ILLINOIS VETERANS' HOME QUINCY CAMPUS MASTER PLAN

EXISTING CONDITIONS APPENDIX

REPORT 2 OF 4

DECEMBER 2018

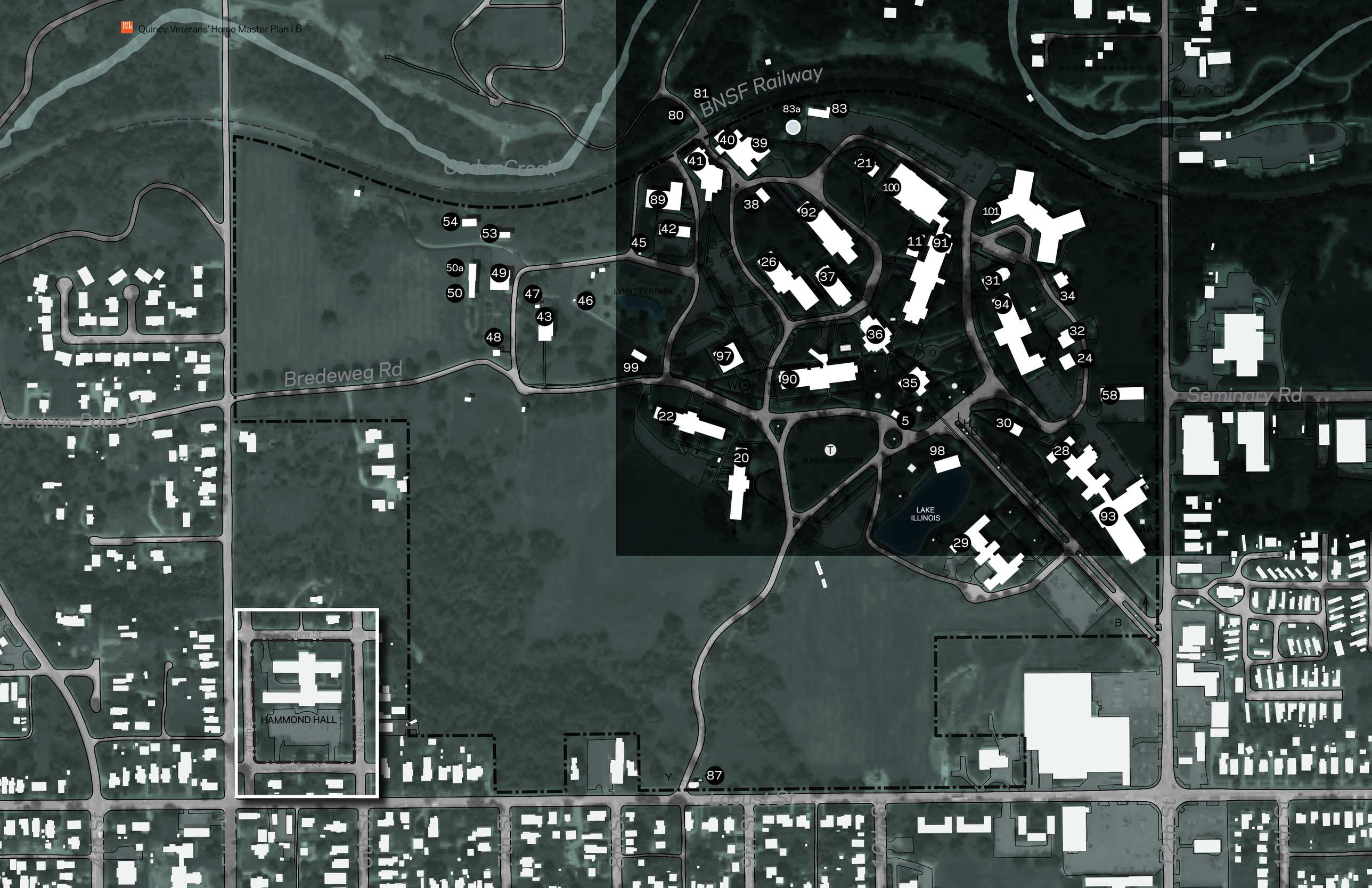
CDB Project Number – 040-010-110

PART 5. BUILDING INVENTORY & TECHNICAL REPORT

Report I: Building Inventory Summary 04
Report II: Important Historic Buildings Inventory 12
Report III: Environmental Existing Conditions 28
Report IV: Site Utilities - Tunnels Report 128
Report V: Mechanical Conditions Report 144
Report VI: Electrical Conditions Report 202
Report VII: Plumbing Conditions Report 252
Report VIII: Fire protection & Suppression Report 292
Report IX: Structural Conditions Report 302

[This page intentionally left blank]

I. BUILDING INVENTORY SUMMARY


BNSF Railway
Cedar Creek
Bredeweg Rd
Gardner Park Dr
Seminary Rd
LYNN DEER PARK
SUNKEN GARDEN
LAKE ILLINOIS
HAMMOND HALL
Sycamore St
N 7th St
N 8th St
Spruce St
Locust St
81
80
83a
83
40
39
41
21
100
101
89
38
92
54
53
42
45
11
91
26
37
50a
49
50
47
46
43
31
34
94
48
36
32
24
99
97
90
35
58
22
5
30
20
98
28
93
29
B
87

SITE BUILDINGS & FEATURES

5	W0601	BUS STATION
11	W0608	ROLAND BARRACKS
20	W0610	SOMERVILLE DOMICILIARY
21	W0611	FOGG BARRACKS
22	W0612	ANDERSON BARRACKS
24	W0637	VEHICLE GARAGE
26	W0618	FLETCHER INFIRMARY
28	W0621	ANDREW BARRACKS
29	W0617	REIG - ADMINISTRATION
30	W0606	LIBRARY
31	W0603	NORTHERN GUEST HOUSE
32	W0653	TRUCK MAINTENANCE GARAGE
34	W0614	MEDICAL STAFF BUILDING
35	W0604	OLD ADMINISTRATION
36	W0613	SMITH HALL
37	W0600	LIPPINCOTT HALL
38	W0634	ENGINEERING BUILDING
39	W0654	LAWN GARAGE
40	W0615	POWER PLANT
41	W0605	EQUIPMENT STORAGE
42	W0623	TRADESMAN WORKSHOP
43	W0622	SUPERINTENDENT'S RESIDENCE
45	W0652	CONDENSATE PUMP HOUSE
46	W0641	DEER FEED SHED
47	W0602	HOUSEMAN'S QUARTERS
48	W0631	5TH STREET GATEHOUSE
49	W0627	CARPENTER SHOP
50	W0624	GREENHOUSE
50a	N/A	STORAGE/GARAGE
53	W0628	LUMBER SHED
54	W0626	STORAGE BUILDING
58	W0635	NEW TRUCK GARAGE
80	W0638	BUS GARAGE
81	W0632	STORAGE/CAVE
83	W0616	WATER TREATMENT PLANT
83a	N/A	WATER TOWER
87	W0607	8TH STREET GATEHOUSE
89	W0645	EHLE LAUNDRY
90	W0647	MARKWORD INFIRMARY
91	W0650	KENT INFIRMARY
92	W0643	NIELSON DINING/KITCHEN/STORE
93	W0644	SCHAPERS HOSPITAL
94	W0646	ELMORE INFIRMARY
97	W0649	ALL FAITHS CHAPEL
98	W0658	AMERICAN LEGION RECREATION BUILDING
99	W0659	AMVETS DEER PARK PAVILION
100	W0660	MULTI-PURPOSE THERAPY BUILDING
101	W0661	FIFER SKILLED CARE FACILITY

A	ARTILLERY
B	STONE GATE POSTS
C	BLUE STAR MEMORIAL SIGN
D	HELICOPTER
E	TANK
F	AMBULANCE
G	TIME CAPSULE MARKER
H	FLAGPOLE
I	FOUNTAIN
J	WWII MEMORIAL
K	IRAQ WAR MEMORIAL
L	WOUNDED VETS MEMORIAL
M	KOREAN MEMORIAL
N	VIETNAM WAR MEMORIAL
P	SHELTER
Q	SHELTER
R	SUN DIAL
S	PICNIC PAVILION
T	FOUNTAIN
U	TANK
V	PRIVATE JOE FIFER
W	ETERNAL FLAME
X	PICNIC PAVILION
Y	LIGHTED ENTRY GATE
Z	SHELTER
AA	GAZEBO
BB	CANNON

STATE ID	IVH ID	BUILDING NAME	DATE CONSTRUCTED	DATE BUILT	GRS SQ FEET	FLOORS	BELOW GRADE	BUILDING USE	OCCUPANCY	SERVICE TYPE	BEDS OCCUPIED	BEDS VACANT	HISTORIC SIGNIFICANCE	Environmental				
														Asbestos	LBP	Mold	Universal Waste	UST/AST
WO0601	5	BUS STATION	1935 (1905?)	1935 (1905?)	264	1		Support/Logistics	Occupied				Yes (IHPA 92)	NO	3	2	1	NO
W0608	11	ROLAND BARRACKS	1905/06	1907	5,625	2			Vacant				Yes (IHPA 92)	5	5	4	5	NO
W0610	20	SOMERVILLE DOMICILIARY	1909	1909	38,680	4	1	Healthcare	Occupied	Domiciliary	28	18	Yes (IHPA 92)	3	3	3	2	NO
W0611	21	FOGG BARRACKS	1905/06	1907	4,395	2			Vacant				Yes (IHPA 92)	5	4	4	5	NO
W0612	22	ANDERSON BARRACKS	1909	1909	38,680	4	1	Healthcare	Occupied	Domiciliary	12	30	Yes (IHPA 92)	3	3	3	1	NO
W0637	24	VEHICHLE GARAGE	1951	1951	924	1		Support/Logistics	Occupied				Yes (IHPA 2012)	3	2	3	1	NO
W0618	26	FLETCHER INFIRMARY	1954	1954	32,922	3	1		Vacant				Yes (IHPA 2012)	3	3	3	4	NO
W0621	28	ANDREW BARRACKS	1931	1936	20,188	2	1	Office	Partial occupied				Yes (IHPA 92)	3	3	3	2	NO
W0617	29	REIG - ADMINISTRATION	1935	1936	20,188	2	1	Office & Cultural	Occupied				Yes (IHPA 92)	3	4	4	3	NO
WO606	30	LIBRARY	1905	1905	5,910	2		Cultural	2nd Flr Vacant				Yes (IHPA 92)	2	3	3	2	NO
WO603	31	NORTHERN GUEST HOUSE	1886	1886	6,949	2		Residential lodging	Occupied				Yes (IHPA 92)	2	3	2	2	NO
W0653	32	TRUCK MAINTENANCE GARAGE	1927	1927	4,800	3	1	Support/Logistics	Storage				Yes (IHPA 92)	4	3	3	2	2
W0614	34	MEDICAL STAFF BUILDING	1912	1912	3,464	3	1	Residential lodging	Occupied				Yes (IHPA 92)	2	2	2	2	NO
WO604	35	OLD ADMINISTRATION	1885	1886	17,115	4	1	Office	Occupied				Yes (IHPA 92)	3	3	3	2	NO
W0613	36	SMITH HALL	1935	1935	18,286	2	1	Community	Occupied				Yes (IHPA 2012)	3	2	3	2	NO
W0600	37	LIPPINCOTT HALL	1938	1939	19,324	3	1	Auditorium	Occupied				Yes (IHPA 92)	3	2	3	2	NO
W0634	38	ENGINEERING BUILIDNG	1911	1911	2,625	3	1	Office	Occupied				Yes (IHPA 92)	1	2	3	2	NO
W0654	39	LAWN GARAGE	1886	1886	4,169	1		Support/Logistics	Storgae				Yes (IHPA 92)	3	3	3	2	NO
W0615	40	POWER PLANT	1886	1886	17,004	2	1	Support/Logistics	Occupied				Yes (IHPA 92)	3	3	4	4	NO
WO605	41	EQUIPMENT STORAGE	1886	1886	24,889	4	1	Support/Logistics	Storage				Yes (IHPA 92)	3	4	4	2	NO
W0623	42	TRADESMAN WORKSHOP	1948	1948	3,805	1		Support/Logistics	Occupied					3	3	3	2	NO
W0622	43	SUPERINTENDENT'S RESIDENCE	1854	1854	9,203	3	1		Vacant				Yes (IHPA 92)	3	3	3	2	NO
W0652	45	CONDENSATE PUMP HOUSE	1955	1955	49	1		Support/Logistics						NO	NO	1	1	NO
W0641	46	DEER FEED SHED	Pre- 1879	Pre- 1879		1		Support/Logistics					Possible Future Inclusion	NO	NO	2	1	NO
WO602	47	HOUSEMAN'S QUARTERS	1854	1854	152	1		Support/Logistics					Yes (IHPA 92)	5	5	4	3	NO
W0631	48	5TH STREET GATEHOUSE	1886	1886	190	1		Support/Logistics					Yes (IHPA 92)	4	4	3	2	NO
W0627	49	CARPENTER SHOP	Pre-1879	Pre-1879	7,104	2		Support/Logistics	Occupied				Yes (IHPA 92)	3	3	3	2	NO
W0624	50	GREENHOUSE	Pre-1879	Pre-1879	2,791	1		Support/Logistics					Yes (IHPA 92)	NO	3	3	2	NO
W0628	53	LUMBER SHED	Pre-1879	Pre-1879	2,656	1		Support/Logistics	Storage				Yes (IHPA 92)	NO	3	3	2	NO
W0626	54	STORAGE BUILDING	Pre-1879	Pre-1879	1,036	1		Support/Logistics	Storage				Yes (IHPA 92)	NO	3	3	2	NO
W0635	58	NEW TRUCK GARAGE	2011	2010	6,000	1	1	Support/Logistics	Occupied					1	1	1	1	NO
W0651	59	KOCH CEMETERY BUILDING		1986	2,048	1		Support/Logistics	Occupied					2	NO	2	1	NO
WO638	80	BUS GARAGE	1951	1951	764	1		Support/Logistics	Storage					NO	4	4	4	NO
W0632	81	STORAGE/CAVE	1894	1894	767	1	1	Support/Logistics	Storage				Yes (IHPA 92)	NO	4	4	5	NO
W0616	83	WATER TREATMENT PLANT	1946	1946	1,885	1		Support/Logistics	Occupied				Yes (IHPA 2012)	1	1	2	1	2
W0607	87	8TH STREET GATEHOUSE	1886	1886	370	1		Support/Logistics					Yes (IHPA 92)	3	3	3	2	NO
W0645	89	EHLE LAUNDRY	1963	1963	9,120	2	1	Support/Logistics	Occupied					4	3	4	2	2

STATE ID	IVH ID	BUILDING NAME	MECHANICAL	ELECTRICAL	PLUMBING SUMMARY								Fire protection & suppression	STRUCTURAL	ARCHITECT
					Water Service Entrance	Under-ground Plumbing	Above Grade Sanitary - Storm	Cold Water Distribution	Hot Water Distribution	Hot Water Generation	Fixtures & Fittings	Overall Plumbing Rating			
WO0601	5	BUS STATION	P	F+G	NA	NA	NA	NA	NA	NA	NA	NA	NA	G	
W0608	11	ROLAND BARRACKS	NA	P	NA	P	P	P	P	P	P	P	NA	Sched. For Demo	Robert Bruce Watson, Architect
W0610	20	SOMERVILLE DOMICILIARY	F	F-P	G	P	F+P	F+P	F + P	G	G-F	F + P	G-F	F-P	
W0611	21	FOGG BARRACKS	P	P	NA	P	P	P	P	P	P	P	NA	F-P	Robert Bruce Watson, Architect
W0612	22	ANDERSON BARRACKS	F	F-P	F	P	F+P	F+P	F + P	G	G-F	F + P	G-F	F	
W0637	24	VEHICHLE GARAGE	F	?	NA	NA	NA	NA	NA	NA	NA	NA	NA	G	
W0618	26	FLETCHER INFIRMARY	F	F-P	G	F-P	F-P	F-P	F	G	F-P	F-P	G	G	State of IL, Dept. of Public Works, C. Herrick Hammond - Supervising Architect Perkins & Will, Associate Architect
W0621	28	ANDREW BARRACKS	F	F	F-P	P	P	F-P	F-P	G	F-P	F-P	F-P	F	State of IL, Dept. of Purchases & Construction C. Herrick Hammond - Supervising Architect
W0617	29	REIG - ADMINISTRATION	F	F	G	P	F-P	F-P	F	G	G-F	F	G*	F	State of IL, Dept. of Public Works, C. Herrick Hammond - Supervising Architect
WO606	30	LIBRARY	P	P	G	P	F-P	F-P	F	G	F	F	G*	F-G	State of Illinois, Office of Supervising Architect Robert Bruce Watson, Associate Architect
WO603	31	NORTHERN GUEST HOUSE	F-P	F-P	G	P	F	F-P	F-P	G	F	F	G-F	F	
W0653	32	TRUCK MAINTENANCE GARAGE	G	F-P	F	P	P	F-P	G	G	F-P	F-P	NA	F-P	
W0614	34	MEDICAL STAFF BUILDING	G+P	F	F	P	F-P	F-P	F-P	G	F-P	F-P	NA	F-G	
WO604	35	OLD ADMINISTRATION	P	F-P	F-P	P	P	P	F-P	G	F-P	F-P	NA	G	S. M. Randolph
W0613	36	SMITH HALL	F-P	F	G	P	F	G	G	G	G-F	G-F	G*	F-G	
W0600	37	LIPPINCOTT HALL	F+G	F	F+G	P	F-P	F-P	F	G	F-P	F-P	G*	F-G	State of IL, Dept. of Purchases & Construction C. Herrick Hammond - Supervising Architect
W0634	38	ENGINEERING BUILIDNG	F	F	F	P	G-F	F	G	G	F	F	NA	F	
W0654	39	LAWN GARAGE	F	P	G	P	P	F	F	G	P	P	NA	N/A	
W0615	40	POWER PLANT	F+G	F-P	G	P	F-P	F	F	G	F-P	F-P	NA	F-P	
WO605	41	EQUIPMENT STORAGE	P	P	G	P	P	G+P	G+P	G	P	P	*	F	
W0623	42	TRADESMAN WORKSHOP	G+P	F	F	F-P	F-P	F	F	G	F-P	F	NA	F-G	
W0622	43	SUPERINTENDENT'S RESIDENCE	F	F	NA	P	P	P	P	P	P	P	NA	F	
W0652	45	CONDENSATE PUMP HOUSE	F	F	NA	NA	NA	NA	NA	NA	NA	NA	NA	G	
W0641	46	DEER FEED SHED	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	G	
WO602	47	HOUSEMAN'S QUARTERS	NA	P	NA	P	P	P	P	P	NA	NA	NA	P	
W0631	48	5TH STREET GATEHOUSE	NA	F - P	NA	P	P	P	P	P	P	P	NA	G	
W0627	49	CARPENTER SHOP	P	P	F	P	F-P	F	F	G	F-P	F-P	NA	F	
W0624	50	GREENHOUSE	P	F	F-P	NA	P	P	NA	NA	P	P	NA	F-P	
W0628	53	LUMBER SHED	NA	F	NA	NA	NA	NA	NA	NA	NA	NA	NA	P	
W0626	54	STORAGE BUILDING	NA	P	NA	NA	NA	NA	NA	NA	NA	NA	NA	F-P	
W0635	58	NEW TRUCK GARAGE	G	G	G	G	G	G	G	G	G	G	NA	G	
W0651	59	KOCH CEMETERY BUILDING	NA	G	F	G	G	G	G	G	G	G	NA	G	
WO638	80	BUS GARAGE	NA	?	NA	NA	NA	NA	NA	NA	NA	NA	NA	F	
W0632	81	STORAGE/CAVE	NA	?	NA	NA	NA	NA	NA	NA	NA	NA	NA	F	
W0616	83	WATER TREATMENT PLANT	G	G	G	G	G	G	G	G	G	G	NA	G	
W0607	87	8TH STREET GATEHOUSE	?	?	NA	P	P	P	P	P	P	P	NA	F	
W0645	89	EHLE LAUNDRY	P	P	F	F-P	F	F	F	G+F	F	F	NA	G	

STATE ID	IVH ID	BUILDING NAME	DATE CONSTRUCTED	DATE BUILT	GRS SQ FEET	FLOORS	BELOW GRADE	BUILDING USE	OCCUPANCY	SERVICE TYPE	BEDS OCCUPIED	BEDS VACANT	HISTORIC SIGNIFICANCE	Environmental				
														Asbestos	LBP	Mold	Universal Waste	UST/AST
W0647	90	MARKWORD INFIRMARY	1963	1964	27,504	3	1	Healthcare	Occupied	Skilled & Intermediate care	96	10		3	NO	3	2	2
W0650	91	KENT INFIRMARY	1970	1972	58,850	4	1	Healthcare (OLD)	Vacant		0	154		3	NO	3	2	2
W0643	92	NIELSON DINING/KITCHEN/STORE	1963	1963	40,929	3	1	Community Living/Recreation Center	Desire for new building to replace					2	NO	3	2	NO
W0644	93	SCHAPERS HOSPITAL	1963	1963	35,716	2	1	Healthcare	Occupied	Dementia	47	6		3	NO	3	2	NO
W0646	94	ELMORE INFIRMARY	1963	1963	34,126	3	1	Healthcare	Occupied	Skilled & Intermediate care	78	19		3	3	3	2	NO
W0649	97	ALL FAITHS CHAPEL	1969	1972	5,357	1		Religious	Occupied				Possible Future Inclusion	2	NO	2	1	NO
W0658	98	AMERICAN LEGION RECREATION BUILDING	1990	1989	2,960	1		Pavillion	Pavillion					NO	NO	3	2	NO
W0659	99	AMVETS DEER PARK PAVILLION	1990	1989	736	1		Pavillion	Pavillion					NO	NO	3	2	NO
W0660	100	MULTI-PURPOSE THERAPY BUILDING	1993	1995	41,100	2	1	Healthcare	Occupied	Therapy				1	NO	2	2	NO
W0661	101	FIFER SKILLED CARE FACILITY	2000	2002	43,077	2	1	Healthcare	Occupied	Skilled-care (2-beds with J&J bath)	100	6		1	NO	2	2	2
W0655	23&92	INTERCONNECT			853	1								2	NO	2	1	NO
W0656		TUNNEL SYSTEM			27,250	1	1							5	4	5	3	NO
W0657		WOOD FRAME STORAGE			156	1								NO	NO	3	1	NO
W0658		SITE ELECTRICAL DISTRIBUTION			NA	1	1							NO	NO	NO	2	NO

BUILDING USE LEGEND

- Residential
- Residential Lodging
- Therapy Healthcare
- Office
- Cultural
- Community/Dining/ Recreational center
- Auditorium
- Religious
- Support/ Logistics
- Vacant

ENVIRONMENTAL LEGEND

Poor	5
Fair to Poor	4
Fair	3
Good to Fair	2
Good	1
Not observed	

MECHANICAL, ELECTRICAL & PLUMBING AND FIRE PROTECTION LEGEND

Poor	P
Fair to Poor	F-P
Fair	F
Fair to Good	F-G
Good	G
Poor & Fair	P+F
Fair & Good	F+G
Poor & Good	P + G
NA	Not applicable
?	Unknown/ Not surveyed
*	Fire Protection System Partially Incomplete

STATE ID	IVH ID	BUILDING NAME	MECHANICAL	ELECTRICAL	PLUMBING SUMMARY								Fire protection & suppression	STRUCTURAL	ARCHITECT
					Water Service Entrance	Under-ground Plumbing	Above Grade Sanitary - Storm	Cold Water Distribution	Hot Water Distribution	Hot Water Generation	Fixtures & Fittings	Overall Plumbing Rating			
W0647	90	MARKWORD INFIRMARY	P	F-P	F-P	F-P	F+P	F+P	G-F	G	G-F	F	G-F	F-G	
W0650	91	KENT INFIRMARY	P	F-P	NA	P	P	P	P	P	P	P	NA	G	
W0643	92	NIELSON DINING/KITCHEN/STORE	F-P	F-P	G	F	F	F	F	G	F	F	G*	F-G	Lorentz A. Johanson, State Supervising Architect Holabird & Root, Associate Architect
W0644	93	SCHAPERS HOSPITAL	F-P	F-P	F	F	F	F	F	G	G-F	F	G-F	F-G	State of IL, Dept. of Public Works, A.G. Paja - Supervising Architect Holabird & Root, Associate Architect
W0646	94	ELMORE INFIRMARY	F-P	F	F	F	F+P	F	F	G	G-F	F	G-F	F-G	Lorentz A. Johanson, State Supervising Architect Holabird & Root, Associate Architect
W0649	97	ALL FAITHS CHAPEL	G	G	G	G	G	G	G	G	G	G	G	F-G	State of IL, Dept. of Public Works, Architect Holabird & Root, Associate Architect
W0658	98	AMERICAN LEGION RECREATION BUILDING	F	F	G	G	G	G	G	G	G	G	NA	F-P	Lorentz A. Johanson, State Supervising Architect Holabird & Root, Associate Architect
W0659	99	AMVETS DEER PARK PAVILLION	G	F	G	G	G	G	G	G	G	G	NA	G	Lorentz A. Johanson, State Supervising Architect M. R. Beckstrom, Associate Architect
W0660	100	MULTI-PURPOSE THERAPY BUILDING	F+G	G	G	G	G	G	G	G	G	G	G	G	Pepping, Stone, Bach & Associates, Architect
W0661	101	FIFER SKILLED CARE FACILITY	G	G	G	G	G	G	G	G	G	**G**	G	G	Pepping, Stone, Bach & Associates, Architect
W0655	23&92	INTERCONNECT	NA		NA	NA	NA	NA	NA	NA	NA	**NA**	NA	G	
W0656		TUNNEL SYSTEM		NA	NA	NA	NA	NA	NA	NA	NA	**NA**	NA	-	
W0657		WOOD FRAME STORAGE	?	?	NA	NA	NA	NA	NA	NA	NA	**NA**	NA	-	
W0658		SITE ELECTRICAL DISTRIBUTION	NA	F - P	NA	NA	NA	NA	NA	NA	NA	**NA**	NA		

[This page intentionally left blank]

II. IMPORTANT HISTORIC BUILDINGS INVENTORY

5	W0601	BUS STATION
11	W0608	ROLAND BARRACKS
20	W0610	SOMERVILLE DOMICILIARY
21	W0611	FOGG BARRACKS
22	W0612	ANDERSON BARRACKS
24	W0637	VEHICLE GARAGE
26	W0618	FLETCHER INFIRMARY
28	W0621	ANDREW BARRACKS
29	W0617	REIG - ADMINISTRATION
30	W0606	LIBRARY
31	W0603	NORTHERN GUEST HOUSE
32	W0653	TRUCK MAINTENANCE GARAGE
34	W0614	MEDICAL STAFF BUILDING
35	W0604	OLD ADMINISTRATION
36	W0613	SMITH HALL
37	W0600	LIPPINCOTT HALL
38	W0634	ENGINEERING BUILDING
39	W0654	LAWN GARAGE
40	W0615	POWER PLANT
41	W0605	EQUIPMENT STORAGE
42	W0623	TRADESMAN WORKSHOP
43	W0622	SUPERINTENDENT'S RESIDENCE
45	W0652	CONDENSATE PUMP HOUSE
46	W0641	DEER FEED SHED
47	W0602	HOUSEMAN'S QUARTERS
48	W0631	5TH STREET GATEHOUSE
49	W0627	CARPENTER SHOP
50	W0624	GREENHOUSE
50a	N/A	STORAGE/GARAGE
53	W0628	LUMBER SHED
54	W0626	STORAGE BUILDING
58	W0635	NEW TRUCK GARAGE
80	W0638	BUS GARAGE
81	W0632	STORAGE/CAVE
83	W0616	WATER TREATMENT PLANT
83a	N/A	WATER TOWER
87	W0607	8TH STREET GATEHOUSE
89	W0645	EHLE LAUNDRY
90	W0647	MARKWORD INFIRMARY
91	W0650	KENT INFIRMARY
92	W0643	NIELSON DINING/KITCHEN/STORE
93	W0644	SCHAPERS HOSPITAL
94	W0646	ELMORE INFIRMARY
97	W0649	ALL FAITHS CHAPEL
98	W0658	AMERICAN LEGION RECREATION BUILDING
99	W0659	AMVETS DEER PARK PAVILION
100	W0660	MULTI-PURPOSE THERAPY BUILDING
101	W0661	FIFER SKILLED CARE FACILITY

BUILDING IDENTIFICATION AND NUMBERING

The clear identification of several buildings has proven elusive due to the fact that there are a number of different resources for identification and they do not always agree regarding building name and/or number. This is further complicated by the fact that buildings may have changed function several times through the years. Also, some of the resource information is not clearly legible. These resources include:

A. Letter from the Illinois Historic Preservation Agency dated March 16, 1992 in which Appendix A contains a list of buildings deem eligible for nomination to the National Register of Historic Places
B. Map of Illinois Veterans Home, Quincy, Illinois currently on the QVH website
C. Site Plan, Illinois Veteran's Home (undated) provided to HPZS by HOK
D. Figure 5 located in IL HABS Report No. A-2012-1 (c. 1885)
E. Figure 6 located in IL HABS Report No. A-2012-1 (c. 1890)
F. Figure 7 located in IL HABS Report No. A-2012-1 (1919)
G. Figure 8 located in IL HABS Report No. A-2012-1 (1927)
H. Figure 9 located in IL HABS Report No. A-2012-1 (c. 1936-39)
I. Figure 10 located in IL HABS Report No. A-2012-1 (1950)
J. Figure 11 located in IL HABS Report No. A-2012-1 (c. 1955)
K. Figure 12 located in IL HABS Report No. A-2012-1 (1965)
L. Figure 13 located in IL HABS Report No. A-2012-1 (1971)
M. Figure 14 located in IL HABS Report No. A-2012-1 (c. 1995)
N. Figure 15 located in IL HABS Report No. A-2012-1 (2012)

Specific buildings where there is conflicting information include:

1. HPZS Map Reference #80 – Bus Garage. (State ID #W0638) In the HABS report this is building has also been identified as a Garbage Disposal Plant (Figure 9) and Storage? (Figure 15)
2. HPZS Map Reference #48 – 5th Street Gate House. (State ID #W0631) The IHPA eligibility letter refers to this building as Lumber Storage #53. The HABS report also refers to this as the Chauffer's Cottage (Figure 11).
3. HPZS Map Reference #50a – Storage building. This is a frame structure attached to the Greenhouse #50 (State ID #W0624) and is of equal or greater size than the greenhouse, however its footprint is seldom shown as distinguishable from the greenhouse. It needs to be clarified as to whether or not this is a separate structure, and if so, what the appropriate designation should be.
4. HPZS Map Reference #54 – Power House (?). (State ID #W0626 – Storage Building #54) There is some evidence that this may have been the power plant for the Dudley Estate, one of the earliest such facilities in Quincy. Also identified in the HABS Report as a Paint Shop (Figure 9).
5. HPZS Map Reference #39 – Lawn Garage. (State ID # W0654) In much of the documentation this building is referenced as an extension of the Power Plant #40. The HABS report also refers to it as the Laundry (Figure 11)

HISTORIC BUILDINGS

BUS STATION
STATE ID # W0601
VH ID #5
DATE: 1935 (1905?)

BRIEF HISTORY: The bus depot was built at the cost of the Quincy Horse Railway and Carrying Company as a waiting station when the Streetcar was in use.

CURRENT STATUS: The bus depot remains an active stop. However, the use of the interior space is unkown as it appears unkept with no interior seating.

ROLAND COTTAGE
(COTTAGE #11)
STATE ID # W0608
VH ID #11
DATE: 1905

BRIEF HISTORY: Built in the Classical Revival style, Roland was 1 of the 3 final cottages built on campus. The floor plans for these final cottages differed from their earlier Victorian counterparts, taking on a boxed form, as well as bringing bathrooms to each floor that had flush toilets and urinals (former dry-earth closets). The building served as a residence from its inception in 1905 with intermittant occupancy in the 1960s until 1972. Records of occupancy beyond this point disappear, potentially due to the construction of Kent. At some point following its use as a residence, the building is used as a wood/craft shop by residents.

CURRENT STATUS: Roland remains vacant. A HABS report was created in 2012 in preparation for it's demolition. The building is currently marked with the red "x".

FOGG COTTAGE
(COTTAGE #21)
STATE ID # W0611
VH ID #21
DATE: 1905

BRIEF HISTORY: Fogg was built as a sister cottage to Roland when the campus called for additional residences for an ever growing population. Unlike Roland, Fogg underwent several floor plan changes when it was renovated in 1921, to accomodate residents suffering from cancer and contagious disease, as well as potential psychological disorders.

CURRENT STATUS: Fogg is currently unoccupied and acts as storage for campus staff. The VHQ staff have put Fogg on the priority list with plans for demolition.

SOMERVILLE BARRACKS
STATE ID # W0610
VH ID #20
DATE: 1909

BRIEF HISTORY: The largest form of all cottage designs on campus, Somerville and it's concurrent Anderson Barracks was originally built for the purpose of hosting Veterans and their wives.

CURRENT STATUS: Somerville Barracks is occupied as domiciliary care residences, but not at full capacity. QVH staff has mentioned potential plans to renovate to include private bathrooms for all suites as opposed to current shared restrooms.

ANDERSON BARRACKS
STATE ID # W0612
VH ID #22
DATE: 1909

BRIEF HISTORY: The largest form of all cottage designs on campus, Anderson and it's concurrent Somerville Barracks was originally built for the purpose of hosting Veterans and their wives.

CURRENT STATUS: Anderson Barracks is occupied as domiciliary care residences, but not at full capacity. QVH staff has mentioned potential plans to renovate to include private bathrooms for all suites as opposed to current shared restrooms.

ANDREW BARRACKS
(INFIRMARY)
STATE ID # W0621
VH ID #28
DATE: 1931

BRIEF HISTORY: With continued growth, the campus called for additional infirmaries. Andrew Infirmary was built as a replacement for Memorial Hill Hospital, which was demolished.

CURRENT STATUS: Andrew Barracks (Infirmary) appears to be currently used as office space, although initially it was thought to be vacant per QVH. Current capacity is unknown, but there has been no discussion of demolition or renovation.

REIG - ADMINISTRATION
STATE ID # W0617
VH ID #29
DATE: 1935

BRIEF HISTORY: With continued growth, the campus called for additional infirmaries. Reig was built and used as a skilled care unit until 1988 when it was converted to its currrent use administration and the home of the All Wars Museum. The building itself mirrors that of Andrew Barracks (Infirmary).

CURRENT STATUS: Reig-Administration is occupied as office space and one win dedicated to teh museum.

LIBRARY
STATE ID #W0606
VH ID #30
DATE: 1905

BRIEF HISTORY: Built in 1905, the building was to host the library's collection on the lower level and living quarters for campus nurses on the second floor. The library was only in use until 1962, when the collection was relocated to Smith and later to Markword, leaving the building vacant and decaying until it was marked for demolition. It wasn't until 1988 that the superintendent and campus engineer called for the building undergo complete restoration.

CURRENT STATUS: The Library remains active and connected to the Central Illinois library system. The second floor (former nurses quarters) remains vacant and is said to be storage.

SECURITY ANNEX (TRUCK MAINTENANCE)
STATE ID # W0653
VH ID #32
DATE: 1927

BRIEF HISTORY: The team is still in pursuit of more information on this building; currently the sources provided in our 'source list' section have not provided additional detail for this property.

CURRENT STATUS: The building is currently being used as truck garage.

MEDICAL STAFF
BUILDING
STATE ID # W0614
VH ID #34
DATE: 1912

BRIEF HISTORY: The team is still in pursuit of more information on this building; currently the sources provided in our 'source list' section have not provided additional detail for this property.

CURRENT STATUS: The building currently serves as office space for the medical staff on campus.

OLD ADMINISTRATION
STATE ID # W0604
VH ID #35
DATE: 1885

BRIEF HISTORY: Besides the Dudley Mansion (Superintendent's Residence), the administration building was the first structure to be constructed on campus. Throughout it's years, the building has served many roles, including kitchen, assembly hall, and the original location for the library. The building used to be 4 stories in height, but after being damaged by a tornado, the 4th floor was removed and the buildings appearance changed to what it is today.

CURRENT STATUS: The building remains as office space, but not at full capacity.

SMITH HALL
STATE ID # W0613
VH ID #36
DATE: 1935

BRIEF HISTORY: Originally used as dining quarters or a mess hall, Smith Hall marked a change in campus operation with the removal of the individual dining rooms within each cottage and providing one single dining hall for all campus residents.

CURRENT STATUS: Smith Hall currently includes a post office, bank, gift shop, and coffee shop for residents.

LIPPINCOTT HALL
STATE ID # W0600
VH ID #37
DATE: 1938

BRIEF HISTORY: After several years of requests for an assembly hall, the original Lippincott structure was built in 1900 and honorarily named after the first supertintendent's wife Emily Chandler Lippincott, who took on the role of Matron of the Home following his death in 1887. (Snyder, Bugle Mar.Aprl. 2012) However, the original structure was destroyed by fire in 1938 and razed, resulting in the current structure built in its place. Unlike the former assembly hall within the Old Administration building, this building allowed access for all residents and remains as the main gathering place on campus to this day.

CURRENT STATUS: Lippincott Hall remains an assembly space for large gatherings on campus.

ENGINEERING BUILDING
STATE ID # W0634
VH ID #38
DATE: 1911

BRIEF HISTORY: The team is still in pursuit of more information on this building; currently the sources provided in our 'source list' section have not provided additional detail for this property.

CURRENT STATUS: The building is actively office space for the campus Engineer. The second floor remains the holding place for all building blueprints for the campus.

LAWN GARAGE
STATE ID # W0654
VH ID #39
DATE: 1886

BRIEF HISTORY: The team is still in pursuit of more information on this building; currently the sources provided in our 'source list' section have not provided additional detail for this property.

CURRENT STATUS: The building serves as storage for maintenance lawn equipment.

POWER PLANT
STATE ID # W0615
VH ID #40
DATE: 1886

BRIEF HISTORY: The power plant serves as the main supply for heating and supply for electricity to all buildings on campus. Over the years, the building has been expanded to accomodate growing demand. Just 2 years after the Home opened, 6 boilers were added to the original 4 with another renovation and the inclusion of 3 new boilers again in 1950. In 1896-1898, the smoke stack settled and had to be corrected.

CURRENT STATUS: The power plant remains active in serving the entire campus. Discussions with QVH staff have led to future possibilities of decomissioning the plant and infilling associated steam tunnels due to capacity limitations and condition of current tunnels of the current system.

EQUIPMENT STORAGE
(OLD COMMISSARY)
STATE ID # W0605
VH ID #41
DATE: 1886

BRIEF HISTORY: Built at the inception of the Veterans' Home campus, the Commissary was a central hub for everyday operation from warehouse, bakery, and kitchen.

CURRENT STATUS: The commissary remains as active storage for the campus, including storage of attic stock of furniture, chemicals, paints, etc.

SUPERINTENDENT'S
RESIDENCE
STATE ID # W0622
VH ID #43
DATE: 1854

BRIEF HISTORY: Built prior to the Veteran's Home, the Superintendent's Residence was once known as the Dudley Mansion. Mr. Dudley was the former owner of the land in which the campus sits. The property was pasted on to the Dudley Estate (a grouping of his grandchildren) following his death in 1979. The City purchased the property and the buildings in 1886, agreeing to maintain the existing deer park, for $7,000 in preparation for the acquisition of the Veteran's Home. The Italianate structure has underwent several renovations throughout the years, including 3 changes to the porch design and updates to the kitchen. In 1986, the home underwent restoration with focuses on the kitchen, which was restored to its apparent 1879 appearance, and the exterior, which was power washed to remove old layers of paint and repainted to the current color (thought to be the original color of the home).

CURRENT STATUS: The residence is no longer active as housing for the current superintendent and has been vacant for the past 2 superintendents, being used only for occasional gatherings.

HOUSEMAN'S QUARTERS
STATE ID # W0602
VH ID #47
DATE: 1854

Brief History: Original to the Dudley Estate, the building served as the house boy's living quarters.

Current Status: The building is no longer active and presumed to be storage.

5TH STREET GATEHOUSE
(LUMBER STORAGE)
STATE ID # W0631
VH ID #48
DATE: 1886

BRIEF HISTORY: The exact historical use for this structure is unknown. It could have been the chauffer's living quarters during the time of Mr. Dudley's residence. However, we have found no solid evidence to support this theory.

CURRENT STATUS: The Gatehouse is no longer in operation and its use is unknown.

CARPENTER SHOP
STATE ID # W0627
VH ID #49
DATE: PRE-1879

BRIEF HISTORY: Thought to originally be the carriage house for the mansion with living quarters for stable keepers and horse trainers on the second floor.

CURRENT STATUS: The building remains the carpenter shop that serves the campus.

GREENHOUSE
STATE ID # W0624
VH ID #50
DATE: PRE-1879

BRIEF HISTORY: The greenhouse was constructed as part of the original Dudley Mansion estate, serving the once thriving, active farm homestead. An addition appears to have been added at a later point, but no record has been found as to when and no VH # or State ID # suggests the building exists as a separate entity to the greenhouse.

CURRENT STATUS: The greenhouse, while furnished with tables, does not seem to be an active growing space at the moment. The addition currently is a storage garage for the campus bus.

LUMBER SHED
STATE ID # W0628
VH ID #53
DATE: PRE-1879

BRIEF HISTORY: Originally a stable building for the Dudley mansion.

CURRENT STATUS: The building is actively being used for storage.

STORAGE BUILDING
STATE ID # 54
VH ID # W0626
DATE: PRE-1879

BRIEF HISTORY: Thought to originally be a central steam plant that provided heat and electrictity for the entire Dudley complex. The structure used to be 3 stories in height, but was reduced to one story by the State of Illinois. The plant included a steam engine driven generator, which could have been one of the first private installations of electric lighting in the country.

CURRENT STATUS: The building is actively being used for storage.

8TH STREET GATEHOUSE
STATE ID # W0626
VH ID #87
DATE: 1886

BRIEF HISTORY: Constructed shortly after the Home opened, the gatehouse served as the main entry into the campus where all members were checked in and out. In 1912, two iron gates were added along with the large stone piers and signage seen in the photo. The iron gates, no longer in place, were operated from a set of levers and gears controlled by the turning of a wheel within the gatehouse. (History of the Veteran's Home 1973).

CURRENT STATUS: The Gatehouse remains as a marker for the entry off of Locust Street, but does not appear to be active as a current checkpoint for security of the campus.

8-BAY GARAGE
(AMBULANCE GARAGE)
STATE ID # W0637
VH ID #24
DATE: 1951

BRIEF HISTORY: Former home of campus' own ambulance supply that carried residents to nearby VA hospitals when medical treatment was need outside of the campus' capabilities.

CURRENT STATUS: The building remains active as storage for landscaping equipment.

CAVE STORAGE
STATE ID # W0632
VH ID #81
DATE: 1894

BRIEF HISTORY: As the campus continued to grow and with the Old Comissary as the main hub and kitchen of the campus, there arised a need for storage of potatoes and vegetables that would other spoil, so this arched root cellar was created in close proximity, just across the tracks from the Comissary.

CURRENT STATUS: The building is still in use as storage.

WATER TREATMENT
PLANT (TRUCK GARAGE)
STATE ID # W0616
VH ID #83
DATE: 1946

BRIEF HISTORY: The team is still in pursuit of more information on this building; currently the sources provided in our 'source list' section have not provided additional detail for this property.

CURRENT STATUS: The building was recently transitioned from a garage space into a water treatment facility plant.

WATER TOWER
STATE ID # NONE
VH ID # NONE (LABELED AS 83A ON MAPS)
DATE: 1955-1965

BRIEF HISTORY: The team is still in pursuit of more information on this building; currently the sources provided in our 'source list' section have not provided additional detail for this property. Plot maps included within the HABS documentation suggest the water tower was constructed between 1955 and 1965, not appearing in the 1955 map, but appearing later in the 1965 map.

CURRENT STATUS: The water tower is no longer active.

DEER FEED SHOP
STATE ID # W0641
VH ID #46
DATE: PRE-1879

BRIEF HISTORY: Original to the Dudley Mansion estate. Mr. Dudley thrived on breeding horses and was known for his collection of animals including that of deer and wild animals such as bison. Upon purchase, it was agreed that the Deer Park would remain on campus.

CURRENT STATUS: While the Deer Feed Shop has not been deemed eligible for nomination, we feel it to be an important representation of the Dudley Estate prior to the development of the Veteran's Home. The building is still in use and appears to be storage.

ALL FAITHS CHAPEL
STATE ID # W0649
VH ID #97
DATE: 1969

BRIEF HISTORY: Prior to the construction of a chapel, religious services have been hosted in several other buildings on campus including the Old Administration followed by Lippincott Hall.

CURRENT STATUS: The building remains an active place of worship with several services a week for various religious backgrounds.

DOCUMENTS FOUND AT QUINCY PUBLIC LIBRARY:

Landrum Series Articles
Landrum, Carl. "Pre-Santa news half a century ago." September 24,1978.
Landrum, Carl. "The Quincy scene 50 years ago." February 7, 1982.
Landrum, Carl. "March 1937 was a time for scarlet fever and bock beer." The Quincy Herald-Whig. March 8, 1987
Landrum, Carl. "July 1887-a celebration and building activity." The Quincy Herald-Whig. July 5, 1987.
Landrum, Carl. "From Quincy's Past - How Soldier's Home came into being." August 11, 1968.
Landrum, Carl. "From Quincy's Past – More about Soldiers' Home." December 3, 1972.
Landrum, Carl. "From Quincy's Past – An assembly hall for Soldiers' Home." May 30, 1976.
Landrum, Carl. "From Quincy's Past - Soldiers' Home hospital dedicated." The Quincy Herald-Whig. April 18, 1982.
Landrum, Carl. "Amtrak depot at Veterans Home wouldn't be first on the grounds." The Quincy Herald-Whig. September 16, 1984.
Landrum, Carl. "From Quincy's Past – Plans approved, first work stated on Soldiers Home 100 years ago." April 6, 1986.
Landrum, Carl. "From Quincy's Past - Soldiers Home cornerstone laid in ceremonies 100 years ago." The Quincy Herald-Whig. August 17, 1986.
Landrum, Carl. "Lippincott Hall at Veterans Home dedicated 50 years ago." The Quincy Herald-Whig. November 12, 1989.
Landrum, Carl. "Quincy quiz." April 25, 1968.

Quincy Herald Whig Articles

Clouser, Gary. "Home changed to meet veterans' health needs." February 27, 1986.
"Private Joe comes to Life". January 18, 1986.
Husar, Edward. "Quincyans joined parade for Vietnam vets."
"Residents formerly helped in farm operation." February 27, 1986.
Snellen, Mike. "Mansion former home of rich horse breeder, cattleman". February 27, 1986.
Wellman, Caroline. "Home built to meet Civil War veterans' needs." February 27, 1986

DOCUMENTS FOUND AT QUINCY HISTORICAL SOCIETY:

"Ceremony Opens Work on Pavilion." The Quincy Herald-Whig. 1, April 1990.
"Dogwood Festival Preparations." Quincy Herald-Whig. 30 April 1986.
"Gov. Kerner dedicates S.&S. home buildings." Quincy Herald-Whig. 5 Oct. 1965.
Hultz, Ruth. "Architectural Gift: The Edward A. Dudley mansion at the Illinois Veterans Home currently is used to entertain guests." May 13, 2001.
Husar, Edward. "Veterans Home restores Library." The Quincy Herald-Whig. 19 November 1988.
Husar, Edward. "Forgotten Korean veterans remembered at ceremony." The Quincy Herald-Whig. 11 Nov. 1988.
Husar, Edward. "Vets Home to get new fountain." The Quincy Herald-Whig. 27 Oct. 1988.
Husar, Edward. "Group wants Vietnam memorial: Purple Heart chapter revived." The Quincy Herald-Whig. 21 December 1981.
Illinois Soldiers' & Sailors' Home. "History of the Illinois Veterans' Home." 1886-1973
"Illinois Veterans Home at Quincy Bugle." March 1987.
"Memorials to Fallen Heroes." The Quincy-Herald Whig. 29 May 1988.
"Restoration Project of the Adams County WWII Memorial." 22 July 2009.
Schleppenbach, Barbara. "…..History can be found in Institutions Library"
Snyder, Lynn. "To Provide a Home The G.A.R. Encampment." Bugle. 2011.
Snyder, Lynn. "Charles & Emily Lippincott: A Duel in California, Serving in the Civi War, and Their Life at the Soldiers' and Sailors' Home, Quincy." Bugle. 2012.
Wilson, Doug. "State's flagship veteran's home getting facelift." Herald-Whig City/County. Dec. 21, 2003.

DOCUMENTS FOUND AT QUINCY VETERANS HOME ON-SITE LIBRARY:

Curry, Charles. "The Birth of the Illinois Veterans' Home and as it stands September 1974."
Residents Action Group. A Promise Kept. 1996.

HABS DOCUMENTATION:

Fever River Research. "Illinois Historic American Building Survey Report." No. A-2012-1. 2012
Fever River Research. "Illinois Historic American Building Survey Report." No. A-2012-1-A. 2012

[This page intentionally left blank]

III. ENVIRONMENTAL EXISTING CONDITIONS

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Bus Station Building #5 (W0601) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1935 and is a 264-square-foot structure consisting of (brick masonry, asphalt shingle roof, with 1 floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated October 15, 1991, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1991 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Asphalt Shingle Roof

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. No new suspect materials were observed.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls & ceilings, wood door system tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly on the ceiling and near the windows, which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a

BUS STATION BUILDING #5 (W0601)

good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly on the ceiling and near the windows, which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Roland Activity & Craft Barracks Building #11 (W0608) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), on July, 9, 2018 through July 18, 2018. The building was constructed in 1907 and is a 5,789-square-foot structure consisting of (brick masonry, wood joist, asphalt shingle roof, with 2 floors). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through, the observed asbestos containing material (ACM) and lead-based paint (LBP) was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Insulation
- Joints on "Mag Block Covered Piping"

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" x 9" Floor Tile & Mastic

In general, all assumed and positive materials appeared to be in a poor condition at the time of the survey. GSG observed this building to be vacant, and the materials positive and assumed, were found to be severely damaged and deteriorating. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. The flooring in the building was seen to be breaking away and has spots of open black mastic. Upon entry there is a large hole in the first floor falling through to the basement, which makes this building a hazardous area, and structurally unsound.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, wood door and window systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed throughout the building on the walls and ceilings, which were noted in specific spots at the time of the walk-through. Visible water could be seen collected on the floor, causing the wood floor structure to deteriorate. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimated no ballasts or fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

ROLAND ACTIVITY & CRAFT BARRACKS BUILDING #11 (W0608)

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. There was a significant amount of animal feces in the building, which is not uncommon since the building is vacant.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a poor condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed throughout the building on the walls and ceilings, which were noted in specific spots at the time of the walk-through. Visible water could be seen collected on the floor, causing the wood floor structure to deteriorate. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.
GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Somerville Domiciliary Building #20 (W0610) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), on July, 9, 2018 through July 18, 2018. The building was constructed in 1909 and is an 38,680 square-foot structure consisting of (masonry walls, wood frame floors and roof, with 4 floor and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated December 21, 1990, was prepared by Poepping, Stone, Bach & Assoc. Inc, under CDB project number 040-010-704. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1990 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Insulation
- Mudded Joint Compound on Paper Wrap Insulation
- Paper Wrap Insulation
- 9" x 9" Floor Tile & Mastic

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Carpet Mastic
- Vinyl Baseboard Mastic
- Wall Paper Mastic
- Stair Tread Mastic
- 12" x 12" Floor Tile & Mastic

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, wood doors and window systems

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 200 ballasts and

400 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Fogg Barracks Building #21 (W0611) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1935 and is a 5,789-square-foot structure consisting of (brick masonry, wood joists, asphalt single roof, with 2 floors). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Aircell Pipe Wrap
- Joints for "Aircell Pipe Wrap"
- Joints for "Cardboard Insulation"

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" x 9" Floor Tile & Mastic
- Sink Undercoating

In general, all assumed and positive materials appeared to be in a poor condition at the time of the survey. GSG observed this building to be vacant, and the materials positive and assumed, were found to be severely damaged and deteriorating. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. The flooring in the building was seen to be breaking away and has spots of open black mastic.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, wood door and window systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed throughout the building on the walls and ceilings, which were noted in specific spots at the time of the walk-through. Visible water could be seen collected on the floor, causing the wood floor structure to deteriorate. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimated no ballasts or fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

FOGG BARRACKS BUILDING #21 (W0611)

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. There was a significant amount of animal feces in the building, which is not uncommon since the building is vacant.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a poor condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations.

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed throughout the building on the walls and ceilings, which were noted in specific spots at the time of the walk-through. Visible water could be seen collected on the floor, causing the wood floor structure to deteriorate. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Anderson Barracks Building #22 (W0612) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1909 and is a 38,680-square-foot structure consisting of (masonry walls, wood frame floors & roof, with 4 floors and 1 below grade). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated December 21, 1990, was prepared by James A. Johnston & Associates., under CDB project number 910-010-039. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1990 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Insulation
- Mud joints at Paper Insulation
- Paper Insulation

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" x 9" Floor Tile & Mastic
- Carpet mastic
- Wall paper mastic
- Vinyl baseboard mastic
- Sink undercoating
- 2' x 4' (Drop) Ceiling Tile
- 12" x 12" Floor Tile & Mastic
- Shingle roofing
- Mudded Joints on Fiberglass Pipe Insulation

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. The majority of the damaged insulation was confined to the basement.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as metal windows systems, wood door system, and plaster walls tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

ANDERSON BARRACKS BUILDING #22 (W0612)

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 200 ballasts and 400 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations.

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Interconnect Building #26/92 (W0655) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1969 and is an 853-square-foot structure consisting of (masonry, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 01, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile & Mastic
- Built Up Bituminous Roofing
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a good-fair condition at the time of the survey. Only minor damage was observed to the assumed floor tile in the building.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates metal window systems that tested negative for LBP.

Visual Inspection for Mold

Evidence of moisture damage was observed in the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 15 ballasts and 30 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good-fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing

INTERCONNECT BUILDING #26/92 (W0655)

of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of moisture damage was observed in the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Vehicle Garage Building #24 (W0637) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1951 and is a 2,083-square-foot structure consisting of (brick masonry, wood structures, flat built-up roof, with 1 above ground floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 15, 1991, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1991 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Roof Deck Insulation
- Flat Built-Up Roof

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The only noted damage was to the ceiling in the second garage port, which is allowing some of the roof deck insulation, which is assumed material, to fall out onto the floor.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly near the windows and ceiling of the building, which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. The building has a lot of stored chemicals and vehicle parts/ materials.

GENERAL RECOMMENDATIONS

VEHICLE GARAGE BUILDING #24 (W0637)

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly near the windows and ceiling of the building, which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Fletcher Infirmary Building #26 (W0618) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1954 and is a 34,720-square-foot structure consisting of (brick masonry, concrete structure, flat built-up roof, with 3 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Insulation
- Joints for "Mag Block"
- Mud Joints for "Layer Pipe Covering"
- Joints for "Fiberglass Insulation"
- 12" x 12" Ceiling tile (Pattern 1)
- Mag Block Pipe Wrap (stored)

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile & Mastic
- 9" x 9" Floor Tile & Mastic
- Built-Up Bituminous Roofing
- Carpet mastic
- Vinyl Baseboard Mastic
- Sink undercoating
- Radiator insulation

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. Most of the damage is focused in the basement, however there is minor damage throughout the building.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as metal electrical vault door tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement but can be seen spread throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

FLETCHER INFIRMARY BUILDING #26 (W0618)

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 400 ballasts and 800 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. In the electrical vault on the basement floor there is observed leaking transformers.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement but can be seen spread throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Andrew Infirmary/ Barracks Building #28 (W0621) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1936 and is 18,950-square-foot structure consisting of (brick masonry, steel structure, asphalt shingle roof, with 2 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Plaster (Smooth Finish)
- Mag Block Pipe Covering
- Joints on "Mag Block Pipe Covering"
- Layered Pipe Insulation
- Joints for Layered Pipe Insulation
- White Cementitious Pipe Covering
- Joints for "White Cementitious Pipe Covering"
- Joints for "Fiberglass Piping Cover"

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Plaster (Rough Finish)
- 9" x 9" Floor Tile & Mastic
- Terrazzo
- Drywall System
- Vinyl Baseboard Mastic
- Ventilation Duct Vibration Damper Cloth
- Wall Paper Mastic
- 12" x 12" Floor Tile & Mastic
- Sink Undercoating

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. GSG observed that the basement of this building is shared with Schapers Hospital.

The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood window systems, metal radiators, and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

ANDREW INFIRMARY/ BARRACKS BUILDING #28 (W0621)

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 200 ballasts and 400 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Regional Administration Building #29 (W0617) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1976 and is a 28,167-square-foot structure consisting of (brick masonry, steel structure, with 2 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Plaster Ceilings (Textured)
- Mag Block Pipe Wrap
- Layered Pipe Wrap
- Joints for "Mag Block Pipe Wrap"
- Tank Covering

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Mastic for Carpeting
- Fireproofing Insulation
- Terrazzo Flooring
- Linoleum Flooring

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation and tank covering. The ACM plaster ceilings showed signs of cracking and deterioration throughout the building.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls & ceilings, wood window systems, and wood door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 34 ballasts and

REGIONAL ADMINISTRATION BUILDING #29 (W0617)

68 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. In the electrical vault in the basement of this building two of the transformers showed signs of leaking, having observed a small collection of oil on the floor.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Library Building #30 (WO606) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1905 and is a 6,265-square-foot structure consisting of (masonry, wood joists, partial flat built-up & metal roof, with 2 floors). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated March 1, 1994, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Pipe Wrap - Layered
- Pipe Joints for "Pipe Wrap – Layered"
- Mag Block Pipe Wrap
- Mag Block Joints for "Mag Block Pipe Wrap"
- Tank Cover

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" x 9" Floor Tile
- Sheet Goods Flooring
- Carpet Mastic
- 12" x 12" Floor Tile
- Built Up Roofing
- Ventilation Vibration Damper Cloth
- 1' x 1' Ceiling Tile Glue Puck

In general, all assumed and positive materials appeared to be in a good-fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation and tank covering.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls & wood window frames tested positive for LBP

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. The 2nd floor had visible mold growth, along with a significant amount of moisture damage on the walls in the rooms and corridors. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts

were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 16 ballasts and 32 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good-fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. The 2nd floor had visible mold growth, along with a significant amount of moisture damage on the walls in the rooms and corridors. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Northern Guest House Building #31 (W0603) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 7,560-square-foot structure consisting of (Brick Masonry, Wood Joists, Asphalt Single Roof, with 2 floors). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated August 1, 1994, was prepared by James A. Johnston & Associates, under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block on Steam, Condensate, Hot & Cold-Water Lines
- Joints for Mag Block Covered Piping
- Aircell at Risers, Steam Condensate Lines

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Glue Mastic for Ceiling Tile MCA
- Glue Mastic for Ceiling Tile MCC
- Glue Mastic for Ceiling Tile MCE
- 9" x 9" Floor Tile & Mastic
- Inlaid Floor Covering, Hexagon Pattern
- Linoleum Flooring
- Carpet Mastic
- 12" x 12" VFT & Mastic
- 2' x 4' White Fissured w/ Pinholes (Drop) Ceiling Tile
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a good-fair condition at the time of the survey, with some exceptions. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation and tank covering.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

NORTHERN GUEST HOUSE BUILDING #31 (W0603)

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 34 ballasts and 68 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good-fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed off and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Truck Maintenance Garage Building #32 (W0653) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1927 and is a 4,800-square-foot structure consisting of (brick masonry, wood framed floors & roof, with 2 floors and 1 below grade floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Sheet Goods Flooring
- 12" x 12" Floor Tile & Mastic
- Vinyl Baseboard Mastic
- Cardboard Pipe Insulation

In general, all assumed and positive materials appeared to be in a fair-poor condition at the time of the survey. Damage was observed in the basement where most of the pipe insulation had been abated however, there was a section of cardboard pipe insulation that was not abated in the pipe chase cavity that is exposed to the rest of the room. In the attic the sheet good flooring, which is assumed, was observed to be damaged and deteriorating. The majority of the Pipe Insulation had been abated and was replaced with fiberglass insulation.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, wood window and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

Observations made by GSG during the property reconnaissance indicated the presence of USTs associated with the "Truck Maintenance Garage" structure. GSG observed the presence of vent and fill caps, which were set in a concrete pad and an associated filling pump. The Truck Garage Manager (Mr. Mark Carpenter) confirmed the presence of two (2) USTs at this location. The two (2) USTs are located near the southeast corner of the "Truck Maintenance Garage" and are currently in use. There is one (1) 1000-gallon UST, containing "Gasohol", which is used to fuel trucks and vehicles and one 600-gallon UST, which contains "Unleaded Fuel" used to fuel smaller equipment. The Office of the State Fire Marshal (OSFM) has records of two (2) USTs matching these descriptions. According to the OSFM records, the USTs have leak detection and corrosion protection equipment and were installed in 1993, after old tanks were removed.

Hazardous Materials

TRUCK MAINTENANCE GARAGE BUILDING #32 (W0653)

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 2 ballasts and 4 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair-poor condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a geophysical survey and subsequent test pit investigation (if warranted), at the locations identified during the property reconnaissance, where there is the potential presence of a UST. Any USTs discovered on-site that are not in use should be removed in accordance with all applicable federal and local regulations

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Medical Staff Building #34 (W0614) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1912 and is a 3,870 square-foot structure consisting of (wood frame, stucco, asphalt shingle roof, with 3 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- White Cementitious P.C. (Not Mag Block)
- Mud Joints for Covering "White Cementitious P.C."
- Air Cell Pipe Insulation
- Mud Joints for "Air Cell Pipe Insulation"
- Mag Block Pipe Insulation
- Mud Joints for Fiberglass Insulated Piping
- Mud Joints for Mag Block Pipe Wrap "Mag Block Pipe Insulation"

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Glue Mastic for "12" x 12" Ceiling Tile"
- 12" x 12" Floor Tile & Mastic
- Inlaid Sheet Goods and Mastic
- Mastic for Carpeting
- Mastic for FRP Wall Panel

In general, all assumed and positive materials appeared to be in a good-fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, exterior siding tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout office area and the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts

were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 14 ballasts and 28 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good-fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout office area and the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Old Administration Stone Building #35 (W0604) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 20,910-square-foot structure consisting of (stone masonry, heavy timber, flat and copper hip roof, with 4 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Insulation
- Mud joint Compound on "Mag Block Insulation"
- Air Cell Pipe insulation
- Mud Joints on "Aircell pipe insulation"
- Brown Layered Pipe Insulation
- 2' x 4' White w/ Fissures Ceiling Tile

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Ceiling Tile Mastic for "12 x 12 Ceiling Tile w/ Holes
- 12" x 12" Floor Tile & Mastic
- Inlaid Flooring & Mastic
- 9" x 9" Floor Tile & Mastic
- Built-Up Bituminous
- Carpet mastic
- Terrazzo

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. The damage was observed to be confined to the basement.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, wood windows systems, wood door systems, tile floors and walls tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

OLD ADMINISTRATION STONE BUILDING #35 (W0604)

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 125 ballasts and 250 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Smith Hall Building #36 (W0613) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1935 and is a 16,872-square-foot structure consisting of (masonry, steel framing, built-up and shingle roof, with 2 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Insulation, Steam Lines
- Joints on "Mag Block Covered Piping"
- Air Cell Pipe Insulation, Hot & Cold-Water Lines
- Mud Joints on "Aircell Covered Piping"
- Layered Pipe Insulation, Hot & Cold Water
- Mud Joints on "Layered Pipe Insulation"
- White Cementitious Pipe Covering (Not Mag Block)
- Mud Joints on "Cementitious Covering"
- Tank Covering, Insulation

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12"'X12" Floor Tile & Mastic
- Drywall System
- Vinyl baseboard mastic
- Ventilation Duct Vibration Damper Cloth

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation and tank covering.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as metal windows systems, metal radiators, and plaster walls tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the cafeteria and men's bathroom; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is

expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 45 ballasts and 90 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the cafeteria and men's bathroom; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Lippincott Hall Building #37 (W0600) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1939 and is a 19,324-square-foot structure consisting of (masonry, concrete walls and floors, wood roof, with 3 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated December 21, 1990, was prepared by Poepping, Stone, Bach & Associates, under CDB project number 040-010-704. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1990 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Steam & Hot Water Insulation
- Paper Insulation
- Mud joint compound at "Paper Insulation"

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" x 9" Floor Tile & Mastic
- 12" x 12" Floor Tile & Mastic
- Sheet Floor & Mastic
- Transite
- Terrazzo Flooring
- Drywall System
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. The damage to the ACM insulation was observed to be confined to the basement of the building. Some of the insulation was showing significant water damage, and had begun to sag, which will eventually fall away.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as metal stairwells & rails, wood windows systems, and metal radiators tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement & balcony; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

LIPPINCOTT HALL BUILDING #37 (W0600)

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 100 ballasts and 200 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement & balcony; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Engineering Building #38 (W0634) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1911 and is a 3,000-square-foot structure consisting of (brick masonry, wood structure, asphalt single roof, with 3 Floors, and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated March 1, 1994, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12"x12" Floor Tile & Mastic
- Carpet Mastic
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. Observed insulation in the basement was fiberglass insulation. Carpet had recently been put into the flooring on the first floor of the building, over top of the 12" x 12" floor tile that was previously in place, which is assumed.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, wood window and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

As part of the environmental review of existing conditions, GSG obtained Sanborn Fire Insurance Maps from the years 1927 and 1950, which depict a "Gasoline Tank" located at the northwest corner of the "Engineering Building" structure. The 1967 Sanborn does not depict this UST; however, no records relating to the removal of a UST in this location have been found. Pipes extending into the basement from the approximate area where the tank would have been located were observed by GSG during the property reconnaissance. It is unknown if these pipes are related to the presence of a UST. None of the individuals interviewed had any knowledge of the presence or potential presence of a UST in this area. Based on marks present on the wall, there appears to have been some large object mounted against the wall where the pipes are currently located, which could represent machinery which was associated with the UST; additionally, sources familiar with the property indicated that the structure used to contain a "Stone Masons Shop". The presence of a UST cannot be ruled out based on field observations and

ENGINEERING BUILDING #38 (W0634)

historical information regarding the structure

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 38 ballasts and 72 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a geophysical survey and subsequent test pit investigation (if warranted), at the locations identified during the property reconnaissance, where there is the potential presence of a UST. Any USTs discovered on-site that are not in use should be removed in accordance with all applicable federal and local regulations

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Lawn Garage Building #39 (W0654) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 4,169-square-foot structure consisting of (stone masonry, wood roof structure, built-up flat roof, with 1 ½ floors). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag block Covered Pipes
- Joints for "Mag block Covered Pipes"

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Built Up Bituminous Roofing

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood window and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

LAWN GARAGE BUILDING #39 (W0654)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Power Plant Building #40 (W0615) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 17,004 -square-foot structure consisting of (stone walls, structural roof plank, with 1 floor and 1 below grade). Since its construction the building has been extensively remodeled and renovated. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993 was prepared by James A. Johnston & Associates, under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Covering
- Joints for "Mag Block Pipe Covering"
- Layered Pipe Wrap-White
- Joints for "Layered Pipe Wrap-White"
- Layered Pipe Wrap-Brown
- Insulation, Brick Fire Boxes
- Covering on Breaching, Troweled
- Insulation Board, Breaching Duct

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Joints for "Layered Pipe Wrap-Brown"
- Layered Pipe Wrap-Pink
- Joints for "Layered Pipe Wrap-Pink"
- Layered Pipe Wrap-Yellow
- Joints for "Layered Pipe Wrap-Yellow"
- Layered Pipe Wrap-Blue
- Joints for "Layered Pipe Wrap-Blue"

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation and tank covering. The pipe insulation is also painted with lead-based paint.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, painted insulation on pipes and duct tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. There is standing gray water in the sub-basement (coal debris hatch), which is causing significant amount of visible and moisture damage on the floors, walls, and ceilings. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

Individuals familiar with the property, who were interviewed by GSG, including two carpenters (Doug and Aaron) and the Truck Garage Manager (Mr. Mark Carpenter), indicated that the "Old Power Plant" structure used to be operational as a small "power plant". The "power plant" was used to power the superintendent's

POWER PLANT BUILDING #40 (W0615)

residence and nearby buildings. The structure has not been operational as a "power plant" for a "very long time"; however, it is unknown exactly when it last operated as a "power plant". During the property reconnaissance, GSG observed within the structure an approximately 3-feet deep pit, which was stated to at one time contain a diesel generator. It is possible, but unknown if any USTs were related to the operation of this "power plant".

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 75 ballasts and 150 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. In the electrical vault on the below grade floor there is observed leaking transformers. Also, on the below grade floor there are three coal burning boilers, that have coal ash clean outs below.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. There is standing gray water in the sub-basement (coal debris hatch), which is causing significant amount of visible and moisture damage on the floors, walls, and ceilings. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a geophysical survey and subsequent test pit investigation (if warranted), at the locations identified during the property reconnaissance, where there is the potential presence of a UST. Any USTs discovered on-site that are not in use should be removed in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.
renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Equipment Storage Building #41 (W0605) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 27,585-square-foot structure consisting of (stone, heavy timber, built-up flat roof, with 4 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Cementitious Pipe Covering
- Mud Joints for "Cementitious Pipe Covering"
- Brown Fibrous Pipe Insulation
- Joints for "Brown Fibrous Pipe Insulation"
- Cold Storage Insulation Material
- Gasket Material (stored)
- White Cementitious Pipe Wrap (stored)
- Plaster (Finish Coat Gray)

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" x "9" Floor Tile & Mastic
- Inlaid Flooring Sheet Goods
- Built-Up Roofing
- Elevator Break Pads
- Freezer Insulation

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage throughout all floors of the building. GSG observed split ends, water damaged insulation, and damaged elbows on the pipe insulation and tank covering. Stored in the building is a lot of ACM material that is in good condition, for future use. The ACM plaster that was observed in the building is showing signs of water damage and deterioration. The assumed floor tile was observed throughout the building with significant damage. The freezer insulation, which is assumed, was observed in poor condition and had begun to collapse on itself. This is a present problem in approximately five freezers.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls & ceilings, along with window and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. There was a significant amount of visible mold & moisture damage on the upper 3rd and 4th floors. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an

EQUIPMENT STORAGE BUILDING #41 (W0605)

EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 11 ballasts and 30 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. Most of the observed chemicals were located in this area for storage, for future use.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. There was a significant amount of visible mold & moisture damage on the upper 3rd and 4th floors. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Tradesman Workshop Building #42 (W0623) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1948 and is a 3,921-square-foot structure consisting of (brick masonry, wood structure, flat built-up roof, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated March 1, 1994, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Built-Up Roof
- Aircell Pipe Insulation
- Mudded Joint Compound on Fiberglass Pipe Insulation

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. GSG observed that majority of the pipe insulation had been abated and changed to fiberglass, however there is still about 5 linear feet of Aircell pipe insulation located in the break room of the building. On opposite sides of the pipe run, the insulation is fiberglass. The aircell and joint packing on fiberglass is showing signs of water damage and deterioration.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood window and door system tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed, mostly around the windows in the building, which was specifically noted during the walk through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 44 ballasts and 88 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

TRADESMAN WORKSHOP BUILDING #42 (W0623)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed, mostly around the windows in the building, which was specifically noted during the walk through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Superintendent's Residence Building #43 (W0622) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 12,651-square-foot structure consisting of (brick masonry, wood structure, asphalt shingle roof, with 4 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Plaster, Old

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Mastic for Ceiling Title "12x12 Gold"
- 9" x 9" Floor Tile & Mastic
- 12" x 12" Floor Tile & Mastic
- Inlaid Flooring
- Ventilation Duct Vibration Dampener Cloth
- Carpet Mastic

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. GSG observed the building as being vacant. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the fiberglass pipe/tank insulation.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood doors, cabinets and baseboards tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Specifically, the upper 2nd and 3rd floors had significant moisture damage and visible mold. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and

SUPERINTENDENT'S RESIDENCE BUILDING #43 (W0622)

0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Specifically, the upper 2nd and 3rd floors had significant moisture damage and visible mold. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Condensate Pump House Building #45 (W0652) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1930 and is a 60-square-foot structure consisting of (brick masonry, asphalt shingle roof, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 15, 1991, was prepared by James A. Johnston & Associates, under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1991 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Asphalt Shingle Roof

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. No new suspect materials were observed.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as brick walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly on the floor of the building near the door, which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing

CONDENSATE PUMP HOUSE BUILDING #45 (W0652)

of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly on the floor of the building near the door, which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Houseman's Quarters Building #47 (W0602) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 152-square-foot structure consisting of (brick masonry, transite tile roof, with 1 floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" X 9" Floor Tiles
- Transite Tile Roof
- 1' x 1' White Fissured Ceiling Tile
- Glue Puck for "1' x 1' White Fissured Ceiling Tile"

In general, all assumed and positive materials appeared to be in a poor condition at the time of the survey. GSG observed this building as vacant and was boarded up. The materials observed inside are significantly damage and are assumed for asbestos.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates plaster walls, wood window and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

HOUSEMAN'S QUARTERS BUILDING #47 (W0602)

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a poor condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the 5TH Street Gate House Building #48 (W0631) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 177-square-foot structure consisting of (stone masonry, wood structure, asphalt shingle roof, with 1 floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" x 9" Floor tile & Mastic
- Mastic for "9" x 9 Ceiling Tile"
- Asphalt Shingle Roof

In general, all assumed and positive materials appeared to be in a fair-poor condition at the time of the survey. The materials that are assumed inside the building were observed to be significantly damaged, due to the building being vacant.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood window and door systems, exterior walls tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

STREET GATE HOUSE BUILDING #48 (W0631)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair-poor condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Carpenter Shop Building #49 (W0627) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1855 and is a 6,793-square-foot structure consisting of (brick masonry, wood structure, transite tile roof, with 2 floors). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated August 1, 1994, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Roof Transite Tile
- Built Up Roofing
- Sheetgoods Flooring, 1/4th Thick
- Sheetgoods Flooring, 1/8th Thick
- 9"X9" Floor Tile, "Congoleum-Narin"
- 9"X9" Floor Tile, "Azrock" Green W/Cream
- 9"X9" Floor Tile, "Azrock" Red W/Marbles
- 12"X12" Floor Tile, "Azrock" Red W/Brick Pattern
- 9"X9" Floor Tile, "Kentile" Tan W/Gray Pattern
- 12"X12" Floor Tile, "Azrock" Black
- 12"X12" Floor Tile, " Kentile" Cream
- 12"X12" Floor Tile, "Armstrong" Rose W/Pattern
- 12"X12" Floor Tile, "Armstrong Excelon" Tan W/Brown Pattern
- 12"X12" Floor Tile, "Azrock" Brown
- 12"X12" Floor Tile, "Armstrong" Green W/Gray
- 9"X9" Floor Tile, "Azrock" Tan W/Brown Pattern
- 9"X9" Floor Tile, Misc. Pieces Not Boxed
- 12"X12" Floor Tile, Misc. Pieces Not Boxed

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. Most of the materials that were observed in this building were being stored for future use in the attic and were in good condition. The materials that were observed in place were starting to show signs of damage and deterioration. All of the insulation that was observed was fiberglass.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as garage doors, ceilings, radiators, windows & frames tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the attic; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance,

CARPENTER SHOP BUILDING #49 (W0627)

GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the attic; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Greenhouse Building #50 (W0624) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1886 and is a 2,778-square-foot structure consisting of (concrete, glass, wood & partial asphalt shingle roof). At the time of GSG's walk-through the no asbestos and lead-based paint was observed.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated May 1, 1992, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1992 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Asphalt Shingle Roof

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. GSG reviewed the AMP dated 1992, which stated that the asbestos in the building was abated in March 1992.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, wood windows and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly garage section of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 1 ballast and 1 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should

GREENHOUSE BUILDING #50 (W0624)

continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly garage section of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Lumber Shed Building #53 (W0628) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), on July 9, 2018 through July 18, 2018. The building was constructed in 1940 and is a 2,566-square-foot structure consisting of (wood, tile roof, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Stored Transit Tile, 24x24

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Stored, 2x4 White ACT (stored)
- Stored, 2x2 Aura ACT (stored)
- Tile Roof

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. The materials that were observed as being suspect were being stored in the building, so no damage was observed.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood walls, wood door system tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the garage ports of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a

LUMBER SHED BUILDING #53 (W0628)

good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the garage ports of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Storage Building #54 (W0626) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1855 and is a 1,118-square-foot structure consisting of (brick masonry, wood structures, asphalt shingle roof, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 15, 1991, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1991 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Asphalt Shingle Roof & Flashing

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. No new suspect materials were observed.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood window and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. This building is primarily used for storage of materials for the surrounding buildings.

STORAGE BUILDING #54 (W0626)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the New Truck Garage Building #58 (W0635) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 2010 and is a 6,000-square-foot structure consisting of (sheet metal siding, sheet metal roof). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG was not able to obtain an existing AMP for this building, however a visual walk through indicated new suspect materials were observed. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile & Mastic
- Drywall System
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. GSG observed this was a new building, all of the insulation was fiberglass. The walls were made up of drywall, and new floor tile was put into the office and toilet area.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as drywall walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was not observed. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 15 ballasts and 30 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing

NEW TRUCK GARAGE BUILDING #58 (W0635

of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was not observed.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Koch Cemetery Building #59 (W0651) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1986 and is a 2,048-square-foot structure consisting of (masonry, wood trusses, asphalt shingle roof, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated March 1, 1994, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile & Mastic

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Drywall System
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a good-fair condition at the time of the survey. The observed materials were new, the pipe insulation was fiberglass and the flooring were new vinyl floor tile.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls tested Negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the office section of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 16 ballasts and 32 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

KOCH CEMETERY BUILDING #59 (W0651)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good-fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Bus Garage Building #80 (W0638) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1951 and is an 860-square-foot structure consisting of (masonry, block and stone, wood truss roof, asphalt shingle, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 15, 1991, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1991 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Asphalt shingle roof

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. No new suspect materials were observed.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood windows and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly on the walls of the building near the windows and the overhead door, which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

The Truck Garage Manager (Mark Carpenter), who is familiar with the property, contacted an individual who was the former Truck Garage Manager (Kenny). Mr. Carpenter conveyed to GSG, that Kenny believes that at one point there was a UST located to the northwest of the property, somewhere between the railroad tracks and the bridge to the cemetery. During the property reconnaissance, GSG observed area of stressed vegetation located near northwest corner of the "Bus Garage" structure, which could potentially be related to the presence of a UST. No other observations indicating the potential presence of a UST were made in the area. Additionally, according to sources familiar with the property, at one point there was a Pump House located near the river. The vegetation was too thick to observe the remains of the pump house; however, this would be another candidate for the location of the rumored UST. It is unknown, but possible that a UST exists in this area.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

BUS GARAGE BUILDING #80 (W0638)

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a geophysical survey and subsequent test pit investigation (if warranted), at the locations identified during the property reconnaissance, where there is the potential presence of a UST. Any USTs discovered on-site that are not in use should be removed in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Storage/ Cave Building #81 (W0632) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1885 and is a 723-square-foot structure consisting of (stone and concrete, earth covered, with 1 floor). At the time of GSG's walk-through the no asbestos and lead-based paint was observed.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 15, 1991, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1991 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- None

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. No new suspect materials were observed.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls tested Negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly on the concrete walls of the building near the overhead door, which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

During the property reconnaissance, GSG observed the presence of three (3) ASTs within the "Storage Cave" structure. Two (2) of the ASTs are labelled "Used Oil" and one is labelled as "Turbine Oil". The ASTs have a capacity of approximately 150-gallons, are not in containment, and appear to have leaked. There is no indication of when they were last used or if they are still in use. Due to the visible leakage, the ASTs are assumed to be in poor condition.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation

STORAGE/ CAVE BUILDING #81 (W0632)

and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly on the concrete walls of the building near the overhead door, which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends maintaining any USTs and ASTs which are currently in use, in accordance with all applicable federal rules and regulations; ASTs which are currently in use should have secondary containment; and USTs and ASTs which are currently in use should be monitored for any signs of leaks or staining. GSG recommends removing any USTs or ASTs which are not in use in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.
GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Water Treatment Plant Building #83 (W0616) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1946 and is a 3,179-square-foot structure consisting of (brick masonry, flat built-up roof, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 15, 1991, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1991 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Flat Built-Up Roof

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. The building had recently undergone a renovation, all of the pipe insulation and tank insulation observed had been replace with styrofoam and fiberglass.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood window systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

During the property reconnaissance, GSG observed the presence of one (1) AST located on exterior of the east side of the "Water Treatment Plant" structure. The AST is used for the storage of diesel fuel. The AST is currently in use, has a capacity of approximately 300-gallons, rests on a concrete pad, and appears to be in good condition; however, it is not in secondary containment. No evidence of leaks or staining were observed in the area around the AST

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 20 ballasts and 40 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. Majority of the chemicals that were observed were in drums that were stored and are used for the primary and secondary drinking water treatment process.

WATER TREATMENT PLANT BUILDING #83 (W0616)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends maintaining any USTs and ASTs which are currently in use, in accordance with all applicable federal rules and regulations; ASTs which are currently in use should have secondary containment; and USTs and ASTs which are currently in use should be monitored for any signs of leaks or staining. GSG recommends removing any USTs or ASTs which are not in use in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the 8th Street Gatehouse Building #87 (W0607) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1935 and is a 512-square-foot structure consisting of (stone masonry, wood, transite tile roof, with 1 floor). At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated March 1, 1994, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Mastic on Floor Underlayment
- Transite Tile Roof
- 1' x 1' Ceiling Tile Glue Puck

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. GSG observed this building was vacant, and some of the assumed materials were showing visible signs of mold/ moisture damage on them. The floor underlayment was observed to be damaged and breaking away.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood windows and doors tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed near the windows in the building; which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

8TH STREET GATEHOUSE BUILDING #87 (W0607)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed near the windows in the building; which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

No evidence of a UST and/ or AST were observed at the time of the survey. GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Ehle Laundry Building #89 (W0645) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1963 and is a 11,352-square-foot structure consisting of (brick masonry, concrete structure, flat built-up roof, with 3 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated March 1, 1994, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Joints for "Mag Block Pipe Covering"
- Mag Block Pipe Covering
- Tank Insulation

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile and Mastic
- Built Up Bituminous Roofing
- 2' x 4' White Fissured (Drop) Ceiling Tile
- Drywall System
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a fair-poor condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation and tank covering. The mechanical room in the laundry room was observed to be hazardous. GSG observed a lot of breaks in the pipe insulation, which is covering the high-pressure steam through the building, was dripping a significant amount of water amount the floor causing the insulation to sag. The tank insulation was observed to haven affected by the water and showed signs of damage as well.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; specifically, the mechanical room, however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Visible mold could be observed on the mechanical room walls and floor. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

Observations made by GSG during the property reconnaissance indicated the potential presence of USTs associated with the "Ehle Laundry" structure. GSG observed two, circular access hatches in the ground adjacent to the south of the "Ehle Laundry" structure. Two sources familiar with the property, Building and Grounds Maintenance (Mr. Ron Secrest) and the Truck Garage Manager (Mr. Mark Carpenter), indicated that that two (2) USTs are present under the parking lot, near the south of the "Ehle

EHLE LAUNDRY BUILDING #89 (W0645)

Laundry" building. The USTs are located between the "Ehle Laundry" building and the "Tradesman Workshop" to the south. The USTs were referred to by personnel interviewed as "salt tanks" and they are believed to have contained laundry related softeners; however, the exact contents are unknown and since the exact nature of the laundry operation is unknown and due to the industrial nature and size of the operation, the potential of UST contents (chlorinated solvents) related to dry cleaning activities onsite cannot be precluded. Mr. Carpenter and Mr. Secrest stated that they believe that the USTs have not been in use since approximately the 1980s; but, they were unsure of the exact date of last use. The USTs are of unknown size and condition.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 300 ballasts and 600 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; specifically, the mechanical room, however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Visible mold could be observed on the mechanical room walls and floor. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a geophysical survey and subsequent test pit investigation (if warranted), at the locations identified during the property reconnaissance, where there is the potential presence of a UST. Any USTs discovered on-site that are not in use should be removed in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Markwood Domiciliary Building #90 (W0647) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1964 and is a 27,504-square-foot structure consisting of (brick masonry, with 4 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated November 16, 1987, was prepared by Poepping, Stone, Bach & Associates, under CDB project number 040-010-701. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1987 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile & Mastic
- Gaskets
- Packing
- Mastic Under Baseboard
- Elevator Brake Shoes
- Mastic Under Stair Tread
- Mastic Under Ceramic Tile
- Metal Fire Doors
- Wood Fire Doors
- Mastic Under 1' x 1' Ceiling Tile
- Sink Undercoating
- Drywall System

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. Observed in this building was fiberglass insulation throughout on the piping and tanks. The assumed materials were in good-fair condition, showing some signs of damage and deterioration. The building is consisted of mostly CMU block on the walls throughout, no plaster was observed.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as CMU and drywall walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

During the property reconnaissance, GSG observed the presence of one (1) newer diesel generator, containing a built in reservoir, with a capacity of approximately 200 gallons, on the exterior of the northwest side of the "Markwood Infirmary" structure. The Generator and associated AST appeared to be in good condition.

Hazardous Materials

MARKWOOD DOMICILIARY BUILDING #90 (W0647)

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 300 ballasts and 620 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends maintaining any USTs and ASTs which are currently in use, in accordance with all applicable federal rules and regulations; ASTs which are currently in use should have secondary containment; and USTs and ASTs which are currently in use should be monitored for any signs of leaks or staining. GSG recommends removing any USTs or ASTs which are not in use in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Kent Infirmary Building #91 (W0650) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1972 and is an 57,307-square-foot structure consisting of (masonry, with 4 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Transite Panels

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile & Mastic
- 12" x 12" Floor Tile mastic
- 9" x 9" Floor Tile & Mastic
- Built up bituminous
- Carpet Mastic
- Drywall System
- Sink Undercoating
- 1' x 1' White Fissured Ceiling Tile
- 1' x 1' White Fissured Ceiling Tile Glue Puck
- Mag Block Pipe Insulation

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. Majority of the observed insulation was fiberglass, with the exception of some remaining mag black pipe covering that was not abated.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

During the property reconnaissance, GSG observed the presence of one (1) newer diesel generator, containing a built in reservoir, with a capacity of approximately 200 gallons, on the exterior of the west side of the "Kent Infirmary" structure. The Generator and associated AST appeared to be in good condition.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 850 ballasts and

KENT INFIRMARY BUILDING #91 (W0650)

1700 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends maintaining any USTs and ASTs which are currently in use, in accordance with all applicable federal rules and regulations; ASTs which are currently in use should have secondary containment; and USTs and ASTs which are currently in use should be monitored for any signs of leaks or staining. GSG recommends removing any USTs or ASTs which are not in use in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Nelson Dining/ Kitchen/ Storage Building #92 (W0643) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1967 and is a 43,199-square-foot structure consisting of (concrete, masonry, with 3 floors with 2 below grade floors). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated May 1, 1994, was prepared by James A. Johnston & Associates. under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1994 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Duct Insulation
- Mag Block Pipe Insulation
- Joints for "Mag Block Pipe Insulation"
- Joints for "Fiberglass Pipe Insulation"
- Valve Gasket (stored)

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile & Mastic
- 9" x 9" Floor Tile & Mastic
- Terrazzo
- 6" x 6" Ceramic Tile & Mastic
- 1' x 1' White Fissured Ceiling Tile
- Glue Puck for "1' x 1' White Fissured Ceiling Tile"
- Drywall System
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a good-fair condition at the time of the survey. GSG observed the materials that were noted in the AMP to be intact, with some exceptions of split ends, water damaged insulation, and damaged elbows on the pipe insulation.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Specifically, in the two below grade floors, which are used for storage, GSG observed significant water damage which will lead to more visible mold. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is

expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 500 ballasts and 1000 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good-fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Specifically, in the two below grade floors, which are used for storage, GSG observed significant water damage which will lead to more visible mold. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Schapers Hospital Building #93 (W0644) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1963 and is a 35,253-square-foot structure consisting of (brick masonry, concrete structure, flat built-up roof, asphalt shingle roof, with 2 floors and 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Duct Expansion Gasket
- Mag Block Pipe Covering
- Joints on "Mag Block Covering"
- Tank Covering
- Transite Panel
- Tank insulation

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Built-Up Roofing & Flashings
- 12" x 12" Floor Tile & Mastic
- 9" x 9" Floor Tile & Mastic
- Terrazzo
- Linoleum
- Sink undercoating
- 1' x 1' White Fissured Ceiling Tile
- Glue Puck for "1' x 1' White Fissured Ceiling Tile"
- 2' x 4' (Drop) Ceiling Tile
- Drywall System
- Vinyl Baseboard Mastic

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey. GSG observed that the basement of this building is shared with Andrew Barracks. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. The tank and duct insulation, was observed to be in good condition.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood window systems, metal radiators, and door systems tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the shared basement but can be seen throughout the building on the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

During the property reconnaissance, GSG observed the presence of one (1) AST in the northeast corner of the basement of the "Schapers Hospital" structure. The AST contains diesel fuel, which is to fuel an old generator (circa 1950's) and has a

SCHAPERS HOSPITAL BUILDING #93 (W0644)

capacity of approximately 50-gallons. The AST and appeared to be maintained in good condition, with no evidence of leaks or staining.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 400 ballasts and 800 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the shared basement but can be seen throughout the building on the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends maintaining any USTs and ASTs which are currently in use, in accordance with all applicable federal rules and regulations; ASTs which are currently in use should have secondary containment; and USTs and ASTs which are currently in use should be monitored for any signs of leaks or staining. GSG recommends removing any USTs or ASTs which are not in use in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Elmore Infirmary Building #94 (W0646) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1963 and is a 36,390-square-foot structure consisting of (masonry with 3 floors, 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates, under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Insulation
- Joints for "Mag Block Covered Piping"
- Joints for "Fiberglass Covered Piping"
- Tansite Wall Panels

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 9" x 9" Floor Tile & Mastic
- Built Up Bituminous Roofing
- Aircell Duct Insulation
- Ventilation Duct Vibration Damper Cloth

In general, all assumed and positive materials appeared to be in a fair condition at the time of the survey, with some exceptions. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. The transite wall panel was observed to be significantly damaged. GSG observed that most of the duct insulation in the attic was fiberglass, with the exception of one duct that was still insulated with aircell.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as plaster walls, metal window systems, and wood doors tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

During the property reconnaissance, GSG observed the presence of stressed vegetation in an area on the exterior of the east side of the "Elmore Infirmary" structure. The Truck Garage Manager (Mr. Mark Carpenter), who is familiar with the property, indicated that at one point there was a diesel-powered generator located in this area. According to Mr. Carpenter, the generator was removed around the time when the "Fifer Skilled Care Facility" was constructed, sometime around the early-2000's. The area where the generator was formerly located contained unusually stressed vegetation; which, could be an indicator of a spill or the possible presence of a UST related with the former

ELMORE INFIRMARY BUILDING #94 (W0646)

generator.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 110 ballasts and 220 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations.

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly in the basement; however, it was observed throughout the rest of the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a geophysical survey and subsequent test pit investigation (if warranted), at the locations identified during the property reconnaissance, where there is the potential presence of a UST. Any USTs discovered on-site that are not in use should be removed in accordance with all applicable federal and local regulations.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the All Faiths Chapel Building #97 (W0649) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1972 and is 5,357-square-foot structure consisting of (brick masonry, steel structure, flat built-up roof, with 1 floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated July 1, 1993, was prepared by James A. Johnston & Associates., under CDB project number 910-010-007. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1993 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Mag Block Pipe Insulation

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Mastic Glue for "12" x 12" Ceiling Tile"
- 12" x 12" Floor Tile & Mastic
- Mastic for Carpeting
- Built Up Bituminous Roofing
- Vinyl Baseboard Mastic
- Drywall System

In general, all assumed and positive materials appeared to be in a good-fair condition at the time of the survey.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as drywall walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Specifically, moisture damage was observed in the offices along the north elevation of the building. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 48 ballasts and 96 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

ALL FAITHS CHAPEL BUILDING #97 (W0649)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good-fair condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations.

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed throughout the building near the windows and the ceiling which were noted in specific spots at the time of the walk-through. Specifically, moisture damage was observed in the offices along the north elevation of the building. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the American Legion Recreation Pavilion Building #98 (W0658) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. It is unknown when the building was constructed and is a 250-square-foot structure consisting of (brick masonry, wood, frame, shingled roof, with 1 floor). At the time of GSG's walk-through no asbestos or lead-based paint was observed.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG was not able to obtain an existing AMP for this building, however a visual walk through indicated new suspect materials were observed. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Drywall System
- Vinyl Baseboard Mastic

In general, the suspect materials were observed to be in good condition and intact at the time of the survey. All of the observed insulation was fiberglass.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood and drywall walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly near the entry door of the washroom and the kitchen, which was noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, no containers of were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an

AMERICAN LEGION RECREATION PAVILION BUILDING #98 (W0658)

IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly near the entry door of the washroom and the kitchen, which was noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the AMVETS Deer Park Pavilion Building #99 (W0659) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. It is unknown when the building was constructed and is a 250-square-foot structure consisting of (brick masonry, shingled roof, with 1 floor). At the time of GSG's walk-through no asbestos or lead-based paint was observed.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG was not able to obtain an existing AMP for this building, however a visual walk through indicated new suspect materials were observed. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- Drywall System
- Vinyl Baseboard Mastic

In general, the suspect materials were observed to be in good condition and intact at the time of the survey. All of the observed insulation was fiberglass.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood and drywall walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly near the entry door of the washrooms, which was noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, no containers of were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos

AMVETS DEER PARK PAVILION BUILDING #99 (W0659)

Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly near the entry door of the washrooms, which was noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Multi-Purpose Therapy Building #100 (W0660) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), on July, 9, 2018 through July 18, 2018. The building was constructed in 1993 and is a 41,100-square-foot structure consisting of (masonry, steel, concrete, asphalt shingled roof, with 2 floors and 1 below grade). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed assumed asbestos was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG was not able to obtain a copy of the AMP, however a visual walk through was performed to assess all the materials that are located in the building. These items will appear below as assumed until further analysis can be performed.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor Tile & Mastic
- 2' x 4' White fissured (Drop) Ceiling Tile
- Sink Under Coating
- Vinyl Baseboard mastic
- Drywall System
- Carpet Mastic
- Linoleum
- Spray-On Fire Proofing
- Fire Door
- Vibration cloth dampener

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. GSG observed that this building is connected to the Kent Infirmary building, so the assumption is made that the connection point from the steam hot water lines are in the unfinished spaces of the Multi-Purpose Therapy building. However, all of the observed pipe, tank, and duct insulation to be fiberglass or Styrofoam. Minor damage was noted to the floor tile throughout the building. The assumed ceiling tile showed signs of water damage, causing some deterioration to occur.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as drywall walls tested negative for LBP.

Visual Inspection for Mold

Evidence of water damage was observed mostly on the ceiling which was noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 90 ballasts and 180 fluorescent light-bulbs present at the site. This estimate

includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building. GSG observed a lot of stored chemicals in the basement, that is used for the pool system that is located in the building. GSG observed that the pool system has a hydraulic lift that allows the floor the be elevated and lowered with a control system.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of water damage was observed mostly on the ceiling which was noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Fifer Skilled Care Facility Building #101 (W0661) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 2000 and is a 43,077-square-foot structure consisting of (masonry, steel, asphalt roof, with 2 floors with 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed assumed asbestos was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG was not able to obtain a copy of the AMP, however a visual walk through was performed to assess all the materials that are located in the building. These items will appear below as assumed until further analysis can be performed.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- 12" x 12" Floor tile & mastic
- Drywall system
- 4" x 4" ceramic tile & mastic
- 2' x 4' White fissured (Drop) Ceiling Tile
- Vinyl baseboard mastic
- Carpet mastic
- Ventilation Duct Vibration Damper Cloth
- Stair Tread Mastic
- Sink Undercoating
- Gypsum Board Mastic
- FRP Panel Mastic
- Spray-On Fireproofing Insulation
- Fire Doors

In general, all assumed and positive materials appeared to be in a good condition at the time of the survey. GSG observed all of the pipe, tank, and duct insulation to be fiberglass or styrofoam. Minor damage was noted to the floor tile throughout the building. The assumed ceiling tile showed signs of water damage, causing some deterioration to occur.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as drywall walls tested negative for LBP.

Visual Inspection for Mold

Evidence of water damage was observed mostly on the ceiling which was noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

During the property reconnaissance, GSG observed the presence of one (1) newer diesel generator, containing a built in reservoir, with a capacity of approximately 250 gallons, on the exterior of the west side of the "Fifer Skilled Care Facility" structure. The Generator and associated AST appeared to be in good condition.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 34 ballasts and 68 fluorescent light-bulbs present at the site. This estimate

includes marked as well as unmarked ballasts.

Additionally, containers of different sizes containing various amounts of chemicals (utilized for a variety of reasons) were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of water damage was observed mostly on the ceiling which was noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends maintaining any USTs and ASTs which are currently in use, in accordance with all applicable federal rules and regulations; ASTs which are currently in use should have secondary containment; and USTs and ASTs which are currently in use should be monitored for any signs of leaks or staining. GSG recommends removing any USTs or ASTs which are not in use in accordance with all applicable federal and local regulations

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed off and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Wood Frame Storage Building (W0657) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. It is unknown when the building was constructed and is a 156-square-foot structure consisting of (wood frame, shingled roof, with 1 floor). At the time of GSG's walk-through no asbestos or lead-based paint was observed.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG was not able to obtain an existing AMP for this building, however a visual walk through indicated no suspect materials were observed. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- None

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- None

In general, the suspect materials were observed to be in good condition and intact at the time of the survey. GSG observed this building as not having any suspect material and was empty.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as wood walls tested negative for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed mostly near the entry door of the building, which was noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, no containers of were present in the building.

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a good condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance

WOOD FRAME STORAGE BUILDING (W0657)

with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed mostly near the entry door of the building, which was noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

GENERAL DESCRIPTION

A Limited Environmental Assessment of the Tunnel System (W0656) located at the Quincy Veteran Home Complex in Quincy, Illinois, was conducted by GSG Consultants, Inc. (GSG), from July, 9, 2018 through July 18, 2018. The building was constructed in 1885 and is a 27,250-square-foot structure consisting of (concrete, clay, 1 below grade floor). Since its construction the building has undergone numerous interior and exterior renovations. At the time of GSG's walk-through the observed asbestos and lead-based paint was mostly intact, with some exceptions.

During the walk-through, GSG considered the following environmental conditions for the building: asbestos-containing materials (ACM); lead-based paint (LBP); visual inspection for mold; underground storage tanks (UST's) and aboveground storage tanks (AST's); and hazardous materials (mold, PCB-containing equipment, fluorescent bulbs & ballasts, chemicals, etc.). GSG's observations are described below.

GENERAL ENVIRONMENTAL CONDITIONS

Asbestos-Containing Materials (ACM)

GSG obtained and reviewed the Asbestos Management Plan Report (AMP). The AMP, dated December 18, 1991, was prepared by James A. Johnston & Associates., under CDB project number 040-010-705. GSG performed a visual inspection of the building in order to confirm and assess the condition of existing materials reported in the 1991 APM and to identify any new suspect materials. No bulk samples were collected.

Materials that tested positive for asbestos, according to the APM report and confirmed by GSG, are as follows:

- Aircell pipe insulation
- Mag block pipe insulation
- Felt paper insulation
- Mud joint compound on aircell insulation
- Mud joint compound on magblock insulation
- Mud joint compound on fiberglass insulation

Materials assumed to have ACM, according to the APM and confirmed by GSG, are as follows:

- None

In general, all assumed and positive materials appeared to be in a poor condition at the time of the survey. The observed asbestos material, noted above, showed signs of damage mostly in the basement and unfinished spaces. GSG observed a lot of split ends, water damaged insulation, and damaged elbows on the pipe insulation. The observed insulation had significant damage and breakage, causing a very hazardous area in the tunnels.

Lead-Based Paint (LBP)

During the walk-through, damaged (peeling, cracking, etc.) painted components/surfaces of the building were tested by GSG utilizing an XRF Spectrum Analyzer (Serial # 3149R). GSG confirmed that painted components/surfaces found on substrates such as Wood doors tested positive for LBP.

Visual Inspection for Mold

Evidence of mold growth and/or water damage was observed throughout the tunnels on the walls, ceiling, floors which were noted in specific spots at the time of the walk-through. No swab samples were collected at the property.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

After conducting a review of readily available site-historic information, including Sanborn Fire Insurance Maps; an EDR regulatory Radius Map search for the property; online environmental databases; and a site and vicinity reconnaissance, GSG found no evidence to suggest the presence or potential presence of any USTs or ASTs associated with this structure.

Hazardous Materials

Based on the age of the building, PCB containing equipment is expected to be present in the building. Fluorescent light ballasts were inspected when possible, for labels indicating whether or not PCBs are present. GSG estimates about 0 ballasts and 0 fluorescent light-bulbs present at the site. This estimate includes marked as well as unmarked ballasts.

Additionally, no chemical containers were observed.

TUNNEL SYSTEM (W0656)

GENERAL RECOMMENDATIONS

Asbestos-Containing Material (ACM)

In general, all positive and assumed ACM appeared to be in a poor condition at the time of the survey. The building should continue to follow its Asbestos Management Plan Operation and Maintenance (O&M) Program. GSG recommends the testing of all assumed materials and the preparation of an Asbestos Removal Project Design prior to any renovation/ demolition activities in which ACM may be impacted. The asbestos design plan and specification should be prepared and signed by an IDPH- licensed Asbestos Project Designer in accordance with IDPH and federal regulations. Asbestos abatement work should be conducted by a licensed abatement contractor under the supervision of a licensed Asbestos Project Manager in accordance with all applicable federal, state, and local regulations

Lead-Based Paint (LBP)

GSG recommends that prior to any renovation activities in which painted surfaces may be impacted, in the common and exterior areas of this building, a comprehensive lead survey be conducted and a Lead Removal Project Design be prepared by an IDPH- licensed Project Designer. LBP design plans and specifications should include information regarding lead-based paint location; quantity; exposure assessment; and LBP waste handling, removal and disposal. Also, all removal activities should be conducted by a licensed abatement contractor under the supervision of a certified Risk Assessor/Lead Inspector.

Microbial-Contaminated Surfaces (Mold)

Evidence of mold growth and/or water damage was observed throughout the tunnels on the walls, ceiling, floors which were noted in specific spots at the time of the walk-through. Materials indicating mold growth and/ or moisture damage shall be managed appropriately during renovation/ demolition activities.

Underground Storage Tanks (UST's) and Aboveground Storage Tanks (AST's)

GSG recommends performing a full Phase I Environmental Site Assessment for the Quincy Illinois Veterans Home property.

Hazardous Materials

GSG recommends that all suspect PCB containing oil, mechanical and electrical equipment should be tested prior to renovation or demolition activities. All PCB containing equipment should be disposed of and managed in accordance with all federal, state, and local regulations.

GSG recommends that all chemical containers/drums and other hazardous material be inventoried, characterized, labeled and placed in secondary containments for disposal according to federal, state and local regulation prior to any building renovation/demolition activities.

[This page intentionally left blank]

IV. SITE UTILITIES - TUNNELS REPORT

[This page intentionally left blank]

SITE UTILITIES - TUNNELS

A visual assessment of the structural and mechanical condition of the tunnel system was conducted in June, 2018. Identification of tunnel conditions on the map above generally reflect the nature of construction, conditions encountered therein, and the ability to reasonably access the tunnel to perform maintenance on the tunnel and its components; further detail follows. The tunnel carries steam of three pressures (7 PSIG, 90 PSIG and 250 PSIG); a low pressure, gravity return condensate piping system; water; and various low voltage cable systems. A storm sewer is shown on site utility maps traversing the length of the main tunnels, located directly underneath the tunnel; it is not always evident that drains exist due to the majority of the tunnel floor being caked in wet or dried mud.

A tunnel noted to be in good condition has stable walls and ceilings, they are not bowed; a good tunnel is not demonstrating substantial evidence of water damage causing walls or ceilings to spall; very little cracking is evident; water entrainment is not overly problematic; walking access through the tunnel cross section is reasonable; there is reasonable space around valves, expansion joints and anchor frames to conduct maintenance; access to branch piping is reasonable; annular space around pipes which penetrate walls is not demonstrating significant water entrainment; water on the floors is not significant and seems to have consistent drainage patterns; transverse and longitudinal joints are holding well in most cases; pipe hangers located in ceilings and walls are intact; insulation is generally in good condition lacking evidence of water damage to jacket surface; steam leaking at main valves and expansion joints is minimal indicating maintenance is being conducted and expansion forces have been predicted properly; lighting is sufficient; ventilation is sufficient; wiring is reasonably supported; and finally, most feet supporting structural pipe racks are intact.

Conversely, a tunnel in poor condition demonstrates the antithesis of all that characterizes a tunnel in good condition.

The following pages document visual assessments of each section of the tunnel.

Concrete Surfaces In Good Condition

Failing Ceiling

Falling Ceiling Joint

Failing Concrete Ceiling

Failing Walls

Failing Walls

Concrete Pedestal In Good Condition

Deteriorated Concrete Feet

CENTER LEG OF CLAMSHELL (FROM POWER PLANT TO SMITH HALL, 7# STEAM)

1. Tunnel is concrete construction, generally in good condition.
2. Few instances of damaged concrete walls and ceilings and joint seals.
3. Evidence of water traversing floor; steel pipe rack feet are corroded at many locations. Concrete pedestals make for a good detail but many are deteriorated, exposing steel feet.
4. Anchor plates and steel frames are in good condition.
5. Heat components (valves and expansion joints) demonstrate expected wear.

Evidence Of Water On The Floor

Concrete Surfaces In Good Condition Joint

Deteriorated Concrete Feet

Anchor Frame

Deteriorated Concrete Feet

Anchor Frame

Expansion Joint

Gate Valve

Continuation Of Concrete Tunnel In Good Condition

Transition To Stone

Evidence Of Water On The Floor

New Concrete Tops

Deteroriated Insulation

Evidence Of Water On Floor

Under Floor Drainage System

RIGHT HALF OF CLAMSHELL (FROM SMITH HALL TO EQUIPMENT STORAGE/PRINT SHOP, 7#, 90# AND 250# STEAM)

1. Concrete tunnel in good condition continues from Smith Hall to close to All Faiths Chapel at which point tunnel construction is stone. From this point to the Equipment Storage/Print Shop, the stone tunnel is in poor condition.
2. Evidence of water traversing floor.
3. Some sections of the tunnel have old stone walls and newer concrete tops.
4. Evidence of under floor drainage system, likely blocked with sediment.
5. Evidence of water/moisture affecting insulation covering.
6. Failed piping on floor of tunnel, possibly condensate. Failed from inside out.
7. Evidence of failed insulation systems, exposing pipe to wet tunnel conditions.
8. At branch tunnel connection to Anderson and Summerville, tunnel condition is very poor. Walls and ceilings have failed and will continue to do so. Conditions are very tight. Piping insulation systems are in poor condition.
9. Anchor frames and slip-type expansion joint in fair condition; anchor frames are attached to poor stone walls.

Under Floor Drainage System

Deteroriated Insulation

Deteroriated Insulation

Deteroriated Insulation

Failed Pipe

Failed Pipe

Failed Insulation

At Branch To Anderson And Somerville

At Branch To Anderson And Somerville

Anchor Frame

At Branch To Anderson And Somerville

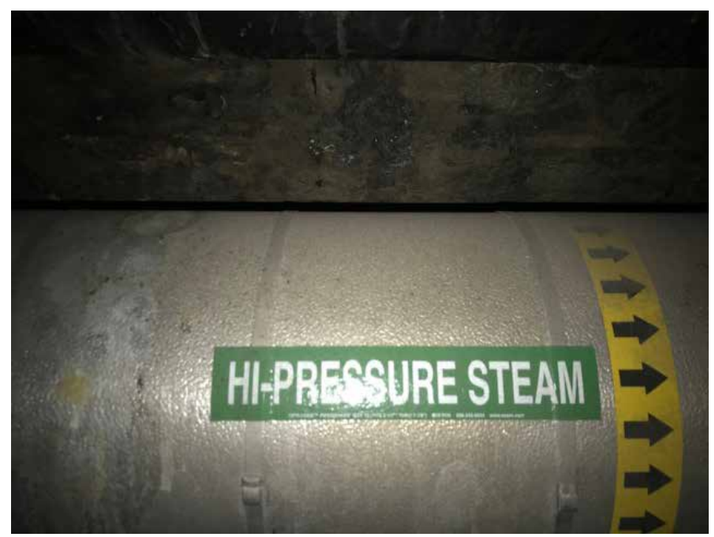
Slip Type Expansion

[This page intentionally left blank]

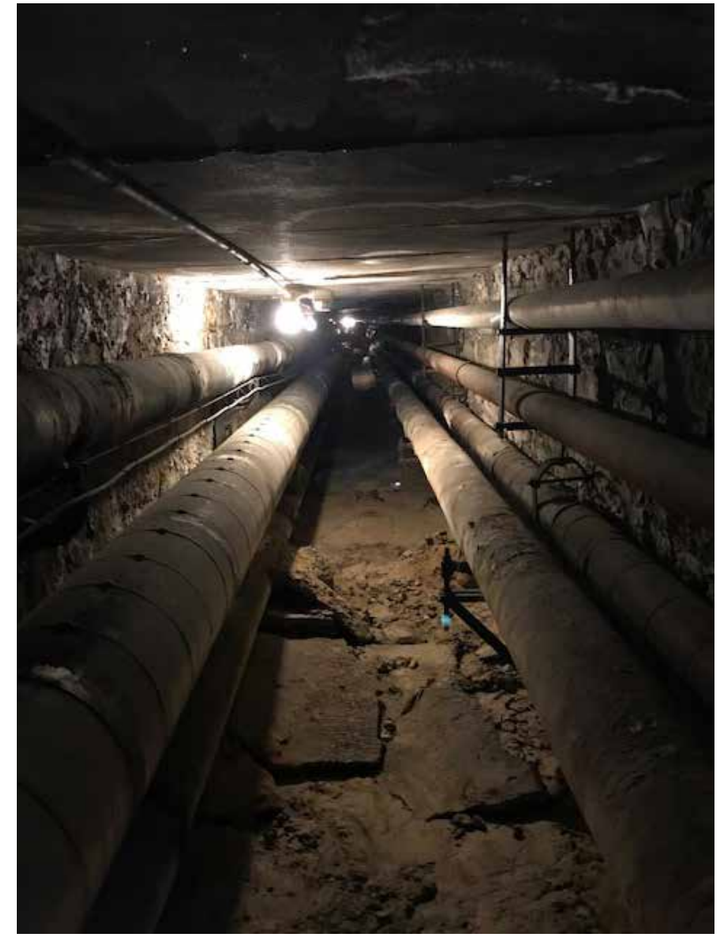
LEFT HALF OF CLAMSHELL (FROM SMITH HALL TO POWER PLANT, 7#, 90# AND 125# STEAM)

1. From the Power Plant to just past Kent Infirmary, the tunnel is stone construction, generally in good condition. After Kent, the tunnel is concrete, appearing to be put in place at the same time the center leg of the tunnel (from Power Plant to Smith Hall) was installed. This section is generally in good condition.
2. A few sections of the tunnel show evidence of previous deterioration and repair.
3. A few sections of the tunnel show evidence of water entrainment.
4. This section of tunnel carries high pressure steam in addition to low pressure steam.
5. Around the branch to Northwest Guest House, but prior to the connection to the Center Leg of the Clamshell, tunnel conditions are very tight; pipe constrains access through the tunnel. There is evidence of weakening of ceiling due to water entrainment. Maintenance is also very difficult in this area.

Stone, In Good Condition



High And Low Pressure Steam



Collapsed And Repaired Ceiling

Water Entrainment At Ceiling

Old Deteriorating Ceiling

Very Tight Conditions

BRANCHES OF THE TUNNEL SYSTEM

1. From the Left Clamshell Leg, just past Kent Infirmary a branch heads to the northeast connecting to the Northern Guest House. This tunnel is concrete, generally in good condition.
2. From the north end of the Northern Guest House to Fifer Skilled Care Facility, this tunnel is concrete, generally in good condition.
3. From the Right Half of the Clamshell to the northern end of the Security and Switchboard Building, this tunnel is concrete, generally in good condition.
4. From the southern end of the Security and Switchboard Building, a concrete tunnel heads southeastward, then tees; the northeastern branch serves Andrew Barracks and Schapers Hospital and the southwestern branch serves Reig Administration Building. This tunnel is concrete, generally in good condition.
5. On the Right Clamshell Leg, at the turn between All Faiths Chapel and Markword Infirmary, a tunnel branches to the southwest serving Somerville Domiciliary; a branch from this tunnel serves Anderson Barracks. All tunnels described herein are old stone construction but generally in good condition.

[This page intentionally left blank]

V. MECHANICAL CONDITIONS REPORT

[This page intentionally left blank]

BUILDINGS-MECHANICAL SYSTEMS

A visual assessment of the building mechanical systems was conducted on June 21, July 5, July 12 and July 2018. Identification of building conditions on the map above generally reflect the age and condition of existing major components of the building heating, ventilation, and air conditioning system, the expected useful life of the system utilizing industry guidelines for major components of the system and our experience, the estimated service life based on construction drawings, and the energy source.

HVAC systems in good condition exhibited relatively new components, properly maintained, with capable control systems, capable of maintaining appropriate space conditions. HVAC systems which utilize "and" to classify conditions demonstrate components which are aged and original and components which have been replaced; Lippincott Hall is an example, classified as "Fair and Good" – the condensing unit and DX cooling coil in the air handling unit have been replaced, otherwise, the airside and steam systems are aged and at best, in fair condition. A system in fair condition demonstrates age, worn components, a disjointed control system, some missing parts and/or components, utilizes technology that makes it difficult and expensive to replace parts, and is known to be in the latter stages of its expected useful service life. A system in poor condition exhibits all of the deficiencies of a system in fair condition but general age and condition are worse, access for maintenance is very difficult, and the system and its major components are near the end of useful service life.

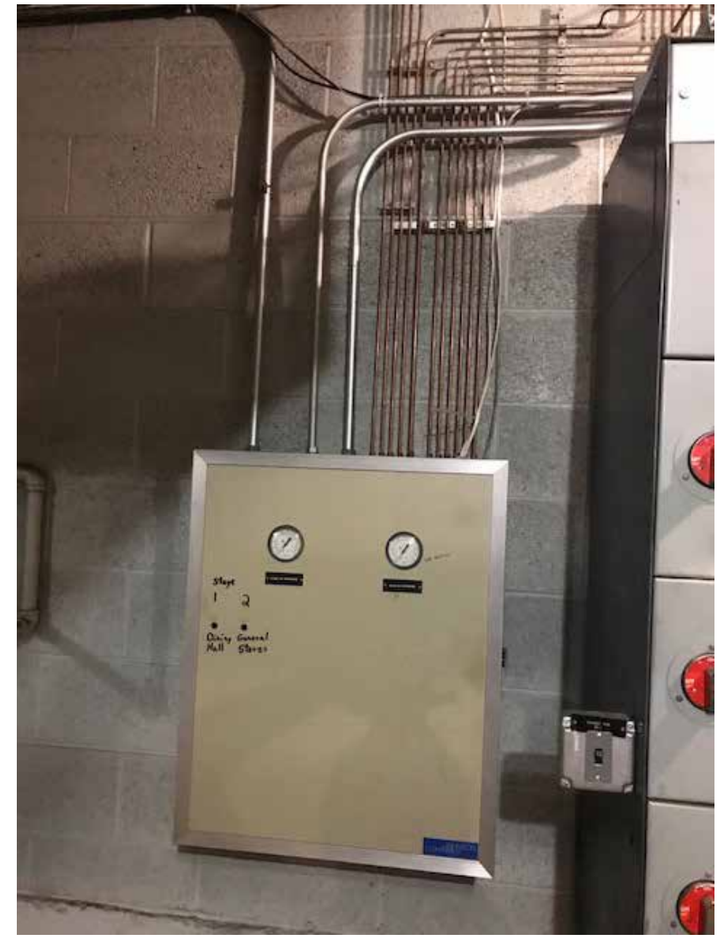
It should be noted that most buildings are old to very old therefore the envelope, from thermal resistance and moisture penetration perspectives, are likely lacking. In some cases, crawl spaces or small mechanical rooms, resembling closets, are utilized for routing mechanical piping and housing equipment; this approach fosters a lack of maintenance because components are very difficult to access. In other buildings, mechanical components and/or systems have not been operated or operated only to keep a building from freezing thus the system and its components have not operated under normal conditions for some time.

We gauge the HVAC system in most of the buildings on campus to be in fair to poor condition. There are four major buildings wherein the mechanical/HVAC systems are in relatively good condition; these buildings are Lippincott Hall, Fifer Infirmary, Multi-Purpose Therapy Building, and All Faiths Chapel. It so happens that three of these buildings are in the proximity of sections of the steam tunnel system which also are in good condition. There are other buildings wherein the HVAC system is in good condition, however, these buildings do not house residents, they are generally support buildings, much smaller, and have HVAC systems and/or components for which a large financial investment has not been made previously; examples include the Truck Garage, AmVets Deer Park Pavilion.

The following pages document our visual assessment of the buildings and HVAC system components therein.

AHU DX Coil

AHU DX Coil



Pneumatic Controls

Condensate Receiver And Pump

Kitchen Make-Up Air Unit

BLDG. #92/W0643 - NIELSON DINING/KITCHEN

Cooling: Direct expansion refrigerant split system, zoned. Direct expansion refrigerant rooftop unit providing makeup air and space cooling to kitchen.
Heating: Steam coils in air handling units. Steam service from Power Plant.

1. Current Service Life: 34 years. Expected Useful Life: 40 years
2. Airside visual assessment: Fair to poor condition.
3. Waterside visual assessment: Fair to poor condition.
4. Pneumatic controls: aged technology.
5. Limited major parts replacement observed.

Main Condensing Unit – 2 Circuit

Steam PRV Station

Replaced but antiquated compression

Steam Entrance From Power Plant

Newer PRV

Aged Cast Iron Radiator

BLDG. #49/W0627 - CARPENTER SHOP

Heat only; steam service from Power Plant. Space heating provided by cast iron radiators. Steam source is Power Plant via direct buried piping system connecting to Right Clamshell Leg. A branch from this service supplies steam to the Superintendent's Residence.

1. Current Service Life: estimated 50+ years. Expected Useful Life: 40 years
2. Visual assessment: Poor condition.
3. Limited major parts replacement observed.

Heat only; steam service from Power Plant. Space heating provided by cast iron radiators. Steam source is Power Plant via direct buried piping system connecting to Right Clamshell Leg. A branch from this service supplies steam to the Superintendent's Residence.

1. Current Service Life: estimated 50+ years. Expected Useful Life: 40 years
2. Visual assessment: Poor condition.
3. Limited major parts replacement observed.

Steam Entrance

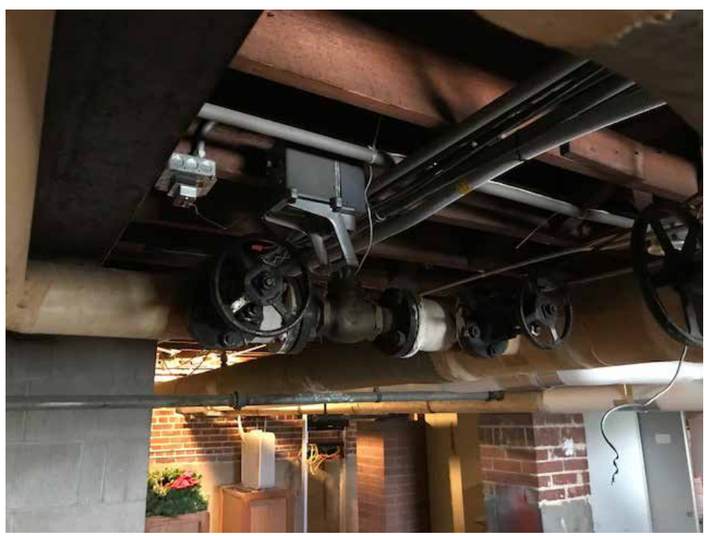
DX AHU (Zoned)

Aged Condensate Piping

Steam Humidifier

Branch Steam To Perimeter Heat

Hardcast Steam Pipe Insulation

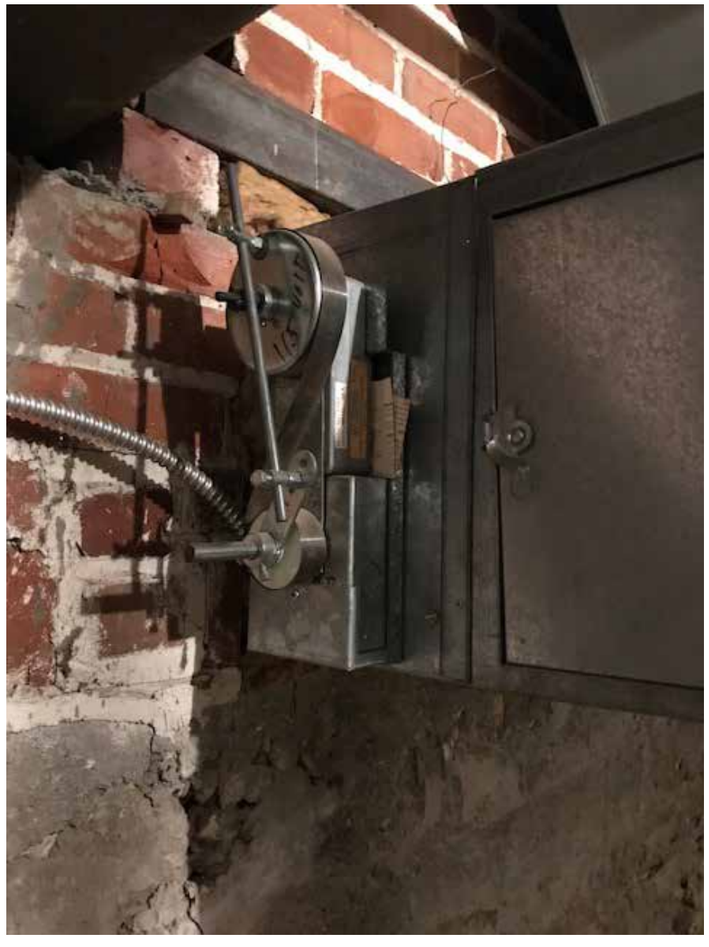


New Electric Controls

BLDG. #22/W0612 - ANDERSON BARRACKS

Cooling: direct expansion refrigerant split system.
Heating: Airside steam coils and perimeter heat. Steam source is Power Plant;

1. Current Service Life: 28 years. Expected Useful Life: 40 years.
2. Airside visual assessment: fair condition.
3. Steam piping visual assessment: fair.
4. Insulation: hardcast joints and straight runs; likely ACM.
5. New electric controls.



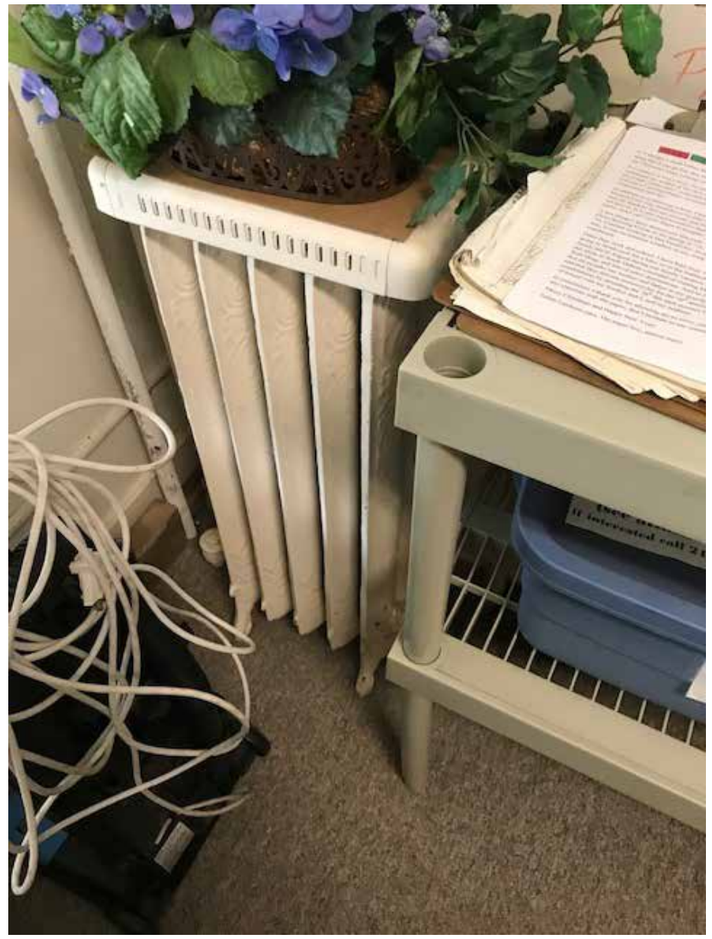
New Electric Controls

DX AHU (Zoned)

Aged Manual Valves And New Electric Actuator

Steam Humidifier

Steam Entrance



Cast Iron Steam Radiator

BLDG. #20/W0610 - SOMERVILLE DOMICILIARY

Cooling: direct expansion refrigerant split system.
Heating: Airside steam coils and perimeter heat. Steam source is Power Plant;

1. Current Service Life: 28 years. Expected Useful Life: 40 years.
2. Airside visual assessment: fair condition.
3. Steam piping visual assessment: fair.
4. Insulation: hardcast joints and straight runs; likely ACM.
5. New electric controls.

Aged Condensate Piping

Branch Piping To Perimeter Heat

Perimeter Heating Unit

New Electric Controls

New DX Condensing Units

New DX Condensing Units

BLDG. #97/W0649 - ALL FAITHS CHAPEL

Cooling: direct expansion refrigerant split system.
Heating: airside steam coils and limited electric perimeter heat.
Steam source is Power Plant;

1. Current Service Life: Steam, 49 years. Expected Useful Life: 40 years.
2. DX refrigerant visual assessment: Good condition.

DX Condensing Unit

Remote Evaporator Barrel

2-Pipe Zone Piping

Pump Header Array

Steam To Hot Water Heat Exchanger

Perimeter Fan Coil Unit

Zoned Secondary Pumps

Pneumatic Controls

BLDG. #90/W0647 - MARKWORD INFIRMARY

HVAC System: 2-pipe zoned fan coil system; DX condensing unit with remote evaporator barrel and steam to hot water heat exchanger. Primary/secondary pumping scheme.

1. Current Service Life: estimated 40+ years. Expected Useful Life: 40 years.
2. Visual assessment: Poor

Hardcast Steam Insulation

Aged AHU

Steam Entrance

New DX Condensing Unit

Aged Steam Radiator

New Dx Cooling Coil

Steam Radiator

Pneumatic Controls

Aged Steam Coil

BLDG. #37/W0600 - LIPPINCOTT HALL

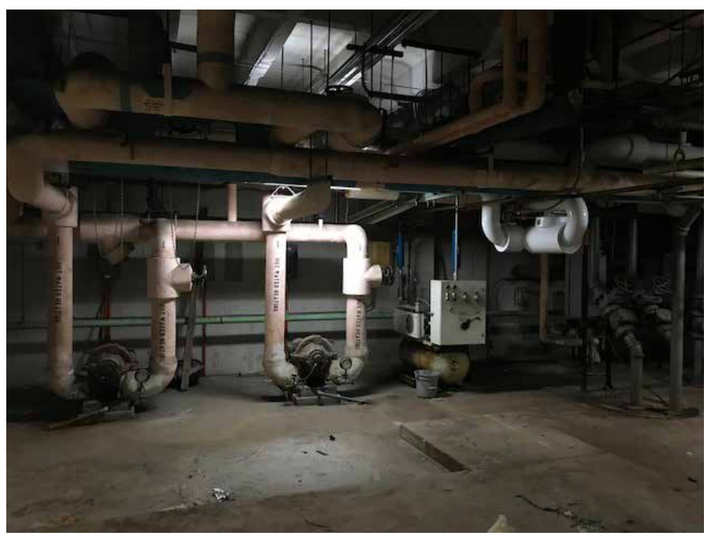
Cooling: direct expansion refrigerant split system.
Heating: airside steam coils and steam perimeter heat. Steam source is Power Plant.

1. Current Service Life: steam estimated 40+ years; airside 28 years, DX condensing unit and cooling coil, less than 2 years expected; perimeter heat, 28 years.
2. DX refrigerant condensing unit and cooling coil recently replaced.
3. Visual assessment of airside, airside steam coils, and perimeter steam radiators: fair.
4. Controls are pneumatic.
5. Insulation: hardcast joints and straight runs; likely ACM.

Aged AHU

New Chilled Water Pump With VFD

Perimeter Fan Coil Unit



Aged Heating Water Pumps

Aged Condensate Pump Set

Evidence Of Abandonment

Roof Equipment

BLDG. #91/W0650 - KENT INFIRMARY

Cooling: chilled water
Heating: steam to hot water heat exchanger; steam source is Power Plant.

1. Building equipment has been abandoned; operates only to keep building from freezing.
2. Visual assessment of HVAC systems other than chilled water pump: poor.
3. New chilled water pump and variable frequency drive.

4-Pipe Air Handling Unit

Chilled Water Pumps

Steam To Hot Water Heat Exchanger

BLDG. #101/W0661 - FIFER SKILLED CARE FACILITY

Cooling: zoned air handling units, 4-pipe, chilled and hot water.
Heating: zoned air system, perimeter fan coil units

1. Current Service Life: estimated 25+ years. Expected Useful Life: 40 years.
2. Visual assessment of HVAC system: good condition.

Chiller In Good Condition

Chiller In Good Condition

FIFER CHILLER

1. This chiller supplies only Fifer Infirmary.

Coil Replaced

CHW Entrance

Aged AHU

Aged CHW Control Valve

Aged Ahu

Aged Manual Chw Valve

BLDG. #94/W0646 - ELMORE INFIRMARY

Cooling: zoned air handling units, 4-pipe, chilled and hot water.
Heating: zoned air system with hot water coils.

1. Current Service Life: 55 years. Expected Useful Life: 40 years.
2. Some coils replaced.
3. Manual and control valves are aged.
4. Newer chilled water entrance.
5. Airside equipment visual assessment: poor
6. Waterside visual assessment: poor.
7. Overall HVAC visual assessment: fair to poor.

Old/New Condensing Unit

Condensate Pump

BLDG. #30/W0606 - LIBRARY

Cooling: direct expansion refrigerant split system (2).
Heating: steam to hot water heat exchanger with perimeter heat. Steam source is Power Plant via direct buried piping system connecting to just north of mid-point of tunnel connecting Security and Switchboard Building and tee to Reig – Administration Building and Anderson Barracks/Schapers Hospital.

1. Current Service Life: 30 years. Expected Useful Life: 40 years.
2. One condensing unit in good condition; the other is aged.
3. Visual assessment of HVAC system: poor condition.

Steam To Hot Water Heat Exchanger

Steam/Condensate Entrance

Air Handling Unit

Condensate Pump

Aged Air Handling Unit

BLDG. #93/W0644 - SCHAPERS HOSPITAL

Cooling: chilled water to zoned air handling units.
Heating: steam to hot water heat exchanger.

1. Current Service Life: 30 years. Expected Useful Life: 40 years.
2. Visual assessment of HVAC systems: fair to poor condition.

Aged Air Handling Unit

Lift Station

80 PSI Reading At High Pressure Entrance Yet Cold Pipe And PRV

Chilled Water Pump/Pipe Arrangement

Steam Entrance

High And Low Pressure Steam Piping

Medical Equipment

Aged Steam Prv Station

High And Low Pressure Steam Piping

BLDG. #93/W0644 - SCHAPERS HOSPITAL

Aged Exhaust Fan

Aged Chw Control

Ahu Coil And Temp Arrangement

BLDG. #28/W0621 - ANDREW BARRACKS

Access to the basement is not found. Old condensing unit outside.

Newer Steam Zone Controls

Newer Steam Zone Controls

BLDG. #34/W0614 - MEDICAL STAFF BUILDING

Cooling: window units.
Heating: cast iron steam radiators; steam source is Power Plant via direct buried piping system emanating from northeast corner of Northern Guest House.

1. Visual assessment of window units: good.
2. Visual assessment of steam system: poor.
3. Limited component replacement: flow controls.

Steam To Hot Water Heat Exchanger

Steam Entrance

BLDG. #35/W0604 - SECURITY SWITCHBOARD (OLD ADMINISTRATION)

Cooling: window units.
Heating: steam to hot water heat exchanger; steam source is Power Plant. Cast iron radiators along perimeter.

1. Current Service Life: estimated 50+ years. Expected Useful Life: heating system only, 40 years.
2. Visual assessment of HVAC systems: poor condition.
3. Location of steam to hot water heat exchanger makes maintenance very difficult.

Steam Entrance

Condensate Received And Lift Station

Aged Valve

Steam Piping To Perimeter Heat

BLDG. #36/W0613 - SMITH HALL

Cooling: assumed DX Split Systems.
Heating: steam perimeter cast iron radiators. Steam source is Power Plant.

1. Current Service Life: 31 years. Expected Useful Life: heating, 40 years.
2. Visual assessment of heating systems: fair to poor condition.

Steam Entrance

Condensate Receiver And Pump Set

Steam Pipe To Perimeter Heat

Aged Steam Valve And Hardcast Joint

Cooling Duct In Basement

Cooling Duct In Basement

Perimeter Heating Element

Split System Condensing Units

Split System Condensing Unit

Dx Rooftop Equipment

BLDG. #29/W0617 - REIG-ADMINISTRATION

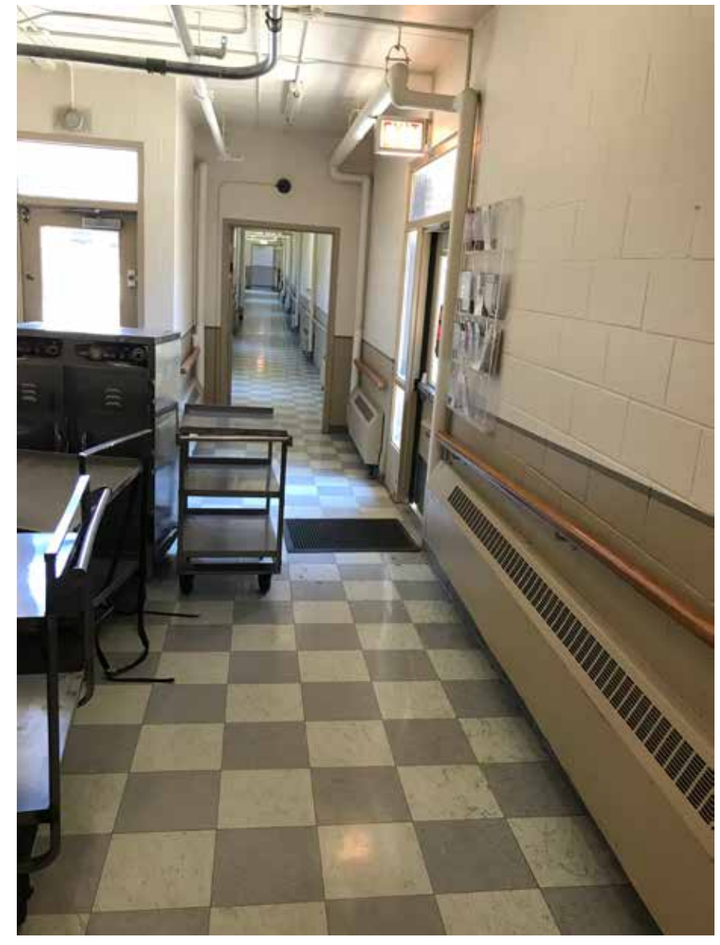
Cooling: direct expansion refrigerant split systems and rooftop units.
Heating: perimeter steam heat. Steam source is Power Plant.

1. Current Service Life: 32 years. Expected Useful Life: DX systems, 30 years; steam heating system, 40 years.
2. Duct distribution system serving split systems in basement is deteriorating.
3. Visual assessment of HVAC systems: steam system in fair condition; some components of the cooling system are in good condition, e.g., some condensing units, basement duct system in poor condition.

BLDG. #29/W0617 - REIG-ADMINISTRATION

Perimeter Heating Element

Steam Pipe To Perimeter Heat



Perimeter Heat

Steam PRV Station

Condensate Receiver Array

Steam DHW Heat Exchanger

Steam Water Heater

BLDG. #89/W0645 - EHLE LAUNDRY

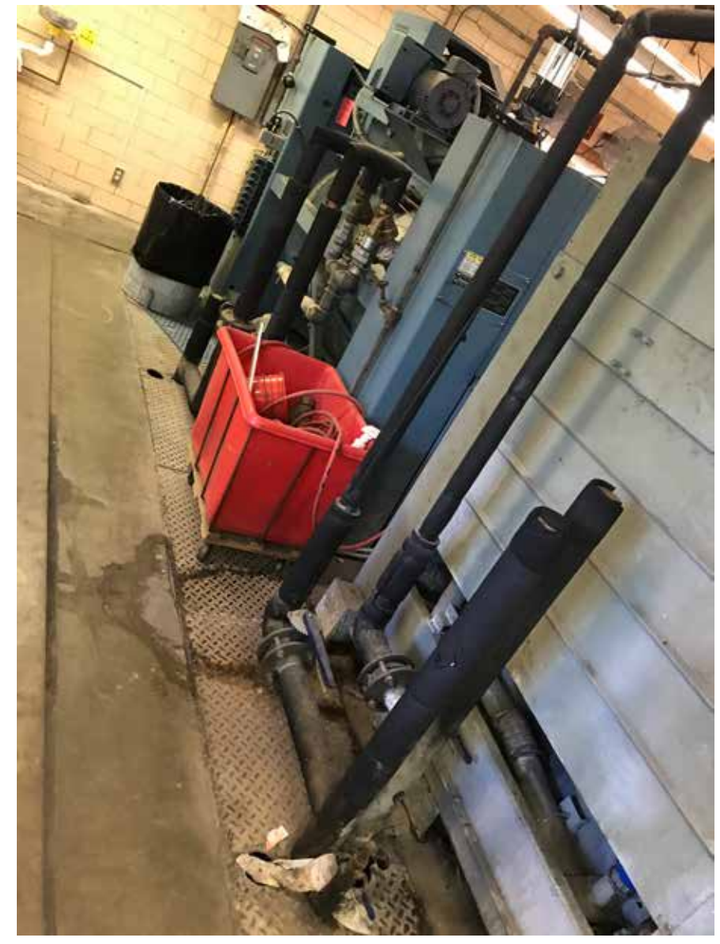
Cooling: none, ventilation only via various air handling systems.
Heating: Steam perimeter heat and heated ventilation. Steam source is Power Plant via direct buried piping system connecting to Right Clamshell Leg.

1. Steam is primary energy source to building; steam supplies heats makeup air for commercial dryers and heats water for commercial washing machines.
2. Steam systems are in poor condition, ventilation systems are in poor condition.
3. Parts are difficult to get for steam driven laundry equipment.
4. Manager expressed preference for natural gas and electric equipment.

BLDG. #89/W0645 - EHLE LAUNDRY

Steam Fed Dryer

Steam Array At Dryer Line



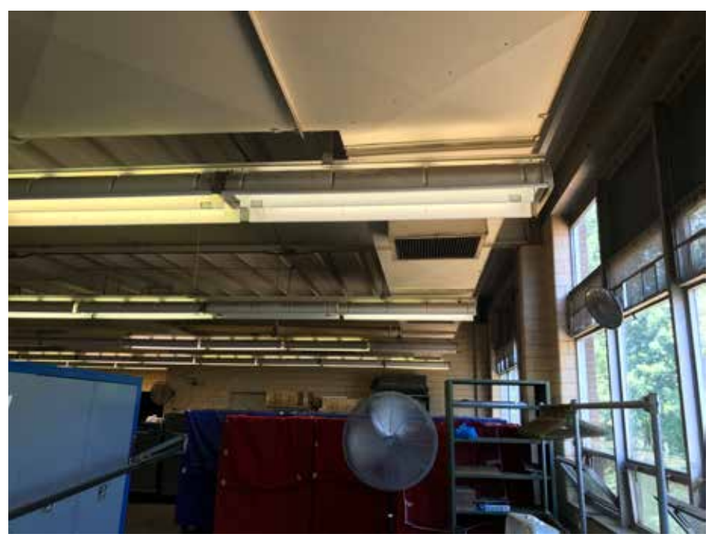
Process Water At Washer Line

BLDG. #89/W0645 - EHLE LAUNDRY

Perimeter Heat

Aged Ventilation AHU

Process Air Compressors



First Floor Ventilation

Steam Cast Iron Radiator

Steam Piping In Crawl Space

BLDG. #21/W0611 - FOGG BARRACKS

Cooling: none.
Heating: Steam supplied to cast iron radiators about the perimeter. Steam source is Power Plant.

1. This building is not occupied.
2. Steam systems are in poor condition.

Take Offs At Looped Expansion Joint

Take Off To Lippincott

Pipe Rack Foot

Window Ac Units

BLDG. #26/W0618 - FLETCHER INFIRMARY

Cooling: Window A/C and Packaged Terminal Air Conditioning Units.
Heating: Perimeter heating elements.

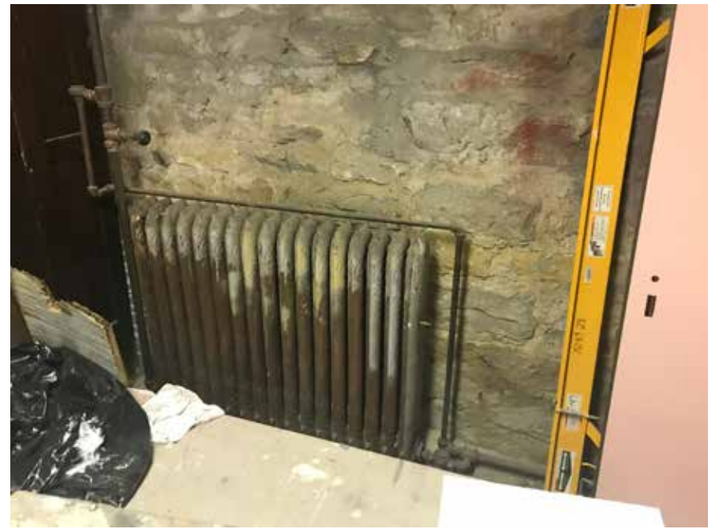
1. Steam main in the center concrete tunnel turns into the concrete tunnel to Fletcher and forms an expansion loop. At the end of the expansion loop, extending from its short leg, are three steam take-offs; one proceeds to the basement in Fletcher, one proceeds to basement mechanical room in Lippincott Hall, and the third is capped with a blind flange. The two concrete tunnels to Fletcher and Lippincott are in good condition. The concrete pedestals below the steel feet of the pipe racks are in good condition.
2. Fletcher is not currently occupied.
3. Overall HVAC System visual assessment is fair.

Ventilation

Bridge To Power Plant

Historic Storage Room

Steam Perimeter Heat



Steam Perimeter Heat

BLDG. 41/WO605 - EQUIPMENT STORAGE

Cooling: None. Minimal ventilation.
Heating: Steam Fed Heating Elements.

1. Visual Assessment of Heating System: Poor

Steam Unit Heater

Steam Piping At Dry Goods Storage

Window A/C Unit And Steam Cast Iron Radiator

Steam Take Off - 150 Lf Down Center Tunnel (Direct Buried)

BLDG. #38/W0634 - ENGINEERING BUILDING

Cooling: Window air conditioning unit
Heating: Steam fed cast iron radiators.

1. Visual Assessment of HVAC System: Fair

Direct Buried Condensate

Interior

Front Elevation

BLDG. #87/W0607 - 8TH ST. GATEHOUSE

Cooling: None
Heating: None

1. COA Yard

2. Coal Yard Grate And Hopper

31. Process Air Compressor

14. Vane Axial Control At Fd Fan

BLDG. #40/W0615 - POWER PLANT

5. Vertical Elevator System And Coal Storage Silo

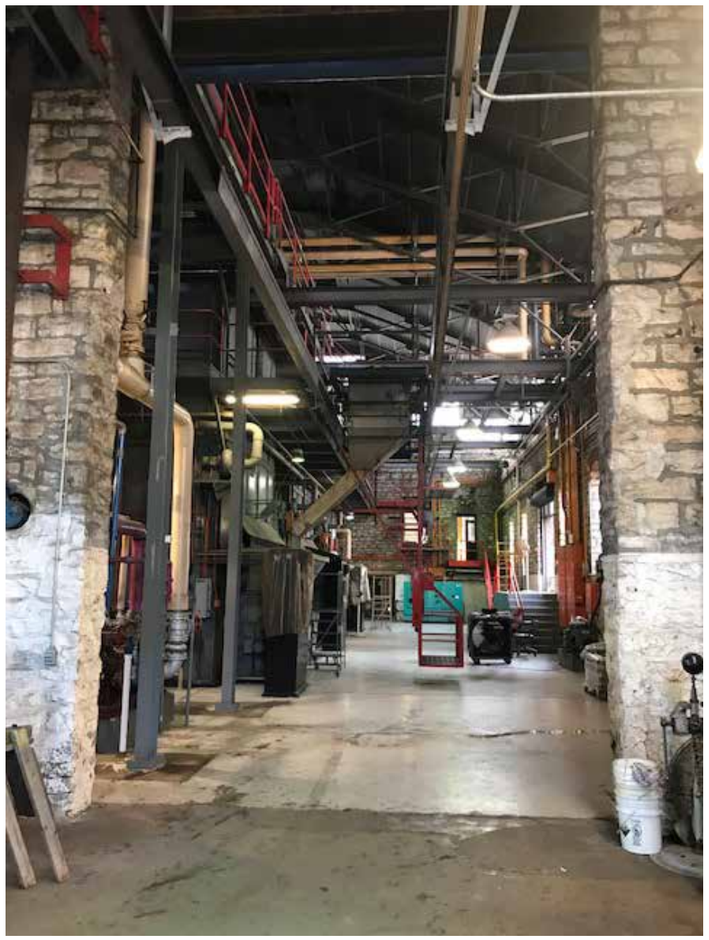
1. Boilers: Wickes, built in 1950, identical. Major Power Plant renovation drawings are dated 1949.
a. MAWP = 300 PSIG, operate at approximately 250 PSIG.
b. Three steam drums, one mud drum each.
c. Inspection memo, dated April 7, 2005, from Kickham Boiler noted Boiler #03 had two plugged tubes and that their visual inspection of Boiler #03 mud and steam drums indicated the three steam drums and single mud drum were in "very good condition". Kickham Boiler recommended non-destructive testing of the tubes and drums.
d. On May 5, 2005, Roy Abbott of Kickham Boiler conducted non-destructive testing of the mud and steam drum wall thickness and tube wall thickness of Boiler #03 only. Anecdotally, results were "favorable" (no formal report was available for review). Boiler #01 and #02 thought to be in similar condition because operators attempt to equate run times.
2. Coal grate, hopper, vertical bucket elevator, coal storage silo: replaced in late 2000's.
3. Weigh Larry, may be original (1950).
4. Breech and main duct system to stack may be original (1950).
5. Forced draft fan array may be original (1950); controls are vane axial.
6. Fly ash and bottom ash receiver system may be original (1950).
7. Dry ash vacuum system and silo; replaced in late 2000's.
8. Main steam piping, valves and PRV station piping may be original (1950). It is evident that main PRV valve and related pressure components are replaced regularly.
9. Water treatment equipment regularly maintained.
10. Deaerator replaced in late 2000's.
11. Feedwater downcomer, header, and branch piping to turbine driven feedwater pumps may be original (1950). Turbine pump pressure parts replaced as needed.
12. Brick stack may be original (1950). Liner condition uncertain.
13. Process air compressor in good condition.
14. Asbestos a large concern; evidenced in abandoned steam to domestic hot water heat exchangers.
15. Minimum plant turndown is approximately 7,000 pounds per hour steaming rate; below this rate, incomplete combustion occurs effecting stack liner.

6. Overhead Coal Storage Silo

7. Underside Of Overhead Coal Storage Silo

32. Abandoned Steam To Domestic Hot Water Heat Exchangers

29. Turbine Driven Feedwater Pumps



8. Weigh Larry System

21. Steam Header

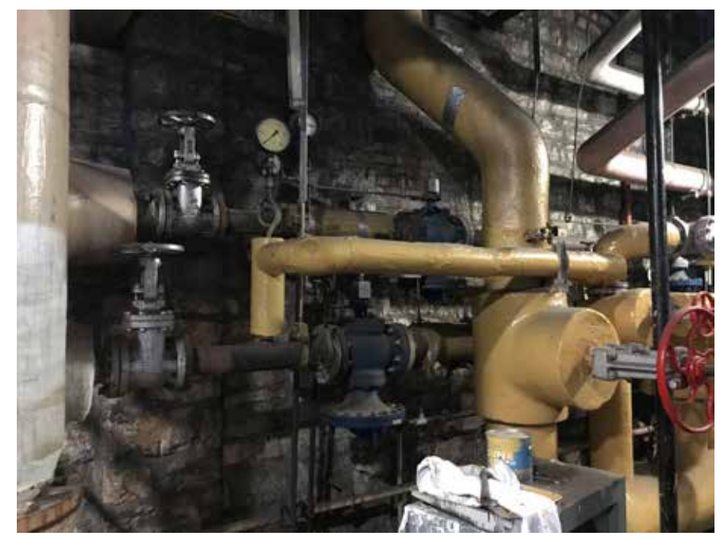
22. PRV Station

12. Breech Connection To Main Duct

13. Forced Draft Fan Array

16. Fly Ash Hopper

23. PRV Station



24. PRV Station

19. Main Header Valves

26. Water Treatment (RO System)

11. Typical Steam Drum Array (3)

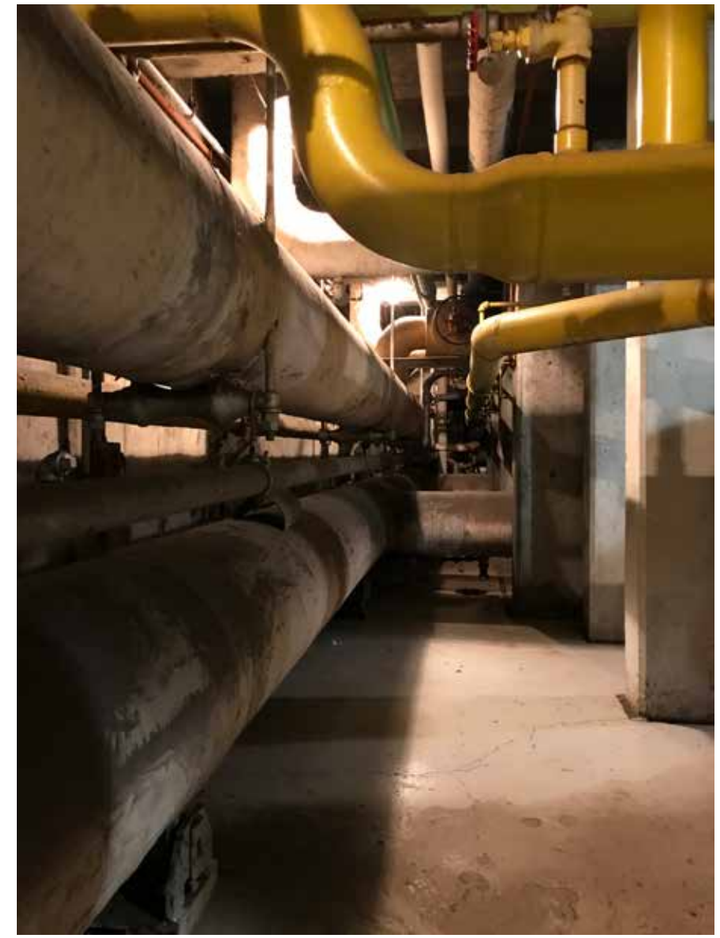
25Water Treatment (Softeners)

27. Deaerator

15. Boiler Wall Tube Steam Soot Blower Array

17. Dry Ash Vacuum Silo

18. Dry Ash Vacuum Chute



20. Steam Headers To Central Plant

30. Brick Stack

28.0Feedwater Header From Da Tank To Feedwater Pumps

10. Boiler No. 03 Rear And Partial Lh & Rh Wall Tube Array

9. Boiler No. 03 Floor And Rear Tube Wall

3. Grate Hopper To Coal Conveyor And Vertical Elevator System

BLDG. #98/W0658 - AMERICAN LEGION RECREATIONAL

Cooling: None
Heating: Perimeter electric base board heat.

1. Visual Assessment of Heating System: Fair

Electric Baseboard Heater

BLDG. #39/W0654 - LAWN GARAGE

Cooling: None
Heating: Steam fed unit heater

1. Visual Assessment of Heating System: Fair
Unit heater is relatively new.
Piping is aged.

Steam Fed Unit Heater

BLDG. #99/W0659 - AMVETS DEER PARK PAVILION

Cooling: None
Heating: Electric base board heater.

1. Visual Assessment of Heating System: Good

Electric Baseboard Heater

BLDG. #5/W0601 - BUS STATION

Cooling: None
Heating: Overhead electric radiant heater

1. Visual Assessment of Heating System: Poor

Overhead Electric Radiant Heater

BLDG. #80/W0638 - BUS GARAGE

Cooling: None
Heating: None

Interior

BLDG. #24/W0637 - VEHICLE GARAGE

Cooling: None
Heating: Steam fed cast iron radiator

1. Visual Assessment of Heating System: Fair

Steam Fed Cast Iron Radiator

BLDG. #32/W0653 - TRUCK MAINTENANCE GARAGE

Cooling: Office window AC unit.
Heating: Overhead gas fired radiant heating elements.

1. Visual Assessment of Heating System: Good

Gas Fired Radiant Heat

BLDG. #81/W0632 - STORAGE/CAVE

Cooling: None
Heating: None

Steam Fed Cast Iron Radiator

BLDG. #45/W0652 - CONDENSATE PUMPHOUSE

Cooling: None
Heating: None

1. Visual Assessment of Steam System Components: Fair, shows signs of heat and moisture wear.

Recessed Condensate Receiver And Pump Set

BLDG. #42/W0623 – TRADESMAN WORKSHOP

Cooling: Window air conditioning unit
Heating: Steam fed cast iron radiators

1. Visual Assessment of HVAC System: A/C Unit, Good; Steam CIR, Poor

Steam Fed Cast Iron Radiator

BLDG. #50/W0624 - GREENHOUSE

Overhead Steam Radiant Heat

BLDG. #43/W0622 - SUPERINTENDENT'S RESIDENCE

Cooling: direct expansion refrigerant split system.
Heating: Space heating provided by cast iron radiators. Steam source is Power Plant via direct buried piping system branching from service to Carpenters Shop.

1. Current Service Life: estimated 50+ years. Expected Useful Life: DX system, 25 years; Steam system, 40 years.
2. Visual Assessment: Fair condition.

BLDG. #100/W0660 - MULTI-PURPOSE THERAPY

Cooling: chilled water via two York Absorption Chillers and cooling tower. Tower has chemical feed.
Heating: steam to hot water heat exchanger; steam source is Power Plant.

1. Current Service Life: heating, estimated 40+ years. Expected Useful Life: 40 years.
2. Airside: zoned air handling units (2) in fair condition.
3. Steam to hot water heat exchanger in fair condition.
4. Some hot water based perimeter heat in good condition.
5. Steam condensate receiver and pump set in good condition.
6. Chilled water system in good condition; estimated service life less than 5 years. This chilled water system supplies Multipurpose Therapy Building and Elmore Infirmary.

BLDG. #31/W0603 - NORTHERN GUEST HOUSE

Cooling: window units.
Heating: cast iron steam radiators; steam source is Power Plant.

1. Visual assessment of steam system: fair to poor.

BLDG. #46/W0641 - DEER FEED SHED

Cooling: None
Heating: None

BLDG. 47/WO602 - HOUSEMAN'S QUARTERS (BOARDED CLOSED)

BLDG. #53/W0628 - LUMBER SHED

BLDG. #54/W0626 - STORAGE

[This page intentionally left blank]

VI. ELECTRICAL CONDITIONS REPORT

ELECTRICAL SYSTEMS CONDITIONS

Electrical systems were surveyed by visual observation. Where possible, equipment manufacturer and style was used to assist in determining the age and viability of the electrical distribution equipment in each building. Equipment consisted of transformers, switchboards, panelboards, unit substations (USS), switches, enclosed circuit breakers, motor controls, piping and wiring. Communications equipment or life safety systems such as telephone, data, fire alarm, intercoms/nurse calls systems, door alarms, access control or security such as CCTV were noted for general conditions and inclusion. Additionally, medium voltage equipment which served as electrical power entry to each building was observed. Some conditions such as the site medium voltage system used information found in documents from previous renovations.

To best judge conditions the following survey methods were employed where possible:

1. Visual Inspection (General Conditions; damaged; unauthorized repair or parts; not maintained)
2. Age (equipment tags; manufacturer series; other identifiers such as non-functional or disconnected; documented date of renovations or modifications)
3. Equipment Manufacture System or Type (recognizable equipment changes by manufacturer; discontinued equipment)
4. Supportability (where commonly known that no parts or service is provided by the OEM or OEM no longer exists)
5. Regulatory Deficiencies (commonly recognized non-compliant equipment or installations)

Where condition is rated as 'Good', the equipment was of recent manufacturer or was in operable condition and is currently supported by the manufacturer. In the older buildings, the age and condition of the equipment was rated 'Fair' if the equipment appeared usable and if limited parts such as circuit breakers may still be available from the manufacturer. Equipment which appeared beyond industry recognized typical life of 20-30 years and/or obsolete since common parts such as a circuit breaker are likely unavailable was rated 'Poor'. Where electrical conditions are listed as 'Fair to Poor' or 'Fair to Good', the buildings may exhibit some updates resulting in a mix of obsolete and supportable equipment. Situations where renovations or equipment has been replaced would rate Fair & Good because of the differences of conditions. In some instances, 'Poor' may be understated because much of the wiring may be of questionable reliability due to age, environment or hazardous conditions. Specific instances of excessively poor or hazardous elements are noted in the individual building narrative e.g. the conditions of the medium voltage distribution ductbanks which are in extremely poor condition as to not be considered usable.

GENERAL SUMMARY OF ELECTRICAL CONDITIONS

The site Medium Voltage electrical service and distribution is a 2400V, 3 phase ungrounded (delta) system. According to available documents some cabling was replaced in 1991. It is difficult to predict the life expectancy of medium voltage cable. Industry and manufacturers typically will not speculate since the conditions of the installation, environmental conditions such wet conduits, heat, dirt, etc. will affect the usable life of wire and cable. Most consider 20 to 30 years as the usable life under optimal conditions. The cables installed in 1991 at 27 years would then be near the end of their life expectancy. The cables may last longer but failures could occur. A survey and testing could provide additional information but there are other site factors to consider. One such factor is the continued use of oil-immersed switches (G&W Manufacture) which are considered hazardous to use and operate. Additional information regarding this is in the body of the report and appendices.

Much of the existing underground conduits which were re-usable in 1991 may not be usable now due to continued deterioration. Deterioration of the conduits had occurred and were addressed in the 1991 project by some replacement of the concrete encased wood fiber/bituminous conduits with PVC conduit laid on top of a ductbank (group of conduits encased in concrete) so new wire could be installed. With twenty-seven years of more moisture and stress, it safe to assume some of the remaining original conduits have deteriorated further and may not be able to be re-used for new cable installations. Ductbank/conduit routing throughout the campus also uses manholes for directional changes. Some of these manholes were site built of brick which indicates these are very aged. A brief visual observation could not determine the exact conditions of the brick manholes since these were water filled. Manhole and ductbank locations may be in the path of future plans and any re-routing should be considered a temporary method since the overall conditions of the system may require full ductbank and cable replacements. For the most part, the conditions of the ductbanks indicate major replacement is necessary.

The campus electrical distribution (conduit and cables) is only part of the system. The Power Plant houses the existing main service switches which feed the campus. There are six (6) switches feeding six circuits. Each circuit supports multiple buildings. The switchgear dates to the 1940's (obsolete GE) and no parts are available. A failure will result in an extended outage even to provide a temporary correction to re-energize

ELETRICAL

any buildings on a single circuit. Individual switch repairs would require extensive custom fabrication and none would be listed by an NRTL (Nationally Recognized Testing Lab such as UL). Certain component failures could cause an entire system power loss and very long duration before any power could be restored. The emergency power system in the Power Plant cannot support the campus and it too relies on this obsolete switchgear to function. All emergency power in the plant is non-automatic and requires multiple manual procedures to even use the existing steam turbine driven generators (also from the 1940's). Engineering said the typical duration to transfer loads to the steam turbine generators is about 90-125 minutes.

Further, the utility (Ameren) provided the known peak load for the facility service which exceeds the capability of the two generators in the Power Plant. The campus is fed from a utility stepdown transformer which is not readily available due to the 2400V system. Ameren did confirm only one usable replacement transformer is available but is not stored nearby. How long this transformer will continue to be available is unknown. Any transformer of this size and type are custom fabricated requiring extensive (months) to order and build. This distribution voltage and configuration is in essence obsolete and not easily maintained.

If loads increase on the campus due to future planning, the existing campus Medium Voltage service and distribution must be carefully scrutinized since it presents a risk. Currently, even without load increases the overall system should be studied in detail and plans developed for replacements or emergency actions should a failure occur. Replacement of the service and distribution should be considered in future planning. Please see the body of the study for further details including hazards, risks to staff and the system reliability. Because of the overall campus load, it is obvious some load shifting (e.g. switchgear sign handwritten changes) has occurred which indicates the existing distribution is NOT conducive to additions and should NOT be used for new loads.

Most of the older building electrical systems should be considered fair to poor with many having poor equipment and wiring. Complete surveying of all the wiring within buildings was not feasible considering the scale of the campus and age of some buildings with varied changes and updates over the life of each building. Many buildings did exhibit examples of period wiring types and methods that are not only obsolete but could be hazardous. For example, panel main feeders of cloth covered rubber insulated wire were observed. These same panels could be expected to have branch circuits for lighting and receptacles with similar cloth-rubber type wire. This type wire has not been used since the 1930's - 1940's and presents real hazards since the rubber insulation and cloth covering becomes brittle and cracks. Fire or shock hazard from this type of deteriorated wiring is common. Even more recent wiring in electrical tubing has no grounding as required by the National Electrical Code for safe operation of overcurrent protection. The lack of proper grounding again presents a hazard and may be detrimental for sensitive electronics which have become more common today. Wholesale replacement of the electrical distribution may be required in some if not all of the older buildings (systems greater than 30 years). Please see the building reports for more details of general electrical system conditions within that building.

Site Medium Voltage Electrical Distribution

The existing Medium Voltage Distribution feeds all buildings on the IVHQ Campus (approx. 230 acres) at a nominal 2400 volts, 3- phase, delta (3 wire) configuration. The primary system is supplied via a utility owned (Ameren) substation to the northeast of the Power Plant and reduces the utility voltage from 12,470 volt (12.47kV) to the 2400 volt (2.4kV) delta supply. Overhead power poles and line conduct the power from the utility substation to the Power Plant where an overhead, pole mounted switch is located. Adjacent to the service pole with the pole mounted manual switch is another pole which provides utility metering via a set of overhead, pole mounted current and potential transformers. All campus power is metered at this point. The 2.4kV system distributes through six (6) existing circuits fed from switches and gear in the Power Plant. See the Power Plant summary below for additional information. From the Power Plant, underground ductbanks feed the campus building services through manholes and pull boxes. In some instances, underground cables are routed via building vaults or directly to outdoor pad mounted stepdown transformers. The outmoded 2400 volt distribution and equipment is beyond normal maintenance and should be replaced with a more common system such as 4160 volt or more appropriate a 12470 volt system which is the utility primary delivery voltage.

In 1991, some upgrades and repairs to the underground medium voltage cables and ducts were performed to ostensibly correct on-going cable faults (see CDB 040-010-047). It appears some of the ducts had collapsed so some sections of unusable ducts were replaced with a single PVC conduit to allow new cables to be installed. We observed in a building electrical vault portions of PILC (Paper Insulated Lead Covered) multi-conductor cables which was cut off and abandoned due to collapsed ducts. It appears the majority of PILC cable was replaced in 1991 since no active PILC cable was observed at any locations. Several

main manholes were inspected and fire wrapped conductors were observed which further supports the intent of the 1991 project was to replace the PILC cabling. Due to the fire wrap, the surveyor could not identify the type of medium voltage cable used. It is assumed the medium voltage cable is 5kV rated, either EPR (ethylene propylene rubber) or XLP (cross-linked polyethylene) since these are the two most common types used. Some manholes are composed of brick and mortar and some newer manholes and pull boxes are pre-cast concrete or concrete composites. The older, brick manholes have square cast iron covers which are hazardous to remove since they can fall into the manhole and damage cables. Round manhole covers are preferred since these do not fall through the collar and are therefore safer to remove/replace when 'live' cables are present.

Electrical staff did relate an incident of ductbank and primary cable damage occurring near the exit of the two (2) main ductbanks from the Power Plant. Apparently, a water leak undermined one ductbank causing a partial collapse. The collapse sheared the outer insulation of a section of cables which was repaired in place (spliced). This was an emergency measure and did not replace a full section of cable or conduits. The ductbank was stabilized using flowable fill material but no other actions were taken to repair the ductbank. This was summarized by the electricians on staff and confirmed by the facility engineering.

From accessible locations in the Power Plant and some building vaults, the surveyor observed what appears to be wood-bituminous composite ducts in unreinforced concrete ductbanks. The duct material is commonly known as 'Orangeburg.' This material will deteriorate over time and the concrete encasement appears from descriptions supplied by the electrical staff to be minimal coverage (2"-3") with no reinforcement. Where direct visual observation of collapsed ducts were available (Power Plant vault and several building vaults), the deterioration of the duct was very obvious. According to the project plans, the replacement of conduit in 1991 was minimal and typically was only a single PVC conduit and was not full replacement of ductbanks. It appears the majority of the ducts are orangeburg. No transite conduit (asbestos composite) was observed but could be present from additions or modifications. We found no records except the 1991 project.

Besides the existing air insulated main switches in the Power Plant, the medium voltage circuits have some air insulated switches in buildings with unit substations (USS) while others have vaults which contain dry type or oil filled transformers feeding secondary electrical distribution. Buildings with a free standing underground electrical vaults for medium voltage transformers use G&W oil filled switches for means of disconnection. See the attached cautionary letters from G&W concerning oil filled switch safe operation and use. G&W no longer manufacturers these oil switches. Under no circumstances should this type of switch be operated under load.

To reiterate, the overall conditions of the medium voltage central equipment, ductbanks, age of cables, maximized loads and hazards indicates a need for wholesale replacement with a distribution system to support the site for current and future needs.

BLDG. #5/W0601 - BUS STATION

5A - Bus Station Lighting & Heating

5B - Bus Station Electrical Equipment

The electrical systems in the station consist of a small two pole load center with two (2) tandem circuit breakers to provide four (4) circuits for lighting (interior/exterior), a quadruplex receptacle and two ceiling hung electric radiant heaters (see pictures 5A and 5B). The exterior lighting is controlled by a photocell and the electric heaters are controlled via a remote line voltage thermostat adjacent the load center. All wiring was in EMT conduit and painted. Other than conditions of the heaters, the electrical wiring appears to be in good shape. It is unknown where the feed for this building originates but assumes it comes from the Old Administration Building (35).

11A - Roland Entry

BLDG. #11/W0608 - ROLAND BARRACKS

Roland Barracks: (Unoccupied) It is unclear from records and could not be visually confirmed where the electrical service is fed from. Most probable it feeds from Kent Infirmary (91) at standard line voltage (120/208V, single phase). The building was not accessible due to asbestos concerns (doors secured and warning signs – see 11A) however some visual confirmation was observed through windows and doors. The electrical service is located on wall of the stairs to the crawlspace and appears to be obsolete equipment similar to that observed in Fogg (21 – see below). Please note that location of panels or electrical equipment in the stairway is a NEC violation and the low ceiling and earth floor of the crawl space. The surveyor was not able to confirm if power was available in the building. Due to items observed, it is believed power is available in the building. The building is nearly identical to Fogg Barracks (21) and conditions should be similar. It is unknown if any telephone or other communications systems are in the building or functional. From what could be visually observed, the electrical feed to this building should be de-energized/disconnected except when necessary.

BLDG. #20/W0610 - SOMERVILLE DOMICILIARY

20A - Sommerville Vault Oil Switches

20B – Sommerville Service Transfromers

20C - Sommerville Main Distribution Panel

20D - Sommerville Cloth/Rubber Feeder Wires

20E – Sommerville FACP (Simplex 4010)

Sommerville is nearly identical to the conditions in Anderson (22) as the 2.4kV electrical service enters directly into an electrical vault which houses three (3) obsolete, oil-filled, G&W switches feeding three (3) transformers which step down the voltage to 120/208V and feed a main distribution panel (see 20A, 20B, 20C). As in Anderson, the main panel has the front cover and dead-front removed creating a hazard although entry into the electrical vault room is also restricted by means of a padlocked door. Unfamiliar or unqualified staff should not enter this room. Panel feeds included cloth covered, rubber insulated wire (see 20D). Care should be taken not to move or disrupt these wires since the insulation may be brittle. This type of wire is considered a hazard and should be replaced. The main panel is an obsolete Westinghouse unit which also has some mixed vintage circuit breakers. It is unknown whether replacement circuit breakers are available without major modifications. Several of the other branch and distribution panels are a mix of older, obsolete GE-Trumbull/Westinghouse/Sq. D and newer Sq. D. The newer Sq. D panels are supportable. Please note the use of G&W oil switches should be ceased; see attached letters of warning from G&W.

A Simplex 4010 hybrid FACP is located in the lower level outside the electrical vault (see 20E). The fire alarm is supportable. Adjacent the fire alarm is the telephone terminal board (TTB). The IDF (rack) is located on the other side of the wall as the FACP/TTB. All the lower level space is unconditioned.

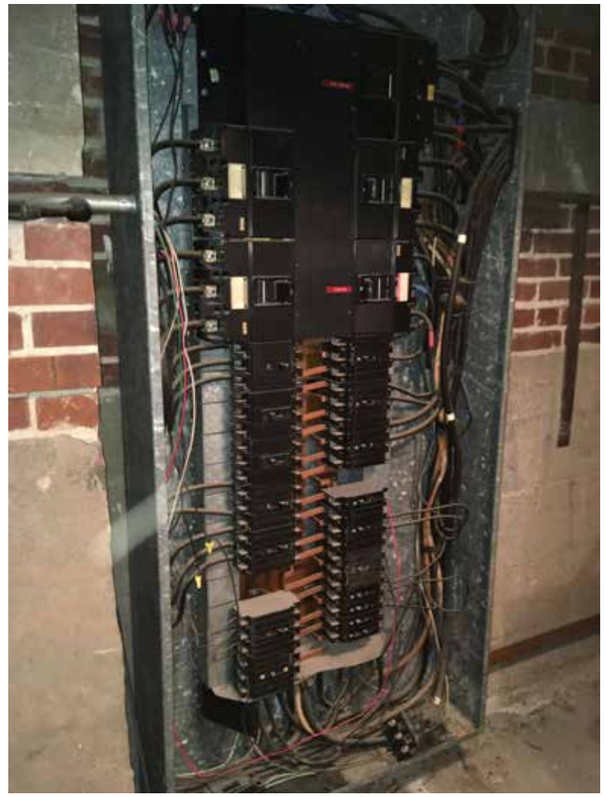
21A - Fogg E. Service on Stairway

BLDG. #21/W0611 - FOGG BARRACKS

(Unoccupied) As in Roland (11) it is unknown where the electrical service is fed from but is assumed Kent Infirmary (91) subfeeds this building as well. Similar to Roland the electrical service switch and panels are located on the stairs to the basement/ crawlspace (see 21A). The service is single phase, residential type equipment and not commercial grade. All equipment is obsolete and in poor condition. As noted in the Roland narrative, the location of the electrical service is non-compliant and the crawlspace does not have the necessary clearances for locating of service panels. Although some EMT electrical conduit was observed in the crawlspace, it would be expected from the type and appearance of lighting fixtures and receptacles plus the original, obsolete panelboard (very old Sq. D), cloth covered, rubber insulated wiring may be present. All fixtures and devices appear to be in poor physical condition. A telephone terminal block was attached above the stairs to the crawlspace but did not appear to be functional. No other communications systems were observed. No fire alarm system was observed. Overall conditions of the electrical systems appear to be very poor and may be hazardous due to the type and age of wiring and devices. Although power was available in the building, de-energizing of the building power should be considered to avoid possible hazards from wiring and devices. Some lighting operates but overall conditions suggest limiting use.

BLDG. #22/W0612 - ANDERSON BARRACKS

22A – Anderson G&W Obsolete Oil Switch (typical)



22B – Anderson Main Distribution Panel

2.4kV electrical service enters directly into an electrical vault room which houses three (3) obsolete, oil-filled, G&W switches feeding three (3) transformers which step down the voltage to 120/208V and feed a main distribution panel (see 22A). The main panel has the front cover and deadfront removed creating a hazard (see 22B). However, entry into the electrical vault room is restricted by means of a padlocked door. No unauthorized or unfamiliar staff should enter this room because of the live 2.4kV as well as the open panel. The surveyor noted the main panel is fed from the transformers and feeds panels with cloth covered, rubber insulated wire. Though none appeared to have immediate damage, care should be taken not to move or disrupt these wires since the insulation may be brittle. As noted elsewhere this type of wire is considered a hazard and should be replaced. The main panel is an obsolete Westinghouse unit which also has some mixed vintage circuit breakers. It is unknown whether replacement circuit breakers are available without major modifications. Several of the other branch and distribution panels are a mix of older, obsolete GE-Trumbull/Westinghouse/ Sq. D and newer Sq. D. The newer Sq. D panels are supportable. Please note the use of G&W oil switches should be ceased; see attached letters of warning from G&W (Appendix).

A Simplex 4010 hybrid FACP is located in the lower level outside the electrical vault. The fire alarm is supportable. Adjacent the fire alarm is the IDF (rack) as is the telephone terminal board. All the lower level space is unconditioned.

BLDG. #24/W0637 - VEHICLE GARAGE

This building was not surveyed however it appears the electrical service is fed from main panel L3 in the Truck Maintenance Garage (32).

BLDG. #26/W0618 - FLETCHER INFIRMARY

26A – Fletcher Abandoned & New Conduits

26B – Fletcher Close-up of Collapsed/ Abadnoned Conduits

26D – Fletcher Existing ATS

26C – Fletcher E. Vault with Transformers and Sanitary Piping

26E – Fletcher Simplex 4100 U FACP

(Unoccupied) Fletcher is fed from the 2.4kV distribution to an electrical vault in the center lower level. The vault houses three (3) dry-type Westinghouse transformers fed from three (3) obsolete G&W 5kV oil switches. Within this vault is an example of duct conduits abandoned during the 1991 upgrades (see 26A below). One of the abandoned conduits has a remnant of the PILC cable 'trapped' from the collapse and has been cut clear (see 26B below). A single, newer 4" PVC conduit is on top of the abandoned conduits and contains the current cables which feed the oil switches. See the picture below of the abandoned/ collapsed conduit and 1991 PVC conduit/cables.

A hazard within the vault exists since a sanitary pipe (cast iron) has been routed within the vault (see 26C). Foreign piping and systems are and always have been forbidden to be routed through electrical rooms and vaults especially those housing live electrical systems.

The transformers feed a 120/208V a Federal Pacific Electric Main Panel outside the vault. Please note Federal Pacific Electric (FPE) suspended manufacturing in the 1980's. Some limited types of large molded case circuit breakers are available from a custom builder (American Circuit Breaker) at high-cost and long lead times to fabricate and test. Small FPE circuit breakers as well as most other types of FPE breakers are not available except from 'used' equipment suppliers. Because of safety issues with FPE equipment, existing panels should be replaced and not used. The last FPE small circuit breakers did not meet UL for listing so FPE ceased manufacturing of them in the early 1980s and used GE parts and circuit breakers for the last branch panels marketed by FPE. None of the FPE equipment observed in Fletcher were of this era and are much older (greater than 30 years). Adjacent an FPE panel outside the electrical vault is an Onan ATS which is fed from an outdoor, weather enclosed diesel generator and the adjacent 50A panel (see 26D). It appears the emergency system may have not been used or tested for an extended amount of time and is in fair to poor condition from age and lack of maintenance.

Wiring varies in type and age with most being thermoplastic type TW or THW. The surveyor was not able to access most of the wiring but some appeared to not include an NEC required ground conductor but most likely uses the conduit as a ground path. Though this was once acceptable, it no longer meets NEC requirements in health care applications. Some branch panels have had minor upgrades probably during renovations. The condition and type wire used in the panel feeders was not observed so condition is unknown. Lighting fixtures were mostly in fair condition but some older, poor condition light fixtures were observed in ancillary areas.

A Simplex 4100 U fire alarm panel is located in the inner corridor vestibule and is supportable (see 26E). It appears an upgrade of the fire alarm was performed before the building was vacated. Telephone service is operable in parts of the building and data wiring was observed but an IDF (rack) was not located. Some existing security CCTV and access control was observed. The access control was operable.

BLDG. #28/W0621 - ANDREW BARRACKS

28A – Andrew Main E. Service Panels

28B - Andrew IDF (data rack)

28C – Andrew Simplex FACP

The building 400 amp main breaker, 120/208V, 3 phase, 4-Wire service panel is fed from three (3) 25kVA transformers in Vault H and also feeds the library service from fused switch in the same vault. The main panel has been updated by retrofitting a new Sq. D panel interior and front in the original panel enclosure but has no index (see 28A). It is assumed the main panel feeds some equipment and branch panels. An adjacent 225 amp, 120/208V, 3 phase, 4-wire panel 'A' has been retrofitted with a new Sq. D interior and front. Panel 'A' serves mechanical equipment and feeds some branch panels. Both of these are fully serviceable since they are current. Some branch panels are current Sq. D but others are obsolete, small GE panels.

An IDF (rack) is located in the main electrical room on the lower level (see 28B). The FACP is a Simplex 4100 located in the main electrical room and is supportable but is an earlier series which may be limited on available modules without upgrades (see 28C). The telephone terminal board is adjacent the FACP in the main electrical room.

29A – Reig Admin Main E. Service Panel (obsolete)

29B – Abandoned UPS System (possible hazard – batteries)

29D – Emergency Panel (no life safety circuits)

29C – Reig TTB and Emergency Panel (red box)

29E – Reig IDF (data rack – unconditioned space)

29F – Reig (non- compliant device; typical of all noted)

BLDG #29/W0617 - REIG-ADMINISTRATION

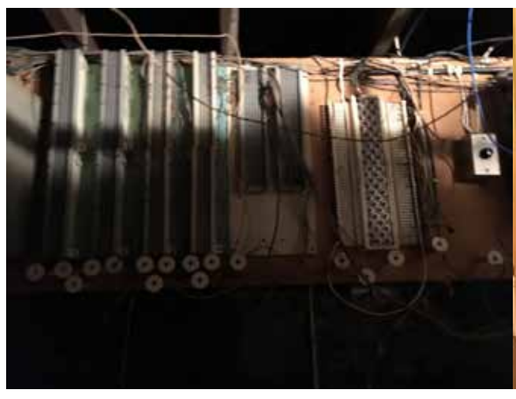
The service consists of three (3) 75kVA transformers in a lower level vault feeding a Main Distribution Panel. With some exceptions most panels are obsolete Trumbull (GE) 120/208V, 3 phase, 4-wire panels which are not supportable (see 29A). Several smaller load centers have been installed in the lower level which appear to have limited or no use for old UPS feeds. An abandoned UPS (Uninterruptible Power Supply) and power conditioner are feeding one of the load centers which appear to have been previously used for data equipment. Neither is functioning and there may be depleted batteries in the UPS (see 29B). A single 'Emergency' Panel is located in the lower level near the telephone terminal board and is labeled as fed from the Schapers building generator (see 29C). The 'Emergency' Panel is indexed and noted as feeding the 'computer room' but this appears to be the source for the abandoned UPS and power conditioner. No emergency power for life safety lighting and fire alarm appears to be fed from this panel (see 29D). Wiring is of varied methods with some possible cloth/rubber insulated wires. As mentioned above the telephone terminal board resides in the lower level. A data IDF (rack) also resides in the lower level in an unconditioned space (see 29E). The FACP is a Simplex 4010 located at the building entry vestibule and is supportable).The fire alarm notification appliances are obsolete Simplex horn/ lamp devices which do not meet NFPA 72 – National Fire Alarm and Signaling Code (see 29F).

30A – Library Main Panel (obsolete)

30B – Main Panel Index (GE/Trumbull)

30C – Library Level One Panel (hazard, obsolete)

30D – Library Fire Alarm Device (typical non-compliant)



30E – Library TTB (poor environmen not readily accessible)

30F – Library IDF (data rack – not in secure area)

BLDG. #30/W0606 - LIBRARY

The service consists of a Main Panelboard in the crawlspace beneath the building. The panel is fed from three (3) transformers fed from three (3) oil filled switches in an underground vault. The transformers stepdown the 2.4kV distribution to 120/208V to feed a 200 amp disconnect switch for the Library. The Main Panelboard is an obsolete GE/Trumbull panel which feeds the mechanical equipment in the crawlspace as well as feeds branch panels in the crawl space and on the upper levels (see 30A, 30B). All branch panels are obsolete GE/Trumbull. The panel on the main floor has part of the dead front missing and presents a shock hazard should someone inadvertently reach past to the live buss (see 30C). Where wiring was visible, it appears to be a mix of thermoplastic insulated (type TW) and some cloth covered, rubber insulated. Except for some more recent wiring, it appears most of the wiring is well past usable life.

Within a stairwell landing between the main floor and the approach to the crawlspace stairs a Simplex 2001 non-addressable FACP is located. Though the fire alarm appears to be functioning it was noted that the notification appliances are non-compliant horn/lamp units with a white (translucent) lens. The horn/lamp units do not meet NFPA 72 – National Fire Alarm and Signaling Code requirements (see 30D).

The telephone terminal board resides in the crawlspace and can only be accessed by crawling under the AHU and ductwork (see 30E). The crawlspace is an earth floor. An IDF (rack) is located on the main floor in a side room in conditioned space but is not secure since the room is open to public traffic (see 30F).

31A – Guest House Panel and Simplex FACP

BLDG. #31/W0603 - NORTHERN GUEST HOUSE

The electrical service is single phase 120/208V fed from a 200 amp, two-pole disconnect located in an underground vault with three (3) single transformers fed from oil filled switches connected to the campus 2.4kV distribution. The transformers feed three (3) buildings – Guest House (31), Maintenance Garage (32) and Medical Staff Building (34). There are branch panels on each floor fed from this single 200 amp feed. Each branch panel is a Sq. D load center which has been retrofitted within and existing older enclosure (see 31A). The load centers are supportable but fully used. No three phase power is available in the Guest House.

Wiring could not be readily observed but it appears extensions from existing recessed boxes were added by means of surface EMT conduit to increase location and quantity of convenience outlets. Wiring appears to be in fair condition but is inadequate. Especially concerning is the use of window type air conditioners on common convenience outlet circuits in the sleeping rooms. All lighting, equipment and outlets are fed from these branch load centers. Emergency, battery backup lighting units with exit signs are in the corridors. However, the battery backup emergency lighting is connected by means of plug and cord which does not meet NFPA 70 or NFPA 101 – Life Safety Code since these can be unintentionally disconnected.
No telephone, data or fire alarm services were observed in the building.

BLDG. #32/W0653 - TRUCK MAINTENANCE GARAGE

12A – Truck Maint. Garage Main Panel (L3)

12B – T. Maint. Garage Telephone Entry and Data Wiring (blue wires)

As noted above in the Northern Guest House (31), the garage has a 200 amp main circuit breaker 120/208V, 3 phase, 4 wire panel (L3) fed from the common underground vault from a separate 200 amp, three-pole fused switch tapped at the transformers. The main panel in the garage is a Sq. D of recent manufacturer and is supportable (see 12A). The condition of wiring is fair with some wiring on the upper floor in poor condition. Most of the main level wiring is EMT conduit. A fuel station for vehicles is outside the garage and the fuel delivery/monitor system is mounted on the wall of the garage. It is unknown if the fuel delivery system is functional or in use. The fuel system should be further reviewed for proper fittings and methods of wiring per NEC . Lighting was in fair to poor conditions especially on the second level.

An underground telephone service entry appears to be routed from the basement via a tunnel access. The earth floor of the basement was not accessible since it was wet and muddy so survey was limited to what could be observed from the door. The telephone multi-pair feeds a telephone demarcation box with circuit protectors. Some telephone wiring is active in the 'office' of the garage. Adjacent the telephone demarcation is a sleeve with several Category type Ethernet type data cables which appear to be routed to the office as well (see 12B). A printer was observed in the office but it is unknown if the data communications are functioning. No line protectors were provided for the outside to inside entry of the data communication wiring. No fire alarm or other systems were observed.

BLDG. #34/W0614 - MEDICAL STAFF BUILDING

34A – Medical Staff Bldg E. Service Panel

34B – TTB with telephone entry protector

34C – Med. Staff IDF (data rack-basement)

34D – Med. Staff Non-compliant Fire Alarm Device (typical)

As noted in the Guest House (31) narrative the Medical Staff Building electrical service is fed from a common set of transformers in an underground vault. The Main Service is a Sq. D 100A, 120/208V, single phase, 3 –wire load center and is current and supportable (see 34A). Most visible wiring in the basement was in EMT conduit and appeared relatively recent (± 20 years) but may not have separate ground conductors for sensitive electronics and convenience outlets. Otherwise, the use of EMT as ground path is not a concern for general lighting if the conduit pathways are continuous with low impedance.

A telephone terminal board with entry protection is in the basement and adjacent is an IDF (rack) for data communications (see 34B, 34C). The fire alarm notification appliances (horn/strobes) are non-compliant with NFPA 72 since they use translucent, white lamps in lieu of strobes (see 34D).

35A – Old Admin/Security Main Panel

35B – Obsolete GE/Trumbull Panels (typical) Basement

35F – Elevator Eqp./Access Control (located in room with MDF)

35C – Old Admin/Security Emergency Power

35D – Old Admin/Security Telephone Entry

35E – MDF (Main Data Racks for Campus)

35G – Old Admin/Security FACP (Simplex 4010)

35H – Old Admin/Security Typical Non-compliant FACP Horn/Lamp

BLDG. #35/W0604 - OLD ADMIN (SECURITY-STONE)

The service consists of a Main Panelboard fed from three (3) 2.4kV to 120/208V transformers in a lower level vault and is fed from a 2.4kV site distribution circuit. The original main panel has been upgraded with a newer Sq. D interior and front which feeds a small load center adjacent the main panel (see 35A). Another Sq. D 200A, 120/208V, 3 phase, 4-wire load center is located in the lower level was also observed as well as other older, obsolete small GE and Trumbull panels in the building (35B).

A small load center is adjacent the Main Panelboard and is penciled with 'EM Power, from Kent' and was assumed to be for Life Safety circuits (see 35C). The surveyor did not open nor was able to determine the condition of the overall building wiring but noted on the unused third floor areas much was cloth covered, rubber insulated wiring. Other wiring in conduit is obviously of more recent installation and materials. It is unknown how much of the original cloth/rubber wiring remains. Much of the wiring is contained in exposed surface conduits which are routed throughout the building.

A telephone terminal board (TTB) is adjacent a Sq. D load center and behind the main domestic water service in the basement (see 35D). The location of the TTB is not easily accessible and is subject to damage should a water leak occur. Also in the basement is a room used to house the entire campus IT MDF (Main Data Frame) in two open relay racks (see 35E). The room has a dedicated split Dx cooling system unlike most of the other building IDF locations. The elevator equipment is also housed in the same room as the MDF (see 35F) and not in a separate room as required by ASME 17.1. The access control system is adjacent the elevator equipment (Hirsch – 35F). The fire alarm control panel (FACP) is on the first floor at the entry vestibule and is a Simplex 4010 hybrid so it is supportable (see 35G). The surveyor noted that the fire alarm notification appliances were old, obsolete Simplex horn/lamp devices which do not meet NFPA 72 – National Fire Alarm and Signaling Code since these are not clear lens candela rated strobes (see 35H).

BLDG. #36/W0613 - SMITH HALL

36A – Smith Main Service Panel (covers not installed)

36B – Smith Load Center on Main Floor (typical)

36C – Smith Simplex 4010 FACP

36D – Smith IDF (data rack) in Basement

The electrical service is fed from an outside pad mounted 225kVA 2.4kV- 120/208V transformer to a Sq. D 400 amp Main Circuit Breaker, 120/208V, 3 phase, 4 wire panelboard located in the basement. Although Main Service Panel is in good condition, the surveyor found the covers had been removed and not reinstalled (see 36A). This is a hazard and should be corrected. Most of the panels and load centers in the building are Sq. D and all are supportable (see 36B). The surveyor could not readily access wiring to confirm the type of insulation but most wiring was in conduit. Age of the conduit was concealed by paint. A complete detailed inspection should be performed especially of the food prep area to confirm the wiring conditions including grounding. No separate grounds were observed where feeders were visible in the main panel.

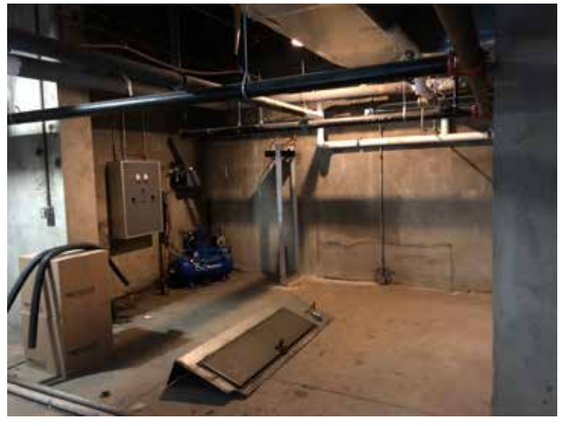
A Simplex 4010 FACP is located in the Café area and is fully supportable (see 36C). A new, unused IDF (data rack) is installed in the basement adjacent a load center (see 36D). The basement space where the IDF is located is not conditioned. A small telephone terminal board is located in the connecting tunnel of the basement.

37A – Lippincott G&W Oil Switches

37C – Retrofited Main E. Service Panel

37D – Abandoned Stage Lighting Controls (main floor stage)

37B – Oil Filled E. Service Stepdown Transformers



37E – IDF (data rack) Located in Mechanical Space (unconditioned)

BLDG. #37/W0600 - LIPPINCOTT HALL

The electrical service entry is to a transformer vault in the mechanical lower level space. The vault contains three (3) G&W oil switches fed from the underground campus 2.4kV distribution (see 37A). The oil switches control three (3) 50kVA oil filled stepdown transformers which step the voltage from 2.4kV to 120/208V, 3 phase, 4 wire (Wye) (see 37B). The transformers feed a Sq. D Main Panel which has been retrofitted into the original panel enclosure (see 37C). The Sq. D panel is current and supportable but the condition of the existing wiring and feeders may be original and were not observed. The main panel enclosure shares enclosure of another distribution section which appears to have been part of an older lighting control system which fed the abandoned stage lighting controls (see 37D).

A Simplex 4010 hybrid FACP is used for the fire alarm in the building. An IDF (rack) is located in the basement mechanical room with the AHU and electrical service (see 37E). This is an unconditioned space. Telephone service was present in the building but a TTB was not observed by the surveyor.

38A – Engineering Main Panel and Load Center

38B – Engineering IDF (data rack) and TTB

BLDG. #38/W0634 - ENGINEERING

The building has a 100 amp Sq. D service panel in the lower level (basement) providing 120/208V power to the entire building (see 38A). Adjacent the service panel is a small Sq. D load center fed from the main panel which appears to have been added to provide more circuit positions since the main panel was limited to 20 spaces/positions. Both the main panel and the load center are current and supportable.

Also located in the basement is a data IDF (rack) and the telephone terminal board (TTB) in unconditioned space (see 38B). The fire alarm has been updated with some Simplex zone modules mounted in an existing Simplex system enclosure. The fire alarm circuits are fed from the Simplex 4100U FACP in the Power Plant via an underground conduit.

BLDG. #39/W0654 - LAWN GARAGE

The Garage is adjacent the Power Plant and only a brief observation was made. There is a single panel which powers the lighting and some convenience outlets. The panel is an obsolete GE/Trumbull unit and is in very poor condition. Wiring is mostly deteriorated conduits and lighting fixtures are minimal and in poor condition. It is unknown where the power if fed from. No communications systems were observed.

40A – Incoming Overhead Utility Service (behind Lawn Garage 39)

40B – OH Utility E. Service at SW Corner of Power Plant (center view pole is utility metering; other pole is manual switch & IVHQ property)

40D – Section of Obsolete GE 2.4kVA Switchgear/Generator Controls

40C – Lower Level Power Plant Vault (below the main switchgear plus houses the plant stepdown transformers)

40E – One of Two Steam Turbine 500kW Generators

40F – Example of Main Campus Med. Voltage Switch Label

40G – Typical Modifications to MV Switches (incomplete or confusing)

40J – 125kVA Diesel Generator for Power Plant Operation (manual start, non-automatic)

40H – Power Plant MV Distribution Vault with G&W Oil Switches for Circuits

40I – Power Plant MV Cable Distribution to Ductbanks (damaged conduits)

40K – Power Plant Manual Transfer Switch for 125kW Generator

40L – Second Small 12kW Diesel Generator for Power Plant Boiler Controls (must be manually started to maintain boiler operation)

BLDG. #40/W0615 - POWER PLANT

The campus primary electrical service is fed from three (3) 500kVA Ameren transformers which steps down the voltage from 12,470V to 2,400V (2.4kV) delta. The incoming service is on overhead poles to the Power Plant at the southwest corner (see 40A, 40B). The overhead primary is metered at the last Ameren pole via pole mounted current and potential transformers feeding the pole mounted utility meter (40B). The final pole routes the incoming power from overhead through underground conduits (ducts) to the switchgear in the Power Plant. The final pole also includes a manually operated open, air-insulated switch for disconnecting the overhead primary from the underground feed to the indoor switchgear (40B). The switch can be operated from the ground via a pole mounted mechanism.

The primary service conductors are routed into a lower level vault up through the floor to the existing switchgear (see 40C). The switchgear is obsolete GE gear (1940 era) which includes the paralleling controls for two 500kW (625kVA), 2.4kV steam turbine driven generators plus six (6) medium voltage switches which feed the six (6) campus 2.4kV distribution circuits (40D, 40E). The two (2) steam turbine generators are 1940's salvage from a naval ship. The existing switches have electro-mechanical overcurrent relays and instantaneous elements (fuses) to protect each circuit. The switches have engraved laminate signs indicating which buildings are fed from each circuit but appear to have had some changes made with ink markers. The circuit building assignments are not complete since they do not reflect recent changes such as the Water Treatment Building. The ink marked changes indicate some loads were shifted from Circuit 2 to Circuit 6 but this can be confused since ink markings on the Circuit 2 label have been lined out (40F, 40G).

The generator control section of the switchgear has had some electro-mechanical relays for generator synchronizations and protection replaced with new relays solid state relays (Basler units). No wiring diagrams of the generator/switchgear control system were observed so ability to troubleshoot the existing equipment is hampered. All the switchgear and the steam turbine generators are obsolete with no parts readily available. The two 500kVA generators are inadequate to power the campus since the campus loads exceed the combined generator capacity of 1,000kVA. Current utility meter data indicates a peak summer load of 1,227kW (1443kVA) with a typical power factor of .85. If the generators are operated, it is a manual procedure and not automatically connected if the power fails. The operator must disconnect the campus distribution from the switchgear via the manual, pole mounted open air switch mentioned above to avoid hazardous backfeeds to the utility grid system endangering utility personnel – a distinct liability/risk. After disconnection from the utility grid, the generators must be manually started. After the generators are started and paralleled than the operator can manually signal the contactor in the switchgear to connect the generator fed buss. Since the peak demand exceeds the generator capacity, manual load shedding must be performed before any power transfer.

There are two (2) primary medium voltage vaults in the lower level of the Power Plant. The vault which houses the service primary conductors also houses oil filled switches controlling oil filled transformers for the Power Plant (The second vault is adjacent to the main vault and contains oil filled switches to control the campus primary circuits which are split and routed to the two main ductbanks feeding all the buildings (see 40H). All oil filled switches in the Power Plant and elsewhere are obsolete G&W switches as noted above. Visual observation of the unused ducts in the distribution vault appear to be all orangeburg conduits with some exhibiting deterioration (see 40I). Please note the electrical vaults should be considered controlled access per both NFPA 70 – National Electrical Code and NFPA 70E – National Electrical Safety Code and should be kept closed and locked to restrict access to only qualified personnel. The surveyor found both vaults unlocked with doors open and unsecured. These are hazardous areas which should be secured. It appears the main electrical vault door was open to allow ventilation for the transformers so ventilation of this vault should be checked before securing.

The Power Plant itself has two (2) separate smaller backup power generators to maintain operation. A 125kVA/166kW, 120/208V, 3 phase, 4-wire diesel powered Cummins generator is on the boiler room floor (see 40J). The generator fuel is stored in a subbase fuel tank. It is unknown what the run time is on the fuel supply but the tank is relatively small with the assumed intent to increase replenishment of fuel over short periods of regular testing. The replenishment over short periods avoids the need to test and reprocess the diesel fuel as it ages. The generator feeds the plant loads (general power) via a manual 600 amp three pole, double throw switch feeding a single 600 amp, 208V, 3 phase panelboard outside the electrical vault (see 40K). This is a manually operated system which does not automatically transfer power during a utility power outage. The operator must start the generator and then operate the switch to restore power for the essential Power Plant operation. The 600 amp panel is a Cutler-Hammer/Westinghouse (now Eaton) unit and remains serviceable with circuit breakers available.

Another small Onan 15kW, 120/208V, 3 phase, 4-wire generator with subbase fuel tank also resides on the boiler room floor and feeds a small panelboard (see 40L). There is no manual or automatic transfer switch so the panel is essentially de-energized unless the generator is operating. From the panel schedule it is apparent this fed some lighting circuits and the existing boiler controls. Currently, it appears only the boiler controls are fed from this generator/panel. The circuit(s) for the controls are connected to a non- UL 1008 rated contactor mounted on adjacent power panel PP-1. The contactor is fed utility power from PP-1 and when the power fails and the small generator is manually started, transfers the boiler control circuits to the small generator. Again, the generator must be manually started to provide power to the boiler controls. The small Emergency Panel is a Sq. D unit which is serviceable. The larger panels (PP-1 and adjacent panel) are Cutler-Hamer/ Westinghouse (now Eaton) and are serviceable.

Several older, obsolete Westinghouse Electric panels reside throughout the lower level of the plant and these may not be readily serviceable since circuit breakers would most likely need to be retro-fitted while general replacement parts would not be available. Some small older load centers from various manufacturers were observed in areas such as the pipe/machine shop. All appeared to be older and may be obsolete. Many of the disconnect switches are older, obsolete units and in fact are physically smaller than newer switches with the same amperage and voltage ratings. Replacement of switches may be hampered by the tight spaces at existing switch locations where a replacement would be of larger dimensions.

The fire alarm is a Simplex 4100U system located on the first level which is supportable. Data and phone wiring is minimal and is connected via the Engineering Building systems through an underground conduit(s).

41A – Presumed Equipment Storage Main Panel

41B – Equipment Storage Hazardous Panel (missing covers and cloth/rubber wire)

41C – Eqp. Storage Existing Operable Lighting and Abandoned Wiring (to right of the lamps)

41D – Eqp. Storage Phone and Security System

41E – Eqp. Storage Non-compliant Horn/Lamp (typical)

BLDG. #41/W0605 - EQUIPMENT STORAGE

This building was related as the original Commissary and currently appears to be used for incidental storage. Since the available documents (1991) do not indicate how the building is fed power but the main switch #6 in the Power Plant indicates the load control, it is assumed the building is fed from the Power Plant distribution. The surveyor observed several panels in the building on both main and lower levels. One Westinghouse panel (see 41A) appears to feed the other panels and is assumed to be the main service panel for the building. The panel is unsafe since the deadfront covers are missing and allows someone to reach past and touch live components. The panel is of obsolete design and contains cloth covered, rubber insulated feeders to the other panels. All panels are of obsolete series by Westinghouse and Kinney (with Westinghouse or GE components) and have similar conditions of missing covers and aged type of wire (see 41B). Lighting fixtures are fair to poor. Some wiring has been added over time in EMT but even older circuits appear to have damaged or compromised wiring (see 41C). Both functioning telephone and what appears to be a security system with a single motion detector were observed (see 41D). It appears the security alarm annunciates via the telephone lines. A Simplex 4010 FACP had been installed but the fire alarm horn/lamp are of the non-compliant type (see 41E).

BLDG. #42/W0623 - TRADESMAN'S WORKSHOP

42A – Tradesman Main Panel L2

42B – Tradesman Other Panels (sample)

The building electrical service is fed from three (3) 25kVA transformers to stepdown the 2.4kV to 120/208V, 3 phase, 4 wire. A newer Sq. D Main Panel L2 is located in the building and feeds other smaller panel load centers (see 42A, 42B). All panels and load centers are in good condition and supportable. Most wiring is conduit but direct observation of grounding and wire type was not done. It appears there has been some wiring added in EMT conduit over time.

Telephone service is provided via a small telephone terminal board (TTB) is adjacent to a Simplex 4010 FACP. A single, dual fiber fiber optic jumper cable is routed from underground (assume the pipe tunnel) to a single switch which is not rack mounted but mounted on a plywood backboard with several category Ethernet cables routed to desktops. No other communications systems were observed.

43A – Superintendent House Service Panel

43B – Superintendent House TTB

43C – Superintendent House FACP

43D – Superintendent House Non-compliant FA Device (typical)

BLDG. #43/W0622 - SUPERINTENDENT'S RESIDENCE

The house service panel is a 200A, 120/208V, 3 phase, 4 wire Sq. D load center located in the basement and fed underground from an enclosed circuit breaker connected to the main panel in the Carpenter Shop (49). The load center is current and supportable but has a shock hazard from missing position covers exposing live components (see 43A). Another smaller load center is fed from the main and appears to be single purpose for adding some circuits for unknown equipment but could be kitchen or heating/cooling. Lack of panel directories or incomplete directories would not allow further identification. A telephone entry protector is mounted to a telephone terminal board in the basement (see 43B). A Simplex 2010 FACP is located on the main level (see 43C) however the appliances are the non-compliant horn/lamp type (see 43D).

BLDG. #45/W0652 - CONDENSATE PUMPHOUSE

Power is fed from underground circuits routed through a pipe tunnel. It is unknown as to the source but is assumed to originate in Tradesman 42. Power is fed to a single fused switch which feeds the pump motor controls and lighting (see 45A, 45B). No other systems were observed.

45A - Condensate Pumphouse Power

45B - Condensate Pumphouse Lighting

46A – Deer Feed Sheds (no MEP services)

BLDG. #46/W0641 - DEER FEED SHEDT

This building has no electrical systems and strictly storage for animal feed and fodder (see 46A).

47A - Houseman Power Entry

BLDG. #47/W0602 - HOUSEMAN'S QUARTERS

Surveyor could not access the building since it is boarded up. Was able to view through a window. A small service load center appears to be fed via an underground conduit from the Superintendent House. Conduit entry from the outside appears to feed the load center and possibly a telephone line (see 47A). Observable conditions indicated the wiring, fixtures and equipment were in poor condition.

BLDG. #48/W0631 - 5TH ST. GATEHOUSE

48A – 5th St. Gatehouse Fused Load Center (hazard)

48B – 5th St. Gatehouse Auxiliary CB Load Center (use?)

48C – 5th St. Gatehouse E. Water Heater (?)

The source of power for the gatehouse is unknown. A fused main/range load center is located in the building. While in fair condition, the open Edison base fuse outlet is a shock hazard which is why fused load centers are typically not installed (see 48A). A small subfed circuit breaker load center has been added (see 48B). Lighting fixtures function but are only in fair condition as are the convenience outlets. Surveyor was unable to observe the wiring type and condition but the electric water heater appears to be connected though water piping is disconnected (see 48C). Overall electrical conditions are fair to poor.

BLDG. #49/W0627 - CARPENTER SHOP

49A – Carpenter Shop E. Vault with Oil Switches & Transformers

49B – C. Shop Existing Main Panel and Sub-Panel (to Superintenent H.)

49C – C. Shop TTB (above lockers)

49D – C. Shop Simplex FACP

49E – C. Shop Non-compliant FA Device (horn/lamp)

49F – C. Shop Security Alamr Cabinets for the Shop and Lumber Shed

The electrical service consists of a separate vault room with three (3) G&W oil switches feeding three (3) 50kVA transformers that feed an obsolete GE/Trumbull 120/208V, 3 phase, 4 wire panelboard (see 49A, 49B). The panelboard has been tapped to feed an old panel being used as circuit breaker enclosure to feed the service for the Superintendent House (43). Wiring is a mix of older conduit and newer EMT conduit. Surveyor could not readily access wiring but from open spaces in the main panelboard some cloth covered, rubber insulated wire was observable.

A small telephone terminal block (TTB) with a circuit protector is wall mounted on one end of the shop (see 49C). The FACP is a Simplex 4010 which is a current hybrid type (see 49D). The fire alarm notification appliances are non-compliant horn/lamp units (see 49E). A security alarm system is on the wall of the shop which is connected to the Lumber Shed (53) on the padlocked storage areas (see Lumber Shed narrative and 49F).

50A – Greenhouse E. Panel

50B – Greenhouse Deteriorated Wiring

BLDG. #50/W0624 - GREENHOUSE

It is unknown how the power is fed to the Greenhouse but an obsolete GE/Trumbull panel is located in the solid roof section of the building (see 50A). Most wiring is in EMT or rigid galvanized steel conduit. The 'garage' section has more recent wiring that is in fair to good condition however some abandoned wiring in the greenhouse proper (glass covered) should be checked and removed since open boxes present hazards with exposed wiring (see 50B). It appears most of the wiring in the glass greenhouse area is in poor condition and it is not clear if any of this is active. No operating communications systems were observed.

BLDG. #53/W0628 - LUMBER SHED

53A – Lumber Shed (note the stalls)

53B – Lumber Shed Electrical and Security Conduit Entries

The lumber storage section of the building has not power or lighting. The large door sections were padlocked and off master so access was not possible (see 53A). However, it was observed that two (2) underground conduits entered the center area (see 53B). The carpenter staff indicated the conduits were for power for lighting in the storage stalls and one conduit is from the security system in the Carpenter Shop (49). See the Carpenter Shop narrative for additional information. These are exposed PVC conduits where impact from vehicles or loading/unloading can take place and is non-compliant with NEC for this location.

54A – Storage Building near Lumber Shed

54B – Storage Bldg (note the conduits and wire on wall)

BLDG. #54/W0626 - STORAGE

This building is adjacent the Lumber Shed (53) and appears to have been a cottage which is now used for storage only (see 54A). The building was not accessible being off the master keys but view through the windows indicated the electrical system was disconnected. There is a location where it appeared a load center once existing and disconnected conduits with exposed wires were observed (see 54B). Some lighting pendants with bare lamps were observed but the surveyor assumed these are not functional.

58A – Truck M. Electrical Panels

58B – Truck M. Fire Alarm Extender & Telephone/Data Entries

BLDG. #58/W0635 - NEW TRUCK GARAGE

It is unknown how the new truck garage electrical power is sourced but the service is relatively new Sq. D panelboards located in the main service area (see 58A). The wiring is generally newer and in EMT conduit. Since this was a recent construction it is assumed wiring is in good condition and meet NEC grounding requirements.

A Simplex fire alarm extender for signal and notification is located on the wall and appears to come from the alarm system at another building (assumed Old Admin/Security 35) (see 58B). All the fire alarm devices and appliances are up to date. Other communications consisted of telephone lines and a small switch/router apparently both fed underground from conduits (see 58B) adjacent the fire alarm wiring entry. The systems entries have no visible surge protection and should be protected in surface wireway or duct.

59A – Cemetery Bldg Main Service Panel

59B – Cemetery Bldg Telephone Entry and Terminal

BLDG. #59/W0651 - KOCH CEMETERY

The service consists of a 25kVA, 2.4kV – 120/208V pad mounted outdoor transformer fed underground from the facility medium voltage distribution. The transformer feeds a Sq. D, 225 amp, 120/208V, 3 phase, 4 wire Main Service panel in the storage area (not garage) (see 59A). A telephone terminal with entry protectors is also located in the storage area (see 59B). No other communications systems were observed. The building is all electric including heating and the wiring appears to be in fair to good condition with no obvious issues. It is unknown the type of wire insulation or if grounded per NEC.

BLDG. #80/W0638 - BUS GARAGE

This building was not surveyed.

BLDG. #81/W0632 - STORAGE/CAVE

This building was not surveyed.

83A – Water Treatment Plant Outside Transformer/Switch

83B – Water Treatment Plant Main Service Panel

BLDG. #83/W0616 - WATER TREATMENT PLANT

The Water Treatment Plant was built in 2015/16 and is in good condition. The electrical service is fed underground from the 2.4kV medium voltage distribution by means of an outdoor pad mounted outdoor transformer and disconnect (see 83A). The Main Service Panel is current Sq. D and all the building wiring, lighting, power, controls and receptacles are in good to very good condition (see 83B). No communications systems were observed.

BLDG. #87/W0607 - 8TH ST. GATEHOUSE

This building was not surveyed.

BLDG. #89/W0645 - EHLE LAUNDRY

89A – Ehle Laundry GE USS (obsolete)

89B – Ehle Laundry Main Floor Electrical Panel (sample)

89E – Ehle Laundry Service Elevator Equipment Housed in the Lower Level Electrical Room

89C – Ehle Laundry Telephone Cabinet in Lower Level

89D – Ehle Laundry Simplex FACP in Entry Vestibule

The electrical service consists of a 225kVA Unit Substation in a separate electrical equipment room in the lower level (see 89A). The USS is obsolete since most components are unavailable although some circuit breakers may be found. The electrical equipment room ventilation is not functioning and due to the proximity to the mechanical room with steam producing equipment the temperature and humidity is above normal for electrical equipment. As in other buildings with similar GE USS this unit would not allow for a transformer to be replaced easily since new transformer standards will not allow for the dimensions to fit in the existing USS enclosure. Other panels in the lower level mechanical room are GE era of the USS and are not supportable. The main floor panels are predominantly newer Sq. D and are supportable (see 89B). Wiring was not readily visible to determine the insulation type of wire but most wiring was in EMT or rigid steel conduit. It is doubtful from the age of the USS if any separate ground conductors are installed in feeders and circuits and it is assumed that grounding is only provided by the conduits. The noticeable age and condition of some conduits would suggest the ground paths are no longer low impedance due to corrosion and contaminants (dirt, oil, etc.) at fittings and joints.

Lighting conditions of equipment and quality of lighting varied with the lower level mechanical areas very poor while the main floor laundry areas of fair to good. Some equipment switches and controls in the lower level are in poor condition and most likely well past normal useful life. Main floor switches and controls varied from fair to good condition although some appear to be near useful life.

The telephone terminal is in an enclosure wall mounted in the lower level electrical room (see 89C). The Simplex 4010 FACP is located on the main level at an entry vestibule (see 89D). Fire alarm horn/lamps are of the non-compliant type. The service elevator equipment being housed in the electrical room not only increase the heat in the room, it does not comply with ASME 17.1 required by the state (see 89E). A data router is located on a desktop in the Laundry Supervisor's Office and is connected by a dual fiber jumper type FO cable routed across the main level and down to underground via a conduit. It is assumed the fiber optic cable originates in the adjacent pipe tunnel.

BLDG. #90/W0647 - MARKWORD INFIRMARY

90A – Markword Unit Substation

90B – Markword Dry-type Transformer (for Panel B)

90C – Marword Panel B

90D – Markword Free-Standing Medium Voltage Switch (feed through)

90E – Markword Diesel Generator

90F – Markword ATS (located at canopy back entry)

90G – Markword Simplex FACP (main level)

90H – Markword IDF (data rack)

90 I – Markword Generator Remote Monitor, Door Alarm and Medical Gas Alarms (note basement water alarm below)

90J – Markword Nurse Station – Dukane Call System Annunciator

The electrical service in the lower level electrical room is a General Electric (GE) USS with medium voltage fused switch feeding an integral 2400-120/208V dry-type transformer and 120/208V, 3 phase, 4-wire panelboard (see 90A). A separate Sorgel 112.5 kVA, 2400V-120/208V dry-type transformer (see 90B) is parallel wired at the output of the USS medium voltage switch and feeds a Sq. D panelboard for additional loads (panel B, see 90C). Circuit breakers for the USS GE panelboard section are supportable. Other distribution and branch panels are obsolete GE with some newer Sq. D which are supportable. Also in the electrical room a free-standing 5kV medium voltage air-insulated switch is located behind the USS and is labeled Circuit 3 (see 90D). It is assumed this was a modification to accommodate some of the load shifting noted on the signs for the main 5kV switches in the Power Plant. A wireway on the wall adjacent the USS has power from a site diesel generator which in turn feeds two fused switches for the elevator and to the transfer switch (ATS) which is located outside between the generator location and the building (see 90E, 90F). A branch emergency panel is located in the electrical room adjacent the telephone terminal board. The ATS is relatively new and appears in good shape while housed in a NEMA 3R (raintight) enclosure, the surveyor noticed no heaters were included. The surveyor suspects the ATS was located outside due to limited space in the main electrical room as the wireway/switches for emergency distribution were located without meeting NEC required clearances. The generator remote monitor is located on the first level at the nurse station which is appropriate for 24/7 monitoring (see 90I).

Located in the main electrical room is a Simplex 4010 hybrid FACP which is supportable (see 90G). The building telephone terminal board, IDF (rack) and access control panel are housed in the electrical room as well (see 90H). The conditions of the systems appear good. The electrical room is an unconditioned space which is not advised for the IDF or other sensitive electronics due to the heat rejection of the power transformers. Other systems located near the first level nurse station and adjacent the generator remote monitor are the medical gas monitor/alarms, egress door alarms and a basement water alarm (see 90I). Located at the front desk wall of the nurse station is a simple audible/visual annunciator for a Dukane call system (see 90J). Please note Dukane medical communication systems were absorbed by General Electric who suspended all manufacturer support several years ago.

BLDG. #91/W0650 - KENT INFIRMARY

(Unoccupied) Surveyor did not perform a full survey of electrical systems but age of building equipment and outward visual condition suggests the electrical systems are Fair to Poor conditions. A casual pass through the building entry vestibule and main level corridors supported this. Ceiling lighting is in poor condition and much of the devices appeared beyond useful age and conditions.

92A – Nielson Dining GE Unit Substation in Sub-Basement (note the added enclosed circuit breaker)

92B – Nielson Dining GE Motor Control Center Series (obsolete)

92C – Nielson Dining Elevator Equipment

92D – Nielson Dining Simplex 4010 FACP and Relay Module Cabinets (re-tasked 2001 cabinets)

BLDG. #92/W0643 - NIELSON DINING/KITCHEN

A GE Unit Substation is located on the upper level of the mechanical sub-basement. The USS is an obsolete style and has inadequate circuit space even if circuit breakers are available. This is proven since the buss has been tapped and an enclosed circuit breaker mounted on the side of the panelboard section to feed additional equipment distribution (see 92A). The enclosed circuit breaker is in good shape but the surveyor could not observe how the buss tap and connections were accomplished. Mechanical equipment is powered via a GE 7700 series motor control center (MCC, see 89B). This series is obsolete and only limited motor starter parts are available. The surveyor could not readily access the wiring to determine condition or insulation type but most circuits are enclosed in conduit. Some newer conduit was observed but the predominance of older EMT and rigid steel conduit suggests that no grounding conductors or few grounding conductors are installed and the conduits serve as the ground path. Most of the branch panels are obsolete GE.

As in other buildings the elevator equipment is not housed in a separate, dedicated equipment room as required by ASME 17.1 (see 92C). An older, obsolete fire alarm (Simplex 2001) has been replaced with a Simplex 4010 hybrid FACP and some of the old enclosures re-used to house new controls and relays – this was also commonly seen in other buildings and is an accepted practice (see 92D).

93A – Schapers Unit Substation

93B – Schapers GE Motor Conrol Center (obsolete)

93C – Schapers 12kW Diesel Generator and EM Panel

93D – Schapers IDF (data rack)

93E – Schapers Simplex FACP

93F – Schapers Elevator Equipment (located in the mechanical room)

BLDG. #93/W0644 - SCHAPERS HOSPITAL

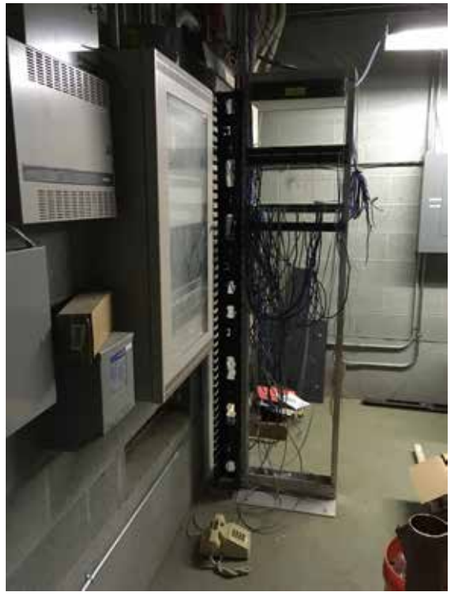
The building service is in a lower level electrical room and consists of a General Electric (GE) Unit Substation (USS) arrangement with integral medium voltage switch, 300kVA dry-type transformer and 1200 amp, 120/208V, 3 phase, 4-wire panelboard (see 93A). The room did not have any working ventilation. The medium voltage switch may not be serviceable and the transformer enclosure section may be undersized to meet the required clearances for a new dry-type transformer. Circuit breakers for the panelboard section are supportable. Building mechanical equipment are controlled via an obsolete GE 7700 series motor control center (MCC) which GE no longer supports (see 90B). The MCC is located in the lower level mechanical space. Distribution and branch panels are obsolete GE units.

A small Kohler 12kW, diesel, 120/208V, 3 phase, 4-wire generator feeds an Onan ATS for a small 60 amp main breaker, 120/208V, 3 phase, 4-wire load center (see 93C). The load center is the only emergency panel observed and appears to feed some lighting, receptacles, fire alarm/fire protection system compressor and the data IDF power. The generator, ATS and panel are in the lower level mechanical space with no physical separation. No circuit is identified for Reig-Administration as noted above.

The IDF (rack) is located in the lower level in a storage area separated by wire cage sections and the area is conditioned (see 93D). The Simplex 4010 hybrid FACP is located with an auxiliary power supply in the electrical service equipment room (see 93E). The telephone terminal board also resides in the electrical service equipment room. The elevator equipment is located within the lower level mechanical space with no separation as required by IAC Title 41, Ch. II, Part 1000 and ASME 17.1 (see 93F).

94A – Elmore Unit GE Substation (obsolete)

94B – Elmore Emergency Power System (fed from Fifer generator)



94C – Elmore IDF (data rack) and FACP

94D – Elmore Elevator Equipment in Open Mechanical Space (not in elevator equipment room)

BLDG. #94/W0646 - ELMORE INFIRMARY

The Main Panel is an 800A, 120/208V, 3 phase, 4-wire panelboard integral to a General Electric USS in a lower level electrical room and has an integral medium voltage primary switch and 225kVA 2.4kV – 120/208V dry type transformer (see 94A). The transformer is located directly behind the panelboard within the USS enclosure so a replacement transformer meeting current code and UL space/clearance requirements will not fit in the enclosure. The GE main panel contains branch/feeder circuit breakers which can be replaced but 800 amp main circuit breaker may require non-UL modifications to be replaced. No parts are readily available for the type of GE primary switch or the main panelboard.

The electrical room also contains a 75kVA, 480-120/208V, 3 phase transformer feeding a Sq. D 100 amp, 120/208V, 3 phase, 4-wire panelboard for emergency power. The transformer is fed 480V, 3 phase from panel EDP in Fifer. There is a primary 480V, 3 pole disconnect switch for the 480V feed and is adjacent the transformer (see 94B). The Sq. D emergency panel and other Sq. D panels are supportable. Older GE panels within the building are obsolete.

The electrical room also houses the IDF (rack), telephone terminal board and Simplex 4100U FACP panel for the building (see 94C). Adjacent the FACP is a Hirsch access control panel for building access control.

The elevator equipment is located in the open mechanical space which is not in a separate room. It does not appear to have a fire recall interface to the fire alarm system (see 94D).

97A – Chapel GE Main Panel

97B – Chapel Simplex 4010 FACP

97C – Chapel Telephone Terminal Cabinet

97D – Chapel IDF (data rack)

BLDG. #97/W0649 - ALL FAITHS CHAPEL

The Chapel electrical service is provided via an outdoor 75kVA 2.4kV- 120/208V pad mounted transformer feeding a GE Main Panel located in an electrical room accessible only from outside the building. The GE panel is somewhat supportable in that circuit breakers are available (see 97A). The Simplex 4010 FACP and the telephone terminal cabinet also reside in the electrical room (see 97B, 97C). An IDF (data rack) has been added and is located in a storage room accessed via an office (see 97D). The storage room also houses a small closed circuit TV system which apparently is used to broadcast services to the residents. General conditions of the wiring observed were good but no NEC required grounding was noticed. With more sensitive electronics proper grounding should be considered for any upgrades.

BLDG. #98/W0658 - AMERICAN LEGION RECREATIONAL

The building has a Sq. D load center located in a storage room and is in fair condition. Wiring was not readily observable but what could be easily seen was in conduit but grounding to meet NEC is unknown.

99A – Deer Park Pavilion Main Electrical Panel

99B – Deer Park Pavilion Vending Machine Outlet (non-GFIR)

99D – Deer Park Pavilion Vaportight Missing Globe

99C – Deer Park Pavilion Non-Rated Lighting

BLDG. #99/W0659 - AMVETS DEER PARK PAVILION

The Pavilion has a small Sq. D load center in a storage room which appears to be in good conditions and is supportable (see 99A). The surveyor did not do a detailed observation of the wiring but most was enclosed in EMT conduit. It was noted that some vending machines were present and did not have ground fault protection (either receptacles or circuit breakers) per the NEC. Some fluorescent lighting was noted as not damp rated or sealed against insect/ debris entry and one vapor tight fixture had the glass globe missing exposing the lamp socket to the environment. Both of these are minor issues.

BLDG. #100/W0660 - MULTI-PURPOSE THERAPY

100A – Multi-Therapy MV Service Switch and Enclosed Transformer

100B – Multi-Therapy GE Motor Control Center

100C – Multi-Therapy 480V-120/208V Stepdown Transformer Feeding 120/208V Main Distribution Panel

100D – Multi-Therapy IDF (data rack), FACP and Access Control

The electrical service is relatively new and is located in the lower level. A 2.4kV circuit feed enters underground to a medium voltage switch which feeds a dry-type, enclosed 2.4kV – 277/480V transformer (see 100A). This feeds a 277/480V Main Panel which feeds a 480V- 120/208V Distribution Panel feeding the branch lighting panels (see 100C). The building equipment is controlled via a GE 480V, 3 phase motor control center in the lower level near the main service (see 100B). All wiring appears to be in good condition and is enclosed in conduit. The surveyor was able to observe a few locations for wiring and all met NEC for method and grounding. Generally the lighting, wiring, devices and equipment are in good conditions.
A telephone terminal board is located in the lower level near the IDF (data rack), Simplex FACP and access control system (see 100D). All equipment is in good condition but some of the data cabling needs to be better supported and managed.

101A – Fifer Main Distribution Panel, ATS and Emergency Distribution Panel EDP (277/480V)

101C – Fifer Elevator Equipment (note shares same room as the communications and access control to left)

101B – Fifer IDF (data rack) and TTB

BLDG. #101/W0661 - FIFER SKILLED CARE

The building service consists of an outdoor, pad mounted oil-filled transformer and a service switch feeding a Main Distribution Panel (MDP) in the lower level. The pad mounted transformer is fed from the site 2.4kV distribution via underground conduit from a manhole. The MDP is a Sq. D 1,000 amp main breaker, 277/480V, 3 phase, 4 wire panel which feeds other panels as well as an automatic transfer switch (ATS) for an Emergency Power System (EPS) (see 101A). The 120/208v panels are fed via distribution stepdown transformers to distribution and branch lighting panels. The ATS is fed backup power from an outdoor, weather enclosed diesel generator. The ATS feeds a 277/480V distribution panel EDP which in turn feeds a 45kVA 480-120/208V dry-type distribution transformer which feeds branch distribution panel BE-1 for 120/208V lighting and receptacles. The elevator, medical air compressor, medical vacuum pump and pumps P1 and P2 are also fed from EDP. All panels, transformers and wiring are current and in good condition. There is a circuit from EDP to Elmore as noted above. Since the EPS at Fifer supports both mechanical and lighting loads and no load data is available, this should be reviewed since the feed from the MDP to the ATS is only 80A. Additionally, it appears the Elmore feed was added.

Elevator equipment is housed in a separate room which also houses the telephone terminal board, fire alarm control panel (FACP), IDF (rack) and access control systems (see 101B). The surveyor noted the elevator equipment room should not house other systems per the state enforced codes (IAC Title 41, Chapter II, Part 1000 and ASME 17.1) (see 101C). The Simplex FACP is current and supportable.

[This page intentionally left blank]

VII. PLUMBING CONDITIONS REPORT

PLUMBING: BUILDING WATER SERVICE ENTRANCES

The IVHQ campus is currently served by a combined domestic and fire service distribution system. Recent improvements to the site distribution system and building service entrances have occurred. CDB Project No. 040-000-002, Phases 1&2, starting in 2014, included installation of new PVC water main branches to supply new fire suppression systems in many of the campus buildings. The entire fire suppression project has not been completed to date due to funding constraints, although all site work and new building service entrances were completed. Initially, these new water service entrances were installed as fire services only. In 2015/16, as part of CDB Emergency Project No. 040-010-105, the decision was made to take advantage of the new building service entrances and convert them to combined domestic & fire services. This conversion had two primary benefits; (1) elimination of many older (mostly metal) domestic service entrances, and (2) elimination of long, mostly inactive fire service branches connected to the combined (potable) site distribution loop.

All buildings, classified as health care occupancies, have full or partial, interior fire suppression systems which are supplied by the combined domestic & fire, building service branches. Once entering the buildings, the combined services are split into dedicated domestic (potable) water distribution systems and dedicated fire (non-potable) water distribution systems. All non-potable fire systems are isolated from the potable incoming water service and the potable building distribution system by reduced pressure principal backflow prevention devices. In addition, the domestic, potable distribution systems within the buildings are isolated from the incoming combined service by either a double check valve or dual check valve, backflow prevention device, a component of the 2015/16 CDB Emergency Project. Thus, most of the incoming water services have been recently upgraded, except as noted below.

Typical interior combined, incoming building water service arrangement within buildings.

Fire suppression systems isolated by RPZ backflow Domestic (Potable) isolated by double check valve (Multi-Therapy Building shown)

Combined Building Water Service Entrance Conditions:

For the purposes of this evaluation the incoming water services will be divided into two components; the exterior water main branch assemblies (exterior service valves & exterior water mains) and the interior building isolation assemblies (interior isolation valves & backflow prevention devices). In addition, projects are currently in progress to provide improvements to the incoming water services including supplemental filtration systems and water quality monitoring systems. Building with these improvements installed or planned have been so indicated. Evaluations of the exterior service entrances has been developed, in some cases, from first-hand knowledge of the underground conditions of the water main components. In other situations, the evaluation is based on construction document research and background familiarity the campus systems. This background & first-hand knowledge were a result of our firm's involvement with the 2015/16 CDB Emergency Project to mitigate the Legionella problem at IVHQ. The interior service entrance conditions evaluations are also related to the Emergency Project and are evident from visual observation as well. The age and estimate time in service, (Est. Service) of the various components is also a portion of the basis for overall system conditions.

BLDG. #20/W0610 – SOMERVILLE DOMICILIARY

– 6" combined service splits to 4" fire & 4" domestic services

- New PVC exterior service branch main installed during CDB emergency project 2015/2016.
Exterior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Supplemental filtration at service entrance planned.
- Service entrance water quality monitoring planned for this building.

BLDG. #22/W0612 – ANDERSON BARRACKS

– 4" combined service splits to 4" fire & 4" domestic services

- Early 4" cast iron exterior service branch remains with 2015/16 exterior improvements at building entrance.
Exterior observed condition assessment – Fair-Poor
Est. Service – 100 years (Water Main)
Useful Life Expectancy – 15 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Supplemental filtration at service entrance planned.
- Service entrance water quality monitoring planned for this building.

BLDG. #26/W0618 – FLETCHER INFIRMARY

– 6″ combined splits to 4″ fire & 4″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior presumed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #28/W0621 – ANDREW BARRACKS

– 3″ combined splits to 3″ fire & 3″ domestic services

- Early 3″ cast iron exterior water main, with believed lead joint fittings, remains in service
Exterior presumed condition assessment – Poor
Est. Service – 80 years (Water Main)
Useful Life Expectancy – 5 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Fair-Good
Est. Service – Varies
Useful Life Expectancy – 35 years

- Service entrance water quality monitoring planned for this building.

BLDG. #29/W0617 – REIG-ADMINISTRATION

– 6″ combined splits to 4″ fire & 4″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Service entrance water quality monitoring planned for this building.

BLDG. #30/W0606 - LIBRARY

– 4″ combined splits to 3″ fire & 1″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior presumed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Service entrance water quality monitoring planned for this building.

BLDG. #31/ W0603 - NORTHERN GUEST HOUSE

– 4″ combined splits to 3″ fire & 2″ domestic services

- Existing fire service entrance was constructed in approximately 2002 & became a combined service in 2015/16.
Exterior presumed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 50 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Service entrance water quality monitoring planned for this building.

BLDG. #36/W0613 - SMITH HALL

– 6″ combined splits to 4″ fire & 2″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior presumed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Service entrance water quality monitoring planned for this building.

BLDG. #37/W0600 – LIPPINCOTT HALL

– 6″ combined splits to 4″ fire & 2″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior presumed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Service entrance water quality monitoring planned for this building.

BLDG. #41/W0605 – EQUIPMENT STORAGE

– 6″ combined splits to 4″ fire & 2″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior presumed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #90/W0647 – MARKWORD INFIRMARY

– 6″ combined splits to 4″ fire & 4″ domestic services

- Upgrades to service branch main completed during CDB 2015/16 Emergency Project, but portions of the building service are very early cast iron water main.
Exterior observed condition assessment – Poor-Fair
Est. Service – 100 years (Water Main)
Useful Life Expectancy – 15 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Supplemental filtration at service entrance planned.
- Service entrance water quality monitoring planned for this building.

BLDG. #92/W0643 – NIELSON DINING/KITCHEN

– 6″ combined splits to 4″ fire & 4″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior presumed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Service entrance water quality monitoring planned for this building.

Supplemental Filtration – Schapers Hospital

Supplemental Filtration – Elmore Infirmary

BLDG. #93/W0644 – SCHAPERS HOSPITAL

– 4″ combined splits to 4″ fire & 4″ domestic services

- Early 4″ cast or ductile iron (assumed) exterior service branch remains with no known exterior improvements at building entrance.
Exterior presumed condition assessment – Poor-Fair
Est. Service – 65 years (Water Main)
Useful Life Expectancy – 15 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Fair-Good
Est. Service – 25/3 years
Useful Life Expectancy – 35 years

- New Supplemental Filtration System (2018)
Est. Service – 0 years
Useful Life Expectancy – 50 years

- Service entrance water quality monitoring planned for this building.

BLDG. #94/W0646 – ELMORE INFIRMARY

– 4″ combined splits to 4″ fire & 4″ domestic services

- Early 4″ cast iron exterior service branch remains with only repairs made to exterior building entrance.
Exterior observed condition assessment – Poor
Est. Service – 65 years (Water Main)
Useful Life Expectancy – 10 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 20 years
Useful Life Expectancy – 30 years

- New Supplemental Filtration System (2018)
Est. Service – 0 years
Useful Life Expectancy – 50 years

- Service entrance water quality monitoring planned for this building.

BLDG. #97/W0649 – ALL FAITHS CHAPEL

– 4″ combined splits to 4″ fire & 2″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior presumed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Service entrance water quality monitoring planned for this building.

BLDG. #100/W0660 – MULTI-PURPOSE THERAPY BLDG

– 6″ combined splits to 4″ fire & 4″ domestic services

- New PVC exterior service branch main installed during CDB fire protection upgrade project 2015 and became combined main in 2015/16 CDB Emergency Project.
Exterior presumed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Service entrance water quality monitoring planned for this building.

BLDG. #101/W0661 – FIFER SKILLED CARE

– 4″ combined splits to 4″ fire & 4″ domestic services

- This facility was constructed in 2002/3 including the exterior water service entrance.
Exterior presumed condition assessment – Good
Est. Service – 15 years
Useful Life Expectancy – 60 years

- Interior service improvements completed during CDB emergency project 2015/16.
Interior observed condition assessment – Good
Est. Service – 15 years
Useful Life Expectancy – 40 years

- Supplemental filtration at service entrance planned.
- Service entrance water quality monitoring planned for this building.

Domestic Only Building Water Service Entrance Conditions:

Other buildings on campus are supplied from the combined fire & domestic water service loop with branch lines that are classified as only domestic (potable) water services. The domestic only service entrances will be evaluated as exterior & interior components, similar to the combined services. These buildings and the domestic service conditions are as follows:

BLDG. #32/W0653 – SECURITY ANNEX/AMBULANCE GARAGE

– 1″ domestic water service

- New 1″ copper service installed in 1982.
Exterior presumed condition assessment – Fair
Est. Service – 35 years
Useful Life Expectancy – 25 years

- Interior service improvements completed during CDB emergency project 2015/16. Backflow protection added.
Interior observed condition assessment – Fair
Est. Service – 25 years
Useful Life Expectancy – 25 years

BLDG. #34/W0614 – MEDICAL STAFF BUILDING

¾″ domestic service

- Early ¾″ copper service connected to loop main in 1982.
Exterior presumed condition assessment – Fair
Est. Service – 35 years
Useful Life Expectancy – 25 years

- Interior service improvements completed during CDB emergency project 2015/16. Backflow protection added.
Interior observed condition assessment – Fair
Est. Service – 25 years
Useful Life Expectancy – 25 years

BLDG. #35/W0604 – OLD ADMINISTRATION

– 4″ domestic service

- Very early 4″ cast or ductile iron (assumed) connected to loop main in 1982
Exterior presumed condition assessment – Poor
Est. Service – 100 years (Water Main)
Useful Life Expectancy – 5 years

- Interior service improvements completed during CDB emergency project 2015/16. Backflow protection added.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 40 years

- Service entrance water quality monitoring planned for this building.

BLDG. #38/W0634 – ENGINEERING BUILDING

– 1″ domestic service

- Early 1″ copper service fed underground from the new Power Plant domestic service
Exterior presumed condition assessment – Fair
Est. Service – 50 years
Useful Life Expectancy – 20 years

- Interior service improvements completed during CDB emergency project 2015/16. Backflow protection added.
Interior observed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 25 years

BLDG. #39/W0654 – LAWN GARAGE

– 1″ domestic service

- New 1″ copper service included as part of the new Power Plant domestic service
Exterior condition assessment – Not Applicable

- Interior condition assessment – Not Applicable – Considered part of Power Plant Service

BLDG. #40/W0615 – POWER PLANT

- The campus combined water distribution loop passes through the Power Plant. The loop line size within the building is 6″ and is ductile or cast iron construction. The age or installation date of portions of this line have not been determined. The building was originally constructed in 1886 and some lines could possibly be that old. Various upgrades to the Power Plant have replaced portions of the loop main, with the latest upgrades occurring during the 2016 CDB emergency project. During this project, all of the plant's process water usages, within the building, were isolated from the distribution loop. Also, a new plant domestic (potable) water service was created for the domestic needs within the building and isolated from the combined service loop, similar to other buildings on campus. The power plant has a process water service for supplying the boiler feed water system, which is fed from the new water treatment building directly from Quincy water, prior to any supplemental treatments. This emergency service is isolated by a RPZ backflow prevention deice from the Quincy water service.

- Campus Distribution Loop within Power Plant – 6″ combined water distribution
Early ductile & cast iron mains with valving improvements completed as part of the 2015/16 CDB Emergency Project
Observed condition assessment – Fair
Est. Service – 100 years
Useful Life Expectancy – 20 years

- Domestic (potable) Power Plant Water Service – 2″ copper – New isolated domestic service completed as part of the 2015/16 CDB Emergency Project
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Process (non-potable) Power Plant Water Service – 6″ ductile iron –
New service created for process water systems as part of 2015/16 CDB Emergency Project
Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

- Boiler Feed Water (non-potable) System Service – 2″ Copper & PVC –
New service fed from Treatment Building connected underground to early 2″ PVC main, originally connected to the water tower service, as part of the 2015/16 CDB Emergency Project

Exterior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #42/W0623 – TRADESMAN WORKSHOP

– 2″ domestic service

- Early 2″ copper service connected to distribution loop in 1982
Exterior presumed condition assessment – Fair-Good
Est. Service – 35 years
Useful Life Expectancy – 25 years

- Interior service improvements completed during CDB emergency project 2015/16. Backflow protection added.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #49/W0627 – CARPENTER SHOP

– ¾″ domestic service

- Early ¾″ copper service reconnected in water man-hole as part of 2015/16 CDB Emergency Project.
Exterior observed condition assessment – Fair
Est. Service – 35 years
Useful Life Expectancy – 20 years

- Interior service improvements completed during CDB emergency project 2015/16. Backflow protection added.
Interior observed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 25 years

- Service entrance water quality monitoring planned for this building.

BLDG. #50/W0624 – GREENHOUSE & GARDENS

– 1″ domestic service

- Early mixed material service line reconnected in water man-hole as part of 2015/16 CDB Emergency Project.
- Exterior presumed condition assessment – Poor
Est. Service – 65 years
Useful Life Expectancy – 10 years

Interior observed condition assessment – Poor
Est. Service – 65 years
Useful Life Expectancy – 10 years

BLDG. #58/W0635 – NEW TRUCK GARAGE

– 1 ½" domestic service

- Building and exterior water service entrance constructed in 2011.
Exterior presumed condition assessment – Good
Est. Service – 7 years
Useful Life Expectancy – 68 years

- Interior service improvements completed during CDB emergency project 2015/16. Backflow protection added.
Interior observed condition assessment – Good
Est. Service – 7 years
Useful Life Expectancy – 50 years

BLDG. #59/W0651 – KOCH CEMETERY BUILDING

– 1" domestic service

- The exterior service for this building was connected to early service lines that fed the cemetery and were routed in various materials from the coal pile branch distribution line.
Exterior presumed condition assessment – Poor
Est. Service – 65 years
Useful Life Expectancy – 10 years

- Interior service is original construction (1986) and was improved by the addition of backflow prevention as part of the 2015/16 CDB Emergency Project.
Interior observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

- Service entrance water quality monitoring planned for this building.
– Provides domestic & fire service water.

BLDG. #83/W0616 – WATER TREATMENT PLANT

- The origin of the campus water distribution system is the water treatment plant. The facility provides supplemental water treatment using processes established during the 2015/16 CDB Emergency Project. A new 12" PVC water feed from the city of Quincy was installed as part of that project. The supplemental chemical treatments are injected, controlled, monitored and supplied to the campus water distribution loop. All water service systems are essentially new.
Exterior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 72 years

- The domestic water services for utilization within the building itself were newly constructed as part of the 2015/16 CDB Emergency Project.
Interior observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #89/W0645 – EHLE LAUNDRY

– 4″ domestic service

- Original exterior service construction of 4″ ductile or cast iron main connected to loop branch in 1982.
Exterior presumed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 25 years

- Interior service improvements completed during CDB emergency project 2015/16. Backflow protection added.
Interior observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

- Interior process water sub-service exists that originally fed water softener systems in this building. The sub-service is protected by backflow prevention device.
Sub-service observed condition assessment – Poor-Fair Est. Service – 55 years
Useful Life Expectancy – 10 years

- Service entrance water quality monitoring planned for this building.

BLDG. #98/W0658 – AMERICAN LEGION RECREATION BLDG

– 1″ domestic service

- Exterior building service is original to building constructed in 1989 and is fed from water manhole located north of the building.
Exterior observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 45 years

Interior observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

BLDG. #99/W0659 – AMVETS DEER PARK PAVILION

– 1″ domestic service

- Exterior building service is original to building constructed in 1989 and is fed from water manhole located north of the building.
Exterior presumed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 45 years

Interior observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Buildings with Domestic Water Service Entrances Disconnected:

There are buildings on campus which at various stages of the campus evolution had domestic water services that have subsequently been disconnected and the branch service lines capped at the loop or branch mains. These services are uniformly classified as poor condition & 0 useful life expectancy, since they cannot be restored to functionality without major upgrades or complete replacement. These buildings are as follows:

Bldg. #11/W0608 – Rowland Barracks
Bldg. #21/W0611 – Fogg Barracks
Bldg. #43/W0622 – Superintendent's Residence
Bldg. #47/W0602 – Houseman's Quarters
Bldg. #48/W0631 – 5th Street Gatehouse
Bldg. 87/W0607 – 8th Street Gatehouse
Bldg. #91/W0650 – Kent Infirmary

Buildings with No Domestic Water Service Entrances:

There are buildings on campus which never have had domestic water services to the best of available knowledge. These buildings are as follows:

Bldg. #5/W0601 – Bus Station
Bldg. #24/W0637 – Vehicle Garage
Bldg. #45/W0652 – Condensate Pump House
Bldg. #46/W0641 – Deer Feed Shed
Bldg. #54/W0626 – Storage Building
Bldg. #58/W0658 – Lumber Shed
Bldg. # 80/W0638 – Bus Garage
Bldg. #81/W0632 – Storage/Cave
Bldg. W0655 – Interconnect –
- This structure has water lines routed through the lower level space, but has no outlets or services.
Bldg. W0657 – Tunnel System –
- This structure, at various times during the campus development, had potable water lines routed within the tunnel system, but this is no longer the case. No water service outlets or services currently exist within the tunnel system.

Other Domestic Water Service Outlets:

There are site features on the IVHQ campus which have domestic water outlets that are connected to the combined site water distribution systems. These site outlets are constructed according to the Illinois Plumbing Code with air-gap service outlets. These locations are as follows:

Deer Park Lake Feed
Deer Park Animal Watering Device
Buffalo Park Animal Watering Device
Lake Illinois Feed
Fountain Water Feed
Sunken Garden Water Feed

PLUMBING SYSTEMS:

Underground Sanitary / Storm Sewer Systems:

The underground sewer systems of the buildings do not appear to have been upgraded as part of the various renovation projects for which we have drawing documentation. Nor are there any visible signs that components of the underground sewer has been improved or repaired. i.e. concrete floor patches It is believed that all of the underground systems are still serviceable and provide the required function, although the respective building's age would determine the "presumed" conditions of the subsurface system. Further detailed investigation including camera drain exploration would be recommended for a full and comprehensive evaluation of these systems. Some of the campus building are more "residential" in construction type, and the material types for these applications impact the Useful Life Expectancy as well.

Bldg. #11/W0608 – Roland Barracks –
- Out of service
Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #20/W0610 – Somerville Domiciliary –

Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 10 years

Bldg. #21/W0611 – Fogg Barracks –
- Out of service
Presumed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #22/W0612 – Anderson Barracks –

Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 10 years

Bldg. #26/W0618 – Fletcher Infirmary –
- No longer occupied by patients
Presumed condition assessment – Fair-Poor
Est. Service – 70 years
Useful Life Expectancy – 20 years

Bldg. #28/W0621 – Andrew Barracks –
- Current Business Occupancy
Presumed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 10 years

Bldg. #29/W0617 – Reig-Administration –
- Current business occupancy & Museum
Presumed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 10 years

Bldg. #30/W0606 – Library –

Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 10 years

Bldg. #31/ W0603 – Northern Guest House –
- Hotel Type Occupancy
Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 10 years

Bldg. #32/W0653 – Security Annex/Ambulance Garage –
- Minimal Plumbin
Presumed condition assessment – Poor
Est. Service – 90 years
Useful Life Expectancy – 10 years

Bldg. #34/W0614 – Medical Staff Building –
- Residence converted to Business Occupancy
Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 10 years

Bldg. #35/W0604 – Old Administration –
- Observed condition assessment – Poor

Est. Service – 100 years
Useful Life Expectancy – 5 years

Bldg. #36/W0613 – Smith Hall –
- Business / Dining Occupancy
Presumed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 10 years

Bldg. #37/W0600 – Lippincott Hall –
- Assembly Occupancy
Presumed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 10 years

Bldg. #38/W0634 – Engineering Building –

Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 10 years

Bldg. #39/W0654 – Lawn Garage –
- Minimal Plumbing Connect to Power Plant
- Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 5 years

Bldg. #40/W0615 – Power Plant –

Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 5 years

Bldg. #41/W0605 – Equipment Storage –
Not original function for this building.
- Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 5 years

Bldg. #42/W0623 – Tradesman Workshop –

-Presumed condition assessment – Fair-Poor
Est. Service – 70 years
Useful Life Expectancy – 20 years

Bldg. #43/W0622 – Superintendent's Residence –
-Out of Service
Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #47/W0602 – Houseman's Quarters –
-Out of Service
Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #48/W0631 – 5th Street Gatehouse –
- Substantially out of plumbing service
Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #49/W0627 – Carpenter Shop –

- Presumed condition assessment – Poor
Est. Service – 65 years
Useful Life Expectancy – 10 years

Bldg. #50/W0624 – Greenhouse –

-Presumed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #58/W0635 – New Truck Garage –

-Presumed condition assessment – Good
Est. Service – 7 years
Useful Life Expectancy – 75 years

Bldg. #59/W0651 – Koch Cemetery Building –
- Stand-alone sanitary system
Presumed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #83/W0616 – Water Treatment Plant –

- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 75 years

Bldg. #87/W0607 – 8th Street Gatehouse –
-Substantially out of plumbing service
Presumed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #89/W0645 – Ehle Laundry –
-High volume usage.
Presumed condition assessment – Fair-Poor
Est. Service – 55 years
Useful Life Expectancy – 25 years

Bldg. #90/W0647 – Markword Infirmary –

-Presumed condition assessment – Fair-Poor
Est. Service – 54 years
Useful Life Expectancy – 25 years

Bldg. #91/W0650 – Kent Infirmary –
- Substantially out of plumbing service & unoccupied
Presumed condition assessment – Poor
Est. Service – 45 years
Useful Life Expectancy – 10 years

Bldg. #92/W0643 – Nielson Dining/Kitchen –
- High volume usage.
Presumed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 30 years

Bldg. #93/W0644 – Schapers Hospital –

- Presumed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 30 years

Bldg. #94/W0646 – Elmore Infirmary –

-Presumed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 30 years

Bldg. #97/W0649 – All Faiths Chapel –

-Presumed condition assessment – Good
Est. Service – 46 years
Useful Life Expectancy – 40 years

Bldg. #98/W0658 – American Legion Recreation Bldg. –

- Presumed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 50 years

Bldg. #99/W0659 – AmVets Deer Park Pavilion –

-Presumed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 50 years

Bldg. #100/W0660 – Multi-Purpose Therapy Bldg. –
- Presumed condition assessment – Good
Est. Service – 20 years
Useful Life Expectancy – 65 years

Bldg. #101/W0661 – Fifer Skilled Care –
- Presumed condition assessment – Good
Est. Service – 15 years
Useful Life Expectancy – 70 years

Sub-surface drainage issues have occasionally occurred in the basement of Elmore

Above Ground Sanitary Sewer Systems:

The above ground sanitary systems are located in basements, crawlspaces, above ceilings, and exposed in occupied areas. The types of materials utilized for these installations are commonly based on the building occupancy being served and overall construction type. The institutional buildings are normally provided with cast iron sanitary waste & vent systems. Over the years, maintenance type replacements have occurred in multiple buildings, often utilizing materials different from the original construction. Changes in function or building renovation have also dictated system updates & improvements. Thus, the evaluation of the above ground sanitary, cannot be based solely on the building's original construction date. Recently, some issues have surfaced due to the chemically treated water that is routinely be flushed through the systems. The cleaning effect of these chemicals has exposed previously undiscovered drainage problems due to thin pipe walls & failing pipe joint construction.

Bldg. #11/W0608 – Roland Barracks –
- Out of Service
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #20/W0610 – Somerville Domiciliary –
- Partial renovation 1991 – some original sanitary remained
Observed condition assessment – Fair-Poor
Est. Service – 100 & 27 years
Useful Life Expectancy – 20 years

Bldg. #21/W0611 – Fogg Barracks –
- Out of Service
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #22/W0612 – Anderson Barracks –
- Partial renovation 1991 – some original sanitary remained
Observed condition assessment – Fair-Poor
Est. Service – 100 &27 years
Useful Life Expectancy – 20 years

Bldg. #26/W0618 – Fletcher Infirmary –
- Cast iron waste & vent, renovations in 1980. No longer occupied by patients
Observed condition assessment – Fair-Poor
Est. Service – 70 years
Useful Life Expectancy – 20 years

Bldg. #28/W0621 – Andrew Barracks –
- Cast iron waste & vent with multiple maintenance repairs, renovated in 1981
Observed condition assessment – Poor
Est. Service – 80 & 37 years
Useful Life Expectancy – 10 years

Bldg. #29/W0617 – Reig-Administration –
- Cast iron waste & vent with some maintenance repairs, Renovated for business occupancy
Observed condition assessment – Fair-Poor
Est. Service – 80 years
Useful Life Expectancy – 15 years

Bldg. #30/W0606 – Library –
-Cast iron waste & vent, renovated in 1988
Observed condition assessment – Fair-Poor
Est. Service – 100 & 30 years
Useful Life Expectancy – 15 years

Bldg. #31/ W0603 – Northern Guest House –
-Mixed drainage systems, renovated as Hotel usage
Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #32/W0653 – Security Annex/Ambulance Garage –
-Portions of the plumbing systems abandoned, only one rest room active
Observed condition assessment – Poor
Est. Service – 90 years
Useful Life Expectancy – 10 years

Bldg. #34/W0614 – Medical Staff Building –
- Constructed as residence with only early minor renovations
Observed condition assessment – Fair-Poor
Est. Service – 50 years
Useful Life Expectancy – 15 years

Bldg. #35/W0604 – Old Administration –
- Portions renovated as hotel occupancy, both old & newer systems utilized
Observed condition assessment – Poor
Est. Service – 100 & 30 years
Useful Life Expectancy – 10 years

Bldg. #36/W0613 – Smith Hall –
- Various renovations
Observed condition assessment – Fair
Est. Service – 80 & 20 years
Useful Life Expectancy – 25 years

Bldg. #37/W0600 – Lippincott Hall –
- Partial renovation in 1991
Observed condition assessment – Fair-Poor
Est. Service – 80 years
Useful Life Expectancy – 15 years

Bldg. #38/W0634 – Engineering Building –
- Various renovations with partial waste & vent replacement
Observed condition assessment – Good-Fair
Est. Service – 100 & 30years
Useful Life Expectancy – 30 years

Bldg. #39/W0654 – Lawn Garage –
- Minimal plumbing, no known waste & vent replacement
Observed condition assessment – Poor
Est. Service – 100 year
Useful Life Expectancy – 5 years

Bldg. #40/W0615 – Power Plant –
- Multiple renovation projects, but only minor waste & vent replacement
Observed condition assessment – Fair-Poor
Est. Service – 100 & 50 years
Useful Life Expectancy – 15 years

Bldg. #41/W0605 – Equipment Storage –
- Complete building functional change, nearly no renovation of waste & vent
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 5 years

Bldg. #42/W0623 – Tradesman Workshop –
- Minimal waste & vent renovation
Observed condition assessment – Fair-Poor
Est. Service – 70 years
Useful Life Expectancy – 20 years

Bldg. #43/W0622 – Superintendent's Residence –
- Out of Service
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #47/W0602 – Houseman's Quarters –
- Out of Service
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #48/W0631 – 5th Street Gatehouse –
- Substantially out of service, water service eliminated
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 5 years

Bldg. #49/W0627 – Carpenter Shop –
- Minimal waste & vent
Observed condition assessment – Fair-Poor
Est. Service – 65 years
Useful Life Expectancy – 15 years

Bldg. #50/W0624 – Greenhouse –
- Only partially in service with minimal drainage systems active
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 5 years

Bldg. #58/W0635 – New Truck Garage –
- Modern plumbing materials utilized for waste & vent
Observed condition assessment – Good
Est. Service – 7 years
Useful Life Expectancy – 40 years

Bldg. #59/W0651 – Koch Cemetery Building –
- Residential plumbing materials utilized for waste & vent
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #83/W0616 – Water Treatment Plant –
- Complete sanitary system replacement within building with change in function in 2015/16
Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 50 years

Bldg. #87/W0607 – 8th Street Gatehouse –
- Plumbing out of service
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #89/W0645 – Ehle Laundry –
- Commercial waste & vent, partially renovated in 1984
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #90/W0647 – Markword Infirmary –
- Complete renovation in 1988 with significant waste & vent systems replacement
Observed condition assessment – Fair+Poor
Est. Service – 54 years
Useful Life Expectancy – 20 years

Bldg. #91/W0650 – Kent Infirmary –
- Substantially out of plumbing service, no water service, not occupied as health care occupancy, systems deteriorating rapidly
Observed condition assessment – Poor
Est. Service – 45 years
Useful Life Expectancy – 5 years

Bldg. #92/W0643 – Nielson Dining/Kitchen –
-Most original waste & vent systems still in service, commercial kitchen construction
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #93/W0644 – Schapers Hospital –
-Partial systems renovations in 1988, most waste & vent systems original
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #94/W0646 – Elmore Infirmary –
- Deteriorating drainage systems have led to significant replacement of cast iron waste & vent with PVC patches
Observed condition assessment – Fair+Poor
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #97/W0649 – All Faiths Chapel –
- Little renovation of original waste & vent systems
Observed condition assessment – Good
Est. Service – 46 years
Useful Life Expectancy – 30 years

Deteriorated Sanitary Sewer Main at Elmore

Cast Iron Sanitary replaced with PVC in Elmore Crawlspace

Threaded Cast Iron Sanitary replaced with no-hub cast iron

Cast Iron Sanitary repair at Schapers

Bldg. #98/W0658 – American Legion Recreation Bldg. –
- Original waste & vent systems
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #99/W0659 – AmVets Deer Park Pavilion –
- Original waste & vent systems
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #100/W0660 – Multi-Purpose Therapy Bldg. –
- Original waste & vent systems
Observed condition assessment – Good
Est. Service – 20 years
Useful Life Expectancy – 40 years

Bldg. #101/W0661 – Fifer Skilled Care –
- Original waste & vent systems
Observed condition assessment – Good
Est. Service – 15 years
Useful Life Expectancy – 40 years

Potable Cold Water Distribution System:

The potable cold water distribution systems vary widely across the IVHQ campus. Most of the older building were originally constructed utilizing threaded galvanized iron pipe & fittings as the primary distribution system. Given the age of these systems, there has been sediment build up that has accumulated on the interior of the galvanized piping. As renovation projects occurred, copper piping systems were normally utilized to replace the systems in the renovated areas. When the original cold water distribution was located in basements or crawlspaces, the copper piping for the renovated spaces was often connected to the galvanized piping in the lower level, service areas. Under this scenario, the evaluation of the distribution system as a whole becomes somewhat clouded. The overall evaluation has primarily been based on percentages of systems in acceptable condition versus systems that are in poor condition.

A CDB Emergency Project to upgrade the IVHQ water distribution systems, campus wide, was undertaken in 2015/2016. Multiple steps were undertaken to mitigate the existence of Legionella bacteria in the facilities distribution systems.

Water distribution systems are prone to develop sediment build-up on the walls of the distribution piping & devices, depending on the source water quality. This is especially true for systems that are not provided with equipment to reduce the mineral content of the water. Over years of service, the sediment build-up increases causing significant loss of flow through the piping system. It has also been hypothesized that the rough surface and crevasses in the build-up harbor Legionella bacteria and make it increasingly more difficult to destroy the bacteria with water chemical treatments. The amount of build-up required to provide this potential safe harbor for the bacteria in a very in-exact science. For the purposes of evaluation of "Useful Life Expectancy" for the distribution systems, the build-up in the piping systems is being considered only through a functional standpoint on its effects of system performance. If it would be proven beyond reproach, that the sediment build-up in the IVHQ piping is preventing the mitigation of the Legionella bacteria, then the "Useful Life Expectancy" of many of the distribution systems would potentially be zero years.

Bldg. #11/W0608 – Roland Barracks –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #20/W0610 – Somerville Domiciliary –
- Mixed galvanized & copper systems, most distribution systems replaced on upper floors with copper in 1991.
Observed condition assessment – Fair + Poor
Est. Service – 100 & 37years
Useful Life Expectancy – 15 years

Bldg. #21/W0611 – Fogg Barracks –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #22/W0612 – Anderson Barracks –
- Mixed galvanized & copper systems, most distribution systems replaced on upper floors with copper in 1991.
Observed condition assessment – Fair + Poor
Est. Service – 100 & 37 years
Useful Life Expectancy – 15 years

Bldg. 26/W0618 – Fletcher Infirmary –
- Primarily galvanized piping on cold water distribution with exception of the very latest renovations
Observed condition assessment – Fair-Poor
Est. Service – 70 years
Useful Life Expectancy – 20 years

Bldg. #28/W0621 – Andrew Barracks –
- Primarily galvanized piping on cold water distribution with exception of the very latest renovations
Observed condition assessment – Fair-Poor
Est. Service – 80 & 37 years
Useful Life Expectancy – 15 years

Bldg. #29/W0617 – Reig-Administration –
- Much of the original galvanized pipe system replaced with copper during the functional renovation of the building
Observed condition assessment – Fair-Poor
Est. Service – 25 years
Useful Life Expectancy – 20 years

Bldg. #30/W0606 – Library –
- Primarily galvanized piping on cold water distribution with exception of the very latest renovations
Observed condition assessment – Fair-Poor
Est. Service – 100 & 30 years
Useful Life Expectancy – 15 years

Bldg. #31/ W0603 – Northern Guest House –
- Building renovated to function as a hotel, with updates to copper pipe for hot water distribution system. Mains replaced during 2015/16 project with water heater installation.
Observed condition assessment – Fair-Poor
Est. Service – 100 & 30 years
Useful Life Expectancy – 15 years

Bldg. #32/W0653 – Security Annex/Ambulance Garage –
- Portions of the plumbing systems abandoned, only one rest room active, remaining systems mostly galvanized piping
Observed condition assessment – Fair-Poor
Est. Service – 90 years
Useful Life Expectancy – 15 years

Bldg. #34/W0614 – Medical Staff Building –
- Constructed as residence with only early minor renovations, mixed galvanized & copper cold water systems
Observed condition assessment – Fair-Poor
Est. Service – 100 years
Useful Life Expectancy – 15 years

Bldg. #35/W0604 – Old Administration –
- Portions renovated as hotel occupancy, both old galvanized & newer copper systems remain in service
Observed condition assessment – Poor
Est. Service – 100 & 30 years
Useful Life Expectancy – 10 years

Bldg. #36/W0613 – Smith Hall –
- Cold water distribution upgraded to new copper by in-house project in 2017
Observed condition assessment – Good
Est. Service – 1 year
Useful Life Expectancy – 35 years

Bldg. #37/W0600 – Lippincott Hall –
- Most of the original, galvanized cold water distribution is still in service
Observed condition assessment – Fair-Poor
Est. Service – 80 years
Useful Life Expectancy – 15 years

Bldg. #38/W0634 – Engineering Building –
- Most cold water distribution upgraded to copper in various renovation projects
Observed condition assessment – Good-Fair
Est. Service – 25 years
Useful Life Expectancy – 25 years

Bldg. #39/W0654 – Lawn Garage –
- Minimal plumbing, cold water distribution partially upgraded during 2015/16 project.
Observed condition assessment – Fair
Est. Service – 100 & 3 years
Useful Life Expectancy – 20 years

Bldg. #40/W0615 – Power Plant –
- Approximately 70% of cold water distribution upgraded to copper during 2015/16 project.
Observed condition assessment – Fair
Est. Service – 100 & 3years
Useful Life Expectancy – 20 years

Bldg. #41/W0605 – Equipment Storage –
- Entire active cold water distribution replaced during 2015/16 project. Other obsolete distribution systems abandoned in place.
Observed condition assessment – Good+Poor
Est. Service – 3 years
Useful Life Expectancy – 35 years

Bldg. #42/W0623 – Tradesman Workshop –
- Original cold water distribution copper
Observed condition assessment – Fair
Est. Service – 70 years
Useful Life Expectancy – 20 years

Bldg. #43/W0622 – Superintendent's Residence –
- Out of Service, no active water distribution
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #47/W0602 – Houseman's Quarters –
- Out of Service, no active water distribution
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #48/W0631 – 5th Street Gatehouse –
- Out of Service, water service removed in 2015/16 project
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #49/W0627 – Carpenter Shop –
- Minimal copper pipe distribution system
Observed condition assessment – Fair
Est. Service – 65 years
Useful Life Expectancy – 20 years

Bldg. #50/W0624 – Greenhouse –
- Old galvanized system,
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 10 years

Bldg. #58/W0635 – New Truck Garage –
- New copper, cold water distribution in good condition
Observed condition assessment – Good
Est. Service – 7 years
Useful Life Expectancy – 35 years

Bldg. #59/W0651 – Koch Cemetery Building –
- Relatively new copper, cold water distribution in good condition
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #83/W0616 – Water Treatment Plant –
- New copper, cold water distribution in good condition
Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 50 years

Bldg. #87/W0607 – 8th Street Gatehouse –
- Out of Service, no active cold water systems
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #89/W0645 – Ehle Laundry –
- Mix of galvanized & copper cold water distribution systems.
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #90/W0647 – Markword Infirmary –
- Renovated with complete distribution system upgrade to copper in 1988.
Observed condition assessment – Good-Fair
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #91/W0650 – Kent Infirmary –
- Substantially out of service, no active water supply to this building.
Observed condition assessment – Poor
Est. Service – 45 years
Useful Life Expectancy – 0 years

Bldg. #92/W0643 – Nielson Dining/Kitchen –
- Combination of galvanized & copper distribution systems
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #93/W0644 – Schapers Hospital –
- Combination of galvanized & copper distribution systems
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #94/W0646 – Elmore Infirmary –
- Combination of galvanized & copper distribution systems
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Deteriorated Valve in Galvanized Water Main @ Elmore

Multiple water distribution piping types in Guest House Crawlspace

Bldg. #97/W0649 – All Faiths Chapel –
- Original construction, copper cold water distribution system.
Observed condition assessment – Good
Est. Service – 46 years
Useful Life Expectancy – 35 years

Bldg. #98/W0658 – American Legion Recreation Bldg. –
- Original construction, copper cold water distribution system.
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #99/W0659 – AmVets Deer Park Pavilion –
- Original construction, copper cold water distribution system.
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #100/W0660 – Multi-Purpose Therapy Bldg. –
- Original construction, copper cold water distribution system.
Observed condition assessment – Good
Est. Service – 20 years
Useful Life Expectancy – 40 years

Bldg. #101/W0661 – Fifer Skilled Care –
- Original construction, copper cold water distribution system.
Observed condition assessment – Good
Est. Service – 15 years
Useful Life Expectancy – 40 years

Potable Hot Water Distribution System:

The potable hot water distribution systems vary widely across the IVHQ campus, similar to the cold water systems. Most of the older building were originally constructed utilizing threaded galvanized iron pipe & fittings as the primary distribution system. Given the age of these systems, there has been sediment build up that has accumulated on the interior of the galvanized piping. As renovation projects occurred, copper piping systems were normally utilized to replace the systems in the renovated areas. When the original hot water distribution was located in basements or crawlspaces, the copper piping for the renovated spaces was often connected to the galvanized piping in the lower level, service areas. The overall evaluation has primarily been based on percentages of systems in acceptable condition versus systems that are in poor condition. Since very little in the realm of water treatment has been undertaken until just recently, even the relatively newer copper piping systems have developed some sediment build up.

A CDB Emergency Project to upgrade the IVHQ water distribution systems, campus wide, was undertaken in 2015/2016. Multiple steps were undertaken to mitigate the existence of Legionella bacteria in the facilities distribution systems. One major features of this project was to provide hot water, at approximately 160 degree F, to each point of use within each building via the hot water distribution systems. To this end, the majority of the buildings required upgrades to provide more effective circulation of the generated hot water to maintain the elevated water temperature.

Hot water distribution systems are prone to develop sediment build-up on the walls of the distribution piping & devices, depending on the source water quality. This is especially true for systems that are not provided with equipment to reduce the mineral content of the water. Over years of service, the sediment build-up increases causing significant loss of flow through the piping system. It has also been hypothesized that the rough surface and crevasses in the build-up harbor Legionella bacteria and make it increasingly more difficult to destroy the bacteria with water chemical treatments. The amount of build-up required to provide this potential safe harbor for the bacteria in a very in-exact science. For the purposes of evaluation of "Useful Life Expectancy" for the distribution systems, the build-up in the piping systems is being considered only through a functional standpoint on its effects of system performance. If it would be proven beyond reproach, that the sediment build-up in the IVHQ piping is preventing the mitigation of the Legionella bacteria, then the "Useful Life Expectancy" of many of the distribution systems would potentially be zero years.

Bldg. #11/W0608 – Roland Barracks –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #20/W0610 – Somerville Domiciliary –
- Mixed galvanized & copper systems, most distribution systems replaced on upper floors with copper in 1991. Hot water recirculation systems upgraded in 2015/16.
Observed condition assessment – Fair
Est. Service – 100 & 3 years
Useful Life Expectancy – 15 years

Bldg. #21/W0611 – Fogg Barracks –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #22/W0612 – Anderson Barracks –
- Mixed galvanized & copper systems, most distribution systems replaced on upper floors with copper in 1991. Hot water recirculation systems upgraded in 2015/16.
Observed condition assessment – Fair
Est. Service – 100 & 3 years
Useful Life Expectancy – 15 years

Bldg. #26/W0618 – Fletcher Infirmary –
- Primarily galvanized piping on hot water distribution, hot water recirculation systems upgraded in 2015/2016.
Observed condition assessment – Fair
Est. Service – 70 years
Useful Life Expectancy – 20 years

Bldg. #28/W0621 – Andrew Barracks –
- Primarily galvanized piping on hot water distribution, hot water recirculation systems upgraded in 2015/2016.
Observed condition assessment – Fair-Poor
Est. Service – 80 & 3years Useful Life Expectancy – 15 years

Bldg. #29/W0617 – Reig-Administration –
- Much of the original galvanized pipe system replaced with the functional renovation of the building, hot water recirculation systems upgraded in 2015/2016.
Observed condition assessment – Fair
Est. Service – 25 & 3 years Useful Life Expectancy – 20 years

Bldg. #30/W0606 – Library –
- Primarily galvanized piping on cold water distribution with exception of the very latest renovations, hot water recirculation systems upgraded in 2015/2016.
Observed condition assessment – Fair
Est. Service – 100 & 3 years
Useful Life Expectancy – 20 year

Bldg. #31/ W0603 – Northern Guest House –
- Building renovated to function as a hotel, with updates to copper pipe for hot water distribution system. Mains replaced during 2015/16 project with water heater installation.
Observed condition assessment – Fair-Poor
Est. Service – 30 years
Useful Life Expectancy – 15 years

Bldg. #32/W0653 – Security Annex/Ambulance Garage –
- Point of Use water heater provided for only toilet room in 2015/16, minimal hot water piping
Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #34/W0614 – Medical Staff Building –
- Constructed as residence with only early minor renovations for current office usage,
Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #35/W0604 – Old Administration –
- Portions renovated as hotel occupancy, both old & newer systems utilized
Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #36/W0613 – Smith Hall –
- Hot water distribution upgraded to new copper by in-house project in 2017
Observed condition assessment – Good
Est. Service – 1 years
Useful Life Expectancy – 40 years

Bldg. #37/W0600 – Lippincott Hall –
- Most of the original, galvanized hot water distribution is still in service
Observed condition assessment – Fair
Est. Service – 80 years
Useful Life Expectancy – 20 years

Bldg. #38/W0634 – Engineering Building –
- Most hot water distribution upgraded to copper in various renovation projects, upgraded in 2015/16 project
Observed condition assessment – Good
Est. Service – 30 & 3 years Useful Life Expectancy – 25 years

Bldg. #39/W0654 – Lawn Garage –
- Point of Use Water heater added in 2015/16 project, minimal hot water piping
Observed condition assessment – Fair
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #40/W0615 – Power Plant –
- Hot water distribution in limited area, upgraded in 2015/16 project
Observed condition assessment – Fair
Est. Service – 50 & 3 years
Useful Life Expectancy – 20 years

Bldg. #41/W0605 – Equipment Storage –
- Point of Use water heaters provided with minimal distribution piping, portions of obsolete systems abandoned
Observed condition assessment – Good+Poor
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #42/W0623 – Tradesman Workshop –
- Original hot water distribution copper piping
Observed condition assessment – Fair
Est. Service – 70 years
Useful Life Expectancy – 20 years

Bldg. #43/W0622 – Superintendent's Residence –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #47/W0602 – Houseman's Quarters –
-Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #48/W0631 – 5th Street Gatehouse –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #49/W0627 – Carpenter Shop –
- Minimal copper pipe, hot water distribution system
Observed condition assessment – Fair
Est. Service – 65 years
Useful Life Expectancy – 20 years

Bldg. #50/W0624 – Greenhouse –
- Observed condition assessment – NA

Bldg. #58/W0635 – New Truck Garage –
- Basically new copper pipe system
Observed condition assessment – Good
Est. Service – 7 years
Useful Life Expectancy – 35 years

Bldg. #59/W0651 – Koch Cemetery Building –
- Relatively new copper pipe distribution system
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #83/W0616 – Water Treatment Plant –
- New copper hot water distribution system
Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 50 years

Bldg. #87/W0607 – 8th Street Gatehouse –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #89/W0645 – Ehle Laundry –
- Domestic hot water distribution system primarily copper, process hot water system mainly galvanized
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #90/W0647 – Markword Infirmary –
- Renovated with complete distribution system upgrade to copper in 1988.
Observed condition assessment – Good-Fair
Est. Service – 30 years
Useful Life Expectancy – 25 years

Bldg. #91/W0650 – Kent Infirmary –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor Est. Service – 45 years
Useful Life Expectancy – 0 years

Bldg. #92/W0643 – Nielson Dining/Kitchen –
- Combination of galvanized & copper distribution systems, upgraded with 2015/16 project
Observed condition assessment – Fair
Est. Service – 55 & 3 years Useful Life Expectancy – 20 years

Bldg. #93/W0644 – Schapers Hospital –
- Combination of galvanized & copper distribution systems, recirculation systems upgraded in 2015/16
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #94/W0646 – Elmore Infirmary –
- Combination of galvanized & copper distribution systems, recirculation systems upgraded in 2015/16
Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #97/W0649 – All Faiths Chapel –
- Original copper, hot water distribution system
Observed condition assessment – Good
Est. Service – 46 years
Useful Life Expectancy – 30 years

Bldg. #98/W0658 – American Legion Recreation Bldg. –
- Original copper, hot water distribution system
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 35 years

Bldg. #99/W0659 – AmVets Deer Park Pavilion –
- Original copper, hot water distribution system
Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 35 years

Bldg. #100/W0660 – Multi-Purpose Therapy Bldg. –
- Original copper hot water distribution system, upgraded with 2015/16 project
Observed condition assessment – Good
Est. Service – 20 years
Useful Life Expectancy – 40 years

Bldg. #101/W0661 – Fifer Skilled Care –
- Original copper hot water distribution system, upgraded with 2015/16 project
Observed condition assessment – Good
Est. Service – 15 years
Useful Life Expectancy – 40 years

Potable Hot Water Generation System:

A CDB Emergency Project to upgrade the IVHQ water distribution systems, campus wide, was undertaken in 2015/2016. Multiple steps were undertaken to mitigate the existence of Legionella bacteria in the facilities distribution systems. One major features of this project was to decentralize the hot water generation. This include the abandonment of the domestic hot water heating equipment in the Power Plant and replacing that system with individual hot water systems for each campus building. Providing hot water, at approximately 160 degree F, to each point of use within each building via the hot water distribution systems was also a component of this project. The evaluation of the "Useful Life Expectancy", in this case is more a function of the type of equipment, rather than a visual observation. For example, commercial gas water heater would have a greater useful life than smaller electric units.

Bldg. #11/W0608 – Roland Barracks –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #20/W0610 – Somerville Domiciliary –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #21/W0611 – Fogg Barracks –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #22/W0612 – Anderson Barracks –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #26/W0618 – Fletcher Infirmary –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #28/W0621 – Andrew Barracks –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #29/W0617 – Reig-Administration –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #30/W0606 – Library –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #31/ W0603 – Northern Guest House –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #32/W0653 – Security Annex/Ambulance Garage –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #34/W0614 – Medical Staff Building –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #35/W0604 – Old Administration –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #36/W0613 – Smith Hall –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #37/W0600 – Lippincott Hall –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #38/W0634 – Engineering Building –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #39/W0654 – Lawn Garage –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #40/W0615 – Power Plant –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #41/W0605 – Equipment Storage –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #42/W0623 – Tradesman Workshop –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #43/W0622 – Superintendent's Residence –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #47/W0602 – Houseman's Quarters –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #48/W0631 – 5th Street Gatehouse –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #49/W0627 – Carpenter Shop –
Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #50/W0624 – Greenhouse –
- Observed condition assessment – NA

Bldg. #58/W0635 – New Truck Garage –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #59/W0651 – Koch Cemetery Building –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #83/W0616 – Water Treatment Plant –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #87/W0607 – 8th Street Gatehouse –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #89/W0645 – Ehle Laundry –
- Observed condition assessment – Good&Fair
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #90/W0647 – Markword Infirmary –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #91/W0650 – Kent Infirmary –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 45 years
Useful Life Expectancy – 0 years

Bldg. #92/W0643 – Nielson Dining/Kitchen –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #93/W0644 – Schapers Hospital –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #94/W0646 – Elmore Infirmary –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #97/W0649 – All Faiths Chapel –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Typical New Electric Water Heater Installation Old Admin

Typical New Gas Water Heater Installation at Fifer

Bldg. #98/W0658 – American Legion Recreation Bldg. –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #99/W0659 – AmVets Deer Park Pavilion –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 15 years

Bldg. #100/W0660 – Multi-Purpose Therapy Bldg. –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Bldg. #101/W0661 – Fifer Skilled Care –
- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 20 years

Plumbing Fixtures & Fittings:

There is a large variety of plumbing fixture types & styles within the IVHQ buildings. To a great extent, fixture & fitting replacements have occurred with some frequency in the patient occupied buildings, in order to keep the facility current with modern standards and provide a pleasing environment for the residents & staff. Often replacements occur on a periodic maintenance basis rather that a full scale, building wide system replacement. The evaluation of condition and useful life expectancy for plumbing fixtures & fittings is a combination of perceived age, functionality, and generally observed appearance.

A CDB Emergency Project to upgrade the IVHQ water distribution systems, campus wide, was undertaken in 2015/2016. Multiple steps were undertaken to mitigate the existence of Legionella bacteria in the facilities distribution systems. One major features of this project was to provide hot water, at approximately 160 degree F, to each point of use within each building via the hot water distribution systems. To this end, the majority of the buildings required upgrades to provide faucets & fittings for the plumbing fixtures, utilizing hot water, that were capable of accommodating the elevated water temperatures. Point of use mixing valves were installed on all lavatories & sinks. Shows & tubs were provide with new anti-scald shower valve or mixing valves. Through the evaluation of current building utilization, several fixtures which were no longer serviceable, needed or required by code, were removed from the system.

Bldg. #11/W0608 – Roland Barracks –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #20/W0610 – Somerville Domiciliary –

- Observed condition assessment – Good-Fair
Est. Service – 30 & 3 years
Useful Life Expectancy – 25 years

Bldg. #21/W0611 – Fogg Barracks –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #22/W0612 – Anderson Barracks –

- Observed condition assessment – Good-Fair
Est. Service – 30 & 3 years
Useful Life Expectancy – 25 years

Bldg. #26/W0618 – Fletcher Infirmary –

- Observed condition assessment – Fair-Poor
Est. Service – 70 & 3 years
Useful Life Expectancy – 15 years

Bldg. #28/W0621 – Andrew Barracks –

- Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #29/W0617 – Reig-Administration –

- Observed condition assessment – Good-Fair
Est. Service – 25 years
Useful Life Expectancy – 25 years

Bldg. #30/W0606 – Library –

- Observed condition assessment – Fair
Est. Service – 30 years
Useful Life Expectancy – 20 years

Bldg. #31/ W0603 – Northern Guest House –
- Observed condition assessment – Fair

Est. Service – 25 years
Useful Life Expectancy – 20 years

Bldg. #32/W0653 – Security Annex/Ambulance Garage –

- Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #34/W0614 – Medical Staff Building –

- Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #35/W0604 – Old Administration –

- Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #36/W0613 – Smith Hall –

- Observed condition assessment – Good-Fair
Est. Service – 20 years
Useful Life Expectancy – 25 years

Bldg. #37/W0600 – Lippincott Hall –

- Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #38/W0634 – Engineering Building –

- Observed condition assessment – Fair
Est. Service – 30 years
Useful Life Expectancy – 20 years

Bldg. #39/W0654 – Lawn Garage –

- Observed condition assessment – Poor
Est. Service – 50 years
Useful Life Expectancy – 5 years

Bldg. #40/W0615 – Power Plant –

- Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #41/W0605 – Equipment Storage –

- Observed condition assessment – Poor
Est. Service – 50 years
Useful Life Expectancy – 5 years

Bldg. #42/W0623 – Tradesman Workshop –

- Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #43/W0622 – Superintendent's Residence –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #47/W0602 – Houseman's Quarters –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #48/W0631 – 5th Street Gatehouse –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 100 years
Useful Life Expectancy – 0 years

Bldg. #49/W0627 – Carpenter Shop –

- Observed condition assessment – Fair-Poor
Est. Service – 40 years
Useful Life Expectancy – 15 years

Bldg. #50/W0624 – Greenhouse –

- Observed condition assessment – Poor
Est. Service – 50 years
Useful Life Expectancy – 10 years

Bldg. #58/W0635 – New Truck Garage –

- Observed condition assessment – Good
Est. Service – 7 years
Useful Life Expectancy – 45 years

Bldg. #59/W0651 – Koch Cemetery Building –

- Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #83/W0616 – Water Treatment Plant –

- Observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 50 years

Bldg. #87/W0607 – 8th Street Gatehouse –
- Out of service, no active water distribution systems.
Observed condition assessment – Poor
Est. Service – 80 years
Useful Life Expectancy – 0 years

Bldg. #89/W0645 – Ehle Laundry –

- Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #90/W0647 – Markword Infirmary –

- Observed condition assessment – Good-Fair
Est. Service – 30 years
Useful Life Expectancy – 25 years

Bldg. #91/W0650 – Kent Infirmary –
- Out of service, no active water distribution systems.

Observed condition assessment – Poor
Useful Life Expectancy – 0 years

Bldg. #92/W0643 – Nielson Dining/Kitchen –

- Observed condition assessment – Fair
Est. Service – 55 years
Useful Life Expectancy – 20 years

Bldg. #93/W0644 – Schapers Hospital –

- Observed condition assessment – Good-Fair
Est. Service – 55 years
Useful Life Expectancy – 25 years

Bldg. #94/W0646 – Elmore Infirmary –

- Observed condition assessment – Good-Fair
Est. Service – 55 years
Useful Life Expectancy – 25 years

Bldg. #97/W0649 – All Faiths Chapel –

- Observed condition assessment – Good
Est. Service – 40 years
Useful Life Expectancy – 30 years

Bldg. #98/W0658 – American Legion Recreation Bldg. –

- Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #99/W0659 – AmVets Deer Park Pavilion –

- Observed condition assessment – Good
Est. Service – 30 years
Useful Life Expectancy – 30 years

Bldg. #100/W0660 – Multi-Purpose Therapy Bldg. –

- Observed condition assessment – Good
Est. Service – 20 years
Useful Life Expectancy – 35 years

Bldg. #101/W0661 – Fifer Skilled Care –

- Observed condition assessment – Good
Est. Service -15 years
Useful Life Expectancy – 35 years

PLUMBING & FIRE PROTECTION SYSTEMS:

OVERALL PLUMBING & FIRE PROTECTION SYSTEMS EVALUATION:

Bldg. #11/W0608 – Roland Barracks –
- Observed condition assessment – Poor

Bldg. #20/W0610 – Somerville Domiciliary –
- Observed condition assessment – Fair

Bldg. #21/W0611 – Fogg Barracks –
- Observed condition assessment – Poor

Bldg. #22/W0612 – Anderson Barracks –
- Observed condition assessment – Fair

Bldg. #26/W0618 – Fletcher Infirmary –
- Observed condition assessment – Fair-Poor

Bldg. #28/W0621 – Andrew Barracks –
- Observed condition assessment – Fair-Poor

Bldg. #29/W0617 – Reig-Administration –
- Observed condition assessment – Fair

Bldg. #30/W0606 – Library –
- Observed condition assessment – Fair

Bldg. #31/ W0603 – Northern Guest House –
- Observed condition assessment – Fair

Bldg. #32/W0653 – Security Annex/Ambulance Garage –
- Observed condition assessment – Fair-Poor

Bldg. #34/W0614 – Medical Staff Building –
- Observed condition assessment – Fair-Poor

Bldg. #35/W0604 – Old Administration –
- Observed condition assessment – Fair-Poor

Bldg. #36/W0613 – Smith Hall –
- Observed condition assessment – Good-Fair

Bldg. #37/W0600 – Lippincott Hall –
- Observed condition assessment – Fair-Poor

Bldg. #38/W0634 – Engineering Building –
- Observed condition assessment – Fair

Bldg. #39/W0654 – Lawn Garage –
- Observed condition assessment – Poor

Bldg. #40/W0615 – Power Plant –
- Observed condition assessment – Fair-Poor

Bldg. #41/W0605 – Equipment Storage –
- Observed condition assessment – Poor

Bldg. #42/W0623 – Tradesman Workshop –
- Observed condition assessment – Fair

Bldg. #43/W0622 – Superintendent's Residence –
- Observed condition assessment – Poor

Bldg. #47/W0602 – Houseman's Quarters –
- Observed condition assessment – Poor

Bldg. #48/W0631 – 5th Street Gatehouse –
- Observed condition assessment – Poor

Bldg. #49/W0627 – Carpenter Shop –
- Observed condition assessment – Fair-Poor

Bldg. #50/W0624 – Greenhouse –
- Observed condition assessment – Poor

Bldg. #58/W0635 – New Truck Garage –
- Observed condition assessment – Good

Bldg. #59/W0651 – Koch Cemetery Building –
- Observed condition assessment – Good

Bldg. #83/W0616 – Water Treatment Plant –
- Observed condition assessment – Good

Bldg. #87/W0607 – 8th Street Gatehouse –
- Observed condition assessment – Poor

Bldg. #89/W0645 – Ehle Laundry –
- Observed condition assessment – Fair

Bldg. #90/W0647 – Markword Infirmary –
- Observed condition assessment – Fair

Bldg. #91/W0650 – Kent Infirmary –
- Observed condition assessment – Poor

Bldg. #92/W0643 – Nielson Dining/Kitchen –
- Observed condition assessment – Fair

Bldg. #93/W0644 – Schapers Hospital –
- Observed condition assessment – Fair

Bldg. #94/W0646 – Elmore Infirmary –
- Observed condition assessment – Fair

Bldg. #97/W0649 – All Faiths Chapel –
- Observed condition assessment – Good

Bldg. #98/W0658 – American Legion Recreation Bldg. –
- Observed condition assessment – Good

Bldg. #99/W0659 – AmVets Deer Park Pavilion –
- Observed condition assessment – Good

Bldg. #100/W0660 – Multi-Purpose Therapy Bldg. –
- Observed condition assessment – Good

Bldg. #101/W0661 – Fifer Skilled Care –
- Observed condition assessment – Good

[This page intentionally left blank]

VIII. FIRE PROTECTION & SUPPRESSION REPORT

FIRE PROTECTION/ SUPPRESSION

Somerville Sprinkler Riser Assembly

Markword Sprinkler Riser Assembly

Semi-Recessed Normal Response Head

Older Style Sidewall Normal Response Head

Retrofitted Quick Response Head

Site Fire Suppression Systems:

There are 6" fire hydrants located at appropriate points around the campus water distribution loop and on branch mains that extend from the loop. These fire hydrants are manually flushed on regular intervals to prevent the potable water within the hydrant branches from becoming stagnant. In addition to fire hydrants, there are automatic flushing devices located on water main branch lines with little or no flow.
-Site Fire Hydrant Observed Condition Assessment – Fair/Good
Useful Life Expectancy – 30 years

Building Fire Sprinkler Systems:

Fire Sprinkler Systems are installed in multiple building across the IVHQ campus, as dictated by the applicable building codes and the state licensing requirements for facilities utilized as health care occupancies. The ages of the fire sprinkler systems do not always follow the construction dates for the buildings that are being protected. There have been some upgrades to these suppression systems over the years to accommodate revisions to the building codes or changes in building occupancy. The most recent systems upgrade occurred with CDB Project No. 040-000-002, Phases 1&2, starting in 2014. As previously mentioned in the Water Service Evaluation, this project included installation of new PVC water main branches to supply new & updated fire suppression systems in various building. Individual building, suppression system upgrades were included in the project, as well, which will be itemized in the existing conditions evaluations for the respective buildings. This latest CDB Project was not fully completed, due to state funding constraints, with a significant percentage of the project is yet to be finished. The upgrade work in the resident housing buildings was completed bringing those facilities to the current codes.

Sprinkler system risers have been installed at or near the point of service entry. In most cases, these are located in the building basements and are easily accessible. In campus building without full basements, the sprinkler riser have occasionally been installed in the building crawlspaces. The crawlspace locations are somewhat less accessible and the environment is more corrosive on the system materials and devices. Thus the useful life expectancy with the crawlspace installation is lower.

The distribution piping for the wet pipe, fire suppression systems, used predominantly campus wide, is commonly referred to as "black iron pipe" which is a malleable form of steel piping. Dry pipe fire suppression systems are utilized where the protected areas are subject to freezing temperatures, such as attics, crawlspaces, and exterior porches. The distribution piping in these areas in normally galvanized steel, which has higher resistance to corrosion for the piping interiors & exteriors.

The sprinkler heads installed across the campus vary in style & design depending on the date of initial installation and specific application for which the heads are installed. "Normal Response" type heads were utilized in many of the earlier installations. During the more recent installations, including the 2014 CDB Fire Suppression Project, quick response heads have been installed.
Typical sprinkler system risers with wet zone systems & black iron pipe as well as dry pipe zones with galvanized piping.

Buildings with Full or Partial Fire Sprinkler Protection:

The basis of evaluation of the fire sprinkler system for each building is taken primarily on age of the installation. Because the systems are normally dormant, with exception of periodic flow tests, a true operational review of system is not possible. A full code review for proper coverage is not part of the scope of this evaluation. Systems installed in the recent past would receive a "Good" rating. Systems that include early initial installation features would have lower ratings. Other systems that been recently upgraded would receive ratings in between. For the purpose of this evaluation, the buildings which were part of the 2014 CDB Fire Suppression Project and are very near completion, are being evaluated as if the project will eventually be completed, so that the Useful Life Expectancy of the system can be illustrated. The exception to this approach are buildings, initially without fire sprinkler systems, that are totally incomplete.

BLDG. #20/W0610 – SOMERVILLE DOMICILIARY

– Fully fire sprinkler protected

- Early black iron, wet pipe system distribution system, with normal response sprinkler heads. Minor upgrade with 2014 project.
Wet pipe system observed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 25 years

- Dry pipe sprinkler system added in combustible attic spaces with 2014 CDB project
Dry pipe system observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #22/W0612 – ANDERSON BARRACKS

– Fully fire sprinkler protected

- Early black iron, wet pipe system distribution system, with normal response sprinkler heads. Minor upgrade with 2014 project.
Wet pipe system observed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 25 years

- Dry pipe sprinkler system added in combustible attic spaces with 2014 CDB project
Dry pipe system observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #26/W0618 – FLETCHER

– Fully fire sprinkler protected

- Black iron, wet pipe system distribution system, with quick response sprinkler heads installed as part of the 2014 CDB Fire Suppression Project.
Wet pipe system observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #28/W0621 – ANDREW BARRACKS

– Partially fire sprinkler protected

- Early black iron, wet pipe system distribution system, with normal response sprinkler heads. Previous health care occupancy of Andrew south dictated the installation of fire sprinkler system. Overall occupancy has subsequently been converted to business occupancy only, and sprinkler system is not dictated under this current building usage.
Wet pipe system observed condition assessment – Fair
Est. Service – 25 years
Useful Life Expectancy – 20 years

BLDG. #29/W0617 – REIG-ADMINISTRATION

– Fully fire sprinkler protected as planned

- Wet pipe & dry pipe distribution systems, with quick response sprinkler heads partially installed as part of the 2014 CDB Fire Suppression Project. Work as planned under this project not fully completed or commissioned.
Wet pipe system observed condition assessment – Good (Once complete)
Est. Service – 0 years
Useful Life Expectancy – 50 years

- Dry pipe sprinkler system planned in combustible basement & crawl spaces with 2014 CDB project
Dry pipe system observed condition assessment – Good(Once complete)
Est. Service – 0 years
Useful Life Expectancy – 50 years

BLDG. #30/W0606 - LIBRARY

– Fully fire sprinkler protected as planned

- Wet pipe distribution systems, with quick response sprinkler heads partially installed as part of the 2014 CDB Fire Suppression Project. Work as planned under this project not fully completed or commissioned.
Wet pipe system observed condition assessment – Good (Once complete)
Est. Service – 0 years
Useful Life Expectancy – 50 years

BLDG. #31/ W0603 - NORTHERN GUEST HOUSE

– Partial fire sprinkler protection

- Wet pipe system distribution system, with normal response sprinkler heads installed in early building upgrade project.
Wet pipe system observed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 25 years

BLDG. #36/W0613 - SMITH HALL

– Fully fire sprinkler protected as planned

- Wet pipe distribution systems, with quick response sprinkler heads partially installed as part of the 2014 CDB Fire Suppression Project. Work as planned under this project not fully completed or commissioned.
Wet pipe system observed condition assessment – Good (Once complete)
Est. Service – 0 years
Useful Life Expectancy – 50 years

BLDG. #37/W0600 – LIPPINCOTT HALL

– Fully fire sprinkler protected as planned

- Wet pipe distribution systems, with quick response sprinkler heads partially installed as part of the 2014 CDB Fire Suppression Project. Work as planned under this project not fully completed or commissioned.
Wet pipe system observed condition assessment – Good (Once complete)
Est. Service – 0 years
Useful Life Expectancy – 50 years

BLDG. #41/W0605 – EQUIPMENT STORAGE

- Full fire sprinkler protection as planned, but may never be completed.

- Wet pipe & dry pipe distribution systems, with quick response sprinkler heads planned for installation as part of the 2014 CDB Fire Suppression Project. Work as planned under this project was barely started for this building, with only the new service entrance installed.
Wet pipe system observed condition assessment – Totally incomplete.

- Dry pipe sprinkler system planned in various portions of this building with 2014 CDB fire suppression project
Dry pipe system observed condition assessment – Totally incomplete.

BLDG. #90/W0647 – MARKWORD INFIRMARY

– Fully fire sprinkler protected

- Early black iron, wet pipe system distribution system, with normal response sprinkler heads.
Wet pipe system observed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 25 years

- Dry pipe sprinkler system added in exterior protected areas with 2014 CDB fire suppression project
Dry pipe system observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #92/W0643 – NIELSON DINING/KITCHEN

– Full fire sprinkler protection as planned

- Wet pipe distribution systems, with quick response sprinkler heads partially installed as part of the 2014 CDB Fire Suppression Project. Work as planned under this project not fully completed or commissioned.
Wet pipe system observed condition assessment – Totally incomplete.

- Dry pipe sprinkler system planned in attic spaces with 2014 CDB project
Dry pipe system observed condition assessment – Totally incomplete.

BLDG. #93/W0644 – SCHAPERS HOSPITAL

- Fully fire sprinkler protected

- Early black iron, wet pipe system distribution system, with normal & quick response sprinkler heads. Upgrade with 2014 fire suppression project to add coverage for basement & crawlspaces.
Wet pipe system observed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 25 years

BLDG. #94/W0646 – ELMORE INFIRMARY

– Fully fire sprinkler protected

- Early black iron, wet pipe system distribution system, with normal & quick response sprinkler heads. Upgrade with 2014 fire suppression project to add coverage for basement & crawlspaces.
Wet pipe system observed condition assessment – Fair-Good
Est. Service – 25 years
Useful Life Expectancy – 25 years

BLDG. #97/W0649 – ALL FAITHS CHAPEL

– Fully fire sprinkler protected

- Wet pipe distribution systems, with quick response sprinkler heads installed as part of the 2014 CDB Fire Suppression Project.
Wet pipe system observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #100/W0660 – MULTI-THERAPY

– Fully fire sprinkler protected

- Wet pipe distribution systems, with quick response sprinkler heads installed as part of the 2014 CDB Fire Suppression Project.
Wet pipe system observed condition assessment – Good
Est. Service – 3 years
Useful Life Expectancy – 47 years

BLDG. #101/W0661 – FIFER SKILLED CARE

– Fully fire sprinkler protected

- Wet pipe system distribution system, with quick response sprinkler heads installed as original construction.
Wet pipe system observed condition assessment – Good
Est. Service – 15 years
Useful Life Expectancy – 35 years

Buildings with Fire Hose Standpipe Protection:

Some of the buildings on campus were provided with Fire Hose Standpipe as part of the original construction. In these building, the fire codes & licensing standards at time did not dictate Fire Sprinkler Systems for building protection with the appropriate construction types. Instead the codes required the fire hose standpipes. After codes were update, requiring the Fire Sprinkler Systems, the standpipes in these type of building became superfluous. At IVHQ, the few Fire Hose Standpipes that existed, were connected to the domestic water service, creating dead legs in the system and the potential for potable water contamination. All campus standpipes were disconnected from the domestic main and are no longer in service.

[This page intentionally left blank]

IX. STRUCTURAL CONDITIONS REPORT

BLDG. # 5 W0601 BUS STATION
G

BLDG. # 11 W0608 ROLAND BARRACKS
SCHED. FOR DEMO

BLDG. # 20 W0610 SOMERVILLE DOMICILIARY

F-P

Cracking brick, wood rot, grand steps pulling aways from structure

BLDG. # 21 W0611 FOGG BARRACKS

F-P

Wood damage, tuckpointing and water damage

BLDG. # 22 W0612 ANDERSON BARRACKS

F

Tuckpointing, exposed rebar on elevated slab and stairs

BLDG. # 24 W0637 VEHICHLE GARAGE

G

Tuckpointing, exposed rebar on elevated slab and stairs

BLDG. # 26 W0618 FLETCHER INFIRMARY

G

Concrete spalling, exposed rebar at exterior stairs and elevated slabs.

BLDG. # 28 W0621 ANDREW BARRACKS

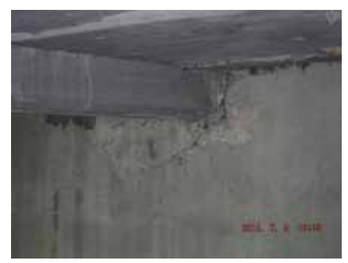
F

Exterior concrete spalling, dormers had extensive wood rot and missing shingles on roof

BLDG. # 29 W0617 REIG - ADMINISTRATION

F

Concrete cracking, spalling and exposed rebar at elevated patio.
Failing lintel



BLDG. # 30 WO606 LIBRARY

F-G

Brick cracking, tuckpointing and concrete lintel with exposed rebar

BLDG. # 31 WO603 NORTHERN GUEST HOUSE

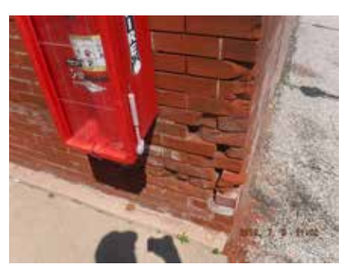
F

Concrete spalling at entry steps, cracked brick and failing lintel

BLDG. # 32 W0653 TRUCK MAINTENANCE GARAGE

F-P

Tuckpointing and brick cracking



BLDG. # 34 W0614 MEDICAL STAFF BUILDING

F-G

Concrete spalling at front porch

BLDG. # 35 W0604 OLD ADMINISTRATION

G

Section loss at steel fire escape and cracking at parapet

BLDG. # 36 W0613 SMITH HALL

F-G

Tuckpointing, concrete and brick cracking and roof structure looked to be sagging in some areas

BLDG. # 37 W0600 LIPPINCOTT HALL

F-G

Concrete spalling, exposed rebar at exterior stairs and elevated slabs.

BLDG. # 38 W0634 ENGINEERING BUILIDNG

F

Tuckpointing, front porch slab and column in shear failure

BLDG. # 39 W0654 LAWN GARAGE

N/A

BLDG. # 40 W0615 POWER PLANT

F-P

Salt storage building is in poor condition, elevated steel in rear of building has missing bolts and unconnected x-bracing

BLDG. # 41 WO605 EQUIPMENT STORAGE

F

Cracking in walls and retaining walls. Water damage inside.

BLDG. # 42 W0623 TRADESMAN WORKSHOP

F-G

Tuckpointing, settlement cracking

BLDG. # 43 W0622 SUPERINTENDENT'S RESIDENCE

F

Brick cracking at archways

BLDG. # 45 W0652 CONDENSATE PUMP HOUSE
G

BLDG. # 46 W0641 DEER FEED SHED
G

BLDG. # 47 W0602 HOUSEMAN'S QUARTERS
P
Severe cracking

BLDG. # 48 W0631 5TH STREET GATEHOUSE
G

BLDG. # 49 W0627 CARPENTER SHOP

F

Tuckpointing, archway cracking and failing lintel

BLDG. # 50 W0624 GREENHOUSE

F-P

Foundation cracking, wood rot and roof sagging in some areas

BLDG. # 53 W0628 LUMBER SHED
P
Roof rot and holes in walls

BLDG. # 54 W0626 STORAGE BUILDING
F-P
Loose bricks, tuckpointing, sunken roof and cracked bricks

BLDG. # 58 W0635 NEW TRUCK GARAGE
G

BLDG. # 59 W0651 KOCH CEMETERY BUILDING
G

BLDG. # 80 W0638 BUS GARAGE
F
Cracking in walls

BLDG. # 81 W0632 STORAGE/CAVE
F
Cracking in walls

BLDG. # 83 W0616 WATER TREATMENT PLANT
G

BLDG. # 87 W0607 8TH STREET GATEHOUSE
F
Foundation wall cracking at corner and settlement at door steps

BLDG. # 89 W0645 EHLE LAUNDRY
G
Foundation cracks at corner

BLDG. # 90 W0647 MARKWORD INFIRMARY
F-G
Rusted steel columns, light foundation spalling

BLDG. # 91 W0650 KENT INFIRMARY
G

BLDG. # 92 W0643 NIELSON DINING/KITCHEN/STORE
F-G
Concrete delamination, light cracking and light water damage

BLDG. # 93 W0644 SCHAPERS HOSPITAL
F-G
Concrete spalling

BLDG. # 94 W0646 ELMORE INFIRMARY
F-G
Concrete spalling and exposed rebar at basement entry

BLDG. # 97 W0649 ALL FAITHS CHAPEL
F-G
Rusted steel columns, brocken welds along with section loss

BLDG. # 98 W0658 AMERICAN LEGION RECREATION BUILDING
F-P

BLDG. # 99 W0659 AMVETS DEER PARK PAVILLION
G
Roof flashing

BLDG. # 101 W0661 FIFER SKILLED CARE FACILITY
G

BLDG. # 23&92 W0655 INTERCONNECT
G

BLDG. # 100 W0660 MULTI-PURPOSE THERAPY BUILDING

G

Water damage at overhangs, extensive cracking at entry ramp and stairs

Illinois Veterans' Home

QUINCY MASTER PLAN

Planning Today. Building Tomorrow. Honoring Always.