HOLY ROSARY SCHOOL RENOVATIONS

for

St. Clair Catholic District School Board

Prepared by

Marklevitz Architects Inc.
516 Huron Street
Stratford, Ontario

Project No.: 2808-11

Dated: March 17, 2011

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Section 00100

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 INVITATION

1 TENDER CALL

1 The intent of this tender call is to obtain an offer to perform work to complete Holy Rosary School Renovations, 715 London Street, Wyoming ON N0N 1T0, for a stipulated price in accordance with the contract documents.

2 The Contractor must meet the qualifications as indicated in these contract documents.

3 Offers signed under seal, executed and dated, will be received at St. Clair Catholic District School Board, located at 420 Creek Street, Wallaceburg, ON N8A 4C4, before 2:00 PM local time, on March 31, 2011.

4 The contract documents are identified as Project Number: 2808-11, dated March 17, 2011 as prepared by Marklevitz Architects Inc., 516 Huron Street, Stratford, Ontario, N5A 5T7.

5 The owner requires that the work under this contract be substantially completed by August 19, 2011. This is a condition of submission of this tender. If the Owner decides to proceed with the project a contract will be awarded on or before April 13, 2011. Extensions in the award of contract will extend the completion date by the same number of working days. The total length of these extensions shall be limited to the time limit of the offer.

2 TENDER REQUIREMENTS

1 SUBMISSION

1 Bidders will be solely responsible for the delivery of their tenders in the manner and time prescribed.

2 Amendments to the submitted price will be permitted if received in writing prior to tender closing and if endorsed by the same party or parties who signed and sealed the offer.

3 Submit one copy of the executed tender on the forms provided, signed and corporate sealed together with the required security. The required documentation shall be submitted in a closed opaque envelope, clearly identifying on the outside that it is a tender indicating the project name, bidder's name, and owner's name.

4 Unless otherwise stated herein or by written addendum, Fax submissions or amendments are not acceptable.

5 Bidders may withdraw tender submissions up to the closing time indicated. Request for a withdrawal of a tender must be accompanied by a written confirmation on letterhead, indicating the project name and number, the intent to withdraw and endorsed by the appropriate signing authorities. It is the sole responsibility of the bidder to ensure the submission has been returned before closing time.

2 TENDER INELIGIBILITY

1 Offers not submitted in compliance with the indicated time and location will be returned unopened to the bidders.

2 Tenders declared informal will not be considered an acceptable submission and will be returned to the bidders.

3 Tenders that are unsigned, improperly signed or sealed, illegible, obscure, contain arithmetical error, erasures, alterations, or irregularities of any kind will be considered informal.

4 Submissions will be declared informal if Tender forms and enclosures are improperly prepared or incomplete including but not limited to the following items:

Failure to complete all required information on the tender form including pricing, addenda, names, etc.

Failure to apply corporate seal

Failure to provide complete list of qualified Subcontractors as required in Appendix B (a submission may be rejected if it is determined that it indicates more than one Subcontractor in each category, a non qualified Subcontractor or lists own forces which are not qualified for the work proposed).

Failure to indicate all pricing in Appendix C – Unit Prices

Failure to supply pricing for all Separate Prices requested on Appendix D. Please note that the failure to provide separate prices indicated elsewhere in contract documents will not make the submission informal or incomplete.

5 Failure to provide the indicated security deposit, bonding or insurance submissions will result in the tender being declared informal.

3 QUALIFICATIONS OF BIDDERS AND SUBCONTRACTORS

1 The Owner requires Bidders and Subcontractors that have the proven ability to complete the type of project indicated in the tender documents. The Owner reserves the right to review the experience of any bidder or listed Subcontractor.

2 The bidder and the indicated Subcontractors shall have operated under the listed corporate identity for a minimum of five years. At the Owner's discretion mitigating circumstances may be considered.

3 The bidder and the indicated Subcontractors' shall have experience in successfully completing projects of a similar size to the project of this tender call. For the purposes of this tender call the term 'similar size' shall be defined as a value 50% greater or less than this project's estimated value.

Projects valued from $490,000.00 to $1,470,000.00

4 The bidder and the indicated Subcontractors' shall have experience in successfully completing projects of a similar nature to the project of this tender call. For the purposes of this tender call, the term 'similar nature' shall be defined as:

Projects used for the same purpose as proposed for this tender

Projects involving the similar working conditions to that indicated within the contract documents (e.g.: on an occupied site, predefined construction schedule, etc.)

Projects involving similar specialized construction types or procedures indicated in the contract documents (e.g.: public building with fire rated assemblies, historic restoration, etc)

5 The bidder shall have successfully completed within the 519 telephone area code.

4 REVIEW PROCESS FOR QUALIFICATIONS

1 At the owner's request, any bidder or any of the listed Subcontractors shall supply, in the form of a completed CCDC 11 document including a list of at least five projects completed by the corporate identity under which the tender is submitted.
State:

1) the name of the project
2) a brief description of the work completed
3) cost of the work completed under the bidders contract
4) month and year work commenced and was completed
5) name of the owner/client
6) name of the owner's consultant
7) name, address and telephone number of a contact person

2 The submission shall be reviewed using the criteria indicated in this Section

3 The Owner and Consultant reserve the right to contact any of the supplied references or any others that may assist in the Owner's assessment of the Bidder's qualifications to complete the proposed work. References contacted will be asked to comment on the bidders ability to complete the work within schedule, the quality of work, coordination ability, fairness of values of changes to contract and whether the reference would prefer to work with the bidder again.

4 The Owner reserves the right to consider past projects of either the Owner or the projects consultants.

6 Information received in this process is confidential.

7 The Owner's decision as to the suitability of the bidder or Subcontractor is final and irrevocable.

3 TENDER ENCLOSURES

1 SECURITY DEPOSIT

1 The tender shall be accompanied by a security deposit in the form of a Bid Bond in the amount of NINETY EIGHT THOUSAND DOLLARS ($98,000.00)

2 Endorse the bid bond in the name of the owner as oblige, signed and sealed by the General Contract bidder and surety.

3 The security deposit will be returned after delivery to the owner of the signed contracts and the required Performance, Labour and Material Payment Bonds by the accepted bidder.

4 If no contract is awarded, all security deposits will be returned.

2 CONSENT OF SURETY TO BOND

1 The tender shall be accompanied by a "Consent of Surety" stating that the Surety, supplying the bid bond, is willing to provide the Performance, Labour and Materials Payment Bonds required.

2 The accepted bidder shall provide Performance, Labour and Materials Payment bonds stated in the Supplementary General Conditions.

3 Include the cost of bonds in the tender price.

3 INSURANCE

1 Upon request, the bidder shall provide proof of insurance as required by the contract documents.

2 The accepted bidder shall provide Insurance as stated in the Supplementary General Conditions.

3 Include the cost of Insurance in the tender price.

4 TENDER SIGNING

1 The tender shall be signed under seal by the bidder.

2 Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under signature. Affix seal.

3 Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the words "Partner" against each signature. Affix seal against each signature.

4 Limited Company: Signature of all duly authorized signing officer in their normal signatures. Insert the officer capacity in which the signing officer acts against each signature. Affix Corporate seal. If the tender is signed by official other than President and Secretary of the company or the President-Secretary-Treasurer of the Company, a copy of the by-law resolution of the Board of Directors authorizing them to do so, must also be submitted with the tender in the tender envelope.

5 If bidder is a joint venture, each party to the joint venture shall execute the tender under seal in the manner appropriate to such party.

5 COST BREAKDOWNS

1 Provide all separate prices as requested.

2 At the request of the Owner provide a summary of HST taxes included in the submission.

6 SELECTION CRITERIA

1 The Criteria for selection in the order they will be considered is as follows:

1) COMPLIANCE WITH INSTRUCTIONS TO BIDDERS - including the submission of all documentation indicated therein.
2) ACCEPTABLE EXPERIENCE RECORD - Consideration will be given to how well the submitted documentation reflects the criteria listed in the QUALIFICATIONS OF BIDDER AND Subcontractors clauses within this Section. The Owner reserves the right to reject a bidder as per Section 00800.8 GC3.8. SUBCONTRACTOR AND SUPPLIERS
3) TENDER PRICES - including the value of unit rates and accepted extras or credits.
4) LENGTH OF CONSTRUCTION - Indicated time from commencement of work to substantial completion. Preference will be given to tenders indicating a shorter period of construction.
5) BUDGET AND COMPLETION DATE - The Owner reserves the right to accept or reject any or all tenders that do not meet the Owner's budget or time constraints

4 PROCEDURES DURING TENDERING

1 DEFINITIONS

1 Contract Documents: Defined in CCDC 2, Definitions with General Conditions.

2 Tender Documents: Contract documents supplemented with Instruction to Bidders, Tender, tender securities.

3 Tender: Act of submitting an offer under seal.

4 Alternate or Alternative: Products or systems identified as 'alternate' or 'alternative' are NOT APPROVED EQUALS and can not be substituted for base specified products without the permission of the Consultant. If the Consultant or Contractor wish to substitute a alternate product or system for reasons of cost, availability, or ease of construction, a request must be made, a contemplated change order issued and if accepted a change order issued before the substitution can be made. Submission or review of a shop drawing shall not constitute a request or approval of an alternate. The value of any change to the contract shall include all coordination necessary to incorporate the alternate into the work.

5 Approved Equal: Within this contract a product, procedure or system that is identified as 'approved equal' can be substituted for the product or system identified in the base specification. However the contractor assumes all responsibility for design changes, engineering, coordinating the work as may be required, ensuring the identified finishes and colours are provided and that the product or system is able to be supplied within the project schedule. No increase in contract price will be considered.

2 CONTRACT DOCUMENT AVAILABILITY

1 Tender documents may be obtained from the office of Marklevitz Architects Inc., located at 516 Huron Street, Stratford, Ontario, N5A 5T7.

2 Tender documents can be obtained by the General Contract bidder upon receipt of a refundable deposit by a certified cheque in the amount of $100.00 per set. The Consultant reserves the right to restrict the number of sets to be issued to the General Contract bidder. No set or partial set will be issued to the sub-trade. Documents are to be picked up at the Consultants office or may be sent to the contractor collect by courier.

3 Deposit will be refunded if tender documents are returned complete, undamaged and unmarked within seven (7) days of Tender submission. Failure to comply will result in forfeit of deposit.

4 If unable to bid, the bidding contractor must return all tender documents to the office of the Consultant at-least five (5) working days before closing date of tenders. Failure to comply will result in forfeit of deposit.

3 EXAMINATION

1 Tender documents may be viewed at the office of the Consultant at 516 Huron Street, Stratford, Ontario, N5A 5T7.

2 Tender documents will be on display at the offices of the London Construction Association, Sarnia Construction Association and the Lambton Area Builders Exchange.

3 Upon receipt of tender documents, verify documents are complete. Notify the Consultant should documents be incomplete.

4 Immediately notify the Consultant upon finding discrepancies or omission in the tender documents.

4 QUERIES/ADDENDA

1 Direct questions to Marklevitz Architects Inc., telephone number (519) 271-9230.

2 Addenda may be issued during the tender period. All addenda become part of the contract documents.

3 Verbal answers are only binding when confirmed by written addendum.

4 Clarifications requested by the bidders will be in writing or on telephone not less than seven (7) days before date for receipt of bids. The reply will be made in the form of an addendum, a copy of which will be forwarded to known General Contract bidders.

5 With the exception of an addendum delaying or cancelling the tender, Addenda will not be issue within 48 hours of the tender closing.

5 PRODUCTS/SYSTEM OPTIONS

1 Approved Equal: Within this contract a product, procedure or system that is identified as 'approved equal' can be substituted for the product or system identified in the base specification. However the contractor assumes all responsibility for design changes, engineering, coordinating the work as may be required, ensuring the identified finishes and colours are provided and that the product or system is able to be supplied within the project schedule. No increase in contract price will be considered.

2 Alternate products will be considered if submitted as an attachment to the tender form. However, only specified products or those approved equal by written addendum may be included in the prices requested by this tender call.

3 Submission shall provide sufficient information to enable Consultant to determine acceptability of such products.

4 Provide complete information on required revisions to other work to accommodate each alternate, the dollar amount of addition to or reductions from the tender price, including required revisions to other work.

5 Unless alternates are submitted in this manner and subsequently accepted, provide products as specified.

6 Approval to submit alternates prior to submission of bids is not required.

6 SITE EXAMINATION

1 A Site Meeting with the Architect has been scheduled for Wednesday, March 23, 2011 at 3:30 p.m. Although this meeting is not mandatory, it will be the only opportunity to visit the school.

2 The bidder shall be responsible for all on site conditions, considered by the consultant, visible during the on site examination including those revealed through accessible ceilings, floors and access panels.

5 OFFER ACCEPTANCE/REJECTION

1 ACCEPTANCE OF TENDER SUBMISSIONS

1 It is the sole responsibility of the bidder to deliver the tenders to the correct location before the stipulated deadline. Receipt of tenders at the wrong location does not consititute a correct submission or any responsibility by the individual or corporation receiving it.

2 It is the sole responsibility of the owner to determine which tenders are acceptable. The owner's decision is final.

2 DURATION OF OFFER

1 Tenders shall remain open to acceptance and shall be irrevocable for a period of thirty (30) days after the bid closing date.

2 This condition shall also apply to any or all Separate or Alternate Prices submitted. The Owner therefore reserves the right to accept the modification(s) to the Base Bid at the stipulated price(s) within thirty (30) days from tender closing, regardless of the date the contract may be signed.

3 PROCESS FOR REDUCING COSTS OF OVERBUDGET TENDERS.

1 If the lowest tender is within 10% of the Owner's budget amount (when the tenders are received) the Owner has the right to reject all tenders or negotiate with the low bidder. If the process fails to successfully reduce the project cost to an acceptable level, the Owner has the right to use alternative methods indicated herein.

2 If the lowest tender is more than 10% higher than the Owner's budget amount the Owner has the right to reject all prices, negotiate with the lowest bidder or request potential cost savings from the three lowest bidders and any other bidders who prices are within 10% of the lowest received. All requests and submissions shall be made in writing. Listed sub trades may not be substituted in this process.

3 Once potential cost savings have been identified the Owner has the right to request a final revised base bid submission of the bidders.

4 Requests for potential cost savings shall be limited to deletions from the scope of work and associated changes OR changes of materials and finishes. The Owner shall not request pricing of significant design modifications without the approval of the bidder (s).

4 ACCEPTANCE OF OFFER

1 The Owner reserves the right to reject any or all offers. The Owner also reserves the right to not award the project for reasons of budget, deferral, an insufficient number of acceptable bids or confusion in the any or all submissions that would not allow the Owner to make a fair decision. In the absence of an Owner's policy to the contrary, the Owner may exercise the option of rejecting all offer if less than three acceptable bids are received.

2 At a public opening of the tenders, the reading of any or all the information submitted is at the discreation of the Owner. The actions of the Owner or Consultant during this opening shall not imply the acceptance of the bid.

3 The required information contained within tenders that are subject to a public opening is public whether read at the opening or not. Those interested who are directly involved this tender process may request specific information but do not have the right to request copies of all or any part of the tender documents.

4 The Consultant, on behalf of the Owner, will issue to the successful bidder, a letter indicating that the Owner intends to enter into contract.

5 After a contract has been signed or the project deferred, all tender securities shall be returned to the unsuccessful bidders.

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Holy Rosary School Renovations

St. Clair Catholic District School Board
Project Date: March 17, 2011
Marklevitz Architects Inc. **(reproduction without the author's written permission is prohibited)**

Project Location 715 London Street, Wyoming ON N0N 1T0

Submitted to
Closing Office THE OWNER
St. Clair Catholic District School Board
420 Creek Street, Wallaceburg, ON N8A 4C4

We, _____

Company Name

of, _____

Business Address

Having examined the documents dated as listed in Appendix "A" to this tender issued by Marklevitz Architects Inc.

AND

Having examined the addenda issued for this tender by Marklevitz Architects Inc.

_____ List total number of addenda received

AND

Having visited the project site, hereby offer to enter into a contract to perform the work required by the tender documents for the stipulated price of:

_____

Written Submitted Price in Canadian Dollars

This value shall include all specified cash and contingency allowances and applicable taxes in force at this date except as may be otherwise provided in the tender document.

$ _____ CONTRACT PRICE (excluding H.S.T.)

$ _____ Value of H.S.T.

$ _____ TOTAL VALUE OF CONTRACT (as written above)

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

DECLARATIONS

We hereby declare that:

(a) We have reviewed the deadlines required by this project and agree to substantially complete the work by August 19 2011. In addition we offer to complete the work in a shorter period of time as indicated below.

☐ **Unless otherwise indicated here, construction will commence within 5 working days after the award of contract**

☐ **weeks after award of contract that construction will be substantially complete. (Insert a number here ONLY if there is an offer to complete the work sooner than required by the these documents**

(b) No person, firm or corporation other than the undersigned has any interest in this tender or in the proposed contract for which this tender is made.

(c) The information submitted on all Appendices to this Tender: Sub-trades, Unit Prices, Alternative Prices and Separate Prices form an integral part of this tender.

(d) This tender is open to acceptance for period of Thirty (30) Days from the date of tender closing.

SIGNATURES:

Signed, sealed and submitted for on behalf of:

Name of Company

Street Address or Postal Box

City, Province & Postal Code

Telephone | Fax | Email

Signature:

Name & Title:

Dated: Month/Day/Year

Apply Seal above

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St. Clair Catholic District School Board
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APPENDIX "A" to Tender

LIST OF TENDER DOCUMENTS

The following is the list or description of the tender documents referred to in the tender for the project.

1 Standard Construction Document CCDC 2, 2008	
2 Specifications Dated	March 17, 2011
3 Drawings: Dated	March 17, 2011
Architectural:	A0 only A1.1 only A2.1 to A2.2 inclusive A3.1 to A3.2 inclusive A4.1 to A4.2 inclusive A5.1 to 5.3 inclusive A6.1 only A7.1 only
Structural	by addendum
Mechanical:	M-1 to M-9 inclusive
Electrical:	E1.1 only E2.1 to E2.3 inclusive E3.1 only E4.1 only E5.1 only

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APPENDIX "B" TO TENDER — LIST OF SUBCONTRACTORS

1 **The following are the subcontractors we propose to use for the Divisions or Sections of work listed hereunder.**

2 **Only one subtrade can be listed for each category indicated below. Listing more than one will result in the bid being declared informal. If the bidder wish to list multiple names the base bid must contain the subtrade which the bidder is willing to include in the bid and alternative names can then be listed in Appendix "D" ALTERNATIVE PRICES**

3 **All subtrades listed must be qualified to complete the work of the indicated section. The Owner has the right of review and refusal.**

4 **No substitution of subcontractors is permitted after these documents are submitted without the Owner's approval**

Demolition	
Site Work	
Landscaping	
Paving	
Concrete Work	
Masonry	
Miscellaneous Metal	
Rough Carpentry	
Finish Carpentry	
Insulation	
Roofing & Metal Flashing	
Sealant & Caulking	
Hollow Metal Doors & Frames	

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Wood Doors	
Glass & Glazing	
Metal Studs & Drywall	
Acoustic Ceiling	
Tile Work	
Resilient Tile Flooring	
Exposed Aggregate Panels	
Painting & Finishing	
Washroom Accessories	
Toilet Partitions	
Drapery	
Chalkboards & Tackboards	
Mechanical	
Control Systems	
Electrical	

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APPENDIX "C" TO TENDER — LIST OF UNIT PRICES

The following are our Unit Prices of work listed hereunder. The Unit Price listed applies only to perform the Units of the work during the time schedule for such work in the project schedule. The Unit Price shall include all overhead and profits and shall be net to the Owner for work in place. Please note that these prices are to exclude H.S.T.

UNIT PRICE

DESCRIPTION	ADDITION ($)	DELETION ($)

HOURLY RATES FOR CHANGE DIRECTIVES

Indicate the following hourly rates. Please note that this amount should include wages and benefits for work related to Change Directives or approved Delays of Project. All stipulated overhead and profit percentages are not to be included in this amount but will be covered in Supplementary General Conditions Section 00800.

1	**On-site Superintendent's Hourly Charge**	$
2	**Qualified Tradesmen under the Direct Employ of the Contractor**	$
3	**Labourer**	$

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Holy Rosary School Renovations

St. Clair Catholic District School Board

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APPENDIX "D" TO TENDER — ALTERNATIVE PRICES

1 **The following are our prices for the alternative work listed hereunder. The prices shall include all overhead and profits and shall be net cost of the Owner for the work in place. Please note that these prices are to exclude H.S.T.**

2 **The Owner reserves the right to accept or reject any alternate prices up to Thirty (30) days from tender closing, regardless of the date the contract may be signed.**

3 **Alternative prices are listed here at the discretion of the bidder. However all submitted prices are binding.**

4 **These prices are offered under the conditions of Section 01100 - Alternatives**

	DESCRIPTION	ADDITION ($)	DELETION ($)
1			
2			
3			
4			
5			
6			

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St. Clair Catholic District School Board

Project Date: March 17, 2011

APPENDIX "E" TO TENDER — SEPARATE PRICES

1 **Submission of the following Separate Prices MUST be provided. If there is no change in cost, indicate a $0 dollar value. Tenders not including price requested on this page as originally distributed in the tender documents or re-issued as part of an addendum WILL BE CONSIDERED INFORMAL.**

2 **The following are our Separate Prices for the work listed hereunder. The prices shall include all overhead and profits and shall be net to the Owner for work in place. Please note that these prices are to exclude H.S.T.**

3 **The Owner reserves the right to accept or reject any alternate prices up to Thirty (30) days from tender closing, regardless of the date the contract may be signed.**

	DESCRIPTION	ADDITION ($)	DELETION ($)
1	Provide a Separate Price to DELETE the supply and installation of new light fixtures where indicated and re-install existing fixtures in new layout.		-
2			-
3			-
4			-

Section 00800

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 General Conditions of the Contract for Stipulated Price Contract, Document CCDC2, 2008, is a part of this contract and is incorporated herein as fully as if herein set forth.

2 The following supplements modify, change, delete or add to the General Conditions of CCDC 2 2008. Where any part of the General Conditions are not modified or voided by this Section, the unaltered provisions or that part shall remain in effect.

2 ARTICLE A-5 PAYMENT

1 Holdback shall be 10%.

3 ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

1 No other address, facsimile number, or email address other than those listed in this section shall be valid for communications dealing with

changes to the contract

request, approval or denial of payment

submission of requested information regarding contemplated changes to the contract

formal minutes of meetings

stop work orders

issues related to disputes

termination of contract

2 Amend clause 6.1 as follows:

Facsimile or other form of electronic communication shall be deemed to be received only based on electronic conformation that the facsimile has been successfully sent or by electronic confirmation that the electronic confirmation has been opened. It is the responsibility of the sender to ensure the correspondence has been successfully sent and confirmation received.

4 ARTICLE A-7 LANGUAGE OF THE CONTRACT

1 The language of this contract is English.

5 DEFINITIONS

1 Add the following to Definition 4

For the purposes of this document the term CONSULTANT and Consultant are interchangeable.

2 Add the following to Definition 19

The list of subcontractors is to include all those stipulated in the contract documents and stipulated by the Owner to perform work under the Allowances. For the purposes of this document the term SUBCONTRACTOR and Subcontractor are interchangeable.

3 Add the following Definition 27

Approved Equal: Within this contract a product, procedure or system that is identified as 'approved equal' can be substituted for the product or system identified in the base specification. However the contractor assumes all responsibility for design changes, engineering, coordinating the work as may be required, ensuring the identified finishes and colours are provided and that the product or system is able to be supplied within the project schedule. No increase in contract price will be considered.

4 Add the following Definition 28

Alternate or Alternative: Products or systems identified as 'alternate' or 'alternative' are NOT APPROVED EQUALS and can not be substituted for base specified products without the permission of the Consultant. If the Consultant or Contractor wish to substitute a alternate product or system for reasons of cost, availability, or ease of construction, a request must be made, a contemplated change order issued and if accepted a change order issued before the substitution can be made. Submission or review of a shop drawing shall not constitute a request or approval of an alternate. The value of any change to the contract shall include all coordination necessary to incorporate the alternate into the work.

5 Add the following Definition 29

Subtotal: The tender amount plus the total amount of all change orders. This amount will include all taxes but exclude HST.

6 Add the following Definition 30

% Complete and Value of Work Complete: The total value of all work completed in the total contract by the Contractor and by each Subcontractor. This information is required as a percentage of the total value of the Subcontractor's work and as a dollar value. As part of the certification process, the Consultant's evaluation of the percentage of the work complete will be based on the total current value of the contract minus the value of any unspent (or unapproved) allowances

6 GC 1.1 CONTRACT DOCUMENTS

1 Change paragraph 1.1.7.1 to read:

If there is a conflict within the Contract Documents

.1 the order of priority of document, form the highest to lowest, shall be
the agreement between the *Owner* and the *Contractor*

the Definitions

Supplementary Conditions

the General Conditions

where there is a conflict in thickness, weight or size of material the largest shall apply

where there is a conflict in the quality of a material specified the best quality shall apply. For this purpose the best quality shall be considered the most costly to supply and install.

Division 1 of the Specifications

technical Specifications

material and finishing schedules

drawings

in the absence of any specified material or process the work shall be completed in compliance with applicable government requirements, the manufacturers' guidelines for specified systems, industry reference standards indicated in Section 01600 and general construction practices.

2 Add paragraph 1.1.11 to read:

For material and equipment sizes of civil, structural, mechanical, electrical systems the most related civil, structural, mechanical or electrical documents shall govern.

3 Add paragraph 1.1.12 to read:

Nothing in these documents overrides governmental requirements including the current requirements of the Ministry of Labour and the Ontario Building Code.

4 Add paragraph 1.1.13 to read:

The Owner shall furnish the Contractor, without charge to him, twelve (12) sets of drawings and specifications. Any additional sets required shall be paid for by the Contractor at rate of $2.50 per sheet for drawings, and 20 cents per sheet for specifications.

7 GC3.1 CONTROL OF THE WORK

1 Add the following clauses 3.1.3:

When a project occurs on a site where the owner requires access or needs to maintain operations, the contractor shall maintain safe access, egress, and provide temporary facilities and services as required. The Contractor shall schedule work to permit the owner's normal operations and coordinate the work with the Owner's on site representative on a weekly basis as it may relate to these operations.

The Owner and Consultant will each designate a representative(s) who will have the authority to issue site instructions. The contractor will not accept any direction from others. Any change of representative must be done in writing.

On a site occupied by others the Owner will designate an on site representative. That representative will have no authority to make changes to the contract, with the exception of stop work on the property beyond the construction area that is felt to be unsafe.

No representative of the Owner or Consultant is authorized to give direction to a Subcontractor.

2 Add the following paragraph 3.1.4:

The contractor shall fulfill the requirements of Section 01500 as part of the control of the work.

8 GC3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

1 Add to 3.2.1 the following:

Work conducted under Cash Allowance indicated under Section 01020 shall not be considered a separate contract or subject to the conditions of GC3.2.

2 Add the following to paragraph 3.2.2.2:

The Owner will assume and assign this responsibility but only for work by Owner or other contractors that have not been listed in the Contract Documentation

3 Add the following paragraph 3.2.3.4

The Contractor shall assume responsibility for compliance with the applicable health and construction safety legislation at the Place of the Work including the work of the Owner and other contractors listed in the Contract Documentation.

4 Change 3.5.1.3. to read:

The Construction Schedule and the date of Substantial Performance may not be changed without the Owner's approval or as provided for under Section GC6.5 DELAYS or as approved under Part 6 of the General Conditions - CHANGES IN THE WORK.

9 GC3.5 CONSTRUCTION SCHEDULE

1 Add 3.5.1.4:

Provide an approved schedule on a monthly basis as an appendix to Application for Payment.

2 Add 3.5.1.5:

Any work unfinished at the time the project is scheduled for substantial completion shall be completed in coordination with the owner to insure the building and site can be used for its intended purpose. The contractor shall provide temporary services and facilities necessary for the owners operation of the project if these services are not complete. The contractor shall permit the owner to move into the facility at the scheduled date of substantial completion and arrange for the relocation of the owner's equipment and furniture required to complete any unfinished work.

10 GC3.6 SUPERVISION

1 Modify clause 3.6.1:

.....Supervisor shall not be changed from the commencement of the project to the date of Substantial Performance without the written approval of the Owner.

11 GC3.7 SUBCONTRACTORS AND SUPPLIERS

1 Add the following to paragraph 3.7.3:

If a Subcontractor is rejected, the Bidder/Contractor has the right to compensation to include the next lowest acceptable Subcontractor. However the Owner has the right to reject the tender if this revision in cost exceeds the value of the next acceptable bid carrying acceptable Subcontractors. (Example: The low bidder carries the price of Subcontractor A while most other bidders carry Subcontractor B. Subcontractor A is deemed by the owner to be unacceptable. However the price from the low bidder to change Subcontractors creates a contract price higher than the second acceptable bidder. In this case the Owner would have the right to reject the low bidder.

2 Include the following conditions as paragraph 3.7.7:

After signing of the contract, the contractor may request a change of subcontractor or supplier if they fail to meet the obligations prescribed to the contractor in CCDC 2 1994, Section GC7.1, or they are unable to complete the project within the agreed schedule of work, or it is proven that their qualifications, workmanship or materials do not meet the specifications.

When a Subcontractor or supplier is considered for replacement, the contractor shall notify the consultant in writing. Either a letter from the Subcontractor or supplier indicating a desire to withdraw or a copy and receipt of a registered letter to the Subcontractor or supplier shall accompany this written request.

No replacement of subcontractor or supplier can be made without the Owner's written acceptance of the proposed alternate subcontractor or supplier. Agreements made or proposed to perform work of this contract between the contractor or one of the listed Subcontractors and any other company shall be considered a change of Subcontractor and require the Owners approval. No change of subcontractor or supplier requested by the Contractor shall increase the contract price.

12 GC3.10 SHOP DRAWINGS

1 Add the following to 3.10.1:

All Shop Drawings and their submissions shall conform to Section 01300.

13 GC3.12 CUTTING AND REMEDIAL WORK

1 Add to 3.12.1 the following:

Where cutting and remedial work is required specifically for the work of any section of this contract, it shall fall under the responsibility of that section.

14 GC3.13 CLEAN-UP

1 Add a new paragraph 3.13.4:

In addition to the requirements of CCDC 2, complete the requirements of Section 01700.

15 GC5.2 APPLICATIONS FOR PROGRESS PAYMENT

1 Modify clause 5.2.1 to read:

.....payment shall be made monthly as the work progresses until the substantial performance of the work. At that time no further invoices will be accepted until the final invoice is applied for and the work is deemed by the Consultant to be totally complete. The only exception shall be a request for release of holdback upon expiration of the lien period.

2 Modify paragraph 5.2.5:

The schedule of values shall be made out in a form as indicated the enclosed appendix to this Section

3 Add the following to paragraph 5.2.6:

Each application shall also include an approved schedule (as may be revised under GC3.5 of CCDC2) indicating status of work to the date of application. No payments will be certified unless the Consultant assesses the work is being completed as per the approved Construction Schedule.

4 Add the following paragraph 5.2.8:

Every application for payment shall be accompanied by a construction schedule. Under the terms of this contract, the contractor shall indicate that all work is being completed as scheduled on the date of this application. No payments will be certified unless the Consultant assesses the work is being completed as per the approved construction schedule. The Consultant will return to the contractor all applications for payment not complying with this requirement.

5 Add the following paragraph 5.2.9:

For the purposes of this contract the close out requirements indicated in Section 01700.2 shall have an agreed value of 5% of the total construction cost. Certification of this value shall be made only when all conditions indicated in Section 01700.2 have been completed

16 GC5.3 PROGRESS PAYMENTS

1 Add a new paragraph 5.3.2:

Commencing with the second application for progress payment and for all applications hereafter, the General Contractor shall furnish a Statutory Declaration (as per enclosed specimen copy) declared before a Notary Public, Commissioner of Oaths, etc. that all sub-contractor's labour and accounts for material whatsoever entering into the construction of the contract, as set forth in the progress estimate passed last previous to the current application, have been paid.

2 Add a new paragraph 5.3.3:

Upon notification of a written notice from a listed Subcontractor or specified supplier of non payment for which the contractor has notarized as paid, all unpaid certified amounts and subsequent certificates will be frozen until the conflicting statements between the contractor and Subcontractor/supplier resolved.

17 GC5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE

1 Add the following clause 3 to 5.5.1:

Meet all requirements of the Construction Lien Act including publishing a statement in the Daily Commercial News as follows at the contractor's cost:

THIS FORM HAS BEEN INSERTED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT CONSIDERED PART OF THE CONTRACT DOCUMENTS. THE INFORMATION SUPPLIED IN ANY PUBLICATION MUST BE DONE IN COMPLIANCE WITH APPLICABLE GOVERNMENT REGULATIONS.

CERTIFICATE OF SUBSTANTIAL PERFORMANCE OF THE CONTRACT

UNDER SECTION 32 OF THE CONSTRUCTION LIEN ACT

(County; District or Regional Municipality; City; in which premises are situated)

(address, city, postal code)

This is to certify that the contract for the following improvement:

Holy Rosary School Renovations

to the above premises was substantially performed on

(date Certificate signed)

Certified by Terry Marklevitz, B.Arch, O.A.A., M.R.A.I.C. (Lic.3462) (BCDN 4211)

1 Owner: **St. Clair Catholic District School Board**
(Name of Owner)

420 Creek Street, Wallaceburg, ON N8A 4C4
(Address for service)

2 Contractor:
(Name of Contractor)

Contractor's Address
(Address for service)

3 Certifier **Marklevitz Architects Inc.**
(Name of Payment Certifier)

516 Huron Street, Stratford, Ontario, N5A 5T7.
(Address)

4 Identification of premises for preservation of liens:

18 GC5.6 PROGRESSIVE RELEASE OF HOLDBACK

1 Delete GC5.6: No progressive release of holdback will be permitted on this project.

All conditions of the Construction Lien Act are considered as part of this contract. The Contractor shall be responsible for all related administration including publication and publication cost for the notification of substantial completion.

19 GC6.2 CHANGE ORDERS

1 Add the following new paragraph 6.2.3:

All alterations and/or revisions in excess of the total value of the indicated allowances shall be charged as follows.

For work by the forces of the General Contractor, the General Contractor shall charge the net price of material and labour, plus 10% overhead, 5% profit.

On work of a Subcontractor the subcontractor shall charge the net price of materials and labour plus 10% overhead, and 5% profit, the Contractor shall add to this cost, 10% overhead/profit.

For the purposes of this contract the work 'overhead' shall be interpreted as all on site supervision, all office administration and all reimbursable related to the change. The Phrase 'net price' shall refer to the cost of all materials delivered to the site and all labour costs required for the actual installation but shall not include any of the overhead charges.

20 GC6.3 CHANGE DIRECTIVE

1 Add the following clauses 6.3.14

Unless an on site Change Directive is issued, the Owner and Consultants assume that there is no change in the contract price as a result of their comments. Verbal instructions are to be confirmed in writing within 24 hours. If the Contractor does not receive that confirmation, the contractor shall notify in writing within 30 days that it is their intention to complete the indicated scope of work and that it will involve a change to the contract. In the absence of a written instruction or a notification received and approved by the Consultant, no change to the contract will be considered.

No changes in contract price will be considered for changes implied or requested by anyone other that the authorized representatives.

Unless otherwise approved all quotations for changes must be submitted within 30 days of the request.

21 GC6.5 DELAYS

1 Modify 6.5.5 as follows:

.....the consultant to furnish instructions within 14 working days.....

2 Add a new condition to be 6.5.6 as follows:

The Owner has the right to reduce the value of the contract by the actual value of costs related to unapproved construction delays. The Owner shall be required to provide complete documentation of such costs which will be limited to:

providing temporary facilities or storage for proposed uses of the building

all consultant(s) time after the agreed completion date

all additional moving and relocation charges necessitated by the late completion of the work

where it can be documented, the loss of income due to the unavailability of the building

22 GC 7.1 TERMINATION OF CONTRACT

1 If the Contractor should neglect to execute the work properly or otherwise fails to comply with the requirements of the contract to a substantial degree, the Owner may correct such faults and deduct the cost thereof from any payment then or thereafter due to the Contractor, or terminate the Contractor's right to continue with the work in whole or in part or terminate the contract.

23 GC8.1 AUTHORITY OF THE CONSULTANT

1 Change 8.1.1 to read:

Differences between the parties to the "contract" as to the interpretation application, or administration of the "contract" or any failure to agree where agreement between the parties is called for, herein collectively called disputes, shall be considered resolved by the finding of the "Consultant" under GC2.2 Role of the Consultant.

2 Change 8.1.2 to read:

The parties are deemed to have expressly waived and released either party from any claims in respect OF the particular matter, unless legal action is commenced within 15 working days of receipt of Consultant's written findings.

24 GC8.2 NEGOTIATION, MEDIATION AND ARBITRATION

1 Delete this Section

25 GC8.3 RETENTION OF RIGHTS

1 Delete this section.

26 GC9.2 TOXIC AND HAZARDOUS SUBSTANCES

1 Replace clause 9.2.3 with the following:

The Owner shall supply the Contractor with all available documentation of Hazardous Materials. The Contractor shall take all reasonable steps to ensure that no person suffers injury, sickness or death and that no property is injured or destroyed as a result of exposure to, or the presence of, toxic or hazardous substance or materials which were at the *Place of the Work* prior to the *Contractor* commencing the Work

2 Modify clause 9.2.4 to read:

The Contractor shall be responsible to taking all necessary steps in accordance with legal requirements, to dispose of, store or otherwise render harmless toxic or hazardous substances or materials which were present at the *Place of the Work* prior to the *Contractor* commencing the Work. **All additional removal or protection of hazardous material requiring specialized trades, other than those that are identified in these documents, will be completed under this contract through a change to the contract and using personnel approved by the Owner.**

27 GC10.1 TAXES AND DUTIES

1 The contract price shall include all taxes and customs duties in effect at the time of the bid closing. Value Added Taxes shall in indicated as stipulated in Article A-4 of the Agreement - CONTRACT PRICE.

28 GC10.2 LAWS, NOTICES, PERMITS & FEES

1 Make the following change to 10.2.2:

The contractor, not the owner, shall be responsible to obtain and pay for the Building Permit. The Owner shall pay for permanent easements and rights of servitude.

2 Add the following to 10.2.2:

The contractor shall be responsible for all initial fees of operating licenses as required for inspections. or commissioning of any portion of the work.

29 GC11.1 INSURANCE

1 Add to 11.1.1.1 the following:

The Contractor shall secure and maintain, during the full term of this contract, Liability insurance coverage for the business to the extent of at least $2,000,000.00 per incident and commercial general automobile liability insurance to the extent of $2,000,000.00 per incident for al licensed vehicles provided, however, that if the Contractor has already such coverage on his business in the said amount, he shall not be required to place additional coverage. The Owner shall be designated as a named insured on any policy if requested.

30 GC11.2 BONDS

1 Add to 11.2.1 the following:

Performance Bond:

The successful General Contractor shall furnish to the Owner, a guarantee bond covering the faithful performance of the contract in the amount of 50% of the contract amount. The bond shall be in the form as approved by the C.C.A. or certified cheque, and shall remain in effect for a period of one year from the date of the Consultant's final certificate.

Labour and Materials Payment Bond:

The successful General Contractor shall furnish to the Owner, a guarantee bond covering the payment of labour and materials in the amount of 50% of the contract amount. The bond shall be in the form as approved by the C.C.A. and shall remain in effect for a period of one year from the date of the Consultant's final certificate.

Section 00800

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

CONTRACTOR
ADDRESS
BUS. PHONE
FAX PHONE

PROJECT & #
DRAW #
DATE

Allowances and Subtrades	Original Contract Value	% Complete	Complete	Previous Payment	This Draw
General Requirements					
Cash Allowance					
Demolition					
Grading & Seeding					
Excavation & Backfill					
ETC.					
Sub-Total					
Change Order #1					
Change Order #2					
ETC.					
SUBTOTAL					
H.S.T.					
VALUE OF CONTRACT					
LESS 10% HOLDBACK					
LESS TOTAL INVOICED TO DATE					
AMOUNT REQUESTED					

1 DESCRIPTION OF WORK

1 The work of this contract includes all permits, taxes, services, labour, material, supervision, and administration required to complete the scope of work of this project.

2 Unless indicated to remain, unfinished or to be supplied by others, this project is considered to include complete and operable mechanical, plumbing and electrical systems. The construction shall be weather tight with all exposed surfaces finished as specified or to match adjacent areas. All required fire separations and enclosures shall be provided.

3 Nothing within these documents or stated by the Owner or consultants shall override or imply non compliance with regulations governing the work of this project. The contractor shall give notification of any conflicts and receive written confirmation before proceeding with any affected work.

4 The intent of the drawings and specification is to describe special materials and construction methods required for this project. They are not intended as a manual of construction for every possible construction condition. The contractor is required to use qualified tradesmen, and those tradesmen are required to provide quality work using methods approved by;

governing regulations.

specified trade, engineering and testing organizations.

manufacturers guidelines.

5 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

6 Work shall include in general but shall not be limited to the Scope of Work as indicated in Section 01010.

7 Photo identification badges are required to be worn by all personnel within the Contractor's responsibility while working on the Owner's property.

2 DOCUMENTS REQUIRED

1 Maintain at job site, one copy each of the following:

1 Ministry of Labour Notice of Project complete with a copy of all reports
2 Municipal Building Permit complete with permit set of construction documents and all reports
3 Contract drawings.
4 Specifications.
5 Addenda.
6 Approved Construction Schedule

7 Copies of all project meeting minutes
8 Revised shop drawing.
9 Change orders.
10 Other modifications to the contract.
11 Field test report.
12 Copy of approved work schedule.
13 Manufacturer's installation and application instructions.
14 WHMIS standards for products used on site.
15 When requested under special circumstances, provide Standard listed in Part I of specification sections under references standards.
16 Designated Substance Survey as prepared by Advanced Environmental
17 Environment Assessment
18 Copies of company health and safety policies of the Contractor and all Subcontractors as required by the Ministry of Labour
19 Copies of safety and trade certifications for all those on site as required by this contract and by government statute
20 Copies of all required government statutes and document, including but not limited to:
The Ontario Building Code
The Ontaro Fire Code
Construction Safety Handbook
21 Testing Agency reports on any listed assemblies, systems or products.

3 PRODUCTS SUPPLIED BY OWNER

1 Unload and handle at site.

2 Promptly inspect delivered products, and give written to Consultant on condition of all items.

3 Install, connect and finish products as specified.

4 WORK SCHEDULE

1 Provide within ten (10) working days after award of contract, a weekly construction schedule using either a bar graph method related to Subcontractors or a critical path diagram related to construction tasks. This schedule shall be completed in consultation with Subcontractors and material suppliers for this project. Any submitted schedule shall be considered by the Owner and the Consultants as approved not only by the Contractor, but as well as Subcontractors and suppliers of materials.

Construction schedule shall indicate the following:

commencement of construction

progress of all phases of on site construction

dates of submission for all shop drawings, samples, warranties and manuals. This schedule shall include deadlines for return of approved shop drawings to the Contractor by the Consultants, allowing for the period of review indicated in Section

dates of completion of all on site mock-ups

coordination dates for items that affect the ongoing operation of existing facility including electric power shut-downs, water shut-offs, road closures, and other item that may disrupt or provide a safety concern to the Owner.

date of Substantial Performance (August 19, 2011)

date of Total Performance

2 Refer also to GC3.5 Construction Schedule.

3 Interim review of work progress based on work schedule will be conducted as determined by the Consultant. No schedule shall be revised without the written approval of the Owner through the consultants as per GC Part 6 of CCDC 2, 2008

4 Refer also to GC6 for the approval process to extend construction times and penalties related to late completion of the work.

5 COST BREAKDOWN

1 Before submitting first progress claim, submit breakdown of contract prices in detail as directed by Consultant and aggregating contract price. After approval by the Consultant, cost breakdown will be used as basis for progress payment.

6 CONTRACTOR'S USE OF SITE

1 Do not unreasonably encumber site with materials or equipment.

2 Move stored products or equipment which interfere with operation of work.

3 Obtain and pay use of additional storage or work areas needed for operations.

4 Work during school hours must be approved by the Owner's Representative. All construction and maintenance activities shall be confined to the areas of the school under construction. Fire exits shall be maintained at all times and physical barriers will be used to isolate the construction work from school staff and students.

5 The Contractor shall provide appropriate polyethylene plastic curtains between new construction and corridors to prevent dust penetration and provide doormats and take other appropriate precautions in these rooms to prevent dirt being tracked into the school.

6 The Contractor must cooperate and coordinate all building activities, which may interfere with the school, with the school Principal.

7 The school must be left in a safe and secure condition at the end of every day. The Contractor is responsible for arming the building at the end of each day if school staff are not present.

8 The Contractor shall be solely responsible for loss or damage of his tools, equipment or any materials on the Owner's property.

9 The Contractor shall ensure the work zone is clearly delineated with appropriate barricades to prevent unauthorized access.

10 Prior written approval must be obtained from the School Principal when bringing vehicles on to a school playground during school hours. Trucks and all other vehicles shall proceed with caution with a maximum 10 kph on school property. All trucks must be equipped with automatic back-up alarms. No vehicles shall be operated on the schoolyard while children are on the playground.

11 The Contractor must report to school office or school representative at the beginning of each work shift.

7 PARTIAL OCCUPANCY OR USE

1 The Owner has the right to use the facility for its stated purpose upon the scheduled date of substantial performance. All related costs of moving and protection and work outside of normal working hours as required to complete the project shall be the responsibility of the contractor.

2 The Owner shall have the right to enter and occupy renovated parts of the building in whole or in part for the purpose of placing fittings and equipment or for other use, before completion of the contract, if in the opinion of the Owner's Representative such entry and occupation does not prevent or interfere with the Contractor in the performance of the completion of his contact within the time specified. Such entry and occupation shall not be considered as acceptance of the work or in any way relieves the Contractor from his responsibility to complete the contract.

8 CODES AND STANDARDS

1 Perform work in accordance with all applicable governmental regulations including, Ontario Building Code, Ontario Fire Code, Ministry of Labour requirements and any other local codes or bylaws provided that in case of conflict or discrepancy, more stringent requirements shall apply.

2 Meet or exceed requirements for specified standards, codes and reference documents.

3 The contractor, not the owner, shall be responsible to obtain and pay for the Building Permit. The Owner shall pay for permanent easements and rights of servitude.

4 The contractor shall register this project with the Ministry of Labour. Registration forms of Constructors and Employers of Workers are available from the Ministry of Labour offices.

5 The Construction Project Managers shall coordinate arrangements for the contractor to be briefed on Fire Safety at their pre-work conference by the Fire Chief before any work is commenced.

6 Provide all street and sidewalk closings, as required by the work, in compliance and with the co-ordination with the municipality or the related governing authority.

7 Provide the Authority having Jurisdication a copy of all official job minutes and other documentation as required by legislation.

8 Notify the appropriate government authorities when site reviews are required by governing regulations. Maintain a log of all notifications, site visits, and verbal directives given by these authorities. Notify the Consultant in writing of any directives given.

9 Maintain on site a record of all written reports and directions given by these authorities. Provide a copy to the Consultant within 48 hours of receipt.

10 At the completion of the project include the close out documentation a copy of all permits, the log notes of notification, site visits and site reports by governmental authorities.

9 PROJECT MEETINGS

11 Attend all regular project meetings

12 Notify Subcontractors and suppliers concerned of meetings.

13 Distribute minutes to all Subcontractors and suppliers within 24 hours of receipt of minutes

10 SETTING OUT OF WORK

1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.

2 Provide devices needed to layout and construct work.

3 Supply such devices as straight edges and templates required to facilitate Consultant's inspection of work.

4 Supply stakes and other survey markers required for laying out work.

11 CO-ORDINATION

1 Ensure co-operation to workers in laying out work. Maintain efficient and continuous supervision. One supervisor, who the Owner agrees to, shall be provided by the Contractor. That supervisor shall be on site during all construction from commencement of work to substantial completion. Substitution of this supervisor can be made only through the mutual consent of the Owner and Contractor.

2 Be responsible for co-ordination and placement of openings, sleeves and accessories.

3 Coordinate with the Owner's representative on a weekly basis and as required to ensure the ongoing operation of the building. The Owner has the right to refuse disruption of services or the use of power impact tools during normal hours of building operation.

12 LOCATION OF EQUIPMENT AND FIXTURES

1 Location of equipment, fixtures and outlet indicated or specified are to be considered as approximate.

2 Locate equipment, fixtures and distribution system to provide minimum interference and maximum usable space and in accordance with manufacturers recommendations for safety, access and maintenance.

3 Submit field drawing to indicate relative position of various services and equipment when required by the Consultant.

13 CONCEALMENT

1 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

14 CUTTING, FITTING AND PATCHING

1 Execute cutting , fitting and patching required to make work fit properly together.

2 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.

3 Obtain Consultant's approval before cutting, boring or sleeving load-bearing members.

4 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

5 Unless otherwise specified all cutting and patching shall be the responsibility of the Subcontractor who will provide qualified tradesmen to complete the necessary patching.

6 In areas otherwise unaffected by the work of this contract, Subcontractors that are required to disturb existing finishes shall patch the existing surfaces and provide new finishes to the entire wall or ceiling surface to an appropriate existing seam or corner, i.e. where cutting or patching is required to an existing wall, the entire wall will be painted; or where ceiling tile has to be disturbed, the existing ceiling tile will be reused - ceiling tile will be found to match the existing tile in colour and texture, or all new ceiling tile will be provided.

15 EXISTING SERVICES

1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to pedestrian and vehicular traffic.

2 Before commencing work, establish location and extent of service lines in area of work and notify the Consultant of findings.

3 Submit schedule to and obtain approval from Consultant for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to effected parties.

4 Where unknown services are encountered, immediately advise Consultant and confirm finding in writing.

5 Remove abandoned service lines within 2 metres of structure. Cap or otherwise seal lines at cut-off points as directed by the Consultant.

6 Record locations of maintained, re-routed and abandoned service lines.

16 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

1 Execute work with least possible interference or disturbance to occupants, public and normal use of premised. Arrange with Consultant to facilitate execution of work.

2 Where security has been reduced by work of contract, provide temporary means to maintain security.

17 INITIAL SITE MEETING AGENDA ITEMS

Nothing in this agenda shall supercede the requirement of the contract indicated elsewhere

1 GENERAL

1 The Consultant shall conduct the site meetings and provide the official minutes.

2 The Consultant shall distribute to the following:

the Owner's representative

the local building official

the Contractor
all subconsultants of the Consultant
any others requested by the Owner

3 The Contractor shall be respeonsible for the distribution of minutes to all Subcontractors and suppliers

4 The contractor shall ensure that all major Subcontractors (determined in discussion with the Consultant) are present for this meeting.

2 NOTICES IN WRITING

1 The owner, contractor and consultant shall each assign a representative for all contract administration in accordance with Article A-6 of CCDC 2. As this contract now permits facsimile and electronic communication as being official, each party will assign an official email address, fascimile, phone number and postal address to which all correspondence shall be sent. Each party shall be repsonsible for ensuring the communication as been sent and received as per Section 00800. No other addresses shall be used for this formal communication. All of the following communications shall be sent to the assigned address:

changes to the contract
request, approval or denial of payment
submission of requested information regarding contemplated changes to the contract
formal minutes of meetings
stop work orders
issues related to disputes
termination of contract

3 CHAIN OF AUTHORITY

2 When a project occurs on a site where the owner requires access or needs to maintain operations, the contractor shall maintain safe access, egress, and provide temporary facilities and services as required. The Contractor shall schedule work to permit the owner's normal operations and coordinate the work with the Owner's on site representative on a weekly basis as it may relate to these operations.

3 The Owner and Consultant will each designate a representative(s) who will have the authority to issue site instructions. The contractor will not accept any direction from others. Any change of representative must be done in writing.

4 On a site occupied by others the Owner will designate an on site representative. That representative will have no authority to make changes to the contract, with the exception of stop work on the property beyond the construction area that is felt to be unsafe.

5 No representative of the Owner or Consultant is authorized to give direction to a Subcontractor.

4 CONSTRUCTION SAFETY

1 Construction safety should be the first topic on subsequent site meeting agenda.

2 The contractor shall apply to the Ministry of Labour for the Notice of Project and to the municipality for a Building Permit. Post the documents and provide the Consultant with a copy. The contractor shall provide a written copies of all site visit reports and verbal commands.

3 The contractor is responsible for safety within the project limits and as required to provide access over the site to it. The contractor shall secure the site and maintain all barriers in good condition.

4 The contractor has sole right to limit access to the property. The Owner's staff have no right to access the property without the knowledge of the Owner's representative and the approval of the contractor. The Owner shall notify their staff of this condition.

5 The Owner's representative shall have the right to request stop the work that poses a safety concern outside the area of construction. The Consultant shall be notified of this action immediately

6 Where the remainder of the site is in use by others, the Contractor does not have the right of unlimited access across the property. All access must be coordinated with the Owner.

7 The Owner shall provide all available information on hazardous material contained within the building. The contractor shall review all available documentation regarding such substances that may be present in this building, including reports as appended in Section 01010. The contractor shall be solely responsible for the construction and all workers using the effected areas. The contractor shall not commence work until satisfied that these reports are complete and all those on site have been fully instructed in safety procedures.

8 The Contractor shall ensure that these reports are available to all employees and Subcontractors that are on site during the project. The Contractor shall keep a record signed by each employee and Subcontractor indicating that they are aware of the reports and their contents.

9 The intent of this contract is that all removal of hazardous material requiring specialized tradespersons has been completed under separate contract. However, in all work to existing buildings, the contractor must assume that asbestos may still be present.

5 COORDINATION

1 Provide within ten (10) working days after award of contract, a weekly construction schedule using either a bar graph method related to Subcontractors or a critical path diagram related to construction tasks. This schedule shall be completed in consultation with Subcontractors and material suppliers for this project. Any submitted schedule shall be considered by the Owner and the Consultants as approved not only by the Contractor, but as well as Subcontractors and suppliers of materials.

2 The Contractor shall identify items with long delivery times and factor this information into the schedule.

3 At the beginning of the project the Contractor shall schedule all inspection, reviews and certifications that are required for the occupancy of the project or use of the equipment. The dates of these reviews shall be included as critical deadlines within the overall construction schedule. These reviews shall include but are not limited to

Fire alarm verification

Electrical reviews and verification

4 The Contractor shall ensure timely production and review of all shop drawings and samples.

5 The Contractor is required to complete the work according to this schedule and will be responsible under the terms of the contract for costs incurred by the Owner for late completion.

6 When a project occurs on a site where the owner requires access or needs to maintain operations, the contractor shall maintain safe access, egress, and provide temporary facilities and services as required. The Contractor shall schedule work to permit the owner's normal operations and coordinate the work with the Owner's on site representative on a weekly basis as it may relate to these operations.

7 Where a project is on a site that is occupied by others, the Contractor's superintendent shall arrange and conduct a weekly meeting with the Owner's on site representative. The purpose of this meeting is to discuss, safety and noise issues, the weekly scope of work, coordination of issues that effect the site beyond the construction area and personal issues.

8 The contractor shall notify all regulating authorities of the commencement of work. Notification shall also be given the police department to make them aware of the potential of vandalism.

9 The fire department shall be notified and any encumbrances to their access plan to and within the building discussed.

6 PRE CONSTRUCTION REVIEW

1 The Owner assumes that unless otherwise noted in the contract documents that the site, building and finish conditions both on the site and on neighbouring public and private lands are in a good state of repair. Therefore the full restoration of any area damaged by the work of this contract shall be the responsibility of the Contractor unless the following steps are taken

2 The Contractor shall review all existing conditions that are to remain unchanged by the work but could be effected during construction (i.e.: sidewalks, curbs, fences, adjacent walls etc). The Contractor shall arrange for such access to adjacent lands as may be required to adequately review and document suspect conditions.

7 INSURANCE

1 The Contractor shall supply proof of insurance as required by this contract

8 MONTHLY INVOICING PROCESS

1 The Contractor shall submit a cost breakdown which will form the basis of the progress invoices.

2 In order to facilitate timely payments the Consultant requests of the contractor a draft of each draw in order that it can be reviewed in conjunction with a regular site visit before the formal invoice is submitted. The date of the formal submission should be coordinate to allow for timely payment by the Owner in consideration of their payment procedures.

9 CHANGES TO THE CONTRACT

1 Unless an on site Change Directive is issued, the Owner and Consultants assume that there is no change in the contract price as a result of their comments. Verbal instructions are to be confirmed in writing within 24 hours. If the Contractor does not receive that confirmation, the contractor shall notify in writing within 30 days that it is their intention to complete the indicated scope of work and that it will involve a change to the contract. In the absence of a written instruction or a notification received and approved by the Consultant, no change to the contract will be considered.

2 No changes in contract price will be considered for changes implied or requested by anyone other that the authorized representatives.

3 Unless otherwise approved all quotations for changes must be submitted within 30 days of the request.

10 PROJECT CLOSE OUT

1 Items required for occupancy shall include but will not be limited to the following:

Electrical Safety Authority review and report

Fire Alarm Verification

Air Balancing Report

All exit doors must be complete with glazing and hardware including power door operators for accessibility entrances

All venting windows must be operating or the mechanical system must be running

Water purity test completed and verified

All ventilation, plumbing and electrical systems must be operational

All washroom accessories to accessible washrooms must be installed

Fire rated ceilings complete including fire dampers, flaps and enclosures around light fixtures

All fire rated walls must be complete with doors, fire rated glazing screens, hardware, fire stopping to all holes.
In renovation work the fire stopping is not limited to holes created by the project, but also existing defects.

All concrete and asphalt paving necessary associated with accessibility issues.

All handrails, guards, toe kicks.

Building must be watertight.

2 The project will not be considered substantial complete until

The project meets the requirements of the Construction Lien Act and Section 01700 of the contract documents

All manuals have been received and accepted

All as built drawings have been received and accepted

All warranties have been submitted and accepted

All allowances have been balanced

All system certifications have been done and report received for items required for occupancy including the air balancing and fire alarm verification

An occupancy permit is granted by the municipality.

Section 01010

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 01011: Project Information - Ontario Building Code Matrix
2 Section 01012: Materials Schedule
3 Section 01013: Room Finish Schedule
4 Section 01014: Door Schedule
5 Section 01015: Standard Details
6 Section 01006: Special Requirements of the Owner

2 REPORTS AND ATTACHMENTS APPENDENDED TO THIS CONTRACT

1 Designated Substance Survey as prepared by Advanced Environmental

2 SCOPE OF WORK

1 General

1 This scope of work is intended as a general guideline and does not limit the contractor's responsibility to complete the work in compliance with ALL requirements of the contract.

2 Asbestos Removal

1 The Owner has identified, removed or encapsulated all known sources of asbestos potentially affected by the work of this contract. However, in all work to existing buildings, the contractor must assume that asbestos may still be present. The contractor shall request and review any available studies and assessments on the building. The contractor shall insure that all concealed areas exposed during the work of this contract are inspected for hazardous materials before the work in those areas commence.

2 Contractor is responsible for construction safety on this site including the safe disposal of any asbestos as required by this contract. All removal, verification of condition shall be completed by qualified personnel registered with the Ministry of Labour.

3 Where the report indicates that asbestos occurs within the construction area, but has been encapsulated, and does not require modifications under this contract, the Contractor shall clearly identify these areas and instruct all personnel as to its location.

4 Maintain copies of reports and tests related to hazardous substances including all inspections by testing companies, consultants and government representatives on site during the duration of the project. Return reports to Owner and provide copies of all reports or notices issued during the project as part of the project commissioning.

5 Where removal of asbestos bearing material is indicated as part of the work of this contract, the Contractor shall engage properly trained personnel registered with the Ministry of Labour. This personnel shall be responsible for evaluating the removal requirements, erecting all safety precautions and supplying a air quality test and Certificate of Removal upon completion.

6 Where materials that are discovered and are suspected of containing asbestos, but not indicated within these documents to be removed or modified, the Contractor shall immediately cease work in the affected area and notify the Consultant. This material will be dealt with under direction by the Owner.

3 Fire Separations

1 Unless otherwise indicated provide 3/4 hour separation around all corridors.
2 Unless otherwise indicated provide a 1 hour separation around all mechanical and electrical areas
3 All walls of separations as required by the building code or indicated in these documents shall be fully extended to the structural deck above with all openings fire stopped. Review location of structural elements that might conflict with these separations. Notify Consultants of conflicts before commencing working.

4 Modifications to Existing

1 Replace fire alarm system throughout
2 Install new HVAC system complete with A/C and BMS
3 Install new lighting where indicated
4 Replace windows throughout
5 Replace all interior and exterior doors throughout.
6 Paint entire school including all classrooms, offices, corridors and washrooms unless noted otherwise.
7 Replace flooring and baseboards throughout unless noted otherwise
8 Upgrade washrooms including for partitions and fixtures
9 Replace millwork, chalkboards and tackboards in all classrooms, library and staff room
10 Install 2 layers ½" type 'X' gypsum board to underside of all exposed wood structures
11 Install new t-bar acoustic tile ceilings in all classrooms and staff area
12 Relocate library, chapel and offices
13 Refer to mechanical and electrical drawings for further alterations information.

5 New Construction

1 In addition to the modifications to the existing school a new 3 classroom modular building will be supplied/installed by NRB modular building specialists under a separate contract with the St. Clair Catholic District School Board. This project will run concurrently with the modifications to the existing school.

2 Items related to the modular building that will be the responsibility of the General Contractor's contract are as follows:
- disconnect electrical service, fire alarm, PA system, data and communications, water service, storm and sanitary connections
- removal of existing fencing for NRB access to site
- supply/installation of construction hoarding to provide clear separation of construction areas.
- Post NRB modular building installation:
o Make all final service connections to modular building including electrical service, fire alarm, PA system, data and communications, water service, storm and sanitary connections
o Restoration of site including all surfaces disturbed by modular building installation, ie asphalt and concrete paving, sodding and fencing.

6 Scheduling of Work

1 All work shall be substantially complete by August 19, 2011

Section 01011

2808-11

Holy Rosary School Renovations

715 London Street, Wyoming ON N0N 1T0

St. Clair Catholic District School Board

Project Date: March 17, 2011

Marklevitz Architects Inc. **(reproduction without the author's written permission is prohibited)**

Architect of Record **Terry Marklevitz, B.Arch, O.A.A., M.R.A.I.C. (Lic.3462) (BCDN 4211)**
516 Huron Street, Stratford, Ontario, N5A 5T7.
(519) 271-9230

ONTARIO ASSOCIATION OF ARCHITECTS
TERRY C. MARKLEVITZ LICENCE 3462

Jan 20 06 tm

Signature of the Architect of Record Date Reviewed

The Architect noted above has exercised responsible control with respect to design activities. The Architect's seal number is the Architect's BCDN

2006 Ontario Building Code Data Matrix Part 3 & 9

							OBC Reference		
1						New	Part 3	Part 9	Part 11
					X	Addition	1.1.2.[A]	1.1.2.[A]	11.1 to 11.4
					X	Alterations			
						Change of Use		9.10.1.3	
2	**Major Occupancy('s)**	A2-Assembly					3.1.2.1.(1)	9.10.2	
		Existing		New		Total			
3	**Building Area (sM)**	1,031.31		370.11		1,401.42	1.4.1.2.[A]	1.4.1.2.[A]	
4	**Gross Area (sM)**	1,031.31		370.11		1,401.42	1.4.1.2.[A]	1.4.1.2.[A]	
5	**Number of Storeys**	Above grade	1	Below grade			1.4.1.2.[A] & 3.2.1.1.	1.4.1.2.[A] & 9.10.4.	
6	**Height of Building (M)**	5.56		Metres	(gymnasium)				
7	**Number of Streets**	2					3.2.2.10. & 3.2.5.5.	9.10.20.	
8	**Building Classification**	A2 - Assembly					3.2.2.20 - 83	9.10.2	
9	**Sprinker System**	Entire Building		No	Yes/No		3.2.2.20 - 83	9.10.8.2.	
		Selected Compartments		No	Yes/No		3.2.1.5.		
		Selected Floor Areas		No	Yes/No		3.2.2.17		
		Basement only		No	Yes/No		INDEX	INDEX	
		In lieu of Roof Rating		No	Yes/No		INDEX	INDEX	
		Required		No	Yes/No				
10	**Standpipe required**	No	Yes/No				3.2.9	N/A	
11	**Fire Alarm required**	Yes	Yes/No				3.2.4.	9.10.18.	
12	**Water Service Suppy is Adequate**	N/A	Yes/No				3.2.5.7.	N/A	
13	**High Building**	No	Yes/No				3.2.6.	N/A	
		Combustible		Non Combustible		Both			
14	**Permitted Construction**					3.2.2.25	3.2.2.20 - 83	9.10.6	
		Compartments required		**Compartments required**					
	Actual Construction					3.2.2.25	(existing 11.3.3.1)		
15	**Mezzanine(s) Area (sM)**	N/A					3.1.2.1.(3) - (8)	9.10.4.1.	
16	**Occupancy load based on**	sM / Person		Design of Building			3.1.17.	9.9.1.3	
	Basement	Occupancy		Load		persons			
	First	Occupancy	200	Load	25/Class	persons			
	Second	Occupancy		Load		persons			

Section 01011

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	Third	Occupancy		Load		persons		
	Total		200					
17	**Barrier Free Design**	Yes	Yes/No	Explain	accessible entrance and new barrier free washroom		3.8.	9.5.2.
18	**Hazardous Substances**	No	Yes/No	Refer to Designated Substances Report			3.3.1.2. & 3.3.1.19.	9.10.1.3.(4)
19	**Required Fire Resistance Rating (FRR)**						3.2.2.20 - 83 & 3.2.1.4.	9.10.8
	Horizontal Assemblies FRR (Hours)			Listed Design No. or Description (SG-2)				9.10.9.
	Floors	45	Minutes	N/A				
	Roof	45	Minutes	Adding 2 layers of ½" type 'X' gypsum board to underside of structure in all affected areas SB-2 2.3.12				
	Mezzanine		Minutes					
	FRR of Supporting Members			Listed Design No. or Description (SG-2)				
	Floors	45	Minutes	N/A				
	Roof	45	Minutes	Existing. No changes				
	Mezzanine		Minutes					

20 **Spatial Separation - Construction of Exterior Walls**

	Area of EBF	LD.	L/H or H/L	Permitted Max % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design of Description	3.2.3 Comb. Const	9.10.14 Comb. Construction Nonc. Cladding	Non-comb. Construction
North	Decreased area of openings in north, east and south elevations									
South										
East										
West	No changes to west elevation.									

Other Building Code Requirements

					OBC Reference		
					Part 3	Part 9	Part 11
21	**Acoustical Separations** (Residential ratings) 9.11	N/A	STC Rating	Listed Design No. or Description (SG-2)		9.11	

Section 01011

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22 **Fire Walls**

N/A	Location	Required Rating	Listed Design No. or Description (SG-2)		
				3.1.10	9.10.11.

23 **Major Occupancy Separations**

Occupancy #1	Occupancy #2	Rating (Hours)	Listed Design No. or Description (SG-2)	3.1.3.	9.10.2.
A2 - Assembly		N/A	N/A		

24 **Separations within Floor Areas**

	Required Rating	Listed Design No. or Description (SG-2)	3.1.3.	9.10.2.
Between rooms or suites	45 Min	140mm block SB-3B1a; JF94 (top of wall to u/s of deck 190mm block SB-3B1b; SP163, SP196 (penetrations thru concrete block)		
Between suites and corridors	45 Min	140mm block SB-3B1a; JF94 (top of wall to u/s of deck 190mm block SB-3B1b; SP163, SP196 (penetrations thru concrete block)		
Around stairwells	N/A			
Around mechanical rooms	1 Hour	140mm block SB-3B1a; JF94 (top of wall to u/s of deck 190mm block SB-3B1b; SP163, SP196 (penetrations thru concrete block)		
Around shafts				

24 **Other Building Code Considerations**

	Yes / No		
Interconnected Floor Space(s)	No		3.2.8.
Exit Through A Lobby	No		3.4.4.2.
Exterior Combustible Cladding Systems	No		3.1.5.5.
Fire Alarm System Type and Operation	Yes		3.2.4.1.
Impeded Egress Zone/Contained Use Areas	No		3.3.3.
Barrier Free Requirements - Places of refuge	N/A		3.3.1.7.
Exit Capacity/Location/Dead Ends	N/A		

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Holy Rosary School Renovations

St. Clair Catholic District School Board

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Number	Section	Item	Item
02110	**Demolition**	Temporary Structures including shoring, scaffolding, false work, hoarding and bracing	Temporary Structures including shoring, scaffolding, false work, hoarding and bracing: to Ministry of Labour standards and CSA guidelines Shop Drawings: Provide engineered shop drawings in accordance with Section 01300
02110	**Demolition**	Demolition	Demolition: to National Building Code of Canada 1995, Part 8 Construction Safety Measures
02487	**Sodding**	Nursery Sod	Nursery Sod: to Guide Specification for Nursery Stock' Section 17, 1978 Edition, published by Canadian Nursery Trades Association for quality and source Number one Kentucky bluegrass/Fescue sod: sod grown from minimum 40% Kentucky bluegrass, 30% Creeping Red Fescue.
02513	**Asphalt Concrete Paving**	Granular Sub-base	Granular Sub-base: to O.P.S.S. Specification Form 1010 Class 'B' Granular Thickness / Size: to a max. particle size of 50mm (2")
02513	**Asphalt Concrete Paving**	Granular base	Granular base: to O.P.S.S. Specification Form 1010 Class 'A' Granular
02513	**Asphalt Concrete Paving**	Asphalt Concrete Binder Course	Asphalt Concrete Binder Course: to O.P.S.S. 1150 HL6 - 85-100 penetration asphalt cement. Thickness / Size: 38mm (1.50") unless otherwise indicated
02513	**Asphalt Concrete Paving**	Asphalt Concrete Surface Course	Asphalt Concrete Surface Course: to O.P.S.S. 1150 HL3M - 85-100 penetration asphalt cement. Thickness / Size: 38mm (1.50") unless otherwise indicated
02515	**Concrete Paving**	Portland cement concrete pavement	Portland cement concrete pavement: to OPSD standards and CAN-A23.1-09
02515	**Concrete Paving**	Portland cement	Portland cement: to CAN3-A5-M93
02515	**Concrete Paving**	Water, aggregate	Water, aggregate: to OPSD standards and CAN-A23.1-09
02515	**Concrete Paving**	Welded steel wire fabric	Welded steel wire fabric: to CSA G30.5-1972
02515	**Concrete Paving**	Asphalt felt expansion joint filler	Asphalt felt expansion joint filler: to ASTM-D-1751-65
02515	**Concrete Paving**	Air Entraining Admixture	Air Entraining Admixture: to CAN 3A-A266.2-M78 Sternson - Sternson N.V.R. or an equivalent product approved equal by the Architect.

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Number	Section	Item	Item
02515	**Concrete Paving**	Sealant	Sealant: to C95B14-GP-3M Sternson - Duo-flex S.L. two component polysulphide or an equivalent product approved equal by the Architect.
02515	**Concrete Paving**	Granular base	Granular base: to MTC form 1010 Granular 'A'
02515	**Concrete Paving**	Wood formwork	Wood formwork: to OPSD standards and CAN-A23.1-09
02515	**Concrete Paving**	Curing Compound	Curing Compound: to CGSB 90-GP-1a Type 2 Chlorinated rubber type compound
02515	**Concrete Paving**	Joint Sealer	Joint Sealer: to CGSB-19-GP-24M Stenson - Tremco THC900 self-levelling urethane: or Rubber Caulk 6000 by PRC Canada Inc.; or an equivalent product approved equal by the Architect
02515	**Concrete Paving**	Liquid Curing Agent	Liquid Curing Agent: Sternon- Ritecure; or Masterseal by Masterbuilders; or Promulsion 100 by ConCehm or an equivalent product approved equal by the Architect
04200	**Masonry**	Grout	Grout: to CSA A179M-04 Table 3
04200	**Masonry**	Interior and Exterior Mortar above grade	Interior and Exterior Mortar above grade: to CSA A179-04 Portland cement Type 'S' Colour: as selected by Architect from Northern Pigments full range (different colours for each masonry colour) Finish: Exposed joints are concave unless otherwise indicated
04200	**Masonry**	Concrete Block	Concrete Block: to CSA A165.1M, Type H/15/A/M for hollow blocks and type S/30/A/M for solid blocks. Richvale York Block Inc. - Standard block or an equivalent product approved equal by the Architect. Thickness / Size: Metric modular in thicknesses as indicated Finish: Smooth Faced Mockups / Samples: 920mm x 1220mm (3'-0" x 4'-0")
06100	**Rough Carpentry**	Lumber	Lumber: to CAN/CSA 0141-05 (R2009), NLGA Standard Grading Rules for Canadian Lumber, 1987 Douglas Fir grade #1/2 softwood S4S (surfaced four sides), moisture content 19% or less
06200	**Finished Carpentry**	Countertops	Countertops: Plastic Laminate Finish: Refer to Room Finish Schedule Shop Drawings: in accordance with Section 01300 Mockups / Samples: provide samples in full range of colours and finishes for specified products

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St. Clair Catholic District School Board
Project Date: March 17, 2011
Marklevitz Architects Inc.

Number	Section	Item	Item
06200	**Finished Carpentry**	Cabinetry	Cabinetry: Natural Finished Maple veneer 19mm (¾") medium density particle board. Colour: as selected by Architect Finish: Refer to Room Finish Schedule Shop Drawings: in accordance with Section 01300 Mockups / Samples: provide samples in full range of colours and finishes for specified products
07200	**Insulation and Moisture Barrier**	Batt Insulation	Batt Insulation: Roxul - Mineral Wool or an equivalent product approved equal by the Architect. Thickness / Size: to RSI indicated on drawings
07200	**Insulation and Moisture Barrier**	Urethane Foam	Urethane Foam: Strassburger - Two part expanding urethane foam, complete with fire rated encapsulant or an equivalent product approved equal by the Architect.
07200	**Insulation and Moisture Barrier**	Rigid Cavity Wall Insulation	Rigid Cavity Wall Insulation: to CAN/ULC S701 Type 3 Dow - CavityMate (or Owen Corning / Celfortec - Celfort 200) or an equivalent product approved equal by the Architect. Thickness / Size: Type 3, 25 psi, 400mm x 2400mm with a thickness as indicated on the drawings
07260	**Cavity Wall Air/Vapour Barrier**	Air Vapour Barrier	Air Vapour Barrier : to Permeance - ASTM E96: Flexibility - CGSB 37-GP56M Bakor - Blueskin SA (self adhering) or an equivalent product approved equal by the Architect. Extended Warranty: 5 years
07260	**Cavity Wall Air/Vapour Barrier**	Through Wall Flashing	Through Wall Flashing: to Permeance - ASTM E96: Flexibility - CGSB 37-GP56M Bakor - Blueskin TWG (self-adhered) or as specified by manufacturer to ensure compatibility with Air/Vapour Barrier or an equivalent product approved equal by the Architect. Extended Warranty: 5 years
07410	**Steel Cladding**	Metal Wall Cladding - Vertical Rib	Metal Wall Cladding - Vertical Rib: Vic West Steel - Channel Wall prefinished metal panel or an equivalent product approved equal by the Architect. Thickness / Size: 0.76mm (22 gauge) Colour: Architect selected from Standard HMP colours Mockups / Samples: 305mm x 305mm sample of profile and gauge, full range of colours
07410	**Steel Cladding**	Metal Wall Cladding - Horizontal Rib	Metal Wall Cladding - Horizontal Rib: Vic West Steel - 22mm (7/8") CORRUGATED - 22mm (7/8") deep "wave" corrugated wall panel with ribs at 68mm (2.67") on center or an equivalent product approved equal by the Architect. Thickness / Size: 0.76mm (22 gauge) Colour: Architect selected from Standard HMP COLORITE colours on Galvalume substrate coating Mockups / Samples: 305mm x 305mm sample of profile and gauge, full range of colours

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Number	Section	Item	Item
07620	**Metal Flashing and Trim**	Prefinished Steel Trim	Prefinished Steel Trim: Thickness / Size: base metal thickness of 0.6mm (24 gauge) Colour: Architect selected from Series 8000 (CGSB 93-GP-3M) Mockups / Samples: 100mm x 100mm
07900	**Sealants, Caulking and Firestopping**	Removable Firestopping	Removable Firestopping: to CAN/ULC -S115M, ASTM E814 Tremco - TREMstop PS or an equivalent product approved equal by the Architect. Colour: Silver Shop Drawings: in accordance with Section 01300
08110	**Hollow Metal Doors, Frames and Screens**	H.M. Steel Doors, Frames & Screens	H.M. Steel Doors, Frames & Screens: Thickness / Size: see Door Schedule Shop Drawings: in accordance with Section 01300
08120	**Aluminum Door, Frames and Screens**	Exterior Aluminum Frames	Exterior Aluminum Frames: Alumicor - Series 3400 or an equivalent product approved equal by the Architect. Colour: #17 Clear Finish: Anodized Shop Drawings: in accordance with Section 01300 Extended Warranty: 3 years
08120	**Aluminum Door, Frames and Screens**	Exterior Doors	Exterior Doors: Alumicor - Series 600B insulated or an equivalent product approved equal by the Architect. Colour: #17 Clear Finish: Anodized Shop Drawings: in accordance with Section 01300
08120	**Aluminum Door, Frames and Screens**	Hardware	Hardware: Refer to Section - or an equivalent product approved equal by the Architect. Colour: #17 Clear Finish: Anodized Shop Drawings: in accordance with Section 01300
08210	**Wood Doors**	Solid Core Wood Doors Non-Fire Rated Solid Core	Solid Core Wood Doors Non-Fire Rated Solid Core: Baillargeon - Series 8500 ME/AF (urea-formaldehyde free) or an equivalent product approved equal by the Architect. Thickness / Size: 44.5mm (1.75") thick Colour: Premium Stain Grade Finish: Maple Veneer Shop Drawings: in accordance with Section 01300 Extended Warranty: 10 years
08210	**Wood Doors**	Solid Core Wood Doors 20 Minute Fire Rated Door	Solid Core Wood Doors 20 Minute Fire Rated Door: Baillargeon - Series 8520 ME/AF (urea-formaldehyde free) or an equivalent product approved equal by the Architect. Thickness / Size: 44.5mm (1.75") thick Colour: Premium Stain Grade Finish: Maple Veneer Shop Drawings: in accordance with Section 01300 Extended Warranty: 10 years

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

Number	Section	Item	Item
	08210 Wood Doors	Solid Core Wood Doors 45 Minute Fire Rated Door	Solid Core Wood Doors 45 Minute Fire Rated Door: Baillargeon - Series AF45-MO/VE - urea-formaldehyde free or an equivalent product approved equal by the Architect. Thickness / Size: 44.45mm (1.75") thick Colour: Premium Stain Grade Finish: Maple Veneer Shop Drawings: in accordance with Section 01300 Extended Warranty: 10 years
	08520 Aluminum Windows	Fixed Aluminum Windows	Fixed Aluminum Windows: Alumicor Limited - Series 900 or an equivalent product approved equal by the Architect. Thickness / Size: 127mm (5") framing Colour: #17 Clear Finish: Class I Anodized Shop Drawings: in accordance with Section 01300 Mockups / Samples: provide samples in full range of colours and finishes for specified products Extended Warranty: 5 years
	08520 Aluminum Windows	Vented Aluminum Window Units	Vented Aluminum Window Units: Alumicor Limited - Series 1400 Type 2, Class "A", complete with thermal break or an equivalent product approved equal by the Architect. Colour: #17 Clear Finish: Class I Anodized Shop Drawings: in accordance with Section 01300 Mockups / Samples: provide samples in full range of colours and finishes for specified products Extended Warranty: 5 years
	08520 Aluminum Windows	Hardware	Hardware: As approved by the frame manufacturer - or an equivalent product approved equal by the Architect. Colour: #17 Clear Finish: to match frames Shop Drawings: in accordance with Section 01300 Mockups / Samples: provide samples in full range of colours and finishes for specified products Extended Warranty: 5 years
	08800 Glass and Glazing	Vertical Exterior Glazing A	Vertical Exterior Glazing A: to Tempered Glazing to ASTM 1036-90, ASTM 1048-90,ANSI Z97.1, CAN/CGSB 12.1, CPSC 16 CFR-1201 Laminated Glazing to ASTM 1036-90, ANSI Z07.1-1984,CPSC 16 CFR 1201, CAN/CGSB 12.1, Guidelines of LSGA, UL 752, UL 972 PPG Glass - Unless otherwise specified provide sealed units to all aluminum framing and doors in compliance with the following. All double glazing to consist of and outer layer of tempered glass, inner layer of laminated or an equivalent product approved equal by the Architect. Thickness / Size: 6mm and 6mm Colour: Exterior Glass Clear (unless tinted units are indicated), Sungate 500 low E on side 2, Clear interior glazing. Finish: Clear unless otherwise indicated Shop Drawings: in accordance with Section 01300 Mockups / Samples: provide samples in full range of colours and finishes for specified products Extended Warranty: 10 years

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Holy Rosary School Renovations

St. Clair Catholic District School Board

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Number	Section	Item	Item
08800	**Glass and Glazing**	Vertical Exterior Glazing B - to glazed screens with sills above 1067mm (42") or glazing above 2134mm (84") in screens	Vertical Exterior Glazing B - to glazed screens with sills above 1067mm (42") or glazing above 2134mm (84") in screens: to ASTM E 774, Class CBA, and CGSB Specifications 12-GP-8 PPG Glass - All double glazing to consist of heat stregthened glass or an equivalent product approved equal by the Architect. Thickness / Size: 6mm and 6mm Colour: Exterior Glass Clear (unless tinted units are indicated), Sungate 500 low E, Clear interior glazing. Finish: Clear unless otherwise indicated Shop Drawings: in accordance with Section 01300 Mockups / Samples: provide samples in full range of colours and finishes for specified products Extended Warranty: 10 years
08800	**Glass and Glazing**	Spandrel Panels	Spandrel Panels: to ASTM C 1048-90, CAN/CGSB 12.9 PPG Glass - All spandrel glazing to consist of 6mm heat strengthened glass or an equivalent product approved equal by the Architect. Thickness / Size: 6mm Colour: Exterior clear glass Finish: Clear with OpaciCoat 300 colour to be clear anodized as produced by Oldcastle Glass Shop Drawings: in accordance with Section 01300 Mockups / Samples: provide samples in full range of colours and finishes for specified products Extended Warranty: 10 years
09130	**Suspension System for Acoustic Ceilings**	T-Bar Suspension	T-Bar Suspension: to ASTM C635-78. Donn - Exposed tee grid system. All grid and components fire rated even at non-rated ceilings. Flange-klamp, Bailey or Universal considered equal. or an equivalent product approved equal by the Architect. Colour: White Mockups / Samples: provide samples in full range of colours and finishes for specified products
09250	**Gypsum Board**	Gypsum Board	Gypsum Board:
09250	**Gypsum Board**	Gypsum Board	Gypsum Board:
09330	**Tile Work**	Ceramic Tile Type 1 - Floor	Ceramic Tile Type 1 - Floor: Centura - Dotti or an equivalent product approved equal by the Architect. Thickness / Size: 305mm x 305mm x 9.5mm (12" x 12" x 3/8") Colour: as selected by Architect Finish: Matt Mockups / Samples: provide samples in full range of colours and finishes for specified products
09330	**Tile Work**	Base to match Floor	Base to match Floor: Centura - Dotti or an equivalent product approved equal by the Architect. Thickness / Size: 102mm (4") Colour: to match tile Finish: matt cove base Mockups / Samples: provide samples in full range of colours and finishes for specified products

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Number	Section	Item	Item
09511	**Acoustical Panels and Tiles**	Acoustical Panels Type 4	Acoustical Panels Type 4: Armstrong - CGC Radar or an equivalent product approved equal by the Architect. Thickness / Size: 610mm x 610mm x 16mm (24" x 24" x 5/8") Colour: White Finish: Square Edge Mockups / Samples: provide samples in full range of colours and finishes for specified products
09660	**Resilient Tile Flooring**	Vinyl Composite Tile type 1	Vinyl Composite Tile type 1: Tarkett - Azrock or an equivalent product approved equal by the Architect. Thickness / Size: 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12") Colour: as selected by Architect Mockups / Samples: 4 random tiles
09660	**Resilient Tile Flooring**	Base	Base: Johnsonite - Rubber or an equivalent product approved equal by the Architect. Thickness / Size: 102mm (4") high as indicated Colour: as selected by Architect Mockups / Samples: 305mm (12")
09670	**Gymnasium Flooring**	Gymnasium Flooring	Gymnasium Flooring: Gerflor - Tarflex MultiUse 5.0 or an equivalent product approved equal by the Architect. Colour: 6381 Maple Design
09850	**Exposed Aggregate Panels**	Exposed Aggregate Panels	Exposed Aggregate Panels: Synstone - or an equivalent product approved equal by the Architect. Thickness / Size: 3/8" (10mm) thickness Colour: Architect selected from manufacturer’s standard color selection Shop Drawings: in accordance with Section 01300 Mockups / Samples: 76mm (3") x 76mm (3") Extended Warranty: 15 years
09900	**Painting**	Gloss	Gloss: to All paint manufacturers and products used shall be as listed under the Approved Product List section of the MPI Painting Manual. ICI - Devoe Coatings Devflex W. B. Acrylic Gloss Enamel or an equivalent product approved equal by the Architect. Colour: as selected by Architect Mockups / Samples: provide samples in full range of colours and finishes for specified products
09900	**Painting**	Semi-gloss	Semi-gloss: to All paint manufacturers and products used shall be as listed under the Approved Product List section of the MPI Painting Manual. ICI - Glidden Dulux Interior Acrylic Semi-Gloss 13010 or an equivalent product approved equal by the Architect. Colour: as selected by Architect Mockups / Samples: provide samples in full range of colours and finishes for specified products

Number	Section	Item	Item
09900	**Painting**	Egg shell	Egg shell: to All paint manufacturers and products used shall be as listed under the Approved Product List section of the MPI Painting Manual. ICI - GliddenUltra Interior Latex Pearl 94910 or an equivalent product approved equal by the Architect. Colour: as selected by Architect Mockups / Samples: provide samples in full range of colours and finishes for specified products
09900	**Painting**	Flat	Flat: to All paint manufacturers and products used shall be as listed under the Approved Product List section of the MPI Painting Manual. ICI - GliddenUltra Interior Flat Latex 94500 or an equivalent product approved equal by the Architect. Colour: as selected by Architect Mockups / Samples: provide samples in full range of colours and finishes for specified products
09900	**Painting**	Natural Finish	Natural Finish: to All paint manufacturers and products used shall be as listed under the Approved Product List section of the MPI Painting Manual. ICI - Woodpride Interior Acrylic Varnish - Satin 1840 or an equivalent product approved equal by the Architect. Colour: as selected by Architect Mockups / Samples: provide samples in full range of colours and finishes for specified products
10100	**Chalkboards, Whiteboards and Tackboards**	Chalkboards	Chalkboards: Architectural School Products Ltd.; (Gander, Cveti) - Vitrite, consisting of a sandwich type construction composed of face panel, core and balancing rear sheet or an equivalent product approved equal by the Architect. Thickness / Size: to sizes indicated on drawings Colour: Green Shop Drawings: in accordance with Section 01300
10100	**Chalkboards, Whiteboards and Tackboards**	Whiteboards	Whiteboards: Architectural School Products Ltd.; (Gander, Cveti) - "Rite-ON, Wipe-Off" Series 3000 complete with clear anodized aluminum trim and tray or an equivalent product approved equal by the Architect. Thickness / Size: to sizes indicated on drawings Shop Drawings: in accordance with Section 01300
10100	**Chalkboards, Whiteboards and Tackboards**	Tackboards	Tackboards: Architectural School Products Ltd.; (Gander, Cveti) - 12.7mm factory prelaminated consisting of 6mm thick A.S.P. natural cork laminated to 6mm particle board or masonite substrate under mechanical pressure in maximum panel sizes of 1219 mm x 2438 mm. Bonding of materials by a waterproof adhesive that will not delaminate or rupture at the contact surfaces. or an equivalent product approved equal by the Architect. Thickness / Size: to sizes indicated on drawings Shop Drawings: in accordance with Section 01300

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Number	Section	Item	Item
10161	**Laminated Plastic Toilet Partitions**	Laminated Plastic Toilet Partitions	Laminated Plastic Toilet Partitions: Buddsteel Architectural Products Limited. - P.lam. scratch resistant floor mounted, overhead braced. Panels, pilasters and doors are to be 19mm (3/4") thick rigid particleboard cores covered with P.lam. thermally fused to cores or an equivalent product approved equal by the Architect. Thickness / Size: to sizes indicated on drawings Colour: Selected by Architect from a full range or Arborite, Formica or Wilsonart colours and patterns Shop Drawings: in accordance with Section 01300
10800	**Washroom Accessories**	Washroom Accessories	Washroom Accessories: Frost - Products as specified in the Section or an equivalent product approved equal by the Architect. Colour: Stain steel 304 finish unless otherwise specified Shop Drawings: in accordance with Section 01300 Extended Warranty: 5 years
15000	**General Mechanical Provisions**	General Mechanical Provisions	General Mechanical Provisions: Shop Drawings: in accordance with Section 01300
16000	**General Electrical Provisions**	General Electrical Provisions	General Electrical Provisions: Shop Drawings: in accordance with Section 01300

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1.C01 Corridor

Floor	Ceramic Tile Type 1 - Floor: Centura Dotti 305mm x 305mm x 9.5mm (12" x 12" x 3/8")	as selected by Architect
Base	Base to match Floor: Centura Dotti 102mm (4")	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Doors	Aluminum:	as selected by Architect
Doors (2)	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect

1.C02 Corridor

Floor	Ceramic Tile Type 1 - Floor: Centura Dotti 305mm x 305mm x 9.5mm (12" x 12" x 3/8")	as selected by Architect
Base	Base to match Floor: Centura Dotti 102mm (4")	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Millwork	Millwork: Natural Finished Maple veneer 19mm (¾") medium density particle board.	as selected by Architect
Doors	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Doors (2)	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Comments	Paint new wood trim around mural semigloss	

1.C03 Corridor

Base	Base to match Floor: Centura Dotti 102mm (4")	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect

101A Principal Office

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Plam window stool	

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101 General Office

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Plam window stool	

101B Workroom/Literacy

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Plam window stool	

101C Comm/Closet

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Drywall, painted: ICI GliddenUltra Interior Flat Latex 94500	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect

102 Classroom

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Millwork	Countertops: Plastic Laminate	as selected by Architect
Millwork (2)	Millwork: Natural Finished Maple veneer 19mm (¾") medium density particle board.	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Whiteboards/tackboards/chalkboards Plam window stool Postformed countertops	

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103 Classroom

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Millwork	Countertops: Plastic Laminate	as selected by Architect
Millwork (2)	Millwork: Natural Finished Maple veneer 19mm (¾") medium density particle board.	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Whiteboards/tackboards/chalkboards Plam window stool Postformed countertops	

104 Classroom

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Millwork	Countertops: Plastic Laminate	as selected by Architect
Millwork (2)	Millwork: Natural Finished Maple veneer 19mm (¾") medium density particle board.	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Whiteboards/tackboards/chalkboards Plam window stool Postformed countertops	

105 Classroom

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Millwork	Countertops: Plastic Laminate	as selected by Architect
Millwork (2)	Millwork: Natural Finished Maple veneer 19mm (¾") medium density particle board.	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Whiteboards/tackboards/chalkboards Plam window stool Postformed countertops	

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105A Washroom

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Comments	Owner supplied washroom accessories	

105B Washroom

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Comments	Owner supplied washroom accessories	

106 Classroom

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Whiteboards/tackboards/chalkboards Plam window stool Postformed countertops	

107 Staff Room

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Millwork	Countertops: Plastic Laminate	as selected by Architect
Millwork (2)	Millwork: Natural Finished Maple veneer 19mm (¾") medium density particle board.	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Comments	Whiteboards and tackboards	

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107A Servery

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Millwork	Countertops: Plastic Laminate	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Doors (2)	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Post formed countertops	

108 Gymnasium

Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Doors (2)	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Comments	Paint exposed ductwork, brackets, conduit, etc.	

108A Staff Washroom

Floor	Vinyl Composite Tile type 1: Tarkett Azrock 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")	as selected by Architect
Base	Rubber Cove Base: Johnsonite Rubber 102mm (4") high as indicated	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Drywall, painted: ICI GliddenUltra Interior Flat Latex 94500	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Comments	Owner supplied washroom accessories	

108B Storage

Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect

109 Mechanical Room

Floor	Sealed Concrete:	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Doors	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect

110 Custodial Office

Floor	Sealed Concrete:	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Doors	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect

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111 Boys Washroom

Floor	Ceramic Tile Type 1 - Floor: Centura Dotti 305mm x 305mm x 9.5mm (12" x 12" x 3/8")	as selected by Architect
Base	Base to match Floor: Centura Dotti 102mm (4")	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Drywall, painted: ICI GliddenUltra Interior Flat Latex 94500	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Owner supplied washroom accessories Plam window stool	

112 Girls Washroom

Floor	Ceramic Tile Type 1 - Floor: Centura Dotti 305mm x 305mm x 9.5mm (12" x 12" x 3/8")	as selected by Architect
Base	Base to match Floor: Centura Dotti 102mm (4")	as selected by Architect
Walls	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Ceiling	Drywall, painted: ICI GliddenUltra Interior Flat Latex 94500	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Owner supplied washroom accessories Plam window stool	

113 Chapel

Floor	Gymnasium Flooring: Taraflex Sport M	6381 Maple Design
Base	Wood natural finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Walls	Paint eggshell: ICI GliddenUltra Interior Latex Pearl 94910	as selected by Architect
Ceiling	Acoustical Panels Type 1: Armstrong CGC Radar	White
Millwork	Millwork: Natural Finished Maple veneer 19mm (¾") medium density particle board.	as selected by Architect
Doors	Stained finish: ICI Woodpride Interior Acrylic Varnish - Satin 1840	as selected by Architect
Frames	Paint semi gloss: ICI Glidden Dulux Interior Acrylic Semi-Gloss 13010	as selected by Architect
Windows	Aluminum: Alumicor Limited Series 900	#17 Clear
Comments	Plam window stool	

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 RELATED REQUIREMENTS

1 Section 08110: Hollow Metal Doors, Frames and Screens

3 Section 08210: Wood Doors

4 Section 08710: Finish Hardware

5 Division 15: Door Grilles

6 Division 16: Power Hardware to Doors

2 GENERAL REQUIREMENTS

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Supply all door and frames as shown on the drawings, door schedule and/or specified herein.

3 Refer to mechanical and electrical drawings and sections for door grille and power requirements.

DOOR SCHEDULE

No.	From	To	Opening Size			Door				Frame								Hardware	
			Width	Height	Thickness	Type	Material	Core	Finish	Type	Material	Jamb	Head	Finish	Fire Rating	Glass Type	Wall type	Auto Operators	Group	Notes
01	1.C01	Ext	2 @ 3'-4"±	7'-0"±	1¾"	E	Alum	insul	Clear	3	Alum	5¼	2"	Clear		DBL	masonry	Yes		to suit existing opening
02	101	101A	3'-0"±	7'-0"±	1¾"	B	WD	solid core	Stain	1	HM	5 ¾"	2"	Paint			W4			
03	1.C01	101	3'-0"±	7'-0"±	1¾"	B	WD	SC	Stain	4	HM	wrap	2 5/8"	Paint	20	GWG	masonry			to suit existing opening
04	1.C01	101B	3'-0"±	7'-0"±	1¾"	C	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint	20	GWG	masonry			to suit existing opening
05	101C	101B	2 @ 2'-8"±	8'-0"±	1¾"	D	WD	SC	Stain	1	WD	5 ¾"	2"	Paint			drywall			louvre
06	113	1.C01	3'-0"±	7'-0"±	1¾"	B	WD	SC	Stain	5	HM	wrap	2"	Paint	20	GWG	drywall			
07	1.C02	102	3'-0"±	7'-0"±	1¾"	C	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint	20	GWG	concrete block			to suit existing opening
08	1.C02	112	3'-0"±	7'-0"±	1¾"	A	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint	45		masonry			to suit existing opening
09	1.C02	111	3'-0"±	7'-0"±	1¾"	A	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint	45		masonry			to suit existing opening
10	1.C02	110	3'-0"±	7'-0"±	1¾"	D	HM	SS	Paint	1	HM	wrap	2 5/8"	Paint	45		masonry			to suit existing opening
11	109	1.C02	3'-0"±	7'-0"±	1¾"	D	HM	SS	Paint	1	HM	wrap	2 5/8"	Paint	45		masonry			to suit existing opening
12	1.C02	108B	3'-0"±	7'-0"±	1¾"	C	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint	45	GWG	masonry			to suit existing opening
13	108A	108B	3'-0"±	7'-0"±	1¾"	A	WD	SC	Stain	1	HM	wrap	2"	Paint			drywall			to suit existing opening
14	108C	108	3'-0"±	7'-0"±	1¾"	A	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint			masonry			to suit existing opening

DOOR SCHEDULE

No.	From	To	Opening Size			Door				Frame									Hardware
			Width	Height	Thickness	Type	Material	Core	Finish	Type	Material	Jamb	Head	Finish	Fire Rating	Glass Type	Wall type	Auto Operators	Group	Notes
15	108	Ext	3'-0"±	7'-0"±	1¾"	D	HM	SS	Paint	Existing to remain				Paint			masonry			to suit existing frame
16	1.C02	103	3'-0"±	7'-0"±	1¾"	C	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint	20	GWG	masonry			to suit existing opening
17	108	1.C02	2 @ 3'-0"±	7'-0"±	1¾"	B	WD	SC	Stain	2	HM	wrap	2 5/8"	Paint	45	GWG	masonry			to suit existing opening
18	1.C02	104	3'-0"±	7'-0"±	1¾"	C	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint	20	GWG	masonry			to suit existing opening
19	108	1.C02	2 @ 3'-0"±	7'-0"±	1¾"	B	WD	SC	Stain	2	HM	wrap	2 5/8"	Paint	45	GWG	masonry			to suit existing opening
20	1.C03	107	3'-0"±	7'-0"±	1¾"	C	WD	SC	Stain	1	HM	wrap	2 5/8"	Paint	45	GWG	masonry			to suit existing opening
21	107A	108	3'-0"±	7'-0"±	1¾"	C	WD	SC	Paint	1	HM	wrap	2 5/8"	Paint	45	GWG	masonry			to suit existing opening
22	107A	Ext	3'-0"±	7'-0"±	1¾"	D	HM	SS	Paint	1	HM	8¾"	2 5/8"	Paint			masonry			to suit existing opening
23	105	105A	3'-0"±	7'-0"±	1¾"	F	WD	SC	Stain	Existing to remain				Paint			masonry			cap top hinges
24	105	105B	3'-0"±	7'-0"±	1¾"	F	WD	SC	Stain	Existing to remain				Paint			masonry			cap top hinges
25	1.C03	195	3'-0"±	7'-0"±	1¾"	C	WD	SC	Stain	Existing to remain				Paint	20	GWG	masonry			to suit existing frame
26	1.C03	196	3'-0"±	7'-0"±	1¾"	C	WD	SC	Stain	Existing to remain				Paint	20	GWG	masonry			to suit existing frame
27	Closet	1.C02	4 @ 1'-10"	7'-10"	1¾"	A	WD	SC	Stain	6	HM	8¾"	2"	Paint	45		masonry			to suit existing opening

Section 01014
Appendix A

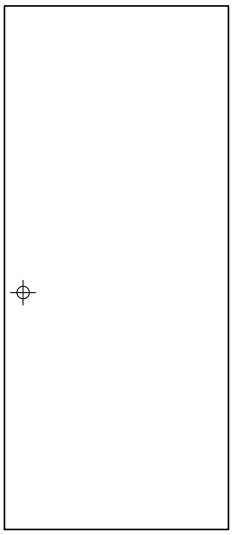
Job # 2808-11

Holy Rosary School Renovations

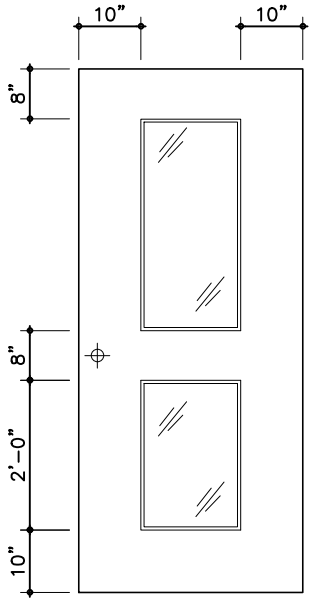
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

Date: March 17, 2011

Door Types **Not To Scale**



A
Wood



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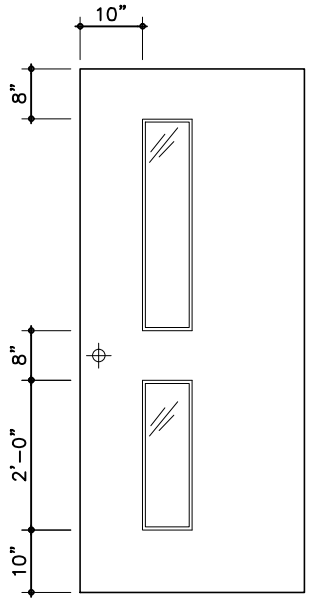
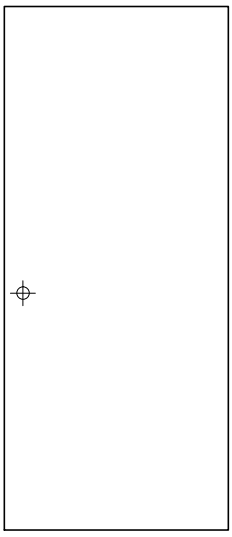
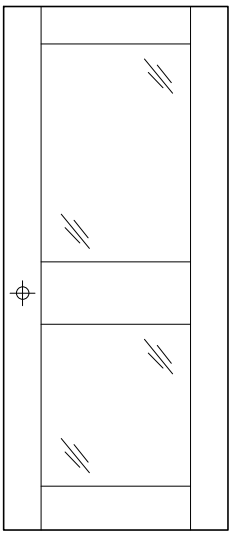


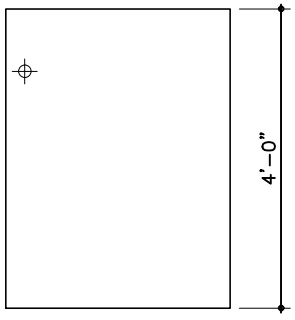
C
Wood



D
Hollow
Metal



E
Aluminum



F
Wood

Door Schedule **#1**

Job # 2808-11

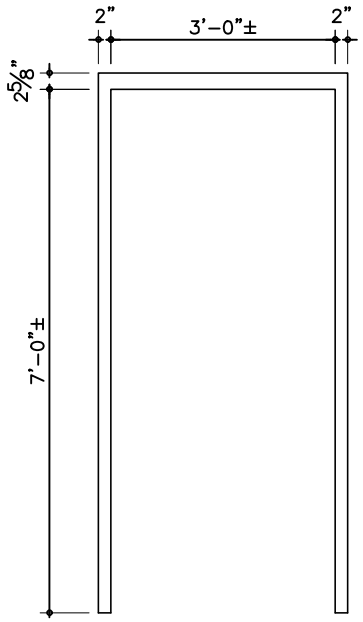
Section 01014
Appendix A

Holy Rosary School Renovations

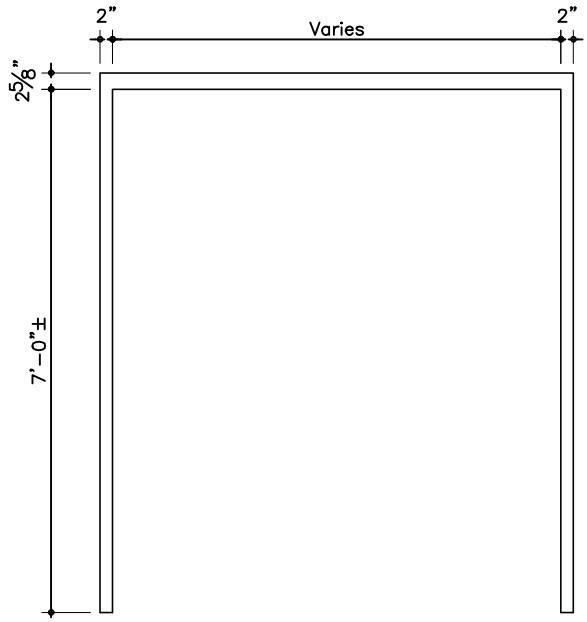
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

Date: March 17, 2011

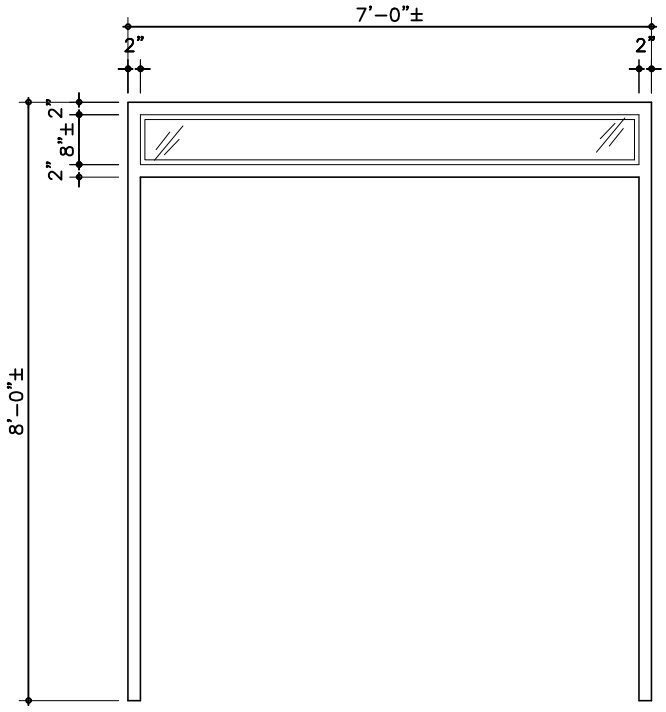
Frame Types **Not To Scale**



1
Hollow Metal



2
Hollow Metal



3
Aluminum

Section 01014
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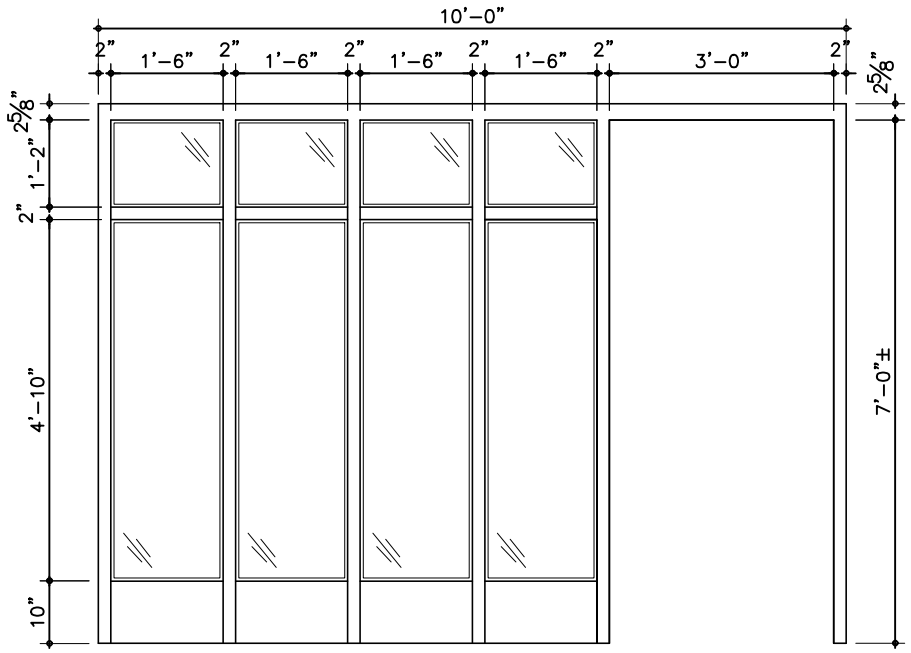
Holy Rosary School Renovations

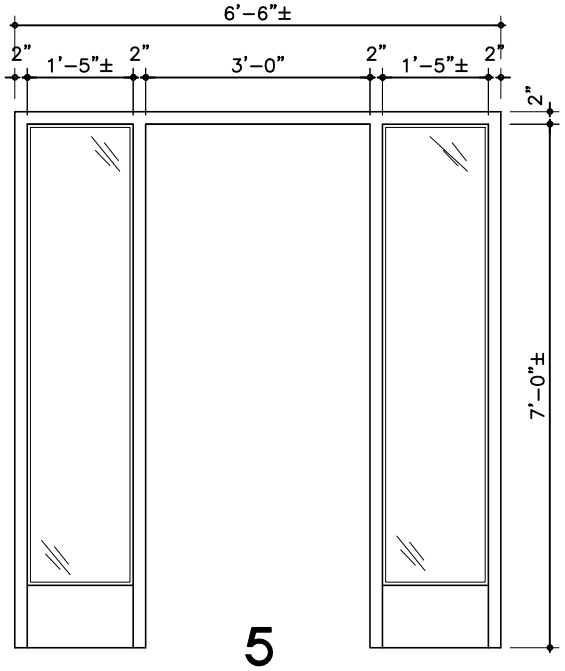
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

Date: March 17, 2011

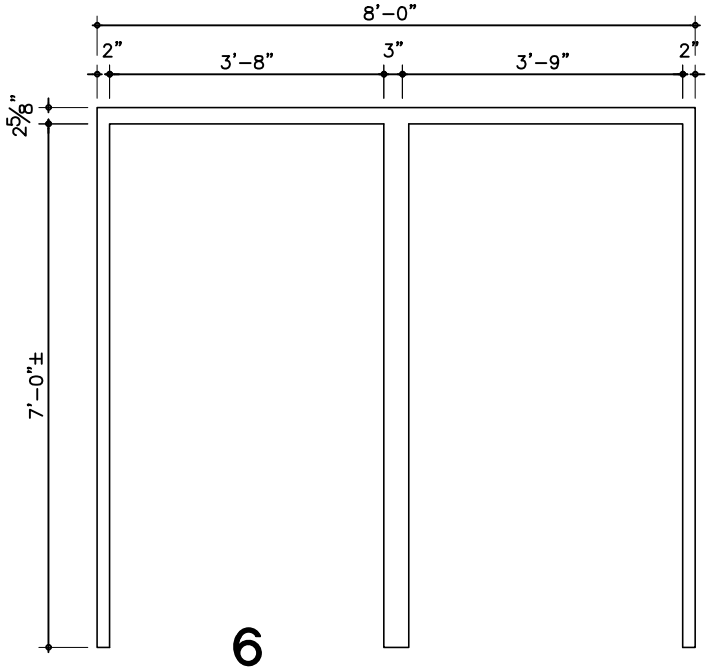
Frame Types **Not To Scale**



4
Hollow Metal



5
Hollow Metal



6
Hollow Metal

Section 01015
Appendix A

Job # 2808-11

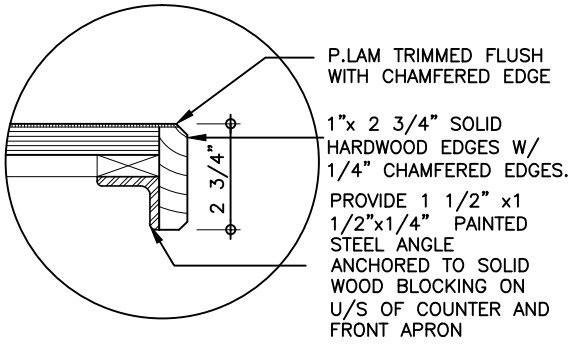
Holy Rosary School Renovations

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

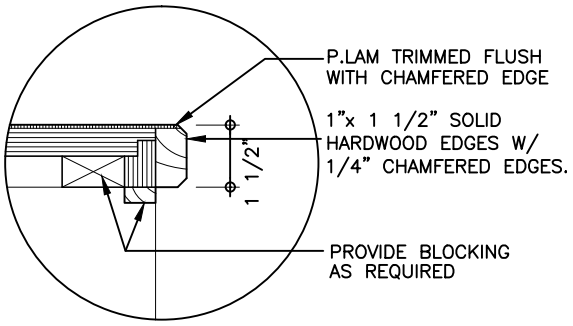
March 17, 2011

MARKLEVITZ, Architect

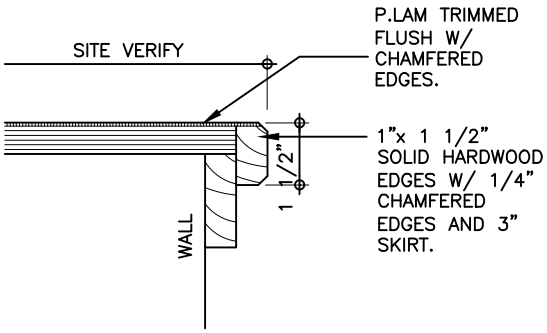
TYPICAL EDGE DETAILS **SCALE : Not to Scale**



TYPICAL EDGE DETAIL A



TYPICAL EDGE DETAIL B



TYPICAL WINDOW SILL DETAIL

Job # 2808-11

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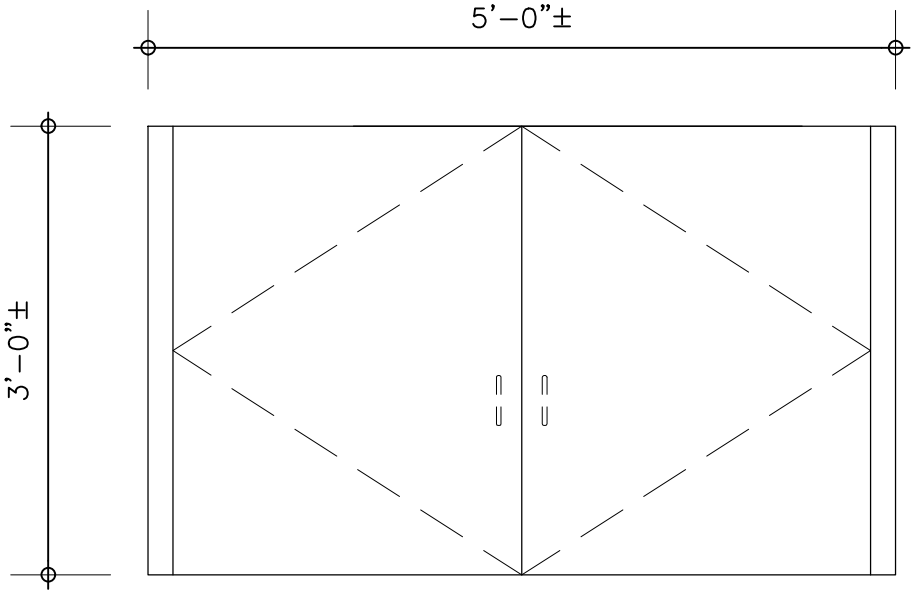
Appendix A

Holy Rosary School Renovations

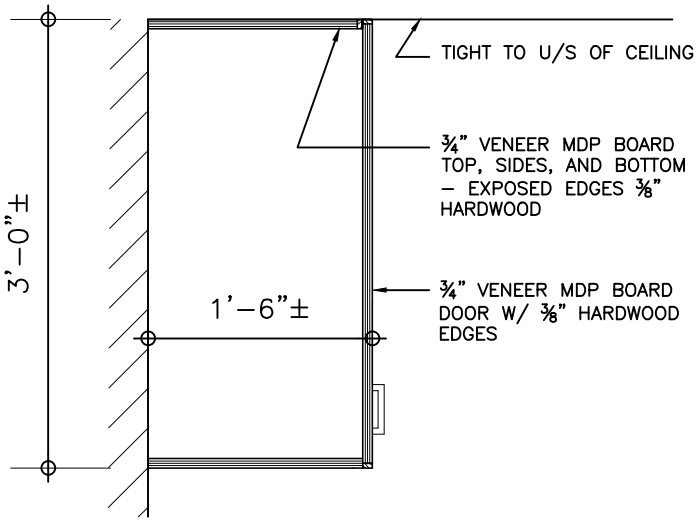
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

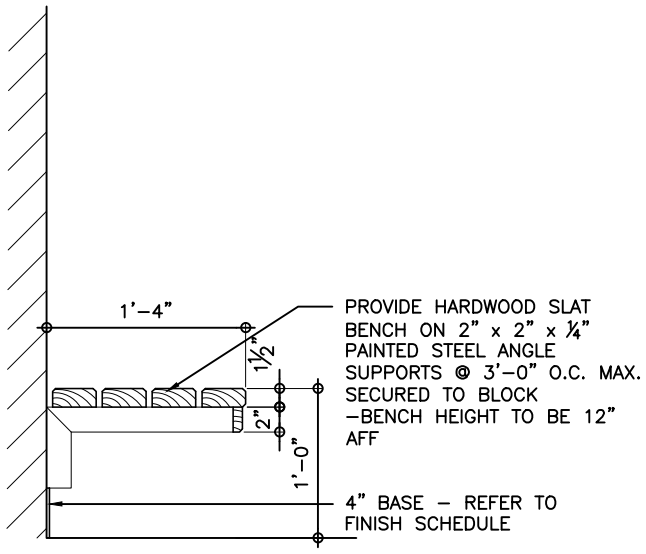
TYPICAL TELEPHONE CABINET & BENCH **SCALE : 3/4" = 1'-0"**



Cabinet Elevation



Cabinet Section



Bench Section

Standard Detail **#2 & 3**

Section 01015
Appendix A

Job # 2808-11

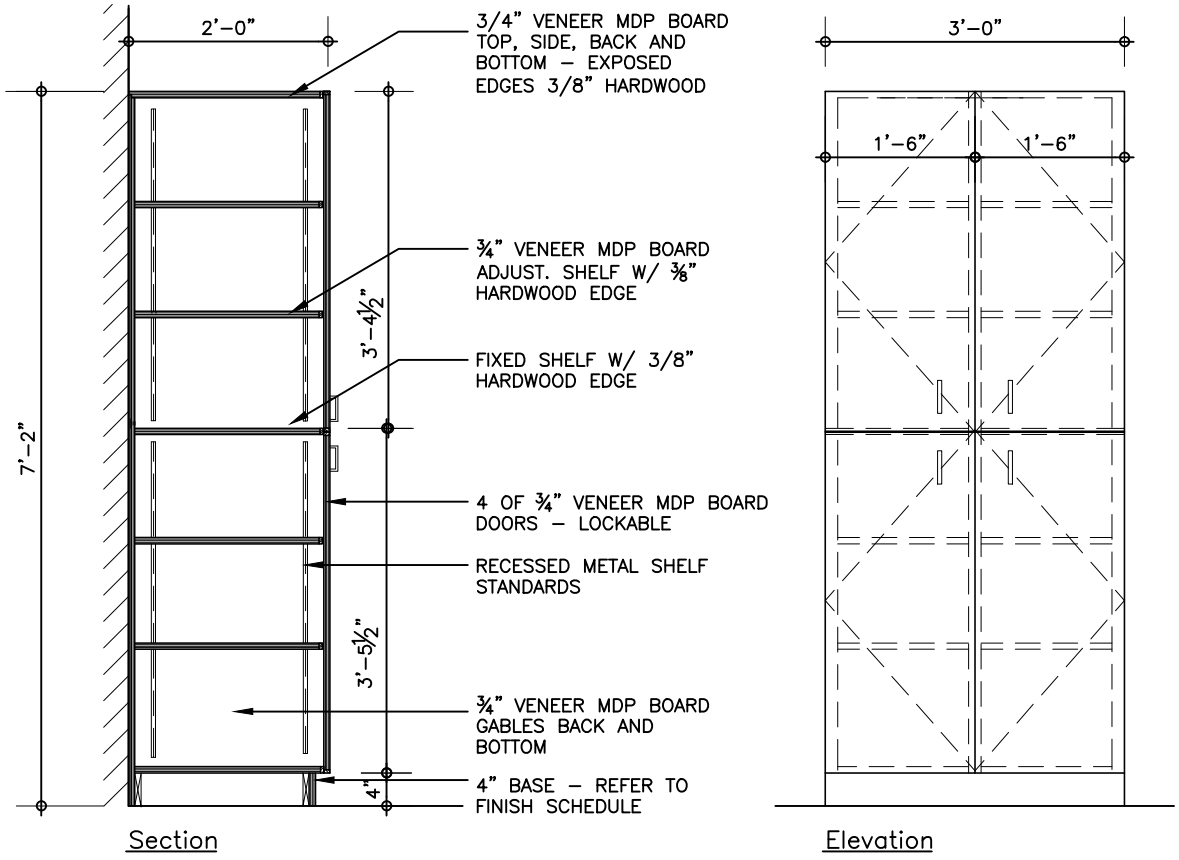
Holy Rosary School Renovations

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL 24" DEEP STORAGE

SCALE : 1/2" =1'-0"



Standard Detail **#4**

Job # 2808-11

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Appendix A

Holy Rosary School Renovations

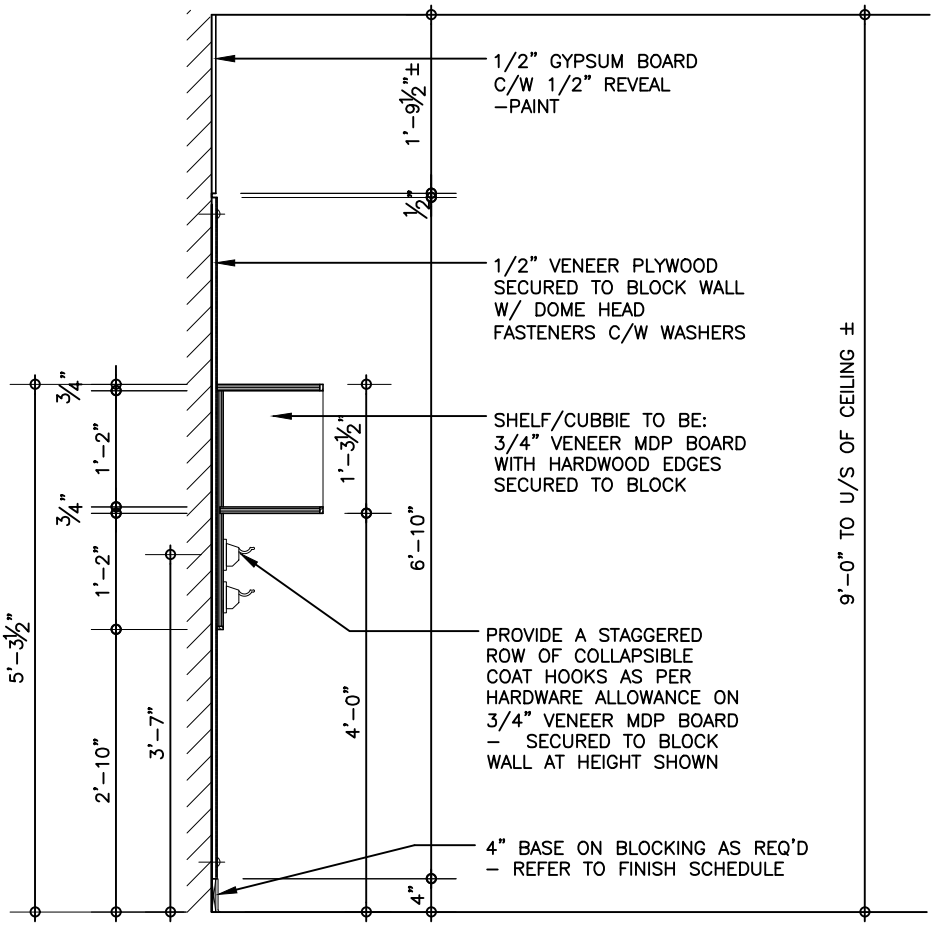
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

MARKLEVITZ, Architect

TYPICAL COAT SHELF W/ HOOKS ON PLAM WALL

SCALE : 1/2" =1'-0"



Standard Detail **#5**

Section 01015
Appendix A

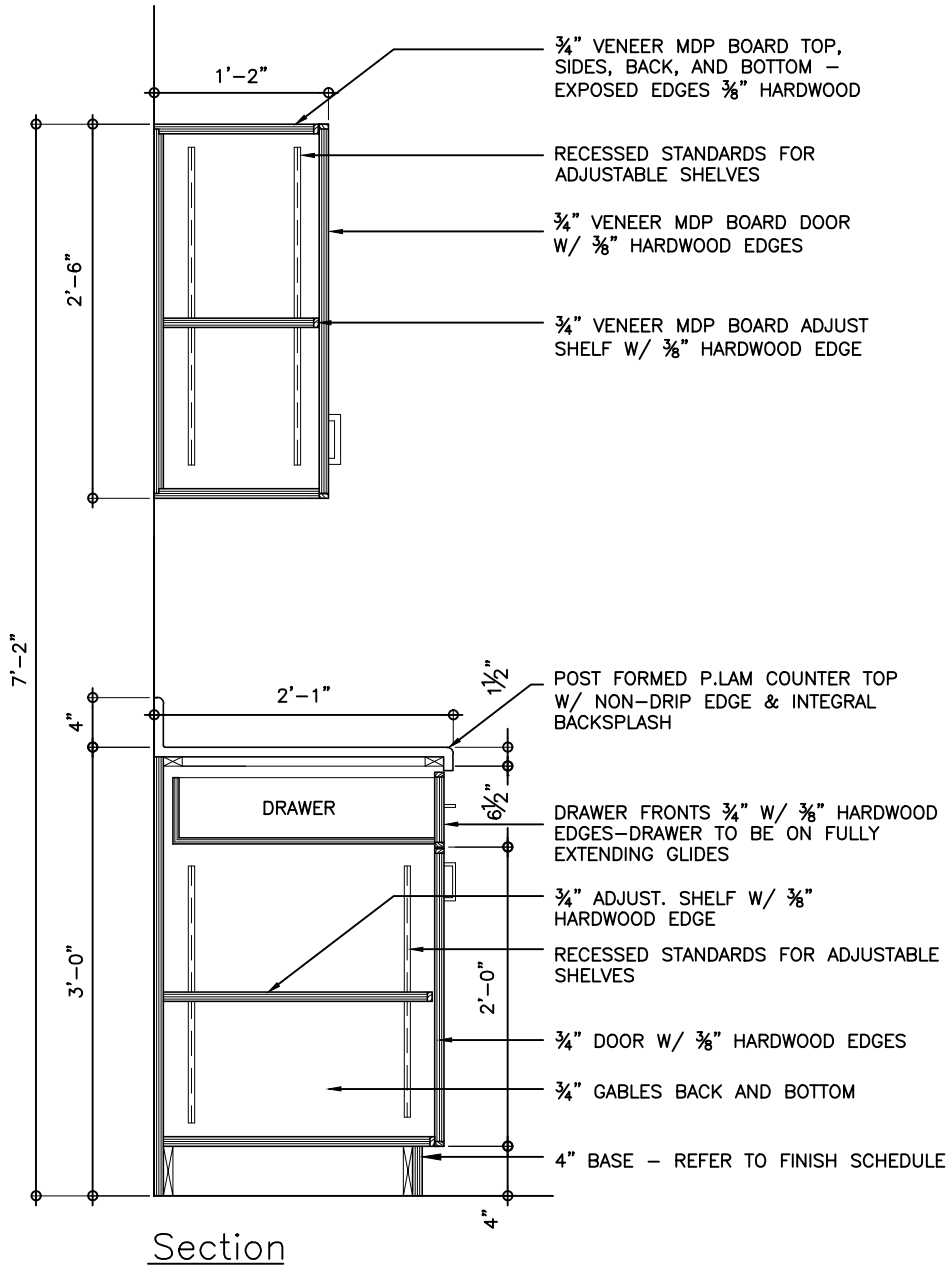
Job # 2808-11

Holy Rosary School Renovations

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL COUNTER W/ UPPERS **SCALE : 3/4" =1'-0"**



Standard Detail **#6**

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Holy Rosary School Renovations

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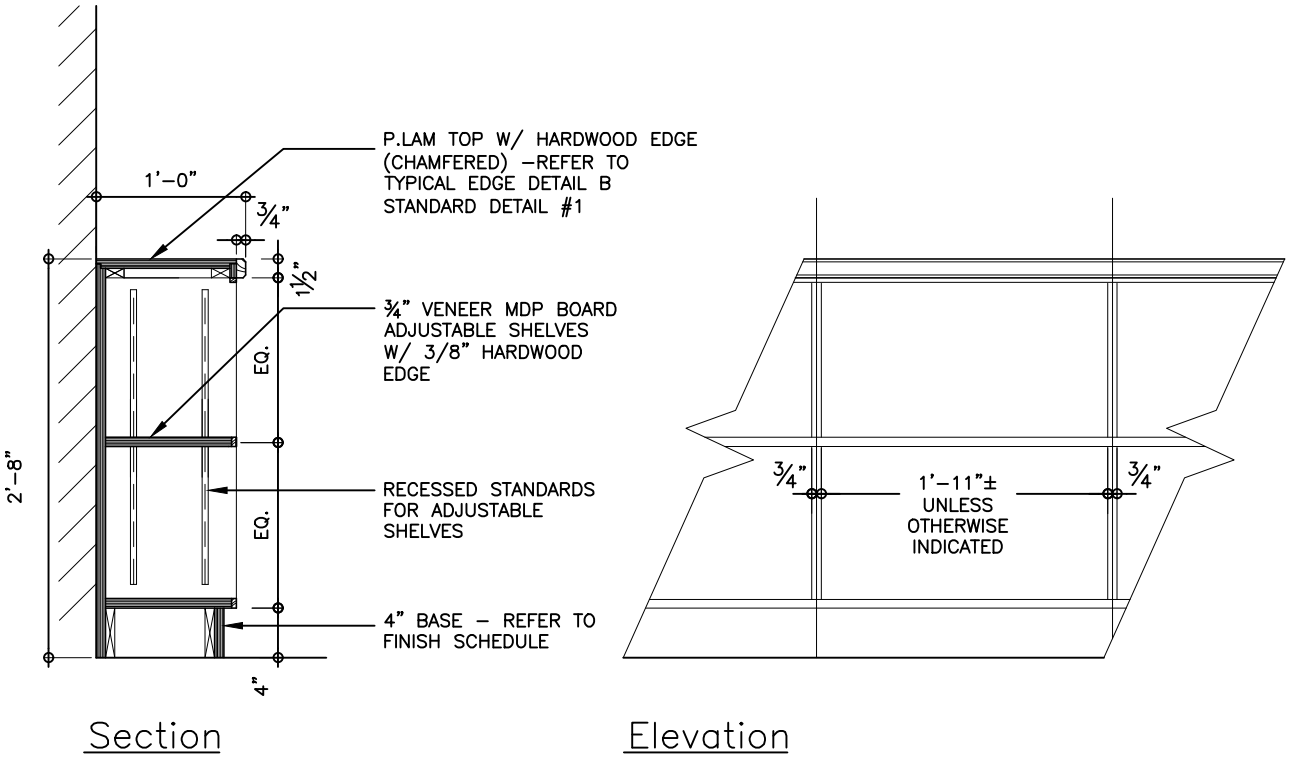
Appendix A

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL OPEN SHELVING **SCALE : 3/4" =1'-0"**



Section Elevation

Standard Detail **#7**

Job # 2808-11

Holy Rosary School Renovations

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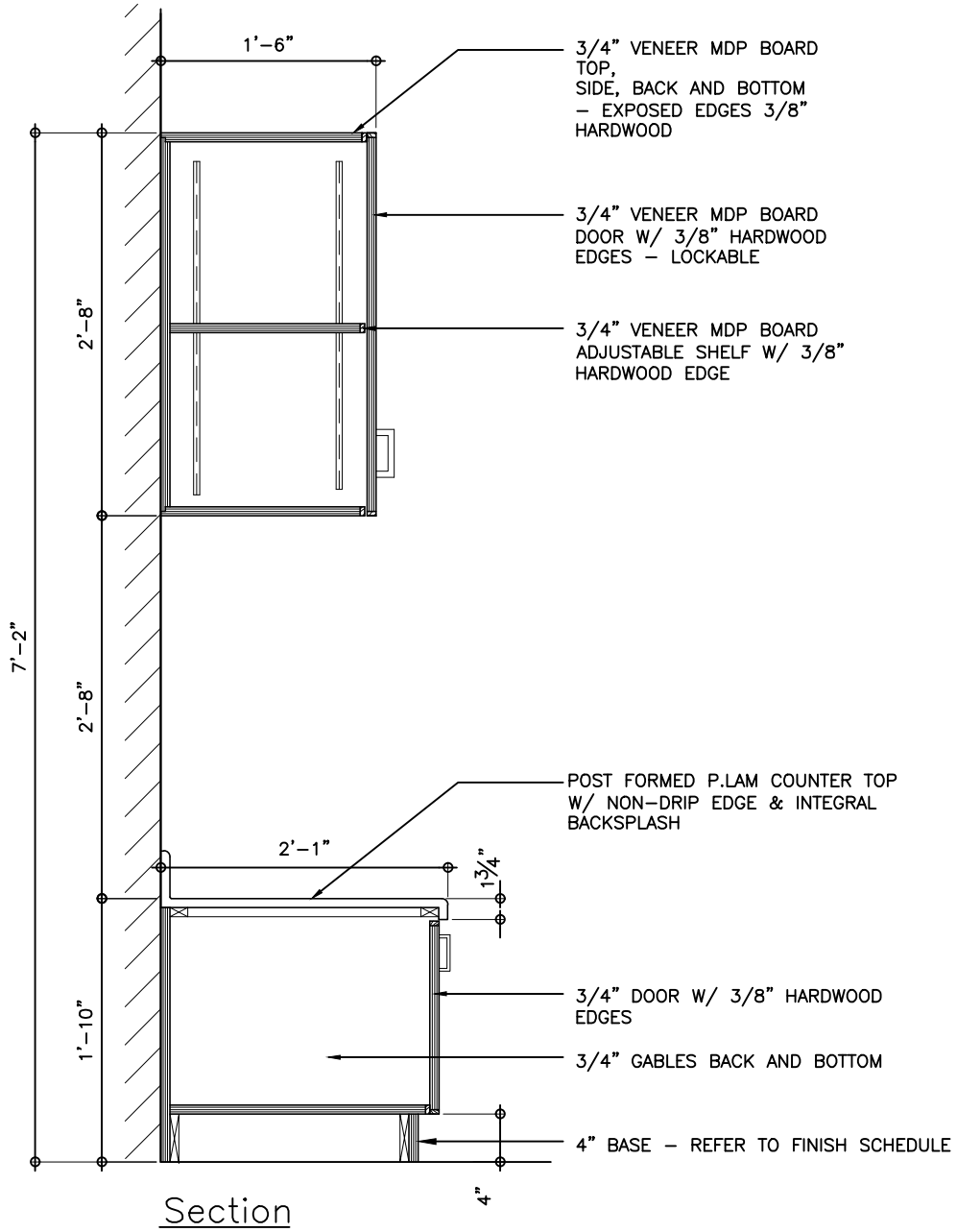
Appendix A

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL KINDERGARTEN COUNTER W/ UPPERS **SCALE : 3/4" = 1'-0"**



Standard Detail **#8**

Job # 2808-11

Holy Rosary School Renovations

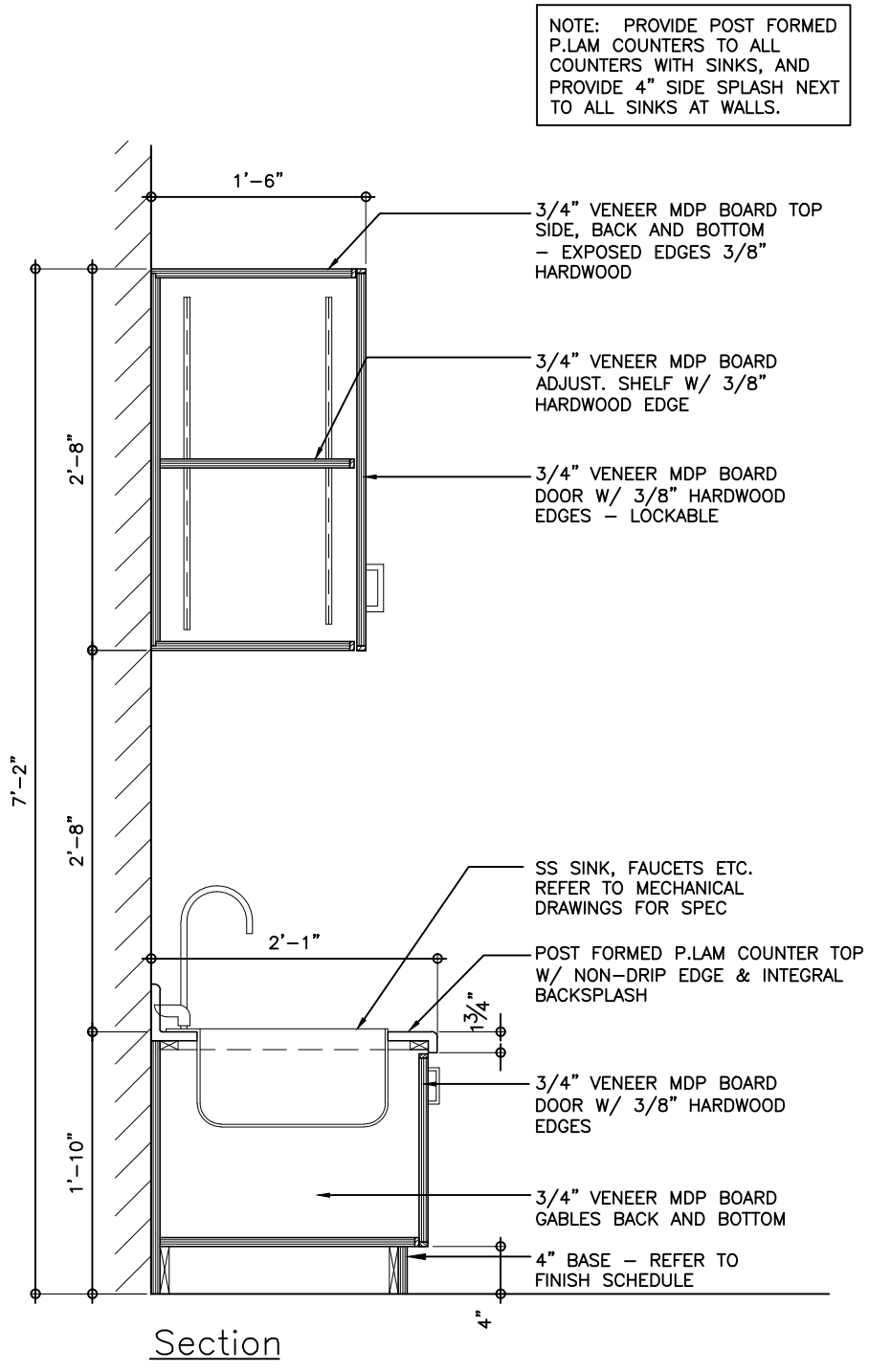
Section 01015
Appendix A

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL KINDERGARTEN COUNTER W/ UPPERS & SINK

SCALE : 3/4" = 1'-0"



Standard Detail **#9**

Job # 2808-11

Holy Rosary School Renovations

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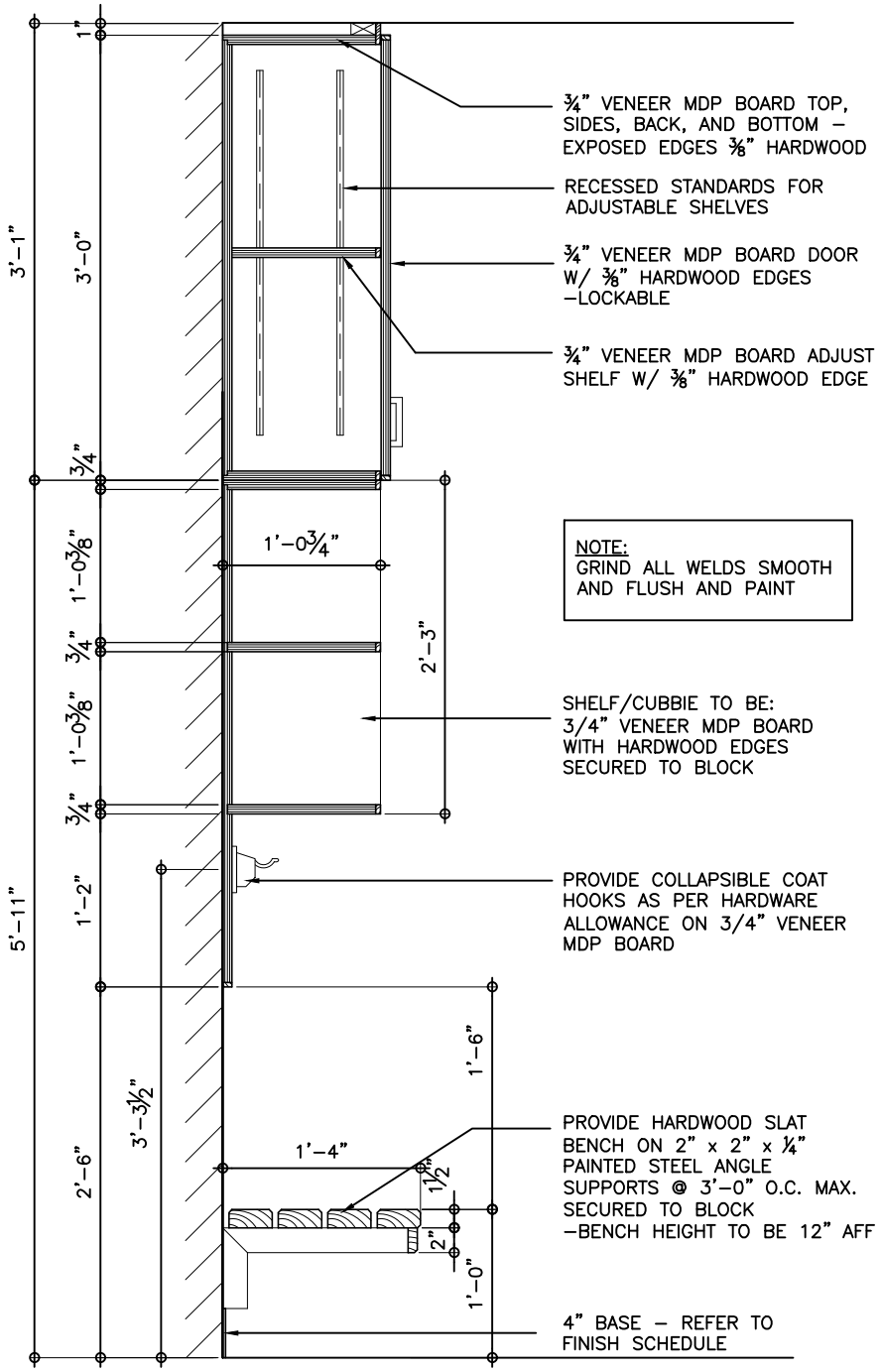
Appendix A

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL CUBBIES W/ LOCKABLE UPPERS

SCALE : 3/4" = 1'-0"



Standard Detail **#10**

Section 01015
Appendix A

Job # 2808-11

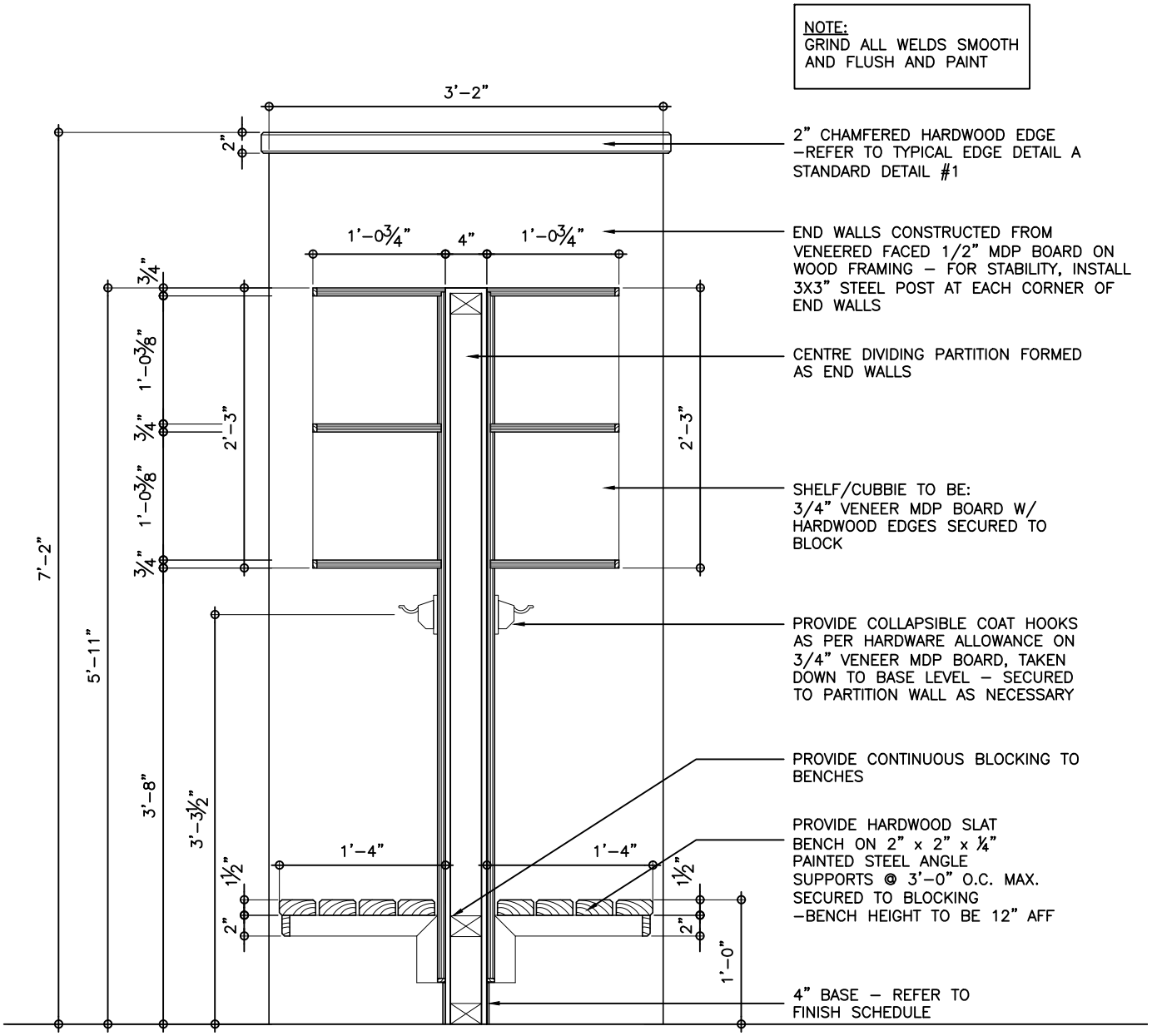
Holy Rosary School Renovations

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL ISLAND CUBBIES W/ BENCH

SCALE : 3/4" = 1'-0"



Standard Detail **#11**

Job # 2808-11

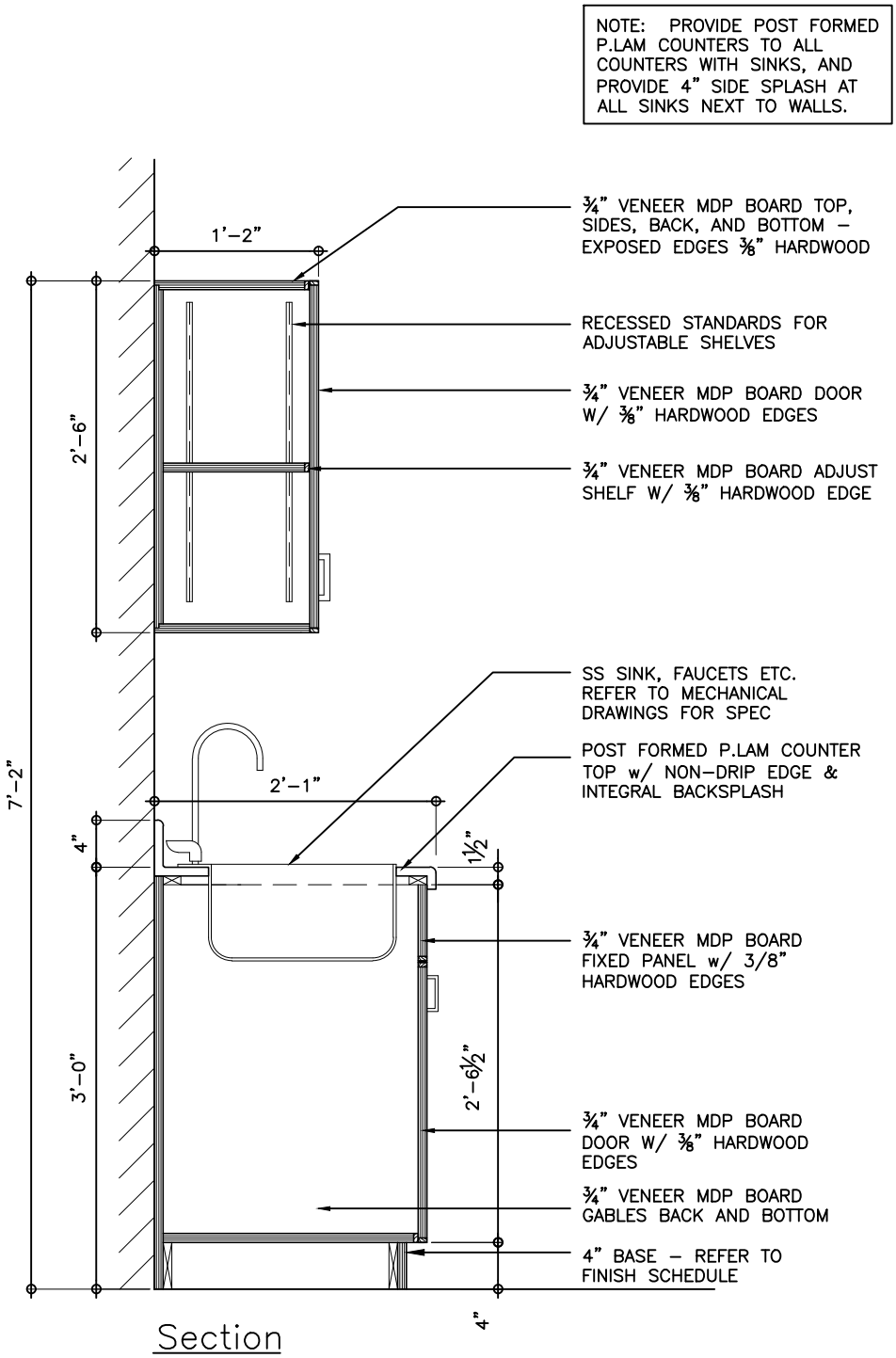
Holy Rosary School Renovations

Section 01015
Appendix A

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL COUNTER W/ UPPERS & SINK **SCALE : 3/4" = 1'-0"**



Standard Detail **#12**

Job # 2808-11

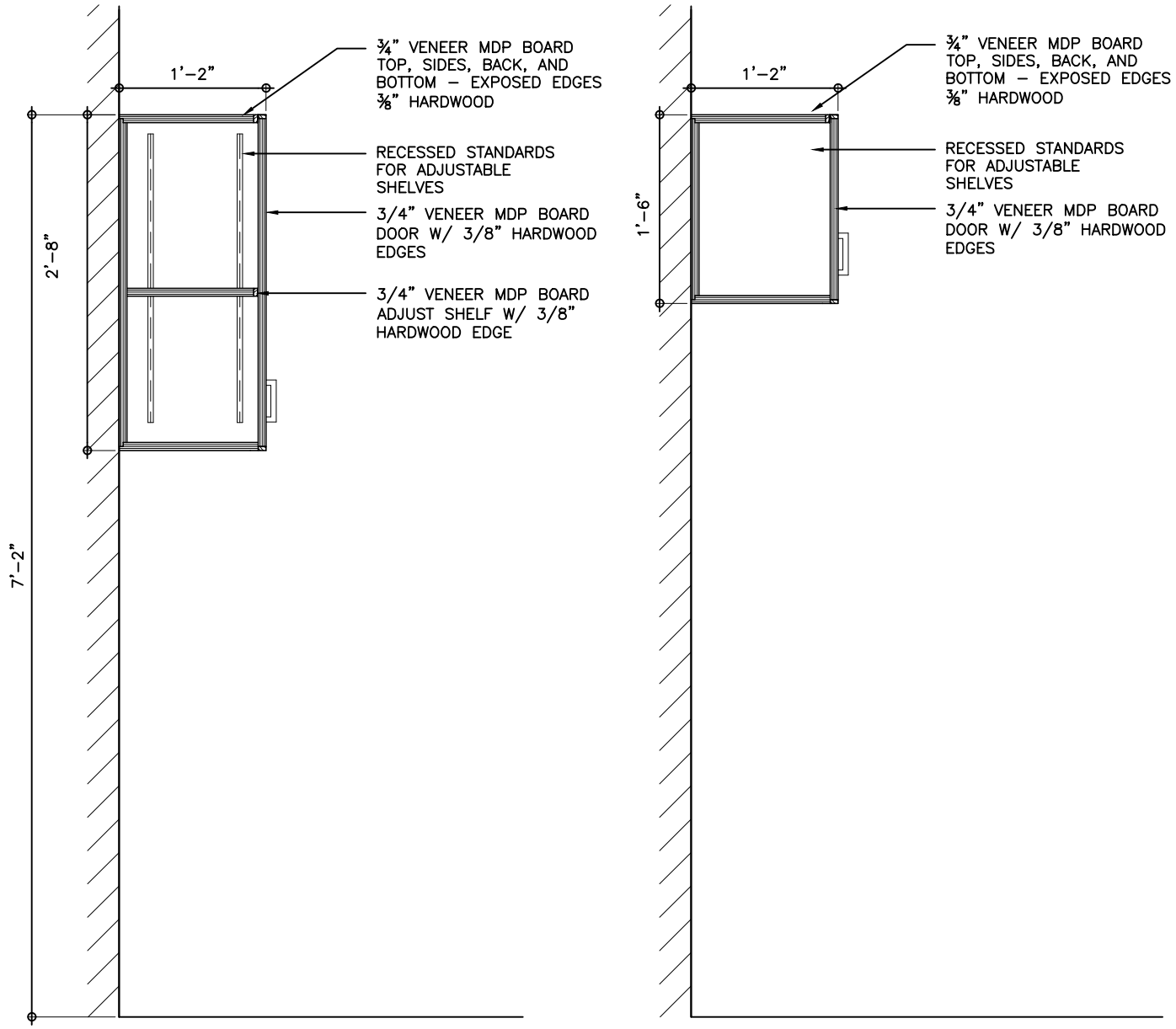
Holy Rosary School Renovations

Section 01015
Appendix A

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL COUNTER W/ UPPERS & SINK **SCALE : 3/4" = 1'-0"**



Standard Detail **#13 & 14**

Job # 2808-11

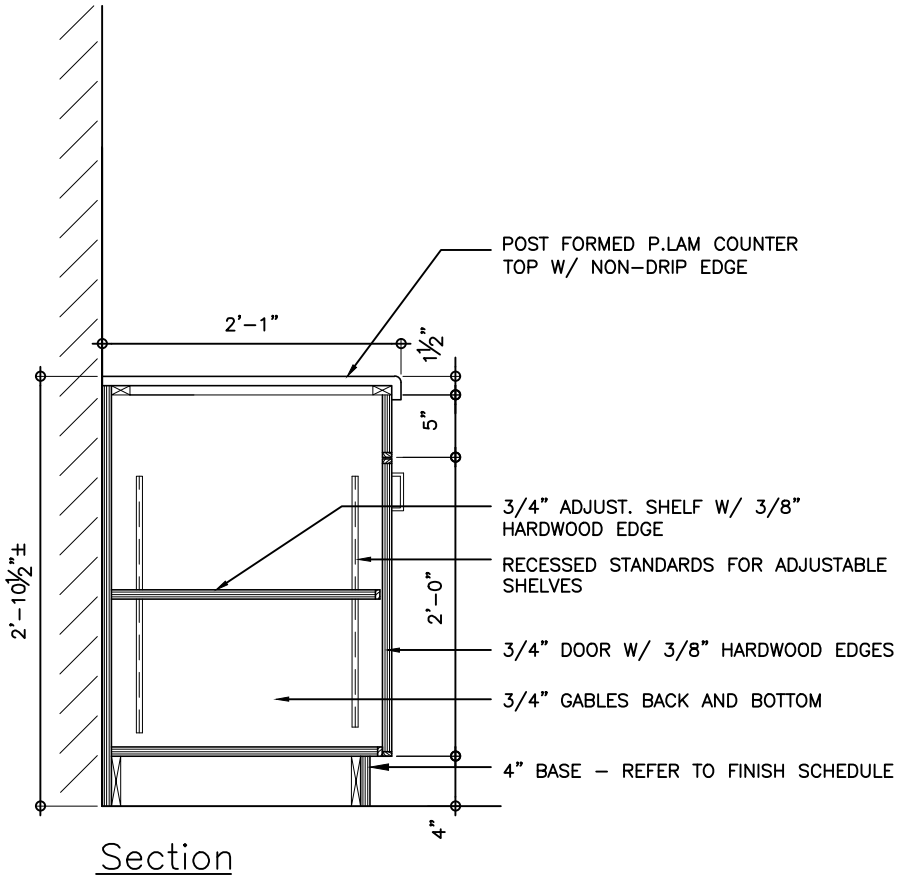
Section 01015
Appendix A

Holy Rosary School Renovations

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL SERVERY COUNTER **SCALE : 3/4" = 1'-0"**



Standard Detail **#15**

Job # 2808-11

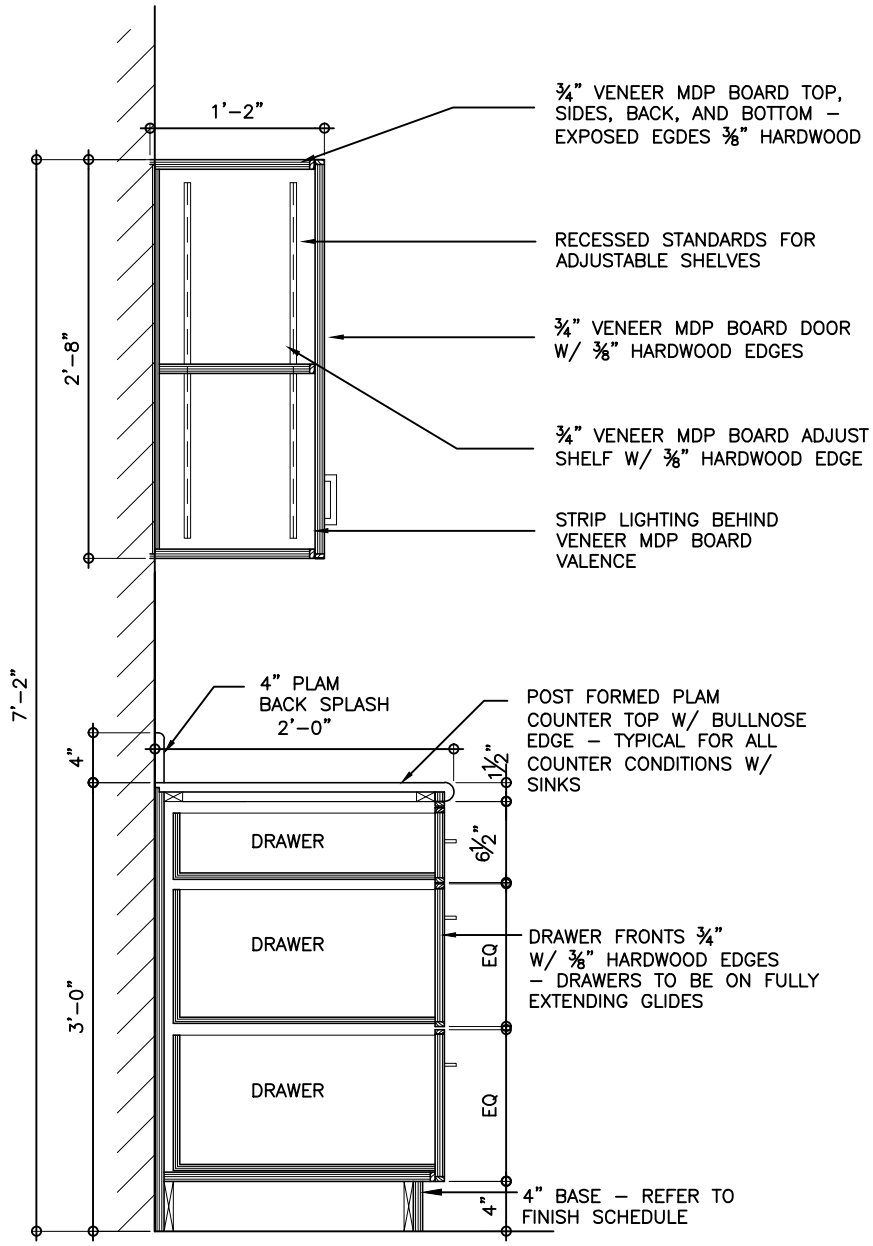
Holy Rosary School Renovations

Section 01015
Appendix A

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

TYPICAL COUNTER W/ DRAWERS **SCALE : 3/4" = 1'-0"**



Section

Standard Detail **#16**

Job # 2808-11

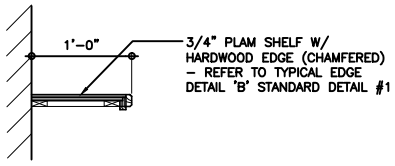
Holy Rosary School Renovations

Section 01015
Appendix A

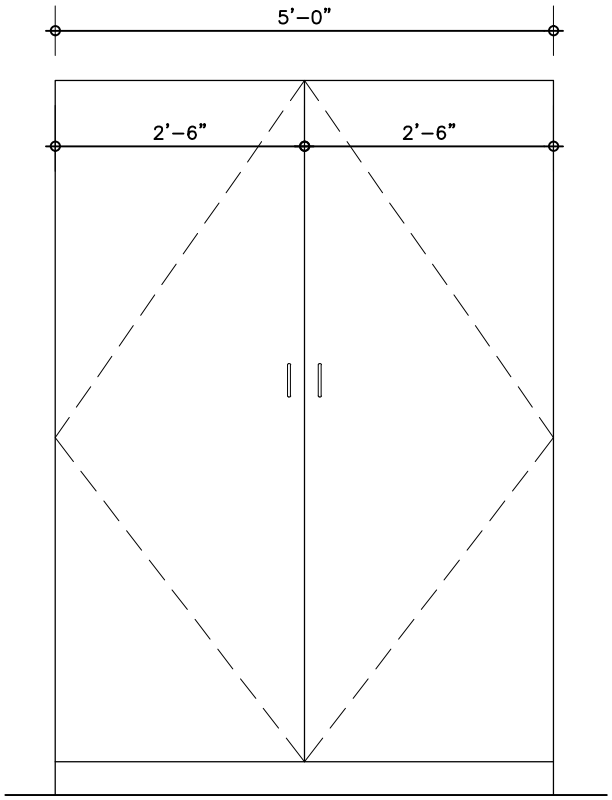
ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

March 17, 2011

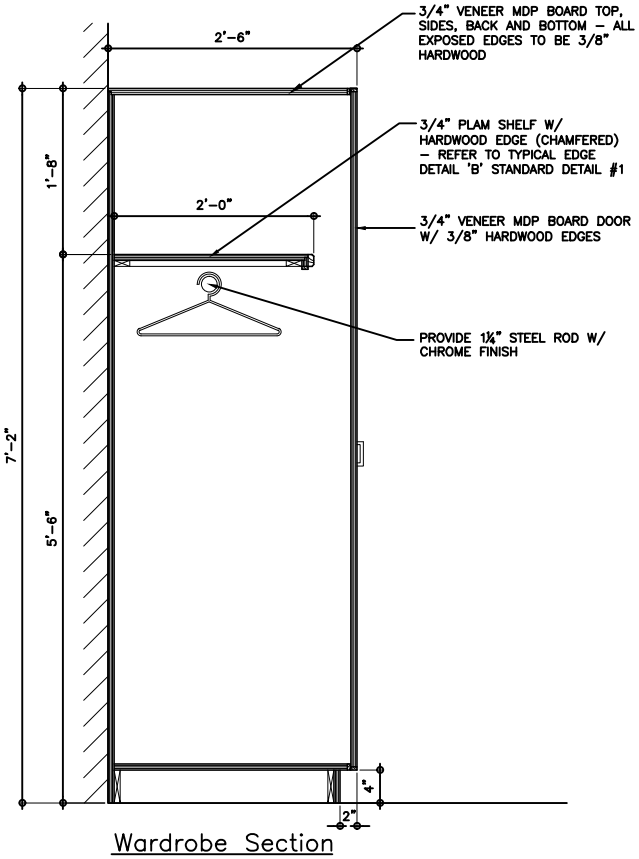
TYPICAL WARDROBE **SCALE : 1/2" = 1'-0"**



Shelf Section



Elevation



Wardrobe Section

Standard Detail **#17 & 18**

Advanced Environmental
A Division of Trow Associates Inc

4093 Meadowbrook Drive, Unit 114
London, Ontario
N6L 1G2

DESIGNATED SUBSTANCES SURVEY

Holy Rosary School
Wyoming, Ontario

Prepared for:

St. Clair Catholic District School Board
245 Tecumseh Street
Sarnia, Ontario
N7T 2L1

November 15, 2010

Project No.: 10-5052

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APPENDICES

1.0 INTRODUCTION

Advanced Environmental (AEC) 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 Holy Rosary School located at 715 London Street in Wyoming, Ontario.

The school is a single storey structure, with a total area of 11,000 square feet. The original building was constructed in 1957. 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 AEC 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.

Effective as of July 1st 2010 in Ontario, all Designated Substances are regulated within a single amalgamated regulation, Ontario Regulation 490/09.

The Ministry of Labour (MOL) has issued a regulation (Ontario Regulation 278/05) with respect to the disturbance of asbestos on construction projects and has drafted guidelines for control of lead and silica exposures on construction projects.

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 practises. 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 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. However, the designated substance regulation (DSR) for lead, Regulation 843, specifies occupational exposure limits (OELs) for lead and, where necessary, requires implementation of a control program to ensure compliance with these OELs. The time-weighted average (TWA) OEL for lead (i.e., all lead except tetraethyl lead) is: 0.05 milligrams per cubic metre (mg/m3) of air. However, under Subsection 3(3) of the Regulation, construction projects are excluded from the OELs and most of the other requirements of the Regulation. This exclusion should not be interpreted as meaning nothing is to be done for construction workers who are exposed to lead. The OELs establish an Ontario standard for worker protection from lead. Procedures that provide an equivalent level of protection should, therefore, be implemented on construction projects where exposure to lead is a hazard. Ensuring such procedures are in place would, in the words of clause 25(2)(h) of the *Occupational Health and Safety Act* (OHSA), be "taking reasonable precautions to protect the health and safety of workers".

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 theoretically an 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 Holy Rosary 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

No asbestos-containing acoustic tiles were noted in this facility.

4.1.4 Mechanical Insulation

An asbestos containing paper gasket is present on the boiler in the Mechanical Room.

4.1.5 Plaster and Drywall

No asbestos was detected in any of the plaster samples collected. On the basis of these sample results, plaster in this building can be assumed to be non-asbestos.

Drywall compound used in construction prior to 1988 should be considered asbestos-suspect.

4.1.6 Asbestos Cement Sheets

Transite tile is present above the existing corridor ceiling where the original buildng joins the portapak.

4.1.7 Vinyl Floor Tiles

The vinyl floor tiles in the facility have been assumed 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.

4.1.8 Vinyl Sheet Flooring

Vinyl sheet flooring has been sampled (by others) and found to be asbestos free

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 Holy Rosary 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
103P, Boys Washroom	2 stained ceiling tiles.
118A, Kindergarten Classroom	17 stained ceiling tiles.
116A, Classroom	1 stained ceiling tile.
102P, Corridor	2 stained ceiling tiles.

5.0 RECOMMENDATIONS

The following recommendations are made with respect to the hazardous building materials and Designated Substances noted at Holy Rosary 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 Drywall Joint Compound

The sampling of drywall compound was not performed during this assessment. If any disturbance of these materials is planned, sampling should be performed in advance.

Removal of more than 1 square metre (9 square feet), of drywall compound containing asbestos requires Type 2 procedures under Reg. 278/05.

5.1.2.2 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.

5.1.2.3 Asbestos Cement Board

The transite present in the building has been visually identified as a non-friable asbestos product. This product is non-friable, and as such is not expected to release airborne asbestos fibre under normal use.

Transite may be altered or removed, with manually powered tools, following the Type 1 procedures outlined in Reg. 278/05. The use of powered equipment on asbestos cement products, 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, Regulation Respecting

Mercury - 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 were observed throughout the school, AEC 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

AEC has prepared this report for the exclusive use of the Client in evaluating the Site at the time of AEC's assessment. AEC will not be responsible for the use of

APPENDIX I

BULK SAMPLING RESULTS

(From Previous Assessments)

this report by any third party, or reliance on or any decision to be made based on it without the prior written consent of AEC. AEC accepts no responsibility for damages, if any, by any third party because of decisions or actions based on this report.

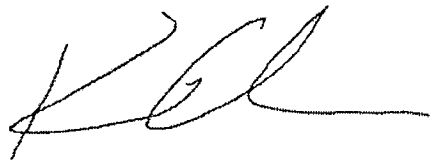
The findings and conclusions documented in this report have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by qualified professionals currently practising in this area of environmental assessment. 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, AEC should be contacted to re-evaluate the conclusions of this report and to provide amendments as required.

Respectfully submitted,

Advanced Environmental



Kris Olson, P.Eng.
Senior Project Manager

APPENDIX II

UPDATED ROOM-BY-ROOM ASBESTOS MATERIALS SUMMARY

PINCHIN
Environmental

Pinchin Environmental

Asbestos Samples Report

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/22/2007

Sample Number	System	Material	Location Number	Has Asbestos	Phase One		Phase Two		Description
					Asb. Type	Result	Asb. Type	Result	
0002	Ceiling	Glued-on tiles	8	☐	None Detected	ND	None Detected	NR	Stuck-on ceiling tiles
0003	Ceiling	Glued-on tiles	12	☐	None Detected	ND	None Detected	NR	Stuck-on ceiling tiles
0004	Ceiling	Lay-in tiles	14	☐	None Detected	ND	None Detected	NR	Lay-in ceiling tiles
0005	Ceiling	Lay-in tiles	15	☐	None Detected	ND	None Detected	NR	Lay-in ceiling tiles
0006	Ceiling	Lay-in tiles	17	☐	None Detected	ND	None Detected	NR	Lay-in ceiling tiles
0007	Ceiling	Lay-in tiles	18	☐	None Detected	ND	None Detected	NR	Lay-in ceiling tiles
0008	Floor	Vinyl sheet (flooring)	22	☐	None Detected	ND	None Detected	NR	Vinyl sheet flooring
0009	Ceiling	Lay-in tiles	24	☐	None Detected	ND	None Detected	NR	Lay-in ceiling tiles
0010	Ceiling	Lay-in tiles	24	☐	None Detected	ND	None Detected	NR	Lay-in ceiling tiles
0011	Ceiling	Plaster	2	☐	None Detected	ND	No Result	NR	Plaster
0012	Ceiling	Transite	17	☑	Chrysotile	10-25%	No Result	NR	Transite sheets on ceiling
0013	Ceiling	Lay-in tiles	14	☐	None Detected	ND	No Result	NR	Lay-in ceiling tiles
0014	Other	Vinyl sheet (flooring)	7	☐	None Detected	ND	No Result	NR	Vinyl sheet flooring covering countertop

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 2 MECHANICAL ROOM **Floor:** 1 **Room Number:** 108 P **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Not Accessible	NAC	Plaster	016	Not Applicable	Not Applicable	C	Yes	120	(-)	0	(-)	0	(-)	SF	S 0011	None
Duct	1	Not Applicable	N/A	Not Insulated	099	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Concrete(poured	002	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Boiler	BLR	Fibreglass	028	Not Applicable	Not Applicable	B	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Mechanical	1	Furnace	FURN	Not Insulated	099	Not Applicable	Not Applicable	B	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Mechanical	1	Heating Water Tank	HWT	Not Insulated	099	Not Applicable	Not Applicable	B	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Mechanical	1		WMTR	Not Insulated	099	Not Applicable	Not Applicable	B	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Return	HWR	Fibreglass	028	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Supply	HWS	Fibreglass	028	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Other	1	Door	DOOR		NE			B	Yes	1	(8)	0	(-)	0	(-)	EA	V 9500	Suspect

Surveyor Notes: ACM gasket hanging on wall

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(--) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 1 MECHANICAL ROOM **Floor:** 1 **Room Number:** 107 P **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	Yes	120	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Duct	1	Not Applicable	N/A	Not Insulated	099	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Concrete(poured	002	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Applicable	N/A	Fibrous Board	119	Gasket	Steel	B	Yes	3	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Mechanical	1	Domestic Hot Water	DHWT	Fibreglass	028	Not Applicable	Not Applicable	B	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Mechanical	1	Furnace	FURN	Not Insulated	099	Not Applicable	Not Applicable	B	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Not Applicable	Not Applicable	B	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Other	1	Door	DOOR		NE			B	Yes	1	(8)	0	(-)	0	(-)	EA	V 9500	Suspect

Surveyor Notes: GASKET PRESENT ON FURNACE

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 10 CLASSROOM **Floor:** 1 **Room Number:** 112 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Wood	004	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Not Accessible	NAC		NI			C	Yes	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes: A mercury thermostat is present in this location.

Location #: 11 GYMNASIUM **Floor:** 1 **Room Number:** 111 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Not Applicable	N/A	Not Applicable	N/A	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	1500	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Hot Water Heating	HWH	Not Insulated	099	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Beam, Deck, Joist	BDJ	Wood	004	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 9 MAIN OFFICE **Floor:** 1 **Room Number:** 114 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Not Accessible	NAC		NI			C	Yes	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes: A mercury thermostat is present in this location.

Location #: 10 CLASSROOM **Floor:** 1 **Room Number:** 112 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Large pinhole pattern -	AT-003	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	600	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	550	(5)	0	(-)	50	(3)	SF	V 9000	Asbestos
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access

A - Accessible To All Building Occupants.

B - Accessible To Maintenance Staff

C - Accessible To Maintenance Staff With a Ladder.

D - Not Accessible.

Condition

Good - No Visible damage or exposed material.

Fair - Repairable Damage with minor amounts of exposed material.

Poor - Irrepairable damage with exposed & missing material.

Note: Sprayed Materials are only rated as Good or Poor.

Action

(–) No Action Required.

(1) Immediate clean-up of debris or damaged ACM likely to be disturbed

(2) Type 2 precautions for entry into areas with ACM debris

(3) ACM removal required

(4) Type 2 precautions for entry into areas where ACM is present

(5) Proactive ACM removal

(6) Proactive ACM repair

(7) Management program and surveillence

(8) Suspect Material

Sample Number

S #### Sample Collected.

V #### Material is visually identified to be identical to S ####.

V 0000 Material is visually identified to contain no asbestos.

V 9000 Material is visually identified to contain asbestos.

V 9500 Material is suspected to contain asbestos.

Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 8 COMPUTER ROOM **Floor:** 1 **Room Number:** 110 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Not Accessible	NAC		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None
Floor	1		NE	Wood	004			NE	No	NE	(-)	NE	(-)	NE	(-)	NE	V 0000	None

Surveyor Notes: A mercury thermostat is present in this location.

Location #: 9 MAIN OFFICE **Floor:** 1 **Room Number:** 114 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Large pinhole pattern -	AT-003	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	240	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Carpet	A	No	240	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(--) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

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All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 7 LIBRARY **Floor:** 1 **Room Number:** 104 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Walls	1	Not Applicable	N/A	Wood	004	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Pinhole pattern -	AT-002	Glued-on tiles	005	Not Applicable	Not Applicable	A	Yes	100	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Other	1	Countertop	CNTR	Vinyl sheet	009			A	Yes	10	(-)	0	(-)	0	(-)	SF	S 0014	None
Ceiling	1	Not Accessible	NAC		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes:

Location #: 8 COMPUTER ROOM **Floor:** 1 **Room Number:** 110 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Large pinhole pattern -	AT-003	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	300	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Random large & small	AT-004	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	100	(-)	0	(-)	0	(-)	SF	S 0002	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Carpet	A	No	400	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

PINCHIN Environmental

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All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 6 CLASSROOM **Floor:** 1 **Room Number:** 100 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Walls	1	Not Applicable	N/A	Wood	004	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Pinhole pattern -	AT-002	Glued-on tiles	005	Not Applicable	Not Applicable	A	Yes	100	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Other	1	Countertop	CNTR	Vinyl sheet	009			A	Yes	10	(-)	0	(-)	0	(-)	SF	V 0014	None

Surveyor Notes: NO CEILING ACCESS. ELECTRIC WALL HEATERS (2) - THERMOSTAT BUILT IN.

Location #: 7 LIBRARY **Floor:** 1 **Room Number:** 104 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Pinhole pattern -	AT-002	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	600	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	No	600	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Rain Water Leader	RWL	Not Insulated	099	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access

A - Accessible To All Building Occupants.

B - Accessible To Maintenance Staff

C - Accessible To Maintenance Staff With a Ladder.

D - Not Accessible.

Condition

Good - No Visible damage or exposed material.

Fair - Repairable Damage with minor amounts of exposed material.

Poor - Irrepairable damage with exposed & missing material.

Note: Sprayed Materials are only rated as Good or Poor.

Action

(–) No Action Required.

(1) Immediate clean-up of debris or damaged ACM likely to be disturbed

(2) Type 2 precautions for entry into areas with ACM debris

(3) ACM removal required

(4) Type 2 precautions for entry into areas where ACM is present

(5) Proactive ACM removal

(6) Proactive ACM repair

(7) Management program and surveillence

(8) Suspect Material

Sample Number

S #### Sample Collected.

V #### Material is visually identified to be identical to S ####.

V 0000 Material is visually identified to contain no asbestos.

V 9000 Material is visually identified to contain asbestos.

V 9500 Material is suspected to contain asbestos.

Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

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All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 5 LAN ROOOM **Floor:** 1 **Room Number:** 101 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Wood	004	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Not Accessible	NAC		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes: NO ACCESS ABOVE CEILING.

Location #: 6 CLASSROOM **Floor:** 1 **Room Number:** 100 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Pinhole pattern -	AT-002	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	600	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	600	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access

A - Accessible To All Building Occupants.

B - Accessible To Maintenance Staff

C - Accessible To Maintenance Staff With a Ladder.

D - Not Accessible.

Condition

Good - No Visible damage or exposed material.

Fair - Repairable Damage with minor amounts of exposed material.

Poor - Irrepairable damage with exposed & missing material.

Note: Sprayed Materials are only rated as Good or Poor.

Action

(–) No Action Required.

(1) Immediate clean-up of debris or damaged ACM likely to be disturbed

(2) Type 2 precautions for entry into areas with ACM debris

(3) ACM removal required

(4) Type 2 precautions for entry into areas where ACM is present

(5) Proactive ACM removal

(6) Proactive ACM repair

(7) Management program and surveillence

(8) Suspect Material

Sample Number

S #### Sample Collected.

V #### Material is visually identified to be identical to S ####.

V 0000 Material is visually identified to contain no asbestos.

V 9000 Material is visually identified to contain asbestos.

V 9500 Material is suspected to contain asbestos.

Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

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All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 4 GIRL'S WASHROOM **Floor:** 1 **Room Number:** 106 P **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Floor	1	Not Applicable	N/A	Terrazzo	052	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None

Surveyor Notes:

Location #: 5 LAN ROOOM **Floor:** 1 **Room Number:** 101 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Pinhole pattern -	AT-002	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	240	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Terrazzo	052	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Applicable	N/A	Not Insulated	099	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access

A - Accessible To All Building Occupants.

B - Accessible To Maintenance Staff

C - Accessible To Maintenance Staff With a Ladder.

D - Not Accessible.

Condition

Good - No Visible damage or exposed material.

Fair - Repairable Damage with minor amounts of exposed material.

Poor - Irrepairable damage with exposed & missing material.

Note: Sprayed Materials are only rated as Good or Poor.

Action

(–) No Action Required.

(1) Immediate clean-up of debris or damaged ACM likely to be disturbed

(2) Type 2 precautions for entry into areas with ACM debris

(3) ACM removal required

(4) Type 2 precautions for entry into areas where ACM is present

(5) Proactive ACM removal

(6) Proactive ACM repair

(7) Management program and surveillence

(8) Suspect Material

Sample Number

S #### Sample Collected.

V #### Material is visually identified to be identical to S ####.

V 0000 Material is visually identified to contain no asbestos.

V 9000 Material is visually identified to contain asbestos.

V 9500 Material is suspected to contain asbestos.

Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 3 BOY'S WASHROOM **Floor:** 1 **Room Number:** 105 P **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	No pattern - cellulose	AT-001	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	200	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Terra Cotta	020	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Floor	1	Not Applicable	N/A	Terrazzo	052	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None

Surveyor Notes: NO CEILING ACCESS.

Location #: 4 GIRL'S WASHROOM **Floor:** 1 **Room Number:** 106 P **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	No pattern - cellulose	AT-001	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	200	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 11 GYMNASIUM **Floor:** 1 **Room Number:** 111 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Walls	1	Not Applicable	N/A	Wood	004	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None

Surveyor Notes: A mercury thermostat is present in this location.

Location #: 12 STAGE **Floor:** 1 **Room Number:** 109 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Large pinhole patterns	AT-005	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	360	(-)	0	(-)	0	(-)	SF	S 0003	None
Ceiling	1	Pinholes pattern -	AT-006	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	15	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Concrete(poured	002	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	240	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Return	HWR	Fibreglass	028	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Supply	HWS	Fibreglass	028	Not Applicable	Not Applicable	C	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 12 STAGE **Floor:** 1 **Room Number:** 109 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Wood	004	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Not Accessible	NAC		NI			C	Yes	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes: NO ACCESS ABOVE CEILING.

Location #: 13 CORRIDOR **Floor:** 1 **Room Number:** **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Pinhole pattern -	AT-002	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	220	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Large pinhole patterns	AT-005	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	560	(-)	0	(-)	0	(-)	SF	V 0003	None
Ceiling	1	Pinholes pattern -	AT-006	Glued-on tiles	005	Not Applicable	Not Applicable	C	Yes	10	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Terrazzo	052	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access

A - Accessible To All Building Occupants.

B - Accessible To Maintenance Staff

C - Accessible To Maintenance Staff With a Ladder.

D - Not Accessible.

Condition

Good - No Visible damage or exposed material.

Fair - Repairable Damage with minor amounts of exposed material.

Poor - Irrepairable damage with exposed & missing material.

Note: Sprayed Materials are only rated as Good or Poor.

Action

(–) No Action Required.

(1) Immediate clean-up of debris or damaged ACM likely to be disturbed

(2) Type 2 precautions for entry into areas with ACM debris

(3) ACM removal required

(4) Type 2 precautions for entry into areas where ACM is present

(5) Proactive ACM removal

(6) Proactive ACM repair

(7) Management program and surveillence

(8) Suspect Material

Sample Number

S #### Sample Collected.

V #### Material is visually identified to be identical to S ####.

V 0000 Material is visually identified to contain no asbestos.

V 9000 Material is visually identified to contain asbestos.

V 9500 Material is suspected to contain asbestos.

Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 13 CORRIDOR **Floor:** 1 **Room Number:** **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Not Accessible	NAC		NI			C	Yes	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes: NO CEILING ACCESS.

Location #: 14 KINDERGARTEN CLASSROOM **Floor:** 1 **Room Number:** 118 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Pinhole pattern -	AT-008	Drywall	014	Not Applicable	Not Applicable	C	Yes	330	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Long fissures with	AT-015	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	170	(-)	0	(-)	0	(-)	SF	S 0013	None
Duct	1	Not Applicable	N/A	Not Insulated	099	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	500	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	300	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(-) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 14 KINDERGARTEN CLASSROOM **Floor:** 1 **Room Number:** 118 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Piping	1	Domestic Cold Water	DCW	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Hot Water	DHW	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Return	HWR	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Supply	HWS	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Deck	DCK	Steel	001	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Joist	JST	Steel	001	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Wood	004	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Straight		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Fitting		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Surveyor Notes: A mercury thermostat is present in this location.

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 15 STAFF ROOM **Floor:** 1 **Room Number:** 115 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Pinhole pattern -	AT-008	Drywall	014	Not Applicable	Not Applicable	C	Yes	360	(-)	0	(-)	0	(-)	SF	NI NI	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	250	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	200	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Return	HWR	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Supply	HWS	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Deck	DCK	Steel	001	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Joist	JST	Steel	001	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Wood	004	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None

Surveyor Notes:

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 16 CLASSROOM **Floor:** 1 **Room Number:** 117 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Pinhole pattern -	AT-008	Drywall	014	Not Applicable	Not Applicable	C	Yes	600	(-)	0	(-)	0	(-)	SF	NI NI	None
Duct	1	Not Applicable	N/A	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable		A	No	600	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	All	ALL	Fibreglass	028	Straight	Foil Face	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	All	ALL	Fibreglass	028	Fitting	Foil Face	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Deck	DCK	Steel	001	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Joist	JST	Steel	001	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1		NE	Wood	004			NE	No	NE	(-)	NE	(-)	NE	(-)	NE	V 0000	None

Surveyor Notes: A mercury thermostat is present in this location.

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 30 STAFF WASHROOM **Floor:** 1 **Room Number:** 103 P **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Floor	1		NI	Terrazzo	052			A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1		NI	Masonry	019			A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Ceiling	1	No pattern - cellulose	AT-001	Glued-on tiles	005			C	Yes	30	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1	Not Accessible	NAC		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Straight		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Fitting		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Duct	1	Not Found	N/F		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes:

Location #: 31 STORAGE ROOM **Floor:** 1 **Room Number:** 103 S **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Floor	1		NI	Terrazzo	052			A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1		NI	Masonry	019			A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Ceiling	1	No pattern - cellulose	AT-001	Glued-on tiles	005			C	Yes	30	(-)	0	(-)	0	(-)	SF	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Surveyor Notes:

Location #: 29 KINDERGARTEN GIRL'S WASHROOM **Floor:** 1 **Room Number:** **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Floor	1		NI	Vinyl tiles	008			A	Yes	30	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Walls	1		NI	Masonry	019			A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Ceiling	1	Long fissures with	AT-015	Lay-in tiles	006			C	Yes	30	(-)	0	(-)	0	(-)	SF	V 0013	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Straight		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Fitting		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Duct	1	Not Found	N/F		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None
Structure	1	Beam, Deck, Joist	BDJ	Steel	001			C	No	NE	(-)	NE	(-)	NE	(-)	NE	V 0000	None

Surveyor Notes:

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 31 STORAGE ROOM **Floor:** 1 **Room Number:** 103 S **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Not Accessible	NAC		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Straight		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Fitting		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Duct	1	Not Found	N/F		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes:

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 26 STAFF WASHROOM **Floor:** 1 **Room Number:** **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Random large & small	AT-004	Glued-on tiles	005			C	Yes	30	(-)	0	(-)	0	(-)	SF	V 0002	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Straight		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Fitting		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Ceiling	1	Not Accessible	NAC		NI			C	Yes	0	(-)	0	(-)	0	(-)	NI	NI NI	None
Duct	1	Not Found	N/F		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes:

Location #: 27 EQUIPMENT STORAGE ROOM **Floor:** 1 **Room Number:** **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Floor	1		NI	Concrete(poured	002			A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1		NI	Masonry	019			A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Ceiling	1	Random large & small	AT-004	Glued-on tiles	005			C	Yes	90	(-)	0	(-)	0	(-)	SF	V 0002	None
Ceiling	1	Not Accessible	NAC		NI			C	Yes	0	(-)	0	(-)	0	(-)	NI	NI NI	None
Piping	1	Not Found	N/F		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Legend:

Access

A - Accessible To All Building Occupants.

B - Accessible To Maintenance Staff

C - Accessible To Maintenance Staff With a Ladder.

D - Not Accessible.

Condition

Good - No Visible damage or exposed material.

Fair - Repairable Damage with minor amounts of exposed material.

Poor - Irrepairable damage with exposed & missing material.

Note: Sprayed Materials are only rated as Good or Poor.

Action

(--) No Action Required.

(1) Immediate clean-up of debris or damaged ACM likely to be disturbed

(2) Type 2 precautions for entry into areas with ACM debris

(3) ACM removal required

(4) Type 2 precautions for entry into areas where ACM is present

(5) Proactive ACM removal

(6) Proactive ACM repair

(7) Management program and surveillence

(8) Suspect Material

Sample Number

S #### Sample Collected.

V #### Material is visually identified to be identical to S ####.

V 0000 Material is visually identified to contain no asbestos.

V 9000 Material is visually identified to contain asbestos.

V 9500 Material is suspected to contain asbestos.

Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN
Environmental

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All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 31 STORAGE ROOM **Floor:** 1 **Room Number:** 103 S **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Not Accessible	NAC		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Straight		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Domestic Water (Hot &	DW	Not Insulated	099	Fitting		A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Duct	1	Not Found	N/F		NI			NI	No	0	(-)	0	(-)	0	(-)	NI	NI NI	None

Surveyor Notes:

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 25 CUSTODIAL OFFICE **Floor:** 1 **Room Number:** 102 P **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling one	2	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	No	300	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Ceiling	1	Fissures with pinholes	AT-013	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	300	(-)	0	(-)	0	(-)	SF	V 0009	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Concrete(poured	002	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos

Surveyor Notes:

Location #: 26 STAFF WASHROOM **Floor:** 1 **Room Number:** **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Floor	1		NI	Vinyl tiles	008			A	Yes	30	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Walls	1		NI	Masonry	019			A	Yes	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(--) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 24 CORRIDOR **Floor:** 1 **Room Number:** 102 P/ **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling one	2	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	No	480	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Ceiling	1	Fissures with pinholes	AT-013	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	480	(-)	0	(-)	0	(-)	SF	S 0009	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	480	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Steel	001	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos

Surveyor Notes:

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(--) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Surveyor Notes: A mercury thermostat is present in this location.

Location #: 23 BOYS WASHROOM **Floor:** 1 **Room Number:** 103 P **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling one	2	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	No	160	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Ceiling	1	Fissures with pinholes	AT-012	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	160	(-)	0	(-)	0	(-)	SF	V 0007	None
Duct	1	Not Applicable	N/A	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Backing (Vinyl Flooring)	BCK	Vinyl sheet	009	Not Applicable	Not Applicable	A	Yes	160	(-)	0	(-)	0	(-)	SF	V 0008	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Applicable	N/A	Not Insulated	099	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos

Surveyor Notes: A mercury thermostat is present in this location.

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 21 OFFICE **Floor:** 1 **Room Number:** 120 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos

Surveyor Notes: Air and bulk sampling for mold was performed in this location on May 10, 2000.
A mercury thermostat is present in this location.

Location #: 22 GIRL'S WASHROOM **Floor:** 1 **Room Number:** 121 P **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling one	2	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	No	160	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Ceiling	1	Fissures with pinholes	AT-012	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	160	(-)	0	(-)	0	(-)	SF	V 0007	None
Duct	1	Not Applicable	N/A	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Backing (Vinyl Flooring)	BCK	Vinyl sheet	009	Not Applicable	Not Applicable	A	Yes	160	(-)	0	(-)	0	(-)	SF	S 0008	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Applicable	N/A	Not Insulated	099	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(--) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 20 CLASSROOM **Floor:** 1 **Room Number:** 116 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos

Surveyor Notes: A mercury thermostat is present in this location.

Location #: 21 OFFICE **Floor:** 1 **Room Number:** 120 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling one	2	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	No	400	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Ceiling	1	Fissures with pinholes	AT-012	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	400	(-)	0	(-)	0	(-)	SF	S 0007	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

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PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 19 CLASSROOM **Floor:** 1 **Room Number:** 113 A **Surveyor** (cont'd)

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos

Surveyor Notes: A mercury thermostat is present in this location.

Location #: 20 CLASSROOM **Floor:** 1 **Room Number:** 116 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling one	2	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	No	600	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Ceiling	1	Fissures with pinholes	AT-012	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	600	(-)	0	(-)	0	(-)	SF	V 0007	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 18 CLASSROOM **Floor:** 1 **Room Number:** 119 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling one	2	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	No	600	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Ceiling	1	Fissures with pinholes	AT-012	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	600	(-)	0	(-)	0	(-)	SF	S 0007	None
Duct	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Vinyl tiles	008	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Not Found	N/F	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Drywall	014	Not Applicable	Not Applicable	A	Yes	100	(7)	0	(-)	0	(-)	%	V 9000	Asbestos

Surveyor Notes: A mercury thermostat is present in this location.

Location #: 19 CLASSROOM **Floor:** 1 **Room Number:** 113 A **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling one	2	Not Accessible	NAC	Drywall	014	Not Applicable	Not Applicable	C	No	600	(7)	0	(-)	0	(-)	SF	V 9000	Asbestos
Ceiling	1	Fissures with pinholes	AT-012	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	600	(-)	0	(-)	0	(-)	SF	V 0007	None

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.

PINCHIN Environmental

Pinchin Environmental

All Data

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

Building #: 12 **Building Name:** Holy Rosary School Wyoming **Survey Date:** 08/10/2009

Location #: 17 CORRIDOR **Floor:** 1 **Room Number:** **Surveyor**

System	Layer	System Component		Component Material		Component Item	Component Covering	Access	Visible	Condition						Units	Sample Number	Hazard
		Description	Code	Description	Code					Good	Action	Fair	Action	Poor	Action			
Ceiling	1	Pinhole pattern -	AT-008	Lay-in tiles	006	Not Applicable	Not Applicable	C	Yes	320	(-)	0	(-)	0	(-)	SF	V 0000	None
Duct	1	Not Applicable	N/A	Not Insulated	099	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Floor	1	Not Applicable	N/A	Terrazzo	052	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Mechanical	1	Not Applicable	N/A	Not Applicable	N/A	Not Applicable	Not Applicable	NI	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Return	HWR	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Heating Water Supply	HWS	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Piping	1	Rain Water Leader	RWL	Fibreglass	028	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Deck	DCK	Steel	001	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Structure	1	Joist	JST	Steel	001	Not Applicable	Not Applicable	C	No	0	(-)	0	(-)	0	(-)	NI	V 0000	None
Walls	1	Not Applicable	N/A	Masonry	019	Not Applicable	Not Applicable	A	Yes	0	(-)	0	(-)	0	(-)	SF	V 0000	None
Ceiling	1		NI	Transite	021			C	No	8	(7)	0	(-)	0	(-)	SF	S 0012	Asbestos

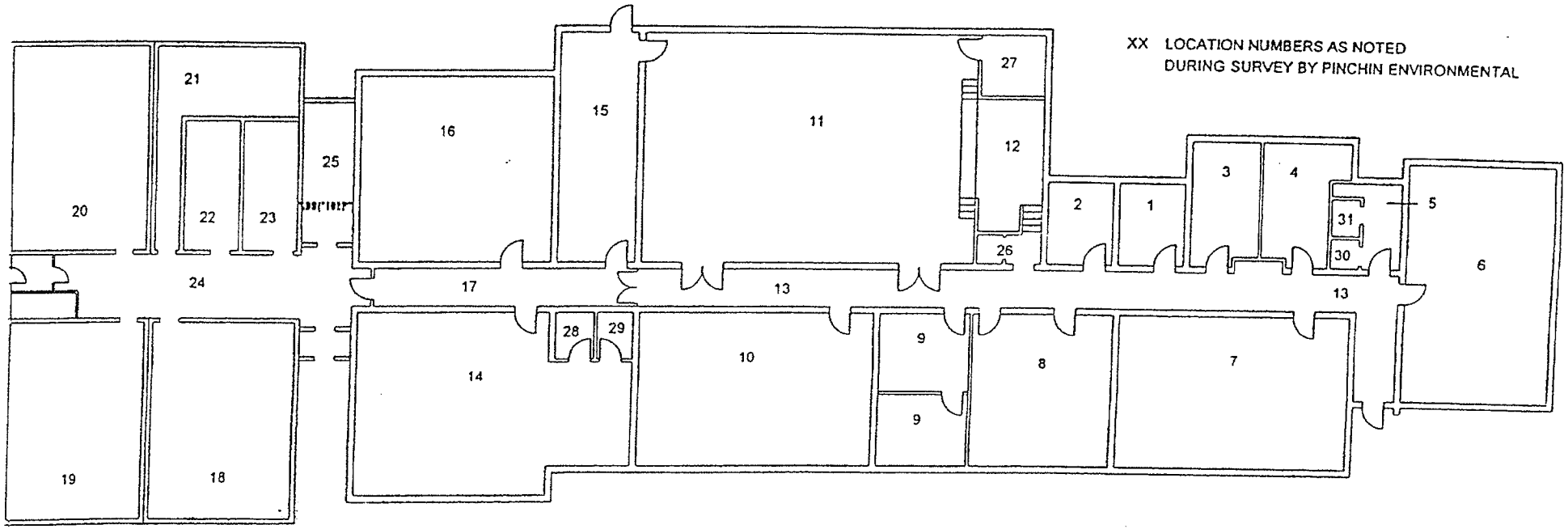
Surveyor Notes:

Legend:

Access	Condition	Action	Sample Number
A - Accessible To All Building Occupants. B - Accessible To Maintenance Staff C - Accessible To Maintenance Staff With a Ladder. D - Not Accessible.	Good - No Visible damage or exposed material. Fair - Repairable Damage with minor amounts of exposed material. Poor - Irrepairable damage with exposed & missing material. Note: Sprayed Materials are only rated as Good or Poor.	(–) No Action Required. (1) Immediate clean-up of debris or damaged ACM likely to be disturbed (2) Type 2 precautions for entry into areas with ACM debris (3) ACM removal required (4) Type 2 precautions for entry into areas where ACM is present (5) Proactive ACM removal (6) Proactive ACM repair (7) Management program and surveillence (8) Suspect Material	S #### Sample Collected. V #### Material is visually identified to be identical to S ####. V 0000 Material is visually identified to contain no asbestos. V 9000 Material is visually identified to contain asbestos. V 9500 Material is suspected to contain asbestos. Note: Vinyl Tiles, Vinyl sheet Flooring, Drywall, Plaster and Textured Finish (Coat) are considered suspect materials if not sampled.

Units : SF - Square Feet LF - Linear Feet EA - Each % - Percentage

Quantities shown above are based on visual approximations only and may be subject to variation.



Holy Rosary School Wyoming

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 REQUIREMENTS INCLUDED

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 As indicated in Part 4 of CCDC 2, the indicated value of allowances in this Section shall not include H.S.T. or overhead and profit percentages which shall be included as part of the stipulated price base bid amount.

3 Unless indicate otherwise in this section, the indicated allowances do no pertain to any product or procedure that are specified within the contract documents

4 All allowances shall be spent only with the approval of the Architect, who has the right to define materials, techniques, suppliers and personal to complete the work as indicated in the section.

2 CASH ALLOWANCES

1 Refer to CCDC2.

2 Section 01400 Testing: Include the stipulated sum of $5,000.00.

3 Section 08710 Hardware: Include the stipulated sum of $26,000.00. This allowance shall include the following:

Coordination Meeting with trades installing door and frames, installing hardware, making electrical and electronic connections.

The supply and installation of of mechanical and electrical hardware
Supply and installation of two automatic openers and supply and installation of one card reader.
Supply only of all millwork hardware (including henke hooks)
A complete review and report of all hardware installations as part of the substantial completion review.
Complete a final review of all deficiencies. Provide all necessary manuals to the Contractor and instruct the Owner's representative in the proper use and maintenance of all material and systems provided.

4 Section 02080 Hazardous Materials: Include the stipulated sum of $5,000.00 for removal of asbestos not identified for removal within the contract documents

5 Drapery: Include the stipulated sum of $5,000.00 for the supply and installation of drapery not specifically indicated elsewhere in the documents.

6 Electrical: Include the stipulated sum of $30,000.00 for the Communication Systems. All equipment, cabling, field devices, termination and testing allowance with the following communication systems shall be provided by others under this allowance.
- security/access control
- telephone (voice)
- computer (data)
- CATV/Satellite
- public address
- camera (video)

All rough-in work associated with these systems shall be provided by the electrical contractor as outlined on Drawing E2.3

Section 01100

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 REQUIREMENTS INCLUDED

1 Product installation alternative to base bid work.

2 Incorporation of accepted alternatives in agreement.

2 RELATED REQUIREMENTS

1 Section 00100: Instructions to bidders, Product/System Options.

3 REQUIREMENTS

1 Alternate or Alternative: Products or systems identified as 'alternate' or 'alternative' are NOT APPROVED EQUALS and can not be substituted for base specified products without the permission of the Consultant. If the Consultant or Contractor wish to substitute a alternate product or system for reasons of cost, availability, or ease of construction, a request must be made, a contemplated change order issued and if accepted a change order issued before the substitution can be made. Submission or review of a shop drawing shall not constitute a request or approval of an alternate. The value of any change to the contract shall include all coordination necessary to incorporate the alternate into the work.

2 Approved Equal: Within this contract a product, procedure or system that is identified as 'approved equal' can be substituted for the product or system identified in the base specification. However the contractor assumes all responsibility for design changes, engineering, coordinating the work as may be required, ensuring the identified finishes and colours are provided and that the product or system is able to be supplied within the project schedule. No increase in contract price will be considered.

3 Reference specification sections stipulate pertinent requirements for products and methods to achieve the work stipulated under each alternative. ALTERNATIVES listed in the sections of this contract do not indicate that they are APPROVED EQUALs or can be substituted without the Consultant's written approval.

4 Co-ordinate affected related work and modify surrounding work to integrate the work under each alternative.

4 AWARD/SELECTION OF ALTERNATIVES

1 If the contractor wishes to use an alternate system, product or method to what is specified, the Consultant shall be contacted and if an alternate can be considered the contractor shall provide a written request that includes the following information for both what is being proposed and what was originally specified.

The name of the specified and proposed system, product or method

The reason for the request (i.e.: cost, availability, etc)

Product or system identification of both proposed and specified

Industry design classifications of both indicating any differences and how the proposed is equal to or surpasses the specified.

Conformance diagrams of each indicating differences and proposed changes to incorporate the alternative.

Warranties for each indicating how the proposed equals or surpasses the specified.

The contractor shall indicate how the use of the alternate with affect the construction schedule. Alternates the delay the work will not be considered.

Indicate the the variation in price offered or requested as a result of using the alternate. The price shall include the values of all related changes required.

2 The Consultant shall have 5 working days to consider and render a recommendation to the Owner.

3 Shop Drawings shall be submitted only for specified or approved alternates. Submission or review of shop drawings does not supersede the approval process for Alternates.

4 Clearly indicate all related changes caused by the use of this alternative. Coordinate affected related work and modify surrounding work to integrate the work under each alternative.

5 ALTERNATIVES

1 See Appendix "D" attached to the tender form.

Section 01300

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 01010: Submission of schedules.
2 Section 01400: Submission of test and mix design (mill tests).
3 Section 01600: Submission of manufacturer's instructions.
4 Section 01700: Submission of contract close-out documents.

2 REQUIREMENTS INCLUDED

1 ADMINISTRATIVE
2 PRE CONSTRUCTION CONDITION REVIEW
2 SHOP DRAWINGS AND PRODUCT DATA
3 SAMPLES
4 OPERATING MAINTENANCE MANUALS
5 RECORD DRAWINGS AND DOCUMENTS
6 WARRANTIES
7 Electrical Inspection & Plumbing Reports
8 Colour Schedule

2 REQUIREMENTS

1 ADMINISTRATIVE

1 It is the sole responsibility of the Contractor to make submissions for systems, materials or processes that have been specified or approved equal. The Owner and Consultants shall not be responsible for cost or delay as a result of submission of a non approved alternate by the Contractor

2 Submit with reasonable promptness and in an orderly sequence so as to not cause delay in the work. Failure to submit in ample time is not considered sufficient reason for an extension of contract time and no claim for extension by reason of such default will be allowed.

3 The contractor shall allow the following review period by the consultants for all submittals. This period shall commence on the date submittals are received by the prime consultant:
five working days for all work requiring the review of only the prime consultant.
ten working days for all reviews for all other submittals (i.e. electrical light fixtures, etc.)

4 At the prime consultants option, specific items for review of other items may be sent directly to them to speed the construction process. These concerns should be discussed with the consultants before the construction schedule is finalized.

5 Work affected by the submittal shall not proceed until review is complete.

6 Submittals not stamped, signed, dated and identified as to the specific project will be returned without being examined and shall be considered rejected. No extension of the contract schedule will be permitted as a result of rejection of any submittal.

7 Verify field measurements and coordinate with affected adjacent work.

8 Adjustments made on shop drawings by the Consultant are not intended to change the Contract Price. If adjustments affect the value of work, state such in writing to the Consultant prior to proceeding with the work.

9 Contractor's responsibility for errors, omissions or deviations from requirements of Contract Documents is not relieved by any review by the Consultant.

10 Keep one reviewed copy of each submission on site.

2 PRE CONSTRUCTION CONDITION REVIEW

1 The Owner assumes that unless otherwise noted in the contract documents that the site, building and finish conditions both on the site and on neighbouring public and private lands are in a good state of repair. Therefore the full restoration of any area damaged by the work of this contract shall be the responsibility of the Contractor unless the following steps are taken

2 The Contractor shall review all existing conditions that are to remain unchanged by the work but could be effected during construction (i.e.: sidewalks, curbs, fences, adjacent walls etc). The Contractor shall arrange for such access to adjacent lands as may be required to adequately review and document suspect conditions.

3 The Contractor shall produce a condition report to highlight any suspect areas that show existing damage and indicate any concern in areas where additional measure are necessary to stabilize suspect conditions. Where the report contains a visual record of these conditions, the location of each image shall be identified and keyed to a reference drawing.

4 The Consultant shall review the report. Once this review is complete copies of the final documentation shall be supplied to the Owner, Consultant, and where off site conditions are recorded, to the Municipality and the effected land owner. The Contractor shall retain a copy of the report as part of the on site documents.

3 SHOP DRAWINGS AND PRODUCT DATA

1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by the Contractor to illustrate how specific details are being provided to meet the requirements of the contract and the intent of the design. These documents in no way supersede the contract documents and their review is not to be considered as an approval to deviate from them. If the contractor wishes to deviate from the contract document, approval must be first obtain through the Alternative price process.

2 Shop Drawings shall be submitted only for specified or approved alternates. Submission or review of shop drawings does not supersede the approval process for Alternates.

3 Shop Drawings shall be highlighted to clearly indicate;

- where and how the drawings deviate from contract documents.
- where further clarification of construction details and materials are required.
- request for specified post tender information (i.e.., colour, pattern, style).
- indicate materials, methods of construction and attachment or anchorage, temporary shoring and support, erection diagrams, connections, explanatory notes and other information necessary for completion of work.
- where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of the Section under which the adjacent items will be supplied and installed.
- cross references to design drawings and specifications.
- include the review, certification and stamp of an engineer qualified and register in the Province of Ontario for temporary or permanent elements of structural, electrical/electronic, mechanical, chemical, civil design.

4 Submit six (6) prints of shop drawings for each requirement requested in specification sections and as the Consultant may reasonably request.

5 The Consultant receives shop drawings for record and to answer specific questions that are clearly marked. If errors are noticed, the Consultant may request revised shop drawings. The Consultant shall return 3 copies to the Contractor.

6 Neither the receipt nor the review of shop drawings by the Owner or Consultant-Engineer shall relieve the Contractor from errors or omissions which may occur, even though the work is done in accordance with shop drawings. Errors or omissions shall be made good by the Contractor as soon as discovered irrespective of the receipt and review of the drawings by the Owner or Consultant-Engineer.

7 Make changes in shop drawings as the Consultant may require, consistent with Contract Documents. When resubmitting, notify the Consultant in writing of any revisions other than those requested.

8 The contractor shall clearly indicate in their submission and be responsible for any collateral alterations as a result of changes related to the building configurations, systems used or products installed as a result of the shop drawing process.

9 When shop drawings require an engineer's review, the contractor shall provide this review as part of the contract. The engineer shall be licensed within the Province of Ontario for the discipline required. Shop drawings shall clearly indicate the firm name, business address, telephone number and email address of the certifying engineer. As part of the shop drawing process, a letter of complicance from this certifying engineer shall be provided clearly indicating the product and/or work has been completed in compliance with the shop drawings. When a system is installed within the project, the letter of compliance shall be supplied before a payment application can be made. The contract shall include all costs related to review and preparation of compliance letter.

4 SAMPLES

1 Samples shall be submitted only for specified or approved alternates.

2 Submit for review samples in duplicate as requested in respective specification sections. Label samples as to origin and intended use in the work.

3 Deliver samples prepaid to Consultant's business address.

4 Notify the Consultant in writing, at the time of submission of deviations in samples from requirements of Contract Documents.

5 Make changes in samples which the Consultant may require, consistent with Contract Documents.

5 OPERATING MAINTENANCE MANUALS

1 Two (2) weeks prior to Substantial Performance of the work, submit to the Consultant, two (2) copies of operating and maintenance manuals. NOTE: SUBSTANTIAL COMPLETION WILL NOT BE GRANTED UNTIL MANUALS ARE SUBMITTED.

2 Manuals to contain operational information on equipment, cleaning and lubrication schedules, filters, overhaul and adjustment schedules and similar maintenance information. Instructions in this manual shall be in simple language so as to guide the owner in the proper operation and maintenance of building components.

3 Bind contents in a black three-ring, hard covered, plastic jacketed binder. Organize contents into applicable categories of work, parallel to specifications sections. Place all "as-builts" folded in pocket of back sleeve of binder. Provide two copies of black binders.

4 In addition to information specified, include the following:

- Title sheet, labeled "Operating and Maintenance Instructions:, containing project name and date.

- List of names, addressed and phone numbers subcontractors and suppliers who can effect repair of maintenance on equipment.
- List of contents.
- Final shop drawings, product data of equipment, and letters of compliance for all engineered shop drawings.

- Record drawings of concealed components of mechanical and electrical services.
- Full description of building systems and operation.

6 RECORD DRAWINGS AND DOCUMENTS

1 After award of Contract the Consultant will provide a set of printed drawings for the purpose of maintaining record drawings. Accurately and neatly record deviations from Contract Documents caused by site conditions and changes ordered by the Consultant.

2 Record locations of concealed components of mechanical and electrical services.

3 Identify drawings as "Project Record Copy". Maintain in new condition and make available for inspection on site by Consultant.

4 Return Owner's copies of all reports and tests. Provide copies of all inspection reports and certifications by testing companies and independant consultants. Provide copies of all reports and orders from and all correspondance to government representatives that occured relative to the project.

5 Two (2) weeks prior to Substantial Performance of the work, submit to the Consultant. NOTE: SUBSTANTIAL COMPLETION WILL NOT BE GRANTED UNTIL RECORD DRAWINGS ARE SUBMITTED.

7 WARRANTIES

1 Provide to the Consultant, two (2) copies of warranties and bond fully executed and notarized. NOTE: SUBSTANTIAL COMPLETION WILL NOT BE GRANTED UNTIL WARRANTIES ARE SUBMITTED.

2 Ensure that all warranties including extended warranties meet the intent of the contract.

3 Submit a statement from the manufacturer certifying the warrant for equipment put into use during construction. Unless otherwise agreed to by the Owner, this certification and the warranty should indicate the commencement of the warranty period as the date of Substantial Performance.

4 All work is to be guaranteed for a period of one year (or greater as indicated) after substantial or 100 percent completion of the work, during which time any defects or imperfections that develop in the workmanship or materials used or any work affected in making good such imperfections must be made good promptly by the Contractor without cost to the Owner.

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

May 15, 2009

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 01020: Allowances

2 Section 01300: Submittals

3 Section 01600: Materials and Equipment

2 REQUIREMENTS INCLUDED

1 Inspection and testing, administrative and enforcement requirements.

2 Tests and mix designs.

3 Mock-ups.

4 Mill tests.

5 Equipment/system adjust and balance.

6 Commissioning

3 INDEPENDENT INSPECTION AGENCIES

1 Independent Inspection, Testing and Commissioning Agencies will be engaged as approved by the Consultant for the purpose of inspection and/or testing portions of the work. Costs shall be allocated as set out in Section 01020, Allowances.

2 Provide equipment required for executing inspection and testing by the appointed agencies.

3 Employment of inspection/testing agencies does not relax the responsibility to perform work in accordance with the Contract Documents.

4 If defects are revealed during inspection and/or testing, the appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defects and irregularities as advised by Consultant at no cost to the Owner. Pay costs for retesting and re-inspection.

4 ACCESS TO WORK

1 Allow inspection/testing agencies access to the work, off-site manufacturing and fabrication plants.

2 Co-operate to provide reasonable facilities for such access.

5 PROCEDURES

1 Notify the appropriate agency and Consultant in advance of the requirement for the tests, in order that attendance arrangements can be made.

2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in the work.

3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

6 REPORTS

1 Submit two (2) copies of inspection and test reports promptly to the Consultant.

2 Provide copies to Subcontractor of work being inspected/tested.

7 TESTS AND MIX DESIGNS

1 Furnish test results and mix designs as may be requested.

2 The cost of tests and mix designs beyond those called for in the Contract Documents or beyond those required by the Law of the Place of Work shall be appraised by the Consultant and may be authorized as recoverable.

8 MOCK-UPS

1 Prepare mock-ups for work when requested by the Consultant.

2 Construct in locations acceptable to the Consultant.

3 Prepare mock-up for Consultant review with reasonable promptness and in an orderly sequence, so as not to cause any delay in the work.

4 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.

5 Remove mock-ups at conclusion of work.

9 EQUIPMENT/SYSTEMS

1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.

Section 01500

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 02110: Demolition

2 Section 01010: Owners Current Asbestos Report

2 SUBMISSIONS

1 Engineered drawings for all temporary supports and bracing as required

2 Engineered drawings for all scaffolding as required

3 Copy of municipal approval of all hoarding as required by the governing authority

4 Copy of notification of project from the Ministry of Labour

5 Copy of any on site report by the Ministry of Labour

6 Copy of any written correspondence with the Fire Department

7 Copy or an Ministry approved report indicating that the site is clear of contamination as the result of accidents or specific construction procedures

2 TEMPORARY UTILITIES

1 INSTALLATION AND REMOVAL

1 Provide temporary utilities controls in order to execute work expeditiously.

2 Remove from site all such work after use.

2 SANITARY FACILITIES

1 Provide sufficient sanitary facilities for workers in accordance with local health authorities and the Ministry of Labour.

2 Maintain in clean condition.

3 WATER SUPPLY

1 Provide a continuous supply of potable water for construction use.

2 Arrange for connection with appropriate utility company and pay all costs for installation, maintenance and removal.

3 Pay for utility charges at prevailing rates.

4 TEMPORARY HEATING

1 Provide temporary heating required during construction period, including attendance, maintenance and fuel.

2 Construction heaters used inside building must be vented to outside or be non-flameless type. Solid fuel salamanders not permitted.

3 Maintain required temperatures in areas where construction is in progress.

4 Ventilate heated areas keep building free of exhaust or combustion gases.

5 Permanent heating system of building, or portions thereof, may not be used when available.

6 Be responsible for damage to work due to failure in providing adequate heat and protection during construction.

5 TEMPORARY POWER AND LIGHT

1 Provide power during construction for temporary lighting and operating of power tools. Pay all utility charges.

2 Provide and maintain temporary lighting throughout project.

3 Arrange for connection with appropriate utility company. Pay all costs for installation, maintenance and removal.

6 TEMPORARY TELEPHONE

1 Provide and pay for temporary telephones necessary for own use and use of the Consultant.

3 TEMPORARY FACILITIES

1 INSTALLATION AND REMOVAL

1 Provide construction facilities in order to execute work expeditiously.

2 Remove from site all such work after use.

2 SCAFFOLDING

1 Provide and maintain scaffolding, ramps, ladders, platforms, temporary stairs.

2 Provide engineered drawings for all scaffolding as required by the regulating authorities. Provide drawings, as prepared by a structural engineer registered to practice in the Province of Ontario, for all temporary structures including scaffolding as required by the governing regulations, including the Construction Safety Act.

3 HOISTING

1 Provide, operate and maintain hoists, and cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.

2 Hoists and cranes shall be operated by qualified operator.

4 SITE STORAGE/LOADING

1 Do not load or permit to load any part of work with a weight or force that will endanger the work.

5 CONSTRUCTION PARKING

1 Limited parking will be permitted on site in areas designated by the Owner.

6 SECURITY

1 If the Consultant assesses that construction conditions warrant, provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays.

2 The school must be left in a safe and secure condition at the end of every day. The Contractor is responsible for arming the building at the end of each day if school staff are not present.

3 The Contractor shall be solely responsible for loss or damage of his tools, equipment or any materials on the Owner's property.

4 The Contractor shall ensure the work zone is clearly delineated with appropriate barricades to prevent unauthorized access.

5 Owner issued photo identification badges are required to be worn by all personnel within the Contractor's responsibility while working on the Owner's property. Badges are issued only to individuals that have completed the computer based "Basic Safety Orientation" program and whose employer has successfully completed the Contractor Prequalification Form.

6 The computer based "Basic Safety Orientation" can be obtained on CDROM through the Plant Department or accessed through the Owner's website. Each individual wishing to work on site must complete and supply proof of completion of the "Basic Safety Orientation" prior to requesting photo identification.

7 Photo identification badges will be issued by the Owner on an appointment basis. Requests for exemptions from the "Basic Safety Orientation" are required in writing on the proper Owner issued form. The Owner reserves the right to refuse equivalency to any Contractor.

8 The Owner is not responsible for any costs associated with obtaining photo identification.

7 OFFICES

1 Provide and maintain in clean condition during progress of work, adequately lighted, heated and ventilated Consultant's temporary office and Contractor's office with space for filing and layout of Contract Documents and Contractor's normal site office staff.

2 Provide adequate required aid facilities.

3 Subcontractors may provide their own offices as necessary. Direct location of these offices.

8 EQUIPMENT, TOOL AND MATERIALS STORAGE

1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.

2 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.

9 CONSTRUCTION SIGN

1 Provide and erect within three weeks of signing Contract, a project sign in a location designated by Consultant with Contractor's name, Consultants' names and project title. Size to be 4' x 8' unless otherwise directed by the Consultant.

2 Maintain sign in good condition for duration of work. Clean periodically.

3 No other signs or advertisements, other than warning signs, are permitted on site.

4 TEMPORARY CONTROLS

1 INSTALLATION AND REMOVAL

1 Provide temporary controls in order to execute work expeditiously.

2 Remove from site all such work after use.

2 HOARDING

1 Erect hoarding where indicated on drawings to protect the public, workers, public and private property from injury or damage.

2 Provide hoarding as required by the governing agencies or where no other guidelines govern, with a chain link fence, 1.5m high, protecting public and private property from injury or damage. Provide lockable gates within hoarding for access to site by workers and vehicles.

3 Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to building.

4 Provide barriers around trees and plants designated to remain. Protect from damage.

3 GUARD RAILS AND BARRICADES

1 Provide secure, rigid guard rails and barricades around open edges of roofs.

4 WEATHER ENCLOSURES

1 Provide weather tight closures to unfinished door and window openings, and other openings in roofs.

2 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work for temporary heat.

5 DUST TIGHT SCREENS

1 Provide dust tight screens or partitions to localize dust generating activities, and for the protection of workers, finished areas of work and the public.

2 Maintain and relocate protection until such work is complete.

6 ACCESS TO SITE

1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to the work.

7 PUBLIC TRAFFIC FLOW

1 Provide and maintain flag persons, traffic signals, barricades and flares, lights, or lanterns as required to perform the work and protect the public.

2 Provide all street and sidewalk closings, as required by the work, in compliance and with the co-ordination with the municipality or the related governing authority.

8 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

1 Protect surrounding private and public property from damage during performance work.

2 Be responsible for damage incurred.

3 Provide preconstruction condition documentation as required by Section 01300

9 PROTECTION OF BUILDING FINISHES AND EQUIPMENT

1 Provide protection for finished and partially finished building finishes and equipment during performance of work.

2 Provide necessary screens, covers, and hoardings as required.

3 Be responsible for damage incurred due to lack of or improper protection.

10 CLEANING

1 Maintain the work in tidy conditions, free from the accumulation of waste products and debris, other than that caused by the owner or other contractor not employed by the Contractor.

2 Remove waste material and debris from the site and deposit in waste container at the end of each working day.

3 Clean interior areas prior to start of finish work, maintain areas free of dust and other contamination during finishing operations.

11 TEMPORARY STRUCTURAL SUPPORTS

1 Ensure no part of work is subjected to a load which will endanger its safety or will cause permanent deformation.

2 Do not cut, drill or sleeve any load bearing structural members unless specifically indicated, without written approval of the Consultant.

3 Design and construct false work and scaffolding in accordance with current CSA and Ministry of Labour requirements. Provide copies of engineered drawings for temporary support of any altered building component within or supporting an occupied portion of any building, or as required by governing regulations.

12 ENVIRONMENTAL PROTECTION

1 Disposal of all material resulting from normal construction or due to spills or other accidents shall be as per the regulations of the Ministry of the Environment and the Municipality. Provide a report by a testing agency, qualified by the governing authorities and approved by the Consultant, to indicate that the site is clear of any environmental hazardous material. Cost of testing and preparation of the report is the responsibility of the contractor and not considered an expense of the owner or part of any stated allowance.

2 Fires and burning of rubbish on site is not permitted.

3 Do not bury waste rubbish and waste materials on site unless approved by Consultant.

4 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary systems.

5 Do not pump water containing suspended materials into waterways, sewer or drainage systems.

6 Control disposal or run-off of water containing suspended materials or other harmful substances in accordance with local authority requirements.

13 OCCUPATIONAL HEALTH & SAFETY ACT AND REGULATIONS

1 Refer to GC3.6 Construction Safety.

2 The Owner shall consider the work of this contract to be a "project" under the terms of the Occupational Health & Safety Act. The contractor shall be solely responsible for the safety of the construction site and all personnel therein, including but not limited to the requirements of the aforementioned Act and its regulations. The contractor shall also be responsible for the safety of the owner and the owner's staff and the public in buildings where there are ongoing operations and shall have the right to refuse admittance to any individual not complying with these Ministry regulations.

3 Observe and enforce constructions safety measure required by Canadian Construction Safety Code and Workmen's Compensation Board. In event of conflict between any provision of above authorities the most stringent provision will apply.

4 The contractor shall have in his possession a copy of the most recent requirements of this Act and shall make all workers and others on site aware of its requirements.

5 The contractor shall register this project with the Ministry of Labour. Registration forms of Constructors and Employers of Workers are available from the Ministry of Labour offices.

6 The contractor shall file this notice with a Director of the Ministry before beginning work on a project. If the work at a project is not expected to take more than fourteen days, a constructor shall, before the work begins, provide by telephone to an inspector at the nearest office of the Ministry of Labour the information required under subsection (5) for the project.

7 The contractor shall provide a copy of all correspondence with the Ministry within ten days of issue or receipt to the Consultant. This includes the Notice of Project.

14 ASBESTOS AND OTHER TOXIC AND HAZARDOUS SUBSTANCES

1 The Owner shall provide all available information on hazardous material contained within the building. The contractor shall review all available documentation regarding such substances that may be present in this building, including reports as appended in Section 01010. The contractor shall be solely responsible for the construction and all workers using the effected areas. The contractor shall not commence work until satisfied that these reports are complete and all those on site have been fully instructed in safety procedures.

2 Maintain copies of reports and tests related to hazardous substances including all inspections by testing companies, consultants and government representatives on site during the duration of the project. Return reports to Owner and provide copies of all reports or notices issued during the project as part of the project commissioning.

3 The Owner has identified, removed or encapsulated all known sources of asbestos potentially affected by the work of this contract. However, in all work to existing buildings, the contractor must assume that asbestos may still be present. The contractor shall request and review any available studies and assessments on the building. The contractor shall insure that all concealed areas exposed during the work of this contract are inspected for hazardous materials before the work in those areas commence.

4 The Contractor is responsible for the construction safety on this site including the handling and disposal of all hazardous materials.

5 The Contractor's responsibilities for dealing with hazardous material include the follow categories.

6 **Identify hazardous materials to remain:**

Where the reports indicate that hazardous materials occur within the construction area, but have been encapsulated, and does not require modifications under this contract, the Contractor shall clearly identify these areas and instruct all personnel as to its location.

7 **Removal of identified hazardous materials:**

The intent of this contract is that all removal of hazardous material requiring specialized tradespersons has been completed under separate contract. However, in all work to existing buildings, the contractor must assume that asbestos may still be present.

8 **Identification and handling of hazardous material not identified in these documents:**

It is assumed that during any renovation project hazardous materials other than those previously identified may be present. Materials are discovered that are suspected of containing asbestos or other hazardous materials, but not indicated within these documents, the Contractor shall immediately cease work in the affected area and notify the Architect and take all precautions required by the related governmental statues and guidelines. This material will be dealt with by the Owner and the Owner's cost using the stipulated allowance under Section 01020.

9 Provide written report by qualified supplier that air quality upon completion of the work, meets the requirements of the Ministry of Labour..

10 Where hazardous materials have been removed or modified the Owner's reports shall be updated as part of the as built drawing submission.

5 FIRE SAFETY REQUIREMENTS

1 FIRE SAFETY PLAN

1 Contractors and their personnel will be familiar with this section and its requirements.

2 FIRE DEPARTMENT BRIEFING

1 The Construction Project Managers shall coordinate arrangements for the contractor to be briefed on Fire Safety at their pre-work conference by the Fire Chief before any work is commenced.

2 The fire department shall be notified and any encumbrances to their access plan to and within the building discussed.

3 The contractor shall provide a copy of all correspondence with the Ministry within ten days of issue or receipt to the Consultant. This includes the minutes of the required coordination meeting.

3 REPORTING FIRES

1 Know the location of nearest fire alarm box and telephone, including the emergency phone number.

2 Report immediately all fire incidents to the Fire Department as follows:

Activate nearest fire alarm box or telephone

3 Person activating fire alarm box shall remain at the box to direct Fire Department to scene of fire.

4 When reporting a fire by telephone, give location of fire, name or number of building and be prepared to verify the location.

4 INTERIOR AND EXTERIOR FIRE PROTECTION AND ALARM SYSTEMS

1 Fire protection and alarm systems shall not be:

Obstructed

Shut-off

Left inactive at the end of a working day or shift without notification and authorization from the Fire Chief or his representative.

2 Fire hydrants, standpipes and hose system shall not be used for other than fire fighting purposes unless authorized by the Fire Chief.

5 FIRE EXTINGUISHERS

1 The Contractor shall supply fire extinguishers, as scaled by the Fire Chief, necessary to protect, in an emergency, the work in progress and the contractors physical plant on site.

6 INSTALLATION AND/OR REPAIR OF ROOF

1 The Contractor shall notify the Fire Chief of the location of any asphalt kettles and the dates that the kettles will be in use. The Contractor, in the course of roofing work, shall ensure that he and/or his personnel use and take the following precautions:

Use only kettles equipped with thermometers or gauges in good working order.

Locate kettles in a safe place outside of building or, if approved by Engineer and/or Fire Chief, on non-combustible roof. Locate to avoid danger of igniting combustible material below.

Maintain continuous supervision while kettles are in operation and provide metal covers for the kettles to smother any flames in case of fire. Fire extinguishers shall be provided as required in 4.5.1.

Prior to start of work demonstrate container capacities to Engineer and/or Fire Chief

Use only glass fibre roofing mops.

Used roofing mops shall not be left unattended on roof and shall be stored away from building and combustible materials.

All roofing materials shall be stored in locations no closer than 3m to any structures.

7 BLOCKAGE OF ROADWAYS

1 The Fire Chief shall be advised of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by the Fire Chief, erecting of barricades and the digging of trenches.

8 SMOKING PRECAUTIONS

1 ABSOLUTELY NO SMOKING IS ALLOWED.

9 RUBBISH AND WASTE MATERIALS

1 Extreme care is required where it is necessary to store oily waste in work areas to ensure maximum possible cleanliness and safety.

2 Greasy or oily rags or materials subject to spontaneous combustion shall be deposited and kept in an approved receptacle and removed as required in 9.3.1.

10 FLAMMABLE LIQUIDS

1 The handling, storage and use of flammable liquids are to be governed by the current National Fire Code of Canada.

2 Flammable liquids such as gasoline, kerosene and naphtha may be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable liquids exceeding 45 litres for work purposes, requires the permission of the Fire Chief.

3 Transfer of flammable liquids is prohibited within buildings.

4 Transfer of flammable liquids shall not be carried out in the vicinity of open flames or any type of heat-producing devices.

5 Flammable liquids having a flash point below 38°C such as naphtha or gasoline shall not be used as solvents or cleaning agents.

6 Flammable waste liquids, for disposal, shall be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and the Fire Department is to be notified when disposal is required.

11 HAZARDOUS SUBSTANCES

1 If the work entails the use of any toxic or hazardous materials, chemicals and/or explosives, or otherwise creates a hazard to life, safety or health, work shall be in accordance with the National Fire Code of Canada.

2 The Fire Chief is to be advised, and a "Hot Work" permit issued in all cases involving welding, burning or the use of blow torches and salamanders, in buildings or facilities. Special precautions are necessary to safeguard life and property from damage by fire or explosives.

3 Wherever work is being carried out in dangerous or hazardous areas involving the use of heat, fire watchers, equipped with sufficient fire extinguishers shall be provided. The determination of dangerous or hazardous areas along with the level of precaution necessary for Fire Watch shall be at the discretion of the Fire Chief. Contractors are responsible for providing fire watch service for their work on a scale established and in conjunction with the Fire Chief at the pre-work conference.

4 Where flammable liquids, such as lacquers or urethane are to be used, proper ventilation shall be assured and all sources of ignition are to be eliminated. The Fire Chief is to be informed prior to and at the cessation of such work.

12 QUESTIONS AND/OR CLARIFICATION

1 Any questions or clarification on Fire Safety in addition to the above requirements shall be directed to and cleared through the Fire Chief.

13 FIRE INSPECTIONS

1 The Base/Station Fire Chief shall be allowed unrestricted access to the work site.

2 The Contractor shall co-operate with the Fire Chief during routine inspections of the work site.

3 The Contractor shall immediately remedy all unsafe fire situations observed by the Fire Chief.

14 FIRE SAFETY IN OCCUPIED EXISTING BUILDINGS

1 Maintain all means of egress during construction.

2 Provide dust tight 3/4 hr. temporary fire separations between construction and occupied areas. Doors to be solid core with H.M. frames self closing and latching.

3 Existing windows to be protected with 5/8" gypsum board and suitable framing.

4 Openings in roof and other assembles to be sealed with mineral wool or other non combustible insulation.

Section 01600

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 REQUIREMENTS INCLUDED

1 Reference standards.

2 Product quality, availability, storage, handling, protection, transportation.

3 Manufacturer's instructions.

4 Workmanship, co-ordination, cutting, fastenings.

2 RELATED REQUIREMENTS

1 Section 01400: Quality control and inspection of work.

3 REFERENCE STANDARDS

1 Within the text of the specifications, reference may be made to the following standards:

ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials
CEC	Canadian Electrical Code (published by CSA)
CEMA	Canadian Electrical Manufacturer's Association
CGSB	Canadian General Standards Board
CISC	Canadian Institute of Steel Construction
CLA	Canadian Lumberman's Association
CPCA	Canadian Painting Contractors' Association
CPCI	Canadian Prestressed Concrete Institute
CRCA	Canadian Roofing Construction Association
CSA	Canadian Standards Association
FM	Factory Mutual Engineering Corporation
IEEE	Institute of Electrical and Electronic Engineers
IPCEA	Insulated Power Cable Engineers Association
NAAMM	National Association of Consultantural Metal Manufacturers
NBC	National Building Code
NEMA	National Electrical Manufacturer's Association Ontario Hydro
TTMAC	Terrazzo, Tile and Marble Association of Canada
ULC	Underwriters' Laboratories of Canada

2 Conform to these standards, in whole or in part, as specifically requested in the specification. Where an updated standard is available, both standards shall be considered by the contractor in the completion of the work of this contract. Where there is a conflict between these two guidelines, the most recent version shall be followed.

3 If there is question as to whether any product or system is in conformance with application standards, the Consultant reserves the right to have such products or systems tested to prove or disprove conformance.

4 The cost for such testing will be borne by the Owner in the event of conformance with Contract Documents or by the Contractor in the event of non-conformance.

4 PRODUCTS AND MATERIALS

1 QUALITY

1 Products, materials, equipment and articles (referred to as products throughout the specification) incorporated in the work shall be new, not damaged or defective, and of the best quality (compatible with specifications) for the purpose intended. If requested, furnish evidence as to type, source and quality of products provided.

2 Defective products, whenever identified prior to the completion of work, will be rejected, regardless of previous inspections. Inspection by the Consultants or Owner does not relieve responsibility error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.

3 Should any dispute arise as to the quality or fitness of products, the decision rests strictly with the Consultant based upon the requirements of the Contract Documents.

4 Unless otherwise indicated in the specifications, maintain uniformity of manufacture for any item throughout the building.

5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instruction, or when located in mechanical or electric rooms.

6 Unless otherwise indicated in the specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instruction directly from manufacturer.

7 Notify the Consultant in writing, of conflicts between the specifications and manufacturer's instructions, so that the Consultant may establish the course of action.

8 Improper installation or erection of products, due to failure in complying with these requirements, authorize the Consultant to require removal and re-installation at no increase in Contract Price.

2 AVAILABILITY

1 Immediately upon signing Contract, review Product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify the Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of work.

2 Products no longer available or discontinued before the contract date will be subject to revision by a Change Order. Products discontinued or no longer available subsequent to the contract date shall be substituted with the Consultant's approval by the Contractor for products of similar or superior quality at no additional cost.

3 SUBSTITUTIONS

1 When a substitution has been permitted the Contractor shall coordinate related work to ensure compatibility and completion within original stated tolerances.

4 STORAGE, HANDLING AND PROTECTION

1 Handle and store products in a manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.

2 Store packaged or bundled products in original and undamaged condition with manufacturer's seals and labels intact. Do not remove from packaging or bundling until required in the work.

3 Store products subject to damage from weather in weatherproof enclosures.

4 Store cementitious products clear of earth or concrete floors, and away from walls.

5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.

6 Store material and equipment in accordance with supplier instructions.

7 Store and mix paints in a heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.

8 Remove and replace damaged products at own expense and to the satisfaction of the Consultant.

5 WORKMANSHIP

1 GENERAL

1 Workmanship shall be the best quality, executed by workers experienced and skilled in the respective duties for which they are employed. Immediately notify the Consultant if required work is such as to make it impractical to produce required results.

2 The Consultant reserves the right to require the dismissal from the site, workers deemed incompetent, careless, insubordinate or otherwise objectionable.

3 Decisions as to the quality or fitness of workmanship in cases of dispute rest solely with the Consultant, whose decision is final.

2 FASTENINGS

1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated.

2 Prevent electrolytic action between dissimilar metals and materials.

3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in the affected specification section.

4 Space anchors within their load limit or shear capacity and ensure they provide permanent anchorage. Wood, or any other organic material plugs are not acceptable.

5 Keep exposed fastenings to a minimum, space evenly and install neatly.

6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

Section 01700

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 RELATED REQUIREMENTS

1 Section 01300: Submission of 2 black three-ring binders with all necessary documentation.

2 Section 01401: Project Commissioning

3 Section 01500: Progressive site cleaning.

4 General conditions of the contract, Fiscal provision, Legal submission, and other administrative requirements.

2 CONTRACT CLOSE OUT TO BE COMPLETED AS PART OF SECTION 00800.13.5

1 For the purposes of this contract the close out requirements indicated in Section 01700.2 shall have an agreed value of 5% of the total construction cost. Certification of this value shall be made only when all conditions indicated in Section 01700.2 have been completed

1 FINAL CLEANING

1 Remove surplus products, tools, construction machinery and equipment not required for the performance of the remaining work.

2 Remove waste products and debris other than that caused by the Owner, other contractors or their employees, and leave the work clean and suitable for occupancy by owner.

3 Remove surplus products, tools, construction machinery and equipment. Remove waste products and debris other than that caused by the owner or other contractors.

4 Remove waste material and debris from the site at regularly scheduled times or dispose of as directed by the Architect. Do not burn waste materials on site, unless approved by the Architect.

5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

6 Leave the work broom clean before the inspection process commences.

7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, mechanical and electrical fixtures, furniture fitments, walls, and floors.

8 Vacuum clean and dust building interiors, behind grilles, louvers and screens.

9 Wax, seal, shampoo or prepare floor finishes, as recommended by the manufacturer.

10 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.

11 Broom clean and wash exterior walks, steps and surfaces.

12 Remove dirt and other disfigurations from exterior surfaces.

13 Clean and sweep roofs, gutters, areaways

14 Sweep and wash clean site paved areas.

15 Clean equipment and fixtures to a sanitary condition, clean or replace filters of mechanical equipment.

2 SYSTEM DEMONSTRATION

1 Prior to final inspection, demonstrate operation of each system to Owner and Architect including his Consultants.

2 Instruct personnel in operation, adjustment, and maintenance data as the basis for instruction.

3 DOCUMENTS

1 All documentation shall be submitted in the fashion indicated in Section 01300

2 Provide warranties and bond fully executed and notarized. Submit documents in the fashion indicated in Section 01300

3 Submit a statement from the manufacturer certifying the warrant for equipment put into use during construction. Unless otherwise agreed to by the Owner, this certification and the warranty should indicate the commencement of the warranty period as the date of Substantial Performance.

4 At the completion of the project include the close out documentation a copy of all permits, the log notes of notification, site visits and site reports by governmental authorities.

5 Submit Occupancy Permit from governing authority

6 Submit required documentation such as statutory declarations, Workers' Compensation Certificate, warranties, certificates of approval or acceptance from regulating bodies.

7 Review maintenance manual contents (operating, maintenance instructions, record "as built" drawings, spare parts, materials) for completeness. Turn over 2 copies of manuals to Architect as per Submittals Section 01300.

8 Collect and assemble the required submissions as per Sections 01010 and 01300 from sub-trades, suppliers, and manufacturers including letters of compliance related to engineered shop drawings.

9 Execute transition of Performance and Labour and Materials Payment bond to warranty period requirements.

10 Submit all outstanding Contemplated Change Order price requests and values of all outstanding change directives. Review cash and contingency allowances in relation to contract price, change order, hold-back and other contract price adjustments. Architect will issue a final change order reflecting approved adjustments to contract sum not previously made.

11 Submit required documentation such as statutory declarations, Workers' Compensation Certificate.

4 INSPECTION/TAKE-OVER PROCEDURES

1 Review commissioning, inspection and testing reports to verify conformance to the intent of the documents and that changes, repairs or replacements have been completed.

2 Carefully inspect the work and ensure that previously identified construction deficiencies are complete and/or corrected and the building is clean and condition for occupancy. Notify the Architect in writing of satisfactory completion of the work and request an inspection.

3 Coordinate a deficiency review by the Owner, Architect and Consulting Engineer's. Distribute the tabulated list of deficiencies and defects to Subcontractors and suppliers. Before applying for a Certificate of Substantial Performance, correct all deficiencies that in the Architect's opinion does not allow safe occupancy of the building.

4 Only when the Architect considers outstanding deficiencies and defects fall within the requirements of the Construction Lien Act shall the certification of Substantial Performance be given.

3 TOTAL PERFORMANCE REQUIREMENTS INCLUDED IN THIS SECTION

Before the final payment is made the following conditions must be met

1 COMPLETION OF THE WORK

1 Co-ordinate owner's moving-in of staff, furnishing, equipment with building accessibility, traffic, cleaning and sub-Subcontractor's cleaning-up and cleaning activities, all to suit Owner's work schedule and not to disrupt owner's productivity.

2 Expedite and complete deficiencies and defects identified by the Architect.

3 Review condition of equipment (heating system) which have been used in the course of the work to ensure turning over at completion in "as new condition" with warranties, dated and certified from time of substantial performance of work.

4 When the work is totally performed, remove surplus products, tools, construction machinery and equipment. Remove waste products and debris other than that caused by the owner or other contractors.

4 REQUIREMENTS DURING WARRANTY PERIOD INCLUDED IN THIS SECTION

1 Provide on-going review, inspection and attendance to building call-back, maintenance and repair problems during the warranty period.

1 GENERAL

1 RELATED REQUIREMENTS

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Complete all removal and demolition work as indicated on the drawings.

3 All Asbestos removal shall be completed by qualified persons certified by the Province of Ontario.

3 EXAMINATION

1 Visit and examine the site and note all characteristics and features affecting the work of this contract.

2 No allowances will be made for any difficulties encountered or any expenses incurred by this trade on account of any conditions of the site, or any item existing therein which is visible or known to exist at the time the tender for this work is submitted.

4 PROTECTION

1 Execute demolition work to protect adjacent structure, property and public against damages which might occur from falling debris or other causes.

2 Erect temporary fences, barriers, fire rated dust screens and protection that may be required during demolition and thereafter, by the Owners and/or Municipal authorities.

3 In the execution of barricades and fences, demolition, removals and shoring, the Contractor must take all precautions for the protection of life and property as he will be held responsible and liable for all accidents or injury to workmen or other persons as well as property.

4 Do not obstruct entrances and sidewalks, without permission of the Architect. Do not place or store debris in any of these locations but remove directly from the site.

5 **Temporary Structures including shoring, scaffolding, false work, hoarding and bracing: to Ministry of Labour standards and CSA guidelines**

Shop Drawings: Provide engineered shop drawings in accordance with Section 01300

5 REGULATORY AUTHORITIES

6 **Demolition: to National Building Code of Canada 1995, Part 8 Construction Safety Measures**

3 EXECUTION

1 DEMOLITION

1 Execute demolition in an orderly, careful manner with due consideration for adjacent structures and finishing.

2 During demolition operations, keep work wetted down thoroughly, if required, to prevent dust and dirt from rising. Water can be taken from the existing premises for this purpose, using existing exterior hose bibs.

3 All building materials resulting from the demolition work will become property of the Contractor and shall be removed from the premises unless otherwise specified herein or shown on the drawings.

4 Take all necessary precautions to guard against movement of settlement of remaining structure. Provide all necessary bracing of shoring that is required.

2 REMOVALS

Remove all obstacles which interfere with the construction of the building and other work of the contract herein included, as shown on drawings as being removed.

3 DEBRIS

1 Remove as it accumulates, all debris resulting from demolition operations. Do not store or permit debris to accumulate on site. If contractor fails to remove excess debris promptly, Architect may order same to be removed at Contractor's expense.

2 The contractor shall be responsible for removing all surplus material from the site and disposing it in accordance with municipal and Ministry of the Environment guidelines.

4 ASBESTOS REMOVAL

1 The contractor shall be responsible for the identification and protection of all asbestos in areas affected by the work of this project.

2 All removal or modifications of asbestos material shall be completed by qualified trades. The contractor shall submit the credentials of all asbestos removal subtrades.

3 Where areas of asbestos are uncovered that have not been identified for removal, the architect shall be notified and the area sealed and protected until the proper course of action has been identified.

4 The contractor shall complete all work outside the normal hours of operation of the building where the building continues to be occupied by the Owner.

5 The contractor shall be responsible for all disposal of material and certification that the areas affected are clean and ready for use by the Owner and/or other subtrades in the completion of the project.

6 The contractor shall also be responsible for amending the owner's asbestos studies and reports to reflect the changes completed under this contract.

Section 02487

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 DELIVERY AND STORAGE

1 Do not deliver small, irregular or broken pieces of sod.

2 During wet weather allow sod to dry sufficiently to prevent tearing during lifting and handling.

3 During dry weather protect sod from drying and water sod as necessary to ensure its vitality and prevent dropping of soil in handling. Dry sod will be rejected.

2 PRODUCT

1 MATERIAL

1 **Nursery Sod: to Guide Specification for Nursery Stock' Section 17, 1978 Edition, published by Canadian Nursery Trades Association for quality and source**
Number one Kentucky bluegrass/Fescue sod: sod grown from minimum 40% Kentucky bluegrass, 30% Creeping Red Fescue.

2 **Water:** potable

3 **Fertilizer:** complete synthetic slow release fertilizer with maximum 35% water soluble nitrogen.

3 EXECUTION

1 WORKMANSHIP

1 Keep site well drained.

2 Clean up immediately soil or debris spilled onto pavement and dispose of deleterious materials.

2 LAYING OF SOD

1 Spread top-soil to a min. of 100 mm (4").

2 Lay sod during growing season. Sodding during dry summer period, at freezing temperatures or over frozen soil is not acceptable.

3 Lay sod in rows, perpendicular to slope, smooth and even with adjoining areas, and with joint staggered. Butt sections closely without overlapping or leaving gaps between sections. Cut out irregular or thin sections with a sharp knife.

4 Provide close contact with sod and soil by means of light roller. Heavy rolling to correct irregularities in grade is not permitted.

5 Water immediately after sod laying to obtain moisture penetration through sod into top 100 mm (4") of top soil.

6 Provide adequate protection of sodded areas against erosion and mechanical damage. Remove protection after lawn areas have been accepted.

3 MAINTENANCE

1 Water sodded areas in sufficient quantities and at required frequency to maintain sub-soil immediately under sod continuously moist for depth of 75 to 100 mm (3"-5")

2 Cut grass first time when it reaches height of 40-50 mm (1½" - 2"). Remove clipping which will smother grassed areas.

3 Fertilize sodded areas one month after sodding with fertilizer as per manufacturer's instructions.

Section 02513

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 02515: Concrete Paving

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 OPSS 310 December, 1993 “Construction Specification for Hot mixed, Hot Laid Asphaltic Concrete Paving and Hot Mix Patching”. OPSS 1150 May, 1994 “Material Specification for Hot mixed, Hot Laid Asphaltic Concrete”.

3 PROTECTION

1 Keep vehicular traffic off newly asphalt paved areas until paving surface temperature has cooled below 38°C. Do not permit stationary loads on pavement until 24 hours after placement.

2 Provide access to building at all times. Arrange paving schedule so as not to interfere with normal use of premises.

4 SITE CONDITIONS

1 Sub-surface investigation report is bound into specification following Section 01050.

2 PRODUCTS

1 MATERIALS

1 **Granular Sub-base: to O.P.S.S. Specification Form 1010**
Class 'B' Granular

Thickness / Size: to a max. particle size of 50mm (2")

2 **Granular base: to O.P.S.S. Specification Form 1010**
Class 'A' Granular

3 **Asphalt Concrete Binder Course: to O.P.S.S. 1150**
HL6 - 85-100 penetration asphalt cement.

Thickness / Size: 38mm (1.50") unless otherwise indicated

4 **Asphalt Concrete Surface Course: to O.P.S.S. 1150**
HL3M - 85-100 penetration asphalt cement.

Thickness / Size: 38mm (1.50") unless otherwise indicated

5 **Primer:**

Primer: cut-back asphalt to CAN2-16.1-M77 grade MC-70.

3 EXECUTION

1 SUB-GRADE INSPECTION

1 Verify graded subgrade drains and other items set in paving area for conformity with elevations and sections before placing granular base and sub-base material.

2 GRANULAR SUB-BASE AND GRANULAR BASE

1 Place granular sub-base to compacted thickness as indicated.

2 Place granular base to compacted thickness as indicated.

3 Place in layers not exceeding 150 mm compacted thickness. Compact to at least 100% Standard Proctor Density.

4 Finish base surface to be within 10 mm of specified grade, but not uniformly high or low.

5 Sub-base and base shall be 300 mm and 150 mm respectively for asphalt concrete paving.

3 ASPHALT PRIMER

1 Liquid asphalt: Apply asphalt primer to granular base at rates directed, but do not exceed 2.2 L/m². Apply on dry surface unless other directed.

2 Do not apply prime when air temperature is less than 5°C or when rain is forecast with 2 hours.

3 Apply primer to existing asphalt to be top coated.

4 ASPHALT CONCRETE PAVING

1 Place asphalt mixtures only when base or lower course is dry and air temperature is above 5°C.

2 Unless otherwise indicated place asphalt concrete in compacted layers of 38mm (1.50") HL6 binder course and 38mm (1.50") HL3M surface course.

3 In areas requiring heavy duty vehicular paving place asphalt concrete in compacted layers of 50.8mm (2") HL6 binder course and 38mm (1.50") HL3M surface course.

4 In areas indicated for pedestrian use ony place asphalt concrete in compacted layer of 38mm (1.50") HL3M

5 Compact each course with roller as soon as it can support roller weight without undue cracking or displacement. Lay surface and where require base course hot mix asphalt to depth(s) specified using a mechanical spreader and compact using rollers of sufficient size and weight as specified in OPSS 310.

6 Roller, power driven, minimum mass of 4.5 tonnes, minimum wheel width 600 mm.

7 Roll until roller marks are eliminated. Compact to a density not less than 95% of density obtained with Marshall specimens prepared in accordance with ASTM D1559-76 from samples of mixtures being used.

8 Keep roller speed slow enough to avoid mixture displacement and do not stop roller on fresh pavement.

9 Moisten roller wheels with water to prevent mixture adhesion.

10 Compact mixture with hot tampers or other approved equipment in areas inaccessible to roller.

11 Finish surface smooth, true to grade to within 10 mm and with no irregularities greater than 10 mm in 4.5M.

5 JOINTS

1 Cut back bituminous course to full depth in straight or curved lines as required to expose fresh vertical surfaces. Remove broken or loose material.

2 Paint exposed vertical edge of asphaltic joints, edges of manholes and catch basin frames, curbs and similar items with hot asphalt cement or emulsified asphalt primer prior to placing asphalt courses.

3 Where paving comprises two courses, overlap longitudinal joints minimum 150 mm.

4 Carefully place and compact hot asphaltic material against joints.

6 REPAIRING EXISTING PAVING AND PADDING

1 Make good all existing asphalt paving where required as noted on plans. Dispose of existing asphalt off the site.

2 Joints between existing asphalt and new asphalt or between the successive day's work in new asphalt shall be carefully made in such a manner to ensure a thorough and continuous bond between old and new surfaces.

3 Joints between existing paved areas to remain and new work shall be formed by saw cutting the existing to expose fresh vertical surface, clean of any broken or loose material. Mill edges of existing asphalt, do not feather joints.

7 TESTING

1 Inspection and testing of asphalt pavement will be carried out by designated testing laboratory.

2 Costs of tests will be paid under a Cash Allowance.

8 PROTECTION AND CLEAN-UP

1 Protected finished paved surfaces and prohibit heavy vehicular traffic until the paved areas are turned over for the Owner's use

2 Exercise care in paving operations adjacent to curbs, light standards, sidewalk etc., so as not to damage. Make good any damage acceptable to Owner.

3 Upon completion, remove all tools, equipment, surplus material and debris.

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 02513: Asphalt Concrete Paving

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 REFERENCE STANDARDS

1 Portland cement concrete pavement: to OPSD standards and CAN-A23.1-09

2 Work on municipal land shall be reviewed and approved by the City Engineering Department. Coordinate review process and submit copies of approval and all other correspondence.

4 PROTECTING

1 Keep vehicular traffic off newly paved sidewalk areas until paving is properly cured.

2 PRODUCTS

1 MATERIALS

1 **Portland cement: to CAN3-A5-M93**

2 **Water, aggregate: to OPSD standards and CAN-A23.1-09**

3 **Welded steel wire fabric: to CSA G30.5-1972**

4 Chairs, bolsters, bar supports, spacers: adequate for strength and support of reinforcing construction conditions.

5 **Asphalt felt expansion joint filler: to ASTM-D-1751-65**

6 **Air Entraining Admixture: to CAN 3A-A266.2-M78**
Sternson - Sternson N.V.R. or an equivalent product approved equal by the Architect.

7 **Sealant: to C95B14-GP-3M**
Sternson - Duo-flex S.L. two component polysulphide or an equivalent product approved equal by the Architect.

8 **Granular base: to MTC form 1010**
Granular 'A'

9 **Wood formwork: to OPSD standards and CAN-A23.1-09**

10 Form Stopping Agent: Colourless, mineral oil, free from Kerosene, with viscosity, minimum 70 S, maximum 110 S Saybolt universal at 38°C, flash point minimum 149°C open cap.

11 **Curing Compound: to CGSB 90-GP-1a Type 2**
Chlorinated rubber type compound

12 **Joint Sealer: to CGSB-19-GP-24M**
Stenson - Tremco THC900 self-levelling urethane: or Rubber Caulk 6000 by PRC Canada Inc.; or an equivalent product approved equal by the Architect

13 **Liquid Curing Agent:**
Sternon- Ritecure; or Masterseal by Masterbuilders; or Promulsion 100 by ConCehm or an equivalent product approved equal by the Architect

2 CONCRETE MIXES

1 Concrete may be either ready-mix or mixed on site in ratio of one (1) part Portland Cement, 1½ parts sand and 2 parts of 19mm (¾") crushed stone. Mix shall have a minimum of 22.7L (5 gallons) of water per bag of cement (38.8kg (85.5 lbs.)) with allowance for water in aggregate.

2 All concrete supplied by the contractor shall be ready-mix concrete with the following minimum requirements:

Compressive Strength: 32 MPa at 28 days

Air Entrainment: 7% ± 1.5%

Slump: 70 ± 20mm

Coarse Aggregate: 19 mm nominal maximum size

3 Contractor must name source of supply of concrete and submit copies of delivery slips when required. The supply of concrete from other than a plant batch supplier will be accepted only upon written approval of the Engineer and must conform to OPSS Section 1350.04.01.02.

3 EXECUTION

1 WORKMANSHIP

1 All work described in this section shall be carried out in accordance with lines, contours, and spot elevations shown on drawings, or as directed by Architect.

2 Provide qualified personnel to properly lay out and establish all lines and grades necessary for construction. Architect may check work at any time, but checking layout or failure to do so on part of Architect in no way relieves Contractor of full responsibility for accuracy of location, line and grade.

2 PREPARATION

1 Surfaces to be paved which have been rough graded under Section 02210 shall be fine graded and compacted to conform to final cross section.

2 Rough graded areas shall be cut and filled as required, fill being suitable materials acceptable to Architect, compacted by rolling with a sheep's foot roller or approved equal of adequate weight and size to ensure a minimum 95% SPMDD. Areas inaccessible to consolidation by above method shall be consolidated by tamping.

3 Fine graded areas shall be dry, compact, non-rutted and true to grade before granular base material is applied.

4 Place granular base to 150 mm thickness and compact to 95% Standard Proctor Density.

3 FORMS

1 Construct rigid forms for unsupported concrete edges, to provide straight lines and smooth flowing curved line as indicated.

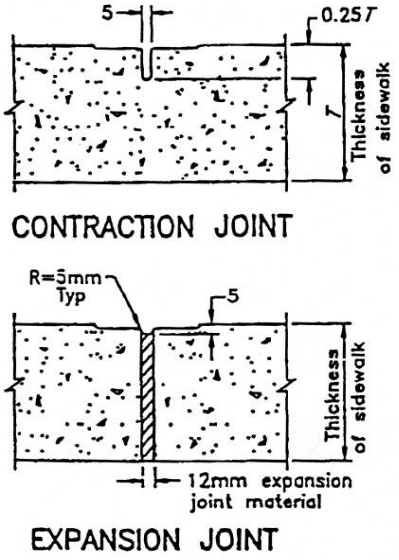
2 Apply form stripping agent to surface in contact with the concrete.

3 Remove form when concrete is fully cured.

4 JOINTS

1 Locate expansion joint at 6.00m (19.69 ft.) max. and as shown on drawings (check drawing for location of joints as specified here) and where paving abuts curving wall and other vertical surfaces. Joint filler to be full depth of concrete section for isolation joints.

2 Provide contraction joints at 1.50m (4.93 ft.) max. and at structural points.



5 REINFORCING

1 Place and support reinforcing in position to CAN3-A.23.1-M77.

2 Keep reinforcing 4" (100 mm) back from edges and non-doweled joints.

6 CONCRETE

1 Ensure that reinforcement and insert are not disturbed during concrete placement.

2 Finish concrete to required levels, in accordance with Sections 22 7 CAN3-A23.1-M77 to a tolerance of 10mm (0.38") of request grade, with no irregularities exceeding 5mm (0.19") in 2m (6 ft.).

3 As soon as sheen disappears, finish concrete paving with broomed non-skid finish.

4 Cure and protect concrete in accordance with requirement of Section 21 of CAN3-A23.1-M77.

5 Apply curing compound to manufacturer's instruction.

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 05500: Miscellaneous Metal Fabrication

2 Section 07200: Insulation and Moisture Barrier

3 Section 07260: Cavity Wall Air/Vapour Barrier

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Items covered by this section include but are not limited to load bearing and non load bearing concrete block masonry walls including the supply and erection of concrete block masonry units, mortar materials, grout fill for hollow units and lintel blocks, reinforcing materials, and masonry anchors.

3 Build in all items supplied by others which are required to be built into masonry as the Work progresses, including but not limited to door frames, anchors, bolts, sleeves, electrical outlet boxes, inserts, loose lintels, shelf angles, loose door jambs and guards, panels and any other items required to be built into masonry work.

4 Upon request, make available to the Architect, laboratory test reports certifying compliance of masonry units and mortar ingredients with specification requirements.

3 REFERENCE STANDARD

1 At the Architects request submit laboratory test reports certifying compliance of masonry units and mortar ingredients with specification requirements.

2 Do masonry work to CSA3-S304-04 and CSA-A371-04.

3 For clay units, in addition to requirements set out in reference CSA and ASTM standards, include data indicating initial rate of absorption for units proposed for use.

4 Do masonry mortar and grout work to CSA A179M-04 except where specified otherwise.

4 PRODUCT DELIVERY, STORAGE AND HANDLING

1 Ensure that materials are delivered to job site in dry condition.

2 Except where wetting of bricks is specified, keep materials dry until use.

3 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

5 COLD WEATHER REQUIREMENTS

1 When air temperature is below 5°C take following precautions in preparing and using mortar: Heat sand slowly and evenly but do not scorch. Do not use scorched sand, having a reddish cast, in mortar. Heat water to 70°C. After combining heated ingredients maintain temperature of mortar between 5°C and 50°C until used. Protect mortar from rain and snow.

2 When air temperature is below -4°C protect and heat masonry to maintain air temperature above 0°C on both sides of walls during operations and for period of 48 hours after.

3 When air temperature is above -4°C, erect windbreaks to prevent differential freezing of walls.

4 Maintain dry beds for masonry and use dry masonry units only. Do not wet masonry units in winter.

6 HOT WEATHER REQUIREMENTS

1 Protect freshly laid masonry from drying too rapidly, by means of waterproof, non-staining coverings.

7 PROTECTION

1 Until completed and protected by flashing or other permanent construction, keep masonry dry using waterproof, non-staining coverings that extend over walls and down sides sufficient to protect walls from wind driven rain.

2 Protect masonry and other work from marking and other damage. Protect completed work from mortar droppings. Use non-staining coverings.

3 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.

2 PRODUCTS

1 MORTAR

Supplement CSA A179-04 as follows:

1 **Coloured mortar:** use colouring admixture not exceeding 10% of cement content by mass, or integrally coloured masonry cement to produce coloured mortar to match approved sample. Use coloured mortar all exposed unpainted masonry.

2 **Additive to improve resistance to dirt and water:** 'Addiment Mortar Tite' as distributed by Form and Build or approved equal.

3 When 6 mm thick joints are specified, use aggregate passing No. 16 sieve.

4 Use same brands of materials and source of aggregate for entire project to ensure uniformity of coloration and other mix characteristics.

2 MORTAR TYPES

1 **Interior and Exterior Mortar above grade: to CSA A179-04**
Portland cement Type 'S'

Colour: as selected by Architect from Northern Pigments full range (different colours for each masonry colour)
Finish: Exposed joints are concave unless otherwise indicated

2 **Grouted reinforced masonry:** 15 MPa

3 **Grout: to CSA A179M-04 Table 3**

3 ACCESSORIES

4 REINFORCING AND TIES

1 **Horizontal Reinforcing:** Duro-wall truss type, 3.65mm (9 gauge) corrosion resistant deformed rod.

5 CONCRETE BLOCK

1 **Concrete Block: to CSA A165.1M, Type H/15/A/M for hollow blocks and type S/30/A/M for solid blocks.**
Richvale York Block Inc. - Standard block or an equivalent product approved equal by the Architect.

Thickness / Size: Metric modular in thicknesses as indicated
Finish: Smooth Faced
Mockups / Samples: 920mm x 1220mm (3'-0" x 4'-0")

2 **Units:** shall be autoclave. Approved manufacturers are as follows:

Richvale York Block Inc.

Boehmers

LaFarge

Concrete blocks manufactured by Shouldice are approved equal.

3 EXECUTION

1 GENERAL

1 Build masonry plumb, level and true to line with vertical joints in proper alignment.

2 Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.

3 Maintain cavity free of mortar.

4 All walls of separations as required by the building code or indicated in these documents shall be fully extended to the structural deck above with all openings fire stopped. Review location of structural elements that might conflict with these separations. Notify Consultants of conflicts before commencing working.

2 TOLERANCE

1 Deviation in joint thickness: +3mm (1/8").

3 EXPOSED MASONRY

1 Remove chipped, cracked and otherwise damaged units in exposed masonry and replace with undamaged units.

4 JOINTING

1 Where concave joints are specified, allow joints to set just enough to remove excess mortar, then tool with round jointer to provide smooth, compressed, uniform concave joints.

2 Where joints are concealed in walls and where walls are to receive plaster, tile, insulation or other applied material except paint or similar thin finish coating, strike flush.

5 JOINING OF WORK

1 Where necessary to temporarily stop horizontal runs of masonry, and in building corners, step-back masonry diagonally to lowest course previously laid. Do not "tooth" new masonry. Fill in adjacent courses before heights of stepped masonry reach 1220 mm (4'-0").

6 CUTTING

1 Cut out neatly for electrical switches, outlet boxes, and other recessed or built-in objects.

2 Make cuts straight, clean and free from uneven edges. Use masonry saw where necessary.

7 BUILDING-IN

1 Build in items provided by other Sections, including steel doorframes, anchor bolts, sleeves, inserts, loose lintels, steel beams, access panels and other such items. Build in items to present a neat rigid, true and plumb installation. Leave wall openings required for ducts, grilles, pipes, and other items.

2 Fill voids between masonry and metal frames with masonry mortar.

3 Set wall plates on masonry in nonshrink grout in accordance with manufacturer's instructions.

4 Prevent displacement of built-in items during construction. Check for plumb, alignment, and correctness of position as work progresses.

5 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.

8 SUPPORT OF LOADS

1 Except where drawing requirements are more stringent, comply with CSA-S304-04

2 Where masonry walls support beams, joists, lintels, the top 2 courses of block under bearing shall be solid, or the cells shall be filled solid with 30 MPa concrete, unless noted otherwise on structural drawings.

3 Install building paper below voids to be filled with concrete; keep paper 25 mm back from faces of units.

9 PROVISIONS FOR MOVEMENT

1 Leave 3 mm (1/8") space below shelf angles.

2 Leave 12mm (½") space and do not use wedges between tops of non-load bearing walls and partitions and structural elements.

10 LOOSE STEEL LINTELS

1 Install loose steel lintels. Centre over opening width.

11 MORTAR: MEASUREMENT AND MIXING

1 Supplement clause 5 of CSA A179M-1994 as follows: Mix grout to semi-fluid consistency. Incorporate colour into mixes in accordance with manufacturer's instructions. Use clean mixer for coloured mortar. Prehydrate pointing mortar by mixing ingredients dry, then mix again adding just enough water to produce damp unworkable mix that will retain its form when pressed into ball. Allow to stand for not less than one hour nor more than 2 hours then remix with sufficient water to produce mortar of proper consistency for pointing.

12 HORIZONTAL MASONRY REINFORCING

1 Provide masonry reinforcing in every second block course of all block walls. Provide prefabricated reinforcing corners in every second block course at intersecting block walls.

2 Reinforce over all openings and in the first two courses under beam bearings and extending 900mm (3 feet) on each side of bearings unless otherwise noted on the structural drawings.

13 LAYING OF CONCRETE MASONRY UNITS

1 Bond: running stretcher.

2 Coursing height: 200mm (8") for one block and one joint.

3 Jointing: concave unless otherwise indicated.

4 Provide special shapes and sizes as required such as halves, jambs, lintels, solids, semi-solids, corners, bullnose units, etc.

5 All masonry units are to be laid in full beds of mortar. Completely fill vertical joints between flanges of adjacent block. Space between face brick and insulation must be free of mortar in cavity walls.

6 Lay blocks with shells and webs aligning over each other. Horizontal and vertical masonry joints shall be uniform in thickness with vertical joints of alternate courses aligning.

7 Lay work to minimize cutting.

8 Use power-driven abrasive cutting disc or diamond cutting wheel for flush-mounted electrical outlets, grilles, pipes, conduit, etc., leaving 3mm (1/8”) maximum clearance.

9 No chases shall be formed in any bearing wall that is less than 300mm (12”) thick or shall be more than 1/3 the thickness of any wall greater than 300mm (12”). In no case shall any two chases be closer than 21.3m (7 feet). No horizontal chases shall be allowed.

10 All walls shall be carried up in a uniform manner, no portion being raised more than 300mm (1 foot) above another at one time.

14 CLEANING

1 Allow mortar dropping on unglazed concrete masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block and finally by brushing.

15 TESTING

1 Inspection and testing of masonry and masonry units, if requested by the Architect, will be carried out by testing laboratory designated by the Architect.

2 The costs of testing will be paid from the cash allowances.

Section 05500

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 04200: Masonry

2 Section 06200: Finished Carpentry

3 Section 08110: Hollow Metal Doors, Frames and Screens

4 Section 09900: Painting

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any subtrade or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Review the drawings thoroughly and provide miscellaneous metals whether or not specified herein.

3 REFERENCE STANDARDS

1 **Welded Steel Construction, (Metal Arc Welding), Metric: to CSA W59- 03 (R2008)**

4 SHOP DRAWINGS

1 Submit shop drawings in accordance with Section 01300.

2 Clearly indicate materials, core thickness, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details and accessories.

5 SOURCE QUALITY CONTROL

1 Refer to Section 05100 for standards of inspection and testing of materials and shop fabrication of work of this contract.

2 PRODUCTS

1 MATERIALS

1 **Steel sections and plates:** to CSA G40.21-04 (R2009), Type 300W.

2 **Steel pipe:** to CSA B63-1966 series 40 pipe standard weight, black finish.

3 **Stainless steel:** to CSA G110.6-1968 Type 302, exposed surfaces to have No. 4 polished finish.

4 **Welding materials:** to CSA W59-03 (R2008)

5 **Bolts and anchor bolts:** to ASTM A307-07b A325M-09.

6 **Stainless Steel Corner Guards: Constrution Specialties Group, Model #CO-8, distributed by Gander Building Specialties or an equivalent product approved equal by the Architect**

Thickness/Size: 48" high mechanically fastened

2 FABRICATION

1 Build work square, true, straight and accurate to required size, with joints closely fitted and properly secured.

2 Fabricate items from steel unless otherwise noted.

3 Use self-tapping shake-proof countersunk flat headed screws on items required to be assembled by screws or as indicated.

4 Where possible, work to be fitted and shop assembled, ready for erection.

5 Exposed welds to be continuous for length of each joint. File or grind exposed welds smooth and flush to completely conceal any welded butt joints and to make a smooth curved transition between other joints of not more than 4.8mm (3/16") in either direction.

6 Grind all miscellaneous steel surfaces remaining after construction to ensure a perfectly smooth surface ready to be painted.

3 SHOP PAINTING

1 Apply one shop coat of primer to metal items, with exception of stainless steel, aluminum and those to be galvanized or encased in concrete.

2 Use primer unadulterated, as prepared by manufacturer. Paint on dry surfaces free from rust, scale, grease. Do not paint when temperature is lower than 7°C.

3 Clean surfaces to be field welded; do not paint.

3 EXECUTION

1 ERECTION

1 Erect metalwork square, plumb, straight and true, accurately fitted, with tight joints and intersections.

2 Provide suitable and acceptable means of anchorage, such as dowels, anchor clips, bar anchors, expansion bolts and shields, toggles.

3 Make field connections with high tensile bolts, or weld to reference standards.

4 Hand items to be cast into concrete or built into masonry over to appropriate trades together with setting templates.

5 Touch-up rivets, field welds, bolts and burnt or scratched surfaces after completion of erection.

6 Do all cutting, drilling and fitting necessary to match adjoining work.

7 Prime base metal surfaces, field welds, damaged and abraded primed surfaces and surfaces not previously primed. Leave ready for finish painting under Section 09900.

2 LOOSE STEEL LINTELS

1 Supply all loose angle lintels over door openings, built-in cabinets, all duct and pipe openings, recesses and openings of all kinds unless otherwise noted on the drawings. See drawings for various openings.

2 Loose Lintels to be hot dip galvanized.

3 Unless noted otherwise on structural drawings, use the following chart:

Angle Sizes	Max.Clear Masonry Opening Width	Min. End Bearing
89mm x 89mm x 6mm (3½" x 3½" x ¼")	1194mm (3'-11")	152mm (6")
89mm x 76mm x 8mm (3½" x 3" x 5/16")	1499mm (4'-11")	178mm (7")
100mm x 89mm 8mm (4" x 3½" x 5/16")	1803mm (5'-11")	203mm (8")
114mm x 89mm x 8mm (4½" x 3½" x 5/16")	2108 (6'-11")	203mm (8")
127mm x 89mm x 8mm (5" x 3½" x 5/16")	2388mm (7'-10")	203mm (8")
127mm x 89mm x 9.5mm (5" x 3½" x 3/8")	2692mm (8'-10")	203mm (8")

152mm x 102mm x 9.5mm (6" x 4" x 3/8")	2997mm (9'-10")	203mm (8")

2 The angle leg 89mm (3½") to be horizontal. Provide one angle for each 100mm (4") nominal wall thickness. Conceal vertical legs within masonry.

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06200: Finished Carpentry

2 Section 07620: Metal flashing

3 Section 09250: Gypsum Board

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 PRODUCT HANDLING

1 Co-ordinate delivery with construction schedule. Protect materials from weather while in transit and on job site.

4 QUALITY ASSURANCE

1 Grade stamp lumber prior to delivery. Lumber must bear grading stamp of manufacturer.

2 PRODUCTS

1 MATERIALS

1 **Lumber: to CAN/CSA 0141-05 (R2009), NLGA Standard Grading Rules for Canadian Lumber, 1987 Douglas Fir grade #1/2 softwood S4S (surfaced four sides), moisture content 19% or less**

2 For rough carpentry such as wood block, rough bucks, strapping grounds and nailing strips: S2S (surfaced two sides) is acceptable for nailing strips, grounds, and sleepers; otherwise uses S4S. All material to be Douglas Fir #1 or 2 with preservative applied to cuts and the whole assemble sprayed with preservative prior to installation. Well seasoned stock, free from large loose resinous knots, shakes, splits, dry rot or other defects which would impair its strength or durability.

2 ACCESSORIES

1 **Wood Preservative:** " Boracol 20-2 as distributed by The Sanson Corp. Strathroy

2 **Sill seal:** flexible expanded foam gasket in widths to match framing.

3 FASTENERS

1 **Nails, spikes and staples:** to CSA B111-1974.

2 **Bolts:** 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.

3 **Proprietary fasteners:** toggle bolts, expansion shields and lag bolts, screws and lead to inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.

4 **Galvanizing:** to CSA G164-M1992, use galvanized fasteners for exterior work, interior highly humid areas, pressure-preservative, or fibre-retardant treated lumber.

5 **Power fasteners:** power staplers and explosive impact fasteners are not permitted.

3 EXECUTION

1 WORKMANSHIP

1 Ground nailing strips, rough bucks, etc., shall be accurately set as required, or as detailed and securely fastened.

2 WOOD FRAME CONSTRUCTION

1 Comply with requirements of Section 4.3.1 of Ontario Building Code or as indicated on the drawings.

3 FASTENINGS

1 Complete in accordance with details. Where not detailed, use best standard practice and Ontario Building Code.

2 Maximum spacing of members 400 mm o.c. Work closely fitted, accurately set and tightly secured.

3 Blocking, grounds, strapping, rough buck, anchors, shown on drawings are guides to work only, and are not necessarily complete. Location, method of securing is optional.

4 Erect as indicated or required to provide true, plumb, rigid, secure support with all joints location over solid bearing.

5 Anchor rough bucks with 12.7mm (1/2") bolts at 1200 mm o.c. unless indicated otherwise.

6 Provide blocking, beveled 100 mm (4") (nominal) high wood cant strips as indicated or required for roofing and sheet metal flashings.

7 Construct roof curbs around roof fans, ventilation ducts and all other electrical and mechanical equipment placed on roof and as shown on drawings.

8 Construct and install skids for roof mounted air conditioning units as detailed. Bolt securely together.

9 Provide rough frames as required for openings in masonry.

10 Provide sill seal below all base plates secured to concrete slabs and foundation walls.

4 WOOD PRESERVATIVE

1 Wood used for exterior rough carpentry shall be coated on all surfaces by brush or by dipping in preservative before installation.

2 This shall include wood curbs, fascia blocks, etc.

5 TEMPORARY PROTECTION

1 Provide and place all temporary protection required in order to keep building weatherproof. Provide and place all temporary doors and windows required to enclose and lock up building.

6 ELECTRICAL EQUIPMENT BACKBOARD

1 Install backboard for mounting electrical equipment as indicated. Use 19 mm (3/4") thick GIS plywood on 19 x 39 mm (¾" x 3½") furring at 300mm (12") o.c.

7 HOLLOW METAL FRAMES AND SCREEN

1 Set and brace all hollow metal frames and screens supplied under Section 08111.

8 CLEAN UP

1 Remove all debris and surplus material.

Section 06200

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 05500: Miscellaneous Metal Fabrication

2 Section 06100: Rough Carpentry

3 Section 08210: Wood Doors

4 Section 08710: Finish Hardware

5 Section 09330: Tile Work

6 Section 09900: Painting

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 REFERENCE STANDARDS

1 Millwork shall be in accordance with quality standard of Architectural Woodwork Industries (published by Architectural Woodwork Institute 1971) for custom grade.

4 SHOP DRAWINGS

1 Submit shop drawings in accordance with Section 01300.

5 PRODUCT HANDLING

1 Do not deliver finished materials during rain or damp weather. Keep all materials dry during delivery and on the job site.

2 Prevent damage to materials during handling and storage.

3 Do not deliver finished millwork to job until all openings are glazed.

2 PRODUCTS

1 CABINETRY MATERIAL

1 **Low Urea-Formaldehyde particle core for plastic laminate work:** Nu Green particle board by Uniboard or approved equal to ANSI - A208.1-99 Grade M-2 standards having a minimum core density of 635 kg/m³ average (39.6 lb/ft³ average)and formaldehyde emissions of 0.00 - 0.01 ppm (Comply CARB Phase I and II)

2 **Laminated Plastic for Postforming work:** to CAN3-A172-M79. Unless otherwise specified laminate shall be solid colour scratch resistant finish, moulding grade 0.8mm (0.032") thick. Economy grade plastic laminates are not acceptable. Colour shall be as selected later by the Architect.

3 **Approved Manufacturer:** Arborite, Formica, and Wilson Art.

4 **Laminated Plastic for Flatwork:** to CAN3-A172-M79. Unless otherwise specified laminate shall be solid colour scratch resistant finish, standard grade 1mm (0.04") thick. Economy grade laminated plastic are not acceptable. Colour shall be as selected later by the Architect.

5 **Approved Manufacturer:** Wilson Art, Arborite and Formica, .

6 **Laminated Plastic Liner:** by the same manufacturer as facing sheet, not less than 0.51mm (0.020"), white colour.

7 **Laminated Backing Sheet:** for plastic laminate work - by same manufacturer as facing sheet, not less than 0.51 mm (0.020") thick, sanded one side.

8 **Low Formaldehyde Adhesive:** GREENGUARD® Certified Wilsonart Adhesives or equal by approved laminate plastic manufacturer. The VOC content of adhesives and sealants used must be less than the current VOC content limits of South Coast Air Quality Management District Rule #1168, and all sealants used as fillers must meet or exceed the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 51.

9 **Sealer:** approved type water resistant sealer.

2 PAINTED OR STAINED CABINETRY

1 **Counter Top:** plastic laminate - scratch resistant

2 **Cabinetry:**
Natural Finished Maple veneer 19mm (¾") medium density particle board.

Colour: as selected by Architect
Finish: Refer to Room Finish Schedule
Shop Drawings: in accordance with Section 01300
Mockups / Samples: provide samples in full range of colours and finishes for specified products

3 **Hardwood Edges: 9.5mm (3/8") Natural Finished Maple to match panel thickness and finish unless otherwise indicated**

4 **Veneer Edges: 1.59mm (0.06") Natural Finished Maple to match panel thickness and finish unless otherwise indicated**

3 LAMINATED PLASTIC APPLICATION

1 Form shape profiles and bend as indicated, using postforming grade laminated plastic.

2 Use straight self-edging strip for all flatwork to cover exposed edge of core. Chamfer exposed edges of laminate uniformly at approximately 20°. Do not mitre laminate edges.

3 Apply backing sheet to underneath side of the core of all plastic laminate work.

4 Provide cut-outs as required for inserts, grilles, appliances, outlet boxes and other fixtures. Round internal corners. chamfer edges and seal core.

5 Unless otherwise indicated, all counter tops shall be post-formed and shall have furniture finish.

6 Apply laminated plastic lining sheet to interior of cabinet work where indicated.

4 CABINET WORK CONSTRUCTION

1 Fabricate casework to AWMAC conventional construction, custom grade. Unless indicated as painted or stained, all cabinets to be finished in plastic laminate.

2 Properly construct cabinet with all components adequately glued. All joints shall be properly flushed. Set nails and screws. Apply stained plain wood filler to indentations. Sand smooth and leave ready to receive finish. Each unit sanded before leaving shop.

3 Apply 9.5mm (3/8") hardwood to all exposed edges of veneer board. When visible on the exterior of the cabinet, wood to match stained exterior faces. Otherwise wood edges are to be maple.

4 All knee space exceeding 900mm (36") wide to have 38mm x 38mm (2x2) steel angle reinforcing welded at corners (including premoulded vanities).

5 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures whether or not shown on the drawing. Where wiring access is required through countertops or other exposed surfaces to electrical receptacles below, provide prefinished aluminum 38mm (1½") diameter access covers.

6 Shop assemble work for delivery to site in size easily handled and ensure passage through building openings.

7 Install cabinet hardware for doors, shelves and drawers.

5 SHELVING

1 All shelving to be complete with side gables, fixed top, bottom and toe kick all of 19mm (¾") material. Provide one fixed shelf in units greater than 1.8m (6'-0") and less than 2.4m (8'-0") in height and at 1060mm (42") o.c. max for higher units. All shelving units to have a one piece 6mm (¼") plywood veneer back rebutted to top, bottom and side gables with finish to meet general cabinetry specification. Install all shelving as shown on drawings.

2 Unless otherwise specified all shelving is to match cabinet depth or where no size is indicated construct units to contain shelving with 300mm (12") width.

3 Unless a specific shelving arrangement is shown all cabinets are to have pilasters and the number of adjustable shelves to ensure spacing between shelves does not exceed 300mm (12") (i.e.., 600mm (24") high cabinet 1 shelf, 750mm (30") high cabinet 2 shelves).

4 Shelving shall be as detailed. Shelving to cabinetwork to be adjustable unless otherwise noted. Shelving over 760mm (30") in length shall be constructed of 19mm (¾") plywood with stain grade maple where specified or plastic laminate otherwise. Shelving under 750mm (30") length stain grade maple 19mm (¾") medium density particle board or prefinished melamine otherwise. Shelving in cabinetry shall not exceed 900mm (36") in length. Provide interior gables and pilasters.

5 All stain or paint grade shelving shall have hardwood edges or melamine or laminated shelves shall have flat stock plastic laminate edges.

3 EXECUTION

1 WORKMANSHIP

1 Construct finished carpentry and finish in accordance with best practice for first class workmanship.

2 Sand and clean materials after erection. Accurately fit joints, coped where possible and glue. End grain wood is not accepted on finished surfaces.

3 Set and conceal nail heads in a finished surface in a satisfactory manner. In stained work, countersink screws and bolts and cover with side grain plugs.

2 INSTALLATION

1 All dimensions to be site verified, any discrepancy must be reported to the Architect prior to any construction or fabrication. Dimensions are nominal. Contractor to provide clearance as required for cupboards, drawers, doors, etc.

2 Install all cabinet-work in locations as shown, level and plumb and fixed and bolted in place. Furnish and drill for all screws, expansion shields, toggle bolts, shims, etc.

3 Install cabinet-work and equipment in close co-operation and coordination with all other trades involved. Provide all necessary cut-outs for service and other inserts as required by other trades.

4 All work to be left complete, accurate to line, of sound construction and good workmanship and include all work shown on the drawing.

5 Site apply laminated plastic to unit as indicated. Adhere laminated plastic over entire surface. Joints where required or indicated shall be hairline.

6 Apply small bead of sealant at junction of wall finish and splash-back.

7 After installation, fit and adjust operating hardware for doors, drawers and shelves.

3 HARDWARE

1 Supply all necessary rough hardware for execution of work of this contract, such as nails, spikes, bolts, nuts, washers, screws, etc.

2 Finish hardware shall be supplied under section 08710 and installed under this section.

3 Install hardware in accordance with manufacturer's instructions using special tools, etc. This trade shall be responsible for damaging hardware due to faulty installation.

4 MILLWORK GENERALLY

1 Examine drawings and furnish all finished carpentry items required for the proper execution of this project. Each item shall be complete with all required anchorage and such accessories as necessary for proper installation and for co-relation with adjoining work.

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 04200: Masonry
2 Section 06100: Rough Carpentry
3 Section 07260: Cavity Wall Air/Vapour Barrier
4 Section 07410: Steel Cladding
5 Section : Roof Insulation
6 Section 09250: Gypsum Board
7 Section 09850: Exposed Aggregate Panels
8 Division 15: Insulation for Mechanical Work

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Membrane Air/Vapour Barriers shall be provided to all exterior insulated cavity walls as per Section 07260.

3 Separate air and vapour barriers shall be provided to either side of all insulated exterior stud walls where insulation is to be installed within the stud system.

4 Ensure continuity of the air/vapour barrier membrane system throughout the scope of this section.

5 Prior to commencing the Work, submit documentation from an approved independent testing laboratory certifying that the air leakage and vapour presence rates of the air/ vapour barrier membranes, including primary membrane and transition sheets, exceed the requirements of the National Building Code.

6 Prior to commencing the Work submit copies of manufacturers' current ISO certification. Membrane, primers, sealants, adhesives and associated auxiliary materials shall be included.

7 Prior to commencing the Work submit manufacturers' complete set of standard details for the air/vapour barrier membrane systems showing a continuous plane of air tightness throughout the building envelope.

8 Coordinate installation of air, vapour barriers and insulation with other section of the work involved in the various wall, floor and roof assemblies.

3 QUALITY ASSURANCE

1 Perform Work in accordance with the manufacturer's written instructions of the air/vapour barrier membrane and this specification.

2 Maintain one copy of manufacturer's written instructions on site.

4 SAMPLES AND MOCKUPS

1 Assist in the construction of cavity wall mock-up and others as required in accordance with Section 01300

5 DELIVERY, STORAGE AND HANDLING

1 Deliver materials to the job site in undamaged and original packaging indicating the name of the manufacturer and product.

2 Store rolls of materials on end in original packaging. Protect rolls from direct sunlight until ready for use.

3 Store adhesives and primers at temperatures of 5°C and above to facilitate handling.

4 Keep solvent away from open flame or excessive heat.

5 Store insulation in a dry covered location.

2 PRODUCTS

1 INSULATION

1 **Batt Insulation:**
Roxul - Mineral Wool or an equivalent product approved equal by the Architect.

Thickness / Size: to RSI indicated on drawings

Rigid Cavity Wall Insulation: to CAN/ULC S701 Type 3
Dow - CavityMate (or Owen Corning / Celfortec - Celfort 200) or an equivalent product approved equal by the Architect.

Thickness / Size: Type 3, 25 psi, 400mm x 2400mm with a thickness as indicated on the drawings

2 ADHESIVE

1 All adhesives to be compatible with membrane and insulation and approved by related manufacturers

3 ACCESSORIES

1 **Insulation clips:** impale type, perforated 50 x 50 mm cold rolled carbon steel 0.8 mm thick, adhesive back, spindle of 2.5 mm diameter annealed steel, length to suit insulation, 25 mm diameter washers of self locking type.

2 **Sealant:** to CGSB 19-GP-21M.

3 **Tape for sealing:** as recommended by manufacturer.

4 **Protection board:** to CSA A247-M1978, type II, 12 mm thick.

5 **Staples:** 12 mm minimum leg.

6 **Sub Girts:** Galvanized steel 'Z' girts by Vic Westeel to be 12.7mm (0.50") deeper than rigid insulation as indicated in Section 07200 to ensure air space.

7 **Metal Strapping:** Galvanized steel hat section horizontal strapping by Vic Westeel shall be a minimum of 19mm (0.75") thick.

4 INSULATION SCHEDULE

1 Insulate the following areas to the minimum levels indicated herein unless an insulation level is specified elsewhere.

2 **Cavity wall insulation with Air Vapour Barrier Membrane on uninsulated backup:** 50mm (2") Rigid Insulation

3 **Exterior insulated stud walls:** 152mm (6") Batt Insulation

4 **Interior stud walls:** 102mm (4") Batt Insulation

3 EXECUTION

1 EXAMINATION

1 Verify that surfaces and conditions are ready to accept this work. Notify Architect in writing of unacceptable substrate conditions. Commencement of work or any parts thereof indicates acceptance.

2 Where the work of the section is to be applied to existing substrate otherwise unaffected by the work of the project. This section shall be responsible for cleaning and preparing the surface as required by the manufacturer.

2 PREPARATION

1 All surfaces must be sound, dry, clean and free of oil, grease, dirt, excess mortar or other contaminants. Fill spalled areas in substrate to provide an even plane. Strike masonry joints flush.

2 New concrete should be cured for a minimum of 14 days and must be dry before air/vapour barrier membranes are applied.

3 PROTECTION OF MEMBRANE

1 Install membranes as per Section 07260

2 Membranes are not designed for permanent exposure. Ensure membrane is covered within the time period specified by the manufacturer.

4 INSULATION - GENERAL INSTALLATION REQUIREMENTS

1 Install insulation after building substrata materials are dry.

2 Install insulation to maintain continuity of thermal protection to building elements and spaces.

3 Install foam insulation around electrical boxes, plumbing and heating pipes and ducts, around exterior doors and windows and other protrusions.

4 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 longest possible lengths to reduce number of joints.

5 Do not enclose insulation until it has been inspected.

5 INSTALLATION OF INSULATION TO AIR VAPOUR BARRIER MEMBRANES

1 Co-ordinate the installation with work related elsewhere.

2 Install insulation were it is to be mechanically fastened as specified in the related section.

3 Cavity wall insulation to wall receiving exterior metal siding shall be install under Section 07410; Steel Cladding

4 Where an adhesive system is required, upon the completion of the air/vapour barrier membrane system apply the liquid air seal mastic and insulation adhesive in a serpentine pattern.

5 Immediately embed insulation into the adhesive and press firmly into place to ensure full contact. Apply additional adhesive if allowed to skin over.

6 Fully butter all joints of insulation panels with adhesive during installation, except at expansion joints.

7 Leave insulation board joints unbonded over line of expansion and control joints. Bond a continuous 150 mm wide 0.15 mm polyethylene strip over joint using compatible adhesive before application of insulation.

6 BATT INSULATION INSTALLATION

1 Install insulation as shown on drawings for areas not installed under Section 09250.

2 Protect insulation until the building is weather tight. Remove and replace any damaged or wet insulation

3 Contact Architect for review before work is concealed.

7 VAPOUR BARRIER FILM INSTALLATION TO INSULATED STUD FRAMING

1 Place polyethylene on warm side of insulation.

2 Staple or glue with adhesive vapour barrier to framing members. Lap joints 150mm minimum and tape seal. Ensure joints occur over framing members.

3 Taping of joints may be deleted where protected by gypsum

4 Leave insulation board joints unbonded over line of expansion and control joints. Bond a continuous 150 mm wide 0.15 mm polyethylene strip over joint using compatible adhesive before application of insulation.

5 Unless otherwise indicated Insulation between two masonry wythes shall be 50mm (2") thick Styrofoam 'SM'.

6 Extend vapour barrier tight to perimeter of windows, door frames, and other items interrupting continuity of membrane. Tape seal.

7 Seal vapour barrier at points of penetration.

8 AIR BARRIER INSTALLATION TO INSULATED STUD SYSTEMS

1 Place a continuous layer of air barrier to exterior side of studs in exterior walls above grade.

2 Air barrier is not required where rigid insulated sheathing is indicated.

3 Tape all joints as per manufacturers specifications.

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 04200: Masonry

2 Section 07200: Insulation and Moisture Barrier

3 Section 08120: Aluminum Door, Frames and Screens

4 Section 08520: Aluminum Windows

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Membrane Air/Vapour Barriers shall be provided to all exterior insulated cavity walls.

3 Separate air and vapour barriers shall be provided to either side of all insulated exterior stud walls where insulation is to be installed within the stud system.

4 Ensure continuity of the air/vapour barrier membrane system throughout the scope of this section.

5 Prior to commencing the Work, submit documentation from an approved independent testing laboratory certifying that the air leakage and vapour presence rates of the air/ vapour barrier membranes, including primary membrane and transition sheets, exceed the requirements of the National Building Code.

6 Prior to commencing the Work submit copies of manufacturers' current ISO certification. Membrane, primers, sealants, adhesives and associated auxiliary materials shall be included.

7 Prior to commencing the Work submit manufacturers' complete set of standard details for the air/vapour barrier membrane systems showing a continuous plane of air tightness throughout the building envelope.

8 Coordinate installation of air, vapour barriers and insulation with other section of the work involved in the various wall, floor and roof assemblies.

3 QUALITY ASSURANCE

1 The air/vapour barrier contractor shall be, during the bidding period as well as during installation, officially recognized as an approved contractor by the air barrier materials manufacturer. The installer must have followed the training course offered by the manufacturer.

2 Submit in writing, a document stating that the applicator of the primary air/vapour barrier membranes specified in this section is recognized by the manufacturer as suitable for the execution of the Work.

3 Perform Work in accordance with the manufacturer's written instructions of the air/vapour barrier membrane and this specification.

4 Maintain one copy of manufacturer's written instructions on site.

5 At the beginning of the Work and at all times during the execution of the Work, allow access to Work site by the air/vapour barrier membrane manufacturers' representative.

6 Components used in this section shall be sourced from one manufacturer, including sheet membrane, air/vapour barrier sealants, primers, mastics and adhesives.

7 The contractor shall coordination on site review of work by the manufacturer's representative. A written confirmation from the manufacturer must be provided indicating that the appropriate products have been installed in accordance with the manufacturer's guidelines by qualified persons.

4 LABORATORY TESTING

1 Upon request from the owner, the electrometric membrane manufacturer shall supply proof of their ISO 9001 Certification.

5 SAMPLES AND MOCKUPS

1 Construct mock-up in accordance with Section 01300

2 Coordinate and provide mockups for all composite assemblies indicated incorporating substrate, window frame, attachment of insulation, and showing air/vapour barrier membrane application details.

6 DELIVERY, STORAGE AND HANDLING

1 All materials shall be delivered and stored in their original packaging, displaying the manufacturer's name, quality, weight, standards references and all other indications or references considered as standard.

2 Materials shall be adequately protected and stored at all times in a dry space, properly ventilated and protected from the elements. Only materials which shall be used that same day shall be removed from this storage space. In winter conditions, it is preferable to store the rolls in a heated shelter at a minimum temperature of +100°C, and remove them just prior to their installation in the work. Materials must be protected from exposure to open flame or sparks from welding.

3 Deliver materials to the job site in undamaged and original packaging indicating the name of the manufacturer and product.

4 Store rolls of materials on end in original packaging.

5 Store adhesives and primers at temperatures of 5°C and above to facilitate handling.

6 Protect rolls from direct sunlight until ready for use.

5 GUARANTEES

1 The product manufacturer shall issue a written and signed document, issued in the name of the owner, certifying the product will meet all the physical characteristics published by the manufacturer, for a period of 5 years, starting from the date of acceptance of the work.

2 The contractor shall issue a written and signed document, issued in the name of the owner, certifying that the work executed shall remain in place and free of any air/vapour barrier performance defects for a period of 5 years starting from the date of acceptance of the work.

7 VERIFICATION AND ACCEPTANCE OF THE WORK

1 At the completion of the installation of the air/vapour barrier system, a thermo graphic study shall be made of all the envelope surfaces treated in this section. This study shall be performed by a company possessing a minimum of three (3) years experience in this type of evaluation. If this study reveals that air/vapour leaks are present across the surfaces in question, and that such leaks are due to improper installation, then the subcontractor for this section shall be held responsible and shall repair the defects or air leaks at this own cost and to the satisfaction of the professional. The cost of the study shall be paid by the owner and the resulting report shall be issued in the name of the owner.

2 The owner may demand a verification of the work on any section of a wall or surface by an infiltration test, carried out by an accredited company. This test shall be used to confirm the quality of materials, installation, and elements affecting the proper functioning of the air/vapour barrier system. The cost of carrying out this test shall be paid by the owner.

2 PRODUCTS

1 MATERIALS

1 **PRIMERS:**

Bakor Aquaprime: In temperature above 4°C (40°F)

Bakor Blueskin Primer: In temperature above -5°C (23°F) and below 4°C (40°F)

2 **Air Vapour Barrier : to Permeance - ASTM E96: Flexibility - CGSB 37-GP56M**
Bakor - Blueskin SA (self adhering) or an equivalent product approved equal by the Architect.

Extended Warranty: 5 years

Approved Equal Systems:

IKO SUPERSEAL TYPE III

Soprema SOPRASEAL 180 HD

W.R.Meadows SEALTIGHT AIR-SHIELD

If approved, equal products used are to be compatible primers and mastics as approved by the membrane manufacturer shall be employed.

3 **WATERPROOFING MASTIC AND INSULATION ADHESIVE:**

Bakor Air-Bloc 21

4 **Through Wall Flashing: to Permeance - ASTM E96: Flexibility - CGSB 37-GP56M**
Bakor - Blueskin TWG (self-adhered) or as specified by manufacturer to ensure compatibility with Air/Vapour Barrier or an equivalent product approved equal by the Architect.

Extended Warranty: 5 years

for composite masonry wall or adhered behind the AIR/VAPOUR Barrier Membrane

3 EXECUTION

1 EXAMINATION AND PREPARATION OF SURFACES

1 Verify that surfaces and conditions are ready to accept the Work of this section. Notify Architect in writing of unacceptable substrate conditions. Commencement of work or any parts thereof indicates acceptance.

2 Where the work of the section is to be applied to existing substrate otherwise unaffected by the work of the project. This section shall be responsible for cleaning and preparing the surface as required by the manufacturer.

3 Do not install materials in conditions of snow or rain.

4 All surfaces to receive membrane must be clean of oil, dust and excess mortar. Strike masonry joints flush.

5 For applications onto poured or reinforced concrete surfaces or concrete block, the surfaces should be allowed to cure for at least 14 days prior to application of air/vapour barrier or waterproofing products. Where curing compounds are used, they must be clear resin based, without oil, wax or pigments. It is recommended to carry out an adhesion test before the installation of the membrane.

6 Dynamic cracking in the substrate, or cracks of greater than 3mm in width shall be reported to the architect/engineer prior to membrane installation. Static cracking up to 3 mm in width must be covered with a membrane strip 150 mm wide, centred over the crack. This strip is to be installed before the installation of the covering membrane.

2 SELF ADHERED MEMBRANE AND COMPONENTS - PRIMER

1 Apply manufacturer approved primer for self-adhering membranes at rate recommended.

2 Apply primer to all areas to receive self adhered membrane, transition sheet and / or through-wall flashing membrane, as indicated on drawings by roller or spray and allow minimum 30 minute open time. Primed surfaces not covered by transition membrane or through-wall flashing membrane during the same working day must be re-primed.

3 PRIMING IN TEMPERATURE ABOVE -5°C (23°F) AND BELOW 4°C (40°F): All surfaces to receive membrane must be primed using lambs wool roller, brush or spray equipment at a rate of 1 litre per 2-6m² depending on porosity and texture of surface and allowed to dry for 30 minutes before membrane is applied. Ensure that all primed surfaces receive membrane in the same day.

4 PRIMING IN TEMPERATURE ABOVE 4°C (40°F): All surfaces to receive membrane must be primed with Aquaprime applied by Garden sprayer at a rate up to 1 litre per 12m². Allow to dry to a tacky film. Ensure that all primed surfaces receive membrane in the same day.

3 AIR VAPOUR BARRIER - SELF ADHERED

1 Apply self adhered membrane complete and continuous to prepared and primed substrate in an overlapping shingle fashion and in accordance with manufacturer's recommendations and written instructions. Stagger all vertical joints.

2 Align and position sheet membrane, remove protective film and press firmly into place. Ensure minimum 50 mm overlap at all end and side laps. Promptly roll all laps and membrane with a counter top roller to

3 At the end of each days work seal the top edge of the membrane where it meets the substrate using manufacturer approved liquid air seal mastic. Trowel apply a feathered edge to seal termination and shed water.

4 Tie-in to window frames, aluminum screens, hollow metal doorframes, spandrel panels, roofing system and at the interface of dissimilar materials as indicated in drawings. Refer to manufacturers' standard details.

5 Mechanically fasten membrane through securement bars to all window, door, louvers and curtain wall sections as recommended by membrane manufacturer where proper adhesion and bonding cannot be maintained.

6 Across openings, that is areas where the membrane is unsupported, (around windows, below edge beams etc.) stop the membrane on the wall surface at the edge of the opening on either side. To extend the air/vapour barrier across the opening, cut a membrane strip 305 mm wide and 3 m long. Install this strip centred over the unsupported opening, parallel to its length, so as to minimize the number of overlaps between membrane strips which span the opening.

7 Ensure all projections, including wall ties, are properly sealed with an caulk application of liquid air seal mastic.

8 Membrane applied to the underside of substrate surfaces shall receive special attention on application to ensure maximum surface area adhesion is obtained.

9 Where masonry anchors are already in place prior to the membrane installation, install the membrane in a horizontal orientation. The installation should begin from the bottom and work in an upwards direction along the wall surface, using the width of membrane recommended and supplied by the manufacturer.

10 Seal around any openings with mastic. Seal end of membrane where it meets the substrate, at the end of the days work. Use application of mastic to affect seal.

11 Detail work must be carefully carried out to ensure continuous air tightness of the membrane. It is recommended that mechanical attachment be made to all window and door frames, or a properly designed sealant joint be provided.

12 Holes and rips in the membrane must be repaired with the appropriate membrane material. A patching piece must be welded into place and exceed the affected surface area by at least 100 mm.

13 All waterproofing and air/vapour barrier membranes must be protected from excessively high temperatures.

4 THROUGH WALL FLASHING - SELF ADHERED

1 Provide through wall flashing to at the heads of all openings and the bottom of all walls receiving and air barrier or and air vapour membrane.

2 Where metal drip flashing is specified or indicated provide flashing membrane secured to surfaces below. Mechanically fasten metal flashing in coordination with the related section. Provide an additional strip of flashing or transition material over the back upstand of the metal to bind it to the air/vapour barrier.

3 Align and position the leading edge of self-adhering through-wall flashing membrane with the front horizontal edge of the foundation walls or self angles, partially remove protective film and roll membrane over surface and up vertically.

4 Press firmly into place. Ensure minimum 50mm overlap at all end and side laps.

5 Promptly roll all laps and membrane to effect the seal.

6 Ensure all preparatory work is complete prior to applying through wall flashing membrane

7 Ensure through-wall flashing membrane extends fully to the exterior face of the exterior masonry veneer. Trim off excess as directed by the consultant.

8 Apply through-wall flashing membrane along the base of masonry veneer walls, over windows, doors and all other wall openings. Membrane shall form continuous flashing and shall extend up a minimum of 200 mm up the back-up wall.

5 TRANSITION FLASHING - SELF ADHERED

1 Align and position manufacturer approved self-adhering transition membrane, remove protective film and press firmly into place. Ensure minimum 50 mm overlap at all end and side laps.

2 Tie-in to window frames, aluminum screens, hollow metal doorframes, spandrel panels, roofing system and at the interface of dissimilar materials as indicated in drawings

3 Promptly roll all laps and membrane with a counter top roller to effect seal.

6 INSTALLATION OF WALL FLASHING MEMBRANE

1 Install flashings under exterior masonry bearing or flashing of metal cladding at:

top of foundation walls
floor slabs
shelf angles and steel angles over openings
below masonry or concrete sills
under all weep hole courses
at horizontal joints between different veneers
elsewhere as indicated.

1 Insulation Clips: Fasten insulation clips through the membrane as recommended by manufacturer. Do not pre-drill. Insulation clips may be held in place temporarily by applying heat to the underside of the clip and pressing the clip into the membrane.

2 Use a minimum of one fastener per four square feet of insulation.

3 Air barriers are not designed for permanent exposure. Cover within 6 weeks of installation.

7 ON SITE REVIEW OF MEMBRANE

1 Notify the Architect when sections of work are complete so as to allow for review prior to installing insulation.

2 Coordinate the necessary reviews by Manufacturer's representative.

8 PROTECTION OF MEMBRANE

1 Membranes are not designed for permanent exposure. Ensure membrane is covered within the time period specified by the manufacturer.

7 INSTALLATION OF CAVITY WALL INSULATION

1 Secure insulation as indicated in Section 07200.

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Rough Carpentry

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 SHOP DRAWINGS

1 Submit shop drawings in accordance with Section 01300, showing all erection details including flashing.

4 QUALIFICATIONS

1 The work shall be carried out by an experienced applicator approved by the manufacturer.

5 DELIVERY AND STORAGE

1 Delivery of materials will commence when the job site has progressed to such a point that erection of the steel cladding can begin. If site storage becomes necessary, suitable storage shall be provided by the General Contractor. Where practicable, the storage shall be under cover.

6 DESIGN

1 Structural properties shall be calculated using CSA Standard S-136-1974 "Cold Formed Steel Structural Members". The steel cladding sheets shall be of such thickness and profile to support a live load of variable pounds per square foot and a deflection not to exceed 1/180th of the span.

2 Canadian Sheet Steel Building Institute Standard for zinc-coated (galvanized) sheet steel for exterior building products. Technical Bulletin No. 5 and Standard for Sheet Steel Cladding shall form part of this specification.

2 PRODUCTS

1 METAL WALL CLADDING

1 **Metal Wall Cladding - Vertical Rib:**
Vic West Steel - Channel Wall prefinished metal panel or an equivalent product approved equal by the Architect.

Thickness / Size: 0.76mm (22 gauge)
Colour: Architect selected from Standard HMP colours
Mockups / Samples: 305mm x 305mm sample of profile and gauge, full range of colours

2 **Metal Wall Cladding - Horizontal Rib:**
Vic West Steel - 22mm (7/8") CORRUGATED - 22mm (7/8") deep "wave" corrugated wall panel with ribs at 68mm (2.67") on center or an equivalent product approved equal by the Architect.

Thickness / Size: 0.76mm (22 gauge)
Colour: Architect selected from Standard HMP COLORITE colours on Galvalume substrate coating
Mockups / Samples: 305mm x 305mm sample of profile and gauge, full range of colours

4 FINISH

1 Minimum zinc coating designation shall be per ASTM Standard A653 or A653M as applicable.

2 The print coating shall be , conforming to
Film Cure: ASTM D1005,
Film Hardness: ASTM D3363,
Humidity Resistance: ASTM D2247,
Formability / Adhesion: ASTM D4145,
Gloss: ASTM D523

3 Finish for outer skin shall be paint coating and for inside liner shall be galvanized.

3 EXECUTION

1 EXAMINATION

1 Before commencing erection, the structure will be carefully examined. The General Contractor will be notified of any defects found and work will not commence until corrective measures have been taken. The General Contractor shall ensure that the site, particularly in the areas to receive steel cladding be clear of all obstructions which would interfere with the use of appropriate installation equipment.

2 STEEL FRAMING TO CLAD CAVITY WALLS

1 Coordinate erection with installation of Air Vapour Barrier as indicated in Section 07200

2 Provide all steel girt framing to masonry walls to receive cladding. Secure framing at 400mm (16") o.c. max. Ensure that girts are anchored to masonry units, not at mortar joints. Unless otherwise indicated girts are to be vertical spaced at 400mm (16") o.c. max.

3 Provide steel girts to both sides of corners for support and insulate.

4 Install insulation girts to provide a continuous insulation layer.

5 Provide horizontal strapping at 400mm (16") o.c. max unless otherwise specified. Notch and bend strapping around all corners.

3 ERECTION

1 The steel cladding sheets shall be of such thickness and profile to support a wind load of 122 kg/sqM (25 lb/sf) and a deflection not to exceed 1/180th of the span. Horizontal metal 'z' bars to be spaced a maximum of 1200mm (48") vertically.

2 Insulation shall be cut and installed to fit tight, without gaps. The exterior sheet shall be fastened to the 'z' bars and subgirts as per manufacturer's standards. At the end of the day, all exposed insulation shall be protected from the weather. All insulation damaged by the weather before the installation of the cladding shall be replaced.

3 All steel cladding sheets shall be installed in accordance with the approved erection drawings and Vic Westeel Limited standard erection procedures. Steel cladding sheets shall be fastened at a maximum of 270mm (10.65") centres to intermediate support and at a maximum of 135mm (5.33") centres at end laps. Closures and flashings shall be fastened at a maximum of 300mm (12") centres. The Erector shall cut and flash all openings and protrusions located and dimensioned on the tender drawings.

4 No butt joints in 'z' girts will be permitted. All joints in field and at corners to be lap joints, mechanically secured.

5 All jamb and head flashing to be constructed of two pieces to allow a proper fit.

6 Touch up with matching paint any minor paint abrasions at screw fasteners and lap joints to the satisfaction of the owner.

4 CLEAN UP

1 On completion, remove all rubbish and unused material from the site.

2 The contractor shall remove undue grime and dirt from panel by dry wiping the panel as the material is erected.

Section 07620

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Rough Carpentry

2 Section 07900: Sealants, Caulking and Firestopping

3 Section 09900: Painting

4 Division 16: Electric Heating Cables

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 SAMPLES

1 Submit duplicate 102 x 102 mm. samples of sheet metal material, colour and finish in accordance with Section 01300.

2 PRODUCTS

1 PREFINISHED STEEL SHEET

1 **Prefinished Steel Trim:**

Thickness / Size: base metal thickness of 0.6mm (24 gauge)
Colour: Architect selected from Series 8000 (CGSB 93-GP-3M)
Mockups / Samples: 100mm x 100mm

2 ACCESSORIES

1 Isolation coating: to CGSB 1-GP-108C.

2 Plastic cement: to CGSB 37-GP-5M.

3 Sealants: in accordance with Section 07900, paragraph 2.1.3, type 1, colour later selected.

4 Cleats: of same material, and temper as sheet metal, minimum 50 mm wide. Thickness same as sheet metal being secured.

5 Fasteners: of same material as sheet metal, to CSA B111-1974, flat head roofing nails of length and thickness suitable for metal flashing application.

6 Washers: of same material as sheet metal, 1 mm thick with rubber packing.

7 Touch-up paint: as recommended by metal flashing and trim manufacturer.

3 FABRICATION

1 Fabricate metal flashings and other sheet metal work in accordance with CRCA specifications.

2 Fabricate aluminum flashing and other sheet aluminum work in accordance with Aluminum Association.

3 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.

4 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

4 METAL FLASHING

1 Form flashing, coping and fascia to profiles indicated.

3 EXECUTION

1 INSTALLATION

1 Install sheet work to specifications and as detailed on drawings.

2 Use concealed fastenings except where approved before installation.

3 Lock end joints and caulk with sealant.

4 Counterflash bituminous flashing at intersection of roof vertical surfaces and curbs.

5 Flash all roof penetrations and make watertight. Check mechanical and electrical drawings for equipment penetrating through roof.

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 07620: Metal Flashing and Trim

2 Section 09250: Gypsum Board

3 Division 15: General Mechanical Provisions

4 Division 16: General Electrical Provisions

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 SCOPE OF WORK

1 Supply and install all caulking as shown on drawings, under thresholds, around door frames, louvred windows, below sill to masonry, control joints expansion joints, etc., to ensure a waterproof building.

4 QUALIFICATIONS

1 Arrange and pay for supply and installation of sealants and caulking work by recognized specialist applicator having at least five years of proven satisfactory experience and having skilled mechanics thoroughly trained and competent in all phases of caulking work.

5 PRODUCT HANDLING

1 Deliver sealant materials to site and store in their original containers in undamaged condition, sealed, with labels intact and showing manufacturer's name, brand, colour, etc.

2 Store materials in a dry location in such manner that no damage will be done to materials or building.

6 WARRANTY

1 Provide written warranty stating that caulking work is guaranteed against leakage, cracking, crumbling, melting, shrinkage, running loss of adhesion, or staining adjacent surfaces in accordance with GC 24, but for two years.

7 ENVIRONMENTAL CONDITIONS

1 Apply sealants only to completely dry surfaces, and at air and material temperatures above minimum established by manufacturer's specifications.

8 SUBMITTALS

1 Submit samples of sealant and backing, if requested, for Architect's approval.

2 PRODUCTS

1 MATERIALS

1 **Primers:** are to be type recommended by sealant manufacturer, for the appropriate sealant and corresponding substrate.

2 **Joint fillers:** compatible with primers and sealants.

3 **Sealant:**

Type 1: CAN/CGSB-19.0-M Test Methods. Use at all exterior locations, except where another is specified.

a) Dymeric 240 by Tremco.

OR

b) One part silicone rubber sealant.

Dow corning 790 bond to concrete.

Dow corning 795 bond to steel

Type 2: Use at interior joint between windows door frames and screens.

a) Acrylic solvent release one part sealant CGSB Specification 19-GP-5M Mono 555 by Tremco or Dow Corning 999.

Type 3: Silicone Sealant for plumbing fixtures, vanity tops, mildew resistant.

a) One part sealant CGSB specification 19-GP-9Ma, Proglaze by Tremco or Dow Corning 786.

Type 5: a) Fire separation caulking - one part water-based, acrylic elastomeric sealant Tremco Tremstop Acrylic. To be used to seal opening in fire separations, around piping, conduit, ductwork and building elements.
b) Fire separation backing - 22.23mm (0.875") nominal diameter polyurethane backer rod. Installation to meet ULC standard rated assemblies. Unless otherwise indicated, for two hour rating provide two layers of friction fitted on top of each other into gap. For one hour system, bond breaker tape is to be applied.

4 **Bond Breaker:** where joint configuration does not allow for proper depth/width ratio with the use of joint fillers (See Section 3.1, item 3.1.5) - a pressure sensitive plastic tape such as 3M #226 or 481 or approved equal shall be placed at the back of the joint which will not bond to the sealant.

5 **Colours of sealant:** to the approval of the Architect, and matching the predominant material to which the sealant is applied.

6 **Removable Firestopping: to CAN/ULC -S115M, ASTM E814**
Tremco - TREMstop PS or an equivalent product approved equal by the Architect.

Colour: Silver
Shop Drawings: in accordance with Section 01300

3 EXECUTION

1 PREPARATION

1 Remove dust, paint, loose mortar and other foreign matter and dry joint surfaces.

2 Remove rust mill scale and coatings from ferrous metals by wire brush, grinding or sandblasting.

3 Remove oil, grease and other coatings from non-ferrous metals with xylol, toluol or methyl-ethyl-ketone.

4 Prepare concrete, masonry, glazed and citreous surfaces as recommended by sealant manufacturer.

5 Examine joint sizes and correct to achieve depth ratio 1/2 of joint width with minimum width and depth of 6mm (1/4") maximum width 25mm (1").

6 Install joint filler to achieve correct joint depth.

7 Where necessary to prevent staining, mask adjacent surfaces with tape prior to priming and sealing.

8 Apply bond breaker tape where required in accordance with manufacturer's directions.

9 Prime sides of joints in accordance with manufacturer's directions immediately prior to caulking.

10 Before any caulking or sealing is commenced, a test of the material shall be made for indications to staining or poor adhesion.

2 APPLICATION

1 Apply sealants in accordance with manufacturer's directions, using a gun with proper size nozzle. Use sufficient pressure to fill voids and joints solid. Superficial pointing with skin bead is not acceptable.

2 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities. Neatly tool surface to a slight concave joint.

3 Clean adjacent surfaces immediately and leave work neat and clean. Remove excess and droppings, using recommended cleaners as work progresses. Remove masking tape after tooling of joints.

4 In masonry cavity construction, vent caulked joints from cavity to 3mm (1/8") beyond external face of wall by inserting 3mm (1/8") diameter plastic tubing at bottom of each joint and 1524mm (5'-0") o.c. max. vertically.

5 In fire separations install backing material Type 5b and caulk both sides of separation with Type 5A to an approved ULC design. Provide fire stopping and caulking to all joints in rated and non rated separations between dissimilar material including but not limited to:

penetrations by mechanical, electrical or structural elements

joints between dissimilar roof and/or wall materials

control joints

6 Unless indicated otherwise in this section or elsewhere in the contract documents all separations shall maintain a one hour fire rating.

Section 08110

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 01014: Door Schedule
2 Section 04200: Masonry
3 Section 05500: Miscellaneous Metal Fabrication
4 Section 06100: Rough Carpentry
5 Section 06200: Finish Carpentry
6 Section 07900: Sealants, Caulking and Firestopping
7 Section 08210: Wood Doors
8 Section 08710: Finish Hardware
9 Section 08800: Glass and Glazing
10 Section 09111: Metal Stud Systems
11 Section 09900: Painting

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Supply all door and frames as shown on the drawings, door schedule and/or specified herein.

3 REGULATORY AUTHORITY

1 Canadian Steel Door and Frame Manufacturer's Association.

4 SHOP DRAWINGS

1 Submit shop drawings in accordance with Section 01300.

2 Clearly indicate each type frame material, core thickness, reinforcements, glazing stops, location of anchors and exposed fastenings, electrical conduit/boxes and finishes.

3 Coordinate shop drawings with Section 08710 to ensure proper preparation of doors and frames.

2 PRODUCTS

1 MATERIALS

1 Steel: Zinc wipe coated galvanized steel ASTM #A527 (class designation A01) Imperial, ZF 001 Metric) commercially known as Satin coat and Colourbond or commercial quality cold rolled steel ASTM #A568. All as per chart attached.

2 HOLLOW METAL TYPE STEEL DOORS

1 Flush Type: Flush type doors shall be hollow steel construction or honeycomb core construction tack welded edge seams at 150mm (6") maximum o.c., ground, filled and sanded smooth/flush

2 Interior Doors: shall be 1.5mm (16 ga.) honeycomb core material lamianted under pressure to face sheets. Suitable reinforcing for application of the hardware as specified herein shall be provided. Surface sheets for doors shall consist of two formed steel sheets of thicknesses as specified in table. Top and bottom of the door shall be closed with recessed continuous welded channel end closures. Provide flush steel top caps seaded in place only at doors receiving recessed door contacts.

3 Labeled Fire Doors: Labeled doors shall be provided for those openings requiring fire protection ratings as determined and scheduled by the Architect. Such doors shall be in accordance with manufacturer's standard and/or type of construction as tested and approved by a nationally recognized testing agency having a factory inspection service.

4 Exterior Doors: Exterior Doors shall be 1.5mm (16ga.) steel stiffened and insulated. All interior voids of the door shall be filled with a fibreglass insulation. Provide flush steel top caps welded in place.

5 Finishing: Doors manufactured from C.R.S. shall be finished with a corrosion resistant steel primer. Doors manufactured from zinc wipe coated galvanized steel shall have a factory applied touch-up at those areas where coating has been removed due to grinding.

6 Mortise, reinforce, drill and tap doors and reinforcements to receive hardware using templates provided by Finish Hardware supplier. Refer to Section 01014 for Hardware Groups.

7 All doors requiring glass to have narrow-lite above and below latch. Size of opening to be appropriate size for G.P.W. glass in a fire rating.

3 HOLLOW METAL FRAMES

1 Frames shall be of welded construction.

1. Welded Type: Frames shall be either mitred or mechanically jointed and securely welded on the inside of the profile. Welded joints to be ground to a smooth, uniform finish.

2. Labeled Fire Frames: Labeled frames shall be provided for those openings requiring fire protection ratings as determined and scheduled by the Architect. Such frames shall be tested in conformance with CAN4-S104 "Standard Method of Fire Tests of Door Assemblies".

3. Thermally Broken Frame: shall be made from 16 gauge (1.5mm) wipeout galvanized steel for strength and corrosion resistant with rigid vinyl extrusion to provide positive thermal break.

2 Mortise, reinforce, drill and tap frames and reinforcements to receive hardware using templates provided by finish hardware supplier. Refer to typical hardware groups in Section 01014.

3 Frames shall be reinforced when required for surface mounted hardware. (Drilling and tapping in field by others.) See table for minimum gauges.

4 Each door opening to be prepared for single rubber bumpers, three (3) for single door openings, two (2) for double door openings. Two (2) channel or angle spreaders to be welded to door jambs at bottom of door opening to ensure proper alignment.

5 Shop Priming: Frames manufactured from C.R.S. shall be chemically treated for good paint adhesion and ship coated with a corrosion resistant steel primer. Frames manufactured from zinc wipe coated galvanized steel shall have a factory-applied touch up at those welded areas where coating has been removed due to disc sanding.

6 Provide concealed conduit and concealed boxes to all electrical and electronic devices incorporated in the frames.

4 ANCHORS

1 Provide anchors as per standard of Canadian Steel Door and Frame Manufacturer's Association to suit wall construction.

2 Frames to be anchored to previously placed concrete, masonry or structural steel shall be provided with anchors of suitable design as shown on approved shop drawings (Fasteners for such anchors shall be provided by others).

3 Floor anchors shall be securely attached to the inside of each jamb profile.

5 GLAZED OPENINGS (HOLLOW METAL SCREENS)

1 Butt joints of mullions and transoms shall be coped accurately, securely welded, and ground.

2 Glazing bead at openings shall be formed channel, minimum 16mm (5/8") high. Glazing bead shall be accurately fitted at corners and fastened to frame sections with counter-sunk oval head sheet metal screws at 460 mm (18") O.C. maximum, 50mm (2") from each end. Install glazing beads at an appropriate distance form the stop to suit the glass thickness being provided.

3 EXECUTION

1 SITE STORAGE AND PROTECTION OF MATERIALS

1 It shall be the responsibility of the General Contractor to see that any scratches or disfigurement caused in shipping or handling is promptly cleaned and touched up with rust-inhibitive primer; and that materials are properly stored on planks, free from damage, out of water, and covered to protect them from damage due to any cause.

2 Doors shall have their wrapping or coverings removed upon arrival at the building site and shall be stored in a vertical position, spaced by blocking to permit air circulation between them. Store in a controlled area to protect from damage.

2 INSTALLATION

1 Set frames at correct elevation. Install work plumb, square, level, free from warp, twist and superimposed loads.

2 Secure anchorages and connections to adjacent construction in manner not restricting thermal movement. Finalize anchor settings after alignment.

3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm wide. Remove temporary spreaders after frames are built-in.

4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.

5 Unless otherwise indicated install all hardware supplied under Section 08710. Install doors and hardware in accordance with hardware templates and manufacturers' instructions.

6 Adjust operable parts for correct function.

7 Exterior door frames shall be insulated by the section before installation

8 All exterior frames to be equipped with full frame width aluminum drip cap.

9 Installation shall be by knowledgeable and experienced personnel. Manufacturer installation recommendations must be followed.

10 All welds to be ground smooth with no sharp edges, burrs, depressions or voids. All welds to be primed.

11 All hardware supplied and isntalled as per Section 08710.

12 Work site must be kept neat and clean at all times and a thorough clean up must be performed immediately upon completion.

13 Make allowances for deflection of structure to ensure that structure loads are not transmitted to aluminum/metal work.

14 Provide structural steel reinforcement as required for adequate strength, stiffness and connections. Weld threshold to base of jambs for rigid four corner frame construction.

15 Accurately fit intersecting members of flush hairline, weather tight joints and mechanically interlock together except where specified.

16 Conceal fastenings (except where exposed fastenings are indicated) wherever possible.

17 All doors to be prepped as required and reinforced at all panic, closer, hinge and latch locations complete as per the approved finishing hardware schedule.

3 CAULKING AND INSULATION

1 Prior to exterior caulking, completely fill cavity between exterior frames and rough opening with insulation.

2 Seal between members of aluminum work to provide a weatherproof installation.

3 Conceal sealant within aluminum work except where exposed use is permitted.

4 Apply sealant to joints between door frames and adjacent building components around perimeter of every external door opening.

5 Apply sealant using gun with proper size nozzle. Fill voids and joints to be solid. Superficial pointing with skin bead not acceptable.

6 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities. Neatly tool surface to a tight concave joint.

MINIMUM GAUGE OF SHEET METAL

TYPE	Gauge	Gauge Thickness Imperial	Metric
Door Frames	16	.060"	1.6mm
Doors - Honeycomb Core Construction			
Face Sheets	16	.060"	1.6mm
Top and bottom channels	16	.060"	1.6mm
Accessories (Doors & Frames)			
Lock and strike reinforcements	16	.060"	1.6mm
Hinge reinforcements	10	.135"	3.4mm
Flush Bolt reinforcements	16	.060"	1.6mm
Reinforcements for surface applied hardware	12	.015"	2.7mm
Glass mouldings (non-fire rated doors)			
Formed steel (screw fixed or snap-on type)	20	.036"	0.90mm
Glass mouldings (Fire-rated doors)			
Formed steel	20	.036"	0.90mm
Mortar Guard Boxes	22	.030"	0.80mm
Jamb Floor anchors	16	.060"	1.6mm
Anchors			
T - Strap type	16	.060"	1.6mm
L - Type	18	.048"	1.2mm
Wire Type	0.156 DIA		4.0mm DIA
Stirrup-Strap Type (2'x 10" Min.)			
(50 mm x 250 mm)	16	.060"	1.6mm
Stud Type	18	.048"	1.2mm
Jamb Spreaders	18	.048"	1.2mm

Section 08120

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 01014: Door Schedule

2 Section 04200: Masonry

3 Section 07900: Sealants, Caulking and Firestopping

4 Section 08520: Aluminum Windows

5 Section 08710: Finish Hardware

6 Section 08800: Glass and Glazing

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 SHOP DRAWINGS

1 Submit shop drawings in accordance with Section 01300.

2 Clearly indicate each type of door, frame, extrusion profile, method of assembly, section and hardware reinforcement, location of exposed fasteners, finishes etc.

3 MAINTENANCE DATA

1 Provide maintenance data for cleaning and maintenance of aluminum finishes for incorporation into maintenance manual specified in Section 01700.

4 PROTECTION

1 Apply temporary protective coating in finished surface. Remove coating after erection. Do not use coating that will become hard to remove or leave residue.

5 WARRANTY

1 Contractor shall warrant aluminum doors and frames including factory sealed glazing against leakage, defects and malfunctions under normal usage in a accordance with GC 24 but for three (3) years.

2 PRODUCTS

1 MATERIALS

1 **Exterior Aluminum Frames:**
Alumicor - Series 3400 or an equivalent product approved equal by the Architect.

Colour: #17 Clear
Finish: Anodized
Shop Drawings: in accordance with Section 01300
Extended Warranty: 3 years

2 **Exterior Doors:**
Alumicor - Series 600B insulated or an equivalent product approved equal by the Architect.

Colour: #17 Clear
Finish: Anodized
Shop Drawings: in accordance with Section 01300

2 HARDWARE

1 All door hardware shall be supplied and installed by Section 08710

3 FINISH

1 **Permanodic Hardcolour:** Exposed aluminum sections shall be given an anodic oxide treatment to obtain and Architectural Class 1 Anodic Colour Coating in accordance with Aluminum Association specification AA-M12C22A42/44. Colour shall be:

2 Colour: #17 Clear Anodized

4 FABRICATION

1 Construct door from extrusions of size and shape shown on shop drawings. All doors shall be heavy duty design. Door top rails, bottom rails and stiles shall be porthole extrusions. Corner construction shall be mechanical clip fastening. Glazing stops shall be screw applied with glazing gaskets. Meeting stiles on pairs of doors shall be provided with bevelled edges. Weather strip to be installed on removable mullion.

2 Design frames in exterior wall to:

Accommodate expansion and contraction within service temperature range of -35°C to 75°C.

Design units to withstand wind load of 1.20 kPa (25 psf) with a maximum deflection of L/175 of the span as per area climatic conditions, tested to ASTM E330-79 under wind loads for building locality as per O.B.C.

3 Make allowances for deflection of structure. Ensure that structural loads are not transmitted to aluminum work.

4 Provide structural steel reinforcement for strength, stiffness and connections. The frame should also be reinforced to support weight of shelving.

5 Fit intersecting members to flush hair-line joints and mechanically fasten together.

6 Conceal fastenings from view. Exposed fastenings where indicated.

7 Form cut-outs, recesses, mortising or milling for finishing hardware to templates supplied. Reinforce with aluminum or galvanized steel plates.

8 Provide concealed conduit and concealed boxes to all electrical and electronic devices incorporated in the frames.

9 Field apply isolation coating to aluminum in contact with dissimilar metals, cementitious materials.

10 Provide replaceable weather-stripping at exterior and vestibule door openings. Weather-strip bottom of doors with pile sweep strip applied to door rail.

11 Manufacturer's nameplates on doors, frames and screens are not permitted. Place manufacturer's nameplates in semi-concealed locations.

5 GLASS AND GLAZING

1 Glass and glazing shall conform to requirements of Section 08800.

2 Glaze all exterior doors and screens with factory sealed double tempered glass where tinted glazing is required.

3 EXECUTION

1 INSTALLATION

1 Doors shall be installed, glazed, and adjusted by experienced personnel in accordance with the manufacturer's instructions and approved shop drawings. All items in this section shall be set in their correct location and shall be set level, square, plumb and at proper elevations and in alignment with other work.

2 Install work plumb, square, level, free from warp, twist and superimposed loads.

3 Secure work in required position. Do not restrict thermal movement.

4 Adjust operable parts for correct function.

5 Isolate from cementitious materials.

6 Provide column cover where required.

2 CAULKING

1 Apply sealant in accordance with Section 07900. Conceal sealant within the aluminum work, except where exposed use is permitted by Architect.

3 HARDWARE

1 All finish hardware supplied and installed by Section 08710.

4 PROTECTION AND CLEANING

1 Doors shall be protected from other building materials during and after installation until acceptance by the General Contractor.

Section 08210

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 01014: Door Schedule
2 Section 04200: Masonry
3 Section 06100: Rough Carpentry
4 Section 06200: Finish Carpentry
5 Section 07900: Sealants, Caulking and Firestopping
6 Section 08110: Hollow Metal Doors, Frames and Screens
7 Section 08210: Wood Doors
8 Section 08710: Finish Hardware
9 Section 08800: Glass and Glazing
10 Section 09111: Metal Stud Systems
11 Section 09900: Painting

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 SHOP DRAWINGS

1 Submit shop drawings in accordance with Section 01300.

4 SCHEDULES

1 Door numbers, types, sizes, glass, louvers, etc., and finishes are shown on Door Schedule on drawings.

2 Door sizes listed in Door Schedule are nominal sizes only. Door manufacturer shall make all necessary allowances for clearances.

5 DELIVERY, STORAGE AND HANDLING

1 Deliver, store and handle doors in a manner to prevent damage and deterioration.

2 Store doors upright in a protected dry area at least one inch or more off ground and at least 6mm (¼") space between individual pieces.

6 GUARANTEE

1 Guarantee wood doors not to warp, twist, show core ghost lines, split, delaminate or sag under normal usage for a minimum of ten (10) years.

2 PRODUCTS

1 MATERIALS

1 **Solid Core Wood Doors Non-Fire Rated Solid Core:**
Baillargeon - Series 8500 ME/AF (urea-formaldehyde free) or an equivalent product approved equal by the Architect.

Thickness / Size: 44.5mm (1.75") thick
Colour: Premium Stain Grade
Finish: Maple Veneer
Shop Drawings: in accordance with Section 01300
Extended Warranty: 10 years

2 **Solid Core Wood Doors 20 Minute Fire Rated Door:**
Baillargeon - Series 8520 ME/AF (urea-formaldehyde free) or an equivalent product approved equal by the Architect.

Thickness / Size: 44.5mm (1.75") thick
Colour: Premium Stain Grade
Finish: Maple Veneer
Shop Drawings: in accordance with Section 01300
Extended Warranty: 10 years

3 **Solid Core Wood Doors 45 Minute Fire Rated Door:**
Baillargeon - Series AF45-MO/VE - urea-formaldehyde free or an equivalent product approved equal by the Architect.

Thickness / Size: 44.45mm (1.75") thick
Colour: Premium Stain Grade
Finish: Maple Veneer
Shop Drawings: in accordance with Section 01300
Extended Warranty: 10 years

4 Stain Grade Doors shall have surface grain that is straight, free of grain flares, knots and variations in colour. Where more than one door is within a frame doors shall be book matched. Doors within eyesight of one another shall be matching or similar in appearance. The Architects rejection of unsuitable doors shall be final.

2 CUT OUTS

1 Hardware Preparation: Provide all cutout, reinforcing and other preparation for hardware. Unless otherwise indicated all latching device will be full concealed mortise systems.

3 EXECUTION

1 INSTALLATION

1 All hardware supplied and installed as per Section 08710

2 Adjust operable parts for correct function.

3 Install all doors at a time when adequate protection for them is provided by other trades.

2 PROTECTION

1 Protect installed doors from damage from weather and other construction work.

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Rough wood blocking

2 Section 07900: Sealants, Caulking and Firestopping

3 Section 08800: Glass and Glazing

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 PERFORMANCE STANDARDS

1 Fixed window air tightness shall meet the FIXED rating (less than 0.045 cfm/ft (p.25 m^3/h) m-1) at 1.57 p.s.f. (75 Pa)) when testing in accordance with CAN/CSA-A440 windows.

2 Operating window air tightness shall meet the A3 rating (less than 0.10 cfm/ft (o.55 (m^3/h)m-1) at 1.57 p.s.f. (75 Pa)) when tested in accordance with CAN/CSA-A440 windows.

3 Fixed and operating window water tightness shall meet the B7 rating (no water/leakage at 14.6 p.s.f. (700 Pa)) when tested in accordance with CAN/CSA-A440 windows.

4 Structural performance shall be based on CSA Standard CAN3-S157 "Strength Design in Aluminum" and a maximum deflection of 1/175 of the span.

5 Wind load resistance for fixed and operating windows shall meet the C5 rating when tested with configurations in accordance with CAN/CSA-A440 windows. Design units to withstand wind load not less than 1.20 kPa (25 psf).

6 The fixed window condensation temperature index of the frame shall be 66 and temperature index of the glass shall be 68 when tested in accordance with CAN/CSA-A440 windows.

7 The fixed window thermal transmittance U-Value shall be 2.2 W/m^2 °C (0.39 BTU/hr ft^2 °F) when tested in accordance with AAMA 1503.1 and CAN/CSA-A440.2.

4 SHOP DRAWINGS

1 Submit shop drawings in accordance with Section 01300.

2 Clearly indicate materials and large scale details for head, jamb and sill, elevation of unit, anchorage detail, location of isolation coating and exposed finishes and fasteners.

5 MAINTENANCE DATA

1 Provide maintenance data for cleaning and maintenance of aluminum finishes for incorporation into maintenance manual specified in Section 01700.

6 PROTECTION

1 Apply temporary protective coating in finished surface. Remove coating after erection. Do not use coating that will become hard to remove or leave residue.

7 WARRANTY

1 Warrant aluminum window including factory seated glazing against leakage, defects and malfunctions, under normal usage in accordance with GC24 but for a period of 5 years.

2 PRODUCTS

1 MATERIALS

1 Formed aluminum members to be anodizing quality.

2 **Fixed Aluminum Windows:**
Alumicor Limited - Series 900 or an equivalent product approved equal by the Architect.

Thickness / Size: 127mm (5") framing
Colour: #17 Clear
Finish: Class I Anodized
Shop Drawings: in accordance with Section 01300
Mockups / Samples: provide samples in full range of colours and finishes for specified products
Extended Warranty: 5 years

3 **Vented Aluminum Window Units:**
Alumicor Limited - Series 1400 Type 2, Class "A", complete with thermal break or an equivalent product approved equal by the Architect.

Colour: #17 Clear
Finish: Class I Anodized
Shop Drawings: in accordance with Section 01300
Mockups / Samples: provide samples in full range of colours and finishes for specified products
Extended Warranty: 5 years

4 Extrusions shall be 6063 T54 alloy and temper.

5 Formed aluminum components shall be sheet of alloy and temper suitable for their purpose and finish.

6 Fasteners shall be 300 series stainless steel or 400 series stainless steel cadmium plated and of sufficient size and quality to perform their intended function.

7 Glazing tapes shall be macro-polyisobutylene, highly adhesive and elastic with built in shim.

8 Weather-stripping and glazing spline - extruded black neoprene of Durometer appropriate for the function. Where thermal break is indicated, the thermal separator shall be polyvinylchloride.

9 Column cover - aluminum sheet to be 1.3 mm (0.51") thick.

10 Drip bar - extruded aluminum.

11 Sill - extruded aluminum sill to suit. Colour to match window frame.

2 SCREENS

1 Screen shall be extruded aluminum frame containing fibreglass screen cloth, aluminum screen mesh.

2 Screen to be retained in place by turn clip type fixing to permit easy removal.

3 CONSTRUCTION

1 Construct units from extrusion of size and shapes as specified and formed with clean, sharply defined profiles. Joints to be accurately machined, fitted, assembled and sealed to provide neat weather tight joinery.

2 Draw joints together and secure by means of screws driven through the walls and into the integrally extruded screw channels of abutting extrusions.

3 Intermediate members within units may be either solid or tubular to suit wind loading and weight carrying requirements.

4 Design coupling mullions to eliminate the "seam joint" on the weathered side while providing a functional split to permit unit module construction and provide for thermal expansion. When required, reinforce wind load carrying members with 6.4mm x 50.8mm (¼" x 2") or 6.4mm x 76.2mm (¼" x 3") steel bars suitably treated to prevent electrolytic action.

5 Overlap and seal glazing flanges of abutting members for the entire depth and width of the flanges to provide a solid, unbroken water barrier. Glass stops shall be screwless, lock-in type. Equip sill base with splice plate back sections at joints in long runs. Seal ends and jambs to provide neat, weather tight joints.

6 All members to have extruded P.V.C thermal break integrated with the inner and outer aluminum extrusions by a roll-crimping process to form a rigidly interconnected assembly without the use of fasteners or other thermal bridging elements.

7 **Vented Window**

0.1 Assemble framing vent joints by means of screws driven through the walls and into integrally extruded screw channels of abutting sections. All members shall have thermal break PVC extrusion integrated with the inner and outer aluminum extrusions by a roll-crimping process to form a rigidly interconnected assembly without the use of fasteners or other thermal bridging elements.

0.2 All operating sash members to have tubular extrusions for both the outer and inner portion of each member.

0.3 Glass stops to be lock-in screwless type.

0.4 Install drip bar as required to make vents water-tight.

4 CONSTRUCTION

1 Fabricate framing from extrusions of size and shape shown on shop drawings.

2 Interior and exterior extruded aluminum framing sections shall be integrated with a glass reinforced nylon thermal break to form a rigid composite assembly without the use of fasteners or other thermal bridging elements.

3 Composite frame assembly shall have a minimum of 4815N/100mm (1100 lbf/4 in.) resistance to shear between the aluminum and the thermal break materials.

4 Dry shrinkage of the thermal break shall not exceed 0.10% of the framing member length.

5 Fixed framing shall be designed for screw spline corner construction. 516 ISOPORT frameless vent operating sash extrusions shall be tubular with mitered, clip, adhesive, stake joint construction.

6 All framing joints shall be accurately machined, assembled, and sealed to provide neat weather tight connections.

7 Coupling mullions shall be designed to provide a functional split to permit modular construction and allow for thermal expansion.

8 Glass tops shall be lock-in screwless type.

9 All glazing pockets shall be vented, pressure equalized and drained to the exterior.

10 Elastomeric air seal gasket shall be installed around the full perimeter of glass and sealed at corners with silicone sealant.

11 Air seal gasket must provide adhesion with silicone sealant.

5 ALUMINUM SILL

1 Install aluminum sill as shown on drawings or as required to make the windows water-tight.

6 HARDWARE

1 Vented Bottom awning and casement windows:

2 - Anderberg friction arms.

2 - Satin finish with clear anodized locking handles.

7 GLASS AND GLAZING

1 Glass and glazing shall conform to the requirements of Section 08800.

2 Glaze with factory sealed double glass.

3 EXECUTION

1 ERECTION

1 Window shall be installed, glazed and adjusted by experienced workmen in accordance with the manufacturer's instructions.

2 All items in this section shall be set in their correct location, and shall be level, square, plumb and at proper elevations and alignment with other work.

3 Aluminum to be placed in contact with concrete, mortar plaster or dissimilar metal shall be given a heavy coat of bituminous paint on contacting surfaces.

2 CAULKING

1 Where required, seal between members of aluminum work with butyl sealant.

Section 08710

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Rough Carpentry

2 Section 06200: Finished Carpentry

3 Section 08110: Hollow Metal Doors, Frames and Screens

5 Section 8210: Wood Doors

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 The supply and installation of finish hardware is included in the Allowance as indicated in Section 01020. The Allowance shall not include or be assigned to any work beyond the scope indicated in Section 01020.

3 The scope of work shall include the coordination, installation and review of hardware supplied but not installed under Section 01020 Allowances, and providing onsite instruction and review of all hardware installed by others.

4 The work of this contract shall include the supply and installation of all hardware indicated within this Section

3 HARDWARE SCHEDULE

1 Submit for approval, schedules for all hardware provided under the allowance or indicated in this section, including detailed list of finished hardware complete with description, purpose and location of each hardware item. Revise hardware schedules as often as required by Architect.

2 Include a delivery schedule of hardware as part of all submissions, highlighting long delivery items.

4 TEMPLATES

1 Upon award of Contract, furnish promptly to applicable trades, any patterns, templates, template information and manufacturer's literature required for proper preparation for and application of hardware, in ample time to facilitate progress of work.

5 PRODUCT HANDLING

1 Deliver and store materials undamaged in original wrappings or containers with manufacturer's labels and seals intact.

2 Pack finishing hardware for each door, etc., where possible, in same carton complete with all screws, expansion shields and necessary fittings for fixing same.

3 Clearly label cartons and packages designating contents and locations for which each item is intended. Packing memos shall indicate carton in which each item is packed.

6 MAINTENANCE

1 Brief maintenance staff regarding proper care of hardware such as lubrication of locksets, adjustments of door closures, cleaning, general maintenance, etc.

7 CASH ALLOWANCE

1 See Section 01020 - Allowances - for hardware allowance. The allowance shall include the following:

2 Coordination Meeting with trades installing door and frames, installing hardware, making electrical and electronic connections.

4 The supply and installation of of mechanical and electrical hardware

5 Supply and installation of two automatic openers and supply and installation of one card reader.

6 Supply only of all millwork hardware (including henke hooks)

7 A complete review and report of all hardware installations as part of the substantial completion review.

8 Complete a final review of all deficiencies. Provide all necessary manuals to the Contractor and instruct the Owner's representative in the proper use and maintenance of all material and systems provided.

9 The scope of the allowance shall not include installation or coordination of any hardware unless specifically indicated. No additional cost for hardware supplied and/or installed under this section will be permitted without the approval of the Architect.

2 PRODUCTS

1 QUALITY

1 In every case, hardware shall be of quality, design and finish suitable for purpose of which it is intended.

2 FINISHES

1 Type and finish of hardware shall be in accordance with, and equal in all respects to samples of hardware and finishes approved by the Architect.

2 Metal finishes shall be free from defects, clean and unstained, and of uniform colour and finish for each type of finish required.

3 FASTENINGS

1 Hardware shall be complete with screws, bolts, expansion shields and other fastening devices as required for satisfactory installation and operating of hardware.

2 Fastening devices shall be of same finish as hardware that is to be fastened.

3 Unless otherwise indicated all latching devices shall require doors to be prepared for full mortise hardware.

3 EXECUTION

1 INSTALLATION

1 All finish hardware supplied and installed as per Section 01020.

2 DOOR HARDWARE

2 **Millwork to be installed under Section 06200**

Doors: Three way adjustable fully concealed door hardware opening to a minimum 100 degrees, complete with "D" 152mm (6") pulls, fully recessed door and drawer locks
Drawers: Fully concealed ball bearing steel drawer hardware permitting full extention of the drawer, complete with "D" 152mm (6") pulls, fully recessed door and drawer locks
Shelving: Fully recessed metal pilaster strips with metal clips to support adjustable shelves.

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 08110: Hollow Metal Doors, Frames and Screens

2 Section 08210: Wood Doors

3 Section 08520: Aluminum Windows

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 All glazing units shall be sized and designed by a Professional Engineer registered in the Province of Ontario.

3 **Installer Qualifications:** Minimum five (5) years documented experience installing products specified in this section, and approved by fabricator.

3 MATERIAL STANDARDS

1 ANSI Z97.1 - American National Standard for Glazing Materials Used in Buildings -- Safety Performance Specifications and Methods of Test.

2 ASTM C 162 - Standard Terminology of Glass and Glass Products.

3 ASTM C 864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.

4 ASTM C 1036 - Standard Specification for Flat Glass.

5 ASTM C 1048 - Standard Specification for Heat-Treated Flat Glass -- Kind HS, Kind FT Coated and

6 ASTM C 1193 - Standard Guide for Use of Joint Sealants.

7 ASTM E 283 - Standard Test Method For Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

8 ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

9 ASTM E 773 - Standard Test Method for Seal Durability of Sealed Insulating Glass Units.

10 ASTM E 774 - Standard Specification for Sealed Insulating Glass Units.

11 ASTM E 1300 - Standard Practice for Determining the Minimum Thickness and Type of Glass Required to Resist a Specified Load.

12 GANA (GM) - FGMA Glazing Manual; Glass Association of North America.

13 GANA (SM) - FGMA Sealant Manual; Glass Association of North America.

4 DESIGN REQUIREMENTS

1 Size glass to withstand dead loads and positive and negative live loads acting normal to plane of glass in accordance with the Ontario Building Code.

2 Size glass to withstand dead loads and positive and negative live loads acting normal to plane of glass to a design pressure in accordance with ASTM E 1300 as follows

Exterior Window Glazing - 1.20 kPa (25 psf)

Exterior Curtainwall - 1.20 kPa (25 psf)

Sloped Glazing - 1.68 kPa (35 psf)

3 Limit glass deflection to 19mm (3/4") or flexure limit of glass with full recovery of glazing materials, whichever is less.

5 PROTECTION

1 After all glass is set in building, place a patch of whiting on same. Maintain this patch until glass is to be cleaned.

6 BREAKAGE

1 Glazier shall be responsible for replacement of all broken glass installed under this section until satisfactory completion of work as specified herein, from which time the contractor shall be responsible for such replacement.

7 DELIVERY, STORAGE AND HANDLING

1 Deliver all materials to the job site in their original unopened containers, with all labels intact.

2 Store materials in strict accordance with manufacturer's recommendations.

8 SAMPLES AND SHOP DRAWINGS

1 Submit engineered shop drawings with type and placement of materials for approval.

Product Data: Flat glass materials manufacturer's descriptive literature indicating conformance to specified performance requirements for specified flat glass materials.

Design Data: Glass size calculations, prepared in accordance with specified method.

2 Certificates: a. Contractor's certification that:

Products of this section, as provided, meet or exceed specified requirements.

Fabricator of sealed insulating glass units meets specified qualifications.

Installer of products of this section meets specified qualifications.

3 Submit samples of each type of glass as indicated:

Flat Glass Materials: Two 102mm (4") by 102mm (4") samples of each glass type specified.

Sealed Insulating Glass Units: Two 305mm (12") by 305mm (12") samples representative of unit construction.

Opacifier for Spandrel Glass: Indicated match to Architect's color selection.

9 ENVIRONMENTAL CONDITIONS

1 Glaze with compounds, sealants, or tapes only when glazing surfaces are at temperature is below that recommended by sealant manufacturer. Obtain approval of glazing methods and protective measures which will be used during glazing operations from the Architect.

10 WARRANTY

1 Provide a warranty for 10 years to include all material and labour required for the replacement of sealed glass units exhibiting seal failure, interpane dusting or misting.

2 Provide a warranty for 10 years to include all material and labour required for the replacement of laminated glass exhibiting delamination.

2 PRODUCTS

1 MATERIALS

1 **Sheet Glass:** 'B' quality glass of weights and thickness as indicated below, and used for all glazing unless otherwise specified or detailed.

Each light shall be labeled showing quality of glass and indicating direction of draw lines

Supply all glass so that draw lines will run horizontally when installed. Labels shall remain on glass until final cleaning and inspection of same is made before building is turned over to Owners. All sheet glass shall be in accordance with CAN/CGSB Specification 12.2.

Maximum Square Footage for Annealed Units

3mm - 1.40sq.m. (15.00 sq.ft.)

4mm - 2.33sq.m. (25.00 sq.ft.)

5mm - 3.26sq.m. (35.00 sq.ft.)

6mm - 6.51sq.m. (70.00 sq.ft.)

Panes over 6.51sq.m. (70.00 sq.ft.) - the manufacturer shall provide engineered shop drawings.

2 **Polished Plate Glass:** standard glazing quality 6 mm (¼") thick, with edges clean cut, but not nipped. Plate or float glass shall be in accordance with CAN/CGSB 12.3.

3 **T.P.G. - Tempered Plate Glass:** 6 mm (¼") Herculite as manufactured by Canadian Pittsburgh Industries Ltd. or 6mm (¼") conforming to CAN/CGSB 12.1.

4 **Georgian Polished Wired Glass:** 6mm (¼") thick conforming to CAN/CGSB Specifications 12.11, ASTM C 1036-90, UL-9 Classification Reference #R1108(N), ANSI Z97.1. Provide wire glazing to all doors and lights in fire separations.

5 **Laminated Glass:** incorporating an interlayer of 0.762mm (0.030"), or greater, to meet or exceed ASTM 1036-90, Consumer Product Safety Commission (CPSC) Standard for Architectural Glazing Materials 16 CFR 1201 Category I & II, CAN/CGSB 12.1, Guidelines of LSGA, UL 752, UL 972, ANSI Z97.1-1984 Specification for Safety Glazing.

5 **Heat Strengthened Glass:** in thicknesses indicated herein or indicated within approved engineered shop drawings. Meeting the the requirements of ASTM C 1036-90, ASTM C 1048-90, CAN/CGSB 12.3

6 **Vertical Exterior Glazing A: to Tempered Glazing to ASTM 1036-90, ASTM 1048-90,ANSI Z97.1, CAN/CGSB 12.1, CPSC 16 CFR-1201 Laminated Glazing to ASTM 1036-90, ANSI Z07.1-1984,CPSC 16 CFR 1201, CAN/CGSB 12.1, Guidelines of LSGA, UL 752, UL 972**
PPG Glass - Unless otherwise specified provide sealed units to all aluminum framing and doors in compliance with the following. All double glazing to consist of and outer layer of tempered glass, inner layer of laminated or an equivalent product approved equal by the Architect.

Thickness / Size: 6mm and 6mm
Colour: Exterior Glass Clear (unless tinted units are indicated), Sungate 500 low E on side 2, Clear interior glazing.
Finish: Clear unless otherwise indicated
Shop Drawings: in accordance with Section 01300
Mockups / Samples: provide samples in full range of colours and finishes for specified products
Extended Warranty: 10 years

7 **Vertical Exterior Glazing B - to glazed screens with sills above 1067mm (42") or glazing above 2134mm (84") in screens: to ASTM E 774, Class CBA, and CGSB Specifications 12-GP-8**
PPG Glass - All double glazing to consist of heat stregthened glass or an equivalent product approved equal by the Architect.

Thickness / Size: 6mm and 6mm
Colour: Exterior Glass Clear (unless tinted units are indicated), Sungate 500 low E, Clear interior glazing.
Finish: Clear unless otherwise indicated
Shop Drawings: in accordance with Section 01300
Mockups / Samples: provide samples in full range of colours and finishes for specified products
Extended Warranty: 10 years

8 **Spandrel Panels: to ASTM C 1048-90, CAN/CGSB 12.9**
PPG Glass - All spandrel glazing to consist of 6mm heat strengthened glass or an equivalent product approved equal by the Architect.

Thickness / Size: 6mm
Colour: Exterior clear glass
Finish: Clear with OpaciCoat 300 colour to be clear anodized as produced by Oldcastle Glass
Shop Drawings: in accordance with Section 01300
Mockups / Samples: provide samples in full range of colours and finishes for specified products
Extended Warranty: 10 years

9 **Mirror:** Type 1A, conforming to CAN/CGSB 12.5.

2 GLAZING MATERIALS

1 **Setting Blocks:** ASTM C 864, neoprene, 80 to 90 Shore A durometer hardness; length 4 inches (100 mm), width of glazing rabbet space less 1.5mm (1/16 inch), height required for glazing method, pane weight, and pane area.

2 **Spacer Shims:** ASTM C 864, neoprene, 50 to 60 Shore A durometer hardness; length 75mm (3 inches), one half height of glazing stop, thickness required for application , one face self-adhesive.

3 **Glazing Tape:** Butyl compound tape with integral resilient tube spacer, 10 to 15 Shore A durometer hardness, black color, coiled on release paper; widths required for specified installation.

4 **Glazing Tape:** Closed cell polyvinyl chloride foam, maximum water absorption by volume 2 percent, designed for 25 percent compression percent for air barrier and vapor retarder seal, black color, coiled on release paper over adhesive on two sides; widths required for specified installation.

5 **Glazing Splines:** ASTM C 864, resilient polyvinyl chloride, extruded shape to fit glazing channel retaining slot; black color.

6 **Glazing Gaskets:** ASTM C 864, resilient polyvinyl chloride, extruded shape to fit glazing channel retaining slot; black color.

7 **Glazing Clips:** Manufacturer's standard type.

8 **Sealants:** Specified in Section 07900.

9 Ensure that glazing sealants used are compatible with insulating glass sealant.

10 **Silicone Polyester Enamel:** Type recommended by flat glass materials manufacturer; color selected by Architect.

3 GLAZING SCHEDULE

1 Glazing in all exterior and interior non rated doors shall be tempered.

2 All glazing panels in exterior and interior non rated frames lower than 1070mm (42") to the finished floor shall be tempered.

3 **Exterior Curtain Wall vision panels:** Sealed double glazing

4 **Exterior Curtain Wall spandrel panels:** As specified

5 **Exterior Windows:** Sealed double glazing

6 **Exterior Entrance System:** Sealed double glazing

7 **Interior Glazing in Fire Rated Doors and Frames:** georgian polished wired glazing

8 **All Other Glazing:** polished plate glass

4 FABRICATION

1 **Heat-Strengthened Glass:** Cut float glass materials to indicated sizes and provide cut-outs and holes, if indicated, before heat strengthening. Heat strengthen float glass materials in accordance with ASTM C 1048, Kind HS.

2 **Tempered Glass:** Cut float glass materials to indicated sizes and provide cut-outs and holes, if indicated, before heat strengthening. Fully temper float glass materials in accordance with ASTM C 1048, Kind FT.

3 **Laminated Glass:** Cut float glass materials to indicated sizes and provide cut-outs and holes, if indicated, before heat strengthening. Heat strengthen float glass materials in accordance with ASTM C 1048, Kind HS. Laminate plastic interlayer between glass panes in accordance with ASTM C 1172. Laminated glass to conform to GANA (LGDG) and requirements of ANSI Z97.1.

4 **Sealed Insulating Glass Units:** Fabricate units in accordance with ASTM E 774, Class CBA, with components and performance characteristics specified in this section. Provide unit edge seals meeting requirements of ASTM E 773, with aluminum spacers having mitered and corners, and silicone sealant for glass-to-spacer seals.

3 EXECUTION

1 GENERAL

1 Install materials in accordance with manufacturer's specifications ensuring that each material in the glazing system is compatible with the others.

2 Verify that glazing channels and recesses are clean and free of obstructions, that weeps are clear, and that channels and recesses are ready for glazing.

3 All surfaces receiving glazing materials shall be thoroughly wiped with a clean cloth and dampened with the appropriate cleaner, as approved by the sealant manufacturer. Special precautions must be taken in cold weather to ensure the surfaces are free from frost.

4 Verify that openings for glazing are correct size and within tolerance.

5 All sashes shall be checked prior to glazing to make certain that the opening is square, plumb, and secure in order that uniform face and edge clearances are maintained. Inspect all butt and mitre joints. If these joints are open, they shall be sealed with 1-part acrylic terpolymer sealant prior to glazing. All ventilators shall be properly adjusted. Maintain minimum face clearance between glass and sash, on both sides, as outlined by glass manufacturer.

6 Erect windows and entrances in openings complete with all necessary reinforcing and incidental components.

7 All operating sashes shall be glazed in the closed position, and not opened by any trade until the glazing materials have properly cured.

8 Seal all joints between frames and adjacent surfaces to provide a completely weather tight enclosure.

9 Install flashings to locations as indicated.

10 To ensure a weather tight seal with insulating glass with a metal edge (banded units), minimum rabbet depth must be sufficient to provide a minimum 3 mm (1/8") seal above metal edge.

11 A full size detail of the glazing and metal system must be submitted for approval prior to start of job. Metal die drawings are required when applicable. Placement of materials must be shown on the detail. If sash from the fabricator differs from the submitted detail, the principal parties must resolve differences before proceeding.

12 Glazing to be undertaken at temperatures recommended by manufacturer of glazing materials.

2 GLAZING

1 Size glass units to accurately fit openings with clearances according to glass manufacturer's recommendations.

2 Tape shall be cut to proper length prior to application.

3 If the butt joint in the sash is in the vertical direction, the glazier shall run the tape initially on the head and sill members going directly over this joint. Should the butt joint in the sash run horizontally, tapes must first be applied to the jambs so that it crosses over the joint.

4 Each tape section shall butt the adjoining tape and be united with a tool or coin to eliminate any opening. Dab the butted tape joint with sealant for maximum leak-proof security.

5 Where the glazing channel is offset, the difference in the rabbet width should be compensated by employing different sizes of exterior glazing material. The difference should be equal to size of the offset.

6 Immediately prior to setting glass, paper backing shall be removed from the glazing tape. Dab the butted tape joint with sealant.

7 Locate setting blocks in the sill member at quarter points. Setting blocks must be set equal distant from centre line of the glass and 1.5 mm (1/16") less than full rabbet width and high enough to provide the recommended bite and edge clearances. Set edge block according to glass manufacturer's recommendations.

8 Set glass. The glass shall be pressed firmly against the tape to achieve full contact. Tape compression can be achieved with a compression tool prior to installing the interior stop or with a PVC wedge after the interior stop has been placed. This is mandatory when polyshim tape is used to obtain full compression of the unit to the shim.

9 A cap bead of silicone is required when using banded sealed units.

10 **Glazing Gasket**

.1 The gasket shall be cut approximately 1.6 mm (1/16") per 305 mm (1') longer than the respective channel. Cut ends of gasket to be about a 45° angle so that top is longer than the base.

.2 In setting the gasket into the channel between the glass and removable stops, the horizontal strips (head and sill) shall be set first, then the vertical (jamb) strips.

3 SEALING

1 Seal all joints between frames and adjacent surfaces and where indicated, provide a completely weather tight and airtight enclosure.

2 Application of sealant shall be in strict accordance with manufacturer's printed direction. The sealant shall be applied to a clean, dry, grease and oil-free surface. Sealant shall be smooth, free from ridges, wrinkles and embedded foreign materials.

3 Remove excess sealant droppings, which would set up or become difficult to remove from the surfaces. Chemicals, scrappers or other tools, which would effect finished surfaces, shall not be used for such removal. Finished surfaces damaged due to this work shall be replaced at this section's expense to the satisfaction of the Architect.

4 EXTERIOR DRY METHOD (Tape and Gasket Spline): Vertical Glazing

1 Apply glazing tape or spline to glass; butt-joint tape edges; seal joints with butyl sealant.

2 Place setting blocks with edge blocks maximum 150mm (6 inches) from glass edges and intermediate blocks at 1/4 points of glass panel length.

3 Set glass unit on setting blocks; apply pressure against fixed stop for full contact.

4 Install removable stops without displacing glazing tape or spline; apply pressure for full continuous contact.

5 Trim sight-exposed tape flush with stop.

5 CLEANING

1 Remove glazing materials from finish surfaces.

2 Remove labels after glass installation is complete.

3 Clean glass surfaces and adjacent surfaces.

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

Jul 27 04 tm

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 05500: Miscellaneous Metal Fabrication
2 Section 06100: Wood Blocking
3 Section 09250: Gypsum board
4 Section 09250: Suspension system for drywall ceiling
5 Section 09850: Exposed Aggregate Panels

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 PRODUCTS

1 MATERIALS

1 **Non-load bearing channel stud framing:** to ASTM C645-76 stud size as noted on the drawing, roll formed from 0.5 mm (25 gauge) thickness electro galvanized steel sheet, for screw attachment of gypsum board. Knock-out service holes at 460 mm centres.

2 **Floor and ceiling tracks:** to ASTM C645-76, in width to suit stud sizes, 30 mm flange height. 50 mm flange height where specifically called for.

3 **Metal channel stiffener:** 40 mm size, 2 mm thick cold rolled steel, coated with rust inhibiting coating.

4 **Structural Studs:** To be CAN3-S136-M84 stud size 92mm, roll formed from 0.8mm (21 gauge) thickness electro galvanized steel sheet, Bailey, Maintane by BMP or approved equal.

5 **Acoustical sealant:** to CGSB 19-GP-21M.

6 **Metal Strapping:** Galvanized steel hat section horizontal strapping by Vic Westeel shall be a minimum of 19mm (0.75") thick.

3 EXECUTION

1 STRUCTURAL STEEL

1 Provide structural studs as noted on architectural and structural drawing. Use structural studs in all exterior wall assemblies where steel studs are indicated.

2 ERECTION

1 All walls of separations as required by the building code or indicated in these documents shall be fully extended to the structural deck above with all openings fire stopped. Review location of structural elements that might conflict with these separations. Notify Consultants of conflicts before commencing working.

2 Align partition tracks at floor and ceiling and secure at 600 mm O.C. maximum. For exterior wall, apply two rows of caulking strips before installation of track.

3 Place studs vertically at 400 mm O.C. and not more than 50 mm from abutting walls, and at each side of openings and corners. Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions.

4 Erect metal studding to tolerance of 1:1000.

5 Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings are aligned.

6 Co-ordinate erection of studs with installation of door/window frames and special supports or anchorage for work specified in other sections.

7 Provide two studs extending from floor to ceiling at each side of openings wider than stud centres specified. Secure studs together, 50 mm apart, using column clips or other approved means of fastening placed alongside frame anchor clips.

8 Erect track at head of door/window openings and sills of sidelight/window openings to accommodate intermediate studs. Secure track to studs at each end, in accordance with manufacturer's instructions. Install intermediate studs above and below openings in same manner and spacing as wall studs.

9 Provide 40 mm stud or furring channel secured between studs for attachment of fixtures behind lavatory basins, toilet and bathroom accessories, and other fixtures including grab bars and towel rails, attached to steel stud partitions.

10 Install steel studs or furring channel between studs for attaching electrical and other boxes.

11 Extend partitions to ceiling height except where noted otherwise on drawings.

12 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs. Use 50 mm leg ceiling tracks.

13 Install continuous insulating strips to isolate studs from uninsulated surfaces.

14 Install two continuous beads of acoustical sealant behind studs and tracks around perimeter of sound control partitions.

3 STRAPPING TO STUD WALLS IN PREPARATION FOR WALL PANELS

1 Ensure exterior sheathing, taping and air barrier have been install to all stud walls as per Section 09250 and as indicated.

2 Provide horizontal strapping at 400mm (16") o.c. max unless otherwise specified. Notch and bend strapping around all corners. Secure a junction with each underlying stud.

4 REINFORCING TO DOOR FRAMES

1 Unless other reinforcing is indicated all metal door openings in a metal stud walls shall have both jambs reinforced as indicated in this section. Reinforcing shall comply with Section 05500. Reinforcing shall be contained within the wall structure and run continuous from the floor to the roof or floor structure above.

For reinforcing greater than 3m (10'-0") in height: HSS 75 x 75 x 6 mm

For reinforcing less than 3m (10'-0") in height where steel studs and drywall are not continuous to deck above: Steel angle 75 x 75 x 6 mm
All other situations shall be reinforced based on stud manufacturers specifications

2 Where double metal door openings are indicated greater than 1.83m (6'-0") provide head reinforcing: Steel angle 75 x 75 x 6 mm

3 Secure reinforcing top and bottom to permit design deflection in structure.

Section 09130

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Rough Carpentry
2 Section 06200: Finished Carpentry
3 Section 09250: Suspension systems for gypsum board ceilings
4 Section 09511: Acoustical Panels and Tiles
5 Section 09900: Painting
6 Division 15: Trim for recessed mechanical fixtures
7 Division 16: Trim for recessed light fixtures

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 REFERENCE STANDARDS

1 Installation: to ASTM C636-76 except where specified otherwise.

4 DESIGN CRITERIA

1 Maximum deflection: 1/360th of span to ASTM C635-78 deflection test.

5 SAMPLES

1 Submit one representative model of each type of ceiling suspension system in accordance with Section 01300.

2 Ceiling system to show basic construction and assembly, treatment at walls, recessed fixtures, splicing, interlocking, finishes, acoustical unit installation.

6 WARRANTY

1 All materials and workmanship to be warranted for a period of one year upon completion of the project.

2 PRODUCTS

1 MATERIALS

1 **T-Bar Suspension: to ASTM C635-78.**
Donn - Exposed tee grid system. All grid and components fire rated even at non-rated ceilings. Flange-klamp, Bailey or Universal considered equal. or an equivalent product approved equal by the Architect.

Colour: White
Mockups / Samples: provide samples in full range of colours and finishes for specified products

2 Basic materials for suspension system: commercial quality cold rolled steel, zinc coated.

3 Suspension system: fire rated unless indicated otherwise.

4 Exposed tee bar grid components: enamel finish. Components die cut. Main tee with double web, rectangular bulb and 25mm rolled cap on exposed face. Cross tee with rectangular bulb; web extended to form positive interlock with main tee webs; lower flange extended and offset to provide flush intersection.

5 Hangers: galvanized soft annealed steel wire, 3.6mm thick for access tile ceilings. Secure to structure.

6 Accessories: splices, clips, wire ties, retainers and wall moulding to compliment suspension system components, as recommended by system manufacturer. Provide hold down clips for all tiles.

2 MANUFACTURERS

1 Donn Canada Ltd.
2 Flangeklamp of Canada.
3 Bailey
4 Universal

3 EXECUTION

1 INSTALLATION

1 Do not erect ceiling suspension system until anchors, blocking, sound or fire barriers, electrical and mechanical work above ceiling have been inspected and approved by the Architect.

2 Lay out system according to reflected ceiling plan.

3 Ensure suspended system is coordinated with location of related components.

4 Install wall mould to provide correct ceiling height. Finished ceiling system to be level within 1:1200.

5 Support suspension system main runners at 1.2 m o.c. maximum with hanger wire from building structural system. The suspension system shall not be supported from ductwork, conduit, or piping. Completed assembly to support super-imposed loads, such as lighting fixtures, diffusers, grilles and speakers.

6 Support light fixtures with supplemental hangers within 150mm of each corner and at maximum 600mm around perimeter of fixture.

7 Interlock cross member to main runner to provide rigid assembly.

8 Frame at openings for light fixtures, air diffusers, speakers and at changes in ceiling heights.

2 CLEANING

1 Touch up scratches, abrasions, voids and other defects in painted surfaces.

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Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Wood framing/strapping
2 Section 07200: Insulation and Moisture Barrier
3 Section 09111: Metal Stud Systems
4 Section 09850: Exposed Aggregate Panels
5 Division 15: Access doors and trim for recessed mechanical fixtures
6 Division 16: Trim for recessed electrical fixtures
7 Section 09850: Exposed Aggregate Panels

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 REFERENCE STANDARDS

1 Do work to CSA A82.31-1977 except where specified otherwise.

2 PRODUCTS

1 GYPSUM BOARD

1 **Non Rated Drywall:** to CSA A82.27-M1977 standard, 1200mm wide x maximum practical length, ends square cut, edges tapered.

Walls: 15.9 mm thick (5/8") or as indicated

Ceiling: 15.9 mm thick (5/8")

2 **Fire rated Drywall:** conforming specifically to ULC 40 U 18.23 and generally to CSA A82.27-M1977, 15.9mm 5/8" thick 1200mm wide x maximum practical length.

3 **Impact Resistant:** CGC Fiberock VHI, 15.9 mm (5/8") thick

4 **Water Resistant Drywall:** to CSA A82.27-M1977, standard 12.7mm thick, 1220mm (48") wide x maximum practical length.

5 **Exterior Sheating: 15.9mm Densglass Gold or equivalent approved equal by the Architect.**

6 **Plywood Sheathing to Interior Walls:** Various thicknesses to be used, where noted. Typically Douglas fir plywood is recommended and typically G1S. (Good One Side)

2 METAL FURRING & SUSPENSION SYSTEMS

1 Metal furring runners, hangers, tie wire, inserts, anchors: to CSA A82.30-M1980.

2 Drywall furring channels: 0.5mm core thickness galvanized steel channels for screw attachment of gypsum board.

3 Resilient drywall channels: 0.5mm base steel thickness galvanized steel for resilient attachment of gypsum board.

3 FASTENINGS AND ADHESIVES

1 Nails, screws and staples: to CSA A82.31-1977.

2 Stud adhesive: to CGSB 71-GP-25M.

3 Laminating compound: to CSA A82.31-1977 asbestos free.

4 ACCESSORIES

1 **Casing, beads, corner beads fill type:** 0.5mm base thickness commercial grade sheet steel with G90 zinc finish to ASTM A5250-78a; perforated flanges; one piece length per location.

2 **Acoustic sealant:** to CGSB 19-GP-21M.

3 **Vapour Barrier:** to CAN 2-51.33-M77, Type 2, 10 mil.

4 **Insulating strip:** rubberized, moisture resistant, 3mm closed cell neoprene strip, 12mm wide, with self sticking permanent adhesive on one face; length as required.

5 **Joint Compound:** to CSA A82.31-1977, asbestos free.

5 BATT INSULATION

1 **Mineral Wool:** ROXUL a mineral wool fibre insulation made from basalt rock and steel slag by Roxul Canada Limited. To be used where noted.

2 **Fiberglass:** Full framing thickness Acoustic Fiberglas Batt manufactured by Fiberglas Canada Ltd. (regular building insulation) in walls unless otherwise specified

3 EXECUTION

1 DRYWALL SCHEDULE

1 Provide the following material to areas to receive drywall unless otherwise specified.

2 Ceilings and walls - 15.5mm (5/8") fire rated.

3 All washroom walls - 12.7mm (1/2") water resistant drywall.

4 All walls of separations as required by the building code or indicated in these documents shall be fully extended to the structural deck above with all openings fire stopped. Review location of structural elements that might conflict with these separations. Notify Consultants of conflicts before commencing working.

5 Unless otherwise specified all interior and exterior walls shall extend fully, including finished drywall to the underside of the deck above. All deck cavities shall be stopped and joints in exterior walls sealed to maintain the vapour barrier.

2 SUSPENDED AND FURRED CEILINGS

1 Erect hangers and runner channels for suspended gypsum board ceilings to CSA A82.31-1977 except where specified otherwise.

2 Support light fixtures by providing additional ceiling suspension hangers within 150mm of each corner and at maximum 600mm around perimeter of fixture.

3 Install work level to tolerance of 1:1200.

4 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles, etc.

5 Install 19 x 64 mm. furring channels parallel to, and at exact locations of the steel stud partition header track.

6 Furr for gypsum board faced vertical bulkheads within or at termination of ceilings.

7 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.

3 WALL FURRING

1 Install wall furring for gypsum board wall finishes in accordance with CSA A82.31-M1980, except where specified otherwise.

2 Frame openings and around built-in equipment, cabinets, access panels, on four sides, extend furring into reveal. Check clearance with equipment supplier.

3 Furr duct shafts, beams, columns, pipes and exposed services where indicated.

4 RESILIENT FURRING

1 Erect drywall resilient furring transversely across studs and or joists spaced maximum 600mm o.c and not more than 150mm ceiling/wall juncture. Secure to each support with 25 mm drywall screws.

2 Install 150mm continuous strip of 12.7mm gypsum board along base of partitions where resilient furring installed.

5 GYPSUM BOARD APPLICATION

1 Do not apply gypsum board until bucks, anchors, blocking, electrical and mechanical work is approved.

2 Apply single layer gypsum board to wood or metal furring or framing using screw fasteners. Maximum spacing of screws 300mm o.c.

3 Apply single layer gypsum board to concrete and or concrete block surfaces, where indicated, using laminating adhesive.

4 Apply Fire Rated gypsum board where indicated, to obtain specified fire separations.

5 Apply water resistant gypsum board to wall and ceilings of all washroom/bathroom areas not to be tiled.

6 Apply 12mm diameter bead of acoustic sealant continuously around periphery of each face of partitioning to seal gypsum board/structure junction where partitions abut fixed building components. Seal full perimeter of cut-outs around electrical boxes, ducts in partitions.

6 DOUBLE LAYER LAMINATED CONSTRUCTION

1 Attach base layer with 25mm (1") type S screw spaced 200mm (8") o.c. at joint edges and 300mm (12") o.c. in field.

2 Caulk around with acoustical sealant where acoustical barrier partitions abut floor, walls and ceiling.

3 Provide another band of caulking along the floor under second layer of wall double layer application.

4 Apply face layer parallel to studs with laminated compound, spread on back side, joints staggered approximately 300mm (12") and fasten to base layer with 38mm (1½") type G screws.

5 Drive screws approximately 50mm (2") form ends and 100mm (4") o.c. in field of panel, 25mm (1") from ends and 900mm (3'-0") o.c. along a line 50mm (2") from vertical edge.

7 EXTERIOR SHEATHING APPLICATION

1 Install exterior sheathing using screw fasteners at 300 mm. o.c., boards nicely butted together.

2 Tape all joints between boards and to framing of opening as specified by the sheathing manufactuer.

8 SUBSTRATE PREPARATION FOR EXTERIOR WALL CLADDING

1 Install air barrier the unsheathed walls that are to receive exterior wall panels. Ensure a continuous barrier around all openings

2 Review work after strapping has been completed under Section 09111 and repair as required before the installation of exterior wall cladding

9 INSTALLATION OF BATT INSULATION AND VAPOUR BARRIER

3 Install insulation between studs at exterior walls unless otherwise specified and insulated to minimum value of R-20.

4 Install vapour barrier on warm side of exterior wall.

10 ACCESSORIES

1 Erect accessories straight, plumb, or level, rigid and at proper plane. Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners accurately, free from rough edges.

2 Install casing beads around perimeter of suspended ceilings.

3 Install casing beads where gypsum board butts against surfaces having no trim concealing junction and where indicated. Seal joints with sealant.

4 Install insulating strips continuously at edges of gypsum board or casing beads abutting metal window or exterior door frames, to provide thermal break.

11 CONTROL JOINTS

1 Construct control joints of two back-to-back casing beads set in gypsum board facing and supported independently on both sides of joint.

2 Provide continuous polyethylene dust barrier behind and across control joints.

3 Locate control joints at changes in substrate construction.

4 Install control joints straight and true.

12 ACCESS DOORS

1 Install access doors to electrical and mechanical fixtures specified in respective sections.

2 Rigidly secure frames to furring or framing systems.

13 TAPING AND FILLING

1 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and taping compound installed according to manufacturer's directions and feathered out onto panel faces.

2 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of taping compound, feathered out onto panel faces.

3 Fill screw head depressions with joint and taping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after painting is completed.

4 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.

5 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for painting.

Section 09330

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Wood sub floor

2 Section 09250: Preparation of substrate

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 REFERENCE STANDARDS

1 Manual 200 1979 of TTMAC.

4 QUALIFICATIONS

1 Work shall be carried out by a recognized specialist firm in accordance with Manual 200 1979 of Terrazzo Tiles and Marble Association of Canada.

5 SAMPLES

1 Submit samples of tiles in colour and types selected to Architect for approval.

2 No materials shall be purchased until approval is given.

3 Approval of samples shall not be construed as an acceptance of work subsequently carried out.

6 MAINTENANCE DATA

1 Provide data for recommended cleaning/maintenance methods and materials for incorporation into Manufacturer's Data Book specified in Section 01700.

7 ENVIRONMENTAL CONDITIONS

1 Commence work after areas are 'closed in' and conditions will allow proper curing.

2 Maintain building temperature of 13°C. (53°F) minimum and 24°C. (75°F) maximum for 72 hours prior, during and after application.

3 Avoid concentrated or irregular heat during drying. Provide ventilation to dry tile work properly.

2 PRODUCTS

1 MATERIALS

1 **Tiles**: shall be first quality material. Tiles installed outside shall be frost free and with no more than 3% water absorption.

2 **Ceramic Tile Type 1 - Floor:**
Centura - Dotti or an equivalent product approved equal by the Architect.

Thickness / Size: 305mm x 305mm x 9.5mm (12" x 12" x 3/8")
Colour: as selected by Architect
Finish: Matt
Mockups / Samples: provide samples in full range of colours and finishes for specified products

3 **Ceramic Tile Mortar:** Mapei Keralastic/Kerabond mortar system. Note: NOT TO BE USED FOR GRANITE, MARBLE OR OTHER NATURAL STONES.

MIXING

In a clean mixing container:

1. 51.4kg (34 lbs) kit: Pour in approximately 3.7L (1 US gal.) of Keralastic liquid and gradually add 11.3kg (25 lbs.) bag of Kerabond power while slowly mixing
2. 7.5L (2 US gallon) jug: Pour in approximately 7.5L (2 US gal) of Keralastic liquid, and gradually add 22.7kg (50 lbs.) of Kerabond powder while slowly mixing.

Use a low speed mixer (approximately 300 RPM)

Avoid air entrapment and prolonged mixing which will shorten the pot life.

Mix thoroughly to a homogeneous and smooth consistency.

Let slake 10 to 15 minutes.

Re-mix without adding any more liquid

Some stiffening may occur before all material is used (approximately 4 hours). If so, simply re-mix by hand or machine, but do not add any liquid.
Wash tools and hands with water immediately after mixing.

4 **Grout for Ceramic Floor Tile:** Mapei Keracolor Floor Grout complete with Mapei Plastijoint acrylic latex additive. Colour to be chosen by Architect.

5 **Base to match Floor:**
Centura - Dotti or an equivalent product approved equal by the Architect.

Thickness / Size: 102mm (4")
Colour: to match tile
Finish: matt cove base
Mockups / Samples: provide samples in full range of colours and finishes for specified products

3 EXECUTION

1 PREPARATION

1 Thoroughly cure and dry concrete surfaces for quarry or ceramic tile finish. Brush with a soft broom to remove loose particles of dust, dirt, concrete and mortar.

2 WORKMANSHIP

1 Surfaces to receive tile shall be firm, smooth, level, plumb, square.

2 Install tile according to best practice of trades. All faces and joints shall be plumb and true. Form intersections, corners and returns accurately.

3 Carry out all work in strict accordance with lines and dimensions shown on drawings. Check all dimensions on site.

4 Finished joints shall be completely filled, uniform in appearance without voids. It shall be clean, without excess mortar or grout.

3 INSTALLATION OF TILE

1 Use the recommended notched trowel with sufficient depth to ensure proper epoxy mortar transfer, covering 100% of the tile back.

2 Using the flat or straight edge of the trowel, apply a thin, pressure-applied coat to the substrate. Follow immediately with proper and thorough beat-in to flatten the ridges or notches into a continuous bed, allowing at least 25% of the thickness of each tile to be embedded into the epoxy mortar. Following this procedure will minimize air bubbles from reaching the surface and causing pinholes during grouting.

3 The entire substrate should be covered, leaving no bare areas between the ridges.

4 Do not spread more epoxy mortar than can be covered with ceramic tiles immediately. Set tiles dry (do not soak tiles before application).

5 Place tiles firmly into position with a slight twisting motion to ensure good contact with the epoxy mortar.

6 Follow immediately with proper and thorough bean-in to flatten ridges or notches into a continuous bed, allowing at least 25% of the thickness of each tile to be embedded into the mortar.

7 Make all alignments or adjustments immediately following beat-in.

8 Remove smudges from the tile face immediately with a clean sponge and water.

9 Do not disturb grout or walk over tiles for at least 24 hours.

10 Wash tools and hands immediately with water while material is still fresh.

4 EXPANSION AND CONTROL JOINTS

1 Provide for expansion and control joints where specified.

2 Do not cover or bridge any expansion joints with epoxy mortar.

3 Plan installation so tiles line up on one side of the control or expansion joints.

4 Protect tilework with metal strips along both edges or structural building expansion joints.

5 Insert sealant manufacturer's specified compressible bead and sealant for expansion and control joints.

5 APPLICATION AS A GROUT

1 Both the application and clean-up procedures for an entire kit typically should not exceed 45 minutes to one hour at room temperature.

2 Do not disturb grout or walk over tiles for at least 24 hours after setting.

3 Tile surfaces must be clean, dry and free of any debris.

4 All joints must be clean and free of excess setting material, standing water, dust and foreign substances.

5 Surface temperature should be maintained between 15°C (60°F) and 32°C (90°F) for best results. Cold weather formula 4°C (40°F) and 15°C (60°F).

6 Prepare and mix grout as recommended.

7 Using a hard green rubber float, force the grout into the joints in a continuous manner, leaving it flush with the tile edge.

8 Be certain all joints are well-compacted and free of voids and gaps. Fill the joints with the maximum amount of grout possible.

9 Thoroughly remove excess grout from the face of the tile before it loses its plasticity or begins to set. This is most easily accomplished by holding the rubber float at a 90° angle to the tile surface and proceeding diagonally to the joint surface and proceeding diagonally to the joint line, leaving as little epoxy grout on the tile surface as possible.

10 Clean tiles immediately after applying each unit of Kerapoxy. Grout and clean in small areas. Do not attempt to use more than one unit before cleaning tiles.

6 CLEANING OF GROUT

1 Before grout hardens on the tile surface, apply a liberal amount of water (cold water is acceptable) to the freshly grouted area and scrub the tile surface diagonally to the joint line using a non-woven nylon scouring pad. Apply a minimum amount of pressure on the pad, rinsing it frequently while cleaning. Always keep a lot of water on the surface being cleaned, but be careful not to get any water in the ungrouted joints ahead.

2 Remove the remaining water and residue with a damp, firm cellulose sponge, applying no pressure, and move diagonal to the joint line. Rinse the sponge often and keep rinsing water clean to avoid residue build-up.

3 Final clean-up is best accomplished with the use of a towel and two pails of clean water. Dampen the towel in one of the pails of water.

4 Drape the clean, damp towel over the newly grouted surface. Holding two corners of the towel, drag it over the tiles. The weight of the damp towel will help to remove any epoxy film still remaining,

5 Thoroughly rinse the towel in the second pail of water. Then dampen the towel again in the pail of clean water. Repeat.

6 Change the cleaning water often to maintain cleanliness.

7 Do not step on freshly cleaned tiles. Permanent damage to grout could result.

8 Do not allow surplus epoxy to stain in joints of adjacent areas.

9 Do not allow excess water, forma or film to remain on the tile surface. It will be very difficult to remove any spears once hardened. Check the installation the following day to make sure it is completely clean. If the surface has any tacky residue, a neutral cleaner or mild solution of detergent and water is recommended for removal.

7 CLEAN UP

1 Remove all rubbish and unused material from the site after completion of this work.

Section 09511

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 09130: Suspension System for Acoustic Ceilings

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 ENVIRONMENTAL CONDITIONS

1 Commence installation after building enclosed and dust generating activities complete.

2 Permit wet work to dry before commencement of installation.

3 Maintain uniform minimum temperature of 15°C and humidity of 20 - 40% before and during installation.

4 Store materials in work area 48 hours prior to installation.

4 MAINTENANCE MATERIALS

1 Deliver two cartons of acoustical units for maintenance use. Store where directed. Clearly identify contents.

2 Maintenance materials to be same production run as installed materials.

2 PRODUCTS

1 MATERIALS

1 **Acoustic Materials:** shall be asbestos free and manufacturer shall provide a documented proof.

2 **Acoustical Panels Type 4:**
Armstrong - CGC Radar or an equivalent product approved equal by the Architect.

Thickness / Size: 610mm x 610mm x 16mm (24" x 24" x 5/8")
Colour: White
Finish: Square Edge
Mockups / Samples: provide samples in full range of colours and finishes for specified products

2 **Acoustical Panels Type 4:**
Armstrong - CGC Radar or an equivalent product approved equal by the Architect.

Thickness / Size: 610mm x 610mm x 16mm (24" x 24" x 5/8")
Colour: White
Finish: Square Edge
Mockups / Samples: provide samples in full range of colours and finishes for specified products

3 EXECUTION

1 INSTALLATION

1 Install panels in grid.

2 Cut panels to fit neatly around grilles, light fixtures, columns, etc.

3 Install box around recessed light fixtures and diffusers etc., in fire rated ceiling.

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Division 15: Floor Access Covers

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 MAINTENANCE DATA

1 Provide data for maintenance of resilient flooring for incorporation into Maintenance Manual specified in Section 01700.

4 MAINTENANCE MATERIALS

1 Provide the Owner with one full carton of each of tile used for the project, for a maximum of three colours.

2 Maintenance materials to be same production run as installed materials.

5 ENVIRONMENTAL REQUIREMENTS

1 Provide dehumification, heat and enclosures required to ensure the substrate is cure and floor installation can be completed within the agreed construction schedule.

2 Maintain minimum 20°C air temperature at flooring installation area for three (3) days before, during and for 48 hours after installation.

2 PRODUCTS

1 MATERIALS

1 **Vinyl Composite Tile type 1:**
Tarkett - Azrock or an equivalent product approved equal by the Architect.

Thickness / Size: 3.2 mm (0.125") thick, 305mm x 305mm (12" x 12")
Colour: as selected by Architect
Mockups / Samples: 4 random tiles

2 **Base:**
Johnsonite - Rubber or an equivalent product approved equal by the Architect.

Thickness / Size: 102mm (4") high as indicated
Colour: as selected by Architect
Mockups / Samples: 305mm (12")

top set, 3mm (1/8") thick, coloured rubber, including premoulded end stops, external corners and manufacturer approved adhesive. Toeless base in carpeted areas. Cove base to all other areas. Colour to selected by Architect. Approved Manufacturer: Flexco; Johnsonite and Flextile will be considered if selected colour is available.

3 **Primers and adhesives:** (waterproof): recommended by flooring manufacturer for specific material on applicable substrate, above, at or below grade.

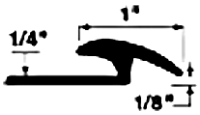
For all new concrete substrate or existing floors with a relative humidity exceed 50% relative humidity but less than 90% relative humidity install flooring using products designed specifically for high humidity including Henry 430 Clear Pro from the W. W. Henry Company or as approved the Architect.

www.wwhenry.com

4 **Sub-floor filler:** white premix latex requiring water only to produce cementitious paste.

5 **Metal edge strips:** aluminum extruded, smooth, mill finish with lip to extend under floor finish, shoulder flush with top of adjacent floor finish.

6 **Vinyl Transition strips:** Johnsonite CTA-XX-C: 6.35 mm (0.25") carpet to 3.18 mm (0,125") resilient materials



7 **Sealer:** type recommended by flooring manufacturer.

8 **Wax:** type recommended by flooring manufacturer.

3 EXECUTION

1 INSPECTION

1 Ensure concrete floors are dry by using test methods recommended by tile and adhesive manufacturers, and exhibit negative alkalinity, carbonization or dusting.

2 SUB-FLOOR TREATMENT

1 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.

2 Clean floor and apply filler; trowel and float to leave smooth, flat hard surface. Prohibit traffic until filler cured.

3 TILE APPLICATION

1 Apply adhesive uniformly using recommended trowel in accordance with flooring manufacturer's instructions. Do not spread more adhesive than can be covered by flooring before initial set takes place.

2 Lay flooring with joints parallel to building lines to produce symmetrical tile pattern. Border tiles minimum half tile width.

3 Install flooring to square grid pattern with all joints aligned.

4 As installation progresses, roll flooring with 45 kg. clean roller to ensure full adhesion.

5 Cut tile and fit neatly around fixed or excessively heavy objects.

7 Continue flooring through areas to receive movable type partitions without interrupting floor pattern.

8 Terminate flooring at centre line of door in openings where adjacent floor finishes or colours are dissimilar.

9 Install metal edge strips at unprotected or exposed edges where flooring terminates.

4 BASE APPLICATION

1 Set base in adhesive tightly against wall and floor surfaces. Use lengths as long as practicable and not less than 0.5 m long.

2 Install straight and level to variation of 1:1000.

3 Scribe and fit to door frames and other obstructions. Use premoulded end pieces at flush doorframes.

4 Mitre internal corners. Use premoulded sections for external corners.

5 CLEANING AND WAXING

1 Remove excess adhesive from floor, base and wall surfaces without damage.

2 Clean, seal and wax floor and base surface to flooring manufacturer's instructions.

6 PROTECTION OF FINISHED WORK

1 Prohibit traffic on floor for 48 hours after installation.

Section 09670

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

2 QUALITY ASSURANCE

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Installer shall be:

.1 Flooring contractor experienced in the field and approved by the manufacturer.

.2 Flooring contractor shall have manual instructions and be trained by the manufacturer and distributor.

.3 Manufacturer's recommendations for the correct preparation, finishing and testing sub floor surfaced.

3 DELIVERY, STORAGE AND HANDLING

1 Material shall not be delivered until all work in place is finished.

2 Installation temperature shall be at least 20°C (70°F) or maximum 30°C (85°F) and moisture content of slab 16% or lower.

4 SITE CONDITIONS

1 Do not install floor system until sub floor concrete has been cured for a minimum of sixty (60) days and the requirements in paragraph 1.3 are obtained.

2 Check following before cutting or installing: product type, colour, size, dye lots, visual defects.

2 PRODUCTS

1 MATERIALS

1 **Gymnasium Flooring: Tarflex MultiUse 5.0 by Gerflor**

Colour: 6381 Maple Design

2 DIMENSIONS AND SIZES

1 Surface embossing: smooth or stipple

2 Width of roll: 1.49m (4'-11")

3 Length of rolls: 19.8m (65'-0")

4 Total thickness: 245 mils

5 Weight (Lbs./sq.ft.): 0.09

6 Colours: selection by Architect

3 PHYSICAL PROPERTIES

1 This surfacing shall meet the following specifications:

A. Abrasion Resistance Taber: ASTM/C 501 109
B. Tensile Strength: ASTM/D 412 855
C. Chemical Resistance: Excellent
D. Compression Set: Greater than 90% immediate recovery
E. Linear Dimension: ASTM/D 1024, Less than 0.5%
F. Fungus Resistance: ASTM/D 1924, Complete
G. Hardness Shore A: ASTM/D 2240, 81
H. Flame Spread: ASTM/E 84, 70
I. Critical Radiant Flux: ASTM/E 648, 0.52 w/cm
J. Smoke Box Test: ASTM/E 662, 183.5

4 ADHESIVES

1 As recommended by manufacturer.

3 EXECUTION

1 INSTALLATION

1 Surface Preparation (General Contractor)

0.1 The General Contractor will supply a smooth, flat concrete finish which will be achieved manually or mechanically. The slab will have a tolerance of ± 3mm (1/8") in 254mm (10") radius.
0.2 The concrete sub floor temperature will have to be maintained at a minimum of 20°C (70°F). during installation and the Contractor will make sure that moisture content does not exceed 16%.

2 Surface Preparation

0.1 Before proceeding with any work, inspect the sub floor surface and report, in writing, to the Project Manager and the General Contractor, any visible defect on the surface, such as cracks, bumps, rough areas, or variations in planarity.

0.2 Check for any grease, oil, paint, dust or any contamination remaining on the concrete sub floor.

0.3 Before proceeding with installation, clean concrete surface to remove any dirt or foreign materials, rinse thoroughly and allow eight (8) hours minimum to dry, if required, sanding is necessary in all installations.

0.4 It is recommended that the General Contractor fill any areas not meeting the ± 3mm (1/8") requirement before installation. This will ensure levelness and proper adhesion of material.

2 LAYING OF THE SPORT SURFACE

1 Once all of the above operations have been completed and all surfaces carefully verified, test the humidity content of the concrete with a moisture tester. Moisture content must not exceed 16%.

2 Lay out all the material, making all fittings, cuttings or corrections to tolerances before applying adhesive. Also make sure that the material can acclimate for 24 hours.

3 Use a notched trowel to spread the recommended adhesive on the perfectly dry subsurface. Use adhesive according to manufacturer's directions.

4 Spread the recommended adhesive at the rate of coverage recommended by the manufacturer. Be sure to follow the technique of flexible flooring systems for the material installation and applying adhesive accordingly.

5 Start laying in the middle of the area to be laid and after first striking a centre line, place the first length against this line. Continue from the first length towards both outer walls. Care should be taken in order to keep the lengths straight and as even as possible.

6 After a period of at least 12 hours has elapsed allowing the adhesive to properly set, the seams must be heat welded.

7 Careful cutting and fitting in areas such as doorways, columns, etc. is critical. Extreme caution should therefore be exercised in these areas.

8 Use a medium weight steel roller pushing towards the seams, to eliminate any entrapped air which may have remained between the subsurface and the material.

9 Use extreme are to check and immediately wipe off any excess adhesive oozing through the seams or any spot showing on the surface of the material.

10 Adhesive:

0.1 Use the adhesive recommended by the manufacturer, and under no circumstances, use a substitute for adhesive brand specified.

0.2 Comply with the instructions of the resin manufacturer using recommended adhesive for installations on concrete surfaces.

0.3 Spread: Approximately 15 square feet per gallon for concrete, or as recommended by adhesive manufacturer.

3 MAINTENANCE

1 Clean material to flooring manufacturer's printed instructions.

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 04200: Masonry
2 Section 06100: Wood Framing
3 Section 07200: Insulation and Moisture Barrier
4 Section 07260: Cavity Wall Air/Vapour Barrier
5 Section 07620: Metal Flashing and Trim
6 Section 09111: Metal Stud Systems
7 Section 09250: Gypsum Board

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Install panels to exterior walls as shown on the drawings.

3 DESIGN

1 The manufacturer of the cladding material shall review the entire wall assembly to ensure complicance with the manufacturers requirements. All substrate element affecting this work shall be coordinated and approved by this section.

2 **Insulated cavity wall system to masonry backup:**

Masonry - Existing or as specified in Section 04200

Air Vapour Barrier to masonry/concrete backup: To Permeance - ASTM E96: Flexibility - CGSB 37-GP56M
Bakor - Blueskin SA (self-adhered) or an equivalent approved by the Architect
Sub Girts: Galvanized steel 'Z' girts by Vic Westeel to be 12.7mm (0.50") deeper than rigid insulation as indicated in Section 07200 to ensure air space. as per Section 07200
Dow - Styfofoam 'SM' (or Owens Corning/Celfortec - Celfort 300) or an equivalent product approved equal by the Architect
Thickness/Size: Type 4, 30 psi, 50mm x 600mm x 2400mm
Finish: square edge
miminum of 50mm (2:) thickenss as per Section 07200

4 CO-OPERATION

1 This trade shall furnish all necessary information required for other trades in order that all preparation can be made for application of this section.

5 SUBMITTALS

1 **Product Data:** Submit manufacturer's product literature, standard color chart, specifications, standard detail drawings, and installation instructions.

2 Submit shop drawings indicating thickness and dimensions of parts, fastening and anchoring methods, details and locations of panel joints. Indicate wall terminations, clearly showing flashings and transition conditions. Show location and spacing of sub-framing and fasteners. Provide elevation drawings showing layout of entire wall system.

3 **Samples:** Submit two samples, 75mm x 75mm (3" x 3"), of selected color for final approval by Architect. Refer to manufacturer's standard colors and patterns chart. Submit two samples, 300mm x 300mm (12" x 12"), of selected routed pattern (if specified). Refer to manufacturer's standard colors and patterns chart.

4 Submit manufacturer's written certification that materials and finishes meet specification requirements.

5 **Applicator's and Manufacturer's Experience Records:** Submit list of completed projects.

6 QUALITY ASSURANCE

1 **Manufacturer's Qualifications:** 20 years minimum experience in manufacturing glass fiber reinforced polymer panels with embedded natural stone aggregate.

2 **Applicator Qualifications:** Three years minimum experience in application and installation of architectural wall panel systems.

7 DELIVERY, STORAGE AND HANDLING

1 Protect products and accessories from damage and discoloration during transit and at project site. Panels shall be stored on a flat and dry surface protected with weather resistant tarpaulins. All accessory items shall be stored in a dry and safe location.

2 Prevent contamination or damage of panels from materials or products used by nearby trades.

8 WARRANTY

1 Panels shall be warranted for a period of not less than 15 years from the date of installation or as indicated in Section 01012. Warranty shall cover panel to be free of unnatural discoloration, cracking, and unreasonable loss of stone aggregate.

2 Panel manufacturer shall provide complete written warranty documents for review prior to bid date.

9 EXAMINATION

1 Examine the work of other trades on which the work of this trade depends and report to the Architect and the General Building Contractor in writing any unsatisfactory site conditions or defects affecting this work.

2 Commencement of work shall imply acceptance of the surface.

2 PRODUCTS

1 PANELS

1 **Exposed Aggregate Panels: Synstone - or an equivalent product approved equal by the Architect.**

Thickness / Size: 3/8" (10mm) thickness
Colour: Architect selected from manufacturer's standard color selection
Shop Drawings: in accordance with Section 01300
Mockups / Samples: 76mm (3") x 76mm (3")
Extended Warranty: 15 years

2 ACCESSORIES

1 **Sealant**: Color coordinated BondaflexSil 295 Silione Sealent or DowCorning 795 Silicone Building Sealant. No alternates permitted unless approved in writing by the manufacturer.

2 **Panel Fasteners:** shall be epoxy coated, square drive, thin-head self-tapping screws for metal and wood in stainless or carbon steel #8 x 25mm (1"), 41mm (1 5/8") or 58mm (2 1/4") long, color coordinated to aggregate color and shall be supplied by panel manufacturer.

3 **Exterior grade PVC Compressive Foam Tape**: to be used between joints as a thermal and bond break, and on all metal studs as a thermal break, shall be supplied by panel manufacturer.

4 **Finish:** As selected by Architect

3 EXECUTION

1 DESIGN REQUIREMENTS

1 Provide panels with a maximum nominal width of 1.22m (4'-0") and a maximum nominal length of 7.3m (24'-0"). Panels may be factory cut to specific width and length.

2 Provide all necessary accessory items required to attach panels.

3 Provide all necessary accessory items required to provide a weather tight seal at all edge joints, end joints and panel transitions.

4 Provide panels that have a Class A Flame Spread rating when tested in accordance with ASTM E-84. Certified test performance shall not exceed the following: Flame Spread Index 20 Stenni and Stenni Quartz, Smoke Developed 105 Stenni, 135 Stenni Quartz

2 PANEL ATTACHMENT

1 Maximum sub-girt and framing spacing for attachment of panels shall not exceed panel manufacturer's written schedule.

2 Provide panel installation guide approved by panel manufacturer. Installation guide will clearly illustrate all attachment detail for panels and framing systems.

3 EXAMINATION

1 Examine substrate or secondary framing to ensure that it is properly secured and prepared to receive wall panels.

2 Ensure substrate or secondary framing is installed flat, free from objectionable warp, wave, and buckle.

4 INSTALLATION

1 Comply with manufacturer's instructions for assembly, installation, and erection. Install in accordance with approved shop drawings. Refer to Manufacturer's Installation Guide for proper installation methods.

2 Steel or wood studs shall be placed at 400mm (16") o.c. (or no more than 600mm (24") o.c.) with proper support top and bottom and in the intermediate areas.

3 All trims and flashings shall be placed in accordance with approved shop drawings.

4 Cut panels from back side with a diamond tipped saw blade. Rout panels for special cutouts and clearances. Ensure that all cuts are smooth and even. Ensure that finished face is free of chips or other damage from cutting or routing.

5 Edge residue from cutting shall be removed by using compressed air or a bristle brush.

6 A strip of single faced adhesive foam tape shall be placed on the surface of each metal stud and at all panel joints for both wood and metal studs.

7 Predrill panels with a carbide tipped 3mm (1/8") masonry drill. Drill holes 200mm (8") o.c. at edges and 300mm (12") o.c. through the field to meet the maximum wind load requirement of 146kg per sq.m. (30 pounds per sq.ft.). For resistance of greater than 146kg per sq.m. (30 psf), contact United Panel.

8 Panels shall be attached using a #8 x 25mm (1”), 41mm (1 5/8”) or 58mm (2 1/4”) long stainless or carbon steel color coordinated fastener in accordance with manufacturer’s recommended fastener schedule.

9 A minimum 6mm (1/4”) space shall be held between panel end laps and side laps to receive color coordinated construction sealant as specified by panel manufacturer.

10 Joints shall be caulked with an approved exterior grade sealant matching the aggregate as closely as possible. For routed panels, the sealant should match the rout line color as closely as possible.

5 CLEANING

1 Clean exposed surfaces of work promptly after completion of installation. Please refer to panel manufacturer’s written recommendations for surface cleaning.

6 PROTECTION

1 Protect work as required ensuring wall system will be without damage at time of final completion.

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 05500: Miscellaneous Metal Fabrication

2 Division 15: General Mechanical Provisions

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 Supply all labour, materials, tools and other equipment necessary for completion of this work.

3 Examine the specifications for the various other trades and become thoroughly familiar with all their provision regarding their painting. All surfaces that are left unfinished by the requirements of other specifications shall be painted or finished as part of this work.

4 The latest edition of the following reference standards shall govern all painting work:

Architectural Painting Specification Manual by the Master Painters Institute (MPI), including Identifiers, Evaluation, Systems, Preparation and Approved Product List. (hereafter referred to as the ***MPI*** Painting Manual) as issued by the local **MPI** Accredited Quality Assurance Association having jurisdiction.

Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings) of the Environmental Protection Agency (EPA).

National Fire Code of Canada.

3 QUALITY ASSURANCE

1 This Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of work that he will maintain a qualified crew of painters throughout the duration of the work. When requested, Contractor shall provide a list of the last three comparable jobs including, name and location, specifying authority / project manager, start / completion dates and value of the painting work.

2 Only qualified journeypersons, as defined by local jurisdiction shall be engaged in painting and decorating work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyperson in accordance with trade regulations.

3 All paint manufacturers and products used shall be as listed under the Approved Product List section of the ***MPI*** Painting Manual.

4 All materials, preparation and workmanship shall conform to requirements of the latest edition of the Architectural Painting Specification Manual by the Master Painters Institute (***MPI***) (hereafter referred to as the ***MPI*** Painting Manual) as issued by the local **MPI** Accredited Quality Assurance Association having jurisdiction.

5 All materials used shall be exactly as specified in brand and quality. At the request of the Architect provide written verification from the supplier.

6 No claim by the painting trade to the unsuitability or unavailability of any material specified, or his willingness to use same, will be entertained unless such claims have been made in writing and submitted at the time of tender.

7 All paints, varnishes, enamels, lacquers, stains, paste filler and similar materials shall be delivered in the original containers with the seal unbroken and label intact.

8 Before proceeding with any painting, prepare and finish a sample room, complete or in part, as directed by the Architect. Finish all areas or items in accordance with the specifications and colours selected by the Architect.

9 Sample areas or items will be inspected by the Architect and/or his representative. If such areas or items are not approved, finish workmanship, appearance and materials approved for similar areas or items throughout the project must be corrected.

10 Examine sub surface conditions. Report or repair on defects or anything considered unsuitable. Commencement of work indicates acceptance of related work or site conditions. Defect in substrate or work completed by this section shall be repaired and then refinished at no additional cost to the Owner.

11 Provide samples as indicated in Section 01012.

12 Testing required identified herein is within the scope and responsibility of this section and NOT Section 01020

4 PRODUCT DELIVERY

1 Deliver paints and enamels ready-mixed to job site. All material must be delivered in their original containers with labels intact.

2 All materials used on the job shall be stored in a designated place. Such storage place shall be kept neat and all damage thereto or its surroundings shall be made good by the painting trade. All soiled or used rags, waste and trash must be removed from the building every night and every precaution taken to avoid the danger of fire. Latex paint must be stored above freezing temperature.

5 JOB CONDITIONS

1 CLEANING

Areas to be painted shall be clean and free of dust and shall remain in that condition throughout the painting process.

2 ENVIRONMENTAL REQUIREMENTS

When surface temperature is below 10°C (50°F) do not apply paint, varnish or special coatings unless otherwise specified. Do not paint exterior during frosty or rainy weather. Avoid painting surfaces while they are exposed to hot sun. Do not apply paint to areas where dust is being generated.

6 PROTECTION

1 The painter shall not only protect his own work all of the time, but shall also protect all adjacent work and materials by suitable covering or other method during progress of the work.

2 PRODUCTS

1 ACCEPTABLE MANUFACTURERS

1 ICI products are specifiied.

2 MATERIALS

1 Materials shall be of the specified manufacturer. No combination of products from different manufacturer will be permitted.

2 Use products of the same manufacture for each system.

3 COLOURS

1 All colours to be selected and approved by the Architect.

4 PAINTING SCHEDULE (Interior finish unless otherwise indicated)

1 **Type 1 (Gloss) - MPI Gloss Level 6**

Concrete Block (MPI#)

1 coat ICI X-Pert Interior Exterior Latex Blockfiller 36520 (MPI# 4)

2 coats Devoe Coatings Devflex W. B. Acrylic Gloss Enamel (MPI# 114)

Drywall and Plaster (MPI# 9.2A)

1 coat Prep-N-Prime PVA Interior Wall Primer Sealer 1030 (MPI# 50)

2 coats Devoe Coatings Devflex W. B. Acrylic Gloss Enamel (MPI# 114)

Woodwork (Exterior) (MPI# 6.3B)
1 coat Dulux Weatherguard Exterior Alkyd Primer 1675 (MPI# 5)
2 coats Devoe Devguard Alkyd Gloss Enamel 4308-0100 (MPI# 9)

Metal (Exterior, Galvanized) (MPI# Ext 5.3)
1 coat GliddenUltra Cementitious Primer 8000 (MPI# 26)
2 coats Devoe Devguard Alkyd Gloss Enamel 4308-0100 (MPI# 9)

Metal (Interior) (MPI# Int 5.1Q)
1 coat Devoe Coatings Devgard T&S Primer 4160 (MPI# 79)
2 coats Devoe Coatings Devflex W. B. Acrylic Gloss Enamel (MPI# 114)

2 **Type 2 (Semi gloss) MPI Gloss Level 5**
Concrete Block (MPI# 4.2)
1 tinted coat ICI X-Pert Interior Exterior Latex Blockfiller 36520 (MPI# 4)
2 coats Glidden Dulux Interior Acrylic Semi-Gloss 13010 (MPI# 54)

Drywall and Plaster (MPI# 9.2)
1 tinted coat Prep-N-Prime PVA Interior Wall Primer Sealer 1030 (MPI# 50)
2 coats Glidden Dulux Interior Acrylic Semi-Gloss 13010 (MPI# 54)

Metal (Interior) (MPI# Int 5.1Q)
1 tinted coat Devoe Coatings Devgard T&S Primer 4160 (MPI# 79)
2 coats Glidden Dulux Interior Acrylic Semi-Gloss 13010 (MPI# 54)

Woodwork (MPI# 6.4)
1 tinted coat ICI-X-Pert Alkyd Jammer Primer Sealer 200 (MPI# 45)
2 coats Glidden Dulux Interior Acrylic Semi-Gloss 13010 (MPI# 54)

Old Work
1 coat ICI X-Pert 250 Gripper (MPI#)
2 coats Glidden Dulux Interior Acrylic Semi-Gloss 13010 (MPI# 54)

3 **Type 3 (Eggshell) MPI Gloss Level 3**
Concrete Block (MPI# 4.2)
1 tinted coat ICI X-Pert Interior Exterior Latex Blockfiller 36520 (MPI# 4)
2 coats GliddenUltra Interior Latex Pearl 94910 (MPI# 52)

Drywall and Plaster (MPI# 9.2)
1 coat Prep-N-Prime PVA Interior Wall Primer Sealer 1030 (MPI# 50)
2 coats GliddenUltra Interior Latex Pearl 94910 (MPI# 52)

4 **Type 4 (Flat) MPI Gloss Level 1**
Drywall and Plaster (MPI# 9.2)
1 coat Prep-N-Prime PVA Interior Wall Primer Sealer 1030 (MPI# 50)
2 coats GliddenUltra Interior Flat Latex 94500 (MPI# 53)

5 **Type 5 (Natural Finish)**
Woodwork (interior) (MPI# 6.4U)
1 coat Woodpride Interior Semi-Transparent Stain 1825 (MPI# 90)
2 coats Woodpride Interior Acrylic Varnish - Gloss 1830 (MPI# 130)
1 coat Woodpride Interior Acrylic Varnish - Satin 1840 (MPI# 128)

Woodwork (exterior) (MPI# Ext6.3G)
3 coats Devoe Devthane 379 (MPI# 78)

3 EXECUTION

1 INSPECTION

1 Examine the work of other trades prior to the application of any paint or finishing materials. If any surface to be finished cannot be put in proper condition for finishing by customary cleaning, sanding and puttying operations, notify the General Contractor immediately in writing.

2 Do not proceed with finishing until surface is acceptable. Application of paint or finish to surface constitutes acceptance of the surface.

3 Substrates must be dry and have received the necessary surface preparation to ensure adequate adhesion. The durability and appearance of any finished paint system is directly related to quality and thoroughness of the surface preparation.

2 GENERAL SURFACE PREPARATION

1 Surface to be painted shall be clean as well as floors and adjacent surfaces.

2 Mildew, efflorescence and all foreign material shall be removed from surfaces by appropriate methods.

3 To achieve an even appearance on certain woods when using a stain or stain/varnish system, a very thin coat of shellac (I.e. 1 part shellac to 8 parts alcohol) can be used to even out the porosity of the wood before application.

4 On concrete, masonry units, wood, plaster and gypsum board, stucco, cementitious composition board and clay masonry units: If sprayed, the first coat application must be back rolled/brushed to ensure good penetration of primer (or paint) into the substrate.

5 On any surface previously painted with alykd (oil based) paint apply prime coat of manufacturer approved primer before applied the required number of top coats

3 pH TESTING

1 Test interior concrete and masonry surfaces for alkalinity prior to the application of any finishing system. Dampen the surface area and apply a small strip of pH indicator paper. A value of 7 on the pH scale represents neutrality. Values below 7 indicate an acid conditions and above 7 indicate an alkali condition.

2 Normal painting procedures are suitable for alkali values of 7 to 8.5 pH. When a solvent based system is specified and the pH is above 8.5, the surface must be neutralized using a zinc sulfate wash treatment. The surface must be allowed to dry out thoroughly before painting is commenced. Any residual zinc sulfate crystals left on the surface shall be brushed off. An alkali resistant primer sealer solvent based) shall then be applied. Latex paints shall not be used over zinc sulfate treated surfaces.

4 DRYWALL PREPARATION

1 Fill all scratches, nicks and uneven areas with spackling compound and sand flush with the surface.

2 Remove sand, dust, dirt, oil, grease, wax, silicone, glue and all other foreign matter. The resulting surface must be made acceptable to the Painting Contractor before application of the paint commences.

3 Joint compound shall be tested for alkali content. The architect shall receive a written report and notified of any concern before work commences

5 CONCRETE MASONRY PREPARATION

1 Epoxy block filler should be used unless otherwise specified. The exception is where a natural finish coating is desired and a water repellent, clear, coating is used.

2 Efflorescence shall be removed, before a finish schedule is put into operation. This is done by scraping and wire brushing, and an acid etch as necessary. Allow sufficient time (at least one week) to elapse, to see if the efflorescence reappears. If it does, the cause shall be remedied before painting is attempted.

3 Mortar joints must cure for not less than 28 days. Remove all dirt, loose mortar and splatters, residues, powder, oil and grease, etc. (i.e. any other foreign matter). If rust or any stains are present, they shall be removed, often by chemical cleaning. Oil and grease shall be removed by a TSP wash (50 grams per liter or ½ lb. per gallon, plus or minus, depending upon requirements) or the use of an emulsifying cleaner, followed by thorough rinsing with clean water. The surface must be allowed to dry completely.

4 Cracks, holes, broken off corners, joints and other surface imperfection must be repaired and filled with concrete-based patching material. All patches to be made flush with the adjoining surfaces and must be dry and fully cured before application of block filler. Patching must be completed prior to acceptance of the surface by the Painting Contractor. After surface repairs have been carried out, one coat of masonry block filler will bring the surface up to a reasonably smooth and level condition, ready for painting.

5 In certain instances, abrasive blast cleaning may be required. In these cases, standard blast cleaning equipment is normally used. Only highly qualified personal shall be assigned this work.

6 Environmental conditions before and during application and during drying shall be as outlined.

6 METAL PREPARATION

1 To remove rust stains on exposed surfaces use a mixture of 425 grams oxalic acid per 4.5 litres (15 oz/gallon) of warm water. Mixing should be carried out in glass or plastic containers or enamel coated pails. The solution is to be left on the surface until the stain is no longer visible. Repeat as many times as necessary when stubborn stain marks are encountered. The areas must be thoroughly rinsed to remove all traces of acid. Only qualified tradespersons shall carry out this work.

2 Ferrous metal shall be washed with mineral spirits to remove oil, grease and dirt.

3 Remove rust and scale by scraping and wire brushing. Clean all welds and abrade with power tools. Spot prime all areas at once.

7 GALVANIZED METAL PREPARATION

1 Untreated galvanized metal, when exposed to the environment, does not necessarily render a good paint surface. Therefore weathering is not to be accepted in place of proper surface preparation.

2 The galvanized metal supplier shall disclose to the general and/or managing contractor and painting contractor any pre-treatment and temporary coatings which have been applied.

3 Galvanized metal that has been treated by the manufacturer with hexavelent chromium in solution or other similar passivation treatment to prevent humid storage stains, is difficult to coat satisfactorily. The passivation treatment shall first be removed. In such cases, refer to the manufacturer for surface preparation and painting instructions, however, in no case shall the pre-treatment be considered as a primer.

4 Wiped zinc coated metal (due to the thinner zinc film) does not resist prolonged exterior exposure (particularly in chemical environments) and shall be primed with the specified galvanized metal primer as soon as is possible. The specified primer shall be top coated within the recoat window of the primer as stipulated by the primer manufacturer.

5 Different types of galvanized metals (i.e. zinc metals) are available (eg mechanically coated, hot dip, different spangle size, etc.). None are considered paint ready, and all require proper surface preparation and the appropriate coating selection. Proper surface preparation is the responsibility of the painting contractor.

6 Environmental conditions before and during application and during drying shall be as outlined.

8 WOOD PREPARATION

1 Sand smooth the surface to be painted or varnished before applying the prime coat and once again before applying the first top coat. Clean surface from all sanding dust before applying coating.

2 Polyurethane coatings shall not be applied over sealers containing zinc stearate.

3 A full paint system is required, as well on the tops and bottoms of doors.

4 All wood surfaces such as windows sills and equipment mounting panels, etc., must be back primed before installation.

5 All surfaces must be free of dust, dirt, oil, grease, silicone, wax, and other foreign matter.

6 For surfaces to be painted, holes, cracks and points are to be filled with an appropriate filler level with the surrounding surfaces. Knots must be sealed, and pitch must be removed. The affected areas must be sealed.

7 Pine and other softwoods containing sap or pitch must be cleaned of all residues. All knots, pitch pockets, and sap-affected areas must be sealed with clear shellac or an appropriate sealer. The shellac must be applied after the stain has been applied and allowed to fully dry. All discolourations such as water stains, scuff marks, pencil marks, etc., must be removed from the surface. Sand before and between coats, with a fine grade of sandpaper to maintain a smooth surface. Tack rag surfaces to remove all sanding debris.

8 Open grained wood surfaces that are to receive a clean or stain system require MPI #91 paste type wood filler to fill the pores. Sand before and between coating applications to maintain a smooth surface. All sanding must be done in the direction of the grain, particularly when a stain or varnish system is specified. Cross sanding the grain creates scratches that will absorb stain or finish unevenly. Tack rag surfaces to remove all sanding debris. Any discolouration must be remove from the surface (eg scuff marks, water stains, pencil marks).

9 For 'factory-primed' material, the manufacturer/supplier shall provide certification that the specified surface preparation and priming has been performed utilizing the appropriate MPI approved primer.

10 Environmental conditions before and during application and during drying shall be as outlined.

9 APPLICATION

1 Apply paint in accordance with the manufacturer's direction. Use the techniques and application best suited for type of material being applied.

2 Apply all material under adequate illumination. Spread evenly and flow on smoothly without runs or sags.

3 All coats must be thoroughly dry before applying the succeeding coats.

4 Back prime interior or exterior trim before installation with primer specified.

5 Finish tops of upper sash and bottoms of lower sash same as interior finish. After doors are fitted, finish tops, bottoms and edges same as face and back.

6 Cover surfaces to be stained with uniform coat and wipe off, if required.

7 Between coats, sand enamel or varnish finish applied to wood or metal with sandpaper and clean to produce an even, smooth finish.

8 Finish inside of drawers with one coat of sanding sealer and one coat of varnish.

9 Unless otherwise indicated herein or in the manufacter's written specification, apply conventional paints in uniform coats at a rate of approximately 8 to 10 sure meters/liter (320-400 square feet/gallon) to attain a 4-5 mils wet film thickness. This does not include Elastomeric and high-build specialty coatings specifically designed for thick film application, and thin coat lacquers, which shall be applied in strict conformance. In all cases, follow specific manufacturer's recommendations of thickness of application.

10 Allow the manufacturer's recommended dry time between coats. if required provide the application of a test patch of the next coat to determine if the cure is complete. If lifting or wrinkling is visible in the test patch the previous coating shall be given more time to cure fully.

11 Ensure subsequent coats be applied within the time period specified by the manufacturer to assure proper inter coat adhesion, especially when epoxy, polyurethane and alkyd systems are used. If the time period in not met, additional sanding (or otherwise lightly abrading the previous coating) will be required before application of the next coat.

10 CLEAN UP

1 Upon completion of the work, remove all paint and varnish spots from the floors, glass and other surfaces. Remove from the premises all rubbish accumulated and leave the work in clean, orderly and acceptable condition.

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Strapping and Grounding

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

2 SHOP DRAWINGS

1 Provide shop drawings in accordance with Section 01340 showing dimensional layouts together with fabrication and installation details based on site conditions.

3 INSPECTION

1 Prior to commencement of erection, all surfaces to be checked for irregularities, trueness and rigidity and projections and defects to be reported immediately to the general contractor for correction.

2 On completion of the installation all materials and workmanship to be inspected for proper operation, rigidity and appearance, and any defective materials to be replaced with new materials prior to final inspection.

4 SAMPLES

1 Samples to be provided to the Architect, if requested, for his perusal and approval of all materials to be utilized in this installation.

5 STORAGE/DELIVERY

1 The general contractor to be responsible for providing a dry, warm storage area capable of being locked for the storage of all materials. The general contractor shall unload all materials at the site and place in aforementioned storage room.

6 SPECIAL PROTECTION

1 During installation, utmost care to be taken by workmen to ensure the protection of the work from damage by other trades until the building is ready for occupation and handed over to the Owner.

2 Protection of all materials during the painting operation shall be carried out by the use of polyethylene covering which shall be the responsibility of the painting contractor.

7 SPECIAL CLEANING

1 Upon completion of all work, clean down, remove all stains, loose dirt and excessive adhesive, and leave all elements in a first-class condition at the point of handing over to the Owner.

2 At the same time all chalkboards to be broken in by final "chalking in" utilizing first quality soft white chalk.

8 MAINTENANCE

1 A label stating instructions for the care and maintenance of chalkboards to be affixed to the upper right hand corner of all chalkboard elevations for the use of the school board's maintenance staff.

9 WARRANTY

1 Installation of all materials to be warranted for a period of one year. This warranty covers both labour and material for replacement of defective materials.

2 Chalkboards to be warranted for a period of 25 years against defects due to normal usage and wear. Upon completion of contract, a written warranty to be submitted to the school board by this trade.

2 PRODUCTS

1 CHALKBOARD MATERIALS

1 **Chalkboards:**
Architectural School Products Ltd.; (Gander, Cveti) - Vitrite, consisting of a sandwich type construction composed of face panel, core and balancing rear sheet or an equivalent product approved equal by the Architect.

Thickness / Size: to sizes indicated on drawings
Colour: Green
Shop Drawings: in accordance with Section 01300

2 **Whiteboards:**
Architectural School Products Ltd.; (Gander, Cveti) - "Rite-ON, Wipe-Off" Series 3000 complete with clear anodized aluminum trim and tray or an equivalent product approved equal by the Architect.

Thickness / Size: to sizes indicated on drawings
Shop Drawings: in accordance with Section 01300

3 **Face Panel:** 0.8mm (22 gauge) high quality enameling steel base with a porcelain enamel writing surface fused to a ground coat of not less than 0.076mm nor more and 0.727mm after firing at temperatures between 800°C and 900°C, as manufactured by P.G. Bell Assoc., Georgetown, Ontario, in accordance with the Porcelain Enamel Institute Standards P.E.I. S104 as regards to durability, smoothness of texture, colour continuity and ./factor of 6-8 as measured by 45o gloss meter.

4 **Core:** 11.1mm impregnated sound absorbing fibreboard laminated under heat and pressure to face panel and back sheet utilizing adhesives that ensure rupturing of the component materials before failure of joint contact surfaces.

5 **Back up balancing sheet:** 0.4mm (28 gauge) zinc coated stretcher leveled steel in one unjointed section. Overall thickness of chalkboard lamination shall be 12.7mm.

6 **Colour of Chalkboards:** to be green

2 TACKBOARD MATERIALS

1 **Tackboards:**
Architectural School Products Ltd.; (Gander, Cveti) - 12.7mm factory prelaminated consisting of 6mm thick A.S.P. natural cork laminated to 6mm particle board or masonite substrate under mechanical pressure in maximum panel sizes of 1219 mm x 2438 mm. Bonding of materials by a waterproof adhesive that will not delaminate or rupture at the contact surfaces. or an equivalent product approved equal by the Architect.

Thickness / Size: to sizes indicated on drawings
Shop Drawings: in accordance with Section 01300

2 **Standard:** All tackboards shall meet the minimum requirements of the applicable building code and/or Ontario Fire Marshal's Office.

3 **Adhesive:** as recommend by the manufacturer.

3 ALUMINUM TRIM

1 **Extruded aluminum** to be 6063T5 alloy with clear etches and anodized 0.051mm satin finish, free from extruded draw marks and surface scratches. A.S.P. 200 series.

2 **Perimeter:** No. 205 trim for all tackboards and also vertical jambs of chalkboards - 19mm exposed face and weight of approximately 298 g per lineal metre.

3 **Divider Bar:** No. 207 trim for adjacent chalkboard/tackboard panels and adjacent tackboard/tackboard panels of elevations greater than 2438mm - 12.7mm exposed face and weight of approximately 372 g per lineal metre.

4 **Map rail:** No. 206 trim for chalkboard elevation only complete with integral natural cork insert, end stops and two (2) combination roller map hooks per 1.829mm - 50.8mm exposed face and weight of approximately 521 g per lineal metre.

5 **Chalktray:** No. 212 triangular box section for chalkboard elevations only complete with contour fitting end castings - 102 mm projection from wall and weight of approximately 1.5 kg per lineal metre. No. 220 chalktray for cupboards/shelving below.

3 EXECUTION

1 INSTALLATION/ERECTION

1 Erection of materials to be carried out by competent craftsmen supervised by a foreman with a least 2 years' experience in this specialized field.

2 Overhead work such as ceiling grids, plumbing, electrical services, communications systems, painting, etc., to be in an advanced stage of completion in order not to impede this sub-contractor. Millwork units forming integral part of the chalkboard/tackboard installation to be located and affixed to the walls before commencing chalkboard/tackboard installation.

3 Erection of materials shall be carried out in a substantial manner to ensure a rigid, straight, square, plumb and horizontal lines level.

4 All aluminum trims to be attached in such a manner that all fastenings shall be concealed. Fastening to be accomplished by the use of #10 x 25.4mm (1") steel wood screws attached to the walls by the use of rail plugs.

5 Tackboards to be adhered to wall surface by the use of a 1.9mm (14 gauge) 1.9mm x 25.4mm wide steel spline and an extruded polyvinyl slotted insert to ensure a flush butt joint with a hairline appearance.

Section 10161

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06200: Wood Doors

2 Section 10800: Washroom Accessories

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 SHOP DRAWINGS

1 Submit shop drawings in accordance with Section 01300.

2 Clearly indicated fabrication details, plans, elevations, hardware and installation details.

4 MAINTENANCE DATA

1 Provide maintenance data for maintenance of plastic laminate work.

5 PROTECTION

1 Protect finished laminated plastic surfaces during shipment and installation by approved means.

6 WARRANTY

1 The contractor shall warrant laminated plastic work against warping and delamination in accordance with GC24, but for period of two (2) years.

2 PRODUCTS

1 MATERIALS

1 **Laminated Plastic Toilet Partitions:**
Buddsteel Architectural Products Limited. - P.lam. scratch resistant floor mounted, overhead braced. Panels, pilasters and doors are to be 19mm (3/4") thick rigid particleboard cores covered with P.lam. thermally fused to cores or an equivalent product approved equal by the Architect.

Thickness / Size: to sizes indicated on drawings
Colour: Selected by Architect from a full range or Arborite, Formica or Wilsonart colours and patterns
Shop Drawings: in accordance with Section 01300

2 Hardware: All exposed hardware other than pilaster shoes shall be polished chrome plated heavy cast non-ferrous metal. Pilaster shoes shall be 75mm (3") high of 0.31 stainless steel 302.

3 EXECUTION

1 PARTITION ERECTION

1 Install partitions secure, plumb and square.

2 Leave 12 mm space between wall and panel or end pilaster.

3 Attach fixing brackets securely to masonry/concrete surfaces using screws and shields: to hollow walls using bolts and toggle type anchors, to steel supports with bolts in threaded holes.

4 Attach panel and pilaster to brackets with through type sleeve bolt and nut.

5 Provide adjustment of floor variations with screw jack through steel saddles made integral with pilaster. Conceal floor fixings with stainless steel shoes.

Section 10800

2808-11

Holy Rosary School Renovations

St. Clair Catholic District School Board

Project Date: March 17, 2011

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1 GENERAL

1 RELATED REQUIREMENTS

1 Section 06100: Wood Blocking

2 Section 08800: Mirrors specified elsewhere

2 GENERAL

1 Requirements of Division 0, 1 and all contract drawings shall apply to all sections of this document. These sections have been created in order to organize the contract documents. It can not be assumed in any way that they limit the responsibility of the contractor, any Subcontractor or supplier to complete the full scope of the work indicated in the contract documents as a whole.

3 SHOP DRAWINGS

1 Submit shop drawings or catalogue illustrations in accordance with Section 01300.

2 Indicate size and description of components, base material, surface finish inside and out, hardware and locks, attachment devices, description of rough-in-frame, building-in details of anchors for grab bars.

2 PRODUCTS

1 GENERAL

1 Remove existing and turn over to owner.

2 Contractor to install Owner supplied washroom accessories.

3 EXECUTION

1 INSTALLATION

1 Install and secure fixtures rigidly in place as follows:

.1 Stud walls: install steel back-plate to stud prior to plaster or drywall finish. Provide plate with threaded studs or plugs.

.2 Hollow masonry units or existing plaster/drywall: use toggle bolts drilled into cell/wall cavity.

.3 Solid masonry, marble, stone or concrete: use bolt with lead expansion sleeve set into drilled hole.

.4 Toilet/shower compartments: use male/female through bolts.

2 Use tamper-proof screws/bolts for fasteners.

3 Fill units with necessary supplies shortly before final acceptance of building.

4 Install dual model sanitary napkin in partition between two cubicles.

5 Install grab bars in handicapped toilet stall. One at the back of w.c. and one 'L' shaped on side of w.c.

2 MOUNTING HEIGHTS

1 Unless otherwise indicated install the indicated accessories to the following heights

Toilet tissue dispenser - 762mm (30”)
Control Roll Towel Dispenser - 1118mm (44”) to bottom of unit
Towel dispenser/waste receptacle combo unit - 1220mm (48") to centre of inlet panel
Wall Mounted Receptacle - 914mm (36”) to top of receptacle
Sanitary Napkin Disposal - 660mm (26”) to top of unit
Mirrors - 990mm (39”) to bottom of unit
Hand Dryer 965mm (38") to bottom of mounting bracket
Wall Mounted Receptacle - 1220mm (48") to centre of inlet panel
Soap dispenser - 38" to dispenser valve

3 LOCATION AND QUANTITY

1 Washrooms

toilet tissue dispenser - 1 in each stall
towel dispenser
mirror - 1 over each sink
soap dispenser - 1 for each wall hung sink
grab bars - 1 set of two to handicap stalls only
sanitary napkin disposal - 1 in each stall
waste receptacle - 1
hand dryers – one for every two toilets