



**City of Saskatoon
Nutana Kiwanis Maintenance / Office Buildings
Asbestos Survey Report**



December 2015

**Prepared For: City of Saskatoon – Infrastructure Services – Facilities Branch
Nutana Kiwanis Maintenance / Office Buildings
2235 McEown Street, Saskatoon SK
Attn: Brent Anderson**

**Prepared By: Bersch & Associates Ltd.
Project No. : B67SRL17**

1.0 EXECUTIVE SUMMARY

The asbestos survey of the Nutana Kiwanis Maintenance / Office Buildings located at 2235 McEown Street in Saskatoon, SK. entailed the inspection of all accessible suspect asbestos-containing materials (ACM) located throughout the facility. Materials inspected included transite board and drywall mud compound.

Bulk sample analysis results indicate the presence of “Chrysotile” asbestos within the Nutana Kiwanis Maintenance Office Building. Asbestos containing materials **were not** detected in the **Maintenance Building**. The maintenance building construction consists of metal building fiberglass insulation, concrete floor, exposed red iron on the interior and metal cladding on the exterior. Please refer to *Appendix I for Bulk Sample Analysis* results, *Appendix II for the Asbestos Survey Database* and *Appendix III for the Floor Plan* for the location of the areas containing the transite board. The recommended action to be implemented in reference to the ACM identified is Management. Please refer to section 5 Asbestos Abatement Discussion for definitions. It should be noted that the recommendation of “Management” as part of the asbestos action plan is based upon the premise that renovations are not scheduled throughout the area that would impact the asbestos containing material present. ***Prior to any major renovation/demolition activity, a destructive investigation is recommended to identify any inaccessible ACM that is physically concealed or isolated in areas such as enclosed wall/ceiling/floor cavities and pipe chases.*** Asbestos was detected in the following forms throughout the facility:

- **Transite Board** has been identified within the Nutana Kiwanis Maintenance Office Building. The samples were collected from the 109 Furnace Room and the sill on the exterior west wall of 108 Concession Equipment Storage.

Throughout the survey of the Nutana Kiwanis Maintenance / Office Buildings, the Asbestos Containing Materials were assessed and given a Priority Rating of One, Two or Three, with Priority One being the items requiring the most immediate attention. There are no Priority One Items.

Bersch & Associates Ltd. implemented the use of doorjamb labels that are applied to all the doorjambs of the rooms containing asbestos within the facility. This permits anyone accessing the room to easily identify the ACM present without having to reference the written report. Legends providing explanation of the abbreviations used on doorjambs was placed on the backside of the door of the 109 Furnace Room of the office building. Employees and contractors will use the legend as a reference to identify ACM within the areas they are working.

2.0 INTRODUCTION

Bersch & Associates Ltd. was retained by the City of Saskatoon to conduct an Asbestos Survey and Hazard Assessment of the Nutana Kiwanis Maintenance / Office Buildings located in Saskatoon, SK. The survey entailed the inspection of all accessible areas of the facility; including ceiling spaces and pipe chases. The purpose of the survey was to locate, identify and assess the condition of all Asbestos Containing Materials (ACM) located throughout the facility. This report gives a detailed account of the inspection results and our firm's recommendations on control options to be implemented to bring the facility in compliance with the Province of Saskatchewan Occupational Health and Safety Act and Regulations. Brad Berschminsky of Bersch & Associates Ltd. completed the survey in December 2015. A review of this report shall be conducted with all trades that are entering the facilities to perform maintenance or renovation activity. This will ensure they are familiar with the types and locations of asbestos-containing materials present within each facility and prevent any uncontrolled disturbance and/or possible exposure to asbestos.

3.0 METHODOLOGY

Bersch & Associates Ltd. conducted the survey of the Nutana Kiwanis Maintenance / Office Buildings located in Saskatoon, SK. in December of 2015. The primary documents for guidance and criteria in this survey were the Province of Saskatchewan "Occupational Health and Safety Act and Regulations, 1996", Province of Saskatchewan "Managing Asbestos", and the U.S. Environmental Protection Agency "Guidance for Controlling Asbestos Containing Materials in Buildings". The USEPA document identifies factors associated with the "condition" and the "potential for disturbance or erosion" of asbestos containing materials (ACM). These factors help to determine potential for exposure to ACM and were used to make a qualitative evaluation of the material. It should be noted that the recommendation of "Management" Asbestos Abatement Action is based upon the premise that renovations are not scheduled in that area that will require disturbing or violating the asbestos containing material. In the event that renovations are scheduled further testing may be necessary.

In total three (3) bulk samples of suspect asbestos-containing materials were collected within the Nutana Kiwanis Maintenance Office Building. Refer to **Appendix I** for a copy of the Bulk Sample Analysis Report. All bulk samples collected were analyzed by Bersch & Associates Ltd. laboratory in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as <1% by volume.

4.0 RECOMMENDATIONS

Throughout the survey of the Nutana Kiwanis Maintenance Office Building, the Asbestos Containing Materials were assessed and given a Priority Rating of One, Two or Three, with Priority One being the items requiring the most immediate attention. As a result no Priority One items were identified. The action to be implemented in the facility is Management. Refer to the recommendations provided in the attached **Asbestos Survey Database found in Appendix II.**

5.0 ASBESTOS ABATEMENT DISCUSSION

Asbestos is a known carcinogen and is listed in the Province of Saskatchewan under the Occupational Health and Safety Appendix, Part V as a Hazardous Chemical Substance and any release of asbestos fibres into the atmosphere creates a potential health hazard. Although the mechanism and epidemiology of asbestos carcinogenesis is not yet well defined, accumulating evidence suggests the significance of exposure at even very low fibre concentrations and hence human exposure should be kept to a minimum. It should be noted however that asbestos is a natural mineral and a measurable background concentration can be detected in any location sampled (inside buildings, outside buildings, urban, rural, etc.). The recommendations of the report are therefore intended to keep the potential exposure to an absolute minimum with the knowledge that a zero exposure is not possible.

Asbestos containing materials have been used in a wide variety of applications. Of particular concern, is the group of so called friable products. A friable product is one which can be crumbled or reduced to powder or smaller fragments by hand pressure. Publications from the U.S.E.P.A. as early as 1977 have indicated the potential hazard of asbestos exposure in buildings containing these friable products. The two main uses of friable asbestos products are as spray insulation (thermal, acoustic or fireproofing) on deck and/or beams or as thermal insulation on piping or mechanical equipment. A large amount of non-friable asbestos-containing materials have also been used in building construction such as asbestos cement board and asbestos containing vinyl flooring.

The mere presence of a friable asbestos containing material does not imply that there is an actual presence of elevated airborne fibre. As numerous studies have indicated, elevated asbestos fibre levels are generally found when settled dust or the actual asbestos containing material itself is disturbed by maintenance, renovation, inadvertent contact or vibration. The factors considered in the Environmental Protection Agency (USEPA) exposure assessment (condition of material, water damage, activity, movement, exposed surface area, accessibility, friability and presence in an air stream) often give some indication of the likelihood of fibre release but are not in any way definitive in determining whether a hazard exists or not. That is, even if the most friable product exists in a building, elevated fibre levels will not likely occur unless there is some disturbance by physical contact, vibration or an air stream.

There are four possible approaches to control exposure to airborne asbestos once a friable material is identified in a building. These methods briefly are as follows:

- A) Removal** - Asbestos material is removed and disposed of by burial and replaced by non-asbestos materials.
- B) Encapsulation** - Asbestos material is coated with a bridging or penetrating sealant.
- C) Enclosure** - Asbestos containing materials are separated from the building environment by barriers such as suspended ceilings or cladding materials.
- D) Deferred Action or Management and Custodial Control** - The Province of Saskatchewan Human Resources, Labor and Employment Branch under the

Occupational health and Safety Regulations publish a document outlining “The Management of Asbestos”. In the guide for compliance, an action plan is outlined for management of the asbestos materials identified and in summary is:

1. Identification, which has been accomplished by this report.
2. Development of Written Handling Procedures for maintenance personnel or often arrangements are made for a qualified contractor to conduct the necessary removal or spot maintenance prior to the regular staff conducting maintenance.
3. Asbestos Abatement Awareness and Process Training if the regular maintenance personnel are required to conduct asbestos related activities.
4. Inspection on regular basis is conducted to determine the ongoing condition of the material. Sask. Occupational Health & Safety Regulations require an “annual” inspection of all “friable” asbestos materials by a competent person.

In the event renovations or maintenance is performed within areas containing asbestos materials, written procedures must be developed to conduct the activity or prior removal if the situation warrants.

6.0 REFERENCES

- .1 Province of Saskatchewan “The Occupational Health and Safety Act and The Occupational Health and Safety Regulations” Office Consolidation, January 1996.
- .2 Province of Saskatchewan Human Resources, Labor, and Employment “The Management of Asbestos” January, 1991.
- .3 USEPA, 1985. U.S. Environmental Protection Agency, “Guidance for Controlling Asbestos-Containing Materials in Buildings”. Washington, DC: Office of Toxic Substances, USEPA.
- .4 Midwest Centre for Occupational Health & Safety St. Paul’s, Minnesota – Asbestos Training For Inspectors & Management Planners
- .5 McCrone Research Institute Course Hayward California “Asbestos Identification”
- .6 Environment Management and Protection Act, Saskatchewan Environment, October 2002
- .7 Hazardous Substances and waste Dangerous Goods Regulations, Saskatchewan Environment, April 1989

APPENDIX I

BULK SAMPLE ANALYSIS REPORT

BERSCH & ASSOCIATES LTD.

December 18, 2015

City Of Saskatoon
Infrastructure Services Department
3130 Laurier Drive
Saskatoon, Sk.
S7L 5J7

ATTENTION: Brent Anderson

SUBJECT: Bulk Sample Analysis Report

Please find attached our laboratory's results for the bulk material samples taken from the Nutana Kiwanis Maintenance Office Building located at 2235 McEown Street in Saskatoon, SK. The samples were analyzed in our laboratory for the identification of asbestos.

The results for the bulk samples were obtained by examination in accordance with the current USEPA 600/R-93/116 Method for the analysis of asbestos in building materials using polarized light microscopy and dispersion staining techniques. The detection limit of this method is listed as less than 1% by volume.

This test report relates only to the materials sent for examination and any use or extension of the information by the client of these results is the responsibility of the client. If any questions arise on the results of the attached information please contact me at 306 222 7477. Thank you for this opportunity of service!

Sincerely,

Brad Berschiminsky
Bersch & Associates Ltd.
File: B67BLL17

Bersch & Associates Ltd.

B67BAL17

Box 3568

Humboldt, Sask. S0K 2A0

BULK SAMPLE ANALYSIS REPORT

PROJECT NO. B67.15

CLIENT: CITY OF SASKATOON - INFRASTRUCTURE SERVICES – FACILITIES BRANCH

NUTANA KIWANIS MAINTENANCE BUILDING / OFFICE BUILDING

CONTACT: BRENT ANDERSON

LOCATION: 2235 MCEOWN, SASKATOON, SK.

NO.	DATE	SAMPLE INFORMATION	ASBESTOS	%	ANALYST
1	13-May-13	Office Building #904.002 - 109 Furnace Room - Transite Board On The East Wall Beside The Furnace.	Chrysotile	25	WB
2	17-Dec-15	Office Building #904.002 - 109 Furnace Room - Drywall Mud Compound On The North Wall And Ceiling.	No Asbestos Detected		WB
3	17-Dec-15	Office Building #904.002 - Exterior Of 108 Concession Equipment Storage - Transite Board On The Sill On The West Wall.	Chrysotile	25	WB

APPENDIX II


ASBESTOS SURVEY DATABASE

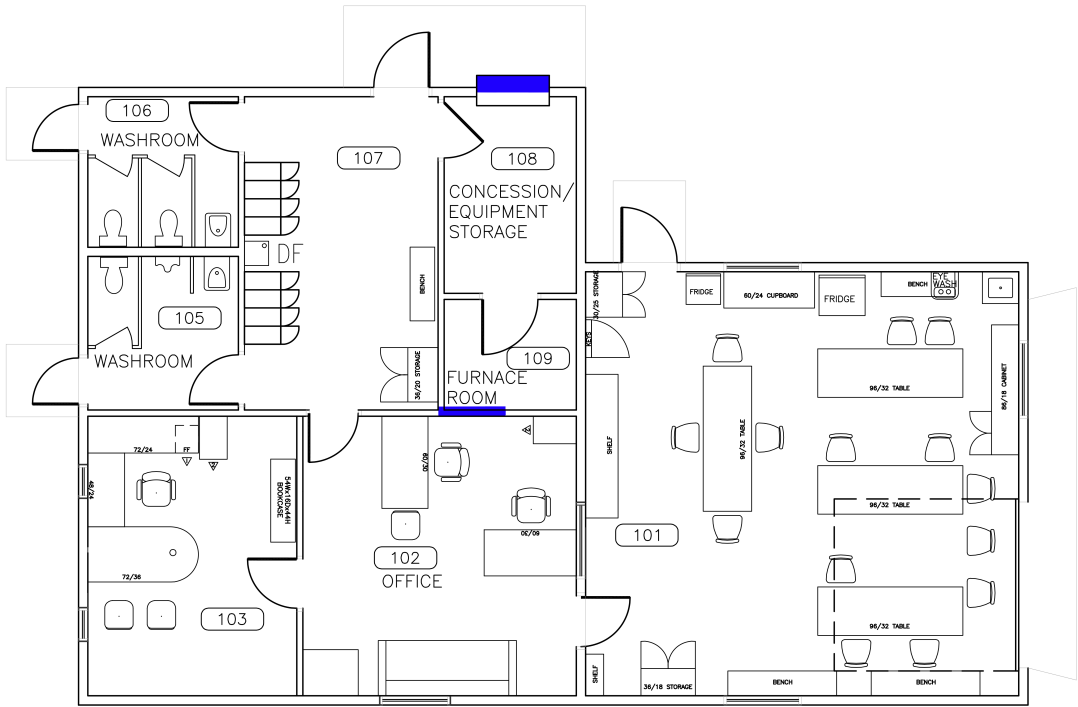
Bersch Associates Ltd.															
City of Saskatoon - Kiwanis Maintenance Building / Office															
			SAMPLE DATA												
	Room	Use	SAMPLE	Sample	Date	Asbestos	% of	Tradename			Description of	Asbestos Content	Potential for	Recommended	
Floor	Number		SAMPLE REP	ID	DD/MM/YY	Type	Asbestos	ACM Product	Condition	Priority	Sample Location	In Area	Disturbance	Action	Comments
M	101	Staff Room										No Accessible ACM			
M	102	Office										No Accessible ACM			
M	103	Office										No Accessible ACM			
M	105	Men's Washroom										No Accessible ACM			
M	106	Women's Washroom										No Accessible ACM			
M	107											No Accessible ACM			
M	108	Concession/Equip Storage										No Accessible ACM			
M	109	Furnace Room	Sample	B67-ASB.1	17/12/2015	Chrysotile	25	Transite Board	Good	3	Office Building #904.002 - 109 Furnace Room - Transite Board On The East Wall Beside The Furnace.	Transite Board	Low	Manage	
M	109	Furnace Room	Sample	B67-ASB.2	17/12/2015	None					Office Building #904.002 - 109 Furnace Room - Drywall Mud Compound On The North Wall And Ceiling.	Transite Board			
M		Exterior Office	Sample	B67-ASB.3	17/12/2015	Chrysotile	25	Transite Board	Good	3	Office Building #904.002 - Exterior Of 108 Concession Equip. Storage Room - Transite Board On The Sill On The West Wall.	Transite Board	Low	Manage	The Transite Board Is Located On The Exterior Sill Of The Concession Wall Opening.
M	110	Maintenance Shop										No Accessible ACM			
M	111	Mechanical Room										No Accessible ACM			
M	112	Tool Storage										No Accessible ACM			
M	113	Office										No Accessible ACM			

APPENDIX III

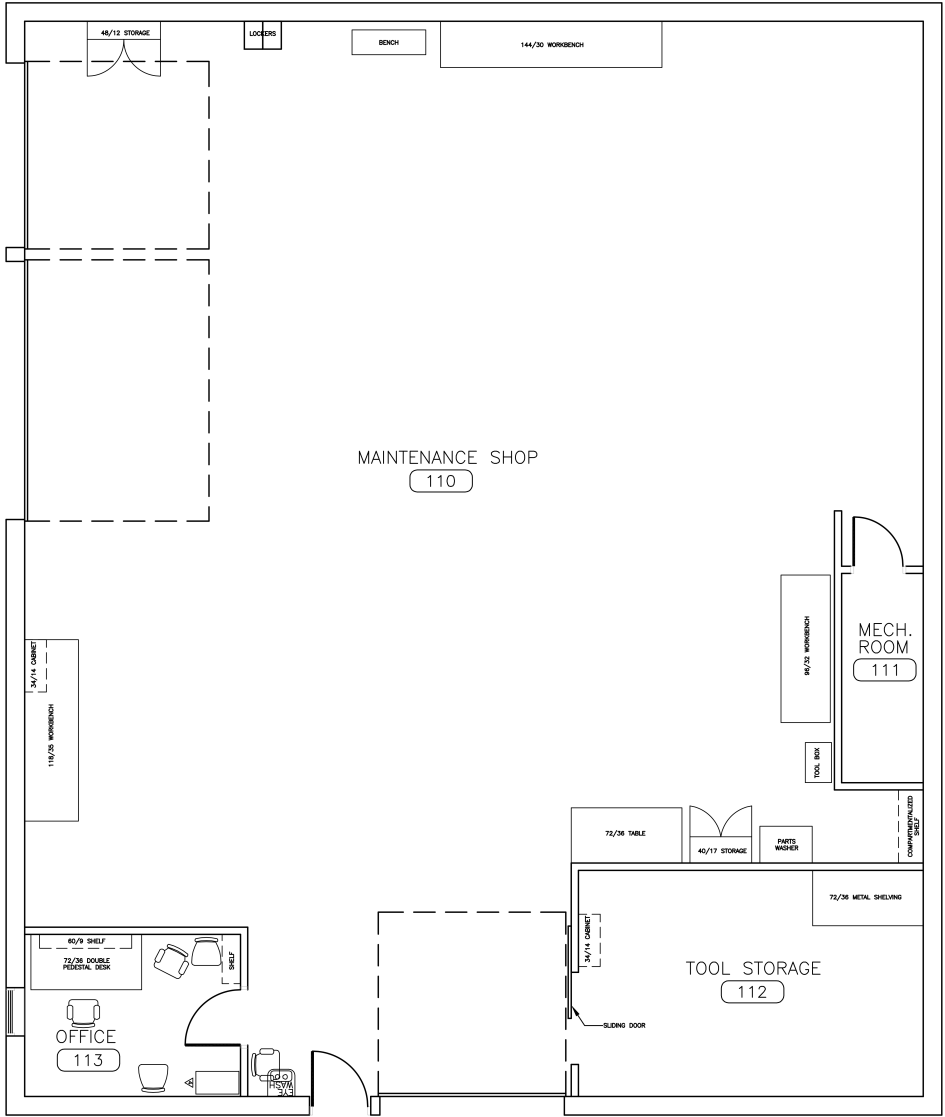
FLOOR PLAN

ASBESTOS LEGEND

Transite Board - 



FACILITY #904.002



FACILITY #904.001



City of
Saskatoon

Infrastructure Services
Department

Facilities Branch
306-975-3300

- GENERAL NOTES:
1. All dimensions are in millimetres
 2. Drawings are not to be scaled.
 3. All drawings to be read in conjunction with the specifications, unless otherwise noted.
 4. Verify site conditions and location of all utilities prior to the start of construction.
 5. Report all discrepancies to the Consultant.
 6. If in doubt, ask.

REV	ISSUED FOR	DATE
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DESIGNED BY:	DRAWN BY:	CHECKED BY:	REQUESTED BY:
	MG/KR		

SCALE:	DATE:
1:125	27/4/2005

SHEET NAME	Asbuilt
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Main Floor
Furniture Plan

PROJECT TITLE
904
Nutana Kiwanis
Maintenance

PROJECT NO.	SHEET
	REV. NO. 

Pre- Renovation Assessment

March 29, 2018

Client: City of Saskatoon
222 3rd Avenue N
Saskatoon, SK
S7K 0J5

Attention: Jason Kennon

File Number: B67PRC28H- Nutana Kiwanis Maintenance Office

Project: Nutana Kiwanis Maintenance Office – 2235 McEown Ave – Installation of Central Vacuum System

Evan Westad of Bersch Consulting Ltd. conducted a site visit on March 28, 2018, to the Maintenance Building at 2235 McEown Ave, Saskatoon, Saskatchewan. The purpose of the visit was to investigate and collect bulk samples to determine the presence/absence of asbestos. No bulk sample were collected. No suspect asbestos materials were identified within the area.

Site Observations and Information

The scope of the project involves the installation of a central vacuum system in the storage room on the northeast side of the building. The central vacuum will be mounted on the south wall. This wall is composed of wood framing with plywood sheeting on both sides. The wall cavity is empty as observed from several uncovered sections of the wall in the storage room. The vacuum will be plumbed into the shop area through the plywood wall of the storage room. The vacuum will be exhausted overhead to the exterior east wall where an existing vent in the exterior wall will be used to exhaust the unit outside.

Based on observations during the site visit, there is no asbestos concern regarding the proposed renovations within the maintenance shop.

If any questions arise on the results of the attached information, please contact Evan Westad at (306) 978-6665. Thank you for this opportunity of service.

Sincerely,



Evan Westad
Bersch Consulting Ltd.
File No.: B67PRC28H- Nutana Kiwanis Maintenance Office

Appendix I

Site Photos



Figure 1- Wall adjoining storage room and maintenance shop where vacuum is to be mounted.



Figure 2- Exterior wall of storage room showing existing vent to be used.



Figure 3- Wall adjoining maintenance shop and storage room.