# NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS FOR CITY OF NIAGARA FALLS



	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

# **3200 STANLEY AVENUE**

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-212 M-300	REVISED PLUMBING EAST GROUND FLOOR AND MEZZANINE DEMOLITION HVAC GROUND FLOOR AND MECHANICAL MEZZANINE
M-212 M-300 M-301	REVISED PLUMBING EAST GROUND FLOOR AND MEZZANINE DEMOLITION HVAC GROUND FLOOR AND MECHANICAL MEZZANINE DEMOLITION HVAC SERVICE CENTRE
M-212 M-300 M-301 M-302	REVISED PLUMBING EAST GROUND FLOOR AND MEZZANINE DEMOLITION HVAC GROUND FLOOR AND MECHANICAL MEZZANINE DEMOLITION HVAC SERVICE CENTRE DEMOLITION HVAC EAST GROUND FLOOR AND MEZZANINE
M-212 M-300 M-301 M-302 M-303	REVISED PLUMBING EAST GROUND FLOOR AND MEZZANINE DEMOLITION HVAC GROUND FLOOR AND MECHANICAL DEMOLITION HVAC SERVICE CENTRE DEMOLITION HVAC EAST GROUND FLOOR AND MEZZANINE DEMOLITION HVAC WEST ROOF
M-212 M-300 M-301 M-302 M-303 M-304	REVISED PLUMBING EAST GROUND FLOOR AND MEZZANINE DEMOLITION HVAC GROUND FLOOR AND MECHANICAL DEMOLITION HVAC SERVICE CENTRE DEMOLITION HVAC EAST GROUND FLOOR AND MEZZANINE DEMOLITION HVAC WEST ROOF DEMOLITION HVAC ROOF CENTRAL

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

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

GE	ENERA	L NOT	ES	
▋╌┼┨				/
	<u>)0</u> +	A SSO ARCH	CIATES HITECTS	INC.
Electr	rical E	Ingine	eering	
ENG		RING		
			FER	
3 ISSUED F			26, 2021 DEC.	P.G.
1 RE-ISSUE		RMIT	03, 2020 NOV	P.G. P.G.
0 ISSUED F		<u>т</u>	06, 2020 SEPT 4, 2020	P.G.
No. DESCRIPT	TION		4, 2020 DATE	BY
R	EVIS	SION	IS	
		20	Y	
	Engi	neeri	ng Ind	<b>C.</b>
Creating Solution	ns Throug	gh Engine	ering Excel	lence
110 St	o South Se oney Creek T ● (905)	i vice Rd., #4 CON L8E 00 643-8530	417 25	
	F • (905)	643-8510		
со	ntact@arce	ineering.ca ingineering.	ca	
PROJECT:				
NI SEI IM <sup>32</sup> NIA	AGAR RVICE PROV 000 STANL GARA FAL	A FALL CENT EMEN EY AVENU LS, ONTAR	LS RE TS E,	
START DATE:	DRAWN	BY:	DESIGNED	BY:
2020 03 24	M.B.		P.G.	
DRAWING TITLE:				
С	OVER	SHEE	Т	
SCALE:		DRAWING	No.:	
N.T.S.		C	3-000	
ркојест: <b>20-201-010</b>				

						Door	n Finich Schodulo								General Notes
			North Wall		East Wall	Roon	n Finish Schedule		West Wall		Ceilir	20		DRAW AND S	INGS ARE NOT VALID FOR CONSTRUCTION UNTIL SEALED GIGNED BY THE ARCHITECT.
Ser Name	Base N/A	Floor Finish	North Wall Material	North Wall Finish	East Wall Material	East wall Finish	South Wall Material	South Wall Finish	West Wall Material	West Wall Finish	Ceiling Material	Ceiling Finish	Remarks	DO NC ARCHI	)T SCALE DRAWINGS. REPORT ALL DISCREPANCIES TO THE ITECT BEFORE PROCEEDING. ALL DRAWINGS AND DESIGNS
Existing Meter Testing     Existing Enviro	N/A N/A	Existing	Ex. Con. Block	Paint	Ex. Con. Block & New Con. Block	Paint Point	Ex. Con. Block Ex. Con. Block Ex. Con. Block	Paint Paint	Ex. Con. Block Ex. Con. Block	Paint Paint	Ex. Con Slab	Paint Paint	Repair walls/ceiling for new paint finish           Repair walls/ceiling for new paint finish	REMA PROTE	N THE PROPERTY OF THE ARCHITECT, AND ARE ECTED UNDER COPYRIGHT.
Existing Lunchroom	Existing / New Match Existing	g Existing / Repair as Required	Ex. GWB / New GWB	Ex. Paint / New Paint	t Ex. Con. Block	Ex. Paint / New Paint	Ex. Con. block and new Con. Board Existing	Existing	Ex. Coll. Diock & New Coll. Block Existing	Existing	Ex. Con Slap Existing	Existing	Patch and repair for new work  Report any issues to Arabitect	THESE USE B	DESIGN DOCUMENTS ARE PREPARED SOLELY FOR THE Y THE PARTY WITH WHOM THE DESIGN PROFESSIONAL HAS RED INTO A CONTRACT AND THERE ARE NO
Existing Maintenance Garage	N/A N/A	N/A. Cash Allowance	N/A. N/A.	N/A. N/A.	Ex. Con. Block	N/A. Ex. Paint / New Paint	N/A. Ex. Con. Block & New Con. Block / Boar	IN/A. Ird Ex. Paint / New Paint	N/A. Ex. Con. Block	IN/A. Ex. Paint / New Pain	N/A N/A	N/A. N/A.	Patch and repair for new work	REPRI PROFI	.SENTATIONS OF ANY KIND MADE BY THE DESIGN ESSIONAL TO ANY PARTY WITH WHOM THE DESIGN ESSIONAL HAS NOT ENTERED INTO A CONTRACT.
Existing Garage Storage     Existing Welding	N/A N/A	Cash Allowance Existing	Ex. Con. Block & New Con. Board Ex. Con. Block & New Con. Board	Paint Paint	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A N/A	N/A.	Patch and repair for new work Patch and repair for new work		Kay Dlan
Existing Carpentry       Joint Counter	N/A N/A	Existing Cash Allowance	Ex. Con. Block & New Con. Board Ex. Con. Block	Paint Paint	N/A. Ex. Con. Block & New Con. Block	N/A. Paint	Ex. Con. Block Ex. Con. Block	Paint Paint	N/A. Ex. Con. Block & New Con. Block	N/A. Paint	N/A Ex. Con Slab	N/A. Paint	Patch and repair for new work Repair walls/ceiling for new paint finish		rey Fidii
Existing Exit Stair #1         /       New Carpentry Office	N/A N/A	Cash Allowance N/A.	Ex. Con. Block N/A.	Paint N/A.	Ex. Con. Block & New Con. Block N/A.	Paint N/A.	Ex. Con. Block N/A.	Paint N/A.	Ex. Con. Block & New Con. Block N/A.	Paint N/A.	Ex. Con Slab / Metal Deck	< Paint / FR Paint N/A.	Repair walls/ceiling for new paint finish           Report any issues to Architect.		
Existing Washroom Existing Stores	N/A N/A	Cash Allowance Cash Allowance	N/A. Ex. Con. Block	N/A. Paint	N/A. Ex. Con. Block	N/A. Paint	Ex. Con. Block & New Con. Block Ex. Con. Block	Paint Paint	N/A. Ex. Con. Block & New Con. Block	N/A. Paint	N/A Ex. Con Slab	N/A. Paint	Patch and repair for new work Repair walls/ceiling for new paint finish		
Existing Stores Existing Stores Office	N/A N/A	Cash Allowance Cash Allowance	Ex. Con. Block Ex. Con. Block & New Con. Board	Paint Paint	Ex. Con. Block & New Con. Block           Ex. Con. Block & New Con. Block	Paint Paint	Ex. Con. Block & New Con. Block / Boar Ex. Con. Block	rd Paint Paint	Ex. Con. Block & New Con. Block & GWB Ex. Con. Block & New Con. Block	Paint Paint	Ex. / Metal Deck Metal Deck	Paint / FR Paint FR Paint	Repair walls/ceiling for new paint finish           Repair walls/ceiling for new paint finish		
J         Existing Office           1         Existing Corridor	Existing / New Match Existing Existing / New Match Existing	gExisting / Repair as RequiredgExisting / Repair as Required	N/A. Ex. GWB / New GWB	N/A. Paint	N/A. N/A.	N/A. N/A.	Ex. GWB / New GWB Ex. GWB / New GWB	Paint Paint	N/A. N/A.	N/A. N/A.	N/A Ex.T-Bar	N/A. Ceiling Tile	Patch and repair for new work Patch and repair for new work		
A     Existing Office       3     New Mech. Room	N/A N/A	Existing / Repair as Required Existing / Repair as Required	Ex. GWB / New GWB Ex. GWB / New GWB	Paint Paint	New GWB New GWB	Paint Paint	Ex. GWB / New GWB Ex. GWB / New GWB	Paint Paint	N/A. Ex. GWB / New GWB	N/A. Paint	Ex.T-Bar Open	Ceiling Tile Open	Patch and repair for new work Patch and repair for new work		
Image: Existing Office       5     Ex. Washroom	Existing / New Match Existing N/A	g Existing / Repair as Required N/A.	Ex. GWB / New GWB Ex. GWB	Paint Paint	N/A. Ex. GWB	N/A. Paint	Ex. GWB / New GWB Ex. GWB	Paint Paint	Ex. GWB / New GWB Ex. GWB	Paint Paint	Ex.T-Bar FR GWB	Ceiling Tile Paint	Patch and repair for new work Patch and repair for new work		
3     Existing Exit Stair #2       7     Existing Office	Existing / New Match Existing N/A	g Cash Allowance N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	Ex. GWB / New GWB N/A.	Paint N/A.	N/A. N/A.	N/A. N/A.	N/A N/A	N/A. N/A.	Report any issues to Architect. Report any issues to Architect.		
3 Existing Printers 9 Existing Office	N/A N/A	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A. N/A.	N/A N/A	N/A.	Report any issues to Architect. Report any issues to Architect.		
J     Existing Office       1     Existing Storage	N/A N/A	N/A.	N/A.	N/A.	N/A.	N/A.	Ex. GWB	Paint	N/A.	N/A.	N/A N/A	N/A.	Patch and repair for new work		
2 Existing Office     3 Existing Enviro Mezz	N/A N/A	N/A.	N/A.	N/A. Paint	N/A.	N/A.	N/A.	N/A.	N/A. Ex. Con. Block	N/A.	N/A N/A	N/A.	Report any issues to Architect.		
4 Existing Stores Mezz.     5 New Mash Deptheuse	N/A	Existing / Repair as Required	Ex. GWB / New GWB	Paint	Ex. GWB	Paint	New GWB	Paint	Ex. Con. Block Ex. Con. Block	Paint	N/A N/A	N/A.	Repair walls/ceiling for new paint finish Repair walls/ceiling for new paint finish Repair walls/ceiling for new paint finish		
Second Second         Second Second           Second Second         Second Second           T         Evicting Dect	N/A N/A	N/A.	N/A.	N/A.	N/A.	N/A.	N/A.	N/A.	N/A.	N/A.	N/A N/A	N/A. N/A.	Report any issues to Architect.		
Existing Root           8         New Mech. Room	N/A Existing / New Match Existing	g Existing	N/A. New GWB	N/A. Paint	Ex. GWB	N/A. Paint	Ex. GWB	N/A. Paint	N/A. Ex. GWB	N/A. Paint	N/A N/A	N/A. N/A.	Report any issues to Architect. Report any issues to Architect.		
Pound OR Number									RAI NOTES'		WALL TYPE ACCEMPLY	IOTES			
And Acoustic Ceiling Tile							1	. ALL DRAWINGS AN	D SPEC'S ARE TO BE READ AS A COMP	LETE	1. REFER TO STRUC	CTURAL DWGS FOR	R REINFORCEMENT.		
Area Drain Above Finished Floor							2	PACKAGE FOR ALL MECHANI	CAL SERVICES REFER TO MECHANICAL	PLANS	2. ALL WALLS EXTE ABOVE UNLESS N	ND TO U/S OF ROC	F DECK OR FLOOR STRUCTURE E.		
✓I Aluminum ✓D Anodized /T Basement							3. 4.	FOR ALL STRUCTU	RAL SERVICES REFER TO STRUCTURAL AL SERVICES REFER TO ELECTRICAL F	L PLANS PLANS.	3. ALL GWB MATER PAINT - UNLESS N	IALS TO RECIEVE 1	COAT PRIME + 2 COATS OF E.	J Feb :	26, 2021 Issued for Tender
D Beyond Bottom							5.	EXTERIOR WALL D FACE OF MASONR	MENSIONS SHOWN ARE TAKEN TO THE Y VENEER, INSIDE FACE OF CONCRETE						
Cast In Place IL Channel							6	INTERIOR DIMENSI STUD. CONCRETE	ONS SHOWN ARE TAKEN TO THE FACE BLOCK AND THE CENTERLINF OF PLUM	OF METAL					
Control Joint Ceiling		FL1a	- 3 1/2" concrete		<b>C01</b> 5/8" typ	be x gypsum board	7.	FIXTURES UNLESS	NOTED OTHERWISE. RIOR GWB FINISHES SHALL BE TAPED,	, FILLED,					
Clear Concrete Masonry Unit			<ul> <li>- 1 1/2" metal decking</li> <li>- 3/4 hour intumescent paint, refer to</li> </ul>	to spec's	7/8" furr 5/8" typ	rring channel be x gypsum board	8	SANDED AND MAD REFER TO DRAWIN	E GOOD FOR FINISH UNLESS NOTED OT IGS A0-200 FOR REQUIRED FIRE SEPAR	THERWISE. RATIONS AND					·
PR Compressible			Refer to structural drawings.		5/8" typ	be x gypsum board	paint colour TRD by owner	FIRE RESISTANCE ASSEMBLIES							
Continuous Ceramic Tile					- Refer	to spec's & room finish	schedule for locations		O BE SITE VERIEIED	JMBERS &					
D Courtyard Double		R-VALUE	_		R-VALUE		1	1. SCAN/X-RAY ALL P	ENETRATIONS THROUGH WALLS OR FL	.OORS.					
O Demolish or Demolition Diameter		FIRE RATING 3/4 STC RATING	_		FIRE RATING 1 HR STC RATING										
Dimension 3 Dimensions		ULC LISTING			ULC LISTING (OBC S	SB-2 TABLE 2.3.12)									Revisions
Door G Drawing		Floor Type Leger	nd		Ceiling Type Legend										
Each Expansion Joint		Ex.	Existing construction to romain ast	ich and repair as	Ex.	a construction to romain	n, patch and repair as	·		/		$\langle \rangle$			
Elevation C Electrical			required, report any issues to archit	tect.	required Report a	d and maintain fire ratin any issues to architect	ng. (site verify)			/					
/     Elevator or Elevation       M     Ethylene Propylene Diene M-Class	(Roofing)		- 1 coat prime plus 2 coats of paint, - Refer to spec's & room finish sche	, colour TBD by owner edule for locations	r - 1 coat	t prime plus 2 coats of p	paint, colour TBD by owner	i	the second second			$\setminus$			
,T Existing			(site verify)		- Refer t	to spec's & room finish	schedule for locations		and and			\			
			(Site Verify)						the second second			h Bay,		•	'
Exterior Floor Drain or Fire Department		R-VALUE			R-VALUE				<b>E</b>		Existing Truck Was Small Engine &	Office			
Expansion control Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture		R-VALUE FIRE RATING STC RATING			R-VALUE FIRE RATING 3/4 STC RATING						Existing Truck Was Small Engine & ——— — — — —				I
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation		R-VALUE FIRE RATING STC RATING ULC LISTING <b>Ex.</b>	Existing 7.1/2" concrete block to rer	main, patch and renai	R-VALUE FIRE RATING 3/4 STC RATING ULC LISTING ir <b>P01</b>	nstruction to match evi	isting			   , - 	Existing Truck Was Small Engine &	. Office			
Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge / Galvanized		R-VALUE FIRE RATING STC RATING ULC LISTING <b>Ex.</b>	Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify)	main, patch and repai	R-VALUE FIRE RATING 3/4 STC RATING ULC LISTING ir P01 New cor (site ver	onstruction to match exis	isting				Existing Truck Was Small Engine &				
Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge / Galvanized Gypsum Wall Board Hollow Core		R-VALUE FIRE RATING STC RATING ULC LISTING <b>Ex.</b>	Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) - Block filer, paint and high glazed c owner.	main, patch and repai coating, colour TBD by	R-VALUE         FIRE RATING         STC RATING         ULC LISTING         ir <b>P01</b> S/8" type         5/8" type         3 5/8" m	onstruction to match exis rify) be x gypsum board netal studs at 16" o/c fil	isting Il w/stone wool insulation				Existing Truck Was Small Engine &				
Expansion of the Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge V Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Dairt		R-VALUE FIRE RATING STC RATING ULC LISTING <b>Ex.</b>	Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) - Block filer, paint and high glazed c owner. - Refer to spec's & room finish sche	main, patch and repai coating, colour TBD by edule for locations	R-VALUE         FIRE RATING         STC RATING         ULC LISTING         ir <b>P01</b> Stars         S/8" type         3 5/8" m         5/8" type         S/8" type	onstruction to match exis rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board	isting Il w/stone wool insulation			20 m	Existing Truck Was Small Engine &				
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour Condition Heating, Ventilating, And Air Condition	ioning	R-VALUE FIRE RATING STC RATING ULC LISTING Ex.	Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) - Block filer, paint and high glazed co owner. - Refer to spec's & room finish sche (OBC SB-2 T-2.1.1)	main, patch and repai coating, colour TBD by edule for locations	R-VALUE	ponstruction to match exis rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish	isting Il w/stone wool insulation paint, colour TBD by owner a schedule for locations				Existing Truck Was Small Engine &				
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge / Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condit /B Impact Resistant Gypsum Wall Boa In Lieu Of	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING	Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) - Block filer, paint and high glazed co owner. - Refer to spec's & room finish sche (OBC SB-2 T-2.1.1)	main, patch and repai coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ULC LISTING       5/8" type         y       5/8" type         ST/8" type       5/8" type         - 1 coat       - 1 coat         FIRE RATING       3/4         STC RATING       3/4	onstruction to match exis rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish	isting Il w/stone wool insulation paint, colour TBD by owner a schedule for locations				Existing Truck Was Small Engine &				
<ul> <li>Expansion contract</li> <li>Exterior</li> <li>Floor Drain or Fire Department</li> <li>Fire Extinguisher Cabinet</li> <li>Fixture</li> <li>Floor</li> <li>Face Of</li> <li>Foundation</li> <li>Gauge</li> <li>V</li> <li>Galvanized</li> <li>Gypsum Wall Board</li> <li>Hollow Core</li> <li>High</li> <li>Hollow Metal</li> <li>High Point</li> <li>Hour</li> <li>C</li> <li>Heating, Ventilating, And Air Condit</li> <li>VB</li> <li>Impact Resistant Gypsum Wall Board</li> <li>In Lieu Of</li> <li>L</li> <li>Insulated or Insulation</li> </ul>	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1	Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) - Block filer, paint and high glazed c owner. - Refer to spec's & room finish sche (OBC SB-2 T-2.1.1)	main, patch and repai coating, colour TBD by edule for locations	R-VALUE         FIRE RATING         STC RATING         ULC LISTING         ir <b>P01</b> New cor (site ver         y         X         FIRE RATING         3/4         STC RATING         3/4         S/8" type         3 5/8" m         5/8" type         3 5/8" m         5/8" type         - 1 coat         - Refer t         FIRE RATING         STC RATING         ULC LISTING         W407	onstruction to match exis rrify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish	isting Il w/stone wool insulation paint, colour TBD by owner a schedule for locations				Existing Truck Was Small Engine &				IMONDO + ASSOCIATES
Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge V Galvanized S Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condit VB Impact Resistant Gypsum Wall Boa In Lieu Of L Insulated or Insulation Interior Low Maximum Macanary Operation	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1	<pre>(site verify) Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) - Block filer, paint and high glazed c owner Refer to spec's &amp; room finish sche (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify)</pre>	main, patch and repai coating, colour TBD by edule for locations	R-VALUE         FIRE RATING         STC RATING         ULC LISTING         ir <b>P01</b> Strong         ULC LISTING         ULC LISTING         Strong         Strong      <	ponstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board	isting Il w/stone wool insulation paint, colour TBD by owner a schedule for locations			12-0-	Existing Truck Was Small Engine &				IMONDO + ASSOCIATES ARCHITECTS INC.
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condit VB Impact Resistant Gypsum Wall Boa In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1	(Site verify) Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed cowner.	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New correst of site ver         y       5/8" type         y       5/8" type         a 5/8" m       5/8" type         b 7/8" type       3 5/8" m         b 7/8" type       - 1 coat         c 7/8" type       - 1 coat         c 8/8" type       - 1 coat         c 8/8" type       - 1 coat         c 1000000000000000000000000000000000000	ponstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board netal studs at 16" o/c fi	isting II w/stone wool insulation paint, colour TBD by owner a schedule for locations ill w/stone wool insulation paint, colour TBD by owner			12-0"	Existing Truck Was Small Engine &			R/4 4687	Image: Street Suite 2, Niagara Falls, Ontario, L2E 2L9
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge / Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condit VB Impact Resistant Gypsum Wall Boa In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall Boa	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1	<ul> <li>(and verify)</li> <li>Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>(OBC SB-2 T-2.1.1)</li> <li>New 7-1/2" concrete block to match fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> </ul>	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by	R-VALUE         FIRE RATING         STC RATING         ULC LISTING         ir <b>P01</b> New cor (site ver         y         Image: State of the	ponstruction to match exist rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board metal studs at 16" o/c fi pe x gypsum board metal studs at 16" o/c fi	isting II w/stone wool insulation paint, colour TBD by owner a schedule for locations ill w/stone wool insulation paint, colour TBD by owner in schedule for locations				Existing Truck Was Small Engine &				ARCHITECTS INC.
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condit VB Impact Resistant Gypsum Wall Boa In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall Boa Metal Not In Contract	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 NULLISTING	<ul> <li>(and verify)</li> <li>Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>(OBC SB-2 T-2.1.1)</li> <li>New 7-1/2" concrete block to match fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>Refer to spec's &amp; room finish schee</li> <li>Refer to spec's &amp; room finish schee</li> <li>Refer to structural drawings</li> </ul>	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations	R-VALUE         FIRE RATING         STC RATING         ULC LISTING         ir <b>P01</b> New cor (site ver         y         X         FIRE RATING         3/4         STC RATING         3/4         STC RATING         STC RATING         STC RATING         ULC LISTING         V407         n <b>P02</b> 5/8" type         3 5/8" n         5/8" type         1 coat         - 1 coat         - 1 coat         - 1 coat         - Refer         (provide	onstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of r to spec's & room finish the P.Eng shop drawings	isting Il w/stone wool insulation paint, colour TBD by owner a schedule for locations ill w/stone wool insulation paint, colour TBD by owner n schedule for locations s with seismic reinforcement)				Existing Existing Existing Service Centre			A687 TEL. WEB. EMAI	Acchitects Suite 2, Niagara Falls, Ontario, L2E 2L9 905-357-4441 FAX. 905-357-9203 www.raimondoarchitects.com
Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condil VB Impact Resistant Gypsum Wall Boa In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall Boa Metal Not In Contract Number Nominal	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING 2 STC RATING 2 R-VALUE FIRE RATING 2 STC RATING 2 R-VALUE FIRE RATING 2	<ul> <li>(and verify)</li> <li>Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>(OBC SB-2 T-2.1.1)</li> <li>New 7-1/2" concrete block to match fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>Refer to spec's &amp; room finish schee</li> <li>(OBC SB-2 T-2.1.1)</li> </ul>	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New cord (site verd)         y       5/8" type 3 5/8" mp 5/8" type 3 5/8" type 3 5/8" mp 5/8" type 3 5/8" type 3 5/8" mp 5/8" type 3 5/8" type 3 5/8" mp 5/8" type 3 5/8"	ponstruction to match exist rrify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of r to spec's & room finish the P.Eng shop drawings artition in existing location	isting II w/stone wool insulation paint, colour TBD by owner a schedule for locations ill w/stone wool insulation paint, colour TBD by owner in schedule for locations s with seismic reinforcement) ion, refer to floor plan notes				Existing Existing Existing Service Centre			₽ RA 4687 TEL. WEB. EMAI	Acchitects com Mensore Street Suite 2, Niagara Falls, Ontario, L2E 2L3 Sueen Street Sueen Street Sueen Street Sueen Street Sueen Street Sueen Street Sueen Street S
Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour Heating, Ventilating, And Air Condil VB Impact Resistant Gypsum Wall Boa In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall Boa Metal Not In Contract Number Nominal On Center Opposite Hand Ourse	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING 2	<ul> <li>(and verify)</li> <li>Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>(OBC SB-2 T-2.1.1)</li> <li>New 7-1/2" concrete block to match fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>Refer to spec's &amp; room finish schee</li> <li>(OBC SB-2 T-2.1.1)</li> </ul>	main, patch and repai coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New cord (site veridation of site veridation of sit	onstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of p t to spec's & room finish the P.Eng shop drawings artition in existing location	isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations ill w/stone wool insulation paint, colour TBD by owner in schedule for locations is with seismic reinforcement) ion, refer to floor plan notes				Existing Truck Was Small Engine &			RA 4687 TEL. WEB. EMAI	Image: City of Ningarge Ealls
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condii Hour C Heating, Ventilating, And Air Condii Hour C Heating, Ventilating, And Air Condii In Lieu Of L Insulated or Insulation In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall Bo Metal Not In Contract Number Nominal On Center Opposite Hand Ounce Pre-Cast Concrete //B	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING ULC LISTING ULC LISTING ULC LISTING	<ul> <li>(and verify)</li> <li>Existing 7-1/2" concrete block to rerto maintain fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>(OBC SB-2 T-2.1.1)</li> <li>New 7-1/2" concrete block to match fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>Refer to spec's &amp; room finish schee</li> <li>(OBC SB-2 T-2.1.1)</li> <li>New 7-1/2" concrete block to match fire rating. (site verify)</li> <li>Block filer, paint and high glazed cowner.</li> <li>Refer to spec's &amp; room finish schee</li> <li>Refer to structural drawings</li> <li>(OBC SB-2 T-2.1.1)</li> <li>New 7-1/2" concrete block</li> </ul>	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New correst of site ver         y       5/8" type         y       5/8" type         g       5/8" type         g       5/8" type         g       - 1 coat         FIRE RATING       3/4         STC RATING       - 1 coat         ULC LISTING       W407         n       P02         5/8" type       3 5/8" n         5/8" type       - 1 coat         - 8 fire RATING       3/4         STC RATING       W407         n       P02         STC RATING       - 1 coat         - Refer       (provide         R-VALUE       Note:         FIRE RATING       1         ULC LISTING       W407         VLC LISTING       W407         P03       5/8" type	ponstruction to match exist rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of r to spec's & room finish le P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/	isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations ill w/stone wool insulation paint, colour TBD by owner in schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation				Existing Truck Was Small Engine &			RA A687 TEL WEB EMAI	Image: Constraint of the second state of the second sta
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condir MB Impact Resistant Gypsum Wall Boa In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall Bo Metal Not In Contract Number Nominal On Center Opposite Hand Ounce Pre-Cast Concrete //B Plumbing Plywood Pressure Treated	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2	(Site Verify) Existing 7-1/2" concrete block to rerto maintain fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings Deck filer, paint and high glazed cowner. Refer to structural drawings Deck filer, paint and high glazed cowner. Refer to structural drawings Deck filer, paint and high glazed cowner. Refer to structural drawings Deck filer, paint and high glazed cowner. Refer to structural drawings New 7-1/2" concrete block Refer to structural drawings	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New corresting of the state of the sta	enstruction to match existerify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fil pe x gypsum board at prime plus 2 coats of p to spec's & room finish the P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board	isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations ill w/stone wool insulation paint, colour TBD by owner in schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation	New ele. tr	Image: Constraint of the second s		Existing Truck Was Small Engine &			A687 TEL WEB EMAI	Image: Constraint of the second state of the second sta
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condir /B Impact Resistant Gypsum Wall Board In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall Br Metal Not In Contract Number Nominal On Center Opposite Hand Ounce Pre-Cast Concrete /B Plumbing Plywood Pressure Treated Paint or Painted Polyvinyl Chloride	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 NUC NUC NUC NUC NUC NUC NUC NUC	(Site Verify) Existing 7-1/2" concrete block to rento maintain fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings - Block filer, paint and high glazed cowner Refer to structural drawings - Block filer, paint and high glazed cowner Block filer, paint and high glazed cowner Refer to structural drawings - Block filer, paint and high glazed cowner Refer to structural drawings - Block filer, paint and high glazed cowner Refer to structural drawings - Block filer, paint and high glazed cowner Refer to structural drawings - Block filer, paint and high glazed cowner Refer to spec's & room finish schee	main, patch and repai coating, colour TBD by edule for locations n existing and maintain coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New cord (site verd)         y       5/8" type 3 5/8" mg 5/8" type 3 5/8" mg 5/8" type 3 5/8" mg 5/8" type 1 coat - Refer to 5/8" type 3 5/8" mg 5/8" type 3 5/8" ng 5/8" mg 5/8" type 3 5/8" ng 5/8" type 3 5/8" type 3 5/8" ng 5/8" type 3 5/8" ng 5/8" type 3 5/8" ng 5/8" type 3	enstruction to match exist rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of f r to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of f r to spec's & room finish	isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations ill w/stone wool insulation paint, colour TBD by owner in schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner is schedule for locations	New ele. tr refer to ele	C C C C C C C C C C C C C C C C C C C		Existing Truck Was Small Engine &			RA 4687 TEL WEB EMAI	Image: Additional and the second
Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C. Heating, Ventilating, And Air Condi Heating, Ventilating, And Air Condi Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall Bo Metal Not In Contract Number Nominal On Center Opposite Hand Ounce Pre-Cast Concrete MB Plumbing Plywood Pressure Treated Paint or Painted Polyvinyl Chloride Rubber Reflected Ceiling Plan Poof Drain	ioning rd bard	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 W2	(and verify) Existing 7-1/2" concrete block to rento maintain fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings - Block filer, paint and high glazed cowner Refer to structural drawings - Block filer, paint and high glazed cowner Refer to structural drawings - Block filer, paint and high glazed cowner Refer to structural drawings - Block filer, paint and high glazed cowner Refer to spec's & room finish schee Refer to structural drawings - Block filer, paint and high glazed cowner Refer to spec's & room finish schee - Block filer, paint and high glazed cowner Refer to spec's & room finish schee - Block filer, paint and high glazed cowner Refer to spec's & room finish schee	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New cord (site ver         y       5/8" type 3 5/8" m 5/8" type 3 5/8" m 5/8" type 4 1 coat - Refer to 5/8" type 3 5/8" m 5/8" type 5/8" type 3 5/8" m 5/8" type 1 coat - Refer to 5/8" type 3 5/8" m 5/8" type 1 coat - Refer to 5/8" type 3 5/8" m 5/8" type 3 5/8" m 5/8" type 1 coat - Refer to 5/8" type 3 5/8" m 5/8" type 1 coat - Refer to 5/8" type 3 5/8" m 5/8" type 3 5/8" type 3 5/8" m 5/8" type 3 5/8"	enstruction to match exist rrify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of r to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of r to spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations ill w/stone wool insulation paint, colour TBD by owner in schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner in schedule for locations is with seismic reinforcement) paint, colour TBD by owner in schedule for locations is with seismic reinforcement)	New ele. tr refer to ele	Image: Constraint of the second s		Existing Truck Was Small Engine & Existing Service Centre PROX. location of trench for ctrical services, patch and re	Route new epair	Existing Storage & Bays	RA 4687 TEL WEB EMAI	Image: Constraint of the second state of the second sta
Exterior         Floor Drain or Fire Department         Fire Extinguisher Cabinet         Fixture         Floor         Face Of         Foundation         Gauge         Galvanized         Gypsum Wall Board         Hollow Core         High         Hollow Metal         High Point         Hour         C         Heating, Ventilating, And Air Condi         //B         Impact Resistant Gypsum Wall Board         In Lieu Of         L         Insulated or Insulation         Interior         Low         Maximum         Masonry Opening         H         Mechanical         BR         Membrane         Minimum         WB         Moisture-Resistant Gypsum Wall B         Metal         Not In Contract         Number         Nominal         On Center         Opposite Hand         Ounce         Pre-Cast Concrete         MB         Plywood         Pressure Treated         Paint	ioning rd bard	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING 2 STC RATING ULC LISTING ULC LISTING ULC LISTING 2 STC RATING 2	(Site Verify) Existing 7-1/2" concrete block to rento maintain fire rating. (site verify) Block filer, paint and high glazed of owner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed of owner. Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings Block filer, paint and high glazed of owner. Refer to structural drawings OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1)	main, patch and repai coating, colour TBD by edule for locations n existing and maintain coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New cordiste verification of site ver	enstruction to match existrify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of p to spec's & room finish le P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of p to spec's & room finish the P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner schedule for locations iII w/stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) paint, colour TBD by owner n schedule for locations is with seismic reinforcement)	New ele. tr refer to ele	ansformer, drawings	AF ele existi Site v	Existing Truck Was Small Engine & Small Engine & Existing Service Centre Existing Service Centre PROX. location of trench for ctrical services, patch and re ing asphalt/fill/granular for neverify and refer to electrical dr	Route new epair w work. rawings	Existing Storage & Bays	RA 4687 TEL WEB EMAI M	Image: Checked in the second seco
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour Heating, Ventilating, And Air Condi //B Impact Resistant Gypsum Wall Board In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall B Metal Not In Contract Number Nominal On Center Opposite Hand Ounce Pre-Cast Concrete //B Plumbing D Plywood Pressure Treated Paint or Painted Polyvinyl Chloride Rubber Reflected Ceiling Plan Roof Drain D Required Room Similar C Specified OR Specification	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING	(all verify) Existing 7-1/2" concrete block to rear to maintain fire rating. (site verify) Block filer, paint and high glazed or owner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed or owner. Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1 New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1 New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1 New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New correstree         y       Store       5/8" type         y       Store       5/8" type         y       Store       5/8" type         y       Store       -1 coat         R-VALUE       -1 coat       - Refer te         FIRE RATING       3/4       -1 coat         STC RATING       W407       -1 coat         n       P02       5/8" type         y       Store       -1 coat         g       Store       -1 coat         refer       -1 coat       - Refer         y       Store       -1 coat         y       Store       -1 coat         g       Store       -1 coat         refer       (provide         R-VALUE       Note:         FIRE RATING       Note:         New pa       5/8" type         y       Store       -1 coat         y       Store       -1 coat         y       Store       -1 coat         y       -1 coat       -1 coat	enstruction to match exist rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fil pe x gypsum board at prime plus 2 coats of p to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of p to spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations iiI w/stone wool insulation paint, colour TBD by owner in schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner in schedule for locations is with seismic reinforcement) paint, colour TBD by owner in schedule for locations is with seismic reinforcement)	New ele. tr refer to ele New gene to ele	ansformer, drawings rator, refer e. drawings	AF ele existi Site v Existi	Existing Truck Was Small Engine & Small Engine & Existing Existing Service Centre PROX. location of trench for ctrical services, patch and re ng asphalt/fill/granular for nev erify and refer to electrical dr ng power operated gate, coor with underground ducts	Route new epair w work. rawings ordinate	Existing Storage & Bays	Image: Control of the second secon	Acchinect Suite 2. Niagara Falls. Ontario. L2E 2.19 Meen Street Suite 2. Niagara Falls. Ontario. L2E 2.19 205-357-4441 FAX. 905-357-203 WW.raimondoarchitects.com City of Niagara Falls Minicipal Service Centre Suite Stanley Ave, Niagara Falls DRAWN BY: CHECKED: T.29:20 PM JV CHECKED:
Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condi VB Impact Resistant Gypsum Wall Boa In Lieu Of L Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical BR Membrane Minimum WB Moisture-Resistant Gypsum Wall B Metal Not In Contract Number Nominal On Center Opposite Hand Ounce Pre-Cast Concrete MB Plumbing ) Plywood Pressure Treated Paint or Painted Polyvinyl Chloride Rubber Reflected Ceiling Plan Roof Drain D Required Room Similar C Specification Sprinkler or Speaker . Stainless Steel	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING 2 STC RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W3	(Site Verify) Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) Block filer, paint and high glazed or owner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed or owner. Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1 New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1 New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1 New 7-1/2" concrete block Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New vertical pre-finished metal sidir (provide sample for approval)	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations	R-VALUE       FIRE RATING       3/4         STC RATING       J/4         STC RATING       ULC LISTING         ir       P01       New correst (site version of site version	enstruction to match exist rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of p to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of p t to spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner schedule for locations iII w/stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) is with seismic reinforcement)	New gene to ele	ansformer, drawings	AF ele existi Site v Ex. elec. infill to	Existing Truck Was Small Engine & Small Engine & Existing Existing Service Centre PROX. location of trench for ctrical services, patch and re g asphalt/fill/granular for new erify and refer to electrical dr ng power operated gate, coo with underground ducts. ransformer and pad to be re match existing Refer to electrical	Route new epair w work. rawings ordinate moved and drawings	Existing Storage & Bays	■	ALIANS AND
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge V Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condi VB Impact Resistant Gypsum Wall Board IL Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical IBR Membrane Minimum WB Moisture-Resistant Gypsum Wall B Metal Not In Contract Number Nominal On Center Opposite Hand Ounce Pre-Cast Concrete MB Plumbing ) Plywood Pressure Treated Paint or Painted Polyvinyl Chloride Rubber Reflected Ceiling Plan Roof Drain D Required Room Similar C Specified OR Specification Sprinkler or Speaker Stainless Steel Sound Transmission Coefficient Steel	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2	(Site Verify) Existing 7-1/2" concrete block to rento maintain fire rating. (site verify) Block filer, paint and high glazed of owner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed of owner. Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1) New vertical pre-finished metal sidir (provide sample for approval) - 8" metal studs at 24" o/c fill w/3" (Finsulation	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations coating, colour TBD by edule for locations	R-VALUE       FIRE RATING       3/4         STC RATING       ULC LISTING       New con (site ver ystrong)         y       Image: Stress of the stress of t	enstruction to match exist rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of f r to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of f r to spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner schedule for locations iII w/stone wool insulation paint, colour TBD by owner n schedule for locations s with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner n schedule for locations s with seismic reinforcement) is with seismic reinforcement)	New gene to ele	C C C C C C C C C C C C C C C C C C C	AF ele existi Site v Existi K. elec. infill to AF	Existing Truck Was Small Engine & Small Engine & Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re- erify and refer to electrical dr ng power operated gate, coo with underground ducts. ransformer and pad to be re- natch existing. Refer to electrical PROX. 750' of temp. fencing dinate with overhead down	Route new epair w work. rawings ordinate moved and drawings g, and	Existing Storage & Bays	■	AMONDO + OSSOCIATES ACCHITECTS DCC ACCHITECTS DCC ACCHITECT
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge V Galvanized Galysum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condi VB Impact Resistant Gypsum Wall Board IL Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical IBR Membrane Minimum WB Moisture-Resistant Gypsum Wall B Metal Not In Contract Number Nominal On Center Opposite Hand Ounce Pre-Cast Concrete VB Plumbing ) Plywood Pressure Treated Paint or Painted Polyvinyl Chloride Rubber Reflected Ceiling Plan Roof Drain D Required Room Similar C Specified OR Specification Sprinkler or Speaker . Stainless Steel Sound Transmission Coefficient Steel JCT Structure or Structural Tongue And Groove Ten Of	ioning rd bard	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 W3	(Site Verify) Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBC SB-2 T-2.1.1) New vertical pre-finished metal sidir (provide sample for approval) - 8" metal studs at 24" o/c fill w/3" (Finsulation - 1/2" cement board	main, patch and repai coating, colour TBD by edule for locations n existing and maintain coating, colour TBD by edule for locations coating, colour TBD by edule for locations	R-VALUE       FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New correst of site ver         y       Store Rating       5/8" type         y       Store Rating       - 1 coat         FIRE RATING       3/4       - 1 coat         FIRE RATING       3/4       - 1 coat         FIRE RATING       3/4       - 1 coat         Store Rating       W407       - 1 coat         n       P02       5/8" type         y       Store Rating       W407         n       P02       5/8" type         y       Store Rating       Note:         Refer       Note:       Note:         FIRE RATING       1       Note:         VIC LISTING       W407       - 1 coat         y       Store Rating       5/8" type         y       Store Rating       - 1 coat         Store Rating       - 1 coat       - 1 coat         y       Store Rating       - 1 coat         y <td< td=""><td>enstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's &amp; room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of f r to spec's &amp; room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of f r to spec's &amp; room finish de P.Eng shop drawings</td><td>isting II w/stone wool insulation paint, colour TBD by owner a schedule for locations iII w/stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) s with seismic reinforcement)</td><td>New gene to ele</td><td>ansformer, d drawings rator, refer d drawings Ex. Gas Service</td><td>AF ele existi Site v Existi Ex. elec. infill to cool en (cite</td><td>Existing Truck Was Small Engine &amp; Small Engine &amp; Contre Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re or asphalt/fill/granular for nev erify and refer to electrical dr or power operated gate, coor with under ground ducts. ransformer and pad to be re match existing. Refer to electrical PROX. 750' of temp. fencing dinate with overhead doors a pergency exits, refer to spect</td><td>Route new epair w work. rawings ordinate moved and drawings g, and s. rner)</td><td>Existing Storage &amp; Bays</td><td>4687 TEL WEB EMAI DATE: 2/26/2021</td><td>AMONDO + ASSOCIATES ARCHITECTS INC. AMONDO + ASSOCIATES ARCHITECTS INC. ACHITECTS INC. Queen Street Suite 2, Niagara Falls, Ontario, L2E 2L9 905-357-4441 FAX. 905-357-9203 WW.raimondoarchitects.com City of Niagara Falls Million Association (Construction) City of Niagara Falls City of Niagara Falls City of Niagara Falls City of Niagara Falls City of Niagara Falls Million (Construction) City of Niagara Falls City of Nia</td></td<>	enstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of f r to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of f r to spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner a schedule for locations iII w/stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) s with seismic reinforcement)	New gene to ele	ansformer, d drawings rator, refer d drawings Ex. Gas Service	AF ele existi Site v Existi Ex. elec. infill to cool en (cite	Existing Truck Was Small Engine & Small Engine & Contre Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re or asphalt/fill/granular for nev erify and refer to electrical dr or power operated gate, coor with under ground ducts. ransformer and pad to be re match existing. Refer to electrical PROX. 750' of temp. fencing dinate with overhead doors a pergency exits, refer to spect	Route new epair w work. rawings ordinate moved and drawings g, and s. rner)	Existing Storage & Bays	4687 TEL WEB EMAI DATE: 2/26/2021	AMONDO + ASSOCIATES ARCHITECTS INC. AMONDO + ASSOCIATES ARCHITECTS INC. ACHITECTS INC. Queen Street Suite 2, Niagara Falls, Ontario, L2E 2L9 905-357-4441 FAX. 905-357-9203 WW.raimondoarchitects.com City of Niagara Falls Million Association (Construction) City of Niagara Falls City of Niagara Falls City of Niagara Falls City of Niagara Falls City of Niagara Falls Million (Construction) City of Niagara Falls City of Nia
Exterior Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Five Extinguisher Cabinet Floor Face Of Foundation Gauge V Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condi VB Impact Resistant Gypsum Wall Board IL Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical IBR Membrane Minimum WB Moisture-Resistant Gypsum Wall B Metal Not In Contract Number I Nominal On Center Opposite Hand Ounce Pre-Cast Concrete VB Plumbing ) Plywood Pressure Treated Paint or Painted Polyvinyl Chloride Rubber Reflected Ceiling Plan Roof Drain D Required Room Similar C JCT Structure or Structural Tongue And Groove Top Of Top Of Concrete Top Of Top Of Concrete Top Of Concrete	ioning rd	R-VALUE         FIRE RATING         STC RATING         ULC LISTING         Ex.         Image: Constraint of the second se	(Site Verify) Existing 7-1/2" concrete block to rer to maintain fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed cowner. Refer to spec's & room finish schee Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings OBICK filer, paint and high glazed cowner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New vertical pre-finished metal sidir (provide sample for approval) - 8" metal studs at 24" o/c fill w/3" (Finsulation - 1/2" cement board Note: Match existing construction, site vertice	main, patch and repai coating, colour TBD by edule for locations n existing and maintair coating, colour TBD by edule for locations coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ir       P01       New cor (site ver         y	enstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of r to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of r to spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner schedule for locations iII w/stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) s with seismic reinforcement)	New gene to ele	Arawings Ex. Gas Service	AF ele existi Site v Existi Ex. elec. infill to site NOTE	Existing Truck Was Small Engine & Small Engine & Contre Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re ing asphalt/fill/granular for neverify and refer to electrical dr ng power operated gate, coor with underground ducts. ransformer and pad to be re natch existing. Refer to electrical PROX. 750' of temp. fencing dinate with overhead doors a hergency exits, refer to spec's verify and coordinate with ow	Route new epair w work. rawings ordinate moved and drawings g, and s. /ner)	Existing Storage & Bays	AGRO	AMONDO + ASSOCIATES ARCHITECTS INC. Queen Street Suite 2, Niagara Falls, Ontario, L2E 2L9 905-357-4441 FAX. 905-357-9203 www.raimondoarchitects.com City of Niagara Falls Unicipal Service Centre Saturational Service Centre City of Niagara Falls Unicipal Service Centre City of Niagara Falls DRAWN BY: L29:20 PM DRAWN BY: L29:20 PM CHECKED: ER Ssemblies + Legends, om Finish Schedule and Existing Site Plan
Exterior Floor Drain or Fire Department Fire Extinguisher Cabinet Fixture Floor Face Of Foundation Gauge V Galvanized Galvanized Galvanized Gypsum Wall Board Hollow Core High Hollow Metal High Point Hour C Heating, Ventilating, And Air Condi WB Impact Resistant Gypsum Wall Board In Lieu Of IL Insulated or Insulation Interior Low Maximum Masonry Opening H Mechanical IBR Membrane Minimum IWB Moisture-Resistant Gypsum Wall B Metal Not In Contract Number I Nominal On Center Opposite Hand Ounce Pre-Cast Concrete VB Plumbing ) Plywood Pressure Treated Paint or Painted Polyvinyl Chloride Rubber Reflected Ceiling Plan Roof Drain D Required Room Similar C Specified OR Specification Sprinkler or Speaker Stainless Steel Sound Transmission Coefficient Steel JCT Structure or Structural Tongue And Groove Top Of Top Of Concrete Top Of Steel Toilet Paper Dispenser Telebhone/Data	ioning rd bard	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2	(Site verify)         Existing 7-1/2" concrete block to rerito maintain fire rating. (site verify)         Block filer, paint and high glazed cover.         Refer to spec's & room finish scheet         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block to match fire rating. (site verify)         Block filer, paint and high glazed cover.         Refer to spec's & room finish scheet         Refer to spec's & room finish scheet         Refer to structural drawings         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block         Refer to structural drawings         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block         Refer to structural drawings         Block filer, paint and high glazed cover.         Refer to structural drawings         Block filer, paint and high glazed cover.         Refer to spec's & room finish scheet         (OBC SB-2 T-2.1.1)         New vertical pre-finished metal sidir (provide sample for approval)         -8" metal studs at 24" o/c fill w/3" (Finisulation         -1/2" coment board         Note:         Match existing construction, site verify         Refer to structural drawings.         Refer to structural drawings.	main, patch and repai coating, colour TBD by edule for locations n existing and maintain coating, colour TBD by edule for locations coating, colour TBD by edule for locations	R-VALUE       J/4         FIRE RATING       J/4         STC RATING       ULC LISTING         ir       P01       New cor (site ver 5/8" type 3 5/8" type         y       Image: Stress of the st	enstruction to match existrify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of f r to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of f r to spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations iil w/stone wool insulation paint, colour TBD by owner is swith seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner is schedule for locations is with seismic reinforcement) s with seismic reinforcement)	New gene to ele	Arator, refer ansformer, ansformer, and drawings rator, refer a. drawings	AF ele existi Site v Existi Ex. elec. infill to Af cool en (site NOTE Existi ROUT	Existing Truck Was Small Engine & Small Engine & Contre Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re ing asphalt/fill/granular for neverify and refer to electrical dr ng power operated gate, coo with underground ducts. ransformer and pad to be re natch existing. Refer to electrical PROX. 750' of temp. fencing dinate with overhead doors a hergency exits, refer to spect verify and coordinate with ow g Fire Truck and Snow Equip to be keep clear at all time	Route new epair w work. rawings ordinate moved and drawings ordinate moved and drawings ordinate moved and drawings ordinate moved and drawings ordinate	Existing Storage & Bays	A687 TEL WEB EMAI DATE: 2/26/2021	AMONDO + ASSOCIATES ARCHITECTS INC. Queen Street Suite 2, Niagara Falls, Ontario, L2E 2L9 905-357-4441 FAX. 905-357-9203 www.raimondoarchitects.com City of Niagara Falls City of Niagara Falls City of Niagara Falls 200 Stanley Ave, Niagara Falls 129:20 PM DRAWN BY: CHECKED: R Sseemblies + Legends, om Finish Schedule and Existing Site Plan
Exterior         Floor Drain or Fire Department         Fire Extinguisher Cabinet         Ficor         Face Of         O         Face Of         O         Galyanized         B         Gypsum Wall Board         Hollow Core         High         Hollow Metal         High Point         Hour         C         Heating, Ventilating, And Air Condi         MB         Impact Resistant Gypsum Wall Board         In Lieu Of         JL         Insulated or Insulation         Interior         Low         X         Maximum         Masonry Opening         'H         Mechanical         IBR         Membrane         Minimum         WB         Moisture-Resistant Gypsum Wall B         Metal         Not In Contract         Number         1         Nominal         On Center         Opposite Hand         Ounce         Pre-Cast Concrete         VB         Pl	ioning rd bard	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING ULC LISTING W3 R-VALUE FIRE RATING STC RATING ULC LISTING	(Site verify) Existing 7-1/2" concrete block to rereto maintain fire rating. (site verify) Block filer, paint and high glazed of owner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New 7-1/2" concrete block to match fire rating. (site verify) Block filer, paint and high glazed of owner. Refer to spec's & room finish schee Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings (OBC SB-2 T-2.1.1) New 7-1/2" concrete block Refer to structural drawings Block filer, paint and high glazed of owner. Refer to spec's & room finish schee (OBC SB-2 T-2.1.1) New vertical pre-finished metal sidir (provide sample for approval) - 8" metal studs at 24" o/c fill w/3" (Finsulation - 1/2" cement board Note: Match existing construction, site verify Refer to structural drawings. Refer to spec's	main, patch and repai coating, colour TBD by edule for locations n existing and maintain coating, colour TBD by edule for locations coating, colour TBD by edule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         uLC LISTING       5/8" type         y       5/8" type         g       5/8" type         - 1 coat       - Refer t         FIRE RATING       3/4         STC RATING       - 1 coat         ULC LISTING       W407         n       P02         5/8" type       - 1 coat         STC RATING       W407         n       P02         STC RATING       W407         n       P03         STC RATING       Note:         New pa       5/8" type         - 1 coat       - 1 coat         FIRE RATING       Note:         New pa       5/8" type         0LC LISTING       W407         V       - 1 coat         STC RATING       1         ULC LISTING       W407         V       - 1 coat         STC RATING       - 1 coat         VLC LISTING       W407         V       - 1 coat         STC RATING       - 1 coat         VIC LISTING       W453 <td>enstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's &amp; room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of f t o spec's &amp; room finish le P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of f t o spec's &amp; room finish de P.Eng shop drawings</td> <td>isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations iil w/stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) ion, refer to floor plan notes //stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) s with seismic reinforcement)</td> <td>New ele. tr refer to ele New gene to ele</td> <td>A Constant of the second of th</td> <td>AF existi Site v Existi Ex. elec. infill to for the cool en (site NOTE</td> <td>Existing Truck Was Small Engine &amp; Small Engine &amp; Cantre Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re asphalt/fill/granular for ney erify and refer to electrical dr ng power operated gate, coo with underground ducts. ransformer and pad to be re natch existing. Refer to electron PROX. 750' of temp. fencing dinate with overhead doors a pergency exits, refer to spec' verify and coordinate with ow g Fire Truck and Snow Equip to be keep clear at all time</td> <td>Route new epair w work. rawings ordinate moved and drawings g, and s. ner) pment s</td> <td>Existing Storage &amp; Bays</td> <td>A687 TEL WEB EMAI DATE: 2/26/2021 A RO SCALE:</td> <td>A sindicated</td>	enstruction to match exist rify) be x gypsum board netal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of f t o spec's & room finish le P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of f t o spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner is schedule for locations iil w/stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) ion, refer to floor plan notes //stone wool insulation paint, colour TBD by owner n schedule for locations is with seismic reinforcement) s with seismic reinforcement)	New ele. tr refer to ele New gene to ele	A Constant of the second of th	AF existi Site v Existi Ex. elec. infill to for the cool en (site NOTE	Existing Truck Was Small Engine & Small Engine & Cantre Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re asphalt/fill/granular for ney erify and refer to electrical dr ng power operated gate, coo with underground ducts. ransformer and pad to be re natch existing. Refer to electron PROX. 750' of temp. fencing dinate with overhead doors a pergency exits, refer to spec' verify and coordinate with ow g Fire Truck and Snow Equip to be keep clear at all time	Route new epair w work. rawings ordinate moved and drawings g, and s. ner) pment s	Existing Storage & Bays	A687 TEL WEB EMAI DATE: 2/26/2021 A RO SCALE:	A sindicated
Exterior         Floor Drain or Fire Department         Fire Extinguisher Cabinet         Floor         Face Of         O         Face Of         O         Galyanized         B         Gypsum Wall Board         Hollow Core         High         Hollow Metal         High Point         Hour         .C         Heating, Ventilating, And Air Condi         MB         Impact Resistant Gypsum Wall Board         In Lieu Of         JL         Insulated or Insulation         Interior         Low         X         Maximum         Masonry Opening         H         Mechanical         IBR         Membrane         Minimum         WB         Moisture-Resistant Gypsum Wall B         Metal         Not In Contract         Number         1       Nominal         On Center         Opposite Hand         Ounce         Pre-Cast Concrete         MB         Plumbing <td>ioning rd</td> <td>R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING 2 STC RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING</td> <td>(Site verify)         Existing 7-1/2" concrete block to rerito maintain fire rating. (site verify)         Block filer, paint and high glazed or owner.         Refer to spec's &amp; room finish scheet         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block to match fire rating. (site verify)         Block filer, paint and high glazed or owner.         Refer to spec's &amp; room finish scheet         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block         Refer to structural drawings         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block         Refer to structural drawings         Block filer, paint and high glazed or owner.         Refer to structural drawings         Block filer, paint and high glazed or owner.         Refer to spec's &amp; room finish scheet         (OBC SB-2 T-2.1.1)         New vertical pre-finished metal sidir (provide sample for approval)         -8" metal studs at 24" o/c fill w/3" (File insulation         -1/2" cement board         Note:         Match existing construction, site verify         Refer to structural drawings.         Refer to structural drawings.         Refer to structural drawings.</td> <td>main, patch and repai coating, colour TBD by edule for locations n existing and maintain coating, colour TBD by edule for locations coating, colour TBD by edule for locations adule for locations</td> <td>R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ULC LISTING       5/8" type         Y       STC RATING         Y       STC RATING         Image: Stream of the strea</td> <td>enstruction to match exist rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's &amp; room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of p r to spec's &amp; room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of p r to spec's &amp; room finish de P.Eng shop drawings</td> <td>isting II w/stone wool insulation paint, colour TBD by owner a schedule for locations ill w/stone wool insulation paint, colour TBD by owner a schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner a schedule for locations is with seismic reinforcement) is with seismic reinforcement)</td> <td>New ele. tr refer to ele New gene to ele</td> <td>te Plan</td> <td>AF ele existi Site v Existi Ex. elec. infill to Af cool en (site NOTE: Provide City prior to work</td> <td>Existing Truck Was Small Engine &amp; Small Engine &amp; International Content of the service Centre Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re or asphalt/fill/granular for net erify and refer to electrical dr ng power operated gate, coor with underground ducts. ransformer and pad to be re natch existing. Refer to electrical international coordinate with ower generated gate, to end international coordinate with ower generated gate, coor with underground ducts. ransformer and pad to be re natch existing. Refer to electricated intergency exits, refer to spect werify and coordinate with ower generated doors a mergency exits, refer to spect werify and coordinate with ower for Niagara Falls with 10 bus starting in areas where staff</td> <td>Route new epair w work. rawings ordinate moved and drawings g, and s. mer) pment s siness days f may have to</td> <td>Existing Storage &amp; Bays</td> <td>A687 TEL WEB EMAI DATE: 2/26/2021 A RO SCALE:</td> <td>ACHITECIS INC. ACCOUNT OF A SSOCIATES ACCHITECIS INC. ACCHITECIS INC.</td>	ioning rd	R-VALUE FIRE RATING STC RATING ULC LISTING Ex. R-VALUE FIRE RATING 2 STC RATING ULC LISTING W1 R-VALUE FIRE RATING 2 STC RATING 2 STC RATING 2 STC RATING ULC LISTING W2 R-VALUE FIRE RATING 2 STC RATING	(Site verify)         Existing 7-1/2" concrete block to rerito maintain fire rating. (site verify)         Block filer, paint and high glazed or owner.         Refer to spec's & room finish scheet         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block to match fire rating. (site verify)         Block filer, paint and high glazed or owner.         Refer to spec's & room finish scheet         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block         Refer to structural drawings         (OBC SB-2 T-2.1.1)         New 7-1/2" concrete block         Refer to structural drawings         Block filer, paint and high glazed or owner.         Refer to structural drawings         Block filer, paint and high glazed or owner.         Refer to spec's & room finish scheet         (OBC SB-2 T-2.1.1)         New vertical pre-finished metal sidir (provide sample for approval)         -8" metal studs at 24" o/c fill w/3" (File insulation         -1/2" cement board         Note:         Match existing construction, site verify         Refer to structural drawings.         Refer to structural drawings.         Refer to structural drawings.	main, patch and repai coating, colour TBD by edule for locations n existing and maintain coating, colour TBD by edule for locations coating, colour TBD by edule for locations adule for locations	R-VALUE       3/4         FIRE RATING       3/4         STC RATING       ULC LISTING         ULC LISTING       5/8" type         Y       STC RATING         Y       STC RATING         Image: Stream of the strea	enstruction to match exist rify) be x gypsum board metal studs at 16" o/c fil be x gypsum board t prime plus 2 coats of p to spec's & room finish pe x gypsum board metal studs at 16" o/c fi pe x gypsum board at prime plus 2 coats of p r to spec's & room finish de P.Eng shop drawings artition in existing location pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board al studs at 16" o/c fill w/ pe x gypsum board at prime plus 2 coats of p r to spec's & room finish de P.Eng shop drawings	isting II w/stone wool insulation paint, colour TBD by owner a schedule for locations ill w/stone wool insulation paint, colour TBD by owner a schedule for locations is with seismic reinforcement) ion, refer to floor plan notes /stone wool insulation paint, colour TBD by owner a schedule for locations is with seismic reinforcement) is with seismic reinforcement)	New ele. tr refer to ele New gene to ele	te Plan	AF ele existi Site v Existi Ex. elec. infill to Af cool en (site NOTE: Provide City prior to work	Existing Truck Was Small Engine & Small Engine & International Content of the service Centre Existing Service Centre Existing Fire I PROX. location of trench for ctrical services, patch and re or asphalt/fill/granular for net erify and refer to electrical dr ng power operated gate, coor with underground ducts. ransformer and pad to be re natch existing. Refer to electrical international coordinate with ower generated gate, to end international coordinate with ower generated gate, coor with underground ducts. ransformer and pad to be re natch existing. Refer to electricated intergency exits, refer to spect werify and coordinate with ower generated doors a mergency exits, refer to spect werify and coordinate with ower for Niagara Falls with 10 bus starting in areas where staff	Route new epair w work. rawings ordinate moved and drawings g, and s. mer) pment s siness days f may have to	Existing Storage & Bays	A687 TEL WEB EMAI DATE: 2/26/2021 A RO SCALE:	ACHITECIS INC. ACCOUNT OF A SSOCIATES ACCHITECIS INC. ACCHITECIS INC.

#	Pound OR Number
&	And
ACT	Acoustic Ceiling Tile
AD	Area Drain
AFF	Above Finished Floor
ALUM	Aluminum
	Anodized
BSMT	Basement
	Beyond
BOT	Bottom
	Cost In Disco
	Class III Place
	Channel
CJ	Control Joint
CLG	Ceiling
CLR	Clear
CMU	Concrete Masonry Unit
COL	Column
COMPR	Compressible
CONC	Concrete
CONT	Continuous
CT	Ceramic Tile
CTYD	Courtyard
DBL	Double
DEMO	Demolish or Demolition
DIA	Diameter
DIM	Dimension
DIMS	Dimensions
DN	Down
DR	Door
DWG	Drawing
EA	Each
EJ	Expansion Joint
EL	Elevation
FLFC	Flectrical
FI FV	Elevator or Elevation
FPDM	Ethylene Pronylene Diene M_Class (Roofing)
	Eurylene Propylene Diene M-Class (Robining)
	Equal Eviating
	Existing
EXPJI	Expansion Joint
	Exterior
FD	Floor Drain or Fire Department
FEC	Fire Extinguisher Cabinet
	Fixture
FLR	Floor
FO	Face Of
FND	Foundation
GA	Gauge
GALV	Galvanized
GWB	Gypsum Wall Board
HC	Hollow Core
HI	High
HM	Hollow Metal
HP	High Point
HR	Hour
HVAC	Heating, Ventilating, And Air Conditioning
IRGWB	Impact Resistant Gypsum Wall Board
ILO	In Lieu Of
INSUL	Insulated or Insulation
INT	Interior
LO	Low
MAX	Maximum
MO	Masonry Opening
MECH	Mechanical
MEMBR	Membrane
MIN	Minimum
MRGWB	Moisture-Resistant Gypsum Wall Board
MTI	Metal
NIC	Not In Contract
NO	Number
NOM	Nominal
00	On Center
OH	Opposite Hand
07	Ounce
PCC	Pre-Cast Concrete
PLUMR	Plumbing
	Plywood
PT	Pressure Treated
PNT	Paint or Painted
	Polyvinyl Chlorido
PBP	Rubber
	Reflected Ceiling Plan
RD	Roof Drain
	Required
RM	Room
SIM	Similar
SPEC	Specified OR Specification
	Sprinkler or Speakor
90 IX 901	Stainlass Steel
STC	Sound Transmission Coofficient
STC STI	
SIL	Structure or Structurel
	Tongue Ana Groove
	Top Of Steel
105	
	I ollet Paper Dispenser
	i elepnone/Data
IYP	I ypical
UNU	Unless Noted Otherwise
U/S	
	veniy in Field
VV/	vvitn

FL1a	- 3 1/2" concrete - 1 1/2" metal decking	C01		5/8" type x gypsum board 7/8" furring chappel
	- 3/4 hour intumescent paint, refer to spec's			5/8" type x gypsum board
	Refer to structural drawings.		· · · · ·	- 1 cost prime plus 2 costs of paint, colour TBD by owner
				- Refer to spec's & room finish schedule for locations
R-VALUE	_	R-VALUE		-
FIRE RATING 3/4	-	FIRE RATING	6 1 HR	-
ULC LISTING	-	ULC LISTING		(OBC SB-2 TABLE 2.3.12)
Floor Type Leger	nd	Ceiling	Type Lege	end
Ex.	Existing construction to remain, patch and repair as required, report any issues to architect.	Ex.		Existing construction to remain, patch and repair as required and maintain fire rating. Report any issues to architect (site verify)
	<ul> <li>- 1 coat prime plus 2 coats of paint, colour TBD by owner</li> <li>- Refer to spec's &amp; room finish schedule for locations</li> </ul>			- 1 coat prime plus 2 coats of paint, colour TBD by owner - Refer to spec's & room finish schedule for locations
	(site verity)			
		R-VALUE	2/4	-
STC RATING		STC RATING	5 5/4	_
	Existing 7-1/2" concrete block to remain patch and repair	P01	i	New construction to match existing
	to maintain fire rating. (site verify)			(site verify)
	- Block filer, paint and high glazed coating, colour TBD by owner. - Refer to spec's & room finish schedule for locations		·····	5/8" type x gypsum board 3 5/8" metal studs at 16" o/c fill w/stone wool insulation 5/8" type x gypsum board
				- 1 coat prime plus 2 coats of paint, colour TBD by owner
R-VALUE	(OBC SB-2 1-2.1.1)	R-VALUE		- Refer to spec's & room finish schedule for locations
STC RATING 2		STC RATING	3/4	_
ULC LISTING	Now 7.1/2" concrete block to match existing and maintain	ULC LISTING	W407	E/8" type x gypeym beard
	fire rating. (site verify)			3 5/8" metal studs at 16" o/c fill w/stone wool insulation 5/8" type x gypsum board
	- Block filer, paint and high glazed coating, colour TBD by	P		- 1 coat prime plus 2 coats of paint colour TBD by owner
	- Refer to spec's & room finish schedule for locations			- Refer to spec's & room finish schedule for locations
	Refer to structural drawings			(provide P.Eng shop drawings with seismic reinforcement)
R-VALUE	(OBC SB-2 T-2.1.1)	R-VALUE	1	Note:
STC RATING	-	STC RATING		
W2	New 7-1/2" concrete block	P03	VV407	5/8" type x gypsum board
	Refer to structural drawings			6" metal studs at 16" o/c fill w/stone wool insulation 5/8" type x gypsum board
	- Block filer, paint and high glazed coating, colour TBD by owner.			- 1 coat prime plus 2 coats of paint, colour TBD by owner - Refer to spec's & room finish schedule for locations
	- Refer to spec's & room finish schedule for locations			(provide P.Eng shop drawings with seismic reinforcement)
R-VALUE	(OBC SB-2 T-2.1.1)	R-VALUE		
FIRE RATING 2 STC RATING	_	FIRE RATING	6 1 	-
		ULC LISTING	W453	
CAA	New vertical pre-finished metal siding to match existing. (provide sample for approval)			
	insulation - 1/2" cement board			
	Note:			
	Match existing construction, site verify			
R-VALUE FIRE RATING	Refer to structural drawings. Refer to spec's			
STC RATING	_			
		<b>_</b>		



Item         Ontario Building Code Data Matrix Parts 3 & 9         Ontario Building Code Reference           1         Project Desorption         □ Addition         □ Part 11         □ IPart 3         □ Part 9           1         0         □ Addition         □ Part 11         □ IPart 3         □ Part 9           1         1.12 [A]         9.10.13         9.10.13         9.10.13           2         Major Concurrence 1         3.12 [A]         9.10.2         9.10.2           3         Building Area (m²)         Existing 2.972         Nomber of Streep A how Crade: 2         3.22.10.8 3.2.5         9.10.2           5         Number of Streep A how Crade: 2         Balow Grade: 0         1.4.1.2 [A]	Proj	ect Name								
1.       Project Description       □ New □ Addition □ Addition □ Addition       ■ Part 11       □ Part 3       □ Part 9         2.       Major Occupancy(s) F2 - Sarvice Centre Addition       11.1 to 11.4       11.2 [A]       11.2 [A]       11.2 [A]         3.       Building Aram (m)       Existing 2.072       New: Totals 2.072       14.1.2 [A]       14.1.2 [A]       14.1.2 [A]         4.       Gross Area (m)       Existing 2.072       New: Totals 4.73.4       14.1.2 [A]       14.1.2 [A]       14.1.2 [A]         5.       Number of Streets / Fire Fighter Access: 2       3.2.2.10 & 3.2.5       9.10.2         7.       Building Advance       □ Diverse Mode and the Advance       9.10.8.2       3.2.1.6       3.2.2.6       3.2.1.6       3.2.1.6       3.2.1.6       3.2.2.6       3.4       9.10.6       3.2.2.6       3.4       9.10.6       3.2.2.6       3.4       9.10.6       3.2.2.6       3.4       3.2.2.6       3.4       3.2.2.	Item	Ontario B	uilding Code Data	Matrix Pa	arts 3 & 9		Ontario	Building (	Code	Reference
□Change of U         □Addition         11.1 to 11.4         1.12 [A]         1.11 [A] <td>1.</td> <td>Project Descri</td> <td>iption</td> <td>□New</td> <td>■ Pa</td> <td>rt 11</td> <td>□ Part 3</td> <td></td> <td>□Part</td> <td></td>	1.	Project Descri	iption	□New	■ Pa	rt 11	□ Part 3		□Part	
2.         Major Occupancy(i)         F2 - Service Centre         3.12.1(1)         9.102           3.         Building Area (m)         Existing: 2972         Number of Storeys         Advance (m)         Existing: 422         New: 51.4         Total: 2972         1.4.12 [A]         1.4.12 [A]         1.4.12 [A]           6.         Number of Storeys         Above Grade: 2         Balow Grade: 0         1.4.12 [A] & 5.2.1.1         1.5.1         1.4.12 [A			□ Change of Use	□ Addition □ Alteration	า 11.	1 to 11.4	1.1.2 [A]		1.1.2 9.10.	2 [A] .1.3
3. Building Area (m*)       Existing: 2972       14.12 [A]       14.12 [A]         4. Gross Area (m*)       Existing: 227       Number of Storeys       Above Grade: 2       Below Grade: 0       14.12 [A]       14.12 [A]         5. Number of Storeys       Above Grade: 2       Below Grade: 0       14.12 [A]       14.12 [A]       14.12 [A]         6. Number of Storeys       Above Grade: 2       Below Grade: 0       14.12 [A]       14.12 [A]       14.12 [A]         8. Sprinkler System Proposed:       Existing Building (For Insurance Purposed)       3.22 20-83       9.10.2         9. Standpipe Required:       TYSE INC Required       NDEX       NDEX         9. Standpipe Required:       TYSE INC Combustible INON Combustible Both       3.22 0.7       NIA         11. Water Service/Supply is Adequate.       TYSE INO       3.25.7       NIA         12. High Building:       TYSE INO       3.26.8       NIA         13. Permitted Construction: L Combustible INON Combustible Both       3.22.0.83       9.10.6         14.12 [A]       Mater Service/Supply is Adequate.       TYSE INO       3.22.7       NIA         14.12 [A]       Mater Service/Supply is Adequate.       TYSE INO       3.2.2.7       NIA         12. High Building:       TYSE INO       3.2.2.7       NIA <t< td=""><td>2.</td><td>Major Occupa</td><td>ancy(s) F2 - Service C</td><td>entre</td><td></td><td></td><td>3.1.2.1.(1)</td><td></td><td>9.10.</td><td>.2</td></t<>	2.	Major Occupa	ancy(s) F2 - Service C	entre			3.1.2.1.(1)		9.10.	.2
4. Gross Area (m)         Existing: 422         New: 51.4         Total: 473.4         1.4.1.2 [A]         1.4.1.2 [A]         1.4.1.2 [A]         1.4.1.2 [A]         1.4.1.2 [A]         5.0           5. Number of Streets / Fire Fighter Access: 2         3.2.2.10.8.3.2.5         3.2.2.10.8.3.2.5         3.2.2.2.0.8.3         9.10.2           8. Sprinkler System Proposed:         Elefter Building (For Insurance Purposes)         3.2.2.20.8.3         9.10.8.2           9. Standpipe Required:         UPSs ement Only         3.2.2.9         N/A         N/A           9. Standpipe Required:         UPSs ement Only         3.2.2.7         N/A           10. Fire Alarm Required:         UPSs ement Only         3.2.2.7         N/A           11. Water Service/Supply is Adequate:         Ves INO         3.2.4         9.10.16           11. Water Service/Supply is Adequate:         Ves INO         3.2.6         N/A           12. High Building:         Low = Normal THigh IPost-disaster         5.2.2.1(2)         5.2.5.1(2)           5.16 Class (A.B.C.D.E from Geotechnical Report)         D         4.18.4.4.18.5.         T.4.18.4.8           5.56 Stace (A.B.C.D.E from Geotechnical Report)         D         4.18.4.10.8 SB-1.1.4.18.4.8         1.1.8.5.           5.62 Class (A.B.C.D.E from Geotechnical Report)         D         4.1.8.4.10.8 SB-1.1	3.	Building Area	(m <sup>2</sup> ) Existing: 2,972	New:	Total: 2	,972	1.4.1.2 [A]		1.4.1	.2 [A]
5.         Number of Storeys / Above Grade: 2         Below Grade: 0         1.4.12 [A] & 3.2.1.1         1.4.12 [A] & 3.2.1.1           6.         Number of Storeys / Fire Fighter Access: 2         3.2.2.10 & 3.2.5         3.2.2.0.83         9.10.2           7.         Building Classification: Existing 11.2.1.1(3)         3.2.2.0.83         9.10.2         9.10.2           8.         Sprinkler System Proposed:         □Entime Building (For Insurance Purpose)         3.2.2.1.1         3.2.2.1.5         3.2.2.1.7           8.         Standpipe Required:         Ures INO         3.2.2.7         NIA         10.0           10.         Fire Alarm Required:         Ures INO         3.2.2.7         NIA         10.1           11.         Water Service/Supply is Adequate: If Yes E No         3.2.6         N/A         3.2.5.7           11.         Water Service/Supply is Adequate: If Yes E No         3.2.2.0.83         9.10.6           12.         High Building:         Ures INO         3.2.2.1.2         5.2.5.1.(2)           13.         Permited Construction:         Combustble INOn-Combustble IBoth         3.2.2.0.43         9.10.6           14.1         High Building:         Ures INO         3.2.2.1.2         5.5.2.1.(2)         5.5.1.(2)           14.1         High ID Alartis INO	4.	Gross Area (ı	m²) Existing: 422	New: 51.4	Total: 4	73.4	1.4.1.2 [A]		1.4.1	.2 [A]
6.         Number of Stroats / Fire Fighter Access: 2         3.2.2.10 8.3.2.5           7.         Building Classification: Existing 11.2.1.1(3)         3.2.2.0.83         9.10.2           8.         Sprinkler System Proposed: Elassement Only Elassement Only Elassemation = Construction elaster Only Elassement Only	5.	Number of St	oreys Above Grade:	2	Below Grad	de: 0	1.4.1.2 [A]	& 3.2.1.1	1.4.1	.2 [A] & 9.10.4
7.       Building Classification: Existing 11.2.1.(3)       3.2.2.2083       9.10.2         8.       Sprinkler System Proposed:       Entire Building (For Insurance Purposes) Diff Level of Roof Rating Not Required:       3.2.2.17       INDEX         9.       Standpipe Required:       Ures No       3.2.1.7       INDEX         9.       Standpipe Required:       Ures No       3.2.1.7       INDEX         9.       Standpipe Required:       Ures No       3.2.5.7       N/A         10.       Fire Alarm Required:       Ves No       3.2.6       NA         11.       Water Service/Supply is Adequate:       Ves No       3.2.6       NA         12.       High Building:       Ures No       3.2.6       NA         13.       Permitted Construction:       Combustible Non-Combustible Both Actual Construction:       3.2.2.70       N/A         14.       Importance Category:       Low Non-Combustible Both Actual Construction:       4.18.4.1       4.18.4.         5% Spectral Response Acceleration S(0.2)       .1.0       T.4.1.8.5       T.4.1.8.5         5% Spectral Response Acceleration S(0.2)       .1.12       T.1.2       T.1.2         16.       Barrier-Free Design:       Ures Site Of Sec.0.2)       0.3.1.2.8.3.1.19       9.1.3.2.2.1.4       9.1.3.4.10.2.	6.	Number of St	reets / Fire Fighter Acc	ess: 2			3.2.2.10 &	3.2.5		
8.       Sprinkler System Proposed:       □Entire Building (For Insurance Purposes) □In Lieu of Roof Rating In Roof Rating IND Required       3.2.2.0-33 3.2.17 INDEX       9.10.8.2         9.       Standpipe Required:       □Yes <in0< td="">       3.2.4       N/A         10.       Fire Alarm Required:       □Yes<in0< td="">       3.2.4       9.10.8         11.       Water Service/Supply is Adequate:       IYes<in0< td="">       3.2.4       9.10.8         11.       Water Service/Supply is Adequate:       IYes<in0< td="">       3.2.6       N/A         12.       High Building:       □Yes<in0< td="">       3.2.6       N/A         13.       Permitted Constructor:       □Combustible □Both Actual Constructor:       3.2.1       9.10.6         14.       Importance Category:       □Low<inno-combustible □both<br="">Actual Constructor:       9.4.11.4.1.2.1(3)       5.2.1.(2)         15.       Stec Class (A,B,C,D,E from Geotechnical Report)      </inno-combustible></in0<></in0<></in0<></in0<></in0<>	7.	Building Clas	sification: Existing 11.2	.1.1(3)			3.2.2.20	83	9.10.	.2
9.         Standpipe Required:         Visit No         3.2.9         N/A           10.         Fire Alarm Required:         • Yes ■No         3.2.4         9.10.18           11.         Water Service/Supply is Adequate:         • Yes ■No         3.2.6         N/A           12.         High Building:         ○res ■No         3.2.6         N/A           13.         Permitted Construction:         ○combustible ■Non-Combustible ■Both Actual Construction:         0.10.8         4.1.2.1.(3)         9.4.1.1, 4.1.2.1.(3)           14.         Importance Category:         Low ■Normal ■High Post-disaster         4.1.2.1.(3)         9.4.1.1, 4.1.2.1.(3)           15.         Category:         Low ■Normal ■High Post-disaster         4.1.8.4.1         4.1.8.4.1           16.         Spectral Response Acceleration Sa, (0.2)         _321         4.1.8.4.1         8.5           17.         High Exponse Acceleration Sa, (0.2)         _321         4.1.8.4.1         8.5           17.         Toble 4.1.1.18.         EF a Sa (0.2) = 0.36         4.1.8.18.(1)         4.1.8.18.(2)         9.1.3           17.         Table 4.1.1.18.         Er a Sa (0.2) = 0.36         4.1.8.18.(2)         9.1.3         9.1.6.2.(3)           16.         Barrier-Free Design:         ●Yes ■No         Not Req	8.	Sprinkler Sys	tem Proposed:	∃Entire Buildir ∃Basement O ∃In Lieu of Ro ∎Not Required	ng (For Insu nly of Rating d	rance Purposes)	3.2.2.208 3.2.1.5 3.2.2.17 INDEX	33	9.10. INDF	.8.2 =x
Control         District	9	Standnine Re	auired:	Yes ∎No	<u> </u>		329		N/A	
International and the service of the servic	0. 10	Fire Alarm Re	equired:	IYes □No			324		9 10	18
Instruction         Instruction:         Instruction: </td <td>11</td> <td>Water Service</td> <td>e/Supply is Adequate</td> <td>Yes □No</td> <td></td> <td></td> <td>3.2.5.7</td> <td></td> <td>N/A</td> <td></td>	11	Water Service	e/Supply is Adequate	Yes □No			3.2.5.7		N/A	
Number         Openation         O	12	High Building	·	Yes ∎No			326		N/A	
14.       Importance Category.       □Low ■Normal □High □Post-disaster       4.12.1(3) 5.22.1(2)       9.4.1.1.4.1.2.1(3) 5.22.1(2)         Site Class (A,B,C,D,E from Geotechnical Report)	13.	Permitted Co Actual Constr	nstruction: □Combustil ruction: □Combustil	ole □Non-Co ole ■Non-Co	mbustible	Both Both	3.2.2.20-8	3	9.10.	.6
Site Class (A,B,C,D,E from Geotechnical Report)         D         4.18.4.         4.18.4.         4.18.4.           Earthquake Importance Factor (le)         1.0         T.4.1.8.5.         T.4.1.8.5.         T.4.1.8.5.           Acceleration Based Coefficient (F <sub>o</sub> )         1.135         T.4.1.8.4.8         T.4.1.8.4.8         T.4.1.8.4.8           5% Spectral Response Acceleration S <sub>n</sub> (0.2)         .321         4.18.4.(1) & SB-1, T.1.2         T.1.2         T.1.2           Seismic Hazard Index         IE Fa Sa (0.2) = 0.36         4.1.8.18.(1)         4.1.8.1(1) & SB-1, T.1.2         4.1.8.1(2)         9.31.6.2(3)           15.         Occupant Load Based on:         Im <sup>7</sup> /person         Design of Building TOTAL         4.1.8.18.(2)         3.1.17.1         9.5.1.3           16.         Barrier-Free Design:         Im Ves         No (Not Required)         3.8         1.1.3.6.4(1) & SB-2(3)           17.         Hazardous Substances:         Im Ves         No (Not Required)         3.8         3.2.2.2.0-83         9.5.2         9.10.13 (4)         9.10.3           18.         Required Fire Resistance Rating         Hoizontal Assemblies Inform 3/4 Hours         Listed Design No. or Description (SG-2)         3.2.2.2.0-83         9.5.2         9.10.13 (4)         9.10.8           19.         Spatial Separation - Construction of Exterior	14.	Importance C	ategory: □Low ■No	ormal ⊟High	⊡Post-disa	aster	4.1.2.1.(3) 5.2.2.1.(2)		9.4.1 5.2.5	.1, 4.1.2.1.(3) 5.1.(2)
Earthquake Importance Factor (lg)         1.0         T4.1.8.5.         T.4.1.8.5.         T.4.1.8.5.           Acceleration Based Coefficient (F <sub>0</sub> )         1.135         T.4.1.8.4.B         T.4.1.8.4.B         T.4.1.8.4.B           5% Spectral Response Acceleration S <sub>a</sub> (0.2)         .321         4.1.8.4.(1) & SB-1, T.1.2         T.1.2         T.1.2           Seismic Hazard Index         IE Fa Sa (0.2) = 0.36         4.1.8.18.(1)         4.1.8.18.(2)         4.1.8.18.(2)           Design for Seismic Required for Categories 6 to 21. Table 4.1.1.18. (Equal or Above 0.357) (Yes or No)         Yes         4.1.8.18.(2)         4.1.8.18.(2)           50. Occupant Load Based on:         Im <sup>37</sup> /Person         Deersons TOTAL         Mezz.         Occupancy: F2         Load: 20         persons           10.         Barrier-Free Design:         Yes         No (Not Required)         3.8         3.1.17.1         9.9.1.3           18.         Required Resistance Rating (FRR)         Horzontal Assemblies         Listed Design No. or Description (SG-2)         3.2.2.20 - 83         3.2.1.4         9.10.1.3 (4)           9.10.9         First Floor         Non- construction of Exterior Walls         3.2.3         9.10.1.3 (4)           9.10.1.3 (4)         9.10.3         Non- construction of Exterior Walls         3.2.3         9.10.1.4           19. </td <td></td> <td>Site Class (A</td> <td>B,C,D,E from Geotech</td> <td>nical Report)</td> <td>D</td> <td></td> <td>4.1.8.4.</td> <td></td> <td>4.1.8</td> <td>8.4.</td>		Site Class (A	B,C,D,E from Geotech	nical Report)	D		4.1.8.4.		4.1.8	8.4.
Acceleration Based Coefficient (F <sub>a</sub> )         1.135         T4.1.8.4.B         T4.1.8.4.B           5% Spectral Response Acceleration S <sub>a</sub> (0.2)        321         4.1.8.4.(1) & SB-1, T.1.2         1.1.2           Seismic Hazard Index         IE Fa Sa (0.2) = 0.36         4.1.8.18.(1)         4.1.8.4.(1) & SB-1, T.1.2           Design for Seismic Required for Categories 6 to 21.         Yes         4.1.8.18.(1)         4.1.8.18.(1)           Design for Seismic Required for Categories 6 to 21.         Yes         4.1.8.18.(2)         4.1.8.18.(2)           TOTAL         Mezz         Occupancy: F2         Load: 100 persons         3.1.17         9.5.1.3           16.         Barrier-Free Design:         Impreson         Occupancy: F2         Load: 20 persons         3.8         3.1.12 & 3.3.1.19           17.         Hazardous Substances:         Impreson         Occupancy: F2         Load: 20 persons         3.2.2 20 - 83         3.2.2 4         9.10.1.3 (4)           18.         Required Resistance Resistance Resistance Resistance Roof         Indurs         Listed Design No. or Description (SG-2)         3.2.3         9.10.1.3 (4)         9.10.3           19.         Spatial Separation - Construction of Exterior Walls         3.2.3         9.10.14         Sonc           19.         Spatial Separation - Construction of Exterior Walls		Earthquake li	mportance Factor (I <sub>E</sub> )		1.0		T.4.1.8.5.		T.4.1	.8.5.
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Acceleration	Based Coefficient (F <sub>a</sub> )		1.135		T.4.1.8.4.E	3	T.4.1	.8.4.B
Seismic Hazard Index         IE Fa Sa (0.2) = 0.36         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 0.35?) (Yes or No)         Yes         4.1.8.18.(2)         4.1.8.18.(2)         4.1.8.18.(2)         9.31.6.2.(3)           15.         Occupant Load Based on:         m <sup>2</sup> /person         Design of Building         3.1.17.1         9.9.1.3           16.         Barrier-Free Design:         Ves         No (Not Required)         3.8         3.8           17.         Hazardous Substances:         IYes         No (Not Required)         3.8         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 (S.2.1.4         9.10.3 (S.2.20 - 83 (S.2.1.4)         9.10.4 (S.3.2.1.4)           19.         Spatial Separation - Construction of Exterior Walls         SB-2 / Existing         S.2.1 A         9.10.14           19.         Spatial Separation - Construction of Exterior Walls         SB-2 / Existing         Comb. Constr. Nonc.         Non-comb. Constr.           19.         Spatial Separation - Construction of Exterior Walls         S2.23         9.10.14           19.         Spatial Separation - Construction of Exterior Walls         S2.3         9.10.14 <td></td> <td>5% Spectral I</td> <td>Response Acceleration I<sub>E</sub> F<sub>a</sub> S<sub>a</sub> (0.2</td> <td>S<sub>a</sub> (0.2) = 0.41</td> <td>321_</td> <td></td> <td>4.1.8.4.(1) T.1.2</td> <td>&amp; SB-1,</td> <td>4.1.8 T.1.2</td> <td>8.4.(1) &amp; SB-1, 2</td>		5% Spectral I	Response Acceleration I <sub>E</sub> F <sub>a</sub> S <sub>a</sub> (0.2	S <sub>a</sub> (0.2) = 0.41	321_		4.1.8.4.(1) T.1.2	& SB-1,	4.1.8 T.1.2	8.4.(1) & SB-1, 2
Design for Seismic Required for Categories 6 to 21. Table 4.1.1.18. (Equal or Above 0.35?) (Yes or No)         4.1.8.18.(2)         4.1.8.18.(2)         4.1.8.18.(2)         4.1.8.18.(2)         9.9.1.3           15.         Occupant Load Based on: TOTAL         Im?/person         IDesign of Building         3.1.17.1         9.9.1.3           16.         Barrier-Free Design: TOTAL         Mezz.         Occupancy: F2         Load: 100         persons         3.8         1.1.118         9.9.1.3           16.         Barrier-Free Design:         IVes INN (Not Required)         3.8         3.8         9.9.1.3           17.         Hazardous Substances:         IVes INN (Not Required)         3.8         3.2.2.20 - 83         9.5.2         9.10.1.3 (4)         9.10.8           Required Fire Resistance Rating (FRR)         Horizontal Assemblies         Listed Design No. or Description (SG-2)         3.2.2.20 - 83         8.3.2.1.4         9.10.8         9.10.8           Image: Free for Supporting (FRR)         FRR of Supporting Roof         Listed Design No. or Description (SG-2)         3.2.3         9.10.14         9.10.4           Image: Free for Supporting (FRR)         Free for Supporting Roof         Listed Design No. or Description         3.2.3         9.10.14           Image: Free for molecular distance (m <sup>2</sup> )         Hours         SB-2 / Existing         3.		Seismic Haza	ard Index	IE Fa Sa (0.2	2) = 0.36		4.1.8.18.(*	1)	4.1.8	3.18.(1)
15.       Occupant Load Based on:       Im <sup>2</sup> /person       IDesign of Building       3.1.17.1       9.9.1.3         16.       Barrier-Free Design:       IVes       No (Not Required)       3.8       3.8         17.       Hazardous Substances:       IVes       No (Not Required)       3.3.1.2 & 3.3.1.19       9.5.2         18.       Required Resistance Rating (FRR)       Horizontal Assemblies FRR (Hours)       Listed Design No. or Description (SG-2)       3.2.2.20 - 83       9.5.2         10.1.3 (4)       9.10.13 (4)       9.10.13 (4)       9.10.8       9.10.8       9.10.8         18.       Registance Rating (FRR)       FIR of Supporting Members       Listed Design No. or Description (SG-2)       3.2.2.0 - 83       9.10.13 (4)         19.10.9       File Resistance       File Resistance       File Resistance       9.10.13 (4)         10.9       File Resistance       File Resistance       SB-2 / Existing       3.2.3       9.10.14         19.       Spatial Separation - Construction of Exterior Walls       SB-2 / Existing       3.2.3       9.10.14         19.       Spatial Separation - Construction of Exterior Walls       SB-2 / Existing       Comb       Constr. Non-comb       Non-comb         19.       NE       -       -       -       -       -		Design for Se Table 4.1.1.1	eismic Required for Cate 8. (Equal or Above 0.35	egories 6 to 2 ?) (Yes or No	1. <u>Yes</u> )		4.1.8.18.(2	2)	4.1.8 9.31.	.18.(2), 9.20.1.2 6.2.(3)
First Floor TOTAL         Occupancy: F2 Mezz.         Load: 100 Occupancy: F2 Load: 20         persons           16.         Barrier-Free Design:              • Yes             • No (Not Required)          3.8           17.         Hazardous Subtances:              • Yes             • No             (Not Required)          3.8           18.         Required Resistance Rating (FRR)         Horizontal Assemblies FIR (Hours)         Listed Design No. or Description (SG-2)         3.2.2.20 - 83 8.3.2.1.4         9.5.2 9.10.1.3 (4)           18.         Required Resistance Rating (FRR)         Horizontal Assemblies FIR (Hours)         Listed Design No. or Description (SG-2)         3.2.2.20 - 83 8.3.2.1.4         9.10.1.3 (4)           19.         Nor         Nor         Mezzanine 3/4         Hours         ULC W407 / Existing Members         SB-2 / Existing           19.         Spatial Separation - Construction of Exterior Walls         SB-2 / Existing         3.2.3         9.10.14           19.         Spatial Separation - Construction of Exterior Walls         SB-2 / Existing         Comb         Constr.         Non-comb- Constr.           19.         Spatial Separation - Construction of Exterior Walls         SB-2 / Existing         Comb         Constr.         Non-constr.           19.         Mezanine 3/4         Hours         SB-2 / Existing	15.	Occupant Loa	ad Based on:	]m²/person	□Desig	n of Building	3.1.17.1		9.9.1	.3
16.       Barrier-Free Design:       ■Yes □No (Not Required)       3.8         17.       Hazardous Substances:       □Yes ■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)         18.       Required Fire Resistance Rating (FRR)       Horizontal Assemblies FRR (Hours)       SB-2 / Existing       3.2.2.20 - 83 & 3.2.1.4       9.10.1.3 (4)         19.       FRR of Supporting Members       Listed Design No. or Description (SG-2)       9.10.14       9.10.8         19.       Spatial Separation – Construction of Exterior Walls       SB-2 / Existing       3.2.3       9.10.14         19.       Spatial Separation – Construction of Exterior Walls       SB-2 / Existing       3.2.3       9.10.14         19.       Spatial Separation – Construction of Exterior Walls       SB-2 / Existing       3.2.3       9.10.14         19.       Math       Area EBF (m <sup>2</sup> )       L.D. H/H       Permitted Max.% of Comb Const       FRR (Hours)       Comb Description       Comb Constr.       Non-comb- Constr.         NR       -       -       -       0       -       -       -       -         19.       Spatial Separation –        -		Fir TOTAL Me	st Floor Occupa ezz. Occupa	ncy: F2 Loa ncy: F2 Loa	ad: 100 pe ad: 20 pe	ersons ersons				
17.       Hazardous Substances:       □Yes       No       3.3.1.2 & 3.3.1.19         18.       Required Fire Resistance Resistance (FRR)       Horizontal Assemblies FRR (Hours)       Listed Design No. or Description (SG-2)       3.2.2.20 - 83 & 3.2.1.4       9.5.2         Floors       3/4       Hours       SB-2 / Existing       3.2.2.20 - 83 & 3.2.1.4       9.10.1.3 (4)         Roof       n/a       Hours       SB-2 / Existing       3.2.2.20 - 83 & 3.2.1.4       9.10.1.3 (4)         Floors       3/4       Hours       SB-2 / Existing       3.2.2.20 - 83 & 3.2.1.4       9.10.1.3 (4)         Floors       3/4       Hours       SB-2 / Existing       9.10.8       9.10.9         FRR of Supporting Members       Listed Design No. or Description (SG-2)       9.10.14       9.10.9         19.       Spatial Separation - Construction of Exterior Walls       SB-2 / Existing       3.2.3       9.10.14         19.       Spatial Area of (m?)       L/L of (m?)       Proposed Max. % of Openings       FRR (Hours)       Listed Design or Description       Comb. Constr. Nonc.       Nonc. Constr.         Net       -       -       -       0       -       -       -       -         NW       -       -       -       0       -       -       - <td>16.</td> <td>Barrier-Free I</td> <td>Design:</td> <td>Yes ⊡No (N</td> <td>lot Required</td> <td>1)</td> <td>3.8</td> <td></td> <td></td> <td></td>	16.	Barrier-Free I	Design:	Yes ⊡No (N	lot Required	1)	3.8			
Name         Required Fire Resistance Rating (FRR)         Horizontal Assemblies FRR (Hours)         Listed Design No. or Description (SG-2)         3.2.2.20 - 83         9.5.2         9.10.1.3 (4)         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.8         9.10.9         9.10.8         9.10.9         9.10.8         9.10.9         9.10.8         9.10.9         9.10.8         9.10.9         9.10.8         9.10.9         9.10.8         9.10.9         9.10.9         9.10.9         9.10.8         9.10.9         9.10.13         9.10.13         9.10.13         9.10.13         9.10.9         9.10.9         9.10.9         9.10.9         9.10.9         9.10.9 <t< td=""><td>17.</td><td>Hazardous S</td><td>ubstances:</td><td>∃Yes ∎No</td><td></td><td></td><td>3.3.1.2 &amp; 3</td><td>3.3.1.19</td><td></td><td></td></t<>	17.	Hazardous S	ubstances:	∃Yes ∎No			3.3.1.2 & 3	3.3.1.19		
Rating (FRR)         Floors         3/4         Hours         SB-2 / Existing           Roof         n/a         Hours         ULC W407 / Existing         9.10.8         9.10.9           Mezzanine         3/4         Hours         ULC W407 / Existing         Exist d Design No. or Description (SG-2)         9.10.9           FRR of Supporting Members         Listed Design No. or Description (SG-2)         Floors         3/4         Hours         SB-2 / Existing           19.         Spatial Separation – Construction of Exterior Walls         SB-2 / Existing         3.2.3         9.10.14           19.         Spatial Area Of EBF (m <sup>2</sup> )         L.D.         L/H         Permitted Max. % of Openings         Proposed % of Openings         FRR (Hours)         Listed Design or Description         Comb Constr.         Non-comb- Nonc.           NR         -         -         -         0         -         -         -           NW         -         -         -         0         -         -         -         -           SU         -         -         0         -         -         -         -         -         -         -           9.10.14         Or -         -         -         0         -         - <td< td=""><td>18.</td><td>Required Fire Resistance</td><td>Horizontal Assem FRR (Hours)</td><td>olies</td><td>Listed [ or Descri</td><td>Design No. ption (SG-2)</td><td>3.2.2.20 - &amp; 3.2.1.4</td><td>83</td><td>9.5.2 9.10.</td><td>2 .1.3 (4)</td></td<>	18.	Required Fire Resistance	Horizontal Assem FRR (Hours)	olies	Listed [ or Descri	Design No. ption (SG-2)	3.2.2.20 - & 3.2.1.4	83	9.5.2 9.10.	2 .1.3 (4)
Image: Record n/a Hours       Roof n/a Hours       ULC W407 / Existing         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       SB-2 / Existing         Roof       n/a. Hours       SB-2 / Existing         19.       Spatial Separation - Construction of Exterior Walls       3.2.3       9.10.14         Wath       Area       L.D.       L/H       Permitted       Proposed       FRR (Hours)       Comb       Comb. Constr.       Non-comb-Constr.         NE       -       -       -       0             NW       -       -       -       0             SE       -       -       -       0             SW       -       -       -       0             SUB       -       -       -       0		Rating	Floors 3/4 H	ours S	B-2 / Existin	g	_		9.10. 9.10	.8 .9
Mezzanine       3/4       Hours       ULC W407 / Existing         FRR of Supporting Members       FRR of Supporting Members       Listed Design No. or Description (SG-2)         Floors       3/4       Hours       SB-2 / Existing         Roof       n/a.       Hours       SB-2 / Existing         19.       Spatial Separation - Construction of Exterior Walls       3.2.3       9.10.14         Walt       Area of (m <sup>2</sup> )       LD. H/L       L/H Openings       Proposed % of Openings       FRR (Hours)       Listed Design or Description       Comb Comb Constr.       Comb Nonc       Comb Constr.       Non-comb- Constr.         NE       -       -       -       0        - <t< td=""><td></td><td></td><td>Roof n/a H</td><td>ours</td><td></td><td></td><td>-</td><td></td><td></td><td></td></t<>			Roof n/a H	ours			-			
FRR of Supporting Members       Listed Design No. or Description (SG-2)         Floors       3/4       Hours       SB-2 / Existing         Roof       n/a.       Hours       SB-2 / Existing         19.       Spatial Separation - Construction of Exterior Walls       SB-2 / Existing       3.2.3       9.10.14         19.       Spatial Separation - Construction of Exterior Walls       SB-2 / Existing       3.2.3       9.10.14         19.       Spatial Separation - Construction of Exterior Walls       SB-2 / Existing       3.2.3       9.10.14         19.       Natt       Area of (m <sup>2</sup> )       L/H H       Permitted or (m <sup>2</sup> )       Proposed Max.% of Openings       FRR (Hours)       Listed Design or Description       Comb Const Const       Non-comb- Nonc.         NE       -       -       -       0            NW       -       -       -       0            SW       -       -       -       0             20.       Other - Describe       -       -       0			Mezzanine 3/4 H	ours U	LC W407 / I	Existing				
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$			FRR of Supporti Members	ng	Listed I or Descri	Design No. ption (SG-2)				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			Floors 3/4 H	ours S	B-2 / Existin	g				
Mezzanine       3/4       Hours       SB-2 / Existing         19.       Spatial Separation - Construction of Exterior Walls       3.2.3       9.10.14         Watt       Area       L.D.       L/H       Permitted       Proposed       FRR       Listed       Comb       Comb. Constr.       Non-comb-         Valt       Area       L.D.       L/H       Permitted       Proposed       FRR       Listed       Comb       Comb. Constr.       Non-comb-         NE       -       -       -       0             NW       -       -       -       0             SW       -       -       -       0             20.       Other – Describe       -       -       -       0			Roof n/a. H	ours						
19.       Spatial Separation - Construction of Exterior Walls       3.2.3       9.10.14         Walt       Area       L.D.       L/H       Permitted       Proposed       FRR       Listed       Comb       Comb. Constr.       Non-comb.         EBF       H/L       Openings       Openings       Openings       Openings       FRR       Listed       Comb       Comb. Constr.       Non-comb.         NE       -       -       -       0       -       -       -       -         NW       -       -       -       0        -       -       -       -         SW       -       -       -       0        -       -       -         20.       Other – Describe       Other – Describe       Other – Construction of Exterior Walls       0       -       -       -			Mezzanine 3/4 H	ours S	B-2 / Existin	g				
Wait       Area of (m)       L/H or (m)       Permitted Max. % of H/L       Proposed % of Openings       FRR (Hours)       Listed Design or Description       Comb Const       Comb. Constr.       Non-comb- Nonc.         NE       -       -       -       0       - <td>19.</td> <td>Spatial Separ</td> <td>ration – Construction of</td> <td>Exterior Walls</td> <td>S</td> <td></td> <td>3.2.3</td> <td></td> <td>9.10</td> <td>.14</td>	19.	Spatial Separ	ration – Construction of	Exterior Walls	S		3.2.3		9.10	.14
NE         -         -         -         0         -         -         -           NW         -         -         -         0          -		Watt Area of EBF (m²)	L.D. L/H Permitt (m) or Max. % H/L <del>Ope</del> nir	ed Propose of % of gs Opening	ed FRR (Hours) gs	Listed Design or Description	Comb Const	Comb. Co Nonc. <del>Claddin</del>	nstr. g	Non-comb. Constr.
NW         -         -         -         0              SE         -         -         -         0          -             SW         -         -         -         0          -             20.         Other – Describe         -         -         -         -         -         -		NE -		-	0		-			
SE         -         -         -         0          -		NW -			0					
SW         -         -         -         0          -		SE -		-	0		-			
20. Other – Describe		SW -		-	0		-			
	20.	Other – Desc	ribe							

Onta	ario Building Code D	ata Matrix - Part 11 - Renov	vation of E	Existing Building	OBC Reference
11.1	Existing Building classification:	Describe Existing Use:OfficeConstruction Index:n/aHazard Index:n/a	e and Service (	Centre (F2)	11.2.1 T 11.2.1.1A T 11.2.1.1B to N
11.2	Alteration to Existing Building is:	Basic Renovation Extensive Renovation		joi occupancy)	11.3.3.1 11.3.3.2
11.3	Reduction in Performance Level:				11.4.2
		Structural: By Increase in occupant load: By change of major occupancy: Plumbing: Sewage-system:	■No ■No ■No ■No	□ Yes □ Yes □ Yes □ Yes □ Yes	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	■No	□ Yes (explain)	11.4.3
		Increase in occupant load:	■No	□ Yes (explain)	11.4.3.3.
		Change of major occupancy:	■No	□ Yes (explain)	11.4.3.4
		Plumbing:	■No	□ Yes (explain)	11.4.3.5
		Sewage-system:	■No	□ Yes (explain)	11.4.3.5
11.5	Compliance Alternatives Proposed:	■No □Yes (give	numbers)		11.5.1







	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
#	Natao
# F03	Noues
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 verifv)
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 stampe 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.
F40	New guard rail c/w yellow paint linish, refer to typical details and structural drawings. Provide P.Eng stamped shop drawings by misc, metal Div.#5.
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.
	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 deer and frame in evipting partition, refer to deer bardware achedula
F94	New bot water tank, refer to mechanical drawings
F 90	Install HVAC Equipment prior to installation of fire rated partitions, coordinate with HVAC sub-trade

New door, refer to door schedule Existing door to remain, refer to door schedule d a a

Floor Plan Legend

![](_page_5_Figure_6.jpeg)

2 Roof Plan A2-102 scale: 1/8" = 1'-0"

![](_page_5_Figure_9.jpeg)

![](_page_6_Figure_0.jpeg)

![](_page_7_Figure_0.jpeg)

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

# SHELVING PLAN LEGEND (CASH ALLOWANCE)

![](_page_8_Figure_4.jpeg)

![](_page_9_Figure_0.jpeg)

![](_page_9_Figure_2.jpeg)

![](_page_9_Figure_4.jpeg)

![](_page_10_Figure_0.jpeg)

				Unit Info			s	Unit Size		
EI Rating Hardware Set Ca	Fire Rating	Door and Frame Finish	Frame Material	Glass Type	Door Material	Door Type	Thickness	Height	Width	Mark
our Refer to Spec's	3/4 Hour	Paint	Hollow Metal	N/A.	Hollow Metal	F	0' - 1 3/4"	7' - 0"	3' - 0"	19a
ng Refer to Spec's For New Hardware Yes	Existing	Paint	Existing	N/A.	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	19b
ng Refer to Spec's For New Hardware	Existing	Paint	Existing	N/A.	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	24
ng Refer to Spec's For New Hardware	Existing	Paint	Existing	Existing	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	25
Refer to Spec's For New Hardware	N/A.	Existing	Existing	N/A.	Existing			10' - 0"	14' - 0"	25a
Refer to Spec's	1.5	Paint	Ins. Hollow Metal	1" Ins. Unit	Ins. Hollow Metal	GP	0' - 1 3/4"	7' - 0"	3' - 0"	42
ng Refer to Spec's For New Hardware No	Existing	Paint	Existing	Existing	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	42a
ng Refer to Spec's For New Hardware Yes	Existing	Paint	Existing	N/A.	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	49
Refer to Spec's Yes	1.5	Paint	Existing	Firelite or App. Eq	Hollow Metal	DGP	0' - 1 3/4"	7' - 0"	6' - 0"	61
Refer to Spec's Yes	1.5	Paint	Existing	Firelite or App. Eq	Hollow Metal	GP	0' - 1 3/4"	7' - 0"	3' - 0"	61a
ng Refer to Spec's Yes	Existing	Paint	Existing	N/A.	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	61b
Refer to Spec's Yes	1.5	Paint	Ins. Hollow Metal	1" Ins. Unit	Ins. Hollow Metal	GP	0' - 1 3/4"	7' - 0"	3' - 0"	61c
ng Refer to Spec's For New Hardware Yes	Existing	Paint	Existing	Existing	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	61d
Refer to Spec's Yes	1.5	Paint	Existing	Firelite or App. Eq	Hollow Metal	GP	0' - 1 3/4"	7' - 0"	3' - 0"	61e
ng Refer to Spec's For New Hardware Yes	Existing	Paint	Existing	Existing	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	61f
Refer to Spec's Yes	N/A.	Paint	Hollow Metal	6mm Laminated	Hollow Metal	GP	0' - 1 3/4"	7' - 0"	3' - 0"	61g
Refer to Spec's Yes		Paint	Existing	1" Ins. Unit	Ins. Hollow Metal	GP	0' - 1 3/4"	7' - 0"	3' - 0"	63a
Refer to Spec's	N/A.	Paint	Existing	6mm Laminated	Hollow Metal	VP	0' - 1 3/4"	7' - 0"	3' - 0"	63b
Refer to Spec's For New Hardware	N/A.	Existina	Existing	N/A.	Existing			10' - 0"	10' - 0"	63c
Refer to Spec's For New Hardware	N/A.	Existina	Existing	N/A.	Existing			10' - 0"	14' - 0"	63d
ng Refer to Spec's For New Hardware Yes	Existing	Paint	Existing	Existing	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	64a
ng Refer to Spec's For New Hardware	Existing	Paint	Existing	N/A.	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	64b
our Storage room lockset and closer Yes	3/4 Hour	Paint	Hollow Metal	N/A.	Hollow Metal	GP	0' - 1 3/4"	7' - 0"	3' - 0"	65a
our Fire-Rated Counter Shutter	3/4 Hour	Metal	Metal	N/A.	Metal			3' - 9"	4' - 3"	65b
ng Refer to Spec's For New Hardware Yes	Existing	Paint	Existing	Existing	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	66a
ng Refer to Spec's For New Hardware Yes	Existing	Paint	Existing	Existing	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	66b
Refer to Spec's	_,	Paint	Existing	Firelite or App. Fa	Hollow Metal	GP	0' - 1 3/4"	7' - 0"	3' - 0"	67
ng Refer to Spec's For New Hardware	Existing	Paint	Existing	N/A	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	73
Refer to Spec's For New Hardware	N/A	Existing	Existing	N/A	Existing	Extouring		10' - 0"	14' - 0"	76
Refer to Spec's	N/A	Paint	Hollow Metal	N/A	Hollow Metal	SG	0' - 1 3/4"	3' - 1 1/4"	3' - 0"	76a
ng Refer to Spec's For New Hardware	Existing	Paint	Fxisting	Existing	Existing	Existing	0' - 1 3/4"	7' - 0"	3' - 0"	76h
Refer to Spec's	N/A	Paint	Hollow Metal	6mm Laminated	Hollow Metal	GP	0' - 1 3/4"	6' - 6"	2' - 8"	78
Refer to Spec's For New Hardware	Existing	Paint	Evisting	N/A	Evisting	Evisting	0' - 1 3/4"	7' _ 0"	2 - 0 3' - 0"	101
Refer to Spec's	Lλisting N/Δ	Paint	Hollow Metal	Ν/Α.	Wood	F	0' - 1 3/4"	7'-0"	2' - 8"	101 102a
Pur Refer to Spec's	3// Hour	Paint	Hollow Metal	Ν/Α.	Hollow Metal	F	0' - 1 3/4"	7 - 0 7' - 0"	2 - 0 3' - 0"	1024
a Refer to Spec's For New Hardware	5/4 Hour Existing	Paint	Evisting	Existing	Evisting	F	0' - 1 3/4"	7 - 0 7' - 0"	3' - 0"	105
bur Refer to Spec's	3/4 Hour	Paint	Hollow Metal	N/A	Hollow Metal	F	0' - 1 3/4"	7 - 0 7' - 0"	3'-0"	115
Pur Pofer to Spec's	3/4 Hour	Point	Hollow Metal	N/A.	Hollow Metal	r E	0' 1 3/4"	7 - 0 7' 0"	3 - 2	110
Dui Incici lu Opecis	S/4 HOUI	n airit Doint		Evicting	Evicting	I Evicting	0' 1 2/4"	7 - 0	3-0	200

![](_page_11_Picture_0.jpeg)

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

![](_page_11_Picture_2.jpeg)

![](_page_11_Picture_3.jpeg)

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

Photo #4

![](_page_11_Picture_6.jpeg)

Photo #7

![](_page_11_Picture_8.jpeg)

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.

![](_page_11_Picture_10.jpeg)

![](_page_11_Picture_12.jpeg)

![](_page_11_Picture_13.jpeg)

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.

![](_page_11_Figure_15.jpeg)

Photo #8

![](_page_11_Picture_17.jpeg)

Repair existing cracked foundation with new

![](_page_11_Picture_19.jpeg)

![](_page_11_Picture_20.jpeg)

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.

![](_page_11_Picture_22.jpeg)

![](_page_12_Picture_0.jpeg)

Photo #12

![](_page_12_Picture_2.jpeg)

![](_page_12_Picture_3.jpeg)

Approx. 5 sq ft, remove and replace base course,

Refer to floor plan notes.

refer to structural

drawings.

![](_page_12_Picture_5.jpeg)

![](_page_12_Figure_6.jpeg)

![](_page_12_Figure_8.jpeg)

![](_page_12_Picture_9.jpeg)

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

![](_page_12_Picture_11.jpeg)

![](_page_12_Picture_12.jpeg)

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

![](_page_12_Picture_14.jpeg)

![](_page_13_Figure_0.jpeg)

![](_page_13_Figure_5.jpeg)

![](_page_14_Figure_0.jpeg)

<u>ENVI</u> <u>₩IND</u> ∯50 Iw

	ITAL DATA	SNOW / RAIN I DAD.		ON S PROC ALL IS N CAU	SITE AND REPORT CEEDING WITH WORK GOVERNING CODES OT RESPONSIBLE F SED BY WORKMA	ANY DISCREPANCIES TO THE ALL WORK TO BE DONE IN AND LOCAL BUILDING AUTHO OR ANY FAILURES IN MATE NSHIP OR DEVIATION FROM	DESIGNER BEFORE ACCORDANCE WITH DRITIES. DESIGNER RIALS OR ERRORS M THIS DRAWING.
NESSUKE	0.43 kPa (9 psf)	Ss 1.8 kPa Sr 0.4 kPa	ŀ	No.	Revision	5	Date
ς πατα	1.0	LATERAL EARTH PRESSURE	ŀ	0	ISSUED FOR PER	NIT IDER	9/4/20
)	0.321	K (ASSUMED) 0.40					
)	0.157 0.072 0.032	SOIL CLASSIFICATION CLASS D: STIFF SOIL (PER BENDIGO CONSULTING REPORT	-				
)	0.032 0.207 1.0	2020-96-G/K DATED APRIL 27, 2020) SEISMIC HAZARD INDEX: I Fa Sa(0.2) = 1x1.135x0.321 =	0.36				
		THUS, SEISMIC RESTRAINTS REQUIRED					
			_				
			ŀ	NO.		REVISIONS	DA II
			Ī		ACA I	ENGINEEF	RING
					SERV	ICES LIMI	
					4082 Niag	jara Falls, Ontai	rio
				F	PH: 905-357	-2030 FX: 905-	357-7183
			ľ	PRO	JECT:		
				CIT) SER	r OF NIAG RVICE CEN	ARA FALLS IRE IMPROVEME	NTS
				320 NIA	)O STANLE GARA FALL	Y AVENUE S, ON	
			ŀ	DRA	WING TITI F.		
				GRC	OUND FLO	DR PLAN	
				LOA	DS		
					SCALE	DATE	İ
			F	1 / ۶	3"=1'-0"	SEP. 4 2020	
				1/8	3"=1'-0" ргамм ву	SEP. 4, 2020 JOB NO.	S2

![](_page_15_Figure_0.jpeg)

![](_page_16_Figure_0.jpeg)

![](_page_17_Figure_0.jpeg)

No.	Revision	S		Date
0	ISSUED FOR PER	RMIT	9	9/4/20
1	ISSUED FOR T	ENDER	2	2/26/2
ΝΟ		ITFM		
NO.		ITEM		DAT
NO.			RING	DAT
NO.	ACA		RING	DAT
NO.	ACA I SERV 4082	ITEM REVISIONS ENGINEE /ICES LIM Portage Road.	RING ITED Unit 1	DAT
NO.	ACA SERV 4082 Niag	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta	RING ITED Unit 1 ario	DAT
NO.	ACA I SERV 4082 Niag	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 904	RING ITED Unit 1 ario	DA1
NO.	ACA SERV 4082 Niag	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 905	RING ITED Unit 1 ario 5-357-718	DA1
NO. FRO	ACA I SERV 4082 Niac PH: 905-357 JECT: ( OF NIAC	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909	RING ITED Unit 1 ario 5-357-718	DA1
NO. PRO CITY SEF	ACA SERV 4082 Niag PH: 905-357 JECT: Y OF NIAG	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909	RING ITED Unit 1 ario 5-357-718	DA1
NO. FRO CITY SEF 320	ACA SERV 4082 Niag PH: 905-357 JECT: Y OF NIAG VICE CEN O STANLE	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 SARA FALLS TRE IMPROVEM Y AVENUE	RING ITED Unit 1 ario 5-357-718	DA1
NO. PRO CITY SEF 320 NIA	ACA SERV 4082 Niag PH: 905-357 JECT: Y OF NIAG VICE CEN O STANLE GARA FALL	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 ARA FALLS TRE IMPROVEM Y AVENUE S, ON	RING ITED Unit 1 ario 5-357-718	DA1
NO. I PRO CIT SEF 320 NIA	ACA SERV 4082 Niag PH: 905-357 JECT: Y OF NIAG VICE CEN O STANLE GARA FALL	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 ARA FALLS TRE IMPROVEM Y AVENUE -S, ON	RING ITED Unit 1 ario 5-357-718	DA1
NO. PRO CITY SEF 320 NIA DRA TYP	ACA SERV 4082 Niag PH: 905-357 JECT: Y OF NIAG VICE CEN O STANLE GARA FALL WING TITLE: ICAL DETA	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 ARA FALLS TRE IMPROVEM Y AVENUE S, ON	RING ITED Unit 1 ario 5-357-718	DA1
NO. I PRO CIT SEF 320 NIA DRA TYP	ACA SERV 4082 Niag PH: 905-357 JECT: Y OF NIAG VICE CEN O STANLE GARA FALL WING TITLE: ICAL DETA	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 ARA FALLS TRE IMPROVEM Y AVENUE -S, ON	RING ITED Unit 1 ario 5-357-718	DA1
NO. I PRO CIT SEF 320 NIA DRA TYP	ACA SERV 4082 Niag PH: 905-357 JECT: Y OF NIAG VICE CEN O STANLE GARA FALL WING TITLE: ICAL DETA	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 ARA FALLS TRE IMPROVEM 2 AVENUE -S, ON	RING ITED Unit 1 ario	DAT
NO. PRO CIT SEF 320 NIA DRA TYP	ACA SERV 4082 Niag PH: 905-357 JECT: Y OF NIAG VICE CEN JECT: Y OF NIAG VICE CEN DO STANLE GARA FALL WING TITLE: ICAL DETA	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 SARA FALLS TRE IMPROVEM SARA FALLS TRE IMPROVEM SARA FALLS TRE IMPROVEM SARA FALLS TRE IMPROVEM SARA FALLS TRE IMPROVEM SARA FALLS TRE IMPROVEM SARA FALLS TRE IMPROVEM SEP. 4, 2020	RING ITED Unit 1 ario	DAT
NO.	ACA SERV 4082 Niag PH: 905-357 JECT: VICE CEN JECT: VICE CEN JECT: OF NIAG VICE CEN JECT: ICAL DETA	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 ARA FALLS TRE IMPROVEM 2 AVENUE S, ON ARA FALLS TRE IMPROVEM 2 AVENUE S, ON	RING ITED Unit 1 ario 5-357-718	DA1
NO.	ACA SCALE NTS SCALE NTS RAWN BY ACA	ITEM REVISIONS ENGINEE /ICES LIM Portage Road, gara Falls, Onta L2E 6A3 7-2030 FX: 909 ARA FALLS TRE IMPROVEM Y AVENUE S, ON ARA FALLS TRE IMPROVEM Y AVENUE S, ON AVENUE S, ON AVENUE S, ON AVENUE S, ON AVENUE S, ON AVENUE S, ON	RING Unit 1 ario 5-357-718	DA 33

![](_page_18_Figure_0.jpeg)

**OIL CHANGE PIT PLAN VIEW**  $\frac{1}{4}$ "=1'-0"

NEW PL 3"x12" CONT. w/<u>9</u>"ø HOLES @ 2'-0" o.c.

3

(G)-

4.

6.

8.

- ANCHORS OR STEEL ANGLES AT PIT EDGE.
- 7. REMOVE PLYWOOD FLOOR SPANNING BETWEEN PIT EDGES.
- 9. STEEL REINFORCING TO HAVE MINIMUM 400 MPa TENSILE GRADE.

![](_page_18_Figure_8.jpeg)

IS N CAU	GOVERNING CODES OT RESPONSIBLE SED BY WORKM	FOR ANY FAILURES IN MANSHIP OR DEVIATION F	ATERIALS OR E ROM THIS DR	ERRORS AWING.
No.	Revisior	IS		Date
0	ISSUED FOR TEN	IDER		2/26/21
NO.				DATE
	ACA			j
	SER/	/ICES LIN	IIIED	
	4082	Portage Road,	, Unit 1	
	INIC	L2E 6A3	GIIU	
F	PH: 905-35	7-2030 FX: 90	5-357-71	83
PRO	JECT:			
	 ( OF NIAG	GARA FALLS		
SEF	VICE CEN	TRE OIL PIT F	REPAIRS	
320	O STANLE	AVENUE	-	
NIA	JARA FALI	LS, ON		
	WING TITLE	:		
DB v	N VIFWS			
dra PLA				
DRA PLA SEC	TIONS &	DETAILS		
DRA PLA SEC SPE	TIONS &	DETAILS NS		
DRA PLA SEC SPE	CIFICATION	DETAILS NS		
DRA PLA SEC SPE	CIFICATION SCALE NOTED	DETAILS NS Date SEP. 15, 202	20 C	D 1 F
DRA PLA SEC SPE	CTIONS & CIFICATION SCALE NOTED	DETAILS NS DATE SEP. 15, 202 JOB NO.	20 S	P1)

	LEGEND	– GENERA	L		LEGEND	– HVAC								CON	DENSIN	IG UNI	TS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	TAC	G	SYSTEM	MODE	- #	COOLING	ELE	CTRICAL	WEI	GHT	REMARK
×	ISOLATION VALVE	к	) PIPE UP	——— HWS ———	- HEATED WATER SUPPLY		SINGLE LINE RIGID DUCT						BUTH	VOLTAGE	МС	A LE	as a	
	GLOBE VALVE	+:	D PIPE DOWN	HWR	- HEATED WATER RETURN		SINGLE LINE DUCT WITH ACOUSTIC LINING	CU-ST	T AHU-S	ST OEZ	Z-090-1H1-8		121,700	575/3/60	) 44	.1 46	65 C/	W LOW AMBIENT KIT AND CRANKCASE HEATER
<b>X</b>	LOCKABLE FLOW CONTROL VALVE		CAPPED PIPE	RWS	- RADIATION WATER SUPPLY		SINGLE LINE FLEXIBLE DUCT			)/C 0F	7_110_1H1_8		121 700	575/3/60		1 46	65 C/	W LOW AMRIENT KIT AND CRANKCASE HEATER
ю	BALL VALVE		- DIRECTION OF FLOW	RWR	- RADIATION WATER RETURN		DOUBLE LINE FLEXIBLE DUCT				7 075 4114 0		79,920	E7E /3 /60	75			
<b>N N</b>	CHECK VALVE		· PIPE SLEEVE	CHWS	- Chilled water supply	X	SUPPLY AIR DIFFUSER				2-0/5-181-6		70,020	57575760	, 55.	95 0		
0 <sup>M</sup>	FLOAT VALVE		· Continuous Pipe	CHWR	- CHILLED WATER RETURN		RETURN AIR GRILLE		-W MUA-0	G-W OE	Z-075-1H1-8		78,820	575/3/60	) 35.	93 6'	15 C/	N LOW AMBIENT KIT AND CRANKCASE HEATER
	HOSE-END DRAIN VALVE		- METER	cws	- CONDENSER WATER SUPPLY	<u>2-6"ø</u>	NUMBER/DIFF NECK SIZE DIFF TYPE/SUPPLY AIR CFM	CU-C/	/R MUA-(	C/R OEZ	Z-150-1H1-8		148,200	575/3/60	) 35.'	93 94	40 C/	W LOW AMBIENT KIT AND CRANKCASE HEATER
₩3	VALVED AND CAPPED PROVISION	III	- UNION	CWR	- Condenser water return		FIRE DAMPER	CU-0-	-M F-0-I	1 24/	ABB360A001		60,000	575/3/60	21	4 33	30 C/ PR	N LOW AMBIENT KIT, CRANKCASE HEATER, EVAPO ESSURE SWITCH, WINTER START CONTROL, AND V
	GATE VALVE AND FLOW SWITCH	<del></del>	STRAINER	S	- STEAM MAIN (PRESSURE AS INDICATED)		SMOKE DAMPER	<u>NOIES:</u> 1. CU-	-ST AND CU	-OC SPECIFICATIONS	BASED ON MAMMOTI	, CU-GE, CU-GW,	AND CU-CR SI	PECIFICATIONS	BASED ON E	FI CONCEPTS,	CU-O-M	SPECIFICATIONS BASED ON CARRIER
	SHUT-OFF VALVE AND ACCESS PANEL	BFP	BACKFLOW PREVENTER	c	- CONDENSATE RETURN	MD	MOTORIZED DAMPER	3. TX	VALVE TO N	IATCH ASSOCIATED CO	NL NIGHT							
ΙΓ	BUTTERFLY VALVE	WFA	WATER FEEDER ASSEMBLY	FOS	- FUEL OIL SUPPLY	BD	MANUAL BALANCING DAMPER											
Image: Second se	LOCKSHIELD VALVE		FLEXIBLE PIPE CONNECTION	FOR	- FUEL OIL RETURN	BDD	) BACK DRAFT DAMPER			FRVING			ESD					REMARK
ı∯ı	PLUG VALVE	$\bigcirc$	PUMP	RL	- REFRIGERANT LIQUID	<b>D</b> FS	S MOTORIZED COMBINATION FIRE AND SMOKE											
	PRESSURE REDUCING VALVE	<u> </u>	PRESSURE GAUGE WITH COCK	RD	- REFRIGERANT DISCHARGE	Ø	FIRE DAMPER (IN RISER)							c 575/3/60			_B2	
	FLOW SWITCH	Ū Ū	THERMOMETER	RS	- REFRIGERANT SUCTION	X	SMOKE & FIRE DAMPER (IN RISER)	NOTES:			UGAL QOL	1,502 420		6 37373700	1.12	.5 0.74	440 -	
	FLOW METER, VENTURI		STARTER	CS	- GLYCOL SUPPLY	<b>Ф</b>	BALANCING DAMPER IN (IN RISER)	1. SPE	ECIFICATIONS	BASED ON TWIN CIT	r fans							
© X	SOLENOID VALVE	\$	FAN SPEED CONTROLLER	GR	- GLYCOL RETURN	□↔	MOTORIZED DAMPER (IN RISER)											
8	CIRCUIT BALANCING VALVE	STB	SLEEVE THROUGH BEAM		SUPPLY OR OUTSIDE AIR DUCT	Ô	THERMOSTAT			SYSTEM		TYPE	MODEL					
Ŕ	BALANCING VALVE (PLUG)	STW	SLEEVE THROUGH WALL		RETURN OR EXHAUST DUCT	B	HUMIDISTAT			STSTEM	LOCATION		WODEL		LJF	W.		
<b>₽</b>	NEEDLE VALVE	DTF	DOWN THROUGH FLOOR		SUPPLY DUCT DOWN	UC	DOOR UNDERCUT					SQUARE INLINE		500 1.2	10 <u>0</u>	20 575/3/60	0 1 12	1 50 1 34 C/W MOTOR COVER, VARIABLE SPEED
<b>X</b> 0	PRESSURE DIFFERENTIAL VALVE	CTE	CONNECT TO EXISTING		RETURN DUCT DOWN	DG	DOOR GRILLE	SF_S/				CENTRIFUGAL SQUARE INLINE		500 1.2		20 0707070	0 1.12	1.50 (NEMA1), VFD 1.50 1.34 C/W MOTOR COVER, VARIABLE SPEEL
1		AP	ACCESS PANEL		ROUND DUCT UP	AO	OUTDOOR AIR	SF_FM		ECHANICAL ROOM	EAST MECHANICA	CENTRIFUGAL SQUARE INLINE		236 50	n 95 0	38 575/3/60	0 0 25	(NEMA1), VFD
	SAFETY RELIEF VALVE	AD	ACCESS DOOR		ROUND DUCT DOWN	RA	RETURN AIR		WEST N	TION AIR IECHANICAL ROOM	ROOM WEST MECHANICA	CENTRIFUGAL SQUARE INLINE		354 7	50 95 0.	38 575/3/60	0 0.25	DIAMETER, DISC SWITCH-UNFUSED (N 0 33 0 31 C/W ALUMINUM BACKDRAFT DAMPER,
	AUTOMATIC CONTROL VALVE				DUCT WITH ACOUSTIC LINING	RF	RELEIF AIR	NOTES:	""`  VENTILA E	tion Air	ROOM	CENTRIFUGAL			~ <del>3</del> 5 0.		0.20	
	MOTORIZED BUTTERFLY VALVE				DOUBLE LINE DUCT	SA	SUPPLY AIR	1. SPE	ECIFICATIONS	BASED ON TWIN CIT	(							
	VALVE IN RISER				SOUND ATTENUATOR			1										

																						MAK	ΕU	P AI	RUI	NI 12	(GA	AS FIREI	)							
TAG	SYSTEM	LOCATION	TYPE	MODEL #	AIRFI	LOW	MIN O.A.		HI	EATING							C00	LING						FAN	MOTOR	(SUPPL	<u>Y)</u>	VOLTAGE	MCA		FIL	TER		WEIG	SHT	
					L/S	CFM	%	HEAT	ING AIR	GAS	HEAT		ING AIR		SEN		E/	AT			L	AT		POW	/ER	ESI	5			PRE-	FILTER	0	DOUR			
								F								[	)B	w	/B		DB	W	B							MERV	TYPE	MEDIA	TYPE			
								L/S	CFM	CFH	MBH	L/S	CFM	MBH	MBH	•C	۴F	<b>.</b> C	۴	<b>.</b> .	۰F	•C	۰F	КW	HP	Pa	in.w.c.							LBS	IS	
MUA-G-W	GARAGE WEST	WEST MECHANICAL ROOM	INDOOR	Tec-ESL-36x45	1,652	3500	100	826	1750	175	140	826	1750	72	42	34	93	24	75	21.1	70.0	17.4	63.3	3.73	5	250	1	575/3/60	-	8	PLEATED	MM-9000	CARTRIDG	260	00 C	Complete with S/A VFD, MERV 8 FILTER, CONTROLS B
MUA-G-E	GARAGE EAST	EAST MECHANICAL ROOM	INDOOR	Tec-ESL-36x45	1,652	3500	100	826	1750	175	140	826	1750	72	42	34	93	24	75	21.1	70.0	17.4	63.3	3.73	5	250	1	575/3/60	-	8	PLEATED	MM-9000	CARTRIDG	240	00 C	COMPLETE WITH S/A VFD, MERV 8 FILTER, CONTROLS B
MUA-C/R	CHANGEROOM	WEST MECHANICAL ROOM	INDOOR	Tec-ESL-39x36	1,133	2400	100	1,133	2400	300	240	1,133	2400	160	90	33	92	24	75	13.4	56.2	12.4	54.3	1.12	1.5	150	0.6	575/3/60	6.6	8	PLEATED	MM-9000	CARTRIDG	240	00 C	complete with S/A VFD, Merv 8 Filter, controls b
NOTES:																																				

<u>NULES:</u> 1. Specifications based on enviro—tec 2. All units to be bacnet compatible, ms/tp niagara 4 platform 3. Circul—aire carbon filters for odour control.

																								AIF	R HA	NDL	ING	UNIT	S												
TAG SYSTEM	LOCATION	MAKE	MODEL #	AIR	Flow			SUPF	ply fai	N					Return	FAN				C	OOLING						HEATI	IG				ste Humidif	CAM TICATION			FILT	ER		WEIGH	iht	
							F	OWER			E	SP		POW	ER		ESF	<b>,</b>			DX			G	as heat	Г		HYDRO	NIC HE/	л		LO	AD	PR	e—filte	R.	0[	OUR			
				L/S	CFM	VOLT	AGE MCA	MOCP	, кw	HP	Pa	in.w.c.	VOLTAGE	FLA	кw	HP F	ya ii	n.w.c.	TOTAL SE CAP CA	N P	EAT	L	_AT	gas Input	GAS OUTPUT	%EFF	CAP EV	T LWT	EAT	LAT	PD	kg/hr	lb/hr	MER	/ тү	ΈE	MEDIA	TYPE	LBS	s	
				,			AMF	AMP						AMP			_		MBH MB	8H   DE 8H   (*F	B   WB F)   (°F)	) DB ("F)	WB (*F)	CFH	MBH		мвн •	•F	۰F	۴	ft HD	57	,								
AHU-ST STORES	EAST MECHANICAL ROOM	ENVIRO-TEC	Tec-ESL-36x63	1,982	4,200	0 575/3	3/60 17.4	30.0	3.7	5	385	1.54	-	-	-	-	-	-	95 66	6 77.	7.7 64.6	62.7	57.0	225	185	80		_	-	-	-	-	-	8	PLE/	ATED	MM-9000	CARTRIDG	E 3000	0 0	COMPLETE WITH S/A VFD, MERV 8 FILTER, CONTROLS E
AHU-0/C OFFICE/ CA	WEST MECHANICAL ROOM	ENVIRO-TEC	Tec-ESL-36x45	1,321	2,800	0 575/3	3/60 7.5	12.0	1.5	2	325	1.31	208/3/6	4.5	1.1	1.5 2	35	0.95	121 70	6 80	).0 67.0	54.3	52.3	-	-	-	190 180	.0 140.	1 20	78.3	1.7	36.7	81	8	PLE/	ATED	MM-9000	CARTRIDG	E 2400	IO HI	IUMIDIFIER'S STEAM GENERATOR, CONTROL VALVE, AND CONTROLS BY THE VENDOR, REMOTE CONTROL PANEL, A
AHU-S/W WELDING	EAST MEZZANINE	ENVIRO-TEC	Tec-ESL-30x45	755	1,600	0 575/3	3/60 –	-	1.5	2	185	0.75	-	-	-	-	-	-	74 46	6 89	9.5 73	62.2	58.9	200	160	80		-	-	-	-	-	-	8	PLE/	ATED	MM-9000	CARTRIDG	E 1700	0 CI	COMPLETE WITH S/A VFD, MERV 8 FILTER, MM-9000 C SF-S/W AND EF-S/W.
AHU-S/C CARPENTRY	EAST MEZZANINE	ENVIRO-TEC	Tec-ESL-30x45	774	1,640	0 575/3	3/60 –	-	1.5	2	185	0.75	_	-	-	_	-	-	40 3	1 77	7 64	59.3	55.7	100	80	80		_	-	-	-	-	_	8	PLE	ATED	MM-9000	CARTRIDG	E 1700	0 C SI	COMPLETE WITH S/A VFD, MERV 8 FILTER, MM-9000 C SF-S/C AND EF-S/C.

NOTES: 1. SPECIFICATIONS BASED ON ENVIRO-TEC 2. ALL UNITS TO BE BACNET COMPATIBLE, MS/TP NIAGARA 4 PLATFORM 3. CIRCUL-AIRE CARBON FILTERS FOR ODOUR CONTROL.

												FUF	RNAC	CES																									EVA	PORAT	ЗR
TAG	SYSTEM	LOCATION	MODEL #	SIZE	SUPPL	Y AIR	RETURI	n air	OUT	DOOR	FAN	POWER	ES	SP	EER	GAS	HEATING	3	COOL	ING	REFRIGERANT		ELECTRICAL		WEIGHT		TAG	AREA	AIRFI	ow		EAT				LAT		FSP		TOTAL	WE
										uiv						INPUT	· OUTP	N TU	NET	SENSIBLE								D	,		DB		WB		DB	1	WB			CAPACITY	1
					L/S	CFM	L/S	CFM	L/S	CFM	кw	HP	Pa	in.w.c.		MBH	MBI	H N	MBH	MBH	]	VOLTAGE	MCA	MOCP	LBS	IN	]		L/S	CFM	•C	•F	·c	•F	·c	•F •C	۰F	Pa	n. k\ .c. k\	W MBH	
F-0-M	MEZZ. OFFICES EAST	EAST MECH. ROOM 103	59TP6A120E2422	120	850	1,800	715	1,515	135	285	0.7	1	150	0.60	11	120	117	7 5	56.26	42.26	PURON	115/1/60	14.7	20	190	29.5 x 24 x 35	F-0-M	OFFICE EAST	944	2,000	26.7	80 1	19.4	67.0 1	5.8	60.44 14.6	58.24	125 (	.5 17	7.6 60	ç

1. SPECIFICATIONS BASED ON CARRIER

																							ΕN	IERG	GY F	RECO	VERY	UN	NITS			
TAG SYST	EM LOCA	CATION	MODEL #	AIRF	LOW		HEAT	RECOVE	ERY SU	IMMER CO	ONDITION	IS			HEA	T REC	OVERY \	WINTER	CONDITIO	NS		FAN	MOTO	R (SUI	PPLY)	FAN MO	TOR (RE	rurn)	ELEC	TRICAL	WEIGH	REMARKS
						OUTS	SIDE AIR	R	Return	AIR	SUF	PLY AIR		OUTS	SIDE AIF	R	RETU	JRN AIF	२ः	SUPPLY	AIR	P0'	WER	E	:SP	POWER	२ E	SP				
				L/S	СҒМ	DB	WE	3 D	B	WB	DB	WE	3	DB	EAT	r wb	DB	W	B D	в	WB	KW	HP	Pa	in.w.	кw н	IP Pa	in.w.	VOLTAGE	MCA	LBS	
						•C •F	··c	•F •C	۰F	•C •F	•C •F	• •c	•F •	C 'F	•c	۴	•C •F	- •c	•F •C	•F	•C •F				с.			C.				
ERV-C/R CHANGER		ANICAL ANINE	CSU-2K	1	2,400	33.9 93	3 23.9	75 23.3	74 1	6.1 61	26.1 78. 5	<sup>9</sup> 18.6 6	5.39 -2	20. –4 0 –4	-20. 0	-4	21.1 70	0 11.6	52.9 9.4	48.83	4.6 40.2	3 0.7	1	175	0.7	0.7 1	1 125	0.5	575/3/60	12	2,300	MOTORIZED OUTSIDE AIR DAMPER, MOTORIZED EXHAUST AIR DAMPER, MERV 8 FILTERS. THIS CONTRACTOR TO INSTALL THE LISTED ERV AS SPECIFIED AND PROVIDE ALL MECHA LABOUR REQUIRED FOR A FULLY FUNCTIONING SYSTEM. I.E. DUCTWORK, CONDENSATE PIPING. COORDINATE FINAL HOOKUP WITH ELECTRICAL AND CONTROLS CONTRACTOR.
NOTEC																																

NOTES: 1. SPECIFICATIONS BASED ON NORTEK 2. ALTERNATES: COOK

ORIGINAL SHEET SIZE: ARCH D

## MAKE LID AID LINITS (CAS EIDED)

I	Γ			GENERAL I		
		DRAWING SCHEDULE	1. ALL E	QUIPMENT TO BE PROVIDED	WITH SEISMIC CURB OF	
s	DWG NO		RESTR	aints. See specifications f	for details	
	M-100		SAVE ON EN	ERGY PROGRAM DETAILS		
	M-107		1. THE F PROGR	OLLOWING ARE MANDATORY F AM. FAILURE TO DOCUMENT MATION BELOW WILL VOID THI	REQUIREMENTS OF THE AND PROVIDE ANY OF IF PROGRAM AND MAKE	THE THF
	M-102		APPLIC TOP R	CATION INTELLIGIBLE FOR THE RTU-N AND RTU-S ARE ELIG	E INCENTIVE REBATE. REBILE AND PARTICIPATE	)OF IN
	M-104	CONTROLS 2	THE IN 2 THE C	NCENTIVES.	PHOTOGRAPHIC	
	M-105	SPECIFICATIONS 1	DOCUN	MENTATION OF THE EXISTING , SERIAL NUMBER. THIS INFO	ROOFTOPS INCLUDING ORMATION IS TO BE NE	ATLY
	M-106	SPECIFICATIONS 2	ARRAN SUBMI	IGED, LABELED AND ORGANIZ T A COPY TO THE OWNER AI	ED IN A PDF DOCUMEN	Τ.
TATOR FREEZE THERMOSTAT, LOW IND BAFFLE	M-200	NATURAL GAS SCHEMATIC	3. THE C	WAL.	A RECEIPT AND LETTER	
	M-201	DEMOLITION PLUMBING SERVICE CENTRE	STATIN	G THAT THE ROOFTOPS HAVE	E BEEN DISPOSED OF.	
	M-202	DEMOLITION PLUMBING EAST GROUND FLOOR AND	4. IHE C ROOFT	OPS (RTU-N AND RTU-S). 1 TE MODEL NUMBER AND SEE	RECEIPTS FOR THE NEV THE RECEIPTS SHALL DIAL NUMBER THIS	1
	M-210	MEZZANINE WASTE OIL PLUMBING PLAN	INFOR	MATION IS USED TO VALIDATE CATION. PRICING CAN BE BLA	THE INCENTIVES ACKED OUT. THIS SHALL	BE
	M-211	REVISED PLUMBING SERVICE CENTRE	SUBMI APPRO	TTED TO THE OWNER AND TH WAL.	HE CONSULTANT FOR	
5	M-212	REVISED PLUMBING EAST GROUND FLOOR AND MEZZANINE				
	M-300	DEMOLITION HVAC GROUND FLOOR AND MECHANICAL				
	M-301	DEMOLITION HVAC SERVICE CENTRE				
	M-302	DEMOLITION HVAC EAST GROUND FLOOR AND MEZZANINE				
	M-303	DEMOLITION HVAC WEST ROOF				
	M-304	DEMOLITION HVAC ROOF CENTRAL				
EMARKS	M-305	DEMOLITION HVAC EAST ROOF				
	M-310	REVISED HVAC GROUND FLOOR AND MECHANICAL				
V-REIT DRIVE 1.5 CE DISC SWITCH	M-311	REVISED HVAC SERVICE CENTRE				
PERFORMANCE RAFELE WITH 5 72 IN	M-312	REVISED HVAC EAST GROUND FLOOR AND MEZZANINE				
PERFORMANCE DAFFLE WITH 5.73 IN	M-313	REVISED HVAC WEST ROOF				-
EMA 1)	M-314	REVISED HVAC CENTRAL ROOF				
	M-315	REVISED HVAC EAST ROOF				
	M-320	REVISED HVAC EAST GROUND FLOOR AND MEZZANINE				_
		SECTIONS				+
			3 18		FEB.	
			2 RI		26, 202 T DEC.	
REMARKS					' 03, 202 <sub>Т</sub> NOV	
			0 15		' 06, 202 SEPT	) T.C
			Ů IO		4, 2020	1.0
			No. D	ESCRIPTION	DATE	BY
			No. D			BY
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND	DRAIN CONNECTION DRAIN CONNECTION		No. D		DATE ONS	BY
' THE VENDOR, REMOTE CONTROL PANEL, AND ' THE VENDOR, REMOTE CONTROL PANEL, AND ' THE VENDOR, REMOTE CONTROL PANEL, AND	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION		No. D		DATE	BY
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION		No. D		DATE	BY
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION	N. INTERLOCK WITH RETURN FAN RT-ST.	No. D	REVISI REVISI CAR CEngine	ONS ONS C eering In	В` С.
Y THE VENDOR, REMOTE CONTROL PANEL, AND Y THE VENDOR, REMOTE CONTROL PANEL, AND Y THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS Y THE VENDOR, REMOTE CONTROL PANEL, AND AIR PROVING SWITCH TO BE SHIPPED LOOSED IND DRAIN CONNECTION.	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER,	No. D	REVISI REVISI CREATE RCENGING Solutions Through E	DATE ONS	BY C.
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN	No. D	REVISI REVISI CONTRACTOR REVISI REVISI REVISION REVISION REVISION REVISION Solutions Through E 1100 South Service Stoney Creek ON	DATE ONS	BY C. ellenc
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN	No. D	ESCRIPTION REVISI REVISI CONTINUE REVISI Solutions RCEngine Solutions Through E 1100 South Service Stoney Creek ON T • (905) 643 F • (905) 643	DATE ONS	BY C.
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS THE VENDOR, REMOTE CONTROL PANEL, AND AR PROVING SWITCH TO BE SHIPPED LOOSED IND DRAIN CONNECTION. ARBON FILTER, CONTROLS BY THE VENDOR, RE ARBON FILTER, CONTROLS BY THE VENDOR, RE	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION O DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN	No. D	ESCRIPTION REVISI REVISI Solutions Contact Solutions Through E 1100 South Service Stoney Creek ON T • (905) 643 F • (905) 643	DATE ONS	BY C.
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS THE VENDOR, REMOTE CONTROL PANEL, AND ARPROVING SWITCH TO BE SHIPPED LOOSED IND DRAIN CONNECTION. ARBON FILTER, CONTROLS BY THE VENDOR, RE ARBON FILTER, CONTROLS BY THE VENDOR, RE	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN	No. D	ESCRIPTION REVISI REVISI Solutions CEngine Solutions Through E 1100 South Service Stoney Creek ON T • (905) 643 F • (905) 643 S • (905) 643	DATE ONS	BY C.
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS Y THE VENDOR, REMOTE CONTROL PANEL, AND AIR PROVING SWITCH TO BE SHIPPED LOOSED IND DRAIN CONNECTION. ARBON FILTER, CONTROLS BY THE VENDOR, RE ARBON FILTER, CONTROLS BY THE VENDOR, RE	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION O DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN	No. D	ESCRIPTION REVISI REVISI Solutions REVISI Solutions RCEngine Solutions Through E 1100 South Service Stoney Creek ON T • (905) 643 F • (905) 643 F • (905) 643	DATE ONS	B` C.
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS THE VENDOR, REMOTE CONTROL PANEL, AND ARP PROVING SWITCH TO BE SHIPPED LOOSED AND DRAIN CONNECTION. ARBON FILTER, CONTROLS BY THE VENDOR, RE ARBON FILTER, CONTROLS BY THE VENDOR, RE ARBON FILTER, CONTROLS BY THE VENDOR, RE	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION O DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN	No. D	ESCRIPTION REVISI REVISI REVISI SINCE REVISE REVISE Solutions Through E Solutions Through E 1100 South Service Stoney Creek ON T • (905) 643 F • (905) 643 F • (905) 643 F • (905) 643 F • (905) 643 SERVICE C IMPROVEN	DATE ONS ONS	B C. ellenc
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS THE VENDOR, REMOTE CONTROL PANEL, AND ARP PROVING SWITCH TO BE SHIPPED LOOSED AND DRAIN CONNECTION. ARBON FILTER, CONTROLS BY THE VENDOR, RE ARBON FILTER, CONTROLS BY THE VENDOR, RE ARBON FILTER, CONTROLS BY THE VENDOR, RE	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION O DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, IEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN IEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN	No. D	ESCRIPTION REVISI REVISI REVISI SINCE REVISION REVISION REVISION Solutions Through E Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 F = (905) 643 Stoney Creek ON T = (905) 643 F = (905) 6	DATE ONS ONS	BY C. ellenc
THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND THE VENDOR, REMOTE CONTROL PANEL, AND REMARKS THE VENDOR, REMOTE CONTROL PANEL, AND ARPROVING SWITCH TO BE SHIPPED LOOSED AND DRAIN CONNECTION. ARBON FILTER, CONTROLS BY THE VENDOR, RE ARBON FILTER, CONTROLS ARBON FILTER, HUMIDIF	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, IEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN IEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN IEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN IEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN	No. D	ESCRIPTION REVISI REVISI REVISI SINCE REVISE REVISE Solutions Through E Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 F = (905) 643 Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 Stoney Creek ON T = (9	DATE ONS ONS	B C. ellenc
Y THE VENDOR, REMOTE CONTROL PANEL, AND         Y THE VENDOR, REMOTE CONTROL PANEL, AND         Y THE VENDOR, REMOTE CONTROL PANEL, AND         REMARKS         Y THE VENDOR, REMOTE CONTROL PANEL, AND         AIR PROVING SWITCH TO BE SHIPPED LOOSED         ND DRAIN CONNECTION.         NRBON FILTER, CONTROLS BY THE VENDOR, RE         AIR PROVING SWITCH TO BE SHIPPED LOOSED         NRBON FILTER, CONTROLS BY THE VENDOR, RE         ARBON FILTER, CONTROLS BY THE VENDOR, RE         C         C         C         C/W ELECTRONIC AIR CLEANER, HUMIDIF         TERMINATION CONFIGURATION). PROVIDE	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN ARKS ENT KIT (SEE DETAIL 8 ON DRAWING M-101 FOR VENT ROOF ) FILTER WITH WOVEN CARBON.	No. D	ESCRIPTION REVISI REVISI REVISI Solutions Construction Solutions Through P 100 South Service Stoney Creek ON T • (905) 643 F • (905) 643 T • (905) 643 F • (	DATE ONS ONS CONS CONS CONS CONS CONS CONS C	BY C. ellence
' THE VENDOR, REMOTE CONTROL PANEL, AND         REMARKS         Y THE VENDOR, REMOTE CONTROL PANEL, AND         ND         AR PROVING SWITCH TO BE SHIPPED LOOSED         ND       DRAIN CONNECTION.         VRBON FILTER, CONTROLS BY THE VENDOR, RE         'RBON FILTER, CONTROLS BY THE VENDOR, RE         'S'         'S'         'S'         'S'         'S'	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, HEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN HEL, AND DRAIN CONNECTION FAN FAN FAN FAN FAN FAN FAN FAN FAN FA	No. D	ESCRIPTION REVISI REVISI REVISI REVISI REVISI REVISI REVISI REVISION Solutions Through E 1100 South Service Stoney Creek ON T • (905) 643 F • (905) 643 F • (905) 643 F • (905) 643 F • (905) 643 T • (905) 643 F • (905) 643 T • (905) 643 F • (	DATE ONS ONS CONS CONS CONS CONS CONS CONS C	B C. ellence
' THE VENDOR, REMOTE CONTROL PANEL, AND         REMARKS         Y THE VENDOR, REMOTE CONTROL PANEL, AND         ARPROVING SWITCH TO BE SHIPPED LOOSED         IND DRAIN CONNECTION.         ARBON FILTER, CONTROLS BY THE VENDOR, RE         ARBON FILTER, CONTROLS BY THE VENDOR, RE         IGH         T         BS         16         C/W ELECTRONIC AIR CLEANER, HUMIDIF         C         C/W ELECTRONIC AIR CLEANER, HUMIDIF	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION O DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN ARKS ENT KIT (SEE DETAIL 8 ON DRAWING M-101 FOR VENT ROOF ) FILTER WITH WOVEN CARBON. C PRE-HEAT COIL	No. D	ESCRIPTION REVISI REVISI REVISI REVISI REVISI REVISI REVISION RECENSION RECENSION RECENSION Solutions Through E 100 South Service Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 WWW.arcenginer Contact@arcengin SERVICE C IMPROVEN 3200 STANLEY NIAGARA FALLS, TE: DRAWN BY: M.B. TITLE:	DATE ONS ONS	B C. ellence
' THE VENDOR, REMOTE CONTROL PANEL, AND         REMARKS         Y THE VENDOR, REMOTE CONTROL PANEL, AND         Y THE VENDOR, REMOTE CONTROL PANEL, AND         AIR PROVING SWITCH TO BE SHIPPED LOOSED         ND DRAIN CONNECTION.         VRBON FILTER, CONTROLS BY THE VENDOR, RE         NRBON FILTER, CONTROLS BY THE VENDOR, RE         O         C         IGH         T         BS         105         C/W ELECTRONIC AIR CLEANER, HUMIDIF         TAG	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION O DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN EMOTE CONTROL PAN	ARKS  C PRE-HEAT COIL  LLECTRICAL WEIGHT VOLTAGE FLA MCA I	No. D	ESCRIPTION REVISI REVISI REVISI REVISI REVISI Solutions Through E 100 South Service Solutions Through E 100 South Service Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 SERVICE C INFROVEN 3200 STANLEY / NIAGARA FALLS, TE: DRAWN BY: M.B. TITLE: LEGENDS SCHEDI	DATE ONS ONS CONS CONS CONS CONS CONS CONS C	B C. ellence
' THE VENDOR, REMOTE CONTROL PANEL, AND         ' THE VENDOR, REMOTE CONTROL PANEL, AND         ' THE VENDOR, REMOTE CONTROL PANEL, AND         REMARKS         'Y THE VENDOR, REMOTE CONTROL PANEL, AND         Y THE VENDOR, REMOTE CONTROL PANEL, AND         AIR PROVING SWITCH TO BE SHIPPED LOOSED         IND DRAIN CONNECTION.         VRBON FILTER, CONTROLS BY THE VENDOR, REMOTE SHIPPED LOOSED         IGH         BS         25         C/W ELECTRONIC AIR CLEANER, HUMIDIF         TAG         K         RH-C/R	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY EMOTE CONTROL PAN EMOTE CONTROL PAN	ARKS  C PRE—HEAT COIL  ELECTRICAL  VOLTAGE FLA MCA LBS 575/3/60 47.8 48	No. D	ESCRIPTION REVISI REVISI REVISI REVISI REVISI REVISI REVISION REVISION Solutions Through E 1100 South Service Stoney Creek ON T • (905) 643 F •	DATE ONS ONS	B C. ellence
'THE VENDOR, REMOTE CONTROL PANEL, AND         'THE VENDOR, REMOTE CONTROLS BY THE VENDOR, RE         'THE VENDOR FILTER, CONTROLS BY THE VENDOR, RE         'THE VENDOR FILTER, CONTROLS BY THE VENDOR, RE         'THE VENDOR CONFIGURATION', PROVIDE         'THE VENDOR CONFIGURATION', PROVIDE         'THE VENDOR', REMOTE CONFIGURATION', PROVIDE         'THE VENDOR', REMOTE CONFIGURATION', PROVIDE         'THE VENDOR', REMOTE CONFIGURATION', PROVIDE	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY MOTE CONTROL PAN EMOTE CONTROL PAN	N. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV & FILTER, AEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN ARKS ARKS C PRE—HEAT COIL ELECTRICAL WEIGHT VOLTAGE FLA MCA LBS 575/3/60 47.8 48	No. D	ESCRIPTION REVISI REVISI REVISI REVISI SINCE REVISE REVISE Solutions Through E 1100 South Service Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 F = (905) 643 SERVICE C IND South Service Stoney Creek ON T = (905) 643 F = (905) 64	DATE ONS ONS	B C. ellence
'THE VENDOR, REMOTE CONTROL PANEL, AND         'THE VENDOR, REMOTE CONTROLS BY THE VENDOR, RE         'IGH         'THE CONTROLS BY THE VENDOR, RE         'IGH         'S'         'IGH         'S'	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY MOTE CONTROL PAN EMOTE CONTROL PAN	ARKS  C PRE-HEAT COIL  ELECTRICAL  VOLTAGE FLA  KEL  KEL  KEL  KEL  KEL  KEL  KEL  K	No. D	ESCRIPTION REVISI REVISI REVISI REVISI SINCE REVISE REVISE Solutions Through E Solutions Through E Solutio	DATE ONS ONS	B C. ellence
' THE VENDOR, REMOTE CONTROL PANEL, AND         REMARKS         '' THE VENDOR, REMOTE CONTROL PANEL, AND         '' THE VENDOR, REMOTE CONTROLS BY THE VENDOR, RE         '' REBON FILTER, CONTROLS BY THE VENDOR, RE         '' THE VENDOR CONFIGURATION'. PROVIDE         '' THE VENDOR CONFIGURATION'. PROVIDE         '' TAG         '' TAG         '' NOTES:         '' SPECIFICATIONS         NICAL MATERIALS AND	DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION DRAIN CONNECTION AND INSTALLED BY MOTE CONTROL PAN MOTE CONTROL PAN EMOTE CONTROL PAN E	A. INTERLOCK WITH RETURN FAN RT-ST. CONTRACTOR. COMPLETE WITH S/A VFD, MERV 8 FILTER, NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN NEL, AND DRAIN CONNECTION. INTERLOCK WITH SUPPLY FAN ARKS ARKS C PRE-HEAT COIL ELECTRICAL VOLTAGE FLA MCA LBS 575/3/60 47.8 48	No. D	ESCRIPTION REVISI REVISI REVISI REVISI IN REVISE REVISE REVISE REVISE Solutions Through E 1100 South Service Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 F = (905) 643 REVISE Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 REVISE Stoney Creek ON T = (905) 643 F = (905) 643 F = (905) 643 T = (905) 643 F = (905) 643 T = (905) 643 REVISE Stoney Creek ON T = (905) 643 F = (905) 643 REVISE Stoney Creek ON T = (905) 643 F = (905) 643 T = (905) 643 REVISE Stoney Creek ON T = (905) 643 F = (905) 643 T = (905) 643 REVISE Stoney Creek ON T = (905) 643 F = (905) 643 T = (905) 643 REVISE Stoney Creek ON T = (905) 643 REVISE REVISE Stoney Creek ON T = (905) 643 REVISE Stoney Creek ON T = (	DATE ONS ONS ONS CONS CONS CONS CONS CONS CO	B` C. ellenc

						EXI	HAU	ST	FAN	SCHEI	DUL	.E		
TAG	SYSTEM	SERVING	TYPE	MAKE	MODEL	CAP	ACITY	E	SP	VOLTAGE		MOTOR		REMARKS
						L/S	CFM	Pa	in.w. c		кw	HP	BHP	
EF-O-N	SANITARY EXHAUST	OFFICE NORTH WASHROOMS	ROOF	S&P	LPD081AS	-	-	-	-	_		-	-	EXISTING TO REMAIN
EF-0-S	SANITARY EXHAUST	OFFICE SOUTH WASHROOMS	ROOF	S&P	LPD081AS	-	-	-	-	-	-	-	-	EXISTING TO REMAIN
EF-0-BR	general exhaust	BREAK ROOM WEST	INLINE CABINET FAN	GREENHECK	CSP-A390-VG	94	200	100	0.400 00	115/1/60	0.05	0.067	0.050	<ul> <li>UL/cUL LISTED - ELECTRIC FAN</li> <li>FLAT ROOF FLASHING FLANGE (PN: RFC-7) SHIPPED LOOSE</li> <li>ROUND DUCT CONNECTOR, (PN:RDC-8) SHIPPED LOOSE</li> <li>ISOLATION KIT (PN: VI KIT-SP/CSP), SHIPPED LOOSE</li> <li>ADJUSTABLE EASY INSTALLATION MOUNTING BRACKET</li> <li>ENERGY STAR CERTIFIED</li> <li>POLYPROPYLENE WHEEL MATERIAL</li> </ul>
EF-C/R	general exhaust	RM 113 MECHANICAL MEZZANINE	CENTRIFUGAL INLINE FAN	GREENHECK	SQ-160-VG	1,133	2,400	160	0.65	115/1/60	0.56	0.75	0.51	<ul> <li>NO UL LISTING</li> <li>SWITCH, NEMA-1, TOGGLE, SHIPPED WITH UNIT</li> <li>SEISMIC RATED TO DESIGN CATEGORY F PER IBC-2012 &amp; A</li> <li>OSHPD SEISMIC CERTIFIED, #OSP-0113-10</li> <li>ISOLATORS REQUIRED - OSHPD CERTIFIED BY OTHERS</li> <li>DAMPER SHIPPED LOOSE, INLINE, WD-330-PV-23X23, GRAVI</li> <li>ALUMINUM WHEEL MATERIAL</li> <li>INSULATED HOUSING - 1 IN. THICK: FAN HOUSING</li> <li>MOTOR COVER</li> </ul>
EF-G-N	general exhaust	RM 61 MAINTENANCE GARAGE	ROOF	GREENHECK	AE-16-428-A5	1,100	2,330	100	0.40	115/1/60	0.37	0.50	0.36	-UL/cUL 705 LISTED - "POWER VENTILATORS" - SWITCH NEMA-1. TOGGLE, SHIPPED WITH UNIT - ALUMINUM BIRDSCREEN MATERIAL - SOLID STATE SPEED CONTROL, 10 AMP, SHIPPED LOOSE
EF-G-S	general exhaust	RM 61 MAINTENANCE GARAGE	ROOF	GREENHECK	AE-16-428-A5	1,100	2,330	100	0.40	115/1/60	0.37	0.50	0.36	-UL/cUL 705 LISTED - "POWER VENTILATORS" - SWITCH NEMA-1. TOGGLE, SHIPPED WITH UNIT - ALUMINUM BIRDSCREEN MATERIAL - SOLID STATE SPEED CONTROL, 10 AMP, SHIPPED LOOSE
EF-G-P	garage pit exhaust	MAINTENANCE GARAGE PIT	ROOF	GREENHECK	GB-101HP-4	101	215	150	0.60	115/1/60	0.19	0.25	0.08	<ul> <li>SPARK B CONSTRUCTION</li> <li>UL/cUL 705 LISTED - "POWER VENTILATORS"</li> <li>SWITCH, NEMA-7 AND 9, TOGGLE, SHIPPED WITH UNIT, DIVIS</li> <li>SEISMIC RATED TO DESIGN CATEGORY F PER IBC-2015 &amp; AU</li> <li>OSHPD SEISMIC CERTIFIFED, #OSP-0148-10</li> <li>HINGED CURB CAP KIT W/ CABLES (PN 851018)(SHIPPED LU</li> <li>FOAM CURB SEAL (ATTACHED)</li> <li>BIRDSCREEN: GALVANIZED, NOM. 84% FREE AREA</li> <li>BEARINGS WITH GREASE FITTINGS, L10 LIFE OF 100,000 HRS</li> </ul>
EF-G-VE	VEHICLE EXHAUST	RM 61 MAINTENANCE GARAGE	ROOF	GREENHECK	FJI—BI—X	1,699	3,600	795	3.20	575/3/60	3.73	5.00	3.43	-COATED WITH PERMATECTOR, CONCRETE GRAY-RAL 7023, FAN -CURB MOUNTED WITH PANEL -UL LISTED FOR UL/CUL-705 - "POWER VENTILATORS" -DIRECT MOUNT ISOLATORS, ISOLATOR-SPRING, RESTRAINED, 1 -ACCESS DOOR - HINGED -DRAIN CONNECTION - 1" PIPE THREAD W/PLUG -INLET CONNECTION - SLIP FIT -OUTLET CONNECTION - SLIP FIT -OUTLET CONNECTION - SLIP FIT -VFD MOUNTING BRACKET -FASTENERS - STANDARD -VFD
EF-G-GS	general exhaust	RM 61A GARAGE STORAGE	ROOF	GREENHECK	G-080-VG	142	300	100	0.40	115/1/60	0.07	0.10	0.06	<ul> <li>UL/cul 705 Listed – "Power ventilators"</li> <li>SWITCH, NEMA-1, TOGGLE, SHIPPED WITH UNIT</li> <li>SEISMIC RATED TO DESIGN CATEGORY F PER IBC-2015 &amp; A:</li> <li>OSHPD SEISMIC CERTIFIED, #OSP-0148-10</li> <li>HINGED CURB CAP KIT W/ CABLES (PN 851018)(SHIPPED LG</li> <li>FOAM CURB SEAL (ATTACHED)</li> <li>BIRDSCREEN: GALVANIZED, NOM. 84% FREE AREA</li> <li>ALUMINUM WHEEL MATERIAL</li> </ul>
EF-O-M	Sanitary exhaust	RM 105 WASHROOM	CEILING MOUNTED	GREENHECK	SQ-60-VG	47	100	85	0.35	115/1/60	0.37	0.50	0.36	-NO UL LISTING -SWITCH, NEMA-1, TOGGLE, SHIPPED WITH UNIT -SEISMIC RATED TO DESIGN CATEGORY F PER IBC-2012 & ASI -OSHPD SEISMIC CERTIFIED, #OSP-0113-10 -ISOLATORS REQUIRED - OSHPD CERTIFIED BY OTHERS -DAMPER SHIPPED LOOSE, INLINE, BD-330-PB-9X9, GRAVITY -ALUMINUM WHEEL MATERIAL -NO MOTOR COVER
EF-WR	Sanitary exhaust	EAST BLOCK WASHROOM	ROOF	GREENHECK	G—095—VG	142	300	125	0.50	115/1/60	0.12	0.17	0.06	<ul> <li>UL/cul 705 LISTED - "POWER VENTILATORS"</li> <li>SWITCH, NEMA-1, TOGGLE, SHIPPED WITH UNIT</li> <li>SEISMIC RATED TO DESIGN CATEGORY F PER IBC-2015 &amp; A'</li> <li>OSHPD SEISMIC CERTIFIFED, #OSP-0148-10</li> <li>HINGED CURB CAP KIT W/CABLES (PN 851018) (SHIPPED L'</li> <li>FOAM CURB SEAL (ATTACHED)</li> <li>BIRDSCREEN: GALVANIZED, NOM. 84% FREE AREA</li> <li>ALUMINUM WHEEL MATERIAL</li> </ul>
EF-S/W	SQUARE INLINE CENTRIFUGAL	WELDING SHOP	CEILING MOUNTED	twin city	DSI	165	350	60	0.25	115/1/60	0.09	0.13	0.04	C/W DISK SWITCH (NEMA 1)
EF-S/C	SQUARE INLINE CENTRIFUGAL	CARPENTRY SHOP	CEILING MOUNTED	TWIN CITY	DSI	165	350	125	0.50	115/1/60	0.12	0.17	0.06	C/W SPEED CONTROLLER MOTOR MOUNTED, 0-10 VDC LEAD, D
FE-S/W	CENTRIFUGAL	WELDING SHOP FUME EXHAUST	CEILING MOUNTED	PLYMOVENT	FUA-3000	425	900	1,745	7.00	230/3/50	1.49	2		C/W MOTOR STARTER
EF-WO	GENERAL EXHAUST	WASTE OIL STORAGE ROOM	PROPELLER WALL FAN	TWIN CITY	TCPE	94	200	30	0.13	115/1/60	0.12	0.17	0.02	COMPLETE WITH BACK DRAFT DAMPENER
<u> </u>			1		1	1		I			1			

<u>NOTES:</u> —ALTERNATES: TWIN CITY

								S	SPLIT SY	<b>STEMS</b>				
TAG	LOCATION	INDOOR UNIT OUTDOOR UNIT												
		MODEL #	NOM A	IRFLOW	MIN.	MIN. O.A NOMINAL CAPACITY E			ELECTRICAL	MODEL #		ELECTRIC	CAL	
			L/S	CFM	L/S	CFM	HEATING	COOLING	VOLTAGE		MCA	MOCP	VOLTAGE	
HP-S-0/HP-E	STORES OFFICE	40MBFQ123	132	280	0	0	7,639	10,917	230/1/60					
HP-MT/HP-E	METER TESTING	40MBFQ183	260	550	71	150	11,459	16,375	230/1/60	391000495 3	75	50	208/230	-FLOOR CONSOLE FAN CON SWEEP OPERATION, AUTOMA
HP-CO/HP-E	CARPENTRY OFFICE	40MBFQ123	132	280	24	50	7,639	10,917	230/1/60		35	50	200/200	PUMP, WALL MOUNT WIRED C/W SNOW STAND, WIND B
HP-C-LR/HP-E	CARPENTRY LUNCHROOM	40MBFQ123	132	280	47	100	7,639	10,917	230/1/60					
NOTES 1 SPECIEI	CATIONS BASED ON CAR	RIFR												

<u>NOTES:</u> 1.	SPECIFICATIONS	BASED	ON	CARRIER

											F	200	FΤ	ΌP	U	NITS							
TAG	SYSTE	LOCATION	MODEL #		COOLING					HE/	ATING			MIN	•••	FC	'n			-	WEI	оцт	
	М			GROSS	ROSS SENSIBLE LATENT OU		OUTPUT	AIRF	LUW	MIIN	U.A.	EG	r			L	WEI	501					
				MBH	MBH	MBH	SEER	IEER	EER	MBH	MBH	L/S	CFM	L/S	CFM	Pa	in.w. c.	VOLTAGE	MCA	MOC P	KG	lbs	
rtu-o-n	office North	lower west Roof	48LCR004A0M1 -1E3C0	34.33	25.21	9.12	17.10	-	-	115	93	472	1000	61	130	185	0.75	575/3/60	24	30	408	900	C/W STANDARD ELECTR Controller, Enthalpy Access Panel, Non-F Seismic Rook Curb.
rtu-o-s	office South	lower west Roof	48lce008e2m5- 1e3f0	89.82	69.56	20.26	-	19.4	12.80	180	146	1,416	3000	189	400	225	0.90	575/3/60	43	50	998	2200	C/W STATIC BELT DRIVE RTU OPEN MULTI PROTO ECONOMIZER WITH BARC SENSOR, AND 24 IN TA FILTER & HOOD BY RTU
NOTES: SPI	ECIFICATIO	INS BASED ON	CARRIER																				

							CARBON	I FILTER	UNITS								
TAG	SYSTEM	LOCATION	MODEL #	AIRF	LOW		FIL	.TERS	E	SP	ELECT	RICAL		WEI	GHT	REMARKS	
				L/S	CFM	PRE	TYPE	OUDR CONTROL	TYPE	Pa	in.w.c.	VOLTAGE	MOCP	HP	KG	lbs	
CF-O-N	OFFICE NORTH	LOWER WEST ROOF		61	130	8	PLEATED	MM-9000	CARTRIDGE	60	0.25	115/1/60	15	1 8	272	600	
CF-0-S	OFFICE SOUTH	LOWER WEST ROOF		189	400	8	PLEATED	MM-9000	CARTRIDGE	80	0.32	115/1/60	15	18	272	600	INTERLOCK WITH ASSOCIATED
CF-O-M	OFFICE MEZZ	EAST ROOF		138	292	8	PLEATED	MM-9000	CARTRIDGE	90	0.36	115/1/60	15	18	272	600	HVAC EQUIPMENT
CF-MR	METER ROOM	EAST ROOF		138	292	8	PLEATED	MM-9000	CARTRIDGE	90	0.36	115/1/60	15	1 8	272	600	
NOTES: SPEC	IFICATIONS BASED (	ON TWIN CITY/ CIRCUL ·	-AIRE														

ORIGINAL SHEET SIZE: ARCH D

								UNIT	HEATER			
EMARKS		TAG	SYSTEM	MODEL #	AIRF	LOW	POV	NER	VOLTAGE	WEI	ЭНТ	REMARKS
					L/S	CFM	WATTS	BTU/H		KG	lbs	
		UH-WO	WASTE OIL ROOM HEATING	ARUH5TCHAR	94	200	3,750	12,798	208/1/60	9	20	BUILT IN THERMOSTAT
		NOTES: 1. SPECIFI	CATIONS BASED ON	OXFORD								
Shipped Loose Pped Loose												
UNIT HEATER (GAS)												
		TAG	SYSTEM	MODEL #	AIRF	LOW	POV	NER	VOLTAGE	WEI	3HT	REMARKS

L/S CFM WATTS BTU/H

LOCATION

907 | 1921 | 44,000 | 150,000 | 208/1/60

SIZE MODEL

MOTORIZED DAMPERS

KG

78

CFM

AIRFLOW

L/S

lbs

173

REMARKS

## ER IBC-2012 & ASCE 7-05 STANDARDS

BY OTHERS -PV-23X23, GRAVITY OPERATED, NOT COATED

UH-ST ENVIRO SHOP HEATING

TAG

NOTES: 1. SPECIFICATIONS BASED ON REZNOR

MD-WMR-OA SF-WMR OUTSIDE AIR

MD-WMR-RL SF-WMR RELIEF AIR

NOTES: 1. SPECIFICATIONS BASED ON TAMCO

UDAS-150

SYSTEM

IOUSING

WITH UNIT, DIVISION 1 WIRING R IBC-2015 & ASCE 7-10 STANDARDS 1018)(SHIPPED LOOSE)

ARE OF 100,000 HRS (L50 AVERAGE LIFE 500,000 HRS)

Y-RAL 7023, FAN AND ATTACHED ACCESSORIES NTILATORS" RESTRAINED, 1 INCH

R IBC-2015 & ASCE 7-10 STANDARDS 1018)(SHIPPED LOOSE)

IBC-2012 & ASCE 7-05 STANDARDS

OTHERS -PB-9X9, GRAVITY OPERATED, NOT COATED

R IBC-2015 & ASCE 7-10 STANDARDS

018) (SHIPPED LOOSE) AREA

)-10 VDC LEAD, DISK SWITCH (NEMA 1) REMARKS DIL UNIT C/W FILTER, DX COIL, SELECTABLE AIR MATIC RESTART AFTER POWER FAILURE, CONDENSATE ) REMOTE BACNET THERMOSTAT. CONDENSING UNIT BAFFLES.

REMARKS

NC DRIVE, LOUVERED HAIL GUARDS, RTU OPEN ECONOMIZER WITH BAROMETRIC RELIEF, HINGED FUSED DISCONNECT, CO2 SENSOR, AND 24 IN TALL

(WITH VFD CONTROLLER), LOUVERED HAIL GUARDS, OCOL CONTROLLER, STANDARD LEAK ENTHALPY ROMETRIC RELIEF, HINGED ACCESS PANELS, CO2

TALL SEISMIC ROOF CURB. 12" CARTRIDGE CARBON U VENDOR.

HWT\_1

EAST

NOTES: 1. SPECIFICATIONS BASED ON A.O. SMITH

DOMESTIC HOT WATER HEATERS AREA | MANUFACTUR | MODEL # | CAPACITY | INPUT | ELECTRICAL TAG WEIGHT SERVED ER USGAL MBH VOLTAGE AMPS KG LBS.

A.O. SMITH GPDT50

MD-S/C CARP. SHOP SUPPLY AIR CARPENTRY SHOP 10"x10" 9000 590 1,250 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS 1,250 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS MD-S/W WELDING SHOP SUPPLY AIR WELDING SHOP 16"x16" 590 9000 WEST MECH. 1,133 MD-CR-I ERV-C/R INTAKE AIR 26"x10" 9000 2,400 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS WEST MECH. ERV-C/R SUPPLY AIR 1,133 MD-CR-0 26"x10" 2,400 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS 1000 WEST MECH. 1,133 20"x18" MD-CR-E GENERAL EXHAUST 1000 2,400 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS MF77 WEST MECH. 1,133 MD-CR-R GENERAL EXHAUST 20"x18" 2,400 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS 1000 MF77 WEST MECH. 1,133 MD-CR-B ERV-C/R BYPASS 26"x10" 9000 2,400 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS IMF77 EAST MECH. 1,982 MD-ST-RL AHU-ST RELIEF AIR 32"x16" 9000 4,200 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS ROOM WEST MECH. 1,321 MD-0/C-RL AHU-0/C RELIEF AIR 26"x16" 9000 2,800 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS ROOM EAST MECH. 20"x10" MD-EMR-RA SF-EMR RETURN AIR 1000 236 500 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS ROOM EAST MECH. MD-EMR-OA SF-EMR OUTSIDE AIR 14"x12" 9000 236 500 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS ROOM EAST MECH. MD-EMR-RL SF-EMR RELIEF AIR 12"x10" 236 500 COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS 9000 IROOM WEST MECH. COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS MD-WMR-RA SF-WMR RETURN AIR 24"x18" 1000 354 750 ROOM

354

354

750

750

PLUMBING EQUIPMENT LIST	
-------------------------	--

WEST MECH.

WEST MECH.

IROOM

ROOM

ITEM DESCRIPTION BACKFLOW PREVENTER - LEAD FREE - DOUBLE CHECK VALVE ASSEMBLY - WATTS LF757 BFG: 3 LEAD FREE - DOUBLE CHECK VALVE ASSEMBLY - TWO INDEPENDENT, REMOVABLE AND SERVICEABLE TRI-LINK CHECK MODULES WITHIN A SINGLE HOUSING, DRIP TIGHT CLOSURE AGAINST REVERSE FLOW, (BFP-1) 304 SCHEDULE 40 STAINLESS STEEL HOUSING AND SLEEVE, STAINLESS STEEL SPRINGS, REVERSIBLE ELASTOMERIC DISCS, SLEEVED ACCESS PORT, TWO DRIP TIGHT SHUT-OFF VALVES UL/FM GROOVED GEAR OPERATED BUTTERFLY VALVES WITH TAMPER SWITCH, 3"Ø (50 MM) PIPE CONNECTION, FOUR LEAD FREE, BRONZE BODY, NICKEL PLATED TEST COCKS.

WATTS #FD-103-C-A5-1-7 FLOOR DRAIN - EPOXY COATED CAST IRON BODY, REVERSIBLE FLASHING CLAMP WITH

12"x8"

16"x10"

9000

9000

(FD-1) PRIMARY AND SECONDARYWEEPHOLES, TRAP PRIMER CONNECTION WITH PLUG, 3"Ø (76 MM) NO HUB OUTLET 5" (127 MM) DIAMETER, NICKEL BRONZE, ADJUSTABLE ROUND STRAINER. ZURN Z-645 12" [305] X 12" [305] EXTRA-HEAVY-DUTY SIDE OUTLET BODY, INTERNAL TRAP AND CLEANOUT, SEEPAGE PAN AND COMBINATION HEAVY-DUTY MEMBRANE FLASHING CLAMP AND FRAME FOR CAST IRON HINGED FD-2 EXTRAHEAVY-DUTY SLOTTED GRATE, WITH SUSPENDED SEDIMENT BUCKET. 3" PIPE SIZE, NO HUB OUTLET, TRAP PRIMER CONNECTION.

FIAT #SF-1-F SINGLE BOWL LAUNDRY SINK, 2 HOLES 4" (102 MM) CENTER, 508 MM (20") WIDE X 587 MM (23-1/8") LONG X 856 MM (33-11/16") HIGH DEEP, FLOOR MOUNTED, MANUFACTURED FROM A MOLDED, FINE CELLED, STRUCTURAL PLASTIC POLYMER, WHITE BAKED ENAMEL STEEL LEGS, INTEGRAL MOLDED DRAIN AND PLASTIC STOPPER AND TAIL PIECE NUT WITH WASHER. CHICAGO FAUCETS #891-ABCP TWO HANDLES FAUCET, CHROME PLATED FINISH, ECAST CONSTRUCTION LEAD FREE (EQUAL OR LESS THAN 0.25%) CAST BRASS BODY, QUATURN COMPRESSION OPERATING CARTRIDGE, 8.3 LPM (2.2 GPM) PRESSURE COMPENSATING SOFTFLO AERATOR OUTLET, 152 MM (6") S TYPE SWING SPOUT, 60 MM (2-3/8") METAL VANDAL PROOF LEVER HANDLES WITH BLUE AND RED

LS-1 INDEX BUTTÓNS. LAWLER #TMM-1070, BELOW DECK MECHANICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, 10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP. NOTE : PROVIDE TEE, ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE TEMPERED WATER TO HOT SIDE OF FAUCET. MCGUIRE #LFBV170 FAUCET SUPPLIES, CHROME PLATED FINISH POLISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 MM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDLES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. PROVIDE P-TRAP, ADJUSTABLE ALL METAL CONSTRUCTION, 38 MM (1.5") SIZE, AND ESCUTCHEON.

3" HUB DRAIN - WATTS DRAINAGE FD-100-DD3T-1 EPOXY COATED CAST IRON 3"Ø OUTLET FLOOR DRAIN WITH ANCHOR FLANGE, HD-1 REVERSIBLE CLAMPING COLLAR WITH PRIMARY & SECONDARY WEEPHOLES, ADJUSTABLE CAST IRON HUB FUNNEL, AND THREADED NICKEL BRONZE HUB OUTLET.

EYE/FACE WASH-WALL MOUNTED -Guardian #G1750-t, wall mounted, 292 mm (11-1/2") dia bowl, stainless steel bowl, eye/face wash. EWS-1) PROVIDE SHUT-OFFS AT EMERGENCY MIXING VALVE. EYEWASH/FACEWASH FIXTURE SHOULD BE INSTALLED 4 TO 10 FEET FROM THE MIXING VALVE. - LAWLER #911E/F, 'EMERGENCY TEMPERED WATER MIXER', FOR EMERGENCY THERMOSTATIC MIXING VALVE FOR EYEWASH OR EYE/FACE WASH.

	EXPANSION TANKS														
TAG	SYSTEM	LOCATION	MODEL	SHIPPING	WEIGHT	CONNI	ECTION	VC	IUME	REMARKS					
				kg	lbs	mm	in	L	USGAL						
ET-1	DCW MAIN	WATER SERVICE ROOM	ST-30V	11.4	25	20	3/4"	53	14	-					
ET-2	hot water Tank	HWT ROOM	ST-12	4.1	9	20	3/4"	79	21	-					
NOTES:	I. SPECIFICATIONS	BASED ON AM	ROL												

189.3 50 50 120/1/60

REMARKS 87.1 192 C/W 3" COMBUSTION AIR AND 3" FLUE VENT

	PUMPS														
TAG	SERVICE	LOCATION		MODEL	FLUID	TYPE	CONTROL	FLO	W	HE	EAD	ELECTRIC	al da	TA	REMARKS
			TUKER					L/S	USG PM	м	ft.	VOLTAGE	кw	HP	
P-DHWR	DOMESTIC HOT WATER RECIRC	HWT ROOM	ARMSTRON G	ASTRO 210CL	WATER	INLINE	-	0.1	2	1.5	5	120/1/60	0.22	0.3	3 SPEED CIRCULATOR
NOTES:															

SPECIFICATIONS BASED ON ARMSTRONG

COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS

COORDINATE WITH CONTROLS CONTRACTOR FOR ACTUATORS

	ROOF HOOD SCHEDULE														
TAG	SYSTEM	LOCATION	SI	ZE	MODEL	AIRF	LOW	REMARKS							
			HOOD	THROAT	]	L/S	CFM								
RHD-1	WELDING/CARPENT RY EXHAUST	ROOF	60"x36"	36"x24"	ESV	755	1,600	GALVANIZED HOOD COMPLETE WITH BIRD SCREEN, CURB CAP. 100% FREE AREA.							
NOTES:															

1. SPECIFICATIONS BASED ON ABI BY MESTEK COMPANY

	HEAT RECOVERY UNIT														
TAG	LOCATION	MODEL #	AIRF	LOW	E	SP	ELEC.	TRICAL		WEIGHT		DIMENSIONS L x H x D	REMARKS		
			L/S	CFM	Pa	in.w.c.	VOLTAGE	MCA	MOCP	KG	lbs	IN			
HRV-0-M	EAST MEZZANINE	NU500HRV	138	292	100	0.4	115/1/60	4	15	23	50	36 x 23 x 17	C/W INTELLIGENT DEFROST CYCLE, FAN SPEED CONTROL, DRAIN, HANGER KIT, AND AIR FILTERS		
HRV-MR	METER ROOM	NU500HRV	142	300	100	0.4	115/1/60	-	-	-	-	-	-		
NOTES:											-				

SPECIFICATIONS BASED ON CARRIER

	LOUVRES														
TAG	SYSTEM	LOCATION	SIZE	MODEL	AIRF	LOW	REMARKS								
		-													
LV-1	MAINTENANCE GARAGE MUA	EAST MECH. ROOM	72 <b>"</b> x60"	DE439	3,634	7,700	-								
LV-2	EAST MEZZANINE RELIEF AIR	EAST MECH. ROOM	72 <b>*</b> x24*	DE439	1,982	4,200	-								
LV-3	EAST MECH. ROOM COMB. AIR	EAST MECH. ROOM	12"x12"	DE439	-	-	-								
LV-4	CARPENTRY SUPPLY AIR	CARPENTRY SHOP	18"x16"	DE439	165	350	-								
LV-5	WELDING SUPPLY AIR	WELDING SHOP	24"x36"	DE439	590	1,250	-								
LV-6	HRV-MR EXHAUST AIR	METER ROOM	18"x16"	DE439	142	300	-								
NOTES: 1. SPECIFI	CATIONS BASED ON EH PRICE														

	DUST EXTRACTION EQUIPMENT LIST
	ITEM
EA-S/W-1)	<ul> <li>KUA-200/4H FLEX. EXTRACTION ARM C/W FLEXMAX-45/200 EXTENSION CRANE - PLYMOVENT</li> <li>Wall mounted extraction arm with extension crane (wall bracket included)</li> <li>KUA-200 Working range from 1.62m to 4.13m</li> <li>Extension Crane length of 4.55m</li> <li>200Ø Aluminum tubing with 340mm Hood</li> <li>PVC Flex Tubing</li> <li>May accounted of circlew of 0.40 of m</li> </ul>
(EA-S/W-2)	<ul> <li>Max recommended airliow of 940 crm</li> <li>KUA-200/3H FLEX. EXTRACTION ARM C/W FLEXMAX-45/200 EXTENSION CRANE - PLYMOVENT</li> <li>Wall mounted extraction arm with extension crane (wall bracket included)</li> <li>KUA-200 Working range from 1.45m to 3.44m</li> <li>Extension Crane length of 4.55m</li> <li>200ø Aluminum tubing with 340mm Hood</li> <li>PVC Flex Tubing</li> <li>Max recommended airflow of 940 cfm</li> </ul>
(EA-S/W-3)	KUA-200/3H FLEX. EXTRACTION ARM - PLYMOVENT • Wall mounted extraction arm (wall bracket included) • KUA-200 Working range from 1.45m to 3.44m • 200ø Aluminum tubing with 340mm Hood • PVC Flex Tubing • Max recommended airflow of 940 cfm.
ER-G	EXHAUST HOSE REEL 865 (ELECTRIC MOTOR DRIVEN) - NEDERMAN • Model No. 20803965 • Voltage 100/230 V, Frequency 50/60Hz • NR-CP Hose, 150ø Diameter, 10 m length • c/w Extraction Trolley Reel on rail, pendant control, transmitter with wall bracket, fan stand, transformers (x2) 230/250V to 24V/75VA and 24V/25VA, bridge hose clamp, flex noz 6" with 8"/9" opening, arm bracket, stainless steel 5" nozzle, NFC-4.2 Hose Ex. 100mm/5m
ER-G-EX	EXHAUST HOSE REEL 865 (ELECTRIC MOTOR DRIVEN) - NEDERMAN • CONTRACTOR TO RELOCATE EXISTING HOSE REELS

		DIFFUSER	S/GRILLES	
TAG	TYPE	MANUFACTURE R	MODEL #	REMARKS
S1	INDUSTRIAL DISPLACEMENT DIFFUSER	e.h price	DXFI	SIZE OF FLOOR MOUNTED DIFFUSER IS 24"x24"x36", INLET SIZE 16"ø.
S2	LOUVERED FACE SUPPLY	E.H PRICE	520D/SDF/L/F/D/B1 2	REFER TO DRAWINGS FOR SIZE
S3	ROUND CONE DIFFUSER	E.H. PRICE	RCD/B12	REFER TO DRAWINGS FOR SIZE
S4	RESERVED	-	_	-
S5	LOUVERED FACE SUPPLY	E.H. PRICE	520D/L/F/D/B12	REFER TO DRAWINGS FOR SIZE
S6	LOUVERED FACE SUPPLY	E.H. PRICE	520D/L/TB/B12	REFER TO DRAWINGS FOR SIZE
R1	LOUVERED FACE RETURN	E.H. PRICE	530D/L/F/D/B12	REFER TO DRAWINGS FOR SIZE
R2	LOUVERED FACE RETURN	E.H. PRICE	530D/L/TB/B12	REFER TO DRAWINGS FOR SIZE
R3	EGG CRATE RETURN	E.H. PRICE	80/F	REFER TO DRAWINGS FOR SIZE
E1	LOUVERED FACE EXHAUST	E.H. PRICE	530D/L/F/D/B12	REFER TO DRAWINGS FOR SIZE
E2	LOUVERED FACE EXHAUST	E.H. PRICE	530D/L/TB/B12	REFER TO DRAWINGS FOR SIZE

NOTES: 1. SPECIFICATIONS BASED ON E.H. PRICE

2. STATIONARY DRAINABLE LOUVRE, 4" ALUMINUM, 53.6% FREE AREA, COORDINATE COLOR WITH ARCHITECT PRIOR TO ORDERING.

**GENERAL NOTES** 

1.	ALL EQUIPMENT TO BE PROVIDED WITH SEISMIC CURB O	R
	RESTRAINTS. SEE SPECIFICATIONS FOR DETAILS.	

SAVE ON ENERGY PROGRAM DETAILS

- THE FOLLOWING ARE MANDATORY REQUIREMENTS OF THE PROGRAM. FAILURE TO DOCUMENT AND PROVIDE ANY OF THE INFORMATION BELOW WILL VOID THE PROGRAM AND MAKE THE APPLICATION INTELLIGIBLE FOR THE INCENTIVE REBATE. ROOF TOP RTU-N AND RTU-S ARE ELIGIBLE AND PARTICIPATE IN THE INCENTIVES.
- 2. THE CONTRACTOR SHALL INCLUDE PHOTOGRAPHIC DOCUMENTATION OF THE EXISTING ROOFTOPS INCLUDING MODEL, SERIAL NUMBER. THIS INFORMATION IS TO BE NEATLY ARRANGED, LABELED AND ORGANIZED IN A PDF DOCUMENT. SUBMIT A COPY TO THE OWNER AND CONSULTANT FOR APPROVAL.
- 3. THE CONTRACTOR IS TO PROVIDE A RECEIPT AND LETTER STATING THAT THE ROOFTOPS HAVE BEEN DISPOSED OF.
- 4. THE CONTRACTOR IS TO PROVIDE RECEIPTS FOR THE NEW ROOFTOPS (RTU-N AND RTU-S). THE RECEIPTS SHALL INDICATE MODEL NUMBER AND SERIAL NUMBER. THIS INFORMATION IS USED TO VALIDATE THE INCENTIVES APPLICATION. PRICING CAN BE BLACKED OUT. THIS SHALL BE SUBMITTED TO THE OWNER AND THE CONSULTANT FOR APPROVAL.

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.
No.	DESCRIPTION	DATE	BY
	REVISIONS	5	

![](_page_20_Picture_62.jpeg)

![](_page_20_Picture_63.jpeg)

# A**K**C 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: DRAWN BY: DESIGNED BY: P.G. 2020 03 24 M.B.

DRAWING TITLE:

# SCHEDULES 2

SCALE:	DRAWING No.:
N.T.S.	N 404
PROJECT:	
20-201-010	

![](_page_21_Figure_0.jpeg)

![](_page_21_Figure_3.jpeg)

![](_page_22_Figure_0.jpeg)

.OT DATE: February 26,

ORIGINAL SHEET SIZE: ARCH D

	GENERAL NOTES
ENCE To maintain room temperature. Pers are in normal position. Bove setpoint {75;F} adjustable, open damper md-emr/wwr-rl and start supply E: damper md-emr/wmr-oa open; damper md-emr/wr-ra closed; to maintain supply f;f (adj.)	
ITCL PANEL	Image: Second state of the second s
EXHAUST FANS. WHEN SENSORS CAN NOT BE INSTALLED IN THE MUA PROVIDE	<b>ARC</b> Engineering Inc. Creating Solutions Through Engineering Excellence
PLY FAN SHALL BE RUNNING AT 50% CAPACITY- 1750 CFM EACH (ADJUSTABLE) L BE GENERATED. WHEN THE SUPPLY FAN STATUS INDICATES THE FAN STARTED C GAS HEATING VALVE AND COOLING DX VALVE WILL MODULATE IN SEQUENCE TO P). S THE DIRTY FILTER LIMIT GENERATE AN ALARM.	1100 South Service Rd., #417 Stoney Creek ON L8E 0C5 T ● (905) 643-8530 F ● (905) 643-8510 www.arcengineering.ca contact@arcengineering.ca
ed, exhaust fan (ef—a and ef—b) shall switch to high speed (1700 cfm r temperature, and the supply fan is on	NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO
A CONCENTRATION OF 25ppm or NO2 SENSOR DETECTING A CONCENTRATION OF IN THAT DETECTION ZONE SHALL START A CONCENTRATION OF 100ppm CO or NO2 SENSOR DETECTING A CONCENTRATION IN THE WAREHOUSE AND ANNUNCIATED. DOWN AND THEIR MOTORIZED DAMPERS CLOSE.	START DATE:DRAWN BY:DESIGNED BY:2020 03 24M.B.P.G.DRAWING TITLE:CONTROLS 1
ITORING ONLY UNLESS OTHERWISE NOTED ON DRAWINGS.	SCALE: DRAWING No.: AS NOTED M-103 PROJECT: 20-201-010

![](_page_23_Figure_0.jpeg)

ORIGINAL SHEET SIZE: ARCH D

### <u>GENERAL</u> 1.

- 1.1. The scope of work is to provide mechanical serves relating to the upgrade of the existing HVAC systems for the Niagara Falls Service Centre. HVAC systems include base building heating and cooling, service garage ventilation, shop ventilation, and general ventilation. Additionally, plumbing and hydronic work is included to support the HVAC systems.
- Perform all mechanical work detailed on these drawings to provide a complete and fully functional 1.2. operating system to the satisfaction of the owner and mechanical consultant.
- 1.3. Where there is discrepancy between specified, or scheduled equipment, and information indicated
- elsewhere on the drawings, the most stringent shall apply. 1.4. Where there is apparent discrepancy of any kind, between any drawings, equipment tables, schedules, specifications, or other bid documents, notify the Consultant, for direction and clarification during the
- tender period Consideration will not be granted for misunderstanding the intent of the contractual documents, the 1.5. extent of work to be performed, or the intent required to provide complete and fully operational and controlled systems upon completion installation
- Specified work described or indicated on drawings does not delegate function to any specified 1.6. subcontractor or identify absolute contractual limits between mechanical or subcontractors.
- Arrange for milestone inspections. Contact ARC Engineering Tel: (905) 643—8530 E—mail: contact@arcengineering.ca. When ceiling tiles have been installed it will be necessary for the 1.7. contractor to remove portions for inspection.
- 1.8. As a minimum, base building standards shall form the basis for this construction. Comply with Landlord's requirements for system shutdown and connection.
- Coordinate all work with base building work. Refer to base building drawings and specifications. 1.9. 1.10. Codes and bylaws shall be strictly adhered to. Obtain necessary permits, approvals and inspections
- from the authorities having jurisdiction. 1.11. Permits and fees required by the authorities having jurisdiction shall be obtained and paid for by this contractor. Include all applicable taxes.
- 1.12. Existing site conditions affecting the work of this trade shall be reviewed prior to tender submission. Contractor shall conduct ongoing reviews during demolition and construction and immediately notify the consultants of any deviations from drawing dimensions/details/schematics. Failure to do so shall not relieve contractor of full contract responsibility
- 1.13. Cutting, patching and core drilling required by this trade shall be paid for by this contractor. Provide details of new opening through structural components for engineer's approval. Incur all costs related for structural approva
- 1.14. Fire stop shall be ULC listed for the required separation and provided at all pipe and duct penetrations through rated assemblies.
- 1.15. Premium time costs shall be included for work outside of normal working hours. Comply with construction schedule prepared by Management.
- 1.16. Flashing and counter flashing for exterior penetrations or water-proofed floors shall be provided under this contract.
- 1.17. Shop drawings shall be complete with contractors reviewed stamp. Submit four (4) copies and/or one (1) electronic copy of all shop drawings. Allow one (1) week for consultant's review. 1.18. Base bid equipment and suppliers in Base Building Mechanical Specifications shall apply to this
- 1.19. If the Contractor chooses to submit alternates: 1.19.1. Contractor to submit alternates in addition to base bid products, and show savings by utilizing alternates. Where modifications to the work of Other Trades are required as a result or part of the
- alternative offered, include the cost of said modifications in the alternative price offered. 1.19.2. Contractor responsible for ensuring alternate equipment meets physical requirements of existing site conditions to remain and proposed design with respect to but not limited to: size, weight, service
- access clearances, duct connection arrangement, & air intake clearances. 1.19.3. Contractor responsible for ensuring alternate equipment meets functions and performance specifications specified in schedule and/or shown on Drawings.
- 1.20. Equipment substitutions after award of contract will not be considered without written explanation and consultant's written authorization. The quality and performance characteristics of substituted product shall be equivalent to the specified product. All substitute products shall be approved by consultants. Any additional costs incurred by all trades for substituted equipment installation must be incurred by this contract
- 1.21. Control wiring and devices shall be provided under this contract.
- 1.22. Electrical devices shall be provided for all Division 15 equipment, including load side wiring, starters, disconnect, etc. Verify and coordinate voltage, phase, and short circuit interrupting capacity with the electrical contractor prior to ordering equipment. Provide conduit and wiring materials and methods in strict accordance with Division 16 requirements.
- 1.23. Access doors shall be provided for all inaccessible mechanical equipment and services requiring inspection or service. Finish shall suit architect/designers requirements. Access doors shall be recessed as required to suit wall finish (e.g., tile).
- 1.24. Architect/Designer/Owner approval of air terminal, thermostat, and access door locations must be obtained prior to installation.
- 1.25. One (1) year written warranty shall be provided for the complete mechanical installation from date of acceptance 1.26. CAD as-built drawings shall be completed utilizing AutoCAD. Record accurately installed work on white
- prints transferring to AutoCAD. Submit both copies. Operating and maintenance manuals containing approved shop drawings, air and water balancing reports, equipment data sheets, written warranty, operating instructions and maintenance procedures shall be submitted to consultant for review. Manuals shall be separated with dividers in appropriate sections. Make all corrections requested by consultant and resubmit for review.
- 1.28. Provide, at minimum, one (1) hard copy and one (1) electronic copy of the operating and maintenance manuals referenced in section 1.27 to the building owner.
- 1.29. Change Notice Quotations shall be submitted complete with cost breakdown of labour and materials. Failure to provide will result in rejection. All Mechanical Change Notices shall be priced in accordance with "MECHANICAL CONTRACTORS ASSOCIATION" (MCA) labour units strictly for labour.

### DEMOLITION 2.

- 2.1. Provide labour, materials, products, equipment and services required to complete the demolition work specified hereir
- Dispose, off site, of all debris in accordance with the jurisdictional authorities. 2.2.
- 2.3. Removal and storage of salvageable items as directed by this specification section and the Owner of their representative
- Mechanical demolition work associated with this building is indicated on the demolition drawings and 2.4. generally consists of the following:
  - HVAC systems and equipment - Hydronic systems and equipment
  - Building Control Systems
- 2.5. Disposed materials which have not been designated for salvage from the demolition shall become the property of the Contractor. Remove all material and debris from the site as quickly as possible and dispose of legally. Burning of debris or selling of materials on the site will not be permitted. 2.6. Present to the Owner exisiting equipment removed but not identified for salvage on site. Acceptance
- of removed equipment is at the discretion of the Owner. Remove such items from site when deemed unsuitable 2.7. Conform to requirements of municipality's Works Department regarding disposal of waste materials.
- 2.8. Materials prohibited from municipality waste management facilities shall be removed from site and disposed to recycling companies specializing in recyclable materials.
- Contractor shall be responsible for all fees required for the disposal of demolished materials, 2.9. equipment, etc.
- 2.10. Salvageable items are to be carefully disconnected, removed and turned over to the owner. The list
  - Radiant tube heaters — Exhaust fan:
  - Hose reels
- 2.11. Store materials only in areas designated by the Owner and as permitted by the local jurisdictional authorities

### HVAC PIPING SYSTEMS 3.

ORIGINAL SHEET SIZE: ARCH D

- 3.1. Piping material for hydronic hot water heating and chilled water and glycol radiant systems to 2068 kPa [300 psig] operating pressure use ASTM A-53 or A-106 schedule 40 black carbon steel, seamless or ERW with the following fittings:
- 3.1.1. For small bore, 50 mm [2 in.] and under to [1034 kPa]150 psi use 1034 kPa [150 psi] screwed black malleable iron or 125# cast iron fittings. 3.1.2. For large bore 65 mm [2-1/2 in.] and over to 1034 kPa [150 psi] use schedule 40 black carbon
- steel welded fittings. 3.1.3. For small bore 50 mm [2 in.] and under to 2068 kPa [300 psi] use 300# screwed black malleable iron or 250# fittings cast iron fittings.
- 3.1.4. For large bore 65 mm [2-1/2 in.] and over to 2068 kPa [300 psi] schedule 40 black carbon steel welded fittings.
- 3.2. Use of grooved systems (Victaulic or equal) installed in accordance with the manufacturer instructions, may be acceptable subject to approval by the owner and the engineer. Upon request provide savinas.
- 3.3. Use of copper piping for small branches and run-outs is acceptable for 20mm [3/4 in.] and below, with type L pipe, wrought copper fittings, and soldered joints for pressures up to 100 psig and silver soldering for higher pressures. 3.4. Valves: (part numbers listed):
- 3.4.1. To 1379 kPa [200 psi] working pressure, up to 50mm [2 in.] soldered or threaded
- 3.4.1.1. Gate Valves 125S/200 W.O.G. rated, bronze body to ASTM-B62, solid wedge disc, bronze trim,

- rising stem. (Soldered Kitz 44, Threaded Kitz 24) 3.4.1.2. Globe Valves - 125S/200 W.O.G. rated, bronze body to ASTM-B62, bronze trime, rising
- (Soldered Kitz 12, Threaded Kitz 11) 3.4.1.3. Ball Valves - 150/600 W.O.G. rated, two piece full port brass body (C37700), solid chrome brass ball, PTFE seats, double o-ring stem seals, lever operated. (Soldered - Kitz 59, Thread Kitz 58)
- 3.4.1.4. Check Valves 125S/200 W.O.G. rated, bronze body to ASTM B62, bronze trim, Y pat (Soldered – Kitz 23, Threaded – Kitz 22)
- 3.4.2. To 1379 kPa [200 psi], 65mm [2-1/2 in.] and larger flanged
- 3.4.2.1. Gate Valves 125S/200 W.O.G. rated, cast iron body to ASTM A126 class B, bronze trim, (Kitz 72)
- 3.4.2.2. Globe Valves 1255/200 W.O.G. rated, cast iron body to ASTM A126 class B, bronze trim, (Kitz 76)
- 3.4.2.3. Ball Valves 125S/200 W.O.G. rated, two piece full port, cast iron ASTM 126 class B body coated to NSF 61, teflon fused ball, RPTFE seats, seals, and packing, lever or gear operated 3.4.2.4. Butterfly Valves - 200 psi rated, ductile iron body, aluminum bronze disc, stainless steel moulded or cartridge style seats (EPDM). Valve to be rated for full dead end service with downstream flanged removed. Lever operated to 6", gear operated 8" and over, LUG pat
- (Lever operated Kitz 6122EL, Gear operated Kitz 6122EG) 3.4.2.5. Check Valves - 125S/200 W.O.G. rated, cast iron body to ASTM A126, bronze trim, bolted bo (Flanged – Kitz 78)
- 3.4.3. To 2068 kPa [300 psi] working pressure, up to 50mm [2 in.] socket welded or threaded 3.4.3.1. Gate Valves - ANSI class 800, forged steel A105N body, bolted bonnet, 1/2 stellite (trim
- graphite packing, OS&Y 3.4.3.2. Globe Valve - ANSI class 800, forged steel A105N body, bolted bonnet, 1/2 stellite (trim
- graphite packing, OS&Y 3.4.3.3. Ball Valves - 150/600 W.O.G. rated, two piece full port brass body (C37700), solid chrome brass ball, PTFE seats, double o-ring stem seals, lever operated. (Threaded - Kitz 58)
- 3.4.3.4. Check Valves ANSI class 800, forged steel A105N body, bolted bonnet, 1/2 stellite (trim graphite gasket
- 3.4.4. To 2068 kPa [300 psi] working pressure, 65mm [2-1/2 in.] and larger flanged
- 3.4.4.1. Gate Valves ANSI class 150, carbon steel A216WCB body, bolted bonnet, OS&Y, 1/2 stellite #8), graphite packing (Kitz 150 SCLS) 3.4.4.2. Globe Valves - ANSI class 150, carbon steel A216WCB body, bolted bonnet, OS&Y, 1/2 s
- (trim #8), graphite packing (Kitz 150 SCJS) 3.4.4.3. Butterfly Valves - ANSI class 150, lug style, carbon steel body, 1704 shaft, stainless steel
- RPTFE packing and seat. Valve shall be fully bi-directional, rated for full dead end service. or gear operated.
- 3.4.4.4. Check Valves ANSI class 150, carbon steel A216WCB body, bolted bonnet, 1/2 stellite (trim stainless steel inserted flexible graphite gasket (Kitz 150 SCOS) Butterfly valves are to be molded or cartridge style only. 3.5.
- 3.6. Ball valves are to be solid ball style only.
- 3.7. Provide ball or butterfly valves for all shut-off requirements. Gate valves will not be approved 3.8. Provide 20 mm [3/4" in.] hose end drain valves with cap and chain at all system low points.
- 3.9. Provide di-electric couplings for connection of dissimilar piping materials. 3.10.
- Provide circuit balancing valves as required to balance water flow. Circuit balancing valves sho Armstrong Model CBVI - Y pattern style, all metal, with soldered or screwed connections, bu drain connection with shut off valve and protective caps and integral valve insulation. Provide each valve: - Vernier type handwheel settings for precision flow balancing.
  - Positive shut off valve with no drip seat and plug type stem with Teflon disc.
  - Tamper proof hidden memory.
- 3.11. Positive shut off metering valves with connections for portable meter. Provide one (1) portable and turn over to tenant at end of project.
- 3.12. Select circuit balancing valve size to give a pressure drop at 100% open between 3.0 kPa and 21 kPa [7 ft.]. Select valves location remote from the pumps in the circuit near min pressure drop and those located near the pumps at higher pressure drops.
- 3.13. Provide safety and relief valves for all closed water systems. Pipe relief to nearest floor Provide Watts 174A valves rated at 1035 kPa [150 psig] at 99°C [210°F] ASTM rated, cast iron bronze disc and seat, steel spindle assembly, carbon steel spring.
- 3.14. Provide strainers upstream of each pump and where indicated on drawings. Strainers shall be b body type with screwed connections, stainless steel screens with 1.6 mm [1/16 in.<-] perform and capable of system pressure of 860 kPa [125 PSI].
- Automatic air vents and collecting chambers Spirax 13W shall be provided at all high point piping system. Ensure ratings are compatible with system pressure. 3.16. Insulation shall be provided to match base building standards or refer to insulation section.
- 3.17. Provide 50% glycol solution for radiant heating systems.
- Flush clean all HVAC piping systems. Bypass and isolate any equipment that may be damaged the flushing process. After flushing process, clean all strainers and check all low points to er removal of all loose dirt. Chemically clean all piping systems utilizing low foaming che detergents which shall not adversely affect system components. After flushing and cleaning, pre test all HVAC piping systems.
- 3.19. Provide ULC classified firestopping products by 3M or Hilti which have been tested in accord with CAN4-S115, install firestopping systems in accordance with the appropriate ULC system nur for the products and type of penetration.
- 3.20. Ensure that fire ratings of floors and walls are maintained, fill spaces between openings and passing through fire separations.

### CHEMICAL TREATMENT

- Perform cleaning and water treatment services under the supervision of a Water Treatment Spec 4.1 who shall have a minimum of five (5) years continuous local experience in the supply installation of water treatment systems. 4.2 After completion of flush cleaning and pressure testing, chemically clean all piping systems util
- low foaming chemical detergents which shall not adversely affect system components 4.3. Provide each closed system with a 7.6 Litre [2 US Gal.] capacity by-pass chemical feeder.
- across pumping system and locate not more than (1m) [3 ft.] above floor. Pipe to floor using 20mm [3/4"] pipe c/w ball valves. Provide feeders with pressure rating suitable for system working pressure
- 4.4. To compensate for initial losses of chemicals and water during startup of system, provide twice much corrosion inhibitor and biocide as are necessary to treat systems Maintain chemical levels from the time the system is filled after cleaning, up to Subst
- Performance of the Contract. 4.6. The water treatment specialist shall supply all necessary supervision during installation and
- check the systems during construction. 4.7. Provide a service program from a specialist with the water treatment supplier/contractor period of one year from Substantial Completion. Include initial water analysis and recommenda
- service startup training of operating personnel and laboratory and technical assistance. 4.8. Provide service visits as required to stabilize and commission the systems and a minimum visit per month by the Water Treatment Specialist for the year following Substantial Completic ensure that a proper treatment program is maintained. Perform corrosion tests to performance requirements are being achieved. Document recommendations and submit a w report to the Owner's representative after each visit.

5.7.

5.8.

5.9.

5.10.

5.11.

- GAS PIPING SYSTEMS 5. Provide all labour, materials, products, equipment and services to supply and install the natural 5.1. piping system indicated on the Drawings and specified in this Section of the Specifications. 5.2. Install natural gas system only with fitters certified to Natural Gas and Propane Installation
- requirements. 5.3. If necessary, arrange and pay for a gas service to the building, including regulating station
- meter, and associated accessories. Provide all equipment and materials required for the building natural gas distribution system accordance with the requirements of the current version of Natural Gas and Propane Install 5.4.
- Code.

5.5. Provide complete natural gas system, to CSA and CGA requirements. Provide pressure reducing, regulating and relief valving required for compatibility between equip and building natural gas distribution system. 5.6.

5.12. Provide 25mmø [1"ø] opening at the top and bottom of any chase containing a gas pipe.

Globe Valves — 1255/200 W.O.G. rated, bronze body to ASIM—B62, bronze trime, rising stem. (Soldered — Kitz 12, Threaded — Kitz 11)	5.14.	Select pressure reducing valves to maintain downstream pressures within +5% range of setting. Submit sizing data for each valve with Shop Drawings.
Ball Valves - 150/600 W.O.G. rated, two piece full port brass body (C37700), solid chrome plated	5.15.	Select pressure relief valves for the maximum capacity of the pressure reducing station served plus
brass ball, PTFE seats, double o—ring stem seals, lever operated. (Soldered — Kitz 59, Threaded — Kitz 58)	5.16.	Pipe all relief vents individually to outdoors. Size piping for a maximum pressure drop of 10% of
Check Valves — 1255/200 W.O.G. rated, bronze body to ASTM B62 , bronze trim, Y pattern.	5 17	the pressure reducing valve setpoint gauge pressure with a 25% capacity safety factor.
(Soldered – Kitz 23, Threaded – Kitz 22) To 1379 kPa [200 psi] 65mm [2–1/2 in ] and larger – flanged	5.17.	at all pressure reducing stations. Connect relief valves so that they cannot be isolated from the
Gate Valves – 125S/200 W.O.G. rated, cast iron body to ASTM A126 class B, bronze trim, OS&Y	5.18.	appliances which they serve. Provide supports (roof supports Durg Block or pressure treated wood blocks complete with rigid
(Kitz 72)		insulation at bottom of block) at maximum spacing as follows:
Globe Valves — 125S/200 W.O.G. rated, cast iron body to ASTM A126 class B, bronze trim, OS&Y (Kitz 76)		20mm [3/4 in.] – 25mm [1 in.] : 2.4m [8 ft.]
Ball Valves - 125S/200 W.O.G. rated, two piece full port, cast iron ASTM 126 class B body, epoxy	5.19.	SUMM [1-1/4 in.] - 65MM [2-1/2 in.] : 5M [10 ft.] Anchor aas piping supports as per OBC. CSA, and seismic requirements.
coated to NSF 61, terion fused ball, RPIFE seats, seals, and packing, lever or gear operated. Butterfly Valves — 200 psi rated, ductile iron body, aluminum bronze disc, stainless steel stem.	5.20.	Connect gas piping to all gas fired equipment.
moulded or cartridge style seats (EPDM). Valve to be rated for full dead end service with the	5.21.	Paint gas service piping to meet code requirements.
(Lever operated – Kitz 6122EL, Gear operated – Kitz 6122EG)	5.22.	BASE BUILDING Gas components and equipment removed shall be turned over to the landlord/owner at their directions.
Check Valves — 125S/200 W.O.G. rated, cast iron body to ASTM A126, bronze trim, bolted bonnet. (Flagged — Kitz 78)		
To 2068 kPa [300 psi] working pressure, up to 50mm [2 in.] — socket welded or threaded	<b>6.</b>	PLUMBING SYSTEM
Gate Valves - ANSI class 800, forged steel A105N body, bolted bonnet, 1/2 stellite (trim #8),	0.1.	commencement of work.
graphite packing, US&Y Globe Valve — ANSI class 800, forged steel &105N body, bolted bonnet 1/2 stellite (trim #8)	6.2.	PIPING MATERIALS:
graphite packing, OS&Y	6.2.1.	Domestic hot and cold water piping — type "L" copper with copper fittings use 95/5 tin/antimony solder. Provide type "K" soft copper piping without joints below ground.
Ball Valves — 150/600 W.O.G. rated, two piece full port brass body (C37700), solid chrome plated brass ball. PTFE seats, double o—ring stem seals, lever operated. (Threaded — Kitz 58)	6.2.2.	Drainage and Vent Piping (60mm $[2-1/2^n]$ and smaller):
Check Valves — ANSI class 800, forged steel A105N body, bolted bonnet, 1/2 stellite (trim #8),	6.2.2.1.	Sanitary piping, above ground — DWV copper pipe with drainage fittings and 50/50 solder joints.
graphite gasket To 2068 kPg [300 psi] working pressure 65mm [2-1/2 in ] and larger - flanged	6.2.2.2. 6 2 2 3	Sanitary piping, below ground — Type L copper with 50/50 solder joints.
Gate Valves — ANSI class 150, carbon steel A216WCB body, bolted bonnet, OS&Y, 1/2 stellite (trim	6.2.2.4.	Vent piping, below ground — Type L copper pipe with wrought copper fittings and 50/50 solder
#8), graphite packing (Kitz 150 SCLS)	623	joints. Drainage and Vent Pining (75mm [3"] and Jarger):
(trim #8), graphite packing (Kitz 150 SCJS)	6.2.3.1.	Sanitary piping, above ground — CSA class 4000 cast iron soil pipe and fittings, with mechanical
Butterfly Valves — ANSI class 150, lug style, carbon steel body, 1704 shaft, stainless steel disc, RPTFE packing and seat. Valve shall be fully bi—directional, rated for full dead end service. Lever	6.2.3.2.	joints. Sanitary pipina, below ground – CSA class 4000 cast iron soil pipe and fittings, with mechanical
or gear operated.	0.2.0.2.	joints.
check valves — ANSI class 150, carbon steel Aziowcb body, boited bonnet, 1/2 stellite (trim #6), stainless steel inserted flexible graphite gasket (Kitz 150 SCOS)	6.2.3.3.	vent piping, above ground — CSA class 4000 cast iron soil pipe and fittings, with mechanical joints.
Butterfly valves are to be molded or cartridge style only.	6.2.3.4.	Vent piping, below ground — CSA class 4000 cast iron soil pipe and fittings, with mechanical joints.
Ball valves are to be solid ball style only. Provide ball or butterfly valves for all shut—off requirements. Gate valves will not be approved.	6.3.	Ball valves are to be solid ball style only.
Provide 20 mm $[3/4"$ in.] hose end drain valves with cap and chain at all system low points.	6.4. 6 F	Provide ball or butterfly valves for all shut-off requirements. Gate valves will not be approved.
Provide di-electric couplings for connection of dissimilar piping materials.	0.0.	individual plumbing fixture served.
Armstrong Model CBVI – Y pattern style, all metal, with soldered or screwed connections, built-in	6.6.	Plumbing fixtures shall be new, of first quality, in perfect condition and installed in best workmanlike manner. Verify plumbing fixture quantities and locations with Architect's/Designer's drawings. Reuse of
each valve:	67	domestic water heater is not permitted. Devide di electric courlings for connection of dissimilar sizing materials
<ul> <li>Vernier type handwheel settings for precision flow balancing.</li> <li>Positive shut off value with no drip seat and plug type stem with Teflon disc</li> </ul>	6.8.	Trap seal primer must be provided on all new Floor Drains, Funnel Floor Drains and Hub Drains.
<ul> <li>Tamper proof hidden memory.</li> </ul>	6.9.	Provide ULC classified firestopping products by 3M or Hilti which have been tested in accordance a with CAN4—S115 install firestopping systems in accordance with the appropriate ULC system number
Positive shut off metering valves with connections for portable meter. Provide one (1) portable meter		for the products and type of penetration.
Select circuit balancing valve size to give a pressure drop at 100% open between 3.0 kPa [1 ft.]	6.10.	Ensure that fire ratings of floors and walls are maintained, fill spaces between openings and pipes passing through fire separations.
and 21 kPa [7 ft.]. Select valves location remote from the pumps in the circuit near minimum pressure drop and those located near the pumps at higher pressure drops.	7	
Provide safety and relief valves for all closed water systems. Pipe relief to nearest floor drain. Provide Watts 1744 valves rated at 1035 kPa [150 psia] at 99°C [210°E] ASTM rated cast iron body.	7. 7.1.	Provide all labour, materials, products, equipment and services to supply and install thermal
bronze disc and seat, steel spindle assembly, carbon steel spring.		insulation, vapour barriers and finishes for mechanical work as indicated on the drawings and specified in this section of these specifications.
Provide strainers upstream of each pump and where indicated on drawings. Strainers shall be bronze body type with screwed connections, stainless steel screens with 1.6 mm [1/16 in.<-] perforations	7.2.	PIPING INSULATION:
and capable of system pressure of 860 kPa [125 PSI]. Automatic air vents and collecting chambers Spiray 13W shall be provided at all high points of	7.2.1.	Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics and insulating cements.
piping system. Ensure ratings are compatible with system pressure.	7.2.2.	Insulation materials must be manufactured at facilities certified and registered with an approved Registrar to conform a ISO 9000 quality standard
Insulation shall be provided to match base building standards or refer to insulation section. Provide 50% alvool solution for radiant heating systems.	7.2.3.	All insulation pertaining to Division 15 shall be carried out by one firm specializing in insulation work.
Flush clean all HVAC piping systems. Bypass and isolate any equipment that may be damaged during	7.2.4.	Do not mix similar products of multiple manufacturers. Acceptable insulation manufacturers are Owens Cornina Canada, Johns Manville, Manson Insulation Inc.
removal of all loose dirt. Chemically clean all piping systems utilizing low foaming chemical	705	Knauf Fiber Glass and Certainteed.
aetergents which shall not daversely affect system components. After flushing and cleaning, pressure test all HVAC piping systems.	7.2.3.	freprovide insulation and covers in strict accordance with authorities governing compustibility and fireproofing of materials and in accordance with manufacturer's recommendations.
Provide ULC classified firestopping products by 3M or Hilti which have been tested in accordance with CAN4—S115, install firestopping systems in accordance with the appropriate ULC system number	7.2.6.	Provide non-combustible insulation, jackets and finishes having a Flame Spread/Smoke Developed rating of 25/50 or less
for the products and type of penetration. Ensure that fire ratings of floors and walls are maintained fill spaces between openings and pipes	7.2.7.	Provide insulation materials with a minimum thermal conductivity of 0.24BTU.in/(hr. sq.ft°F) at 100°F
passing through fire separations.	7.2.8.	mean temperature. On hot piping applications, hold insulation in place with flare type staples (outward clinch).
CHEMICAL TREATMENT	7.2.9.	Apply pipe insulation over $1-1/2$ " thickness in two layers with joints staggered.
Perform cleaning and water treatment services under the supervision of a Water Treatment Specialist	7.2.10.	Insulate fittings with fabricated mitered or preformed sections of specified insulation.
who shall have a minimum of five (5) years continuous local experience in the supply and installation of water treatment systems.	7.2.11.	flange diameters. Fill spaces between insulation and adjoining pipe insulation with similar material.
After completion of flush cleaning and pressure testing, chemically clean all piping systems utilizing low foaming chemical detergents which shall not adversely affect system components	7.2.12.	Insulate valves and inline components with flexible insulation density (3/4 lbs./cu.ft.) compressed not more than 50% of original thickness. Build up to specified thickness with approved asbestos free
Provide each closed system with a 7.6 Litre [2 US Gal.] capacity by-pass chemical feeder. Pipe	7047	finishing cement.
across pumping system and locate not more than (1m) [3 ft.] above floor. Pipe to floor drain, using 20mm [3/4"] pipe c/w ball valves. Provide feeders with pressure rating suitable for the	7.2.13. 7.2.14.	Do not insulate terminal unit automatic control valves installed in hot piping. Under all domestic cold water, provide an insert between support shield and piping for piping
system working pressure	7045	1-1/2" or larger.
much corrosion inhibitor and biocide as are necessary to treat systems	7.2.13.	'Type P1' — Owens Corning Fiberglas Pipe Insulation, Johns Manville Micro—Lok Pipe Insulation.
maintain cnemical levels from the time the system is filled after cleaning, up to Substantial Performance of the Contract.		Manson Alley—K Pipe Insulation or Knauf Earthwool 1000° Pipe Insulation with factory applied all purpose vapour barrier jacket where scheduled.
The water treatment specialist shall supply all necessary supervision during installation and shall check the systems during construction.		'Type P2' — Armacell AC Accoflex fiber—free piping insulation, painted with WB Finish where installed
Provide a service program from a specialist with the water treatment supplier/contractor for a period of one year from Substantial Completion Include initial water creativity and account of the		
service startup training of operating personnel and laboratory and technical assistance.		INSULATION VAPOUR
Provide service visits as required to stabilize and commission the systems and a minimum of one visit per month by the Water Treatment Specialist for the year following Substantial Completion to		
ensure that a proper treatment program is maintained. Perform corrosion tests to verify performance requirements are being achieved. Document recommendations and submit a written		HOT WATER Less than 1-1/2" P-1 1-1/2" No
report to the Owner's representative after each visit.		1-1/2" and larger P-1 2" No
GAS PIPING SYSTEMS		HORIZONTAL CONDENSATE
Provide all labour, materials, products, equipment and services to supply and install the natural gas		DRAINS
Install natural gas system only with fitters certified to Natural Gas and Propane Installation Code		all pipe sizes P-1 1/2" Yes
requirements. If necessary, arrange and pay for a gas service to the buildina. including regulating station gas		REFRIGERANT SUCTION PIPE
meter, and associated accessories.		Less than 1" P-2 1" Yes 1" and above P-1 1" Yes
riovide all equipment and materials required for the building natural gas distribution systems in accordance with the requirements of the current version of Natural Gas and Propane Installation Code		
Provide complete natural gas system, to CSA and CGA requirements.	7.2.16.	Provide Johns Manville Zeston PVC jacketing or Knauf Proto PVC jacketing for all exposed areas and
Provide pressure reducing, regulating and relief valving required for compatibility between equipment and building natural aas distribution svstem.	73	concealed ceiling spaces.
Provide gas pressure reducing station(s) where noted on Drawings and where required to reduce	, . <u>.</u> . 7.3.1.	Provide insulation with a minimum thermal resistance of 0.25 BTU.in/hr. sq.ft *F at 75*F mean
builaing Distribution system pressures to appliance operating pressure ranges. Pressure regulators shall be sprina—loaded self—operated desian and shall be tight closing with	732	temperature. Apply vapour barrier over insulation on cold temperature ductwork
replaceable orifices and discs and concealed accessible manual adjustment. Valve bodies shall be cast iron rated for {10.34 kPa} [150 psia] as pressure and all valve materials shall be	7.3.3.	Circular silencers and acoustic plenums need not be externally insulated.
painted to resist corrosive ambient conditions.	7.3.4.	Ductwork and casings lined with acoustic insulation 1 <sup>**</sup> or more in thickness need not be externally insulated.
Provide gas pressure relief stations downstream of all pressure reducing stations where required. Provide relief valves of spring—loaded design with throttling characteristics to reduce system pressure	7.3.5.	Provide the following ductwork insulation type as indicated in the ductwork insulation table below.
surges. Valve bodies shall be cast iron rated for {1034 kPa} [150 psig] gas pressure with replaceable orifices and discs and concealed accessible manual adjustment. All valve materials shall		Type D1: Owens Corning 703 Fiberglas Insulation with FRK facing, John Mansville 814 Spin—Glas with FSK Facing, Manson AK Board with FSK facing, or Knauf Farthwool Insulation Board with FSK
be epoxy painted to resist corrosive ambient conditions.		facing. Density shall be not less than 3lbs./cu.ft. Impale on mechanically fastened pins located at not greater than 12" centers. Secure with speed washers. Butt joints tighthy together, and coal
mstan natural gas service to meet Natural Gas and Propane Installation Code and all authorities having jurisdiction.		washers breaks and joints with self-adhering 4" wide plain aluminum tape or adhere fail with
		Childers CP82 or Bakor 230–38 adhesive.
Provide 25mmø [1"ø] opening at the top and bottom of any chase containing a gas pipe.		Type D2: Owens Corning SOFTR Duct Wrap FRK, Johns Manville Microlite EQ FSK Duct Wrap,

5.13. Distribute gas within the building at 7"w.c.

	son Alley Wrap with FSK facing or Knauf Atmosphere Duct Wrap with FSK facing, 12kg/cubi	C	control boxes and attenuators as follows:	GENERAL NOTES
	with Childers CP82 or Bakelite 230–39 adhesive, which shall be applied in strips 150mr wide at not greater than 300mm [12"] centres. Butt edges of insulation tightly together, an breaks and joints of facing with self-adhering 100mm [4"] wide aluminum tape or adhere fo Childers CP82 or Bakor 230–38 adhesive.	n d il	— 3000mm [10ft. — 0in.] for straight duct run box or — 1500mm [5ft. — 0in.] downstream of 1st elbow or — 1500mm [5ft. — 0in.] for each branch downstream of 1st tee.	
$ \begin{array}{c c c c c } & \mathbf{r}_{\mathbf{r}}}\mathbf{r}}}}}}}}}}$		8.8.2.	<ul> <li>From fan powered VAV box to last flexible duct connection</li> <li>Frame and install motorized dampers. Unless shown otherwise, attached each motorized damper</li> </ul>	
	DUTY INSULATION THICKNESS VAPOUR TYPE BARRIER Outside air plenums	8.8.3. 8.8.4.	module to the channel framing. Provide frames in ductwork airflow stations. Make provisions in ductwork and plenums for installation of duct type smoke detectors and other control devices.	
	and ducts D1 2" Yes	8.8.5. 8.8.6.	Provide neoprene isolation gaskets and nylon bolts at connections required for dissimilar metals. Seal watertight the bottom and sides of intake and exhaust ducts connected to exterior louvres as	
	Outside air supply fans D1 2" Yes Relief and exhaust air		tollows: — Intake: from louvre to air handling unit — Exhquist: from louvre to {2 metres} [6'-6"] upstream of louvre	
<ul> <li>and a propriet and a proper pro</li></ul>	plenums D1 1-1/2" Yes	8.9. 8.9.1.	ACOUSTIC DUCT LINING INSTALLATION Seal all leading and trailing edges and repair all rips or tears of acoustic duct liner with a suitable	
$ \frac{1}{1000} = \frac{1}{1000} = \frac{1}{1000} = \frac{1}{1000} = \frac{1}{1000} = \frac{1}{1000} = \frac{1}{10000} = \frac{1}{10000000000000000000000000000000000$	Final 3m (10') of exhaust duct before exiting building or up to motorized damper	8.9.2.	sealing compound similar to Johns–Manville Superseal. Provide a tapered sheet metal nose piece to hold the leading edge of acoustic duct liner and direct the air over the edge.	
	if distance exceeds 3m (10') D1 1" Yes	8.10. 8.10.1.	TESTING Pressure test ductwork in accordance with the outlines and classification described in the SMACNA, HVAC Duct Leakage Test manual.	
	mechanical room D1 1" Yes	8.10.2. 8.10.3.	All supply air ductwork shall be pressure tested. Random testing of approximately 15% of other ductwork shall be conducted when requested by Consultant.	
0.0000 400         2         7         0.000         2	or in garage area D1 2" Yes	8.10.4. 8.10.5.	Failed joints shall be repaired and retested. Additional testing will be required if random testing reveals failures.	
	Concealed supply air D2 1" Yes	8.10.6.	The leakage amount shall not exceed the allotted amount for the pressure class. The test pressures shall be based on the static pressure for each fan.	
	er insulation and insulation finishes outside the building or exposed to the weather with on m} [1/16"] thick layer of Childers Encacel X or Bakor 110–26 fire retardant black masti r barrier coating. Embed a layer of woven glass reinforcing fabric into the wet coating g ends and edges at least {75mm} [3"]. Apply a top coating of {1.5mm} [1/16"] thic	e 8.10.7. c 8.10.8. k 8.10.9.	Make good all audible leakage, whether test is within limit specified or not. Provide calibrated tester, connection hoses, temporary plugs, etc., as required.	
<ul> <li>an any structure of the str</li></ul>	el X or Bakor 110—26 over the entire surface of the fabric. Seal the entire covering t e a watertight assembly. 1 of above recovering of insulation and insulation finishes outside the building, aluminum jacke	o 0.11. 8.11.1. t	CLEAN OP Vacuum clean the inside of all air handling systems, including fans, plenums, ducts, coils and terminal units to ensure that they are free from debris and dust.	
	s with waterproof mastic tape and caulk all longitudinal seams with silicone caulking. Seal th covering to achieve a watertight assembly.	<sup>e</sup> 9.	TESTING. ADJUSTING. AND BALANCING	
<ul> <li></li></ul>	st the work of this trade from being defaced by other trades. Make good any damage an in perfect condition, ready for final painting. insulation over clean dry surfaces, firmly butting all sections toaether.	d 9.1. 9.1.1.	Balancing contractor shall be qualified by the following: Associated Air Balance Council (AABC) National Standards for Total System Balancing, NM-1 National Balancing, Council (NBC), Catified the Balancing, Causification and Causification in Science Council	
Mater i status au onforty i is useful frame fra	er all exposed insulation and insulation finishes with minimum {0.20kg/squaremetre} [6oz.<- s, and two applications of Childers CP50A—HV2 or Bakor 120—18 white fire resistant coating cceptable alternative recovering will be PVC fitting covers and incketing installed on po	9.1.2. ] ŀ 9.1.3.	National Balancing Council (NBC) Certified Air Balancing Specifications and Certified Hydronic Balancing Specifications National Environmental Balancing Bureau (NEBB) TABES Proceedural Standard for Testing, Adjusting,	
<ul> <li>and the state of the length of the state of the</li></ul>	acturer's instructions, and conforming to the specified Flame Spread/Smoke Developed Rating.	9.1.4.	ana Balancing Environmental Systems Sheet Metal and Air Conditioning Contractors National Association (SMACNA) HVAC TAB HVAC Systems — Testing, Adjusting and Balancing	
$ \frac{1}{10000000000000000000000000000000000$	וארוא <b>ד.</b> e all labour, materials, products, equipment and services to supply and install the sheet meta ductwork systems as indicated on the Drawings and specified in this Section of th	9.2. 11 e	Balancing contractor shall be one of: — Troup Engineering Services Inc. — Air Audit	
The second product of a register of the second product of the sec	ications. Standards described in the latest Edition of HVAC Duct Construction Standards handbook fror Metal and Air Conditioning Contractors National Association (SMACNA).	n 9.3	— Dynamic — Dynamic List selected balancina contractor on tender form. Balancina scope of work shall include water and	
$ f_{12} (a derived a der$	dimensions shown on Drawings are net, inside insulation and acoustic duct lining. DUCTWORK	0.4	air side balancing of all equipment, ductwork and terminal devices provided as part of this contract, as well as base building equipment revised by this contract.	3 ISSUED FOR TENDER FEB. 26 2021 P.G.
An of a second of a s	ate ductwork from galvanized sheet metal with a minimum coating of 1.83 grams/m² (G6 g) unless other materials are specifically named.	9.4. 9.5.	Balance to the following tolerances of design values:	2         RE-ISSUED FOR PERMIT         DEC. 03, 2020         P.G.
<ul> <li>a. Comparison of the structure and /li></ul>	ork shall be smooth on the inside and free of obstructions, vibration and rattle.	9.5.1. 9.5. <u>2</u> .	HVAC systems: +/- 5% Hydronic System: +/- 10%	1 RE-ISSUED FOR PERMIT NOV 06, 2020 P.G.
	use ductwork, except as described in the next item, according to the following classifications: iss 1: All ducting subject to positive or negative static pressure of 250 Pa or less wit	h 9.5.3.	Refrigeration Systems: +/- 10%	0 ISSUED FOR PERMIT SEPT 4, 2020 P.G.
$ \frac{1}{10000000000000000000000000000000000$	induring velocities of 1977/s shall be constructed in accordance with SMACNA construction indards for 250 Pa duct.	9.5.4. 9.6.	measurea volumes to be accurate to with 2% of actual volumes. Instruments	No. DESCRIPTION DATE BY
<ul> <li>b d i 2 provide distance di la soluzione di monte degradi di la soluzione di la soluz</li></ul>	iss 2: All ducting subject to positive or negative static pressure of more than 250 Pa up t O Pa with maximum velocity of 13 m/s shall be constructed in accordance with SMACN nstruction standards for 500 Pa duct.	9.6.1.	Prior to balancing, submit to owner representation a list of instruments to be used together with matching serial numbers.	REVISIONS
$ \frac{1}{10000000000000000000000000000000000$	e Class 2 pressure duct construction for: Ductwork between variable volume air handling units and air terminal control units.	9.6.2. 9.6.3.	calibrate instruments in accoraance with requirements of most stringent of referenced standard for applicable system. Calibrate instruments with (3) months of balancing and provide certificate of calibration to owner's	
$ \frac{1}{10000000000000000000000000000000000$	Ductwork between air flow Venturi's and fans. le duct transformation with expansion fittings having slopes not exceeding 1 to 7 an action fittings having slopes not exceeding 1 to 4.	d 9.7.	representative. Submit balancing report in triplicate to the consultant and the owner, indicating terminal design and measured flow rates.	
<ul> <li>a more plane and performed by the first product of software plane in the first performance has a software has a software plane in the first performance has a software plane in the first performance has a software has a software has a software plane in the first performance has a software plane in the first performance has a software has a software plane in the first performance has a software plane in the first performance has a software has a software plane in the first performance has a software plane in the first performance has a software has a software plane in the first performance has a software has a software plane in the first performance has a software plane in the first performance has a software has a software plane in the first performance has a software plane in the first performance has a software has a software plane in the first performance has a software has a software plane in the first performance has a software has a software has a software has a software plane in the first performance has a software has a software plane in the first performance has a software has a software plan</li></ul>	e full radius tees, bends, and elbows for changes in direction except where square elbows ar ed due to space restrictions. Provide DuroDyne double thickness 0.8 mm turning vane	<sup>e</sup> <sup>s</sup> 10.	VALVE TAGS	
<ul> <li>Increasing the Torm are put to value for the burdle based of parts of the burdle based of the bur</li></ul>	le balancing dampers free to move in either direction without binding and rattling. Construc- ers in ductwork from 1.2 mm galvanized sheet metal. Use manual auadrants on small ducts	t 10.1. s.	Provide 40 mm dia., 1 mm thick lamacoid tags with 10mm high die—stamped black letters, except for fire and sprinkler systems, provide red lamacoid tags with white letters in lieu of brass tags.	
<ul> <li>An one process of a charge of parts where the order port of parts where the process of a charge of parts where the process of parts where the parts where the process of parts where the parts where the process of parts where the</li></ul>	ampers longer than 375mm use push rods with DuroDyne Model SRP ball joints. Use two pus on ducts wider than 600 mm. Provide OBD balancing dampers where shown on the drawings. e equipment with DuroDyne neoprene 0.8 mm thick flexible connectors with finished fabric widt	h 10.2. 10.3. h	Attach to valves with 100 mm long brass chains. Tag all valves except for small valves isolating a single piece of equipment such as a unit heater, fan coil unit, terminal reheat coil and radiation section.	
<ul> <li>merror of budge 51 dat and/er for sign paramet. Joint with the tare and/er to construct the analysis of the construction of the construct</li></ul>	e stan roomm. Ie 50mm insulated sheet metal blank off panels behind unused portions of exterior louvers. all joints in low, medium and high pressure ductwork with Transcontinental MP for low an	d 11.	EQUIPMENT NAMEPLATES	
<ul> <li>Suidig Phaged</li> <li>Suidig P</li></ul>	m pressure or DuroDyne S2 duct sealer for high pressure. Joints shall be sealed to conform of following SMACNA standards:	n 11.1. 11.2. 11.3.	uentury equipments, starters, ana, remote control devices in a manner consistent with the Drawings. Use solid black capitalized lettering 100 mm high. Where equipment size does not permit stencil identification, use lamacoid labels, engraved white on	$A\mathbf{\Lambda}C$
$\frac{1}{10000000000000000000000000000000000$	Sealing Required Static Pressure Construction Class	40	black, mechanically fastened to the equipment. Minimum lettering size 10 mm.	
A furtherwave jobs and lenghadral (300-730 Pe] $[2^{-}-3^{+} e_{5} < -2]$ area. Transverse jobs $[0, 1, 2, 3^{+}]$ by $[300 Pe] [2^{-} e_{5} < e_{5} < -2]$ area. Transverse jobs $[0, 1, 2, 3^{+}]$ by $[300 Pe] [2^{-} e_{5} < e_{5} < -2]$ jobs $[1, 1, 2, 3^{+}]$ by $[300 Pe] [2^{-} e_{5} < e_{5} < -2]$ jobs $[1, 1, 2, 3^{+}]$ by $[300 Pe] [2^{-} e_{5} < e_{5} < -2]$ jobs $[1, 1, 2, 3^{+}]$ by $[300 Pe] [2^{-} e_{5} < e_{5} < e_{5} < -2]$ jobs $[1, 1, 2, 3^{+}]$ by $[300 Pe] [2^{-} e_{5} < $	An consverse joints, iongituainai {1000 Pa} [4" w.g. and up] seams and duct wall penetrations.	1 <b>2.</b> 12.1.	<b>SLIGNIC RESIDUAL SISTEMS</b> This building is considered Site Class D – (Stiff Soil) for Seismic design in accordance with Table 4.1.8.4.B of the Ontario Building Code. Consider the facility's importance category as {Normal} from	A <b>I</b> C Engineering Inc.
<ul> <li>Incomers joint up to 1500 Pei [2* vg.&lt;-]</li> <li>The additional decision where from indice is further than 25 m from further that 25 m from the theorem of a beam of the complete SS for all particles in the provise of Duteris.</li> <li>The Brannetter T/-A-A findle duderet upthreem and downtrown of a formation control on the theorem of the provise strength and theorem of the theorem of the theorem of the theorem of the provise strength and theorem of the theorem of the theorem of the provise strength and theorem of theorem of the provise strength and theorem of theorem of the provise strength and theorem of the provise strength and theorem of theorem of the provise strength and theorem of theorem of the provise strength and theorem of the provise strength and theorem of theorem of theorem of the provise strength and theorem of theorem o</li></ul>	All transverse joints and longitudinal {500—750 Pa} [2"— 3" w.g.<—] seams.	12.2.	4.1.8.5 of the Untario Building Code. The contractor is responsible for complying with the required seismic codes and standards. The contractor's seismic specialist shall establish final restances have been and standards.	Creating Solutions Through Engineering Excellence
<ul> <li>pinds in statust ackords where for indue is further than 25 m from further links in further indue in the statust ackords were according to the provide a tright induction of the provide a tright induction of the provide induction inductor specific file induction inductor specific file induction inductor specific file induction inductor inductor specific file induction inductor is proved. The inductor inductor is provide a tright induction inductor is proved a steps of status according to the provide a tright induction inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is proved a steps of status according to the provide a tright inductor is provide a tright inductor is proved at the provide.</li> <li>10 the provide tright inductor is proved a tright inductor is proved at the provide a tright inductor is proved at the provide a tright inductor is proved at the provide at the prov</li></ul>	Transverse joints Up to {500 Pa} [2" w.g.<-]	12.3.	The contractor's seismic specialist to be a Professional Engineer specializing in the design of seismic	Stoney Creek ON L8E 0C5 T • (905) 643-8530
<ul> <li>a Flemmater T/L-A, flassle ductiverk upstream and downstream of air terminal control units in the many and part of the standard of the Downing.</li> <li>b Flemmater T/L-A, flassle ductiverk upstream and downstream of air terminal control units many and part of the Towning and the Downing.</li> <li>b Flemmater T/L-A, flassle ductiverk upstream and downstream of air terminal control units many and part of the Towning and the Downing.</li> <li>c Bobb ductiverk in minimum length and flasslik and flassl</li></ul>	joints in exhaust ducting where fan intake is further than 25 m from furthest intake i dance with seal Class A BLE DUCTWORK:	n 12.5. 12 e	restraint systems (SRS) and registered in the province of Ontario. One only seismic restraint system to be used for all systems and equipment. This section governs design, supply, and installation of complete SPS for all mechanical systems and	r ● (905) 043-8510 www.arcengineering.ca
<ul> <li>Startic restants specific devision write in this project.</li> <li>Startic restants specific devision is specific devision write.</li> <li>Startic restants specific devision is specific devision.</li> <li>Startic restants specific devision is specific devision.</li> <li>Startic restants specific devision.</li> <li>Startic restant specific devision.</li> <li>Start DATE S</li></ul>	e Flexmaster T/L—A, flexible ductwork upstream and downstream of air terminal control unit r other locations indicated on the Drawings.	12.0. S	equipment specified for installation on this project. This includes fire protection, plumbing & utility piping, mechanical equipment and systems, both vibration isolated and statically supported.	PRO.IECT
<ul> <li>m to the requerements of MPA BV and Underwriters Laboratories classification IL 181.</li> <li>e fielded ductwork in minimum lengths of 3500 mm and maximum lengths of 3500 mm and maximum lengths of 3500 mm.</li> <li>2.8. During setemics event, SRS to prevent systems and equipment from causing personal injury and from from proving torm more position.</li> <li>2.8. During setemics event, SRS to prevent systems and equipment from causing personal injury and from more position.</li> <li>2.8. During setemics event, SRS to prevent systems and equipment from causing personal injury and from more position.</li> <li>2.8. During setemics event, SRS to prevent systems and equipment from causing personal injury and from more position.</li> <li>2.8. During setemics event, SRS to prevent systems and equipment from causing personal injury and from more position.</li> <li>2.8. During setemics event, SRS to prevent systems and equipment from causing personal injury and from more position.</li> <li>2.8. During setemics event, SRS to prevent systems and equipment from causing personal injury and from more position.</li> <li>2.8. During setematics event system (SRS) and registered in the province of Ontario, to include: <ul> <li>- Fail details of stoppe of works, contrained, to includion</li> <li>- Fail details of stoppe of work.</li> <li>- Detail Drawing</li> <li>- Calculations</li> <li>- Fail details of a cope of work.</li> <li>- Detail Drawing entities to stimuling storts event system is event.</li> <li>- SRS to previde molificational copy of shop drawings and product data to Structural Engineer for review of met.</li> <li>- SRS to previde molificational expansion.</li> <li>- SRS to previde molificational expansion di detailing monitoring requirements for Owner.</li> <li>- SRS to previde molificational expansion, archoring and guidem requirements for Owner.</li> <li>- SRS to previde molification and equipment strength mechanical expansion, archoring and guidem requirements for Owner.</li> <li>- SRS to previde molificati</li></ul></li></ul>	ruct ductwork from a tape of soft annealed aluminum sheet, spiral wound into a tube an corrugated to provide strength and flexibility. Provide a triple mechanical lock to form uous secure air joint without the use of adhesives for pressures up to 3000 Pa.	d 12.7. a	əeismic restraint system (১৪১) to be tully integrated into, compatible with: — Noise and vibration controls specified elsewhere in this project specification. — Structural, mechanical, electrical design of project.	NIAGARA FALLS
1 pressure systems. For Class 2 and higher pressure systems restrict minimum and movimum to 1020 mm. STIC DUCT LINING 2 55 mm thick acoustic ducting where shown on drawings and as follows: acoustic insulation coefficient: .70 or higher based on "type A mounting" and tested in accordance thermined by XSTM C 21 and C 22. a Reduction Coefficient of .70 as per ASTM C 423. (Type A mounting) XTED DUCT INFORCE States and the ductwork from discharge side of mechanical in structions and in accordance with the UL listing. Use hongers, support rods and freedopping in accordance with the this. a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coustic insulation on supply air ductwork from discharge side of mechanical air volume a coust	rm to the requirements of NFPA 90 and Underwriters Laboratories classification for round duc ecification UL 181. e flexible ductwork in minimum lengths of 1500 mm and maximum lenaths of 3600 mr	n 12.8.	During seismic event, SRS to prevent systems and equipment from causing personal injury and from moving from normal position.	SERVICE CENTRE
<ul> <li>25 mm thick accustic duct liner where shown on drawings and as follows:</li> <li>angular Duct Liner: Permacote Linocustic meeting ASIM C 1071 with air surface coded with the restart microbial growth is control traveline with PA registered atti-microbial growth is control traveline with PA registered atti-microbial growth as determined by ASIM C 216.</li> <li>Duct Liner: Permacote Surfaceutic, rigid preformed round liner, or Spirocoutic Pus with or estart microbial growth or settermined by ASIM C 21 and C 22.</li> <li>Reduction Coefficient: -7.0 or higher based on Type A mounting?</li> <li>Duct Liner: Permacote Surfaceutic, rigid preformed round liner, or Spirocoutic Pus with or estart microbial growth or settermined by ASIM C 21 and C 22.</li> <li>Reduction Coefficient -7.0 os per ASIL C 423. (Type A mounting)</li> <li>ATED DUCTING AND ENCLOSURES</li> <li>de and install the ductwork according to the manufacturers written instructions and in fance with the UL listing, cost in restorabiling cost inno, threaded pipe, other nached pipe, other nachers and tand thender pipe pipe ana</li></ul>	1 pressure systems. For Class 2 and higher pressure systems restrict minimum and maximur s to 1200 mm. STIC DUCT LINING	n 12.9.	coordinating their respective discipline as it relates to Seismic restraints system to ensure a single system is used throughout the project.	
<ul> <li>Jetermined by ASTM 6 21 and 6 22.</li> <li>Full written description of scope of work.</li> <li>Colculations</li> <li>Colculations</li> <li>Colculations</li> <li>Strik C 423.</li> <li>Chype A mounting?</li> <li>Continger process of process in a light process.</li> <li>Intell INSTALLINKIN</li> <li>e acoupters shall be Type Pa o</li></ul>	e 25 mm thick acoustic duct liner where shown on drawings and as follows: angular Duct Liner: Permacote Linacoustic meeting ASTM C 1071 with air surface coated wit lic coating treated with EPA reaistered anti-microbial agent proven to resist microbial growt	12.10. h h	seismic restraint systems (SRS) and registered in the province of Ontario, to include: - Full details of design criteria.	
STM C 423.       - Detail Drawings         serve: meeting ASTM C 916.       - Detail Drawings         eners: Duct liner: Permocote Spiracoustic, rigid preformed round liner, or Spiracoustic Plus with air re coated with acrylic coating treated with EPA register anti-microbial agent proven to resist ald growth accurate for the ductiverk according to the monufacturers written instructions on the inforce with the UL listing. Use hongers, support rods on the frestopping in accordance with the table.       - Detail Drawings         VIETD DUCTING AND ENCLOSURES ate and install the ductwork according to the monufacturers written instructions on third ing.       - Detail Drawings         12.11.       SRS to provide gente and steady cushioning action and avoid high impact loads.       E.11.         12.12.       SRS to restrain seismic forces in all directions.       E.11.         12.13.       SRS to restrain seismic forces in all directions.       E.11.         12.14.       SRS or piping systems to be compatible with expansion, anchoring and guiding requirements, fing.       SRS or testrain seismic forces in all directions.       E.11.         12.14.       SRS to the strain seismic control measures not to interfere with integrity of firestopping.       SCALE: AS NOTED       DRAWING No.:: AS NOTED         12.15.       RS utilizing cast iron, threaded pipe, other britte materials not permitted.       E.12.       As NOTED         12.16.       Ensure seismic control measures not to interfere with integrity of firestopping.       ME.       DRAWIN	letermined by ASTM G 21 and G 22. e Reduction Coefficient: .70 or higher based on "Type A mounting" and tested in accordance	e	<ul> <li>Full written description of scope of work.</li> <li>Calculations</li> </ul>	START DATE: DRAWN BY: DESIGNED BY:
eners: Duct liner galvanized steel pins, welded or mechanically fastened.  Duct Liner: Permacote Spiracoustic, rigid preformed round liner, or Spiracoustic Plus with air condition of earners.  Duct Liner: Permacote Spiracoustic, rigid preformed round liner, or Spiracoustic Plus with air condition of settermined by ASTM C 21 and C 22.  Frovide maintenance data including monitoring requirements for Owner  SKE to DuctING AND ENCLOSURES  at and install the ductwork according to the manufacturers written instructions and in fance with the UL listing. Use hangers, support rods and firestopping in accordance with the tuble.  METAL INSTALLATION  e acoustic insulation on supply air ductwork from discharge side of mechanical air volume  e acoustic insulation on supply air ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  from the ductwork from discharge side of mechanical air volume  fr	STM C 423. esive: meeting ASTM C 916.	12.11.	— Detail Drawings Submit additional copy of shop drawings and product data to Structural Engineer for review of	2020 03 24 M.B. P.G.
<ul> <li>the coated with acyclic coating treated with EPA register anti-microbial agent proven to resist piol growth as determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determined by ASIM G 21 and G 22.</li> <li>the coated with a determine bint by ASIM G 21 and G 22.</li> <li>the coated with a determine bint by ASIM G 21 and G 22.</li> <li>the coated with a determine bint by ASIM G 21 and G 22.</li> <li>the coated with a determine bint by ASIM G 21 and G 22.</li> <li>the coated with a determine bint by ASI</li></ul>	eners: Duct liner galvanized steel pins, welded or mechanically fastened.   Duct Liner: Permacote Spiracoustic, rigid preformed round liner. or Spiracoustic Plus with ai	r 12.12.	connection points to building structure. Provide maintenance data including monitoring requirements for Owner	DRAWING TITLE:
<ul> <li>e reauction coefficient of ./U as per ASIM C 423. (1ype A mounting)</li> <li>ATED DUCTING AND ENCLOSURES</li> <li>ate and install the ductwork according to the manufacturers written instructions and in dance with the UL listing. Use hangers, support rods and firestopping in accordance with the UL listing. Use hangers, support rods and firestopping in accordance with the table.</li> <li>Barta LINSTALLATION</li> <li>e acoustic insulation on supply air ductwork from discharge side of mechanical air volume</li> <li>12.10. Ensure seismic control measures not to interfere with integrity of firestopping.</li> <li>12.20. Ensure seismic control measures not to interfere with integrity of firestopping.</li> </ul>	e coated with acrylic coating treated with EPA register anti-microbial agent proven to resisted growth as determined by ASTM G 21 and G 22.	t 12.13. 12.14.	SRS to be from one manufacturer regularly engaged in production of same. SRS to provide gentle and steady cushioning action and avoid high impact loads.	SPECIFICATIONS 1
ate and install the ductwork according to the manufacturers written instructions and in dance with the UL listing. Use hangers, support rods and firestopping in accordance with the ting. e dampers shall be Type-B or Type-C, unless otherwise noted. Type-A fire dampers are not table. METAL INSTALLATION e acoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation on supply air ductwork from discharge side of mechanical air volume Table accoustic insulation accoustic account	e Reduction Coefficient of .70 as per ASTM C 423. (Type A mounting) RATED DUCTING AND ENCLOSURES	12.15. 12.16.	SRS to restrain seismic forces in all directions. Fasteners and attachment points to resist same load as seismic restraints.	
admpers shall be Type-B or Type-C, unless otherwise noted. Type-A fire dampers are not table.       12.18.       SRS utilizing cast iron, threaded pipe, other brittle materials not permitted.       SSCALE:       ASNOTED         12.19.       Attachments to reinforced concrete structure to use high strength mechanical expansion anchors.       PROJECT:       DRAWING No.:         12.20.       Ensure seismic control measures not to interfere with integrity of firestopping.       PROJECT:       20-201-010       DRAWING No.:	ate and install the ductwork according to the manufacturers written instructions and i dance with the UL listing. Use hangers, support rods and firestopping in accordance with th ting.	n 12.17. e	SRS of piping systems to be compatible with expansion, anchoring and guiding requirements, equipment vibration isolation and equipment SRS.	
METAL INSTALLATION       12.20.       Ensure seismic control measures not to interfere with integrity of firestopping.       PROJECT:       20-201-010       M-105	e dampers shall be Type—B or Type—C, unless otherwise noted. Type—A fire dampers are no table.	t 12.18. 12.19.	SRS utilizing cast iron, threaded pipe, other brittle materials not permitted. Attachments to reinforced concrete structure to use high strength mechanical expansion anchors. Drilled or power driven anchors not permitted	AS NOTED
	<sup>.</sup> METAL INSTALLATION e acoustic insulation on supply air ductwork from discharge side of mechanical air volum	e 12.20.	Ensure seismic control measures not to interfere with integrity of firestopping.	PROJECT: M-105
$5^{"}$		<b> </b>   10 <b>"</b>		

	Manson Alley Wrap with FSK facing of	or Knauf Atmospher	re Duct Wrap w	ith FSK facing, 12kg/c	cubic	control boxes and attenuators as follows:		GENER	AL NOTES	;	
	surface with Childers CP82 or Bakeli [6"] wide at not greater than 300mm seal breaks and joints of facing with	ctory applied reinfor ite 230—39 adhesive m [12"] centres. Bu self—adhering 100n	rced foil facing. e, which shall b utt edges of insi mm [4"] wide ali	Adhere insulation to be applied in strips 150 ulation tightly together, uminum tape or adhere	auct Omm and e foil	— 3000mm [10ft. — 0in.] for straight duct run box or — 1500mm [5ft. — 0in.] downstream of 1st elbow or — 1500mm [5ft. — 0in.] for each branch downstream of 1st tee.					
	with Childers CP82 or Bakor 230—38	adhesive.	THICKNESS		8.8.2.	<ul> <li>From fan powered VAV box to last flexible duct connection</li> <li>Frame and install motorized dampers. Unless shown otherwise, attached each motorized damper</li> </ul>					
	Outside air plenums	TYPE	THICKNESS	BARRIER	8.8.3. 8.8.4.	module to the channel framing. Provide frames in ductwork airflow stations. Make provisions in ductwork and plenums for installation of duct type smoke detectors and other control devices					
	and ducts	D1	2"	Yes	8.8.5. 8.8.6.	Provide neoprene isolation gaskets and nylon bolts at connections required for dissimilar metals. Seal watertight the bottom and sides of intake and exhaust ducts connected to exterior louvres as					
	Outside air supply fans	D1	2"	Yes		follows: — Intake: from louvre to air handling unit					
	plenums	D1	1-1/2"	Yes	8.9.	<ul> <li>Exhaust: from louvre to {2 metres} [6'-6"] upstream of louvre</li> <li>ACOUSTIC DUCT LINING INSTALLATION</li> </ul>					
	Final 3m (10') of exhaust duct before exiting building				8.9.1. 8.9.2.	Seal all leading and trailing edges and repair all rips or tears of acoustic duct liner with a suitable sealing compound similar to Johns—Manville Superseal. Provide a tapered sheet metal nose piece to hold the leading edge of acoustic duct liner and direct					
	or up to motorized damper if distance exceeds 3m (10')	D1	1"	Yes	8.10.	the air over the edge. TESTING					
	Exposed ductwork in	D1	1"	Ves	8.10.1.	Pressure test ductwork in accordance with the outlines and classification described in the SMACNA, HVAC Duct Leakage Test manual. All supply air ductwork shall be pressure tested					
	Ductwork outside of Building		I	165	8.10.3.	Random testing of approximately 15% of other ductwork shall be conducted when requested by Consultant.					
	or in garage area	D1	2"	Yes	8.10.4. 8.10.5.	Failed joints shall be repaired and retested. Additional testing will be required if random testing reveals failures.					
	Concealed supply air	D2	1 <b>"</b>	Yes	8.10.6.	The leakage amount shall not exceed the allotted amount for the pressure class. The test pressures shall be based on the static pressure for each fan.					
.3.6.	Recover insulation and insulation finish {1.5mm} [1/16"] thick layer of Child vapour barrier coating. Embed a la	nes outside the buil ers Encacel X or l ayer of woven glas	ilding or exposed Bakor 110–26 f ss reinforcing fa	d to the weather with fire retardant black m ıbric into the wet coo	one 8.10.7. astic 8.10.8. Iting, 8.10.9.	Make good all audible leakage, whether test is within limit specified or not. Provide calibrated tester, connection hoses, temporary plugs, etc., as required.					
	lapping ends and edges at least {75 Encacel X or Bakor 110–26 over th achieve a watertight assembly.	imm} [3"]. Apply ne entire surface o	a top coating of the fabric. S	of {1.5mm} [1/16"] leal the entire covering	thick 8.11. g to 8.11. 8.11.1.	CLEAN UP Vacuum clean the inside of all air handling systems, including fans, plenums, ducts, coils and					
.3.7.	In lieu of above recovering of insulation with aluminum fittings may be substitu segme with waterproof mastic tape an	n and insulation fin uted (VentureClad Pl od caulk all longitud	hishes outside the lus or similar pr tingl seams with	e building, aluminum jo roduct). Band all transv silicone caulking Seal	icket /erse the	terminal units to ensure that they are free from debris and dust.					
.3.8.	entire covering to achieve a watertight Protect the work of this trade from	assembly. being defaced by a	other trades. Ma	ake good any damage	and 9.1.	TESTING. ADJUSTING. AND BALANCING Balancing contractor shall be qualified by the following:					
.3.9.	Apply insulation over clean dry surfaces	nai painting. s, firmly butting all	sections togethe	۲.	9.1.1. 9.1.2.	Associated Air Balance Council (AABC) National Standards for Total System Balancing, NM-1 National Balancing Council (NBC) Certified Air Balancing Specifications and Certified Hydronic Balancing					
.3.10.	recover all exposed insulation and ins canvas, and two applications of Childe An acceptable alternative recovering	sulation finishes with ers CP50A-HV2 or will be PVC fitting	n minimum {0.2 Bakor 120—18 g covers and j	white fire resistant coo gacketing, installed as	.<−j Iting. 9.1.3. per 9.1.3.	specifications National Environmental Balancing Bureau (NEBB) TABES Proceedural Standard for Testing, Adjusting, and Balancing Environmental Systems		T		<b>I</b>	<b></b>
	manufacturer's instructions, and conform	ming to the specifie	ed Flame Spread,	/Smoke Developed Ratir	ng. 9.1.4.	Sheet Metal and Air Conditioning Contractors National Association (SMACNA) HVAC TAB HVAC Systems — Testing, Adjusting and Balancing	$\vdash$	-			──
.1.	DUCTWORK Provide all labour, materials, products, and ductwork systems as indicated	equipment and ser	vices to supply	and install the sheet n	9.2. netal the	Balancing contractor shall be one of: — Troup Engineering Services Inc.	-				
.2.	Specifications. Meet Standards described in the latest	t Edition of HVAC D	Duct Construction	n Standards handbook	from	— Air Audit — Dynamic					
.3.	Sheet Metal and Air Conditioning Contra Duct dimensions shown on Drawings are	actors National Asso e net, inside insulat	ciation (SMACNA) tion and acoustic	). c duct lining.	9.3.	List selected balancing contractor on tender form. Balancing scope of work shall include water and air side balancing of all equipment, ductwork and terminal devices provided as part of this contract, as well as base building equipment revised by this contract.	3		ED	FEB.	
.4. .4.1.	RIGID DUCTWORK Fabricate ductwork from galvanized sh conting) unless other materials are spe	neet metal with a	minimum coating	g of 1.83 grams/m²	9.4. (G60 9.5.	Balance as listed on mechanical drawings. Balance to the following tolerances of design values:	2	RE-ISSUED FOR PI		26, 2021 DEC. 03, 2020	P.G.
.4.2. .4.3.	Ductwork shall be smooth on the inside Fabricate ductwork, except as described	e and free of obstru d in the next item.	uctions, vibration according to the	) and rattle. e following classification	9.5.1. s: 9.5.2.	HVAC systems: +/- 5% Hydronic System: +/- 10%	1	RE-ISSUED FOR PI	ERMIT	NOV 06, 2020	P.G.
	Class 1: All ducting subject to pr maximum velocities of 13m/s sho	ositive or negative all be constructed	static pressure in accordance	of 250 Pa or less with SMACNA constru	with 9.5.3. ction 9.5.4.	Refrigeration Systems: +/— 10% Measured volumes to be accurate to with 2% of actual volumes.	0		11T	SEPT 4, 2020	P.G.
	standards for 250 Pa duct. Class 2: All ducting subject to pos 500 Pa with maximum velocity of	sitive or negative sta f 1.3 m/s shall be	tatic pressure of e constructed in	more than 250 Pa u	9.6. p to 9.6.1.	Instruments Prior to balancing, submit to owner representation a list of instruments to be used together with	NO.		SIONS		Вү
.4.4.	construction standards for 500 Pa o Provide Class 2 pressure duct construct	duct. stion for:			9.6.2.	matching serial numbers. Calibrate instruments in accordance with requirements of most stringent of referenced standard for applicable system.			T	,	
	— Ductwork between variable volume — Ductwork between air flow Venturi	e air handling units i's and fans.	and air terminal	l control units.	9.6.3.	Calibrate instruments with (3) months of balancing and provide certificate of calibration to owner's representative.					
.4.5.	Provide duct transformation with exp contraction fittings having slopes not ex- Provide full radius tees bands and ell	pansion fittings hav exceeding 1 to 4.	iving slopes not	t exceeding 1 to 7	and 9.7.	Submit balancing report in triplicate to the consultant and the owner, indicating terminal design and measured flow rates.					
.4.0.	required due to space restrictions. assembled in top and bottom rails in s	Provide DuroDyne square elbows.	double thicknes	ss 0.8 mm turning v	anes <b>10.</b>	<u>VALVE TAGS</u> Provide 40 mm dia 1 mm thick lamacoid taas with 10mm high die-stamped black letters, except					
.4.7.	Provide balancing dampers free to mo dampers in ductwork from 1.2 mm ga On dampers longer than 375mm use	ove in either direct alvanized sheet meto push rods with Duro	tion without bind al. Use manual oDyne Model SRF	ling and rattling. Cons quadrants on small d P ball joints. Use two	truct 10.77 ucts. push 10.2.	for fire and sprinkler systems, provide red lamacoid tags with white letters in lieu of brass tags. Attach to valves with 100 mm long brass chains.					
.4.8.	rods on ducts wider than 600 mm. Pro Isolate equipment with DuroDyne neopre not less than 150mm.	ovide OBD balancing ene 0.8 mm thick f	g dampers where flexible connector	shown on the drawing rs with finished fabric v	s. 10.3. width	Tag all valves except for small valves isolating a single piece of equipment such as a unit heater, fan coil unit, terminal reheat coil and radiation section.	┝				
.4.9. .4.10.	Provide 50mm insulated sheet metal bl Seal all joints in low, medium and h	lank off panels behin high pressure ductw	ind unused portic vork with Transc	ons of exterior louvers. continental MP for low	11. and 11.1	EQUIPMENT NAMEPLATES			D		
	medium pressure or DuroDyne S2 duct to the following SMACNA standards:	t sealer for high pr	ressure. Joints	shall be sealed to con	form 11.1. 11.2.	Use solid black capitalized lettering 100 mm high. Where equipment size does not permit stencil identification use lamacoid labels engraved white on					
S	eal Class Sealing Required	Static	: Pressure Constr	ruction Class	11.0.	black, mechanically fastened to the equipment. Minimum lettering size 10 mm.					
	A All transverse joints, lor seams and duct wall pe	ngitudinal {1000 enetrations.	) Pa} [4" w.g. a	nd up]	<b>12.</b> 12.1.	<u>SEISMIC RESTRAINT SYSTEMS</u> This building is considered Site Class D – (Stiff Soil) for Seismic design in accordance with Table	A	KC Eng	ineerin	g Ind	с.
	B All transverse joints and	d longitudinal {500–	-750 Pa} [2" —	3" w.g.<-]	10 0	4.1.8.4.B of the Ontario Building Code. Consider the facility's importance category as {Normal} from 4.1.8.5 of the Ontario Building Code. The contractor is responsible for complying with the required seismic codes and standards	Creat	ting Solutions Throi	ıgh Engineerii	ng Excel	lence
	C Transverse ioints	Up to	o {500 Pa} [2" v	w.g.<-]	12.2.	The contractor's seismic specialist shall establish final restraint locations and restraint design requirements.		1100 South S Stoney Cree	ervice Rd., #417 ek ON L8E 0C5		
.4.11.	Seal joints in exhaust ducting where	fan intake is fur	rther than 25 r	m from furthest intak	12.4. e in	The contractor's seismic specialist to be a Professional Engineer specializing in the design of seismic restraint systems (SRS) and registered in the province of Ontario.		T ● (905 F ● (905	o) 643-8530 o) 643-8510		
.5. 5 1	FLEXIBLE DUCTWORK:	twork unstrage	d downotroem of	f air terminal control	12.5. 12.6. unite	Une only seismic restraint system to be used for all systems and equipment. This section governs design, supply, and installation of complete SRS for all mechanical systems and equipment specified for installation on this project. This includes fire protection, plumbina & utility		www.arce contact@arc	ngineering.ca cengineering.ca		
.5.2.	and/or other locations indicated on the Construct ductwork from a tape of s	e Drawings. soft annealed alumin	inum sheet, spir	al wound into a tube	and 12.7.	piping, mechanical equipment and systems, both vibration isolated and statically supported. Seismic Restraint System (SRS) to be fully integrated into, compatible with:	PROJ	ECT:			
.5.3	spiral corrugated to provide strength continuous secure air joint without the Conform to the requirements of NEDA	and flexibility. Prouse of adhesives for	rovide a triple n or pressures up rs Laboratorics	nechanical lock to for to 3000 Pa.	m a duct	<ul> <li>Noise and vibration controls specified elsewhere in this project specification.</li> <li>Structural, mechanical, electrical design of project.</li> </ul>		NIAGAF	RA FALLS		
.5.4.	to specification UL 181. Provide flexible ductwork in minimum	lengths of 1500 n	mm and maximu	um lengths of 3600	mm 12.8.	During seismic event, SRS to prevent systems and equipment from causing personal injury and from moving from normal position.		SERVIC		Ξ	
.6.	class 1 pressure systems. For Class 2 lengths to 1200 mm. ACOUSTIC DUCT LINING	and higher pressu	ire systems restr	rict minimum and maxii	mum 12.3.	coordinating their respective discipline as it relates to Seismic restraints system to ensure a single system is used throughout the project.		IVIPKO		)	
.6.1. .6.1.1.	Provide 25 mm thick acoustic duct line Rectangular Duct Liner: Permacote L	er where shown on Linacoustic meetina	drawings and as ASTM C 1071 w	s follows: vith air surface coated	12.10. with	Supmittais and shop drawings, certified by a Professional Engineer specializing in the design of seismic restraint systems (SRS) and registered in the province of Ontario, to include: — Full details of desian criteria.		NIAGARA FA	ALLS, ONTARÍO		
610	acrylic coating treated with EPA regi as determined by ASTM G 21 and G Noise Reduction Coofficients 70 co	istered anti-microbio 22. bigher based or "T	ial agent proven	to resist microbial gr	rowth	<ul> <li>Full written description of scope of work.</li> <li>Calculations</li> </ul>	STAR	T DATE: DRAWN	I BY: DE	SIGNED	BY:
.5.1.2.	to ASTM C 423. Adhesive: meeting ASTM C 916.	mynei Duseu Ofi I	ווסטרונים איני. איניים איניים	ana testeu III accord	12.11.	– Detail Drawings Submit additional copy of shop drawings and product data to Structural Engineer for review of	2020 0	03 24 M.B.	P.0	Э.	
.6.1.4. .6.2.	Fasteners: Duct liner galvanized steel Round Duct Liner: Permacote Spiracou	pins, welded or me ustic, rigid preforme	echanically fasten ed round liner, o	ed. r Spiracoustic Plus with	n air 12.12.	connection points to building structure. Provide maintenance data including monitoring requirements for Owner	DRAW	ING TITLE:			
.6.2.1	surrace coated with acrylic coating tre microbial growth as determined by ASTN Noise Reduction Coefficient of 70 co	eated with EPA regi M G 21 and G 22. per ASTM C 423	jister anti-microl (Type A mountir	piai agent proven to r na)	resist 12.13. 12.14.	SRS to be trom one manufacturer regularly engaged in production of same. SRS to provide gentle and steady cushioning action and avoid high impact loads.		SPECIFI	CATIONS	1	
.7. .7.1.	FIRE RATED DUCTING AND ENCLOSURES Fabricate and install the ductwork of	according to the	manufacturers	written instructions and	12.15. 12.16. d in 10.17	SRS of piping systems to be compatible with exercise probability and middle with exercise.					
70	accordance with the UL listing. Use h UL listing.	hangers, support ro	ods and firestopp	ng in accordance with	the 12.17.	sing or piping systems to be compatible with expansion, anchoring and guiding requirements, equipment vibration isolation and equipment SRS. SRS utilizing cast iron, threaded pipe, other brittle materials not permitted.	SCALE	Ξ:	DRAWING No.	:	
. <i>1</i> .2. .8.	acceptable. SHEET METAL INSTALLATION	iype-o, unless othe	erwise noted. Typ	pe—n iire aampers are	12.19.	Attachments to reinforced concrete structure to use high strength mechanical expansion anchors. Drilled or power driven anchors not permitted.		DTED	М-	105	
.8.1.	Provide acoustic insulation on supply	air ductwork from	discharge side	of mechanical air vo	lume 12.20.	Ensure seismic control measures not to interfere with integrity of firestopping.	20-2	201-010			
	<b> </b>       15"				<b> </b>   10"		•				

- Provide gas pressure reducing station(s) where noted on Drawings and where required to re Pressure reaulators shall be spring-loaded self-operated design and shall be tight closing replaceable orifices and discs and concealed accessible manual adjustment. Valve bodies sha
- cast iron rated for {1034 kPa} [150 psig] gas pressure and all valve materials shall be Provide gas pressure relief stations downstream of all pressure reducing stations where required. Provide relief valves of spring-loaded design with throttling characteristics to reduce system pre surges. Valve bodies shall be cast iron rated for {1034 kPa} [150 psig] gas pressure replaceable orifices and discs and concealed accessible manual adjustment. All valve materials

- 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 tight 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.

		GE	ENER/	AL NO	DTES	)	
3	IS	SUED FO	OR TEND	ER		FEB. 26, 2021	P.G.
2	RE	E-ISSUEI	D FOR PI			DEC. 03, 2020 NOV	P.G.
0	IS	SUED FO		11T		06, 2020 SEPT 4, 2020	P.G.
No.	DE	ESCRIPT	ION			DATE	BY
		RI	ΞVΙ	SIC	) N S	6	
			4	R	C		
A	ŀ	C	Eng	inee	erin	g In	c.
Creati	ng	Solution	ns Throi	ıgh Eng	gineerii	ng Exce	llence
		110 St	0 South S oney Cree T ● (90!	ervice Ro k ON L8 5) 643-85	d., #417 E 0C5 30		
		N	F • (905	5) 643-85 ngineerir	10 ig.ca		
		co	ntact@ar	cenginee	ring.ca		
PROJE	CT:						
		NI. SEI	AGAF RVICI	RA FA E CEI	ALLS NTRI	Ξ	
		IM					
		32 NIA	GARA FA	LET AVI	NTARIO		
START	DA	ΓE:	DRAWN	I BY:	DE	SIGNED	BY:
2020 03	3 24	TITI -	M.B.		P.(	Э.	
DRAWI	NG	IIILE:					
		SPE	ECIFI	CATI	SNC	2	
SCALE				DRAW	ING No.	:	
AS NOT	IED CT:				<b>M</b> -	106	
20-2	01	-010				I	
1						I	

												0	ISSU	ED FO	r pe
												No.	DESC	CRIPTI	ON
											ſ			R E	EV
											ľ				
											ŀ				
															1
												A	R	C ]	En
												Creati	ng Sol	lution	s Th
														1100 Sto	Sout ney ( T ● (
														w con	ww.a
											ŀ	PROJE	CT.		
												TROUL	01.		
															١Ġ
														320	0.51
														NIÃO	GARA
											ŀ	START	DATE:		DRA
												2020 03	8 24		M.B.
											ľ	DRAWI	NG TIT	LE:	
													Ċ	SDE	
													Ň		
											ŀ	SCALE: AS NOT	ED		
											ľ	PROJE		4.0	
					1	1						20-20	J1-0	10	
	I	I	I	l	I	I	I	ا 5	<b>,</b> ,,,	I	I	Ι			

![](_page_26_Figure_0.jpeg)

1

M-200 SCALE: N.T.S.

![](_page_26_Figure_1.jpeg)

NATURAL GAS SCHEMATIC DEMOLITION

![](_page_26_Figure_2.jpeg)

HWT-1 250 MBH

MECHANICAL MEZZANINE

![](_page_26_Figure_4.jpeg)

┣┛┣

PROVIDE 4"Ø NATURAL GAS HEADER COMPLETE WITH DRIP LEG AND ISOLATION VALVE

GROUND FLOOR \_\_\_\_\_

4"ø

 RH-1
 <th

\_\_7"WC G \_\_\_►

GROUND FLOOR

MEZZANINE

\_\_\_\_\_

MAIN BUILDING

 RH-1
 HWT-1

 100 MBH
 50 MBH

**|** | 15" 

 RH-1
 UH-ST

 100 MBH
 150 MBH

MUA-G-E 175 MBH

RH-1 100 MBH

(AHU-ST) 225 MBH

		GENER		6	
	1. NAT	fural gas piping to e	Xisting Equipment	to be verif	IED.
	_	MECHANICAL DRAWING CONTRACTOR TO ENGA SCOPE WITH REFRIGER	For Reference, ge Se and coordinate Ation energy solu	NERAL MECHANICAL TIONS LTD.	
	3 2 1	ISSUED FOR TEN RE-ISSUED FOR F RE-ISSUED FOR F	DER PERMIT PERMIT	FEB. 26, 2021 DEC. 03, 2020 NOV 06, 2020	P.G. P.G. P.G.
	0 No.	ISSUED FOR PER	MIT	SEPT 4, 2020 DATE	P.G. BY
		REVI	SIONS	5	
	4				
	A . Creatin	RCEng ag Solutions Thro 1100 South Stoney Cru T = (90 F = (90 Www.arc contact@a	<b>Rec</b> <b>Service Rd., #417</b> <b>Service Rd., #417</b> <b>Service Rd., #417</b> <b>Seck ON L8E 0C5</b> <b>05) 643-8530</b> <b>05) 643-8510</b> <b>engineering.ca</b> <b>rcengineering.ca</b>	g Ind	C. lence
	PROJEC	NIAGA SERVIC IMPRO 3200 STA NIAGARA F	RA FALLS E CENTR VEMENTS NLEY AVENUE, ALLS, ONTARIC	5 E S	
	START D 2020 03 DRAWIN	DATE: DRAW 24 M.B. IG TITLE: NATU SCH	N BY: DI P. RAL GAS EMATIC	ESIGNED G.	BY:
"	SCALE: AS NOTE PROJEC 20-20	ED ST: 0 <b>1-010</b>	DRAWING No - <b>M</b> -		

![](_page_27_Figure_0.jpeg)

ORIGINAL SHEET SIZE: ARCH D

![](_page_27_Figure_3.jpeg)

GEI	NERAL N	OTES						
KEY PLAN								
<ul> <li>MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.</li> </ul>								
0 ISSUED FOR No. DESCRIPTION		DERMIT FEB. 26, 2021 P.G. DATE BY						
Carconic constraints         ARcengineering Inc.         Creating Solutions Through Engineering Excellence         1100 South Service Rd., #417         Stoney Creek ON L8E 0C5         T = (905) 643-8530         F = (905) 643-8510								
PROJECT:								
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO								
START DATE:DRAWN BY:DESIGNED BY:2020 03 24M.B.P.G.								
DRAWING TITLE: D SER	DEMOLIT PLUMBIN RVICE CE	ION NG ENTRE						
SCALE: AS NOTED PROJECT:	DRAV	VING No.: <b>M-201</b>						
20-201-010								

∎, ⊤ 5"

![](_page_28_Figure_0.jpeg)

![](_page_28_Figure_3.jpeg)

![](_page_29_Figure_0.jpeg)

BAS CONTROL SEQUENCE WHEN VACUUM IS LOST, PROVIDE ALARM AT BAS WASTE OIL SYSTEM CD-1 (M-210) LOCATI TAG DESCRIPTION OVP-1 OVERFLOW PREVENTION ALARM SERVICE GAR FVC-1 TANK VENT EXTERIOR

![](_page_29_Figure_3.jpeg)

![](_page_29_Figure_4.jpeg)

![](_page_29_Figure_5.jpeg)

NOTES: SPECIFICATIONS BASED ON GRACO

P-WO-1 WASTE OIL PUMP #1

P-WO-2 WASTE OIL PUMP #2

TLI-1 TANK LEVEL INDICATOR

FS-1 TANK LEVEL INDICATOR

R-WO-1 EVACUATION REEL

SV-1 AIR SOLENOID VALVE

NOTES: 1. SPECIFICATIONS BASED ON MAKE MODEL NO.

SERVICE

DB—1 | DRAIN BASIN

TAG

# BAS CONTROLLER - DI ---- $\bigcirc$ SS-1 DO \_\_\_\_ \_\_\_\_ DOUBLE WALL TANK. COMPRESSED AIR (P-W0-2)

FUEL	EQUIPME	NT SCHE	DULE					
LOCATION	MAKE	MODEL	REMARKS					
SERVICE GARAGE	HELLIWELL	PS102H-2	COMPLETE WITH TWO LEVEL SWITCHES (90% AND 95%) FILLED, AUDIBLE AND VISUAL ALARM					
EXTERIOR	OPW	23–0033						
TANK	global Industries	T9FB887727	TANK LIQUID LEVEL GAUGE, ALUMINUM BUSHING, GALVANIZED ROD, HDPE FLOAT, 2" FITTING, 44" DEPTH					
TANK	HELLIWELL	FS301-2	2 SWITCH LEVEL INDICATOR					
SERVICE GARAGE	GRACO	HSMD5B	INSTALL AT FLOOR LEVEL WITHIN 24" OF P-WO-1					
SERVICE GARAGE	DIEXO	TKFD255	-					
SERVICE GARAGE	HELLIWELL	HES3V21008-C	-					

WASTE OIL PUMP SCHEDULE											
LOCATION	GRACO PUMP		MODEL	FLUID	TYPE	CONTROL		FLO	ow	HE	AD
	KII NOMBEN						FRESSORE	L/S	GPM	KPA	PSI
SERVICE GARAGE	24E166	HUSKY	1050	WASTE OIL	DIAPHRAGM	Compressed Air	40 PSI	0.6	10	9.1	30
SERVICE GARAGE	224873	HUKSY	716	WASTE OIL	DIAPHRAGM	Compressed Air	40 PSI	0.6	9	3.0	10

GENERAL NOTES							
KEY PLAN							
<ul> <li>MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.</li> </ul>							
4 ISSUED FOR TENDER FEB. 3 ISSUED FOR PRICING JAN. 4 ISSUED FOR PRICING JAN. 5 ISSUED FOR PRICING J							
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     P.G.							
No.DESCRIPTIONDATEBY							
REVISIONS							
ARC							
AKC 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: DRAWN BY: DESIGNED BY:							
2020 03 24 M.B. P.G. DRAWING TITLE:							
WASTE OIL PLUMBING PLAN							
SCALE: DRAWING No.: AS NOTED							
PROJECT: M-210							
20-201-010							
$\cdot$							

![](_page_30_Figure_0.jpeg)

ORIGINAL SHEET SIZE: ARCH D

GENERAL NOTES						
KEY PLAN						
<ul> <li>MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.</li> </ul>						
0 ISSUED FOR PLUMBING PERMIT FEB. 26, 2021 P.G.						
REVISIONS						
Creating Solutions Through Engineering Excellence 1100 South Service Rd., #417 Stoney Creek ON L8E 0C5 T • (905) 643, 8520						
www.arcengineering.ca contact@arcengineering.ca						
PROJECT: NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO						
START DATE: DRAWN BY: DESIGNED BY: 2020 03 24 M B P G						
DRAWING TITLE:						
REVISED PLUMBING SERVICE CENTRE						
SCALE: DRAWING No.: AS NOTED						
PROJECT: <b>WI-211</b> 20-201-010						

**"** 5"

![](_page_31_Figure_0.jpeg)

![](_page_32_Figure_0.jpeg)

![](_page_32_Figure_3.jpeg)

![](_page_33_Figure_0.jpeg)

		GE	NER/	AL NOT	ES		
	KEY PLAN						
	<ul> <li>MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.</li> </ul>						
	3	ISSUED FO	OR TEND	ER	FEB.	P.G.	
	2 1	RE-ISSUE	d for Pe	ERMIT	DEC. 03, 2020 NOV 06, 2020	P.G. P.G.	
	0 No.	ISSUED FO	OR PERM	1IT	SEPT 4, 2020 DATE	P.G. BY	
		RI	EVI	SION T	IS		
	4						
	Creating Solutions Through Engineering Excellence 1100 South Service Rd., #417 Stoney Creek ON L&E OC5 T = (905) 643-8530 F = (905) 643-8510						
	PROJE	CT:					
		NI. SEI IMI <sup>32</sup> NIA	AGAF RVICE PRO\ <sup>00 STAN</sup> GARA F/	RA FALI E CENT /EMEN <sup>®</sup> LEY AVENU LLS, ONTA	_S RE TS <sup>E,</sup> RIO		
	START I 2020 03	DATE: 24	DRAWN M.B.	I BY:	DESIGNED P.G.	BY:	
	DRAWIN	NG TITLE: DEN SEI	/IOLIT RVICI	TION H\ E CENT	/AC RE		
	SCALE: AS NOT PROJEC 20-20	ED CT: ) <b>1-010</b>		DRAWING	No.: <b>/1-301</b>		
<b>I</b> ,     5	I	I	ı	I	1		

![](_page_34_Figure_0.jpeg)

![](_page_34_Figure_3.jpeg)

![](_page_35_Figure_0.jpeg)

ORIGINAL SHEET SIZE: ARCH D

Δ\_

		GE	ENER/	AL NOT	ES		
		K	EY	PLA	N		
	-	MECHANICAL Contractor Scope with	drawing f( to engage refrigerat	Dr Reference, E and coordin 10n energy s	, general Iate Mechanical Olutions Ltd.		
	3	ISSUED FO	OR TEND	ER	FEB. 26, 2021 DEC. 03, 2020	P.G. P.G.	
	1	RE-ISSUE			NOV 06, 2020 SEPT	P.G.	
	No.	DESCRIPT			4, 2020 DATE	BY	
	4						
	<section-header><section-header><text><text><text><text><text><text></text></text></text></text></text></text></section-header></section-header>						
	START 2020 03	DATE: 3 24	DRAWN M.B.	NBY:	DESIGNED B P.G.	Y:	
	DRAWI		MOLII WES <sup>-</sup>	ΓΙΟΝ Η\ Γ ROOF	/AC		
	SCALE: AS NOT PROJE 20-20	тер ст: 0 <b>1-010</b>		DRAWING	No.: <b>/1-303</b>		

**I** I 5"

![](_page_36_Figure_0.jpeg)

	GENERA	L NOTES				
	KEY F	PLAN				
	- MECHANICAL DRAWING FOR Contractor to Engage a Scope with Refrigeratio	R REFERENCE, GENERAL AND COORDINATE MECHANICAL DN ENERGY SOLUTIONS LTD.				
	3       ISSUED FOR TENDE         2       RE-ISSUED FOR PER         1       RE-ISSUED FOR PERMIT         0       ISSUED FOR PERMIT         No.       DESCRIPTION         R E V I S	Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system         Image: Signal system       Image: Signal system       Image: Signal system				
	Creating Solutions Throug 1100 South Se Stoney Creek T • (905) F • (905) www.arceny contact@arce	<b>Provide Rd.</b> , #417 CON L8E 0C5 643-8530 643-8510 gineering.ca engineering.ca				
	PROJECT: NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO					
	START DATE: DRAWN I 2020 03 24 M.B.	BY: DESIGNED BY: P.G.				
	DRAWING TITLE: DEMO HVAC C RO	LITION ENTRAL OOF				
	SCALE: AS NOTED PROJECT:	DRAWING No.: <b>M-304</b>				
<b></b>   _	20-201-010					

![](_page_37_Figure_0.jpeg)

ORIGINAL SHEET SIZE: ARCH D

2021

	CENERAL NOTES					
	KEY PLAN					
	<ul> <li>MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.</li> </ul>					
	3 ISSUED FOR	RTENDER	FEB. 26, 2021 P.G.			
	2 RE-ISSUED I		DEC. 03, 2020 P.G. NOV P.G.			
	0 ISSUED FOR	R PERMIT	06, 2020 P.G. SEPT 4, 2020 P.G.			
	No. DESCRIPTIC		DATE BY			
	Creating Solutions	Engineering.ca act@arcengineering.ca	ng Inc. ring Excellence			
	PROJECT:					
	NIA SER IMP <sup>3200</sup> NIAG	GARA FALL VICE CENTE ROVEMENT STANLEY AVENUE ARA FALLS, ONTAR	S RE S			
	START DATE: E 2020 03 24 M	DRAWN BY:	DESIGNED BY: P.G.			
	DRAWING TITLE: DRAWING TITLE: D HVA	EMOLITION C EAST ROO	ЭF			
	SCALE:	DRAWING N	lo.:			
	AS NOTED PROJECT:	м	-305			
- I · · ·	20-201-010					
<b> </b>     5"						

![](_page_38_Figure_0.jpeg)

![](_page_38_Figure_3.jpeg)

![](_page_39_Figure_0.jpeg)

	GE	NER/	AL NOT	ES		
	K	EY	PLA	N		
- Mechanical drawing for reference, general contractor to engage and coordinate mechanical scope with refrigeration energy solutions Ltd.						
4 3 2	ISSUED FC ISSUED FC RE-ISSUEI	DR TEND DR CITY	ER COMMENT ERMIT	FEB. 26, 2021 JAN. 26, 2020 DEC. 03, 2020	P.G. P.G. P.G.	
1 0	RE-ISSUEI	D FOR PI	ERMIT 1IT	NOV 06, 2020 SEPT 4, 2020	P.G. P.G.	
No.			SION	DATE	BY	
REVISIONS						
Creating Solutions Through Engineering Excellence 1100 South Service Rd., #417 Stoney Creek ON L&E 0C5						
	v co	www.arce ntact@are	ngineering.c cengineering	a J.ca		
PROJECT: NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO						
START [ 2020 03	DATE: 24	DRAWN M.B.	I BY:	DESIGNED P.G.	BY:	
DRAWIN	IG TITLE: RI SEI	EVISE RVICI	ED HVA E CEN <sup>-</sup>	AC TRE		
SCALE: AS NOTI PROJEC <b>20-20</b>	ED ST: 0 <b>1-010</b>		DRAWING	<sup>3 No.:</sup> <b>M-311</b>		

![](_page_40_Figure_0.jpeg)

![](_page_40_Figure_3.jpeg)

![](_page_41_Figure_0.jpeg)

ORIGINAL SHEET SIZE: ARCH D

	GE	ENER/	AL NOT	ES		
	K	EY	PLA	N		
-	MECHANICAL Contractor Scope with	drawing f( to engage refrigerat	DR REFERENCI AND COORDI ION ENERGY	e, general Inate mecha Solutions l'	NICAL TD.	
3 2 1	ISSUED FO RE-ISSUE RE-ISSUE	or tend d for pe d for pe	ER ERMIT ERMIT	FEB. 26, 2 DEC 03, 2 NOV 06, 2	021 P.G. 020 P.G. 020 P.G.	
0 No.	ISSUED F	OR PERM	1IT	SEP 4, 20 DA	T <sub>20</sub> P.G. TE BY	
	R	EVI	sioi T	N S		
4						
A	Rc	A Eng	R	) ring I	nc.	
Creati	ing Solution 110 St	ns Throi 00 South S toney Cree T • (905 F • (905 www.arce	<i>igh Engin</i> ervice Rd., ; ek ON L8E ( 5) 643-8530 643-8510 ngineering.c	<i>eering E:</i> #417 0C5 :a	xcellence	
PROJE	cc CT:	ontact@arc	cengineering	j.ca		
	NI SE IM <sup>32</sup>	AGAF RVICE PRO\ 2000 STAN GARA FA	RA FAL E CEN <sup>T</sup> /EMEN LEY AVEN ALLS, ONT/	LS TRE ITS <sup>UE,</sup> ARIO		
START DATE:DRAWN BY:DESIGNED BY:2020 03 24M.B.P.G.						
DRAWI	NG TITLE:	VAC I WEST	REVISI F ROO	ED F		
SCALE AS NOT PROJE	TED CT:		DRAWING	<sup>3 No.:</sup> M-31	3	
20-2	01-010					

**|** | 5"

![](_page_42_Figure_0.jpeg)

	GENERAI	LINUTES					
	KEY PLAN						
	<ul> <li>MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.</li> </ul>						
		EEB					
	3 ISSUED FOR TENDER	R 26, 2021 P.G.					
	1 RE-ISSUED FOR PER	03, 2020         1.0.           RMIT         NOV         P.G.					
	0 ISSUED FOR PERMIT	Г SEPT 4, 2020 Р.G.					
	No. DESCRIPTION	DATE BY					
	REVIS	SIONS					
	Creating Solutions Throug 1100 South Ser Stoney Creek T • (905) 6 F • (905) 6	<b>Provide a constraint of the engineering Excellence</b> vice Rd., #417 ON L8E 0C5 643-8530 643-8510					
	www.arceng contact@arcer	jineering.ca ngineering.ca					
	PROJECT: NIAGARA SERVICE IMPROVE 3200 STANLE NIAGARA FAL	A FALLS CENTRE EMENTS EY AVENUE, LS, ONTARIO					
	START DATE: DRAWN E 2020 03 24 M.B.	BY: DESIGNED BY: P.G.					
	DRAWING TITLE: HVAC CENTRAL	ROOF REVISED					
	SCALE:	DRAWING No.:					
	AS NOTED PROJECT:	M-314					
	20-201-010						
5"							

![](_page_43_Figure_0.jpeg)

ORIGINAL SHEET SIZE: ARCH D

	GENERAL	NOTES
	KEY P	LAN
	<ul> <li>MECHANICAL DRAWING FOR R CONTRACTOR TO ENGAGE AND SCOPE WITH REFRIGERATION</li> </ul>	REFERENCE, GENERAL D COORDINATE MECHANICAL ENERGY SOLUTIONS LTD.
	3 ISSUED FOR TENDER	FEB. P.G.
	2 RE-ISSUED FOR PERM 1 RE-ISSUED FOR PERM	26, 2021         F.G.           /IT         DEC. 03, 2020         P.G.           /IT         NOV 06, 2020         P.G.
	0 ISSUED FOR PERMIT No. DESCRIPTION	SEPT 4, 2020 P.G. DATE BY
	Creating Solutions Through 1100 South Servit Stoney Creek O T • (905) 64 F • (905) 64 Www.arcengin contact@arceng	<b>Engineering Excellence</b> ce Rd., #417 NN L8E 0C5 43-8530 43-8510 meering.ca gineering.ca
	PROJECT: NIAGARA SERVICE ( IMPROVE 3200 STANLEY NIAGARA FALLS	FALLS CENTRE MENTS AVENUE, S, ONTARIO
	START DATE: DRAWN BY 2020 03 24 M.B.	2: DESIGNED BY: P.G.
	DRAWING TITLE: REVIS HVAC EAS	SED ST ROOF
<b>I</b>	SCALE: DF AS NOTED PROJECT: 20-201-010	RAWING No.: M-315
<b> </b>     5"		

![](_page_44_Figure_0.jpeg)

	GF			FS	
-	MECHANICAL	DRAWING F	OR REFERENCE	, GENERAL	
	SCOPE WITH	REFRIGERAT	TION ENERGY S	OLUTIONS LTD.	
				FFB	
3	RE-ISSUE		ER ERMIT	26, 2021 DEC.	P.G. P.G.
1	RE-ISSUE	D FOR P	ERMIT	03, 2020 NOV 06, 2020	P.G.
0	ISSUED F		ИТ	SEPT 4, 2020	P.G.
No.	DESCRIP			DATE	BY
	R	EVI	SION	N S	
	$\bigwedge_{a}$				
		ALC ROAD			
4	( <b>N</b>	_)~			
		1	R	Y	
		A		,	
	D				
A		Eng	ineer	ing Ind	С.
Creat	ing Solutio	ns Throi	ugh Engine	ering Excel	lence
	110 St	o South S toney Cree رون م	ervice Rd., # ek ON L8E 0	417 C5	
		F ● (905	5) 643-8510		
	сс	www.arce ontact@ar	ngineering.c cengineering	a .ca	
PROJE	ECT:				
	NI	AGAF		IS	
	SE	RVICI		RE	
	IM			TS	
	32 NIA	GARA F	ALLS, ONTA	RIO	
START		DRAW	I BY·		BY∙
2020 03	3 24	M.B.	• •	P.G.	- • •
DRAWI	NG TITLE:	1		1	
	REV	ISED			
	GRO	UND MEZZ	FLOOR ZANINE	and E	
	: TED		DRAWING	No.:	
PROJE	 .CT:		ſ	M-320	
20-2	01-010				

![](_page_44_Figure_7.jpeg)

EMERGENCY LIGHTING FIXTURE SCHEDULE	LIGHTING FIXTURE SCHEDULE	WIRING DEVICES	LIGHTING FIXTURES
GENERAL NOTES:	GENERAL NOTES:	OF SPECIAL RECEPTACLE. REFER TO NOTES OR DESCRIPTION FOR TYPE	SURFACE OR RECESS MOUNTED LIGHTING FIXTURES. LETTER DENOTES TYPE
<ol> <li>CONTRACTOR IS TO INCLUDE FOR ALL ACCESSORIES AS REQUIRED FOR A FULL AND COMPLETE INSTALLATION. PARTS NUMBERS SHOWN ARE GENERALLY FOR FIXTURE ONLY. REFER TO ARCHITECTURAL CEILING</li> </ol>	1. CONTRACTOR IS TO INCLUDE FOR ALL ACCESSORIES AS REQUIRED FOR A FULL AND COMPLETE INSTALLATION. PARTS NUMBERS SHOWN ARE GENERALLY FOR FIXTURE ONLY. REFER TO ARCHITECTURAL CEILING	O125 VOLT, 2-POLE, 3-WIRE, STRAIGHT BLADE RECEPTACLE.RECEPTACLE.15 AMP SIMPLEX UNO.	SURFACE OR RECESS MOUNTED LIGHTING
SCHEDULE FOR CEILING TYPES. 2. INSTALLATION OF EMERGENCY LIGHTING AND UNIT EQUIPMENT SHALL BE	SCHEDULE FOR CEILING TYPES AND PROVIDE REQUIRED ACCESSORIES (IE DRYWALL FLANGE KIT, ETC). DISCREPANCIES BETWEEN THE DESCRIPTION AND PART NUMBER SHALL BE BROUGHT TO THE ENGINEERS ATTENTION	I25VOLT, 2-POLE, 3-WIRE, STRAIGHT BLADERECEPTACLE.15AMPDUPLEXDUPLEXUNO.	CIRCUIT. LETTER DENOTES TYPE.
ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO CODE REQUIREMENTS.	PRIOR TO SUBMITTING A BID.	€ 125 VOLT, 2−POLE, 3−WIRE, STRAIGHT BLADE RECEPTACLE. 15 AMP DUPLEX CONTROLLED	X       Image: Surface or recess mounted lighting         FIXTURES.       LETTER DENOTES TYPE.
3. EMERGENCY BATTERIES SHALL BE SIZED TO MAINTAIN CONNECTED LOAD FOR MINIMUM 1/2 HOUR.	2. THE CONTRACTOR IS TO ALLOW FOR NORMAL DELIVERY ON FIXTURES (6-8 WEEKS FROM ACCEPTANCE OF SHOP DRAWINGS). FIXTURES FROM A QUICK SHIP PROGRAM WILL BE NOTED WHERE APPLICABLE. CONTRACTOR IS	2x 125 VOLT, 2-POLE, 3-WIRE, STRAIGHT BLADE	FIXTURES ON AN EMERGENCY OR NIGHT LIGHT CIRCUIT. LETTER DENOTES TYPE.
<ol> <li>FOR ALL EXIT SIGNS REFER TO FLOOR PLANS FOR SINGLE OR DOUBLE FACE, CEILING RECESSED OR WALL MOUNTED.</li> </ol>	TO SUBMIT SHOP DRAWINGS FOR FIXTURES AS SOON AS POSSIBLE TO AVOID DELAY OF THE PROJECT. ALTERNATES WILL NOT BE ACCEPTED TO EXPEDITE A SCHEDULE.	W     RECEPTACLE.     15 AMP DUPLEX UNO.       Image: the straight strai	HO I D- WALL OR COLUMN MOUNTED LIGHTING FIXTURES. LETTER DENOTES TYPE.
5. ALL EMERGENCY LIGHTING AND EQUIPMENT ARE TO HAVE SHOP DRAWINGS SUBMITTED TO THE CONSULTANT PRIOR TO ORDERING FOR APPROVAL.	3. PENDANT AND LINEAR FIXTURES SHOWN AS END TO END ARE TO BE ORDERED AS CONTINUOUS RUN FIXTURES UNLESS SPECIFICALLY NOTED	125 VOLT, 2-POLE, 3-WIRE, STRAIGHT BLADE	HO D- B- WALL OR COLUMN MOUNTED LIGHTING
CONTRACTOR MUST INCLUDE SHOP DRAWINGS FOR ALL LAMPS BEING INSTALLED WITH FIXTURES.	OTHERWISE. FIXTURES ARE GENERALLY LISTED AS A MODULE TO CLARIFY THE LUMENS OR THE BALLAST AND LAMP REQUIRED FOR EACH MODULE. FIXTURE RUN LENGTHS SHALL BE AS SHOWN ON THE PLANS.	EMERGENCY OR UPS POWER	SURFACE MOUNTED STRIP FLUORESCENT
6. EQUIPMENT BEING SUBMITTED AS AN APPROVED EQUAL ARE TO BE SUBMITTED TO THE CONSULTANT FOR APPROVAL NO LESS THAN 5 BUSINESS DAYS BEFORE CLOSING. SUBMITTALS SHALL BE CLEARLY	DISCREPANCIES BETWEEN THE FIXTURE DESCRIPTION AND PLAN SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO SUBMITTING A BID.	HALF-SWITCHED RECEPTACLE. 15 AMP DUPLEX CONTROLLED VIA LOCAL SWITCH	B-1-2 LIGHTING CIRCUITING NOTE. B-PANELBOARD I.D.,
LABELED AND INCLUDE COMPLETE FIXTURE CUTS STATING INCLUDED OPTIONS AND ACCESSORIES. SUBMITTALS NOT MEETING THIS CRITERIA WILL BE REJECTED.	4. CONTRACTOR SHALL SUPPLY TO OWNER AND/OR CONSULTANT ANY DOCUMENTATION AS REQUIRED FOR OWNER TO APPLY FOR ENERGY INCENTIVES INCLUDING BUT NOT LIMITED TO BILLS OF SALE, ETC.	URTICAL LINE THROUGH ANY RECEPTACLE SYMBOL INDICATES A NON-STANDARD MOUNTING	I-BRANCH CIRCUIT, 2-LOCAL (SWITCH) CIRCUIT.       Image: SWITCH.       SWITCH.       SWITCH.       SWITCH.
7. THE CONTRACTOR SHALL INCLUDE FOR TWO (2) SPARE EXIT SIGNS TO BE INSTALLED AS DIRECTED BY OWNER/ENGINEER/BUILDING OFFICIAL. UNUSED	5. ALL FIXTURES ARE TO HAVE SHOP DRAWINGS SUBMITTED TO THE CONSULTANT PRIOR TO ORDERING FOR GENERAL REVIEW, CONTRACTOR	125 VOLT, 2-POLE, 3-WIRE, STRAIGHT BLADE	RC ROOM CONTROLLER FOR LIGHTING CONTROLS
SPARE SIGNS SHALL BE TURNED OVER TO OWNER IF NOT REQUIRED.	MUST INCLUDE SHOP DRAWINGS FOR ALL LAMPS BEING INSTALLED WITH FIXTURES.	FURNITURE	WALL MOUNTED OCCUPANCY SENSOR
ITEM DESCRIPTION	6. DIMMERS SHALL BE (0-10V) UNLESS SPECIFIED OTHERWISE. DIMMERS SHALL BE COMPLETE WITH ON/OFF BUTTON AND SEPERATE SLIDER TO	RECEPTACLE. 15 AMP DUPLEX FOR SYSTEMS FURNITURE CONTROLLED BY OCCUPANCY SENSOR	TYPICAL SWITCH NOTES. CIRCUITING: B-PANELBOARD I.D., 1-BRANCH CIRCUIT,2-LOCAL
PICTOGRAMS FOR ON-SITE DIRECTION SELECTION. 1–1.5W LED 120VAC, 12VDC. REFER TO FLOOR PLANS FOR SINGLE OR DOUBLE FACE, CEILING	TO OFF ARE NOT ACCEPTABLE UNLESS NOTED. ELV TYPE DIMMER WHERE REQUIRED SHALL COMPATIBLE WITH LIGHT FIXTURE AND BE CAPABLE OF	125 VOLT, 2-POLE, 3-WIRE, STRAIGHT BLADE	P-PILOT LIGHT, 3-THREE WAY, 4-FOUR WAY, OS-OCCUPANCY SENSOR, VS-VACANCY SENSOR
EXIT SIGN AIMLITE 'RPALW' SERIES RPALW-X-M-WHT-BAT	7. FIXTURES BEING SUBMITTED AS AN APPROVED EQUAL ARE TO BE	FURNITURE ON EMERGENCY OR UPS POWER	
STANPRO 'RMXL' SERIES RMXLUWH—IB LUMACELL 'LA' SERIES LAXWS OR APPROVED EQUAL	BUSINESS DAYS BEFORE CLOSING. SUBMITTALS SHALL BE CLEARLY LABELLED AND INCLUDE COMPLETE FIXTURE CUTS STATING INCLUDED		Sp PHOTOELECTRIC TYPE SMOKE DETECTOR
SURFACE MOUNTED BATTERY UNIT C/W TWIN HEADS AS INDICATED.	MEETING THIS CRITERIA WILL BE REJECTED. IES FILES FOR FIXTURES MUST HAVE AN IES LAB CERTIFICATION.	B-PANELBOARD I.D., 1-BRANCH CIRCUITING: SUBSCRIPT: XX-CURRENT RATING (IF NOTED).	SR PHOTOELECTRIC TYPE SMOKE DETECTOR WITH A RELAY BASE.
EMERG. BATTERY UNIT BATTERY DISCONNECT.	ITEM DESCRIPTION		S PHOTOELECTRIC TYPE SMOKE ALARM, 120VAC WITH BATTERY BACKUP, INTERCONNECTED
C/W EMERG. HEADS STANPRO 'SL' SERIES EBST-12-200-2SM3WLJ-WHT-ATD-BTD STANPRO 'SL' SERIES SLC-12-200-2N3WLJ-WH-AT-BD	SURFACE MOUNT 4' LED UTILITY WRAP LUMINAIRE, DIE FORMED COLD ROLLED STEEL CONSTRUCTION, FROST ACRYLIC PRISMATIC LENS,	POWER LAYOUT	Shown       Structure       PHOTOELECTRIC TYPE DUCT SMOKE DETECTOR
LUMACELL 'RGS' SERIES RG12S-200-2LD10-AT-LD OR APPROVED EQUAL	A 120–277V, 3200 LUMENS, 4000K, ELECTRONIC DIMMING DRIVER (0–10V)	COMBINATION STARTER (CS)	RATE OF RISE AND 57°C FIXED TEMPERATURE HEAT DETECTOR
REMOTE EMERGENCY SINGLE AND DOUBLE HEAD AS INDICATED ON PLANS. 3W LED PAR18 (6W MR16LED), 12VDC.	COOPER# 4WNLED-LD4-32SL-F-UNV-L840-CD-1-U	MAGNETIC STARTER (MG)	92°C FIXED TEMPERATURE HEAT DETECTOR
EMERG. REMOTE AIMLITE 'RMSM1-6-12-3WLJ-WHT' & 'RMSM2-6-12-3WLJ-WHT' HEADS STANPRO 'N-1-6-12-3WLJ-WHT' & 'N-2-6-12-3WLJ-WHT'	LED 4'STRIP LIGHT, 120-277V ELECTRONIC DIMMING DRIVER (0-10V),		ESV ELECTRIC SUPERVISED VALVE
LUMACELL 'MQM1LD10' & 'MQM2LD10' OR APPROVED EQUAL	B 4000K, 6500 LUMENS, FULL FROST LENS, WIDE DISTRIBUTION. FIXTURE TO BE INSTALLED WITH TWIST LOCK RECEPTACLE PER LIGHT WITH ADEQUATE CORD LENGTH.	POWER PANEL - NEW       POWER TRANSFORMER	FS FLOW SWITCH
RUNNING MAN EXIT SIGN C/W PICTOGRAMS FOR ON-SITE DIRECTION SELECTION AS INDICATED AND TWIN HEADS, 1-1.5W LED, 3W LED	COOPER# 4SNLED-LD5-65HL-LW-UNV-L840-CD-1-U OR APPROVED EQUAL		Ess FIRE ALARM SIGNALLING APPLIANCE – BELL
PAR18 (6W-MR16LED), 120VAC. REFER TO FLOOR PLANS FOR SINGLE COMBO. OR DOUBLE FACE, CEILING RECESSED OR WALL MOUNT. UNIT TO BE		ELECTRICAL POWER CONNECTION REFER TO EQUIPMENT SCHEDULE	FIRE ALARM SIGNALLING APPLIANCE – HORN
EMERG. LIGHTS AIMLITE CAT.# CARPW1250-x-M-2SM3LJ-WHT-ATD-BTD	4" RECESSED LED DOWNLIGHT, 1000 LUMENS, 120V ELECTRONIC DIMMING DRIVER (0-10V), 80CRI, 4000K, WIDE BEAM DISTRIBUTION,	EQUIPMENT SUPPLIED BY OWNER REQUIRING ELECTRICAL POWER CONNECTION	FIRE ALARM SIGNALLING APPLIANCE –
LUMACELL CAT.# LAC-x-W-1250-2LD10-AT OR APPROVED EQUAL	C WHITE PAINTED SELF-FLANGED TRIM, SPECULAR CLEAR FINISH.		WALL/COLUMN MOUNT
SENSOR NOTES AND SCHEDULE	COOPER# LD4B10D010-EU4B10208040-4LB2LI OR APPROVED EQUAL	ALL MODES OF OPERATION OF FOUR	COMBINATION HORN AND STROBE CEILING MOUNT
GENERAL NOTES:	LED 4' STRIP LIGHT, 120-277V ELECTRONIC DIMMING DRIVER (0-10V), 4000K, 3000 LUMENS, FULL FROST LENS, WIDE DISTRIBUTION.	Protect to be shut down by the alarm CONDITION OF THE FIRE ALARM CONTROL PANEL.	FIRE ALARM DOOR RELEASE DEVICE
1. ALL DEVICES AND SENSORS ARE TO HAVE SHOP DRAWINGS SUBMITTED TO THE CONSULTANT FOR REVIEW AND COMMENT PRIOR TO ORDERING.	COOPER# 4SNLED-LD5-30SL-LW-UNV-L840-CD-1-U	PUSH BUTTON	SIC FIRE ALARM SPEAKER – CEILING MOUNT
<ol> <li>ALL SENSORS ARE TO BE IN COMPLIANCE WITH NEMA WD 7-2011. ANY SENSORS NOT IN COMPLIANCE WILL BE REJECTED.</li> </ol>		①     THERMOSTAT	Image: State of the state o
3. PROVIDE ALL SENSORS, POWER PACKS AND RELAY UNITS AS REQUIRED FOR A COMPLETE INSTALLATION. PASSIVE INFRARED SENSOR, ULTRASONIC	4000K, 5000 LUMENS, FULL FROST LENS, WIDE DISTRIBUTION.	TIME CLOCK       J     JIFFY POLE	
AND MULTI TECHNOLOGY OCCUPANCY SENSORS SHALL BE AS NOTED BELOW (REFER TO PLANS FOR DEVICE LAYOUT). PART NUMBERS SHOWN ARE GENERAL, FOR DEVICE ONLY.	COOPER# 4SNLED-LD5-50SL-LW-UNV-L840-CD-1-U	120V HARDWIRE CONNECTION	
<ol> <li>THIS CONTRACTOR SHALL ALLOW FOR ON SITE ADJUSTMENTS OF TIME DELAY, AIMING AND SENSITIVITY.</li> </ol>	2'X4' RECESS LED SPECIFICATION GRADE TROFFER, 120–277V,	(a)       208V, 1Ø HARDWIRE CONNECTION         (b)       208V, 3Ø HARDWIRE CONNECTION	
5. FINAL PLACEMENT OF SENSORS SHALL BE CONFIRMED ON SITE WITH ALL PIPING, DUCTWORK, EQUIPMENT, ETC. PRIOR TO ROUGH-IN, TO ENSURE	E ELECTRONIC DIMMING DRIVER (0-10V), 3000 LUMENS, 4000K, CODE GAUGE PRIME COLD ROLLED STEEL HOUSING, RIBBED FROSTED ACRYLIC	600V, 3Ø HARDWIRE CONNECTION	THIS LEGEND REPRESENTS THE SYMBOLS COMMONLY USED.
CLEAR VIEW OF THE ENTRANCE DOOR AND THE OVERALL SPACE. THIS CONTRACTOR TO REFER TO AND FOLLOW MANUFACTURERS SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR PLACEMENT LOCATIONS AND SENSOR	COOPER# 2407_30_UNV 1840_001_U	H HAND DRYER	SHOULD A SYMBOL BE FOUND ON THE DRAWINGS. SHOULD A SYMBOL BE FOUND ON THE DRAWING AND NOT APPEARING ON THE LEGEND, THE CONTRACTOR SHALL
COVERAGE. 6. CEILING MOUNTED SENSORS SHALL BE AT AT CEILING LEVEL WHERE	OR APPROVED EQUAL	FLOOR BOX	AN ADDENDUM PRIOR TO SUBMITTING A BID.
CEILING EXISTS. WHERE CEILING IS NOT PRESENT SENSORS TO BE MOUNTED AT HEIGHT OF PARTITIONS. WALL/CORNER MOUNTED SENSORS SHALL BE MOUNTED 8'-0" A.F.F. WALL STATION SENSORS SHALL BE AS	F ELECTRONIC DIMMING DRIVER (0-10V), 3200 LUMENS, 4000K, CODE GAUGE PRIME COLD ROLLED STEEL HOUSING, RIBBED FROSTED ACRYLIC	SECURITY, ACCESS CONTROL, CCTV	20A DENOTES 5–20R DEVICE
PER SPECIFICATIONS AND STANDARD SWITCH LOCATIONS. ALL MOUNTING HEIGHTS ARE TO BE CONFIRMED ON SITE AND ADJUSTED ACCORDINGLY TO ENSURE PROPER COVERAGE.		AREA TYPE BREAK GLASS DETECTOR	AC ABOVE COUNTER ADO AUTOMATIC DOOR OPENER
7. APPROVED ALTERNATE BY: WATTSTOPPER, LUTRON, H-MOSS, SENSORSWITCH. SENSORS BEING SUBMITTED AS EQUALS SHALL MEET	COOPER# 14CZ-32-UNV-L840-CD1-U OR APPROVED EQUAL	DOOR CONTACT	AE APPROVED EQUAL
SPECIFIED CAPABILITIES, COVERAGE(S), SENSITIVITY ADJUSTMENT, TIME DELAYS, ETC. AS OUTLINED ABOVE AND AS PER SPECIFICATIONS. SHALL AN ALTERNATE FAIL TO MEET INTENT OF DESIGN. CONTRACTOR WILL BE	SAVE ON ENERGY PROGRAM DETAILS	ROLL-UP OR OVERHEAD DOOR DOOR CONTACT	AFF ABOVE FINISHED FLOOR AN FIRE ALARM ANNUNCIATOR
RESPONSIBLE TO PROVIDE ADDITIONAL SENSORS AND OR PARTS TO MEET INTEND OF DESIGN AND FUNCTIONALITY.	1. THE FOLLOWING ARE MANDATORY REQUIREMNTS OF THE PROGRAM. FAILURE TO DOCUMENT AND PROVIDE ANY OF THE INFORMATION BELOW	MOTION DETECTOR     PHOTO-ELECTRIC BEAM SOURCE	BED RECEPTACLE DEDICATED FOR PATIENT BED
8. ELECTRICAL CONTRACTOR SHALL ALLOW FOR TRAINING AND EXPLANATION OF CONTROLLED SYSTEMS TO END USER.	WILL VOID THE PROGRAM AND MAKE THE APPLICATION INELLIGBLE FOR THE INCENTIVE REBATE. FIXTURES DENOTED AS "DLC LISTED" ARE ELIGIBLE AND PARTICIPATING IN THE INCENTIVE	Image: Intervention Delaw Source           Image: Interventintery	BH     BASEBOARD HEATER       CB     CIRCUIT BREAKER
9. ELECTRICAL CONTRACTOR TO ENGAGE THIRD PARTY FOR FUNCTIONAL TESTING OF LIGHTING CONTROL DEVICES AND CONTROL SYSTEM AND PROVIDE CERTIFICATE OF ACCEPTANCE TO ENGINEER LIPON COMPLETION	2. THE CONTRACTOR SHALL INCLUDE TO TAKE PHOTOGRAPHIC	SECURITY SYSTEM ALARM SIGNAL	ER EXISTING TO BE RELOCATED
PRIOR TO OCCUPANCY.	PHOTO OF THE LUMINARIES, A PHOTO OF THE MODEL NUMBER ON THE LUMINAIRE, A PHOTO OF THE LAMPS, AND A PHOTO OF ANY BALLAST INFORMATION (AS APPLICABLE) THIS INFORMATION IS TO BE NEATLY	POWER DOOR PUSH BUTTON OPERATOR	FH     FORCED-AIR HEATER
IILM DESCRIPTION	ARRANGED, LABELLED AND ORGANIZED IN A PDF DOCUMENT. SUBMIT A COPY TO THE OWNER AND CONSULTANT FOR APPROVAL.	LADO     AUTOMATIC DOOR OPENER       C     CARD READER	GFI EQUIPMENT SO NOTED TO BE SUPPLIED WITH A GROUND FAULT CIRCUIT INTERRUPTER
MOUNTED IN AREAS AS SHOWN AND CONNECTED TO LIGHTS WITH 30 MINUTE TIME DELAY (1000 SQ.FT.MAX.) SENSOR TO BE SET TO	3. ALL FIXTURES REMOVED ARE TO BE DISPOSED OF; NO EXCEPTIONS. FIXTURES ARE NOT TO BE DISPOSED OF TILL THE OWNER AND		HSKP HOUSEKEEPING
OS-1 VACANCY MODE.	EXISTING FIXTURES. THE CONTRACTOR IS TO PROVIDE A RECEIPT AND LETTER STATING THAT THEY HAVE BEEN DISPOSED OF.	LK.         ELECTRONIC KEY PAD           MAG         MAGNETIC LOCK	PD POWER DOOR
COOPER #ONW-D-1001-DMV-N-W OR APPROVED EQUAL	4. THE CONTRACTOR IS TO PROVIDE RECEIPTS FOR THE NEW LUMINARIES. RECEIPTS SHALL INDICATE QUANTITIES AND PART NUMBERS FOR FIXTURES.	OCCUPIED LIGHT CAMDEN LED ANNUNCIATOR CM-AF-500	R     RELAY WITH AUXILIARY CONTACTS       REL     RELOCATED ITEM IN NEW LOCATION
CEILING MOUNT SENSOR, LOW VOLTAGE, DUAL TECH, MOUNTED IN AREAS SHOWN AND CONNECTED TO LIGHTS WITH 30 MINUTE TIME	THIS INFORMATION IS USED TO VALIDATE THE INCENTIVE APPLICATION. PRICING CAN BE BLACKED OUT. THIS SHALL BE SUBMITTED TO THE OWNER AND CONSULTANT FOR APPROVAL.	PTR PUSH TO RELEASE	REM EXISTING TO BE REMOVED IN IT'S ENTIRETY
DELAY (1000 SQ. FT. MAX). SENSOR TO BE SET FOR VACANCY MODE WITH MANUAL 'ON' VIA WALL SWITCH AND AUTOMATIC 'OFF' AFTER		PTL PUSH TO LOCK CAMDEN PUSHBUTTON CM-400/8	T TRANSFORMER UH UNIT HEATER
$\bigcirc$ PRESET TIME. COMES WITH 0-10V DIMMER SWITCH/SLIDER AND POWER PACK.		IREX     REQUEST TO EXIT       SP     SCRAMBLE PAD	UNO UNLESS NOTED OTHERWISE
LUTRON#LOS-CDT-1000-WH C/W DVTV-WH & PP-DV		HANDS FREE SWITCH CAMDEN SUREWAVE CM-324/3	W WALL MOUNT - VERIFY HEIGHT
UK APPKUVED EQUAL		i	MANUFACTURER'S WEATHER-PROOFING OPTION(S)

DEMOLITION NOTES	GENERAL NOTES	GENERAL NOTES
1. THE CONTRACTOR SHALL ARRANGE TO TOUR THE FACILITY WITH MAINTENANCE STAFF PRIOR TO SUBMITTING A BID ON THE PROJECT.	1. THE ELECTRICAL DRAWINGS REPRESENT A PORTION OF THE CONTRACT. THE CONTRACTOR IS TO FAMILIARIZE THEMSELVES WITH ALL OF THE DRAWINGS IN THE	
2. DURING THE CONTRACTORS SITE TOUR THEY SHALL BECOME FAMILIAR WITH THE EXISTING BUILDING CONSTRUCTION AND THE LOCATIONS OF THE EXISTING	PACKAGE AS SOME WORK MAY BE SHOWN ON OTHER DRAWINGS IN THE PACKAGE. CONTRACTOR IS TO DETERMINE FULL EXTENT OF PROJECT PRIOR TO SUBMITTING BID.	
COMMUNICATION CLOSETS, LOCAL POWER PANELS, FIRE ALARM AND OTHER SYSTEMS BEING WORKED ON AS PART OF THIS CONTRACT.	2. THE DRAWINGS ARE NOT TO BE SCALED FOR INSTALLATION PURPOSES. ALL MEASUREMENTS ARE TO BE OBTAINED FROM ARCHITECTURAL PLANS, FLEVATIONS, SHOP DRAWINGS OR BE OBTAINED FROM	
OPEN EXISTING PANELS AND SYSTEMS TO BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND TO DETERMINE THE FULL SCOPE OF WORK REQUIRED TO	FIELD MEASUREMENTS. 3. CONTRACTOR IS TO REVIEW ARCHITECTURAL DRAWINGS	
CARRY OUT THE PROJECT. THE CONTRACTOR SHALL PROVIDE NEW BREAKERS, DATA/VOICE COMPONENTS, FIRE ALARM DEVICES, LIGHTING SYSTEM COMPONENTS, ETC TO FACILITATE A COMPLETE AND FUNCTIONING	AND PROVIDE ALL NECESSARY PARTS AND ACCESSORIES AND FIRESTOPPING AS REQUIRED TO CONFORM WITH ARCHITECTURAL FIRE RATINGS.	
4. THE CONTRACTOR SHALL MEASURE OFF ANY DISTANCES NOT INDICATED FOR HOME RUNNING NEW SERVICES (POWER, FIRE ALARM, SECURITY ETC) AND INCLUDE MATERIALS AND LABOUR REQUIRED IN THEIR	4. CONTRACTOR IS TO REMOVE ALL EXISTING DEAD AND ABANDONED CONDUIT AND WIRING BACK TO SOURCE. WHERE NOT POSSIBLE TO REMOVE EXISTING CONDUIT, CONDUIT IS TO BE LEFT BEHIND AND EXISTING WIRE IS TO BE REMOVED AND REPLACED WITH A PULL ROPE.	
BID PRICE. 5. COORDINATE ALL DEMOLITION WITH GENERAL CONTRACTOR. EVERY EFFORT HAS BEEN MADE TO	5. CONTRACTOR IS TO PROVIDE ELECTRONIC CAD 'AS-BUILT' DRAWINGS IN DWG AND PDF FORMAT AT THE COMPLETION OF THE PROJECT. CAD FILES ARE TO BE AUTOCAD 2010.	
OUTLINE THE DEMOLITION SCOPE OF WORK, HOWEVER THE DEMOLITION DRAWINGS REPRESENT ONLY THE GENERAL LOCATION AND NUMBER OF FITTINGS, FIXTURES, DEVICES, EQUIPMENT ETC. TO ASSIST IN EVALUATING THE DEMOLITION SCOPE OF WORK. DRAWINGS ARE BASED ON PREVIOUS AS-BUILTS OR	6. UNLESS NOTED OTHERWISE ALL WIRING SHALL BE IN CONDUIT AND CONCEALED IN WALLS AND CEILING SPACES. BX IS PERMITTED IN SPECIAL CIRCUMSTANCES AND SHORT DROPS FROM JUNCTION BOXES TO LIGHT FIXTURES, REFER TO SPECIFICATIONS. CONDUIT RUNS	
FIELD EVALUATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE DURING THE TENDER PERIOD TO DETERMINE THE EXACT SCOPE OF DEMOLITION WORK, QUANTITIES AND THOROUGHLY UNDERSTAND THE SITE CONDITIONS FOR	ARE TO BE PARALLEL TO WALL STUDS AND DROP FROM JUNCTION BOXES MOUNTED IN THE CEILING SPACE. HORIZONTAL RUNS IN WALLS WILL ONLY BE ACCEPTED UNDER SPECIAL CIRCUMSTANCES (IE OFFSET TO AVOID STRUCTURAL ABOVE) WITH WRITTEN APPROVAL FROM THE OWNER/CONSULTANT.	
CARRYING OUT THE SAME. REQUESTS FOR EXTRAS DUE TO FAILURE TO PROPERLY EVALUATE THE CONDITIONS THAT AFFECT DEMOLITION SCOPE OF WORK WILL NOT BE CONSIDERED.	7. UNLESS SPECIFICALLY NOTED AS "CABLING BY OTHERS", THE CONTRACTOR SHALL INCLUDE FOR ALL CABLING TO DEVICES, OUTLETS, ETC AS SHOWN FOR A	Copyright Reserved All designs and drawings are copyrighted and the
6. SHOULD THE CONTRACTOR ENCOUNTER ANY ASBESTOS DURING THE WORK, THEY SHALL STOP WORK AND NOTIFY THE OWNER IMMEDIATELY.	COMPLETE AND FUNCTIONING SYSTEM(S). 8. CONTRACTOR IS TO MAINTAIN POWER AND COMMUNICATION CIRCUITS IN AREAS OUTSIDE OF THE	property of Seguin Engineering Inc. Reproduction or use for any purpose other than that authorized by Seguin Engineering Inc. is forbidden.
7. THE CONTRACTOR SHALL PATCH, REPAIR AND RESTORE FIRE-SEPARATIONS AS REQUIRED FOR INSTALLATION OF ELECTRICAL RACEWAYS AND OUTLETS IN WALLS AND EXTERIOR WALLS.	CONSTRUCTION AREA. PROVIDE TEMPORARY CONNECTIONS AS REQUIRED, COORDINATE WITH OWNER. 9. EQUIPMENT BEING REMOVED AND NOT BEING REUSED DEMAIN THE PROPERTY OF THE OWNER AND IS TO BE	verify and be responsible for all dimensions. Any errors or omissions shall be reported to Seguin Engineering Inc.
8. THE CONTRACTOR SHALL SUBMIT QUESTIONS IN WRITING 5 DAYS PRIOR TO TENDER CLOSING TO ALLOW FOR QUESTIONS TO BE FORMALLY ANSWERED IN AN ADDENDUM.	STORED ON SITE. ANY EQUIPMENT THE OWNER DEEMS NO INTEREST IN IS TO BE DISPOSED OF IN A LAWFUL AND SAFE MANNER BY THIS TRADE.	© COPYRIGHT 2020 - Seguin Engineering Inc.
9. UNLESS EXISTING CIRCUITS NUMBERS ARE INDICATED ON THE DEMOLITION PLANS, ALL CIRCUITS SHOWN ON THE NEW LAYOUTS ARE NEW CIRCUITS. EXCEPTIONS TO	AND CEILING LAYOUTS TO VERIFY THAT NO INTERFERENCES EXIST PRIOR TO THE INSTALLATION OF FIXTURES AND DEVICES IN WALLS AND CEILINGS.	
PLAN AND AGAIN ON THE NEW LAYOUT. THE CIRCUIT SHOWN BOTH TIMES IS EXISTING AND LOCALIZED IN THE AREA OF WORK. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING FOR ALL NEW CIRCUITS: NEW	11. COORDINATE PENETRATION LOCATIONS WITH GENERAL CONTRACTOR FOR SCANNING OF MASONRY WALLS AND CONCRETE FLOORS.	
CONDUIT, WIRING, BREAKERS, SUPPORTS, BACKBOXES, FACEPLATES, RECEPTACLES, ETC FOR A COMPLETE SYSTEM.	DRAWING LIST	2 ISSUED FOR TENDER FEB
10. EXISTING CIRCUITS BEING REUSED WILL BE INDICATED BY A CIRCUIT NUMBER (IE 2A15) OR A GENERIC NUMBER (IE CCT7). CCT 7 INDICATES THAT THE	E000 GENERAL NOTES, DRAWING LIST, LEGEND AND FIXTURE SCHEDULE	1         RE-ISSUED FOR PERMIT         DEC 3, 2020         K.S.
LIGHTING OR DEVICE IS TO BE CONNECTED TO 1 OF 7 EXISTING CIRCUITS IN THE AREA THAT HAS BECOME FREE AFTER DEMOLITION. THE CONTRACTOR SHALL	E100 SITE PLAN E200 DEMOLITION LIGHTING – GROUND FLOOR AND	0ISSUED FOR PERMITNOV 6, 2020K.S.No.DESCRIPTIONDATEBY
PANEL LOADS AND SHOFFLE BREAKERS AFTER THE PANEL LOADS HAVE BEEN CONNECTED TO EQUALLY LOAD EACH PHASE.	E201 DEMOLITION LIGHTING - SERVICE CENTRE	REVISIONS
11. WHERE EXISTING LIGHTING CIRCUITS HAVE BEEN REUSED, CONTRACTOR SHALL VERIFY EXISTING VOLTAGE OF CIRCUITS PRIOR TO SUBMITTING ANY SHOP	E202 DEMOLITION LIGHTING - EAST GROUND FLOOR AND MEZZANINE	
DRAWINGS OR ORDERING OF FIXTURES, SENSORS, CONTROLS, ETC. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IN FIXTURE VOLTAGE AND EXISTING CIRCUIT, VOLTAGE	E300 REVISED LIGHTING – GROUND FLOOR AND MECHANICAL MEZZANINE	
	E301 REVISED LIGHTING - SERVICE CENTRE E302 REVISED LIGHTING - EAST GROUND FLOOR AND MEZZANINE	
FIRE ALARM 1. ALL NEW FIRE ALARM DEVICES SHALL BE INSTALLED IN	E400 DEMOLITION POWER & SYSTEMS – GROUND FLOOR AND MECHANICAL MEZZANINE	
ACCORDANCE WITH CAN/ULC S524. 2. FIRE ALARM DEVICES SHALL BE REVERIFIED IN	E401 DEMOLITION POWER & SYSTEMS - SERVICE CENTRE	
3. FIRE ALARM GRAPHIC SHALL BE UPDATED IN ALL LOCATIONS TO REFLECT THE UPDATED LAYOUT OF THE	E402 DEMOLITION POWER & SYSTEMS - EAST GROUND FLOOR AND MEZZANINE	
FIRE ALARM SYSTEM. 4. CONNECT ALL ASSOCIATED ALARM, SUPERVISORY ZONE WIRING, AND SIGNAL CIRCUIT WIRING ETC TO FIRE	E403 DEMOLITION POWER & SYSTEMS – WEST ROOF E404 DEMOLITION POWER & SYSTEMS – CENTRAL ROOF	
ALARM PANEL. 5. ALL WIRING TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE ONTARIO ELECTRICAL SAFETY CODE.	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	
TELEPHONE OUTLET IN CONDUIT C/W DATA	E501 REVISED POWER & SYSTEMS - SERVICE CENTRE	<b>Electrical Engineering</b> 12 Argyle Street N., Caledonia, ON. N3W 1B6
COMPUTER OUTLET IN CONDUIT C/W DATA CABLING (SEE SPECS) AND RJ45 OUTLET	E503 REVISED POWER & SYSTEMS - LAST GROUND E503 REVISED POWER & SYSTEMS - WEST POOF	www.sei-ee.com
COMBINATION TELEPHONE AND COMPUTER OUTLET IN CONDUIT C/W 2x DATA CABLING (SEE SPECS). 1x RJ45 AND 1x RJ11 OUTLETS	E504 REVISED POWER & SYSTEMS - CENTRAL ROOF E505 REVISED POWER & SYSTEMS - EAST ROOF	
(((ෆ)) WIRELESS ACCESS POINT BACKBOX, FACEPLATE, CONDUIT C/W DATA CABLING (SEE SPECS) AND RJ45 OUTLET	E506 REVISED POWER & SYSTEMS – MUNICIPAL TRUCK WASH AND SMALL ENGINE BUILDING	
COMMUNICATION DEVICES MOUNTED IN 2 CHANNEL RACEWAY	E600 DEMOLITION – SINGLE LINE DIAGRAM E601 NEW – SINGLE LINE DIAGRAM	SERVICE CENTRE
COMMUNICATION NOTES: NUMBER BESIDE THE OUTLET DENOTES NUMBER OF OUTLETS	E700 ELECTRICAL DETAILS E800 PANEL SCHEDULES	IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO
EMERGENCY LIGHTING AND EXIT SIGNS		
O OO     SURFACE MOUNTED EMERGENCY LIGHTING       FIXTURE		START DATE:DRAWN BY:DESIGNED BY:JULY 2020B.M.P.S.
		DRAWING TITLE:
BATTERY		GENERAL NOTES, LEGENDS
		DRAWING LIST, & SCHEDULE
DC V DC - DENOTES A SOURCE OF DC POWER		SCALE: DRAWING No.: NTS
$\frac{DC-x}{X-DC} = \frac{DC}{DC} = $		PROJECT: <b>E000</b>

3 KEYNOTE - SEE KEYNOTE No. 3 ON DRAWINGS 3 KEYNOTE – SEE KEYNOTE No. 3 ON DRAWINGS

![](_page_46_Figure_0.jpeg)

			GENERAL NC	DTES
	İ			
			Convright Reserved	
			All designs and drawings are copyrig property of Seguin Engineering Inc.	ghted and the Reproduction or use
			for any purpose other than that au Engineering Inc. is forbidden.	thorized by Seguin
			The drawing is not to be scaled. The verify and be responsible for all dim	ne Contractor shall nensions. Any errors
			or omissions shall be reported to S Inc.	eguin Engineering
			©COPYRIGHT 2020 - Seguin Engine	ering Inc.
			2 ISSUED FOR TENDER	FEB 26, 2021 K
			1 RE-ISSUED FOR PERMIT	3, 2020 K
			No. DESCRIPTION	6, 2020 CATE E
			REVISIO	NS
	1			NO
	1			
CONDARY NG				
Conduits				
NATURAL GAS LINE TO REMAIN.				
GAS GAS GAS GAS GAS GAS GAS	1		N	
PAD MOUNT TRANSFORMER (1)				
GENERATOR LOCATION.	1			
TE WITH STRUCTURAL.				
D DUCT BANK				
			Electrical Engi	neerina
			12 Argyle Street N., Caledonia	a, ON, N3W 1B6
			www.sei-ee.coi	
			PROJECT:	
				119
			SERVICE CEN	NTRE
			IMPROVEME	NTS
			3200 STANLEY AVE NIAGARA FALLS, ON	NUE, TARIO
			START DATE: DRAWN BY:	DESIGNED BY:
				۲.5.
			DRAWING HTLE:	
			SITE PLA	N
			00415	
			SCALE: DRAWII 1"=40'-0"	NG No.:
			PROJECT:	E100
			20-101	

![](_page_47_Figure_0.jpeg)

![](_page_48_Figure_0.jpeg)

ed ∠ ×

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..

	GEN	ERAL NOTE	ES
	KE	YPLAN	
	Copyright Reserved All designs and drawin	gs are copyrighte	d and the
	property of Seguin Eng for any purpose other Engineering Inc. is for The drawing is not to verify and be responsi or omissions shall be Inc.	gineering Inc. Rep than that author bidden. be scaled. The C ble for all dimens reported to Segui	roduction or use ized by Seguin ontractor shall ions. Any errors n Engineering
	© COPYRIGHT 2020 -	Seguin Engineerin	g Inc.
			FEB K C
	1 RE-ISSUED FOR		26, 2021 K.S. DEC 3, 2020 K.S.
	0 ISSUED FOR F	PERMIT	NOV 6, 2020 K.S.
	RE	V I S I O N I	S
		È	
	Electric 12 Argyle Street I wv	<b>Al Engine</b> N., Caledonia, O ww.sei-ee.com	ering N, N3W 1B6
	PROJECT: NIAC SERV IMPF 3200 S NIAGAR	GARA FALL (ICE CENT ROVEMENT STANLEY AVENUE RA FALLS, ONTAF	S RE S
	START DATE: DF	RAWN BY:	DESIGNED BY:
	JULY 2020 B.I	М.	P.S.
	DRAWING TITLE: DEMOLI SERV	ITION LIGH /ICE CENT	ITING RE
	SCALE:	DRAWING I	No.:
	AS NOTED PROJECT:	— E	201
	20-101		
I,     5"			

![](_page_49_Figure_0.jpeg)

ed

2 3 1 G EM-10 Existing Lunchroom 42 F EM-10 BU-1 EM-10 EM-10 E OBU-2 ΎМ Μä QQ PANEL B (D ЕМ-10 ⊠ B-410 BU-10 EM-10 С BU-20 IOBU-2 EM-10 В EM-10 BU-1PANEL A EM-10 PANEL E 00 BU−2 A EM-10 (2) 3 € В0-2 1 (1) GROUND FLOOR WEST PLAN - REVISED SCALE: 1/8"=1'-0"

![](_page_50_Figure_3.jpeg)

![](_page_51_Figure_0.jpeg)

ed Z× Z× н Т Т Т Т Т Т С

2 PROVIDE NEW DEDICATED 120V CIRCUIT FOR EMERGENCY BATTERY UNITS FROM EXISTING PANEL AND NEW 20A-1P BREAKER.

DRAWING NOTES:

**I** | | | | | | | | 15"

# 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.

3 PROVIDE ADDITIONAL EMERGENCY REMOTE HEAD ON UPPER GARAGE STORAGE. CONFIRM LOCATIONS PRIOR TO ROUGH-IN.

				GE	NER/	AL NOT	ſES	
				K	ζEΥF	PLAN		
		Copyrig All desi propert	ht Res gns c y of S	served and dro Seguin	awings au Engineer	re copyrigh ring Inc. Re	ited and the	e or use
		The dro verify a or omis Inc.	purp ring l wing nd be sions RIGHT	ose of nc. is is not respo shall	forbidder to be s onsible fo be repor	i mat auth n. scaled. The or all dime ted to Sec in Engineer	Contractor nsions. Any guin Enginee ring Inc.	shall errors ering
		2 1 0 No.	ISSU RE-I ISSU DES	JED FO SSUEI JED FO SCRIPT <b>R I</b>	DR TEND D FOR PI DR PERM TON E V I	ERMIT	FEB 26, 20 DEC 3, 202 NOV 6, 202 DATI	21 K.S. 0 K.S. 0 K.S. E BY
		4						
		12	Ele	e Stre	ical eet N., C www.se	Engin caledonia, ei-ee.com	eering on, n3w	1B6
		PROJE	CT:	NI SEI IM <sup>32</sup> NIA	AGAF RVICI PRO\ 00 STAN GARA FA	RA FAL E CEN /EMEN /EMEN ALLS, ONT/	LS TRE ITS <sup>UE,</sup> ARIO	
		START JULY 20 DRAWI	DATE 020 NG TI	TLE: RE\ SE	DRAWN B.M. /ISED RVICI	) LIGH <sup>-</sup> E CEN	DESIGNE P.S. TING TRE	D BY:
<u>].</u>		SCALE: AS NOT PROJEC 20-10	ED CT: <b>)1</b>			DRAWING	G No.: E301	
5″								С

![](_page_52_Figure_0.jpeg)

![](_page_52_Figure_3.jpeg)

![](_page_52_Figure_4.jpeg)

![](_page_53_Figure_0.jpeg)

![](_page_54_Figure_0.jpeg)

![](_page_54_Figure_2.jpeg)

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	6
	KEYPLAN	
	<b>Copyright Reserved</b> All designs and drawings are copyrighted property of Seguin Engineering Inc. Reproc for any purpose other than that authorize Engineering Inc. is forbidden.	and the duction or use ad by Seguin
	The drawing is not to be scaled. The Con verify and be responsible for all dimensior or omissions shall be reported to Seguin Inc	tractor shall is. Any errors Engineering
	© COPYRIGHT 2020 - Seguin Engineering I	nc.
		FEB K O
	2     ISSUED FOR TENDER       1     RE-ISSUED FOR PERMIT	26, 2021 K.S. DEC 3, 2020 K.S.
	0 ISSUED FOR PERMIT	NOV 6, 2020 K.S.
	No. DESCRIPTION	DATE BY
	REVISIONS	5
	ControlContr	ering N3W 1B6
	PROJECT: NIAGARA FALLS SERVICE CENTR IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIC	5 E S
	START DATE: DRAWN BY: DE	ESIGNED BY:
	JULY 2020 B.M. P.	S.
	DRAWING TITLE: DEMOLITION POWE SYSTEMS SERVICE CENTR	ER &
	AS NOTED	
	PROJECT: <b>E</b> 4	+U'I
5"	· · · ·	Ö

![](_page_55_Figure_0.jpeg)

ed

![](_page_56_Figure_0.jpeg)

## GENERAL NOTES

RION BOXES	YLAN
Copyright Reserved All designs and drawings are property of Seguin Engineerin for any purpose other than Engineering Inc. is forbidden. The drawing is not to be so verify and be responsible for or omissions shall be report Inc.	e copyrighted and the ing Inc. Reproduction or use that authorized by Seguin caled. The Contractor shall r all dimensions. Any errors ted to Seguin Engineering
2 ISSUED FOR TENDE	ER FEB 26, 2021 K.S.
1   RE-ISSUED FOR PE     0   ISSUED FOR PERMI	RMIT         DLO 3, 2020         K.S.           IT         NOV 6 2020         K.S.
No. DESCRIPTION	DATE BY
Electrical E         12 Argyle Street N., Ca         www.se	Engineering Aledonia, ON, N3W 1B6 ai-ee.com
PROJECT:	
NIAGAR	A FALLS CENTRE EMENTS
SERVICE IMPROV 3200 STANL NIAGARA FAI	LLS, ONTARIO
SERVICE IMPROV 3200 STANL NIAGARA FAI START DATE: DRAWN	BY: DESIGNED BY:
SERVICE IMPROV 3200 STANL NIAGARA FAI START DATE: DRAWN JULY 2020 B.M. DRAWING TITLE:	BY: DESIGNED BY: P.S.
SERVICE IMPROV 3200 STANL NIAGARA FAI START DATE: DRAWN JULY 2020 B.M. DRAWING TITLE: DEMOLITIO SYSTEMS V	BY: DESIGNED BY: P.S. DN POWER & VEST ROOF
START DATE: DRAWN JULY 2020 B.M. DRAWING TITLE: DEMOLITIO SYSTEMS V	BY: DESIGNED BY: P.S. DN POWER & VEST ROOF
START DATE: DRAWN JULY 2020 B.M. DRAWING TITLE: DEMOLITIO SYSTEMS V SCALE: AS NOTED PROJECT:	BY: DESIGNED BY: P.S. PN POWER & VEST ROOF DRAWING No.: E403

1 EXISTING MECHANICAL UNIT TO BE REMOVED. DEMOLISH ALL WIRE, CONDUIT AND JUNCTI BACK TO SOURCE PANEL/DISCONNECT.

![](_page_57_Figure_0.jpeg)

		OLIVEINOTEO
ND JUNCTION BOXES		KEYPI AN
		Copyright Reserved
		property of Seguin Engineering Inc. Reproduction or us for any purpose other than that authorized by Seguin
		Engineering Inc. is forbidden.
		verify and be responsible for all dimensions. Any errors or omissions shall be reported to Sequin Engineering
		© COPTRIGHT 2020 - Seguin Engineering Inc.
		2 ISSUED FOR TENDER FEB 26, 2021 K
		1 RE-ISSUED FOR PERMIT DEC 3, 2020 K
		0 ISSUED FOR PERMIT ROV 6, 2020 K
		No. DESCRIPTION DATE E
		REVISIONS
		<section-header><section-header><section-header></section-header></section-header></section-header>
		PROJECT: NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
		Intervention of the second design of the second des
		Image: Start Date:       Drawn By:       Designed by:         JULY 2020       B.M.       P.S.
		Image: Strart Date:       Drawing Title:
		Image: Start Date:       Drawing Title:         Drawing Title:       DEMOLITION POWER &
		Image: Start Date:       Drawing Title:         Drawing Title:       DEMOLITION POWER & SYSTEMS
		Image: Constraint of the system is a constraint of the system is
		<image/> Start Date:       Drawing title:         Start Date:       Drawing title:         Drawing title:       Designed by:         Designed by:       Designed by:
		Start Date:       DRAWING TITLE:         Drawing Title:       DEMOLITION POWER & SYSTEMS CENTRAL ROOF         Scale:       As NOTEF
		Start Date:       DRAWING TITLE:         JULY 2020       B.M.       P.S.         DRAWING TITLE:       DEMOLITION POWER & SYSTEMS CENTRAL ROOF         Scale:       AS NOTEF       DRAWING No.:         PROJECT:       DRAWING No.:

![](_page_58_Figure_0.jpeg)

![](_page_58_Figure_2.jpeg)

DRAWING NOTES:

	GENERAL N	IOTES					
	KEYPL <i>i</i>	AN					
	Copyright Reserved	wighted and the					
	All designs and drawings are cop property of Seguin Engineering In for any purpose other than that	pyrighted and the c. Reproduction or use authorized by Seguin					
	Engineering Inc. is forbidden.	The Contractor shall					
	verify and be responsible for all or omissions shall be reported to	dimensions. Any errors o Seguin Engineering					
	oc COPYRIGHT 2020 - Seguin Eng	ineering Inc.					
	2 ISSUED FOR TENDER	FEB K.S.					
	1 RE-ISSUED FOR PERMIT	- <u>DEC</u> 3 2020 K.S.					
	0 ISSUED FOR PERMIT	NOV 6, 2020 K.S.					
	No. DESCRIPTION	DATE BY					
	REVISI	ONS					
	<b>I</b>						
	Electrical Eng	<b>Dia ON NAM 4DC</b>					
	r∠ Argyle Street N., Caledo WWW.sei-ee.	com					
	PROJECT:						
	NIAGARA F	ALLS					
		ENTRE					
	IMPROVEMENTS 3200 STANLEY AVENUE.						
	NIAGARA FALLS,	ONTARIO					
	START DATE: DRAWN BY	DESIGNED BY					
	JULY 2020 B.M.	P.S.					
	DRAWING TITLE:	I					
	DEMOLITION F	POWER &					
	SYSTE	MS DOF					
	LASIRU						
	SCALE: DRA	WING No.:					
	AS NOTED	F405					
	20-101						
5"	· · · ·	Ö					

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

![](_page_59_Figure_0.jpeg)

Ð

	GENERAL NOTES
DRAWING NOTES: (1) EXISTING FIRE ALARM DEVICES TO BE REMOVED IN TRUCK WASH BUILDING FOR NEW SYSTEM UPGRADES. REFER TO NEW POWER PLANS. (4)	
	KEYPLAN KEYPLAN
3	© COPYRIGHT 2020 - Seguin Engineering Inc.
-2	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.       No.     DESCRIPTION     DATE     BY <b>REVISIONS</b>
	<section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header>
	NIAGARA FALLS         SERVICE CENTRE         IMPROVEMENTS         3200 STANLEY AVENUE,         NIAGARA FALLS, ONTARIO         START DATE:       DRAWN BY:         DESIGNED BY:         UNINCE DESIGNED BY:
-1	JULY 2020     B.M.     P.S.       DRAWING TITLE:     DEMOLITION POWER &       SYSTEMS MUNICIPAL       TRUCK WASH AND SMALL       ENGINE BUILDING
	AS NOTED PROJECT: 20-101 E406

![](_page_60_Figure_0.jpeg)

![](_page_61_Figure_0.jpeg)

of

![](_page_61_Figure_2.jpeg)

# INSTRUCTIONS FOR POWER AND CONTROL WIRING TO ALI SUPPLIED. CONFIRM EQUIPMENT DISCONNECT LOCATIONS

- DRAWING NOTES: 1 NEW ELECTRIC MOTOR DRIVEN EXHAUST HOSE REEL SUF AND WIRED BY ELECTRICAL CONTRACTOR. INSTALL AS P
- B COORDINATE WITH MECHANICAL FOR EQUIPMENT REQUIRING LOCAL POWER DISCONNECT. ELECTRICAL CONTRACTOR TO PROVIDE IF NOT INCLUDED WITH NEW MECHANICAL UNIT.

15" I

	GENERAL NOTES
GENERAL NOTES: 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	KEYPLAN
<ul> <li>DRAWING NOTES:</li> <li>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.</li> <li>2 NEW CO/NO2 SENSORS BY MECHANICAL DIVISION. PROVIDE DEDICATED 120V CIRCUIT AND 15A-1P BREAKER.</li> </ul>	
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. A PROVIDE NEW DATA OUTLETS IN MECHANICS BAY, CONFIRM LOCATIONS WITH OWNER PRIOR	
<ul> <li>FROVIDE NEW BELDING RECEPTACLE MOUNTED TO EXISTING COLUMN. CONFIRM LOCATION WITH OWNER PRIOR TO ROUGH-IN. PROVIDE NEW 50A-2P BREAKER IN EXISTING PANEL.</li> <li>PROVIDE DEDICATED 120V CIRCUIT TO NEW EXHAUST FAN FROM NEW 15A-1P BREAKER IN EXISTING PANEL</li> </ul>	
<ul> <li>EXISTING PANEL.</li> <li>PROVIDE DEDICATED 208V CIRCUIT TO NEW ELECTRIC UNIT HEATER FROM NEW 30A-2P BREAKER IN EXISTING PANEL.</li> </ul>	Copyright Reserved All designs and drawings are copyrighted and property of Seguin Engineering Inc. Reproduc for any purpose other than that authorized Engineering Inc. is forbidden. The drawing is not to be scaled. The Contra verify and be responsible for all dimensions. or omissions shall be reported to Seguin Eng Inc. © COPYRIGHT 2020 – Seguin Engineering Inc.
	2 ISSUED FOR TENDER FE
	0     ISSUED FOR PERMIT     3,       0     ISSUED FOR PERMIT     No.       No.     DESCRIPTION     I       REVISIONS
	Image: Constraint of the second state of the second sta
	PROJECT: NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO
	START DATE: DRAWN BY: DESI
	DRAWING TITLE: REVISED POWER & SYSTEMS SERVICE CENTRE
	SCALE: DRAWING No.:
	PROJECT: E50

		(EYPL	AN		
opyrig l des opert or any nginee r any c r omi c. COPY	ht Reserved igns and dr y of Seguin purpose of ering Inc. is awing is not and be resp ssions shall RIGHT 2020	awings are o Engineering ther than th forbidden. to be scale onsible for o be reported	copyrighted Inc. Repr at author ed. The Ca all dimensi to Seguin	d and the oduction or ized by Segu ontractor sh ons. Any er n Engineering g Inc.	use Jin all rors g
2 1 0 No.	ISSUED FO RE-ISSUED ISSUED FO DESCRIPT	OR TENDER D FOR PERM OR PERMIT	ЛІТ	FEB 26, 2021 DEC 3, 2020 NOV 6, 2020 DATE	K.S. K.S. K.S. BY
4	R	EVIS	ION	S	
12	Electr Argyle Stree	ical El eet N., Cale www.sei-e	<b>B</b> <b>B</b> <b>B</b> <b>B</b> <b>B</b> <b>B</b> <b>B</b> <b>B</b> <b>C</b> <b>C</b> <b>C</b> <b>C</b> <b>C</b> <b>C</b> <b>C</b> <b>C</b> <b>C</b> <b>C</b>	ering N, N3W 1B	6
ROJE	CT: NI SEI	AGARA RVICE ( PROVE	FALL CENTI MENT	S RE 'S	
TART	32 NIA DATE: 020	DRAWN BY	Y AVENUE S, ONTAR /:	DESIGNED F P.S.	3Y:
<b>ΚΑ</b> ΥVΙ	RE\ SE	/ISED F SYSTI RVICE (	POWEI EMS CENTI	₹ & ₹E	

E501

![](_page_62_Figure_0.jpeg)

![](_page_63_Figure_0.jpeg)

	GE	ENER/	AL NO	DTES	<b>)</b>	
	-			<u>}</u>		
	k	(F Y F		N		
	1			1 1		
Copyrig	ht Reserved			*		
for any Engine	igns and ard y of Seguin y purpose of erina Inc. is	awings ai Engineei ther than forbiddei	re copyr ring Inc. that au	Reprod uthorize	uction or d by Seg	use uin
The dro verify o	awing is not and be resp	to be s onsible fo	caled. T or all dir	he Cont mension	tractor sh s. Any er	all rors
or omi Inc.	ssions shall	be repor	ted to s	Seguin (	Engineerin	g
		- Segu		eening in		
2	ISSUED FO	OR TEND	ER		FEB 26, 2021	K.S.
1	RE-ISSUEI		ERMIT		DEC 3, 2020 NOV	K.S.
0 No.	DESCRIPT		11T		6, 2020 DATE	K.S. BY
	RI	EVI	SIC	) N S	5	
4						
12	Electr Argyle Stre	ical eet N., C www.se	Engi aledoni ei-ee.co	inee ia, ON, om	ring N3W 1B	6
PROJE	CT:		ר <i>ב</i> י			
	SEI	RVICI		NTR	Ξ	
	IM 32	PRO	/EME	ENTS		
	NIA	GARA FA	ALLS, ON	NTARÍO		
START	DATE:		I BY:	DE	SIGNED	BY:
DRAWI	NG TITLE:	ם.ועו.		P.8	J.	
	REV	/ISED		VER	&	
	,	SYS WES	ΓRO	S OF		
8041-						
AS NOT	FED				503	
PROJE 20-1	ст: 01	_		L		
1						

![](_page_64_Figure_0.jpeg)

![](_page_64_Figure_2.jpeg)

		01		
		ŀ	KEYPLAN	
			1	
	Co	pyright Reserved I designs and dr	awings are copyright Engineering too Po	ted and the production or use
	for En	r any purpose o igineering Inc. is	ther than that author forbidden.	prized by Seguin
	Th ve	e drawing is no rify and be resp	t to be scaled. The consible for all dimen	Contractor shall isions. Any errors
	or	omissions shall c.	be reported to Seg	uin Engineering
	C	COPYRIGHT 2020	) — Seguin Engineeri	ng Inc.
		2 ISSUED F		EB 26, 2021 K.S DFC
			U FOR PERMIT	3, 2020 K.S NOV K.S
	N	lo. DESCRIP		6, 2020 R.S DATE BY
		R	FVISION	NS
		Election 12 Argyle Structure	Contraction of the second seco	eering ON, N3W 1B6
		Election 12 Argyle Street	tical Engine www.sei-ee.com	eering ON, N3W 1B6
	PF	Election 12 Argyle Structure	tical Engine www.sei-ee.com	eering ON, N3W 1B6
	PF	COJECT:	AGARA FAL	eering on, N3W 1B6
	PF	COJECT: NI SE IM	AGARA FAL RVICE CENT PROVEMEN	LS TRE TS
	PF	ROJECT: NI SE IM 33	AGARA FAL RVICE CENT PROVEMEN	LS RE TS JE, O
	PF	ROJECT: NI SE IM 32 NI A	AGARA FAL RVICE CENT PROVEMEN 200 STANLEY AVENU GARA FALLS, ONTA	eering on, N3W 1B6
	PF	ROJECT: NI SE IM 32 NI ART DATE:	AGARA FAL PROVEMEN 200 STANLEY AVENU CONSTANLEY AVENU CONSTANLEY AVENU CONSTANLEY AVENU CONSTANLEY AVENU	DESIGNED BY:
	PF	ROJECT: NI SE IM 32 NI ART DATE: LY 2020	AGARA FAL RVICE CENT PROVEMEN 200 STANLEY AVENU GARA FALLS, ONTA	eering ON, N3W 1B6
	PF JU DF	ROJECT: NI SE ID ROJECT: NI SE IM 33 NI A ROJECT: NI SE IM 33 NI A ROJECT: NI SE IM 31 NI A ROJECT: NI SE NI SE NI NI SE NI SE NI SE NI SE NI SE NI SE NI SE NI SE NI SE SE SE NI SE SE SE SE SE SE SE SE SE SE SE SE SE	AGARA FAL PROVEMEN PROVEMEN 200 STANLEY AVENU CONSTANLEY AVENU	ESIGNED BY: P.S.
	PF JU DF	ROJECT: NI SE IM 33 NI ART DATE: LY 2020 RAWING TITLE: REV C	AGARA FAL WWW.sei-ee.com	eering ON, N3W 1B6
	PF JU DF	ROJECT: NI SE ID ROJECT: NI SE IM 3 NI ART DATE: LY 2020 RAWING TITLE: REV C	AGARA FAL PROVEMEN Constantey Avenue AGARA FALLS, ONTA DRAWN BY: B.M. DRAWN BY: B.M.	Eering ON, N3W 1B6
	PF JU DF	ROJECT: ART DATE: LY 2020 RAWING TITLE: REV C CALE: S NOTED	AGARA FAL vww.sei-ee.com	DESIGNED BY: P.S. ER & OF
	PF ST JU DF SC AS PR	ROJECT: ROJECT: ROJECT: ROJECT: ROJECT: REV C C C C C C C C C C C C C	AGARA FAL PROVEMEN Constantey Avenue AGARA FALLS, ONTA DRAWN BY: B.M. VISED POWE SYSTEMS ENTRAL ROO	DESIGNED BY: P.S. ESO4

![](_page_65_Figure_0.jpeg)

![](_page_65_Figure_2.jpeg)

**|** 10**"** 

 PROVIDE DEDICATED POWER CIRCUIT TO NEW CARB MECHANICAL DIVISION.
 PROVIDE DEDICATED POWER CIRCUIT TO NEW HVAC MECHANICAL DIVISION.
 PROVIDE DEDICATED POWER CIRCUIT TO NEW EXHAM MECHANICAL DIVISION.

DRAWING NOTES:

ON FILTER UNIT PROVIDED BY	KEYPLAN
UNIT PROVIDED BY	
JST FAN PROVIDED BY	
	Copyright Reserved All designs and drawings are copyrighted and the
	property of Seguin Engineering Inc. Reproduction or use for any purpose other than that authorized by Seguin Engineering Inc. is forbidden.
	The drawing is not to be scaled. The Contractor shall verify and be responsible for all dimensions. Any errors
	or omissions shall be reported to Seguin Engineering Inc.
	© COPYRIGHT 2020 — Seguin Engineering Inc.
	2 ISSUED FOR TENDER FEB KS
	1         RE-ISSUED FOR PERMIT         DEC 3. 2020         K.S.
	0 ISSUED FOR PERMIT NOV 6, 2020 K.S.
	No. DESCRIPTION DATE BY
	REVISIONS
	REVISIONS     Image: Constraint of the second state of the second st
	REVISIONS
	REVISIONS
	REVISIONS
	REVISIONS
	REVISIONS IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
	REVISIONS
	REVISIONS

![](_page_66_Figure_0.jpeg)

![](_page_66_Figure_1.jpeg)

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

				GEN	ERAL NOTE	ES	
	DRAWING NOTES: PROVIDE DEDICATED FIRE ALARM ZONE FO EXISTING TRUCK WASH AND SMALL ENGINE BUILDING. CONNECT ZONE TO FIRE PANEL SERVICE CENTER FUNDING	DR E IN					
4	SERIVICE CENTRE BUILDING.			KE	L_} EYPLAN		
				Copyright Reserved All designs and drawin property of Seguin En for any purpose other Engineering Inc. is for	ngs are copyrighte ngineering Inc. Rep r than that author rbidden.	d and the roduction or rized by Segu	use uin
3				The drawing is not to verify and be respons or omissions shall be Inc. © COPYRIGHT 2020 -	b be scaled. The C ible for all dimens reported to Segu Seguin Engineerin	Contractor sh ions. Any er in Engineerin g Inc.	aall rors g
				2 ISSUED FOR 1 RE-ISSUED F 0 ISSUED FOR No. DESCRIPTION RE	TENDER OR PERMIT PERMIT N VISION	FEB 26, 2021 DEC 3, 2020 NOV 6, 2020 DATE S	K.S. K.S. K.S. BY
2				Electric 12 Argyle Street W	A Caledonia, C ww.sei-ee.com	ering N, N3W 1B	6
				PROJECT: NIA( SER) IMPF 3200 NIAGA	GARA FALL VICE CENT ROVEMENT STANLEY AVENU RA FALLS, ONTAF	S RE IS	
				START DATE: DI JULY 2020 B. DRAWING TITLE: REVIS SYSTE TRUCK V ENGI	RAWN BY: .M. SED POWE MS MUNIC VASH AND INE BUILDI	DESIGNED I P.S. R & IPAL SMALL NG	BY:
				SCALE: AS NOTED PROJECT: 20-101	DRAWING	No.: <b>506</b>	

![](_page_67_Figure_0.jpeg)

![](_page_67_Figure_2.jpeg)

GENERAL NOTES
EXISTING MAIN SERVICE ENTRANCE DISCONNECT SWITC AND UTILITY METERING TO BE REMOVED FOR NEW ELECTRICAL SERVICE UPOPADE
ELECTRICAL SERVICE UPGRADE.
SWITCH, ETC.) TO BE REMOVED FOR GENERATOR UPGRADES.
Copyright Reserved All designs and drawings are copyrighted and the
property of Seguin Engineering Inc. Reproduction or use for any purpose other than that authorized by Seguin Engineering Inc. is forbidden. The drawing is not to be scaled. The Contractor shall verify and be responsible for all dimensions. Any errors
or omissions shall be reported to Seguin Engineering Inc. © COPYRIGHT 2020 — Seguin Engineering Inc.
2     ISSUED FOR TENDER     FEB 26, 2021     K.S       1     RE-ISSUED FOR PERMIT     DEC 3, 2020     K.S
0     ISSUED FOR PERMIT     ISSUED FOR PERMIT <td< th=""></td<>
<b>Electrical Engineering</b> 12 Argyle Street N., Caledonia, ON, N3W 1B6 www.sei-ee.com
PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO
START DATE:DRAWN BY:DESIGNED BY:JULY 2020B.M.P.S.DRAWING TITLE:
DEMOLITION SINGLE LINE DIAGRAM
SCALE: DRAWING No.:

![](_page_68_Figure_0.jpeg)

File: X:\Projects\2020\20-101 City of Nigara Falls-Municipal Service Centre\_ARC\E\20-101 E601 NEW SL February 26, 2021 – 01:01pm Plotted by: Breanna

WIRE	AND CONDUIT SCHEDULE	
TYPE	DESCRIPTION	RATING
1	2 PARALLEL RUNS OF 4C#350 MCM CU RWU90 + 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

70A SPLITTER (GEN. RM)
30A DISC. SW.
5 HP A/C COMPRESSOR

GENERAL NOTES	

1) PR F0 FL	OVIDE SHORT CIRCUIT R ENTIRE DISTRIBUTIO ASH HAZARD ANALYS	AND COORDIN N SYSTEM COM S AND LABELS	ATION STU PLETE WIT	DY H ARC
2 FU PR PR IN:	EL TANK PROJECT BY OJECT #190812). ELE OVIDE AND CONNECT STALLED BY OTHERS.	OTHERS (HALL CTRICAL CONTR POWER WIRING OTHERS TO M	EX ENGINI ACTOR TO TO EQUIP OUNT PAN	EERING MENT IELS
AN 3 NE ME	D CONNECT FIELD SIE	METER SUPPLIE		
	ANSDUCERS (CVT) TO	SUPPLIED CURI NEW ECOMMS	RICAL RENT/VOL <sup>-</sup> METER AN AND DIGIT	TAGE ID ALLY
CC AS INS	MUNICATE POWER V WIRING INSTRUCTION STALLATION MANUAL.	ALUES TO THE S AS INDICATED	METER. IN ) IN	STALL
4 PR TO	OVIDE NEW INTEGRAL	SURGE PROTEC JTIONS# TK-ST	TIVE DEVI 160-3Y60	CE, 0 (OR
AF	PROVED EQUAL)			
Copyri All des	ght Reserved signs and drawings ar	e copyrighted	and the	
proper for an Engine	ty of Seguin Engineer y purpose other than ering Inc. is forbidder	ing Inc. Reproc that authorize 1.	luction or ed by Segu	use uin
The dr verify	rawing is not to be s and be responsible for	caled. The Con or all dimension	tractor sh is. Any er Engineerin	all rors
	YRIGHT 2020 - Seaui	n Engineering I	nc.	y
	_			
2		FR	FEB	ĸs
1	RE-ISSUED FOR PE		26, 2021 DEC 3, 2020	K.S.
0	ISSUED FOR PERM	IIT	NOV 6, 2020	K.S.
No.				BY
		E		
	Electrical	Enginee	ring	
12	Argyle Street N., C www.se	aledonia, ON, ei-ee.com	N3W 1B	6
PROJE	ECT:			
	NIAGAF	RA FALLS	)	
	SERVICE		E	
	IMPROV 3200 STAN	LEY AVENUE,	>	
	NIAGARA FA	LLS, ONTARIO	1	
START	DATE: DRAWN	BY: DE	SIGNED I	BY:
JULY 2	B.M.	P.5	S	
DRAW	ING IIILE:			
	N SINGLE LIN		RAM	
SCALE NTS	::	DRAWING No.	.:	
SCALE NTS PROJE	:: :CT:			

**5**"

# 3 FIRE ALARM RISER DIAGRAM

![](_page_69_Figure_2.jpeg)

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

# 1 TYPICAL MOUNTING HEIGHTS/INSTALLATION DETAIL E700 SCALE: NTS

F. ALL BREACHES IN WALLS ARE TO BE FIRESTOPPED TO MAINTAIN THE FIRE SEPARATIONS.G. PROVIDE SUPPORTS FOR ALL CEILING MOUNTED ELEMENTS (IE CHAIN HANGERS FOR FIXTURES ETC.) DEVICES SHALL NOT BE SUPPORTED BY A CEILING TILE.

- E. CONDUITS ARE TO HAVE PULL ROPES INSTALLED AND LEFT BEHIND TO ALLOW THE PULLING OF ADDITIONAL SERVICES IN THE FUTURE.
- CONDUITS WITH OTHER SERVICES IN CLOSE PROXIMITY.
- C. ALL CONDUITS FOR LOW VOLTAGE CABLING AND WIRING SHALL HAVE BUSHINGS INSTALLED TO PREVENT CHAFFING OF WIRE(S). D. 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
- B. CONDUIT SHALL BE PROVIDED IN ALL CASES UNLESS DENOTED AS BX OR AS ALLOWED IN THE SPECIFICATIONS.
- A. DETAIL IS APPLICABLE FOR DEVICES SHOWN ON PLANS. ALL THE DEVICES INDICATED IN THE DETAIL MAY NOT OCCUR ON THE PLANS.

### DETAIL NOTES:

![](_page_69_Figure_12.jpeg)

![](_page_69_Figure_14.jpeg)

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

B. JUNCTION BOXES ARE TO BE LOCATED CLOSE TO FIXTURES. PROVIDE P-TOUCH TYPE LABEL ON COVER PLATE WITH CIRCUIT NUMBER.

DETAIL NOTES: A. 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.

![](_page_69_Figure_18.jpeg)

	Copyright Reserved         All designs and drawings are property of Seguin Engineerir for any purpose other than Engineering Inc. is forbidden.         The drawing is not to be sc verify and be responsible for or omissions shall be reported Inc.         © COPYRIGHT 2020 – Seguin	e copyrighted and the ng Inc. Reproduction or use that authorized by Seguin aled. The Contractor shall all dimensions. Any errors ed to Seguin Engineering
	2 ISSUED FOR TENDE	E FEB KS
	1 RE-ISSUED FOR PER	Z6, 2021         RUS.           RMIT         DEC 3, 2020         K.S.
	0 ISSUED FOR PERMI	Г NOV 6, 2020 К.S.
	REVIS	SIONS
CAT 6 CABLE TO NEAREST POE+ SWITCH LOCATION	<b>Electrical E</b> 12 Argyle Street N., Ca www.sei	<b>Engineering</b> Iedonia, ON, N3W 1B6 Jee.com
EGRESS	PROJECT: NIAGAR SERVICE IMPROV 3200 STANL NIAGARA FAL	A FALLS CENTRE EMENTS EY AVENUE, LS, ONTARIO
	START DATE: DRAWN JULY 2020 B.M. DRAWING TITLE:	BY: DESIGNED BY: P.S.
	ELECTRICA	AL DETAILS
OR DETAIL	SCALE: NTS PROJECT: 20-101	DRAWING No.: <b>E700</b>

**GENERAL NOTES** 

120 LOAD

600/3	34/ VOLTS			I,   )	)   }	)		200 AMP MAIN BRE	AKER
LOAD	DESCRIPTION	CCT		Í	ĺ	•	CCT	DESCRIPTION	LOAD
	MAKE UP AIR MUA-G/E	1	20A			20A	2	AIR HANDLER AHU-ST	
		3					4		
		5			_		6		
	CONDENSING UNIT CU-ST	7	<u> 20A</u>	┢─┤		20A	8	RETURN FAN RE-ST	
		9	╞╬╴	┝		-슈-	10		
		11			-	<u> </u>	12		
	CONDENSING CU-GE	13		┥┤	_	<u>-207</u>	14	CONDENSING UNIT CU-0/M	
		15	╞╦╴	┝		-슈-	16		
		17		$\left  \right $	-		18		
	AIR HANDLER AHU-SW	19	$F^{-}$	┥┤			20	AIR HANDLER AHU-S/C	
		21	Fî-	┼╴╋			22		
	SUPPLY FAN SE-SW	25	20A		-	20A	27	SUPPLY FAN	
		27	۲ <sub>ـ</sub> ـــــــــــــــــــــــــــــــــــ			Ĺ,	28		
		29	٦_			_ب_	30		
	CONDENSING UNIT	31	1 <u>5</u> A			1 <u>5</u> A	32	CONDENSING UNIT	
	CU-S/W	33	[上]				34	CU-S/C	
		35					36		
	SPARE	37	<u>15</u>			<u>15</u> A	38	OUTSIDE AIR FAN	
		39	Ŀ <u></u>			<u>_</u>	40	EF-SMR	
		41	╘┿╴		_	<u></u>	42		
	SPARE	43		$\downarrow$		<u>15A</u>	44	SPARE	
		45	╞╬╴	┝			46		
		47			-	<u> </u>	48		
	SPARE	49	<u> 204</u>	┥┤		20A	50	SPARE	
		51	╞╦╴	┼╺┝		-^-	52		
		53		$\left  \right $	-	- 604	54		
	SPARE	55		┥┤	_	$-\widetilde{1}$	56	SPLITTER TRANSFORMER	
		57	╞╦╴	┼╴┥		-^-	50		
		109	└──			<u> </u>	60		

-207	200 10213		ļ	)-	)	)			
LOAD	DESCRIPTION	CCT					CCT	DESCRIPTION	LOAD
	LIGHTING - NEW PENTHOUSE	1	<u>204</u>			20A	2	UNIT HEATER UH-ST	
	LIGHTING – STORES MEZZANINE	3	<u> 204</u>			$\lfloor \perp \rfloor$	4		
	LIGHTING - STORES	5	<u> 20A</u>			<u>50</u> A	6	SPLIT SYSTEM OUTDOOR UNIT HP-E	
	LIGHTING – ENVIRO. MEZZANINE	7	<u>20</u> A			L+_	8		
	LIGHTING - ENVIRO SHOP	9	<u>20</u> A				10		
	PARTS COUNTER RECEPTACLES	11	1 <u>5</u> A			1 <u>5</u> A	12	MOTORIZED DAMPERS	
	PARTS COUNTER RECEPTACLES	13	<u>15</u>			1 <u>5</u> A	14	ENVIRO SHOP FRIDGE	
	PARTS COUNTER RECEPTACLES	15	1 <u>5</u> A			1 <u>5</u> A	16	ENVIRO SHOP RECEPTACLE	
	MECH PENTHOUSE RECEPTACLES	17	1 <u>5</u> A			1 <u>5</u> A	18	ENVIRO SHOP RECEPTACLE	
	MECH ROOM RECEPTACLES	19	<u>15</u>			1 <u>5</u> A	20	SPARE	
	MECH ROOM WATER HEATER	21	1 <u>5</u> A			1 <u>5</u> A	22	SPARE	
	BAS PANEL	23	1 <u>5</u> A			1 <u>5</u> A	24	SPARE	
	SPARE	25	<u>15</u>			1 <u>5</u> A	26	SPARE	
	SPARE	27	1 <u>5</u> A			1 <u>5</u> A	28	SPARE	
	SPARE	29	1 <u>5</u> A			1 <u>5</u> A	30	SPARE	
	SPARE	31	<u> 154</u>			1 <u>5</u> A	32	SPARE	
	SPARE	33	[ <u>15</u> A			1 <u>5</u> A	34	SPARE	
	SPARE	35	[ <u>15</u> A			1 <u>5</u> A	36	SPARE	
	-	37	<u> 154</u>			1 <u>5</u> A	38	-	
	-	39	[ <u>15</u> A			1 <u>5</u> A	40	-	
	-	41	[ <u>15</u> A			20A	42	EMERGENCY LIGHTING	

PANEL LOCATION: NEW MECHANICAL MEZZANINE

120/	208 VOLTS							60 AMP MAIN BREAK	≺ER
LOAD	DESCRIPTION	CCT		Í	Ĺ	Í	CCT	DESCRIPTION	OAD
	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-O/M	5	[ <u>15</u> A				6		
	CARBON FILTER CF-MR	7	15A			2 <u>0</u> A	8	EXHAUST FAN EF-S/W	
	SERVER RECEPTACLES	9	20A			1 <u>5</u> A	10	EXHAUST FAN EF-S/C	
	MECH. ROOM RECEPTACLE	11	[ <u>15</u> A			20A	12	EXHAUST FAN EF-WR	
	SPARE	13	15A			[ <u>15</u> A	14	MOTORIZED DAMPERS	
	SPARE	15	<u>15</u> A			1 <u>5</u> A	16	SPARE	
	SPARE	17	<u>15</u> A			1 <u>5</u> A	18	SPARE	
	SPARE	19	15A			[ <u>15</u> A	20	SPARE	
	SPARE	21	15A			1 <u>5</u> A	22	SPARE	
	SPARE	23	[ <u>15</u> A			1 <u>5</u> A	24	SPARE	
	_	25	15A			[15A	26	-	
	_	27	15A			1 <u>5</u> A	28	-	
	_	29	[ <u>15</u> A			1 <u>5</u> A	30	-	
	SURFACE FLUSH PANEL LOCATION: NEW MECH ROOM		-	- '					

DESCRIPTION       Oth       DESCRIPTION       Oth         ROOFTOP RECEPTACLE       1       20A       15A       2       CARBON FILTER UNIT CF-0/N         ROOFTOP RECEPTACLE       3       20A       15A       4       CARBON FILTER UNIT CF-0/N         GENERATOR SHORE POWER       5       20A       15A       6       EXHAUST FAN EF-CR         BAS PANEL       7       15A       15A       6       EXHAUST FAN EF-CR         SPARE       9       15A       15A       10       TO EXISTING PHONE SYSTEM         SPARE       11       15A       15A       15A       12       TO EXISTING PHONE SYSTEM         SPARE       11       15A       15A       15A       15A       15A       14       TO EXISTING PHONE SYSTEM         SPARE       11       15A       15A       15A       15A       16       SPARE         SPARE       17       15A       15A       15A       15A       15A       15A       15A         SPARE       17       15A       15A       15A       20       SPARE       15A         -       19       15A       15A       15A       22       SPARE       15A         -       -<	\	DESCRIPTION	ССТ		ΓT	/ I	ק	сст		
ROOFTOP RECEPTACLE120A13A2CARBON FILTER UNIT CF-0/NROOFTOP RECEPTACLE320A15A4CARBON FILTER UNIT CF-0/SGENERATOR SHORE POWER520A15A6EXHAUST FAN EF-CRBAS PANEL715A15A8MOTORIZED DAMPERSSPARE915A15A10TO EXISTING PHONE SYSTEMSPARE1115A15A12TO EXISTING PHONE SYSTEMSPARE1315A15A14TO EXISTING PHONE SYSTEMSPARE1515A15A15A16SPARE1715A15A15A18SPARE1715A15A20SPARE1115A15A22SPARE1515A15A15ASPARE1515A15A16SPARE1715A15A201915A15A15A15A15A15A15A15A15A15A15A	_	DESCINI HON		204			15 4		DESCINI NON	
ROOFTOP RECEPTACLE320A15A4CARBON FILTER UNIT CF-0/SGENERATOR SHORE POWER520A15A6EXHAUST FAN EF-CRBAS PANEL715A15A8MOTORIZED DAMPERSSPARE915A15A10TO EXISTING PHONE SYSTEMSPARE1115A15A12TO EXISTING PHONE SYSTEMSPARE1315A15A14TO EXISTING PHONE SYSTEMSPARE1515A15A16SPARESPARE1715A15A15A18SPARE1715A15A20SPARE1915A15A22-15A15A15A15A15A15A15A-15A15A15A15ASPARE1715A15A-15A15A15A-15A15A15A-15A15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A <td></td> <td>ROOFTOP RECEPTACLE</td> <td>1</td> <td></td> <td>┢─┤</td> <td></td> <td></td> <td>2</td> <td>CARBON FILTER UNIT CF-0/N</td> <td></td>		ROOFTOP RECEPTACLE	1		┢─┤			2	CARBON FILTER UNIT CF-0/N	
GENERATOR SHORE POWER520A15A6EXHAUST FAN EF-CRBAS PANEL715A15A15A8MOTORIZED DAMPERSSPARE915A15A10TO EXISTING PHONE SYSTEMSPARE1115A15A12TO EXISTING PHONE SYSTEMSPARE1315A15A14TO EXISTING PHONE SYSTEMSPARE1515A15A16SPARESPARE1715A15A15A18SPARE1915A15A15A20SPARE1115A15A15A22SPARE		ROOFTOP RECEPTACLE	3	20A			15A	4	CARBON FILTER UNIT CF-0/S	
BAS PANEL715A15A8MOTORIZED DAMPERSSPARE915A15A10TO EXISTING PHONE SYSTEMSPARE1115A15A12TO EXISTING PHONE SYSTEMSPARE1315A15A14TO EXISTING PHONE SYSTEMSPARE1515A15A16SPARESPARE1715A15A16SPARE1915A15A15A1115A15A15A15A15A15A-15A15A15A-15A15A15A-15A15A15A-15A15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A15A-15A-15A15A-15A-15A-15A-15A-15A-15A-15A-15A-15A-15A-15A-15A-15A-15A-		GENERATOR SHORE POWER	5	<u> 20</u> A		_	1 <u>5</u> A	6	EXHAUST FAN EF-CR	
SPARE915A15A10TO EXISTING PHONE SYSTEMSPARE1115A15A12TO EXISTING PHONE SYSTEMSPARE1315A15A14TO EXISTING PHONE SYSTEMSPARE1515A15A16SPARESPARE1715A15A16SPARE-1915A15A15A20SPARE-2115A15A15A22SPARE		BAS PANEL	7	[ <u>15</u> A			1 <u>5</u> A	8	MOTORIZED DAMPERS	
SPARE1115A15A12TO EXISTING PHONE SYSTEMSPARE1315A15A15A14TO EXISTING PHONE SYSTEMSPARE1515A15A16SPARESPARE1715A15A16SPARE-1915A15A15A20-2115A15A15A22SPARE15A15A15A15A		SPARE	9	<u>15</u>			15A	10	TO EXISTING PHONE SYSTEM	
SPARE         13         15A         15A         14         TO EXISTING PHONE SYSTEM           SPARE         15         15A         15A         16         SPARE           SPARE         17         15A         15A         16         SPARE           -         19         15A         15A         18         SPARE           -         21         15A         15A         22         SPARE		SPARE	11	<u>15</u>			1 <u>5</u> A	12	TO EXISTING PHONE SYSTEM	
SPARE         15         15A         15A         16         SPARE           SPARE         17         15A         15A         18         SPARE           -         19         15A         15A         18         SPARE           -         19         15A         15A         20         SPARE           -         21         15A         15A         22         SPARE		SPARE	13	[ <u>15</u> 4			15A	14	TO EXISTING PHONE SYSTEM	
SPARE         17         15A         15A         18         SPARE           -         19         15A         15A         20         SPARE           -         21         15A         15A         22         SPARE		SPARE	15	<u>15</u>			15A	16	SPARE	
-         19         15A         15A         20         SPARE           -         21         15A         15A         22         SPARE		SPARE	17	<u>15</u>			1 <u>5</u> A	18	SPARE	
- 21 15A 15A 22 SPARE		_	19	[ <u>15</u> 4			15A	20	SPARE	
		_	21	[ <u>15</u> A			15A	22	SPARE	
		_	23	<u>15</u>			1 <u>5</u> A	24	_	

PANEL LOCATION: EX. MECH MEZZANINE

PANEL C

# PANEL M

# PANEL N

PANEL H

GENER		2	
		, 	
Copyright Reserved All designs and drawings o	are copyrighted o	and the	
property of Seguin Enginee for any purpose other tha Engineering Inc. is forbidde	ering Inc. Reprod n that authorize en.	luction or d by Segi	use uin
The drawing is not to be	scaled. The Con	tractor sh	all
or omissions shall be repo Inc.	orted to Seguin	з. Any er Engineerin	g g
©COPYRIGHT 2020 - Segu	uin Engineering I	nc.	
2 ISSUED FOR TENI	DER	FEB 26. 2021	K.S.
1 RE-ISSUED FOR F	PERMIT	DEC 3, 2020	K.S.
0 ISSUED FOR PERI	MIT	NOV 6, 2020	K.S.
No. DESCRIPTION		DATE	BY
REVI	SIONS	6	
		7	
<b>Electrical</b> 12 Argyle Street N., (	Enginee Caledonia, ON,	N3W 1B	6
www.s	sei-ee.com	-	-
PROJECT			
	RA FALLS	E	
IMPRO	VEMENTS	<b>_</b> \$	
3200 STAI	NLEY AVENUE, ALLS ONTARIO		
	ALLO, UNTARIU		
START DATE: DRAW	N BY: DE	SIGNED	BY:
JULY 2020 B.M.	P.5	S.	
DRAWING TITLE:	I		
		-0	
PANEL S	CHEDULE	20	
SCALE:	DRAWING No.	:	
	E	300	
20-101			