RECAPP Facility Evaluation Report

St Albert Pss Dist #6

Bellerose Composite High School

B4063A

St. Albert

Report run on: March 12, 2007 11:26 AM

Facility Details

Building Name: Bellerose Composite High S
Address: 49 Giroux Road
Location: St. Albert

Building Id: B4063A
Gross Area (sq. m): 11,807.04
Replacement Cost: $22,114,350
Construction Year: 0

Evaluation Details

Evaluation Company: Wilson Architects Ltd.
Evaluation Date: May 29 2006
Evaluator Name: J. R. Irlam

Total Maintenance Events Next 5 years: **$987,500**
5 year Facility Condition Index (FCI): **4.47%**

General Summary:

The two storey Bellerose Composite High School was constructed in 1986 and at the last count in September 2005 there were 1125 students in grades 10 to 12. The main focal point of the school is a tiered dining area which is set up like a dinner theatre and looks down on the stage. The tiers are connected by a series of stairs and ramps. There are gallery style second floor corridors overlooking this area.
In 2000 a 2 storey class room addition was was constructed on the north side of the school with four classrooms at each level. There is also a two classroom portable building.

Structural Summary:

The structure is a mix of steel columns and reinforced concrete block walls carrying open web steel joists or steel beams. The floor structures are also a mix of concrete topping on steel deck and poured reinforced concrete slabs on steel beams. Most of the interior partitions are reinforced concrete block
The 1986 school has belled end bearing concrete piles with grade beams. The 2000 addition has friction piles with grade beams.

The structure is in a generally good condition.

Envelope Summary:

The exterior walls of the school consist of a brick skin, an air space, 50 mm rigid insulation and vapour barrier on a concrete block wall with loose fill mineral insulation in the blocks. There is a precast concrete band which defines the top and bottom of the walls. These walls are extremely durable and show no signs of wear or distress.
There are both built up and SBS roofs on the building. The built up roof on the 1986 school requires replacement. There is a dramatic stepped glazing system at the main entrance and skylights over the upper level corridors.
Generally the building envelop is in a generally good condition.

Interior Summary:

The interior wall finishes throughout the school are painted concrete block which is durable and shows no signs of distress or damage. There is a mix of ceiling systems from stippled drywall in corridors to acoustic t-bar in class rooms. The majority of floor finishes throughout the school are sheet vinyl. There is hardwood flooring in the gym and epoxy finishes in wash rooms.
The carpeting in classrooms varies as to the condition with some areas requiring replacement.
Overall the interior is on a good to acceptable condition.

Mechanical Summary:

Flush valve water closets and urinal throughout the school are in good condition. Lavatories have been replaced with stainless steel models.
Hydronic heating system with two gas fired boilers and circulating pumps that serve perimeter radiation, ventilation units, reheat coils, and force flow unit heaters. The boilers are in fair condition, but the grooved coupling used for the heating distribution leak whenever the heating system is turned off. This required that the heating system runs year round. Mechanical grooved couplings should be replaced.
The ventilation units provided for the school are institutional quality, and are operating effectively. Some re-balancing of the supply system is required to improve circulation to a few of the second floor classrooms. Providing spectrum specific solar film on the skylight windows would provide a significant increase in space comfort.
Overall the mechanical systems are in a fair to good condition.

Electrical Summary:

The school has been provided with a 2000A, 600V 3 phase 4 wire underground service obtained from an on-site pad mounted transformer. The main switchboard is the an FPE and has spare capacity for the addition of future breakers. Dry type step down transformers have been provided to step the voltage down to 120/208 Volts. Lighting is provided by fluorescent fixtures utilizing T8 lamps and electronic ballasts.The low voltage switching system should be replaced due to ongoing problems. The call system is obsolete and is prone to frequent breakdowns. It should be replaced. Overall, the electrical systems are in good condition.

Rating Guide	
Condition Rating	**Performance**
1 - Critical	Unsafe, high risk of injury or critical system failure.
2 - Poor	Does not meet requirements, has significant deficiencies. May have high operating/maintenance costs.
3 - Marginal	Meets minimum requirements, has significant deficiencies. May have above average operating maintenance costs.
4 - Acceptable	Meets present requirements, minor deficiencies. Average operating/maintenance costs.
5 - Good	Meets all present requirements. No deficiencies.
6 - Excellent	As new/state of the art, meets present and foreseeable requirements.

S1 STRUCTURAL

A1010 Standard Foundations*

The 1986 original school building is carried on poured concrete belled end bearing piles carrying grade beams.

The foundation system for the 2000 addition consists of concrete friction piles carrying grade beams.

Rating	Installed	Design Life	Updated
5 - Good	0	100	NOV-06

A1030 Slab on Grade*

The original 1986 school has a reinforced concrete ground floor slab on engineered fill.

The 2000 addition has slab on grade on compacted gravel and steel mesh reinforcement.

Rating	Installed	Design Life	Updated
5 - Good	0	100	NOV-06

B1010.01 Floor Structural Frame*(Building Frame)

The building structural frame is complex to achieve the architecture with a mix of structural systems. The roof structure consists of open web steel joists of varying sizes spanning between steel stanchions or reinforced concrete block walls.

There are also steel frames for the system of skylights on the second floor.

Rating	Installed	Design Life	Updated
5 - Good	1986	100	NOV-06

B1010.02 Structural Interior Walls Supporting Floors (or Roof)*

There are load bearing reinforced concrete block walls which carry the floor and roof structures in both the 1986 school and the 2000 addition.

Rating	Installed	Design Life	Updated
5 - Good	1986	100	NOV-06

B1010.03 Floor Decks, Slabs, and Toppings*

There are floor decks consisting of concrete topping on metal deck spanning open web steel joists as well as reinforced concrete floor slabs spanning steel beams.

Rating	Installed	Design Life	Updated
5 - Good	1986	100	NOV-06

B1010.05 Mezzanine Construction*

There is a mezzanine floor in the materials lab. constructed of a concrete slab carried on open web steel joists. In 1992 this mezzanine was enclosed with gypsum board and plywood on steel studs and converted into two classrooms.

Rating	Installed	Design Life	Updated
5 - Good	1986	80	NOV-06

B1010.06 Ramps: Exterior**

There are exterior concrete ramps with 10% slope at the front of the school to access the main entrance.

Rating	Installed	Design Life	Updated
5 - Good	1986	40	NOV-06

B1010.09 Floor Construction Fireproofing*

The steel roof and floor structure is protected by a sprinkler system. There is no fire proofing of the structure itself. The floor structure does not comply with the current 1997 Code which requires a fire separation between floors.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	50	NOV-06

Event: Code review

Concern:
There is no fire proofing indicated on the school drawings which appears to be in breach of the current 1997 Code. The school building may well have been in compliance with the prevailing Code at the time of construction.

Recommendation:
It is recommended that a Code review be carried out and the implications of non-compliance with the current Code be addressed and a recommendation made to the School Board.

The estimate is based on a week of consultant's time including a report with recommendation.

Type	Year	Cost	Priority
Study	2007	$3,000	Unassigned

Updated: NOV-06

B1010.10 Floor Construction Firestopping*

Floor construction fire stopping appears to be intact.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

B1020.01 Roof Structural Frame*

The roof structural frame in both the 1986 school and the 2000 addition consists of a mix of steel channels, steel I-beams and open web steel joists spanning steel stanchions and reinforced concrete block walls.
The sloped framing for the skylights is constructed of hollow steel sections.

Rating	Installed	Design Life	Updated
5 - Good	1986	100	NOV-06

B1020.04 Canopies*

There is a pitched canopy over the main entrance constructed of a slopes glass roof in a frame of painted hollow steel sections. Hollow steel sections also form the posts carrying the roof. There are pre-finished metal gutters each side of the canopy and a precast concrete fascia on the main elevation to define the gable.

Rating	Installed	Design Life	Updated
5 - Good	1986	50	NOV-06

B1020.06 Roof Construction Fireproofing*

The steel roof structure is protected by a sprinkler system. There is no fire proofing applied to the steel structure.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

S2 ENVELOPE

B2010.01.01 Precast Concrete: Exterior Wall Skin*

There is a pre-cast concrete band along the top and at the base of the exterior brick skin cladding on all elevations in both the 1986 school and 2000 addition.

Rating	Installed	Design Life	Updated
5 - Good	0	75	NOV-06

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

There is an exterior brick skin on all elevations of the school buildings.

Rating	Installed	Design Life	Updated
5 - Good	1986	75	NOV-06

B2010.01.08 Cement Plaster (Stucco): Ext. Wall*

The portable class room builing has a stucco exterior finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	75	NOV-06

B2010.01.09 Expansion Control: Exterior Wall Skin*

There are brick control joints built into the brick work on the elevations of the 2000 addition.

Rating	Installed	Design Life	Updated
5 - Good	2000	75	NOV-06

B2010.01.11 Joint Sealers (caulking): Ext. Wall**

There is caulking on the skylight assemblies visible on the roof. There is also caulking where exterior windows abut walls.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	20	NOV-06

Event: Recaulk windows and skylights

Concern:
The concern is that there are windows and skylights which leak and require re-caulking.
Recommendation:
Re-caulking of the skylights and windows is recommended.

The estimate is based on replacing 100 linear metres caulking with a 13 mm bead.
Consequences of Deferral:
The windows and skylights will continue to leak and potentially cause internal damage.

Type	Year	Cost	Priority
Repair	2007	$2,000	High

Updated: NOV-06

B2010.02.05 Wood Framing*: Ext. Wall Const.

The portable classrooms are wood frame exterior construction.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	100	NOV-06

B2010.03 Exterior Wall Vapor Retarders, Air Barriers, and Insulation*

There are vapour barriers and 50 mm rigid insulation in both the 1986 school and the 2000 addition.

Rating	Installed	Design Life	Updated
5 - Good	1986	30	NOV-06

B2010.06 Exterior Louvers, Grilles, and Screens*

There is an exterior louvre for the mechanical system on the west elevation of the 1986 school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

B2020.01.01.02 Aluminum Windows (Glass & Frame)**

The north elevation of the 2000 addition has aluminum windows with hopper openings in the lower third.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	40	NOV-06

B2030.01.05 All Glass Entrances and Storefronts**

There is two storey sloping glazing, stepped in plan, either side of the main entrance.

The design of this feature presents a dramatic indication of the main entrance.

There are three main entrance doors which have an aluminum frame with tempered glass sealed units.

Rating	Installed	Design Life	Updated
5 - Good	1986	30	NOV-06

B2030.03 Large Exterior Special Doors (Overhead)*

There are five exterior overhead doors in the automotive shop.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	30	NOV-06

Event: Replace overhead doors

Concern:
The concern is that the overhead doors in the automotive shop are damaged due to prolonged usage and the affects of ice and snow.
Recommendation:
Replacement of the overhead doors is recommended.

The estimate is based on replacing 5 overhead doors.
Consequences of Deferral:
The overhead doors will continue to deteriorate if not replaced.

Type	Year	Cost	Priority
Repair	2007	$7,500	High

Updated: NOV-06

B2030.05 Other Exterior Doors**

The main entrance doors are tempered glass in an aluminum frame.

The other exterior doors are hollow steel in a steel frame.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

Event: Replace exterior doors

Concern:
The exterior doors will reach the end of their theoretical service life in the year 2016 and will need to be replaced.

Recommendation:
Replacement of the exterior doors is recommended in the year 2016.

The estimate is based on replacing 10 exterior doors.

Consequences of Deferral:
The doors will continue to deteriorate beyond the year 2016.

Type	Year	Cost	Priority
Lifecycle Replacement	2016	$5,000	High

Updated: NOV-06

B3010.01 Deck Vapor Retarder and Insulation*

There are vapour barriers and rigid insulation on all roof decks.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel)**

There are built up roofs with gravel finish over original 1986 school. The 2000 addition has an SBS roof.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	25	NOV-06

Event: Replace roof

Concern:
The original 1986 built up roof is showing signs of deterioration and will reach the end of its design life in 2011.

Recommendation:
Replacement of the majority of this roof is recommended.

The estimate is based on replacing 4000 m2 with an SBS roof.

Consequences of Deferral:
The roof will continue to deteriorate if this recommendation is deferred.

Type	Year	Cost	Priority
Failure Replacement	2010	$200,000	High

Updated: NOV-06

B3010.04.04 Modified Bituminous Membrane Roofing (SBS)**

There are SBS roofs on the portable classrooms and the 2000 addition.

Rating	Installed	Design Life	Updated
5 - Good	2000	25	NOV-06

B3020.01 Skylights**

There is an extensive system of skylights in the roof of both the 1986 school and the 2000 addition.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	20	NOV-06

Event: Replace glazing in skylights

Concern:
The skylights leak and are a continual maintenance issue. The water penetration causes damage to interior finishes.

Recommendation:
Replacement of the glazing system within the existing steel framework if recommended by the consultant's study.

The estimate is based on an appropriate order of magnitude of the cost of this work..

Consequences of Deferral:
The skylights will continue to leak.

Type	Year	Cost	Priority
Failure Replacement	2009	$250,000	High

Updated: NOV-06

B3020.02 Other Roofing Openings (Hatch,Vent, etc)*

There are two hatches on the 1986 school roof. There are also numerous vent pipe and roof drain penetrations.

Rating	Installed	Design Life	Updated
5 - Good	1986	25	NOV-06

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Interior fixed partitions are various thicknesses of concrete block.

Rating	Installed	Design Life	Updated
5 - Good	1986	50	NOV-06

C1010.03 Interior Operable Folding Panel Partitions**

There is an operable folding partition to merge two class rooms into one on the second floor of the 2000 addition. The partition is suspended from a ceiling track suspended from the steel roof structure above.

There is a moveable acoustic panel wall to isolate the stage area on the original 1986 school.

Rating	Installed	Design Life	Updated
5 - Good	2000	30	NOV-06

C1010.04 Interior Balustrades and Screens, Interior Railings*

There are interior balustrades associated with the ramps in the music room and the central seating area.

Rating	Installed	Design Life	Updated
5 - Good	1986	40	NOV-06

C1010.05 Interior Windows*

There are interior windows between the second floor library and the corridor, between the second floor work room and the computer rooms, and the reception area to the general office and the book room (both on either side of the main entrance vestibule).

There are also interior windows in the offices in the cafeteria and home economics room.

Rating	Installed	Design Life	Updated
5 - Good	1986	40	NOV-06

C1010.06 Interior Glazed Partitions and Storefronts*

There are glazed screens and store fronts within the school.

Rating	Installed	Design Life	Updated
5 - Good	1986	30	NOV-06

C1010.07 Interior Partition Firestopping*

There was no missing fire stopping observed by the audit team.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

C1020.03 Interior Fire Doors*

There are rated hollow metal fire doors throughout the school some of which have wired glass windows.

Rating	Installed	Design Life	Updated
5 - Good	1986	50	NOV-06

C1020.07 Other Interior Doors*

The interior doors are typically hollow metal or solid core wood in pressed steel frames.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	15	NOV-06

C1030.01 Visual Display Boards**

There are green boards, white boards and peg boards for visual displays.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	20	NOV-06

Event: Replace visual display boards

Concern:
The concern is that the theoretical design life of the visual display boards is reached in the year 2006.

Recommendation:
It is recommended that worn and damaged visual display boards be replaced.

The estimate is based on replacing 20 m2 of white and green boards.

Consequences of Deferral:
The visual display boards will continue to deteriorate.

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$10,000	Low

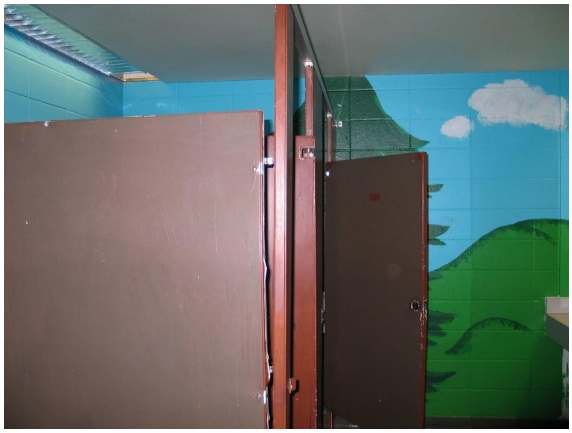
Updated: NOV-06

C1030.02 Fabricated Compartments(Toilets/Showers)**

There are steel toilet partitions in student and staff wash rooms on both floors throughout the school.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	30	NOV-06

Event: Replace toilet partitions



Concern:
There are steel toilet partitions in student wash rooms on both floors of the school which are damaged due to prolonged usage and abuse.
Recommendation:
Replacement of steel toilet partitions is recommended.

The estimate is based on replacing 15 steel toilet partitions.
Consequences of Deferral:
The toilet partitions will continue to deteriorate.

Type	Year	Cost	Priority
Failure Replacement	2007	$5,000	High

Updated: NOV-06

C1030.06 Handrails*

There is a painted steel pipe handrail in the second floor corridor of the 2000 addition. This also acts as a guard rail to protect the sloped glazing into the original school building.

There are also a painted steel handrails on a poured concrete upstand where the gallery style corridors overlook the central atrium as well as the ramps and stairs which form part of the central seating/dining/theatre area.

Rating	Installed	Design Life	Updated
5 - Good	2000	50	NOV-06

C1030.08 Interior Identifying Devices*

There are interior identifying devices on doors to class rooms and other rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	20	NOV-06

C1030.10 Lockers**

There are steel lockers in corridors on both floors and in the gym change rooms.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	30	NOV-06

Event: Replace steel lockers

Concern:
There are steel lockers which are damaged. The lockers in the gym change room are in a particularly bad condition.

Recommendation:
Replacement of the damaged lockers is recommended.

The estimate is based on replacing 30 steel lockers.

Consequences of Deferral:
The steel lockers will deteriorate further.

Type	Year	Cost	Priority
Failure Replacement	2008	$6,000	High

Updated: NOV-06

C1030.12 Storage Shelving*

Storage shelving is a mix of steel for the industrial arts rooms and shops, plywood with plastic laminate or birch veneer in other areas such as the art room and library.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	20	NOV-06

C1030.14 Toilet, Bath, and Laundry Accessories*

There are dispensers for paper towels, toilet rolls and soap.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	20	NOV-06

C1030.17 Other Fittings*

There mirrors mounted over vanity units in student and staff wash rooms.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	10	NOV-06

Event: Replace mirrors

Concern:
There are mirrors in student and staff wash rooms which have deteriorated and require replacement.
Recommendation:
Replacement of deteriorated mirrors is recommended.

The estimate is based on replacing 10 mirrors.
Consequences of Deferral:
Wash room mirrors will continue to deteriorate.

Type	Year	Cost	Priority
Failure Replacement	2008	$5,000	Medium

Updated: NOV-06

C2010 Stair Construction*

The main circulation stairs between the two floors are poured reinforced concrete.

There are also four sets of escape stairs constructed of steel with tread pans filled with concrete.

Rating	Installed	Design Life	Updated
5 - Good	1986	100	NOV-06

C2020.01 Tile Stair Finishes*

The main circulation stairs have non slip ceramic tile treads and risers.

Rating	Installed	Design Life	Updated
5 - Good	1986	60	NOV-06

C2020.05 Resilient Stair Finishes**

The steel stairs have resilient finish to the treads and risers.

Rating	Installed	Design Life	Updated
5 - Good	1986	20	NOV-06

Event: Replace stair finish

Concern:
The stair finish reach their design life in 2006.
Recommendation:
Replacement is recommended.

The estimate is based on replacing 100 m2 of resilient stair finish.
Consequences of Deferral:
The finish will continue to deteriorate.

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$4,500	Low

Updated: NOV-06

C2020.08 Stair Railings and Balustrades*

There are painted steel and stainless steel pipe hand rails on a concrete upstand which form the stair balustrades and railings.

Rating	Installed	Design Life	Updated
5 - Good	1986	50	NOV-06

C2030.01 Ramp Construction*

There are barrier free concrete ramps in the cafeteria and music room.

Rating	Installed	Design Life	Updated
5 - Good	1986	100	NOV-06

C2030.02 Ramp Finishes*

The finish to the ramp is sheet vinyl.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	0	NOV-06

C2030.03 Ramp Railings*

The ramp railings and constructed from a concrete upstand topped with a steel handrail.

Rating	Installed	Design Life	Updated
5 - Good	1986	50	NOV-06

C3010.01 Concrete Wall Finishes*

There are painted concrete block interior wall finishes throughout the school in rooms such as the gym, shops and other areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	100	NOV-06

C3010.04 Gypsum Board Wall Finishes*

There are gypsum board wall finishes throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	60	NOV-06

C3010.06 Tile Wall Finishes**

There are ceramic tile wall finishes in some service rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	40	NOV-06

C3010.11 Interior Wall Painting**

There is interior painting finish on the drywall walls and ceilings and concrete block walls and partitions.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	10	NOV-06

Event: Repaint interior

Concern:
The concern is that the interior painting will be required in the year 2010.

Recommendation:
The recommendation is to repaint the interior walls .

The estimate is based on repainting 2000 m2 of wall area.

Consequences of Deferral:
The condition of the interior painting will start to deteriorate after the year 2010.

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$10,000	Low

Updated: NOV-06

C3010.14 Other Wall Finishes**

There is an epoxy Desco wall finish in many rooms throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	20	NOV-06

Event: Refinish walls

Concern:
The concern is that the epoxy wall finish reached the end of its theoretical design life in 2006.

Recommendation:
Refinishing the epoxy walls is recommended in the year 2015.

The estimate is based on refinishing 1000 m2 of wall area with epoxy.

Consequences of Deferral:
The epoxy wall finish will deteriorate after the year 2015.

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$10,000	Low

Updated: NOV-06

C3020.01.02 Paint Concrete Floor Finishes**

There are painted concrete floor finishes in the mechanical room and other service areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	10	NOV-06

Event: Repaint floors

Concern:
The floor painting needs to be redone within its design service life.

Recommendation:
Repainting concrete floors is recommended.

The estimate is based on repainting 1000 m2 of concrete floor area.

Consequences of Deferral:
The concrete floor painting will continue to deteriorate.

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$1,500	Low

Updated: NOV-06

C3020.04 Wood Flooring** - Bellerose Composite High School B4063A

Rating	Installed	Design Life	Updated
3 - Marginal	0	30	FEB-07

Event: Refinish hardwood floors

Concern:
The hardwood floors are marked and damaged and need to be re-finished and relined.

Recommendation:
Refinishing of the floors is recommended rather than replacement.

The estimate is based on refinishing 1070 m2 of floor area.

Consequences of Deferral:
The floors will continue to deteriorate.

Type	Year	Cost	Priority
Repair	2008	$10,000	High

Updated: NOV-06

C3020.07 Resilient Flooring**

There is sheet vinyl throughout the school in corridors and classrooms.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	20	NOV-06

Event: Replace sheet vinyl floor

Concern:
The sheet vinyl reaches the end of its theoretical design life in 2006. The sheet vinyl is also damaged and split in some locations.

Recommendation:
Replacement of the damaged sections is recommended.

The estimate is based on replacing 1000 m2 of sheet vinyl flooring.

Consequences of Deferral:
The floor finish will continue to deteriorate.

Type	Year	Cost	Priority
Failure Replacement	2007	$25,000	Unassigned

Updated: NOV-06

C3020.08 Carpet Flooring**

There is carpet flooring in some class rooms, offices, music room and library.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	15	NOV-06

Event: Replace carpet

Concern:
There are areas of carpet which are damaged, appear unsightly and require replacement.
Recommendation:
Replacement of damaged carpet is recommended.

The estimate based on replacing 1000 m2 of carpet.
Consequences of Deferral:
The carpet will continue to deteriorate.

Type	Year	Cost	Priority
Lifecycle Replacement	2007	$70,000	High

Updated: NOV-06

C3020.14 Other Floor Finishes**

There are epoxy (Desco) floor finishes in wash rooms, change rooms and shower rooms.
The floor finish in the kitchen is Alto safety flooring.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	20	NOV-06

Event: Replace damaged floor

Concern:
The other floor finishes reach their design life in 2006. They are damaged, appear unsightly and require replacement.
Recommendation:
Replacement of the damaged areas is recommended.

The estimate is based on replacing 300 m2 of epoxy floor.
Consequences of Deferral:
The floor will continue to deteriorate.

Type	Year	Cost	Priority
Failure Replacement	2007	$2,000	High

Updated: NOV-06

C3030.01 Concrete Ceiling Finishes*

There are painted concrete ceiling finishes in the generator room, gym store and change rooms under the mechanical room.

Rating	Installed	Design Life	Updated
5 - Good	1986	100	NOV-06

C3030.04 Gypsum Board Ceiling Finishes*

There are gypsum board ceiling finishes in the music room, home economics room , drama room and other room rooms in the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

C3030.06 Acoustic Ceiling Treatment (Susp.T-Bar)**

There are special suspended acoustic ceiling panels in the music room.

There are also areas of acoustic tiles in a t-bar grid in rooms throughout the school.

Rating	Installed	Design Life	Updated
5 - Good	1986	25	NOV-06

D1010.01.04 Hydraulic Freight Elevators**

There is a hydraulic elevator in the receiving area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

S4 MECHANICAL

D2010.01 Water Closets**

Floor mounted flush valve water closets are used in the student washrooms. Seating configurations are generally elongated bowls with open fronts in all washrooms.
Flush tank water closets in second floor staff washrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	35	NOV-06

Capacity Size	Capacity Unit
34	number

Event: Replace Water Closets

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$19,200	High

Updated: NOV-06

D2010.02 Urinals**

There are floor mounted urinals with flush valves in the boys wash rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	35	NOV-06

Capacity Size	Capacity Unit
9	number

Event: Replace Urinals

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$6,300	High

Updated: NOV-06

D2010.03 Lavatories**

There are vanity mounted lavatories in staff and student wash rooms. Most are stainless steel with Symmons mixing and metering faucets. Minor repairs are required.
Wall mounted vitreous china lavatories used in handicapped and private washrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	35	NOV-06

Capacity Size	Capacity Unit
30	number

Event: ReplaceLavatories

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$15,000	High

Updated: NOV-06

D2010.04 Sinks**

Single and double compartment stainless steel sinks for staff rooms, science labs, custodial office, and in some classrooms.
Science labs have single compartment stainless steel sinks with gooseneck faucet, and bottle traps (37 in total).
Single and double compartment stainless steel sinks in kitchen and Nutrition room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

Capacity Size	Capacity Unit
54	number

Event: Replace Sinks

Type	Year	Cost	Priority
Lifecycle Replacement	2016	$27,000	High

Updated: NOV-06

D2010.05 Showers**

There are low flow aerating shower heads with metering push-button faucet in the shower rooms adjacent to the gym..
An emergency shower is located in the biology lab.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

Capacity Size	Capacity Unit
23	number

Event: Replace Showers

Type	Year	Cost	Priority
Lifecycle Replacement	2016	$11,500	High

Updated: NOV-06

D2010.08 Drinking Fountains / Coolers**

There are Sunroc stainless steel refrigerated wall hung water fountains throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	35	NOV-06

Capacity Size	Capacity Unit
8	number

Event: Replace Drinking Fountains

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$8,000	High

Updated: NOV-06

D2010.09 Other Plumbing Fixtures**

Other plumbing features are summarized as follows:
Shampoo sinks in Beauty Culture.
Wall hung janitor's sinks in custodial rooms.
Two compartment stainless steel pot sink in cafeteria kitchen.
Semi-circular wash fountains in VED and IA.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

Capacity Size	Capacity Unit
16	number

Event: Replace Plumbing Fixtures

Type	Year	Cost	Priority
Lifecycle Replacement	2016	$16,000	Unassigned

Updated: NOV-06

D2020.01.01 Pipes and Tubes: Domestic Water*

Copper piping is used for domestic water service throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	40	NOV-06

Capacity Size	Capacity Unit
10640	m2

D2020.01.03 Piping Specialties (Backflow Preventors)**

Backflow prevention devices have been provided on the water service, fire protection system, chemical feed systems, and make-up water.

Rating	Installed	Design Life	Updated
5 - Good	1993	20	NOV-06

Event: Replace Backflow Preventors

Type	Year	Cost	Priority
Lifecycle Replacement	2013	$6,000	Unassigned

Updated: NOV-06

D2020.02.02 Plumbing Pumps: Domestic Water**

Bell & Gossett bronze circulator used for domestic hot water recirculation.

Rating	Installed	Design Life	Updated
4 - Acceptable	1994	20	NOV-06

Capacity Size	Capacity Unit
1.1	L/s

Event: Replace Domestic Water Recirc Pump

Type	Year	Cost	Priority
Lifecycle Replacement	2014	$1,000	Unassigned

Updated: NOV-06

D2020.02.06 Domestic Water Heaters**

Two water heaters are used for domestic hot water production:
One is a Jetglas D80T-725 and one Bradford White D80T-725 tank type natural gas water heaters with electronic ignition and draft inducing fans. These have identical tanks and symmetrical piping. An ASME horizontal storage tank is provided in the fan room above the boiler room.
An electric domestic water booster has been provided in the kitchen for the dishwasher.

Rating	Installed	Design Life	Updated
4 - Acceptable	1996	20	NOV-06

Capacity Size	Capacity Unit
310	kW

Event: Replace Domestic Water Heaters

Type	Year	Cost	Priority
Lifecycle Replacement	2016	$11,000	Unassigned

Updated: NOV-06

D2020.03 Water Supply Insulation: Domestic*

Domestic water piping is insulated throughout the school.

Rating	Installed	Design Life	Updated
5 - Good	1986	30	NOV-06

Capacity Size	Capacity Unit
10640	m2

D2030.01 Waste and Vent Piping*

There are cast iron and copper DWV. Where visible it is supported.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

Capacity Size	Capacity Unit
10680	m2

D2030.02 Waste Piping Specialties*

Bottle traps are used in Science Room sinks.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

Capacity Size	Capacity Unit
37	number

D2030.03 Waste Piping Equipment*

There is a sanitary sump in mechanical room with Simplex pump.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

D2030.03.01 Interceptors: Waste - Grease

A grease interceptor is provided for kitchen drains.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	0	NOV-06

D2040.01 Rain Water Drainage Piping Systems*

Rain water is collected from roof drains through bell and spigot cast piping and is directed below grade to the municipal storm water system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

Capacity Size	Capacity Unit
5340	m2

D2040.02.04 Roof Drains**

Deep sump open flow roof drains with cast aluminum strainers.
All roof drains are regularly cleaned and maintained. No standing water was noted.

Rating	Installed	Design Life	Updated
5 - Good	1986	40	NOV-06

Capacity Size	Capacity Unit
42	number

D2090.01 Compressed Air Systems (Non Controls)**

Shop air system includes an DeVilbiss 15 HP tank mounted compressor with steel distribution piping. A domestic water cooled condensing heat exchanger with solenoid valve has been added to replace the refrigerated condenser. Compressed air to the industrial and vocational arts areas is via steel piping. There are an estimated 32 air stations.

Rating	Installed	Design Life	Updated
5 - Good	1986	30	NOV-06

Capacity Size	Capacity Unit
11.25	kW

Event: Replace Shop Compressed Air System

Type	Year	Cost	Priority
Lifecycle Replacement	2016	$15,000	High

Updated: NOV-06

D3010.02 Gas Supply Systems*

The gas meter is located inside the school building in a separate meter room adjacent to the mechanical room. Gas is regulated from 60# down to 2# then to 7" prior to entering the mechanical room. All gas piping is steel with welded or screwed fittings. A 2# gas line runs on the roof to the addition mechanical room and to the portables.

Rating	Installed	Design Life	Updated
5 - Good	1983	60	NOV-06

D3010.06 Other Energy Supply Systems*

A diesel storage tank with secondary containment weir in the generator room serves the emergency generator..

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

Capacity Size	Capacity Unit
950	litre

D3020.02.01 Heating Boilers and Accessories: H.W.**

Two Unilux 350WG natural gas fired hot water heating boilers provide heating for the building. Power burners on the boilers modulate to meet load demands.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	35	NOV-06

Capacity Size	Capacity Unit
1670	kW

Event: Replace Heating Boilers

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$110,000	Unassigned

Updated: NOV-06

D3020.02.02 Chimneys (&Comb. Air): H.W. Boiler**

Combustion air ducts have been provided in the mechanical room. Chimney clearances are adequate.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

Event: Replace Chimneys &Comb. Air

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$11,000	Unassigned

Updated: NOV-06

D3020.02.03 Water Treatment: H. W. Boiler*

Chemical treatment is provided for the heating system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

D3030.06.02 Refrigerant Condensing Units**

Trane RAUBC602BE02B roof mounted air cooled condensing unit provides direct expansion cooling to AH-3 . Refrigeration lines run to roof. System is dual circuited and uses R-22.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	25	NOV-06

Capacity Size	Capacity Unit
170	kW

D3040.01.01 Air Handling Units: Air Distribution**

There are three low velocity air systems in the gymnasium fan room #1.
AH-1: Haakon AirPak 360 custom air handling unit serves the large gymnasium. Includes return fan, mixing section, blenders,filters, heating coil, humidifier, and supply fan. (6958 l/s)
AH-2: Haakon AirPak 120 custom air handling unit serves the small gymnasium. Includes return fan, mixing section, blenders,filters, heating coil, humidifier, and supply fan. (2430 l/s)
AH-3: Haakon AirPak 360 custom air handling unit serves the main floor south administration area. Includes return fan, mixing section, blenders,filters, heating coil, humidifier, and supply fan. (7692 l/s)
There are two low velocity air systems in Fan room #2.
AH-4: Haakon AirPak custom air handling unit serves the central Rotunda/cafeteria. Includes return fan, mixing section, blenders,filters, heating coil, humidifier, and supply fan. (4719 l/s)
AH-5: Haakon AirPak 560 custom air handling unit serves the north and west portions of the second floor. Includes return fan, mixing section, blenders,filters, heating coil, humidifier, and supply fan. (12,581 l/s)
There is one low velocity air systems in Fan Room #3 over the boiler room.
AH-6: Haakon AirPak 560 custom air handling unit serves the science classrooms on the south and east portions of the second floor. Includes return fan, mixing section, blenders,filters, heating coil, humidifier, and supply fan. (10,105 l/s)
There are two low velocity air systems in Fan room #4.
AH-7: Haakon AirPak 240 custom air handling unit serves the Automotive shops. Includes return fan, mixing section, blenders,filters, glycol heating coil, humidifier, and supply fan with a variable speed drive. (4684 l/s)
AH-8: Haakon AirPak custom air handling unit serves the materials lab and shop areas on the main floor. Includes return fan, mixing section, blenders,filters, glycol heating coil, humidifier, and supply fan with a variable speed drive. (4011 l/s)

Rating	Installed	Design Life	Updated
5 - Good	1987	30	NOV-06

Capacity Size	Capacity Unit
53180	L/s

Event: Replace Air Handling Units

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$320,000	Unassigned

Updated: NOV-06

D3040.01.01 Air Handling Units: Air Distribution** - 2001 Addition

AH-10: Haakon PentPak roof mounted custom air handling unit serves the classroom addition on the north side. Includes return fan, mixing section, blenders,filters, glycol heating coil, humidifier, and supply fan. (10,252 l/s)

Rating	Installed	Design Life	Updated
5 - Good	2001	30	NOV-06

Capacity Size	Capacity Unit
10252	L/s

D3040.01.03 Air Cleaning Devices:Air Distribution*

There is a Murphy dust collection unit for the woodwork shop.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

D3040.01.04 Ducts: Air Distribution*

Low pressure distribution ductwork is run in the ceiling space. Numerous revision made in 1996.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

D3040.01.07 Air Outlets & Inlets:Air Distribution*

Square ceiling diffusers and rectangular wall grilles used throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

D3040.03.01 Hot Water Distribution Systems**

Two Bell & Gossett vertical in-line pumps circulating heating water from the boilers through finned tube radiation, cabinet unit heaters, glycol heat exchangers, and heating coils, and reheat coils. Piping is Schedule 40 steel with grooved couplings (Victaulic). Smaller piping uses screwed fittings and copper piping. Reverse return piping system. Some revisions were made in 1996 to accommodate changes to the ventilation ductwork.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	40	NOV-06

Capacity Size	Capacity Unit
10640	m2

Event: Repair Mechanical couplings

Concern:
Grooved coupling on heating water mains leak whenever the heating water temperature is reduced. Boilers run year round in order to avoid leaking.

Recommendation:
Remove grooved couplings. Weld joints and replace fittings with welded or flanged fittings.

Consequences of Deferral:
High energy costs, uncomfortable building, potential for water damage to finishes.

Type	Year	Cost	Priority
Repair	2007	$200,000	Unassigned

Updated: NOV-06

D3040.04.01 Fans: Exhaust**

There are six roof mounted exhaust fans for washrooms, three silk-screen exhaust fans, a kiln exhaust fan, a photo room exhaust fan,
a Home Ec range exhaust, beauty culture exhaust fan and a general exhaust fan.
There is CO2 exhaust system in automotive shop.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

Capacity Size	Capacity Unit
15	number

D3040.04.01 Fans: Exhaust** - Tailpipe Exhaust System

Belted vent sets are used for tail pipe exhaust extraction in the automotive shop.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

Capacity Size	Capacity Unit
2200	L/s

D3040.04.03 Ducts: Exhaust*

Low pressure exhaust ductwork in ceiling space feeds roof mounted exhaust fans.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

D3040.04.05 Air Outlets and Inlets: Exhaust*

There are ceiling mounted exhaust grilles in washrooms and locker rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

D3040.05 Heat Exchangers**

There is a shell and tube water-to-glycol heat exchanger. It includes an expansion tank and a Bell & Gosset model 80-3x3x7 vertical in-line circulating pump that serves the heating coils in AH-7 an AH-8.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

D3040.05 Heat Exchangers** 2001 addition

An Alfa Laval plate and frame water-to-glycol heat exchanger serves the 2001 addition. It includes an expansion tank and Grundfos UPS-50-160F circulating pump that serves the heating coil in AH-10.

Rating	Installed	Design Life	Updated
5 - Good	2001	30	NOV-06

D3050.02 Air Coils**

There are hot water re-heating coils in ventilation ductwork. Coils generally serve individual interior zones.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

D3050.03 Humidifiers**

Each air system, AH-1 through AH-8 has a spray coil humidification section.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	25	NOV-06

D3050.03 Humidifiers** - 2001 Addition

A Dri-Steem GTS99-100 gas-fired humidifier produces atmospheric steam to a steam grid in AH-10.

Rating	Installed	Design Life	Updated
5 - Good	2001	25	NOV-06

D3050.05.03 Finned Tube Radiation**

Perimeter finned tube radiation cabinets is used throughout the building for perimeter heating. Bare fin radiation is used in the second floor ceiling space, behind perimeter millwork, and in architectural features in the Rotunda.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	40	NOV-06

D3050.05.06 Unit Heaters**

Horizontal hydronic unit heaters are used in the mechanical rooms. Cabinet unit heaters are used in the entrance vestibules. There are horizontal and vertical hydronic unit heaters in the shop and automotive and welding shops.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

Capacity Size	Capacity Unit
28	number

D3050.05.08 Radiant Heating (Ceiling & Floor)**

There are ceiling mounted radiant panels in the 2001 addition classrooms.

Rating	Installed	Design Life	Updated
5 - Good	2001	35	NOV-06

D3060.02.03 Pneumatic and Electric Controls

Control actuators throughout are pneumatic. Pilot positioners are used on large valve and damper actuators.
Zone control is provide by proportional pneumatic thermostats and normally open heating valves and day night setback is accomplished through a dual pressure system.
Control air is produced by a Powers tank mounted duplex compressor with a DeVilbiss-Hankison refrigerated air dryer.
Line voltage thermostats used on entrance heaters and unit heaters.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	40	NOV-06

Capacity Size	Capacity Unit
210	points

D3060.02.05 Building Systems Controls (BMCS, EMCS)**

Powers DDC BMCS has been installed. Pneumatic actuators are used on valves and dampers throughout. System provides basic scheduling, monitoring and control of primary building systems. Energy management capabilities are limited.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	25	NOV-06

Capacity Size	Capacity Unit
120	points

D3090 Other Special HVAC Systems and Equipment*

An Engineered Air DJ-100 indirect gas-fired make-up air unit is used for kitchen exhaust air make-up,

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	25	NOV-06

Capacity Size	Capacity Unit
2800	L/s

D3090 Other Special HVAC Systems and Equipment* - Vacuum

There is a Spensor vacuum and dry mop system in main mechanical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	25	NOV-06

D4010 Sprinklers: Fire Protection*

There is a hydraulically designed sprinkler system throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	60	NOV-06

D4030.01 Fire Extinguisher, Cabinets and Accessories**

There are handheld dry chemical fire extinguishers throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

D4090 Other Fire Protection Systems*

There is a wet chemical kitchen hood fire suppression system.
There are also fire blankets in the science labs and science prep area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	30	NOV-06

D4090.06 Smoke Protection & Exhaust Fans**

There are two roof mounted spun aluminum fans for smoke extraction from the rotunda.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

S5 ELECTRICAL

D5010.02 Secondary Electrical Transformers (Interior)**

Dry type step down transformers have been provided throughout the school to step the voltage down to 120/208 Volts.

Rating	Installed	Design Life	Updated
5 - Good	1987	40	NOV-06

D5010.03 Main Electrical Switchboards (Main Distribution)**

An FPE Main switchboard has been provided and is located in the main electrical room on the main floor. It is fed from an on-site pad mounted transformer located on the south side of the property. The switchboard is rated at 2000A, 600V, 3 phase, 4 wire, and is complete with a 2000A main breaker and a feeder breaker distribution section complete with feeder breakers. There is spare capacity in the distribution section and all feeder breakers are well identified

Rating	Installed	Design Life	Updated
5 - Good	1987	40	NOV-06

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)**

Branch circuit panel boards have been provided throughout the school and are located in service rooms and in the class room wings. Panel boards are approximately 80% full.

Rating	Installed	Design Life	Updated
5 - Good	1987	30	NOV-06

D5010.07 Motor Control Centers (Motor Control)**

Klockner Moeller motor control centres have been provided in each mechanical room. Motor control centres are complete with magnetic motor starters, pilot lights and hand -off-auto selector switches.There is ample spare capacity in the motor control centres.

Rating	Installed	Design Life	Updated
5 - Good	1987	30	NOV-06

D5020.01 Electrical Branch Wiring*

All branch wiring is copper in conduit.

Rating	Installed	Design Life	Updated
5 - Good	1987	50	NOV-06

D5020.02.01 Lighting Accessories (Lighting Controls)*

Interior lighting control is provided by a low voltage switching system and is the product of GE. Relay cabinets are located adjacent to the lighting panels..

Rating	Installed	Design Life	Updated
3 - Marginal	1987	30	NOV-06

Event: Replace low voltage switching system

Concern:
Low voltage switching relays are prone to frequent failures as are the switches. System does not have the capability of being interfaced with a building energy management system.

Recommendation:
Replace the low voltage switching system with a new system that reflects current technology.

Consequences of Deferral:
Lighting controls will continue to fail.

Type	Year	Cost	Priority
Failure Replacement	2008	$50,000	Medium

Updated: NOV-06

D5020.02.02.02 Interior Florescent Fixtures**

There are fluorescent fixtures throughout the school with T8 lamps and electronic ballasts. Fixtures are recessed and surface mounted.

Rating	Installed	Design Life	Updated
5 - Good	1997	30	NOV-06

D5020.02.02.03 Interior Metal Halide Fixture*

There are metal halide fixtures in the gymnasia and in the entrance foyer. These fixtures have 400 Watt lamps with pulse start.

Rating	Installed	Design Life	Updated
5 - Good	1997	30	NOV-06

D5020.02.03.01 Emergency Lighting Built-in*

Selected fixtures throughout the school are connected to the emergency generator. All paths and points of egress are illuminated.

Rating	Installed	Design Life	Updated
5 - Good	1987	35	NOV-06

D5020.02.03.03 Exit Signs*

The exit signs are LED. Each required exit has been provided with an exit light.

Rating	Installed	Design Life	Updated
5 - Good	1997	30	NOV-06

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

75 Watt Wall mounted fixtures have been provided all around the building including each entrance.

Rating	Installed	Design Life	Updated
5 - Good	1987	30	NOV-06

D5020.03.02 Lighting Accessories: Exterior (Lighting Controls)*

Exterior lighting is controlled by photo cell with manual override.

Rating	Installed	Design Life	Updated
5 - Good	1987	30	NOV-06

D5030.01 Detection and Fire Alarm**

An Edwards EST-3 addressable, zoned fire alarm system has been provided. It is complete with heat and smoke detectors, pull stations, and horn/strobe units. The main control panel is located in the custodian's room with a remote anunnciator in the main entrance vestibule. The system`is expandable. The system is externally monitored and tested annually.

Rating	Installed	Design Life	Updated
5 - Good	2004	25	NOV-06

D5030.02.02 Intrusion Detection**

A Focus 32, DSC 832 intrusion alarm has been provided. It is complete with motion sensors, door contacts and key pads. The system is monitored externally.

Rating	Installed	Design Life	Updated
5 - Good	2000	25	NOV-06

D5030.02.04 Video Surveillance**

A video surveillance system has been provided that consists of cameras, monitors and recording equipment. Cameras are located the hallways, and the parking lot. The monitors and recording equipment is located in the general office

Rating	Installed	Design Life	Updated
5 - Good	2002	25	NOV-06

D5030.03 Clock and Program Systems**

A Dukane central clock system has been provided. The head end equipment is located in the main office and digital clocks have been provided throughout the school in each classroom and the hallways.

Rating	Installed	Design Life	Updated
5 - Good	1987	25	NOV-06

D5030.04.01 Telephone Systems**

The telephone service is underground with the main terminal board located in the main electrical room. A Mitel 2000 telephone system has been provided. There are telephone sets in the administration area and in each classroom.

Rating	Installed	Design Life	Updated
5 - Good	1998	25	NOV-06

D5030.04.03 Call Systems**

The call system is a Dukane. It is a relay based system (switch bank style) and is located in the main office. A hand held microphone has been provided for making announcements. System is prone to frequent breakdowns and is used primarily for all call paging and not for communicating with the classrooms.

Rating	Installed	Design Life	Updated
3 - Marginal	1987	25	NOV-06

Event: Replace the call system

Concern:
The call system is obsolete and prone to frequent breakdowns.
Parts are no longer available.
Recommendation:
Replacement of the call system is recommended.
Consequences of Deferral:
Call system failures will persist.

Type	Year	Cost	Priority
Failure Replacement	2007	$60,000	Medium

Updated: NOV-06

D5030.04.04 Data Systems**

Cat 5 data cabling is installed throughout the school. There are data outlets in each class room and in the administration area. The network is located in a room off the computer lab and consists of a data rack with patch panels, hubs, and switches. Secondary data closets are provided at strategic locations within the school and are linked with fibre optic cable.

Rating	Installed	Design Life	Updated
5 - Good	1999	25	NOV-06

D5030.06 Television Systems*

The TV cable service is underground and the terminal board is located in the electrical room. Each classroom has a TV outlet.

Rating	Installed	Design Life	Updated
5 - Good	1987	20	NOV-06

D5090.02 Packaged Engine Generator Systems (Emergency Power System)**

A Leroy Somer emergency engine generator set is located in a dedicated room. It is rated at 175Kw, 600V, 3 phase, 4 wire and is diesel fired. It is complete with a transfer switch, and a battery charger. An emergency power distribution centre has been provided. Selected lights, fire alarm system and some mechanical equipment are on emergency power.

Rating	Installed	Design Life	Updated
5 - Good	1987	35	NOV-06

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.03 Theater and Stage Equipment* - Bellerose Composite High School B4063A

There are make up counters and mirrors in the drama area separate from the stage by means of an acoustical operable partition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

E1020.07 Laboratory Equipment*

The science class rooms are equipped with safety stations (eye wash, fire blankets etc.), fume hoods, laboratory benches and microscopes.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

E1030.01 Vehicle Service Equipment*

The auto shop is equipped with car lifts, engine hoists and stands. There are also steel work benches and steel tool cabinets.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

E1090.03 Food Service Equipment*

The kitchen is equipped with the full range of food storage (coolers and freezers), food preparation (prep. counters and sinks) and food production (deep fryers, griddle, soup kettle, conventional ovens).

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

The gymnasia court floor markings for a range of court games (including badminton, floor hockey, basket ball). They are also equipped with score boards, basket ball hoops and back boards.
The large gym also has operable 10 tier bleachers which are stacked in a wall recess.
There is an electrically operated dividing curtain in the large gym.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	15	NOV-06

Event: Replace curtain

Concern:
The theoretical design life of this component was reached in 2001.

The plastic dividing curtain in the large gym is damaged and requires replacement.

Recommendation:
Replacement of the curtain is recommended.

The estimate is based on replacing the 24 metre by 7 metre plastic curtain.

Consequences of Deferral:
The curtain will continue to deteriorate.

Type	Year	Cost	Priority
Failure Replacement	2007	$5,000	Medium

Updated: NOV-06

E2010.02 Fixed Casework**

There is fixed casework with both wood veneer and plastic laminate finish.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	35	NOV-06

Event: Replace casework

Concern:
There is damaged casework in some locations in the school particularly in the food preparation in the home economics area.

Recommendation:
Replacement of damaged casework is recommended.

The estimate is based in replacing 20 linear metres of casework.

Type	Year	Cost	Priority
Failure Replacement	2007	$6,000	High

Updated: NOV-06

E2010.03.01 Blinds**

There Venetian blinds under the skylights.

Rating	Installed	Design Life	Updated
2 - Poor	1986	30	NOV-06

Event: Replace blinds

Concern:
Several sections of Venetian blinds beneath the skylights are damaged and require replacement.

Recommendation:
Replacement of damaged blinds is recommended.

The estimate is based on replacing 50 m2 of damaged Venetian blinds.

Consequences of Deferral:
The blinds will deteriorate further if there is a deferral of this item.

Type	Year	Cost	Priority
Failure Replacement	2007	$15,000	High

Updated: NOV-06

E2010.05 Fixed Multiple Seating**

There is fixed multiple seating in the dining area. This consists of a wood slats on a steel frame on short chrome legs on a semi circular concrete ledge.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	35	NOV-06

E2010.06 Fixed Interior Landscaping*

There are concrete planters located in the cafeteria.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	10	NOV-06

E2020 Moveable Furnishings*

There are student desks and tables with laminated plastic tops and a steel leg frame.

The student chairs have polypropylene seats and steel leg frames.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	20	NOV-06

Event: Repairdesks and tables

Concern:
There are desks and tables with damaged plastic laminate which appears unsightly and requires replacement.

Recommendation:
Re-laminating damaged desks and tables is recommended.

The estimate is based on re-laminating 36 desks.

Consequences of Deferral:
Desks and tables will continue to deteriorate.

Type	Year	Cost	Priority
Repair	2008	$10,000	High

Updated: NOV-06

F1010.02.04 Portable and Mobile Buildings*

There are two portable classrooms, installed in 2002, attached to the school with a pedestrian link. There is also a free standing metal clad portable classroom installed in 2004.

The 2002 portables are constructed of both interior and exterior wood stud walls with plywood sheathing and a stucco exterior finish with a vinyl finished gypsum board interior finish. There are sliding aluminum windows for the classrooms which are protected by a steel grille. There is batt insulation between the joists.

The roof structure consists of wood joists spanning the wood stud walls. The roof is an SBS system.

There is a crawl space under the portables which is covered by a plywood skirt. The portable substructure appears to be driven steel piles.

The portable classrooms are approximately 1.5 metres above the floor elevation in the school. There is a wood ramp and adjacent stairs which lead from the pedestrian link at the school elevation up the portable classroom level.

There are wood stairs with steel handrails which lead from grade into the pedestrian link.

The interior finishes consist of a mix of vinyl and carpet for the floor and vinyl finished ceiling tiles.

The construction of the free standing building is similar to the other portable buildings described above. There are two sets of exterior wood stairs into this building from grade and two aluminum windows protected with metal grille.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	25	NOV-06

Event: Replace Aluminum windows - 2002 Portables

Concern:
Plastic tracks have deteriorated.
Recommendation:
Replace plastic tracks on all four (4) windows.
Consequences of Deferral:
Plastic tracks will continue to deteriorate.

Type	Year	Cost	Priority
Preventative Maintenance	2007	$1,000	Medium

Updated: NOV-06

Event: Replace wood stairs

Concern:
Wood stairs in both the 2002 and 2004 portables: poor, wood components and steel handrails are separating
Recommendation:
Replace all three sets with steel stairs.

Type	Year	Cost	Priority
Failure Replacement	2007	$15,000	High

Updated: NOV-06

F1010.02.05 Grandstands and Bleachers**

There are operable bleachers in the large gym.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

F1020.02.13 Paint Booths*

There is a paint booth in the material lab.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

F1030.05 Other Special Construction Systems*

There are welding booths in the materials lab.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

F2020.01 Asbestos*

An August 2002 consultant's report on the presence of asbestos and lead in the school failed to identify asbestos content in any of the building materials sampled.

No asbestos was observed or reported by the audit team.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	0	NOV-06

F2020.04 Mould*

There was no mould observed or reported by the audit team during the facility review.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	0	NOV-06

F2020.09 Other Hazardous Materials*

The August, 2002, consultant's report identified the presence of lead in paint samples and roof vent housing material.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	0	NOV-06

Event: Remove and encapsulate lead

Concern:
The concern is that lead has been identified in roof vent housing and in the interior of the school.

Recommendation:
Removal of the lead roof vent housing is recommended.

Repainting with non lead paint those areas where lead paint has been identifies is also recommended.

The estimate is based on replacing the lead flashings for the roof penetrations with pre-finished metal in 20 locations and repainting 1000 m2 of wall area.

Consequences of Deferral:
The potential for toxicity in the school environment will persist.

Type	Year	Cost	Priority
Hazardous Materials Abatement	2007	$7,000	High

Updated: NOV-06

S8 FUNCTIONAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance

There is a barrier free route from the parking lot into the school. There are curb ramps in the parking lots and concrete ramps integrated into the landscaping at the front of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	0	NOV-06

K4010.02 Barrier Free Entrances

The main entrance is barrier free.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	0	NOV-06

K4010.03 Barrier Free Interior Circulation

There is a hydraulic elevator designed and located for moving supplies. This can obviously be utilized for students. A central feature of this school is the tiered seating area which slopes down to the stage. This area also provides an eating area for the school cafeteria and is accessible directly from the main entrance. There is a system of ramps to provide access to all levels in this part of the school.
The music room has a greater floor to ceiling height achieved by lowering the floor in this room. There are ramps within the room for barrier free access.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	0	NOV-06

K4010.04 Barrier Free Washrooms

There are barrier free wash rooms for male and female students on both floors. There are also barrier free wash rooms for staff.

Rating	Installed	Design Life	Updated
5 - Good	1986	0	NOV-06

RECAPP Facility Evaluation Report

Bellerose Composite High School

S4063

St. Albert

Report run on: March 26, 2007 3:29 PM

Facility Details

Building Name: Bellerose Composite High S
Address:
Location: St. Albert

Building Id: S4063
Gross Area (sq. m): 0.00
Replacement Cost: $0
Construction Year: 0

Evaluation Details

Evaluation Company: Wilson Architects Ltd.
Evaluation Date: May 29 2006
Evaluator Name: J. R. Irlam

Total Maintenance Events Next 5 years: **$176,000**
5 year Facility Condition Index (FCI): **0%**

General Summary:

The site in front of the school has mature trees, shrubs and grassed areas presenting an attractive approach to the school. In this area there is also a system of concrete sidewalks, steps, ramps and wood benches.
There are asphalt parking areas on either side of the school as well as at the rear where the service yard for the automotive and materials shops are located.
There are playing fields and a tennis court behind the school and a baseball diamond.
The wood benches and concrete steps at the front of the school are damaged and require repair.
The overall appearance and function of the site is satisfactory and in an acceptable condition.

Structural Summary:

Envelope Summary:

Interior Summary:

Mechanical Summary:

Electrical Summary:

Rating Guide

Condition Rating	Performance
1 - Critical	Unsafe, high risk of injury or critical system failure.
2 - Poor	Does not meet requirements, has significant deficiencies. May have high operating/maintenance costs.
3 - Marginal	Meets minimum requirements, has significant deficiencies. May have above average operating maintenance costs.
4 - Acceptable	Meets present requirements, minor deficiencies. Average operating/maintenance costs.
5 - Good	Meets all present requirements. No deficiencies.
6 - Excellent	As new/state of the art, meets present and foreseeable requirements.

S7 SITE

G1030 Site Earthwork (Site Grading)*

The site grading is designed to provide barrier free access to the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	50	NOV-06

G2010.02.02 Flexible Pavement Roadway (Asphalt)**

There are asphalt roadways to the asphalt parking areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

Event: Replace flexible roadways

Concern:
The concern is that damaged and deteriorated asphalt roadway requires replacing.

Recommendation:
Replacement of asphalt roadway is recommended at the end of its design life.

The estimate is based on replacing 200 m2 of asphalt roadway.

Consequences of Deferral:
The asphalt roadway will deteriorate further.

Type	Year	Cost	Priority
Lifecycle Replacement	2011	$140,000	High

Updated: NOV-06

G2010.04 Rigid Roadway Pavement (Concrete)**

There is a concrete service road on the east side of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

Event: Replace concrete road

Concern:
The concrete service road is cracked and expensive to repair.
Recommendation:
Replacing the concrete service road with asphalt when the service life has been reached in 2011is recommended.

The estimate is based on demolishing 560 m2 of concrete roadway and constructing 560 m2 of asphalt road.
Consequences of Deferral:
The concrete road will continue to deteriorate.

Type	Year	Cost	Priority
Failure Replacement	2011	$70,000	High

Updated: NOV-06

G2010.05 Roadway Curbs and Gutters*

There are concrete gutters and curbs on the concrete and asphalt road ways.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

Event: Replace concrete curbs

Concern:
There are roadway curbs and gutters which are damaged and require replacement.
Recommendation:
Replacement of the curbs and gutters in the year of their design life is recommended.

The estimate is based on replacing 50 linear metres of concrete curbs and gutters.
Consequences of Deferral:
The curbs and gutters will continue to deteriorate beyond there theoretical design life.

Type	Year	Cost	Priority
Lifecycle Replacement	2011	$10,000	High

Updated: NOV-06

G2020.02.02 Flexible Paving Parking Lots(Asphalt)**

There are asphalt parking lots on either side of the school and at the rear.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	10	NOV-06

Event: Reconstruct parking lots

Concern:
There are numerous cracks, fissures and pot holes in the parking lot surface.
Recommendation:
It is recommended that parking lots be reconstructed.

The estimate is based on reconstructing 2000 m2 of asphalt parking lot.
Consequences of Deferral:
The asphalt parking lots will continue to deteriorate.

Type	Year	Cost	Priority
Failure Replacement	2007	$140,000	High

Updated: NOV-06

G2020.05 Parking Lot Curbs and Gutters*

There are concrete curbs and gutters on the asphalt parking lots.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	25	NOV-06

Event: Replace curbs and gutters

Concern:
The concern is that concrete cubs are damaged, appear unsightly and require replacement. The design life is reached in 2011.
Recommendation:
Replacement of the curbs is recommended.

The estimate is based on replacing 300 linear metres of concrete curbs and gutters.
Consequences of Deferral:
The curbs and gutters will deteriorate further.

Type	Year	Cost	Priority
Failure Replacement	2011	$60,000	Medium

Updated: NOV-06

G2020.06.01 Traffic Barriers*

There are painted steel bollards and horizontal barriers to prevent vehicles from using the fire access roads.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

G2020.06.02 Parking Bumpers*

There are precast parking bumpers at the rear of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

G2020.06.03 Parking Lot Signs*

There are metal parking lot signs to designate areas for particular use.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

G2020.06.04 Pavement Markings*

There pavement markings to delineate parking stalls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

G2030.03 Pedestrian Unit Pavers**

There are unit pavers in the landscaped area at the front of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	20	NOV-06

Event: Reset unit pavers

Concern:
The theoretical deign life of the pavers was reached in the year 2006.

Recommendation:
Replacement of the unit pavers is recommended in the year 2020.

The estimate is based on replacing 50 m2 of unit pavers.

Consequences of Deferral:
The unit pavers will continue to deteriorate beyond the year of recommended replacement.

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$10,000	High

Updated: NOV-06

G2030.04 Rigid Pedestrian Pavement (Concrete)**

There is concrete pedestrian paving at the front and both sides of the school.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	15	NOV-06

Event: Replace concrete sidewalk

Concern:
The concern is that the concrete pedestrian pavement is cracked and damaged and requires replacing.
Recommendation:
Replacement of deteriorated sidewalk is recommended.

The estimate is based on replacing 75 m2 of concrete sidewalk.
Consequences of Deferral:
The pavement will deteriorate further.

Type	Year	Cost	Priority
Failure Replacement	2007	$10,000	Medium

Updated: NOV-06

G2030.06 Exterior Steps and Ramps*

There are concrete steps in the landscaped area at the front of the school.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	15	NOV-06

Event: Repair concrete steps

Concern:
The concrete steps are damaged, appear unsightly and require repair. The design life was reached in 2001.
Recommendation:
Repair of the concrete steps is recommended.

The estimate is based on replacing 20 m2 of concrete steps.
Consequences of Deferral:
The steps will deteriorate further.

Type	Year	Cost	Priority
Repair	2007	$10,000	Medium

Updated: NOV-06

G2040.02 Fences and Gates**

There is a chain link fence enclosing the service yard to the automotive shop.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

Event: Replace fencing

Concern:
The chain link will need replacing in the year 2016.
Recommendation:
Replacement of the chain link fence will need replacing in the year 2016.

The estimate is based on replacing 100 linear metres of chain link.
Consequences of Deferral:
The chain link fence will continue to deteriorate after its service life.

Type	Year	Cost	Priority
Lifecycle Replacement	2016	$10,000	High

Updated: NOV-06

G2040.03 Athletic and Recreational Surfaces**

There are tennis courts at the rear of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	25	NOV-06

Event: Resurface tennis courts

Concern:
The concern is that the tennis courts will reach their design life and need re-surfacing in the year 2011.
Recommendation:
Resurfacing is recommended in 2011.

The estimate is based on resurfacing 2500 m2 of tennis court epoxy surface.
Consequences of Deferral:
The tennis courts will deteriorate further beyond their design life.

Type	Year	Cost	Priority
Lifecycle Replacement	2011	$100,000	High

Updated: NOV-06

G2040.05 Site and Street Furnishings*

There are benches with wood seats on a steel frame set in concrete in the front of the school.

Rating	Installed	Design Life	Updated
2 - Poor	1986	15	NOV-06

Event: Replace wood seats

Concern:
The wood seats on the benches are damaged and some parts are missing and require repair.
Recommendation:
Repair of the wood seats is recommended.

The estimate is based on replacing 20 linear metres of wood seat and repairing 10 linear metres 750 mm wide.
Consequences of Deferral:
The wood seats will continue to deteriorate.

Type	Year	Cost	Priority
Failure Replacement	2007	$6,000	Medium

Updated: NOV-06

G2040.06 Exterior Signs*

There are two exterior signs for the school.

Rating	Installed	Design Life	Updated
3 - Marginal	1986	25	NOV-06

G2040.08 Flagpoles*

There are three flag poles at the front of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	30	NOV-06

G2050.04 Lawns and Grasses*

There are lawn areas at the front of the school and grassed areas at the rear and sides.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	15	NOV-06

G2050.05 Trees, Plants and Ground Covers*

The school is surrounded by mature trees. There are bushes and other plantings in the landscaped area at the front of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	10	NOV-06

G3010.02 Site Domestic Water Distribution*

Domestic water for the site is from the utility main southeast of the property. The 200mm service feeds the site fire protection water, a 200mm building fire protection service and the 100mm domestic water service.

Rating	Installed	Design Life	Updated
4 - Acceptable	1989	50	NOV-06

G3010.03 Site Fire Protection Water Distribution*

There is a fire hydrant at the southeast property line and two fire hydrants on the property at the north east and northwest corners of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

G3020.01 Sanitary Sewage Collection*

A 200mm sanitary line leaves the building from the mechanical room and ties into the municipal sewer service at the southeast corner of the property.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

G3030.01 Storm Water Collection*

A 450mm storm water line leaves the building at the east side and ties into a catchbasin/manhole in the east parking lot. This catchbasin and three others in the east parking areas are collected together and discharge into the municipal storm main at Giroux Road.
Three catchbasins serve the west parking lots and combine to a 4500mm storm line before tying into the municipal storm service at Giroux Road.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

G3060.01 Gas Distribution*

The intermediate pressure gas service connects into the utility main at the south east corner of the property and runs underground to the point of entry outside the meter room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

G3060.04 Fuel Storage Tanks*

Underground fuel dispensing and waste oil tanks are located on the north side of the property adjacent to the automotive shops.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	50	NOV-06

G4010.04 Car Plugs-ins*

Pedestal mounted car plug-ins have been provided for staff use. Car plug-ins are time and temperature controlled.

Rating	Installed	Design Life	Updated
5 - Good	0	25	NOV-06

G4020.01 Area Lighting*

Site lighting is provided by mounted fixtures each utilizing 250 Watt H.P and 400 Watt H.P Sodium lamps. Poles are approximately 6 metres high in the parking lot and 3 metres in the walkways. Site lighting is controlled by photo cell and manual override.

Rating	Installed	Design Life	Updated
4 - Acceptable	1987	25	NOV-06