

NOTICE TO RESIDENTS/BUSINESSES



Board of Water Supply

Factory Street Environmental Study

From February 19–27, a Board of Water Supply (BWS) contractor will be conducting an environmental study in a four-block area bordered by Kopke St., Stanley St., Puuhale Rd., and N. King St. Work will also include Pulaa Lane (A map is included on the reverse side of this sheet).

- The purpose of the study is to define the extent of any lead contamination in the ground by analyzing soil samples within this area.
- About 30 boreholes will be drilled along each street in the affected area.
 - No on-street parking will be allowed on the street scheduled for drilling that day. “No Parking” signs will be posted for each street at least 48 hours in advance.
 - Streets will remain open, with traffic control measures.
- The drill used will minimize dust disturbance at each borehole.
 - Drilling will result in loud noises at each location.
 - Each hole will take about 20 minutes to drill.
 - Daily work is scheduled between 8:30 a.m. to 3:30 p.m., Monday–Friday.
- The road will be restored to its prior condition when the work is completed.

For questions, please contact the BWS Communications Office at 748-5041 or email ContactUs@hbws.org. While the work is on-going, you may speak with a BWS staff person who will be on site to help address community questions and concerns.



630 S. Beretania St., Honolulu, HI 96843
www.boardofwatersupply.com

TROUBLE CALL: (808) 748-5000

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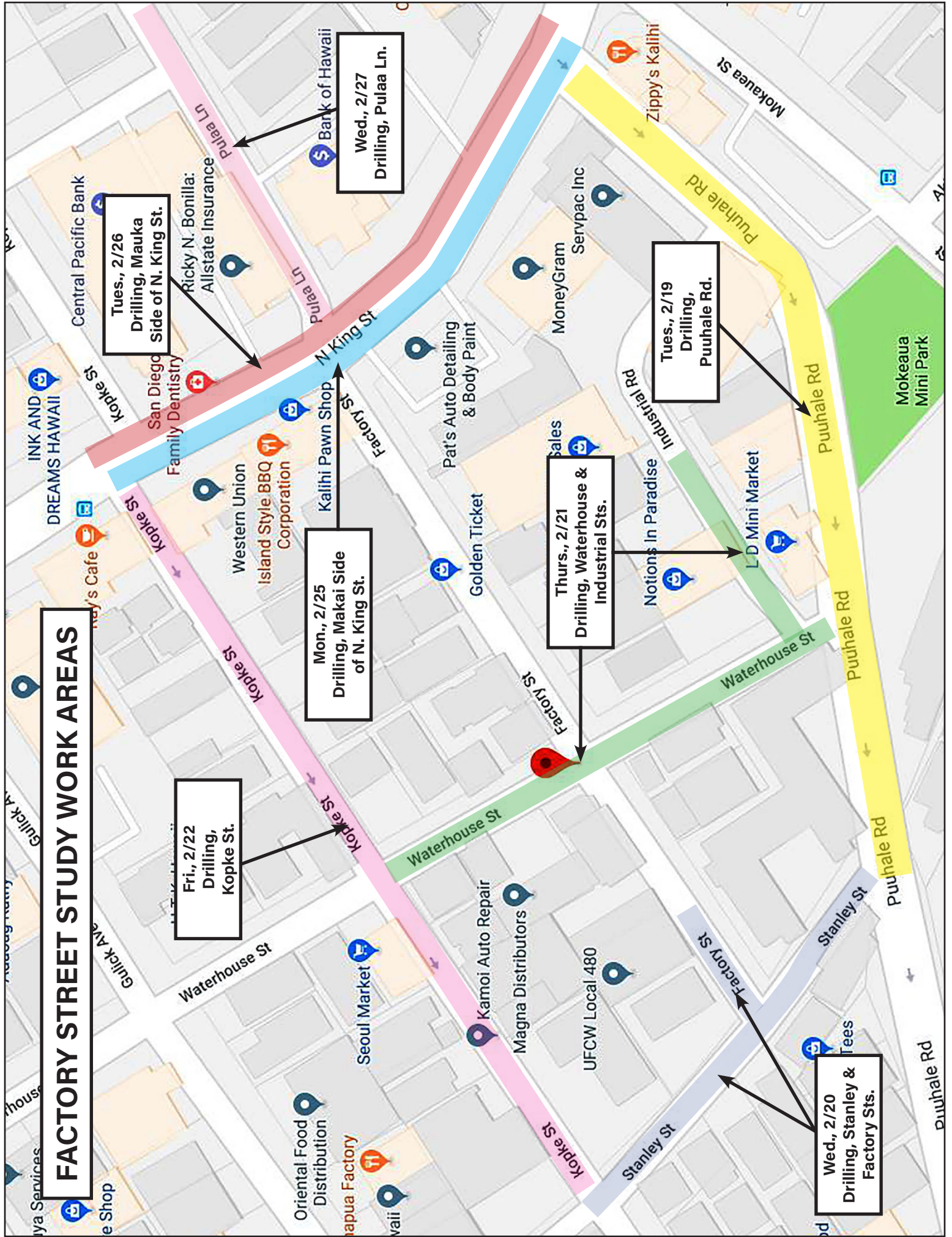
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FACTORY STREET STUDY WORK AREAS



Pease, Amanda

From: Erwin Kawata <EKAWATA@hbws.org>
Sent: Friday, May 17, 2019 1:37 PM
To: vanderZander, Iris; Pease, Amanda; John Farmer
Cc: Carrier, Shawn; Moxley, Bret; Grange, Gabrielle Fenix; Lester Fujikami; Jason Takaki; Eva Kakone
Subject: RE: Kalihi Water System Improvements, Part III Factory St Plan - Profile
Attachments: FactoryStreetResults-draft.pdf; FieldSchedule-OnBoreholeMaps-11Feb2019.pdf; 190212 Factory St Flier.pdf

Iris

The purpose of the Factory Street investigation was to assess the concentrations of lead in subsurface soil to identify potential construction worker hazards and plan construction worker safety procedures, if necessary, during excavations needed in the event of a water main break. Multi-increment soil samples were collected and composited from seven decision units (DUs) established based on individual streets within the Area of Concern as designated by HDOH (See attached map). Each DU included the interval of soil between the ground surface (excluding asphalt) and 5 feet below ground surface (bgs). Within each DU, 30 boreholes were advanced to 5 feet bgs, and 5 increments were collected from each borehole (There were no trenches dug in the street.) for a total of 150 increments per DU. These samples were collected, then composited and sent for analysis. Replicate samples, including primary, duplicate and triplicate samples were collected from one DU for field quality assurance/quality control purposes. The report and analysis is still undergoing finalization. However, attached is the draft results of the composite samples (see attached).

The figures that were previously provided by John Farmer were created to notify Factory Street residents of upcoming field activities. (See attached). The Meter Box Report activities were completed to determine if BWS workers had a potential for exposure while performing activities at the meter boxes. That report was sent earlier.

Erwin

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From: vanderZander, Iris [mailto:iris.vanderzander@doh.hawaii.gov]
Sent: Thursday, May 16, 2019 6:04 PM
To: Erwin Kawata <EKAWATA@hbws.org>; Pease, Amanda <pease.amanda@epa.gov>; John Farmer <JFarmer@hbws.org>
Cc: Carrier, Shawn <shawn.carrier@westonsolutions.com>; Moxley, Bret <moxley.bret@epa.gov>; Grange, Gabrielle Fenix <gabrielle.grange@doh.hawaii.gov>; Lester Fujikami <LFUJIKAMI@hbws.org>; Jason Takaki <JTAKAKI@hbws.org>; Eva Kakone <ekakone@hbws.org>
Subject: RE: Kalihi Water System Improvements, Part III Factory St Plan - Profile

Hi Erwin,

With "Kalihi Area Lead Trench Data" we mean results related to the attached investigation by EA for BWS. EA indicated these samples were collected to collect MI samples that are representative of exposure to workers in trenches. I hope this clarifies it.

Iris

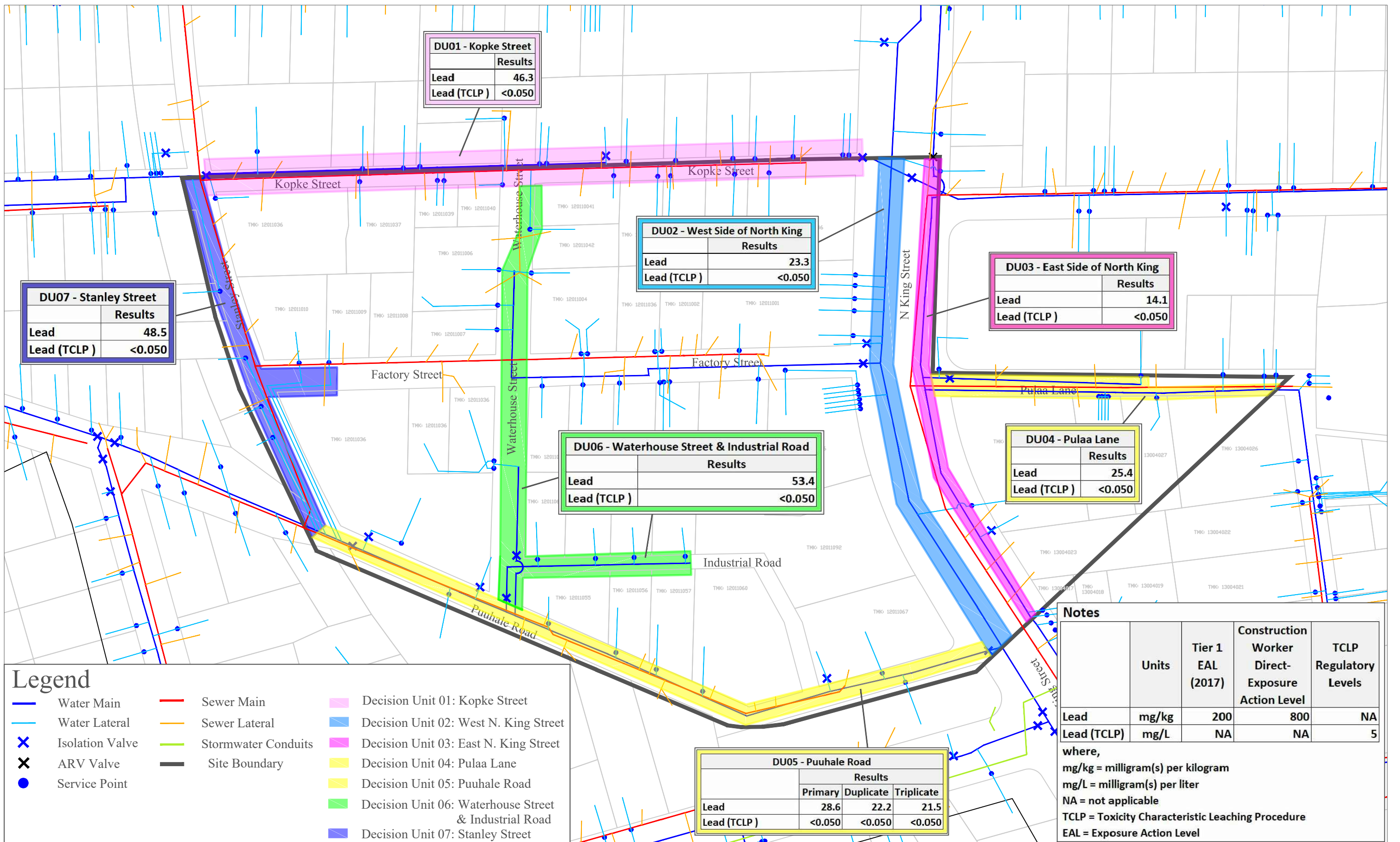


Figure 4
Decision Unit Locations and
Analytical Results for Soil Samples

Table 1 - Analytical Results for Soil Samples
Board of Water Supply
Factory Street Subsurface Environmental Assessment

DRAFT

Sample Identifier Sample Date Sample Location Sample Type Sample Depth (feet below ground surface)						BWS-FS-DU01 22-Feb-2019 Kopke Street ISM 0-5		BWS-FS-DU02 25-Feb-2019 West Side of North King Street ISM 0-5		BWS-FS-DU03 26-Feb-2019 East Side of North King Street ISM 0-5		BWS-FS-DU04 27-Feb-2019 Pulaa Lane ISM 0-5		BWS-FS-DU05 28-Feb-2019 Puuhale Road ISM 0-5		BWS-FS-DU06 21-Feb-2019 Waterhouse Street & Industrial Road ISM 0-5		BWS-FS-DU07 20-Feb-2019 Stanley Street ISM 0-5	
Analyte	CASRN	Units	Tier 1 EAL (2017) ¹	Construction Worker Direct-Exposure Action Level ²	TCLP Regulatory Levels ³	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Total Metals (SW6010B)																			
Lead	7439-92-1	mg/kg	200	800	NA	46.3		23.3		14.1		25.4		28.6		53.4		48.5	
TCLP Metals (SW1311/6010B)																			
Lead	7439-92-1	mg/L	NA	NA	5.0	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	

Notes:

Results shown in bold have been positively identified, but are below the criteria listed or standards have not been published.

Results shown in bold and highlighted blue equal or exceed one or more of the screening levels.

¹ State of Hawaii Department of Health Tier I Environmental Action Level (EALs) Groundwater is a Current or Potential Source of Drinking Water (>150 meter to surface water body) presented in Table A-1 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

² State of Hawaii Department of Health Direct-Exposure Action Level, Construction/Trench Worker Exposure Scenario presented in Table I-3 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

³ Regulatory levels for the Toxicity Characteristic (40 Code of Federal Regulations Part 261.24).

< = analyte not detected below the limit of detection.

CASRN = Chemical Abstracts Service Registry No.

ISM = incremental sampling method NA = not applicable

mg/kg = milligram(s) per kilogram Q = qualifier

mg/L = milligram(s) per liter TCLP = Toxicity Characteristic Leaching Procedure

Data Qualifiers:

J = The analyte was positively identified; the quantitation is estimated.

UJ = The analyte was not detected; however, the quantitation limit is estimated due to discrepancies in the associated quality control criteria.

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Table 2 - Analytical Results for Replicate Soil Samples

Board of Water Supply

Factory Street Subsurface Environmental Assessment

						Sample Identifier	BWS-FS-DU05		BWS-FS-DU08		BWS-FS-DU09	
						Sample Date	28-Feb-2019		28-Feb-2019		28-Feb-2019	
						Sample Description	Normal - Puuhale Road		Field Duplicate - Puuhale Road		Field Triplicate - Puuhale Road	
						Sample Type	ISM		ISM		ISM	
						Sample Depth (feet below ground surface)	0-5		0-5		0-5	
Analyte	CASRN	Units	Tier 1 EAL (2017) ¹	Construction Worker Direct- Exposure Action Levels ²	TCLP Regulatory Levels ³	Results	Q	Results	Q	Results	Q	
Total Metals (SW6010B)												
Lead	7439-92-1	mg/kg	200	800	NA	28.6		22.2		21.5		
TCLP Metals (SW1311/6010B)												
Lead	7439-92-1	mg/L	NA	NA	5.0	<0.050		<0.050		<0.050		

Notes:

Results shown in bold have been positively identified, but are below the criteria listed or standards have not been published.

Results shown in bold and highlighted blue equal or exceed one or more of the screening levels.

¹ State of Hawaii Department of Health Tier I Environmental Action Levels (EALs), Groundwater is a Current or Potential Source of Drinking Water (>150 meter to surface water body) presented in Table A-1 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

² State of Hawaii Department of Health Direct-Exposure Action Level, Construction/Trench Worker Exposure Scenario presented in Table I-3 of the Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Fall 2017 Edition).

³ Regulatory levels for the Toxicity Characteristic (40 Code of Federal Regulations Part 261.24).

< = analyte not detected below the limit of detection.

CASRN = Chemical Abstracts Service Registry No.

ISM = incremental sampling method

mg/kg = milligram(s) per kilogram

mg/L = milligram(s) per liter

NA = not applicable

Q = qualifier

TCLP = Toxicity Characteristic Leaching Procedure

Data Qualifiers:

J = The analyte was positively identified; the quantitation is estimated.

UJ = The analyte was not detected; however, the quantitation limit is estimated due to discrepancies in the associated quality control criteria.

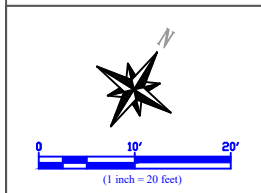
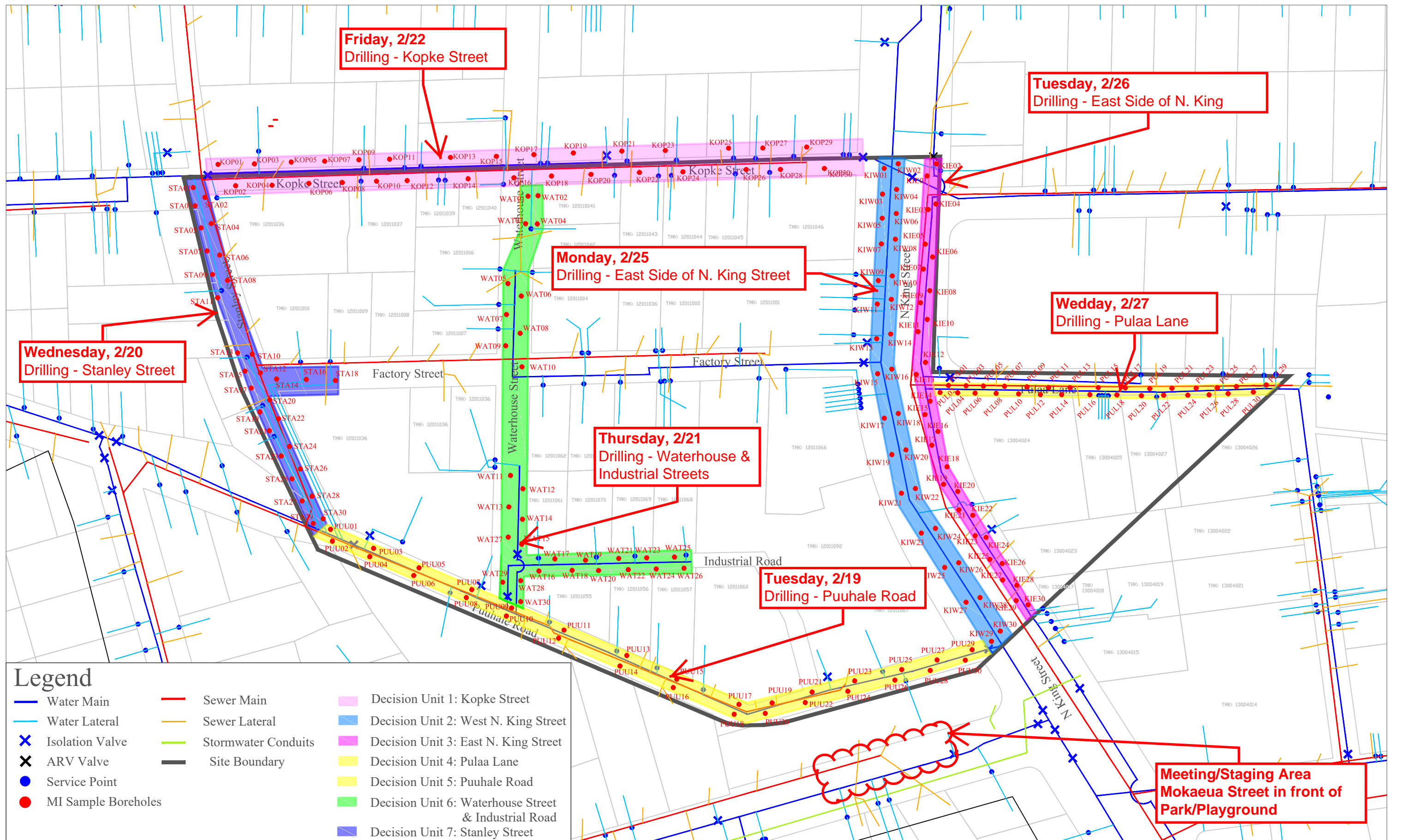
Table 3 - 95 Percent Upper Confidence Level Calculations for Replicate Samples

Board of Water Supply

Factory Street Subsurface Environmental Assessment

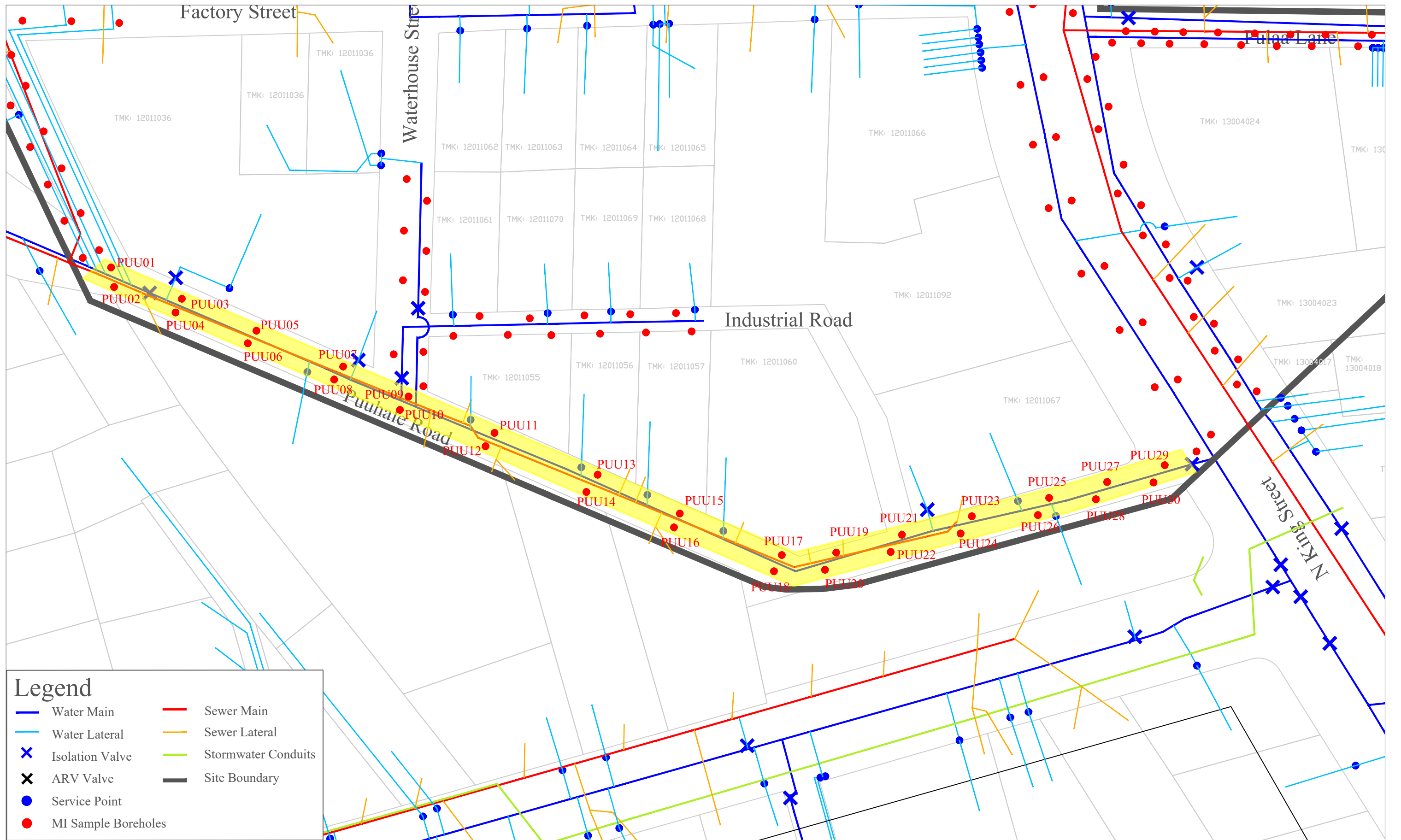
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Analyte	EPA Method	Sample Identification	Sample Type	Result (mg/kg)	Relative Percent Difference		Mean (mg/kg)	Standard Deviation	Relative Standard Deviation	95% UCL Calculations			Comment
					Primary and Duplicate	Primary and Triplicate				Number of samples	t value	95% UCL	
Lead	6010B	BWS-FS-DU05	Normal	28.6	25%	28%	24.1	3.9	16%	3	2.92	30.7	The data indicates that there is 95% confidence that the true mean for Lead does not exceed 30.7 mg/kg within this Decision Unit
		BWS-FS-DU08	Duplicate	22.2									
		BWS-FS-DU09	Triplicate	21.5									
NOTES: mg/kg milligram(s) per kilogram RPD relative percent difference UCL upper confidence level % percent													



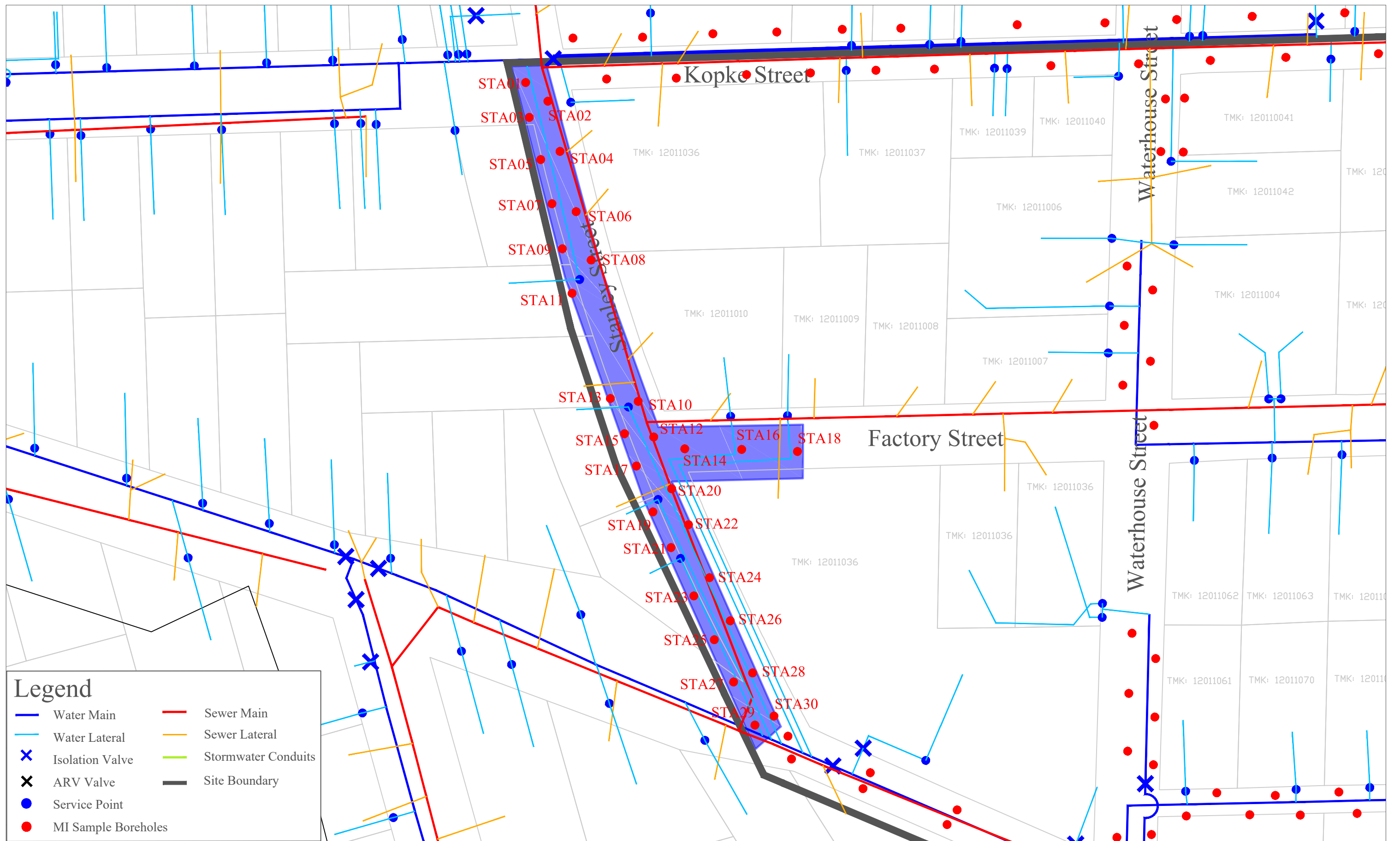
Board of Water Supply Factory Street Investigation
Factory Street, Honolulu, HI

Fieldwork Schedule



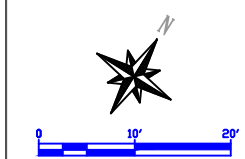
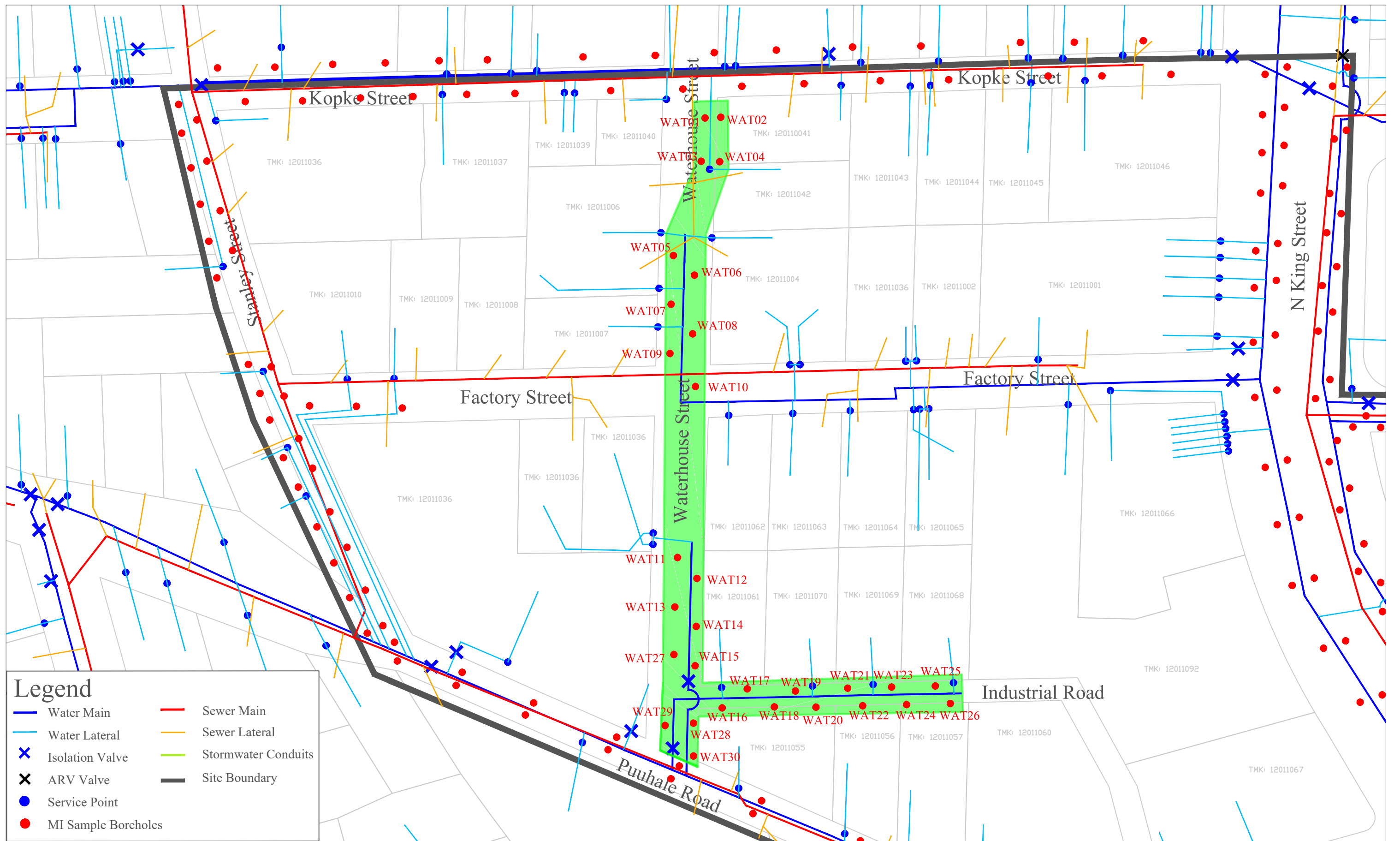
Tuesday - February 19
Drilling - Puuhale Road

Decision Unit 5
Puuhale Road



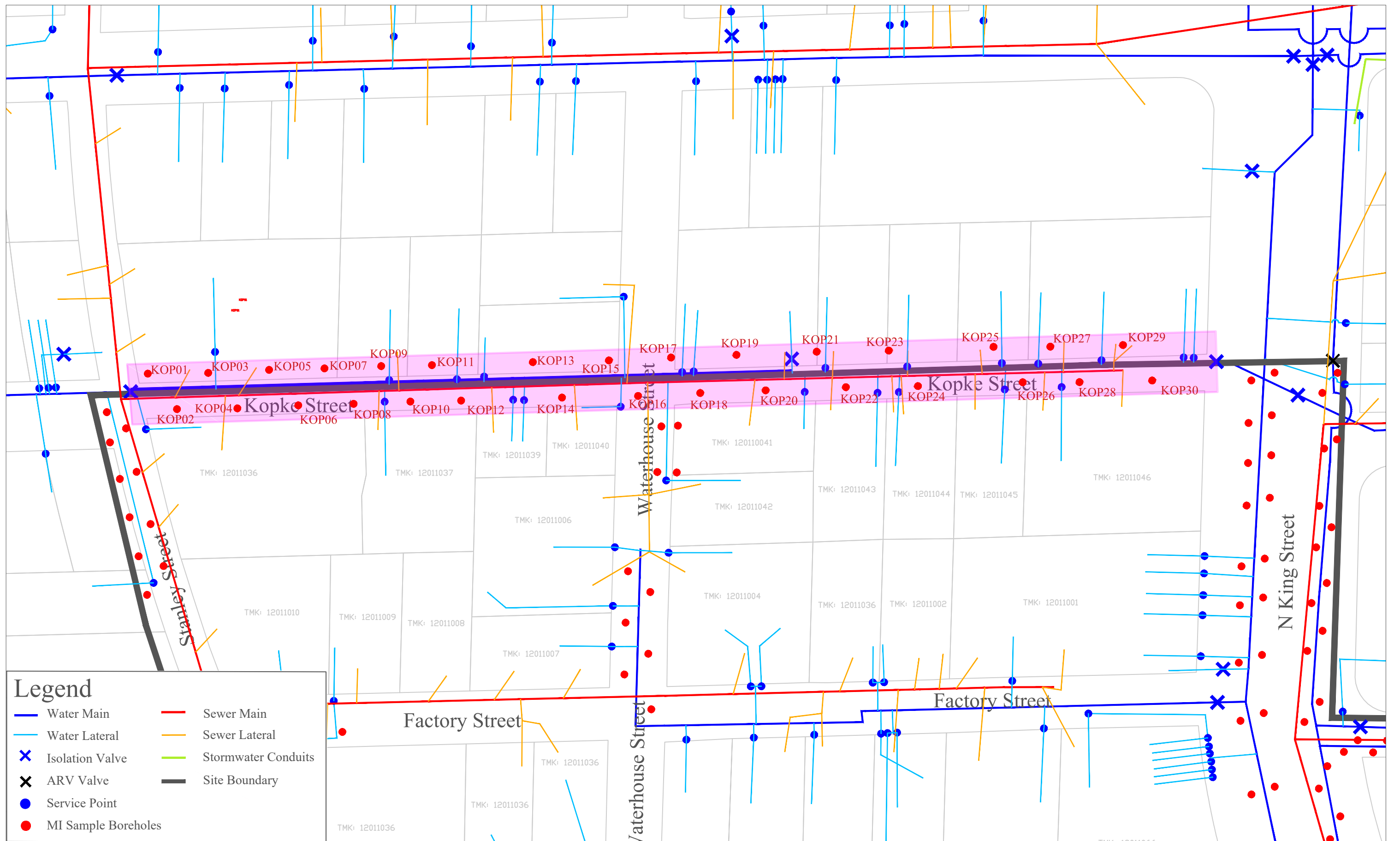
Legend

Water Main	Sewer Main
Water Lateral	Sewer Lateral
Isolation Valve	Stormwater Conduits
ARV Valve	Site Boundary
Service Point	
MI Sample Boreholes	



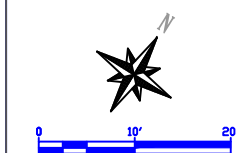
Thursday - February 21
Drilling - Waterhouse & Industrial Streets

Decision Unit 6
Waterhouse Street & Industrial Road



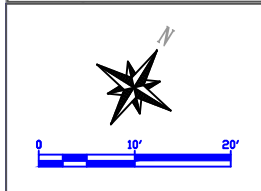
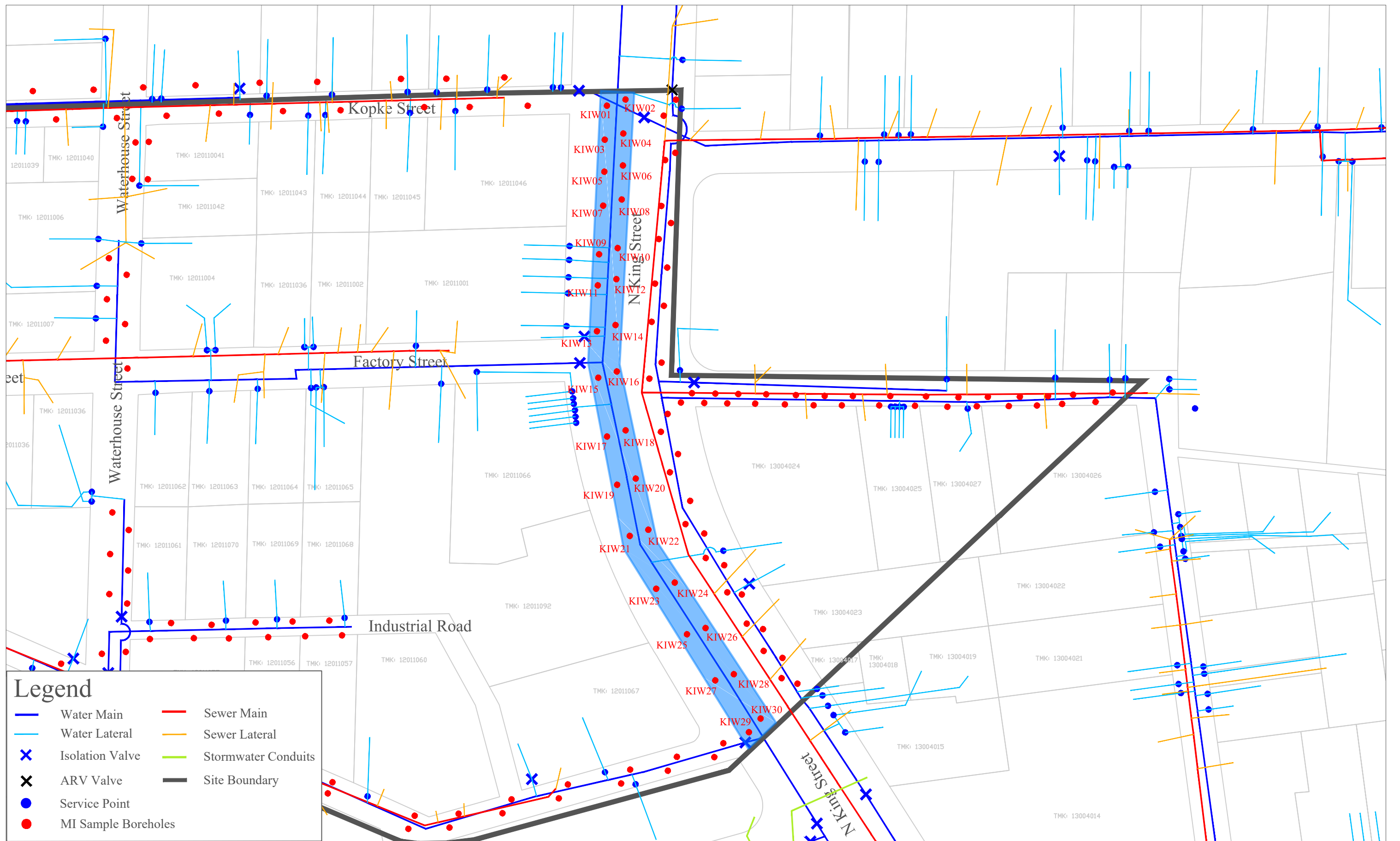
Legend

- | | |
|-----------------------|-----------------------|
| — Water Main | — Sewer Main |
| — Water Lateral | — Sewer Lateral |
| × Isolation Valve | — Stormwater Conduits |
| × ARV Valve | — Site Boundary |
| ● Service Point | |
| ● MI Sample Boreholes | |



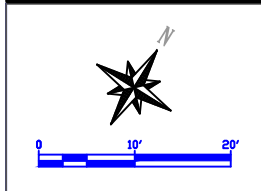
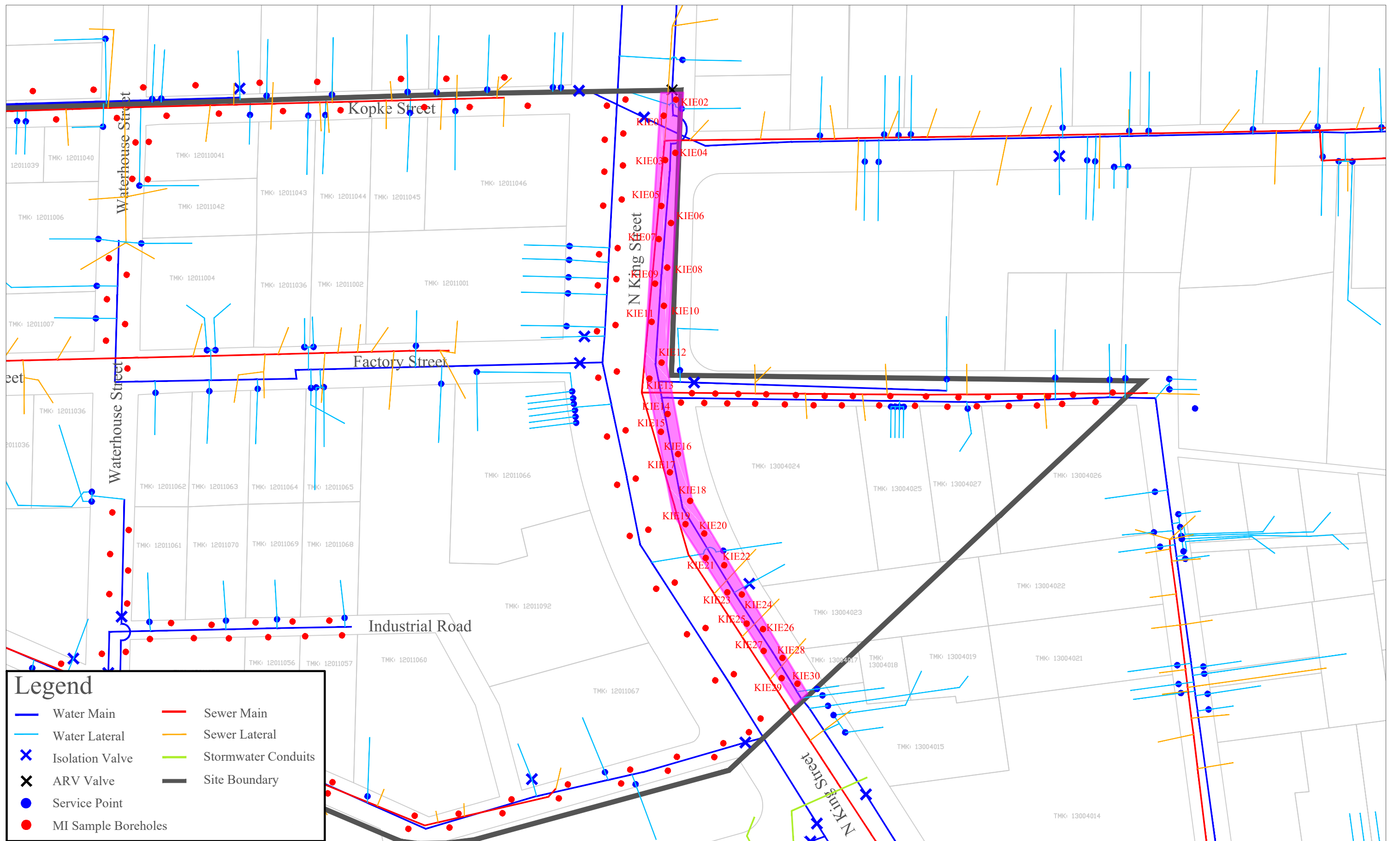
Friday - February 22
Drilling - Kopke Street

Decision Unit 1
Kopke Street



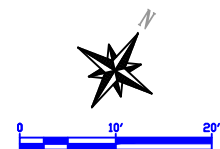
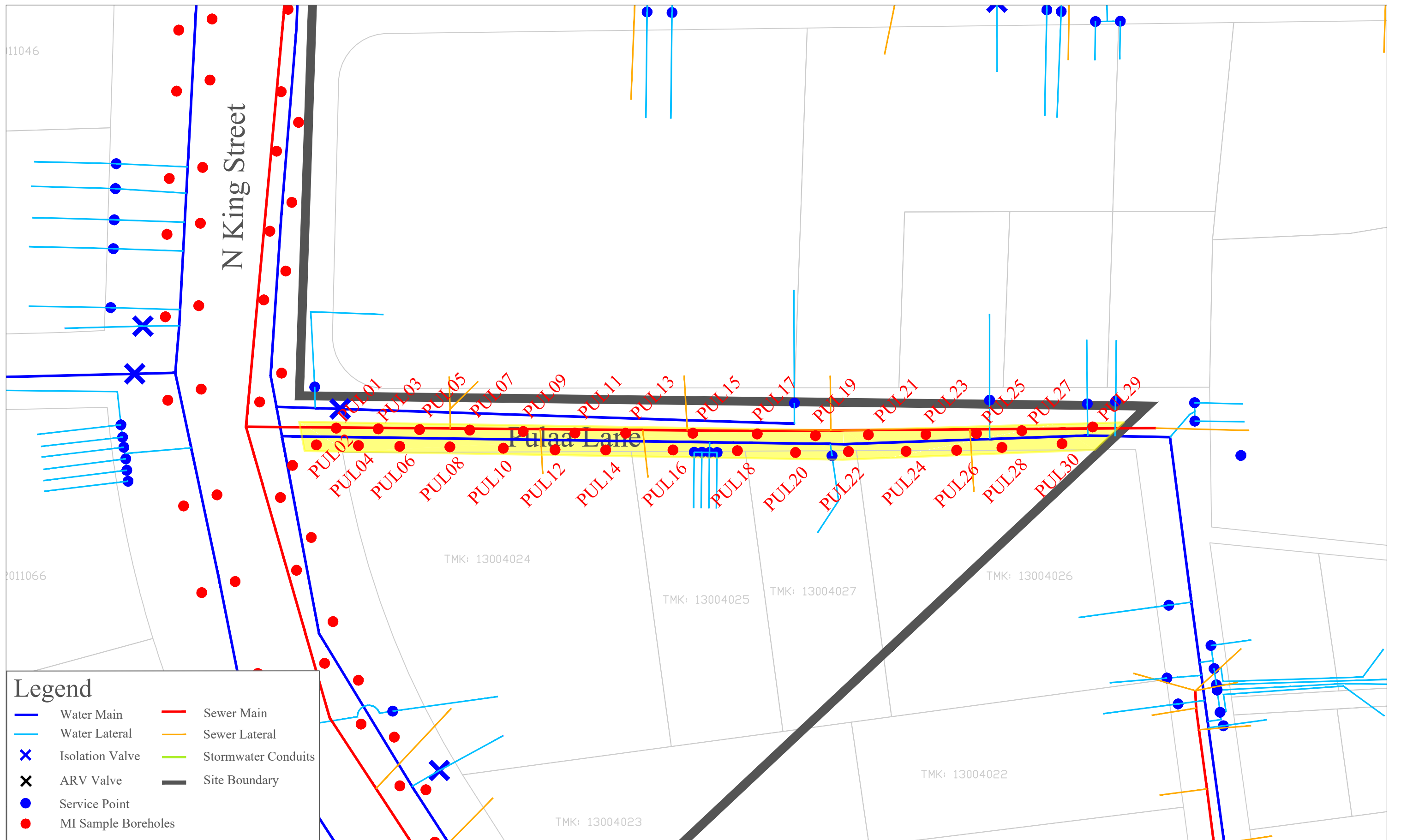
Monday - February 25
Drilling - West Side of N. King Street

Decision Unit 2
West Side of N. King Street



Tuesday - February 26
 Drilling - East Side of N. King Street

Decision Unit 3
 East side of N. King Street



Wednesday - February 27
Drilling - Pulaa Lane

Decision Unit 4
Pulaa Lane