# **RECAPP Facility Evaluation Report**

**Calgary School District #19** 



Cappy Smart Elementary School
B2566A
Calgary

# Calgary - Cappy Smart Elementary School (B2566A)

# **Facility Details**

**Building Name:** Cappy Smart Elementary Sc

Address: 5808 Madigan Drive N. E.

Location: Calgary

Building Id: B2566A

Gross Area (sq. m): 3,398.00

Replacement Cost: \$9,873,000

Construction Year: 1978

## **Evaluation Details**

**Evaluation Company:** ARUP DATTA ARCHITECT LTD.

Evaluation Date: September 25 2012

Evaluator Name: Brian Dennis

Total Maintenance Events Next 5 years: \$2,150,746 5 year Facility Condition Index (FCI): 21.78%

#### **General Summary:**

Original single storey 3008.7 m2 school constructed in 1979 (as per drawing).

4 portable classrooms with an area totaling 390.2 m2 are located on the North side of the original building.

Total Area of original building plus portables is 3399 m2.

Individual portable information is provided on separate data files (reference numbers T4635, T4636, T4637 and T4638)

#### **Structural Summary:**

The building appears to be constructed of a combination of concrete slab on grade, load bearing concrete block and face brick walls, open web steel joists and metal deck.

Overall, the Structure is in acceptable condition

#### **Envelope Summary:**

The building envelope is a combination of face brick and Built-up bituminous roofing. Windows are aluminium units consisting of single exterior pane and single interior pane.

Major work Recommended:

- replace caulking around exterior windows.

Overall the Building Envelope is in Acceptable condition.

#### **Interior Summary:**

Resilient tile flooring to corridors, classrooms, administration offices and storages. carpet to library areas; wood flooring to the gymnasium; mosaic and ceramic tiles in the washroom and shower areas. Now shower areas in dressing room are utilized as storage space. Flooring in 4 Classrooms (rm.# 1,4,9 & 10) and carpet flooring in general office areas and library offices have been replaced with new resilient tile flooring in 2011.

Painted metal door frames with painted wood or metal doors are typical. All corridors walls and interior doors and frames were painted in 2012. Millwork typically consists of stained plywood doors and drawer fronts with plastic laminate type countertops.

## Major work recommended:

- replace carpet flooring in library.
- replace resilient tile to the north side of north corridor after investigating the cause and damages.
- replace failed millwork.

Overall, the Interior finishes are in Acceptable condition.

## **Mechanical Summary:**

All major equipment is original with the exception of the domestic water heaters which were installed in 2002.

The heating system consists of two hot water boilers which feed a perimeter radiation heating system, with heating water coils in air handling units.

There are two ventilation systems, one central air handling unit for classrooms and auxiliary spaces, and a separate make-up air unit on roof to serve gym.

The spray coil humidifier on the AHU was not in service at the time of the audit.

Overall the mechanical systems are in acceptable condition.

# **Electrical Summary:**

Main electrical service rated at 1000A, 120/208V, 3-phase, 4-wire. Fluorescent lighting throughout the facility has T12 lamping and magnetic ballasts. Exit lights have LED lamps. Emergency lighting run on battery packs, and primarily utilizes ceiling-recessed lights. The fire alarm is operational. Cat 5 and wireless data are installed throughout the school. Motion detectors are used throughout the school for security.

The following items need to be upgraded:

- 1- Change interior lighting in school to Metal Halide and T8 lighting.
- 2- Add ten new power circuits in kitchen -staff room.

Overall, the electrical systems are in acceptable 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\*

Cast in place concrete foundations

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### A1030 Slab on Grade\*

Cast in place concrete.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

# B1010.01 Floor Structural Frame (Building Frame)\*

Load-bearing, concrete masonry block walls support the roof and suspended floor structures.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

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

Load Bearing concrete masonry block walls are supporting the roof.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### **B1010.05 Mezzanine Construction\***

Stage is constructed of wood and supported by load bearing Concrete masonry block walls.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## B1010.09 Floor Construction Fireproofing\*

This is a single storey building with no basement. Underside of stage has gypsumboard which is fire rated.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## B1010.10 Floor Construction Firestopping\*

Main floor slab on grade with no fire stopping and nothing was visible to mezzanine (stage).

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

# B1020.01 Roof Structural Frame\*

Steel Deck on open web steel joists supported by load bearing concrete block walls

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

# B1020.06 Roof Construction Fireproofing\*

Single storey building fire proofing was not required.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1979	0	JAN-13

# **S2 ENVELOPE**

## B2010.01.02.01 Brick Masonry: Ext. Wall Skin\*

Brick masonry veneer over masonry exterior wall.

Rating Installed Design Life Updated 4 - Acceptable 1979 0 JAN-13

# **Event:** Investigate cracking in brickwork.

#### Concern:

Cracking/Separation of outer wythe of brickwork South side of North East Entrance may continue to deteriorate.

#### Recommendation:

Investigate cause of cracking to determine whether some level of repair may prevent further deteriorization.

# **Consequences of Deferral:**

Accelerated deterioration of building envelope leading to possible damage to interior components

TypeYearCostPriorityStudy2012\$5,633Unassigned

Updated: JAN-13

# B2010.01.09 Expansion Control: Ext. Wall\*

Expansion control joints in the clay brick exterior are filled with a caulking material. For replacement refer to B2010.01.11 Joint sealers (caulking): Ext. Wall.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1979	0	JAN-13

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

Joint sealers are provided in construction joints and around exterior windows and doors. Caulking around exterior windows started brittling.

RatingInstalledDesign LifeUpdated3 - Marginal197920JAN-13

**Event: Remove and Replace Caulking around Exterior** 

Windows (BOE 350 lm.)

Concern:

Caulking around exterior windows started brttling.

Recommendation:

Remove and replace existing caulking.

**Consequences of Deferral:** 

Poor performance of building envelope.

TypeYearCostPriorityFailure Replacement2014\$12,250Low

**Updated:** JAN-13

**Event:** Replace Caulking to Control Joints and Exterior

Doors (BOE 280 lm.)

TypeYearCostPriorityLifecycle Replacement2016\$10,100Unassigned

Updated: JAN-13

B2010.01.13 Paints (& Stains): Ext. Wall\*\*

All exterior doors and doors frames have paint finish.

RatingInstalledDesign LifeUpdated4 - Acceptable201215JAN-13

**Event: Repaint Exterior Doors (BOE 75 sqm.)** 

TypeYearCostPriorityLifecycle Replacement2027\$4,000Unassigned

Updated: JAN-13

B2010.02.01 Cast-in-place Concrete: Ext. Wall Const\*

Cast-in-place concrete wall at lower portion of of building.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### B2010.02.03.02 Concrete Masonry: Ext. Wall Const.

Exterior back-up walls are generally are load-bearing masonry block walls.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

# B2010.03 Exterior Wall Vapour Retarders, Air Barriers, and Insulation\*

Assumed membrane air vapour barrier applied to concrete masonry structure.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### B2010.06 Exterior Louvers, Grilles, and Screens\*

Pre-finished mechanical grilles and pre-finished metal protection screens on windows

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### B2010.09 Exterior Soffits\*

Pre-finished metal soffits to all entrances/ exits. Minor damage to pre-finished metal soffit by Nothwest entrance/ exit.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

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

Exterior windows of the school are operable double glazed windows and pre-finished metal spandrel panels set in aluminum frames. Horizontal blinds between two panes are operated by controls.

Previous indication of fogging of window a problem in E.C.S. Room. Replacement of seals recommended on this unit but repair not identified as cost of repair is less than \$1000.

RatingInstalledDesign LifeUpdated4 - Acceptable197940JAN-13

#### **Event: Replace Aluminum Windows (BOE 70 sqm.)**

TypeYearCostPriorityLifecycle Replacement2019\$100,800Unassigned

#### B2030.01.02 Steel-Framed Storefronts: Doors\*\*

Painted metal clad doors are set in painted metal frames at entrances. For painting refer to B2010.01.13 Paints (& Stains).

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Replace Metal Doors (BOE 10 doors)** 

TypeYearCostPriorityLifecycle Replacement2016\$24,000Unassigned

Updated: JAN-13

## B2030.02 Exterior Utility Doors\*\*

Painted metal clad doors to the portable corridor, gym exits and one storage room (rm no. 107).

RatingInstalledDesign LifeUpdated4 - Acceptable197940JAN-13

**Event:** Replace Metal Doors (BOE 5 doors)

TypeYearCostPriorityLifecycle Replacement2019\$5,000Unassigned

Updated: JAN-13

# B3010.01 Deck Vapour Retarder and Insulation\*

Not observed during inspection, but the roof is presumed to be provided with an air/moisture barrier and insulation.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

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

Built-up bituminous roofing. No major roof leaks were reported. 3 leaks have been repaired in 2011.

RatingInstalledDesign LifeUpdated3 - Marginal197925JAN-13

**Event:** Reroof Building (BOE 3000 sqm.)

Concern:

Roof is in poor condition and has had leaks

**Recommendation:** 

Replace roof with SBS roofing and new flashing

**Consequences of Deferral:** 

Continued deterioration and potential of roof leaks and water

damage to interior of school

TypeYearCostPriorityFailure Replacement2014\$525,000Medium

**Updated: JAN-13** 

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

Standard pre-manufactured type roof hatch.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## S3 INTERIOR

#### C1010.01 Interior Fixed Partitions\*

Interior fixed partitions are painted masonry blocks.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## C1010.02 Interior Demountable Partitions\*

Pre-finished and painted vinyl clad demountable type partitions in some locations

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### C1010.03 Interior Operable Folding Panel Partitions\*\* - Accordion Style

Accordion style folding partitions in gymnasium and kitchen.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event:** Replace Accordion Style Folding Partition (BOE

<u>100 sqm.)</u>

TypeYearCostPriorityLifecycle Replacement2016\$8,000Unassigned

Updated: JAN-13

#### C1010.03 Interior Operable Folding Panel Partitions\*\* - Panel Partition

Panel folding partition to seperate stage and gym.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Replace panel Folding Partition (BOE 60 sqm)** 

TypeYearCostPriorityLifecycle Replacement2016\$68,700Unassigned

Updated: JAN-13

#### C1010.05 Interior Windows\*

Interior window in general office area & library and display type widows in the corridors. Single glazed interior windows are set in pressed steel frames.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### C1010.07 Interior Partition Firestopping\*

Penetrations through rated walls appear sealed.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## C1020.01 Interior Swinging Doors (& Hardware)\*

Combination of painted wood and painted metal doors in pressed steel frames. All interior doors were painted in 2012, reported by school representative.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## C1020.03 Interior Fire Doors\*

45 min. Rate door in 3 hour fire rated frames noted in mechanical room, science room, and storage Room. All interior doors were painted in 2012, reported by school representative.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

# C1030.01 Visual Display Boards\*\*

White boards and tack boards are provided in classrooms. Blackboards and smartboards are provided in some classrooms. Tackboards are provided throughout the corridors. Blackboards are obselete; should be replaced with whiteboards.

RatingInstalledDesign LifeUpdated4 - Acceptable197920JAN-13

Event: Replace Display Boards (BOE whiteboards 30,

tackboards 100)

TypeYearCostPriorityLifecycle Replacement2016\$85,100Unassigned

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

Prefinished metal toilet/shower paritions in students washrooms, one staff washroom and girls shower. Shower stall areas now utilized as storage space, shower partitions are not considered in BOE.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Repair Damaged Partition** 

Concern:

Damaged partition in Boys washroom South West portion of

building.

Recommendation:

Repair/replace as required. **Consequences of Deferral:** Stall not functioning properly.

TypeYearCostPriorityRepair2012\$1,127Unassigned

Updated: JAN-13

**Event: Replace Toilet Compartments (BOE 12 toilet** 

partitions)

TypeYearCostPriorityLifecycle Replacement2016\$22,800Unassigned

**Updated: JAN-13** 

C1030.06 Handrails\*

Painted metal railings on stair to stage area.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### C1030.08 Interior Identifying Devices\*

Room name/ number signage to doors.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### C1030.10 Lockers\*\*

Pre-finished metal lockers (stacked in two or four) in boys and girls dressing rooms. Boys and girls dressing rooms are utilized as storage space. Since lockers are no longer being used, are not considered in replacement cost.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

#### C1030.12 Storage Shelving\*

Metal cabinets in some classrooms and general offices.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## C1030.14 Toilet, Bath, and Laundry Accessories\*

Paper towel, toilet tissue, soap dispensers, wall mounted mirrors are typical and sanitary disposals in female staff washrooms.

Rating Installed Design Life Updated 4 - Acceptable 1979 0 JAN-13

# C2010 Stair Construction\*

Wood stairs to the stage/ music room with wood rails.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## C2020.05 Resilient Stair Finishes\*\*

Resilient sheet stair finish.

RatingInstalledDesign LifeUpdated4 - Acceptable197920JAN-13

## **Event:** Replace Resilient Sheet stair finish (BOE 5 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$1,500Unassigned

Updated: JAN-13

## C3010.06 Tile Wall Finishes\*\*

4x4 ceramic tile wal;I finish at urinals in boys washrooms upto 3'-6" high and in shower areas in phys. ed. and dressing rooms upto 7' high. Showers areas in dressing rooms are utilized as storage space, are not considered in BOE calculation.

RatingInstalledDesign LifeUpdated4 - Acceptable197940JAN-13

## **Event: Replace Ceramic Tile Wall Finish (BOE 20 sqm.)**

TypeYearCostPriorityLifecycle Replacement2019\$6,000Unassigned

**Updated:** JAN-13

## C3010.09 Acoustical Wall Treatment\*\* - Fabric Covered

4'x4' fabric covered acoustic panels to two walls in gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable197920JAN-13

Event: Replace Fabric Covered Acoustic Treatment (BOE

30 sqm)

TypeYearCostPriorityLifecycle Replacement2016\$7,000Unassigned

Updated: JAN-13

#### C3010.09 Acoustical Wall Treatment\*\* - Peg Board Style

Acoustic Panels - masonite faced with acoustic backing behind to gym wall above door height. Painting over the years has reduced acoustical effectiveness.

RatingInstalledDesign LifeUpdated3 - Marginal197820JAN-13

# **Event:** Replace Acoustic Wall Treatment (BOE 150 sqm.)

Concern:

Painting over holes in masonite faced acoustic panels has reduced the acoustical effectiveness of the panels.

**Recommendation:** 

Replace panels with a more efficient acoustic solution.

**Consequences of Deferral:** 

Noisey reverberant space, particularly in multilple use situations.

TypeYearCostPriorityFailure Replacement2013\$30,000Medium

Updated: JAN-13

# C3010.11 Interior Wall Painting\* - 1979 Section

Typical Interior concrete block walls have paint finish.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## C3010.11 Interior Wall Painting\* - 2012 Section

Concrete masonry block walls in corridors and some common areas were painted in 2012, reported by school representative.

RatingInstalledDesign LifeUpdated5 - Good20120JAN-13

#### C3020.01.02 Painted Concrete Floor Finishes\*

Painted concrete floor finish in mechanical room, two storage rooms. Minor cracks were observed in mechanical room flooring.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## C3020.02 Tile Floor Finishes\*\* - Mosaic Flooring

1"x1" mosaic flooring in shower areas and in front of urinals. Shower areas in dressing rooms are not used for shower, now these areas are being used as storage space. Life cycle replacement cost of tile in these storage areas is not included.

RatingInstalledDesign LifeUpdated4 - Acceptable197950JAN-13

Event: Replace Mosaic Flooring in Phys. Ed. Shower

areas and in Boys Washrooms (BOE 5 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$1,500Unassigned

Updated: JAN-13

# C3020.02 Tile Floor Finishes\*\* - Quarry Tile

Quarry tile flooring in all entrances, students washrooms and boys & girls dressing rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable197950JAN-13

**Event:** Replace Quarry Tile (BOE 245 sqm)

TypeYearCostPriorityLifecycle Replacement2029\$79,350Unassigned

**Updated:** JAN-13

#### C3020.04 Wood Flooring\*\*

Hard wood flooring in gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event:** Replace gym Flooring (BOE 402 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$104,500Unassigned

# C3020.07 Resilient Flooring\*\* - Tile (1979 Section)

Original resilient tile flooring in corridors, storage rooms, general admin area, phys. ed. Offices, portion of science room, science prep. room and resource room.

RatingInstalledDesign LifeUpdated4 - Acceptable197920JAN-13

**Event:** Based on study recommendations eliminate

moisture infiltration and replace the Resilient Tile

Flooring (BOE budget estimate.)

#### Concern:

Resililient tile flooring in north side corridor has damaged tiles due to high water issue.

#### **Recommendation:**

It is recommended to replace the tile after resolving moisture penetration issue.

#### **Consequences of Deferral:**

Accelerated deterioration of resilient tile floor finish leading to tripping hazard. Water may also be causing damage to other (hidden) building components.

TypeYearCostPriorityRepair2013\$30,000High

Updated: JAN-13

## **Event:** Investigate Floor Condition

## Concern:

Resilient tile flooring north side of corridor on North wall of building is lifting or rippling at this wall with the relocatable clssroooms on the other side.

#### Recommendation:

Study recommended to determine whether moisture is penetrating building envelope at junction of relocatable classrooms and North wall of original school building.

## **Consequences of Deferral:**

Accelerated deterioration of resilient tile floor finish leading to tripping hazard. Water may also be causing damage to other (hidden) building components.

TypeYearCostPriorityStudy2013\$6,000High

**Updated:** JAN-13

# Event: Replace Resilient Tile Flooring (BOE 770 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$46,200Unassigned

## C3020.07 Resilient Flooring\*\* - Tile (2006 Section)

12 x12 resilient tile flooring in some classrooms and lunch room.

RatingInstalledDesign LifeUpdated4 - Acceptable200620JAN-13

**Event:** Replace Resilient Tile Flooring (BOE 565 sqm.)

TypeYearCostPriorityLifecycle Replacement2026\$35,000Unassigned

Updated: JAN-13

# C3020.07 Resilient Flooring\*\* - Tile (2011 Section)

New resilient tile flooring in principal's rm, vice-principal's rm, work room, staff room, two libary offices and classroom no. 4,9,10 & 1.

RatingInstalledDesign LifeUpdated5 - Good201120JAN-13

**Event:** Replace Resilient Tile Flooring (BOE 350 sqm.)

TypeYearCostPriorityLifecycle Replacement2031\$25,200Unassigned

#### C3020.08 Carpet Flooring\*\*

Carpet flooring in library, conference room, ancillary art room (rm no. 8) and portion of science room (rm no. 3). Carpet flooring in general office areas and library office areas have been replaced with new resilient tile flooring. Refer to C3020.07 Resilient Flooring - Tile (2011 section).

RatingInstalledDesign LifeUpdated3 - Marginal197815JAN-13

**Event: Replace Carpet Flooring in library and conference** 

room (BOE 300 sqm.)

Concern:

Carpet flooring in library is worn, pulling apart at seams.

Recommendation:

Replace with new carpet flooring. **Consequences of Deferral:** Tipping hazard, safety issue.

TypeYearCostPriorityFailure Replacement2013\$22,500Medium

**Updated:** JAN-13

**Event: Replace Carpet Flooring in science room and** 

ancillary art rm (BOE 145 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$13,000Unassigned

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

2x4 acoustic ceiling T-bar throughout the school. There stained tiles were observed in several areas most likely due to roof leakage. The roof leaks have been repaired last year, reported by school representative. The stained tiles should be replaced (part of maintenance item)

RatingInstalledDesign LifeUpdated4 - Acceptable197925JAN-13

**Event:** Replace Acoustic Ceiling Tiles (BOE 2435 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$121,700Unassigned

**Updated:** JAN-13

**Event:** Replace Tiles - Not Suppoted

Concern:

Stained, dirty tiles create an unfavorable impression of the school and with future replacement of roofing (currently scheduled by CBE for 2009) will make it difficult to determine new roof leaks from old roof leaks.

**Recommendation:** 

Replacement of ceiling tiles. Allowance is for an area of 200  $\mathrm{m}2$ 

**Consequences of Deferral:** 

Continued deterioration of ceiling tiles.

TypeYearCostPriorityFailure Replacement2012\$10,139Medium

**Updated:** JAN-13

## C3030.07 Interior Ceiling Painting\*

Gymnasium ceiling and other gypsum board ceiling have paint finish. Painted gypsum board ceiling finishes in shower areas

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

# **S4 MECHANICAL**

#### D2010.04 Sinks\*\*

Stainless steel general purpose sinks located in classrooms and kitchens. Utility sink located in Janitors closet.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Replace Sinks BOE (18)** 

TypeYearCostPriorityLifecycle Replacement2016\$27,500Unassigned

**Updated: JAN-13** 

## D2010.05 Showers\*\*

Shower heads located in locker rooms

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Replace Showers BOE (15)** 

TypeYearCostPriorityLifecycle Replacement2016\$23,600Unassigned

Updated: JAN-13

## D2010.08 Drinking Fountains/Coolers\*\*

Wall hung Vitreous China

RatingInstalledDesign LifeUpdated4 - Acceptable197935JAN-13

**Event: Replace Drinking Fountains / Coolers BOE (8)** 

TypeYearCostPriorityLifecycle Replacement2016\$12,600Unassigned

#### D2010.10 Washroom Fixtures (WC, Lav, Urnl)\*\*

Wall hung and counter mount Vitreous China Lav's

Exposed flush valve Vitreous China WC's

Floor mounted Vitreous China recessed Urinals

Wall hung cast iron Janitor Service Sinks

RatingInstalledDesign LifeUpdated4 - Acceptable197935JAN-13

**Event: Replace Washroom Fixtures BOE (WC-23, Lav-22,** 

UrnI-7)

TypeYearCostPriorityLifecycle Replacement2016\$76,600Unassigned

**Updated: JAN-13** 

D2020.01.01 Pipes and Tubes: Domestic Water\*

100mm service from municipal service. 50mm water meter

All domestic water piping is copper

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

D2020.01.02 Valves: Domestic Water\*\*

Domestic water valves visible in mechanical room in good condition

RatingInstalledDesign LifeUpdated4 - Acceptable197940JAN-13

**Event: Replace Valves BOE (20)** 

TypeYearCostPriorityLifecycle Replacement2019\$22,900Unassigned

**Updated:** JAN-13

#### D2020.01.03 Piping Specialties (Backflow Preventers)\*\*

Backflow protection on all services

RatingInstalledDesign LifeUpdated5 - Good200020JAN-13

**Event:** Replace Backflow Preventors BOE (3)

TypeYearCostPriorityLifecycle Replacement2020\$9,200Unassigned

Updated: JAN-13

## D2020.01.08 Hose Bibbs\*

Building has exterior hose bibbs

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## D2020.02.02 Plumbing Pumps: Domestic Water\*\*

Bell & Gossett circulation pump

Rating Installed Design Life Updated 4 - Acceptable 1979 20 JAN-13

Event: Replace Plumbing Pumps: Domestic Water BOE

<u>(1)</u>

TypeYearCostPriorityLifecycle Replacement2016\$1,200Unassigned

Updated: JAN-13

## D2020.02.06 Domestic Water Heaters\*\*

Two self contained hot water heaters, gas fired. Tank #2 isolated and gas and water shut off Nov. 1 2011

RatingInstalledDesign LifeUpdated4 - Acceptable200220JAN-13

**Event:** Replace Domestic Water Heaters BOE (2)

TypeYearCostPriorityLifecycle Replacement2022\$3,700Unassigned

**Updated:** JAN-13

#### D2030.01 Waste and Vent Piping\*

Sanitary sewers to municipal system

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## D2040.01 Rain Water Drainage Piping Systems\*

Storm sewers to municipal system

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### D2040.02.04 Roof Drains\*

Single weir control flow roof drains

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## D3010.02 Gas Supply Systems\*

Gas meter located in mechanical room, regulator piped to exterior

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

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

Two hot water boilers "Bryan" serve the perimeter radiation system and air handling system

Controls are all pneumatic with interface to direct digital components for off site monitoring

RatingInstalledDesign LifeUpdated4 - Acceptable197935JAN-13

Event: Replace Heating Boilers and Accessories: H.W.

**BOE (2)** 

TypeYearCostPriorityLifecycle Replacement2016\$90,900Unassigned

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

Independent chimney serving each boiler

RatingInstalledDesign LifeUpdated4 - Acceptable197935JAN-13

Event: Replace Chimneys (&Comb. Air): H.W. Boiler BOE

(12M)

TypeYearCostPriorityLifecycle Replacement2016\$7,900Unassigned

Updated: JAN-13

D3020.04.03 Fuel-Fired Unit Heaters\*\*

Unit Heater used to heat Combustion Air.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event:** Replace Fuel-Fired Unit Heaters BOE (2)

TypeYearCostPriorityLifecycle Replacement2016\$6,800Unassigned

**Updated:** JAN-13

D3030.06.02 Refrigerant Condensing Units\*\*

Roof mounted air cooled condenser/compressor unit.

RatingInstalledDesign LifeUpdated4 - Acceptable197925JAN-13

**Event: Replace Refrigerant Condensing Units BOE (1)** 

TypeYearCostPriorityLifecycle Replacement2016\$10,000Unassigned

#### D3040.01.01 Air Handling Units: Air Distribution\*\*

Central air handling unit for classrooms and auxiliary spaces.

Separate make up air unit on roof to serve gym.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Replace Air Handling Units: Air Distribution BOE** 

<u>(2)</u>

TypeYearCostPriorityLifecycle Replacement2016\$235,500Unassigned

Updated: JAN-13

D3040.01.04 Ducts: Air Distribution\*

Original galvanized sheet metal

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

D3040.01.07 Air Outlets & Inlets: Air Distribution\*

Square stamped ceiling diffusers located throughout the school

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

D3040.03.01 Hot Water Distribution Systems\*\*

Copper piping

RatingInstalledDesign LifeUpdated4 - Acceptable197940JAN-13

**Event: Replace Hot Water Distribution Systems BOE (3009)** 

M2/gfa)

TypeYearCostPriorityLifecycle Replacement2019\$284,600Unassigned

#### D3040.04.01 Fans: Exhaust\*\*

Dedicated exhaust fans are provided for washrooms and auxiliary spaces

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event:** Replace Fans: Exhaust BOE (4)

TypeYearCostPriorityLifecycle Replacement2016\$7,400Unassigned

Updated: JAN-13

D3040.04.03 Ducts: Exhaust\*

Original galvanized sheet metal

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## D3040.04.05 Air Outlets and Inlets: Exhaust\*

Exhaust grilles connected to exhaust fans/ductwork throughout

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### D3050.02 Air Coils\*\*

Direct expansion coil

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Replace Air Coils BOE (1)** 

TypeYearCostPriorityLifecycle Replacement2016\$6,600Unassigned

#### D3050.03 Humidifiers\*\*

Spray coil in main air handling system. Not being operated at this time

RatingInstalledDesign LifeUpdated4 - Acceptable197925JAN-13

**Event:** Replace Humidifier BOE (1)

TypeYearCostPriorityLifecycle Replacement2016\$11,400Unassigned

**Updated: JAN-13** 

## D3050.05.03 Finned Tube Radiation\*\*

Perimeter heating supplied by finned tube radiation.

RatingInstalledDesign LifeUpdated4 - Acceptable197940JAN-13

**Event:** Replace Finned Tube Radiation BOE (3009 M2/gfa)

TypeYearCostPriorityLifecycle Replacement2019\$140,100Unassigned

Updated: JAN-13

# D3060.02.02 Pneumatic Controls\*\*

Trane pneumatic control panels located in mechanical room

RatingInstalledDesign LifeUpdated4 - Acceptable197940JAN-13

**Event: Replace Pneumatic Controls BOE (3009 M2/gfa)** 

TypeYearCostPriorityLifecycle Replacement2019\$43,800Unassigned

**Updated:** JAN-13

**D4010 Sprinklers: Fire Protection\*** 

Sprinklers in gym stage installed

No fire suppression system in rest of building

RatingInstalledDesign LifeUpdated5 - Good20100JAN-13

# D4030.01 Fire Extinguisher, Cabinets and Accessories\*

Hand extinguishers throughout building

No siamese connection

Street fire hydrant available

<u>Rating</u>	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1979	0	JAN-13

## S5 ELECTRICAL

## D5010.01.02 Main Electrical Transformers (Utility Owned)\*

Pad mounted 300 kVA transformer located on south side of school. S/N 23E-276. Owned by ENMAX.

RatingInstalledDesign LifeUpdated4 - Acceptable20060JAN-13

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

FPE 1000A, 120/208V 3-phase, 4-wire. 60% full.

RatingInstalledDesign LifeUpdated4 - Acceptable197940JAN-13

**Event:** Replace 1000 AMP Main Electrical Switchboards

(Main Distribution)

TypeYearCostPriorityLifecycle Replacement2019\$60,935Unassigned

Updated: JAN-13

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

Eight FPE NBLP-424L, 225A, 3-phase, 4-wire. 70% full.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Replace 8 Electrical Branch Circuit Panelboards** 

(Secondary Distribution)

TypeYearCostPriorityLifecycle Replacement2016\$24,000Unassigned

**Updated: JAN-13** 

#### D5010.07.02 Motor Starters and Accessories\*\*

Six separate starters fed off a common splitter.

Square D, some remote-controlled through a contract with Honeywell.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event: Replace 6 Motor Starters and Accessories** 

TypeYearCostPriorityLifecycle Replacement2016\$4,500Unassigned

Updated: JAN-13

#### D5020.01 Electrical Branch Wiring\*

Wiring in EMT conduit. AC90 used for final connections to some equipment and light fixtures.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

**Event:** Add ten new power circuits in Staff room

Concern:

Kitchen equipment do not have sufficient power. Tripping the existing circuit breakers.

Recommendation:

Add ten new power circuits in the kitchen / staff room.

**Consequences of Deferral:** 

Existing breakers trip due to overload.

TypeYearCostPriorityProgram Functional Upgrade2013\$3,000Medium

Updated: JAN-13

## D5020.02.01 Lighting Accessories: Interior (Lighting Controls)\*

Majority line voltage switching. 2-level switching typical for classrooms. Library has low voltage switching, with relays in ceiling space.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### D5020.02.02.02 Interior Fluorescent Fixtures\*\*

T12 lamping/magnetic ballasts throughout school.

Corridors - recessed 1x4s

Classrooms/office - recessed 2x4s.

Library - combination recessed 2x2s and 2x4s.

Some de-lamping of fixtures for energy savings/adjusted light levels.

RatingInstalledDesign LifeUpdated3 - Marginal197930JAN-13

# **Event:** Replace Interior Florescent Fixtures for (3,398)

<u>m²/gfa).</u>

Concern:

Light fixtures are obsolete technology and have exceeded their life span. Lenses are brittle and yellow.

**Recommendation:** 

Replace Interior Florescent Fixtures for (3,398 m²/gfa) with new T8 type fixtures with electronic ballasts.

Consequences of Deferral:

High operating costs. Obsolete technology. Broken lenses.

TypeYearCostPriorityFailure Replacement2013\$187,638Medium

Updated: JAN-13

#### D5020.02.02.05 Other Interior Fixtures\*

24 Mercury vapor high bay light fixtures mounted in Gym area with remote ballasts in Gym storage room.

Rating 2 - Poor 1979 Design Life Updated JAN-13

# **Event:** Replace 24 high bay light fixtures in Gym with

Metal Halide fixtures.

Concern:

Obsolete technology. Mercury in lamps. High operating costs.

Recommendation:

Replace 24 MV units with new Metal Halide units.

**Consequences of Deferral:** 

High operating and maintenance costs.

TypeYearCostPriorityFailure Replacement2013\$12,000Medium

#### D5020.02.03.02 Emergency Lighting Battery Packs\*\*

Emergi-Lite battery packs and remote heads located as required throughout the school.

RatingInstalledDesign LifeUpdated6 - Excellent201220JAN-13

**Event: Completed 2012 Replace Emergency Lighting** 

**Battery Packs** 

Concern:

Several battery packs non-functional.

Recommendation:

Replace batteries/battery packs.

**Consequences of Deferral:** 

Non-compliance with code. Insufficiently lit exit path under

loss of power.

TypeYearCostPriorityFailure Replacement2012\$3,380High

Updated: JAN-13

**Event: Replace 25 Emergency Lighting Battery Packs** 

TypeYearCostPriorityLifecycle Replacement2032\$12,987Unassigned

Updated: JAN-13

D5020.02.03.03 Exit Signs\*

Emergi-Lite LED exit signs located as required throughout the school.

RatingInstalledDesign LifeUpdated6 - Excellent20120JAN-13

**Event: Completed 2012 Upgrade Exit Signs** 

Recommendation:

Replace all exit signs with LED lamping.

TypeYearCostPriorityEnergy Efficiency Upgrade2012\$2,253Unassigned

Updated: JAN-13

D5020.03.01.04 Exterior H.P. Sodium Fixtures\*

Wall-packs, vandal-proof &/or with wireguard.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

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

Paragon time clock.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### D5030.01 Detection and Fire Alarm\*\*

Notifier 320 Control panel. Horn strobes and detection devices located as needed. Passive graphic at entrances. Six zones.

Rating 6 - Excellent 2012 25 JAN-13

# **Event:** Completed 2012 Fire Alarm/Emergency Lights

Concern:

Equipment obsolete, parts were unavailable.

**Recommendation:** 

Replace fire alarm throughout the building.

**Consequences of Deferral:** 

Fire system failure would result in the building being unprotected due to spares not being available.

TypeYearCostPriorityFailure Replacement2012\$6,613Low

**Updated:** AUG-12

Event: Replace fire alarm system for (3,398 m²/gfa).

TypeYearCostPriorityLifecycle Replacement2037\$58,590Unassigned

Updated: JAN-13

#### D5030.02.02 Intrusion Detection\*\*

Motion sensors located as required. Card swipe system in place. Silent Knight Regency control panel.

RatingInstalledDesign LifeUpdated4 - Acceptable199525JAN-13

Event: Replace Intrusion Detection for (3,398 m²/gfa).

TypeYearCostPriorityLifecycle Replacement2020\$34,456Unassigned

**Updated:** JAN-13

#### D5030.03 Clock and Program Systems\*

Lathern DWA384-4 time clock. Used for class change signal only.

RatingInstalledDesign LifeUpdated4 - Acceptable19950JAN-13

# D5030.04.01 Telephone Systems\*

Nortel Norstar. Handsets in classrooms. Connected to PA system.

RatingInstalledDesign LifeUpdated4 - Acceptable19900JAN-13

#### D5030.04.05 Local Area Network Systems\*

4 data drops to each classroom.
Wireless throughout school.
Cat 5 cabling throughout, installed in conduit.

Cat 5 cabiling throughout, installed in conduit.

RatingInstalledDesign LifeUpdated4 - Acceptable20050JAN-13

## D5030.05 Public Address and Music Systems\*\*

50 Channel PA head end Bogen SBA 225, tied in to phone system, cassette.

RatingInstalledDesign LifeUpdated4 - Acceptable199020JAN-13

**Event: Replace Public Address and Music Systems for** 

(3,398 m<sup>2</sup>/gfa).

TypeYearCostPriorityLifecycle Replacement2016\$14,169Unassigned

# **S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION**

# E1090.04 Residential Equipment\*

Household type appliances include stove, microwave, fridge in Kitchen and Staff area.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## E1090.07 Athletic, Recreational, and Therapeutic Equipment\*

Fixed and retractable basketball equipment and wall mounted climbing equipment in gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### E2010.02 Fixed Casework\*\*

Typical Units are laminate countertops with stained/sealed door/drawer faces. Stained/ painted wood coat racks with coat hooks in some classrooms and in some corridors. Stained wood open shelves in storages. Laminate top stained/ painted wood book shelves in library.

RatingInstalledDesign LifeUpdated3 - Marginal197935JAN-13

# **Event:** Repair Casework (BOE = sqm/gfa on 350 sqm.)

#### Concern:

Typical condition of fixed millwork. Delaminations in laminate countertops and stained/plywood cupboard door faces.

## **Recommendation:**

Selective refinishing/repair where possible and replacement where not.

## **Consequences of Deferral:**

Mainly a visual image issue and potential water damage where laminate failing.

TypeYearCostPriorityFailure Replacement2013\$56,330Low

Updated: JAN-13

# Event: Replace Casework (BOE = sqm/gfa on 800 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$146,920Unassigned

#### E2010.03.01 Blinds\*\*

Horizontal blinds between inner and outer panes of all exterior aluminum window units. Horizontal blinds to some interior windows.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

Event: Replace Blinds (BOE 60 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$7,200Unassigned

Updated: JAN-13

# E2010.03.06 Curtains and Drapes\*\*

Fabric Curtain In stage/ music room.

RatingInstalledDesign LifeUpdated4 - Acceptable197930JAN-13

**Event:** Replace Curtain (BOE 85 sqm.)

TypeYearCostPriorityLifecycle Replacement2016\$36,000Unassigned

Updated: JAN-13

# E2020.02.03 Furniture\*

Moveable desks, chairs, and tables are typically provided in the classrooms, shops, and the main office.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## S8 SPECIAL ASSESSMENT

#### K4010.01 Barrier Free Route: Parking to Entrance\*

No designated parking stall for disabled persons has been provided.

Parking stall area is paved.

No signage has been provided for visitors with disabilities.

Access is provided from the parking area on the West side to public sidewalk on South to the main entrance.

RatingInstalledDesign LifeUpdated2 - Poor19790JAN-13

#### **Event: Provide Barrier Free Parking Signage**

#### Concern:

No designated handicapped parking stalls or related signage are provided at this school.

#### Recommendation:

Provide barrier-free parking stalls and signage/markings.

# **Consequences of Deferral:**

Non-compliance with current barrier-free standards and poor accessibility for handicapped persons.

Type Year Cost Priority
Barrier Free Access Upgrade 2013 \$2,500 Medium

Updated: JAN-13

## K4010.02 Barrier Free Entrances\*

Power door operators have not been provided.

RatingInstalledDesign LifeUpdated3 - Marginal19790JAN-13

#### **Event: Install Power Door Operators**

#### Concern:

Power door operators have not been provided.

#### Recommendation:

Install power door operators

#### **Consequences of Deferral:**

It may be inconvenient or impossible for disabled persons to participate in activities at the school.

TypeYearCostPriorityBarrier Free Access Upgrade2013\$14,251Medium

Updated: JAN-13

#### K4010.03 Barrier Free Interior Circulation\*

Most of the areas of the school are accessible to handicapped persons. Stage area not accessible. Stage is no longer used as a stage, now is used as music room.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

**Event: Install Lift - Not Supported** 

Concern:

Stage area is not accessible.

Recommendation:

Install lift.

**Consequences of Deferral:** 

Disabled persons may not be able to participate in activities in this part of the school.

Type Year Cost Priority
Barrier Free Access Upgrade 2012 \$11,266 Medium

Updated: JAN-13

#### K4010.04 Barrier Free Washrooms\*

No barrier free washroom exists in school.

RatingInstalledDesign LifeUpdated3 - Marginal19790JAN-13

Event: Construct or convert an existing washroom into a

barrier free washroom.

Concern:

No barrier free washroom has been provided in this school.

Recommendation:

Construct or convert an existing washroom into a barrier free washroom.

**Consequences of Deferral:** 

Disabled persons may not be able to participate in activities in the school.

Type Year Cost Priority
Barrier Free Access Upgrade 2014 \$11,300 Medium

**Updated: JAN-13** 

## K4030.01 Asbestos\*

The CBE has conducted testing and maintains a Facility Asbestos Management Binder on site.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### K4030.02 PCBs\*

No PCBs were reported.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## K4030.04 Mould\*

None observed nor reported during the course of the evaluation.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

#### K4030.09 Other Hazardous Materials\*

None observed nor reported during the course of the evaluation.

RatingInstalledDesign LifeUpdated4 - Acceptable19790JAN-13

## K5010.01 Site Documentation\*

The prime consultant is ARUP DATTA ARCHITECT LTD. The evaluation date was September 25, 2012

#### Site description:

The school building is located on 5808 Madigan Drive N.E. with asphalt parking lot to the east and west. The main entrance faces south and is accessed form the municipal sidewalk by a concrete entrance walkway. The fields are contained within a chain link fence. Asphalt and gravel play field to the the east, north and west. Grassed play fields are shared with the city. The site is relatively flat. Drainage is generally away from the building to the west and south.

Rating	<b>Installed</b>	Design Life	<b>Updated</b>
4 - Acceptable	2012	0	JAN-13



Google view of site with portables tagged

#### K5010.02 Building Documentation\*

The prime consultant is ARUP DATTA ARCHITECT LTD.

The evaluation date was September 25, 2012

The entire building was evaluated

Cappy Smart Elementary School is located at 5808 Madigan drive N.E. The school is a 1979 Single storey, slab on grade, 3399 m2. The 4 classrooms portable information is provided on separate data files Brick veneer clad concrete masonry building with open web steel joists supporting wood deck.

Rating	<u>Installed</u>	Design Life	<b>Updated</b>
4 - Acceptable	2012	0	JAN-13



Main floor plan (CBE)