ST. CLAIR CATHOLIC
DISTRICT SCHOOL BOARD

Lighting the Way ~ Rejoicing in Our Journey

Addendum # 002

TENDER NUMBER: 619-CP2003

Renovations and Atrium Project

Our Lady of Fatima Catholic School

545 Baldoon Road, Chatham, ON

Revised Submission Deadline and Location:
Thursday April 02, 2020
2:00:00 PM Local Time
Reception Desk, Catholic Education Centre
420 Creek Street, Wallaceburg, ON

ISSUED: Friday March 6, 2020

ADDENDUM #002

This addendum forms part of the Contract Bid Documents and amends the original drawings and specifications issued for Bid on February 19, 2020.

TABLE OF CONTENTS

PART A – GENERAL

.1 SECTION 2.1 RFT SCHEDULE

Schedule has been revised to:

For the purposes of this RFT, the Board has established the following timing deadlines for the completion of the RFT process. All times listed are Local Time (Eastern Standard Time).

Event	Date & Time
Notice of Project Issue Date:	February 14, 2020
Tender Issue Date:	February 19, 2020
Mandatory Site Visit:	February 21, 2020 at 11:00 a.m.
Revised Question Deadline:	March 24, 2020 at 2:00 p.m.
Revised Responses to Questions Received:	March 26, 2020
Revised Closing Date and Time:	April 02, 2020 at 2:00:00 p.m.

.2 SECTION 2.33 INSURANCE

Insurance limits have been revised to:

- Comprehensive General Liability and Property Damage with a limit of not less than **$5,000,000.00 (five million dollars)**.
- Motor Vehicle Public Liability and Property Insurance on all owned and rented equipment with a limit of not less than **$2,000,000.00 (two million dollars).**

.3 APPENDIX B: BID FORM

Appendix B: Bid form has been revised. REVISED APPENDIX B: BID FORM supersedes the Bid Form issued on February 19, 2020. REVISED APPENDIX B: BID FORM must be used as part of your bid submission.

.4 QUESTIONS AND ANSWERS

Q1 Can you please provide us with the contact information for the following trades?:

-Concrete Surface Solutions
-Toronto Concrete
-Surface Design.

A1 Section 09 61 00 – Preparation and Repair of Existing Floors is deleted from the specification documents as a project requirement. The intent of the work required under Section 09 65 00 – Resilient

Flooring has been revised to ensure that floor preparation is completed such that full warrantees for each floor type are achieved that full contract warrantees are in place by the G.C. and all sub-trades.

Q2: Request for approved alternate – section 09 65 20 Resilient Sports flooring - Taraflex flooring.

A2: Gerflor Taraflex Multi-Use 6.2 is approved as an alternate.

Q3: Request for approved alternate – section 11 67 00 Athletic Equipment – Lolimpin Equipment

A3: Lolimpin is approved as an alternate but must be in compliance to the intent of the specifications.

Q4: This is missing from the spec book: Division 6 – Wood and Plastic

A4: Division 06 – Wood and Plastic was issued as part of Addendum #001.

Q5: On page 380 of the Request for Tender, when outlining the type of letters required for the sign, it says the name of the school is to be "St. XXXXXXXXXX Catholic Elementary School". We are wondering if the school's name is to be changing from an "Our Lady" to a "St",or what is the actual copy that is going up for exterior signage. Any clarification you can provide is much appreciated

A5: Section 10 14 00 – Signage is deleted from the specification documents as a project requirement. Refer to Cash Allowances B3 - 5a – Bid Form Revised for addendum#002.

Q6: I would like to submit that Almita Piling be listed as an acceptable helical pile designer, manufacturer and installer for this project.

A6: Altima Piling is an acceptable contractor under Section 31 66 15 – Helical Pier Foundations.

Q7: We would like to request your consideration of our QUIK SHEILD 112UE Spray Foam Insulation Product as an alternate for this project

A7: The QUIK SHEILD 112UE Spray Foam Insulation Product is approved as an alternate.

Q8: The Room Finish Schedule (A1001) lists Room 101 as "Conference," but there is no Room 101 on dwg A100. Please clarify.

A8: There is no Room 101. Refer to updated drawing set issued with this addendum.

Q9: As the DSS report does not include/address the F/R doors, will the cost of disposal be covered by the $5,000.00 asbestos cash allowance?

A9: There are 49 doors to be removed and disposed of as part of the abatement work included in the contract.

Q10: Please confirm there is no Electrical (Division 16) cash allowance

A10: Refer to the Electrical Division specifications.

Q11: We would like to request an approval for our Bellara cladding profile in lieu of the Long Board cladding indicated in specification 074613 Preformed Meal Siding. 2.01.3.: Indicates the soffit to be Long Board. We would like to request approval of our Bellara Cladding profile that is available in 4 wood grain finishes.

A11: Bellara cladding profile is not accepted in lieu of Long Board as specified. The product is not an equivalent.

Q12: Please confirm if roofers have to be CRCA/ORCA Members to quote the Lady Fatima project.

A12: Roofers do not need to be members of either CRCA/ORCA to bid to this project. They will have to comply to the specification requirements.

Q13: Architectural drawing A175 indicates that tapered roof insulation is required at roof perimeters. What material and slope is required? This is not called off in the project specifications.

A13: Refer to revised drawing sets issued as part of this Addendum. There is no longer a requirement for tapered roof insulation.

Q14: Would you consider adding our primerless AVB and VP membranes for Section 07 26 00 Vapour and Air Barrier Membrane?

A14: IKO MVP Modified Air Vapour Barrier by IKO is acceptable.

Q15: IKO specifications: I appreciate that we are named as an acceptable manufacturer. However, I have found some discrepancies that may cause some confusion in the tendering process. Let me know if you would like me to mark up your specification

A15: Refer to Section 07 52 00 Modified Bituminous Membrane Roofing - Revised and issued with this addendum. The specifications as written shall stand.

Q16: The Foundation Plan on S100 shows a footing and wall that extends along col line G1 north. There doesn't appear to be anything above it on A100 or other drawings. Please confirm if this foundation is to be there.

A16: Please refer to Structural drawings issued with this addendum.

Q17: For estimating purposes, please provide additional dimensions, including but not limited to dimensions between new columns and existing as well as the extents of the beam from new and existing.

A17: Refer to drawing sets issued with this addendum. Specifically drawing A-100 and references to details.

Q18: Additional dimensions are required as there isn't any on the Structural Drawings and the dimensions on the Architectural drawings are referenced from walls, doors and windows and not from steel.

A18: Refer to drawing sets issued with this addendum. Specifically drawing A-100 and references to details.

Q19: I am getting calls from some of the GC's looking for abatement pricing on your upcoming renovation project at Our Lady of Fatima in Chatham. I looked on line at the Drawings and specs that are currently out and I do not see where an updated detailed room by room Designated Substance survey or where any sort of detailed asbestos abatement scope of work is currently included as part of the Bid Package.

Do you know if an abatement scope and updated designated substance survey report is going to be issued as part of an addendum for this project?

A19: Refer to Designated Substance report issued with this addendum.

Q20: Demo Note 20 instructs to remove the existing blinds. New work Note 1 instructs to supply new blinds. There is no spec section for the new blinds. Please confirm the blinds are being replaced. If yes, please specify the new blinds (DWG AD100/AD200, A200)

A20: Where note 20 indicates, remove the old blind system and then replace with the new blind system. Some rooms already have new blinds that are not to be replaced. Match Colour of existing blinds to remain for the new blind installations. Refer to Specification Section 12 24 10 – Interior Roller Window Shade System, issued with this addendum.

Q21: Please clarify the following: the wall schedule calls for blueskin behind spray foam, should it be applied over entire wall surface or only at openings and penetrations?

A21: Refer to Section 07 26 00 - Comply to Part 3.

PART B – SPECIFICATIONS

1.	Revised Table of Contents Included new specification Division and Sections	5 Page(s)
2.	Revised Bid Form:	6 Page(s)
3.	Revised Specification Section 07 21 13 to replace previously issued. Corrections to header title.	5 Page(s)
4.	Revised Specification Section 07 52 00 to replace previously issued. Revisions throughout.	12 Page(s)
5.	Revised Specification Section 08 71 10 – Hardware Schedule. to replace previously issued Hardware Schedule Only. Revisions throughout.	17 Page(s)
6.	Revised Specification Section 09 65 19 to replace previously issued. Revisions throughout.	7 Page(s)
7.	Added Specification Section 10 21 20 - Solid Phenolic Toilet Partitions	4 Page(s)
8.	Added Specification Section 12 24 10 Roller Window Shades	5 Page(s)
9.	Delete Specification Section 09 61 00 – No Longer a Requirement for this project.	

10. Refer to Section 09 21 16 - 2.9. *Delete:* Column Cover - no longer a requirement.
11. Refer to Section 10 51 00 – 2.1.3 *Revise to read*: Provide Half Height Lockers in Staff Room only
12. Refer to Section 31 23 00 – 1.9 *Delete:* Prices - no longer a requirement.

PART C – ARCHITECTURAL DRAWINGS

1. Refer to attached Drawings re-issued as part of Addendum No. 2 issued by Wilson Diaz Architects Inc. — 43 Sheets(s)

ARCHITECTURAL SKETCHES

None at this time.

PART D – STRUCTURAL DRAWINGS/SKETCHES

1. Refer to attached Drawings re-issued as part of Addendum No. 2 issued by Vanboxmeer and Stranges Engineering Ltd. — 17 Sheet(s)

PART E – MECHANICAL / ELECTRICAL DRAWINGS

1. Refer to attached Electrical Drawings re-issued as part of Addendum No. 2 issued by Chorley and Bisset Engineering Ltd. — 17 Sheet(s)

2. Refer to attached Mechanical Drawings re-issued as part of Addendum No. 2 issued by Chorley and Bisset Engineering Ltd. — 26 Sheet(s)

PART F – CIVIL AND SITE WORK DRAWINGS

1. Refer to attached drawings P4-SE1 revised and re-issued. — 1 Sheet(s)

This concludes Addendum #002.

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD
Lighting the Way ~ Rejoicing in Our Journey

REVISED APPENDIX B: Bid Form

Submitted By: _____

To:

St. Clair Catholic District School Board

619-CP2003 Renovation and Atrium Project

Our Lady of Fatima Catholic School, Chatham, ON

B1. Base Bid Price

The Drawings, Specifications and other Contract Documents for this Project have been examined, as well as the premises and job site conditions affecting the work. The undersigned hereby offers to complete the work in accordance with the Contract Documents for the following bid price, except as defined below for HST:

_____

_____ Dollars ($ _____)

in Canadian funds EXCLUDING HST. HST will be added to the bid price.

In submitting this Bid, the undersigned recognizes and accepts the right of the Owner to accept any Bid, which is deemed the most advantageous to the Owner, (or any part thereof), at the price submitted, or to reject any or all Bids. Acceptance of the Bid and/or award of the contract is subject to the approval of the Board.

In the event that a discrepancy arises between the written bid price and the associated numerical price, the written bid price will be deemed to be correct.

B2. Harmonized Sales Tax (HST)

The bidder shall not include the applicable HST in the bid price. The successful contractor will indicate on each application for payment as a separate amount the appropriate HST the Owner is obliged to pay.

HST Registration # _____

B3. Cash Allowances

1. Include a General Contingency Allowance Stipulated Sum of Eighty Thousand Dollars ($80,000.00).

2. Include a Stipulated Sum of Ten Thousand Five Hundred Dollars ($10,000.00) to cover over the following items from which the Consultant shall direct payment for services, labour, and material.
    a. Supply and installation of Fob Readers and Airphone for access control by JPW Systems.

3. Include a Stipulated Sum of Five Thousand Dollars ($5,000.00) to cover over the following items from which the Consultant shall direct payment for services, labour, and material.
    a. Related to unforeseen minor asbestos abatement.

4. Include a Stipulated Sum of Fifteen Thousand Dollars ($15,000.00) to cover over the following items from which the Consultant shall direct payment for services, labour, and material.
    a. Testing & Inspection.

5. Include a Stipulated Sum of Ten Thousand Dollars ($10,000.00) to cover over the following items from which the Consultant shall direct payment for services, labour, and material.
    a. School Signage.

6. Include a Stipulated Sum of Twenty-Five Thousand Dollars ($25,000.00) to cover over the following items from which the Consultant shall direct payment for services, labour, and material.
    a. Installation of P.A. system provided by owner including all new wiring, clocks and call switches to be integrated into all Classroom Modules.

The General Contractor is to coordinate and ensure that all cash allowances specified in Division 23, 24 and Division 25 are fully accounted for in the base price.

The General Contractor is to coordinate and ensure that all cash allowances specified in Division 26 are fully accounted for in the base price.

Time and Materials rates to be applied against Cash Allowance work. Final reconciliation will adjust the cash allowance as credit to the SCCDSB for unexpended amounts and extra to the contractor for over expenditure. The contractor shall mark-up sub-trade time and materials billing for this portion of work at 10% only.

B4. <u>Itemized Prices</u>

The following prices have been included in the Base Bid amount. The following prices, if accepted by the owner, shall include all labour, material, tools, equipment, overhead and profit, but exclude H.S.T. No other cost consideration shall be added to the contract for the scope of this work if accepted by the owner. The owner retains the right to cancel any or all of the sites for any reason.

Itemized Price #1: None at this Time

B5. Alternate Prices

It is accepted that the intent of alternate prices is to allow the Owner to select an alternative scope of work at a price which is declared below, and solely at the owner's discretion. All prices submitted take into consideration and allow for changes and adjustments in other work as may be necessary to provide a finished functional result, unless specifically indicated otherwise.

The following alternate prices are for work which is not included in the stipulated bid price listed on the bid form but which may be substituted by the Owner for work which is included (no price) listed shall mean no change in cost) and the Owner has the right to accept or reject any or all of the prices quoted. The following prices, if accepted by the owner, shall include all labour, material, tools, equipment, overhead and profit, but exclude H.S.T. No other cost consideration shall be added to the contract for the scope of this work if accepted by the owner.

Alternate Price #1:

Quartz Tile QT1 310 x 310 in lieu of VCT 1

$_____(extra)

Alternate Price #2

Quartz Tile QT2 610 x 610 in lieu of VCT 1

$_____(extra)

Alternate Price #3

Interflor DuraMultisport in lieu of Tarket Omnisport 7.1

$_____(credit)

Alternate Price #4

Gerflor Taraflex Multi-Use 6.2 in lieu of Tarket Omnisport 7.1

$_____(credit)

Alternate Price #5

Provide Solid Phenolic Toilet Partitions in Lieu of Metal Toilet Partitions

$_____(extra)

B6. Separate Prices

It is accepted that the intent of separate prices is to allow the Owner to select a separate scope of work at a price which is declared below, and solely at the owner's discretion.

The following price has not been included in the Base Bid amount. The following prices, if accepted by the owner, shall include all labour, material, tools, equipment, overhead and profit, but exclude H.S.T. No other cost consideration shall be added to the contract for the scope of this work if accepted by the owner.

Separate Price #1: None at this time.

B7. List of Subcontractors

Civil Contractor _____

Mechanical Contractor _____

Electrical Contractor _____

Masonry Contractor _____

Glass and Glazing Contractor _____

Acoustics and Drywall Contractor _____

Structural Steel Contractor _____

Flooring Contractor _____

Painting Contractor _____

B8. Project Superintendent / Supervisor

The Owner requires the General Contractor provide a full time site supervisor for the duration of the project. A minimum of 5 years supervisory experience is required. List proposed personnel and their experience in the table below. Supervisory experience with firms other than the Bidder is acceptable to include on the list. The General Contractor shall indicate the person chosen in writing to the Owner within 5 days of contract award.

Name	Firm/Position	Qualifications/ Experience

B9. Conflict of Interest

I /We confirm that: (please check one)

_____ There is not nor was there any actual or perceived Conflict of Interest or any other type of unfair advantage in our submitting this Proposal or performing or observing the contractual obligations of the Contractor in the Agreement.

OR

_____ Complete with this bid submission is a declaration on company letterhead of situations which may be a Conflict of Interest or an instance of unfair advantage or appears as potentially a Conflict of Interest or unfair advantage in our company submitting this Proposal or the contractual obligations of the Contractor under the Agreement.

Please note that the Board has the right to waive an actual or perceived conflict of interest as described in section 2.54 CONFLICT OF INTEREST.

B10. Agreement of Terms

I/We hereby acknowledge and agree that I/we have read, accepted, and completed all Contract Terms and Conditions and Appendices.

It is the SCCDSB's intention to use a CCDC 2-2008 Stipulated Price Contract when establishing a contract with the successful proponent(s).

The undersigned acknowledges receipt of Addenda Numbers _____ through _____inclusive, and that the price, or adjustment thereof, for all work required therein is included in this submission.

This page must be signed below and returned with your submission for your bid to be accepted.

I/We the undersigned are duly authorized to execute this Bid Submission on behalf of:

Company: _____

Address: _____

Name: _____

Title: _____

Signature: _____ Date: _____

Phone: _____ Fax: _____

Email: _____

Please refer to Appendix A: Bidder's Response Guide to ensure you include all necessary documentation with your bid submission

SPECIFICATIONS

Division 5 – Metals

Division 6 - Wood and Plastic

Division 7 - Thermal and Moisture Protection

Division 8 – Doors and Windows

Division 9 – Finishing

Division 10 - Specialties

DRAWING LIST

Architectural

A000 – COVER PAGE
A010 – LIFE SAFETY PLAN AND SITE PLAN
A050 – ASSEMBLY TYPES
AD100 – DEMOLITION FLOOR PLAN
AD200 – DEMOLITION REFLECTED CEILING PLAN
AD300 – DEMOLITION EXTERIOR AND INTERIOR ELEVATIONS
A100 – CONSTRUCTION FLOOR PLAN
A120 – FLOOR FINISH PLAN
A150 – ENLARGED FLOOR PLANS – CLASSROOMS
A151 – ENLARGED FLOOR PLANS
A152 – WASHROOM GROUPS, FINISH PLANS, AND ELEVATIONS
A153 – GYMNASIUM ENLARGED PLAN
A175 – CONSTRUCTION ROOF PLAN
A176 – DEMOLITION ROOF PLAN
A177 – ROOFING DETAILS
A178 – ROOFING DETAILS
A200 – CONSTRUCTION REFLEWCTED CEILING PLAN
A300 – CONSTRUCTION EXTERIOR ELEVATIONS
A301 – CONSTRUCTION EXTERIOR ELEVATIONS
A400 – BUILDING ELEVATIONS
A401 – BUILDING ELEVATIONS
A500 – WALL SECTIONS
A501 – WALL SECTIONS
A600 – PLAN DETAILS
A601 – PLAN DETAILS
A602 – PLAN DETAILS
A650 – SECTION DETAILS
A651 – SECTION DETAILS
A652 – SECTION DETAILS
A653 – SECTION DETAILS
A654 – SECTION DETAILS

A800 – TYPICAL CLASSROOM ELEVATIONS – NORTH WING
A801 – TYPICAL CLASSROOM ELEVATIONS – SOUTH WING
A802 – KINDERGARTEN AND KITCHENETTE INTERIOR ELEVATIONS
A803 – INTERIOR ELEVATIONS – ATRIUM
A804 – INTERIOR ELEVATIONS – CORRIDOR
A805 – INTERIOR ELEVATIONS – CORRIDOR
A806 – INTERIOR ELEVATIONS – GYMNASIUM
A900 – MILLWORK DETAILS
A901 – MILLWORK DETAILS
A1000 – SCHEDULES
A1001 – ROOM FINISH SCHEDULE
A1002 – GLAZING ELEVATIONS

Civil

P4-SE1 – Site Servicing and Grading Plan – Revised and re-issued Addendum #002.
P4-SE2 – Notes and Details

Mechanical

M101.4 – MECHANICAL LEGEND AND DRAWING LIST
M102.4 – SCHEDULES
M103.4 – DETAILS
M201.4 – PART GROUND FLOOR PLAN – DRAINAGE
M202.4 – PART GROUND FLOOR PLAN – DRAINAGE
M203.4 – PART GROUND FLOOR PLAN – PLUMBING
M204.4 – PART GROUND FLOOR PLAN – PLUMBING
M205.4 – PLUMBING DETAILS
M301.4 – PART GROUND FLOOR PLAN – FIRE PROTECTION NORTH
M302.4 – PART GROUND FLOOR PLAN – FIRE PROTECTION SOUTH
M401.4 – PART GROUND FLOOR PLAN – HEATING
M402.4 – PART GROUND FLOOR PLAN – HEATING
M501.4 – PART GROUND FLOOR PLAN – AIR DISTRIBUTION
M502.4 – PART GROUND FLOOR PLAN – AIR DISTRIBUTION
M601.4 – MECHANICAL ROOF PLAN
M602.4 – MECHANICAL ROOF PLAN DEMOLITION
M701.4 – PART GROUND FLOOR PLAN – DRAINAGE DEMOLITION
M702.4 – PART GROUND FLOOR PLAN – DRAINAGE DEMOLITION
M703.4 – PART GROUND FLOOR PLAN – PLUMBING DEMOLITION
M704.4 – PART GROUND FLOOR PLAN – PLUMBING DEMOLITION
M705.4 - PART GROUND FLOOR PLAN – FIRE PROTECTION DEMOLITION
M706.4 – PART GROUND FLOOR PLAN – FIRE PROTECTION DEMOLITION
M707.4– PART GROUND FLOOR PLAN – HEATING DEMOLITION
M708.4– PART GROUND FLOOR PLAN – HEATING DEMOLITION
M709.4 – PART GROUND FLOOR PLAN – AIR DISTRIBUTION DEMOLITION
M710.4 – PART GROUND FLOOR PLAN – AIR DISTRIBUTION DEMOLITION

Electrical

E101.4 – ELECTRICA LEGEND, DRAWING LIST, SCHEDULES, ABBREVIATIONS, AND ELECTRICAL GENERAL NOTES
E102.4 – PANEL SCHEDULES.
E103.4 – PANEL SCHEDULES
E201.4 – PART GROUND FLOOR PLAN NORTH – LIGHTING AND FIRE ALARM
E202.4 – PART GROUND FLOOR PLAN SOUTH – LIGHTING AND FIRE ALARM
E301.4 – PART GROUND FLOOR PLAN NORTH – POWER AND SYSTEMS
E302.4 – PART GROUND FLOOR PLAN SOUTH – POWER AND SYSTEMS
E401.4 – ELECTRICAL RISERS
E501.4 – ELECTRICAL DETAILS
E502.4 – ELECTRICAL DETAILS
E503.4 – LIGHTING CONTROL DETAILS
E503.4 – LIGHTING CONTROL DETAILS
E601.4 – PART GROUND FLOOR PLAN NORTH – LIGHTING AND FIRE ALARM DEMOLITION
E602.4 – PART GROUND FLOOR PLAN SOUTH – LIGHTING AND FIRE ALARM DEMOLITION
E701.4 – PART GROUND FLOOR PLAN NORTH – POWER AND SYSTEMS DEMOLITION
E702.4 – PART GROUND FLOOR PLAN SOUTH – POWER AND SYSTEMS DEMOLITION

Structural

S100 – FOUNDATION PLAN
S101 – ROOF FRAMING PLAN
S200 – SCHEDULES
S201 – ELEVATIONS
S202 – JOIST REINFORCING
S301 – SECTIONS
S302 – SECTIONS
S303 – SECTIONS
S304 – SECTIONS
S305 – SECTIONS
S306 – SECTIONS
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S401 – TYPICAL DETAILS
S402 – TYPICAL DETAILS
S403 – TYPICAL DETAILS
S404 – TYPICAL DETAILS
S405 – TYPICAL DETAILS

End of Section

ST. CLAIR CATHOLIC
DISTRICT SCHOOL BOARD

Lighting the Way ~ Rejoicing in Our Journey

CCDC 2- 2008

Stipulated Price Contract

Supplementary Conditions

November 10, 2009

2nd Revision: 1 February 2013

3rd Revision: 3 July 2013

The Standard Construction Document CCDC 2 2008 for a Stipulated Price Contract, English version, consisting of the Agreement Between *Owner* and *Contractor*, Definitions and General Conditions of the Stipulated Price Contract, Parts 1 to 12 inclusive, governing same is hereby made part of these *Contract Documents*, with the following amendments, additions and modifications:

AGREEMENT BETWEEN OWNER AND CONTRACTOR

ARTICLE A-3 – CONTRACT DOCUMENTS

3.1 Add the following to the list of *Contract Documents* in paragraph 3.1:

- Amendments to CCDC 2 – 2008
- *Drawings*
- *Specifications*
- Performance Bond
- Labour and Material Payment Bond

ARTICLE A-5 – PAYMENT

5.1.3 Amend paragraph 5.1.3, in the first line, by deleting the words "…the issuance of the…" and replacing them with "…receipt of the *Consultant's*..."

5.3.1 Delete paragraph 5.3.1 in its entirety and replace it with the following:

Interest

.1 Should either party fail to make payments as they become due under the terms of the Contract or in an award by arbitration or court, interest shall also become due and payable on such unpaid amounts at 0% above the prime rate. Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interested quoted by the Bank of Canada for prime business loans, as it may change from time to time.

ARTICLE A-9 – CONFLICT OF INTEREST

Add new Article A-9 – Conflict of Interest:

9.1 The *Contractor*, all of the *Subcontractors* and *Suppliers* and any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall not engage in any activity or provide any services where such activity or the provision of such services creates a conflict of interest (actually or potentially, in the sole opinion of the *Owner*) with the provision of the *Work* pursuant to the *Contract*. The *Contractor* acknowledges and agrees that a conflict of interest, as described in this Article A-9, includes, but is not limited to, the use of *Confidential Information* where the *Owner* has not specifically authorized such use.

9.2 The *Contractor* shall disclose to the *Owner*, in writing, without delay, any actual or potential situation that may be reasonably interpreted as either a conflict of interest or a potential conflict of interest, including the retention of any *Subcontractor* or *Supplier* that is directly or indirectly affiliated with or related to the *Contractor*.

9.3 The *Contractor* covenants and agrees that it will not hire or retain the services of any employee or previous employee of the *Owner* where to do so constitutes a breach by such employee or previous employee of the *Owner's* conflict of interest policy, as it may be amended from time to time, until after completion of the *Work* under the *Contract*.

9.4 It is of the essence of the *Contract* that the *Owner* shall not have direct or indirect liability to any *Subcontractor* or *Supplier*, and that the *Owner* relies on the maintenance of an arm's-length relationship between the *Contractor* and its *Subcontractors* and *Suppliers*. Consistent with this fundamental term of the *Contract*, the *Contractor* will not enter into any agreement or understanding with any *Subcontractor* or *Supplier*, whether as part of any contract or any written or oral collateral agreement, pursuant to which the parties thereto agree to cooperate in the presentation of a claim for payment against the *Owner*, directly or through the *Contractor*, where such claim is, in whole or in part, in respect of a disputed claim by the *Subcontractor* or *Supplier* against the *Contractor*, where the payment to the *Subcontractor* or *Supplier* by the *Contractor* is agreed to be conditional or contingent on the ability to recover those amounts or a portion thereof from the *Owner*, failing which the *Contractor* shall be saved harmless from all or a portion of those claims. The *Contractor* acknowledges that any such agreement would undermine the required arm's-length relationship and constitute a conflict of interest. For greater certainty,

the *Contractor* shall only be entitled to advance claims against the *Owner* for amounts pertaining to *Subcontractor* or *Supplier* claims where the *Contractor* has actually paid or unconditionally acknowledged liability for those claims or where those claims are the subject of litigation or binding arbitration between the *Subcontractor* or *Supplier* and the *Contractor* has been found liable for those claims.

9.5 Notwithstanding paragraph 7.1.2 of GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT, a breach of this Article by the *Contractor*, any of the *Subcontractors*, or any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall entitle the *Owner* to terminate the *Contract*, in addition to any other rights and remedies that the *Owner* has in the *Contract*, in law, or in equity.

DEFINITIONS

Add the following new definitions:

27. **Confidential Information**

Confidential Information means all the information or material of the *Owner* that is of a proprietary or confidential nature, whether it is identified as proprietary or confidential or not, including but not limited to information and material of every kind and description (such as drawings and move-lists) which is communicated to or comes into the possession or control of the *Contractor* at any time, but *Confidential Information* shall not include information that:

1) is or becomes generally available to the public without fault or breach on the part of the *Contractor*, including without limitation breach of any duty of confidentiality owed by the *Contractor* to the *Owner* or to any third party, but only after that information becomes generally available to the public;

2) the *Contractor* can demonstrate to have been rightfully obtained by the *Contractor* from a third party who had the right to transfer or disclose it to the *Contractor* free of any obligation of confidence;

3) the *Contractor* can demonstrate to have been rightfully known to or in the possession of the *Contractor* at the time of disclosure, free of any obligation of confidence; or

4) is independently developed by the *Contractor* without use of any *Confidential Information*.

28. Construction Schedule

Construction Schedule means the schedule for the performance of the *Work* provided by the *Contractor* pursuant to GC 3.5, including any amendments to the *Construction Schedule* made pursuant to the *Contract Documents.*

29. Force Majeure

Force Majeure means any cause, beyond the *Contractor's* control, other than bankruptcy or insolvency, which prevents the performance by the *Contractor* of any of its obligations under the *Contract* and the event of *Force Majeure* was not caused by the *Contractor's* default or active commission or omission and could not be avoided or mitigated by the exercise of reasonable effort or foresight by the *Contractor*. *Force Majeure* includes *Labour Disputes*, fire, unusual delay by common carriers or unavoidable casualties, civil disturbance, acts, orders, legislation, regulations or directives of any government or other public authority, acts of a public enemy, war, riot, sabotage, blockage, embargo, lightning, earthquake, or acts of God.

30. Install

Install means install and connect. *Install* has this meaning whether or not the first letter is capitalized.

31. Labour Dispute

Labour Dispute means any lawful or unlawful labour problems, work stoppage, labour disruption, strike, job action, slow down, lock-outs, picketing, refusal to work or continue to work, refusal to supply materials, cessation or work or other labour controversy which does, or might, affect the *Work*.

32. **Overhead**

Overhead means all site and head office operations and facilities, all site and head office administration and supervision; all duties and taxes for permits and licenses required by the authorities having jurisdiction at the *Place of the Work*; all requirements of Division 1, including but not limited to submittals, warranty, quality control, calculations, testing and inspections; meals and accommodations; and, tools, expendables and clean-up costs.

33. Request for Information/RFI

Request for Information or *RFI* means written documentation sent by the *Contractor* to the *Owner* or to the *Owner's* representative or the *Consultant* requesting written clarification(s) and/or interpretation(s) of the *Drawings* and/or *Specifications*, *Contract* requirements and/or other pertinent information required to complete the *Work* of the *Contract* without applying for a change or changes to the *Work*.

16. Amend Definition 16 by adding the following to the end of the Definition:

Provide has this meaning whether or not the first letter is capitalized.

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

1.0 Where a General Condition or paragraph of the General Conditions of the *Contract* is deleted by these amendments, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, unless stated otherwise herein, and the numbering of the deleted item will be retained, unused.

GC 1.1 CONTRACT DOCUMENTS

1.1.6 Add the following to the end of paragraph 1.1.6:

The *Specifications* are divided into divisions and sections for convenience but shall be read as a whole and neither such division nor anything else contained in the *Contract Documents* will be construed to place responsibility on the *Owner* or the *Consultant* to settle disputes among the *Subcontractors* and *Suppliers* with respect to such divisions. The *Drawings* are, in part, diagrammatic and are intended to convey the scope of the *Work* and indicate general and appropriate locations, arrangements and sizes of fixtures, equipment and outlets. The *Contractor* shall obtain more accurate information about the locations, arrangements and sizes from study and coordination of the *Drawings*, including *Shop Drawings* and shall become familiar with conditions and spaces affecting those matters before proceedings with the *Work*. Where site conditions require reasonable minor changes where the change requires only the additional labour of one half hour or less, the *Contractor* shall make such changes at no additional cost to the *Owner*. Similarly, where known conditions or existing conditions interfere with new installation and require relocation, the *Contractor* shall include such relocation in the *Work*. The *Contractor* shall arrange and install fixtures and equipment in such a way as to conserve as much headroom and space as possible. The schedules are those portions of the *Contact Documents*, wherever located and whenever issued, which compile information of similar content and may consist of drawings, tables and/or lists.

1.1.7 Amend paragraph 1.1.7.1 by adding "Amendments to CCDC 2 – 2008" before "the Agreement between the Owner and the Contractor" and deleting the reference to "Supplementary Conditions".

Add new paragraphs 1.1.7.5, 1.1.7.6, 1.1.7.7 and 1.1.7.8 as follows**:**

.5 noted materials and annotations on the *Drawings* shall govern over the graphic representation of the *Drawings.*

.6 finishes in the room finish schedules shall govern over those shown on the *Drawings.*

.7 architectural drawings shall have precedence over structural, plumbing, mechanical, electrical and landscape drawings insofar as outlining, determining and interpreting conflicts over the required design intent of all architectural layouts and architectural elements of construction, it being understood that the integrity and installation of the systems designed by the *Consultant* or its sub-*Consultants* are to remain with each of the applicable drawing disciplines.

.8 should reference standards contained in the *Specifications* conflict with the *Specifications*, the *Specifications* shall govern. Should reference standards and *Specifications* conflict with each other or if certain requirements of the Specifications conflict with other requirements of the *Specifications*, the more stringent requirements shall govern.

1.1.8 Delete paragraph 1.1.8 in its entirety and substitute as follows:

The *Consultant*, on behalf of the *Owner* shall provide the *Contractor* without charge, twelve (12) copies of the *Contract Documents*, exclusive of those required by jurisdictional authorities and the executed *Contract Documents*. Additional copies can be purchased by the *Contractor* at the *Consultant's* cost of reproduction, handling and sales tax.

GC 1.3 RIGHTS AND REMEDIES

1.3.2 Delete the word "No" from the beginning of paragraph 1.3.2 and substitute the words:

"Except with respect to the requirements set out in paragraphs 2.2.13, 6.4.1, 6.5.4, 6.6.1 and 8.2.2, no…"

GC 1.4 ASSIGNMENT

Delete paragraph 1.4.1 in its entirety and replace with the following:

1.4.1 The *Contractor* shall not assign the *Contract*, or any portion thereof, without the prior written consent of the *Owner*. The *Owner* shall be entitled to assign the *Contract* to a corporation, partnership or other entity (the "Assignee"). Upon the assumption by the Assignee of the *Owner's* obligations under the *Contract*, the *Owner* shall be released from its obligations under the *Contract*.

GC 1.5 EXAMINATION OF DOCUMENTS AND SITE

Add new GC 1.5 – EXAMINATION OF DOCUMENTS AND SITE as follows:

1.5.1 The *Contractor* declares and represents that in tendering for the *Work*, and in entering into a *Contract* with the *Owner* for the performance of the *Work*, it has investigated for itself the character of the *Work* to be done, based on information generally available from a site visit. The *Contractor* has assumed and does hereby assume all risk of conditions now existing or arising in the course of the *Work* which might or could make the *Work*, or any items thereof more expensive in character, or more onerous to fulfil, than was contemplated or known when the tender was made or the *Contract* signed.

1.5.2 The *Contractor* also declares that in tendering for the *Work* and in entering into this *Contract*, the *Contractor* did not and does not rely upon information furnished by the *Owner* or any of its agents or servants respecting the nature or confirmation of the ground at the site of the *Work*, or the location, character, quality or quantity of the materials to be removed or to be employed in the construction of *Work*, or the character of the construction machinery and equipment or facilities needed to perform the *Work*, or the general and local performance of the work under the *Contract* and expressly waives and releases the *Owner* from all claims with respect to the said information with respect to the *Work*.

GC 1.6 TIME IS OF THE ESSENCE OF THE CONTRACT

Add new GC 1.6 - TIME IS OF THE ESSENCE OF THE CONTRACT as follows:

1.6.1 All time limits stated in the *Contract Documents* are of the essence of the *Contract*.

GC 2.2 ROLE OF THE CONSULTANT

2.2.7 Delete the words "Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER" .

2.2.13 Amend paragraph 2.2.13 by the addition of the following to the end of that paragraph:

If, in the opinion of the *Contractor*, the *Supplemental Instruction* involves an adjustment in the *Contract Price* or in the *Contract Time*, it shall, within ten (10) *Working Days* of receipt of a *Supplemental Instruction*, provide the *Consultant* with a notice in writing to that effect. Failure to provide written notification within the time stipulated in this paragraph 2.2.13

shall be deemed an acceptance of the *Supplemental Instruction* by the *Contractor*, without any adjustment in the *Contract Price* or *Contract Time*.

2.2.19 Add new paragraph 2.2.1.9 as follows:

The *Consultant* or the *Owner*, acting reasonably, may from time to time require the *Contractor* to remove from the *Project* any personnel of the *Contractor*, including project managers, superintendents or *Subcontractors*. Such persons shall be replaced by the *Contractor* in a timely fashion to the satisfaction of the *Consultant* or the *Owner*, as the case may be, at no cost to the *Owner*.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

2.3.2 Amend paragraph 2.3.2 by adding the words "and *Owner*" after the words "*Consultant*" in the second and third lines.

2.3.3 Delete paragraph 2.3.3 in its entirety and replace it with the following:

The *Contractor* shall furnish promptly two copies to the *Consultant* and one copy to the *Owner* of all certificates and inspection reports relating to the *Work*.

2.3.4 Insert the word "review" after the word "inspections" in the first line of paragraph 2.3.4.

2.3.5 In the first line after *"Consultant"*, add "or the *Owner"*.

2.3.8 Add a new paragraph 2.3.8 as follows:

The *Consultant* will conduct periodic reviews of the *Work* in progress, to determine general conformance with the requirements of the *Contract Documents*. Such reviews, or lack thereof, shall not give rise to any claims by the *Contractor* in connection with construction means, methods, techniques, sequences and procedures, nor in connection with construction safety at the *Place of Work*, responsibility for which belongs exclusively to the *Contractor*.

GC 2.4 DEFECTIVE WORK

2.4.1 Amend GC 2.4.1 by inserting ", the *Owner* and/or its agent" in the first sentence following "rejected by the *Consultant*".

Add new paragraphs 2.4.1.1 and 2.4.1.2:

2.4.1.1 The *Contractor* shall rectify, in a manner acceptable to the *Consultant* and to the *Owner through the Consultant* all defective work and deficiencies throughout the *Work*, whether or not they are specifically identified by the *Consultant*.

2.4.1.2 The *Contractor* shall prioritize the correction of any defective work, which, in the sole discretion of the *Owner through the Consultant*, adversely affects the day to day operations of the *Owner* or which, in the sole discretion of the *Consultant*, adversely affects the progress of the *Work*.

2.4.2 Delete paragraph 2.4.2 in its entirety and replace it with the following:

The *Contractor* shall promptly pay the *Owner* for costs incurred by the *Owner*, the *Owner's* own forces or the *Owner's* other contractors, for work destroyed or damaged or any alterations necessitated by the *Contractor's* removal, replacement or re-execution of defective work.

Add new paragraph 2.4.4 as follows:

2.4.4 Neither acceptance of the *Work* by the *Consultant* or the *Owner*, nor any failure by the *Consultant* or the *Owner* to identify, observe or warn of defective *Work* or any deficiency in the *Work* shall relieve the *Contractor* from the sole responsibility for rectifying such defect or deficiency at the *Contractor's* sole cost, even where such failure to identify, observe or warn is negligent.

GC 3.1 CONTROL OF THE WORK

3.1.3 Add a new paragraph 3.1.3 as follows:

Prior to commencing individual procurement, fabrication and construction activities, the *Contractor* shall verify at the *Place of the Work*, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the *Work* and shall further carefully compare such field measurements and conditions with the requirements of the *Contract Documents*. Where dimensions are not included or exact locations are not apparent, the *Contractor* shall immediately notify the *Consultant* in writing and obtain written instructions from the *Consultant* before proceedings with any part of the affected *Work*.

3.1.4 Add a new paragraph 3.1.4 as follows:

Notwithstanding the provisions of paragraphs 3.1.1 and 3.1.2, the *Owner* shall have access to the site at all times to monitor all aspects of construction. Such access shall in no circumstances affect the obligations of the *Contractor* to fulfill its contractual obligations.

GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

3.2.2.1 Delete paragraph 3.2.2.1 in its entirety.

3.2.2.2 Delete paragraph 3.2.2.2 in its entirety.

3.2.2.3 Delete paragraph 3.2.2.3 in its entirety.

3.2.2.4 Delete paragraph 3.2.2.4 in its entirety.

3.2.3.2 Delete paragraph 3.2.3.2 and replace it with the following:

Co-ordinate and schedule the activities and work of other contractors and *Owner's* own forces with the *Work* of the *Contractor* and connect as specified or shown in the *Contract Documents*.

3.2.3.4 Add new paragraph 3.2.3.4 as follows:

Subject to GC 9.4 CONSTRUCTION SAFETY, for the *Owner's* own forces and for other contractors, assume overall responsibility for compliance with all aspects of the applicable health and safety legislation in force at the *Place of the Work*, including all of the responsibilities of the "constructor", pursuant to the *Occupational Health and Safety Act* (Ontario)..

GC 3.3 TEMPORARY WORK

3.3.2 In paragraph 3.3.2, in the second line after the words "where required by law", insert "or the *Consultant*".

GC 3.4 DOCUMENT REVIEW

3.4.1 Delete paragraph 3.4.1 in its entirety and substitute new paragraph 3.4.1:

The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Consultant* any error, inconsistency, or omission the *Contractor* may discover. Such review by the *Contractor* shall be undertaken with the standard of care described in paragraph 3.14.1 of the *Contract*. Except for its obligation to make such review and report the result, the *Contractor* does not assume any responsibility to the *Owner* or to the *Consultant* for the accuracy of the *Contract Documents*. Provided it has exercised the degree of care and skill described in this paragraph 3.4.1, the *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the *Contract Documents*, which the *Contractor* could not reasonably have discovered through the exercise of the required standard of care.

3.4.2 Add new paragraph 3.4.2. as follows:

If, at any time, the *Contractor* finds errors, inconsistencies, or omissions in the *Contract Documents* or has any doubt as to the meaning or intent of any part thereof, including laying out of the Work, the *Contractor* shall immediately notify the *Consultant*, and request instructions, a *Supplemental Instruction*, *Change Order*, or *Change Directive*, as the case may require, and the *Contractor* shall not proceed with the work affected until the *Contractor* has received such instructions, a *Supplemental Instruction*, *Change Order* or *Change Directive*. Neither the *Owner* nor the *Consultant* will be responsible for the consequences of any action of the *Contractor* based on oral instructions.

3.4.3 Add new paragraphs 3.4.3 as follows:

Errors, inconsistencies and/or omissions in the *Drawings* and/or *Specifications* which do not allow completion of the *Work* of the *Contract* shall be brought to the *Consultant's* attention prior to the execution of the *Contract* by means of an *RFI*.

GC 3.5 CONSTRUCTION SCHEDULE

3.5.1 Delete paragraph 3.5.1 in its entirety and replace with the following:

The *Contractor* shall:

.1 within five (5) calendar days of receiving written confirmation of the award of the Contract, prepare and submit to the *Owner* and the *Consultant* for their review and acceptance, a construction schedule in the format indicated below that indicates the timing of the activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time* and in accordance with the *Contract Documents.* Such schedule is to include a delivery schedule for *Products* whose delivery is critical to the schedule for the *Work* or are required by the *Contract* to be included in a *Products* delivery schedule. The *Contractor* shall employ construction scheduling software, being the latest version of "Microsoft Project" *that* permits the progress of the *Work* to be monitored in relation to the critical path established in the schedule. The *Contractor* shall provide the schedule and any successor or revised schedules in both electronic format and hard copy. Once accepted by the *Owner* and the *Consultant*, the construction schedule submitted by the *Contractor* shall become the baseline construction schedule; and,

.2 provide the expertise and resources, such resources including manpower and equipment, as are necessary to maintain progress under the accepted baseline construction schedule or revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE; and,

.3 monitor the progress of the *Work* on a weekly basis relative to the baseline construction schedule, or any revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE, update and submit to the *Consultant* and *Owner* the electronic and hard copy schedule on a monthly basis, at a minimum, or as required by the *Consultant* and advise the *Consultant* and the *Owner* weekly in writing of any variation from the baseline or slippage in the schedule; and,

.4 provide overtime work without change to the *Contract Price* if such work is deemed necessary to meet the schedule; and,

.5 ensure that the *Contract Price* shall include all costs required to phase or stage the *Work*.

3.5.2 Add new paragraph 3.5.2 as follows:

If, at any time, it should appear to the *Owner* or the *Consultant* that the actual progress of the *Work* is behind schedule or is likely to become behind schedule, or if the *Contractor* has given notice of such to the *Owner* or the *Consultant* pursuant to subparagraph 3.5.1.3, the *Contractor* shall, either at the request of the *Owner* or the *Consultant*, or following giving notice pursuant to subparagraph 3.5.1.3, take appropriate steps to cause the actual progress of the *Work* to conform to the schedule or minimize the resulting delay. Within five (5) calendar days of the request by the *Owner* or the *Consultant* or the notice being given pursuant to subparagraph 3.5.1.3, the *Contractor* shall produce and present to the *Owner* and the *Consultant* a plan demonstrating how the *Contractor* will achieve the recovery of the last accepted schedule.

3.5.3 The *Contractor* is responsible for performing the *Work* within the *Contract Time*. Any schedule submissions revised from the accepted baseline construction schedule or revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE, during construction are not deemed to be approved extensions to the *Contract Time.* All extensions to the *Contract Time* must be made in accordance with the *Contract Documents*.

GC 3.6 SUPERVISION

Delete paragraph 3.6.1 in its entirety and replace with the following:

3.6.1 The *Contractor* shall employ a competent full-time superintendent, acceptable to the *Owner* and *Consultant,* who shall be in full time attendance at the *Place of Work* while the *Work* is being performed. The superintendent shall not be changed by the *Contractor* without valid reason which shall be provided in writing and shall not be changed without prior consultation with and agreement by the *Owner* and the *Consultant*. The *Contractor* shall replace the superintendent within 7 *Working Days* of the *Owner's* written notification, if the superintendent's performance is not acceptable to the *Owner*. The *Contractor* shall provide the *Owner* and the *Consultant* with the names, addresses and telephone numbers of the superintendent referred to in this paragraph 3.6.1 and other responsible persons who may be contacted for emergency and other reasons during non-working hours.

Delete paragraph 3.6.2 in it's entirely and replace with the following:

3.6.2 The superintendent, and any project manager appointed by the *Contractor*, shall represent the *Contractor* at the *Place of Work* and shall have full authority to act on written instructions given by the *Consultant* and/or the *Owner*. Instructions given to the superintendent or the project manager shall be deemed to have been given to the *Contractor* and both the superintendent and any project manager shall have full authority to act on behalf of the *Contractor* and bind the *Contractor* in matters related to the *Contract*.

3.6.3 Add new paragraph 3.6.3, 3.6.4, 3.6.5 and 3.6.6 as follows:

The *Owner* may, at any time during the course of the *Work*, request the replacement of the appointed representative(s). Immediately upon receipt of the request, the *Contractor* shall make arrangements to appoint an acceptable replacement, which is approved by the *Owner*.

3.6.4 The supervisory staff assigned to the *Project* shall also be fully competent to implement efficiently all requirements for scheduling, coordination, field engineering, reviews, inspections and submittals defined in the *Specifications,* and have minimum 5 years documented "Superintendent/Project Management" experience.

3.6.5 The *Consultant and Owner* shall reserve the right to review the record of experience and credentials of supervisory staff assigned to the *Project* prior to commencement of the *Work.*

3.6.6 A superintendent assigned to the *Work* shall be "Gold Seal Certified" as per the Canadian Construction Association; or a superintendent that can demonstrate the requisite experience and success related to the *Project* to the sole satisfaction of the *Owner*.

GC 3.7 SUBCONTRACTORS AND SUPPLIERS

3.7.1.1 In paragraph 3.7.1.1 add to the end of the second line "including any warranties and service agreements which extend beyond the term of the *Contract*."

3.7.1.2 In subparagraph 3.7.1.2 after the words "the *Contract Documents*" insert the words "including any required surety bonding".

Delete paragraph 3.7.2. in its entirety and replace with the following:

3.7.2 Substitution of any *Subcontractor* and/or *Suppliers* after submission of the *Contractor's* bid will not be accepted unless a valid reason is given in writing to and approved by the *Owner*, whose approval may be arbitrarily withheld. The reason for substitution must be provided to the *Owner* and to the original *Subcontractor* and/or *Supplier* and the *Subcontractor* and/or *Supplier* shall be given the opportunity to reply to the *Contractor* and *Owner.* The *Contractor* shall be fully aware of the capability of each *Subcontractor* and/or *Supplier* included in its bid, including but not limited to technical ability, financial stability and ability to maintain the proposed construction schedule.

Add new paragraphs 3.7.7 and 3.7.8 as follows:

3.7.7 Where provided in the *Contract*, the *Owner* may assign to the *Contractor*, and the *Contractor* agrees to accept, any contract procured by the *Owner* for *Work* or services required on the *Project* that has been pre-tendered or pre-negotiated by the *Owner*, and upon such assignment, the *Owner* shall have no further liability to any party for such contract.

3.7.8 The *Contractor* covenants that each subcontract or supply contract which the *Contractor* enters into for the purpose of performing the *Work* shall expressly provide for the assignment thereof to the *Owner* (at the option of the *Owner*) and the assumption by the *Owner* of the obligations of the *Contractor* thereunder, upon the termination of the *Contract* and upon written notice by the *Owner* to the other parties to such subcontracts or supply contracts, without the imposition of further terms or conditions; provided, however, that until the *Owner* has given such notice, nothing herein contained shall be deemed to create any contractual or other liability upon the *Owner* for the performance of obligations under such subcontracts or supply contracts and the *Contractor* shall be fully responsible for all of its obligations and liabilities (if any) under such subcontracts and supply contracts.

GC 3.8 LABOUR AND PRODUCTS

3.8.2 Delete paragraph 3.8.2 and substitute with the following:

Products provided shall be new and shall conform to all current applicable specifications of the Canadian Standards Association, Canadian Standards Board or General Standards Board, ASTM, National Building Code, provincial and municipal building codes, fire safety standards, and all governmental authorities and regulatory agencies having jurisdiction at the *Place of the Work*, unless otherwise specified. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*. *Products* brought on to the *Place of the Work* by the *Contractor* shall be deemed to be the property of the *Owner*, but the *Owner* shall be under no liability for loss thereof or damage thereto arising from any cause whatsoever. The said *Products* shall be at the sole risk of the *Contractor*. Workmanship shall be, in every respect, first class and the *Work* shall be performed in accordance with the best modern industry practice.

3.8.3 Amend paragraph 3.8.3 by adding the words, "…, agents, *Subcontractors* and *Suppliers*…" after the word "employees" in the first line.

Add new paragraphs 3.8.4, 3.8.5, 3.8.6, 3.8.7, 3.8.8 and 3.8.9 as follows:

3.8.4 Upon receipt of a written notice from the *Owner*, the *Contractor* shall immediately remove from the *Place of the Work*, tradesmen and labourers whose conduct jeopardizes the safety of the *Owner's* operations. Immediately upon receipt of the request, the C**ontractor** shall make arrangements to appoint an acceptable replacement.

3.8.5 Upon receipt of written notice from the *Consultant*, the *Contractor* shall remove from the *Place of Work*, tradesmen and labourers whose *Work* is unsatisfactory to the *Consultant* or who are considered by the *Consultant* to be unskilled or otherwise objectionable.

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3.86 The *Contractor* shall cooperate with the *Owner* and its representatives and shall take all reasonable and necessary actions to maintain stable and harmonious labour relations with respect to the *Work* at the *Place of the Work*, including cooperation to attempt to avoid *Work* stoppages, trade union jurisdictional disputes and other *Labour Disputes*. Any costs arising from labour disputes shall be at the sole expense of the *Contractor*.

3.8.7 The cost for overtime required beyond the normal *Working Day* to complete individual construction operations of a continuous nature, such as pouring or finishing of concrete or similar work, or *Work* that the *Contractor* elects to perform at overtime rates without the *Owner* requesting it, shall not be chargeable to the *Owner*.

3.8.8 All manufactured *Products* which are identified by their proprietary names or by part or catalogue number in the *Specifications* shall be used by the *Contractor*. No substitutes for such specified *Products* shall be used without the written approval of the *Owner* and the *Consultant*. Substitutes will only be considered by the *Consultant* when submitted in sufficient time to permit proper review and investigation. When requesting approval for the use of substitutes, the *Contractor* shall include in its submission any proposed change in the *Contract Price*. The *Contractor* shall use all proprietary *Products* in strict accordance with the manufacturer's directions. Where there is a choice of proprietary *Products* specified for one use, the *Contractor* may select any one of the *Products* so specified for this use.

3.8.9 Materials, appliances, equipment and other *Products* are sometimes specified by reference to brand names, proprietary names, trademarks or symbols. In such cases, the name of a manufacturer, distributor, *Supplier* or dealer is sometimes given to assist the *Contractor* to find a source *Supplier*. This shall not relieve the *Contractor* from its responsibility from finding its own source of supply even if the source names no longer supplies the *Product* specified. If the *Contractor* is unable to obtain the specified *Product*, the *Contractor* shall supply a substitute product equal to or better than the specified *Product,* as approved by the *Consultant* with no extra compensation. Should the *Contractor* be unable to obtain a substitute *Product* equal to or superior to the specified *Product* and the *Owner* accepts a different Product, the *Contract Price* shall be adjusted accordingly, as approved by the *Consultant*.

GC 3.9 DOCUMENTS AT THE SITE

3.9.1 Delete paragraph 3.9.1 in its entirety and substitute the following:

The *Contractor* shall keep one copy of the current *Contract Documents*, *Supplemental Instructions*, contemplated *Change Orders*, *Change Orders*, *Change Directives*, cash allowance disbursement authorizations, reviewed *Shop Drawings*, submittals, reports and records of meeting at the *Place of the Work*, in good order and available to the *Owner* and *Consultant*.

GC 3.10 SHOP DRAWINGS

3.10.1 Delete paragraph 3.10.1 in its entirety and replace with the following:

The *Contractor* shall provide shop drawings as described in the *Contract Documents* and as the *Consultant* may reasonably request**.**

3.10.9 Delete paragraph 3.10.9 in its entirety and substitute the following:

At the time of providing *Shop Drawings*, the *Contractor* shall advise the *Consultant* in writing of any deviations in Shop *Drawings* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance of such deviation expressly in writing. Where manufacturers' literature is submitted in lieu of scaled drawings, it shall be clearly marked in ink, to indicate the specific items for which review is requested.

Add new paragraphs 3.10.13, 3.10.14, 3.10.15, 3.10.16, 3.10.17 and 3.10.18 as follows:

3.10.13 Reviewed *Shop Drawings* shall not authorize a change in the *Contract Price* and/or the *Contract Time*.

3.10.14 The *Contractor* shall prepare a *Shop Drawings* schedule acceptable to the *Owner* and the *Consultant* prior to the first application for payment. A draft of the proposed *Shop Drawings* schedule shall be submitted by the *Contractor* to the *Consultant* and the *Owner* for approval. The draft *Shop Drawings* schedule shall clearly indicate the phasing of *Shop Drawings* submissions. The *Contractor* shall periodically re-submit the *Shop Drawings* schedule to correspond to changes in the construction schedule.

3.10.15 Except where the parties have agreed to a different *Shop Drawings* schedule pursuant to paragraph 3.10.3, the *Contractor* shall comply with the requirements for *Shop Drawings* submissions stated in the *Specifications*.

3.10.16 The *Contractor* shall not use the term "by others" on *Shop Drawings* or other submittals. The related trade, *Subcontractor* or *Supplier* shall be stated.

3.10.17 Certain *Specifications* sections require the *Shop Drawings* to bear the seal and signature of a professional engineer. Such professional engineer must be registered in the jurisdiction of the *Place of the Work* and shall have expertise in the area of practice reflected in the *Shop Drawings*.

3.10.18 The *Consultant* will review and return *Shop Drawings* and submittals in accordance with the schedule agreed upon in paragraph 3.10.3, The *Contractor* shall allow the *Consultant* a minimum of 10 Working *Days* to review *Shop Drawings* from the date of receipt. If resubmission of *Shop Drawings* is required, a further 10 *Working Day* period is required for the *Consultant's* review.

GC 3.11 USE OF THE WORK

3.11.1 In the second line between the words "permits and "or" add", by direction of the *Owner* or *Consultant.*

3.11.3 Add new paragraph 3.11.3 as follows:

The *Owner* shall have the right to enter or occupy the *Work* in whole or in part for the purpose of placing fittings and equipment, or for other use before *Substantial Performance of the Work*, if, in the opinion of the *Consultant*, such entry and occupation does not prevent or substantially interfere with the *Contractor* in the performance of the *Contract* within the *Contract Time.* Such entry or occupation shall neither be considered as acceptance of the *Work*, nor in any way relieve the *Contractor* from its responsibility to complete the *Contract*.

GC 3.12 CUTTING AND REMEDIAL WORK

Add new paragraphs 3.12.5 and 3.12.6 as follows:

3.12.5 Unless specifically stated otherwise in the *Specifications*, the *Contractor* shall do all cutting and making good necessary for the proper installation and performance of the *Work.*

3.12.6 To avoid unnecessary cutting, the *Contractor* shall lay out its work and advise the *Subcontractors*, when necessary, where to leave holes for installation of pipes and other work.

GC 3.13 CLEAN UP

3.13.1 At the end of the paragraph 3.13.1, add the following:

Remove accumulated waste and debris at least once a week as a minimum or as required by the nature of the *Work.*

3.13.2 In paragraph 3.13.2, in the fourth line add the word "materials" between the word "tools" and the words "*Construction Equipment*".

3.13.3 In paragraph 3.13.3, in the first and second lines add the word "materials" between the word "tools" and the words "*Construction Equipment*".

Add new paragraphs 3.13.4, 3.13.5 and 3.13.6 as follows:

3.13.4 The *Contractor* shall clean up garbage during and after construction, and maintain the site in a neat and orderly condition on a daily basis. Prior to leaving the site at the end of construction, the *Contractor* shall make good all damage to the building and its components caused by the performance of the *Work* or by any *Subcontractor* or *Supplier*. The *Contractor* shall leave the site in a clean and finished state; remove all equipment and materials; remove all paint, stains, labels, dirt, etc. from the *Work*; and touch up all damaged painted areas.

3.13.5 Without limitation to or waiver of the *Owner's* other rights and remedies, the *Owner* shall have the right to back charge to the *Contractor* the cost of damage to the site caused by transportation in and out of the site by the *Contractor*, *Subcontractors* or *Suppliers,* if not repaired before final payment.

3.13.6 The *Contractor* shall dispose of debris at location and in a manner acceptable to the *Owner*, and authorities having jurisdiction in the area of the *Work* and the disposal area, and cover containers with tarpaulins tied in place to prevent scattering of debris on site and during transport.

GC 3.14 CONTRACTOR STANDARD OF CARE

Add a new General Condition 3.14 – CONTRACTOR STANDARD OF CARE as follows:

3.14.1 In performing its services and obligations under the *Contract*, the *Contractor* shall exercise the standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor supplying similar services for similar projects. The *Contractor* acknowledges and agrees that throughout the *Contract,* the performance of the *Contractor's* obligations, duties and responsibilities shall be judged against this standard. The *Contractor* shall exercise the same standard of care, skill and diligence in respect of any *Products*, personnel or procedures which it may recommend to the *Owner*.

3.14.2 The *Contractor* further represents, covenants and warrants to the *Owner* that:

.1 the personnel it assigns to the *Project* are appropriately experienced;

.2 it has a sufficient staff of qualified and competent personnel to replace any of its appointed representatives, subject to the *Owner's* approval, in the event of death, incapacity, removal or resignation; and

.3 there are no pending, threatened or anticipated claims, liabilities or contingent liabilities that would have a material effect on the financial ability of the *Contractor* to perform its work under the *Contract*.

GC 3.15 OCCUPANCY OF THE WORK

3.15.1 The *Owner* reserves the right to take possession of and use for any intended purpose any portion or all of the undelivered portion of the *Project* even though the *Work* may not be substantially performed, provided that such taking possession and use will not interfere, in any material way, with the progress of the *Work.* The taking of possession or use of any such portion of the *Project* shall not be deemed to be the *Owner's* acknowledgement or acceptance of the *Work* or the *Project*, nor shall it relieve the *Contractor* of any of its obligations under the *Contract*.

3.15.2 Whether the *Project* contemplates *Work* by way of renovations in buildings which will be in use or be occupied during the course of the *Work* or where the *Project* involves *Work* that is adjacent to a structure which is in use or is occupied, the *Contractor*, without in any way limiting its responsibilities under the *Contract*, shall take all reasonable steps to avoid interference with fire exits, building access and egress, continuity of electric power and all other utilities, to suppress dust and noise and to avoid conditions likely to propagate mould or fungus of any kind and all other steps reasonably necessary to promote and maintain the safety and comfort of the users and occupants of such structures or adjacent structures.

GC 4.1 CASH ALLOWANCES

4.1.1 Delete the second sentence in paragraph 4.1.1

4.1.4 Delete paragraph 4.1.4 in its entirety and substitute the following:

Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the *Consultant's* direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.

4.1.5 Delete paragraph 4.1.5 in its entirety and substitute the following:

The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by *Change Order* without any adjustment for the *Contractor's* overhead and profit on such amount.

Add new paragraphs 4.1.8 and 4.1.9 as follows:

4.1.8 The *Owner* reserves the right to call, or to have the *Contractor* call, for competitive bids for portions of the *Work*, which are to be paid for from cash allowances.

4.1.9 Cash allowances cover the net cost to the *Contractor* of services, *Products*, *Construction Equipment*, freight, unloading, handling, storage, installation, provincial sales tax, and other authorized expenses incurred in performing any *Work* stipulated under the cash allowances but does not include any *Value Added Taxes* payable by the *Owner* and the *Contractor*.

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

5.1.1 Delete paragraph 5.1.1 in its entirety.

5.1.2 Delete paragraph 5.1.2 in its entirety.

GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

Delete paragraph 5.2.2 in its entirety and substitute the following:

5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties. The amount claimed shall be for the value, proportionate to the amount of the *Contract*, or work performed and *Products* delivered and incorporated into the *Work* at that date. No amount claimed shall include products delivered and incorporated into the work, unless the products are free and clear of all security interests, liens and other claims of third parties.

Each application for payment, except the first, shall include a statutory declaration, in the current CCDC 9A form, up to the date of the application for payment. Each application for payment (including the first the holdback upon Substantial Performance, and final payments), shall also include:

.1 A certificate, issued by an agency or firm providing workers' compensation insurance to the *Contractor*, verifying that coverage is in force at the time of making the application for payment, and that coverage will remain in force for at least sixty (60) days thereafter.

.2 A declaration by the *Contractor* verifying that the performance of the *Work* is in compliance with all applicable regulatory requirements respecting environmental protection, first safety, public safety and occupational health and safety.

.3 A pre-approved schedule of values, supplied by the *Contractor*, for Divisions 1 through 14 of the *Work*, aggregating the total amount of the *Contract Price.*

.4 A separate pre-approved schedule of values, supplied by each *Subcontractor*, for each of Division 15, 16, and 17 of the *Work*, aggregating the total amount of the *Contract Price.*

.5 Invoices to support all claims against the cash allowance.

.6 An acceptable construction schedule pursuant to GC 3.5.

5.2.3 Amend paragraph 5.2.3 by adding the following to the end of that paragraph:

No amount claimed shall include *Products* delivered to the *Place of the Work* unless the *Products* are free and clear of all security interests, liens, and other claims of third parties.

5.2.7 Delete existing paragraph 5.2.7:

Add new paragraphs 5.2.7, and 5.2.8 as follows:

5.2.7 The *Contractor* shall prepare and maintain current as-built drawings which shall consist of the *Drawings* and *Specifications* revised by the *Contractor* during the *Work*, showing changes to the *Drawings* and *Specifications*, which current as-built drawings shall be maintained by the *Contractor* and made available to the *Consultant* for review with each application for progress payment. The *Consultant* shall retain a reasonable amount for the value of the as-built drawings not presented for review.

5.2.8 Prior to each application for payment, the *Contractor* and the *Consultant* shall jointly review the progress of the *Work*.

GC 5.3 PROGRESS PAYMENT

5.3.1.2 In the first sentence amend as follows: After the words "issue to the *Owner*" delete "and copy to the *Contractor*". After the words "after the receipt of the" add "complete".

5.3.1.3 Delete subparagraph 5.3.1.3 in its entirety and substitute as follows:

the *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT no later than 20 calendar days after the date of a complete certificate of payment is issued by the *Consultant*

Add new paragraphs 5.3.2 and 5.3.3 as follows:

5.3.2 If the *Contractor* fails to provide all documentation as required by GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT, the *Contractor* or *Owner* shall be entitled to return the application for progress payment to the *Contractor* for completion. The 10 day review period by the *Consultant* and 20 day payment period by the *Owner* will commence upon receipt of a complete application for progress payment.

5.3.3 Payment will be mailed to the *Contractor.* The payment date shall be the date the cheque is mailed. Delay resulting from mail shall not be used in calculating payment date.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

5.4.2 Delete paragraph 5.4.2 in its entirety and substitute the following:

The *Consultant* will review the *Work* to verify the validity of the application and shall promptly, and in any event, no later than 30 calendar days after receipt of the *Contractor's* complete deficiency list and application, the *Consultant* shall:

.1 prepare a final deficiency list incorporating all items to be completed or corrected. Each item is to have an indicated value for correction or completion. Determination of the value is defined in GC 5.10 – DEFICIENCY HOLDBACK. The final deficiency list complete with values is to be included with the *Consultant's* draft verification and shall be reviewed with the *Owner* prior to 5.4.2.2.

.2 having completed 5.4.2.1, the *Consultant* shall:
.1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
.2 state the date of *Substantial Performance of the Work* in a certificate and issue a copy of that certificate to each the *Owner* and the *Contractor.*

5.4.3 Delete paragraph 5.4.3 in its entirety and substitute the following:

Following the issuance of the certificate of *Substantial Performance of the Work*, the following shall apply to completing the *Work*:

.1 *Contractor* is to complete the *Work* within sixty (60) calendar days.
.2 No payments will be processed between *Substantial Performance of the Work* and the completion of the *Work.*
.3 The *Owner* reserves the right to contract out any or all unfinished *Work* if it has not been completed within sixty (60) days of *Substantial Performance of the Work* without prejudice to any other right or remedy and without affecting the warranty period. The cost of completing the *Work* shall be deducted from the *Contract Price.*

Add new paragraphs 5.4.4, 5.4.5 and 5.4.6:

5.4.4 Within the time prescribed by the construction/builder's lien legislation in force at the *Place of the Work*, or where there is no legislation or no time prescribed, within a reasonable time of receiving a copy of the certificate of *Substantial Performance of the Work* signed by the *Consultant*, the *Contractor* shall take whatever steps are required to publish or post a signed copy of the certificate, as is required by such legislation. If the *Contractor* fails to comply with this provision, the *Owner* may take the required steps pursuant to the legislation and charge the *Contractor* for any costs so incurred.

5.4.5 Prior to submitting its written application for *Substantial Performance of the Work*, the *Contractor* shall submit to the *Consultant* all:

.1 guarantees;
.2 warranties;
.3 certificates;
.4 final testing and balancing reports;
.5 distribution system diagrams;
.6 spare parts;
.7 maintenance manuals;
.8 samples;
.9 reports and correspondence from authorities having jurisdiction in the Place *of the Work*;
.10 shop drawings;

.11 inspection certificates;
.12 red-lined record drawings from the construction trailer in two copies.

and other materials or documentation required to be submitted under the *Contract*, together with written proof acceptable to the *Owner* and the *Consultant* that the *Work* has been substantially performed in conformance with the requirements of municipal, governmental, and utility authorities having jurisdiction in the *Place of the Work*. The *Consultant* shall refuse to certify *Substantial Performance of the Work* if the submittals referred to in this paragraph 5.4.5 are not provided by the *Contractor*.

5.4.6 The *Owner* shall withhold, from amounts otherwise payable to the *Contractor*, an amount not to exceed one (1) percent of the *Contract Price* as security for the obligation of the *Contractor* to deliver two copies of the red-lined record drawings.

GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

Add new subparagraph 5.5.1.3 as follows

5.5.1.3 submit a statement that no written notices of liens have been received by it

5.5.2 Amend paragraph 5.5.2 by adding the following sentence to the end of that paragraph:

A reserve fund may be retained by the *Owner* to secure the correction of deficiencies and/or warranty claims. Included in the reserve fund would be all *Consultant* and *Owner* costs related to the correction of deficiencies and/or warranty claims.

5.5.3 Delete paragraph 5.5.3 in its entirety.

5.5.5 Delete paragraph 5.5.5 in its entirety.

GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK

Delete GC 5.6 in its entirety.

GC 5.7 FINAL PAYMENT

5.7.1 Delete paragraph 5.7.1 in its entirety and substitute as follows:

When the *Contractor* considers that the *Work* is completed, as defined in the lien legislation applicable to the *Place of the Work* or if such definition does not exist, in accordance with other applicable legislation, industry practice or provisions which may be agreed to between the parties, the *Contractor* shall submit an application for final payment. The *Contractor's* application for final payment shall be accompanied by any documents or materials not yet delivered pursuant to paragraph 5.4.5, together with complete and final as-built drawings and:

.1 the Contractor's written request for release of the deficiency holdback, including a statement that no written notices of lien have been received by it;

.2 a Statutory Declaration CCDC 9A-2001.

The *Work* shall be deemed not to be completed until all of the aforementioned documents have been delivered, and the *Owner* may withhold payment in respect of the delivery of any documents in an amount determined by the *Consultant* in accordance with the provisions of GC 5.8 - WITHHOLDING OF PAYMENT.

5.7.2 Delete from the first line of paragraph 5.7.2 the words, "calendar days" and substitute the words "*Working Days*".

5.7.4 Delete from the second line of paragraph 5.7.4 the words, " 5 calendar days after the issuance" and substitute the words "30 calendar days after receipt of".

GC 5.8 WITHHOLDING OF PAYMENT

Delete paragraph 5.8.1 and replace with the following:

5.8.1 If because of conditions reasonably beyond the control of the *Contractor*, there are items of work that cannot be performed, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such remaining work.

GC 5.10 DEFICIENCY HOLDBACK

Add a new General Condition 5.10 as follows:

5.10.1 Notwithstanding any provisions contained in the *Contract Documents* concerning certification and release of monies to the *Contractor*, the *Owner* reserves the right to establish a deficiency holdback, at the time of the review for *Substantial Performance*, based on a 200% dollar value of the deficiencies listed by the *Consultant*. The value of work outstanding for the calculation of *Substantial Performance of the Work* under the *Construction Lien Act* (Ontario) shall utilize the 100% dollar value. No individual deficiency will be valued at less than two hundred dollars ($200.00). The *Owner* shall retain the entire deficiency holdback amount until completion of all of the deficiencies listed by the *Consultant* to the satisfaction of the *Consultant*.

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

Add new paragraphs 6.1.3, 6.1.4, 6.1.5, 6.1.6, 6.1.7 and 6.1.8 as follows:

6.1.3 The *Contractor* agrees that changes resulting from construction coordination, including but not limited to, site surface conditions, site coordination, and *Subcontractor and Supplier* coordination are included in the *Contract Price* and the *Contractor* shall be precluded from making any claim for a change in the *Contract Price* as a result of such changes.

6.1.4 Labour costs shall be actual, prevailing rates at the *Place of the Work* paid to workers, plus statutory charges on labour including WSIB, unemployment insurance, Canada pension, vacation pay, hospitalization and medical insurance. The *Contractor* shall provides these rates, when requested by the *Consultant*, for review and/or agreement.

6.1.5 Quotations for changes to the *Work* shall be accompanied by itemized breakdowns together with detailed, substantiating quotations or cost vouchers from *Subcontractors* and *Suppliers*, submitted in a format acceptable to the *Consultant* and including any costs associated with extensions in *Contract Time.*

6.1.6 When both additions and deletions covering related *Work* or substitutions are involved in a change to the *Work*, payment, including *Overhead* and profit, shall be calculated on the basis of the net difference, if any, with respect to that change in the *Work*.

6.1.7 No extension to the *Contract Time* shall be granted for changes in the *Work* unless the *Contractor* can clearly demonstrate that such changes significantly alter the overall construction schedule submitted at the commencement of the *Work.* Extensions of *Contract Time* and all associated costs, if approved pursuant to GC 3.4.2, are to be included in the relevant *Change Order.*

6.1.8 When a change in the *Work* is proposed or required, the *Contractor* shall within 10 calendar days submit to the *Consultant* for review a claim for a change in *Contract Price* and/or *Contract Time.* Should 10 calendar days be insufficient to prepare the submission, the *Contractor* shall within 5 calendar days, advise the *Consultant* in writing of the proposed date of submission of the claim. Claims submitted after the dates prescribed herein will not be considered.

GC 6.2 CHANGE ORDER

6.2.1 Add after the last sentence in the paragraph:

The adjustment in the *Contract Time* and the *Contract Price* shall include an adjustment, if any, for delay or for the impact that the change in the *Work* has on the *Work* of the *Contractor*, and once such adjustment is made, the *Contractor* shall be precluded from making any further claims for delay or impact with respect to the change in the *Work*.

Add new paragraph 6.2.3 as follows:

6.2.3 The value of a change shall be determined in one or more of the following methods as directed by the *Consultant*.

.1 by estimate and acceptance of a lump sum;

.2 by negotiated unit prices which include the *Contractor's Overhead* and profit, or;

.3 by the actual cost to the *Owner*, such costs to be the actual cost after all credits included in the change have been deducted, plus the following ranges of mark-up on such costs:

.1 for *Change Orders* with a value of $0 to $15,000 the total *Subcontractor/Supplier* mark-up including *Overhead* and profit shall be 10% and the total *Contractor* mark-up including overhead and profit shall be 5%.

.2 For *Change Orders* in excess of $15,000, the total *Subcontractor/Supplier* mark-up including *Overhead* and profit shall be 5% and the total *Contractor* mark-up including *Overhead* and profit shall be 3%.

Add new paragraph 6.2.4 as follows:

6.2.4 All quotations will be submitted in a complete manner listing:

.1 quantity of each material,
.2 unit cost of each material,
.3 man hours involved,
.4 cost per hour,
.5 *Subcontractor* quotations submitted listing items 1 to 4 above and item 6 below.
.6 mark-up

Add new paragraph 6.2.5 as follows:

6.2.5 The *Owner* and the *Consultant* will not be responsible for delays to the *Work* resulting from late, incomplete or inadequately broken down valuations submitted by the *Contractor*.

GC 6.3 CHANGE DIRECTIVE

6.3.6.1 Amend paragraph 6.3.6.1 by deleting the final period and adding as follows:

.1 Ten percent (10%) for profit plus five percent (5%) for overhead on work by the *Contractor's* own forces up to the value of $15,000 and five percent (5%) for profit plus three percent (3%) for *Overhead* on work by the *Contractor's* own forces in excess of $15,000 and,

.2 Ten percent (10%) fee on amounts paid to *Subcontractors* or *Suppliers* under subparagraph 6.3.7.9 for changes up to the value of $15,000 and five percent (5%) on changes over $15,000.

Unless a *Subcontractor's* or *Supplier's* price has been approved by the *Owner*, the *Subcontractor* or *Supplier* shall be entitled to its actual net cost as determined in accordance with paragraph 6.3.7, plus ten percent (10%) for profit and five percent (5%) for *Overhead* on such actual net cost for changes in the *Work*, up to the value of $15,000 and five percent (5%) for profit and three percent (3%) for overhead on such actual net cost changes in the *Work* in excess of $15,000.

6.3.6.2 Delete paragraph 6.3.6.2 and replace it with the following:

If a change in the *Work* results in a net decrease in the *Contract Price* in excess of $15,000 the amount of the credit shall be the net cost, with deduction for *Overhead* and profit. If a change in the *Work* results in a net decrease in the *Contract Price* of $15,000 or less, the amount of the credit shall be the net cost, without deduction for *Overhead* or profit.

6.3.7.1 In subparagraph 6.3.7.1 insert "while directly engaged in the work attributable to the change" after the words "in the direct employ of the *Contractor*".

6.3.7 At the end of paragraph 6.3.7 add the following:

All other costs attributable to the change in the *Work* including the costs of all administrative or supervisory personnel are included in *Overhead* and profit calculated in accordance with the provisions of paragraph 6.1.5 of GC6.1 – OWNER'S RIGHT TO MAKE CHANGES.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

6.4.1 Delete paragraph 6.4.1 and replace with the following:

6.4.1.1 Prior to the submission of the bid on which the *Contract* was awarded, the *Contractor* confirms that it carefully investigated the *Place of the Work* and carried out such tests as it deemed appropriate and, in doing so, applied to that investigation the degree of care and skill required by paragraph 3.14.1.

6.4.1.2 No claim by the *Contractor* will be considered by the *Owner* or the *Consultant* in connection with conditions which could reasonably have been ascertained by such investigation or other due diligence undertaken prior to the execution of the *Contract*.

6.4.2 Amend paragraph 6.4.2 by adding a new first sentence as follows:

Having regard to paragraph 6.4.1, if the *Contractor* believes that the conditions of the *Place of the Work* differ materially from those reasonably anticipated, differ materially from those indicated in the *Contract Documents* or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1, it shall provide the *Owner* and the *Consultant* with *Notice in Writing* no later than five (5) *Working Days* after the first observation of such conditions.

Amend the existing second sentence of paragraph 6.4.2 in the second line, following the word "materially" by adding the words "or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1,"

6.4.3 Delete paragraph 6.4.3 in its entirety and substitute the following:

If the *Consultant* makes a finding pursuant to paragraph 6.4.2 that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* shall report in writing the reasons for this finding to the *Owner* and the *Contractor*.

Add new paragraph 6.4.5 as follows:

6.4.5 No claims for additional compensation or for an extension of *Contract Time* shall be allowed if the *Contractor* fails to give *Notice in Writing* to the *Owner* or *Consultant*, as required by paragraph 6.4.2.

GC 6.5 DELAYS

6.5.1 Delete the words after the word "for" in the fourth line of paragraph 6.5.1, and add the words "…reasonable direct costs directly flowing from the delay, but excluding any consequential, indirect or special damages (including, without limitation, loss of profits, loss of opportunity or loss of productivity)."

6.5.2 Delete the words after the word "for" in the fourth line of paragraph 6.5.2, and add the words "…reasonable direct costs directly flowing from the delay, but excluding any consequential, indirect or special damages (including, without limitation, loss of profits, loss of opportunity or loss of productivity)."

6.5.3 Delete paragraph 6.5.3 in its entirety and replace with the following:

If the *Contractor* is delayed in the performance of the *Work* by *Force Majeure*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as a result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from the actions of the *Owner*.

Delete paragraph 6.5.4 in its entirety and replace with the following:

6.5.4 No extension or compensation shall be made for delay or impact on the *Work* unless notice in writing of a claim is given to the *Consultant* not later than ten (10) *Working Days* after the commencement of the delays or impact on the *Work*, provided however, that, in the case of a continuing cause of delay or impact on the *Work*, only one notice of claim shall be necessary.

Add new paragraphs 6.5.6, 6.5.7 and 6.5.8 as follows:

6.5.6 If the *Contractor* is delayed in the performance of the *Work* by an act or omission of the *Contractor* or anyone directly or indirectly employed or engaged by the *Contractor*, or by any cause within the *Contractor's* control, then the *Contract Time* may be extended for such reasonable time as the *Owner* may decide in consultation with the *Consultant* and the *Contractor*. The *Owner* shall be reimbursed by the *Contractor* for all reasonable costs incurred by the *Owner* as the result of such delay, including, but not limited to, the cost of all additional services required by the *Owner* from the *Consultant* or any sub-consultants, project managers, or others employed or engaged by the *Owner*, and in particular, the costs of the *Consultant's* services during the period between the date of *Substantial Performance of the Work* stated in Article A-1 herein, as the same may be extended through the provision of these General Conditions, and any later or actual date of *Substantial Performance of the Work* achieved by the *Contractor*.

6.5.7 Without limiting the obligations of the *Contractor* described in GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS or GC 9.4 – CONSTRUCTION SAFETY, the *Owner* or *Consultant* may, by notice in writing, direct the *Contractor* to stop the *Work* where the *Owner* or *Consultant* determines that there is an imminent risk to the safety of persons or property at the *Place of the Work*. In the event that the *Contractor* receives such notice, it shall immediately stop the *Work* and secure the site. The *Contractor* shall not be entitled to an extension of the *Contract Time* or to an increase in the *Contract Price* unless the resulting delay, if any, would entitle the *Contractor* to an extension of the *Contact Time* or the reimbursement of the *Contractor's* costs as provided in paragraphs 6.5.1, 6.5.2 or 6.5.3.

6.5.8 No claim for delay shall be made and the *Contract Time* shall not be extended due to climatic conditions or arising from the *Contractor's* efforts to maintain the *Contract* schedule.

GC 6.6 CLAIMS FOR A CHANGE IN THE CONTRACT PRICE

Delete GC 6.6 in its entirety.

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

Revise the heading to read **"OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT"**

Add a new subparagraph 7.1.3.4 as follows:

7.1.3.4 An "acceptable schedule" as referred to in subparagraph 7.1.3.2. means a schedule approved by the *Consultant* and the *Owner* wherein the default can be corrected within the balance of the *Contract Time* and shall not cause delay to any other aspect of the *Work* or the work of other contractors, and in no event shall it be deemed to give a right to extend the *Contract Time*.

7.1.4.1 Delete sentence and replace with the following:

Correct such default and deduct the cost, including *Owner's* expenses, thereof from any payment then or thereafter due the *Contractor*.

7.1.5.3 In subparagraph 7.1.5.3 delete the words: "however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference;"

Delete paragraph 7.1.6 in its entirety and add new paragraphs 7.1.6, 7.1.7, 7.1.8, 7.1.9 and 7.1.10 as follows:

7.1.6 In addition to its right to terminate the Contract set out herein, the *Owner* may terminate this *Contract* at any time for any other reason and without cause upon giving the *Contractor* fifteen (15) *Working Days Notice in Writing* to that effect. In such event, the *Contractor* shall be entitled to be paid for all *Work* performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*, but in no event shall the *Contractor* be entitled to be compensated for any loss of profit on unperformed portions of the *Work*, or indirect, special, or consequential damages incurred.

7.1.7 The *Owner* may suspend *Work* under this *Contract* at any time for any reason and without cause upon giving the *Contractor Notice in Writing* to that effect. In such event, the *Contractor* shall be entitled to be paid for all *Work* performed to the date of suspension and be compensated for all actual costs incurred arising from the suspension, including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the suspension of the *Work*, but in no event shall the *Contractor* be entitled to be compensated for any indirect, special, or consequential damages incurred. In the event that the suspension continues for more than thirty (30) calendar days, the *Contract* shall be deemed to be terminated and the provisions of paragraph 7.1.6 shall apply.

7.1.8 In the case of either a termination of the *Contract* or a suspension of the *Work* under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK, OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall use its best commercial efforts to mitigate the financial consequences to the *Owner* arising out of the termination or suspension, as the case may be.

7.1.9 Upon the resumption of the *Work* following a suspension under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* will endeavour to minimize the delay and financial consequences arising out of the suspension.

7.1.10 The *Contractor's* obligations under the *Contract* as to quality, correction, and warranty of the *Work* performed by the *Contractor* up to the time of termination or suspension shall continue after such termination of the *Contract* or suspension of the *Work*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

7.2.3.1 Delete subparagraph 7.2.3.1 in its entirety.

7.2.3.4 In subparagraph 7.2.3.4, delete the words "except for GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER".

Renumber paragraph 7.2.5 as paragraph 7.2.6. Add a new paragraph 7.2.5 as follows:

7.2.5 If the default cannot be corrected within the 5 *Working Days* specified in paragraph 7.2.4, the *Owner* shall be deemed to have cured the default if it:

.1 commences correction of the default within the specified time;

.2 provides the *Contractor* with an acceptable schedule for such correction; and,

.3 completes the correction in accordance with such schedule.

Delete paragraph 7.2.6 entirely and replace with the following:

7.2.6 If the *Contractor* terminates the *Contract* under the conditions described in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall be entitled to be paid for all *Work* performed to the date of termination, as determined by the *Consultant*. The *Contractor* shall also be entitled to recover the direct costs associated with termination, including the costs of demobilization and losses sustained on *Products* and *Construction Equipment*. The *Contractor* shall not be entitled to any recovery for any special, indirect or consequential losses, including loss of profit.

Add new paragraphs 7.2.7, 7.2.8 and 7.2.9 as follows

7.2.7 The *Contractor* shall not be entitled to give notice of the *Owner's* default or terminate the *Contract* in the event the *Owner* withholds certificates or payment or both in accordance with the *Contract* because of:

(a) the *Contractor's* failure to pay all legitimate claims promptly, or
(b) the failure of the *Contractor* to discharge construction liens which are registered against the title to the *Place of the Work.*

7.2.8 The *Contractor's* obligations under the *Contract* as to quality, correction and warranty of the *Work* performed by the *Contractor* up to the effective date of termination shall continue in force and shall survive termination by the *Contractor* in accordance with paragraph 7.2.4.

7.2.9 If the *Contractor* suspends the *Work* or terminates the *Contract* as provided for in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall ensure the site and the *Work* are left in a safe, secure condition as required by authorities having jurisdiction at the *Place of the Work* and the *Contract Documents*.

GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

8.2.1 Amend paragraph 8.2.1 by changing part of the second line from "shall appoint a *Project Mediator*" to "may appoint a *Project Mediator,* except that such an appointment shall only be made if both the *Owner* and the *Contractor* agree."

8.2.4 Amend paragraph 8.2.4 by changing part of the second line from "the parties shall request the *Project Mediator"* to "and subject to paragraph 8.2.1 the parties may request the *Project Mediator".*

Delete paragraphs 8.2.6, 8.2.7 and 8.2.8 in their entirety.

Add new paragraph 8.2.6 as follows:

8.2.6 The dispute may be finally resolved by arbitration under the Rules for Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, provided that both the *Contractor* and the *Owner* agree. If the *Contractor* and the *Owner* agree to resolve the dispute by arbitration, the arbitration shall be conducted in the jurisdiction of the *Place of the Work*.

GC 9.1 PROTECTION OF WORK AND PROPERTY

Delete subparagraph 9.1.1.1 in its entirety and substitute the following:

9.1.1.1 errors in the *Contract Documents* which the *Contractor* could not have discovered applying the standard of care described in paragraph 3.14.1;

Delete paragraph 9.1.2 in its entirety and substitute as follows:

9.1.2 Before commencing any *Work*, the *Contractor* shall determine the locations of all underground or hidden utilities and structures indicated in or inferable from the *Contract Documents*, or that are inferable from an inspection of the *Place of the Work* exercising the degree of care and skill described in paragraph 3.14.1.

Add new paragraph 9.1.5 as follows:

9.1.5 With respect to any damage to which paragraphs 9.1.3 or 9.1.4 apply, the *Contractor* shall neither undertake to repair or replace any damage whatsoever to the work of other contractors, or to adjoining property, nor acknowledge that the same was caused or occasioned by the *Contractor*, without first consulting the *Owner* and receiving written instructions as to the course of action to be followed from either the *Owner* or the *Consultant*. Where, however, there is danger to life, the environment, or public safety, the *Contractor* shall take such emergency action as it deems necessary to remove the danger.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

Add a new subparagraph 9.2.5.5 as follows:

9.2.5.5 in addition to the steps described in subparagraph 9.2.5.3, take any further steps it deems necessary to mitigate or stabilize any conditions resulting from encountering toxic or hazardous substances or materials.

9.2.6 Add the following to paragraph 9.2.6, after the word "responsible" in the second line:

…or whether any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the *Owner* or others,**…**

9.2.8 Add the following to paragraph 9.2.8, after the word "responsible" in the second line:

…or whether any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the *Owner* or others**,…**

Add new paragraph 9.2.10 as follows:

9.2.10 The *Contractor*, *Subcontractors* and *Suppliers* shall not bring on to the *Place of the Work* any toxic or hazardous substances and materials except as required in order to perform the *Work*. If such toxic or hazardous substances or materials are required, storage in quantities sufficient to allow work to proceed to the end of any current work week only shall be permitted. All such toxic and hazardous materials and substances shall be handled and disposed of only in accordance with all laws and regulations that are applicable at the *Place of the Work*.

GC 9.4 CONSTRUCTION SAFETY

Delete paragraph 9.4.1 in its entirety and substitute as follows:

9.4.1 The *Contractor* shall be solely responsible for construction safety at the *Place of the Work* and for compliance with the rules, regulations, and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*.

Add new paragraphs 9.4.2 to 9.4.10 as follows:

9.4.2 Prior to the commencement of the *Work*, the *Contractor* shall submit to the *Owner*:

.1 the evidence of workers' compensation compliance required by GC 10.4.1;

.2 copies of the *Contractor's* insurance policies having application to the *Project* or certificates of insurance, at the option of the *Owner*;

.3 documentation setting out the *Contractor's* in-house safety programs;

.4 copies of any documentation or notices to be filed or delivered to the authorities having jurisdiction for the regulation of occupational health and safety at the *Place of the Work*.

9.4.3 The *Contractor* shall indemnify and save harmless the *Owner*, its agents, trustees, officers, directors, employees, consultants, successors, appointees, and assigns from and against the consequences of any and all safety infractions committed by the *Contractor* under the occupational health and safety legislation in force at the *Place of the Work* including the payment of legal fees and disbursements on a substantial indemnity basis.

9.4.4 The *Owner* undertakes to include in its contracts with other contractors and in its instructions to its own forces the requirement that the other contractor or its own forces, as the case may be, comply with the policies and procedures of and the directions and instructions from the *Contractor* with respect to occupational health and safety and related matters.

9.4.5 If the *Owner* is of the reasonable opinion that the *Contractor* has not taken such precautions as are necessary to ensure compliance with the requirements of paragraph 9.4.1, the *Owner* may take any remedial measures which it deems necessary, including stopping the performance of all or any portion of the *Work*, and the *Owner* may use its employees, the *Contractor*, any *Subcontractor* or any other contractors to perform such remedial measures.

9.4.6 The *Contractor* shall file any notices or any similar document required pursuant to the *Contract* or the safety regulations in force at the *Place of the Work*. This duty of the *Contractor* will be considered to be included in the *Work* and no separate payment therefore will be made to the *Contractor*.

9.4.7 Unless otherwise provided in the *Contract Documents*, the *Contactor* shall develop, maintain and supervise for the duration of the *Work* a comprehensive safety program that will effectively incorporate and implement all required safety precautions. The program shall, at a minimum, respond fully to the applicable safety regulations and general construction practices for the safety of persons or property, including, without limitation, any general safety rules and regulations of the *Owner* and any workers' compensation or occupational health and safety statutes or regulations in force at the *Place of the Work*.

9.4.8 The Contractor shall provide a copy of the safety program described in paragraph 9.4.7 hereof to the *Consultant* for delivery to the *Owner* prior to the commencement of the *Work*, and shall, ensure, as far as it is reasonably practical to do so, that every employer and worker performing work in respect of the *Project* complies with such program.

9.4.9 The *Contractor* shall arrange regular safety meetings, and shall supply and maintain, at its own expense, at its office or other well-known place at the job site, safety equipment necessary to protect the workers and general public against accident or injury as prescribed by the authorities having jurisdiction at the *Place of the Work*, including, without limitation, articles necessary for administering first-aid to any person and an emergency procedure for the immediate removal of any inured person to a hospital or a doctor's care.

9.4.10 The *Contractor* shall promptly report in writing to the *Owner* and the *Consultant* all accidents of any sort arising out of or in connection with the performance of the *Work*, whether on or adjacent to the job site, giving full details and statement of witnesses. If death or serious injuries or damages are caused, the accident shall be promptly reported by the *Contractor* to the *Owner* and the *Consultant* by telephone or messenger in addition to any reporting required under the applicable safety regulations.

GC 10.1 TAXES AND DUTIES

10.1.2 Amend paragraph 10.1.2 by adding the following sentence to the end of the paragraph:

For greater certainty, the *Contractor* shall not be entitled to any mark-up for overhead or profit on any increase in such taxes and duties and the *Owner* shall not be entitled to any credit relating to mark-up for overhead or profit on any decrease in such taxes. The *Contractor* shall provide a detailed breakdown of additional taxes if requested by the *Owner* in a form satisfactory to the Owner.

Add new paragraph 10.1.3 as follows:

10.1.3 Where the *Owner* is entitled to an exemption or a recovery of sales taxes, customs duties, excise taxes or *Value Added Taxes* applicable to the *Contract*, the *Contractor* shall, at the request of the *Owner*, assist with the application for any exemption, recovery or refund of all such taxes and duties and all amounts recovered or exemptions obtained shall be for the sole benefit

of the *Owner*. The *Contractor* agrees to endorse over to the *Owner* any cheques received from the federal or provincial governments, or any other taxing authority, as may be required to give effect to this paragraph.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

10.2.5 Amend paragraph 10.2.5 by addition the words "Subject to paragraph 3.4" at the beginning of the paragraph. Add the following to the end of the second sentence:

…and no further *Work* on the affected components of the *Contract* shall proceed until these directives have been obtained by the *Contractor* from the *Consultant*.

10.2.6 Amend paragraph 10.2.6 by adding the following sentence to the end of the paragraph:

In the event the *Owner* suffers loss or damage as a result of the *Contractor's* failure to comply with paragraph 10.2.5 and notwithstanding any limitations described in paragraph 12.1.1, the *Contractor* agrees to indemnify and to hold harmless the *Owner* and the *Consultant* from and against any claims, demands, losses, costs, damages, actions suits or proceedings resulting from such failure by the *Contractor*.

Add new paragraph 10.2.8 as follows:

10.2.8 The *Contractor* shall furnish all certificates that are required or given by the appropriate governmental authorities as evidence that the *Work* as installed conforms with the laws and regulations of authorities having jurisdiction, including certificates of compliance for the *Owner's* occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the *Work*, in the event that such governmental authorities furnish such certificates.

GC 10.4 WORKERS' COMPENSATION

10.4.1 Delete paragraph 10.4.1 and replace with the following:

Prior to commencing the *Work*, and with each and every application for payment thereafter, including the *Contractor's* application for payment of the holdback amount following *Substantial Performance of the Work* and again with the *Contractor's* application for final payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation in force at the *Place of the Work*, including payments due thereunder.

GC 11.1 INSURANCE

Delete entirety of general condition and CCDC 41 and replace with the following**:**

11.1 Without restricting the generality of GC 12 – INDEMNIFICATION, the *Contractor shall* provide, maintain, and pay for the insurance coverages specified in GC 11.1 – INSURANCE. Unless otherwise stipulated, the duration of each insurance policy shall be from the date of commencement of the *Work* until the expiration of the warranty periods set out in the *Contract Documents*. Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements.

.1 **General Liability Insurance**

General liability insurance shall be in the name of the *Contractor*, with the *Owner* and the *Consultant* named as additional insureds, with limits of not less than $5,000,000.00 inclusive per occurrence for bodily injury, death, and damage to property, including loss of use thereof, for itself and each of its employees, *Subcontractors* and/or agents. The insurance coverage shall not be less than the insurance required by IBC Form 2100, or its equivalent replacement, provided that IBC Form 2100 shall contain the latest edition of the relevant CCDC endorsement form. To achieve the desired limit, umbrella, or excess liability insurance may be used. All liability coverage shall be maintained for completed operations hazards from the date of *Substantial Performance of the Work*, as set out in the certificate of *Substantial Performance of the Work*, on an ongoing basis for a period of 6 years following *Substantial Performance of the Work*. Where the *Contractor* maintains a single, blanket policy, the addition of the *Owner* and the *Consultant* is limited to liability arising out of the *Project* and all operations

necessary or incidental thereto. The policy shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of any cancellation and of change or amendment restricting coverage.

.2 **Automobile Liability Insurance**

Automobile liability insurance in respect of licensed vehicles shall limits of not less than $2,000,000.00 inclusive per occurrence for bodily injury, death and damage to property, covering all licensed vehicles *owned* or leased by the *Contractor*, and endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of any cancellation, change or amendment restricting coverage. Where the policy has been issued pursuant to a government-operated automobile insurance system, the *Contractor* shall provide the *Owner* with confirmation of automobile insurance coverage for all automobiles registered in the name of the *Contractor.*

.3 **Aircraft and Watercraft Liability Insurance [NTD: This can come out if N/A]**

Where determined necessary by the *Contractor*, acting reasonably, aircraft and watercraft liability insurance will be obtained in accordance with the provisions of paragraph 11.1.3. Aircraft and watercraft liability insurance with respect to owned or non-owed aircraft and watercraft if used directly or indirectly in the performance of the *Work*, including use of additional premises, shall be subject to limits of not less than $2,000,000.00 inclusive per occurrence for bodily injury, death and damage to property, including loss of use thereof and limits of not less than $2,000,000.00 for aircraft passenger hazard. Such insurance shall be in a form acceptable to the *Owner*. The policies shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of cancellation, change or amendment restricting coverage.

.4 Property and Boiler and Machinery Insurance

(1) Builder's Risk property insurance shall be in the name of the *Contractor* with the *Owner* and the *Consultant* named as additional insureds. The policy shall insure against all risks of direct physical loss or damage to the property insured which shall include all property included in the *Work*, whether owned by the *Contractor* or the owner or owned by others, so long as the property forms part of the *Work*. The property insured also includes all materials and supplies necessary to complete the work, whether installed in the work temporarily or permanently, in storage on the project site, or in transit to the project site, as well as temporary buildings, scaffolding, falsework forms, hoardings, excavation, site preparation and similar work. The insurance shall be for not less than the sum of the amount of the contract price and the full value of products that are specified to be provided by the owner for incorporation into the work, if applicable, with the deductible of $10,000.00 payable by the contractor. The insurance shall include the foregoing and, otherwise, shall not be less than the insurance required by IBC Form 4042 or its equivalent replacement provided that the IBC Form 4042 shall include the latest addition of the relevant CCDC endorsement form. The coverage shall be based on a completed value form and shall be maintained continuously until ten (10) days after the date of the final certificate of payment.

(2) Boiler and machinery insurance shall be in the name of the *Contractor*, with the *Owner* and the *Consultant* named as additional insureds, for not less than the replacement value of the boilers, pressure vessels and other insurable objects forming part of the *Work*. The insurance provided shall not be less than the insurance provided by the "Comprehensive Boiler and Machinery Form" and shall be maintained continuously from commencement of use or operation of the property insured and until 10 days after the date of the final certificate for payment.

(3) The policies shall allow for partial or total use or occupancy of the *Work.*

(4) The policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. The *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extension of the *Contract Time*, relative to the extent of the loss or damage, as determined by the *Owner*, in its sole discretion.

(5) The *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount at which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds and as provided in GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT and GC 5.3 – PROGRESS PAYMENT. In addition, the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*.

(6) In the case of loss or damage to the *Work* arising from the work of other contractors, or the *Owner's* own forces, the *Owner*, in accordance with the *Owner's* obligations under paragraph 3.2.2.4 of GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS, shall pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as provided in GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT and GC 5.3 – PROGRESS PAYMENT.

.5 Contractors' Equipment Insurance

"All risks" contractors' equipment insurance covering construction machinery and equipment used by the *Contractor* for the performance of the *Work*, excluding boiler insurance, shall be in a form acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner.* The policies shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of cancellation, change or amendment restricting coverage. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance of his equipment, the *Owner* agrees to waive the equipment insurance requirement.

11.1.2 The *Contractor* shall be responsible for deductible amounts under the policies except where such amounts may be excluded from the *Contractor's* responsibility by the terms of GC 9.1 - PROTECTION OF WORK AND PROPERTY and GC 9.2 - DAMAGES AND MUTUAL RESPONSIBILITY.

11.1.3 Where the full insurable value of the *Work* is substantially less than the *Contract Price*, the *Owner* may reduce the amount of insurance required to waive the course of construction insurance requirement.

11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and provide evidence of same to the *Contractor*. The *Contractor* shall pay the costs thereof to the *Owner* on demand, or the *Owner* may deduct the amount that is due or may become due to the *Contractor*.

11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work.*

GC 11.2 CONTRACT SECURITY

11.2.2 Delete paragraph after the word "provided" and replace with the following:

Such bonds shall be issued by a duly licensed surety company, which has been approved by the *Owner*, authorized to transact a business of suretyship in the province or territory of the *Place of the Work* and shall be maintained in good standing until the fulfillment of the *Contract*, including all warranty and maintenance periods set out in the *Contract Documents.*

Add new paragraph 11.2.3 as follows:

11.2.3 It is the intention of the parties that the performance bond shall be applicable to all of the *Contractor's* obligations in the *Contract Document* and, wherever a performance bond is provided with language which conflicts with this intention, it shall be deemed to be amended to comply. The *Contractor* represents and warrants to the *Owner* that it has provided its surety with a copy of the *Contract Documents* prior to the issuance of such bonds.

GC 12.1 INDEMNIFICATION

Delete General Condition 12.1 – INDEMNIFICATION in its entirety and substitute as follows:

12.1.1 The *Contractor* shall indemnify and hold harmless the *Owner*, its parent, subsidiaries and affiliates, their respective partners, trustees, officers, directors, agents and employees and the *Consultant* from and against any and all claims, liabilities, expenses, demands, losses, damages, actions, costs, suits, or proceedings (hereinafter called "claims"), whether in respect of claims suffered by the *Owner* or in respect of claims by third parties, that directly or indirectly arise out of, or are attributable to, the acts or omissions of the *Contractor*, its employees, agents, *Subcontractors*, *Suppliers* or any other persons for whom it is in law responsible (including, without limitation, claims that directly or indirectly arise out of, or are attributable to, loss of use or damage to the *Work*, the *Owner's* property or equipment, the *Contractor's* property or equipment or equipment or property adjacent to the *Place of the Work* or death or injury to the *Contractor's* personnel).

12.1.2 The provisions of GC 12.1 - INDEMNIFICATION shall survive the termination of the *Contract*, howsoever caused and no payment or partial payment, no issuance of a final certificate of payment and no occupancy in whole or in part of the *Work* shall constitute a waiver or release of any of the provisions of GC 12.1.

GC 12.2 WAIVER OF CLAIMS

12.2.1 In the fourth line, add the words "claims for delay pursuant to GC 6.5 DELAYS" after the word "limitation". Add the words "(collectively "Claims")" after "*Substantial Performance of the Work*" in the sixth line.

12.2.1.1 Change the word "claims" to "Claims" and change the word "claim" to "Claim".

12.2.1.2 Change the word "claims" to "Claims".

12.2.1.3 Delete paragraph in its entirety.

12.2.1.4 Change the word "claims" to "Claims".

12.2.2 Change the words "in paragraphs 12.2.1.2 and 12.2.1.3" to "in paragraph 12.2.1.2".Change the word "claims" to "Claims" in both instances and change the word "claim" to "Claim".

12.2.3 Delete paragraph in its entirety.

12.2.4 Delete paragraph in its entirety.

12.2.5 Delete paragraph in its entirety.

12.2.6 Change the word "claim" to "Claim" in all instances in the paragraph.

12.2.7 Change "The party" to "The *Contractor*. Change the word "claim" to "Claim" in all instances in the paragraph.

12.2.8 Change "under paragraphs 12.2.1 or 12.2.3" to "under paragraph 12.2.1". Change both instances of the words "the party" to "the *Contractor*". Change the word "claim" to "Claim" in all instances in the paragraph.

12.2.9 Delete paragraph 12.2.9 in its entirety.

12.2.10 Delete paragraph 12.2.10 in its entirety.

GC 12.3 WARRANTY

12.3.2 Delete from the first line of paragraph 12.3.2 the word, "The" and substitute the words "Subject to paragraph 3.4.1, the…"

Add new paragraphs 12.3.7 to 12.3.12 as follows:

12.3.7 Where required by the *Contract Documents*, the *Contractor* shall provide a maintenance bond as security for the performance of the *Contractor's* obligations as set out in GC 12.3 WARRANTY.

12.3.8 The *Contractor* shall provide fully and properly completed and signed copies of all warranties and guarantees required by the *Contract Documents*, containing:

.1 the proper name of the *Owner*;
.2 the proper name and address of the *Project*;
.3 the date the warranty commences, which shall be at the "date of *Substantial Performance of the Work*" unless otherwise agreed upon by the *Consultant* in writing.
.4 a clear definition of what is being warranted and/or guaranteed as required by the *Contract Documents*; and

.5 the signature and seal (if required by the governing law of the *Contract*) of the company issuing the warranty, countersigned by the *Contractor*.

12.3.9 Should any *Work* be repaired or replaced during the time period for which it is covered by the specified warranty, a new warranty shall be provided under the same conditions and for the same period as specified herein before. The new warranty shall commence at the completion of the repair or replacement.

12.3.10 The *Contractor* shall ensure that its *Subcontractors* are bound to the requirements of GC 12.3 – WARRANTY for the *Subcontractor's* portion of the *Work.*

12.3.11 The *Contractor* shall ensure that all warranties, guarantees or other obligations for *Work*, services or *Products* performed or supplied by any *Subcontractor, Supplier* or other person in connection with the *Work* are obtained and available for the direct benefit of the *Owner*. In the alternative, the *Contractor* shall assign to the *Owner* all warranties, guarantees or other obligations for *Work*, services or *Products* performed or supplied by any *Subcontractor, Supplier* or other person in connection with the *Work* and such assignment shall be with the consent of the assigning party, where required by law, or by the terms of that party's contract. Such assignment shall be in addition to, and shall in no way limit, the warranty rights of the *Owner* under the *Contract Documents*.

12.3.12 The *Contractor* shall commence or correct any deficiency within 2 Working Days after receiving a notice from the *Owner* or the *Consultant*, and shall complete the *Work* as expeditiously as possible, except in the case where the deficiency prevents maintaining security or where basic systems essential to the ongoing business of the *Owner* and/or its tenants cannot be maintained operational as designed. In those circumstances all necessary corrections and/or installations of temporary replacements shall be carried out immediately as an emergency service. Should the *Contractor* fail to provide this emergency service within 8 hours of a request being made during the normal business hours of the *Contractor*, the *Owner* is authorized, notwithstanding GC 3.1, to carry out all necessary repairs or replacements at the *Contractor's* expense.

PART 13 OTHER PROVISIONS

Add new Part 13 OTHER PROVISIONS as follows:

GC 13.1 OWNERSHIP OF MATERIALS

13.1.1 Unless otherwise specified, all materials existing at the *Place of the Work* at the time of execution of the *Contract* shall remain the property of the *Owner*. All *Work* and *Products* delivered to the *Place of the Work* by the *Contractor* shall be the property of the *Owner*. The *Contractor* shall remove all surplus or rejected materials as its property when notified in writing to do so by the *Consultant*.

GC 13.2 CONSTRUCTION LIENS

13.2.1 In the event that a claim for lien is registered against the *Project* by a *Subcontractor, Sub-subcontractor* or *Supplier*, and provided the *Owner* has paid all amounts properly owing under the *Contract*, the *Contractor* shall, at its own expense:

.1 within 10 calendar days, ensure that any and all claims for lien and certificates of action are discharged, released, or vacated by the posting of security or otherwise; and

.2 in the case of written notices of lien, ensure that such notices are withdrawn, in writing.

13.2.2 In the event that the *Contractor* fails to conform with the requirements of paragraph 13.2.1, the *Owner* may fulfil those requirements without *Notice in Writing* to the *Contractor* and set off and deduct from any amount owing to the *Contractor*, all costs and associated expenses, including the costs of posting security and all legal fees and disbursements associated with discharging or vacating the claim for lien or certificate of action and defending the action. If there is no amount owing by the *Owner* to the *Contractor*, then the *Contractor* shall reimburse the *Owner* for all of the said costs and associated expenses.

13.2.3 Notwithstanding any other provision in the *Contract*, the *Consultant* shall not be obligated to issue a certificate and the *Owner* shall not be obligated to make payment to the *Contractor* if, at the time such certificate or payment was otherwise due:

.1 a claim for lien has been registered against the *Project* lands, or

.2 if the *Qwner* or mortgagee of the *Project* lands has received written notice of a lien.. or

.3 the *Owner* or *Consultant* reasonably believe that any party has purported to retain title to *Products* or materials in respect of which an application for payment has been made.

13.2.4 Without limiting the foregoing, the *Contractor* shall, if requested by the *Owner*, defend, indemnify and save the *Owner* harmless from the amount of all such claims and the costs of defending any and all actions commenced against the *Owner* pursuant to the construction/builder's lien legislation in force at the *Place of the Work*, including the legal costs of the *Owner*, unless the lien was a direct result of a breach of the *Contract* by the *Owner* or the non-payment by the *Owner* of a valid charge or claim under the *Contract*.

13.2.5 GC 13.2 – CONSTRUCTION LIENS does not apply to construction/builder's liens claimed by the *Contractor.*

END OF AMENDMENTS TO CCDC 2 - 2008

DESIGNATED SUBSTANCES SURVEY

(per Section 30, OHSA)

ASBESTOS PRODUCTS RE-ASSESSMENT

(per Section 8, O.Reg. 278/05)

Our Lady of Fatima Catholic School

Chatham, Ontario

Prepared for:

St. Clair Catholic District School Board
1930 Wildwood Drive
Bright's Grove, Ontario
N0N 1C0

February 11, 2020

(Revised March 5, 2020)

Project No.: 19-1713

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APPENDICES

1.0 INTRODUCTION

OH Solutions Inc. (OHS) was retained by the St. Clair Catholic District School Board to conduct a re-assessment of the condition of known friable asbestos-containing materials (ACM) and a visual inspection for mould at Our Lady of Fatima School located at 545 Baldoon Road North in Chatham, Ontario.

The school is a single storey structure, with a total area of 27,000 square feet. The original building was constructed in 1978. In addition to the investigation for asbestos and mould, the school was evaluated for the presence of any other designated substances.

Under the *Occupational Health & Safety Act* (OSHA), an owner must determine whether any Designated Substances are present at a site and is required to prepare a list of all Designated Substances that are present. These substances may require special handling procedures. The current OHSA regulation lists the following eleven (11) substances as Designated Substances in the workplace: acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica and vinyl chloride.

Based on the estimated construction date and the reported use of the building, the review undertaken by OHS targeted asbestos, lead, mercury, and silica which, in our experience, are most likely to be present on-site.

The following report explains our survey methodology and summarizes the hazardous building materials found at the Site.

2.0 SURVEY METHODOLOGY

During this investigation the surveyor inspected the building for construction material suspected of containing asbestos after reviewing previous reports and database information. In addition, the surveyor inspected the building for construction materials suspected of containing other Designated Substances.

Note:

- Repetitive testing was generally not performed. Items, which were visually similar to others tested, were considered to be of like material and were not sampled again. However, due to the variable nature of some products, several samples may have been collected of some materials.

- No destructive testing was performed. The inaccessible spaces within the building were not inspected. This includes areas above plaster or drywall

ceilings (in the absence of access panels) as well as shafts, chases and bulkheads. Similarly, doors, motors and other equipment were not disassembled to determine composition.

- Vinyl sheet flooring and vinyl asbestos tiles have been recorded where observed, but may not be identified where they are present beneath multiple layers of flooring.

There was no access to the roof at the time of the assessment.

2.1 Asbestos

No additional asbestos bulk samples were collected as a part of this re-assessment.

2.2 Other Hazardous Building Materials and Designated Substances

All other hazardous building materials or Designated Substances were identified based on visual assessment and historical usage.

3.0 REGULATORY REQUIREMENTS

"Designated Substance" as defined by the Ontario *Occupational Health & Safety Act* (OHSA) means "a biological, chemical or physical agent or combination thereof prescribed as a Designated Substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled." Under Section 30 of the OHSA an owner is required to determine whether any Designated Substances are present at a project site before beginning construction. If any portion of the project is tendered, the person issuing the tenders is required to list the Designated Substances present at the project site. The constructor is then required to ensure that every contractor and sub-contractor receives a copy of the list.

Designated Substances are regulated under Ontario Regulation 490/09, which identifies the occupational exposure limits for these materials. Under Subsection 3(3) of the Regulation, construction projects are excluded from the OELs and most of the other requirements of the Regulation. For this reason, the Ministry of Labour (MOL) has issued regulations and guidelines to cover asbestos, lead and silica on construction.

Ontario Regulation 278/05 classifies all disturbance of asbestos as Type 1, Type 2 or Type 3, each of which is associated with defined work practices. All asbestos material waste is subject to special handling and disposal practices, and must be removed prior to partial or full demolition. Removal of any quantity of asbestos of more than $1m^2$ requires notification of the MOL. Disposal of asbestos waste is subject to waste

management regulations under Ontario Regulation 347/90 as amended to Ontario Regulation 102/07.

The Guidelines: “Silica on Construction Projects” and “Lead on Construction Projects” identify precautions required for various activities that may disturb silica, or lead during construction, renovation or maintenance activities.

The MOL guideline for the control of lead exposures during the removal of lead on construction projects does not include criteria for categorizing lead paint. The Ontario Ministry of Labour (MOL) does not have a standard to state what percentage of lead a material must have to be considered lead-containing. The Environmental Abatement Council of Ontario (EACO) has issued a “Lead Guideline for Construction, Renovation, Maintenance or Repair”. This guideline recommends procedures to protect against lead exposure when concentrations of lead in paint exceed 0.1% by weight, but suggests that finishes with concentrations below 0.1% by weight do not require lead specific precautions provided the material is not disturbed in an aggressive manner (e.g. grinding or sandblasting) and that general dust control is adequate.

There are currently no regulations specifically covering exposure to mould or outlining mould remediation practices. In addition, there are no occupational exposure limits stating acceptable levels of exposure without adverse health effects.

However, Sections 25 and 27 of the Ontario *Occupational Health and Safety Act* states that an employer must take every reasonable precaution to ensure the health and safety of their workers. This includes exposure to moulds.

4.0 RESULTS

4.1 Asbestos-Containing Materials

Asbestos is a general name for several varieties of highly fibrous silicate minerals. Commercially significant types of asbestos include chrysotile, amosite and crocidolite. The fibres are valued for their heat and chemical resistance properties. The combination of fibrous structures, low heat conductivity, high electrical resistance, chemical inertness, strength and flexibility, as well as its effectiveness as a reinforcing or binding agent when combined with cement and/ or plastic, made asbestos popular for widespread industrial use.

One measure of the potential hazard of ACM is its friability. The Ontario Ministry of Labour asbestos regulation defines a friable material as one when dry can be crumbled, pulverized or powdered by hand pressure. The friability of ACM is considered a significant indicator of the ease with which fibres may be released into

the air. Non-friable products with bound asbestos pose no danger of releasing airborne fibres unless cut, broken up or otherwise physically abraded.

The following is a summary of the asbestos-containing or asbestos-suspect materials that were encountered at Our Lady of Fatima School. A detailed summary of asbestos materials identified in the building are included in Appendix II.

4.1.1 Sprayed Fireproofing

No sprayed fireproofing was encountered in the survey of this facility.

4.1.2 Texture Finishes

No texture finishes was encountered in the survey of this facility.

4.1.3 Acoustic Ceiling Tiles

Asbestos-containing ceiling tiles originally identified in the building have been removed from the building. Confirmatoert samples of the primary tile remaining were collected (Sample Group 106) and found to be asbestos free.

4.1.4 Mechanical Insulation

Asbestos and non-asbestos mechanical insulation is present in this building. Parging cement has been removed from the majority of piping systems although it in the Boiler Room and may be present in inaccessible areas.

Parging cement in the boiler room was sampled (Sample Group 101) and found to contain 18% chrysotile asbestos. Parging cement is present on the water meter, and on valves and other fittings in the mechanical room.

Non-asbestos parging cement is present in some locations. Straight run pipe insulation is generally non-asbestos fiberglass.

4.1.5 Plaster and Drywall

Plaster finishes were not encountered in the survey of this school.

The compound in the Resource Room at the south end of the school (Location 80) was sampled in advance of a renovation project and found to be asbestos-free. An additional five samples of drywall joint compound were collected from the original school building (Sample Group 105) and all were found to be asbestos free.

4.1.6 Asbestos Cement Sheets

No asbestos cement or “transite” products were encountered in the re-assessment of this facility.

4.1.7 Vinyl Floor Tiles

The original 12” x 12” vinyl floor tiles in the facility (Sample Groups 102 &104) have been confirmed to contain asbestos. These products are non-friable, and as such are not expected to release airborne asbestos fibre under normal conditions of building use. If a large quantity of floor tile is to be removed, it may be practical to verify the presence of asbestos at that time.

Note that a third pattern was sampled (Sample Group 103) and found to be non-asbestos. This tile was present in a patterned application with tiles from Sample Group 102. The tiles should all be treated as asbestos containing, for practical purposes.

The black floor tile adhesive at the site was sampled (Sample Groups 102, 103, 109 &110) and found to be a non-asbestos product.

4.1.8 Sealant/Mastic

Red or brown duct sealant is present on seams of ductwork present throughout the building. The sealant was sampled (Sample Group 107) and was found to contain 4% chrysotile asbestos.

A gold coloured mastic, has been applied as an acoustic treatment to the original sinks present in the building. This mastic has been visually identified to be an asbestos-containing product

4.2 Lead

Painted finishes in the building were not sampled. Lead may be present in some finishes within the building.

4.3 Mercury

Mercury is present in thermostats and within fluorescent light tubes located within the building.

4.4 Silica

Common construction sand contains free crystalline silica and is present in concrete products, mortar, brick, etc. These construction products are typically found throughout building structures.

4.5 Acrylonitrile, Benzene, Isocyanates, Arsenic, Ethylene Oxide, Vinyl Chloride and Coke Oven Emissions

Evidence suggesting the presence of acrylonitrile, benzene, isocyanates, arsenic, ethylene oxide, vinyl chloride monomer or coke oven emissions was not observed at Our Lady of Fatima School.

4.6 Mould

In recent years, contamination of buildings with mould has become a major concern. Mould growth will occur on any water damaged building material. Evidence does exist to support the relationship between exposure to mould in buildings and many health effects.

This re-assessment included the inspection of areas for visible mould growth. In the absence of occupants experiencing symptoms, the inspection for and remediation of visible mould present in the building will be an appropriate response to the issue. Where occupants are experiencing symptoms, in the absence of visible mould growth, some invasive inspection may be necessary to find potential sources of mould. In general this was beyond the scope of this assessment.

Although some evidence of water damage was present, visible mould was not evident in the course of this inspection. Locations where water stained/damaged tiles were identified are outlined in the following table:

Location	Quantity of Water Damaged Material
LOC 29 – Resource Centre	1 stained ceiling tile
LOC 31 – I.T. Room	1 stained ceiling tile
Work Room 154	1 stained ceiling tile
Corridor CR 1-11	1 stained ceiling tile
Classroom 162	1 stained ceiling tile
Classroom 164	1 stained ceiling tile
Classroom 166	1 stained ceiling tile
Washroom 166B	2 stained ceiling tiles

Location	Quantity of Water Damaged Material
Washroom 170B	1 stained ceiling tile
Girl's Washroom 121	1 stained ceiling tile
Office 123	1 stained ceiling tile
Office 125B	1 stained ceiling tile

5.0 RECOMMENDATIONS

The following recommendations are made with respect to the hazardous building materials and Designated Substances noted at Our Lady of Fatima School:

5.1 Asbestos

5.1.1 Asbestos Management Program

Since asbestos-containing materials were identified at this facility, the building is subject to the requirement for an Asbestos Management Program, as specified under Ontario Regulation 278/05.

5.1.2 Specific Recommendations

5.1.2.1 Mechanical Insulation

Any activity, which will disturb asbestos-containing mechanical insulation, is governed by the procedures outlined in Reg. 278/05. The disturbance of less than nine linear feet (or nine parged fittings or nine square feet of parging cement) of asbestos-containing mechanical insulation may be performed as a Type 2 operation, while any greater disturbance requires Type 3 precautions.

5.1.2.2 Drywall Joint Compound

The sampling of drywall compound was not performed throughout the school. If any disturbance of these materials is planned, sampling should be performed in advance.

Removal of more than 9 square feet, of drywall compound containing asbestos requires Type 2 procedures under Reg. 278/05.

5.1.2.3 Vinyl Floor Tiles

Vinyl floor tiles may be removed, with manually powered tools, following the Type 1 procedures outlined in Reg. 278/05. The use of powered equipment on non-friable asbestos materials, an activity which could result in the release of airborne fibre, must be performed under Type 3 precautions.

5.2 Lead

Although samples were not collected, it should be assumed that lead is present within paint finishes at the site. As a result, the handling or disturbance of painted finishes should be evaluated to help ensure that workers are not adversely affected.

The lead-containing materials in the building will not generate airborne lead dust in the absence of disturbance. However, significant lead dust levels can result when uncontrolled work procedures are used on lead-based materials. The control of dust levels during the demolition of the buildings can be accomplished through proper work practises such as wetting the surface of the materials to reduce overall dust levels and providing workers with washing facilities and proper respiratory protection.

The procedures outlined in the MOL document 'Guideline – Lead on Construction Projects' (2004) should provide an adequate standard for the handling or disturbance of the material.

The disposal of construction waste containing lead is controlled under Ontario Regulation 347, as amended by O. Reg. 102/07, and may be subject to Leachate Criteria (Schedule 4) of this regulation.

5.3 Mercury

The presence of mercury in fluorescent light tubes and thermostats poses minimal risk to occupants or workers provided the equipment is handled properly and the mercury is not allowed to escape. In the event of future renovations, light tubes and thermostat tubes should be removed intact to prevent the mercury vapour from escaping.

It is good management practice to take precautions to prevent mercury vapours from becoming airborne during building demolition. Exposure to airborne mercury is regulated under Ontario Regulation 490/09 made under the *Occupational Health and Safety Act*. The current TWAEV for mercury vapour is 0.025 mg/m^3 (except alkyl compounds).

Mercury waste must be handled and disposed of according to Ontario Regulation 347, as amended by O. Reg. 102/07, and may be subject to Leachate Criteria (Schedule 4) of this regulation.

5.4 Silica

Disturbance of materials containing silica will occur during demolition of walls and ceilings, saw cutting floor slabs and removal of lay-in acoustic ceiling tiles containing silica and is regulated under Ontario Regulation 490/09. The current TWAEV for amorphous fused silica is 0.1 mg/m^3 and is 0.05 mg/m^3 for crystalline silica (quartz). This can be accomplished through proper work practises such as wetting the surface of the materials to reduce overall dust levels and providing workers with washing facilities and proper respiratory protection.

5.5 Mould

Mould growth on building materials was not observed during this investigation. At this time, no further action is required regarding conditions observed. However water damaged acoustic tiles and drywall were observed throughout the school. OHS recommends that this material be removed to reduce the potential for mould growth on the water impacted surface.

Moisture issues are the only factor in the growth of mould that may be controlled by the building operator. Any existing moisture problems in the building must be addressed to prevent or control mould growth. The following general recommendations are made to reduce the potential for future mould growth within the building:

- Promptly respond to any water infiltration, including minor leaks.
- Where HVAC units permit, maintain relative humidity below 60%.
- Maintain caulking at sinks, bathrooms and at exterior locations.

In the event of a flood, remove water by pumping or vacuuming as soon as possible. Drying of construction and finishing materials must begin promptly (in less than 24 hours). It may be practical to remove and dispose of some wetted materials, (e.g. drywall and carpet) in some cases.

6.0 LIMITATIONS AND WARRANTY

OHS has prepared this report for the exclusive use of the Client in evaluating the Site at the time of OHS's assessment. OHS will not be responsible for the use of this report by any third party, or reliance on or any decision to be made based on it without

the prior written consent of OHS. OHS accepts no responsibility for damages, if any, by any third party because of decisions or actions based on this report.

The findings and conclusions documented in this report have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by qualified professionals currently practising in this area of environmental assessment. No other warranty, expressed or implied, is made.

The findings contained in this report are based upon conditions as they were observed at the time of investigation. No assurance is made regarding changes in conditions subsequent to the time of investigation.

If new information is developed in future work, OHS should be contacted to re-evaluate the conclusions of this report and to provide amendments as required.

Respectfully submitted,

OH Solutions Inc.

Kris Olson, P.Eng.
Senior Project Manager

APPENDIX I

BULK SAMPLING RESULTS

(From Previous Assessments)

PINCHIN
Environmental

Pinchin Environmental

Asbestos Samples Report

Project #: 13256 **Client Name:** St. Clair Catholic District School Board

Building #: 31 **Building Name:** Our Lady of Fatima School Chatham **Survey Date:** 08/28/2007

Sample Number	System	Material	Location Number	Has Asbestos	Phase One		Phase Two		Description
					Asb. Type	Result	Asb. Type	Result	
0001	Piping	Parging Cement	1	√	Chrysotile	50-75%	No Result	NR	Parging cement pipe fittings
0002	Ceiling	Lay-in tiles	3		None Detected	ND	No Result	NR	Lay-in ceiling tiles
0003	Ceiling	Lay-in tiles	5		None Detected	ND	No Result	NR	Lay-in ceiling tiles
0004	Walls	Glued-on tiles	7		None Detected	ND	No Result	NR	Stuck-on ceiling tiles
0005	Ceiling	Lay-in tiles	15	√	Amosite	0.5-5%	No Result	NR	Lay-in ceiling tiles
0006	Ceiling	Lay-in tiles	80		None Detected	ND	No Result	NR	Lay-in tiles
0007	Ceiling	Lay-in tiles	80		None Detected	ND	No Result	NR	Lay-in Tiles
0008	Ceiling	Lay-in tiles	80		None Detected	ND	No Result	NR	Lay-in Tile
0009	Walls	Drywall Compound	80		None Detected	ND	No Result	NR	Drywall Joint Compound
0010	Walls	Drywall Compound	80		None Detected	ND	No Result	NR	Drywall Joint Compound
0011	Walls	Drywall Compound	80		None Detected	ND	No Result	NR	Drywall Joint Compound

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Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

OH Solutions
119 Thames St S
Ingersoll, ON N5C 2T3

Customer Project: 18-1461, OLFCS
Reference #: CAL1901470AG Date: 1/24/2019

Analysis and Method

Summary of polarized light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of a stereomicroscope. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are preformed. Calibrated liquid refractive oils are used as liquid mouting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjugation with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion

Vermiculite containing samples may contain trace amounts of actinolite/tremolite. When not detected by PLM, these samples should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may contain a regulated asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be delectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Since allowable variation in quantification of samples close to 1% is high, <1% may be reported. Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos or "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

Qualifications

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have completed college courses or hold a degree in a natural science (geology, biology, or environmental science). Recognition by a state professional board in one these disciplines is preferred, but not required. Extensive in-house training programs are used to augment the educational background of the analyst. The Laboratory Director and Quality Manager have received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235
AIHA LAP, LLC Laboratory #102929

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Baton Rouge, LA 70809
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Overview of Project Sample Material Containing Asbestos

Customer Project: 18-1461, OLFCS **CA Labs Project #:** CAL1901470AG

Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
101-01	*101-01-1*	***Parging at Water Meter, Room 150**/ gray insulation*	***18% Chrysotile***	***gray insulation***
102-01	*102-01-1*	***VFT #1 Room 126**/ red floor tile*	***3% Chrysotile***	***red floor tile***
104-01	*104-01-1*	***VFT #3 Room 114**/ tan floor tile*	***2% Chrysotile***	***tan floor tile***
107-01	*107-01-1*	***Red Duct Sealant, Corridor**/ brown sealant*	***4% Chrysotile***	***brown sealant***

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235
AIHA LAP, LLC Laboratory #102929

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate
gypsum - gypsum
bi - binder
or - organic
ma - matrix
mi - mica
ve - vermiculite
ot - other
pe - perlite
qu - quartz
fg - fiberglass
mw - mineral wool
wo - wollastinite
ta - talc
sy - synthetic
ce - cellulose
br - brucite
ka - kaolin (clay)
pa - palygorskite (clay)

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Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:**
OH Solutions
119 Thames St S
Ingersoll, ON N5C 2T3

Phone # (519) 485 - 2500
Fax # (866) 700 - 4975

Customer Project:
18-1461, OLFCS
Turnaround Time:
3 days

CA Labs Project #:
CAL1901470AG

Date: 1/24/2019
Samples Received: 1/21/19 10:30AM
Date Of Sampling: None Given
Purchase Order #:

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
101-01		*101-01-1*	***Parging at Water Meter, Room 150**/ gray insulation*	*y*	***18% Chrysotile***	4% fg	78% qu,ca,ma
101-02		*101-02-1*	***Parging at Water Meter, Room 150**/ gray insulation*		*Positive Stop*		
101-03		*101-03-1*	***Parging at Valve, Room 150**/ gray insulation*		*Positive Stop*		
102-01		*102-01-1*	***VFT #1 Room 126**/ red floor tile*	*y*	***3% Chrysotile***		97% qu,ca
	5	*102-01-2*	*black mastic*				
102-02		*102-02-1*	***VFT #1 Room 126**/ red floor tile*		*Positive Stop*		
		102-02-2	*black mastic*	*y*	***None Detected***	3% ce	97% gy,bi

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot -other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
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Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:**
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Phone # (519) 485 - 2500
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CAL1901470AG

Date: 1/24/2019
Samples Received: 1/21/19 10:30AM
Date Of Sampling: None Given
Purchase Order #:

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
102-03		*102-03-1*	***VFT #1 Room 126**/ red floor tile*		*Positive Stop*		
		102-03-2	*black mastic*	*y*	***None Detected***	2% ce	98% gy,bi
103-01		*103-01-1*	***VFT #2 Room 126**/ gray floor tile*	*y*	***None Detected***	3% ce	97% qu,ca
		103-01-2	*black mastic*	*y*	***None Detected***		100% gy,bi
103-02		*103-02-1*	***VFT #2 Room 126**/ gray floor tile*	*y*	***None Detected***	3% ce	97% qu,ca
	5	*103-02-2*	*black mastic*				
103-03		*103-03-1*	***VFT #2 Room 126**/ gray floor tile*	*y*	***None Detected***	3% ce	97% qu,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot -other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
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Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:**
OH Solutions
119 Thames St S
Ingersoll, ON N5C 2T3

Phone # (519) 485 - 2500
Fax # (866) 700 - 4975

Customer Project:
18-1461, OLFCS
Turnaround Time:
3 days

CA Labs Project #:
CAL1901470AG

Date: 1/24/2019
Samples Received: 1/21/19 10:30AM
Date Of Sampling: None Given
Purchase Order #:

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
		103-03-2	*black mastic*	*y*	***None Detected***	2% ce	98% gy,bi
104-01		*104-01-1*	***VFT #3 Room 114**/ tan floor tile*	*y*	***2% Chrysotile***		98% qu,ca
104-02		*104-02-1*	***VFT #3 Room 114**/ tan floor tile*		*Positive Stop*		
	5	*104-02-2*	*black mastic*				
104-03		*104-03-1*	***VFT #3 Room 114**/ tan floor tile*		*Positive Stop*		
	5	*104-03-2*	*black mastic*				
105-01		*105-01-1*	***Joint Compound, Room 114**/ off-white surfaced white compound*	*n*	***None Detected***		100% qu,mi,bi,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

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gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot -other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

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10. TEM analysis suggested

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Polarized Light Asbestiform Materials Characterization

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Ingersoll, ON N5C 2T3

Phone # (519) 485 - 2500
Fax # (866) 700 - 4975

Customer Project:
18-1461, OLFCS
Turnaround Time:
3 days

CA Labs Project #:
CAL1901470AG

Date: 1/24/2019
Samples Received: 1/21/19 10:30AM
Date Of Sampling: None Given
Purchase Order #:

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
105-02		*105-02-1*	***Joint Compound, Room 126**/ off-white surfaced white compound*	*n*	***None Detected***		100% qu,mi,bi,ca
105-03		*105-03-1*	***Joint Compound, Room 138**/ off-white surfaced white compound*	*n*	***None Detected***		100% qu,mi,bi,ca
105-04		*105-04-1*	***Joint Compound, Room 148**/ off-white surfaced white compound*	*n*	***None Detected***		100% qu,mi,bi,ca
105-05		*105-05-1*	***Joint Compound, Room 150**/ off-white surfaced white compound*	*n*	***None Detected***		100% qu,mi,bi,ca
106-01		*106-01-1*	***Acoustic Tile, Corridor at 128**/ white surfacing*	*y*	***None Detected***		100% qu,bi
		106-01-2	*tan ceiling tile*	*y*	***None Detected***	37% ce 37% fg	26% qu,pe
106-02		*106-02-1*	***Acoustic Tile, Room 138**/ white surfacing*	*y*	***None Detected***		100% qu,bi

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot -other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

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Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:**
OH Solutions
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Ingersoll, ON N5C 2T3

Phone # (519) 485 - 2500
Fax # (866) 700 - 4975

Customer Project:
18-1461, OLFCS
Turnaround Time:
3 days

CA Labs Project #:
CAL1901470AG

Date: 1/24/2019
Samples Received: 1/21/19 10:30AM
Date Of Sampling: None Given
Purchase Order #:

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
		106-02-2	*tan ceiling tile*	*y*	***None Detected***	37% ce 36% fg	27% qu,pe
106-03		*106-03-1*	***Acoustic Tile, Corridor at 150/*** *white surfacing*	*y*	***None Detected***		100% qu,bi
		106-03-2	*tan ceiling tile*	*y*	***None Detected***	38% ce 39% fg	23% qu,pe
107-01		*107-01-1*	***Red Duct Sealant, Corridor/*** *brown sealant*	*y*	***4% Chrysotile***		96% qu,gy,bi
107-02		*107-02-1*	***Red Duct Sealant, Corridor/*** *brown sealant*		*Positive Stop*		
107-03		*107-03-1*	***Red Duct Sealant, Corridor/*** *brown sealant*		*Positive Stop*		

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot -other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

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10. TEM analysis suggested

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Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

OH Solutions
119 Thames St S
Ingersoll, ON N5C 2T3

Customer Project: Our Lady of Fatima
Reference #: CAL2001569RL Date: 1/27/2020

Analysis and Method

Summary of polarized light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of a stereomicroscope. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are preformed. Calibrated liquid refractive oils are used as liquid mouting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjugation with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion

Vermiculite containing samples may contain trace amounts of actinolite/tremolite. When not detected by PLM, these samples should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may contain a regulated asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be delectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Since allowable variation in quantification of samples close to 1% is high, <1% may be reported. Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos or "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

Qualifications

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have completed college courses or hold a degree in a natural science (geology, biology, or environmental science). Recognition by a state professional board in one these disciplines is preferred, but not required. Extensive in-house training programs are used to augment the educational background of the analyst. The Laboratory Director and Quality Manager have received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235
AIHA LAP, LLC Laboratory #102929

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Overview of Project Sample Material Containing Asbestos

Customer Project: Our Lady of Fatima **CA Labs Project #:** CAL2001569RL

Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
109-02	*109-02-1*	***Mastic**/ gray floor tile*	***3% Chrysotile***	***gray floor tile***

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235
AIHA LAP, LLC Laboratory #102929

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastinite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

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Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:**
OH Solutions
119 Thames St S
Ingersoll, ON N5C 2T3

Phone # (519) 485 - 2500
Fax # (866) 700 - 4975

Customer Project:
Our Lady of Fatima
Turnaround Time:
4 Hours

CA Labs Project #:
CAL2001569RL

Date: 1/27/2020
Samples Received: 1/27/20 10:30am
Date Of Sampling: None Given
Purchase Order #:

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
109-02		*109-02-1*	***Mastic**/ gray floor tile*	*y*	***3% Chrysotile***		97% qu,ca
		109-02-2	*black mastic*	*y*	***None Detected***		100% gy,bi
109-03		*109-03-1*	***Mastic**/ brown floor tile*		*Positive Stop*		
		109-03-2	*black mastic*	*y*	***None Detected***		100% gy,bi
110-01		*110-01-1*	***Mastic**/ green floor tile*	*y*	***None Detected***		100% qu,ca
		110-01-2	*black mstic*	*y*	***None Detected***		100% gy,bi
110-02		*110-02-1*	***Mastic**/ white floor tile*	*y*	***None Detected***		100% qu,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
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Approved Signatories:

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Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

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Polarized Light Asbestiform Materials Characterization

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Phone # (519) 485 - 2500
Fax # (866) 700 - 4975

Customer Project:
Our Lady of Fatima
Turnaround Time:
4 Hours

CA Labs Project #:
CAL2001569RL

Date: 1/27/2020
Samples Received: 1/27/20 10:30am
Date Of Sampling: None Given
Purchase Order #:

Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
		110-02-2	*black mastic*	*y*	***None Detected***		100% gy,bi
110-03		*110-03-1*	***Mastic**/ green floor tile*	*y*	***None Detected***		100% qu,ca
		110-03-2	*black mastic*	*y*	***None Detected***		100% gy,bi

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

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APPENDIX II

UPDATED ROOM-BY-ROOM ASBESTOS MATERIALS SUMMARY

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Building Number : SC 31		**Building Name :** Our Lady of Fatima School Chat					**Survey Date :** 7/27/2018		
Level : 1 - First Floor		**Room :** 115 - Office					**Asbestos Present :** Yes		
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 115A - Storage Room					**Asbestos Present :** Yes		
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 115B - Washroom					**Asbestos Present :** Yes		
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 117 - Washroom					**Asbestos Present :** Yes		
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 119 - Storage Room					**Asbestos Present :** Yes		
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 121 - Washroom					**Asbestos Present :** Yes		
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Comments:									
Level : 1 - First Floor		**Room :** 123 - Office			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 125 - Storage Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 125A - Storage Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 125B - Office			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 127 - Office			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 129 - Daycare			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : 1 - First Floor		**Room :** 129A - Washroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 131 - Office			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 133 - Daycare			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 154 - Work Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 156 - Storage Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 158 - Custodial Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : 1 - First Floor		**Room :** 160 - Staff Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 160A - Washroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 162 - Classroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 162A - Storage Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 162B - Washroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 164 - Classroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : 1 - First Floor		**Room :** 164A - Storage Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 164B - Washroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 166 - Classroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 166A - Storage Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 166B - Washroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 168 - Classroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : 1 - First Floor		**Room :** 168A - Storage Room				**Asbestos Present :** Yes			
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 170 - Classroom				**Asbestos Present :** Yes			
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 170A - Storage Room				**Asbestos Present :** Yes			
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 172 - Classroom				**Asbestos Present :** Yes			
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 172A - Storage Room				**Asbestos Present :** Yes			
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 174 - Classroom				**Asbestos Present :** Yes			
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : 1 - First Floor		**Room :** 174A - Storage Room			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 176 - Washroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** 178 - Washroom			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** CR1-10 - Corridor			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** CR1-11 - Corridor			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** CR1-12 - Corridor			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : 1 - First Floor		**Room :** CR1-13 - Corridor			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** V-05 - Corridor			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : 1 - First Floor		**Room :** V-06 - Corridor			**Asbestos Present :** Yes				
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Comments:									
Level : LOC 01 - First Floor		**Room :** Boiler Room			**Asbestos Present :** Yes				
Ceiling	Not Found								
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated								
Floor	Concrete								
Mechanical	Boiler								
Piping	Fibreglass Straight Run								
Piping	Uninsulated								
Structure	Inaccessible								
Wall	Masonry								

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Comments:									
	Reno 2019.								
Level : LOC 02 - First Floor		**Room :** Electrical Room			**Asbestos Present :** Yes				
Ceiling	Not Found								
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	Yes	No	V104
Duct	Not Found								
Floor	Concrete								
Mechanical	Electrical								
Piping	Uninsulated								
Structure	Steel Beam, Deck								
Wall	Masonry								
Comments:									
	Reno 2019.								
Level : LOC 03 - First Floor		**Room :** Corridor			**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile								S0002
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated								
Floor	Terrazzo								
Mechanical	Not Found								
Piping	Fibreglass Fitting								
Piping	Fibreglass Straight Run								
Structure	Steel Beam, Deck & Joist								

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Reno 2019.

Level : LOC 04 - First Floor **Room :** Corridor **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile								S0002
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated								
Floor	Terrazzo								
Mechanical	Not Found								
Piping	Fibreglass Straight Run								
Piping	Uninsulated								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Level : LOC 05 - First Floor **Room :** Side Entrance **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile								S0003
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated								
Floor	Terrazzo								
Mechanical	Not Found								

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Piping	Fibreglass Fitting								
Piping	Fibreglass Rain Water Leader								
Piping	Fibreglass Straight Run								
Structure	Steel Beam, Deck & Joist								
Wall	Non-Asbestos Drywall Compound - New								V105

Comments:

Reno 2019.
New addition barrier free washroom 2019.

Level : LOC 06 - First Floor **Room :** Office **Asbestos Present :** Yes

Ceiling	Not Found								
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Not Found								
Floor	Concrete								
Mechanical	Not Found								
Piping	Not Found								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								

Comments:

Level : LOC 07 - First Floor **Room :** Gymnasium **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile								
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	Yes	No	V104
Duct	Uninsulated								

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Floor	Suspect Vinyl Floor Tile	2,520.0	SF	Good		A	8	Yes	No	
Piping	Asbestos Parging Cement Roof Hopper	2.0	EA	Good		C	7	Yes	Yes	V0001
Piping	Fibreglass Straight Run									
Piping	Fibreglass with PVC									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos 1 x 1 Tile									S0004

Comments:

Includes corridor to left side of stage

Level : LOC 08 - First Floor **Room :** Equipment Storage Room **Asbestos Present :** Yes

Ceiling	Not Found									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Not Found									
Floor	Suspect Vinyl Floor Tile	100.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Piping	Non-Asbestos Parging Cement									
Structure	Concrete									
Wall	Masonry									

Comments: Vinyl Floor Tile Assumed to Contain Asbestos

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : LOC 09 - First Floor		**Room :** Stage						**Asbestos Present :** Yes		
Ceiling	Non-Asbestos 1 x 1 Tile									
Ceiling	Not Found									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	Yes	No	V104
Duct	Not Found									
Floor	Suspect Vinyl Floor Tile	480.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
Comments: Vinyl Floor Tile Assumed to Contain Asbestos										
Level : LOC 10 - First Floor		**Room :** Equpment Storage Room						**Asbestos Present :** Yes		
Ceiling	Not Found									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	Yes	No	V104
Duct	Uninsulated									
Floor	Suspect Vinyl Floor Tile	200.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Not Found									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Comments: Vinyl Floor Tile Assumed to Contain Asbestos									
Level : LOC 11 - First Floor	**Room :** Boy's Change Room			**Asbestos Present :** Yes					
Ceiling	Non-Asbestos Drywall Compound								V105
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	D	7	No	No	V104
Duct	Inaccessible								
Floor	Terrazzo								
Mechanical	Inaccessible								
Piping	Uninsulated								
Structure	Inaccessible								
Wall	Masonry								
Comments: No access above ceiling.									
Level : LOC 12 - First Floor	**Room :** Girl's Change Room			**Asbestos Present :** Yes					
Ceiling	Non-Asbestos Drywall Compound								V105
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	D	7	No	No	V104
Duct	Inaccessible								
Floor	Terrazzo								
Mechanical	Inaccessible								
Piping	Uninsulated								
Structure	Inaccessible								
Wall	Masonry								
Comments: No access above ceiling.									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : LOC 13 - First Floor		**Room :** Custodial Storage Room				**Asbestos Present :** Yes				
Ceiling	Not Found									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	Yes	No	V104
Duct	Not Found									
Floor	Concrete									
Mechanical	Not Found									
Piping	Not Found									
Structure	Steel Beam, Deck									
Wall	Masonry									
Comments:	Former custodial room. Future vestibule and building exit. Reno 2019.									
Level : LOC 14 - First Floor		**Room :** 2 - Washroom				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Drywall Compound									V105
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	D	7	No	No	V104
Duct	Inaccessible									
Floor	Suspect Vinyl Floor Tile	25.0	SF	Good		A	8	Yes	No	
Mechanical	Inaccessible									
Piping	Uninsulated									
Structure	Inaccessible									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Comments: No access above ceiling. Vinyl Floor Tile Assumed to Contain Asbestos									
Level : LOC 15 - First Floor	**Room :** Secretary's Office				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Drywall Compound								V105
Ceiling	Non-Asbestos Lay-in Tile								
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	D	7	No	No	V104
Duct	Uninsulated								
Floor	Non-Asbestos Vinyl Tile - New								
Mechanical	Not Found								
Piping	Not Found								
Structure	Steel Beam, Deck								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								
Comments:									
Level : LOC 16 - First Floor	**Room :** Vestibule				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile								
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Not Found								
Floor	Terrazzo								
Mechanical	Not Found								
Piping	Not Found								
Structure	Steel Beam, Deck & Joist								

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Wall	Masonry									
Comments:										
Level : LOC 17 - First Floor		**Room :** Vice Principal's Office				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Carpet									
Mechanical	Not Found									
Piping	Not Found									
Structure	Steel Beam, Deck									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
Comments:										
Level : LOC 18 - First Floor		**Room :** 2 - Principal's Office				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Inaccessible									
Floor	Suspect Vinyl Floor Tile	180.0	SF	Good		A	8	Yes	No	
Mechanical	Inaccessible									
Piping	Fibreglass Straight Run									
Structure	Inaccessible									
Wall	Masonry									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Wall	Non-Asbestos Drywall Compound									V105
Comments: No access above ceiling. Vinyl Floor Tile Assumed to Contain Asbestos										
Level : LOC 19 - First Floor	**Room :** Corridor							**Asbestos Present :** Yes		
Ceiling	Non-Asbestos Lay-in Tile									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Not Found									
Floor	Suspect Vinyl Floor Tile	80.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Not Found									
Structure	Steel Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
Comments: Vinyl Floor Tile Assumed to Contain Asbestos										
Level : LOC 20 - First Floor	**Room :** Supply Room							**Asbestos Present :** Yes		
Ceiling	Non-Asbestos Lay-in Tile									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Not Found									
Floor	Suspect Vinyl Floor Tile	70.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Structure	Steel Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
	Comments: Vinyl Floor Tile Assumed to Contain Asbestos									
Level : LOC 21 - First Floor		**Room :** Washroom				**Asbestos Present :** Yes				
Ceiling	Suspect Drywall Compound	30.0	SF	Good		C	8	Yes	No	
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Inaccessible									
Floor	Suspect Vinyl Floor Tile	30.0	SF	Good		A	8	Yes	No	
Mechanical	Inaccessible									
Piping	Uninsulated									
Structure	Inaccessible									
Wall	Masonry									
	Comments: No access above ceiling.									
	Vinyl Floor Tile Assumed to Contain Asbestos									
Level : LOC 22 - First Floor		**Room :** Teacher's Work Room				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Suspect Vinyl Floor Tile	170.0	SF	Good		A	8	Yes	No	
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
	Comments: Vinyl Floor Tile Assumed to Contain Asbestos									
Level : LOC 23 - First Floor		**Room :** Staff Room				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Suspect Vinyl Floor Tile	440.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
	Comments: Vinyl Floor Tile Assumed to Contain Asbestos									
Level : LOC 24 - First Floor		**Room :** Staff Washroom				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Drywall Compound									V105
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	D	7	No	No	V104
Duct	Inaccessible									
Floor	Suspect Vinyl Floor Tile	30.0	SF	Good		A	8	Yes	No	

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Mechanical	Inaccessible								
Piping	Uninsulated								
Structure	Inaccessible								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments: No access above ceiling.
Vinyl Floor Tile Assumed to Contain Asbestos

Level : LOC 25 - First Floor **Room :** Corridor **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile								V0002
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated								
Floor	Terrazzo								
Mechanical	Not Found								
Piping	Fibreglass Fitting								
Piping	Fibreglass Straight Run								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Level : LOC 26 - First Floor **Room :** Corridor **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile								V0002
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	No	No	V104

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Duct	Uninsulated								
Floor	Terrazzo								
Mechanical	Not Found								
Piping	Fibreglass Fitting								
Piping	Fibreglass Straight Run								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Level : LOC 27 - First Floor **Room :** Corridor **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile								V0002
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	C	7	Yes	No	107-01
Duct	Uninsulated								
Floor	Terrazzo								
Mechanical	Not Found								
Piping	Fibreglass Fitting								
Piping	Fibreglass Straight Run								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Includes vestibule.
Reno 2019.

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : LOC 28 - First Floor		**Room :** Library				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	Yes	No	107-02
Floor	Carpet									
Floor	Suspect Vinyl Floor Tile	200.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									105-05
Comments:										
Level : LOC 29 - First Floor		**Room :** Resource Centre				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Suspect Vinyl Floor Tile	308.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Wall	Non-Asbestos Drywall Compound									V105
	Comments: Vinyl Floor Tile Assumed to Contain Asbestos									
Level : LOC 30 - First Floor		**Room :** Librarian's Office				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Suspect Vinyl Floor Tile	144.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
	Comments: Vinyl Floor Tile Assumed to Contain Asbestos									
Level : LOC 31 - First Floor		**Room :** I.T. Room				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Suspect Vinyl Floor Tile	168.0	SF	Good		A	8	Yes	No	
Mechanical	Inaccessible									
Piping	Fibreglass Fitting									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Piping	Fibreglass Straight Run									
Structure	Inaccessible									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
Comments:	No access above ceiling.									
	Vinyl Floor Tile Assumed to Contain Asbestos									
Level :	LOC 32 - First Floor	**Room :**	3 - Storage Room			**Asbestos Present :**		Yes		
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Suspect Vinyl Floor Tile	80.0	SF	Good		A	8	Yes	No	
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
Comments:	Vinyl Floor Tile Assumed to Contain Asbestos									
	Reno 2019.									
Level :	LOC 33 - First Floor	**Room :**	Publishing Room			**Asbestos Present :**		Yes		
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Duct	Uninsulated								
Floor	Non-Asbestos Vinyl Tile - New								
Mechanical	Not Found								
Piping	Fibreglass Fitting								
Piping	Fibreglass Straight Run								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Reno 2019.

Level : LOC 34 - First Floor **Room :** Girl's Washroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Drywall Compound								V105
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	D	7	No	No	V104
Duct	Inaccessible								
Floor	Terrazzo								
Mechanical	Inaccessible								
Piping	Uninsulated								
Structure	Inaccessible								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments: No access above ceiling.

Reno 2019.

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : LOC 35 - First Floor		**Room :** Boy's Washroom				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Drywall Compound									V105
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	D	7	No	No	V104
Duct	Uninsulated									
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Piping	Uninsulated									
Structure	Steel Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105
Comments:										
Reno 2019.										
Level : LOC 36 - First Floor		**Room :** 122 - Classroom				**Asbestos Present :** Yes				
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	784.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Asbestos containing accoustic mastic on underside of sink.
Reno 2019.

Level : LOC 37 - First Floor **Room :** 116 - Classroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	840.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 38 - First Floor **Room :** 114 - Classroom **Asbestos Present :** Yes

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	840.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	S104-01
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									105-01

Comments:

Asbestos containing mastic on underside of sink.
Reno 2019.

Level : LOC 39 - First Floor **Room :** 112 - Classroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	840.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Asbestos containing mastic on underside of sink.
Reno 2019.

Level : LOC 40 - First Floor **Room :** 110 - Classroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	840.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 41 - First Floor **Room :** Corridor **Asbestos Present :** No

Ceiling	Non-Asbestos Lay-in Tile									V0002

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Duct	Uninsulated								
Floor	Terrazzo								
Piping	Fibreglass Fitting								
Piping	Fibreglass Straight Run								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Reno 2019.

Level : LOC 42 - First Floor **Room :** Corridor **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile								V0002
Duct	Asbestos Sealant	Good	Chrysotile 4.00%	C	7	No	No		V104
Duct	Uninsulated								
Floor	Terrazzo								
Mechanical	Not Found								
Piping	Fibreglass Fitting								
Piping	Fibreglass Straight Run								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Reno 2019.

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Level : LOC 43 - First Floor		**Room :** Corridor					**Asbestos Present :** Yes			
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Not Found									
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Uninsulated									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Comments:	Reno 2019. Vestibule now closed up.									
Level : LOC 44 - First Floor		**Room :** 124 - Classroom					**Asbestos Present :** Yes			
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	784.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound							No	No	V105

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 45 - First Floor **Room :** 126 - Classroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	784.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	S102-01
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									105-02

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 46 - First Floor **Room :** 128 - Classroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	784.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 47 - First Floor **Room :** 130 - Kindergarten **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	784.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Piping	Uninsulated									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 48 - First Floor **Room :** 130A - Kindergarten Coat Room **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	216.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Piping	Uninsulated									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Reno 2019.

Level : LOC 49 - First Floor **Room :** Storage Room **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Floor	Asbestos Vinyl Floor Tile	96.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Floor	Ceramic									
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Reno 2019.

Level : LOC 50 - First Floor **Room :** Side Entrance **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Not Found									
Floor	Terrazzo									
Mechanical	Not Found									
Piping	Not Found									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									

Comments:

Reno 2019.

Level : LOC 51 - First Floor **Room :** 134 - Classroom **Asbestos Present :** Yes

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	784.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 52 - First Floor **Room :** 136 - Classroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	784.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity		Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Wall	Non-Asbestos Drywall Compound									V105

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 53 - First Floor **Room :** 138 - Classroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	No	No	V104
Duct	Uninsulated									
Floor	Asbestos Vinyl Floor Tile	784.0	SF	Good	Chrysotile 3.00%	A	7	Yes	No	V102
Mechanical	Not Found									
Piping	Fibreglass Fitting									
Piping	Fibreglass Straight Run									
Structure	Steel Beam, Deck & Joist									
Wall	Masonry									
Wall	Non-Asbestos Drywall Compound									105-03

Comments:

Asbestos containing acoustic mastic on underside of sink.
Reno 2019.

Level : LOC 54 - First Floor **Room :** Prep Room **Asbestos Present :** Yes

Ceiling	Non-Asbestos Lay-in Tile									V0002
Duct	Asbestos Sealant			Good	Chrysotile 4.00%	C	7	Yes	No	107-04
Duct	Uninsulated									
Floor	Concrete									

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Mechanical	Not Found								
Piping	Uninsulated								
Structure	Steel Beam, Deck & Joist								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments:

Reno 2019.
ACM vinyl floor tiles removed 2019.
Former storage 142 LOC 55 now part of this room.

Level : LOC 56 - First Floor **Room :** Boy's Washroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Drywall Compound								V105
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	D	7	No	No	V104
Duct	Uninsulated								
Floor	Terrazzo								
Mechanical	Inaccessible								
Piping	Uninsulated								
Structure	Inaccessible								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments: No access above ceiling.

Level : LOC 57 - First Floor **Room :** Girls Washroom **Asbestos Present :** Yes

Ceiling	Non-Asbestos Drywall Compound								V105
Duct	Asbestos Sealant		Good	Chrysotile 4.00%	D	7	No	No	V104

Asbestos Status Report

(sorted by Building Number)

UPPER(BUILD:BuildingNumber) = 'SC 31'

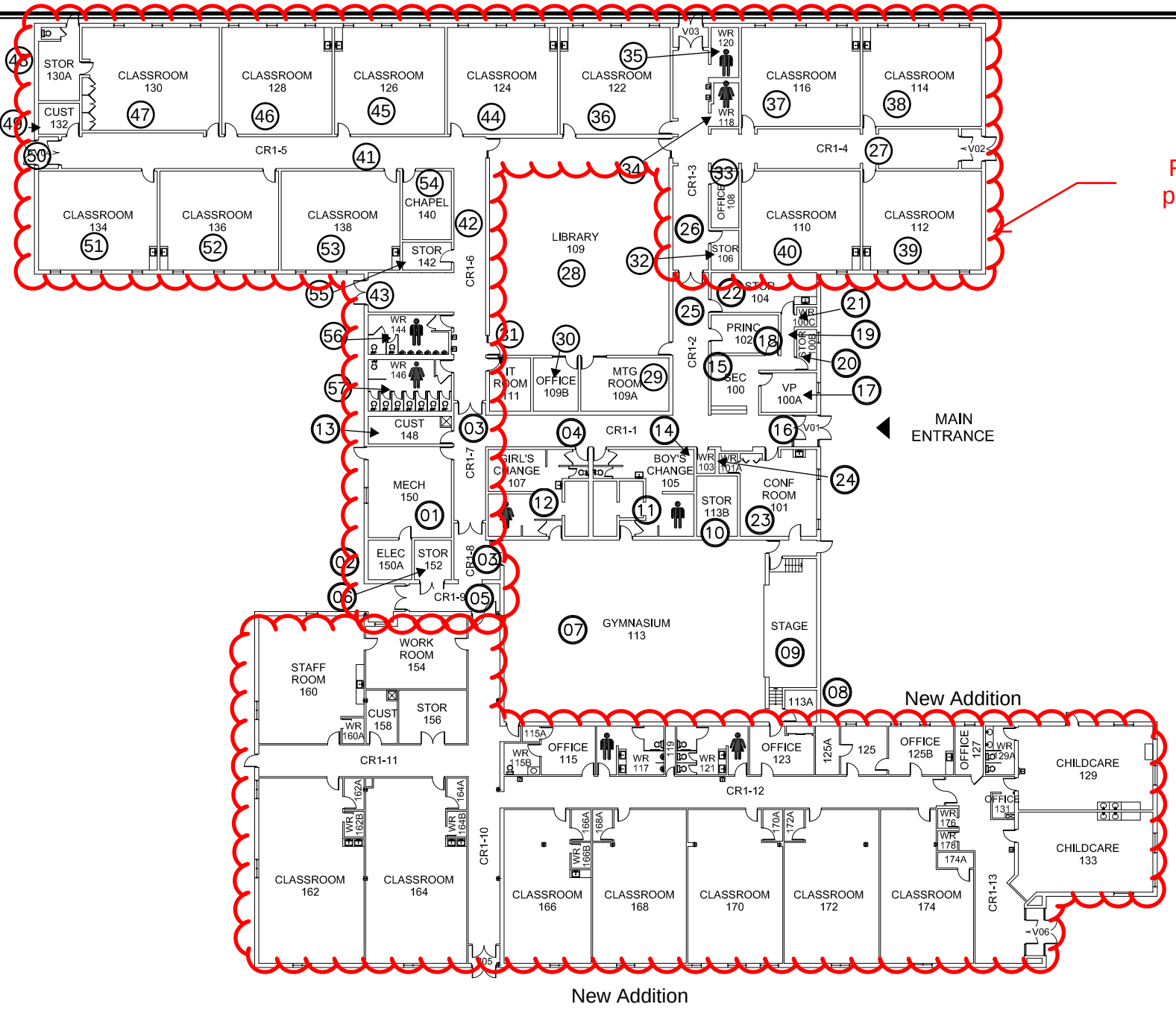
Registered user: OH Solutions Inc.

Design	Description	Quantity	Cond.	Asbestos type	Access.	Action	Visible	Friable	Sample
Duct	Inaccessible								
Floor	Terrazzo								
Mechanical	Inaccessible								
Piping	Uninsulated								
Structure	Inaccessible								
Wall	Masonry								
Wall	Non-Asbestos Drywall Compound								V105

Comments: No access above ceiling.

APPENDIX III

DRAWINGS OUTLINING INSPECTION LOCATIONS



Occupational Hygiene Solutions
119 Thames Street South
Ingersoll, Ontario
N5C 2T3

St. Clair Catholic School Board

Our Lady Of Fatima Elementary School Chatham

Main Floor
Survey Locations

Project:	Prepared by:
19-1713	JE
Scale: N.T.S.	Date: Sept 2019

Occupational
Hygiene Solutions

March 4, 2020

OHS Project 19-1713

St. Clair Catholic District School Board
1930 Wildwood Drive
Brights Grove, ON
N0N 1C0

Attention: Mr. Paul Lernout

RE: SUPPLEMENTARY ASBESTOS BULK SAMPLING
OUR LADY OF FATIMA SCHOOL, CHATHAM, ONTARIO

INTRODUCTION

OH Solutions Inc. (OHS) was retained by the St. Clair Catholic District School Board (the Board) to complete supplementary sampling in advance of the renovation project at our Lady of Fatima Catholic School, in Chatham, Ontario.

Kris Olson of OHS attended the site and with the assistance of Board personnel collected samples from the core of three fire doors in the building.

METHODOLOGY AND RESULTS

The bulk samples were submitted to Crisp Analytical Laboratories, in Carrollton Texas. Samples were analyzed based on US EPA Method 600/R-93/116. Preliminary identification was made using Polarized Light Microscopy (PLM), with confirmation of the presence and type of asbestos made by dispersion staining optical microscopy. This analytical procedure conforms to the requirements outlined in Ontario Regulation 278/05 - Asbestos on Construction Projects and in Buildings and Repair Operations. The results of the analysis are presented below:

Sample	Sample Description	Percent Asbestos
111-01	Core of Fire Door, Room 126	10% Amosite 4% Chrysotile
111-02	Core of Fire Door, Room 136	Positive Stop
111-03	Core of Fire Door, Room 150	Positive Stop

CONCLUSIONS AND RECOMMENDATIONS

Cores of the fire doors were found to contain asbestos. Doors that are scheduled for removal can be packaged and disposed of as asbestos waste, following Type 1 asbestos procedures.

CLOSURE

OHS has prepared this report for the exclusive use of our Client. OHS will not be responsible for the use of this report by any third party, or reliance on or any decision to be made based on it without the prior written consent of OHS. OHS accepts no responsibility for damages, if any, by any third party because of decisions or actions based on this report. In addition, the liability due to any responsibility arising out of or relating to this report for OHS, and its officers, directors, employees and agents will be limited to the stated value of the work. However, OHS will not be liable for any consequential, incidental or indirect damages as a result of the performance of this work.

We trust that this information is sufficient for your present purposes. Should you have any questions regarding this matter, please do not hesitate to contact our office.

Respectfully submitted,

Kris Olson, P.Eng., CIH
OH Solutions Inc.
Enclosure: Certificate of Analysis

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

OH Solutions
119 Thames St S
Ingersoll, ON N5C 2T3

Customer Project: 19-1713 Our Lady of Fatima
Reference #: CAL20031540RL Date: 03/04/20

Analysis and Method

Summary of polarized light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of a stereomicroscope. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are preformed. Calibrated liquid refractive oils are used as liquid mouting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjugation with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion

Vermiculite containing samples may contain trace amounts of actinolite/tremolite. When not detected by PLM, these samples should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may contain a regulated asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Since allowable variation in quantification of samples close to 1% is high, <1% may be reported. Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos or "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

Qualifications

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have completed college courses or hold a degree in a natural science (geology, biology, or environmental science). Recognition by a state professional board in one these disciplines is preferred, but not required. Extensive in-house training programs are used to augment the educational background of the analyst. The Laboratory Director and Quality Manager have received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235
AIHA LAP, LLC Laboratory #102929

CA Labs
Dedicated to Quality

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Overview of Project Sample Material Containing Asbestos

Customer Project: 19-1713 Our Lady of Fatima **CA Labs Project #:** CAL20031540RL

Laboratory Sample ID	Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
24815	111-01	*111-01-1*	***Insulation**/ white insulation*	***10% Amosite 4% Chrysotile***	***white insulation***

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235
AIHA LAP, LLC Laboratory #102929

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate
gypsum - gypsum
bi - binder
or - organic
ma - matrix
mi - mica
ve - vermiculite
ot - other
pe - perlite
qu - quartz
fg - fiberglass
mw - mineral wool
wo - wollastinite
ta - talc
sy - synthetic
ce - cellulose
br - brucite
ka - kaolin (clay)
pa - palygorskite (clay)

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Polarized Light Asbestiform Materials Characterization

Customer Info:
OH Solutions
119 Thames St S
Ingersoll, ON N5C 2T3

Phone # (519) 485 - 2500
Fax # (866) 700 - 4975

Attn:

Customer Project:
19-1713 Our Lady of Fatima

Turnaround Time:
4 Hours

CA Labs Project #:
CAL20031540RL

Date: 3/4/2020
Samples Rec'd: 3/4/20 10:30am
Date Of Sampling: None Given
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
24815	111-01		*111-01-1*	***Insulation**/ white insulation*	*y*	***10% Amosite*** ***4% Chrysotile***		86% qu,ca,ma
24816	111-02		*111-02-1*	***Insulation**/ white insulation*		*Positive Stop*		
24817	111-03		*111-03-1*	***Insulation**/ white insulation*		*Positive Stop*		
24817		***4***	*111-03-2*	*brown wooden fragments*				

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot -other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

SUPPLEMENTARY GEOTECHNICAL INVESTIGATION
OUR LADY OF FATIMA SCHOOL ADDITION
545 BALDOON ROAD
CHATHAM, ONTARIO

for

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

PETO MacCALLUM LTD.
4023 MEADOWBROOK DRIVE, UNIT 103
LONDON, ONTARIO
N6L 1E6
PHONE: (519) 203-7500
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Distribution:
1 cc: St. Clair Catholic District School Board
(email – tony.montanino@st-clair.net)
1 cc: PML London
1 cc: PML Kitchener

PML Ref.: 19LF005
Report: 1
February 20, 2020

Peto MacCallum Ltd.
CONSULTING ENGINEERS

February 20, 2020

PML Ref.: 19LF005
Report: 1

Mr. Tony Montanino
St. Clair Catholic District School Board Facility
1930 Wildwood Drive
Brights Grove, Ontario
N0N 1C0

Dear Mr. Montanino

Supplementary Geotechnical Investigation
Our Lady of Fatima School Addition
545 Baldoon Road
Chatham, Ontario

Peto MacCallum Ltd. (PML) is pleased to report the results of the supplementary geotechnical investigation recently completed at the above noted project site. Authorization to proceed with this assignment was provided by Mr. Randy Wilson of Wilson Diaz Architects Inc. and confirmed by St. Clair Catholic School Board purchase order 30646.

In general, the project involves the proposed construction of an addition onto the existing school building, located at 545 Baldoon Road, in Chatham, Ontario.

A previous geotechnical investigation was conducted at the site by AMEC Foster Wheeler, and reference is given to their report, Ref. SWW177161 dated June 16, 20117 for particulars.

The purpose of the supplementary geotechnical investigation was to explore the subsurface soil and ground water conditions at the site and based on this information, to provide geotechnical recommendations for the proposed addition. Specific considerations to be addressed in this report include:

- A description of the site and the field investigation procedure;
- A summary of the subsurface soil and ground water conditions encountered including fill and organic deposit depths;
- Log of borehole sheets, a borehole location plan drawing, and geotechnical laboratory
- test results;
- Foundations, including design bearing resistances for conventional strip or pad footings;
- Deep foundation options including the potential use of helical piers;
- Slab on grade floors; and,
- Excavation recommendations including safe side slopes and dewatering requirements.

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BARRIE, COLLINGWOOD, HAMILTON, KITCHENER, LONDON, TORONTO

The comments and recommendations provided in this report are based on the site conditions at the time of the investigation, and are for the current project only. Any changes in plans will require review by PML to assess the applicability of the report, and may require modified recommendations, additional analysis and / or investigation. When the project design is complete, the general recommendations given in this report should be reviewed by PML to ensure their applicability.

Investigation Procedure

The field work for this geotechnical investigation was conducted on December 23, 2019. The investigation program comprised a total of two boreholes. Borehole 1 was advanced to 15.7 m and Borehole 2 to 3.7 m depth. The borehole locations are shown on the appended Borehole Location Plan, Drawing 1.

The borehole locations were established in the field and surveyed by PML using a Sokkia GCX3 GNSS Receiver.

The boreholes were advanced using a Diedrich D-50 track mounted drill rig fitted with continuous flight hollow stem augers and automatic hammer, supplied and operated by a specialist drilling contractor. The work was carried out under the full-time supervision of a PML engineering staff member who directed the drilling and sampling operations, documented the soil stratigraphy, monitored ground water conditions and processed the recovered samples.

Representative samples of the overburden were recovered at regular intervals throughout the depths explored. Standard penetration tests (SPT) were carried out during sampling operations of the boreholes using conventional split spoon equipment. It is noted that split spoon sampling does not accommodate collection of soil particles larger than 38 mm in diameter.

Pocket penetrometer testing was carried out on recovered samples to determine the undrained shear strength of cohesive soils.

The ground water conditions in the boreholes were monitored during the course of the drilling operation. All the recovered samples were returned to PML's laboratory for detailed visual examination, classification, and routine moisture content determinations. The laboratory testing also included particle size distribution analyses on two samples of the major soil types encountered.

Summarized Subsurface Conditions

Reference is made to the appended Log of Borehole sheets for details of the field work including soil descriptions, inferred stratigraphy, standard penetration test (SPT) N values, ground water observations, laboratory moisture content determinations and organic content determinations.

Due to the soil sampling procedures and the limited size of samples, the depth / elevation demarcations on the borehole logs must be viewed as "transitional" zones, and cannot be construed as exact geologic boundaries between layers.

In general, the subsurface soil stratigraphy comprised localized surficial fill, over a localized silt layer, over a major silty clay deposit.

Surficial fill was encountered in both boreholes 1 and 2 and extended to 2.1 and 1.6 m depth respectively. The fill comprised a 250 mm thick layer of dark brown silty sand topsoil, underlain by layers of brown clayey silt, and sand and gravel. The fill also contained occasional wood pieces. The fill was in a moist to wet condition with laboratory moisture contents ranging 9 to 21%.

Silt was encountered locally in borehole 1 below the fill and extended to 2.9 m depth. The silt was compact with SPT N value of 21 blows per 0.3 m penetration of the split spoon sampler. The silt was moist with moisture content 16%.

Silty clay was encountered below the fill and silt deposits, and extended to the respective 15.7 and 3.7 m borehole termination depths. The silty clay was soft to firm to approximately 10.2 m depth with SPT N values ranging from 1 to 10 blows per 0.3 m penetration of the split spoon sampler. Below 10.2 m depth, the silty clay was firm to very stiff with SPT N values ranging from 7 to 33 blows per 0.3 m penetration of the split spoon sampler. Penetrometer testing of the undrained shear strength of the silty clay deposit below 13.7 m depth ranged from 138 to 200 kPa.

Reference is given to Figure 1 and 2 for the results of the particle size analyses conducted on samples of the silty clay. The silty clay was drier than plastic limit (DTPL) to wetter than plastic limit (WTPL) with moisture contents ranging from 9 to 39%. Atterberg limit test results for the silty clay indicated a Liquid Limit between 20 to 25 and a Plastic Limit between 15 and 20 corresponding to a Plasticity Index of 5.

Ground Water Conditions

Ground water observations carried out during and upon completion of drilling are presented on the appended Log of Borehole Sheets.

WTPL silty clay was observed in boreholes 1 and 2 below 2.9 and 1.6 m depth respectively. Upon completion of drilling, free water was not observed in the boreholes, and this is attributed to the relatively impermeable nature of the silty clay.

The ground water levels at the site are subject to seasonal fluctuations and precipitation patterns. The relatively impermeable nature of the deposits could contribute to the development of perched water conditions following short term and seasonal precipitation events.

Discussion and Recommendations

In general, the project involves the proposed addition of the existing Our Lady of Fatima School, located at 545 Baldoon Road, in Chatham, Ontario.

As noted previously, a geotechnical investigation was conducted at the site in 2017 by AMEC Foster Wheeler, Ref. SWW177161 dated June 16, 2017. The recommendations presented in the previous report remain applicable. Notwithstanding, we have provided the following supplementary recommendations for the proposed addition.

The following supplementary recommendations are based on design information provided by the client. It is recommended that PML be retained to review the final design to check that the recommendations presented hereafter have been interpreted correctly and are sufficient and appropriate for the proposed works.

Foundations

Footings

Based on the results of the investigation, conventional strip / spread footings founded at least 0.3 m into the native silty clay deposits may be designed for a net bearing resistance of 40 kPa at the serviceability limit state (SLS) and a factored bearing resistance of 60 kPa at the ultimate limit state (ULS) as noted in the table below.

FOOTING FOUNDING DEPTHS

BOREHOLE	For 40 kPa at SLS and 60 kPa at ULS	
	MINIMUM DEPTH (m)	CORRESPONDING ELEVATION
1	2.4	177.7
2	1.9	178.2

Alternatively, footings may be supported on an approved engineered structural fill, comprised of approved sand and gravel, placed in accordance with the generic recommendations for engineered fill construction provided in Appendix A. Prior to placement of engineered fill, all existing fill must be removed and the soils should be subexcavated to the level of competent native overburden soils noted in the table above.

Footings supported on the structural fill may also be designed using the values for a net factored resistance at ULS and SLS of 60 and 40 kPa, respectively. Full time inspection of any structural fill placement by PML personnel is recommended to approve subgrade conditions, fill materials and to verify that the specified compaction levels are being achieved.

All founding surfaces should be examined by PML personnel prior to concrete placement, to check that all loose, frozen, organic or otherwise deleterious materials have been satisfactorily removed and the required bearing capacity is available throughout. Any loose or unsuitable founding soils should be excavated and replaced with structural fill compacted to 98% standard Proctor maximum dry density (SPMDD), or lean mix concrete.

In general, the founding soils are sensitive to disturbance from foot traffic and construction equipment. Therefore, it is recommended that a working pad of lean mix concrete (mud slab) be poured at the base of footing excavations to protect the soil from disturbance, and to provide a durable work area for placement of reinforcing steel and erection of formwork.

Provided the footings are designed and constructed for the SLS resistance outlined above, total settlements should not exceed 25 mm with differential settlements of 75% of this value.

All exterior footings should be provided with a minimum 1.2 m of earth cover or the thermal insulation equivalent to provide adequate insulation against potential frost damage. A 25 mm thick layer of polystyrene insulation is thermally equivalent to 600 mm of soil cover.

Design provisions for earthquake loading should also be applied. For the soil conditions at the site, a Class E site category may be assumed, in accordance with the 2012 Ontario Building Code.

Helical Piers

It is feasible to support building on helical piers founded on the very stiff native silty clay deposits. For preliminary design (costing purposes only) an individual helical pier (Chance type SS5) founded below 12 m depth in the native very stiff silty clay may be able to provide bearing resistances of 200 kN at SLS and 270 kN at ULS. The capacity of a helical pier is dependent on the individual pier configuration and the properties of the founding soils. Helical pier systems are typically available as a proprietary product. The names of local distributors / installers can be provided if required. Design services are typically included with the product. PML can assist with a review of the helical pier design. Furthermore, compressive load testing should be conducted at the installation stage.

Design provisions for earthquake loading should also be applied. For the soil conditions at the site, a Class E site category may be assumed, in accordance with the 2012 Ontario Building Code.

Slab on Grade Floors

The variable fill soils found at the site are suitable for support of the slab-on-grade floors provided some settlement and associated floor slab cracking can be tolerated. However, if potential settlement and the associated cracking cannot be tolerated, then the insitu fill must be removed and replaced with engineered structural fill. Engineered fill used to support slab on grade floors must be placed in accordance with the generic recommendations for engineered fill construction provided in Appendix A.

Fill placed under floor slabs or as foundation backfill should comprise approved inorganic material having a moisture content within 3% of the optimum value, placed in maximum 200 mm thick lifts, and compacted to at least 95% of SPMDD.

A minimum 150 mm thick layer of free draining Granular A type material compacted to 98% SPMDD is recommended directly beneath the slab-on-grade. A polyethylene vapour barrier should be placed on the surface of the granular base if a moisture sensitive finish is to be placed on the floor. Joints should be saw cut into concrete floor immediately after initial set of the concrete to control potential cracking of the slab.

Exterior grades should be maintained at least 300 mm below the finished slab level and sloped to promote drainage away from the proposed addition.

Excavation and Ground Water Control

It is generally envisaged that excavations for the earthworks, foundation construction and site servicing will extend to a maximum 2 m depth within the proposed development. Excavations are expected to extend through fill, into the native silt and silty clay deposits above the ground water level which are classified as Type 3 materials as defined in the OHSA. Subject to inspection, and provided adequate ground water control is achieved, excavations within Type 3 soils that are to be entered by workers should be inclined from the base of the excavation at one horizontal to one vertical (1H:1V) or flatter.

It is anticipated that for much of the site ground water seepage or surface water entering the excavations will be handled readily by conventional sump pumping. The actual dewatering methods should be established at the contractor's discretion within the context of a performance specification for the project. Regardless of the dewatering method chosen, the hydraulic head and ground water inflow must be properly controlled to ensure a stable and safe excavation and to facilitate construction. The design of the dewatering system should be specified to maintain and control ground water at least 0.3 m below the excavation base level, in order to provide a stable excavation base throughout construction.

It should be noted that, under the Ontario Water Resources Act, the Water Taking and Transfer Regulation 387/04, a Permit to Take Water (PTTW) from the Ministry of Environment, Conservation and Parks (MECP) is required if the dewatering discharge is greater than 50,000 L/day. Excavations for utility installation, foundation construction and earthworks grading are generally expected to have dewatering rates less than 50,000 L/day, and a PTTW or EASR will not be required.

Geotechnical Review and Construction Inspection and Testing

When development design is complete, it is recommended that the design drawings be submitted to PML for general geotechnical review for compatibility with site conditions and recommendations of this report.

Earthworks operations should be carried out under the supervision of PML to approve subgrade preparation, backfill materials, placement and compaction procedures, and verify the specified degree of compaction is achieved uniformly throughout fill materials.

The comments and recommendations provided in the report are based on the information revealed in the boreholes. Conditions away from and between boreholes may vary, particularly where service trenches exist. Geotechnical review during construction should be on going to confirm the subsurface conditions are substantially similar to those encountered in the boreholes, which may otherwise require modification to the original recommendations.

This report is subject to the Statement of Limitations that is included in Appendix A, which must be read in conjunction with the report.

Closure

We trust the information presented in this report is sufficient for your immediate requirements. If you have any questions or require further information, please do not hesitate to contact our office.

Sincerely

Peto MacCallum Ltd.

Rahil Bhavsar, BEng, MEng
Project Technologist, Geotechnical Services

William Loghrin, P.Eng.
Project Engineer, Geotechnical Services

Scott Jeffrey, P.Eng., QP_{ESA}, $LEED_{GA}$
Associate
Regional Manager, Geotechnical Services

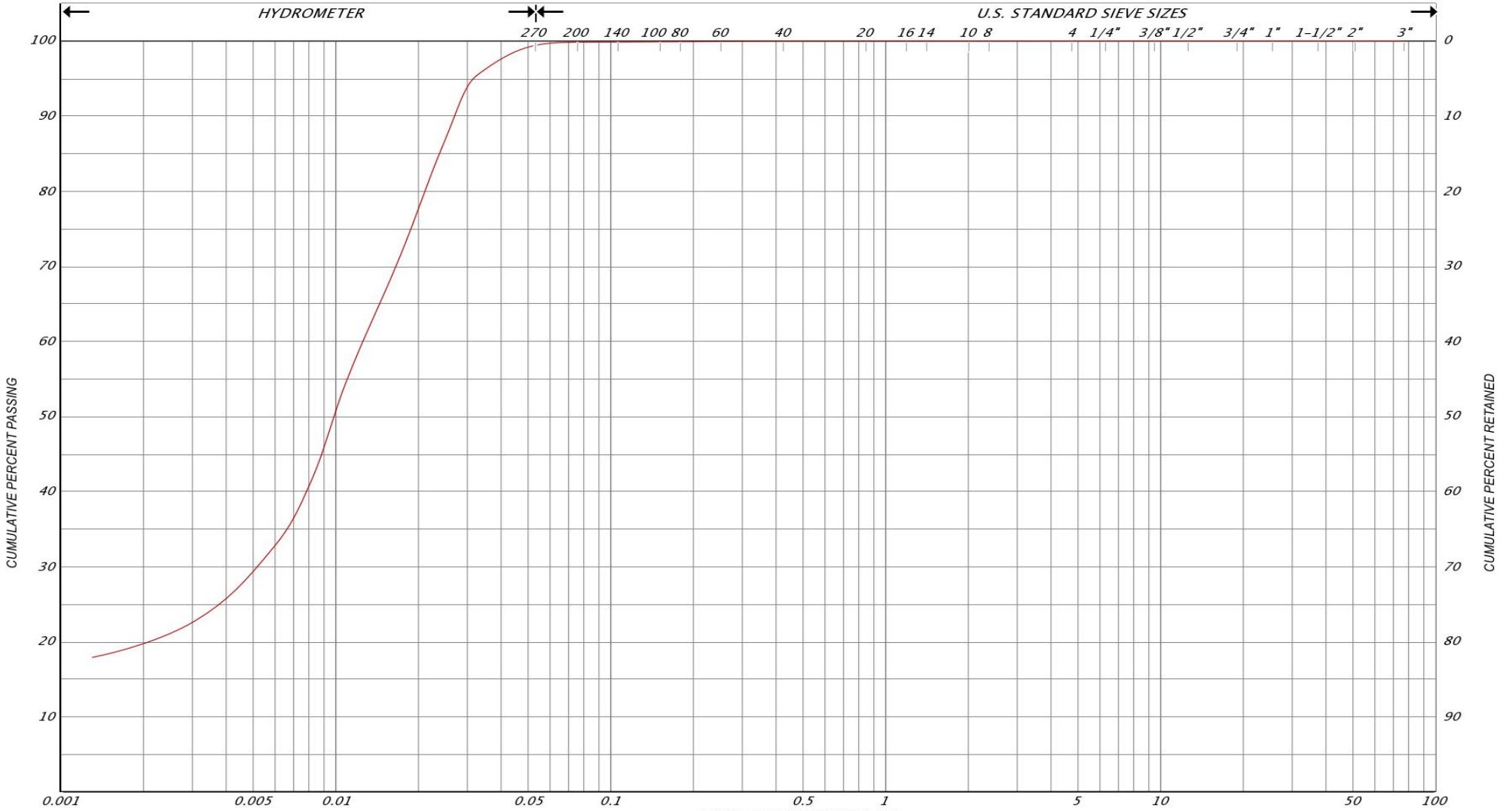
WL/GM:wl

Enclosures:
Figures 1 and 2 - Particle Size Distribution Charts
List of Abbreviations
Log of Boreholes 1 and 2
Drawing 1 - Borehole Location Plan

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS

PROJECT NO. 19LF005
FIGURE NO. 1

PARTICLE SIZE DISTRIBUTION CHART



SILT & CLAY				FINE	MEDIUM	COARSE	GRAVEL			COBBLES	UNIFIED
				SAND							
CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	GRAVEL			COBBLES	M.I.T
	SILT			SAND							
CLAY	SILT			V.FINE	FINE	MED.	COARSE	GRAVEL			US BUREAU
				SAND							

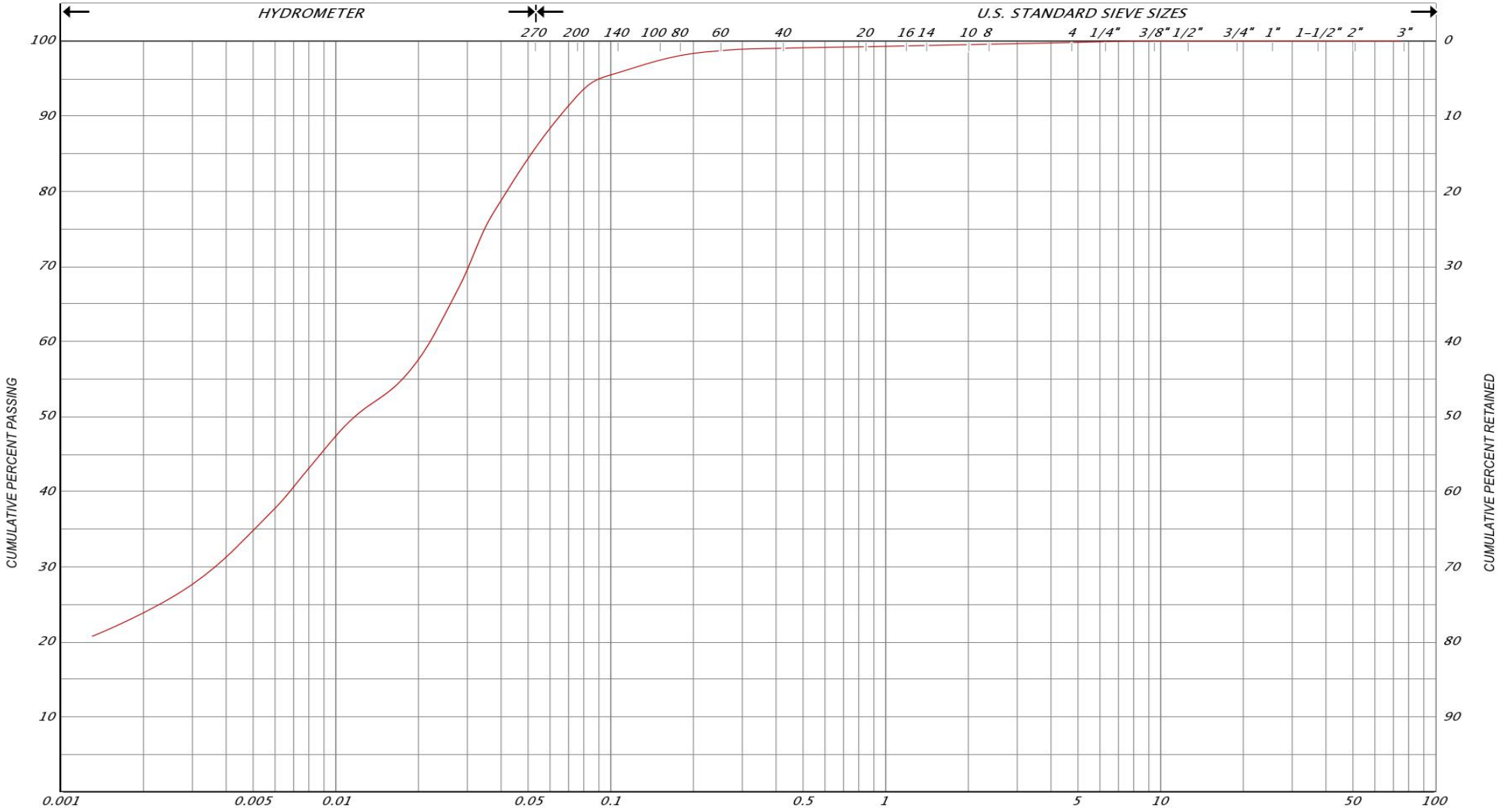
REMARKS: Borehole 1, Sample SS6, Depth 4.5 to 5.0 m

SILTY CLAY

PML Peto MacCallum Ltd.
CONSULTING ENGINEERS

PROJECT NO. 19LF005
FIGURE NO. 2

PARTICLE SIZE DISTRIBUTION CHART



SILT & CLAY				FINE	MEDIUM	COARSE	GRAVEL			COB BLES	UNIFIED
				SAND							
CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	GRAVEL			COBBLES	M.I.T
	SILT			SAND							
CLAY	SILT			V.FINE	FINE	MED.	COARSE	GRAVEL			US BUREAU
				SAND							

REMARKS: Borehole 1, Sample SS12, Depth 13.7 to 14.2 m

SILTY CLAY

Peto MacCallum Ltd.
CONSULTING ENGINEERS

LOG OF BOREHOLE NO. 1

17T 399572.9E 4696053N

PROJECT School building addition — **PML REF.** 19LF005

LOCATION 545 Baldoon Rd, Chatham — **BORING DATE** December 23, 2019 — **ENGINEER** W. Loghrin

BORING METHOD Continuous Flight Hollow Stem Augers — **TECHNICIAN** R. Bhavsar

DEPTH / ELEV (metres)	DESCRIPTION	STRAT PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES "N" VALUES
	SURFACE ELEVATION 180.12				
0.0	FILL: 250mm dark brown silty sand topsoil over brown clayey silt,occassional silt layers, occasional sand and gravel layers, occassional wood pieces, moist to wet		1	SS	5
1.0			2	SS	10
2.0			3	SS	7
2.1 / 178.0	SILT: Compact brown silt, some clay, trace sand, moist to wet		4	SS	21
2.9 / 177.2	SILTY CLAY: Firm to soft with depth, grey silty clay, trace sand, APL to WTPL		5	SS	10
4.0			6	SS	2
5.0			7	SS	1
6.0			8	SS	2
7.0			9	SS	2
8.0			10	SS	7
9.0			11	SS	17
10.0			12	SS	33
10.2 / 169.9	becoming firm to very stiff, WTPL to DTPL with depth				
11.0					
12.0					
13.0					
14.0					
15.0	CONTINUED				

ELEVATION SCALE: 180, 179, 178, 177, 176, 175, 174, 173, 172, 171, 170, 169, 168, 167, 166

SHEAR STRENGTH (kPa)
+FIELD VANE △TORVANE ○ Qu
▲POCKET PENETROMETER ○ Q
50 100 150 200
DYNAMIC CONE PENETRATION ×
STANDARD PENETRATION TEST ●
20 40 60 80

PLASTIC LIMIT w_P — NATURAL MOISTURE CONTENT w — LIQUID LIMIT w_L
WATER CONTENT (%)
10 20 30 40

GAS READINGS ppm

GROUND WATER OBSERVATIONS AND REMARKS

GRAIN SIZE DISTRIBUTION (%)
GR SA SI&CL

NOTES

Peto MacCallum Ltd.
CONSULTING ENGINEERS

LOG OF BOREHOLE NO. 1

17T 399572.9E 4696053N

PROJECT School building addition — **PML REF.** 19LF005

LOCATION 545 Baldoon Rd, Chatham — **BORING DATE** December 23, 2019 — **ENGINEER** W. Loghrin

BORING METHOD Continuous Flight Hollow Stem Augers — **TECHNICIAN** R. Bhavsar

DEPTH ELEV (metres)	DESCRIPTION	STRAT PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES "N" VALUES	ELEVATION SCALE	SHEAR STRENGTH (kPa) / DYNAMIC CONE PENETRATION / STANDARD PENETRATION TEST	PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT / WATER CONTENT (%)	GAS READINGS ppm	GROUND WATER OBSERVATIONS AND REMARKS / GRAIN SIZE DISTRIBUTION (%) GR SA SI&CL
15.0	CONTINUED FROM PREVIOUS PAGE					165				
15.7			13	SS	23					
164.4	BOREHOLE TERMINATED AT 15.7 m									Upon removal of augers Cave at 14.6 m No free water

NOTES

Peto MacCallum Ltd.
CONSULTING ENGINEERS

LOG OF BOREHOLE NO. 2

17T 399569.3E 4696061N

PROJECT School building addition — ***PML REF.*** 19LF005

LOCATION 545 Baldoon Rd, Chatham — ***BORING DATE*** December 23, 2019 — ***ENGINEER*** W. Loghrin

BORING METHOD Continuous Flight Hollow Stem Augers — ***TECHNICIAN*** R. Bhavsar

DEPTH (metres)	ELEV	DESCRIPTION	STRAT PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES "N" VALUES	ELEVATION SCALE
		SURFACE ELEVATION 180.11					
0.0		FILL: 250mm dark brown silty sand topsoil, over brown clayey silt,occassional silt layers, occasional sand and gravel layers, occassional wood pieces, moist to wet		1	SS	6	180
1.0				2	SS	19	179
1.6	178.5	SILTY CLAY: Soft brown to grey silty clay, trace sand, APL to WTPL		3	SS	9	178
2.0				4	SS	4	
3.0				5	SS	5	177
3.7	176.4	BOREHOLE TERMINATED AT 3.7 m					
4.0							
5.0							
6.0							
7.0							
8.0							
9.0							
10.0							
11.0							
12.0							
13.0							
14.0							
15.0							

SHEAR STRENGTH (kPa)
+FIELD VANE △TORVANE ○ Qu
▲POCKET PENETROMETER ○ Q
50 100 150 200
DYNAMIC CONE PENETRATION ×
STANDARD PENETRATION TEST ●
20 40 60 80

PLASTIC LIMIT — NATURAL MOISTURE CONTENT — LIQUID LIMIT
w_P — w — w_L
WATER CONTENT (%)
10 20 30 40

GAS READINGS ppm

GROUND WATER OBSERVATIONS AND REMARKS
GRAIN SIZE DISTRIBUTION (%) GR SA SI&CL

Upon removal of augers
No cave
Free water at 2.9 m

NOTES

LEGEND:

BOREHOLE LOCATION

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

OUR LADY FATIMA SCHOOL ADDITION

545 BALDOON ROAD
CHATHAM, ONTARIO

BOREHOLE LOCATION PLAN

Peto MacCallum Ltd.
CONSULTING ENGINEERS

DRAWN	R. BHAVSAR	*DATE*	*SCALE*	*PML REF.*	*DWG. NO.*
CHECKED	W. LOGHRIN	FEBRUARY 2020	AS SHOWN	19LF005	1
APPROVED	W. LOGHRIN				

APPENDIX A

ENGINEERED FILL

ENGINEERED FILL

The information presented in this appendix is intended for general guidance only. Site specific conditions and prevailing weather may require modification of compaction standards, backfill type or procedures. Each site must be discussed, and procedures agreed with Peto MacCallum Ltd. prior to the start of the earthworks and must be subject to ongoing review during construction. This appendix is not intended to apply to embankments. Steeply sloping ravine residential lots require special consideration.

For fill to be classified as engineered fill suitable for supporting structural loads, a number of conditions must be satisfied, including but not necessarily limited to the following:

1. Purpose

The site specific purpose of the engineered fill must be recognized. In advance of construction, all parties should discuss the project and its requirements and agree on an appropriate set of standards and procedures.

2. Minimum Extent

The engineered fill envelope must extend beyond the footprint of the structure to be supported. The minimum extent of the envelope should be defined from a geotechnical perspective by:

- at founding level, extend a minimum 1.0 m beyond the outer edge of the foundations, greater if adequate layout has not yet been completed as noted below; and
- extend downward and outward at a slope no greater than 45° to meet the subgrade

All fill within the envelope established above must meet the requirements of engineered fill in order to support the structure safely. Other considerations such as survey control, or construction methods may require an envelope that is larger, as noted in the following sections.

Once the minimum envelope has been established, structures must not be moved or extended without consultation with Peto MacCallum Ltd. Similarly, Peto MacCallum Ltd. should be consulted prior to any excavation within the minimum envelope.

3. Survey Control

Accurate survey control is essential to the success of an engineered fill project. The boundaries of the engineered fill must be laid out by a surveyor in consultation with engineering staff from Peto MacCallum Ltd. Careful consideration of the maximum building envelope is required.

During construction it is necessary to have a qualified surveyor provide total station control on the three dimensional extent of filling.

4. Subsurface Preparation

Prior to placement of fill, the subgrade must be prepared to the satisfaction of Peto MacCallum Ltd. All deleterious material must be removed and in some cases, excavation of native mineral soils may be required.

Particular attention must be paid to wet subgrades and possible additional measures required to achieve sufficient compaction. Where fill is placed against a slope, benching may be necessary and natural drainage paths must not be blocked.

5. Suitable Fill Materials

All material to be used as fill must be approved by Peto MacCallum Ltd. Such approval will be influenced by many factors and must be site and project specific. External fill sources must be sampled, tested and approved prior to material being hauled to site.

6. Test Section

In advance of the start of construction of the engineered fill pad, the Contractor should conduct a test section. The compaction criterion will be assessed in consultation with Peto MacCallum Ltd. for the various fill material types using different lift thicknesses and number of passes for the compaction equipment proposed by the Contractor.

Additional test sections may be required throughout the course of the project to reflect changes in fill sources, natural moisture content of the material and weather conditions.

The Contractor should be particularly aware of changes in the moisture content of fill material. Site review by Peto MacCallum Ltd. is required to ensure the desired lift thickness is maintained and that each lift is systematically compacted, tested and approved before a subsequent lift is commenced.

7. Inspection and Testing

Uniform, thorough compaction is crucial to the performance of the engineered fill and the supported structure. Hence, all subgrade preparation, filling and compacting must be carried out under the full time inspection by Peto MacCallum Ltd.

All founding surfaces for all buildings and residential dwellings or any part thereof (including but not limited to footings and floor slabs) on structural fill or native soils must be inspected and approved by PML engineering personnel prior to placement of the base/subbase granular material and/or concrete. The purpose of the inspection is to ensure the subgrade soils are capable of supporting the building/house foundation and floor slab loads and to confirm the building/house envelope does not extend beyond the limits of any structural fill pads.

8. Protection of Fill

Fill is generally more susceptible to the effects of weather than natural soil. Fill placed and approved to the level at which structural support is required must be protected from excessive wetting, drying, erosion or freezing. Where adequate protection has not been provided, it may be necessary to provide deeper footings or to strip and recompact some of the fill.

9. Construction Delay Time Considerations

The integrity of the fill pad can deteriorate due to the harsh effects of our Canadian weather. Hence, particular care must be taken if the fill pad is constructed over a long time period.

It is necessary therefore, that all fill sources are tested to ensure the material compactability prior to the soil arriving at site. When there has been a lengthy delay between construction periods of the fill pad, it is necessary to conduct subgrade proof rolling, test pits or boreholes to verify the adequacy of the exposed subgrade to accept new fill material.

When the fill pad will be constructed over a lengthy period of time, a field survey should be completed at the end of each construction season to verify the areal extent and the level at which the compacted fill has been brought up to, tested and approved.

In the following spring, subexcavation may be necessary if the fill pad has been softened attributable to ponded surface water or freeze/thaw cycles.

A new survey is required at the beginning of the next construction season to verify that random dumping and/or spreading of fill has not been carried out at the site.

10. Approved Fill Pad Surveillance

It should be appreciated that once the fill pad has been brought to final grade and documented by field survey, there must be ongoing surveillance to ensure that the integrity of the fill pad is not threatened.

Grading operations adjacent to fill pads can often take place several months or years after completion of the fill pad.

It is imperative that all site management and supervision staff, the staff of Contractors and earthwork operators be fully aware of the boundaries of all approved engineered fill pads.

Excavation into an approved engineered fill pad should never be contemplated without the full knowledge, approval and documentation by the geotechnical consultant.

If the fill pad is knowingly built several years in advance of ultimate construction, the areal limits of the fill pad should be substantially overbuilt laterally to allow for changes in possible structure location and elevation and other earthwork operations and competing interests on the site. The overbuilt distance required is project and/or site specified.

Iron bars should be placed at the corner/intermediate points of the fill pad as a permanent record of the approved limits of the work for record keeping purposes.

11. Unusual Working Conditions

Construction of fill pads may at times take place at night and/or during periods of freezing weather conditions because of the requirements of the project schedule. It should be appreciated therefore, that both situations present more difficult working conditions. The Owner, Contractor, Design Consultant and Geotechnical Engineer must be willing to work together to revise site construction procedures, enhance field testing and surveillance, and incorporate design modifications as necessary to suit site conditions.

When working at night there must be sufficient artificial light to properly illuminate the fill pad and borrow areas.

Placement of material to form an engineered fill pad during winter and freezing temperatures has its own special conditions that must be addressed. It is imperative that each day prior to placement of new fill, the exposed subgrade must be inspected and any overnight snow or frozen material removed. Particular attention should be given to the borrow source inspection to ensure only nonfrozen fill is brought to the site.

The Contractor must continually assess the work program and have the necessary spreading and compacting equipment to ensure that densification of the fill material takes place in a minimum amount of time. Changes may be required to the spreading methods, lift thickness, and compaction techniques to ensure the desired compaction is achieved uniformly throughout each fill lift.

The Contractor should adequately protect the subgrade at the end of each shift to minimize frost penetration overnight. Since water cannot be added to the fill material to facilitate compaction, it is imperative that densification of the fill be achieved by additional compaction effort and an appropriate reduced lift thickness. Once the fill pad has been completed, it must be properly protected from freezing temperatures and ponding of water during the spring thaw period.

If the pad is unusually thick or if the fill thickness varies dramatically across the width or length of the fill pad, Peto MacCallum Ltd. should be consulted for additional recommendations. In this case, alternative special provisions may be recommended, such as providing a surcharge preload for a limited time or increase the degree of compaction of the fill.

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

.1 The General Conditions of CCDC 2-2008, Stipulated Price Contract as supplemented in Section 00 73 00, and the General Requirements of Division 1, form part of this Section, and must be read in conjunction with the requirements of this Section, and all related Sections.

.2 The Work of this Section, and Related Work specified in other Sections shall comply with all requirements of Division 1 – General Requirements.

1.02 SECTION INCLUDES

.1 Provision of all labour, materials, equipment and incidental services necessary to Provide rigid board insulation

1.03 RELATED SECTIONS

.1	Section 03 30 00	Cast-In-Place Concrete
.2	Section 07 26 00	Vapour and Air Barriers
.3	Mechanical Divisions	Insulation for Mechanical Work

1.04 REFERENCE STANDARDS

.1 Underwriters Laboratories of Canada (ULC):

.1 CAN/ULC-S102-2018; Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

.2 CAN/ULC -S701.1-2017, Standard for Thermal Insulation, Polystyrene, Boards

.3 CAN/ULC-S702.1-2014; Standard for Mineral Fibre Thermal Insulation for Buildings.

.4 CAN/ULC-S702.2-2015; Standard for Mineral Fibre Thermal Insulation for Buildings.

.5 CAN/ULC-S704-2017; Standard for Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Faced.

.6 CAN/ULC-S770-15- REV1; Standard Test Method Determination of Determination of Long-Term Thermal Resistance of Closed-Cell Thermal Insulation Foams.

.2 ASTM International

.1 ASTM C 208-12(2017)e1, Standard Specification for Cellulosic Fiber Insulating Board.

.2 ASTM C 591-17, Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation.

.3 ASTM C 612-14, Standard Specification for Mineral Fibre Block and Board Thermal Insulation.

.4 ASTM C 726-17, Standard Specification for Mineral Fiber Roof Insulation Board.

.5 ASTM C 728-17a, Standard Specification for Perlite Thermal Insulation Board.

.6 ASTM C 1126-18, Standard Specification for Faced or Unfaced Rigid Cellular Phenolic Thermal Insulation.

.7 ASTM C 1289-18a, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

.8 ASTM E 96/E 96M-16, Standard Test Methods for Water Vapour Transmission of Materials.

.9 ASTM E2178-13 Standard Test Method for Air Permeance of Building Materials

1.05 SUBMITTALS

.1 Submit Submittals in accordance with Section 01 33 00

.2 Product Data Sheets:

.1 Submit Product Data Sheets indicating physical characteristics, test results confirming performance characteristics and compliance with referenced standards.

.3 Samples:

.1 Submit duplicate 300mm (12”) long Samples of insulation furring system channels, fasteners and accessories.

1.06 DELIVERY, STORAGE AND HANDLING

.1 Deliver materials to the Place of the Work in their original unopened packages, bearing all manufacturer's labels.

.2 Protect packages from damage, and materials from effects of weathering.

.3 Store insulation materials in dry location, off ground and protected for wetting and traffic.

PART 2 - PRODUCTS

2.01 INSULATION

.1 Provide board insulation in single thickness, to maximum thickness manufactured, unless Specifications and/or Drawings indicate multiple layers.

.1 Refer to drawings for thickness of insulation required. Where following the specified list choices of materials, the contractor shall select appropriate products from such lists on the basis of their total compatibility when incorporated into the entire assembly, as well as their ability to adhere to other components permanently and in a rigid manner.

.2 General Application:

.1 Rigid Insulation; perimeter insulation, extruded polystyrene. Dow ‘SM’ Owens Corning ‘Celfort 300'

.1 Board size: 610mm x 2440mm.

.2 Cement faced insulation board

.1 Dow Styrofoam CT board for perimeter foundation walls To meet specified requirements of CSA Standard A101, Type IA, friction fit.

.3 Semi-rigid insulation: mineral fibre, cavity wall insulation. Roxul ‘Cavityrock” Owens Corning ‘Fibreglas Type 703".

.4 Foamed in Place insulation: CFC free polyurethane foam as manufactured by Instafoam, Hilti, or approved alternate.

2.02 ADHESIVES

.1 For polystyrene: to ASTM E2178 . Mastic adhesive: solvent based polymer modified liquid applied membrane compatible with insulation to be applied, type as manufactured for the attachment of insulation as manufactured by Bakor (airbloc 21) or approved alternate.

2.03 ACCESSORIES

.1 Insulation fasteners: soft washer and pin type; direct fasten type; concrete/block back-up/precast: Grey polyethylene washer, corrosion resistant fastener, pin length to suit application as recommended for pin embedment depth as manufactured by Hilti (X-SW 60 Pins) or approved alternate.

.2 Insulation attachment to metal studs: galvanized self tapping screws for 12.7mm minimum embedment into metal studs, complete with 25mm diameter plastic retaining washers.

PART 3 - EXECUTION

3.01 EXAMINATION

.1 Prior to commencing the Work of this Section, carefully inspect installed Work of other trades and verify that such Work is complete to the point where Work of this Section may properly commence. Provide Notice in Writing to the Consultant and Contractor of conditions detrimental to the proper and timely completion of the Work of this Section.

.1 Ensure substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris.

.2 Do not begin installation until all unsatisfactory conditions are resolved. Beginning Work of this Section constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.02 INSULATION INSTALLATION

.1 General

.1 Install insulation after building substrate materials are dry.

.2 Do not install insulation in areas of the building unprotected from water, freezing or similar damaging environmental conditions.

.3 Install insulation to maintain continuity of thermal protection to building elements and spaces.

.4 Fit insulation tightly around electrical boxes, plumbing and heating pipes and ducts, around exterior doors and windows and other protrusions.

.5 Keep insulation minimum 75mm (3”) from heat emitting devices such as recessed light fixtures.

.6 Cut and trim insulation neatly to fit spaces. Butt joints tightly, offset vertical joints. Use only insulation boards free from chipped or broken edges. Use largest possible dimensions to reduce number of joints.

.7 Offset both vertical and horizontal joints in multiple layer applications.

.8 Do not enclose insulation until it has been reviewed by Consultant.

.2 Batt Insulation

.1 Ensure that insulation is supported to prevent settlement.

.2 Install friction fit batts snugly between framing members.

.3 Semi-Rigid Cavity Insulation

.1 Install using securement plates as recommended by manufacturer.

.2 Apply adhesive around openings and edges.

.3 Fasten insulation to substrates at spacing recommended by manufacturer.

.4 Foundation Wall Insulation

.1 Provide cement faced insulation at all exterior face of perimeter foundation walls. Fasten with clips and adhesive.

.2 Secure insulation by adhesive if backfilling is not immediately placed to retain panels in place.

.3 Prime surfaces before application of adhesive only where and as recommended by adhesive manufacturer.

.4 Apply 50 mm diameter pads of adhesive to faces of panels as required to hold board in place on walls.

.5 Position and press boards into full contact with adhesive, and temporarily hold them in place until adhesive has set.

.6 Ensure that backfilling is completed within 24 hours, and that it does not dislodge or damage insulation.

.5 Installation of Slab Insulation

.1 Lay insulation board over compacted fill for slab base.
.2 Secure in place to prevent dislodgement when slab is poured.
.3 Ensure that slab is poured within 24 hours.

.6 Foamed in Place Insulation

.1 Install between window and door frames and all rough openings provided for structural attachments through thermal and air/vapour barrier to provide the integrity of a continuous thermal air/vapour barrier in compliance with OBC.

.7 Adhesive

.1 Apply adhesive to substrate by notched trowel in accordance with manufacturer's instructions.

.2 Embed insulation boards into adhesive, prior to skinning of adhesive.

.3 Leave unbonded joints in insulation board over line of expansion and control joints.

3.03 ADJUSTMENT

.1 Repair and seal breaks, punctures, and other openings in the vapour barrier by application of pressure sensitive vapour barrier tape. Clean surface before taping, and apply smoothly and in full contact.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

.1 **General Requirements**

.1 Division 1 and General Requirements, is a part of this Section and shall apply as if repeated here.

.2 **Work Performed by Other Sections Related to this Section is specified in**

.1 Section 02 41 00 – Selective Demolition

.2 Section 06 10 00 – Rough Carpentry

.3 Section 07 62 00 - Flashing and Sheet Metal

.4 Section 07 72 33 - Roof Hatches

.5 Section 07 92 13 - Joint Sealants

.6 Mechanical Divisions - Roof Drains

.7 Mechanical Divisions - Vent Stack Covers and Flashing

.3 **This Section shall include performance of Work which is specified in**

Section 07 62 00 - For field quality control of flashing installation contiguous with the work of this Section.

.4 **Work Performed by this Section to Meet Requirements of the Following**

Section 07 26 00 – Vapour and Air Barrier

.5 **Scope of Work**

.1 To remove the existing roof membrane, insulation, metal flashing, wood cants, and materials down to existing roof deck on existing school.

.2 Preparation of new and existing decks to receive new roofing.

.3 Install a new 2-ply modified bitumen membrane roof to the new addition and existing roof areas, refer to roof drawings. Ensure proper tie in to existing roofing systems.

1.02 QUALITY ASSURANCE

.1 **Subcontractors Qualifications**

.1 Execute Work of this Section only by a Subcontractor approved by the membrane manufacturer and who has adequate plant, equipment and skilled tradesmen to perform it expeditiously, and is known to have been responsible for satisfactory installations similar to that specified during a period of at least the immediate past five years.

.2 Install membrane approved by the personnel who have been trained and who are approved by the membrane manufacturer.

.3 Ensure that the roofing Subcontractor's suppliers and subcontractors have the

same qualifications.

.2 **Requirements of Regulatory Agencies**

.1 Ensure that materials, including adhesives, and roof anchorage meet requirements of jurisdictional authorities.

.2 Ensure that roofing materials, including adhesives and roof anchorage, are listed by Factory Mutual as approved roofing components; and that details of roofing anchorage conforms to Factory Mutual requirements.

.3 **Source Quality Control**

.1 Review Drawings and inform Architect of conditions which will not ensure a satisfactory installation.

.2 Arrange for a site meeting for review of installation procedures with a representative of membrane manufacturer.

.4 **Compatibility**

.1 Assure that all roofing components are compatible with each other.

.2 Ensure that all roofing components are compatible with other systems to which attachment or other physical interface is required.

1.03 REFERENCE STANDARDS

.1 ASTM International

.1 ASTM A653/A653M-18, Specification for Steel Sheet, Zinc Coated (Galvanized) by Hot Dip Process

.2 ASTM D3686-13 Standard Practice for Sampling Atmospheres to Collect Organic Compound Vapours (Activated Charcoal Tube Absorption Method)

.2 Canadian General Standards Board

.1 CGSB Specification 51-GP-20M, Thermal Insulation, Expanded Polystyrene.

.2 CGSB Specification 37-GP-56M, Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing

.3 Canadian Standards Group

.1 CSA Standard A82.27-M1977, Gypsum Board Products

.2 CSA Standard A123.4-04(R2018), Asphalt for Constructing Built Up Roofing Coverings and Waterproof Systems

1.04 SUBMITTALS

.1 Inspection Company Reports

.1 Submit roof inspection reports as the Work progresses.

.2 Upon completion of roofing Work, submit duplicate certificates of acceptance issued by the roofing inspection company.

.2 Shop Drawings

.1 Submit shop drawings for approval of system and as required for composite membrane.

.3 Samples

.1 Submit samples and manufacturer's literature before ordering materials and proceeding with the Work.

1.05 DELIVERY STORAGE AND HANDLING

.1 Store materials in dry protected area as recommended by manufacturer to ensure that they are not damaged.

.2 Do not store roofing materials on roof. Store them under cover while roofing Work is not in progress.

.3 Package roofing materials and identify on attached labels the manufacturer, brand, contents, weight as applicable, and product and specification numbers.

.4 Store materials in dry protected areas between temperatures of 15°C (60°F) and 27°C (80°F), except for membrane. If materials are exposed to lower temperatures, restore them to specified range prior to use.

1.06 SITE CONDITIONS

.1 Environmental Requirements

.1 Do not apply any part of the roofing system over damp materials, nor during a period of damp weather, rain, snow, or otherwise inclement conditions.

.2 Apply membrane and components only when air and surface temperatures are within limits recommended by manufacturer and not less than 5°C (40°F).

1.07 WARRANTY

.1 Extended Warranty

.1 Warranty contained in GC24 is, with respect to Section 07 52 00, extended from 1 year to 10 years. Without restricting generality of warranty, defects shall include leaking, failure to stay in place, undue expansion, lifting, deformation, loosening, failure to adhere, splitting of same, deterioration, blisters, etc.

.2 Membrane manufacturer will issue a written document in the Owner’s name, valid for 15 years, stating that they will repair any leaks in the roofing membrane to restore the roofing system to a dry and watertight condition, to the extent that membrane manufacturing or installation defects caused water infiltration. The warranty must cover entire cost of repairs including labour and materials, for the full duration of the warranty period.

.3 Contractor will issue a written and signed document in the Owner’s name, certifying that the work executed will remain in place and free of any workmanship defect for a period of 10 years, starting from the date of acceptance.

.4 Contractor shall arrange with Architect and/or Owner, about 1 month before warranty expires, to visit site, examine roofing installation specified in this Section, and make necessary arrangement through no fault or neglect of Owner or Architect, then period of warranty shall extend to one month after such arrangement is made.

PART 2 - PRODUCTS

2.01 MATERIALS

Basis of specification is Soprema, equivalent products as supplied by Henry Company or IKO for torching application of the base sheet and torching of the cap sheet, will be accepted upon review and approval by consultants. The colour of the granular surface is to be selected by the Owner. Supply additional granules to be applied to bitumen outflows between membrane sheets. Use only compatible materials in roofing system.

.1 **Sheathing Board** – Silicone treated fibreglass-mat faced gypsum roof board to ASTM C1177/C1177M-04, 12.7 mm thick, 1219mm wide boards x 2438 mm long min. Ends cut square; DensDeck Prime as manufactured by Georgia-Pacific, or approved alternate.

.2 **Gypsum Board Tape** – Sopraguard Tape as manufactured by Soprema, "V-8086" Contractor's sheathing tape as manufactured by 3M Canada, "Tuck 20502" Contractor's Sheathing tape as manufactured by Canadian Technical Tape Ltd. or approved alternate.

.3 **Base Sheet Panel –** Soprasmart board 180 or approved equal - high-performance high-density support panel composed of SBS modified bitumen membrane with a non-woven polyester reinforcement, factory-laminated on asphaltic board (SOPRABOARD). The surface is covered with a thermo-fusible plastic film.

.4 **Primer (for heat welded of asphalt adhered membranes)** – A blend of elastomeric bitumen, volatile solvents and adhesive enhancing additives used to prime, concrete, metal or gypsum board substrates prior to the application of torch applied or asphalt adhered membranes; Elastocol 500 by Soprema, or approved alternate.

.5 **Primer (for self-adhesive membranes)** – Composed of SBS synthetic rubber, volatile solvents, adhesive enhancing resins used to prime porous and nonporous substrates such as wood, concrete, metal or gypsum board to enhance the adhesion of self-adhered membranes at temperatures above -10°C; Elastocol Stick by Soprema, or approved alternate.

.6 **Duotack** – LOW-RISE two-part urethane adhesive to be used for the application of rigid insulation.

.7 **Roofing Asphalt** - Type 2 oxidized asphalt with a softening point between 75°C - 83°C conforming to CSA A123.4M.

.8 **Vapour Retarder (Steel deck areas)** – Self-adhesive air/vapour barrier membrane composed of bitumen modified with thermoplastic polymers and high density polyethylene film; Sopravap'r 40 by Soprema, or approved alternate.

.9 **Mechanical Fasteners** - Screw fasteners with 3" round galvanized metal stress plates, self-tapping corrosion resistant screw, length as required to ensure minimum 19 mm penetration into deck; Dekfast #14 screws complete with 3" round Galvalume steel insulation plates as manufactured by SFS Intec Inc. or approved alternate.

.10 **Membranes** -

.1 Membrane Base Sheet: A membrane sheet, composed of Styrene Butadiene Styrene (SBS) modified bitumen and reinforced with non-woven polyester mat, weight 180 g/m^2, thickness of 2.2 mm., with a thermofusible poly film top surface and a lightly sanded underside to meet CGSB 37-GP-56M, Type 2, Class C, Grade 2 for base sheets; Sopralene 180 PS, by Soprema, or other approved manufacturer.

.2 Self-Adhesive Membrane: A membrane sheet, composed of Styrene Butadiene Styrene (SBS) modified bitumen and reinforced with non-woven polyester mat, weight 180 g/m^2, thickness of 2.2 mm., with a poly upper surface to torch cap sheets and a self-adhered lower surface to meet CGSB 37-GP-56M Type 2 Class C, Grade 2. NP180 Tack Sheet by Henry, or other approved manufacturer.

.3 Base Sheet Flashings: A membrane sheet, composed of Styrene Butadiene Styrene (SBS) modified bitumen and reinforced with a heavy duty glass mat, weight 130 g/m^2, thickness of 2.5 mm., with a thermofusible poly film top surface and a self adhesive underside protected by a silicone release film, to meet CGSB 37-GP-56M, Type 2, Class C, Grade A for base sheets; Sopraflash Flam Stick as supplied by Soprema, or other approved manufacturer.

.4 Membrane Cap Sheet and Flashing Cap Sheet: A membrane sheet, composed of Styrene Butadiene Stryrene (SBS) modified bitumen and reinforced with a non-woven polyester mat, weight 250 g/m^2, 3.5 mm thickness, with ceramic mineral granules embedded into top surface and a thermofusible poly film on the underside, meeting CGSB 37-GP-56M Type 1, Class A, Grade 2, for cap sheets; Sopralene Flam 250 GR supplied by Soprema, or as supplied by IKO Roofing Products, Bakor or other approved manufacturer.

.5 Base Sheet Perimeter Membrane: A membrane sheet, composed of Styrene Butadiene Styrene (SBS) modified bitumen and reinforced with a heavy duty combination of non-woven polyester with glass grid composite, weight 170 g/m^2, thickness of 2.2 mm., with a lightly sanded top and bottom surface and a 200mm wide selvedge on both sides of the roll, to meet CGSB 37-GP-56M, Type 2, Class C, Grade 2 for base sheets; Perimet'r by Soprema, or as supplied by IKO Roofing Products, Bakor, or other approved manufacturer.

.6 Cap Sheet Starter - A membrane sheet, composed of Styrene Butadiene Stryrene (SBS) modified bitumen and reinforced with a non-woven polyester mat, weight 250 g/m^2, 4 mm thickness, with ceramic mineral granules embedded into top surface and a thermofusible poly film on the underside, meeting CGSB 37-GP-56M Type 1, Class A, Grade 2, for cap sheets; Starter Flam GR supplied by Soprema, or as supplied by IKO Roofing Products, Bakor or other approved manufacturer.

.11 **Waterproofing Mastic** – Composed of synthetic rubbers, plasticized with bitumen and solvents; Sopramastic by Soprema, or approved alternate.

.12 **Asphalt Kettles** - to have thermometer accurately measuring the temperature of the asphalt in the kettle.

.13 **Caulking** - CGE Silpruf or DOW 790 Low Modulus Silicone Sealant or approved alternate.

.14 **Vent Stack Covers** - Lexsuco insulated, tamper proof or approved alternate.

.15 **Roof Drain –** Roof Drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4-RR or approved alternate with FURCO FOR DIRECT CONNECT. Outlet size shall be verified on site by the Roofing Contractor.

.16 **Rigid Insulation –** Insulation shall be roof insulation which is rigid closed cell, Polyiso Foam Insulation, integrally laminated to fiber-reinforced paper facers, thermal resistance of insulation shall be R-23.6 (L.T.T.R.) (4.0 inch) for the main roof area and R-11.4 (L.T.T.R.) (2.0 inch) around recessed roof drains, Resistance R-Value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 4 feet in size.

.17 **Tapered Insulation (Recessed Roof Drains) –** tapered insulation shall be faced Isocyanurate Boards conforming to CAN/CGSB-51.26-M86, meeting the requirements of ULC S126 Polyisocyanurate foam panels chemically bonded during the foaming process to facers on the top and bottom organic surfaces. Tapered panels shall not be less than 13m at any point of the roof to the slope indicated on the Roof Plan and Details.

.18 **Elastomeric Modified Bitumen Adhesive** – COLPLY EF or approved equal, low volatile organic compound (VOC), low odour, 100% solids and solvent-free polyether-based adhesive.

.19 **Sealants –** Sealants for metal flashing shall be one-part silicone to conform to CGSB 19 GP 96. Sealants shall be manufactured by Canadian General Electric, Dow Corning or approved equal. The colour of the sealant shall be identical to the colour of the metal flashing; the Owner is to approve the colour before ordering the sealant. This sealant shall be applied to all metal flashing joints including the reglet.

.20 **Roofing Gravel –** 1/4" to 5/8" size; water washed pea gravel, well graded, opaque, non-porous material free of fines, moisture, ice, and snow or long splinters and conforms to ASTM D1863-086.

.21 **Precast Pads –** Precast concrete pads shall be 24 inches by 24 inches by 2-inch-thick for additional walkway, etc. as shown on Roof Plan. Pads shall be placed on a 20 inch by 20 inches by 2-inch-thick sections of rigid Type 4 extruded polystyrene insulation.

PART 3 - EXECUTION

3.01 EXAMANATION

.1 Before proceeding with roofing application, ensure that:

.1 All existing roof membrane, insulation, metal flashing and cants have been removed from the designated roof area to receive new roofing systems.

.2 Existing roof deck is sound; in true planes; and level, or sloped to drains, whichever is design intent.

.3 New roof deck is constructed smoothly; in true planes, and level, or sloped to drains, whichever is design intent.

.4 Edges of all panels of metal roof deck are supported to prevent deflection.

.5 Roof drains have been set and anchored by others at a level to drain and are connected to drainage system.

.6 Roof decks are clean and sufficiently dry for application under specified warranty.

.7 Adjacent construction and installation of other work incorporated with roof is completed.

.8 Roofing surfaces are free of cracks that are wider than bridging ability of roofing materials.

.9 Preparations have been made for bases on which equipment will be installed.

.10 Work that penetrates roof has been installed.

.2 Defective roofing Work resulting from application to unsatisfactory previously completed Work will be considered the responsibility of those performing the Work of this Section.

3.02 PREPARATION

.1 Sweep roof deck completely free of dust, dirt and debris.

.2 Protection

.1 Ensure that stored porous materials absorb no moisture. Remove wet materials from Project site.

.2 When using adhesives and sealants containing petroleum distillates keep them away from open flames and do not breathe their fumes.

.3 Protect membrane from punctures by sharp materials on both their top and bottom sides.

.4 Protect surrounding work, and adjacent building and other property from damage during roofing operations.

.5 This Section shall make payment for repair of damage caused by its Work.

.6 Install temporary blocking and otherwise protect drains during roofing operations, and remove at completion of roofing Work.

.7 Protect insulation from sunlight at all times while in storage.

3.03 INSTALLATION

.1 **General**

.1 Apply roofing in accordance with Drawings, Specifications, requirements of jurisdictional authorities, and material manufacturer's printed directions which shall establish minimum requirements not otherwise specified.

.2 Roofing system to be installed to meet requirements of Factory Mutual 1-90.

.3 Apply roofing as soon as possible after new roof has been installed.

.4 Make adjustments to specified roofing procedures caused by weather and site conditions only when approved.

.5 Maintain equipment in good working order to ensure control of roofing operations and protection of Work. Use only roofing equipment recommended and approved by membrane manufacturer.

3.04 VAPOUR RETARDER (Self-adhesive)

.1 Ensure substrate is suitable prior to installation of vapour retarder.

.2 Beginning at the bottom of the slope, without adhering the membrane, unroll onto the substrate for alignment. Do not immediately remove the silicone release sheet.

3. Align the roll parallel to the corrugations of the steel deck. Make sure the membrane overlaps are supported along their entire length. Place a thin sheet of metal spanning the flutes of the deck under any end laps of membrane as support for the lap.

4. Peel back approx. 12” at one end of the silicone release sheet and adhere this part of the membrane to the deck. Peel back the remaining release sheet at a 45° angle to avoid wrinkles in the membrane.
5. If the membrane is not properly aligned, do not try to adjust it. Instead, cut the roll and start again, making sure that it is properly aligned and that it overlaps the end of the misaligned piece by 150mm.
6. Overlap adjacent membranes by 75mm (3”). Overlap end laps by 150mm (6”). Stagger end laps by at least 300mm (12”).
7. The vapour retarder is to be carried up the vertical surfaces a minimum of 8 inches above roof deck.

3.05 VAPOUR RETARDER (Mopped)

.1 Ensure substrate is suitable prior to installation of vapour retarder.

.2 Apply a coat of asphalt primer to substrate at a rate of 0.15 to 0.25 L/m². All surfaces to primed must be free of rust, duct, or any residue that may hinder adhesion. Cover primed surfaces with roofing membrane as soon as possible. Allow primer to flash and dry sufficiently before application of membrane.

.3 Unroll vapour retarder membrane dry onto substrate for alignment purposes. Overlap side laps by 75 mm and end laps by 150 mm. Laps shall be staggered a minimum of 300 mm. Begin work at bottom of slopes.

.4 Unroll vapour retarder into layer of hot asphalt spread at a rate of 1 kg/m² to 1.5 kg/m².

.5 Apply asphalt on roof at a temperature of about 230°C and heat in kettle to approximately 250°C taking care to never exceed the asphalt flash point temperature. Follow supplier’s recommendations. In colder temperatures (below 10°C), warm membranes underside by sweeping a torch over rolls entire width.

.6 The roof vapour retarder must meet and overlap the air/vapour barrier on adjoining walls to ensure total air/vapour seal. Incorporate heat-resistant air/vapour barrier continuity strip at these overlaps.

.7 Install vapour retarder membrane at insulation perimeters and around each element piercing the insulation to ensure sealed connections with base sheet at upstands.

.8 The vapour retarder is to be carried up the vertical surfaces a minimum of 8 inches above roof deck.

3.06 RIGID INSULATION BOARDS

.1 Install boards with Duotack Adhesive to the vapour retarder. On all insulation surfaces intended for board coverage apply beads of 20mm (3/4”) wide on 200mm (8”) centers.

.2 Firmly set the rigid insulation boards in staggered fashion. All boards must be butted tightly together.

.3 Apply only as many boards as can be covered in the same day.

3.07 BASE SHEET PANEL

.1 Install with Duotack Adhesive to the rigid insulation as indicated. On all insulation surfaces intended for board coverage, apply continuous strips of 13 to 19 mm (½ to ¾ inch) on 150 mm (6”) centres for eight (8) feet around roof perimeter and 200 mm (8”) centres for the field of the roof.

.2 Firmly set into the strips of Duotack Adhesive. All boards must be evenly and tightly butted together in soldier fashion.

.3 Apply only as many boards as can be covered in the same day.

.4 Install Sopralap cover strips across the end laps on the panels by heat-welded with a propane torch.

3.08 ADDITIONAL PLYWOOD AND/OR WOOD BLOCKING

.1 Install all new wood blocking and plywood as detailed on the applicable Details.

Note: The new plywood detailed on the inside face of parapet wall is not to be installed until the first ply of base sheet roof membrane is applied 3 inches up the vertical surface of parapet wall.

3.09 PRIMER

.1 Apply primer to the wood blocking and plywood surfaces which will be in contact with the self - adhesive membranes at a rate of 0.2 to 0.3 l/m2. All surfaces to be primed must be free of rust, dust or any residue that may hinder adherence. Cover primed surfaces with roofing membrane as directed by the Manufacturer.

3.10 ROOF MEMBRANE

.1 Provide a 2-ply modified bitumen membrane (mopped base, torch cap) over the overlay board.

.2 Base Sheet:

.1 Unroll base sheet dry onto substrate with first side lap lined up with centre of drain and parallel to edge of roof. Allow membrane to relax for 15 minutes prior to application. In cold weather (below 10°C) burn the plastic film on the top surface in zag-zag pattern with a propane torch to hasten relaxation.

.2 Overlap side laps by 75 mm, along lines provided for this purpose, and overlap end laps by 150 mm. Stagger end laps by at least 300mm.

.3 Re-roll base sheet and unroll again onto a bed of hot asphalt. Apply asphalt to one half of side only and seal the remaining outside half with a torch. Burn off the poly film at all end laps before adhering with asphalt.

.4 Pour hot asphalt in front of each roll at a temperature of about 230°C and heat in kettle to approx. 250°C taking care not to exceed the flash point of the asphalt. Minimum temperature at point of contact should be 220°C to 230°C. Ensure hot asphalt in kettle is in constant use to avoid distillation.

.5 Do not spread asphalt more than 3 metres in front of each roll. In colder weather (below 15°C) do not spread asphalt more than 1 metre in front of each roll.

.6 Below 10°C heat the membrane underside by sweeping a torch over entire roll's width. Be careful not to direct flame toward the bitumen.

.7 Hot asphalt must never be applied on vertical surfaces at levels higher than 25mm above horizontal base sheet roofing surface.

.8 Avoid forming wrinkles, air pockets or fishmouths.

.9 Install reinforcements at penetrations (drains, stack flashings, cone flashings) at 45° degree angle to the field membrane rolls and in accordance with manufacturer's recommendations.

.10 Always seal overlaps at the end of the workday with propane torch and hot trowel.

.3 Base Sheet Flashing

.1 Before applying primer or membranes, always remove the plastic film on the section of field membrane to be covered by overlaps.

.2 Apply a coating of primer to parapet, curb, upstand substrates including overlaps and allow to flash-off and dry.

.3 Pre-cut one (1) metre wide pieces of sufficient length to completely cover the parapet, curb, upstand detail complete with a minimum 100mm (4") overlap to the field membrane.

.4 Position pre-cut membrane piece. Peel back 100 to 150mm (4" to 6") of the silicone release paper and adhere this part of the membrane at the top of the parapet, curb or upstand. Gradually peel back the remaining silicone release paper, pressing down on the membrane with an aluminium applicator to ensure good adhesion. Use the applicator to ensure a perfect transition between the upstand and the field surface. Smooth the entire membrane surface with a roller for full adhesion. Fasten outside edge of membrane at face of parapet at 300mm (12") O.C. with round-top roofing nails.

.5 Overlap side laps 75mm (3") and stagger by at least 300mm (12") from base sheet side laps to prevent excessive layering.

.6 Cut off corners at end laps to be covered by the next roll.

.7 Install a reinforcing gusset at all inside and outside corners.

.8 Always seal overlaps at the end of the workday with propane torch and hot trowel.

.4 Cap Sheet:

.1 Once base sheet is applied and no defects are apparent, proceed with cap sheet installation, starting at the roof drains.

.2 Begin with a double selvedge starter roll. If starter roll is not used, side laps covered in granules must be degranulated by embedding a 100mm (4") side lap in torch-heated bitumen.

.3 Unroll cap sheet at drain. Carefully centre roll on drain and align side lap parallel to roof edge.

.4 Weld cap sheet onto base sheet with torch recommended by membrane manufacturer. During application, simultaneously melt both designated contact surfaces so a bead of bitumen is apparent as cap sheet unrolls.

.5 Avoid overheating.

.6 Unless overlap widths differ between cap and base sheets, make sure joints between the two layers are staggered by at least 300 mm.

.7 Overlap cap sheet side laps by 100mm (4") and end laps by 150 mm. Cut off corners at end laps to be covered by next roll. All overlap surfaces must be granule-free or degranulated.

.8 Complete perfect welds between two membranes. Leave no zone unwelded. In cold weather, adjust welding time to obtain homogenous seam (it may be necessary to slow down in certain cases.)

.9 Once cap sheet is installed, carefully check all overlapped joints.

.10 During installation, care should be taken to avoid excessive bitumen bleed-out at joints.

.5 Cap Sheet Flashing Installation

.1 The cap sheet flashing must be installed in one (1) metre wide strips. The side laps must overlap by 75mm (3”) and must be staggered by at least 100mm (4”) with respect to the joints of the cap sheet on the field surface, to avoid areas of excessive layering. The overlaps to the field surface must be 150mm (6”) minimum and exceed those of the base sheet flashing overlap by at least 50mm (2”). At end laps, angle cut the corners that will be covered by the following piece.

.2 Use chalk line to draw a straight line on the field surface 150mm (6”) from the inside of the parapets, curbs, upstands, etc. Using a propane torch and round nose trowel, embed the surface of the granules in a layer of hot bitumen, starting from the chalk line on the field surface to the bottom edge of the parapet, curb or upstand.

.3 Heat weld cap sheet flashing directly to the base sheet membrane, proceeding from top to bottom. This technique softens both membranes in order to obtain an even, continuous weld.

.4 During installation be careful not to overheat the membrane or to create excessive bitumen bleed out at the joints.

3.11 FLOOD COAT AND GRAVEL COVER

.1 Apply a flood coat of cold roofing adhesive at the rate of 5 gallons/100ft² as recommended by Manufacturer.

.2 Then embed new approved pea stone gravel at 20 kg/m² (450 lbs/100ft²) while adhesive is still wet.

3.12 CONCRETE PAVERS

.1 Install concrete pavers as indicated on the Roof Plan on top of one-inch extruded polystyrene rigid insulation (Type 4).

3.13 METAL FLASHINGS

.1 Cap and counter flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to wood capping blocking at 12 inches O.C.

.2 The inside face of the metal cap flashing between the S-locked joints is to be secured with three (3) fasteners matching the colour of the metal cap with a neoprene washer between the fastener head and inside face of the metal cap flashing.

.3 Replace any metal flashing removed from equipment fans, etc., and replace with new metal.

.4 Fabricate and install metal copings, fascias, and counter flashing as indicated on drawings.

.5 New counter flashing and cap flashings as detailed shall be coloured metal shapes to match existing flashing if any.

.6 Fabricate metal flashing and other sheet metal work in accordance with applicable CRCA FL series details. Make allowance for expansion at joints. In general, flat locked seams shall be used. Seal joints watertight with approved sealant. Form sections square, true and accurate to size, free from distortion and other defects. Double back exposed edges at least 12 mm. Flashings to be fastened with clips secured to masonry walls with nail-ins by competent mechanical fasteners or approved equal at 2'.

.7 Counter flashings shall be installed at all reglets and curbs with at least three (3) inches below the top of roof curb or reglet.

3.14 PROTECTION OF WORK

.1 At the completion of each day's work, all exposed edges of unfinished roof membrane system must be sealed by means of a temporary water cut off.

3.15 FIELD QUALITY CONTROL

.1 Arrange for a review of the complete roofing installation by a representative of the membrane manufacturer to ensure that work has been performed in compliance with specified requirements.

.2 Engage the roofing inspection company selected by the Architect to supervise installation of roofing and to verify its completion in accordance with this Specification for Work included in both Section 07 52 00 and 07 62 00.

.3 Provide supervision of roofing installation by a representative of the membrane manufacturer.

.4 Notify designated Owner's representative and roofing inspection company at least seventy-two hours before roofing operations commence, and arrange for a job site meeting to be held the day before the roofing starts with the following present: Owner's representative; Contractor's superintendent; roofing inspector; and a principal of the roofing Subcontractor's firm. Subsequently, give two working day's prior notice to the roofing inspector of the commencement of each phase of Work, and provide him with materials and installation information as required.

.5 Payment for roofing inspection will be made from Cash Allowance listed in Section 01 21 00.

3.16 ADJUSTMENT AND CLEANING

.1 Install membrane patches over punctures and tears in membrane in strict accordance with manufacturer’s written recommendations.

.2 Remove all roofer's equipment and debris as Work progresses, and at completion of roofer's Work.

.3 Remove all debris and soil from all areas and surfaces that was caused from roofing operations.

3.17 PROTECTION

.1 Coordinate work to ensure that special protection against damage from traffic or Work performed on top of completed roofing is installed as specified in Div 01.

END OF SECTION

FINISH HARDWARE SCHEDULE for
Our Lady of Fatima School Phase 3 Renewal
545 Baldoon Road,
Chatham, Ont.

Project Number: 300709

ARCHITECT:

Wilson Diaz Architects Inc.
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London Ont., N6B 1X3
TEL: 519-439-0611
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CONTRACTOR:

SCHEDULE BY:

150 Exeter Road
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Consultant: Brian Lavallee, CFDAI x237

Reviewed By: Jason Landon, EHC x226

Date: March 3, 2020

FINISH HARDWARE SCHEDULE for
Our Lady of Fatima School Phase 3 Renewal
545 Baldoon Road,
Chatham, Ont.

Project Number: 300709

PART 1 GENERAL

1.01 General Requirements

.1 Comply with the General Conditions of the contract, Supplementary General Conditions and the requirements of Division 1.

1.02 Related Work Specified Elsewhere

.1 section 06200 - finish carpentry
.2 section 08110 - steel doors
.3 section 08111 - steel frames
.4 section 08120- aluminum doors & frames

1.03 Scope of Work Included

The work of this section includes:
.1 The supply of all finish hardware product.
.2 Installation of all B/F operators

1.04 Quality Assurance

.1 Supply only hardware as required by jurisdictional codes.
.2 Supply only ULC or WHI listed hardware for fire rated construction.
.3 Supply only ULC and/or CSA listed electrical components.

1.05 Warranty

.1 Provide a warranty as stipulated in the General Conditions, from the date of final completion and acceptance of the Work.

- for a period of Two (2) years

1.06 Maintenance Manual

.1 Provide a triplicate set of maintenance and operating instructions for inclusion in the Data Manual as specified in Division 1.

1.07 Inspection and Supervision

.1 The hardware supplier shall provide a qualified Architectural Hardware Consultant who shall co-operate with the installer and clarify the locations or installation methods of particular items.

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1.08 Delivery Storage and Handling

.1 Each item shall be clearly itemized and labelled in accordance with the schedule and delivered in the manufacturer's original cartons.

.2 The hardware supplier shall arrange delivery time and date to the job site or door manufacturer so that all work may progress without delay or interruption.

.3 Storage and protection of the hardware is the responsibility of the Contractor.

.4 All hardware shall be laid out in an organized manner on shelves provided by the Contractor in a properly secure room.

.5 Deliver & assist in unloading and sorting of hardware. All hardware must be checked in onsite by the contractors designated person.

PART 2 PRODUCTS

2.01 General Requirements

.1 All hardware shall be made to template. Furnish templates and template hardware together with the instructions necessary for door and frame preparation.

.2 All hardware shall be supplied with necessary screws, bolts or other fastening devices to anchor hardware in position neatly and properly in accordance with best practices.

.3 Kickplates for hollow metal and wood doors are to be supplied with SS screws **(no tape mounting).**

2.02 Materials

Only products listed in the hardware schedule or the approved alternates listed in the following list are to be used on this project.

PRODUCT	LISTED PRODUCTS
Hinges	Ives
Latch Sets	Schlage ND series, Rhodes lever design
Exit Devices	Von Duprin 98 series
Door Closer	LCN 4040 series
Kickplates	Gallery
Wall Stops	Gallery
Threshold Weatherstripping	(KN Crowder)
Door Sweeps	(KN Crowder)
B/F operators	Hunter
Wall Switches	Camden
Power supplies	Von Duprin
Electric Stikes	Hes

FINISH HARDWARE SCHEDULE for
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2.03 Finishes

.1 The following is a description of hardware finishes as listed in the finish hardware schedule.

26D /626/652	satin chrome plated
AL/627	aluminum – mill finish
CA /628	aluminum – clear anodized
32D /630	satin stainless steel
689	painted aluminum

2.03 Keying

.1 The owner will supply the bitting for all new cylinders
.2 All new cylinders to be Schlage "G" keyway
.3 SCCDSB to provide cut keys

PART 3 EXECUTION

3.01 Examination

.1 Before supplying any materials, check all contract documents, shop drawings, details and field dimensions and conditions to ensure that the listed hardware is suitable for intended use. Inform the Consultant of any inaccuracies or discrepancies in writing.

3.02 Installation

.1 Provide instruction and templates to fabricators and to the hardware installers.
.2 All hardware is to be adjusted for proper closing and latching.
.3 Install all closers with thru-bolts and template to the degree of opening listed in the schedule Adjust door closers for proper strength, back check, closing and latching speeds.
.4 Adjust all hardware upon completion of the HVAC balancing and testing
.5 All hardware is to be installed by skilled tradesmen to the manufacturer's installation templates and instructions at the following mounting heights unless noted otherwise in the hardware schedule.

Latch Sets -	40-5/16"
Deadbolts	40 5/16"
Exit Devices-	39-13/16"
Door pulls	42"

All dimensions are from the centreline of the hardware from bottom of frame unless noted otherwise.

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3.03 Installation of Electronic Products

Following to be included in Finish Hardware Contract:
Installation of Auto Operators
Supply and installation of 24V wiring from operator to wall switches, current transfer, electric strikes.
Termination of 24V at all of the above to be co-ordinated with General Contractor and Electrical Contractor.

Related items by others:
120V 5amp power to operators, power supplies
Preparation of recessed boxes for wall switches and card readers
Conduit for wall switches, card readers

3.04 Adjustment

.1 Verify that the installed hardware functions properly.
.2 Instruct installers of requirements or procedures for adjustments.
.3 Provide a written inspection report for all hardware installation deficiencies.

FINISH HARDWARE SCHEDULE for
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Opening	Hdw Heading
D100	1
D100.1	2
D100.2	2
D100A	3
D101	4
D102	3
D103	5
D104	6
D104A	7
D104B	7
D105	8
D109	9
D109.2	9
D109A	10
D109B	10
D113.1	12
D113.2	12
D113A	13
D113A.1	14
D113B	15
D113C	16
D113D	16
D113.3	17
D115	18
D118	21
D120	21
D124	20
D132	22
D144	11
D144A	11
D150	23
D154	22
D159	24
D159A	25
D160B	25
D160	26
D160A	27
D166	28
D168	28
D170	28
D172	28
D-CR6	29
D-CR10	29

Opening	Hdw Heading
DV01.1	30
DV01.2	31
DV01.3	32
DV01.4	33
D112.E	34
D114.E	34
D116.E	34
D122.E	34
D124.E	34
D126.E	34
D128.E	34
D130.E	34
D133.E	35
D134.E	34
D136.E	34
D138.E	34
D162.E	35
D162A.E	35
D162B.E	36
D164.E	35
D164A.E	35
D164B.E	36

FINISH HARDWARE SCHEDULE for
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HEADING #1

Opening Description: 982 x 2150 x 45 Alum Dr / Alum Fr

1	Single Door #D100	Atrium 01 to Office		100°	LH
3	Hinges	5BB1HW 114 x 114	652		CIV
1	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626		CSC
1	Closer	4040 XP HEDA TB	689		CLC
1	Wall Stop	GSH 250	C26D		CGA

HEADING #2

Opening Description: 982 x 2150 x 45 Alum Dr / Alum Fr

1	Single Door #D100.1	Atrium 01 to Office		100°	RH
1	Single Door #D100.2	Office to Conference 101		100°	LH
6	Hinges	5BB1HW 114 x 114	652		CIV
2	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626		CSC
2	Closer	4040 XP HEDA TB	689		CLC
2	Wall Stop	GSH 250	C26D		CGA

HEADING #3

Opening Description: 915 x 2032 x 45 HMD / HMF

1	Single Door #D100A	Office to VP Office 100A		100°	LH
1	Single Door #D102	Office to Principal Office 102		100°	RH
6	Hinges	5BB1 114 x 102	652		CIV
2	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626		CSC
2	Kick Plate	GSH 80A 204 x 877 TEK	C32D		CGA
2	Wall Stop	GSH 250	C26D		CGA

HEADING #4

Opening Description: 965 x 2150 x 45 Alum Dr / Alum Fr

1	Single Door #D101	Atrium 01 to Conference 101		100°	LH
3	Hinges	5BB1HW 114 x 114	652		CIV
1	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626		CSC
1	Closer	4040 XP HEDA TB	689		CLC
1	Wall Stop	GSH 250	C26D		CGA

FINISH HARDWARE SCHEDULE for
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HEADING #5

Opening Description: 915 x 2032 x 45 HMD / HMF

1	Single Door #D103	Office to Work Room 103		100°	RH
3	Hinges	5BB1 114 x 102	652		CIV
1	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626		CSC
1	Kick Plate	GSH 80A 204 x 877 TEK	C32D		CGA
1	Wall Stop	GSH 250	C26D		CGA

HEADING #6

Opening Description: 965 x 2032 x 45 HMD / HMF

1	Single Door #D104	Corridor CR4 to Staff Room 104		100°	RH
3	Hinges	5BB1HW 114 x 114	652		CIV
1	Lockset	ND92PD RHO 50-210-GMK G KEYWAY	626		CSC
1	Closer	4040 XP EDA TB	689		CLC
1	Kick Plate	GSH 80A 204 x 927 TEK	C32D		CGA
1	Wall Stop	GSH 250	C26D		CGA

HEADING #7

Opening Description: 915 x 2032 x 45 HMD / HMF

1	Single Door #D104A	Staff Room 104 from Washroom 104A		100°	LHR
1	Single Door #D104B	Staff Room 104 from Washroom 104B		100°	LHR
6	Hinges	5BB1 114 x 102	652		CIV
2	Privacy Set	ND40S RHO	626		CSC
2	Kick Plate	GSH 80A 204 x 877 TEK	C32D		CGA
2	Wall Stop	GSH 250	C26D		CGA

HEADING #8

Opening Description: 915 x 2150 x 45 Alum Dr / Alum Fr

1	Single Door #D105	Atrium 01 to Meeting Room 105		100°	LH
3	Hinges	5BB1 114 x 102	652		CIV
1	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626		CSC
1	Wall Stop	GSH 250	C26D		CGA

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HEADING #9

Opening Description: 965 x 2150 x 45 HMD / HMF

1	Single Door #D109	Atrium 01 from Learning Commons 109	100°	RHR

3	Hinges	5BB1HW 114 x 114		652	CIV
1	Exit Device	98EO 299 (BLK) 48"		US26D	CVO
1	Exit Device Trim	996L-R&V 06-LEVER	RHR	US26D	CVO
1	Rim Cylinder	20-021 50-210-GMK G KEYWAY		626	CSC
1	Closer	4040 XP CUSH TB		689	CLC
1	Overhead Stop/Holder	550S-H		652	CGL
1	Kick Plate	GSH 80A 204 x 927 TEK		C32D	CGA

HEADING #10

Opening Description: 965 x 2150 x 45 HMD / HMF

1	Single Door #D109A	Learning Commons 109 to Study Room 109A	100°	RH
1	Single Door #D109B	Learning Commons 109 to Study Room 109A	100°	LH

6	Hinges	5BB1HW 114 x 114	652	CIV
2	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626	CSC
2	Overhead Stop/Holder	550S-H	652	CGL
2	Kick Plate	GSH 80A 204 x 927 TEK	C32D	CGA

HEADING #11

Opening Description: Existing to Remain

1	Single Door #D118	Corridor CR12 to Washroom 118	90°	LH
1	Single Door #D120	Corridor CR12 to Washroom 120	90°	RH
1	Single Door #D144	Corridor CR2 to Custodian 144	100°	LH
1	Single Door #D144A	Custodian 144 to Storage 144A	100°	LH

Note: Existing frame, door, and hardware configuration to remain.

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HEADING #12

Opening Description: 2 - 965 x 2150 x 45 HMD / HMF

1	Pair Doors #D113.1	Atrium 01 from Gymnasium 113	100°	LHR\RHR
1	Pair Doors #D113.2	Atrium 01 from Gymnasium 113	100°	LHR\RHR

16	Hinges	5BB1HW 114 x 114		652	CIV
4	Exit Device	9849EO 48" 7'0" Door LBL		US26D	CVO
2	Exit Device Trim	996L-R&V 06-LEVER	LHR	US26D	CVO
2	Exit Device Trim	996L-R&V 06-LEVER	RHR	US26D	CVO
4	Rim Cylinder	20-021 50-210-GMK G KEYWAY		626	CSC
2	Closer	4021 REG	LH	689	CLC
4	Adapter Plate	4020 18G		689	CLC
2	Closer	4021 REG	RH	689	CLC
4	Overhead Stop/Holder	550S-H		652	CGL

HEADING #13

Opening Description: 1@ 1065, 1@ 460 x 2080 x 45 HMD / HMF

1	Pair Doors #D113A	Gymnasium 113 to Gym Storage 113A	100°	LHA

6	Hinges	5BB1HW 114 x 114	652	CIV
2	Flush Bolt	GSH 401 305	C26D	CGA
1	Deadlock	B663P 50-210-GMK G KEYWAY	626	CSC
1	Flush Pull	2632 SPECIAL SIZE 305 X 508 X CYLINDER CUTOUT	C32D	CGA
1	Door Pull	GSH 4312-2 305 C.C. #2	C32D	CGA
1	Overhead Stop/Holder	550S-H	652	CGL
1	Kick Plate	GSH 80A 204 x 1032 STMS	C32D	CGA
1	Kick Plate	GSH 80A 204 x 433 STMS	C32D	CGA
1	Wall Stop	GSH 250	C26D	CGA

Note: "Z" Astragal by hollow metal door supplier

HEADING #14

Opening Description: 965 x 2032 x 45 HMD / HMF

1	Single Door #D113A.1	Corridor CR12 from Gym Storage 113A	100°	RHR

3	Hinges	5BB1HW 114 x 114	652	CIV
1	Lockset	ND96PD RHO 50-210-GMK G KEYWAY	626	CSC
1	Overhead Stop/Holder	550S-H	652	CGL
1	Kick Plate	GSH 80A 204 x 927 TEK	C32D	CGA
1	Wall Stop	GSH 250	C26D	CGA

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HEADING #15

Opening Description: 2 - 915 x 2134 x 45 HMD / HMF

1	Pair Doors #D113B	Gymnasium 113 from Chair Storage 113B	110°	RHRA

6	Hinges	5BB1 114 x 102	652	CIV
1	Deadlock	B663P 50-210-GMK G KEYWAY	626	CSC
1	Flush Pull	2632 SPECIAL SIZE 305 X 508 X CYLINDER CUTOUT	C32D	CGA
2	Overhead Stop/Holder	550S-H	652	CGL
2	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA

Note: "Z" Astragal by hollow metal door supplier

HEADING #16

Opening Description: 965 x 2150 x 45 HMD / HMF

1	Single Door #D113C	Gymnasium 113 to Change Room 113C	100°	RH
1	Single Door #D113D	Gymnasium 113 to Change Room 113D	100°	LH

6	Hinges	5BB1HW 114 x 114	652	CIV
2	Deadlock	B662P 50-210-GMK G KEYWAY	626	CSC
2	Flush Pull	2632 SPECIAL SIZE 305 X 508 X CYLINDER CUTOUT	C32D	CGA
2	Door Pull	GSH 4312-2 305 C.C. #2	C32D	CGA
2	Closer	4040 XP HEDA TB	689	CLC
2	Kick Plate	GSH 80A 204 x 927 TEK	C32D	CGA
2	Wall Stop	GSH 250	C26D	CGA

HEADING #17

Opening Description: 965 x 2032 x 45 HMD / HMF

1	Single Door #D113.3	Corridor CR10 from Gymnasium 113	100°	RHR

3	Hinges	5BB1HW 114 x 114		652	CIV
1	Exit Device	98EO 299 (BLK) 48"		US26D	CVO
1	Exit Device Trim	996L-R&V 06-LEVER	RHR	US26D	CVO
1	Rim Cylinder	20-021 50-210-GMK G KEYWAY		626	CSC
1	Closer	4040 XP EDA TB		689	CLC
1	Kick Plate	GSH 80A 204 x 927 TEK		C32D	CGA
1	Wall Stop	GSH 250		C26D	CGA

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HEADING #18

Opening Description: 965 x 2150 x 45 HMD / HMF

1	Single Door #D115	Corridor CR12 to Custodian 115	100°	RH

3	Hinges	5BB1HW 114 x 114	652	CIV
1	Lockset	ND96PD RHO 50-210-GMK G KEYWAY	626	CSC
1	Closer	4040 XP EDA TB	689	CLC
1	Kick Plate	GSH 80A 204 x 927 TEK	C32D	CGA
1	Wall Stop	GSH 250	C26D	CGA

HEADING #20

Opening Description: 915 x 2032 x 45 HMD / HMF

1	Single Door #D124	Corridor CR12 to Sprinkler Room 124	100°	RH

3	Hinges	5BB1 114 x 102	652	CIV
1	Lockset	ND96PD RHO 50-210-GMK G KEYWAY	626	CSC
1	Closer	4040 XP EDA TB	689	CLC
1	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA
1	Wall Stop	GSH 250	C26D	CGA

HEADING #21

Opening Description: 915 x 2032 x 45 HMD / HMF

1	Single Door #D154	Corridor CR10 to Resource 154	100°	RH

3	Hinges	5BB1 114 x 102	652	CIV
1	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626	CSC
1	Overhead Stop/Holder	550S-H	652	CGL
1	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA

HEADING #22

Opening Description: 915 x 2032 x 45 HMD / HMF

1	Single Door #D132	Corridor CR5 to Resource 132	100°	RH

3	Hinges	5BB1 114 x 102	652	CIV
1	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626	CSC
1	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA
1	Wall Stop	GSH 250	C26D	CGA

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HEADING #23

Opening Description: 915 x 2032 x 45 HMD / HMF

1	Single Door #D150		Corridor CR6 to Mechanical 150	100°	LH
3	Hinges	5BB1 114 x 102		652	CIV
1	Lockset	ND96PD RHO 50-210-GMK G KEYWAY		626	CSC
1	Closer	4040 XP EDA TB		689	CLC
1	Kick Plate	GSH 80A 204 x 877 TEK		C32D	CGA
1	Wall Stop	GSH 250		C26D	CGA

HEADING #24

Opening Description: 965 x 2150 x 45 HMD / HMF

1	Single Door #D159		Corridor CR11 to Storage 159	100°	LH
3	Hinges	5BB1HW 114 x 114		652	CIV
1	Lockset	ND96PD RHO 50-210-GMK G KEYWAY		626	CSC
1	Kick Plate	GSH 80A 204 x 927 TEK		C32D	CGA
1	Wall Stop	GSH 250		C26D	CGA

HEADING #25

Opening Description: 965 x 2150 x 45 HMD / HMF

1	Single Door #D159A		Corridor CR11 to Staff Washroom 159A	100°	RH
1	Single Door #D160B		Corridor CR11 to Staff Washroom 160B	100°	LH
6	Hinges	5BB1HW 114 x 114		652	CIV
2	Lockset	ND85PD RHO 50-210-GMK G KEYWAY		626	CSC
2	Kick Plate	GSH 80A 204 x 927 TEK		C32D	CGA
2	Wall Stop	GSH 250		C26D	CGA

HEADING #26

Opening Description: 965 x 2032 x 45 HMD / HMF

1	Single Door #D160		Corridor CR11 to FDK Classroom 160	100°	RH
3	Hinges	5BB1 114 x 102		652	CIV
1	Lockset	ND94PD RHO 50-210-GMK G KEYWAY		626	CSC
1	Kick Plate	GSH 80A 204 x 927 TEK		C32D	CGA
1	Wall Stop	GSH 250		C26D	CGA

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HEADING #27

Opening Description: 915 x 2032 x 45 HMD / HMF

1	Single Door #D160A	FDK Classroom 160 to Washroom 160A	100°	RH

3	Hinges	5BB1HW 114 x 114	652	CIV
1	Passage Set	ND10S RHO	626	CSC
1	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA
1	Wall Stop	GSH 250	C26D	CGA

HEADING #28

Opening Description: 965 x 2032 x 45 HMD / HMF

1	Single Door #D166	Corridor CR12 to Classroom 166	100°	RH
1	Single Door #D168	Corridor CR12 to Classroom 168	100°	LH
1	Single Door #D170	Corridor CR12 to Classroom 170	100°	RH
1	Single Door #D172	Corridor CR12 to Classroom 170	100°	LH

12	Hinges	5BB1HW 114 x 114	652	CIV
4	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626	CSC
4	Kick Plate	GSH 80A 204 x 927 TEK	C32D	CGA
4	Wall Stop	GSH 250	C26D	CGA

HEADING #29

Opening Description: 2 - 1180 x 2134 x 45 HMD / HMF

1	Double Egress Door #D-CR6	Corridor CR2 to/from Corridor CR6	100°	DELHR
1	Double Egress Door #D-CR10	Corridor CR2 to/from Corridor CR6	100°	DELHR

12	Hinges	5BB1HW 114 x 114	652	CIV
4	Fire Exit Device	9849EO-F 48" 7'0" Door LBLAFL	US26D	CVO
4	Magnetic Holder	SEM 7830	689	CLC
4	Closer	4040 XP EDA TB	689	CLC
8	Kick Plate	GSH 80A 204 x 927 TEK	C32D	CGA
2	Steel Astragal	W-8SP 2150		CKN

Description of Operation:
Doors are normally closed, latched, and secure.
Doors can be held open indefinitely via hold open magnet.
In the event of fire, doors close and latch.

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HEADING #30

Opening Description: 1005 x 2134 x 57 Alum Dr / Alum Fr

1	Single Door #DV01.1	Exterior from Vestibule V01		110°	RHR
1	Hinges	5BB1HW 114 x 114 TW8		630	CIV
2	Hinges	5BB1HW 114 x 114 NRP		630	CIV
1	Exit Device	QEL 98EO 299 (BLK) 48"		US26D	CVO
1	Door Pull	1180-2 12 C.C. #2 (2-1/4" THICK) 32D			CGA
1	Door Operator	HA-8P-1 41" CLEAR LH\PUSH			DIT1
2	Surface Box	CM-43CBL			CAMD
2	Wall Switch-Logo	CC-0045-4-ENTDOO-05			CAMD
1	Overhead Stop/Holder	550S-H		652	CGL
1	Door Sweep	W-24S 1067		CA	CKN
1	Threshold	CT-10 1067		AL	CKN
1	ELECTRICAL	ELEVATION			PAHS
1	Labour to	INSTALL BARRIER FREE OPERATOR AND ACCESSORIES			PAHS
1	Labour	INSTALL LOW VOLTAGE WIRE			PAHS

Note: Weatherstripping by aluminum door supplier

Access control by Division 28 10 00

Cylinder to be provided by SCCDSB.

HEADING #31

Opening Description: 1005 x 2134 x 57 Alum Dr / Alum Fr

1	Single Door #DV01.2	Exterior from Vestibule V01		110°	LHR
1	Hinges	5BB1HW 114 x 114 TW8		630	CIV
2	Hinges	5BB1HW 114 x 114 NRP		630	CIV
1	Exit Device	QEL 98EO 299 (BLK) 48"		US26D	CVO
1	Door Pull	1180-2 12 C.C. #2 (2-1/4" THICK) 32D			CGA
1	Adapter Plate	4020 18G		689	CLC
1	Closer	4021 REG	RH	689	CLC
1	Overhead Stop/Holder	550S-H		652	CGL
1	Door Sweep	W-24S 1067		CA	CKN
1	Threshold	CT-10 1067		AL	CKN
1	ELECTRICAL	ELEVATION			PAHS

Note: Weatherstripping by aluminum door supplier

Access control by Division 28 10 00

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HEADING #32

Opening Description: 1005 x 2150 x 45 Alum Dr / Alum Fr

1	Single Door #DV01.3	Exterior from Vestibule V01		110°	RHR
3	Hinges	5BB1HW 114 x 114		652	CIV
1	Dummy Push Bar	350 48"		US26D	CVO
1	Door Pull	1180-2 12 C.C. #2 (2-1/4" THICK) 32D			CGA
1	Adapter Plate	4020 18G		689	CLC
1	Door Closer	4021 REG	LH	689	CLC
1	Overhead Stop/Holder	550S-H		652	CGL

HEADING #33

Opening Description: 1005 x 2150 x 45 Alum Dr / Alum Fr

1	Single Door #DV01.4	Exterior from Vestibule V01		110°	RHR
3	Hinges	5BB1HW 114 x 114		652	CIV
1	Dummy Push Bar	350 48"		US26D	CVO
1	Door Pull	1180-2 12 C.C. #2 (2-1/4" THICK) 32D			CGA
1	Door Operator	HA-8P-1 41" CLEAR LH\PUSH			DIT1
2	Surface Box	CM-43CBL			CAMD
2	Wall Switch-Logo	CC-0045-4-ENTDOO-05			CAMD
1	Overhead Stop/Holder	550S-H		652	CGL
1	ELECTRICAL	ELEVATION			PAHS
1	Labour to	INSTALL BARRIER FREE OPERATOR AND ACCESSORIES			PAHS
1	Labour	INSTALL LOW VOLTAGE WIRE			PAHS

Description of Operation:
Door is normally closed.
Use of either wall switch opens door automatically.

HEADING #34

Opening Description: 915 x 2032 x 45 Ex Door & Frame

1	Single Door #D112.E	Corridor CR4 to Classroom 112	RH
1	Single Door #D114.E	Corridor CR4 to Classroom 114	LH
1	Single Door #D116.E	Corridor CR4 to Classroom 116	LH
1	Single Door #D122.E	Corridor CR3 to Classroom 122	LH
1	Single Door #D124.E	Corridor CR3 to Classroom 124	LH
1	Single Door #D126.E	Corridor CR5 to Classroom 126	LH
1	Single Door #D128.E	Corridor CR5 to Classroom 128	LH
1	Single Door #D130.E	Corridor CR5 to Classroom 130	RH
1	Single Door #D134.E	Corridor CR5 to Classroom 134	LH
1	Single Door #D136.E	Corridor CR5 to Classroom 136	LH
1	Single Door #D138.E	Corridor CR5 to Classroom 138	LH

33	Hinges	5BB1 114 x 102	652	CIV
11	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA
11	Wall Stop	GSH 250	C26D	CGA

Note: Existing locksets to be re-used.

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HEADING #35

Opening Description: 915 x 2134 x 45 Ex Door & Frame

1	Single Door #D133.E	Corridor CR5 to Storage 133	RH
1	Single Door #D162A.E	FDK Classroom 162 to Closet 162A	RH
1	Single Door #D164A.E	FDK Classroom 164 to Closet 164A	RH

9	Hinges	5BB1 114 x 102	652	CIV
3	Lockset	ND96PD RHO 50-210-GMK G KEYWAY	626	CSC
3	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA
3	Wall Stop	GSH 250	C26D	CGA

HEADING #36

Opening Description: 915 x 2134 x 45 Ex Door & Frame

1	Single Door #D162.E	Corridor CR11 to FDK Classroom 162	LH
1	Single Door #D164.E	Corridor CR11 to FDK Classroom 164	LH

6	Hinges	5BB1 114 x 102	652	CIV
2	Lockset	ND94PD RHO 50-210-GMK G KEYWAY	626	CSC
2	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA
2	Wall Stop	GSH 250	C26D	CGA

HEADING #37

Opening Description: 762 x 2032 x 45 Ex Door & Frame

1	Single Door #D162B.E	FDK Classroom 162 to Washroom 162B	LH
1	Single Door #D164B.E	FDK Classroom 164 to Washroom 164B	RH

6	Hinges	5BB1 114 x 102	652	CIV
2	Privacy Set	ND40S RHO	626	CSC
2	Kick Plate	GSH 80A 204 x 877 TEK	C32D	CGA
2	Wall Stop	GSH 250	C26D	CGA

PART 1 - GENERAL

1.01 DESCRIPTION

.1 General Requirements

.1 Division 1 and General Requirements, is a part of this Section and shall apply as if repeated here.

1.02 QUALITY ASSURNCE

.1 Subcontractor Qualifications

.1 Install resilient flooring specified in this Section only by a Subcontractor who has adequate equipment and skilled tradesmen to perform it expeditiously, and is known to have been responsible for satisfactory installations similar to that specified during a period of at least the immediate past five years.

1.03 REFERENCES STANDARDS

.1 ASTM International

.1 ASTM F1066-04(2018), Standard Specification for Vinyl Composition Floor Tile.

.2 ASTM F 1344-15, Standard Specification for Rubber Floor Tile.

.3 ASTM F 710, for concrete preparation for excessive moisture levels and ph. – Testing to be performed by an independent testing agency as part of the General Contract. Refer to testing allowances.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

.1 Product Data:

.1 Submit manufacturer's instructions, printed product literature and data sheets for resilient tile flooring and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Samples

.1 Submit samples of each specified flooring, base, stair, and accessories that are specified.

.2 Submit full size tiles 300 x 300.

.3 Submit 216 mm X 280 mm pieces of sheet goods.

.4 Submit base and accessories in lengths of 300 mm.

.3 Affidavits

.1 Submit for approval, a list of installation materials intended for use with each flooring material and for each subfloor condition, before installation commences. Accompany the list with an affidavit stating that the manufacturer of each material recommends and approves of its use in each case.

.4 Maintenance Instructions

.1 Submit maintenance instructions for incorporation in Project Data

Book.

1.05 DELIVERY STORAGE AND HANDLING

.1 Package flooring materials and identify contents of each package.

.2 Store materials for a minimum 48 hours immediately before installation at not less than 19 degrees C.

1.06 SITE CONDITIONS

.1 Environmental Requirements

.1 Install resilient flooring only when surfaces and air temperatures have been maintained between 19 degrees C and 48 degrees C for 24 hours preceding installation, and will be so maintained during installation and for 48 hours thereafter. Maintain a minimum temperature of 13degrees C after above period.

.2 Inspect and test floor patching, levelling and concrete floors to confirm that moisture content does not exceed the Manufacturers recommendations prior to commencing work.

.3 Commencing work it is deemed that the flooring contractor has undertaken appropriate testing such that all warrantees for floor adhesives and resilient finishes are held valid and certified by full contract warrantees are in place by the G.C. and all related subtrades.

.4 Ensure that adequate ventilation is provided during installation of flooring and curing of adhesive.

.5 Ensure that spark-proof electrical equipment is provided, and smoking is prohibited, in areas where flammable adhesives are used. Store materials to prevent spontaneous combustion.

1.07 Quality Assurance

.1 Warrantees

.1 Provide submittals at the close of project of valid warrantees as follows:

1. Manufacturer's defects:
   - .1 5 years for VCT and Quartz Tile.
   - .2 10 years for Solid Vinyl - Texas Granite.
   - .3 10 years for Resilient Sports flooring
2. Installation defects: 2 years.

.2 Refer to 1.04.3

PART 2 - PRODUCTS

2.01 MATERIALS

.1 Provide each flooring material from same production run for one area and from same manufacturer for entire project.

2.02 FLOORING

.1 Vinyl Composite Tile: 300 X 300 as supplied by Tarkett – Refer to Finish Schedule and drawings.
.2 Vinyl Quartz: 2.5 mm thick, 300 mm X 300 mm; Precedo Versa Quartz Tile as supplied by Centura. – Refer to Finish Schedule and drawings.
.3 Solid Vinyl Tile: American Builtrite – 610 X 610 and 910 X 910 Texas Granite as supplied by Centura. – Refer to Finish Schedule and drawings.
.4 Resilient Sheet Flooring – Omnisport by Tarkett. – Refer to Finish Schedule and drawings.
.5 Resilient Sheet Flooring – Sports Floor: DURAmultisport Interflor– Refer to Finish Schedule and drawings.
.6 Rubber Base: Roppe 100mm high Pinnacle.

2.03 RESILIENT BASE- RUBBER

.1 Top Set: Cove bottom, 2 mm thick, grooved back, preformed external corners.
.2 Straight: Butted Bottom, 2 mm thick, grooved back, Site Formed Corners.
.3 Base Height: 100 mm as specified in Room Finish Schedule for each base type.
.4 Colours: Solid as selected from manufacturer's standard range, not more than 2 colours.

2.04 FLOORING ACCESSORIES

.1 Ensure that accessories are compatible with, and match appearance, thickness and transition between abutting flooring materials.
.2 Basis of Specification: Schluter Systems – brushed nickel in finish.
.3 Provide samples for approval by architect for all conditions as transitions.

2.05 FILLER/SUBFLOOR PREPARATION

.1 The intent of this section is to provide for a full fill and level of existing floors to receive all floor finishes. Contractor is to cover all costs associated with the intent to provide an acceptable substrate for all finishes.
.2 Assume an overall average levelling compound thickness of 4mm.
.3 Provide for shotblasting of all existing surfaces in preparation for filler and levelling compound.
.4 Provide Bonding agent as recommended by manufacturer.
.5 Levelling Compound: Ardex K15
.6 Cementitous bulk concrete filler: Ardex

2.06 PRIMERS AND ADHESIVES

.1 As recommended by manufacturer of each material for each subfloor condition. Use clear adhesive for vinyl polymer flooring.
Vinyl Composite Flooring: Waterproof, as recommended by manufacturer for specific application conditions and compliant for full flooring warrantee.
Vinyl Quartz Tile: TEC Rollfast or TEC 752
Texas Granite Solid Vinyl: ADH610, Waterproof, as recommended by manufacturer for specific application conditions and compliant for full flooring warrantee.
Sheet Vinyl: TEC 744, Waterproof, as recommended by manufacturer for specific application conditions and compliant for full flooring warrantee.

2.07 CLEANER

.1 Neutral chemical compound that will not damage tile or affect its colour.

2.08 FLOOR PROTECTION

.1 Heavy kraft paper laminated with non-staining adhesive to both sides of glass fibre reinforcing ply, minimum weight of 0.18 kg/sq.m.

PART 3 - EXECUTION

3.01 EXAMINATION

.1 Test substrate to ensure that moisture level and acid-alkali balance does not exceed limits recommended by adhesive manufacturer.
.2 Ensure that environmental conditions have been provided as requested and specified.
.3 Ensure subfloors have been provided as specified without holes, protrusions, cracks greater than 2 mm wide, unfilled control joints, depressions greater than 3 mm deep, or other major defects.
.4 Defective resilient flooring resulting from application to unsatisfactory surfaces will be considered the responsibility of this Section.

3.02 PREPARATION

.1 Remove dirt, soil, oil, grease, wax, sealants and other deposits which would lessen the adhesive bond of flooring, and which would telegraph through flooring.
.2 Scarify existing terrazzo to accept flooring adhesives for recommended bonding.
.3 Remove chalking and dusting from concrete surfaces with wire brushes.
.4 Remove prime paint and adhesives in accordance with the manufacturer’s requirements.
.5 Fill all defects such as cracks, depressions and scars from damage with filler. Level to smooth surface.
.6 Prime subfloors in accordance with the manufacturer’s requirements.
.7 Protection: Prevent traffic and work on newly laid floors by barricading until adhesive cures.

3.02 INSTALLATION

.5 **General**
.1 Lay each material in accordance with manufacturer's specification.
.2 Lay flooring with joints closely butted. Scribe, cut and fit around floor outlets and openings, door frames, and heavy equipment supports.
.3 Cut flooring and bases to fit within 0.4 mm of abutting surfaces were

exposed to view.

.4 Avoid abrupt variations in shades between adjacent flooring material. Do not install units that are off-colour or contain untypical pattern variations.

.5 Carry floor patterns through openings.

.6 Roll flooring with three-section, 45 kg roller, in two directions from centre of area. Maintain rollers clean and polished.

.6 **Adhesives**

.1 Apply adhesive uniformly over surfaces with a notched trowel, at rate recommended by manufacturer.

.2 Cover only an area into which flooring can be set during working time of adhesive. Do not lay flooring over hardened adhesive.

.3 Use only waterproof type adhesive in all areas where plumbing fixtures or floor drains are installed.

.4 Protect adjacent surfaces from soil by adhesive.

.5 Clean trowels and maintain profile of notches as installation of flooring progresses to ensure a constant rate of application.

.7 **Resilient Tile Flooring**

.1 Lay tile with joints as directed by architect.

.2 Lay tile in square pattern with grain of adjacent units running in same monolithic direction.

.3 Lay out tile so that perimeter units are at least one half tile in width except where room irregularities make it impossible.

.4 **Resilient Sheet Flooring**

.1 Install flooring with joints parallel to long axis of rooms, in full width sheets, with border sheets not less than 600 mm wide, and with cross joints no closer than 1800 mm from each other and not concentrated in isolated areas.

.2 Cut sheets to sizes required, lay them out flat and allow them to reach room temperature before installation.

.3 Double cut seams.

.4 Remove wrinkles and air pockets.

.5 At seams, using a welding rod, butt sheet tightly together and weld in accordance with manufacturer's written instructions.

.6 Refer to installation of Resilient Base.

.5 **Resilient Bases**

.1 Install bases in lengths as long as possible: do not make up runs of short lengths.

.2 In areas where bases are indicated, install them on built-in fitments, columns, walls.

.3 Cut and mitre internal corners.

.4 Double cut seams between adjoining lengths.

.5 Apply adhesive to wall, masked to prevent spreading above base, and firmly bed base in place.
.6 Press top set base down to force cove against flooring.
.7 Install straight base before flooring, with bottom edge against subfloor and top edge level.
.8 Install top set base in all areas except as noted on Drawings.

.6 Reducer/Transition Strips

.1 Install strips at terminations of flooring where edges are exposed to view.
.2 Install strips in straight lines and relate their terminations to significant building features and within tolerance of 3 mm in 3 m.
.3 Install strips under doors at openings.
.4 Cut and fit strip terminations to profile of abutting construction.
.5 Secure strips to subfloor with contact bond adhesive to ensure complete bond.

3.03 ADJUSTMENT, CLEANING, SEALING, WAXING

.5 Replace defective resilient flooring installations so that there is no discernible variation in appearance between installed and replaced materials.
.6 Clean off excess adhesive as installation of flooring progresses and before it sets.
.7 Clean resilient flooring, but no sooner than 48 hours following installation. Use neutral floor cleaner where required, and proceed as recommended by manufacturer.
.8 Clean floors on a regular basis at least once per week if no other protection is provided.
.9 Clean floors according to manufacturer's recommendations before acceptance by Owner.
.10 For non PUR flooring (VCT), provide sealer, plus 5 (five) coats of wax applied according to manufacturer's technical specifications prior to final acceptance.

3.04 PROTECTION

.5 After materials have set, and until project completion, coordinate with other Sections to ensure that floors are not damaged by traffic, as specified in Section 01010. Ensure that flooring is not subjected to any static loading during the week following installation.
.6 At completion of flooring installation, install floor protection in areas where finishing operations, repairs and installation of equipment, and foot traffic will occur. Lap joints of material by 150 mm and seal with non-asphaltic tape.

3.05 EXTRA STOCK

.5 Deliver to Owner on completion of Project construction, and as he directs, 3% of the quantity of flooring installed of each material and colour, rounded up to original full cartons and clearly labelled.

END OF SECTION

Part 1 General

1.1. GENERAL

.1 Conform to Division 1 – General Requirements.

1.2. RELATED SECTIONS

.1 Section 09 51 13 – Acoustic Panel Ceilings

1.3. REFERENCES

.1 ASTM A 167-90 Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip

.2 CAN3-A172-M79 High Pressure Paper Base, Decorative Laminates

.3 CAN/CSA-B651-M90 Barrier-Free Design

.4 CSA O112 Series M1977 CSA Standards for Wood Adhesives

.5 CAN3-O188.1-M78 Interior Mat-Formed Wood Particleboard

.6 CAN/CGSB-71.20-M88 Adhesive, Contact, Brushable

1.4. SAMPLES

.1 Submit samples in accordance with Division 02.

.2 Submit duplicate 300 x 300 mm samples of panel showing finish on both sides, two finished edges and core construction.

.3 Submit duplicate representative samples of each hardware item, including brackets, fastenings and trim.

1.5. SHOP DRAWINGS

.1 Submit shop drawings in accordance with Division 02.

.2 Indicate fabrication details, plans, elevations hardware, and installation details.

1.6. CLOSEOUT SUBMITTALS

.1 Provide maintenance data for plastic laminate for incorporation into manual specified in Division 02.

1.7. STORAGE AND PROTECTION

.1 Deliver, store, handle and protect materials in accordance with Section 01610 – Basic Product Requirements.

.2 Protect finished laminated plastic surfaces during shipment and installation. Do not remove until immediately prior to final inspection.

Part 2 Products

2.1. MATERIALS

.1 Solid Phenolic Toilet Partitions:

.1 Acceptable Material: Bobrick 1082 DuraLine Series overhead-braced solid phenolic plastic with high pressure laminate matte finish surface, colour from phenolic manufacturer's standard range.

.2 Acceptable Alternates: Watrous/ASI, Ontario Accurate Partitions, Decolam, Buddsteel; by matching that specified with their product.

.2 Solid Phenolic: To ASTM E-84, material constructed of solidly fused plastic laminate with matte finish coloured face sheets, and black phenolic resin core that are integrally bonded, colour as selected by Consultant from full range of colours.

.3 Reinforcing Sheet Steel: Commercial grade, stretcher levelled sheet steel to A653/A653M with G90 zinc coating to A653/A653M, 3 mm thick.

.4 Stainless Steel Sheet: To ASTM A666-10, Type 304 with No. 4 finish

.5 Sealer: Water-resistant sealer or glue as recommended by laminate manufacturer

2.2. COMPONENTS

.1 Hinges:

.1 Heavy duty continuous

.2 Material/Finish: Stainless steel casting

.3 Swing: Inward and outward – refer to Drawings

.4 Return Movement: Gravity

.5 Emergency access feature

.2 Latch Set: 25 mm wide surface mounted positive position, one piece 3 mm stainless steel, shock resistant nylon track slides; door stop, keeper and bumper, vinyl coated stainless steel, emergency access feature

.3 Wall and Connecting Brackets: Stainless steel extrusion or casting; three at each juncture of pilasters to panels (partitions), pilasters to walls and panels (partitions) to walls.

.4 Connector Channels: Full height, 1.3 mm thick, Type 304 satin stainless steel at panel/stile and stile/wall junctions

.5 Headrail (overhead braced) shall be extruded aluminum 1.65 mm thick with satin finish and anti-grip profile.

.6 Door Pull: Barrier-free type suited for outswinging doors, stainless steel

.7 Pilaster Shoe: 0.91 mm (20 ga.) stainless steel

.8 Attachment: Stainless steel tamper-proof type screws and bolts

2.3. FABRICATION

.1 Doors: 19 mm thick, solid phenolic plastic laminate panels, typical width 711 mm /barrier-free 950 mm; height 1470 mm – 305 mm above floor

.2 Panels: 13 mm thick, solid phenolic plastic laminate panels, to sizes indicated. Overhead braced partition height 2160 mm

.3 Stiles: 19 mm thick, constructed same as door, to sizes indicated

.4 Solidly fuse plastic laminate with matte-finish melamine surfaces, coloured face sheets, and black phenolic-resin core that are integrally bonded.

.5 Chamfer exposed edges uniformly at approximately 20°.

.6 Provide formed and closed edges for doors, panels and pilasters. Mitre and weld corners and grind smooth.

.7 Provide internal reinforcement at areas of attached hardware and fittings. Temporarily mark location of reinforcement for grab bars and benches, where shown.

Part 3 Execution

3.1. INSTALLATION

.1 Ensure supplementary anchorage, if required, is in place.

.2 Do Work in accordance with CAN/CSA-B651.

3.2. ERECTION

.1 Partition Erection:

.1 Install partitions secure, plumb and square.

.2 Leave 12 mm space between wall and panel or end pilaster.

.3 Anchor mounting brackets to masonry or concrete surfaces using screws and shields to hollow walls using bolts and toggle type anchors.

.4 Attach panel and pilaster to brackets with through type sleeve bolt and nut.

.5 Provide for adjustment of floor variations screw jack through steel saddles made integral with pilaster. Conceal floor fixings with stainless steel shoes.

.6 Caulk partition bases to floor surfaces, colourless.

3.3. CLEANING

.1 Clean surfaces after installation using manufacturer’s recommended cleaning procedures.

END OF SECTION

PART 1 – GENERAL

1.1 General Instructions

.1 Read and be governed by conditions of the Contract and sections of Division 1.

1.2 Section Includes

.1 Interior roller window shade systems.

.2 Interior roller room darkening (black-out) shade systems.

1.3 Quality Assurance

.1 Qualifications: Installation of the work of this section shall be by forces in the direct employ or under control of the system manufacturer, skilled, trained, and experienced in work of similar scope and complexity.

1.4 Submittals

.1 Submit required submittals in accordance with Section 01330.

.2 Product data sheets:

.1 Submit manufacturer's Product data sheets for Products proposed for use in the work of this section.

.2 Submit manufacturers' installation instructions.

.3 Shop drawings:

.1 Submit shop drawings or fully dimensioned catalogue cuts.

.2 Clearly indicate general construction, configurations, jointing methods and locations, fastening methods, handing of controls, required blocking locations, banding (tandem shades), and installation details.

.4 Samples:

.1 Submit samples of each material and finish colour selected and each accessory.

.5 Mock-ups:

.1 Erect 1 full size mock-up each roller shade type at the Place of the Work for review. Completed and accepted mock-up shall act as the standard to which balance of the work of this section will be judged.

.6 Closeout submittals:

.1 Submit closeout submittals in accordance with Section 01 77 00.

.2 Operation and maintenance instructions: Submit operation and maintenance instructions for incorporation into operation and maintenance manuals.

1.5 Protection

.1 Before delivery to the Place of the Work, check each shade for operation; remove finger marks and smudges.

.2 Tightly wrap Products in polyethylene or other protective covering and leave in open position until directed.

1.6 Delivery, Storage and Handling

.1 Package Products to prevent distortion in shipment and handling. Label packages and crates, and protect finish surfaces by sturdy wrappings.

1.7 Warranty

.1 Provide Product warranty for work of this section for a period of 2 years against defects in labour, materials, and workmanship in accordance with Section 01 78 00.

PART 2 – PRODUCTS

2.1 Acceptable Manufacturers

.1 MechoShade Systems, Inc.

.2 Nysan Solar Control, A Hunter Douglas Contract Company

.3 SunProject Toro Inc.

.4 Solarfective Products Ltd.

2.2 Hardware

.1 Manual: Easy-lift action, chain operated, with infinite positioning. Left or right hand operation and banding as applicable to suit Place of the Work condition.

.1 Dive assembly:

.1 Must allow fingertip control and include a built in shock absorber system to prevent chain breakage under normal operating conditions.

.2 Factory set for the size and travel of the shades.

.3 Capable of being field adjusted from the exterior of the shade unit without having to disassemble the hardware.

.4 Drive Chain: No. 10 stainless steel bead chain formed in a continuous loop. The chain shall have passed a 40 kg (90 lb) load test. Chain may be positioned at either, or both, ends of the shade without disassembly of the shade unit.

.2 Provide child-safe chain retainers.

.3 Shades shall each have a counter balancing mechanism designed to offset the weight of the shade and give fingertip control.

.4 Control shades and room darkening shades independently.

2.3 Assembly

.1 Provide fully factory assembled shade unit consisting of 2 end shade brackets, shade tube, extruded aluminum fascia, hembar and fabric as specified.

.2 Factory modify housings where necessary to bypass columns.

.3 End brackets: a two piece moulded ABS construction with 6.35 mm (1/4”) diameter nylon drive sprocket. Bracket colour shall coordinate with the fascia colour.

.4 Shade tube: Minimum 1.52 mm (0.060”) thick extruded aluminum with three equally spaced continuous stiffening fins, non-sag design, maximum deflection under full load of fabric L/700.

.5 Fascia: 1.7 mm (0.067”) thick extruded aluminum.

.6 Hembar: Extruded aluminum with matching plastic end finials.

.7 Mounting: Removal of shade system shall not require the disassembly of the shade unit.

.8 Room darkening shade features: 13 mm (1/2”) pile mounted in prefinished 38 mm x 28 mm (1-1/2” x 1-1/8”) extruded aluminum side and bottom channels finished to match mullions. Include Dynamic hembar to allow for variance in window sill level.

2.4 Shade Mounting System

.1 Extruded aluminum bracket designed to accept preassembled shade system.

.1 Brackets to be used to facilitate the alignment with shade opening.

.2 Modular construction: shades must be removable as a complete modular unit without any component disassembly required.

2.5 Aluminum Finish

.1 Exposed aluminum: Clear anodized AA-M12C22A31.

.2 Unexposed aluminum: mill finish.

2.6 Shade Fabric Types

.1 Sun control fabric:

.1 Vinyl coated polyester (25% polyester – 75% PVC), dimensionally stable shade fabric.

.1 Acceptable Products; 1% open area:

.1 MechoShade 'ThermoVeil Series 0900'
.2 Solarfective 'Sun Control 4800 Series'.
.3 SunProject toro 'RT400'.

.2 Colour: Grey to match existing installations.

.3 Performance: Fabric shall hang flat, without buckling or distortion. Edge, where trimmed, shall hang true and straight, without shifting sideways more than 3 mm (1/8") in either direction due to warp distortion or weave design.

.4 Flammability:

.1 Certified by an independent Laboratory to pass CAN/ULC S109-3 Large Flame Test.

2.7 Fabrication

.1 Finished assemblies shall be, square, true to size and free from distortion, twist, or other defects that could affect their strength, operation or appearance. Factor applied finish shall be uniform, smooth and without blemishes.

.2 The fabric shall be colour fast, retain its shape, not be affected by moisture or heat, and shall be non-flammable. Cut fabric to eliminate glare and reflection from shining surfaces while maintaining exterior view. The top of the fabric is retained in recessed spline of the shade roller and the bottom of the fabric is retained by the hembar.

PART 3 – EXECUTION

3.1 Installation

.1 Install work by manufacturer's skilled tradesmen and installed in strict accordance with manufacturers recommendations.

.2 Install shade systems in a plumb, squared, rigidly coupled and adequately anchored, maintaining uniformed clearances, accurate alignment levels, and parallel with the window plane. Fabric shall not travel more than 3 mm (1/8") in either direction within channels after installation.

.3 Fabric shall be pre-measured and manufactured off-site.

.4 Shades shall be snapped into place without screws or visible fasteners.

.5 Incorporate reinforcing, fastening and anchorage required for installation of shades.

.6 Securely attach installation fittings to their mounting surfaces with stainless steel or hardened aluminum screws of proper length and type and durable anchors.

.7 Install shade roller true and level, and with cloth to hang flat without buckling or distortion.

.8 Room darkening shades to be installed to eliminate passage of light from exterior.

.9 Electrical wiring, hook-up, switches; motorized shades: in accordance with Division 16.

3.2 Adjustment and Cleaning

.1 Verify that installed shade system functions properly, and adjust it accordingly to ensure satisfactory operation.

.2 Refinish damaged or defective work so that no variation in surface appearance is discernible.

END OF SECTION

OUR LADY OF FATIMA SCHOOL RENEWAL

545 BALDOON ROAD, CHATHAM ON N7L 5A9

Firm Name: Wilson Diaz Architect Inc.
Certificate of Practice Number: 3803
280 Queens Ave, Suite 1Q
London ON N6B 1X3
p. 439-0611 f. 438-5962
The Certificate of Practice Number
of the holder is the holder's BCDN.

Name of Project:
Our Lady of Fatima – Chatham ON
SCCDSB

Location:
545 Baldoon Rd, Chatham, ON N7M 5A9

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCDN.

Ontario Building Code Data Matrix – Part 11 – Renovation of Existing Building

				OBC Reference
11.1	Existing Building classification:	Describe Existing Use: Group A-2 Construction Index: 4 Hazard Index: 6 ■ Not Applicable (no change of major occupancy)		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 ■		11.3.3.1 11.3.3.2
11.3	Reduction in Performance Level:			11.4.2
		Structural: ■ No ☐ Yes		11.4.2.1
		By Increase in occupant load: ■ No ☐ Yes		11.4.2.2
		By change of major occupancy: ■ No ☐ Yes		11.4.2.3
		Plumbing: ■ No ☐ Yes		11.4.2.4
		Sewage system: ■ No ☐ Yes		11.4.2.5
11.4	Compensating Construction:	Structural ■ No ☐ Yes (explain)		11.4.3 11.4.3.2
		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)		11.4.3.6
11.5	Compliance Alternatives Proposed:	■ No ☐ Yes (give number(s)) _____		11.5.1
11.6	Alternative Measures Proposed:	■ No ☐ Yes (explain) _____		11.5.2

December14, 2005

2 OBC MATRIX

Firm Name: Wilson Diaz Architects Inc.
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280 Queens Ave. Suite 1Q
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Item	Ontario's 2006 Building Code Data Matrix Part 3 or 9			OBC Reference (References are to Division B unless noted [A] for Division A or [C] for Division C.	
1	Project Description: ☐ Change of Use	☐ New ■ Addition ■ Alteration	■ Part 11 11.1 to 11.4	■ Part 3 1.1.2. [A]	☐ Part 9 1.1.2. [A] & 9.10.1.3.
2	Major Occupancy(s)			3.1.2.1.(1)	9.10.2.
3	Building Area (m²)	Existing 3871m²	New 67m² Total 3938m²	1.4.1.2. [A]	1.4.1.2. [A]
4	Gmss Area	Existing 3871m²	New 67m² Total 3938m²	1.4.1.2. [A]	1.4.1.2. [A]
5	Number of Storeys	Above grade 1	Below grade 0	1.4.1.2. [A]&3.2.1.1.	1.4.1.2[A] & 9.10.4
6	Number of Streets/Fire Fighter Access __1 Street (Existing)			3.2.2.10. & 3.2.5.	9.10.20.
7	Building Classification: 3.2.2.26. Group A, Division 2, up to 2 Storeys, Increased Area, Sprinklered			3.2.2.20.- 83	9.10.2.
8	Sprinkler System Proposed		☐ entire building ☐ selected compartments ■ selected floor areas ☐ basement ☐ in lieu of roof rating ☐ not required	3.2.2.20.- 83 3.2.1.5. 3.2.2.17. INDEX	9.10.8.2. INDEX
9	Standpipe required		■ Yes ☐ No	3.2.9.	N/A
10	Fire Alarm required		■ Yes ☐ No	3.2.4.	9.10.18.
11	Water Service/Supply is Adequate		■Yes ☐ No	3.2.5.7.	N/A
12	High Building		☐ Yes ■ No	3.2.6.	N/A
13	Construction Restrictions Actual Construction	☐ Combustible permitted ☐ Combustible	☐ Non-combustible required ■ Both ☐ Non-combustible ■ Both	3.2.2.20.- 83	9.10.6.
14	Mezzanine(s) Area m² __N/A_____			3.2.1.1.(3)-(8)	9.10.4.1.
15	Occupant load based on	☐ m²/person	■ design of building 512 Persons	3.1.17.	9.9.1.3.
16	Barrier-free Design		■ Yes ☐ No (Explain)_____	3.8.	9.5.2.
17	Hazardous Substances		☐ Yes ■ No	3.3.1.2. & 3.3.1.19.	9.10.1.3.(4)

18	Required Fire Resistance Rating (FRR)	Horizontal Assemblies FRR (Hours)	Listed Design No. or Description (SG-2)	3.2.2.20.- 83 & 3.2.1.4.	9.10.8. 9.10.9.
		Floors ___N/A_____Hours			
		Roof ___N/A_____Hours			
		Mezzanine __N/A___ Hours			
		FRR of Supporting Members	Listed Design No. Or Description (SG-2)		
		Floors ___N/A____ Hours			
		Roof ____N/A_____ Hours			
		Mezzanine __ N/A___ Hours			

19	Spatial Separation – Construction of Exterior Walls									3.2.3.		9.10.14.
	Wall	Area of EBF (m²)	L.D. (m)	L/H or H/L	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb Const	Comb. Constr. Nonc. Cladding		Non-comb. Constr.
	North											
	South											
	East											
	West											
	(Additional wall areas continued below)											

20	Other – Describe _____		
	15 (Occupant Load - Continued)		
	_____Floor Occupancy _____ Load_____ persons		
	_____Floor Occupancy _____ Load_____ persons		
	_____Floor Occupancy _____ Load_____ persons		
	_____Floor Occupancy _____ Load_____ persons		
	_____Floor Occupancy _____ Load_____ persons		
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	_____Floor Occupancy _____ Load_____ persons		
	_____Floor Occupancy _____ Load_____ persons		
	_____Floor Occupancy _____ Load_____ persons		
	_____Floor Occupancy _____ Load_____ persons		
	19 (Spatial Separation – Construction of Exterior Walls - Continued)	3.2.3.	9.10.14.

Wall	Area of EBF(m²)	L.D. (m)	L/H Or H/L	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb Const.	Comb. Constr. Nonc. Cladding	Non-comb. Constr.

2006 Building Code Data Matrix, Part 3 or 9, updated February 28, 2007

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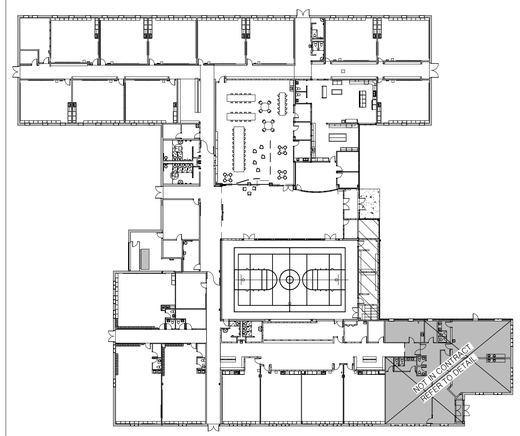

1 SITE KEY PLAN
N.T.S.

ELECTRICAL DRAWINGS

E101 - ELECTRICAL LEGEND, DRAWING LIST, SCHEDULES, ABBREVIATIONS, AND ELECTRICAL GENERAL NOTES
E201 - PART GROUND FLOOR PLAN NORTH - LIGHTING AND FIRE ALARM
E202 - PART GROUND FLOOR PLAN SOUTH - LIGHTING AND FIRE ALARM
E301 - PART GROUND FLOOR PLAN NORTH - POWER AND SYSTEMS
E302 - PART GROUND FLOOR PLAN SOUTH - POWER AND SYSTEMS
E401 - ELECTRICAL RISERS
E501 - ELECTRICAL DETAILS
E502 - ELECTRICAL DETAILS
E601 - PART GROUND FLOOR PLAN NORTH - LIGHTING AND FIRE ALARM DEMOLITION
E602 - PART GROUND FLOOR PLAN SOUTH - LIGHTING AND FIRE ALARM DEMOLITION
E701 - PART GROUND FLOOR PLAN NORTH - POWER AND SYSTEM DEMOLITION
E702 - PART GROUND FLOOR PLAN SOUTH - POWER AND SYSTEM DEMOLITION

DRAWING LIST

ARCHITECTURAL DRAWINGS

A000 - COVER PAGE
A010 - LIFE SAFETY PLAN AND SITE PLAN
A050 - ASSEMBLY TYPES
AD100 - DEMOLITION FLOOR PLAN
AD200 - DEMOLITION REFLECTED CEILING PLAN
AD300 - DEMOLITION EXTERIOR AND INTERIOR ELEVATIONS
A100 - CONSTRUCTION FLOOR PLAN
A120 - FLOOR FINISH PLAN
A150 - ENLARGED FLOOR PLANS - CLASSROOMS
A151 - ENLARGED FLOOR PLANS
A152 - WASHROOM GROUPS, FINISH PLANS, AND ELEVATIONS
A153 - GYMNASIUM ENLARGED PLAN
A175 - DEMOLITION ROOF PLAN
A176 - CONSTRUCTION ROOF PLAN
A177 - ROOFING DETAILS
A178 - ROOFING DETAILS
A200 - CONSTRUCTION REFLECTED CEILING PLAN
A300 - CONSTRUCTION EXTERIOR ELEVATIONS
A301 - CONSTRUCTION EXTERIOR ELEVATIONS
A400 - BUILDING SECTIONS
A401 - BUILDING SECTIONS
A500 - WALL SECTIONS
A501 - WALL SECTIONS
A600 - PLAN DETAILS
A601 - PLAN DETAILS
A602 - PLAN DETAILS
A650 - SECTION DETAILS
A651 - SECTION DETAILS
A652 - SECTION DETAILS
A653 - SECTION DETAILS
A654 - SECTION DETAILS
A800 - TYPICAL CLASSROOM ELEVATIONS - NORTH WING
A801 - TYPICAL CLASSROOM ELEVATIONS - SOUTH WING
A802 - KINDERGARTEN AND KITCHENETTE INTERIOR ELEVATIONS
A803 - INTERIOR ELEVATIONS - ATRIUM
A804 - INTERIOR ELEVATIONS - CORRIDOR
A805 - INTERIOR ELEVATIONS - CORRIDOR
A806 - INTERIOR ELEVATIONS - GYMNASIUM
A900 - MILLWORK DETAILS
A901 - MILLWORK DETAILS
A1000 - SCHEDULES
A1001 - ROOM FINISH SCHEDULE
A1002 - GLAZING ELEVATIONS

CIVIL DRAWINGS

SE1 - SITE SERVICING AND GRADING PLAN
SE2 - NOTES AND DETAIL

STRUCTURAL DRAWINGS

S100 - FOUNDATION PLAN
S101 - ROOF FRAMING PLAN
S200 - SCHEDULES
S201 - ELEVATIONS
S202 - JOIST REINFORCING
S301 - SECTIONS
S302 - SECTIONS
S303 - SECTIONS
S304 - SECTIONS
S305 - SECTIONS
S306 - SECTIONS
S400 - TYPICAL DETAILS
S401 - TYPICAL DETAILS
S402 - TYPICAL DETAILS
S403 - TYPICAL DETAILS
S404 - TYPICAL DETAILS
S405 - TYPICAL DETAILS

MECHANICAL DRAWINGS

M101 - MECHANICAL LEGEND AND DRAWING LIST
M102 - SCHEDULES
M103 - DETAILS
M201 - PART GROUND FLOOR PLAN - DRAINAGE
M202 - PART GROUND FLOOR PLAN - DRAINAGE
M203 - PART GROUND FLOOR PLAN - PLUMBING
M204 - PART GROUND FLOOR PLAN - PLUMBING
M205 - PLUMBING DETAILS
M301 - PART GROUND FLOOR PLAN - FIRE PROTECTION NORTH
M302 - PART GROUND FLOOR PLAN - FIRE PROTECTION SOUTH
M401 - PART GROUND FLOOR PLAN - HEATING
M402 - PART GROUND FLOOR PLAN - HEATING
M501 - PART GROUND FLOOR PLAN - AIR DISTRIBUTION
M502 - PART GROUND FLOOR PLAN - AIR DISTRIBUTION
M601 - MECHANICAL ROOF PLAN
M602 - MECHANICAL ROOF PLAN DEMOLITION
M701 - PART GROUND FLOOR PLAN - DRAINAGE DEMOLITION
M702 - PART GROUND FLOOR PLAN - DRAINAGE DEMOLITION
M703 - PART GROUND FLOOR PLAN - PLUMBING DEMOLITION
M704 - PART GROUND FLOOR PLAN - PLUMBING DEMOLITION
M705 - PART GROUND FLOOR PLAN - FIRE PROTECTION DEMOLITION
M706 - PART GROUND FLOOR PLAN - FIRE PROTECTION DEMOLITION
M707 - PART GROUND FLOOR PLAN - HEATING DEMOLITION
M708 - PART GROUND FLOOR PLAN - HEATING DEMOLITION
M709 - PART GROUND FLOOR PLAN - AIR DISTRIBUTION DEMOLITION
M710 - PART GROUND FLOOR PLAN - AIR DISTRIBUTION DEMOLITION

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KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
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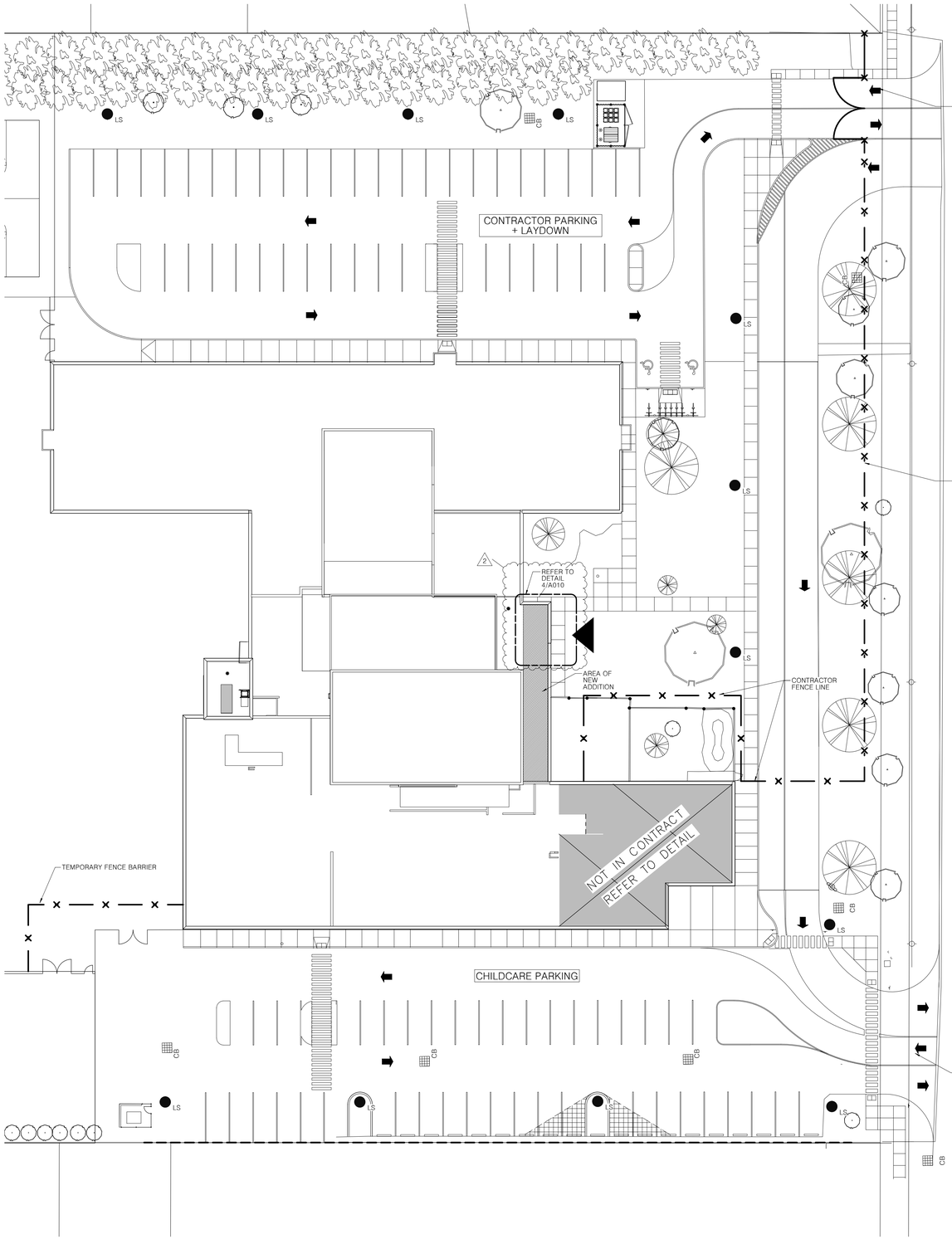
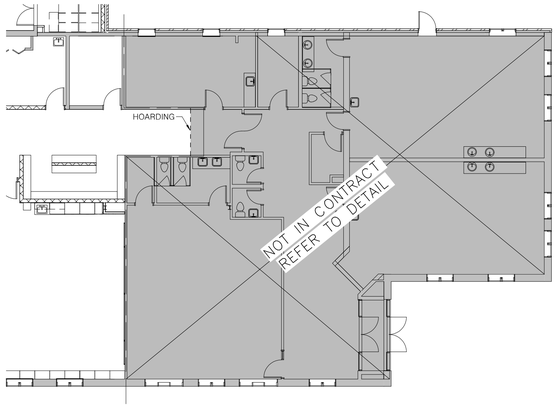
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
COVER PAGE

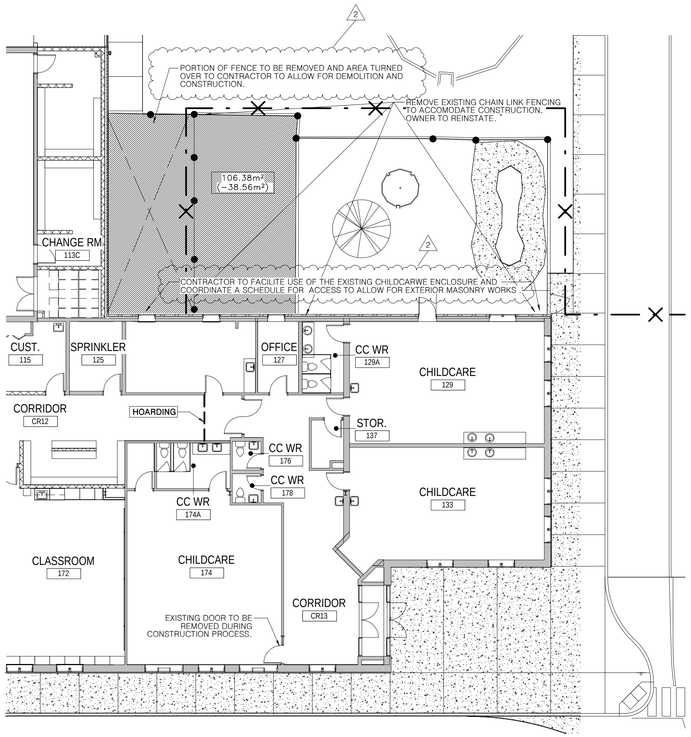
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:37:14 PM	TJV/PC	A000
SCALE: As indicated	CHECKED BY: RW	
PROJECT No.: 1901		



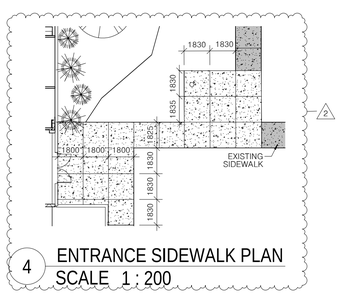
1 SITE PLAN
SCALE 1 : 300



2 ENLARGED FLOOR PLAN - CHILDCARE N.I.C.
SCALE 1 : 150



3 ENLARGED FLOOR PLAN - CHILDCARE
SCALE 1 : 150



4 ENTRANCE SIDEWALK PLAN
SCALE 1 : 200

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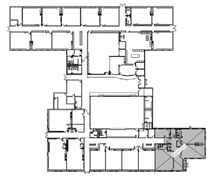

KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

TEMP. CONSTRUCTION HOARDING

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
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ONTARIO ASSOCIATION OF ARCHITECTS
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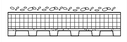
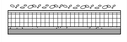
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
LIFE SAFETY PLAN AND SITE PLAN

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:37:35 PM	PC	A010
SCALE: As indicated	CHECKED BY: RW	
PROJECT No.: 1901		

ASSEMBLY TYPES:

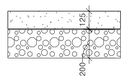
ROOF TYPES

TYPE	DETAIL	DESCRIPTION
R1		NEW ROOF: PEA STONE ROOFING GRAVEL ON FLOOD COAT OF COLD ADHESIVE ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE ON 5 MM PROTECTION ASPHALT BOARD ON 100 RIGID INSULATION (ISO) ON VAPOUR RETARDER AS SPECIFIED ON 13 MM TYPE X GYPSUM BOARD (ISO) MECHANICALLY FASTENED TO DECK ON 38 METAL DECK
R2		NEW ROOF ON EXISTING DECK: PEA STONE ROOFING GRAVEL ON FLOOD COAT OF COLD ADHESIVE ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE ON 5 MM PROTECTION ASPHALT BOARD ON 100 RIGID INSULATION (ISO) ON VAPOUR RETARDER AS SPECIFIED ON 13 MM TYPE X GYPSUM BOARD (ISO) MECHANICALLY FASTENED TO DECK ON EXISTING METAL DECK

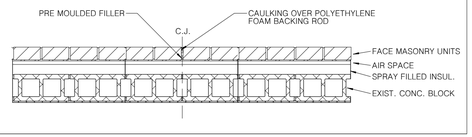
CEILING TYPES

TYPE	DETAIL	DESCRIPTION
ACT HT A.F.F.		ACOUSTIC CEILING TILE: -ACT PANEL -ALUM. CHANNEL SYS.
GYP HT A.F.F.		GWB ON STUDS: -16 ABUSE RESISTANT GWB -102 STUDS @ 400 O.C.

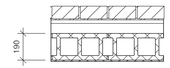
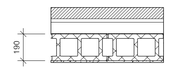
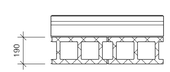
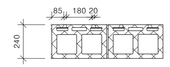
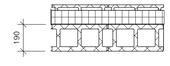
FLOOR TYPES

FL1.1		NEW CONC. SLAB ON GRADE: -FLOOR FINISH. REFER TO FINISHING PLAN -125 CONCRETE SLAB W/ WELDED WIRE MESH -MIN 200 COMPACTED GRANULAR FILL

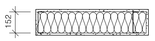
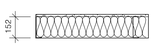
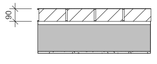
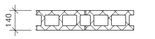
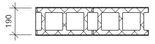
CONTROL JOINT DETAIL



EXTERIOR WALL TYPES

TYPE	DETAIL	DESCRIPTION
W1		MASONRY ON EXIST. CMU: -90 CSBU MASONRY -25 AIR BARRIER -80 SPRAY FOAM INSULATION -BLUESKIN SA WATER RESISTIVE A.V.B. -EXISTING 190 CONC. BLOCK
W2		NSMU BASE: -90 LIMESTONE MASONRY -25 AIR BARRIER -80 SPRAY FOAM INSULATION -BLUESKIN SA WATER RESISTIVE A.V.B. -EXISTING 190 CONC. BLOCK
W3		METAL SIDING ON EXST. CMU: -38 GAUGE HORIZONTAL CORRUGATED METAL SIDING -VERTICAL Z-BAR REINFORCING -25 AIR BARRIER -80 SPRAY FOAM INSULATION -BLUESKIN SA WATER RESISTIVE A.V.B. -EXISTING 190 CONC. BLOCK
W4		NEW ACOUSTIC CMU: -240 ACOUSTIC TYPE RSC "SOUNDBLOX" CMU
FW1		350 CMU FOUNDATION: -100 CMU -50 RIGID INSULATION -190 REINFORCED CONCRETE CMU (REFER TO STRUCTURAL)

INTERIOR WALL TYPES

TYPE	DETAIL	DESCRIPTION
P1		GWB ON STUDS: -16 ABUSE RESISTANT GWB -92 STUDS @ 400 O.C. -ROXUL ACOUSTIC INSUL. BETWEEN STUDS IN CAVITY -16 ABUSE RESISTANT GWB
P1a		GWB ON STUDS: -16 ABUSE RESISTANT GWB -92 STUDS @ 400 O.C.
P2		GWB ON STUDS: -16 ABUSE RESISTANT GWB -152 STUDS @ 400 O.C. - ROXUL ACOUSTIC INSUL. BETWEEN STUDS IN CAVITY -16 ABUSE RESISTANT GWB
P3		GWB ON STUDS: -16 ABUSE RESISTANT GWB -152 STUDS @ 400 O.C. -ROXUL ACOUSTIC INSUL. BETWEEN STUDS IN CAVITY
F1		GWB ON STUDS: -22 METAL FURRING CHANNELS -16 ABUSE RESISTANT GWB
F2		GWB ON STUDS: -41 METAL STUDS @ 400 O.C. -16 ABUSE RESISTANT GWB
F3		GWB ON STUDS: -64 METAL STUDS @ 400 O.C. -16 ABUSE RESISTANT GWB
F4		GWB ON STUDS: -92 METAL STUDS @ 400 O.C. -16 ABUSE RESISTANT GWB
F5		EXISTING WALL: -90 CLAY BRICK -25 RIGID INSULATION -190 CONC. BLOCK NOTE: ALL OUTSIDE EXPOSED CORNERS TO BE ROUNDED.
B1		EXPOSED CMU: -NEW 140 CMU NOTE: ALL OUTSIDE EXPOSED CORNERS TO BE ROUNDED.
B2		EXPOSED CMU: -NEW 190 CMU NOTE: ALL OUTSIDE EXPOSED CORNERS TO BE ROUNDED.
B3		EXPOSED CMU: -NEW 290 CMU NOTE: ALL OUTSIDE EXPOSED CORNERS TO BE ROUNDED.

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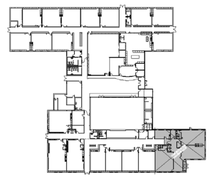

KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
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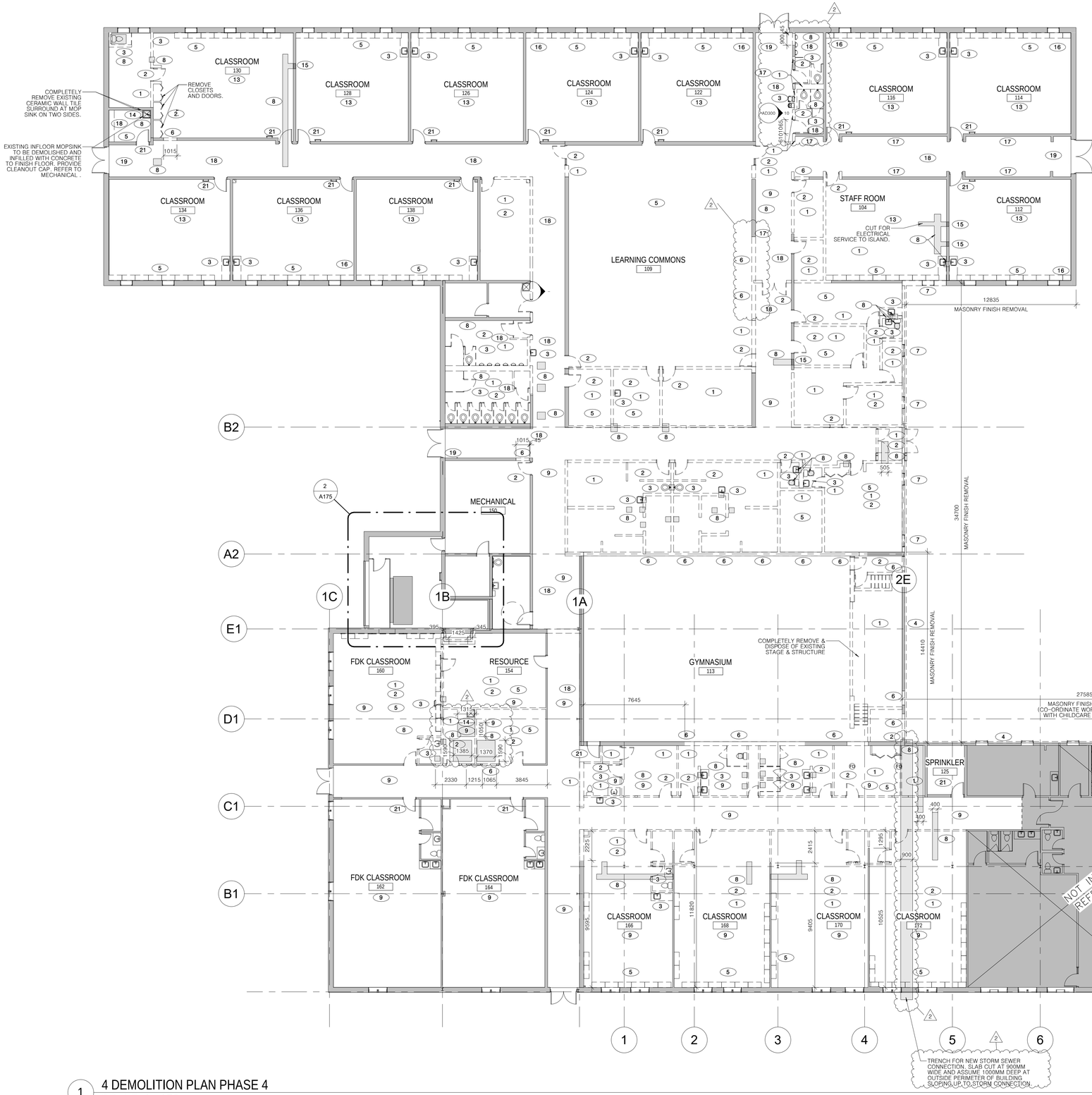
PROJECT TITLE

OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE

ASSEMBLY TYPES

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:37:44 PM	PC	A050
SCALE: 1 : 20	CHECKED BY: RW	
PROJECT No.: 1901		



1 4 DEMOLITION PLAN PHASE 4
SCALE 1 : 150

DEMOLITION SPECIFIC NOTES

1	REMOVE EXISTING WALLS AS INDICATED ON THE DRAWINGS. CONSTRUCTION TYPE MAY VARY FROM EXTERIOR MASONRY ON CONCRETE BLOCK BACKUP TO INTERIOR CONCRETE BLOCK AND/OR DRYWALL PARTITIONS. REMOVE MECHANICAL AND ELECTRICAL COMPONENTS / DEVICES (BACK TO SOURCE) ANCHORED TO OR CONCEAL WITHIN WALLS. PROVIDE ALL SHORING AND TEMPORARY SUPPORT REQUIRED TO MAKE EXISTING STRUCTURE SAFE. REFER TO DRAWINGS & SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2	EXISTING DOOR, AND FRAME IF INDICATED, TO BE REMOVED. BOX, LABEL AND TURN OVER HARDWARE TO OWNER FOR FUTURE USE. WHERE FRAME IS REMOVED PREPARE OPENING TO RECEIVE NEW INFILL OR DOOR AND FRAME IF REQUIRED. REFER TO NEW CONSTRUCTION PLANS AND ELEVATIONS.
3	EXISTING PLUMBING FIXTURES TO BE REMOVED. REMOVE ALL EQUIPMENT, CAP & REMOVE SINKS, DRAINS, AND HARDWARE. REFER TO MECHANICAL AND ELECTRICAL FOR ADDITIONAL REQUIREMENTS. ONLY RETAIN FIXTURES FOR OWNERS' USE OR REUSE IN NEW CONSTRUCTION WHERE SPECIFICALLY NOTED. REPAIR AND MAKE GOOD ALL EXPOSED SURFACES.
4	REMOVE & DISPOSE OF EXISTING EXTERIOR BRICK AND RIGID INSULATION BACK TO EXISTING CONC. BLOCK. WALL CONC. BLOCK STRUCTURE TO REMAIN. CUT AND GRIND TO FLUSH ALL REINFORCING BETWEEN BLOCK AND REMOVED CLAY BRICK MASONRY. MAKE READY FOR NEW MASONRY.
5	EXISITING MILLWORK TO BE REMOVED AND DISPOSED.
6	DEMOLISH PORTION OF WALL TO ACCOMODATE NEW DOOR OR WINDOW OPENING. PROVIDE TEMPORARY SUPPORT FOR EXISITNG BLOCK ABOVE. REFER TO ENLARGED PLANS FOR LOCATION.
7	REMOVE AND DISPOSE OF EXISTING WINDOW.
8	EXISTING FLOOR SLAB CUTTING LOCATION FOR NEW SANITARY AND ELECTRICAL. COORDINATE EXACT LOCATION BETWEEN ABOVE FLOOR TIE-IN BELOW FLOOR CONNECTION TO SANITARY. ASSUME TRENCHING, FOR ELECTRICAL, PROVIDE 1" CONDUIT FROM POWER SOURCE TO ABOVE FINISHED FLOOR. ALL CUTS TO BE 400MM WIDE X 600MM DEEP UNLESS NOTED OTHERWISE. . REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
9	EXISTING ACT CEILING TILE AND GRID OR GYPSUM BOARD CEILING W/ LIGHT FIXTURES/DEVICES TO BE REMOVED AND DISPOSED INCLUDING ALL TILES, GYPSUM BOARD, SUPPORT HANGARS AND FRAMING. REFER TO MECHANICAL AND ELECTRICAL DEMOLITION PLANS.
10	REMOVE EXISTING L.E.D. LIGHT FIXTURES. TURN OVER EXISTING LED BULB TO OWNER.
11	EXISITNG GRID TO REMAIN AND NEW ACOUSTIC LAY IN TILES TILES TO BE INSTALLED.
12	EXISITNG LIGHT FIXTURE TO REMAIN. REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
13	ALL EXISTING WHITE BOARDS/ TACK BOARDS TO BE REMOVED AND DISPOSED.
14	EXISITNG MOP SINK TO BE REMOVED.
15	EXISTING BLOCK WALL CUT AREA FOR NEW PLUMBING PIPE LINES. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
16	EXISTING METAL TV MOUNT TO BE REMOVED ABOVE CEILING LINE BACK TO STRUCTURE.
17	BREAK OUT EXISTING CONCRETE BASE AND PORCELAIN WALL BASE.
18	DEMOLISH ALL TERRAZZO BASES DOWN TO BELOW LEVEL OF TERRAZZO TO REMAIN.)SCARIFY ALL EXISTING TERRAZZO FLOORING TO REMOVE ALL FINISH COATINGS ACCEPTABLE TO FLOORING CONTRACTORS REQUIREMENTS FOR ADHESION FOR PORCELAIN TILE FLOORING.
19	REMOVE INSET EXISTING ABANDONED ELECTRICAL AND DEVICE BOXES, INFILL WITH COMPLETE BLOCK TO ACHIEVE UNIFORM MASONARY APPEARANCE. INCLUDES ABANDONED THERMOSTATES, CONTROL AND ELECTRICAL DEVICES ACCOUNT FOR UP TO SEVEN LOCATIONS.
20	EXISTING BLINDS TO BE REMOVED.
21	EXISITNG DOOR TO BE REMOVED AND REPLACE WITH NEW DOOR IN AN EXISTING FRAME AND EXISTING HARDWARE TO BE RETURNED TO THE OWNER. INSTALL EXISTING DOOR HANDLE IN NEW DOOR.
22	EXISITNG OVERHEAD PROJECTOR TO BE REMOVED BY THE BOARD.

GENERAL NOTES

A. REMOVE ALL WIRING FROM ELECTRICAL DEVICES THAT WILL BE REMOVED AND ALL ~REDUNDANT CONDUIT BACK TO NEAREST JUNCTION BOX THAT WILL REMAIN, AND MAKE ~SAFE. INSTALL METAL COVER PLATES OVER EXPOSED OPENINGS AND ELECTRICAL BOXES. REFER TO ELECTRICAL FOR ADDITIONAL REQUIREMENTS.

B. MAKE GOOD ALL AREAS AFFECTED BY REMOVALS ~ FLUSH TO ADJACENT SURFACE AND MATCH TO EXISTING FINISH.

C. DISPOSE OF ALL DESIGNATED SUBSTANCES TO THE REQUIREMENTS AS SET OUT IN THE SPECIFICATIONS AND CONFORMING TO STANDARDS AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION

D. ALL PIPING THAT IS TO BE REMOVED OR ABANDONED IS TO BE REMOVED BACK TO THE NEAREST JUNCTION AND CAPPED. REFER TO MECHANICAL FOR ADDITIONAL ~REQUIREMENTS.

E. NOTE ALL EXISTING ITEMS MAY NOT BE SHOWN ON THESE DRAWINGS. A CAREFUL REVIEW OF THE SITE IS REQUIRED TO DETERMINE THE FULL EXTENT OF THE WORK SHOWN, CONTACT ARCHITECT PRIOR TO BID CLOSE TO CONFIRM.

F. THE ARCHITECTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL PROJECT MANUALS, STRUCTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS. IN CASE OF DIFFERENCES BETWEEN CONSULTANTS' DOCUMENTS WITH RESPECT TO QUANTITY, SIZES OR SCOPE, THE GREATER SHALL APPLY.

G. PROVIDE PROTECTION FOR ALL FINISHES OR SERVICES TO REMAIN.

H. ALL WINDOWS FALLING WITHIN THE DEMOLITION AREA (NORTH WING)ARE TO HAVE THEIR COVERINGS, FITTINGS, AND MOUNTING HARDWARE REMOVED & RETURNED TO THE OWNER.

I. DEMOLITION NOTE REFERENCE NUMBERS, WHERE LOCATED ADJACENT TO A ROOM ~NAME/NUMBER APPLY TO THE ENTIRETY OF THE ROOM.

J. GENERAL CONTRACTOR IS TO ALLOW FOR THE SUPPLY AND INSTALLATION OF LOOSE LINTELS AS REQUIRED WHERE NEW OPENINGS ARE BEING CREATED OR WIDENED. REFER TO THE LOOSE LINTEL SCHEDULE PROVIDED ON THE STRUCTURAL DRAWINGS, OR PROVIDE ENGINEERING WHERE THERE ARE NO STRUCTURAL DRAWINGS OR SCHEDULE.

K. GENERAL CONTRACTOR IS REQUIRED TO REMOVE ALL REMAINING ADHESIVES ON WALLS WHERE COMMUNICATION BOARDS AND BASE WERE REMOVED. TYPICAL FOR ALL ROOMS AFFECTED BY WORK.

L. EXISTING FLOOR FINISHES AND WALL BASE TO BE REMOVED INCLUDING ALL ADHESIVES AND MORTAR DOWN TO EXISTING CONCRETE SLAB AND WALL BACKING BY MEANS OF GRINDING. PREPARE FLOOR SURFACE LEVEL TO WITHIN SPECIFIED TOLERANCES AND MAKE READY FOR NEW FINISHES. PROVIDE ANY AND ALL REMEDIAL WORK TO WALL BACKING WHERE BASE HAS BEEN REMOVED. REFER TO NEW CONSTRUCTION PLANS AND ELEVATIONS. THE EXSITNG FLOOR FINISH SHALL REMAIN IN FOLLOWING AREA: 150, 150A, 150B, 152, 144, & 144A.

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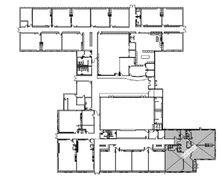
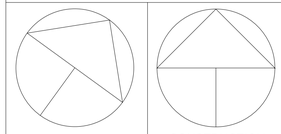


KEY PLAN



NOTES

LEGEND

SYMBOL	DESCRIPTION
	AREA OF WORK N.I.C.
	ACT CEILING TILE TO BE REMOVED
	PORTION OF EXISTING WALLS TO BE REMOVED
	EXTERIOR MASONRY & INSULATION TO BE REMOVED EXISTING CONC. BLOCK TO REMAIN
	AREA OF CONCRETE FLOOR TO BE REMOVED FOR PLUMBING
	AREA OF BLOCK WALL TO BE REMOVED FOR PLUMBING
	EXISTING DOOR & FRAME TO BE REMOVED
	EXISTING WINDOW & FRAME TO BE REMOVED

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PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
DEMOLITION FLOOR PLAN

DATE PLOTTED: 2020-03-05 3:48:48 PM	DRAWN BY: TJV	DRAWING No.: AD100
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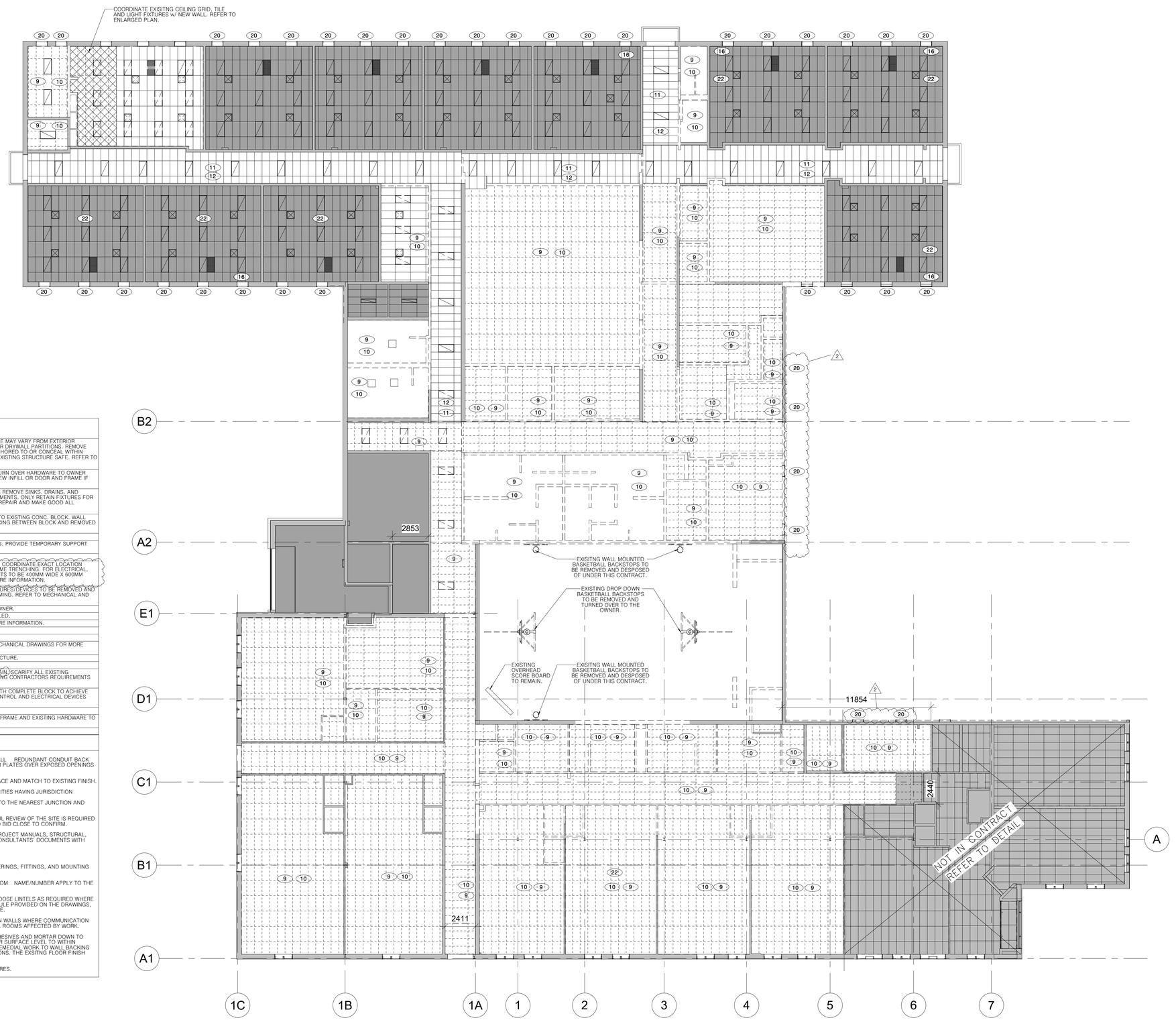

DEMOLITION SPECIFIC NOTES	
1	REMOVE EXISTING WALLS AS INDICATED ON THE DRAWINGS. CONSTRUCTION TYPE MAY VARY FROM EXTERIOR MASONRY ON CONCRETE BLOCK BACKUP TO INTERIOR CONCRETE BLOCK AND/OR DRYWALL PARTITIONS. REMOVE MECHANICAL AND ELECTRICAL COMPONENTS / DEVICES (BACK TO SOURCE) ANCHORED TO OR CONCEAL WITHIN WALLS. PROVIDE ALL SHORING AND TEMPORARY SUPPORT REQUIRED TO MAKE EXISTING STRUCTURE SAFE. REFER TO DRAWINGS & SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2	EXISTING DOOR, AND FRAME IF INDICATED, TO BE REMOVED, BOX, LABEL AND TURN OVER HARDWARE TO OWNER FOR FUTURE USE. WHERE FRAME IS REMOVED PREPARE OPENING TO RECEIVE NEW INFILL OR DOOR AND FRAME IF REQUIRED. REFER TO NEW CONSTRUCTION PLANS AND ELEVATIONS.
3	EXISTING PLUMBING FIXTURES TO BE REMOVED. REMOVE ALL EQUIPMENT, CAP & REMOVE SINKS, DRAINS, AND HARDWARE. REFER TO MECHANICAL AND ELECTRICAL FOR ADDITIONAL REQUIREMENTS. ONLY RETAIN FIXTURES FOR OWNERS' USE OR REUSE IN NEW CONSTRUCTION WHERE SPECIFICALLY NOTED. REPAIR AND MAKE GOOD ALL EXPOSED SURFACES.
4	REMOVE & DISPOSE OF EXISTING EXTERIOR BRICK AND RIGID INSULATION BACK TO EXISTING CONC. BLOCK. WALL CONC. BLOCK STRUCTURE TO REMAIN. CUT AND GRIND TO FLUSH ALL REINFORCING BETWEEN BLOCK AND REMOVED CLAY BRICK MASONRY. MAKE READY FOR NEW MASONRY.
5	EXISITING MILLWORK TO BE REMOVED AND DISPOSED.
6	DEMOLISH PORTION OF WALL TO ACCOMODATE NEW DOOR OR WINDOW OPENING. PROVIDE TEMPORARY SUPPORT FOR EXISITNG BLOCK ABOVE. REFER TO ENLARGED PLANS FOR LOCATION.
7	REMOVE AND DISPOSE OF EXISTING WINDOW.
8	EXISTING FLOOR SLAB CUTTING LOCATION FOR NEW SANITARY AND ELECTRICAL. COORDINATE EXACT LOCATION BETWEEN ABOVE FLOOR TIE-IN BELOW FLOOR CONNECTION TO SANITARY. ASSUME TRENCHING. FOR ELECTRICAL, PROVIDE 1" CONDUIT FROM POWER SOURCE TO ABOVE FINISHED FLOOR. ALL CUTS TO BE 400MM WIDE X 600MM DEEP UNLESS NOTED OTHERWISE. . REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
9	EXISTING ACT CEILING TILE AND GRID OR GYPSUM BOARD CEILING W/ LIGHT FIXTURES/DEVICES TO BE REMOVED AND DISPOSED INCLUDING ALL TILES, GYPSUM BOARD, SUPPORT HANGARS AND FRAMING. REFER TO MECHANICAL AND ELECTRICAL DEMOLITION PLANS.
10	REMOVE EXISTING L.E.D. LIGHT FIXTURES. TURN OVER EXISTING LED BULB TO OWNER.
11	EXISTING GRID TO REMAIN AND NEW ACOUSTIC LAY IN TILES TILES TO BE INSTALLED.
12	EXISITNG LIGHT FIXTURE TO REMAIN. REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
13	ALL EXISTING WHITE BOARDS/ TACK BOARDS TO BE REMOVED AND DISPOSED.
14	EXISTING MOP SINK TO BE REMOVED.
15	EXISTING BLOCK WALL CUT AREA FOR NEW PLUMBING PIPE LINES. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
16	EXISTING METAL TV MOUNT TO BE REMOVED ABOVE CEILING LINE BACK TO STRUCTURE.
17	BREAK OUT EXISTING CONCRETE BASE AND PORCELAIN WALL BASE
18	DEMOLISH ALL TERRAZZO BASES DOWN TO BELOW LEVEL OF TERRAZZO TO REMAIN.SCARIFY ALL EXISTING TERRAZZO FLOORING TO REMOVE ALL FINISH COATINGS ACCEPTABLE TO FLOORING CONTRACTORS REQUIREMENTS FOR ADHESION FOR PORCELAIN TILE FLOORING.
19	REMOVE INSET EXISTING ABANDONED ELECTRICAL AND DEVICE BOXES, INFILL WITH COMPLETE BLOCK TO ACHIEVE UNIFORM MASONARY APPEARANCE . INCLUDES ABANDONED THERMOSTATES, CONTROL AND ELECTRICAL DEVICES ACCOUNT FOR UP TO SEVEN LOCATIONS.
20	EXISTING BLINDS TO BE REMOVED.
21	EXISTING DOOR TO BE REMOVED AND REPLACE WITH NEW DOOR IN AN EXISTING FRAME AND EXISTING HARDWARE TO BE RETURNED TO THE OWNER. INSTALL EXISTING DOOR HANDLE IN NEW DOOR.
22	EXISTING OVERHEAD PROJECTOR TO BE REMOVED BY THE BOARD.

GENERAL DEMOLITION NOTES

A. REMOVE ALL WIRING FROM ELECTRICAL DEVICES THAT WILL BE REMOVED AND ALL . REDUNDANT CONDUIT BACK TO NEAREST JUNCTION BOX THAT WILL REMAIN, AND MAKE SAFE. INSTALL METAL COVER PLATES OVER EXPOSED OPENINGS AND ELECTRICAL BOXES. REFER TO ELECTRICAL FOR ADDITIONAL REQUIREMENTS.

B. MAKE GOOD ALL AREAS AFFECTED BY REMOVALS – FLUSH TO ADJACENT SURFACE AND MATCH TO EXISTING FINISH.

C. DISPOSE OF ALL DESIGNATED SUBSTANCES TO THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION

D. ALL PIPING THAT IS TO BE REMOVED OR ABANDONED IS TO BE REMOVED BACK TO THE NEAREST JUNCTION AND CAPPED. REFER TO MECHANICAL FOR ADDITIONAL REQUIREMENTS.

E. NOTE ALL EXISTING ITEMS MAY NOT BE SHOWN ON THESE DRAWINGS. A CAREFUL REVIEW OF THE SITE IS REQUIRED TO DETERMINE THE FULL EXTENT OF THE WORK SHOWN, CONTACT ARCHITECT PRIOR TO BID CLOSE TO CONFIRM.

F. THE ARCHITECTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL PROJECT MANUALS, STRUCTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS. IN CASE OF DIFFERENCES BETWEEN CONSULTANTS' DOCUMENTS WITH RESPECT TO QUANTITY, SIZES OR SCOPE, THE GREATER SHALL APPLY.

G. PROVIDE PROTECTION FOR ALL FINISHES OR SERVICES TO REMAIN.

H. ALL WINDOWS FALLING WITHIN THE DEMOLITION AREA ARE TO HAVE THEIR COVERINGS, FITTINGS, AND MOUNTING HARDWARE REMOVED & RETURNED TO THE OWNER.

I. DEMOLITION NOTE REFERENCE NUMBERS, WHERE LOCATED ADJACENT TO A ROOM NAME/NUMBER APPLY TO THE ENTIRETY OF THE ROOM.

J. GENERAL CONTRACTOR IS TO ALLOW FOR THE SUPPLY AND INSTALLATION OF LOOSE LINTELS AS REQUIRED WHERE NEW OPENINGS ARE BEING CREATED OR WIDENED. REFER TO THE LOOSE LINTEL SCHEDULE PROVIDED ON THE DRAWINGS, OR PROVIDE ENGINEERING WHERE THERE ARE NO STRUCTURAL DRAWINGS OR SCHEDULE.

K. GENERAL CONTRACTOR IS REQUIRED TO REMOVE ALL REMAINING ADHESIVES ON WALLS WHERE COMMUNICATION BOARDS WERE REMOVED UNLESS BEING COVERED WITH NEW BOARDS. TYPICAL FOR ALL ROOMS AFFECTED BY WORK.

L. EXISTING FLOOR FINISHES AND WALL BASE TO BE REMOVED INCLUDING ALL ADHESIVES AND MORTAR DOWN TO EXISTING CONCRETE SLAB AND WALL BACKING BY MEANS OF GRINDING. PREPARE FLOOR SURFACE LEVEL TO WITHIN SPECIFIED TOLERANCES AND MAKE READY FOR NEW FINISHES. PROVIDE ANY AND ALL REMEDIAL WORK TO WALL BACKING WHERE BASE HAS BEEN REMOVED. REFER TO NEW CONSTRUCTION PLANS AND ELEVATIONS. THE EXSITNG FLOOR FINISH SHALL REMAIN IN FOLLOWING AREA: 150, 150A, 150B, 152, 144, & 144A.

M. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR DEMOLITION OF FIXTURES.

1 REFLECTED CEILING DEMO PLAN
SCALE 1 : 150

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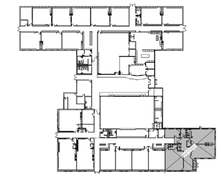

KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

1	DEMOLITION NOTE REFERENCE NUMBER
	AREA OF WORK N.I.C.
	ACT CEILING TILE TO BE REMOVED
	PORTION OF EXISTING WALLS TO BE REMOVED
	EXTERIOR MASONRY & INSULATION TO BE REMOVED
	EXISTING CONC. BLOCK TO REMAIN
	AREA OF CONCRETE FLOOR TO BE REMOVED FOR PLUMBING
	ROOMS COMPLETE DURING PHASE 3 OF CONSTRUCTION.

N NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

PROJECT TITLE

OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE

DEMOLITION REFLECTED CEILING PLAN

DATE PLOTTED	DRAWN BY	DRAWING No.
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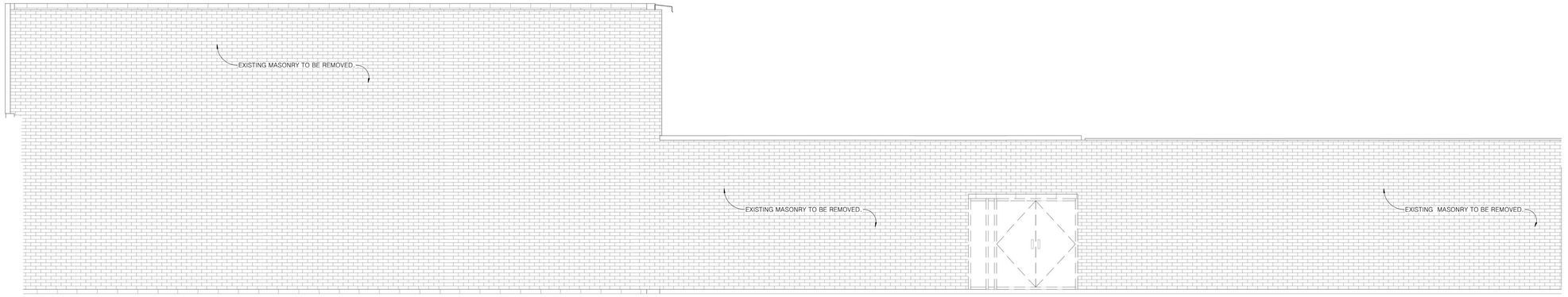
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



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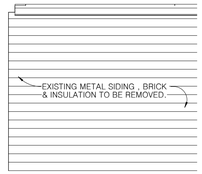
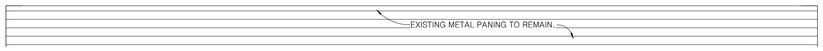
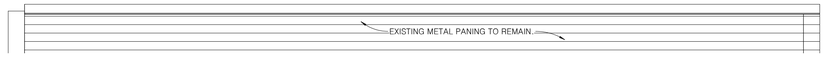




4 BUILDING ELEVATION
SCALE 1 : 50

3 BUILDING ELEVATION
SCALE 1 : 50

2 BUILDING ELEVATION
SCALE 1 : 50



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SCALE 1 : 50

5 BUILDING ELEVATION
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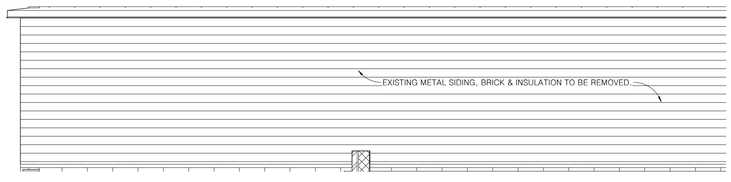

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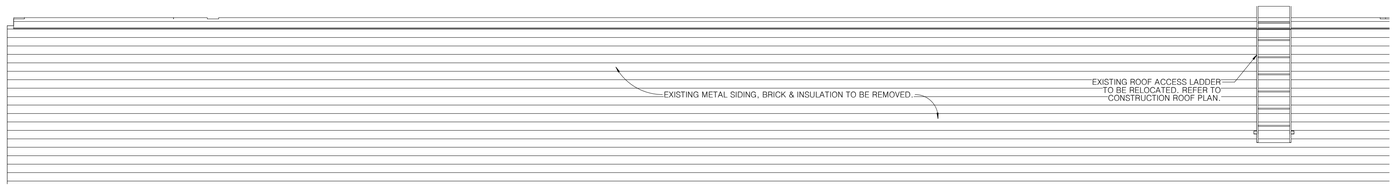

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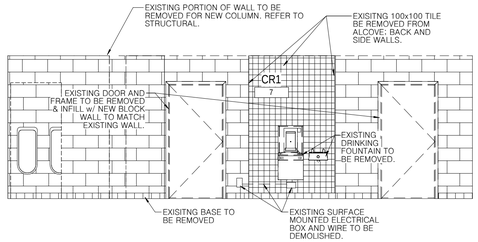

10 CORRIDOR ELEVATION AT WASHROOMS
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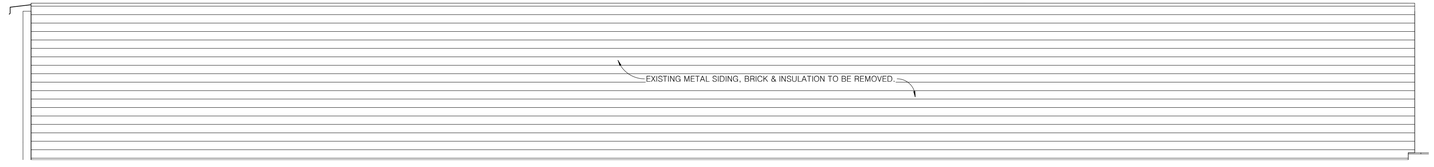

9 BUILDING ELEVATION
SCALE 1 : 50

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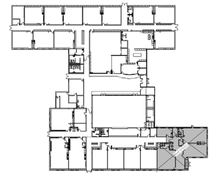

KEY PLAN

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LEGEND

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

PROJECT TITLE

OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE

DEMOLITION EXTERIOR AND INTERIOR ELEVATIONS

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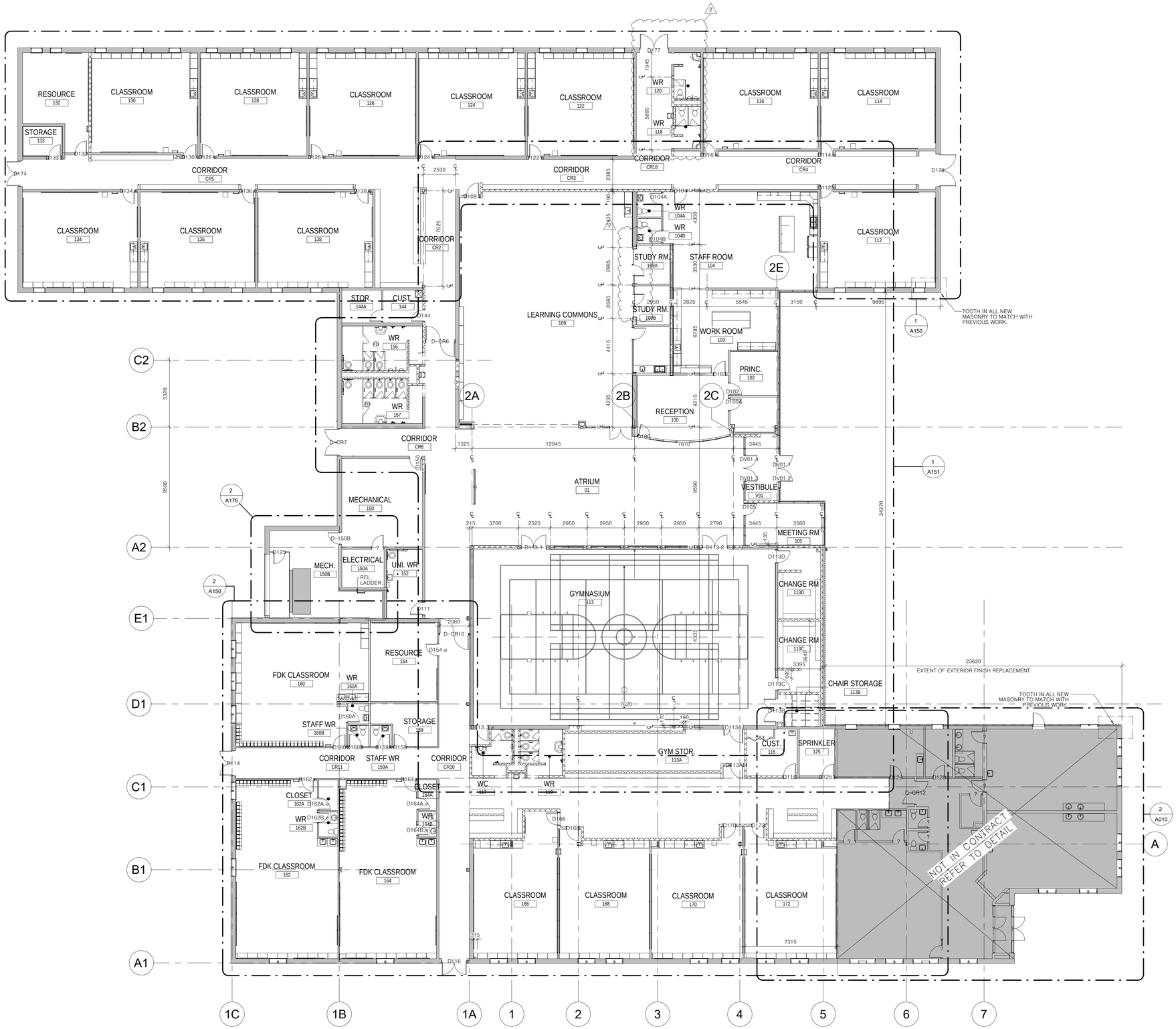
PROJECT No. 1901		



1 CONSTRUCTION FLOOR PLAN
SCALE 1 : 150

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280 QUEENS AVENUE, SUITE 1Q
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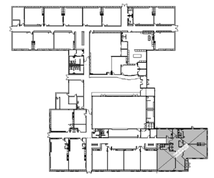

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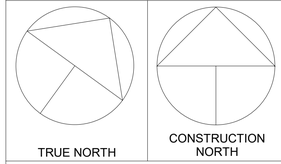

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LEGEND

N
NUMBER INDICATES ADDENDUM #

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1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE 4000

PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
CONSTRUCTION FLOOR PLAN

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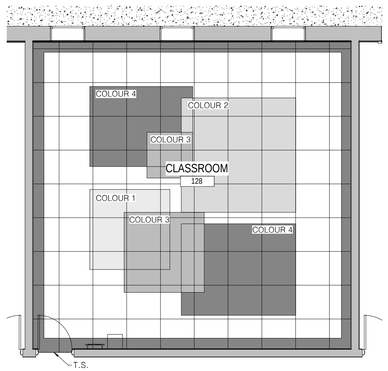
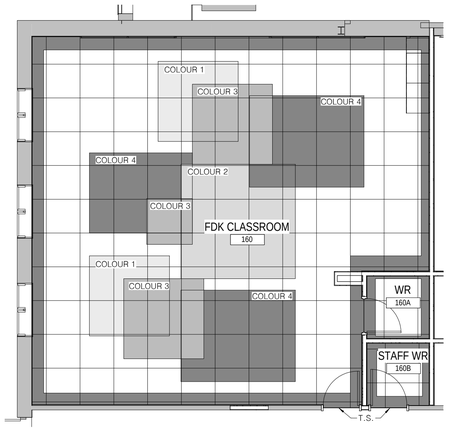


2 TYP. CLASSROOM FINISHING PLAN
SCALE 1 : 75



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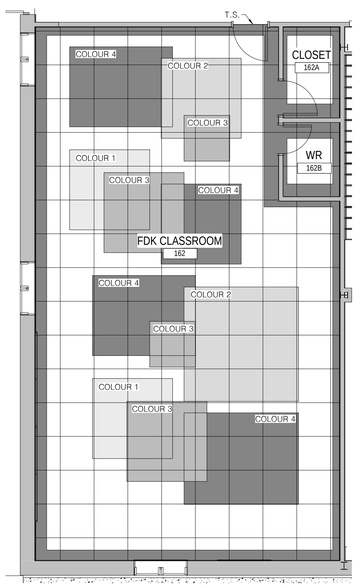

4 TYP. CLASSROOM FINISHING PLAN
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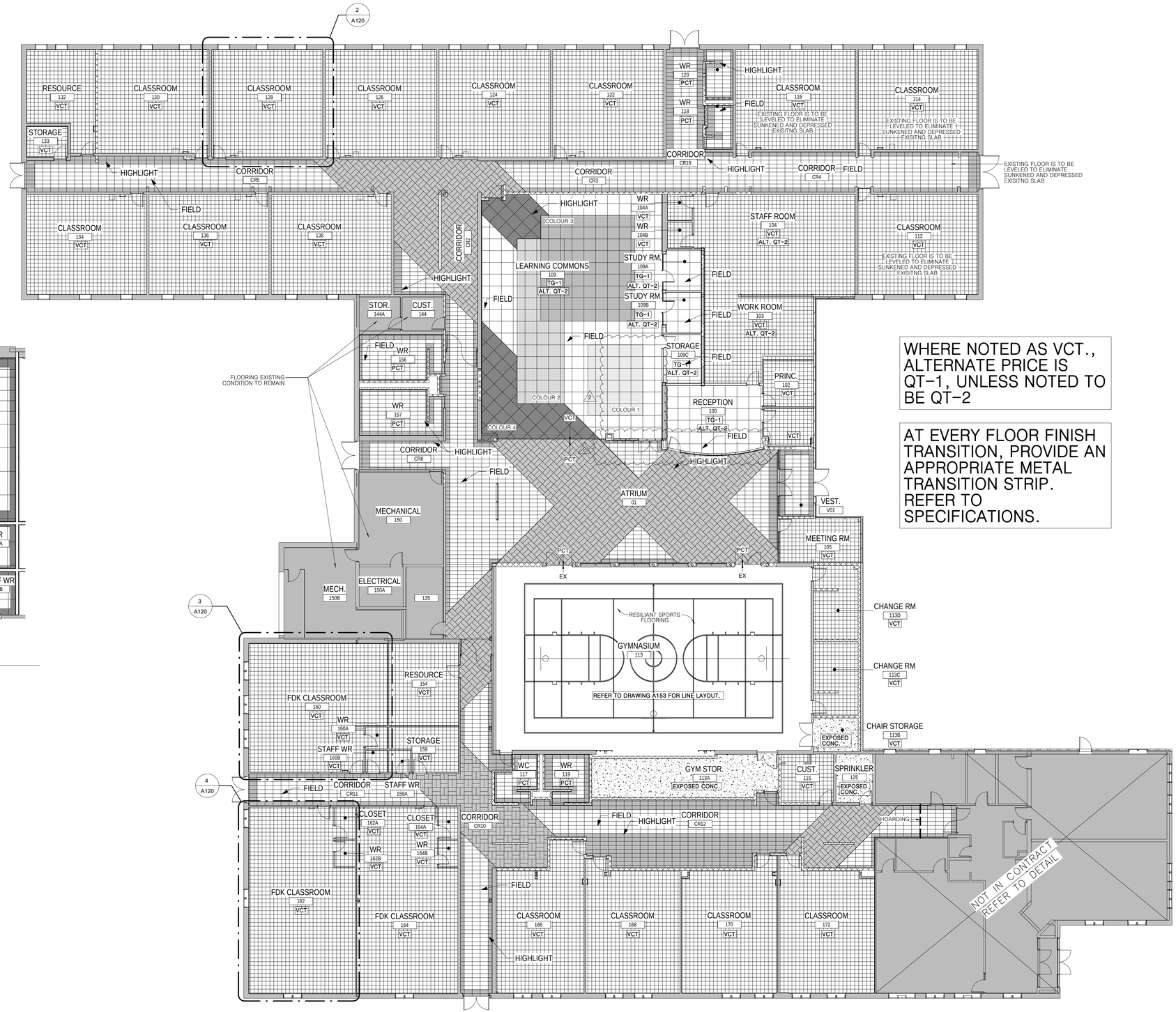

1 FLOOR FINISHING PLAN
SCALE 1 : 150

WHERE NOTED AS VCT., ALTERNATE PRICE IS QT-1, UNLESS NOTED TO BE QT-2

AT EVERY FLOOR FINISH TRANSITION, PROVIDE AN APPROPRIATE METAL TRANSITION STRIP. REFER TO SPECIFICATIONS.

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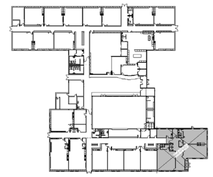

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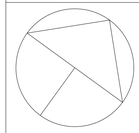
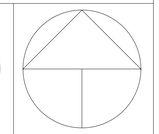


TRUE NORTH



CONSTRUCTION NORTH

NOTES

LEGEND

	PCT1 – PORCELAIN TILE W/ PCT BASE
	PCT2 – PORCELAIN TILE W/ PCT BASE – HIGHLIGHT PATTERN
	VCT – VINYL COMPOSITE TILE QT–1 ALT. QUARTZ COMPOSITE TILE (305 x 305mm) QT–2 ALT. QUARTZ COMPOSITE TILE (610 X 610mm) WHERE NOTED.
	TG–1 – TEXAS GRANITE TILE (910 X 910mm)
	RES – RESILIANT SPORTS FLOORING
	FLOORING EXISTING CONDITION TO REMAIN.
	EXPOSED CONCRETE (SEALED)

NUMBER INDICATES ADDENDUM #

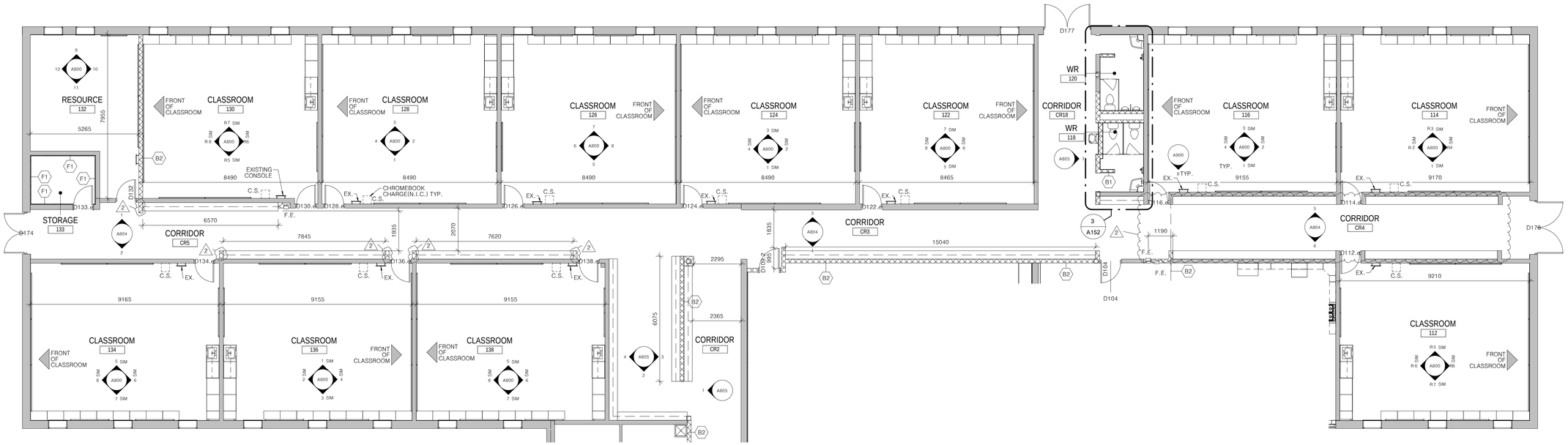
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	1

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

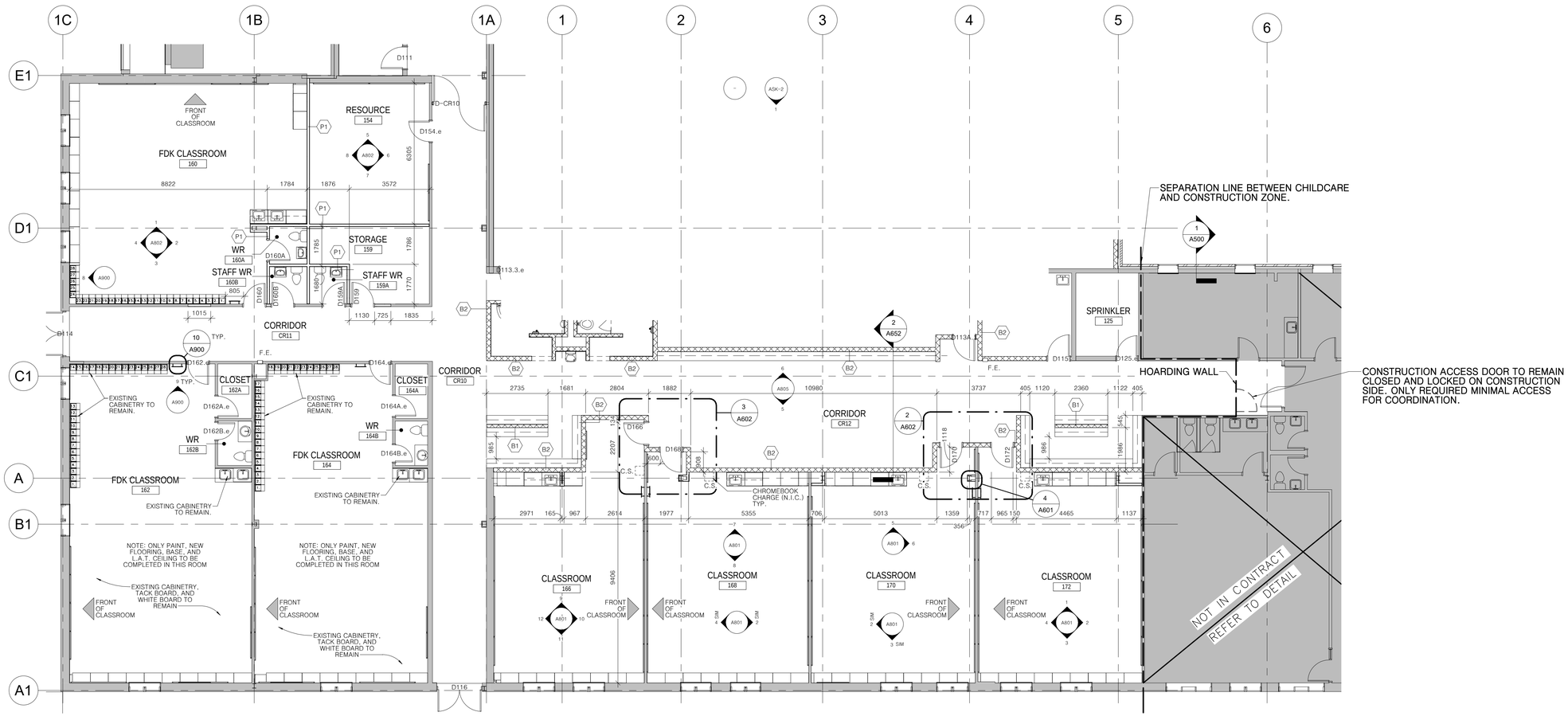
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
FLOOR FINISH PLAN

DATE PLOTTED: 2020-03-05 3:38:27 PM	DRAWN BY: PC	DRAWING No.: A120
SCALE: As indicated	CHECKED BY: RW	
PROJECT No.: 1901		



1 ENLARGED FLOOR PLAN - CLASSROOMS - NORTH
SCALE 1 : 100



2 ENLARGED FLOOR PLAN - CLASSROOMS - SOUTH
SCALE 1 : 100

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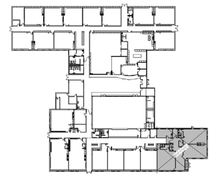
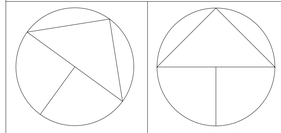


KEY PLAN



NOTES

LEGEND

- EXISTING WALLS REMAINING
- NEW BLOCK WALL
- NEW GYPSUM BOARD WALL
- FOLDING METAL GRILLES

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	1

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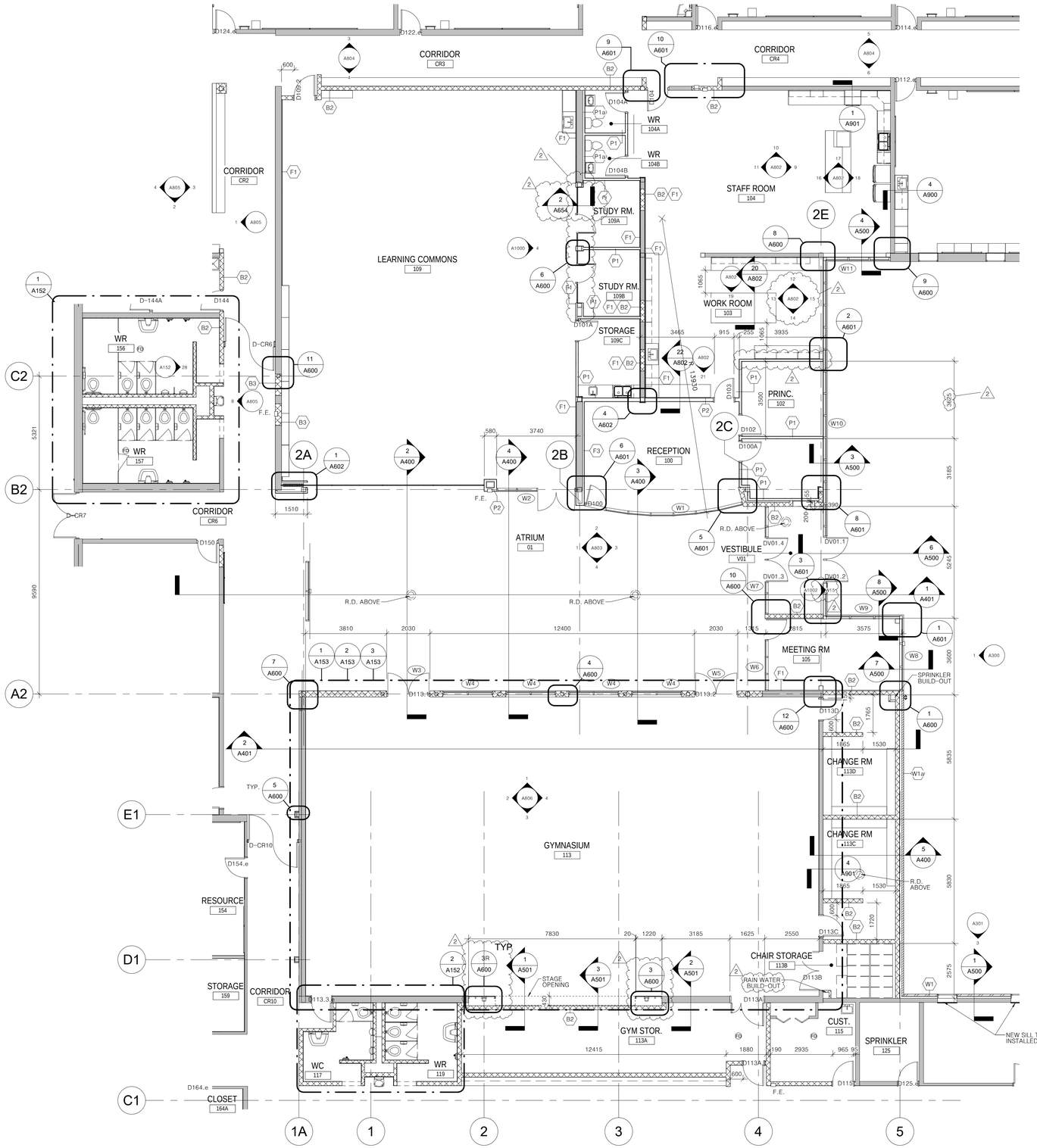
RANDY R. WILSON
LICENCE
4000

PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
ENLARGED FLOOR PLANS - CLASSROOMS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:38:52 PM	TJV	A150
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



1 ENLARGED GYM & ENTRY FLOOR PLAN
SCALE 1 : 100

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LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
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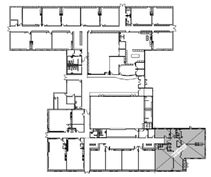
w w w . w i l s o n d i a z . c a



KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

- EXISTING WALLS REMAINING
- NEW BLOCK WALL
- NEW GYPSUM BOARD WALL
- FOLDING METAL GRILLES

NUMBER INDICATES ADDENDUM #

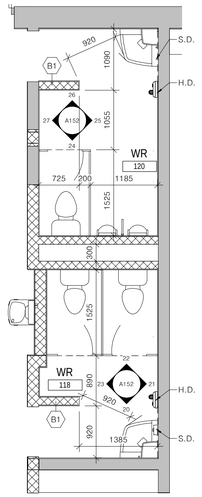
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

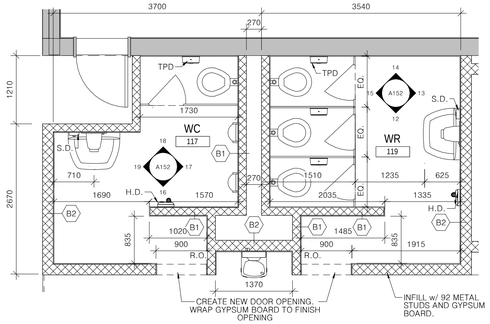
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
ENLARGED FLOOR PLANS

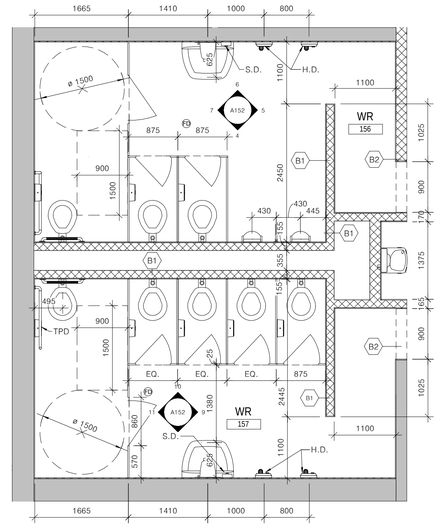
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:39:10 PM	TJV/PC	A151
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



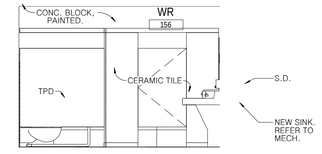
3 ENLARGED FLOOR PLAN - WASHROOMS - NORTH
SCALE 1 : 50



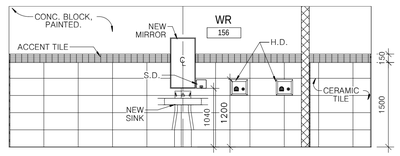
2 ENLARGED FLOOR PLAN - WASHROOMS - SOUTH
SCALE 1 : 50



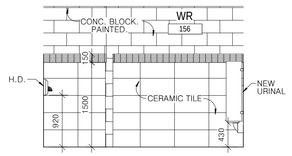
1 ENLARGED FLOOR PLAN - WASHROOM 156 & 157
SCALE 1 : 50



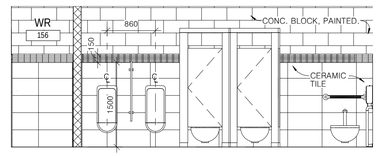
7 BOY'S WR ELEVATION
SCALE 1 : 50



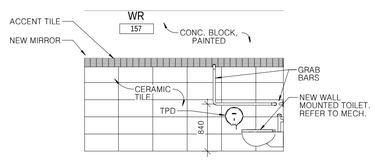
6 BOY'S WR ELEVATION - SINKS
SCALE 1 : 50



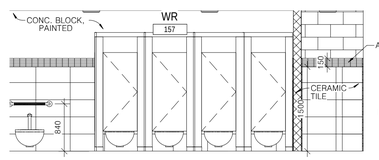
5 BOY'S WR ELEVATION
SCALE 1 : 50



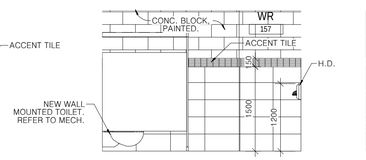
4 BOY'S WR ELEVATION - STALLS
SCALE 1 : 50



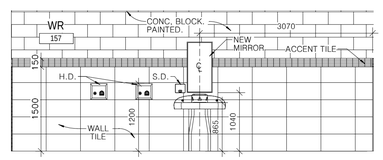
11 GIRL'S WR ELEVATION
SCALE 1 : 50



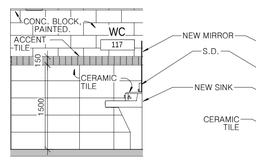
10 GIRL'S WR ELEVATION STALLS
SCALE 1 : 50



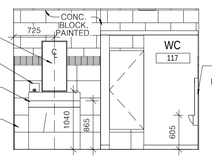
9 GIRL'S WR ELEVATION
SCALE 1 : 50



8 GIRL'S WR ELEVATION - SINK
SCALE 1 : 50



19 BOY'S WR ELEV. - SINK
SCALE 1 : 50



18 BOY'S WR ELEV. - SINK
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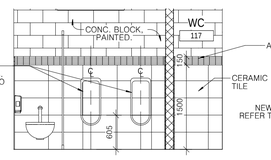
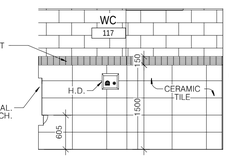
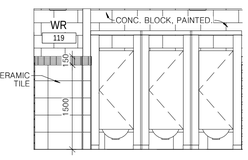


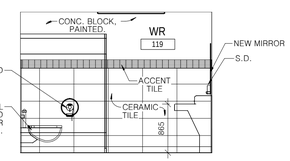
17 BOY'S WR ELEV. - STALLS
SCALE 1 : 50



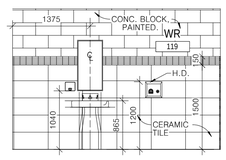
16 INTERIOR ELEVATION
SCALE 1 : 50



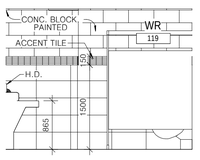
15 GIRL'S WR ELEV. - STALLS
SCALE 1 : 50



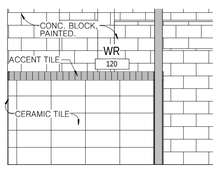
14 INTERIOR ELEVATION
SCALE 1 : 50



13 GIRL'S WR ELEV. -SINK
SCALE 1 : 50



12 INTERIOR ELEVATION
SCALE 1 : 50



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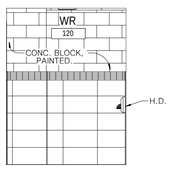
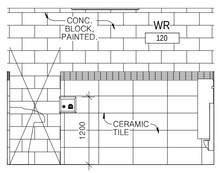
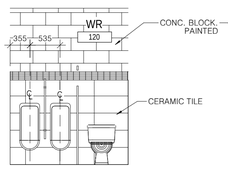
SCALE 1 : 50



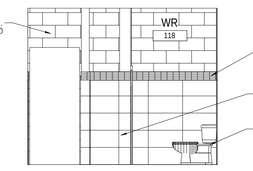
26 INTERIOR ELEVATION
SCALE 1 : 50



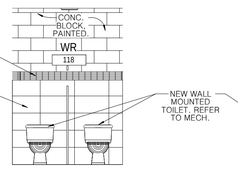
25 INTERIOR ELEVATION
SCALE 1 : 50



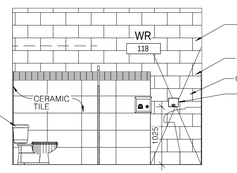
24 BOY'S WR ELEV. - STALLS
SCALE 1 : 50



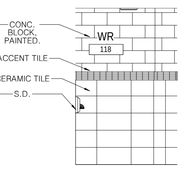
23 INTERIOR ELEVATION
SCALE 1 : 50



22 GIRL'S WR ELEV. - STALLS
SCALE 1 : 50

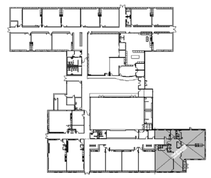


21 INTERIOR ELEVATION
SCALE 1 : 50



20 INTERIOR ELEVATION
SCALE 1 : 50

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

NOTES

LEGEND

	PCT3 - FIELD CERAMIC TILE
	PCT4 - ACCENT TILE

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	1

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

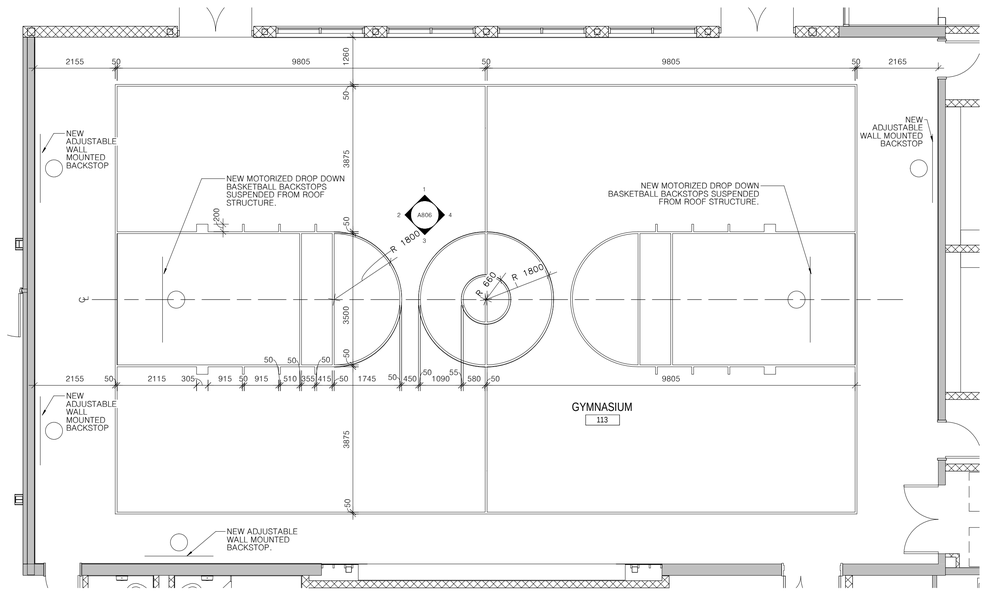
PROJECT TITLE

OUR LADY OF FATIMA - PHASE 4

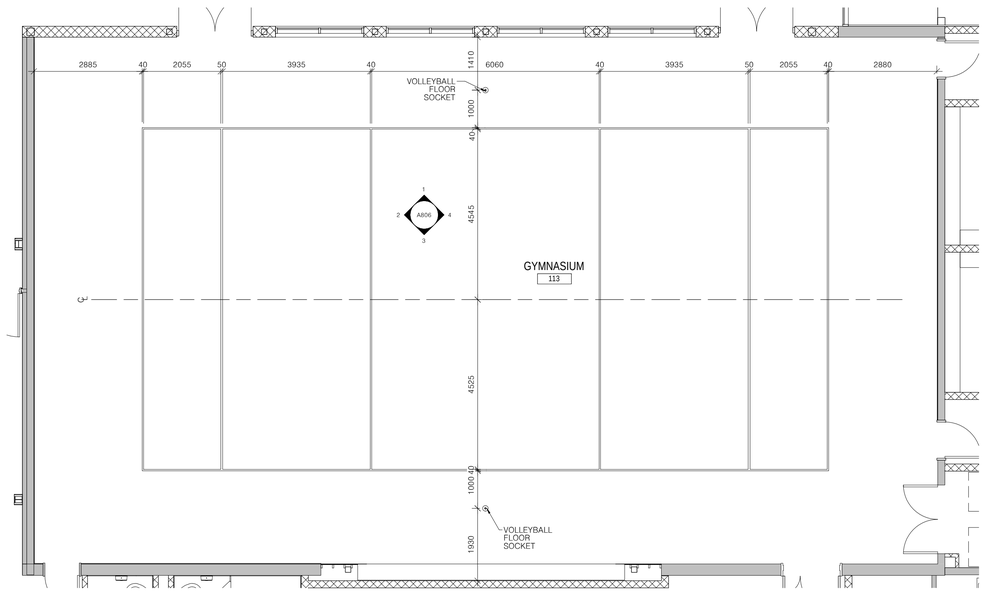
DRAWING TITLE

WASHROOM GROUPS, FINISH PLANS AND ELEVATIONS

DATE PLOTTED: 2020-03-05 3:39:45 PM	DRAWN BY: TJV/PC	DRAWING No.: A152
SCALE: 1 : 30	CHECKED BY: RRW	
PROJECT No.: 1901		

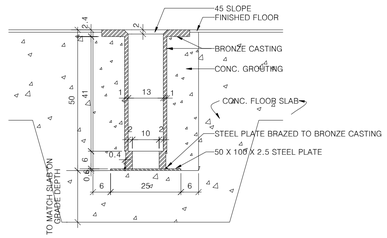


1 GYM LINE LAYOUT - BASKETBALL COURT
SCALE 1 : 75

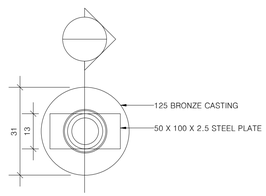


2 GYM LINE LAYOUT - VOLLEYBALL COURT
SCALE 1 : 75

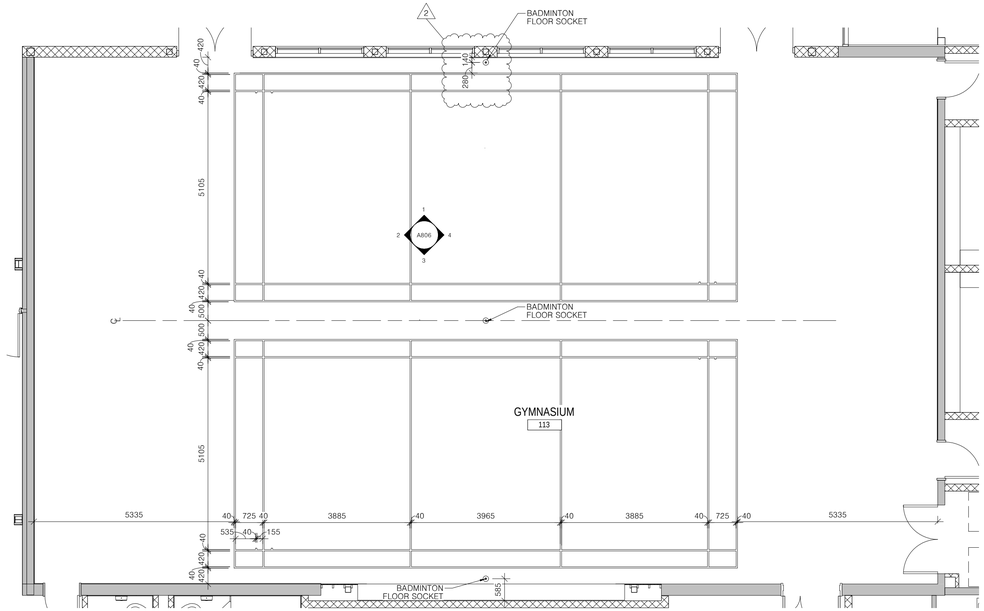
FLOOR SOCKETS TO BE OWNER SUPPLIED BUT INSTALLED BY GC.



4 FLOOR SOCKET DETAIL
SCALE 1 : 5



5 TYP. FLOOR SOCKET PLAN
SCALE 1 : 5



3 GYM LINE LAYOUT - BADMINTON COURT
SCALE 1 : 75

WILSON DIAZ ARCHITECTS INCORPORATED
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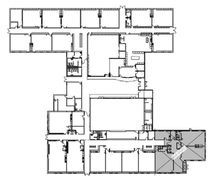
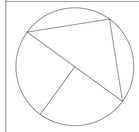
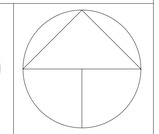
wdai@wilsondiaz.ca
www.wilsondiaz.ca



KEY PLAN



TRUE NORTH



CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
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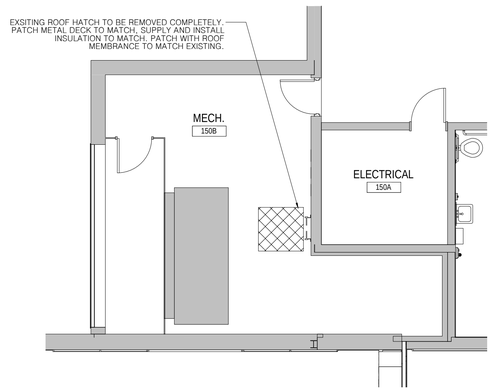
4000

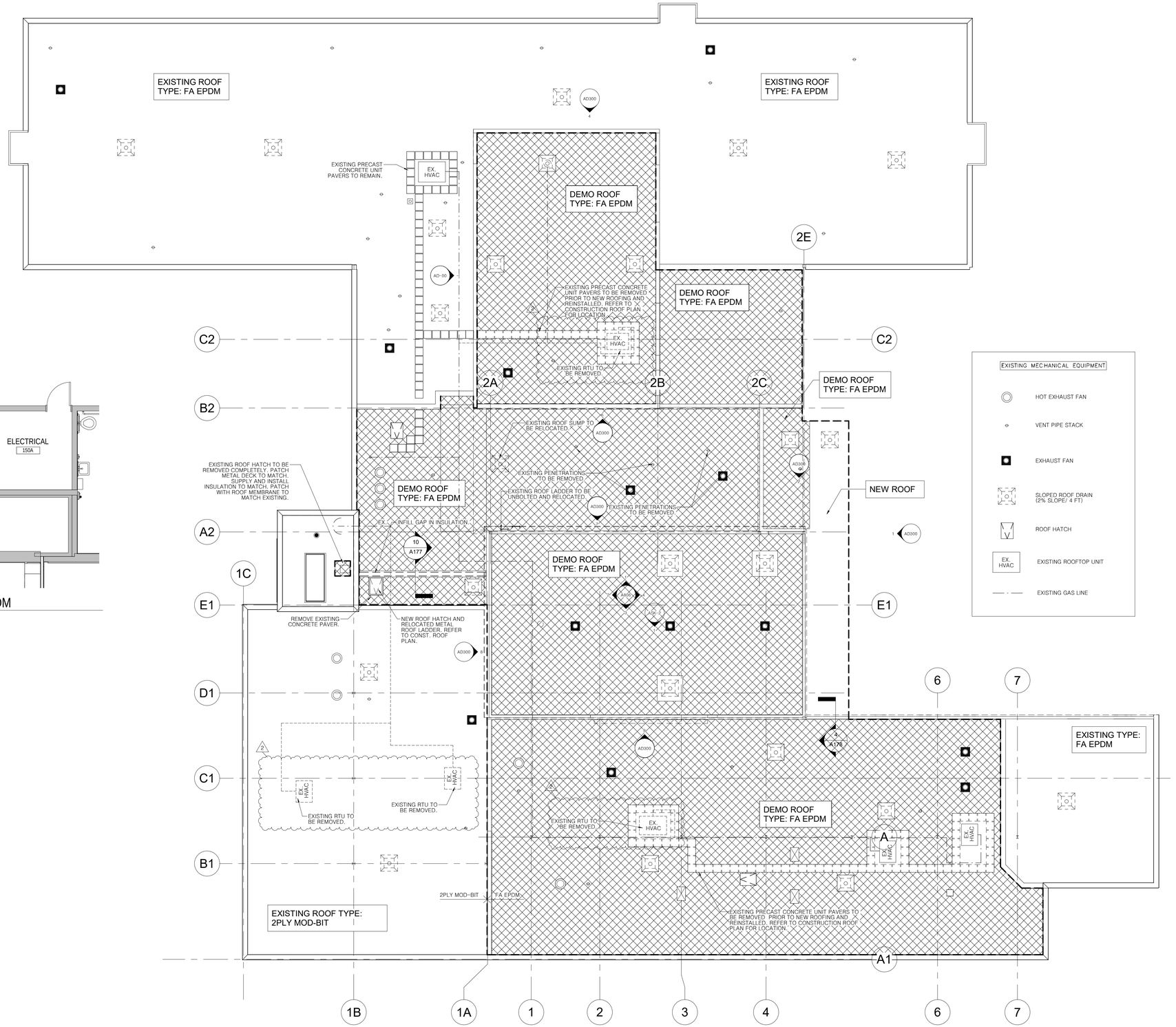
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
GYMNASIUM ENLARGED PLAN

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:39:56 PM	PKC	A153
SCALE: As indicated	CHECKED BY: RW	
PROJECT No.: 1901		



2 DEMOLITION ROOF PLAN - MECH. ROOM
SCALE 1 : 75



1 DEMOLITION ROOF PLAN
SCALE 1 : 150

EXISTING MECHANICAL EQUIPMENT

- HOT EXHAUST FAN
- VENT PIPE STACK
- EXHAUST FAN
- SLOPED ROOF DRAIN (2% SLOPE/ 4 FT)
- ROOF HATCH
- EX. HVAC — EXISTING ROOFTOP UNIT
- EXISTING GAS LINE

WILSON DIAZ ARCHITECTS INCORPORATED
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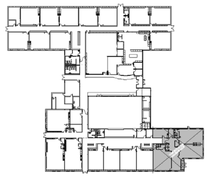
f. 519.438.5962
wdai@wilsondiaz.ca
www.wilsondiaz.ca



KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

PRIOR TO THE START OF INSTALLATION, THE ROOFING CONTRACTOR SHALL EXAMINE ALL ROOF AREAS INCLUDED IN THIS SPECIFICATION. THE ROOFING CONTRACTOR SHALL NOTIFY THE CONSULTANT OF ANY UNACCEPTABLE CONDITIONS.

THESE CONDITIONS INCLUDE, BUT ARE NOT LIMITED TO, UNEVEN DECK SURFACES, IMPROPERLY INSTALLED CURBS AND NAILERS, SURFACES WITH FINS OR SHARP PROJECTIONS, AND SURFACES CONTAMINATED WITH INCOMPATIBLE MATERIALS. WORK SHALL NOT BEGIN UNTIL THESE CONDITIONS HAVE BEEN CORRECTED. PROTECT MEMBRANE IN HIGH TRAFFIC AREAS, WORK BY OTHER TRADES, APPLICATION OF GRAVEL, ETC.

LEGEND

EXISTING ROOF TO BE REMOVED AND PREPARED FOR NEW 2PLY MOD-BIT ROOFING

NUMBER INDICATES ADDENDUM #

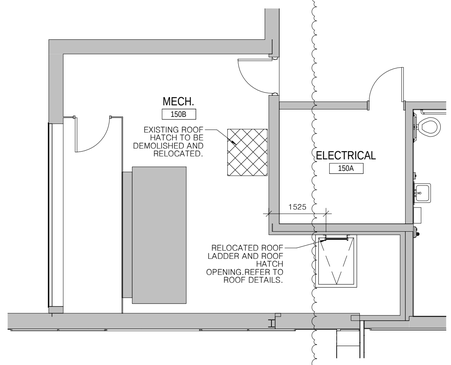
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

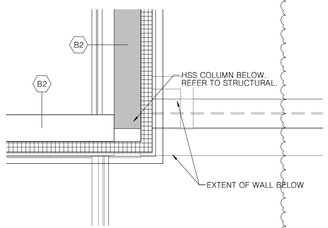
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
DEMOLITION ROOF PLAN

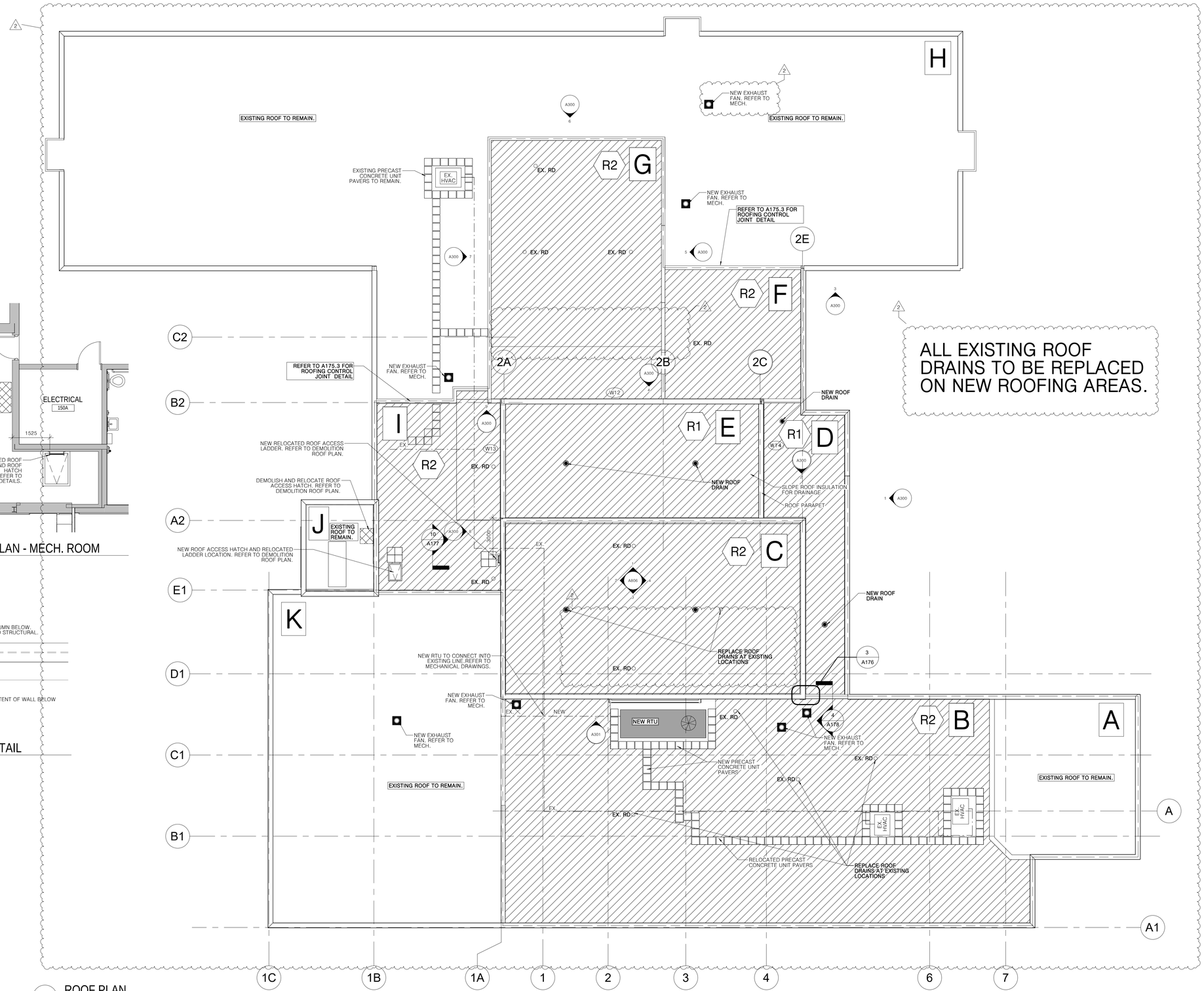
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:40:06 PM	PKC	A175 (2)
SCALE: As indicated	CHECKED BY: RW	
PROJECT No.: 1901		



2 CONSTRUCTION FLOOR PLAN - MECH. ROOM
SCALE 1 : 75



3 EXTERIOR WALL PLAN DETAIL
SCALE 1 : 20



1 ROOF PLAN
SCALE 1 : 150

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
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t. 519.439.0611
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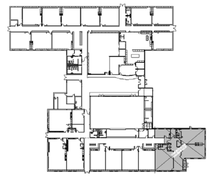
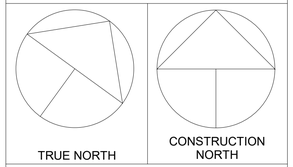
wdai@wilsondiaz.ca
www.wilsondiaz.ca



KEY PLAN



NOTES

LEGEND

AREA OF NEW ROOFING TYPE AS NOTED (R1) (R2)

N NUMBER INDICATES ADDENDUM #

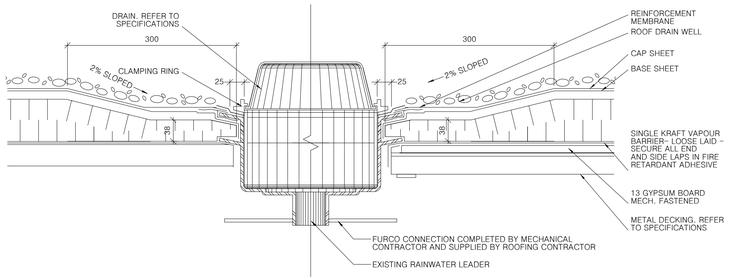
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

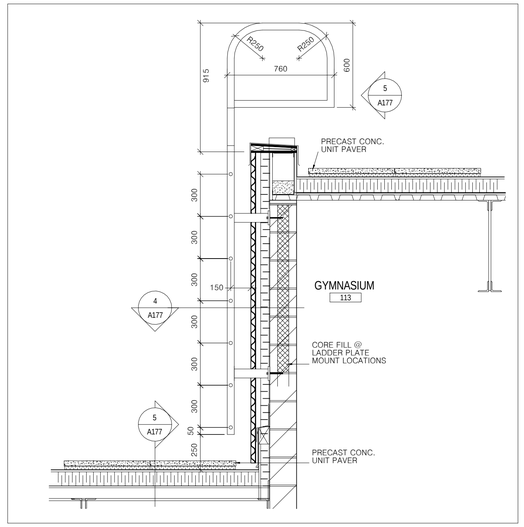
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
CONSTRUCTION ROOF PLAN

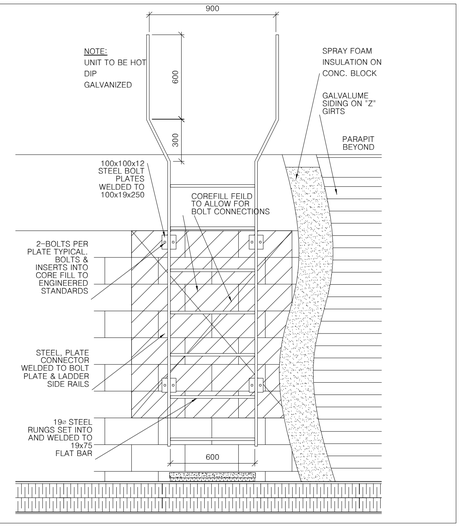
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:40:20 PM	PKC	2 A176
SCALE: As indicated	CHECKED BY: RW	
PROJECT No.: 1901		



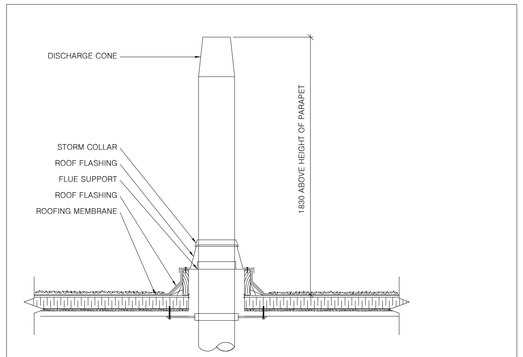
3 ROOF DRAIN FLASHING DETAIL
SCALE 1 : 5



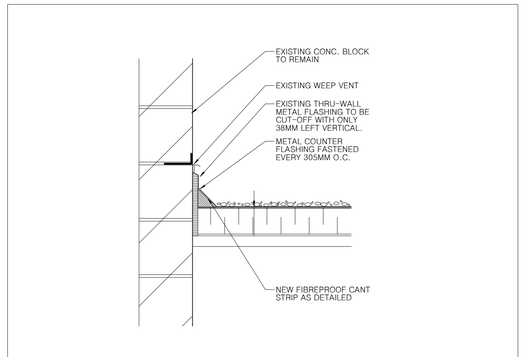
2 ACCESS LADDER SECTION DETAIL
SCALE 1 : 20



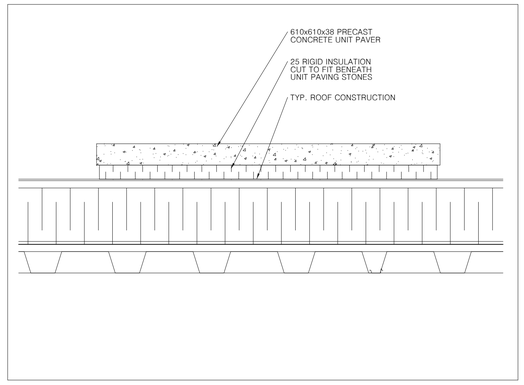
1 ACCESS LADDER ELEVATION
SCALE 1 : 20



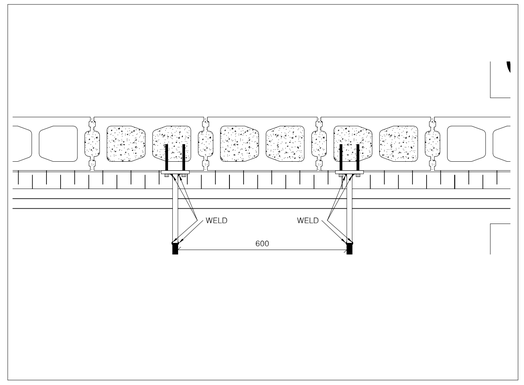
7 CHIMNEY FLUE DETAIL
SCALE 1 : 20



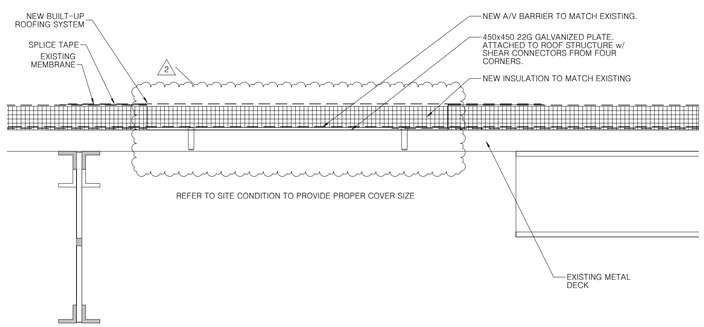
6 ROOF DETAIL AT EXISTING WALL
SCALE 1 : 10



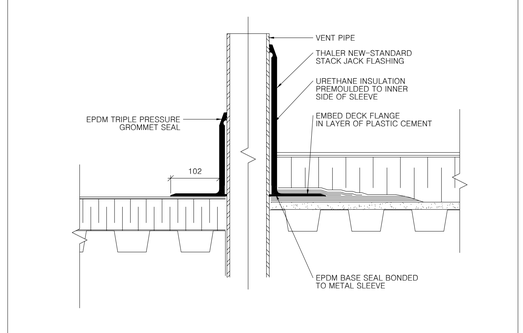
5 CONCRETE PAVERS ON ROOF DETAIL
SCALE 1 : 5



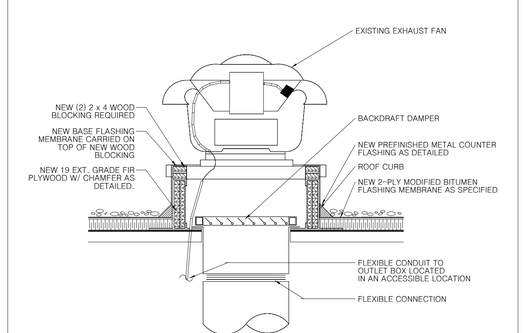
4 ACCESS LADDER PLAN DETAIL
SCALE 1 : 10



10 ROOF PENETRATION INFILL DETAIL
SCALE 1 : 5



9 VENT STACK DETAIL
SCALE 1 : 5



8 EXHAUST FAN DETAIL
SCALE 1 : 5

WILSON DIAZ ARCHITECTS INCORPORATED
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KEY PLAN

NOTES

LEGEND

1 NUMBER INDICATES ADDENDUM #

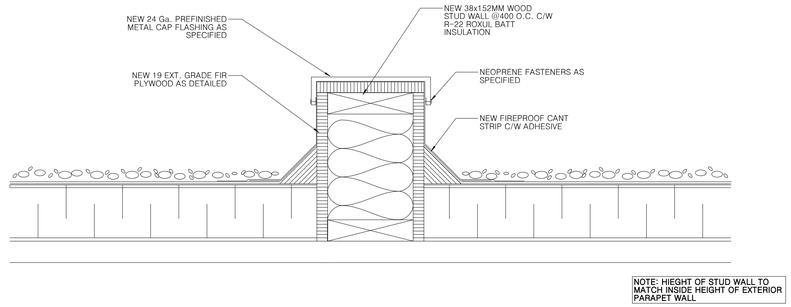
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

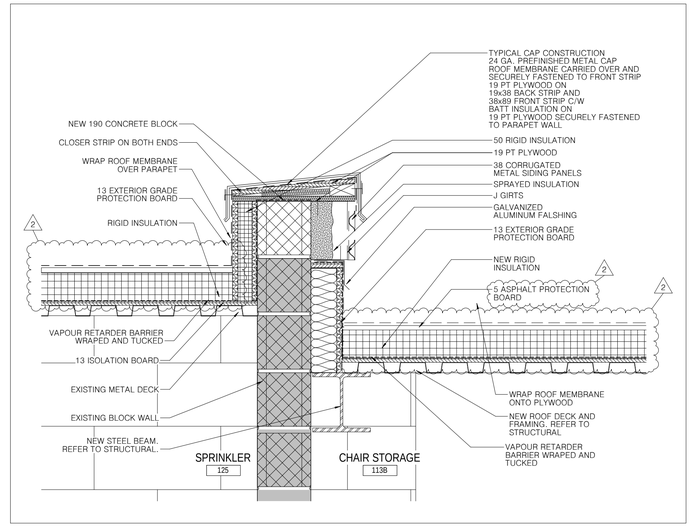
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
ROOFING DETAILS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:40:31 PM	PC	A177
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



1 ROOF SECTION DETAIL - CONTROL JOINT
SCALE 1 : 5



4 SECTION DETAIL AT ROOF
SCALE 1 : 10

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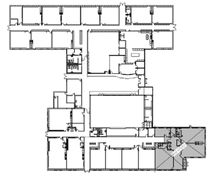
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

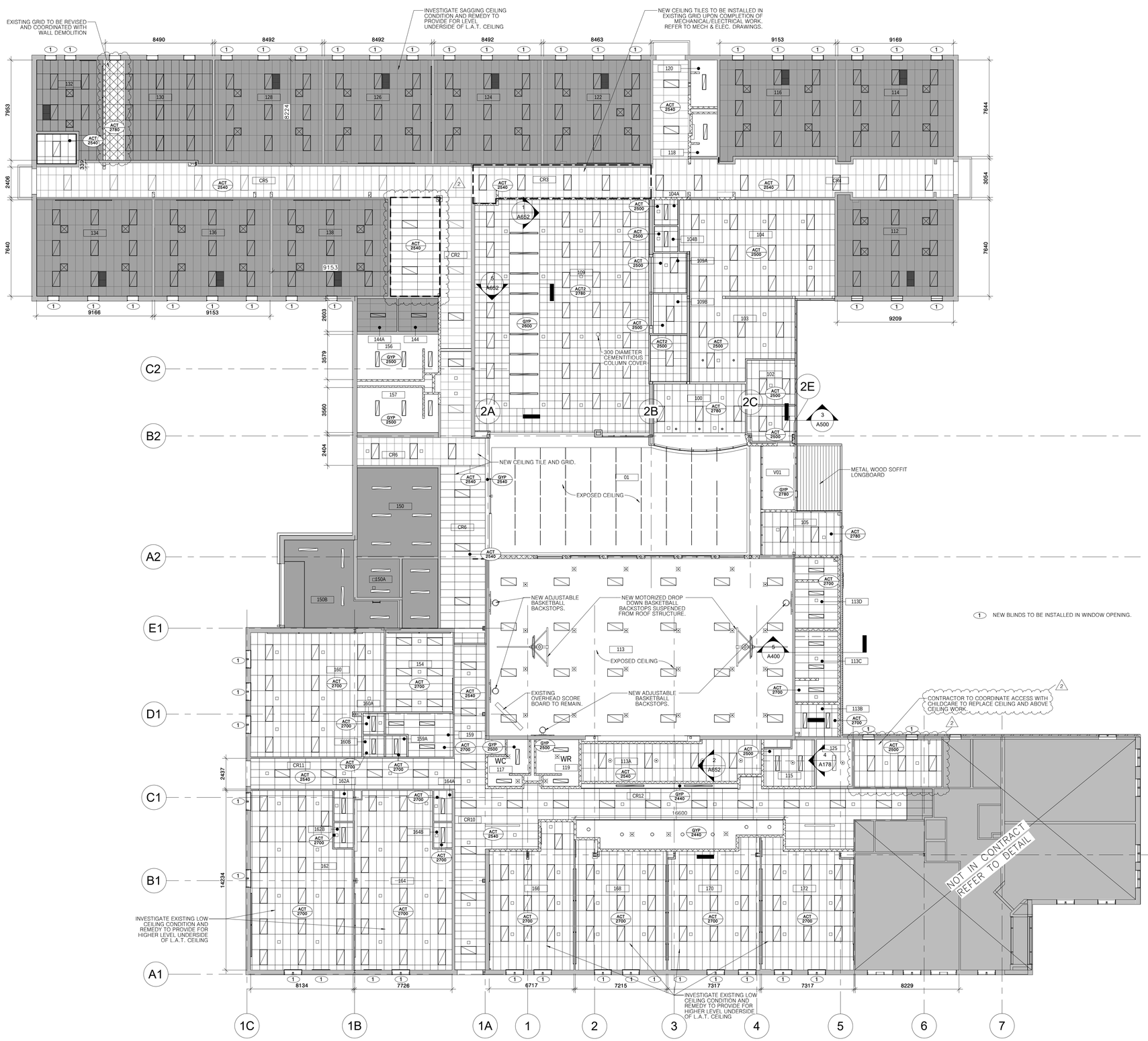
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
ROOFING DETAILS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:40:38 PM	PC	A178
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



1 REFLECTED CEILING PLAN
SCALE 1 : 150

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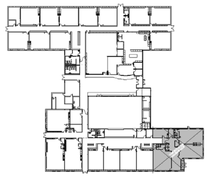
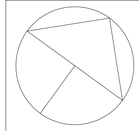
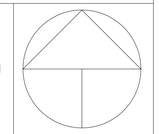


KEY PLAN





NOTES

LEGEND

- □ CONCEALED SPRINKLER HEAD. REFER TO MECH. DWGS.
- ○ PENDANT SPRINKLER HEAD. REFER TO MECH. DWGS.
- ○ UPRIGHT SPRINKLER HEAD. REFER TO MECH. DWGS.
- ⊙ DRYPIPE SPRINKLER HEAD. REFER TO MECH. DWGS.
- ▩ ROOMS COMPLETE DURING PHASE 3 OF CONSTRUCTION.

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	1

ONTARIO ASSOCIATION OF ARCHITECTS
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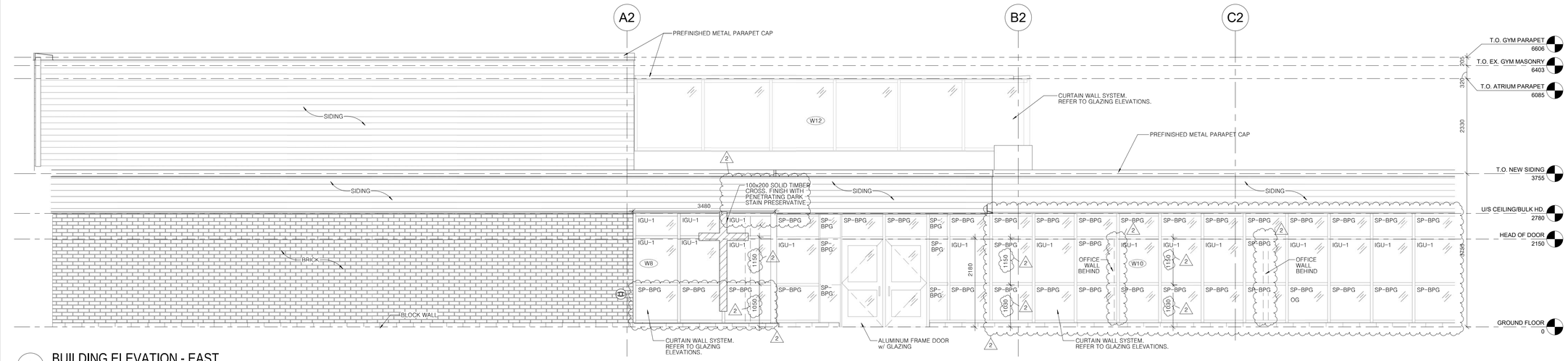
4000

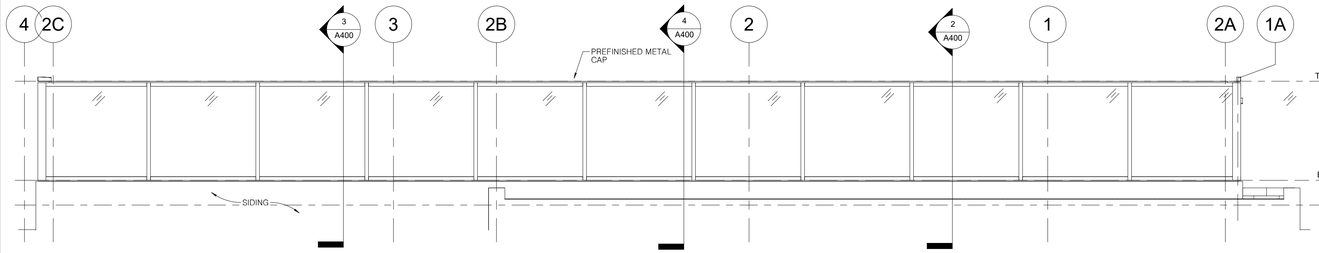
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
CONSTRUCTION REFLECTED CEILING PLAN

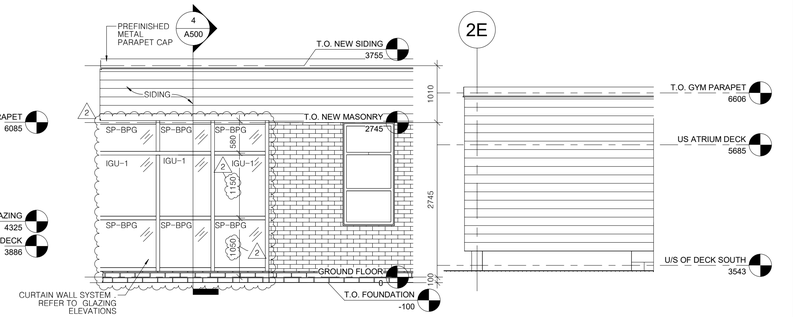
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:41:03 PM	TJV	A200
SCALE 1 : 150	CHECKED BY RRW	
PROJECT No. 1901		



1 BUILDING ELEVATION - EAST
SCALE 1 : 50

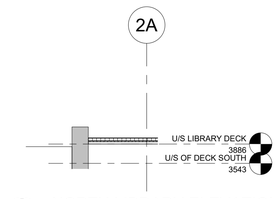


4 NORTH ATRIUM ELEVATION
SCALE 1 : 50

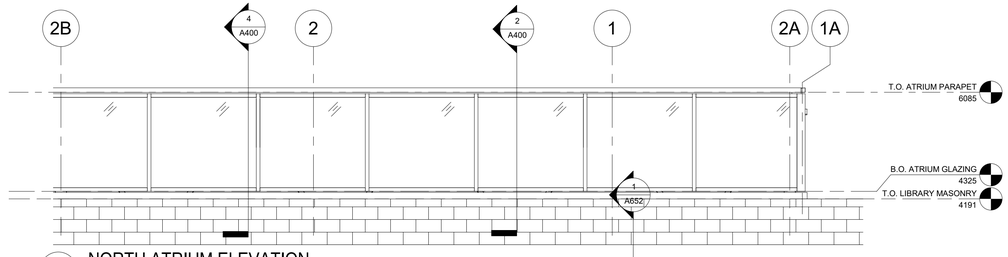


3 PART SOUTH ELEVATION
SCALE 1 : 50

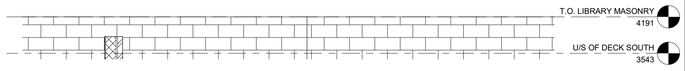
2 PART SOUTH ELEVATION
SCALE 1 : 50



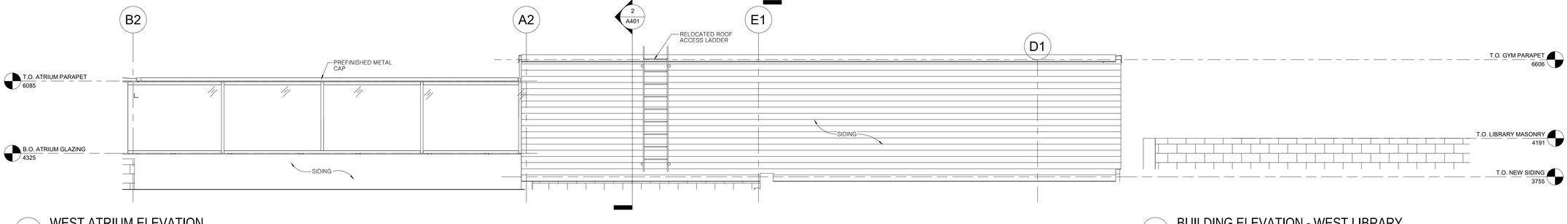
9 NORTH LIBRARY ELEVATION
SCALE 1 : 50



6 NORTH ATRIUM ELEVATION
SCALE 1 : 50



5 BUILDING ELEVATION - EAST LIBRARY
SCALE 1 : 50



8 WEST ATRIUM ELEVATION
SCALE 1 : 50

7 BUILDING ELEVATION - WEST LIBRARY
SCALE 1 : 50

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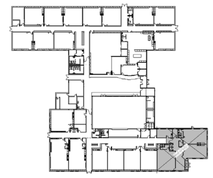


KEY PLAN

NOTES

LEGEND

OG – OBSECURE GLAZING SPANDREL PANEL
SP – SPANDREL PANEL

NUMBER INDICATES ADDENDUM #

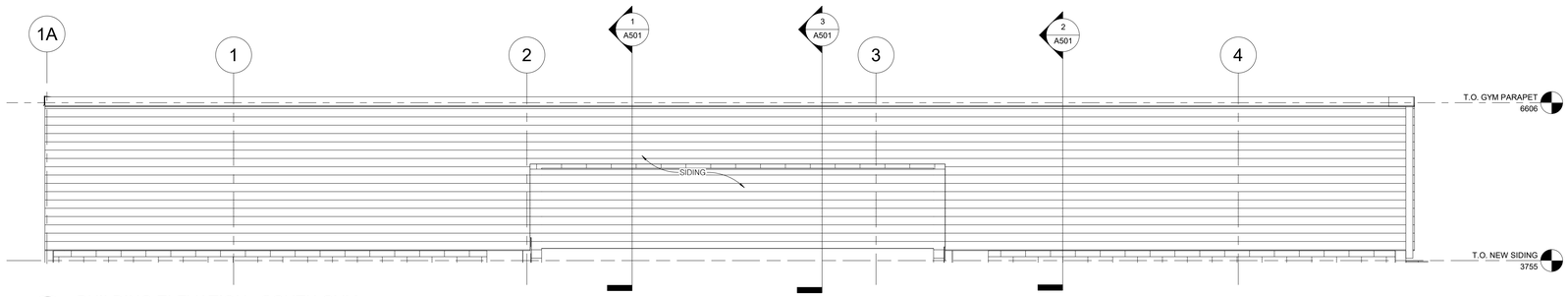
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	1

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

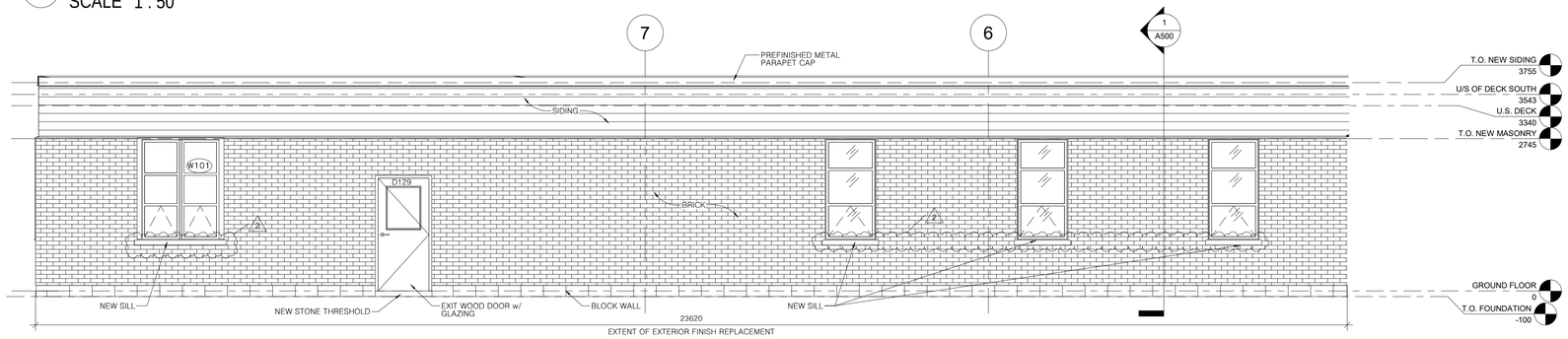
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
CONSTRUCTION EXTERIOR ELEVATIONS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:42:02 PM	PC/TJV	A300
SCALE 1 : 50	CHECKED BY RRW	
PROJECT No. 1901		



2 BUILDING ELEVATION - SOUTH GYM
SCALE 1 : 50



3 BUILDING ELEVATION - NORTH AT CHILDCARE
SCALE 1 : 50

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LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a

KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

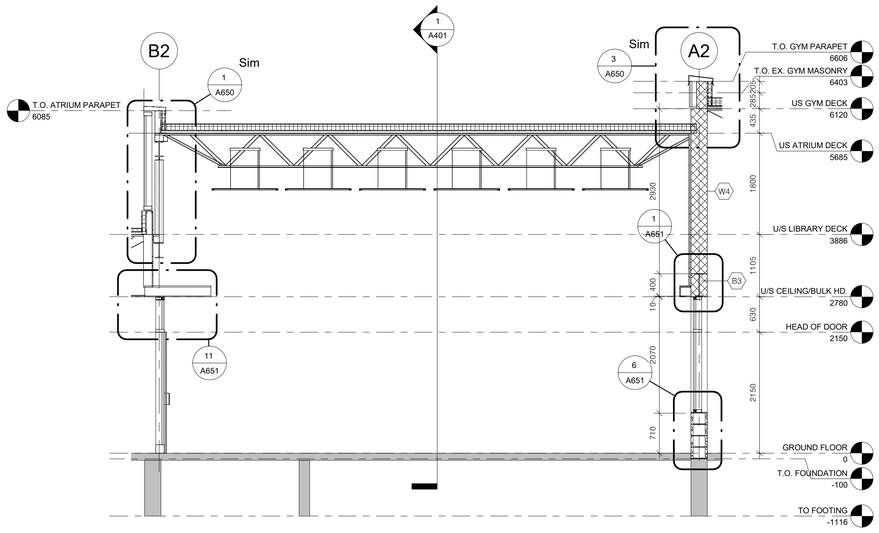
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

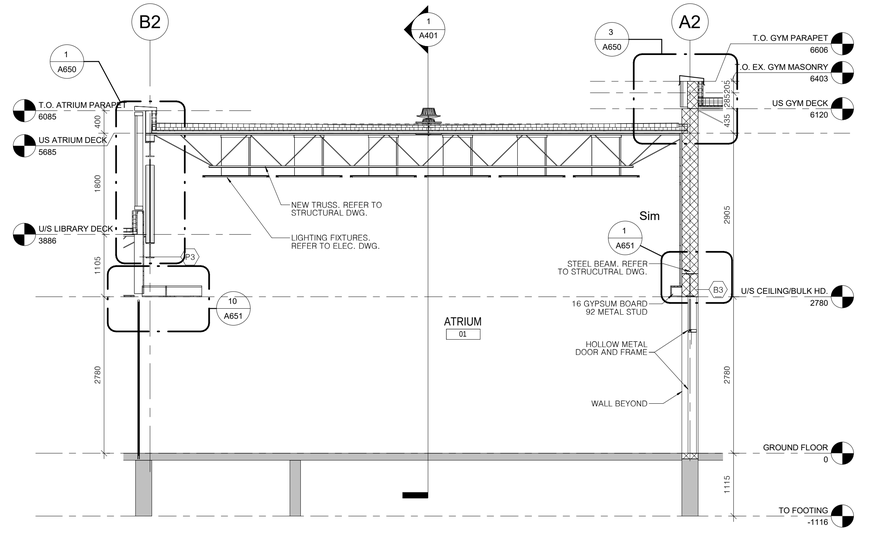
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
CONSTRUCTION EXTERIOR ELEVATIONS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:42:12 PM	PC	A301
SCALE: 1 : 50	CHECKED BY: RRW	
PROJECT No.: 1901		



4 ATRIUM SECTION NORTH - SOUTH
SCALE 1 : 50



2 ATRIUM SECTION NORTH - SOUTH
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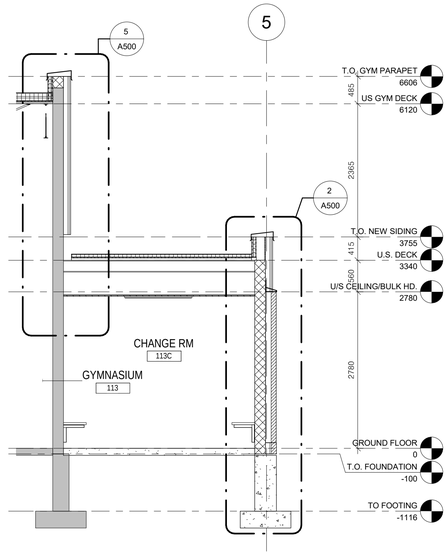
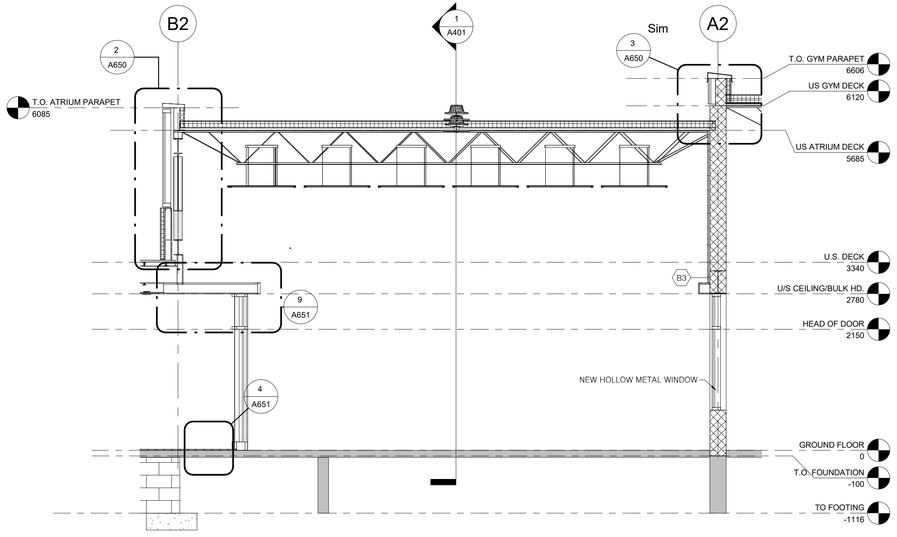


5 SECTION THRU EAST ADDITION
SCALE 1 : 50



3 ATRIUM SECTION NORTH - SOUTH
SCALE 1 : 50

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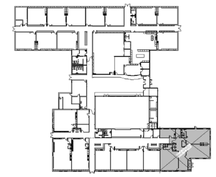
www.wilsondiaz.ca



KEY PLAN

NOTES

LEGEND

N NUMBER INDICATES ADDENDUM #

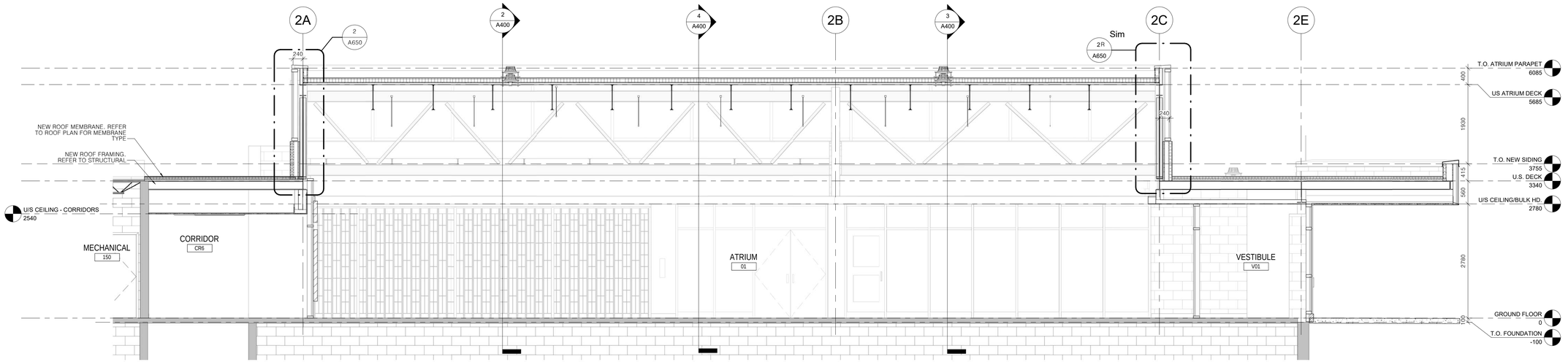
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

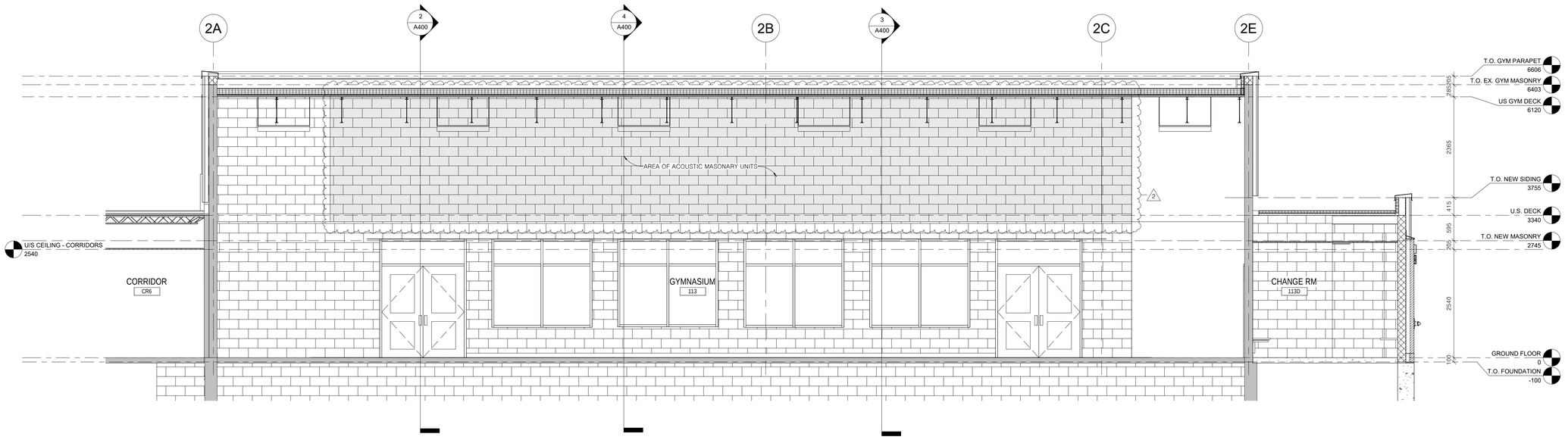
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
BUILDING SECTIONS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:42:26 PM	TJV	A400
SCALE 1 : 50	CHECKED BY RRW	
PROJECT No. 1901		



1 BUILDING SECTION - ATRIUM EAST - WEST
SCALE 1 : 50



2 BUILDING SECTION - GYMNASIUM EAST - WEST
SCALE 1 : 50

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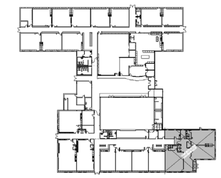
www.wilsondiaz.ca



KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

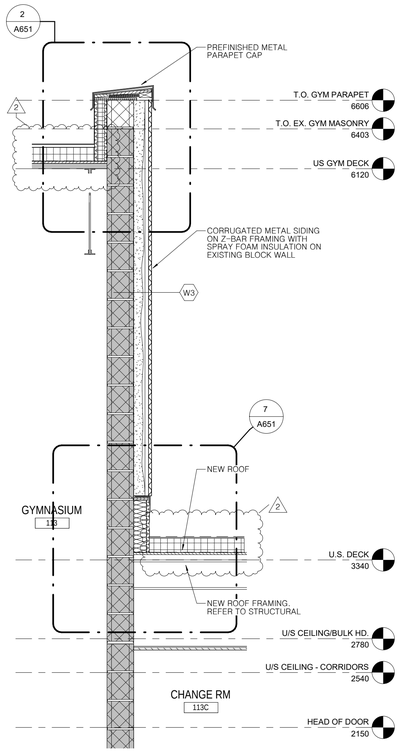
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

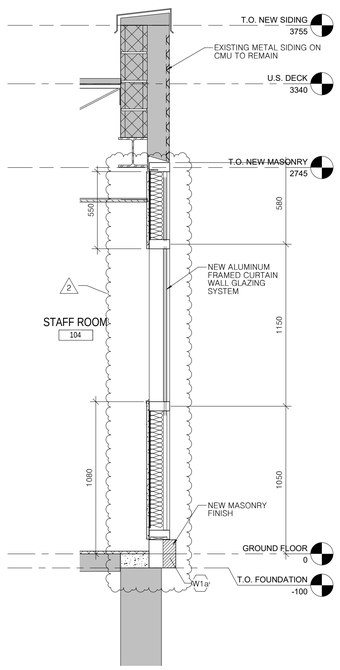
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
BUILDING SECTIONS

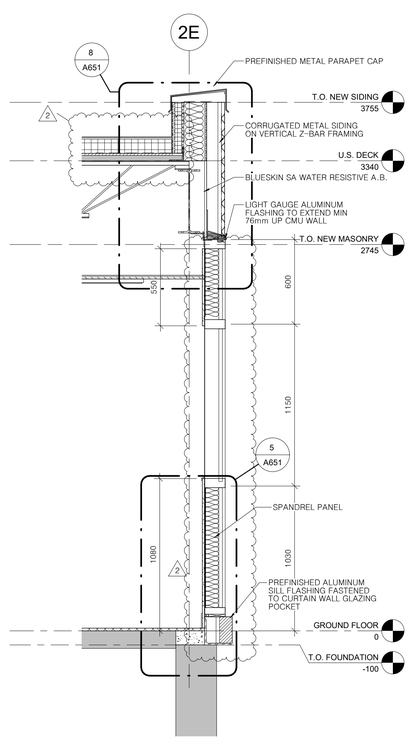
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:42:50 PM	TJV	A401
SCALE 1 : 50	CHECKED BY RRW	
PROJECT No. 1901		



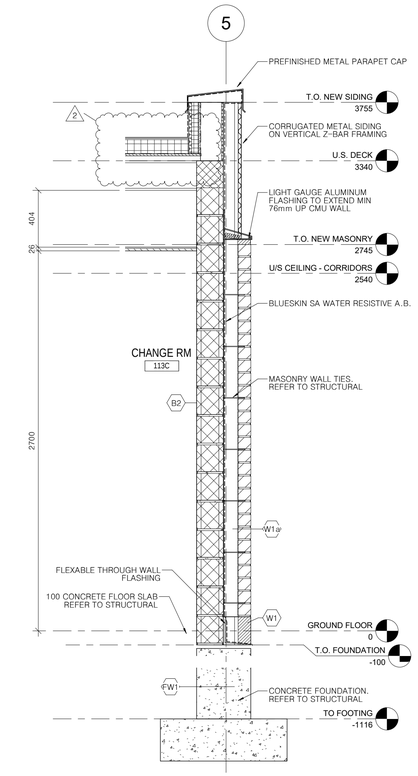
5 WALL SECTION - ABOVE EAST ADDITION
SCALE 1 : 20



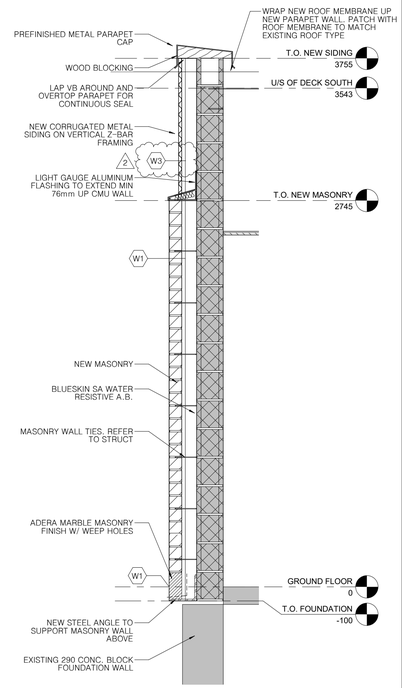
4 SECTION @ CURTAIN WALL - EX. WALL ABOVE
SCALE 1 : 20



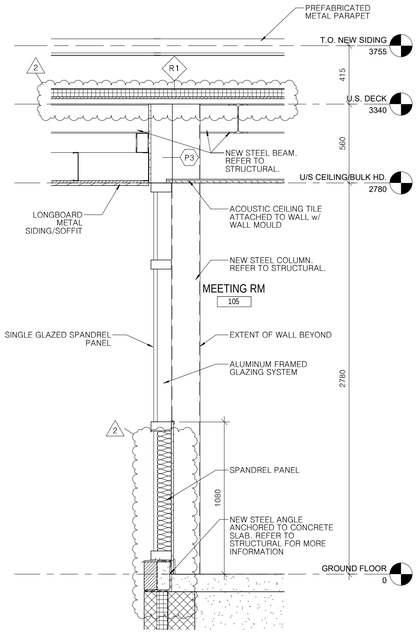
3 SECTION @ CURTAIN WALL
SCALE 1 : 20



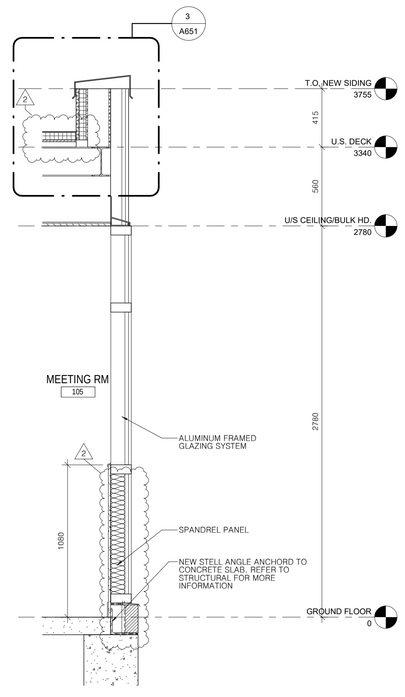
2 SECTION @ EAST ADDITION
SCALE 1 : 20



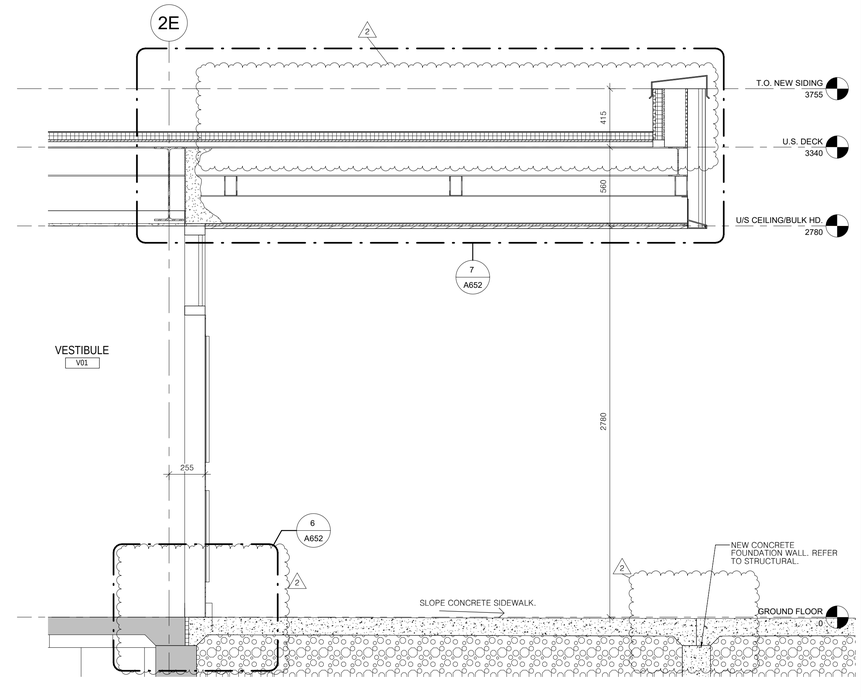
1 TYP. EXTERIOR FINISH REPLACEMENT
SCALE 1 : 20



8 Section 73
SCALE 1 : 20

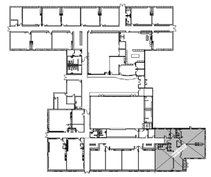


7 Section 72
SCALE 1 : 20



6 WALL SECTION - FRONT VESTIBULE
SCALE 1 : 20

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t. 519.439.0611
f. 519.438.5962
wda@wilsondiaz.ca
www.wilsondiaz.ca



KEY PLAN

NOTES

LEGEND

N NUMBER INDICATES ADDENDUM #

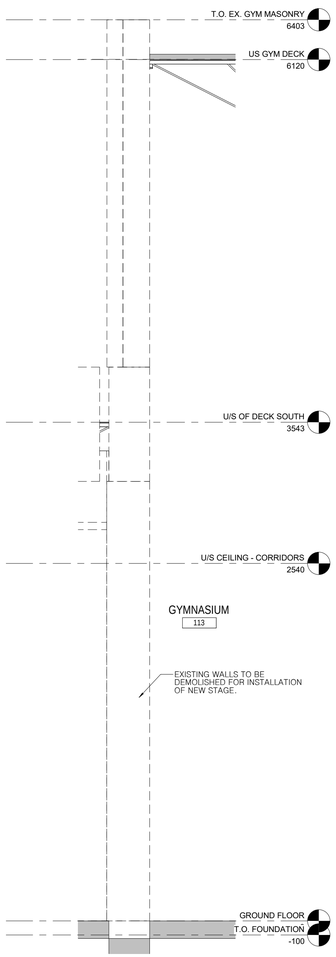
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

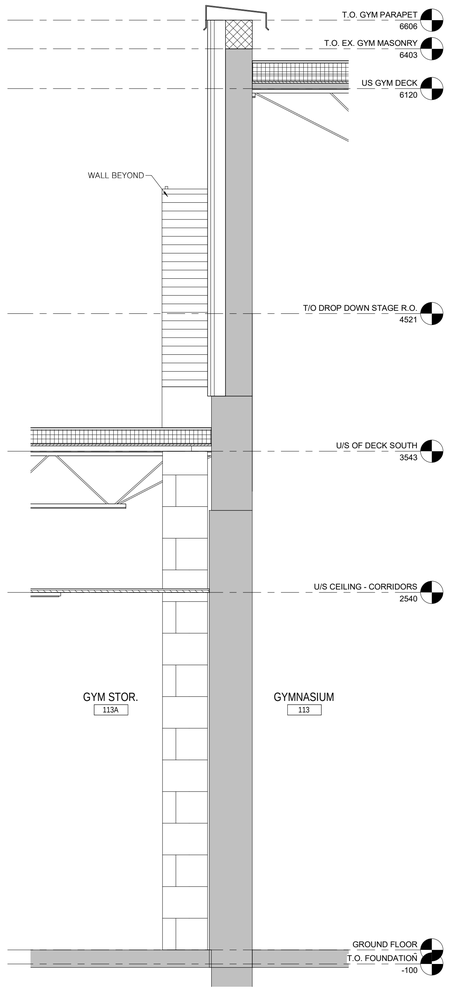
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
WALL SECTIONS

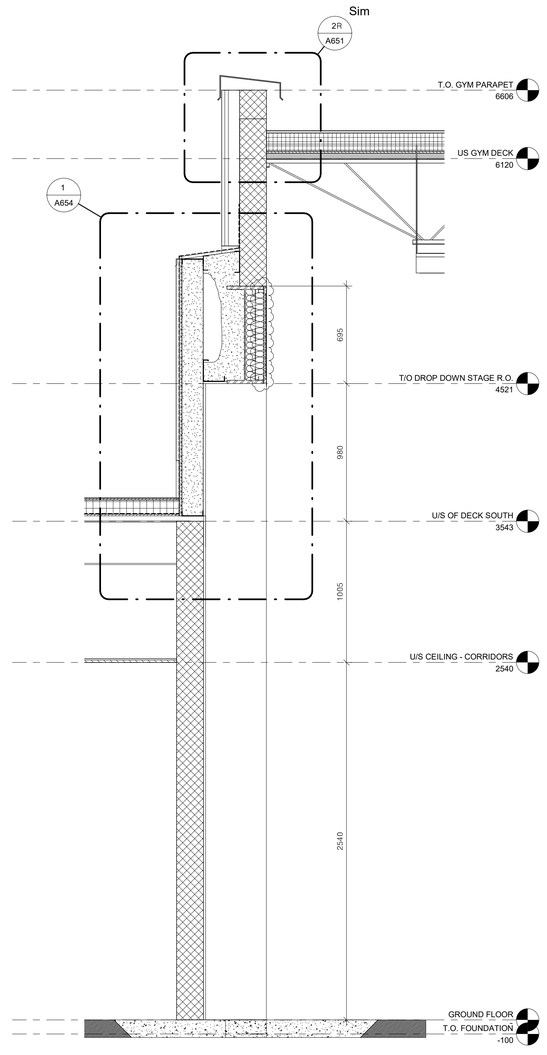
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:43:06 PM	TJV	A500
SCALE 1 : 20	CHECKED BY RRW	
PROJECT No. 1901		



3 SECTION @ DEMOLISHED WALLS GYMNASIUM
SCALE 1 : 20

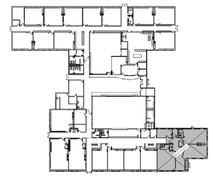


2 SECTION @ EXISTING WALLS TO REMAIN GYMNASIUM
SCALE 1 : 20



1 SECTION @ RECESSED RETRACTABLE STAGE
SCALE 1 : 20

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

NOTES

LEGEND

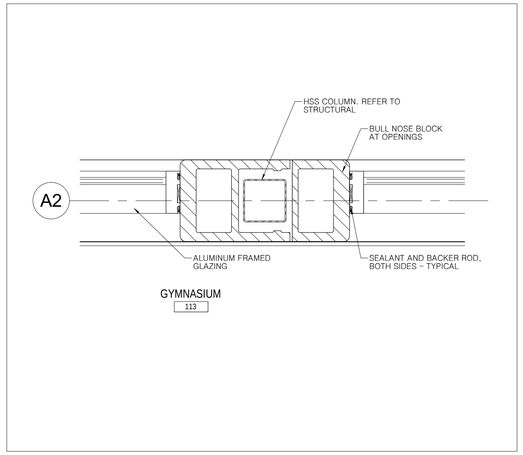
NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

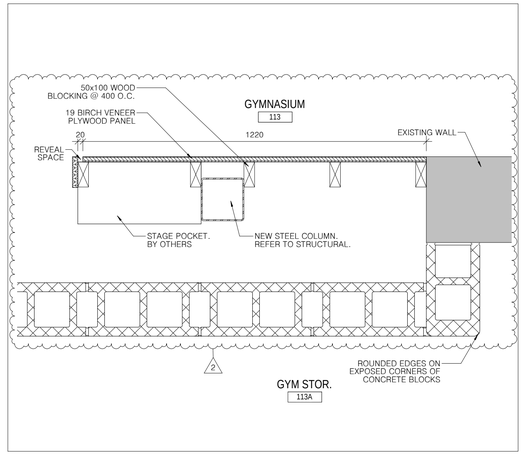
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
WALL SECTIONS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:43:14 PM	TJV	A501
SCALE: 1 : 20	CHECKED BY: RRW	
PROJECT No.: 1901		



4 PLAN DETAIL
SCALE 1 : 10



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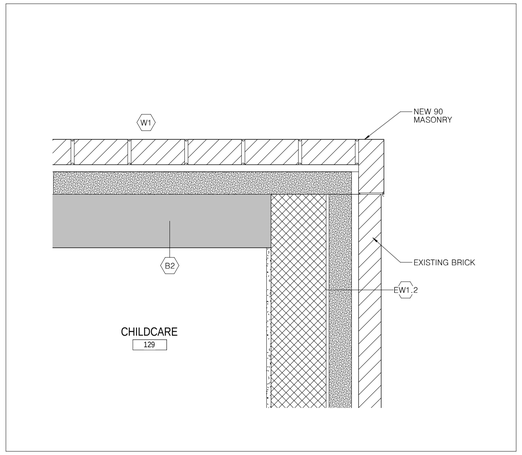
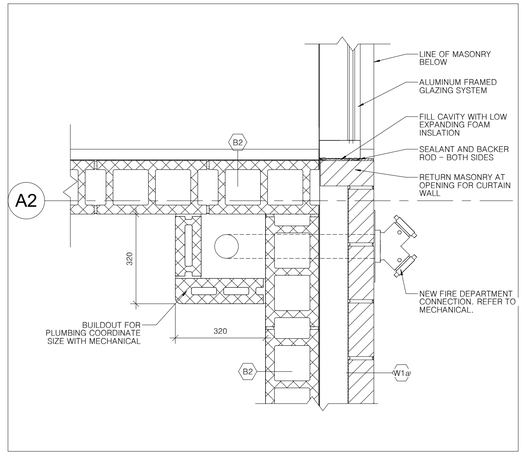
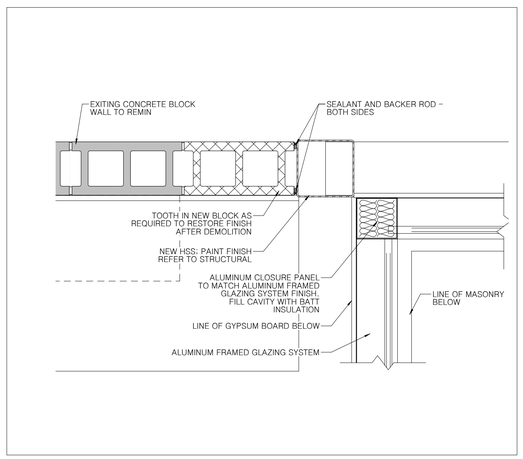
SCALE 1 : 10



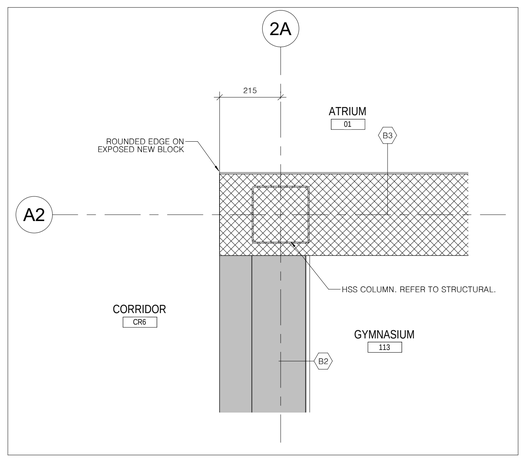
2 PLAN DETAIL
SCALE 1 : 10



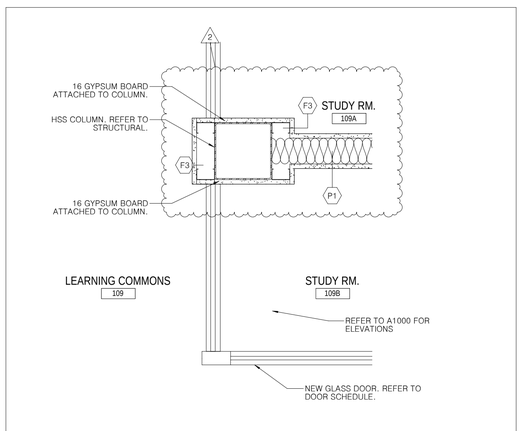
1 PLAN DETAIL
SCALE 1 : 10



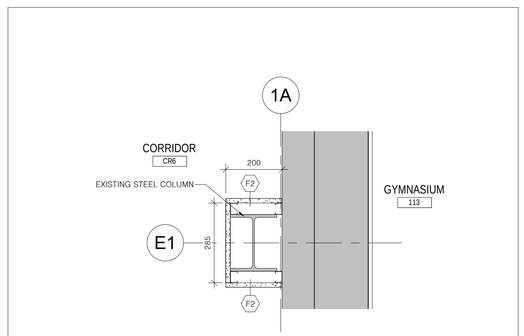
8 PLAN DETAIL
SCALE 1 : 10



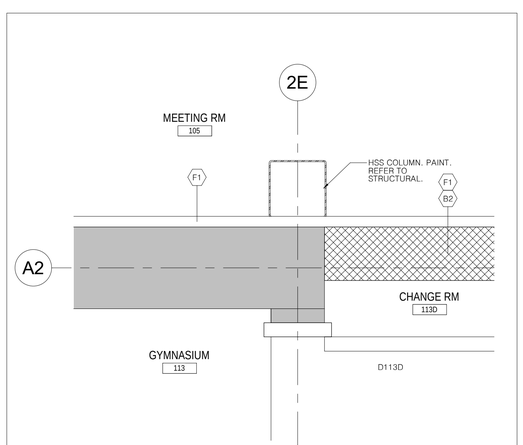
7 PLAN DETAIL
SCALE 1 : 10



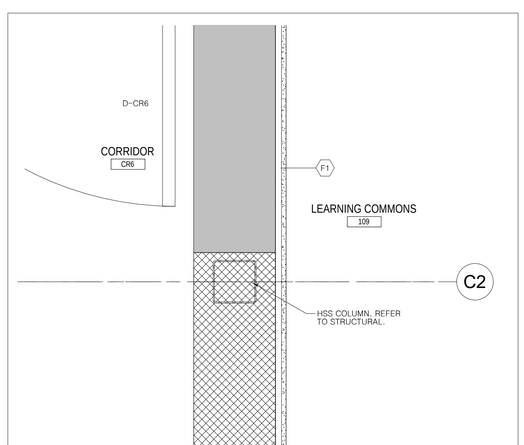
6 PLAN DETAIL
SCALE 1 : 10



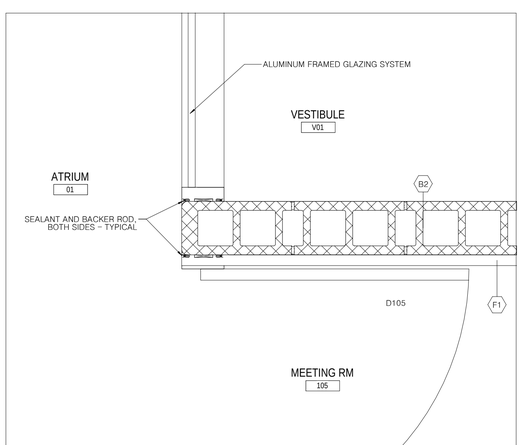
5 PLAN DETAIL
SCALE 1 : 10



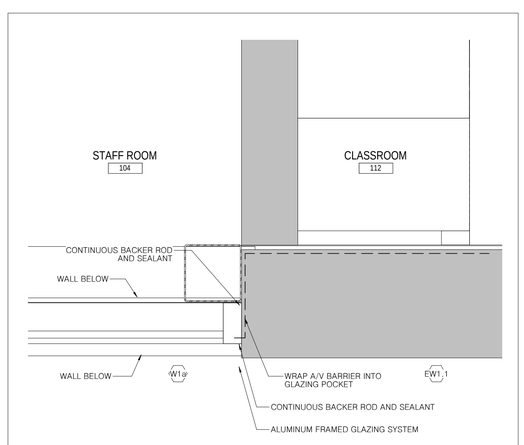
12 PLAN DETAIL
SCALE 1 : 10



11 PLAN DETAIL
SCALE 1 : 10



10 PLAN DETAIL
SCALE 1 : 10



9 PLAN DETAIL
SCALE 1 : 10

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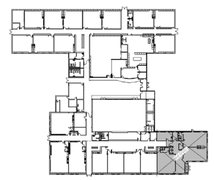
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

NOTES

LEGEND

N NUMBER INDICATES ADDENDUM #

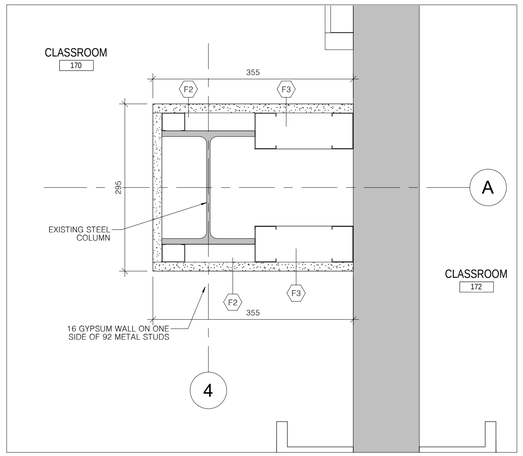
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

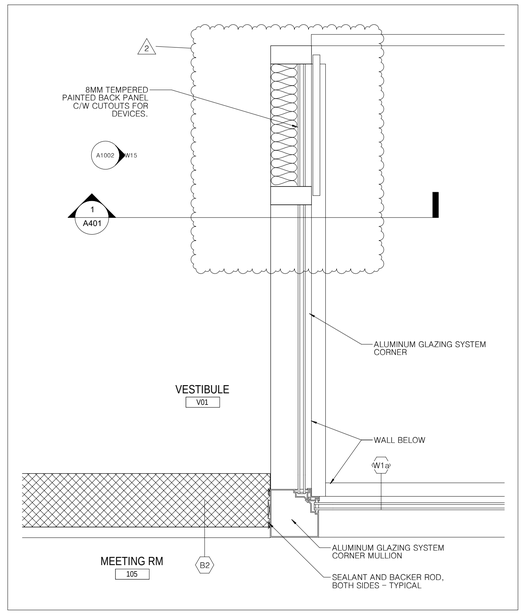
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
PLAN DETAILS

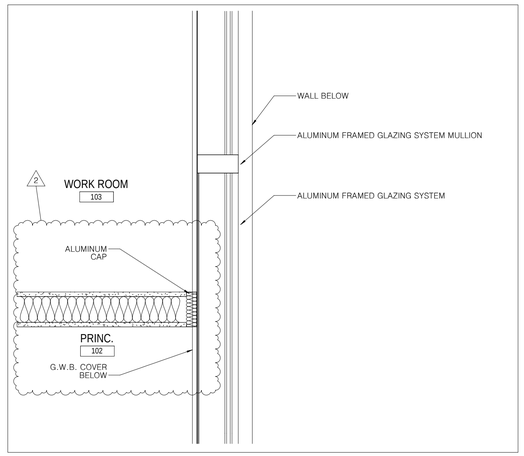
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:43:33 PM	MFPU	A600
SCALE 1 : 10	CHECKED BY RW	
PROJECT No. 1901		



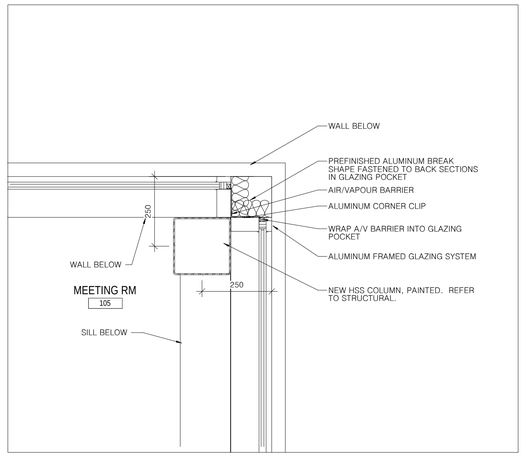
4 PLAN DETAIL
SCALE 1 : 5



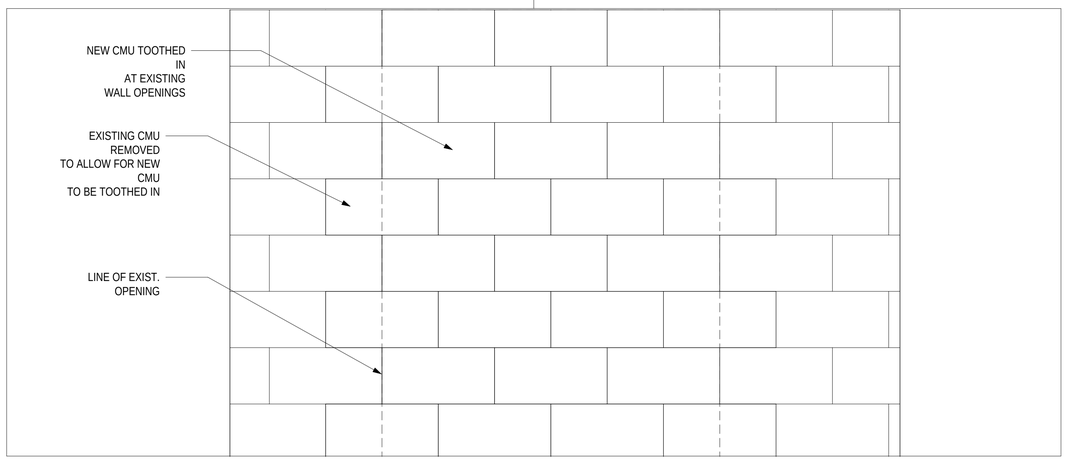
3 PLAN DETAIL
SCALE 1 : 10



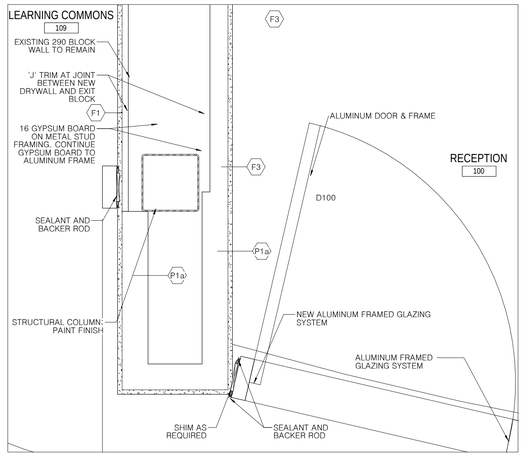
2 PLAN DETAIL
SCALE 1 : 10



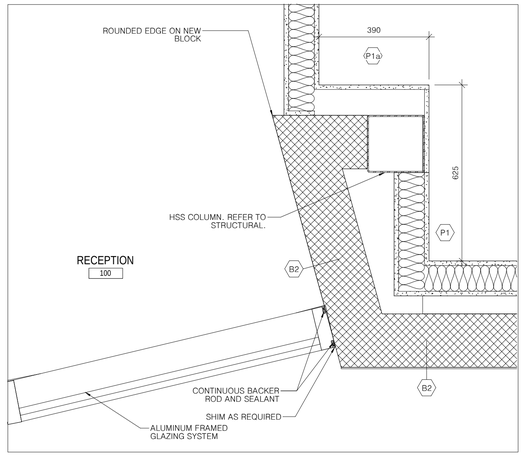
1 PLAN DETAIL
SCALE 1 : 10



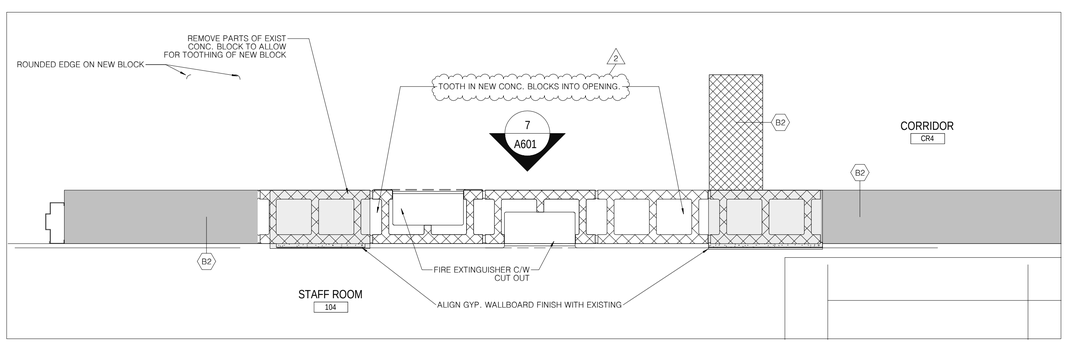
7 INTERIOR ELEVATION - BLOCK INFILL
SCALE 1 : 10



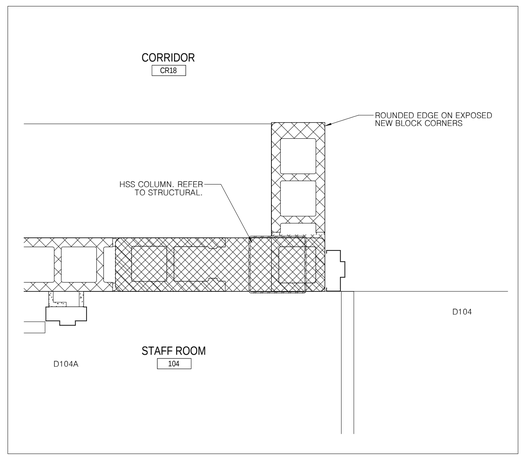
6 PLAN DETAIL
SCALE 1 : 10



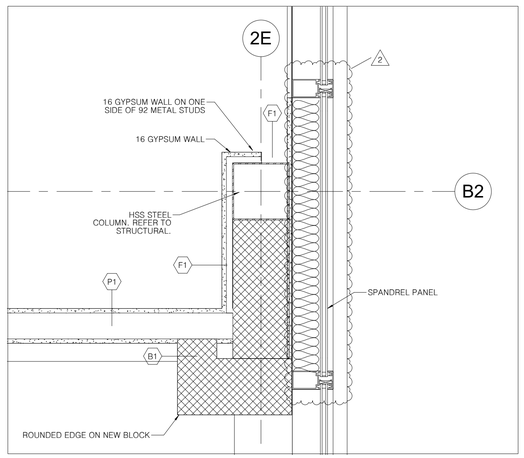
5 PLAN DETAIL
SCALE 1 : 10



10 INTERIOR ELEVATION - BLOCK INFILL
SCALE 1 : 10



9 PLAN DETAIL
SCALE 1 : 10



8 PLAN DETAIL
SCALE 1 : 10

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a

KEY PLAN

NOTES

LEGEND

N NUMBER INDICATES ADDENDUM #

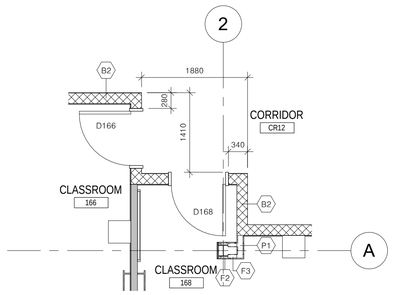
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

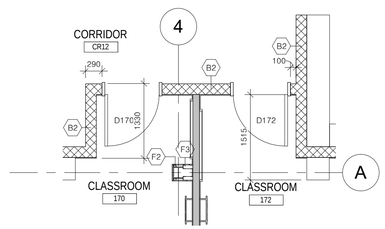
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
PLAN DETAILS

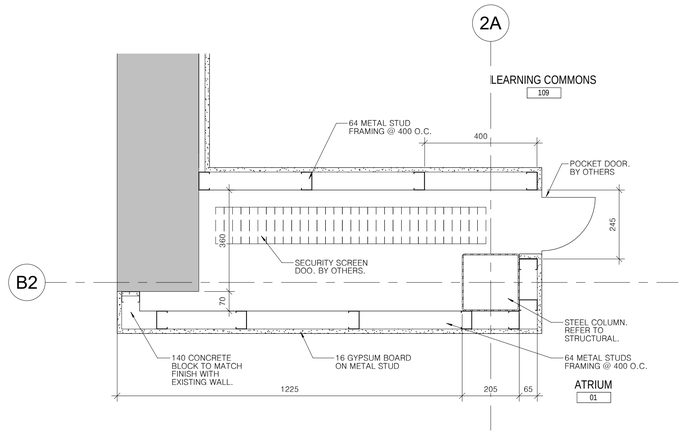
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:43:47 PM	PC	A601
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



3 PLAN DETAIL
SCALE 1 : 50



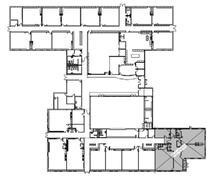
2 PLAN DETAIL
SCALE 1 : 50



1 SECURITY SCREEN POCKET DETAIL @ LIBRARY
SCALE 1 : 10

4 PLAN DETAIL
SCALE 1 : 10

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t. 519.439.0611
f. 519.438.5962
wda@wilsondiaz.ca
www.wilsondiaz.ca



KEY PLAN

NOTES

LEGEND

N NUMBER INDICATES ADDENDUM #

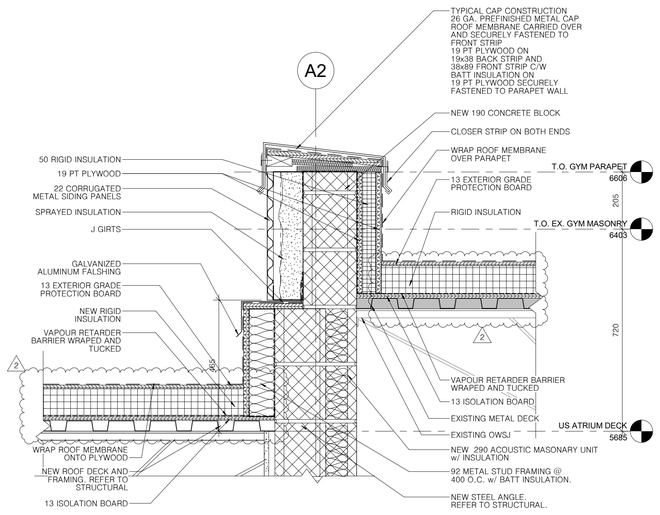
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

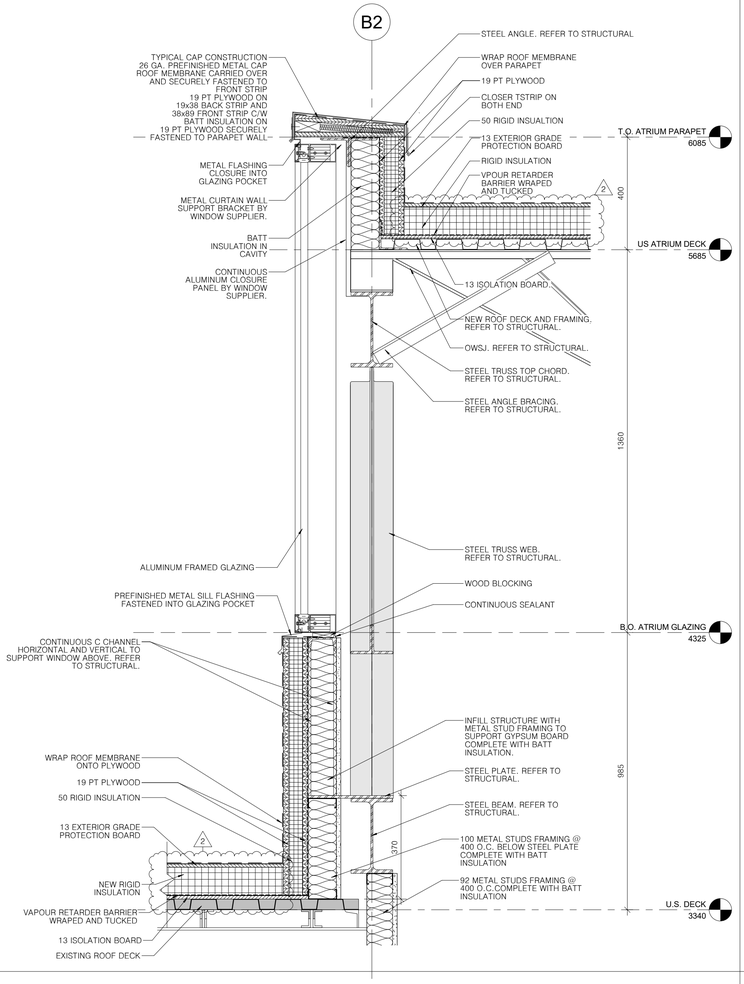
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
PLAN DETAILS

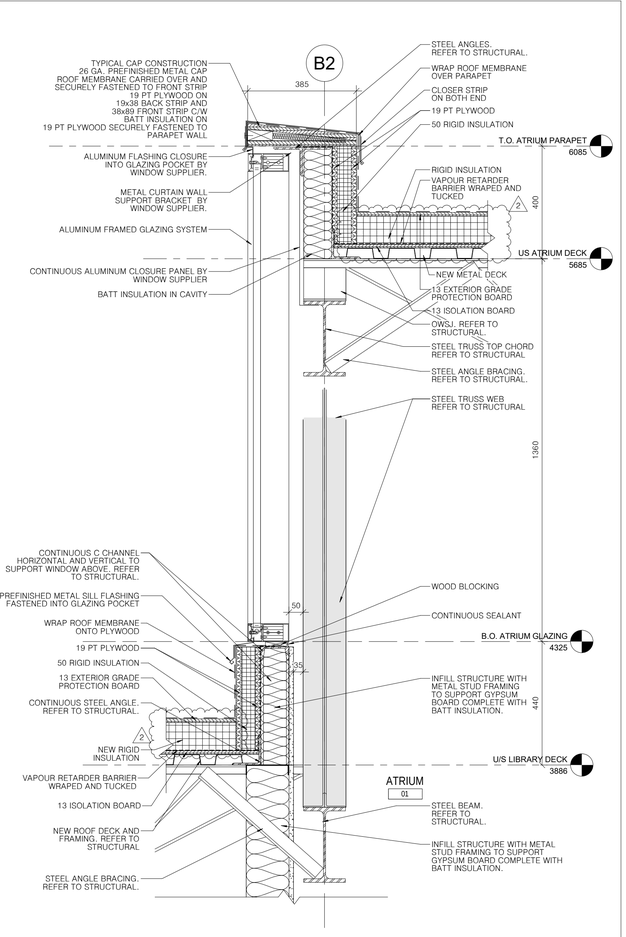
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:43:56 PM	TJV	A602
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



3 Section 2 - Callout 3
SCALE 1 : 10

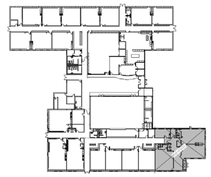


2 SECTION DETAIL
SCALE 1 : 10



1 SECTION DETAIL
SCALE 1 : 10

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

NOTES

LEGEND

N NUMBER INDICATES ADDENDUM #

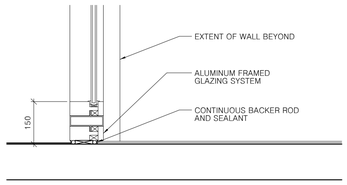
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	1

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

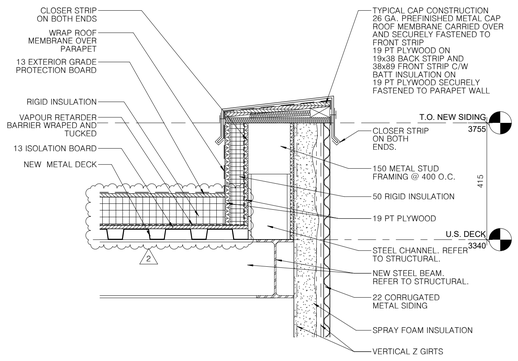
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
SECTION DETAILS

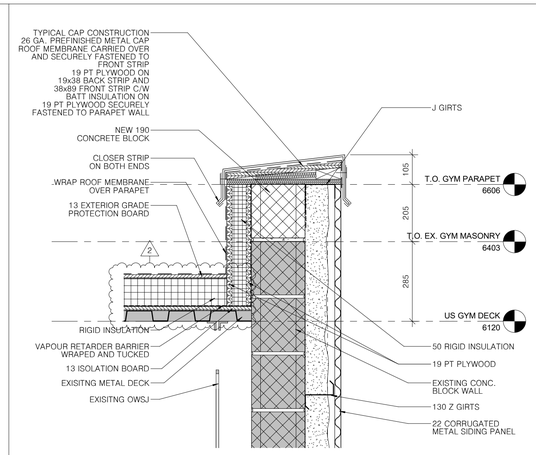
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:44:09 PM	TJV	A650
SCALE 1 : 10	CHECKED BY RRW	
PROJECT No. 1901		



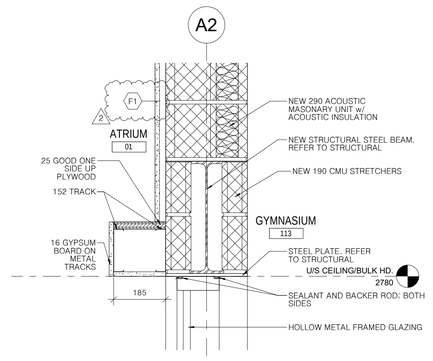
4 DETAIL @ BOTTOM FRAME
SCALE 1 : 10



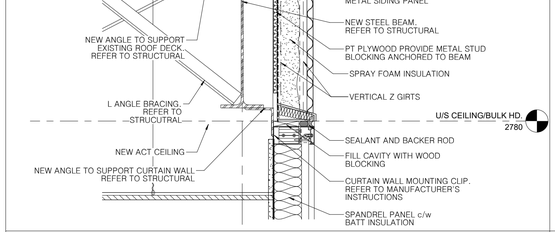
3 Section 72 - Callout 1
SCALE 1 : 10



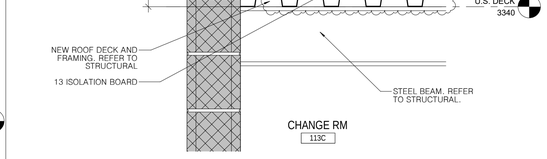
2 WALL SECTION - ABOVE EAST ADDITION - Callout 1
SCALE 1 : 10



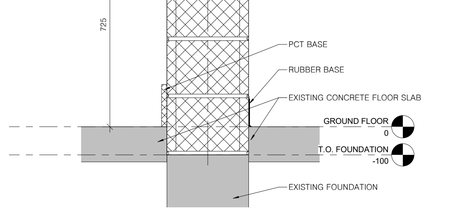
1 GYM WINDOWS HEAD AND SILL DETAIL
SCALE 1 : 10



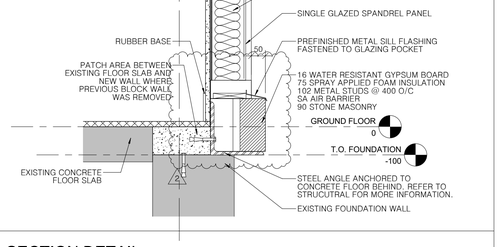
8 SECTION DETAIL
SCALE 1 : 10



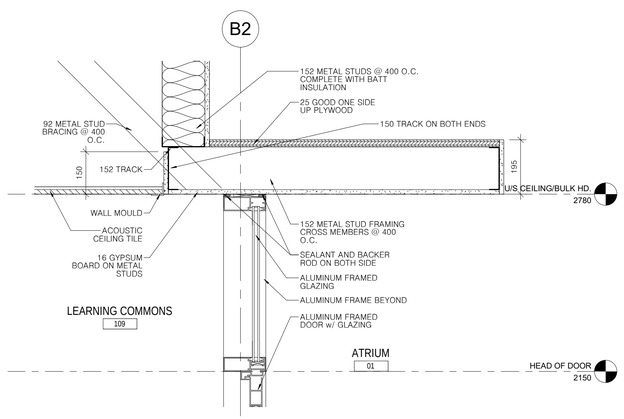
7 WALL SECTION - ABOVE EAST ADDITION - Callout 2
SCALE 1 : 10



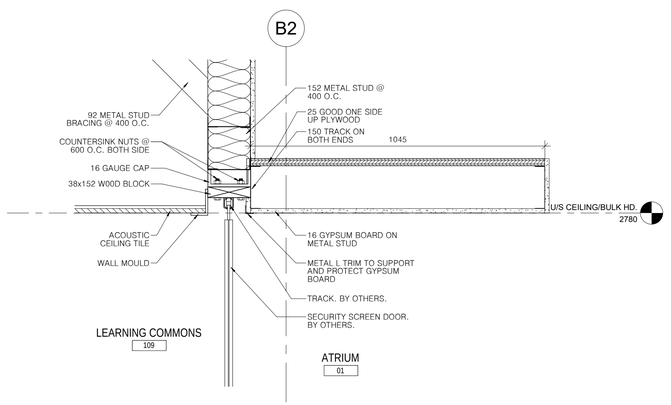
6 Section 12 - Callout 1
SCALE 1 : 10



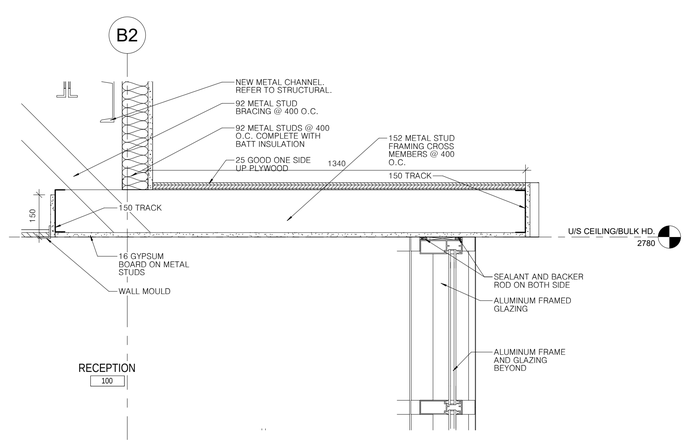
5 SECTION DETAIL
SCALE 1 : 10



11 BULKHEAD DETAIL @ CONFERENCE ROOM
SCALE 1 : 10



10 DETAIL @ SECURITY SCREEN
SCALE 1 : 10



9 BULKHEAD DETAIL @ RECEPTION
SCALE 1 : 10

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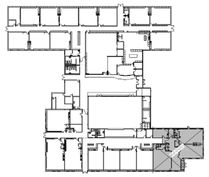
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

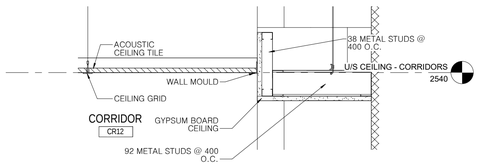
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

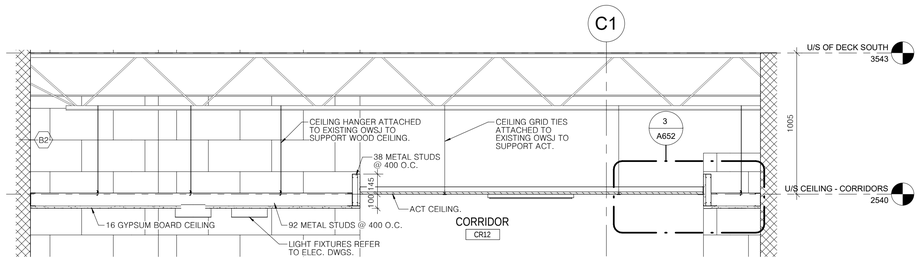
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
SECTION DETAILS

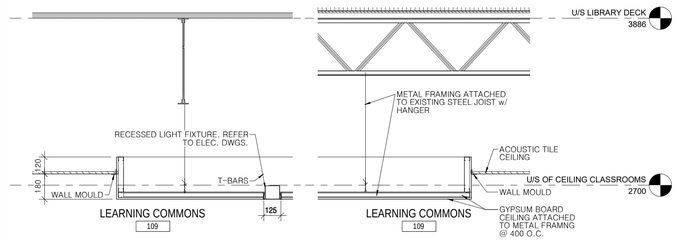
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:44:24 PM	TJV	A651
SCALE 1 : 10	CHECKED BY RRW	
PROJECT No. 1901		



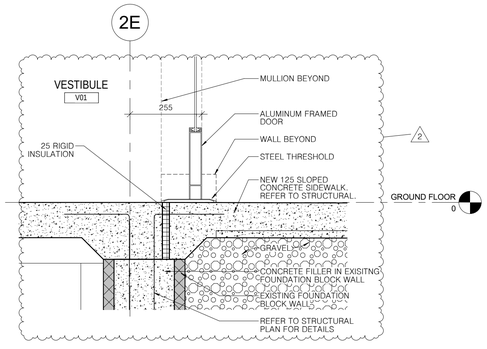
3 SECTION @ CEILING CORRIDOR
SCALE 1 : 10



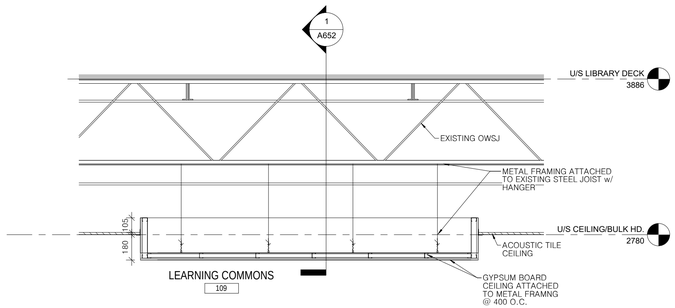
2 GYPSUMBOARD BULKHEAD @ CORRIDOR
SCALE 1 : 20



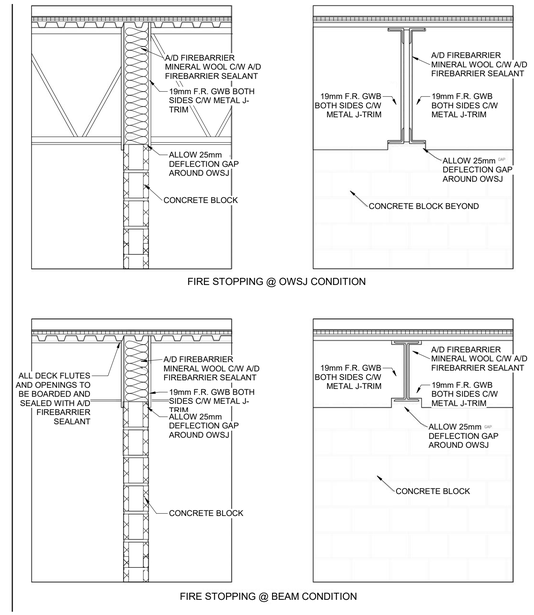
1 SECTION @ LIBRARY CEILING BULKHEAD
SCALE 1 : 20



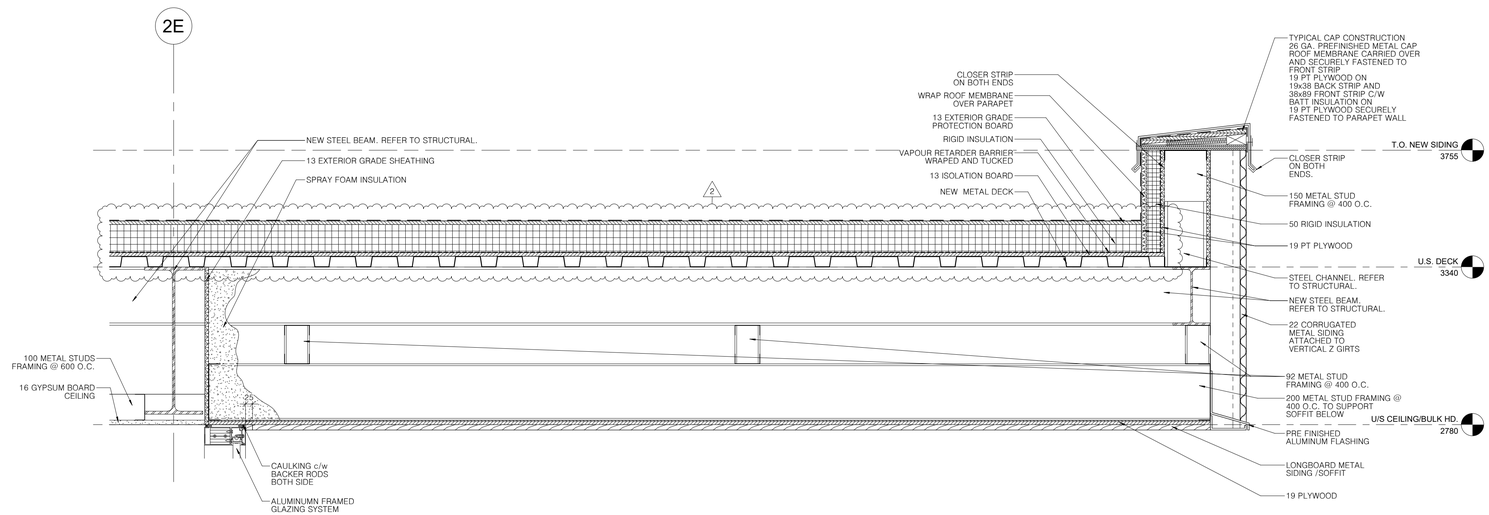
6 SECTION @ BOTTOM OF ENTRANCE DOOR
SCALE 1 : 10



5 SECTION @ LIBRARY CEILING BULKHEAD
SCALE 1 : 20



4 FIRE STOPPING @ OWSJ & BEAM
SCALE 1 : 10



7 SECTION @ CANOPY
SCALE 1 : 10

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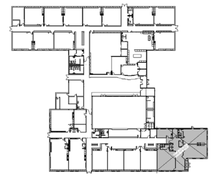
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

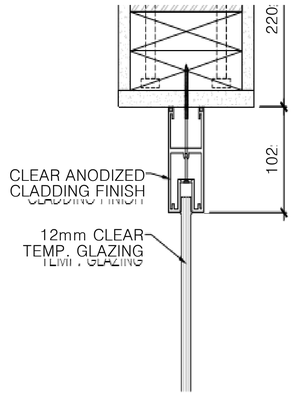
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

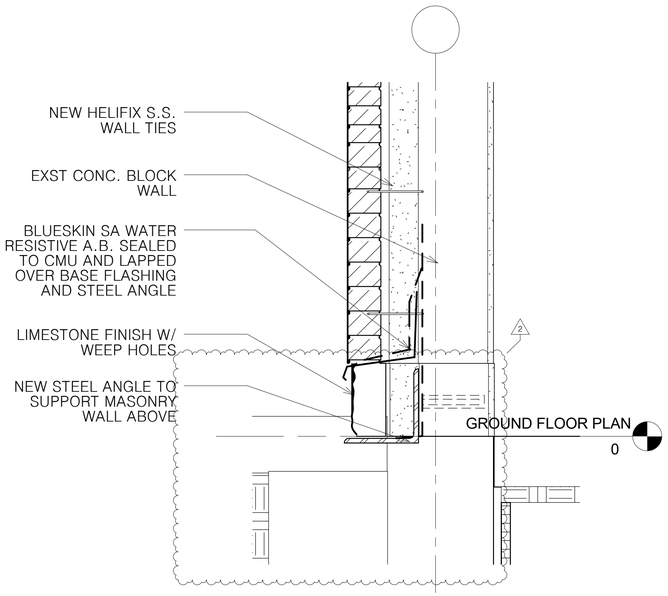
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
SECTION DETAILS

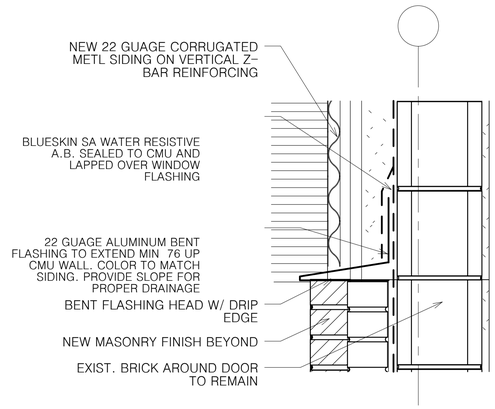
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:44:39 PM	TJV	A652
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



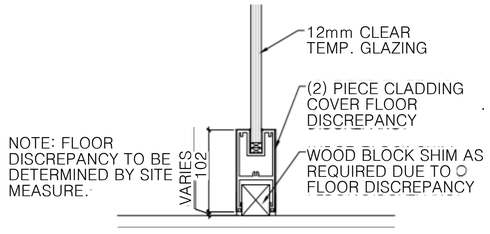
1 ALUMINUM DOOR SIDELITE HEAD DETAIL
SCALE 1:4



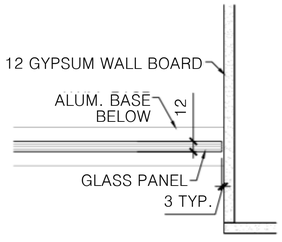
BASE DETAIL WHERE ASPHALT RISES ABOVE BRICK
SCALE 1:10



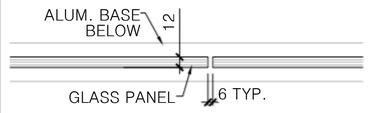
SECTION DETAIL
SCALE 1:7



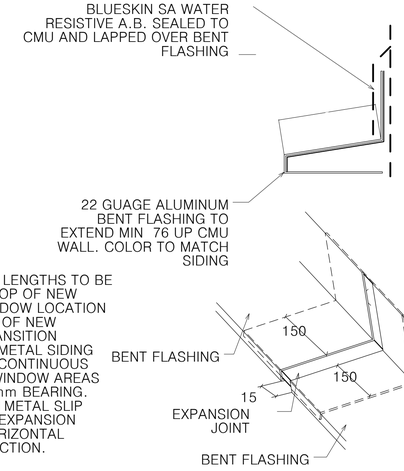
2 ALUMINUM DOOR SIDELITE BASE DETAIL
SCALE 1:4



3 TYP. GLASS JOINT @ WALL
SCALE 1:4



4 TYP. GLASS JOINT
SCALE 1:4



BENT FLASHING HEAD DETAIL
SCALE 1:4

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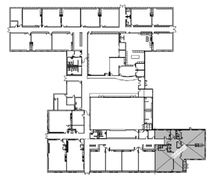
f. 519.438.5962
wdai@wilsondiaz.ca
www.wilsondiaz.ca



KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

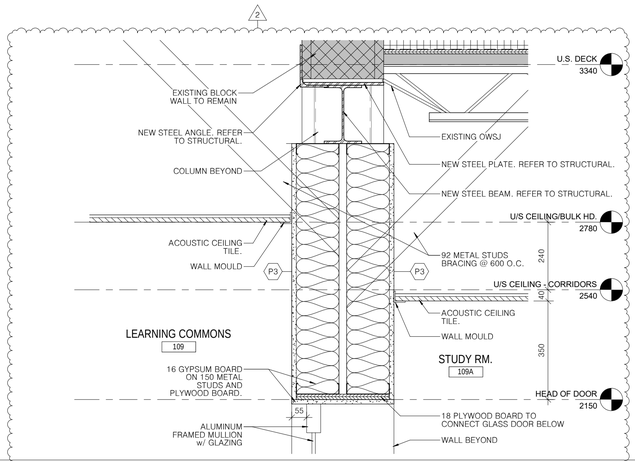
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

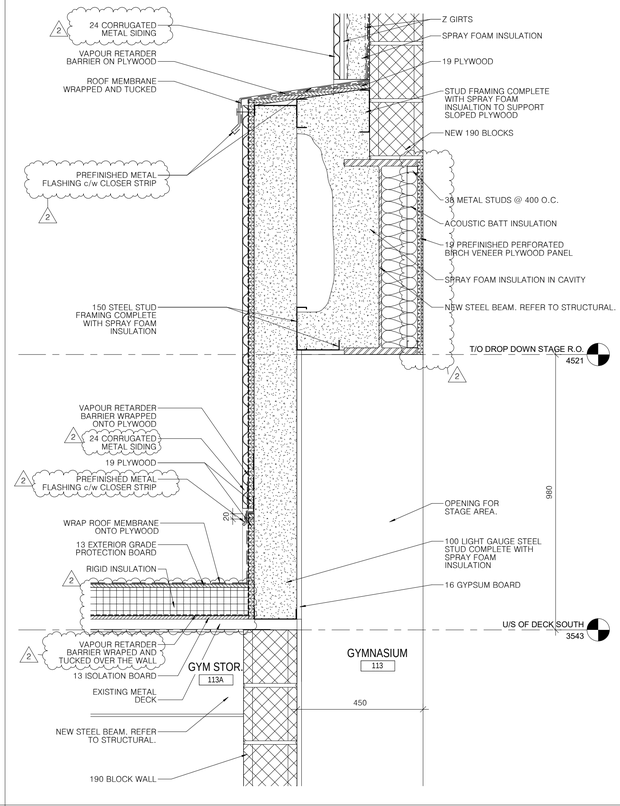
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
SECTION DETAILS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:44:47 PM	PC	A653
SCALE	CHECKED BY	
	RRW	
PROJECT No.		
1901		



2 SSTUDY ROOM WALL SECTION DETAIL
SCALE 1 : 10



1 SECTION DETAIL AT STAGE
SCALE 1 : 10

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
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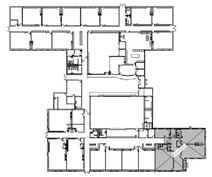

KEY PLAN

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LEGEND

N
NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

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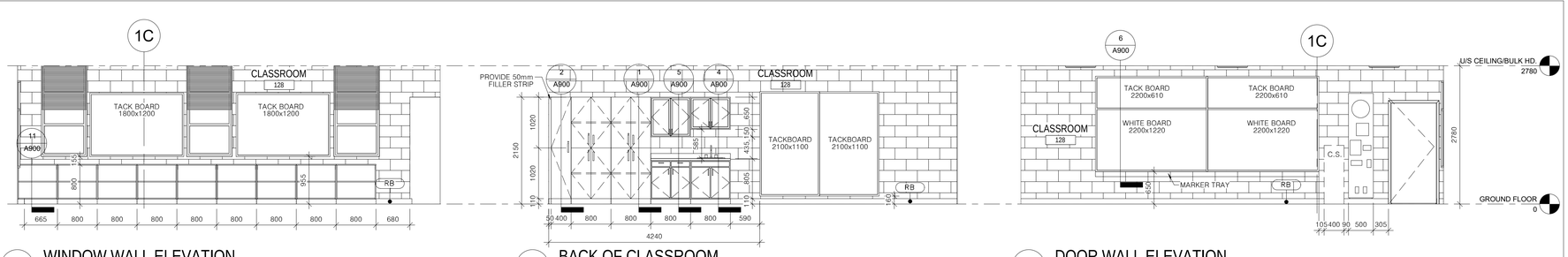
RANDY R. WILSON
LICENCE
4000

PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
SECTION DETAILS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:44:55 PM	TJV	A654
SCALE 1 : 10	CHECKED BY RRW	
PROJECT No. 1901		



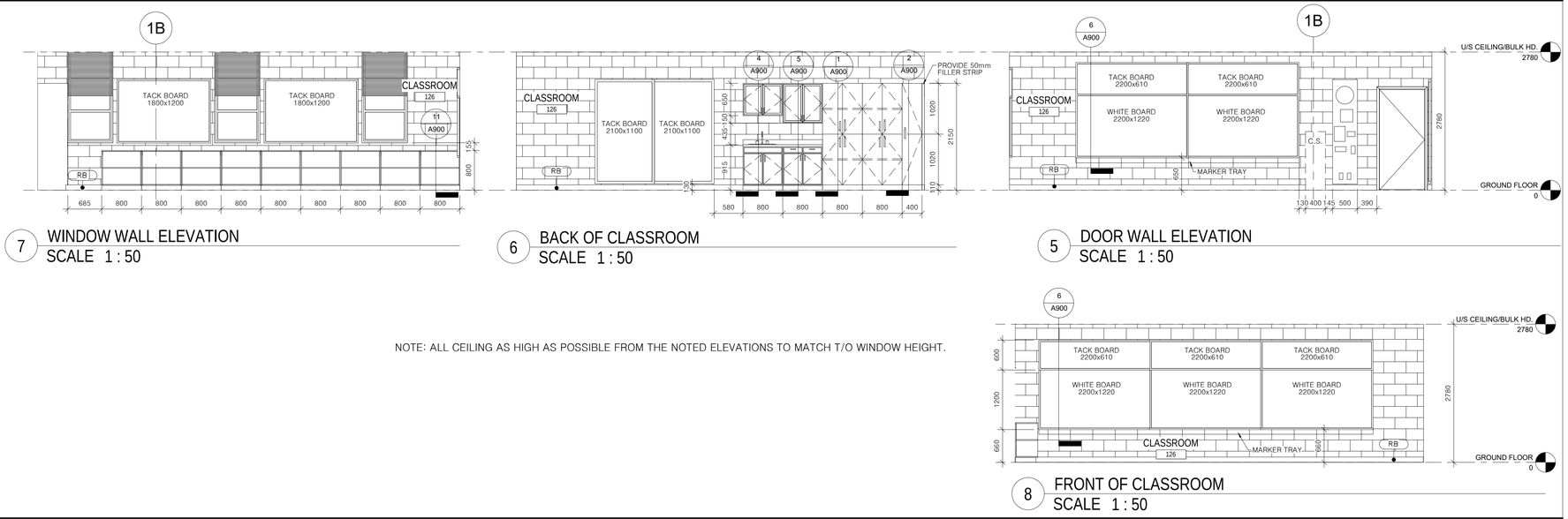
3 WINDOW WALL ELEVATION
SCALE 1 : 50

2 BACK OF CLASSROOM
SCALE 1 : 50

1 DOOR WALL ELEVATION
SCALE 1 : 50

4 FRONT OF CLASSROOM
SCALE 1 : 50

CLASSROOM TYPE 1 – ROOM 114, 116, 124, 128, AND 136



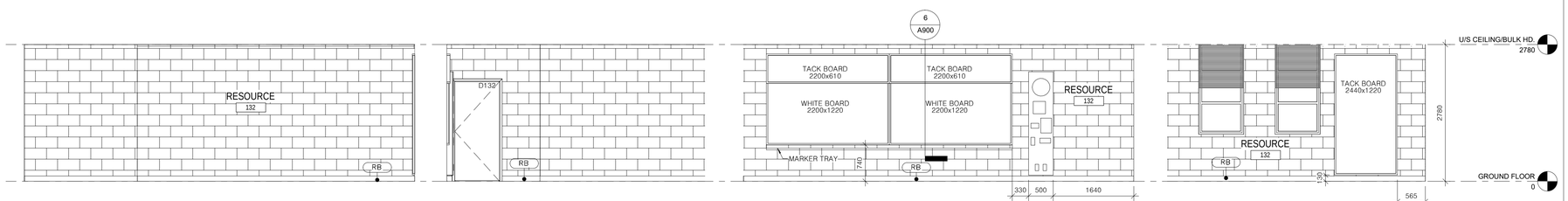
7 WINDOW WALL ELEVATION
SCALE 1 : 50

6 BACK OF CLASSROOM
SCALE 1 : 50

5 DOOR WALL ELEVATION
SCALE 1 : 50

8 FRONT OF CLASSROOM
SCALE 1 : 50

CLASSROOM TYPE 2 – ROOM 112, 122, 126, 130, 134 AND 138



12 INTERIOR ELEVATION
SCALE 1 : 50

11 INTERIOR ELEVATION
SCALE 1 : 50

10 INTERIOR ELEVATION
SCALE 1 : 50

9 INTERIOR ELEVATION
SCALE 1 : 50

NOTE: ALL CEILING AS HIGH AS POSSIBLE FROM THE NOTED ELEVATIONS TO MATCH T/O WINDOW HEIGHT.

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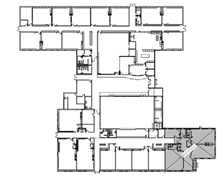
www.wilsondiaz.ca



KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

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2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

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RANDY R. WILSON
LICENCE
4000

PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
TYPICAL CLASSROOM ELEVATIONS - NORTH WING

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:45:10 PM	TJV	A800
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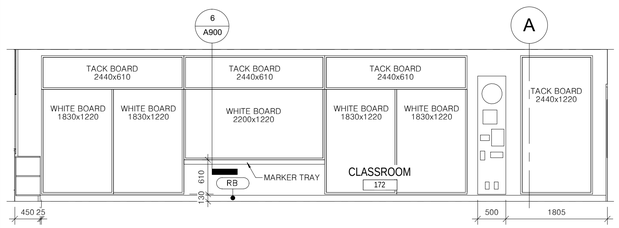
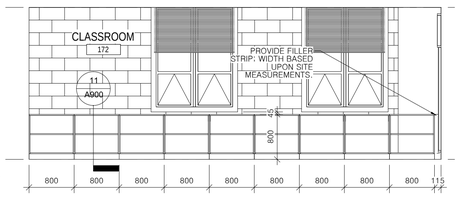
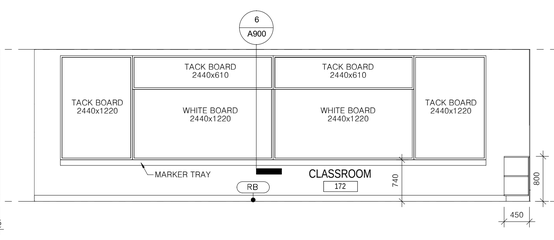
PROJECT No. 1901		



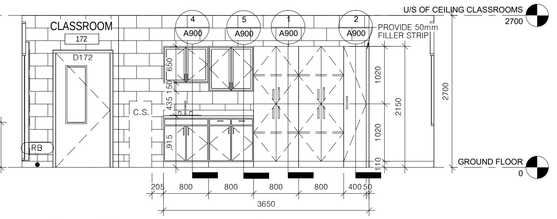
4 FRONT OF CLASSROOM
SCALE 1 : 50



3 WINDOW WALL ELEVATION
SCALE 1 : 50

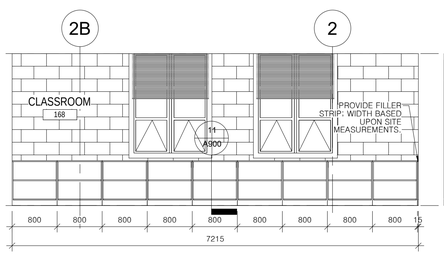


2 BACK OF CLASSROOM
SCALE 1 : 50

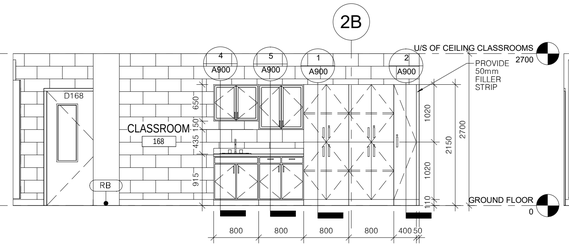


1 DOOR WALL ELEVATION
SCALE 1 : 50

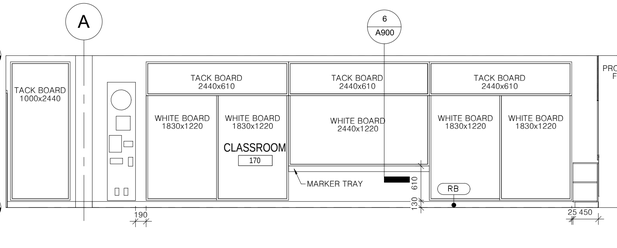
NOTE: ALL CEILING AS HIGH AS POSSIBLE FROM THE NOTED ELEVATIONS TO MATCH T/O WINDOW HEIGHT.



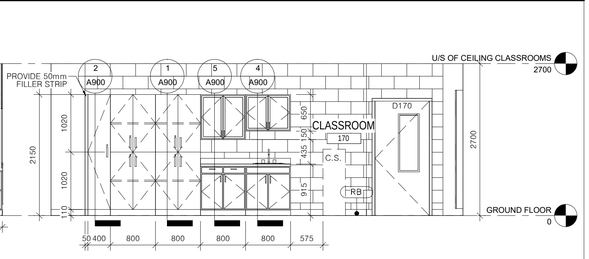
8 WINDOW WALL ELEVATION
SCALE 1 : 50



7 DOOR WALL ELEVATION
SCALE 1 : 50

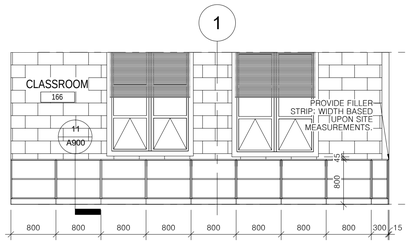


6 FRONT OF CLASSROOM
SCALE 1 : 50

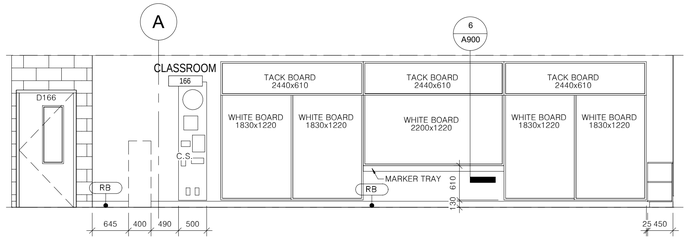


5 DOOR WALL ELEVATION
SCALE 1 : 50

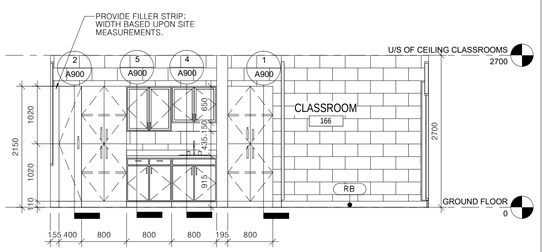
NOTE: ALL CEILING AS HIGH AS POSSIBLE FROM THE NOTED ELEVATIONS TO MATCH T/O WINDOW HEIGHT.



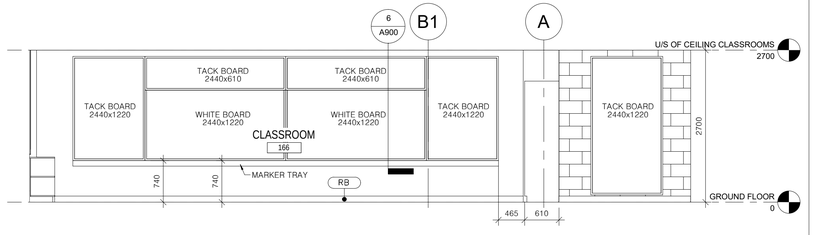
11 WINDOW WALL ELEVATION
SCALE 1 : 50



10 FRONT OF CLASSROOM
SCALE 1 : 50



9 SIDE WALL ELEVATION
SCALE 1 : 50



12 BACK OF CLASSROOM
SCALE 1 : 50

NOTE: ALL CEILING AS HIGH AS POSSIBLE FROM THE NOTED ELEVATIONS TO MATCH T/O WINDOW HEIGHT.

WILSON DIAZ ARCHITECTS INCORPORATED
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wdai@wilsondiaz.ca
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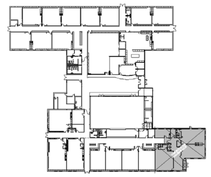


KEY PLAN

NOTES

LEGEND

N NUMBER INDICATES ADDENDUM #

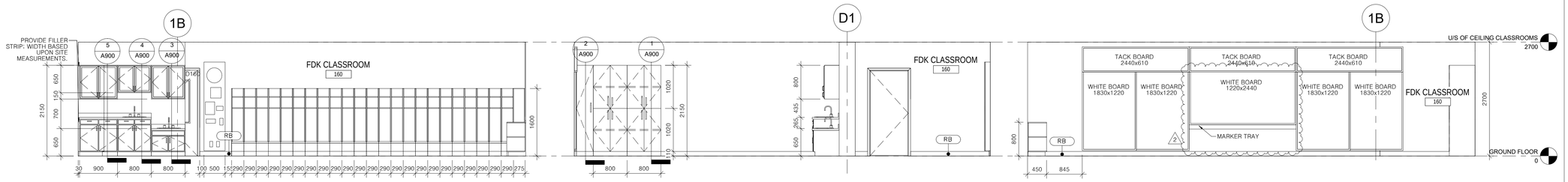
No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
TYPICAL CLASSROOM ELEVATIONS - SOUTH WING

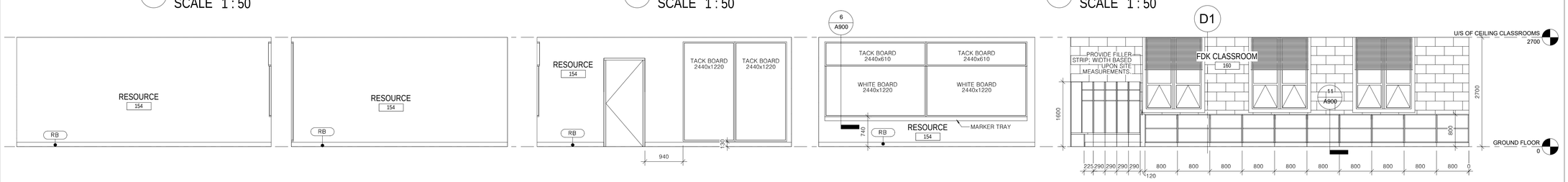
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:45:25 PM	TJV	A801
SCALE 1 : 50	CHECKED BY RRW	
PROJECT No. 1901		



3 BACK OF CLASSROOM
SCALE 1 : 50

2 SIDE WALL ELEVATION
SCALE 1 : 50

1 FRONT OF CLASSROOM
SCALE 1 : 50



8 INTERIOR ELEVATION
SCALE 1 : 50

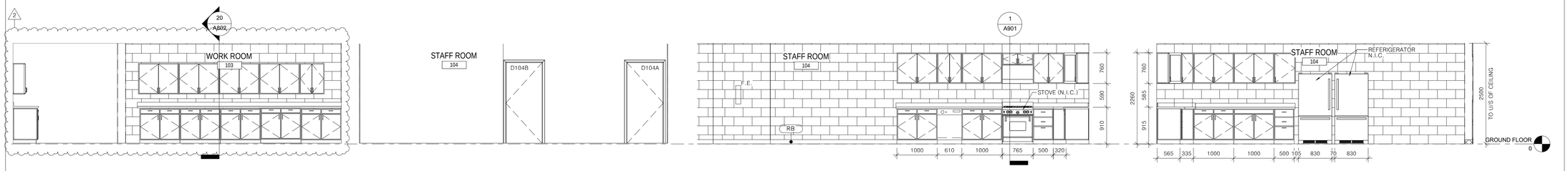
7 INTERIOR ELEVATION
SCALE 1 : 50

6 INTERIOR ELEVATION
SCALE 1 : 50

5 INTERIOR ELEVATION
SCALE 1 : 50

4 WINDOW WALL ELEVATION
SCALE 1 : 50

NOTE: ALL CEILING AS HIGH AS POSSIBLE FROM THE NOTED ELEVATIONS TO MATCH T/O WINDOW HEIGHT.



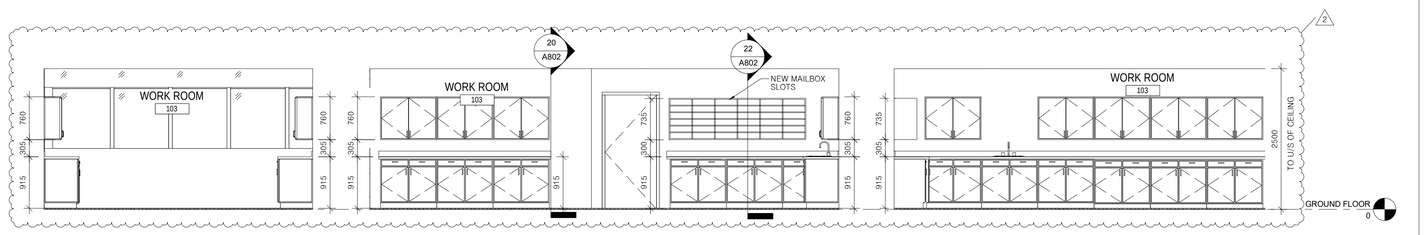
12 INTERIOR ELEVATION
SCALE 1 : 50

11 INTERIOR ELEVATION
SCALE 1 : 50

10 INTERIOR ELEVATION
SCALE 1 : 50

9 STAFF ROOM CLOSET ELEVATION
SCALE 1 : 50

NOTE: ALL CEILING AS HIGH AS POSSIBLE FROM THE NOTED ELEVATIONS TO MATCH T/O WINDOW HEIGHT.

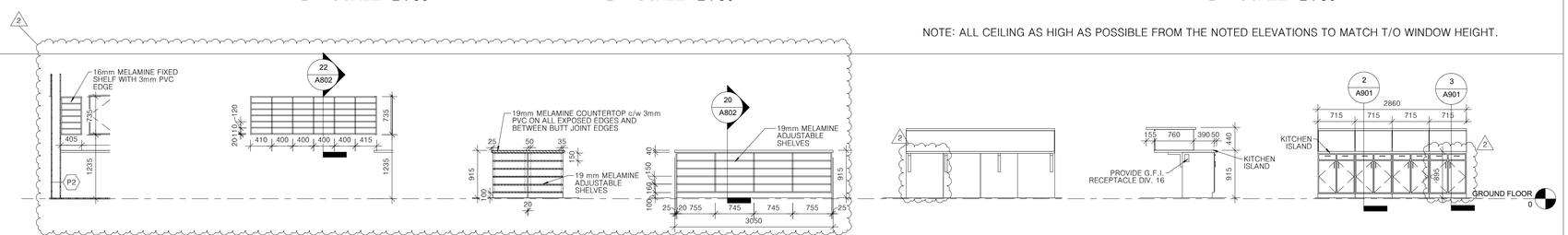


15 INTERIOR ELEVATION
SCALE 1 : 50

14 INTERIOR ELEVATION
SCALE 1 : 50

13 INTERIOR ELEVATION
SCALE 1 : 50

NOTE: ALL CEILING AS HIGH AS POSSIBLE FROM THE NOTED ELEVATIONS TO MATCH T/O WINDOW HEIGHT.



22 MAILBOX SECTION
SCALE 1 : 50

21 MAILBOX ELEVATION
SCALE 1 : 50

20 ISLAND SECTION
SCALE 1 : 50

19 ISLAND ELEVATION
SCALE 1 : 50

18 KITCHEN ISLAND
SCALE 1 : 50

17 KITCHEN ISLAND
SCALE 1 : 50

16 KITCHEN ISLAND
SCALE 1 : 50

NOTE: ALL CEILING AS HIGH AS POSSIBLE FROM THE NOTED ELEVATIONS TO MATCH T/O WINDOW HEIGHT.

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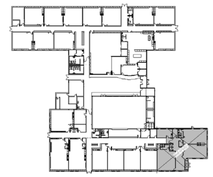

KEY PLAN

NOTES

LEGEND

1 NUMBER INDICATES ADDENDUM #

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2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	1

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

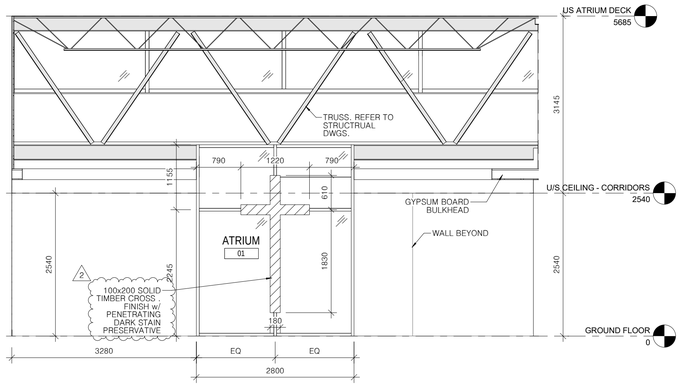
PROJECT TITLE

OUR LADY OF FATIMA - PHASE 4

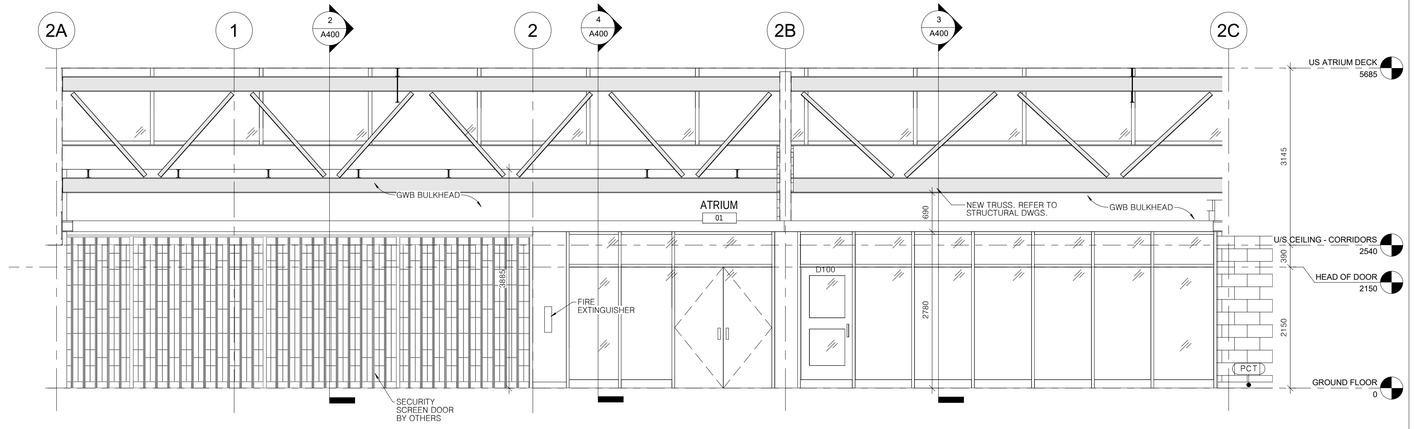
DRAWING TITLE

KINDERGARTEN AND KITCHENETTE INTERIOR ELEVATIONS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:45:44 PM	TJV	A802
SCALE 1 : 50	CHECKED BY RRW	
PROJECT No. 1901		



1 INTERIOR ELEVATION AT ATRIUM
SCALE 1 : 50



2 INTERIOR ELEVATION AT ATRIUM
SCALE 1 : 50

3 INTERIOR ELEVATION AT ATRIUM
SCALE 1 : 50

4 INTERIOR ELEVATION AT ATRIUM
SCALE 1 : 50

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KEY PLAN

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LEGEND

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1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
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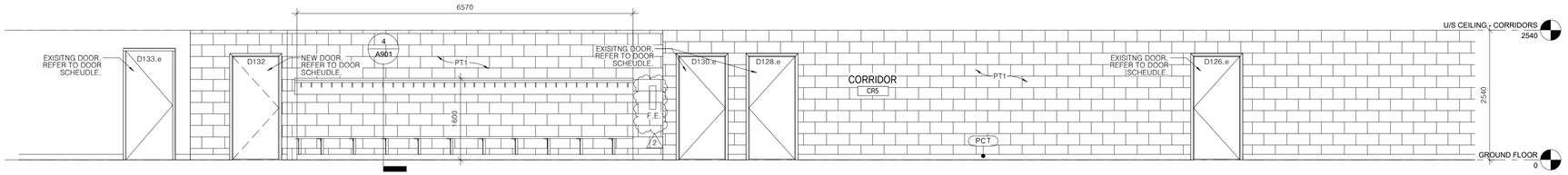
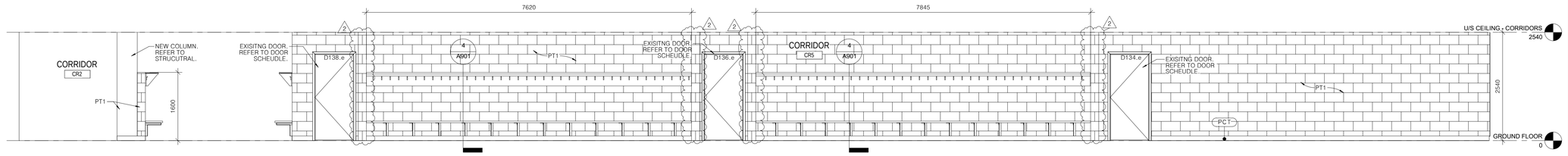
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
INTERIOR ELEVATIONS - ATRIUM

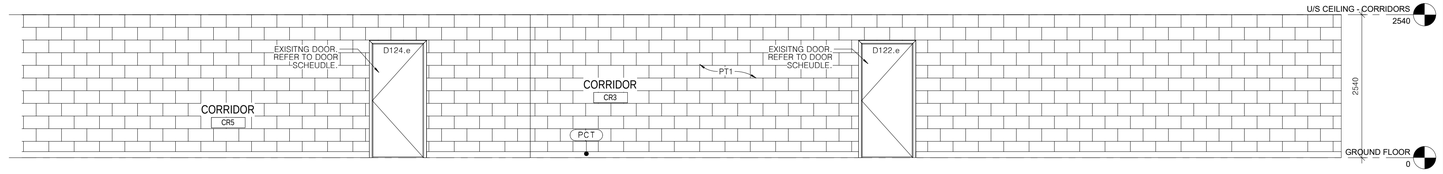
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:46:00 PM	TJV	A803
SCALE 1 : 50	CHECKED BY RRW	
PROJECT No. 1901		



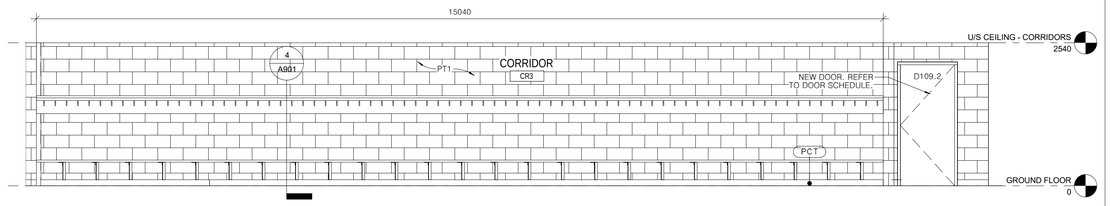
1 CORRIDOR ELEVATION CR5
SCALE 1 : 50



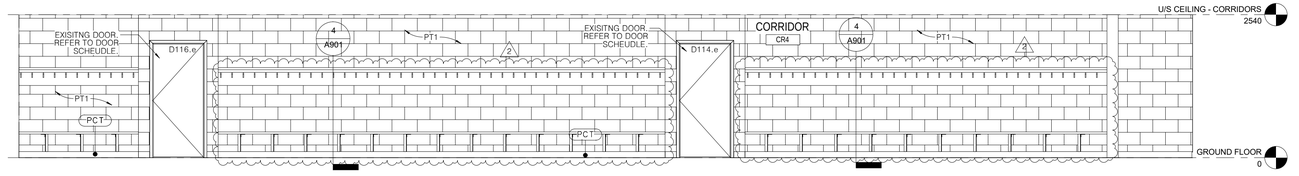
2 CORRIDOR ELEVATION CR5
SCALE 1 : 50



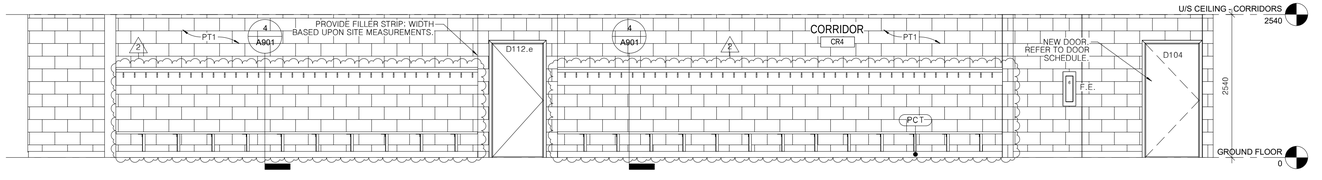
3 CORRIDOR ELEVATION CR3
SCALE 1 : 50



4 CORRIDOR ELEVATION CR3
SCALE 1 : 50



5 CORRIDOR ELEVATION CR4
SCALE 1 : 50



6 CORRIDOR ELEVATION CR4
SCALE 1 : 50

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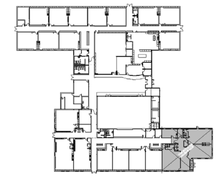
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

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NUMBER INDICATES ADDENDUM #

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ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
INTERIOR ELEVATIONS - CORRIDOR

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:46:12 PM	TJV	A804
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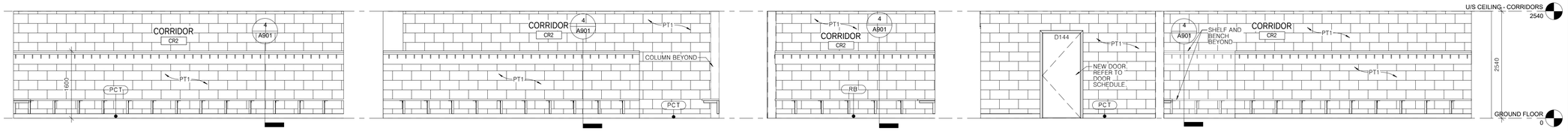
PROJECT No. 1901		

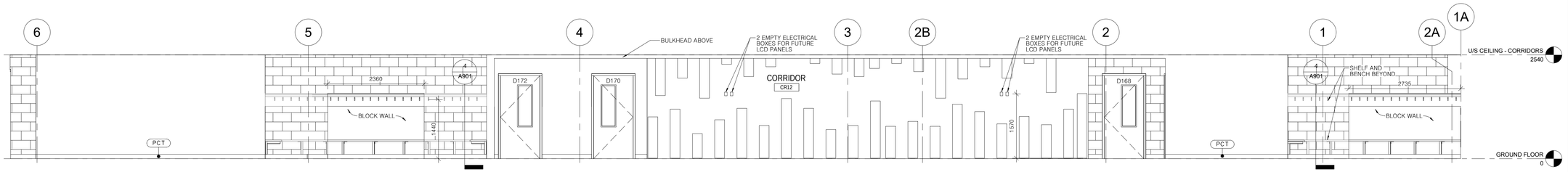


4 CORRIDOR ELEVATION CR2
SCALE 1 : 50

3 CORRIDOR ELEVATION CR2
SCALE 1 : 50

2 CORRIDOR ELEVATION CR2
SCALE 1 : 50

1 CORRIDOR ELEVATION CR2
SCALE 1 : 50



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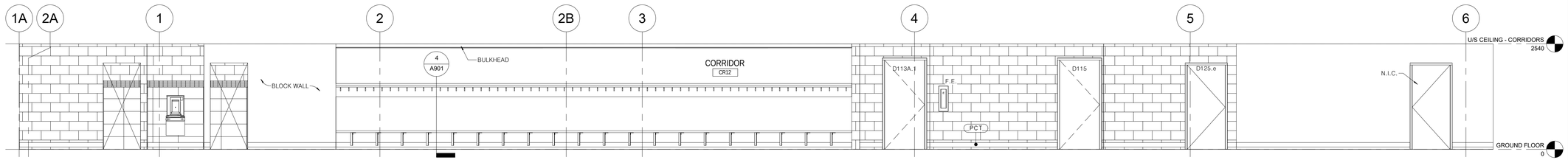
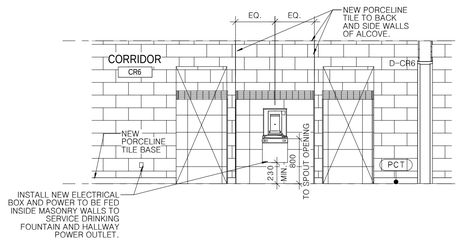
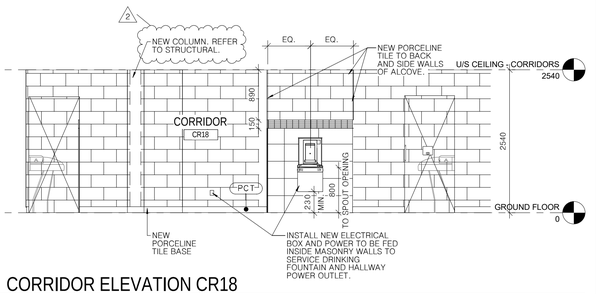
SCALE 1 : 50



6 CORRIDOR ELEVATION CR12
SCALE 1 : 50



8 CORRIDOR ELEVATION CR6
SCALE 1 : 50



7 CORRIDOR ELEVATION CR18
SCALE 1 : 50

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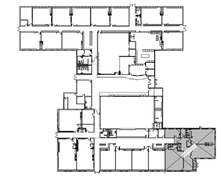
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

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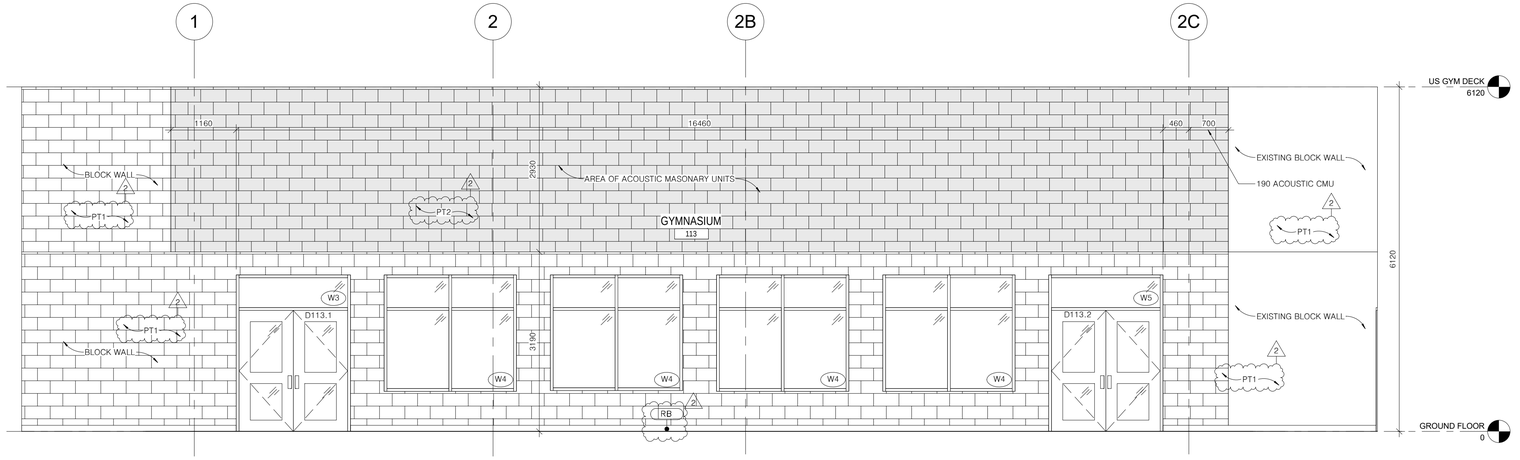
ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

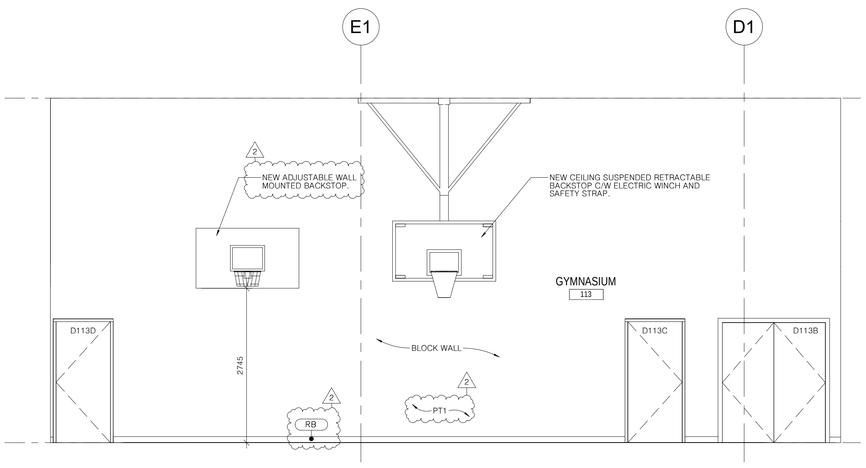
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
INTERIOR ELEVATIONS - CORRIDOR

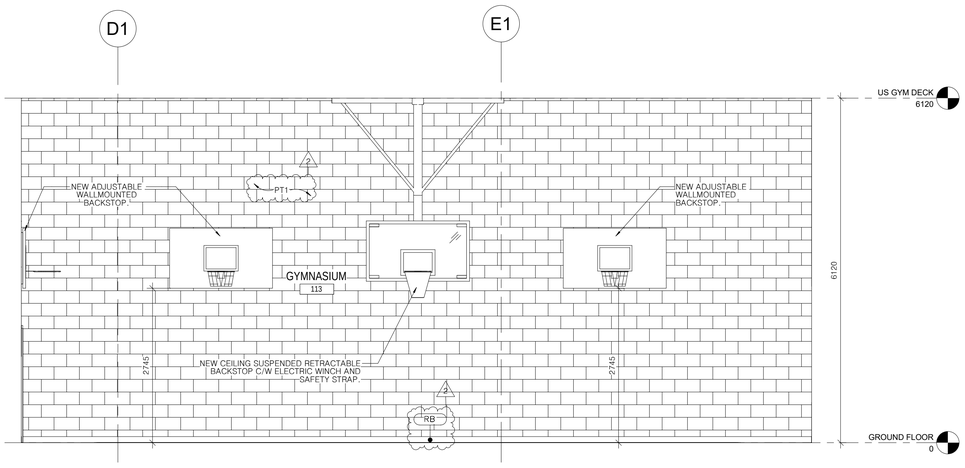
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:46:24 PM	TJV	A805
SCALE 1 : 50	CHECKED BY RRW	
PROJECT No. 1901		



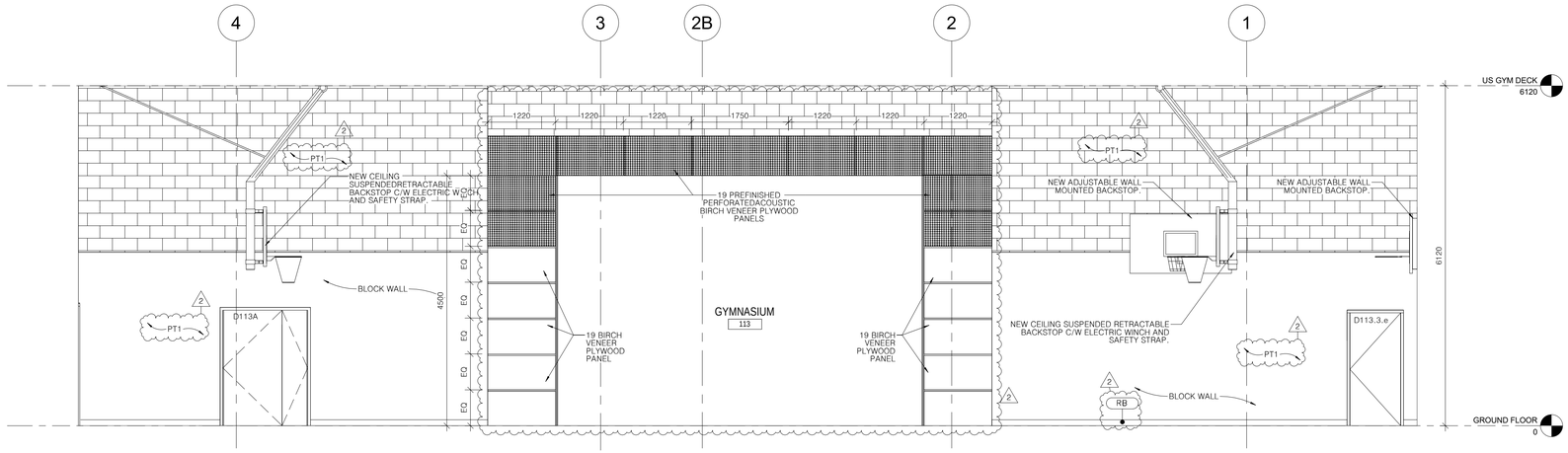
1 INTERIOR ELEVATION AT GYMNASIUM
SCALE 1 : 50



4 INTERIOR ELEVATION AT GYMNASIUM
SCALE 1 : 50



2 INTERIOR ELEVATION AT GYMNASIUM
SCALE 1 : 50



3 INTERIOR ELEVATION AT GYMNASIUM
SCALE 1 : 50

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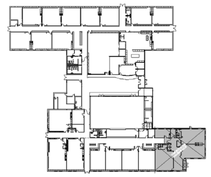
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a



KEY PLAN

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ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
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PROJECT TITLE

OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE

INTERIOR ELEVATIONS - GYMNASIUM

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:47:32 PM	PC	A806
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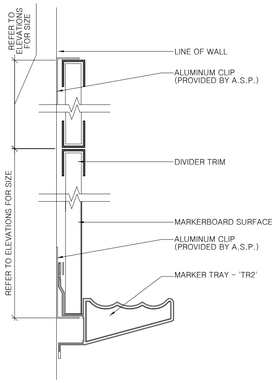
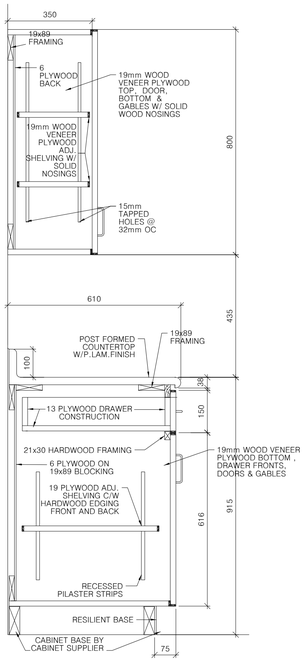
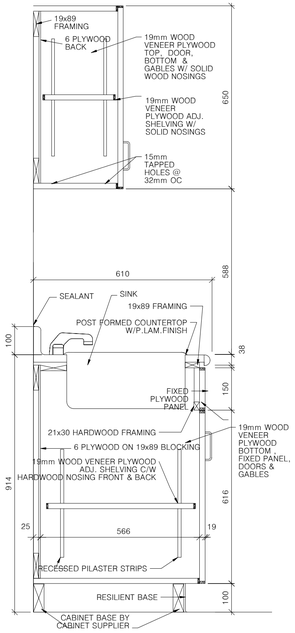
PROJECT No. 1901		



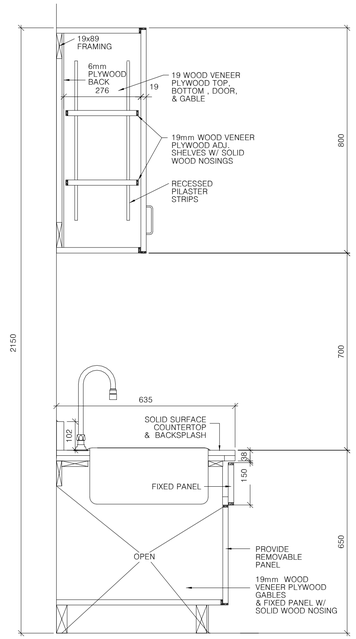
6 MARKER TRAY
SCALE 1 : 2



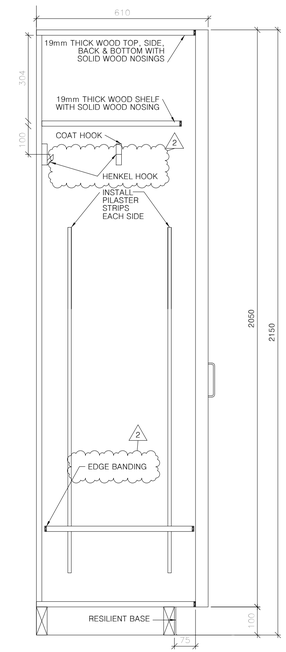
5 1 DRAWER W/ UPPER CAB
SCALE 1 : 10



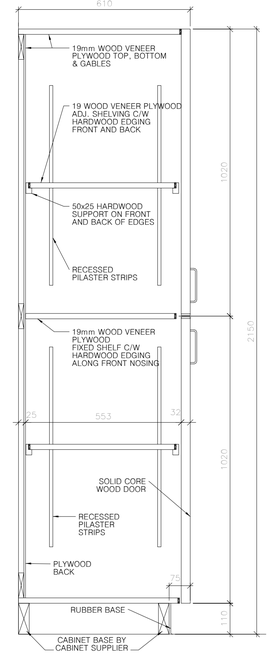
4 MILLWORK @ SINK DETAILS
SCALE 1 : 10



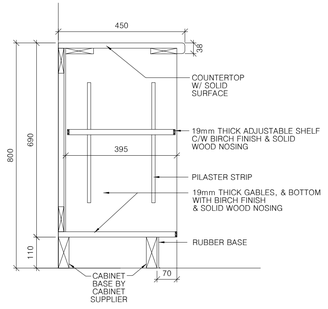
3 KINDERGARTEN LOWER SINK CABINET
SCALE 1 : 10



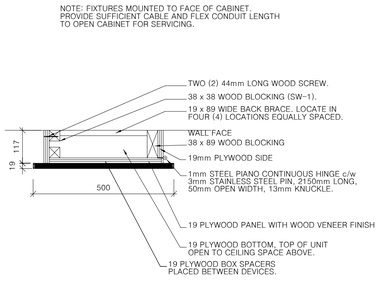
2 TEACHER'S SINGLE CABINET
SCALE 1 : 10



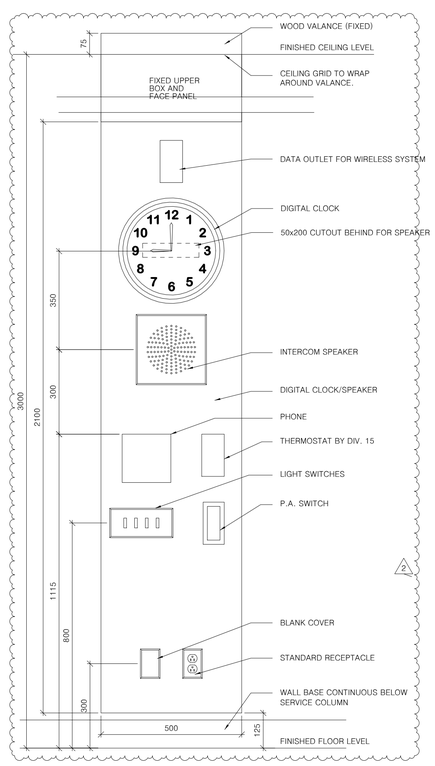
1 TEACHER'S DOUBLE CABINET
SCALE 1 : 10



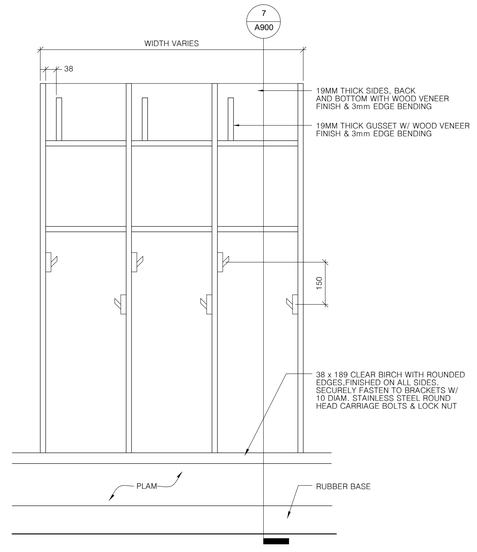
11 LOWER SHELF CABINET
SCALE 1 : 10



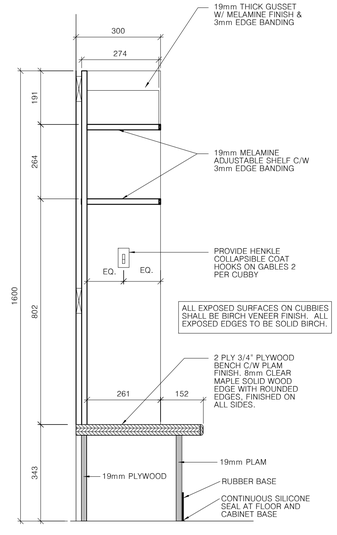
10 SERVICE COLUMN PLAN DETAIL
SCALE 1 : 10



9 CLASSROOM INTERCOM PANEL
SCALE 1 : 10



8 KINDERGARTEN CUBBIES - TYPICAL BANK
SCALE 1 : 10



7 KINDERGARTEN CUBBIES - TYPICAL SECTION
SCALE 1 : 10

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a

KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	1

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

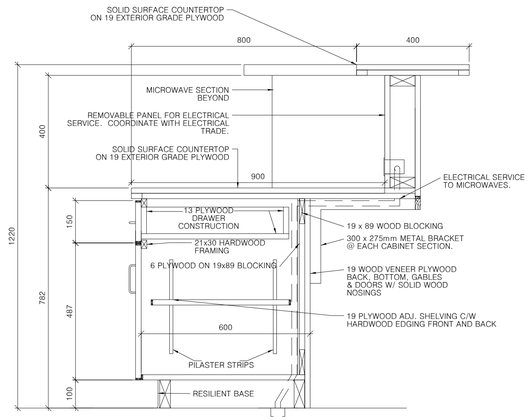
PROJECT TITLE

OUR LADY OF FATIMA - PHASE 4

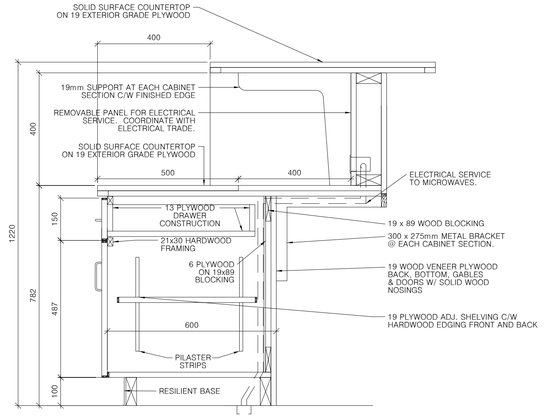
DRAWING TITLE

MILLWORK DETAILS

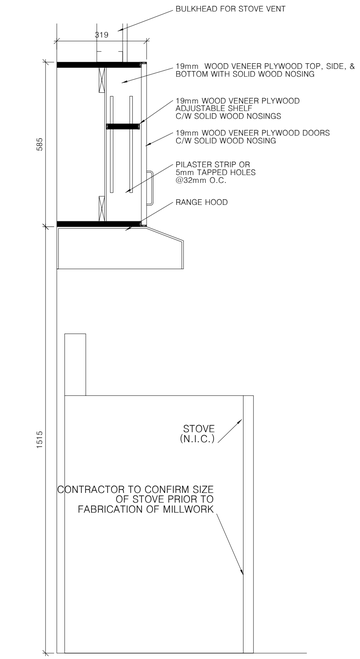
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:47:40 PM	TJV	A900
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



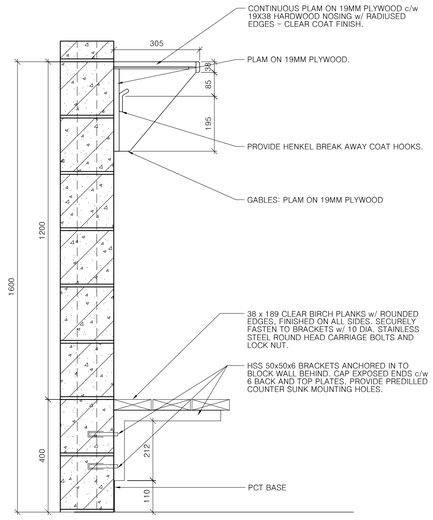
3 KITCHENETTE ISLAND SECTION
SCALE 1 : 10



2 KITCHENETTE ISLAND SECTION
SCALE 1 : 10



1 CUPBOARD @ RANGE HOOD
SCALE 1 : 10



4 SHELF DETAIL
SCALE 1 : 10

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t . 5 1 9 . 4 3 9 . 0 6 1 1
f . 5 1 9 . 4 3 8 . 5 9 6 2
w d a i @ w i l s o n d i a z . c a
w w w . w i l s o n d i a z . c a

KEY PLAN

NOTES

LEGEND

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

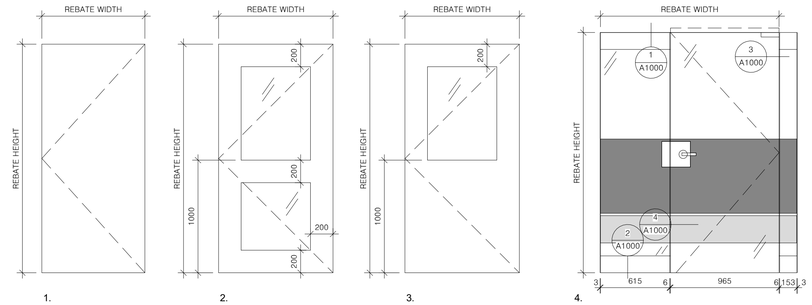
PROJECT TITLE

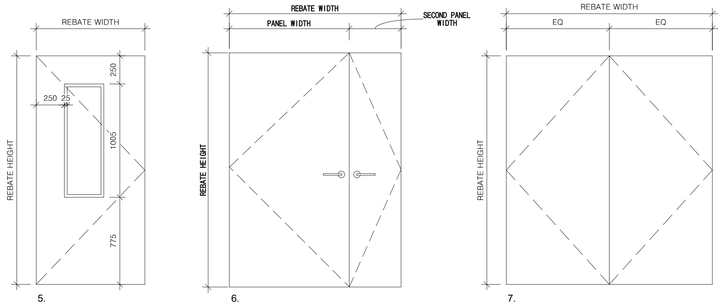
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE

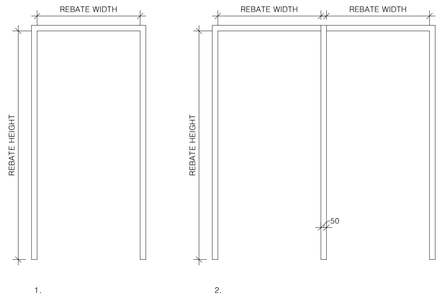
MILLWORK DETAILS

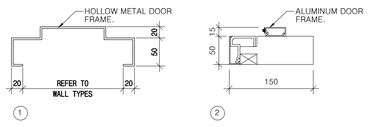
DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:47:47 PM	TJV	A901
SCALE 1 : 10	CHECKED BY RRW	
PROJECT No. 1901		





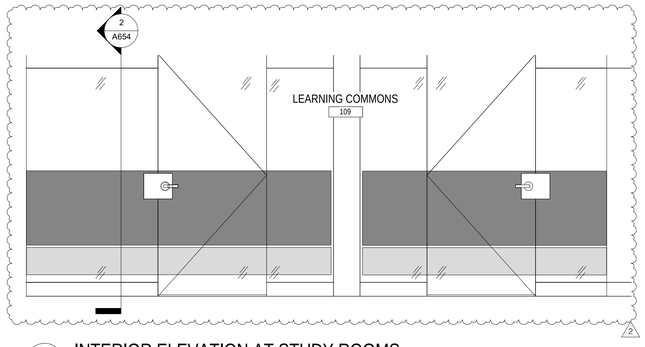
1 DOOR TYPES
SCALE 1 : 25





3 FRAME TYPES
SCALE 1 : 25

2 FRAME PROFILE
SCALE 1 : 5



4 INTERIOR ELEVATION AT STUDY ROOMS
SCALE 1 : 25

DOOR SCHEDULE – PHASE 4

ST. CLAIR CATHOLIC SCHOOL BOARD
OUR LADY OF FATIMA

WILSON DIAZ ARCHITECTS INCORPORATED

Door No.	From Room: Number	To Room: Number	Rebate				Door				Frame				Comments
			Width	Height	Panel Width	Secondary Panel Width	Type	Material	Finish	Glass	Type	Material	Finish	Profile	
D100	01	100	946	2000			2	ALUM	ANOD	Yes	1	ALUM	ANOD	2	
D100A	100		915	2032			1	HM	PT-3	No	1	HM	PT-3	1	
D101A	109	109C	915	2032			1	HM	PT-3	No	1	HM	PT-3	1	
D102	100	102	915	2032			1	HM	PT-3	No	1	HM	PT-3	1	
D103	100	103	915	2032			1	HM	PT-3	No	1	HM	PT-3	1	
D104	CR4	104	965	2032			3	HM	PT-3	Yes	1	HM	PT-3	1	
D104A	104A	104	915	2032			1	HM	PT-3	No	1	HM	PT-3	1	
D104B	104	104B	915	2032			1	HM	PT-3	No	1	HM	PT-3	1	
D105	01	105	953	2150			2	ALUM	ANOD	Yes	1	ALUM	ANOD	2	
D109.2	109	CR3	965	2150			3	HM	PT-3	Yes	1	HM	PT-3	1	
D113.1	113	01	1930	2150			2	HM	PT-3	Yes	1	HM	PT-3	1	
D113.2	01	113	1930	2150			2	HM	PT-3	Yes	1	HM	PT-3	1	
D113A	113	113A	1525	2080	1065	460	6	HM	PT-3	No	1	HM	PT-3	1	
D113A.1	113A	CR12	965	2150			1	HM	PT-3	Yes	1	HM	PT-3	1	
D113B	113B	113	1830	2134			7	HM	PT-3	No	1	HM	PT-3	1	
D113C	113	113C	965	2150			1	HM	PT-3	No	1	HM	PT-3	1	
D113D	113	113D	965	2150			1	HM	PT-3	No	1	HM	PT-3	1	
D115	CR12	115	965	2150			1	HM	PT-3	No	1	HM	PT-3	1	
D125.i	109	01	1725	2150			2	ALUM	ANOD	Yes	1	ALUM	ANOD	2	
D125.k	109	109B	965	2150			4	GLASS	–	Yes	–	–	–	–	REFER TO A653 FOR FRAME ASSEMBLY
D125.l	109	109B	965	2150			4	GLASS	–	Yes	–	–	–	–	REFER TO A653 FOR FRAME ASSEMBLY
D125.m	109	109A	965	2150			4	GLASS	–	Yes	–	–	–	–	REFER TO A653 FOR FRAME ASSEMBLY
D125.n	109	109A	965	2150			4	GLASS	–	Yes	–	–	–	–	REFER TO A653 FOR FRAME ASSEMBLY
D132	CR5	132	915	2032			5	HM	PT-3	Yes	1	HM	PT-3	1	
D144	CR2	144	915	2032			1	HM	PT-3	No	1	HM	PT-3	1	
D150	150	CR6	915	2032			1	HM	PT-3	No	1	HM	PT-3	1	
D159	CR11	159	965	2150			1	HM	PT-3	No	1	HM	PT-3	1	
D159A	CR11	159A	965	2150			1	HM	PT-3	No	1	HM	PT-3	1	
D160	CR11	160	965	2032			5	HM	PT-5	Yes	1	HM	PT-5	1	
D160A	160	160A	915	2032			1	HM	PT-5	No	1	HM	PT-5	1	
D160B	CR11	160B	965	2150			1	HM	PT-5	No	1	HM	PT-5	1	
D166	CR12	166	965	2032			5	HM	PT-3	Yes	1	HM	PT-3	1	
D168	CR12	168	965	2032			5	HM	PT-3	Yes	1	HM	PT-3	1	
D170	CR12	170	965	2032			5	HM	PT-3	Yes	1	HM	PT-3	1	
D172	CR12	172	965	2032			5	HM	PT-3	Yes	1	HM	PT-3	1	
D-CR6	CR2	CR6	2360	2134			2	ALUM	ANOD	Yes	1	ALUM	ANOD	1	ELECTROMAGNETIC HOLDOPEN DEVICE FOR BOTH DOORS
D-CR10	CR10	CR6	2360	2134			2	ALUM	ANOD	Yes	1	ALUM	ANOD	1	ELECTROMAGNETIC HOLDOPEN DEVICE FOR BOTH DOORS
DV01.1		V01	1005	2146			2	ALUM	ANOD	Yes	2	ALUM	ANOD	2	
DV01.2		V01	1005	2146			2	ALUM	ANOD	Yes	2	ALUM	ANOD	2	
DV01.3	01	V01	1000	2150			2	ALUM	ANOD	Yes	2	ALUM	ANOD	2	
DV01.4	01	V01	1000	2150			2	ALUM	ANOD	Yes	2	ALUM	ANOD	2	

Grand total: 41

DOOR SCHEDULE – ALTERNATE PRICE

ST. CLAIR CATHOLIC SCHOOL BOARD
OUR LADY OF FATIMA

WILSON DIAZ ARCHITECTS INCORPORATED

Door No.	From Room: Number	To Room: Number	Rebate		Door				Frame				Comments
			Width	Height	Type	Material	Finish	Glass	Type	Material	Finish	Profile	
D112.e	CR4	112	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D113.3.e	113	CR10	915	2032	3	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D114.e	CR4	114	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D116.e	CR4	116	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D122.e	CR3	122	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEANSURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D124.e	CR2	124	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D125.e	CR12	125	915	2032	1	HM	PT-3	No	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D126.e	CR5	126	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D128.e	CR5	128	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D130.e	CR5	130	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D133.e	CR5	133	915	2134	1	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D134.e	CR5	134	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D136.e	CR5	136	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D138.e	CR5	138	915	2032	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D154.e	CR10	154	915	2134	5	HM	PT-3	Yes	EX	EX	PT-3	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D162.e	CR11	162	915	2134	5	HM	PT-6	Yes	EX	EX	PT-6	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D162A.e	162	162A	915	2134	1	HM	PT-6	No	EX	EX	PT-6	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D162B.e	162	162B	762	2032	1	HM	PT-6	No	EX	EX	PT-6	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D164.e	CR11	164	915	2134	5	HM	PT-4	Yes	EX	EX	PT-4	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D164A.e	164	164A	915	2134	1	HM	PT-4	No	EX	EX	PT-4	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.
D164B.e	164	164B	762	2032	1	HM	PT-4	No	EX	EX	PT-4	EX	NEW DOORS TO GO IN AN EXISITNG FRAMES. CONTRACTOR TO MEASURE DOOR SIZE ON SITE. REUSE EXISTING LOCK AND LATCH SET.

Grand total: 21

NOTE: NEW DOOR IN EXISITNG FRAMES IN NORTH WING CLASSROOMS AS ALTERNATE PRICE.

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
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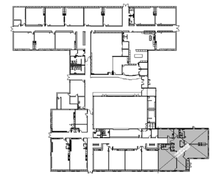

KEY PLAN

NOTES

1. G.C. TO SITE VERIFY ALL DOOR DIMENSIONS.

LEGEND

NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
LICENCE
4000

PROJECT TITLE

OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE

SCHEDULES

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:47:58 PM	TJV/PC	A1000
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		

ROOM FINISH SCHEDULE — DATE – JANUARY 2020

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD
LADY OF FATIMA — *OUR*

WILSON DIAZ ARCHITECTS INCORPORATED

Number	Name	Floor		Wall Finish								Ceiling Material	Ceiling Finish	Comments
				North		East		South		West				
		Floor Finish	Base Finish	Wall Material North	Wall Finish North	Wall Material East	Wall Finish East	Wall Material South	Wall Finish South	Wall Material West	Wall Finish West			
01	ATRIUM	PCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	EXP. & GYP.	PT	
100	RECEPTION	TG	RUB	GYP	PT	GYP	PT	–	–	BLK.	PT	ACT. & GYP.	PT	ALTERNATE PRICING
100A	VP. OFFICE	VCT	RUB	GYP	PT	–	–	BLK.	PT	GYP & BLK.	PT	ACT	–	
102	PRINC.	VCT	RUB	GYP	PT	–	–	GYP	PT	GYP	PT	ACT	–	
103	WORK ROOM	VCT	RUB	BLK.	PT	–	–	GYP	PT	BLK.	PT	ACT	–	ALTERNATE PRICING
104	STAFF ROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	GYP & BLK.	PT	ACT	–	ALTERNATE PRICING
104A	WR	VCT	RUB	BLK.	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
104B	WR	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
105	MEETING RM	VCT	RUB	BLK.	PT	–	–	BLK.	PT	–	–	ACT	–	
109	LEARNING COMMONS	TG	RUB	BLK.	PT	GYP & BLK.	PT	GYP	PT	BLK.	PT	ACT2 & GYP.	PT	ALTERNATE PRICING
109A	STUDY RM.	TG	RUB	BLK.	PT	BLK.	PT	GYP	PT	BLK.	PT	ACT	–	ALTERNATE PRICING
109B	STUDY RM.	TG	RUB	GYP	PT	BLK.	PT	GYP	PT	BLK.	PT	ACT	–	ALTERNATE PRICING
109C	STORAGE	TG	RUB	GYP	PT	GYP & BLK.	PT	GYP	PT	GYP	PT	ACT	–	ALTERNATE PRICING
112	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
113	GYMNASIUM	CSH	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	EXP.	–	
113A	GYM STOR.	EXP. CONC.	RUB	GYP. & BLK.	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
113B	CHAIR STORAGE	EXP. CONC.	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
113C	CHANGE RM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
113D	CHANGE RM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
114	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
115	CUST.	EX.	RUB	BLK.	PT	BLK.	PT	GYP	PT	GYP	PT	ACT	–	
116	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
117	WC	PCT	RUB	BLK.	PT	GYP	PT	GYP	PT	GYP	PT	GYP.	PT	
118	WR	PCT	RUB	GYP	PT	BLK.	PT	BLK.	PT	BLK.	PT	GYP.	PT	
119	WR	PCT	RUB	BLK.	PT	GYP	PT	GYP	PT	GYP	PT	GYP.	PT	
120	WR	PCT	RUB	BLK.	PT	BLK.	PT	GYP	PT	BLK.	PT	GYP.	PT	
122	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
124	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
125	SPRINKLER	EXP. CONC.	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
126	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
128	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
130	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
132	RESOURCE	VCT	RUB	BLK.	PT	BLK.	PT	GYP & BLK.	PT	BLK.	PT	ACT	–	
134	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
136	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
138	CLASSROOM	VCT	RUB	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
150	MECHANICAL	EX.	EX.	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	EXP.	–	
150A	ELECTRICAL	EX.	EX.	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	EXP.	–	
150B	MECH.	EX.	EX.	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	EXP.	–	
154	RESOURCE	VCT	RUB	BLK.	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
156	WR	PCT	RUB	TILE & GYP	PT	TILE & GYP.	PT	TILE & GYP.	PT	TILE & GYP	PT	GYP.	PT	
157	WR	PCT	RUB	GYP	PT	TILE & GYP.	PT	TILE & GYP.	PT	TILE & GYP	PT	GYP.	PT	
159	STORAGE	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
159A	STAFF WR	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
160	FDK CLASSROOM	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
160A	WR	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
160B	STAFF WR	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
162	FDK CLASSROOM	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
164	FDK CLASSROOM	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
164A	CLOSET	VCT	RUB	GYP	PT	BLK.	PT	GYP	PT	GYP	PT	ACT	–	
166	CLASSROOM	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
168	CLASSROOM	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
170	CLASSROOM	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
172	CLASSROOM	VCT	RUB	GYP	PT	GYP	PT	GYP	PT	GYP	PT	ACT	–	
CR2	CORRIDOR	PCT	PCT	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
CR3	CORRIDOR	PCT	PCT	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
CR4	CORRIDOR	PCT	PCT	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
CR5	CORRIDOR	PCT	PCT	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
CR6	CORRIDOR	PCT	PCT	BLK.	PT	BLK.	PT	BLK.	PT	BLK.	PT	ACT	–	
CR10	CORRIDOR	PCT	PCT	BLK.	PT	BLK.	PT	BLK.	PT	GYP	PT	ACT	–	
CR12	CORRIDOR	PCT	PCT	GYP	PT	GYP	PT	TILE & GYP.	PT	GYP	PT	ACT. & GYP.	PT	
V01	VESTIBULE	PCT	PCT	BLK.	PT	–	–	BLK.	PT	–	–	GYP.	PT	

2

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KEY PLAN

NOTES

LEGEND

N NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
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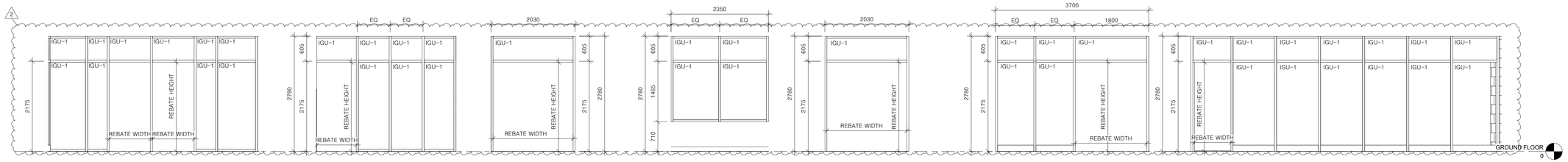
4000

PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
ROOM FINISH SCHEDULE

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:48:07 PM	TJV/PC	A1001
SCALE	CHECKED BY	
	RRW	
PROJECT No.		
1901		



W7 VEST. ENTRANCE
SCALE 1 : 50

W6 MEETING ROOM
SCALE 1 : 50

W5 GYM ENTRANCE 1
SCALE 1 : 50

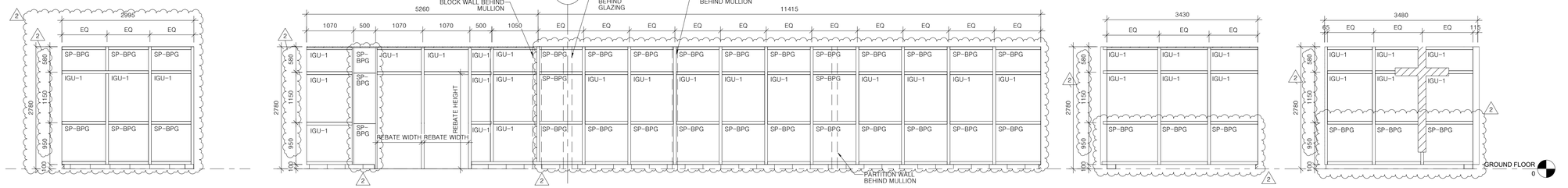
W4 GYM WINDOW
SCALE 1 : 50

W3 GYM ENTRANCE 2
SCALE 1 : 50

W2 CONFERENCE ROOM
SCALE 1 : 50

W1 RECEPTION
SCALE 1 : 50

INTERIOR ALUMINUM FRAMED CURTAIN WALL ELEVATIONS

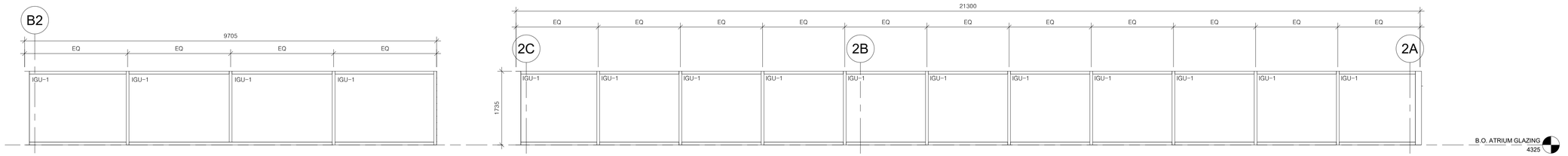


W11 STAFF ROOM
SCALE 1 : 50

W10 WORK ROOM
SCALE 1 : 50

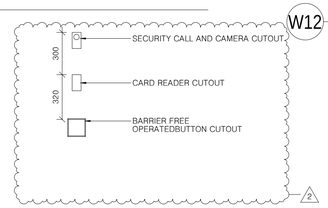
W9 MEETING ROOM 2
SCALE 1 : 50

W8 MEETING ROOM 1
SCALE 1 : 50

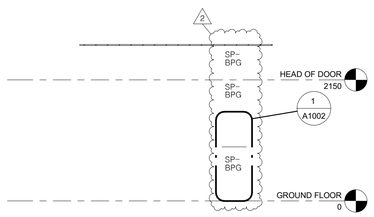


W13 WEST WINDOW @ ATTRIUM
SCALE 1 : 50

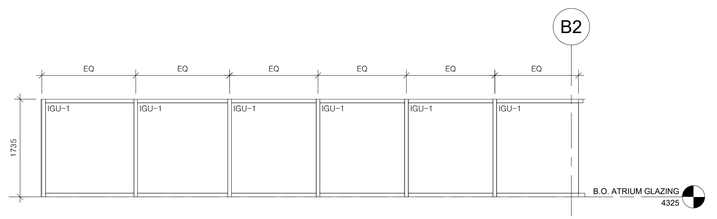
W12 NORTH WINDOW @ ATRIUM
SCALE 1 : 50



1 FRONT ENTRY CONTROL PANEL
SCALE 1 : 20



W15 VESTIBULE DOORS
SCALE 1 : 50



W14 EAST WINDOW @ ATRIUM
SCALE 1 : 50

EXTERIOR ALUMINUM FRAMED CURTAIN WALL ELEVATIONS

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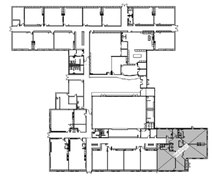

KEY PLAN

NOTES

LEGEND

OG – OBSECURE GLAZING SPANDREL PANEL
SP – SPANDREL PANEL

N NUMBER INDICATES ADDENDUM #

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	05/03/2020	ADDENDUM 002	2
1	19/02/2020	ISSUED FOR TENDER & PERMIT	

ONTARIO ASSOCIATION OF ARCHITECTS
RANDY R. WILSON
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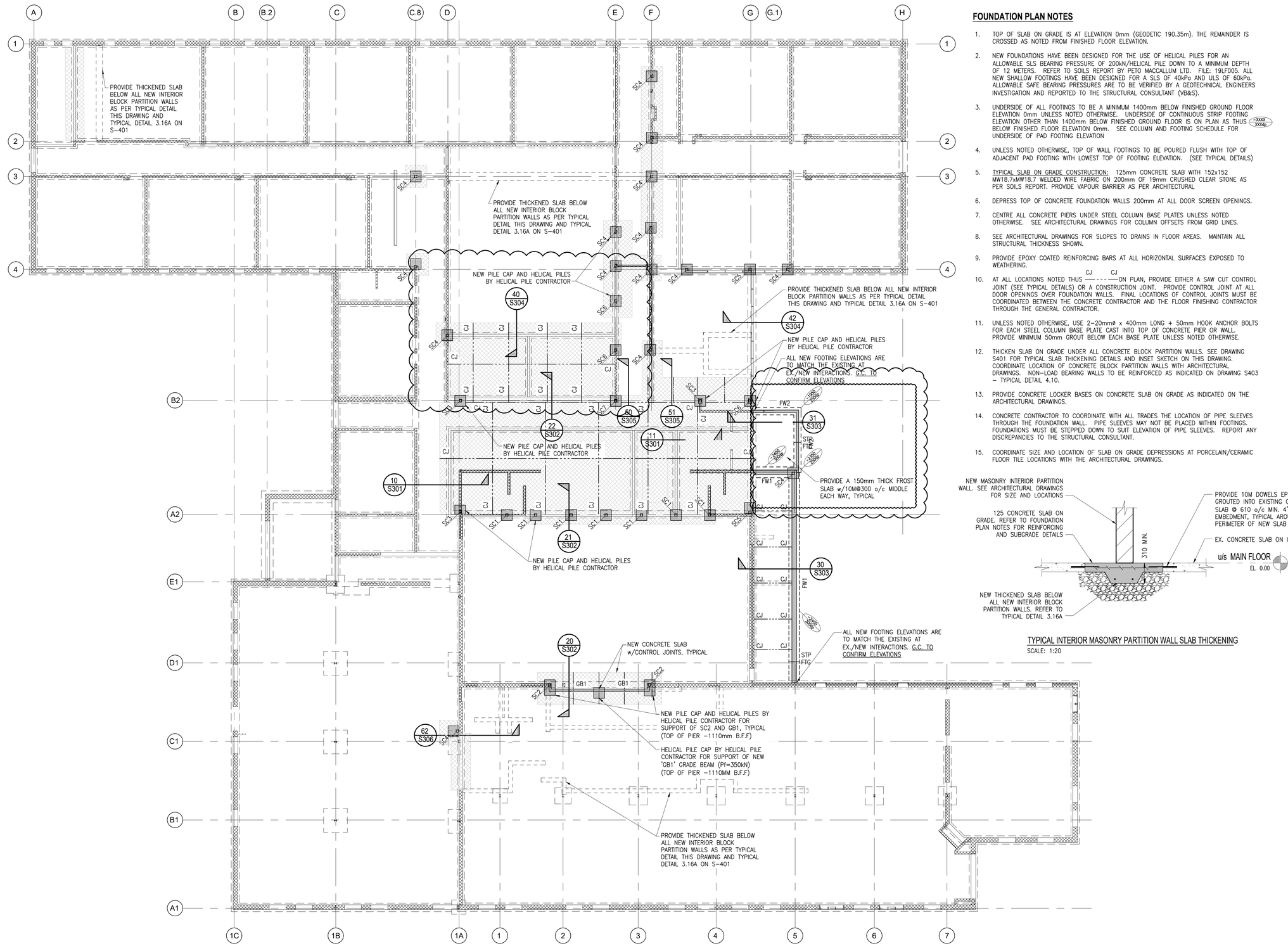
PROJECT TITLE
OUR LADY OF FATIMA - PHASE 4

DRAWING TITLE
GLAZING ELEVATIONS

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:48:24 PM	TJV	A1002
SCALE: As indicated	CHECKED BY: RRW	
PROJECT No.: 1901		



FOUNDATION PLAN
SCALE=1:150

FOUNDATION PLAN NOTES

1. TOP OF SLAB ON GRADE IS AT ELEVATION 0mm (GEODETIC 190.35m). THE REMAINDER IS CROSSED AS NOTED FROM FINISHED FLOOR ELEVATION.
2. NEW FOUNDATIONS HAVE BEEN DESIGNED FOR THE USE OF HELICAL PILES FOR AN ALLOWABLE SLS BEARING PRESSURE OF 200kN/HELICAL PILE DOWN TO A MINIMUM DEPTH OF 12 METERS. REFER TO SOILS REPORT BY PETO MACCALLUM LTD. FILE: 19LF005. ALL NEW SHALLOW FOOTINGS HAVE BEEN DESIGNED FOR A SLS OF 40kPa AND ULS OF 60kPa. ALLOWABLE SAFE BEARING PRESSURES ARE TO BE VERIFIED BY A GEOTECHNICAL ENGINEERS INVESTIGATION AND REPORTED TO THE STRUCTURAL CONSULTANT (VB&S).
3. UNDERSIDE OF ALL FOOTINGS TO BE A MINIMUM 1400mm BELOW FINISHED GROUND FLOOR ELEVATION 0mm UNLESS NOTED OTHERWISE. UNDERSIDE OF CONTINUOUS STRIP FOOTING ELEVATION OTHER THAN 1400mm BELOW FINISHED GROUND FLOOR IS ON PLAN AS THUS (XXXX / XXXdp) BELOW FINISHED FLOOR ELEVATION 0mm. SEE COLUMN AND FOOTING SCHEDULE FOR UNDERSIDE OF PAD FOOTING ELEVATION
4. UNLESS NOTED OTHERWISE, TOP OF WALL FOOTINGS TO BE POURED FLUSH WITH TOP OF ADJACENT PAD FOOTING WITH LOWEST TOP OF FOOTING ELEVATION. (SEE TYPICAL DETAILS)
5. TYPICAL SLAB ON GRADE CONSTRUCTION: 125mm CONCRETE SLAB WITH 152x152 MW18.7xMW18.7 WELDED WIRE FABRIC ON 200mm OF 19mm CRUSHED CLEAR STONE AS PER SOILS REPORT. PROVIDE VAPOUR BARRIER AS PER ARCHITECTURAL
6. DEPRESS TOP OF CONCRETE FOUNDATION WALLS 200mm AT ALL DOOR SCREEN OPENINGS.
7. CENTRE ALL CONCRETE PIERS UNDER STEEL COLUMN BASE PLATES UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR COLUMN OFFSETS FROM GRID LINES.
8. SEE ARCHITECTURAL DRAWINGS FOR SLOPES TO DRAINS IN FLOOR AREAS. MAINTAIN ALL STRUCTURAL THICKNESS SHOWN.
9. PROVIDE EPOXY COATED REINFORCING BARS AT ALL HORIZONTAL SURFACES EXPOSED TO WEATHERING.
10. AT ALL LOCATIONS NOTED THUS CJ - - - - CJ ON PLAN, PROVIDE EITHER A SAW CUT CONTROL JOINT (SEE TYPICAL DETAILS) OR A CONSTRUCTION JOINT. PROVIDE CONTROL JOINT AT ALL DOOR OPENINGS OVER FOUNDATION WALLS. FINAL LOCATIONS OF CONTROL JOINTS MUST BE COORDINATED BETWEEN THE CONCRETE CONTRACTOR AND THE FLOOR FINISHING CONTRACTOR THROUGH THE GENERAL CONTRACTOR.
11. UNLESS NOTED OTHERWISE, USE 2-20mmø x 400mm LONG + 50mm HOOK ANCHOR BOLTS FOR EACH STEEL COLUMN BASE PLATE CAST INTO TOP OF CONCRETE PIER OR WALL. PROVIDE MINIMUM 50mm GROUT BELOW EACH BASE PLATE UNLESS NOTED OTHERWISE.
12. THICKEN SLAB ON GRADE UNDER ALL CONCRETE BLOCK PARTITION WALLS. SEE DRAWING S401 FOR TYPICAL SLAB THICKENING DETAILS AND INSET SKETCH ON THIS DRAWING. COORDINATE LOCATION OF CONCRETE BLOCK PARTITION WALLS WITH ARCHITECTURAL DRAWINGS. NON-LOAD BEARING WALLS TO BE REINFORCED AS INDICATED ON DRAWING S403 - TYPICAL DETAIL 4.10.
13. PROVIDE CONCRETE LOCKER BASES ON CONCRETE SLAB ON GRADE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
14. CONCRETE CONTRACTOR TO COORDINATE WITH ALL TRADES THE LOCATION OF PIPE SLEEVES THROUGH THE FOUNDATION WALL. PIPE SLEEVES MAY NOT BE PLACED WITHIN FOOTINGS. FOUNDATIONS MUST BE STEPPED DOWN TO SUIT ELEVATION OF PIPE SLEEVES. REPORT ANY DISCREPANCIES TO THE STRUCTURAL CONSULTANT.
15. COORDINATE SIZE AND LOCATION OF SLAB ON GRADE DEPRESSIONS AT PORCELAIN/CERAMIC FLOOR TILE LOCATIONS WITH THE ARCHITECTURAL DRAWINGS.

TYPICAL INTERIOR MASONRY PARTITION WALL SLAB THICKENING
SCALE: 1:20

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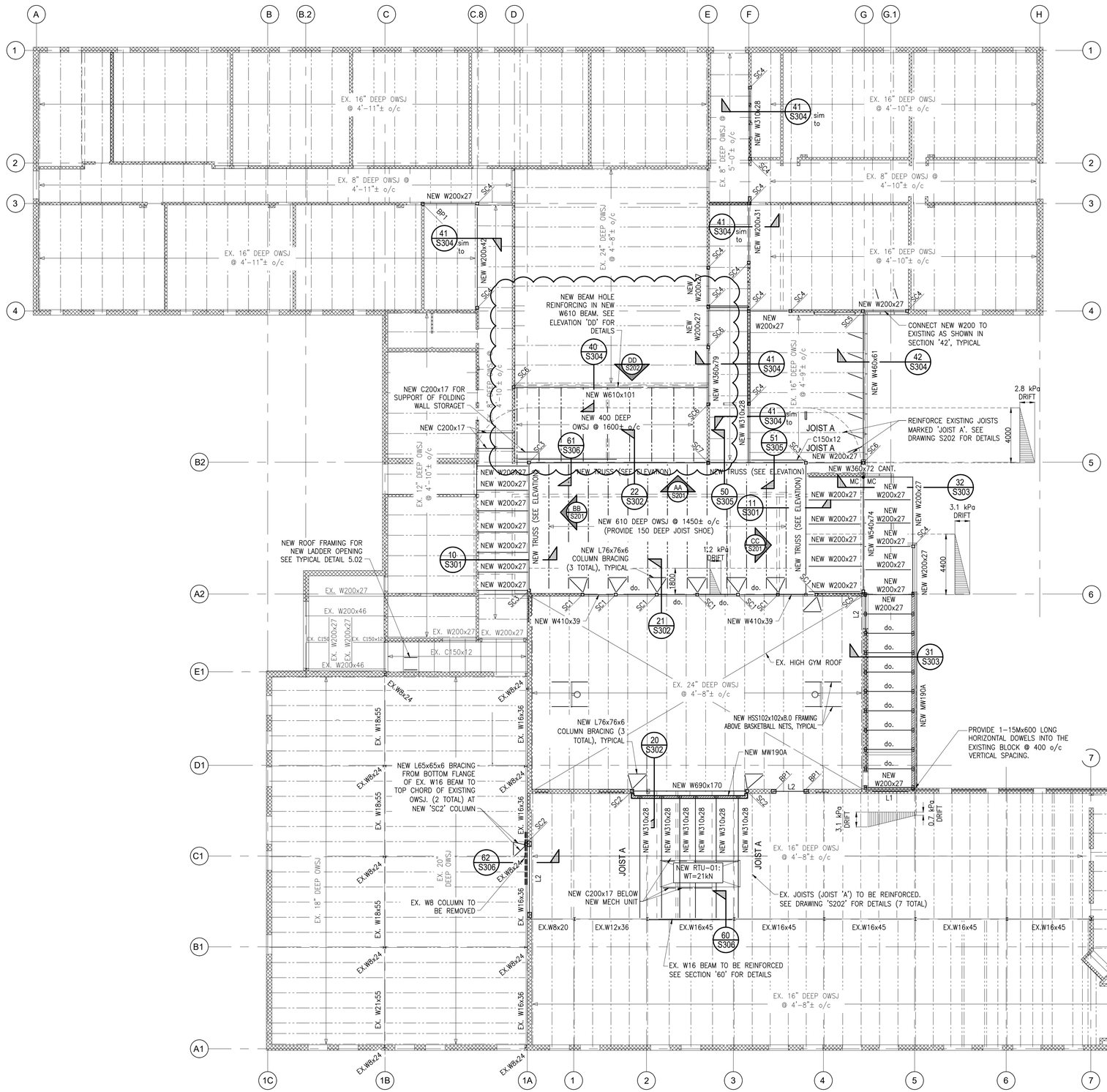
LEGEND

Date	Description	No.
JAN 17, 2020	ISSUED FOR 90% REVIEW	1
FEB 13, 2020	ISSUED FOR PERMIT AND TENDER	2
FEB 26, 2020	ADDENDUM #1	3
MAR 4, 2020	ISSUED FOR ADDENDUM #2	4

PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
FOUNDATION PLAN

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S100
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



ROOF FRAMING PLAN
SCALE=1:150

MAIN ROOF FRAMING PLAN NOTES

1. UNDERSIDE OF MAIN ROOF STEEL DECK AT +3440 AT HIGH POINT. SEE ARCHITECTURAL DRAWINGS FOR ALL ROOF ELEVATIONS
2. TOP OF STEEL BEAM AT UNDERSIDE OF SLOPING STEEL ROOF DECK UNLESS NOTED ON PLAN AS THUS ⌐XXX┘ BELOW UNDERSIDE OF SLOPING STEEL ROOF DECK. TOP OF STEEL ELEVATION SHOWN ON PLAN ASSUMES 100mm DEEP JOIST SHOE.
3. STRUCTURAL STEEL IS TO BE SLOPED TO ACHIEVE SLOPES TO ROOF DRAINS. ROOF SLOPES ARE SHOWN ON PLAN AS THUS ±XXX WHICH INDICATES A SPOT ELEVATION FROM HIGH POINT OF STEEL. CO-ORDINATE THE ROOF SLOPES WITH THE ARCHITECTURAL DRAWINGS.
4. TYPICAL ROOF CONSTRUCTION: 38mm STEEL ROOF DECK SUPPORTED BY STEEL JOISTS OR STEEL BEAMS SPACED AS SHOWN ON PLAN. STEEL FABRICATOR TO DESIGN STEEL DECK THICKNESS BASED ON LOADS INDICATED ON PLAN.
5. ADDITIONAL SNOW LOAD IS INCLUDED AS "DRIFT" ON PLAN. SNOW DRIFT LOADS ARE IN ADDITION TO THE BASIC SNOW LOADS INDICATED ON PLAN. SNOW DRIFT LOADS ARE CUMULATIVE.
6. ROOFTOP MECHANICAL UNITS ARE SHOWN ON PLAN. COODINATE LOCATION, SIZE AND WEIGHT OF ALL ROOFTOP MECHANICAL UNITS WITH THE MECHANICAL DRAWINGS. FRAME PERIMETER OF EACH ROOFTOP MECHANICAL UNIT WITH C150x12 SUPPORT CHANNELS. SEE TYPICAL DETAILS FOR FRAMING REQUIRED AROUND ALL OPENINGS IN STEEL ROOF DECK. DESIGN STEEL JOISTS TO RESIST THE WEIGHT OF MECHANICAL UNITS INCLUDING SNOW DRIFT AROUND UNITS.
7. DESIGN THE STEEL FLOOR DECK, STEEL ROOF DECK AND STEEL JOISTS, INCLUDING THEIR CONNECTION TO SUPPORTING ELEMENTS FOR AN UNFACTORED DIAPHRAGM SHEAR FORCE OF 6kN/m.
8. DESIGN THE STEEL ROOF DECK, STEEL JOISTS AND THEIR CONNECTION TO SUPPORTING MEMBERS FOR AN UNFACTORED UNIFORM UPLIFT PRESSURE OF 0.8kPa.
9. TIE JOISTS ARE INDICATED AS "TJ" AND IS SHOWN ON PLAN. EXTEND BOTH TOP AND BOTTOM CHORD MEMBERS AND CONNECT THEM TO THE COLUMN/WALL.
10. AT ALL LOCATIONS NOTED THUS →MC PROVIDE MOMENT CONNECTION FOR FULL MOMENT AND SHEAR CAPACITY OF THE STEEL BEAM SECTION UNLESS NOTED OTHERWISE IN THE STEEL BEAM SCHEDULE.
11. SEE ARCHITECTURAL DRAWINGS FOR COLUMN OFFSETS FROM GRID LINES.
12. SEE ARCHITECTURAL DRAWINGS FOR SLOPES TO DRAINS IN ROOF AREAS. VARY ELEVATION OF STRUCTURAL STEEL ROOF FRAMING AS INDICATED ON THIS PLAN TO ACHIEVE ROOF SLOPES SHOWN ON ARCHITECTURAL DRAWINGS.
13. THIS BUILDING RELIES ON THE ALL CONCRETE BLOCK WALLS AS THE LATERAL LOAD RESISTING SYSTEM. ALL WALLS INDICATED AS THUS ▭▭▭▭ ON PLAN ARE TO BE CONNECTED TO STEEL BUILDING COLUMNS.
14. NON-LOAD BEARING WALLS TO BE REINFORCED AS SHOWN IN TYPICAL DETAIL 4.10 ON DRAWING S410. PROVIDE TOP OF WALL SUPPORT AS SHOWN IN TYPICAL DETAIL 4.06 TO 4.08
15. JOIST DEPTH SHOWN ON PLAN IS THE JOIST DEPTH MEASURED AT THE POINT OF BEARING
16. UNLESS NOTED OTHERWISE ON PLAN AND IN THE LOAD BEARING LINTEL SCHEDULE ON DRAWING S102, PROVIDE STEEL LINTELS AS INDICATED ON DRAWING S304 FOR ALL CONCRETE BLOCK WALLS (LOAD BEARING AND NON-LOAD BEARING) AND BRICK VENEER.
17. PROVIDE A 'BP1' BEARING PLATE FOR ALL STEEL BEAMS AND JOISTS BEARING ON LOADING BEARING MASONRY WALLS UNLESS NOTED OTHERWISE ON PLAN, TYPICAL.
18. ALL LOAD BEARING MASONRY WALLS SUPPORT METAL DECK ARE TO HAVE A CONTINUOUS 75x6 THICK WELDPLATE w/ 12mmØx102 LONG ANCHORS w/ 50 HOOK @ 800 o/c (WP1), TYPICAL. THIS IS INDICATED ON PLAN BY THUS ——·····——·····——
19. ALL MASONRY LOAD BEARING WALLS AT TO EXTEND UP TIGHT TO THE u/s OF THE ROOF METAL DECK, TYPICAL AT ALL LOCATIONS UNLESS NOTED OTHERWISE ON PLAN.
20. FOR BASKETBALL NETS SUPPORTED FROM THE ROOF STRUCTURE PROVIDE HSS102x102 FRAMING SHOWN ON PLAN. FOR BASKETBALL NETS SUPPORTED FROM THE WALLS PLACE 2-20M BARSx2000 LONG IN EACH CORE AT EVERY SUPPORT BRACKET AND GROUT CORES SOLID, TYPICAL.
21. FOR ALL MECHANICAL DUCT OPENINGS THROUGH LOAD BEARING BLOCK WALLS PROVIDE LINTELS FOR THE FOLLOWING OPENING SIZES:

OPENING	LINTEL	No. Req'd
400 to 800	2-L90x75x6 LLV	45
800 to 1200	'L1'	4
1200 to 1800	'L2'	2

REFER TO TYPICAL DETAIL 5.01 FOR ALL NOTES AND DETAILS FOR LINTEL PLACEMENT.

22. ALL NEW BEAMS PLACED TIGHT TO u/s OF THE EXISTING ROOF DECK TO HAVE THE TOP FLANGE SCREWED INTO THE LOW FLUTES @ 400 o/c EACH SIDE, TYPICAL. PROVIDE 'BP1' BEARING PLATES ON EXISTING BLOCK WALLS AT ALL NEW BEAM BEARING LOCATIONS. GROUT TOP 3 BLOCK COURSES SOLID BELOW ALL NEW BEARING PLATES.

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NOTES

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LEGEND

Date	Description	No.
JAN 17, 2020	ISSUED FOR 90% REVIEW	1
FEB 13, 2020	ISSUED FOR PERMIT AND TENDER	2
FEB 26, 2020	ADDENDUM #1	3
MAR 4, 2020	ISSUED FOR ADDENDUM #2	4

PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
ROOF FRAMING PLAN

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S101
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		

DESIGN LOAD DATA

FLOOR/ROOF LOCATION	TYPE OF LOAD			
	DEAD		LIVE	
	CONSTRUCTION	VALUE (kPa)	TYPE	VALUE (kPa)
GENERAL ROOF	FELT AND GRAVEL INSULATION GYPSUM BOARD 40 STEEL DECK/76 STEEL DECK STRUCTURAL STEEL M&E CEILING ALLOWANCE ROOFTOP MECH UNITS PAVER	0.35 0.10 0.15 0.10/0.15 0.25 0.25 0.25 1.45/1.50 SEE MECH. DWG. 1.0 kPa	SNOW & RAIN	1.38 (SNOW) + DRIFT
MECHANICAL FLOOR AREA	FLOOR FINISH 200 PRECAST PLANKS STRUCTURAL STEEL M&E CEILING MECHANICAL UNITS ON 100mm DEEP HOUSEKEEPING SLABS. (SEE TYPICAL DETAIL 3.33) COORDINATE WITH MECH.	1.20 3.05 0.25 0.50 5.00 + UNITS SEE MECH. DWG.	OCCUPANCY	3.60
CANOPY ROOF	FELT AND GRAVEL INSULATION GYPSUM BOARD 76 STEEL DECK STRUCTURAL STEEL M&E CEILING ALLOWANCE	0.35 0.10 0.15 0.15 0.25 0.25 0.25 1.50	SNOW & RAIN	1.38 (SNOW) + DRIFT

OTHER ENVIRONMENTAL LOADS

WIND PRESSURE

$q_{1/50}$ 0.43 kPa
Iw 1.15

SEISMIC DATA

Sa(0.2)	0.160
Sa(0.5)	0.092
Sa(1.0)	0.050
Sa(2.0)	0.015
PGA	0.088
Ie	1.3

SNOW/ RAIN LOAD:

Ss 1.0
Sr 0.4

Is 1.15

LATERAL EARTH PRESSURE

K 0.40

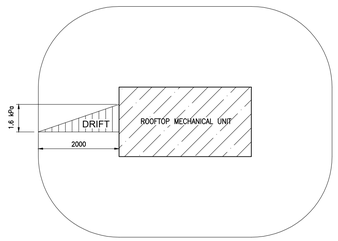
SOIL CLASSIFICATION

CLASS E: SOFT SOIL

SEISMIC HAZARD INDEX: IeFaSa(0.2) = 0.44

NOTES:

1. ALL LOADS SHOWN ABOVE APPLY TO THE AREAS OF THE BUILDING AS INDICATED (REFERENCE TO ARCHITECTURAL PLANS IS NECESSARY TO PROPERLY READ THIS TABLE), AND ARE BASED ON AND INTERPRETED FROM THE LATEST VERSION OF THE ONTARIO BUILDING CODE. USE THESE LOADS IN DESIGN OF BUILDING COMPONENTS AS REQUIRED.
2. ADDITIONAL SNOW PILE UP IS INCLUDED AS A "DRIFT" DIAGRAM ON ROOF FRAMING PLAN. SNOW DRIFT LOADS ARE IN ADDITION TO THE BASIC SNOW LOADS INDICATED. OVERLAPPING SNOW DRIFT LOADS ARE CUMULATIVE.
3. DEAD LOAD SHOWN IN TABLE IS EXCLUSIVE OF M+E EQUIPMENT. MECHANICAL EQUIPMENT PLAN SIZES AND LOADS ARE SHOWN ON STRUCTURAL PLAN BASED ON THE LATEST INFORMATION AVAILABLE TO THE CONSULTANTS. REPORT ANY DISCREPANCIES BETWEEN CONTRACT DOCUMENTS TO THE CONSULTANTS FOR REVIEW.
4. SEE MECHNICAL DRAWINGS AND ARCHITECTURAL DRAWINGS FOR CONDENSER LOCATIONS AND LOADS.
5. PAVER LOAD: 1.15kPa (24psf), SEE ARCHITECTURAL FOR PAVER LOCATIONS



TYPICAL DRIFT AROUND ROOFTOP MECHANICAL UNITS

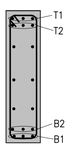
1. DRIFT LOAD SHOWN TO BE APPLIED AROUND ALL ROOFTOP MECHANICAL UNITS. NOTE THAT DRIFT LOADS ARE CUMULATIVE
2. SEE ROOF FRAMING PLANS FOR LOCATION OF ROOFTOP MECHANICAL UNITS. REFER ALSO TO NOTE #10 ON ROOF FRAMING PLAN NOTES.

GRADE BEAM SCHEDULE

BEAM MARK	GRADE BEAM DIMENSIONS	GRADE BEAM REINFORCING	BEAM STIRRUPS	COMMENTS
GB1	310x910 dp	T1=3-25M B1=3-25M 3-15M EACH FACE	10M @ 300 o/c	-

NOTES:

1. CONCRETE CONTRACTOR TO HAVE ALL REINFORCING REVIEWED BY STRUCTURAL CONSULTANT REPRESENTATIVE AND APPROVED PRIOR TO PLACING CONCRETE.
2. SUPPLY 30 MPa CONCRETE WITH 3" SLUMP ± 1", AIR ENTRAINED 6% ± 1%. REINFORCING STEEL YIELD TO BE 400 MPa
3. PROVIDE 35M SPACER BARS BETWEEN BAR LAYERS AT 1200 o/c AT BEAMS WHERE THERE IS MORE THAN ONE LAYER OF TOP OR BOTTOM STEEL.
4. LAP TOP BARS AT MID SPAN OF BEAMS WITH A CLASS 'B' LAP
5. LAP BOTTOM BARS AT SUPPORTS WITH A CLASS 'B' LAP
6. REFER TO TYPICAL DETAIL 3.19 FOR CONTINUOUS BEAM REINFORCING DETAIL.
7. HOOK ALL TOP BARS AT ENDS OF ALL BEAM LINES
8. PLACE 2-10M BARS EACH SIDE OF CAISSON, TYPICAL



T1 = TOP UPPER LAYER B1 = BOTTOM LOWER LAYER
T2 = TOP LOWER LAYER B2 = BOTTOM UPPER LAYER

FOUNDATION WALL AND STRIP FOOTING SCHEDULE

WALL MARK	WALL WIDTH AND TYPE	WALL REINFORCING	CONTINUOUS STRIP FOOTING SIZE	STRIP FOOTING REINFORCING	COMMENTS
~~FW1~~	~~385 CONC. WALL~~	~~2-20M T&B CONT~~	~~800x385 DEEP~~	~~SEE NOTE#1~~	
FW2	200 CONC. WALL	2-20M T&B CONT	600x250 DEEP	SEE NOTE#1	

NOTES:

1. UNLESS NOTED OTHERWISE IN SECTIONS AND DETAILS, PROVIDE 15M x 450mm LONG DOWELS STAGGERED FROM CONTINUOUS STRIP FOOTING TO CONCRETE FOUNDATION WALL.
2. UNLESS NOTED OTHERWISE IN SECTIONS AND DETAILS, PROVIDE DOWELS FROM CONCRETE FOUNDATION WALL TO MASONRY WALL TO MATCH VERTICAL WALL REINFORCING (SEE LOAD BEARING MASONRY WALL SCHEDULE ON DRAWING S1.3).
3. EXTEND CONTINUOUS CONCRETE STRIP FOOTING A MINIMUM OF 300mm PAST THE END OF THE FOUNDATION WALL.
4. POUR TOP OF CONTINUOUS STRIP FOOTING FLUSH WITH TOP OF ADJACENT PAD FOOTING (SEE TYPICAL DETAILS).

COLUMN AND FOOTING SCHEDULE

COLUMN MARK / COLUMN DATA		SC1	SC2	SC3	SC4	SC5	SC6	SC7
TOP OF STEEL - EX. GYM ROOF ELEVATION 6120mm								
TOP OF STEEL - NEW ATRIUM ROOF ELEVATION 5685mm								
TOP OF STEEL - EX. MAIN ROOF ELEVATION 3643mm		HSS 152x152x4.8	HSS 152x152x9.5	HSS 203x203x9.5	HSS 152x152x4.8	HSS 152x152x4.8	HSS 152x152x4.8	HSS 203x203x13
FINISHED FLOOR - GROUND LEVEL ELEVATION 0mm								
DISTANCE FROM FINISHED FLOOR TO U/S OF BASEPLATE		200	200	200	200	200	200	200
STEEL BASE PLATE (SQUARE U.N.O.)		300x16x300	300x16x300	450x19x450	300x16x300	300x16x300	300x16x300	450x19x450
ANCHOR BOLTS	SIZE	4-19mmø	4-19mmø	4-19mmø	4-19mmø	4-19mmø	4-19mmø	4-19mmø
	EMBEDMENT (mm)	450	450	450	450	450	450	450
	HOOK (mm)	50	50	50	50	50	50	50
SERVICE LOAD (kN)		DL=130 LL=90	DL=215 LL=175	DL=130 LL=150	DL=50 LL=45	DL=50 LL=75	DL=85 LL=150	DL=165 LL=200
HELICAL PILE CAP	SIZE (SQUARE U.N.O.)	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR
	REINFORCING	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR
HELICAL PILES		HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR	HELICAL FABRICATOR
NOTES		BRACE TOP OF COLUMN AT u/s ROOF DECK. SEE PLAN	BRACE TOP OF COLUMN AT u/s ROOF DECK. SEE PLAN					
COLUMN DATA / COLUMN MARK		SC1	SC2	SC3	SC4	SC5	SC6	SC7

LOAD BEARING MASONRY WALL SCHEDULE

WALL MARK	WALL TYPE	VERTICAL REINFORCING	HORIZONTAL REINFORCING	COMMENTS
MW190A	190 CONC BLOCK (f'_m=15MPa)	1-20M @ 800 VERT. (EVERY 4TH CORE)	- 9ga. LADDER @ 400 (EVERY 2ND COURSE) - 2-15M CONT. BOND BEAMS @ TOP AND MIDDLE OF WALL. SEE SECTIONS	-HORIZ. BARS PLACED IN CONTINUOUS LINTEL COURSE -SEE SECTIONS FOR ADDITIONAL REBAR

LOAD BEARING MASONRY WALL SCHEDULE NOTES:

1. ALL MASONRY WALLS SHOWN ON PLAN AS THUS ZZZZZZZZZ ARE LOAD BEARING (GRAVITY AND/OR LATERAL).
2. PROVIDE 2-15M VERTICAL IN CORE ADJACENT TO EACH SIDE OF ROUGH OPENINGS OR IN CORE ADJACENT TO BEARING PLATE OF STEEL LINTEL. VERTICAL REINFORCING IS TO BE INSTALLED CONTINUOUS FROM FOUNDATION WALL TO UNDERSIDE OF BEAM/STEEL DECK.
3. FULLY GROUT ALL REINFORCED CORES. (SEE NOTE #8)
4. FILL ALL CORES IN PIERS LESS THAN 600mm IN WIDTH SOLID WITH GROUT IN ADDITION TO THAT REQUIRED BY NOTE #2.
5. GROUT SOLID ALL CORES BELOW THE BEARING POINT OF ALL BEAMS, JOISTS OR LINTELS CONTINUOUS TO THE FOUNDATION.
6. SEE SECTIONS FOR ANY ADDITIONAL WALL REINFORCING STEEL.
7. PROVIDE MECHANICAL CONNECTION BETWEEN LOWER AND UPPER LIFTS OF VERTICAL REINFORCING.
8. ALL GROUT TO BE 15MPa WITH 10mm MAX. AGGREGATE SIZE AND 225mm±25mm SLUMP. ALL GROUTING TO CONFORM TO CSA/CAN3 A371-M84. PLACE GROUT IN "LOW LIFTS" (NOT MORE THAN 1500mm VERTICAL).

STEEL BEARING PLATE SCHEDULE

BASEPLATE MARK	PLATE SIZE	ANCHOR BOLTS	ANCHOR SPACING	COMMENTS
BP1	170Wx12x200L	2-13mmø x 300 LONG + 50 HOOK BOLTS	100	

STEEL BEARING PLATE SCHEDULE NOTES:

1. STEEL BEARING PLATES TO BE FABRICATED BY STRUCTURAL STEEL CONTRACTOR AND PLACED BY CONCRETE FORMING CONTRACTOR (CONCRETE WALL, BEAM OR COLUMN) OR THE MASONRY CONTRACTOR (CONCRETE BLOCK WALL).
2. LOCATION AND ELEVATION OF BEARING PLATES TO BE COORDINATED WITH STRUCTURAL STEEL SHOP DRAWINGS. BEAM OR JOIST TO BE SUPPORTED ON THE PLATE TO BE CENTRED ALONG THE LENGTH OF THE PLATE U.N.O.
3. DIMENSION OF PLATE NOTED IN PLATE SIZE COLUMN AS 'L' TO BE PLACED ALONG THE LENGTH OF THE WALL AND/OR ORIENTED ALONG THE LENGTH OF THE BEAM/JOIST - UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.
4. BEAM FLANGE OR JOIST SHOE TO BE FIELD WELDED DOWN TO TOP OF BEARING PLATE USING A MINIMUM 6mm FILLET WELD EACH SIDE OF BEAM/JOIST SHOE FOR THE ENTIRE LENGTH OF BEARING.
5. FOR BEARING PLATES PLACED ON CONCRETE BLOCK WALLS - GROUT SOLID THE CORES OF THE BLOCKS CONTAINING THE ANCHOR BOLTS OF THE PLATES CONTINUOUS TO THE TOP OF THE FOUNDATION WALL. GROUT SOLID THE BEAM/JOIST POCKETS AFTER FIELD WELDING
6. ANCHOR BOLTS SHOWN TO BE WELDED TO THE UNDERSIDE OF THE BEARING PLATE FOR TENSILE CAPACITY OF THE BOLT

LOAD BEARING MASONRY LINTEL SCHEDULE

MARK	SIZE	BEARING PLATE OR MINIMUM BEARING LENGTH	COMMENTS
L1	W200x31 + 10mm THICK CONT. PL	200	10mm THICK CONTINUOUS PLATE TO BE PLACED ON BOTTOM FLANGE OF BEAM TO SUPPORT BLOCK ABOVE. WIDTH OF PLATE TO MATCH BLOCK THICKNESS SUPPORTED ABOVE
L2	W410x46 + 10mm THICK CONT. PL (SEE SECTIONS AND COMMENTS)	200	10mm THICK CONTINUOUS PLATE FOR BLOCK SUPPORT.

LOAD BEARING LINTEL SCHEDULE NOTES:

1. ALL OPENINGS IN CONRETE BLOCK WALLS LARGER THAN 400mm IN WIDTH AND ALL OPENINGS IN BRICK VENEER REQUIRE A LINTEL OVER THE OPENING. IF NOT SPECIFICALLY INDICATED ON PLAN, SEE DRAWING S4.1 FOR REQUIRED LINTEL SIZE CORRESPONDING TO THE WALL WIDTH AND OPENING SIZE.
2. GROUT BLOCK SOLID BELOW BEARING POINT OF ALL LINTELS.
3. PROVIDE ONE 12mmø A325 ANCHOR BOLT x 400mm LONG w/ 50mm-90° HOOK FULLY WELDED TO THE UNDERSIDE OF STEEL LINTELS OR STEEL LINTEL BEARING PLATES BEARING ON MASONRY.
4. WELD ALL BACK TO BACK ANGLES AT 400mm o/c.
5. FILL ALL MASONRY AROUND LINTELS SOLID WITH MORTAR.
6. PROVIDE 15M WELDABLE REBAR DOWELS @ 400 o/c TO THE TOP FLANGE OF ALL LINTELS THAT ARE SUPPORTING MASONRY WALLS ABOVE, TYPICAL. GROUT ALL REINFORCED CORES ABOVE, TYPICAL

COLUMN AND PAD FOOTING SCHEDULE NOTES

1. FOR COLUMN OFFSETS FROM GRIDLINES - REFER TO ARCHITECTURAL DRAWINGS
2. FOR PLACEMENT OF CONCRETE HELICAL PILE CAPS AND ASSOCIATED HELICAL PILES - SEE HELICAL PILE CONTRACTOR DESIGN
3. FOR TIES IN ALL CONCRETE COLUMNS AND PIERS - SEE TYPICAL DETAIL 3.06
4. FOR ALL COLUMNS PLACED IN NEW OR EXISTING MASONRY BLOCK PROVIDE BLOCK TIES AS PER TYPICAL DETAIL 4.05.
5. FOR STRUCTURAL STEEL BASE PLATES - FIRST PLAN DIMENSION IS TO BE ORIENTED IN THE E-W DIRECTION U.N.O.
6. ALL COLUMN SPLICES ARE TO BE BELOW THE FLOOR LEVEL.

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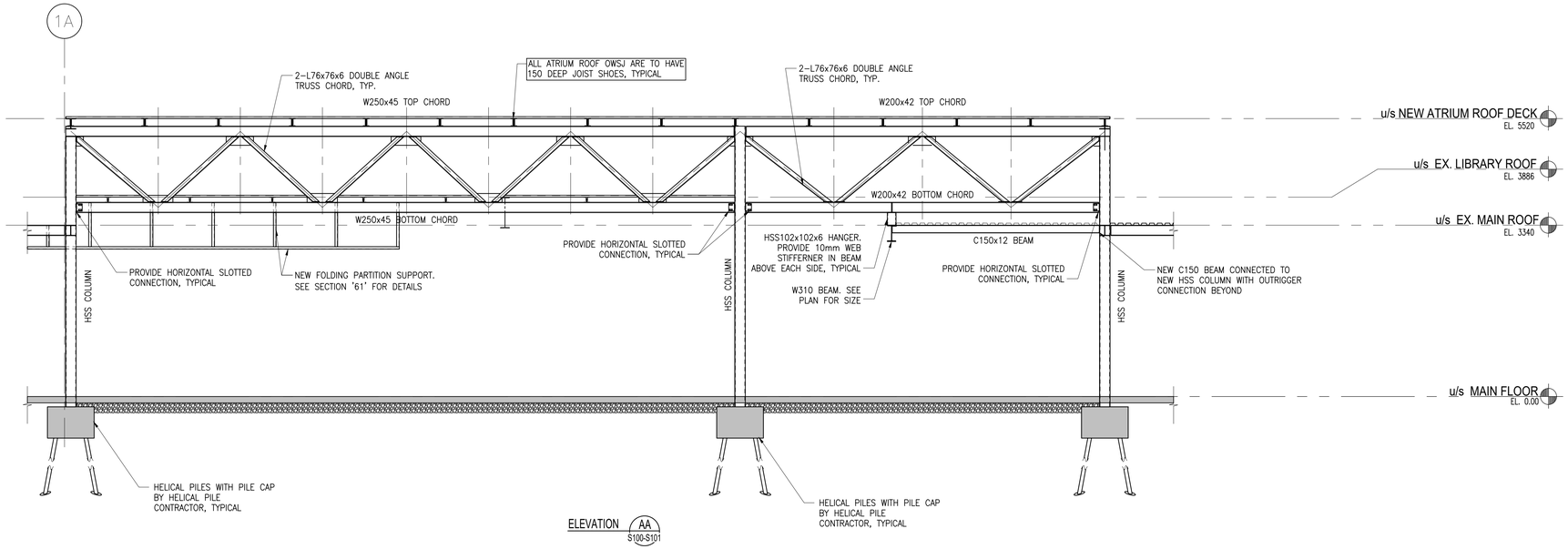
LEGEND

Date	Description	No.
JAN 17, 2020	ISSUED FOR 90% REVIEW	1
FEB 13, 2020	ISSUED FOR PERMIT AND TENDER	2
FEB 26, 2020	ADDENDUM #1	3
MAR 4, 2020	ISSUED FOR ADDENDUM #2	4

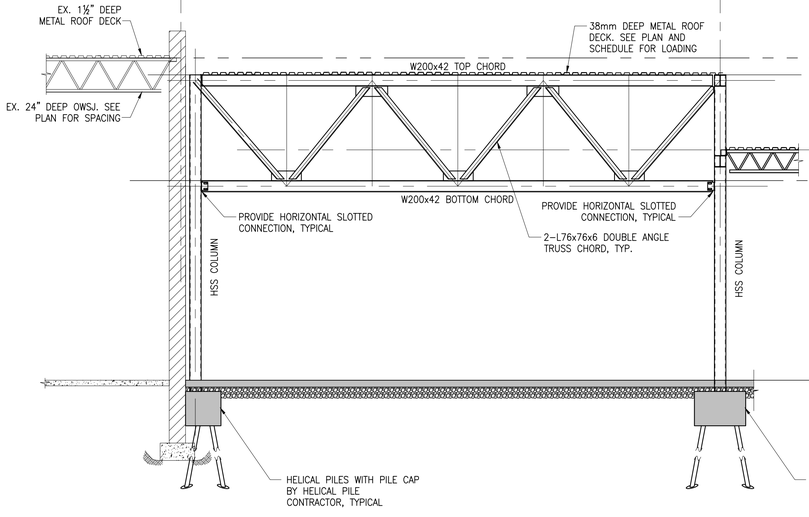
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
SCHEDULES

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S200
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



ELEVATION AA
S100-S101



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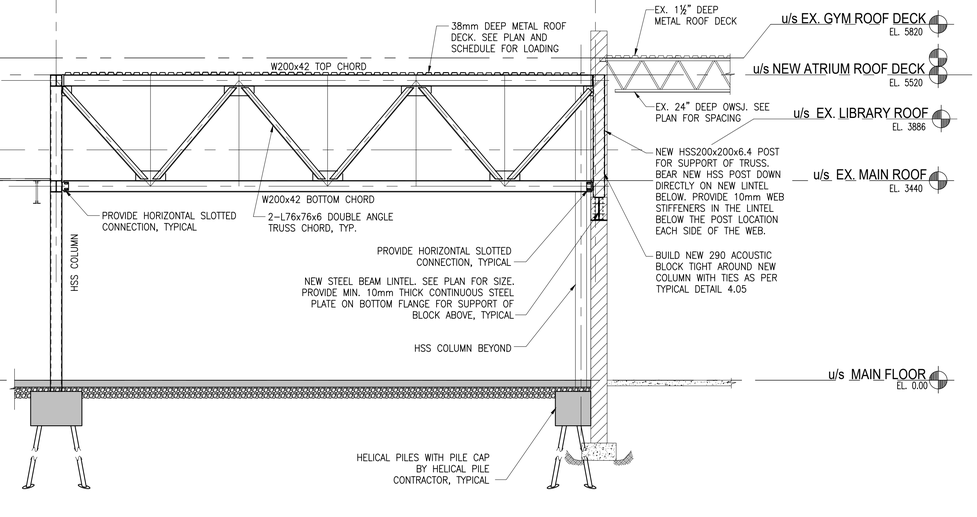

ELEVATION CC
S100-S101

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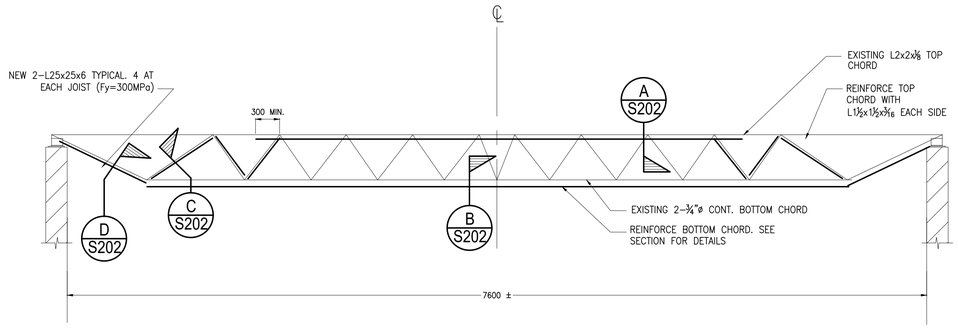
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
ELEVATIONS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S201
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		

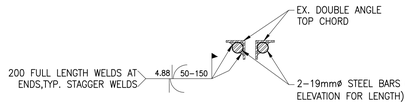


JOIST 'A' ELEVATION
SCALE: 1:25

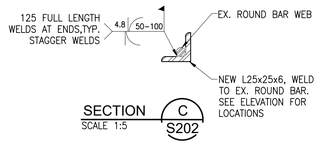
VB&S IS TO BE CONTACTED BY THE CONTRACTOR ONCE CONSTRUCTION HAS STARTED TO REVIEW ALL JOISTS TO BE REINFORCED. ALL JOISTS ARE TO BE MEASURED AND RECOREDED ON SITE BY VB&S PRIOR TO ANY REINFOFCING BEING ORDERED AND PLACED ON SITE.

JOIST REINFORCING NOTES:

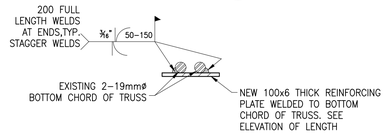
1. ALL JOIST MEMBERS SHOWN IN ELEVATION MARKED WITH A LINE SHOWN THUS ——— REQUIRE REINFORCING. SEE SECTIONS FOR TYPE OF REINFORCING.
2. REFER TO JOIST ELEVATIONS AND SECTIONS FOR REINFORCING INFORMATION.
3. WELDER TO TAKE CARE IN WELDING REINFORCING TO THE EXISTING CHORD MEMBERS TO AVOID BURNING THROUGH THE MATERIAL. IF A MEMBER IS DAMAGED DURING THE WELDING PROCESS, THE CONTRACTOR SHALL CONTACT VANBOXMEER & STRANGES IMMEDIATELY.
4. TOUCH UP ALL WELDS WITH 2 COATS OF ZINC RICH PAINT.
5. ALL NEW STRUCTURAL STEEL INCLUDING PLATES, BARS AND ANGLES TO BE G40.21 – GRADE 300W.
6. ALL WELDING TO CONFORM TO:
   i) CSA STANDARD W59-03 "WELDED STEEL CONSTRUCTION" (METAL ARC WELDING).
   ii) CSA STANDARD W55.3-1965(R2008) "RESISTANCE WELDING QUALIFICATION CODE".
   iii) CSA STANDARD W47.1-03 "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL"
7. AS PER CSA W47.1-03, THE STRUCTURAL STEEL FABRICATOR TO BE CERTIFIED BY THE CANADIAN WELDING BUREAU – DIVISION 2.1. ALL STRUCTURAL FIELD WELDING TO BE REFORMED BY A CANADIAN WELDING BUREAU CERTIFIED WELDER.



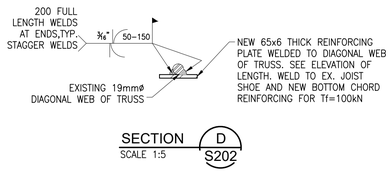
SECTION A S202
SCALE 1:5



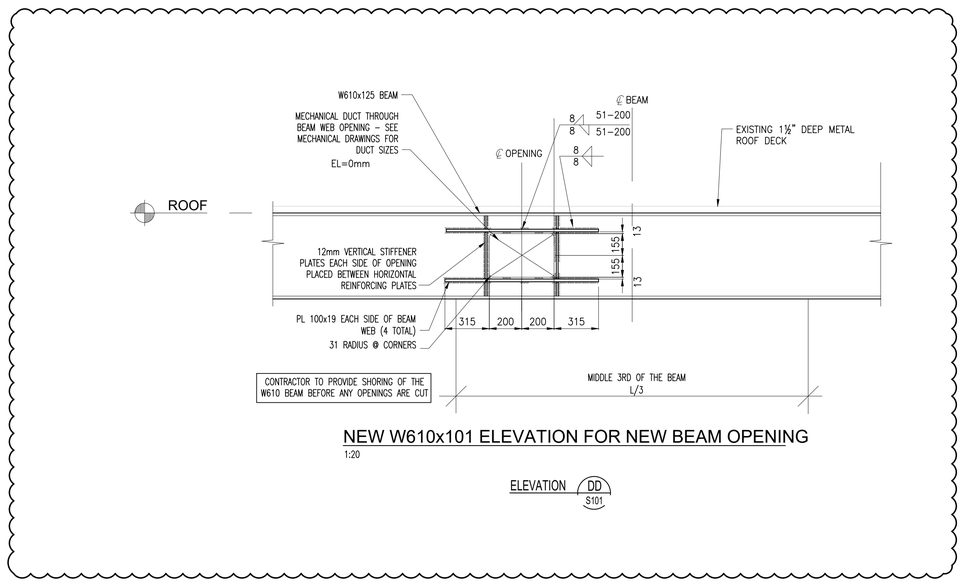
SECTION C S202
SCALE 1:5



SECTION B S202
SCALE 1:5



SECTION D S202
SCALE 1:5



NEW W610x101 ELEVATION FOR NEW BEAM OPENING
1:20

ELEVATION DD S101

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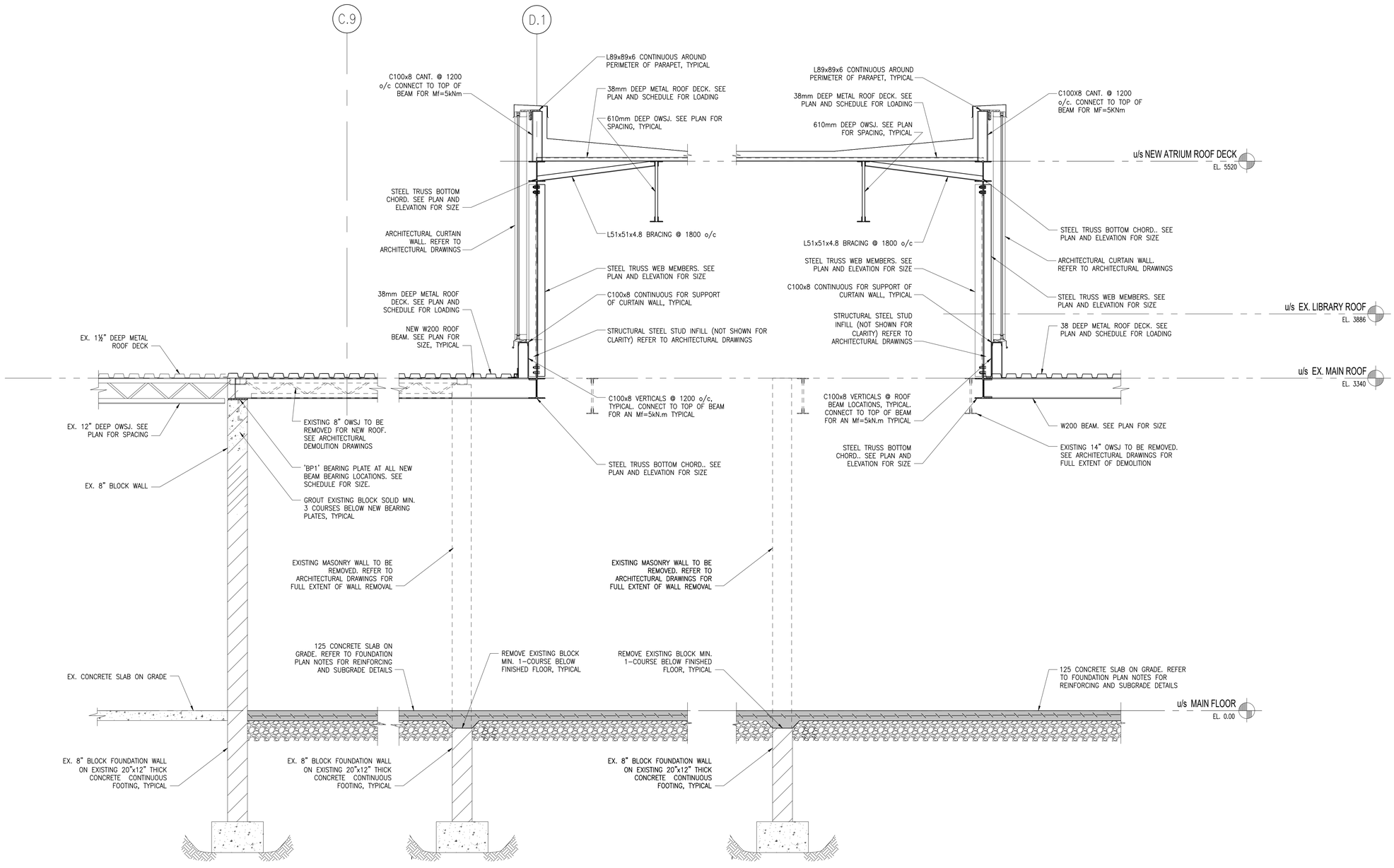
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
JOIST REINFORCING

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S202
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



SECTION 10 — S101
1:20

SECTION 11 — S101
1:20

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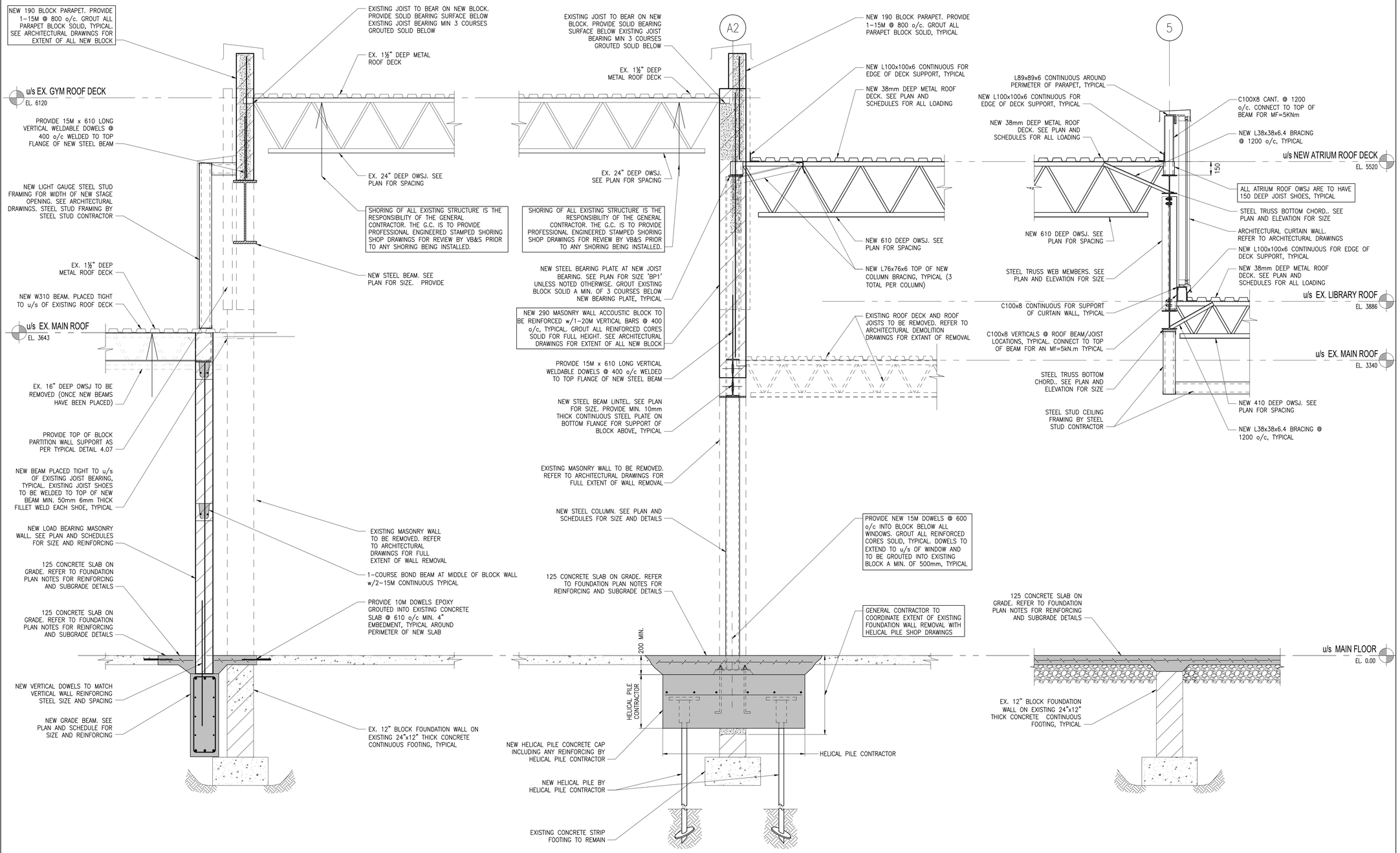
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
SECTIONS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S301
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



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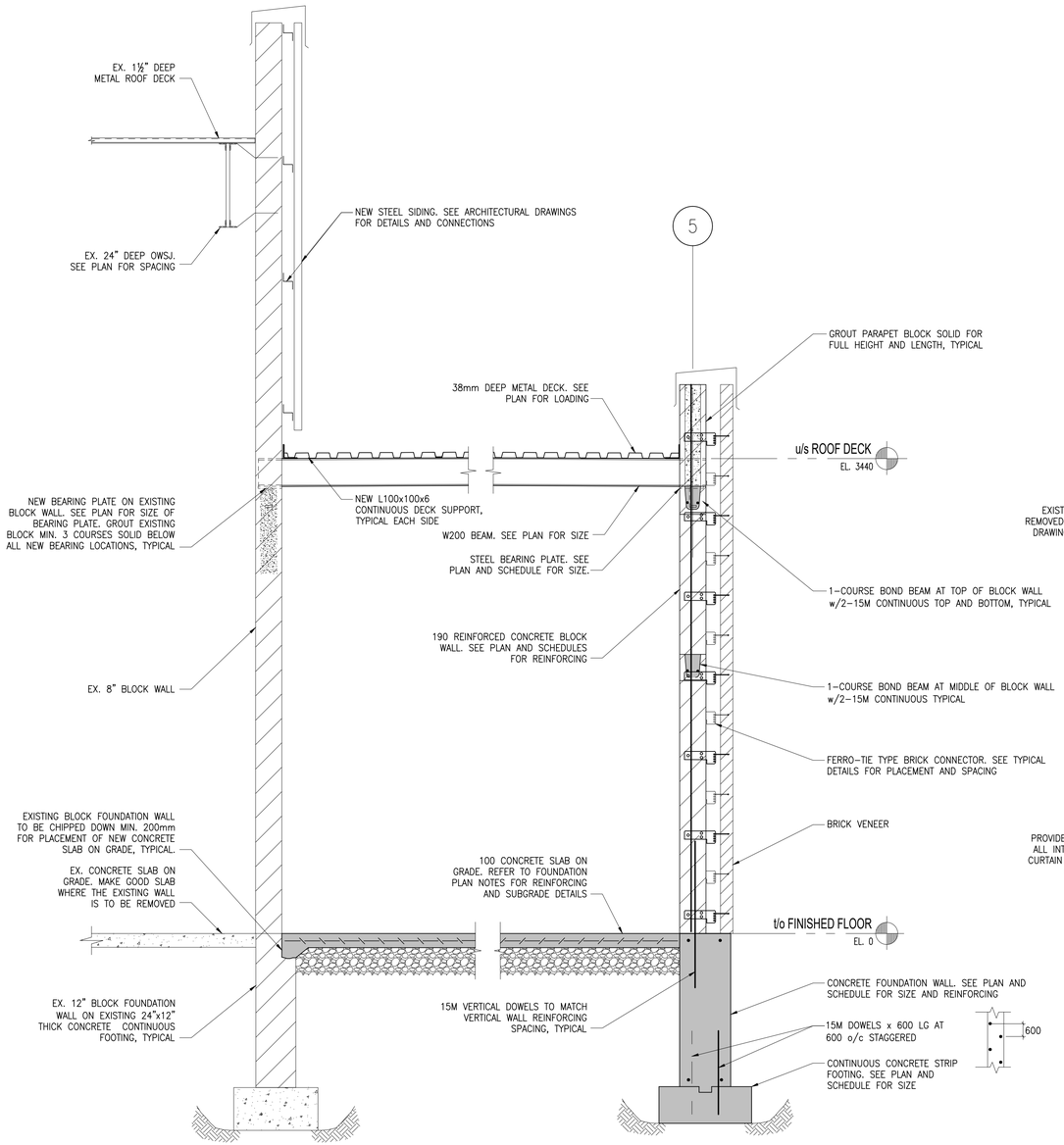
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
SECTIONS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S302
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



SECTION 30
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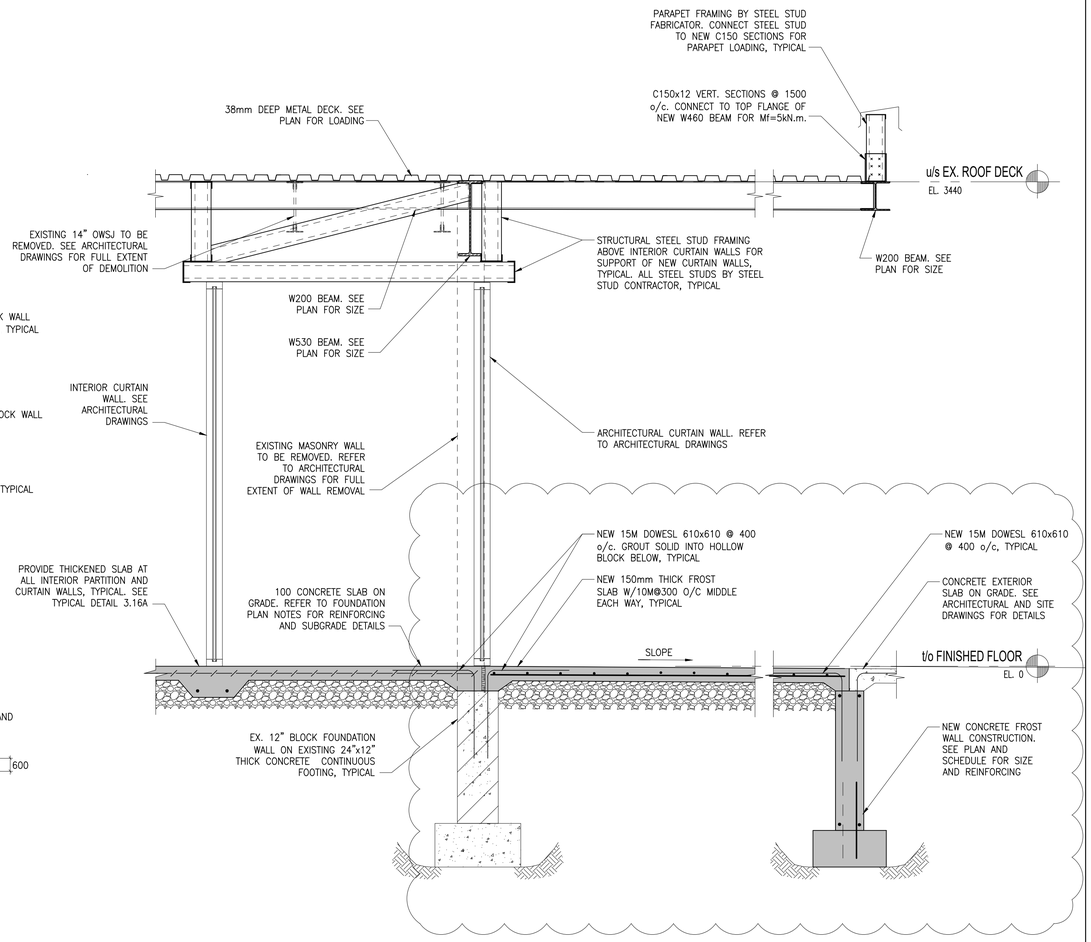

SECTION 31
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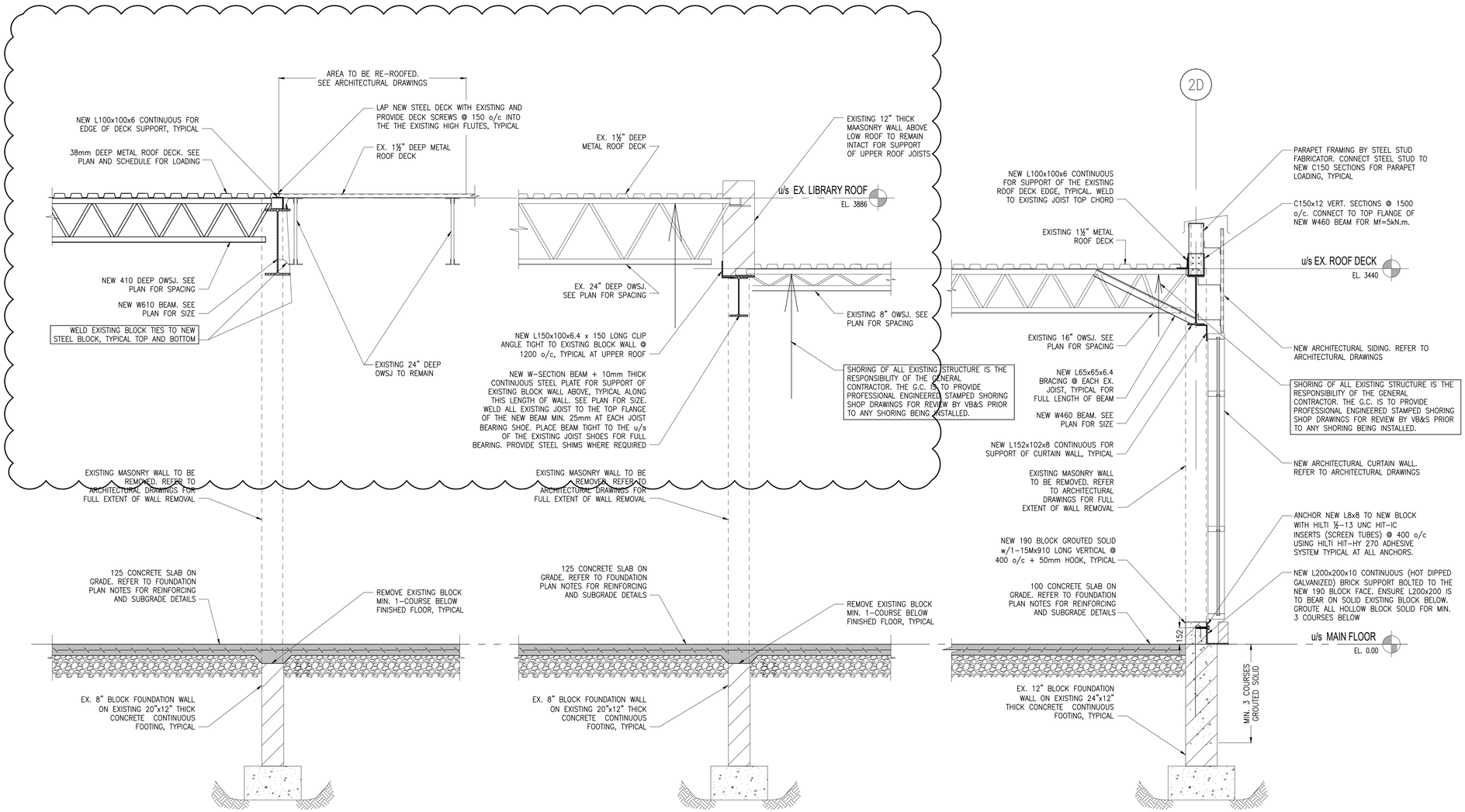
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
SECTIONS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S303
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



SECTION 40 — S100-S101
1:20

SECTION 41 — S100-S101
1:20

SECTION 42 — S100-S101
1:20

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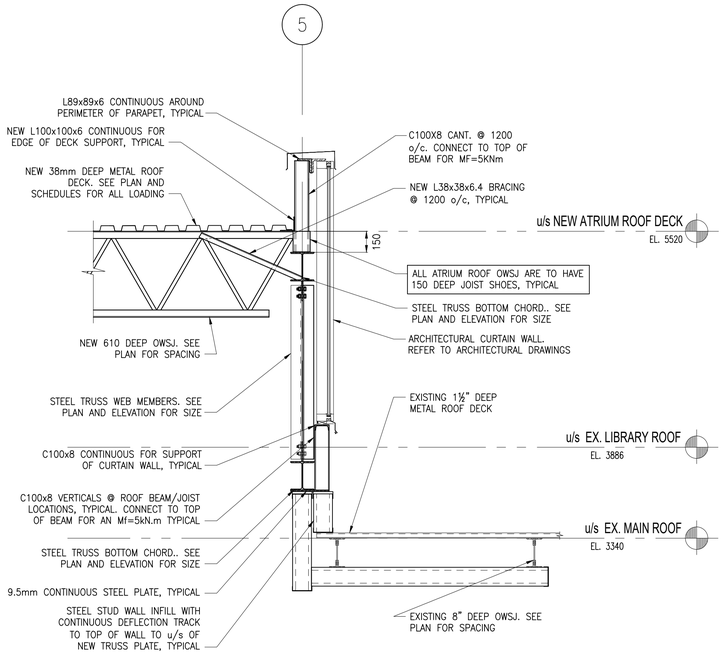
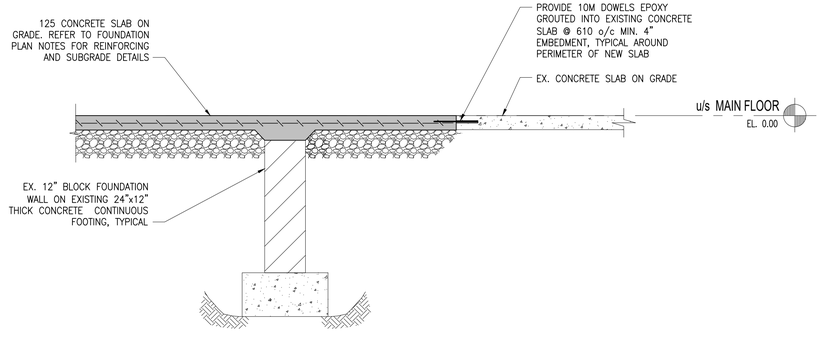
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

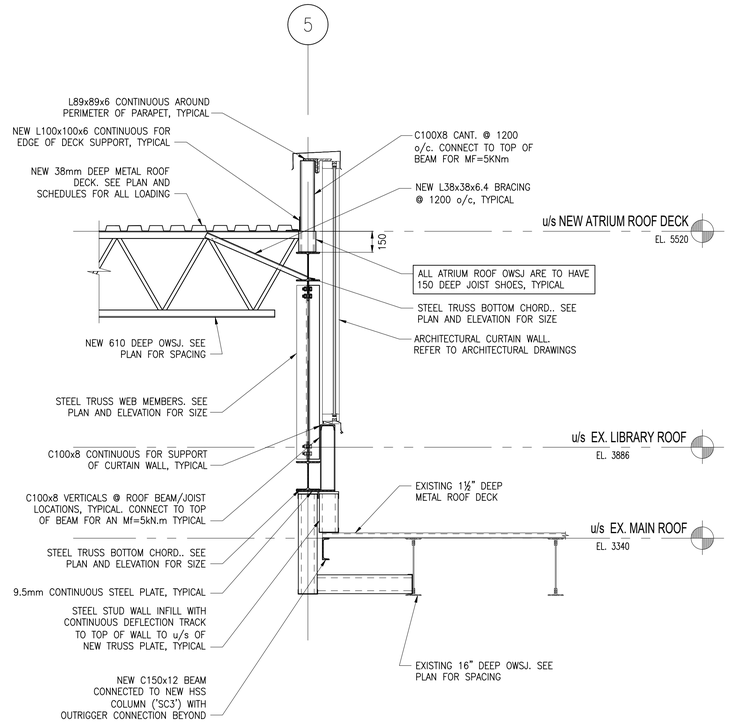
DRAWING TITLE
SECTIONS

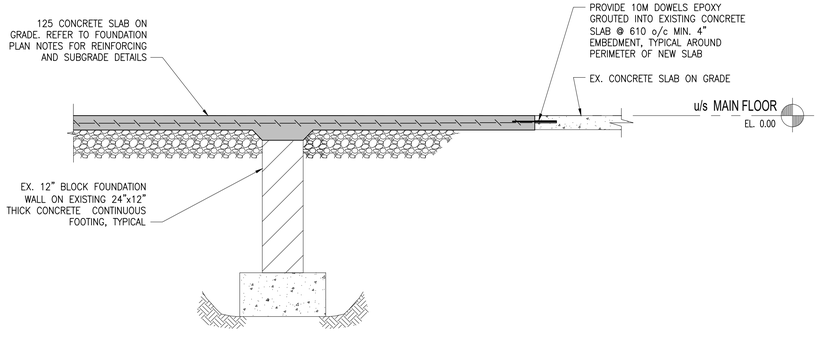
DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S304
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		





SECTION 50
1:20 S100-S101





SECTION 51
1:20 S100-S101

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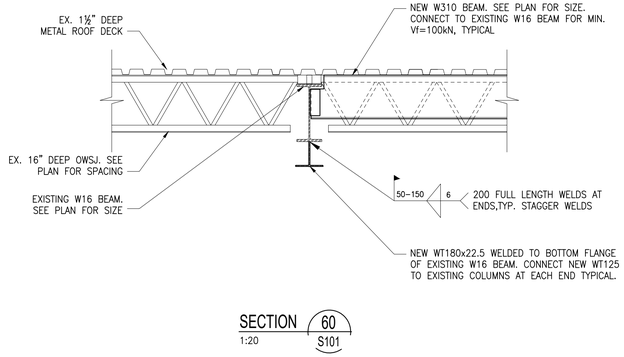
LEGEND

Date	Description	No.
JAN 17, 2020	ISSUED FOR 90% REVIEW	1
FEB 13, 2020	ISSUED FOR PERMIT AND TENDER	2
FEB 26, 2020	ADDENDUM #1	3
MAR 4, 2020	ISSUED FOR ADDENDUM #2	4

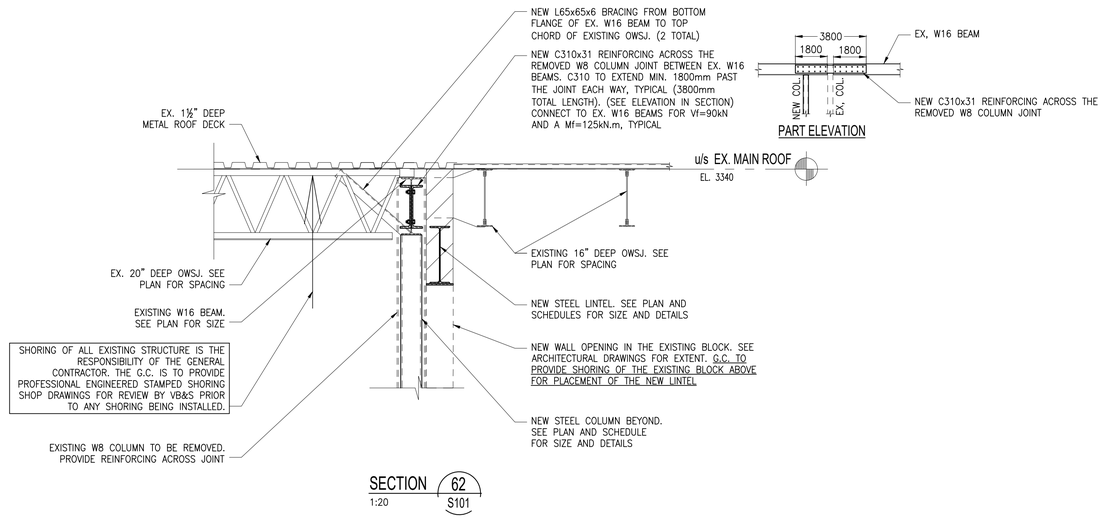
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
SECTIONS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S305
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		

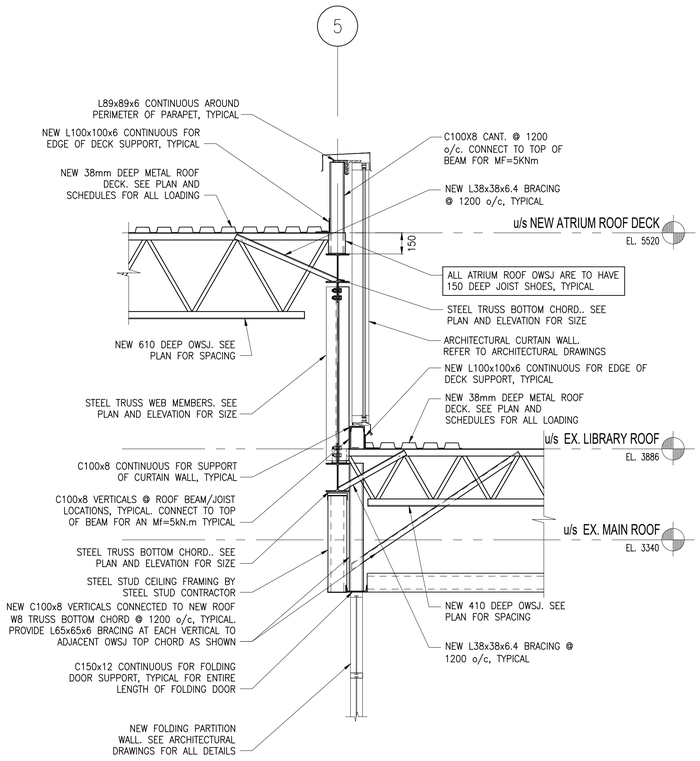


SECTION 60 / S101
1:20



SECTION 62 / S101
1:20

5



SECTION 61 / S101
1:20

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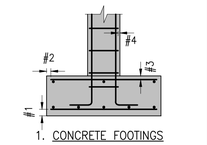
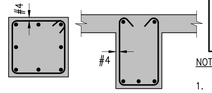
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
SECTIONS

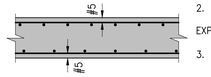
DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S306
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



1. CONCRETE FOOTINGS



2. CONCRETE COLUMNS, PIERS AND BEAMS

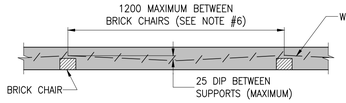


3. SUSPENDED CONCRETE SLABS AND CONCRETE WALLS

COVER TYPE	DESCRIPTION	CLEAR COVER (mm)[1]	
		EXPOSED[2]	NOT EXPOSED
#1	TO BOTTOM BARS IN PAD OR STRIP FOOTING	75	N/A
#2	TO BARS FROM SIDE OF PAD OR STRIP FOOTING	40 OR 75[3]	N/A
#3	TO TOP BARS IN PAD OR STRIP FOOTING	40	N/A
#4	TO TIES IN COLUMNS/PIERS AND TO STIRRUPS IN BEAMS	45	35
#5	TO TUL/BLL BARS IN SLABS OR OUTER BARS IN WALLS	≤ 20M–35 25M–40 30M–45 35M–55	≤ 20M–20 25M–25 30M–30 35M–40

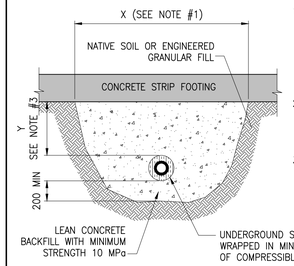
NOTES:

1. CLEAR COVER IS MEASURED FROM THE CONCRETE SURFACE (OR INSIDE FACE OF FORM) TO THE NEAREST DEFORMATION (OR SURFACE FOR SMOOTH BARS OR WIRES) OF THE REINFORCEMENT. FOR TEXTURED ARCHITECTURAL SURFACES IT IS MEASURED FROM THE DEEPEST POINT OF THE TEXTURED SURFACE.
2. THE CONCRETE IS EXPOSED IF IT IS AN EXTERIOR APPLICATION THAT IS SUBJECT TO WEATHER, OR CONCRETE PERMENANTLY EXPOSED TO SOIL.
3. IF THE PAD/STRIP FOOTING IS FORMED USING WOOD OR STEEL FORMWORK, USE A COVER OF 40. IF THE PAD/STRIP FOOTING IS GROUND FORMED AND CAST AGAINST SOIL, USE 75.
4. IF THE CONCRETE IS SUBJECT TO EXPOSURE CLASSES C–1 TO C–4 SEE CSA/CAN A23.1–94 FOR THE CLEAR COVER REQUIRED.
5. OBSERVE TOLERANCES SPECIFIED IN CSA/CAN A23.1–94 (12.8) WHEN PLACING REINFORCING IN THE FIELD. DIFFERENCES IN COVER GREATER THAN THE TOLERANCES SPECIFIED IN THIS STANDARD MUST BE CORRECTED PRIOR TO PLACING CONCRETE. ENSURE THAT THE REINFORCING IS ADEQUATELY TIED AND SUPPORTED TO AVOID SHIFTING DURING PLACEMENT OF CONCRETE.
6. REFER TO DETAIL #4 BELOW – USE BRICK CHAIRS (OR ACCEPTABLE EQUIVALENT) TO SUPPORT WELDED WIRE MESH SHEETS OR ROLLS AT THE CENTRE OF THE SLAB ON GRADE. SUPPORTS ARE TO BE SPACED AT 1200 MAXIMUM IN EACH DIRECTION. IT IS NOT ACCEPTABLE TO LIFT UNSUPPORTED MESH INTO PLACE AT THE TIME OF CONCRETE PLACEMENT.



4. CONCRETE SLAB ON GRADE

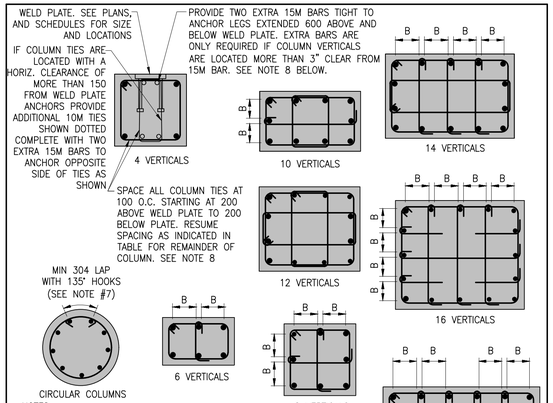
3.01 COVER TO REINFORCING BARS IN CONCRETE ELEMENTS



NOTES:

1. IF WIDTH OF EXCAVATION (X) FOR SERVICE BELOW CONCRETE STRIP FOOTING EXCEEDS 1800, STEP FOOTING SO STRIP FOOTING PASSES BELOW SERVICE (SEE TYPICAL DETAIL 3.02 FOR TYPICAL STEP FOOTINGS). INFORM STRUCTURAL CONSULTANT UNDERGROUND SERVICES WHICH PASS BELOW CONCRETE STRIP FOOTINGS.
2. PLACING SERVICES BELOW CONCRETE PAD FOOTINGS IS NOT ACCEPTABLE. RELOCATE SERVICE TO AVOID CONFLICT WITH PAD FOOTING, OR LOWER PAD FOOTING BELOW SERVICE.
3. COMPLETELY FILL EXCAVATION FOR SERVICE WITH LEAN CONCRETE FILL TO UNDERSIDE OF STRIP FOOTING. EXTEND LEAN CONCRETE A DIMENSION 'Y' IN PLAN EACH SIDE OF STRIP FOOTING

3.04 UNDERGROUND SERVICE BELOW CONTINUOUS CONCRETE STRIP FOOTINGS

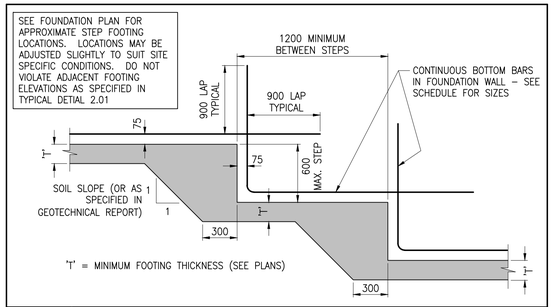


NOTES:

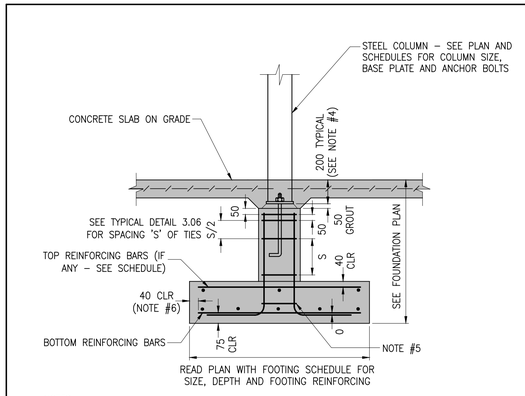
1. WHEN VERTICAL REINFORCING HAS CLEAR SPACING "B" > 150, PROVIDE TIE SHOWN DASHED.
2. PROVIDE A FULL TIE AT EVERY OTHER VERTICAL BAR (MINIMUM).
3. FOR VERTICAL TIE SPACING AND SIZE, SEE TABLE
4. CLEAR DISTANCE BETWEEN VERTICALS SHALL NOT BE LESS THAN:
   - 1.4 TIMES THE BAR DIAMETER
   - 1.4 TIMES THE MAXIMUM AGGREGATE SIZE
   - 32mm
5. ALTERNATE TIE ARRANGEMENTS ARE ACCEPTABLE, SUBJECT TO APPROVAL BY STRUCTURAL CONSULTANT
6. TIE ARRANGEMENT FOR COLUMNS WITH > 16 VERTICALS IS SIMILAR.
7. TIE FOR CIRCULAR COLUMNS MAY BE LAPPED AND WELDED TO DEVELOP TENSILE CAPACITY OF THE BAR IN LIEU OF DETAIL SHOWN
8. EXTRA REINFORCING FOR WELD PLATES SHOWN ON COLUMN WITH 4 VERTICALS IS TYPICAL FOR ALL COLUMNS. SEE TYPICAL DETAIL 3.40 FOR EXTRA REINF. FOR WELD PLATES IN CONCRETE WALLS.

VERTICAL TIE SPACING (mm)		
VERTICAL BAR SIZE	SPACING (fc'<50MPa)	SPACING (fc'>50MPa)
15M	10@250	10@190
20M	10@300	10@225
25M	10@400	10@250
30M	10@460	10@275
35M	10@460	10@400
45M	10@460	10@400
55M	10@460	10@400

3.06 TIE ARRANGEMENT IN CONCRETE COLUMNS AND PIERS



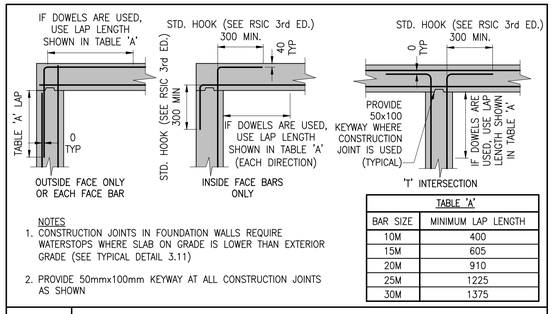
3.02 TYPICAL STEP FOOTING



NOTES:

1. SEE FOUNDATION AND FOOTING SCHEDULES FOR PAD FOOTING BEARING ELEVATION, PLAN SIZE, FOOTING DEPTH, BOTTOM REINFORCING, TOP REINFORCING AND PIER REINFORCING.
2. ALL PIER TIES HAVE 135° HOOKS AND ARE TO BE ROTATED AROUND PIER SO THAT HOOKED CORNERS OF ADJACENT TIES ARE NOT IN LINE VERTICALLY.
3. FOR TIE ARRANGEMENT AND SPACING OF TIES IN PIERS – SEE TYPICAL DETAIL 3.06
4. UNDERSIDE OF STEEL BASEPLATE TO BE 200 BELOW TOP OF SLAB ON GRADE EXCEPT FOR COLUMNS ADJACENT TO RAIN WATER LEADERS WHICH SHALL BE 400 BELOW TOP OF SLAB ON GRADE. SEE COLUMN SCHEDULES FOR MORE INFORMATION ON UNDERSIDE OF BASEPLATE ELEVATION.
5. PROVIDE 1 'STARTER' TIE AROUND DOWELS FOR VERTICAL PIER REINFORCING IN CONCRETE PAD FOOTING AS SHOWN.
6. CLEAR COVER TO REINFORCING STEEL AT SIDE OF FOOTING TO BE 40 (AS SHOWN) BUT IS TO BE 75 IF SIDE OF FOOTING IS CAST AGAINST SOIL.
7. PIERS FOR CONCRETE COLUMNS TO MATCH COLUMN SIZE AND REINFORCING TO TOP OF CONCRETE PAD FOOTING. SEE TYPICAL DETAIL 3.23 AND/OR 3.24 FOR REINFORCING DETAILS AT CONCRETE COLUMN CONSTRUCTION JOINTS.

3.05 TYPICAL CONCRETE PAD FOOTING

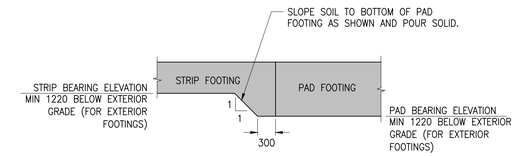


NOTES

1. CONSTRUCTION JOINTS IN FOUNDATION WALLS REQUIRE WATERSTOPS WHERE SLAB ON GRADE IS LOWER THAN EXTERIOR GRADE (SEE TYPICAL DETAIL 3.11)
2. PROVIDE 50mmx100mm KEYWAY AT ALL CONSTRUCTION JOINTS AS SHOWN

TABLE 'A'	
BAR SIZE	MINIMUM LAP LENGTH
10M	400
15M	605
20M	910
25M	1225
30M	1375

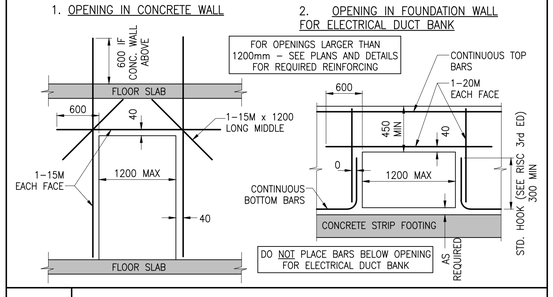
3.09 TYPICAL HORIZONTAL CORNER REINFORCING DETAILS FOR WALLS



NOTES:

1. BEARING ELEVATIONS SHOWN ON FOUNDATION PLAN SET FOR TOP OF STRIP FLUSH WITH TOP OF PAD FOOTINGS. REPORT ANY DISCREPANCIES ON FOUNDATION PLAN TO STRUCTURAL CONSULTANT.
2. REINFORCING IN STRIP AND PAD FOOTING NOT SHOWN FOR CLARITY – SEE FOUNDATION PLAN AND FOOTING SCHEDULES FOR REINFORCING.

3.03 STRIP FOOTING ADJACENT TO DEEPER PAD FOOTING



3.10 TYPICAL OPENING IN CONCRETE WALL

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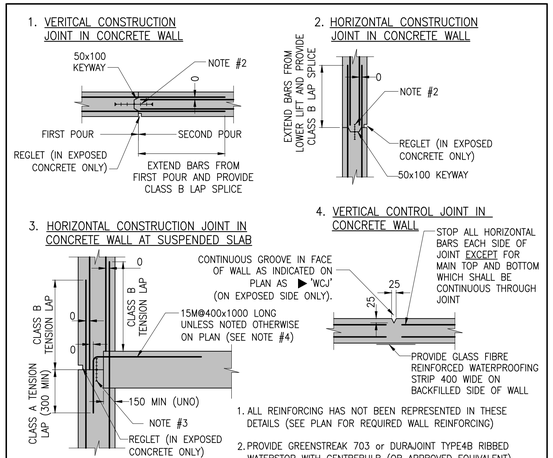
PROJECT TITLE

OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE

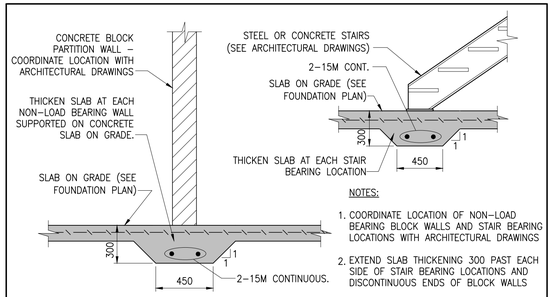
TYPICAL DETAILS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S400
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



1. ALL REINFORCING HAS NOT BEEN REPRESENTED IN THESE DETAILS (SEE PLAN FOR REQUIRED WALL REINFORCING)
2. PROVIDE GREENSTREAK 703 or DURAJOINT TYPE4B RIBBED WATERSTOP WITH CENTREBULB (OR APPROVED EQUIVALENT) TIED TO VERTICAL WALL STEEL @ 300 c/c MAX. PLACE WATERSTOP IN ALL WALLS WHERE THE WALL RETAINS SOIL.
3. PROVIDE GREENSTREAK 701 or DURAJOINT TYPE3 RIBBED WATERSTOP WITH CENTREBULB. IF INSUFFICENT SPACE TO PLACE CENTREBULB STYLE USE GREENSTREAK 776 or DURAJOINT TYPE66 FACE MOUNT STYLE). TIE WATERSTOP TO HORIZONTAL WALL STEEL @ 300 c/c MAX. PLACE WATERSTOP IN ALL WALLS WHERE THE WALL RETAINS SOIL. IF SLAB EXTENDS TO OUTSIDE FACE OF WALL PROVIDE GREENSTREAK 777 'SLABSPAN' OR TWO (2) DURAJOINT TYPE60 FACEMOUNT STYLE WATERSTOPS.
4. PLACE BAR VERTICALLY IN TOP OF WALL AND SITE BEND INTO TOP OF SUSPENDED SLAB – BARS ARE EXTRA TO SLAB REINFORCING SHOWN ON PLAN
5. SEE TYPICAL DETAIL 3.12 FOR JOINT DETAILS IN WALLS OF MULTIPLE STOREY BASEMENTS.

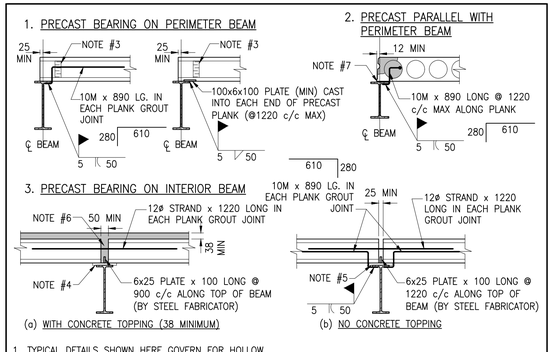
3.11 TYPICAL JOINTS IN CONCRETE WALLS



NOTES:

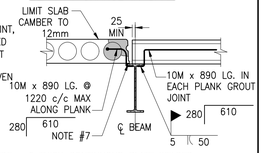
1. COORDINATE LOCATION OF NON-LOAD BEARING BLOCK WALLS AND STAIR BEARING LOCATIONS WITH ARCHITECTURAL DRAWINGS
2. EXTEND SLAB THICKENING 300 PAST EACH SIDE OF STAIR BEARING LOCATIONS AND DISCONTINUOUS ENDS OF BLOCK WALLS

3.16 TYPICAL SLAB ON GRADE THICKENINGS



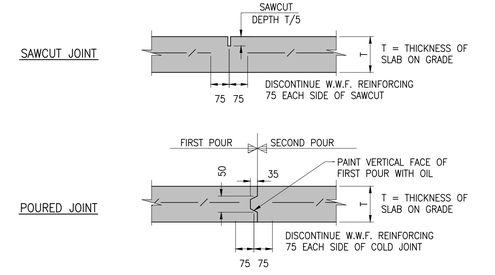
1. TYPICAL DETAILS SHOWN HERE GOVERN FOR HOLLOW CORE PRECAST CONCRETE PLANKS SUPPORTED ON STRUCTURAL STEEL BEAMS U.N.O. ON PLANS AND DETAILS.
2. REFER TO DETAIL #1 ABOVE AND TYP DETAIL 3.32b. ANY CONNECTION DETAIL SHOWN (WELDED REBAR IN GROUT JOINT, WELD PLATE CAST INTO u/s OF PLANK OR POST INSTALLED PLATE WITH 10M WELDED BARS) IS ACCEPTABLE. PRECAST DESIGN ENGINEER TO ENSURE THAT CONNECTION DETAIL USED IS ABLE TO SAFELY TRANSMIT DIAPHRAGM LOADS GIVEN ON EACH FRAMING PLAN.
3. PROVIDE A 50 THICK DISC OF RIGID INSULATION IN CORES AT EXTERIOR WALLS. (BY PRECAST INSTALLER)

4. PRECAST BEARING ON INTERIOR BEAM AT CHANGE IN SPAN



4. IF BEAM FLANGE WIDTH IS 190 OR LESS, PROVIDE 205 WIDE x 6 THICK CONTINUOUS PLATE WELDED TO TOP FLANGE OF STEEL BEAM TO PROVIDE ADEQUATE BEARING SUPPORT FOR PRECAST PLANKS.
5. IF BEAM FLANGE WIDTH IS 165 OR LESS, PROVIDE 180 WIDE x 6 THICK CONTINUOUS PLATE WELDED TO TOP FLANGE OF STEEL BEAM TO PROVIDE ADEQUATE BEARING SUPPORT FOR PRECAST PLANKS.
6. CONCRETE FINISHER TO ENSURE THAT CONCRETE COMPLETELY FILLS GAP BETWEEN ENDS OF PRECAST FLOOR PLANKS WHEN PLACING CONCRETE TOPPING.
7. DRY PACK WITH GROUT ALL GAPS BELOW PRECAST CONCRETE SLAB (BY GENERAL CONTRACTOR)
8. ALL FIELD WELDS SHOWN ABOVE TO BE COMPLETED BY PRECAST PLANK ERECTION CONTRACTOR.

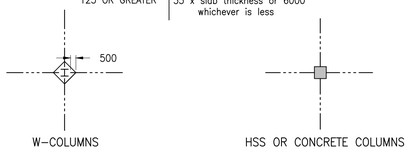
3.32 HOLLOW CORE PRECAST FLOOR PLANKS SUPPORTED ON STEEL BEAMS



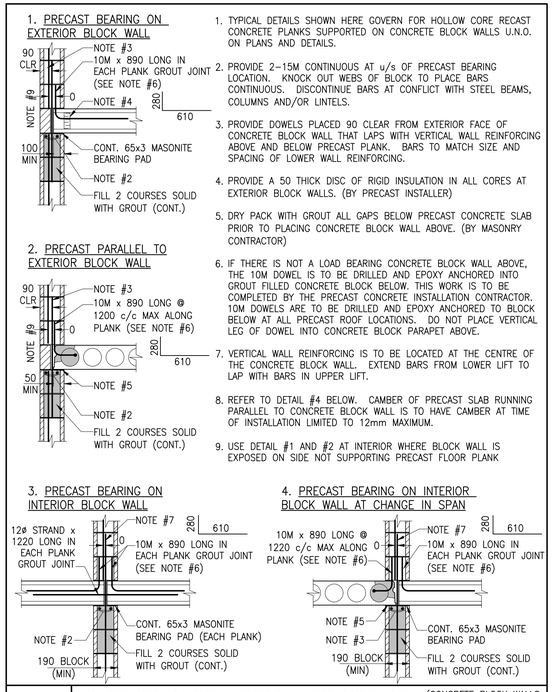
NOTES:

1. USE ONE OR THE OTHER DETAIL AS THE CONTROL JOINT WHERE INDICATED THUS "CJ" ON THE PLAN.
2. SAWCUTS MUST BE COMPLETED WITHIN 6 TO 18 HOURS OF PLACING CONCRETE.
3. AFTER SLAB HAS CURED FOR ONE MONTH, REMOVE ALL DEBRIS FROM SAWCUT JOINTS AND FILL WITH MORTAR CONTAINING CEMENT, SAND AND A LATEX BONDING AGENT, OR AS NOTED.
4. SAWCUT SLAB ON GRADE AROUND COLUMNS AS INDICATED BELOW. OTHER PATTERNS MAY BE ACCEPTABLE, BUT MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW.
5. SAWCUT JOINTS IN SLAB ON GRADE SHOULD NOT EXCEED THE FOLLOWING SPECIFIED SPACING:

SLAB THICKNESS (T)	MAXIMUM SPACING
100	30 x slab thickness
125 OR GREATER	35 x slab thickness or 6000 whichever is less

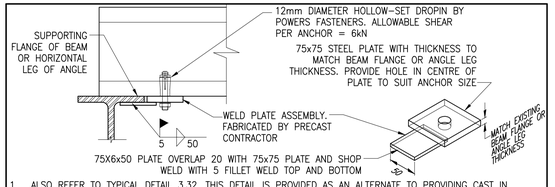


3.15 TYPICAL FLOOR SLAB CONTROL JOINT DETAIL



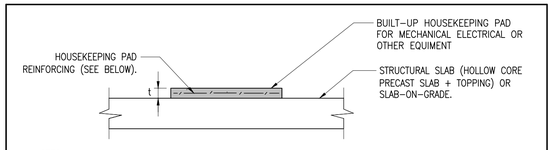
1. TYPICAL DETAILS SHOWN HERE GOVERN FOR HOLLOW CORE RECAST CONCRETE PLANKS SUPPORTED ON CONCRETE BLOCK WALLS U.N.O. ON PLANS AND DETAILS.
2. PROVIDE 2-15M CONTINUOUS AT u/s OF PRECAST BEARING LOCATION. KNOCK OUT WEBS OF BLOCK TO PLACE BARS CONTINUOUS. DISCONTINUE BARS AT CONFLICT WITH STEEL BEAMS, COLUMNS AND/OR LINTELS.
3. PROVIDE DOWELS PLACED 90 CLEAR FROM EXTERIOR FACE OF CONCRETE BLOCK WALL THAT LAPS WITH VERTICAL WALL REINFORCING ABOVE AND BELOW PRECAST PLANK. BARS TO MATCH SIZE AND SPACING OF LOWER WALL REINFORCING.
4. PROVIDE A 50 THICK DISC OF RIGID INSULATION IN ALL CORES AT EXTERIOR BLOCK WALLS. (BY PRECAST INSTALLER)
5. DRY PACK WITH GROUT ALL GAPS BELOW PRECAST CONCRETE SLAB PRIOR TO PLACING CONCRETE BLOCK WALL ABOVE. (BY MASONRY CONTRACTOR)
6. IF THERE IS NOT A LOAD BEARING CONCRETE BLOCK WALL ABOVE, THE 10M DOWEL IS TO BE DRILLED AND EPOXY ANCHORED INTO GROUT FILLED CONCRETE BLOCK BELOW. THIS WORK IS TO BE COMPLETED BY THE PRECAST CONCRETE INSTALLATION CONTRACTOR. 10M DOWELS ARE TO BE DRILLED AND EPOXY ANCHORED TO BLOCK BELOW AT ALL PRECAST ROOF LOCATIONS. DO NOT PLACE VERTICAL LEG OF DOWEL INTO CONCRETE BLOCK PARAPET ABOVE.
7. VERTICAL WALL REINFORCING IS TO BE LOCATED AT THE CENTRE OF THE CONCRETE BLOCK WALL. EXTEND BARS FROM LOWER LIFT TO LAP WITH BARS IN UPPER LIFT.
8. REFER TO DETAIL #4 BELOW. CAMBER OF PRECAST SLAB RUNNING PARALLEL TO CONCRETE BLOCK WALL IS TO HAVE CAMBER AT TIME OF INSTALLATION LIMITED TO 12mm MAXIMUM.
9. USE DETAIL #1 AND #2 AT INTERIOR WHERE BLOCK WALL IS EXPOSED ON SIDE NOT SUPPORTING PRECAST FLOOR PLANK

3.31 HOLLOW CORE PRECAST FLOOR PLANKS SUPPORTED ON CONCRETE BLOCK WALLS OR CAST-IN-PLACE CONCRETE (CONCRETE BLOCK WALLS SHOWN, CAST-IN-PLACE CONCRETE SIMILAR)



1. ALSO REFER TO TYPICAL DETAIL 3.32. THIS DETAIL IS PROVIDED AS AN ALTERNATE TO PROVIDING CAST IN STEEL PLATES. THIS ALTERNATE IS MEANT TO BE USED IN CONJUNCTION WITH 10M REBARS WELDED TO UNDERSIDE OF BEAM FLANGE OR ANGLE LEG. (IE 10M BARS ARE TO PLACED AT JOINTS BETWEEN PRECAST PLANKS AT 1200 O.C. IN ADDITION TO ABOVE DETAILED PLATE ASSEMBLIES TO TRANSFER HORIZONTAL DECK SHEARS.) SUPPLY AND INSTALLATION OF THESE SHEAR PLATES COMPLETE WITH WELDING IS BY THE PRECAST PLANK SUPPLIER AND ERECTOR.
2. REFER TO PLANS FOR SHEAR LOADS TO BE TRANSFERED FROM PRECAST PLANK TO STRUCTURAL STEEL SHAPE. TO DETERMINE NUMBER OF PLATES REQUIRED DIVIDIE THE TOTAL SHEAR LOAD TO BE TRANSFERED TO LATERAL RESISTING ELEMENT BY 6 kN AND ROUND UP BY ONE PLATE. DISTRIBUTE PLATES EQUALLY ALONG LENGTH OF STRUCTURAL STEEL MEMBER.

3.32b ALTERNATE SHEAR PLATE CONNECTION BETWEEN HOLLOW CORE PRECAST PLANKS AND STRUCTURAL STEEL SUPPORTS



NOTES:
1. CONSULT WITH MECHANICAL DRAWINGS FOR SIZE AND LOCATIONS OF ALL REQUIRED HOUSEKEEPING PADS.
2. PROVIDE REINFORCEMENT IN HOUSEKEEPING PADS AS FOLLOWS:

PAD THICKNESS "t" (mm)	REINFORCEMENT
100 150	152x152 MW18.7xMW18.7 WWF ONE LAYER 10M @ 300 MIDDLE EACH WAY

3.33 EQUIPMENT HOUSEKEEPING PADS

WILSON DIAZ ARCHITECTS INCORPORATED
280 QUEENS AVENUE, SUITE 1Q
LONDON, ONTARIO N6B 1X3
t. 519.439.0611
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NOTES

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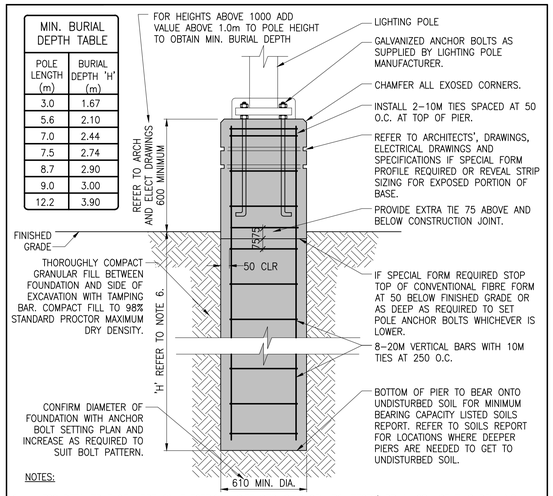
LEGEND

Date	Description	No.
JAN 17, 2020	ISSUED FOR 90% REVIEW	1
FEB 13, 2020	ISSUED FOR PERMIT AND TENDER	2
FEB 26, 2020	ADDENDUM #1	3
MAR 4, 2020	ISSUED FOR ADDENDUM #2	4

PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
TYPICAL DETAILS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S401
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



NOTES:

1. UNLESS DETAILED ELSEWHERE ON ELECTRICAL, SITE SERVICING OR ARCHITECTS' DRAWINGS USE THIS DRAWING FOR FOUNDATIONS FOR ALL LIGHT STANDARDS. REFER TO ELECTRICAL AND ARCHITECTURAL SITE PLANS FOR QUANITY AND LOCATION OF LIGHT STANDARDS.
2. TOP OF FOUNDATION SHALL BE TROWELLED SMOOTH AND SLOPED SLIGHTLY TO THE PERIMETER.
3. CONCRETE TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 30Mpa WITH 75±25 SLUMP AND 6%±1% AIR ENTRAINMENT.
4. THOROUGHLY VIBRATE CONCRETE TO ENSURE FINISH CONFORMS TO ARCHITECTURAL CONCRETE FINISH DESCRIBED IN SPECIFICATIONS.
5. REFER TO ELECTRICAL DRAWINGS FOR GROUNDING, CONDUIT, AND POLE REQUIREMENTS AND SIZES.
6. POLE EMBEDMENT SUBJECT TO SOIL CONDITIONS. IF PEAT OR OTHERWISE LOOSE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED ADVISE CONSULTANT FOR REDESIGN OR DEEPENING OF FOUNDATION BELOW MINIMUM CHARTED BURIAL DEPTHS.

3.34 TYPICAL LIGHTING POLE BASE / FLAG POLE BASE

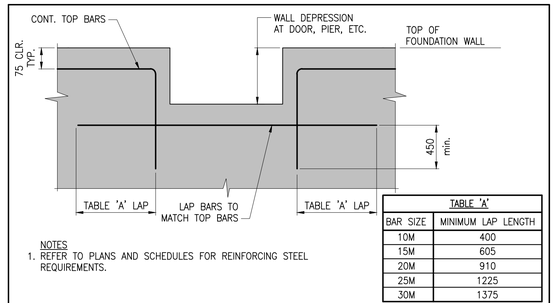
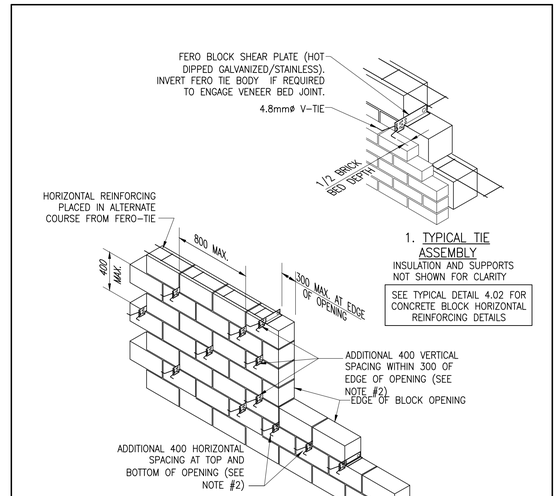


TABLE 'A'	
BAR SIZE	MINIMUM LAP LENGTH
10M	400
15M	605
20M	910
25M	1225
30M	1375

NOTES

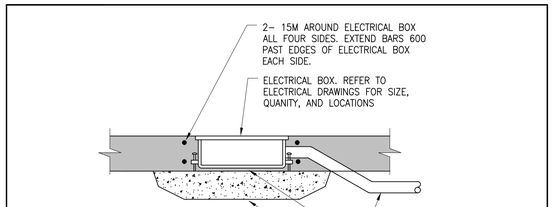
1. REFER TO PLANS AND SCHEDULES FOR REINFORCING STEEL REQUIREMENTS.

3.39 TYPICAL LAP DETAIL FOR CONTINUOUS TOP REBAR AT PIER AND DOOR DEPRESSIONS IN WALLS

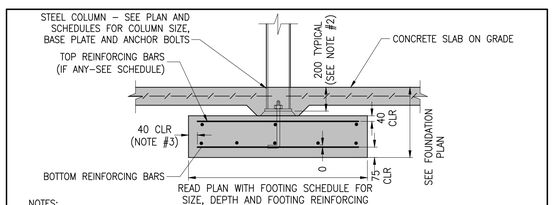


1. BRICK TIES SHALL BE FERO BLOCK SHEAR CONNECTORS. SLOTTED CONNECTORS NOT PERMITTED
2. TIES ARE TO BE EITHER HOT DIPPED GALVANIZED OR STAINLESS STEEL, SEE SPECIFICATIONS.
3. SPACE TIES 400 o/c VERTICAL & 800 o/c HORIZONTAL. STAGGER TIES HORIZONTALLY. ALSO SPACE EXTRA TIES AT 400 O.C. VERTICAL AND HORIZONTAL SPACING BESIDE, ABOVE AND BELOW ALL OPENINGS IN BLOCK WALLS.

4.04 FERO BRICK CONNECTOR DETAILS



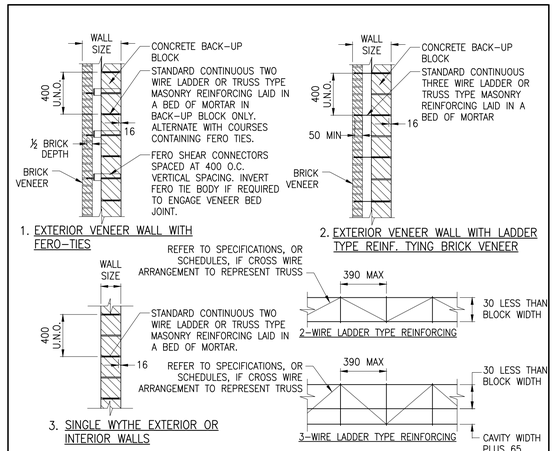
3.35 ELECTRICAL FLOOR BOXES IN SLAB-ON-GRADE



NOTES:

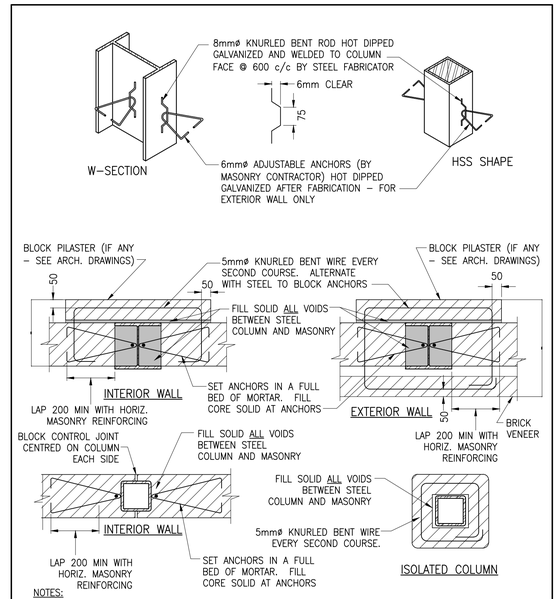
1. SEE FOUNDATION AND FOOTING SCHEDULES FOR PAD FOOTING BEARING ELEVATION, PLAN SIZE, FOOTING DEPTH, BOTTOM REINFORCING, TOP REINFORCING AND PIER REINFORCING.
2. UNDERSIDE OF STEEL BASEPLATE TO BE 200mm BELOW TOP OF SLAB ON GRADE (UNLESS NOTED OTHERWISE ON PLAN) EXCEPT FOR COLUMNS ADJACENT TO RAIN WATER LEADERS WHICH SHALL BE 400mm BELOW TOP OF SLAB ON GRADE. SEE COLUMN SCHEDULES FOR MORE INFORMATION ON UNDERSIDE OF BASEPLATE ELEVATION.
3. CLEAR COVER TO REINFORCING STEEL AT SIDE OF FOOTING TO BE 40mm (AS SHOWN) BUT IS TO BE 3" IF SIDE OF FOOTING IS CAST AGAINST SOIL.

3.38 TYPICAL CONCRETE PAD FOOTING WITHOUT PIER



1. AT MULTI WYTHE WALLS WITH MASONRY VENEER USE DETAIL 1 ABOVE UNLESS SPECIFICALLY NOTED OTHERWISE.
2. DETAIL #2 TO BE USED ONLY IF VENEER WYTHE COURSES WITH BACK-UP BLOCK. SUBMIT DETAILED BRICK/BLOCK COURSING SHOP DRAWINGS FOR REVIEW BEFORE STARTING BLOCK WALL CONSTRUCTION.
3. ALL HORIZONTAL REINFORCING TO HAVE MINIMUM CORROSION PROTECTION CONSISTING OF HOT DIPPED GALVANIZING AFTER FABRICATION TO A.S.T.M. A-153-B2 STANDARD. REFER TO SPECIFICATIONS IF STAINLESS STEEL REQUIRED.
4. UNLESS NOTED OTHERWISE MASONRY REINFORCING SHALL BE 9 GAUGE 2-WIRE CONTINUOUS LADDER TYPE (REFER TO LOAD BRG WALL SCHEDULE AND TYPICAL DETAILS FOR MINIMUM WIRE SIZES AND IF TRUSS TYPE WIRE REINFORCING IS REQUIRED IN SESMIC ZONES)
5. THE OVERALL WIDTH OF THE MASONRY REINFORCING SHALL BE APPROX. 65 LESS THAN THE THICKNESS OF THE WALL. THE CROSS WIRES SHOULD NOT HAVE A DIP.
6. LAP THE REINFORCING 200 AT SPLICES (300 FOR PLAIN WIRE)
7. USE PREFABRICATED CORNERS AND TEES IN ALL MASONRY WALL CORNERS AND INTERSECTIONS
8. PROVIDE EXTRA LAYERS OF MASONRY REINF. IN FIRST COURSE ABOVE AND BELOW ALL BLOCK OPENINGS.

4.02 TYPICAL CONTINUOUS HORIZONTAL REINFORCING IN ALL MASONRY WALLS



NOTES:

1. STEEL FABRICATOR TO COORDINATE LOCATION OF MASONRY ANCHORS WITH BLOCK COURSING ON ARCH. DWGS.
2. BLOCK PILASTERS MAY BE REQUIRED TO FIRE RATE THE STEEL COLUMN - REFER TO ARCH. DRAWINGS FOR COLUMN PLAN DETAILS
3. SEE PLANS FOR COLUMN SIZES. SEE ARCH. DRAWINGS FOR WALL LOCATION RELATIVE TO COLUMN.

4.05 MASONRY ANCHORAGE TO STEEL COLUMNS

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NOTES

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E-mail vbands@vbands.com

LEGEND

Date	Description	No.
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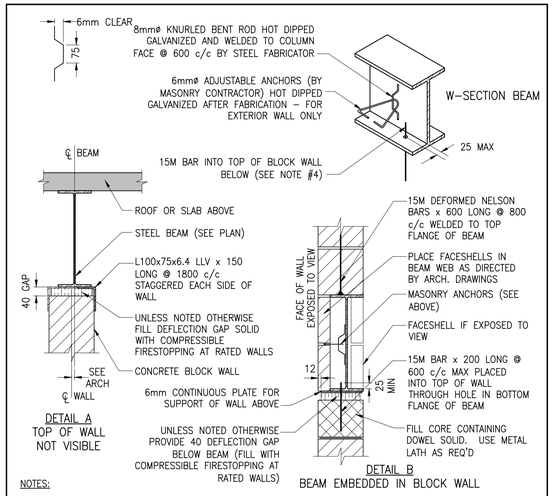
PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

DRAWING TITLE
TYPICAL DETAILS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S402
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		

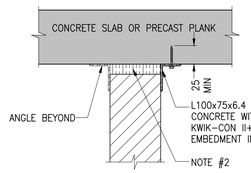


NOTES:

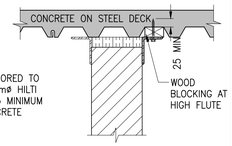
1. STEEL FABRICATOR TO REFER TO ARCH. DRAWINGS TO DETERMINE POSITION OF CONCRETE BLOCK WALL IN RELATION TO BEAM CENTRELINE FOR PLACEMENT OF LATERAL SUPPORT ANGLES ON BOTTOM FLANGE. (SEE DETAIL 'A' ABOVE)
2. REFER TO DETAIL 'A' ABOVE – STEEL BEAMS WHICH SUPPORT TOP OF BLOCK WALLS AT THE EXTERIOR OF THE BUILDING REQUIRE THE BOTTOM FLANGE TO BE LATERALLY SUPPORTED TO THE STRUCTURE ABOVE – SEE PLAN FOR DETAILS.
3. MASONRY CONTRACTOR TO FILL SOLID ALL CORES CONTAINING VERTICAL REINFORCING BARS.
4. STEEL FABRICATOR TO PROVIDE SHOP DRILLED HOLES IN BOTTOM FLANGE OF BEAM FOR PLACEMENT OF BARS AS SHOWN IN DETAIL 'B' ABOVE.
5. REFER TO DETAIL 'B' ABOVE – SEE ARCHITECTS DRAWINGS FOR TREATMENT OF DEFLECTION GAP ON FACE OF WALL EXPOSED TO VIEW

4.06 MASONRY ANCHORAGE TO STEEL BEAMS

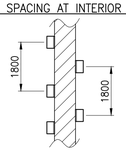
1. BLOCK PARTITION SUPPORTED AT CONCRETE SLAB OR PRECAST PLANK



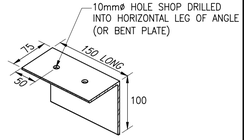
2. BLOCK PARTITION SUPPORTED AT CONCRETE SLAB ON STEEL FLOOR DECK



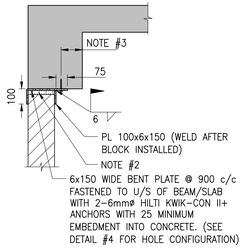
3. ANGLE SPACING AT INTERIOR PARTITION



4. ANGLE CONFIGURATION



5. EXTERIOR BLOCK PARTITION SUPPORTED AT CONCRETE SLAB/BEAM



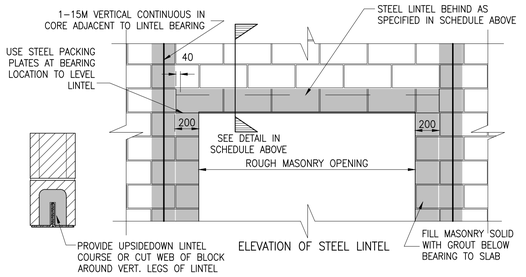
NOTES:

1. LATERAL SUPPORT ANGLES TO BE FABRICATED BY STRUCTURAL STEEL CONTRACTOR AND INSTALLED BY MASONRY CONTRACTOR.
2. FILL ALL DEFLECTION GAPS WITH APPROVED COMPRESSIBLE FILLER. ENSURE THE MATERIAL IS CONSISTENT WITH THE ARCH. DRAWINGS AND SPECIFICATIONS FOR FIRE RATED WALLS.
3. PROVIDE MINIMUM EDGE DISTANCE TO ANCHOR OF 50 FOR APPLICATION WITH CONCRETE BEAMS. REPORT EDGE DISTANCE OF LESS THAN 50 TO STRUCTURAL CONSULTANT.
4. DO NOT USE DETAIL #2 WITH STEEL ROOF DECK ONLY. SEE TYPICAL DETAIL 4.07 FOR LATERAL SUPPORT OF CONCRETE BLOCK PARTITIONS AT STEEL ROOF DECKS.

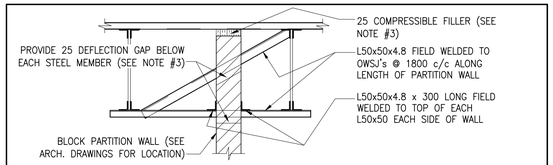
4.08 LATERAL SUPPORT OF CONCRETE BLOCK PARTITION AT CONCRETE SLAB/DECK

WALL THICKNESS	CLEAR SPAN OF ROUGH MASONRY OPENING				DETAIL
	UP TO 1220	1221 to 1800	1801 to 2360	2361 to 3050	
90 BLOCK 90 VENEER	L90x90x6	L100x90x8	L125x90x8	L125x90x10	LLV
140 BLOCK	2–L65x65x6	2–L90x65x6	2–L90x65x8	2–L90x65x10	65 LEGS HORIZ.
190 BLOCK	2–L90x75x6	2–L90x90x6	2–L100x90x8	2–L125x90x10	90 LEGS HORIZ.
240 BLOCK	L100x75x6 + L125x75x6	L100x100x6 + L125x75x6	L100x100x8 + L125x90x8	L150x100x8 + L125x125x8	100 AND 125 LEGS HORIZ.
290 BLOCK	3–L90x75x6	3–L90x90x6	3–L100x90x8	3–L125x90x10	90 LEGS HORIZ.

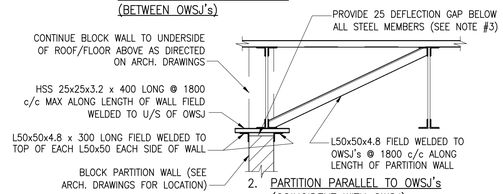
1. IT IS THE RESPONSIBILITY OF THE STRUCTURAL STEEL CONTRACTOR TO READ THIS SCHEDULE IN CONJUNCTION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS TO DETEMINE SIZE AND LOCATION OF LINTELS IN NON–LOAD BEARING WALLS. OPENINGS IN NON–LOAD BEARING WALLS ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
2. WELD BACK TO BACK ANGLES AT 400 c/c ON TOP AND BOTTOM OF LINTEL. FIRST WELD TO BE 75 FROM ENDS OF ANGLES.
3. ALL EXTERIOR LINTELS SUPPORTING BRICK VENEER TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.
4. CONNECT ALL LINTELS TO COLUMNS WHEN THERE IS LESS THAN 300 BETWEEN EDGE OF ROUGH OPENING AND STEEL COLUMN FACE.
5. FILL BLOCKS AROUND STEEL LINTELS IN CONCRETE BLOCK WALLS SOLID WITH GROUT.
6. WHEN 600 OR LESS TO NEXT ROUGH OPENING – PLACE 2–15M VERTICAL IN CENTRE CORE OF PIER BETWEEN OPENINGS AND FILL PIER SOLID



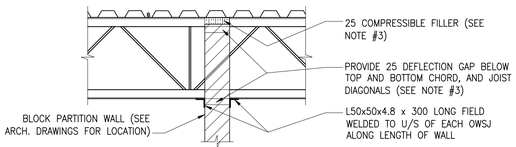
5.01 STRUCTURAL STEEL LINTELS FOR NON-LOAD BEARING CONCRETE BLOCK WALLS AND BRICK VENEER



1. PARTITION PARALLEL TO OWSJ's (BETWEEN OWSJ's)



2. PARTITION PARALLEL TO OWSJ's (COINCIDENT WITH OWSJ)



3. PARTITION PERPENDICULAR TO OWSJ's

1. MAXIMUM DISTANCE FROM END OF ANY WALL TO FIRST LATERAL SUPPORT IS 900
2. MAXIMUM DISTANCE FROM RETURN WALL TO FIRST LATERAL SUPPORT IS 1800 IF RETURN WALL IS LONGER THAN 900 (OTHERWISE SEE NOTE #1)
3. FILL ALL DEFLECTION GAPS WITH APPROVED COMPRESSIBLE FILLER. ENSURE THE MATERIAL IS CONSISTENT WITH THE ARCH. DRAWINGS AND SPECIFICATIONS FOR FIRE RATED WALLS.
4. DETAILS SHOWN ABOVE CAN BE USED WITH STEEL ROOF BEAMS IN PLACE OF OWSJ'S AT ROOF LEVEL (OTHERWISE SEE TYPICAL DETAIL 4.08 FOR ACHORAGE OF PARTITIONS TO u/s OF CONCRETE)

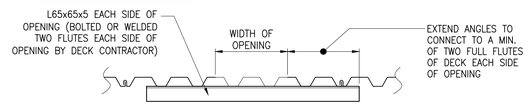
4.07 MASONRY PARTITION SUPPORT AT OWSJ

WALL THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
90 BLOCK	NIL	STANDARD LADDER STYLE WIRE REINFORCING WITH 3.66mm LONGITUDINAL WIRES AND 3.66mm CROSS WIRES SPACED AT 400 O.C. VERTICAL (EVERY OTHER COURSE)
140 BLOCK	10M @ 800 c/c HORIZ (EVERY 4th CORE)	STANDARD LADDER STYLE WIRE REINFORCING WITH 3.66mm LONGITUDINAL WIRES AND 3.66mm CROSS WIRES SPACED AT 400 O.C. VERTICAL (EVERY OTHER COURSE)
190 BLOCK	10M @ 1200 c/c HORIZ (EVERY 6th CORE)	STANDARD LADDER STYLE WIRE REINFORCING WITH 3.66mm LONGITUDINAL WIRES AND 3.66mm CROSS WIRES SPACED AT 400 O.C. VERTICAL (EVERY OTHER COURSE)
240 BLOCK	15M @ 1200 c/c HORIZ (EVERY 6th CORE)	STANDARD LADDER STYLE WIRE REINFORCING WITH 3.66mm LONGITUDINAL WIRES AND 3.66mm CROSS WIRES SPACED AT 400 O.C. VERTICAL (EVERY OTHER COURSE)
290 BLOCK	15M @ 1200 c/c HORIZ (EVERY 6th CORE)	STANDARD LADDER STYLE WIRE REINFORCING WITH 3.66mm LONGITUDINAL WIRES AND 3.66mm CROSS WIRES SPACED AT 400 O.C. VERTICAL (EVERY OTHER COURSE)

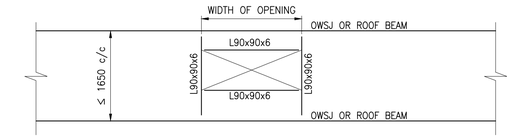
1. SEISMIC HAZARD INDEX=$I_E(F_a)(S_{a(0.2)})$ REFER TO SEISMIC DATA LISTED ON PLANS OR SHEDULE DWGS FOR VALUES
2. NON–LOAD BEARING MASONRY WALLS THAT ARE SHOWN ON THE ARCHTECTURAL PLANS BUT ARE NOT SHOWN ON THE STRUCTURAL FRAMING PLANS. REINFORCE THESE WALLS ACCORDING TO THE SCHEDULE ABOVE. FOR MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS, READ THE FRAMING PLANS IN CONJUNCTION WITH THE LOAD BEARING MASONRY WALL SCHEDULE TO DETERMINE REINFORCING FOR THESE WALLS.
3. FULLY GROUT ALL CORES CONTAINING VERTICAL REINFORCING.
4. SEE TYPICAL DETAIL 4.02 FOR GALVANIZING REQUIREMENTS AND DETAILS RELATING TO PLACEMENT OF HORIZONTAL WIRE JOINT REINFORCING.
5. FOR VERTICAL REINFORCING BARS, LAP BARS 600mm MINIMUM AT BAR SPLICES OR PROVIDE MECHANICAL SPLICE TO DEVELOP 125% OF THE BAR STRENGTH IN TENSION
6. PROVIDE 1–15M VERTICAL FULL HEIGHT IN THE CORE ADJACENT TO BEARING POINT OF LINTELS OVER ALL ROUGH OPENINGS IN NON–LOAD BEARING WALLS (SEE TYPICAL DETAIL 4.01 AND/OR 5.01). THESE BARS ARE PLACED IN ADDITION TO THE VERTICAL BARS INDICATED IN THE SCHEDULE ABOVE.

4.10 REINFORCING FOR NON-LOAD BEARING RUNNING BOND BLOCK WALLS WHERE SEISMIC HAZARD INDEX IS GREATER THAN 0.35 BUT LESS THAN 0.75

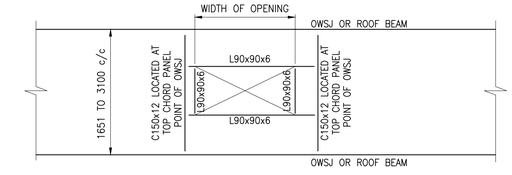
1. OPENINGS 200 TO 360 WIDE



2. OPENINGS WIDER THAN 360 AND JOISTS SPACED @ 1650 OR LESS



3. OPENINGS WIDER THAN 360 AND JOISTS SPACED @ 1651 TO 3100



NOTES:

1. UNLESS NOTED OTHERWISE ON PLAN, PROVIDE FRAMING AROUND OPENINGS IN STEEL ROOF DECK AS SHOWN ABOVE.
2. READ THIS DETAIL IN CONJUNCTION WITH THE STRUCTURAL, ARCHITECTURAL AND MECHANICAL ROOFTOP PLANS TO DETERMINE SIZE AND LOCATION OF OPENINGS THROUGH STEEL ROOF DECK.
3. STRUCTURAL STEEL FABRICATOR TO PROVIDE STRUCTURAL STEEL FOR FRAMING OPENINGS IN ROOF DECK. DECK SUPPLIER TO INSTALL FRAMING FOR #1 ABOVE. STRUCTURAL STEEL ERECTOR TO INSTALL FRAMING FOR #2 AND #3 ABOVE.

5.02 OPENINGS IN STEEL ROOF DECK

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LEGEND

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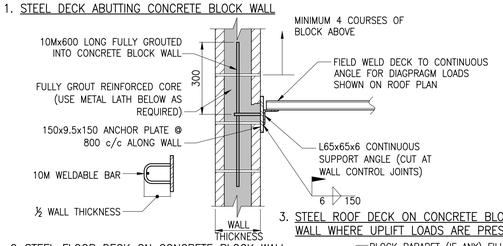
FEB 26, 2020	ADDENDUM #1	3
MAR 4, 2020	ISSUED FOR ADDENDUM #2	4

PROJECT TITLE
OUR LADY OF FATIMA PHASE 4 RENEWAL

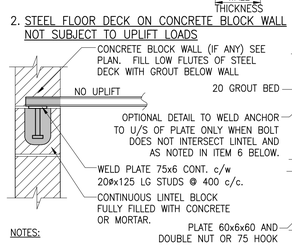
DRAWING TITLE
TYPICAL DETAILS

DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S403
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		

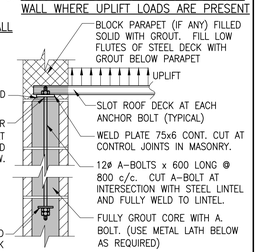
1. STEEL DECK ABUTTING CONCRETE BLOCK WALL



2. STEEL FLOOR DECK ON CONCRETE BLOCK WALL NOT SUBJECT TO UPLIFT LOADS



3. STEEL ROOF DECK ON CONCRETE BLOCK WALL WHERE UPLIFT LOADS ARE PRESENT

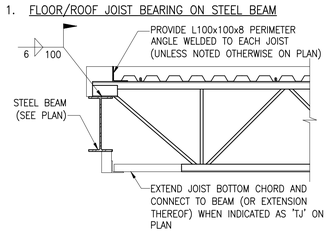


NOTES:

1. USE DETAIL #2 FOR ALL DECK ON BLOCK WALL APPLICATIONS WHERE DECK IS NOT SUBJECTED TO UPLIFT UNLESS NOTED OTHERWISE ON PLAN. USE DETAIL #3 FOR ALL ROOF DECK ON BLOCK WALL APPLICATIONS. USE DETAIL #1 ONLY AS INDICATED ON PLANS AND DETAILS.
2. SEE PLAN FOR LOADS ON STEEL DECK. CONNECT DECK TO WELDPLATE (OR SUPPORT ANGLE) FOR DIAPHRAGM LOADS INDICATED ON PLAN
3. SEE ALSO TYPICAL DETAIL 5.04 FOR ANCHORAGE OF JOIST BRIDGING TO CONCRETE BLOCK WALLS.
4. DECK SUPPLIER/ERECTOR TO NOTCH DECK ON SITE AROUND TOP OF ANCHOR BOLTS AS SHOWN IN DETAIL #3.
5. MASONRY CONTRACTOR TO PROVIDE HOLE IN BOTTOM OF CONTINUOUS LINTEL BLOCK TO INSTALL CONTINUOUS VERTICAL WALL REINFORCING AS SPECIFIED ON PLAN FOR DETAIL #2.
6. DO NOT EXTEND PLATE MORE THAN 75 PAST ANCHOR POINT. IF BARS ARE PRE-WELDED TO U/S OF WELD PLATE FABRICATOR TO SUPPLY ADDITIONAL NUTTED ANCHORS TO ALLOW FIELD CUTTING OF PLATE TO LENGTH.

5.03 STEEL DECK SUPPORTED AT LOAD BEARING CONCRETE BLOCK WALLS

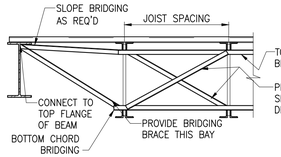
1. FLOOR/ROOF JOIST BEARING ON STEEL BEAM



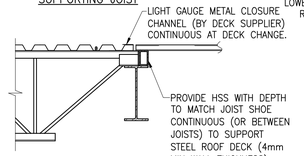
NOTES:

1. READ THIS DETAIL IN CONJUNCTION WITH THE FLOOR/ROOF FRAMING PLANS.
2. STEEL DETAILER/FABRICATOR AND JOIST FABRICATOR TO COORDINATE JOIST SHOE DEPTH, ETC. FOR THE PRODUCTION OF SHOP DRAWINGS AND FABRICATION DETAILS.
3. ROOF JOISTS MAY BE SLOPED TO ROOF DRAINS (SEE ROOF FRAMING PLAN). PROVIDE JOIST SHOES THAT ALLOW A SLOPED JOIST WHILE THE SHOES BEAR EVENLY ON THE FLAT TOP FLANGE OF THE STEEL BEAM
4. SEE TYPICAL DETAIL 4.06 FORSTEEL BEAMS LOCATED WITHIN CONCRETE BLOCK WALLS
5. AS MUCH AS POSSIBLE, ENSURE THAT JOISTS (OR JOISTS AND STEEL PURLINS) BEARING ON OPPOSITE SIDES OF A STEEL GIRDER BEAM DO NOT HAVE CONCURRENT BEARING POINTS

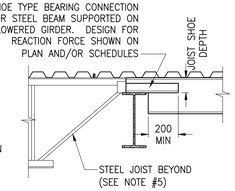
2. JOIST PARALLEL TO BEAM



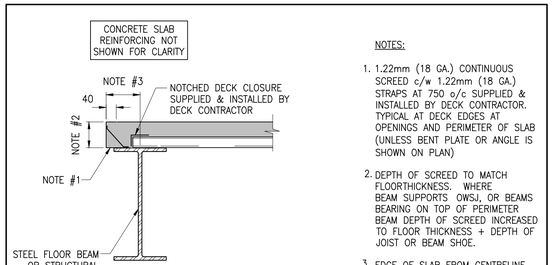
3. DECK SPAN CHANGE AT BEAM SUPPORTING JOIST



4. STEEL PURLIN SUPPORTED AT LOWER GIRDER BEAM



5.05 STEEL JOISTS SUPPORTED ON STEEL BEAMS

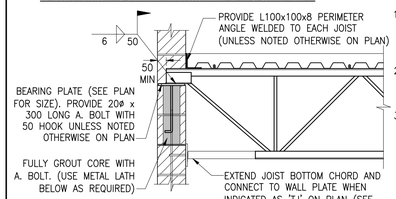


NOTES:

1. 1.22mm (18 GA.) CONTINUOUS SCREED c/w 1.22mm (18 GA.) STRAPS AT 750 o/c SUPPLIED & INSTALLED BY DECK CONTRACTOR. TYPICAL AT DECK EDGES AT OPENINGS AND PERIMETER OF SLAB (UNLESS BENT PLATE OR ANGLE IS SHOWN ON PLAN)
2. DEPTH OF SCREED TO MATCH FLOORTHICKNESS. WHERE BEAM SUPPORTS OWSJ, OR BEAMS BEARING ON TOP OF PERIMETER BEAM DEPTH OF SCREED INCREASED TO FLOOR THICKNESS + DEPTH OF JOIST OR BEAM SHOE.
3. EDGE OF SLAB FROM CENTRELINE OF BEAM AS SHOWN ON PLAN AND/OR SECTIONS (SEE ALSO ARCHITECTURAL DRAWINGS). LENGTH OF BOTTOM HORIZONAL LEG OF SCREED TO SUIT THIS DIMENSION.
4. IN LOCATIONS WHERE EXISTING FINISHES BELOW MAY BE DAMAGED BY CEMENT PASTE ESCAPING PAST METAL FORMS EXTRA CARE IS REQUIRED TO ENSURE DECK CONTRACTOR DOES NOT LEAVE GAPS WIDER THAN 5mm WIDE. GENERAL CONTRACTOR TO FILL GAPS UP TO 5mm WITH SEALANT.

5.08 TYPICAL EDGE OF CONCRETE SLAB ON STEEL DECK AT PERIMETER AND SLAB OPENINGS

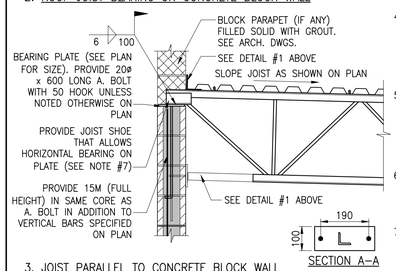
1. FLOOR JOIST BEARING ON CONCRETE BLOCK WALL



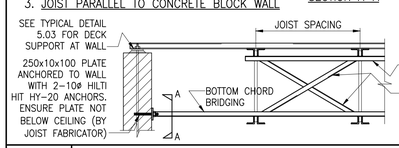
NOTES:

1. READ THIS DETAIL IN CONJUNCTION WITH ROOF PLAN AND BEARING PLATE SCHEDULES.
2. ROOF JOIST IS CLASSIFIED AS ANY JOIST SUBJECTED TO WIND UPLIFT LOADS.
3. 15M REINFORCING BAR SHOWN IN WALL OF DETAIL #2 IS IN ADDITION TO THE VERTICAL WALL REINFORCING INDICATED ON PLAN. GENERAL CONTRACTOR TO LAYOUT LOCATION OF ALL ROOF JOISTS FOR MASONRY CONTRACTOR FOR CORRECT PLACEMENT OF THIS EXTRA 15M BAR.
4. MASONRY CONTRACTOR TO SET ALL JOIST BASEPLATES LEVEL IN A BED OF MORTAR. FILL CORES BELOW BEARING PLATE SOLID AS SHOWN IN DETAILS.
5. PROVIDE PERMANENT CONTINUOUS BRIDGING FOR TOP AND BOTTOM CHORDS OF ALL JOISTS IN ACCORDANCE WITH CAN/CSA S16.1.
6. OFFSET JOIST BEARING PLATE AND ANY CONNECTION PLATES FROM VERTICAL WALL CONTROL JOINT.
7. JOIST SHOE TO BE FABRICATED SUCH THAT THERE IS EVEN BEARING ON THE FLAT BEARING PLATE BELOW WHILE THE JOIST FOLLOWS THE INDICATED SLOPES.

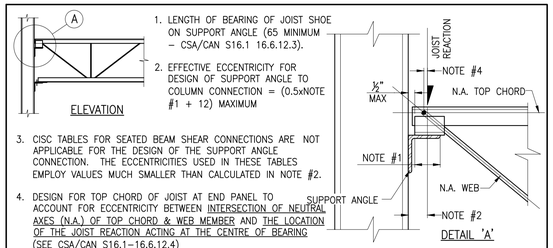
2. ROOF JOIST BEARING ON CONCRETE BLOCK WALL



3. JOIST PARALLEL TO CONCRETE BLOCK WALL

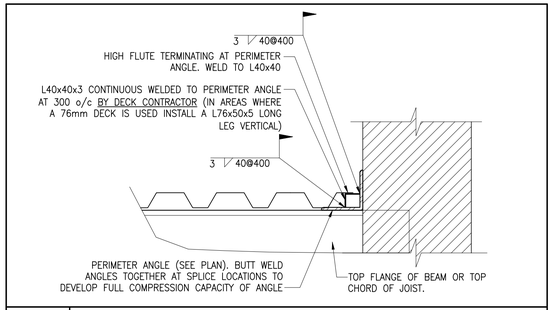


5.04 STEEL JOISTS SUPPORTED ON CONCRETE BLOCK WALLS



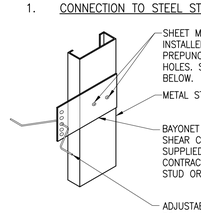
1. LENGTH OF BEARING OF JOIST SHOE ON SUPPORT ANGLE (65 MINIMUM – CSA/CAN S16.1 16.6.12.3).
2. EFFECTIVE ECCENTRICITY FOR DESIGN OF SUPPORT ANGLE TO COLUMN CONNECTION = (0.5xNOTE #1 + 12) MAXIMUM
3. CISC TABLES FOR SEATED BEAM SHEAR CONNECTIONS ARE NOT APPLICABLE FOR THE DESIGN OF THE SUPPORT ANGLE CONNECTION. THE ECCENTRICITIES USED IN THESE TABLES EMPLOY VALUES MUCH SMALLER THAN CALCULATED IN NOTE #2.
4. DESIGN FOR TOP CHORD OF JOIST AT END PANEL TO ACCOUNT FOR ECCENTRICITY BETWEEN INTERSECTION OF NEUTRAL AXES (N.A.) OF TOP CHORD & WEB MEMBER AND THE LOCATION OF THE JOIST REACTION ACTING AT THE CENTRE OF BEARING (SEE CSA/CAN S16.1-16.6.12.4)
5. EFFECTIVE ECCENTRICITY FOR SUPPORT ANGLE TO COLUMN CONNECTION IS NOT TO BE EXCEEDED AS SPECIFIED IN NOTE #2. STRUCTURAL CONSULTANT MUST BE NOTIFIED IF THIS DIMENSION CANNOT BE MAINTAINED.

5.06 OPEN WEB STEEL JOIST SUPPORTED AT STEEL COLUMN

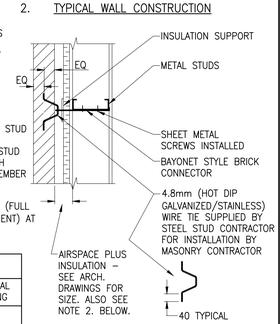


5.07 TYPICAL DECK CLOSURE DETAIL WHERE HIGH FLUTE DOES NOT CLOSE WITH PERIMETER ANGLE

1. CONNECTION TO STEEL STUD



2. TYPICAL WALL CONSTRUCTION



ANCHOR SPACING TABLE	
STUD/FRAMING HORIZONTAL SPACING	MAXIMUM VERTICAL ANCHOR SPACING
FRAMING AT 600 O.C.	400mm O.C.
FRAMING AT 400 O.C.	600mm O.C.
FRAMING AT 300 O.C.	600mm O.C.
AT JAMB LOCATIONS OF ALL WALL OPENINGS	300mm O.C.

1. BAYONET TIES TO BE FERO STUD SHEAR CONNECTORS (SLOTTED NOT PERMITTED) COMPLETE WITH 4.8mm DIAMETER (HOT DIPPED GALVANIZED/STAINLESS) V-ANCHOR AND INSULATION SUPPORT. NOTE THAT INSULATION SUPPORT IS TO BE PLACED OVER AIR BARRIRER SYSTEM.
2. MINIMUM GAUGE OF TIE SYSTEM TO BE 16 GAUGE MATERIAL FOR CAVITIES UP TO 127mm WIDE. ANCHOR SUPPIER TO DESIGN TIE WITH INCREASED THICKNESS FOR WIDER CAVITIES. DESIGN OF ANCHOR TO ASSUME MAXIMUM 0.76kN UNFACTORED ANCHOR LOAD WITH NO LATERAL SUPPORT OF PLATE SUPPLIED BY INSULATION OR EXTERIOR SHEATHING.
3. ALL TIE COMPONETS ARE TO BE HAVE A MINIMUM CORROSION PROTECTION SUPPLIED (HOT DIP GALVANIZING/STAINLESS) AFTER FABRICATION. IF PLATE SYSTEM IS TO BE GALVANIZED, FOLLOW CSA-CAN3-A370 AND ASTM A123 REQUIREMENT OF 401 g/m^2. V TIE GALVANIZING TO BE IN ACCORDANCE TO CSA CAN-A370 AND ASTM A153 REQUIREMENT OF 458 g/m^2. REFER TO SPECIFICATIONS IF STAINLESS STEEL REQUIREMENT SUPERSCEEDS MINIMUM GALVANIZED COATING REQUIREMENT.
4. STEEL STUD CONTRACTOR IS TO CONSTRUCT A STOREY ROD OF MASONRY COURSING FOR ALL MASONRY VENEER WALLS TO ENSURE ANCHORS ARE INSTALLED AT THE CENTRE OF ALL MASONRY JOINTS TO RECEIVE A MASONRY TIE. IF MASONRY UNIT LAYOUT DOES NOT ALLOW PLACEMENT OF ANCHORS AT THE MAXIMUM VERTICAL SPACING SHOWN IN ABOVE TABLE, EXTRA TIES MUST BE INSTALLED ABOVE AND BELOW EACH MASONRY UNIT AT SMALLER VERTICAL SPACING SUCH THAT THE MAX VERTICAL SPACING IS NOT EXCEEDED.

5.09 ADJUSTABLE BAYONET STYLE MASONRY VENEER ANCHORS AT METAL STUD WALLS

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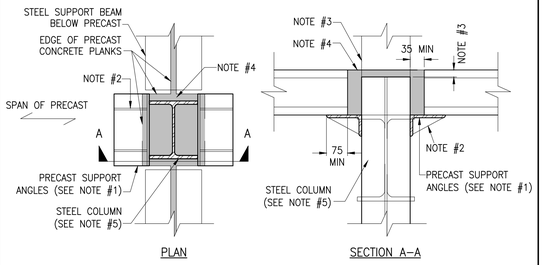
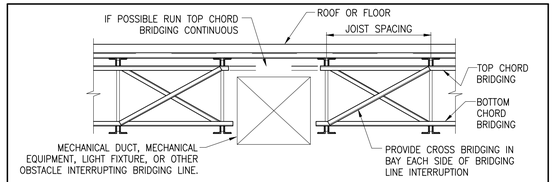


1. WHERE PRECAST CONCRETE FLOOR/ROOF PLANK SPAN(S) TERMINATE AT A STEEL COLUMN, PROVIDE L152x89x8.0 LLH STEEL SUPPORT ANGLES WELDED TO FACE OF COLUMN AS SHOWN. NOTE THAT ANGLE MAY BE REQUIRED ONLY ON ONE SIDE OF COLUMN. SEE FRAMING PLANS TO DETERMINE NUMBER OF ANGLES REQUIRED AT EACH STEEL COLUMN.
2. IF LENGTH OF PRECAST PLANK BEING SUPPORTED IS 9000mm OR GREATER, ADD 6.4mm STIFFENERS AT ½ SPAN OF STEEL ANGLE. SEE FRAMING PLAN TO DETERMINE LENGTH OF PRECAST CONCRETE PLANK BEING SUPPORTED BY ANGLE.
3. IF CONCRETE COLUMN TERMINATES AT LEVEL OF PRECAST CONCRETE FLOOR/ROOF SLABS TO BE SUPPORTED, EXTEND COLUMN ABOVE UNDERSIDE OF PRECAST PLANKS TO WITHIN 30mm OF TOP OF PRECAST ELEVATION. NOTE THAT PRECAST CONCRETE SLAB FABRICATOR MUST NOTCH AROUND COLUMN REGARDLESS OF WHETHER COLUMN CONTINUES ABOVE PRECAST.
4. IF NOT CONCRETE TOPPING PRESENT, PRECAST CONCRETE PLANK ERECTOR TO FULLY GROUT AROUND STEEL COLUMN AS SHOWN. PROVIDE FORMWORK AT UNDERSIDE OF PRECAST AS REQUIRED TO SUPPORT WET GROUT AROUND COLUMN. IF CONCRETE TOPPING IS PRESENT, CONCRETE FORMING CONTRACTOR TO ENSURE THAT COLUMN IS FULLY SURROUNDED BY CONCRETE AS SHOWN.
5. W–SECTION COLUMN SHOWN – TYPICAL DETAIL IS SIMILAR FOR HSS COLUMN SECTIONS

5.10 SUPPORT OF PRECAST CONCRETE PLANKS AT STEEL COLUMNS

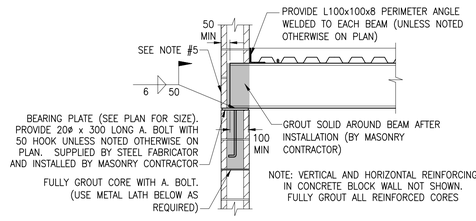


NOTES:

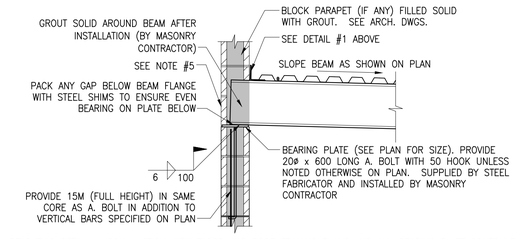
1. READ THIS DETAIL IN CONJUNCTION WITH THE FLOOR/ROOF FRAMING PLANS.
2. STEEL JOIST CONTRACTOR TO REVIEW MECHANICAL AND ELECTRICAL DRAWINGS TO DETERMINE LOCATIONS WHERE BOTTOM CHORD HORIZONTAL BRIDGING WILL BE INTERRUPTED BY LIGHTS, DUCTS, OR OTHER EQUIPMENT.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTION OF JOIST SHOP DRAWINGS TO MECHANICAL AND ELECTRICAL TRADES FOR CONFIRMATION ON LOCATIONS WHERE LIGHTS, DUCTS, OR OTHER EQUIPMENT INTERRUPT BRIGING LINES.

5.13 DUCT OR OTHER MECH. OR ELECT. CONFLICT WITH JOIST BRIDGING

1. FLOOR BEAM BEARING ON CONCRETE BLOCK WALL



2. ROOF BEAM BEARING ON CONCRETE BLOCK WALL



1. READ THIS DETAIL IN CONJUNCTION WITH FLOOR AND ROOF FRAMING PLANS AND ANY BEARING PLATE SCHEDULES.
2. ROOF BEAM IS CLASSIFIED AS ANY BEAM SUBJECTED TO WIND UPLIFT LOADS.
3. 15M REINFORCING BAR SHOWN IN WALL OF DETAIL #2 IS IN ADDITION TO THE VERTICAL WALL REINFORCING INDICATED ON PLAN. GENERAL CONTRACTOR TO LAYOUT LOCATION OF ALL BEARING PLATES FOR MASONRY CONTRACTOR FOR CORRECT PLACEMENT OF THIS EXTRA 15M BAR.
4. MASONRY CONTRACTOR TO SET ALL BEAM BASEPLATES LEVEL IN A BED OF MORTAR. FILL CORES BELOW BEARING PLATE SOLID AS SHOWN IN DETAILS.
5. SEE ARCHITECTURAL DETAILS TO DETERMINE IF FACE OF WALL IS EXPOSED. IF EXPOSED, USE FACESHELLS AS REQUIRED AT BEAM POCKET TO MAINTAIN COURSING AND AND FULL BLOCK PLACEMENT.

5.11 STEEL BEAMS SUPPORTED ON CONCRETE BLOCK WALLS

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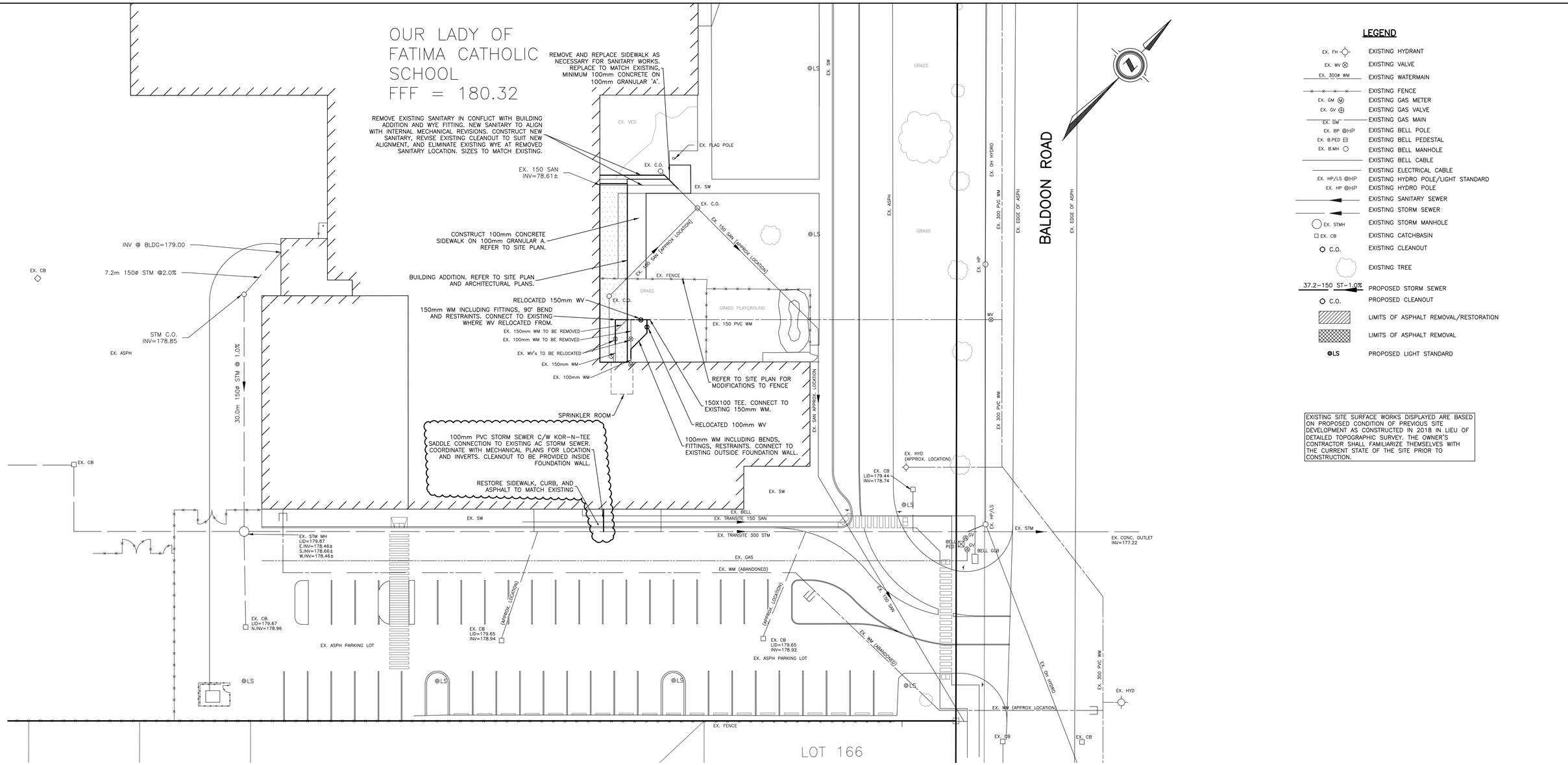
DATE	DRAWN BY	DRAWING No.
11/27/2019	BCS	S405
SCALE: As indicated	CHECKED BY: GVB	
PROJECT No.: 19232		



LEGEND

EX. FH	EXISTING HYDRANT
EX. WV	EXISTING VALVE
EX. 300ø WM	EXISTING WATERMAIN
	EXISTING FENCE
EX. GM	EXISTING GAS METER
EX. GV	EXISTING GAS VALVE
EX. GM	EXISTING GAS MAIN
EX. BP @HP	EXISTING BELL POLE
EX. B.PED	EXISTING BELL PEDESTAL
EX. B.MH	EXISTING BELL MANHOLE
	EXISTING BELL CABLE
	EXISTING ELECTRICAL CABLE
EX. HP/LS @HP	EXISTING HYDRO POLE/LIGHT STANDARD
EX. HP @HP	EXISTING HYDRO POLE
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
EX. STMH	EXISTING STORM MANHOLE
EX. CB	EXISTING CATCHBASIN
C.O.	EXISTING CLEANOUT
	EXISTING TREE
37.2–150 ST–1.0%	PROPOSED STORM SEWER
C.O.	PROPOSED CLEANOUT
	LIMITS OF ASPHALT REMOVAL/RESTORATION
	LIMITS OF ASPHALT REMOVAL
LS	PROPOSED LIGHT STANDARD

EXISTING SITE SURFACE WORKS DISPLAYED ARE BASED ON PROPOSED CONDITION OF PREVIOUS SITE DEVELOPMENT AS CONSTRUCTED IN 2018 IN LIEU OF DETAILED TOPOGRAPHIC SURVEY. THE OWNER'S CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE CURRENT STATE OF THE SITE PRIOR TO CONSTRUCTION.

EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION

DETAILS	No.	REVISIONS	DATE	CONSULTANT
DESIGN BY JSC/DH	1	ISSUED FOR TENDER/APPROVAL	FEB. 06, 2020	DEVENG
DRAWN BY JSC	2	ADDENDUM–STM FROM ADDITION	MAR. 04, 2020	DEVENG
CHECKED BY JS				
FILE: DEL18–011–C3D–BASE PHASE 4.DWG				

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development engineering (London) Limited
CONSULTING CIVIL ENGINEERS

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PROVINCE OF ONTARIO
MAR 4/20

SCALE
SCALE – 1:250
2.5 0 5m

OUR LADY OF FATIMA CATHOLIC SCHOOL
515 BALDOON ROAD
CHATHAM, ONTARIO

SITE SERVICING AND GRADING PLAN

PROJECT No. DEL18–011
SHEET No. P4–SE1
PLAN FILE No.

jsmith Mar.04/20–10:55pm DEL18–011–C3D–BASE PHASE 4.dwg

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
PIPING	
-	DOMESTIC COLD WATER
- · -	DOMESTIC HOT WATER
- · · -	DOMESTIC HOT WATER RETURN
F	FIRE PROTECTION STANDPIPE SYSTEM
SP	FIRE PROTECTION SPRINKLER SYSTEM
CD	CONDENSATE DRAIN
ID	INDIRECT DRAIN
SAN	SANITARY DRAIN
ST	STORM DRAIN
HPWR	HEAT PUMP WATER RETURN
HPWS	HEAT PUMP WATER SUPPLY
HWR	HOT WATER HEATING RETURN
HWS	HOT WATER HEATING SUPPLY
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
G	NATURAL GAS
NAME(E)	EXISTING PIPING TO REMAIN
NAME(E)	EXISTING PIPING TO BE REMOVED
VALVES	
	SHUT OFF VALVE
	CHECK VALVE
	COMBINATION SHUT-OFF, BALANCE & CHECK VALVE
	PRESSURE REDUCING VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	BALANCING VALVE
FCV	FLOW CONTROL VALVE
	COMBINATION SHUT-OFF & BALANCING VALVE
	GAS VALVE
SV	SUPERVISED VALVE

SYMBOL	DESCRIPTION
PIPING MISCELLANEOUS	
	DRAIN WITH HOSE CONNECTION
	FREEZE PROOF WALL HYDRANT
	HOSE BIB
	UNION
	PIPE ANCHOR
CO	CLEANOUT IN WALL
CO	CLEANOUT PLUG
CO	CLEANOUT IN FLOOR
	STRAINER
	STRAINER c/w BLOW OFF
	PIPE ALIGNMENT GUIDE
	FLEXIBLE CONNECTOR
EJ	EXPANSION JOINT (EJ) OR EXPANSION COMPENSATOR (EC)
	CAP
PIPING MISCELLANEOUS	
AV	AUTOMATIC AIR VENT
MV	MANUAL AIR VENT
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
RD	ROOF DRAIN
	FLANGES
CONTROLS	
	THERMOMETER
	PRESSURE GAUGE
PS	PRESSURE SWITCH
FS	FLOW SWITCH
T	THERMOSTAT

SYMBOL	DESCRIPTION
FIRE PROTECTION	
	CONCEALED SPRINKLER HEAD
	UPRIGHT SPRINKLER c/w GUARD
	SIDEWALL SPRINKLER HEAD
	SIDEWALL SPRINKLER HEAD c/w GUARD
FEX	FIRE EXTINGUISHER - SURFACE MOUNTED
FEX	FIRE EXTINGUISHER - RECESSED
	FIRE DEPARTMENT CONNECTION
	SIGHT GLASS
FHC	FIRE HOSE CABINET
HVAC	
	EXISTING DUCTWORK TO REMAIN - SINGLE LINE
	EXISTING DUCTWORK TO BE REMOVED - SINGLE LINE
	EXISTING DUCTWORK TO REMAIN
	EXISTING DUCTWORK TO BE REMOVED
	NEW DUCTWORK
	INTERNALLY INSULATED DUCTWORK
	EXTERNALLY INSULATED DUCTWORK
BD	BALANCING DAMPER
BDD	BACKDRAFT DAMPER
FD	FIRE DAMPER
	OPPOSED BLADE DAMPER - AUTOMATIC OPERATOR

SYMBOL	DESCRIPTION
HVAC	
	IN-LINE FAN
	HEAT PUMP UNIT
	UNIT HEATER
	WALL-FIN ENCLOSURE AND ELEMENT
	FORCE FLOW HEATER OR FAN COIL UNIT
	SUPPLY DIFFUSER/GRILLE/REGISTER
	RETURN GRILLE/REGISTER
	EXHAUST GRILLE/REGISTER
HVAC	
A1	PLUMBING FIXTURE TAG DESIGNATION
0.00 GPM	VALVE FLOW RATE
EF-1 / EF 201	MECHANICAL EQUIPMENT TAG
A-1 24	TYPE; ACTIVE LENGTH (MM) — TYPE - A-1 WALL-FIN/CONVECTOR DESIGNATOR; RHP RADIANT HEATING PANEL
HP 420	TYPE; DESIGNATOR — HEATING EQUIPMENT DESIGNATOR; TYPE - HP HEAT PUMP; UH UNIT HEATER; FF FORCE FLOW UNIT
VB-1 100	TYPE; AIR QUANTITY (L/S) — AIR TERMINAL EQUIPMENT; TYPE - CVB CONSTANT VOLUME BOX; VB VARIABLE VOLUME BOX; VVT VARIABLE VOLUME & TEMPERATURE BOX
SD-1 100	TYPE; AIR QUANTITY (L/S) — DIFFUSER/REGISTER/GRILLE DESIGNATOR

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	EF	EXHAUST FAN	HZ	FREQUENCY	NTS	NOT TO SCALE	RECIRC	RECIRCULATING	SA	SUPPLY AIR	VOL	VOLUME
BHP	BRAKE HORSEPOWER	EG	EXHAUST AIR GRILLE	KW	KILOWATT	OA	OUTSIDE AIR	REL	EXISTING TO BE RELOCATED	SD	SUPPLY AIR DIFFUSER	W	WATT
BTU	BRITISH THERMAL UNIT	EWT	ENTERING WATER TEMPERATURE	l/s	LITERS PER SECOND	PD	PRESSURE DROP	REM	EXISTING TO BE REMOVED	SG	SUPPLY AIR GRILLE	WB	WET-BULB TEMPERATURE
DG	DOOR GRILLE	EX	EXISTING TO BE REMAIN	LAT	LEAVING AIR TEMPERATURE	PH	PHASE	RG	RETURN AIR GRILLE	T STAT	THERMOSTAT		
EAT	ENTERING AIR TEMPERATURE	HP	HORSEPOWER	LWT	LEAVING WATER TEMPERATURE	RA	RETURN AIR	RPM	REVOLUTIONS PER MINUTE	V	VOLT		

MECHANICAL DRAWING LIST

Chorley + Bisset
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250 CITY CENTRE AVE., SUITE 403
OTTAWA ON, K1R 6K7

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	

LICENSED PROFESSIONAL ENGINEER
JD FOSTER
100148736
Feb 20/2020
PROVINCE OF ONTARIO

PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

MECHANICAL LEGEND, ABBREVIATIONS AND DRAWING LIST

DATE PLOTTED: 2020-03-05 2:53:07 PM	DRAWN BY: BMD	DRAWING No.: M101.4
SCALE: AS INDICATED	CHECKED BY: JDF	
PROJECT No.: 8906		

ROOFTOP AIR HANDLING UNIT

DRAWING REFERENCE	MANUFACTURER	SERVICE	MODEL	SUPPLY FAN AIR FLOW (L/s)	SUPPLY FAN E.S.P. (Pa)	SUPPLY FAN T.S.P. (Pa)	SUPPLY FAN BHP (kW)	SUPPLY FAN HP	EXHAUST FAN AIR FLOW (l/s)	EXHAUST FAN E.S.P. (Pa)	EXHAUST FAN BHP (kW)	EXHAUST FAN HP (QUANTITY)	ENERGY RECOVERY WHEEL O/A (l/s)	ENERGY RECOVERY WHEEL E/A (l/s)	ENERGY RECOVERY WHEEL COOLING TOTAL CAPACITY (kW)	ENERGY RECOVERY WHEEL HEATING TOTAL CAPACITY (kW)	MAX. WHEEL* PRESSURE DROP (Pa) SUPPLY AIR	MAX. WHEEL* PRESSURE DROP (Pa) EXHAUST AIR
RTU-102	DAIKIN	VENTILATION	DPS 025A	3,000	125	922	5.3	10 (1)	3,000	125	3.56	8 (1)	3,000	3,000	51	124	234	234

DRAWING REFERENCE	WINTER HEAT RECOVERY SUPPLY TEMPERATURE (°C) ENTERING D.B.	ENTERING W.B.	LEAVING D.B.	LEAVING W.B.	WINTER HEAT RECOVERY EXHAUST TEMPERATURE (°C) ENTERING D.B.	ENTERING W.B.	LEAVING D.B.	LEAVING W.B.	SUMMER HEAT RECOVERY SUPPLY TEMPERATURE (°C) ENTERING D.B.	ENTERING W.B.	LEAVING D.B.	LEAVING W.B.	SUMMER HEAT RECOVERY EXHAUST TEMPERATURE (°C) ENTERING D.B.	ENTERING W.B.	LEAVING D.B.	LEAVING W.B.
RTU-102	-20.6	-21.1	2.6	-0.2	21.1	11.7	2.6	-0.2	31.1	23.3	26.9	19.8	23.9	16.7	26.9	19.8

DRAWING REFERENCE	COOLING CAPACITY TOTAL (kW)	COOLING CAPACITY SENSIBLE (kW)	COOLING CAPACITY EER	NATURAL GAS HEATING CAPACITY INPUT (kW)	NATURAL GAS HEATING CAPACITY OUTPUT (kW)	O/A QUANTITY (l/s)	ELECTRICAL V/PH/HZ	ELECTRICAL MCA	ELECTRICAL MOCP	INLET SOUND POWER LEVELS (dB) 1	2	3	4	5	6	7	8
RTU-102	88.4	60.9	11	175.8	140.7	3,000	208/3/60	151.4	-	78	77	85	77	72	71	66	63

UNIT COMPLETE WITH VIBRATION ISOLATION ADAPTER ROOF CURB.
* INCLUDES ERW FILTER PRESSURE DROP

HEAT PUMPS

DRAWING REFERENCE	MANUFACTURER	MODEL	COOLING CAPACITY TOTAL (kW)	COOLING CAPACITY SENSIBLE (kW)	AIR QUANTITY (l/s)	EXTERNAL STATIC PRESSURE (Pa)	WATER FLOW (l/s)	MAX. WATER PRESSURE DROP (kPa)	HEATING CAPACITY (kW)	ELECTRICAL V/PH/HZ	ELECTRICAL MCA	MIN EER (DESIGN)
HP-401*	DAIKIN	WGSH0091	2.61	1.89	135	95	0.12	25	3.60	208/1/60	5.6	13.1
HP-402*	DAIKIN	WGSH0121	3.61	2.82	195	95	0.16	25	4.66	208/1/60	6.8	12.5
HP-403*	DAIKIN	WGSH0191	4.71	3.70	290	95	0.25	25	6.81	208/1/60	11.3	13.8
HP-404**	DAIKIN	WGTH0261	7.10	5.5	380	95	0.32	25	8.7	208/3/60	11.1	14.7
HP-405**	DAIKIN	WGTH0321	8.7	6.4	480	95	0.39	25	11.0	208/3/60	15.9	13.5
HP-406**	DAIKIN	WGTH0381	10.6	8.0	590	95	0.47	25	13.3	208/3/60	19.5	14.6
HP-407**	DAIKIN	WLVC1120	32.6	27.5	2,245	95	1.58	35	44.8	208/3/60	41.5	10.7

1. COOLING SELECTION BASED ON 23.8/17.2°C ENTERING AIR, 32.2°C ENTERING WATER, 38.8° LEAVING WATER.
2. MAXIMUM PRESSURE DROP INCLUDES LOSSES TROUGH SUPPLY AND RETURN HOSES.
3. HEATING SELECTION BASED ON 21.1°C ENTERING AIR, 21.1° ENTERING WATER.
*SINGLE STAGE HEAT PUMPS.
**TWO STAGE HEAT PUMPS. PERFORMANCE SHOWN AT FULL LOAD CONDITIONS.

EXHAUST FANS

DRAWING REFERENCE	SERVICE	MANUFACTURER	CATALOG NUMBER	AIR QUANTITY (L/S)	EXTERNAL STATIC PRESSURE (PA)	FAN RPM	MOTOR HP	ELECTRICAL (V/PH/HZ)	FAN INLET SOUND POWER LEVELS (dB) 1	2	3	4	5	6	7	8
EF-1	117/119	COOK	90C17DEC	150	80	1,292	FHP	120/1/60	61	65	67	55	50	45	40	37
EF-2	STORAGE EXHAUST	COOK	90C17DEC	240	100	1,301	FHP	120/1/60	63	66	71	62	57	53	48	45
EF-3	CHANGE ROOM EXHAUST	COOK	90C17DEC	200	62	1,050	FHP	120/1/60	57	61	62	55	51	46	42	39
EF-4	FDK WASHROOM EXHAUST	COOK	90C17DEC	125	100	1,334	FHP	120/1/60	61	65	66	55	50	46	41	38
EF-5	STAFF WASHROOM EXHAUST	COOK	90C17DEC	50	62	954	FHP	120/1/60	54	55	53	44	41	36	34	35
EF-6	156/157 WASHROOM EXHAUST	COOK	90C17DEC	260	95	1,331	FHP	120/1/60	64	66	71	63	58	54	49	45
EF-7	118/120 WASHROOM EXHAUST	COOK	90C17DEC	125	62	1,117	FHP	120/1/60	58	61	61	51	46	41	37	36

GRILLES, REGISTERS AND DIFFUSERS

DRAWING REFERENCE	MANUFACTURER	MODEL	PANEL SIZE (mm)	NECK SIZE (mm)	AIR VOLUME (L/s)	REMARKS
SD-1	PRICE	SPD/31/B12	300x300	150ø	0-65	STEEL CONSTRUCTION SQUARE PLAQUE DIFFUSER, EQUALIZING GRID, WHITE FINISH
SD-2	PRICE	SPD/31/B12	610x610	200ø	66-110	STEEL CONSTRUCTION SQUARE PLAQUE DIFFUSER, EQUALIZING GRID, WHITE FINISH
SD-3	PRICE	SPD/31/B12	610x610	250ø	111-180	STEEL CONSTRUCTION SQUARE PLAQUE DIFFUSER, EQUALIZING GRID, WHITE FINISH
SD-4	PRICE	SPD-FR/31/B12	610x610	300ø	181-225	STEEL CONSTRUCTION SQUARE PLAQUE DIFFUSER, FIRE RATED, EQUALIZING GRID, WHITE FINISH
SD-5	KAMPMANN	KASWIRL-EL/400	610x610	200ø	45-85	STEEL CONSTRUCTION SQUARE PANEL HIGH INDUCTION DIFFUSER, SIDE INLET PLENUM BOX, WHITE ECCENTRIC CYLINDERS, WHITE FINISH, CEILING MOUNTED.
SD-6	KAMPMANN	KASWIRL-EL/500	610x610	225ø	86-110	STEEL CONSTRUCTION SQUARE PANEL HIGH INDUCTION DIFFUSER, SIDE INLET PLENUM BOX, WHITE ECCENTRIC CYLINDERS, WHITE FINISH, CEILING MOUNTED.
SD-7	KAMPMANN	KASWIRL-EL/500	610x610	250ø	111-150	STEEL CONSTRUCTION SQUARE PANEL HIGH INDUCTION DIFFUSER, SIDE INLET PLENUM BOX, WHITE ECCENTRIC CYLINDERS, WHITE FINISH, CEILING MOUNTED.
SG-1	PRICE	SDGE/F/A/AS/B15	-	300x200	0-170	EXTRUDED ALUMINUM CONSTRUCTION CURVED FACE DUCT GRILLE, DOUBLE DEFLECTION CORE, CLOSED CELL FOAM GASKET, AIR SCOOP DAMPER, ALUMINUM FINISH.
SL-1	PRICE	SDS/75/1/16/XX/B15	SEE DWG	SEE DWG	0-20 / M	EXTRUDED ALUMINUM CONSTRUCTION CURVED FACE LINEAR SLOT GRILLE. ADJUSTABLE SLOT PATTERN CONTROLER, EQUALIZATION GRID, SPIRAL DUCT MOUNTING, ALUMINUM FINISH.
RG-1	PRICE	PDDR/3/B12	610x300	560x250	0-260	STEEL CONSTRUCTION PERFORATED FACE GRILLE, HINGED FACE, WHITE FINISH
RG-2	PRICE	PDDR/3/B12	610x610	560x560	0-790	STEEL CONSTRUCTION PERFORATED FACE GRILLE, HINGED FACE, WHITE FINISH
RG-3	PRICE	98D/S/A/B15	-	550x900	0-1500	HEAVY DUTY GYM GRILLE, EXTRUDED ALUMINUM, 13mm BLADE SPACING, 45° DEFLECTION LONG BLADES, ALUMINUM FINISH
EG-1	PRICE	80/F/B12	250x250	250x250	0-140	EXTRUDED ALUMINUM CONSTRUCTION EGG CRATE GRILLE, ALUMINUM GRID CORE, FLAT BORDER, WHITE FINISH
DG-1	PRICE	97/L/A/B15	-	610x460	-	HEAVY DUTY GYM GRILLE, EXTRUDED ALUMINUM, 13MM BLADE SPACING, 0° DEFLECTING LONG BLADES, ALUMINUM FINISH

HEATING UNITS

DRAWING REFERENCE	MANUFACTURER	MODEL	SIZE [LENGTH X HEIGHT X DEPTH (mm)]	CAPACITY (W)	ELECTRICAL (V/Ph/Hz)	MOTOR HP	REMARKS
FF-420*	SIGMA	SFF06	1020 x 710 x 240	9290	120/1/60	FHP	RECESSED UNDUCTED WALL CABINET
FF-421*	SIGMA	SFF06	1020 x 710 x 240	9290	120/1/60	FHP	SEMI-RECESSED UNDUCTED WALL CABINET
A-1**	SIGMA	SWE185S	SEE DRAWINGS x 460 x 150	910/m	-	-	1 ROW ENCLOSURE LENGTH AS SHOWN ON PLANS
A-2**	SIGMA	SWE245S	SEE DRAWINGS x 600 x 150	1150/m	-	-	2 ROW ELEMENT, DOUBLE SLOPE ENCLOSURE MOUNTED AT HIGH LEVEL
B-1	RUNTAL	R-1	SEE DRAWINGS x 70 x 42	105/m	-	-	
RP-1**	SIGMA	24-4	SEE DRAWINGS	397/m	-	-	4 TUBE RADIANT HEATING PANEL, CEILING MOUNTED

* SELECTED BASED ON 18°C EAT, 71°C EWT AND 54°C LWT
** ALL OTHER SELECTIONS BASED ON 18°C EAT, 71°C EWT AND 60°C LWT

Chorley+Bisset
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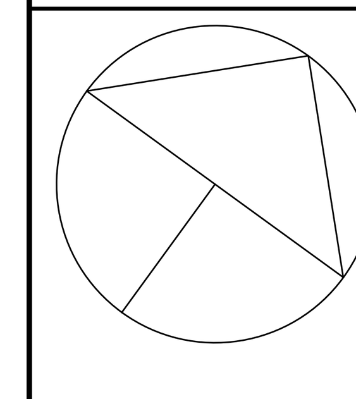
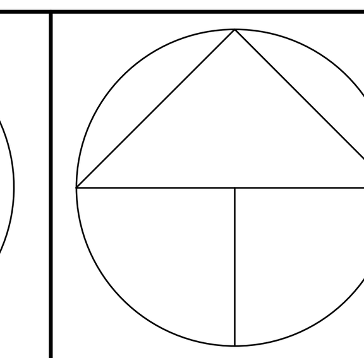

TRUE NORTH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NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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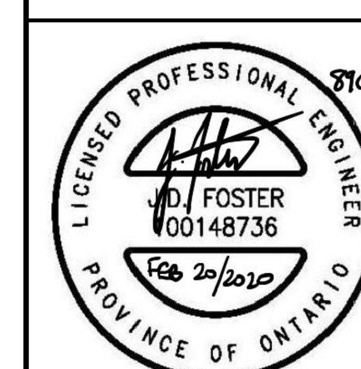
1	02/19/2020	ISSUED FOR TENDER	



PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

SCHEDULES

DATE PLOTTED	DRAWN BY	DRAWING No.
01/11/2020	BMD	M102.4
SCALE: AS INDICATED	CHECKED BY: JDF	
PROJECT No. 8906		

FILE NAME: 8906DM102.DWG
DATE SAVED: 05-Mar-2020 8:49 AM
DATE PLOTTED: 05-Mar-2020 2:51 PM
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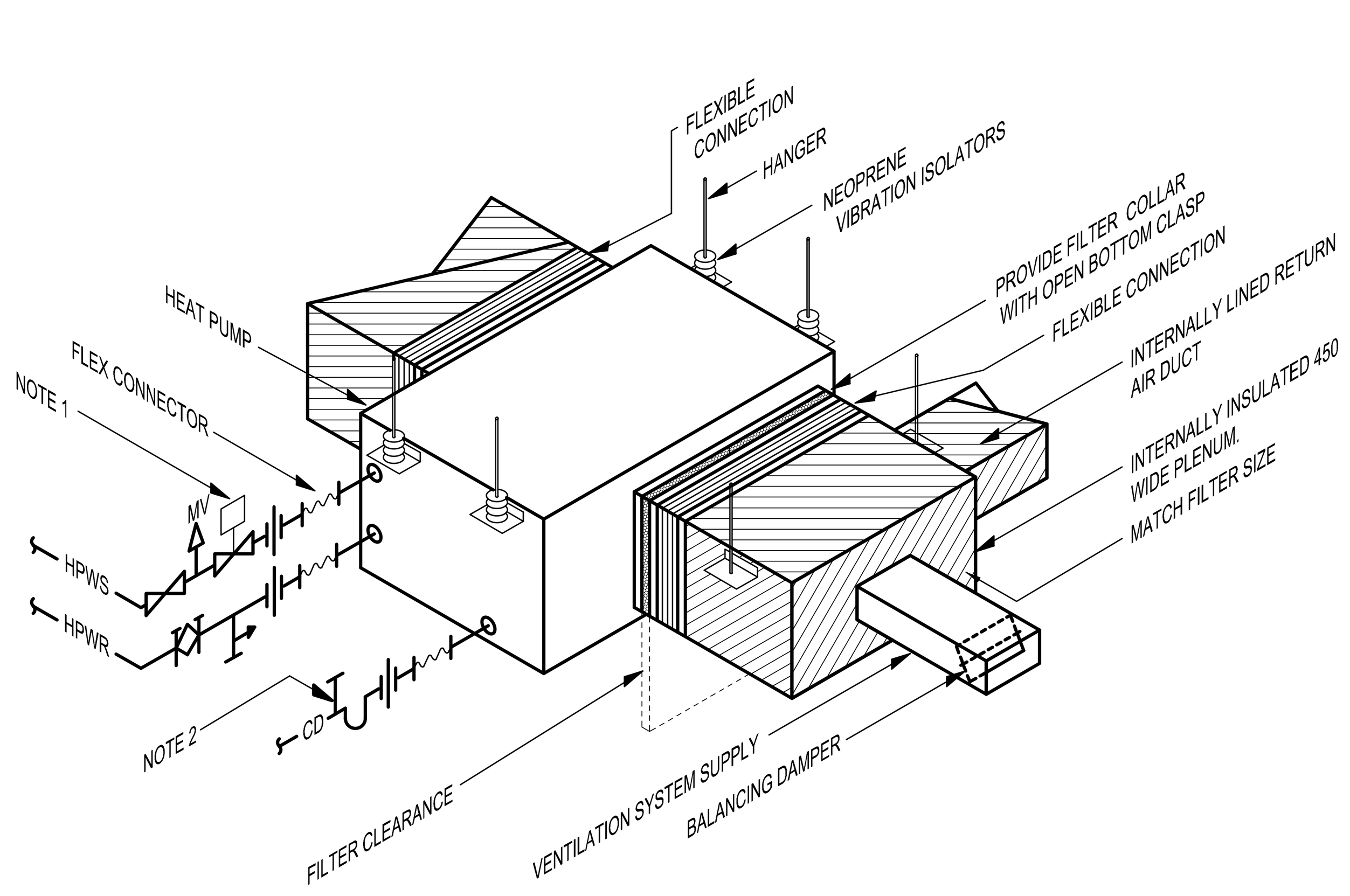
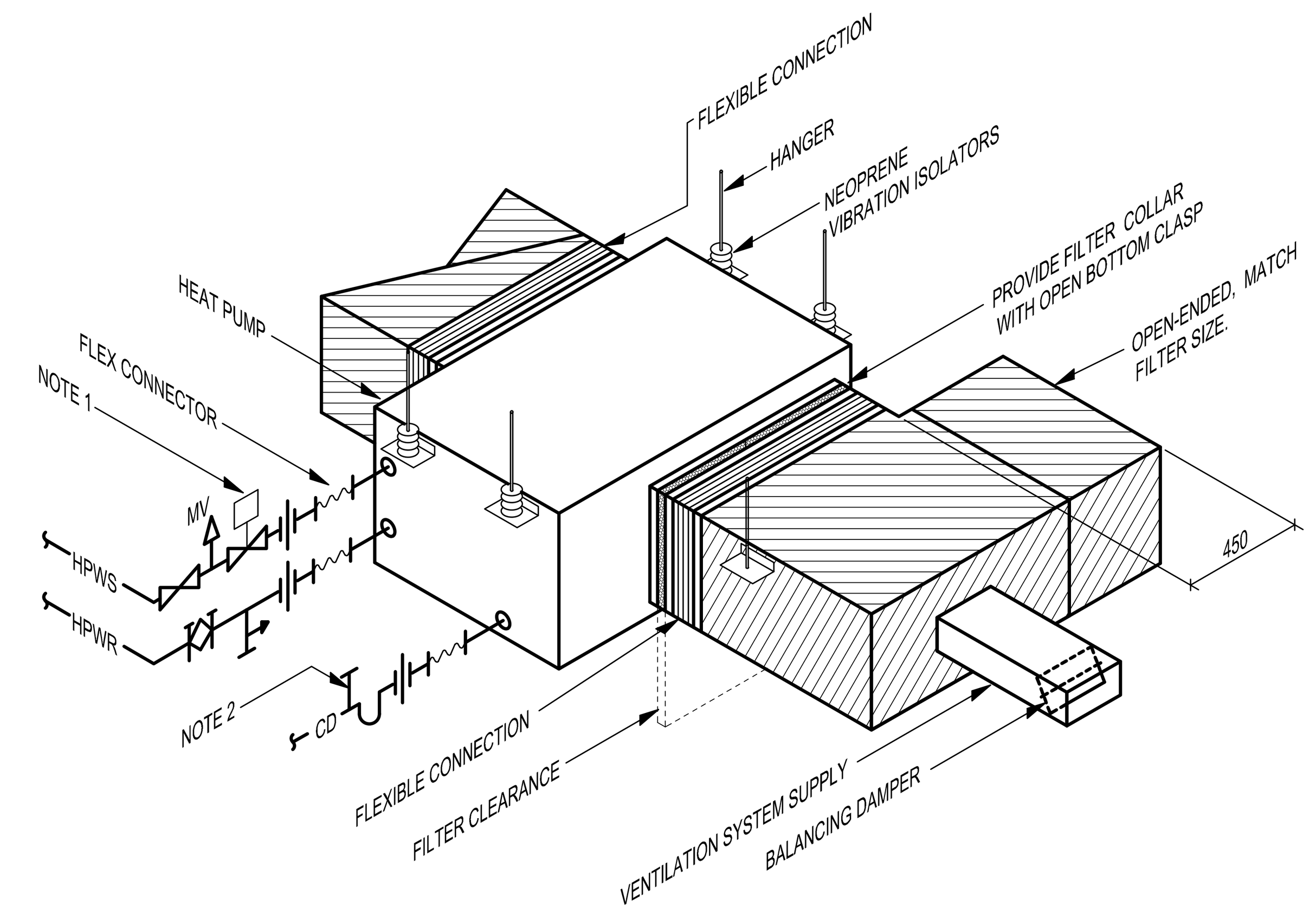


HEAT PUMP INSTALLATION DETAIL WITH DUCTED RETURN

N.T.S.

NOTES:

1. TWO WAY CONTROL VALVE SUPPLIED WITH HEAT PUMP AND INSTALLED BY DIV. 15
2. TRAP IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE LINE SIZE VERTICAL VENT MIN. 80mm LONG.
3. DEMONSTRATE TO OWNER AND CONSULTANT THAT FOR EACH HEAT PUMP THERE ARE NO PHYSICAL OBSTRUCTIONS WHICH BLOCK FILTER REPLACEMENT.
4. ROTATE FILTER HOLDER 180 DEGREES WHEREVER REQUIRED TO ENSURE UNIMPEDED FILTER CHANGES.



HEAT PUMP INSTALLATION DETAIL WITH RETURN PLENUM

N.T.S.

NOTES:

1. TWO WAY CONTROL VALVE SUPPLIED WITH HEAT PUMP AND INSTALLED BY DIV. 15.
2. TRAP IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE LINE SIZE VERTICAL VENT MIN. 80mm LONG.
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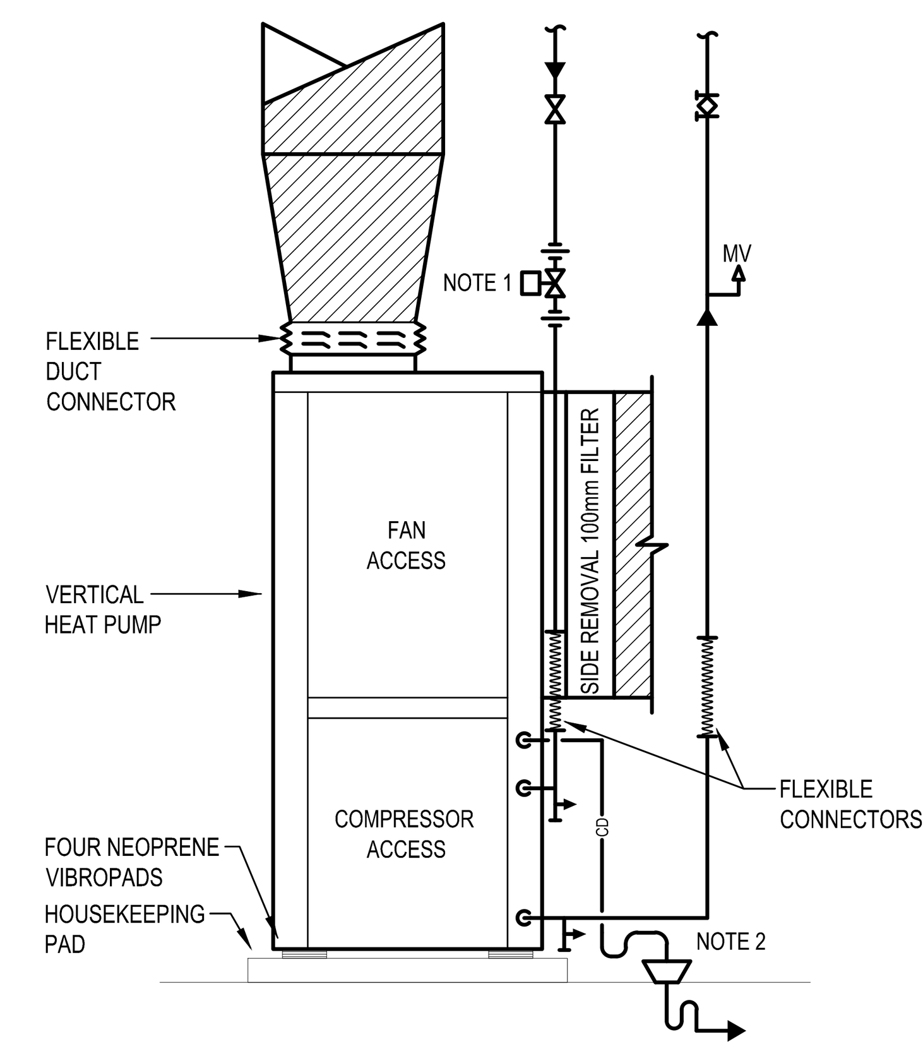
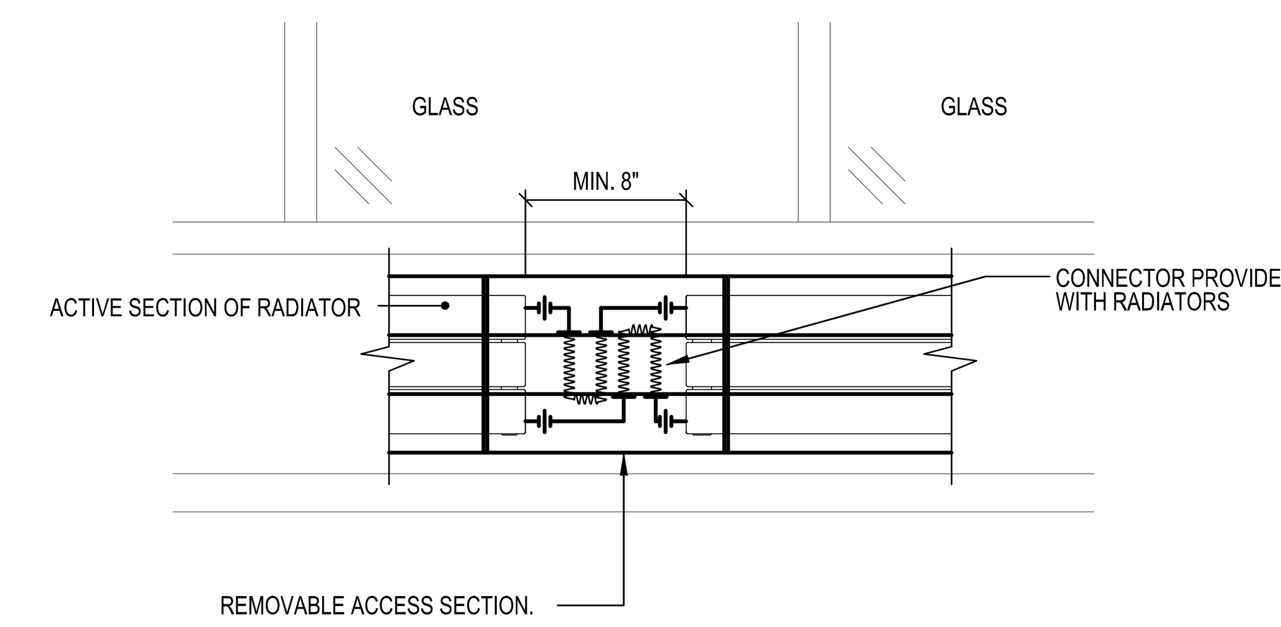


TYPICAL VERTICAL HEAT PUMP INSTALLATION DETAIL.

N.T.S.

NOTES:

1. TWO WAY CONTROL VALVE SUPPLIED WITH HEAT PUMP AND INSTALLED BY DIV. 15.
2. TRAP IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE LINE SIZE VERTICAL VENT MIN. 80mm LONG.
3. DEMONSTRATE TO OWNER AND CONSULTANT THAT FOR EACH HEAT PUMP THERE ARE NO PHYSICAL OBSTRUCTIONS WHICH BLOCK FILTER REPLACEMENT.
4. ROTATE FILTER HOLDER 180 DEGREES WHEREVER REQUIRED TO ENSURE UNIMPEDED FILTER CHANGES.

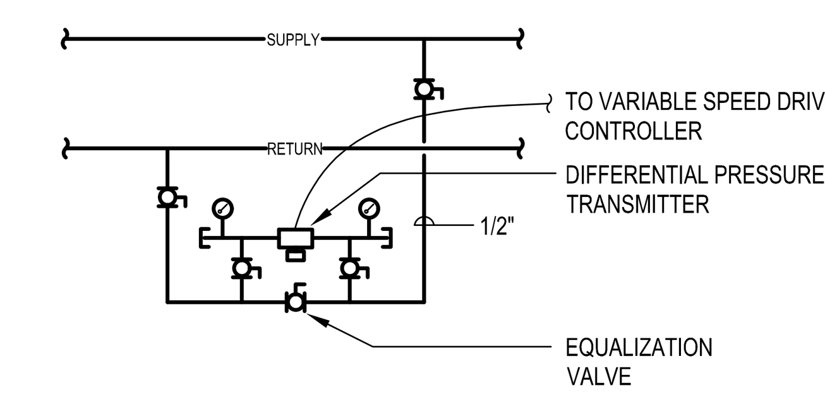


STEEL PANEL RADIATOR EXPANSION DETAIL

N.T.S.

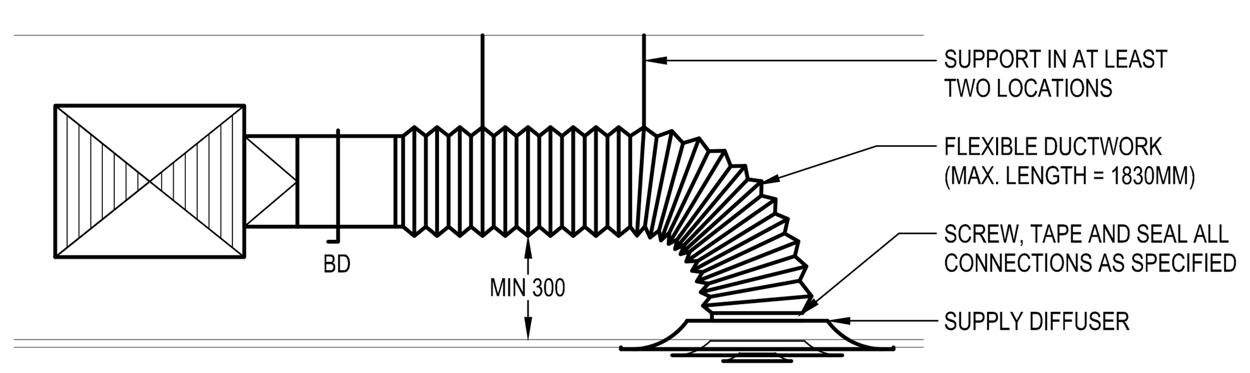
NOTE:

1. INSTALL EXPANSION COMPENSATION AS PER MANUFACTURERS RECOMMENDATIONS.



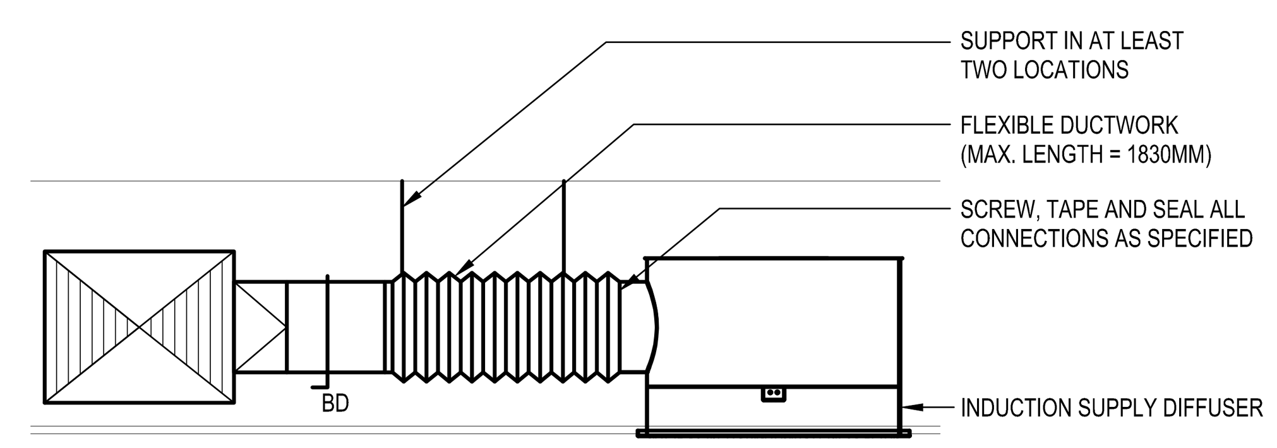
DIFFERENTIAL PRESSURE SENSOR INSTALLATION DETAIL

N.T.S.



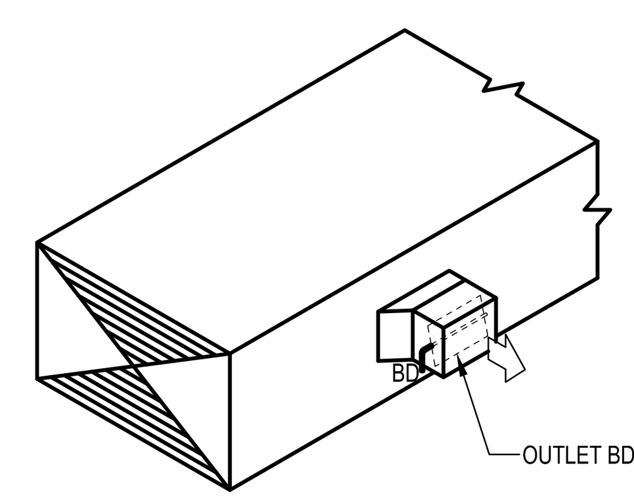
TYPICAL RUNOUT TO SUPPLY DIFFUSER ON HEAT PUMP SYSTEM

N.T.S.



TYPICAL RUNOUT TO HIGH INDUCTION DIFFUSER ON HEAT PUMP SYSTEM

N.T.S.

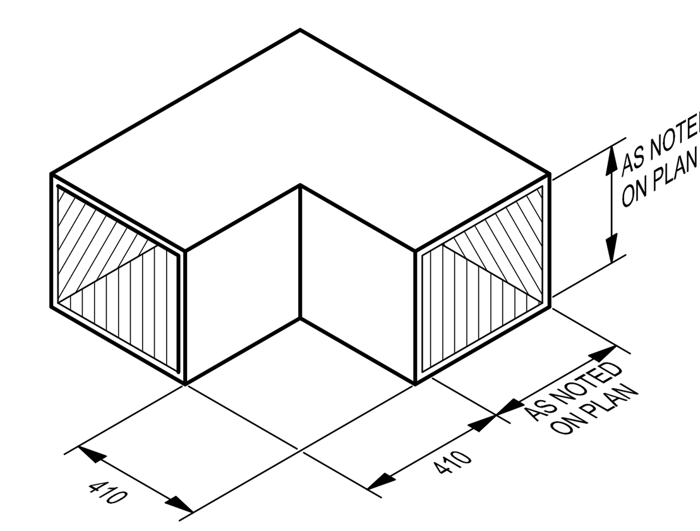


OUTLET BD SIZES

BRANCH SIZE (mm)	AIR VOLUME(L/S)
200x150	0-95
200x200	96-150
250x200	151-190
250x250	191-265

TYPICAL VENTILATION SYSTEM SUPPLY OUTLET

N.T.S.

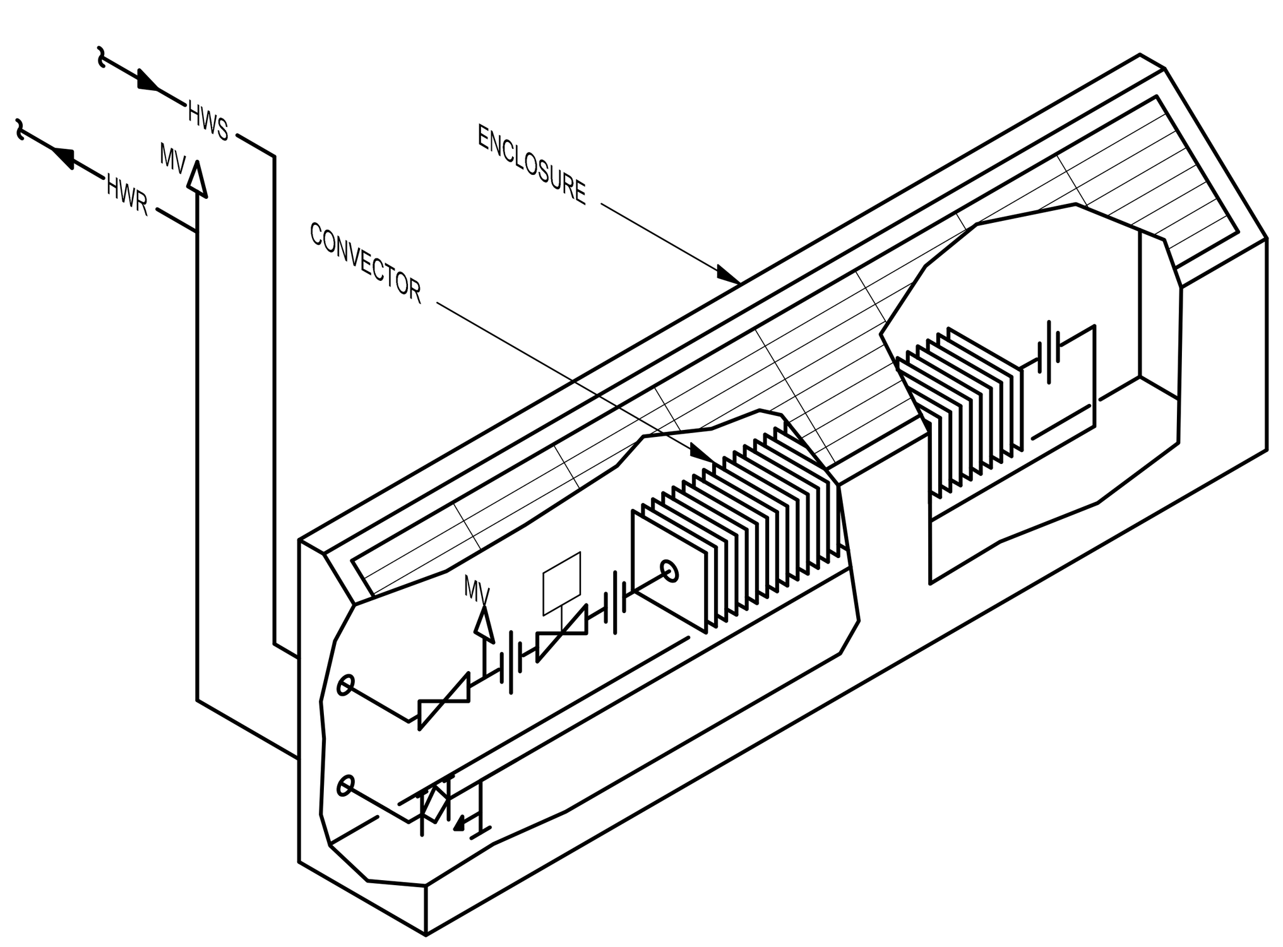


TRANSFER DUCT DETAIL (TD)

N.T.S.

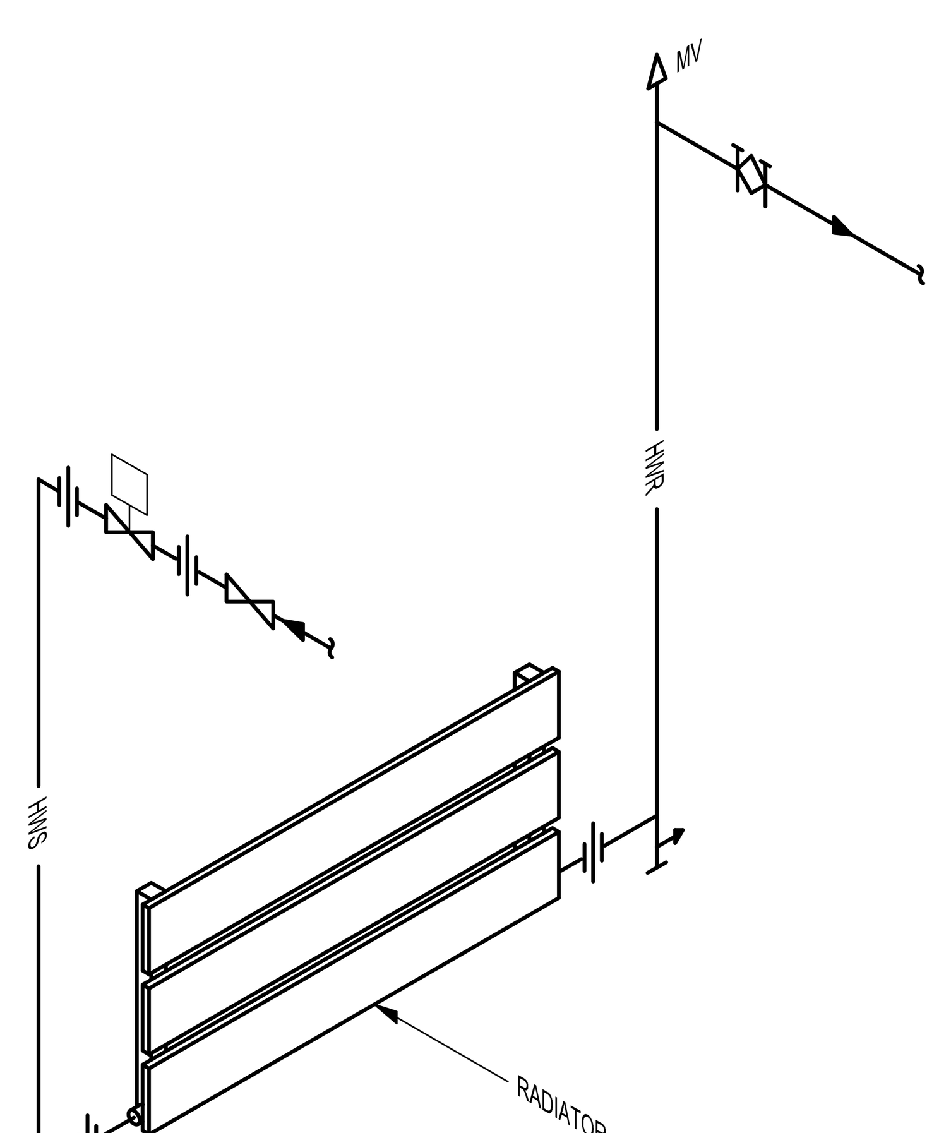
NOTE:

1. INTERNALLY LINE DUCTWORK.



TYPICAL PIPING ARRANGEMENT FOR CONVECTORS - 2 WAY VALVE

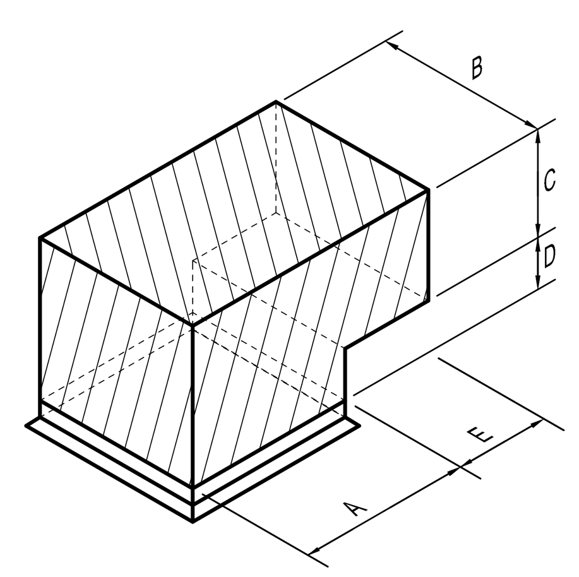
N.T.S.



TYPICAL PIPING ARRANGEMENT FOR PANEL RADIATORS

N.T.S.

	DIMENSIONS				
	A	B	C	D	E
RG-1	560	250	250	200	300
RG-2	560	560	300	200	300

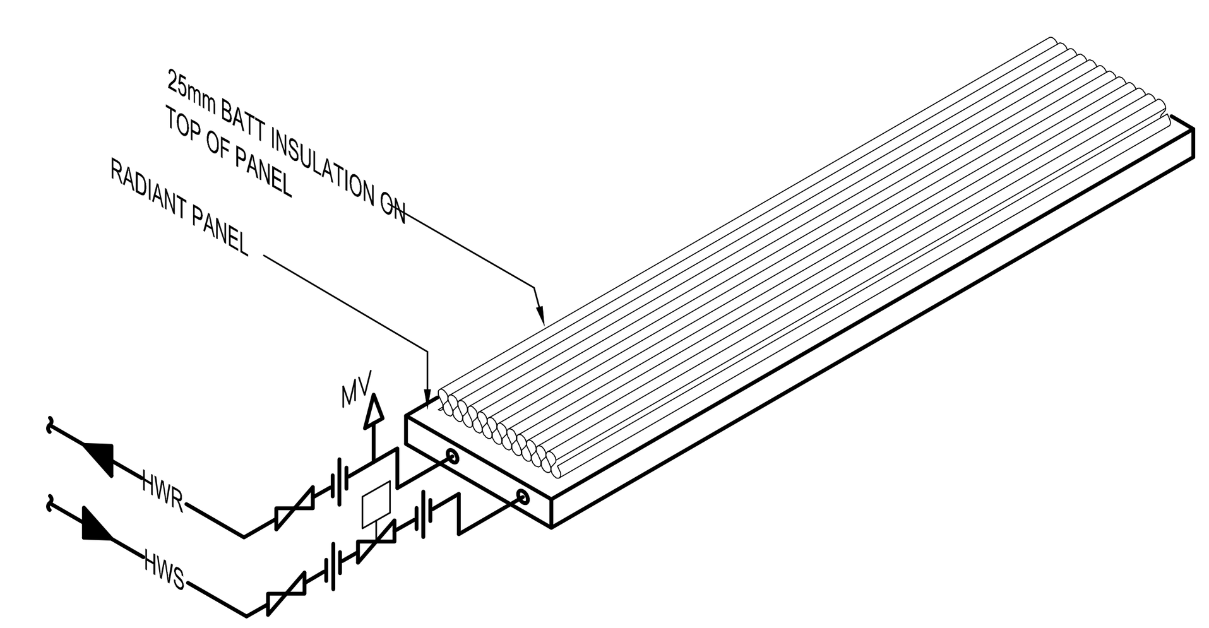


CEILING RETURN GRILLE & BOOT DETAIL

N.T.S.

NOTE:

1. INTERNALLY LINE DUCTWORK.

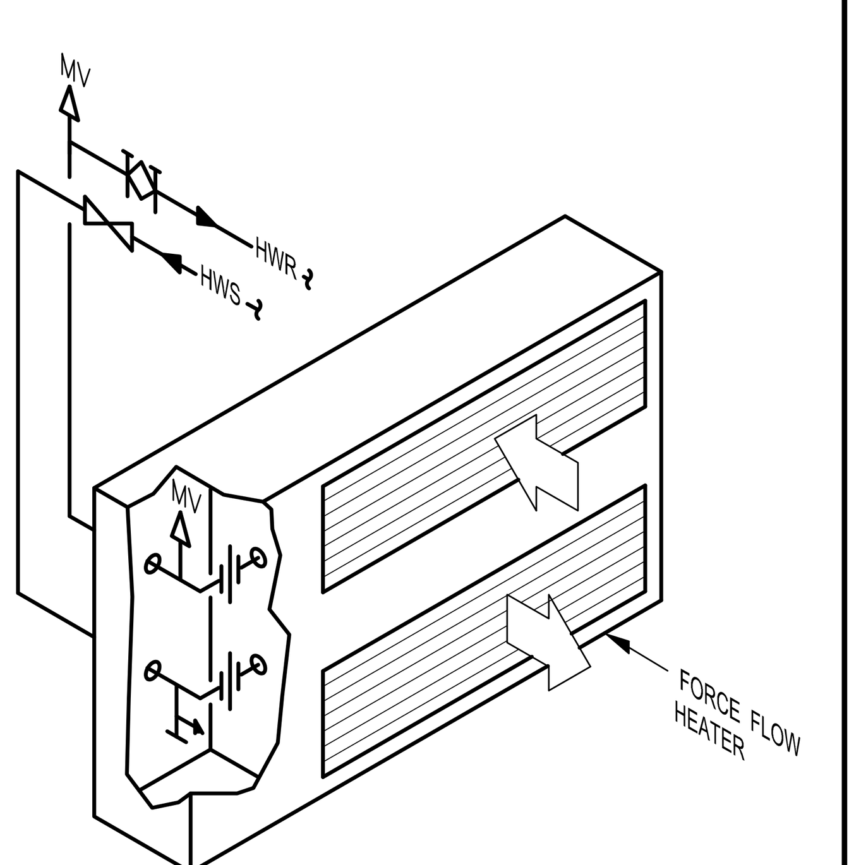


TYPICAL PIPING ARRANGEMENT FOR RADIANT PANELS - 2 WAY VALVE

N.T.S.

NOTE:

1. PROVIDE MEMORY STOP ON HWR BALL VALVE FOR BALANCING PURPOSES.



TYPICAL PIPING ARRANGEMENT FOR FORCE FLOW HEATERS

N.T.S.

Chorley+Bisset
CONSULTING ENGINEERS
201 QUEENS AVE., UNIT 800
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250 CITY CENTRE AVE., SUITE 403
OTTAWA ON, K1R 6K7

KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

NO.	DATE MM/DD/YYYY	DESCRIPTION	REV. NO.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/19/2020	ISSUED FOR TENDER	

LICENSED PROFESSIONAL ENGINEER
J.D. FOSTER
100148736
Feb 20/2020
PROVINCE OF ONTARIO
8906

PROJECT TITLE

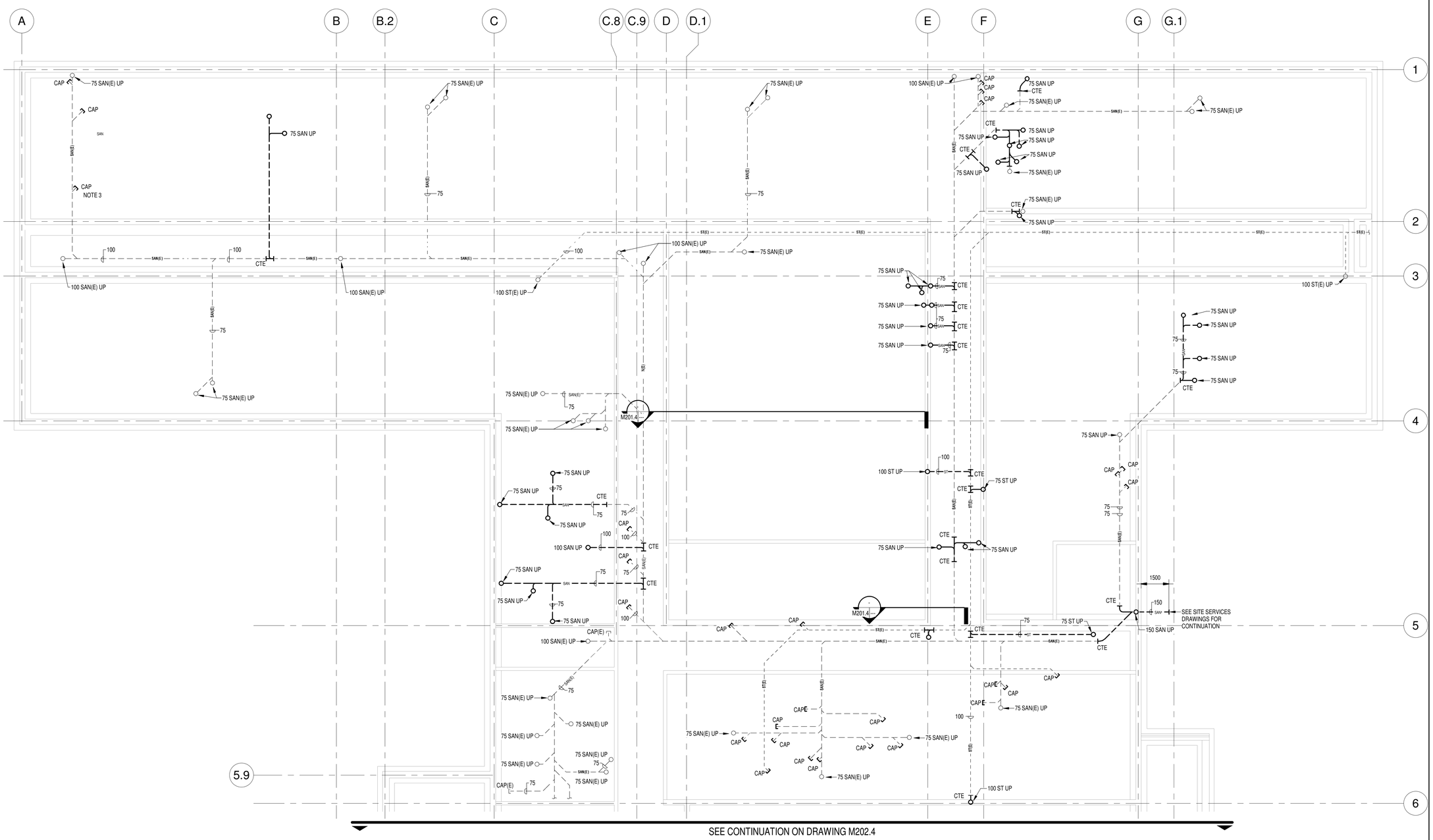
OUR LADY OF FATIMA

DRAWING TITLE

DETAILS

DATE PLOTTED	DRAWN BY	DRAWING No.
01/11/2020	BMD	M103.4
SCALE: AS INDICATED	CHECKED BY: JDF	
PROJECT No. 8906		

24x36



SEE CONTINUATION ON DRAWING M202.4

PART GROUND FLOOR PLAN - DRAINAGE NORTH

SCALE 1 : 100

NOTES:

1. MINIMUM BELOW GRADE PIPE SIZE IS 75 mm.
2. SCAN/LOCATE ALL EXISTING BELOW GRADE SERVICES BEFORE EXCAVATION/CUTTING.
3. CAP TO BE ACCESSIBLE ABOVE FLOOR.

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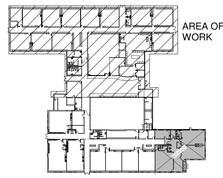
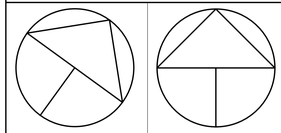


KEY PLAN



NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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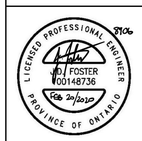
1	02/20/2020	ISSUED FOR TENDER & PERMIT	



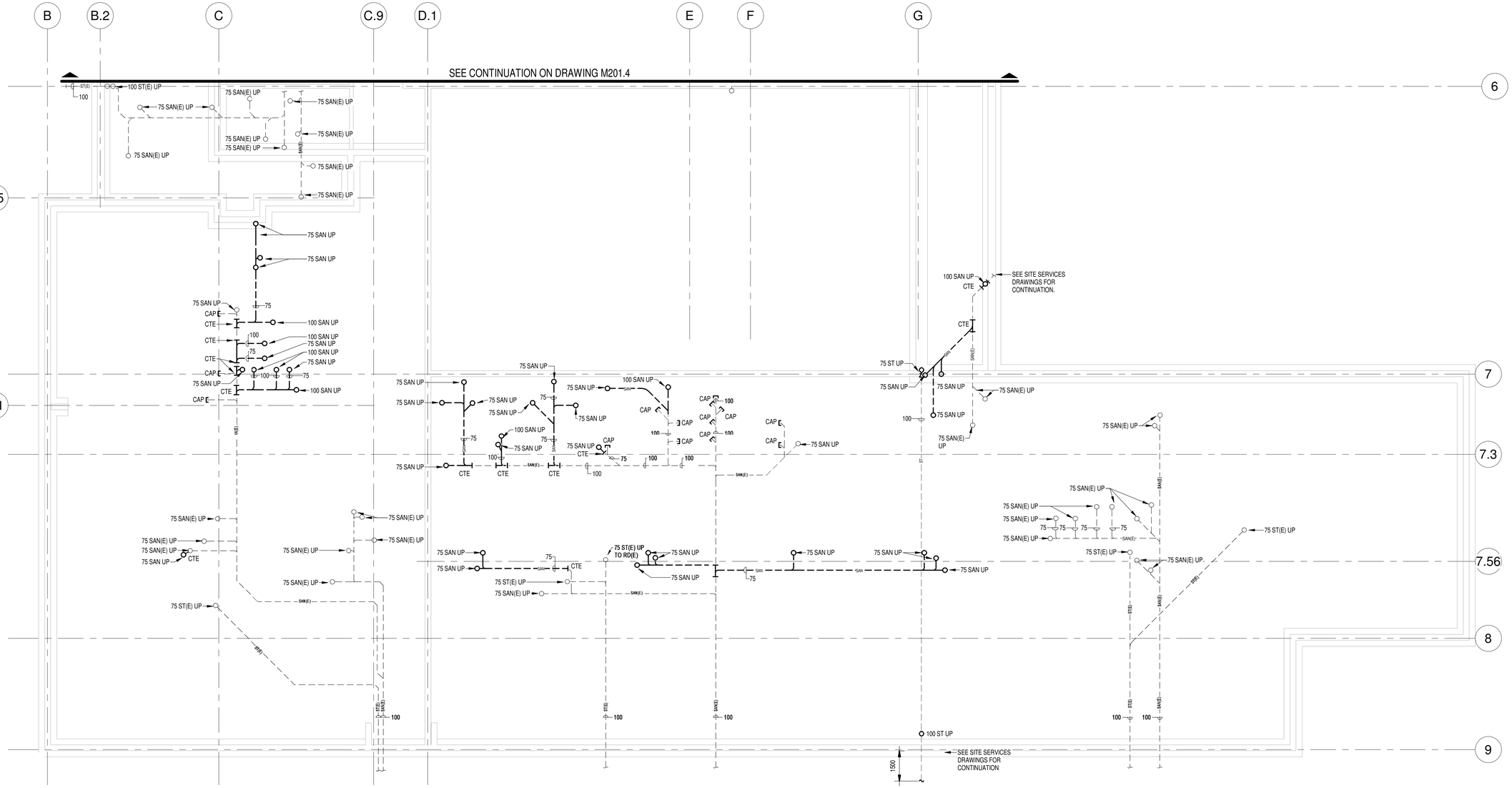
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - DRAINAGE NORTH

DATE PLOTTED: 2020-03-05 2:53:13 PM	DRAWN BY: BMD	DRAWING No.: M201.4
SCALE: 1 : 100	CHECKED BY: JDF	
PROJECT No.: 8906		



PART GROUND FLOOR PLAN - DRAINAGE SOUTH

SCALE 1 : 100

NOTES:

1. MINIMUM BELOW GRADE PIPE SIZE IS 75 mm.
2. SCAN/LOCATE ALL EXISTING BELOW GRADE SERVICES BEFORE EXCAVATION/CUTTING.

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CONSULTING ENGINEERS

201 QUEENS AVE., UNIT 800
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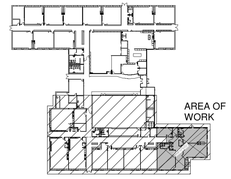
OTTAWA ON, K1R 6K7



KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	

LICENSED PROFESSIONAL ENGINEER
J.D. FOSTER
100148736
Feb 20/2020
PROVINCE OF ONTARIO

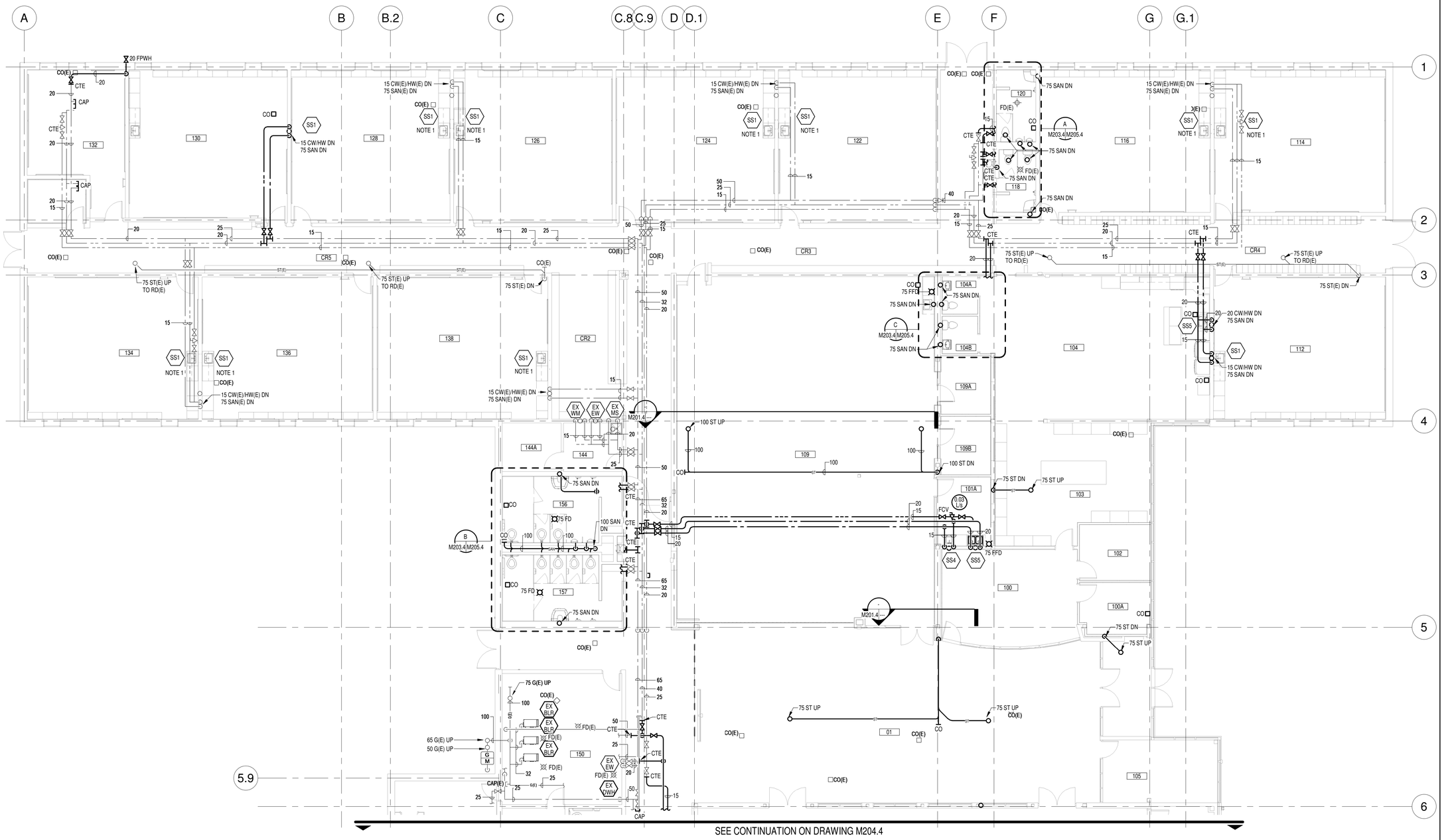
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - DRAINAGE SOUTH

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:53:20 PM	BMD	M202.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - PLUMBING NORTH

SCALE 1 : 100

NOTES:

1. REWORK CW, HW AND SANITARY PIPING TO SUIT NEW SINK LOCATION WITHIN MILWORK.

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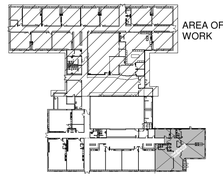
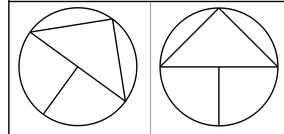


KEY PLAN



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LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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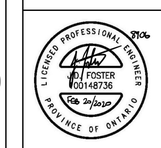

PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - PLUMBING NORTH

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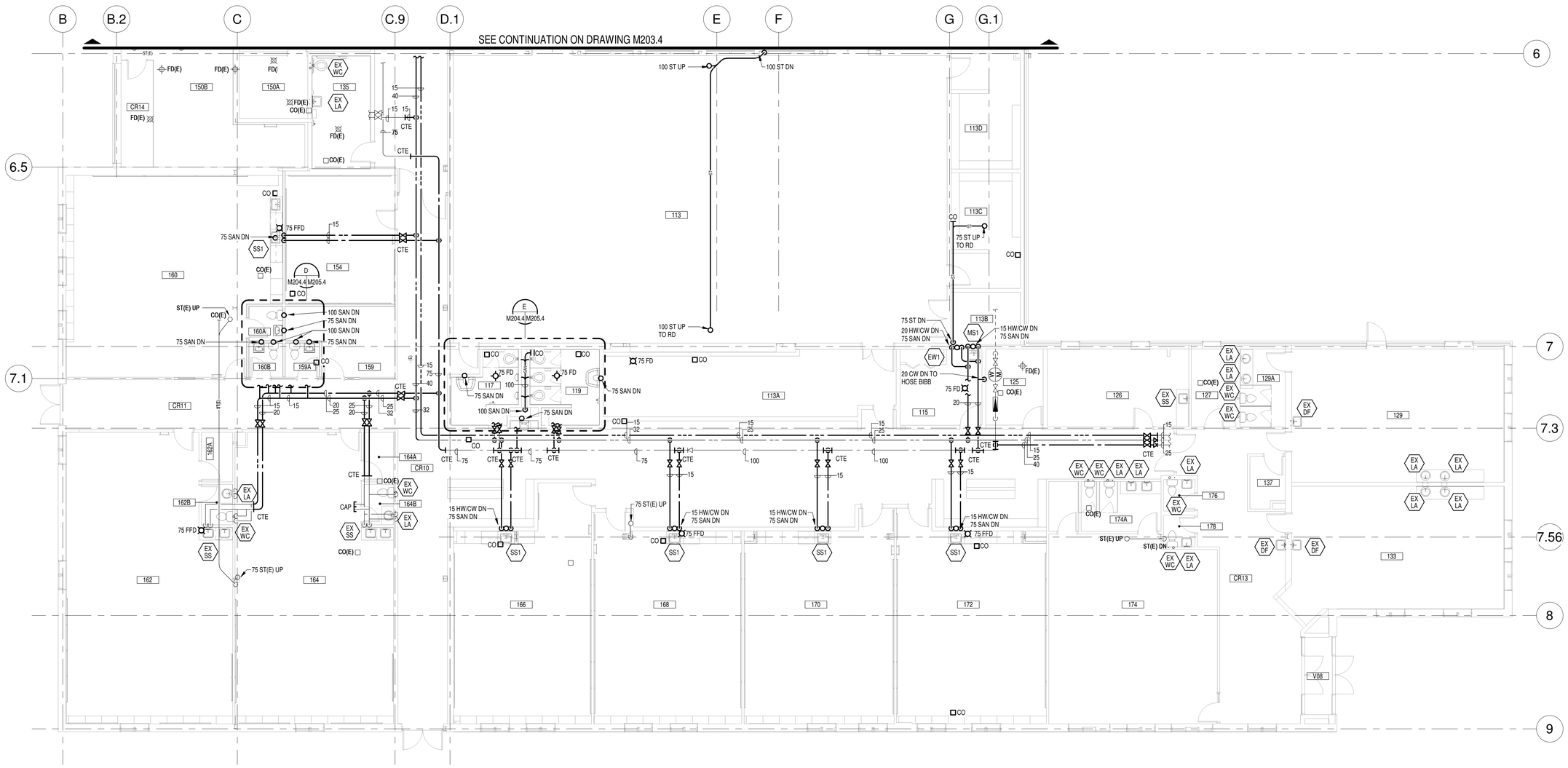
SCALE: 1 : 100	CHECKED BY: JDF	
PROJECT No.: 8906		



PART GROUND FLOOR PLAN - PLUMBING SOUTH

SCALE 1 : 100

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CONSULTING ENGINEERS

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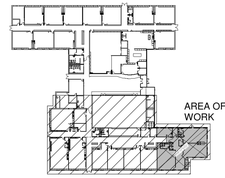
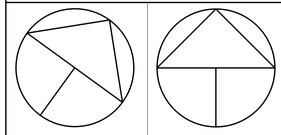
OTTAWA ON, K1R 6K7



KEY PLAN



NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	

LICENSED PROFESSIONAL ENGINEER
JD FOSTER
100148736
PROVINCE OF ONTARIO

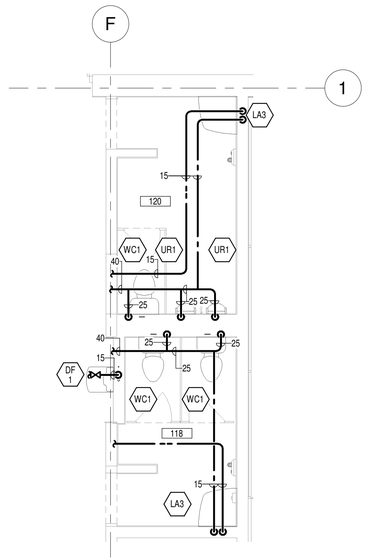
PROJECT TITLE

OUR LADY OF FATIMA

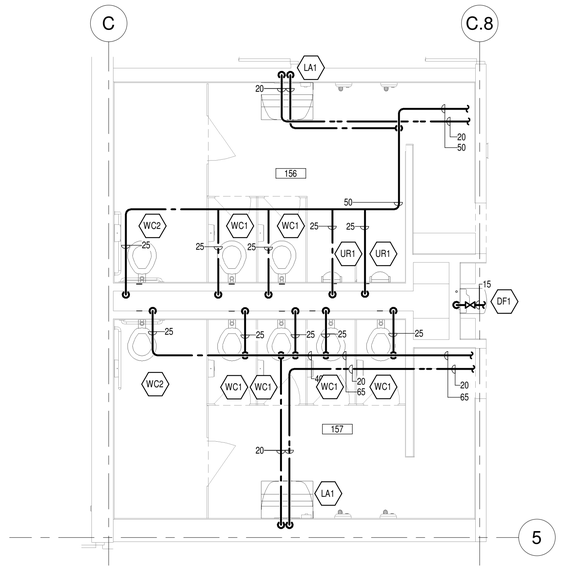
DRAWING TITLE

PART GROUND FLOOR PLAN - PLUMBING SOUTH

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:53:39 PM	BMD	M204.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



A DETAIL
M203.4 | M205.4 SCALE 1 : 50



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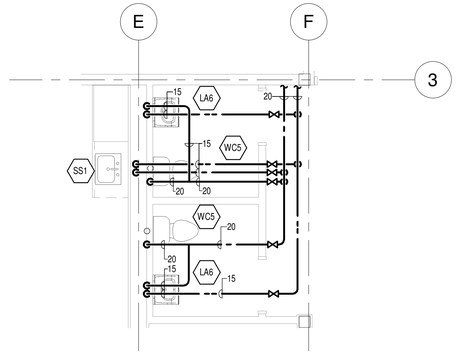
M203.4 | M205.4 SCALE 1 : 50



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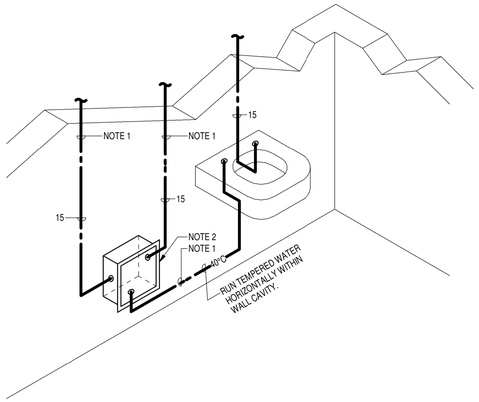
M203.4 | M205.4 SCALE 1 : 50

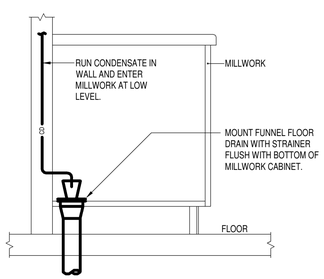


LAVATORY MIXING VALVE DETAIL

SCALE NTS

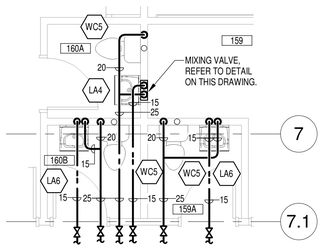
NOTES:

1. REFER TO SPECICATIONS FOR ALL FIXTURES MOUNTING HEIGHTS.
2. CONCEAL MIXING VALVE WITHIN BLOCK WALL. PROVIDE ACCESS DOOR AS SPECIFIED. MOUNT AT 150mm ABOVE FINISHED FLOOR.
3. RUN TEMPERED WATER HORIZONTALLY WITHIN WALL CAVITY.



FUNNEL FLOOR DRAIN MILLWORK MOUNTING DETAIL

N.T.S.



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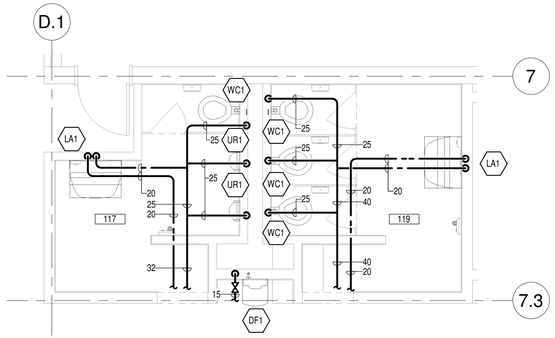
M204.4 | M205.4 SCALE 1 : 50



E DETAIL
M204.4 | M205.4 SCALE 1 : 50

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OTTAWA ON, K1R 6K7

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	

LICENSED PROFESSIONAL ENGINEER
JD FOSTER
100148736
Feb 20/2020
PROVINCE OF ONTARIO

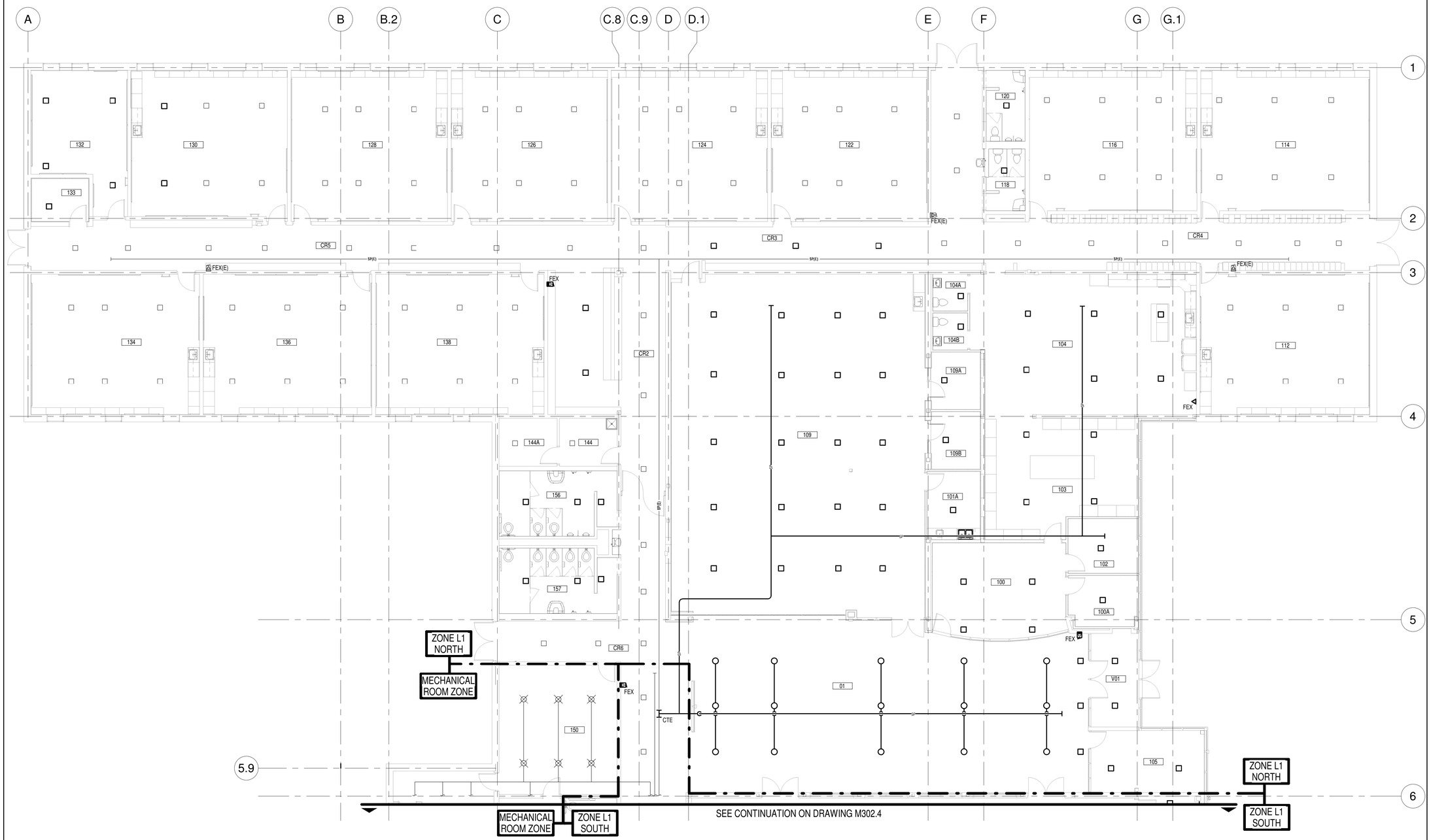
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PLUMBING DETAILS

DATE PLOTTED 2020-03-05 2:53:51 PM	DRAWN BY BMD	DRAWING No. M205.4
SCALE As indicated	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - FIRE PROTECTION NORTH

SCALE 1 : 100

NOTES:

1. SPRINKLERS IN STAIRWELLS AND SHAFTS NOT SHOWN. PROVIDE COVERAGE IN ACCORDANCE WITH REQUIREMENTS OF NFPA 13.
2. IN SOME AREAS, DROPPED CEILINGS ARE NOT CONTINUOUS TO WALLS. IN THOSE AREAS PROVIDE ADDITIONAL SPRINKLER COVERAGE ABOVE CEILINGS (NOT SHOWN). SEE ARCHITECTURAL REFLECTED CEILING PLANS.
3. IN GENERAL, WHERE NEW SPRINKLER HEADS ARE SHOWN, CONNECT TO EXISTING BRANCH PIPING IN AREA.
4. WHERE EXISTING SPRINKLER HEADS ARE INSTALLED IN EXISTING CEILINGS TO BE REMOVED, REMOVE AND REINSTALL HEAD COVER.

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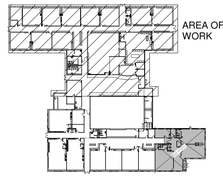

KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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LICENSED PROFESSIONAL ENGINEER
JD FOSTER
100148736
PROVINCE OF ONTARIO
2020/03/05

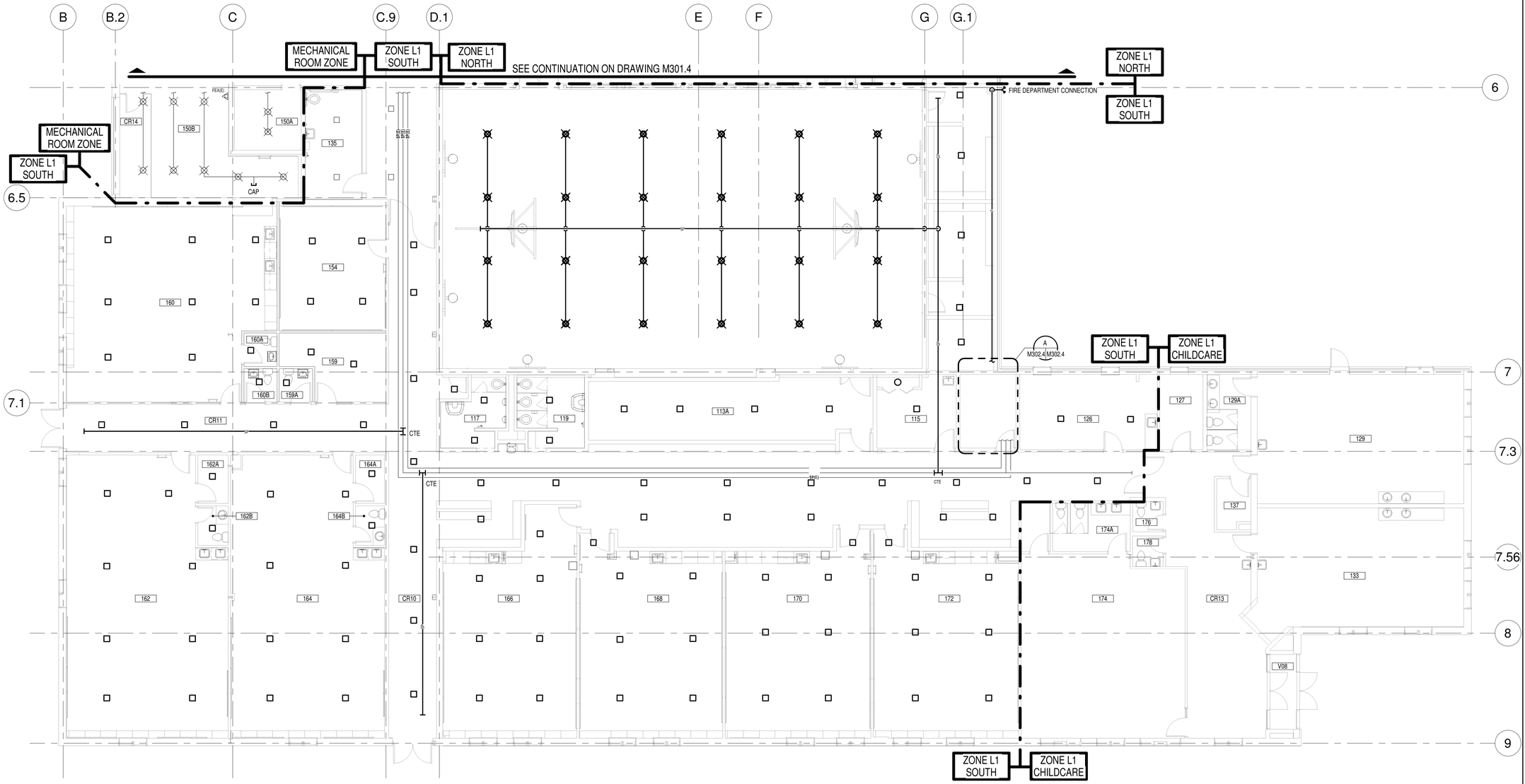
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - FIRE PROTECTION NORTH

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:54:58 PM	BMD	M301.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		

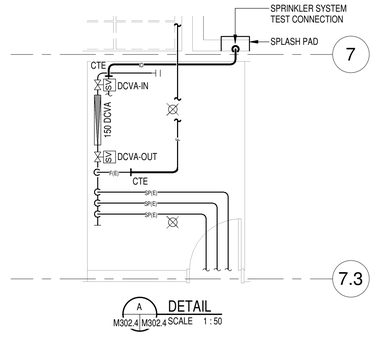


PART GROUND FLOOR PLAN - FIRE PROTECTION SOUTH

SCALE 1 : 100

NOTES:

1. SPRINKLERS IN STAIRWELLS AND SHAFTS NOT SHOWN. PROVIDE COVERAGE IN ACCORDANCE WITH REQUIREMENTS OF NFPA 13.
2. GENERALLY, ALL NEW PIPING INSTALLED WITHIN CEILING SPACE IS TO BE INSTALLED AS HIGH AS POSSIBLE AND THROUGH EXISTING OWSJ WEBBING.
3. IN SOME AREAS, DROPPED CEILINGS ARE NOT CONTINUOUS TO WALLS. IN THOSE AREAS PROVIDE ADDITIONAL SPRINKLER COVERAGE ABOVE CEILINGS (NOT SHOWN). SEE ARCHITECTURAL REFLECTED CEILING PLANS.
4. ZONE L1 CHILDCARE IS A FUTURE ZONE. SHOWN FOR REFERENCE.



A M302.4 M302.4 DETAIL SCALE 1 : 50

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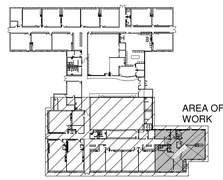
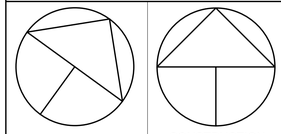


KEY PLAN



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LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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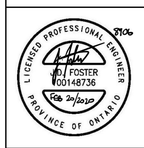


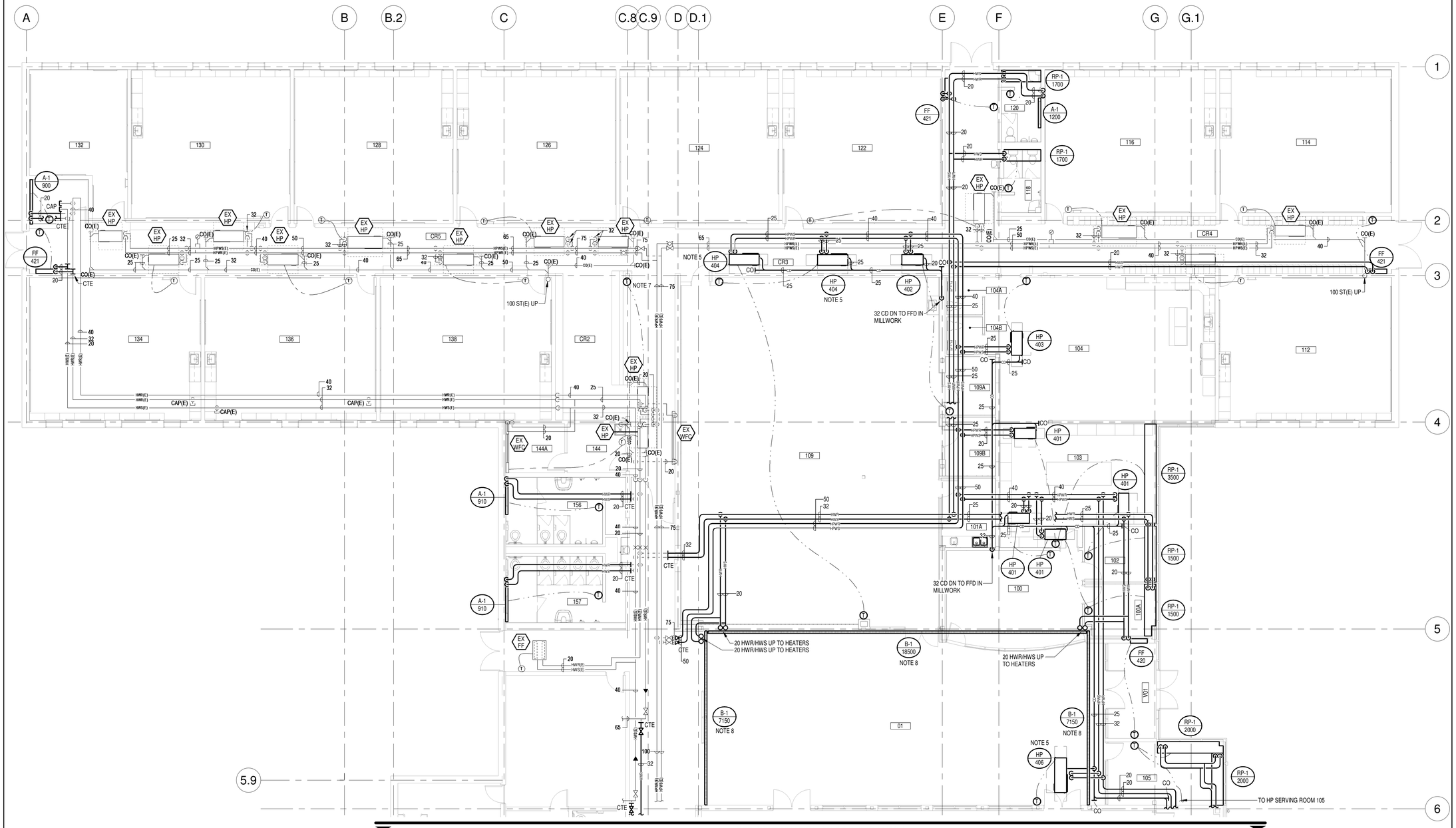
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - FIRE PROTECTION SOUTH

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:55:58 PM	BMD	M302.4
SCALE: As indicated	CHECKED BY: JDF	
PROJECT No.: 8906		



PART GROUND FLOOR PLAN - HEATING NORTH

SCALE 1 : 100

NOTES:

1. MINIMUM HWS AND HWR PIPE SIZE IS 20MM.
2. HEAT PUMP PIPING TO RUN IN JOIST SPACE.
3. ENSURE NO MECHANICAL OR ELECTRICAL SERVICES ARE INSTALLED DIRECTLY BELOW HEAT PUMPS.
4. SEE HEAT PUMP INSTALLATION DETAILS ON DRAWING M103.4.
5. INSTALL HEAT PUMP WITH NO CONTROL VALVE.
6. GENERALLY, ALL NEW PIPING INSTALLED WITHIN CEILING SPACE IS TO BE INSTALLED AS HIGH AS POSSIBLE AND THROUGH EXISTING OWSJ WEBBING.
7. RELOCATE EXISTING THERMOSTAT.
8. MOUNT AT HIGH LEVEL BELOW CLEARSTORY WINDOWS.

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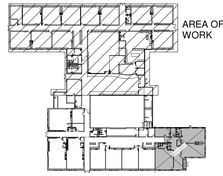

KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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LICENSED PROFESSIONAL ENGINEER
JD FOSTER
100148736
PROVINCE OF ONTARIO
Feb 20/2020

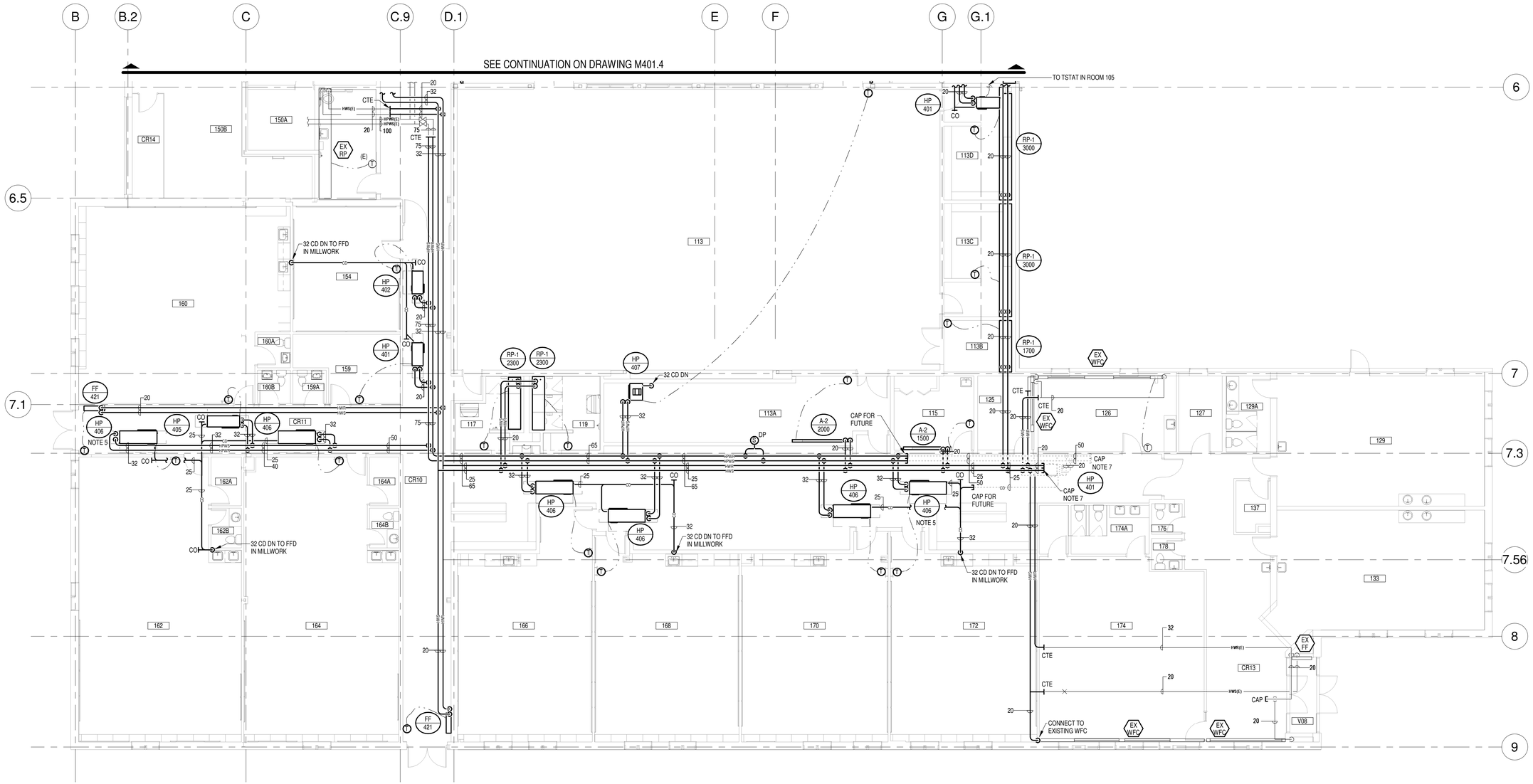
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - HEATING NORTH

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:56:11 PM	BMD	M401.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - HEATING SOUTH

SCALE 1 : 100

NOTES:

1. MINIMUM HWS AND HWR PIPE SIZE IS 20MM.
2. HEAT PUMP PIPING TO RUN IN JOIST SPACE.
3. ENSURE NO MECHANICAL OR ELECTRICAL SERVICES ARE INSTALLED DIRECTLY BELOW HEAT PUMPS.
4. SEE HEAT PUMP INSTALLATION DETAILS ON DRAWING M102.
5. INSTALL HEAT PUMP WITH NO CONTROL VALVE.
6. GENERALLY, ALL NEW PIPING INSTALLED WITHIN CEILING SPACE IS TO BE INSTALLED AS HIGH AS POSSIBLE AND THROUGH EXISTING OWSJ WEBBING.
7. SIZED TO SERVE CHILD CARE AREA.

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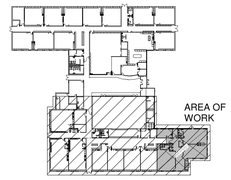
250 CITY CENTRE AVE., SUITE 403
OTTAWA ON, K1R 6K7



KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	

LICENSED PROFESSIONAL ENGINEER
JDJ FOSTER
100148736
Feb 20/2020
PROVINCE OF ONTARIO

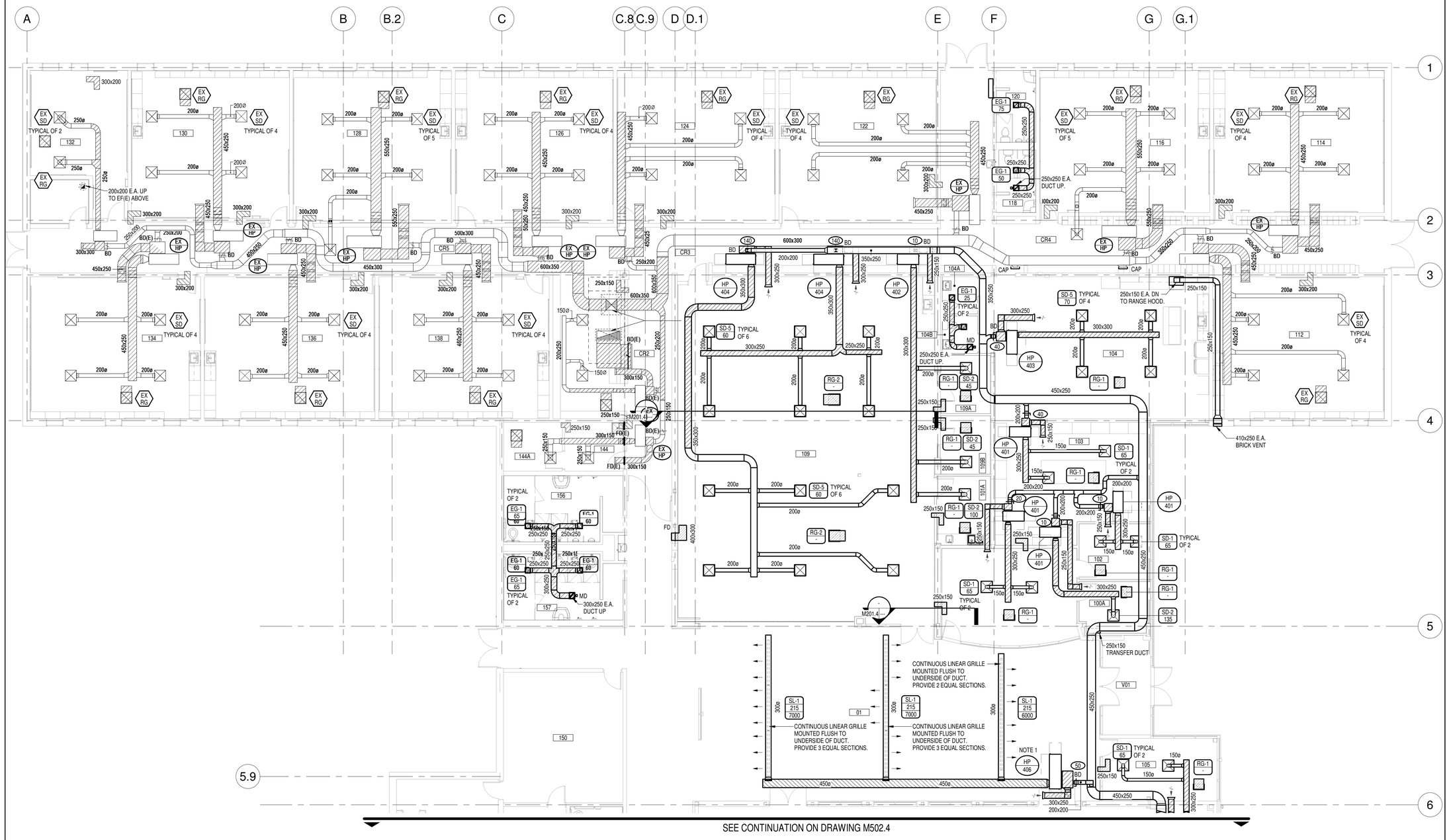
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - HEATING SOUTH

DATE PLOTTED 2020-03-05 2:56:20 PM	DRAWN BY BMD	DRAWING No. M402.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - AIR DISTRIBUTION NORTH

SCALE 1 : 100

NOTES:

1. ALLOW FOR PAINTING OF EXPOSED HEAT PUMP. ARCHITECT TO SELECT COLOUR.
2. PROVIDE BALANCING DAMPERS WHERE SPECIFIED. NOT ALL BALANCING DAMPERS SHOWN FOR CLARITY.
3. SEE HEAT PUMP INSTALLATION DETAILS ON DRAWING M103.4.
4. ENSURE NO MECHANICAL OR ELECTRICAL SERVICES ARE INSTALLED DIRECTLY BELOW HEAT PUMPS.

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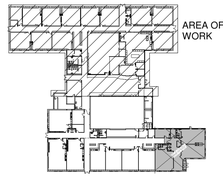


KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	

LICENCED PROFESSIONAL ENGINEER
J.D. FOSTER
100148736
PROVINCE OF ONTARIO
Feb 20/2020

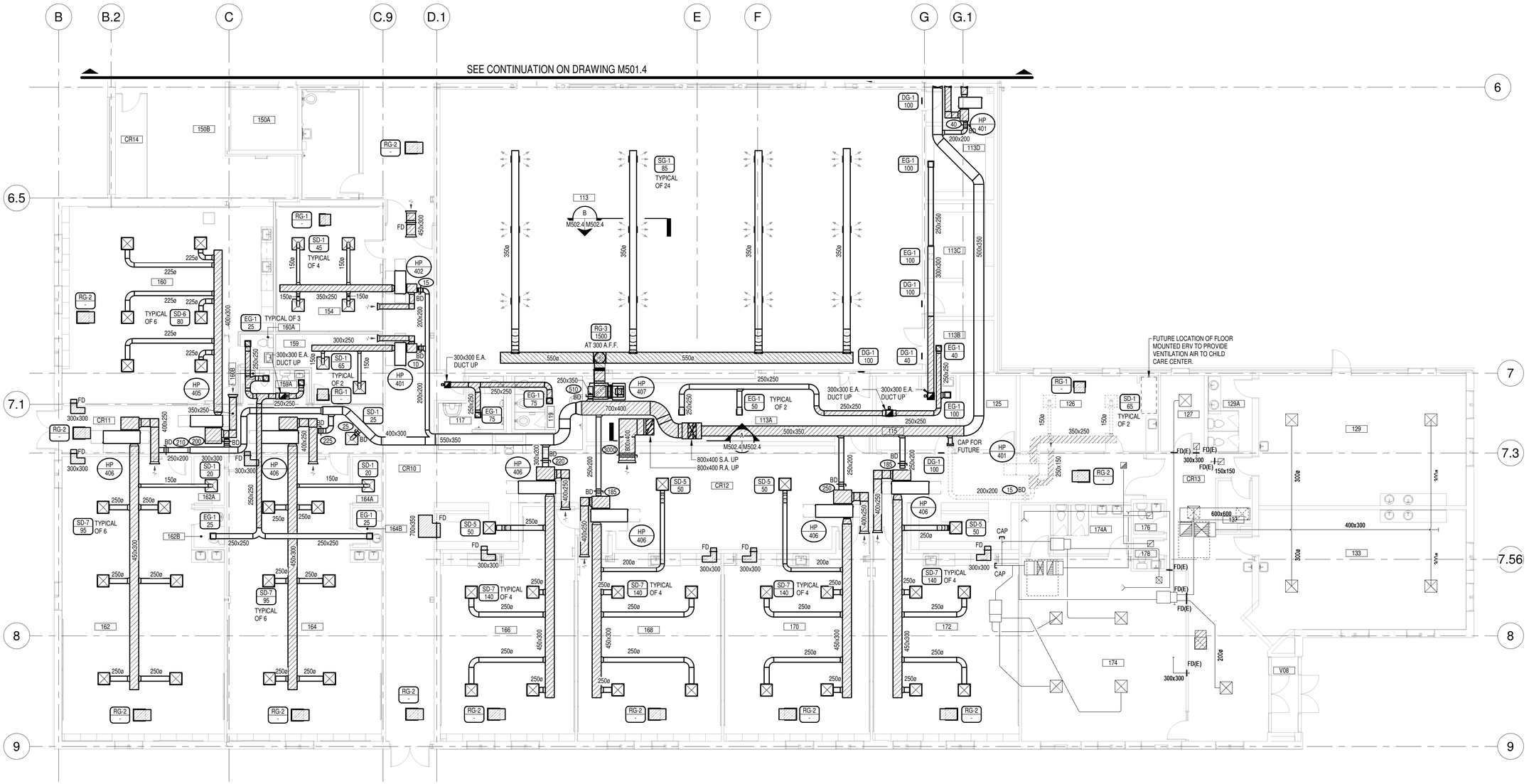
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

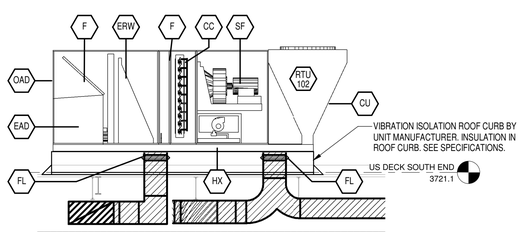
PART GROUND FLOOR PLAN - AIR DISTRIBUTION NORTH

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:56:30 PM	BMD	M501.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



F	FILTER
CU	CONDENSING UNIT
SF	SUPPLY FAN
CC	COOLING COIL
HX	HEAT EXCHANGER
ERW	ENERGY RECOVERY WHEEL
OAD	OUTSIDE AIR DAMPER
EAD	EXHAUST AIR DAMPER

MECHANICAL KEY
SCALE 1 : 100

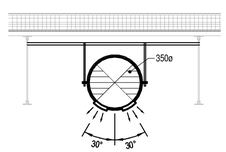


A M502.4/M502.4 SECTION SCALE 1 : 50

PART GROUND FLOOR PLAN AIR DISTRIBUTION SOUTH
SCALE 1 : 100

NOTES:

1. ALLOW FOR PAINTING OF EXPOSED HEAT PUMP. ARCHITECT TO SELECT COLOUR.
2. PROVIDE BALANCING DAMPERS WHERE SPECIFIED. NOT ALL BALANCING DAMPERS SHOWN FOR CLARITY.
3. SEE HEAT PUMP INSTALLATION DETAILS ON DRAWING M103.4.
4. ENSURE NO MECHANICAL OR ELECTRICAL SERVICES ARE INSTALLED DIRECTLY BELOW HEAT PUMPS.



B M502.4/M502.4 SECTION SCALE 1 : 25

NOTES:

1. COORDINATE LOCATION OF SUPPLY GRILLES SUCH THAT AIR FLOW IS NOT OBSTRUCTED BY STRUCTURAL FRAMING.

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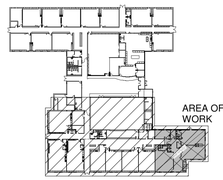
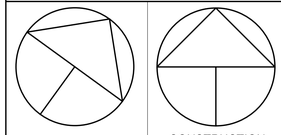


KEY PLAN



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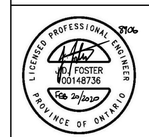
LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	



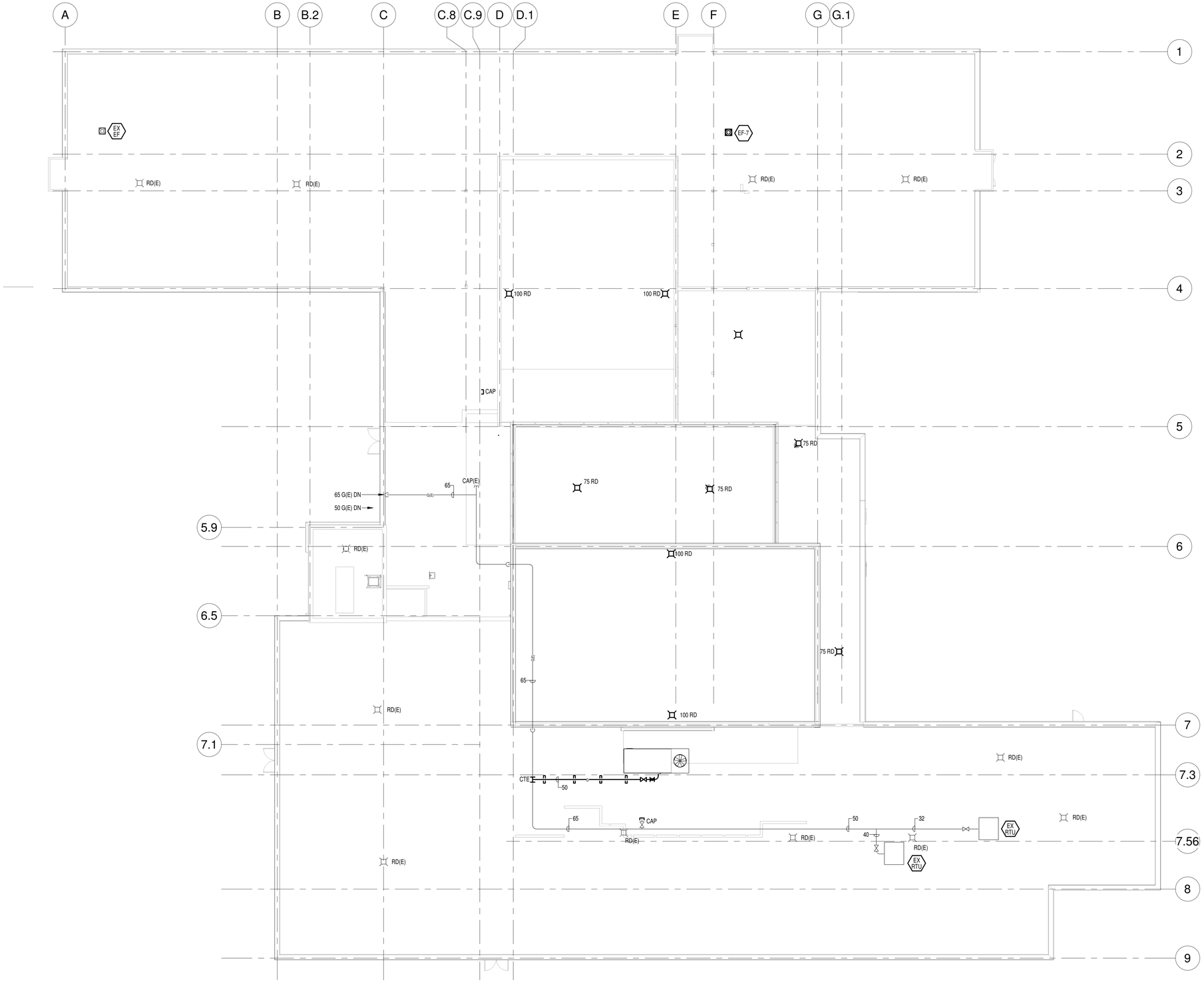
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - AIR DISTRIBUTION SOUTH

DATE PLOTTED 2020-03-05 2:56:39 PM	DRAWN BY BMD	DRAWING No. M502.4
SCALE As indicated	CHECKED BY JDF	
PROJECT No. 8906		



ROOF MECHANICAL PLAN
SCALE 1 : 150

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TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	

LICENSED PROFESSIONAL ENGINEER
JOHN DAVID FOSTER
100148736
PROVINCE OF ONTARIO
2020/03/05

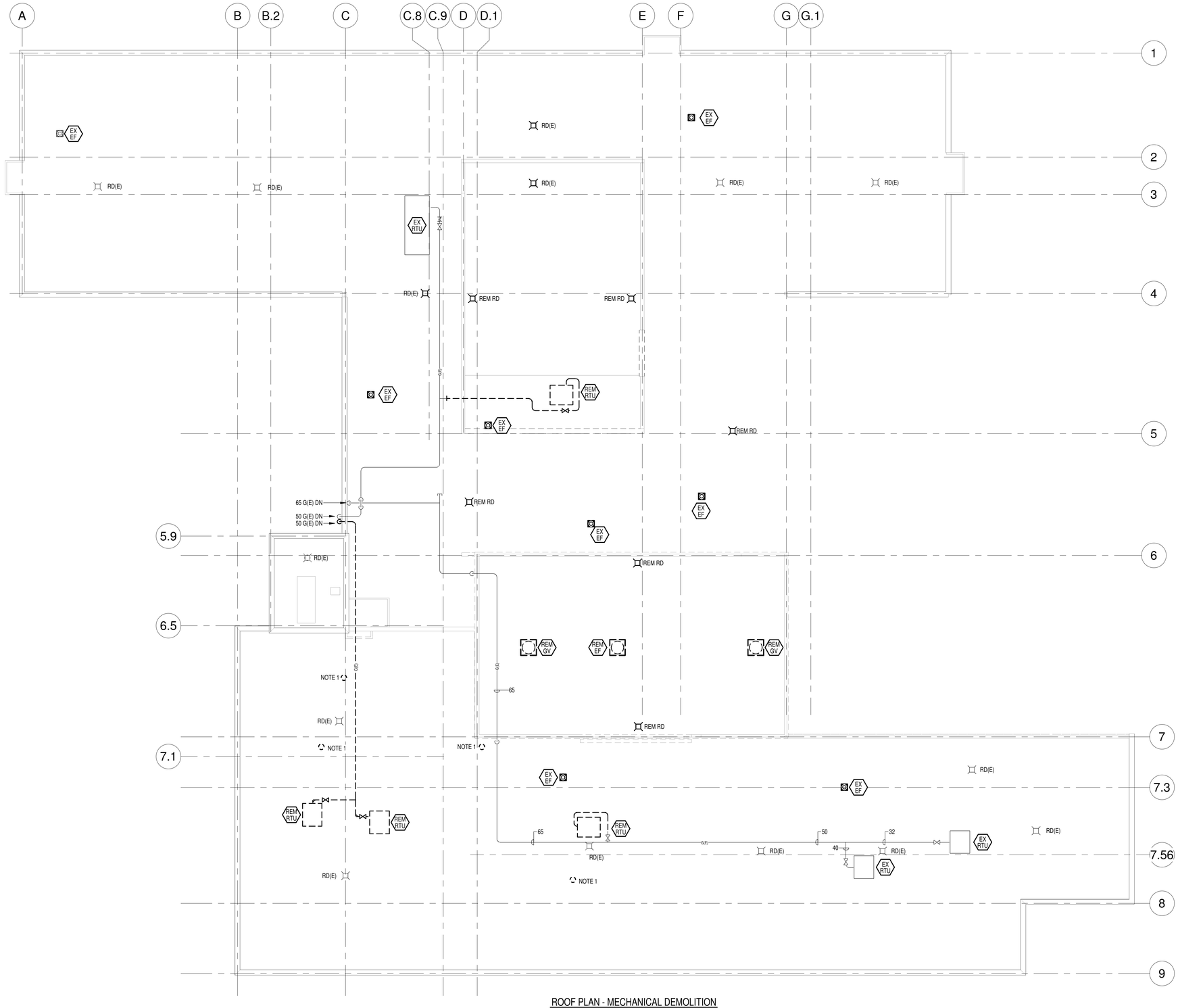
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

ROOF PLAN - MECHANICAL

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:56:44 PM	BMD	M601.4
SCALE 1 : 150	CHECKED BY JDF	
PROJECT No. 8906		



ROOF PLAN - MECHANICAL DEMOLITION

SCALE 1 : 150

NOTES:

1. REMOVE EXISTING VENT AND ASSOCIATED VENTING AND EQUIPMENT AND ACCESSORIES WITHIN BUILDING.

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TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	

J.D. FOSTER
100148736
Feb 28/2020
LICENSED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

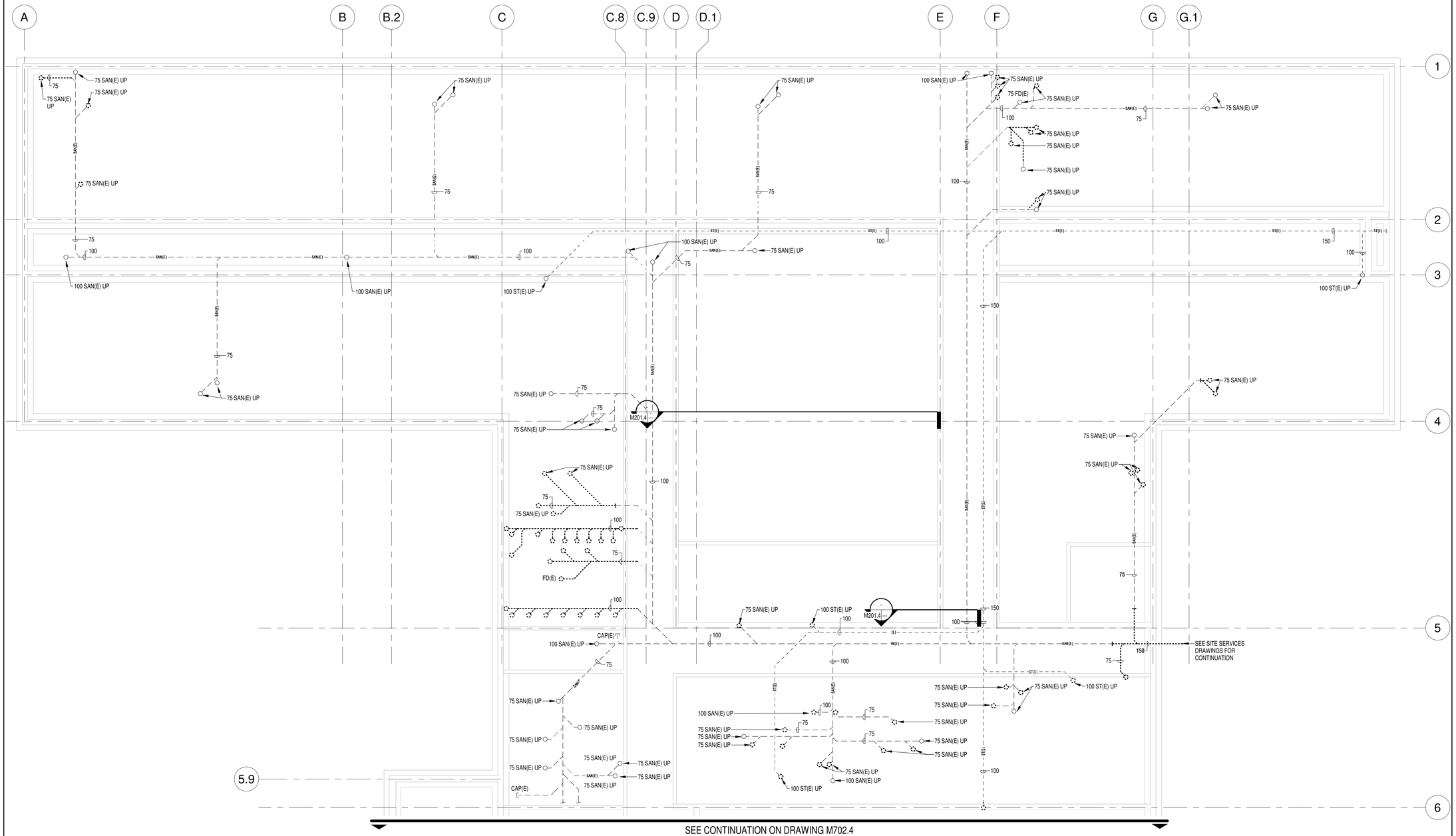
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

ROOF PLAN - MECHANICAL DEMOLITION

DATE PLOTTED 2020-03-05 2:56:47 PM	DRAWN BY BMD	DRAWING No. M602.4
SCALE 1 : 150	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN DRAINAGE NORTH DEMOLITION
SCALE 1 : 100

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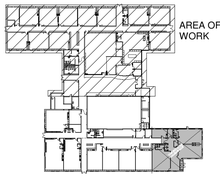
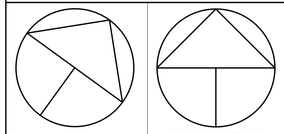
OTTAWA ON, K1R 6K7



KEY PLAN



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LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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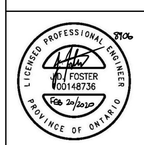
1	02/20/2020	ISSUED FOR TENDER & PERMIT	



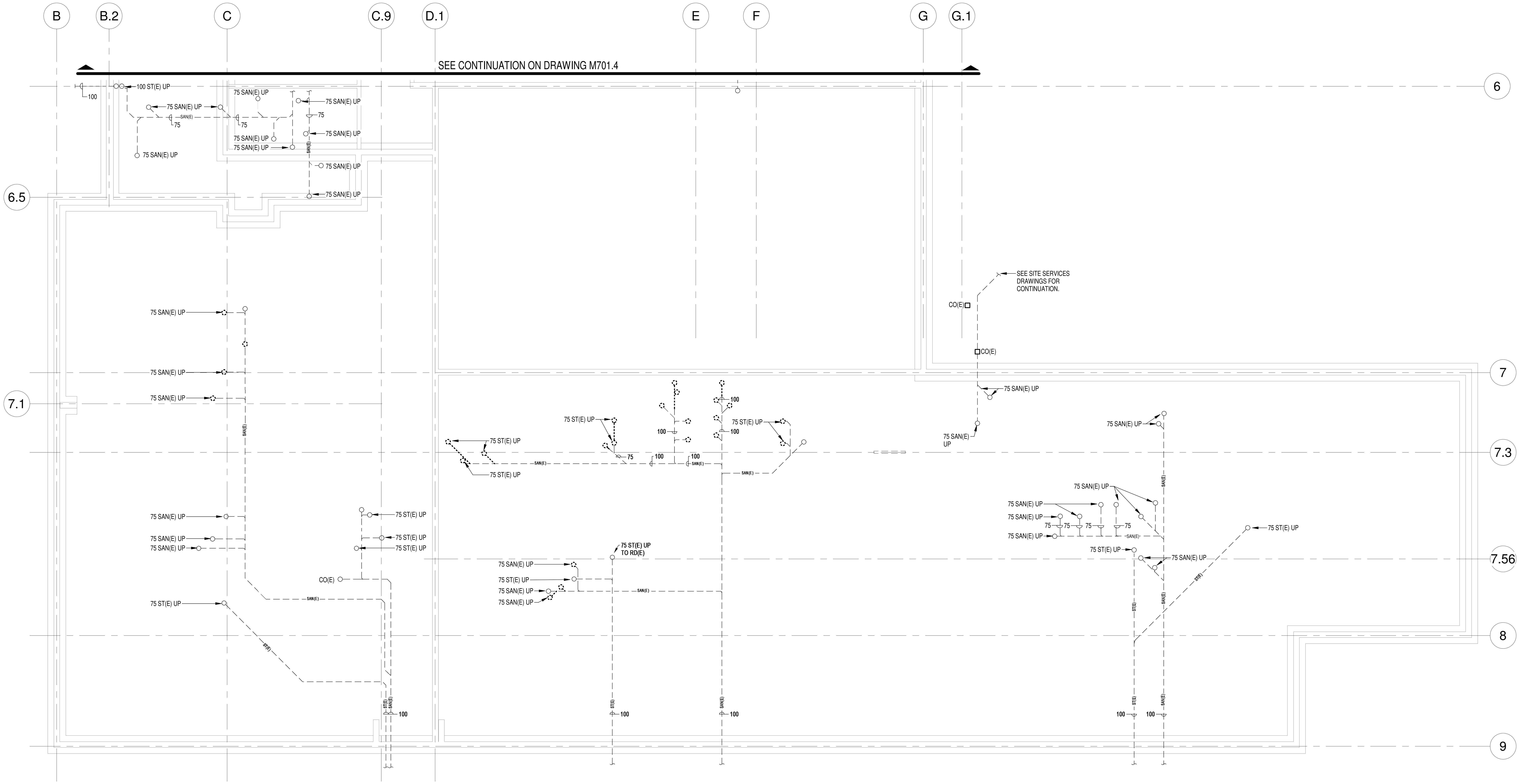
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - DRAINAGE NORTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:56:52 PM	BMD	M701.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN DRAINAGE SOUTH DEMOLITION
SCALE 1 : 100

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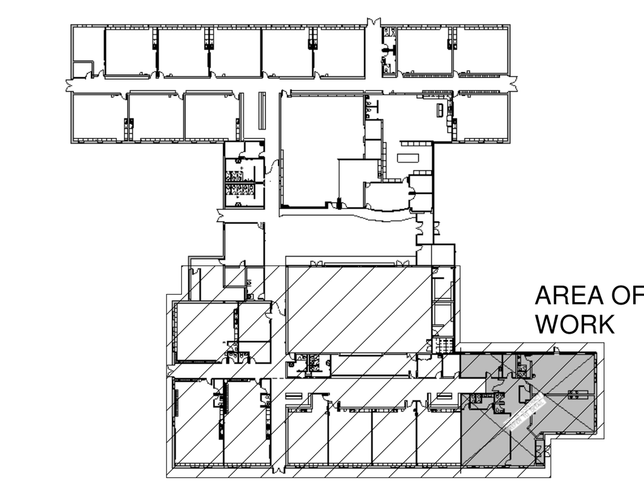
CONSULTING ENGINEERS
201 QUEENS AVE., UNIT 800
LONDON ON, N6A 1J1
250 CITY CENTRE AVE., SUITE 403
OTTAWA ON, K1R 6K7



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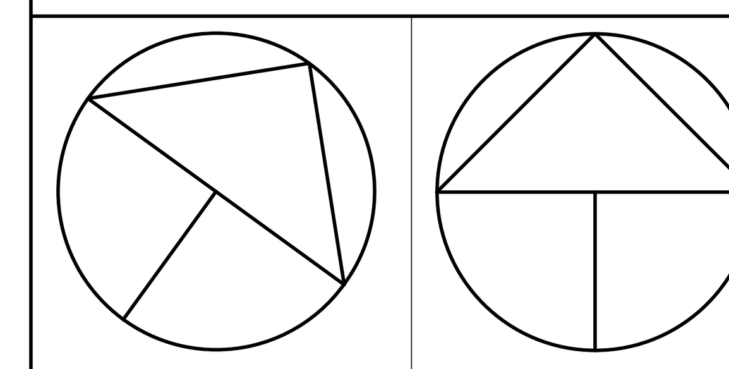


TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	

LICENSED PROFESSIONAL ENGINEER
J.D. FOSTER
100148736
FEB 20/2020
PROVINCE OF ONTARIO
8906

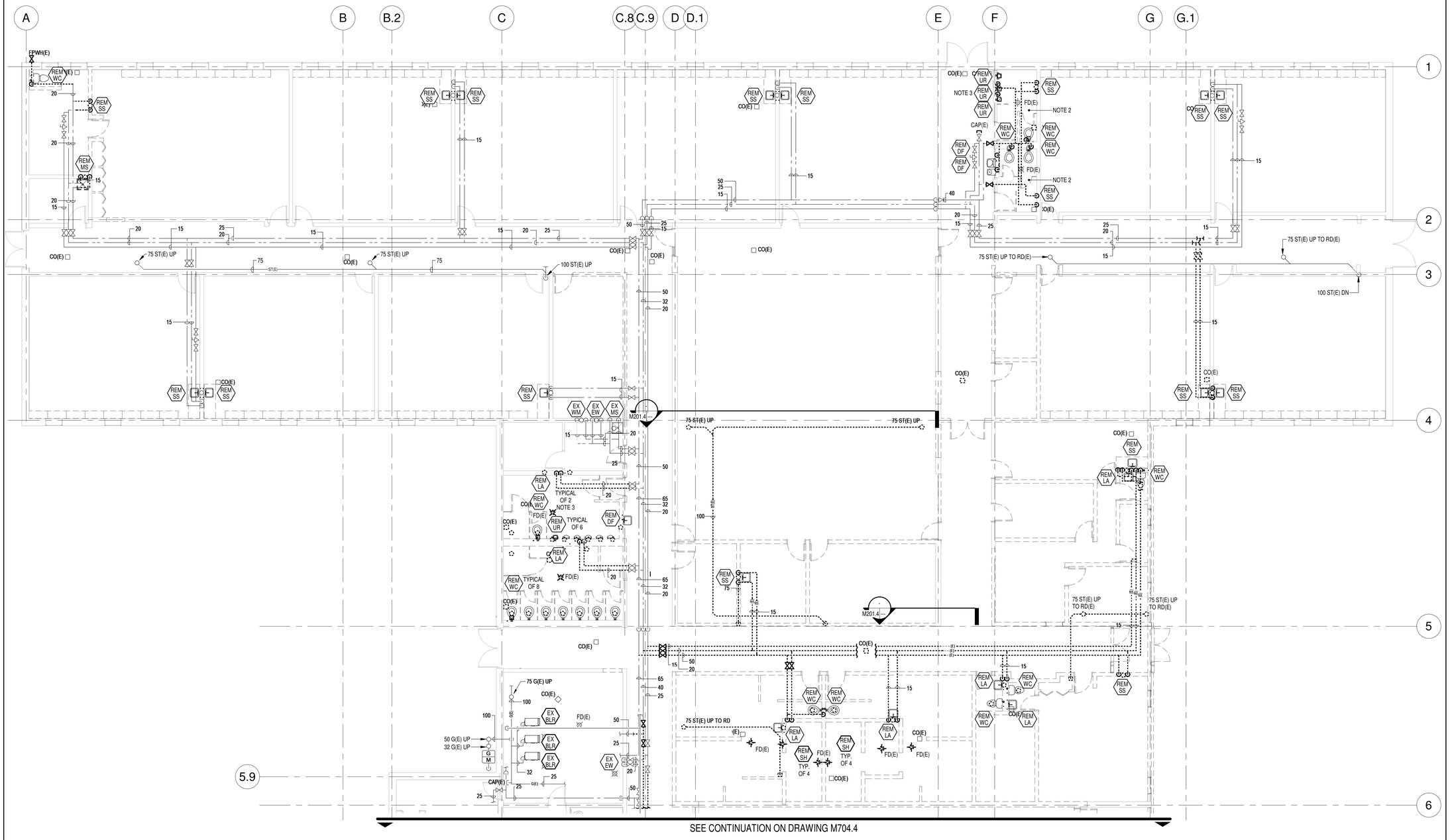
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - DRAINAGE SOUTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:56:57 PM	BMD	M702.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN PLUMBING NORTH DEMOLITION

SCALE 1 : 100

NOTES:

1. SERVICES TO BE CUT BACK AND CAP CONCEALED WITHIN WALL OR UNDERGROUND.
2. REMOVE ALL EXISTING CW,HW AND SANITARY PIPING SERVING EXISTING PLUMBING FIXTURES BEING REMOVED. MODIFY EXISTING SERVICES TO SUIT NEW LAYOUT AS SHOWN ON PLUMBING AND DRAINAGE DRAWINGS. CAP REDUNDANT SERVICES IN WALL OR BELOW FLOOR.
3. REMOVE EXISTING FLOOR MOUNT URINALS AND WALL MOUNT FLUSH TANKS AND ALL ACCESSOIRES AND PLUMBING SERVICES.

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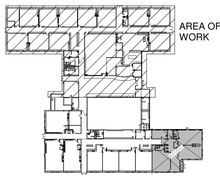

KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
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LICENSED PROFESSIONAL ENGINEER
JDF FOSTER
100148736
Feb 20/2020
PROVINCE OF ONTARIO

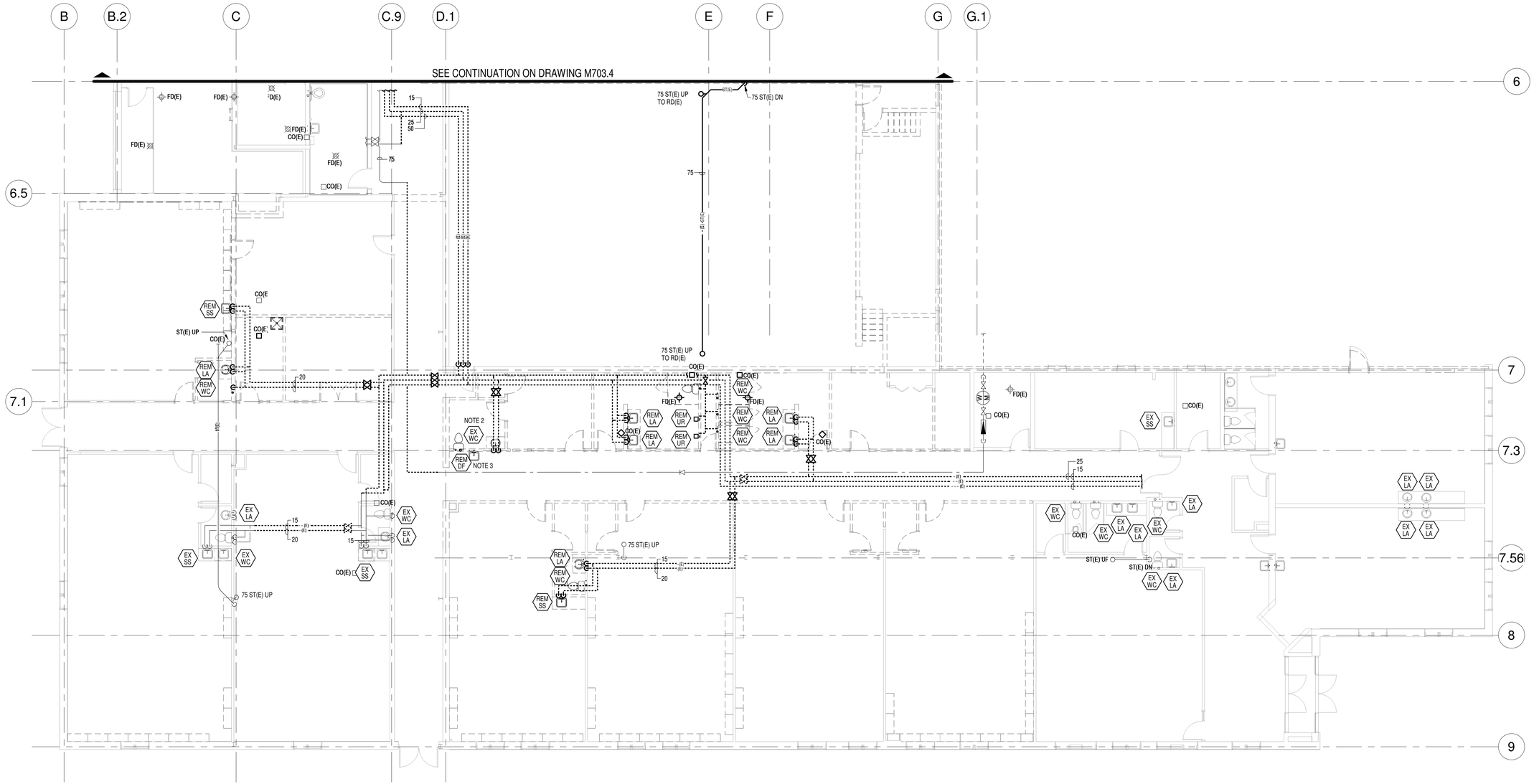
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - PLUMBING NORTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:57:05 PM	BMD	M703.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN PLUMBING SOUTH DEMOLITION

SCALE 1 : 100

NOTES:

1. SERVICES TO BE CUT BACK AND CAP CONCEALED WITHIN WALL OR UNDERGROUND.
2. REMOVE ALL REDUNDANT CW, HW AND SANITARY PIPING. CAP BEHIND WALL OR BELOW FLOOR.
3. REMOVE EXISTING DRINKING FOUNTAIN.

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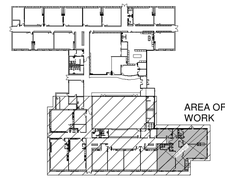
OTTAWA ON, K1R 6K7



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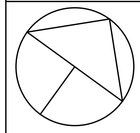
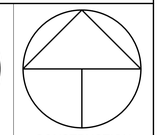


TRUE NORTH



CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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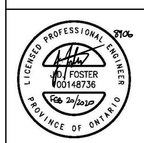


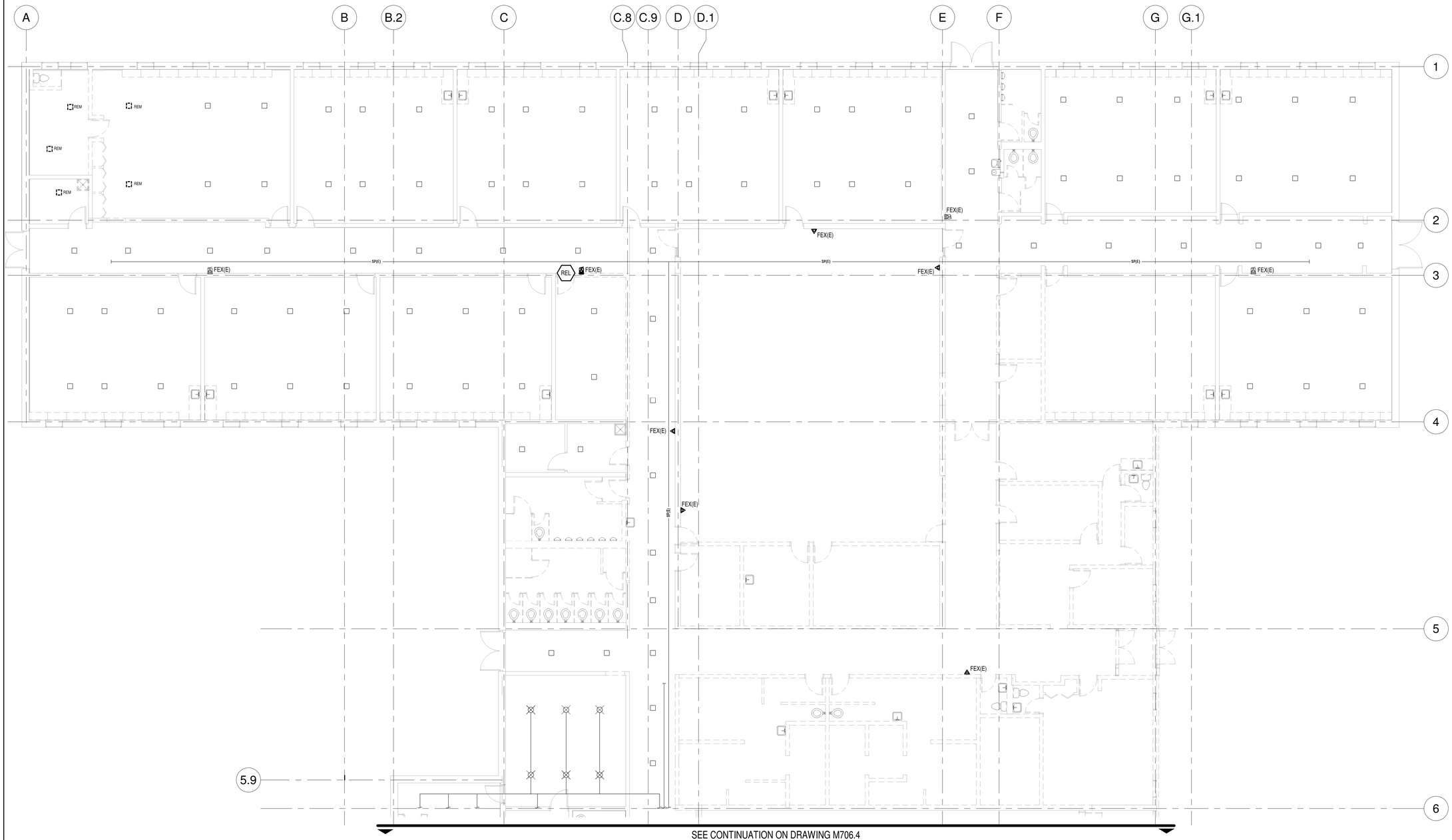
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - PLUMBING SOUTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 3:01:51 PM	BMD	M704.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - FIRE PROTECTION NORTH DEMOLITION
SCALE 1 : 100

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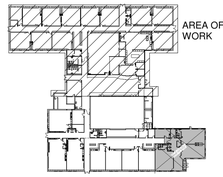
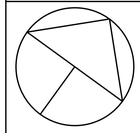
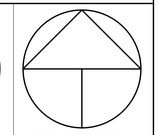
201 QUEENS AVE., UNIT 800
LONDON ON, N6A 1J1
250 CITY CENTRE AVE., SUITE 403
OTTAWA ON, K1R 6K7



KEY PLAN


TRUE NORTH


CONSTRUCTION NORTH

NOTES

LEGEND

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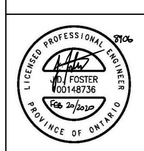


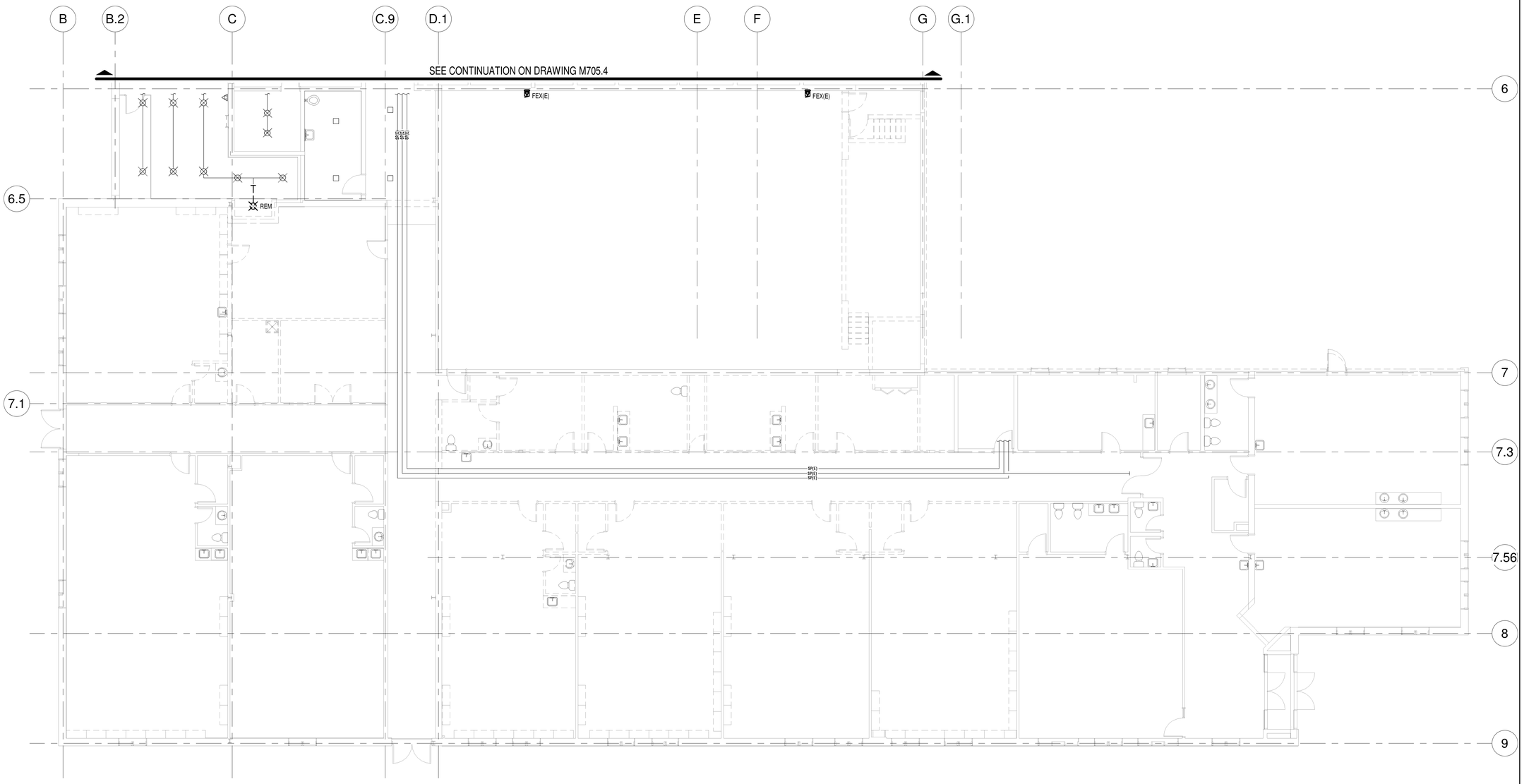
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - FIRE PROTECTION NORTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:57:13 PM	BMD	M705.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



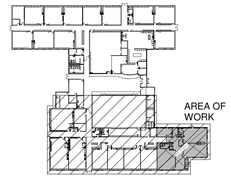
PART GROUND FLOOR PLAN - FIRE PROTECTION SOUTH DEMOLITION

SCALE 1 : 100

Chorley + Bisset
CONSULTING ENGINEERS

201 QUEENS AVE., UNIT 800
LONDON ON, N6A 1J1

250 CITY CENTRE AVE., SUITE 403
OTTAWA ON, K1R 6K7



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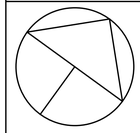
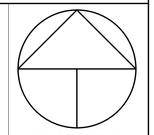


TRUE NORTH



CONSTRUCTION NORTH

NOTES

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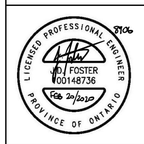
1	02/20/2020	ISSUED FOR TENDER & PERMIT	



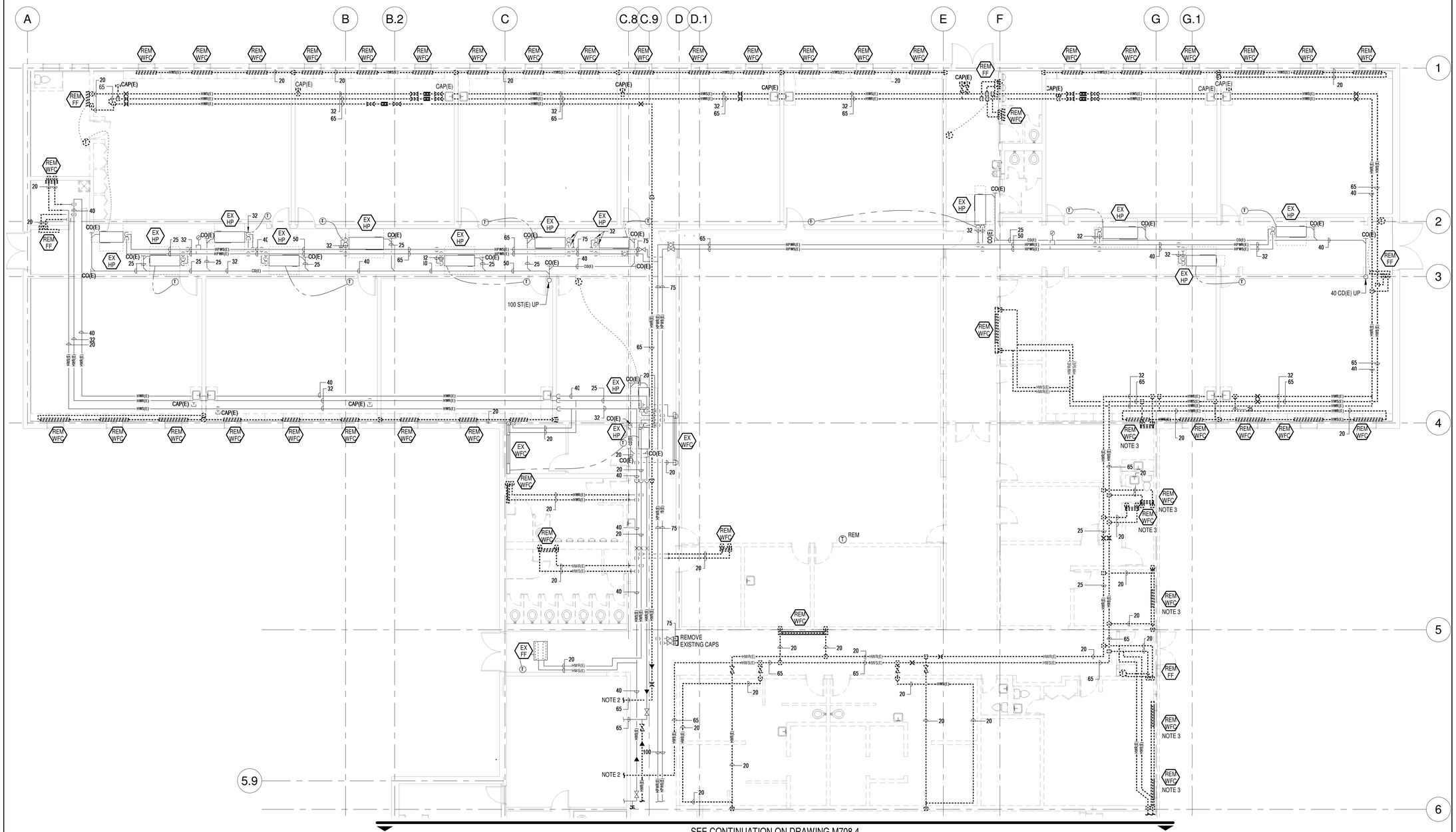
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - FIRE PROTECTION SOUTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:57:18 PM	BMD	M706.4
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - HEATING NORTH DEMOLITION

SCALE 1 : 100

NOTES:

1. REMOVE EXISTING HEATING ELEMENTS IN CHANGE ROOM BENCH SEATING.
2. REMOVE EXISTING HEATING PIPING, ZONE CIRCULATING PUMP AND ACCESSORIES BACK TO MAIN AND CAP. REFER TO HEATING SCHEMATIC ON DRAWING M708.4.
3. REMOVE ALL REDUNDANT CONTROLS AND ACCESORIES ASSOCIATED WITH EXISTING HEATING EQUIPMENT BEING REMOVED.

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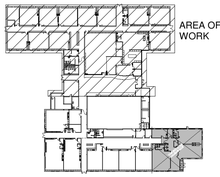

KEY PLAN

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No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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J.D. FOSTER
100148736
FEB 20/2020
PROVINCE OF ONTARIO

PROJECT TITLE

OUR LADY OF FATIMA

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PART GROUND FLOOR PLAN - HEATING NORTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 2:57:25 PM	BMD	M707.4
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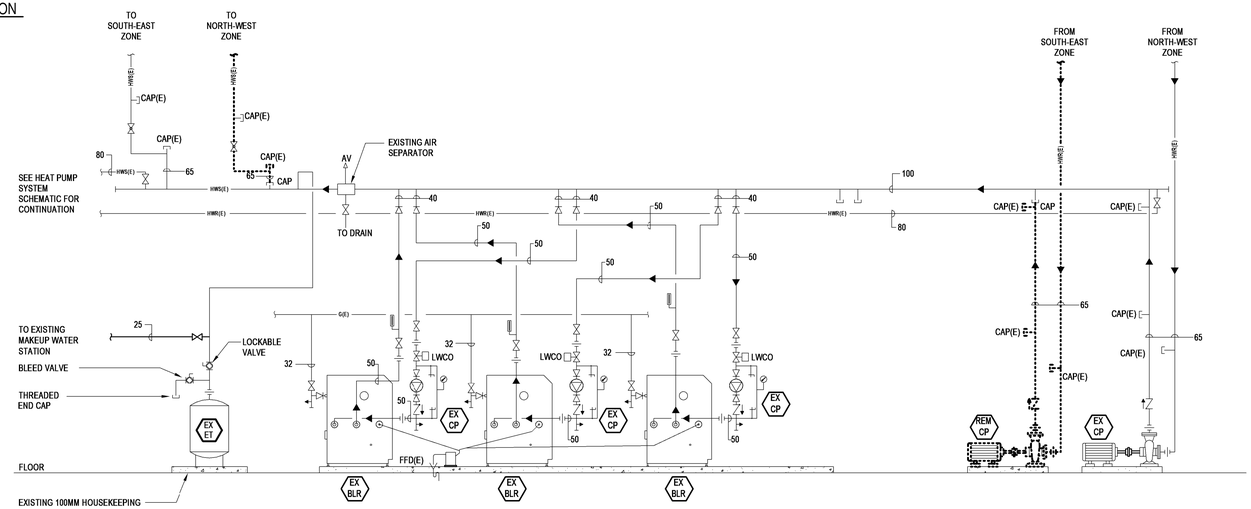
SEE CONTINUATION ON DRAWING M707.4

PART GROUND FLOOR PLAN - HEATING SOUTH DEMOLITION

SCALE 1 : 100

NOTES:

1. REMOVE ALL REDUNDANT CONTROLS AND ACCESSORIES ASSOCIATED WITH EXISTING HEATING EQUIPMENT BEING REMOVED.



HEATING SYSTEM SCHEMATIC - DEMOLITION

N.T.S.

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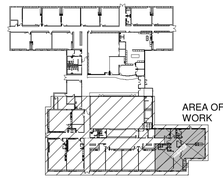

KEY PLAN

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CONSTRUCTION NORTH

NOTES

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J.D. FOSTER
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PROJECT TITLE

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PART GROUND FLOOR PLAN - HEATING SOUTH DEMOLITION

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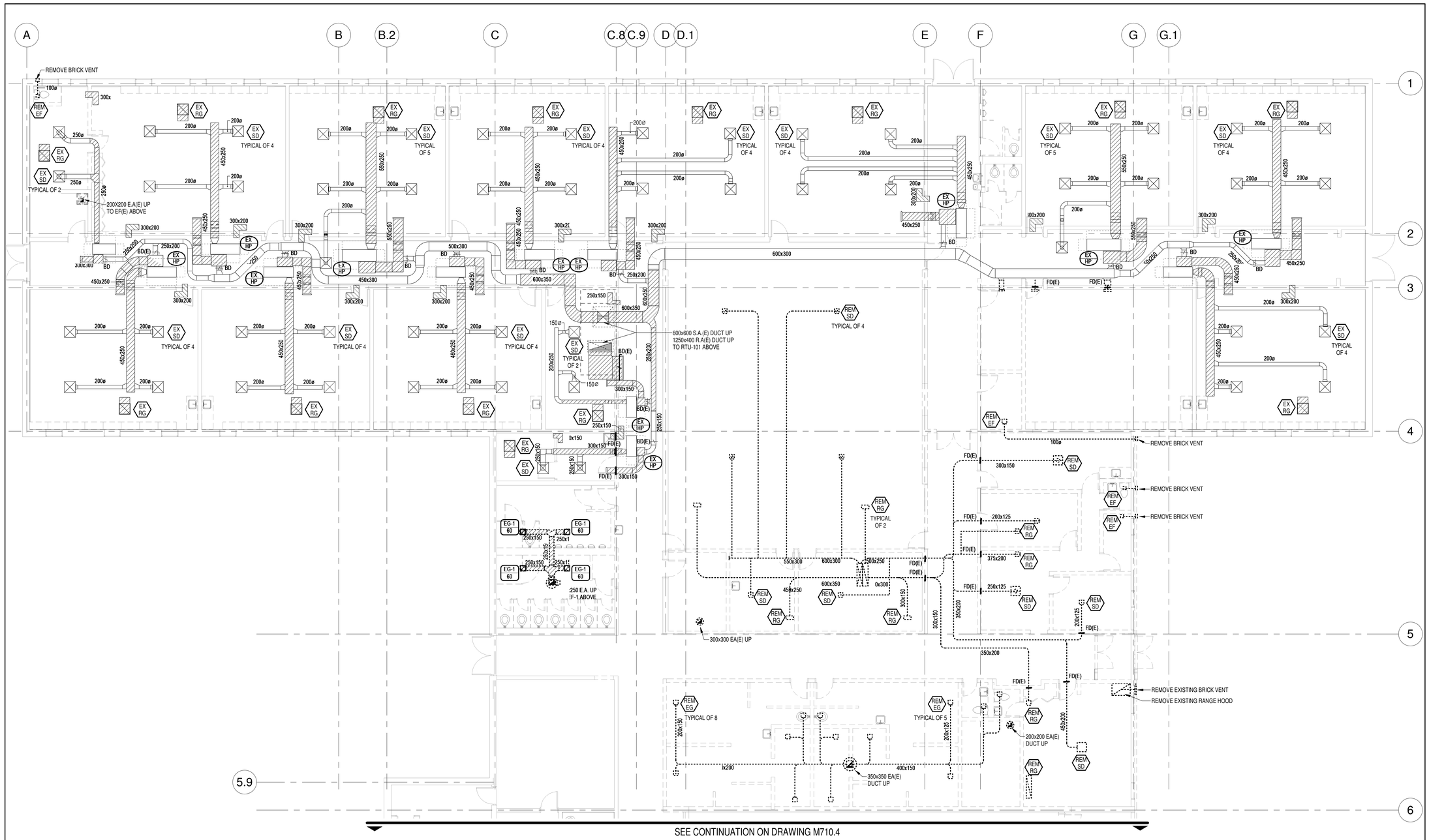
SCALE: As indicated	CHECKED BY: JDF	
PROJECT No.: 8906		



PART GROUND FLOOR PLAN - AIR DISTRIBUTION NORTH DEMOLITION
SCALE 1 : 100

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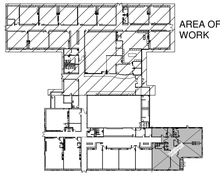

KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

NOTES

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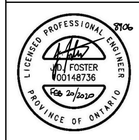

PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - AIR DISTRIBUTION NORTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
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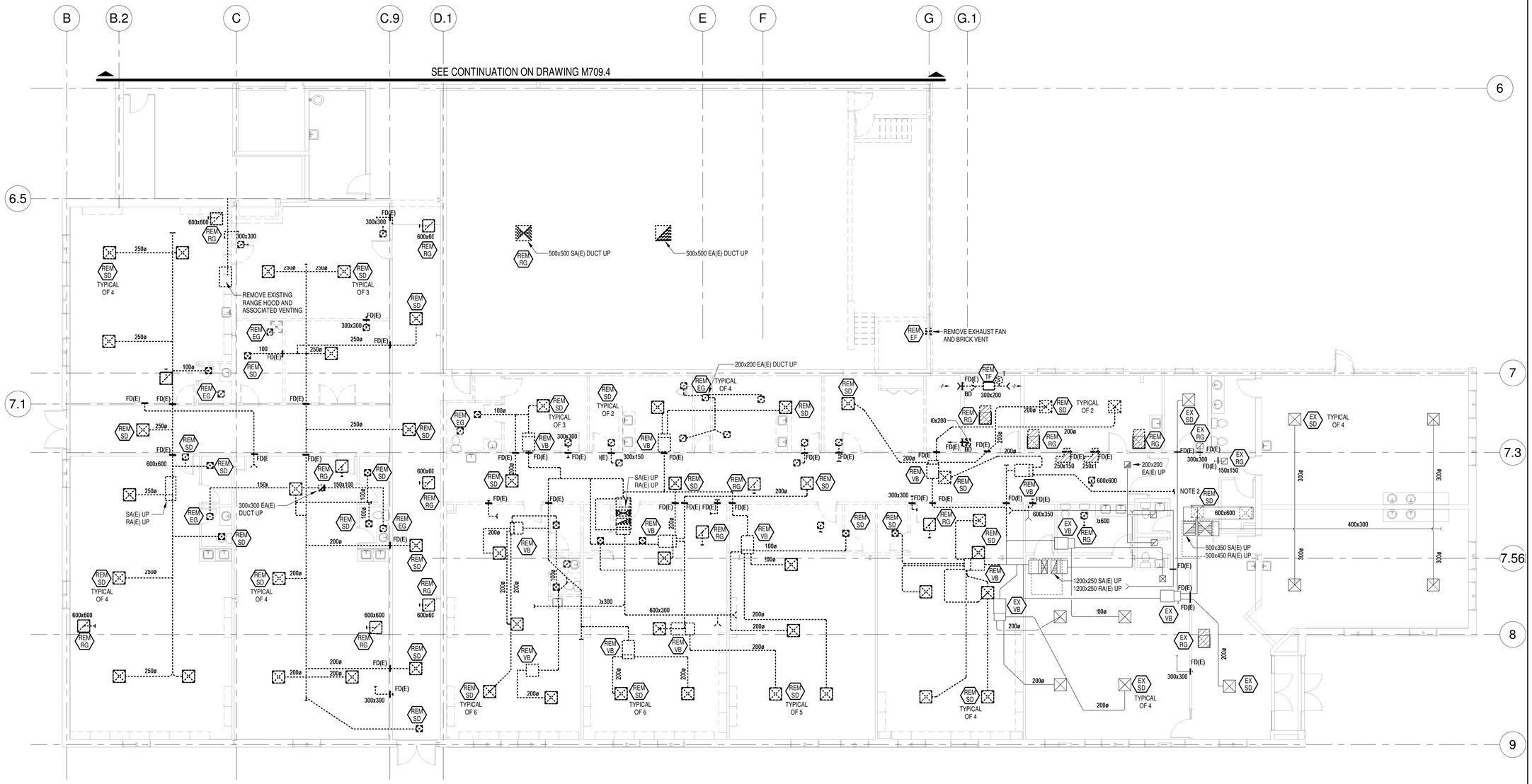
SCALE 1 : 100	CHECKED BY JDF	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - AIR DISTRIBUTION SOUTH DEMOLITION

SCALE 1 : 100

NOTES:

1. MEASURE AND RECORD EXISTING AIRFLOWS. AFTER RENOVATION BALANCE AIRFLOWS TO MATCH AIRFLOW PRIOR TO RENOVATIONS.
2. OPEN ENDED DUCT.
3. IN GENERAL, REMOVE ALL DUCTWORK AND ACCESSORIES ASSOCIATED WITH AIR DISTRIBUTION SYSTEMS BEING REMOVED.

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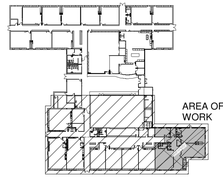

KEY PLAN

TRUE NORTH

CONSTRUCTION NORTH

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J.D. FOSTER
100148736
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PROJECT TITLE

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PART GROUND FLOOR PLAN - AIR DISTRIBUTION SOUTH DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
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LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	MOUNTING TYPE	MOUNTING HEIGHT	LAMPS	VOLTS	SYSTEM WATTS	EQUAL MANUFACTURERS	NOTES
A2	LITHONIA CAT # 2GTL4-40L-FW-EZ1-LP835 610mm x 1220mm RECESSED TROFFER, 3500K, A12 PATTERN ACRYLIC LENS, 0-10V DIMMING	RECESSED	CEILING	4000 LU LED	120	30.8W	CFI, COLUMBIA, METALUX, WILLIAMS, PINNACLE, PHILLIPS	
A2B	MARK ARCHITECTURAL LIGHTING CAT # WHSPR-2X4-4000LM-35K-MIN1-MVOLT 610mm x 1220mm RECESSED TROFFER, 3500K, 0-10V DIMMING TO 1%	RECESSED	CEILING	4000 LU LED	120	33.8W	LEDALITE, METALUX	
B2	LITHONIA CAT # GTL4-48L-FW-EZ1-LP835 305mm x 1220mm RECESSED TROFFER, 3500K, A12 PATTERN ACRYLIC LENS, 0-10V DIMMING	RECESSED	CEILING	4800 LU LED	120	42W	CFI, COLUMBIA, METALUX, WILLIAMS, PINNACLE, PHILLIPS	
B2S	LITHONIA CAT # GTL4-48L-FW-EZ1-LP835, LITHONIA CAT # 1x4SMKSH SURFANCE MOUNT KIT 305mm x 1220mm SURFACE MOUNT TROFFER, 3500K, A12 PATTERN ACRYLIC LENS, 0-10V DIMMING	SURFACE	CEILING	4800 LU LED	120	42W	CFI, COLUMBIA, METALUX, WILLIAMS, PINNACLE, PHILLIPS	
D2	LITHONIA LIGHTING CAT # ZL1D-L48-SMR-5000LM-FST-MVOLT-35K 1200mm STRIP LIGHT WITH COVERED END CAPS, 3500K, c/w WIREGUARD	SURFACE/ SUSPENDED	CEILING/ SEE DETAIL	5000 LU LED	120	41W	CFI, METALUX	
J1	GOTHAM LIGHTING CAT # EVO4-35/07-AR-MD-LSS-MVOLT-GZ1 103mm (ROUND) APERTURE DOWNLIGHT, 3500K, 0-10V DIMMING TO 1%	RECESSED	CEILING	750 LU LED	120	8W	CALCULITE, PORTFOLIO	
L8	MARK ARCHITECTURAL LIGHTING CAT # SL2L-LOP-8FT-RLP-35K-600LMF-MIN1-120 50mm x 2440mm LED LINEAR, 3500K, REGRESSED LENS, 0-10V DIMMING TO 1%	RECESSED	CEILING	600 LU/FT LED	120	6W/FT	PINNACLE, LEDALITE	
L20P	MARK ARCHITECTURAL LIGHTING CAT # S2LID-LLP-20FT-35K-400LMF-I35K-I600LMF-MIN1-MVOLT 50mm x 6096mm SUSPENDED LINEAR PENDANT, 3500K, 0-10V DIMMING TO 1%	SUSPENDED	3200mm A.F.F.	400 LU/FT DOWN, 600 LU/FT UP LED	120	153W	PINNACLE, LEDALITE	
M2	LITHONIA LIGHTING CAT # IBG-24000LM-SEF-AFL-WD-MVOLT-GZ10-35K-WGX LED HIGH BAY c/w WIREGUARD, 3500K, 0-10V DIMMING	SUSPENDED	5000mm A.F.F.	24000 LU LED	120	154W	PHILLIPS, COOPER	

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS TO CONFIRM LUMINAIRE MOUNTING PRIOR TO ORDERING. SUPPLY APPROPRIATE MOUNTING CLIPS AND/OR TRIMS AS REQUIRED.

MECHANICAL EQUIPMENT SCHEDULE

EQUIPMENT SUPPLIED AND INSTALLED BY DIVISION 15, WIRED BY DIVISION 16							CONTROL EQUIPMENT SUPPLED AND INSTALLED BY DIVISION 16						
ITEM	DESCRIPTION	LOCATION	hp	MCA	PHASE	VOLTS	STARTER/CONTROL TYPE	FED FROM	BREAKER SIZE	POLES	CONDUCTOR SIZE	CONDUIT SIZE	NOTES
EXHAUST FANS													
EF-1	EXHAUST FAN	WASHROOM	1/4		1	120	DS, WP, CON	PANEL 'HPD'	15	1	2#12	21mm	
EF-2	EXHAUST FAN	STORAGE	1/4		1	120	DS, WP, CON	PANEL 'HPD'	15	1	2#12	21mm	
EF-3	EXHAUST FAN	CHANGE ROOM	1/4		1	120	DS, WP, CON	PANEL 'HPD'	15	1	2#12	21mm	
EF-4	EXHAUST FAN	WASHROOM	1/4		1	120	DS, WP, CON	PANEL 'HPE'	15	1	2#12	21mm	
EF-5	EXHAUST FAN	WASHROOM	1/4		1	120	DS, WP, CON	PANEL 'HPB'	15	1	2#12	21mm	
EF-6	EXHAUST FAN	VARIOUS	1/4		1	120	DS, WP, CON	PANEL 'HPA'	15	1	2#12	21mm	
EF-7	EXHAUST FAN	VARIOUS	1/4		1	120	DS, WP, CON	PANEL 'HPB'	15	1	2#12	21mm	
HEATING UNITS													
FF-420	FORCE FLOW HEATER	VARIOUS	FHP		1	120	DS	VARIOUS	15	1	2#12	21mm	
FF-421	FORCE FLOW HEATER	VARIOUS	FHP		1	120	DS	VARIOUS	15	1	2#12	21mm	
ROOFTOP UNIT													
RTU-102	ROOFTOP UNIT	ROOF		151.4	3	208	DS, WP	PANEL 'DP1'	175	3	3 2/0	53mm	
HEAT PUMPS													
HP-401	HEAT PUMP	VARIOUS		5.6	1	208	DS	VARIOUS	15	2	2 #12	21mm	
HP-402	HEAT PUMP	VARIOUS		6.8	1	208	DS	VARIOUS	15	2	2 #12	21mm	
HP-403	HEAT PUMP	VARIOUS		11.3	1	208	DS	VARIOUS	15	2	2 #12	21mm	
HP-404	HEAT PUMP	VARIOUS		11.1	3	208	DS	VARIOUS	15	3	3 #12	21mm	
HP-405	HEAT PUMP	VARIOUS		15.9	3	208	DS	VARIOUS	20	3	3 #12	21mm	
HP-406	HEAT PUMP	VARIOUS		19.5	3	208	DS	VARIOUS	20	3	3 #12	21mm	
HP-407	HEAT PUMP	VARIOUS		41.5	3	208	DS	VARIOUS	50	3	3 #8	27mm	

NOTES:

1. DIVISION 16 TO OBTAIN COPIES OF MECHANICAL EQUIPMENT SHOP DRAWINGS AND COORDINATE ELECTRICAL SERVICES.
2. PROVIDE LOCAL NON-FUSED DISCONNECT SWITCHES AT MOTORS IN ACCORDANCE WITH SECTION 28-604 OF THE ONTARIO ELECTRICAL SAFETY CODE.
3. UNLESS INDICATED OTHERWISE ALL CONTROL WIRING IS BY DIVISION 15.

DRAWING LIST

E101.4	ELECTRICAL LEGEND, DRAWING LIST, SCHEDULES, ABBREVIATIONS, AND ELECTRICAL GENERAL NOTES
E102.4	PANEL SCHEDULES
E103.4	PANEL SCHEDULES
E201.4	PART GROUND FLOOR PLAN NORTH - LIGHTING AND FIRE ALARM
E202.4	PART GROUND FLOOR PLAN SOUTH - LIGHTING AND FIRE ALARM
E301.4	PART GROUND FLOOR PLAN NORTH - POWER AND SYSTEMS
E302.4	PART GROUND FLOOR PLAN SOUTH - POWER AND SYSTEMS
E401.4	ELECTRICAL RISERS
E501.4	ELECTRICAL DETAILS
E502.4	ELECTRICAL DETAILS
E503.4	LIGHTING CONTROL DETAILS
E504.4	LIGHTING CONTROL DETAILS
E601.4	PART GROUND FLOOR PLAN NORTH - LIGHTING AND FIRE ALARM DEMOLITION
E602.4	PART GROUND FLOOR PLAN SOUTH - LIGHTING AND FIRE ALARM DEMOLITION
E701.4	PART GROUND FLOOR PLAN NORTH - POWER AND SYSTEMS DEMOLITION
E702.4	PART GROUND FLOOR PLAN SOUTH - POWER AND SYSTEMS DEMOLITION

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MOUNTING
LIGHTING		
A	LED LUMINAIRE - NORMAL POWER	SEE LUMINAIRE SCHEDULE
A	LED LUMINAIRE - NORMAL POWER	SEE LUMINAIRE SCHEDULE
A	LED LUMINAIRE - NORMAL POWER	WALL MOUNTED - SEE LUMINAIRE SCHEDULE
	LED LUMINAIRE - NORMAL POWER	WALL MOUNTED - SEE LUMINAIRE SCHEDULE
EX	EXIT SIGN WITH OR WITHOUT DIRECTIONAL ARROWS	CEILING MOUNTED
EX	EXIT SIGN WITH OR WITHOUT DIRECTIONAL ARROWS	WALL MOUNTED AT CEILING
	EMERGENCY BATTERY PACK	WALL MOUNTED
	EMERGENCY BATTERY PACK c/w DUAL HEADS	WALL MOUNTED
	EMERGENCY LIGHT REMOTE HEAD	SURFACE MOUNTED
	EMERGENCY LIGHT REMOTE DUAL HEAD	SURFACE MOUNTED
	OCCUPANCY SENSOR	WALL MOUNTED AT CEILING
	OCCUPANCY SENSOR	CEILING MOUNTED
$	SINGLE POLE SWITCH	1100mm (43") A.F.F.
	OCCUPANCY SENSOR SWITCH	1100mm (43") A.F.F.
$ LV	LOW VOLTAGE SWITCH	1100mm (43") A.F.F.
$ #LV	LOW VOLTAGE SWITCH - # DENOTES QUANTITY OF SWITCHES	1100mm (43") A.F.F.
RC	ROOM CONTROLLER - DIMMING	ABOVE CEILING
PC	PHOTOCELL	CEILING MOUNTED
POWER		
	15/20 AMP 120 VOLT 3 WIRE GROUNDED DUPLEX RECEPTACLE CSA 5-20R	460mm (18") A.F.F.
	15/20 AMP 120 VOLT 3 WIRE GROUNDED DUPLEX RECEPTACLE CSA 5-20R	ABOVE COUNTER
	TWO 15/20 AMP 120 VOLT 3 WIRE GROUNDED DUPLEX RECEPTACLE CSA 5-20R	460mm (18") A.F.F.
	TWO 15/20 AMP 120 VOLT 3 WIRE GROUNDED DUPLEX RECEPTACLES UNDER COMMON PLATE - NORMAL POWER	FLOOR MOUNTED
	DIRECT POWER	AS NOTED
R	50 AMP 250 VOLT 4 WIRE GROUNDED RANGE RECEPTACLE	200mm (8") A.F.F.
T	TRANSFORMER	AS NOTED
H	BARRIER FREE PUSH BUTTON	
	MOTOR	
	FUSED DISCONNECT SWITCH	
	MANUAL STARTER	
	MAGNETIC STARTER	
D	HAND DRYER	SEE SPECIFICATIONS
DF	DRINKING FOUNTAIN	
T	ELECTRIC THERMOSTAT	
C	CONTACTOR	
VFD	VARIABLE FREQUENCY DRIVE	
R	RELAY	
LC#	LAPTOP CONNECTION	SEE DETAIL
TV#	LCD TELEVISION	SEE DETAIL
PP	SERVICE POLE	
	ELECTRICAL PANEL	SEE PANEL SCHEDULE
FIRE ALARM		
	SMOKE DETECTOR	CEILING MOUNTED
	135°F RATE-OF-RISE TEMPERATURE FIRE DETECTOR	CEILING MOUNTED
F	135°F FIXED TEMPERATURE FIRE DETECTOR	CEILING MOUNTED
	PULL STATION	1200mm (47-1/4") A.F.F.
	FIRE ALARM HORN	WALL 2300mm (91") A.F.F. MIN 150mm (6") TO CEILING
	FIRE ALARM HORN c/w VISUAL SIGNAL	WALL 2235mm (88") A.F.F.
CD	FIRE ALARM HORN c/w VISUAL SIGNAL (CD AS INDICATED)	WALL 2300mm (91") A.F.F. MIN 150mm (6") TO CEILING
	FIRE ALARM VISUAL SIGNAL	CEILING MOUNTED
	ADDRESSABLE CONTROL MODULE	
	ADDRESSABLE MONITOR MODULE	
	MAGNETIC DOOR HOLD OPEN DEVICE BY DIVISION 16	AS NOTED
FS	FLOW SWITCH	
SV	SUPERVISED VALVE	
EOLR	END OF LINE RESISTOR	1800mm (70") A.F.F.
FAA	FIRE ALARM ANNUNCIATOR PANEL	1800mm (70") A.F.F. TO TOP OF UNIT
FACP	FIRE ALARM CONTROL PANEL	1800mm (70") A.F.F. TO TOP OF UNIT
SECURITY		
SSCP	SECURITY SYSTEM CONTROL PANEL	1800mm (70") A.F.F. TO TOP OF UNIT
KP	SECURITY SYSTEM ARM/DISARM KEY PAD	1195mm (47") A.F.F.
D	DOOR POSITION SWITCH - CONCEALED	DOOR FRAME
M	MOTION DETECTOR	WALL AT CEILING
COMMUNICATIONS		
	SINGLE DEVICE BOX c/w BLANK COVERPLATE AND 21mm CONDUIT TO ACCESSIBLE CEILING SPACE	460mm (18") A.F.F.
	DATA OUTLET	460mm (18") A.F.F.
	DATA OUTLET - TWO JACKS	460mm (18") A.F.F.
	DATA OUTLET - TWO JACKS	FLOOR MOUNTED
W	TELEPHONE OUTLET - WALL	1372mm (54") A.F.F.
IC	INTERCOM SPEAKER WITH CALL SWITCH	1100mm (43") A.F.F.
IC ACC	INTERCOM ADMINISTRATION CONTROL CONSOLE	DESK
IC M	INTERCOM MICROPHONE, AM/FM RECEIVER AND CD PLAYER	DESK
PS	PAGING SPEAKER	CEILING MOUNTED
PS	PAGING SPEAKER HORN	3550mm (11') A.F.F.
PSHE	PAGING SYSTEM HEAD END	1195mm (47") A.F.F.
TV	TELEVISION OUTLET	460mm (18") A.F.F.
	CLOCK	WALL MOUNTED
	CLASSROOM MODULE	SEE DETAIL
	DATA RACK - PLAN VIEW	
WIRING AND CONDUIT		
	COMMUNICATIONS CABLE HANGER	
	GENERAL CIRCUIT CONDUIT	
	CIRCUIT BREAKER	
SPD	SURGE PROTECTIVE DEVICE	
DMS	DIGITAL METERING SYSTEM	
M	METER	
	EMT SLEEVE 50mm c/w BUSHINGS AND NYLON FISH WIRE	
	TRANSFORMER - RISER DIAGRAM	
	ELECTRICAL PANEL - RISER DIAGRAM	

ABBREVIATIONS

+XX	LOCATE XX ABOVE FINISHED FLOOR	REL	IF DASHED - EXISTING TO BE RELOCATED
AFF	ABOVE FINISHED FLOOR	REL	IF SOLID - EXISTING IN NEW LOCATION
C	CONDUIT	REM	EXISTING TO BE REMOVED
EX	EXISTING TO REMAIN	REP	EXISTING TO BE REPLACED WITH NEW
OC	OVER COUNTER - 230mm (9")	RR	REMOVE AND REINSTALL
P	POLE	WG	WIREGUARD

MOTOR CONTROL ABBREVIATIONS

DC	DIRECT CONNECTION	H.O.A.	HAND OFF AUTO SELECTOR SWITCH
DS	UN-FUSED DISCONNECT SWITCH	MCA	MINIMUM CIRCUIT AMPACITY
FDS	FUSED DISCONNECT SWITCH	REC	DUPLEX RECEPTACLE
FHP	FRACTIONAL HORSE POWER	VFD	VARIABLE FREQUENCY DRIVE
FVNR	FULL VOLTAGE NON REVERSING STARTER c/w H.O.A. SWITCH	WP	WEATHER PROOF

ELECTRICAL GENERAL NOTES

1. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS, VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING BUILDING, EQUIPMENT AND SYSTEMS TO DETERMINE THE FULL EXTENT OF DEMOLITION AND RENOVATION WORK.
2. RENOVATIONS SHALL BE MADE ON THE EXISTING BUILDING AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. REMOVE ALL REDUNDANT ELECTRICAL EQUIPMENT AND CONDUITS. ONLY CONDUITS AND DEVICE BOXES THAT ARE IN VERY GOOD CONDITION MAY REMAIN AND BE REUSED. ALL EQUIPMENT REMOVED AND NOT REUSED SHALL BE HANDED OVER TO THE OWNER AND/OR BE DISCARDED AT THE OWNER'S DISCRETION.
3. REMOVE, PROTECT AND REINSTALL IN THE SAME OR NEW LOCATION ON NEW SURFACES ALL EXISTING ELECTRICAL EQUIPMENT THAT WILL BE REUSED. EQUIPMENT IDENTIFIED FOR REUSE THAT IS LOST OR DAMAGED MUST BE REPLACED AT NO COST TO THE OWNER.
4. FISH FLEX CONDUIT THROUGH ALL EXISTING DRYWALL PARTITIONS, EXISTING FURRED WALLS, EXISTING DRYWALL CEILINGS AND EXISTING BLOCK WALLS FOR NEW LIGHTING, POWER AND COMMUNICATION DEVICES. IF WALLS CANNOT BE FISHED, PROVIDE V500/700 SURFACE RACEWAY AND ASSOCIATED SURFACE BOXES.

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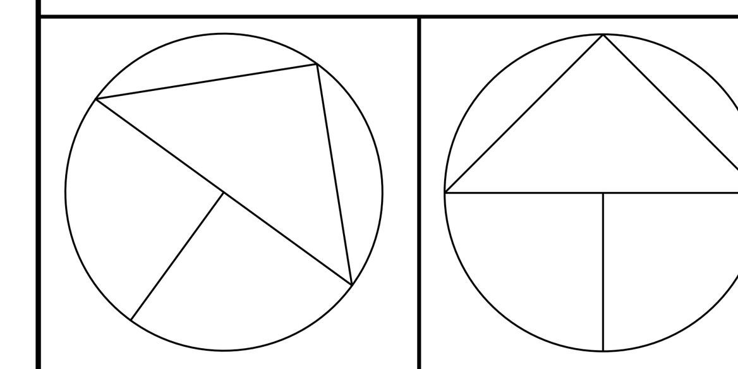
KEY PLAN



TRUE NORTH

CONSTRUCTION NORTH

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/19/2020	ISSUED FOR TENDER	

LICENSED PROFESSIONAL ENGINEER
Z.J.R. LINDUP
100502103
Mar 05, 2020
8906
PROVINCE OF ONTARIO

PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

ELECTRICAL LEGEND, DRAWING LIST, SCHEDULES, ABBREVIATIONS, AND ELECTRICAL GENERAL NOTES

DATE PLOTTED 01/11/2020	DRAWN BY AIS	DRAWING No. E101.4
SCALE AS NOTED	CHECKED BY ZJRL	
PROJECT No. 8906		

FILE NAME: 8906DE101.DWG
DATE SAVED: 05-Mar-2020 11:37 AM
DATE PLOTTED: 05-Mar-2020 1:29 PM
24x36

Panel ID: A

Location: **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: **Mains:** 225 A
Mounting: Surface **Number of CKT:** 78

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1	EXISTING CIRCUIT	20 A	1	1	15 A	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	4
5	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	10
11	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	12
13	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	14
15	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	16
17	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	18
19	EXISTING CIRCUIT	20 A	1	1	15 A	EXISTING CIRCUIT	20
21	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	22
23	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	24
25	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	26
27	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	28
29	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	30
31	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	32
33	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	34
35	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	36
37	RM 156 HAND DRYER	20 A	1	1	20 A	EXISTING CIRCUIT	38
39	RM 156 HAND DRYER	20 A	1	1	20 A	EXISTING CIRCUIT	40
41	RM 157 HAND DRYER	20 A	1	1	20 A	RM 156, 157 REC	42
43	RM 157 HAND DRYER	20 A	1	1	15 A	EXISTING CIRCUIT	44
45	RM 114 COUNTER REC	* 20 A	1	1	15 A	EXISTING CIRCUIT	46
47	RM 116 COUNTER REC	* 20 A	1	1	15 A	EXISTING CIRCUIT	48
49	RM 122 COUNTER REC	* 20 A	1	1	15 A	EXISTING CIRCUIT	50
51	RM 124 COUNTER REC	* 20 A	1	1	20 A *	RM 112 COUNTER REC	52
53	TM 126 COUNTER REC	* 20 A	1	1	20 A	EXISTING CIRCUIT	54
55	RM 128 COUNTER REC	* 20 A	1	1	15 A	EXISTING CIRCUIT	56
57	RM 130 COUNTER REC	* 20 A	1	1	20 A	RM 144A DATA RACK REC	58
59	RM 134 COUNTER REC	* 20 A	1	1	20 A	RM 144A - PSHE	60
61	RM 136 COUNTER REC	* 20 A	1	1	20 A	RM 132 REC	62
63	RM 138 COUNTER REC	* 20 A	1	1	20 A	RM 133 REC	64
65	RM 156 TRANSFORMER	20 A	1				66
67							68
69							70
71	SPARE	20 A	1	1	20 A	SPARE	72
73	SPARE	20 A	1	1	20 A	SPARE	74
75	SPARE	20 A	1	1	20 A	SPARE	76
77	SPARE	20 A	1	1	20 A	SPARE	78

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. PROVIDE NEW BREAKERS TO SUIT EXISTING SIEMENS PANEL.

Panel ID: B

Location: **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: **Mains:** 225 A
Mounting: Surface **Number of CKT:** 72

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1	RM 103, 104, 112 LTG	20 A	1	2	20 A	RM 104 RANGE REC	2
3	RM 114, 116, 118, 120, CR18, CR4 LTG	20 A	1				4
5	RM 101, 109 LTG	20 A	1	2	20 A	RM 104 DISHWASHER	6
7	RM 01, 100, 105 LTG	20 A	1				8
9	--	-- --	--	1	20 A	RM 104 FRIDGE	10
11	--	-- --	--	1	20 A	RM 104 FRIDGE	12
13	RM 104 COUNTER REC	* 20 A	1	1	20 A	RM 104 COUNTER REC	14
15	RM 104 COUNTER REC	20 A	1	1	20 A	RM 104 MICROWAVE	16
17	RM 104 MICROWAVE	20 A	1	1	20 A	RM 104 REC	18
19	RM 104 RANGE HOOD	15 A	1	1	15 A	EXISTING CIRCUIT	20
21	RM 104A,104B REC	* 20 A	1	1	15 A	EXISTING CIRCUIT	22
23	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	24
25	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	26
27	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	28
29	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	30
31	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	32
33	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	34
35	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	36
37	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	38
39	RM 100A, 102 REC	20 A	1	1	20 A	EXISTING CIRCUIT	40
41	RM 101A REFRIGERATOR	20 A	1	1	20 A	RM 100 REC	42
43	RM 101A COUNTER REC	* 20 A	1	1	20 A	RM 101 TV AND LAPTOP REC	44
45	RM 101A REC	20 A	1	1	20 A	RM 109A,109B TV AND LAPTOP REC	46
47	RM 109 REC	20 A	1	1	20 A	RM 109 TV AND LAPTOP REC	48
49	RM 109,109A REC	20 A	1	1	20 A	RM 118, 120 REC, TRANSFORMER	50
51	RM 109 TV AND LAPTOP REC	20 A	1	1	20 A	RM 118 HAND DRYER	52
53	RM 109 COUNTER REC	* 20 A	1	1	20 A	RM 120 HAND DRYER	54
55	ATRIUM 01 REC	20 A	1	1	20 A	RM 120 TRANSFORMER	56
57	RM 105 TV AND LAPTOP REC	20 A	1				58
59	RM 105 TV REC	20 A	1				60
61	VESTIBULE V01 - BARRIER FREE PB	15 A	1				62
63	VESTIBULE V01 - BARRIER FREE PB	15 A	1				64
65							66
67	SPARE	15 A	1	1	20 A	SPARE	68
69	SPARE	15 A	1	1	20 A	SPARE	70
71	SPARE	15 A	1	1	20 A	SPARE	72

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. NEW PANEL TO REPLACE EXISTING, TRACE OUT ALL EXISTING LOADS AND DO NOT PROVIDE NEW BREAKERS FOR LOADS THAT HAVE BEEN REMOVED.

Panel ID: C

Location: MECH. 150B **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: **Mains:** 225 A
Mounting: Surface **Number of CKT:** 78

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	4
5	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	10
11	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	12
13				1	20 A	EXISTING CIRCUIT	14
15	EXISTING CIRCUIT	15 A	3	1	15 A	SPARE	16
17				1	15 A	EXISTING CIRCUIT	18
19	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	20
21	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	22
23	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	24
25	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	26
27	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	28
29	EXISTING CIRCUIT	50 A	2	1	15 A	EXISTING CIRCUIT	30
31				1	15 A	EXISTING CIRCUIT	32
33	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	34
35	EXISTING CIRCUIT	15 A	1	1	15 A	SPARE	36
37	EXISTING CIRCUIT	15 A	1	1	20 A	RM 113 LTG (SPARE)	38
39	SPARE	20 A	2	1	20 A	RM 113A,B,C,D LTG (NOTE 2)	40
41				1	20 A	EXISTING CIRCUIT	42
43	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	44
45	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	46
47	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	48
49	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	50
51	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	52
53	SPARE	15 A	1	1	20 A	EXISTING CIRCUIT	54
55	RM 113 - MOTORIZED BASKETBALL NET	20 A	1	1	20 A	RM 113A REC	56
57	RM 113 - MOTORIZED BASKETBALL NET	15 A	1	1	20 A	RM 113B, 113C, 113D REC	58
59				1	20 A	RM 113 REC	60
61				1	20 A	RM 113 REC	62
63				1	20 A	RM 113A REC	64
65							66
67							68
69							70
71							72
73	SPARE	15 A	1	1	20 A	SPARE	74
75	SPARE	15 A	1	1	20 A	SPARE	76
77	SPARE	15 A	1	1	20 A	SPARE	78

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. EXISTING PANEL 'C'. PROVIDE NEW BREAKERS TO SUIT EXISTING SIEMSN ELECTRICAL PANEL. MARK ALL LOADS MADE REDUNDANT BY THIS PHASE AS SPARE.
2. UTILIZE EXISTING SPARE BREAKER FOR NEW LOAD.

Panel ID: D

Location: CUST. 115 **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: **Mains:** 225 A
Mounting: Surface **Number of CKT:** 66

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	4
5	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	15 A	1	1	15 A	PANEL 'E' CCT 17 (NOTE 2)	8
9	EXISTING CIRCUIT	15 A	1	1	15 A	PANEL 'E' CCT 19 (NOTE 2)	10
11	EXISTING CIRCUIT	15 A	1	1	15 A	PANEL 'E' CCT 33 (NOTE 2)	12
13	RM 166 COUNTER REC (NOTE 2)	* 20 A	1	1	15 A	PANEL 'E' CCT 39 (NOTE 2)	14
15	RM 168 COUNTER REC (NOTE 3)	* 20 A	1	1	20 A	CR12,RM 115,117,119,126 LTG (NOTE 2)	16
17	RM 170 COUNTER REC (NOTE 3)	* 20 A	1	1	20 A	RM 166,168 LTG (NOTE 2)	18
19	RM 172 COUNTER REC (NOTE 3)	* 20 A	1	1	20 A	RM 170,172 LTG (NOTE 2)	20
21	RM 166 REC (NOTE 3)	20 A	1	1	20 A	REDUNDANT	22
23	RM 168 REC (NOTE 3)	20 A	1	1	20 A	REDUNDANT	24
25	RM 170 REC (NOTE 3)	20 A	1	1	20 A	SPARE	26
27	RM 172 REC (NOTE 3)	20 A	1	1	20 A	SPARE	28
29				1	20 A	EXISTING CIRCUIT	30
31	SPARE	20 A	3	1	15 A	PANEL 'E' CCT 41 (NOTE 3)	32
33				1	15 A	PANEL 'E' CCT 43 (NOTE 2)	34
35	PANEL 'E' CCT 2	15 A	1	1	15 A	EXISTING CIRCUIT	36
37	PANEL 'E' CCT 4	15 A	1	1	15 A	PANEL 'E' CCT 12	38
39	PANEL 'E' CCT 6	15 A	1	1	15 A	PANEL 'E' CCT 14	40
41	PANEL 'E' CCT 8	15 A	1	1	15 A	PANEL 'E' CCT 16	42
43	PANEL 'E' CCT 10	15 A	1	1	15 A	PANEL 'E' CCT 18	44
45	PANEL 'E' CCT 42	15 A	1	1	20 A	RM 117 HAND DRYER	46
47	RM 115 REC	20 A	1	1	20 A	RM 119 HAND DRYER	48
49				1	20 A	RM 117, 119 REC	50
51				1	20 A	CR 12 DRINKING FOUNTAIN	52
53				1	20 A	CR 12 REC	54
55				1	20 A	CR 12 REC	56
57							58
59							60
61							62
63							64
65							66

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. EXISTING PANEL 'D'. PROVIDE NEW BREAKERS TO SUIT EXISTING SIEMENS ELECTRICAL PANEL. MARK ALL BREAKERS MADE REDUNDANT BY THIS PHASE AS SPARE.
2. UTILIZE EXISTING CIRCUIT MADE REDUNDANT BY THIS PHASE.
3. UTILIZE EXISTING SPARE BREAKER.

Panel ID: E

Location: STORAGE 159 **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: **Mains:** 225 A
Mounting: Surface **Number of CKT:** 66

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1	PANEL 'G' CCT 2 (NOTE 2)	15 A	1	1	15 A	EXISTING CIRCUIT	2
3	PANEL 'G' CCT 4 (NOTE 2)	15 A	1	1	15 A	EXISTING CIRCUIT	4
5	PANEL 'G' CCT 6 (NOTE 2)	15 A	1	1	15 A	EXISTING CIRCUIT	6
7	PANEL 'G' CCT 36 (NOTE 2)	15 A	1	1	20 A	EXISTING CIRCUIT	8
9	PANEL 'G' CCT 38 (NOTE 2)	15 A	1	1	15 A	EXISTING CIRCUIT	10
11	RM 154, 159, 160 LTG (NOTE 2)	15 A	1	1	15 A	EXISTING CIRCUIT	12
13	CR10, CR11 LTG (NOTE 2)	15 A	1	1	15 A	EXISTING CIRCUIT	14
15	RM 162, 164 LTG (NOTE 2)	15 A	1	1	15 A	EXISTING CIRCUIT	16
17	SPARE	15 A	1	1	15 A	EXISTING CIRCUIT	18
19	SPARE	15 A	1	1	15 A	EXISTING CIRCUIT	20
21				1	15 A	SPARE	22
23	REDUNDANT	40 A	3	1	15 A	SPARE	24
25				2	15 A	PANEL 'G' CCT 32,34 (NOTE 3)	26
27	SPARE	15 A	1				28
29	REDUNDANT	15 A	1	2	15 A	SPARE	30
31	SPARE	15 A	1				32
33	SPARE	15 A	1	1	15 A	EXISTING CIRCUIT	34
35	SPARE	15 A	1	1	15 A	EXISTING CIRCUIT	36
37	SPARE	15 A	1	1	15 A	SPARE	38
39	PANEL 'G' CCT 13	20 A	1	1	20 A	RM 159A, 160A REC	40
41	RM 154 REC	20 A	1	1	20 A	RM 159 REC	42
43	RM 160 COUTER REC	* 20 A	1				44
45	RM 160 REC	20 A	1				46
47	RM 162 REC	20 A	1				48
49	RM 164 REC	20 A	1				50
51							52
53							54
55							56
57							58
59							60
61							62
63							64
65							66

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. PREVIOUSLY PANEL 'H', PROVIDE NEW BREAKERS TO SUIT EXISTING SIEMENS ELECTRICAL PANEL. MARK ALL BREAKERS MADE REDUNDANT BY THIS PHASE AS SPARE.
2. UTILIZE EXISTING CIRCUIT MADE REDUNDANT BY THIS PHASE.
3. UTILIZE EXISITING SPARE BREAKER.

Panel ID: DC

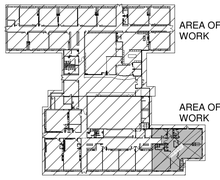
Location: CUST. 115 **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: **Mains:** 225 A
Mounting: Surface **Number of CKT:** 66

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	4
5	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	10
11	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	12
13	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	14
15	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	16
17	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	18
19	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING DAYCARE CIRCUIT	20
21	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING DAYCARE CIRCUIT	22
23	EXISTING CIRCUIT	20 A	1	1	20 A	EXISTING CIRCUIT	24
25	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	26
27				1	15 A	EXISTING CIRCUIT	28
29	EXISTING CIRCUIT	20 A	3	1	20 A	EXISTING CIRCUIT	30
31				1	20 A	EXISTING CIRCUIT	32
33	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	34
35	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	36
37	EXISTING CIRCUIT	15 A	1	1	20 A	EXISTING CIRCUIT	38
39	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	40
41	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	42
43	EXISTING CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	44
45	EXISTING DAYCARE CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	46
47	EXISTING DAYCARE CIRCUIT	15 A	1	1	15 A	EXISTING CIRCUIT	48
49	EXISTING DAYCARE CIRCUIT	20 A	1	1	15 A	EXISTING CIRCUIT	50
51	EXISTING DAYCARE CIRCUIT	20 A	1				52
53							54
55							56
57							58
59							60
61							62
63							64
65							66

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. PREVIOUSLY PANEL 'E', PROVIDE NEW BREAKERS TO SUIT EXISTING SIEMENS ELECTRICAL PANEL. REWORK ALL EXISTING LOADS NOT SERVING DAYCARE TO PANEL 'D'.
2. REWORK ALL CIRCUITS SERVING DAYCARE LIGHTING, FIRE ALARM, POWER AND SYSTEMS DEVICES TO THIS PANEL. UTILIZE EXISTING BREAKERS MADE REDUNDANT BY THIS PHASE. MARK ALL UNUSED BREAKERS AS SPARE.

Chorley + Bisset
CONSULTING ENGINEERS
201 QUEENS AVE., UNIT 800 LONDON ON, N6A 1J1
250 CITY CENTRE AVE., SUITE 403 OTTAWA ON, K1R 6K7

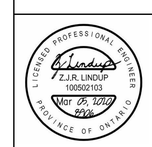


KEY PLAN

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	



PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PANEL SCHEDULES

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 1:26:48 PM	AIS	E102.4
SCALE	CHECKED BY	
	ZJRL	
PROJECT No.		
8906		

Panel ID: HPA

Location: | **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: | **Mains:** 225 A
Mounting: Surface | **Number of CKT:** 78

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1	EXISTING CIRCUIT	15 A	2	3	20 A	EXISTING CIRCUIT	2
3							4
5	EXISTING CIRCUIT	20 A	3				6
7				3	20 A	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	30 A	3				10
11				3	20 A	EXISTING CIRCUIT	12
13	EXISTING CIRCUIT	20 A	3				14
15				3	20 A	EXISTING CIRCUIT	16
17	EXISTING CIRCUIT	15 A	2				18
19				3	20 A	EXISTING CIRCUIT	20
21	EXISTING CIRCUIT	15 A	2				22
23				3	20 A	EXISTING CIRCUIT	24
25	EXISTING CIRCUIT	30 A	3				26
27				3	20 A	EXISTING CIRCUIT	28
29	EXISTING CIRCUIT	20 A	3				30
31							32
33				3	20 A	EXISTING CIRCUIT	34
35							36
37				1	20 A	WR 157 - EF-6	38
39	EXISTING CIRCUIT	20 A	3				40
41							42
43							44
45							46
47							48
49							50
51							52
53							54
55							56
57							58
59							60
61							62
63							64
65							66
67							68
69	SPARE	15 A	3	3	15 A	SPARE	70
71							72
73							74
75	SPARE	20 A	3	3	20 A	SPARE	76
77							78

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
PROVIDE NEW BREAKERS TO SUIT EXISTING SIEMENS PANELBOARD

Panel ID: HPB

Location: | **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: | **Mains:** 225 A
Mounting: Surface | **Number of CKT:** 72

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1				1	20 A	CORR CR18 - FF-421	2
3	CORR CR3 - HP-404	20 A	3	1	20 A	ROOF - EF-7	4
5				1	20 A	CORR CR4 - FF-421	6
7				1	20 A	ROOF - EF-5	8
9	CORR CR3 - HP-404	20 A	3	1	20 A	VESTIBULE V01 - FF-420	10
11							12
13	CORR C3 - HP-402	20 A	2	3	20 A	ATRIUM 01 - HP-403	14
15							16
17	STAFF ROOM 104 - HP-403	20 A	2	2	20 A	WORK ROOM 103 - HP-401	18
19							20
21	WORK ROOM 103 - HP-401	20 A	2	2	20 A	WORK ROOM 103 - HP-401	22
23							24
25	WORK ROOM 103 - HP-401	20 A	2	2	20 A	CHANGE ROOM 113D - HP-401	26
27							28
29							30
31							32
33							34
35							36
37							38
39							40
41							42
43							44
45							46
47							48
49							50
51							52
53							54
55							56
57							58
59							60
61							62
63	SPARE	15 A	3	3	20 A	SPARE	64
65							66
67							68
69	SPARE	20 A	3	3	30 A	SPARE	70
71							72

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. NEW PANELBOARD

Panel ID: HPD

Location: CUST. 115 | **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: | **Mains:** 225 A
Mounting: Surface | **Number of CKT:** 66

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1				1	20 A	ROOF - EF-1 (NOTE 2)	2
3	CORR CR12 - HP-406 (NOTE 2)	20 A	3				4
5				3	20 A	GYM STOR 113A - HP-407 (NOTE 2)	6
7							8
9	CORR CR12 - HP-406 (NOTE 2)	20 A	3				10
11				3	20 A	ROOF - RTU-102 (NOTE 2)	12
13							14
15	CORR CR12 - HP-406 (NOTE 2)	20 A	3	1	20 A	ROOF - EF-2 (NOTE 2)	16
17				1	20 A	ROOF - EF-3 (NOTE 2)	18
19				1	20 A	CORR CR12 - FF-421 (NOTE 2)	20
21	CORR CR12 - HP-406 (NOTE 2)	20 A	3	1	15 A	REWORKED (DC)	22
23				1	20 A	REDUNDANT	24
25	CORR CR12 - HP-401 (NOTE 2)	20 A	2	1	20 A	REDUNDANT	26
27				1	15 A	REDUNDANT	28
29	ROOF - REC - WP (NOTE 2)	* 20 A	1	1	20 A	REDUNDANT	30
31				1	20 A	REDUNDANT	32
33	SPARE	15 A	1	1	15 A	REDUNDANT	34
35	SPARE	15 A	1	1	20 A	REDUNDANT	36
37	SPARE	15 A	1	1	20 A	REDUNDANT	38
39	SPARE	15 A	1	1	15 A	REDUNDANT	40
41	SPARE	15 A	1	1	15 A	SPARE	42
43	SPARE	15 A	1	1	15 A	REDUNDANT	44
45	REWORKED (DC)	15 A	1	1	15 A	SPARE	46
47	REWORKED (DC)	15 A	1	1	15 A	SPARE	48
49	REWORKED (DC)	20 A	1	1	15 A	SPARE	50
51	REWORKED (DC)	20 A	1				52
53							54
55							56
57							58
59							60
61							62
63							64
65							66

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. NEW PANEL TO REPLACE EXISTING, REWORK ALL EXISTING LIGHTING, FIRE ALARM, POWER AND SYSTEMS CIRCUITS TO PANEL 'D' IF THEY SERVE THE SCHOOL AND TO PANEL 'DC' IF THEY SERVE THE DAYCARE. EXISTING MECHANICAL CIRCUITS ARE TO REMAIN. DO NOT PROVIDE NEW BREAKERS FOR REWORKED OR REDUNDANT LOADS.
2. UTILIZE EXISTING CIRCUIT MADE REDUNDANT BY THIS PHASE.

Panel ID: HPE

Location: STORAGE 159 | **Voltage:** 120/208 Wye, 3PH, 4W
Fed From: | **Mains:** 225 A
Mounting: Surface | **Number of CKT:** 66

CKT	Circuit Description	Trip	Poles	Poles	Trip	Circuit Description	CKT
1	CORR CR10 - HP-402 (NOTE 2)	20 A	2	3	20 A	CORR CR11 - HP-405 (NOTE 2)	2
3							4
5	CORR CR10 - HP-401 (NOTE 2)	20 A	2				6
7				3	20 A	CORR CR11 - HP-406 (NOTE 2)	8
9	CORR CR11 - HP-406 (NOTE 2)	20 A	3				10
11							12
13				1	20 A	ROOF - EF-4 (NOTE 2)	14
15	CORR CR-11 - FF-421 (NOTE 2)	20 A	1	2	15 A	REDUNDANT	16
17							18
19	SPARE	70 A	3	2	50 A	REDUNDANT	20
21							22
23				1	15 A	SPARE	24
25	REDUNDANT	40 A	3	1	15 A	SPARE	26
27				1	15 A	SPARE	28
29	SPARE	15 A	2	1	15 A	SPARE	30
31				2	15 A	SPARE	32
33	SPARE	15 A	2				34
35				1	15 A	SPARE	36
37	SPARE	20 A	1	1	15 A	SPARE	38
39	SPARE	20 A	1	1	15 A	SPARE	40
41				1	15 A	SPARE	42
43							44
45							46
47							48
49							50
51							52
53							54
55							56
57							58
59							60
61							62
63							64
65							66

* GFCI BREAKER (5mA) ** GFCI BREAKER (30mA) + AFCI BREAKER

Notes:
1. PREVIOUSLY PANEL 'G', PROVIDE NEW BREAKERS TO SUIT EXISTING SIEMENS ELECTRICAL PANEL. USAGE OF SPARE, REWORKED OR REDUNDANT BREAKERS IS INDICATED IN PARENTHESIS. MARK ALL REWORKED AND REDUNDANT BREAKERS AS SPARE. REWORK EXISTING LIGHTING, FIRE ALARM, POWER AND SYSTEMS LOADS TO EXISTING PANEL 'H' RENAMED TO PANEL 'E'. REFER TO PANEL 'E' SCHEDULE FOR LIST OF CIRCUITS....

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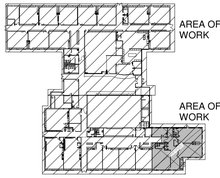

KEY PLAN

NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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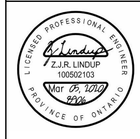
1	02/20/2020	ISSUED FOR TENDER & PERMIT	



PROJECT TITLE
OUR LADY OF FATIMA

DRAWING TITLE
PANEL SCHEDULES

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 1:26:49 PM	AIS	E103.4
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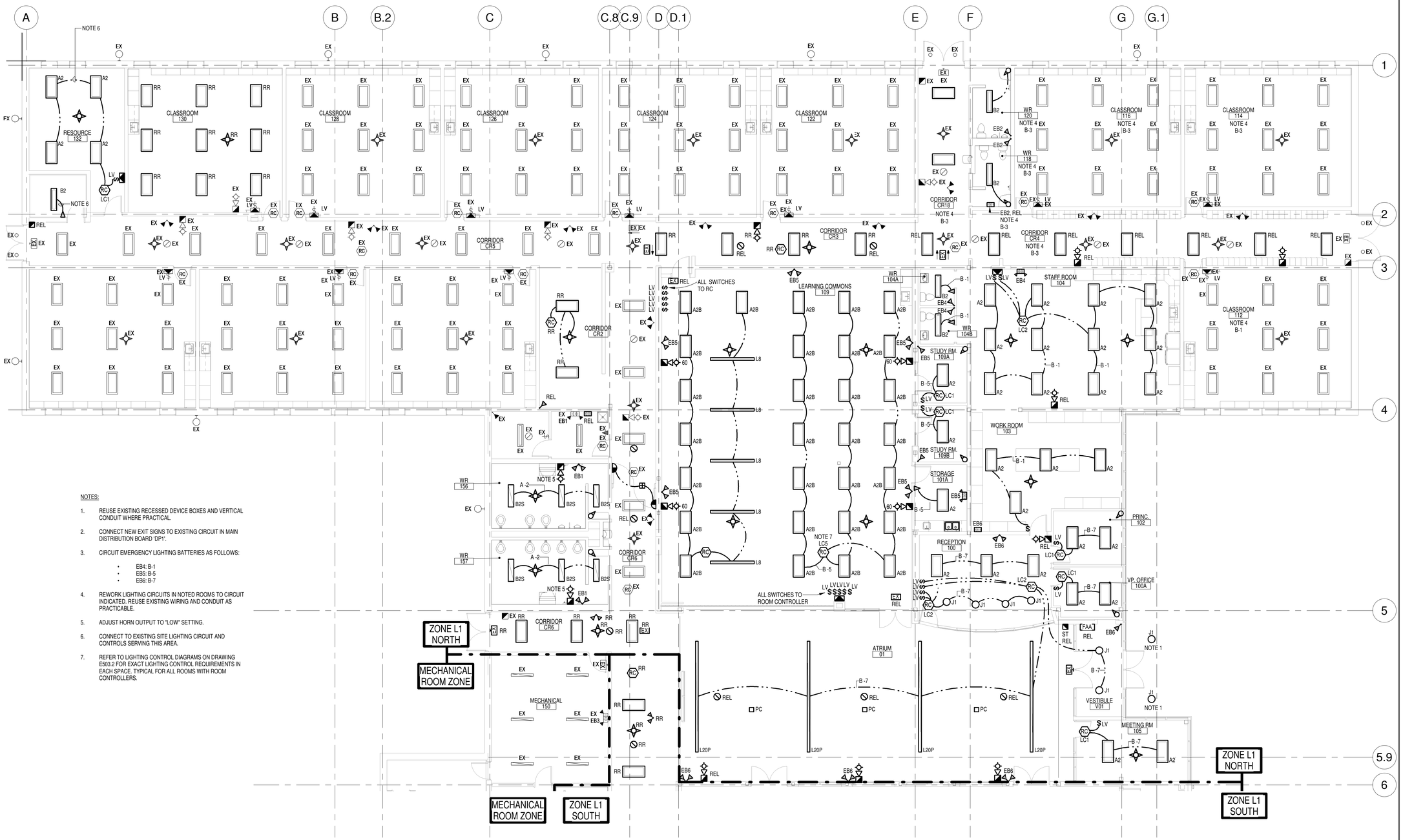
	ZJRL	
PROJECT No.		
8906		



NOTES:

1. REUSE EXISTING RECESSED DEVICE BOXES AND VERTICAL CONDUIT WHERE PRACTICAL.
2. CONNECT NEW EXIT SIGNS TO EXISTING CIRCUIT IN MAIN DISTRIBUTION BOARD 'DP1'.
3. CIRCUIT EMERGENCY LIGHTING BATTERIES AS FOLLOWS:
   - EB4: B-1
   - EB5: B-5
   - EB6: B-7
4. REWORK LIGHTING CIRCUITS IN NOTED ROOMS TO CIRCUIT INDICATED. REUSE EXISTING WIRING AND CONDUIT AS PRACTICABLE.
5. ADJUST HORN OUTPUT TO "LOW" SETTING.
6. CONNECT TO EXISTING SITE LIGHTING CIRCUIT AND CONTROLS SERVING THIS AREA.
7. REFER TO LIGHTING CONTROL DIAGRAMS ON DRAWING E503.2 FOR EXACT LIGHTING CONTROL REQUIREMENTS IN EACH SPACE. TYPICAL FOR ALL ROOMS WITH ROOM CONTROLLERS.

PART GROUND FLOOR PLAN - NORTH - LIGHTING AND FIRE ALARM
SCALE 1 : 100

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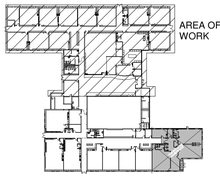

KEY PLAN

NOTES

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No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
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Z.J.R. LINDUP
100502103
Mar 05, 2020
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DRAWING TITLE
PART GROUND FLOOR PLAN - NORTH - LIGHTING AND FIRE ALARM

DATE PLOTTED	DRAWN BY	DRAWING No.
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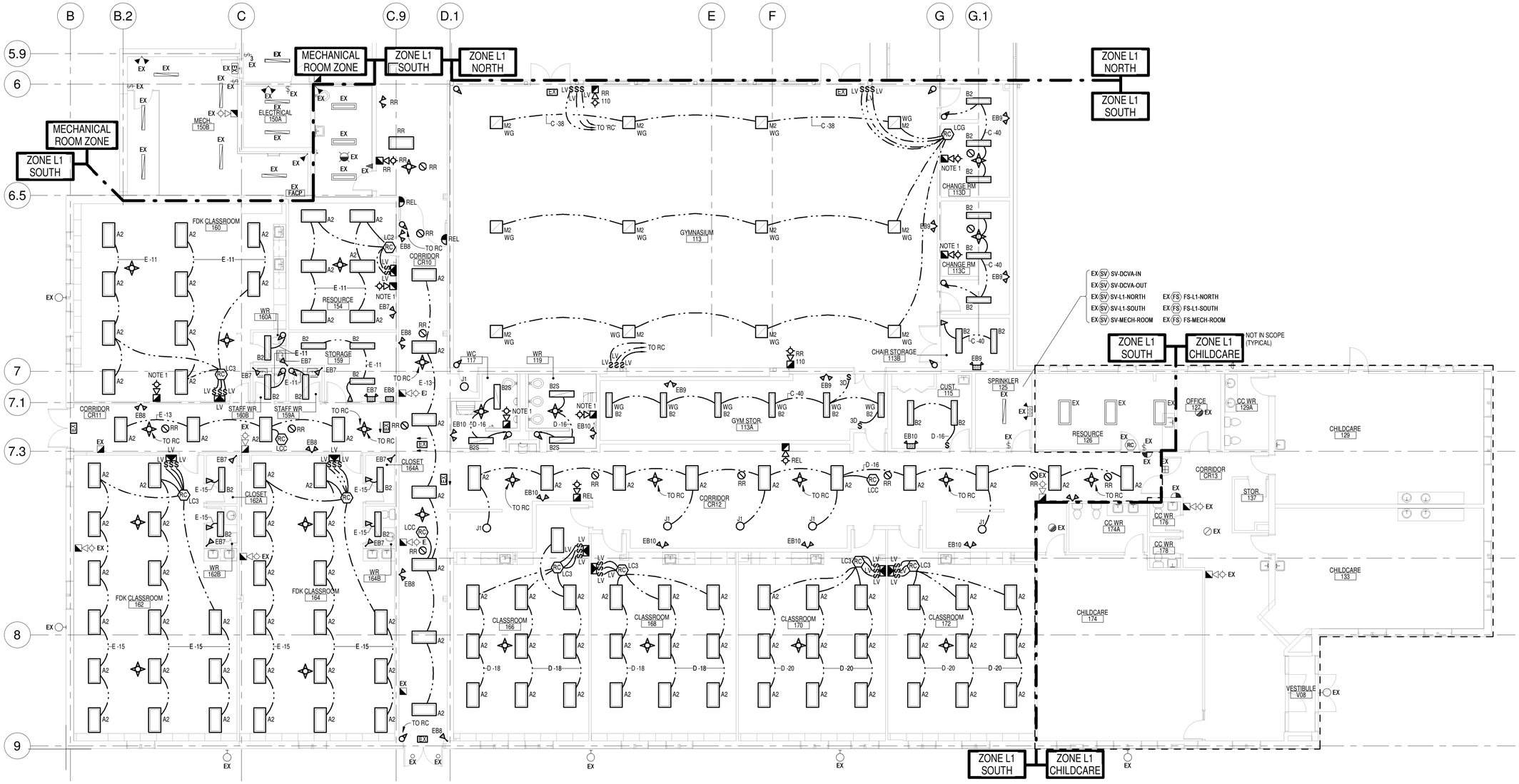

PART GROUND FLOOR PLAN - SOUTH - LIGHTING AND FIRE ALARM

SCALE 1 : 100

NOTES:

1. ADJUST HORN OUTPUT TO "LOW" SETTING.
2. REUSE EXISTING RECESSED DEVICE BOXES AND VERTICAL CONDUIT WHERE PRACTICAL.
3. CONNECT NEW EXIT SIGNS TO EXISTING CIRCUIT IN MAIN DISTRIBUTION BOARD 'DP1'.
4. CIRCUIT EMERGENCY LIGHTING BATTERIES AS FOLLOW:
   - EB7: E-11
   - EB8: E-13
   - EB9: C-38
   - EB10: D-16
5. PROVIDE WIREGUARDS FOR ALL DEVICES IN ROOMS 113, 113A, 113B, AND 115.

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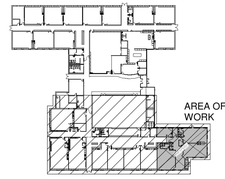

KEY PLAN

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Mar 05 2020
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PROJECT TITLE

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DRAWING TITLE

PART GROUND FLOOR PLAN - SOUTH - LIGHTING AND FIRE ALARM

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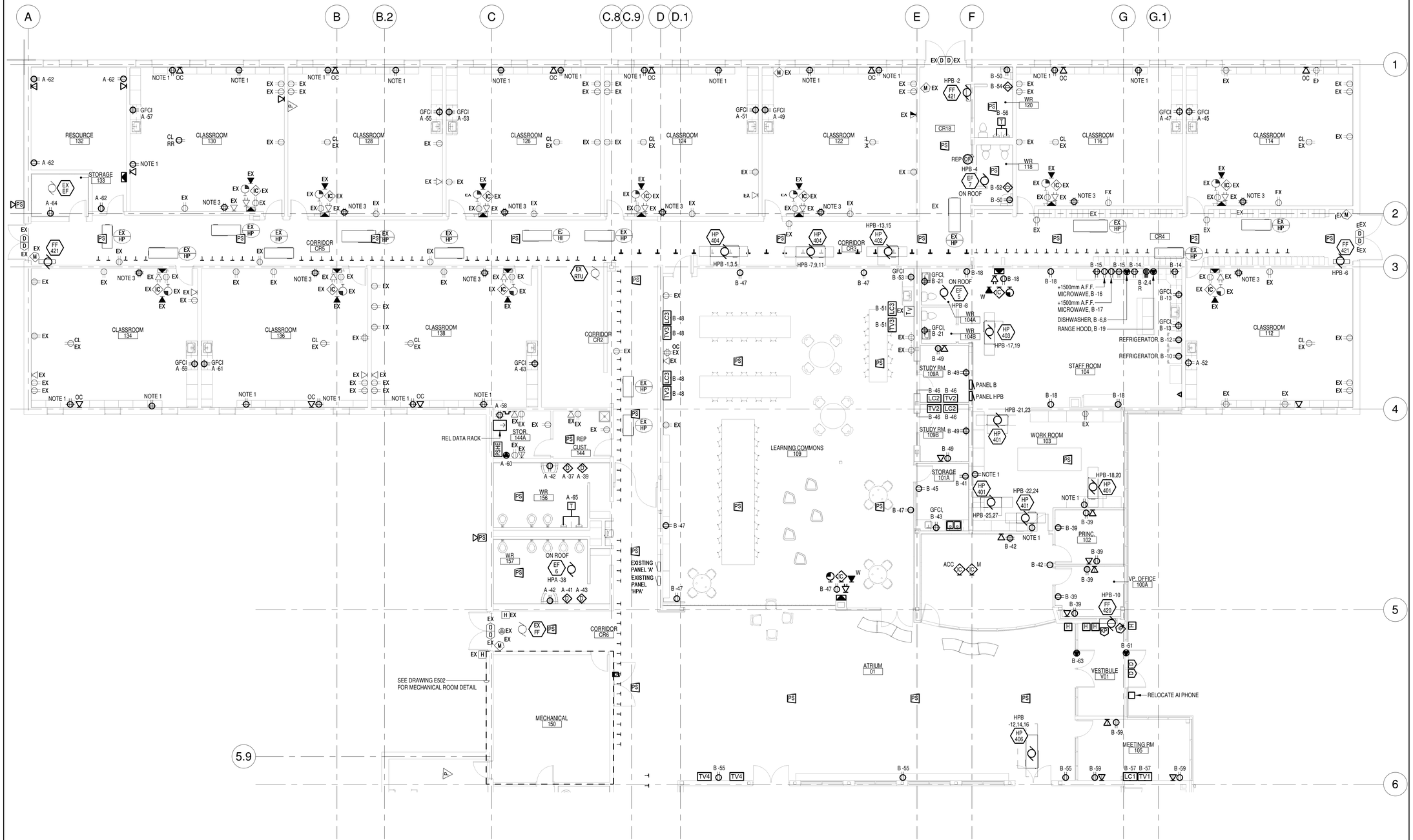

PART GROUND FLOOR PLAN - NORTH - POWER AND SYSTEMS

SCALE 1 : 100

NOTES:

1. CONNECT TO EXISTING CIRCUIT SERVING EXISTING RECEPTACLES IN THIS ROOM.
2. REUSE EXISTING VERTICAL CONDUIT AND RECESSED DEVICE BOXES WHERE PRACTICABLE.
3. CONNECT TO EXISTING CIRCUIT SERVING RECEPTACLE IN CLASSROM MODULE IN THIS ROOM.

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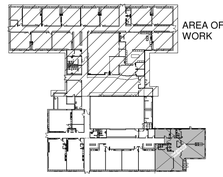

KEY PLAN

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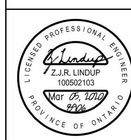

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PART GROUND FLOOR PLAN - NORTH - POWER AND SYSTEMS

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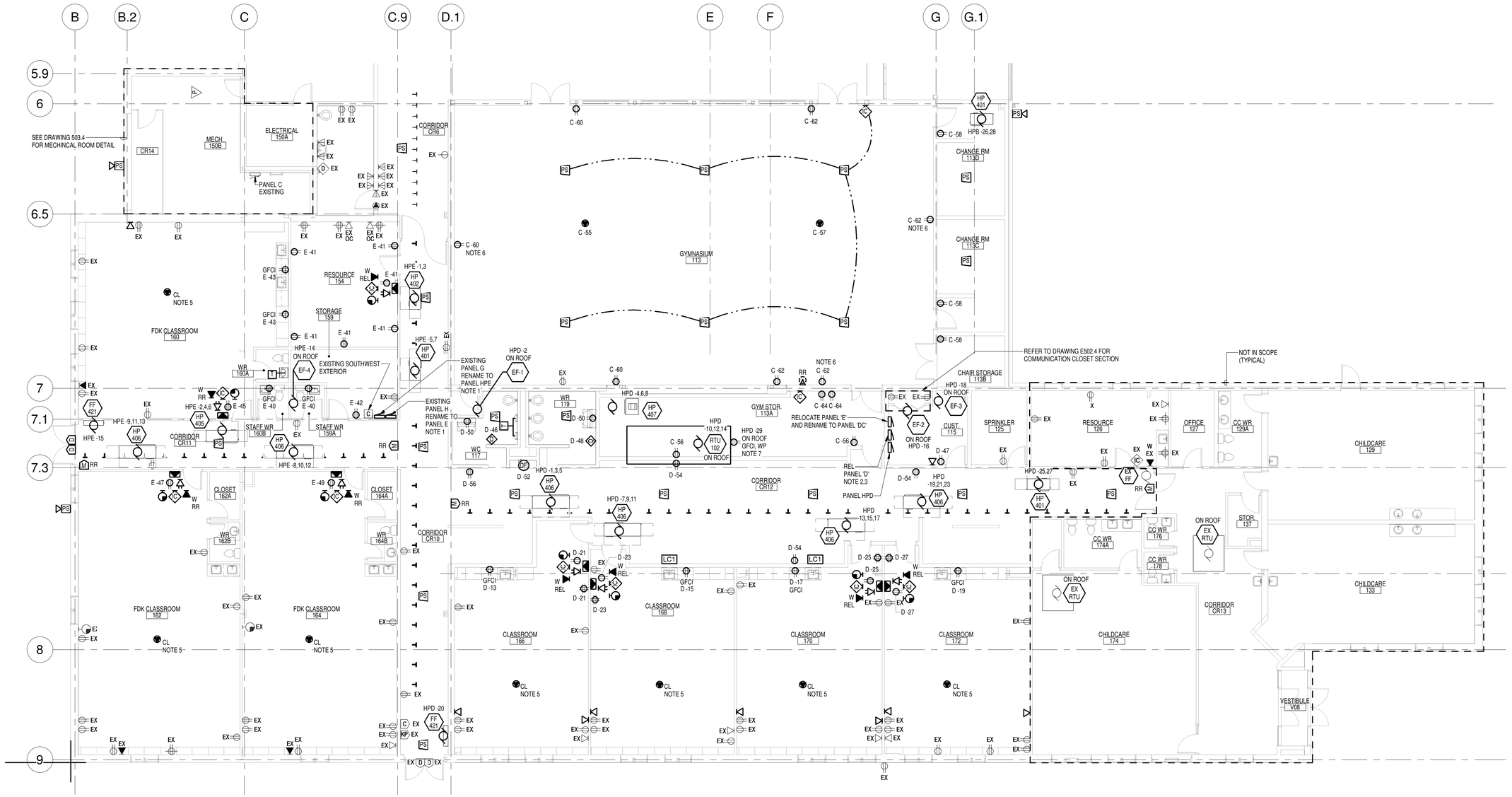

PART GROUND FLOOR PLAN SOUTH - POWER AND SYSTEMS

SCALE 1 : 100

NOTES:

1. REWORK EXISTING LOADS FED FROM EXISTING PANEL 'G' TO EXISTING PANEL 'H'. PROVIDE JUNCTION BOXES ABOVE CEILING AS REQUIRED. RENAME PANEL 'H' TO PANEL 'E' AND PANEL 'G' TO PANEL 'HPE'. TRACE OUT ALL EXISTING DEVICES AND PROVIDE LAMACOID LABELS AS PER SPECIFICATIONS FOR ALL EXISTING DEVICES.
2. REWORK EXISTING LOADS ABOVE CEILING TO EXISTING PANEL IN NEW LOCATION. PROVIDE JUNCTION BOXES AS REQUIRED.
3. REWORK EXISTING LOADS ABOVE CEILING FROM PANEL 'E' TO PANEL 'D' IN NEW LOCATION. PROVIDE JUNCTION BOXES AS REQUIRED.
4. REUSE EXISTING VERTICAL CONDUIT AND RECESSED DEVICES BOXES WHERE PRACTICABLE.
5. CONNECT TO EXISTING CIRCUIT SERVING RECEPTACLES IN THE AREA. JUNCTION BOX TO BE LOCATED IN CEILING SPACE. DO NOT INSTALL IN CEILING TILE.
6. CHIP OUT WALL AND RECESS NEW RECETPACLE IN EXISTING BLOCK WALL. FISH WIRING AND CONDUIT IN EXISTING BLACKWALL.
7. GFCI RECEPTACLE CONNECTED TO STANDARD BREAKER. REFER TO RECEPTACLE ROOF MOUNTING DETAIL FOR EXANT MOUNTING REQUIREMENTS.

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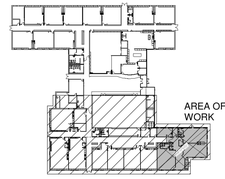

KEY PLAN

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No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
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100502103
Mar 05, 2020
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PROJECT TITLE

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PART GROUND FLOOR PLAN - SOUTH - POWER AND SYSTEMS

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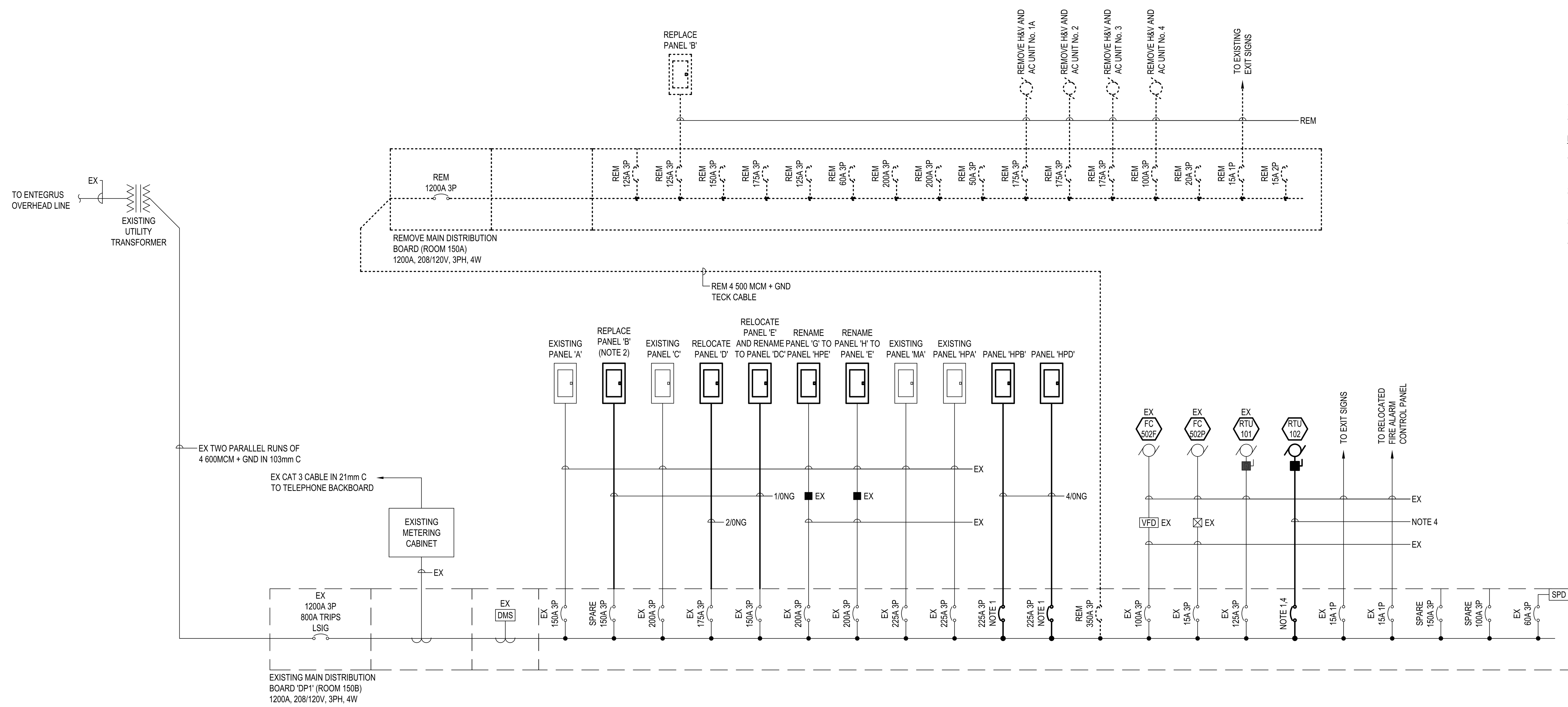


SINGLE LINE DIAGRAM

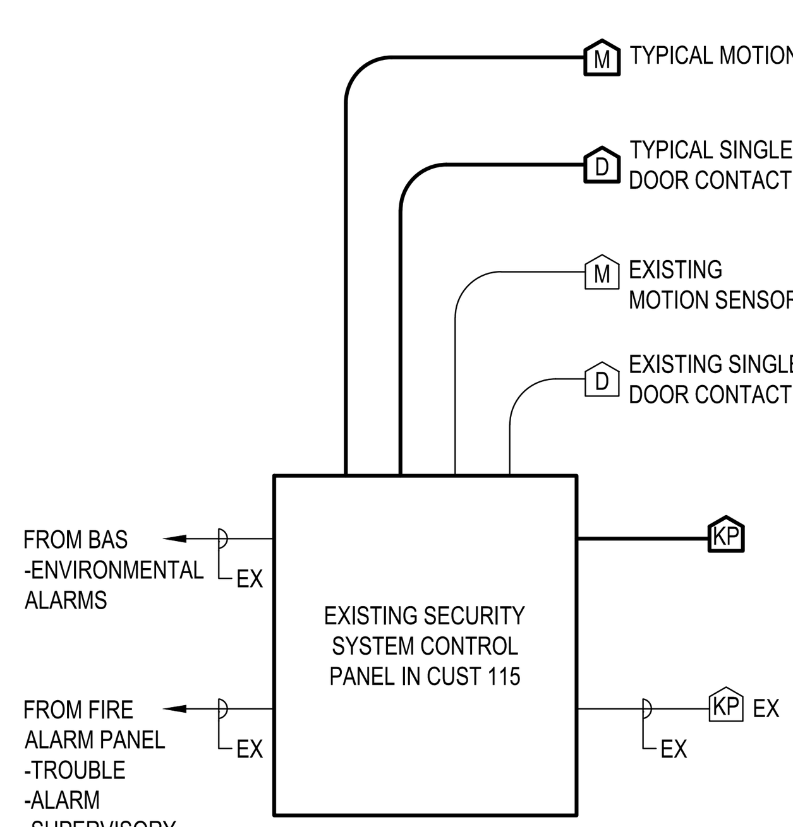
SCALE: N.T.S.

NOTES:

1. PROVIDE NEW BREAKER TO SUIT EXISTING SIEMENS MAIN DISTRIBUTION BOARD. UTILIZE EXISTING SPACE.
2. REWORK EXISTING PANEL 'B' LOADS INTO NEW PANEL 'B' IN NEW LOCATION. REFER TO PANEL SCHEDULES AND FLOOR PLANS FOR DETAILS.
3. REFER TO PANEL SCHEDULES FOR LIST OF REQUIRED BREAKERS.
4. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR ALL MECHANICAL EQUIPMENT BREAKER, WIRE AND CONDUIT REQUIREMENTS.

CONDUCTOR SIZE AND CONDUIT FILL SYMBOL LIST

SYMBOL	DESCRIPTION
1/0NG	4#1/0 & 1#6 GND IN 53mm (2") C
2/0NG	4#2/0 & 1#6 GND IN 53mm (2") C
4/0NG	4#4/0 & 1#4 GND IN 63mm (2-1/2") C

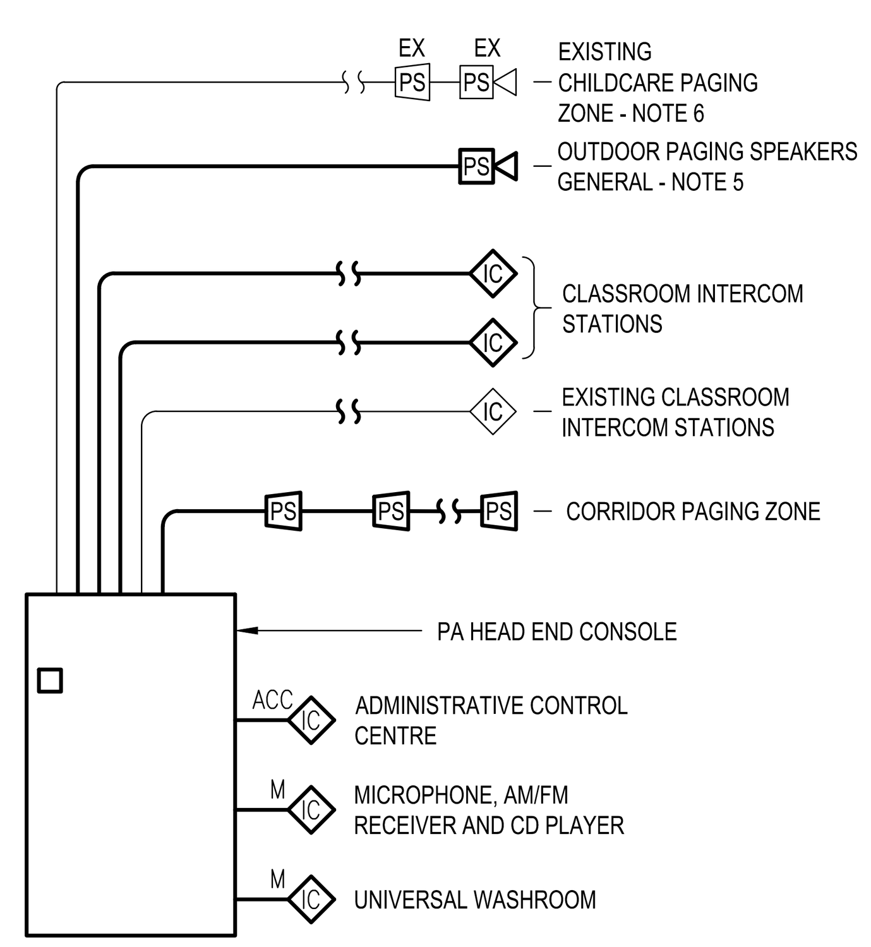


SECURITY RISER

N.T.S.

NOTES:

1. EACH DOOR/DOUBLE DOOR SET IS TO BE MONITORED AND ALARMED AS A SEPARATE ZONE.
2. EACH MOTION DETECTOR IS TO BE MONITORED AND ALARMED AS A SEPARATE ZONE.
3. REFER TO FLOOR PLANS FOR EXACT LOCATION AND QUANTITY OF DEVICES.
4. WIRE AND CONNECT SECURITY SYSTEM AS REQUIRED BY THE MANUFACTURER.

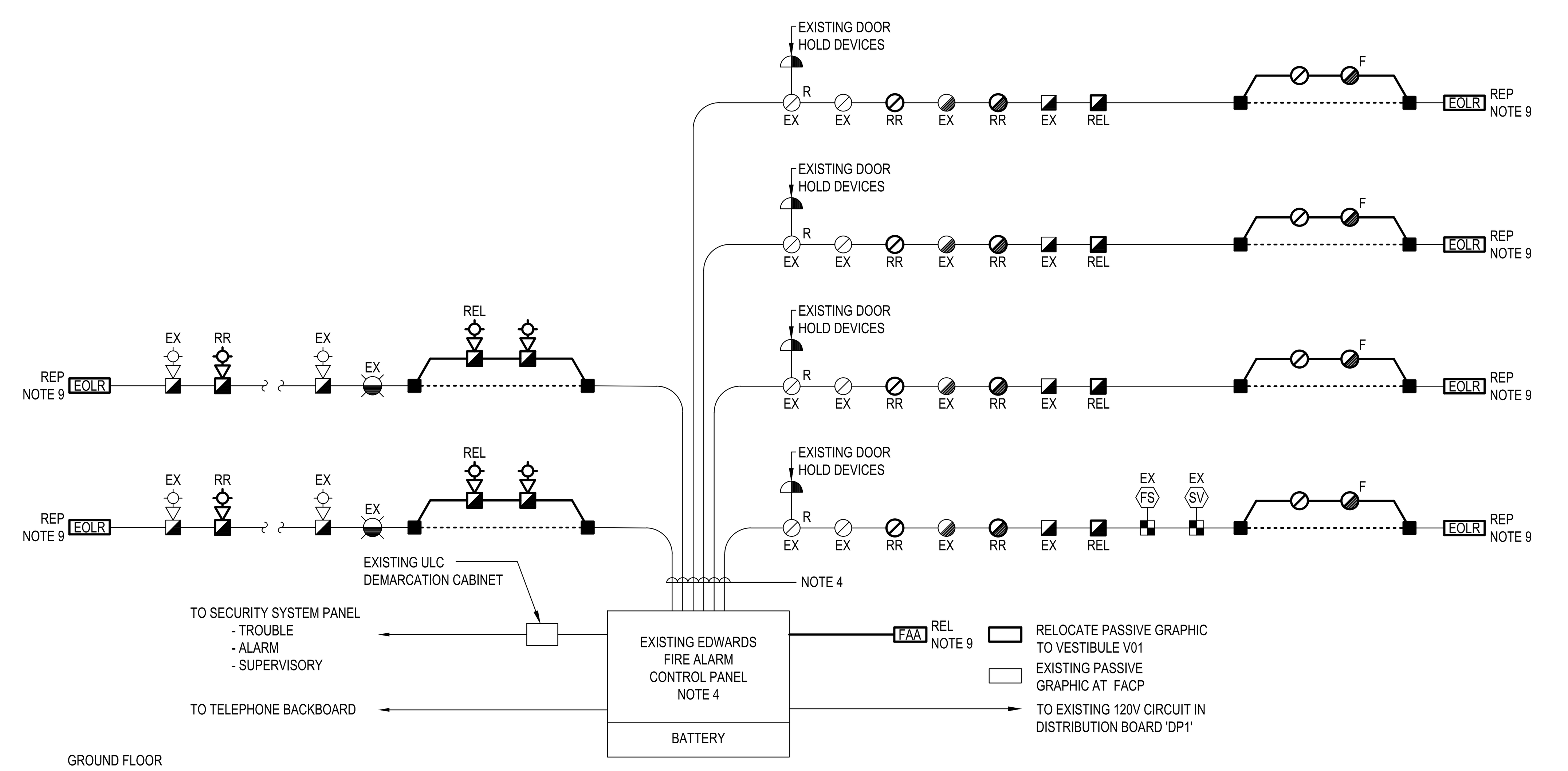


P.A. SYSTEM RISER

N.T.S.

NOTES:

1. REFER TO FLOOR PLANS FOR QUANTITY AND LOCATION OF NEW STATIONS.
2. RUN CABLES IN CORRIDOR COMMUNICATION HANGERS OR NEATLY BUNDLE WITH VELCRO STRAPS.
3. PROVIDE WIRING AND CONNECTIONS AS REQUIRED BY THE MANUFACTURER.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.
5. PROVIDE DEDICATED ZONE WITH SEPARATE VOLUME CONTROL. PROGRAM PAGING ZONE TO DISABLE AUDIO INPUT BROADCAST OUTSIDE OF SCHOOL HOURS.
6. PROGRAM THIS PAGING ZONE FOR EMERGENCY PAGE ONLY. PROGRAM BELLS, GENERAL PAGING AND AUDIO INPUT ARE NOT TO BROADCAST INTO THIS ZONE.



FIRE ALARM RISER

N.T.S.

NOTES:

1. REWORK EXISTING FIRE ALARM WIRING TO SUIT NEW DEVICES.
2. WIRE AND CONNECT ALTERNATE SIGNAL HORNS TO SEPARATE SIGNAL CIRCUITS SO ADJACENT HORNS ARE NOT CONNECTED TO THE SAME CIRCUIT. MOUNT END OF LINE RESISTORS BESIDE LAST DEVICE. DOCUMENT LOCATION OF END OF LINE RESISTORS AND PLACE INSIDE FIRE ALARM CONTROL PANEL.
3. UPDATE ALL PASSIVE GRAPHIC ANNUNCIATORS.
4. NOT USED.
5. WIRE AND CONNECT FIRE ALARM SYSTEM AS REQUIRED BY THE MANUFACTURER.
6. REFER TO FLOOR PLANS FOR DEVICE LOCATIONS AND QUANTITIES AND ZONE LOCATIONS AND QUANTITIES. UPDATE PROGRAMMING TO SUIT NEW ZONE REQUIREMENTS.
7. RELOCATE ISOLATION MODULES AS REQUIRED AT ZONE BOUNDARIES AND BY MANUFACTURER.
8. PROVIDE PTOUCH LABELS ON END OF LINE RESISTOR COVER PLATES TO IDENTIFY ZONE/CIRCUIT CONTAINED WITHIN.
9. REPLACE EXISTING END-OF-LINE RESISTOR AS REQUIRED TO ENSURE THAT NEW SYSTEM CAN CORRECTLY MONITOR EXISTING ZONES.

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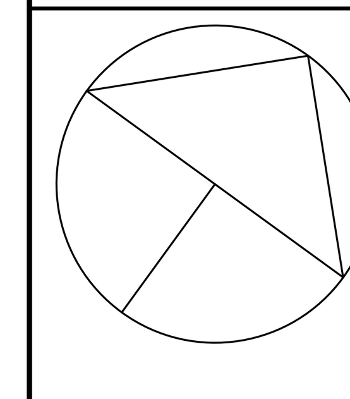
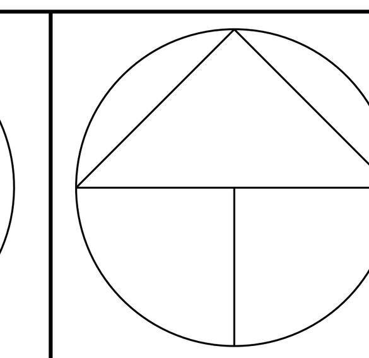
KEY PLAN


TRUE NORTH


CONSTRUCTION NORTH

NOTES

LEGEND

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PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

ELETRICAL RISERS

DATE PLOTTED	DRAWN BY	DRAWING No.
01/11/2020	AIS	E401.4
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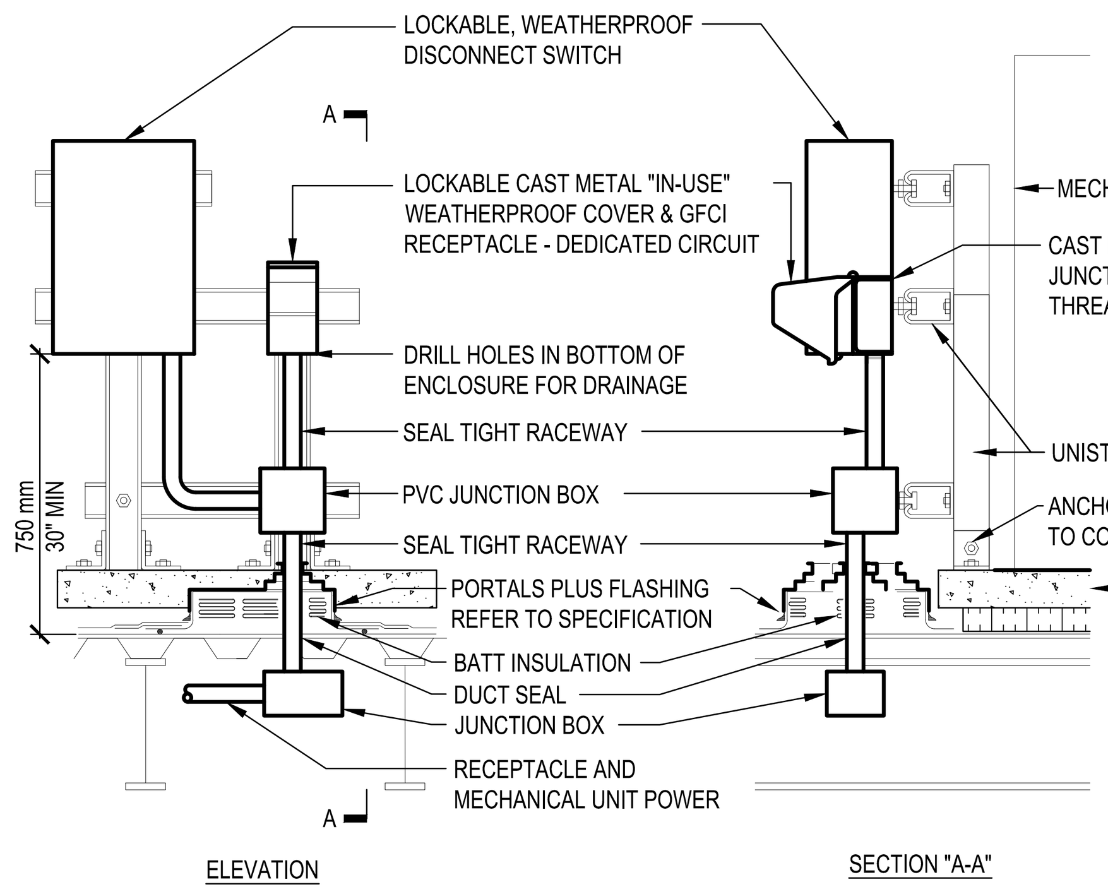
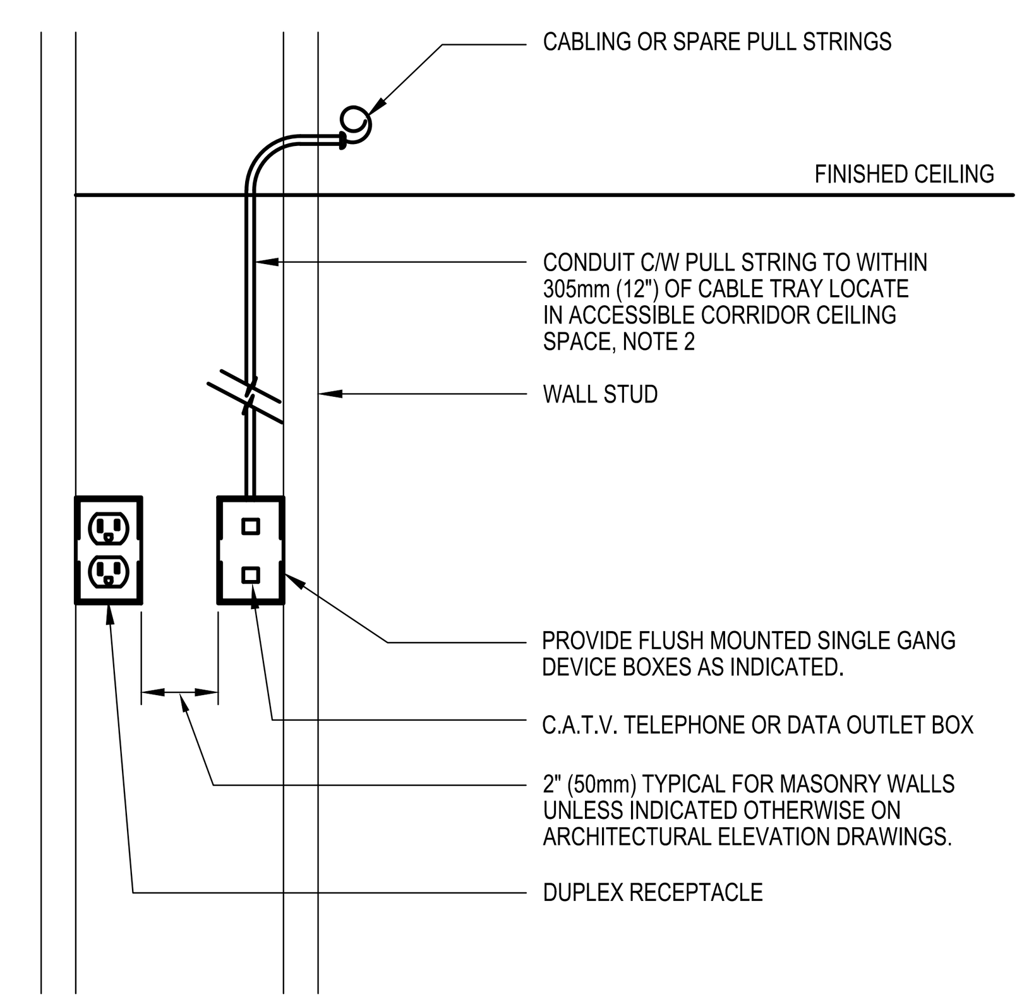


RECEPTACLE ROOF MOUNTING DETAIL

N.T.S.

NOTES:

1. MAINTAIN A MINIMUM CLEARANCE OF 308mm (12") ON ALL SIDES OF ROOF PENETRATION FROM WALLS, CURBS, AND OTHER PROJECTIONS TO FACILITATE PROPER FLASHING.
2. FLANGES OF ADJACENT FLASHINGS SHALL NOT BE CUT OR OVERLAPPED.
3. COORDINATE FLASHINGS INSTALLATION WITH GENERAL CONTRACTOR TO ENSURE PROPER METHODS AND MATERIALS ARE USED TO MAINTAIN ROOF WARRANTY.
4. COORDINATE PRECAST CONCRETE BASE REQUIREMENTS WITH OTHER TRADES.
5. ALL UNISTRUT AND ASSOCIATED MOUNTING HARDWARE TO BE ALUMINIUM.
6. COORDINATE WITH DIVISION 15 FOR SHARED USE OF FLASHING WHERE SPECIFIED AND PRACTICABLE.

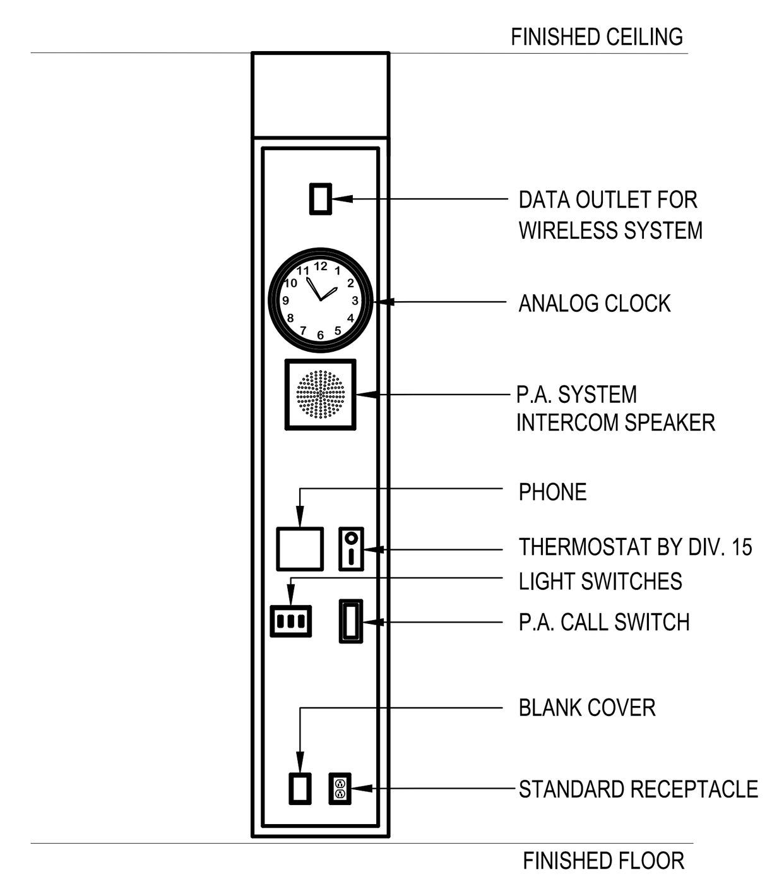


TYPICAL COMMUNICATION OUTLET AND RECEPTACLE MOUNTING

N.T.S.

NOTES:

1. REFER TO FLOOR PLANS FOR LOCATION, TYPE AND QUANTITY OF DEVICES.
2. REFER TO SPECIFICATION FOR COMMUNICATION CONDUIT SIZES.

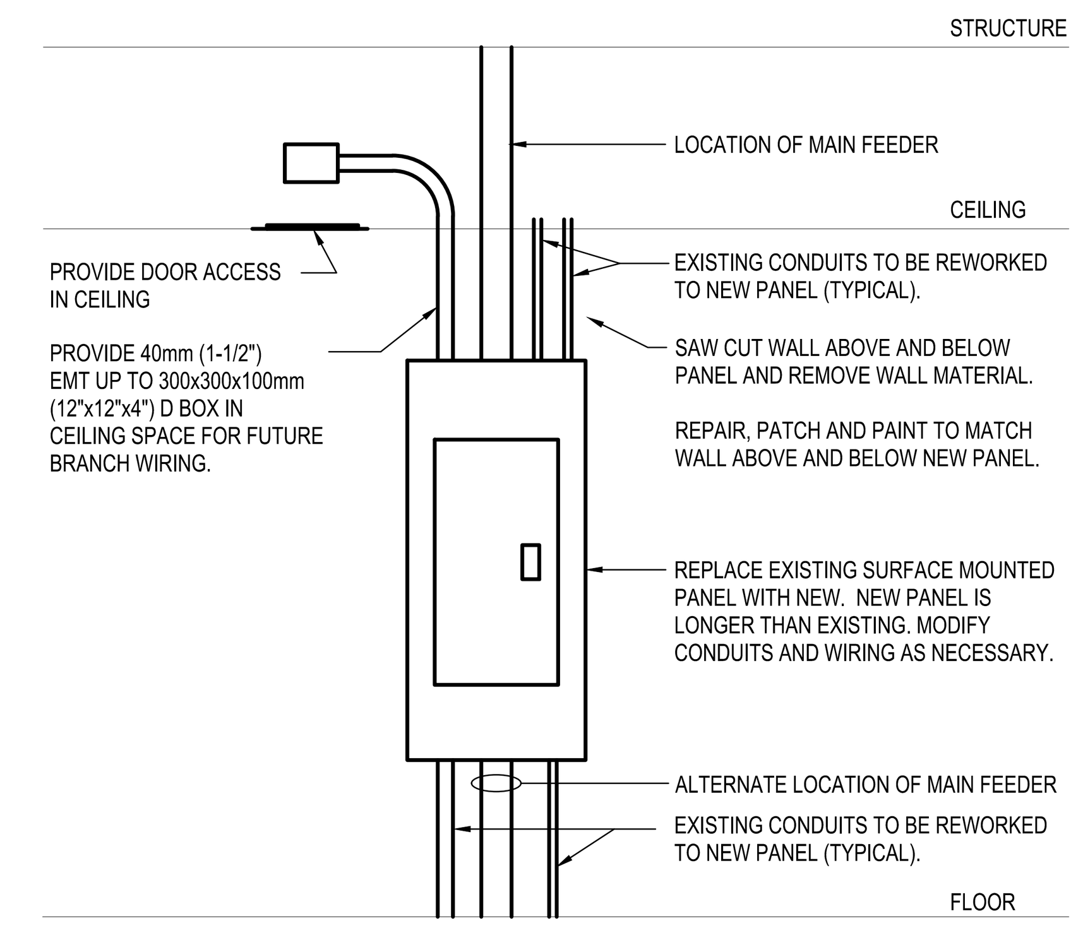


CLASSROOM MODULE

N.T.S.

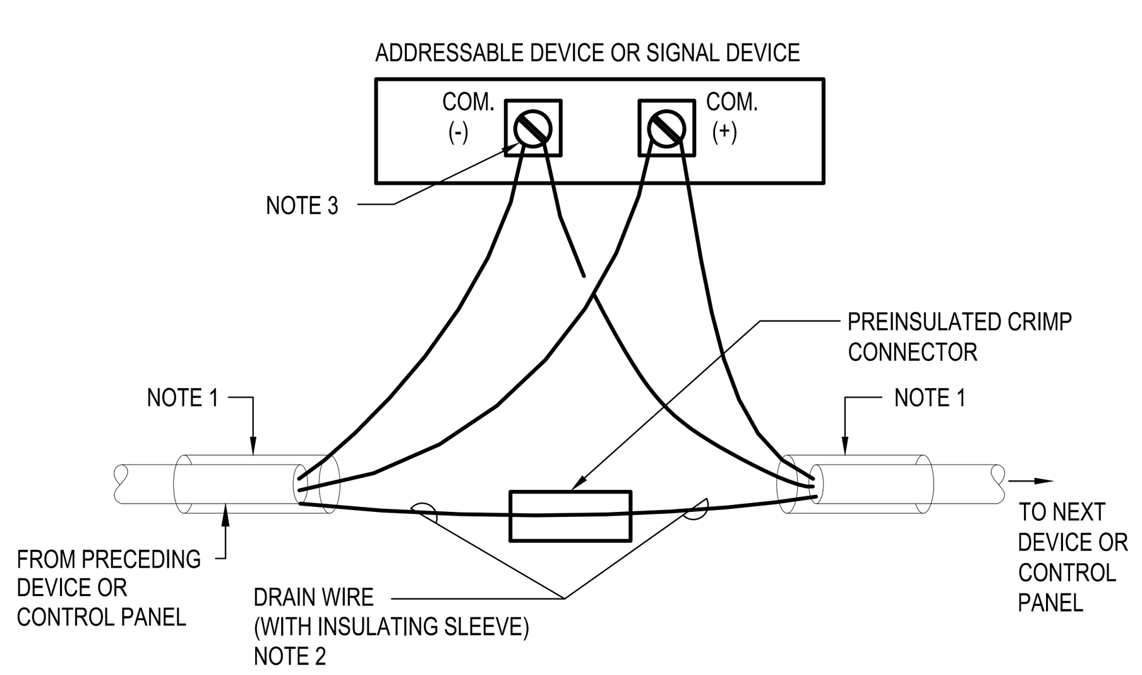
NOTES:

1. MOUNT DEVICES AT HEIGHTS INDICATED ON ARCHITECTURAL DRAWINGS. REFER TO FLOOR PLANS FOR TYPES AND QUANTITY OF DEVICES.



PANEL REPLACEMENT DETAIL

N.T.S.

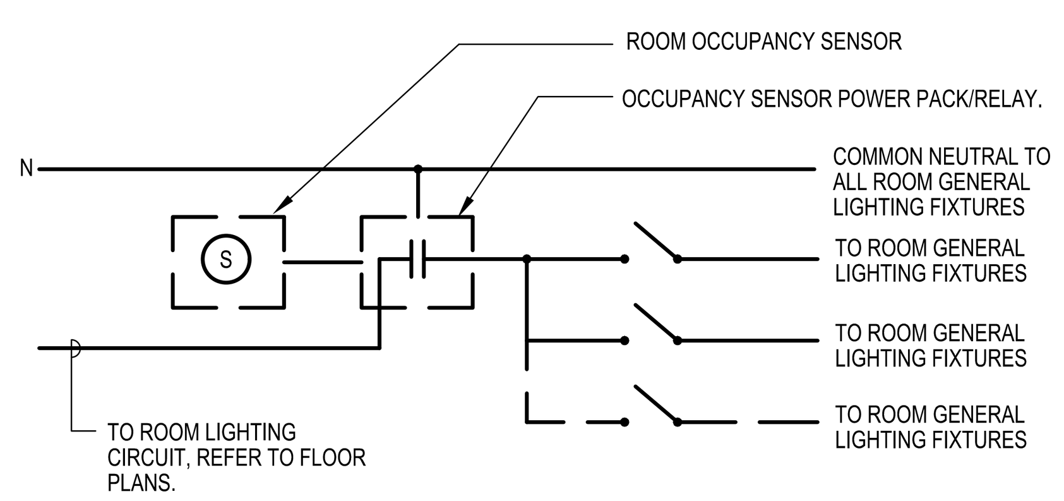


TYPICAL FIRE ALARM DEVICE WIRING DIAGRAM

N.T.S.

NOTES:

1. ASSEMBLE DRAIN WIRE AT BOTH ENDS OF SHIELD USING TYPICAL SHIELD/DRAIN INSULATION METHODS.
2. SHIELDS ON CABLES MUST BE CONTINUOUS AND INSULATED FROM BOXES, CONDUITS ETC. ALL SHIELDS MUST BE ISOLATED FROM GROUND. APPROVED "SHRINK" TUBING SHALL BE USED ON ALL DRAIN CONDUCTORS.
3. DO NOT LOOP WIRE UNDER TERMINALS. BREAK WIRE RUNS TO PROVIDE SUPERVISION.

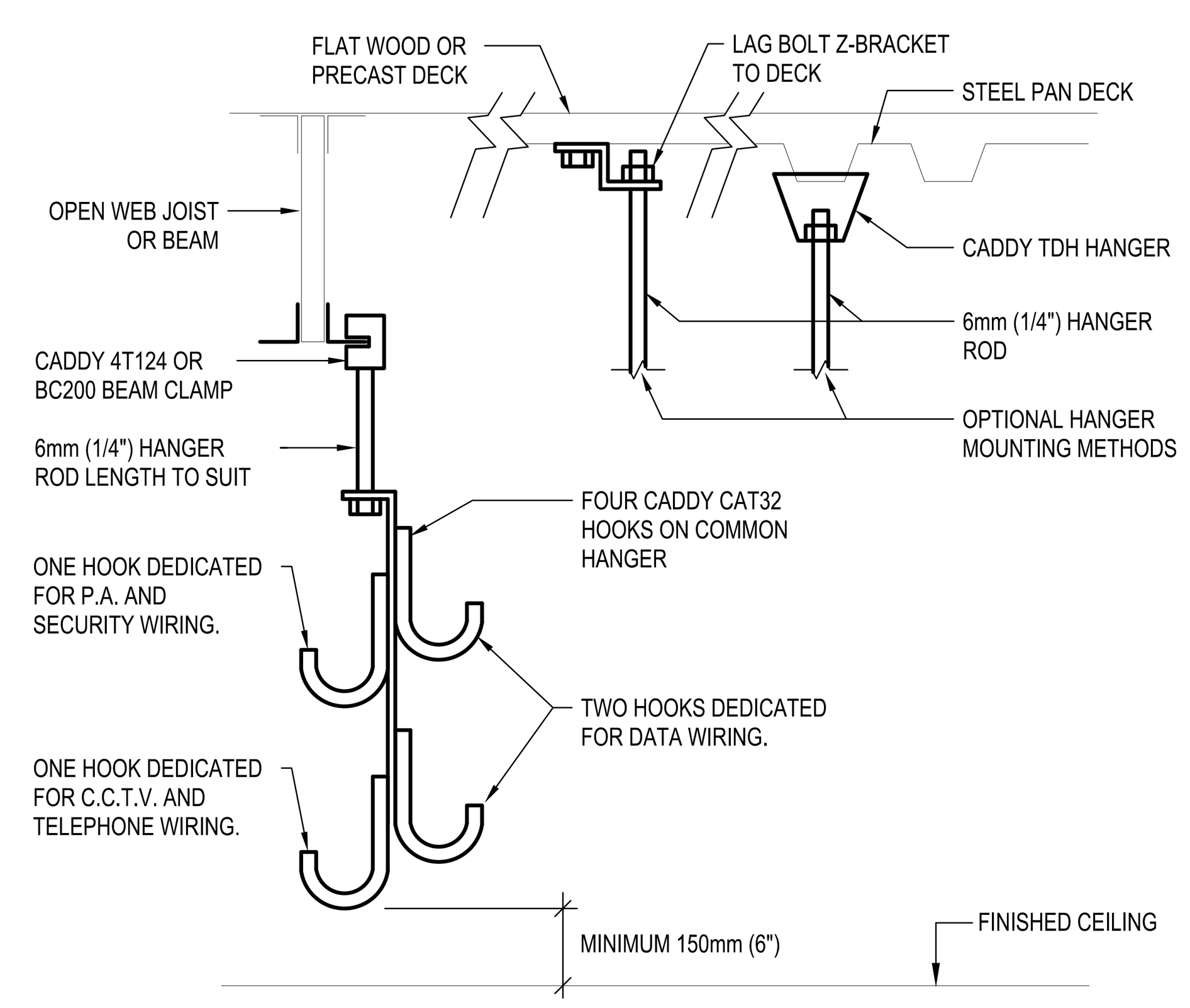


TYPICAL OCCUPANCY SENSOR SCHEMATIC

N.T.S.

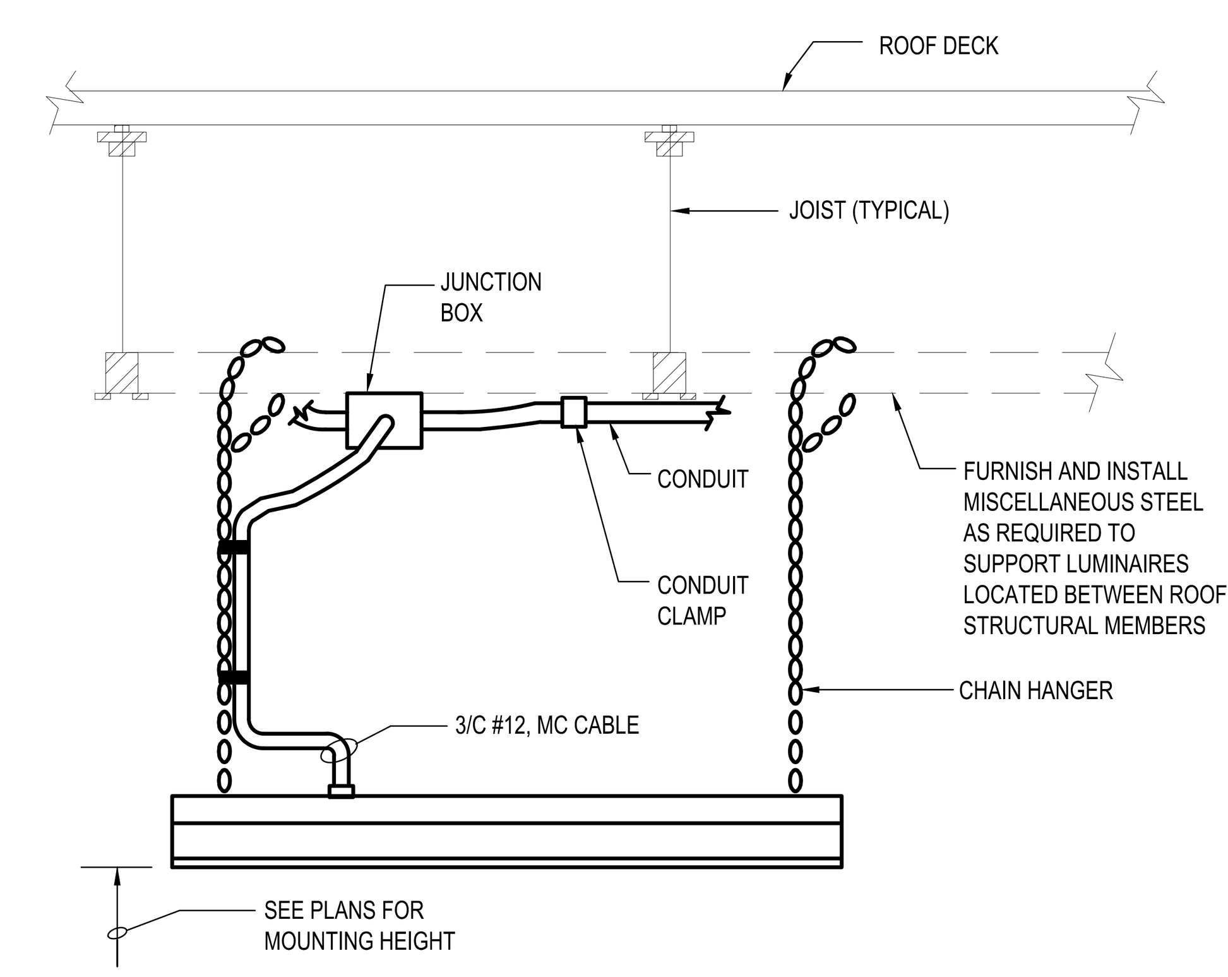
NOTES:

1. ADJUST OCCUPANCY SENSORS TO TURN LIGHTS OFF WHEN ROOM UNOCCUPIED, FOR 5 MINUTES.
2. WIRING BETWEEN OCCUPANCY SENSOR AND CONTROL UNIT TO BE IN CONDUIT.
3. MOUNT POWER PACK IN ACCESSIBLE CEILING SPACE NEXT TO LIGHT FIXTURE OR SWITCH AT LOCATION ELECTRICAL FEED FROM LIGHTING PANEL TERMINATES.
4. WIRE AND CONNECT OCCUPANCY SENSOR AND POWER PACK AS PER MANUFACTURER'S RECOMMENDATIONS.
5. REFER TO ELECTRICAL SPECIFICATIONS FOR SPECIFIC INFORMATION ON SENSORS AND POWER PACKS.
6. REFER TO FLOOR PLANS FOR LOCATION AND QUANTITY OF SENSORS AND LIGHT SWITCHES.
7. DO NOT INSTALL OCCUPANCY SENSORS CLOSE TO DIFFUSERS. COORDINATE ON SITE. FOLLOW MANUFACTURERS RECOMMENDATIONS.
8. THIS DETAIL IS TO BE USED FOR ROOMS WITH OCCUPANCY SENSORS AND NO ROOM CONTROLLERS.



HANGER DETAILS

N.T.S.



TYPICAL MOUNTING DETAIL FOR CHAIN HUNG LUMINAIRES

N.T.S.

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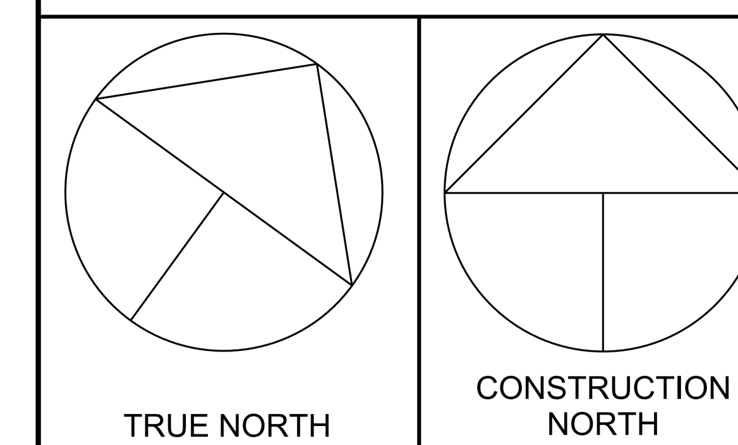
KEY PLAN



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1	02/19/2020	ISSUED FOR TENDER	

LICENSED PROFESSIONAL ENGINEER
Z.J.R. LINDUP
100502103
Mar 05, 2020
8906
PROVINCE OF ONTARIO

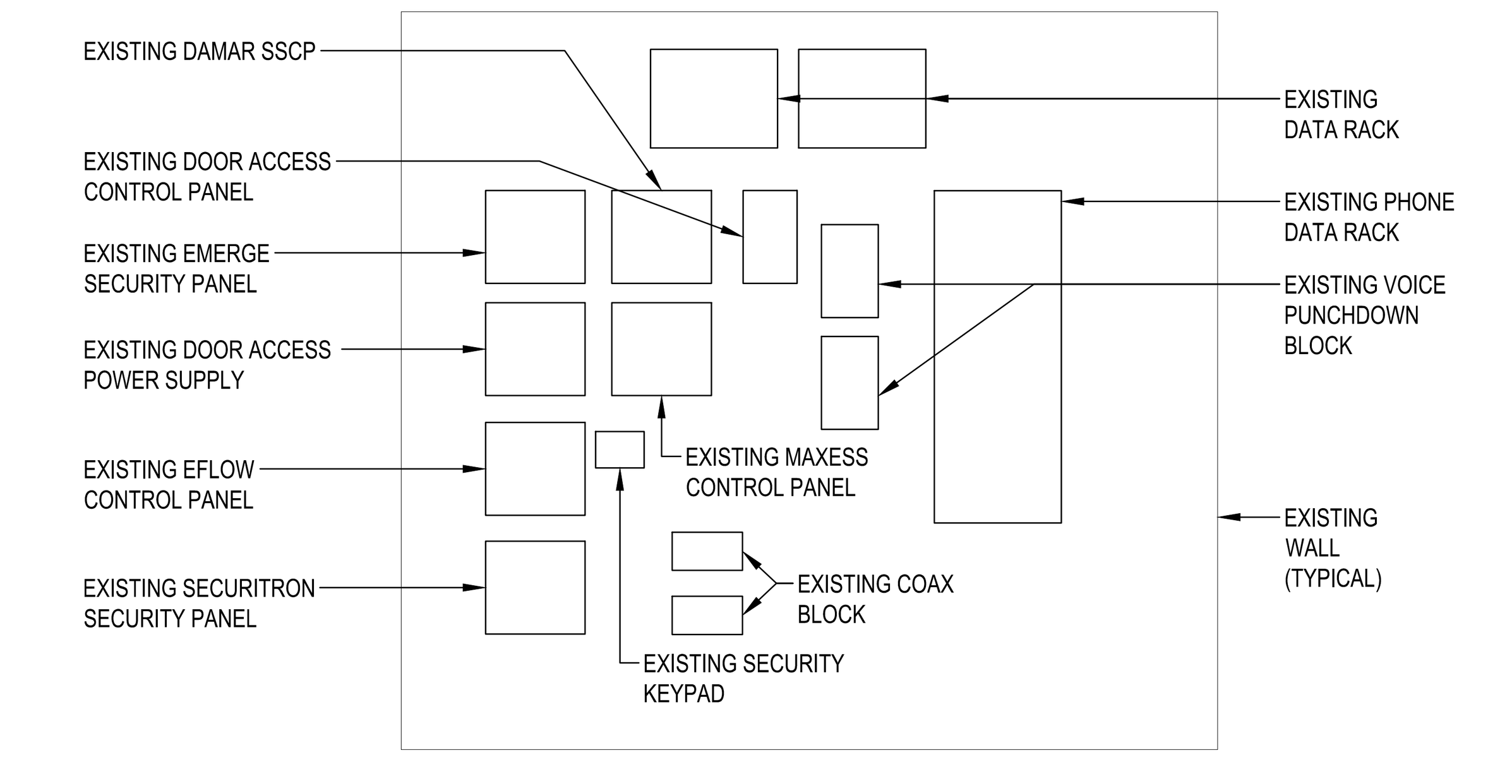
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

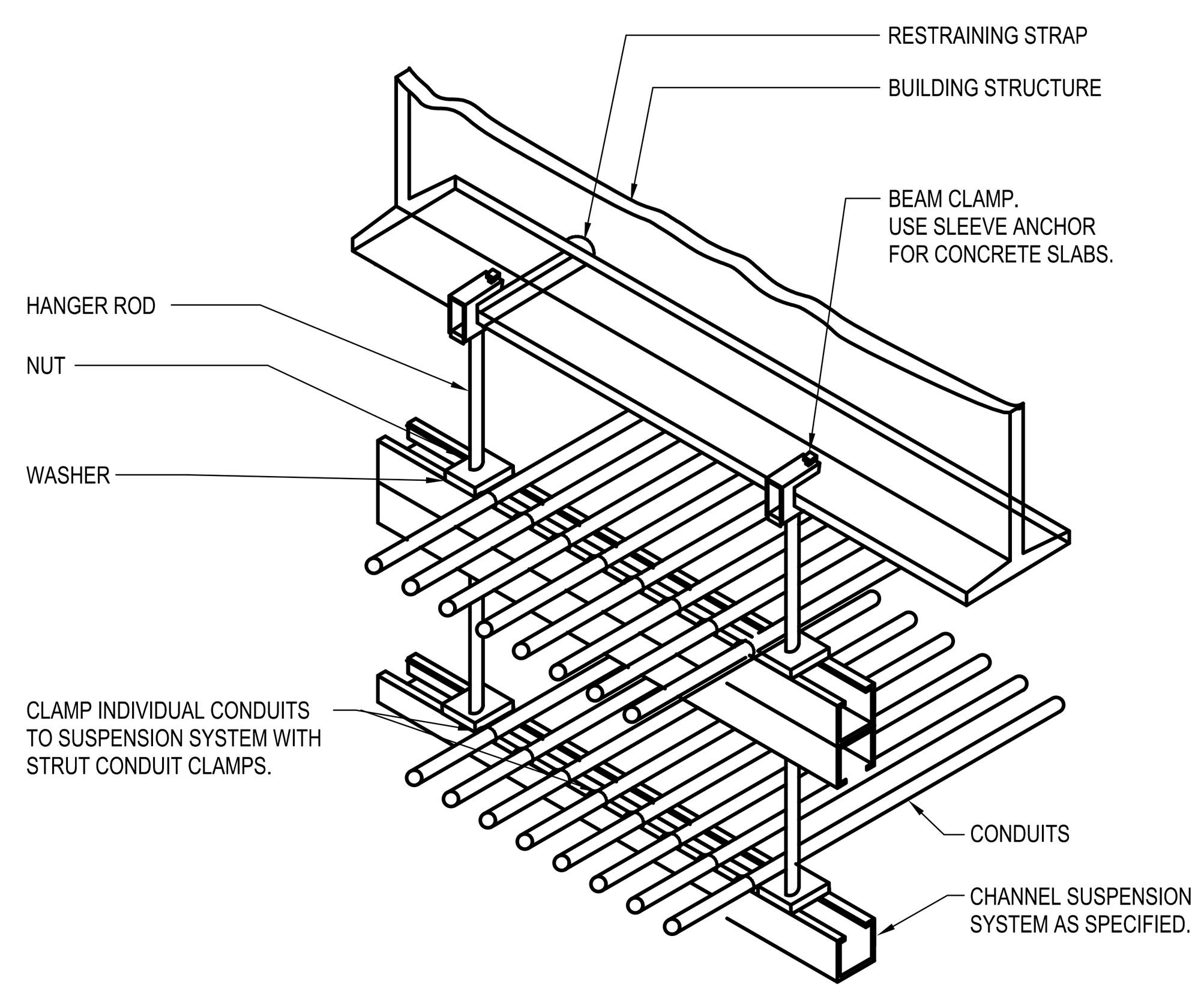
ELECTRICAL DETAILS

DATE PLOTTED	DRAWN BY	DRAWING No.
01/11/2020	AIS	E501.4
SCALE	CHECKED BY	
AS NOTED	ZJRL	
PROJECT No.		
8906		

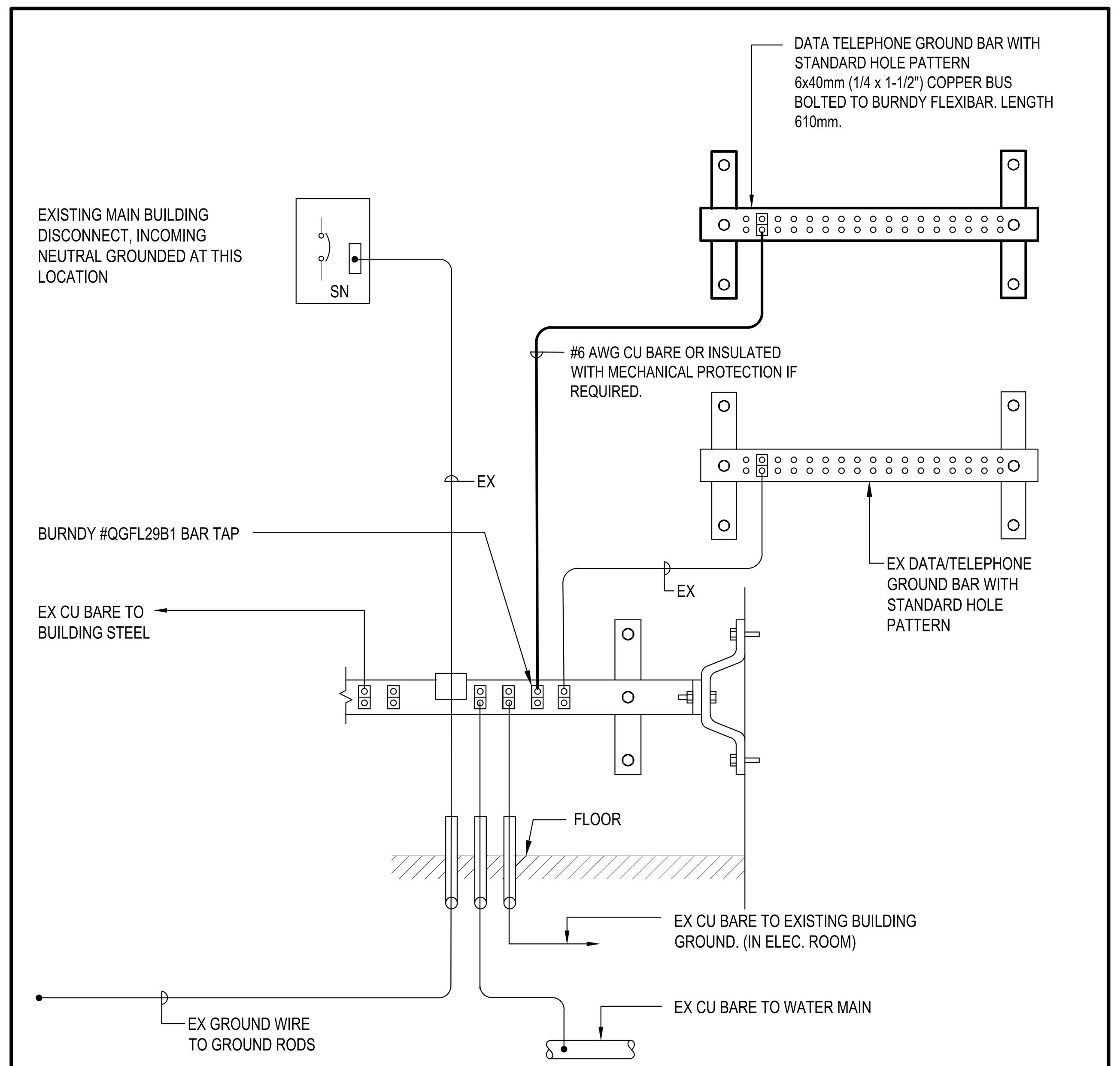


TELEPHONE CLOSET SECTION
N.T.S.

1 E302 E502 E702



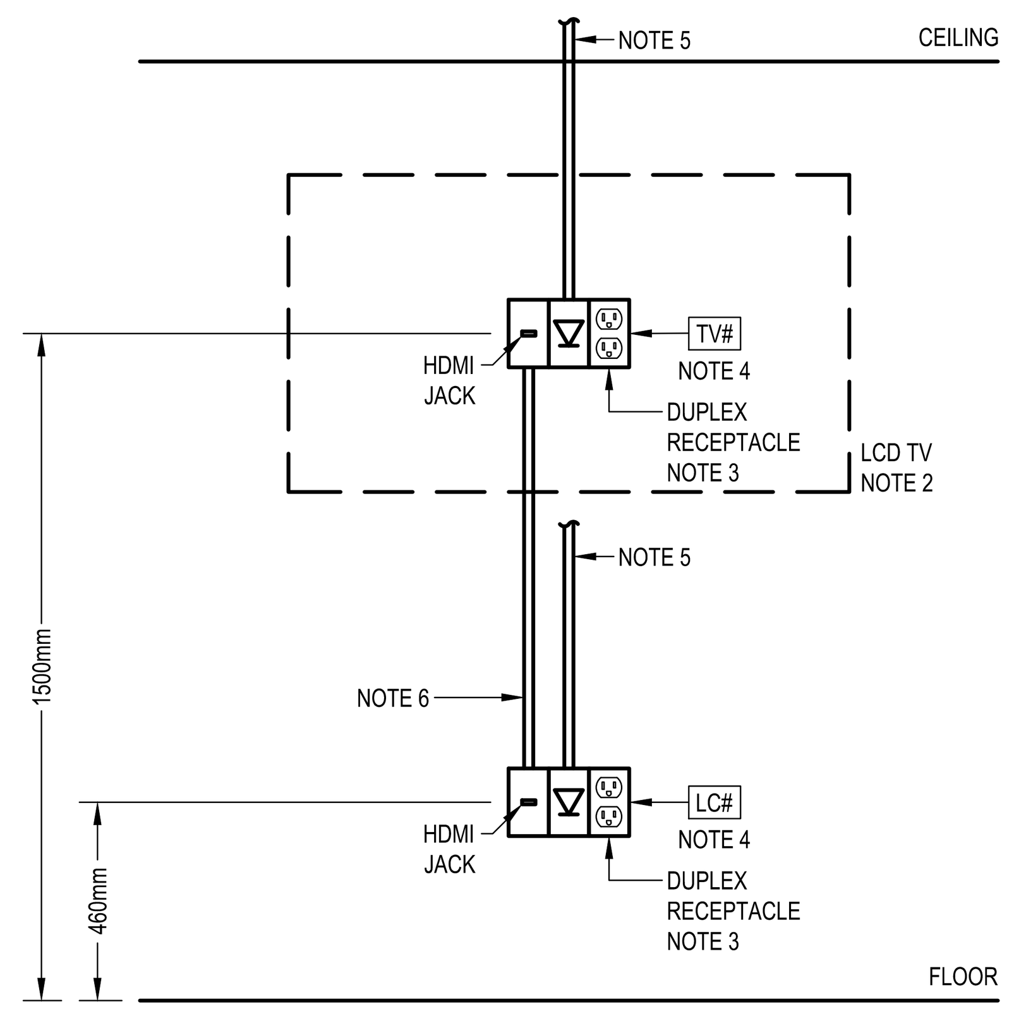
TRAPEZE SUSPENSION FOR FEEDER CONDUITS (TYPICAL)
N.T.S.



GROUNDING BONDING ARRANGEMENT
N.T.S.

NOTES:

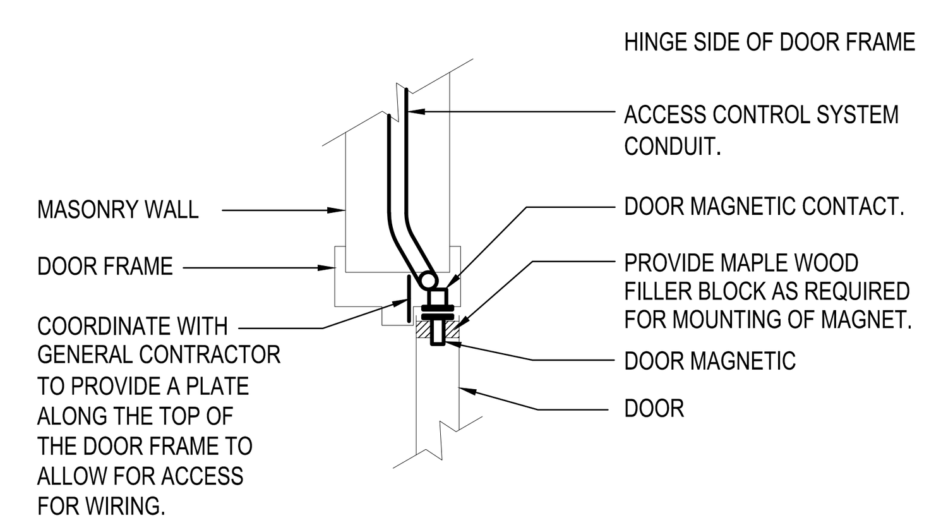
1. USE LARGE RADIUS BENDS ON ALL GROUNDING AND BONDING CONDUCTORS.
2. REFER TO FLOOR PLANS FOR LOCATIONS OF GROUND BUS.



LAPTOP / TELEVISION CONNECTION DETAIL
N.T.S.

NOTES:

1. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS.
2. LCD TV'S PROVIDED BY OWNER.
3. REFER TO FLOOR PLANS FOR CIRCUIT.
4. PROVIDE HUBBELL iSTATION BACKBOX c/w ASSOCIATED COVERPLATE AND DIVIDER BETWEEN POWER AND DATA/AV COMPARTMENTS.
5. PROVIDE CONDUIT TO ACCESSIBLE CEILING SPACE FOR DATA AS SPECIFIED.
6. PROVIDE 41mm C FOR HDMI CABLING.



SECTION A-A
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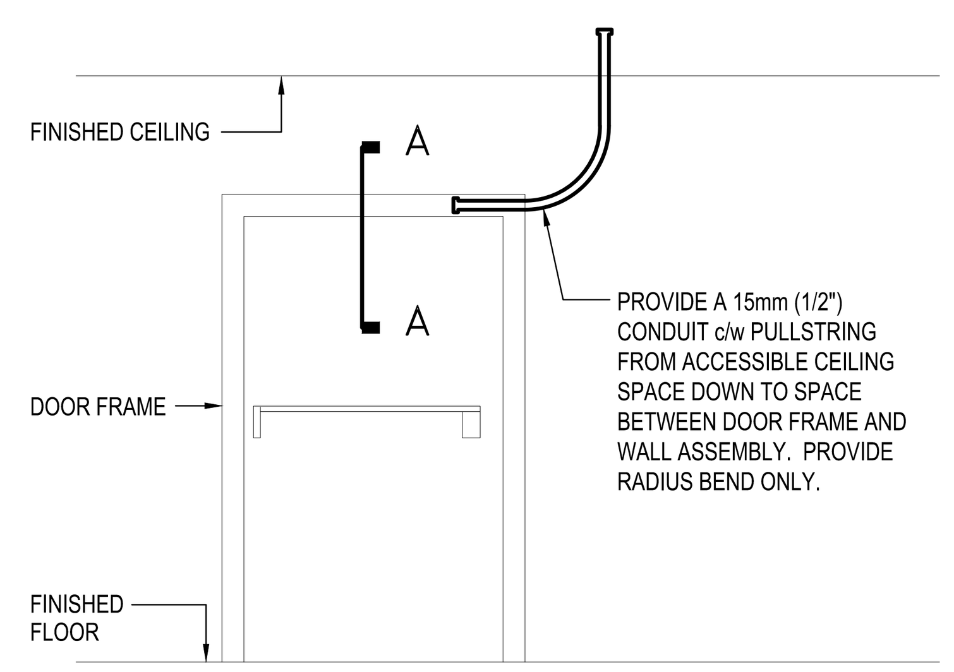
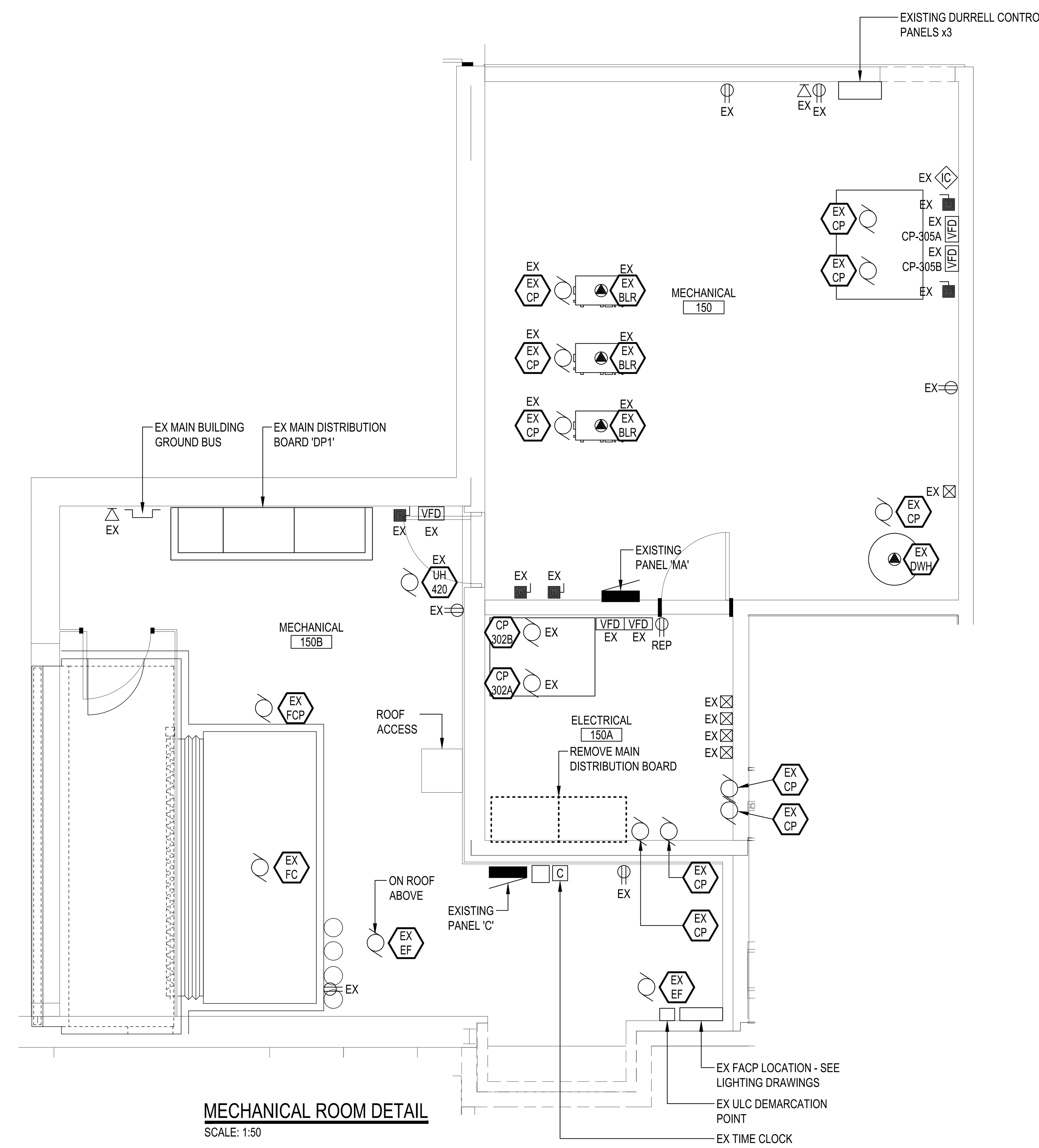


ELEVATION
N.T.S.

DOOR CONTACT ROUGH-IN
N.T.S.

NOTES:

1. CONDUIT ROUGH-IN TYPICAL FOR ALL DOORS WITH ACCESS CONTROL AND DOOR CONTACT ROUGH-IN. REFER TO FLOOR PLANS FOR LOCATION.



MECHANICAL ROOM DETAIL
SCALE: 1:50

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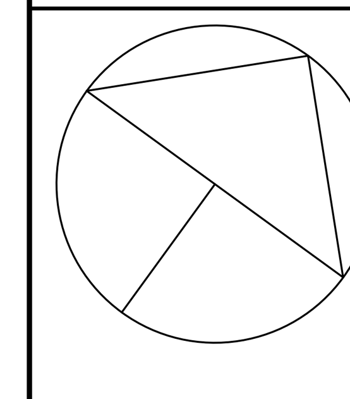
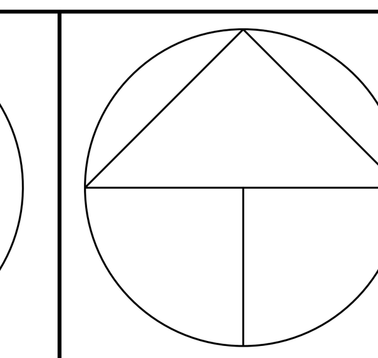
KEY PLAN



TRUE NORTH



CONSTRUCTION NORTH

NOTES

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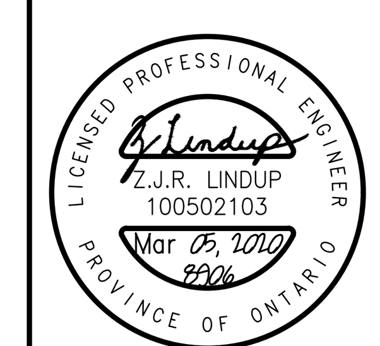


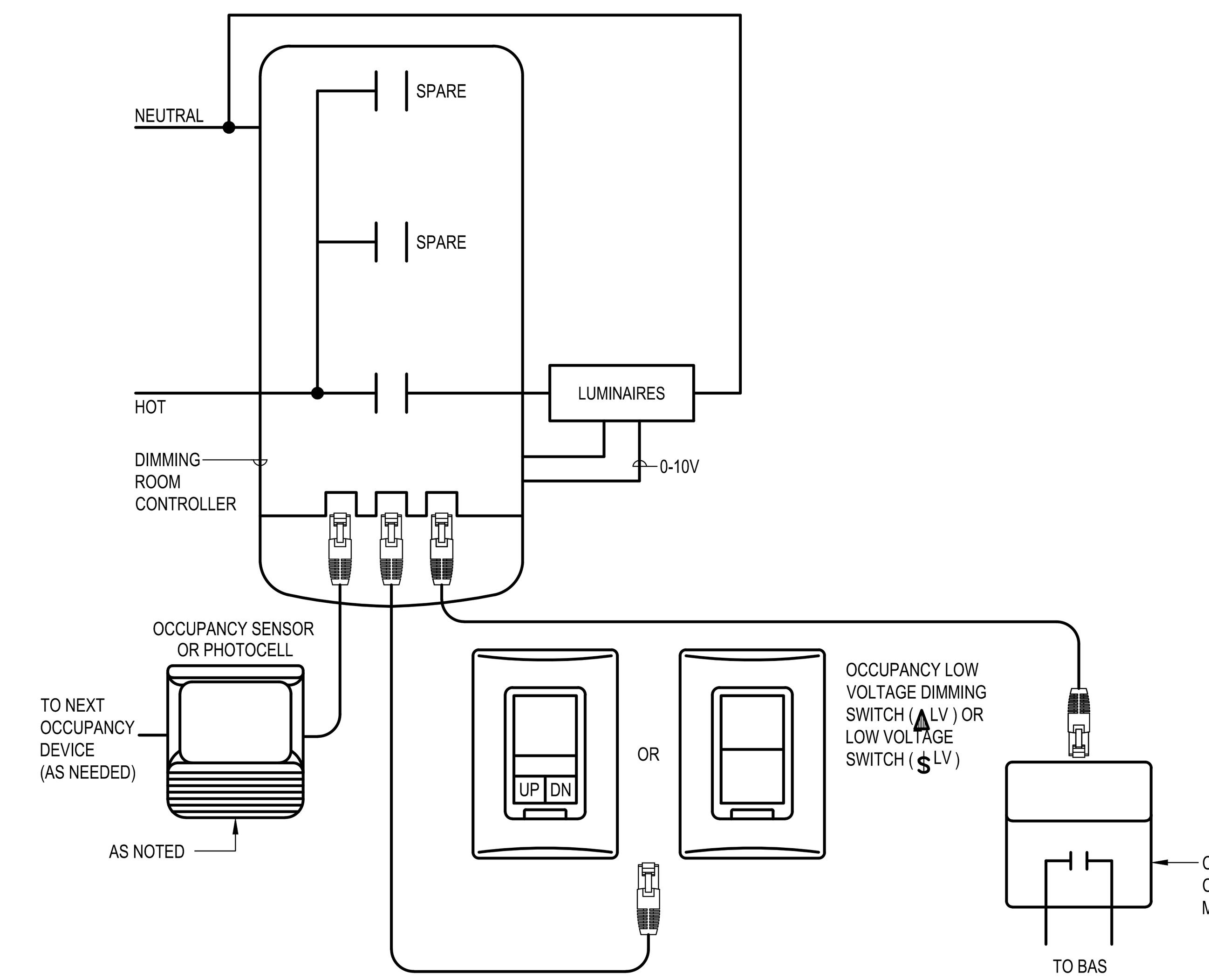
PROJECT TITLE

OUR LADY OF FATIMA

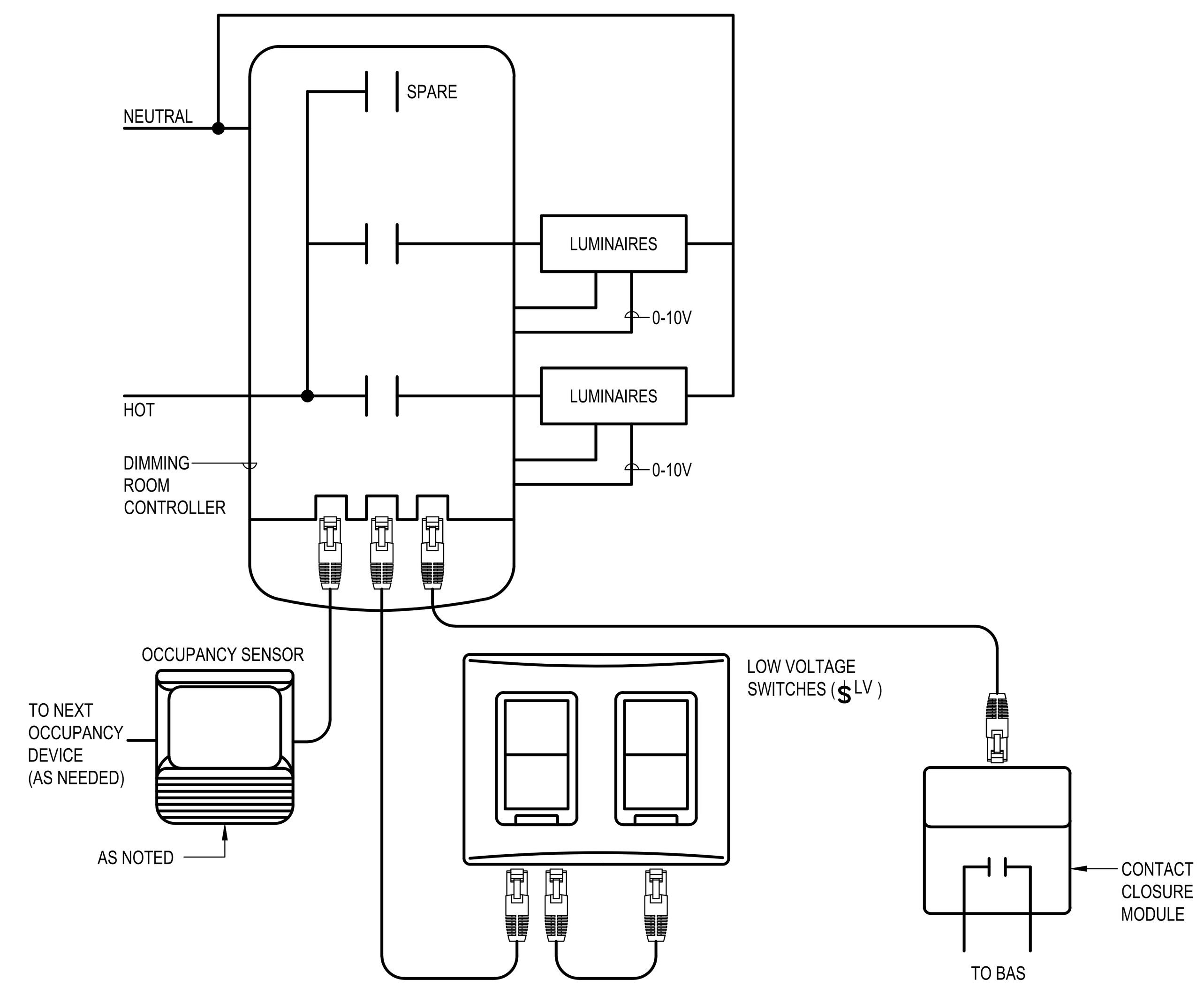
DRAWING TITLE

ELECTRICAL DETAILS

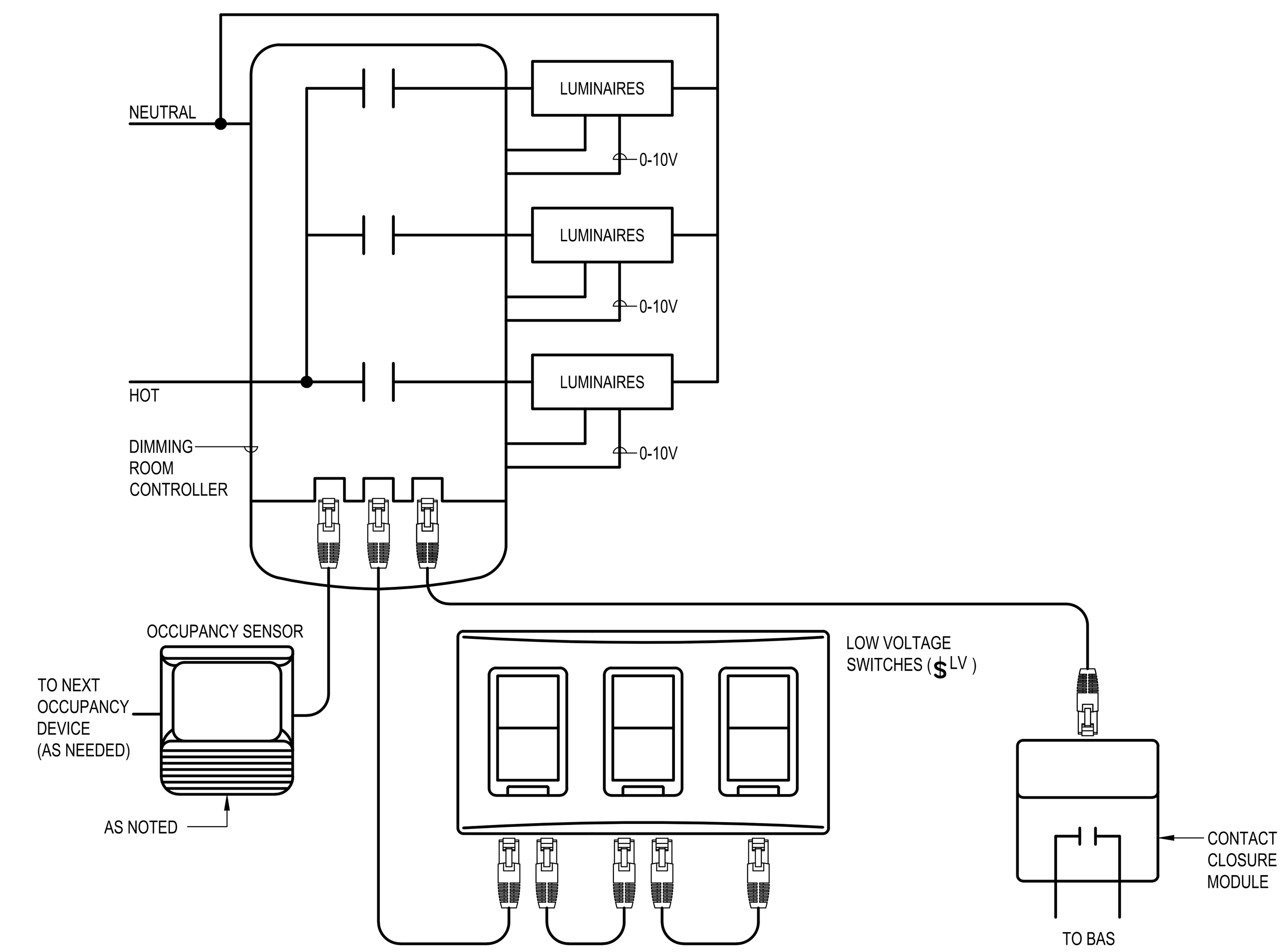
DATE PLOTTED	DRAWN BY	DRAWING No.
01/11/2020	AIS	E502.4
SCALE	CHECKED BY	
AS NOTED	ZJRL	
PROJECT No.		
8906		



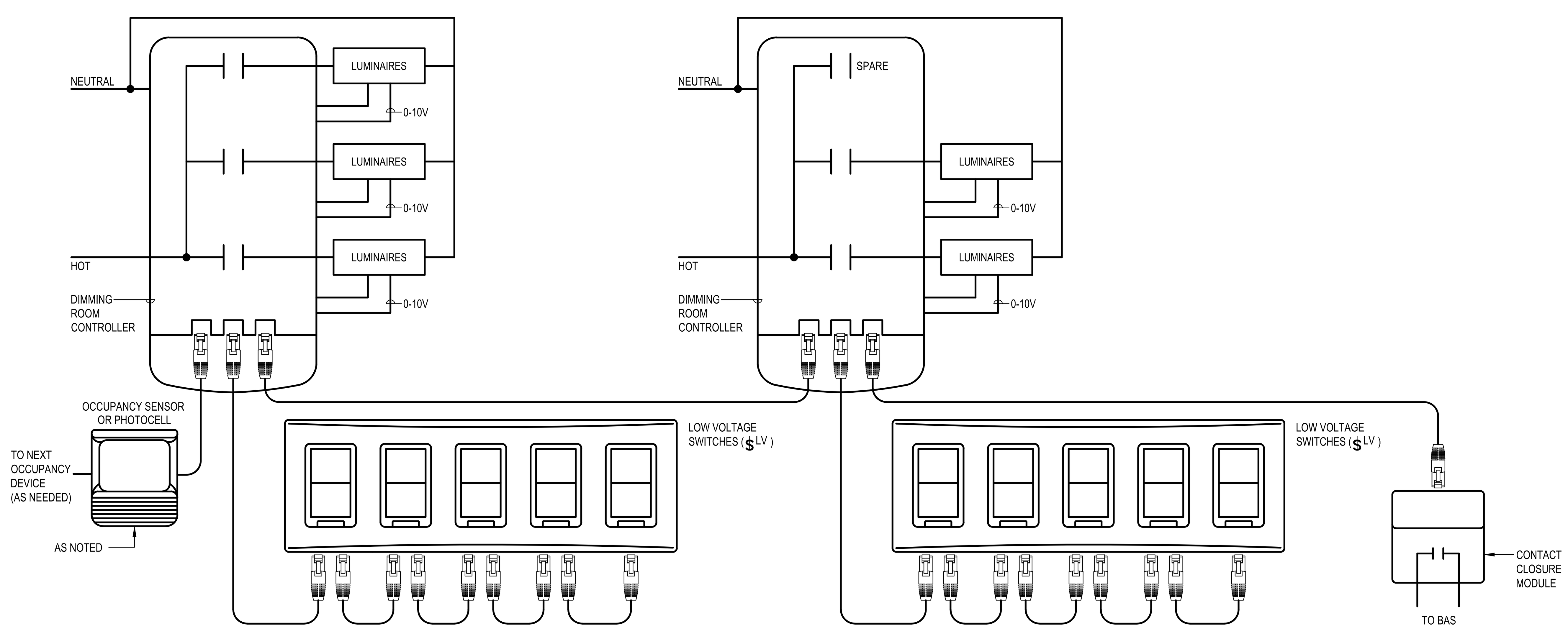
DIMMING ROOM CONTROLLER
LC1 - LIGHTING CONTROL DIAGRAM
N.T.S.



DIMMING ROOM CONTROLLER
LC2 - LIGHTING CONTROL DIAGRAM
N.T.S.



DIMMING ROOM CONTROLLER
LC3 - LIGHTING CONTROL DIAGRAM
N.T.S.



DIMMING ROOM CONTROLLER
LC5 - LIGHTING CONTROL DIAGRAM
N.T.S.

ROOM CONTROLLER GENERAL NOTES

1. TYPICAL FOR ALL ROOMS WITH A ROOM CONTROLLER (RC). REFER TO FLOOR PLANS.
2. ELECTRICAL CONTRACTOR TO INSTALL CONTROLLERS ABOVE SWITCH IN ACCESSIBLE CEILING SPACE. WHERE LOCATED IN EXPOSED CEILING, ELECTRICAL CONTRACTOR TO INSTALL CONTROLLER IN 305mm x 305mm D BOX.
3. ALL LOW VOLTAGE WIRING TO BE IN CONDUIT. CONDUIT AND WIRING SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO SPECIFICATION SECTION 26 09 23 FOR ACCEPTABLE WIRING METHODS.
4. CONTRACTOR TO TEST ALL CIRCUITS WITH MANUAL ON/OFF BUTTONS ON RELAY PACKS PRIOR TO INSTALLATION OF LOW-VOLTAGE WIRING.
5. REFER TO LIGHTING CONTROL SEQUENCE OF OPERATION TABLE ON THIS SHEET FOR LIGHTING CONTROL REQUIREMENTS IN EACH SPACE.
6. PROVIDE THE FOLLOWING CONTROL SEQUENCE IN EACH OF THE FOLLOWING SPACES:
   - 6.1. CORRIDORS: AUTO ON TO 100%, AUTO OFF AFTER 5 MINUTES
   - 6.2. GYMNASIUM: AUTO ON TO 100%, AUTO OFF AFTER 5 MINUTES
   - 6.3. ALL REMAINING ROOMS: AUTO ON TO 50%, AUTO OFF AFTER 5 MINUTES
7. PROVIDE INPUT INTERFACE FOR ALL CORRIDORS. PROGRAM CORRIDOR ROOM CONTROLLERS AS FOLLOWS:
   - 7.1. INTERIOR LIGHTING IS SHUT OFF WHEN SECURITY SYSTEM IS ARMED
   - 7.2. INTERIOR LIGHTING TO TURN ON UPON ACTIVATION OF SECURITY SYSTEM OR FIRE ALARM
   - 7.3. INTERIOR LIGHTING TO TURN ON WHEN SECURITY SYSTEM IS DISARMED

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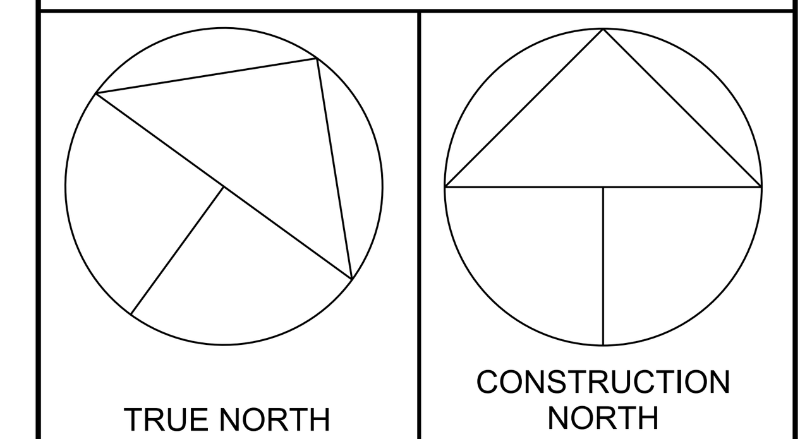
KEY PLAN



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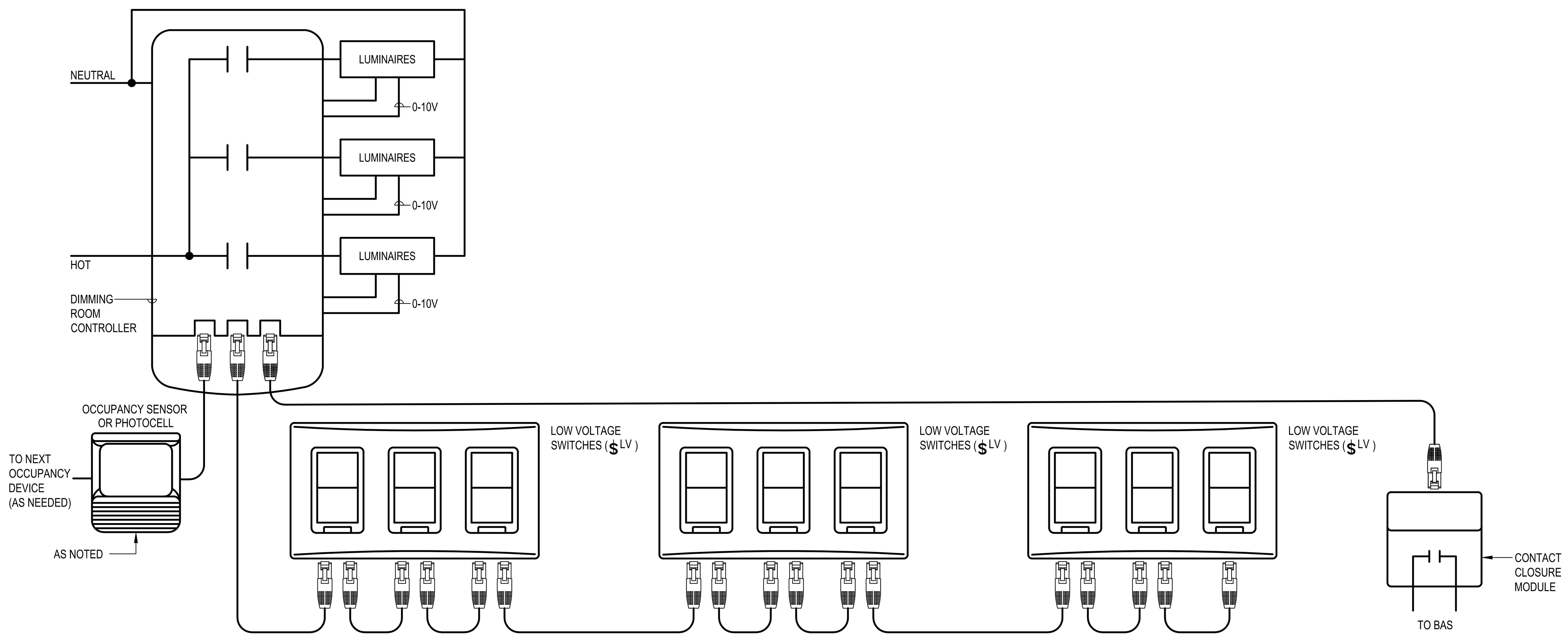
LICENSED PROFESSIONAL ENGINEER
Z.J.R. LINDUP
100502103
Mar 05, 2020
8906
PROVINCE OF ONTARIO

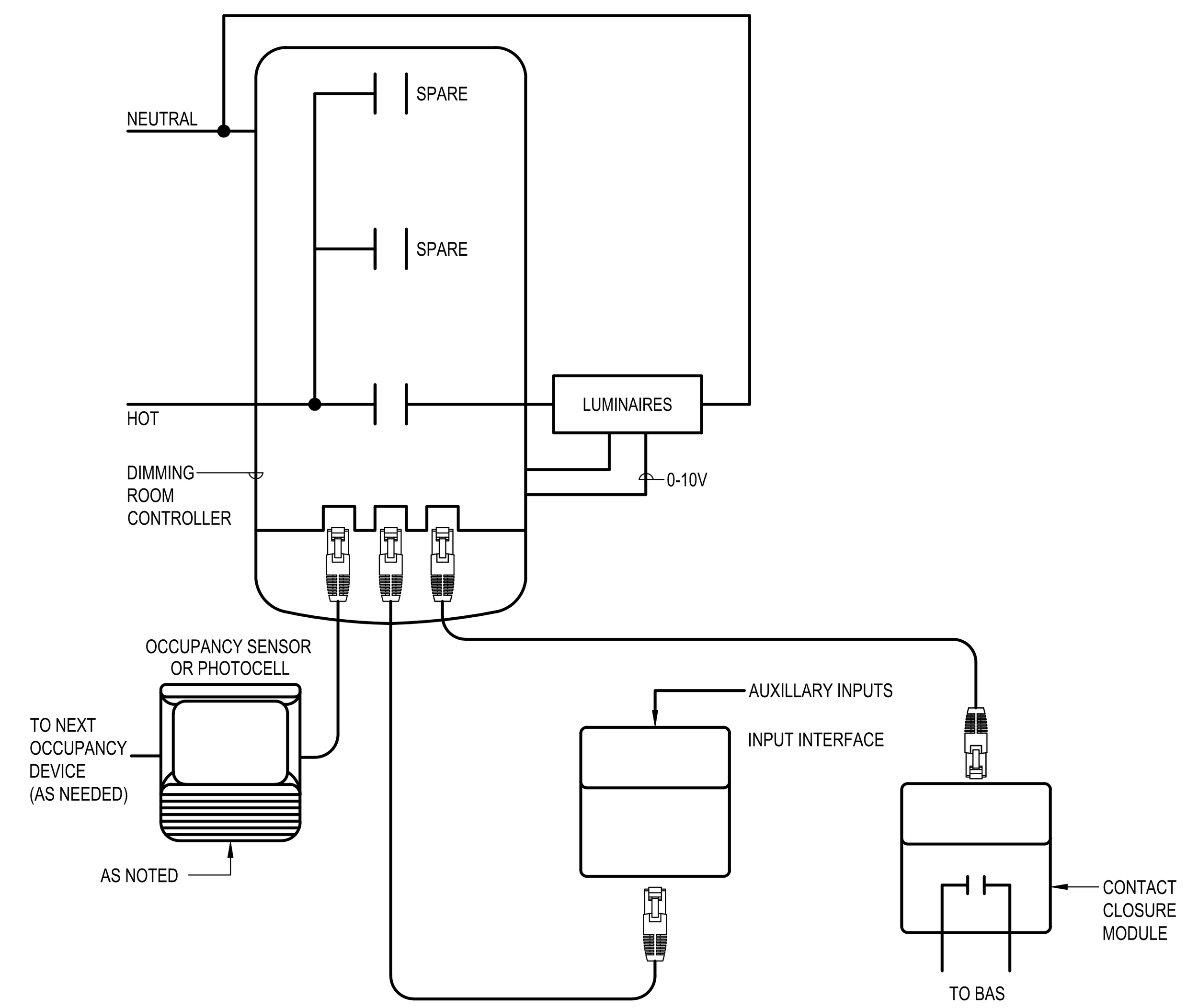
PROJECT TITLE
OUR LADY OF FATIMA

DRAWING TITLE
LIGHTING CONTROL DETAILS

DATE PLOTTED	DRAWN BY	DRAWING No.
01/11/2020	AIS	E503.4
SCALE: AS NOTED	CHECKED BY: ZJRL	
PROJECT No.: 8906		



DIMMING ROOM CONTROLLER
LCG - LIGHTING CONTROL DIAGRAM
N.T.S.



DIMMING ROOM CONTROLLER
LCC - LIGHTING CONTROL DIAGRAM
N.T.S.

ROOM CONTROLLER GENERAL NOTES

1. TYPICAL FOR ALL ROOMS WITH A ROOM CONTROLLER (RC). REFER TO FLOOR PLANS.
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4. CONTRACTOR TO TEST ALL CIRCUITS WITH MANUAL ON/OFF BUTTONS ON RELAY PACKS PRIOR TO INSTALLATION OF LOW-VOLTAGE WIRING.
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   - 6.2. GYMNASIUM: AUTO ON TO 100%, AUTO OFF AFTER 5 MINUTES
   - 6.3. ALL REMAINING ROOMS: AUTO ON TO 50%, AUTO OFF AFTER 5 MINUTES
7. PROVIDE INPUT INTERFACE FOR ALL CORRIDORS. PROGRAM CORRIDOR ROOM CONTROLLERS AS FOLLOWS:
   - 7.1. INTERIOR LIGHTING IS SHUT OFF WHEN SECURITY SYSTEM IS ARMED
   - 7.2. INTERIOR LIGHTING TO TURN ON UPON ACTIVATION OF SECURITY SYSTEM OR FIRE ALARM
   - 7.3. INTERIOR LIGHTING TO TURN ON WHEN SECURITY SYSTEM IS DISARMED

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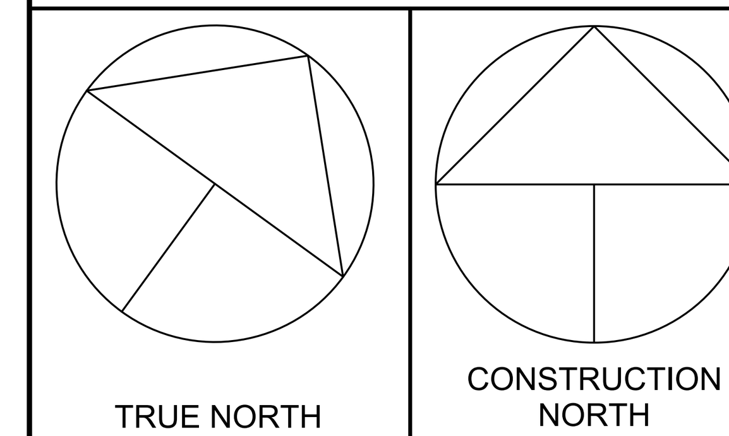

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Z.J.R. LINDUP
100502103
Mar 05, 2020
PROVINCE OF ONTARIO

PROJECT TITLE
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DRAWING TITLE
LIGHTING CONTROL DETAILS

DATE PLOTTED 01/11/2020	DRAWN BY AIS	DRAWING No. E504.4
SCALE AS NOTED	CHECKED BY ZJRL	
PROJECT No. 8906		

PART GROUND FLOOR PLAN - NORTH - LIGHTING AND FIRE ALARM DEMOLITION

SCALE 1 : 100

NOTES:

1. EXISTING DEVICES ARE SHOWN FOR REFERENCE ONLY. COMPLETELY REMOVE ALL LIGHTING AND FIRE ALARM DEVICES WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED. REMOVE ALL REDUNDANT CABLING AND CONDUIT BACK TO SOURCE. MAINTAIN SERVICE TO AREAS NOT UNDER CONSTRUCTION. EXISTING RELAY POWER PACKS AND OCCUPANCY SENSORS TO BE TURNED OVER TO OWNER.
2. TURN OVER ALL EXISTING LED LAMPS FROM REMOVED FIXTURES TO OWNER.
3. COMPLETELY REMOVE AND REINSTALL ALL CEILING MOUNTED LIGHTING AND FIRE ALARM WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED.

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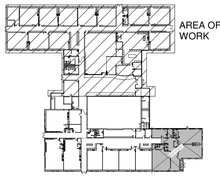

KEY PLAN

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LEGEND

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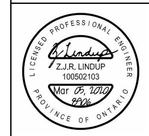

PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - NORTH - LIGHTING AND FIRE ALARM DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
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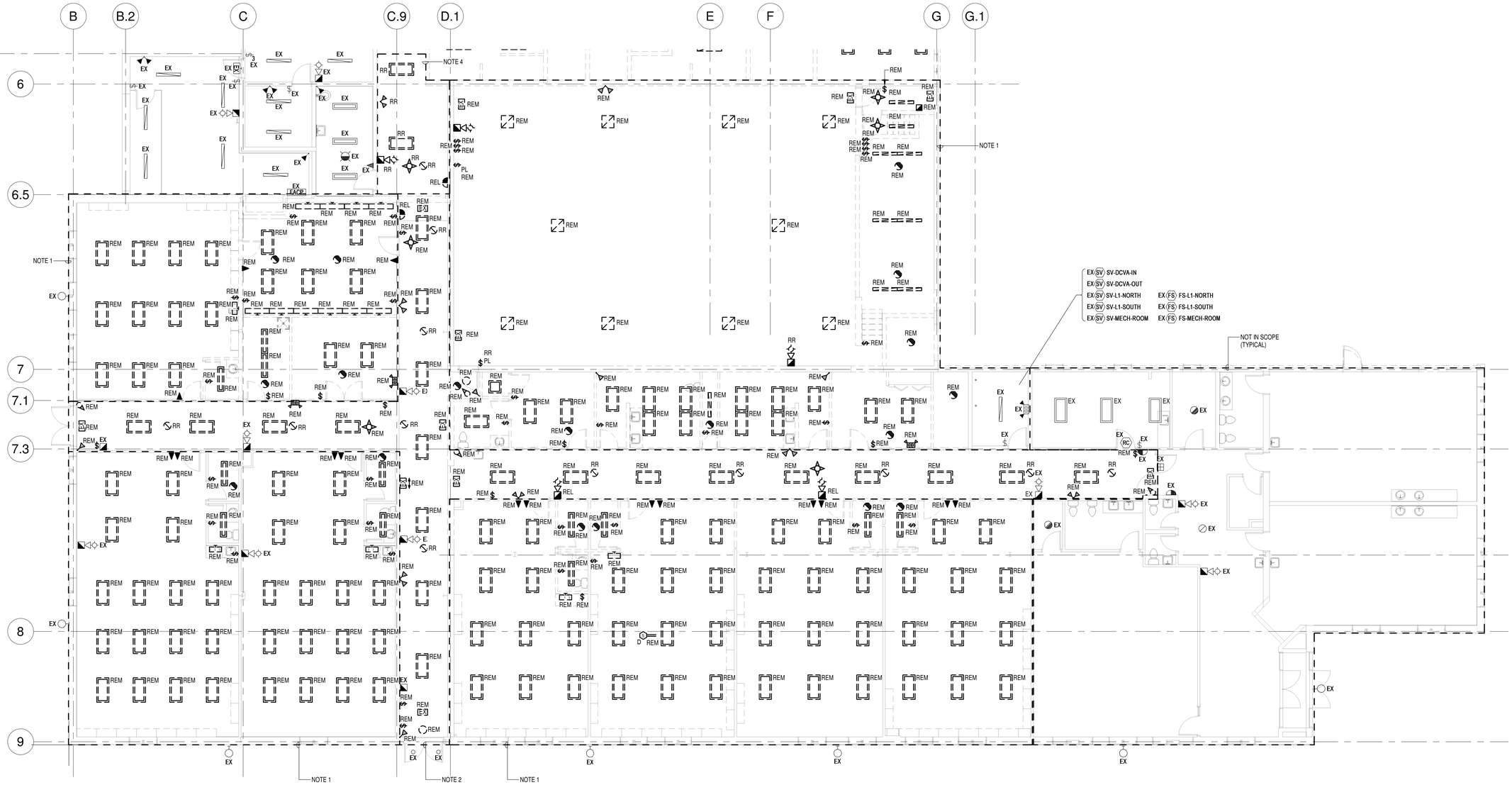
SCALE 1 : 100	CHECKED BY ZJRL	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - SOUTH - LIGHTING AND FIRE ALARM DEMOLITION

SCALE 1 : 100

NOTES:

1. EXISTING DEVICES ARE SHOWN FOR REFERENCE ONLY. COMPLETELY REMOVE ALL LIGHTING AND FIRE ALARM DEVICES WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED. REMOVE ALL REDUNDANT CABLING AND CONDUIT BACK TO SOURCE. MAINTAIN SERVICE TO AREAS NOT UNDER CONSTRUCTION. EXISTING RELAY POWER PACKS AND OCCUPANCY SENSORS TO BE TURNED OVER TO OWNER.
2. EXISTING DEVICES ARE SHOWN FOR REFERENCE ONLY. COMPLETELY REMOVE ALL CEILING MOUNTED LIGHTING AND FIRE ALARM DEVICES WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED. REMOVE ALL REDUNDANT CABLING AND CONDUIT BACK TO SOURCE. MAINTAIN SERVICE TO AREAS NOT UNDER CONSTRUCTION.
3. TURN OVER ALL EXISTING LED LAMPS FROM REMOVED FIXTURES TO OWNER.
4. COMPLETELY REMOCE AND REINSTALL ALL CEILING MOUNTED LIGHTING AND FIRE ALARM DEVICES WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED.

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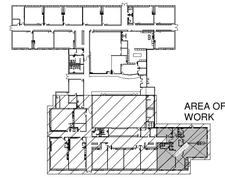

KEY PLAN

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LICENSED PROFESSIONAL ENGINEER
Z.J.R. LINDUP
100502103
Mar 05 2020
PROVINCE OF ONTARIO

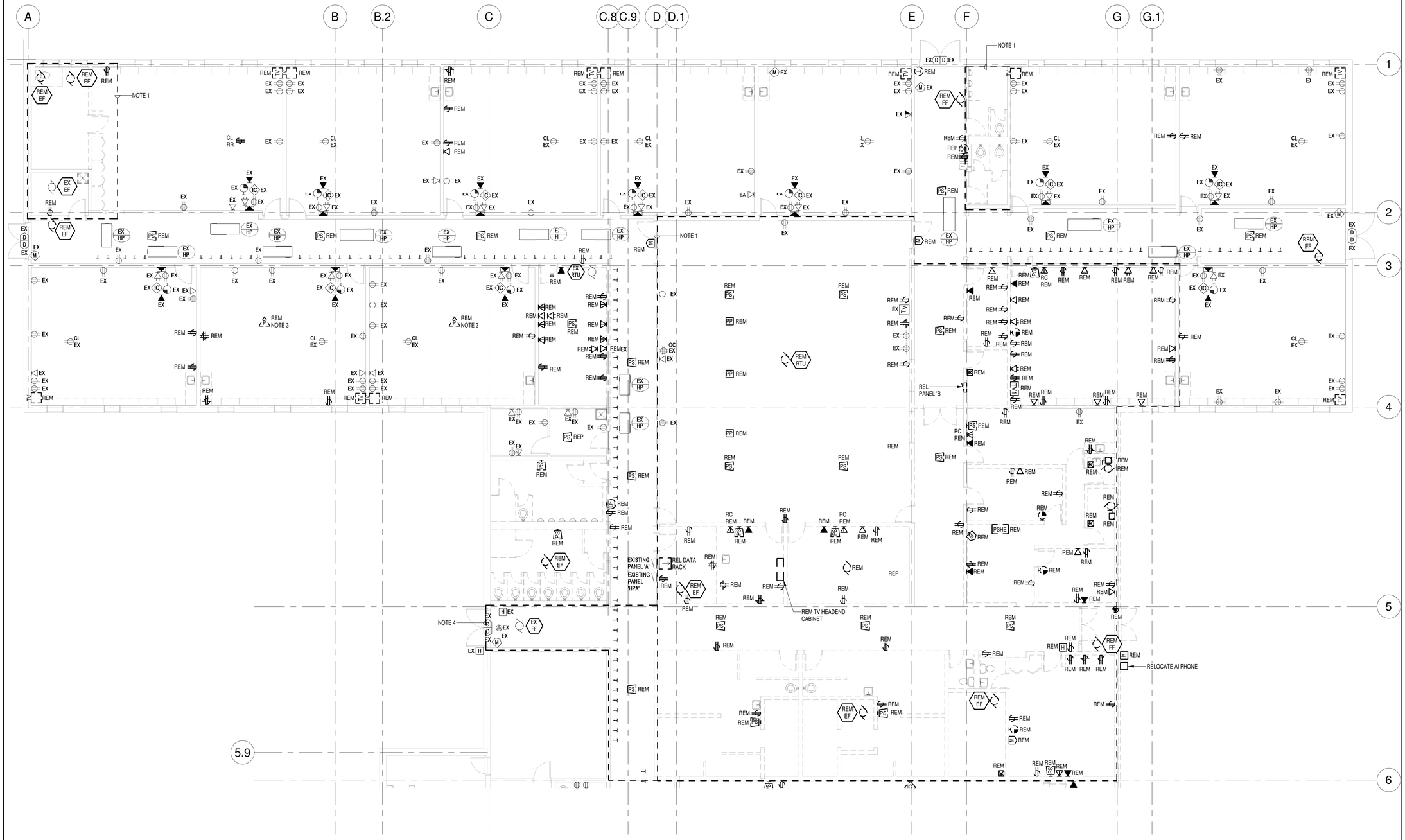
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - SOUTH - LIGHTING AND FIRE ALARM DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 1:27:25 PM	AIS	E602.4
SCALE 1 : 100	CHECKED BY ZJRL	
PROJECT No. 8906		



PART GROUND FLOOR PLAN - NORTH - POWER AND SYSTEMS DEMOLITION

SCALE 1 : 100

NOTES:

1. EXISTING DEVICES ARE SHOWN FOR REFERENCE ONLY. COMPLETELY REMOVE ALL POWER AND SYSTEMS DEVICES WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED. REMOVE ALL REDUNDANT CABLING AND CONDUIT BACK TO SOURCE. MAINTAIN SERVICE TO AREAS NOT UNDER CONSTRUCTION.
2. COMPLETELY REMOVE ALL EXISTING PAGING SPEAKERS, INTERCOM STATIONS, CALL SWITCHES, PROGRAM BELLS, AND PULL CORDS UNLESS OTHERWISE NOTED. REMOVE ALL REDUNDANT WIRING, CONDUIT, AND ACCESSORIES.
3. REMOVE EXISTING OVERHEAD PROJECTOR AND ALL ASSOCIATED WIRING AND CONDUIT. PROJECTOR TO BE TURNED OVER TO OWNER.
4. COMPLETELY REMOVE AND REINSTALL ALL CEILING MOUNTED POWER AND SYSTEMS DEVICE WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED.

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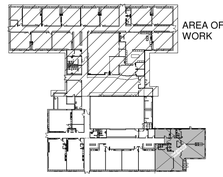

KEY PLAN

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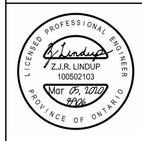


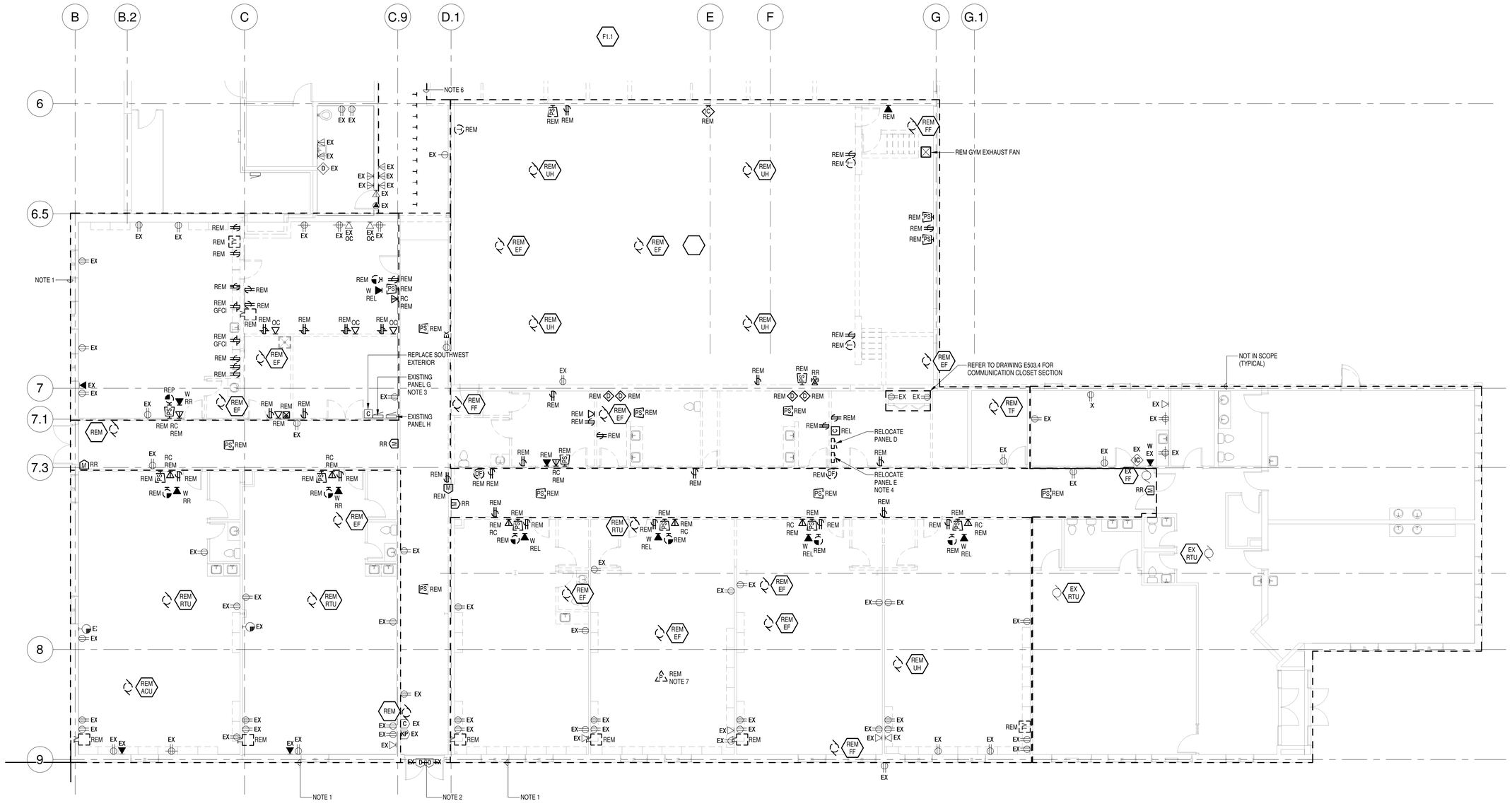
PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - NORTH - POWER AND SYSTEMS DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 1:27:29 PM	AIS	E701.4
SCALE: 1 : 100	CHECKED BY: ZJRL	
PROJECT No.: 8906		



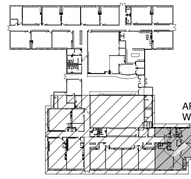
PART GROUND FLOOR PLAN SOUTH - POWER AND SYSTEMS DEMOLITION

SCALE 1 : 100

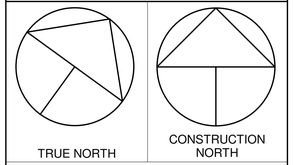
NOTES:

1. EXISTING DEVICES ARE SHOWN FOR REFERENCE ONLY. COMPLETELY REMOVE ALL POWER AND SYSTEMS DEVICES WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED. REMOVE ALL REDUNDANT CABLING AND CONDUIT BACK TO SOURCE. MAINTAIN SERVICE TO AREAS NOT UNDER CONSTRUCTION.
2. EXISTING DEVICES ARE SHOWN FOR REFERENCE ONLY. COMPLETELY REMOVE ALL CEILING MOUNTED POWER AND SYSTEMS DEVICES WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED. REMOVE ALL REDUNDANT CABLING AND CONDUIT BACK TO SOURCE. MAINTAIN SERVICE TO AREAS NOT UNDER CONSTRUCTION.
3. EXISTING LOADS TO BE REWORKED TO EXISTING PANEL 'H'. REFER TO DRAWING E302.4 AND PANEL SCHEDULES FOR ADDITIONAL DETAILS.
4. EXISTING LOADS NOT SERVING DAYCARE TO BE REWORKED INTO EXISTING PANEL 'D' IN NEW LOCATION. REFER TO DRAWING E302.4 AND PANEL SCHEDULES FOR ADDITIONAL DETAILS.
5. COMPLETELY REMOVE ALL EXISTING PAGING SPEAKERS, INTERCOM STATIONS, CALL SWITCHES, PROGRAM BELLS, AND PULL CORDS UNLESS OTHERWISE NOTED. REMOVE ALL REDUNDANT WIRING, CONDUIT, AND ACCESSORIES.
6. COMPLETELY REMOVE AND REINSTALL ALL CEILING MOUNTED POWER AND SYSTEMS DEVICE WITHIN THE OUTLINED AREA UNLESS OTHERWISE NOTED.
7. REMOVE EXISTING OVERHEAD PROJECTOR AND ALL ASSOCIATED WIRING AND CONDUIT. PROJECTOR TO BE TURNED OVER TO OWNER.

Chorley + Bisset
CONSULTING ENGINEERS
201 QUEENS AVE., UNIT 800
LONDON ON, N6A 1J1
250 CITY CENTRE AVE., SUITE 403
OTTAWA ON, K1R 6K7



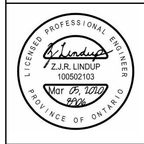
KEY PLAN



NOTES

LEGEND

No.	DATE MM/DD/YYYY	DESCRIPTION	REV. No.
2	03/05/2020	REISSUED FOR ADDENDUM	
1	02/20/2020	ISSUED FOR TENDER & PERMIT	



PROJECT TITLE

OUR LADY OF FATIMA

DRAWING TITLE

PART GROUND FLOOR PLAN - SOUTH - POWER AND SYSTEMS DEMOLITION

DATE PLOTTED	DRAWN BY	DRAWING No.
2020-03-05 1:27:32 PM	AIS	E702.4
SCALE 1 : 100	CHECKED BY ZJRL	
PROJECT No. 8906		