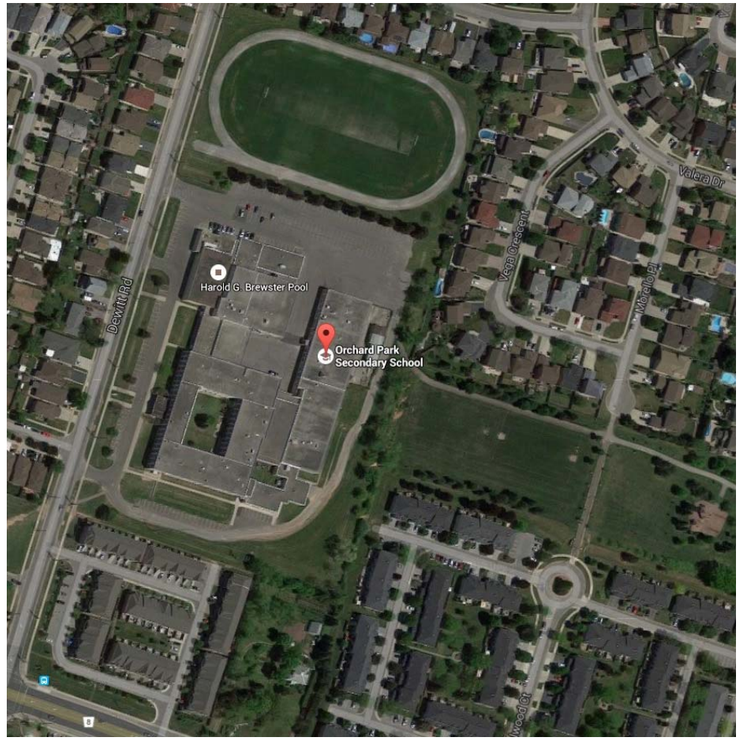


HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

FEASIBILITY STUDY and CONCEPT DESIGN

Orchard Park Secondary School

200 DeWitt Road, Hamilton, ON

November 2015

HOSSACK
& ASSOCIATES
ARCHITECTS

TABLE OF CONTENTS

ORCHARD PARK SECONDARY SCHOOL

SECTION 1 - EXECUTIVE SUMMARY

1.1 PURPOSE

The purpose of this study is to provide information and recommendations for subsequent decisions of the School Board related to the Hamilton-Wentworth District School Board (HWDSB) Secondary School Revitalization Program.

Over the next five years, HWDSB intends on **revitalizing** and **modernizing** the majority of its existing Secondary Schools.

The following areas have been examined for consideration of renovations and upgrades:

Instructional Spaces

- Science Labs & Prep Rooms
- Technological Shops
- Specialized Support Program Space
- Library
- Cafeteria

Operational Areas

- Operation Areas
- Administration Offices
- Student Services
- Staff Lounge and Work Areas
- Washrooms

1.2 METHODOLOGY

The study included a comprehensive review of the facilities in relation to enrolment, projected enrolment, educational adequacy and facilities adequacy. The design team included a team of experienced school architects and engineers lead by Hossack & Associates Architects and exp. The review focused on the ability of the facilities to provide a comprehensive modern educational experience for its students and the ability of the facility to provide a safe, comfortable and effective learning environment.

HWDSB's vision for its ***Secondary Program Strategy*** *(June 2013)* was also reviewed and considered during the study for programming requirements based on the Tier 1 *(all schools – all students),* Tier 2 *(some schools – some students)* and Tier 3 *(few schools – few students)* programs identified within the 13 HWDSB secondary schools.

The Tier 3 programs and specialized interventions/supports are of particular interest in this study as they generally require specialized facilities, equipment or enhancements to the facilities in order to adequately support the program needs. Tier 3 programs are offered in a few school sites located strategically across the HWDSB, where transportation would be provided to students to a larger geographic area according to Board policy.

Tier 3 Programs identified in the Secondary Program Strategy at Orchard Park Secondary School:

- *Cosmetology*
- *Arts & Culture: Digital Media*
- *Hospitality/Tourism (Food Services)*

Tier 3 Interventions and/or Supports identified at Orchard Park Secondary School:

- *Graduated Support Program*

Cosmetology
Students gain hands-on experience in hairstyling techniques and aesthetics that meet industry standards, using industry standard materials and equipment.

Arts & Culture: Digital Media*
Students have the opportunity to pursue creative practices using interactive and new technologies. This is an open and flexible program that encourages students to develop as creative digital and media designers. Students explore how art and technology reshape the future. Courses include animation, digital photography, advertising, digital video production, multimedia development etc.

Hospitably/Tourism (Food Services)*
Students learn about food preparation, hospitality services and tourism. Through experiential learning, students will connect with hospitality employers and explore careers in the industry.

Graduated Support Program
This program provides specific support for students including integration in the school and community, appropriate to the student's strengths. Although they may not be earning credits, students in the program have the ability to achieve a level of independence in the community upon graduation.

*These programs lead to a Specialist High Skills Major (SHSM) designation for students who are heading for an apprenticeship, training, college, university or the workplace. SHSM programs allow Grades 11 and 12 students to focus on a career path that matches their skills and interests while meeting the requirements of the Ontario Secondary School Diploma (OSSD). Students receive the SHSM seal on their diploma when they complete a specific bundle of eight to 10 courses in their selected field, earn valuable industry certifications including first aid and CPR, and gain important skills on the job with employers through co-operative education.

1.3 OVERVIEW

Orchard Park Secondary School first opened in 1965 is located at 200 DeWitt Road, Hamilton, ON L8E 4M5 in the east area of Hamilton. The school currently serves approximately 944 students. The forecasted enrolment projection for the year 2022 is approximately 1,269 students.

Several assumptions have been made in the program analysis and cost estimates as part of the development of this study. The analysis is based on the average costs for the different types of demolition and construction activities proposed. Both the program and the cost estimates will need to be refined during the schematic design phase as the project proceeds into design.

1.4 PROPOSED CONCEPT DESIGN

In this study renovations are proposed to provide the school with updated facilities for its Tier 3 programing to serve the community and the students, as well as address facility needs for the programming outlined in the Boards Secondary Program Strategy.

Additional renovations are proposed to help the school better meet the current Ministry of Education standards with regards to space requirements.
Proposed renovations to the school includes renovations for the following new programs:

- Hospitality
- Graduate Support Program
- Cosmetology
- Communications Arts

The following existing program spaces are proposed to be renovated:

- Automotive shop
- Science Labs and support spaces
- Construction Shops
- Engineering Robotics
- Fabrication
- Wood Shop

Renovations of the following Support Spaces are also proposed:

- Cafeteria
- Library
- Main Office
- Staff lounge
- Washrooms

SECTION 2 - EXISTING CONDITIONS ASSESSMENT

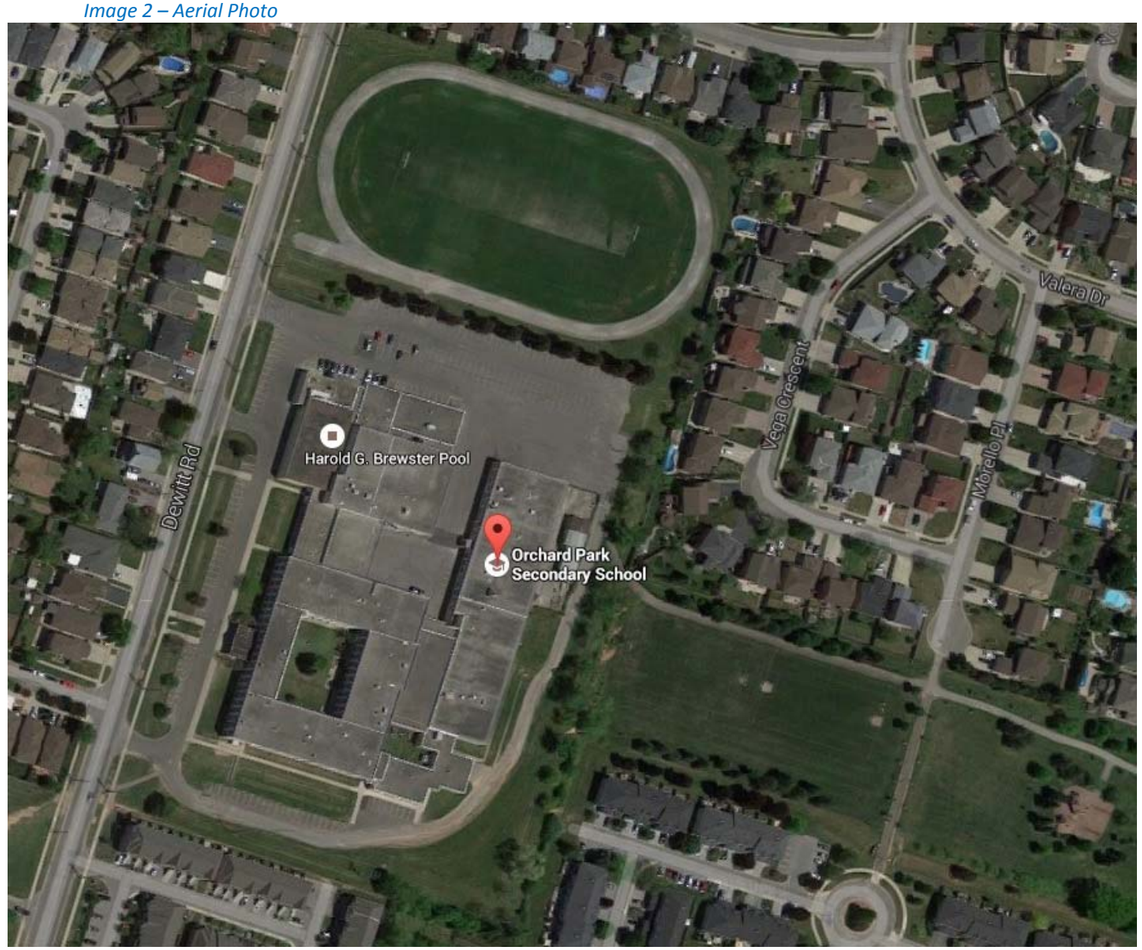
Image 1 – School Main Entry

2.1 INTRODUCTION

Orchard Park Secondary School was constructed in 1965 and is 15,567m^2 (167,562 ft^2) with two stories. The building is configured around outdoor courtyards with main corridors on all sides and two main wings. There is a City of Hamilton Pool attached to the school on the north corner.

2.2 SITE ASSESSMENT

Image 2 – Aerial Photo



<u>Site Background</u>

The school is located on DeWitt Road in Hamilton. The site is located in a residential neighborhood. The school is located on the south portion of the property with the playfield located on the north side. The Harold G. Brewster pool is also located on this property and is connected to the Secondary School.

Accessibility
The existing parking lot provides accessible designated parking spaces with a path of travel to the main entrance. The main entrance does not have an automatic door opening device and therefore should be updated to be current requirements. This would be considered part of the 'Building Conditions Report' upgrade requirements.

Parking & Service
The parking areas are located on the south, east and north sides of the school with the main access off DeWitt Road There is a service loading area provided at the back of the building.

Pedestrian & Vehicular Circulation
Pedestrian access to the school is provided from DeWitt Road with concrete sidewalks.

Athletic Fields
The site has one large running track with a multipurpose field with two goal posts in the centre of the track.

2.3 BUILDING CONDITION

An "*Existing Conditions Report*" was completed by VFA Inc. for the Hamilton-Wentworth District School Board in 2013. This document is included in the appendices for reference. Some information is noted in summaries below*.

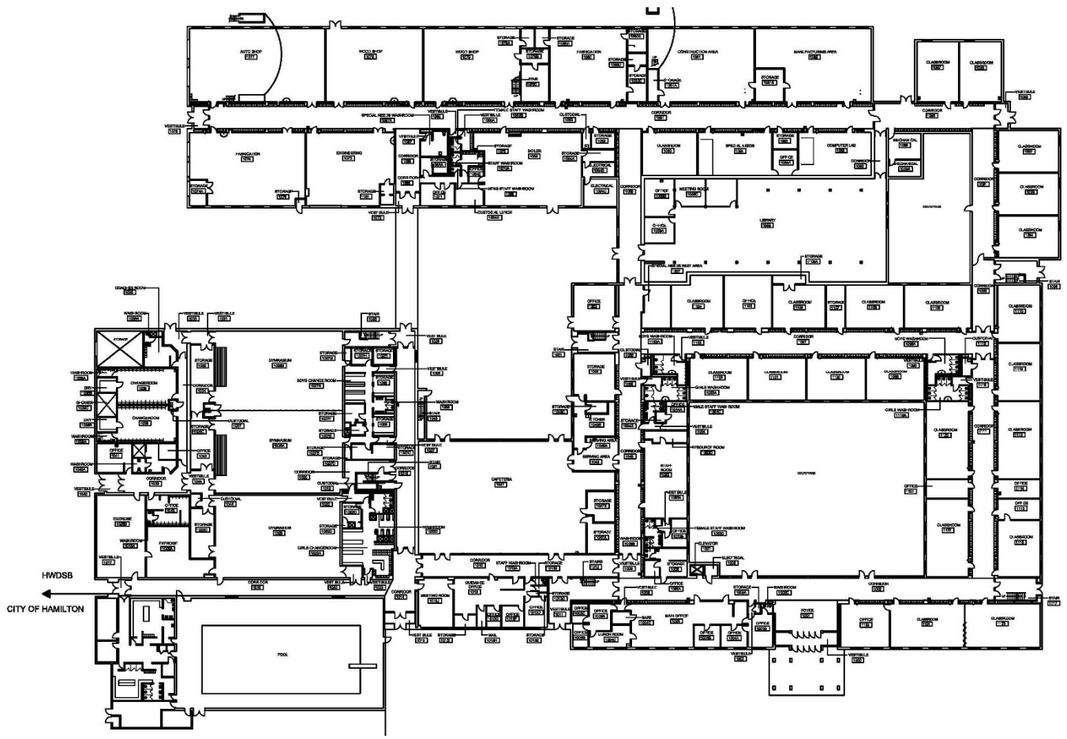


Image 3 – Ground Floor Plan

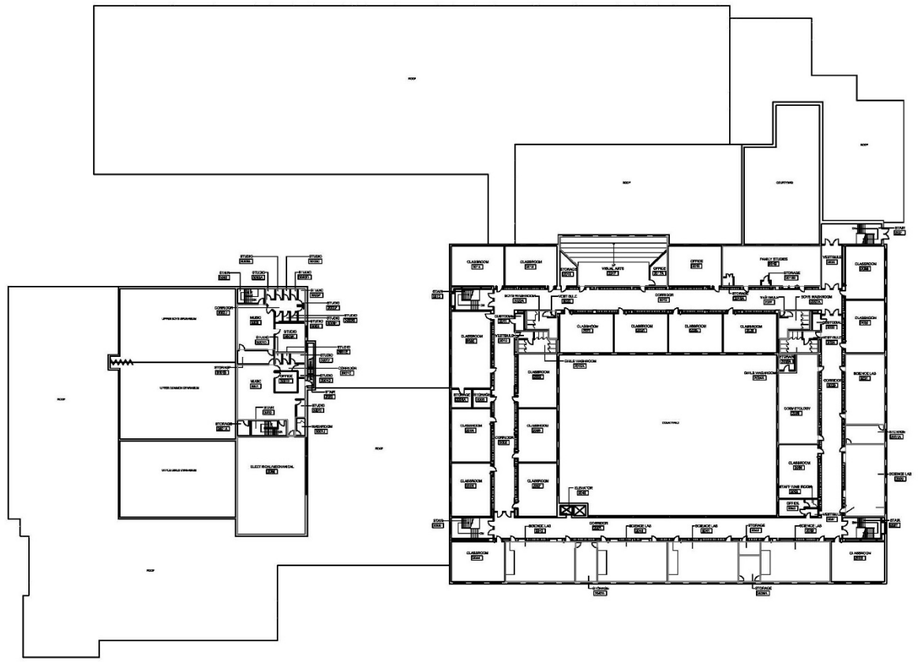


Image 4 – Second Floor Plan

2.3.1 Exterior Building Envelope

- Roof
  The existing flat roofing is on metal roof decking on steel trusses. The majority of the roof was resurfaced in the last 20 years. The overall condition is fair with patches, blisters, ridging and discolourations noted on site but roof leaks have not been reported. The *Existing Conditions Reports* notes that the roof assembly should be replaced.*

- Exterior Walls
  The building envelope consists of brick veneer on load bearing CMU masonry walls. The exterior masonry is in poor condition and is showing signs of excessing deterioration with spalling brick and deteriorating mortar joints.*

- Exterior Doors and Windows
  The existing exterior painted hollow metal doors appear to be original and are showing signs of damage, worn finishes, damaged frames and deteriorated seals and have single pain lites with non-tempered glass. It is recommended in the *Existing Conditions Report* that all exterior doors are a priority to be replaced.*
  The existing windows on the north, south and east elevations appear to be the original windows. They are single glazed units in metal frames and are showing signs of deterioration. It is recommended in the *Existing Conditions Report* these windows be replaced.*

2.3.2 Interiors

- Floor Finishes
  The existing floor finishes consist of terrazzo, mainly vinyl composite tiles, ceramic tiles, hard wood flooring and carpet. The *Existing Conditions Report* notes that most of the floor finishes are in fair condition but that they are showing signs of wear and should be replaced.*

- Interior walls
  The existing interior walls are painted masonry and painted gypsum board. The *Existing Conditions Reports* notes that the walls are showing signs of wear and peeling and recommend re-finishing.*

- Ceilings
  The existing ceilings consist of acoustic ceiling tiles, gypsum board ceilings and painted exposed structure. The *Existing Conditions Report* notes that the ceilings are all showing signs of age. The report recommends that the ceilings be replaced.*

- Interior Doors and Hardware
  The existing doors are a combination of hollow metal doors with paint finish and wood doors with a natural or paint finish and typically have a glazed lite in them. The *Existing Conditions Report* notes that the doors have exceeded their life span and show signs of damage and recommend that the doors as well as all the hardware be replaced.*

2.4 BUILDING CODE ANALYSIS

The existing school is not sprinklered. A renovation would require a thorough review of the building under Part II of the Ontario Building Code (OBC) as a Basic Renovation.

2.5 BUILDING ACCESSIBILITY

The existing school requires updating to meet current accessibility standards. The *Existing Conditions Report* outline a number of areas to be more accessible including providing accessible parking, providing a path of travel to the main entrance of the building and a path of travel to all floor levels. The existing building does have an elevator but it is noted in the Existing Conditions Report that the elevator is in need of replacement.

2.6 STRUCTURAL ANAYLISIS

The existing building structure consists of CMU masonry load bearing walls, concrete on steel deck floors, steel roof deck with steel trusses and joists.*

SECTION 3 – CONCEPT PLANS

3.1 INTRODUCTION

The proposed renovations of Orchard Park Secondary School were determined based on numerous different factors. The proposed concept plans are the result of consideration of the following:

- HWDSB Secondary Program Strategy
- HWDSB Tier 3 Programs & Specialist High Skills Major Programs (including Appendices)
- Ministry of Education Space Template (recommendations)
- Hamilton Wentworth District School Board – Design Manual
- Existing and Projected student enrollment
- Conditions Assessment Report (by VFA Inc., 2013)

It was determined that Orchard Park Secondary School has an excess of instructional spaces in relation to its projected Full Time Enrollment (FTE). It also has an excess of Large Tech Labs. It is lacking in Small Tech Labs based on the Ministry of Education Space Template.

Projected Full Time Enrollment (FTE)	**994** pupil places
Number of pupils existing building can support (based on 21 pupils per classroom)	**1,269** pupil places
Excess Instructional Space in school for approx.	275 pupil places excess
Based on Edu loading of 21 students per classroom, school has approx.	13 excess classrooms

3.2 PHASING

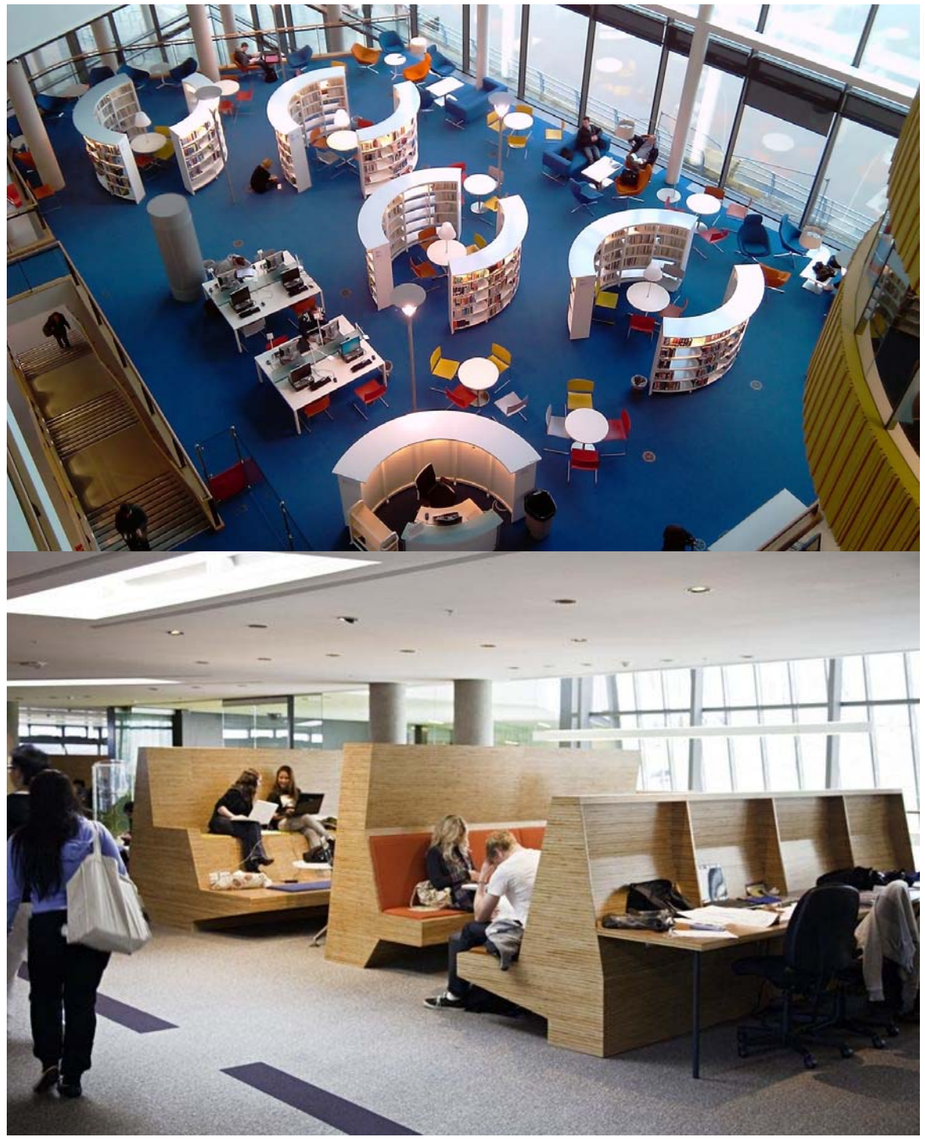
Renovations may take place in several phases to reduce disruption to occupied building during the school year.

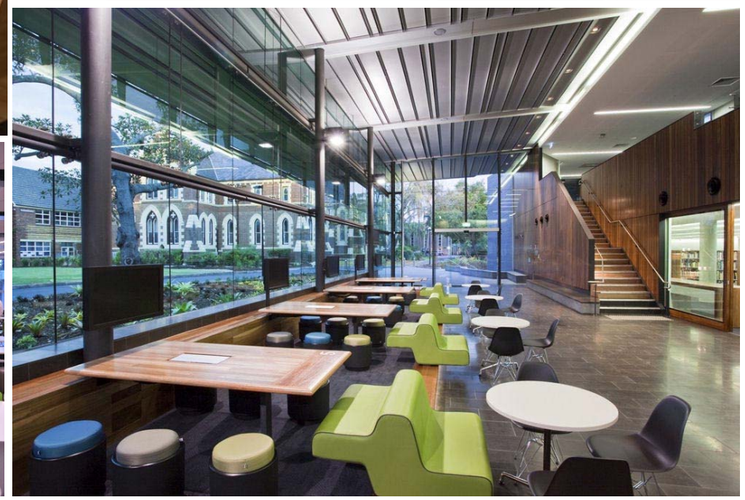
Phases could occur as follows:
Phase 1 – (Summer 1 and fall as required). Renovations to **Instructional Spaces** directly related to academic programs
Phase 2 – (Summer 2) **Cafeteria** and **Library**
Phase 3 – (Summer 3) **Non-instructional Spaces** and **Washrooms**
Phase 4 – (summer 4) Additional work per ***Existing Conditions Assessment Report*** *(refer to Appendix D)*.

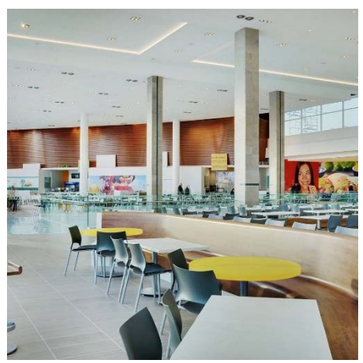
The first three phases identified above relate to the colour coding on the proposed floor plans herein.

3.3 COMMUNAL SPACES

The school revitalization mandate is to create more communal student spaces, such as a 'Student Forum' or 'Student Lounge', in addition to updating existing common spaces such as the Learning Commons (Library) and Cafeteria areas. These areas are to be modernized with various forms of furnishings as well as the sufficient provision of power for devices to support project based group work and 21st Century Learning environments.







3.4 MINISTRY OF EDUCATION – Space Template Analysis

The following chart compares the Ministry of Education Space Template recommendations with the existing school and the proposed School upon renovation completion. This comparison illustrates areas where the existing school may have in excess or may be deficient in space and how it has been resolved.

SECONDARY SCHOOL SPACE TEMPLATE
SAMPLE SCHOOL

School Board: Sample District School Board
Grade Range: Grade 9 to 12
Program: English, French or Dual Track
School Name: Sample School

Table 18: Secondary Model Program Sheet			
Expected Enrolment:			**1,269**
Credit Assumptions	**%**	**Credits**	**Classes**
			57
Regular	51	4,854	32
Science	15	1,428	8
Arts	10	952	6
Business	5	476	3
Technology	10	952	6
Family Studies	3	286	2
Physical Education	6	571	

Instructional Spaces	#	Size m²	Size ft²	Floor Area m²	Floor Area ft²	Load	OTG
Classroom	32	70	750	2,230	24,000	21	672
Science Laboratories	**8**	**116**	**1,250**	**929**	**10,000**	**21**	**168**
Science General (Avg Size)		-		-	-	21	
Science Biology (Avg Size)		-		-	-	21	
Science Chemistry (Avg Size)		-		-	-	21	
Science Physics (Avg Size)		-		-	-	21	
Total Music / Arts	**6**			**678**	**7,300**		**126**
Music Instrumental/Vocal	2	129	1,390	258	2,780	21	42
Graphics/Visual Arts	4	105	1,130	420	4,520	21	84
Theatre Arts		-		-	-	21	-
Photography		-		-	-	21	-
Media Arts		-		-	-	21	-
Technical / Vocational	**11**			**1,544**	**16,620**		**231**
Business/Computer Room	3	97	1,040	290	3,120	21	63
Family Studies	*2*	*114*	*1,230*	*229*	*2,460*		*42*
Family Studies (Food)		-		-	-	21	-
Family Studies (Textiles/Fasion		-		-	-	21	-
Family Studies (Nutrition)		-		-	-	21	-
Technology Lab Large	*2*	*232*	*2,500*	*465*	*5,000*		*42*
Transportation		-		-	-	21	
Construction		-		-	-	21	
Design/Drafting		-		-	-	21	
Manufacturing		-		-	-	21	
Green Industries		-		-	-	21	
Welding		-		-	-	21	
Wood		-		-	-	21	
Integrated		-		-	-	21	
Technology Lab Small	*4*	*140*	*1,510*	*561*	*6,040*		*84*
Communications		-		-	-	21	
Computer Engineering		-		-	-	21	
Computer Laboratory		-		-	-	21	
Cosmetology		-		-	-	21	
Health Sciences		-		-	-	21	
Special Education / Resource Room				**472**	**5,076**		**-**
Special Education Area		-		-	-	9	-
Resource Area - Loaded (400-699 sf)		-		-	-	12	-
Resource Area - Unloaded (<400 sf)		-	-	-	-		-
Instructional Area Flexibility		-		472	5,076		
Other Spaces				**1,200**	**12,921**		**-**
Stage		139	1,500	139	1,500		
Library/Library Resource Centre		472	5,076	472	5,076		
Cafetorium/Cafeteria		589	6,345	589	6,345		
Lecture		-	-	-	-	21	-
Seminar		-	-	-	-		
Chapel		-	-	-	-		
Gymnasium and Exercise Room				**1,511**	**16,260**		**42**
Gymnasium Area - Quadruple		1,486	16,000	-	-	63	-
Gymnasium Area - Triple	1	1,115	12,000	1,115	12,000	42	42
Gymnasium Area - Double	-	743	8,000	-	-	21	-
Gymnasium Area - Single	-	372	4,000	-	-		
Dance/Aerobics Studio		-		-	-		
Exercise Room		-		-	-		
Weight Room		-		-	-		
Change Rooms	4	64	690	256	2,760		
Gymnasium and Exercise Room		-		139	1,500		
Total GFA and OTG of Instructional Area				8,563	92,177		1,239

Operational Areas	Per Pupil m²	Per Pupil ft²	Floor Area m²	Floor Area ft²
General Office	0.2	2.3	271	2,919
Guidance Area	0.1	1.3	153	1,650
Cooperative Education Office			26	280
Staff Lounge			-	
Kitchen/Servery	0.1	1.1	130	1,396
Custodial Areas	0.2	1.7	200	2,157
Staff Room and Teacher Work Rooms	0.3	3.5	413	4,442
Meeting Room			28	300
Academic Storage	0.1	1.0	118	1,269
Washrooms	0.3	3.2	377	4,061
Gymnasium Storage			74	800
Mechanical Spaces	0.5	5.8	680	7,322

SECONDARY SCHOOL SPACE TEMPLATE
Orchard Park Secondary - Existing

School Board: HWDSB
Grade Range: 9 to 12
Program:
School Name: Orchard Park Secondary - Existing

Instructional Spaces	#	Size m²	Size ft²	Floor Area m²	Floor Area ft²	Load	OTG	Area deficiency or excess ft²	# of deficiency or excess rooms
Classroom	39	70	750	2,717	29,250	21	819	0	7
Science Laboratories	**6**			**538**	**5,790**		**126**		**(2)**
Science General (Avg Size)	1	89	956	89	956	21	21	(295)	
Science Biology (Avg Size)	2	90	967	180	1,934	21	42	(293)	
Science Chemistry (Avg Size)	2	90	967	180	1,934	21	42	(293)	
Science Physics (Avg Size)	1	90	967	90	967	21	21	(293)	
Total Music / Arts	**3**			**392**	**4,219**		**63**		**(3)**
Music Instrumental/Vocal	2	127	1,372	255	2,744	21	42	(18)	
Graphics/Visual Arts	1	137	1,475	137	1,475	21	21	345	
Theatre Arts		-		-	-	21	-		
Photography		-		-	-	21	-		
Media Arts		-		-	-	21	-		
Technical / Vocational	**11**			**1,954**	**21,035**		**231**		
Business/Computer Room	1	86	930	86	930	21	21	(110)	(2)
Family Studies	*1*			*126*	*1,353*		*21*		(1)
Family Studies (Food)	1	126	1,353	126	1,353	21	21	123	
Family Studies (Textiles/Fasion)		-		-	-	21	-		
Family Studies (Nutrition)		-		-	-	21	-		
Technology Lab Large	*7*			*1,452*	*15,632*		*147*		5
Transportation	1	275	2,960	275	2,960	21	21	460	
Construction	1	195	2,098	195	2,098	21	21	(402)	
Design/Drafting		-		-	-	21	-		
Manufacturing	1	216	2,324	216	2,324	21	21	(176)	
Green Industries		-		-	-	21	-		
Welding	2	208	2,235	415	4,470	21	42	(265)	
Wood	1	196	2,110	196	2,110	21	21	(390)	
Integrated	1	155	1,670	155	1,670	21	21	(830)	
Technology Lab Small	*2*			*290*	*3,120*		*42*		(2)
Communications		-		-	-	21	-		
Computer Engineering	1	177	1,900	177	1,900	21	21	390	
Computer Laboratory		-		-	-	21	-		
Cosmetology	1	113	1,220	113	1,220	21	21	(290)	
Health Sciences		-		-	-	21	-		
Special Education / Resource Room	**1**			**86**	**930**		**9**		
Special Education Area	1	86	930	86	930	9	9		
Resource Area - Loaded (400-699 sf)		-		-	-	12	-		
Resource Area - Unloaded (<400 sf)		-		-	-		-		
Instructional Area Flexibility									
Other Spaces	**2**			**1,182**	**12,719**		**-**		
Stage		-		-	-		-		
Library/Library Resource Centre	1	657	7,075	657	7,075		-	1999	
Cafetorium/Cafeteria	1	524	5,644	524	5,644		-	(701)	
Lecture		-		-	-	21	-		
Seminar		-		-	-		-		
Chapel		-		-	-		-		
Gymnasium and Exercise Room	**5**			**1,164**	**12,527**		**21**		
Gymnasium Area - Quadruple		-		-	-	63	-		
Gymnasium Area - Triple		-		-	-	42	-		
Gymnasium Area - Double	1	572	6,158	572	6,158	21	21		
Gymnasium Area - Single	1	284	3,060	284	3,060		-		
Dance/Aerobics Studio		-		-	-		-		
Exercise Room	1	111	1,193	111	1,193		-		
Weight Room	1	72	780	72	780		-		
Change Rooms	1	124	1,336	124	1,336		-		
Total GFA and OTG of Instructional Area				8,033	86,470		1,269		

Operational Areas	Per Pupil m²	Per Pupil ft²	Floor Area m²	Floor Area ft²	
General Office			243	2,620	(299)
Guidance Area			175	1,885	235
Cooperative Education Office			-		
Staff Lounge			87	940	
Kitchen/Servery			-		
Custodial Areas			-		
Staff Room and Teacher Work Rooms			-		
Meeting Room			-		
Academic Storage			-		
Washrooms			-		
Gymnasium Storage			-		
Mechanical Spaces			-		

SECONDARY SCHOOL SPACE TEMPLATE
Orchard Park Secondary - Proposed

School Board: PDSB
Grade Range: 9 to 12
Program:
School Name: Orchard Park Secondary - Proposed

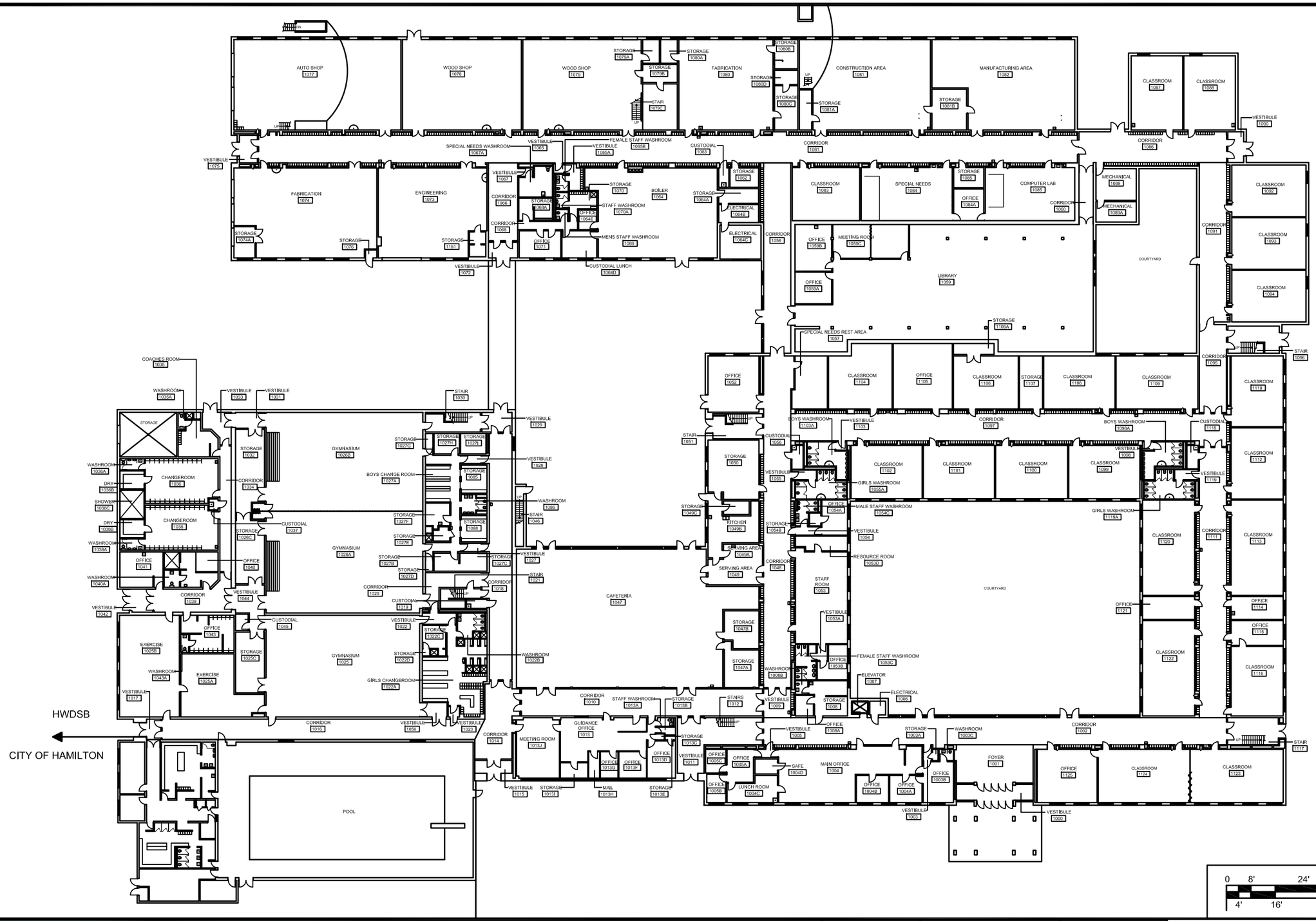
Instructional Spaces	#	Size m²	Size ft²	Floor Area m²	Floor Area ft²	Load	OTG	Area deficiency or excess ft²	# of deficiency or excess rooms
Classroom	37	70	750	2,578	27,750	21	777	0	5
Science Laboratories	**7**			**650**	**6,998**		**147**		**(1)**
Science General (Avg Size)	1	111	1,200	111	1,200	21	21	(50)	
Science Biology (Avg Size)	2	90	966	179	1,932	21	42	966	
Science Chemistry (Avg Size)	2	90	966	179	1,932	21	42	966	
Science Physics (Avg Size)	2	90	966	179	1,932	21	42	966	
Total Music / Arts	**3**			**369**	**3,975**		**63**		**(3)**
Music Instrumental/Vocal	2	116	1,250	232	2,500	21	42	(140)	
Graphics/Visual Arts	1	137	1,475	137	1,475	21	21	345	
Theatre Arts				-	-	21	-		
Photography				-	-	21	-		
Media Arts				-	-	21	-		
Technical / Vocational	**9**			**1,741**	**18,735**		**189**		
Business/Computer Room	1	86	930	86	930	21	21	(110)	(2)
Family Studies	*1*			*146*	*1,570*		*21*		(1)
Family Studies (Food) HOSPITALITY	1	146	1,570	146	1,570	21	21	340	
Family Studies (Textiles/Fasion		-		-	-	21	-		
Family Studies (Nutrition)		-		-	-	21	-		
Technology Lab Large	*4*			*898*	*9,670*		*84*		2
Transportation	1	275	2,960	275	2,960	21	21	460	
Construction	1	195	2,100	195	2,100	21	21	(400)	
Design/Drafting		-		-	-	21	-		
Manufacturing FABRICATION	1	232	2,500	232	2,500	21	21	0	
Green Industries		-		-	-	21	-		
Welding		-		-	-	21	-	0	
Wood	1	196	2,110	196	2,110	21	21	(390)	
Integrated		-		-	-	21	-	0	
Technology Lab Small	*3*			*610*	*6,565*		*63*		(1)
Communications & TV STUDIO	1	196	2,110	196	2,110	21	21	600	
Computer Engineering & ROBOTICS	1	178	1,915	178	1,915	21	21	405	
Computer Laboratory				-	-	21	-		
Cosmetology	1	236	2,540	236	2,540	21	21	1030	
Health Sciences		-		-	-	21	-		
Special Education / Resource Room	**1**			**73**	**789**		**9**		
Special Education Area GSP	1	73	789	73	789	9	9		
Resource Area - Loaded (400-699 sf)				-	-	12	-		
Resource Area - Unloaded (<400 sf)		-		-	-		-		
Instructional Area Flexibility									
Other Spaces	**2**			**1,182**	**12,719**		**-**		
Stage				-	-		-		
Library/Library Resource Centre	1	657	7,075	657	7,075		-	1999	
Cafetorium/Cafeteria	1	524	5,644	524	5,644		-	(701)	
Lecture				-	-	21	-		
Seminar		-		-	-		-		
Chapel		-		-	-		-		
Gymnasium and Exercise Room	**5**			**1,164**	**12,527**		**21**		
Gymnasium Area - Quadruple		-		-	-	63	-		
Gymnasium Area - Triple				-	-	42	-		
Gymnasium Area - Double	1	572	6,158	572	6,158	21	21		
Gymnasium Area - Single	1	284	3,060	284	3,060		-		
Dance/Aerobics Studio		-		-	-		-		
Exercise Room	1	111	1,193	111	1,193		-		
Weight Room	1	72	780	72	780		-		
Change Rooms	1	124	1,336	124	1,336		-		
Total GFA and OTG of Instructional Area				7,757	83,491		1,206		

Operational Areas	Per Pupil m²	Per Pupil ft²	Floor Area m²	Floor Area ft²	
General Office			243	2,620	(299)
Guidance Area			175	1,885	235
Cooperative Education Office			-		
Staff Lounge			87	940	
Kitchen/Servery			-		
Custodial Areas			-		
Staff Room and Teacher Work Rooms			-		
Meeting Room			-		
Academic Storage			-		
Washrooms			-		
Gymnasium Storage			-		
Mechanical Spaces			-		

Space Ten

3.5 PLANS

The following pages illustrate the **Existing Floor Plan** and subsequent **Proposed Floor Plan** for each level of the school.



ORCHARD PARK SECONDARY SCHOOL

EXISTING FIRST FLOOR KEY PLAN

PROJ: 15108
SCALE: NTS
DRAWN: CT
DATE: 15/04/15

TRUE NORTH
PROJECT NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

E1

PHASE LEGEND

PHASE 1

INSTITUTIONAL SPACES

- RENOVATION WITH SAME PROGRAM
- RENOVATION INTO DIFFERENT PROGRAM

PHASE 2

OTHER SPACES

- RENOVATION WITH SAME PROGRAM

PHASE 3

OTHER SPACES

- RENOVATION WITH SAME PROGRAM

- EXISTING TO BE DEMOLISHED
- EXISTING TO REMAIN
- NEW WALLS

NOTE: OPTIONAL HOARDING LOCATION FOR OCCUPIED SCHOOL CONSTRUCTION

NOTE: ENTIRE SHADED AREA DENOTES POSSIBLE LOSS OF ROOM USE DURING SCIENCE ROOM RENOVATIONS TO COMPLETE ABATEMENT AND NEW PLUMBING CONNECTIONS. WILL NEED TO BE DETERMINED IN THE FIELD.

HWDSB
CITY OF HAMILTON

CITY OF HAMILTON
HWDSB

ORCHARD PARK SECONDARY SCHOOL

FIRST FLOOR KEY PLAN

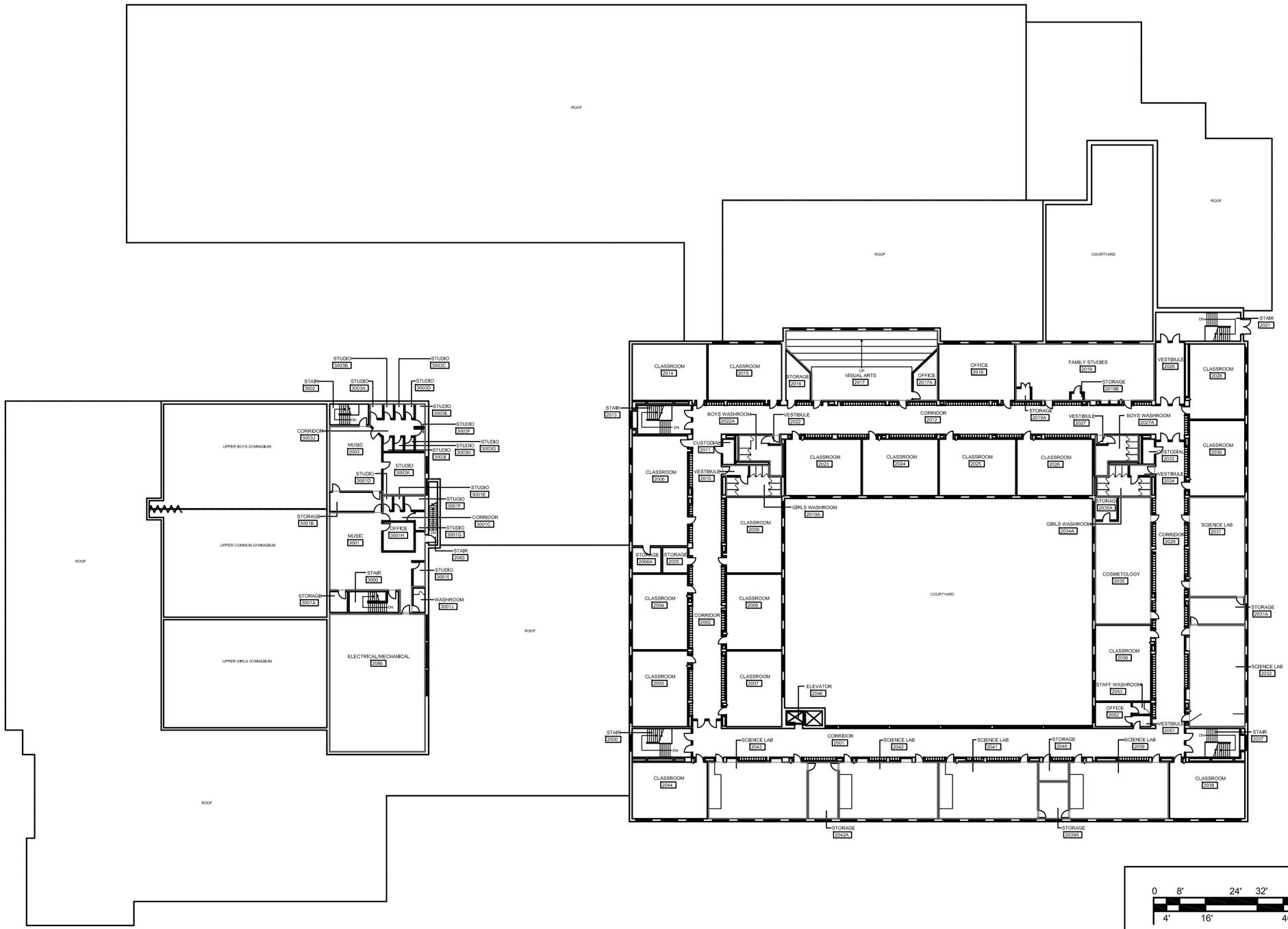
PROJ: 15108
SCALE: NTS
DRAWN: CT
DATE: 15/04/15

PROJECT NORTH
TRUE NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

A1



0 8' 24' 32'
4' 16' 40' 60'

ORCHARD PARK SECONDARY SCHOOL

EXISTING SECOND FLOOR KEY PLAN

PROJ: 15108
SCALE: NTS
DRAWN: CT
DATE: 15/04/15

TRUE NORTH
PROJECT NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

E2

PHASE LEGEND

PHASE 1

INSTITUTIONAL SPACES

- RENOVATION WITH SAME PROGRAM
- RENOVATION INTO DIFFERENT PROGRAM

PHASE 2

OTHER SPACES

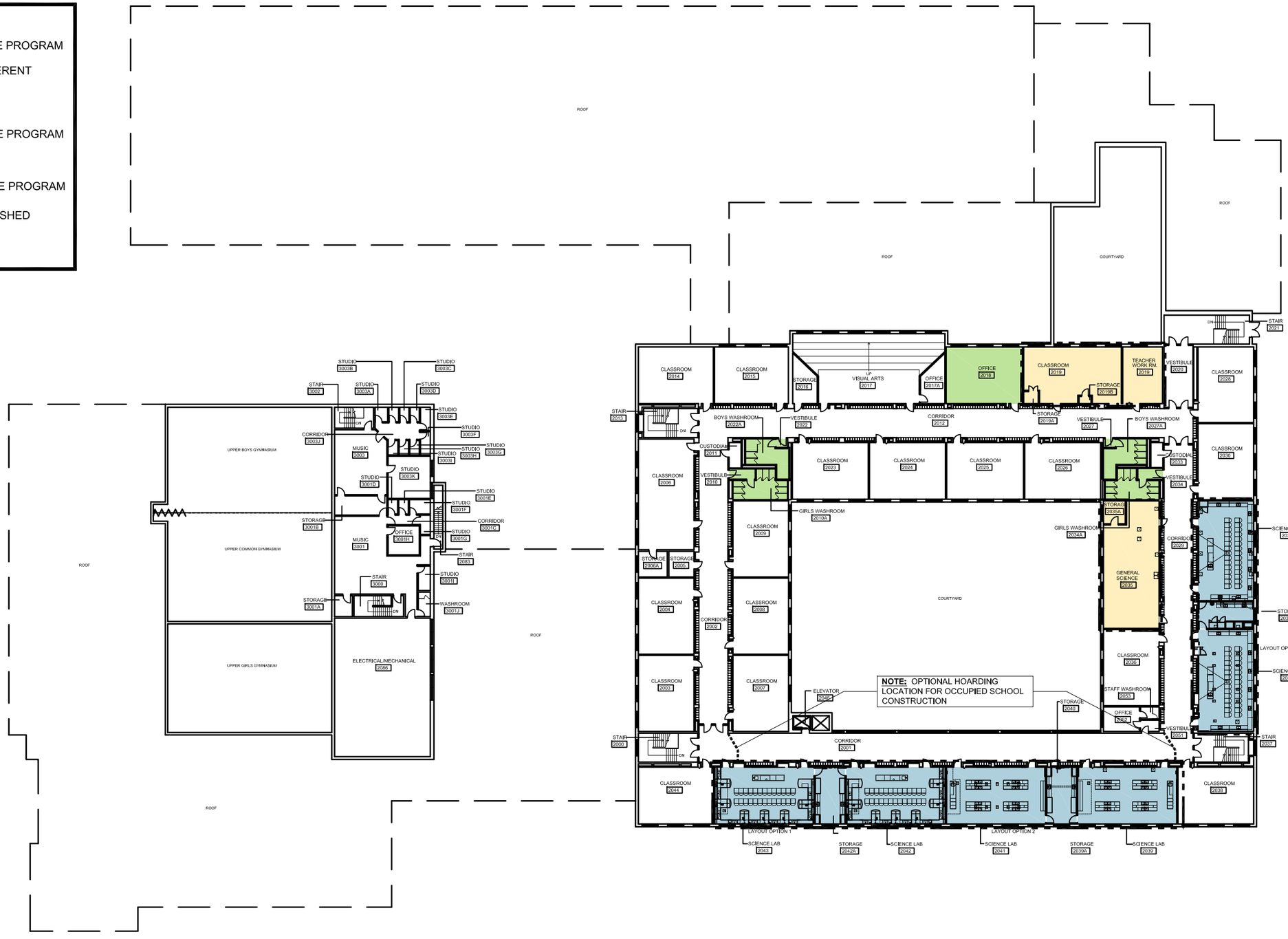
- RENOVATION WITH SAME PROGRAM

PHASE 3

OTHER SPACES

- RENOVATION WITH SAME PROGRAM

- EXISTING TO BE DEMOLISHED
- EXISTING TO REMAIN
- NEW WALLS



ORCHARD PARK SECONDARY SCHOOL

SECOND FLOOR KEY PLAN

PROJ: 15108
SCALE: NTS
DRAWN: CT
DATE: 15/04/15

PROJECT NORTH

TRUE NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

A2

3.6 DESCRIPTION

All Spaces noted below are to be renovated to upgrade flooring, ceilings, painting and millwork as required.

3.6.1 PHASE 1 – Instructional Spaces

All Spaces noted below are to be renovated to upgrade flooring, ceilings, painting and millwork as required.

GROUND FLOOR

COSMETOLOGY
The existing Manufacturing classroom is to be renovated to provide a new Cosmetology classroom. A new exterior doorway will be added to provide access for the public.

COMMUNICATION ARTS
The existing Fabrication classroom and adjacent storage will be renovated to provide a Communications Arts classroom and a TV Studio complete with storage and editing facilities.

HOSPITALITY AND CAFÉ
The existing Construction classroom will be renovated into a new Hospitality Classroom with adjoining Café, connected to the new Student Lounge.

STUDENT LOUNGE
The existing Special Needs classroom and adjacent classroom will be renovated into a new Student Lounge with skylights above.

GRADUATED SUPPORT PROGRAM
An existing classroom and portion of an adjacent classroom located on the ground floor with close proximity to the main entrance will be revised into a new Graduated Support Room. An Orthopedic washroom will be provided with access off the main corridor.

ENGINEERING ROBOTICS
The existing Engineering classroom will continue to provide this program integrated together with a Robotics program and will receive a renovation including new flooring, paint and equipment.

WOOD SHOP
The existing Wood Shop will be renovated with new floors, paint and equipment.

CONSTRUCTION SHOP
The existing Construction Shop will be renovated with new floors, paint and equipment.

AUTOMOTIVE SHOP
The existing Automotive Shop will be renovated with new floors, paint and equipment.*

FABRICATION SHOP
The existing Fabrication Shop will be renovated with new floors, paint and equipment.

SECOND FLOOR

SCIENCE LABS
All the existing Science Labs and adjoining space will be renovated in to new Science Labs with adjoining Prep Rooms. All existing millwork and plumbing will be replaced. Existing Floors and ceilings will also be replaced and existing and new walls will receive new paint.

The existing second floor Cosmetology room will be renovated into new General Science Room. All existing millwork and plumbing will be replaced. Existing Floors and ceilings will also be replaced and existing and new walls will receive new paint.

CLASSROOM AND TEACHER'S WORKROOM
The existing second floor Family Studies classroom will be renovated into a new standard classroom and Teacher's workroom. All existing millwork and plumbing will be removed. The new Classrooms and workroom will receive new flooring, paint and ceilings.

3.6.2 PHASE 2 – Cafeteria and Library

GROUND FLOOR
CAFETERIA AND KITCHEN
The existing Cafeteria and kitchen will be renovated. The existing kitchen and servery will receive all new millwork and equipment. The Cafeteria will receive all new finishes, including floor, ceiling and wall paint.

LIBRARY
The existing Library will be renovated with all new finishes, floors, ceiling and wall paint, as well as reorganizing the layout to provide a lounge area. Existing seminar rooms are to be demolished to provide better access with the student lounge. Three new Seminar rooms will be created along the south wall.

3.6.3 Phase 3 – Non-Instructional Spaces and Washrooms

GROUND FLOOR
WASHROOMS
All existing ground floor washrooms are to be renovated. All plumbing fixtures are to be removed and replaced. New floor, ceiling and wall finishes are to be installed. New washroom partitions are to be installed. Revise layout to include new Barrier-free stalls to meet O.B.C. requirements.

MAIN OFFICE
The existing Main Office area will be renovated with new floors, ceiling and wall finishes.

STAFF ROOM
The existing Main Office area will be renovated with new floors, ceiling and wall finishes.

OFFICES
Existing offices on the ground floor will be renovated with new floors, millwork, ceiling and wall finishes.

SECOND FLOOR

WASHROOMS
All existing second floor washrooms are to be renovated. All plumbing fixtures are to be removed and replaced. New floor, ceiling and wall finishes are to be installed. New washroom partitions are to be installed. Revise layout to include new Barrier-free stalls to meet O.B.C. requirements.

OFFICES
Existing staff offices and workrooms on the second floor will be renovated with new floors, millwork, ceiling and wall finishes.

CONSTRUCTION 1079
STORAGE 1079A
STORAGE 1080A
STORAGE
1079B
UP
COMM. ARTS
MCP
TEACHING WALL
CONTROL RM
EDITING RM
EDITING RM
TV STUDIO
STORAGE
UP
STORAGE 1081A
HOSPITALITY RM. 1081
CAFE 1081B
AESTHETIC SPA BEDS
PEDI
MANI
TEACHING AREA
COSMETOLOGY 1055
ESTHETICIAN
STORAGE
HAIR WASHING
RECEPTION
NEW CANOPY
NEW EXTERIOR ACCESS

CORRIDOR 1061

STUDENT LOUNGE 1060
SKYLIGHT
SKYLIGHT
SKYLIGHT

SP. NEEDS WR 1067A
W. STAFF WR 1065B
STORAGE 1068A
STORAGE 1070
OFFICE 1071
BOILER 1064
CUSTODIAL 1063
STORAGE 1062
STORAGE 1064A
ELECTRICAL RM. 1064B
ELECTRICAL RM. 1064C

CORRIDOR 1058

OFFICE 1059B
OFFICE 1059A
LEARNING COMMONS 1059

STORAGE 1085
OFFICE 1084A
COMPUTER LAB 1085

SEMINAR
SEMINAR
SEMINAR

ORCHARD PARK SECONDARY SCHOOL

GROUND FLOOR - ENLARGED PLANS

PROJ: 15108
SCALE: 1/16"=1'-0"
DRAWN: CT
DATE: 15/04/08

PROJECT NORTH
TRUE NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

A3

TIRE CHANGER (NIC)
WHEEL BALANCER (NIC)
MIG WELDER (NIC)
ARC WELDER (NIC)
FB
WELDING ABLE (NIC)
EXHAUST HOOD
FE
CHOP SAW (NIC)
GRINDER (NIC)
BRAKE LATHE (NIC)
PARTS WAS (NIC)
STEEL WORK BENCHES (NIC)
ROLLING TOOL CHEST (NIC)
COMPUTER DESKS (NIC)
AUTO SHOP
1077
FLOOR TRENCH (DIV. 15)
OIL INTERCEPTOR ACCESS HATCH
VEHICLE HOIST (NIC)
ENGINE HOIST (FOLDED) (NIC)
ENGINE STAND (NIC)
ENGINE STAND (NIC)
UP
WB 2400
WB 2400
WB 2400
STEEL WORK BENCH (NIC)
PANEL SAW (NIC)
MITRE SAW (NIC)
MITRE SAW (NIC)
LATHE (NIC)
WOOD SHOP
1078
TABLE SAW (NIC)
TABLE ROUTER (NIC)
TABLE ROUTER (NIC)
DRILL PRESS (NIC)
MORTISER (NIC)
PLANER (NIC)
JOINTER (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
TB 2400
SCROLL SAW (NIC)
SCROLL SAW (NIC)
SC
BAND SAW (NIC)
SC
CONSTRUC
1079

FABRICATION
1074
STORAGE
1074A
STORAGE
1076
MCP
WB 2000
SMRTB 2000 (NIC)
WB 2000
ROBOTICS ENGINEERING
1073
WORK TABLE (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
WORK TABLE (NIC)
DRILL PRESS (NIC)
CNC LATHE (NIC)
CNC MILL (NIC)
CNC ROUTER (NIC)
STORAGE
1151
CORRIDOR
1066
SP. NEEDS WR
1067A
W. STAFF WR
1065B
STORAGE
1068A
STORAG
1070
OFFICE
1071

ORCHARD PARK SECONDARY SCHOOL

GROUND FLOOR - ENLARGED PLANS

PROJ: 15108
SCALE: 1/8"=1'-0"
DRAWN: CT
DATE: 15/04/08

PROJECT NORTH
TRUE NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

A4

UP

STEEL WORK BENCH (NIC)

SCROLL SAW (NIC)

SCROLL SAW (NIC)

BAND SAW (NIC)

SC

SC

CORRIDOR
1061

MCP

WB 2000

SMRTB 2000 (NIC)

WB 2000

FABRICATION
1074

ROBOTICS ENGINEERING
1073

WORK TABLE (NIC)

WORK TABLE (NIC)

WORK TABLE (NIC)

WORK TABLE (NIC)

WORK TABLE (NIC)

WORK TABLE (NIC)

CORRIDOR
1066

STORAGE
1151

STORAGE
1074A

STORAGE
1076

DRILL PRESS (NIC)

CNC LATHE (NIC)

CNC MILL (NIC)

CNC ROUTER (NIC)

ORCHARD PARK SECONDARY SCHOOL

GROUND FLOOR - ENLARGED PLANS

PROJ: 15108
SCALE: 1/8"=1'-0"
DRAWN: CT
DATE: 15/04/08

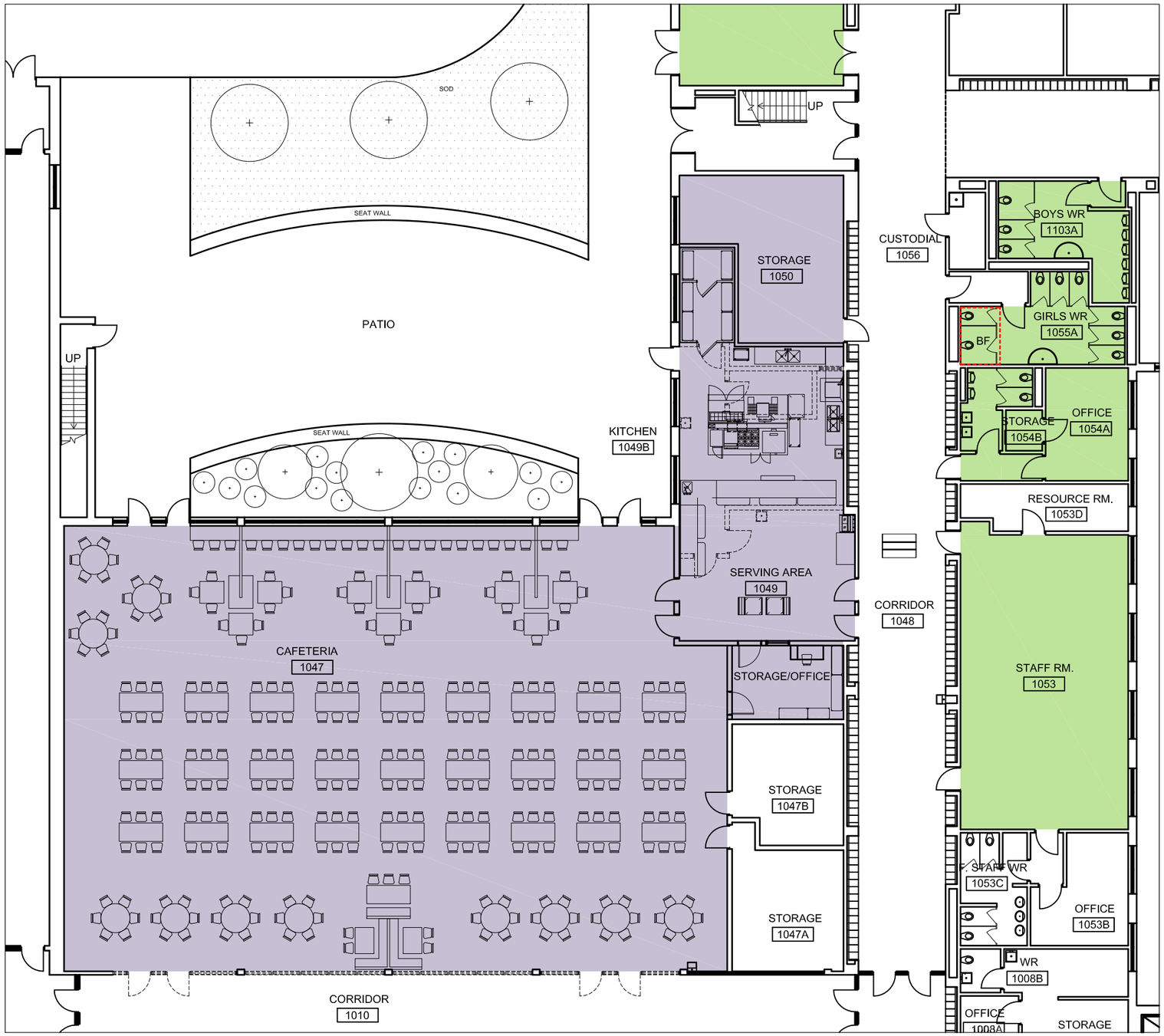
PROJECT NORTH

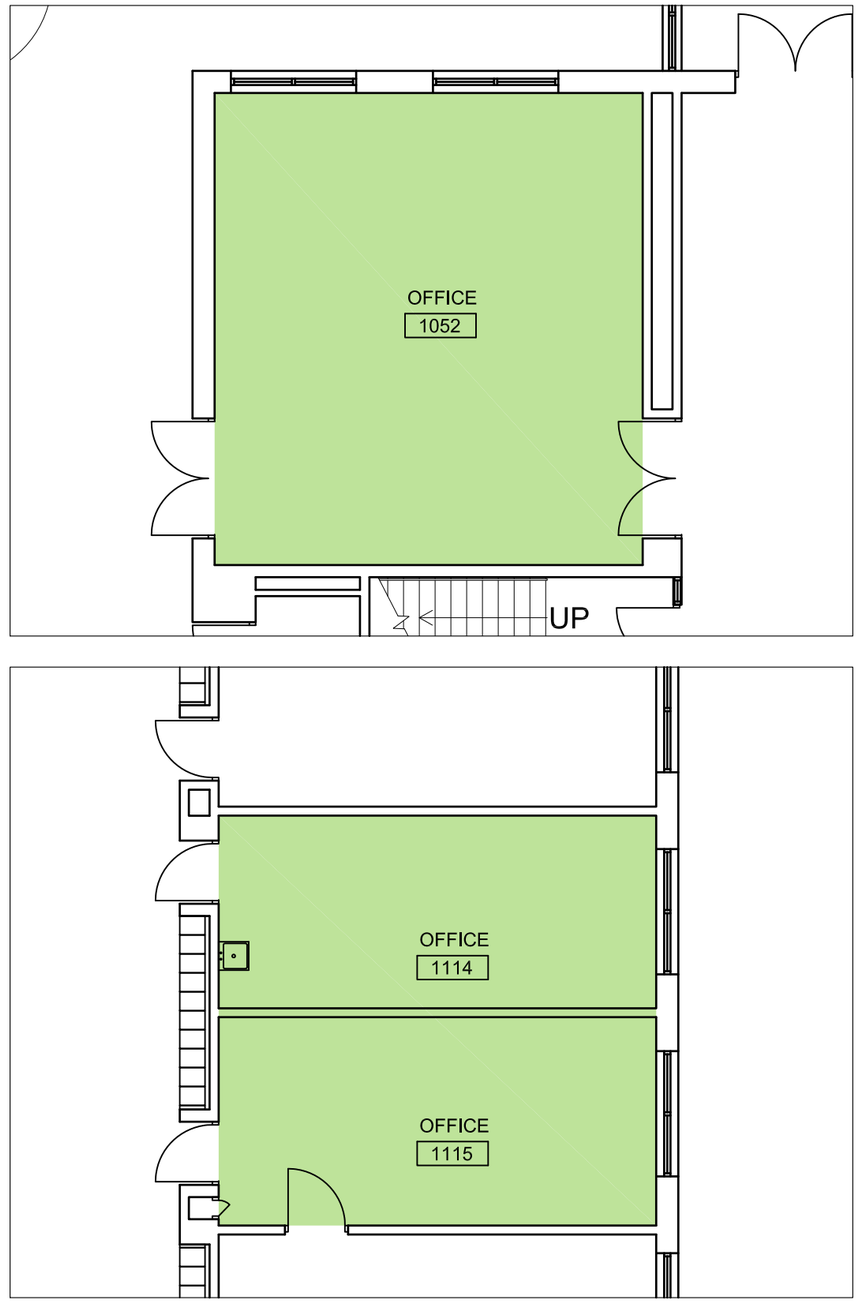
TRUE NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

A5





ORCHARD PARK SECONDARY SCHOOL

GROUND FLOOR - ENLARGED PLANS

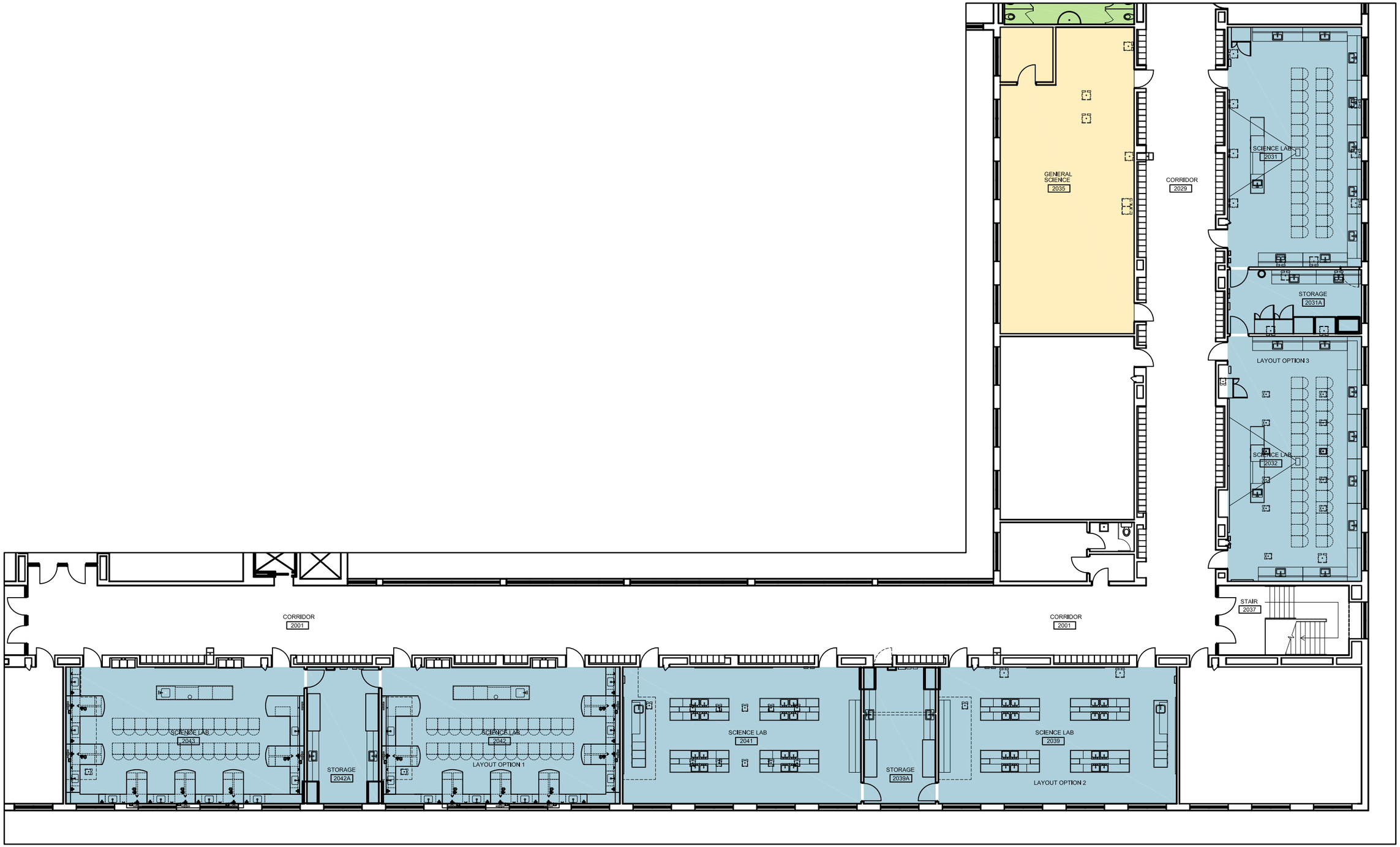
PROJ: 15108
SCALE: VARIES
DRAWN: CT
DATE: 15/04/08

PROJECT NORTH
TRUE NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

A6



ORCHARD PARK SECONDARY SCHOOL

SECOND FLOOR - ENLARGED PLANS

PROJ: 15108
SCALE: 1/16"=1'-0"
DRAWN: CT
DATE: 15/04/08

PROJECT NORTH
TRUE NORTH

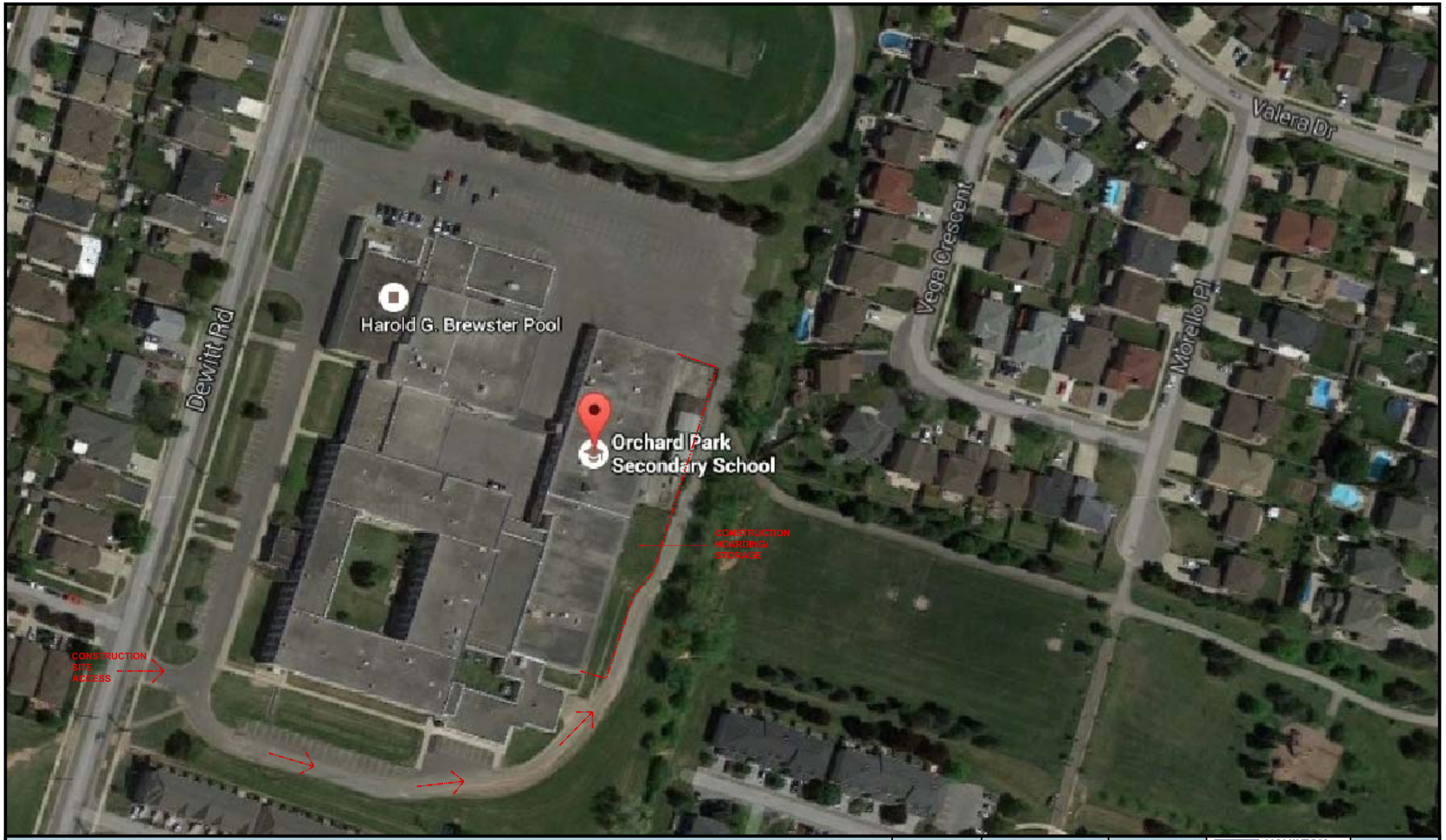
HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

A7

3.7 SITE PLAN – Construction Access

The site has three accesses from Dewitt Road. One will be shared as a construction access. Refer to attached Site Plan for the proposed locations of the Construction Storage and Construction Building entrance.



ORCHARD PARK SECONDARY SCHOOL

SITE PLAN

PROJ: 15108
SCALE: NTS
DRAWN: CT
DATE: 15/04/08

TRUE NORTH

PROJECT NORTH

HOSSACK & ASSOCIATES ARCHITECTS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD

SP1

SECTION 4 – SUSTAINABLE DESIGN STRATEGIES

The revitalization of Orchard Park Secondary School is proposed as a renovation to the existing building to repurpose existing space for the modern needs of the users. An addition is both costly and utilizes site area, which is limited in the urban setting of this school. Also, it has been identified that the existing building has sufficient space to accommodate the projected future enrollment population.

The intention is to renovate using sustainable design strategies such as the following:

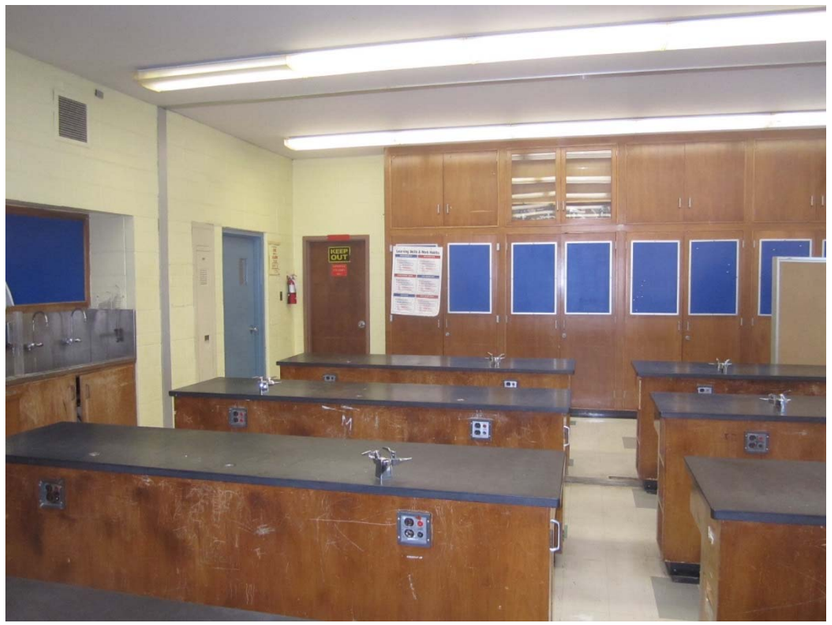
- Retain existing building components wherever possible (thus reducing material in landfill).
- Reuse existing building components wherever possible (reuse concrete block or brick veneer).
- Replace building components that do not promote energy efficient qualities (ie. poor windows and doors, mechanical, plumbing and electrical equipment).
- Use construction materials with recycled content wherever possible.
- Use local construction materials wherever possible.
- Incorporate building technologies which promote lower energy usages (ie. occupancies sensors for lighting).
- Items identified in the Existing Building Conditions Report to be replaced pertaining to building envelope or building systems are to be replaced with higher performance, energy efficient components, thus reducing energy use requirements.

Efforts toward a school revitalization and renewal that embraces sustainable strategies is in keeping with the School Board mandate toward healthier environments for students, staff and the communities they serve.

APPENDIX A

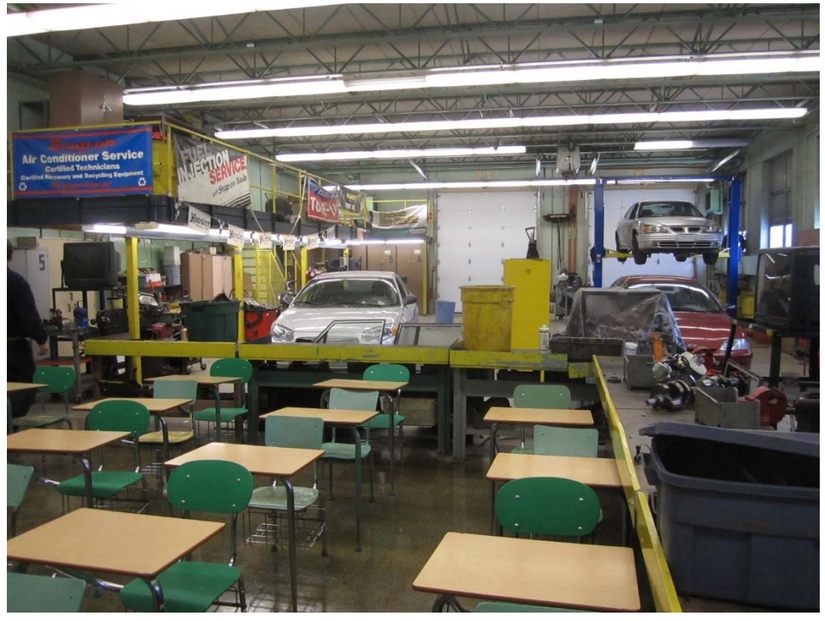
EXISTING CONDITIONS PHOTOS

APPENDIX A - EXISTING CONDITIONS PHOTOS




WEAR YOUR
SAFETY GLASSES


CAUTION
POWER IS ON . OBSERVE
ALL SAFETY RULES
WARNING
Before operating machines, BRAIN must be in gear.
STOP
STOP


Air Conditioner Service
Certified Technicians
INJECTION SERVICE

APPENDIX B

MECHANICAL
FEASIBILITY STUDY &
CONCEPT DESIGN

499 King Street East, Suite 200
Hamilton, ON L8N 1E1 CANADA
T: 905.525.6069 • www.exp.com

• Hamilton Wentworth District School Board

Orchard Park Secondary School

Mechanical Services Feasibility Study & Concept Design

Project Number
GR8-00014230-00

Prepared By:
Murray Wickham, P.Eng., LEED AP
Erick Korthuis

Date Submitted
December 17, 2015

TABLE OF CONTENTS

1.0 INTRODUCTION

The existing Orchard Park Secondary School was opened in 1966 and is located at 200 Dewitt Road in Hamilton, Ontario.

The Hamilton-Wentworth District School Board is proposing to renovate the existing Science Laboratories, Washrooms, Administration Office spaces, Technology Labs (Shops), Cafeteria, and Library and to create new Classroom, Hospitality, Student Lounge, TV Studio, Commercial Arts, Staff Room, Teacher Workroom, new Construction Shops and Special Education (Graduated Support) Classrooms by renovating existing space.

Some of the information in this Design Brief related to existing conditions is based on information from a site review completed in January, 2015. In addition, we have reviewed the building with Ms. Agnese De Fazio, Project Supervisor, Capital Projects.

This report documents the feasibility and the proposed mechanical systems that are consistent with, and anticipated for, the proposed renovations.

This report, prepared by **exp** Services Inc., is intended for the exclusive use of Hamilton-Wentworth District School Board and Hossack & Associates Architects Inc. None of **exp** Services Inc., Hamilton-Wentworth District School Board and Hossack & Associates Architects Inc. assume any liability for the use of this report, or for the use of any information disclosed in the report, or for damages resulting from the use of this report, by other parties.

2.0 CODES, STANDARDS & GUIDELINES

Guidelines and interpretations of the requirements of the latest editions of the following Codes, Standards will be addressed in the design of this project:

- Ontario Building Code (OBC)
- Ontario Fire Code (OFC)
- Ontario Gas Utilization Code
- ASHRAE 62.1, Ventilation for Acceptable Indoor Air Quality
- ASHRAE 90.1, Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings
- NFPA 10, Portable Fire Extinguishers
- NFPA 13, Installation of Sprinkler Systems
- NFPA 14, Installation of Standpipe and Hose Systems
- Hamilton-Wentworth District School Board Design Guidelines

3.0 DESCRIPTION OF SCOPE APPLICABLE TO ALL PROPOSED AREAS OF RENOVATION

3.1 Existing Mechanical Conditions

- Plumbing fixtures and Science Lab sinks complete with associated trim, isolation valves, hot/cold water and sanitary drain pipes serving areas of renovation are to be removed from the site
- Existing buried sanitary and storm pipes serving area of renovation to be power flushed after all construction at the site is complete
- Existing supply air diffusers and/or grilles and a portion of existing ductwork serving areas of renovation are to be removed from the site
- After all construction at the site is complete, existing interior supply, return and exhaust ductwork, approximately 4500 mm from diffusers/grilles is to be power vacuumed
- Existing window air conditioning units and all accessories serving areas of renovation are to be removed from the site
- Existing local fan equipment serving the areas of renovation is to be removed from the site
- Existing unit ventilators that are being reused are to have the interiors cleaned, drain pans cleaned, motors lubricated, filters replaced and all dampers adjusted
- Redundant controls in areas of renovation are to be removed from site
- All existing heating equipment (unit heaters, cabinet heaters, heating coils) that are being reused are to be cleaned and lubricated
- New firestopping to be supplied and installed in gaps between existing pipes/ductwork and existing walls surrounding the renovated area
- Existing equipment being reused to be water and air balanced to match original design documents
- All existing fire extinguishers to be inspected and charged
- Existing wall radiation that is being reused shall be cleaned and enclosures replaced with similar style. New enclosures to be painted
- Existing floor drain grates to be replaced with new, similar in style

Refer to Architectural Demolitions Plans for Rooms/Areas being renovated.

3.2 New Mechanical Requirements

- Type L Copper pipe for new domestic water pipes
- Schedule 40 steel pipe for new heating pipes

- Schedule 40 steel pipe for new gas pipes
- PVC plastic pipe for new sanitary and storm pipes
- DWV copper pipe for new vent pipes
- Type ACR copper piping for new refrigerant pipes
- Type M copper for new condensate pipes
- Borosilicate glass drain pipe for new Science Labs
- New double check valve backflow assembly in existing incoming domestic water and fire pipe
- New Washroom and Change Room supply, return and exhaust ducts are to be aluminum
- New supply, return and exhaust ductwork, unless otherwise noted, are to be galvanized steel fabricated to SMACNA Duct Construction Standards
- Extend existing supply, return and exhaust duct systems complete with new diffusers and grilles to suit the area of renovation, unless otherwise indicated
- New HVAC equipment to be connected to the existing Building Automation System (BAS)
- Supply and install new diffusers and/or grilles serving areas of renovation
- Supply and install additional fire extinguishers to meet the latest Codes and Standards

4.0 DESCRIPTION OF SCOPE APPLICABLE TO SPECIFIC ROOMS/AREAS OF RENOVATION

4.1 Washrooms - All Floors

- Existing wall radiation to be reused
- Existing exhaust system to be reused
- Install new plumbing fixtures as per Architectural Layout and School Board Standards
- Refer to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.2 Cafeteria/Cafeteria Servery Renovation

- Existing wall radiation to be reused.
- Extend and/or relocate existing supply and return duct systems to suit new room layout. New ductwork to be connected to the existing building services
- Refer to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.3 General Offices

- Existing heating wall mounted fan coil units are to remain
- Supply and install a 10-Ton variable refrigerant flow (VRF) cooling system to serve individual offices and General Office. Supply ten (10) dedicated indoor cooling fan coil units complete with refrigerant piping and condensate drains. Fan coil units to be sized to rooms served. Install remote condenser on finished grade
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.4 General Office - Guidance

- Existing heating wall mounted fan coil units are to remain
- Supply and install a 5-Ton variable refrigerant flow (VRF) cooling system to serve individual offices and Meeting Rooms. Supply five (5) dedicated indoor fan coil units, refrigerant piping, condensate drains and remote condensing unit on finished grade
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.5 Graduated Support Program

- Demolish and remove from site all existing radiation
- Supply and install new perimeter building hot water heating pipes and heating equipment to suit new room layout. New pipes to be connected to the existing building heating system
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.6 TV Studio

- Demolish and remove from site all existing supply, return and exhaust air ductwork and all accessories
- Existing facility supply and return ductwork serving the room are to be capped at the Corridor wall
- Demolish and remove from site existing baseboard heating equipment and associated heating pipes
- Supply and install a 7-1/2 Ton cooling and gas heating rooftop unit complete with associated ductwork, grilles, diffusers and controls
- Supply and install new perimeter building water heating pipes and baseboard heating equipment to suit new room layout. New pipes to be connected to existing building heating system
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - New Mechanical Requirements

4.7 Communication Arts

- Demolish and remove from the site all existing exhaust air systems and all accessories
- Demolish and remove from site existing baseboard heating equipment and associated heating pipes
- Supply and install new building hot water heating pipes and heating equipment to suit new room layout. New pipes to be connected to existing building heating system
- Existing facility supply and return ductwork serving the room are to be capped at the Corridor wall
- Supply and install a 5-ton cooling split ductless system complete with indoor fan coil units, refrigerant piping, condensate drains and remote roof mounted condensing unit

- Refer also to General Scope Applicable to All Proposed Areas of Renovation - New Mechanical Requirements

4.8 Engineering/Robotics Classroom

- Demolish and remove from the site all existing exhaust air systems and all accessories
- Supply and install a new specialized exhaust air system complete with exhaust fan and associated ductwork and connect to Owner supplied equipment. i.e. Finishing exhaust system (800 CFM)
- Existing heating equipment and accessories are to remain
- Refer to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.9 Fabrication

- Demolish and remove from the site all existing exhaust air systems and all accessories
- Supply and install new specialized exhaust air systems and connect to Owner supplied equipment
- Existing heating equipment and all accessories are to remain
- Refer to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.10 Wood Shop

- Demolish and remove from the site all existing exhaust air systems and all accessories
- Supply and install a new sawdust collector complete with spark arrestor system (6000 CFM), exhaust air system and connect to Owner supplied equipment
- Existing heating equipment and accessories are to remain
- Refer to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.11 Automotive Shop

- Demolish and remove from the site all existing exhaust air systems and all accessories

- Supply and install new specialized exhaust air systems complete with exhaust fan and associated ductwork and connect to Owner supplied equipment. i.e. Carbon monoxide system (500 CFM); Finishing exhaust system (800 CFM); Welding exhaust system (1500 CFM)
- Existing heating equipment and accessories are to remain
- Refer to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.12 Hospitality/Café

- Demolish and remove from site all existing wall radiation
- Supply and install new perimeter heating building hot water heating pipes and heating equipment to suit new room layout. New pipes to be connected to the existing building heating system
- Supply and install new sanitary piping to serve new commercial kitchen equipment. Connect piping to the existing building sanitary system
- Supply and install new domestic hot, cold and recirculation pipe distribution system to all commercial kitchen equipment. New pipes to be connected to the existing building systems complete with isolation valves and all accessories
- Supply and install a new 100 gallon (450 L) grease interceptor
- Reroute existing above grade storm sewer piping to suit new room layout
- Supply and install new cooking exhaust hood (2500 CFM) complete with roof exhaust fan and associated exhaust ductwork. New ductwork to be 16 gauge steel, fabricated and labelled to NFPA 96 complete with 2-hour rated non-combustible flexible fireproof wrap
- Supply and install cooking exhaust hood fire suppression system
- Supply and install a gas heating rooftop make-up air unit (2000 CFM) to serve the cooking exhaust hood
- Supply and install a 5-Ton cooling and gas heating rooftop unit (2000 CFM) complete with ductwork, grilles, diffusers and controls
- Supply and install refrigeration piping to serve new walk-in refrigerator and freezer units
- Supply and install an automatic gas shut-off valve serving the commercial kitchen equipment to Close upon fire alarm activation
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.13 Construction

- Demolish and remove from the site all existing exhaust air systems and all accessories
- Supply and install new specialized exhaust air systems complete with exhaust fan and associated ductwork and connect to Owner supplied equipment
- Existing heating equipment and accessories are to remain
- Refer to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.14 Student Lounge/Student Gallery

- Supply and install new supply and return air ducts, diffusers/grilles and accessories to serve new room layout. New ductwork to be connected to the existing building systems
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.15 Library/Offices/Seminar Rooms

- Refer to General Scope Applicable to All Proposed Areas of Renovation - New Mechanical Requirements

4.16 New Classroom - Second Floor

- Existing heating equipment is to remain
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.17 Science Labs/Prep Rooms

- Existing wall radiation to be reused
- Demolish and remove from site all existing sanitary, domestic water and natural gas piping serving the old Science Labs
- Demolish and remove from site all existing Instructor's Work Bench exhaust systems, exhaust fan and associated ductwork serving the old Science Labs
- Demolish and remove from site all existing fume hoods serving old Science Labs

- Demolish and remove from site all existing emergency exhaust systems, fans and associated ductwork, serving the old Science Labs
- New Science Lab exhaust air extraction duct to be internally lined PVC coated, Class B negative pressure
- Supply and install new sanitary piping and connect to all new sinks, emergency eyewash, fume hoods, and floor drains. Sanitary pipe to be connect to new neutralizing tank located on the First Floor. New pipe to be connected to the existing building sanitary system
- Supply and install new domestic hot, cold and recirculation water and natural gas pipes to serve new Instructor's Work Benches complete with isolation and solenoid valves. Install solenoid valves on new cold water and natural gas pipes serving Student Work Benches. New pipes to be connected to the existing systems complete with isolation valves and all accessories. Solenoid valve to be controlled by a key switch located at the Instructor's Work Bench and to an emergency panic button located on the wall beside the door leaving the Room.
- Supply and install new two-sided fume hoods (800 CFM each) complete with roof mounted exhaust fans, exhaust ductwork and air proving switch to serve new Lab layout.
- Supply and install emergency exhaust system (1500 CFM) complete with outdoor exhaust fan, ductwork and exhaust grille. Fan to be manually operated
- Existing room unit ventilator compete with wall enclosure and existing associated piping are to remain
- Supply and install new dedicated Classroom Instructor's Work Bench exhaust system complete with roof exhaust fan and associated exhaust ductwork. Fan to be manually operated from Instructor's Work Bench
- New Instructor's Work Bench and fume hood exhaust air extraction duct to be internally lined PVC coated, Class B negative pressure
- Supply and install two (2) floor type neutralizing tanks (150 gallon capacity each) complete with limestone chips to serve new Chemistry Labs. Neutralizing tanks to rest on the First Floor
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.18 Teacher Workroom

- Demolish and remove from site existing baseboard heating equipment and associated heating piping

- Demolish and remove from site a portion of existing supply duct, return duct, diffusers/grilles and accessories to serve new room layout. New ductwork to be connected to the existing building systems
- Supply and install new building hot water heating piping and baseboard heating equipment to suit the new layout. New pipes to be connected to the existing building heating system
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.19 Office

- Demolish and remove from site existing baseboard heating equipment and associated heating piping
- Demolish and remove from site a portion of existing supply duct, return duct, diffusers/grilles and accessories to serve new room layout. New ductwork to be connected to the existing building systems
- Supply and install new building hot water heating piping and baseboard heating equipment to suit the new layout. New pipes to be connected to the existing building heating system
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.20 Staff Room/Male Staff Washroom/Office

- Install new plumbing fixtures as per Architectural Layout and School Board Standards
- Supply and install new supply and return air ducts, diffusers/grilles and all accessories to serve new room layout. New ductwork to be connected to the existing building systems
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.21 General Science

- Existing wall radiation to be reused
- Existing room unit ventilator to remain
- Demolish and remove from site all existing sanitary, domestic water and natural gas piping serving the old Cosmetology
- Demolish and remove from site all existing exhaust systems, fans and associated ductwork serving the old Cosmetology

- Supply and install new sanitary piping and connect to all new sinks and floor drains. New piping to be connected to the existing building sanitary system
- Supply and install new domestic hot, cold and recirculation water and natural gas pipes to serve Work Benches complete with isolation and solenoid valves. New pipes to be connected to the existing systems complete with isolation valves and all accessories. Solenoid valve to be controlled by a key switch located in the Work Bench and to an emergency panic button located on the wall beside the door leaving the Room
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.22 Cosmetology

- Demolish and remove from the site all existing wall radiation
- Demolish and remove from all existing exhaust air systems
- Supply and install a new sanitary piping to serve new hair sinks. Connect new piping to the existing building sanitary system
- Install new hair sinks as per Architectural Layout and School Board Standards
- Supply and install new domestic hot, cold and recirculation pipe distribution system to all new hair sinks. Portion of new pipes to run buried below finished floor. New pipes to be connected to the existing building systems complete with isolation valves and all accessories
- Supply and install new perimeter building hot water heating pipes and heating equipment to suit new room layout
- Supply and install new manually operated roof exhaust fan (1500 CFM), ductwork, grilles and all accessories
- Extend existing supply and return duct system to suit new room layout
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.23 Kitchen /Servery Area

- Supply and install new sanitary piping to serve new commercial kitchen equipment. Connect new piping to existing building sanitary system
- Supply and install new domestic hot, cold and recirculation pipe distribution system to all commercial kitchen equipment. New pipes to be connected to the existing building system complete with isolation valves and all accessories
- Supply and install a new 300 gallon (1350 L) grease interceptor

- Reroute existing above grade storm sewer piping to suit new room layout
- Supply and install new dishwater exhaust hood (500 CFM) complete with roof exhaust fan and associated exhaust ductwork
- Supply and install new cooking exhaust hood (4000 CFM) complete with roof exhaust fan and associated exhaust ductwork. New exhaust ductwork to be 16 gauge steel, fabricated and labelled to NFPA 96 complete with 2-hour rated non-combustible flexible fireproof wrap
- Supply and install cooking exhaust hood fire suppression system
- Supply and install a gas heating make-up air roof-top unit (3200 CFM) to serve the cooking exhaust hood
- Supply and install a 7-1/2 Ton cooling and gas heating rooftop unit complete with ductwork, grilles, diffusers and controls
- Supply and install refrigeration piping to serve new walk-in refrigerator and freezer units
- Supply and install an automatic gas shut-off valve serving the commercial kitchen equipment to Close upon fire alarm activation
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - New Mechanical Requirements

4.24 Special Ed (Graduated Support Program)

- Demolish and remove from site all existing radiation
- Supply and install new perimeter building hot water heating pipes and heating equipment to suit new room layout. New pipes to be connected to the existing building heating system
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.25 Ortho Washroom (Graduated Support Program)

- Supply and install new sanitary sewer piping to serve new plumbing fixtures. Piping to be connected to the existing building sanitary system
- Install new plumbing fixtures as per Architectural Layout and School Board Standards
- Supply and install new domestic hot, cold and recirculation pipe distribution system to all new plumbing fixtures. New pipes to be connected to the existing building systems complete with isolation valves and all accessories
- Supply and install new indoor in-line exhaust fan (300 CFM), ductwork, grilles, outdoor wall louvre and all accessories to serve dedicated area Washrooms

- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.26 CADD Lab

- Remove all existing mechanical services beyond finished wall/floor/ceiling surfaces
- Supply and install a 5-Ton cooling /heating ductless spilt system complete with indoor fan coil unit, remote condensing unit, refrigerant piping and condensate drains
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.27 Gymnasium Entrance Modifications

- Existing return/exhaust ductwork to be partially removed and capped
- Refer also to General Scope Applicable to All Proposed Areas of Renovation - Existing and New Mechanical Requirements

4.28 New Outdoor Patio

- Upgrade existing storm drainage piping and accessories located within outline of new patio area

APPENDIX C
ELECTRICAL
FEASIBILITY STUDY &
CONCEPT DESIGN

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Orchard Park Secondary School

Electrical Services Feasibility Study & Concept Design

Project Number
GR8-00014230-00

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Date Submitted
December 17, 2015

TABLE OF CONTENTS

1.0 INTRODUCTION

The existing Orchard Park Secondary School was opened in 1965 and is located at 20 Dewitt Road, in Stoney Creek, Ontario.

The Hamilton-Wentworth District School Board is proposing to renovate the existing Science Laboratories, Washrooms, Administration Office spaces, Technology Labs (Shops), Cafeteria, and Library and to create new Classrooms, Staff Room, Hospitality Room, Café, Student Gallery, Cosmetology Room and Special Education Classrooms by renovating existing space.

This report documents the feasibility and the proposed electrical systems that are consistent with and anticipated for, the proposed renovations.

This report, prepared by **exp** Services Inc., is intended for the exclusive use of Hamilton-Wentworth District School Board and Hossack & Associates Architects Inc. None of **exp** Services Inc., Hamilton-Wentworth District School Board and Hossack & Associates Architects Inc. assume any liability for the use of this report, or for the use of any information disclosed in the report, or for damages resulting from the use of this report, by other parties.

2.0 CODES, STANDARDS & GUIDELINES

Interpretations of the requirements of the latest editions of the following Codes, Standards and Guidelines will be addressed in the design of this project:

- Ontario Building Code (OBC)
- Ontario Fire Code (OFC)
- Ontario Electrical Safety Code (OESC)
- IES Recommended Practices and Guidelines
- ASHRAE/IES 90.1, Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings
- Hamilton-Wentworth District School Board Design Guidelines

3.0 GENERAL ELECTRICAL CONSTRUCTION SCOPE - ALL AREAS OF RENOVATIONS

3.1 Selective Demolition of Existing Electrical Systems

Unless noted otherwise, all existing electrical systems in the areas of renovation will be disconnected and removed. This includes all power distribution equipment and cabling, branch circuit wiring/conduit, selected fire alarm system devices, public address system, lighting, lighting controls, receptacles, communication outlets, CCTV cameras, music, security systems and wiring for mechanical equipment.

Existing electrical systems that are to be demolished will be disconnected and removed back to source. Where the removed devices are deemed suitable, they will be relocated/re-used.

Refer to Architectural Demolitions Plans for Rooms/Areas being renovated.

3.2 Electrical Power & Distribution

.1 Primary Power Supply

The proposed renovations are not expected to result in any net electrical peak demand load growth and as a result, the existing incoming electrical service supply will remain as is.

.2 Power Distribution

Refer to the selective demolition section of this Report.

Unless indicated otherwise, existing 600/347V and 120/208V power distribution, lighting and receptacle panelboards will remain.

New electrical panelboards will be provided in all new General Science Rooms, Science Labs, Technology Labs (Shops). Refer to Typical Room Specific Electrical Requirements section of this Report.

New panelboards will be fed from existing distribution panels.

All new panelboards will be complete with copper bus.

Conductors for all new feeders will be copper.

.3 Branch Circuit Wiring

Branch circuit wiring systems will be provided throughout all areas of renovation to all new loads as well as existing-to-remain loads as required. Conductors for all branch circuit wiring will be copper. Loads will typically be supplied with power from the nearest panelboard.

.4 Receptacles

Receptacles will be provided throughout the areas of renovation as required for equipment, housekeeping and convenience and also as required by Codes and Standards. Refer to the Typical Room-Specific Electrical Requirements section of this Report.

3.3 Fire Alarm System

Refer to Selective Demolition section of this Report.

The Building is equipped with an existing two-stage, non-addressable, Simplex fire alarm system complete with a Simplex 4100 Series control panel, initiating devices and audible signalling devices (bells).

The existing main Control Panel located in the existing Custodial Office on the First Floor will be upgraded to accept new devices.

Existing-to-remain fire detectors, pull stations, signalling devices, etc., outside of the renovated areas and not affected by the renovations will be reconnected to the new Control Panel. New devices (including strobe visual signalling devices) will be added as required in the areas of renovation, in order to ensure compliance with Codes, Standards and Guidelines, i.e.:

- Manual pull stations (2-stage) at all required exits
- Heat detectors in all Utility, Service and Storage Rooms
- Visual signal appliances (i.e. strobes) in all public areas and areas with high ambient sound levels
- The entire system will be tested and verified as per Code requirements

3.4 Lighting

Refer to the Selective Demolition section of this Report.

Unless noted otherwise, all existing lighting systems outside the areas of renovation and not affected by the renovations will remain. New lighting systems and controls will be provided as required in the areas of renovation,

Existing luminaires that are to be removed will be disconnected and removed from site. Lighting ballasts containing PCBs, if found during the Demolition phase, will be disposed of in accordance with Ministry of Environment regulations.

.1 New Lighting Systems - Interior

All new lighting will utilize energy efficient dimmable LED lamp technology in order to provide daylight harvesting where required and for dimming of classrooms lighting during Audio Visual presentations. High colour rendering, warm and neutral white LED's will be specified as appropriate to suit each application.

Luminaires suitable for use with a 120V power supply will be used.

In general, new interior lighting systems will be provided for the areas of renovation. Lighting systems will be integrated with the building architecture as much as possible. Luminaires that cannot be concealed within an architectural element will be well shielded using either a frosted white or prismatic refracting lens.

Refer to Typical Room Specific Electrical Requirements section of this Report.

.2 New Lighting Systems - Exterior

Exterior lighting fixtures will be provided on the existing building to serve the new Cafeteria Patio area.

All new lighting will utilize energy efficient LED lamp technology with colour rendering of 70 or better and colour temperature tolerance of 4100 to 4300 K.

.3 Lighting Controls

In general, lighting controls with multi-level control will be provided in accordance with the Codes, Standards and Guidelines.

Except for Washrooms, low voltage lighting control system comprised of switches, vacancy sensors and a dimmable daylight control strategy will be specified on all renovated Rooms/ Areas in accordance with ASHRAE/IES 90.1 Standards.
Washrooms will be equipped with occupancy sensors for automatic On/Off of the light fixtures.

.4 Emergency Lighting and Exit signs

Emergency Lighting and Exit signs will be provided in the areas of renovation as required in order to satisfy the requirements of the Ontario Building Code. Emergency lighting systems will consist of battery units and remote heads as required to meet Code requirements.

Exit signs will be LED "green running man" pictogram type.

3.5 Miscellaneous Electrical Work

.1 Communication Cabling (IT/Voice)

Refer to the Selective Demolition section of this Report.

Existing Network/Voice incoming service (fibre optic [FO] cable) will remain.

The existing horizontal copper cabling distribution is comprised of one (1) Main IT Closet on the First Floor and Satellite Racks with Network switches and patch panels located in various rooms throughout the School. The Main IT Closet will remain however any Satellite Racks located within the areas of renovation will be relocated and upgraded as required to accommodate the renovations and the new cabling requirements. Refer to Typical Room Specific Electrical Requirements section of this Report.

Existing wireless (Wi-Fi) access point devices, currently located throughout the School, including in Classrooms, Labs, Shops, Library and Cafeteria, will remain and be reused.

New Cat. 6e cables will be run from the new outlets that are required in the areas of renovation, to the IT Closet or nearest existing satellite rack located on the same floor as the outlet.

.2 Clock Systems

Refer to Selective Demolition section of this Report.

The building is currently equipped with an existing 120 VAC synchronous impulse type master clock system located in the First Floor Main Office that operates various 120V synchronous impulse type secondary clocks throughout the School Corridors. This system will remain and be reused.

The Building is also equipped with an existing 120V wireless clock system with receiver located in a Storage Room on the Second Floor and clocks in Classrooms, Shops and Labs. This system will remain, existing clocks will be reused and new clocks provided as required.

.3 Emergency Call Systems (Washrooms)

In accordance with the School Board Design Guidelines, an emergency call system (tone/visual type) will be provided for Orthopedic Washroom in the Special Education area and in all Staff Washrooms. An emergency call station located adjacent the toilet complete with corridor indicating light will be installed outside the Washroom. Calls will be annunciated at a new annunciator that will be located at the First Floor Main Office.

.4 Public Address and Program Bell System

Refer to the Selective Demolition section of this Report.

The School is currently equipped with an existing P/A & Program Bell System complete with speakers throughout the School that will remain and be upgraded as required in order to accommodate the work associated with the proposed renovations

The main control console is located in the Main Office on the First Floor.

New speakers complete with integral call switch will be provided in all new Classrooms, Labs, Staff Lounge, Teacher's Workrooms and Shops.

.5 Wiring For Mechanical Equipment

Refer to the Selective Demolition section of this Report.

Motor starters, variable frequency drives, disconnect switches, power and control wiring will be provided for any new mechanical equipment that is required. Refer to the Mechanical Services Feasibility Study and Concept Design Brief, for information regarding such equipment.

.6 Security System

Refer to the Selective Demolition section of this Report.

The School is currently equipped with a security system comprised of a main control panel located in the Custodial Office on the First Floor, key pads and door status/monitoring contacts at exterior doors. This system will remain and be upgraded as required.

Unless noted otherwise, existing door status/monitoring contacts outside of areas of renovation and not affected the renovations will remain.

New door status/monitoring contacts will be added as required at Exterior Doors and Staff Rooms and connected to existing system.

.7 Closed-Circuit Television System (Security Cameras)

The School is currently equipped with a system comprised of existing head-end equipment located in the Main Office on the First Floor and cameras located in Corridors and Library. This system will remain as is and equipment will be reused.

.8 Music System

Existing music system in the Cafeteria will remain and be reused.

.9 Modular Control Panels

New surface mounted panels will be provided near each Room main entrance door complete with duplex receptacles, data and telephone outlets, public address speaker, light switches, clock, telephone handset and thermostat in all of the renovated Classrooms, Labs, Technology Labs (Shops), Teacher's Workrooms, Learning Commons Areas, Hospitality Room, Cosmetology Room and Graduated Support/Special Education Areas.

.10 Seismic Restraint Systems

All electrical systems will be seismically braced to comply with the OBC if it is determined that it is required for this site/building. If seismic restraint systems are required, they shall include lateral supports for all suspended systems and lateral seismic resistance for all vibration isolation and fixed mounted equipment.

3.6 Typical Room-Specific Electrical Requirements

.1 Washrooms

All renovated Washrooms to be complete with the following:

- Surface mounted lighting fixtures
- Ceiling mounted occupancy sensors for automatic On/Off of lighting
- Infrared hands-fee sinks, toilets and urinals
- One (1) hand dryer per four (4) stalls

.2 Office/Workroom/Guidance Areas

- Recess mounted lighting fixtures

.3 Cafeteria

- Recessed lighting fixtures
- Receptacles, power connections for equipment and communication outlets as required

.4 Cafeteria Servery

- Recessed lighting fixtures
- Dedicated 120/208V-3∅-4W electrical panel for new Servery/Kitchen equipment
- Receptacles, power connections for Servery/Kitchen equipment and communication outlets as required
- Power connections for Kitchen Hoods
- Power connection for fire suppression system and interlock with fire alarm system for gas supply shut-off

.5 Cafeteria Patio

- Exterior wall mounted lighting fixtures

.6 Technology Labs (Shops)

- Suspended direct/indirect linear light fixtures
- Spray Booth lighting and controls for Automotive Shop
- Welding Booth lighting and controls for Automotive Shops
- Dedicated 120/208V-3 phase-4 wire and 600V-3 phase-3 wire electrical panels complete with emergency Power-Off pushbuttons for Shop equipment only
- Power connection for motorized blinds
- Power and data cabling connection for motorized display screen, overhead projector and interactive board
- Power connections for overhead doors
- Power reels
- Receptacles and data outlets perimeter walls as required
- Three (3) receptacles (20A/120V) at each student workstation

.7 Staff Lounge

- Recessed lighting fixtures
- Eight (8) receptacles and eight (8) data outlets along perimeter walls
- Receptacles and data outlets for the following:
    - Overhead Projector

- Interactive Board
- TV
- Wireless (Wi-Fi) Access Point

.8 Engineering/Robotics Classroom

- Refer to Technology Labs (Shops)

.9 Communication Technology Lab (TV & Communication Art)

- Recessed lighting fixtures and track lighting.
- Ten (10) receptacles and ten (10) data outlets along perimeter walls
- Power and data connection of TV Studio equipment
- Receptacles and data outlets for the following:
  - Overhead Projector
  - Interactive Board/Monitor
  - Printers
- Two (2) receptacles and two (2) data outlets at Teacher's/Demo Desk
- One (1) receptacle at each Student Desk

.10 Science Labs/Classrooms

- Suspended direct/indirect light fixtures
- Dedicated 120/208V-3 phase-4 wire electrical panel complete with emergency Power-Off pushbuttons.
- Eight (8) receptacles and eight (8) data outlets along perimeter walls
- Ground Fault Interrupter receptacles at each Lab Station and Teacher Desk/Demo Station. Power to receptacles to be controlled from Teachers Desk
- Power to Gas Shut-Off valve with interlock to Fire Alarm System
- Receptacles and data outlets for the following:
  - Overhead Projector
  - Interactive Board
- Two (2) receptacles and two (2) data outlets at Teacher's Desk
- One (1) data outlet at each Lab Station

.11 General Science Rooms

Refer to Classrooms.

.12 Classrooms

- Suspended direct/indirect linear lighting
- Eight (8) receptacles and eight (8) data outlets along perimeter walls
- Four (4) receptacles for Tablet charging
- Six (6) floor-mounted receptacles
- Receptacles and data outlets for the following:
  - Overhead Projector
  - Interactive Board/Monitor
- Two (2) receptacles and two (2) data outlets at Teacher's Desk.

.13 Learning Commons

- Recessed lighting fixtures
- Receptacle on perimeter walls at every 15 feet
- Wall mounted surface raceway complete with receptacles and data outlets to accommodate fifteen (15) computer stations
- Eight (8) receptacles and eight (8) data outlets at each Circulation Desk
- Receptacles as required to accommodate five (5) to fifteen (15) Tablet charging stations
- Receptacles for Tablet/Laptop charging station - forty (40) to sixty (60) devices at each Central Staff Desk
- Two (2) receptacle and two (2) communication outlets at each Student Learning Kiosk
- System furniture and floor outlets
- Power connection for motorized blinds
- Receptacles and data outlets for the following:
  - Overhead Projector
  - Interactive Board/Monitor
  - TV
  - Wireless (Wi-Fi) Access Points

- Printers

.14 Learning Commons Seminar Room

- Recessed lighting fixtures
- One (1) receptacle and one (1) data outlet on each wall
- Receptacles and data outlets for the following:
  - Overhead Projector
  - Interactive Board/Monitor

.15 Learning Commons Office

- Recessed lighting fixtures
- Receptacles and communication outlets as required

.16 Graduated Support/Special Education Program Areas

- Recessed lighting fixtures
- Receptacles and communication outlets along perimeter walls
- Three (3) Receptacles and three (3) communication outlets at each Guidance Desk/Station
- Receptacles and communication outlets for the following
  - Overhead Projectors
  - Interactive Board/Monitor
  - TV
  - Wireless (Wi-Fi) Access Point
- Access control system (card reader)

.17 Hospitality Room

- Recessed lighting fixtures.
- Dedicated 120/208V-3 phase-4 wire electrical panels complete with Emergency Power-Off pushbuttons for kitchen equipment
- Eight (8) receptacles and eight (8) communication outlets along perimeter walls for general/student use

- Three (3) 20A-1P receptacles at counter height at each Kitchen Demonstration Station
- Two (2) 15A-1P receptacles and two (2) communication outlets at each Kitchen Demonstration Station
- One (1) 15A-1P dedicated receptacle at each Kitchen Demonstration Station
- Receptacle for each Microwave
- Dedicated 125/250V receptacle for each kitchen range
- Dedicated power for Walk-In Freezer
- Dedicated power for Industrial Washer/Dryer
- Dedicated power for Range Hoods and other various Kitchen equipment
- Receptacles and communication outlets for the following
    - Overhead Projectors
    - Interactive Board/Monitor
    - Wireless (Wi-Fi) Access Point
- Access control system (card reader)
- Cameras over desks for display

.18 Teachers' Workroom

- Recessed lighting fixtures
- Receptacles and Communication Outlets along perimeter walls for general use
- Two (2) Receptacles and two (2) Communication Outlets at each Workstation
- Receptacles and communication outlets for the following
    - Overhead Projector
    - Interactive Board/Monitor
- Wireless (Wi-Fi) access point
- Modular control panel

.19 Café

- Recessed lighting fixtures
- Receptacles as required along perimeter walls
- Wireless (Wi-Fi) access point

.20 Student Lounge

- Recessed lighting fixtures
- Receptacles and communication outlets along perimeter walls as required
- Wireless (Wi-Fi) access point

.21 Cosmetology

- Recessed lighting fixtures
- Power connections for a Spa bed
- A dedicated 120/208V-3 phase-4 wire panel for all Cosmetology Equipment
- Receptacles - along the perimeter walls, as required
- Receptacles and communication outlets for the following
  - Overhead Projector
  - Interactive Board/Monitor
- Wireless (Wi-Fi) access point

.22 Student Gallery

- Recessed lighting fixtures
- Receptacles and communication outlets along perimeter walls as required
- Ten (10) receptacles for charging of Laptops, Tablets, etc.
- Receptacles and communication outlets for the following
  - Overhead Projector
  - Interactive Board/Monitor
- Wireless (Wi-Fi) access point

.23 Storage Room

- Surface mounted lighting fixtures
- Three (3) receptacles

.24 Existing Gymnasium Entrance Modifications

- New recessed lighting fixtures

- Relocation of existing or provision of new ceiling mounted devices on new ceiling as required.

.25 CADD Lab

- Suspended direct/indirect lighting fixtures.
- Receptacles and communication outlets along perimeter walls as required for general use
- Two (2) Receptacles and two (2) communication outlets at each Workstation.
- Receptacles and communication outlets for the following
    - Overhead Projector
    - Interactive Board/Monitor
- Wireless (Wi-Fi) access point
- Modular control panel

APPENDIX D
CONDITION ASSESSMENT

Hamilton-Wentworth District School Board

Condition Assessment

Orchard Park SS, Building ID 8328-1

Facility Name (SFIS)	Orchard Park SS
Ministry Building Number	8328-1
GFA (m2)	15567
Year Built by Original/Additions	1965
Replacement Value - OTG	$32,775,100
Official FCI (%)	12.05
Comparable FCI (%)	24.42
Asset Address	200 DeWitt Rd
Asset City	Stoney Creek
Asset Postal Code	L8E 4M5
-- ACCESSIBILITY CHECKLIST --	----------
Designated parking space	Yes
Path of travel to the main entrance door.	Yes
Designated entrances	No
Path of travel to all floors/elevations.	No
Elevator	Yes
Instructional spaces entrance doors.	No
Fire policy and fire safety plan	No
Fire alarm system with strobe and audible signals	No
Communal washrooms	No
Designated washroom	Yes
-- ENERGY CHECKLIST --	----------
Energy efficient boiler	Yes
Energy audit report	No
Energy efficient domestic hot water heater	Yes
Energy efficient recovery system	No
Energy efficient HVAC pumps and fan motors	No
Energy efficient interior lighting	Yes
Building Automation System	Yes
Energy efficient faucets	No
Energy efficient urinals and toilets	No
Architectural and Site Assessor	Ramin Saeedi
Mechanical and Electrical Assessor	Mark Pantchevski

How to read the final report

The Final Report contains assessment information for 5 years for this facility.

Asset details reported are either populated from the SFIS system (e.g. GFA, year built etc) or calculated based on Ministry's criteria (e.g. Replacement Value – OTG, Official FCI, Comparable FCI etc).

Accessibility and Energy assessment lists are provided in a yes/no format. For a full description of accessibility/energy definitions please check the TCPS database, Asset Narratives, under the Narratives Tab.

Asset Narratives include the following:

- Architectural & Structural Summary –a brief summary of the asset including construction dates and areas of the original and additions. A brief description of the structure, the exterior wall system, the roof assembly system and the building interiors.
- Mechanical Summary – a brief summary of the mechanical systems.
- Electrical Summary – a brief summary of the Electrical systems.
- Site Summary – a brief summary of the Site systems.
- Limitations – a summary of the scope of work and the Tactical Planning Window.

Building Elements listed are only the ones that require replacement in the next 5 years; their condition is Critical if failed or risk of imminent failure is observed, or Poor if it is not functioning as intended with significant repairs within the next two (2) years, or Fair if normal deterioration and minor distress is observed requiring repairs within three (3) to five (5) years.

2011-2015 Cost and Year information is a snapshot from the assessment and cannot be edited in TCPS.

2011-2015 Priority is the value of the Event priority calculated when the assessment data was imported in TCPS and stored in this read-only field.

Estimated Cost and Fiscal Year are values that can be edited at any time by end users.

Event Priority is a field populated with labels like Urgent, High, Medium and Low based on the Event Priority Value. This value is calculated based on the Element Type and Element Condition.

Photos are provided at the event level: old photos are suffixed with the world "Old", new photos are suffixed with the date of assessment.

A copy of this report in PDF format is saved in the TCPS database. You can access it by selecting the Asset Instance in Data Manager and opening this report in PDF format from the Document Tab.

1. Architectural & Structural Executive Summary

Orcher Park SS Building ID-8328-1 was assessed on April 24, 2013 by VFA, is located at 20 DeWitt Road, Stoney Creek, Ontario. The original facility is a two story structure of block construction without basement. The building is constructed in 1965.Addition one was completed in 1990.

The total size of the building is15, 556 square meters. Where visible, mainly in the GYM, workshops, and Cafeteria, the structure of the school are of Metal roof decking, steel trusses, steel joists and load bearing masonry. It was indicated that the roof coverings has been done in last 20 years.

The interior finishes consist of mainly vinyl composite tiles, ceramic tiles, hard wood flooring, painted masonry and gypsum board walls and, gypsum board acoustic ceilings.

The exterior walls of the school are brick veneer finished assembly.

Typical spaces in the school include auto shops, wood shop, library/resource center, music room, theater art class, gymnasiums, weight room, computer rooms, science labs, administration office, and mechanical service space and general instructional classrooms.

2. Mechanical Executive Summary

2013 - Overall, the mechanical equipment is in fair condition.

Heating for Sir Orchard Park Secondary School is provided by four gas fired hot water boilers, updated in 2009. The boilers provide hot water to perimeter fin tube radiators, force flow heaters, fan coil units and the heating coils of the AHUs. There are two central air handlers which supply heating and ventilation throughout the school. Additional heating and ventilation is provided by three make-up air handlers on the roof. There are two rooftop units providing heating and cooling for the school. Cooling is provided by a chiller connected to a condensing unit for addition 2. Cooling for the original building is provided by eight ductless split cooling systems with condensers located on the roof (2009). The remaining ventilation is provided by rooftop exhaust fans and various internal exhaust fans.

Domestic hot water is provided by three gas fired tank water heaters which service the entire school.

The building HVAC system is a mix of pneumatic and DDC controls with a building automation system for most mechanical room equipment.

The school has one elevator in good condition serving two floors with a 950 Kg capacity.

Fire protection for the school is provided by fire extinguishers.
Comments on exceptions: Based on age of components and observed site conditions the following mechanical equipment has exceeded their theoretical useful life and will require replacement within the tactical planning window.

- Domestic water distribution is in fair condition and a study is recommended.

- Sanitary waste distribution is aged in fair condition and a study is recommended.

- Rain water drainage distribution is aged in fair condition and a study is recommended.

- Exterior section of gas piping is corroding and in fair condition

- HVAC pumps in addition 2 are leaking and in critical condition.

- Exhaust fans are aged and in poor condition.

- The central air handlers are original and in poor condition.

- The pneumatic HVAC controls are aged and in fair condition.

- Fire extinguishers are aged and in poor condition.

- One dust collector is aged and in poor condition.

3. Electrical Executive Summary

2013 - Electrically Orchard Park Secondary School is in fair condition.

The main switchgear is original to 1965. The fire alarm panel (Simplex 4100) and end devices are in good condition.

Emergency lighting is provided by wall mounted battery pack units. The interior lighting within the building is in good condition with CFLs and T8 lamps with electronic ballasts. Exterior lighting is provided by fluorescent, HID and incandescent fixtures and light standards for the parking area. Exit lighting is in good condition.

Security system includes a panel, motion detectors, sensors, CCTV and keypads.

The PA system is in good condition.

Comments on exceptions: Based on age of components and observed site conditions the following electrical equipment has exceeded their theoretical useful life and will require replacement within the tactical planning window.

- The primary transformer is aged and in fair condition.

- The main switchboard is aged and in fair condition.

- The secondary switchboard is aged and in fair condition.

- Branch wiring is original in fair condition and a study is recommended.

- Emergency lighting is aged and in poor condition.

- Exterior lighting is aged and in fair condition.

- Information technology system is aged and in fair condition.

- Electrical utilities are aged, in fair condition and a study is recommended.

4. Site Summary

2013-The site at Orchard Park SS is bounded by play field on the north, There are residential development to the south, east and, west Sides.

Typical walkways service the site, with asphalt concrete landing or stairs at most building entrances.

A six foot high chain link fence marks the perimeter of the site; there is a wall mounted sign on top of the main entrance facing west of the building which displays school name; the building access off DeWitt Road and there are paved parking at south, north and, west side of the site.

Definitions for Energy Checklist

Energy audit report: An ASHRAE Level I energy audit report was completed within the last three years.

Energy efficient boiler: The energy efficient boiler provided is a condensing boiler installed within the last five years or is energy star rated.

Energy efficient domestic hot water heater: The energy efficient domestic hot water heater provided is direct or power vented natural gas fired or has an electric heat coil.

Energy efficient recovery system: The building is provided with a Heat Recovery Unit (HRU).

Energy efficient HVAC pumps and fan motors: The energy efficient HVAC pumps and fan motors are reportedly provided with a variable frequency drive.

Energy efficient interior lighting: The provided interior lighting is controlled by motion sensors or building automation system and/or the interior light fixtures are provided with T8 or T5 fluorescent lamps and electronic ballast.

Building Automation System: The building has a comprehensive Direct Digital Control (DCC) automation system to monitor and control the mechanical system.

Energy efficient faucets: Approximately 50% of the lavatory faucets are provided with aerators and motion sensors.

Energy efficient urinals and toilets: Approximately 50% of the urinals and toilets are provided with a low flow flush valve (less than 1.6 gpf)

Definitions for Accessibility Checklist

Designated parking space: The provided designated Barrier Free Accessible parking space is a minimum 2,400 mm wide and is clearly marked with an accessibility sign.

Path of travel to the main entrance door: The provided accessible path of travel from the designated Barrier Free Accessible parking space to an accessible building entrance is a minimum 910 mm wide and includes curb cuts and ramps

Designated entrances: The provided designated Barrier Free Accessible entrance is a minimum 850 mm wide to allow a mobility device, clearly marked with an accessibility sign and is provided with an automatic door open device.

Path of travel to all floors/elevations: The Barrier Free Accessible path of travel is provided with either an accessible ramp or a vertical transportation device where a floor or an elevation difference exists.

Elevator: The provided Barrier Free Accessible Elevator has the following: clear audible communication indicating floors and up/down direction; doors, which open long enough and a minimum 900 mm wide; and a control panel, which is provided with Braille and an emergency call system and where the top is at a maximum height of 1,400 mm above floor.

Instructional spaces entrance doors: The instructional spaces are provided with an entrance door which is a minimum of 850 mm wide.

Fire policy and fire safety plan: Fire policy and fire safety plans are reportedly in place for the evacuation of people with disabilities.

Fire alarm system with strobe and audible signals: Fire alarm system is reported to include strobe lights and audible signals

Communal washrooms: There is a Barrier Free Accessible washroom stall, which is a minimum of 1,500 x 1,500 mm, in the each boys and girls washroom on each accessible floor.

Designated washroom: A designated Barrier Free Accessible washroom is provided on each floor, and is equipped with the following: an automatic door open device; grab bars; emergency call button; lever handle or motion sensor faucets; and a lavatory, where an insulated knee space is provided and the height of lavatory top is a maximum of 815 mm above the floor.

Limitations

This report has been prepared to meet the Ministry of Education (EDU) objectives for the Condition Assessment Program for Educational Facilities in Ontario. The purpose of the Condition Assessment Program was to assess the current physical condition of the schools and associated site features, and to validate information currently contained in the online capital renewal database software Total Capital Planning Solution (TCPS).

The validation of data was limited to a five year period, which is defined as the current assessment year plus four years. Information contained in the database beyond this period was not validated or reviewed.

The provided event costs are intended for global budgeting purposes only. The event costs were adjusted to include regional factors and were based on an approved unit cost list. Actual event costs for the work recommended may differ since the event costs can only be determined after preparation of tender documents, which would consider: specific design conditions, site restrictions, effects of ongoing building operations and construction schedule. The approved cost threshold for the Condition Assessment Program is $ 10,000.

Barrier Free Accessibility and Energy Conservation Measures assessments were limited to a preapproved checklist presented on Page 2. The assessment of portables (classrooms not integrated with the building envelope), solar photovoltaic panels, other solar energy collectors, wind turbines, sheds, less than 45 sq.m., play-equipment/structures, score boards, goal posts and flag poles, fire extinguishers, decommissioned swimming pools, window coverings, black/white boards, benches, gymnastic equipment and the appropriateness of room space were excluded from the scope of work. Information related to these components contained in the database was not updated to reflect condition observed. Information related to events which are either planned or in progress, and currently locked were not updated.

All Elements

B SHELL

B20 Exterior Enclosure

B2010 Exterior Walls

Element Instance : B2010 Exterior Walls - Original Building

Description 2013 - Exterior brick veneer wall with CMU backup walls.

Condition Assessment 2013 - At the time of the assessment the exterior brick veneer walls is showing signs of excessive deterioration with spalling brick and deteriorated mortar joints.

Last Replacement Year	1965
Theoretical Life	75
Technical Condition	Poor

Major Repair[B2010 Exterior Wall- Original Building]

Event Type: Major Repair Priority: High

Brief Description	Major Repair[B2010 Exterior Wall- Original Building]
Estimated Cost	$127,500
Fiscal Event Year	2015
2011-2015 Cost	$127,500
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation 2013 - The exterior brick veneer walls are showing signs of deterioration on all facades of the building. Repointing and brick replacement is necessary as to maintain the integrity of the building envelope.

Apr 2013- Exterior brick veneer wall.

Apr 2013- Evidence of mortar joint deterioration and crack of exterior brick wall.

Apr 2013- Spalling brick on the east facade.

Apr 2013- Spalling brick on the east facade.

B2020 Exterior Windows

Element Instance : B2020 Exterior Windows - Original Building

Description

2013 - Exterior windows are fixed or operable windows located in exterior walls or exterior skin; this includes frames, glazing, caulking, finishes, and other associated work.

Condition Assessment 2013 - At the time of the assessment the exterior windows on the east , south and, north facades were in poor condition, single pane units with hardware missing or not functioning

Last Replacement Year	1965
Theoretical Life	32
Technical Condition	Poor

Replacement[B2020 Exterior Windows-Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement[B2020 Exterior Windows-Original Building]
Estimated Cost	$696,150
Fiscal Event Year	2016
2011-2015 Cost	$696,150
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - Due the condition of the exterior windows, replacement is recommended.

Apr 2013- Typical deteriorated windows on east, south and, north facade of the original building.

Apr 2013- Damaged exterior windows.

B2030 Exterior Doors

Element Instance : B2030 Exterior Doors - Original Building

Description 2013 - Exterior painted hollow metal doors and frames with single glazed non-tempered vision lite.

Condition Assessment 2013 - The majority of the exterior door assemblies are original, with worn finish, corroded frames, deteriorated door seals, single glazed vision lites and have exceeded their effective design rated life.

Last Replacement Year	1965
Theoretical Life	27
Technical Condition	Poor

Replacement [B2030 Exterior Doors - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [B2030 Exterior Doors - Original Building]
Estimated Cost	$137,700
Fiscal Event Year	2016
2011-2015 Cost	$137,700
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - The majority of the exterior door assemblies are original and have exceeded their effective design rated life. Replacement of the door assemblies is recommended.

Apr 2013- Typical painted hollow metal around the original building.

Apr 2013- Stained and scratched exterior door.

Element Instance : B2030 Exterior Doors - Original Building

Description 2013 - Exterior door hardware consists of panic bars, push bars, butt hinges and door pulls

Condition Assessment 2013 - At the time of the assessment the exterior door was in fair condition, showing signs of wear and tear due to use

Last Replacement Year	1965
Theoretical Life	15
Technical Condition	Poor

Replacement [B2030 Exterior Doors - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [B2030 Exterior Doors - Original Building]
Estimated Cost	$43,797

Fiscal Event Year	2015
2011-2015 Cost	$43,797
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation

2013 - It is recommended that the exterior door hardware should be replaced at the time the exterior doors are replaced.

Apr 2013- Typical worn and outdated exterior door hard wares.

Apr 2013- Worn Exterior door hardware.

B30 Roofing

B3010 Roof Coverings

Element Instance : B3010 Roof Coverings

Description

2013 - The original building is covered with a torch-on modified bitumen roof assembly system. The waterproofing membranes are likely installed over rigid insulation. The presence of a vapor barrier is unknown.

Condition Assessment

2013 - The condition of the original building roof assembly is consistent with its age and is in fair overall condition, with patches, blisters, ridging, discoloration, wind scour and cracking of the cap sheet noted at the time of the assessment. roof leaks were reported which have been resolved.

Last Replacement Year	1965
Theoretical Life	22
Technical Condition	Poor

Replacement [B3010 Roof Coverings]

Event Type: Replacement

Priority: Urgent

Brief Description	Replacement [B3010 Roof Coverings]
Estimated Cost	$504,900
Fiscal Event Year	2015
2011-2015 Cost	$504,900
2011-2015 Priority	Urgent
2011-2015 Year	2015

Recommendation

2013 - The roof assembly system of original building is beyond its expected service life and is no longer performing as intended. Replacement is recommended.

Apr 2013- Deteriorated roof assembly.

Apr 2013- Evidence of vegetation growth due to age of the roof and water ponding.

B301006 Roof Openings and Supports

Element Instance : B301006 Roof Openings and Supports- Original Building

Description 2013 - galvanized metal access ladder to the roof and on the roof.

Condition Assessment 2013 - At the time of the assessment there was no access ladder to the roof from inside the existing hatches to the roof. exterior access ladders on the roofs were in poor condition, showing signs of wear and tear due to element.

Last Replacement Year	1967
Theoretical Life	22

Technical Condition Poor

Replacement[B3010 Roof Opening and Supports- Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement[B3010 Roof Opening and Supports- Original Building]
Estimated Cost	$46,410
Fiscal Event Year	2015
2011-2015 Cost	$46,410
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation 2013 - It is recommended that the exterior access ladders on the roof to be replaced and access ladder to roof from inside building hatch to be provided.

Apr 2013- Inside access hatch to the roof with no ladder.

Apr 2013- Deteriorated access ladder from one roof to another.

Apr 2013- Deteriorated access ladder on the roof.

C INTERIORS

C10 Interior Construction

C1010 Partitions

Element Instance : C1010 Partitions - Original Building

Description 2013 - Moveable folding gym partition wall.

Condition Assessment 2013 - The moveable folding partition in the gymnasium is peeling, damaged, and has surpassed its expected useful life. Replacement is recommended.

Last Replacement Year	1965
Theoretical Life	20
Technical Condition	Fair

Replacement [C1010 Partitions - Original Building]

Event Type: Replacement Priority: Medium

Brief Description	Replacement [C1010 Partitions - Original Building]
Estimated Cost	$116,791
Fiscal Event Year	2016
2011-2015 Cost	$116,791
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation 2013 - The moveable partition in the gymnasium has surpassed its expected useful life. Replacement is recommended.

Apr 2013- Movable partition in the GYM.

Apr 2013- movable partition.

C1020 Interior Doors

Element Instance : C1020 Interior Doors - Original Building

Description

2013 - These include all doors within the building except for those through the perimeter walls are Interior Doors. They are constructed of hollow metal with a paint finish, wood with a natural, or paint or plastic laminate finish. They are often provided with glazed vision or half panels.

Condition Assessment

2013 - At the time of the assessment the interior doors were in fair condition, they were showing signs of age and they had past expected useful life.

Last Replacement Year	1965
Theoretical Life	25

Technical Condition Fair

Replacement [C1020 Interior Doors - Original Building]

Event Type: Replacement Priority: Medium

Brief Description	Replacement [C1020 Interior Doors - Original Building]
Estimated Cost	$291,976
Fiscal Event Year	2015
2011-2015 Cost	$291,976
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation

2013 - The interior doors have exceeded their effective design rated life with the majority of the doors exhibiting damage. Replacement of the interior doors is recommended.

Apr 2013- Typical hollow metal interior doors in the originsl building.

Apr 2013- Damaged interior door.

Apr 2013- Typical worn wood veneer interior door.

Element Instance : C1020 Interior Doors - Original Building

Description

2013 - Interior door hardware featuring classroom knob locksets, door pulls, hinges, door closer and floor stops.

Condition Assessment

2013 - The interior door hardware is original and has exceeded its effective rated design life. The components are appearing worn with reports of some reliability issues.

Last Replacement Year	2008
Theoretical Life	15
Technical Condition	Fair

Replacement [C1020 Interior Doors - Original Building]

Event Type: Replacement

Priority: Medium

Brief Description	Replacement [C1020 Interior Doors - Original Building]
Estimated Cost	$116,791
Fiscal Event Year	2015
2011-2015 Cost	$116,791
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation

2013 - The interior door hardware has exceeded its effective design rated life. Replacement planning is warranted.

Apr 2013- Typical interior door hardware.

Apr 2013- Worn interior hardware.

C1030 Fittings

Element Instance : C1030 Fittings - Original Building

Description

2013 - Classroom fittings include cabinetry, millwork items, counters and countertops with associated accessories and anchoring devices.

Condition Assessment

2013 - At the time of the assessment all cabinetry, millwork items, counters and countertops were in a fair condition

Last Replacement Year	1965
Theoretical Life	20
Fittings Type	Unspecified
Technical Condition	Fair

Replacement [C1030 Fittings - Original Building]

Event Type: Replacement

Priority: Medium

Brief Description	Replacement [C1030 Fittings - Original Building]
Estimated Cost	$364,969
Fiscal Event Year	2016
2011-2015 Cost	$364,969
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation

2013 - As all the cabinetry, millwork items, counters and countertops have exceeded their expected useful life and are in fair condition the recommendation is to replace them.

Apr 2013- Typical millwork in the classrooms.

Apr 2013- Worn millwork.

Element Instance : C1030 Fittings - Original Building

Description 2013 - Painted metal floor mounted toilet partitions situated in two washrooms of the original building.

Condition Assessment 2013 - At the time of the assessment the painted metal toilet partitions are original and are showing signs corrosion, damage worn finish and unreliable or missing hardware.

Last Replacement Year	1965
Theoretical Life	15
Fittings Type	Unspecified
Technical Condition	Poor

Replacement [C1030 Fittings - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [C1030 Fittings - Original Building]

Estimated Cost	$109,491
Fiscal Event Year	2015
2011-2015 Cost	$109,491
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation

2013 - The original floor mounted painted toilet partitions have exceeded their effective rated design life. Replacement is recommended.

Apr 2013- Stained and Worn washroom partition.

Apr 2013- Damaged washroom partition.

Element Instance : C1030 Fittings - Original Building

Description

2013 - Painted metal single tier lockers, 12" x 72" x 15" in size.

Condition Assessment

2013 - Some of the painted metal lockers are original with the majority of the lockers retrofitted with a plastic laminate / melamine door front. The original remaining painted metal lockers have exceeded their effective design rated life and are showing signs of damage and corrosion.

Last Replacement Year	1965
Theoretical Life	22
Fittings Type	Unspecified
Technical Condition	Poor

Replacement [C1030 Fittings - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [C1030 Fittings - Original Building]
Estimated Cost	$160,587
Fiscal Event Year	2015
2011-2015 Cost	$160,587
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation 2013 - Recommend lockers to be replaced.

Apr 2013- Stained old lockers.

C30 Interior Finishes

C3010 Wall Finishes

Element Instance : C3010 Wall Finishes - Original Building

Description 2013 -foam sprayed acoustic wall covering in the Gymnasium.

Condition Assessment 2013 - At the time of the assessment the acoustic wall covering in the GYM were in fair condition, there was signs of corrosion of the acoustic wall covering.

Last Replacement Year	1965

Theoretical Life	20
Wall Finishes Type	Unspecified
Technical Condition	Poor

Replacement [C3010 Wall Finishes - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [C3010 Wall Finishes - Original Building]
Estimated Cost	$43,797
Fiscal Event Year	2015
2011-2015 Cost	$43,797
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation 2013 - Recommend all the interior acoustic wall covering in the GYM to be restored as the finishes are fading and showing signs of age.

Apr 2013- Aged and corroded acoustic wall covering in the GYM.

C3020 Floor Finishes

Element Instance : C3020 Floor Finishes

Description 2013 - Cast in place terrazzo flooring with cove base.

Condition Assessment 2013 - The cast in place terrazzo flooring is showing signs of expansion and settling cracks.

Last Replacement Year	1965
Theoretical Life	75

Floor Finishes Type	Unspecified
Technical Condition	Fair

Major Repair [C3020 Floor Finishes]

Event Type:	Major Repair	Priority:	Medium

Brief Description	Major Repair [C3020 Floor Finishes]
Estimated Cost	$14,598
Fiscal Event Year	2015
2011-2015 Cost	$14,598
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation

2013 - Settlement and expansion cracks are evident from the original construction. Repairs of the cracking is recommended for aesthetic reasons.

Apr 2013- Cracked terrazzo in the corridor

Apr 2013- Cracked terrazzo in the corridor.

Element Instance : C3020 Floor Finishes - Original Building

Description

2013 - Carpet floor covering in library, music room and, exercise room.

Condition Assessment

2013 - At the time of the assessment the Resource Center carpet floor covering was in fair condition, it was showing signs of age and wear

Last Replacement Year	1990
Theoretical Life	10
Floor Finishes Type	Unspecified
Technical Condition	Poor

Replacement [C3020 Floor Finishes - Original Building]

Event Type: Replacement

Priority: High

Brief Description	Replacement [C3020 Floor Finishes - Original Building]
Estimated Cost	$128,010
Fiscal Event Year	2015
2011-2015 Cost	$128,010
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation

2013 - The carpets located in the library, exercise room and, music room are subjected to frequent foot traffic. Wear was evident throughout these rooms. Replacement of carpet is recommended.

Apr 2013- Stained carpet in the music room.

Apr 2013- Worn carpet in the exercise room.

Apr 2013- Worn carpet in the Library.

Element Instance : C3020 Floor Finishes - Original Building

Description 2013 - Vinyl composite floor tile and vinyl base.

Condition Assessment 2013 - The vinyl composite floor tile is showing signs of wear and discoloration.

Last Replacement Year	1965
Theoretical Life	20
Floor Finishes Type	Unspecified
Technical Condition	Fair

Replacement [C3020 Floor Finishes - Original Building]

Event Type: Replacement Priority: Medium

Brief Description	Replacement [C3020 Floor Finishes - Original Building]

Estimated Cost	$671,545
Fiscal Event Year	2015
2011-2015 Cost	$671,545
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation

2013 - The vinyl composite floor tile and vinyl base is exhibiting signs of wear and has exceeded its effective rated design life. Replacement planning is recommended.

Apr 2013- Evidence of VCT deterioration.

Apr 2013- Evidence of VCT deterioration.

Element Instance : C3020 Floor Finishes - Original Building

Description

2013 - Original finished hardwood strip flooring and wood base situated on the stage and, in GYM.

Condition Assessment

2013 - The original hardwood strip flooring is worn, scratched and in poor condition.

Last Replacement Year	1996

Theoretical Life	20
Floor Finishes Type	Unspecified
Technical Condition	Poor

Replacement [C3020 Floor Finishes - Original Building]

Event Type: Replacement

Priority: High

Brief Description	Replacement [C3020 Floor Finishes - Original Building]
Estimated Cost	$257,333
Fiscal Event Year	2015
2011-2015 Cost	$257,333
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation

2013 - The hardwood strip flooring on the stage and, in GYM are in poor condition. Refinishing or replacement of the hardwood flooring is recommended.

Apr 2013- Worn hardwood flooring in the GYM.

Apr 2013- Worn Hardwood flooring in the GYM.

C3030 Ceiling Finishes

Element Instance : C3030 Ceiling Finishes - Original Building

Description 2013 - Gypsum board ceilings

Condition Assessment 2013 - At the time of the assessment the gypsum board ceilings were in fair condition

Last Replacement Year	1965
Theoretical Life	30
Ceiling Finishes Type	Unspecified
Technical Condition	Fair

Replacement [C3030 Ceiling Finishes - Original Building]

Event Type: Replacement Priority: Medium

Brief Description	Replacement [C3030 Ceiling Finishes - Original Building]
Estimated Cost	$116,791
Fiscal Event Year	2015
2011-2015 Cost	$116,791
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation 2013 - Gypsum board ceilings are original and have passed there EUL and should be refinished or replaced.

Apr 2013- Damaged gypsum board ceiling in the change room.

Apr 2013- Deteriorating Gypsum board ceiling in the shower of change room.

Element Instance : C3030 Ceiling Finishes - Original Building

Description 2013 - Acoustical suspended ceiling tile system.

Condition Assessment 2013 - The ACT suspended ceiling system is showing signs of wear and damage.

Last Replacement Year	1965
Theoretical Life	25
Ceiling Finishes Type	Unspecified
Technical Condition	Fair

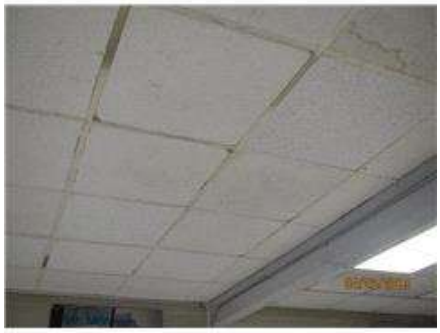
Replacement [C3030 Ceiling Finishes - Original Building]

Event Type: Replacement Priority: Medium

Brief Description	Replacement [C3030 Ceiling Finishes - Original Building]
Estimated Cost	$598,550
Fiscal Event Year	2015
2011-2015 Cost	$598,550
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation Mar 2013 - The acoustical suspended ceiling tile system is showing signs of wear. Replacement is recommended.

Apr 2013- Typical worn ceiling tiles in the corridors of the school.



Apr 2013- Worn ceiling tiles.

D SERVICES

D20 Plumbing

D2020 Domestic Water Distribution

Element Instance : D2020 Domestic Water Distribution - Original Building

Description

2013 - The building domestic water system includes a main line, water meter, pressure reducer and associated piping and insulation. At the time of assessment the domestic water distribution system was estimated to be original to the dates of construction of the additions and original building.

Condition Assessment

2013 - The domestic piping system is mostly concealed and therefore the current condition is not fully known. However due to the age, the expected wear and the theoretical useful life, the system is assessed as being in fair condition.

Last Replacement Year	1965
Theoretical Life	37
Domestic Water Distribution Type	Unspecified

Technical Condition Fair

Replacement [D2020 Domestic Water Distribution - Original Building]

Event Type: Replacement

Priority: Medium

Brief Description	Replacement [D2020 Domestic Water Distribution - Original Building]
Estimated Cost	$714,000
Fiscal Event Year	2016
2011-2015 Cost	$714,000
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation 2013 - Based on the age and theoretical useful life of the domestic water piping system replacement is recommended. A study is recommended to determine the current condition, remaining service life, current service requirements and the cost of replacement.

April 2013 - Original Domestic Water Piping

Study [D2020 Domestic Water Distribution - Original Building]

Event Type: Study

Priority: Medium

Brief Description	Study [D2020 Domestic Water Distribution - Original Building]
Estimated Cost	$10,200
Fiscal Event Year	2014
2011-2015 Cost	$10,200
2011-2015 Priority	Medium
2011-2015 Year	2014

Recommendation 2013 - An in depth study is recommended to determine the condition of the domestic water piping system, the required recommended scope of work and the cost for system renewal.

D2030 Sanitary Waste

Element Instance : D2030 Sanitary Waste

Description

2013 - The sanitary waste distribution system for the school is provided by various types of piping. The majority of the piping is reported to be aged or original to the construction dates of the school.

Condition Assessment

2013 - Much of the sanitary waste water distribution system is concealed with only small areas of the system being visible during the assessment. The visible sections of the piping were observed to be functional but aged. The waste water distribution system is past its rated useful life of 37 years.

Last Replacement Year	1965
Theoretical Life	37

Technical Condition Fair

Study

Event Type: Study Priority: Medium

Brief Description	Replacement
Estimated Cost	$10,200
Fiscal Event Year	2014
2011-2015 Cost	$10,200
2011-2015 Priority	Medium
2011-2015 Year	2014

Recommendation

2013 - A study is recommended to determine the condition of the sanitary waste piping system, the required recommended scope of work and the cost for system renewal.

D2040 Rain Water Drainage

Element Instance : D2040 Rain Water Drainage

Description

2013 - Rain water drainage for the school is provided by roof drains and cast iron distribution piping and is reported to be original to the construction dates of the school.

Condition Assessment

2013 - Much of the rain water drainage system is concealed with only small areas of the system being visible during the assessment. The visible sections of the rain water piping were observed to have minor corrosion. The rain water drainage system is past its rated useful life of 37 years.

Last Replacement Year	1965
Theoretical Life	37

Technical Condition Fair

Study

Event Type: Study Priority: Medium

Brief Description	Study
Estimated Cost	$10,200
Fiscal Event Year	2014
2011-2015 Cost	$10,200
2011-2015 Priority	Medium
2011-2015 Year	2014

Recommendation 2013 - A study is recommended to determine the condition of the rainwater drainage distribution system, the required recommended scope of work and the cost for system renewal.

April 2013 - Aged Roof Rain Water Drainage

D30 HVAC

D3010 Energy Supply

Element Instance : D301002 Gas Supply System - Original Building

Description 2013 - The building includes a natural gas supply and distribution system for the boilers room, roof, kitchen and other areas.

Condition Assessment 2013 - The exterior section of the gas piping is showing signs of minor rusting along the entire run.

Last Replacement Year	1965
Theoretical Life	35
Technical Condition	Fair

Replacement

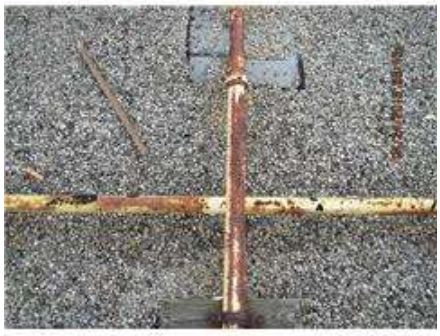
Event Type: Replacement Priority: High

Brief Description	Replacement
Estimated Cost	$25,500
Fiscal Event Year	2016
2011-2015 Cost	$25,500
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation

2013 - Planned replacement of the exterior section of the gas piping is recommended based on age and condition.

April 2013 - Exterior Section of Gas Piping is Aged and Weathered



D3020 Heat Generating Systems

D302005 Auxiliary Equipment

Element Instance : D302005 Auxiliary Equipment - Addition 2 - HVAC Pumps Cooling System

Description

2013 - At the time of assessment it was reported that cooling water pumps in the chiller mechanical room of the 1990 Addition were constantly leaking and damaging equipment in the room.

Condition Assessment

2013 - The cooling water pumps in the chiller room showed signs of excessive leaks and were reported to be consistently in need of repair. The surrounding equipment is stained from previous leaks.

Last Replacement Year	1990
Theoretical Life	30
Auxiliary Equipment Type	Unspecified
Technical Condition	Critical

Replacement

Event Type: Replacement

Priority: Urgent

Brief Description	Replacement
Estimated Cost	$20,400
Fiscal Event Year	2013
2011-2015 Cost	$20,400
2011-2015 Priority	Urgent
2011-2015 Year	2013

Recommendation

2013 - Replacement of the cooling systems pumps in the chiller room is recommended to prevent damage to the chiller and associated equipment in the room and prevent disruption of service due to repairs caused by leaks.

April 2013 - Leaking Pump Directly Above Chiller

April 2013 - Corrosion of Chiller Caused by Leaking Pumps

April 2013 - Leaking Pump Directly Above Chiller

D3040 Distribution Systems

D304007 Exhaust Systems

Element Instance : D304007 Exhaust Systems - Original Building

Description

2013 - Various rooftop and internal exhaust fans service classrooms, washrooms and the general building providing ventilation to the building. There are a total of 40 roof top exhaust fans of which 30 are aged.

Condition Assessment

2013 - At the time of assessment 75% of the rooftop exhaust fans were noted to be original to the building and many had worn and weathered casings. The fans are well maintained but are well past their intended useful life and are in poor condition overall.

Last Replacement Year	1965
Theoretical Life	22
Technical Condition	Poor

Replacement [D304007 Exhaust Systems - Original Building]

Event Type: Replacement

Priority: High

Brief Description	Replacement [D304007 Exhaust Systems - Original Building]
Estimated Cost	$102,000
Fiscal Event Year	2015
2011-2015 Cost	$102,000
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation

2013 - The exhaust fans are operating past their expected useful lives and will likely require replacement as most are in fair condition.

April 2013 - Original Rooftop Exhaust Fan - Aged and Weathered

April 2013 - Original Rooftop Exhaust Fan - Aged and Weathered

April 2013 - Original Rooftop Exhaust Fan - Aged and Weathered

D3060 Controls & Instrumentation

Element Instance : D3060 Controls & Instrumentation - Original Building

Description 2013 - The current HVAC controls are a mix of original, outdated and new equipment controls. The building is equipped with a building automation system and had a combined electric and pneumatic system.

Condition Assessment

2013 - The majority of the pneumatic controls have exceeded their theoretical life. Maintenance and control problems have been reported. Replacement of the aged control system is recommended. Consideration should be made to replace the system with the efficient controls and link them with the school main DDC.

Last Replacement Year	1965
Theoretical Life	15
Technical Condition	Fair

Replacement [D3060 Controls & Instrumentation - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [D3060 Controls & Instrumentation - Original Building]
Estimated Cost	$255,000
Fiscal Event Year	2016
2011-2015 Cost	$255,000
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation

2013 - Remove the existing controls and replace with a new DDC HVAC control system. Work to include removal of the existing components and installation of new controls, including energy monitoring and electronic actuators. Coordinate with other HVAC deficiency correction projects.

April 2013 - Aged Pneumatic Controls

D40 Fire Protection

D4030 Fire Protection Specialties

Element Instance : D4030 Fire Protection Specialties - Original Building

Description

2013 - The fire protection system in the school includes a variety of fire extinguishers located throughout the school. The last replacement of the fire extinguishers is reported to have been in 1997.

Condition Assessment 2013 - The fire extinguishers are reportedly inspected regularly and are functional. Fire extinguishers have a rated useful life of 10 years.

Last Replacement Year	1997
Theoretical Life	10
Fire Protection Specialties Type	Unspecified
Technical Condition	Poor

Replacement [D4030 Fire Protection Specialties - Original Building]

Event Type: Replacement Priority: Urgent

Brief Description	Replacement [D4030 Fire Protection Specialties - Original Building]
Estimated Cost	$10,200
Fiscal Event Year	2015
2011-2015 Cost	$10,200
2011-2015 Priority	Urgent
2011-2015 Year	2015

Recommendation 2013 - Based on the age and theoretical useful life of the fire extinguishers replacement of the outdated and aged fire extinguishers is recommended within the next three years.

April 2013 - Aged Fire Extinguisher

D50 Electrical

D5010 Electrical Service & Distribution

D501001 Main Transformers

Element Instance : D501001 Main Transformers - Original Building

Description 2013 - The main transformer is original to the construction date of the original building 1965 and is located in a small courtyard outside of the main electrical room.

Condition Assessment 2013 - Although the main transformer is functional it is past its theoretical useful life of 40 years and is in fair condition.

Last Replacement Year	1965
Theoretical Life	48
Technical Condition	Fair

Replacement [D501001 Main Transformers - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [D501001 Main Transformers - Original Building]
Estimated Cost	$91,800
Fiscal Event Year	2016
2011-2015 Cost	$91,800
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - Based on the age and theoretical useful life of the main transformer, replacement is recommended.

April 2013 - Original Main Transformer

D501003 Main Switchboards

Element Instance : D501003 Main Switchboards - Original Building

Description 2013 - The switchboard is original in the building construction date of 1965 and has a 1200 Amp capacity.

Condition Assessment 2013 - Although maintained properly, the main switchboard has exceeded the rated useful life and should be replaced due to age and for reliability.

Last Replacement Year	1965
Theoretical Life	42

Technical Condition Fair

Replacement [D501003 Main Switchboards - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [D501003 Main Switchboards - Original Building]
Estimated Cost	$122,400
Fiscal Event Year	2016
2011-2015 Cost	$122,400
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - Replacement of the aged main switchboard is recommended based on age and remaining useful life.

April 2013 - Original Main Switchgear

Element Instance : D501003 Secondary Switchboards - Original Building

Description 2013 - The secondary switchboard and other assemblies including distribution panels, breaker, fuses and meters are original in the building construction date.

Condition Assessment 2013 - Although maintained properly, the secondary switchboard and other assemblies including distribution panels, breaker, fuses and meters has exceeded the rated useful life and should be replaced due to age and for reliability.

Last Replacement Year	1965

Theoretical Life	40
Technical Condition	Fair

Replacement [D501003 Secondary Switchboards - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [D501003 Secondary Switchboards - Original Building]
Estimated Cost	$357,000
Fiscal Event Year	2016
2011-2015 Cost	$357,000
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation

2013 - Replacement of the aged secondary switchboard and other assemblies including distribution panels, breaker, fuses and meters of the building is recommended.

April 2013 - Original Secondary Switchgear

April 2013 - Original Panel Boards

D5020 Lighting & Branch Wiring

D502001 Branch Wiring

Element Instance : D502001 Branch Wiring - Original Building

Description

2013 - The branch wiring system for the original building consists of cabling, raceways, conduit, wiring, bus ducts and wiring terminal devices. Flexible conduit and cabling is provided to motors and other mechanical equipment.

Condition Assessment

2013 - Apart from minor renovations the majority of the branch wiring system in the original building original to 1965. The branch wiring is in poor to fair condition and is past its theoretical useful life.

Last Replacement Year	1965
Theoretical Life	40
Technical Condition	Fair

Replacement [D502001 Branch Wiring - Original Building]

Event Type: Replacement Priority: Medium

Brief Description	Replacement [D502001 Branch Wiring - Original Building]
Estimated Cost	$1,000,000
Fiscal Event Year	2017
2011-2015 Cost	$1,000,000
2011-2015 Priority	Medium
2011-2015 Year	2017

Recommendation

2013 - Based on the age of the branch wiring, replacement is recommended. An in depth study should be conducted to determine the current condition, remaining useful life cost of replacement.

April 2013 - Original Branch Wiring - Original Building

Study [D502001 Branch Wiring - Original Building]

Event Type: Study Priority: Medium

Brief Description	Study [D502001 Branch Wiring - Original Building]
Estimated Cost	$10,200
Fiscal Event Year	2014
2011-2015 Cost	$10,200
2011-2015 Priority	Medium
2011-2015 Year	2014

Recommendation 2013 - A study is recommended and would provide a more detailed condition, remaining useful life and cost of replacement or repair of the branch wiring system.

D502002 Lighting Equipment

Element Instance : D502002 Lighting Equipment - Original Building

Description 2013 - Exterior lighting includes wall-mounted HID fixtures, incandescent pot lighting and light standards in the parking lot area.

Condition Assessment 2013 - The exterior lamps and fixtures have exceeded their rated useful life and the lamps are not energy efficient and should be replaced with high efficient lamps. Aged incandescent fixtures were observed at around the exterior, while wall-mounted HID fixtures were observed to be damaged or discoloured in some locations. Light standards were in good condition at the time of assessment.

Last Replacement Year	1990
Theoretical Life	15
Lighting Equipment Type	Exterior Lighting
Technical Condition	Fair

Replacement [D502002 Lighting Equipment - Original Building]

Event Type: Replacement Priority: High

Brief Description	Replacement [D502002 Lighting Equipment - Original Building]
Estimated Cost	$51,000
Fiscal Event Year	2016
2011-2015 Cost	$51,000
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - The exterior lighting fixtures are original and appear to be functional at this time, but have surpassed their anticipated service life. Replacement of existing aged lamps and fixtures with higher efficiency lamps and fixtures is recommended.

April 2013 - Aged Exterior Lighting Fixture - Entrance Overhang

April 2013 - Aged Exterior Lighting Fixture - Incandescent Lamps

April 2013 - Aged Exterior Lighting Fixture

Element Instance : D502002 Lighting Equipment - Original Building

Description

2013 -At the time of assessment approximately 50% of the emergency lighting fixtures were observed as aged and includes battery pack units with ceiling and wall mounted lighting fixtures.

Condition Assessment

2013 - Although maintained and inspected regularly, 50% of the emergency lamps and fixtures exceeded their rated useful life and the lamps are not energy efficient.

Last Replacement Year	1990
Theoretical Life	20
Lighting Equipment Type	Emergency Lighting
Technical Condition	Poor

Replacement [D502002 Lighting Equipment - Original Building]

Event Type: Replacement

Priority: High

Brief Description	Replacement [D502002 Lighting Equipment - Original Building]
Estimated Cost	$30,600
Fiscal Event Year	2015
2011-2015 Cost	$30,600
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation

2013 - Replacement of existing aged emergency lighting lamps and fixtures (50%) with higher efficiency lamps and batteries is recommended.

March 2013 - Aged Emergency Lighting Battery Pack Fixture

March 2013 - Aged Emergency Lighting Battery Pack Fixture

D5030 Communications & Security

D503099 Other Communications & Alarm Systems

Element Instance : D503099 Other Communications & Alarm Systems - Original Building

Description

2013 - The IT system in the building was noted to be original to 2002. The school's IT system includes switching, routing equipment and servers.

Condition Assessment

2013 - The school's IT system is functioning well without complaints. However, due to the rapid growth in technology the theoretical life of the IT system is 10 years. Based on the theoretical life, the school's IT system is in fair condition and is past its rated useful life.

Last Replacement Year	2002
Theoretical Life	10
Technical Condition	Fair

Replacement [D503099 Other Communications & Alarm Systems - Original Building]

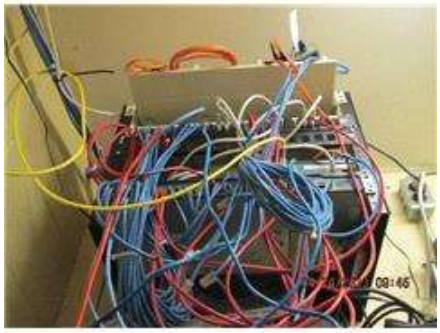
Event Type: Replacement

Priority: Medium

Brief Description	Replacement [D503099 Other Communications & Alarm Systems - Original Building]
Estimated Cost	$102,000
Fiscal Event Year	2016
2011-2015 Cost	$102,000
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation

2013 - Planned replacement of the school's IT system is recommended to keep the system up to date and in working condition.



D5090 Other Electrical Services

D509099 Other Special Systems and Devices

Element Instance : D509099 Other Special Systems and Devices - Dust Collectors

Description

2013 - The school has two dust collectors which service the woodshop machinery and are located at the exterior of the woodshop classes. The two dust collectors were installed at different times based on the style and condition of the units.

Condition Assessment

2013 - One dust collector is relatively new and in good condition. The second dust collector was reported to be to be working fairly well with minor issues reported. The dust collector is located outside and being exposed to the elements and is extremely corroded at the time of assessment.

Last Replacement Year	2015
Theoretical Life	20
Technical Condition	Poor

Replacement

Event Type: Replacement Priority: Urgent

Brief Description	Replacement
Estimated Cost	$81,600
Fiscal Event Year	2015
2011-2015 Cost	$81,600
2011-2015 Priority	Urgent
2011-2015 Year	2015

Recommendation

2013 - Replacement of the aged and corroded dust collector is recommended based on age and condition.

April 2013 - Aged Dust Collector

April 2013 - Newer Dust Collector

G BUILDING SITEWORK

G20 Site Improvement

G2010 Roadways

Element Instance : G2010 Roadways - Site

Description	2013 - Asphalt paved roadway circling the school.
Condition Assessment	2013 - The asphalt paved roadway is exhibiting alligator cracking and some depressed areas.

Last Replacement Year	1965
Theoretical Life	20
Technical Condition	Poor

Replacement [G2010 Roadways - Site]

Event Type: Replacement Priority: High

Brief Description	Replacement [G2010 Roadways - Site]
Estimated Cost	$58,395
Fiscal Event Year	2015
2011-2015 Cost	$58,395
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation 2013 - The asphalt paved roadway is showing signs of alligator cracking. Replacement is recommended.

Apr 2013- Typical roadway around the building.

Apr 2013- Extensive Sign of Deterioration of the road.

G2020 Parking Lots

Element Instance : G2020 Parking Lots - Site

Description 2013 - Asphalt paved parking lot with line painting for parking stalls.

Condition Assessment 2013 - The asphalt paved parking lot is in poor condition with pot holes, alligator cracking and non visible line painting.

Last Replacement Year	1965
Theoretical Life	20
Technical Condition	Poor

Replacement [G2020 Parking Lots - Site]

Event Type: Replacement Priority: High

Brief Description	Replacement [G2020 Parking Lots - Site]
Estimated Cost	$306,574
Fiscal Event Year	2015
2011-2015 Cost	$306,574
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation 2013 - The asphalt paved parking lot is in poor condition with pot holes and alligator cracking. Reconstruction of the parking lot is recommended.

Apr 2013- Parking lot on the north side of the building.

Apr 2013- Evidence of alligator cracking and pot holes in the parking lots.

G2030 Pedestrian Paving

Element Instance : G2030 Pedestrian Paving - Site

Description

2013 - Concrete and Asphalt Paved sidewalks situated around the perimeter of the building on the North and West sides.

Condition Assessment

2013 - The asphalt and concrete paved surfaces are showing signs of uneven and cracked surfaces with signs of vegetation growth and isolated areas of spalling and deteriorated concrete.

Last Replacement Year	1965
Theoretical Life	22
Technical Condition	Fair

Replacement [G2030 Pedestrian Paving - Site]

Event Type: Replacement Priority: Medium

Brief Description	Replacement [G2030 Pedestrian Paving - Site]
Estimated Cost	$29,198
Fiscal Event Year	2015
2011-2015 Cost	$29,198
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation

2013 - The concrete and asphalt paved sidewalks are showing signs of deterioration and have exceeded their effective design rated life. Replacement planning is recommended.

Apr 2013- Typical deteriorated concrete sidewalk round the building

Apr 2013- Deteriorated asphalt sidewalk on the east side of the building.

G2040 Site Development

G204001 Fencing & Gates

Element Instance : G204001 Fencing & Gates

Description 2013 - Chain link perimeter fencing

Condition Assessment 2013 - At the time of the assessment the chain link perimeter fence was in poor condition

Last Replacement Year	2005
Theoretical Life	36
Technical Condition	Fair

Replacement [G204001 Fencing & Gates]

Event Type: Replacement Priority: High

Brief Description	Replacement [G204001 Fencing & Gates]
Estimated Cost	$36,497
Fiscal Event Year	2015
2011-2015 Cost	$36,497
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation

2013 - Based on the age and condition observed the recommendation is to replace the perimeter chain link fence

Apr 2013- Corroded fence on the east side of the building.

Apr 2013- Damaged fence.

G40 Site Electrical Utilities

Element Instance : G40 Site Electrical Utilities - Site

Description

2013 - The electrical utilities for the school are presumed to be original to the construction dates of the school.

Condition Assessment

2013 - At the time of assessment the electrical utilities were aged beyond recommended useful life and in fair condition.

Last Replacement Year	1965
Theoretical Life	40
Technical Condition	Fair

Replacement [G40 Site Electrical Utilities - Site]

Event Type: Replacement Priority: High

Brief Description	Replacement [G40 Site Electrical Utilities - Site]
Estimated Cost	$20,400
Fiscal Event Year	2016
2011-2015 Cost	$20,400
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - The above ground electrical line is past its theoretical life. Life cycle replacement based on age is recommended.

Hamilton-Wentworth District School Board

Report Summary

Saved Report Name	Final Report Template mod1
User Name	william lo
Report Type	Text With Pictures
Report Name	Condition Assessment
Start Year	2013
Number of Years	5
Priority	Default
Structure / Instance	Orchard Park SS, Building ID 8328-1
Filter	Parent Criteria Summary: Structure parent - A SUBSTRUCTURE OR Structure parent - B SHELL OR Structure parent - C INTERIORS OR Structure parent - D SERVICES OR Structure parent - G BUILDING SITEWORK - where the detail criteria for the parent node is - Technical Condition <> Not Assessed ;
Asset Photos	Default Photos Only
Current Backlog FCI	No
Element Photos	No Photos
Include Element ACL Criteria	No
Exclude Elements Without Events	Yes
Include Event level details	Yes
Event Photos	All Photos
Include Costlines	No
Printed Date	10/30/2013

APPENDIX E
ASBESTOS SURVEY

ATTENTION:

PLEASE DO NOT PHOTOCOPY OR DISTRIBUTE THIS BOOK

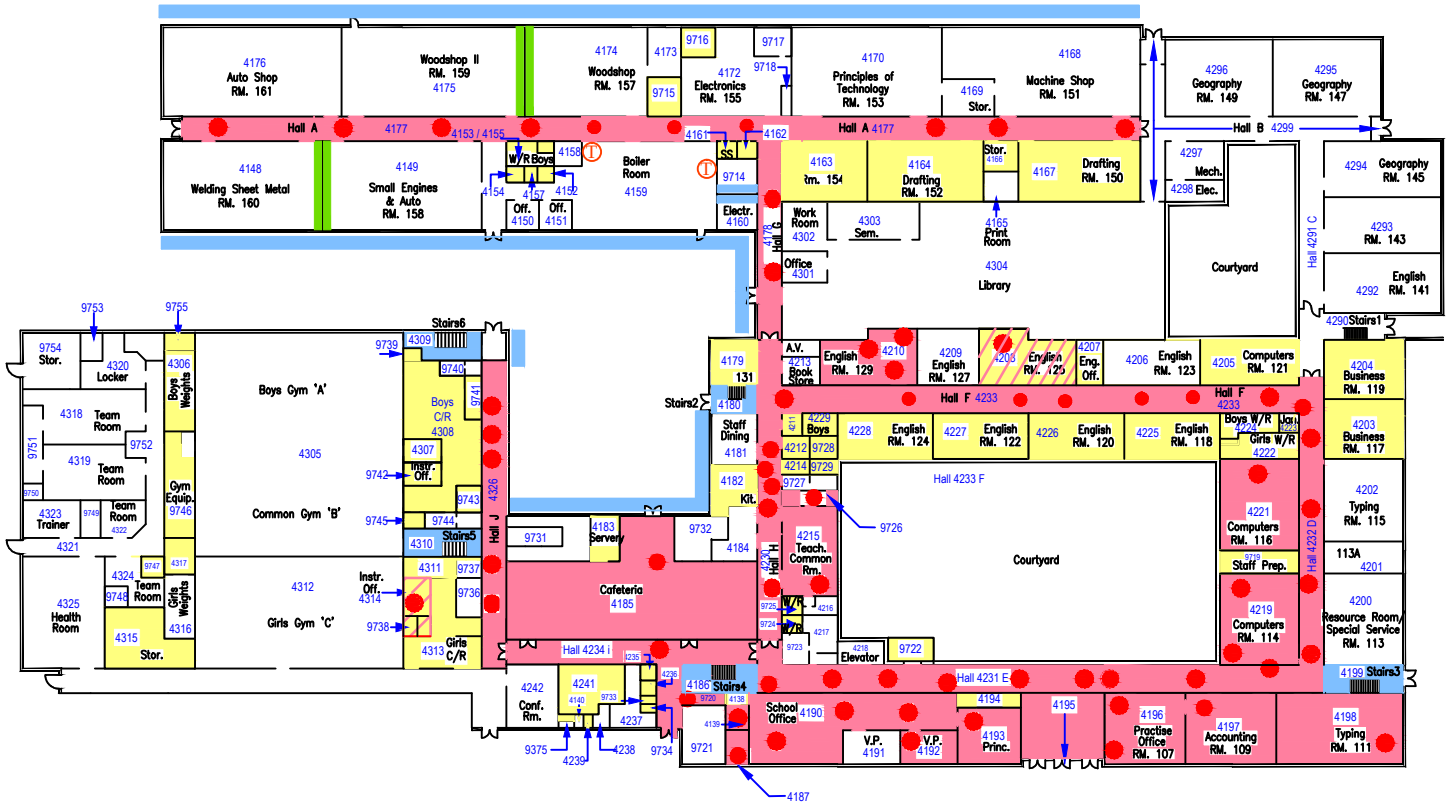
ORCHARD PARK SECONDARY SCHOOL
Asbestos Inventory

Updated NOV. 2014

Prepared by:
Regulated Substance Team (905-521-2513)
The Hamilton-Wentworth District School Board

ORCHARD PARK SECONDARY SCHOOL

FIRST FLOOR



Updated Nov. 2014

Original Const: 1965
Additions: 1972/1990

REGULATED
SUBSTANCES TEAM
905-521-2513

This drawing represents walls and ceiling spaces only. Please see the full asbestos inventory report for all other asbestos containing materials.

Asbestos present on mechanical insulation above asbestos drywall & joint compound ceiling.

Asbestos present on mechanical insulation above ceiling.

Ceiling drywall and joint compound contains asbestos

Rough plaster beam contains asbestos.

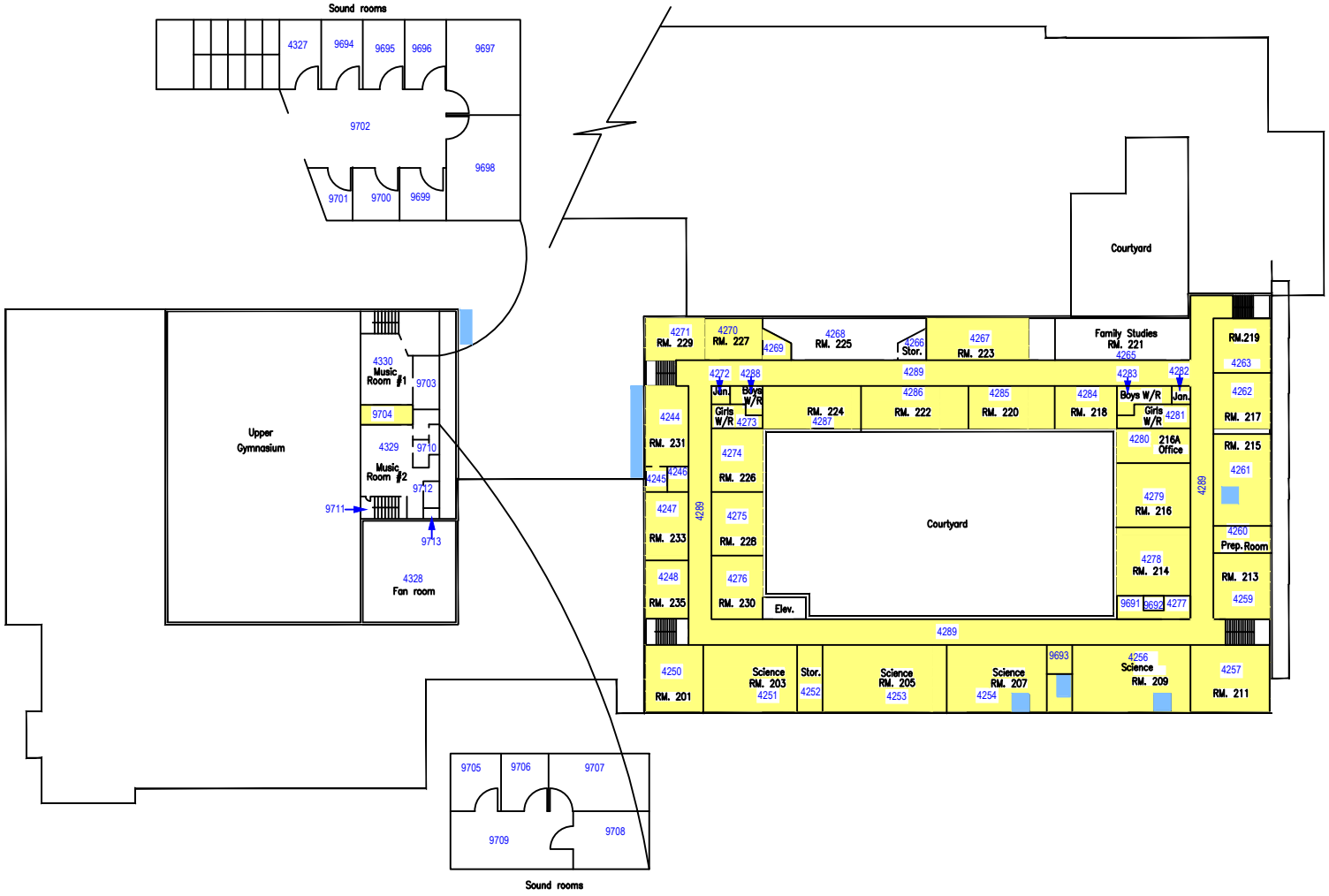
Transite asbestos panels present.

Asbestos elbows shown as

Tunnel access is restricted to Confined space protocol and Type 2 asbestos procedures.

ORCHARD PARK SECONDARY SCHOOL

SECOND FLOOR



Updated Nov. 2014
Original Const: 1965 Additions: 1972/1990
REGULATED SUBSTANCES TEAM 905-521-2513
This drawing represents walls and ceiling spaces only. Please see the full asbestos inventory report for all other asbestos containing materials.
Ceiling drywall and joint compound contains asbestos
Transite asbestos panels present.

DESIGNATED SUBSTANCES

The following designated substances are present in the school:

Asbestos *(samples taken to-date are attached to this report)*
Lead (*Assume **Lead** is present in older paints. Samples taken to-date are attached to this report. Lead based paints are those containing greater than 0.5% **Lead** by weight)*

ASBESTOS

Vinyl Asbestos floor tiles present; assume leveling coat present underneath

Assume asbestos insulation present behind wall cavity and/or lockers
(Asbestos insulation definition: mechanical, thermal, electrical and sound transmission)
In Mechanical rooms – mechanical fittings and pipes contain asbestos

New boiler installed in 2009

Transite asbestos panels present in various areas
Some univents contain asbestos vermiculite (inside)
Transite asbestos tiles present under stairwell

Assume black acid resistant vinyl counter tops contain asbestos
Assume radiators and old window putty/caulking contain asbestos
Assume green/beige resin chairs and desks contain asbestos
Assume roof drains and/or collars contain asbestos
Assume asbestos gaskets/glue present behind old black and old tack boards
Assume fire doors contain asbestos *(for non-asbestos fire doors, please see tag on door spine)*

Ceiling drywall joint compound in some areas contain asbestos

Fume hoods, ductwork, kilns, black acid resistant counter tops, back splash, sink underlining, cabinet lining, wall panels and exhaust system (when present), assume to contain asbestos

Some incandescent light fixtures (when present), assume to contain heat-deflecting paper with an asbestos paper backing. This is a pre-manufactured product and not considered hazardous unless worked on using power tools

Tunnel: Asbestos present on mechanical insulation. Access is restricted to Confined space protocol and Type 2 asbestos procedures

Buried Oil Tank: *Oil tank removed in 1999*

NOTE: Please contact the Regulated Substance Team at 905-521-2513 to co-ordinate site specific assessment & sampling of products that contain Asbestos or Lead including but not limited to wall or ceiling plaster, floor leveler, ceiling tiles etc. This specific assessment & sampling must be done prior to construction or maintenance work, which will disturb materials.

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Boiler room	4159	***Outside - Transite asbestos panels present*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos ***CAUTION: Tunnel access is restricted to Confined space protocol and Type 2 asbestos procedures***
Boiler room - Storage room inside	9714	***Transite asbestos panel on wall contains Amosite and Chrysotile asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Book Store (by rm. 129)	4213	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Cafeteria	4185	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Fume hoods; cabinet lining; and exhaust system (when present) contain asbestos
Cafeteria - corner store	4184	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Cafeteria - Kitchen	4182	***Ceiling drywall and joint compound contains asbestos*** ***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Fume hoods; cabinet lining; and exhaust system (when present) contain asbestos
Cafeteria - Office	9731	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Cafeteria - Servery	4183	***Ceiling drywall and joint compound contains asbestos*** ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Fume hoods; cabinet lining; and exhaust system (when present) contain asbestos
Cafeteria - staff dining room	4181	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff
(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Cafeteria - Storage	9732	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Caretaker's - staff room	4151	***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Caretaker's - washroom	4150	***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Conference room (across cafeteria)	4242	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Continuing Ed. - Office 1	4139	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Continuing Ed. - Office 2	9720	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Continuing ed.- Office foyer	4138	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Custodial Storage room (by boiler room)	4161 & 4162	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Electrical room (across rm. 149)	4298	* Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods, cabinet lining, kilns and exhaust system (when present) contain asbestos
Electrical room (inside boiler room)	4160	***Transite asbestos panel on wall contains Amosite and Chrysotile asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Elevator control room	9722	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Fan room - 2nd floor	4328	***Roof drains insulated with asbestos elbows*** ***Asbestos present on mechanical insulation below ceiling*** * Asbestos insulation present behind wall cavity * Fire doors contains asbestos
Foyer - front	4195	***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos
Gym - Slop sink	9747	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Gym A/B - Boys' Change room	4308	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Gym A/B - Boys' shower	9740	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym A/B - Boys' Weight room	4306/9755	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Gym A/B - Equipment room	9746	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Gym A/B - Equipment storage	4307/9742	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Gym A/B - Instructor's washroom	9750	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym A/B - Locker room	4320	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors contains asbestos
Gym A/B - Locker washroom	9753	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym A/B - showers	9751	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym A/B - slop sink	9752	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Gym A/B - storage 1	9739	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Gym A/B - storage 2	9744	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym A/B - storage 3	9754	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym A/B - Team room 1	4318	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contains asbestos
Gym A/B - Team room 2	4319	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contains asbestos
Gym C - Girls' Change room	4313	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff
(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Gym C - Girls' Weight room	4316/4317	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Gym C - Health room	4325	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contains asbestos
Gym C - Instructor's Office 1	4311/4314/9738	***Asbestos present on mechanical insulation above asbestos drywall and joint compound ceiling*** * Asbestos insulation present behind wall cavity * Fire doors and radiator contain asbestos
Gym C - Instructor's Office 2	4323	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors contains asbestos
Gym C - Instructor's washroom	9749	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym C - slop sink	9737	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Gym C - Storage room	4315	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Gym C - Team room 1	4321/4322	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contains asbestos
Gym C - Team room 2	4324	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation below ceiling*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym C - washroom inside change room	9736	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Gym C - Washroom inside team room	9748	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Gymnasium A/B (Boys)	4305	***Asbestos present on mechanical insulation on roof drains*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos * Asbestos gaskets present behind old black/tack boards * Roof drain and/or collar contain asbestos
Gymnasium C - Girls	4312	***Asbestos present on mechanical insulation on roof drains*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos * Asbestos gaskets present behind old black/tack boards * Roof drain and/or collar contain asbestos
Hall 1A (across rm. 150 to 161)	4177	***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos
Hall 1B (across rm. 147 to 149)	4299	* Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos
Hall 1C (across rm. 141 to 145)	4291	* Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Hall 1D (across rm. 113 to 117)	4232	***Asbestos present on mechanical insulation above ceiling tiles*** ***Transite asbestos panels present under stairwell*** * Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos
Hall 1E (across rm. 111 to main office)	4231	***Asbestos present on mechanical insulation above ceiling tiles*** ***Transite asbestos panels present under stairwell*** * Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos
Hall 1F (across rm. 121 to 129)	4233	***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos
Hall 1G (across rm. 154 & library)	4178	***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos
Hall 1H (cafeteria & staff dining)	4230	***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Hall 1i (across cafeteria & student council)	4234	***Asbestos present on mechanical insulation above ceiling tiles*** ***Transite asbestos panels present under stairwell*** * Asbestos insulation present behind wall cavity or behind lockers * Fire doors contain asbestos
Hall 1J (across gym)	4326	***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity or behind lockers * Fire doors and old window putty/caulking contain asbestos
Hallway - 2nd floor	4289	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Transite asbestos roof drains present with asbestos elbows above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Library	4304	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Library - Office	4301	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff
(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Library - Seminar room	4303	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Library - Work room	4302	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Mechanical room (across rm. 149)	4297	* Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods, cabinet lining, kilns and exhaust system (when present) contain asbestos
Music - Keyboard room	9703	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Music - mixing board room	9710	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors contains asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Music - sound rooms	4377/9694/ 9695/9697/9 798/9699/ 9700/9701/ 9702	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Music - sound rooms	9705/9706/ 9707/9708/ 9709	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Music - storage 1	9711	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors contains asbestos
Music - storage 2	9712	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Music - storage 3	9704	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Music - Wshroom	9713	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors contains asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Music room 1	4330	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors contains asbestos
Music room 2	4329	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors contains asbestos
Nurse's - Office (across cafeteria)	9723	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Nurse's room (across cafeteria)	4217	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Office - Caretaker	4158	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Office - Main	4190	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Office - Math (by rm. 124)	9728/9729	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Office - Principal	4193	***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Office - Vice-Principal 1	4192	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Office - Vice-Principal 2	4191	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Office - Washroom (Principal)	4194	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Office (main) - Kitchenette	4187	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Room 107	4196	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Room 109	4197	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** ***Transite asbestos pipe present above ceiling*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 111	4198	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** ***Transite asbestos pipe present above ceiling*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 113	4200	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation below ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 113A - Office	4201	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Room 114 - Computer	4219	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 114A	9719	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos
Room 115	4202	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards

Confirmed asbestos items are highlighted

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(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 116	4221	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 117	4203	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 118	4225	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 119	4204	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff
(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 120	4226	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 121	4205	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 122	4227	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 123	4206	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 123A - Office	4207	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Asbestos gaskets present behind old black/tack board
Room 124	4228	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 125	4208	***Vinyl asbestos floor tiles*** - * leveling coat present underneath Ceiling drywall and joint compound contains asbestos ***Asbestos present on mechanical insulation above drywall ceiling*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 127	4209	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 129	4210	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 131	4179	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Room 141	4292	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 143	4293	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 145	4294	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 147	4295	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 149	4296	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 150 - Drafting	4167	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 150A - Storage	4166	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 151 - Machine shop	4168	***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 151A - storage	4169	***Asbestos present on mechanical insulation below ceiling*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 152 - Drafting	4164	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 152A - Print	4165	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 153 - Tech. shop	4170	***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 154	4163	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 155 - Electronics	4172	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 155A - Storage	9716	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 155B - Storage	9717	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 155C - Storage	9718	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 157 - Woodshop	4174	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** ***Rough plaster beam contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns & exhaust system (if present) contain asbestos
Room 157A - Paint	4173	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Outside - Transite asbestos panel present*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 157B - Storage	9715	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 158 - Autoshop	4149	***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** ***Rough plaster beam contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns & exhaust system (if present) contain asbestos
Room 159 - Woodshop	4175	***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** ***Rough plaster beam contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns & exhaust system (if present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 160 - Welding	4148	***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** ***Rough plaster beam contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns & exhaust system (if present) contain asbestos
Room 161 - Autoshop	4176	***Asbestos present on mechanical insulation below ceiling*** ***Outside - Transite asbestos panel present*** ***Rough plaster beam contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Spray/paint/welding booths; fume hoods; cabinet lining; kilns & exhaust system (if present) contain asbestos
Room 201	4250	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 203 - science	4251	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** ***Black acid resistant counter top and fume hood contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Cabinet lining; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 203A - prep room	4252	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos * Asbestos gaskets present behind old black/tack boards * Black acid resistant counter tops, fume hood, cabinet lining, kilns and exhaust system contains asbestos
Room 205 - Science	4253	***Vinyl asbestos floor tiles present*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos * Asbestos gaskets present behind old black/tack boards * Black acid resistant counter tops, fume hood, cabinet lining, kilns and exhaust system contains asbestos
Room 207 - Science	4254	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Black acid resistant counter top and fire doors contain asbestos ***Fume hood contains Transite asbestos panels*** * Asbestos insulation present behind wall cavity or above ceiling * Cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 207A - Prep room	4255	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Black acid resistant counter top and fire doors contain asbestos ***Fume hood contains Transite asbestos panels*** * Asbestos insulation present behind wall cavity or above ceiling * Cabinet lining; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 209 - Science	4256	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Black acid resistant counter top and fire doors contain asbestos ***Fume hood contains Transite asbestos panels*** * Asbestos insulation present behind wall cavity or above ceiling * Cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 209A - Science	9693	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Black acid resistant counter top and fire doors contain asbestos ***Fume hood contains Transite asbestos panels*** * Asbestos insulation present behind wall cavity or above ceiling * Cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 211	4257	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 213	4259	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Black acid resistant counter top contains asbestos * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Cabinet lining; fume hoods; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 213A - prep. Room	4260	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** ***Black acid resistant counter top contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Cabinet lining; fume hoods; kilns and exhaust system (when present) contain asbestos
Room 214	4278/4277	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 214A - Office	9691	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 214B - Washroom	9692	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 215	4261	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Black acid resistant counter top and fire doors contain asbestos ***Fume hood contains Transite asbestos panels*** * Asbestos insulation present behind wall cavity or above ceiling * Cabinet lining; kilns and exhaust system (when present) contain asbestos
Room 216	4279	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Room 216A - Office	4280	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Room 217	4262	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 218	4284	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 219	4263	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 220	4285	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 221	4265	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff
(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 222	4286	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 223	4267	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 224	4287	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 225 - Drama	4268	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 225A - storage	4266	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 226	4274	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 227	4270	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 227A - Office	4269	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 228	4275	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 229	4271	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 230	4276	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 231	4244	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** ***Outside - Transite asbestos panels present*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Cabinet lining; fume hoods; kilns and exhaust system (when present) contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Room 231A - Storage	4245	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** ***Outside - Transite asbestos panels present*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos * Cabinet lining; fume hoods; kilns and exhaust system (when present) contain asbestos
Room 233	4247	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 233A - storage	4246	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Room 235	4248	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack board
Slop sink (across rm. 117)	4223	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Slop sink (across rm. 217)	4282	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Slop sink (across rm. 231)	4272	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Slop sink (by rm. 124)	4211	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Staff - Male Washroom (across cafeteria)	9727	* Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Staff room - Male (across cafeteria)	4214	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Stairwell 1 (by rm. 141)	4290	* Asbestos insulation present behind wall cavity * Fire doors and radiator contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Stairwell 2 (by staff dining)	4180	***Transite asbestos panels present under stairwell*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos
Stairwell 3 (by rm. 111)	4199	***Transite asbestos panels present under stairwell*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos
Stairwell 4 (by cafeteria)	4186	***Transite asbestos panels present under stairwell*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos
Stairwell 5 (between Gyms)	4310	***Transite asbestos panels present under stairwell*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos
Stairwell 6 (by Gym A/B)	4309	***Transite asbestos panels present under stairwell*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos
Student services - Office (across cafeteria)	9721	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Student services - Office 1; 2; 4 (across cafeteria)	4237/4238/ 9735	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Student services - office 3	4239	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Student services - storage	4236/9733/ 9734	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Student services - Washroom	4235	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity * Fire doors contain asbestos
Student services (across cafeteria)	4241	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and old window putty/caulking contain asbestos
Supply room (by rm. 158)	4154	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Teacher's common - office	4216	***Vinyl asbestos floor tiles*** - * leveling coat present underneath * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Teacher's common room - Photocopy room	9726	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors and old window putty/caulking contain asbestos
Teacher's common room (across cafeteria)	4215	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Asbestos present on mechanical insulation above ceiling tiles*** * Asbestos insulation present behind wall cavity * Fire doors, radiator and old window putty/caulking contain asbestos * Asbestos gaskets present behind old black/tack boards
Washroom - Boys (across rm. 121)	4224	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Washroom - Boys (across rm. 221)	4283	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Washroom - Boys (across rm. 227)	4288	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Washroom - Boys (by boiler room)	4152	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Washroom - Boys (by rm. 124)	4229	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Washroom - Female staff (across cafeteria)	9725	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Washroom - Girls (across rm. 231)	4273	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff
(For non-asbestos fire doors, please see tag on door spine)

AREA DESCRIPTION	***LOCATION ID***	***ASBESTOS MATERIALS***
Washroom - Girls (across Staff dining room)	4212	***Vinyl asbestos floor tiles*** - * leveling coat present underneath ***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Washroom - Girls (by rm. 116)	4222	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Washroom - Girls (by rm. 217)	4281	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors and radiator contain asbestos
Washroom - Handicap (by boiler room)	4153/4155	***Ceiling drywall and joint compound contains asbestos*** ***Asbestos present on mechanical insulation below ceiling*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos
Washroom - Men's (by boiler room)	4157	***Ceiling drywall and joint compound contains asbestos*** * Asbestos insulation present behind wall cavity or above ceiling * Fire doors contain asbestos

Confirmed asbestos items are highlighted

***** Material is assumed to contain asbestos until confirmed by competent staff

(For non-asbestos fire doors, please see tag on door spine)

APPENDIX II

RESULTS OF BULK SAMPLE ANALYSIS FOR ASBESTOS

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: Orchard Park Secondary School, 200 DeWitt Road, Stoney Creek
Project No.: 53138.003
Prepared For: Damian Palus

Lab Reference No.: b62854
Date Analyzed: June 12, 2009

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
001A Rough soft plaster on partition wall between rooms – upper section of wall 4173, 4148	Homogeneous, grey, soft, cementitious material.	Chrysotile 10-25%	Vermiculite 25-50% Other Non-Fibrous 25-50%
001B Rough soft plaster on partition wall between rooms – upper section of wall 4173, 4148			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
001C Rough soft plaster on partition wall between rooms – upper section of wall 4173, 4148			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
001D Rough soft plaster on partition wall between rooms – upper section of wall 4173, 4148			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		

ANALYST: BGrugeln

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: Orchard Park Secondary School, 200 DeWitt Road, Stoney Creek
Project No.: 53138.003
Prepared For: Damian Palus

Lab Reference No.: b62854
Date Analyzed: June 12, 2009

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)		
		ASBESTOS	OTHER	
001E Rough soft plaster on partition wall between rooms – upper section of wall 4173, 4148			Not Analyzed	
Comments:	Analysis was stopped due to a previous positive result.			
002A 24x24 ceiling tile- pinhole- 1st floor corridor	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 25-50% 0.5-5%
002B 24x24 ceiling tile- pinhole- 1st floor corridor	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 25-50% 0.5-5%
002C 24x24 ceiling tile- pinhole- 1st floor corridor	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 25-50% 0.5-5%
003A 24x24 deep fissure and pinhole- 4151	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	50-75% 10-25% 10-25% 0.5-5%
003B 24x24 deep fissure and pinhole- 4151	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	50-75% 10-25% 10-25% 0.5-5%

ANALYST: 

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: Orchard Park Secondary School, 200 DeWitt Road, Stoney Creek
Project No.: 53138.003
Prepared For: Damian Palus

Lab Reference No.: b62854
Date Analyzed: June 12, 2009

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
003C 24x24 deep fissure and pinhole- 4151	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 50-75% Mineral Wool 10-25% Perlite 10-25% Other Non-Fibrous 0.5-5%
004A 2x24 large fissure and pinhole- 4151	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%
004B 2x24 large fissure and pinhole- 4151	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%
004C 2x24 large fissure and pinhole- 4151	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%
005A Drywall compound- ceiling- loc 4152	Homogeneous, beige, soft, cementitious material.	Chrysotile 0.5-5%	Non-Fibrous Material > 75%
005B Drywall compound- ceiling- loc 4152			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
005C Drywall compound- ceiling- loc 4152			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		

ANALYST: BGilgen

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: Orchard Park Secondary School, 200 DeWitt Road, Stoney Creek
Project No.: 53138.003
Prepared For: Damian Palus

Lab Reference No.: b62854
Date Analyzed: June 12, 2009

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)		
		ASBESTOS	OTHER	
006A Drywall compound- wall-4154+4155	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%
Comments:	Cellulose is present on the surface of this sample.			
006B Drywall compound- wall-4154+4155	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%
006C Drywall compound- wall-4154+4155	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%
007A 24x24 ceiling tiles- pinhole and small fissure- 4156	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Non-Fibrous Material	50-75% 25-50% 0.5-5%
007B 24x24 ceiling tiles- pinhole and small fissure- 4156	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Non-Fibrous Material	50-75% 25-50% 0.5-5%
007C 24x24 ceiling tiles- pinhole and small fissure- 4156	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Non-Fibrous Material	50-75% 25-50% 0.5-5%
008A 24x48 ceiling tiles- pinhole and l/w fissure- 4158	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 25-50% 0.5-5%

ANALYST:

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: Orchard Park Secondary School, 200 DeWitt Road, Stoney Creek
Project No.: 53138.003
Prepared For: Damian Palus

Lab Reference No.: b62854
Date Analyzed: June 12, 2009

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)		
		ASBESTOS	OTHER	
008B 24x48 ceiling tiles- pinhole and l/w fissure- 4158	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 25-50% 0.5-5%
008C 24x48 ceiling tiles- pinhole and l/w fissure- 4158	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 25-50% 0.5-5%
009A 24x48 ceiling tiles- pinhole and w/w fissure- 4163	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
009B 24x48 ceiling tiles- pinhole and w/w fissure- 4163	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
009C 24x48 ceiling tiles- pinhole and w/w fissure- 4163	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
010A 24x48 ceiling tiles- pinhole and fleck- 4163	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	50-75% 10-25% 10-25% 0.5-5%

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SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)		
		ASBESTOS	OTHER	
010B 24x48 ceiling tiles- pinhole and fleck- 4163	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	50-75% 10-25% 10-25% 0.5-5%
010C 24x48 ceiling tiles- pinhole and fleck- 4163	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	50-75% 10-25% 10-25% 0.5-5%
011A 24x48 ceiling tiles- pinhole and small w/w fissure-4164	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
011B 24x48 ceiling tiles- pinhole and small w/w fissure-4164	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
011C 24x48 ceiling tiles- pinhole and small w/w fissure-4164	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
012A 12" splined ceiling tiles-smooth 4171	Homogeneous, brown, compressed, fibrous material.	None Detected	Cellulose	> 75%
012B 12" splined ceiling tiles-smooth 4171	Homogeneous, brown, compressed, fibrous material.	None Detected	Cellulose	> 75%

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
012C 12" splined ceiling tiles- smooth 4171	Homogeneous, brown, compressed, fibrous material.	None Detected	Cellulose > 75%
013A Drywall compound- wall- 4171	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
013B Drywall compound- wall- 4171	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
013C Drywall compound- wall- 4171	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
014A 24x24 ceiling tiles- pinhole and fleck- 4177	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%
014B 24x24 ceiling tiles- pinhole and fleck- 4177	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%
014C 24x24 ceiling tiles- pinhole and fleck- 4177	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 10-25% Other Non-Fibrous 0.5-5%

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)		
		ASBESTOS	OTHER	
015A 24x24 ceiling tiles- pinhole and fleck- 4178	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
015B 24x24 ceiling tiles- pinhole and fleck- 4178	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
015C 24x24 ceiling tiles- pinhole and fleck- 4178	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
016A Drywall compound- wall- 4184	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%
016B Drywall compound- wall- 4184	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%
016C Drywall compound- wall- 4184	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%
017A Drywall compound- wall office- 4193	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%
017B Drywall compound- wall office- 4193	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)			
		ASBESTOS		OTHER	
017C Drywall compound- wall office- 4193	Homogeneous, white, soft, cementitious material.	None Detected		Non-Fibrous Material	> 75%
018A 12x12 ceiling tiles- glued on- pinhole - 4193	Homogeneous, beige, layered, compressed, fibrous material.	None Detected		Cellulose Mineral Wool Non-Fibrous Material	25-50% 50-75% 0.5-5%
018B 12x12 ceiling tiles- glued on- pinhole - 4193	Homogeneous, beige, layered, compressed, fibrous material.	None Detected		Cellulose Mineral Wool Non-Fibrous Material	25-50% 50-75% 0.5-5%
018C 12x12 ceiling tiles- glued on- pinhole - 4193	Homogeneous, beige, layered, compressed, fibrous material.	None Detected		Cellulose Mineral Wool Non-Fibrous Material	25-50% 50-75% 0.5-5%
019A Mastic below CT 4193	Homogeneous, brown, soft, brittle material.	None Detected		Non-Fibrous Material	> 75%
019B Mastic below CT 4193	Homogeneous, brown, soft, brittle material.	None Detected		Non-Fibrous Material	> 75%
019C Mastic below CT 4193	Homogeneous, brown, soft, brittle material.	None Detected		Non-Fibrous Material	> 75%
020A Drywall compound- ceiling – rm 117-4203	Homogeneous, beige, soft, cementitious material.	Chrysotile	0.5-5%	Non-Fibrous Material	> 75%

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
020B Drywall compound- ceiling – rm 117-4203			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
020C Drywall compound- ceiling – rm 117-4203			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
021A Drywall compound- wall 4217	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
021B Drywall compound- wall 4217	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
021C Drywall compound- wall 4217	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
022A Drywall compound- ceiling- 2nd floor closet 4244	2 Phases: a) Homogeneous, beige, soft, cementitious material. b) Homogeneous, off-white, soft, cementitious material.	Chrysotile 0.5-5%	Non-Fibrous Material > 75% Not Analyzed
Comments:	Analysis was stopped for phase a) due to a previous positive result. Cellulose is present on the surface of this sample.		

ANALYST:_____

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)		
		ASBESTOS	OTHER	
022B Drywall compound- ceiling- 2nd floor closet 4244			Not Analyzed	
Comments:	Analysis was stopped due to a previous positive result.			
022C Drywall compound- ceiling- 2nd floor closet 4244			Not Analyzed	
Comments:	Analysis was stopped due to a previous positive result.			
023A 24x48 ceiling tiles- pinhole and large l/w fissure- 4266	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
023B 24x48 ceiling tiles- pinhole and large l/w fissure- 4266	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
023C 24x48 ceiling tiles- pinhole and large l/w fissure- 4266	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 0.5-5%
024A Drywall compound- ceiling- stair 4290	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%
024B Drywall compound- ceiling- stair 4290	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material	> 75%

ANALYST: BQ+9en

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
024C Drywall compound- ceiling- stair 4290	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
025A Drywall compound- wall/ceiling- 4304/4301	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
025B Drywall compound- wall/ceiling- 4304/4301	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
025C Drywall compound- wall/ceiling- 4304/4301	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
026A Thermal insulation- gym on wall- 4305	Homogeneous, off-white, fibrous material.	None Detected	Cellulose > 75% Synthetic Fibres < 0.5%
026B Thermal insulation- gym on wall- 4305	Homogeneous, off-white, fibrous material.	None Detected	Cellulose > 75% Synthetic Fibres < 0.5%
026C Thermal insulation- gym on wall- 4305	Homogeneous, off-white, fibrous material.	None Detected	Cellulose > 75% Synthetic Fibres < 0.5%
026D Thermal insulation- gym on wall- 4305	Homogeneous, off-white, fibrous material.	None Detected	Cellulose > 75% Synthetic Fibres < 0.5%
026E Thermal insulation- gym on wall- 4305	Homogeneous, off-white, fibrous material.	None Detected	Cellulose > 75% Synthetic Fibres < 0.5%

ANALYST: BGrgen

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
027A Rough plaster- ceiling- shower room only- 4313	2 Phases: a) Homogeneous, grey, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, white, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%
Comments:	Phase a) is small in size. For more reliable results, a larger sample is required.		
027B Rough plaster- ceiling- shower room only- 4313	2 Phases: a) Homogeneous, grey, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, white, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%
027C Rough plaster- ceiling- shower room only- 4313	2 Phases: a) Homogeneous, grey, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, white, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
028A Drywall compound- ceiling 4318	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
028B Drywall compound- ceiling 4318	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
028C Drywall compound- ceiling 4318	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
029A Drywall compound- wall 4329	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
029B Drywall compound- wall 4329	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
029C Drywall compound- wall 4329	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%

ANALYST: [signature]

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Prepared For: James Chappell / Damian Palus

Lab Reference No.: b63840
Date Analyzed: July 6, 2009

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
029a Parging cement-hot water heating /domestic water-4149	Homogeneous, grey, soft, cementitious material.	Chrysotile 50-75%	Non-Fibrous Material 25-50%
Comments:	Cellulose is present on the surface of this sample.		
029b Parging cement-hot water heating /domestic water-4149			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
029c Parging cement-hot water heating /domestic water-4149			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
030a Sweatwrap –domestic cold water-4148	2 Phases: a) Homogeneous, black, tar with fibrous material.	None Detected	Cellulose > 75% Tar and other non-fibrous 10-25%
	b) Homogeneous, brown, layered paper.	Chrysotile < 0.5%	Cellulose > 75% Hair < 0.5% Non-Fibrous Material 0.5-5%
Comments:	The asbestos in phase b) is present on the surface of the sample and may be due to contamination.		

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
030b Sweatwrap –domestic cold water-4148	2 Phases: a) Homogeneous, black, tar with fibrous material.	None Detected	Cellulose > 75% Tar and other non-fibrous 10-25%
	b) Homogeneous, brown, layered paper.	Chrysotile < 0.5%	Cellulose > 75% Synthetic Fibres < 0.5% Hair < 0.5% Non-Fibrous Material 0.5-5%
Comments:	The asbestos in phase b) is present on the surface of the sample and may be due to contamination.		
030c Sweatwrap –domestic cold water-4148	2 Phases: a) Homogeneous, black, tar with fibrous material.	None Detected	Cellulose > 75% Tar and other non-fibrous 10-25%
	b) Homogeneous, brown, layered paper.	None Detected	Cellulose > 75% Synthetic Fibres < 0.5% Hair < 0.5% Non-Fibrous Material 0.5-5%
031a Parging cement over fibreglass insulation –hot water tank-domestic water	Homogeneous, grey, soft, cementitious material.	Chrysotile > 75%	Non-Fibrous Material 10-25%
031b Parging cement over fibreglass insulation –hot water tank-domestic water			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		

ANALYST:

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
031c Parging cement over fibreglass insulation –hot water tank-domestic water			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
032a Parging cement on fibreglass insulation on green expansion tanks-boiler room	Homogeneous, grey, soft, cementitious material.	Chrysotile 50-75%	Non-Fibrous Material 25-50%
Comments:	Fibreglass is present on the surface of this sample.		
032b Parging cement on fibreglass insulation on green expansion tanks-boiler room			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
032c Parging cement on fibreglass insulation on green expansion tanks-boiler room			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
033a Parging cement and caposite on boiler breeching boiler room	2 Phases: a) Homogeneous, grey, soft, cementitious material. b) Homogeneous, beige, fibrous material.	Chrysotile > 75% Amosite 5-10%	Non-Fibrous Material 10-25% Mineral Wool 50-75% Perlite 5-10% Other Non-Fibrous 25-50%
Comments:	Cotton fabric reinforcement is present on the surface of this sample.		

ANALYST: Sud Bg

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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
033b Parging cement and caposite on boiler breeching boiler room			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
033c Parging cement and caposite on boiler breeching boiler room			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
034a Parging cement on hot water tank-4328-over fibreglass insulation	Homogeneous, grey, soft, cementitious material.	Chrysotile > 75%	Non-Fibrous Material 10-25%
Comments:	Cellulose and tar are present on the surface of this sample.		
034b Parging cement on hot water tank-4328-over fibreglass insulation			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
034c Parging cement on hot water tank-4328-over fibreglass insulation			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		

ANALYST: _____

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SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
035a Fibrous sprayed fireproofing on beam/deck-4328	2 Phases: a) Homogeneous, off-white, fibrous material.	None Detected	Mineral Wool > 75% Non-Fibrous Material 5-10%
	b) Homogeneous, grey, soft, cementitious material.	Chrysotile 50-75%	Non-Fibrous Material 25-50%
Comments:	Phase b) is small in size.		
035b Fibrous sprayed fireproofing on beam/deck-4328	Homogeneous, off-white, fibrous material.	None Detected	Mineral Wool > 75% Non-Fibrous Material 5-10%
035c Fibrous sprayed fireproofing on beam/deck-4328	Homogeneous, off-white, fibrous material.	None Detected	Mineral Wool > 75% Non-Fibrous Material 5-10%
035d Fibrous sprayed fireproofing on beam/deck-4328	Homogeneous, off-white, fibrous material.	None Detected	Mineral Wool > 75% Non-Fibrous Material 5-10%
035e Fibrous sprayed fireproofing on beam/deck-4328	Homogeneous, off-white, fibrous material.	None Detected	Mineral Wool > 75% Non-Fibrous Material 5-10%

ANALYST:

- 4 -
Results

Section 4 Results

Materials that were suspected of being asbestos-containing were grouped homogeneously; that is, they were grouped as to similar composition (colour, texture), system and general appearance (age, type, etc.). Collected samples were organized by the mechanical or structural system (i.e. wall, floor and ceiling materials).

Samples were also described as being friable or non-friable. Friable describes a material that is loose in composition and can be pulverized by hand pressure. Non-friable materials are materials which indicate a solid composition requiring power tools for the pulverization of the material.

4.1 Homogeneous Materials

The following table represents all of the homogeneous materials identified within Orchard Park Secondary School, including the analytical results and friability of each product.

Table 1 - Homogeneous Materials within Orchard Park Secondary School

Table Notes:
1. Shading of homogeneous materials indicates asbestos minerals were detected above 0.5%.
2. Complete laboratory results are provided in Appendix B.
3. Based on historical evidence and previous sampling, Vinyl Floor Tiles can be assumed to contain Chrysotile asbestos. Vinyl flooring has been assumed to be an asbestos-containing, as identified by the HWDSB. Areas where carpet is located could not be adequately assessed to determine if floor tile is present. There may or may not be asbestos-containing materials located beneath carpeting. At the time of renovation or demolition bulk sampling should occur by OESN Ltd. to confirm material composition below carpeting.
4. Materials determined to be "Asbestos-Containing" have been assumed based on HWDSB identification. At the time of renovation or demolition bulk sampling should occur by OESN Ltd. to confirm material composition.
5. Complete laboratory analytical results for the Pinchin Environmental Ltd. asbestos assessment can be found within the *Asbestos Materials Assessment 2009 within Orchard Park Secondary School* (a copy of this report can be found within the HWDSB Regulated Substances office).

Homogeneous Number	OESN Drawing Location ID	Material and Building Floor	Friability	Asbestos Content and Type	Sample Number
		Floor Materials			
HF-01	-	Floor Tile – 9" x 9"	Non-Friable	**Chrysotile**	Not Sampled
HF-02	-	Floor Tile – 12" x 12"	Non-Friable	**Chrysotile**	Not Sampled
HF-03	-	Linoleum	Non-Friable	**Asbestos-Containing**	Not Sampled
		Wall Materials			
HW-01	**4173, 4148**	Rough Plaster Beam Enclosure	Non-Friable	**10-25% Chrysotile**	001A
				Not Analyzed	001B
				Not Analyzed	001C
				Not Analyzed	001D
				Not Analyzed	001E

Homogeneous Number	OESN Drawing Location ID	Material and Building Floor	Friability	Asbestos Content and Type	Sample Number
		Ceiling Materials			
HC-01	**4152**	Drywall & Joint Compound	Friable	**0.5-5% Chrysotile**	005A
				Not Analyzed	005B
				Not Analyzed	005C
	4203			**0.5-5% Chrysotile**	020A
				Not Analyzed	020B
				Not Analyzed	020C
	4244			**0.5-5% Chrysotile**	022A
				Not Analyzed	022B
				Not Analyzed	022C
HC-02	**4164** (1019)	Drywall & Joint Compound (1969 Era Above Ceiling)	Friable	Non-Asbestos	3111-08-C01
				1.9% Chrysotile	3111-08-C02
	4208 (1078)			**2.2% Chrysotile**	3111-08-C03
				1.7% Chrysotile	3111-08-C04
				2.1% Chrysotile	3111-08-C05
	4315 (1124)			**1.7% Chrysotile**	3111-08-C06
				1.8% Chrysotile	3111-08-C07
		Thermal Materials			
HT-01	-	Insulated Cement Fittings	Friable	**Asbestos-Containing**	Not Sampled
HT-02	**4328**	Duct Parging	Non-Friable	**>75% Chrysotile**	034A
				Not Analyzed	034B
				Not Analyzed	034C
		Manufactured Materials			
HM-01	**4304** (1025A)	Black Caulking	Non-Friable	**5% Chrysotile**	3111-08-M01
	4185 (1088A)			Not Analyzed	3111-08-M02
				Not Analyzed	3111-08-M03
HM-02	-	Transite Panels	Non-Friable	**Asbestos-Containing**	Not Sampled
HM-03	-	Black Mastic (Below Floor Tile)	Non-Friable	**Asbestos-Containing**	Not Sampled
HM-04	**4163** (1018)	Brown Mastic	Non-Friable	Non-Asbestos	3111-08-M04
				Non-Asbestos	3111-08-M05
				Non-Asbestos	3111-08-M06
HM-05	**4219** (1042)	Vermiculite Insulation	Friable	Non-Asbestos	3111-08-M07
				Non-Asbestos	3111-08-M08
				Non-Asbestos	3111-08-M09
HM-06	-	Transite Pipe	Non-Friable	**Asbestos-Containing**	Not Sampled
HM-07	**4241** (1098)	Grey Caulking	Non-Friable	Non-Asbestos	3111-08-M10
				Non-Asbestos	3111-08-M11
				Non-Asbestos	3111-08-M12

Homogeneous Number	OESN Drawing Location ID	Material and Building Floor	Friability	Asbestos Content and Type	Sample Number
Manufactured Materials (Continued)					
HM-08	-	Rope Gasket	Friable	**Asbestos-Containing**	Not Sampled
HM-09	**4244** (2021)	Kiln Block	Non-Friable	Non-Asbestos	3111-08-M13
				Non-Asbestos	3111-08-M14
				Non-Asbestos	3111-08-M15

The results of the assessment and analysis indicate that **thirteen (13)** homogeneous materials contain asbestos minerals. A summary of all identified building materials and their location within Orchard Park Secondary School can be referenced in **Appendix A – *Table 3 - Inventory of Asbestos and Non-Asbestos Containing Building Materials within Orchard Park Secondary School***. A log of photographs of the materials identified to be asbestos-containing within the school can be found below within **Table 2**.

ORCHARD PARK SCHOOL - SAMPLE RESULTS

SCHOOL ID	LOCATION ID#	MATERIAL	ASBESTOS CONTENT & TYPE	LEAD CONTENT	RESULTS DATED
Bay doors - mechanical shop		bay doors - outside paint		0.123%	July 13, 1998
Breezeway		Pillar paint		0.045%	Oct. 10, 2000
Change room - boys	4308	Wall plaster paint		0.0239%	June 28, 1008
Change room - girls - hall to teacher's phys. Ed. Off		ceiling paint		0.0050%	Oct. 15, 2002
Electrical room	4160	Transite wall	20% Amosite & 30% Chrysotile		June 29, 1998
Front canopy		West side paint		0.035%	Oct. 10, 2000
Front canopy		West side - front panel paint		0.096%	Oct. 10, 2000
Gym		west wall paint		0.005%	Mar. 18, 1999
Gym		East wall paint		0.012%	Mar. 18, 1999
Room 160	4148	Welding booth panel	10-25% Chrysotile		Mar. 25, 1999
Room 221- kitchen		Exhaust fan paint		0.038%	Nov. 17, 2004
Team room - D	4318	ceiling paint		0.003%	Nov. 16, 2006