School Name: St. Catherine School
Location: 10915 110 Street
Edmonton, Alberta
Region: Central
Jurisdiction: Edmonton RCSSD No. 40

Grades: K to 9

School Code: 8212
Facility Code: 2016

Superintendent: Dr. Dale W. Ripley
Contact Person: Mr. Garnet McKee
Telephone: 1-780-453-4500 (Garnet)

School Capacity: 500

Building Section	Year of Compl	No. of Floors	Gross Bldg Area (Sq.M.)	Type of Construction (i.e., structure, roof, cladding)	Description of Mechanical Systems (incl. major upgrades)	Comments/Notes
Original Building	1952	Two	928.7	Wood frame walls, floors and roof on cast-in-place concrete foundation.	Hot water heating and unit ventilators with 2-Reliance welding works boilers. Boiler system runs on DDC (Honeywell burner controls). 4 heating waterpumps; P-1 (wild zone) Grundfos #UHC-65-40, Model "A"	The heating system is old and in poor condition. The original boilers require upgrading or replacement. There is exhaust air only (no supply). The ventilation system, including controls, requires upgrading.
Additions/ Expansions	1954	Two	583.6	Wood frame walls, floors and roof on cast-in-place concrete foundation.	Hot water heating and unit ventilators. Pump P-2, Stat in library - Armstrong #819359-002 (Ser no. 9206)	See above
	1957	One	538.8	Wood frame walls, floors and roof on cast-in-place concrete foundation.	Hot water heating and unit ventilators. Pump P-3, Stat in Room 204, nameplate not readable	See above
	1962	Two	982.8	Wood frame walls, floors and roof on cast-in-place concrete foundation.	Hot water heating and unit ventilators. Pump P-4, Stat in Room 201, nameplate not readable	See above

Evaluator's Name: Merv Wiess & James Dykes
& Company: **Kasian Kennedy**

Building Section	Year of Compl	No. of Floors	Gross Bldg Area (Sq.M.)	Type of Construction (i.e., structure, roof, cladding)	Description of Mechanical Systems (incl. major upgrades)	Comments/Notes
Additions/ Expansions Cont'd	1972	Two	1543.1	Wood deck over open-web steel joists with load-bearing concrete block on cast-in-place concrete foundation.	Hot water heating and unit ventilators. 2 heating water pumps; P-5, P-6 - Arthur S.Lletich Co.Ltd., centrifugal pump; type 1 - cac; 25 ft. head; Serial 13008-1,2	Old , but acceptable
Total Area - Sq.M			**4577.0**			
Upgrading/ Modernization (identify whether minor or major)	1992			Upgraded gymnasium storage facilities to Edmonton Catholic School Board standards.	N/A	Minor Upgrading
	1996			Mezzanine added to Library Resource area	N/A	Major Upgrading ($50,000)
	1997			E.C.S. Classroom and storage millwork unit renovated.	N/A	Major Modernization ($37,000)
Portable Struct. (identify whether attached/perman. or free-standing/ relocatable)				There are no portable structures at this school.		

List of Reports/ Supplementary Information	
	Leased out area = 131.0 Sq.M. Gross Capacity = 500 - 85 for leased and other exemptions = 435net capacity Current enrolment = 307 or 70.57% of net capacity

	Evaluation Components	Summary Assessment	Estimated Cost
1	**Site Conditions**	The site is in good condition throughout with no notable deficiencies. There is a safety concern, which is elaborated upon later in this report, with traffic and pedestrians on 110 Street.	$25,400
2	**Building Exterior**	The building exterior is in good condition with few deficiencies. At some locations, one or two units of the brick veneer have come free and are missing.	$3,500
3	**Building Interior**	There are two major problems with the building interior, primarily in the 1952 and 1954 sections of the school. A fibrous spray has been applied to many classroom ceilings as a form of encapsulation for the original textured finishes which contain asbestos. This material is a problem. Floor finishes in these sections of the building have an asbestos content. They are brittle and are in very poor condition. Many edges are exposed and have been patched with duct tape.	$239,600
4	**Mechanical Systems**	The plumbing system and fixtures are old but are working and are acceptable. The heating systems in all sections except the 1972 part are also old and in poor condition. The original boilers require upgrading or replacement. There is exhaust air only in the older sections of the building (no supply). The majority of the ventilation system, including controls, requires upgrading. The only humidification system in the building has been abandoned. There is no air conditioning in the	$215,000
5	**Electrical Systems**	The main power service should be upgraded to 800 amps. There is a serious lack of receptacles in classrooms. Lighting upgrading has been started, using T8 lamps and electronic ballasts and should be completed. All incandescent exit lights should be replaced with new LED type and tied into emergency power source. Lighting in the gym should be upgraded to "metal halide source".	$183,800
6	**Portable Buildings**	N/A	$0
7	**Space Adequacy:**		
	7.1 Classrooms	263.4	
	7.2 Science Rooms/Labs	-144.2	
	7.3 Ancillary Areas	-30.7	
	7.4 Gymnasium	-183.1	
	7.5 Library/Resource Areas	-77.6	
	7.6 Administration/Staff Areas	127.9	
	7.7 CTS Areas	-115	
	7.8 Other Non-Instructional Areas (incl. gross-up)	416.3	
	Overall Space Adequacy Assessment	257 (Leased out area = 131.0 Sq.M.)	
	Overall School Conditions & Estimated Costs		**$667,300**

Section 1	Site Conditions	Rating	Comments/Concerns	Estimated Cost
1.1	**General Site Conditions**			**$25,000**
1.1.1	Overall site size.	4	The St. Catherine School site is too small for a school of this capacity.	
1.1.2	Outdoor athletic areas.	4	There is a softball / fastball diamond to the east of the building. It is in good condition. Other facilities are on the St. Joseph School site to the south and are shared with this school.	
1.1.3	Outdoor playground areas, including condition of equipment and base.	4	No notable deficiencies.	
1.1.4	Site landscaping.	4	No notable deficiencies.	
1.1.5	Site accessories (i.e., perimeter and other fencing, guard rails, bike stands, flag poles).	4	No notable deficiencies.	
1.1.6	Surface drainage conditions (i.e., drains away from building, signs of ponding).	4	The site is well planned with respect to surface drainage. No evidence of ponding or icing were evident at the time of the inspection.	
1.1.7	Evidence of sub-soil problems.	4	No notable deficiencies.	
1.1.8	Safety and security concerns due to site conditions.	2	There have been many occurrences of traffic north bound on 110 Street running into vehicles belonging to school staff which are angle parked at the east curb of the street. There is a very real concern that a pedestrian could be hit at the main entrance of the school. There is a great deal of pedestrian traffic at the curve because this is the main entrance to St. Catherine School. Parking should be on site with a berm/buffer constructed between the sidewalk and the street.	$25,000
Other				

Section 1	Site Conditions	Rating	Comments/Concerns	Estimated Cost
1.2	**Access/Drop-Off Areas/Roadways/Bus Lanes**			**$0**
1.2.1	Vehicular and pedestrian access points (i.e., size, number, visibility, safety).	4	There is only one on-site vehicular and pedestrian access point, that being the on-site staff parking area at the south end of the building.	
1.2.2	Surfacing of on-site road network (note whether asphalt or gravel).	4	The on-site staff parking area is asphalt. This lot offers only a small portion of the staff and visitors parking requirements. Most parking is angled parking at the east curb of 110 Street.	
1.2.3	Bus lanes/drop-off areas (note whether on-site or off-site).	3	There are no on-site bus lanes or drop off points. 110 Street is used for that purpose. The bus loading area is north of the school site on the east curb of the Street. Students must walk southward from the drop off zone to the main entry of the school which is at the dangerous curve in 110 Street.	Ref. 1.1.8
1.2.4	Fire vehicle access.	4	Fire vehicle access is available on all but the north side of the school. The west side can be accessed from 110 Street. The south and east sides can be accessed via the on site staff parking area.	
1.2.5	Signage.	4	Building identification signage exists at the main entrance to the building. It is adequate.	
Other				

Section 1	Site Conditions	Rating	Comments/Concerns	Estimated Cost
1.3	**Parking Lots and Sidewalks**			**$400**
1.3.1	Number of parking spaces for staff, students and visitors (including stalls for disabled persons).	4	There are 32 parking stalls available for staff and visitors. Only about 8 of these are on site parking stalls. The remainder are angled parking at the east curb of 110 Street.	
1.3.2	Layout and safety of parking lots.	4	The on site parking lot is acceptable. The parking at the street is a safety hazard.	
1.3.3	Surfacing and drainage of parking lots (note whether asphalt or gravel).	4	Both the on site parking lot and the 110 Street curb parking are asphalt surfaced parking areas. There are no drainage problems to report.	
1.3.4	Layout and safety of sidewalks.	4	The sidewalk from the main entrance to the school leads to the City Of Edmonton sidewalk at the east curb of 110 Street. This sidewalk is not visible to vehicular traffic on 110 Street because there is angled parking situated between the traffic and the sidewalk.	
1.3.5	Surfacing and drainage of sidewalks (note type of material).	4	There is an asphalt tarmac to the south of the building. All other sidewalks on the site are cast-in-place concrete. All are in good condition. There are no drainage problems to report.	
1.3.6	Curb cuts and ramps for barrier free access.	3	There are no curb cuts in the sidewalk to the west of the school. The vehicular curb crossings are the only locations where a wheelchair might gain access to the sidewalk.	$400
Other				
	Overall Site Conditions & Estimated Costs		The site is in good condition throughout with no notable deficiencies. There is a safety concern, which is elaborated upon later in this report, with traffic and pedestrians on 110 Street.	**$25,400**

Section 2	Building Exterior	Rating	Comments/Concerns		Estimated Cost
2.1	**Overall Structure**		**Building Section**	**Description/Conditions**	**$0**
2.1.1	Floor structure and beams (i.e., signs of bending, cracking, heaving, settlement, voids, rust, stains).	4		There is some evidence of movement of the floor structure in the area which was previously the gymnasium (1957 section) and is now the general office and the library.	
2.1.2	Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains).	4		No problems to report.	
2.1.3	Roof structure (i.e., signs of bending, cracking, voids, rust, stains).	4		No problems to report.	
Other					

Section 2	Building Exterior	Rating	Comments/Concerns		Estimated Cost
2.2	**Roofing and Skylights** ***Identify the availability of an up-to-date inspection report or roofing program. Note if roof sections are of different ages and/or in varying states of repair.***		**Building Section or Roof Section**	**Description/Condition/Age**	**$0**
2.2.1	Based on the inspection report (and to the extent possible, direct observation), assess and rate roof conditions and estimate costs for required improvements (i.e., covering materials, membrane, insulation, other components).	4	All	All sections have standard built-up roofing. The 1952, 1954, 1957, and 1962 sections of the building was re-roofed in 1987. There are no problems to report.	
2.2.2	Roof accessories (i.e., ladders, stairs, hatches, masts, exhaust hoods, chimneys, gutters, downspouts, splashpads).	4	All	No problems to report.	
2.2.3	Control of ice and snow falling from roof.	4	All	All drainage is internal. There are no problems or safety concerns to report.	
2.2.4	Skylights (i.e., signs of distress, leaks, ice build-up, condensation, deteriorated materials/seals).	N/A			
Other					

Section 2	Building Exterior	Rating	Comments/Concerns		Estimated Cost
2.3	**Exterior Walls/Building Envelope**		**Building Section**	**Description/Condition**	**$0**
2.3.1	Exterior wall finishes (i.e., signs of deterioration, cracks, brick spalling, efflorescence, water stains).	4	All	No problems to report.	
2.3.2	Fascias, soffits, parapets (i.e., signs of looseness, stains, rust, peeling paint).	4	All	No problems to report.	
2.3.3	Building envelope (i.e., evidence of air infiltration/ exfiltration through the exterior wall or ice build up on wall, eaves, canopy).	4	All	No problems to report.	
2.3.4	Interface of roof drainage and ground drainage systems.	4	All	No problems to report.	
2.3.5	Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots).	4	All	No problems to report.	
Other					

Section 2	Building Exterior	Rating	Comments/Concerns		Estimated Cost
2.4	**Exterior Doors and Windows**		**Building Section**	**Description/Condition**	**$3,500**
2.4.1	Doors (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	4	All	Routine general maintenance (painting) of exterior wood doors is required. All are in good condition.	
2.4.2	Door accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	4	All	No problems to report.	
2.4.3	Exit door hardware (i.e., safety and/or code concerns).	4	All	No problems to report.	
2.4.4	Windows (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	4	All	Windows were replaced a few years ago. All are in good condition.	
2.4.5	Window accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	3	All	Latching devices at operable windows are weak from wear. All such devices should be examined and adjusted or replaced as necessary.	$3,500
2.4.6	Building envelope (i.e., signs of heavy condensation on doors or windows).	4	All	No problems to report.	
Other					
	Overall Building Exterior Condition & Estimated Costs			The building exterior is in good condition with few deficiencies. At some locations, one or two units of the brick veneer have come free and are missing.	**$3,500**

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estimated Cost
3.1	**Interior Structure**		**Building Section**	**Description/Conditions**	**$0**
3.1.1	Interior walls and partitions (i.e., signs of cracks, spalling, paint peeling).	4	All	Most interior walls and partitions are lath and plaster or gypsum board on wood framing. There are no signs of structural problems with these walls.	
3.1.2	Floors (i.e., signs of cracks, heaving, settlement).	3	All	There are a number of locations on the ground floor where the floor slab has cracked and has damaged the finishes. This is particularly noticeable where the floor finish is epoxy.	Ref. 3.2.1
Other					

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estimated Cost
3.2	**Materials and Finishes**		**Building Section**	**Description/Condition**	**$181,100**
3.2.1	Floor materials and finishes.	2	All	Nearly all epoxy floor finishes are cracked due to settlement of the slab beneath them. They should all be re-finished. Photo No. 29 shows an example of this condition.	$40,000
			1952 & 1954	Corridors in both the 1952 section and the 1954 section of the building have an old linoleum product which has an asbestos content. The flooring is in poor condition and cannot be repaired where it is breaking away. The edges at these locations are being covered with duct tape as a measure of keeping the asbestos in the material from becoming airborne. All such flooring should be replaced. Photo Nos. 7, 8, and 9 show examples of the condition of the floors in these sections of the building.	$18,000
			1952	Classrooms in the 1952 section of the building have 9x9 vinyl asbestos tiles in them. Although this product is in reasonable condition in these lower traffic areas, it is quite brittle and is beginning to break. This exposes the edges permitting the asbestos material to become airborne. All vinyl asbestos tiles should be removed and new vinyl composite tiles installed in their place.	$17,500
			1952 & 1954	Classrooms in the 1954 section of the building have the same linoleum product used in the corridors of this section and the 1952 section. The flooring in the classrooms is in better condition than that in the corridors but is beginning to exhibit the same types of problems. It should all be removed (even that beneath the carpeted areas) and new finishes applied to the sub-strate. Photo No. 4 shows an example of the condition of the floors within these classrooms.	$20,000
			1972	Carpet in the music room is badly worn and should be replaced.	$5,600
3.2.2	Wall materials and finishes.	4	All	Most interior walls and partitions are lath and plaster or gypsum board on wood framing, except in some of the corridors which have brick or conc. blk. Finishes in the washrooms are ceramic tile.	
			1952 & 1954	Ceramic tile in the 1952 and 1954 sections are in poor condition and some have fallen off.	Ref. 3.2.8

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estimated Cost
3.2	**Materials and Finishes (cont'd)**		**Building Section**	**Description/Condition**	
3.2.3	Ceiling materials and finishes.	2	1952, 1954 & 1962	Ceilings in the 1952, 1954 and 1962 sections of the building have been treated with a sprayed fiber product which is apparently an asbestos encapsulation method. In the 1952 section of the building, suspended t-bar ceilings with lay-in acoustic panels have been installed beneath this product. The product is exposed in the 1954 and 1962 sections of the building and is discolored and unsightly. There is concern that the dust which is collected by this product is contributing to the poor quality of air within the building. Suspended ceilings should be hung beneath this material at all locations. Photo Nos. 2, 4, 5, 6, 10, 25, and 26 show examples of the condition of this type of ceiling.	$75,000
3.2.4	Interior doors and hardware.	4	All	Interior doors and hardware are generally in good condition. They are due for some repair and re-painting.	
3.2.5	Millwork	4	All	No problems to report.	
3.2.6	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs).	4	All	No problems to report.	
3.2.7	Any other fixed/mounted specialty items (i.e., CTS equipment, gymnasium equipment).	4	All	No problems to report.	
3.2.8	Washroom materials and finishes.	3	1952 & 1954	Walls within the washrooms in the 1952 and 1954 sections of the building are painted plaster with a 4x4 ceramic tile dado. The is a recurring problem with tiles lifting and coming free in these areas which is evidenced by the many types of tiles used in the areas. The original tiles are no longer available so there is not a lot of choice in making repairs of this nature. All ceramic wall tile in these areas should be replaced.	$5,000
Other					

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estimated Cost
3.3	**Health and Safety Concerns --- *Intent is to identify renovations considered necessary to meet applicable codes, primarily due to safety concerns. Basis of evaluation should be an up-to-date inspection report from the authority having jurisdiction together with direct observations as appropriate. Evaluator should note if in his opinion a comprehensive code evaluation is required.***		**Building Section**	**Description/Condition**	**$58,500**
3.3.1	Building construction type - combustible or non-combustible, sprinklered or non-sprinklered.	4	1952, 1954, 1957, and 1962	The 1952, 1954, 1957, and 1962 sections of the building are of combustible construction and are not sprinklered.	
			1972	The 1972 section of the building is of non-combustible construction and is not sprinklered.	
3.3.2	Fire separations (i.e., between buildings, wings, zones if non-sprinklered).	4		Each section of the building is separated from adjoining assemblies by a door, sidelite, and transom assembly. These assemblies do not bear fire resistance labels but doors are solid core wood with closers and sidelites and transoms are fitted with wired glass.	
3.3.3	Fire resistance rating of materials (i.e., corridor walls and doors).	4		Classrooms and Ancilliary Room doors do not bear fire resistance labels and are not fitted with closers. These are solid core wood doors in wood frames.	
3.3.4	Exiting distances and access to exits.	2		Guards at the open sides of the stairs within the north exit of the 1972 section of the building do not conform to code. Photo No. 30 shows the existing guardrail.	$3,500
3.3.5	Barrier-free access.	3		Barrier free access is available at the primary entrance of the building. No barrier free access is available to the second floor areas of the building. There are no washrooms in the building designed for the physically disabled.	$45,000

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estimated Cost
3.3	**Health and Safety Concerns --- *Intent is to identify renovations considered necessary to meet applicable codes, primarily due to safety concerns. Basis of evaluation should be an up-to-date inspection report from the authority having jurisdiction together with direct observations as appropriate. Evaluator should note if in his opinion a comprehensive code evaluation is required.***		**Building Section**	**Description/Condition**	
3.3.6	Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals).	2		There were no hazardous materials audits available at the time of the inspection. The principal was apparently advised that the sprayed fiber used on the ceilings was an encapsulation method for the substrate which has an asbestos content, the linoleum product throughout the school has an asbestos content, and that insulation on many pipes in the crawl spaces of the 1952 and 1954 sections of the building has an asbestos content. In addition, all 9x9 floor tile used in the building is vinyl asbestos tile.	$10,000
3.3.7	Other health and safety concerns (i.e., evidence of excessive noise conditions, air quality problems)	N/A			
Other					
	Overall Building Interior Condition & Estimated Costs			There are two major problems with the building interior, primarily in the 1952 and 1954 sections of the school. A fibrous spray has been applied to many classroom ceilings as a form of encapsulation for the original textured finishes which contain asbestos. This material is a problem. Floor finishes in these sections of the building have an asbestos content. They are brittle and are in very poor condition. Many edges are exposed and have been patched with duct tape.	**$239,600**

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
4.1	**Mechanical Site Services**		**Building Section**	**Description/Conditions**	**$0**
4.1.1	Site drainage systems (i.e., surface and underground systems, catch basins).	4	1952 1954 1957 1962	Storm water is collected through parking lot catch basins.	
			1972	Non-freeze hose bibbs located around building	
4.1.2	Exterior plumbing systems (i.e., irrigation systems, hose bibs).	4	All Wings	Some regular hose bibbs with some non-freeze hose bibbs (reg. Bibbs must be drained in the fall).	
4.1.3	Outside storage tanks.	N/A			
Other					
4.2	**Fire Suppression Systems**		**Building Section**	**Description/Condition**	**$5,000**
4.2.1	Fire hydrants and siamese connections.	4	All Wings	Fire hydrant located at street by school	
4.2.2	Fire suppression systems (i.e., pumps, sprinklers, piping, reservoirs, hoses, stand pipes, CO2 systems).	4	All Wings	Fire hose/standpipe throughout school	
4.2.3	Hand extinguishers, blankets and showers (i.e., in CTS areas).	4	All Wings	Hand extinguishers are adequately placed throughout school	
4.2.4	Other special situations (e.g., flammable storage areas, science labs, CTS areas).	3	1972	Portable eye wash station.	
			1972	No chemical storage cabinet (chemicals etc. are stored in regular lab cabinets)	$5,000

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
Other					

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
4.3	**Water Supply and Plumbing Systems**		**Building Section**	**Description/Condition**	**$0**
4.3.1	Domestic water supply (i.e., pressure, volume, quality - note whether municipal or well supply).	4	1952	4" dia water service with a 2" standpipe line complete with double check assembly.	
4.3.2	Water treatment system(s).	N/A			
4.3.3	Pumps and valves (including backflow prevention valves).	4	1952 1954 1957 1962	4 heating waterpumps; P-1 (wild zone) Grundfos #UHC-65-40, Model "A" Pump P-2, Stat in library - Armstrong #819359-002 (Ser no. 9206) Pump P-3, Stat in Room 204, nameplate not readable Pump P-4, Stat in Room 201, nameplate not readable	
			1972	2 heating water pumps; P-5, P-6 - Arthur S.Lletich Co.Ltd., centrifugal pump; type 1 - cac; 25 ft. head; Serial 13008-1,2	
4.3.4	Piping and fittings.	4	All	Pipe/fittings insulation are in good condition; no leaks are evident.	
4.3.5	Plumbing fixtures (i.e., toilets, urinals, sinks)	4	1952 1954 1957	Fixtures are old but are working.	
			1962	Fixtures are good	
			1972	Fixtures are good	
4.3.6	Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, recirculation).	4	1952	Domestic hot water boiler, Raypak "383WTR"; 383,000 btu input	
			1952	Domestic hot tank 36" dia, 9' tall	
			1952	Tacoi domestic hot circ pump #0011-BF2	
			1952	Domestic water tank/boiler circ pump, Armstrong #816549-091	
4.3.7	Sanitary and storm sewers, including sumps and pits (note whether sewage system is municipal or septic).	4	All	Sanitary and storm system to Municipal services	
			1952	Sump pit pump/ high water level sump pit (boiler room) pump Gorman Pump #81 1/4 B3-E1/3	

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
Other		4	1952	Gas service 1-1/2" dia in, 3" out to boilers; 2-1/2" to 1972 air system	

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
4.4	**Heating Systems**		**Building Section**	**Description/Condition**	**$65,000**
4.4.1	Heating capacity and reliability (including backup capacity).	3	1952 1954 1957 1962	2-Reliance welding works boilers require upgrading	$65,000
			1972	Heating okay	
4.4.2	Heating controls (including use of current energy management technology.	4	1952	Boiler system runs on DDC (Honeywell burner controls); refer to pumps 4.3.3 for zoning	
4.4.3	Fresh air for combustion and condition of the combustion chimney.	4	1952	Appears to be adequate combustion air	
			1952	Chimney appears to be adequate; Note: heating boiler and domestic boiler have chimney induction fans.	
			1972	Good combustion air	
4.4.4	Treatment of water used in heating systems.	4	1952	Dearborn chemicals (treatment of water is done regularly)	
4.4.5	Low water cutoff/pressure relief valves and failure alarms (i.e., hot water heating).	4	All	All appears to be working well; checked regularly.	
4.4.6	Heating air filtration systems and filters.	N/A			
4.4.7	Heating humidification systems and components.	1	1952 1954 1957 1962	No humidification systems.	Refer to 4.5.9
			1972	No humidification system; has been abandoned.	Refer to 4.5.9

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
4.4	**Heating Systems (cont'd)**		**Building Section**	**Description/Condition**	
4.4.8	Heating distribution systems (i.e., piping, ductwork) and associated components (i.e., diffusers, radiators).	3	All	Exterior wall radiation cabinets throughout school.	Refer to 4.4.1
4.4.9	Heating piping, valve and/or duct insulation.	4	All	Insulation appears to be in good shape	
4.4.10	Heat exchangers.	N/A			
4.4.11	Heating mixing boxes, dampers and linkages.	N/A			
4.4.12	Heating distribution/circulation in larger spaces (i.e., user comfort, temperature of outside wall surfaces).	4	All	No complaints of hot/cold areas in school.	
4.4.13	Zone/unit heaters and controls.	4	All	Entrance heaters are old but work well.	
Other					

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
4.5	**Ventilation Systems**		**Building Section**	**Description/Condition**	**$145,000**
4.5.1	Air handling units capacity and condition.	2	1952 1954 1957 1962	Exhaust only; no supply. System requires upgrading.	$70,000
			1972	AHU-1 - 1967 classrooms, Engineered Air (gas fired) 1 burner section #0250, 225,000 input; serial #WJ3502N362 AHU-2 - 1967 gymnasium, Engineered Air (gas fired) 2 burner sections #D-400, 360,0900 input; serial WG825N454 Return air fan for AHU-1, 2, Fan F-2 Model Mark Hot cabinet fan; no nameplate.	
4.5.2	Outside air for the occupant load (if possible, reference CFM/occupant).	2	1952 1954 1957 1962	No outside air	Refer to 4.5.1
			1972	Minimum outside air for occupant load. Acceptable	
4.5.3	Air distribution system (if possible, reference number of air changes/hour).	2	1952 1954 1957 1962	Exhaust air only	Refer to 4.5.1
			1972	Supply and return air system of ductwork is acceptable	
4.5.4	Exhaust systems capacity and condition.	2	1952 1954 1957 1962	Minimum exhaust system - inadequate	Refer to 4.5.1
			1972	Good washroom exhaust system	
4.5.5	Separation of out flow from air intakes.	4	All	Separation between out flows is good.	
4.5.6	Special/dedicated ventilation and/or exhaust systems (i.e., kitchen, labs, CTS areas).	4	1954	Dedicated wll exhaust fan with a minimum of ductwork in room.	

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
Other					

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
4.5	**Ventilation Systems (cont'd)**		**Building Section**	**Description/Condition**	
	Note: Only complete the following items if there are separate ventilation and heating systems.				
4.5.7	Ventilation controls (including use of current energy management technology).	2	1952 1954 1957 1962	A few room control heating systems; refer to 4.3.3 for pump numbers, zones and control location. Ventilation controls should be upgraded.	$35,000
			1972	Room thermostats/sensors for control are acceptable	
4.5.8	Air filtration systems and filters.	2	1952 1954 1957 1962	No filtration system.	Refer 4.5.1
			1967	Changed regularly (monthly)	
4.5.9	Humidification system and components.	2	1952 1954 1957 1962	No humidification	$30,000
			1967	Humidification system has been abandoned and should be replaced.	$10,000
4.5.10	Heat exchangers.		N/A		
4.5.11	Ventilation distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages).	2	1952 1954 1957 1967	Exhaust system only, very poor	Refer 4.5.1
			1972	A good system of supply/return air ductwork. Acceptable.	

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
Other					

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
4.6	**Cooling Systems**		**Building Section**	**Description/Condition**	**$0**
4.6.1	Cooling system capacity and condition (i.e., chillers, cooling towers, condensers).		N/A		
4.6.2	Cooling distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages)		N/A		
4.6.3	Cooling system controls (including use of current energy management technology).		N/A		
4.6.4	Special/dedicated cooling systems (i.e., labs, CTS areas).		N/A		
Other					
4.7	**Building Control Systems**		**Building Section**	**Description/Condition**	**$0**
4.7.1	Building wide/system wide control systems and/or energy management systems.	4	1952	DDC panel Andover AC256M Plus; pneumatic compressor (controls) #Air King/ with air dryer.	

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estimated Cost
	Overall Mechanical Systems Condition & Estimated Costs			The plumbing system and fixtures are old but are working and are acceptable. The heating systems in all sections except the 1972 part are also old and in poor condition. The original boilers require upgrading or replacement. There is exhaust air only in the older sections of the building (no supply). The majority of the ventilation system, including controls, requires upgrading. The only humidification system in the building has been abandoned. There is no air conditioning in the building.	**$215,000**

Section 5	Electrical Systems	Rating	Comments/Concerns		Estimated Cost
5.1	**Site Services**		**Building Section**	**Description/Conditions**	**$30,000**
5.1.1	Primary service capacity and reliability (i.e., access, location, components, installation, bus sizes - note whether overhead or underground).	2		EPCOR Power vault in the basement. Secondary switchgear 600 amp; 120/240V/ 1 phase, 3 wire as manufactured by FPE. Vintage 1972. We recommend a service upgrade at 120/208V, 3 phase, 4 wire, estimated 800 amps.	$30,000
5.1.2	Site and building exterior lighting (i.e., safety concerns).	4		Some fixtures are damaged and require maintenance.	
5.1.3	Vehicle plug-ins (i.e., number, capacity, condition).	4		10 plug-ins; breaker controlled from panel at main entry in closet.	
Other					
5.2	**Life Safety Systems**		**Building Section**	**Description/Condition**	**$11,000**
5.2.1	Fire and smoke alarm systems (i.e., safety concerns, up-to-date technology, regularly tested).	4		Simplex 2001 hardwired, Bells, no strobe lights; verified August 26, 1999. System is 16 years old.	
5.2.2	Emergency lighting systems (i.e., safety concerns, condition).	4		Adequate; no concerns.	
5.2.3	Exit lighting and signage (i.e., safety concerns, condition).	3		Old incandescent exit lights in the 1952, 1954, 1957 and 1962 portion of the school have no DC power source.	$11,000
Other					

Section 5	Electrical Systems	Rating	Comments/Concerns		Estimated Cost
5.3	**Power Supply and Distribution**		**Building Section**	**Description/Condition**	**$32,800**
5.3.1	Power service surge protection.	3		No surge protection.	$2,000
5.3.2	Panels and wireways capacity and condition.	4		Panels are generally in good condition and majority of these panels are full.	
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	N/A			
5.3.4	General wiring devices and methods.	3		Surface mounted conduit for upgrade, fire alarm, power, etc. Plugs were added in each classroom in the 1952 and 1954 portion, however, there is still a serious lack of receptacles in classrooms.	$30,800
5.3.5	Motor controls.	3		Local starter; some obsolete.	$2, 500.
Other					

Section 5	Electrical Systems	Rating	Comments/Concerns		Estimated Cost
5.4	**Lighting Systems**		**Building Section**	**Description/Condition**	**$110,000**
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).	3		All of the classrooms and corridors are surface mounted, two lamp T12 fixtures with wrap around lens. Classrooms are two level, low voltage switches. Gym is controlled by low voltage switches. Lighting levels are adequate as per Alberta Infrastructure Guidelines except the following areas: Gym - 300 lux; Science room - 355 lux; Corridor 1952/1954 Main floor - 237 lux; Corridor 1952/1954 second floor - 141 lux; Corridor 1957 main floor - 203 lux; Corridor 1957 second floor - 191 lux; Corridor 1972 main floor - 146 lux; Corridor 1972 second floor - 149 lux.	Refer to 5.4.3.
5.4.2	Replacement of ballasts (i.e., health and safety concerns).	3		Ballasts are being replaced as they burnout, but the old one all need to be replaced.	refer to 5.4.3.
5.4.3	Implementation of energy efficiency measures and recommendations.	3		New surface mounted 2 lamp fixtures with T8 lamps and electronic ballasts have been introduced in the classrooms and washrooms of the 1952, 1954 and a portion of the 1962 area. Recommend completion of T8 lamps and electronic ballasts. Replace all incandescent exit lights with new LED type and tie into emergency power source. Time clock on car plugs. Provide HID lighting in the gym "metal halide source".	$110,000
Other					

Section 5	Electrical Systems	Rating	Comments/Concerns		Estimated Cost
5.5	**Network and Communication Systems**		**Building Section**	**Description/Condition**	**$0**
5.5.1	Telephone system and components (i.e., capacity, reliability, condition).	4		Main cabinet in medical room Nitsuko American equipment.	
5.5.2	Other communication systems (i.e., public address, intercom, CCTV, satellite or cable TV).	4		Cable TV wiring throughout the total school is run surface within corridors. System is presently not being used.	
5.5.3	Network cabling (if available, should be category 5 or better).	4		Cat. 5 in general office. Cat. 5 throughout total school.	
5.5.4	Network cabling installation (i.e., in conduit, secured to walls or tables).	4		General office and all classrooms plus computer labs cabling is loose. Computer, Library, Mezzanine cabling in management system on walls. Computer cabling is run surface throughout total school; no infrastructure.	
5.5.5	Wiring and telecommunication closets (i.e., size, security, ventilation/cooling, capacity for growth).	4		Minimal growth within this room.	
5.5.6	Provision for dedicated circuits for network equipment (i.e., hubs, switches, computers).	4		No dedicated power for server for general office. Hub is surface mounted high up on wall in library.	
Other					

Section 5	Electrical Systems	Rating	Comments/Concerns		Estimated Cost
5.6	**Miscellaneous Systems**		**Building Section**	**Description/Condition**	**$0**
5.6.1	Site and building surveillance system (if applicable).	N/A			
5.6.2	Intrusion alarms (if applicable).	4		Telsco	
5.6.3	Master clock system (if applicable).	4		No master clock; 120V plug-in.	
Other					
5.7	**Elevators/Disabled Lifts (If applicable)**		**Building Section**	**Description/Condition**	**$0**
5.7.1	Elevator/lift size, access and operating features (i.e., sensing devices, buttons, phones, detectors).	N/A			
5.7.2	Condition of elevators/lifts.	N/A			
5.7.3	Lighting and ventilation of elevators/lifts.	N/A			
Other					
	Overall Electrical Systems Condition & Estimated Costs			The main power service should be upgraded to 800 amps. There is a serious lack of receptacles in classrooms. Lighting upgrading has been started, using T8 lamps and electronic ballasts and should be completed. All incandescent exit lights should be replaced with new LED type and tied into emergency power source. Lighting in the gym should be upgraded to "metal halide source".	**$183,800**

Section 6	Portable Buildings	Rating	Comments/Concerns	Estimated Cost
	Note: Separate sheets can be completed, if necessary, for portable buildings of different ages and/or conditions.		**There are no portable structures at this school.**	
6.1.1	Foundation and structure (i.e., signs of bending, cracking, settlement, rust, voids, stains).			
6.1.2	Roof materials and components (i.e., signs of deterioration, leaks, ice build-up).			
6.1.3	Exterior wall finishes (i.e., signs of deterioration, cracks, water stains).			
6.1.4	Doors and windows (i.e., signs of deterioration, rusting hardware, glass cracks, peeling paint, damaged seals).			
6.1.5	Interior finishes (i.e., floors, walls, ceiling).			
6.1.6	Millwork (i.e., counters, shelving, vanities, cabinets).			
6.1.7	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs)			
6.1.8	Heating system.			
6.1.9	Ventilation system.			
6.1.10	Electrical, communication and data network systems.			
6.1.11	Health and safety concerns (i.e., fire and smoke alarms, fire protection systems, exiting, fire resistance rating of materials).			
6.1.12	Barrier-free access.			
	Overall Portable Bldgs Condition & Estim Costs			**$0**

Section 7	Space Adequacy	This Facility			Equiv. New Facility			Surplus/ Deficiency	Comments/Concerns
		No.	Size	Total Area	No.	Size	Total Area		
7.1	Classrooms			1143.4	1	80	880	263.4	Gross Capacity = 500 - 85 for leased and other exemptions = 435net capacity
		8	79						Current enrolment = 307 or 70.57% of net capacity
		1	71.5						
		2	76.7						
		1	76.4						
		1	71.2						
		1	69.2						
		1	69.7						
7.2	Science Rooms/Labs			190.8			335	-144.2	
		1	97.4		2	120			
		1	93.4		1	95			
7.3	Ancillary Areas (i.e., Art, Computer Labs, Drama, Music,)			369.3	1	400	400	-30.7	
	Music	1	96.6						
		1	111.5						
		1	85.5						
	Stage	1	75.7						
7.4	Gymnasium (incl. gym storage)			471.9	1	655	655	-183.1	
7.5	Library/Resource Areas	1		152.4	1	230	230	-77.6	
7.6	Administration/Staff, Physical Education, Storage Areas			682.9			555	127.9	
7.7	CTS Areas			0			115	-115	There is no CTS space for the junior high students
	7.7.1 Business Education				1	115			
	7.7.2 Home Economics								
	7.7.3 Industrial Arts								
	7.7.4 Other CTS Programs								
7.8	Other Non-Instructional Areas (i.e., circulation, wall area, crush space, wc area)			1566.3			1150	416.3	
	Overall Space Adequacy Assessment			**4577**			**4320**	**257**	Leased out area = 131.0 Sq.M.

Evaluation Component/ Sub-Component	**Additional Notes and Comments**
Site Services	Main disconnect switch, 600 amp is very warm to touch. This switch feeds a 600 amp, CDP panel adjacent to it. This equipment is located in closet in the main entry vestibule by general office, no ventilation. In conversation with EPCOR, the existing power demand is 380 amps which represents 63.3% of the existing service being used. In being consistent with recommended mechanical upgrades and electrical load increase, we recommend a service upgrade at 120/208V, 3 phase, 4 wire, estimated 800 amps.
Network and Communication System	Computer rooms, second floor of the 1972 portion, have computer hubs located high up on the wall in each classroom. Cabling is run loose in ceiling space. This hub is also tied into hubs in the main office. There is absolutely no conduit infrastructure for computer cabling or cable TV and cabling is run loose throughout the total school.
Power Supply and Distribution	Conversation with the Principal, there is a lack of receptacles in classrooms.
Site	There is a great deal of pedestrian traffic at the curve because this is the main entrance to St. Catherine School. There is a very real concern that a pedestrian could be hit at the main entrance of the school.