School Facility Evaluation Project Part I - Facility Profile and Summary

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School Name:	Western	Canada H	igh School		School Code:	816
Location:	641 - 17t	h Avenue	S.W.		Facility Code:	1648
Region:	South				Superindendent:	Dr. Donna Michaels
Jurisdiction:	Calgary I	Board of E	ducation		Contact Person:	Leanne Soligo
	District N	lo. 19			Telephone:	(403) 214-1123
Grades:	10 to 12				School Capacity:	2180
Building Section	Year of Compl	No. of Floors	Gross Bldg Area	Type of Construction (i.e., structure,	Description of Mechanical Systems (incl. major upgrades)	Commonts/Notos
Original Building	1928	3	3,694.1	Masonry walls with brick exterior, concrete	Two new low-pressure steam boilers	Comments/Notes
		_	-,	floors and roof	provide heat to the whole complex - good	
					condition. Perimeter heating by radiators.	
					Ventilation and primary heating by rooftop	
					1928 wings - installed 1986.	
Additions/	1929 E	1	1,472.8	Masonry wall with brick exterior, concrete	Numerous upgrades, including cooling in	
Expansions				floors and steel truss/concrete slab root	the computer room installed 1996.	
	1929 W	3	3,694.1	Masonry walls with brick exterior, concrete	New rooftop ventilation system installed	
					1300 (See 1320 willy above).	
	1959	3	3,222.7	Masonry wall with brick exterior, concrete	Unit ventilators on top 2 floors, separate	
				floors and roof	system for offices.	
	1966 N	1	1,634.3	Concrete block walls with brick facing,	Numerous upgrades. Auto shop and art	
				concrete noor, precast concrete 1 roor	studio air changes good.	
	1066 8	1	4 472 5	Concrete columns with proceet cladding	Control overtem with europhy and return fene	
	1900 3	1	4,475.5	concrete floors and roof	steam heating coil and free cooling.	
					····· ; ···· ;	
	1968	1	1,913.7	Concrete block walls, concrete floor and	8 roof-mounted heating/ventilation units.	
				precast concrete T roof		
	1982	1	2,021.6	Concrete block walls, glu-lam beam &	Roof-mounted heating/ventilation units.	Gymnasium
				steel deck roof		
	1982	1	860.8	Concrete block walls and steel truss roof	Roof-mounted heating/ventilation units.	Cafeteria
			22,987.6			
					Evaluator's Name:	Douglas Campbell

					& Company:	Carruthers & Associates Architects Inc.					
Upgrading/ Modernization (identify whether	1982 Renov.	860.82									
minor or major)	1982 Renov.	142.88									
	1982 Renov.	364.2									
	1981 Mod.	435									
Portable Struct. (identify whether attached/perman. or free-standing/ relocatable)											
List of Reports/ Supplementary Information	Roof plan s Asbestos re	Roof plan showing dates of replacement of all wings Asbestos report prepared by Environmental Health Professionals for the Calgary Board of Education									

	Evaluation Components	Summary Assessment	Estim. Cost
1	Site Conditions	The site is too small to accommodate the athletic fields needed by a school of this size. The form of the school creates semi-enclosed areas hidden from surveillance. Access to the student parking lot is too steep and becomes a hazard when slippery.	\$105,000
2	Building Exterior	Cracked columns in the southeast wall of the 1929 wing and cracked precast concrete fins at the south wall of the 1966 south wing need repair. Roofs on the 1928, 1929 W and 1959 wings are over 20 years old and should be replaced. The brick exterior of the 1928, 1929 and 1959 wings has significant deterioration of the mortar joints. Some stone and precast sills and parapet caps are loose. Repointing of brickwork on these wings is required. On the newer wings, the brick expansion joints and exterior windows should be recaulked. Also, painted metal fascia panels on the 1987 wing need repainting. Leaks around windows in the lower floors of the 1966 wing need to be recaulked. Exterior doors need new hardware and weather seals. Wood windows in the 1028, 1929 and 1959 wings are weather-worn, and some frames are rotted. They should be replaced by new metal-clad units that have the same historic character as the original ones.	\$2,352,000
3	Building Interior	Classroom flooring in the 1928, 1929 and 1959 wings is worn and should be replaced. Also, the gymnasium wood floor and the band room carpet in the 1968 wing should be replaced. Corridor doors in the 1959 wing have been removed, compromising the fire separation. Other corridor doors in this and the 1928 and 1929 wings have outdated hardware that does not meet code requirements. Hardware should be upgraded. There is no handicapped access either into the building or within because of the multiple levels. Three elevators are needed.	\$711,000
4	Mechanical Systems	All Areas fed from new steam boiler plant original 1928,1929, & 1959 wings need perimeter heating changet to hot water. Proper ventilation to be provided for 1959 wing. 1968 roof mounted and handling equipment needs replacement. Latest retrofits and additions are acceptable however current control technology should be incorporated throughout.	\$855,000
5	Electrical Systems	Existing systems in a large portion of the school are obsolete and require replacement with new. New fire alarm, emergency lights, and exit signs need upgrading to meet today's code. Energy efficiency performance will be improved with new lighting and LED exit signs.	\$1,363,000
6	Portable Buildings	None	\$0
7	Space Adequacy:		
	7.1 Classrooms	Surplus: 23.7m2	
	7.2 Science Rooms/Labs		
	7.3 Ancillary Areas	Surplus: 580	
	7.4 Gymnasium	Deficiency: 286.7	
	7.5 Library/Resource Areas	Deficiency: 79.2	
	7.6 Administration/Staff Areas	Surplus: 2533.9	

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Evaluation Components	Summary Assessment	Estim. Cost
7.7 CTS Areas		
7.8 Other Non-Instructional Areas (incl. gross-up)	Surplus: 2492.1m2	
Overall School Conditions & Estim. Costs		\$5,386,000

Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.1	General Site Conditions			
1.1.1	Overall site size.	F. I.	Total site area of 46,803.67 sq. m. (.468 ha. = 11.565 ac) is too small for a school of this size. A site of 15 to 17 acres is necessary for all athletic facilities in addition to the building and parking.	
1.1.2	Outdoor athletic areas.	4	The football/soccer field is worn at the edges close to the school, but the irrigation system keeps it in reasonably good condition.	
1.1.3	Outdoor playground areas, including condition of equipment and base.	N/A		
1.1.4	Site landscaping.	3	Primarily grass, with mature trees in the north lawn and along the east side. Grass areas near the northeast and northwest entries are worn to dirt by students congregating - concrete paving is required.	\$10,000
1.1.5	Site accessories (i.e., perimeter and other fencing, guard rails, bike stands, flag poles).	4	ок	
1.1.6	Surface drainage conditions (i.e., drains away from building, signs of ponding).	4	Courtyards between 1928 and north 1966 addition, and between 1929 and south 1966 additions have no drainage. Catch basins required. Ground west of 1929 addition has settled below adjacent sidewalk level, causing pooling and snow accumulation against the building. New fill required.	
1.1.7	Evidence of sub-soil problems.	4	OK	
1.1.8	Safety and security concerns due to site conditions.	3	The building provides many semi-enclosed areas hidden from surveillance. Some security cameras are installed, but more are advisable.	\$20,000
Other				

Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.2	Access/Drop-Off Areas/Roadways/Bus Lanes			
1.2.1	Vehicular and pedestrian access points (i.e., size, number, visibility, safety).	4	Primary pedestrian access points are at the NW (1929 addition), NE (1928 wing), west and South (2), (1968 addition) and the S (1966 addition), South 19821 Addition.	
		3	Vehicle access points are to parking lots in the NE, W, SW and SE. The drive up to the SE student parking lot is too steep. When icy in winter it is a hazard. Regrading required.	\$35,000
1.2.2	Surfacing of on-site road network (note whether asphalt or gravel).	3	Asphalt in most areas. Concrete in SE courtyard (between 1966 and 1929 additions) is broken and needs repaving, refer to photo #34.	\$30,000
1.2.3	Bus lanes/drop-off areas (note whether on-site or off- site).	N/A	None	
1.2.4	Fire vehicle access.	4	3 streets (however 17th Avenue to the north is 45 m. away).	
1.2.5	Signage.	4	Good	
Other				

Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.3	Parking Lots and Sidewalks			
1.3.1	Number of parking spaces for staff, students and visitors (including stalls for disabled persons).	4	Approximately 75 stalls for staff; Approximately 105 stalls for students and visitors. No stalls marked for disabled use.	
1.3.2	Layout and safety of parking lots.	4	Student parking lot is tightly laid out - access is difficult.	
1.3.3	Surfacing and drainage of parking lots (note whether asphalt or gravel).	4	Asphalt paving with some cracks. Catch basins installed.	
1.3.4	Layout and safety of sidewalks.	4	ок	
1.3.5	Surfacing and drainage of sidewalks (note type of material).	4	Concrete with asphalt patches	
1.3.6	Curb cuts and ramps for barrier free access.	3	None	\$10,000
Other		F. I.	Retaining wall at the eastof the playing fields is cracking.	
	Overall Site Conditions & Estimated Costs			\$105,000

Section 2	Building Exterior	Rating		Comments/Concerns	
2.1	Overall Structure		Bldg. Section	Description/Condition	
2.1.1	Floor structure and beams (i.e., signs of bending, cracking, heaving, settlement, voids, rust, stains).	4	1929, 1966 & 1968	Minor cracks in concrete foundation wall	
		3	1966	West concrete porch is settling, causing cracks in quarry tile surface.	\$10,000
2.1.2	Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains).	3	1929	Cracked columns in SE wall near chimney need patching.	\$7,000
		F. I.	1966 South	Precast concrete fins in the south wall have large open cracks, and columns in west wall have surface cracks indicating building settlement.	
2.1.3	Roof structure (i.e., signs of bending, cracking, voids, rust, stains).	4		Generally in good condition	
Other					

Section 2	Building Exterior	Rating		Comments/Concerns	Estim. 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		Bldg. Section or Roof <u>Section</u>	Description/Condition/Age	
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).	3	1928 1929 E 1929 W 1959 1966 N 1966 S 1968 1982 1987	Roofing summary plan attached showing dates of re-roofing of all wings. Tar and gravel BUR replaced 1973 - due for replacement (840 sq. m.)-50,000 Tar and gravel BUR replaced 1987 Tar and gravel BUR replaced 1973 - due for replacement (840 sq. m.)-50,000 Tar and gravel BUR replaced 1973 - due for replacement (944 sq. m.)-55,000 Tar and gravel BUR replaced 1987 - some blisters in the membrane need repair Tar and gravel BUR replaced 1982 (east) and 1994 (west) Tar and gravel BUR replaced 1987 (west), 1981 (south) and 1996 (north) Tar and gravel BUR replaced 1983 Tar and gravel BUR replaced 1983	\$155,000
2.2.2	Roof accessories (i.e., ladders, stairs, hatches, masts, exhaust hoods, chimneys, gutters, downspouts, splashpads).	4		ОК	
2.2.3	Control of ice and snow falling from roof.	N/A		Flat roofs	
2.2.4	Skylights (i.e., signs of distress, leaks, ice build-up, condensation, deteriorated materials/seals).	3	1929	Leaks around skylights Refer to photo nos. 40, 41, 42, 58 and 59	\$50,000
Other					

Section 2	Building Exterior	Rating		Comments/Concerns	Estim. Cost
2.3	Exterior Walls/Building Envelope		Bldg. Section	Description/Condition	
2.3.1	Exterior wall finishes (i.e., signs of deterioration, cracks, brick spalling, effluorescence, water stains).	2	1928, 1929 (all) and 1959	Mortar joints are deteriorating due to weathering between bricks and around concrete and sandstone sills. Some precast window sill blocks are dislodged by water penetration and freezing. All joints need to be repointed. 1929 E - precast concrete band in brick wall is cracked, with exposed, rusting re-bar. Also approximately 30 holes drilled in the east and south walls need to be filled. 1928 and 1929E - sandstone and precast concrete sills and window mullions cracked. 1928 - Carved sandstone facade at entry is deteriorating - needs restoration. Refer to photo nos. 27, 28, 29, 63 to 81 inclusive.	\$800,000
2.3.2	Fascias, soffits, parapets (i.e., signs of looseness, stains, rust, peeling paint).	2	1928, 1929 (all) and 1959 1966 N 1987	Parapet masonry has deteriorating mortar joints and stone and concrete capstones are dislodged and loose. Repointing and reinstallation of capstones are required. Precast concrete parapet caps have been dislodged. Reinstallation with proper flashings is required. Painted metal fascia panels peeling	Included in 2.3.1
2.3.3	Building envelope (i.e., evidence of air infiltration/ exfiltration through the exterior wall or ice build up on wall, eaves, canopy).	3	1966 N	Caulking of brick joint between 1929 and 1966 wings is failing - requires replacement.	\$10,000
		2	1966 S	Caulking around stairwell windows and doors requires replacement. Brick cladding shows efflorescence. Refer to photo nos. 51 and 52.	\$20,000
		3	1968	Caulking in brick expansion joints needs recaulking.	\$5,000
2.3.4	Interface of roof drainage and ground drainage systems.	4		Internal drainage from flat roofs.	
2.3.5	Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots).	2 F I	1966 N	Water stain on Theory Room wall next to west entry - window unit leaking. Glass block is leaking at window heads in Ancillary Room (lower floor) and Electrical Shop and north CTS room (main floor), causing peeling paint. Refer to photo nos. 56 and 57.	\$25,000
			10000	Separation of brick interior facing from concrete column indicates differential settlement. Efflorescence on brick in stairwell indicates roofing or flashing leak.	
Other					

Section 2	Building Exterior	Rating		Comments/Concerns	Estim. Cost
2.4	Exterior Doors and Windows		Bldg. Section	Description/Condition	
2.4.1	Doors (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	3	1928 & 1929 1959	Original wood doors in wood frames. New weather seals and exterior refinishing are required. Wood doors in aluminum frames. New weather seals are required.	\$20,000
		4	1968 1982	Wood doors in aluminum frames. Steel doors in steel or aluminum frames.	
2.4.2	Door accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	3	1928, 1929 and 1959	Original hardware- worn out - requires replacement.	\$70,000
2.4.3	Exit door hardware (i.e., safety and/or code concerns).	3	1928, 1929 and 1959	Original hardware- worn out - requires replacement.	\$30,000
2.4.4	Windows (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	2	1928, 1929 (all)	Single pane wood windows with exterior single-pane storms and opening transoms. Exterior surfaces are extensively peeled, and many have rotted wood from exposure to water. Weather seals are missing. Many are screwed shut. Replacement is recommended (7388 sq. m)	\$700,000
		2	1959	North - Unsealed double-pane wood windows in aluminum frames. Many units have condensation between panes and frames are extensively peeled. Putty seals have broken away in many areas. South - unsealed double-pane in steel casement frames. Replacement of all units is recommended.	\$300,000
		2	1966, 68 and 1982	Double-sealed units in aluminum frames. Some weather strips and sealed unit repair needed.	\$150,000
2.4.5	Window accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	2	1928, 1929 (all) 1959 and 1966	Original hardware is worn and loose. It should be replaced along with the windows.	Included in 2.4.4
2.4.6	Building envelope (i.e., signs of heavy condensation on doors or windows).				
Other			1928, 29 1928	Low stone walls at entry stairs have deteriorated; restoration is required. Laboratory has a noisy fume hood	Include 2.3.1
	Overall Bldg Exterior Condition & Estim Costs				\$2,352,000

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estim. Cost
3.1	Interior Structure		Bldg.		
311	Interior walls and partitions (i.e., signs of cracks	4	Section 1928 & 1929	Description/Condition Minor cracks in plaster classroom walls, particularly pear centrelines of rooms, - patch and repaint	
5.1.1	spalling, paint peeling).	4	W		
				Horizontal and step cracks in west concrete block wall of Gymnasium and Band Room	
			1968		
3.1.2	Floors (i.e., signs of cracks, heaving, settlement).	4	1928 & 1929	Cracked terrazzo floors in corridors	
			1966 S	cracks and ripples in floor at classroom entries, indicating floor movement between 1929 construction	
Other					
3.2	Materials and Finishes		Bldg.	Description/Condition	
			Section		
3.2.1	Floor materials and finishes.	3	1928	Terrazzo corridors have several cracks all floors; Classes lino or vinyl tile - replace-(\$120,000)	
		3	1929W	Terrazzo corridors have several cracks all floors; Classes lino or vinyl tile - replace-(\$120,000)	
		3	1929	Corridors vinvl tile - many lifting - replace(\$15.000) Classrooms vinvl tile or lino. Library - carbet	\$275,000
			1966N		
			1966S		
		4	1966	Concrete shop & studio floors	
			N and S	Lower floor vinyl tile, upper floor linoleum - corridors and classrooms	
		3	1968	Gymnasium - wood;	
				Band Room - carpet worn and stained - replace;	\$18,000
				Theatre - vinyl tiles with carpeted aisles - replace carpet	
		4	1982	Gymnasium - wood, locker rooms vinyl tile	
				Cafeteria - concrete floor	
3.2.2	Wall materials and finishes.	4	1928	Corridors and classes painted plaster	
		4	1929W	Corridors and classes painted plaster	
		3	1929E	Shops and studios painted concrete block; Activity room - hardboard panels, patch	
		4	1966N	Painted concrete block	* 4 0 000
		4	1966S	Corridors - brick and concrete block; Classes painted concrete block	\$10,000
		4	1968	Corridors brick; Gym, Band and Drama Rooms painted concrete block	
		4	1982	Painted concrete block	
		4	1907		
3.2.3	Ceiling materials and finishes.	4	1928	Corridors suspended T-bar with acoustic panels; Classes painted plaster	
		4	1929W	Corridors suspended T-bar with acoustic panels; Classes painted plaster	
		3 4	1929E	Shops - painted steel truss and concrete slab; Activity Koom - acoustic tiles - replace Stipple texture on main and 2nd, suspended T-bar 3rd floor	
		4	1966N	Painted precast concrete T beams	¢15 000
		4	1966S	Suspended GWB panels with stipple texture.	ຈາວ,000
		4	1968	Precast concrete T beams with adhered acoustic tiles	
		4	1982	Painted glu-lam beams and steel deck	

3.2 Materials and Finishes (cont'd) Bldg. Description/Condition 3.2.4 Interior doors and hardware. 4 1928 Original varnished wood doors in wood frames 4 1929W Original varnished wood doors in wood frames 4 1929E 5.2.4 1929E Original varnished wood doors in wood frames 6 4 1929E Original wood doors in wood frames 6 5.2.5 Millwork 196S Original wood doors in wood frames 6 3.2.5 Millwork 3 1928 Varnished wood cabinets in good condition 7 3.2.5 Millwork 3 1928 Varnished wood cabinets in good condition 7 3.2.5 Millwork 3 1928 Varnished wood cabinets in good condition 7 3.2.5 Millwork 3 1928 Varnished wood cabinets in good condition 8 3.2.5 Millwork 3 1928 Varnished wood cabinets in good condition 8 3.2.5 Millwork 3 1928 Varnished wood cabinets in good condition 9 3.1966 N Art room cabinets worn - replace 3	stim. Cost
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3.2.5 Millwork ⁴ ^{1966S} ^{1966S} ⁰ riginal wood doors in painted steel frames ⁴ ¹⁹⁶⁸ ¹⁹⁶⁸ ^{Wood doors in steel frames ⁴ ¹⁹⁸² ¹⁹⁸² ^{Steel doors in steel frames ³ ¹⁹²⁸ ¹⁹²⁸ ^{Varnished wood cabinets in good condition ^{1929E} ^{Varnished wood cabinets in good condition ^{1929E} ^{Varnished wood cabinets in good condition ^{1929E} ^{Varnished wood cabinets in good condition ¹⁹⁵⁹ ^{Library has good tables and shelves ³ ^{1966 N} ^A ^A}}}}}}}	
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1929 W Varnished wood cabinets in good condition 1959 Library has good tables and shelves 3 1966 N Art room cabinets worn - replace	
1959 Library has good tables and shelves 3 1966 N Art room cabinets worn - replace	\$40,000
3 1966 N Art room cabinets worn - replace	
	\$20,000
2 1020 W Home Economics counters needs replacement \$20,000	φ20,000
1050 Classroom collisite minimal: node how tone (\$20,000	
1965 S Division calments imminiatin feed new tops, remaining - \$20,000	\$60,000
1900 3 Physics toolin cabinets have painted wood tops - chipped and worn-\$20,000	
3.2.6 Fixed/wall mounted equipment (i.e., writing boards, 3 Mostly original blackboards in wood frames, with some new whiteboards in aluminum frames	\$12,000
tackboards, display boards, signs).	ψ12,000
3.2.7 Any other fixed/mounted specialty items (i.e., CTS 5 Gym has retractable seats and basketball hoops - good condition	
equipment, gymnasium equipment). Excellent new auto shop	
3.2.8 Washroom materials and finishes. 3 1928 Terrazzo floor - cracked; ceramic tile/plaster walls, painted plaster ceiling	
1929W Quarry tile floor, ceramic tile walls, painted plaster ceiling	
1929E Mosaic tile floor, ceramic tile/concrete block walls, acoustic tile ceiling(lower floor) - replace	\$4.000
	• ,
1982 Mosaic tile floor, painted concrete block walls, painted GWB ceiling	
Other	

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Section 3	Building Interior - Overall Conditions	Rating		Comments/Concerns	Estim. Cost
3.3	Health and Safety Concerns Intent is to identify renovations considered necessary to		Bldg. <u>Section</u>	Description/Condition	
	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.				
3.3.1	Building construction type - combustible or non- combustible, sprinklered or non-sprinklered.	F. I.	1928 1929W 1929E 1959 1966N 1966S 1968 1982	Combustible - Concrete/masonry walls, concrete floor slabs with wood sleepers, concrete roof Combustible - Concrete/masonry walls, concrete floor slabs with wood sleepers, concrete roof Combustible - Concrete/masonry walls, steel truss/concrete roof, concrete floor; wood flooring in computer room Non-combustible - Concrete/masonry walls, concrete floor slabs, concrete roof Non-combustible - Concrete/masonry walls, concrete floor slabs, precast concrete T roof Non-combustible - Concrete/masonry walls, concrete floor slabs, precast concrete T roof Non-combustible - Concrete/masonry walls, concrete floor slabs, precast concrete T roof Non-combustible - Concrete/masonry walls, concrete floor slabs, precast concrete T roof Non-combustible - Concrete/masonry walls, concrete floor slabs, precast concrete T roof Only the 1966 theatre workshop is sprinklered.	
3.3.2	Fire separations (i.e., between buildings, wings, zones if non-sprinklered).	F. I.	1959	Mostly steel doors in steel frames; no magnetic holders; some have no latches Corridors have wood doors and frames; west doors (to 1929W wing) removed: unrated door to basement mechanical room	
3.3.3	Fire resistance rating of materials (i.e., corridor walls and doors).	F. I.	1928, 1929, 1959	Corrodor walls masonry; Corridor doors original wood in wood frames - may not meet current code	
3.3.4	Exiting distances and access to exits.	F. I.	1928, 1929, 1958	Further study required because of removal of corridor doors in central 1958 wing	
3.3.5	Barrier-free access.	2		All wings have stairs; no elevators or entry ramps. Three elevators would be required. Washrooms have no accessible stalls	\$250,000
3.3.6	Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals).	F.I.	1959 1966 1968 1982	Asbestos report prepared for the Calgary Board of Education by Environmental Health Professionals May 13, 1998 Asbestos present in floor tile, ceiling texture coat and ventilator cabinets Asbestos present in floor tile, ceiling texture coat and Science Room counter tops Asbestos present in floor tile and ceiling texture coat Asbestos present in floor tile and ceiling texture coat Asbestos present in the theatre curtain Asbestos also present as pipe insulation in numerous locations.	
3.3.7	Other health and safety concerns (i.e., evidence of excessive noise conditions, air quality problems)	2	1928	Second floor Home Economics room - dryer vents into the room, and mice are getting into cabinets - repair	\$5,000
		3	1929 W	NW clssroom has noisy diffusers - adjust	\$2,000
Other					
	Overall Bldg Interior Condition & Estim Costs				\$711,000

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.1	Mechanical Site Services				
4.1.1	Site drainage systems (i.e., surface and underground systems, catch basins).	4		Combustion of catch basins and grading to streets.	
4.1.2	Exterior plumbing systems (i.e., irrigation systems, hose bibs).	4		Generally hose bibbs only.	
4.1.3	Outside storage tanks.			Not applicable.	
Other					
4.2	Fire Suppression Systems		Bldg.		
4.2.1	Fire hydrants and siamese connections.	4	Section	Fire hydrants available on adjoining streets.	
4.2.2	Fire suppression systems (i.e., pumps, sprinklers, piping, reservoirs, hoses, stand pipes, CO2 systems).	4		40 mm standpipe and hose and for some portions and 65 mm fire department connections provided.	
4.2.3	Hand extinguishers, blankets and showers (i.e., in CTS areas).	4		Fire extinguishers provided throughout.	
4.2.4	Other special situations (e.g., flammable storage areas, science labs, CTS areas).			Not applicable.	
Other					

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.3	Water Supply and Plumbing Systems		Bldg.		
			Section	Description/Condition	
4.3.1	Domestic water supply (i.e., pressure, volume, quality - note whether municipal or well supply).	4		100 mm water service from municipal service. 80 mm water meter for domestic service.	
4.3.2	Water treatment system(s).			Not applicable.	
4.3.3	Pumps and valves (including backflow prevention valves).	2		No backflow protection provided on domestic water service or fire protection service.	\$15,000
4.3.4	Piping and fittings.	4		All piping to fixtures is copper and considering age is acceptable.	
4.3.5	Plumbing fixtures (i.e., toilets, urinals, sinks)	4		Plumbing fixtures are in good shape for age. Ongoing maintenance or replacement required as necessary.	
4.3.6	Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, recirculation).	4		Three self contained gas fired hot water heaters are provided in main boiler plant to serve school needs.	
4.3.7	Sanitary and storm sewers, including sumps and pits (note whether sewage system is municipal or septic).	4		Sanitary and storm sewers are tied to municipal mains.	
Other					

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.4	Heating Systems		Bldg. <u>Section</u>	Description/Condition	
4.4.1	Heating capacity and reliability (including backup capacity).	5		Two (2) low pressure steam boiler provide the heating needs for entire complex. Boilers are new, installed and commissioned in 1999. Total capacity 200 HP each. Cleaver Brooks model CB(LE)200. Serial #S-87683 & S-87684.	
4.4.2	Heating controls (including use of current energy management technology.	4		Boilers controls are current technology integrated with existing pneumatic controls. Rest of heating controls are older, pneumatic based.	
4.4.3	Fresh air for combustion and condition of the combustion chimney.	5		Combustion air and chimneys are in good shape.	
4.4.4	Treatment of water used in heating systems.	4		Treatment systems are current and well maintained.	
4.4.5	Low water cutoff/pressure relief valves and failure alarms (i.e., hot water heating).	4		Devices in place.	
4.4.6	Heating air filtration systems and filters.			Not applicable.	
4.4.7	Heating humidification systems and components.			Not applicable.	

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.4	Heating Systems (cont'd)		Bldg. Section	Description/Condition	
4.4.8	Heating distribution systems (i.e., piping, ductwork) and associated components (i.e., diffusers, radiators).	2		Several portions of the older section of the school still utilize steam perimeter heat including cast iron steam radiators. These include 1928, 1929, 1959 and 1929 shop wings. These areas should be upgraded to hot water.	\$440,000
		4		Later editions such as 1966, 1968 & 1982 additions and renovations utilize hot water heating and are in good shape.	
4.4.9	Heating piping, valve and/or duct insulation.	3		Existing heating piping (Steam) is old and should be replaced.	See 4.4.8
4.4.10	Heat exchangers.	3		Heat exchangers are utilized throughout to exchange steam to hot water and steam to glycol for air system coils and on shop wing for unit heaters. Some exchangers are old specifically in shop wing and 1966 hot water system. Consideration to be given for retrofit on the older exchangers.	\$30,000
4.4.11	Heating mixing boxes, dampers and linkages.	3		Unit ventilators are used in the older 1959 wing on all three levels. These should be replaced.	See 4.4.8 & 4.5.1
4.4.12	Heating distribution/circulation in larger spaces (i.e., user comfort, temperature of outside wall surfaces).	3		User comfort for heating is subject to complaints mainly in the older steam heated areas. Hot water heated areas are better.	See 4.4.8
4.4.13	Zone/unit heaters and controls.	3		Same situation as described under 4.4.12.	See 4.4.8
Other					

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.5	Ventilation Systems				
			Bldg. <u>Section</u>	Description/Condition	
4.5.1	Air handling units capacity and condition.	4		1929/1966 Shop Wing - This wing has had numerous ventilation system upgrades, most recent being 1996 for the main computer classroom. Make-up air for exhausts in arts and crafts and automotive shops are current and provide good air changes.	
		3		1966 addition has a central air handling system with supply and return fans, steam heating coil, mixed air with full free cooling and summer use evaporative water cooler in air stream. System design capacity of approximately 30,000 CFM (14,157 L/s). The system needs work to improve efficiency, needs balancing and capacity increase to serve areas on lower floor which have no air supply.	\$110,000
		4		The original 1928 and 1929 blocks had new ventilation systems added by means of rooftop equipment in 1986. Equipment consists of variable volume supply and return fans, mixing sections, glycol heating coil and VAV zoning for each classroom. Capacity of each unit is approximately 25,000 CFM (11,795 L/s).	
		3		In 1968 a drama, gym and band room addition was added on the west side of the school. Air supply to these areas was by means of roof mounted gas fired air handling units. Due to problems with gas fired sections, the gas sections were removed and glycol coils were added to the eight roof mounted units in 1985. The original fans, casing and duct distribution are old. Two of the units serving the theatre have air conditioning but due to failure of compressors are only 50% functional. Due to age of overall system these units should be replaced.	\$90,000
		2		The three story 1959 addition houses the general offices, library and classrooms. Air systems consist of unit ventilators on top two floors and a small ventilation system for the general office. Systems are inadequate and poor conditions are encountered.	\$145,000
		4		In 1982 an additional gym was added along with new cafeteria, kitchen and change rooms. Separate units are provided for the cafeteria (3600 L/s), kitchen make-up air (2400 L/s), change rooms (4719 L/s) and gym (3900 L/s). All quantities are approximate based on equipment sizes.	

Section 4	Mechanical Systems	Rating	Comments/Concerns	Estim. Cost
4.5.2	Outside air for the occupant load (if possible, reference CFM/occupant).	4	Outside air quantities are good in 1966, 1929/66 wing, 1928, 1929 and 1982 additions, as long as minimum position of outside air dampers are maintained. 1959 and 1968 portions need upgrade. See 4.5.1.	
4.5.3	Air distribution system (if possible, reference number of air changes/hour).	4	Air change rates are good in most areas except for 1959, some areas of 1966 portion and 1968 additions. See 4.5.1 for areas of upgrade.	
4.5.4	Exhaust systems capacity and condition.	4	Exhaust systems were generally found to be in good shape throughout and meeting needs of areas including science rooms.	
4.5.5	Separation of out flow from air intakes.	4	Separation was good between intakes and exhaust.	
4.5.6	Special/dedicated ventilation and/or exhaust systems (i.e., kitchen, labs, CTS areas).	3	Generally adequate exhausts were provided. Poor exhaust was noted in the fine arts darkrooms and auto shops machine storage rooms. A cost is noted here for information.	\$10,000
Other				

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.5	Ventilation Systems (cont'd)		Bldg. <u>Section</u>	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).	3		All controls were pneumatic based and generally on the upgraded areas of adequate function. However, proper control of mixed air and maintaining minimum outside are at design condition is suspect.	See 4.7.1
4.5.8	Air filtration systems and filters.	4		All air systems utilized 25 or 50 mm fiberglass filters.	
4.5.9	Humidification system and components.	F.I.		No humidification systems are incorporated in air systems.	
4.5.10	Heat exchangers.			Not applicable.	
4.5.11	Ventilation distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages).	4		Generally existing system distribution is in good shape.	
Other					

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.6	Cooling Systems		Bldg. Section	Description/Condition	
4.6.1	Cooling system capacity and condition (i.e., chillers, cooling towers, condensers).	4		The only cooling for the school is on the computer room units in the 1929 shop wing which were installed in 1996.	
4.6.2	Cooling distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages)	3		Cooling is currently installed on theatre system which needs replacing.	\$15,000
4.6.3	Cooling system controls (including use of current energy management technology).			Not applicable.	
4.6.4	Special/dedicated cooling systems (i.e., labs, CTS areas).			See 4.6.1	
Other					
4.7	Building Control Systems		Bidg.	Description/Condition	
4.7.1	Building wide/system wide control systems and/or energy management systems.	3	Section	The overall school has pneumatic based controls on an addition by addition basis. No central building management is in place. Much of the pneumatics are old and not using current technology. Controls of air systems could be improved with central monitoring and proper control technology.	
	Overall Mech Systems Condition & Estim. Costs	3-Jan		Systems where upgrades have been done and latest additions are providing generally good performance. However, several areas are in need of upgrade and centralization of controls and introduction of current technology would benefit overall school operation.	\$855,000
				Evaluator: Dale Way, Hemisphere Engineering	

Section 5	Electrical Systems	Rating		Comments/Concerns	Estim. Cost
5.1	Site Services		Bldg. Section	Description/Condition	
5.1.1	Primary service capacity and reliability (i.e., access, location, components, installation, bus sizes - note whether overhead or underground).	4			
5.1.2		3		Additional wall packs required at doorways and perimeter of building.	\$10,000
5.1.3	Site and building exterior lighting (i.e., safety concerns).	4			
Other	Vehicle plug-ins (i.e., number, capacity, condition).				
5.2	Life Safety Systems				
5.2.1	Life Safety Systems		Bldg. <u>Section</u>	Description/Condition	
5.2.2	Fire and smoke alarm systems (i.e., safety concerns, up-to-date technology, regularly tested).	2		Existing system is obsolete, requires strobes and bells, and does not meet 1997 code. Replace with new system.	\$150,000
5.2.3	Emergency lighting systems (i.e., safety concerns, condition).	2		Additional lighting is to be added onto generator to meet 1997 code.	\$15,000
Other	Exit lighting and signage (i.e., safety concerns, condition).	2		Existing are past life cycle and should be changed to LED and additional installed to meet 1997 code.	\$25,000

Section 5	Electrical Systems	Rating		Comments/Concerns			
5.3	Power Supply and Distribution		Bldng. <u>Section</u>	Description/Condition			
5.3.1	Power service surge protection.	2	1928	None in place.	\$1,500		
5.3.2	Panels and wireways capacity and condition.	3	1928	Existing panels are obsolete, fully, and need replacement. New panels will be sized to allow for computer, convenience, and future needs.	\$29,000		
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	2	1928	Existing generator is fed with natural gas and does not meet code. Generator to be replaced with new diesel unit or independent fuel source to be installed to meet code.	\$50,000		
5.3.4	General wiring devices and methods.	3	1928	New wiring for circuit for convenience, computer, as well as future will be installed.	\$21,000		
5.3.5	Motor controls.	3	1928	Existing are obsolete and will be replaced with new.	\$15,000		
Other		3	1928	Provide new wiring and control for mechanical upgrades.	\$15,000		
5.3	Power Supply and Distribution		Bldng. <u>Section</u>	Description/Condition			
5.3.1	Power service surge protection.	N/A	1929				
5.3.2	Panels and wireways capacity and condition.	3	1929	Existing panels are generally obsolete and need replacement. New panels will be sized to allow for computers, convenience, as well as future.	\$48,000		
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	N/A	1929				
5.3.4	General wiring devices and methods.	3	1929	New wiring for circuits for convenience, computer, as well as future will be installed.	\$28,000		
5.3.5	Motor controls.	3	1929	Existing generally obsolete and will be replaced with new.	\$18,000		
Other		3	1929	Provide new wiring and control for mechanical upgrade.	\$15,000		
5.3.1	Power service surge protection.	N/A	1937				
5.3.2	Panels and wireways capacity and condition.	3	1937	Existing panels in good condition. Provide one additional for convenience, computer, as well as future.	\$2,500		
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	N/A	1937				
5.3.4	General wiring devices and methods.	3	1937	Provide circuitry for convenience, computer, and future.	\$2,500		
5.3.5	Motor controls.	4	1937				
Other		3	1937	Provide controls and wiring for mechanical upgrades.	\$10,000		

Section 5	Electrical Systems	Rating		Comments/Concerns			
5.3.1	Power service surge protection.	N/A	1959				
5.3.2	Panels and wireways capacity and condition.	3	1959	Existing panels are obsolete, full, and need replacement. New panels will be sized to allow for computer, convenience, and future needs.	\$30,000		
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	N/A	1959				
5.3.4	General wiring devices and methods.	3	1959	New wiring for circuits for convenience, computer, as well as future will be installed.	\$19,000		
5.3.5	Motor controls.	3	1959	Existing are obsolete and will be replaced with new.	\$12,000		
Other		3	1959	Provide new wiring and control for mechanical upgrades.	\$10,000		
5.3	Power Supply and Distribution		Bldng.	Description/Condition			
5.3.1	Power service surge protection.	N/A	1966	None in place.			
5.3.2	Panels and wireways capacity and condition.	3	1966	Existing panels are obsolete, full, and need replacement. New panels will be sized to allow for computer, convenience, and future needs.	\$50,000		
5.3.3	Emergency generator capacity and condition and/or	N/A	1966				
5.3.4	General wiring devices and methods.	3	1966	New wiring for circuits for convenience, computer, as well as future will be installed.	\$35,000		
5.3.5	Motor controls.	3	1966	Existing are obsolete and will be replaced with new.	\$18,000		
Other		3	1966	Provide new wiring and control for mechanical upgrades.	\$15,000		
5.3	Power Supply and Distribution		Bldng. Section	Description/Condition			
5.3.1	Power service surge protection.	N/A	1968	None in place.			
5.3.2	Panels and wireways capacity and condition.	3	1968	Existing panels are obsolete, full, and need replacement. New panels will be sized to allow for computer, convenience, and future needs.	\$15,000		
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	N/A	1968				
5.3.4	General wiring devices and methods.	3	1968	New wiring for circuits for convenience, computer, as well as future will be installed.	\$10,000		
5.3.5	Motor controls.	3	1968	Existing are obsolete and will be replaced with new.	\$5,000		
Other		3	1968	Provide new wiring and control for mechanical upgrades.	\$5,000		

Section 5	Electrical Systems	Rating	Comments/Concerns			
5.3	Power Supply and Distribution		Bidng.	Description/Condition		
5.3.1	Power service surge protection.	N/A	1982			
5.3.2	Panels and wireways capacity and condition.	4	1982	Existing panels have some space for future requirements.		
5.3.3	Emergency generator capacity and condition and/or	N/A	1982			
5.3.4	General wiring devices and methods.	3	1982	Provide some additional outlets for convenience and computer.	\$4,000	
5.3.5	Motor controls.	4	1982			
Other		3	1982	Allow wiring and control for mechanical upgrades.	\$2,500	
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).	3	1928	Existing lighting consists mainly of surface and pendant fluorescent blade fixtures with some heritage incandescent. New fluorescent fixtures c/w T-8 lamps and electronic ballasts will be installed. Any existing heritage fixtures will be refurbished with energy efficient lamps. Existing lighting levels in Classroom - 30 - 50 fc, Corridors - 15 - 20 fc.	\$84,000	
5.4.2	Replacement of ballasts (i.e., health and safety concerns).	3	1928	Existing ballasts may contain PCB's. Cost estimate for safe removal.	\$7,000	
5.4.3	Implementation of energy efficiency measures and recommendations.	F.I.	1928		Refer to Items 5.4.1 and 5.3.2	
Other						
5.4	Lighting Systems		Bldg. Section	Description/Condition		
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).	3	1929	Existing lighting consists of pendant and surface mounted blade fixtures in part of building. Lighting in industrial arts area consists of 8' industrial fluorescent fixtures which have recently been generally upgraded. Lighting levels are 15 - 20 fc in corridors, 30 - 50 fc in classrooms, and 90+ fc in portion industrial arts. New fixtures will be c/w T-8 lamps and electronic ballasts.	\$96,000	
5.4.2	Replacement of ballasts (i.e., health and safety concerns).	3	1929	Existing ballasts in some areas may contain PCB's. Cost estimate for safe removal.	\$4,500	
5.4.3	Implementation of energy efficiency measures and recommendations.	F.I.	1929		Refer to Items 5.4.1 and 5.3.2	
Other						

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Section 5	Electrical Systems	Rating		Comments/Concerns			
5.4	Lighting Systems		Bldg. Section	Description/Condition			
5.4.1	Interior lighting systems and components (i.e., illumina	3	1959	Existing lighting consists mainly of surface and pendant fluorescent blade fixtures with some herita	\$74,000		
5.4.2	Replacement of ballasts (i.e., health and safety concer	3	1959	Existing ballasts may contain PCB's. Cost estimate for safe removal.	\$6,500		
5.4.3	Implementation of energy efficiency measures and recommendations.	F.I.	1959		Refer to Items 5.4.1 and 5.3.2		
Other							
5.4	Lighting Systems		Bldg. Section	Description/Condition			
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).	3	1966	Existing lighting consists of surface and pendant blade 8' industrial and 2 x 4 recessed fluorescents. Lighting in automotive area was replaced in 1999 and in excellent condition. Lighting levels are 15 - 20 fc in corridors and 30 - 55 fc in office and classroom. New fluorescent fixtures will be installed c/w T-8 lamps and electronic ballasts generally throughout.	\$135,000		
5.4.2	Replacement of ballasts (i.e., health and safety concer	3	1966	Some of the ballasts may contain PCB's. Cost for safe removal.	\$12,000		
5.4.3	Implementation of energy efficiency measures and rec	F.I.	1966		Refer to Items 5.4.1 and 5.3.2		
Other							

Section 5	Electrical Systems	Rating		Comments/Concerns			
5.4	Lighting Systems		Bldg. Section	Description/Condition			
5.4.1	Interior lighting systems and components (i.e., illumina	3	1968	Existing lighting consists of surface 2 x 4 fluorescent and gym fluorescent fixtures. Fixtures can be retrofitted and some need replacement. New and retrofit fixtures will use T-8 lamps and electronic ballasts. Lighting levels in gym - 35 fc. Other spaces around 50 fc.	\$30,000		
5.4.2	Replacement of ballasts (i.e., health and safety concerns).	3	1968	Some fixtures may contain PCB's. Cost is for safe removal.	\$1,000		
5.4.3	Implementation of energy efficiency measures and recommendations.	F.I.	1968		Refer to Items 5.4.1 and 5.3.2		
Other							
5.4	Lighting Systems		Bldg. Section	Description/Condition			
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).	3	1982	Existing fluorescent fixtures are generally in good condition and will be retrofitted with T-8 lamps and electronic ballasts.	\$22,000		
5.4.2	Replacement of ballasts (i.e., health and safety concerns).	4	1982				
5.4.3	Implementation of energy efficiency measures and recommendations.	F.I.	1982		Refer to Items 5.4.1 and 5.3.2		
Other							

Section 5	Electrical Systems	Rating		Comments/Concerns			
Section 5	Electrical Systems	Rating	Comments/C	mments/Concerns			
5.5	Network and Communication Systems		Bldg. Section	Description/Condition			
5.5.1	Telephone system and components (ie. capacity, reliability, condition).	2		Existing system is obsolete and needs replacement.	\$60,000		
5.5.2	Other communication systems (ie. public address, intercom, CCTV, satellite or cable TV)	3		Some additional speaker and amplifier upgrades are required.	\$10,000		
5.5.3	Network cabling (if available, should be category 5 or better).	4					
5.5.4	Network cabling installation (ie. in conduit, secured to walls or tables)	4					
5.5.5	Wiring and intercommunication closets (ie. size, security, ventilation/cooling, capacity for growth).	3		Additional wiring closets are required to provide local area network and replace existing which does not meet standards.	\$25,000		
5.5.6	Provision for dedicated circuits for network equipment (ie. hubs, switches, computers).	3		Additional outlets will be installed throughout school to provide power for new computer equipment.	\$50,000		
Other		3		At the present time, there is no local area network installed. Provide 2 - 4 cable drops in all classrooms and teaching areas.	\$60,000		

Section 5	Electrical Systems	Rating		Comments/Concerns	
5.6	Miscellaneous Systems		Bldg. Section	Description/Condition	
5.6.1	Site and building surveillance system (if applicable).	4			
5.6.2	Intrusion alarms (if applicable).	4			
5.6.3	Master clock system (if applicable).	4			
Other					
5.7	Elevators/Disabled Lifts (if applicable)				
5.7.1	Elevator/lift size, access and operating features (ie. sensing devices, buttons, phones, detectors).				
5.7.2	Condition of elevators/lifts.				
5.7.3	Lighting and ventilation of elevators/lifts.	4			
Other					
	Overall Elect. Systems Condition & Estim Costs	3		Existing system old and obsolete. Provide new to allow for new life cycle and upgrade.	\$1,363,000
				Evaluator: Gary Mctighe, Stebnicki, Robertson & Associates	

	Space Adequacy		This Fa	acility	Ec	uiv. Nev	w Facility	Surplus/ Deficiency	Comments/Concerns
Section 7		No.	Size	Total Area	No.	Size	Total Area		
7.1	Classrooms	54	80.4	4343.7	54	80	4320	23.7	
7.2	Science Rooms/Labs								
7.3	Ancillary Areas (i.e., Art, Computer Labs, Drama, Music,)			1740.2			1160	580	
7.4	Gymnasium (incl. gym storage)			1388.3			1675	-286.7	Design size given for 1575 Capacity only - maximum shown in table
7.5	Library/Resource Areas			899			978.2	-79.2	
7.6	Administration/Staff, Physical Education, Storage Areas			3609.9			1076	2533.9	Several Large areas included as storage
7.7	CTS Areas								
	7.7.1 Business Education								
	7.7.2 Home Economics			317.3			420		
	7.7.3 Industrial Arts			3551			1380		Special Progams?
	7.7.4 Other CTS Programs								
7.8	Other Non-Instructional Areas (i.e., circulation, wall area, crush space, wc area)			7121.1			4629	2492.1	
	Overall Space Adequacy Assessment			22970.5			15638.2	5263.8	Net Capacity=2085, Design instructional Area=3837 Reported Area=23695

Evaluation Component/ Sub-Component	Additional Notes and Comments