Appendix D:	Seismic -	<b>Initial</b>	<b>Evaluation</b>	<b>Procedure</b>
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## Initial Evaluation Procedure (IEP) Assessment - Completed for WDC

Page 1

WARNING!! This initial evaluation has been carried out solely as an initial seismic assessment of the building following the procedure set out in the New Zealand Society for Earthquake Engineering document "Assessment and Improvement of the Structural Performance of Buildings in Earthquakes, June 2006". This spreadsheet must be read in conjunction with the limitations set out in the accompanying report, and should not be relied on by any party for any other purpose. Detailed inspections and engineering calculations, or engineering judgements based on them, have not been undertaken, and these may lead to a different result or seismic grade.

Street Number & Name:		Job No.:	851847
AKA:		By:	DRV
Name of building:	Whakatane Commercial Wharf - 1919 section	Date:	12/12/2014
City:	Whakatane	Revision No.:	1

#### Table IEP-1 **Initial Evaluation Procedure Step 1**

## Step 1 - General Information

1.1 Photos (attach sufficient to describe building)



NOTE: THERE ARE MORE PHOTOS ON PAGE 1a ATTACHED

1.2 Sketches (plans etc, show items of interest) 0 0 Raking beams at nominal 4.8m centres TYPICAL SECTION

# NOTE: THERE ARE MORE SKETCHES ON PAGE 1a ATTACHED

1.4 Note information source:	S	
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Drawings (note type)

Visual Inspection of Exterior

Visual Inspection of Interior

Specifications Geotechnical Reports Other (list)



Non-invasive condition survey on 5 November 2014 by Tonkin & Taylor. 2009 condition survey report by Opus.

Street Number	& Name:			Job No.:	851847	
NKA:	. "	10.1.4	A 1'	By:	DRV	
lame of buildi		Whakatane Commercial Wharf - 191 Whakatane	a section	Date:	12/12/2014 1	
ity: able IEP-2		ation Procedure Step 2		Revision No.:	1	
Step 2 - Dete	rmination of <i>(%NB</i>	S) <sub>b</sub>				
	5) for particular building nominal (%NBS) = (		<u>Longitudina</u>	1	Transverse	
	itrengthening Data Ilding is known to have t	peen strengthened in this direction	Г		Г	
If strength	nened, enter percentage	of code the building has been strengthened	to N/A		N/A	
b) Year of De	sign/Strengthening, B	uilding Type and Seismic Zone				
			Pre 1935 <b>⊙</b> 1935-1965 <b>⊘</b>		Pre 1935 (6)	
			1965-1976 ()	l l	1935-1965 () 1965-1976 ()	
			1976-1984 🔾		1976-1984 ()	
			1984-1992 ()		1984-1992 Q	
			1992-2004 ()	1	1992-2004 O	
			2004-2011 Q	<b>I</b>	2004-2011 ()	
			Post Aug 2011 O	Po	ost Aug 2011 O	
		Building Type:	Public Buildings	<u></u>	Public Buildings	
c) Soil Type		Seismic Zone:	1			
	From NZS1170.5:2004 From NZS4203:1992,		C Shallow Soil		C Shallow Soil	
	(for 1992 to 2004 and					- 4
d) Estimate P Comment:	•		h <sub>n</sub> = 2.5		2.5 m	
		m in the longitudinal direction is moment	A <sub>c</sub> = 1.00	1	1.00 m <sup>2</sup>	!
		are braced transversely.	1100	<b>-</b>	1.00	
Moment Re	esisting Concrete Frame	es: $T = \max\{0.09h_0^{0.75}, 0.4\}$	•	ŀ	0	
	esisting Steel Frames:	$T = \max\{0.14h_0^{0.75}, 0.4\}$	0		o	
	lly Braced Steel Frames rame Structures:	$T = \max\{0.08h_n^{0.75}, 0.4\}$ $T = \max\{0.06h_n^{0.75}, 0.4\}$	0		0	
	Shear Walls	$T = \max\{0.09h_n^{0.75}/A_0^{0.5}, 0.4\}$	0		0	
Masonry S	hear Walls:	<i>T</i> ≤ 0.4sec	0		0	
User Defin	ed (input Period):		٥		•	
	where n <sub>n</sub> = height uppermost seismid	in metres from the base of the structure to the weight or mass.	T: 0.40		0.10	
e) Factor A:	Strengthening factor detern if not strengthened)	nined using result from (a) above (set to 1.0	Factor A: 1.00	]	1.00	
f) Factor B:	Determined from NZSEE G results (a) to (e) above	uidelines Figure 3A.1 using	Factor B: 0.04	]	0.04	
g) Factor C:		dings designed between 1976-84 Factor 1.0.	Factor C: 1.00	]	1.00	
h) Factor D:	For buildings designed prior where Factor D may be take	r to 1935 Factor D = 0.8 except for Wellington en as 1, otherwise take as 1.0.	Factor D: 0.80	]	0.80	
	AxBxCxD	,	%NBS) <sub>nom</sub> 3%	,	3%	

Street Number & Name:				lob No.	054047
4 L/ A .		······	······	Job No.:	851847 DRV
AKA:	18/h-14 C	>	4040tion	By: Date:	***************************************
lame of building: ity:	Whakatane	Commercial Wharf	- 1313 Section	Revision No.:	12/12/2014 1
		edure Step 2 co	ntinued		
2 Near Fault Scaling Factor	, Factor E	·			
If <i>T</i> ≤ 1.5sec, Factor E =	1		<u>Longitue</u>	linal	Transverse
a) Near Fault Factor, N(T,D)			N(T,D): 1		1
(from NZS1170.5:2004, CI 3.1.6)			_ ,		
b) Factor E		= 1/N(T,D)	Factor E: 1.0	)	1.00
2.3 Hazard Scaling Factor, Fa a) Hazard Factor, Z, for site	actor F				
Locati	ion: Whakatane	<u>-</u>			
	Z = 0.3	(from NZS1170.5:2004	. Table 3.3)		
$Z_1$	1.175	···········	actor from accompanying Figure	3,5(b))	
	004 = 0.3	(from NZS1170.5:2004			
b) Factor F					
For 1992	=	1/Z Z <sub>1992</sub> /Z			
For 1992-2011 For post 2011	=	Z <sub>1992</sub> /Z Z <sub>2004</sub> /Z			
1 01 9001 2011		- 2004; <b>-</b>	Factor F: 3.3	3	3.33
4 Betwee Berled Ovellage Fe	-4 F4 O				
4.4 Return Period Scaling Fa. a) Design Importance Level, I					¥
(Set to 1 if not known. For buildings	designed prior to 1965 and		1		есиче
public building set to 1.25. For build public building set to 1.33 for Zone A			I = <u>1.2</u>	5	1.25
b) Design Risk Factor, R <sub>o</sub>					4
(set to 1.0 if other than 1976-2004,	or not known)		1		
			R <sub>o</sub> = 1		1
c) Return Period Factor, R (from NZS1170.0:2004 Building Im	and the second state of the second			03 04 0	
		Chacae Important	$\sim 1$ $\sim 1$ $\sim 1$ $\sim 1$ $\sim 1$		1 02 03 04
(ITOIN 14231170.0.2004 Building III	iportance Levely	Choose Important	<u>ce Level</u> O1 O2 6		
(NOTH N251170.0.2004 Building III	iputtance Levely	<u>Choose Importand</u>	R = 1.3		1.3
d) Factor G	=	<u>Choose Importand</u> IR₀/R			
				3	
d) Factor G 2.5 Ductility Scaling Factor, F	= Factor H	IR <sub>o</sub> /R	R = 1.5	3	1.3
d) Factor G 5 Ductility Scaling Factor, F a) Available Displacement Du	= Factor H	IR <sub>o</sub> /R	R = 1.5	6	0.96
d) Factor G .5 Ductility Scaling Factor, F	= Factor H	IR <sub>o</sub> /R	R = 1.5	6	1.3
d) Factor G 5 Ductility Scaling Factor, F a) Available Displacement Du	= Factor H	IR <sub>o</sub> /R	$R = 1.5$ Factor G: 0.9 $\mu = 1.2$	<u>6</u>	0.96
d) Factor G 5 Ductility Scaling Factor, F a) Available Displacement Du Comment:	= Factor H Ictility Within Existing For pre 1976 (me	IR₀/R g Structure aximum of 2)	$R = 1.5$ Factor G: 0.9 $\mu = 1.2$ $k_{\mu}$ = 1.1	5	1.3  0.96  1.25 $k_{\mu}$ 1.04
d) Factor G 5 Ductility Scaling Factor, F a) Available Displacement Du Comment:	= Factor H Ictility Within Existing	IR₀/R g Structure aximum of 2)	Factor G: 0.9 $\mu = 1.2$ $= 1.1$ $= 1.1$	6 5	1.3  0.96  1.25
d) Factor G  .5 Ductility Scaling Factor, F a) Available Displacement Du  Comment:	= Factor H Inditity Within Existing For pre 1976 (m. For 1976 onward	IR <sub>o</sub> /R  g Structure  aximum of 2)	Factor G: 0.9 $\mu = 1.2$ $= 1.1$ $= 1.1$ Factor H: 1.1	6 5	1.3  0.96  1.25 $k_{\mu}$ 1.04
d) Factor G  .5 Ductility Scaling Factor, F a) Available Displacement Du Comment:  b) Factor H  (where kμ is NZS1170.5:2004 Inela	For pre 1976 (me For 1976 onward	IR <sub>o</sub> /R  g Structure  aximum of 2) ds  or, from accompanying Table	Factor G: 0.9 $\mu = 1.2$ $= 1.1$ $= 1.1$ Factor H: 1.1	6 5	1.3  0.96  1.25
d) Factor G  .5 Ductility Scaling Factor, F a) Available Displacement Du Comment:  b) Factor H  (where kμ is NZS1170.5:2004 Inela	For pre 1976 (me For 1976 onward	IR <sub>o</sub> /R  g Structure  aximum of 2) ds  or, from accompanying Table	Factor G: 0.9 $\mu = 1.2$ $= 1.1$ $= 1.1$ Factor H: 1.1	6 5	1.3  0.96  1.25 $k_{\mu}$ 1.04  1.04
d) Factor G  .5 Ductility Scaling Factor, F a) Available Displacement Du Comment:  b) Factor H  (where kμ is NZS1170.5:2004 Inela 6 Structural Performance Faca) Structural Performance Faca	Factor H Inctility Within Existing For pre 1976 (may be presented in 1976 onward astic Spectrum Scaling Factor actor, S p	IR <sub>o</sub> /R  g Structure  aximum of 2) ds  or, from accompanying Table	Factor G: 0.9 $\mu = 1.2$ $= 1.1$ $= 1.1$ Factor H: 1.1	5 4 4	1.3  0.96  1.25 $k_{\mu}$ 1.04  1.04
d) Factor G  .5 Ductility Scaling Factor, F a) Available Displacement Du Comment:  b) Factor H  (where kµ is NZS1170.5:2004 Inela .6 Structural Performance Sca) Structural Performance Fac	Factor H Inctility Within Existing For pre 1976 (may be presented in 1976 onward astic Spectrum Scaling Factor actor, S p	IR <sub>o</sub> /R  g Structure  aximum of 2) ds  or, from accompanying Table	Factor G: 0.9 $\mu = 1.2$ $= 1.1$ $= 1.1$ Factor H: 1.1	5 4 4	1.3  0.96  1.25 $k_{\mu}$ 1.04  1.04
d) Factor G  .5 Ductility Scaling Factor, F a) Available Displacement Du Comment:  b) Factor H  (where kµ is NZS1170.5:2004 Inela .6 Structural Performance Sa (from accompanying Figure 3.4) Tick if light timber-framed co	Factor H Inctility Within Existing For pre 1976 (makes for 1976 onward astic Spectrum Scaling Factor calling Factor, Factor ctor, S p	IR <sub>o</sub> /R  g Structure  aximum of 2) ds or, from accompanying Table or I	Factor G: 0.9 $\mu = 1.2$ $= 1.1$ $= 1.1$ Factor H: 1.1 $S_p = 0.9$	5 	1.3  0.96  1.25 $k_{\mu}$ 1.04  1.04  1.04
d) Factor G  .5 Ductility Scaling Factor, F a) Available Displacement Du Comment:  b) Factor H  (where kµ is NZS1170.5:2004 Inela .6 Structural Performance Sca) Structural Performance Fac	Factor H Inctility Within Existing For pre 1976 (make) For 1976 onward astic Spectrum Scaling Factor calling Factor, Factor tor, S p Instruction in this direct	IR <sub>o</sub> /R  g Structure  aximum of 2) ds or, from accompanying Table or I  ion  = 1/S <sub>p</sub>	Factor G: 0.9 $\mu = 1.2$ $\mu = 1.2$ Factor H: 1.1 $\mu = 1.2$ Factor H: 1.1 $\mu = 1.2$	5 	1.3  0.96  1.25 $k_{\mu}$ 1.04  1.04
d) Factor G  2.5 Ductility Scaling Factor, F a) Available Displacement Du Comment:  b) Factor H  (where kµ is NZS1170.5:2004 Inela  6 Structural Performance Scan Structural Performance Factor in the structural Performance Factor in the structural Performance Scan Structural Performance Scan Structural Performance Scan Structural Performance Scan Note Factor B values for 1992 to 2	Factor H Intercept of the second seco	IR <sub>o</sub> /R  g Structure  aximum of 2) ds or, from accompanying Table or I  ion  = 1/S <sub>p</sub>	Factor G: 0.9 $\mu = 1.2$ $\mu = 1.2$ Factor H: 1.1 $\mu = 1.2$ Factor H: 1.1 $\mu = 1.2$	5 	1.3  0.96  1.25 $k_{\mu}$ 1.04  1.04  1.04
d) Factor G 2.5 Ductility Scaling Factor, F a) Available Displacement Du Comment:  b) Factor H  (where kµ is NZS1170.5:2004 Inela 2.6 Structural Performance Fa (from accompanying Figure 3.4) Tick if light timber-framed cor	Factor H Intercept of the second sector of the second sector of the second sector, Factor of the sector, S point of the sector o	IR <sub>o</sub> /R  g Structure  aximum of 2) ds or, from accompanying Table or I  ion  = 1/S <sub>p</sub>	Factor G: 0.9 $\mu = 1.2$ $\mu = 1.2$ Factor H: 1.1 $\mu = 1.2$ Factor H: 1.1 $\mu = 1.2$	5  4 4 4 	1.3  0.96  1.25  k <sub>µ</sub> 1.04 1 1.04

(************************************		Job No.:	851847
	1010	By:	DRV
Whakatane Commercial Wharf - Whakatane	1919 section	Date: Revision No.:	12/12/2014 1
rmance Achievement Ratio (PAR)			
Effect on Structural Performance (Choose a value - Do not interpolate)			Facto
e O Severe O	Significant	<b>⊙</b> Insignificant	Factor A 1.0
0	Significant	<b>⊙</b> Insignificant	Factor B 1.0
0	Significant	Insignificant	Factor C 1.0
uilding has a frame structure. For stiff bu			]
			J
			<u>'</u>
ent of Floors not within 20% of Storey Heigh	ot 0 0.4 O	0.7 🔾 0.8	
Difference Effect			•••
Fa	actor D2 For Longitudir	al Direction: 1.0	
f Factor D2			
Height Difference > 4 Storey	3 "		
Tiogra Difference > 2 Storey.			<b></b>
			Factor D 1.0
ry, landslide threat, liquefaction etc as it affec	cts the structural performa	nce from a life-safety pers	spective
•	Significant	<ul><li>Insignificant</li></ul>	
ce O Severe O	ed to be confirmed during  ilding For ≤ 3 store  otherwis	<ul><li>Insignificant</li></ul>	
	(Choose a value - Do not interpolate)  e O Severe O  e O Severe O  arity.  e O Severe O  D = the lower of the two, or 1.0 if no pote.  uilding has a frame structure. For stiff buthe coefficient to the right of the value aport of Factor D1  Separation gnment of Floors within 20% of Storey Height of Factor D2  Height Difference > 4 Storey Height Difference 2 to 4 Storey Height Difference 2 to 4 Storey	Effect on Structural Performance (Choose a value - Do not interpolate)  e O Severe O Significent  e O Severe O Significent  o Significent  o Significent  o Significent  o Severe O Significent  o Significent  o Significent  o Severe O Significent  o Significent  o Severe O Significent  o Separation O Sepondo O Sep	Effect on Structural Performance (Choose a value - Do not interpolate)  e O Severe O Significant O Insignificant  e O Severe O Significant O Insignificant  e O Severe O Significant O Insignificant  be O Severe O Significant O Insignificant  e O Severe O Significant O Insignificant  be O Severe O Significant O Insignificant  consequences are considered or pounding, or consequences are considered or pounding has a frame structure. For stiff buildings (eg shear walls), the effect of pounding the coefficient to the right of the value applicable to frame buildings.    Consequence

Street Number & Name:				b No.:	851847	
AKA: Name of building: City:	Whakatane Commercial Wharf - 1 Whakatane	919 section	By Da Re		DRV 12/12/2014 1	
Table IEP-3 Initial Ev	valuation Procedure Step 3					
	formance Achievement Ratio (PAR)					
Critical Structural Weakness	Effect on Structural Performance (Choose a value - Do not Interpolate)				i	actors
3.1 Plan Irregularity  Effect on Structural Perform  Unequal pile lengths will indu	ance O Severe Cuce some torsional response, but not considered	o S <i>ignificant</i> d to be a significant p	plan irregulari	<b>⊙</b> <i>Insignificent</i> ty.	Factor A	1.0
3.2 Vertical Irregularity  Effect on Structural Perform  No evidence of vertical irreg	unoc =	Significant		<b>⊙</b> Insignificant	Factor B	1.0
3.3 Short Columns  Effect on Structural Perform  No evidence of short column	unoo -	Significant		<b>⊙</b> Insignificant	Factor C	1.0
3.4 Pounding Potential (Estimate D1 and D2 and se	et D = the lower of the two, or 1.0 if no potent	ial for pounding, o	r consequen	ces are conside	ered to be minin	nal)
a) Factor D1: - Pounding Effe	ct					
Note: Values given assume the	ct building has a frame structure. For stiff buil g the coefficient to the right of the value appl	dings (eg shear wai icable to frame buil	lls), the effectidings.	ct of pounding		
Note: Values given assume the	building has a frame structure. For stiff buil y the coefficient to the right of the value appi	dings (eg shear wai icable to frame buil actor D1 For Trans	ildings.	P	]	
Note: Values given assume the may be reduced by taking	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to the coefficient to the right of the coefficient to the right of the coefficient to the coefficient to the right of the coefficient to the coefficient	actor D1 For Trans Severe S 0 <sep<.005h .005<="" td=""><td>sverse Directions of the Significant Section 15 (Sept.01H)</td><td>ction: 1.0 Insignificant Sep&gt;.01H</td><td></td><td></td></sep<.005h>	sverse Directions of the Significant Section 15 (Sept.01H)	ction: 1.0 Insignificant Sep>.01H		
Note: Values given assume the may be reduced by taking  Table for Selection	building has a frame structure. For stiff build g the coefficient to the right of the value appl Fa n of Factor D1 Separation Alignment of Floors within 20% of Storey Height	actor D1 For Trans Severe S 0 <sep<.005h .005<="" td=""><td>ildings. sverse Dire</td><td>ction: 1.0</td><td></td><td></td></sep<.005h>	ildings. sverse Dire	ction: 1.0		
Note: Values given assume the may be reduced by taking  Table for Selection	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to the coefficient to the right of the coefficient to the right of the coefficient to the coefficient to the right of the coefficient to the coefficient	actor D1 For Trans Severe S 0 <sep<.005h .005<="" td=""><td>sverse Directions of the Significant Sept.01H</td><td>ction: 1.0 Insignificant Sep&gt;.01H ② 1</td><td></td><td></td></sep<.005h>	sverse Directions of the Significant Sept.01H	ction: 1.0 Insignificant Sep>.01H ② 1		
Note: Values given assume the may be reduced by taking  Table for Selection	building has a frame structure. For stiff build g the coefficient to the right of the value appl Fa n of Factor D1 Separation Alignment of Floors within 20% of Storey Height	actor D1 For Trans Severe S 0 <sep<.005h .005<="" td=""><td>sverse Directions of the Significant Sept.01H</td><td>ction: 1.0 Insignificant Sep&gt;.01H ② 1</td><td></td><td></td></sep<.005h>	sverse Directions of the Significant Sept.01H	ction: 1.0 Insignificant Sep>.01H ② 1		
Note: Values given assume the may be reduced by taking  Table for Selection Align No buildings nearby.	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to Factor D1  Separation Alignment of Floors within 20% of Storey Height to Difference Effect	actor D1 For Trans Severe S 0 <sep<.005h .005<="" td=""><td>sverse Directions of the state of the state</td><td>ction: 1.0 Insignificant Sep&gt;.01H ② 1</td><td>_</td><td></td></sep<.005h>	sverse Directions of the state	ction: 1.0 Insignificant Sep>.01H ② 1	_	
Note: Values given assume the may be reduced by taking  Table for Selection Align No buildings nearby.	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to Factor D1  Separation Alignment of Floors within 20% of Storey Height ment of Floors not within 20% of Storey Height to Difference Effect	actor D1 For Trans Severe S 0 <sep<.005h .005="" 0.4="" 0.7="" actor="" d2="" for="" q="" s<="" severe="" td="" trans=""><td>sverse Directions of the state of the state</td><td>ction: 1.0 nsignificant Sep&gt;.01H ② 1</td><td>_</td><td></td></sep<.005h>	sverse Directions of the state	ction: 1.0 nsignificant Sep>.01H ② 1	_	
Note: Values given assume the may be reduced by taking  Table for Selection  Align  No buildings nearby.  b) Factor D2: - Heigh	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to the coefficient to the right of Factor D1  Separation Alignment of Floors within 20% of Storey Height of Floors not within 20% of Storey Height to Difference Effect  Factor D2  Height Difference > 4 Storeys	Actor D1 For Trans   Severe	sverse Direction of the state o	ction: 1.0 Insignificant Sep>.01H ② 1  O 0.8  ction: 1.0 Insignificant Sep>.01H O 1	_	
Note: Values given assume the may be reduced by taking  Table for Selection  Align  No buildings nearby.  b) Factor D2: - Heigh	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to Factor D1  Separation Alignment of Floors within 20% of Storey Height to The comment of Floors not within 20% of Storey Height to The comment of Floors of Floors Total The comment of Floors Total The coefficient to the right of the value applied Total The coefficient to the right of Floors Total The coefficient to the right of the value applied Total The coefficient to the right of Floors Total The coefficient to the right of the value applied Total The coefficient to the right of Floors Total The coefficient to the right of Total The rig	actor D1 For Trans   Severe	sverse Directions of the state	ction: 1.0 Insignificant Sep>.01H ② 1  O 0.8  ction: 1.0 Insignificant Sep>.01H	_	
Note: Values given assume the may be reduced by taking  Table for Selection  Align  No buildings nearby.  b) Factor D2: - Heigh	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to the coefficient to the right of Factor D1  Separation Alignment of Floors within 20% of Storey Height of Floors not within 20% of Storey Height to Difference Effect  Factor D2  Height Difference > 4 Storeys Height Difference 2 to 4 Storeys	Actor D1 For Trans   Severe	sverse Directions of the state	ction: 1.0 Insignificant Sep>.01H ② 1  O 0.8  ction: 1.0 Insignificant Sep>.01H O 1 O 1	_	
Note: Values given assume the may be reduced by taking  Table for Selection A Align No buildings nearby. b) Factor D2: - Heigh	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to the coefficient to the right of Factor D1  Separation Alignment of Floors within 20% of Storey Height of Floors not within 20% of Storey Height to Difference Effect  Factor D2  Height Difference > 4 Storeys Height Difference 2 to 4 Storeys	Actor D1 For Trans   Severe	sverse Directions of the state	ction: 1.0 Insignificant Sep>.01H ② 1  O 0.8  ction: 1.0 Insignificant Sep>.01H O 1 O 1	_	1.0
Note: Values given assume the may be reduced by taking  Table for Selection  Align  No buildings nearby.  b) Factor D2: - Heigh  Table for Selection  No buildings nearby.	building has a frame structure. For stiff building the coefficient to the right of the value applied to the coefficient to the right of the value applied to the coefficient to the right of Factor D1  Separation Alignment of Floors within 20% of Storey Height of Floors not within 20% of Storey Height to Difference Effect  Factor D2  Height Difference > 4 Storeys Height Difference 2 to 4 Storeys	Actor D1 For Trans   Severe	sverse Direc Significant   5 <sep<.01h 0.7="" 0.8="" 0.9="" 1<="" 5<sep<.01h="" direc="" o="" significant="" sverse="" td=""  =""><td>ction: 1.0 Insignificant Sep&gt;.01H ② 1 ② 0.8  ction: 1.0 Insignificant Sep&gt;.01H ③ 1 ③ 1 ④ 1 ④ 1</td><td>- - - Factor D</td><td>1.0</td></sep<.01h>	ction: 1.0 Insignificant Sep>.01H ② 1 ② 0.8  ction: 1.0 Insignificant Sep>.01H ③ 1 ③ 1 ④ 1 ④ 1	- - - Factor D	1.0
Note: Values given assume the may be reduced by taking  Table for Selection Align No buildings nearby. b) Factor D2: - Heigh  Table for Selection No buildings nearby.  No buildings nearby.	building has a frame structure. For stiff building the coefficient to the right of the value application of Factor D1  Separation Alignment of Floors within 20% of Storey Height ament of Floors not within 20% of Storey Height of Factor D2  Height Difference > 4 Storeys Height Difference 2 to 4 Storeys Height Difference < 2 Storeys	actor D1 For Trans Severe S 0 <sep<.005h .005="" 0.4="" 0.7="" 0<sep<.005h="" 1<="" actor="" d2="" for="" q="" s="" severe="" td="" trans=""><td>sverse Directions of the state of the state</td><td>ction: 1.0 Insignificant Sep&gt;.01H ② 1 ③ 0.8  ction: 1.0 Insignificant Sep&gt;.01H ③ 1 ④ 1 ④ 1 ④ 1 ⑤ 1 ⑤ 1 ⑤ 1 Ø 1 Ø 1 Ø 1 Ø 1 Ø 1 Ø Insignificant</td><td>Factor D</td><td>1.0</td></sep<.005h>	sverse Directions of the state	ction: 1.0 Insignificant Sep>.01H ② 1 ③ 0.8  ction: 1.0 Insignificant Sep>.01H ③ 1 ④ 1 ④ 1 ④ 1 ⑤ 1 ⑤ 1 ⑤ 1 Ø 1 Ø 1 Ø 1 Ø 1 Ø 1 Ø Insignificant	Factor D	1.0
Note: Values given assume the may be reduced by taking  Table for Selection  Align  No buildings nearby.  b) Factor D2: - Heigh  Table for Selection  No buildings nearby.  3.5 Site Characteristics - State  Effect on Structural Perform  This assessment assumes in Record rationale for company to the state of the state	building has a frame structure. For stiff building the coefficient to the right of the value applied the coefficient to the right of the value applied to Factor D1  Separation Alignment of Floors within 20% of Storey Height ament of Floors not within 20% of Storey Height Difference Effect  Height Difference > 4 Storeys Height Difference < 2 to 4 Storeys Height Difference < 2 Storeys  Height Difference < 2 Storeys  Analysis of liquefaction at the site. This would need the coefficient of the building the coefficient to the coefficient of the building the coefficient to the coefficient of the building the coefficient of th	actor D1 For Trans Severe S 0 <sep<.005h .005="" 0.4="" 0.7="" 0.<="" 0<sep<.005h="" 1="" actor="" d2="" for="" g="" q="" s="" severe="" td="" trans=""><td>sverse Directions of the storeys - Maxie rwise - Maxie significant of the storeys - Maxie rwise - Maxie significant of the storeys - Maxie rwise - Maxie rwise - Maxie significant of the storeys - Maxie rwise - Ma</td><td>ction: 1.0 Insignificant Sep&gt;.01H ② 1 ③ 0.8  ction: 1.0 Insignificant Sep&gt;.01H ③ 1 ④ 1 ④ 1 ④ 1 ⑤ 1 ⑤ 1 ⑤ 1 Ø 1 Ø 1 Ø 1 Ø 1 Ø 1 Ø Insignificant</td><td>Factor D</td><td></td></sep<.005h>	sverse Directions of the storeys - Maxie rwise - Maxie significant of the storeys - Maxie rwise - Maxie significant of the storeys - Maxie rwise - Maxie rwise - Maxie significant of the storeys - Maxie rwise - Ma	ction: 1.0 Insignificant Sep>.01H ② 1 ③ 0.8  ction: 1.0 Insignificant Sep>.01H ③ 1 ④ 1 ④ 1 ④ 1 ⑤ 1 ⑤ 1 ⑤ 1 Ø 1 Ø 1 Ø 1 Ø 1 Ø 1 Ø Insignificant	Factor D	

Initial Evaluation Proced	ure (IEP) Assessment - Comp	leted for WDC		Page 6
Street Number & Name:	N.B. J. J. A. S.	4040 cootion	Job No.: By:	851847 DRV
Name of building: City:	Whakatane Commercial Wharf - Whakatane	· 1919 Section	Date: Revision No.:	12/12/2014 1
	Iluation Procedure Steps 4, 5	and 6		•
Step 4 - Percentage of New I	Building Standard (%NBS)	Longitudin	al	Transverse
4.1 Assessed Baseline (%NB (from Table IEP - 1)	S) <sub>b</sub>	11%		10%
4.2 Performance Achievemer (from Table IEP - 2)	t Ratio (PAR)	1.00	]	1.00
4.3 PAR x Baseline (%NBS) b		10%		10%
4.4 Percentage New Building ( Use lower of two values f				10%
Step 5 - Potentially Earthqua	ike Prone? (Mark as appropriate)		%NBS ≤ 34	YES
Step 6 - Potentially Earthqua	tke Risk? (Mark as appropriate)		%NBS < 67	YES
Step 7 - Provisional Grading	for Seismic Risk based on IEP		Seismic Grade	E
Additional Comments (item:	s of note affecting IEP score)			
replace corroded reinforcing ba 2. it has been assumed that the designed to higher loadings that 3. Soil site class C has been assu	wharf was designed as a 'public building'. This i	ncreases the IEP score by a factor	of 1.25 (factor 'G') as	oublic buildings were
Evaluatio	on Confirmed by	Signatu	re	
	Geoff I			
Dalationahin hatus	***************************************	865 CPEng.	No	
Relationship between	en Grade and <i>%NBS</i> :		***************************************	·
Grade: % NBS:			O E 620	

Revision No.:

1

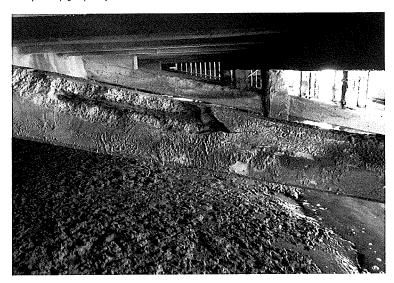
City:

# Initial Evaluation Procedure (IEP) Assessment - Completed for WDC Street Number & Name: AKA: Name of building: Whakatane Commercial Wharf - 1919 section Page 1a Street Number & No.: By: DRV Date: 12/12/2014

## Table IEP-1a Additional Photos and Sketches

Add any additional photographs, notes or sketches required below:

Note: print this page separately





## Initial Evaluation Procedure (IEP) Assessment - Completed for WDC

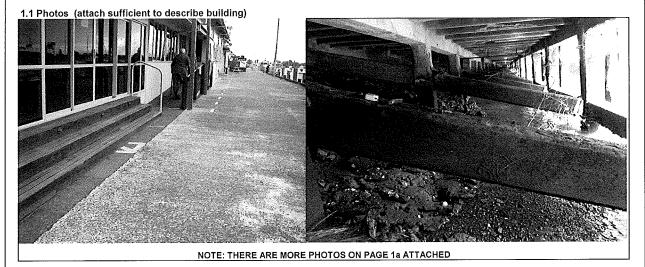
Page 1

WARNING!! This initial evaluation has been carried out solely as an initial seismic assessment of the building following the procedure set out in the New Zealand Society for Earthquake Engineering document "Assessment and Improvement of the Structural Performance of Buildings in Earthquakes, June 2006". This spreadsheet must be read in conjunction with the limitations set out in the accompanying report, and should not be relied on by any party for any other purpose. Detailed inspections and engineering calculations, or engineering judgements based on them, have not been undertaken, and these may lead to a different result or seismic grade.

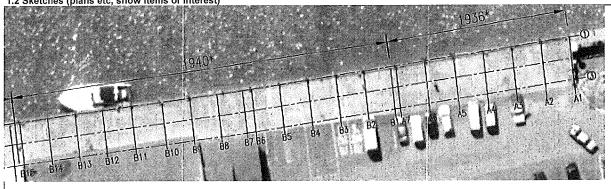
Street Number & Name:		Job No.:	851847
AKA:	***************************************	By:	DRV
Name of building:	Whakatane Commercial Wharf - 1936 & 1940 sections	Date:	12/12/2014
City:	Whakatane	"Revision No.:	1

#### Table IEP-1 **Initial Evaluation Procedure Step 1**

## Step 1 - General Information



1.2 Sketches (plans etc, show items of interest)



# NOTE: THERE ARE MORE SKETCHES ON PAGE 1a ATTACHED

# 1.3 List relevant features (Note: only 10 lines of text will print in this box. If further text required use Page 1a)

Reinforced concrete wharf constructed in 1936 (section A) and 1940 (section B). 1-2 storey buildings are located on grade, immediately behind the 1940

NOTE: This assessment assumes that the wharf has been repaired to reinstate spalled / cracked concrete and replace corroded reinforcing bars

1.4 Note information sources	Tick as appropriate		
Visual Inspection of Exterior	V	Specifications	
Visual Inspection of Interior		Geotechnical Reports	Ц
Drawings (note type)		Other (list)	

AKA:	Street Number	· & Name:	)),,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Job No.:	851847 DRV
Table IEP-2   Initial Evaluation Procedure Step 2		ina:	Whakatane Commercial Wharf - 193	36 & 1940 sections		***************************************
Step 2 - Determination of (%NBS) <sub>b</sub> Baseline (%NBS) for particular building - refer Section B5 ) 2.1 Determine nominal (%NBS) = (%NBS) <sub>nom</sub> a) Building Strengthening Data Tick if building is known to have been strengthened in this direction If strengthened, enter percentage of code the building has been strengthened to N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A			***************************************		Revision No	o.: 1
Determine nominal (%MBS) = (%MBS) <sub>nom</sub>   Longitudinal   Transverse	able IEP-2	Initial Ev	valuation Procedure Step 2			
Description	Stan 2 - Detei	rmination of /	WNRS).			
a) Building Strengthening Data  Tick if building is known to have been strengthened in this direction  If strengthened, enter percentage of code the building has been strengthened to  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/	-					
Tick if building is known to have been strengthened in this direction  If strengthened, enter percentage of code the building has been strengthened to N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A	.1 Determine	nominal (%NBS	S) = (%NBS) <sub>nom</sub>	<u>Longitudina</u>	1	<u>Transverse</u>
Tick if building is known to have been strengthened in this direction  If strengthened, enter percentage of code the building has been strengthened to N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A	a) Building S	Strengthening Da	ta			
b) Year of Design/Strengthening, Building Type and Seismic Zone  Pre 1935 O 1935-1965 © 1935-1965 © 1935-1965 © 1935-1965 © 1936-1976 O 1976-1984 O 1984-1992 O 1982-2004 O 2004-2011 O Post Aug 2011 O  O  Aug 2011 O  Doublic Buildings  Public Buildings  Public Buildings  Public Buildings  Public Buildings  Public Buildings  Public Buildings  O  C Shallow Soil  Aug 2.5  Man 2.5  Aug 2.5  Man 2.5  Aug 2.5  Man 2.5  Aug 2.5  Man 3.0  Aug 3.0  Au	-			Г		Γ
Pre 1935 C   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1986 0   1976-1984 0   1976-1984 0   1976-1984 0   1976-1984 0   1992-2004 0   1992-2004 0   1992-2004 0   2004-2011 0   2	If strength	nened, enter perc	entage of code the building has been strengthened	to N/A		N/A
Pre 1935 C   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1986 0   1976-1984 0   1976-1984 0   1976-1984 0   1976-1984 0   1992-2004 0   1992-2004 0   1992-2004 0   2004-2011 0   2						
Pre 1935 C   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1985 0   1935-1986 0   1976-1984 0   1976-1984 0   1976-1984 0   1976-1984 0   1992-2004 0   1992-2004 0   1992-2004 0   2004-2011 0   2	b) Year of De	sian/Strenathen	ng, Building Type and Seismic Zone			
1985-1976   1976-1984   1976-1984   1976-1984   1976-1984   1976-1984   1976-1984   1976-1984   1976-1984   1976-1984   1976-1984   1976-1984   1984-1992   1984	.,	5 5	5, 5,1			
1976-1984 O   1984-1992 O   2004-2011 O   Post Aug 2011 O   Post					T I	_
1984-1992 O					I	-
1992-2004 C   1992-2004 C   2004-2011 O   Post Aug 2011 O   Pos				-	I	
Building Type:  Selsmic Zone:  Public Buildings  Public Buildings  Public Buildings  Public Buildings  C Shallow Soil  C Shallow Soil  From NZS1170.5:2004, Cl 3.1.3:  From NZS4203:1992, Cl 4.6.2.2: (for 1992 to 2004 and only if known)  d) Estimate Period, T  Comment:  Primary lateral load resisting system in the longitudinal direction is moment resisting concrete frames. Frames are braced transversely.  Moment Resisting Concrete Frames:  T = max(0.04h, 0.03, 0.4)  Moment Resisting Steel Frames:  T = max(0.04h, 0.03, 0.4)  Eccentrically Braced Steel Frames:  T = max(0.06h, 0.03, 0.4)  All Other Frame Structures:  T = max(0.06h, 0.03, 0.4)  O Concrete Shear Walls  T = max(0.06h, 0.03, 0.4)  User Defined (input Period):  Where h, = height in metres from the base of the structure to the uppermost selamic weight or mass.  T: 0.40  Post Aug 2011 O  Public Buildings  Pub						
Selsmic Zone:    Public Buildings   Public Buildings   Public Buildings				=	i i	
Selsmic Zone:    C Shallow Soil   From NZS1170.5:2004, Cl 3.1.3 :   C Shallow Soil   C Sha				Post Aug 2011 C	·	Post Aug 2011 O
c) Soll Type  From NZS1170.5:2004, Cl 3.1.3 :  C Shallow Soil  From NZS4203:1992, Cl 4.6.2.2 : (for 1992 to 2004 and only if known)  d) Estimate Period, T  Comment: Primary lateral load resisting system in the longitudinal direction is moment resisting concrete frames. Frames are braced transversely.  Moment Resisting Concrete Frames:  T = max(0.09h, 0.75, 0.4)  Moment Resisting Steel Frames:  T = max(0.09h, 0.75, 0.4)  Eccentrically Braced Steel Frames:  T = max(0.09h, 0.75, 0.4)  Concrete Shear Walls  T = max(0.09h, 0.75, 0.4)  Masonry Shear Walls:  T = max(0.09h, 0.75, A.05, 0.4)  User Defined (input Period):  Where h, = height in metres from the base of the structure to the uppermost seismio weight or mass.  e) Factor A: Strengthening factor determined using result from (a) above (set to 1.0  Factor B: Determined from NZSEE Guidelines Figure 3A.1 using results (a) to (e) above  Pactor C: For reinforced concrete buildings designed between 1976-84 Factor  Factor C: For reinforced concrete buildings designed between 1976-84 Factor  Factor C: For reinforced concrete buildings designed between 1976-84 Factor  Factor C: For reinforced concrete buildings designed between 1976-84 Factor  C Shallow Soil  An and Shall C Shallow Soil  An and Shall C Shallow Soil  An and Shall C Shallow Soil  An			Building Type:	Public Buildings	<b>9</b>	Public Buildings
c) Soll Type  From NZS1170.5:2004, Cl 3.1.3 :  C Shallow Soil  From NZS4203:1992, Cl 4.6.2.2 : (for 1992 to 2004 and only if known)  d) Estimate Period, T  Comment: Primary lateral load resisting system in the longitudinal direction is moment resisting concrete frames. Frames are braced transversely.  Moment Resisting Concrete Frames:  T = max(0.09h, 0.35, 0.4)  Eccentrically Braced Steel Frames:  T = max(0.09h, 0.35, 0.4)  Concrete Shear Walls  T = max(0.09h, 0.35, 0.4)  Concrete Shear Walls  T = max(0.09h, 0.35, 0.4)  User Defined (input Period):  Where h, = height in metres from the base of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.  T = control of the structure to the uppermost seismic weight or mass.			Seismic Zone:			
From NZS4170.5:2004, Cl 3.1.3:  From NZS4203:1992, Cl 4.6.2.2: (for 1992 to 2004 and only if known)  d) Estimate Period, T  Comment: Primary lateral load resisting system in the longitudinal direction is moment resisting concrete frames. Frames are braced transversely.  Moment Resisting Concrete Frames:  T = max(0.09h, 0.13 0.4)  Moment Resisting Steel Frames: T = max(0.09h, 0.13 0.4)  Eccentrically Braced Steel Frames: T = max(0.09h, 0.13 0.4)  Concrete Shear Walls T = max(0.09h, 0.13 0.4) The max(0			Sciolino Ecito.	,		ŗ
(for 1992 to 2004 and only if known)  d) Estimate Period, <i>T</i> Comment:  Primary lateral load resisting system in the longitudinal direction is moment resisting concrete frames. Frames are braced transversely.  Moment Resisting Concrete Frames:  T = max(0.09h_0^{0.15}, 0.4)  Moment Resisting Steel Frames:  T = max(0.14h_0^{0.15}, 0.4)  Eccentrically Braced Steel Frames:  T = max(0.14h_0^{0.15}, 0.4)  All Other Frame Structures:  T = max(0.09h_0^{0.15}, 0.4)  Concrete Shear Walls  T = max(0.09h_0^{0.15}/A_0^{0.5}, 0.4)  Masonry Shear Walls:  T = max(0.09h_0^{0.15}/A_0^{0.5}, 0.4)  User Defined (input Period):  Where h_n = height in metres from the base of the structure to the uppermost seismic weight or mass.  T: 0.40  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	c) Soil Type	From NZS1170.	5:2004, CI 3.1.3 :	C Shallow Soil	<b>-</b>	C Shallow Soil
d) Estimate Period, <i>T</i> Comment:  Primary lateral load resisting system in the longitudinal direction is moment resisting concrete frames. Frames are braced transversely.  Moment Resisting Concrete Frames:  T = max(0.09h <sub>0</sub> <sup>-0.75</sup> , 0.4)  Moment Resisting Steel Frames:  T = max(0.10h <sub>0</sub> <sup>-0.75</sup> , 0.4)  Eccentrically Braced Steel Frames:  T = max(0.09h <sub>0</sub> <sup>-0.75</sup> , 0.4)  Concrete Shear Walls:  T = max(0.09h <sub>0</sub> <sup>-0.75</sup> , 0.4)  Concrete Shear Walls:  T = max(0.09h <sub>0</sub> <sup>-0.75</sup> , 0.4)  Concrete Shear Walls:  T = max(0.09h <sub>0</sub> <sup>-0.75</sup> , 0.4)  User Defined (input Period):  Where h <sub>n</sub> = height in metres from the base of the structure to the uppermost seismic weight or mass.  T: 0.40  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00					*	
Comment:  Primary lateral load resisting system in the longitudinal direction is moment resisting concrete frames. Frames are braced transversely.  Moment Resisting Concrete Frames:  T = max(0.09h <sub>0</sub> <sup>-056</sup> , 0.4)  Moment Resisting Steel Frames:  T = max(0.09h <sub>0</sub> <sup>-056</sup> , 0.4)  Moment Resisting Steel Frames:  T = max(0.09h <sub>0</sub> <sup>-056</sup> , 0.4)  All Other Frame Structures:  T = max(0.09h <sub>0</sub> <sup>-075</sup> , 0.4)  Concrete Shear Walls  T = max(0.09h <sub>0</sub> <sup>-075</sup> , 0.4)  Concrete Shear Walls  T = max(0.09h <sub>0</sub> <sup>-075</sup> , 0.4)  Concrete Shear Walls  T = max(0.09h <sub>0</sub> <sup>-075</sup> , 0.4)  Where h <sub>0</sub> = height in metres from the base of the structure to the uppermost seismic weight or mass.  T: 0.40  Pactor A: Strengthening factor determined using result from (a) above (set to 1.0 if not strengthened)  Factor B: Determined from NZSEE Guidelines Figure 3A.1 using results (a) to (e) above  g) Factor C: For reinforced concrete buildings designed between 1976-84 Factor  Factor C: 1,00  1.00  1.00  1.00			Tana only it known,			
Primary lateral load resisting system in the longitudinal direction is moment resisting concrete frames. Frames are braced transversely.    Moment Resisting Concrete Frames:	•			h <sub>n</sub> = 2.5		2.5 m
resisting concrete frames. Frames are braced transversely.    Moment Resisting Concrete Frames:			system in the longitudinal direction is moment		7	
Moment Resisting Steel Frames:				1100	_	
Eccentrically Braced Steel Frames:			Frames: $T = \max\{0.09h_0^{0.75}, 0.4\}$			
All Other Frame Structures:		-	mes: $T = \max\{0.14h_0^{-6.5}, 0.4\}$ rames: $T = \max\{0.08h_0^{-0.75}, 0.4\}$			
Masonry Shear Walls: T ≤ 0.4sec C Q  Where h <sub>n</sub> = height in metres from the base of the structure to the uppermost seismic weight or mass.  T: 0.40  e) Factor A: Strengthening factor determined using result from (a) above (set to 1.0 If not strengthened)  f) Factor B: Determined from NZSEE Guidelines Figure 3A.1 using results (a) to (e) above  g) Factor C: For reinforced concrete buildings designed between 1976-84 Factor  Factor C: 1.00  1.00  1.00  1.00  1.00		•	$T = \max(0.06h_{-0.75}, 0.4)$	0		
User Defined (input Period):  Where $h_n = height$ in metres from the base of the structure to the uppermost seismic weight or mass.  T: 0.40  O.10  e) Factor A: Strengthening factor determined using result from (a) above (set to 1.0 if not strengthened)  f) Factor B: Determined from NZSEE Guidelines Figure 3A.1 using results (a) to (e) above  g) Factor C: For reinforced concrete buildings designed between 1976-84 Factor  Factor C: 1.00  1.00  1.00  1.00				9		
where h <sub>n</sub> = height in metres from the base of the structure to the uppermost seismic weight or mass.  T: 0.40  O.10  e) Factor A: Strengthening factor determined using result from (a) above (set to 1.0 if not strengthened)  f) Factor B: Determined from NZSEE Guidelines Figure 3A.1 using results (a) to (e) above  g) Factor C: For reinforced concrete buildings designed between 1976-84 Factor  Factor C: 1.00  1.00  1.00  1.00	•		<i>T</i> ≤ 0.4sec	Ö		_
e) Factor A: Strengthening factor determined using result from (a) above (set to 1.0 if not strengthened)  f) Factor B: Determined from NZSEE Guidelines Figure 3A.1 using results (a) to (e) above  g) Factor C: For reinforced concrete buildings designed between 1976-84 Factor Factor C: 1,00 1.00	Oder Delin		= height in metres from the base of the structure to the		_	
if not strengthened)  f) Factor B: Determined from NZSEE Guidelines Figure 3A.1 using results (a) to (e) above  g) Factor C: For reinforced concrete buildings designed between 1976-84 Factor Factor C: 1,00 1.00		uppermos	seismic weight or mass.	T: 0.40	_	0.10
if not strengthened)  f) Factor B: Determined from NZSEE Guidelines Figure 3A.1 using results (a) to (e) above  g) Factor C: For reinforced concrete buildings designed between 1976-84 Factor Factor C: 1,00 1.00						
results (a) to (e) above  g) Factor C: For reinforced concrete buildings designed between 1976-84 Factor Factor C: 1,00 1.00	e) Factor A:			Factor A: 1.00	]	1.00
	f) Factor B:			Factor B: 0.04	]	0.04
	g) Factor C:			Factor C: 1.00	]	1.00
h) Factor D: For buildings designed prior to 1935 Factor D = 0.8 except for Wellington Factor D: 1.00  where Factor D may be taken as 1, otherwise take as 1.0.	h) Factor D:			Factor D: 1.00	]	1.00
(%NBS) <sub>nom</sub> = AxBxCxD	(%NBS) <sub>nom</sub> =	- AxBxCxD		(%NBS) <sub>nom</sub> 4%	1	4%

Initial Evaluation Procedure (IEP) Assessment - Completed for WDC Page 3			
Street Number & Name:		Job No	o.: 851847
AKA:		Ву:	DRV
Name of building:	Whakatane Commercial Wharf - 193 Whakatane	6 & 1940 sections Date:	12/12/2014 on No.: 1
City:	vviiakataile	IVGVISIO	711180.
Table IEP-2 Initial Eva	luation Procedure Step 2 continu	ıed	
2.2 Near Fault Scaling Factor, Fall of T ≤ 1.5sec, Factor E = 1	actor E	<u> Longitudinal</u>	Transvers <u>e</u>
a) Near Fault Factor, N(T,D)		N(T,D): 1	
(from NZS1170.5:2004, CI 3.1.6) b) Factor E	= 1/N(T,D)	Factor E: 1.00	1.00
שור מינטו ב	(1)=7		
2.3 Hazard Scaling Factor, Factor	or F		
a) Hazard Factor, Z, for site	: Whakatane -		
Location	i   imal	2.0	
Z <sub>1992</sub>	= 0.3 (from NZS1170.5:2004, Table 3 = 1.175 (NZS4203:1992 Zone Factor fr	om accompanying Figure 3.5(b))	
Z 1992 Z 2004			
b) Factor F			
For pre 1992 For 1992-2011	$= 1/Z$ $= Z_{1992}/Z$		
For post 2011	$= Z_{2004}/Z$		
·		Factor F: 3.33	3.33
			•
2.4 Return Period Scaling Facto	or, Factor G		
a) Design Importance Level, I	signed prior to 1965 and known to be designed as a	×	*
public building set to 1.25. For buildings	s designed 1965-1976 and known to be designed as a 1.2 for Zone B. For 1976-1984 set I value.)	I = 1.25	1.25
b) Design Risk Factor, R <sub>o</sub>	1.2 101 20110 B. 7 01 1010-1007 0017 14400.7	~	~
(set to 1.0 if other than 1976-2004, or r	not known)		'
		$R_o = 1$	
c) Return Period Factor, R			
(from NZS1170.0:2004 Building Impor	tance Level) <u>Choose Importance Lev</u>	<u>el</u> ○1 ○2 ⊙3 ○4	01 02 03 04
		R = 1.3	1.3
d) Factor G	= IR <sub>o</sub> /R		
		Factor G: 0.96	0.96
2.5 Ductility Scaling Factor, Fac a) Available Displacement Ducti			
Comment:	my within Existing Structure	$\mu = 1.25$	1.25
		•	
b) Factor H	Face 4070 (manifesture of 0)	κ <sub>μ</sub>	<i>k</i> <sub>μ</sub> 1.04
	For pre 1976 (maximum of 2) For 1976 onwards	= 1.14 = <u>1</u>	11
		Factor H: 1.14	1.04
(where kμ is NZS1170.5:2004 Inelastic	c Spectrum Scaling Factor, from accompanying Table 3.3)		
2.6 Structural Performance Scal	_		
<ul> <li>a) Structural Performance Factor</li> <li>(from accompanying Figure 3.4)</li> </ul>	r, S <sub>p</sub>		
Tick if light timber-framed const	ruction in this direction		
		$S_p = 0.93$	0.93
b) Structural Performance Scali	ng Factor = 1/S <sub>p</sub>	Factor I: 1.08	1.08
	thave been multiplied by 0.67 to account for Sp in this period		
2.7 Baseline %NBS for Building	(%NBS).		
(equals (%NBS) <sub>nom</sub> x E x F x C		14%	13%
		<u></u>	· Buyer, and a continuous

	- Completed for WDC		Page
		Job No.:	851847
	140	By:	DRV
Whakatane Commercial Whakatane	Whart - 1935 & 1940 section	Revision No.:	12/12/2014 1
/aluation Procedure Ste	p 3		
	io (PAR)		
			Facto
ance O Severe	○ Significant	<b>⊙</b> Insignificant	Factor A 1.0
nnce O Severe	() Significent	⊙ Insignificant	t Factor B 1.0
ance Q Severe	O Significant	<b>⊙</b> Insignificant	Factor C 1.0
e building has a frame structure. I	e value applicable to frame buildin	gs.	<u> </u>
n of Factor D1	Severe Signit	ficant Insignificant	1
Alignment of Floors within 20% of S			
nment of Floors not within 20% of S	torey Height O 0.4 O	0.7 🔾 0.8	
nt Difference Effect			
	A CONTRACTOR OF THE PROPERTY O	- transfer and the	0
n of Factor D2			1
Height Difference	- 4 Oloroys -		
	10 4 010/093		
			Factor D 1.0
bility, landslide threat, liquefaction e	tc as it affects the structural performa		
nance O Severe	O Significent his would need to be confirmed during	• Insignificenge detailed assessment.	factor E 1.0
			*****
	es of the building For ≤ 3 store otherwi	eys - Maximum value 2.5 ise - Maximum value 1.5. No minimum.	Factor F 1.0
	Whakatane  Valuation Procedure Step  Informance Achievement Rate  Effect on Structural Performance  (Choose a value - Do not integrated on the content of Severe  In the Lower of the two, or 1.0  In the Coefficient to the right of the coefficient to the right of the coefficient of Floors within 20% of Severe  In the Difference Effect  In the Difference Effect  In the Difference 2  Height Difference 2  Height Difference 2  Height Difference 2  Height Difference	Whakatane  Valuation Procedure Step 3  Informance Achievement Ratio (PAR)  Effect on Structural Performance (Choose a value - Do not Interpolate)  Indice O Severe O Significant  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower of the two, or 1.0 if no potential for pounding, or consect  Indice D = the lower o	valuation Procedure Step 3  rformance Achievement Ratio (PAR)  Effect on Structural Performance (Choose a value - Do not Interpolate)  ance O Severe O Significant O Insignificant  ance O Severe O Insignificant Insignificant Insignificant Insignificant O Insignificant Insign

Initial Evaluation Proced	lure (IEP) Assessment - Comple	ted for WDC		Page 5
Street Number & Name:			Job No.:	851847
AKA:			Ву:	DRV
Name of building:	Whakatane Commercial Wharf - 19	936 & 1940 sections	Date:	12/12/2014
City:	Whakatane		Revision No.:	1
Table IEP-3 Initial Eva	aluation Procedure Step 3			
Step 3 - Assessment of Perfo (Refer Appendix B - Section B3.2) b) Transverse Direction	ormance Achievement Ratio (PAR)			
Critical Structural Weakness	Effect on Structural Performance (Choose a value - Do not interpolate)			Factors
3.1 Plan Irregularity  Effect on Structural Performan	nce O Severe O	Significant	⊙ Insignificent	Factor A 1.0
	ce some torsional response, but not considered	I to be a significant plan irre	gularity.	Parcosas se nemen entra cinidificient
3.2 Vertical Irregularity  Effect on Structural Performan  No evidence of vertical irregul	100	Significant	<b>⊙</b> Insignificent	Factor B 1.0
3.3 Short Columns  Effect on Structural Performat No evidence of short columns	100	Significant	<b>⊙</b> Insignificant	Factor C 1.0
				4
3.4 Pounding Potential (Estimate D1 and D2 and set	D = the lower of the two, or 1.0 if no potenti	ial for pounding, or conse	equences are conside	red to be minimal)
,				
a) Factor D1: - Pounding Effect	t			•
Note: Values given assume the b may be reduced by taking	ouilding has a frame structure. For stiff build the coefficient to the right of the value appli	lings (eg shear walls), the icable to frame buildings.	effect of pounding	
	Fa	ctor D1 For Transverse	Direction: 1.0	1
Table for Selection	of Factor D1	Severe Significa		1
Ali	Separation ignment of Floors within 20% of Storey Height	0 <sep<.005h .005<sep<.<br="">O 0.7 O 0.8</sep<.005h>		
Alignn	nent of Floors not within 20% of Storey Height	O 0.4 O 0.7	Q 0.8	
No buildings nearby.				-
b) Factor D2: - Height I	Difference Effect			
		ctor D2 For Transverse		]
Table for Selection	of Factor D2	Severe Significa 0 <sep<.005h .005<sep<.<="" td=""><td>_</td><td></td></sep<.005h>	_	
	Height Difference > 4 Storeys	Q 0.4 Q 0.7	O 1	
	Height Difference 2 to 4 Storeys	O 0.7 O 0.9	O 1	
	Height Difference < 2 Storeys	Q1 Q1	<b>⊙</b> 1	]
		)		Factor D 1.0
3.5 Site Characteristics - Stabil	ity, landslide threat, liquefaction etc as it affects	s the structural performance	e from a life-safety pers	
	0.7	Significant	⊙ insignificant	
Effect on Structural Performate This assessment assumes no	nce O Severe OS  o risk of liquefaction at the site. This would nee	~~~	. •	Factor E 1.0
Record rationale for ch	e of all other relevant characterstics of the build oice of Factor F: vidence to justify any enhancement of the PAR.	otherwise	- Maximum value 2.5 - Maximum value 1.5. No minimum.	Factor F 1.00
				 PAR
3.7 Performance Achievement (equals A x B x C x D x E x	•		Т	ransverse 1.00
	been carried out solely as an initial seismic assessment oj	f the building following the proce	dure set out in the New Zea	land Society for Earthquake

Initial Evaluation Procedure (IEP) Assessment - Completed for WDC			
Street Number & Name: AKA:	*	Job No.: By:	851847 DRV
Name of building:	Whakatane Commercial Wharf - 1936 & 194	***************************************	12/12/2014
City:	Whakatane	Revision No.:	1
Table IEP-4 Initial Evalu	uation Procedure Steps 4, 5 and 6		
Step 4 - Percentage of New Bu	inding Standard (%NBS)	Longitudinal	Transverse
4.1 Assessed Baseline (%NBS) (from Table IEP - 1)	b	14%	13%
4.2 Performance Achievement I (from Table IEP - 2)	Ratio (PAR)	1.00	1.00
4.3 PAR x Baseline (%NBS) <sub>b</sub>		15%	15%
4.4 Percentage New Building S  ( Use lower of two values from			15%
Step 5 - Potentially Earthquake	e Prone? (Mark as appropriate)	%NBS <u>&lt;</u> 34	YES
Step 6 - Potentially Earthquak	e Risk? (Mark as appropriate)	%NBS < 67	YES
Step 7 - Provisional Grading fo	or Seismic Risk based on IEP	Seismic Grade	Е
Additional Comments (items o	of note affecting IEP score)	;	
1.The wharf is currently in a por concrete and replace corroded 2. it has been assumed that the buildings were designed to high	or state of repair. This assessment assumes that the wha	s the IEP score by a factor of 1.25 (fa	actor 'G') as public
Evaluation	Geoff Radley	Signature Name	
	171865	CPEng. No	
Relationship between	o Grade and <i>%NBS</i> :		

В

79 to 67

Α

100 to 80

> 100

Grade:

% NBS:

С

66 to 34

D

33 to 20

E

< 20

# Initial Evaluation Procedure (IEP) Assessment - Completed for WDC

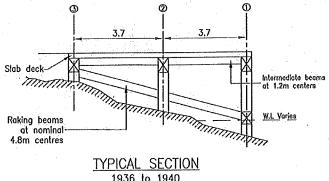
Page 1a

Street Number & Name:		Job No.:	851847
AKA:		By:	DRV
Name of building:	Whakatane Commercial Wharf - 1936 & 1940 sections	Date:	12/12/2014
City:	Whakatane	Revision No.:	1

#### Table IEP-1a **Additional Photos and Sketches**

Add any additional photographs, notes or sketches required below:

Note: print this page separately



1936 to 1940 Scale 1:100

