

ADDITION & RENOVATION OF WINAKWA COMMUNITY CENTRE

980 WINAKWA ROAD, WINNIPEG

**ISSUED FOR TENDER
MAY 13, 2010**

DRAWING LIST

GENERAL

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C01 CIVIL WORKS

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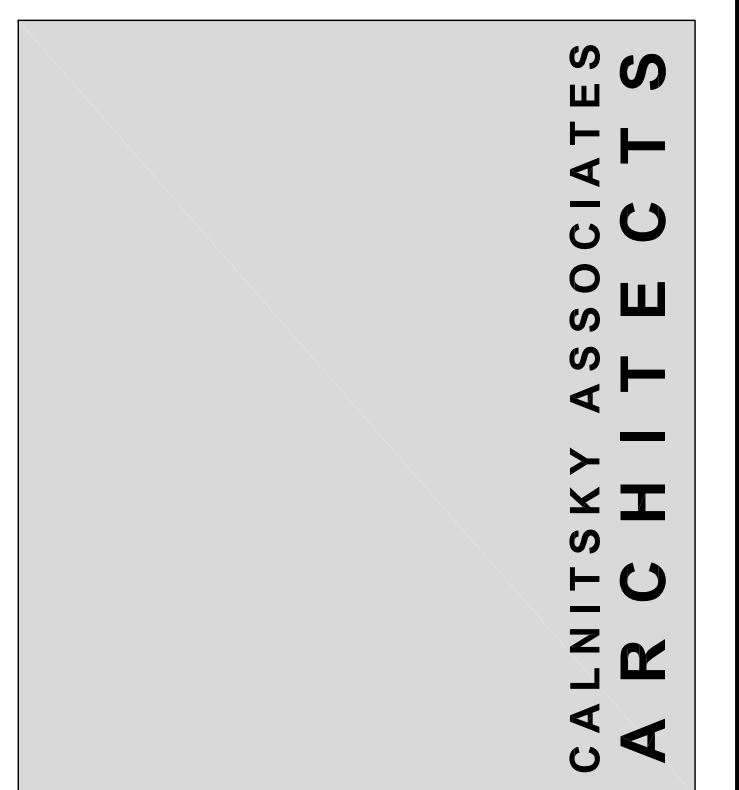
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PROJECT TITLE

**ADDITION & RENOVATION
OF WINAKWA COMMUNITY
CENTRE**

980 WINAKWA RD, WINNIPEG

SHEET TITLE

**TITLE SHEET, INDEX
& BUILDING CODE
ANALYSIS SUMMARY**

DRAWN BY	SCALE	SHEET NUMBER
CS, SM	AS SHOWN	G0.1
CHECKED BY	DATE	
BM	2010.05.13	
PROJECT NO.	REV. DATE	
09-012		

BUILDING CODE ANALYSIS SUMMARY:

Building Code Design Summary

PROJECT DESCRIPTION:

- The project entails additions to an existing recreation centre, together with renovations needed to accommodate the additions.
- The existing building constitutes an original 2-storey 460-sq.m. 1961 building with a series of additions. The 1986 addition (2-storées, 155.6-sq.m.) was added with firewalls to separate it from earlier construction. This would have allowed the resultant two buildings to be unsprinklered under Sentence 3.2.2.14 of the 1985 NBC, while allowing each to be two storeys facing one street. That Sentence required 45-minute fire resistance rated floor and supporting assembly construction and a 45-minute fire resistance rated roof. Without the firewall, the building would have required sprinkling but no minimum fire resistance ratings under Sentence 3.2.2.13 (1985 NBC).
- The additions will roughly double the size of the building. The new construction requirements will negate the need for the firewalls and roof rating, and allow the entire complex to be treated as a single building with regard to egress and Code conformance.
- The existing building is not sprinklered. A sprinkler system will be added as part of this project, including any repairs to the existing building necessary to facilitate the work.

This summary is based on Manitoba Building Code of Canada 2006 – Division B, Part 3.

BUILDING INFORMATION:

Existing buildings:

South and west building (includes 1961 original building and 1968, 1983 and 1989 additions)			
First Storey	826.5 s.m.	(742.1 s.m. prior to 1986 add'n)	
Second Storey		77.2 s.m.	
Northeast Building (1986 Addition)			
First Storey	155.6 s.m.		
Second Storey		155.6 s.m.	
TOTAL EXISTING:	982.1 s.m.	221.1 s.m.	1,203.2 s.m.

New Additions:

Front Entrance			
South Addition	30.9 s.m.		
First Storey			
Second Floor	1,009.9 s.m.	142.7 s.m.	
TOTAL NEW:	1,031.8 s.m.	122.0 s.m.	1,152.8 s.m.
TOTAL BUILDING:	2,012.9 s.m.	358.6 s.m.	2,371.5 s.m.

Building Area By Code Def'n: 2012.9 s.m. (greatest horizontal area above grade)

PART 3 FIRE PROTECTION, OCCUPANT SAFETY AND ASSESSIBILITY

SECTION 3.1 - GENERAL

3.1.2 - MAJOR OCCUPANCY CLASSIFICATION

Major Occupancies: Group A2, Assembly
Subsidiary Uses: none

3.1.3 - MULTIPLE OCCUPANCY REQUIREMENTS

3.1.3.1 N/A.

3.1.11 - FIRE STOPS IN CONCEALED SPACES

3.1.11.5.1 Attic subdivision: N/A
3.1.11.6 Crawl space subdivision: N/A.

3.1.17 - OCCUPANT LOAD

3.1.17.1 Occupant Load Determination

LOCATION	ROOM	Area (sq'')	Notes	Load Calculator	Occupant Load
West 2 nd Storey	Existing Offices (NIC)	43.9		9.3 m/person	5
East 2 nd Storey	Existing Meeting (NIC)	87.5	Tables & seats	0.95 m/person	92
South 2 nd Storey	New Mechanical / Electrical Room	99.1		46 m/person	2
South 2 nd Storey	New A/V Room	7.9		9.3 m/person	1
All 2nd Storeys	Total				100
First Storey	Existing Hall (NIC)	273.6	Tables & seats	0.95 m/person	288
First Storey	Existing Meeting Room (NIC)	34.3	Tables & seats	0.95 m/person	36
First Storey	Existing Hall Kitchen (NIC)	13.8		9.3 m/person	1
First Storey	Existing Equipment Storage	29.2	New size	46 m/person	1
First Storey	Existing Change Rooms remaining (NIC)	16.8	4 team rooms	12 team	48
First Storey	New Storage in converted Change rooms	68.1		46 m/person	1
First Storey	Existing Canton and Kitchen (NIC)	33.7		9.3 m/person	4
First Storey	Existing Garage (NIC)	79.1		46 m/person	2
First Storey	Facility Manager	12.7		9.3 m/person	1
First Storey	Canteen	11.7		9.3 m/person	1
First Storey	Multi-Purpose Room	82.2	Tables & seats	0.95 m/person	87
First Storey	Bar	13.8		9.3 m/person	1
First Storey	Refrigerator	7.2		9.3 m/person	1
First Storey	Grand Hall	96.5	Lounge	1.85 m/person	52
First Storey	Change Rooms	23.9 each	4 team rooms	12 Team	48
First Storey	Gymnasium	488.1	Tables & seats	0.95 m/person	514
First Storey	Total				1086
All Floor Areas	TOTAL				1186*

* Programmatic assigned occupant load (per Building Management) for Building is to be maximum 700 at any one time (for purposes of calculating washrooms and for liquor licensing); however egress calculations will be based on above calculations.

SECTION 3.2 - BUILDING FIRE SAFETY

3.2.2 - BUILDING SIZE AND CONSTRUCTION RELATIVE TO OCCUPANCY

3.2.2.1(4) Aggregate area of the mezzanines is greater than 10% of the building floor area, therefore the building is considered as two-storeys in building height.
3.2.2.9 Floor over crawl space: N/A
3.2.2.10 Building faces two streets (fire fighter access via parking lot, compliance by Civil)
3.2.2.14 Roof top enclosures – not applicable
3.2.2.56 Group A2, up to 2 Storeys, Increased Area, Sprinklered
(2) - Building may be of combustible or non-combustible construction.
(2)(a) - Floors to be fire separations, and if of combustible construction, to have minimum 45-minute fire resistance rating.
(2)(b) - Mezzanines, if of combustible construction, to have minimum 45-minute fire resistance rating. (Not Applicable)
(2)(c) - Load bearing assemblies supporting assemblies with required fire resistance ratings to be non-combustible or if of combustible construction, have minimum 45-minute fire resistance rating.
- Roofs require no fire resistance rating.

3.2.3 - SPATIAL SEPARATION AND EXPOSURE PROTECTION

3.2.3.1 Table 3.2.3.1.C:
North - no limit (faces public street)
East - no limit (faces parking lot)
South - no limit (faces playing fields)
West - no limit (faces playgrounds and public lane)
3.2.3.8 No fire protection required to exterior walls.
3.2.3.14.(3) Wall exposed to another wall - no protection required as building is sprinklered.

3.2.4 - FIRE ALARM AND DETECTION SYSTEMS (Compliance by Electrical)

3.2.4.1.(12) Fire alarm system is required as building is sprinklered - compliance by Electrical.
3.2.4.3 A single or two stage fire alarm system may be provided - compliance by Electrical.
3.2.4.7.(2) Automatic fire alarm notification to fire department required - compliance by Electrical.
3.2.4.8 Annunciator required unless entire building is one zone - compliance by Electrical.
3.2.4.9 Electrical supervision required - compliance by Electrical.
3.2.4.10 Fire detectors required - compliance by Electrical. (service rooms, storage rooms, hazardous substance spaces, janitor rooms)
3.2.4.11 Smoke detectors required in exit stair shafts - compliance by Electrical.
3.2.4.12 Shut down of mechanical system required upon activation of duct mounted smoke detectors if system serves more than one suite or compartment - compliance by Electrical and Mechanical.
3.2.4.16 Manual fire alarm pull stations required at every exit and principle entrance to building - compliance by Electrical.

3.2.5 - PROVISIONS FOR FIRE FIGHTING

3.2.5.1 Provision of access openings - N/A (building is sprinklered).
3.2.5.3 Roof Access - N/A (building is less than 3 storeys).
3.2.5.4 Access route to be provided to building face with principal entrance.
3.2.5.5.(1) Access route is to be within 15-m of principal entrance.
3.2.5.5.(2) The unobstructed path of travel from fire hydrant to the main building's principal entrance is not to exceed 90-m. (Existing complies).
3.2.5.8 Standpipe system not required.
3.2.5.13 Sprinkler system - compliance by Mechanical.
3.2.5.17 Portable fire extinguishers required per NFC - compliance by Mechanical.

3.2.7 - LIGHTING AND EMERGENCY POWER SYSTEMS - Compliance by Electrical

3.2.7.3 Emergency lighting required in exits, principle routes providing access to exits, service rooms - compliance by Electrical.
3.2.7.4 Emergency power required for emergency lighting system - compliance by Electrical
3.2.7.8 Emergency power required for fire alarm system - compliance by Electrical

SECTION 3.3 - SAFETY WITHIN FLOOR AREAS

3.3.1.5(1) Minimum two means of egress required from all areas with occupant load >60.
3.3.1.6 Maximum travel distance within a room or suite to an egress doorway, to conform to 3.4.2.5.(1)(f).
3.3.1.7.(1) Each level with barrier free path of travel is protected by sprinklering.
3.3.1.21.(3) Janitors' Rooms to be separated from remainder of floor area fire separations (no rating required).

SECTION 3.4 - EXITS

3.4.2.1.(1) All floor areas to be served by at least 2 exits. (West and South Mezzanines exempt by 3.4.2.1.(2)(b)).
3.4.2.3.(1)(b) Least distance between exits - 1/2 maximum diagonal of floor area, but not less than 9-m.
3.4.2.5.(1) Maximum travel distance to an exit is 30-m.
3.4.2.6. Principal entrance to be designed as an exit.
3.4.3.2.(1): Exit Widths:

Location	Occupant Load (see 3.1.17 above)	No. of Exits	Exit Doors Capacity (6.1-m/person)	Exit Stairs Capacity (8-m/person)	Notes
First Storey	1086	8 (11 doors)	Required: 9,534-smm Provided: 9,296-smm	NA	
Exit West 2 nd Storey	5	1	Required: 38.5-mm Existing: 873-mm	Required: 46-mm Existing: 806-mm	Existing stairs at 9.2-mm / person
Exit East 2 nd Storey	92	2	Required: 561.2-mm Existing: 1,646-mm	Required: 846.4-mm Existing: 2,126-mm	Existing stairs at 9.2-mm / person
New South 2 nd Storey	3	1	Required: 18.3-mm Provided: 823-mm	Required: 24-mm Existing: 1,100-mm	New stairs at 8-mm / person

3.4.3.2.(8) Minimum width of exits: Corridors, ramps - 1100-mm
3.4.3.2.(8)(d) Minimum width of stairs - 900-mm (1100-mm provided).
3.4.3.4. Headroom clearance minimums: Exits - 2100 mm., Doorways - 2030 mm.
3.4.4.1. Fire-resistance rating of exit separations: minimum 45-minutes.
3.4.5.1. Exit Signs required at all exit doors and required to be visible along all accesses to exit. Exit lights to be on emergency power system. Compliance by Electrical.

SECTION 3.6 - SERVICE FACILITIES

3.6.2.1.(1) Service rooms containing fuel-fired appliances to be fire-rated to 1-hour (Applicable to new second floor mechanical/electrical room.)
3.6.2.1.(6) Electrical service rooms containing transformer to be fire-rated to 1-hour (Applicable to renovated first storey electrical room and new second floor mechanical / electrical room.)
3.6.2.5. Combustible refuse storage room protection - Not Applicable.
3.6.2.7. Electrical Equipment Vault protection - Not Applicable.
3.6.2.8. Emergency Power Installation rooms protection - Not Applicable.
3.6.3.1. Vertical service spaces protection - Not Applicable.

3.6.5 - AIR DUCT AND PLENUM SYSTEMS - Compliance by Mechanical

SECTION 3.7 - HEALTH REQUIREMENTS

3.7.2.2. Water Closets required in building: (Plumbing and fixtures by Mechanical)

Occupant Load (per programmatic assigned load)	Unisex Washrooms Provided	Male WCs Req'd	Exist.	New	Female WCs Req'd	Exist.	New	Notes
700 less 10 for existing (Unisex WC = 690 (145Sex))	1	6	5	4	11	5	6	Per 3.7.2.2.(6) (Table 3.7.2.2.A)

SECTION 3.8 - BARRIER-FREE DESIGN

3.8.1.2. The main entrance (and at least 50% of all public entrances) to be barrier-free and designed to 3.8.3.3.
3.8.1.5. Operator controls (switches, thermostats, etc) intended for use by occupants to be accessible to wheelchair users, operable with one hand, and mounted at between 400 and 1200 AFF - compliance by Mechanical & Electrical.
3.8.2.1. Barrier-free path of travel required to all areas, except for the service rooms and spaces, janitor rooms.
3.8.2.2. Barrier free path of travel required to parking area - compliance by Civil.
3.8.2.3. Barrier free washrooms are required on each floor to which BF access provided.
3.8.3.3.(5) Principal entrance does requires power door operator(s). (Group A building with area greater than 500-sm.)
3.8.3.12. Universal toilet rooms to have no internal dimension of less than 1700-mm, provide an open space at least 1500-mm in diameter, and provide space for wheelchair beside toilet (minimum 875 clear). (Existing washroom to remain.)
3.8.3.16. If drinking fountains provided, at least one to be barrier free - compliance by Mechanical.

NOTE: Additional barrier free requirements to be met to suit City of Winnipeg universal design guidelines.

PART 5 ENVIRONMENTAL SEPARATION

Building to comply with all Environmental Separation requirements of this Part. (Compliance required by all disciplines.) *****

BUILDING PROJECT SIGN OFF	SIGNATURE	DATE
Community Centre President		
General Council of Winnipeg Community Centre		
Manager of Building Services, Planning, Property and Development Department		
Manager of Recreation Services, Community Service Department		
Manager of Parks and Open Space, Public Works Department		
Director of Planning, Property and Development		
Director of Community Services		

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