

APPENDIX C

SEISMIC SCREENING FORM

SEISMIC SCREENING INVENTORY FORM

89 Prideaux Parks and Rec Workshop
City of Nanaimo Building No. B105

Comments

- Load bearing masonry walls.
- Glulam and dimension lumber beams
- Wood joists and shiplap sheathing
- 1 storey (14^{FT})
- stiff soil

SEISMIC SCREENING FORM			p. 1 of 2	ITEM No.: B 105
Address: 89 Prudeaux		Postal Code: V9R 2M6		Bldg. Name: Parks Workshop
No. of storeys: 1	Total Floor Area: 144 m ²	Year Built: c. 1970	Design NBC: 1965	
Primary use (see list on p. 2): Manufacturing			Heritage Designation: N/A	
Inspector: GK	Date: April 16 2012	Checked by:		
See attached		See attached		
Sketch		Photo		

TYPE OF STRUCTURE (circle appropriate descriptors) see 4.3.2			BM	BUILDING IRREGULARITIES (circle appropriate descriptors) see 4.3.3	
Wood	WLF WPB	Wood Light Frame Wood, Post and Beam	90	1. Vertical Irregularity	Abrupt changes in plan dimensions over height (e.g. setback or building on hill)
Steel	SMF SBF SLF SCW SIW	Steel Moment Frame Steel Braced Frame Steel Light Frame Steel Frame with Concrete Shear Walls Steel Frame with Infill Masonry Shear Walls	90	2. Horizontal Irregularity (Torsion)	Irregular building shapes such as "L", "V", "E", "T", eccentric stiffness in plan (e.g. shear wall on only one side of building)
Concrete	CMF CSW CIW	Concrete Moment Frame Concrete Shear Walls Concrete Frame with Infill Masonry Shear Walls	85	3. Short Concrete Columns	Short columns restrained by partial storey height walls (structural or infill) or deep spandrels
	PCF PCW	Precast Concrete Frame Precast Concrete Walls		4. Soft Storey	Severe reduction of stiffness caused by discontinuous shear walls, openings, etc.
Masonry	<u>RML</u>	Reinforced Masonry Bearing Walls with Wood or Metal Deck Floors or Roofs	90	5. Pounding	Separation between buildings less than 20 Z _v x no. of storeys (in mm)
	RMC	Reinforced Masonry Bearing Walls with Concrete Diaphragms		6. Major Modifications	Any change in function, use or addition which results in significant increase in loading or weight
	URM	Unreinforced Masonry Bearing Wall Building		7. Deterioration	Structural elements are damaged, poor condition of building is apparent (corroded reinforcement or steel, rotted wood, poor concrete or masonry)
				8. <u>None</u>	None of the Irregularities listed above is present.

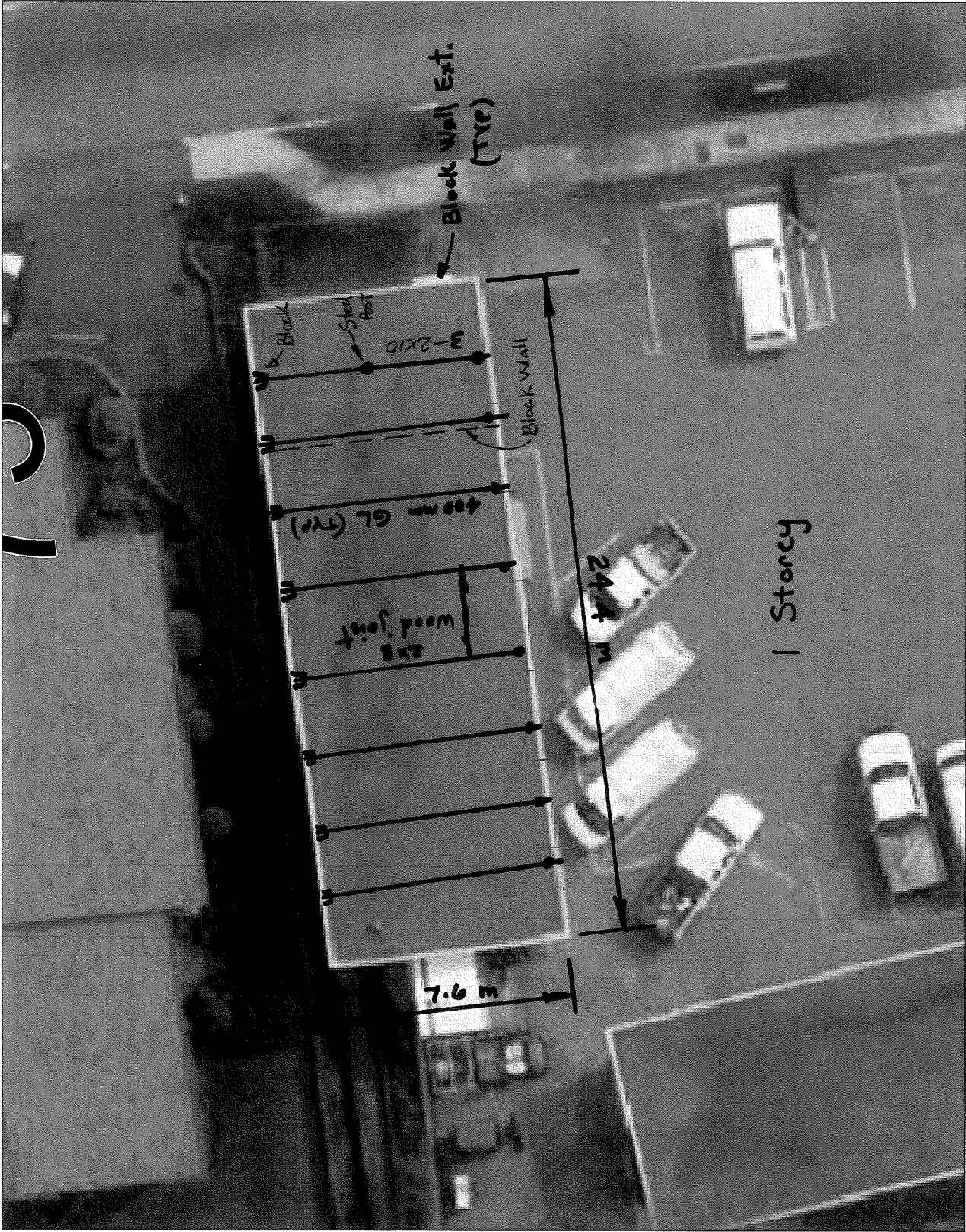
NON - STRUCTURAL HAZARDS (Circle appropriate descriptors) see 4.3.4

F₁ Falling Hazards to Life:
 Exterior: Masonry chimneys, parapets, veneer or stone / precast panels, non-safety glass, or canopies over exits and walkways
 Interior: Heavy components; masonry partitions; non-safety glass in egress areas; storage shelves which may collapse onto areas of human occupancy

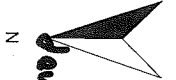
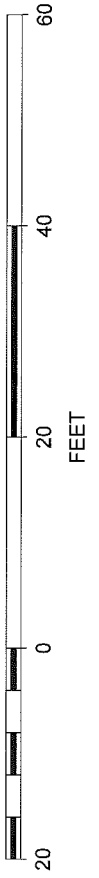
F₂ Hazards to Continuous Operation of Special Buildings: Equipment or lifelines required for continuous operation of special facilities. The owner or authority should provide a list of critical items needed for continuing operations.

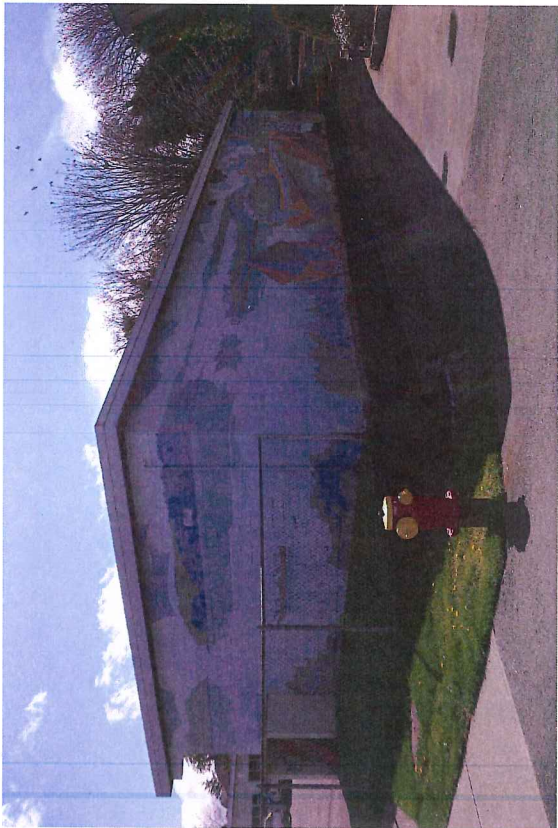
SEISMIC SCREENING FORM											p. 2 of 2	ITEM No.: B105																								
SEISMIC PRIORITY INDEX: Circle appropriate value and enter each result on right side. Use asterisk (*) with uncertain values																																				
A	Seismicity	Design NBC	Effective Seismic Zone (Z_V , or $Z_V + 1$ if $Z_a > Z_V$)						A = 1.3																											
			2	3	4	5	6																													
		Pre - 65 65 - 84 Post - 85	1.0 1.0 1.0	1.5 1.0 1.0	2.0 1.3 1.0	3.0 1.5 1.0	4.0 2.0 1.0																													
B	Soil Conditions	Design NBC	Soil Category					B = 1																												
			Rock or Stiff Soil	Stiff Soil > 50 m	Soft Soil > 15 m	Very Soft or Liquefiable Soil	Unknown Soil																													
		Pre - 65 Post - 65	1.0 1.0	1.3 1.0	1.5 1.0	2.0 1.5	1.5 1.5																													
C	Type of Structure <small>(BM = Benchmark year, see p.1)</small>	Design NBC	Construction Type and Symbol (see p. 1)										C = 2.5																							
			Wood		Steel			Concrete		Precast		Masonry Infill			Masonry																					
			WLF	WPB	SLF	SMF	SBF	SCW	CMF	CSW	PCF	PCW			SIW, CIW	RML, RMC	URM																			
		Pre - 70 70 - BM Post - BM	1.2 1.2 1.0	2.0 2.0 1.0	1.0 1.0 1.0	1.2 1.2 1.0	1.5 1.5 1.0	2.0 1.5 1.0	2.5 1.5 1.0	2.0 1.5 1.0	2.5 1.8 1.0	2.0 1.5 1.0			3.0 2.0 1.0	2.5 1.5 1.0	3.5 3.5 -																			
D	Building Irregularities	Design NBC	1. Vertical	2. Horiz.	3. Short Concrete Columns	4. Soft Storey	5. Pounding	6. Modification	7. Deterioration	8. None	D = product of circled Numbers (Max of 4.0) = 1																									
		Pre - 70 Post - 70	1.3 1.3	1.5 1.5	1.5 1.5	2.0 1.5	1.3 1.3	1.3 1.0	1.3 1.3	1.0 1.0																										
E	Building Importance	Design NBC	Low Occupancy N < 10	Normal Occupancy N = 10 - 300	School, or High Occupancy N = 301 - 3000	Post Disaster, or Very High Occup. N > 3000	Special Operational Requirements		E = .7																											
		Pre - 70 Post - 70	0.7 0.7	1.0 1.0	1.5 1.2	2.0 1.5	3.0 2.0																													
<p>N = Occupied Area x Occupancy Density x Duration Factor* = ... 1.99 ... x ... 1 ... x ... 5 ... = 7</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Primary Use:</td> <td style="width: 20%;">Occupancy Density Persons / m²</td> <td style="width: 20%;">Average Weekly Hours of Human Occupancy</td> <td style="width: 30%;">* Duration Factor is equal to the average weekly hours of human occupancy divided by 100, not greater than 1.0</td> </tr> <tr> <td>Assembly</td> <td style="text-align: center;">1</td> <td style="text-align: center;">5 - 50</td> <td></td> </tr> <tr> <td>Mercantile, Personal service</td> <td style="text-align: center;">0.2</td> <td style="text-align: center;">50 - 80</td> <td></td> </tr> <tr> <td>Offices, Institutional, Manufacturing</td> <td style="text-align: center;">0.1</td> <td style="text-align: center;">50 - 60</td> <td></td> </tr> <tr> <td>Residential</td> <td style="text-align: center;">0.05</td> <td style="text-align: center;">100</td> <td></td> </tr> <tr> <td>Storage</td> <td style="text-align: center;">0.01 - 0.02</td> <td style="text-align: center;">100</td> <td></td> </tr> </table>													Primary Use:	Occupancy Density Persons / m ²	Average Weekly Hours of Human Occupancy	* Duration Factor is equal to the average weekly hours of human occupancy divided by 100, not greater than 1.0	Assembly	1	5 - 50		Mercantile, Personal service	0.2	50 - 80		Offices, Institutional, Manufacturing	0.1	50 - 60		Residential	0.05	100		Storage	0.01 - 0.02	100	
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Storage	0.01 - 0.02	100																																		
SI	STRUCTURAL INDEX = A · B · C · D · E =										SI = 2.3																									
F	NON - STRUCTURAL HAZARDS		Description (see p. 1)				None	Yes	Yes *	F = max (F ₁ , F ₂) = 1																										
	F ₁	Falling Hazards to Life					Pre - 70 NBC	1.0	3.0				6.0																							
	F ₂	Hazards to Vital Operations					Post - 70 NBC	1.0	2.0				3.0																							
* applies only if one or more of the following descriptors on page 1 are circled: SMF, CMF, soft storey, torsion																																				
NSI	NON - STRUCTURAL INDEX = B · E · F =										NSI = .7																									
SPI	SEISMIC PRIORITY INDEX = SI + NSI =										SPI = 3																									
Comments: Low Priority.																																				

SEISMIC SCREENING INVENTORY FORM Attach asterisks (*) to uncertain values						Page No.:
Item No.	Address and/or Name of Building	SI Structural Index	NSI Non- Structural Index	SPI Seismic Priority Index	Priority for Evaluation	Comments



SCALE 1 : 219

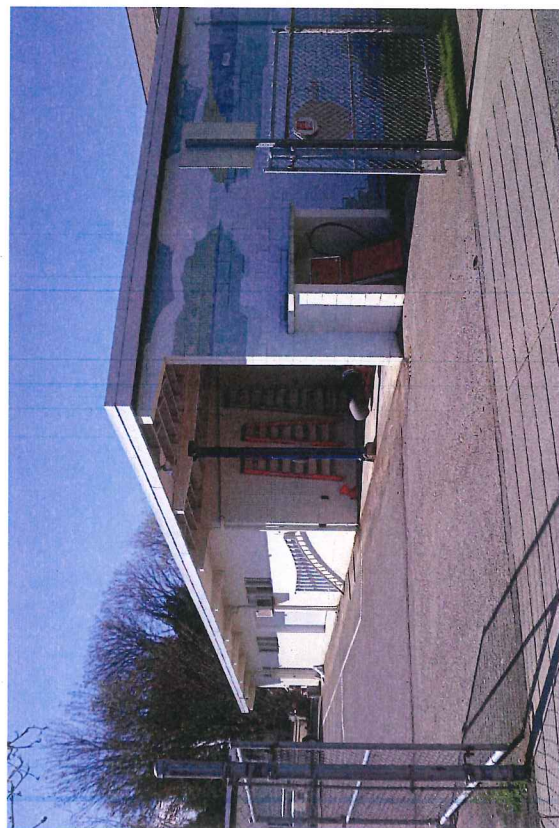




NORTHEAST VIEW



STRESS FRACTURES IN OPEN BAY-- EAST WALL



SOUTHEAST VIEW

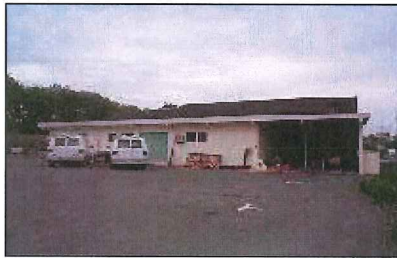


SOUTHWEST VIEW



South View

**APPENDIX "G"
BUILDING COST ANALYSIS
CITY OF NANAIMO
PARKS MAINTENANCE WORKSHOP
89 PRIDEAUX STREET**



APPRAISAL BUILDING #: B105
GROSS FLOOR AREA: 1,544 FT²

CLASS: C

EFFECTIVE DATE: FEBRUARY 8, 2008
YEAR(S) BUILT: CIRCA 1970

BELOW GRADE ASSETS	CRN	CRNLD
EXCAVATION, BACKFILL AND SITE PREPARATION:	2,500	1,200
FOUNDATIONS:	6,800	3,200
ARCHITECTURAL OR ENGINEERING FEES:	700	400
TOTAL BELOW GRADE ASSETS:	10,000	4,800

ABOVE GRADE ASSETS		
BUILDING FRAMING:	3,700	1,800
FLOOR STRUCTURE:	8,300	4,000
INTERIOR CONSTRUCTION, MEZZANINES, STAIRS:	32,100	15,200
FLOOR AND CEILING FINISHES:	2,700	1,300
PLUMBING SYSTEM, FIXTURES, AND SEWERAGE:	-	-
HEATING, VENTILATION AND AIR CONDITIONING:	4,100	1,900
ELECTRICAL AND LIGHTING:	2,800	1,300
EXTERIOR WALL CONSTRUCTION, BALCONIES:	33,500	15,900
ROOF STRUCTURE, ROOF COVERING, AND CANOPIES:	6,600	3,200
FIRE PROTECTION:	-	-
ELEVATORS:	-	-
ADDITIONAL CONSTRUCTION:	-	-
ARCHITECTURAL OR ENGINEERING FEES:	6,800	3,200
TOTAL ABOVE GRADE ASSETS:	100,600	47,800

TOTAL BELOW AND ABOVE GRADE ASSETS:	110,600	52,600
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BUILDING CODES & BYLAWS		
PARKING SPACES	MEETS CODE	-
SPECIAL NEEDS ACCESS	MEETS CODE	-
FIRE PROTECTION	MEETS CODE	-
TOTAL BUILDING CODES & BYLAWS:		-

TOTAL YARD IMPROVEMENTS:	4,200	4,200
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TOTAL CRN COST:	114,800	56,800
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FOUNDATIONS:	REINFORCED CONCRETE FOUNDATIONS
FRAMING:	LOAD BEARING MASONRY WALLS & STEEL COLUMNS
FLOOR STRUCTURE:	REINFORCED CONCRETE SLAB ON GRADE
INTERIOR CONSTRUCTION:	PLYWOOD ON WOOD FRAME WALLS & CEILING
PLUMBING SYSTEM:	NIL
H.V.A.C.:	ELECTRIC FORCED AIR
ELECTRICAL AND LIGHTING:	STANDARD FIXTURES & TYPICAL SERVICE FOR OCCUPANCY
EXTERIOR WALLS:	PAINTED CONCRETE BLOCK
ROOF:	WOOD JOIST & WOOD DECK WITH BUILT-UP ROOFING
FIRE PROTECTION:	NIL
ELEVATORS:	NIL
ADDITIONAL CONSTRUCTION:	NIL