

June 24, 2024

Ms. Jennifer Meyer
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
1027 West St. Paul Ave.
Milwaukee, WI 53233

Project # 40441

**Subject: Community Within the Corridor - East Block: Utility Corridors Vapor Assessment
2748 N. 32nd Street, Milwaukee, WI 53208
BRRTS #02-41-263675, FID #241025400**

Dear Ms. Meyer:

On behalf of the Community Within the Corridor (CWC) Limited Partnership, K. Singh & Associates, Inc. (KSingh) presents the results of sanitary sewer vapor intrusion assessment which was performed for the CWC - East Block project. The sanitary sewer vapor assessment was performed from March 14- 21, 2024, in accordance with the *Status Report and Supplemental Site Investigation Work Plan* dated January 12, 2024, which was submitted to the Wisconsin Department of Natural Resources (WDNR).

Project Background

On November 16, 2023, KSingh submitted a *Revised Remedial Action Options Report* to the WDNR. The report was submitted in response to the WDNR's September 7, 2023, Remedial Action Options Report (RAOR) review letter, which did not approve the RAOR, and requested that an updated RAOR be submitted that incorporated the feedback provided in the letter.

On December 11, 2023, the WDNR reviewed the *Revised Remedial Actions Options Report* for compliance with WAC, NR 722 and 724, and concurred with the remedial strategy, with comments and recommendations to incorporate and/or consider. The following comments were provided regarding the Site Investigation Status:

“As identified in the DNR's Site Investigation Review letter, dated December 22, 2021, site investigation has not yet been approved by the DNR. More specifically, the groundwater investigation and sewer vapor investigation are not complete. Below are additional comments on the site investigation status:

1. Groundwater contaminated with chlorinated volatile organic compounds (CVOCs) at MW-2 located in the northern courtyard of the site appears to be present within a perched groundwater table that exists within that fill interval immediately below the ground surface. Groundwater contamination at MW-2 remains laterally undefined. Install additional monitoring wells that are appropriately screened within the fill interval to laterally define the groundwater contamination at MW-2. Consider installing monitoring wells to the north, east and west of MW-2 to determine whether groundwater contamination may extend off-site and to help to evaluate potential off-site migration pathways and receptors of the contamination.

2. The DNR requests that manhole sample locations Sanitary Manhole 25 (EB-IA-1), Sanitary Manhole 26 (EB-IA-2), and Sanitary Manhole 19 (EB-IA-3) be sampled again as TCE exceeded 10% of the sanitary sewer gas screening level at all of these locations during the May 2021 sampling event. The DNR recommends that the sewer vapor samples be collected using passive samplers for a minimum duration of one-week. For additional information on investigating utilities as a preferential vapor pathway and sewer vapor sample collection, you may reference DNR guidance document RR-649, *Guidance for Documenting the Investigation of Human-made Preferential Pathways Including Utility Corridors*. Please include information on the flow direction of the sanitary sewer in W. Center St. and N. 32nd St. rights-of way and locations of historical sewer laterals (if available) in future reports, where applicable.”

On January 12, 2024, KSingh submitted a *Status Report and Supplemental Site Investigation Work Plan* to the WDNR, documenting work performed, and presenting a supplemental site investigation workplan (SSIWP) to address the WDNR comments. Groundwater monitoring well installation as presented in the SSIWP was completed in May 2024, and the completed sanitary sewer vapor assessment is presented in the following section.

Sanitary Sewer Vapor Assessment

Sanitary sewer vapor samples were collected using passive samplers for a one-week period from March 14–21, 2024, from the following sanitary manholes: Sanitary Manhole 25 (IA-1), Sanitary Manhole 26 (IA-2), and Sanitary Manhole 19 (IA-3) locations which are presented on Figure 1. The manholes range in depth from approximately 9.3 to 11.9 feet deep. KSingh personnel deployed one (1) Radiello 130 passive sampler in each manhole, at approximately 1-foot above the liquid surface utilizing magnets attached to the manhole cover and string support, following the methodology presented in the WDNRs Vapor Intrusion webinar. The passive sampler deployment and retrieval log is included in Attachment A. Select photographs are included in Attachment B.

On March 21, 2024, the passive air samplers were collected and sent to Eurofins Air Toxics, LLC in Folsom, CA for analysis of tetrachloroethylene (PCE), trichloroethene (TCE), cis-1,2-Dichloroethylene (cis-DCE), and trans-1,2-Dichloroethylene (trans-DCE) by Passive S.E. RAD130/SKCUS. The analytical laboratory report is included in Attachment C, and these results are summarized in Table 1 and Figure 1.

The analytical results were compared to Sanitary Sewer Gas Screening Levels (SSGSLs) which were calculated in accordance with procedures in WDNR publication RR-649, *Guidance for Documenting the Investigation of Human-made Preferential Pathways Including Utility Corridors*. The SSGSL is calculated by dividing the Vapor Action Level by an attenuation factor of 0.03. PCE, TCE, trans-DCE, and cis-DCE were not detected at concentrations above SSGSLs in the three (3) sanitary sewer manholes, based on the most recent guidelines published by the WDNR in August 2023.

Utility Corridor Contamination Migration Pathway Assessment

The WDNR requested assessment/information of utility corridors in their December 22, 2021 review of KSingh’s *Site Investigation Report*. The WDNR requests, followed by KSingh’s response in italics is provided:

- “Additional investigation is required to delineate the vapor impacts identified within the sanitary sewer laterals and main sanitary sewer to assess this conduit as a potential migration pathway for contamination. Collect a second round of air samples from the sanitary manhole sample locations IA-1, IA-2, and IA-3”.

The sanitary sewer main beneath North 32nd Street invert depths as measured from Sanitary Manholes 19, 25, and 26 is approximately 9 feet below ground surface (bgs). The sanitary main is 10-inch diameter beneath manholes 19 and 25, and 6-inch diameter beneath manhole 26. Construction is unknown but is assumed to be concrete bedded on granular base coarse gravel. Sanitary sewer flow direction is south along North 32nd Street towards the intersection of the sanitary sewer in the West Center Street and North 32nd Street rights-of way, after which flow is from West to East. Sanitary sewer laterals slope from the property to the main beneath North 32nd Street. Depths are unknown but are assumed to be from 4 to 6 feet bgs. Site groundwater elevations are variable, with several groundwater monitoring wells absent of water. Groundwater elevations in wells which contained water ranged from approximately 8 to 20 feet bgs; therefore, the site laterals are constructed above groundwater. The sanitary main, laterals, and flow direction are presented in Figure 1. The Proposed Utility Plan (7/30/2020), is included in Attachment D.

- “Collect an air sample from one sanitary sewer manhole located upgradient of the site and from two sanitary sewer manholes that are both located downgradient of the site, within the appropriate ROW(s). Discuss the results and whether any offsite properties may be impacted by the vapor contamination within this conduit. Provide a work plan, as needed, to address potential off-site contamination.”

Sanitary sewer air/vapor samples were collected from Sanitary Manhole 25 (IA-1), Sanitary Manhole 26 (IA-2), and Sanitary Manhole 19 (IA-3) as discussed above. As the sanitary sewer vapor as represented by samples IA-1, IA-2, and IA-3 does not contain SSGSL exceedances or exceed 10% of the SSGSL, we do not propose any additional sanitary sewer sampling.

- “The Phase II Site Investigation Report, dated May 2002, submitted for the Jonas Construction site (BRRTS # 02-41-000793), which is located at the subject property, indicates that there is/was a storm sewer that transects the contamination identified in the northern courtyard of the property. Discuss whether this storm sewer lateral still exists and whether it acts as a preferential pathway for off-site migration of contamination. Display this on the map requested above, as applicable.”

The project plumbing contractor, Horner Plumbing (Horner) was contacted to verify if the storm sewer in the northern courtyard is present/active. Horner noted that there is an 8” storm stack inside building 3A, and that they added a clean out to see if they could locate the direction the storm sewer is going from Building 3A and evaluate if the sewer is functional. Horner attempted to hydro-jet the sewer, but it failed. The pipe is either collapsed or missing just a few feet from the building but is approximately 7' below the parking lot grade. The Proposed Utilities Plan (Attachment D) indicates an 8-inch diameter PVC storm sewer in the northern parking lot, pitched towards North 32nd Street. It is understood that the next step is to dig up the sewer to see if a continuation and/or repair could be made. Groundwater monitoring well EB-MW-8 was installed near the storm sewer along 32nd Street. When the groundwater analytical data is received, groundwater elevations/flow direction determined, and sewer investigation/repair is completed, further evaluation of the storm sewer as a potential contaminant migration pathway will be presented.

Conclusions and Recommendation

The March 14-21, 2024 sanitary sewer vapor sampling results demonstrate that TCE concentrations are an order of magnitude lower than the SSGSL; therefore, no further sanitary sewer vapor assessment appears warranted.

Should you need any additional information, please contact us at (262) 821-1171.

Sincerely,

K. SINGH & ASSOCIATES, INC.



Timothy P. Welch, P.G.
Senior Geologist



Robert T. Reineke, P.E.
Senior Engineer



Pratap N. Singh, Ph.D., P.E.
Principal Engineer

cc: Shane LaFave / Roers Companies
Que El-Amin / Scott Crawford, Inc.

Figure and Table:

Figure 1: Site Diagram

Table 1: Sanitary Sewer Vapor Analytical Results

Attachments:

Attachment A: Passive Sampler Deployment and Retrieval Log

Attachment B: Photographic Log

Attachment C: Laboratory Analytical Report

Attachment D: Proposed Utilities Plan

FIGURE



FLOOR FINISH LEGEND

ATH-1	ATHLETIC FLOORING - FLEXIBLE / NON-ADHERED
CPT-1	BROADLOOM CARPET (UNIT BEDROOMS)
CT-1	CERAMIC TILE (UNIT BATHROOMS W/ ROLL-IN SHOWERS ONLY)
ERF-1	EPOXY RESINOUS FLOORING
EXTG-WD	EXISTING WOOD FLOORING TO REMAIN IN PLACE & BE REFINISHED
EXTG-WS	EXISTING CONCRETE SLAB WITH WEATHER SEAL
LVT-1	LUXURY VINYL TILE (UNIT BATHROOMS)
PC-1	POLISHED CONCRETE
RF-1	RUBBER FLOORING
SC-1	SEALED CONCRETE
WD-SV	SALVAGED WOOD - REMOVED, REINSTALLED AND REFINISHED (SALVAGED WOOD WILL BE REINSTALLED IN CORRIDORS FIRST THEN CONTINUE INTO UNITS - IF THERE IS NOT ENOUGH QUANTITY - INSTALL NEW WOOD FLOORING TO MATCH HISTORIC SIZE)

- ### LEGEND
- Planned Underground Plumbing
 - Underground Tunnel
 - Historic Well Locations (10)
 - Historic Soil Probe and Temporary Well Locations (31)
 - Previous Soil Probe, Hand Auger, and Temp. Well Locations (9)
 - Monitoring Well Locations (6)
 - Soil Probe Locations (13)
 - Sub-Slab Soil Sampling Locations (28)
 - Sub-Slab Vapor Sampling Locations (51)
 - Air Sampling Locations (5)
 - Proposed Monitoring Well Locations (3)
 - Former Approximate Underground Storage Tank Location
 - Approximate Site Boundary
 - Manhole Locations (3)
 - Sanitary Manhole 25 (IA-1)
 - Sanitary Manhole 26 (IA-2)
 - Sanitary Manhole 19 (IA-3)
 - Abandoned/Not Applicable Monitoring Well Locations (10)
- NOTE:
- COMBINATION OF EXISTING AND PROPOSED PLUMBING
 - ALL RESULTS EXPRESSED IN MICROGRAMS PER CUBIC METER (UGM³)
 - SMH = SANITARY SEWER MANHOLE
 - C = ESTIMATED CONCENTRATION DUE TO CALCULATED SAMPLING RATE
 - J = INDICATES RESULT IS LESS THAN THE REPORTING LIMIT (RL) BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT (MDL) AND THE CONCENTRATION IS AN APPROXIMATE VALUE

- | | |
|----------------------------|---------------------------|
| EX. AIR CONDITIONER | EX. UG. GAS |
| EX. GAS VALVE | EX. UG. ELECTRIC |
| EX. GAS METER | EX. OVERHEAD WIRES |
| EX. ELECTRIC METER | EX. BUREAU OF ELEC. SERV. |
| EX. ELECTRIC PEDESTAL | EX. UG. COMBINED SEWER |
| EX. ELECTRIC MANHOLE | EX. CITY UG. CONDUIT/COMM |
| EX. ELECTRIC TRANSFORMER | EX. SANITARY SEWER (SAN) |
| EX. POWER / TELEPHONE POLE | EX. STORM SEWER (STO) |
| EX. LIGHT POLE | EX. UG. COMMUNICATIONS |
| EX. TELEPHONE PEDESTAL | EX. UG. TELEPHONE |
| EX. STORM MANHOLE | EX. UG. FIBER OPTICS |
| EX. CATCH BASIN SQUARE | EX. UG. CABLE TELEVISION |
| EX. CLEANOUT | EX. WATER MAIN |
| EX. SANITARY MANHOLE | |
| EX. UNKNOWN MANHOLE | |
| EX. COMBINED SEWER MANHOLE | |
| EX. TELEPHONE MANHOLE | |
| EX. WATER VALVE | |
| EX. HYDRANT | |

- ### SAMPLE ID CODES:
- EB = EAST BLOCK
 - B = BORING
 - TW = TEMPORARY WELL
 - MW = MONITORING WELL
 - SS = SUB-SLAB
 - VE = VAPOR EXTRACTION POINT
 - IB = INTERIOR BORING
 - RTS = REPRESENTATIVE TRENCH SAMPLE
 - IA = INDOOR AIR
 - OA = OUTDOOR AIR

KEY PLAN

PROJECT TITLE: SITE INVESTIGATION REPORT
 COMMUNITY WITHIN THE CORRIDOR
 2748 N. 32nd Street
 MILWAUKEE, WI 53210
 PROJECT NUMBER: 40449
 CLIENT: COMMUNITY WITHIN THE CORRIDOR LIMITED PARTNERSHIP

REVISIONS	DATE	DESCRIPTION

DRAWN BY: AMH DATE: 04/26/2024
 CHECKED BY: TPW DATE: 04/26/2024
 SHEET TITLE: SITE DIAGRAM

FIGURE 1

TABLE

TABLE 1
 SANITARY SEWER VAPOR ANALYTICAL RESULTS
 Community Within the Corridor-East Block, Milwaukee, WI
 KSingh Project No. 40441

CHEMICAL	VAPOR ACTION LIMITS			Sample ID	SD 222/ IA-1		SD 221/ IA-2		SD 220/ IA-3	
	RESIDENTIAL	SMALL COMMERCIAL	COMMERCIAL / INDUSTRIAL	Location	SMH 25		SMH 26		SMH 19	
				SSGSLs (AF = 0.03)	5/11/2021	3/14-3/21/2024	5/11/2021	3/14-3/21/2024	5/11/2021	3/14-3/21/2024
cis-1,2-Dichloroethene	42	180	<u>180</u>	1,400	0.99	0.20 C	0.38 J	< 0.16 C	2.2	0.70 C
trans-1,2-Dichloroethene	42	180	<u>180</u>	1,400	<0.63	< 0.34 C	<0.63	< 0.34 C	1.4	0.34 C
Tetrachloroethene	42	180	<u>180</u>	1,400	0.78 J	2.4	0.41 J	0.60	1.3	3.3
Trichloroethene	2.1	8.8	<u>8.8</u>	70	7.5	0.33	12	0.51	7.3	2.3

Comments
 All results expressed in micrograms per cubic meter (ug/m³)
 SSGSLs= Sanitary Sewer Gas Screening Levels
 SMH = Sanitary Sewer Manhole
 C = Estimated concentration due to calculated sampling rate.
 J = Indicates result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.
 Reference: U.S. Environmental Protection Agency (U.S. EPA) Regional Screening Level Tables, August 2023
BOLD and underlined indicates detection is above Large Commercial / Industrial Vapor Action Limit (VAL)
BOLD indicated detections above Small Commercial VAL
Italics indicates detection is above Residential VAL
Italics indicates detection is above SSGSLs

ATTACHMENTS

ATTACHMENT A

Passive Sampler Deployment and Retrieval Log

Commissioning Log
 Passive Samplers - Manholes
 Community Within the Corridor - East Block

No.	Name	Location	Date Deployed	Time Deployed	Sampler Location	Date Retrieved	Time Retrieved	Sample Label #	Notes	Initials
1	IA-1	Sanitary Manhole 25	3/14/2024	14:58	String	3/21	7:50	SD222		
2	IA-2	Sanitary Manhole 26	3/14/2024	14:50	String	3/21	7:47	SD221		
3	IA-3	Sanitary Manhole 19	3/14/2024	14:30	String	3/21	7:41	SD220		

ATTACHMENT B

Photographic Log

Sanitary Sewer Vapor Assessment
Community Within the Corridor-East Block
2748 N. 32nd Street, Milwaukee, WI 53208
BRRTS #02-41-263675, FID #241025400
Date of Photographs: March 14, 2024



Photo 1: View of Sanitary Sewer Manhole 19 (IA-3) located along N. 32nd Street.



Photo 2: Sanitary Sewer Manhole 19 (IA-3) with magnets/nylon string for passive vapor sampler support.

Sanitary Sewer Vapor Assessment
Community Within the Corridor-East Block
2748 N. 32nd Street, Milwaukee, WI 53208
BRRTS #02-41-263675, FID #241025400
Date of Photographs: March 14, 2024



Photo 3: Sanitary Sewer Manhole 26 (IA-2) with magnets/nylon string for passive vapor sampler support.



Photo 4: Sanitary Sewer Manhole 25 (IA-1) with magnets/nylon string for passive vapor sampler support.

ATTACHMENT C

Laboratory Analytical Report

4/4/2024

Mr. Robert Reineke
K Singh & Associates
3636 N 124th St

Wauwatosa WI 53222

Project Name: CWC EB

Project #: 40449

Workorder #: 2403634

Dear Mr. Robert Reineke

The following report includes the data for the above referenced project for sample(s) received on 3/25/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Passive S.E. RAD130/SKC are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Jade White
Project Manager

WORK ORDER #: 2403634

Work Order Summary

CLIENT: Mr. Robert Reineke
K Singh & Associates
3636 N 124th St
Wauwatosa, WI 53222

BILL TO: Mr. Robert Reineke
K Singh & Associates
3636 N 124th St
Wauwatosa, WI 53222

PHONE:

FAX:

DATE RECEIVED: 03/25/2024

DATE COMPLETED: 04/04/2024

P.O. #

PROJECT # 40449 CWC EB

CONTACT: Jade White

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	SD222	Passive S.E. RAD130/SKC
02A	SD221	Passive S.E. RAD130/SKC
03A	SD220	Passive S.E. RAD130/SKC
04A	Lab Blank	Passive S.E. RAD130/SKC
05A	CCV	Passive S.E. RAD130/SKC
06A	LCS	Passive S.E. RAD130/SKC
06AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY:



Technical Director

DATE: 04/04/24

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000

LABORATORY NARRATIVE
RAD130 Passive SE by Mod EPA TO-17
K Singh & Associates
Workorder# 2403634

Three Radiello 130 (Solvent) samples were received on March 25, 2024. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

<i>Requirement</i>	<i>TO-17</i>	<i>ATL Modifications</i>
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

To calculate ug/m³ concentrations in the Lab Blank, a sampling duration of 9671 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS**

Client Sample ID: SD222

Lab ID#: 2403634-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.15	0.22	0.33
Tetrachloroethene	0.10	0.18	1.4	2.4
cis-1,2-Dichloroethene	0.10	0.16	0.12 C	0.20 C

Client Sample ID: SD221

Lab ID#: 2403634-02A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.15	0.34	0.51
Tetrachloroethene	0.10	0.18	0.34	0.60

Client Sample ID: SD220

Lab ID#: 2403634-03A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.15	1.5	2.3
Tetrachloroethene	0.10	0.18	1.9	3.3
cis-1,2-Dichloroethene	0.10	0.16	0.42 C	0.70 C



Air Toxics

Client Sample ID: SD222

Lab ID#: 2403634-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c032720sim	Date of Collection:	3/21/24 7:50:00 AM
Dil. Factor:	1.00	Date of Analysis:	3/27/24 04:32 PM
		Date of Extraction:	3/27/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.15	0.22	0.33
Tetrachloroethene	0.10	0.18	1.4	2.4
cis-1,2-Dichloroethene	0.10	0.16	0.12 C	0.20 C
trans-1,2-Dichloroethene	0.20	0.34	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 9652 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130



Air Toxics

Client Sample ID: SD221

Lab ID#: 2403634-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c032721sim	Date of Collection:	3/21/24 7:47:00 AM
Dil. Factor:	1.00	Date of Analysis:	3/27/24 04:59 PM
		Date of Extraction:	3/27/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.15	0.34	0.51
Tetrachloroethene	0.10	0.18	0.34	0.60
cis-1,2-Dichloroethene	0.10	0.16	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.34	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 9657 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

Client Sample ID: SD220

Lab ID#: 2403634-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c032722sim	Date of Collection:	3/21/24 7:41:00 AM
Dil. Factor:	1.00	Date of Analysis:	3/27/24 05:26 PM
		Date of Extraction:	3/27/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.15	1.5	2.3
Tetrachloroethene	0.10	0.18	1.9	3.3
cis-1,2-Dichloroethene	0.10	0.16	0.42 C	0.70 C
trans-1,2-Dichloroethene	0.20	0.34	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 9671 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

Client Sample ID: Lab Blank

Lab ID#: 2403634-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c032705sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/27/24 09:33 AM
		Date of Extraction:	3/27/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.15	Not Detected	Not Detected
Tetrachloroethene	0.10	0.18	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.16	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.34	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 9671 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 2403634-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c032702sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/27/24 08:10 AM
		Date of Extraction:	NA

Compound	%Recovery
Trichloroethene	83
Tetrachloroethene	85
cis-1,2-Dichloroethene	83
trans-1,2-Dichloroethene	86

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	85	70-130

Client Sample ID: LCS

Lab ID#: 2403634-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c032703sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/27/24 08:37 AM
		Date of Extraction:	3/27/24

Compound	%Recovery	Method Limits
Trichloroethene	80	70-130
Tetrachloroethene	76	70-130
cis-1,2-Dichloroethene	78	70-130
trans-1,2-Dichloroethene	86	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

Client Sample ID: LCSD

Lab ID#: 2403634-06AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	c032704sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/27/24 09:04 AM
		Date of Extraction:	3/27/24

Compound	%Recovery	Method Limits
Trichloroethene	80	70-130
Tetrachloroethene	75	70-130
cis-1,2-Dichloroethene	77	70-130
trans-1,2-Dichloroethene	83	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

Passive Sorbent Chain of Custody

2403634

WO#

2403614

u 3/26/24

Case Seal #: _____

Company: K Singh Project #: 40441 P.O. #: _____
 Project Manager: Pratap Singh Project Name: CWC EB
 Contact phone/email: (262) 821-1671 Collected by: Samuel Ramirez

Lab I.D.	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one)				Reporting Units (circle)		Turn Around Time:
							Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	ppbv <u>ug/m3</u>	ppmv mg/m3	µg ng
01A	SD221	IA-1	03/14/24	14:58	03/14/24	7:50	X						TCE, PCE, DCE
02A	SD221	IA-2	↓	14:50	↓	7:47	X						
03A	SD220	IA-3	↓	14:30	↓	7:41	X						

Relinquished by: (signature) [Signature] Date 3/21 Time 15:30
 Received by: (signature) [Signature] Date 3/25/24 Time 4:43
 Relinquished by: (signature) _____ Date _____ Time _____
 Received by: (signature) _____ Date _____ Time _____

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples.

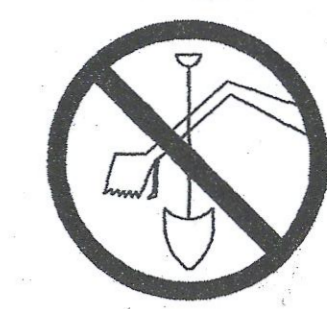
Lab Use Only

Shipper Name: Fedex Custody Seals Intact? Yes No None Sample Condition Upon Receipt: Good SDR
 Air Bill #: _____ Temperature (°C) N/A

ATTACHMENT D

Proposed Utilities Plan

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN



CALL DIGGERS HOTLINE 811 OR 1-800-242-8111 TOLL FREE. WIS. STATUTE 18.07(1)(a) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE. MILWAUKEE AREA 1-414-255-1151

NOTE: The location and size of the underground structures and utilities shown herein have been located to a reasonable degree of accuracy, but the Engineer and/or Surveyor does not guarantee their exact location or the location of others not shown. Contact Diggers Hotline, Inc. Etc.

ABBREVIATIONS:

- AC = ACRES
ARC = ARC OF CURVE
ASPH = ASPHALT
BENCH = BENCHMARK
CH = CHORD LENGTH
CSM = CERTIFIED SURVEY MAP OR MAPPING CORNER
C.T.H. = COUNTY TRUNK HIGHWAY
DEG = DEGREE OF CURVE
E = EAST
EL = ELEVATION
EX. = EXISTING
EXC. = EXCEPTION
FINISH = FINISH FLOOR EL
FRD = FOUND
GFE = CHANGE FLOOR EL
GND = GROUND
IRD = IRON ROD
IP = IRON PIPE
INVERT = INVERT
MEA = MEASURED
NAD = NORTH AMERICAN DATUM
N = NORTH
NE = NORTHEAST
NW = NORTHWEST
QTR = QUARTER
REC = RECORDED AS
RIM = RIM OR TOP POINT
RW = RIGHT OF WAY
S = SOUTH
SE = SOUTHEAST
SEVPC = SOUTHEAST WISCONSIN REGIONAL PLANNING COMMISSION

LEGEND:

- SECTION CORNER MONUMENT
EX. CHISELED CROSS FOUND
EX. IRON ROD FOUND
EX. IRON PIPE FOUND
EX. CITY OR SITE BENCHMARK
EX. STORM MANHOLE
EX. CATCH BASIN ROUND
EX. CATCH BASIN SQUARE
EX. FLOOD LAMP
EX. FLAG LIGHT
EX. FLAG POLE
EX. GAS VALVE
EX. AIR CONDITIONER
EX. ELECTRIC METER
EX. GAS METER
EX. ELECTRIC PEDESTAL
EX. TELEPHONE PEDESTAL
EX. CLEANOUT
EX. POWER POLE
EX. POWER / TELEPHONE POLE
EX. MONITORING WELL OR CORING
EX. MAILBOX
EX. SANITARY MANHOLE
EX. UNKNOWN MANHOLE
EX. COMBINED SEWER MANHOLE
EX. ELECTRIC MANHOLE
EX. ELECTRIC TRANSFORMER
EX. TELEPHONE MANHOLE
EX. GUY WIRE
EX. LIGHT POLE
EX. SIGN
EX. BOLLARD (BOL)
EX. HYDRANT
EX. SWISSE HYDRANT
EX. OVERHEAD WIRES
EX. BUREAU OF ELECTRICAL SERVICES
EX. UG. COMBINED SEWER
EX. CITY UG. CONDUIT/CUMM
EX. UG. COMMUNICATIONS
EX. UG. TELEPHONE
EX. UG. GAS
EX. UG. ELECTRIC
EX. UG. FIBER OPTICS
EX. UG. CABLE TELEVISION
EX. SANITARY SEWER (SAN)
EX. STORM SEWER (STO)
EX. WATER MAIN
EX. TREE LINE
EX. FENCE LINE
EX. RETAINING WALL
EX. STEEL RAILING
PROP. SANITARY SEWER LINE
PROP. STORM SEWER LINE
PROP. WATER SERVICE LINE
PROP. HYDRANT AND SERVICE VALVE
PROP. CLEANOUT & MANHOLE
PROP. STORM CATCH BASIN ROUND & SQUARE (CBR & CBS)

LEGEND:

- EX. BORING LOCATION
EX. DECIDUOUS TREE
EX. CONIFEROUS TREE

UNDERGROUND COMBUSTIBLE GAS LINE

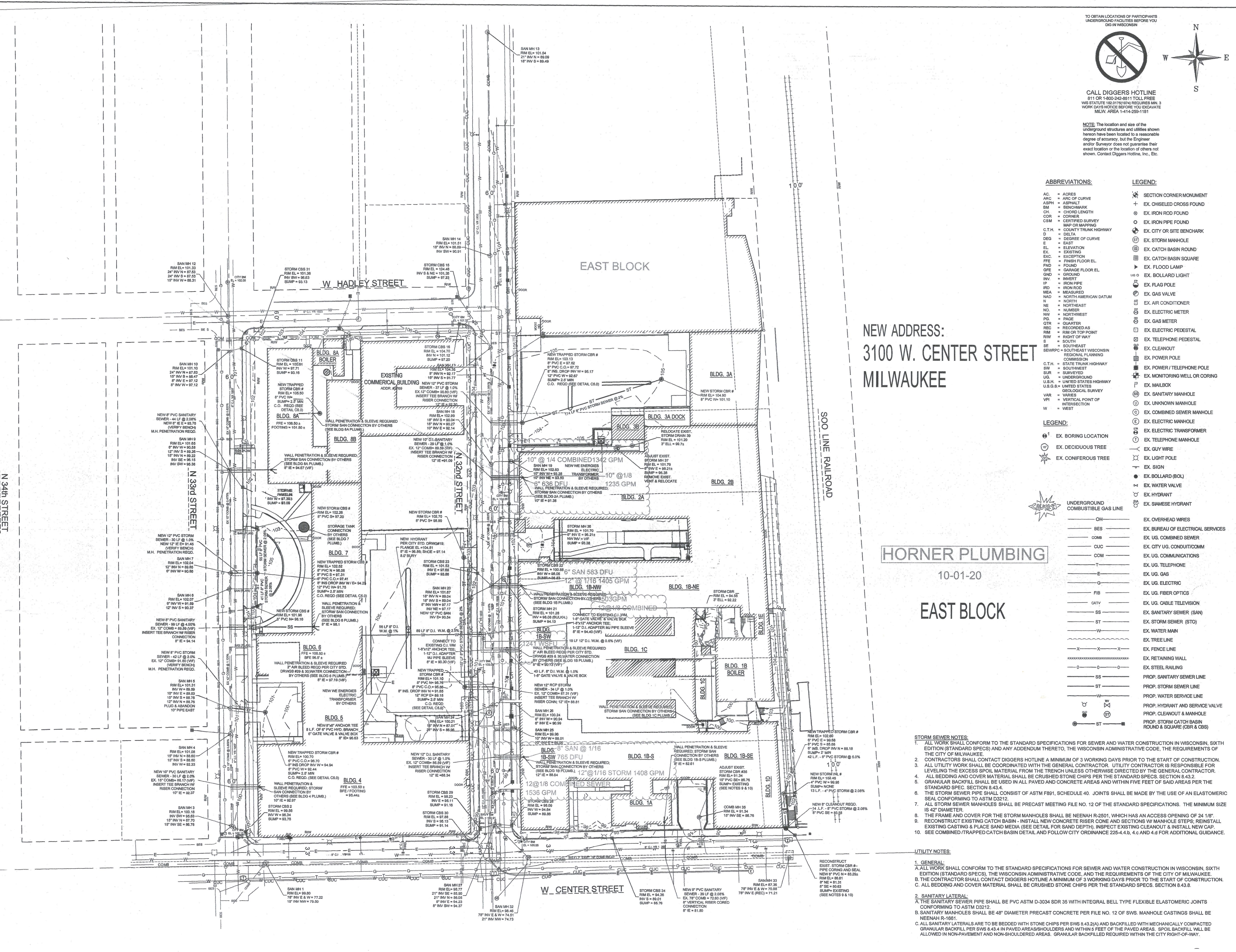
- OH = OVERHEAD WIRES
BES = BUREAU OF ELECTRICAL SERVICES
UGM = UG. COMBINED SEWER
CUC = CITY UG. CONDUIT/CUMM
COM = UG. COMMUNICATIONS
T = UG. TELEPHONE
E = UG. GAS
G = UG. ELECTRIC
FIB = UG. FIBER OPTICS
CATV = UG. CABLE TELEVISION
SS = EX. SANITARY SEWER (SAN)
ST = EX. STORM SEWER (STO)
W = EX. WATER MAIN
EX. TREE LINE
EX. FENCE LINE
EX. RETAINING WALL
EX. STEEL RAILING
PROP. SANITARY SEWER LINE
PROP. STORM SEWER LINE
PROP. WATER SERVICE LINE
PROP. HYDRANT AND SERVICE VALVE
PROP. CLEANOUT & MANHOLE
PROP. STORM CATCH BASIN ROUND & SQUARE (CBR & CBS)

NEW ADDRESS: 3100 W. CENTER STREET MILWAUKEE

HORNER PLUMBING

10-01-20

EAST BLOCK



- STORM SEWER NOTES:
1. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, SIXTH EDITION (STANDARD SPECS) AND ANY ADDENDUM THERETO, THE WISCONSIN ADMINISTRATIVE CODE, THE REQUIREMENTS OF THE CITY OF MILWAUKEE.
2. CONTRACTORS SHALL CONTACT DIGGERS HOTLINE A MINIMUM OF 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. CONTRACTORS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. UTILITY CONTRACTOR IS RESPONSIBLE FOR LEVELING THE EXCESS SPOIL MATERIAL FROM THE TRENCH UNLESS OTHERWISE DIRECTED BY THE GENERAL CONTRACTOR.
3. ALL BEDDING AND COVER MATERIAL SHALL BE CRUSHED STONE CHIPS PER THE STANDARD SPECS. SECTION 8.4.3.2.
4. ALL BEDDING AND COVER MATERIAL SHALL BE CRUSHED STONE CHIPS PER THE STANDARD SPECS. SECTION 8.4.3.2.
5. GRANULAR BACKFILL SHALL BE USED IN ALL PAVED AND CONCRETE AREAS AND WITHIN FIVE FEET OF SAID AREAS PER THE STANDARD SPEC. SECTION 8.4.3.4.
6. THE STORM SEWER PIPE SHALL CONSIST OF ASTM F891, SCHEDULE 40. JOINTS SHALL BE MADE BY THE USE OF AN ELASTOMERIC SEAL CONFORMING TO ASTM D3212.
7. ALL STORM SEWER MANHOLES SHALL BE PRECAST MEETING FILE NO. 12 OF THE STANDARD SPECIFICATIONS. THE MINIMUM SIZE IS 42" DIAMETER.
8. THE FRAME AND COVER FOR THE STORM MANHOLES SHALL BE NEMAH R-2501, WHICH HAS AN ACCESS OPENING OF 24" 1/8".
9. RECONSTRUCT EXISTING CATCH BASIN - INSTALL NEW CONCRETE RISER CONE AND SECTIONS WITH MANHOLE STEPS; REINSTATE EXISTING CASTING & PLACE SAND MEDIA (SEE DETAIL FOR SAND DEPTH). INSPECT EXISTING CLEANOUT & INSTALL NEW CAP.
10. SEE COMBINED/TRAPPED CATCH BASIN DETAIL AND FOLLOW CITY ORDINANCE 225-4.4.b, 4.c AND 4.d FOR ADDITIONAL GUIDANCE.

- UTILITY NOTES:
1. GENERAL
A. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, SIXTH EDITION (STANDARD SPECS), THE WISCONSIN ADMINISTRATIVE CODE, AND THE REQUIREMENTS OF THE CITY OF MILWAUKEE.
B. THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE A MINIMUM OF 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
C. ALL BEDDING AND COVER MATERIAL SHALL BE CRUSHED STONE CHIPS PER THE STANDARD SPECS. SECTION 8.4.3.
2. SANITARY LATERAL
A. THE SANITARY SEWER PIPE SHALL BE PVC ASTM D-3034 SDR 35 WITH INTEGRAL BELL TYPE FLEXIBLE ELASTOMERIC JOINTS CONFORMING TO ASTM D3212.
B. SANITARY MANHOLES SHALL BE 48" DIAMETER PRECAST CONCRETE PER FILE NO. 12 OF SWS. MANHOLE CASTINGS SHALL BE NEMAH R-1691.
C. ALL SANITARY LATERALS ARE TO BE BEDDED WITH STONE CHIPS PER SWS 8.4.3.2(A) AND BACKFILLED WITH MECHANICALLY COMPACTED GRANULAR BACKFILL PER SWS 8.4.3.4 IN PAVED AREAS/SHOULDERS AND WITHIN 5 FEET OF THE PAVED AREAS. SPOIL BACKFILL WILL BE ALLOWED IN NON-PAVED AND NON-SHOULDERED AREAS. GRANULAR BACKFILL REQUIRED WITHIN THE CITY RIGHT-OF-WAY.

COPYRIGHT NOTICE
THIS DRAWING IS THE PROPERTY OF HORNER PLUMBING, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. ALL RIGHTS RESERVED.
COPYRIGHT 2020 HORNER PLUMBING, INC. ALL RIGHTS RESERVED.

ROERS CO. / CONTINUUM DEVELOPMENT
DRAWN BY: RJD | CHECKED BY: P.J.L. | JOB NUMBER: 20-0099 | DATE: MARCH 27, 2020 | PAGE NUMBER: 01
MILWAUKEE - 1000 | EPOCH NUMBER: MILWAUKEE 1010

JAHNKE & JAHNKE
ENGINEERS & ARCHITECTS
1711 WEST WASHINGTON AVENUE, MILWAUKEE, WISCONSIN 53233
TEL: 414-224-4444 FAX: 414-224-4445
WWW.JAHNKEANDJAHNKE.COM

RE: COMMUNITY WITHIN THE CORRIDOR
PROPOSED UTILITIES PLAN
ADDRESS: 3212 WEST CENTER STREET
PART OF THE NE 1/4 OF SECTION 13, T 07 N, R 12 E CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN

REVISIONS
07/29/2020 50% SUBMITTAL
08/05/2020 65% SUBMITTAL