INITIAL STRUCTURAL INTEGRITY ASSESSMENT REPORT (SIAR)

Factory Name:	**Safaa Sweaters Ltd(Saafa Sewing Ltd)**
Address:	**Taj Mension, Jamgara, Ashulia, Savar. Ashulia, Savar Dhaka Bangladesh**
Assessor:	**Bureau Veritas**
Date:	**17 Jul 2014**

Introduction to the Report

The following report contains a site profile and summary of non-conformities identified during an onsite assessment commissioned by the Alliance for Bangladesh Worker Safety (Alliance) and conducted by a third-party Qualified Assessment Firm (QAF). The assessment was conducted against the Alliance for Bangladesh Worker Safety Assessment Protocols (APs) and Fire Safety and Structural Integrity Standard, which is harmonized with the factory assessment guidelines developed by Bangladesh University of Engineering and Technology (BUET) for the Bangladesh National Tripartite Plan of Action (NTPA). The goal of the Alliance process is to provide clear and practical technical requirements by which Bangladeshi Ready Made Garment (RMG) Factories producing for Alliance members may be consistently and fairly evaluated for fire, structural, and electrical safety in a non-duplicative manner. Each assessment will prompt action plans that will be used by RMG factories to systematically and sustainably improve safety conditions for garment workers. Beyond tracking and reporting on action steps taken in a transparent manner, the Alliance organization and its members will seek to further support factory improvements through technical assistance, training, implementation support for functional Worker Committees, and in some cases financial assistance and wage support for workers if factories are closed for remediation.

The contents of the report do not constitute a guarantee of compliance with the applicable laws, the Alliance Standard or the absolute or continued safety against fire, electrical and/or structural integrity issues that may lead to injury or loss of life. The report is designed to provide a non-exhaustive summary of risk issues, based on a limited sampling and duration of time onsite by the named QAF. Neither the QAF nor the Alliance can certify or guarantee the quality, outcome, or effectiveness of actions taken in response to the report.

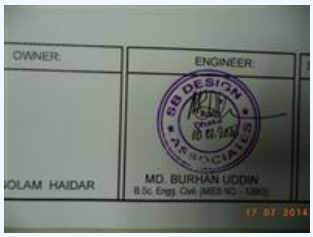
For more information and report feedback please go to: www.bangladeshworkersafety.org.

GENERAL INFORMATION

General Information	
Factory Name:	Safaa Sweaters Ltd(Saafa Sewing Ltd)
Address:	Taj Mension, Jamgara, Ashulia, Savar. Ashulia, Savar Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Ashulia, Savar
Zip Code:	1349
Audit Duration:	1 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	July 17, 2014
Final Report Date :	October 6, 2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex :	There is only one main building in complex. Does not find any ancillary building.
Number of Building Levels (Stories) :	The total number of levels from grade is 7 (G+6). But another one mezzanine floor is available at level-8.
Approximate Building Area (SF) :	The building area is approximately 135975 (SF). Ground Floor 17,800.00 (SF) 1st Floor 17,800.00 (SF) 2nd Floor 17,800.00 (SF) 3rd Floor 15,500.00 (SF) 4th Floor 15,500.00 (SF) 5th Floor 15,500.00 (SF) 6th Floor 15,500.00 (SF) 7th Floor (Mezzanine) 5,075.00 (SF) Roof 15,500.00 (SF)
Date of Building Construction :	The building was constructed in between 2007 to 2009.
Date of Last Building Renovation/Addition :	No renovation/addition has been done in the structure.
Is the Building mixed use?:	No
Ancillary Structures in Complex :	There is no ancillary building in complex
Number of Ancillary Levels (Stories) :	There is no ancillary building in complex.

Approximate Ancillary Structures Area (SF) :	There is no ancillary building in complex.
Number of Occupants :	The number of occupants is 850.
Exterior Facade Description :	The building is RCC frame structure with in filled masonry wall. Exterior face of the masonry wall is of plaster and paint works. The main door of the building is a metallic sliding type door and the windows are of sliding glass type with aluminium frame.
Structural System Description :	This building is a Moment Resisting Frame with monolithic beam slab system irregular structure. Foundation type is spread footing.
Issues were not found during the structural integrity assessment that required the Emergency Escalation Protocol (and referral to NTC Review Panel)?:	Yes

ASSESSMENT FINDINGS

Structural System Design		
Question:	Are Certificates of Occupancy available for review?	
Priority Level:	Low	
Non-Compliance Level:		
Description:	Certificates of Occupancy is available for review.	
Source of Findings:	Document Review: Document review shows that, certificates of Occupancy is available for review.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment	
Question:	Structural Engineer of Record	
Priority Level:		
Non-Compliance Level:		
Description:	Structural Engineer's name: Engr.MD.Burhan Uddin,MIEB-12663.	
Source of Findings:		
Suggested Plan of Action:	Document review shows that Structural Engineer's name: Engr.MD.Burhan Uddin,MIEB-12663.	
Suggested Deadline Date:		
Standard:	Provide the name and firm of the structural engineer of record.	
Question:	Architect of Record	
Priority Level:		
Non-Compliance Level:		
Description:	Arch. Shawkat Selim (MIAB-S005), BD Technology & Civilex, 84 outer circular road(2nd Floor), wireless more, Mogbazar, Dhaka.	
Source of Findings:	Document Review: Arch. Shawkat Selim (MIAB-S005), BD Technology & Civilex, 84 outer circular road(2nd Floor), wireless more, Mogbazar, Dhaka.	

Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Provide the name and firm of the architect of record.	
Question:	Are credible structural design documents available for review and kept on site?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	A set of structural drawings are available, but not sufficient. Also, the design report is not available which is required as per BNBC 2006 clause 1.9.1.1.	
Source of Findings:	Document Review: Inadequate structural drawings and missing design report.	
Suggested Plan of Action:	Have a qualified structural engineer prepare credible as-built documents based on the requirements of Part 8 Section 8.19 of the Alliance Standard.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standard Part 8 Section 8.19 Required Structural Documentation for New and Existing Factories	
Question:	Is a Geotechnical Report available for review and kept on site?	
Priority Level:	Low	
Non-Compliance Level:		
Description:	The Geotechnical Report is complete and available for review.	
Source of Findings:	Document Review: Document review shows that there is a Geotechnical Report available for review on the site.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.2 Structural Integrity of Existing Factory Buildings	
Question:	Can credible structural documentation indicating general conformance with 2006 BNBC or other comparable applicable international model building code be produced?	
Priority Level:	Medium	
Non-Compliance Level:	2	

Description:	The building is designed and constructed after 2006 but the structural design document were not produced with accordance to 2006 BNBC or other comparable applicable international model building code.	
Source of Findings:	Document Review: Available documents.	
Suggested Plan of Action:	Engage a qualified structural engineer to develop the required documents to confirm the structural integrity of the buildings. Documents must comply with Alliance Standard Part 8 Section 8.19 and 8.20	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Reference Alliance Standards Part 8 Section 8.2 Structural Integrity of Existing Factory Buildings	
Question:	If built after 2006, can documented compliance with the seismic and wind requirements of the 2006 BNBC be provided?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	The building is constructed after 2006, but no evidence was found that the seismic and wind load were taken into consideration when the during building design.	
Source of Findings:	Document Review: No indication of the seismic and wind load found in documents.	
Suggested Plan of Action:	Have a qualified structural engineer document compliance with the seismic and wind requirements stated in the 2006 BNBC.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standards Part 8 Section 8.17 Design for Lateral Loads and 2006 BNBC Part 6 Section 1.5	
Question:	Can documentation be provided that the building is compliant with the requirements for wind loading and storm surge loadings as detailed in BNBC Part 6 Section 1.5.3?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	No clear information was available in the design document about the storm surge and wind loading for the design of the building.	
Source of Findings:	Document Review: Design review indicates that no credible information is available for wind loading and storm surge loadings.	
Suggested Plan of Action:	Engage a qualified structural engineer to confirm satisfactory structural performance of the buildings under wind loading and storm surge.	

Suggested Deadline Date:	30 Nov 2014	
Standard:	2006 BNBC Part 6 Section 1.5. Compliance may be waived if the Factory Owner provides satisfactory evidence of a cyclone operations plan that includes full evacuation of the factory in advance of any approaching cyclone"	
Question:	Has evidence of structural integrity been provided using a Preliminary Structural Assessment?	
Priority Level:	High	
Non-Compliance Level:		
Description:	A preliminary structural assessment was done by Shahidullah & New Associates Ltd. The assessment report claimed that the building is safe.	
Source of Findings:	Document Review: Document review shows that a preliminary structural assessment was done by Shahidullah & New Associates Ltd. The assessment report claimed that the building is safe.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 8 Section 8.2 Structural Integrity of Existing Factory Buildings	
Question:	If the structure has been previously expanded, was the structural impact on the entire structure analytically evaluated and confirmed by a qualified structural engineer.	
Priority Level:	Medium	
Non-Compliance Level:		
Description:	There is no evidence of previous expansion of the structure. One mezzanine floor is available at level eight, but it is documented.	
Source of Findings:	Document Review: Document review shows that there is no extension of the building's beyond the original construction., Visual Assessment: Visual assessment shows that there is no extension of the building's beyond the original construction.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 8 Section 8.1 Applicability of Building Code.	

Question:	Structural System Type as defined by 2006 BNBC Part 6 Chapter 1 Table 6.1.2.	
Priority Level:		
Non-Compliance Level:		
Description:	The building is a moment resisting frame structure.	
Source of Findings:	Document Review: Confirmed by reviewing documents. , Visual Assessment: The building is a moment resisting frame structure.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	2006 BNBC Part 6 Chapter 1 Table 6.1.2	
Question:	What is the Structural Configuration?	
Priority Level:		
Non-Compliance Level:		
Description:	It is a irregular structure both vertically and horizontally.	
Source of Findings:	Document Review: It is a irregular structure both vertically and horizontally., Visual Assessment: It is a irregular structure both vertically and horizontally.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	2006 BNBC Part 6 Chapter 1 Section 1.3.4	
Question:	Is a clear and redundant load path to resist lateral loads provided?	
Priority Level:	Medium	
Non-Compliance Level:		
Description:	Since there are multiple moment resisting frames, the lateral load path is clear and redundancy is available.	
Source of Findings:	Document Review: Document review shows that there are multiple moment resisting frames and hence clear and redundant lateral load path is available. , Visual Assessment: Visual inspection shows that there are multiple moment resisting frames and hence clear and redundant lateral load path is available.	
Suggested Plan of Action:		

Suggested Deadline Date:		
Standard:	Alliance Standards Part 8 Section 8.17 Design for Lateral Loads and 8.3.3. 2006 BNBC Part 6 Section 1.5	
Question:	Are the available FoS for the columns adequate based on Preliminary calculation?	
Priority Level:	High	
Non-Compliance Level:		
Description:	FoS of columns noted as below: Based on Minimum concrete strength-2045 psi and yield strength-60000 psi. Central Column: 2.03 Corner Column:2.38 Edge Column:1.89 Based on UPV test concrete strength-2220 psi and yield strength-60000 psi. Central Column: 2.12 Corner Column:2.50 Edge Column:1.98 The FoS in all columns are within acceptable limit.	
Source of Findings:	Uploaded Document: The FoS in all columns are within acceptable limit.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Provide results of preliminary calculations in space provided. a) column capacity; FoS > 1.86 - Safe b) column capacity; FoS 1.5 -1.86 - Needs Evaluation c) Column capacity; FoS 1.25-1.5 - Needs Evaluation d) Column capacity; FoS <1.25 - Unsafe In case of a critically low FoS (<1.25), consider Immediate Escalation Protocol	
Question:	Results of ferro-scanning for confirmation of steel rebar in the columns of the lowest tier were satisfactory.	
Priority Level:	Medium	
Non-Compliance Level:		
Description:	Result of ferro-scanning confirms that the number of rebars are matching with the structural design.	
Source of Findings:	Visual Assessment: Result of ferro-scanning confirms that the number of rebars are matching with the structural design.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment	
Question:	What are the full dead and live loads of the floor slabs and decks?	

Priority Level:		
Non-Compliance Level:		
Description:	The measured slab thickness is 6". Therefore, dead load is 75+25(FF)=100 psf. The estimated live load in 3rd & 6th floor is 55 psf and in other floors load is about 42 psf.	
Source of Findings:	Visual Assessment: shows that the measure slab thickness is 6". Therefore, dead load is 75+25(FF)=100 psf. The estimated live load in 3rd & 6th floor is 55 psf and in other floors load is about 42 psf.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Provide information regarding the dead and live loads of the floor slabs and decks.	
Question:	Have provisions been made in floors or decks for a concentrated load (such as heavy equipment, water tanks, stored materials, etc) applied at a location wherever this load acting upon an otherwise unloaded floor would produce stresses greater than those caused by a uniform load?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	There are 5 plastic water tanks, each having capacity of 2 tons of water storage. There is no analytical information on the provision of these tanks in the design.	
Source of Findings:	Visual Assessment: Visually confirmed.	
Suggested Plan of Action:	Engage a qualified structural engineer to confirm and document that provisions have been made to accommodate these water tanks. If provisions have not been made, have a qualified structural engineer develop a remediation plan.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standard Part 8 Section 8.13 and 8.14	
Question:	Where density of operations, storage of materials, or equipment weights require live load capacity in excess of 2.0 kN/m2 (42 psf), do the design documents confirm that the required load capacity exists? Or has the load capacity been analytically confirmed and certified by an Alliance-qualified structural engineer?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	The load due to storage loading in 3rd and 6th floor exceeds the live load of 42	

	psf but there is no analytical confirmation of strength that can support this load.	
Source of Findings:	Visual Assessment: Visual Confirmation	
Suggested Plan of Action:	Have a qualified structural engineer confirm that capacity to support the load is available. Load Plans complying with Alliance Standard Part 8 Section 8.20.4.3 should also be developed.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standards Part 8 Section 8.15 Minimum Floor Design Loads	
Structural System Construction		
Question:	Have all areas of needed maintenance, including areas with efflorescence, dampness, standing water on rooftops, and corrosion been addressed.	
Priority Level:	Medium	
Non-Compliance Level:		
Description:	All areas of needed maintenance, including areas with efflorescence, dampness, standing water on rooftops, and corrosion have been addressed.	
Source of Findings:	Visual Assessment: Visually confirmed.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance	
Question:	The exterior façade is free of cracking.	
Priority Level:	Low	
Non-Compliance Level:		
Description:	The exterior façade is free of cracking.	
Source of Findings:	Visual Assessment: The exterior façade is free of cracking.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.2	

Question:	Are expansion joints provided at appropriate intervals on the exterior façade?
Priority Level:	Low
Non-Compliance Level:	
Description:	Structural expansion joint is provided in the building.
Source of Findings:	Visual Assessment: Visually confirmed.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standard Part 8 Section 8.2 Structural Integrity of Existing Factory Buildings

Question:	Is expansion joint material free from cracking and other forms of deterioration?
Priority Level:	Low
Non-Compliance Level:	2
Description:	Expansion joint material is filled with mortar which is currently free from cracking but preventing adequate expansion joint movement.
Source of Findings:	Photograph: Expansion joint free of cracking.
Suggested Plan of Action:	Remove the blockage material fromm the expansion joint.
Suggested Deadline Date:	30 Nov 2014
Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance

Question:	Is the building free of active signs of water intrusion or ponding due to lack of performance of the façade system?
Priority Level:	Low
Non-Compliance Level:	
Description:	There is no sign of water intrusion, ponding or dampness due to lack of performance of the façade.
Source of Findings:	Visual Assessment: Visual Assessment shows that there is no sign of water intrusion, ponding or dampness due to lack of performance of the façade.
Suggested Plan of Action:	
Suggested Deadline Date:	

Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance	
Question:	Are the performance of key structural elements such as columns, slender columns, flat plates and transfer structures satisfactory?	
Priority Level:	High	
Non-Compliance Level:		
Description:	The performance of the key structural elements is satisfactory.	
Source of Findings:	Visual Assessment: Visual inspection shows that the performance of the key structural elements is satisfactory.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.3.3	
Question:	Is the structural system free of settlement cracking, excessive perimeter separations, and unlevel floors attributable to foundation settlements?	
Priority Level:	High	
Non-Compliance Level:		
Description:	The structural system is free of settlement, cracking, excessive perimeter separation etc. which shows no noticeable settlement has occurred.	
Source of Findings:	Visual Assessment: Visual inspection shows that the structural system is free of settlement, cracking, excessive perimeter separation etc.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 8 Structural Design Section 8.2 Structural Integrity of Existing Factory Buildings	
Question:	Is the structural system free of deflections (sagging), rotations (twisting), perceivable vibrations, or other noticeable movements of the structure?	
Priority Level:	High	
Non-Compliance Level:		
Description:	The structural system is free of deflections (sagging), rotations (twisting), perceivable vibrations, or other noticeable movements of the structure.	
Source of Findings:	Visual Assessment: Visual Assessment shows that the structural system is	

	free of deflections (sagging), rotations (twisting), perceivable vibrations, or other noticeable movements of the structure.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 8 Structural Design Section 8.2 Structural Integrity of Existing Factory Buildings	
Question:	Is the structural system free of distress, separations, or cracking that indicates lack of performance or overstress of the lateral load-carrying system?	
Priority Level:	High	
Non-Compliance Level:		
Description:	There is no visible sign of distress or crack that may indicate lack of performance or over-stress of the lateral load-carrying system.	
Source of Findings:	Visual Assessment: Visual Assessment shows that there is no visible sign of distress or crack that may indicate lack of performance or over-stress of the lateral load-carrying system.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.3.3	
Question:	Is the structural system free of distress, settlement, shifting, or cracking in columns or walls?	
Priority Level:	High	
Non-Compliance Level:	1	
Description:	Masonry cracks and minor cracks were found on beams at 1st & 6th Floor. No cracks found on the columns.	
Source of Findings:	Visual Assessment: Visually confirmed.	
Suggested Plan of Action:	Have a qualified structural engineer provide further testing and analysis of distress, settlement, shifting, or cracking in columns or walls and provide a remediation plan to correct noted issues.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standard Part 8 Section 8.3.3	
Question:	Have any previous repairs to correct structural deficiencies or to reinforce the	

	existing structure been completed?	
Priority Level:		
Non-Compliance Level:		
Description:	No strengthening or retrofitting has been done on the existing structural members of the building.	
Source of Findings:	Visual Assessment: Visually confirmed.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:		
Question:	Was masonry-chip aggregate concrete (MCAC) used in the construction of the building?	
Priority Level:		
Non-Compliance Level:		
Description:	The frame of the building is made of MCAC	
Source of Findings:	Visual Assessment: The frame of the building is made of MCAC	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 7 Building Materials Section 7.2 Masonry-chip aggregate concrete (MCAC)	
Question:	If yes, have the structural members constructed with MCAC been investigated by an appropriate program of in-situ testing and representative destructive testing or core samples?	
Priority Level:	Medium	
Non-Compliance Level:		
Description:	The column stress calculated taking into account the strength of concrete either from standard or from test result of NDT, does not show any over stress. Nondestructive testing was completed during our investigation.	
Source of Findings:	Visual Assessment: The column stress calculated taking into account the strength of concrete either from standard or from test result of NDT.	
Suggested Plan of Action:		

Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 7 Building Materials Section 7.2 Masonry-chip aggregate concrete (MCAC)	
Question:	Are any structural elements constructed with MCAC exposed to rainfall or other sources of water sealed with a protective coating to prevent water intrusion?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	The roof of the building is made of MCAC and no protective sealing was found.	
Source of Findings:	Visual Assessment: Visually confirmed.	
Suggested Plan of Action:	Provide a protective coating at the structural elements constructed with MCAC exposed to rainfall or other sources of water. Have protective coating approved by the Alliance or a qualified structural engineer. Otherwise, provide 2% slope on the exposed surface to prevent accumulation of water.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standards Part 7 Building Materials Section 7.2 Masonry-chip aggregate concrete (MCAC).	
Question:	Are structural steel members free of corrosion, physical damage or other types of deterioration?	
Priority Level:	Medium	
Non-Compliance Level:		
Description:	Structural steel members are not available.	
Source of Findings:	Visual Assessment: Visual Assessment shows that structural steel members are not available.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.26	
Question:	For post-tensioned reinforced concrete systems or elements, cored holes have not compromised the post-tensioned strands.	
Priority Level:	High	
Non-Compliance Level:		

Description:	Usually there is no post tension RC system.	
Source of Findings:	Visual Assessment: Visual Assessment shows that, there is no post tension RC system.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Not Applicable	
Question:	Is the structure free from any major/progressive distress?	
Priority Level:	High	
Non-Compliance Level:		
Description:	There is no sign of progressive distress visible in the structure.	
Source of Findings:	Visual Assessment: Visual Assessment shows that there is no sign of progressive distress visible in the structure.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 8 Section 8.3.3	
Question:	Are all non-structural elements suspended from, attached to, or resting atop the structure adequately anchored and braced to resist earthquake forces?	
Priority Level:	Medium	
Non-Compliance Level:	1	
Description:	There are racks at middle portion of 1st floor which are not braced for earthquake force. There are 5 plastic water tanks on north west corner of roof with considerable height, which are not braced or anchored properly.	
Source of Findings:	Visual Assessment: Visually confirmed.	
Suggested Plan of Action:	Adequately anchor and brace all non-structural elements to resist earthquake forces to comply with the BNBC and Alliance Standard.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standards Part 8 Section 8.18 Seismic Bracing of Key Non-Structural Elements and 2006 BNBC Part 6	
Question:	If the building is currently being renovated or expanded, are the Construction Practices and Safety requirements of Section 9 being followed?	

Priority Level:	Medium
Non-Compliance Level:	
Description:	No renovation or expansion work is ongoing.
Source of Findings:	Visual Assessment: No renovation or expansion work is ongoing.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standard Part 9 Construction Practices and Safety.

Structural Safety Programs

Question:	Have Load Plans been prepared for each floor documenting the actual maximum operational loading that is intended and/or allowable on each floor.
Priority Level:	Low
Non-Compliance Level:	3
Description:	Floor Load Plans are available. But it cannot accepted without design report.
Source of Findings:	Visual Assessment: Visually confirmed.
Suggested Plan of Action:	Have a qualified structural engineer develop Floor Loading Plans per the requirements of Part 8 Section 8.20.5.3
Suggested Deadline Date:	30 Nov 2014
Standard:	Alliance Standard Part 8 Section 8.10 Floor Loading Plans (Load Plans)

Question:	Are Floor Load Plans posted as required?
Priority Level:	Low
Non-Compliance Level:	3
Description:	Floor Load Plans are posted, but not as per standard. They are not acceptable as the design report is not available.
Source of Findings:	Document Review: Presence of Floor Load Plans visually confirmed. , Visual Assessment: Floor load plan visually confirmed.
Suggested Plan of Action:	Have a qualified structural engineer prepare load plans including the information required in Section 8.20 of the Alliance Standard and have it posted in all required location.
Suggested Deadline Date:	30 Nov 2014

Standard:	Alliance Standard Part 8 Section 8.20.5.3	
Question:	Are floor loads in compliance with posted plans?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	Floor Load Plans are not as per the standard. But it is unacceptable without the design report.	
Source of Findings:	Document Review: Confirmed by reviewing documents.	
Suggested Plan of Action:	Have a qualified structural engineer prepare load plans including the information required in Section 8.20 of the Alliance Standard and have it posted in all required location.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standard Part 8 Section 8.10 Floor Loading Plans (Load Plans).	
Question:	Are areas used for storage of work materials and work products, clearly marked to indicate the acceptable loading limits as described in the Load Plan for that floor?	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	There was no marking on the floor to designate spaces and height for storage of work materials.	
Source of Findings:	Visual Assessment: Visually confirmed.	
Suggested Plan of Action:	Have a qualified structural engineer prepare a load plan for each floor and have the floors marked for designating storage area as per the developed load plan. Provide signage or the appropriate markings at all areas used for storage to indicate the acceptable loading limits detailed in the Load Plan.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standard Part 8 Section 8.11 Floor Load Markings	
Question:	Is a program in place to ensure that the live loads for which a floor or roof is or has been designed will not be exceeded?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	There is no program that ensures the designated load in each floor will not be exceeded.	
Source of Findings:	Document Review: Confirmed by reviewing documents.	

Suggested Plan of Action:	Develop a program to ensure that all live loads for which a floor or roof has been designed for will not be exceeded. The designated Load Manager shall oversee this program and ensure it is enforced.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standard Part 13 Section 13.7 and Part 8 Section 8.9.	
Question:	Is a designated representative (Factory Load Manager), who is onsite full time, trained regarding the structural floor capacity, and serves as an ongoing vendor resource and monitor of operational factory floor loadings?	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	There is no designated representative (Factory Load Manager), who is on site full time, trained regarding the structural floor capacity, and serves as an ongoing vendor resource and monitor of operational factory floor loadings.	
Source of Findings:	Document Review: There is no evidence of a designated load manager being present in the factory., Visual Assessment: Confirmed by visual assessment and document review.	
Suggested Plan of Action:	Designate a representative as the Factory Load Manager. The Factory Owner shall ensure that at least one individual, the Factory Load Manager who is located onsite full time at the factory, is trained in calculating operational load characteristics of the specific factory. The Factory Load Manager shall serve as an ongoing resource to RMG vendors and be responsible to ensure that the factory operational loads do not at any time exceed the factory floor loading limits as described on the Floor Loading Plans.	
Suggested Deadline Date:	30 Nov 2014	
Standard:	Alliance Standards Part 8 Section 8.9 Factory Load Manager	
Question:	For post-tensioned reinforced concrete systems or elements, is a program in place to ensure post-tensioned strands are located before core drilling begins?	
Priority Level:	Medium	
Non-Compliance Level:		
Description:	Post-tensioned reinforced concrete systems or elements are not available.	
Source of Findings:	Visual Assessment: Post-tensioned reinforced concrete systems or elements are not available.	
Suggested Plan of Action:		
Suggested Deadline Date:		

Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance	