

Building Exterior Visual Assessment (BEVA)



EXAMPLE

ROPE ACCESS, WINDOW
CLEANING, INSPECTIONS
AND MORE

www.valiantsolutions.ca

windows@valiantsolutions.ca
587-318-6123

May 29, 2020



Executive Summary

In May 2020, Valiant Solutions performed a Building Exterior Visual Assessment (BEVA) at The Burj Khalifa.

The City of Calgary passed a building maintenance bylaw in 2016. Any buildings 5 stories and over that are older than 10 years must receive this assessment every 5 years. they passed this to ensure the **safety** of buildings in Calgary, given some of the recent tragedies involving items falling off of buildings. Bylaw- 33M2016.

Valiant Solutions, visually assessed the building in accordance with the above bylaw. Please see below our findings report, recommendations, pictures and signed BEVA report for your records.

A thorough visual inspection was completed. Our findings are detailed below, including items requiring immediate attention.

How to read the report:

As per the City Bylaw, there are two main areas requiring assessment. ROOF AND WALLS. Each with itemized inspection points, with three possible grades for each point-

ACCEPTABLE -- **NEEDS ATTENTION** -- **NOT ACCEPTABLE**

Below, you will find three separate pages containing the Acceptable, Needs Attention and Not Acceptable subsections. Color coded for ease of reference.

We have also included an estimate of cost for Valiant to perform the repairs on the balcony glass, as well as an additional findings report, outlining some additional recommendations not typically within the scope of a BEVA, but were observed onsite.

Thank you again for your continued business, we are looking forward to a long term business relationship with you and your team!

Sincerely,

Dustin Finley
Valiant Solutions
587-318-6123

BUILDING EXTERIOR VISUAL ASSESSMENT (BEVA)

Date of Assessment: May 21-30, 2020

Building Name: _____

Address: _____

Onsite Contact: _____

Primary Roof: _____

Materials: _____

Part 1: BUILDING EXTERIOR ASSESSMENT SCHEDULE - ROOF

	ROOF EXTERIOR ASSESSMENT	NA	Acceptable	Needs Attention	Not Acceptable
1	VISIBLE ROOF components including stone ballst, pavers, membrane and insulation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	PERIMETER FLASHING attachment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	CLADDING attachment for all penthouse mechanical rooms, stairs, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	HVAC equipment housing, curbs, support, framing, flashing and attachment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	EXHAUST FANS, and other mechanical exterior systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	COMMUNICATIONS EQUIPMENT, support framing, cable trays, flashing, ballast and/or attachment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	LIGHTNING grounding equipment attachment only	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	SIGNAGE, including housing, curbs, support framing, flashing and attachment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	ACCESS HATCHES and doors	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	SWING STAGE, davit arms, roof anchors and other exterior window washing equipment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	SKYLIGHTS and windows	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12	Exterior mounted electrical equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	Securement of all materials and tools on the roof	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14	SOLAR PANELS and their supports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ASSESSOR

Name _____

Signature _____

Company _____

Address _____

Qualifications _____

BUILDING EXTERIOR VISUAL ASSESSMENT (BEVA)

Date of Assessment: May 21-30, 2020

Building Name: _____

Address: _____

Onsite Contact: _____

Primary Wall _____

Materials _____

Part 2: BUILDING EXTERIOR ASSESSMENT SCHEDULE - WALLS

	EXTERIOR ENVELOPE ASSESSMENT	NA	Acceptable	Needs Attention	Not Acceptable
16	CLADDING SYSTEMS, including glass, plywood, plastics, metal panels	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	CURTAIN WALLS which could be non load bearing prefabricated insulated panels or site built steel stud walls	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	FLASHINGS, corroded, their condition, their placement and use, and any damage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	AIR INTAKE GRILLS for HVAC, venting, make up air, cooking and EXHAUSTS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Brick, Stone and Sandstone, their condition, support and attachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	BALCONIES, guard rails and their attachment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22	SIGNAGE, including housing, curbs, support framing, flashing and attachment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	WINDOWS and doors	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	FIRE ESCAPES, exterior	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	OTHER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ASSESSOR

Name _____

Signature _____

Company _____

Address _____

Qualifications _____

ACCEPTABLE

15 (loose debris)



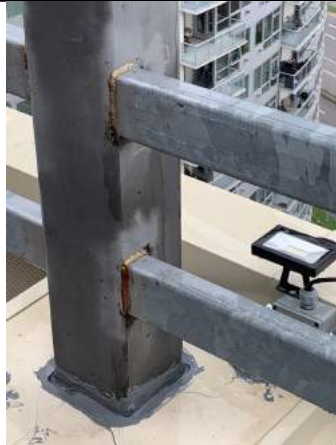
Some loose debris was observed (and removed for safety) from the roof, including mastic tubes from roofing work. Recommend reminding roofer to clear all garbage from work area after service is performed.

15 (loose debris)



There were a number of large steel flashings observed on the upper roof. These can be extremely dangerous if blown off the roof. We relocated them into the elevator room for safety.

1



Observed rusting weld on steel work. Recommend sanding and sealing.

NEEDS ATTENTION

13



All rain caps appear to have rusting fasteners. Two of three have already been apparently torn off from wind. Recommend securing the remaining cap and replacing missing caps. These pose a severe threat to humans and property if not secured.

21



A significant number of balconies are missing the bolts that secure the railing to the concrete. This will lessen the amount of force that the railing is capable of sustaining.

21



A significant number of balconies also have hardware that is deficient or installed improperly.

NOT ACCEPTABLE

20



On many places accross the entire building, concrete edges on balconies are starting to fall apart. In many instances, pieces of concrete are already loose or have shed pieces.

20



Immediate action needed. This is typical of many balcony slabs. Loose concrete posses a serious hazard to those below.

20



On many balconies the concrete is crumbling to the point where internal rebar is visible.

NOT ACCEPTABLE

13



Vent pipe is not secured to the roof sleeper. A properly secured pipe is important because it prevents both the pipe and the sleeper from moving and becoming a fall risk.

11, 12



Rotting dimensional lumber was observed supporting fixtures at several places on the roof. If this set up is not replaced, the fixtures (i.e. cameras, etc) will eventually fall off the roof. If wood is to be used for a support, it should be pressure treated or sealed and should be monitored on a regular basis.




11,12







These electrical fixtures are supported by rusting metal straps and rotting lumber. These supports will eventually fail, and the system will drop off the building. Recommend replacing fixture support system.

Additional Findings Report



Item	Description	Recommendation
<p>Items unsecured or dangerously places on balconies.</p>		<p>Residents need to be reminded of the severity of the consequences, if something like this were to fall. This was found on the 16 floor, SE Corner of the Brava Building. The Brick is easily small enough for fit under the hand rail if kicked. Valiant moved the brick back from the edge, however it will likely reutrn. Valiant also noticed balconies on the NW corner of Encore that had empty boxes, garbages and other items that could easily blow off the building.</p>
<p>Items unsecured or dangerously places on balconies.</p>		<p>Same issue here. A large knife just inches away from the edge of the balcony. Valiant moved the knife back from the edge, but again, it could be moved back.</p>
<p>Items unsecured or dangerously places on balconies.</p>		<p>Same issue again. Large rocks are a very bad idea to have on balconies. They are often inadvertently kicked, and certainly have the ability to cause serious injury or death if dropped from height.</p>

<p>Caulking/Sealant</p>		<p>This picture is typical for most windows on the Brava building. The caulking is completely failed in most cases. We recommend addressing this issue as soon as possible to prevent leakage and water damaged. See attached estimate for Valiant to address the caulking and sealing issues.</p>
<p>Caulking/Sealant</p>		<p>Another example of the many windows where the frame is not sealed at all.</p>
<p>Damaging Walls w/BBQ's</p>		<p>Residents should be mindful of damaging walls with their BBQ's. This was found on the East Side, the set of balconies north of the building entrance.</p>
<p>Seemingly Random Hardware</p>		<p>There is random hardware throughout the building that doesnt appear to have any purpose. With it sticking out the way it is, it will likely corrode and fall down with time. This also allows water to enter the screw hole.</p>

Drain cover not secured.



Found on the 22 floor penthouse. Drain cover not secured properly. Not a safety issue. However, if something was dropped into drain, could cause major plumbing issues.

Vents cracked and deteriorated.



Vents dirty, cracked and in need of replacement. If left as is, birds can get into louvers and makes nests, which will block off the vent.

Rusting stacks



Rusting at exhaust vents was observed. Rust can loosen the screws that attach cap flashing. Unsecured cap flashings can be blown off the roof by the wind.



Summary- What needs to be done.

During the Building Exterior Visual Assessment, it was noted that there are three items that require **immediate attention**, in order to reduce the risk posed to the public.

1. The Concrete balcony slabs are in rough shape. Most balconies have at least some loose pieces of concrete, some have larger pieces ready to fall from the building.

Recommendation: Remove all loose pieces of concrete from the balconies to eliminate the immediate hazard to the public. Estimate for Valiant to complete this work is below.

******Note: While all apparently loose pieces will be removed, The concrete is in a state of continual deterioration and will likely present further hazards at some point in the future. Valiant Solutions will not be responsible for the future hazard posed by the deterioration of the concrete. The above scope is intended to include removing only the immediately apparent hazards, and not to be a permanent fix to the issue. ******

This concrete needs to be assessed and resealed to prevent further deterioration. Valiant would be happy to help in the remediation process.

2. Some electrical items on the roof are attached by sub-par materials. The electrical boxes need to be attached by exterior grade fasteners, to prevent the hazard of the boxes falling to grade.
3. On the south side of the roof, there is an exhaust pipe that needs to be secured to the supports. The supports being unsecured, could easily blow away, creating a hazard for the public. These need to be attached with exterior grade fasteners.



Estimate

Valiant Solutions
 90 Fireside Bend
 Cochrane, AB
 T4C 0V5
 587-318-6123

windows@valiantsolutions.ca
www.valiantsolutions.ca

Intact Insurance #- 5XL396383
 WCB Acct. # - 8056417
 GST # -787299494RT0001

Estimate No: **E6164**
Estimate Date **June 1, 2020**

Prepared by: Dustin Finley
 Phone: 403-437-3441

To: **The Ownership of The Burj Khalifa** Service Location: **The Burj Khalifa**

Work	Description	Amount
Exterior Rope Access Maintenance	Remove all loose concrete peices from all balcony slabs.	
	<i>Balconmy slabs only included for Brava Tower.</i>	
	Estimate Subtotal	
	GST	
	Total	

Scope of work

Our goal is a business relationship with you for the next 20+ years, and will do what it takes to earn your trust. We're a certified company with \$5,000,000 liability insurance, WCB coverage and a name that ensures excellence. We care about our customers and about the quality of our work. Thank you for your business.

Please sign below confirming your commitment to proceed with the scope of work listed above. Once we have received the signed estimate we will be in touch with a schedule.

To accept this estimate, please sign and date below:

Signed by: _____