Lead-Based Paint Risk Assessment Report

2508 Pillsbury AVE 205 and Common Areas

Minneapolis MN, 55404

Prepared For:

Fine Properties of Minnesota

2101 Hennepin Ave #202

Minneapolis, MN 55405

(612) 871-9181

By:

Ashley Hansen
City of Minneapolis
250 S 4th St, Rm. 414
Minneapolis, MN 55415-1372

Minnesota License Number: LR5424

1/17/2019

City of Minneapolis - Healthy Homes and Lead Hazard Control

Paint Inspection / Risk Assessment Summary

Site Address: 2508 Pillsbury AVE 205 and Common Areas

Property Information:

Owner: Fine Properties of Minnesota
2101 Hennepin Ave #202
Minneapolis, MN 55405

Date of Construction: 1960

Occupancy Status: Occupied

Inspection Date: 12/18/2018

Report Date: 1/18/2019

Summary of Findings: Lead-Based Paint and Lead Hazards were found. No debris was found

Summary of Locations of Lead-Based Paint:

Exterior and Interior

Summary of Lead-Based Paint Hazards:
Paint Hazards: window well, window casing
Dust Hazards: window well
Soil Hazards: Soil was not tested due to snow cover. Will test in spring, 2019.

Information Included in Report:

Appendix A: Residential Questionnaire
Appendix B: Dwelling Sketches
Appendix C: Exterior Building Assessment
Appendix D: Paint Sampling Results
Appendix E: Visual Assessment Survey
Appendix F: Analytical Results
Appendix G: Lead Violations/Orders/Recommendations
Appendix H: Monitoring Schedules
Appendix I: Niton Performance Characteristics Sheet
Appendix J: Lead Risk Assessor License

Risk Assessor (for more information):

Ashley Hansen
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Report prepared by:

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Appendix A:
Residential Questionnaire

Risk Assessment Report Questionnaire – Public Data

Address: 2508 Pillsbury Ave, #205 and Common Areas	Date: 12/18/18

1. Occupied or Vacant:
   - ○ Vacant
   - ✓ Occupied

2. Which entrance is used most often?	Both
3. Which windows are opened most often?	Living Room and Bedroom-All
4. Are window ACs used? If so, where?	No
5. Do you have a garden? If so, where?	No
6. Are you planning any new gardening or landscaping activities?	NA
7. Has there been any painting, repair, or renovation done on the property within the last 12 months? ***If yes:*** • What type of work was done?	No
• When was the work performed?	NA
• Where was the work performed?	NA
• Was the family home at the time of the work?	NA
• Where was debris stored afterwards?	NA
8. Are you planning any painting, repair, or renovation work in the near future?	NA

Appendix B:
Dwelling Sketches

These sketches are diagrams of the exterior and interior rooms of the reference property. The room numbers on the sketches correspond to the "Room" column on the XRF report and the "Room #" column on the analytical sample sheets.

Each room in a dwelling unit or common area is given a room number including the exterior and the garage. Dwelling units and common areas are treated separately and individually numbered beginning with Room 02 (Room 01 is never used).
The exterior and garage are numbered as part of the common areas.

The sketches include the locations of both lead dust and soil samples that were collected at the Risk Assessment. They are marked on the sketches as follows:

Window sill – WS
Window well – WW
Floor – FW
Soil Sample – SS

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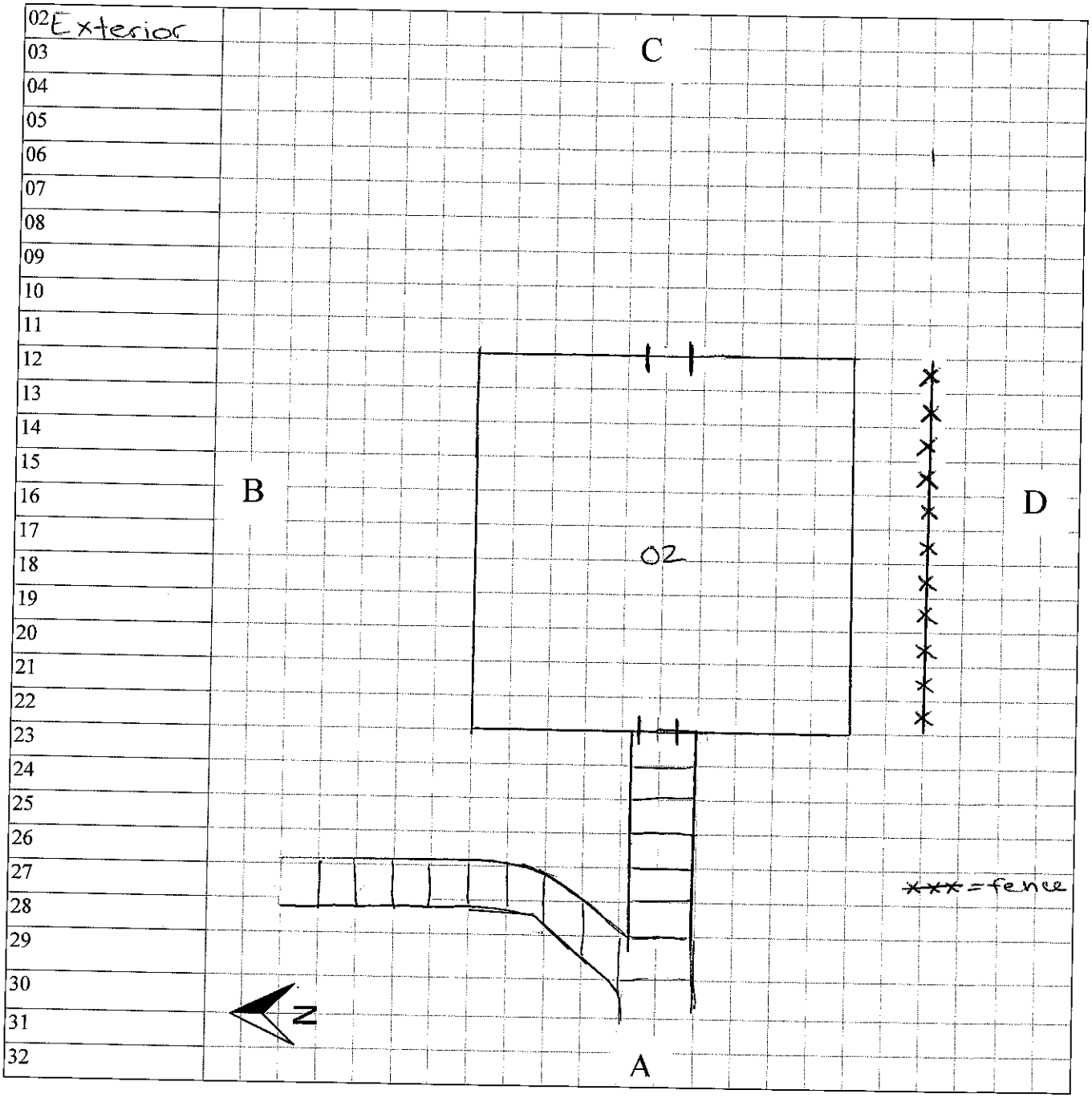
Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	13975	2508 Pillsbury Ave	Common	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
AH	Page 1 of 5	Exterior	AH	12/19/2018



Street used in address of residence: 2508 Pillsbury Ave

This sketch is not to scale.

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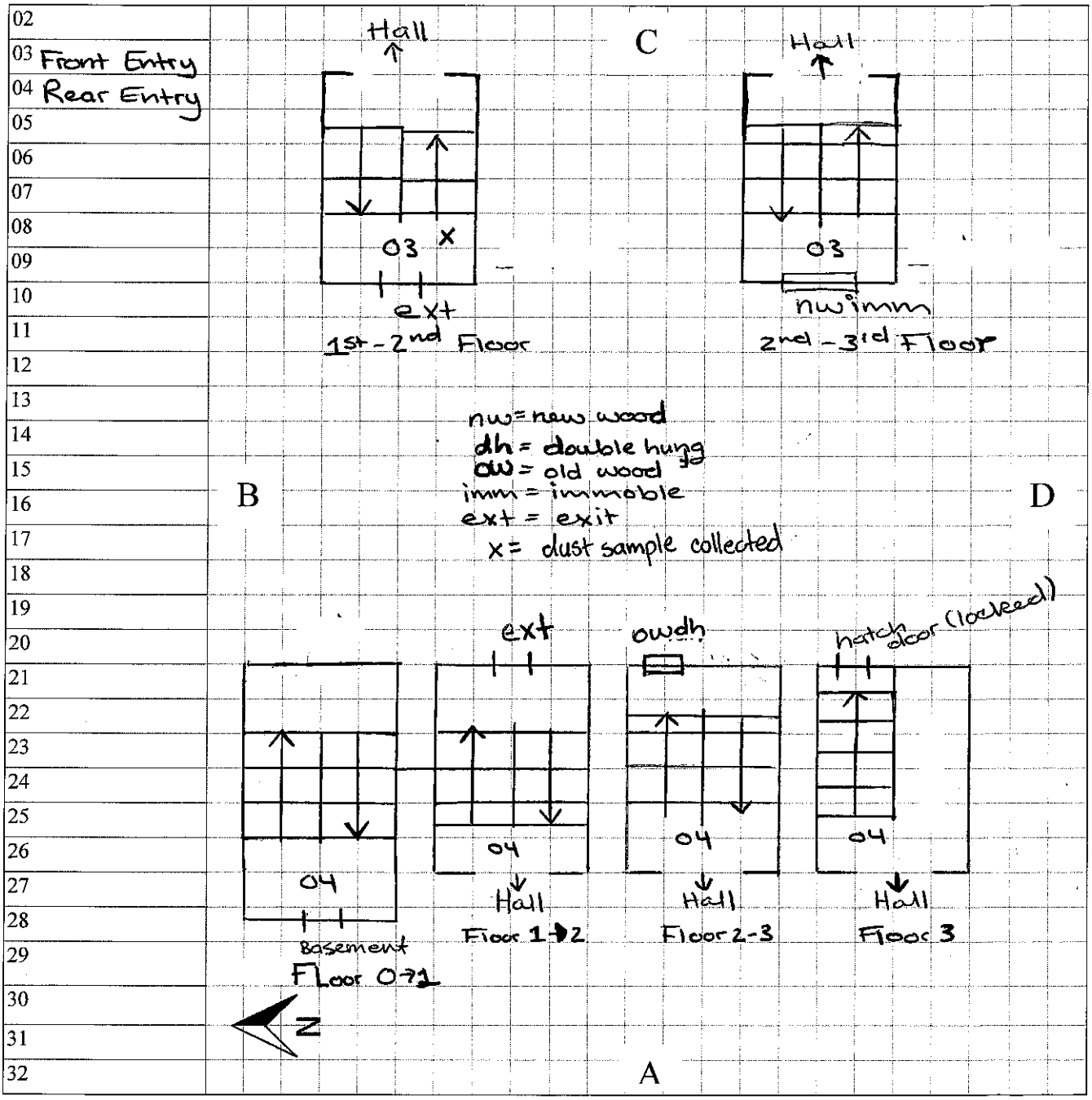
Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	13975	2508 Pillsbury Ave	Common	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
AH	Page 2 of 5	Basement - 3rd	AH	12/19/2018



Street used in address of residence:	2508 Pillsbury Ave

This sketch is not to scale.

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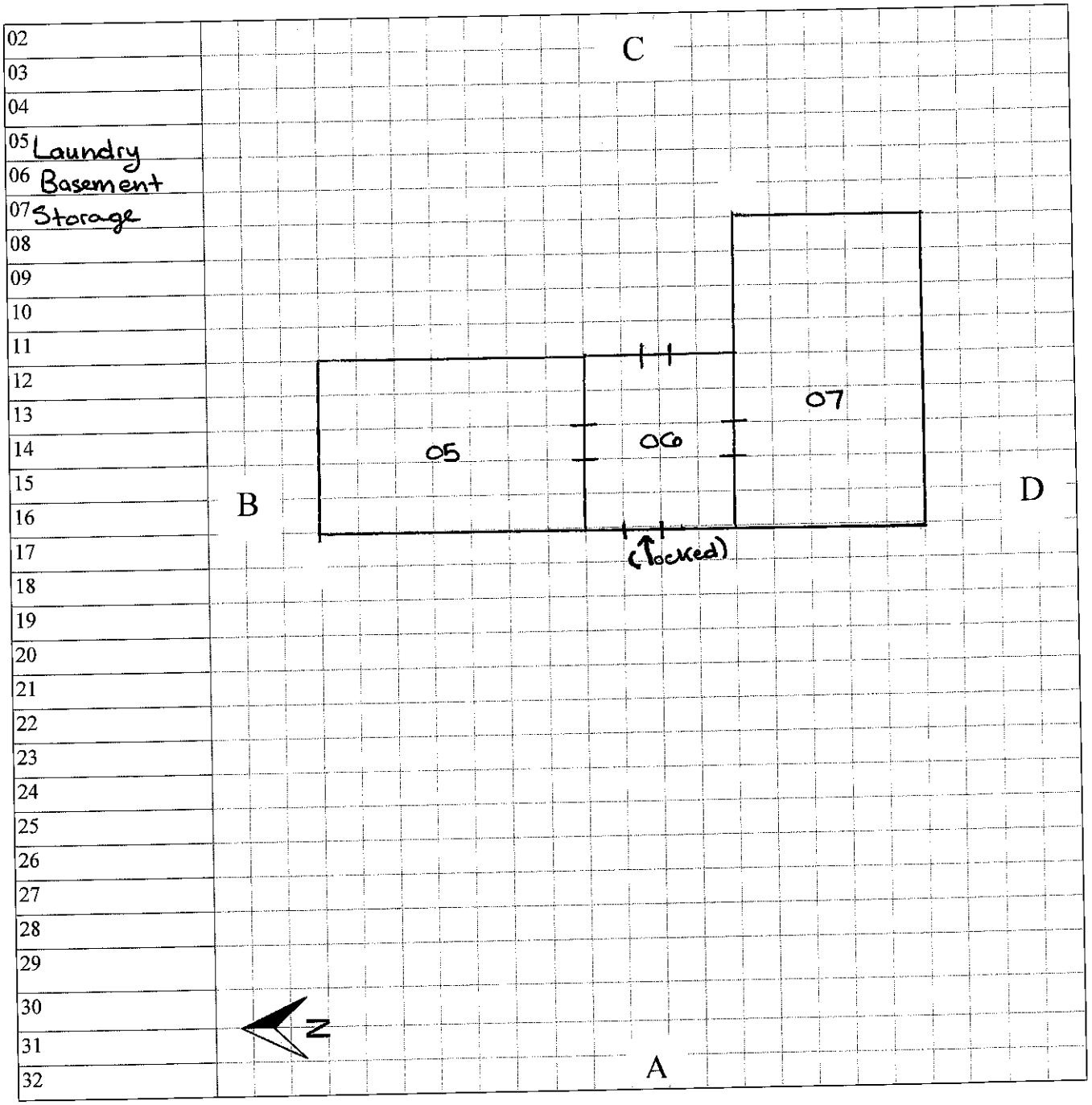
Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	13975	2508 Pillsbury Ave	Common	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
AH	Page 3 of 5	0	AH	12/19/2018



Street used in address of residence: 2508 Pillsbury Ave

This sketch is not to scale.

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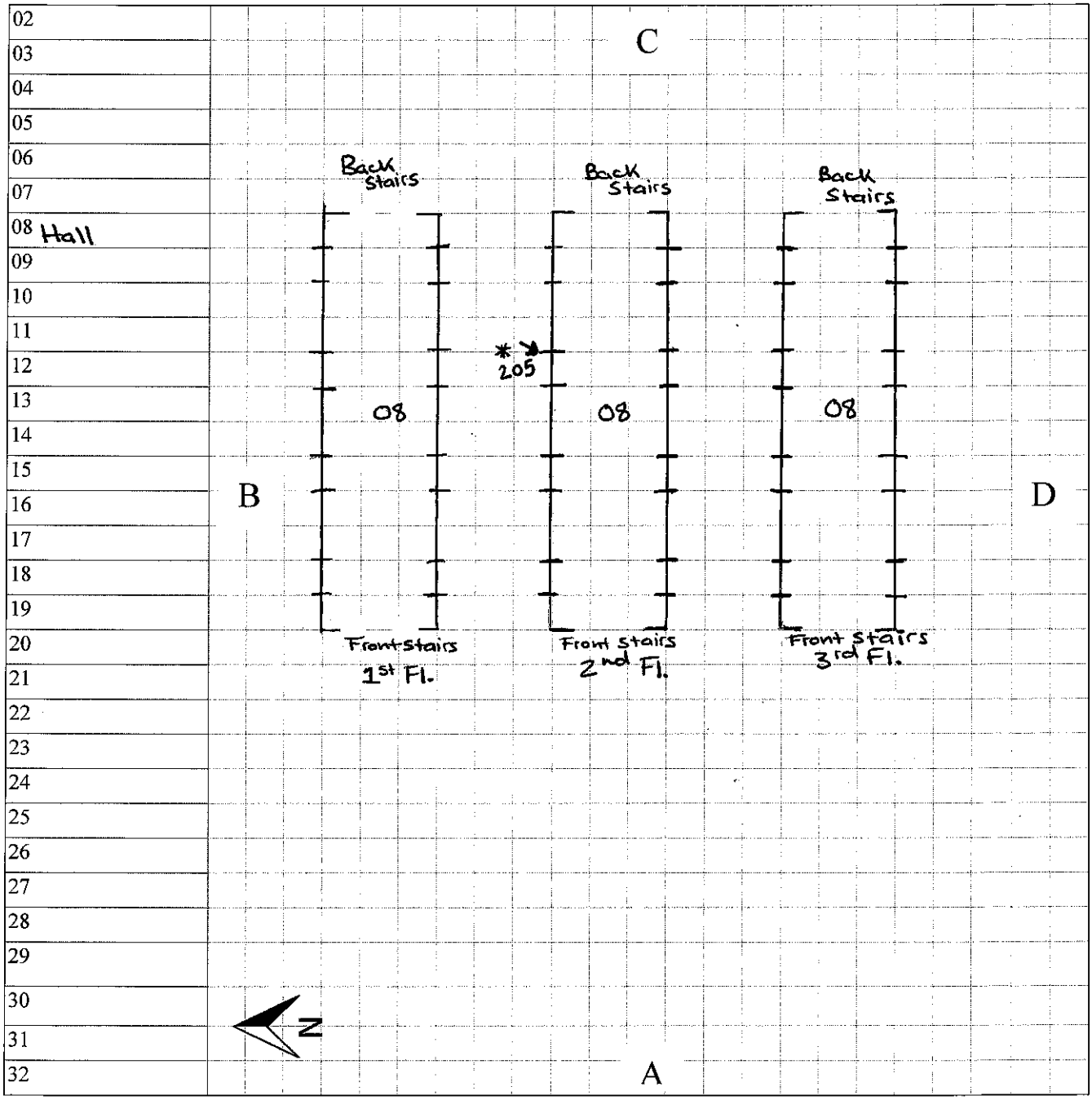
Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	13975	2508 Pillsbury Ave	Common	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
AH	Page 4 of 5	1st – 3rd	AH	12/19/2018



Street used in address of residence:	2508 Pillsbury Ave

This sketch is not to scale.

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Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	13975	2508 Pillsbury Ave	#205	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
AH	Page 5 of 5	2nd	AH	12/19/2018

02 Living Room
03 Bedroom
04 Bathroom
05 Kitchen
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
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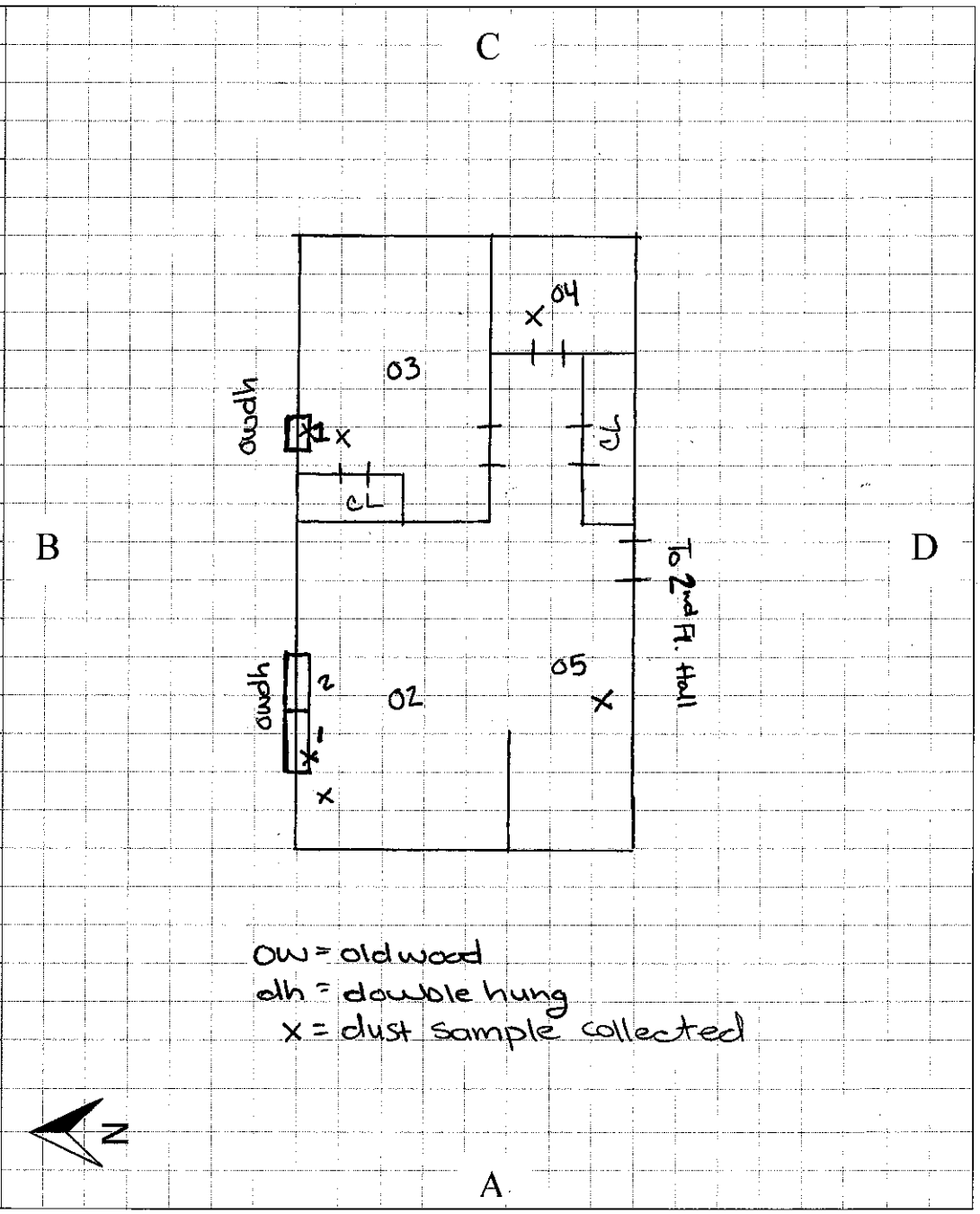
28
29
30
31
32



Street used in address of residence:	2508 Pillsbury Ave

This sketch is not to scale.

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Appendix C
Exterior Building Assessment:

Exterior Visual Assessment

Address	2508 Pillsbury Ave, #205 and Common Areas
Date of inspection	12/18/18

Findings- Circled items indicate ***poor*** condition*

House	Garage NA	Porch NA
Walls	**Walls**	**Walls**
Soffit	**Soffit**	**Floor**
Fascia	**Fascia**	**Stair**
Trim	**Trim**	**Column**
Door	**Door**	**Door**
Roof	**Roof**	**Ceiling**
Chimney		

*EPA/HUD definition of deteriorated paint: peeling, chipping, chalking, cracking or any paint coating located on any interior/exterior surface or figure that is otherwise damaged or separated from the surface.
Intact= <10% peeling, chipping, chalking, cracking, damaged or separated
Poor= >10% peeling, chipping, chalking, cracking; damaged or separated; boards missing or loose, holes evident, many shingles missing, roof sagging.

Signature	Ashley Hansen

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Appendix D:
Paint Sampling Results Report

An XRF device was used to test painted surfaces for lead content. The paint inspection was conducted according to established HUD guidelines and according to the City of Minneapolis Protocol.

Paint Standard
The legal definition of lead paint is ≥ 1.0 mg/cm^2. The result column will indicate "**pos**" when the lead content of the paint is greater than this standard.

Please note that some painted surfaces tested below this legal definition. However, the paint will contain lead if the result is >0 mg/cm^2 and it therefore, has the potential to cause lead poisoning. It is best to always use lead safe work practices when disturbing paint that contains *any* lead.

Explanation of Column Headings:
Reading # (No)- the reading number generated by the XRF machine
Insp/XRF – the initials of the inspector and the serial number of the machine
Floor – Floor level tested
Room – room being tested (see site diagrams also included)
Side - Wall side of the room starting with A on the street side and going clock-wise.
Component- the structural component tested (e.g. wall, window sill, floor)
Substrate – the composition of the tested component
Condition – the condition of the paint
Color – the color of the paint
DI* – Depth Index – the larger the number the deeper the lead-based paint layer
Results – the result of the test (positive for lead or negative for lead)
Pbc – the total combined lead in the layers of paint
Pbc Error – the error of the total combined lead level

DI* - NA (not applicable) will appear in this column if the XRF device used to analyze the paint does not provide this reading, different models have different capabilities.

Reading No	Insp/XRF	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
7	GN/106000	#205	2nd	02 Living Room	A	Wall	Drywall	Intact	White	1	Negative	0	0.02
8	GN/106000	#205	2nd	02 Living Room	B	Wall	Brick	Intact	White	1	Negative	0	0.02
9	GN/106000	#205	2nd	02 Living Room	A	Wall	Brick	Intact	White	1	Negative	0	0.02
10	GN/106000	#205	2nd	02 Living Room	B	Wall	Drywall	Intact	White	1	Negative	0	0.02
11	GN/106000	#205	2nd	02 Living Room	C	Wall	Drywall	Intact	White	1	Negative	0	0.02
12	GN/106000	#205	2nd	02 Living Room		Ceiling	Drywall	Intact	White	1	Negative	0	0.02
13	GN/106000	#205	2nd	02 Living Room		Floor	Carpet	Intact	White	1.05	Negative	0	0.05
14	GN/106000	#205	2nd	02 Living Room	B	Vent	Metal	Intact	White	3.34	Negative	< LOD	0
15	GN/106000	#205	2nd	02 Living Room	B	Window Casing	Wood	Intact	Natural	1.04	Negative	0.03	0.1
16	GN/106000	#205	2nd	02 Living Room	B2	Window Sash Int.	Wood	Intact	Natural	1.4	Negative	0.03	0.08
17	GN/106000	#205	2nd	02 Living Room	B2	Window Sill	Wood	Intact	Natural	1.24	Negative	0.01	0.06
18	GN/106000	#205	2nd	02 Living Room	B2	Window Well	Metal	Intact	White	6.58	Negative	0.21	0.51
19	GN/106000	#205	2nd	02 Living Room	B2	Window Stop	Metal	Intact	White	1.73	Negative	0.03	0.02
20	GN/106000	#205	2nd	02 Living Room	B2	Window Sash Ext.	Wood	Intact	White	1	Negative	0.18	0.15
21	GN/106000	#205	2nd	02 Living Room	B2	Window Sash Ext.	Wood	Intact	White	3.31	Negative	0.5	0.3
22	GN/106000	#205	2nd	02 Living Room	B2	Blinds	Vinyl	Intact	White	1	Negative	0	0.02
23	GN/106000	#205	2nd	02 Living Room	A	Baseboard	Wood	Intact	Natural	1	Negative	0.01	0.05
75	GN/106000	#205	2nd	02 Living Room	B1	Window Sash Ext.	Wood	Intact	White	1.06	Negative	0.26	0.25
76	GN/106000	#205	2nd	02 Living Room	B1	Window Sash Ext.	Wood	Deteriorated	White	3.23	Positive	1.7	0.7
77	GN/106000	#205	2nd	02 Living Room	B1	Window Well	Metal	Intact	White	10	Positive	4.1	3
78	GN/106000	#205	2nd	02 Living Room	B2	Window Well	Metal	Intact	White	10	Positive	3.4	2.3
79	GN/106000	#205	2nd	02 Living Room	B2	Window Sash Ext.	Wood	Deteriorated	White	1.77	Positive	3.4	2
36	GN/106000	#205	2nd	03 Bedroom	A	Wall	Drywall	Intact	White	1	Negative	0	0.02
37	GN/106000	#205	2nd	03 Bedroom	B	Wall	Drywall	Intact	White	1	Null	0	0.02
38	GN/106000	#205	2nd	03 Bedroom	B	Wall	Drywall	Intact	White	1	Negative	0	0.02
39	GN/106000	#205	2nd	03 Bedroom	C	Wall	Drywall	Intact	White	1	Negative	0	0.02
40	GN/106000	#205	2nd	03 Bedroom	D	Wall	Drywall	Intact	White	1	Negative	0	0.02
41	GN/106000	#205	2nd	03 Bedroom		Ceiling	Drywall	Intact	White	1	Negative	0	0.02
42	GN/106000	#205	2nd	03 Bedroom		Floor	Carpet	Intact	White	1	Negative	0	0.02
43	GN/106000	#205	2nd	03 Bedroom	D	Baseboard	Wood	Intact	Natural	1	Negative	0.03	0.08
44	GN/106000	#205	2nd	03 Bedroom	A	Closet Door	Metal	Intact	White	3.89	Negative	0.02	0.11
45	GN/106000	#205	2nd	03 Bedroom	A	Closet Wall	Drywall	Intact	White	1	Negative	0	0.02
46	GN/106000	#205	2nd	03 Bedroom	A	Closet Shelf	Wood	Intact	Natural	1	Negative	0.01	0.06
47	GN/106000	#205	2nd	03 Bedroom	D	Door	Wood	Intact	Natural	1	Negative	0	0.04
48	GN/106000	#205	2nd	03 Bedroom	D	Door Casing	Wood	Intact	Natural	3.35	Negative	0.04	0.22
49	GN/106000	#205	2nd	03 Bedroom	D	Door Jamb	Wood	Intact	Natural	1	Negative	0	0.04

Reading No	Insp/XRF	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
50	GN/106000	#205	2nd	03 Bedroom	B	Window Casing	Wood	Intact	Natural	2.05	Negative	0.03	0.13
51	GN/106000	#205	2nd	03 Bedroom	B	Window Sash Int.	Wood	Intact	Natural	1.61	Negative	0.03	0.12
52	GN/106000	#205	2nd	03 Bedroom	B	Window Sill	Wood	Intact	Natural	1.61	Negative	0.02	0.1
53	GN/106000	#205	2nd	03 Bedroom	B	Window Sash Ext.	Wood	Deteriorated	White	2.55	Positive	1.5	0.5
54	GN/106000	#205	2nd	03 Bedroom	B	Window Stop	Metal	Intact	White	1	Negative	0	0.02
55	GN/106000	#205	2nd	03 Bedroom	B	Window Well	Metal	Intact	White	10	Positive	3.8	2.3
56	GN/106000	#205	2nd	04 Bathroom	C	Wall	Drywall	Intact	White	1	Negative	0	0.02
57	GN/106000	#205	2nd	04 Bathroom	B	Wall	Drywall	Intact	White	3.47	Negative	0.02	0.09
58	GN/106000	#205	2nd	04 Bathroom	A	Wall	Drywall	Intact	White	5.95	Negative	0.04	0.08
59	GN/106000	#205	2nd	04 Bathroom	D	Wall	Drywall	Intact	White	1	Negative	0	0.02
60	GN/106000	#205	2nd	04 Bathroom	D	Wall	Ceramic	Intact	White	1.22	Negative	0.01	0.08
61	GN/106000	#205	2nd	04 Bathroom	D	Tub	Vinyl	Intact	White	1	Negative	0.03	0.06
62	GN/106000	#205	2nd	04 Bathroom		Floor	Ceramic	Intact	White	2.18	Negative	0.01	0.02
63	GN/106000	#205	2nd	04 Bathroom	B	Baseboard	Ceramic	Intact	White	1.69	Negative	0.8	0.2
64	GN/106000	#205	2nd	04 Bathroom		Ceiling	Drywall	Intact	White	1	Negative	0	0.02
65	GN/106000	#205	2nd	04 Bathroom	B	Counter	Vinyl	Intact	Yellow	1	Negative	0	0.03
66	GN/106000	#205	2nd	04 Bathroom	B	Sink	Ceramic	Intact	White	1.85	Positive	2.4	0.9
67	GN/106000	#205	2nd	04 Bathroom	A	Door	Wood	Intact	Natural	1	Negative	0	0.03
68	GN/106000	#205	2nd	04 Bathroom	A	Door Casing	Wood	Intact	Natural	1	Negative	0	0.03
69	GN/106000	#205	2nd	04 Bathroom	A	Door Jamb	Wood	Intact	Natural	1	Negative	0	0.03
24	GN/106000	#205	2nd	05 Kitchen	A	Wall	Drywall	Intact	White	1	Negative	0	0.02
25	GN/106000	#205	2nd	05 Kitchen	D	Wall	Drywall	Intact	White	1	Negative	0	0.02
26	GN/106000	#205	2nd	05 Kitchen	A	Wall	Brick	Intact	White	6.86	Negative	0.05	0.09
27	GN/106000	#205	2nd	05 Kitchen	B	Wall	Drywall	Intact	White	2.93	Negative	0.06	0.1
28	GN/106000	#205	2nd	05 Kitchen	B	Wall	Drywall	Intact	White	5.76	Negative	0.11	0.23
29	GN/106000	#205	2nd	05 Kitchen	C	Wall	Drywall	Intact	White	3.64	Negative	0.06	0.12
30	GN/106000	#205	2nd	05 Kitchen		Ceiling	Drywall	Intact	White	1	Negative	0	0.02
31	GN/106000	#205	2nd	05 Kitchen		Floor	Vinyl	Intact	White	1	Negative	0	0.02
32	GN/106000	#205	2nd	05 Kitchen	B	Hatch	Metal	Intact	White	1	Negative	0	0.02
33	GN/106000	#205	2nd	05 Kitchen	B	Cabinet Outside	Wood	Intact	Natural	1	Negative	0	0.02
34	GN/106000	#205	2nd	05 Kitchen	B	Cabinet Inside	Wood	Intact	Natural	1	Negative	0	0.02
35	GN/106000	#205	2nd	05 Kitchen	A	Baseboard	Wood	Intact	White	1	Negative	0	0.04
70	GN/106000	#205	2nd	05 Kitchen	D	Door	Wood	Intact	Natural	1	Negative	0	0.03
71	GN/106000	#205	2nd	05 Kitchen	D	Door Casing	Wood	Intact	Natural	1	Negative	0	0.03
72	GN/106000	#205	2nd	05 Kitchen	D	Door Jamb	Wood	Intact	Natural	1.65	Negative	0.01	0.09
73	GN/106000	#205	2nd	05 Kitchen	D	Door	Metal	Intact	White	3.41	Null	0.04	0.26

Reading No	Insp/XRF	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
74	GN/106000	#205	2nd	05 Kitchen	D	Door	Metal	Intact	White	1	Negative	0	0.03
6	CMZ/106000	Common	1st	02 Exterior	A	Door	Metal	Intact	Brown	1	Negative	0	0.02
7	CMZ/106000	Common	1st	02 Exterior	A	Door Jamb	Metal	Intact	Brown	1	Negative	0	0.02
8	CMZ/106000	Common	1st	02 Exterior	A	Door Threshold	Metal	Intact	Silver	1	Negative	0	0.02
9	CMZ/106000	Common	1st	02 Exterior	A	Awning Ceiling	Wood	Intact	White	3.8	Positive	6.4	4.3
10	CMZ/106000	Common	1st	02 Exterior	A	Handrail	Metal	Intact	Black	1	Negative	0.02	0.07
11	CMZ/106000	Common	1st	02 Exterior	A	Wall	Brick	Intact	Natural	1	Negative	0	0.02
12	CMZ/106000	Common	1st	02 Exterior	A	Window Sill	Brick	Intact	Natural	1.66	Negative	0.08	0.05
13	CMZ/106000	Common	1st	02 Exterior	A	Window Casing	Wood	Deteriorated	Gray	5.43	Positive	6.5	5.3
14	CMZ/106000	Common	1st	02 Exterior	D	Wall	Stucco	Intact	Beige	1	Negative	0	0.02
15	CMZ/106000	Common	1st	02 Exterior	B	Wall	Stucco	Intact	Beige	1	Negative	0	0.02
16	CMZ/106000	Common	1st	02 Exterior	B	Downspout	Metal	Intact	White	1	Negative	0	0.02
17	CMZ/106000	Common	1st	02 Exterior	C	Wall	Concrete	Intact	Green	1	Negative	0	0.02
18	CMZ/106000	Common	1st	02 Exterior	C	Door	Metal	Intact	Brown	1	Negative	0	0.02
19	CMZ/106000	Common	1st	02 Exterior	C	Door Casing	Metal	Intact	Brown	1	Negative	0	0.02
20	CMZ/106000	Common	1st	02 Exterior	C	Handrail	Metal	Intact	Black	1	Negative	0.02	0.07
21	CMZ/106000	Common	1st	02 Exterior	D	Window Sash Ext.	Wood	Intact	Gray	2.04	Positive	4.6	3.2
100	CMZ/106000	Common		02 Living Room		Soccor Ball				1	Negative	0	0.02
92	GN/106000	Common		02 Living Room		Ball	Plastic	Intact	Orange	1	Negative	0	0.02
93	GN/106000	Common		02 Living Room		Ball	Plastic	Intact	Black	1	Negative	0	0.02
94	GN/106000	Common		02 Living Room		Ball	Plastic	Intact	Blue	1	Negative	0	0.02
95	GN/106000	Common		02 Living Room		Ball	Plastic	Intact	Green	1	Negative	0	0.02
96	GN/106000	Common		02 Living Room		Car	Metal	Intact	Blue	1	Negative	0.4	0.4
97	GN/106000	Common		02 Living Room		Car	Metal	Intact	Gold	1	Negative	0	0.02
98	GN/106000	Common		02 Living Room		Car	Metal	Intact	Blue	1	Negative	0	0.03
99	GN/106000	Common		02 Living Room		Car	Metal	Intact	Blue	1	Negative	0	0.02
22	CMZ/106000	Common	1st	03 Front Entry		Floor	Ceramic	Intact	Beige	3.94	Negative	0.03	0.09
23	CMZ/106000	Common	1st	03 Front Entry		Ceiling	Drywall	Intact	White	1	Negative	0	0.02
24	CMZ/106000	Common	1st	03 Front Entry	B	Wall	Drywall	Intact	White	1	Negative	0	0.02
25	CMZ/106000	Common	1st	03 Front Entry	D	Wall	Drywall	Intact	White	1	Negative	0	0.02
26	CMZ/106000	Common	1st	03 Front Entry	A	Door Casing	Metal	Intact	Black	1	Negative	0	0.02
27	CMZ/106000	Common	1st	03 Front Entry	A	Door	Metal	Intact	Black	1	Negative	0	0.02
28	CMZ/106000	Common	1st	03 Front Entry	B	Register	Metal	Intact	White	1	Negative	0.02	0.07
29	CMZ/106000	Common	1st	03 Front Entry	D	Stair Tread	Vinyl	Intact	Black	1	Negative	0	0.02
30	CMZ/106000	Common	1st	03 Front Entry	D	Handrail	Wood	Intact	Natural	1	Negative	0	0.02
31	CMZ/106000	Common	1st	03 Front Entry	D	Balusters	Metal	Intact	Black	2.05	Negative	0.13	0.24

Reading No	Insp/XRF	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
32	CMZ/106000	Common	2nd	03 Front Entry	D	Landing	Carpet	Intact	Gray	1	Negative	0	0.02
33	CMZ/106000	Common	2nd	03 Front Entry	A	Window Casing	Wood	Intact	Natural	1	Negative	0	0.03
34	CMZ/106000	Common	2nd	03 Front Entry	A	Window Sill	Wood	Intact	Natural	1	Negative	0	0.03
45	CMZ/106000	Common	2nd	04 Rear Entry		Floor	Concrete	Intact	Black	1	Negative	0.08	0.03
46	CMZ/106000	Common	2nd	04 Rear Entry		Ceiling	Concrete	Intact	White	1.83	Negative	0	0.02
47	CMZ/106000	Common	2nd	04 Rear Entry	A	Wall	Concrete	Intact	Gray	1	Negative	0	0.02
48	CMZ/106000	Common	2nd	04 Rear Entry	B	Wall	Concrete	Intact	White	1	Negative	0	0.02
49	CMZ/106000	Common	2nd	04 Rear Entry	C	Wall	Concrete	Intact	White	1	Negative	0	0.02
50	CMZ/106000	Common	2nd	04 Rear Entry	D	Wall	Concrete	Intact	White	1	Negative	0	0.02
51	CMZ/106000	Common	2nd	04 Rear Entry	C	Window Casing	Wood	Intact	Brown	1	Negative	0.02	0.07
52	CMZ/106000	Common	2nd	04 Rear Entry	C	Window Sash Int.	Wood	Intact	Brown	1.94	Negative	0.08	0.21
53	CMZ/106000	Common	2nd	04 Rear Entry	C	Window Sill	Wood	Deteriorated	Brown	1.34	Negative	0.03	0.1
54	CMZ/106000	Common	2nd	04 Rear Entry	C	Window Stop	Metal	Intact	Silver	1.52	Negative	0.04	0.12
55	CMZ/106000	Common	2nd	04 Rear Entry	C	Window Well	Metal	Intact	Gray	10	Positive	4.6	3.5
56	CMZ/106000	Common	2nd	04 Rear Entry	C	Window Sash Ext.	Wood	Deteriorated	Gray	1.52	Positive	5	3.1
57	CMZ/106000	Common	2nd	04 Rear Entry	B	Stair Tread	Concrete	Intact	Brown	3.12	Negative	0.19	0.1
58	CMZ/106000	Common	2nd	04 Rear Entry	B	Stair Riser	Concrete	Intact	Brown	1.75	Negative	0.16	0.26
59	CMZ/106000	Common	2nd	04 Rear Entry	B	Handrail	Metal	Intact	Brown	1.05	Negative	0.03	0.08
60	CMZ/106000	Common	2nd	04 Rear Entry	A	Door	Metal	Intact	Beige	4.69	Negative	0.08	0.33
61	CMZ/106000	Common	2nd	04 Rear Entry	A	Door	Metal	Intact	Gray	1.14	Negative	0.04	0.1
62	CMZ/106000	Common	2nd	04 Rear Entry	A	Door Casing	Metal	Intact	Gray	2.41	Negative	0.13	0.27
63	CMZ/106000	Common	2nd	04 Rear Entry	A	Door Jamb	Metal	Intact	Gray	1	Negative	0.03	0.08
64	CMZ/106000	Common	1st	04 Rear Entry		Floor	Concrete	Deteriorated	Brown	1.01	Negative	0.1	0.03
65	CMZ/106000	Common	1st	04 Rear Entry	D	Stair Tread	Concrete	Deteriorated	Brown	2.01	Negative	0.1	0.06
66	CMZ/106000	Common	1st	04 Rear Entry	C	Door	Metal	Intact	Black	1	Negative	0	0.02
67	CMZ/106000	Common	1st	04 Rear Entry	C	Door Casing	Metal	Intact	Black	1	Negative	0	0.02
68	CMZ/106000	Common	1st	04 Rear Entry	C	Door Jamb	Metal	Intact	Black	1.69	Negative	0	0.02
69	CMZ/106000	Common	1st	04 Rear Entry	B	Baseboard	Vinyl	Intact	Brown	1	Negative	0	0.02
70	CMZ/106000	Common	1st	04 Rear Entry	D	Register	Metal	Intact	Black	2.72	Negative	0.03	0.15
71	CMZ/106000	Common	0	04 Rear Entry		Floor	Vinyl	Intact	Beige	1	Negative	0	0.02
72	CMZ/106000	Common	0	05 Laundry		Floor	Concrete	Intact	Natural	1	Negative	0	0.02
73	CMZ/106000	Common	0	05 Laundry		Ceiling	Concrete	Intact	White	6.31	Negative	0.03	0.07
74	CMZ/106000	Common	0	05 Laundry	A	Wall	Concrete	Intact	White	5.26	Negative	0.02	0.05
75	CMZ/106000	Common	0	05 Laundry	B	Wall	Concrete	Intact	White	1	Negative	0	0.02
76	CMZ/106000	Common	0	05 Laundry	C	Wall	Concrete	Intact	White	1	Negative	0	0.02
77	CMZ/106000	Common	0	05 Laundry	D	Wall	Concrete	Intact	White	2.69	Negative	0.01	0.02

Reading No	Insp/XRF	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
78	CMZ/106000	Common	0	05 Laundry	D	Door	Wood	Intact	Natural	2.09	Negative	0.01	0.08
79	CMZ/106000	Common	0	05 Laundry	D	Door Casing	Wood	Intact	Natural	1	Negative	0.01	0.05
80	CMZ/106000	Common	0	05 Laundry	D	Door Jamb	Wood	Intact	Natural	1	Negative	0	0.02
81	CMZ/106000	Common	0	05 Laundry	C	Cabinet Shelf	Wood	Intact	White	1	Negative	0	0.03
82	CMZ/106000	Common	0	06 Basement		Floor	Concrete	Intact	Natural	1	Negative	0	0.02
83	CMZ/106000	Common	0	06 Basement		Ceiling	Concrete	Intact	White	1	Negative	0.01	0.02
84	CMZ/106000	Common	0	06 Basement	B	Wall	Concrete	Intact	White	1.65	Negative	0.01	0.02
85	CMZ/106000	Common	0	06 Basement	C	Wall	Concrete	Intact	White	3.15	Negative	0.02	0.04
86	CMZ/106000	Common	0	06 Basement	D	Wall	Concrete	Intact	White	1	Negative	0	0.02
87	CMZ/106000	Common	0	06 Basement	A	Wall	Wood	Intact	White	1	Negative	0	0.02
88	CMZ/106000	Common	0	06 Basement	C	Door	Metal	Intact	Gray	2.17	Negative	0.3	0.4
89	CMZ/106000	Common	0	06 Basement	C	Door Casing	Metal	Intact	Gray	1.68	Negative	0.22	0.29
90	CMZ/106000	Common	0	06 Basement	C	Door Jamb	Metal	Intact	Gray	1.73	Negative	0.25	0.33
91	CMZ/106000	Common	0	06 Basement	D	Door	Wood	Intact	Natural	1.87	Negative	0.02	0.1
92	CMZ/106000	Common	0	06 Basement	D	Door Casing	Wood	Intact	Natural	1	Negative	0.01	0.05
93	CMZ/106000	Common	0	06 Basement	D	Door Jamb	Wood	Intact	Natural	1	Negative	0	0.02
80	GN/106000	Common	0	07 Storage	A	Wall	Brick	Intact	Natural	1	Negative	0	0.02
81	GN/106000	Common	0	07 Storage	B	Wall	Brick	Intact	Natural	1	Negative	0	0.02
82	GN/106000	Common	0	07 Storage	C	Wall	Brick	Intact	Natural	1	Negative	0	0.02
83	GN/106000	Common	0	07 Storage	D	Wall	Brick	Intact	Natural	1	Negative	0	0.02
84	GN/106000	Common	0	07 Storage		Ceiling	Concrete	Intact	Natural	1	Negative	0	0.02
85	GN/106000	Common	0	07 Storage		Floor	Concrete	Intact	Natural	1	Negative	0	0.02
86	GN/106000	Common	0	07 Storage	D	Door	Wood	Intact	Natural	1	Negative	0	0.02
87	GN/106000	Common	0	07 Storage	A	Debris	Wood	Intact	Natural	1	Negative	0	0.02
88	GN/106000	Common	0	07 Storage	A	Debris	Wood	Intact	White	1	Negative	0	0.03
89	GN/106000	Common	0	07 Storage	B	Door	Wood	Intact	Natural	1	Negative	0	0.04
90	GN/106000	Common	0	07 Storage	B	Door Casing	Wood	Intact	Natural	1	Negative	0.01	0.05
91	GN/106000	Common	0	07 Storage	B	Door Jamb	Wood	Intact	Natural	1	Negative	0.01	0.05
35	CMZ/106000	Common	2nd	08 Hall		Floor	Carpet	Intact	Gray	1	Negative	0	0.02
36	CMZ/106000	Common	2nd	08 Hall		Ceiling	Drywall	Intact	White	1	Null	0	0.02
37	CMZ/106000	Common	2nd	08 Hall		Ceiling	Drywall	Intact	White	1	Negative	0	0.02
38	CMZ/106000	Common	2nd	08 Hall	B	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
39	CMZ/106000	Common	2nd	08 Hall	D	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
40	CMZ/106000	Common	2nd	08 Hall	D	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
41	CMZ/106000	Common	2nd	08 Hall	B	Door	Wood	Intact	Natural	1	Negative	0.01	0.05
42	CMZ/106000	Common	2nd	08 Hall	B	Door Casing	Wood	Intact	Natural	1	Negative	0	0.04

Reading No	Insp/XRF	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
43	CMZ/106000	Common	2nd	08 Hall	B	Door Jamb	Wood	Intact	Natural	1	Negative	0.01	0.04
44	CMZ/106000	Common	2nd	08 Hall	B	Baseboard	Wood	Intact	Natural	2.18	Negative	0.02	0.11
2	CMZ/106000			Calibrate						1.12	Positive	1	0.1
3	CMZ/106000			Calibrate						1.1	Positive	1.1	0.1
4	CMZ/106000			Calibrate						3.19	Null	1	0.1
5	CMZ/106000			Calibrate						3.3	Positive	1.1	0.1
94	CMZ/106000			Calibrate						1.06	Positive	1	0.1
95	CMZ/106000			Calibrate						1.07	Positive	1	0.1
96	CMZ/106000			Calibrate						3.59	Positive	1.2	0.2
97	CMZ/106000			Calibrate						2.79	Null	0.9	0.4
98	CMZ/106000			Calibrate						1.83	Negative	0.5	0.2
99	CMZ/106000			Calibrate						2.96	Negative	0.9	0.1
2	GN/106000			Calibrate								5.53	0
3	GN/106000			Calibrate								5.49	0
4	GN/106000			Calibrate						1.1	Positive	1.1	0.1
5	GN/106000			Calibrate						1.09	Positive	1.1	0.1
6	GN/106000			Calibrate						3.37	Positive	1.2	0.1
100	GN/106000			Calibrate						1.06	Positive	1	0.1
101	GN/106000			Calibrate						1.13	Positive	1.1	0.1
102	GN/106000			Calibrate						3.32	Positive	1.1	0.1
1	CMZ/106000			Shutter Cal.								5.45	0
1	GN/106000			Shutter Cal.								5.84	0

Minneapolis
Health Department

Healthy Homes & Lead Hazard Control

Appendix E:
Visual Assessment Survey

The information below is generic in nature. The specific locations of deteriorated paint, dust and soil hazards can be found in Appendices D & F. Any deviations of items 3-4 below can be found at the end of Appendix D.

1) **Area description**

Please use the bulleted points below as a guide throughout this report.

- **Location of building component** can be found on the XRF spreadsheet for each component tested.
- **Location of dust** can be found on the analytical results in conjunction with the dwelling sketches
- **Location of bare soil** can be found on the analytical results in conjunction with the dwelling sketches.

2) **Deteriorated Paint**

is defined in the HUD Lead Safe Housing Rule, 24 CFR 35 as any interior or exterior paint or other coating that is peeling, chipping, chalking or cracking, or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate.

3) **Probable cause of deterioration**

The following are assumed to be the "probable cause of deterioration" for the components tested *unless otherwise specified* at the end of the XRF report.

Exterior components:

Walls, soffits, fascia, doors, door/window trim, roof, foundations, porch floors, columns, ceilings are due to moisture, ultraviolet light, extreme heat/cold and wind.

Interior components:

- Windows and window components including (double hung, crank out and swing windows), floors, and stair surfaces are due to friction.
- Doors, door frames, baseboards, and walls are due to impaction through repeated and sudden force.
- Ceilings- moisture
- Radiators, window trim, closet walls due to excessive heat and cold, age and normal wear and tear

Friction/Impact Surfaces:

The following components are **friction surfaces** unless *specifically noted at the end of the XRF report*: Windows and window components including (double hung, crank out and swing windows), floors, and stair surfaces

The following components are **impact surfaces** unless *specifically noted at the end of the XRF report*: Doors, door frames, baseboards, and walls

Visible teeth marks:

Window sills with **visible teeth marks** are specifically *noted at the end of the XRF report.*

Appendix F:
Analytical Results

Analytical Laboratory:

EMSL Analytical, Inc.
14375 23rd Ave N
Minneapolis, MN 55447
Tel: 800-220-3675
AIHA Lab ID: 163162

Dust wipes are collected by Minnesota licensed lead risk assessors and according to HUD guidelines in accordance with the City of Minneapolis Protocol.

A copy of the lead dust and soil sample results are attached. The locations of the samples are indicated on the building sketches by a star (*). The standards for the lead dust wipes are based on the US Environmental Protection Agency Dust Wipe standards. The soil standard is based on the Minnesota Department of Health standard for soil hazards.

The lead dust and soil is considered a lead hazard when it exceeds the applicable standard below.

Floor Wipe (FW)	40 $\mu g/ft^2$
Window Sill (WS)	250 $\mu g/ft^2$
Window Well (WW)	400 $\mu g/ft^2$
Soil (SS)	100 ppm

EMSL Analytical, Inc.
14375 23rd Avenue North, Minneapolis, Mn 55447
Phone/Fax: (763) 449-4922 / (763) 449-4924
http://www.EMSL.com minneapolislab@emsl.com

EMSL Order:	351900088
CustomerID:	MNHD42
CustomerPO:	GF
ProjectID:	

Attn: **Ashley Hansen**
Minneapolis Health Department
250 S. 4th Street
Room 414
Minneapolis, MN 55415

Phone:	(612) 673-5874
Fax:	(612) 673-2635
Received:	01/07/19 12:42 PM
Collected:	12/18/2018

Project: **2508 Pillsbury Ave**

Test Report: Lead in Dust by Flame AAS (SW 846 3050B/7000B)*

Client SampleDescription	*Collected*	*Analyzed*	*Area Sampled*	*RDL*	*Lead Concentration*
2508-1 *351900088-0001*	12/18/2018 Site: Bedroom - FW	1/8/2019	144 in²	10 µg/ft²	<10 µg/ft²
2508-2 *351900088-0002*	12/18/2018 Site: Bedroom - WW	1/8/2019	52.5 in²	27 µg/ft²	570 µg/ft² *
2508-3 *351900088-0003*	12/18/2018 Site: Living Room - FW	1/8/2019	144 in²	10 µg/ft²	<10 µg/ft²
2508-4 *351900088-0004*	12/18/2018 Site: Living Room - WS	1/8/2019	26 in²	55 µg/ft²	140 µg/ft²
2508-5 *351900088-0005*	12/18/2018 Site: Kitchen - FW	1/8/2019	144 in²	10 µg/ft²	<10 µg/ft²
2508-6 *351900088-0006*	12/18/2018 Site: Bathroom - FW	1/8/2019	144 in²	10 µg/ft²	<10 µg/ft²
2508-7 *351900088-0007*	12/18/2018 Site: Front Entrance - FW	1/8/2019	144 in²	10 µg/ft²	<10 µg/ft²
2508-8 *351900088-0008*	12/18/2018 Site: Blank	1/8/2019	N/A	10 µg/wipe	<10 µg/wipe

Rachel Travis, Laboratory Manager
or other approved signatory

*Analysis following Lead in Dust by EMSL SOP/ Determination of Environmental Lead by FLAA. Reporting limit is 10 µg/wipe. ug/wipe =µg/ft² x area sampled in ft². Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependent on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn AIHA-LAP, LLC--ELLAP Accredited #163162

Initial report from 01/08/2019 11:54:22

Appendix G:

Lead Orders

Order to correct notice

Minneapolis
City of Lakes

Case Number: CE1188680

MARK JOSSART
5201 EAST RIVER RD # 308
MINNEAPOLIS, MN 55421

1/17/2019

On 12/18/2018, the following conditions were identified and are violations of the Minneapolis Code of Ordinances (MCO).

Re: 2508 PILLSBURY AVE #205 and Common Areas

Date Due	Violations Due for Reinspection
2/16/2019	LEAD HAZ TRAINING - LEAD SAFE WORK PRAC
3/18/2019	LEAD HAZ PAINT EXT TRIM
3/18/2019	LEAD HAZ REPLACE WINDOW
3/18/2019	LEAD HAZ VACANT UNIT
3/18/2019	LEAD HAZ FINAL CLEARANCE INSPECTION

Please call or email the contact listed below if you have any questions or if you need assistance in understanding this order.

ASHLEY HANSEN ashley.hansen@minneapolismn.gov

Health Department
Environmental Health Division
250 South 4th Street Room 414
Minneapolis, MN 55415-1316

CE1188680

For reasonable accommodations or alternative formats please contact the Minneapolis Health Department at 612-673-2301 or health@minneapolismn.gov.
People who are deaf or hard of hearing can use a relay service to call 311 at 612-673-3000.
TTY users can call 612-673-2157 or 612-673-2626.
Para asistencia 612-673-2700, Yog xav tau kev pab, hu 612-673-2800,
Hadii aad Caawimaad u baahantahay 612-673-3500.

Violations Due for Reinspection

Date Due: 2/16/2019 [ ] LEAD HAZ TRAINING - LEAD SAFE WORK PRAC

ELH003 LEAD HAZARD TRAINING- OWNER OCCUPIED PROPERTIES MUST PROVIDE PROOF OF ATTENDANCE OF AN APPROVED "LEAD SAFE WORK PRACTICES" COURSE. MN RULES 4761.220 RENTAL PROPERTIES MUST PROVIDE PROOF OF ATTENDANCE OF THE EPA'S LEAD RENOVATIOIN REPAIR AND PAINTING PROGRAM (RRP), 40 CRF PART 745 PRIOR TO COMPLETION AND INSPECTION OF THE WORK

Inspector Comments: Take the Renovation, Repair, and Painting course and submit proof of completion to ashley.hansen@minneapolismn.gov by 02/16/2019.

3/18/2019 [ ] LEAD HAZ PAINT EXT TRIM

ELH142 LEAD HAZARD- PAINT EXTERIOR TRIM Using Lead Safe Work Practices properly prepare and paint any exterior painted trim which has loose and flaking paint. Note: Deteriorated lead based paint may pose a health hazard, especially for pregnant women and children six (6) and under. Clean work area daily to limit health problems associated with lead. Paint chips, dust and debris must be double bagged and disposed of properly. Tenants must not be present while paint is being disturbed. Minneapolis Code of Ordinances 240, Minnesota Statutes 144.9504.

Inspector Comments: Repair/Stabilize the following surfaces:
02 Exterior: Window casing (all)

3/18/2019 [ ] LEAD HAZ REPLACE WINDOW

ELH710 LEAD HAZARD- REPLACE WINDOW Using Lead Safe Work Practices replace window sashes, jambs, and stops. Window well should be scraped to bare wood, enclosed or encapsulated. Note: Deteriorated lead-based paint may pose a health hazard, especially for pregnant women and children six (6) and under. Clean work area daily to limit health problems associated with lead. Paint chips, dust and debris must be double-bagged and disposed of properly. Tenants must not be present while paint is being disturbed. Minneapolis Code of Ordinances 240, Minnesota Statutes 144.9501-9509, Minnesota Rules 4761.

Inspector Comments: Replace the following windows:
02 Living Room: 2 windows (B1 and B2)
03 Bedroom: 1 window (side B)
04 Rear Entry: 1 window (side C)

3/18/2019 [ ] LEAD HAZ VACANT UNIT

ELH783 LEAD HAZARD- VACANT UNIT If occupant at time of Risk Assessment vacates premises do not allow the occupancy of this unit until all orders issued have been completed and inspected for compliance. Minneapolis Code of Ordinances 244.620 and 240. THIS VIOLATION IS EXEMPT FROM REINSPECTION FEES. This violation is not appealable to the Housing Board of Appeals.

3/18/2019 [ ] LEAD HAZ FINAL CLEARANCE INSPECTION

ELH910 LEAD HAZARD- FINAL CLEARANCE INSPECTION After all lead orders have been completed, the owner/owner's representative must contact the City Risk Assessor for a clearance inspection. Remove hazardous paint chips and lead dust by wet cleaning and/or vacuuming of all floors, window sills and window wells. Owner/owner's representative must call the Risk Assessor/Inspector issuing these orders when cleaning is completed to have final clearance dust samples taken. The Risk Assessor will conduct a final site visit to complete a visual examination of painted surfaces, overall cleanliness of windows and floor surfaces, and exterior property soil coverings. Orders are considered closed when all representative samples pass clearance levels as defined by statute. Dust wipes will be collected on floors, window sills and window wells as required by Minneapolis Code of Ordinances 240, Minnesota Statutes 144.9504 Subd. 9, Minnesota Rules 4761.

WHO CAN DO THE WORK

Minnesota Rules, Chapter 4761, and MS Law 144.9505 require that a licensed lead supervisor must notify the Minnesota Department of Health (MDH) by mail or fax at least five (5) working days before starting any regulated lead work. A property owner who intends to perform lead hazard reduction must notify MDH by mail or fax at least ten (10) working days before starting regulated lead work (MDH Fax #651-201-4606). Property owners are required to provide PROOF OF ATTENDANCE of a Lead Safe Work Practices or Renovate, Repair & Painting course. Work orders that disturb hazardous surfaces may be completed by the property owner or their immediate family if they have attended a lead safe work practices training and can provide a copy of their certification of attendance.

PROHIBITED WORK ACTIVITIES

MN Rule 4761.2620 prohibits methods of removal of lead-based paint such as dry scraping, dry sanding/vacuuming without an attachment, using chemical strippers containing methylene chloride, open flame burning/torching, or using a heat gun above 700 degrees F. All paint chips, debris, and paint dust should be cleaned up, and double-bagged and taped shut at the end of each work shift.

TENANT PROTECTION

Tenants must not be present during lead hazard reduction, and cannot re-enter until the residence has been approved by the City Risk Assessor if the project takes longer than eight (8) hours. Contact inspector about availability of relocation funds for tenants. If the unit becomes vacant, it may not be re-occupied/let until approved by the City of Minneapolis (MN 4761.2645, sub. 5).

A re-inspection will be conducted after the due date(s) listed above.

Failure to comply by the required due date(s) listed above may result in a fee for each failed compliance inspection and may result in civil and/or criminal legal action to be taken per MCO 2.10, 2.20, 2.30, and 2.40.

This order may be appealed to the Housing Board of Appeals in accordance with the provisions of Section 240.60 of the Minneapolis Code of Ordinances within twenty-one (21) calendar days of the date of this order. If you wish to appeal this order or have questions about the appeal process, please call 612-673-3000 ('311' if within the City of Minneapolis) or visit www.minneapolismn.gov for more information.

Minneapolis
Health Department

Healthy Homes & Lead Hazard Control

Appendix H:
Monitoring Schedule

The following is guidance for property owners to monitor the property for lead hazards into the future. The attached XRF spreadsheet outlines all the locations that lead based paint was found on the property and therefore areas that require ongoing monitoring.

The owner shall conduct an annual visual assessment of all painted surfaces if interim control methods (stabilize and paint) were used to resolve the lead hazards found in this lead risk assessment report. All deteriorated surfaces should be repaired using lead-safe work practices.

Monitoring is not required if lead dust, lead in soil, or lead-based paint was not found.

If no hazards are found, but lead-based paint is found, an owner's visual survey should occur annually and all surfaces with lead-based paint should receive regular maintenance.

If lead dust, lead in soil, and/or lead-based paint hazards were found to be present, then choosing to *remove* all lead-based paint, will require less on-going maintenance.

In general, all painted surfaces should be monitored. A result found to be negative for lead does not necessarily mean that lead is not present; but rather it indicates that the coating is not considered lead paint under a legal definition of 1.0 mg/cm^2. Therefore all painted surfaces should be maintained in accordance with the Minneapolis Housing Ordinances.

The federal Residential Lead-Based Paint Hazard Reduction Act, 42 U.S.C. 4852d, requires sellers and landlords of most residential housing built before 1978 to disclose all available records and reports concerning lead-based paint and/or lead-based paint hazards, including the test results contained in this notice, to purchasers and tenants at the time of sale or lease or upon lease renewal. <u>This disclosure must occur even if hazard reduction or abatement has been completed.</u>

Failure to disclose these test results is a violation of the U.S. Department of Housing and Urban Development and the U.S. Environmental Protection Agency regulations at 24 CFR Part 35 and 40CFR Part 745 and can result in a fine of up to $11,000 per violation. To find out more information about your obligations under federal lead-based paint requirements call 1-800-424-LEAD.

Reading No	Insp/XRF	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
76	GN/106000	#205	2nd	02 Living Room	B1	Window Sash Ext.	Wood	Deteriorated	White	3.23	Positive	1.7	0.7
77	GN/106000	#205	2nd	02 Living Room	B1	Window Well	Metal	Intact	White	10	Positive	4.1	3
78	GN/106000	#205	2nd	02 Living Room	B2	Window Well	Metal	Intact	White	10	Positive	3.4	2.3
79	GN/106000	#205	2nd	02 Living Room	B2	Window Sash Ext.	Wood	Deteriorated	White	1.77	Positive	3.4	2
53	GN/106000	#205	2nd	03 Bedroom	B	Window Sash Ext.	Wood	Deteriorated	White	2.55	Positive	1.5	0.5
55	GN/106000	#205	2nd	03 Bedroom	B	Window Well	Metal	Intact	White	10	Positive	3.8	2.3
66	GN/106000	#205	2nd	04 Bathroom	B	Sink	Ceramic	Intact	White	1.85	Positive	2.4	0.9
9	CMZ/106000	Common	1st	02 Exterior	A	Awning Ceiling	Wood	Intact	White	3.8	Positive	6.4	4.3
13	CMZ/106000	Common	1st	02 Exterior	A	Window Casing	Wood	Deteriorated	Gray	5.43	Positive	6.5	5.3
21	CMZ/106000	Common	1st	02 Exterior	D	Window Sash Ext.	Wood	Intact	Gray	2.04	Positive	4.6	3.2
55	CMZ/106000	Common	2nd	04 Rear Entry	C	Window Well	Metal	Intact	Gray	10	Positive	4.6	3.5
56	CMZ/106000	Common	2nd	04 Rear Entry	C	Window Sash Ext.	Wood	Deteriorated	Gray	1.52	Positive	5	3.1

Appendix I:
Performance Characteristic Sheets

Serial numbers of XRFs used by the City of Minneapolis

Niton Xli 15553
Niton Xlp 3006AW 23480
Niton Xlp 303A 22261
Heuresis Pb200i 1229

Performance Characteristic Sheet

EFFECTIVE DATE: **December 1, 2015**

MANUFACTURER AND MODEL:

Make: ***Heuresis***
Models: ***Model Pb200i***
Source: ***^{57}Co, 5 mCi (nominal – new source)***

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Action Level mode

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm^2 (inclusive)

SUBSTRATE CORRECTION:

Not applicable

INCONCLUSIVE RANGE OR THRESHOLD:

ACTION LEVEL MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results not corrected for substrate bias on any substrate	Brick Concrete Drywall Metal Plaster Wood	1.0 1.0 1.0 1.0 1.0 1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated using test results on building components in the HUD archive. Testing was conducted on 146 test samples in November 2015, with two separate instruments running software version 2.1-2 in Action Level test mode. The actual source strength of each instrument on the day of testing was approximately 2.0 mCi; source ages were approximately one year.

OPERATING PARAMETERS

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm^2 for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm^2 at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

> Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm^2. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.
>
> Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.
>
> For each substrate type (the 1.02 mg/cm^2 NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):
>
> Correction value = (1st + 2nd + 3rd + 4th + 5th + 6th *Reading*)/6 - 1.02 mg/cm^2
>
> Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below. Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

In the Action Level paint test mode, the instrument takes the longest time to complete readings close to the Federal standard of 1.0 mg/cm^2. The table below shows the mean and standard deviation of actual reading times by reading level for paint samples during the November 2015 archive testing. The tested instruments reported readings to one decimal place. No significant differences in reading times by substrate were observed. These times apply only to instruments with the same source strength as those tested (2.0 mCi). Instruments with stronger sources will have shorter reading times and those with weaker sources, longer reading times, than those in the table.

Mean and Standard Deviation of Reading Times in Action Level Mode by Reading Level		
Reading (mg/cm^2)	**Mean Reading Time (seconds)**	**Standard Deviation (seconds)**
< 0.7	3.48	0.47
0.7	7.29	1.92
0.8	13.95	1.78
0.9 – 1.2	15.25	0.66
1.3 – 1.4	6.08	2.50
≥ 1.5	3.32	0.05

CLASSIFICATION OF RESULTS:

XRF results are classified as **positive** if they are **greater than or equal** to the stated threshold for the instrument (1.0 mg/cm^2), and *negative* if they are *less than* the threshold.

DOCUMENTATION:

A report titled *Methodology for XRF Performance Characteristic Sheets* (EPA 747-R-95-008) provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. The report may be downloaded at http://www2.epa.gov/lead/methodology-xrf-performance-characteristic-sheets-epa-747-r-95-008-september-1997.

This XRF Performance Characteristic Sheet (PCS) was developed by QuanTech, Inc., under a contract with the XRF manufacturer.

Performance Characteristic Sheet

EFFECTIVE DATE: **September 24, 2004** **EDITION NO.: 1**

MANUFACTURER AND MODEL:

Make: *Niton LLC*
Tested Model: *XLp 300*
Source: ^{109}Cd
Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.
XLp 300A, XLp 301A, XLp 302A and XLp 303A.
XLi 700A, XLi 701A, XLi 702A and XLi 703A.
XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm^2 (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is <u>not</u> needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm^2)		
Substrate	25^{th} Percentile	Median	75^{th} Percentile	Pb < 0.25	0.25 ≤ Pb<1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.*

Appendix J:
Minnesota Department of Health
Licensed Lead Risk Assessor
License

Risk Assessor	Initials	Risk Assessor License #
Lisa Smestad	LAFS	LR269
Eliza Schell	EMS	LR507
Nathan Olson	NJO	LR2217
Alex Vollmer	AIV	LR3509
Fardowza Omar	FAO	LR3236
Michelle Anderson	MEA	LR4761
Christine McCune-Zierath	CMZ	LR4970
Kelly Dyke	KMD	LR5272
Gregory Nelson	GN	LR5423
Ashley Hansen	AH	LR5424