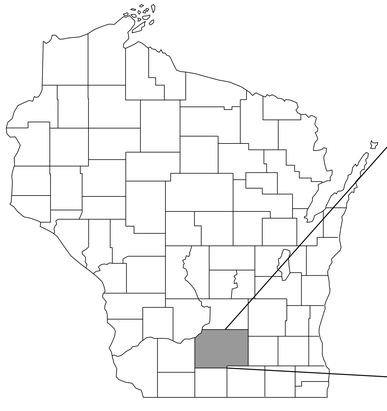
DANE COUNTY LANDFILL SITE NO. 3
FEASIBILITY REPORT

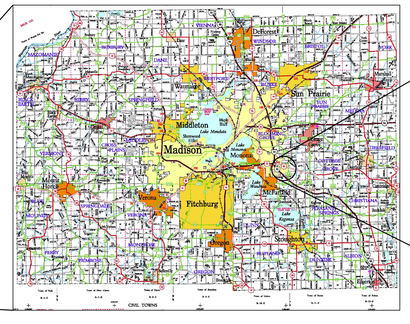
PREPARED FOR: DANE COUNTY DEPARTMENT OF WASTE & RENEWABLES
MADISON, WISCONSIN

PREPARED BY: SCS ENGINEERS
MADISON, WISCONSIN

DATE: FEBRUARY 2024



WISCONSIN



DANE COUNTY MAP



SITE LOCATOR

WISCONSIN
BETSY L. POWERS
E-32183
MONONA, WI
PROFESSIONAL ENGINEER

WISCONSIN
BETTY J. SOCHA
G-304
MADISON
WI
PROFESSIONAL GEOLOGIST
2-13-2024

SHEET INDEX

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11	GEOLOGIC CROSS SECTION F-F'
12	GEOLOGIC CROSS SECTION G-G'
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PROJECT NO. 2522268.00
DRAWN: 03/24/2023
REVISED: 02/06/2024
DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/13/2024

CLIENT: DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

ENGINEER: SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
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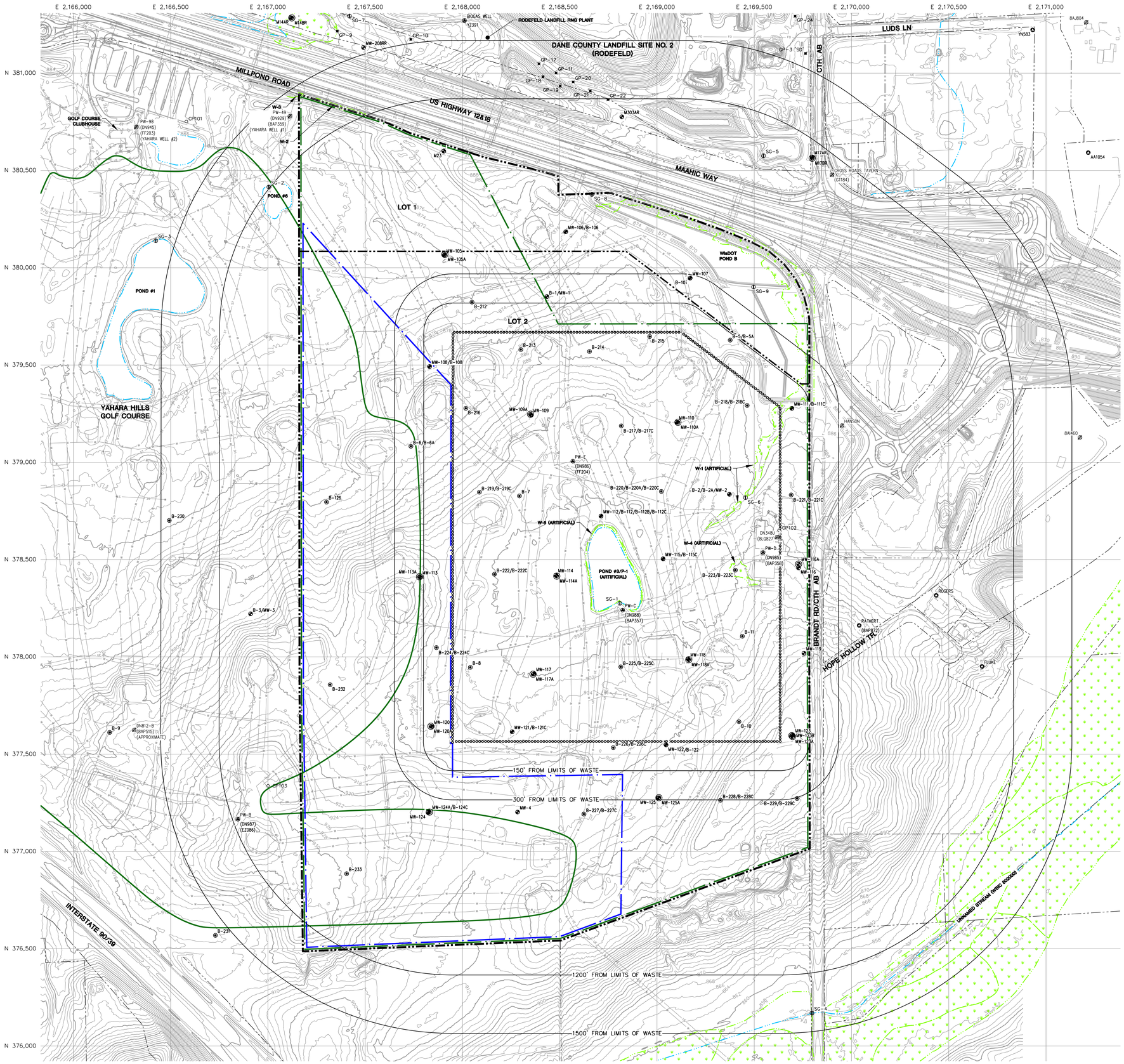
SITE: FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
CAMP RANDALL ROAD
MADISON, WISCONSIN

SHEET: COVER SHEET

SHEET: 1 of 28

2024 SCS Engineers\Dane County - Feasibility Report\Cover Sheet.dwg, 2/13/2024 1:37:12 PM



LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE (LOW)
- 18 HOLE GOLF COURSE LEASE LINE (SEE NOTE 9)
- 27 HOLE GOLF COURSE LEASE LINE (SEE NOTE 9)
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- PAVED ROAD
- UNPAVED ROAD
- STREAM/EDGE OF WATER
- WETLAND
- UNDERGROUND ELECTRIC
- GAS MAIN
- OVERHEAD UTILITY
- SANITARY SEWER
- STORM SEWER
- TELEPHONE LINE
- WATER MAIN
- CULVERT
- ELECTRICAL PEDESTAL
- UTILITY POLE
- LIGHT POLE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER INLET
- WATER VALVE
- WATER SUPPLY WELL (DN988) (8AP357) WG+NHS GEOLOGIC LOG WISCONSIN UNIQUE WELL NUMBER
- WATER SUPPLY WELL (APPROXIMATE LOCATION)
- WATER SUPPLY WELL (ASSUMED LOCATION)
- ABANDONED WATER SUPPLY WELL
- GP-15 GAS PROBE
- B-216 SOIL BORING
- MW-118 WATER TABLE MONITORING WELL
- MW-118A PIEZOMETER
- SG-8 STAFF GAUGE
- CP101 CONTROL POINT

NOTES:

1. BASE MAP MODIFIED FROM TETRA TECH PROPOSED BORING AND MONITORING WELL LOCATION MAP DATED JULY 2022. TOPOGRAPHY FOR USH 12&18 AND CTH AB INTERCHANGE FROM WSDOT DESIGN DRAWINGS FOR PROJECT Nos. 3080-01-40, 3080-01-75, AND 3080-01-76 (APPROVED 1/31/2022).
2. CONTOUR DATA DOWNLOADED FROM DANE COUNTY WISCONSIN GIS SITE. CONTOURS DEVELOPED FROM SPRING 2017 LIDAR FLIGHT OF DANE COUNTY.
3. HORIZONTAL DATUM IS REFERENCED TO WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM (NAD 83), US SURVEY FEET.
4. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988. CONTOUR INTERVAL IS TWO FEET.
5. WETLANDS AS SHOWN ARE FROM TRC REPORT #275981.00004 DATED 12/08/2021. WISCONSIN DEPARTMENT OF NATURAL RESOURCES DETERMINED WETLANDS WERE ARTIFICIAL UNDER REVIEW FILE NO. EXE-SC-2023-13-00856 AND POND #3/P-1 WAS ALSO ARTIFICIAL IN NATURE; THEREFORE NO REGULATORY AUTHORITY REGARDING CHAPTER 30 OR 281 APPLIES TO THE WATER BODY OR WETLANDS. APPROVED AND IMPLEMENTED CHANGES TO WETLANDS AS PART OF THE USDOT US HIGHWAY 12 & 18 AND CTH AB INTERCHANGE PROJECT ARE NOT ACCOUNTED FOR.
6. WETLAND BOUNDARIES OUTSIDE OF TRC REPORT STUDY AREA (SEE NOTE 5) TAKEN FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES, BUREAU OF WATERSHED MANAGEMENT – WETLANDS SECTION, DATED JULY 28, 2021.
7. LAKES, PONDS, RIVERS, AND STREAM DATA FROM HTTPS://GIS-COUNTYOFDANE.OPENDATA.ARCGIS.COM.
8. SOIL BORINGS B-1 THROUGH B-11 AND MONITORING WELLS MW-1 THROUGH MW-4 WERE INSTALLED IN JANUARY AND FEBRUARY 2022 BY TETRA TECH.
9. IN LOCATIONS WHERE THE GOLF COURSE LEASE LINE FOLLOWS THE PROPERTY LINE OR PROPOSED LIMITS OF WASTE, THE LEASE LINE IS SHOWN OFFSET FOR CLARITY.

HORIZONTAL AND VERTICAL CONTROL POINT LOCATIONS

POINT I.D.	NORTHING (FEET)	EASTING (FEET)	ELEVATION (FT-MSL)	DESCRIPTION
CP101	380,751.36	2,166,580.51	870.930	SCAMON
CP102	378,650.01	2,169,627.23	899.540	SCAMON
CP103	377,337.14	2,167,000.91	933.580	SCAMON

N

200 0 200

SCALE: 1" = 200'

DRAWN BY:	KP
CHECKED BY:	MRH/BLP
APPROVED BY:	BLP 02/12/2024
PROJECT NO.	29322268.00
DRAWN:	03/24/2023
REVISED:	02/12/2024

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALVIN T. ENERGY CENTER WAY
MADISON, WI 53713

CLIENT

SCS ENGINEERS
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PHONE: (608) 224-2830

ENGINEER

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
COUNTY TRUNK HIGHWAY AB
MADISON, WISCONSIN

SITE

EXISTING CONDITIONS

SHEET
2 of 28

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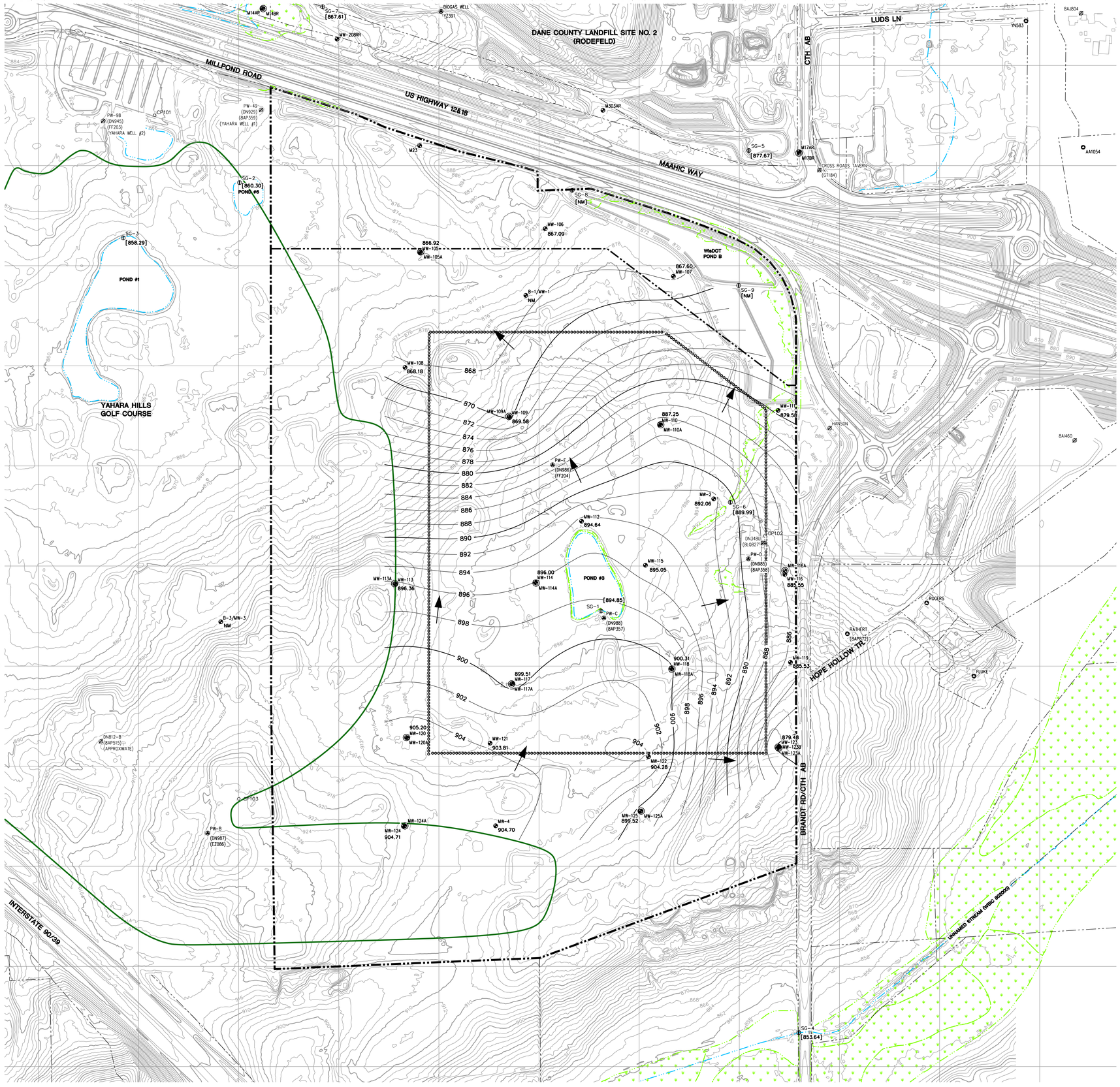

LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- EXISTING WATER SUPPLY WELL
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- ABANDONED WATER SUPPLY WELL
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- 867.60 WATER TABLE ELEVATION
- [894.85] SURFACE WATER ELEVATION
- NM NOT MEASURED
- WATER TABLE CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. WATER LEVELS WERE MEASURED BY SCS ON MARCH 29, 2023.
3. STAFF GAUGES SG-8 AND SG-9 WERE NOT MEASURED BECAUSE THE WISDOT CONSTRUCTION WAS ONGOING AND THESE STAFF GAUGES WERE NOT YET IN PLACE.

N

200 0 200

SCALE: 1" = 200'

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 29222658.00
DRAWN: 03/24/2023
REVISED: 02/09/2024

DANE COUNTY DEPARTMENT OF WASTE AND RECHEABLES
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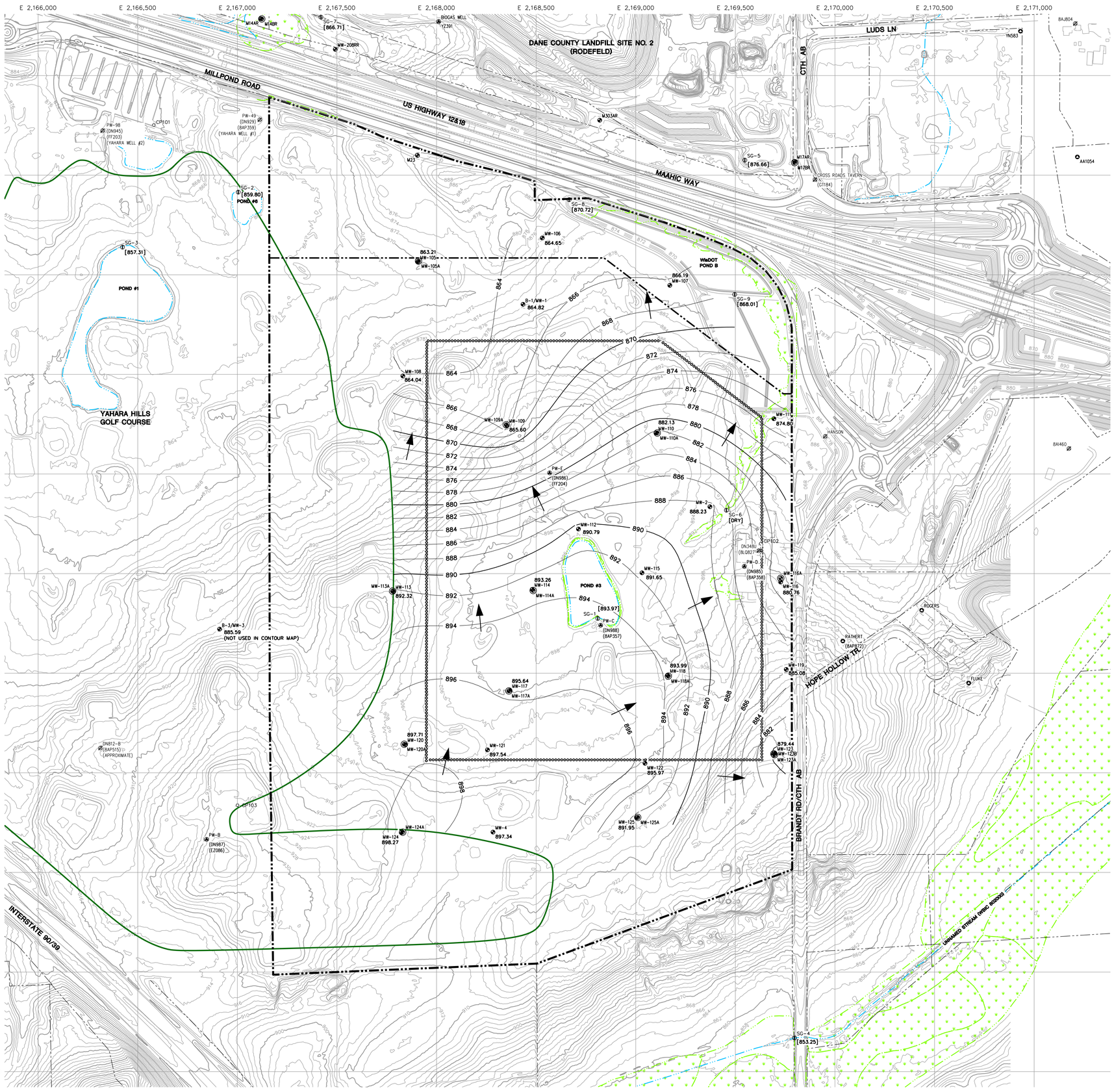
ENGINEER

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE
4448 RODEFELD ROAD
MADISON, WISCONSIN

SITE

HIGH WATER TABLE MAP – MARCH 29, 2023

SHEET
3 of 28



LEGEND

- PARCEL PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- EXISTING WATER SUPPLY WELL
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- ABANDONED WATER SUPPLY WELL
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- 867.60 WATER TABLE ELEVATION
- [877.12] SURFACE WATER ELEVATION
- WATER TABLE CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. WATER LEVELS WERE MEASURED BY SCS ON DECEMBER 4, 2023.

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 25222688.00
DRAWN: 03/24/2023
REVISED: 02/09/2024

CLIENT
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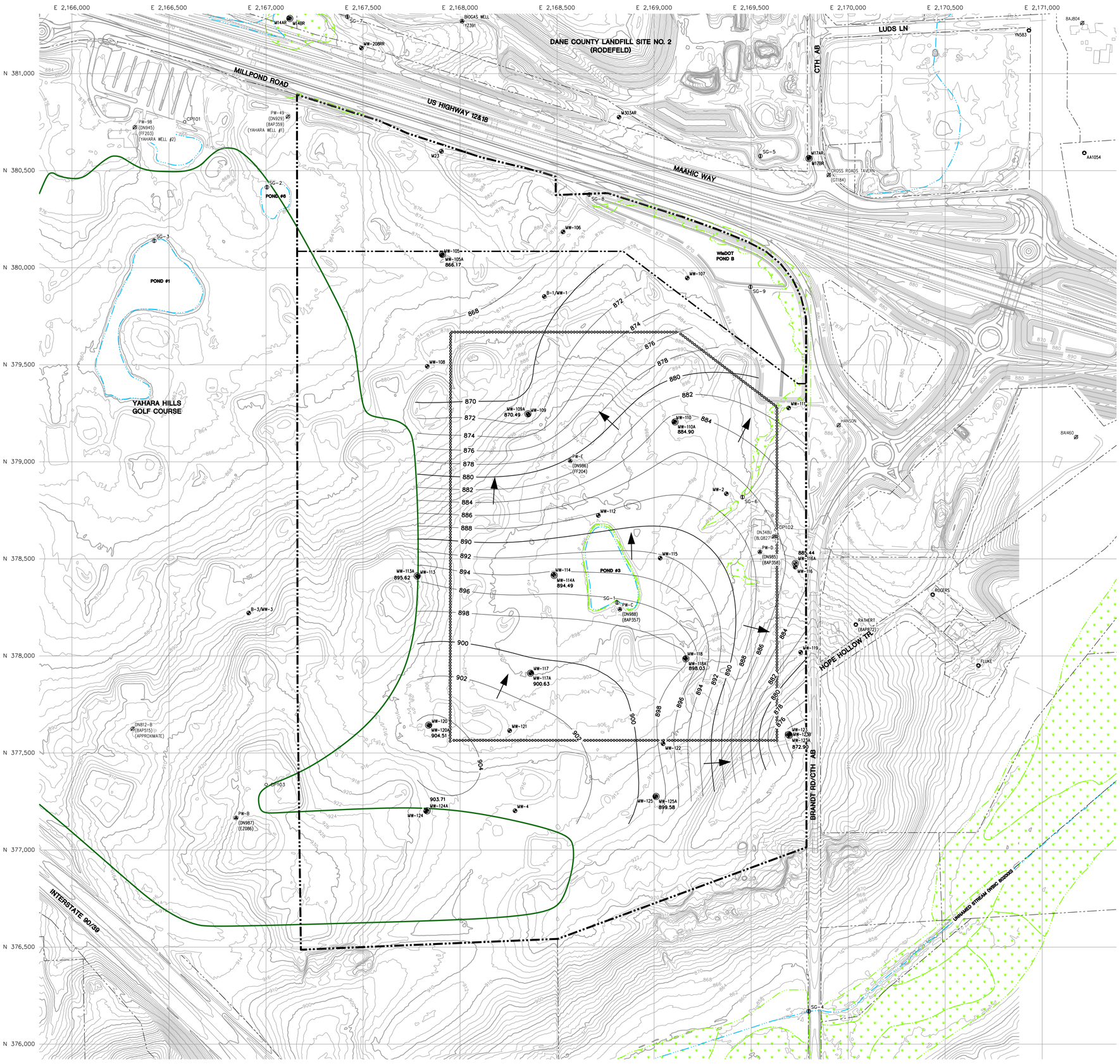
PHONE (608) 224-2830

SITE
FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4448 RODEFELD ROAD
MADISON, WISCONSIN

LOW WATER TABLE MAP – DECEMBER 4 2023

SHEET
4 of 28



LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- EXISTING WATER SUPPLY WELL
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- ABANDONED WATER SUPPLY WELL
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- 867.60 POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. WATER LEVELS WERE MEASURED BY SCS ON MARCH 29, 2023.

N

200 0 200

SCALE: 1" = 200'

POTENTIOMETRIC SURFACE MAP – MARCH 29, 2023

SHEET 5 of 28

SITE

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4602 RODEFELD ROAD
MADISON, WISCONSIN

CLIENT

DANE COUNTY DEPARTMENT OF WASTE AND RECKNABLES
1919 ALLIANT ENERGY WAY
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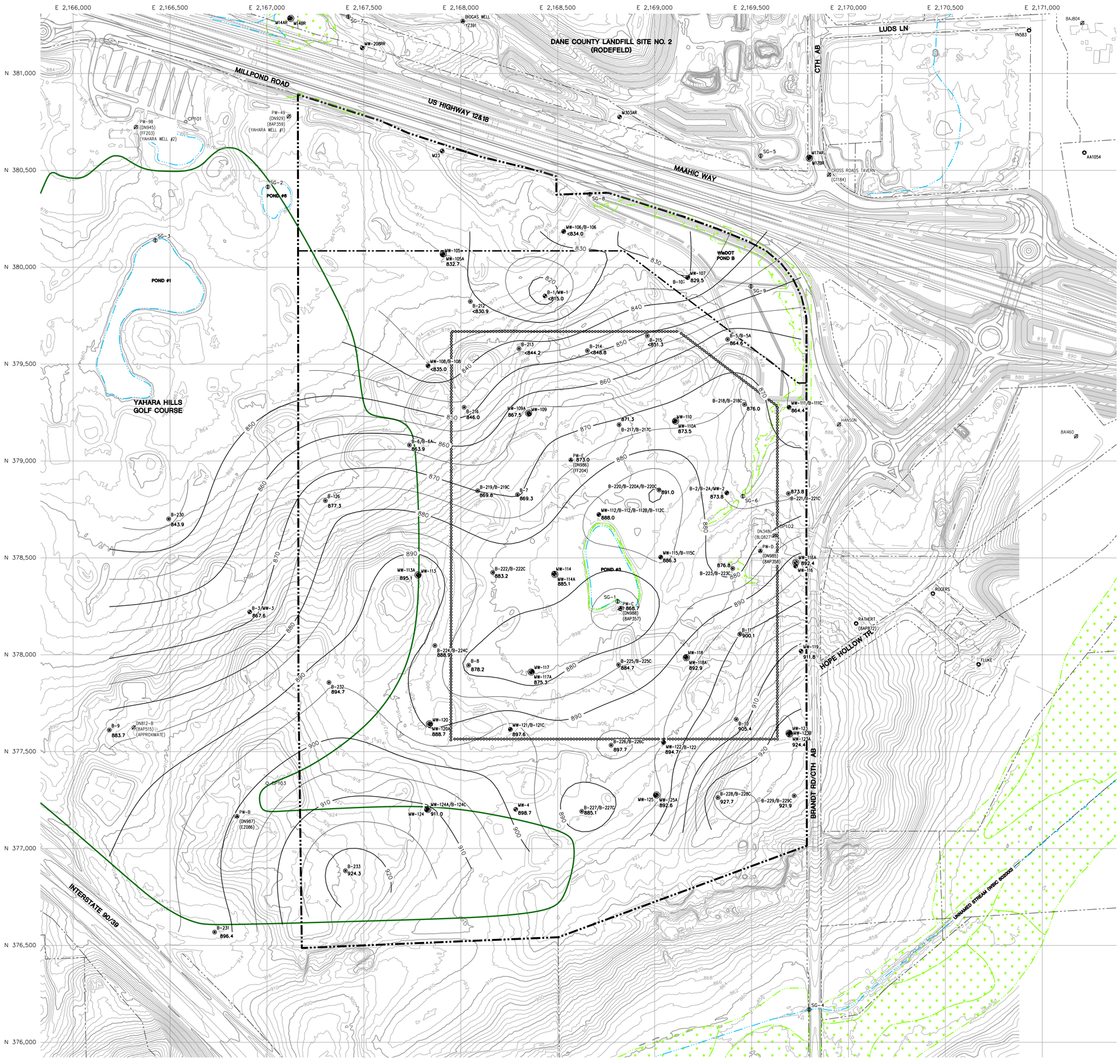
DRAWN BY:		KP
CHECKED BY:		MRH/BLP
APPROVED BY:		BLP 02/12/2024
PROJECT NO.	25222658.00	
DRAWN:	03/24/2023	
REVISED:	02/09/2024	



LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- EXISTING WATER SUPPLY WELL
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- ABANDONED WATER SUPPLY WELL
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- 867.5 APPROXIMATE BEDROCK ELEVATION AT BORING LOCATION (FEET ABOVE MEAN SEA LEVEL)
- TOP OF BEDROCK SURFACE CONTOUR

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. FOR LOCATIONS WITH MORE THAN ONE BORING, THE BEDROCK SURFACE ELEVATION IS BASED ON GEOLOGIC INFORMATION FROM ALL BORINGS AT THE DRILLING LOCATION.
3. THE BEDROCK SURFACE ELEVATION IS THE ELEVATION OF THE FIRST ENCOUNTERED ROCK FORMATION BENEATH THE GROUND SURFACE AND INCLUDES WEATHERED ROCK, BUT EXCLUDES UNCONSOLIDATED EARTH MATERIALS, SOIL, OR REGOLITH LYING AT OR NEAR THE EARTH SURFACE.
4. BEDROCK ELEVATIONS SHOWN WITH "<" SYMBOL INDICATE BEDROCK WAS NOT ENCOUNTERED IN THE BORING(S) AT THIS LOCATION. ELEVATION SHOWN IS THE BOTTOM OF THE DEEPEST BORING AT THE LOCATION.
5. PER NR 500.03 (199) AND (130), "ROCK" MEANS ALL LITHIFIED EARTH MATERIAL INCLUDING ALL NATURALLY OCCURRING AND NATURALLY FORMED AGGREGATES OR MASSES OF MINERALS OR SMALL PARTICLES OF OLDER ROCK THAT FORMED BY CRYSTALLIZATION OF MAGMA OR BY INDURATION OF LOOSE SEDIMENTS. "ROCK" DOES NOT INCLUDE UNCONSOLIDATED EARTH MATERIALS, SOIL, OR REGOLITH LYING AT OR NEAR THE EARTH SURFACE.

N

200 0 200

SCALE: 1" = 200'

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 29222688.00
DRAWN: 03/24/2023
REVISED: 02/09/2024

CLIENT
DANE COUNTY DEPARTMENT OF WASTE AND RECKNABLES
1919 ALVIN T. ENERGY CENTER WAY
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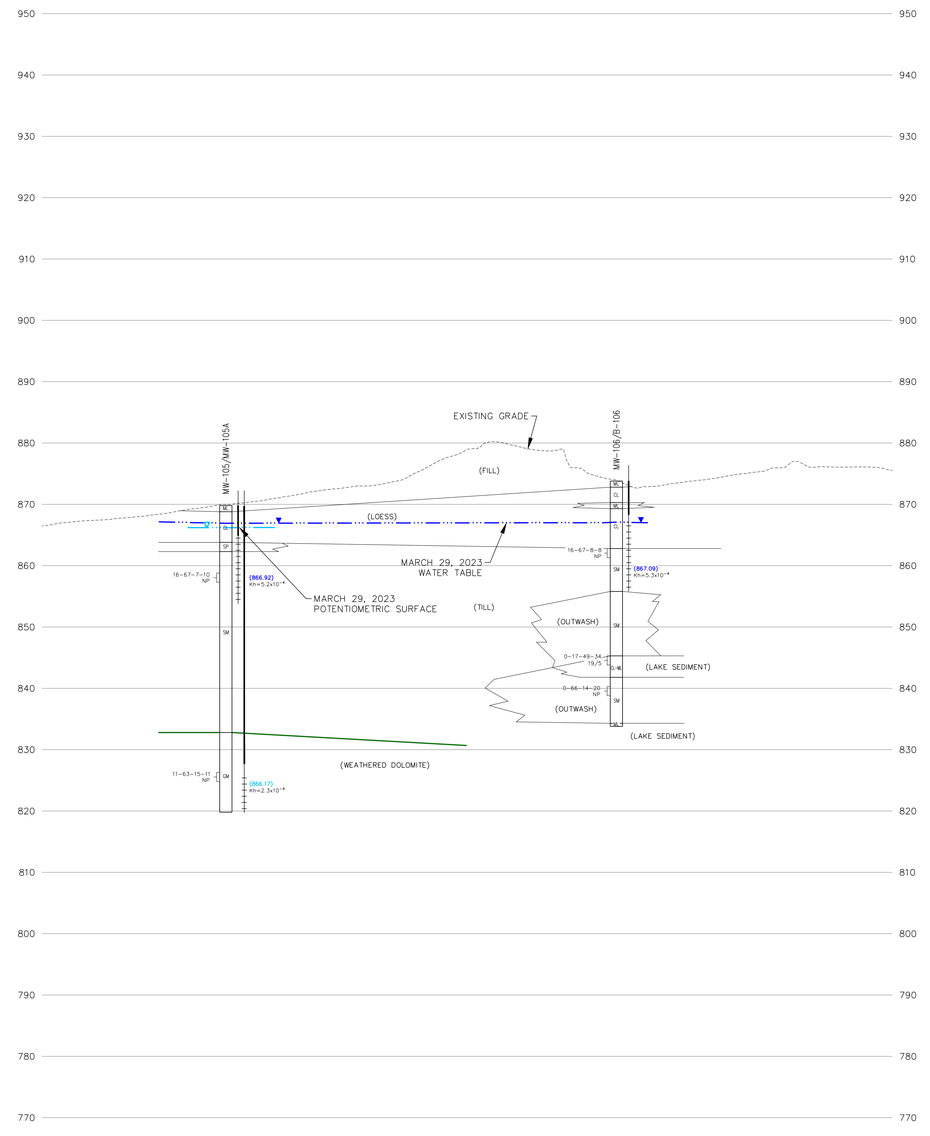
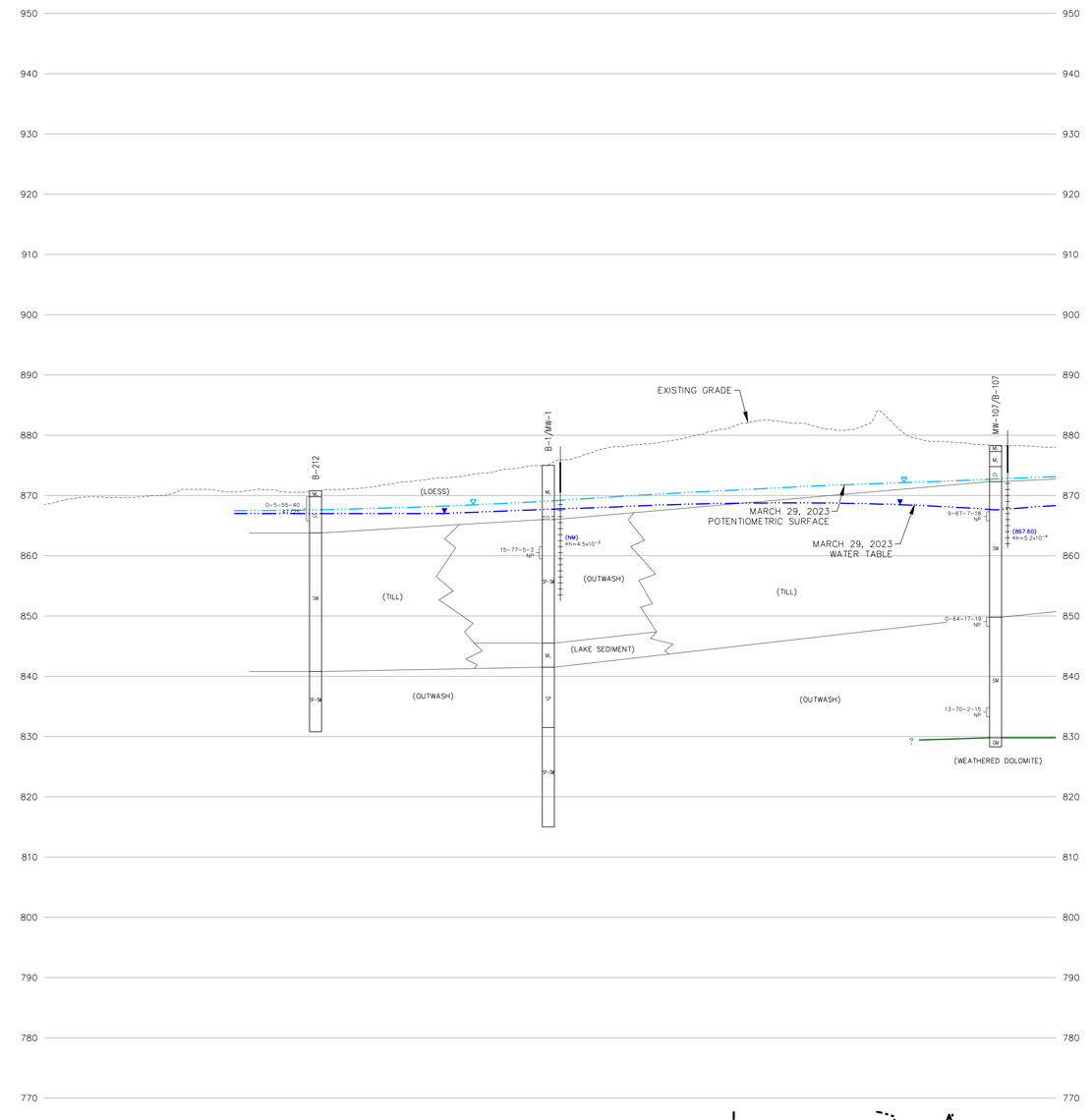
SITE
FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE
CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL NO. 3
MADISON, WISCONSIN

BEDROCK SURFACE MAP

SHEET
6 of 28





SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
NP	NON-PLASTIC
Kv	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (cm/sec)
Kh	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (cm/sec)
0-30-42-28	PERCENT GRAVEL, SAND, SILT, AND CLAY
0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
72-5	PERCENT GRAVEL AND SAND
NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
	WATER TABLE (SEE NOTE 8)
	POTENTIOMETRIC SURFACE (SEE NOTE 9)
	EXISTING GROUND (SPRING 2017)
	GEOLOGIC CONTACT
	UNCERTAIN GEOLOGIC CONTACT
	INFERRED GRADATIONAL GEOLOGIC CONTACT
	TOP OF BEDROCK (SEE NOTE 10)
	PROPOSED FINAL COVER SYSTEM
	PROPOSED COMPOSITE LINER SYSTEM

USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
CH	FAT CLAY
GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL. SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY; MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM-BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS, BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE, DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

PLATTEVILLE FORMATION – DOLOMITE TO SHALY DOLOMITE, YELLOW, BEIGE, AND GRAY TO LIGHT BROWNISH YELLOW GRAY WEATHERING IS TYPICAL OF SHALY INTERVALS. MASSIVE, PLANAR-LAMINATED, OR MEDIUM TO THICK BEDDED, INTERBEDDED WITH THIN, WAVY BEDDED SHALE/SILT LAMINATIONS, MINOR CHERT, FOSSILIFEROUS, BIOGENIC CARBONATES.

ANCELL GROUP – MARINE AND AEOLIAN SANDSTONES, SHALES, RESIDUUM. HIGH-RELIEF UNCONFORMABLE CONTACT WITH THE UNDERLYING PRAIRIE DU CHIEN GROUP.

GLENWOOD FORMATION – SANDSTONE, DOLOMITIC (CARBONATE-CEMENTED), SILTY, AND/OR SHALY, POORLY SORTED, YELLOW-BROWN TO GREEN, WITH BLUE-GREEN SHALE OR SANDY DOLOMITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

ST. PETER FORMATION, TONTI MEMBER – SANDSTONE, LIGHT BROWNISH YELLOW, WHITE, RED, GRAY, ORANGE, OR BROWN (IF CEMENTED BY IRON OXIDES), MEDIUM TO COARSE GRAINED, WELL ROUNDED AND WELL SORTED, POORLY CEMENTED, LOW TO HIGH ANGLED CROSS-BEDDING OR MASSIVE, POORLY CEMENTED BY DOLOMITE, LOCALIZED SULFIDE MINERALIZATION DISSEMINATED THROUGH THE MATRIX AND CONCENTRATED ALONG BEDDING PLANES AND FRACTURES, LOCALIZED THIN LAYERS OF PALE GREEN SHALE/SILT. MARINE AND AEOLIAN QUARTZ SANDSTONE.

ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE. PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

PRAIRIE DU CHIEN GROUP – DOLOMITE AND SANDY DOLOMITE, YELLOW, LIGHT BROWN, AND GRAY. MASSIVE TO MEDIUM BEDDED, SANDY, CHERTY, VUGGY, AND OOLITHIC.

SHAKOPEE FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY, BEIGE, AND RED (SANDY DOLOMITE IS PREDOMINANTLY RED), INTERBEDDED WITH COARSE GRAINED WELL ROUNDED SANDSTONE, AND/OR GREEN TO GRAY SILTSTONE OR CLAY. MASSIVE, PLANAR, OR LOW-ANGEL CROSS-BEDDING; OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

WILLOW RIVER MEMBER – SANDY, GLAUCONITIC DOLOMITE, GRAY, LIGHT GRAY. BIOGENIC CARBONATES.

NEW RICHMOND MEMBER – SANDSTONE, DOLOMITIC SANDSTONE, YELLOW AND LIGHT GRAY, FINE TO COARSE SAND, MASSIVE TO BEDDED, CHERT AND GLAUCONITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

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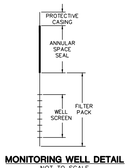
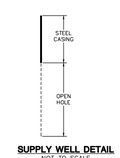
DOLOMITE – UNDIFFERENTIATED CARBONATE ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY WEATHERED AND/OR POORLY INDURATED.

SANDSTONE – UNDIFFERENTIATED SILICLASTIC ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY POORLY INDURATED.



MONITORING WELL DETAIL
NOT TO SCALE



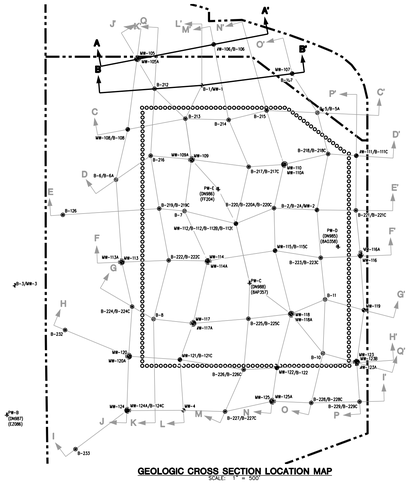
SUPPLY WELL DETAIL
NOT TO SCALE



HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

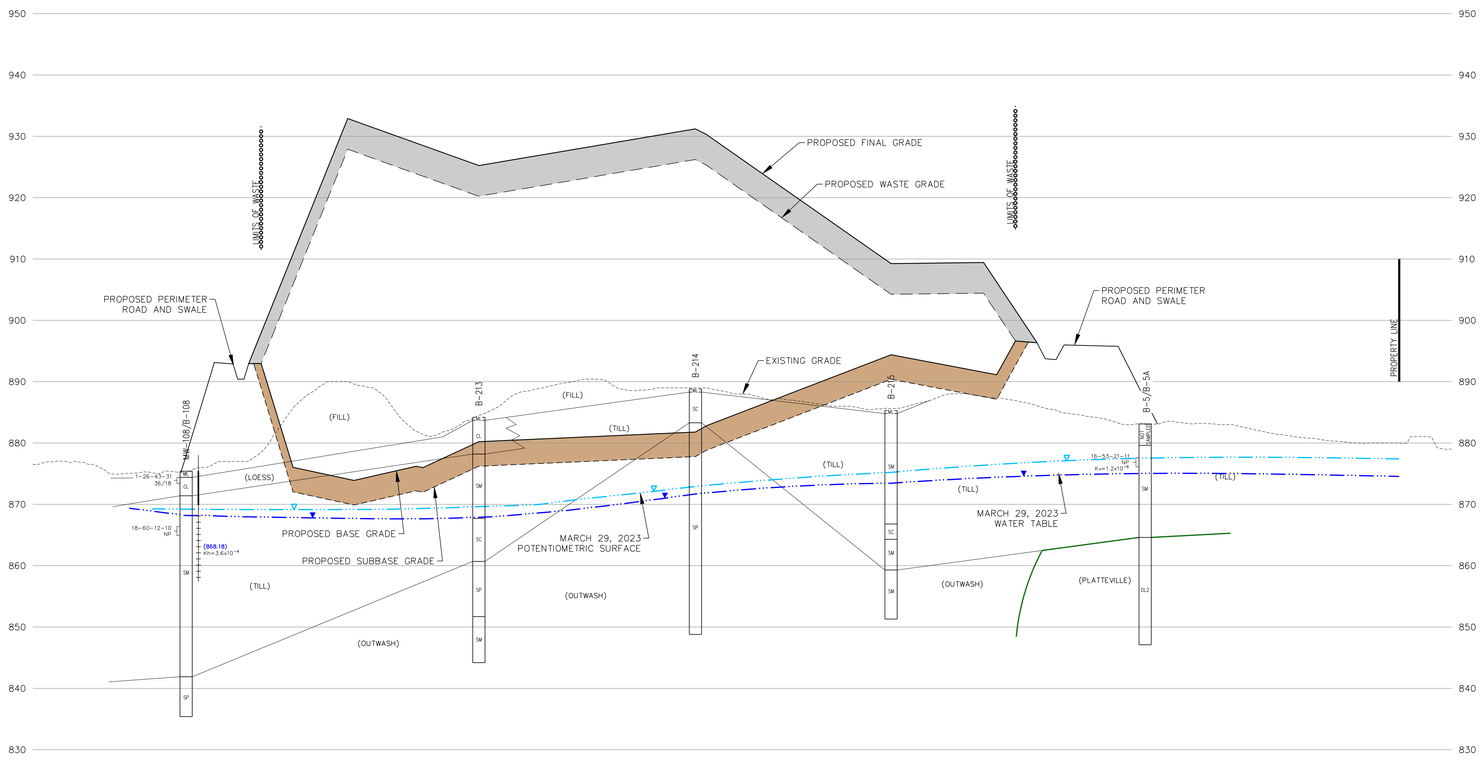
NOTES

1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
2. FOR WELL NESTS, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE WATER TABLE WELL AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE NEST LOCATION.
3. FOR LOCATIONS WITH MORE THAN ONE BORING, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE SHALLOWEST BORING AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE DRILLING LOCATION.
4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
5. REFER TO APPENDIX F FOR MONITORING WELL CONSTRUCTION DETAILS.
6. EXISTING GROUND SURFACE WAS TAKEN FROM SHEET NUMBER 2.
7. ELEVATIONS ARE REFERENCED TO USGS DATUM.
8. THE POSITION OF THE WATER TABLE BETWEEN WELLS IS BASED ON THE WATER TABLE CONTOUR MAP, SHEET NUMBER 3.
9. THE POSITION OF THE POTENTIOMETRIC SURFACE BETWEEN WELLS IS BASED ON THE POTENTIOMETRIC SURFACE CONTOUR MAP, SHEET NUMBER 5.
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS-SECTION IS THE STRAIGHT-LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".



C

C'



SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
NP	NON-PLASTIC
Kv	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (cm/sec)
Kh	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (cm/sec)
0-30-42-28	PERCENT GRAVEL, SAND, SILT, AND CLAY
0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
72-5	PERCENT GRAVEL AND SAND
NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
	WATER TABLE (SEE NOTE 8)
	POTENTIOMETRIC SURFACE (SEE NOTE 9)
	EXISTING GROUND (SPRING 2017)
	GEOLOGIC CONTACT
	UNCERTAIN GEOLOGIC CONTACT
	INFERRED GRADATIONAL GEOLOGIC CONTACT
	TOP OF BEDROCK (SEE NOTE 10)
	PROPOSED FINAL COVER SYSTEM
	PROPOSED COMPOSITE LINER SYSTEM

USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
CH	FAT CLAY
GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL. SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

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DRIFT – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY; MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM-BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

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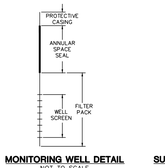
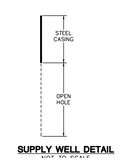


MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
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HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
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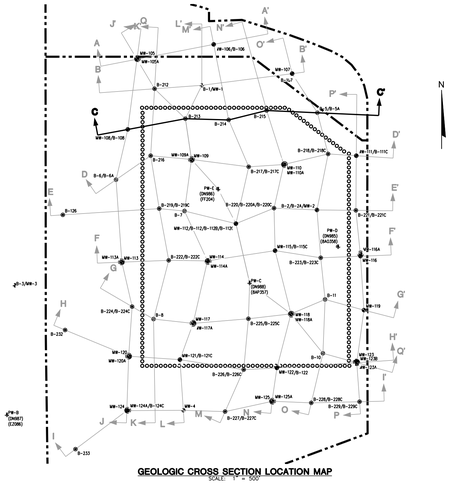

GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 600'

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

ENGINEER

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 25222658.00
DRAWN: 04/11/2023
REVISED: 02/09/2024

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4402 LANDFILL ROAD
MADISON, WISCONSIN

SITE

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

CLIENT

GEOLOGIC CROSS SECTION C-C'

SHEET
8 of 28

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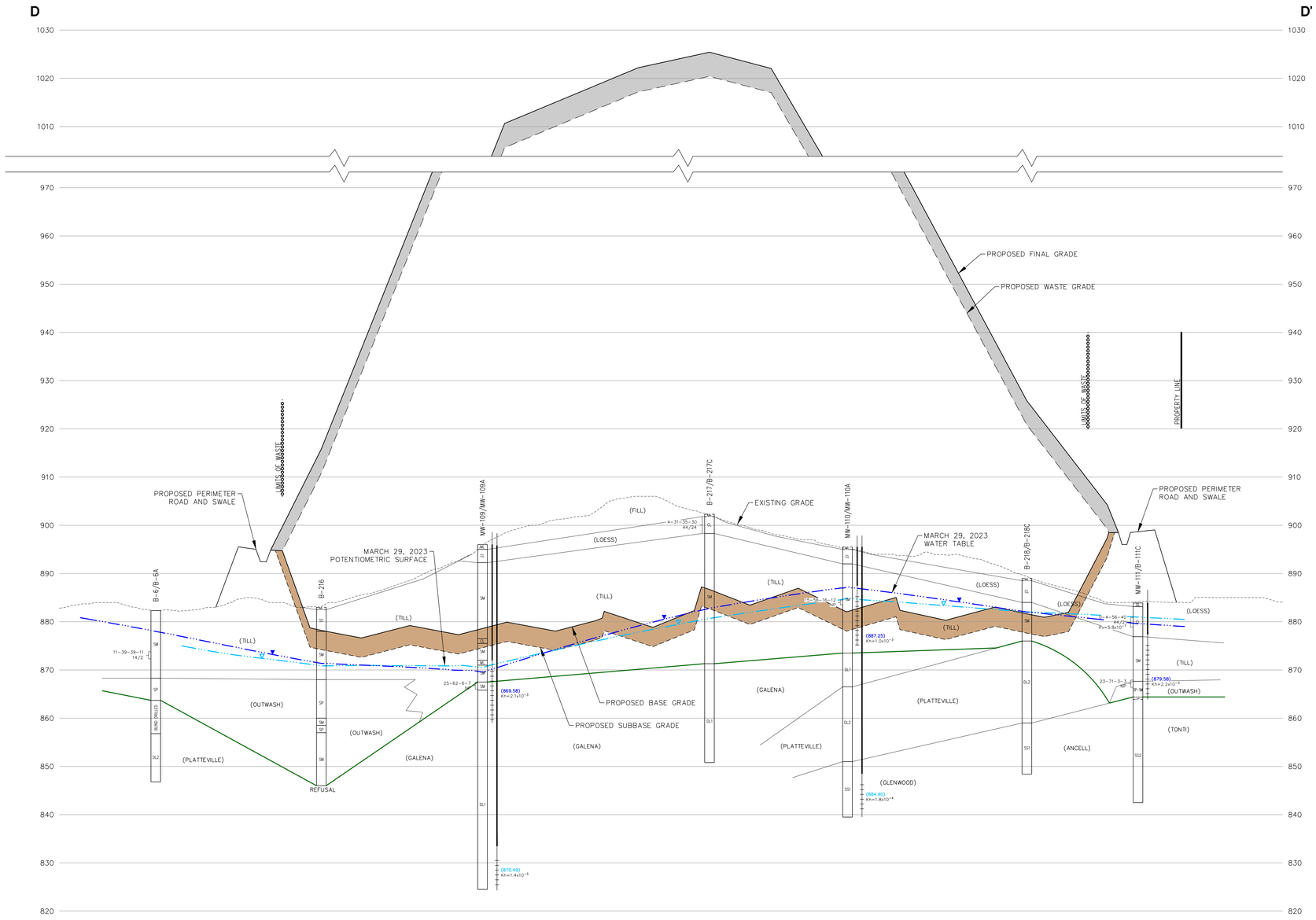

SYMBOLS AND TEST RESULTS

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(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
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BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

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SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

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GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

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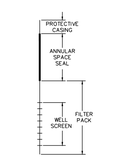
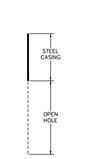
SANDSTONE – UNDIFFERENTIATED SILICLASTIC ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY POORLY INDURATED.



MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
NOT TO SCALE

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

NOTES

1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
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3. FOR LOCATIONS WITH MORE THAN ONE BORING, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE SHALLOWEST BORING AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE DRILLING LOCATION.
4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
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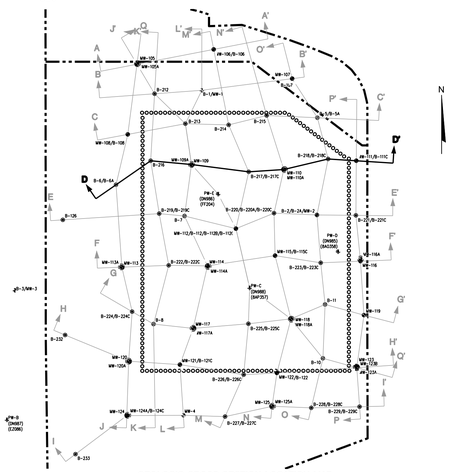
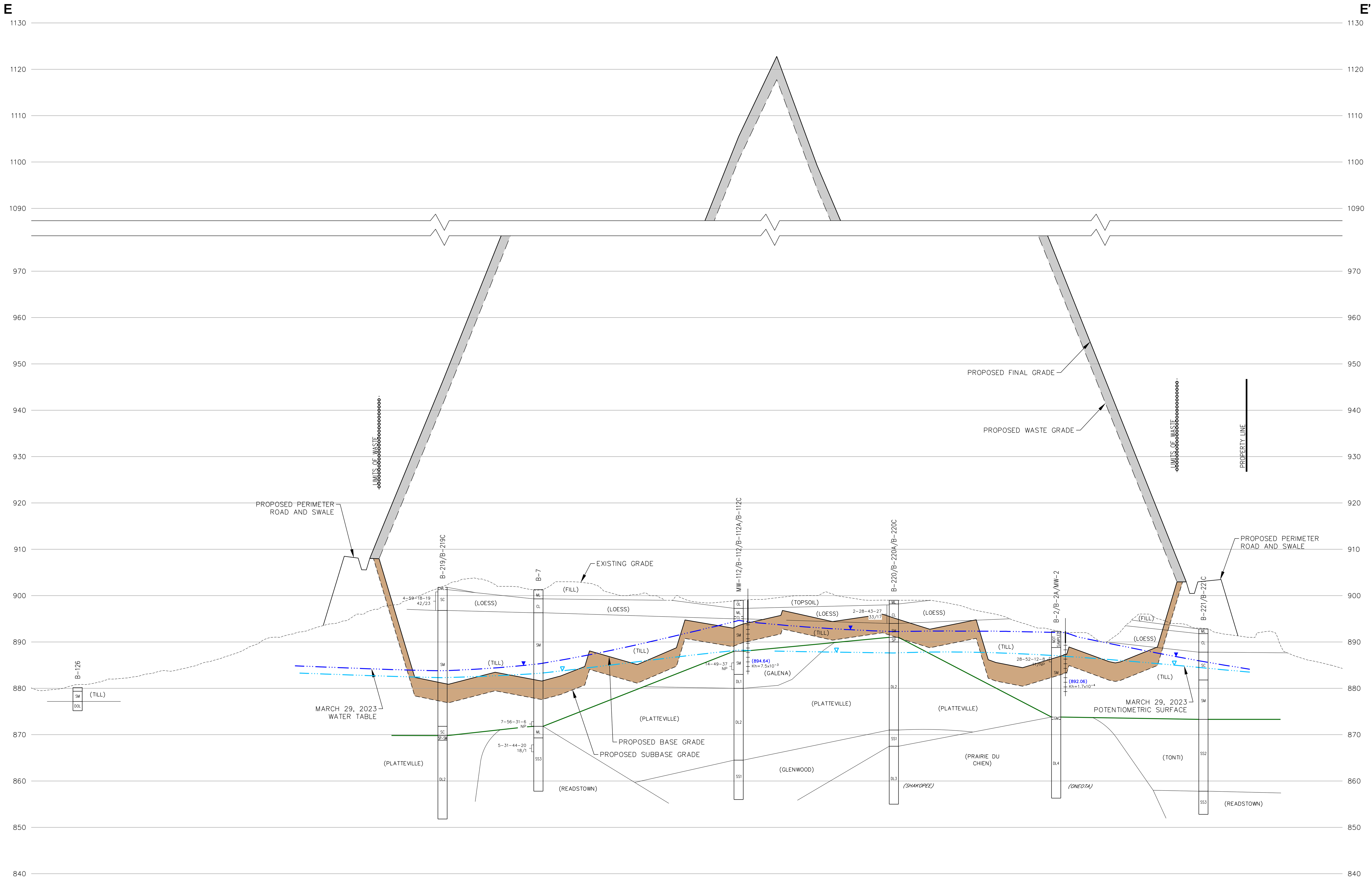
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS–SECTION IS THE STRAIGHT–LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".





SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
NP	NON-PLASTIC
Kv	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (cm/sec)
Kh	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (cm/sec)
0-30-42-28	PERCENT GRAVEL, SAND, SILT, AND CLAY
0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
72-5	PERCENT GRAVEL AND SAND
NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
	WATER TABLE (SEE NOTE 8)
	POTENTIOMETRIC SURFACE (SEE NOTE 9)
	EXISTING GROUND (SPRING 2017)
	GEOLOGIC CONTACT
	UNCERTAIN GEOLOGIC CONTACT
	INFERRED GRADATIONAL GEOLOGIC CONTACT
	TOP OF BEDROCK (SEE NOTE 10)
	PROPOSED FINAL COVER SYSTEM
	PROPOSED COMPOSITE LINER SYSTEM

USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
CH	FAT CLAY
GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL. SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY; MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM-BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE. DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

PLATTEVILLE FORMATION – DOLOMITE TO SHALY DOLOMITE, YELLOW, BEIGE, AND GRAY TO LIGHT BROWNISH YELLOW. GRAY WEATHERING IS TYPICAL OF SHALY INTERVALS. MASSIVE, PLANAR-LAMINATED, OR MEDIUM TO THICK BEDDED, INTERBEDDED WITH THIN, WAVY BEDDED SHALE/SILT LAMINATIONS, MINOR CHERT, FOSSILIFEROUS. BIOGENIC CARBONATES.

ANCELL GROUP – MARINE AND AEOLIAN SANDSTONES, SHALES, RESIDUUM. HIGH-RELIEF UNCONFORMABLE CONTACT WITH THE UNDERLYING PRAIRIE DU CHIEN GROUP.

GLENWOOD FORMATION – SANDSTONE, DOLOMITIC (CARBONATE-CEMENTED), SILTY, AND/OR SHALY, POORLY SORTED, YELLOW-BROWN TO GREEN, WITH BLUE-GREEN SHALE OR SANDY DOLOMITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

ST. PETER FORMATION, TONTI MEMBER – SANDSTONE, LIGHT BROWNISH YELLOW, WHITE, RED, GRAY, ORANGE, OR BROWN (IF CEMENTED BY IRON OXIDES), MEDIUM TO COARSE GRAINED, WELL ROUNDED AND WELL SORTED, POORLY CEMENTED, LOW TO HIGH ANGLED CROSS-BEDDING OR MASSIVE, POORLY CEMENTED BY DOLOMITE, LOCALIZED SULFIDE MINERALIZATION DISSEMINATED THROUGH THE MATRIX AND CONCENTRATED ALONG BEDDING PLANES AND FRACTURES, LOCALIZED THIN LAYERS OF PALE GREEN SHALE/SILT. MARINE AND AEOLIAN QUARTZ SANDSTONE.

ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE. PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

PRAIRIE DU CHIEN GROUP – DOLOMITE AND SANDY DOLOMITE, YELLOW, LIGHT BROWN, AND GRAY. MASSIVE TO MEDIUM BEDDED, SANDY, CHERTY, VUGGY, AND OOLITHIC.

SHAKOPEE FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY, BEIGE, AND RED (SANDY DOLOMITE IS PREDOMINANTLY RED), INTERBEDDED WITH COARSE GRAINED WELL ROUNDED SANDSTONE, AND/OR GREEN TO GRAY SILTSTONE OR CLAY. MASSIVE, PLANAR, OR LOW-ANGEL CROSS-BEDDING; OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

WILLOW RIVER MEMBER – SANDY, GLAUCONITIC DOLOMITE, GRAY, LIGHT GRAY. BIOGENIC CARBONATES.

NEW RICHMOND MEMBER – SANDSTONE, DOLOMITIC SANDSTONE. YELLOW AND LIGHT GRAY, FINE TO COARSE SAND, MASSIVE TO BEDDED, CHERT AND GLAUCONITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

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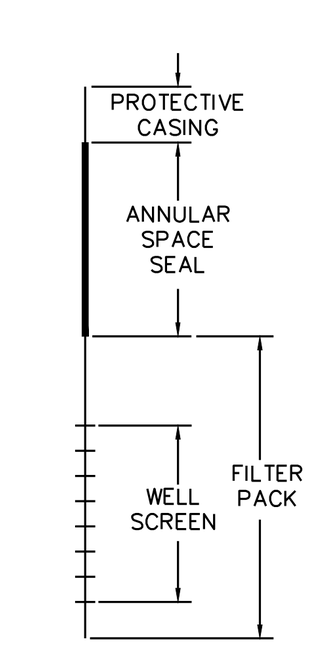
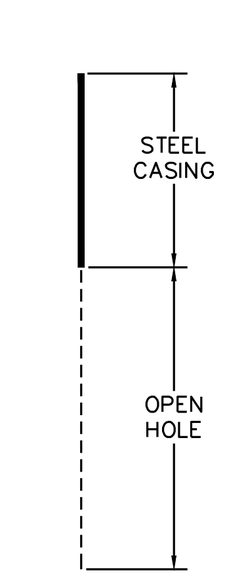


MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
NOT TO SCALE

0 100

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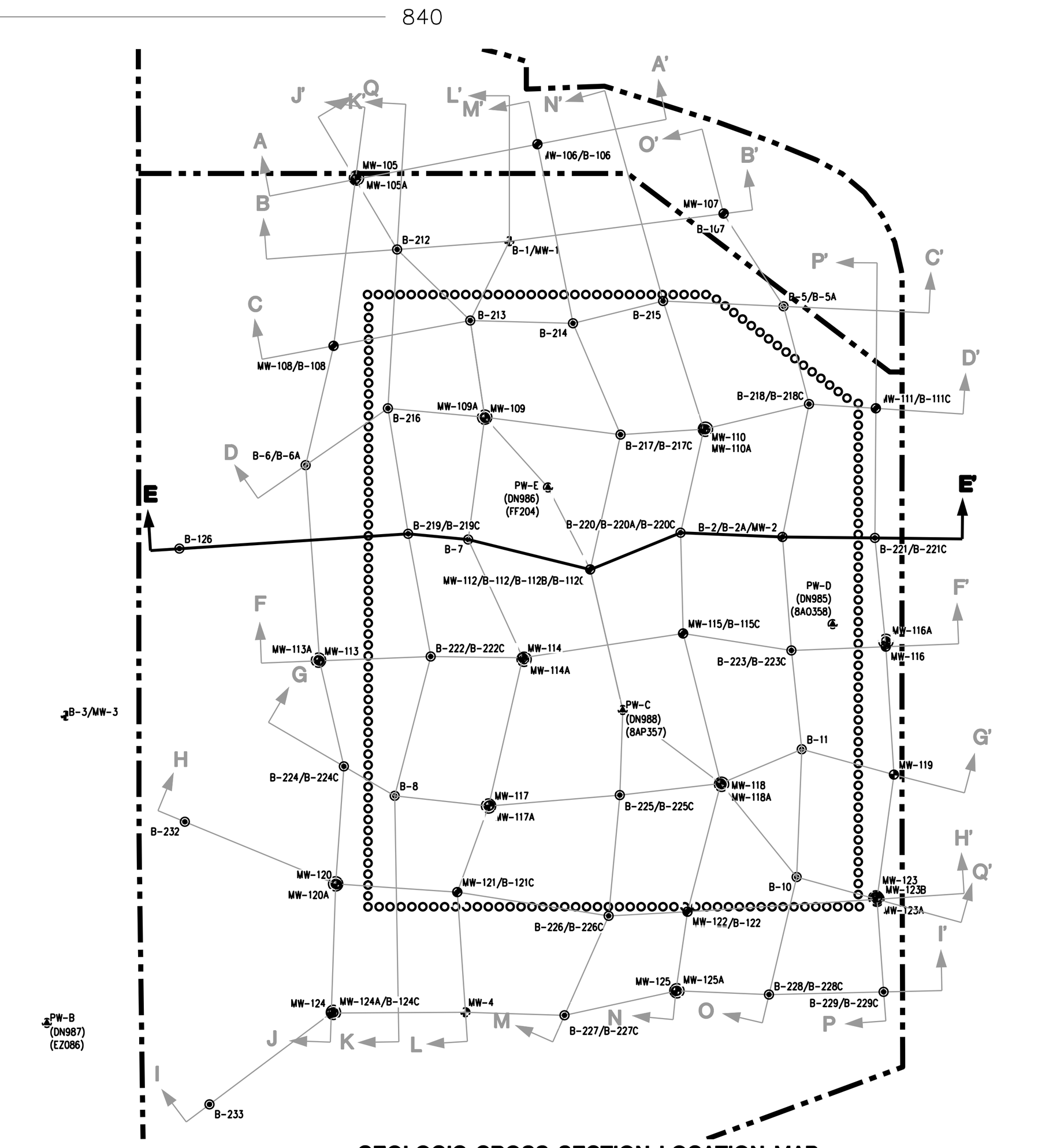

GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

PROJECT NO.	25222268.00	DRAWN BY:	KP
DRAWN:	04/11/2023	CHECKED BY:	MRH/BLP
REVISED:	02/09/2024	APPROVED BY:	BLP 02/12/2024

CLIENT: DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

ENGINEER: SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

SITE: FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

GEOLOGIC CROSS SECTION E-E'

SHEET 10 OF 28

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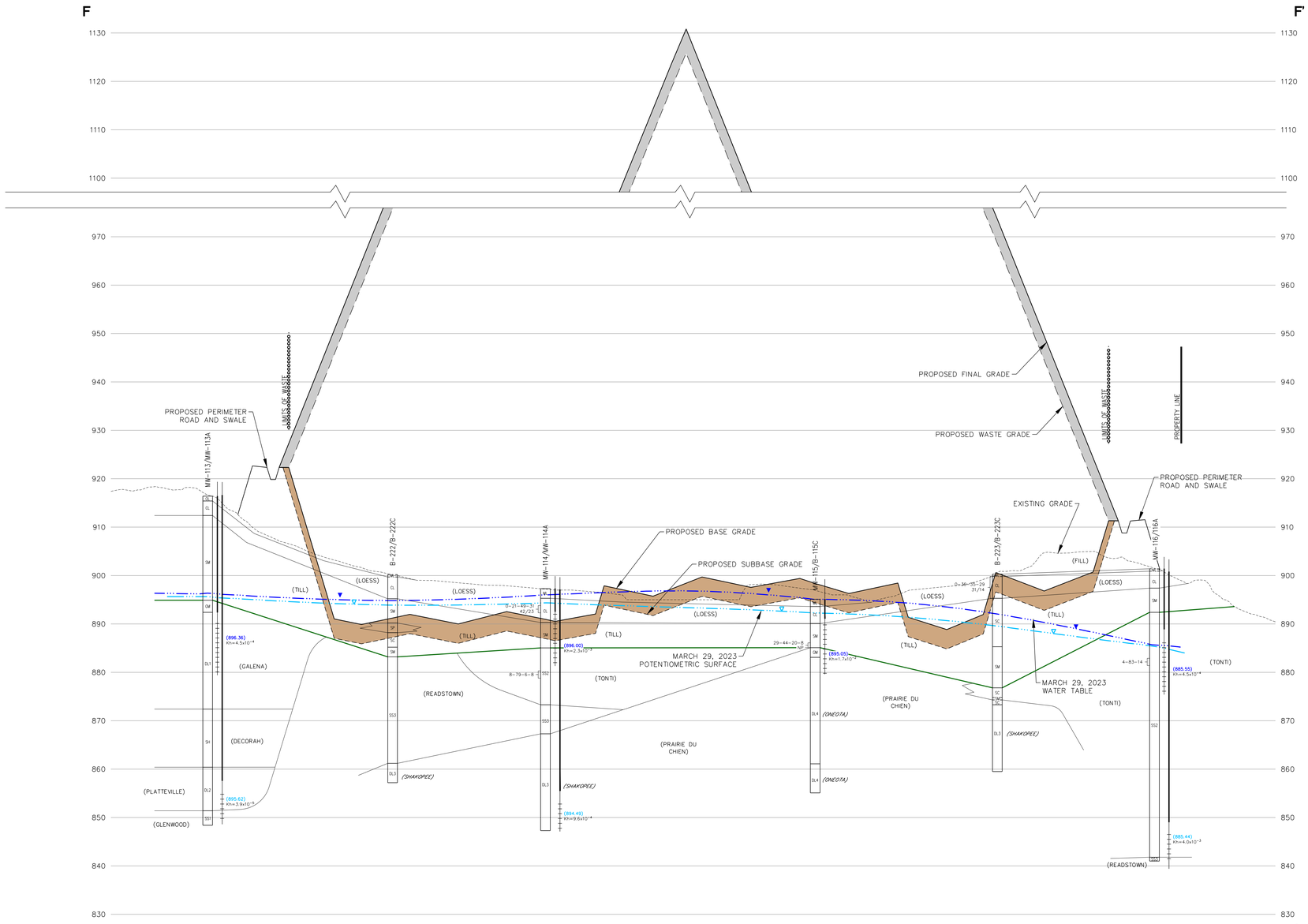

SYMBOLS AND TEST RESULTS

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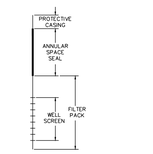
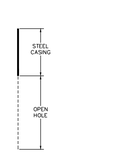


MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
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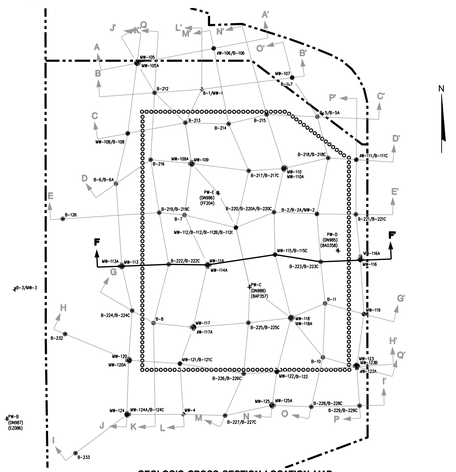
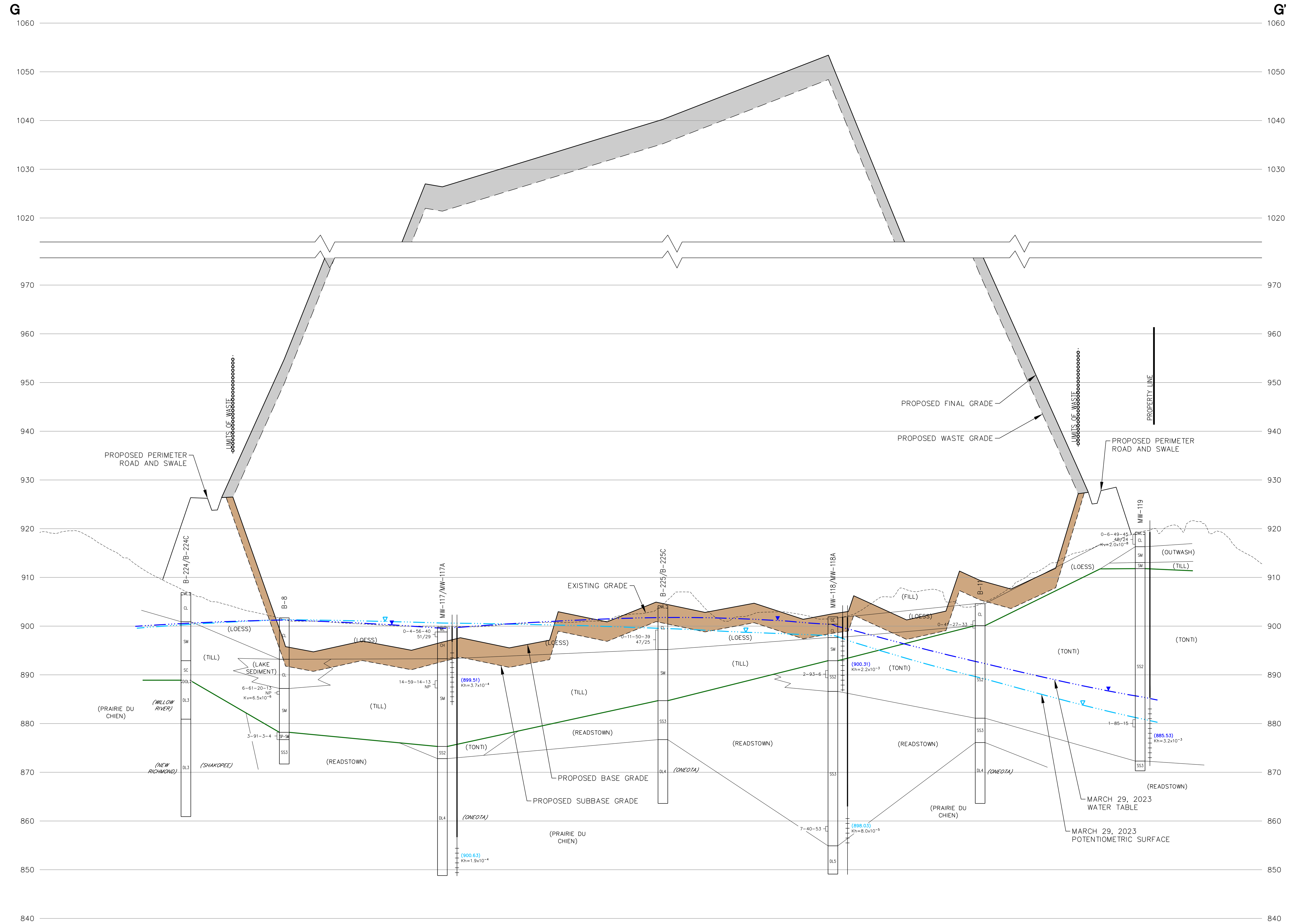
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS-SECTION IS THE STRAIGHT-LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".





SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
NP	NON-PLASTIC
Kv	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (cm/sec)
Kh	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (cm/sec)
0-30-42-28	PERCENT GRAVEL, SAND, SILT, AND CLAY
0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
72-5	PERCENT GRAVEL AND SAND
NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
	WATER TABLE (SEE NOTE 8)
	POTENTIOMETRIC SURFACE (SEE NOTE 9)
	EXISTING GROUND (SPRING 2017)
	GEOLOGIC CONTACT
	UNCERTAIN GEOLOGIC CONTACT
	INFERRED GRADATIONAL GEOLOGIC CONTACT
	TOP OF BEDROCK (SEE NOTE 10)
	PROPOSED FINAL COVER SYSTEM
	PROPOSED COMPOSITE LINER SYSTEM

USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
CH	FAT CLAY
GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL. SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY; MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM-BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE. DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

PLATTEVILLE FORMATION – DOLOMITE TO SHALY DOLOMITE, YELLOW, BEIGE, AND GRAY TO LIGHT BROWNISH YELLOW. GRAY WEATHERING IS TYPICAL OF SHALY INTERVALS. MASSIVE, PLANAR-LAMINATED, OR MEDIUM TO THICK BEDDED, INTERBEDDED WITH THIN, WAVY BEDDED SHALE/SILT LAMINATIONS, MINOR CHERT, FOSSILIFEROUS. BIOGENIC CARBONATES.

ANCELL GROUP – MARINE AND AEOLIAN SANDSTONES, SHALES, RESIDUUM. HIGH-RELIEF UNCONFORMABLE CONTACT WITH THE UNDERLYING PRAIRIE DU CHIEN GROUP.

GLENWOOD FORMATION – SANDSTONE, DOLOMITIC (CARBONATE-CEMENTED), SILTY, AND/OR SHALY, POORLY SORTED, YELLOW-BROWN TO GREEN, WITH BLUE-GREEN SHALE OR SANDY DOLOMITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

ST. PETER FORMATION, TONTI MEMBER – SANDSTONE, LIGHT BROWNISH YELLOW, WHITE, RED, GRAY, ORANGE, OR BROWN (IF CEMENTED BY IRON OXIDES), MEDIUM TO COARSE GRAINED, WELL ROUNDED AND WELL SORTED, POORLY CEMENTED, LOW TO HIGH ANGLED CROSS-BEDDING OR MASSIVE, POORLY CEMENTED BY DOLOMITE, LOCALIZED SULFIDE MINERALIZATION DISSEMINATED THROUGH THE MATRIX AND CONCENTRATED ALONG BEDDING PLANES AND FRACTURES, LOCALIZED THIN LAYERS OF PALE GREEN SHALE/SILT. MARINE AND AEOLIAN QUARTZ SANDSTONE.

ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE. PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

PRAIRIE DU CHIEN GROUP – DOLOMITE AND SANDY DOLOMITE, YELLOW, LIGHT BROWN, AND GRAY. MASSIVE TO MEDIUM BEDDED, SANDY, CHERTY, VUGGY, AND OOLITHIC.

SHAKOPEE FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY, BEIGE, AND RED (SANDY DOLOMITE IS PREDOMINANTLY RED), INTERBEDDED WITH COARSE GRAINED WELL ROUNDED SANDSTONE, AND/OR GREEN TO GRAY SILTSTONE OR CLAY. MASSIVE, PLANAR, OR LOW-ANGEL CROSS-BEDDING; OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

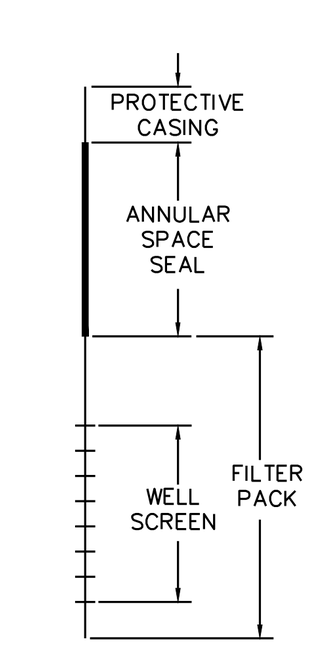
WILLOW RIVER MEMBER – SANDY, GLAUCONITIC DOLOMITE, GRAY, LIGHT GRAY. BIOGENIC CARBONATES.

NEW RICHMOND MEMBER – SANDSTONE, DOLOMITIC SANDSTONE. YELLOW AND LIGHT GRAY, FINE TO COARSE SAND, MASSIVE TO BEDDED, CHERT AND GLAUCONITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

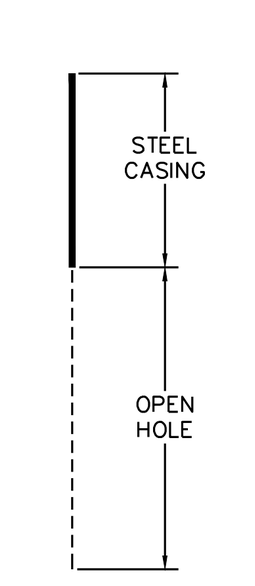
ONEOTA FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY TO BEIGE, MASSIVE, PLANAR, AND WAVY-LAMINATED BEDDING, OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

DOLOMITE – UNDIFFERENTIATED CARBONATE ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY WEATHERED AND/OR POORLY INDURATED.

SANDSTONE – UNDIFFERENTIATED SILICLASTIC ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY POORLY INDURATED.



MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
NOT TO SCALE

0 100

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

NOTES

1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
2. FOR WELL NESTS, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE WATER TABLE WELL AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE NEST LOCATION.
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4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
5. REFER TO APPENDIX F FOR MONITORING WELL CONSTRUCTION DETAILS.
6. EXISTING GROUND SURFACE WAS TAKEN FROM SHEET NUMBER 2.
7. ELEVATIONS ARE REFERENCED TO USGS DATUM.
8. THE POSITION OF THE WATER TABLE BETWEEN WELLS IS BASED ON THE WATER TABLE CONTOUR MAP, SHEET NUMBER 3.
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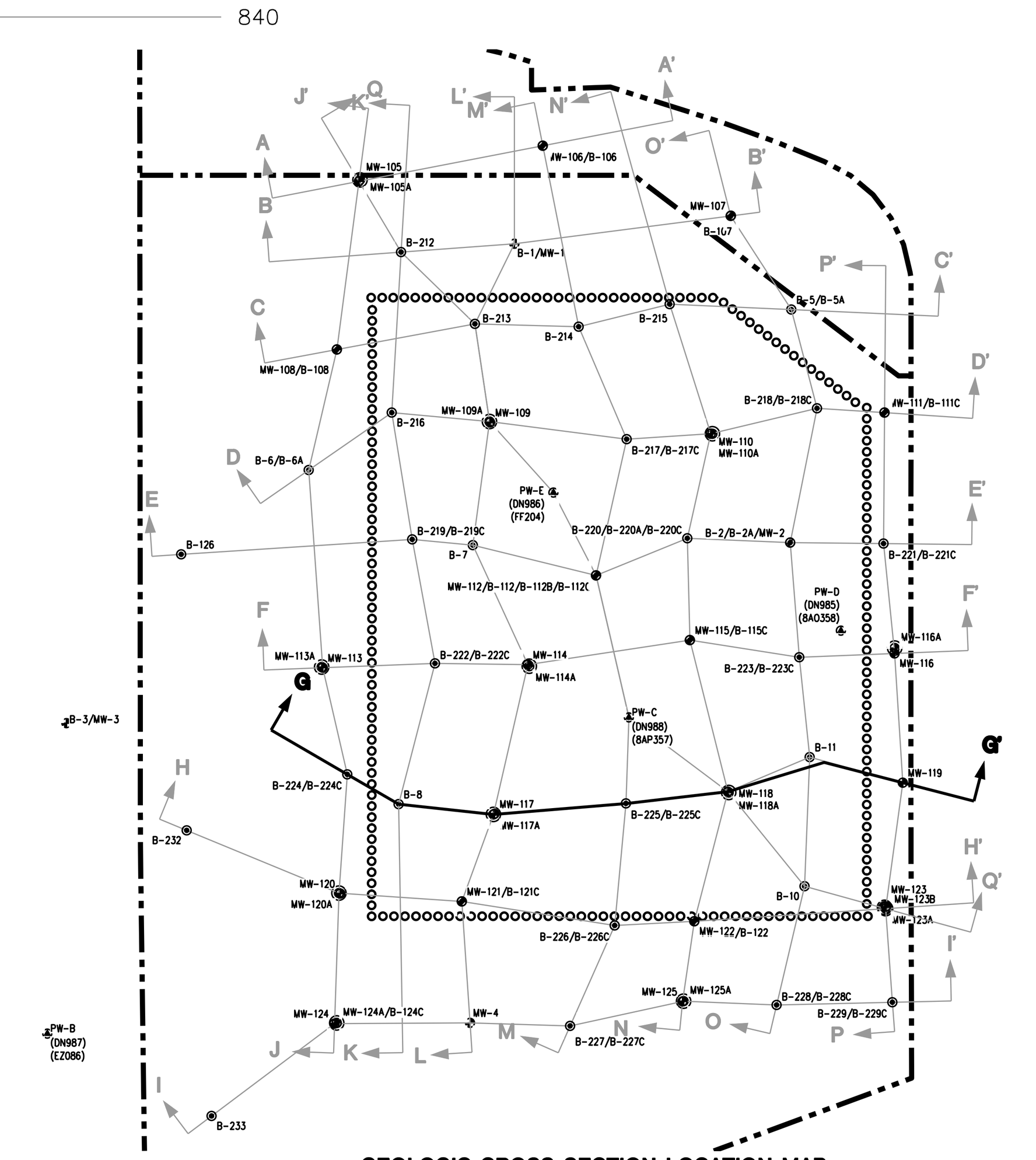

GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

PROJECT NO.	25222268.00	DRAWN BY:	KP
DRAWN:	04/11/2023	CHECKED BY:	MRH/BLP
REVISED:	02/09/2024	APPROVED BY:	BLP 02/12/2024

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

CLIENT

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

ENGINEER

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

SITE

GEOLOGIC CROSS SECTION G–G'

SHEET
12 OF 28

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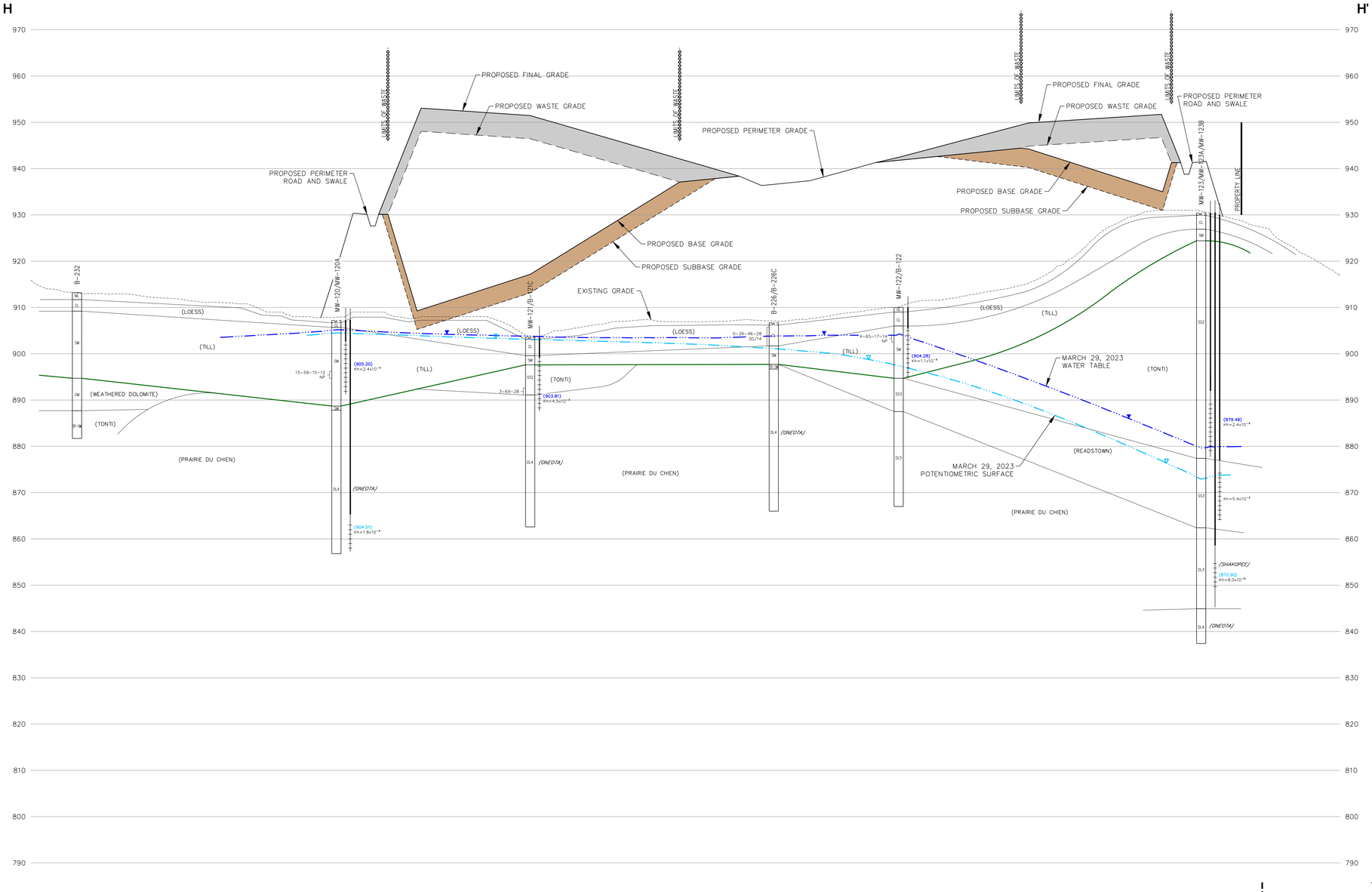

SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
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BEDROCK STRATIGRAPHIC UNITS

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GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

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WILLOW RIVER MEMBER – SANDY, GLAUCONITIC DOLOMITE, GRAY, LIGHT GRAY. BIOGENIC CARBONATES.

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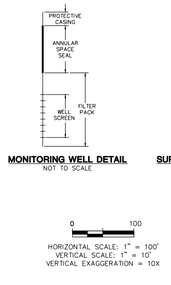

MONITORING WELL DETAIL NOT TO SCALE

SUPPLY WELL DETAIL NOT TO SCALE

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

NOTES

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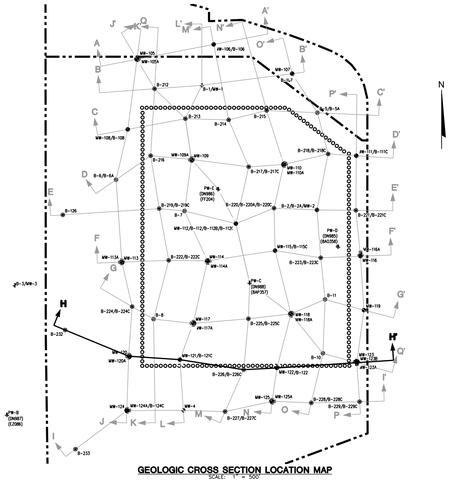

GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE (608) 224-2830

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 25222658.00
DRAWN: 04/11/2023
REVISED: 02/09/2024

DANE COUNTY DEPARTMENT OF WASTE AND RESOURCES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713
CLIENT

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
6400 SEMINOLE RIDGE ROAD
MADISON, WISCONSIN
SITE

GEOLOGIC CROSS SECTION H-H'

SHEET
13 of 28

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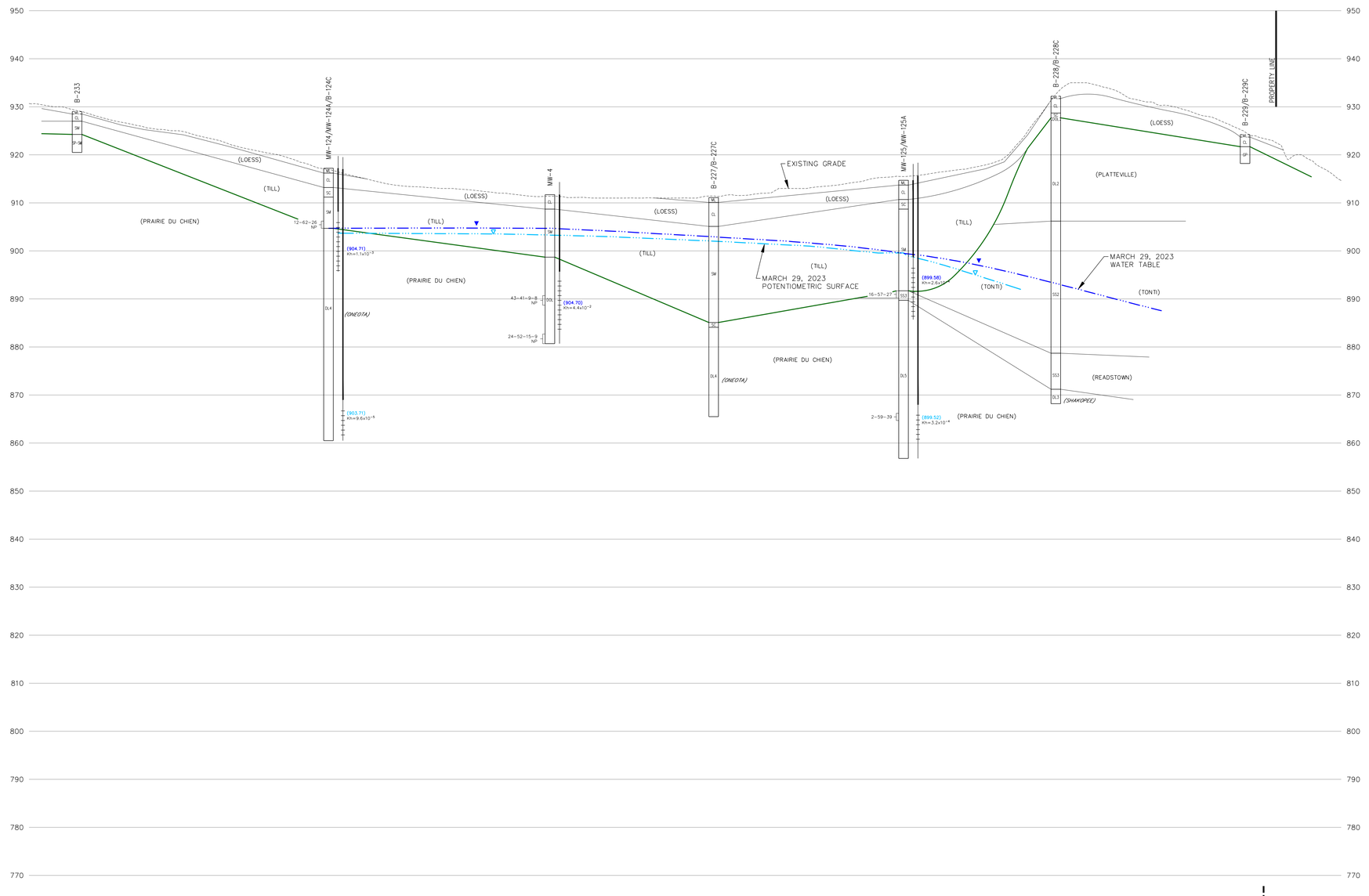

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USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
CH	FAT CLAY
GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL. SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY; MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM-BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE. DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

PLATTEVILLE FORMATION – DOLOMITE TO SHALY DOLOMITE, YELLOW, BEIGE, AND GRAY TO LIGHT BROWNISH YELLOW GRAY WEATHERING IS TYPICAL OF SHALY INTERVALS. MASSIVE, PLANAR-LAMINATED, OR MEDIUM TO THICK BEDDED, INTERBEDDED WITH THIN, WAVY BEDDED SHALE/SILT LAMINATIONS, MINOR CHERT, FOSSILIFEROUS. BIOGENIC CARBONATES.

ANCELL GROUP – MARINE AND AEOLIAN SANDSTONES, SHALES, RESIDUUM. HIGH-RELIEF UNCONFORMABLE CONTACT WITH THE UNDERLYING PRAIRIE DU CHIEN GROUP.

GLENWOOD FORMATION – SANDSTONE, DOLOMITIC (CARBONATE-CEMENTED), SILTY, AND/OR SHALY, POORLY SORTED, YELLOW-BROWN TO GREEN, WITH BLUE-GREEN SHALE OR SANDY DOLOMITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

ST. PETER FORMATION, TONTI MEMBER – SANDSTONE, LIGHT BROWNISH YELLOW, WHITE, RED, GRAY, ORANGE, OR BROWN (IF CEMENTED BY IRON OXIDES), MEDIUM TO COARSE GRAINED, WELL ROUNDED AND WELL SORTED, POORLY CEMENTED, LOW TO HIGH ANGLED CROSS-BEDDING OR MASSIVE, POORLY CEMENTED BY DOLOMITE, LOCALIZED SULFIDE MINERALIZATION DISSEMINATED THROUGH THE MATRIX AND CONCENTRATED ALONG BEDDING PLANES AND FRACTURES, LOCALIZED THIN LAYERS OF PALE GREEN SHALE/SILT. MARINE AND AEOLIAN QUARTZ SANDSTONE.

ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE. PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

PRAIRIE DU CHIEN GROUP – DOLOMITE AND SANDY DOLOMITE, YELLOW, LIGHT BROWN, AND GRAY. MASSIVE TO MEDIUM BEDDED, SANDY, CHERTY, VUGGY, AND OOLITHIC.

SHAKOPEE FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY, BEIGE, AND RED (SANDY DOLOMITE IS PREDOMINANTLY RED), INTERBEDDED WITH COARSE GRAINED WELL ROUNDED SANDSTONE, AND/OR GREEN TO GRAY SILTSTONE OR CLAY. MASSIVE, PLANAR, OR LOW-ANGEL CROSS-BEDDING. OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

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ONEOTA FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY TO BEIGE, MASSIVE, PLANAR, AND WAVY-LAMINATED BEDDING, OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

DOLOMITE – UNDIFFERENTIATED CARBONATE ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY WEATHERED AND/OR POORLY INDURATED.

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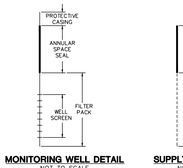
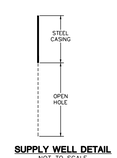


MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
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HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
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4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
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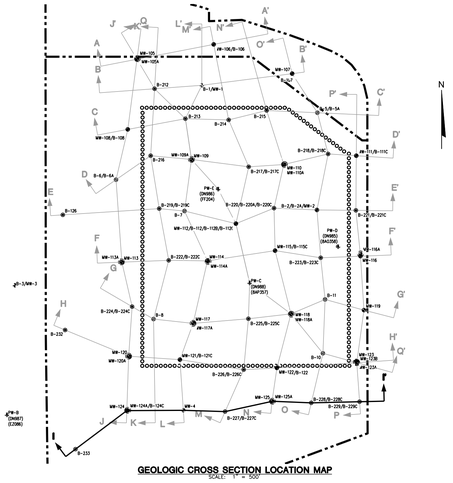
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS-SECTION IS THE STRAIGHT-LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".



GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 25222658.00
DRAWN: 04/11/2023
REVISED: 02/09/2024

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALVIN ENERGY CENTER WAY
MADISON, WI 53713

CLIENT

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
6400 SEMINOLE ROAD
MADISON, WISCONSIN

SITE

GEOLOGIC CROSS SECTION I–I'

SHEET
14 of 28

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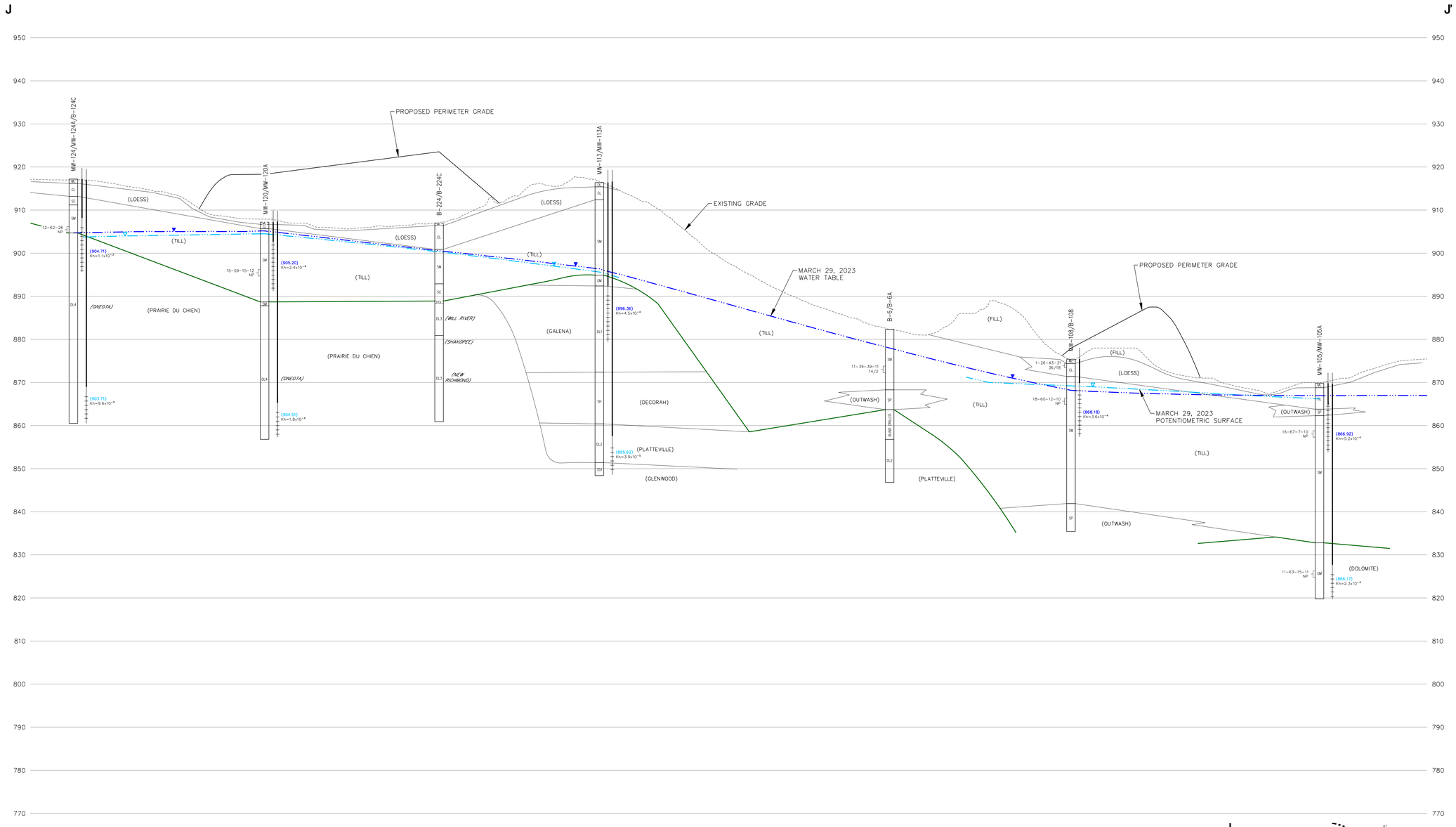

SYMBOLS AND TEST RESULTS

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NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
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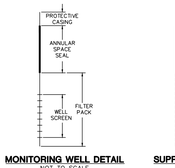
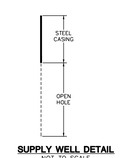


MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
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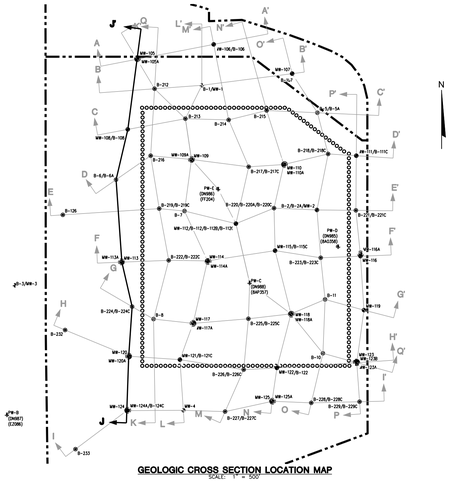

GEOLOGIC CROSS SECTION LOCATION MAP
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DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 25222268.00
DRAWN: 04/11/2023
REVISED: 02/09/2024

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713
CLIENT

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830
ENGINEER

FEASIBILITY REPORT
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4602 E. BROADWAY
MADISON, WISCONSIN
SITE

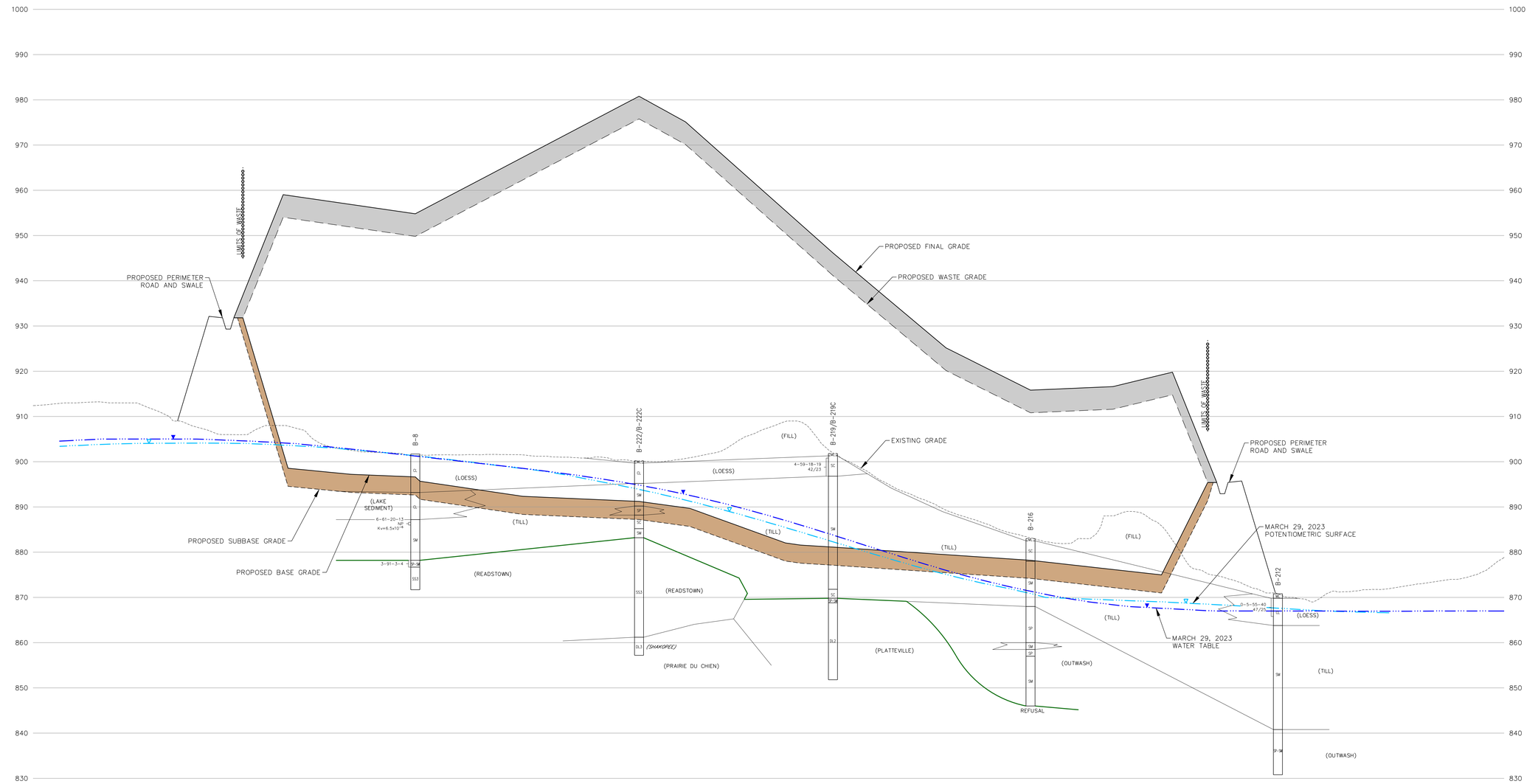
GEOLOGIC CROSS SECTION J-J'

SHEET
15 of 28

2025.01 Editorial Revisions Req. 1/31/2025 2:59:38 PM

K

K'



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OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY, MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM–BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE, DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

PLATTEVILLE FORMATION – DOLOMITE TO SHALY DOLOMITE, YELLOW, BEIGE, AND GRAY TO LIGHT BROWNISH YELLOW GRAY WEATHERING IS TYPICAL OF SHALY INTERVALS. MASSIVE, PLANAR–LAMINATED, OR MEDIUM TO THICK BEDDED, INTERBEDDED WITH THIN, WAVY BEDDED SHALE/SILT LAMINATIONS, MINOR CHERT, FOSSILIFEROUS. BIOGENIC CARBONATES.

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ST. PETER FORMATION, TONTI MEMBER – SANDSTONE, LIGHT BROWNISH YELLOW, WHITE, RED, GRAY, ORANGE, OR BROWN (IF CEMENTED BY IRON OXIDES), MEDIUM TO COARSE GRAINED, WELL ROUNDED AND WELL SORTED, POORLY CEMENTED, LOW TO HIGH ANGLED CROSS–BEDDING OR MASSIVE, POORLY CEMENTED BY DOLOMITE, LOCALIZED SULFIDE MINERALIZATION DISSEMINATED THROUGH THE MATRIX AND CONCENTRATED ALONG BEDDING PLANES AND FRACTURES, LOCALIZED THIN LAYERS OF PALE GREEN SHALE/SILT. MARINE AND AEOLIAN QUARTZ SANDSTONE.

ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE. PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

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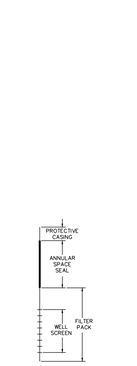

MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
NOT TO SCALE

0 100

HORIZONTAL SCALE: 1" = 100'
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1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
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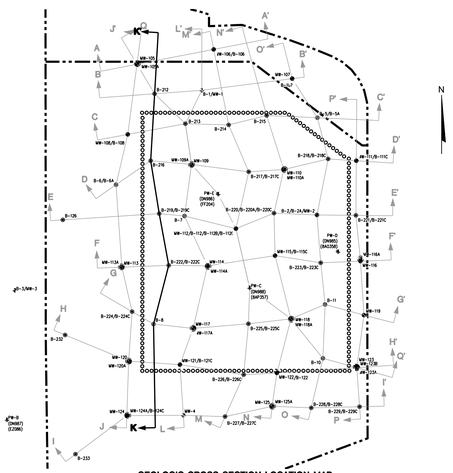

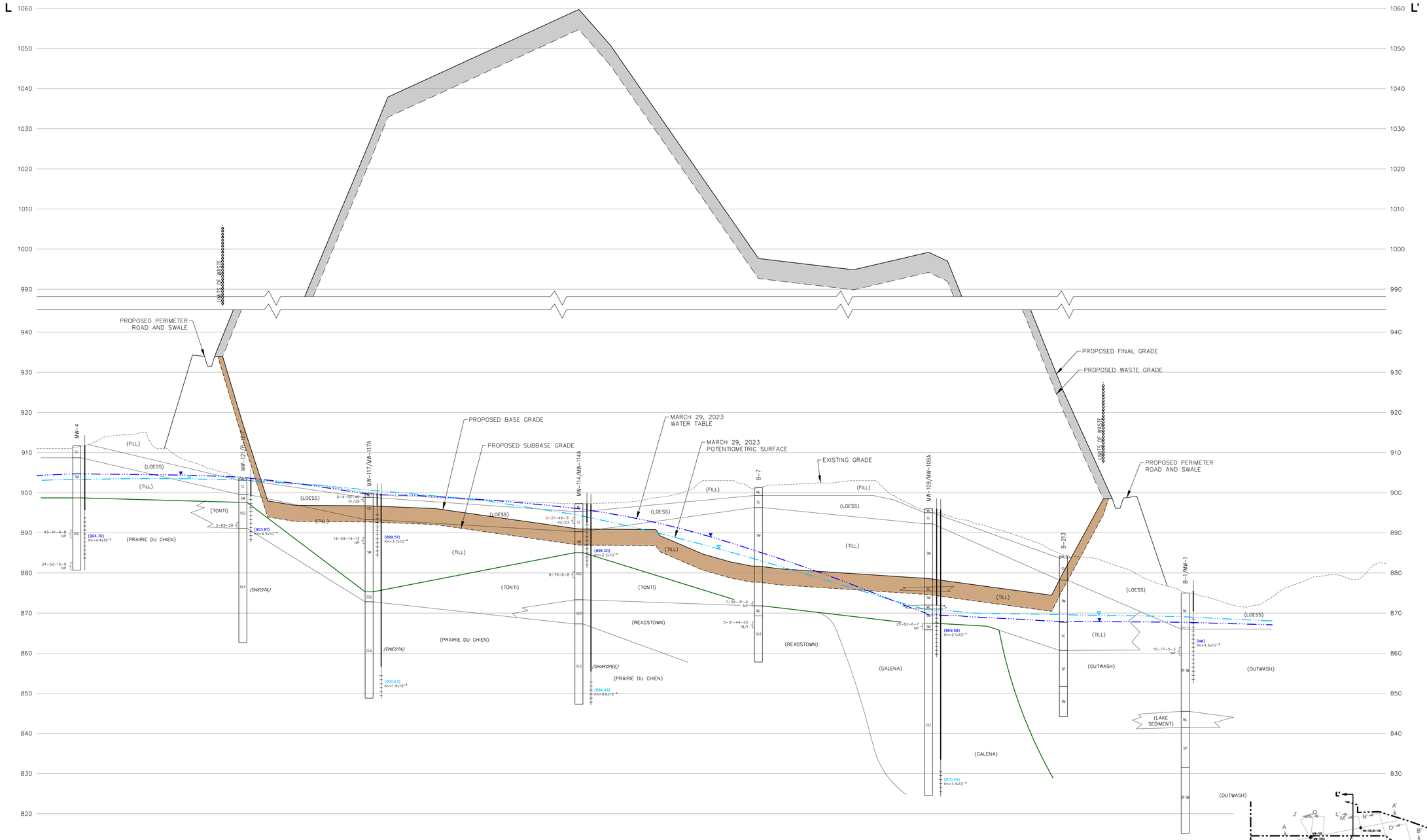

SYMBOLS AND TEST RESULTS

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NP	NON-PLASTIC
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0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
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NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
	WATER TABLE (SEE NOTE 8)
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	GEOLOGIC CONTACT
	UNCERTAIN GEOLOGIC CONTACT
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	TOP OF BEDROCK (SEE NOTE 10)
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USCS CLASSES

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CL-ML	SILTY CLAY
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GP	POORLY-GRADED GRAVEL
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GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

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SS3 – ST. PETER FORMATION, READSTOWN MEMBER

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PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

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GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

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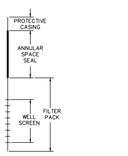

MONITORING WELL DETAIL
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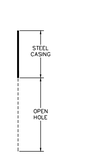

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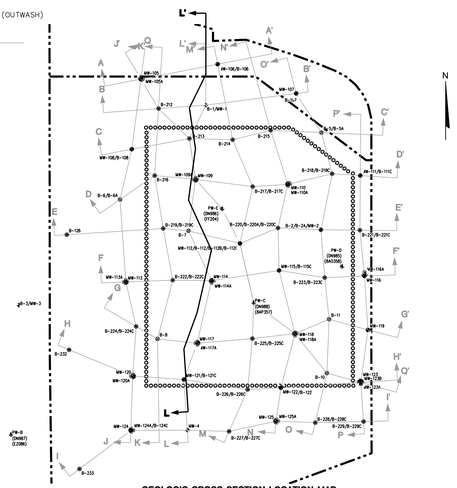


GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
PHONE: (608) 224-2830

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

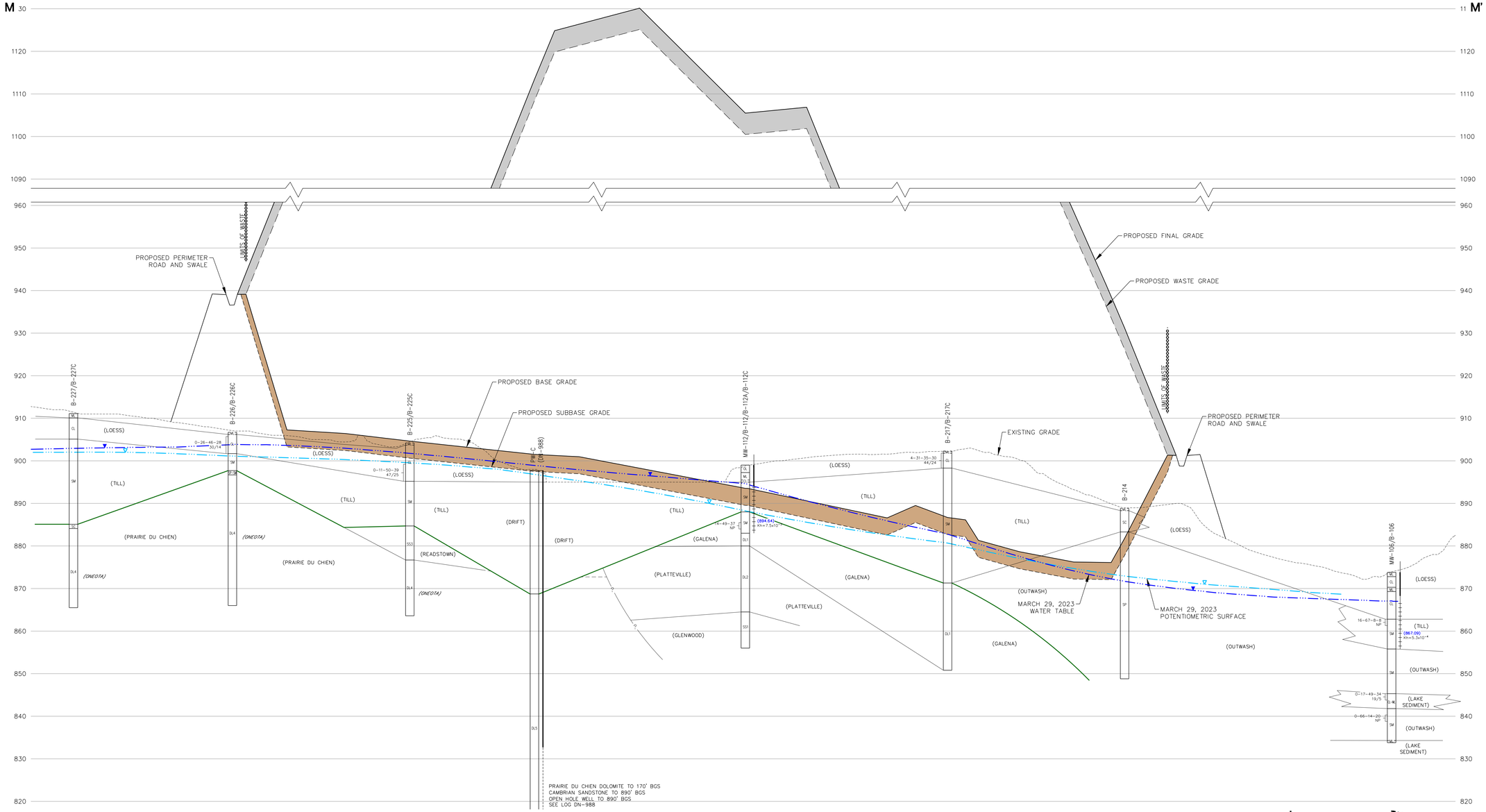
PROJECT NO. 25222658.00
DRAWN: 04/11/2023
REVISED: 02/09/2024

DANE COUNTY DEPARTMENT OF WASTE AND RESOURCES
1919 ALUMNI ENERGY CENTER WAY
MADISON, WI 53713
CLIENT

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4602 BURNING QUARRY ROAD
MADISON, WISCONSIN
SITE

GEOLOGIC CROSS SECTION L-L'

SHEET
17 of 28



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ST. PETER FORMATION, READSTOWN MEMBER – SANDSTONE, SILTY SANDSTONE, CLAYEY SANDSTONE, GRAY, RED, PURPLE, GREEN SHALY LAYERS, INTERBEDDED WITH CLAY AND OR SILT, CONTAINS CLASTS OF CHERT OR DOLOMITE, PARTIALLY REWORKED RESIDUUM ON THE PRAIRIE DU CHIEN EROSIONAL SURFACE.

PRAIRIE DU CHIEN GROUP – DOLOMITE AND SANDY DOLOMITE, YELLOW, LIGHT BROWN, AND GRAY, MASSIVE TO MEDIUM BEDDED, SANDY, CHERTY, VUGGY, AND OOLITHIC.

SHAKOPEE FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY, BEIGE, AND RED (SANDY DOLOMITE IS PREDOMINANTLY RED), INTERBEDDED WITH COARSE GRAINED WELL ROUNDED SANDSTONE, AND/OR GREEN TO GRAY SILTSTONE OR CLAY. MASSIVE, PLANAR, OR LOW-ANGEL CROSS-BEDDING; OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

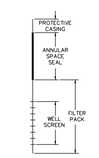
WILLOW RIVER MEMBER – SANDY, GLAUCONITIC DOLOMITE, GRAY, LIGHT GRAY. BIOGENIC CARBONATES.

NEW RICHMOND MEMBER – SANDSTONE, DOLOMITIC SANDSTONE. YELLOW AND LIGHT GRAY, FINE TO COARSE SAND, MASSIVE TO BEDDED, CHERT AND GLAUCONITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

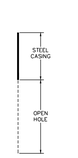
ONEOTA FORMATION – DOLOMITE AND SANDY DOLOMITE, GRAY TO BEIGE, MASSIVE, PLANAR, AND WAVY-LAMINATED BEDDING, OOLITHIC, VUGGY, CHERTY, AND GLAUCONITIC. BIOGENIC CARBONATES.

DOLOMITE – UNDIFFERENTIATED CARBONATE ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY WEATHERED AND/OR POORLY INDURATED.

SANDSTONE – UNDIFFERENTIATED SILICLASTIC ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY POORLY INDURATED.



MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
NOT TO SCALE

0 100
HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

NOTES

1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
2. FOR WELL NESTS, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE WATER TABLE WELL AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE NEST LOCATION.
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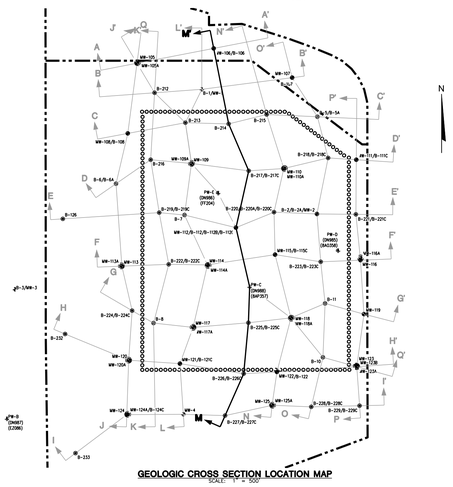
4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
5. REFER TO APPENDIX F FOR MONITORING WELL CONSTRUCTION DETAILS.
6. EXISTING GROUND SURFACE WAS TAKEN FROM SHEET NUMBER 2.
7. ELEVATIONS ARE REFERENCED TO USGS DATUM.
8. THE POSITION OF THE WATER TABLE BETWEEN WELLS IS BASED ON THE WATER TABLE CONTOUR MAP, SHEET NUMBER 3.
9. THE POSITION OF THE POTENTIOMETRIC SURFACE BETWEEN WELLS IS BASED ON THE POTENTIOMETRIC SURFACE CONTOUR MAP, SHEET NUMBER 5.
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS-SECTION IS THE STRAIGHT-LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".



GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 2522268.00
DRAWN: 04/11/2023
REVISED: 02/09/2024

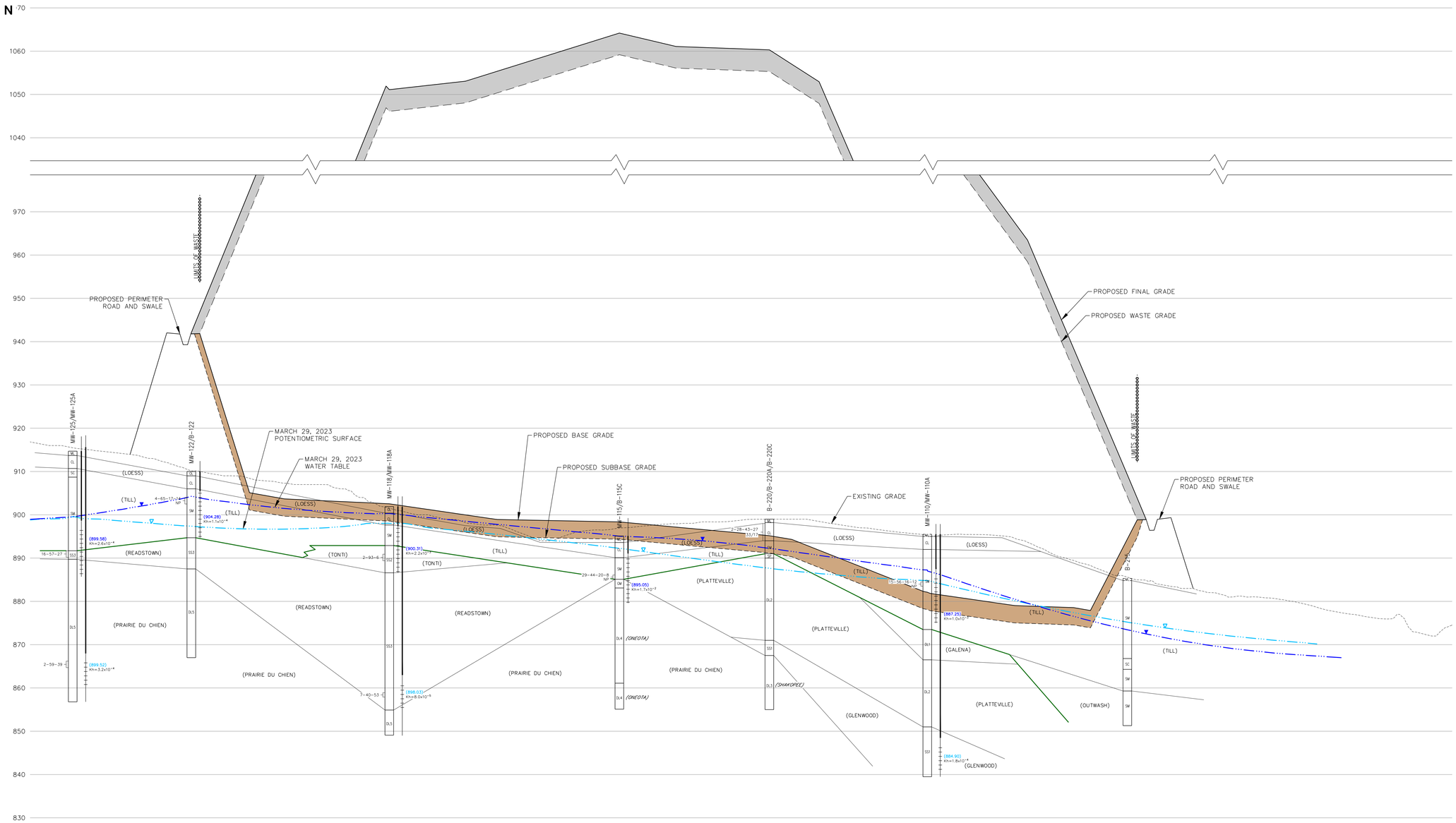
DANE COUNTY DEPARTMENT OF WASTE AND RESOURCES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713
CLIENT

SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
PHONE: (608) 224-2830
ENGINEER

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4602 BRADISH ROAD
MADISON, WISCONSIN
SITE

GEOLOGIC CROSS SECTION M–M'

SHEET
18 of 28



SYMBOLS AND TEST RESULTS

40.7/22.6	LIQUID LIMIT/PLASTICITY INDEX
NP	NON-PLASTIC
Kv	LABORATORY VERTICAL HYDRAULIC CONDUCTIVITY (cm/sec)
Kh	FIELD HORIZONTAL HYDRAULIC CONDUCTIVITY (cm/sec)
0-30-42-28	PERCENT GRAVEL, SAND, SILT, AND CLAY
0-87-13	PERCENT GRAVEL, SAND, AND SILT PLUS CLAY
72-5	PERCENT GRAVEL AND SAND
NS	NOT SAMPLED
(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
	WATER TABLE (SEE NOTE 8)
	POTENTIOMETRIC SURFACE (SEE NOTE 9)
	EXISTING GROUND (SPRING 2017)
	GEOLOGIC CONTACT
	UNCERTAIN GEOLOGIC CONTACT
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	TOP OF BEDROCK (SEE NOTE 10)
	PROPOSED FINAL COVER SYSTEM
	PROPOSED COMPOSITE LINER SYSTEM

USCS CLASSES

CL	LEAN CLAY
CL-ML	SILTY CLAY
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GP	POORLY-GRADED GRAVEL
GP-GM	POORLY-GRADED GRAVEL WITH SILT
GM	SILTY GRAVEL
GW	WELL-GRADED GRAVEL
GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

ANCELL GROUP

SS1 – GLENWOOD FORMATION

SS2 – ST. PETER FORMATION, TONTI MEMBER

SS3 – ST. PETER FORMATION, READSTOWN MEMBER

SS4 – ANCELL GROUP, UNDIFFERENTIATED

PRAIRIE DU CHIEN GROUP

DL3 – SHAKOPEE FORMATION

DL4 – ONEOTA FORMATION

DL5 – PRAIRIE DU CHIEN GROUP UNDIFFERENTIATED

UNDIFFERENTIATED

DOL – DOLOMITE

SS – SANDSTONE

GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

PLEISTOCENE SEDIMENTS

LOESS – GRAYISH BROWN, OR YELLOWISH BROWN, MOSTLY SILT WITH SOME CLAY AND FINE SAND, LEAN CLAY (CL), UNIFORM, MASSIVE. DEPOSITED PRIMARILY BY WIND DURING DEGLACIATION. CONTAINS THE MODERN SOIL PROFILE.

TILL – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN, OR YELLOWISH RED, MOSTLY FINE SAND WITH MEDIUM AND COARSE SAND, AND GRAVEL, SILTY SAND (SM) MATRIX, UNIFORM, WITH SOME COBBLES AND BOULDERS. DEPOSITED BY OR FROM GLACIAL ICE.

OUTWASH – HORICON MEMBER OF THE HOLY HILL FORMATION – BROWN OR YELLOWISH BROWN, FINE TO COARSE SAND AND SOME GRAVEL, GENERALLY POORLY-GRADED SAND WITH SILT (SP-SM), OR SILTY SAND (SM), MASSIVE TO STRATIFIED, DEPOSITED BY FLUVIAL PROCESSES NEAR GLACIAL ICE.

DRIFT – UNDIFFERENTIATED PLEISTOCENE SEDIMENTS, LOESS, TILL, AND/OR OUTWASH.

ORDOVICIAN BEDROCK UNITS

SINNIPEE GROUP – DOLOMITE AND SHALY DOLOMITE, YELLOW BROWN TO LIGHT BROWNISH YELLOW AND GRAY, MASSIVE OR MEDIUM TO THICK BEDDED, BEDDING IS WAVY OR MOTTLED WITH SHALY LAYERS, MINOR WHITE CHERT, FOSSILIFEROUS.

GALENA FORMATION – DOLOMITE TO CHERTY DOLOMITE, GRAY TO BEIGE, AND YELLOW BROWN TO LIGHT BROWNISH YELLOW, MASSIVE TO MEDIUM–BEDDED WITH DISTINCTIVE MOTTLED WEATHERING PATTERN, BASE IS LIGHT GRAY AND SHALY, FOSSILIFEROUS. BIOGENIC CARBONATES.

DECORAH FORMATION – SHALY AND SILTY DOLOMITE, DARK GRAY, THIN BEDDED, MINOR CHERT AND PYRITE. REWORKED SHALLOW WATER OR LAGOONAL DEPOSITS.

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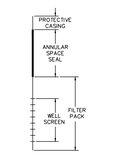
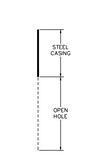


MONITORING WELL DETAIL
NOT TO SCALE



SUPPLY WELL DETAIL
NOT TO SCALE

0 100

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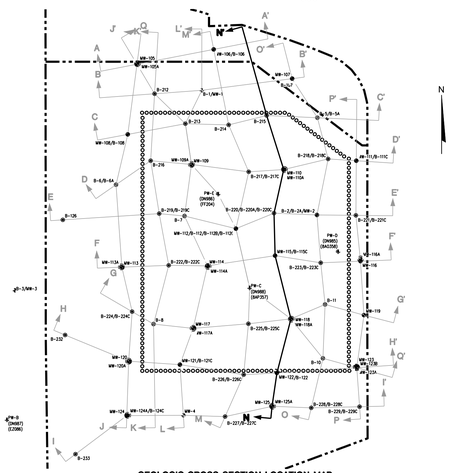

GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
PHONE: (608) 224-2830

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 25222688.00
DRAWN: 04/11/2023
REVISED: 02/09/2024

DANE COUNTY DEPARTMENT OF WASTE AND RESOURCES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713
CLIENT

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE
CELL NO. 3 AND EXPANSION
MADISON, WISCONSIN
SITE

GEOLOGIC CROSS SECTION N–N'
ENGINEER

SHEET
19 of 28

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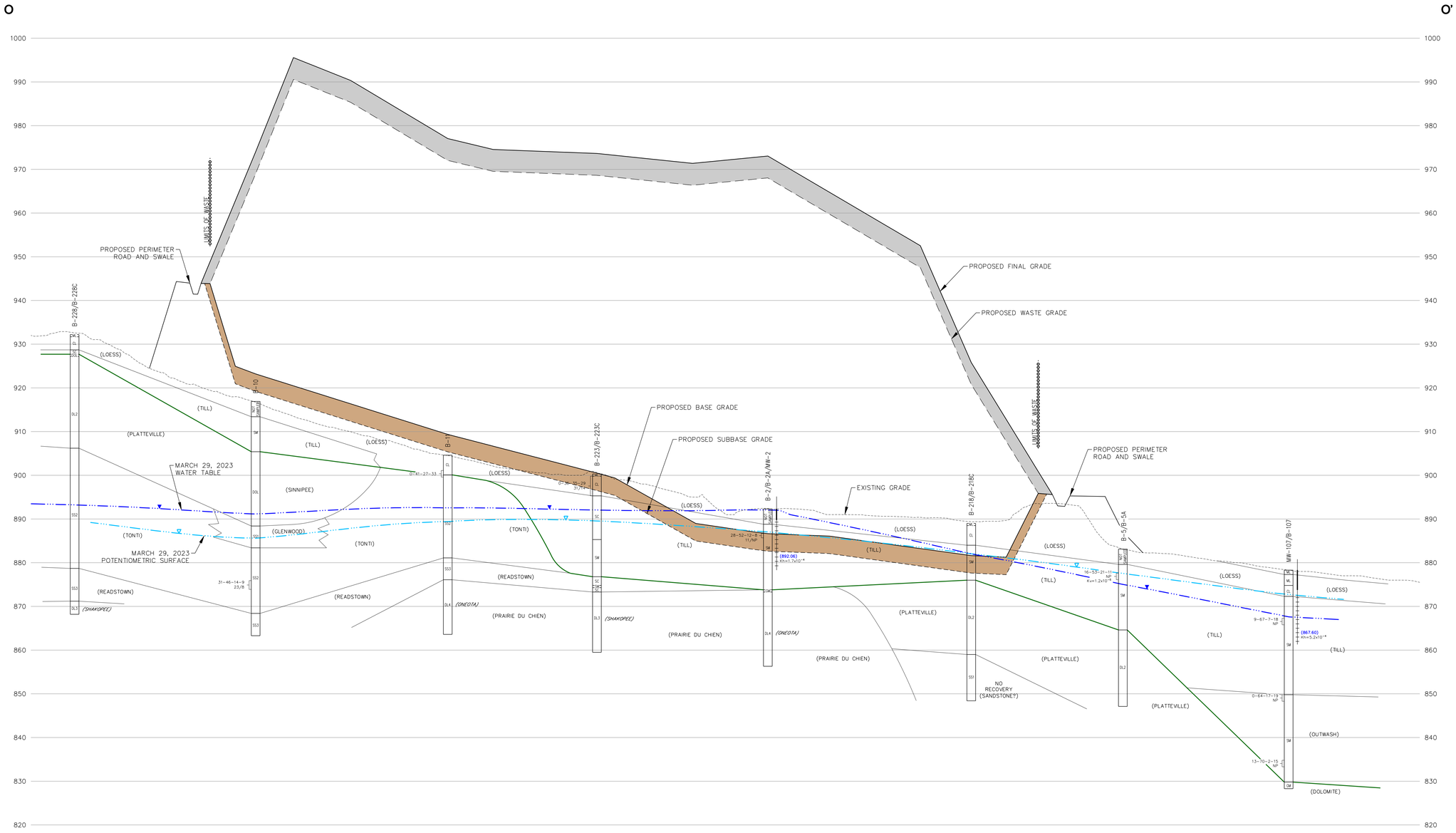

SYMBOLS AND TEST RESULTS

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BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

DL2 – PLATTEVILLE FORMATION

DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

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SS3 – ST. PETER FORMATION, READSTOWN MEMBER

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PRAIRIE DU CHIEN GROUP

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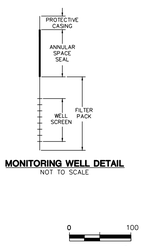

MONITORING WELL DETAIL
NOT TO SCALE

SUPPLY WELL DETAIL
NOT TO SCALE

0 100
HORIZONTAL SCALE: 1" = 100'
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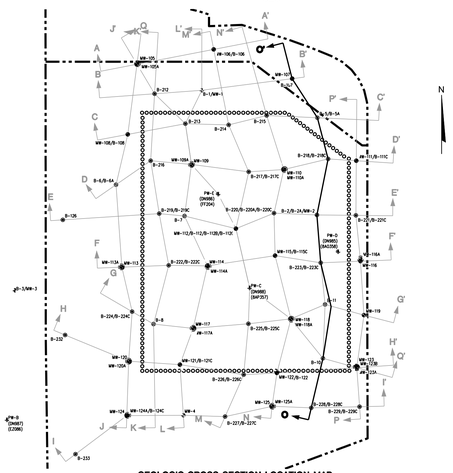

GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
PHONE: (608) 224-2830

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 25222658.00
DRAWN: 04/11/2023
REVISED: 02/09/2024

DANE COUNTY DEPARTMENT OF WASTE AND RESOURCES
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MADISON, WI 53713
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FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE
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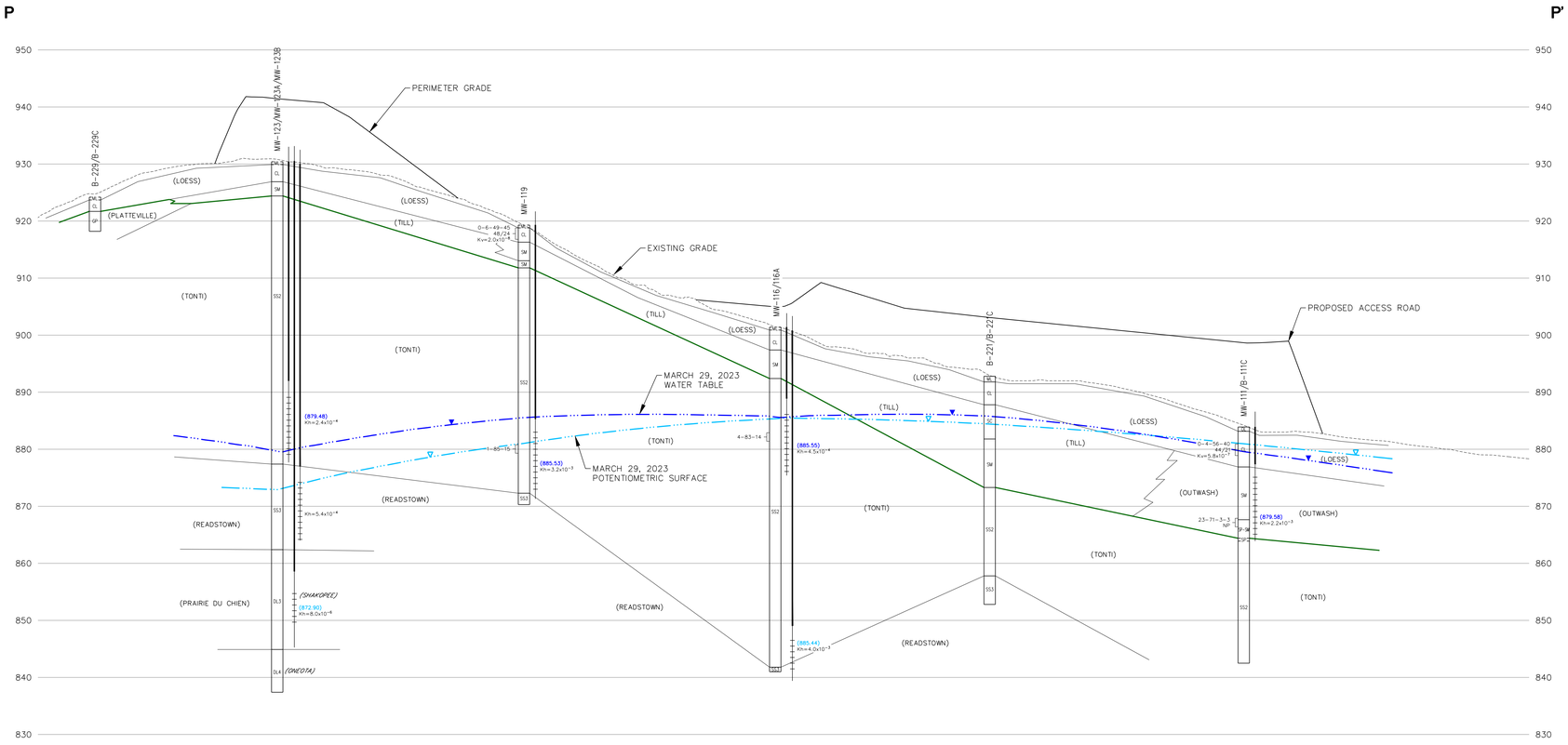
GEOLOGIC CROSS SECTION O–O'

SHEET
20 of 28

C:\SCS\Projects\Wisconsin\Dane County\Site 3\25222658.00 Feasibility Report\Figures\Figure 20 Geologic Cross Section O-O'.dwg 2/9/2024 2:51:17 PM



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72-5	PERCENT GRAVEL AND SAND
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(1,036.67)	GROUNDWATER ELEVATION ON 03/29/2024 (FEET ABOVE MEAN SEA LEVEL)
(NM)	NOT MEASURED
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GW-GM	WELL-GRADED GRAVEL WITH SILT
ML	SILT
SC	CLAYEY SAND
SM	SILTY SAND
SP	POORLY-GRADED SAND
SP-SM	POORLY-GRADED SAND WITH SILT

BEDROCK STRATIGRAPHIC UNITS

SINNIPEE GROUP

DL1 – GALENA FORMATION

SH – DECORAH FORMATION

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DL6 – SINNIPEE GROUP, UNDIFFERENTIATED

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GENERAL DESCRIPTION OF MAJOR GEOLOGIC UNITS

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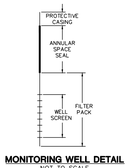

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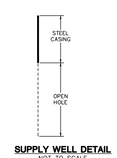

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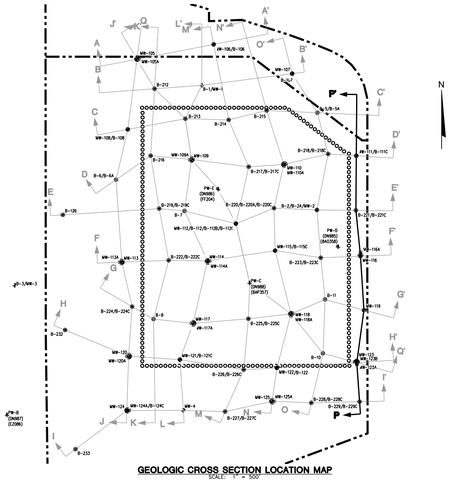

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SCS ENGINEERS
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PROJECT NO. 25322268.00
DRAWN: 04/11/2023
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FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4602 E. BROADWAY
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SITE

GEOLOGIC CROSS SECTION P-P'

SHEET
21 of 28

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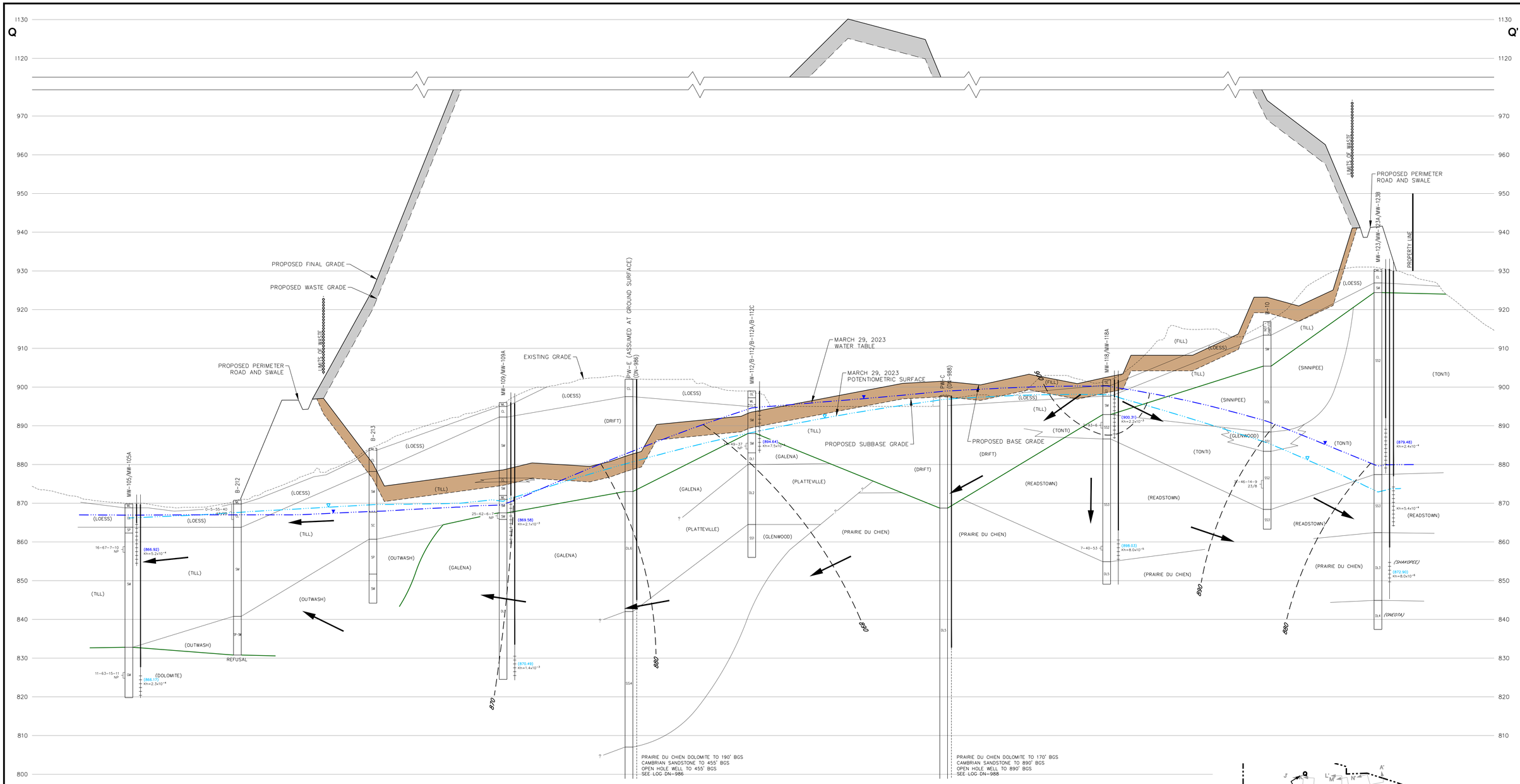

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FLOW NET LEGEND

— —880— — EQUIPOTENTIAL CONTOUR FOR GROUNDWATER HEAD (10' INTERVAL)

GROUNDWATER FLOW DIRECTION

FLOW NET NOTES

1. FLOW ARROWS ARE NOT PERPENDICULAR TO EQUIPOTENTIAL LINES DUE TO ANISOTROPY IN BEDROCK (Kh >> Kv).
2. FLOW NET IS BASED ON CROSS SECTION DATA AND CONCEPTUAL HYDROGEOLOGIC MODEL DEVELOPED FROM SITE-WIDE GEOLOGICAL INFORMATION.

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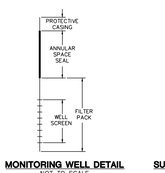
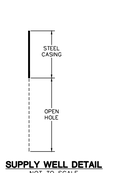
DOLOMITE – UNDIFFERENTIATED CARBONATE ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY WEATHERED AND/OR POORLY INDURATED.

SANDSTONE – UNDIFFERENTIATED SILICLASTIC ROCK. LITTLE OR NO SAMPLE RECOVERED. LIKELY POORLY INDURATED.



MONITORING WELL DETAIL
NOT TO SCALE



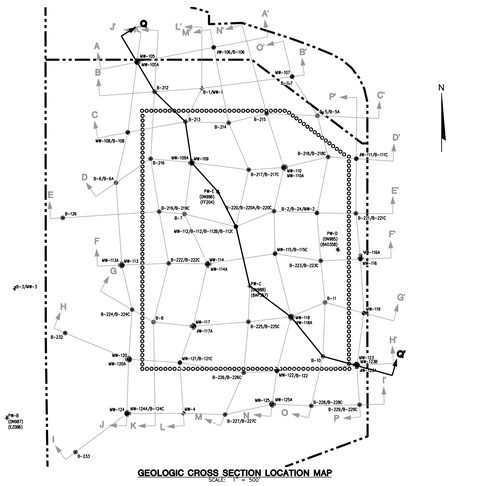
SUPPLY WELL DETAIL
NOT TO SCALE

0 100

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'
VERTICAL EXAGGERATION = 10X

NOTES

1. HORIZONTAL DISTANCES ARE MEASURED WITH RESPECT TO THE CENTER OF EACH BORING LOCATION.
2. FOR WELL NESTS, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE WATER TABLE WELL AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE NEST LOCATION.
3. FOR LOCATIONS WITH MORE THAN ONE BORING, THE GEOLOGIC LOG IS POSTED AT THE LOCATION OF THE SHALLOWEST BORING AND INCLUDES GEOLOGIC INFORMATION FROM ALL BORINGS AT THE DRILLING LOCATION.
4. REFER TO BORING LOGS IN APPENDIX F OF THE FEASIBILITY REPORT FOR DETAILED DESCRIPTIONS OF GEOLOGIC CONDITIONS AT INDIVIDUAL BORING LOCATIONS.
5. REFER TO APPENDIX F FOR MONITORING WELL CONSTRUCTION DETAILS.
6. EXISTING GROUND SURFACE WAS TAKEN FROM SHEET NUMBER 2.
7. ELEVATIONS ARE REFERENCED TO USGS DATUM.
8. THE POSITION OF THE WATER TABLE BETWEEN WELLS IS BASED ON THE WATER TABLE CONTOUR MAP, SHEET NUMBER 3.
9. THE POSITION OF THE POTENTIOMETRIC SURFACE BETWEEN WELLS IS BASED ON THE POTENTIOMETRIC SURFACE CONTOUR MAP, SHEET NUMBER 5.
10. THE BEDROCK SURFACE SHOWN BETWEEN BORINGS ON THE CROSS-SECTION IS THE STRAIGHT-LINE CONNECTION OF THE UPPERMOST ROCK SURFACES OBSERVED AT THE DRILLING LOCATIONS OR IS BASED ON GEOLOGIC INTERPRETATION OF AN EROSIONAL SURFACE BETWEEN BORING LOCATIONS. THE BEDROCK SURFACE CONTOURS SHOWN BETWEEN BORINGS ON PLAN SHEET 6, BEDROCK SURFACE MAP, ARE BASED ON INTERPOLATION USING KRIGING WITH THE PROGRAM "SURFER".



GEOLOGIC CROSS SECTION LOCATION MAP
SCALE: 1" = 500'

SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
PHONE: (608) 224-2830

DRAWN BY:	KP
CHECKED BY:	MRH/BLP
APPROVED BY:	BLP 02/12/2024
PROJECT NO.	25222658.00
DRAWN:	04/11/2023
REVISED:	02/09/2024

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALVIAN ENERGY CENTER WAY
MADISON, WI 53713

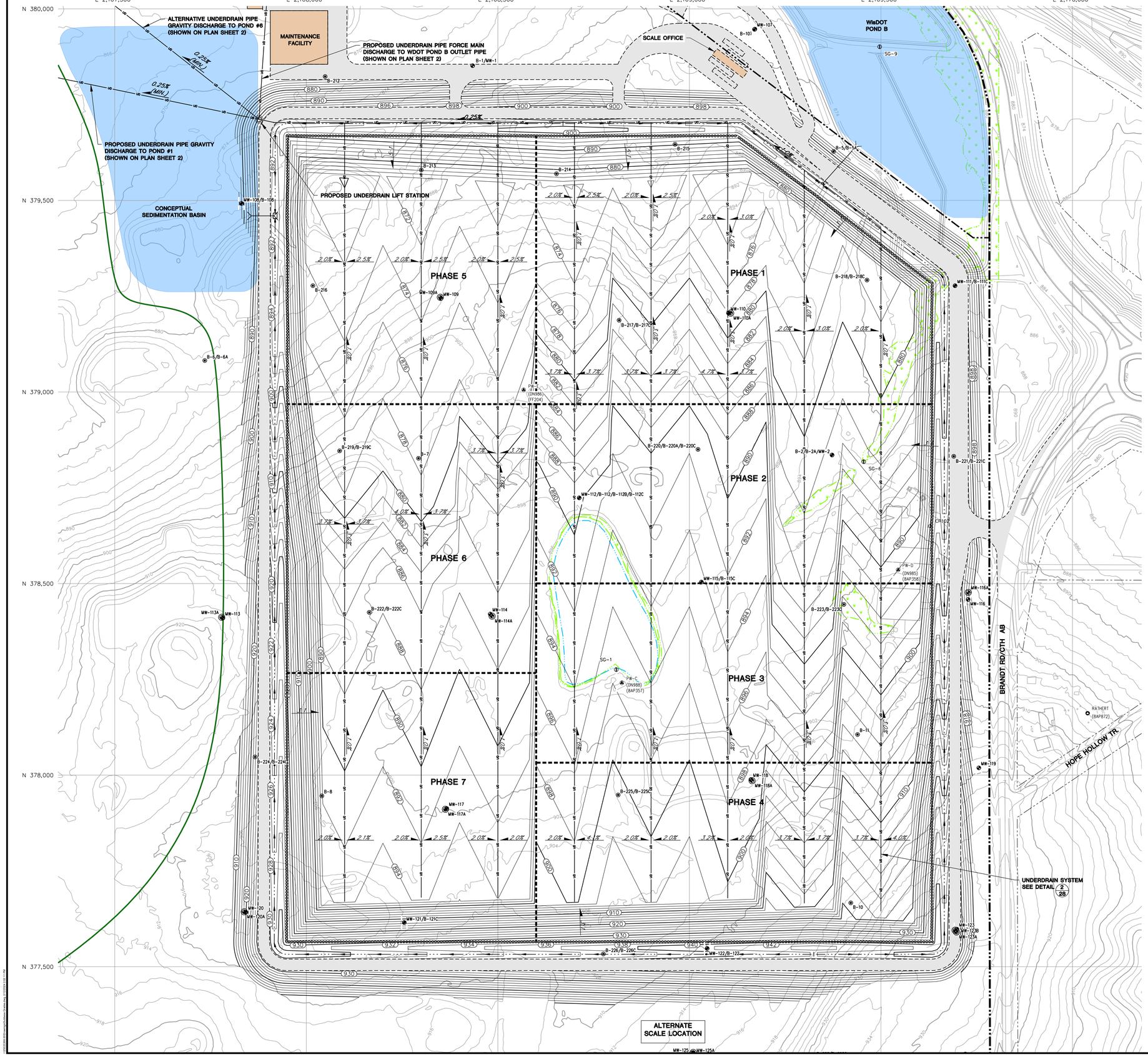
CLIENT

FEASIBILITY REPORT
LANDFILL SITE NO. 3
DANE COUNTY LANDFILL SITE
MADISON, WISCONSIN

SITE

GEOLOGIC CROSS SECTION Q-Q'
WITH FLOW NET

SHEET
22 of 28



LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- PROPOSED PHASE LIMIT
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- B-216 EXISTING SOIL BORING
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- PROPOSED UNDERDRAIN LINE
- 0.25% PROPOSED SLOPE AND DIRECTION
- 902 PROPOSED GRADE (2' CONTOUR)
- 900 PROPOSED GRADE (10' CONTOUR)
- PROPOSED PERIMETER SWALE
- PROPOSED PERIMETER/ACCESS ROAD
- PROPOSED CULVERT

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. PROPOSED CONTOURS WITHIN LIMITS OF WASTE REPRESENT BOTTOM OF CLAY LINER (SUBBASE GRADES). UNDERCUTS FOR LEACHATE COLLECTION LINES AND SUMPS ARE NOT SHOWN.
3. WISDOT POND B WILL BE MODIFIED WITH THE PROPOSED LANDFILL. PROPER APPROVALS WILL BE OBTAINED PRIOR TO MODIFICATION. PRELIMINARY STORM WATER MODELING SUPPORTS THE PROPOSED REDUCTION TO POND B FOOTPRINT.
4. WETLANDS AND GOLF COURSE POND SHOWN WITHIN PROPOSED LIMITS OF GRADING ARE ARTIFICIAL AND NON-JURISDICTIONAL AND THEREFORE NOT SUBJECT TO REGULATORY AUTHORITY REGARDING CHAPTER 30 OR 281, WIS. STATS. (REFER TO CORRESPONDENCE IN APPENDIX B OF THE FEASIBILITY REPORT).

N

100 0 100

SCALE: 1" = 100'

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 29322688.00
DRAWN: 03/24/2023
REVISED: 02/09/2024

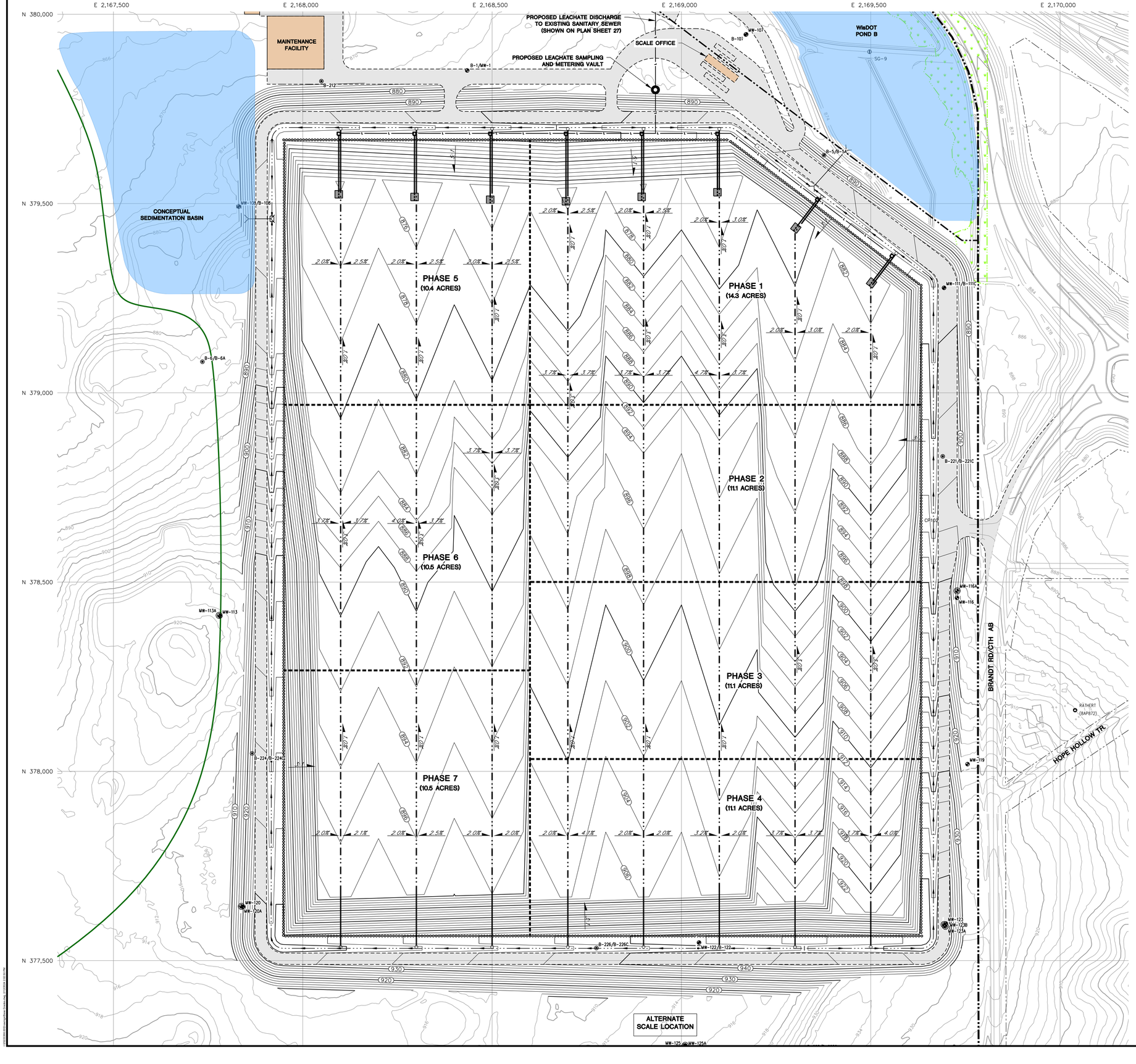
DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713
CLIENT

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830
ENGINEER

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE
CAPACITY EXPANSION NO. 3
MADISON, WISCONSIN
SITE

PROPOSED SUBBASE GRADES AND UNDERDRAIN

SHEET
23 of 28



LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- PROPOSED PHASE LIMIT
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- B-216 EXISTING SOIL BORING
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- PROPOSED LEACHATE COLLECTION LINE
- PROPOSED LEACHATE COLLECTION LINE CLEANOUT
- PROPOSED LEACHATE INCLINED RISER PIPE AND VAULT
- PROPOSED LEACHATE LINE (GRAVITY OR FORCEMAIN)
- PROPOSED LEACHATE COLLECTION SUMP
- 1.0% PROPOSED SLOPE AND DIRECTION
- 902 PROPOSED GRADE (2' CONTOUR)
- 900 PROPOSED GRADE (10' CONTOUR)
- PROPOSED PERIMETER SWALE
- PROPOSED PERIMETER/ACCESS ROAD
- PROPOSED CULVERT

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. PROPOSED CONTOURS WITHIN LIMITS OF WASTE REPRESENT TOP OF CLAY LINER (BASE GRADES). UNDERCUTS FOR LEACHATE COLLECTION LINES AND SUMPS ARE NOT SHOWN.

N

100 0 100

SCALE: 1" = 100'

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALVIN T. ENERGY CENTER WAY
MADISON, WI 53713

CLIENT

SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
PHONE: (608) 224-2830

ENGINEER

DANE COUNTY LANDFILL SITE
FEASIBILITY REPORT
CELL 3 AND PHASE 2 OF CELL NO. 2
MADISON, WISCONSIN

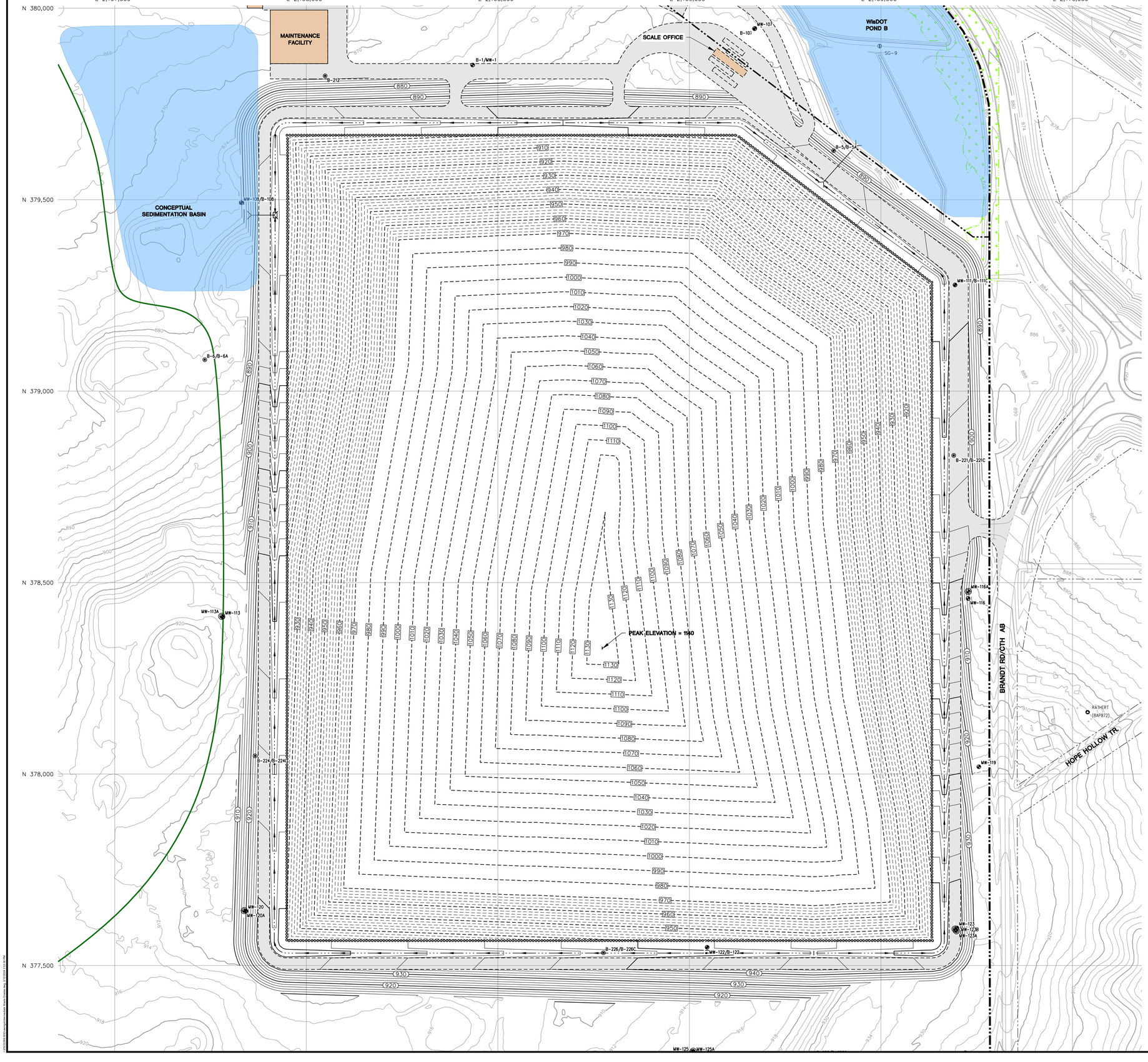
SITE

PROPOSED BASE GRADES

SHEET
24 of 28

PROJECT NO.	25222658.00	
DRAWN:	03/24/2023	DRAWN BY: MRH/BLP
REVISED:	02/09/2024	CHECKED BY:
		APPROVED BY: BLP 02/12/2024

xp



LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- B-216 EXISTING SOIL BORING
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- 902 PROPOSED GRADE (2' CONTOUR)
- 900 PROPOSED GRADE (10' CONTOUR)
- PROPOSED INTERMEDIATE WASTE GRADE (2' CONTOUR)
- 950 PROPOSED INTERMEDIATE WASTE GRADE (10' CONTOUR)
- PROPOSED PERIMETER SWALE
- PROPOSED PERIMETER/ACCESS ROAD
- PROPOSED CULVERT

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. PROPOSED CONTOURS WITHIN LIMITS OF WASTE REPRESENT TOP OF WASTE GRADES WITH 5% OVERFILL. ABOVE ELEVATION 970, ONLY 10' CONTOURS ARE SHOWN FOR CLARITY.

N

100 0 100

SCALE: 1" = 100'

PROJECT NO.	25222268.00
DRAWN:	03/24/2023
REVISED:	02/09/2024
DRAWN BY:	KP
CHECKED BY:	MRH/BLP
APPROVED BY:	BLP 02/12/2024

CLIENT

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

ENGINEER

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

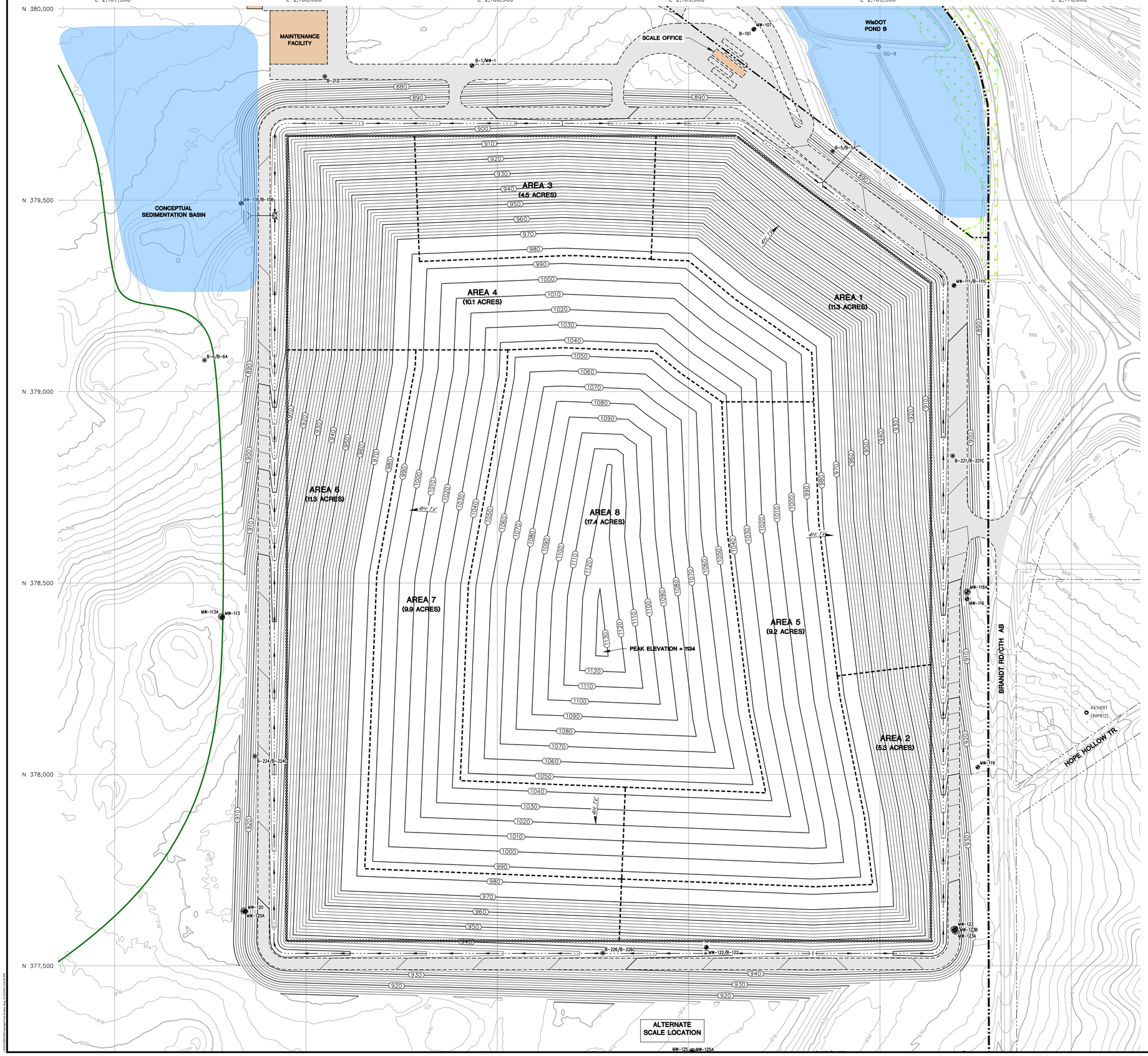
SITE

FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

PROPOSED INTERMEDIATE WASTE GRADES

SHEET

25 of 28



LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- PROPOSED CLOSURE AREA LIMIT
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- B-216 EXISTING SOIL BORING
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- 902 PROPOSED GRADE (2' CONTOUR)
- 900 PROPOSED GRADE (10' CONTOUR)
- PROPOSED TOP OF WASTE GRADE (2' CONTOUR)
- 950 PROPOSED TOP OF WASTE GRADE (10' CONTOUR)
- 4H:1V PROPOSED SLOPE AND DIRECTION
- PROPOSED PERIMETER SWALE
- PROPOSED PERIMETER/ACCESS ROAD
- PROPOSED CULVERT

NOTES:

1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. PROPOSED CONTOURS WITHIN LIMITS OF WASTE REPRESENT TOP OF FINAL COVER GRADES. ABOVE ELEVATION 970, ONLY 10' CONTOURS ARE SHOWN FOR CLARITY.
3. FINAL COVER SEQUENCING IS PRELIMINARY AND WILL BE FURTHER DEFINED AS PART OF THE PLAN OF OPERATION.

N

100 0 100

SCALE: 1" = 100'

DRAWN BY: KP
CHECKED BY: MRH/BLP
APPROVED BY: BLP 02/12/2024

PROJECT NO. 25222268.00
DRAWN: 03/24/2023
REVISED: 02/09/2024

CLIENT
DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

ENGINEER
SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

SITE
FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

PROPOSED FINAL GRADES

SHEET
26 of 28

SHEET

SITE PLAN

SITE

DANE COUNTY LANDFILL SITE NO. 3
4402 BRANDT ROAD
MADISON, WISCONSIN

FEASIBILITY REPORT

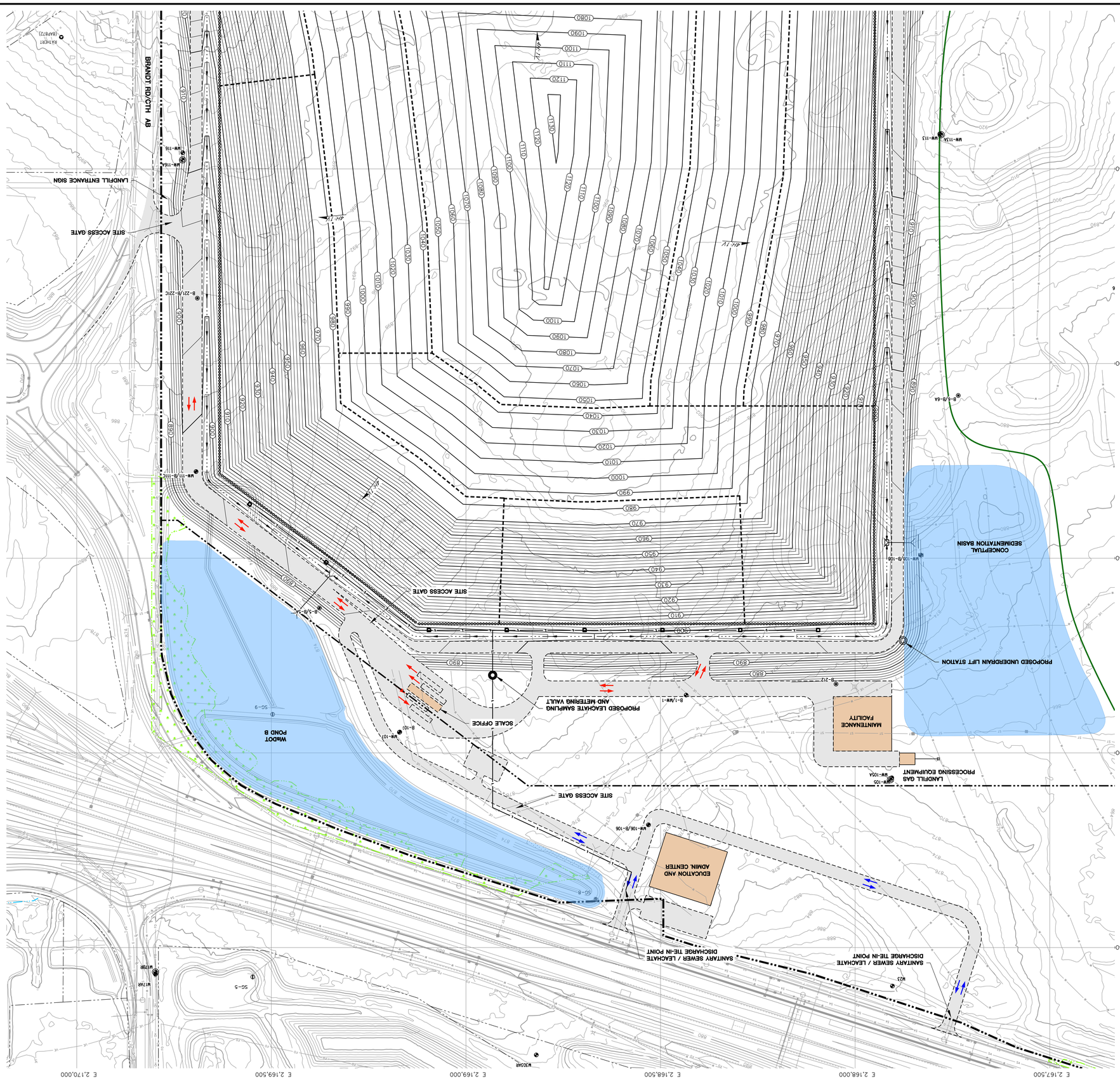
ENGINEER

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CLIENT

DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

	PROJECT NO.	25222680
DRAWN:	01/24/2023	DRAWN BY: KP
REVISED:	02/09/2024	CHECKED BY: MRR/RLP
		APPROVED BY: RLP 02/12/2024



SCALE: 1" = 100'

100 0 100

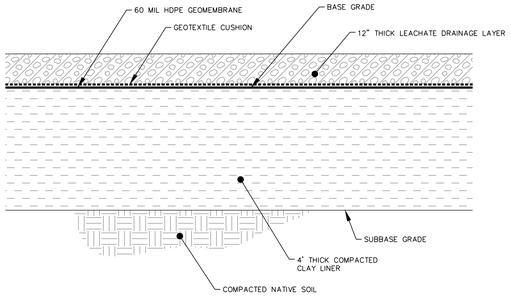
N

NOTES:

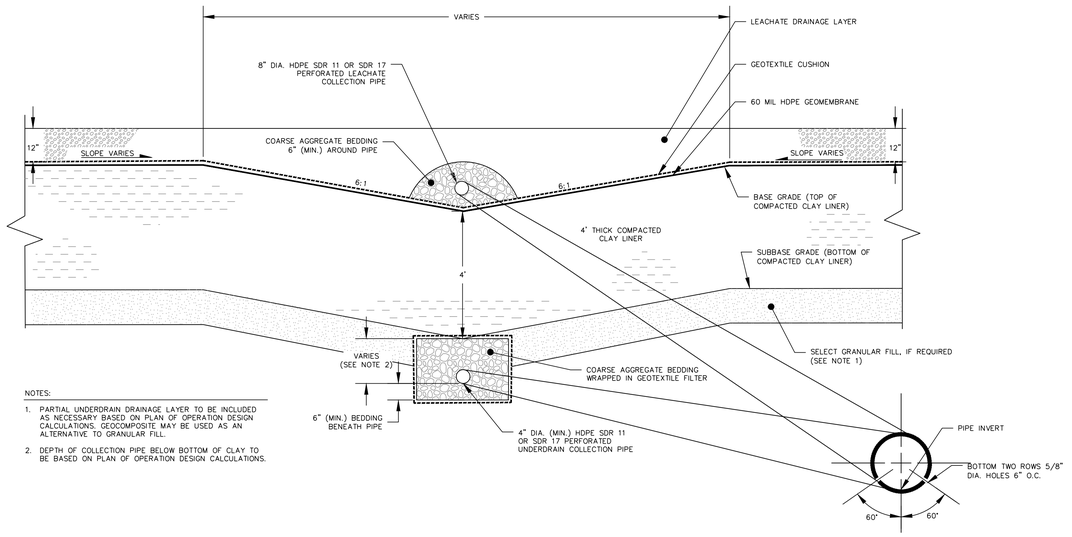
1. SEE SHEET 2, EXISTING CONDITIONS, FOR ADDITIONAL LEGEND ITEMS AND BASE MAP NOTES.
2. PROPOSED CONTOURS WITHIN LIMITS OF WASTE REPRESENT TOP OF FINAL COVER GRADES ABOVE ELEVATION 970, ONLY 10' CONTOURS ARE SHOWN FOR CLARITY.
3. LANDFILL OPERATIONS SUPPORT FACILITIES SHOWN ARE CONCEPTUAL. ADDITIONAL INFORMATION WILL BE PROVIDED WITH THE PLAN OF OPERATION. LANDFILL ENTRANCE LOCATIONS MAY ALSO BE MODIFIED WHILE KEEPING LARGE VEHICLE ACCESS FROM BRANDT ROAD/CTH AB AND SMALLER VEHICLE ACCESS FROM MILLPOND ROAD.

LEGEND

- PROJECT PROPERTY LINE
- PROPERTY PARCEL LINE
- PROPOSED LIMITS OF WASTE
- PROPOSED CLOSURE AREA LIMIT
- EXISTING GRADE (2' CONTOUR)
- EXISTING GRADE (10' CONTOUR)
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING STREAM/EDGE OF WATER
- EXISTING WETLAND
- EXISTING WATER SUPPLY WELL (APPROXIMATE LOCATION)
- B-216 EXISTING SOIL BORING
- MW-118 EXISTING WATER TABLE MONITORING WELL
- MW-118A EXISTING PIEZOMETER
- SG-8 EXISTING STAFF GAUGE
- LIMITS OF PROPOSED 18-HOLE GOLF COURSE
- 902 PROPOSED GRADE (2' CONTOUR)
- 900 PROPOSED GRADE (10' CONTOUR)
- PROPOSED LEACHATE LINE (GRAVITY OR FORCEMAIN)
- PROPOSED LEACHATE VAULT
- 4H:1V PROPOSED SLOPE AND DIRECTION
- PROPOSED PERIMETER SWALE
- PROPOSED PERIMETER/ACCESS ROAD
- PROPOSED CULVERT
- SMALL VEHICLE TRAFFIC
- LANDFILL/LARGE VEHICLE TRAFFIC



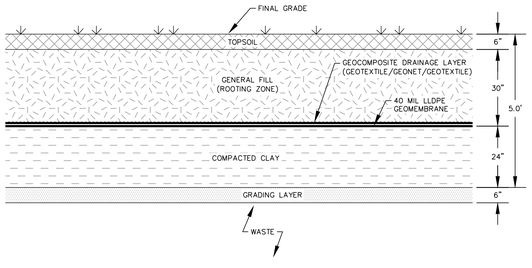
1/28 **COMPOSITE LINER**
SCALE: 1" = 2'



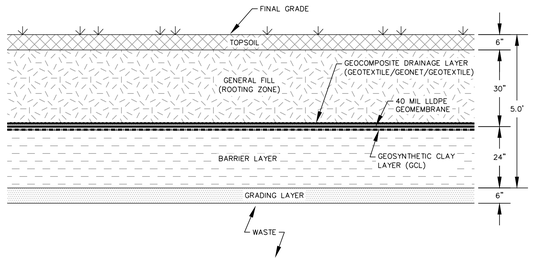
NOTES:

1. PARTIAL UNDERDRAIN DRAINAGE LAYER TO BE INCLUDED AS NECESSARY BASED ON PLAN OF OPERATION DESIGN CALCULATIONS. GEOCOMPOSITE MAY BE USED AS AN ALTERNATIVE TO GRANULAR FILL.
2. DEPTH OF COLLECTION PIPE BELOW BOTTOM OF CLAY TO BE BASED ON PLAN OF OPERATION DESIGN CALCULATIONS.

2/28 **COMPOSITE LINER/ LEACHATE COLLECTION AND UNDERDRAIN SYSTEM**
(NOT TO SCALE)



3/28 **COMPACTED CLAY FINAL COVER**
SCALE: 1" = 2'



4/28 **GCL FINAL COVER**
SCALE: 1" = 2'

SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
PHONE: (608) 224-2830

DRAWN BY:	KP
CHECKED BY:	MRH/BLP
APPROVED BY:	BLP 02/12/2024
PROJECT NO.	25222658.00
DRAWN:	06/15/2023
REVISED:	02/08/2024

CLIENT: DANE COUNTY DEPARTMENT OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

ENGINEER

SITE: FEASIBILITY REPORT
DANE COUNTY LANDFILL SITE
CARLY ROAD
MADISON, WISCONSIN

DETAILS

SHEET
28 of 28

\\SCSFS01\Drawings\Landfills\Dane Co\25222658.00\Fig 1-4_25222658.00.dwg