

April 27, 2016

File: 0063.03881.6

Mr. Brian Finos  
Manager of Facilities  
Charter Development Company  
3850 Broadmoor SE, Suite 201  
Grand Rapids, Michigan 49512

Re: Environmental Assessment – Drinking Water Quality Report  
Detroit Merit Charter Academy  
1091 Alter Road, Detroit, Michigan

Dear Mr. Finos:

Rose & Westra, Inc. (R&W) is pleased to present this drinking water quality report with results from the recent sampling and testing for the Detroit Merit Charter Academy located at 1091 Alter Road, Detroit, Michigan (the Building). This work was requested due a concern about possible lead contaminates being present in the drinking water supplied to the Building. The water piping system to the Building is maintained by City of Detroit Water Department. The water within the piping system is also provided by the City of Detroit.

In summary, none of the tests conducted identified any contaminants exceeding the maximum contaminant levels (MCLs) or the Secondary MCLs allowed by the U. S. Environmental Protection Agency (U.S. EPA) for residential drinking water consumption.

## **Background**

The Building is a multi-story structure constructed in several phases with the original Building constructed in 1930s. Renovations and additions were completed in 2002 using new building materials. The City of Detroit maintains the water distribution system and provides the water within the piping system to the Building.

## **Drinking Water Sampling**

On April 16, 2016, R&W staff collected water samples from nine water fixtures in the Building. The fixtures sampled consist of drinking water fountain station (DFS) located next to Classroom L13 [DFS-L13], DFS next to Office 107 [DFS-107], DFS across the hallway from Classroom 110 [DFS-110], DFS next to Classroom 113 [DFS-113], DFS next to Office 207 [DFS-207], DFS across the hallway from Classroom 210 [DFS-210], DFS next to Classroom 213 [DFS-213], sink tap in the food prep room (Room B3) [FP-B3], and sink tap in the Teacher's Lounge (Room 105) [TL-105]. The locations have been illustrated on Figures 1, 2, and 3 (Attachment 1). The sampling method used for the drinking water sample collection is known as first draw sampling, with a second sample collected from each

location following a flush of the fixture. The first draw method required R&W staff to access the sampling location and flush the fixture to be sampled for a 30-minute period. Flushing the sampling locations was completed at 11:30 pm on April 15, 2016. Once the 30-minute flushing period was completed, R&W allowed each sample location to rest for a minimum of 6 hours. Each sample location was taped off to prevent use. The first draw water sample collection began at 10:05 am on April 16, 2016; thereby allowing for a 10-hour rest period. Once the first draw sample was collected from the sample locations, the fixtures were turned on for a 5-minute flush before the flushed sample was collected.

The first draw sample from each sample location has been identified in the sample name. The first draw samples are identified as DFS-L13-FD, DFS-107-FD, DFS-110-FD, DFS-113-FD, DFS-207-FD, DFS-210-FD, DFS-213-FD, FP-B3-FD, and TL-105-FD. These water sample locations have been illustrated on Figures 1, 2, and 3, Attachment 1.

The flushed sample from each sample location has also been identified in the sample name. The flushed samples are identified as DFS-L13-FL, DFS-107-FL, DFS-110-FL, DFS-113-FL, DFS-207-FL, DFS-210-FL, DFS-213-FL, FP-B3-FL, and TL-105-FL. These water sample locations have also been illustrated on Figures 1, 2, and 3, Attachment 1.

### **Analytical Testing**

Water samples collected by R&W on April 16, 2016 were placed in clean sample containers (supplied by the lab), labeled, cooled, and stored for transportation. The samples were handled and transported to Prein & Newhof Environmental Laboratory, Inc. (Prein & Newhof Laboratory; Grand Rapids, Michigan) under chain-of-custody records using U.S. EPA and Michigan Department of Environmental Quality (MDEQ) recommended methods. The water samples were tested for several heavy metals (copper, iron, and lead). A copy of the laboratory report has been included in Attachment 2. The Prein & Newhof Laboratory has MDEQ Drinking Water Certification for testing water samples.

### **Evaluation of Testing Results**

All of the lead results were reported as below the method detection limit (MDL) of <0.003 mg/L. These reported results are also below the MCL of 0.015 mg/L.

Trace copper levels were reported in most water samples collected. The reported copper concentrations ranged from <0.010 mg/l to 0.498 mg/L; however, all reported concentrations are well below the MCL of 1.300 mg/L.

Trace iron levels were reported in all water samples collected. The reported iron concentrations ranged from 0.013 mg/L to 0.034 mg/L. The Secondary MCL for iron has been established at 0.300 mg/L for taste and color. All reported sample results were below the Secondary MCL for iron.

Mr. Brian Finos  
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## Conclusions

Based on the water sampling and chemical analyses conducted, none of the tests conducted identified any contaminants that exceeded the MCLs or Secondary MCLs allowed by the U. S. EPA for residential drinking water consumption.

If you have any questions regarding the information or data presented in this letter, please feel free to contact our staff.

Sincerely,

ROSE & WESTRA, INC.



William J. Bosze, P.E.

wjb/jac

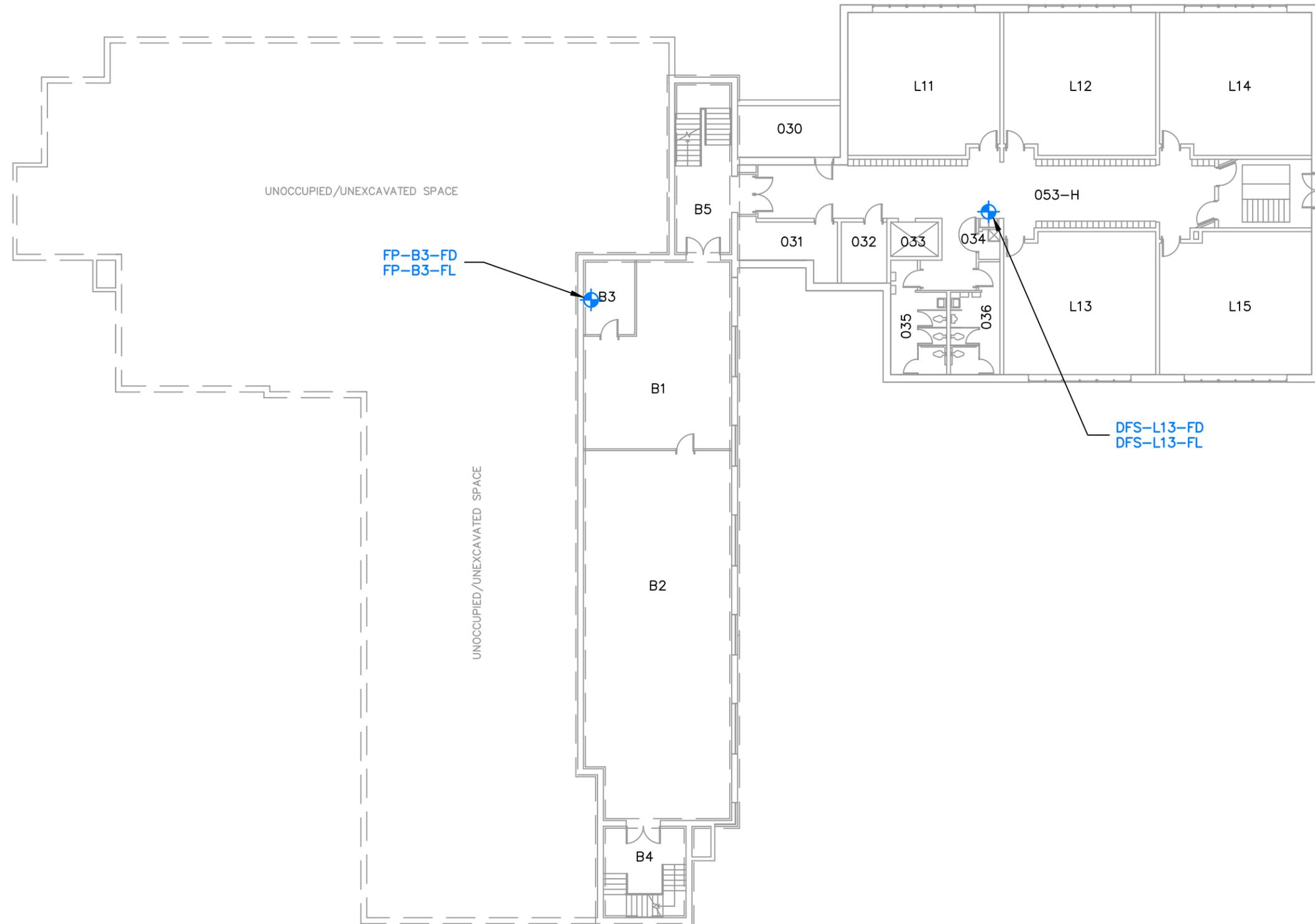
Attachments:

- Attachment 1: Figure 1 – Lower Level Floor Plan – Sample Locations – April 16, 2016
- Figure 2 – First Floor Plan – Sample Locations – April 16, 2016
- Figure 3 – Second Floor Plan – Sample Locations – April 16, 2016

Attachment 2: Prein & Newhof Laboratory Report

*Sent via Email Only*

**ATTACHMENT 1**  
**FIGURES 1, 2, AND 3**  
**DRINKING WATER SAMPLE LOCATIONS – APRIL 16, 2016**



LEGEND

 = WATER SAMPLE LOCATION

SCALE: 1" = 20'  


LOWER LEVEL FLOOR PLAN - SAMPLE LOCATIONS 4/16/16



 **ROSE & WESTRA, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 Grand Rapids, Michigan

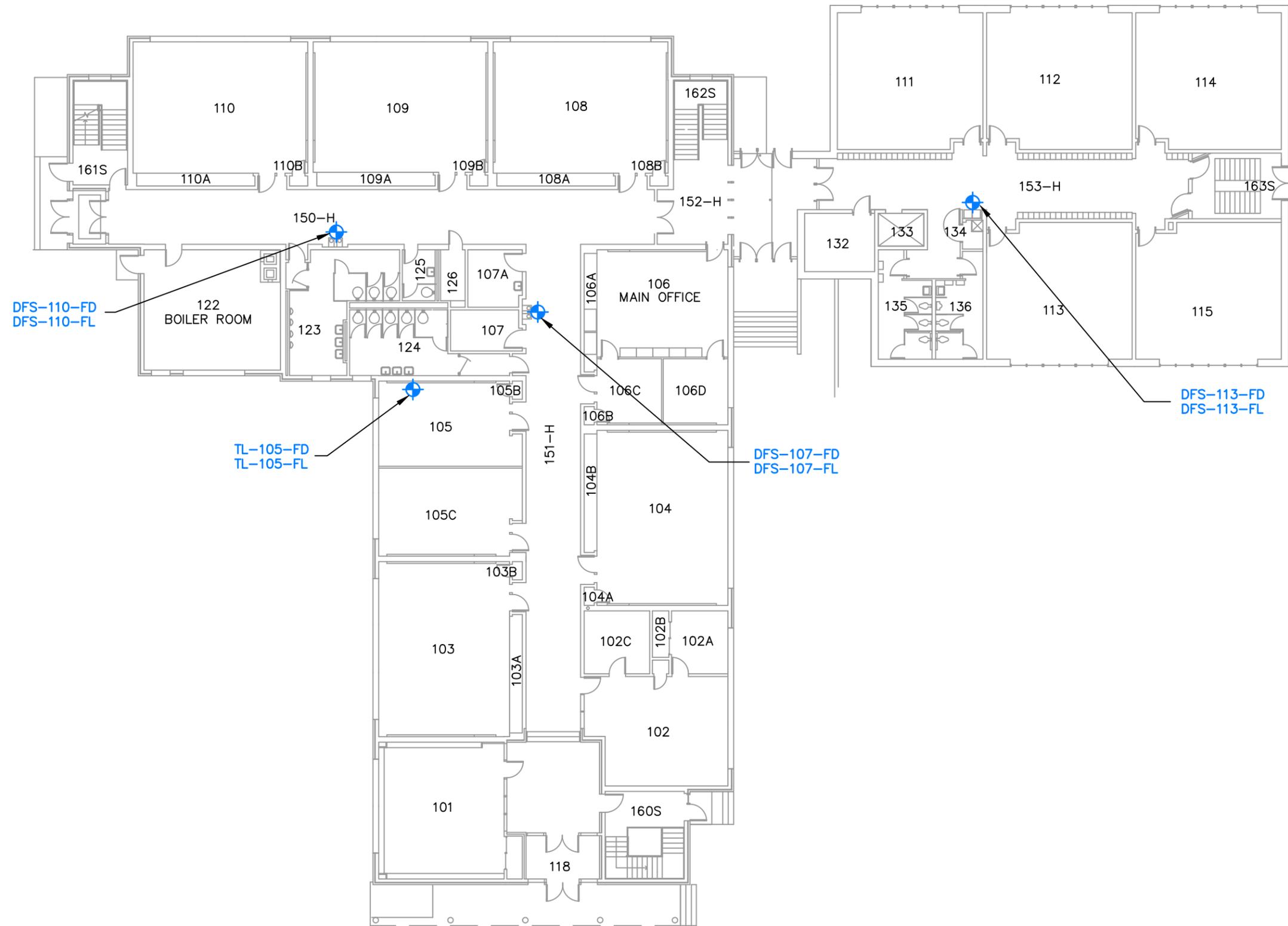
**NATIONAL HERITAGE ACADEMIES**  
 DETROIT MERIT CHARTER ACADEMY  
 1091 ALTER ROAD, DETROIT, MICHIGAN  
 DRINKING WATER TESTING

PROJECT NO.  
0063.03881.6

**1**

FIGURE NO.

CREATED BY: KJB    APPROVED BY: WJB    DATE: 4/19/16    FILE NAME: 038816\_DETMERIT\_DWT



**LEGEND**

= WATER SAMPLE LOCATION

SCALE: 1" = 20'

**FIRST FLOOR PLAN - SAMPLE LOCATIONS 4/16/16**



**ROSE & WESTRA, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 Grand Rapids, Michigan

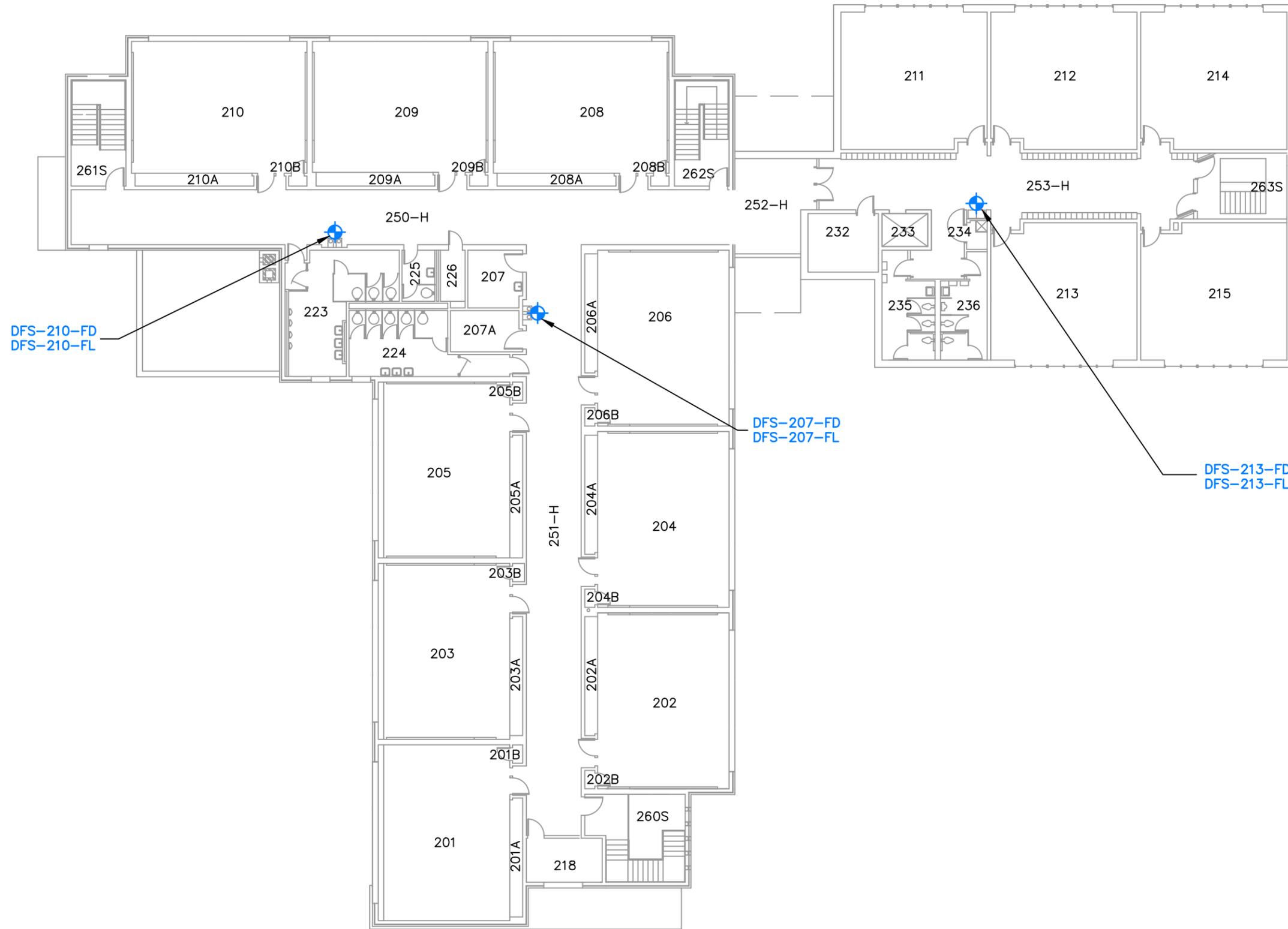
**NATIONAL HERITAGE ACADEMIES**  
 DETROIT MERIT CHARTER ACADEMY  
 1091 ALTER ROAD, DETROIT, MICHIGAN  
 DRINKING WATER TESTING

PROJECT NO.  
0063.03881.6

**2**

FIGURE NO.

CREATED BY: KJB    APPROVED BY: WJB    DATE: 4/19/16    FILE NAME: 038816\_DETMERIT\_DWT



**LEGEND**

 = WATER SAMPLE LOCATION

SCALE: 1" = 20'  


**SECOND FLOOR PLAN - SAMPLE LOCATIONS 4/16/16**



**ROSE & WESTRA, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 Grand Rapids, Michigan

**NATIONAL HERITAGE ACADEMIES**  
 DETROIT MERIT CHARTER ACADEMY  
 1091 ALTER ROAD, DETROIT, MICHIGAN  
 DRINKING WATER TESTING

PROJECT NO.  
0063.03881.6

**3**

FIGURE NO.

CREATED BY: KJB    APPROVED BY: WJB    DATE: 4/19/16    FILE NAME: 038816\_DETMERIT\_DWT

**ATTACHMENT 2**  
**PREIN & NEWHOF LABORATORY REPORT**

**Customer Name:** Rose & Westra, Inc.  
4328 3 Mile Rd NW  
Grand Rapids, MI 49544

**Contact Name:** Rose & Westra, Inc.  
4328 3 Mile Rd NW  
Grand Rapids, MI 49544

**Project:** 0063.03881.6

**Project No:** 2160001

**Lab Order:** 1604489

**Matrix:** DRINKING WATER  
**Sampled By:** W. Bosze

**Lab ID:** 1604489-001A  
**Client Sample ID:** DFS-L13-FD

**Collection Date:** 4/16/2016 10:05 am  
**Received Date:** 4/18/2016 8:20 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.196	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.017	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

**Lab ID:** 1604489-002A  
**Client Sample ID:** DFS-L13-FL

**Collection Date:** 4/16/2016 10:10 am  
**Received Date:** 4/18/2016 8:20 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.038	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.021	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

**Lab ID:** 1604489-003A  
**Client Sample ID:** FP-B3-FD

**Collection Date:** 4/16/2016 10:13 am  
**Received Date:** 4/18/2016 8:20 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.044	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.014	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

**Lab ID:** 1604489-004A  
**Client Sample ID:** FP-B3-FL

**Collection Date:** 4/16/2016 10:18 am  
**Received Date:** 4/18/2016 8:20 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.070	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.013	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

**Lab ID:** 1604489-005A  
**Client Sample ID:** DFS-213-FD

**Collection Date:** 4/16/2016 10:21 am  
**Received Date:** 4/18/2016 8:20 am

Analyses	Result	Units	RPT Limit	M.C.L.	Analyst	Date Analyzed	Method #
Copper	0.060	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.032	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Project: 0063.03881.6

Project No: 2160001

Lab Order: 1604489

Matrix: DRINKING WATER

Sampled By: W. Bosze

Lab ID: 1604489-006A  
Client Sample ID: DFS-213-FL

Collection Date: 4/16/2016 10:26 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.024	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.030	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-007A  
Client Sample ID: DFS-210-FD

Collection Date: 4/16/2016 10:25 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.022	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.020	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-008A  
Client Sample ID: DFS-210-FL

Collection Date: 4/16/2016 10:30 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	< 0.010	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.030	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-009A  
Client Sample ID: DFS-207-FD

Collection Date: 4/16/2016 10:33 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.044	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.014	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-010A  
Client Sample ID: DFS-207-FL

Collection Date: 4/16/2016 10:38 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.016	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.016	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-011A  
Client Sample ID: DFS-113-FD

Collection Date: 4/16/2016 10:43 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.498	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.018	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Project: 0063.03881.6

Project No: 2160001

Lab Order: 1604489

Matrix: DRINKING WATER

Sampled By: W. Bosze

Lab ID: 1604489-012A  
Client Sample ID: DFS-113-FL

Collection Date: 4/16/2016 10:48 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.073	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.028	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-013A  
Client Sample ID: DFS-110-FD

Collection Date: 4/16/2016 10:46 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.019	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.015	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-014A  
Client Sample ID: DFS-110-FL

Collection Date: 4/16/2016 10:51 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.017	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.034	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-015A  
Client Sample ID: DFS-107-FD

Collection Date: 4/16/2016 10:54 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.018	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.024	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-016A  
Client Sample ID: DFS-107-FL

Collection Date: 4/16/2016 10:59 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	< 0.010	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.026	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Lab ID: 1604489-017A  
Client Sample ID: TL-105-FD

Collection Date: 4/16/2016 10:58 am  
Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	0.031	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.020	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

Project: 0063.03881.6

Project No: 2160001

Lab Order: 1604489

Matrix: DRINKING WATER

Sampled By: W. Bosze

Lab ID: 1604489-018A

Collection Date: 4/16/2016 11:03 am

Client Sample ID: TL-105-FL

Received Date: 4/18/2016 8:20 am

Analyses	Result	Units	RPT		Date		Method #
			Limit	M.C.L.	Analyst	Analyzed	
Copper	< 0.010	mg/L	0.010	1.3	SB	4/19/2016	EPA 200.7
Iron	0.023	mg/L	0.006		SB	4/22/2016	EPA 200.7
Lead	< 0.003	mg/L	0.003	0.015	SB	4/23/2016	SM3113B

# Prein & Newhof

Engineers ■ Surveyors ■ Environmental ■ Laboratory

3260 Evergreen Drive NE  
Grand Rapids, MI 49525

t. 616-364-7600  
f. 616-364-4222

Air	A
Drinking Water	D
Groundwater	W
Soil	S
Sludge	L
Oil	O
Other	X

Client: Rose & Westra Inc.

Project Name: 0063.03881.6

Project #: 0063.03881.6

Send Results to: William Borge

Sampling Personnel: William Borge

wj borge @ rosewestra.com

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## CHAIN OF CUSTODY

Lab Use	Sample Information			MATRIX	Preservative						Analysis Requested			
					None	H2SO4	HNO3	HCl	NaOH	Other	Lead	Copper	Iron	
Lab Sample ID #	Date	Time	Sample Description and Location (e.g. MW-1)											
9489-1	4/16/16	10:05a	DFS-L13-FD	D	X							X	X	X
2	4/16/16	10:10a	DFS-L13-FL	D	X							X	X	X
3	4/16/16	10:13a	FD-B3-FD	D	X							X	X	X
4	4/16/16	10:18a	FD-B3-FL	D	X							X	X	X
5	4/16/16	10:21a	DFS-213-FD	D	X							X	X	X
6	4/16/16	10:26a	DFS-213-FL	D	X							X	X	X
7	4/16/16	10:25a	DFS-210-FD	D	X							X	X	X
8	4/16/16	10:30a	DFS-210-FL	D	X							X	X	X
9	4/16/16	10:33a	DFS-207-FD	D	X							X	X	X
10	4/16/16	10:28a	DFS-207-FL	D	X							X	X	X

Comments:

Relinquished By: (Signature) <i>William Borge</i>	Date 4/18/16	Time 8:20a	Received By: (Signature)	Date	Time	Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time	Method of Shipment:			Bill of Lading:		
Received for Laboratory By: <i>M. Lelandian</i>	Date 4/18/16	Time 18:20a	Data Package Relinquished By:	Date	Time	Data Received By:	Date	Time	No. 31261		

# Prein & Newhof

Engineers ■ Surveyors ■ Environmental ■ Laboratory

3260 Evergreen Drive NE  
Grand Rapids, MI 49525

t. 616-364-7600  
f. 616-364-4222

Air	A
Drinking Water	D
Groundwater	W
Soil	S
Sludge	L
Oil	O
Other	X

Client: Rose & Westra, Inc.

Project Name: 0063.03881.6

Project #: 0063.03881.6

Send Results to: William Bozse

Sampling Personnel: William Bozse

wjbozse@rosewestra.com

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## CHAIN OF CUSTODY

Lab Use	Sample Information				MATRIX	Preservative						Analysis Requested		
						None	H2SO4	HNO3	HCl	NaOH	Other	Lead	Copper	Iron
Lab Sample ID #	Date	Time	Sample Description and Location (e.g. MW-1)											
4489-11	4/16/16	10:43a	DFS-113-FD		D	X						X	X	X
12	4/16/16	10:48a	DFS-113-FL		D	X						X	X	X
13	4/16/16	10:46a	DFS-110-FD		D	X						X	X	X
14	4/16/16	10:51a	DFS-110-FL		D	X						X	X	X
15	4/16/16	10:54a	DFS-107-FD		D	X						X	X	X
16	4/16/16	10:59a	DFS-107-FL		D	X						X	X	X
17	4/16/16	10:58a	TL-105-FD		D	X						X	X	X
18	4/16/16	11:03a	TL-105-FL		D	X						X	X	X
	X	X	X											
	X	X	X											

Comments:

Relinquished By: (Signature) 	Date 4/18/16	Time 8:20a	Received By: (Signature)	Date	Time	Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time	Method of Shipment:			Bill of Lading:		
Received for Laboratory By: M. Teravanan	Date 4/18/16	Time 8:20a	Data Package Relinquished By:	Date	Time	Data Received By:	Date	Time	No. 31263		