



CONSULTING ENGINEERING  
477 QUEEN STREET, EAST SUITE 204  
SAULT STE. MARIE, ON P6A 1Z5  
PHONE: (705)942-3344 FAX: (705)942-1477  
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ENGINEER'S SEAL



ISSUED FOR TENDER 2016 02 11

2	-	-
1	-	-
0	ISSUED FOR TENDER	2016 02 11
B	99% REVIEW & TENDER	2016 02 09
A	95% REVIEW & COMMENT	2016 01 18
REV.	DESCRIPTION	DATE

PROJECT DESCRIPTION:  
GREAT LAKES FORESTRY CENTRE  
1219 QUEEN STREET EAST  
RENOVATED STORAGE - BUILDING 'G'  
SAULT STE. MARIE, ONTARIO

DRAWING DESCRIPTION:  
ARCHITECTURAL  
BUILDING 'G'  
STORAGE BUILDING  
CODE MATRIX / NOTES

SCALE: 1:100 FORM SIZE (394x254)

DRAWN BY: PJG DATE: 2016 01 13

CHECKED BY: SE DATE: 2016 01 13

PROJECT NO: 15228 FILE NO: -

SHEET NO. 1 OF 7  
0 REV

CODE REVIEW AND CLASSIFICATION

MAJOR OCCUPANCY  
GROUP F2 - MEDIUM HAZARD INDUSTRIAL WAREHOUSE  
NO CHANGE IN OCCUPANCY

BUILDING CLASSIFICATION  
3.2.2.71 GROUP F, DIVISION 2, UP TO 2 STOREY'S  
NON SPRINKLED  
COMBUSTIBLE OR NON-COMBUSTIBLE

BUILDING DESCRIPTION

AREAS  
EXISTING BUILDING SIZE (GREENHOUSE) - 65.66m2  
NOT SPRINKLER'D  
SINGLE STORY  
EXISTING CONSTRUCTION - GREEN HOUSE FULLY GLAZED MATERIAL WITH ALUMINUM RIBS BEARING UPON 150mm WIDE CONCRETE KNEE WALL.

NEW CONSTRUCTION - STANDARD WOOD FRAME CONSTRUCTION 1hr RATED DESIGN. PRE-ENGINEERED WOOD TRUSSES WITH STANDING SEAM METAL ROOF. NEW CONSTRUCTION TO BEAR UPON EX. CONCRETE KNEE WALL.

BUILDING DESIGN BASED UPON A CONDITIONED SPACE NOT EXCEEDING 10° CELSIUS.

Item	Ontario Building Code Data Matrix - Parts 3 & 9	OBC Reference
1	Project Description: <input type="checkbox"/> New <input type="checkbox"/> Part 11 New Storage Garage 1219 <input checked="" type="checkbox"/> Addition <input type="checkbox"/> Part 3 Queen St. East <input type="checkbox"/> Change of Use <input type="checkbox"/> Alteration <input type="checkbox"/> Part 9	
2	Major Occupancy(s) Group F Division 2	3.1.2.1.(1) 9.10.2
3	Building Area (m2) Existing 65.66 New 65.66 Total 65.66	1.1.3.2 1.1.3.2
4	Gross Area Existing 65.66 New 65.66 Total 65.66	1.1.3.2 1.1.3.2
5	Number of Storeys Above Grade 1 Below Grade N/A	3.2.1.1 & 1.1.3.2 2.1.1.3
6	Height of Building (m) 4.2m	2.1.1.3
7	Number of Street Access Routes 2 Access Routes around perimeter	3.3.3.10 & 3.2.5.5
8	Building Classification Group F Division 2, 3.2.2.71	3.2.2.20-83 9.10.4
9	Sprinkler System Proposed <input type="checkbox"/> entire building <input type="checkbox"/> basement only <input type="checkbox"/> in lieu of roof rating <input checked="" type="checkbox"/> not required	3.2.2.10 & 3.2.5.5 3.2.1.5 3.2.2.17 9.10.8
10	Standpipe required <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.9
11	Fire Alarm required <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.4 9.10.7.2
12	Water Service / Supply is Adequate <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
13	High Building <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.6
14	Permitted Construction <input checked="" type="checkbox"/> Combustible <input checked="" type="checkbox"/> Non-Combustible Actual Construction <input checked="" type="checkbox"/> Combustible <input type="checkbox"/> Non-Combustible	3.2.2.20(3)-(8) 9.10.6
15	Mezzanine(s) Area m2	3.2.1.1.(3)-(8) 9.10.4.1
16	Occupant Load based on <input checked="" type="checkbox"/> m2 / person <input type="checkbox"/> design of building Basement Occupancy N/A Load _____ 1st Floor Occupancy 2 Load _____ 2nd Floor Occupancy N/A Load _____ 3rd Floor Occupancy N/A Load _____	3.1.17 9.9.1.3
17	Barrier - Free Design <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain)	3.8 9.5.2
18	Hazardous Substances <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2.(1) & 3.3.1.19(1) 9.10.1.3
19	Required Fire Resistance Rating (FRR) Horizontal Assemblies FFR (Hours) Floors N/A Hours Roof N/A Hours Mezzanine N/A Hours Listed Design No. or Description (SG-2) FFR of Supporting Members Floors N/A Hours Roof N/A Hours Mezzanine N/A Hours Listed Design No. or Description (SG-2)	3.2.2.20-83 & 3.2.1.4 9.10.8 9.10.9
20	Spetail Separation - Construction of Exterior Walls Wall Area of EBF (m2) L.D. (m) L/H or H/L Permitted Max% of Openings Proposed % of Openings FRR (Hours) Listed Design or Description Comb. Const. Comb. Const. Nonc. Cladding Non -Comb. Constr.	3.2.3 9.10.14
	North 40 9.8 ULC W301	
	South 40 9.8 *N/A ULC W301	*N/A
	East 36 6.7 ULC W301	
	West 36 6.7 ULC W301	
21	Other - Describe *ALL WALLS TO BE CONSTRUCTED AS 1hr F.R. WALL ASSEMBLIES	

**GENERAL NOTES**

ALL WORK SHALL CONFORM TO THE ONTARIO BUILDING CODE, LATEST EDITION.

ALL WORK SHALL CONFORM TO THE OCCUPATIONAL HEALTH & SAFETY ACT, LATEST EDITION.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY PRIOR TO CONSTRUCTION.

DOORS, WINDOWS AND HARDWARE TO BE SUPPLIED BY OWNER AND INSTALLED BY CONTRACTOR.

FD – DENOTES FIELD DIMENSION. TO BE VERIFIED

"PROVIDE" MEANS SUPPLY AND INSTALL BY CONTRACTOR.

**CONCRETE NOTES – GENERAL**

CONTRACTOR TO PROVIDE A "CONCRETE MIX DESIGN SUBMISSION FORM" FOR EACH TYPE OF CONCRETE TO BE USED CERTIFYING CONSTITUENT MATERIALS AND MIX PROPORTIONS TO THE ENGINEER AT LEAST 1 WEEK BEFORE DELIVERY OF CONCRETE TO THE SITE. SUPPLY TEST RESULTS TO THE ENGINEER THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE MEETING THE SPECIFIED STRENGTH, WORKABILITY AND YIELD, AS PER CSA A23.1 SPECIFICATIONS.

IF USED, WATER-REDUCING AGENT NOT TO EXCEED THE MANUFACTURER'S RECOMMENDED QUANTITY.

DO NOT MAKE CHANGES TO APPROVED MIX DESIGNS WITHOUT APPROVAL OF THE ENGINEER.

TYPE OF STRUCTURE OR USE.....	SLAB
MAXIMUM SIZE OF AGGREGATE.....	8mm
EXPOSURE CLASS.....	C-2
MAXIMUM WATER/CEMENTING.....	0.50
MINIMUM COMPRESSIVE STRENGTH.....	25 MPa
SLUMP/FLOW.....	80 +/- 20mm
AIR CONTENT.....	5 TO 8%
COVER AGAINST FORMS.....	MIN 38 mm
COVER AGAINST EARTH.....	MIN 76 mm

FABRICATE AND ERECT CONCRETE FORMWORK IN ACCORDANCE WITH CSA S269.3 AND CSA A23.1. FINISHED CONCRETE TO CONFORM TO SHAPE, DIMENSIONS, LOCATIONS AND ELEVATIONS AS SHOWN ON THE DRAWINGS AND WITHIN THE TOLERANCES REQUIRED BY CSA A23.1.

ALL STEEL REINFORCEMENT SHALL BE DEFORMED BARS CONFORMING TO CSA G30.18 M92 (R2007), Fy=400 MPa (58.0 KSI) GRADE 400.

FABRICATE AND PLACE STEEL REINFORCEMENT AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH CSA A23.1. & ANSI/ACI 315.

ADEQUATELY SUPPORT AND SECURE STEEL REINFORCEMENT AGAINST DISPLACEMENT AND MAINTAIN THE REQUIRED COVER FROM FORMS DURING CONCRETE PLACING USING METHODS AND PRODUCTS IN ACCORDANCE WITH CSA A23.1.

CAST IN SLEEVES, ANCHORS, FRAMES, CONDUIT, BOLTS, PIPES, AND OTHER INSERTS AS SHOWN ON DRAWINGS.

PROVIDE 24 HOURS NOTICE TO THE ENGINEER BEFORE PLACING CONCRETE TO ALLOW FOR INSPECTION AND APPROVAL OF STEEL REINFORCEMENT PLACEMENT AND FABRICATION OF FORMWORK.

**FASTENER NOTES**

FASTENERS SHALL GENERALLY BE HILTI OR SIMPSON STRONG-TIE BRAND OR APPROVED EQUAL.

PROVIDE ALL FASTENERS REQUIRED FOR THE INSTALLATION OF ITEMS SHOWN ON THE DRAWINGS. USE APPROPRIATE ANCHORS FOR THE PARTICULAR SUBSTRATE (ie CONCRETE, WOOD, LSF, ETC)

**SHOP DRAWING – SUBMITALS**

SUBMIT 3 COPIES OF SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO OR AS REQUIRED FROM THE MANUFACTURE OR DISTRIBUTOR FOR THOSE ITEMS AS NOTED WITHIN THIS DOCUMENT, INCLUDING BUT NOT LIMITED TO:

- DOORS AND HARWARE
- FURNACE
- HRV

**WINDOWS AND DOORS**

WINDOWS, DOORS AND SKYLIGHTS AND THEIR COMPONENTS SEPARATING CONDITIONED SPACE FROM UNCONDITIONED SPACE OR THE EXTERIOR SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED SO THAT, WHEN IN THE CLOSED POSITION, THEY, RESIST THE INGRESS OF PRECIPITATION INTO INTERIOR SPACE,

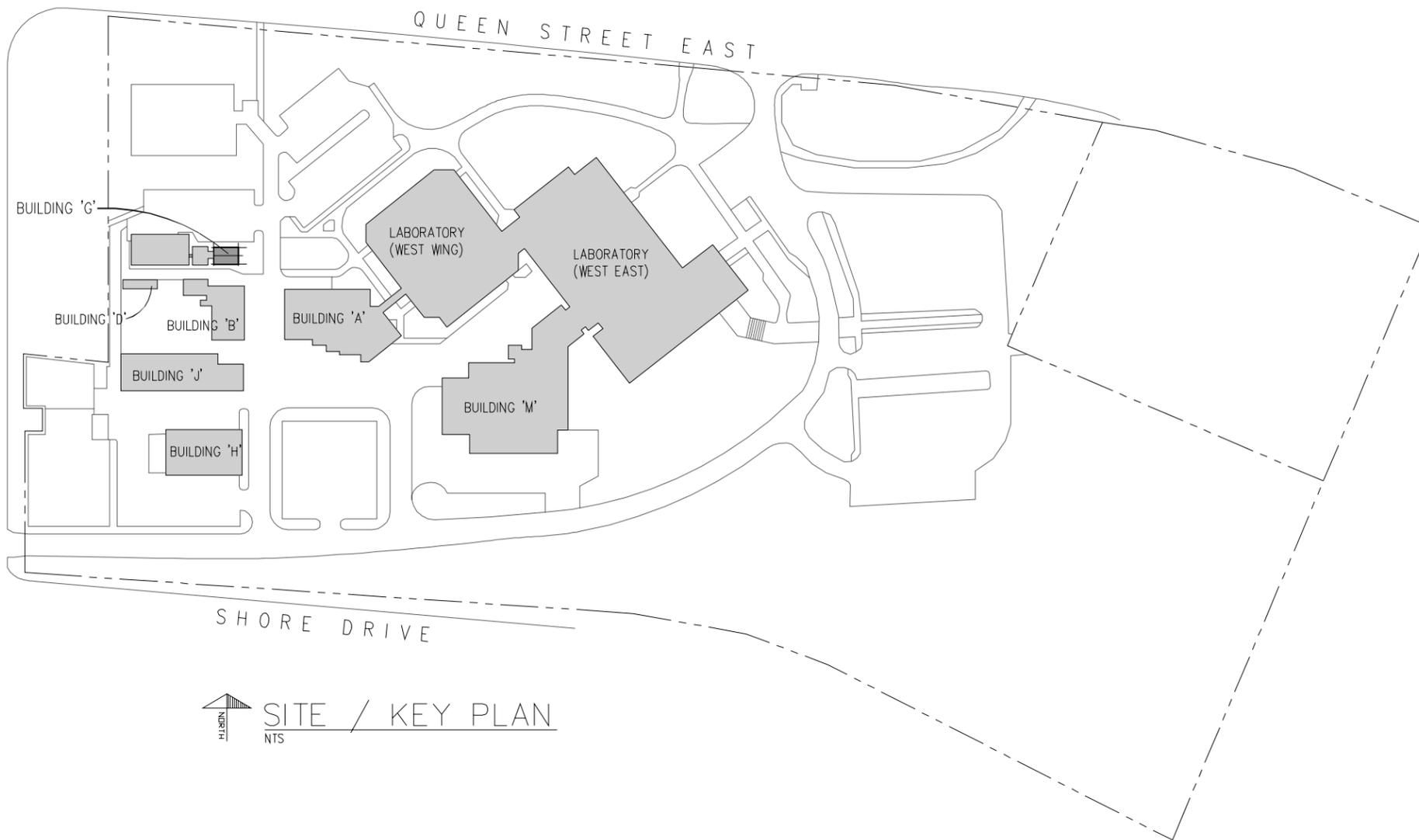
- (B) RESIST WIND LOADS,
  - (C) CONTROL AIR LEAKAGE,
  - (D) RESIST THE INGRESS OF INSECTS AND VERMIN,
  - (E) WHERE REQUIRED, RESIST FORCED ENTRY, AND
  - (F) ARE EASILY OPERABLE, UNLESS THEY ARE FIXED UNITS.
- MAIN ENTRANCE DOORS AND THEIR COMPONENTS SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED SO THAT, WHEN IN THE CLOSED POSITION, THEY,
- (A) CONTROL AIR LEAKAGE,
  - (B) RESIST THE INGRESS OF INSECTS AND VERMIN,
  - (C) RESIST FORCED ENTRY, AND
  - (D) ARE EASILY OPERABLE.

MANUFACTURED WINDOWS, DOORS AND SKYLIGHTS AND THEIR INSTALLATION SHALL CONFORM TO, (A) AAMA/WDMA/CSA 101/1.S.2/A440, "NAFS – NORTH AMERICAN FENESTRATION STANDARD/SPECIFICATION FOR WINDOWS, DOORS, AND SKYLIGHTS", (B) CSA A440S1, "CANADIAN SUPPLEMENT TO AAMA/WDMA/CSA 101/1.S.2/A440, NAFS – NORTH AMERICAN FENESTRATION STANDARD/SPECIFICATION FOR WINDOWS, DOORS, AND SKYLIGHTS",

SWINGING ENTRANCE DOORS TO DWELLING UNITS SHALL BE PROVIDED WITH A DEADBOLT LOCK WITH A CYLINDER HAVING NO FEWER THAN FIVE PINS, AND A BOLT THROW NOT LESS THAN 25mm (1") LONG, PROTECTED WITH A SOLID OR HARDENED FREE-TURNING RING OR BEVELLED CYLINDER HOUSING.

STRIKEPLATES FOR DEADBOLTS SHALL BE FASTENED TO WOOD FRAMES WITH WOOD SCREWS THAT PENETRATE NOT LESS THAN 38mm (1 1/2") INTO SOLID WOOD.

SOLID BLOCKING SHALL BE PROVIDED ON BOTH SIDES AT THE LOCK HEIGHT BETWEEN THE JAMBS FOR DOORS AND THE STRUCTURAL FRAMING SO THAT THE JAMBS WILL RESIST SPREADING BY FORCE.



**SITE / KEY PLAN**  
NTS

**PAINT NOTES**

ALL PLYWOOD FINISHES (WALLS & CEILING) TO RECEIVE ONE COAT OF PRIMER AND TWO COATS OF PAINT

TOUCH UP IN FIELD AS REQUIRED.

MINIMUM PAINT COATING THICKNESS SHALL BE 2-4 mils DFT.

COATING THICKNESS SHALL BE VERIFIED BY PHYSICAL MEASUREMENT.

NO PAINTING SHALL BE DONE AT TEMPERATURES LOWER THAN 7° CELCIUS, OR IN DAMP WEATHER OR ON WET SURFACES.

ALL PAINTING SHALL BE DONE IN STRICT ACCORDANCE WITH THE PAINT MANUFACTURER'S SPECIFICATIONS.

**TEMPORARY BRACING**

MAKE ADEQUATE PROVISIONS FOR ALL LOADS ACTING ON THE STRUCTURE DURING ERECTION.

PROVIDE TEMPORARY SHORING AND BRACING TO KEEP THE STRUCTURE PLUMB AND IN TRUE ALIGNMENT DURING CONSTRUCTION.

MEMBERS SHOWN ON THE PLANS ARE THOSE REQUIRED FOR THE COMPLETED STRUCTURE AND MAY NOT BE SUFFICIENT DURING CONSTRUCTION.

TEMPORARY BRACING AND SHORING ARE THE RESPONSIBILITY OF THE CONTRACTOR.

**WOOD FRAMING NOTES**

CONFORM TO PART 9 OF THE OBC (ONTARIO BUILDING CODE) 2012 UNLESS NOTED OTHERWISE.

ALL LUMBER TO BE GRADE MARKED AND KILN DRIED. MOISTURE CONTENT NOT TO EXCEED 19%.

JOIST HANGERS, ANCHORS AND TIES: MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. FASTEN JOIST HANGERS IN ACCORDANCE WITH SIMPSON STRONG-TIE DETAILS. WHERE APPROPRIATE USE SIMPSON STRONG-TIE FASTENERS (NAILS).

ALL COLUMNS TO BE CONTINUOUS DOWN TO FOUNDATION AND BE BLOCKED SOLIDLY AT FLOOR LEVELS.

USE JOIST HANGERS WHERE JOISTS FRAME INTO SIDES OF SUPPORTS.

PROVIDE SOLID BLOCKING BETWEEN RAFTERS AT SUPPORTS AND PROVIDE CROSS-BRIDGING BETWEEN RAFTERS AT 6'-0" MAXIMUM CENTERS ALONG LENGTH OF SPAN.

WHERE STUDS ARE PLACED TOGETHER TO FORM BUILT-UP WOOD COLUMNS, NAIL INDIVIDUAL STUDS TOGETHER WITH A ROW OF 3 1/2" NAILS SPACED NOT MORE THAN 1'-0" APART. WITH THE END NAILS LOCATED 6" FROM BOTH ENDS.

ANCHOR TOP AND BOTTOM OF ISOLATED COLUMNS USING STRAPS OR SADDLES.

ANCHOR ROOF BEAMS AND TRUSSES TO THEIR SUPPORTS USING STEEL TIES OR SADDLES.

CENTRE WALL STUDS BETWEEN TOP FLOOR AND ROOF DIRECTLY UNDER ROOF TRUSSES ABOVE.

DO NOT NOTCH OR DRILL FRAMING MEMBERS WITHOUT CONSENT OF THE ENGINEER.

PROVIDE ALL NECESSARY BLOCKING AND BRACING TO ENSURE A STABLE SYSTEM.

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ENGINEER'S SEAL

**ELLIOTT**  
ENGINEERING  
35 CEDAR STREET, SAULT STE. MARIE, ONT.  
P6B 2J2 PH: 705-254-2727

ISSUED  
FOR TENDER  
2016 02 11

2	-	-
1	-	-
0	ISSUED FOR TENDER	2016 02 11
B	99% REVIEW & COMMENT	2016 02 09
A	95% REVIEW & COMMENT	2016 01 18
REV.	DESCRIPTION	DATE

PROJECT DESCRIPTION:  
GREAT LAKES FORESTRY CENTRE  
1219 QUEEN STREET EAST  
RENOVATED STORAGE - BUILDING 'G'  
SAULT STE. MARIE, ONTARIO

DRAWING DESCRIPTION:  
ARCHITECTURAL  
BUILDING 'G'  
STORAGE BUILDING  
KEY PLAN / NOTES

SCALE: 1:100 FORM SIZE (394x254)

DRAWN BY: PJG DATE: 2016 01 13

CHECKED BY: SE DATE: 2016 01 13

PROJECT NO: 15228 FILE NO: -

N02 SHEET NO. 2 OF 7  
0 REV

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P6B 2J2 PH: 705-354-9727

ISSUED  
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2016 02 11

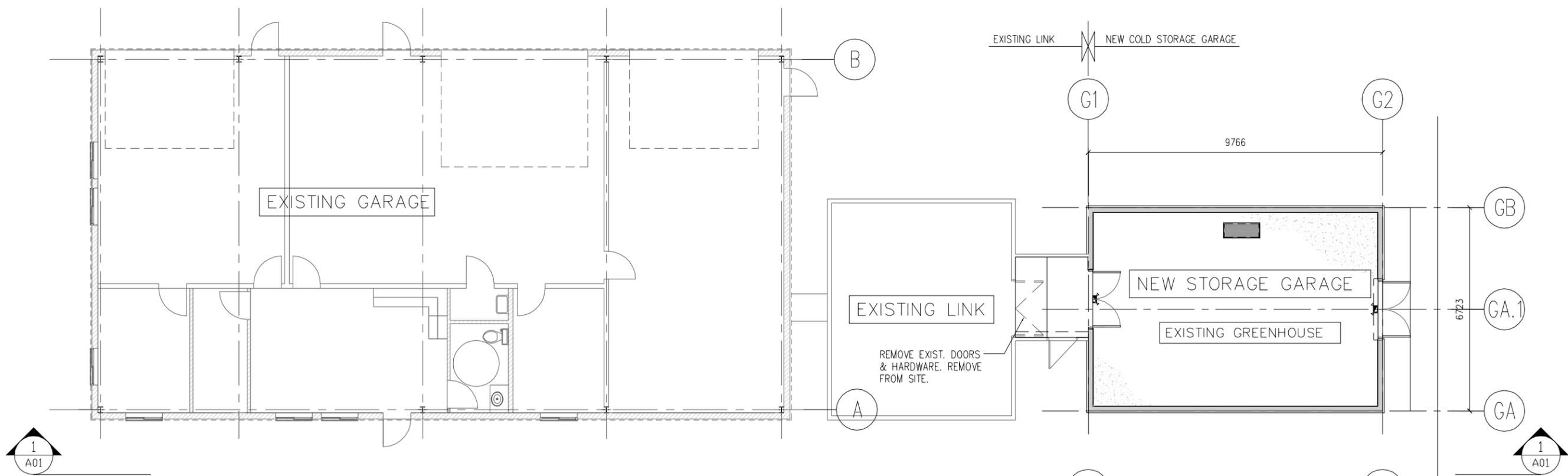
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STORAGE BUILDING  
ELEVATIONS, PLANS

SCALE: 1:100	FORM SIZE (394x254)
DRAWN BY: P-JG	DATE: 2016 01 13
CHECKED BY: SE	DATE: 2016 01 13
PROJECT NO: 15228	FILE NO: -

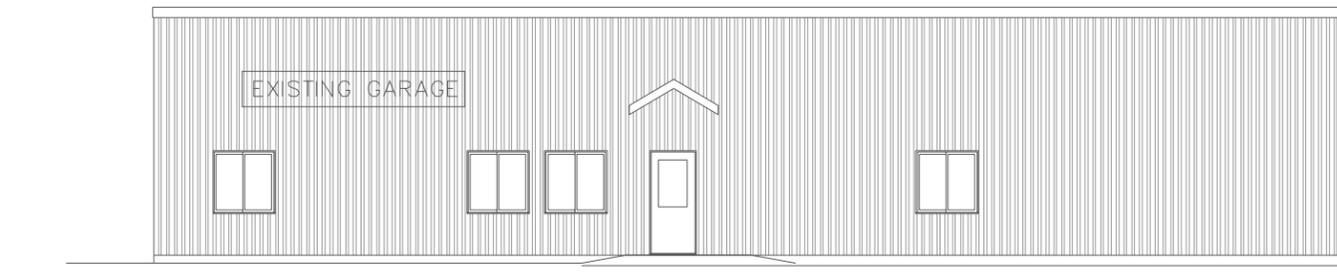
A01  
SHEET NO.  
3 OF 7  
0 REV



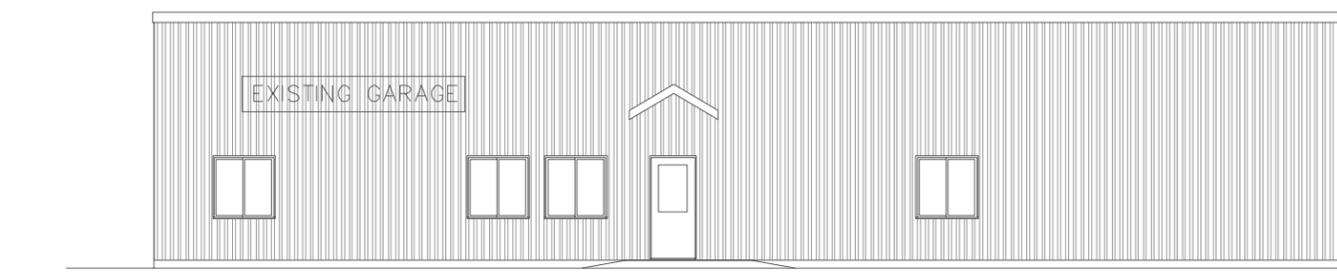
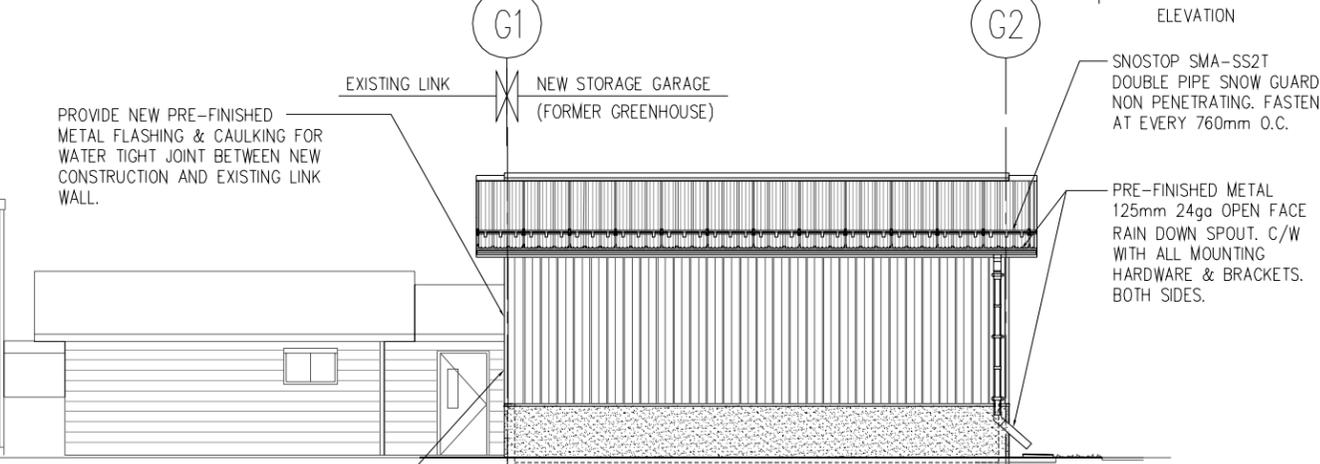
FLOOR PLAN - COMPLETE BUILDING 'G'  
SCALE 1:100

1 A01  
ELEVATION

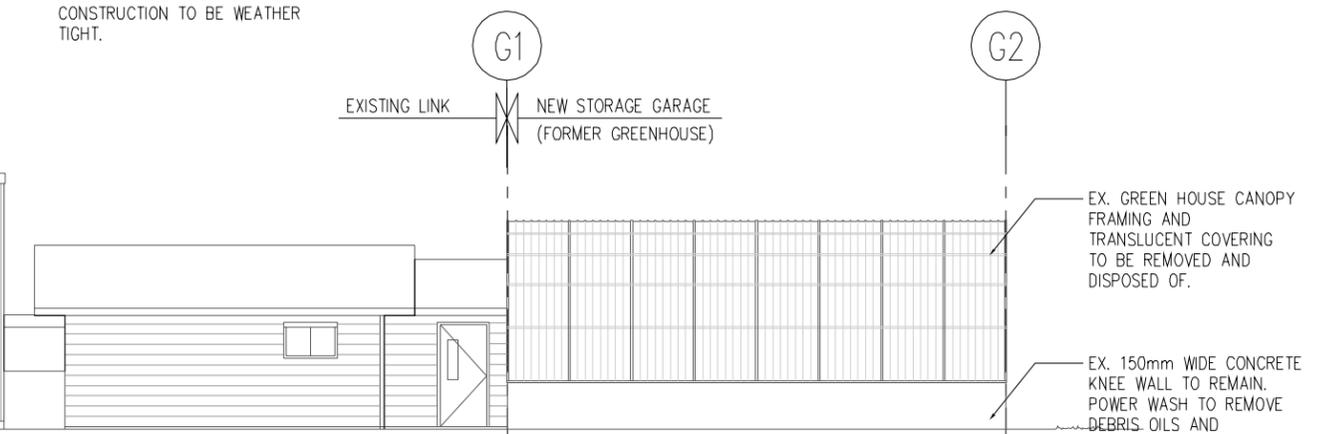
1 A01  
ELEVATION



1 A01 SOUTH ELEVATION - NEW  
SCALE 1:100



SOUTH ELEVATION - EXISTING  
SCALE 1:100





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ISSUED  
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FLOOR PLAN

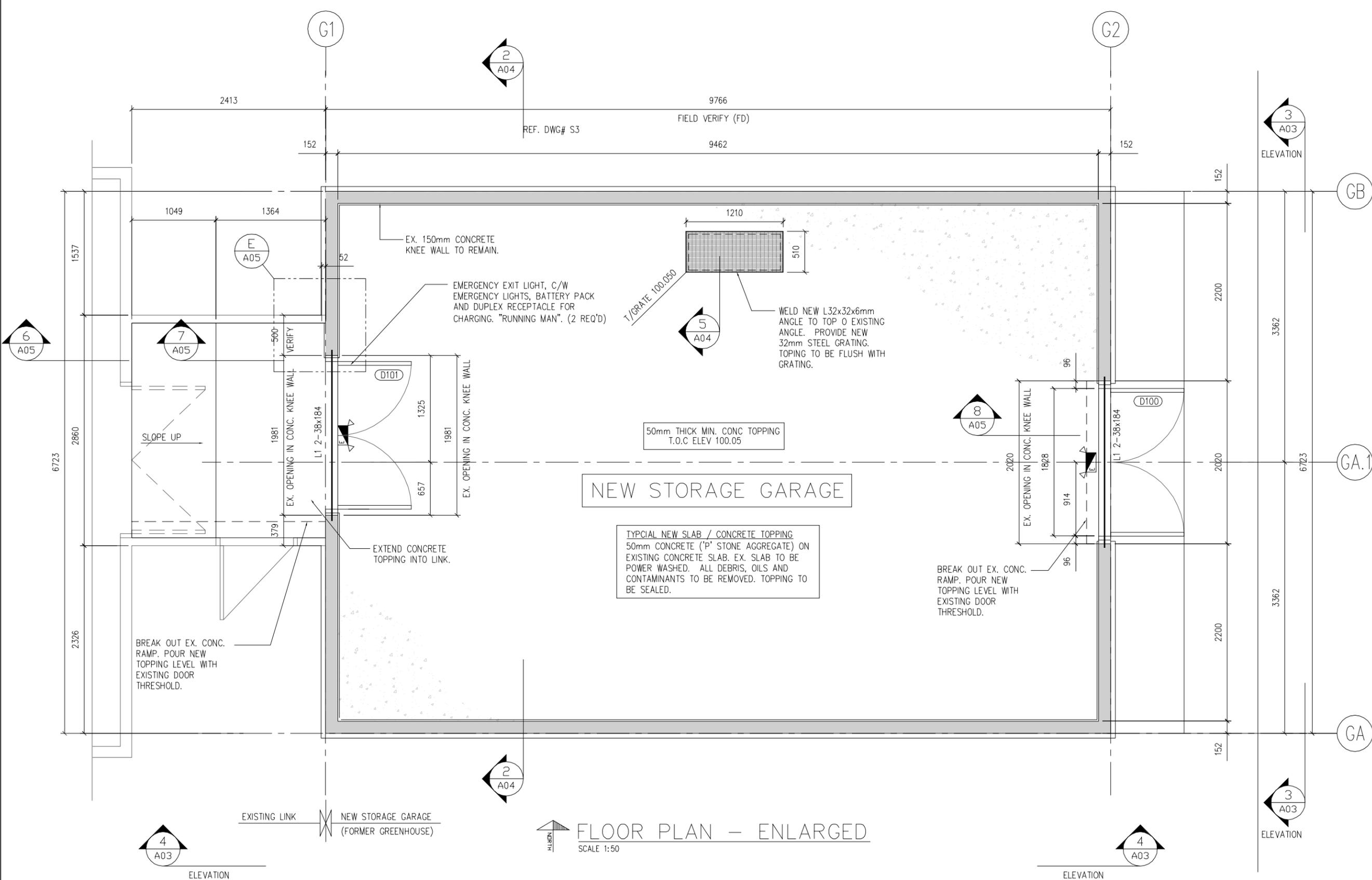
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DRAWN BY: P.J.G. DATE: 2016 01 13

CHECKED BY: SE DATE: 2016 01 13

PROJECT NO: 15228 FILE NO: -

SHEET NO.  
4 OF 7  
0 REV



FLOOR PLAN - ENLARGED  
SCALE 1:50

A02



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ELEVATIONS & DOOR SCHEDULE

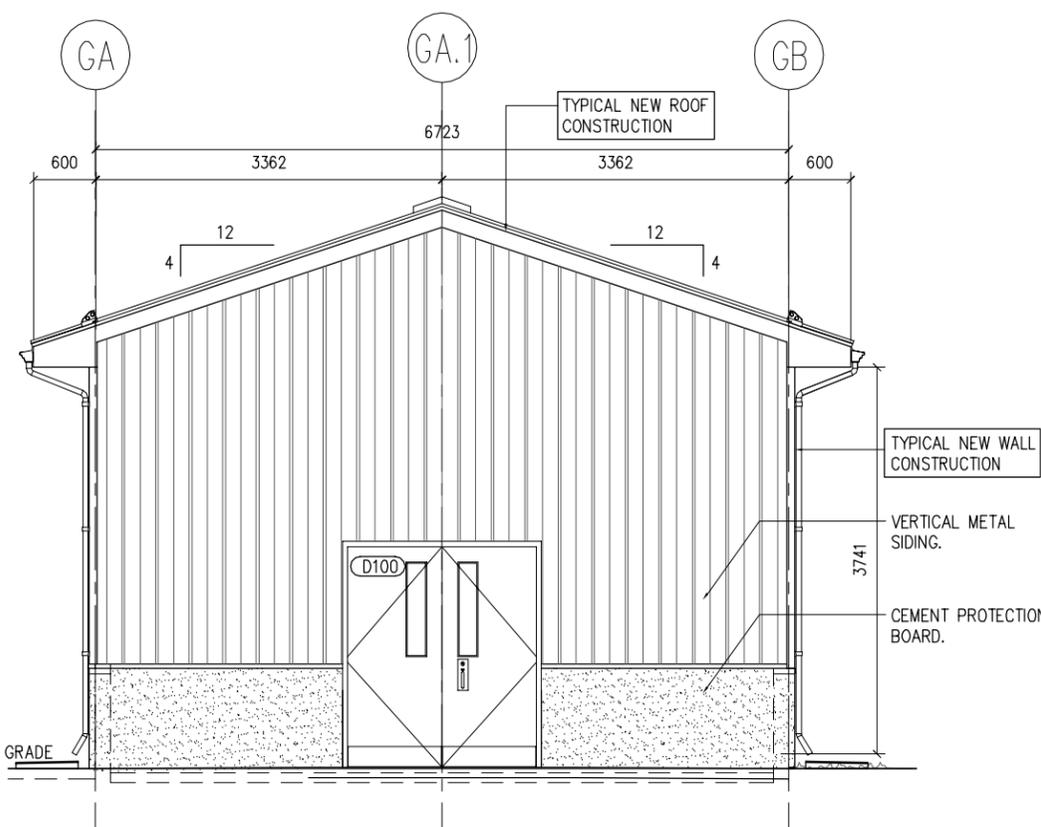
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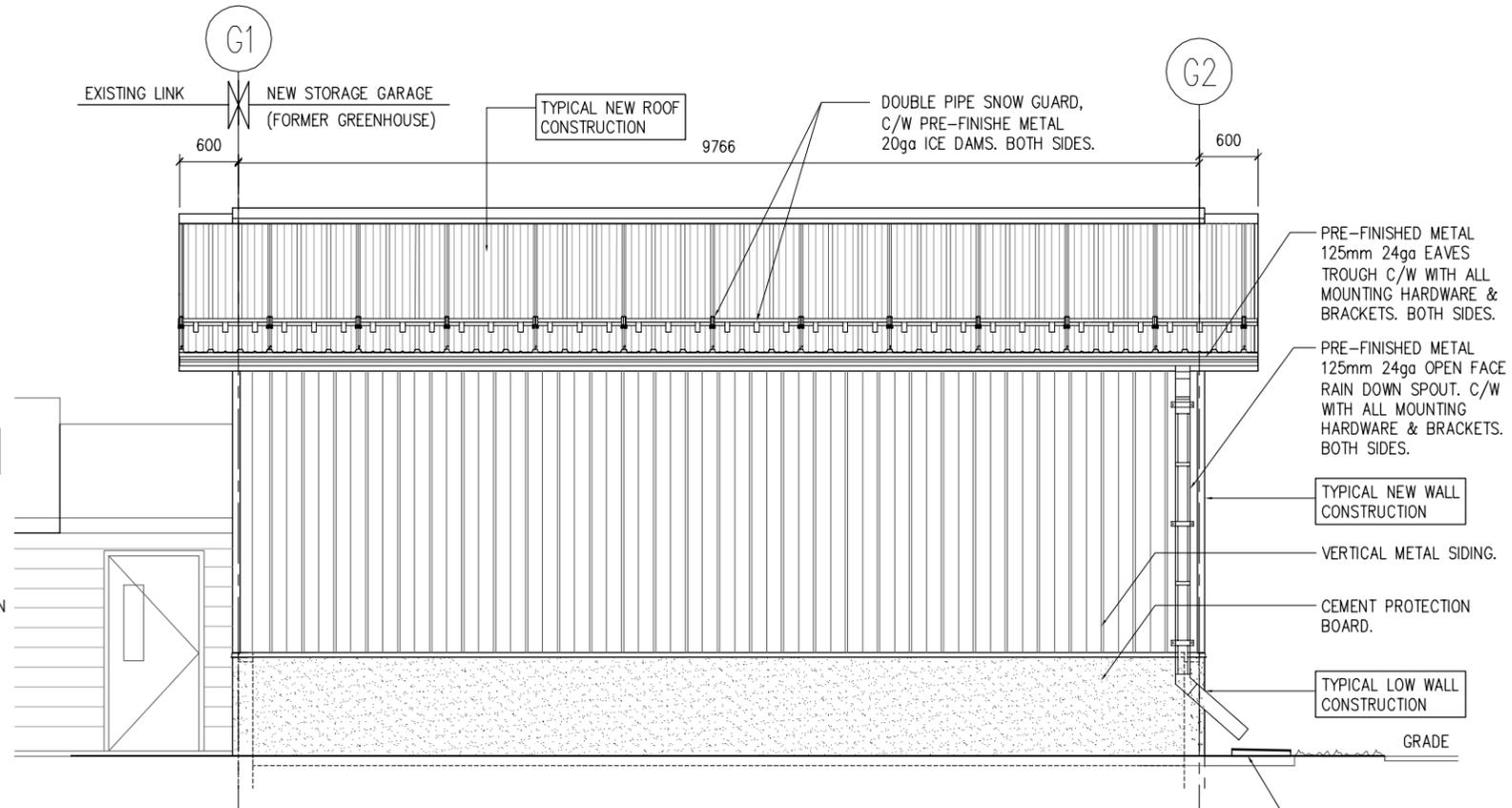
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PROJECT NO: 15228 FILE NO: -

A03 SHEET NO. 5 OF 7  
0 REV



3  
A02 ELEVATION - LOOKING WEST  
SCALE 1:100



4  
A02 ELEVATION - LOOKING NORTH  
SCALE 1:100

DOOR SCHEDULE						DOOR & FRAME FIRE RATING	CLOSER	1 PAIR BUTTS	1 1/2 PAIR BUTTS	KICK PLATE FRONT / BACK	LOCK SET	SECURITY LOCKSET	PASSAGE SET	BUMPER	FLOOR SWEEP	DOOR STOP	FLOOR STOP	DOOR BOLTS (TOP & BOTTOM)	GLASS TYPE
DOOR NUMBER	SIZE	TYPE	FINISH	FRAME	FINISH														
D100	2-3'-0" x 7'-0"	A	PT	HM	PT	3/4hr	●	●	●	●	●	●	●	●	●	●	●	●	GWG
D101	2-3'-0" x 7'-0"	A	PT	HM	PT	3/4hr	●	●	●	●	●	●	●	●	●	●	●	●	TEMP

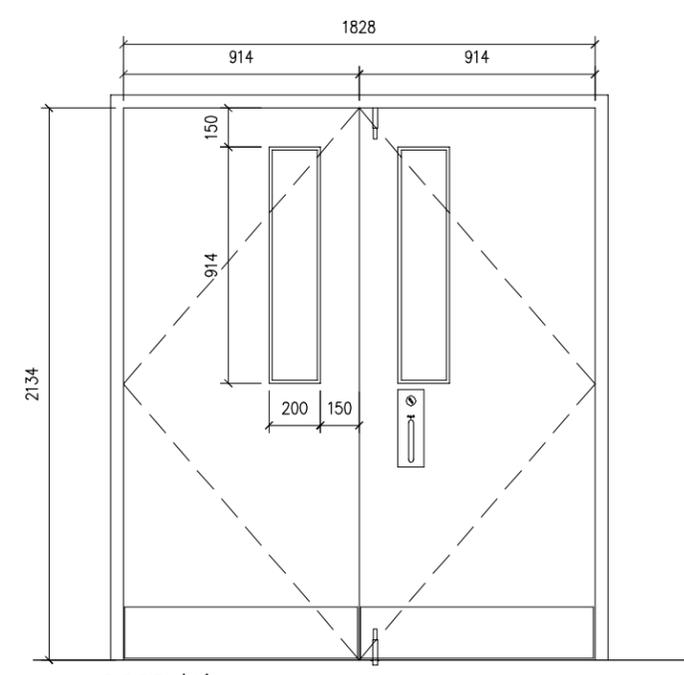
ALL DOORS AND FRAMES TO BE PAINTED BENJAMIN MOORE  
PAINT COLOURS TO BE CHOSEN FROM STANDARD COLOUR  
PALLET BY OWNER.

**MAN DOORS**

(OWNER TO VERIFY HAND, SEE DOOR SCHEDULE WHICH GOVERNS IN ALL CASES)

CONTRACTOR TO SUPPLY AND INSTALL INTERIOR HMF DOORS IN ACCORDANCE WITH THE DOOR SCHEDULE.  
FRAMES (AS PER SCHEDULE.)  
3 HINGES 5BB1 4-1/2" x 4" x NRP x 630 (STAINLESS STEEL)  
PROVIDE PRIVACY LOCKSETS IN ALL DOORS. KEY'D TO MASTER.  
DOOR CLOSER LCN 4040XP x 689 (SEE SCHEDULE)  
THRESHOLD CT32 x 72"  
PERIMETER SEAL W16N x 17"  
DOOR SWEEP W13S x 72"  
1 DOOR OR WALL STOP  
3 FRAME BUMPER (ALL DOORS)

THE CONTRACTOR WILL SUBMIT TO THE CONSULTANT A COMPLETE SET OF SHOP DRAWINGS DENOTING MANUFACTURER, SIZES AND GENERAL CONSTRUCTION FOR MAN DOORS. SUBMITTAL IS TO INCLUDE THE INTENDED OPENING DEVICES. CONTRACTOR TO INSTALL ALTERNATIVE MATERIALS / EQUIPMENT FOR DOORS & HARDWARE ONLY AS AN APPROVED ALTERNATE.



DOOR 'A'  
- 2 INSULATED HOLLOW METAL DOOR, 3/4hr F.R.  
- HOLLOW METAL FRAME 3/4hr F.R.  
- QUARTER LIGHT  
- 914mm x 2134mm  
- 2 SETS REQ'D



**met**  
energy systems

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477 QUEEN STREET, EAST SUITE 204  
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**ELLIOTT**  
ENGINEERING  
35 CEDAR STREET, SAULT STE. MARIE, ONT  
P6B 2J2 PH: 705-254-2727

ISSUED FOR TENDER  
2016 02 11

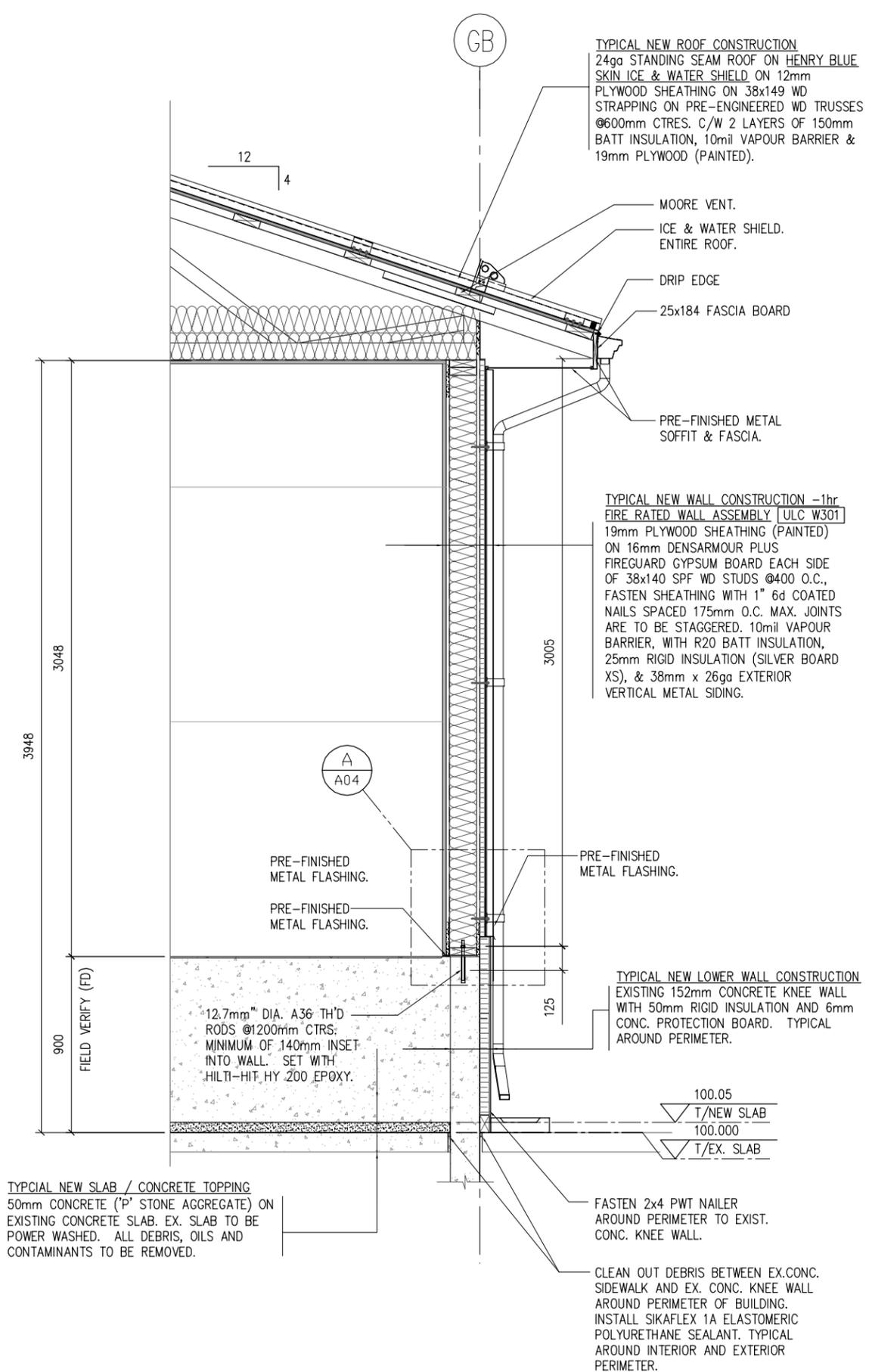
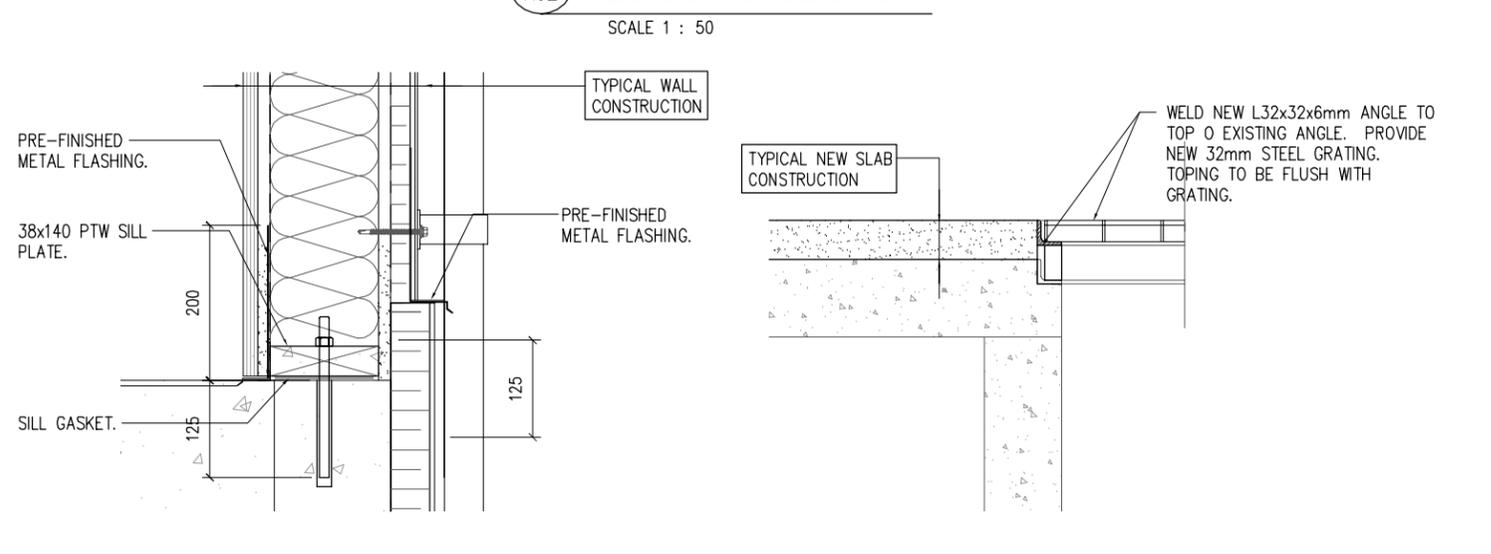
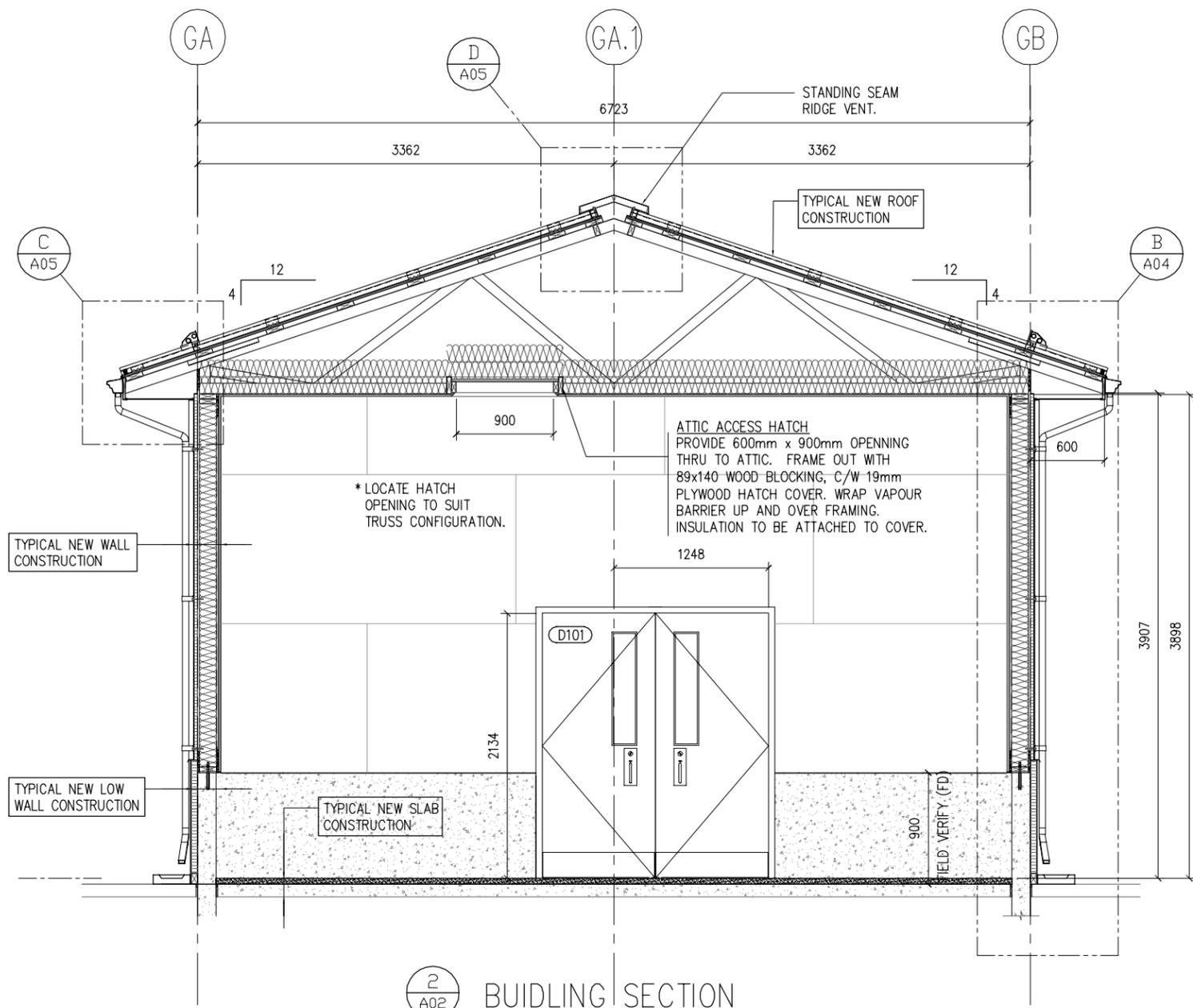
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B	99% REVIEW & COMMENT	2016 02 09
A	95% REVIEW & COMMENT	2016 01 18
REV.	DESCRIPTION	DATE

PROJECT DESCRIPTION:  
GREAT LAKES FORESTRY CENTRE  
1219 QUEEN STREET EAST  
RENOVATED STORAGE - BUILDING 'G'  
SAULT STE. MARIE, ONTARIO

DRAWING DESCRIPTION:  
ARCHITECTURAL  
BUILDING 'G'  
STORAGE BUILDING  
SECTIONS & DETAILS

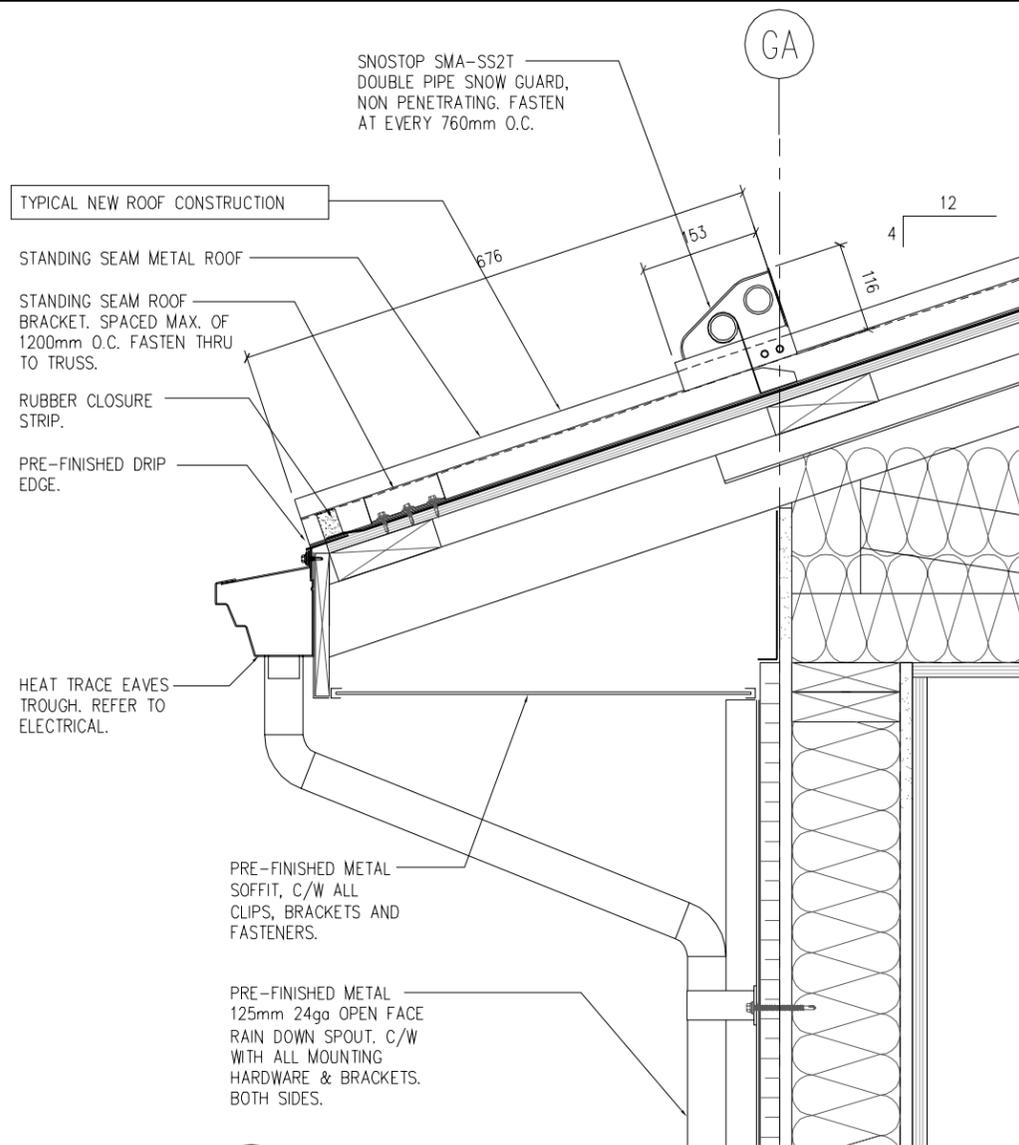
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FORM SIZE (394x254)  
DRAWN BY: PJG DATE: 2016 01 13  
CHECKED BY: SE DATE: 2016 01 13  
PROJECT NO: 15228 FILE NO: -

SHEET NO. 6 OF 7  
0 REV

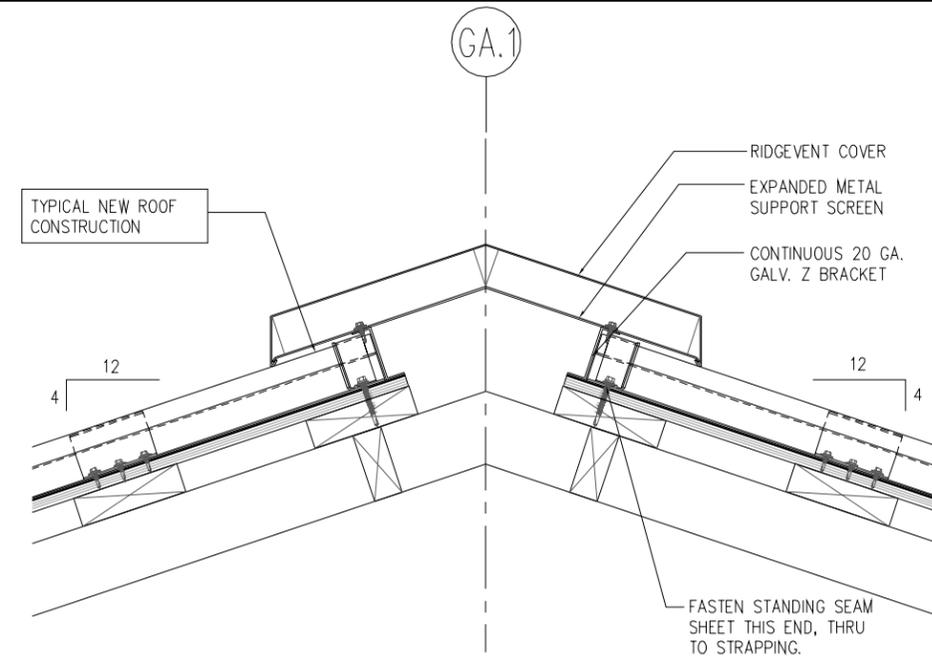


A A04 DETAIL - KNEE WALL SCALE 1:10

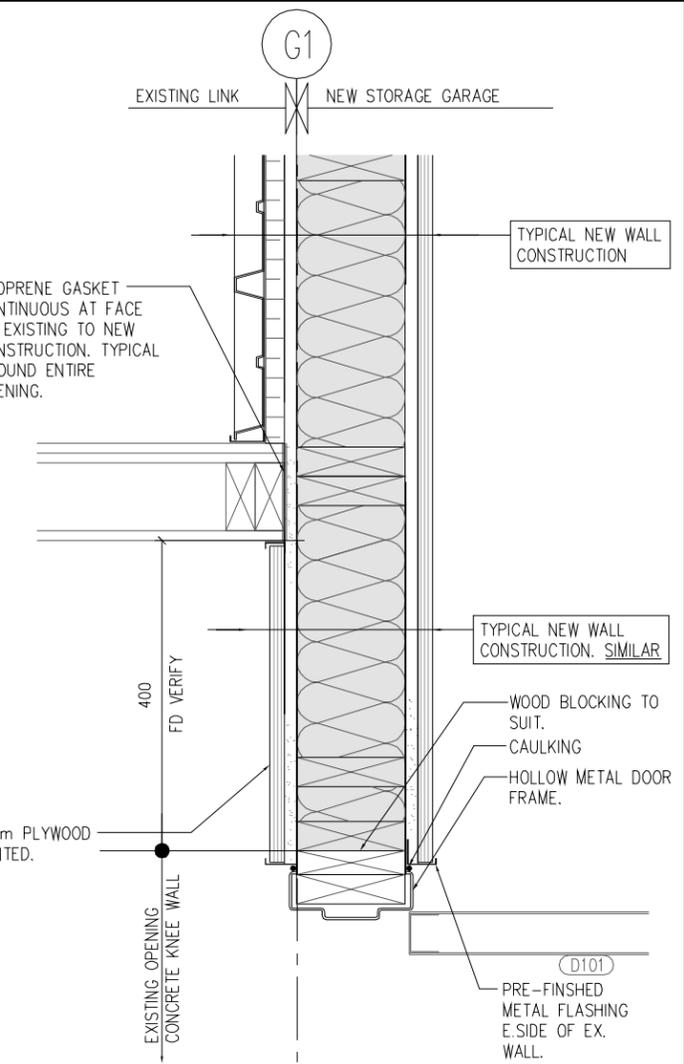
B A04 DETAIL - DOOR FRAMING SCALE 1:20



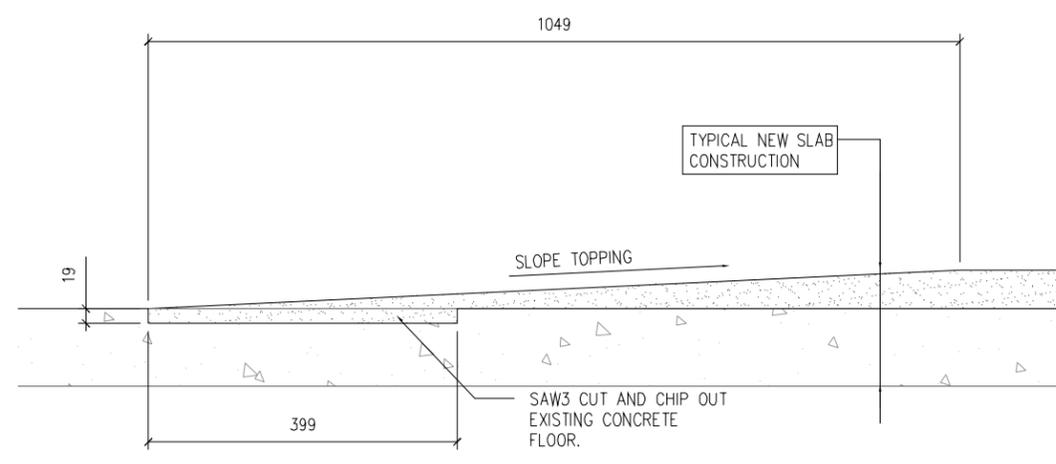
DETAIL - EAVE  
SCALE 1 : 10



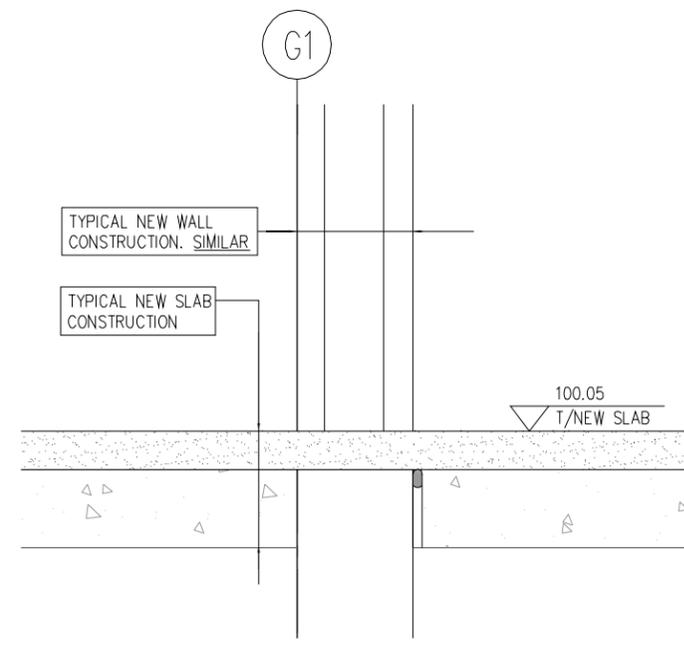
DETAIL - RIDGE  
SCALE 1 : 10  
HI-PERF RIDGE VENT  
SLOPE TO SLOPE STANDING SEAM



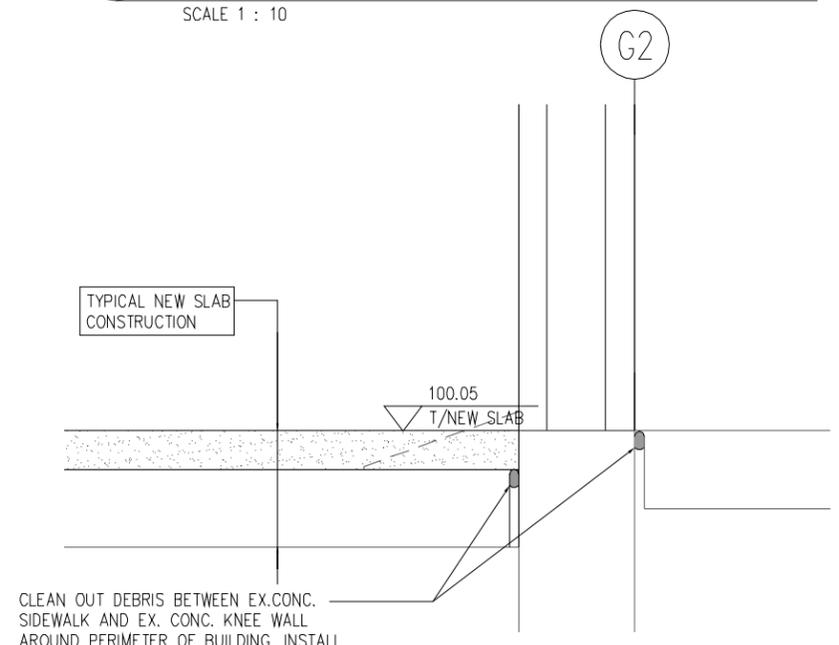
DETAIL - DOOR FRAMING, INTERIOR  
SCALE 1 : 10



SLAB SECTION  
SCALE 1 : 10



SLAB SECTION  
SCALE 1 : 50



SLAB SECTION  
SCALE 1 : 50

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ENGINEER'S SEAL

35 CEDAR STREET, SAULT STE. MARIE, ON P6B 2J2 PH: 708-254-9727

ISSUED FOR TENDER  
2016 02 11

2	-	-
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B	99% REVIEW & COMMENT	2016 02 08
A	95% REVIEW & COMMENT	2016 01 13
REV.	DESCRIPTION	DATE

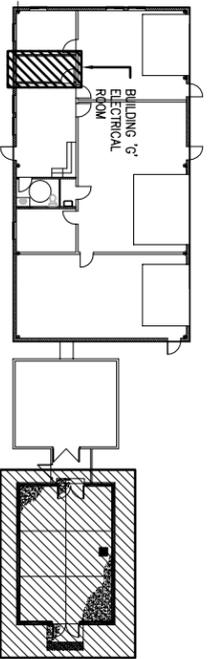
PROJECT DESCRIPTION:  
GREAT LAKES FORESTRY CENTRE  
1219 QUEEN STREET EAST  
RENOVATED STORAGE - BUILDING 'G'  
SAULT STE. MARIE, ONTARIO

DRAWING DESCRIPTION:  
ARCHITECTURAL  
BUILDING 'G'  
STORAGE BUILDING  
SECTIONS & DETAILS

SCALE:	1:100	FORM SIZE (394x254)
DRAWN BY:	PJG	DATE: 2016 01 13
CHECKED BY:	SE	DATE: 2016 01 13
PROJECT NO:	15228	FILE NO: -

A05

SHEET NO.  
7 OF 7  
0 REV



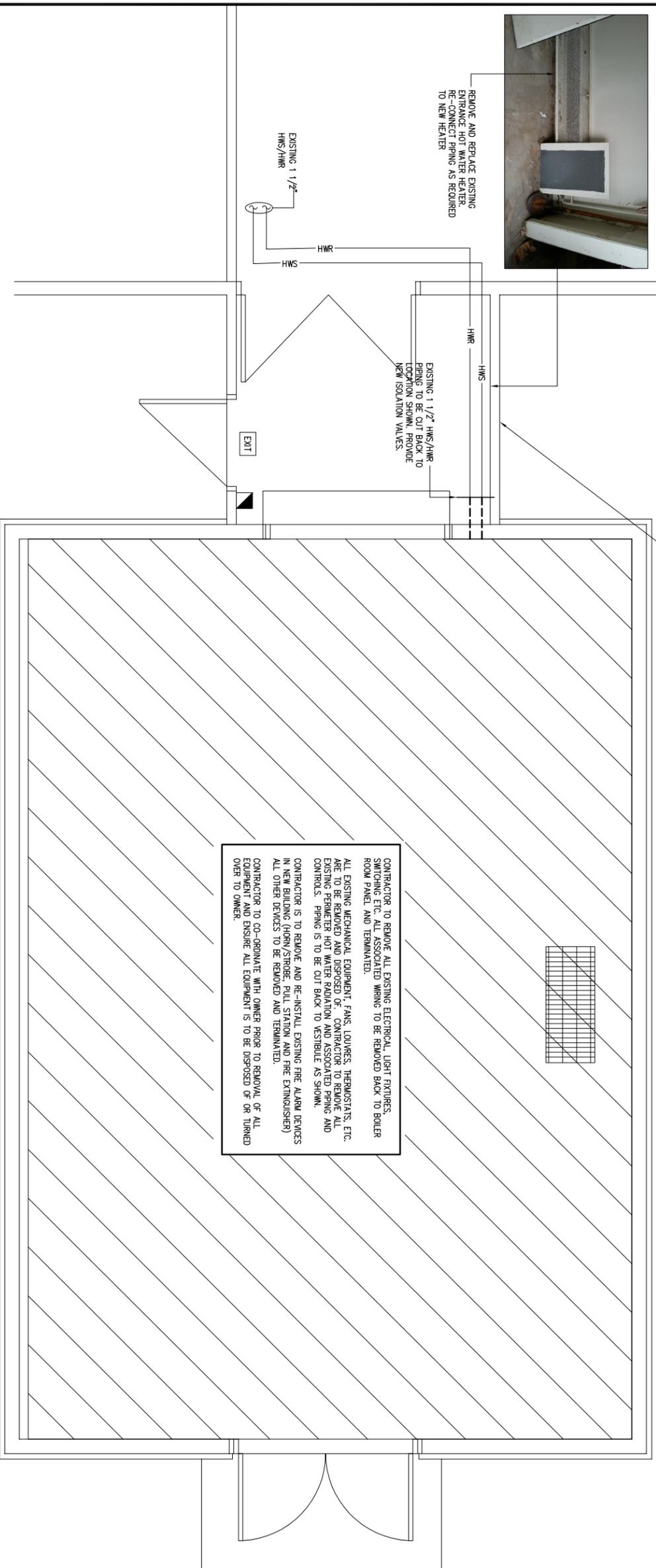
REMOVE ALL EXISTING ELECTRICAL AND ASSOCIATED EQUIPMENT BACK TO MAIN PANEL AND TERMINATE. WALL TO BE PATCH/REPAIRED/PAINITED TO COLOUR SELECTION BY OWNER.



REMOVE AND REPLACE EXISTING ENTRANCE HOT WATER HEATER. RE-CONNECT PIPING AS REQUIRED TO NEW HEATER.

EXISTING 1 1/2" HWS/HWR PIPING TO BE CUT BACK TO NEW ISOLATION VALVES.

EXISTING 1 1/2" HWS/HWR



CONTRACTOR TO REMOVE ALL EXISTING ELECTRICAL, LIGHT FIXTURES, SWITCHING ETC. ALL ASSOCIATED WIRING TO BE REMOVED BACK TO BOILER ROOM PANEL AND TERMINATED.  
 ALL EXISTING MECHANICAL EQUIPMENT, FANS, LOUVRES, THERMOSTATS, ETC. ARE TO BE REMOVED AND DISPOSED OF. CONTRACTOR TO REMOVE ALL EXISTING PERIMETER HOT WATER RADIATION AND ASSOCIATED PIPING AND CONTROLS. PIPING IS TO BE CUT BACK TO VESTIBULE AS SHOWN.  
 CONTRACTOR IS TO REMOVE AND RE-INSTALL EXISTING FIRE ALARM DEVICES IN NEW BUILDING (HORN/STROBE, PULL STATION AND FIRE EXTINGUISHER) ALL OTHER DEVICES TO BE REMOVED AND TERMINATED.  
 CONTRACTOR TO CO-ORDINATE WITH OWNER PRIOR TO REMOVAL OF ALL EQUIPMENT AND ENSURE ALL EQUIPMENT IS TO BE DISPOSED OF OR TURNED OVER TO OWNER.

EXISTING FIRE EXTINGUISHER TO BE REMOVED AND RE-INSTALLED



EXISTING GREENHOUSE TO BE DEMOLISHED



EXISTING HORN/STROBE TO BE REMOVED AND RE-INSTALLED IN NEW STRUCTURE



EXISTING FIRE EXTINGUISHER TO BE REMOVED AND RE-INSTALLED



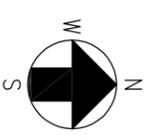
EXISTING PERIMETER HEATING TO BE DEMOLISHED



EXISTING HYDRAONIC PIPING TO BE DEMOLISHED



EXISTING HYDRAONIC PIPING/HEATING ETC. TO BE DEMOLISHED



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REV.	DESCRIPTION	DATE
0	ISSUED FOR TENDER	11 FEB. 2016

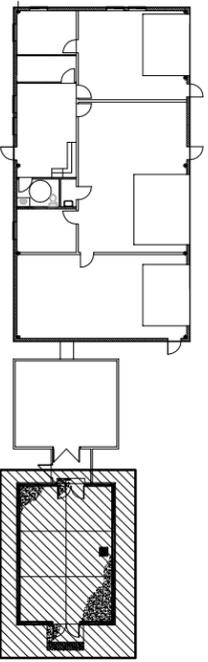
PROJECT DESCRIPTION:  
**GREAT LAKES FORESTRY CENTRE**  
**1219 QUEEN STREET EAST**  
**RENOVATED STORAGE - BUILDING 'G'**  
**SAULT STE. MARIE, ON**

DRAWING DESCRIPTION:  
**ARCH/MECH/PLUMB/ELEC**  
**BUILDING 'G'**  
**STORAGE BUILDING**  
**REMOVALS**

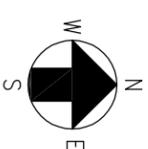
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DRAWN BY:	JV	DATE:	22 JAN. 2016
CHECKED BY:	TSJ	DATE:	--
PROJECT NO.:	15M15	FILE NO.:	15M15-AMPE

**AMPE**

SHEET NO.	1 OF 4
REV	0



KEY PLAN



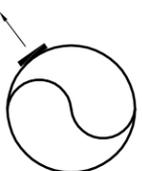
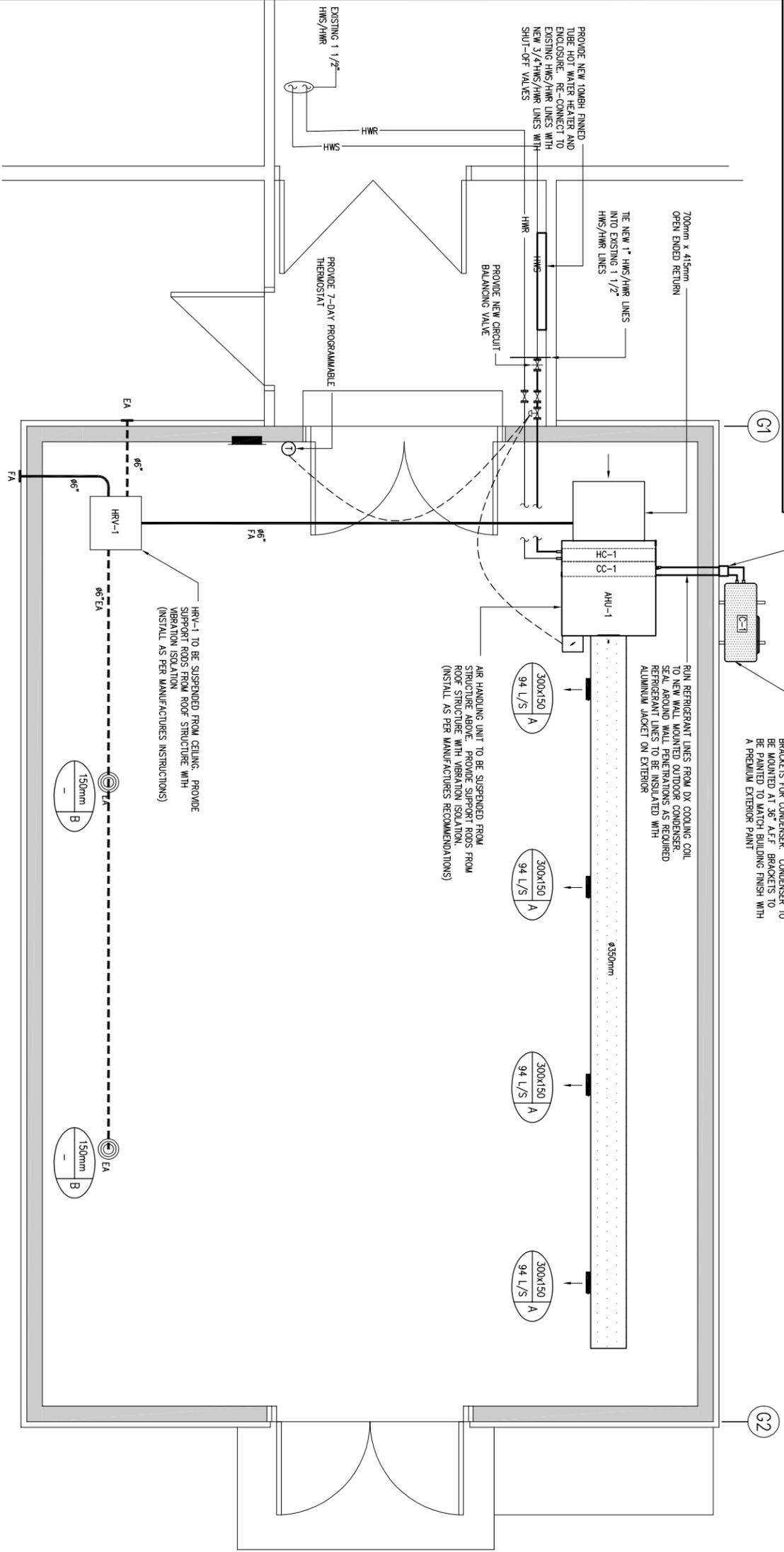
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SAULT STE. MARIE, ON P6A 1Z5  
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PROVIDE MUD BOX ASSEMBLY FOR REFRIGERANT LINES, POWER AND CONTROLS

PROVIDE STEEL WALL MOUNTED ANGLE BRACKETS FOR CONDENSER. CONDENSER TO BE MOUNTED AT 36" AFF. BRACKETS TO BE PAINTED TO MATCH BUILDING FINISH WITH A PREMIUM EXTERIOR PAINT

RUN REFRIGERANT LINES FROM DX COOLING COIL TO NEW WALL MOUNTED OUTDOOR CONDENSER. SEAL AROUND WALL PENETRATIONS AS REQUIRED. REFRIGERANT LINES TO BE INSULATED WITH ALUMINUM JACKET ON EXTERIOR

AIR HANDLING UNIT TO BE SUSPENDED FROM STRUCTURE ABOVE. PROVIDE SUPPORT RODS FROM ROOF STRUCTURE WITH VIBRATION ISOLATION. (INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS)



SPIRAL DUCT DETAIL

**BILL OF MATERIAL**

AHU-1	HORIZONTAL INDOOR AIR HANDLING UNIT, DOUBLE WALL INSULATION 25mm THICK, 50mm HIGHWAY FILTER 400mm x 800mm, DRAW-THRU SUPPLY FAN, 230V 1 $\phi$ , 1262 FAN RPM, 0.5 HP, HIGH EFFICIENCY, 00P SINGLE SPEED, 800 CFM, STAINLESS STEEL DRAIN PAN, UNIT C/W BAGNET CONTROL BOARD
C-1	2-TON AIR CONDITIONER WITH PIRSON REFRIGERANT, 1.3 SEER, WEATHER RAMOR CABINET, ALL STEEL CABINET CONSTRUCTION, MESH COIL GUARD, BAKED ON POWDER PAINT, SCROLL COMPRESSOR, FACTORY SUPPLIED FILTER DRIER, HIGH PRESSURE SWITCH, LOW PRESSURE SWITCH C/W LOW AMBIENT (-20F/-28.9C) WITH ACCESSORY KIT, 240V/1 $\phi$ AND 7-DAY PROGRAMMABLE THERMOSTAT, CRANKCASE HEATER, WINTER START CONTROL, EVAPORATOR FREEZE STAT, HARD SHUTOFF TXV, COMPRESSOR START ASSIST CAPACITOR AND RELAY, WINTER COVER TO BE PROVIDED FOR CONDENSER
HRV-1	SLIM LINE COMPACT 150 CFM HRV, HIGH EFFICIENCY, ENERGY SAVING, PERMANENTLY LUBRICATED, VARIABLE SPEED PSC MOTOR FOR AIR BALANCING, MEV-13 AIR FILTER, POLYPROPYLENE/STEEL BACKDRIFT DAMPER, TEMPERATURE SENSOR, DUAL PROTECTION FOR EXHAUST FAN FAILURE, AUTOMATIC NON-REGULATING TYPE DEFROST, MOTORIZED DAMPER, WASHABLE FILTERS, TILTED CORE DESIGN, IDEAL FOR HORIZONTAL AND VERTICAL INSTALLATION C/W MOUNTING BRACKETS, SINGLE INTAKE VENT WITH EXTRUDED ALUMINUM GRILLE AND SINGLE EXHAUST VENT WITH EXTRUDED ALUMINUM GRILLE, PURNACE INTERLOCK

**GRILLE SCHEDULE**

A	300x150 EXTRUDED ALUMINUM HIGH CAPACITY DRUM LOUVER, ADJUSTABLE VANES C/W OPPOSED BLADE DAMPER AND FELT SEAL AROUND DRUM FOR MINIMIZING AIR LEAKAGE.
B	150mm EXTRUDED ALUMINUM, ROUND ADJUSTABLE LOUVERED FACE CEILING DIFFUSER

**HEATING COIL SCHEDULE**

HEATING COIL	ROOMS/TH/CHRC	AIRFLOW (CFM)	HEATING (MBH)	WATER FLOW (GPM)	ENT. FLUID TEMP	LEAVING FLUID TEMP	ENT. AIR TEMP	LEAVING AIR TEMP
HC-1	4/10/TL	800	40.95	4.1	140F	120F	60F	106.2F

**COOLING COIL SCHEDULE**

COOLING COIL	ROOMS/TH/CHRC	AIRFLOW (CFM)	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)
CC-1	3/12/OR	800	23.17	17.89

**HOT WATER HEATING**

- HOT WATER SYSTEM CONTAINS A GLYCOL MIXTURE.
- SUPPLY AND INSTALL ALL HEATING EQUIPMENT AND PIPING AS SHOWN ON DRAWINGS.
- PIPING SHALL BE STANDARD WEIGHT STEEL SCHEDULE 40 WITH SCREWED 125 LB CLASS FITTINGS OR TYPE K COPPER. USE ONLY ECCENTRIC REDUCERS ON HORIZONTAL PIPING.
- INSTALL AUTOMATIC AIR VENTS C/W ISOLATION VALVES IN ALL HIGH POINTS. HEAVY DUTY AIR VENTS IN EQUIPMENT ROOMS SHALL BE PIPED TO DRAINS. PROVIDE DRAIN COCKS AT ALL LOW POINTS.
- ALL VALVES UP TO 2" (50mm) SHALL BE FULL PORT BRONZE BALL VALVES, 2 1/2" (65mm) AND OVER USE BUTTERFLY VALVES.
- ALL NEW AND EXISTING PIPING IS TO BE INSULATED WITH PLASTIC WRAP. PIPING TO BE LABELLED HWS/HWR AND SIZE OF PIPING WITH DIRECTION OF FLOW ARROWS. PVC JACKETING TO BE COLOURED RED FOR HWS AND BLUE FOR HWR.
- ISOLATIONS VALVES, FLEX LINE, AND UNIONS SHALL BE PROVIDED FOR FINAL CONNECTION TO FORCE CEILING HEATERS, HRV'S ETC. CONTRACTOR TO PROVIDE FIRESTOPPING AT ALL PENETRATIONS THROUGH WALLS INTO CORRIDOR.



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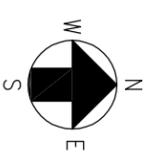
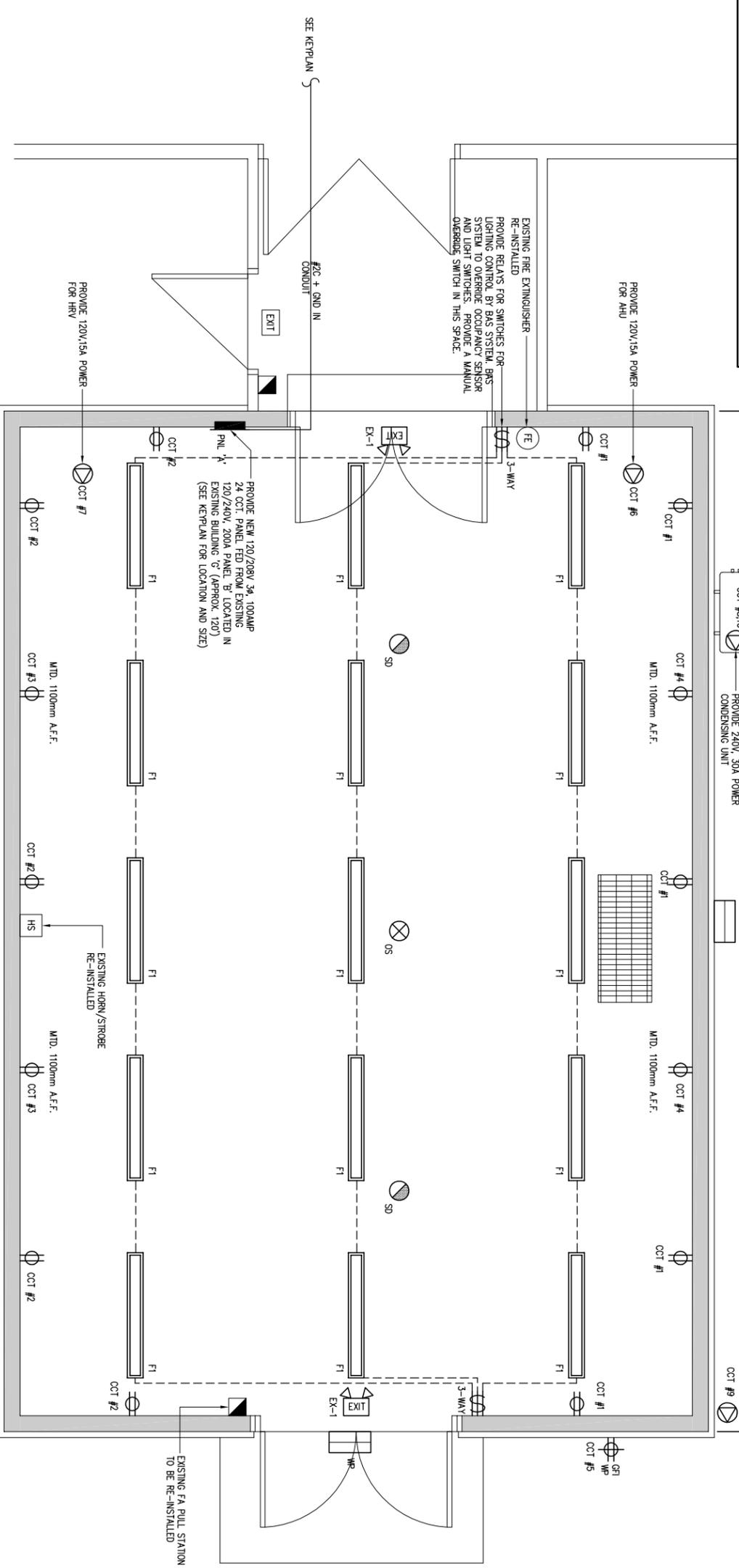
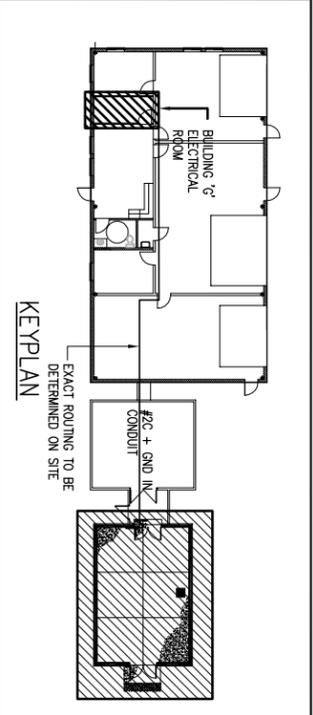
ENGINEER'S SEAL

REV.	DESCRIPTION	DATE
0	ISSUED FOR TENDER	11 FEB. 2016

PROJECT DESCRIPTION:  
**GREAT LAKES FORESTRY CENTRE  
1219 QUEEN STREET EAST  
RENOVATED STORAGE - BUILDING 'G'  
SAULT STE. MARIE, ON**

DRAWING DESCRIPTION:  
**MECHANICAL  
NEW PLAN**

SCALE: 1:50	METRIC	FORM SIZE (A3/24x36)
DRAWN BY: JV	DATE: 22 JAN. 2016	
CHECKED BY: TSI	DATE: 10 FEB. 2016	
PROJECT NO: 15M15	FILE NO: 15M15-M1	
<b>M1</b>	SHEET NO. <b>2 OF 4</b>	
	REV <b>0</b>	



**LEGEND**

FE	EXISTING FIRE EXTINGUISHER RE-INSTALLED
HS	EXISTING FA HORN/STROBE RE-INSTALLED
F1	EXISTING FA PULLSTATION RE-INSTALLED
φ	NEW DUPLEX RECEPTACLE MOUNTED AT 300mm A.F.F. UNLESS NOTED OTHERWISE
SD	NEW PHOTOELECTRIC ADDRESSABLE SMOKE DETECTOR (COMPATIBLE WITH EXISTING SYSTEM)
\$	NEW RECESSED ELECTRICAL PANEL
□	3-WAY LIGHT SWITCH
▭	NEW EXTERIOR WALL PACK TO MATCH EXISTING BUILDING
⊗	NEW DUAL TECHNOLOGY OCCUPANCY SENSOR PASSIVE INFRARED AND ULTRASONIC TECHNOLOGIES

**BILL OF MATERIAL**

F1	4 - 2-LAMP TB PREMIUM GRADE, SURFACE MOUNTED WRAP AROUND CEILING LUMINAIRE, SHALLOW DESIGN, CLEAR, ACRYLIC DIFFUSER WITH PRISMATIC BOTTOM AND RIBBED LINEAR SIDES, DIFFUSER SELF-ALIGNS AND HINGES FROM EITHER SIDE FOR EASY RE-LAMPING AND RE-BALLASTING, C/W LOW BALLAST FACTOR, REFLECTOR SOLID FILL (95% REFLECTANCE) SPECULAR, PROVIDE PHOTOMETRICS FOR SPEC DESIGN.
EX-1	20 GAUGE STEEL HOUSING, WHITE BAKED POWDER COAT FINISH, RUNNING MAIN LED COMBO EXIT/EMERG. LIGHT, C/W WITH PHOTOGRAPHS.
WP	HALF CYLINDER ARCHITECTURAL LOW PROFILE LED WALL SOURCE DOWN LIGHT, 120V/19/60HZ, 4000K, 25W INPUT POWER DESIGNATOR, COLOR BRONZE, E-COAT EPOXY PRIMER WITH AN ULTRA DURABLE POWER TOP COAT, EXCELLENT RESISTANCE TO CORROSION, ULTRAVIOLET DEGRADATION AND ABRASION, THE WALL PACKS INTO EXISTING EXTERIOR LIGHTING CONTROL, AS REQUIRED.

\*\* PROVIDE FA VERIFICATION UPON COMPLETION OF PROJECT.

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PROJECT DESCRIPTION:  
**GREAT LAKES FORESTRY CENTRE**  
**1219 QUEEN STREET EAST**  
**SAULT STE. MARIE, ON**

DRAWING DESCRIPTION:  
**ELECTRICAL**  
**NEW PLAN**

REV.	DESCRIPTION	DATE
0	ISSUED FOR TENDER	11 FEB. 2016

SCALE:	1:50	METRIC	FORM SIZE (A3)
DRAWN BY:	JV	DATE:	22 JAN. 2016
CHECKED BY:	TSJ	DATE:	10 FEB. 2016
PROJECT NO.:	15M15	FILE NO.:	15M15-E1

E1

SHEET NO. 3 OF 4

REV 0

