



Rose & Westra
A Division of GZA

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION
MANAGEMENT

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Sent Via Email: hendershotta@michigan.gov

File No. 16.0062335.52

June 29, 2018

Ms. Abigail Hendershott
District Supervisor – Remediation and Redevelopment Division
Michigan Department of Environmental Quality (MDEQ)
350 Ottawa Avenue NW #10
Grand Rapids, MI 49503

Re: Wolverine World Wide, Inc. – House Street Source Investigation Work Plan (SIWP)
Supplemental Information

Dear Ms. Hendershott:

On behalf of Wolverine World Wide, Inc. (Wolverine), this letter is a supplemental response to your May 31, 2018 letter¹ to Wolverine. The House Street SIWP was submitted on June 8, 2018.

This supplemental letter includes items 2b (Site cross sections, note these cross sections were also submitted in the June 29, 2018 CSM Progress Report) and 2a (Site isoconcentration maps).

No other relevant PFAS information associated with the House Street Disposal Area (per item 2d) was identified.

If you have any questions, please feel free to contact us.

Very truly yours,

Rose & Westra, a Division of GZA GeoEnvironmental, Inc.

Mark A. Westra
Associate Principal

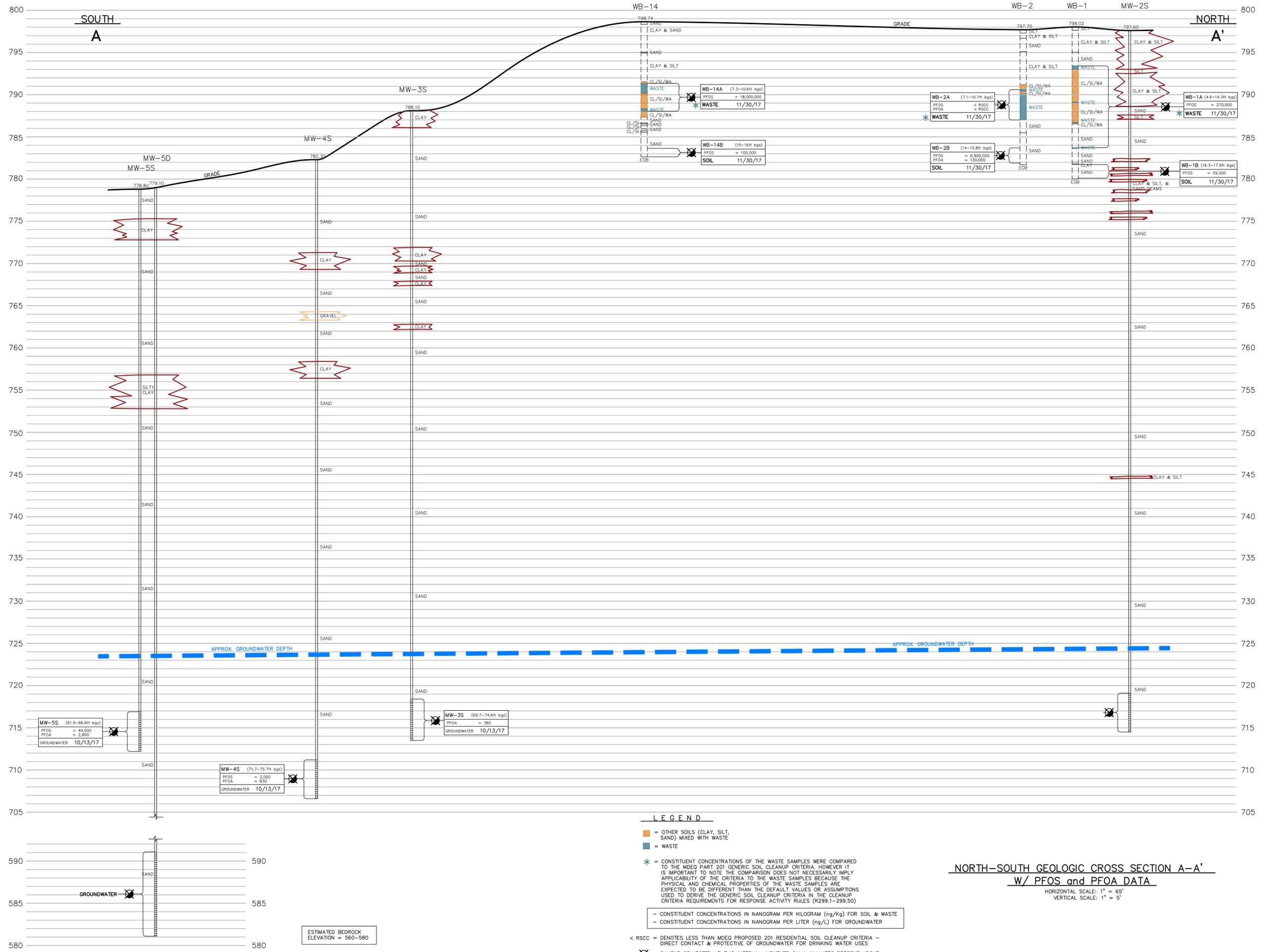
Loretta J. Powers
Senior Project Manager/Consultant Reviewer

c: Mr. Dave Latchana – Wolverine Worldwide, Inc. via email David.Latchana@wwwinc.com
Mr. John V. Byl – Warner Norcross & Judd LLP via email jbyl@wnj.com

Enclosures: Isoconcentration Maps (2 pages) and Cross Sections (10 total pages)

¹ Letter by MDEQ titled “House Street Disposal Area – Wolverine World Wide, Inc. (Wolverine) Per- and Polyfluoroalkyl Substances (PFAS) Response to “Draft Removal Work Plan for House Street Disposal Area, Plainfield Township, Kent County, Michigan: Approval with Significant Modifications dated April 19, 2018” hereafter named “Extent of Contamination Study Removal Work Plan, House Street Disposal Area, Plainfield Township, Kent County, Michigan” dated May 18, 2018”





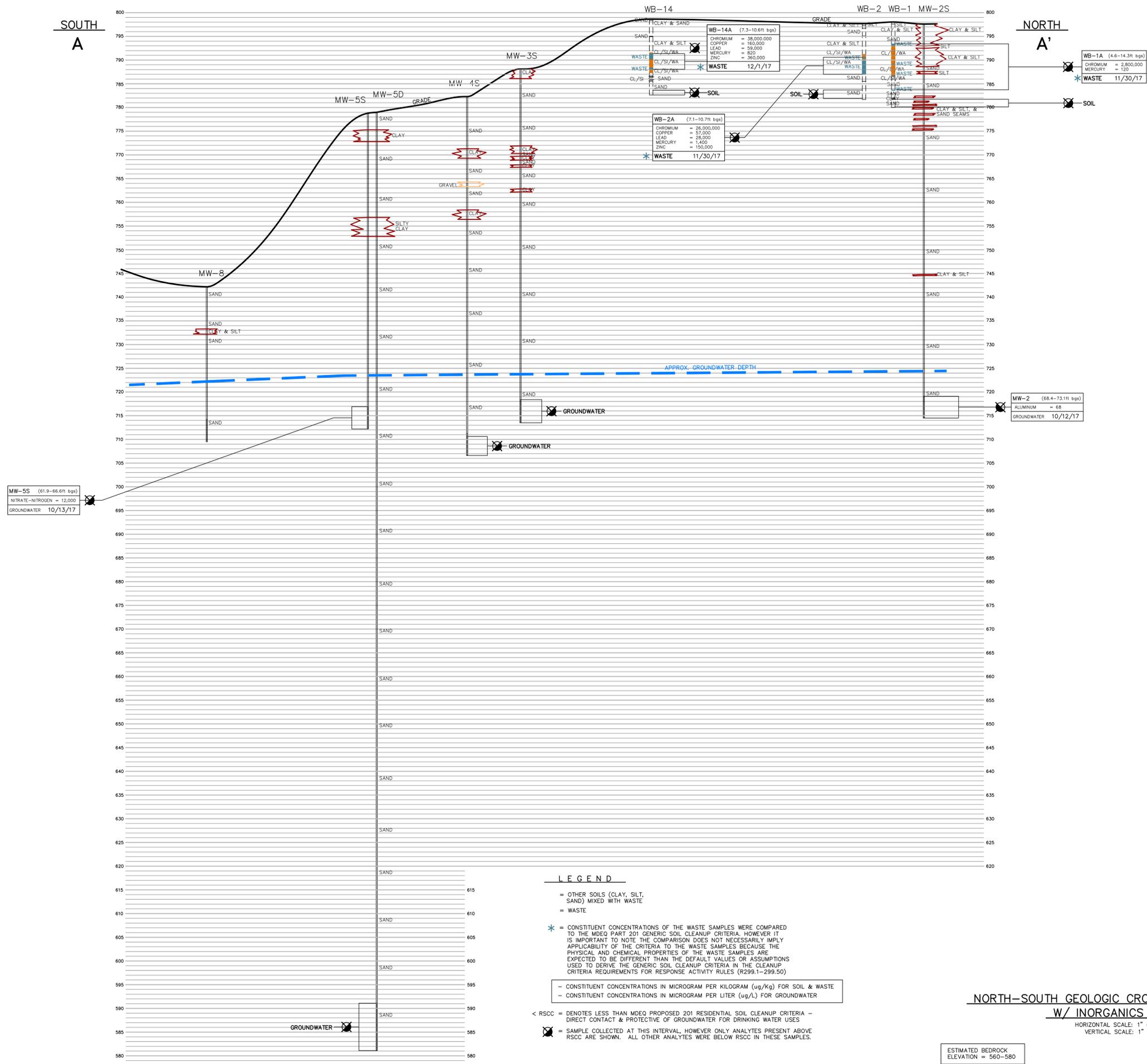
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DESIGN BY	MAA
DATE	2/4/18
FILE NO.	6233552_C01
NO.	
REVISIONS	

WOLVERINE WORLD WIDE, INC.
 FORMER HOUSE STREET SITE
 CONCEPTUAL SITE MODEL

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NORTH-SOUTH GEOLOGIC CROSS SECTION A-A'
 W/ INORGANICS DATA
 HORIZONTAL SCALE: 1" = 130'
 VERTICAL SCALE: 1" = 10'

ESTIMATED BEDROCK ELEVATION = 560-580

DRAWN BY	KJB
DESIGN BY	MAAM
DATE	6/24/19
FILE NO.	6233552_CSM
NO.	
BY	
REVISIONS	

WNJ/WWW
 FORMER HOUSE STREET SITE
 CONCEPTUAL SITE MODEL

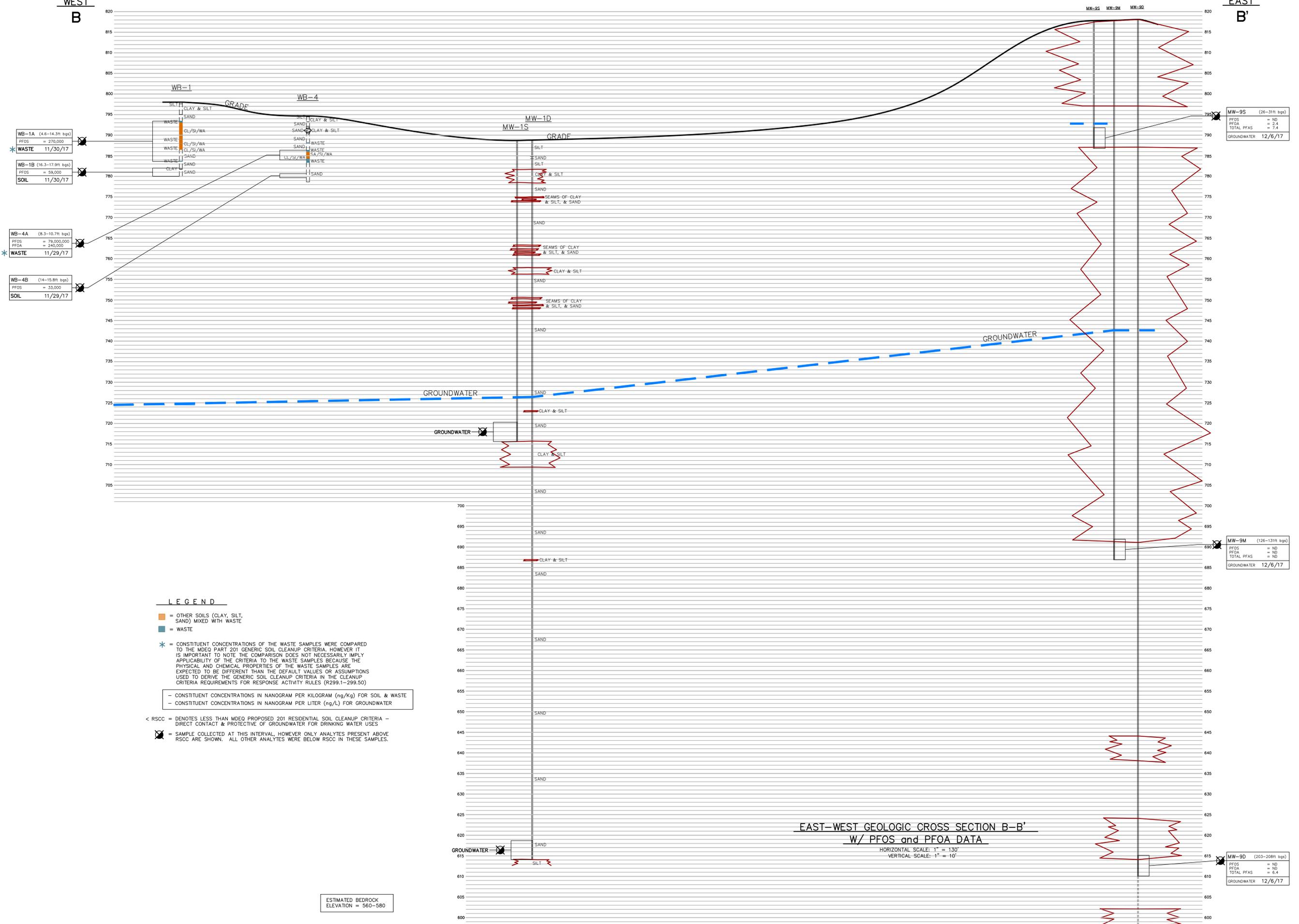
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 16.0062335.52
 SHEET NO.

C2

WEST
B

EAST
B'



DRAWN BY	KJB	DESIGN BY	MAAM	DATE	6/26/19
FILE NO.	6233552_CSM				
NO.	REVISIONS				
BY	DATE				
REVISED IN ACCORDANCE WITH CONSTRUCTION RECORDS					

WNJ/WW
FORMER HOUSE STREET SITE
CONCEPTUAL SITE MODEL

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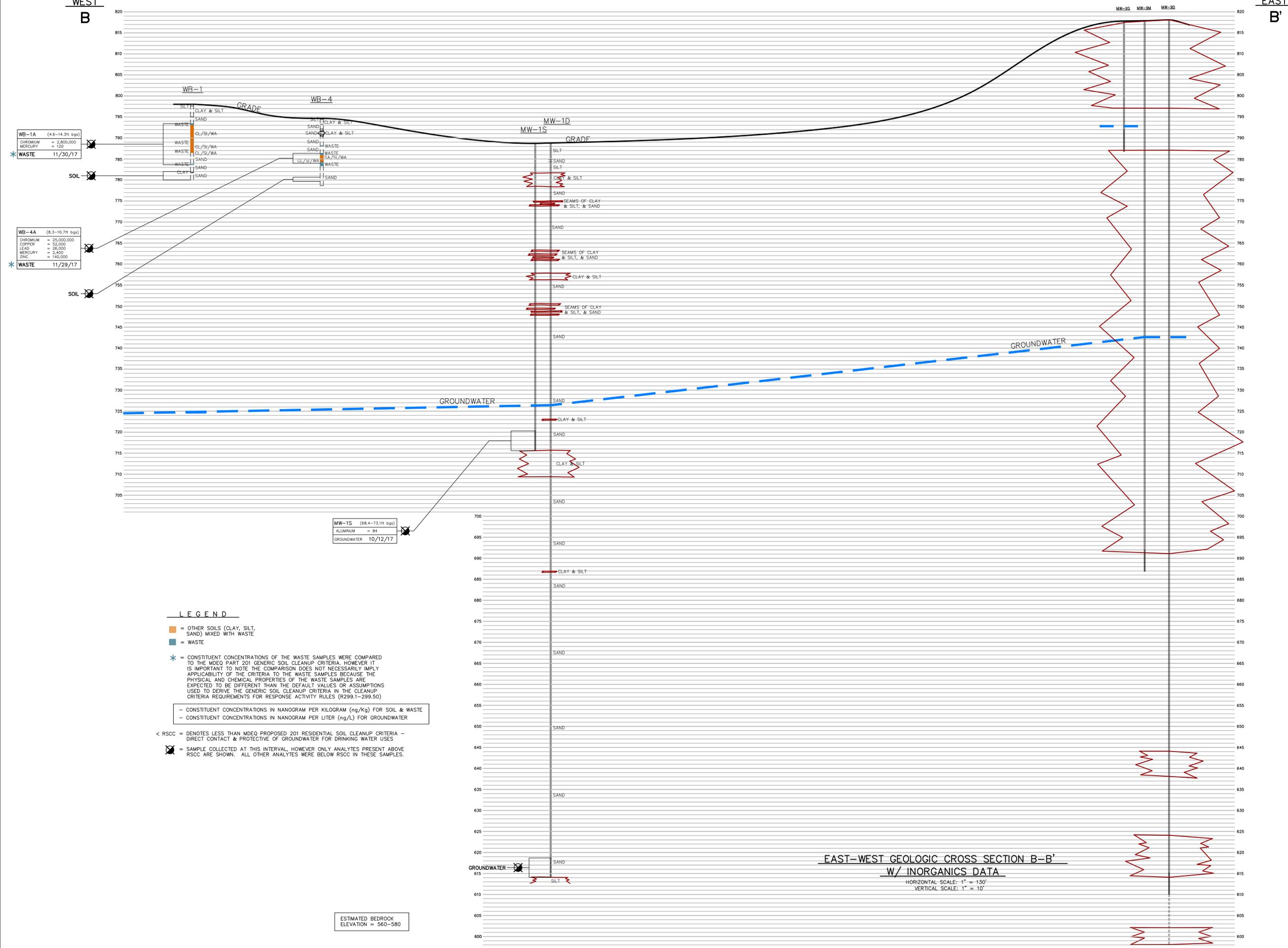


PROJECT NO.
16.0062335.52
SHEET NO.

D1

WEST
B

EAST
B'



WB-1A (4.6-14.3ft bgs)

CHROMIUM	= 2,800,000
MERCURY	= 130

* WASTE 11/30/17

WB-4A (8.3-10.7ft bgs)

CHROMIUM	= 25,000,000
COPPER	= 52,000
LEAD	= 36,000
MERCURY	= 2,400
ZINC	= 140,000

* WASTE 11/29/17

MW-1S (68.4-73.1ft bgs)

ALUMINUM	= 84
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GROUNDWATER 10/12/17

LEGEND

- = OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE
- = WASTE
- * = CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1-299.50)
- CONSTITUENT CONCENTRATIONS IN NANOGRAM PER KILOGRAM (ng/Kg) FOR SOIL & WASTE
- CONSTITUENT CONCENTRATIONS IN NANOGRAM PER LITER (ng/L) FOR GROUNDWATER
- < RSCC = DENOTES LESS THAN MDEQ PROPOSED 201 RESIDENTIAL SOIL CLEANUP CRITERIA - DIRECT CONTACT & PROTECTIVE OF GROUNDWATER FOR DRINKING WATER USES
- ☒ = SAMPLE COLLECTED AT THIS INTERVAL, HOWEVER ONLY ANALYTES PRESENT ABOVE RSCC ARE SHOWN. ALL OTHER ANALYTES WERE BELOW RSCC IN THESE SAMPLES.

EAST-WEST GEOLOGIC CROSS SECTION B-B'
W/ INORGANICS DATA
 HORIZONTAL SCALE: 1" = 130'
 VERTICAL SCALE: 1" = 10'

ESTIMATED BEDROCK
 ELEVATION = 560-580

DRAWN BY	KJB
DESIGN BY	MAA
DATE	6/28/19
FILE NO.	6233552_CSM
NO.	
REVISIONS	
BY	
DATE	

WNJ/WW
 FORMER HOUSE STREET SITE
 CONCEPTUAL SITE MODEL

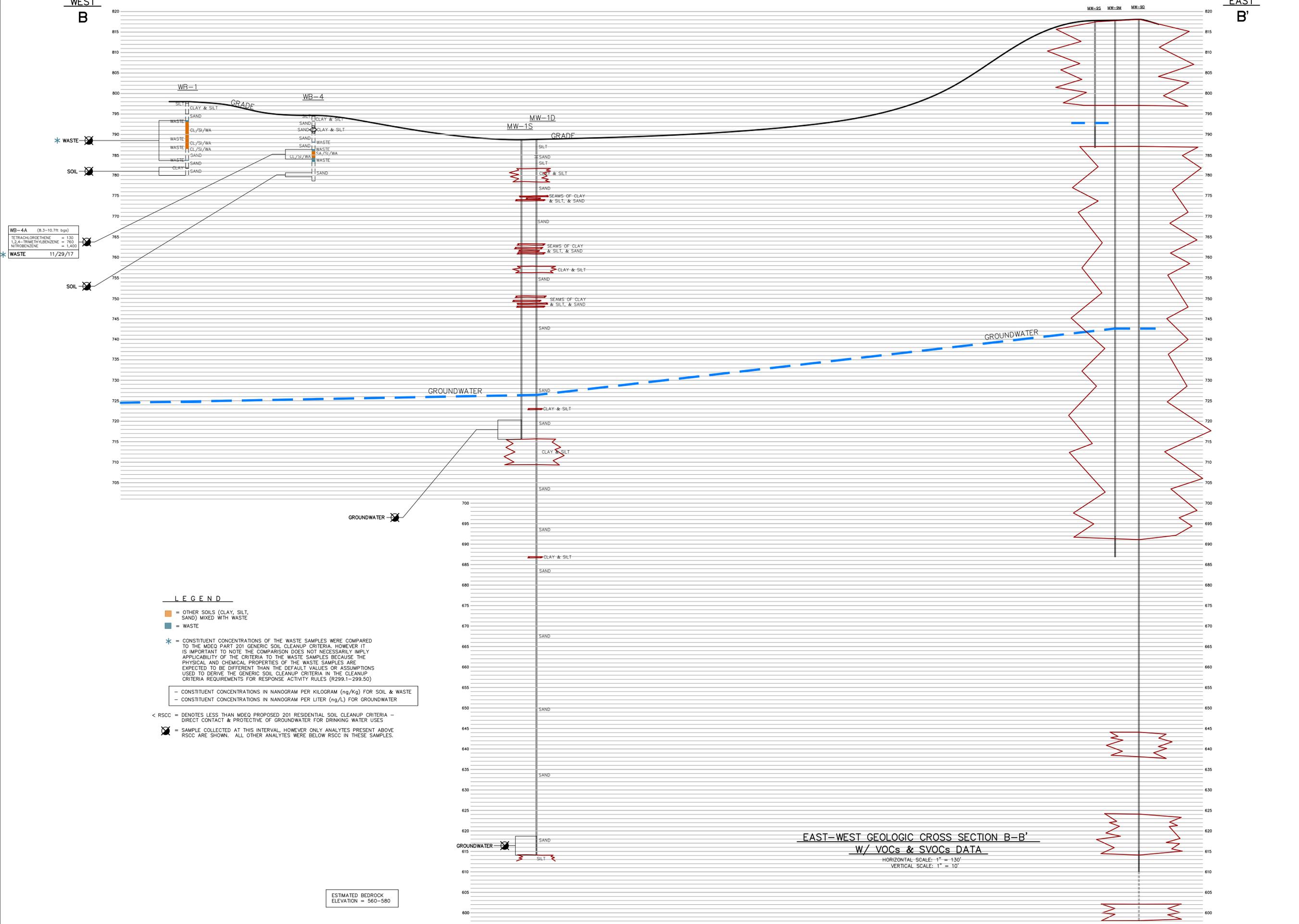
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D2

WEST
B

EAST
B'



LEGEND

- = OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE
- = WASTE
- * = CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1-299.50)
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EAST-WEST GEOLOGIC CROSS SECTION B-B'
 W/ VOCs & SVOCs DATA
 HORIZONTAL SCALE: 1" = 130'
 VERTICAL SCALE: 1" = 10'

ESTIMATED BEDROCK
 ELEVATION = 560-580

DRAWN BY	KJB
DESIGN BY	MAAM
DATE	6/28/19
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BY	
DATE	
REVISIONS	

WNJ/WWW
 FORMER HOUSE STREET SITE
 CONCEPTUAL SITE MODEL

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D3