



**New Brighton City Council
Business Meeting Agenda
New Brighton City Hall | Council Chambers
803 Old Highway 8 NW, New Brighton, MN 55112
6:30 PM June 24, 2025**

To participate in this meeting, members of the public may:

- **Attend the meeting in person.**
- **Watch the meeting electronically.** Tune into CTV Channel 8023 (CenturyLink) or Channel 16 (Comcast). To observe the meeting as a livestream or a webcast, visit www.newbrightonmn.gov and click on "I Want To View a Public Meeting."
- **Join the meeting electronically.** Members of the public who need to interact with our public officials about agenda items, City Administration, and matters that are otherwise of public concern to the City Council but are unable to or not comfortable attending the meeting in person, may join the meeting electronically at: <https://newbrightonmn.gov/zoom> (no app needed), by scanning the QR Code on the right, or by using their Zoom app to join and entering: Meeting ID 898 6240 2361, Passcode 867530



I. Call to Order and Roll Call

____ Mayor Kari Niedfeldt-Thomas
____ Councilmember Graeme Allen
____ Councilmember Emily Dunsworth
____ Councilmember Jeanne Vint Frischman
____ Councilmember Jason Steffenhagen

II. Pledge of Allegiance

III. Public Comment Forum

IV. Approval of Agenda

V. Special Order of Business

VI. Consent Agenda

1. Consider Approval of Payments
2. Consider Approval of City Council Minutes
 - a. City Council Meeting Minutes June 10, 2025

- b. City Council Worksession Minutes June 10, 2025
- 3. Accept Receipt of Commission Minutes
- 4. Consideration of a Resolution Authorizing the Uses of the 2024 General Fund Excess Fund Balance and Amending the 2025 General Fund Budget
- 5. Consider authorizing staff to execute an agreement for proposed auditing service fees for the years ending December 31, 2025, 2026 and 2027.
- 6. Municipal Water System Supervisory Control and Data Acquisition (SCADA) Server Upgrade
- 7. Consider Approval of Temporary Liquor License for Stockyard Days 2025

VII. Public Hearings

- 1. Consider a Resolution approving a Preliminary and Final Plat for Myslajek Estates.

VIII. Council Business

- 1. Consider Resolution Accepting Bids and Award of Contract for City Project 25-1, 2025 Street Rehabilitation
- 2. Consideration of Approval of Plans and Specifications and Authorization for bids for Authorize Ad for Bids for City Project 25-7, Well #16 Well Drilling and Construction
- 3. Consider Resolution Authorizing Acceptance of an Implementation Stormwater Resilience Grant, Approval of Plans and Specifications, and Authorization to bid.

IX. Commission Liason Reports, Announcements, and Updates

City Manager Devin Massopust
Councilmember Graeme Allen
Councilmember Emily Dunsworth
Councilmember Jeanne Vint Frischman
Councilmember Jason Steffenhagen
Mayor Kari Niedfeldt-Thomas

X. Adjournment



Agenda Section:	Consent Agenda
Report Date:	05/27/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Consider Approval of Payments
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Action Requested:	
Public Hearing:	Motion: X
Discussion:	Informational:
Form of Action:	
Resolution:	Ordinance:
Contract/Agreement:	N/A or Other: X
Votes Needed:	
3 Votes: X	4 Votes:
5 Votes:	N/A:

Summary Statement:	The following summary of claims have been submitted to the City's Finance Department for payment. A detailed listing is also attached. <table> <tr> <td>EFT:</td><td>\$2,037,543.56</td></tr> <tr> <td>ACH:</td><td>\$679,358.00</td></tr> <tr> <td>Check:</td><td>\$769,928.92</td></tr> <tr> <td>Total:</td><td>\$3,486,830.48</td></tr> </table>	EFT:	\$2,037,543.56	ACH:	\$679,358.00	Check:	\$769,928.92	Total:	\$3,486,830.48
EFT:	\$2,037,543.56								
ACH:	\$679,358.00								
Check:	\$769,928.92								
Total:	\$3,486,830.48								

Recommendations:	To approve the payment of invoices as listed in the attachment.
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Applicable	The Council Meeting immediately following the disbursement of funds.
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Deadlines:	
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Community Impact:	All payments of claims are accounted for in the City's budgets and/or long-term financial plans and may be funded by the community through the property tax levy, user fees or other charges.
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Legislative History:	Minnesota Statute 412.271 requires the City Council to approve all payments of claims. Per the City's Purchasing Policy, the City Council delegates to the City Manager or his/her designee its authority to pay claims prior to obtaining Council approval. A list of all payments are to be provided to the City Council at the next available Council meeting, and earlier payment does not affect the right of the City Council or any taxpayer to challenge the validity of a claim.
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Strategic Priority:	Sustainable & Reliable Infrastructure	Operational Effectiveness X
	Environment & Sustainability	Diversity, Equity Inclusion
	Livable Community	N/A

Fiscal Impact:	Financial Impact: Is there a financial consideration?		No	Yes: \$ 3,486,830.48
	Financing Sources:	Budgeted	Budget Modification	
	New Revenue	Use of Reserves	Other	

Attachments:	VI_1 Consider Approval of Payments
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VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/31/2025	MN DEPT OF TRANSPORTATION	ACH SWEEPS MAY	15,970.62
05/31/2025	MN DEPT OF TRANSPORTATION	ACH SWEEPS MAY	1,699,554.12
05/31/2025	MN DEPT OF TRANSPORTATION	ACH SWEEPS MAY	1,583.25
			1,717,107.99
05/10/2025	13 FIFTY APPAREL - CC	MISSING PCARD RECEIPT	116.28
05/10/2025	2299 PALMER LLC	PHONE SERVICE	125.98
05/10/2025	820 HAPPY TRAILS TRAVEL CENTER - CC	GAS FOR CLD TRSTING IN IOWA	51.45
05/10/2025	ACE HARDWARE - CC	VALVE REPLACEMENT PART FOR LIONS DRINKING FOUNTAIN	54.48
05/10/2025	Ace Waste-cc	APRIL WASTE DISPOSAL SERVICES	304.56
05/10/2025	Ace Waste-cc	APRIL WASTE DISPOSAL SERVICES	942.24
05/10/2025	Ace Waste-cc	APRIL WASTE DISPOSAL SERVICES	942.24
05/10/2025	Ace Waste-cc	APRIL WASTE DISPOSAL SERVICES	1,681.61
05/10/2025	Ace Waste-cc	APRIL WASTE DISPOSAL SERVICES	153.00
05/10/2025	Ace Waste-cc	APRIL WASTE DISPOSAL SERVICES	543.46
			4,567.11
05/10/2025	ADAGIO'S PIZZA FACTORY - CC	FOOD FOR STAFF MEETING	194.82
05/10/2025	ADOBE-CC	P + R ADOBE SUBSCRIPTION	59.99
05/10/2025	AIR GAS - CC	SAFETY EQUIPMENT FOR POLICE AND FIRE	8.15
05/10/2025	AIR GAS - CC	SAFETY EQUIPMENT FOR POLICE AND FIRE	97.35
			105.50
05/10/2025	ALLSTREAM - CC	HOSTED PHONE SYSTEM	3,388.21
05/10/2025	ALTA - CC	FRAMES AND PHOTOS	726.00
05/10/2025	AMAZON WEB SERVICES - CC	HOSTED WEB SERVICES	4.82
05/10/2025	AMAZON.COM-cc	GREASE PENCILS FOR FLUSHING	0.77
05/10/2025	AMAZON.COM-cc	MONITOR ARM AND SD CARD READER	43.53
05/10/2025	AMAZON.COM-cc	OFFICE CHAIR	169.99
05/10/2025	AMAZON.COM-cc	ERASABLE PENS FOR THE LICENSE BUREAU	43.98
05/10/2025	AMAZON.COM-cc	OFFICE SUPPLIES - DUSTIN WHITE BOARD	58.02
05/10/2025	AMAZON.COM-cc	LABEL TAPE	24.18
05/10/2025	AMAZON.COM-cc	TOOLS SHOP	205.57
05/10/2025	AMAZON.COM-cc	#2025 LED TAIL LIGHTS	88.74
05/10/2025	AMAZON.COM-cc	#0517 WASHER NOZZLE	13.98
05/10/2025	AMAZON.COM-cc	NEW BLADE BALANCE FOR MOWER MAINTENANCE	46.98
05/10/2025	AMAZON.COM-cc	SAFETY EQUIPMENT	372.59
05/10/2025	AMAZON.COM-cc	WATER PUMP	57.99
05/10/2025	AMAZON.COM-cc	GYMNASTICS SUPPLIES/TOTS + TIRES SUPPLIES	27.20

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Check Date	Payee	Description	Amount
05/10/2025	AMAZON.COM-cc	GYMNASTICS SUPPLIES/TOTS + TIRES SUPPLIES	19.65
05/10/2025	AMAZON.COM-cc	NBCC COFFEE SUPPLIES	142.50
05/10/2025	AMAZON.COM-cc	GC SUPPLIES	271.93
05/10/2025	AMAZON.COM-cc	EVIDENCE ROOM SUPPLIES	217.87
05/10/2025	AMAZON.COM-cc	WASH BAY PARTS	133.36
05/10/2025	AMAZON.COM-cc	BELT CUTTER ADN WINDOW BREAKER	30.96
05/10/2025	AMAZON.COM-cc	LANDSCAPING FOR WTP #1	968.14
05/10/2025	AMAZON.COM-cc	SCALE & PAINT STICK	253.91
			----- 3,191.84
05/10/2025	AMAZON.COM-cc	CONCERT SUPPLIES	2.60
05/10/2025	AMAZON.COM-cc	CERTIFICATE HOLDERS/NAVY BLUE FOR CITY HALL	35.89
05/10/2025	AMAZON.COM-cc	WIPEX 70% ALCOHOL WIPES FOR LICENSE BUREAU	519.25
05/10/2025	AMAZON.COM-cc	3RING BINDER	36.19
05/10/2025	AMAZON.COM-cc	FUEL NOZZLE GOLF COURSE FUEL TANK RETURN	(37.99)
05/10/2025	AMAZON.COM-cc	OFFICE SUPPLIES	169.35
05/10/2025	AMAZON.COM-cc	CONCERT SUPPLIES	30.99
05/10/2025	AMAZON.COM-cc	BASEBALLS AND WHISTLES	118.03
05/10/2025	AMAZON.COM-cc	PLAYGROUND BOLT COVERS	63.06
05/10/2025	AMAZON.COM-cc	GROUP FITNESS EQUIPMENT	372.10
		COASTERS, SIGNS FOR COFFEE MACHINE, PHONE CASE FOR M.	
05/10/2025	AMAZON.COM-cc	SINGER, LABEL MAKER TAPE	86.90
05/10/2025	AMAZON.COM-cc	PHONE CASE AND GLASS PROTECTOR	252.80
			----- 1,649.17
05/10/2025	AMERICAN RED CROSS - CC	LIFEGUARD CERTIFICATION FEES	376.00
05/10/2025	AMERICAN RED CROSS - CC	7 CPR CERTS	280.00
			----- 656.00
05/10/2025	APPLE SPICE - CC	INTERVIEW PANEL LUNCH	104.11
05/10/2025	Aramark-cc	REPLACEMENT OF WATER FILTER ON COFFEE MACHINE	550.47
05/10/2025	ARCHETYPE SIGNMAKERS INC-cc	NBCC PDUIUM STORAGE	800.00
05/10/2025	Aspen Mills-cc	C. WOLLA JACKET	2,305.88
05/10/2025	Aspen Mills-cc	M. WIGDAHL BADGES	1,096.00
			----- 3,401.88
05/10/2025	ATACLETE - CC	RESCUE SWIMMER MASK, FINS, SNORKEL	869.85
05/10/2025	ATHLETIC BUSINESS SHOW - CC	ATHELTIC BUSINESS SHOW - CONGERENCE	379.00
05/10/2025	ATLASSIAN - CC	HOSTED KNOWLEDGEBASE	10.00
05/10/2025	AWARDS BY HAMMOND - CC	AWARDS FOR RESERVE BANQUET	154.37
05/10/2025	AYPOTECH.COM - CC	TRAINING- WATER LICENSE - D MILLER	106.00

VI_1 APPROVAL OF PAYMENTS

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Check Date	Payee	Description	Amount
05/10/2025	BCA TRAINING EDUCATION-cc	D. CLARKE BCA TRAININGS (5)	1,650.00
05/10/2025	BEACH'S LONG LAKE SERVICE - CC	#2009 PROPANE	2.96
05/10/2025	BEACH'S LONG LAKE SERVICE - CC	#2009 PROPANE	35.35
			38.31
05/10/2025	BEDFORD - CC	PARK MAINTENANCE SUPPLY	3,518.27
05/10/2025	BEISSWENGERS HARDWARE-cc	SPRAY BOTTLES FOR CONCRETE	1.73
05/10/2025	BEISSWENGERS HARDWARE-cc	SPRAY BOTTLES FOR CONCRETE	20.56
05/10/2025	BEISSWENGERS HARDWARE-cc	#1604 NUTS & BOLTS	6.80
05/10/2025	BEISSWENGERS HARDWARE-cc	WOOD SHOP SUPPLIES	22.47
05/10/2025	BEISSWENGERS HARDWARE-cc	RATCHET STRAP	21.99
05/10/2025	BEISSWENGERS HARDWARE-cc	911 AND GARDEN VIEW KEYS	42.14
05/10/2025	BEISSWENGERS HARDWARE-cc	DUCT TAPE FOR BACKWASH FLOORS	27.58
05/10/2025	BEISSWENGERS HARDWARE-cc	PARTS FOR POND ON 901 11TH AVE NW	38.38
			181.65
05/10/2025	BIG POSTERS - CC	CONCERT POSTERS	76.56
05/10/2025	BIG SKY GOLF CARTS - CC	2 STEERING GEAR, KNUCKLE BRACKETS FOR GOLF COURSE KART	237.17
05/10/2025	BLINDS.COM - CC	BLINDS FOR 216	35.66
05/10/2025	BLINDS.COM - CC	BLINDS FOR 216	425.93
			461.59
05/10/2025	BLUE TO GOLD STORE - CC	MISSING PCARD RECEIPT	39.00
05/10/2025	BLUUM OF MINNESOTA - CC	SERVICE FOR PUBLIC SAFETY TRAINING ROOMS	580.80
05/10/2025	BONANNO'S PIZZERIA MANDALAY - CC	DINNER AT LASERFICHE CONFERENCE	36.35
05/10/2025	BRANNIGANS - CC	DINNER AT TRAINING IN MONTANA 5/7 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	36.00
05/10/2025	BRAVO - ESPRESSO - CC	BREAKFAST AT MCPA ETO CONFERENCE ROCHESTER 4/10/2025	14.71
05/10/2025	BREWDOG - LAS VEGAS - CC	DINNER AT LASERFICHE CONFERENCE	35.32
05/10/2025	BRIGHTON UNIQUE AUTO INC - CC	#2206 DETAIL	209.00
05/10/2025	BULLDOG SALOON - CC	DINNER AT TRAINING IN MONTANA 5/6 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	68.14

VI_1 APPROVAL OF PAYMENTS

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Check Date	Payee	Description	Amount
05/10/2025	CADD MICROSYSTEMS INC - CC	BLUEBEAM LICENSE RENEWAL	3,560.00
05/10/2025	CARHARTT RETAIL - CC	PANTS FOR JEREMY ASHER	101.98
05/10/2025	CARHARTT RETAIL - CC	PANTS FOR TONY 2025	186.95
			288.93
05/10/2025	CASCADE RESCUE - CC	RESCUE KNIFE (3)	99.78
05/10/2025	CDW GOVERNMENT-cc	UPS BATTERY	416.21
05/10/2025	CDW GOVERNMENT-cc	IPAD REPLACEMENT	522.85
			939.06
05/10/2025	CENEX - CC	FUEL FOR RENTAL CAR (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	65.00
05/10/2025	CENTURYLINK - CC	PHONE SERVICE	2,618.19
05/10/2025	CERES ENVIRONMENTAL - CC	PLAYGROUND WOODCHIPS - HANSEN	530.00
05/10/2025	CERES ENVIRONMENTAL - CC	PLAYGROUND WOODCHIPS- HANSEN	583.00
			1,113.00
05/10/2025	CHAMPLIN ATHLETIC - CC	SOFTBALLS FOR LEAGUE	600.00
05/10/2025	CHEESECAKE FACTORY -CC	DINNER FOR CENTRAL SQUARE CONFERENCE ORLANDO FL 4/28 2025	25.27
05/10/2025	CHILI'S - CC	MEAL AT SPORTS ETA	29.20
05/10/2025	CHIPOTLE-CC	LUNCH FROM TRAINING IN MONTANA 5/5 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	12.95
05/10/2025	CINTAS - CC	MATS & SUPPLIES FOR CITY HALL	398.60
05/10/2025	CINTAS - CC	NBCC MAT CLEANING	418.98
			817.58
05/10/2025	CITIZENS AT MANDALAY BAY - CC	BREAKFAST AT LASERFICHE CONFERENCE	34.40
05/10/2025	CITIZENS AT MANDALAY BAY - CC	MEAL FOR NICK KRIZ WHILE TRAVELLING TO LASERFICHE CONFERENCE	34.44
			68.84
05/10/2025	COMCAST CABLE-cc	NBCC FITNESS CENTER CABLE TV	130.18
05/10/2025	COMCAST CABLE-cc	CABLE TV	149.49
05/10/2025	COMCAST CABLE-cc	TV SERVICE FOR PSC	111.77
05/10/2025	COMCAST CABLE-cc	PHONE SERVICE	686.17
			1,077.61

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	COMMERS CONDITIONED WATER-cc	NBCC WATER SOFTENER REPLACEMENT AND INSTALLATION	5,957.28
05/10/2025	CORE & MAIN - CC	WATERMAIN MATERIALS FOR 2024 STREET REHAB PROJECT	4,918.44
05/10/2025	COSTCO WHOLESALE-CC	RISE PROGRAM PARTNERSHIP SUPPLIES	25.22
05/10/2025	COSTCO WHOLESALE-CC	RISE PROGRAM PARTNERSHIP SUPPLIES	99.99
05/10/2025	COSTCO WHOLESALE-CC	COMMUNITY LUNCH SUPPLIES	101.90
05/10/2025	COSTCO WHOLESALE-CC	FOOD FOR STAFF TRAINING	19.98
05/10/2025	COSTCO WHOLESALE-CC	H20/POP/CANDY FOR RESALE AT GOLF COURSE	244.90
			491.99
05/10/2025	CROSSTOWN MECHANICAL - CC	NBCC ICE MACHINE REPAIRS	557.00
05/10/2025	CUB FOODS-cc	BOOK CLUB SUPPLIES	0.22
05/10/2025	CUB FOODS-cc	BINGO + BREAKFAST SUPPLIES	160.98
05/10/2025	CUB FOODS-cc	PARENTS NIGHT OUT SUPPLIES	10.58
05/10/2025	CUB FOODS-cc	BOOK CLUB SUPPLIES	25.14
05/10/2025	CUB FOODS-cc	DISTILLED WATER FOR GOLF CARTS	5.56
05/10/2025	CUB FOODS-cc	SENIOR LEAGUE MEETING DONUTS	104.93
05/10/2025	CUB FOODS-cc	CAKE FOR EVENT OF CHEIFS	59.99
			367.40
05/10/2025	DALCO ENTERPRISES, INC-cc	2 METERED AIR FRESHENERS & C BATTERIES FOR CITY HALL	92.68
05/10/2025	DALCO ENTERPRISES, INC-cc	TOILET PAPER, TRASH BAGS, PLATES, CUPS	463.27
05/10/2025	DALCO ENTERPRISES, INC-cc	SOAP DISPENSER	12.12
05/10/2025	DALCO ENTERPRISES, INC-cc	CHEMICAL FOR FLOOR SCRUBBER IN BASEMENT	57.73
05/10/2025	DALCO ENTERPRISES, INC-cc	CHEMICAL FOR FIRE FLOOR SCRUBBER	59.47
			685.27
05/10/2025	DELTA AIR-cc	NAGC CONFERENCE REGIONAL	586.97
05/10/2025	DELTA AIR-cc	BAGGE FEE FOR TRAINING IN MONTANA REQUIRED TO BRING BALLISTIC HELMET, VEST AND POLICE EQUIPMENT	360.00
			946.97
05/10/2025	DEM-CON LANDFILL - CC	WASTE REMOVAL	94.36
05/10/2025	DEPARTMENT OF LABOR AND INDUSTRY-cc	APRIL 2025 SURCHARGE	1,474.88
05/10/2025	DEPARTMENT OF LABOR AND INDUSTRY-cc	APRIL 2025 SURCHARGE	(29.50)
			1,445.38
05/10/2025	DESERT CAB - CC	TRANSPORTATION FOR NICK KRIZ WHILE TRAVELLING TO LASERFICHE CONFERENCE	30.11
05/10/2025	DICKS SPORTING GOODS - CC	BASEBALL BATS	10.05
05/10/2025	DICKS SPORTING GOODS - CC	BASEBALL BATS	119.96
			130.01
05/10/2025	DIRTROAD APP - CC	NBPR EV CHARGE - VEHICLE 2206	106.67

VI_1 APPROVAL OF PAYMENTS

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Check Date	Payee	Description	Amount
05/10/2025	DOUBLE TREE HOTEL - CC	HOTEL - SPORTS ETA	908.84
05/10/2025	EATALY CUCINA - CC	LUNCH LASERFICHE CONFERENCE	28.18
05/10/2025	EBAY - CC	PODIUM COVERS	5.59
05/10/2025	EBAY - CC	PODIUM COVERS	66.69
			72.28
05/10/2025	EINSTEINS CONCOURSE - CC	MEAL AT SPORTS ETA	8.53
05/10/2025	ELECTRO WATCHMAN INC-cc	WTP1 LICENSE PLATE READER CAMERA TROUBLESHOOTING	2,590.00
05/10/2025	EMERGENCY APPARATUS MAINTENANCE-CC	#1604 FOAM SENSOR & LABOR	1,625.24
05/10/2025	EMERGENCY APPARATUS MAINTENANCE-CC	NEW SQUAD BLAC RAC ROLL BAR WEAPON MOUNT	734.66
			2,359.90
05/10/2025	Emergency Auto Tech, Inc-cc	PSO TRUCK FIXED HANDS FREE	9,626.42
05/10/2025	ENVIRONMENTAL EQUIP & SERV - CC	#1105 SUCTION LINER	167.84
05/10/2025	ESRI - CC	ESRI ARCGIS DESKTOP USER SUBSCRIPTION	465.00
05/10/2025	FACEBOOK - CC	FACEBOOK AD	38.86
05/10/2025	FIRSTNET / AT&T - CC	PUBLIC SAFETY PHONE BILL MARCH 2025	6,463.08
05/10/2025	FIVE GUYS - CC	LUNCH AT TRAINING IN MONTANA 5/7 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	19.42
05/10/2025	FleetPride-cc	#1609 FILTERS	483.15
05/10/2025	FleetPride-cc	#895 FILTERS	33.08
05/10/2025	FleetPride-cc	OIL FILTER SHOP	36.31
			552.54
05/10/2025	FRA-DOR BLACK DIRT & RECYC-CC	TOP SOIL	3.85
05/10/2025	FRA-DOR BLACK DIRT & RECYC-CC	TOP SOIL	46.00
05/10/2025	FRA-DOR BLACK DIRT & RECYC-CC	DISPOSAL OF POND SPOILS AT SOUTH TOWER	475.00
			524.85
05/10/2025	FRISKE BEANS ESPRESSO - CC	LUNCH AT TRAINING IN MONTANA 5/6 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	5.00

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	FULL SLATE - CC	2025 MAY APPOINTMENT SCHEDULING SUBSCRIPTION	49.95
05/10/2025	GALLUP STORE - CC	FOR ASSESSMENT FOR LEADING NEW BRIGHTON MIDDLE MANAGERS	624.75
05/10/2025	GAYLORD PALMS - CC	T. HAMDORF HOTEL ROOM FOR CENTRAL SQAURE CONFERENCE FLORIDA 4/27-4/30	0.04
05/10/2025	General Industrial Supply Co-cc	NEW MEASURING WHEEL FOR PARKS	67.96
05/10/2025	General Industrial Supply Co-cc	SAFETY EQUIPMENT	9.07
05/10/2025	General Industrial Supply Co-cc	CHAIN BINDER	212.75
			289.78
05/10/2025	GFOA - CC	FOR GINA FOSCHI CODE OF ETHICS TRAINING REGISTRATION	200.00
05/10/2025	GIFTOGRAM - CC	JAN-APRIL 2025 EMPLOYEE ANNIVERSARY RECOGNITION GIFT CARDS	195.00
05/10/2025	GLASS DR - CC	NEW GLASS PANE FOR APARATUS BAY DOOR	106.56
05/10/2025	GOLDEN VALLEY SUPPLY - CC	CEILING TILES	102.40
05/10/2025	GRAFIX SHOPPE-cc	#1605 DECALS FOR FORD ESCAPE	203.69
05/10/2025	Grainger-cc	BOLT BIN FOR BACK WELDING BAY	401.88
05/10/2025	Grainger-cc	#1609 AIR LINE FITTIINGS	9.82
05/10/2025	Grainger-cc	BATTERIES AND FAUCET	1,235.64
			1,647.34
05/10/2025	H & L MESABI COMPANY - CC	CUTTING EDGE FOR REGULAR PLOW TRUCK	210.00
05/10/2025	HACH COMPANY-cc	CHLORINE TESTING	780.70
05/10/2025	HANNAY'S MARINE - CC	GEAR LUBE FIRE DEPT BOAT	1.87
05/10/2025	HANNAY'S MARINE - CC	GEAR LUBE FIRE DEPT BOAT	21.99
			23.86
05/10/2025	HEALTH STRATEGIES - CC	DRUG SCREEN AND FITNESS EVALUATION B. GATLUAK	536.00
05/10/2025	HELLOFLOWERS - CC	FLOWERS FOR VIPS	79.21
05/10/2025	HERITAGE LANDSCAPE SUPPLY GROU - CC	GRASS SEED	238.75
05/10/2025	HERITAGE LANDSCAPE SUPPLY GROU - CC	GRASS SEED	238.75
05/10/2025	HERITAGE LANDSCAPE SUPPLY GROU - CC	IRRIGATION PARTS & WEED KILLER	155.68
05/10/2025	HERITAGE LANDSCAPE SUPPLY GROU - CC	IRRIGATION REPAIR FOR FREEDOM	210.97
			844.15

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	HILTON HOTELS-cc	HOTEL FOR MN LEAP CONFERENCE MANKATO 4/30-5/2/2025 E., NUNDAHL	864.24
05/10/2025	HOME DEPOT - CC	PAINT SUPPLIES	140.79
05/10/2025	HOME DEPOT - CC	DUCT TAPE FOR CARDBOARD FLOOR BY BACKWASH PITS	132.35
05/10/2025	HOME DEPOT - CC	NEW TORCHES FOR BACTIS	129.96
			403.10
05/10/2025	HOPS - CC	DINNER AT TRAINING IN MONTANA 5/5 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	36.00
05/10/2025	HORNUNG'S GOLF PRODUCTS - CC	GRIPS	130.49
05/10/2025	HOTSY EQUIPMENT OF MN - CC	VALVE FOR HOTSY SHOP	73.98
05/10/2025	HOUSE OF BLUES LAS VEGAS - CC	LUNCH LASERFICHE CONFERENCE	25.18
05/10/2025	HOUSE OF BLUES LAS VEGAS - CC	MEAL FOR NICK KRIZ WHILE TRAVELLING TO LASERFICHE CONFERENCE	25.68
05/10/2025	HULU - CC	TV SERVICE FOR PSC	106.19
05/10/2025	HYDRAULIC SPECIALTY INC - CC	HYDRAULIC HOSE BLOWER PARKS BLOWER	149.36
05/10/2025	HYVEE - CC	RISE SENIOR SPECIAL EVENT SUPPLIES	245.89
05/10/2025	I-STATE TRUCKING CENTER - CC	#1609 TEMP SENSOR	127.59
05/10/2025	ICMA INTERNET-cc	ICMA MEMBERSHIP	200.00
05/10/2025	IMPERIALDADE - CC	FLOOR SCRUBBER	11,451.31
05/10/2025	Innovative Office Solutions-cc	OFFICE SUPPLIES	1,318.48
05/10/2025	Innovative Office Solutions-cc	PENS, SHARPIE, HIGHLIGHTER, THERMAL POUCH	59.48
05/10/2025	Innovative Office Solutions-cc	COPY PAPER	151.03
05/10/2025	Innovative Office Solutions-cc	RESTROOM SUPPLIES	1,181.73
05/10/2025	Innovative Office Solutions-cc	GENERAL OFFICE SUPPLIES	297.62
			3,008.34
05/10/2025	JIMMY JOHN'S-cc	MEAL TO WORK THROUGH LUNCH	18.95
05/10/2025	JIMMY JOHN'S-cc	LUNCH FOR TRAINING IN MONTANA 5/4 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	14.09

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	KAHLER GRAND HOTEL - CC	HOTEL ROOM FOR ETI CONFERENCE ROCHESTER 4/7-4/10 2025 T. HAMDORF	2,503.95
05/10/2025	KAHLER GRAND HOTEL - CC	PARKING AT MCPA ETI CONFERENCE HOTEL ROCHESTER 4/7-4/10	77.85
			2,581.80
05/10/2025	KALAHARI RESORTS - CC	HOTEL FOR MOCIC CONFERENCE 9/8-9/11 WISCONSIN DELLS M. DEBOER 2025	350.22
05/10/2025	L & S SERVICE SOLUTION - CC	NBCC CLEANING CONTRACT	5,995.00
05/10/2025	LASER PROS INTERNATIONAL - CC	PRINTER PICKUP ROLLERS	10.51
05/10/2025	LASER PROS INTERNATIONAL - CC	PRINTER PICKUP ROLLERS	125.51
			136.02
05/10/2025	LEAGUE OF MN CITIES - CC	2025 LMC ANNUAL CONFERENCE	425.00
05/10/2025	LETAC - CC	FORCE IN FOCUS TRAINING E. SYPNIEWSKI	499.00
05/10/2025	LIBERTINE SOCIAL - CC	MEAL FOR NICK KRIZ WHILE TRAVELLING TO LASERFICHE CONFERENCE	45.63
05/10/2025	LIFESAVING SYSTEMS - CC	SAR PFD FOR RESCUE SWIMMERS	(184.62)
05/10/2025	LIFESAVING SYSTEMS - CC	SAR PFD FOR RESCUE SWIMMERS	923.07
			738.45
05/10/2025	LITTLE CAESARS - CC	PARENTS NIGHT OUT SUPPLIES	42.75
05/10/2025	Loffler Companies, Inc-cc	PARKS AND REC MONTHLY COPIER CHARGES	277.31
05/10/2025	LOU'S DELI - CC	MEAL AT SPORTS ETA	12.41
05/10/2025	LOWE'S - CC	RESPIRATORS FOR TRAINING IN MONTANA (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT	29.98
05/10/2025	LUNDS & BYERLYS - CC	ACCIDENTAL PERSONAL PURCHASE	40.57
05/10/2025	LYFT - CC	LYFT RIDE HOME FROM AIRPORT AFTER LASERFICHE CONFERENCE	40.65
05/10/2025	MAC PARKING RESERVATIONS - CC	SPRTS ETA, AIRPORT PARKING	108.53

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	MACKENZIE RIVER PIZZA - CC	DINNTER AT TRAINING IN MONTANA 5/8 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	36.00
05/10/2025	MANDALAY BAY - CC	DINNER LASERFICHE CONFERENCE (SKIPPED LUNCH)	63.52
05/10/2025	MARIE RIDGEWAY & ASSOC - CC	APRIL 2025 THERAPY RETAINER AND 2 SESSIONS	940.00
05/10/2025	Menards-cc	LAUNDRY FAUCET WASH BAY	4.06
05/10/2025	Menards-cc	CONCRETE FORMS	132.48
05/10/2025	Menards-cc	LAUNDRY FAUCET WASH BAY	49.98
05/10/2025	Menards-cc	WOODSHOP SUPPLIES	195.80
05/10/2025	Menards-cc	PARTS TO FIT MAINLINE BREAK @ INNSBRUCK	77.45
05/10/2025	Menards-cc	PAINTING SUPPLIES	176.75
05/10/2025	Menards-cc	CLEANING MATERIAL	96.10
05/10/2025	Menards-cc	EXTENSION CORD AND CLIPS	119.78
			852.40
05/10/2025	METAL SUPERMARKETS - CC	PARTS FOR BLEACHERS	119.37
05/10/2025	METROPOLITAN COUNCIL ENVIRO - CC	DISCHARGE PERMIT	1,325.00
05/10/2025	METROPOLITAN COUNCIL ENVIRO - CC	PARTIAL PAYMENT FOR MAY WASTE WATER SERVICES	19,999.00
05/10/2025	METROPOLITAN COUNCIL ENVIRO - CC	PERMIT FEE FOR JETTER	475.00
			21,799.00
05/10/2025	METROPOLITAN CULINARY SERVICES - CC	LUNCH AT TRAINING IN MONTANA 5/10 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	26.00
05/10/2025	MID-STATES ORGANIZED CRIM-cc	MOCIC CONFERENCE 9/9-9/11 2025 M. DEBOER	195.00
05/10/2025	MIDC ENTERPRISES - CC	PARTS TO REPAIR MAINLINE BREAK @ INNSBRUCK	39.40
05/10/2025	MIDC ENTERPRISES - CC	IRRIGATION REPAIR FOR ALL STARTUPS IN SPRING	1,251.05
05/10/2025	MIDC ENTERPRISES - CC	IRRIGATION REPAIR FOR PUBLIC SAFETY	1.47
			1,291.92
05/10/2025	MIDWAY FORD - CC	#2108 TIRE SENSOR, IGNITION SWITCH	128.97
05/10/2025	MINNEAPOLIS FINANCE DEPT - CC	WATER FIXED CHARGE MARCH 2025	5,256.12
05/10/2025	MINNESOTA EQUIPMENT-cc	#2502 OIL,FILTER, KNOB,	31.92
05/10/2025	MN POST BOARD - CC	L. OLSON LICENSE ACTIVATION	91.94
05/10/2025	MN RURAL WATER ASSOC-CC	MRWA MEMBERSHIP JUNE 2025- MAY 2026	425.00
05/10/2025	MN STATE COLLEGES & UNIV - CC	DOT CLASS DOT RECERT	110.00

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	MN STATE COMM & TECH COLLEGE - CC	MOORHEAD FIRE SCHOOL A. BARTE	160.00
05/10/2025	MOOSE SALOON - CC	DINNER FOR TRAINING IN MONTANA 5/4/25 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CE	35.70
05/10/2025	MOTOROLA SOLUTIONS INC - CC	CHARGERS (10), MICROPHONE (15) , BATTERIES (12) FOR NEW RADIOS	3,839.40
05/10/2025	MOUNDS VIEW PUBLIC SCHOOL-cc	DANCE RECITAL AUAIORUM RENTAL	244.50
05/10/2025	MOUNDS VIEW PUBLIC SCHOOL-cc	REFUNDED VOLLEYBALL FACILITY FEE	(100.00)
05/10/2025	MOUNDS VIEW PUBLIC SCHOOL-cc	GYMNASTICS GYM FEES	1,320.00
			1,464.50
05/10/2025	MTI-cc	HIGH FLOW BLADES PARKS MOWER	611.41
05/10/2025	MTI-cc	MULCH BLADES, RETURN PARKS MOWERS	(593.28)
			18.13
05/10/2025	NACHO DADDY - CC	DINNER LASERFICHE CONFERENCE	37.93
05/10/2025	NAPA AUTO PARTS - CC	#881 DRIVE BELTS	78.45
05/10/2025	NAPA AUTO PARTS - CC	#0515 WIPER BLADE	4.73
			83.18
05/10/2025	NAT'L ASSOC OF GOVERN COMM - CC	NAGC CONFERENCE REGIONAL	1,315.00
05/10/2025	NEW BRIGHTON FORD-cc	#2109 IMAGE PROCESSING MODULE	1,444.95
05/10/2025	NORDEAST COFFEE COMPANY, INC - CC	NBCC COFFEE	186.30
05/10/2025	NORDEAST COFFEE COMPANY, INC - CC	PUBLIC SAFETY COFFEE APRIL	504.80
			691.10
05/10/2025	NORM'S TIRE SALES -CC	#20071 TIRES	711.00
05/10/2025	NORM'S TIRE SALES -CC	TIRES SHOP	1,168.00
			1,879.00
05/10/2025	North American Safety -cc	TONY UNIFORM 2025	306.30
05/10/2025	North American Safety -cc	JIM UNIFORM 2025	300.18
			606.48
05/10/2025	NORTHERN TOOL EQUIPMENT-cc	TOOLS SHOP	35.97
05/10/2025	NORTHERN TOOL EQUIPMENT-cc	FUEL PRESSURE GUAGE SHOP	29.99
			65.96
05/10/2025	NORTHLAND FENCE - CC	FENCE TOTEM POLE PARK	6,778.75

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	NORTHWEST RIVER SUPPLIES - CC	NFPA RESCUE WHISTLE	1.89
05/10/2025	NORTHWEST RIVER SUPPLIES - CC	NFPA RESCUE WHISTLE	22.50
			24.39
05/10/2025	OFFICE SUPPLIES - CC	16OZ INSULATED PAPER HOT COFFEE CUPS	180.44
05/10/2025	OLIVES - CC	DINNER MN LEAP CONFERENCE MANKATO 4/30/2025	48.02
05/10/2025	ON SITE COMPANIES-OSSTC - CC	PORTA POTTIES	2,580.00
05/10/2025	ORIENTAL TRADING - CC	SAFETY CAMP SUPPLIES	104.95
05/10/2025	Orkin -cc	FEBRUARY ORKIN 2025	122.00
05/10/2025	Orkin -cc	PEST CONTROL- APRIL PUBLIC WORKS	150.00
05/10/2025	Orkin -cc	FREEDOM PARK PEST CONTROL	176.00
05/10/2025	Orkin -cc	NBCC PEST CONTROL	144.00
05/10/2025	Orkin -cc	BRIGHTWOOD HILLS PEST CONTROL	102.96
			694.96
05/10/2025	OXYGEN SERVICE COMPANY -cc	OXYGEN REFILL APRIL 2024	19.16
05/10/2025	PANERA - CC	LUNCH AT TRAINING IN MONTANA 5/8 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	20.46
05/10/2025	PARKING LOTS AND GARAGES - CC	PARKING FOR PEOPLE OF COLOR CAREER FAIR	15.00
05/10/2025	PARKING METER ST PAUL - CC	MRPA EVENT @ CAPITOL PARKING	9.00
05/10/2025	PEACH JAR - CC	MIDDLE SCHOOL TRIP PEACHJAR	50.00
05/10/2025	PEACH JAR - CC	SAFETY CAMP PEACHJAR	50.00
			100.00
05/10/2025	PILOT ROCK - CC	TABLES FOR LIONS PARK	16,164.00
05/10/2025	PIONEER PRESS-CC	LEGALS 04/01/25-04/30/25	248.60
05/10/2025	PITNEY BOWES-CC	SENDPRO P1500 METER RENTAL 01/17/25-04/12/25	240.12
05/10/2025	PLAISTED COMPANIES INC - CC	ROCK FOR LANDSCAPING AT SHOP 3" BUFF	47.40
05/10/2025	PLAISTED COMPANIES INC - CC	ROCK FOR LANDSCAPING AT SHOP 3" BUFF	601.90
05/10/2025	PLAISTED COMPANIES INC - CC	TOP DRESSING SOIL	1,334.72
			1,984.02
05/10/2025	PLAY SPACE SERVICES INC. - CC	EAGLES NEST POLE COVERS/PADS	483.99

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	PORT OF SUBS - CC	MEAL FOR NICK KRIZ WHILE TRAVELLING TO LASERFICHE CONFERENCE	14.77
05/10/2025	POSITIVE PROMOTIONS - CC	SAFETY CAMP SUPPLIES	276.95
05/10/2025	PRECISION DRIVING CENTER - CC	EVOC/PIT REFRESHER	525.00
05/10/2025	PRECISION DRIVING CENTER - CC	FIRE DRIVING SCHOOL C. WOLLA, T. LAMOTTE, C. HALE	1,170.00
			1,695.00
05/10/2025	PUKKA INC. - CC	CAPS/STAFF CAPS	50.00
05/10/2025	PUKKA INC. - CC	CAPS/STAFF CAPS	634.60
			684.60
05/10/2025	QUIZNO'S - CC	AIPORT DINNER WHEN LEAVING LASERFICHE CONFERENCE	25.77
05/10/2025	RED WING SHOES - CC	BOOTS FOR JEREMY ASHER 2025	1.77
05/10/2025	RED WING SHOES - CC	BOOTS FOR JEREMY ASHER 2025	512.46
			514.23
05/10/2025	REPUBLIC SERVICES - CC	REPUBLIC SERVICES APRIL 2025	29,854.87
05/10/2025	REPUBLIC SERVICES - CC	STREET SWEEPING DISPOSAL	272.17
			30,127.04
05/10/2025	RESCUE DIRECT- CC	DRY SUITS FOR RESCUE SWIMMERS	224.88
05/10/2025	RESCUE DIRECT- CC	DRY SUITS FOR RESCUE SWIMMERS	2,685.00
			2,909.88
05/10/2025	ROSEDALE CHEVROLET -CC	#1305 DOOR PANEL	685.19
05/10/2025	ROSENQUIST CONSTRUCTION INC - CC	ROOF REPAIR	1,783.00
05/10/2025	ROUNDERS - CC	DINNER AT MN LEAP CONFERENCE MANKATO 5/1 2025	60.25
05/10/2025	SABLE COFFEE - CC	BREAKFAST AT TRAINING IN MONTANA 5/5 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CER	47.45
05/10/2025	SATOR SOCCER - CC	SHINGUARDS	593.92
05/10/2025	SCHINDLER ELEVATOR CORP - CC	QUARTERLY BILLING 2.1.2025-4.30.2025	1,129.56
05/10/2025	SEABREEZE CAFE - CC	MEAL FOR NICK KRIZ WHILE TRAVELLING TO LASERFICHE CONFERENCE	41.08

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	SHARROW LIFTING PRODUCTS-cc	SLING & CRANE INSPECTION	118.69
05/10/2025	SHARROW LIFTING PRODUCTS-cc	CLIMBING HARRNESS INSPECTION	606.07
05/10/2025	SHARROW LIFTING PRODUCTS-cc	SLING & CRANE INSPECTION	118.69
05/10/2025	SHARROW LIFTING PRODUCTS-cc	SLING & CRANE INSPECTION	118.69
			962.14
05/10/2025	SHERWIN-WILLIAMS - CC	1 GALLON OF PAINT	6.55
05/10/2025	SHERWIN-WILLIAMS - CC	1 GALLON OF PAINT	80.61
			87.16
05/10/2025	ST PAUL STAMP WORKS - CC	2025 NARY EBBOTT NOTARY STAMP	30.75
05/10/2025	STEPHENS ART AND FRAME - CC	PICTURES FOR PUBLIC SAFETY WALLS	900.06
05/10/2025	Stepp Mfg.-cc	#005 PHOTO EYE	58.54
05/10/2025	STONE ARCH - CC	BREAKFAST AT TRAINING 5/4/25 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	28.26
05/10/2025	STREICHER'S-cc	AMMUNITION	434.00
05/10/2025	STREICHER'S-cc	GUN HOLSTER	899.94
05/10/2025	STREICHER'S-cc	GIFT CARDS FOR RESERVES BANQUET	200.00
			1,533.94
05/10/2025	SUBWAY-cc	LUNCH AT TRAINING IN MONTANA 5/6 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	20.60
05/10/2025	SUPERIOR SAND AND GRAVEL - CC	ASPHALT REPAIR FOR WATER BREAKS	350.00
05/10/2025	SYSCO MINNESOTA, INC - CC	COOKIES FOR RESALE AT THE GOLF COURSE	93.48
05/10/2025	TAHO SPORTSWEAR - CC	NEW SHIRTS FOR SUMMER- CHARLIE	482.00
05/10/2025	TEAMLAB - CC	CRACK SEALER KETTLE WALK BEHIND	724.50
05/10/2025	TENET - CC	24-1 MARKING PAINT, LATHE, HUBS	384.01
05/10/2025	Terminal Supply Co-cc	SHOP SUPPLIES	104.75
05/10/2025	Terminal Supply Co-cc	#085 CIRCUIT BREAKER , SWITCHES	38.87
			143.62
05/10/2025	TESSMAN COMPANY-cc	FERTILIZER	777.80
05/10/2025	TEXT-EM-ALL - CC	TEXT-EM-ALL SUBSCRIPTION	19.00

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	THE CRACK SHACK	DINNER AT LASERFICHE CONFERENCE	36.06
05/10/2025	THE CRACK SHACK - CC	DINNER AT LASERFICHE CONFERENCE	24.22
05/10/2025	THE INN ON LAKE SUPERIOR - CC	MASS CONFERENCE	166.99
05/10/2025	THE KNEAD CAFE - CC	BREAKFAST AT MONTANA TRAINING 5/10 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC BREACHER CERT)	21.25
05/10/2025	THE MPX GROUP - CC	LEAD SERVICE LINE INVENTORY POST CARDS - DUPLICATE PAYMENT, REQUESTING REFUND	254.91
05/10/2025	THE MPX GROUP - CC	PARKS AND REC BUSINESS CARDS	320.51
			575.42
05/10/2025	THE RABBIT HOLE BAR & GRILL - CC	MEAL AT SPORTS ETA	16.03
05/10/2025	THE VAULT - CC	MEAL AT SPORTS ETA	13.01
05/10/2025	THOMSON REUTERS- WEST-CC	ONLINE SOFTWARE SUBSCRIPTION CHARGES APRIL 2025	407.47
05/10/2025	THRYV - CC	PRINT CHARGES	116.55
05/10/2025	TRI-STATE BOBCAT - CC	#2404 FUEL VALVE/ HOSE	533.02
05/10/2025	TRI-STATE BOBCAT - CC	PRESSURE SWITCH/ COOLANT SHOP	361.62
			894.64
05/10/2025	UBER - CC	UBER RIDE TO HOTEL FROM AIRPORT LASERFICHE CONFERENCE	51.05
05/10/2025	UBER - CC	UBER TRIP TO AIRPORT FOR TRAINING IN MONTANA 5/4 (MANUAL, MECHANICAL, BALLISTIC, THERMAL & HYDRAULIC	46.83
			97.88
05/10/2025	ULINE-CC	CROSSWALK DELINEATOR	2,045.06
05/10/2025	UNITED RENTALS - CC	LIFT RENTAL NBCC	189.55
05/10/2025	UNITED RENTALS - CC	LIFT RENTAL NBCC	(2.54)
05/10/2025	UNITED RENTALS - CC	LIFT RENTAL NBCC	2,266.38
			2,453.39
05/10/2025	VEIMAN TREE SERVICE - CC	PROFESSIONAL SERVICES	3,780.00
05/10/2025	Verizon-cc	CELLULAR SERVICE	120.65
05/10/2025	VESTIS - CC	CLEANING & UNIFORMS	129.15

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
05/10/2025	VESTIS - CC	CLEANING & UNIFORMS	330.94
			460.09
05/10/2025	VICTORY PARKING INC - CC	RCAO PRESS CONFERENCE PARKING	9.00
05/10/2025	VINO VOLO - CC	MEAL AT SPORTS ETA	27.96
05/10/2025	WALGREENS-cc	MATERIAL TO SHIP OPTIVIEW	8.32
05/10/2025	WALGREENS-cc	TOTS + TIRES EVENT SIGNS	89.57
05/10/2025	WALGREENS-cc	POSTERS FOR GARAGE SALE	38.40
05/10/2025	WALGREENS-cc	FIRST AID SUPPLIES - MISSING PCARD RECEIPT	13.58
05/10/2025	WALGREENS-cc	MATERIAL TO SHIP OPTIVIEW	60.93
			210.80
05/10/2025	WALMART.COM - CC	FIRST AID SUPPLIES	11.71
05/10/2025	WALMART.COM - CC	RISE SENIOR CARD MARKETING SUPPLIES	31.98
05/10/2025	WALMART.COM - CC	COMMUNITY LUNCH SUPPLIES	54.75
05/10/2025	WALMART.COM - CC	YOUTH LESSONS STORAGE/LOCKS	140.37
			238.81
05/10/2025	WEEDERS DIGEST - CC	NEW SHORELINE PLUG FOR GOLF COURSE FOUNTAIN	266.06
05/10/2025	WENDY'S - CC	LUNCH FOR MCPA ETI CONFERENCE 4/10 ROCHESTER	39.40
05/10/2025	WINNER GAS AND AUTO - CC	NEW GAS FOR BOAT 481	38.61
05/10/2025	WRISTBAND RESOURCES - CC	WRISTBANDS	4,086.00
05/10/2025	YAMAHA GOLF & UTILITY - CC	DAMAGE CART REPAIR	186.90
05/10/2025	ZORO TOOLS INC-cc	PICKLEBALLS	207.39
05/15/2025	HEALTHY CONTRIBUTIONS SPV, LLC	MARCH 2025	6.50
06/02/2025	GLOBAL PAYMENTS, INC	NBCC MAY 2025 CC FEES	9,485.94
06/02/2025	GLOBAL PAYMENTS, INC	NBCC MAY 2025 CC FEES	14,228.92
06/02/2025	GLOBAL PAYMENTS, INC	GOLF MAY 2025 CC FEES	5,380.92
			29,095.78
06/02/2025	METROPOLITAN LIFE INSURANCE COMPANY	DENTAL JUNE - GROUP #KM05387365	4,851.86
06/02/2025	METROPOLITAN LIFE INSURANCE COMPANY	DENTAL JUNE - GROUP #KM05387365	260.27
			5,112.13
06/04/2025	PEPSI-COLA - EFT	POP/GATORADE FOR RESALE AT THE GOLF COURSE	956.15
06/06/2025	INVOICE CLOUD INC.	INVOICE CLOUD FEES 05/01/25-05/31/25	7.90

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/06/2025	INVOICE CLOUD INC.	INVOICE CLOUD FEES 05/01/25-05/31/25	187.65
06/06/2025	INVOICE CLOUD INC.	INVOICE CLOUD FEES 05/01/25-05/31/25	401.86
06/06/2025	INVOICE CLOUD INC.	INVOICE CLOUD FEES 05/01/25-05/31/25	401.86
06/06/2025	INVOICE CLOUD INC.	INVOICE CLOUD FEES 05/01/25-05/31/25	200.93
			1,200.20
06/06/2025	PITNEY BOWES INC - EFT	POSTAGE MACHINE REFILL JUNE 2025	2,000.00
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	(587.73)
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	5,731.24
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	1,348.68
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	4,048.54
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	126.50
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	1,235.14
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	884.05
06/10/2025	MN DEPT OF REVENUE	MAY FUEL TAX	851.66
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	51.04
06/10/2025	MN DEPT OF REVENUE	MAY 2025 SALES TAX	2,392.41
			16,081.53
06/10/2025	MONEY MOVERS	MAY 2025 SERVICES	20.50
06/12/2025	XCEL ENERGY	NBCC/BHGC 03/19-05/16/25	10,254.13
06/12/2025	XCEL ENERGY	NBCC/BHGC 03/19-05/16/25	4,302.49
06/12/2025	XCEL ENERGY	NBCC/BHGC 03/19-05/16/25	1,319.00
06/12/2025	XCEL ENERGY	NBCC/BHGC 03/19-05/16/25	234.25
			16,109.87
06/06/2025	ALEXANDER-SUSENS, TIFFANY	MAY DEALER RUNS	52.78
06/06/2025	CHESS, INC	MAINTENANCE PLAN - MAY 2025	2,190.00
06/06/2025	COVERALL OF THE TWIN CITIES	CLEANING - MAY PUBLIC WORKS	2,070.00
06/06/2025	CRAWFORD, LEIGH	2025 MAY DEALER BANK RUNS FOR LICENSE BUREAU	255.85
06/06/2025	ELECTRO WATCHMAN INC	DOOR ACCESS FOBS	634.00
06/06/2025	ELECTRO WATCHMAN INC	REPLACEMENT CAMERA FOR EVIDENCE PREP AREA	3,505.55
06/06/2025	ELECTRO WATCHMAN INC	MOVE UNUSED ACCESS CARD READER FROM OLD ELECTION STORAGE AREA TO TENANT/PASSPORT DOOR AT CITY HALL	755.50
06/06/2025	ELECTRO WATCHMAN INC	AVIGILON CAMERA LICENSE UPGRADE	2,474.79
			7,369.84
06/06/2025	INGEBRAND, JOE	MILEAGE FOR DEED PFML & MNGFOA EMPLOYMENT LAW TRAININGS	82.46
06/06/2025	JENNIFER JOAN HANSELL	WINTER/SPRING DANCE SESSION 2025	6,545.00
06/06/2025	L.E.L.S	POLICE/SERG UNION DUES FOR JUNE	2,044.00

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/06/2025	LOFFLER COMPANIES, INC	CONTRACT OVERAGE CHARGE FOR THE 04/09/25 TO 05/08/25	595.66
06/06/2025	LOFFLER COMPANIES, INC	OVERAGE PERIOD	82.65
		PUBLIC SAFETY PRINTER OVERAGE APRIL 2025	678.31
06/06/2025	MADISON NATIONAL LIFE INSUR. CO,INC	LIFE INSURANCE JUNE	1,238.52
06/06/2025	MADISON NATIONAL LIFE INSUR. CO,INC	LTD FOR JUNE	2,252.74
06/06/2025	MADISON NATIONAL LIFE INSUR. CO,INC	LIFE INSURANCE JUNE	141.31
			3,632.57
06/06/2025	MANSFIELD OIL COMPANY OF GAINSVILLE	DIESEL 517 GALLONS- SPOT	1,222.69
06/06/2025	METROPOLITAN COUNCIL	JUNE WASTE WATER SERVICES	174,819.52
06/06/2025	MN TEAMSTERS #320	MAINTENANCE DUES JUNE	1,681.00
06/06/2025	NCPERS GROUP LIFE INS	PERA LIFE INS FOR JUNE	208.00
06/06/2025	NORTH SUBURBAN COMMUNICATIONS COMM	2025 CITY CONTRIBUTION TO THE NSCC FOR JAN-MARCH 2025	13,502.06
06/06/2025	OXYGEN SERVICE COMPANY, INC.	CYLINDER RENTAL - MAY	165.81
06/06/2025	RICHARD WIEBER	BIKE DEMO FOR SAFETY CAMP AND EDVENTURES	350.00
06/06/2025	RICHARD WIEBER	BIKE DEMO FOR SAFETY CAMP AND EDVENTURES	350.00
			700.00
06/06/2025	SRIXON/CLEVELAND GOLF	RANGE BALLS	576.00
06/06/2025	SRIXON/CLEVELAND GOLF	LOG BALLS	260.00
			836.00
06/06/2025	STREET FLEET	2025 LB COURIER STREET FLEET MAY 2025 (05/28/2025) REPORT	25.16
06/06/2025	TANKSCO, INC	CITY PROJECT 24-5 FORESTDALE WATER TOWER RECONDITIONING	114,532.00
		PAYMENT APPLICATION #2	
06/06/2025	TENICITY LLC	SPRING TENNIS LESSONS 2025	3,129.60
06/06/2025	TRUENORTH STEEL	STORM SEWER PIPE FOR 5TH AVE SW RAILROAD CROSSING	3,879.33
06/13/2025	BONA COMPANIES, INC	#2411 BODYSHOP REPAIRS	1,833.30
06/13/2025	CENTRALSQUARE TECHNOLOGIES, LLC	PRO CITIZENS REPORTING ANNUAL SUBSCRIPTION	2,500.00

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/13/2025	CONFITREK, INC	2025 CONFITREK SUBSCRIPTION 8/1/2025 - 7/31/2026	3,108.00
06/13/2025	COVERALL OF THE TWIN CITIES	COMMERCIAL CLEANING SERVICES AT CITY HALL	2,561.00
06/13/2025	COVERALL OF THE TWIN CITIES	PUBLIC SAFETY CLEANING 6/1-6/30/2025	2,816.00
			5,377.00
06/13/2025	FLEXIBLE PIPE TOOL COMPANY	#1609 SWITCH/ACTIVATOR	1,142.65
06/13/2025	FLEXIBLE PIPE TOOL COMPANY	COUPLER FOR VAC TRUCK TUBES	900.40
			2,043.05
06/13/2025	FOREST LAKE CONTRACTING, INC	REPAIR DAMAGED LIGHT POLE CLAIM 440560	9,379.50
06/13/2025	FOREST LAKE CONTRACTING, INC	REPAIR DAMAGED LIGHT POLE CLAIM 407242	9,887.40
			19,266.90
06/13/2025	FREDRIKSON & BYRON	LEGAL COSTS FOR PROFESIONAL SERVICES FROM 4/1/25 - 4/30/25	2,999.50
06/13/2025	GECK, DUEA & OLSON, PLLC	PROSECUTION CONTRACT, GDO FILE NO: R	7,515.00
06/13/2025	GOPHER STATE ONE-CALL	LOCATE TICKETS MAY 2025	141.75
06/13/2025	GOPHER STATE ONE-CALL	LOCATE TICKETS MAY 2025	141.75
06/13/2025	GOPHER STATE ONE-CALL	LOCATE TICKETS MAY 2025	141.75
			425.25
06/13/2025	HYDRO CORP	BACKFLOW PREVENTION MANAGEMENT PROGRAM MAY 2025	379.00
06/13/2025	INTELLICENTS INC	MONTHLY HEALTH CONSULTING	1,250.00
06/13/2025	KENNEDY & GRAVEN CHARTERED	LEGAL FEES	6,799.00
06/13/2025	KENNEDY & GRAVEN CHARTERED	LEGAL FEES	27.80
06/13/2025	KENNEDY & GRAVEN CHARTERED	LEGAL FEES	48.50
			6,875.30
06/13/2025	LEHMANN, JENNIFER	WELLNESS COMMITTEE ACTIVITY	450.00
06/13/2025	LEXIPOL LLC	ANNUNAL FIRE POLICY MANUAL & DAILY TRAINING BULLETINS	2,232.55
06/13/2025	LOFFLER COMPANIES, INC	CONTRACT FOR 5/9/25-6/8/25	54.27
06/13/2025	LOFFLER COMPANIES, INC	PUBLIC SAFETY PRINTER OVERAGE 5/1/2025-5/31/2025	71.26
			125.53
06/13/2025	MANSFIELD OIL COMPANY OF GAINSVILLE	UNLEADED 1092 GALLONS	2,777.04

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/13/2025	MARCO TECHNOLOGIES, LLC	SHRED BINS - ROUTINE	52.50
06/13/2025	MC TOOL & SAFETY SALES	MARKING PAINT	285.60
06/13/2025	MCCRAY EXPRESS NETWORK	SOFTBALL UMPIRE FEES	930.00
06/13/2025	METROPOLITAN COURIER CORPORATION	SERVICES FOR THE MONTH OF MAY	688.25
06/13/2025	MN REC & PARK ASSOCIATION	SOFTBALL TEAM MRPA REGISTRATIONS	400.00
06/13/2025	MY TIRE PLACE MN, LLC	#1703 RIMS/TIRES	723.00
06/13/2025	NEW BRIGHTON/MOUNDSVIEW ROTARY CLUB	APRIL-JUNE, 2025 QUARTER INVOICE/4Q2024-25 FOR DEVIN MASSOPUST	153.00
06/13/2025	NORTH SUBURBAN ACCESS CORPORATION	2025-MAY MONTHLY MUNICIPAL MEETING AV SERVICES CITY OF NEW BRIGHTON	1,594.50
06/13/2025	OXYGEN SERVICE COMPANY, INC.	CARBON DIOXIDE	102.13
06/13/2025	PMA ASSET MANAGEMENT, LLC	APRIL ACCOUNT MANAGEMENT FEE	6,527.80
06/13/2025	POSTMASTER, ST PAUL	MAILING PERMIT #3655 ACTIVE LIFE NEWSLETTER JULY-AUGUST	144.47
06/13/2025	RAMSEY COUNTY	ELECTION SERVICES Q1 2025	24,262.00
06/13/2025	RAMSEY COUNTY	ANNUAL JPA - ELECTION EQUIPMENT	11,536.00
			35,798.00
06/13/2025	RAMSEY COUNTY EMCOM	RAMSEY COUNTY FLEET SUPPORT MAY 2025	13,015.87
06/13/2025	SCHADEGG MECHANICAL, INC.	QUARTLERY PREVENTIVE MAINTENANCE 6/1/2025 - 8/31/2025	4,375.00
06/13/2025	SINGER, MITCH	GAS REIMBURSEMENT TRAVEL TO INDIANA FOR CN 25004589 5/29/2025-5/30/2025	39.51
06/13/2025	SONTERRE, AUSTIN	DONUTS FOR COFFEE WITH A COP 5/20-5/21/2025	47.95
06/13/2025	SRIXON/CLEVELAND GOLF	GLOVES	248.55
06/13/2025	STREET FLEET	2025 LB COURIER STREET FLEET JUNE 2025 (06/04/2025) REPORT COURIER	25.16

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/13/2025	WATER CONSERVATION SERVICE, INC.	LEAK LOCATE	396.60
06/20/2025	AMERICAN ENGINEERING TESTING, INC.	2024 STREET REHAB TESTING	1,993.45
06/20/2025	BARR ENGINEERING COMPANY	PROFESSIONAL SERVICES FROM APRIL 19, 20205- MAY 16, 2025	12,222.29
06/20/2025	BARR ENGINEERING COMPANY	PROFESSIONAL SERVICES FROM SEPTEMBER 26, 2024 TO MAY 16, 2025	35,617.64
			47,839.93
06/20/2025	BIFFS INC	FENCE RENTAL FOR HANSEN RENTAL	244.80
06/20/2025	CAPITOL BEVERAGE SALES	BEER/SELTZER FOR RESALE AT THE GOLF COURSE	561.60
06/20/2025	ELECTRO WATCHMAN INC	UPDATE SECURITY CODES	27.09
06/20/2025	FACTORY MOTOR PARTS CO	#1506 T-STAT	238.61
06/20/2025	FLEXIBLE PIPE TOOL COMPANY	NEW REEL HOSE FOR THE JETTER	3,185.00
06/20/2025	HAWKINS, INC.	LPC-4	6,157.41
06/20/2025	KATH FUEL OIL SERVICE	HAND PUMP SHOP	410.50
06/20/2025	KLM ENGINEERING INC	SOUTH TOWER INSPECTION	3,200.00
06/20/2025	KLM ENGINEERING INC	CITY PROJECT 24-25 FORESTDALE TOWER RECONDITIONING	51,453.90
			54,653.90
06/20/2025	MANSFIELD OIL COMPANY OF GAINSVILLE	UNLEADED	4,862.71
06/20/2025	MARCO TECHNOLOGIES, LLC	OFFICE 365 SUBSCRIPTION	4,957.00
06/20/2025	MIDWAY FORD CO.	NEW WTPO F-150 #2514	52,115.01
06/20/2025	MORA, CLAUDIA	PLETCHER'S GRENHOUSE	80.45
06/20/2025	REGENTS OF THE UNIVERSITY OF MN	RCP- NEW BRIGHTON: MOBILE HOME EMPOWERMENT	3,000.00
06/20/2025	REPOWERED	RECYCLING EVENT 5/19/2025	1,958.50
06/20/2025	STREET FLEET	2025 LB COURIER STREET FLEET JUNE 2025 (06/11/2025) REPORT COURIER	25.16

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/20/2025	TOKLE INSPECTIONS INC	MAY 2025 TOKLE INSPECTIONS	3,944.90
06/20/2025	USP TECHNOLOGIES	PEROXIDE	22,819.94
06/20/2025	WSB & ASSOCIATES INC	HANSEN PARK REDELOPMENT PROFESSIONAL SERVICES APRIL1-30, 2025	5,028.25
06/20/2025	WSB & ASSOCIATES INC	LIONS PARK SPLASH PAD - CONSTRUCTION ADMINISTRATION APRIL 1-30, 2025	926.50
			5,954.75
06/05/2025	ALAINA LYNK	BALLOON TWISTING PARKS DISCOVERY JULY 22, 2025	130.00
06/05/2025	ALAINA LYNK	BALLOON ARTIST FOR PARKS DISCOVERY JULY 8, 2025	130.00
06/05/2025	ALIVE & KICKIN	ENTERTAINMENT FOR RISE/SENIOR EVENT AUGUST 15, 2025	400.00
06/05/2025	BAILEY NURSERIES	2025 BARE ROOT TREES	5,006.45
06/05/2025	BRISBIN, MICHAEL	REFUND FOR OVERPAYMENT	41.00
06/05/2025	CORNELL, HENRIK	UB refund for account: 305284	10.78
06/05/2025	CORNELL, HENRIK	UB refund for account: 305284	28.08
06/05/2025	CORNELL, HENRIK	UB refund for account: 305284	18.96
06/05/2025	CORNELL, HENRIK	UB refund for account: 305284	9.98
			67.80
06/05/2025	FLORES, HUMBERTO	HUMBERTO FLORES SECURITY DEPOSIT REFUND \$500	500.00
06/05/2025	FORSHEE, JOHN	UB refund for account: 204784	12.56
06/05/2025	FORSHEE, JOHN	UB refund for account: 204784	32.74
06/05/2025	FORSHEE, JOHN	UB refund for account: 204784	22.12
06/05/2025	FORSHEE, JOHN	UB refund for account: 204784	11.63
			79.05
06/05/2025	GLYNN, BRENDAN	UB refund for account: 105080	6.26
06/05/2025	GREAT LAKES COCA-COLA DISTRIBUTION	POP/SPORTS DRINKS FOR RESALE	697.66
06/05/2025	HALL, MORGAN	UB refund for account: 104638	75.96
06/05/2025	KORLUKA, MICHAEL	UB refund for account: 103168	96.73
06/05/2025	KUBIK, CHASE	UB refund for account: 303552	128.27

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/05/2025	LIGHT, ASHER	REFUND FOR OVERPAYMENT	30.00
06/05/2025	LMCIT	INSTALLMENT INVOICE #3 - PROPERTY/LIABILITY INSURANCE	60,009.00
06/05/2025	LMCIT	CLAIM 503950	261.27
06/05/2025	LOPEZ LUCAS, JORGE SEBASTIAN	REFUND FOR OVERPAYMENT	11.00
06/05/2025	MARIA T DORR	COMMUNITY LUNCH ENTERTAINMENT JULY 17, 2025	325.00
06/05/2025	MARTIN MARIETTA MATERIALS, INC	ASPHALT FOR WATER BREAKS ON CLEVELAND AVE	1,111.05
06/05/2025	MILLER, ANGELA	REFUND FOR OVERPAYMENT	577.25
06/05/2025	MN METRO NORTH TOURISM BUREAU	APRIL LODGING TAX	9,561.76
06/05/2025	MN METRO NORTH TOURISM BUREAU	APRIL LODGING TAX	(478.09)
			9,083.67
06/05/2025	NESSER, JOANN	UB refund for account: 104083	2.56
06/05/2025	NESSER, JOANN	UB refund for account: 104083	6.67
06/05/2025	NESSER, JOANN	UB refund for account: 104083	4.51
06/05/2025	NESSER, JOANN	UB refund for account: 104083	2.37
			16.11
06/05/2025	PETERSON, MARK	REFUND FOR OVERPAYMENT	11.00
06/05/2025	PRESCRIPTION LANDSCAPE	BD Payment Refund	700.00
06/05/2025	ST PAUL, CITY OF	ASPHALT FOR WATER BREAKS / POTHOLE PATCHING	905.88
06/05/2025	ST PAUL, CITY OF	ASPHALT FOR WATER BREAKS / POTHOLE PATCHING	1,811.48
			2,717.36
06/05/2025	VANG LUCKY PAOTHAWG	REFUND FOR OVERPAYMENT	50.00
06/12/2025	ALPHA PAINTING CO.	PUBLIC SAFETY PAINTER FIRE MARSHALL AND NEIGHBORING OFFICE	500.00
06/12/2025	BONILA, NELSON	REFUND FOR OVERPAYMENT	490.50
06/12/2025	CLEAR PERFECTION WINDOW CLEANING	WINDOW CLEANING @ MAINTENANCE FACILITY	605.00
06/12/2025	DUSTY'S DRAIN CLEANING	WATER SERVICE REPAIR 254 16TH AVE SW	2,871.00
06/12/2025	FLEETPRIDE, INC	FILTERS STOCK	85.79

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/12/2025	FLEETPRIDE, INC	#2405 HYDRAULIC LINES	435.71
			521.50
06/12/2025	FOBBE CONTRACTING, INC	13TH AVE HYDRANT REPAIR	3,200.00
06/12/2025	FRIENDLY CHEVROLET, INC.	#071 IMPACT SENSOR	219.51
06/12/2025	INDEPENDENT SCHOOL DIST #621	NORDIC WALKING MAY 2025	350.00
06/12/2025	MALANEY, COLLIN	USER CREDIT TO REFUND CHECK - YOUTH LEAGUE	10.00
06/12/2025	MARTIN MARIETTA MATERIALS, INC	ASPHALT PATCHING LAKEVIEW POINT	159.43
06/12/2025	MICHAEL EUGENE MOTHERSHED	JUNE 25 SUMMER CONCERT	1,200.00
06/12/2025	MINNESOTA OCCUPATIONAL HEALTH	PRE-EMPLOYMENT TESTING	252.00
06/12/2025	MN DEPT OF HEALTH	HOSPITALITY FEE	40.00
06/12/2025	MN GOLF ASSOCIATION INC	MEMBERSHIP FEE	600.00
06/12/2025	MULESSA, KUMA	KUMA MULESSA REFUND CHECK \$500	500.00
06/12/2025	SHOREVIEW, CITY OF	MINI TRIP SENIOR ORCHESTRA HALL MAY 8, 2025	55.00
06/12/2025	ST. JOHN THE BAPTIST CHURCH	PEACE KEEPERS PROGRAM - MN CHEIFS GRANT PROGRAM	501.90
06/12/2025	THELEN MECHANICAL LLC	366 NEW BRIGHTON ROAD HELLER - GRANT DISTRIBUTION TO CONTRACTOR FOR I/I REPAIR	4,750.00
06/12/2025	TWIN CITY HARDWARE COMPANY	HIGH SERVICE TOWER DOOR	1,600.00
06/18/2025	CLEMENSON, EILEEN	EILEEN CLEMENSON REFUND CHECK \$500	500.00
06/18/2025	E.G. RUD & SONS, INC	2024 STREET REHAB CONSTRUCTION STAKING	9,403.00
06/18/2025	FLEETPRIDE, INC	OIL FILTERS SHOP	319.80
06/18/2025	INTERSTATE ROADRUNNER INC	REFUND FOR OVERPAYMENT	606.02
06/18/2025	KUECHLE UNDERGROUND INC	PROJECT 24-1 2024 STREET REHABILITATION PARTIAL PAYMENT 5	599,120.01

VI_1 APPROVAL OF PAYMENTS

CHECK DISBURSEMENT REPORT FOR CITY OF NEW BRIGHTON

Check Date	Payee	Description	Amount
06/18/2025	LANO EQUIPMENT, INC	NEW METAL PLESS PLOW FOR JOHN DEERE TRACTOR	38,028.47
06/18/2025	LONG LAKE IMPROVEMENT ASSOC	CONTROL OF WWM USING PROCELLACOR	3,586.00
06/18/2025	MARTIN MARIETTA MATERIALS, INC	ASPHALT FOR WATER BREAK ON 16TH ST NW	2,205.98
06/18/2025	MN DEPT OF HEALTH	QUARTERLY WATER SERVICE CONNECTION FEE	14,541.00
06/18/2025	OFFICE OF MN IT SERVICES	LANGUAGE LINE SERVICES - MAY 2025	231.91
06/18/2025	STEPHANIE MILLAR	FALL COACHING REFUND 2024	34.00
06/18/2025	SUSAN E BLUE	BD Payment Refund	165.00
06/18/2025	TAMIR, SHARON	SHARON TAMIR REFUND CHECK \$500	500.00
TOTAL PAYMENTS			\$ 3,486,830.48



COUNCIL PROCEEDINGS THE CITY OF NEW BRIGHTON

Pursuant to notice thereof, a regular meeting of the New Brighton City Council was held Tuesday, June 10, 2025 at 6:30 pm in the New Brighton Council Chambers.

Present: Mayor Niedfeldt-Thomas, Councilmembers Allen, Dunsworth and Frischman
Absent: Councilmember Steffenhagen

Also Present: Devin Massopust-City Manager, Sarah Sonsalla-City Attorney (attending remotely), Tony Paetznick-Public Safety Director, Hue Schlieu-DEI Coordinator

Call to Order

Mayor Niedfeldt-Thomas called the meeting to order at 6:30 pm.

Pledge of Allegiance

Mayor Niedfeldt-Thomas led the Council in the Pledge of Allegiance.

Public Comment Forum

Mayor Niedfeldt-Thomas opened the Public Forum for comments from the public. There were no comments from the public.

Approval of Agenda

Approval of the June 10, 2025 Council Agenda.

Motion by Councilmember Frischman, seconded by Councilmember Dunsworth to approve the agenda as submitted.

4 Ayes, 0 Nays-Motion Carried

Special Order of Business

None.

Consent Agenda

1. Consider Approval of Payments.
2. Approve City Council Minutes:
 - a. May 13, 2025 Worksession Meeting Minutes.
 - b. May 27, 2025 City Council Meeting Minutes.
 - c. May 27, 2025 Worksession Meeting Minutes.
3. Accept Receipt of Commission Minutes:

Call to Order

Pledge of Allegiance

Public Comment Forum

Approval of Agenda

Approval of the
June 10, 2025 Agenda.

Special Order of Business

Consent Agenda

a. April 17, 2025 Equity Commission Meeting Minutes.

4. Consider Quote and Award City Project 25-2A, 2025 Reclamite Maintenance Project.
5. Authorization for Staff to Purchase Shade and Shelter Equipment from St. Croix Recreation for Hansen and Totem Pole Parks.
6. Approve the 2025 Ramsey County, MN Hazard Mitigation Plan.
7. Consider Resolution Certifying Delinquent Utility Accounts and Past Due Miscellaneous Receivables Invoices to be Payable with 2026 Property Taxes.
8. Authorize Participation in the Capital City Regional Firefighters Association Reciprocal Fire Service Agreement.

Motion by Councilmember Dunsworth, seconded by Councilmember Frischman to approve the Consent Agenda as presented.

4 Ayes, 0 Nays - Motion Carried

Public Hearing

None.

Council Business

1. Consider Approval of Ordinance 917 Amending Chapter 2 of the City Code Amending Compensation for Commission Members
 - a. Consider Approval of Resolution Approving a Summary Publication for Ordinance No. 917

City Manager Massopust indicated this would typically be a worksession item, but staff chose to bring this item straight to the City Council. He explained the Equity Commission discussed this item in February and recommended the Council consider the compensation of commission members. It was noted DEI Coordinator Schlieu would be presenting this item to the Council.

DEI Coordinator Schlieu stated historically, residents have not been compensated for serving as Commission members. Compensation aims to recognize the time, expertise, and civic contributions of community members. This change supports more equitable access to civic participation by reducing financial barriers, which may attract more community members, such as parents, caregivers, students, and low-income residents. The proposed structure offers \$40 per required meeting, capping at \$480 annually, for 43 Commissioners. The financial investment represents a 0.14% tax levy increase. The benefits of providing compensation was further discussed with the Council and it was noted two comparable cities were currently paying their commissioners. If passed, the ordinance would go into full effect April 1, 2026, to align with the start of the next commission year and aligns with broader efforts to foster increased and inclusive governance.

Councilmember Dunsworth asked what age the student commissioners could be. City Manager Massopust reported the student commissioners could be from 7th to 12th grade.

Councilmember Dunsworth explained she asked the question because she questioned if the City would be able to compensate students that were only in 7th grade. City Manager Massopust indicated to date the student commissioners were 14 or older.

Mayor Niedfeldt-Thomas asked if the pay was kept below \$600 for tax purposes. DEI Coordinator Schlieu reported this was the case.

Mayor Niedfeldt-Thomas inquired if Commissioners could opt to not receive their stipend and these funds could then be redeployed to the Fun Fund. DEI Coordinator Schlieu reported this would be allowed.

Councilmember Allen stated he believed this was a good idea and he appreciated the fact Commissioners could opt out of receiving

Public Hearing

Council Business

1. Consider Approval of Ordinance 917 Amending Chapter 2 of the City Code Amending Compensation for Commission Members
 - a. Consider Approval of Resolution Approving a Summary Publication for Ordinance No. 917

compensation. He suggested Commissioners be provided with a menu of options on how their stipend could be donated if they do not wish to receive payment.

Mayor Niedfeldt-Thomas commented on the going rate for babysitters stating she was excited the City Council was discussing this option. She indicated she was looking forward to seeing how this expenditure fit into the budget and stated she would need further information on how ad hoc or joint meetings would be addressed. DEI Coordinator Schlieu explained staff does not take attendance at ad hoc meetings and therefore a stipend would not be offered for these types of meetings.

Mayor Niedfeldt-Thomas spoke to how Planning Commissioners were responsible for public hearings which may lead to more intense meetings.

Councilmember Dunswoth inquired if Commissioners would be paid monthly or once per year. DEI Coordinator Schlieu explained the Ordinance proposed paying Commissioners once per month.

Councilmember Frischman commented on a personal level, given how she had served on the Planning Commission for a number of years, she did not see a situation where people did not genuinely want to be a part of the group. She stated she appreciated the real interest residents had in serving the community and had her questioning if the stipend was really necessary. In addition, she understood \$20,000 was a lot of money that the Council would have to fit into the 2026 budget if this ordinance were to pass. She indicated her first response to this ordinance was to be negative, but she also wanted to be fair and have further conversation.

Mayor Niedfeldt-Thomas requested further information if the other cities that were paying their commissioners did a study on this topic, noting she wanted to better understand if the stipend helped move the needle and improve attendance, and did these cities receive new applicants. DEI Coordinator Schlieu explained after speaking with both cities, she understood they either do not collect or do not share the data, which meant she could not answer the Mayor's question. She understood outside of the comparable cities, she was seeing more of a national trend towards paid volunteerism. She was of the opinion the stipend would assist in drawing in younger applicants and folks that have finances as a barrier.

Councilmember Dunswoth explained she agreed with many of Councilmember Frischman comments. She indicated she saw both sides of this argument. She discussed how at her job she offers scholarships to students and at times these scholarships are turned down. She supported the City offering a stipend to Commissioners with the understanding this stipend could be turned down for those who wish to serve without compensation. She was of the opinion the Council should table action on this item to allow the Council to further consider this topic.

Councilmember Frischman agreed the matter should be tabled. She indicated she wanted to talk about this matter more and see if there were ways to reach out to the communities that were underrepresented.

Councilmember Dunswoth understood some Commissioners may be facing a financial barrier if they need a babysitter for each meeting.

Councilmember Frischman recalled that during the recent Commission interviews, each Commissioner was asked why they wanted to serve, and many spoke on how they wanted to give back to the community. She indicated she did not want to discredit this service and volunteerism. She stated she was not convinced that \$40 was going to bring forward people who have a lot of other barriers in their life.

Mayor Niedfeldt-Thomas supported the City pursuing direct outreach in the multi-family housing complexes in the community. She indicated the proposed stipend would have Commissioners being paid more than City Councilmembers. She asked when the Council last adjusted the compensation for Council pay. Assistant City Manager Lehmann reported the last Council compensation ordinance was passed in October of 2001 and went into effect in January of 2002.

Mayor Niedfeldt-Thomas questioned how other cities compensated their councilmembers. City Manager Massopust reported several cities tied compensation to the cost-of-living adjustment, but noted most were paid a small stipend that was not tied to a modifier.

Mayor Niedfeldt-Thomas supported the Council understanding what the possibilities would look like when for including this item in the 2026 budget.

Councilmember Frischman stated she would like more time on this item.

Motion by Councilmember Allen, seconded by Councilmember Frischman to table action on Ordinance 917 to a future City Council meeting.

4 Ayes, 0 Nays-Motion Carried

2. Consider Grant Award and Purchase of Automated License Plate Recognition (ALPR) Cameras.

City Manager Massopust indicated Public Safety Director Paetznick and Community Engagement Officer Austin Sonterre would be presenting this item to the Council.

Public Safety Director Paetznick stated Public Safety has been awarded a state grant of \$25,000 to offset local

2. Consider Grant Award and Purchase of Automated License Plate Recognition (ALPR) Cameras.

implementation costs for an ALPR program to combat auto theft. He reported ALPR was not new technology, but has been around since 2013. It was noted the City Attorney has reviewed the agreement and MOU for the purchase of the ALPR cameras from Flock Safety. It was noted Flock Safety was offering free installation during the month of June for new customers, which would provide the City with a savings of \$5,850.

Community Engagement Officer Santair spoke further to the opportunities ALPR technology would provide the Public Safety Department noting they would serve as a force multiplier. He spoke to the benefit of having stationary cameras in place throughout the community noting they would be able to capture indiscriminate evidence from fixed locations. He reported the technology would be used to assist with deterring and eliminating crime through Flock's vehicle fingerprint technology. He commented further on the data retention policies that would be put in place for the data that was collected. He reviewed the surrounding communities that were using Flock technology and provided examples of how useful this technology was in solving crimes.

Public Safety Director Paetznick spoke to how the use of this technology was directly aligned with Pillar 3 within the City's 21st Century Policing. He explained the Public Safety Commission reviewed this topic and recommended the City Council move forward with the Flock safety camera purchase.

Councilmember Allen requested further information regarding how data was shared between agencies. Public Safety Director Paetznick explained the agreement for the information sharing for the Flock cameras had been reviewed by the City Attorney. He commented on all of the other information sharing the department participates in within the police records management system. He indicated there would be an audit log for all data requests from the Flock cameras. Mayor Niedfeldt-Thomas asked where the eight cameras would be located. Public Safety Director Paetznick reported the City would want to be strategic when it comes to the camera placement and explained MNDOT would now allow Flock safety cameras to be installed on their right-of-way. Community Engagement Officer Santair spoke to the public private partnerships that were being pursued with multi-family housing units in the community noting this initiative would provide additional cameras in the community. He noted he would be meeting with a Flock location specialist later this week to further discuss where the eight cameras should be located in New Brighton.

Mayor Niedfeldt-Thomas stated she believed this was an exciting opportunity for New Brighton and she thanked the Public Safety Department for pursuing these grant dollars.

Mayor Niedfeldt-Thomas asked what indiscriminate data was. Community Engagement Officer Santair stated this was data that does not consider an individual's demographics.

Councilmember Frischman reported the Public Safety Commission had a robust conversation on this topic and offered their full support for this technology.

Councilmember Allen questioned what the conversation was on how the Public Safety Department would respond to an additional 100 hits per day from the Flock technology. Public Safety Director Paetznick reported his officers were eager to get this technology in place. He stated the department was getting hits on vehicles currently, but they were manually being entered into the system. He commented the new hits may have to be filtered, but he anticipated the technology would assist with making more arrest, returning stolen vehicles to victims, preventing and reducing property crimes at the County Road D apartments. He was excited to see how the cameras would be used as a high-quality investigative tool.

Councilmember Allen inquired if an audit or policy would be put in place for the Flock cameras. Public Safety Director Paetznick reported he would be mandated by the State to complete audits twice a year, like the audits that were completed on the body worn cameras.

Motion by Councilmember Frischman, seconded by Councilmember Allen to approve the purchase of ALPR cameras, including MOU and master services agreement, and acceptance of grant award via Resolution.

4 Ayes, 0 Nays-Motion Carried

Commission Liaison Reports, Announcements and Updates

Devin Massopust

City Manager Massopust reported a summer concert would be held on Thursday, June 12 at Veterans Park. He discussed the infrastructure projects that would be completed this summer and encouraged residents to visit the City's website further information on these projects. He stated the Forestdale Water Tower had recently been repainted. He

**Commission Liaison
Reports, Announcements
and Updates**

indicated the playground at Hansen Park West had been removed in preparation for the work that would occur in this park this summer. He noted the Council worksession meeting for July 1 has been canceled.

Graeme Allen

Councilmember Allen reported the PREC Commission met on Wednesday, June 4 and the group discussed public art and the opening of the splash pad at Lions Park.

Jeanne Frischman

Councilmember Frischman reported the Public Safety Commission met on Monday, June 9 where the group discussed parking ordinances.

Mayor Niedfeldt-Thomas

Mayor Niedfeldt-Thomas reported City Hall would be closed on Thursday, June 19 in observance of Juneteenth. She explained the City Council would meet next on Tuesday, June 24. She invited the public to attend the next farmers market which would be held on Wednesday, June 11 at the Community Center. She indicated she was looking forward to attending the League of Minnesota Cities Conference at the end of June.

Adjournment

Mayor Niedfeldt-Thomas adjourned the meeting at 7:53 p.m.

Adjournment

The meeting adjourned at 7:53 p.m.

Kari Niedfeldt-Thomas, Mayor

ATTEST: _____
Terri Spangrud, City Clerk



Council Worksession
June 10, 2025
5:00 pm

Present: Mayor Kari Niedfeldt-Thomas
Councilmember Graeme Allen
Councilmember Emily Dunsworth
Councilmember Jeanne Frischman

Absent: Councilmember Jason Steffenhagen

Staff in Attendance: Devin Massopust, Ben Gozola

Guests in Attendance: Terri Smith, Metropolitan Council HRA

Metropolitan Council HRA Affordable Housing Cooperative Agreement Proposal

Massopust stated Terri Smith from the Metropolitan Council Housing and Redevelopment Authority (Metro HRA) will provide details on the Family Affordable Housing Program, and what New Brighton must do if it wishes to partner in this important regional program.

Terri Smith, Director of the Metropolitan Council Housing and Redevelopment Authority, thanked the Council for their time and provided the Council with a presentation on the Family Affordable Housing Program. She reported that the Met Council owns 150 scattered site housing units in 11 different cities, which were acquired after a class action law suit in 1995. It was noted 85 of the units were single family homes and 65 of the units were townhomes. She commented on the location of the housing units and stated the units have been successfully operating since 2001. She discussed how the units were financed through the federal government with the tenants paying approximately 30% of their income towards the rent. She reported the Met Council entered a unique partnership with the city of Edina in 2021 where they provided a \$2 million 25 year forgivable loan to assist with purchasing four affordable housing units. She explained she had families on waiting lists and she was interested in purchasing homes in the east metro, which included New Brighton. She discussed how any homes purchased by the Metro HRA would be exempt from property taxes.

Councilmember Allen requested further information regarding the federal funding the Met Council received for this housing. Ms. reported explained she has 7,300 vouchers that she administered at Metro HRA and 1,000 were project based through the Family Affordable Housing Program and 6,300 were tenant based. She provided further information on how tenants are screened and selected.

Councilmember Dunsworth questioned if individuals could approach Metro HRA to have their home purchased and place in this program. Ms. Smith reported the city of Edina reached out to property owners that were within the price range, and this allowed her to look at homes for purchase from private parties.

Further discussion ensued regarding the sale and purchase of the Metro HRA housing units.

Mayor Niedfeldt-Thomas asked why Metro HRA was interested in housing units in New Brighton. Ms. Smith commented there was interest and demand for units in New Brighton.

Mayor Niedfeldt-Thomas reported there were no transportation expansions coming to New Brighton in the next 30 years. She expressed concern with how this was impacting low income families that relied on public transportation. She indicated the City may be interested in partnering with Metro HRA on affordable units, but in exchange may want to have the Met Council expanding transportation routes into New Brighton. Ms. Smith stated she did not work in the transportation area at Met Council but she could forward these questions and concerns along. She commented for affordable units without transportation she had to find tenants that had a car.

Mayor Niedfeldt-Thomas stated the City of New Brighton was interested in more affordable housing units, but the City was also interested in improving its transit routes for all residents.

Councilmember Allen reported the Met Council has done pilot projects in the past and suggested a pilot program be considered in New Brighton for its residents.

Mayor Niedfeldt-Thomas questioned how many cities Metro HRA works with has dedicated staff for housing. Ms. Smith indicated she has very little contact with the cities, beyond receiving rental housing licenses or police call information. She understood Minnetonka, Eden Prairie, Edina and Maple Grove had housing specialists.

Massopust inquired if Metro HRA had statistics around car ownership for the tenants living in these affordable units. Ms. Smith commented she could investigate this further and could report back to the City.

Mayor Niedfeldt-Thomas asked if Metro HRA works closely with the County. Ms. Smith reported she works closely with the counties on many things, but noted these units were project-based rent assistance.

Councilmember Dunsworth stated she was neutral on this topic right now and would need to think on this further before she could make a recommendation one way or the other.

Councilmember Allen explained if the City were to enter a contract with Metro HRA, the City would be losing approximately \$4,000 per year for each home that was purchased for affordable housing. He supported the Council further discussing affordable housing and how dollars should be allocated.

Councilmember Frischman indicated her only stumbling block with this proposal was the loss of property taxes.

Worksession adjourned at 5:42 pm

Respectfully submitted,

Terri Spangrud
City Clerk



Agenda Section:	Consent Agenda
Report Date:	06/10/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Consideration of a Resolution Authorizing the Uses of the 2024 General Fund Excess Fund Balance and Amending the 2025 General Fund Budget

Action Requested:

Public Hearing:	Motion:
Discussion:	Informational:

Form of Action:

Resolution:	Ordinance:
Contract/Agreement:	N/A or Other:

Votes Needed:

3 Votes:	4 Votes:
5 Votes:	N/A:

Summary Statement:

In accordance with the City's Fund Balance Policy, \$700,000 of the General Fund excess fund balance as of December 31, 2024 may be utilized in the subsequent year's budgets and/or transferred to other funds.

Recommendations:

Approve the resolution authorizing the uses of the 2024 General Fund excess fund balance and amending the 2025 General Fund budget.

Applicable

n/a

Deadlines:	
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Community Impact:	Sound financial management ensures the City’s ability to continue funding the programs and services the community relies on.
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Legislative History:	The City’s Fund Balance Policy establishes targeted and minimum amounts for fund balance of the General Fund. The targeted balance includes an amount for cash flows for the subsequent year’s operating budget, plus an amount for contingencies. At a minimum, the City is to maintain a year-end unassigned fund balance of at least 35% of the subsequent year’s budgeted operating expenditures. In the event that the year-end unassigned fund balance exceeds the minimum, 41-45% of the subsequent year’s budgeted operating expenditures must be retained before considering a transfer out to other funds. The General Fund ended 2024 with an unassigned fund balance of \$10,453,175, which is \$1,256,775 over the targeted amount and 46% of the 2025 budget. This level of unassigned fund balance can be attributed to \$473,400 in revenues over expenditures in the General Fund at the end of 2024. This was the result of increased charges for service revenues, permit revenues, and intergovernmental revenues; favorable investment earnings; and significant savings in personnel expenditures. The detailed calculation of the targeted fund balance is included in attachment A. It is the recommendation of staff to utilize \$700,000 of the excess fund balance for various purposes as outlined in Attachment B. Doing so would leave a remaining fund balance equal to 43% of the 2025 budgeted operating expenditures.
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Strategic Priority:	<u>Financial Sustainability</u>	Staff Capabilities
	Economic Development	Community Engagement & Belonging
	City Assets	N/A

Fiscal Impact:	Financial Impact: Is there a financial consideration?		No	<u>Yes</u> : \$ 700,000
	Financing Sources:	Budgeted	<u>Budget Modification</u>	
	New Revenue	<u>Use of Reserves</u>	Other	

Attachments:	Resolution, Attachment A_Excess Fund Balance Calc, Attachment B_2024 Fund Balance Uses
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RESOLUTION No. _____
STATE OF MINNESOTA
COUNTY OF RAMSEY
CITY OF NEW BRIGHTON

**RESOLUTION AUTHORIZING THE USES OF THE 2024 GENERAL FUND EXCESS FUND BALANCE
AND AMENDING THE 2025 GENERAL FUND BUDGET**

WHEREAS, the City's Fund Balance Policy includes targeted and minimum balances for the General Fund, and

WHEREAS, the targeted balance for the year ending December 31, 2024, is \$9,196,400, and

WHEREAS, the minimum balance is 35% of the subsequent year's budgeted operating expenditures, or \$7,930,500, and

WHEREAS, as of December 31, 2024, the unassigned fund balance of the General Fund is \$10,453,175, and

WHEREAS, the unassigned fund balance is 46.1% of the 2025 budgeted operating expenditures, and

WHEREAS, included in the Fund Balance Policy is a provision to retain an unassigned fund balance between 41% and 45% of the subsequent year's budgeted expenditures, and

WHEREAS, included in the Fund Balance Policy is a provision to utilize the amount in excess of the targeted balance in the subsequent year's budgets and/or by transferring to other funds.

NOW THEREFORE, BE IT RESOLVED the Finance Director is authorized and directed to execute the following transfers:

1. Transfer \$110,000 from the General Fund to the Fleet Replacement Fund
2. Transfer \$250,000 from the General Fund to the Non-Fleet Replacement Fund
3. Transfer \$300,000 from the General Fund to the Community Reinvestment Fund.

BE IT FURTHER RESOLVED the 2025 General Fund Budget be amended as follows:

Increase:	Transfer Outs 101-9000-49992 by \$660,000
Increase:	Professional Services 101-2112-43300 by \$23,100

ADOPTED this 24th day of June, 2025 by the New Brighton City Council with a vote of _____ ayes and _____ nays.

Kari Niedfeldt-Thomas, Mayor

ATTEST:

Devin Massopust, City Manager

Terri Spangrud, City Clerk

City of New Brighton, MN
2024 General Fund Targeted Fund Balance per Policy

Designated for Cashflows**Subsequent Year's Budget:**

	2025
General Fund Levy	14,493,200
(Less Internal Debt Service)	(1,363,800)
Police State aid	302,200
Fire state aid	183,100
Police State Reimbursement	112,900
MSA	11,200
County Recycling Grant	93,500
County VCET Reimbursement	20,000
Fire State Reimbursement	8,800
	<u>13,861,100</u>

x 50% A 6,930,550

Designated for Contingencies**Subsequent Year's Budgeted Operating Expenditures**

(Less Internal Debt Service)	24,022,300
	(1,363,800)
	<u>B 22,658,500</u>

x 10% C 2,265,850

Total Targeted Fund Balance A+C=D 9,196,400

Unassigned Fund Balance as of 12/31/2024 E 10,453,175

Amount over Targeted Fund Balance E-D 1,256,775

Minimum 41% - 45% to be Retained E/B 46.13%

Potential to Reallocate per Fund Balance Policy F 700,000

% of next year's budget after the transfer (E-F)/B 43.04%

Minimum Fund Balance: 7,930,475
 (35% of subsequent year's budget)

Memo

To: New Brighton City Council
Devin Massopust, City Manager

From: Gina Foschi, Finance Director

Date: June 24, 2025

Subject: 2024 Excess Fund Balance Uses

New Brighton ended 2024 with an unassigned fund balance of \$10,453,200. This is \$1,256,800 over the City's Target Fund Balance, or 46% of the 2025 budgeted operating expenditures. It is also \$2,522,700 over the City's Minimum Fund Balance of 35% of the subsequent year's budgeted operating expenditures.

According to the City's Fund Balance Policy, whenever we exceed both the minimum and target fund balances, we have the option to transfer an excess amount out of the General Fund for other purposes, or to leave it in the General Fund to assist with the current or subsequent years' budgets. If we choose to transfer an amount out of the General Fund, the policy also states that we shall retain an unassigned fund balance of between 41% to 45% of the subsequent year's budgeted expenditures.

It is my recommendation that we utilize \$700,000 for the purposes outlined in this memo, which would result in a remaining fund balance (as of 12/31/2024) of 43% of the 2025 budgeted operating expenditures.

❖ **\$40,000 retained in the General Fund for Minnesota Paid Leave preparation services**

At the May 13, 2025 Council meeting, Council authorized staff to execute an agreement with The Partners Group to assist in the preparation and implementation of Minnesota's Paid Family Medical Leave. The cost of the one year agreement is \$3,300 per month, for a budgetary impact of \$23,100 in 2025 and \$16,500 in 2026. I believe that this one-time expenditure that benefits the entire organization is a good use of these funds.

❖ **\$110,000 transfer to Fleet Replacement Fund (Forestry)**

The estimated cost of Forestry Fleet has increased significantly since the 2024 budget process. Two pickup trucks planned for replacement in 2026 have almost doubled with a combined total of \$138,000 from \$74,000, and the estimated cost of the wood chipper planned for replacement in 2030 has increased from \$96,200 to \$146,400. As a result, we've had to increase internal service charges significantly between 2025-2030 to ensure we have enough cash when the replacements are needed. The transfer of \$110,000 will enable us to decrease the 2026 General Fund internal service charge by \$31,000.

❖ **\$250,000 transfer to Non-Fleet Replacement Fund (Police)**

During the 2025 budget process, the estimated cost of several building components increased significantly. The Public Safety Center roof, planned for replacement in 2024, increased from \$633,500 to \$1,080,000. This replacement was deferred to 2028 to align with the planned replacement of the skylight, and to give us time to increase internal service charges by \$25,000 each year through 2028 to save up enough funding to cover the increase (\$150,000 total levy impact).

The transfer of \$250,000 will enable us to decrease the Police Non-Fleet internal service charge by \$57,000 in 2026 and \$30,000 in 2027. It will also enable us to reduce the amount of funding needed from the Fire Fleet Fund to cash flow the replacement of the roof by \$200,000. This will in turn allow us to also decrease the Fire Fleet internal service charge by \$18,500 in 2026. This is a total 2026 General Fund levy savings of \$75,500.

❖ **\$300,000 transfer to Community Reinvestment for future Internal Loans needed in the Stormwater Fund**

The Stormwater Fund has consistently relied on internal financing from the Community Reinvestment Fund since 2018 when curb replacements were separated out from the assessable portion of annual street projects and instead expensed to the stormwater fund.

Through the Council-approved Living Streets Plan, certain streets are narrowed during annual reconstruction. Curbs and catch basins must be moved and replaced when this happens. These items are typically paid for through the Stormwater Fund. Combined, the 2024 and 2025 street project costs are about \$1M higher due to curb and catch basin work. The 2025 internal loan of \$400,000 will need to increase by at least \$100,000 in order to maintain a cash balance above the policy minimum at year end. Future street project costs will be re-evaluated during the 2026 utility rate analysis process.



Agenda Section:	Consent Agenda
Report Date:	06/11/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Consider authorizing staff to execute an agreement for proposed auditing service fees for the years ending December 31, 2025, 2026 and 2027.

Action Requested:

Public Hearing:	<u>Motion:</u>
Discussion:	Informational:

Form of Action:

Resolution:	Ordinance:
<u>Contract/Agreement:</u>	N/A or Other:

Votes Needed:

<u>3 Votes:</u>	4 Votes:
5 Votes:	N/A:

Summary Statement:

The proposed cost for the audit of the City's financial statements as of and for the year ended December 31, 2025 is \$45,730, a 3% increase from the previous year. The 2026 and 2027 audits each include a 5% annual increase.

Recommendations:

To authorize staff to execute an agreement for proposed fees for the audit of the financial statements as of and for the years ended December 31, 2025; December 31, 2026; and December 31, 2027.

Applicable Deadlines:	September 30, 2025
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Community Impact:	Sound financial management ensures the City's ability to continue funding the programs and services the community relies on.
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Legislative History:	The State of Minnesota requires a city with a population over 2,500 to have an annual independent audit performed. BerganKDV is a highly qualified Certified Public Accounting firm that has a full-time government audit staff of over 30 professionals with offices in Minneapolis and St. Cloud, Minnesota. BerganKDV is actively involved with the Minnesota Government Finance Officers Association, the Certificate of Achievement for Excellence in Financial Reporting program, the Minnesota Association of School Business Officials, the Minnesota Society of CPAs and the Iowa Society of CPAs. They have numerous city clients within the Twin Cities metropolitan area and audit over 60 cities annually. BerganKDV has been the City's audit firm since 2005.
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Strategic Priority:	<u>Financial Sustainability</u>		Staff Capabilities
	Economic Development		Community Engagement & Belonging
	City Assets		N/A

Fiscal Impact:	Financial Impact: Is there a financial consideration?		No	<u>Yes</u> : \$ 45,730
	Financing Sources:	<u>Budgeted</u>	Budget Modification	
	New Revenue	Use of Reserves	Other	

Attachments:	Proposed Audit Fees
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June 11, 2025

City of New Brighton
Att: Gina Foschi
803 Old Highway 8 NW
New Brighton, MN 55112

Dear Ms. Foschi:

This letter is to provide the proposed audit fees for the audit of the financial statements as of and for the year ended December 31, 2025, December 31, 2026, and December 31, 2027, for the City New Brighton. Our proposed fees are as follows:

Pricing for the year ending December 31, 2025

- o \$ 45,730 for the audit of the financial statements for the City of New Brighton.
- o \$ 4,500 - \$ 6,500 for the single audit of each major federal program, if applicable.

Pricing for the year ending December 31, 2026

- o \$ 48,000 for the audit of the financial statements for the City of New Brighton.
- o \$ 4,725 - \$ 6,725 for the single audit of each major federal program, if applicable.

Pricing for the year ending December 31, 2027

- o \$ 50,400 for the audit of the financial statements for the City of New Brighton.
- o \$ 4,950 - \$ 6,950 for the single audit of each major federal program, if applicable.

With the approval of the services and fees as outlined above, we will provide the audit engagement letter that will confirm and summarize the understanding of the terms and objectives of our engagement.

We appreciate the opportunity to be of service to you and look forward to servicing you in the future. If this quote meets the City's needs, please sign, and return this letter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew Grice'.

Andrew Grice, CPA
Government Audit Shareholder
BerganKDV

The City of New Brighton agrees to the following commitment for audit services at the prices quoted above:

Signature _____

Title _____



Agenda Section:	Consent Agenda
Report Date:	06/17/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Municipal Water System Supervisory Control and Data Acquisition (SCADA) Server Upgrade

Action Requested:

Public Hearing:	Motion: X
Discussion:	Informational:

Form of Action:

Resolution:	Ordinance:
Contract/Agreement: X	N/A or Other:

Votes Needed:

3 Votes: X	4 Votes:
5 Votes:	N/A:

Summary Statement:

The purpose of this item is to obtain council approval to enter into a professional services agreement with In Control, Inc for a Municipal Water System Supervisory Control and Data Acquisition (SCADA) Server Upgrade.

Recommendations:

Authorize staff to enter into a professional services agreement with In Control, Inc. for the amount of \$38,362.00 for a municipal water system Supervisory Control and Data Acquisition (SCADA) Server Upgrade.

Applicable Deadlines:	None
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Community Impact:	The SCADA upgrade will provide us with the ability to continue to deliver safe and reliable drinking water to the residents, business owners, and visitors to the City of New Brighton. The upgrade will also provide tighter cybersecurity and a stronger operating system.
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Legislative History:	None
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Strategic Priority:	Financial Sustainability	Staff Capabilities
	Economic Development	Community Engagement & Belonging
	City Assets X	N/A

Fiscal Impact:	Financial Impact: Is there a financial consideration? Yes		No	Yes: \$ 38,362.00
	Financing Sources: Water 206	Budgeted Yes		Budget Modification
	New Revenue	Use of Reserves		Other

Attachments:	Supervisory Control and Data Acquisition (SCADA) Server Upgrade - In Control Proposal
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In Control, Inc.
5301 E River Rd, Suite 108
Fridley, MN 55421

PROPOSAL # QS25060901-01

To: City of New Brighton

Date: 6/9/2025

From: Bob Dietrich

Valid: 30 days

Page: 1 of 4

Attn: Eric Volk

Re: SCADA Server Upgrade

In Control, Inc. is pleased to provide our proposal for software upgrades and services as part of the project above. The purpose of this project is to update the water system SCADA software to the latest versions and allow them to operate on the latest version of Windows.

This will be achieved by facilitating a TechConnect support contract with Rockwell which will give access to updates for FactoryTalkView. In Control will also make back-end SCADA programming updates to our latest standards.



Proposed Software and Services

Item 1 - Professional Engineering Services as the System Integrator

- A. One project manager will be assigned as a primary point of contact through project completion
- B. SCADA Programming modifications are included and will be tested prior to start up. This includes upgrading the back-end programming to our latest standards to improve performance and serviceability.

Item 2 - Tech-Connect Contract

In Control will provide a Tech-Connect contract between Rockwell and the City so the following licenses can be upgraded to the latest version of software:

- A. (1) 9518-SEOLEDB FT Hist 3rd Party OLEDB connect ESD S/W
- B. (1) 9521-VPDMDBCENE FT VantagePoint EMI db Connector ESD S/W
- C. (1) 9518-HSE5K FT Historian SE 5k Tags ESD Software
- D. (1) 9521-VPCL03ENE FT VantagePoint Clt 3 CCU ESD S/W
- E. (1) 9521-VPSEVERENE FT VantagePoint Server ESD S/W
- F. (5) 9701-VWSCWAENE FT View Client Site Edition ESD S/W
- G. (2) 9701-VWSS000LENE FT View SE Server Unlimited W/RSlinx ESD S/W
- H. (1) 9701-VWSTENE FT View Studio SE FT View Ent EN ESD S/W
- I. (1) Studio 5000 Bundle with the following:
 - 1. 9234-RLD250ENE Studio 5000 Lite Edition ESD Software
 - 2. 9324-RLD200ENE Studio 5000 Mini Edition ESD Software
 - 3. 932-RLDMLPE Studio 5000 Multi-Language Pack ESD Software

Proposal Summary

The price for all items above is \$ 38,362.00 USD net total excluding sales and use taxes (the “Net Total Pricing”).

TERMS: 30% upon order, 70% upon equipment shipment and substantial completion.

Thank you in advance for the consideration of our offer and for the opportunity to work together. Should you have any questions regarding this proposal, please contact me directly at your convenience. I look forward to hearing from you soon to secure and coordinate this project. This proposal is valid for thirty (30) days.

Best Regards,

Bob Dietrich

Technical Sales Engineer

Mobile: 715.607.0099

Office: 763.783.9500 x2004

E-Mail: bob.dietrich@incontrol.net

ACCEPTANCE: To accept this proposal please return a signed copy with purchase order. Thank you!

Signature: _____

Purchase Order: _____

Print Name: _____

Date: _____

Title: _____

Proposal Number: QS25060901-01

Standard Terms and Conditions of Sale

- 1. ENTIRE AGREEMENT** – These Standard Terms and Conditions of Sale (“Terms”) govern the goods and attendant services (“Work”) that In Control, Inc. (“In Control”) will provide to Purchaser pursuant to In Control’s Proposal attached hereto (“Proposal”). The Proposal, along with these Terms, constitute the sole and entire agreement between the parties with respect to the Work (the “Order”). This Order supersedes all prior understandings, discussions, representations, and warranties, both written and oral, regarding the Work. If Purchaser’s internal systems require it to issue a separate purchase order to accept this Order, then any additional or conflicting terms in Purchaser’s purchaser order are expressly rejected and will not in any way amend, alter, change, or negate these Terms. No change or modification to this Order is effective unless in writing and signed by each party.
- 2. TERMINATION** – Either party may terminate this Order for cause if the other party (i) materially breaches this Order; (ii) becomes insolvent or admits its inability to pay its bills as they become due; or (iii) files for or is forced into a bankruptcy, receivership, or liquidation. The party seeking to terminate this Order for cause will give the other party fourteen (14) days’ written notice and the other party will have 14 days to cure the stated default(s). If Purchaser desires to terminate this Order for its own convenience before final completion of the Work, Purchaser may do so, provided that Purchaser pays In Control (i) for all Work provided at In Control’s published rates before the termination date, (ii) all reimbursable expenses incurred before the termination date, (iii) for all equipment ordered before the termination date, and (iv) an early termination fee equal to ten percent (10%) of the remaining Work to be performed as of the termination date.
- 3. ATTORNEYS’ FEES** - If either party files a lawsuit to enforce this Order, the prevailing party in such lawsuit will be entitled to recover from the other party its reasonable attorneys’ fees, costs, and expenses incurred in connection with such lawsuit, as well as any appeal or enforcement of any judgment arising from the lawsuit.
- 4. INDEMNIFICATION / INSURANCE** - Purchaser will defend, indemnify, and hold harmless In Control from and against all claims, actions, proceedings, costs, expenses, losses and liability, including all reasonable attorneys’ fees, costs and expenses, arising out of or relating to goods or services not provided by In Control pursuant to this Order. These obligations include, but are not limited to, all product liability, personal injury, death, or property damage claims. These obligations will survive the termination or completion of the Work. Each party is responsible for obtaining and maintaining appropriate insurance coverages and endorsements necessary to ensure the provisions of this paragraph and other insurable obligations under this Agreement while the Work is being performed and for a reasonable time thereafter.
- 5. WAIVER OF CONSEQUENTIAL DAMAGES / LIMITATION OF LIABILITY** - In no event will In Control be liable in contract, tort, strict liability, warranty or otherwise, for any special, incidental or consequential damages, such as delay, disruption, loss of product, loss of anticipated profits or revenue, loss of use of the equipment or system, non-operation or increased expense of operation of other equipment or systems, cost of capital, or cost of purchase or replacement equipment systems or power incurred by Purchaser as a result of In Control’s Work. Unless otherwise agreed to in writing between the Purchaser and In Control, In Control will not accept liquidated damages. Furthermore, in no event will In Control’s total liability arising out of this Order exceed two (2) times the amount of the Net Total Pricing.
- 6. FORCE MAJEURE** – The parties agree that In Control will not be responsible or liable for any failure or delay in the performance of the Work arising out of or caused by, directly or indirectly, forces beyond its control, including, without limitation, strikes, work stoppages, supply chain disruptions, accidents, acts of war or terrorism, civil or military disturbances, health crises, nuclear or natural catastrophes, acts of nature, and interruptions of utilities, communications or computer services, or other incidents shown to be outside of In Control’s control (each a “Force Majeure Event”). In Control agrees, however, to use all commercially reasonable efforts to mitigate a Force Majeure Event and resume performance of the Work as soon as practicable under the circumstances.
- 7. WARRANTY** – Unless other or more specific warranties are expressly set forth in the Proposal, In Control warrants that the Work will be of good quality, free from defects in material and workmanship, will conform to the specifications and drawings, and be suitable for their intended purpose. This standard warranty will be in force for eighteen (18) months after shipment or twelve (12) months from startup, whichever is shorter. Any remaining allotments for Purchaser or end owner/engineer-initiated changes and call-back expire with the warranty period and are not refundable. In Control reserves the right to terminate any warranty should Purchaser’s account be in arrears for more than thirty-one (31) days. Purchaser agrees that In Control’s warranties do not apply to any damages, delays, or interruptions caused by: (i) reasonable wear and tear; (ii) pre-existing conditions at site; (iii) accidental damage caused by Purchaser; (vi) intentional damage, misuse, or abuse caused by Purchaser or a third-party; or (v) any Force Majeure Event.
- 8. ESCALATION** – This Order is conditioned upon the ability of In Control to complete the Work at present prices for material and at the existing scale of wages for labor. If In Control is, at any time while the Work is being performed, unable to complete the Work at the present prices and wages, then the Net Total Pricing will be equitably adjusted by change order to compensate In Control for significant price increases. A significant price increase is defined as a change of ten percent (10%) or more for a Work item between the date of the Proposal and the date the applicable Work is performed.
- 9. PAYMENT TERMS** - The payment terms are net thirty (30) days upon invoice receipt. Any balance remaining over thirty-one (31) days beyond the invoice date will be subject to a 2.0% monthly service fee until paid. Should a payment default occur In Control reserves the right to stop all Work, including but not limited to startup of equipment, and terminate any existing warranty. All reasonable attempts will be made between both parties to resolve the disputed portions of any invoice within the payment terms. The entire Net Total Price will be invoiced in full upon shipment, unless specific terms are described in the Proposal. No retainage is allowed.
- 10. NONWAIVER** - The failure by In Control to enforce at any time, or for any period of time, any of the provisions hereof will not be a waiver of such provisions nor the right of In Control thereafter to enforce each and every such provision.
- 11. REMEDIES** - Remedies herein reserved to In Control will be cumulative and in addition to any other or further remedies provided in law or equity.
- 12. RELATIONSHIP OF PARTIES** – The relationship between the Parties is that of independent contractors. Nothing contained in this Order shall be construed as creating any agency, partnership, joint venture or other form of joint enterprise, employment or fiduciary relationship between the Parties, and neither Party shall have authority to contract for or bind the other Party in any manner whatsoever.

Agenda Section:	Consent Agenda
Report Date:	06/20/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Consider Approval of Temporary Liquor License for Stockyard Days 2025

Action Requested:

Public Hearing:	Motion: X
Discussion:	Informational:

Form of Action:

Resolution:	Ordinance:
Contract/Agreement:	N/A or Other: X

Votes Needed:

3 Votes: X	4 Votes:
5 Votes:	N/A:

Summary Statement:

- New Brighton Stockyard Days is applying for a temporary On-Sale Liquor License for their event being held August 8 - 11, 2025 at Long Lake Regional Park. The license will be valid for that Friday and Saturday (9th and 10th)
- The \$100 temporary liquor license fee and all paperwork have been submitted
- The New Brighton Stockyard Days application noted they will have liquor liability insurance (West Bend Insurance \$2M/\$4M).

Recommendations:	Approve the temporary liquor license for New Brighton's Stockyard Days event
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Applicable Deadlines:	The state requires a minimum of 30 days to process liquor licenses.
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Community Impact:	Stockyard Days has been a recurring community event for over 40 years; it brings the community together for an event many attend every year as well as brings in visitors from surrounding cities.
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Legislative History:	City Code Chapter 4 regulates temporary on-sale liquor licenses
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Strategic Priority:	Financial Sustainability	Staff Capabilities
	Economic Development	Community Engagement & Belonging
	City Assets	N/A

Fiscal Impact:	Financial Impact: Is there a financial consideration?		No	Yes: \$
	Financing Sources:	Budgeted	Budget Modification	
	New Revenue	Use of Reserves	Other	

Attachments:	None
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Agenda Section:	Public Hearings
Report Date:	06/10/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Consider a Resolution approving a Preliminary and Final Plat for Myslajek Estates.

Action Requested:

Public Hearing:	Motion:
Discussion:	Informational:

Form of Action:

Resolution:	Ordinance:
Contract/Agreement:	N/A or Other:

Votes Needed:

3 Votes:	4 Votes:
5 Votes:	N/A:

Summary Statement:

Patrick & Kelleen Mae Myslajek are seeking to subdivide their property at 1820 Long Lake Road into two (2) parcels. Both of the proposed parcels will conform to R-1 zoning requirements.

Recommendations:

The Planning Commission and staff are both recommending approval with conditions.

Applicable Deadlines:

The final deadline to make a decision on these applications is 10/4/25.

Community Impact:	Provided all conditions are followed, staff has not identified any negative community impacts that would result from this proposed subdivision.
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Legislative History:	-- Original application submitted on 5/19/25 -- Original application deemed incomplete on 6/5/25 -- Application deemed complete on 6/6/25 -- Planning Commission review completed on 6/17/25 -- Council Public Hearing scheduled for 6/24/25
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Strategic Priority:	Financial Sustainability	Staff Capabilities
	Economic Development	Community Engagement & Belonging
	City Assets	N/A

Fiscal Impact:	Financial Impact: Is there a financial consideration?		No	Yes: development increases the City's tax base
	Financing Sources:	Budgeted	Budget Modification	
	New Revenue	Use of Reserves	Other	

Attachments:	Staff Report, Resolution, Site Map (mailing), Site Map (zoning), Preliminary Plat, Final Plat
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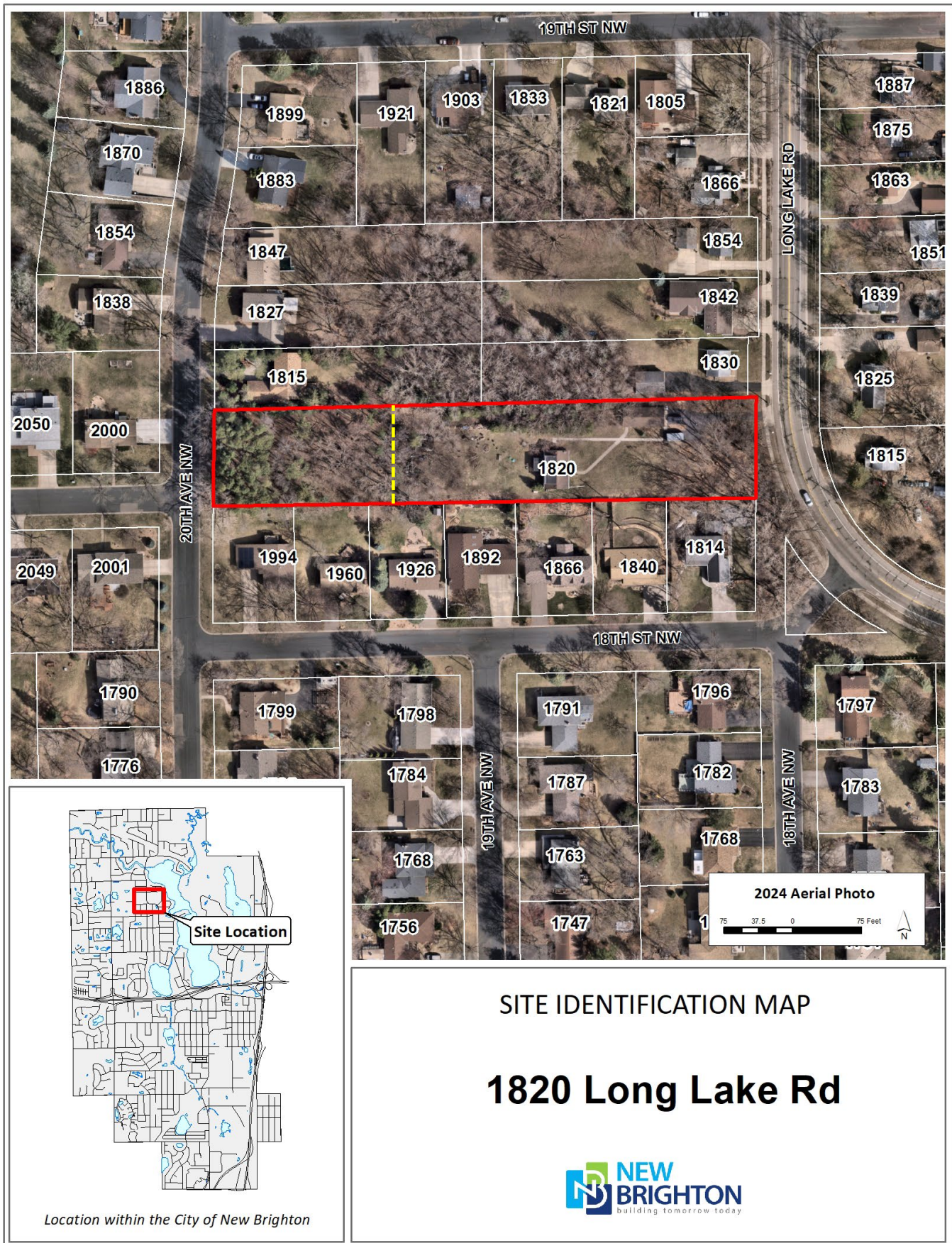
To: **City Council**
From: Ben Gozola, Assistant Director DCAD
Meeting Date: **6-24-25**
Applicants: **Patrick & Kelleen Mae Myslajek**
Main Contact: <same>
Location: 1820 Long Lake Road
Zoning: **R-1**

Introductory Information

- | | |
|------------------------|--|
| <i>Project:</i> | <ul style="list-style-type: none"> ▪ Patrick & Kelleen Mae Myslajek are seeking to subdivide their property at 1820 Long Lake Road into two (2) parcels. Both parcels will be conforming to R-1 zoning requirements. |
| <i>History:</i> | <ul style="list-style-type: none"> ▪ Existing home constructed in 1957 ▪ Myslajek acquires the property in 2004 ▪ Application to subdivide received on 5/19/25 ▪ Application deemed incomplete on 6/5/25 due to lack of a title commitment and the need for plat updates. ▪ Plat Opinion received on 6/6/25, and updated plats received on 6/18/25. |

General Findings

- | | |
|-----------------------------------|---|
| <i>Site Data:</i> | <ul style="list-style-type: none"> ▪ Land Area = 72,346 sq ft ▪ Existing Use – one single family home & two outbuildings ▪ Existing Zoning – R-1 ▪ Property Identification Number (PID): 18-30-23-44-0063 |
| <i>Comp Plan Guidance:</i> | <ul style="list-style-type: none"> ▪ The new 2040 Comprehensive Plan guides this property for “Low Density Residential.” |



Notable Code Definitions:	▪ Boundary Lines. Any line indicating the bounds or limits of any tract or parcel of land. Also, a line separating the various use districts as shown on the City’s zoning map. ▪ Building. Any structure for the shelter, support or enclosure of persons, animals, chattel, or property of any kind affixed to the land. ▪ Preliminary Plat. The proposed plat map, drawing, or chart indicating the proposed layout of the subdivision or consolidation to be submitted to the Planning Commission and City Council for their consideration as to compliance with the Comprehensive Plan and these regulations, along with required supporting data. ▪ Setback. The minimum horizontal distance from a building, structure, fence, or parking lot to a lot line. ▪ Subdivision. A parcel of land divided into smaller parts such as blocks or lots, or a tract of land which is re-divided after the first division.
Primary Applicable Codes:	▪ Chapter 26, Article 1, <u>General Conditions</u> Outlines minimum standards to follow when creating new lots. ▪ Chapter 26, Article 2, <u>Preliminary Plat</u> Outlines the required process to follow to gain approval of a proposed subdivision concept. ▪ Chapter 26, Article 3, <u>Final Plat</u> Outlines the required process to finalize an approved preliminary plat for filing at the County. ▪ Zoning Chapter 4, Article 1, <u>R-1 District.</u> Outlines minimum standards for R-1 zoned lots within the City.
Specific Applications:	Two application types are reviewed herein which are both necessary to complete the requested subdivision: ▪ Preliminary Plat & Final Plat (being reviewed concurrently).
Applicant’s Narrative:	“To split the current lot into 2 parts. 1 part 1 acre the other part ½ acre”

PRELIMINARY Plat Review

IN GENERAL:

Land Area:

- The gross area proposed to be developed is 72,346 sq ft.
 - All land will be used to create two lots; Lot 1 (east) will contain the existing home, detached garage, and shed; and Lot 2 (west) will be vacant.
 - Minimum R-1 lot standards are as follows:

Lot	Area (sq ft)	Width at street (ft)	Width at setback (ft)
REQUIRED	<i>10,000</i>	<i>45'</i>	<i>75'</i>
1 (western lot)	21,780	110'	110'
2 (eastern lot w/home)	43,535	110'	110'

The proposed areas and widths for both lots meet minimum requirements for R-1 zoned lots.

- The original plats submitted to staff and reviewed by the Planning Commission showed a 33' ROW dedication along Long Lake Road which was inconsistent with County planning documents. The plats now before Council have been updated to show the required 43' of ROW dedication along Long Lake Road.

Access:

- Lot 1 will have direct access to 20th Avenue NW to the west, and Lot 2 will have direct access to Long Lake Road to the east.

Building Locations:

- The existing home, detached garage, and shed will reside on Lot 2, and all will continue to be conforming to required setbacks.

Building Heights:

- Future construction on either lot will need to conform with height maximums for the R-1 zoning district (2.5 stories or 30' in height, whichever is less)

Floor Area Ratio:

- There is no FAR standard in the R-1 zoning district.

Building Coverage:

- Each lot will be subject to a maximum building coverage of 30%. Neither should have any issues conforming to this standard.

Impervious Surfaces:

- Each lot will be subject to a maximum impervious coverage of 50%. Neither should have any issues conforming to this standard.

<i>Building Materials:</i>	▪ New construction will need to adhere to any building materials requirements in place at the time of permit review.
<i>Future parcel development:</i>	▪ The proposed plat would fully divide the land. No further development could occur under present zoning and guidance given the lack of additional road frontage.
<i>Adjacent parcel dev:</i>	▪ The proposed subdivision will not have any impact on development of adjacent lands.
<i>Easements:</i>	▪ Drainage and utility easements, as required by the City Engineer, are being provided on the final plat.
<i>Resident Concerns & Feedback:</i>	▪ Staff has only received one call regarding this subdivision. The neighbor (Les Proper, 1994 18TH ST N) just wanted to confirm the City would require a grading plan be submitted and reviewed for any future development of Lot 1. Staff explained that surveys are mandatory for all new builds, and a review of grading and drainage will occur prior to any building permit being issued.

INFRASTRUCTURE:

<i>In General:</i>	▪ All public improvements constructed to support the development must be designed and constructed in accordance with the City's Private Development Standards. City Engineer review of all proposed infrastructure is covered herein.
<i>Streets and Transportation:</i>	▪ Per Ramsey County, the preliminary and final plat need to include a 43' dedication of ROW along Long Lake Road to be consistent with County planning documents. Both plats have been updated to address this concern. ▪ A curb cut permit will be required for future development of Lot 1. This can be reviewed concurrently with the future building permit application for this lot.
<i>Water System(s):</i>	▪ Municipal water is available to the proposed lot off of 20 th Avenue NW. How hook ups to the system can occur will be evaluated at the time a building permit is sought for the new Lot 1.
<i>Sanitary System(s):</i>	▪ Sanitary sewer service is available to the proposed lot off of 20th Avenue NW. How hook ups to the system can occur will be evaluated at the time a building permit is sought for the new Lot 1.

<i>Storm water / Grading / Erosion:</i>	▪ A site survey and grading plan shall be submitted along with the building permit application for the future development of Lot 1. The survey shall depict the location of all improvements, along with existing and proposed lot elevations, contours, and drainage patterns.
<i>Development Phasing:</i>	▪ The development will be completed in a single phase.
<i>Utilities:</i>	▪ All utilities (i.e. telephone, electric, gas service lines, etc) are to be placed underground in accordance with the provisions of all applicable City ordinances.
<i>Lighting:</i>	▪ Lighting on either lot shall be directed downward, and installed so as to prevent direct light from being detectable at the lot line of the site on which the source is located. Lighting for each home site will be reviewed with individual building permit applications. ▪ Lighting shall not shine directly into the public right-of-way or onto any adjacent residential lot.
<i>Parking:</i>	▪ As required by code, both lots will need to accommodate a minimum of two (2.0) parking spaces outside of the right-of-way. No issues are anticipated given the size of both lots.
<i>Required Signage:</i>	▪ No new signage is needed as a result of this subdivision. ▪ Any future signage on any of the proposed lots will need to adhere to standards for lots in the R-1 zoning district.
<i>Fire Hydrants / Fire Safety:</i>	▪ No new fire hydrants are needed to serve these lots.
<i>Streetlights:</i>	▪ No streetlights will be required as part of this subdivision.
<i>Sidewalks:</i>	▪ There is existing sidewalk along Long Lake Road that will not be impacted or affected by this proposed subdivision. The driveway for Lot 2 currently crosses this sidewalk to access Long Lake Road. ▪ There is no sidewalk along 20th Avenue NW. ▪ No new sidewalks will be needed as part of this subdivision.

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| Landscaping /
Fencing: | ▪ There is chain-link fencing to the south of this property on the neighboring lots. Per the applicant, all such fencing belongs to the neighboring property owners. No issues for this subdivision. |
| Monuments: | ▪ Reference monuments shall be placed in the subdivision as required by state law. |

ENVIRONMENTAL & OTHER NEIGHBORHOOD IMPACTS:

- | | |
|-----------------------------------|--|
| Environmental
Impacts: | ▪ By state statute, an Environmental Assessment Worksheet (EAW) is required for subdivisions resulting in 250 or more new unattached single-family dwelling units. With only one (1) new lot proposed by Myslajek Estates, an EAW is not required. |
| Wetlands: | ▪ There are no suspected wetlands on this site. |
| Tree Removal: | <ul style="list-style-type: none"> ▪ Per Subdivision Section 26-11(5) Natural Features. <i>“In the subdividing of any land, regard shall be shown for all natural features such as tree growth, water courses, historic spots, or similar conditions which if preserved will add attractiveness and stability to the proposed development.”</i> ▪ While proposed Lot 1 is fully tree covered and there will be impacts to trees once developed, there is no way to avoid this outcome. Any subdivision of this property will involve impacts to that stand of trees. ▪ Future development of Lot 1 is encouraged to set the home towards either the eastern or western end of the lot to preserve trees on the opposite side in as much as possible. While encouraged, home placement to preserve trees is not mandated by code, and the final development plan will be up to the future owner of Lot 1. |
| Shoreland
District: | ▪ Both Lots 1 and 2 fall outside of the shoreland district around Long Lake. |
| Traffic: | ▪ Traffic studies are typically required when overall development triggers the need for a formal environmental review (EAW, EIS, or AUAR), or when a large number of units are proposed in a multi-family building and there is ample reason to believe the resulting traffic could have negative impacts on nearby residential lands. The addition of a single new lot on 20 th Avenue NW does not trigger the need for a formal traffic study. |

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| Public Safety: | <ul style="list-style-type: none"> ▪ The addition of one new home in this area of the community will have no impact on the City's ability to provide emergency services throughout the community, to this neighborhood, or to these lots in particular. ▪ Final buildings shall comply with all applicable zoning, building, and fire codes. ▪ All construction times and activities shall comply with New Brighton City Code especially relating to parking and hours of work. |
| Flood Plain & Steep Slopes: | <ul style="list-style-type: none"> ▪ There are no flood plains or steep slopes on this site. |
| Docks: | <ul style="list-style-type: none"> ▪ The project does not include any frontage on open water nor easement rights to such. |
| Other Permits: | <ul style="list-style-type: none"> ▪ All necessary permits must be provided to the City. (RCWD, NPDES, MDH, etc. as may be applicable). ▪ Per the RCWD: Rule C, 2(a) comes into play: a permit is required for subdivision of an area exceeding one acre. This includes subdivision for single-family residential, multi-unit residential, commercial, industrial, or institutional development. ▪ Prior to initiating future construction activities, the needed permit shall be secured by the landowner. |

CHARGES, FEES, & RESPONSIBILITIES:

- | | |
|------------------------------|---|
| Park Dedication: | <ul style="list-style-type: none"> ▪ The City's recently approved 2040 Parks and Trail System Plan establishes the goals and objectives of the City's park system for the next twenty years. Per this plan, no new parks are needed in this area of the City. ▪ With no park land needed, cash in lieu of land will satisfy the required park dedication for this subdivision. Per the 2023 fee schedule, a fee of \$1,825 per new dwelling unit will be required by this subdivision. As the new R-1 lot will allow for up to one new dwelling unit, the resulting fee will be \$1825. ▪ Park dedication shall be paid in full prior to the final plat being signed by the City. |
| Sewer and Water Fees: | <ul style="list-style-type: none"> ▪ Local and regional sewer access/availability charges (SAC) and water access charges (WAC) will apply to the new lot. ▪ The City Sewer Maintenance fee of \$103 new SAC will also apply. ▪ These fees become applicable at the time of building permit application. |

FINAL Plat Review

- | | |
|-----------------------------|---|
| <i>In General:</i> | <ul style="list-style-type: none"> ▪ The final plat review typically focuses on adherence to conditions of preliminary plat approval and legal review of the plat to ensure it's ready for filing. As we are reviewing the Preliminary and Final concurrently with this application, we can only complete legal review of the plat at this time, and signature of the plat will be conditioned on all legal matters being resolved on the final mylars to the satisfaction of the City Attorney. ▪ We have recommended the applicant have the final plat reviewed by Ramsey County for needed changes on their end. Approval at this time would be conditioned on all legal requirements being implemented on the final plat prior to mylars being created. |
| <i>Legal Review:</i> | <ul style="list-style-type: none"> ▪ The title commitment for this property was submitted until 6/6/25, so it is still being reviewed by legal counsel as of the penning of this report. ▪ Should any issues be identified, the plat documents will need to be updated to the satisfaction of the City Attorney prior to the City signing final mylars. |

Supplementary Information & Public Comment

- | | |
|---|---|
| <i>Additional Information:</i> | <ul style="list-style-type: none"> ▪ None |
| <i>Planning Commission Review:</i> | <ul style="list-style-type: none"> ▪ The Planning Commission reviewed the subdivision during their meeting on 6/17/25, and recommended approval of the plats subject to the conditions in the resolution currently under consideration by Council. |

Conclusion:

Patrick Myslajek is seeking authorization to subdivide his property at 1820 Long Lake Road into two parcels. The existing home will remain on proposed Lot 2, and proposed Lot 1 will become a vacant lot eligible for construction of a single family home.

Council Options: The City Council has the following options:

- A) APPROVE ALL REQUESTS based on the applicant's submittals and findings of fact.

(cont.)	B) DENY ONE OR MORE REQUESTS based on the applicant’s submittals and findings of fact. C) TABLE THE ITEMS and request additional information. This application was technically deemed incomplete on 6/5/25 based on the lack of a title commitment as part of the application. The missing title commitment was received on 6/6/25 which started the City’s 120-day review time clock. The resulting deadline for a decision is therefore 10/4/2025.
Initial Motion for Debate:	▪ “Consider a Resolution approving a preliminary and final plat for Myslajek Estates.”
Resolution Findings of Fact:	1. The subject property is guided for Low Density use by the 2040 Comprehensive Plan, and R-1 zoning standards are consistent with this land use classification; 2. The existing structures on Lot 2 will continue to be conforming to setback requirements, and the buildable area on proposed Lot 1 will provide ample space for a new single-family home. 3. Both lots will be conforming to minimum area and width standards for R-1 zoned property. 4. All required drainage and utility easements will be established as a result of this plat; 5. Both of the proposed lots will have adequate access to the local roadway system; 6. Each of the proposed lots can be adequately served by existing municipal services; 7. No public safety concerns were identified; 8. Identified impacts and issues can be addressed via conditions.
Resolution Conditions:	1. Prior to the production of final mylars: a. The applicant shall have the final plat reviewed by Ramsey County for needed changes. Any updates required by the County can be administratively approved by City staff for inclusion on the plat. b. The applicant shall make updates to the final plat as required by the City Attorney to address legal concerns.

2. Prior to the City signing the final mylars,
 - a. Legal updates as required by Ramsey County or the City Attorney shall be implemented.
 - b. The required park dedication fee of \$1825 shall be paid in full.
3. A curb cut permit will be required for future development of Lot 1.
4. Lot 1 development:
 - a. A site survey and grading plan shall be submitted along with the building permit application for the future development of Lot 1. The survey shall depict the location of all improvements, along with existing and proposed lot elevations, contours, and drainage patterns.
 - b. Tracking of dirt into 20th Avenue NW during construction activities shall be monitored and addressed in a timely manner, or the developer and/or builder must agree to paying for street sweeping services when directed to do so by the City.
 - c. How hook ups to the municipal utility system will occur shall be evaluated and determined at the time a building permit is sought for Lot 1.
 - d. Local and regional sewer access/availability charges (SAC) and water access charges (WAC) will apply to the new lot at the time of building permit.
5. All utilities (i.e. telephone, electric, gas service lines, etc) are to be placed underground in accordance with the provisions of all applicable City ordinances.
6. Lighting on both lots shall not shine directly into the public right-of-way or onto any adjacent residential lot.
7. Reference monuments shall be placed in the subdivision as required by state law.
8. An RCWD Rule C permit (or other applicable permit type as may be determined by the RCWD) shall be obtained by the applicant prior to any site work occurring on either property.

cc: Patrick Myslajek, applicant

**RESOLUTION
STATE OF MINNESOTA
CITY COUNCIL
CITY OF NEW BRIGHTON**

**RESOLUTION MAKING FINDINGS OF FACT AND APPROVING A PRELIMINARY AND FINAL
PLAT NAMED MYSLAJEK ESTATES FOR THE SUBDIVISION OF LAND AT
1820 LONG LAKE ROAD**

WHEREAS, the City of New Brighton is a municipal corporation, organized and existing under the laws of the State of Minnesota; and,

WHEREAS, the City Council of the City of the New Brighton has adopted a comprehensive plan and corresponding zoning and subdivision regulations to promote orderly development and utilization of land within the city; and,

WHEREAS, Patrick Myslajek (the “Applicant”), is owner of property at 1820 Long Lake Road which has the property identification number of 18-30-23-44-0063 and is legally described as:

That part of the Southwest Quarter of the Southeast Quarter of Section 18, Township 30, Range 23, Ramsey County, Minnesota, described as follows: Commencing at the southeast corner of the North 6 acres of the above described tract, said point being 396.89 feet South from the northeast corner of said tract; thence West parallel with the North line thereof and along the South line of the North 6 acres to the West line thereof; thence South along the West line thereof a distance of 110 feet; thence East parallel with the North line thereof to the East line thereof; thence North along the East line for a distance of 110 feet to the point of beginning.

Description per Warranty Deed Doc. No. 4090498.

and

WHEREAS, the Applicant is seeking to plat the property into two lots in a manner that meets all underlying R-1 zoning requirements; and

WHEREAS, the Applicant made application to the City for concurrent preliminary and final plat reviews on review on 5/19/25, and

WHEREAS, the application was deemed incomplete on 6/5/25 based on the lack of a title commitment being submitted as part of the application; and

WHEREAS, the missing title commitment was received on 6/6/25 which started the City's 120-day review time clock under state statutes; and

WHEREAS, staff fully reviewed the request and prepared a report for consideration by the Planning Commission at their meeting on June 17, 2025; and

WHEREAS, the Planning Commission recommended approval of the request on June 17, 2025, based on the applicant's submittals and findings of fact; and

WHEREAS, the City Council held a public hearing and considered on June 24, 2025, the recommendations of the Planning Commission, Staff, the Applicant's submissions, the contents of the staff report, and other evidence available to the Council.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of New Brighton hereby approves the preliminary and final plats for Myslajek Estates based on the following findings of fact:

1. *The subject property is guided for Low Density use by the 2040 Comprehensive Plan, and R-1 zoning standards are consistent with this land use classification;*
2. *The existing structures on Lot 2 will continue to be conforming to setback requirements, and the buildable area on proposed Lot 1 will provide ample space for a new single-family home.*
3. *Both lots will be conforming to minimum area and width standards for R-1 zoned property.*
4. *All required drainage and utility easements will be established as a result of this plat;*
5. *Both of the proposed lots will have adequate access to the local roadway system;*
6. *Each of the proposed lots can be adequately served by existing municipal services;*
7. *No public safety concerns were identified;*
8. *Identified impacts and issues can be addressed via conditions.*

BE IT FURTHER RESOLVED that approval of the preliminary and final plats for Myslajek Estates shall be subject to the following conditions:

1. *Prior to the production of final mylars:*
 - a. *The applicant shall have the final plat reviewed by Ramsey County for needed changes. Any updates required by the County can be administratively approved by City staff for inclusion on the plat.*
 - b. *The applicant shall make updates to the final plat as required by the City Attorney to address legal concerns.*

2. *Prior to the City signing the final mylars,*
- a. *Legal updates as required by Ramsey County or the City Attorney shall be implemented.*
 - b. *The required park dedication fee of \$1825 shall be paid in full.*
3. *A curb cut permit will be required for future development of Lot 1.*
4. *Lot 1 development:*
 - a. *A site survey and grading plan shall be submitted along with the building permit application for the future development of Lot 1. The survey shall depict the location of all improvements, along with existing and proposed lot elevations, contours, and drainage patterns.*
 - b. *Tracking of dirt into 20th Avenue NW during construction activities shall be monitored and addressed in a timely manner, or the developer and/or builder must agree to paying for street sweeping services when directed to do so by the City.*
 - c. *How hook ups to the municipal utility system will occur shall be evaluated and determined at the time a building permit is sought for Lot 1.*
 - d. *Local and regional sewer access/availability charges (SAC) and water access charges (WAC) will apply to the new lot at the time of building permit.*
5. *All utilities (i.e. telephone, electric, gas service lines, etc) are to be placed underground in accordance with the provisions of all applicable City ordinances.*
6. *Lighting on both lots shall not shine directly into the public right-of-way or onto any adjacent residential lot.*
7. *Reference monuments shall be placed in the subdivision as required by state law.*
8. *An RCWD Rule C permit (or other applicable permit type as may be determined by the RCWD) shall be obtained by the applicant prior to any site work occurring on either property.*

ADOPTED this 24th day of June 2025 by the New Brighton City Council with a vote of ___ ayes and ___ nays.

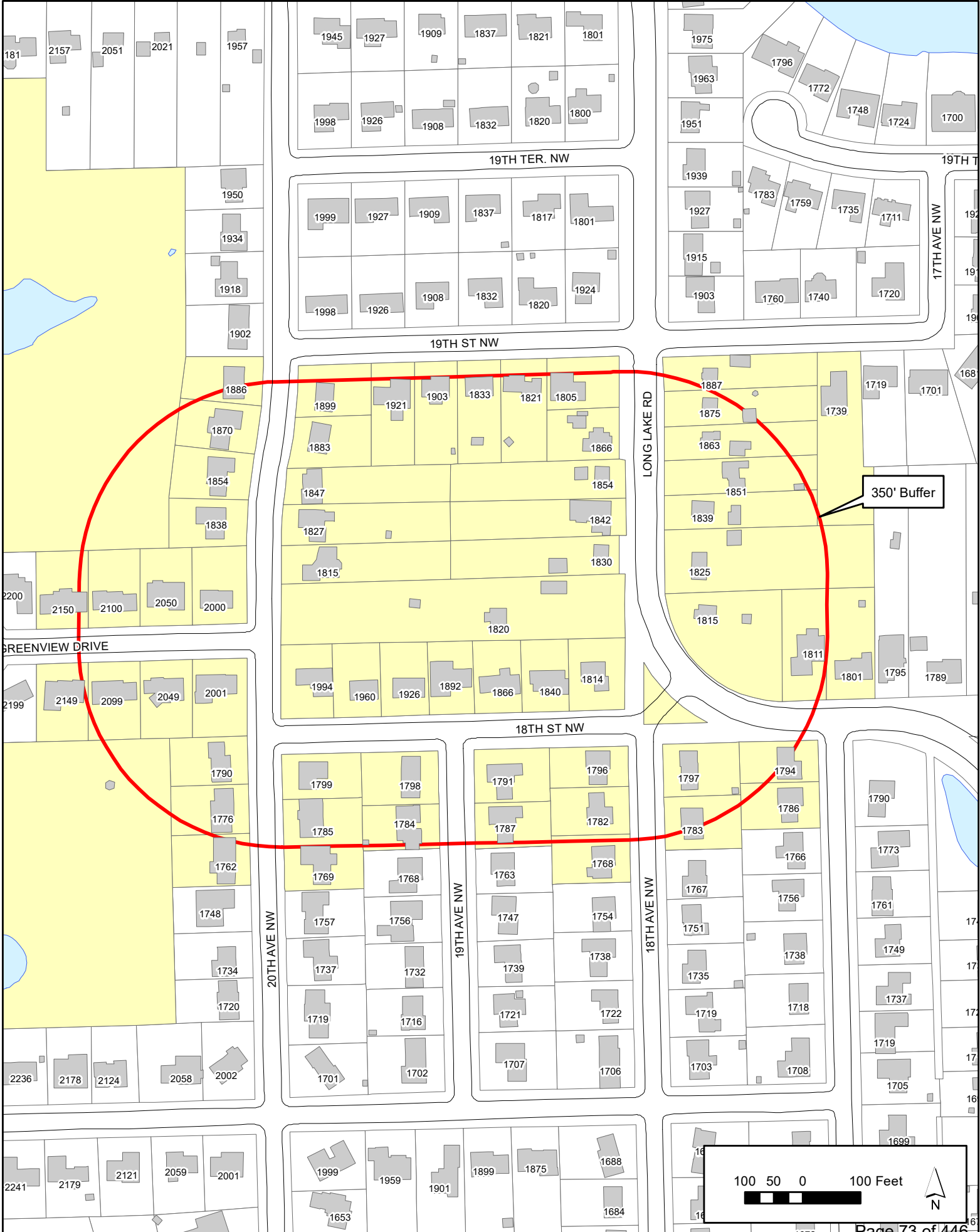
Kari Niedfeldt-Thomas, Mayor

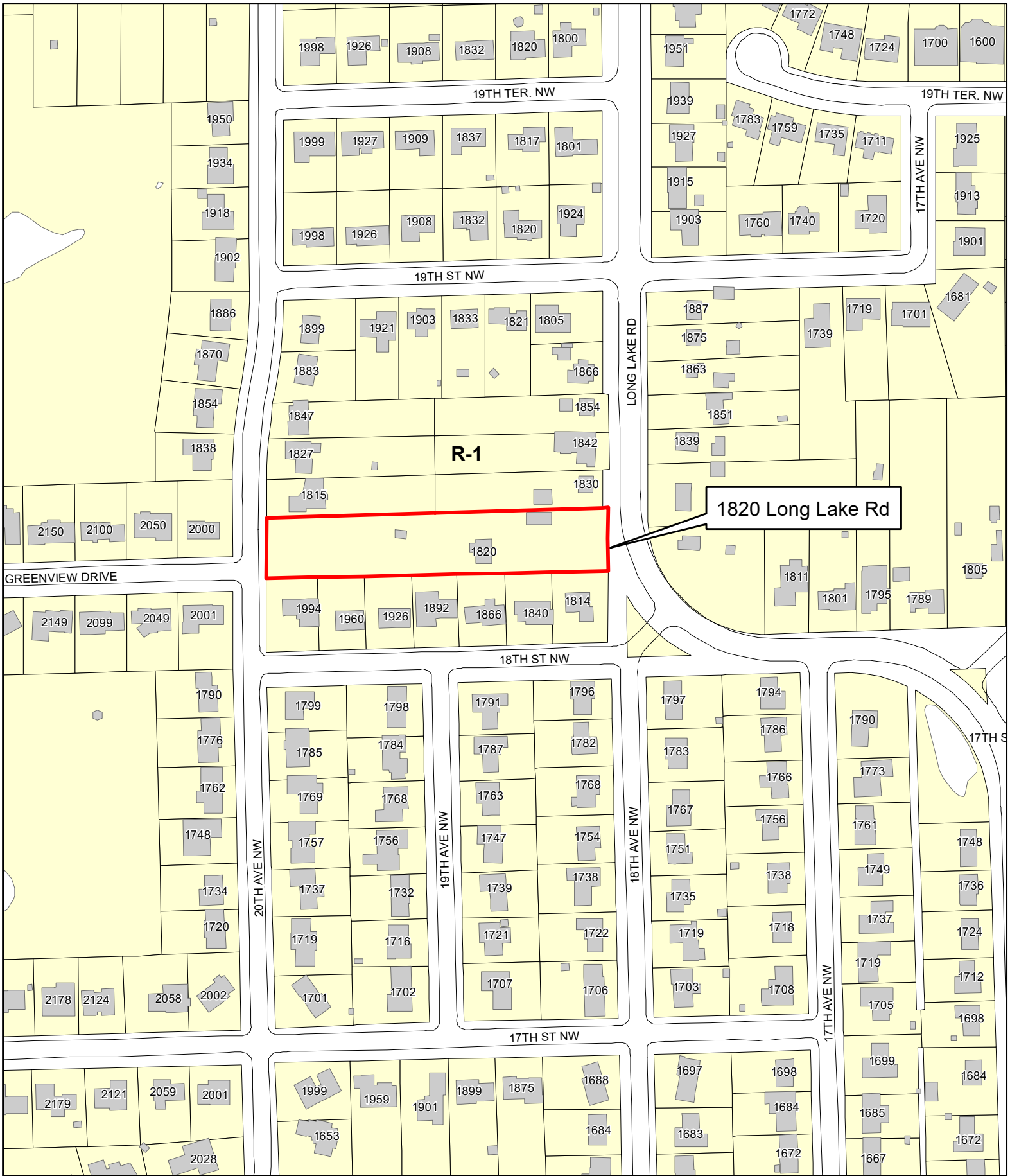
Devin Massopust, City Manager

ATTEST:

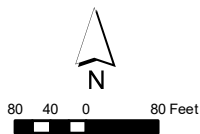
Terri Spangrud, City Clerk

1820 Long Lake Rd - 350' Mailing List

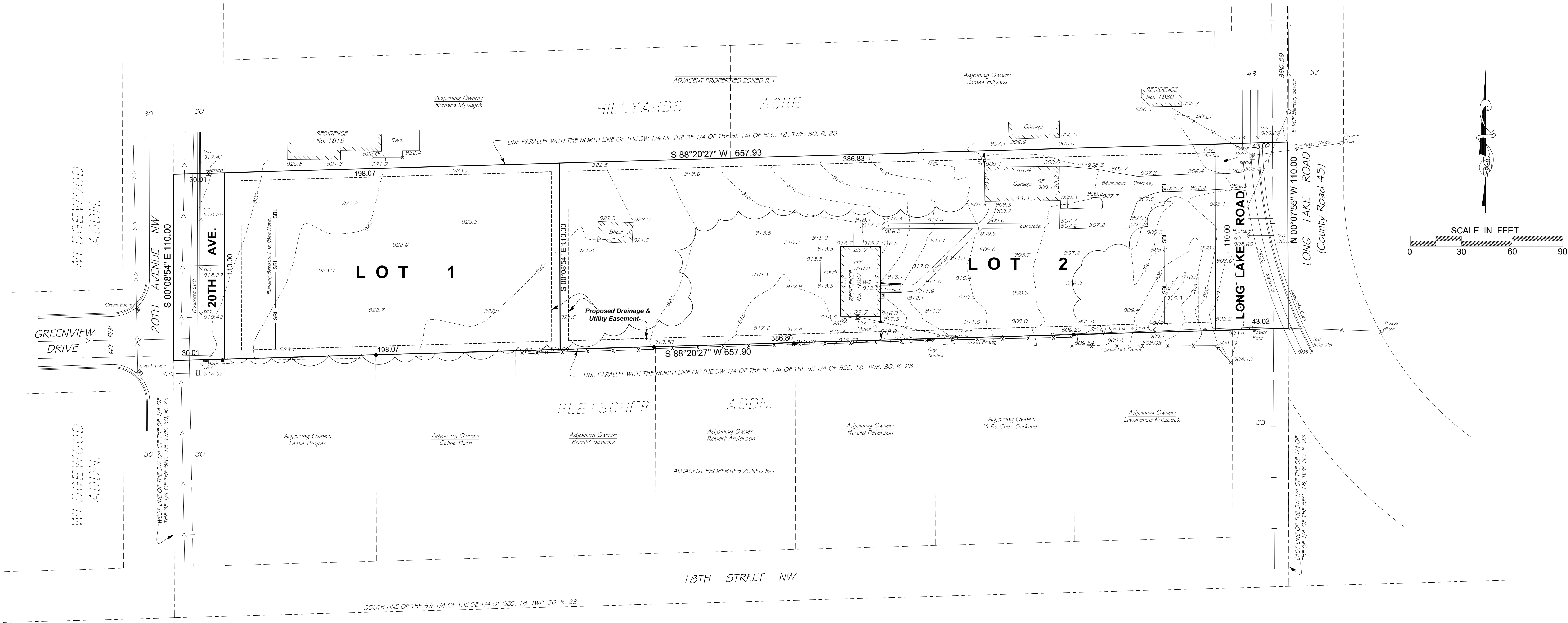




 R-1, Single Family Residential



Current Zoning
1820 Long Lake Rd
R-1, Single Family Residential



Legend

- Denotes Found Iron Monument
- Denotes Iron Monument Set
- ⊗ Bollard
- ⚡ Light
- ⚡ Power Pole
- ⊗ Catch Basin
- ⚡ Sign
- ⚡ Telephone Pedestal Riser
- ⚡ Communication Pedestal Riser
- <— Sanitary Sewer
- <<— Storm Sewer
- |— Watermain
- W— Overhead Wires

Zoning & Development Information

Property Currently Zoned: R-1, Single-Family Residential

Zoning Ordinance Requirements:

Building Setbacks
Front - 30 feet
Side Yard - 5 feet
Rear Yard - 5 feet

Maximum Building Height - 2 1/2 Stories
Maximum lot area to be impervious surface - 30%

Lot Requirements:
A. 75 feet wide at building setback line.
B. 45 feet wide at front lot line.
C. 10,000 square feet of lot area.

Refer to City code for additional requirements, exceptions and modifications.

Proposed Number of Lots = 2
Area of proposed:
Lot 1, Block 1 = 21,780 sq.ft (1/2 acre)
Lot 2, Block 1 = 42,535 sq.ft (0.98 acre)
Right-of-Way = 8,030 sq.ft

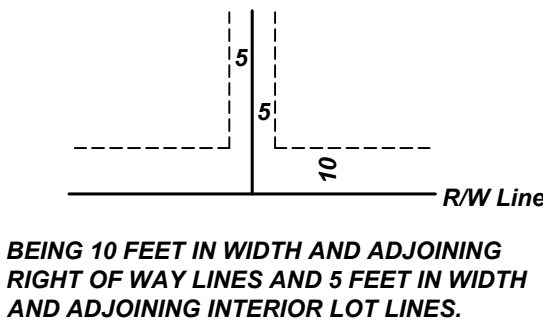
Development Personnel Contacts

Property Owner:
Patrick & Kelleen Myslajek
1820 Long Lake Road
New Brighton, MN 55112

Developer:
Patrick & Kelleen Myslajek
1820 Long Lake Road
New Brighton, MN 55112

Surveyor:
Demarc Surveying and Engineering
7601 73rd Avenue N.
Brooklyn Park, MN 55428
Attn: Greg Prasch
phone: 763-560-3093
e-mail: gregprasch@demarcinc.com

Proposed Drainage & Utility Easements are shown thus:



Miscellaneous Notes

- Property Address: 1820 Long Lake Road, New Brighton, MN 55112
PID No.: 18.30.23.44.0063
- Total Area of Parcel = 72,346 sq. ft.
- By graphic interpretation only, this property is in Flood Zone "X" (area of minimal flooding) per FEMA panel map number 27123C0004G, effective on 6/4/2010.
- Title insurance commitment showing property description and any encumbrances of record was not provided. Survey is subject to change. The only easements shown are from plats of record or information provided by client.
- Property located in Section 18, Township 30, Range 23, Ramsey County, Minnesota.
- Benchmark: Top nut of hydrant located on the East side of subject property. Elevation = 908.60 feet
- Underground utility information per City of New Brighton's records. Locations are only approximate. Contact Gopher State One Call prior to any digging. (811)
- Snow cover on site a time of survey, some improvements may not have been visible.

Legal Description

That part of the Southwest Quarter of the Southeast Quarter of Section 18, Township 30, Range 23, Ramsey County, Minnesota, described as follows: Commencing at the southeast corner of the North 6 acres of the above described tract, said point being 396.89 feet South from the northeast corner of said tract, thence West parallel with the North line thereof and along the South line of the North 6 acres to the West line thereof; thence South along the West line thereof a distance of 110 feet; thence East parallel with the North line thereof to the East line thereof; thence North along the East line for a distance of 110 feet to the point of beginning.

Description per Warranty Deed Doc. No. 4090498.

FIELD BY:	TM
DRAWN BY:	GRP
CHECKED BY:	GRP

I certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed land Surveyor under the laws of the State of Minnesota.
Surveyed this 2nd day of February 2025.
Signed: *Gregory R. Prasch*
Gregory R. Prasch Registration No. 24992

REVISION SUMMARY

4-17-25 name of development.	
4-22-25 prop lot line	
6-3-25 prop rw line	

DEMARC
LAND SURVEYING & ENGINEERING
7601 73rd Avenue North
Minneapolis, Minnesota 55428
(763) 560-3093
DemarcInc.com

SURVEY FOR:

PATRICK & KELLEEN MYSLAJEK

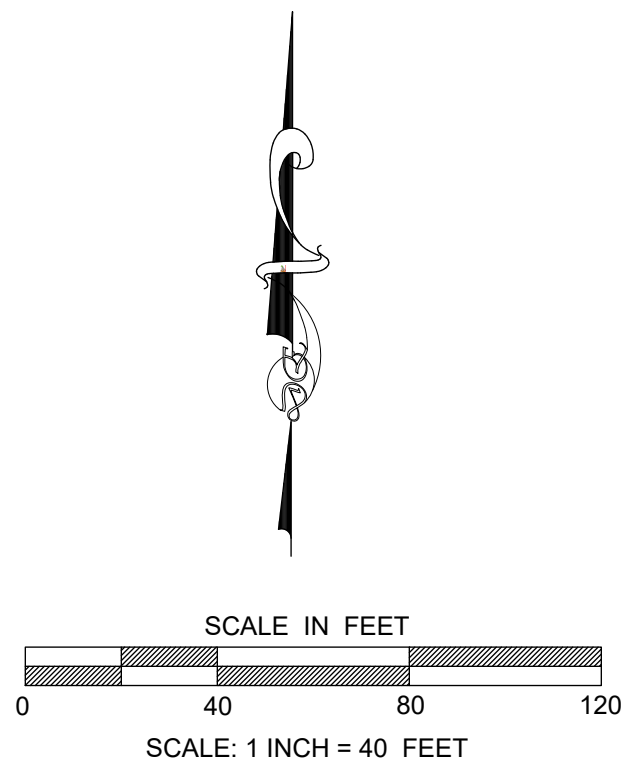
TYPE OF SURVEY:

PRELIMINARY PLAT

DEVELOPMENT NAME

MYSLAJEK ESTATES

PROJECT: 90943
FB No: *
SHEET NO.
1 OF 1



- Denotes 1/2 inch by 14 inch iron pipe monument set and marked by license number 24992, unless otherwise noted.
- Denotes found open end 1/2 inch iron pipe monument.

A diagram of a U-shaped channel cross-section. The channel has a flat bottom of width 10 and vertical side walls of height 5. Dashed lines indicate the original ground level.

DEMARC
LAND SURVEYING & ENGINEERING
7601 73rd Avenue North (763) 560-3093
Minneapolis, Minnesota 55428 Demarcinc.com



Agenda Section:	Council Business
Report Date:	06/16/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Consider Resolution Accepting Bids and Award of Contract for City Project 25-1, 2025 Street Rehabilitation

Action Requested:

Public Hearing:	Motion: X
Discussion:	Informational:

Form of Action:

Resolution: X	Ordinance:
Contract/Agreement:	N/A or Other:

Votes Needed:

3 Votes: X	4 Votes:
5 Votes:	N/A:

Summary Statement:

The following four bids were received and opened by staff at 10:00 a.m. on June 17, 2025:

Park Construction Company \$2,529,179.11
Dresel Contracting Inc. \$2,616,663.68
GMH Asphalt Corporation \$2,634,351.02
Valley Paving \$2,744,984.55

A bid tabulation has been completed by the Department of Community Assets and Development and all bid totals were verified. The low bid of

	\$2,529,179.11 submitted by Park Construction Company is seventeen percent below the engineer's estimate of \$3,051,000. The low bidder, Park Construction Company, has completed work in the City in the past and is capable of performing work of this kind and magnitude. If awarded, the contract requires project completion by October 31, 2025.
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Recommendations:	To accept all bids and adopt the attached Resolution awarding a contract for City Project 25-1, 2025 Street Rehabilitation to the lowest responsible bidder, Park Construction Company, in the amount of \$2,529,179.11.
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Applicable Deadlines:	None
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Community Impact:	Provide cost-effective infrastructure improvements.
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Legislative History:	November 12, 2024 City Council authorized the Director of Community Assets and Development to enter a professional service agreement with American Engineering and Testing. November 12, 2024 City Council adopted a resolution ordering staff to prepare a Feasibility Study for City Project 25-1, 2025 Street Rehabilitation. February 11, 2025 City Council authorized the purchase of fire hydrants and gate valves for the proposed project. March 20, 2025 An informational meeting was held with residents to be affected by the project. April 8, 2025 City Council accepted the Feasibility Study and set the Public Improvement Hearing date for April 22, 2025. April 22, 2025 Public Improvement Hearing held and City Council ordered Public Improvement Project 25-1, 2025 Street Rehabilitation. May 13, 2025 City Council approved project plans and specifications and authorized advertisement for bids. June 17, 2025 Bids opened by staff.
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Strategic Priority:	Financial Sustainability	Staff Capabilities
	Economic Development	Community Engagement & Belonging
	City Assets X	N/A

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Fiscal Impact:	Financial Impact: Is there a financial consideration?		No	Yes: \$2,529,179.11
	Financing Sources:	Budgeted X		Budget Modification
	New Revenue	Use of Reserves		Other

Attachments:	Resolution Accepting Bids and Award of Contract for City Project 25-1, 2025 Street Rehabilitation, 25-1 Bid Award Presentation
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Resolution No. 2025-

State of Minnesota
County of Ramsey
City of New Brighton

RESOLUTION ACCEPTING BIDS AND AWARD OF CONTRACT FOR CITY PROJECT 25-1, 2025 STREET REHABILITATION

WHEREAS, pursuant to advertisement in the *Pioneer Press and Finance and Commerce*, and online at <http://www.questcdn.com>, bids for the above mentioned improvement were received, opened, and read aloud by the City Administration at 10:00 a.m., June 17, 2025 complying with the advertisement; and

WHEREAS, the lowest bidder meeting bid specifications was found to be **Park Construction Company** with a total bid of **\$2,529,179.11**.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of New Brighton, Minnesota:

1. That the Mayor and City Manager are hereby authorized and directed to enter into a contract with Park Construction Company in the name of the City of New Brighton for City Project 25-1, 2025 Street Rehabilitation.

Adopted this 24th day of June, 2025, by the New Brighton City Council with a vote of _____ ayes and _____ nays.

Kari Niedfeldt-Thomas, Mayor

ATTEST:

Devin Massopust, City Manager

Terri Spangrud, City Clerk



Department of Community Assets and Development

PROJECT 25-1, 2025 STREET REHABILITATION

June 24, 2025 Consider Accepting Bids and Award of
Contract



PROJECT 25-1 SCHEDULE



PROJECT OVERVIEW

- Rehabilitation of 1.85 miles of streets
- Living Streets Plan implementation
 - Street width reduction Mounds Avenue
 - Curb “bump-outs” at Mississippi Circle/Thorndale Ave
- Replacement of 2,000 feet of watermain
- Replacement of 43 residential water services
- Replacement of 5 fire hydrants
- Replacement of 18 storm sewer structures
- Installation of 9,600 feet of new curb and gutter

2025 Street Rehabilitation Map



BID TABULATION (Eng. Estimate \$3,051,000)

Contractor	Bid Total
Park Construction Company	\$2,529,179.11
Dresel Contracting Inc.	\$2,616,663.68
GMH Asphalt Corporation	\$2,634,351.02
Valley Paving	\$2,744,984.55

PROJECT CONSTRUCTION COSTS	
IMPROVEMENT	ESTIMATED COST
Street Improvements	\$1,327,626.19
Storm Sewer Improvements	\$448,882.05
Watermain Improvements	\$687,218.30
Sanitary Improvements	\$65,452.57
TOTAL	\$2,529,179.11

1. Adopt Resolution accepting bids and awarding a contract for City Project 25-1, 2025 Street Rehabilitation in the amount of \$2,529,179.11.



Questions?

Craig Schlichting, P.E.

651-638-2056

Craig.Schlichting@newbrightonmn.gov





Agenda Section:	Council Business
Report Date:	06/11/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Consideration of Approval of Plans and Specifications and Authorization for bids for Authorize Ad for Bids for City Project 25-7, Well #16 Well Drilling and Construction

Action Requested:

Public Hearing:	Motion: X
Discussion:	Informational:

Form of Action:

Resolution:	Ordinance:
Contract/Agreement: X	N/A or Other:

Votes Needed:

3 Votes: X	4 Votes:
5 Votes:	N/A:

Summary Statement:

The purpose of this item is to obtain council approval of the plan and specifications for the drill of Well #16, City Project 25-7. The staff are also seeking authorization to advertise for public bids for the drilling of Well #16.

Recommendations:

- Approve the Plans and Specifications for City Project 25-7, Well #16 Well Drilling and Construction
- Authorize staff to advertise for bids for City Project 25-7, Well #16

	Well Drilling and Construction
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Applicable Deadlines:	None
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Community Impact:	The addition of Well #16 will provide us with the ability to continue to deliver safe and reliable drinking water to the residents, business owners, and visitors to the City of New Brighton.
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Legislative History:	None
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Strategic Priority:	Financial Sustainability	Staff Capabilities
	Economic Development	Community Engagement & Belonging
	City Assets X	N/A

Fiscal Impact:	Financial Impact: Is there a financial consideration? Yes		No	Yes: \$ TBD
	Financing Sources: Water 206 Fund	Budgeted Yes		Budget Modification
	New Revenue	Use of Reserves		Other

Attachments:	City Project 25-7 Well #16 Drilling Project Manual, Well 16
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Project Manual

Well 16

City Project No. 25-7



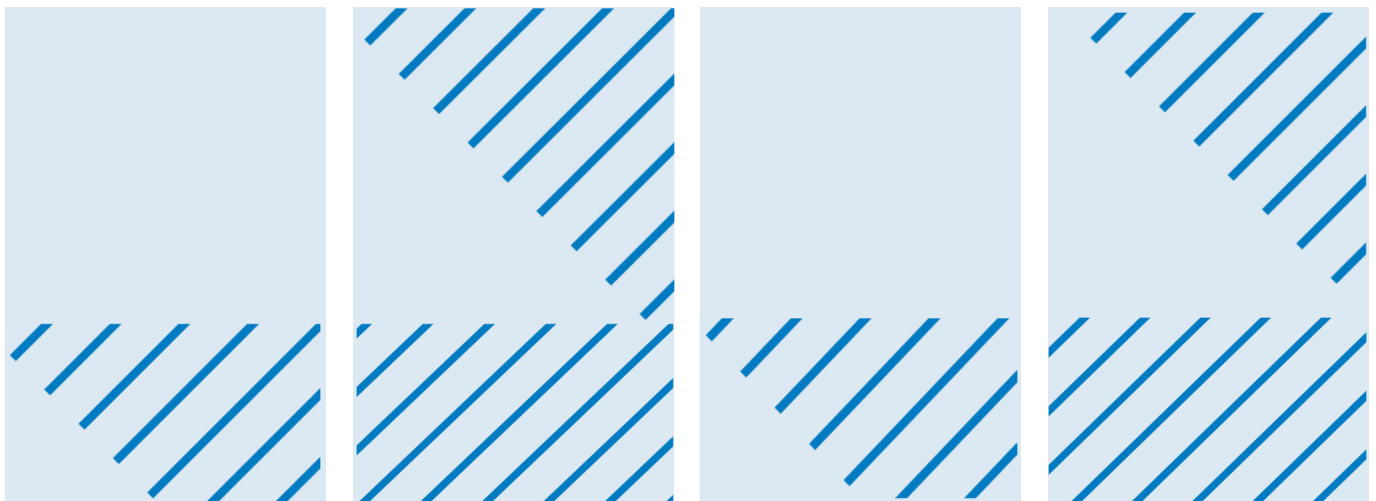
Prepared for
City of New Brighton

Prepared by
Barr Engineering Co.

June 2025

4300 MarketPointe Drive, Suite 200
Minneapolis, MN 55435
952.832.2600

barr.com



made payable to the City of New Brighton in the amount of 5% of the bid as a guarantee that Bidder will enter into a contract with City, in accordance with the terms of the Bidding Documents, in the event that Bidder is selected by City.

No Bids may be withdrawn for a period of sixty (60) days from the date of opening of Bids. City reserves the right to accept any Bid, or to reject any or all Bids.

END OF SECTION 00 11 13

**City Project No. 25-7
Well 16
City of New Brighton, MN
Project Manual**

**00 01 05
CERTIFICATIONS**

I hereby certify that these specifications were prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



Daniel A. Nesler, PE
License Number: 47523
Date: 06/11/2025

END OF SECTION 00 01 05

City Project No. 25-7
Well 16
City of New Brighton, MN
Project Manual

00 01 10
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00 01 10	Table of Contents
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00 20 00	Instructions to Bidders
00 41 00	Bid Form
00 42 00	Bid Form Attachments
00 52 00	Form of Agreement
00 61 13	Performance Bond
00 61 14	Payment Bond
C-700	Standard General Conditions (EJCDC 2013 Edition)
00 73 00	Supplementary Conditions
Division 01	General Requirements
01 11 00	Summary of Work
01 29 00	Measurement and Payment
01 33 00	Submittal Procedures
01 41 00	Permits and Regulatory Requirements
01 45 00	Testing and Quality Control
Division 31	Earthwork
31 25 00	Erosion and Sedimentation Control
Division 33	Utilities
33 21 00	Well Construction
Drawings	
C-01	Proposed Well #16 Site Layout and Well Detail
C-02	Details
Attachments	
Attachment A	Final Operable Unit 1 Optimization Deep Groundwater – Phase II Geophysics Field Summary Report

Division 00

Procurement and Contracting Requirements

PUBLISH
PUBLISH

PIONEER PRESS; FINANCE & COMMERCE
QUESTCDN.COM

June 25, 2025
June 25, 2025

CITY OF NEW BRIGHTON
803 Old Highway 8 NW
New Brighton, MN 55112

SECTION 00 11 13

ADVERTISEMENT FOR BIDS

City of New Brighton
City Project 25-7
Well 16

Sealed bids are solicited for furnishing of the necessary labor, materials, and equipment for the construction of the Well 16. The Project generally consists of the construction of a new municipal water supply well. The Project includes the following elements, among others:

- Site preparation and erosion control
- Constructing a new 18 – inch diameter water supply well in the Prairie du Chein Aquifer (Approximately 395 LF) using dual rotary methods
- Development, test pumping, and sampling of the well
- Site restoration
- Miscellaneous and incidental work as described in the Bidding Documents.

Digital copies of the Bidding Documents are available at <http://www.QuestCDN.com> for a fee of \$30.00. The documents may be downloaded by selecting this project from the “Browse Projects” page or by entering **eBid-Doc #9716882** on the “Search Projects” page. For assistance and free membership registration, contact QuestCDN at 952.233.1632 or info@questcdn.com.

Copies of the Bidding Documents may be examined and obtained at the City Hall, 803 Old Highway 8 NW, New Brighton, Minnesota, 55112, for a non-refundable cost of \$100.00 per set and an additional \$10.00 charge per set if mailed.

There will not be a pre-bid conference for this project.

Bids will be received virtually on Quest CDN through 10:00 a.m. on Wednesday, July 16, 2025, then opened.

Bids shall be made on the forms attached to and made a part of the proposed Contract Documents, in conformance with the Instructions to Bidders, and Bid shall be addressed and submitted to:

Craig Schlichting, P.E.
Director of Community Assets and Development
City of New Brighton
803 Old Highway 8 NW
New Brighton, Minnesota 55112

and endorsed with:

(Name of Bidder)
City Project 25-07

Each Bid Form shall be accompanied by a Non-Collusion Affidavit; a Responsible Contractor Certificate; an Equal Employment Opportunity Affidavit; Bidder’s Qualifications; and a certified check or bid bond

enter into a contract with City, in accordance with the terms of the Bidding Documents, in the event that Bidder is selected by City.

No Bids may be withdrawn for a period of sixty (60) days from the date of opening of Bids. City reserves the right to accept any Bid, or to reject any or all Bids.

END OF SECTION 00 11 13

City Project No. 25-7
Well 16
City of New Brighton, MN

00 20 00

INSTRUCTIONS TO BIDDERS

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ARTICLE 1 – DEFINED TERMS

- 1.01 Defined terms are capitalized, and where used in these Instructions to Bidders shall have the meanings indicated in the General Conditions as modified by the Supplementary Conditions.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents may be obtained as stated in the Advertisement for Bids.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer have made copies of Bidding Documents available only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.
- 2.04 Owner and Engineer shall have no responsibility with respect to Bidder's use of digital data files obtained from Owner or Engineer. Because the information set forth in the digital data files can be modified unintentionally or otherwise, the use of digital data files provided by Owner or Engineer does not in any way negate Bidder's responsibility for coordination with trades or others or for the proper checking and coordination of dimensions, details, member sizes and gauge, and quantities of materials as required to facilitate complete and accurate fabrication, erection, and construction of the Work. In the event of a conflict between sealed documents and digital data files, the sealed documents shall govern. It is the Bidder's responsibility to determine if any conflicts exist.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 Bidder shall submit a completed Non-Collusion Affidavit (Attachment A) and Equal Opportunity Affidavit (Attachment B) with its Bid.
- 3.02 A Bidder responding to the bid solicitation shall comply with Minn. Stat. § 16C.285. A Bidder must verify that it meets the minimum criteria specified in Minn. Stat. § 16C.285 by submitting the Responsible Contractor Certificate (Attachment C), signed under oath by an owner or officer, at the time it responds to the bid solicitation. Bidder shall include in its verification of compliance a list of all first-tier subcontractors that it intends to retain for the Work. THE COMPLETED CERTIFICATE MUST BE SUBMITTED WITH THE BID. Each Bidder or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that it meets all of the minimum criteria in Minn. Stat. § 16C.285, subd. 3, prior to execution of a contract with each subcontractor. At Owner's request, a Bidder must submit a signed Responsible Contractor Certificate for each subcontractor. Each subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in Minn. Stat. § 16C.285, subd. 3, prior to execution of a contract with each subcontractor.

Any Bidder that does not submit or does not meet the minimum criteria in the Responsible Contractor Certificate, or fails to verify that it meets those criteria, is not a responsible Bidder and is not eligible to be awarded a contract for the Work. Any of Bidder's subcontractors that do not meet the minimum criteria in the Responsible Contractor Certificate are ineligible to perform

work and Bidder must propose a qualifying replacement subcontractor at no change in the prices set forth in the Bid. A false statement under oath verifying compliance with any of the minimum criteria shall render the Bidder or subcontractor that makes the false statement ineligible to be awarded a contract, and may result in termination of a contract awarded to a Bidder or subcontractor that submits a false statement.

- 3.03 To demonstrate Bidder's qualifications to perform the Work, Bidder shall submit with its Bid the following additional information:
- A. A description of Bidder's project experience in the past five years including nature of project, owner's name, dollar value, and name of bonding company. Bidder shall clearly indicate projects in which the Work is similar to the current project and describe the Bidder's role in that project.
 - B. A list of projects currently under contract and not yet complete, including a summary of the dollar volume of each project.
 - C. A list of bankruptcy claims filed by Contractor within the past five years.
 - D. A list of claims or complaints filed against and by Contractor and settled through litigation or the courts or through a mediated or arbitrated dispute resolution process in the past 10 years. Describe the nature of the claim, the court of jurisdiction, the mediator or arbitrator and the general resolution.
 - E. An OSHA log and summary of injuries and illnesses (OSHA Form 300 or equivalent) from the five most recent calendar years.
- 3.04 The Bidder's qualifications statement shall be enclosed in a separate sealed envelope that is clearly marked with Bidder's name and the words "BIDDER QUALIFICATIONS".
- 3.05 A Bidder's failure to submit required qualification information with the Bid Form shall be considered unresponsive.
- 3.06 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.07 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.
- 3.08 Owner may require Bidder to submit additional information regarding its qualifications to perform the work after Bids are opened.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

- A. The Site is defined in the General Conditions and is shown on the Drawings and described elsewhere in the Bidding Documents. The majority of the Work will be performed at Driftwood Park, but may also include activity at other water supply system facilities throughout the City. Therefore the Site comprises multiple non-contiguous locations. If any additional lands beyond those shown or described as the Site are required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
 - 1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
 - 2. Copies of reports or drawings referenced in Article 4.02 A may be provided with the Bidding Documents. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein, upon which Bidder is entitled to rely as to its accuracy, if any, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. The definition of Technical Data has been modified in the Supplementary Conditions.
- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Articles 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Article 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct Site visits during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not

practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.

- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER'S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to applicable Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings, if any, identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction

expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;

- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 6 – PRE-BID CONFERENCE

- 6.01 Not Used.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only answers by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's Lump Sum Bid and in the form of a certified check, bank money order, or a Bid bond issued by a surety meeting the requirements of Article 6.01 of the General Conditions.

- 8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

- 9.01 See applicable provisions in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

- 11.01 The Contract for the Work, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to, and will not be considered by, Engineer until after the Effective Date of the Contract.
- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work as required by Bid Form. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- 12.03 If requested by Owner, the apparent Successful Bidder, and any other Bidder so requested, shall within seven days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for Work:

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, without an increase in bid price.

- 12.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance after the Effective Date of the Agreement as provided in Article 7.0 6 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

- 13.01 All Bids shall be submitted on the Bid Form that is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form.
- 13.02 If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid," "No Change," or "Not Applicable." A Bid by a corporation shall be executed in the corporate name by the president, vice-president, or other corporate officer, accompanied by evidence of authority to sign. The corporate seal, if any, shall be affixed and attested by the secretary or assistant secretary. The registered corporate address, federal EIN, and state, province, or other foreign jurisdiction of incorporation shall be shown.
- 13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The federal EIN and registered address of the partnership shall be shown.
- 13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member, or other authorized person, and accompanied by evidence of authority to sign. The state, province, or other foreign jurisdiction of formation of the firm (or other domicile), federal EIN, and the official address of the firm shall be shown.
- 13.05 A Bid by an individual shall show the Bidder's name and official address.
- 13.06 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

- 13.10 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid.

ARTICLE 14 – BASIS OF BID

14.01 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 The Bid Form shall be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place stated in the Advertisement for Bids, and shall be enclosed in a plainly marked package with the Project title, "City Project 25-07, Well 16", the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid and a separate sealed envelope with the Bidder's qualifications shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed as stated in the Advertisement for Bids.
- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed, and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. The request must be signed in the same manner and by the same person or persons who signed the Bid and should not reveal the amount of the Bid. Requests shall be clearly marked "Request for Withdrawal of Bid" and labeled "City Project 25-07, Well 16." Upon receipt of such notice, the unopened Bid will be returned to the Bidder. If such request for withdrawal is not explicit or if it is in any sense subject to misinterpretation, the Bid shall be subject to either acceptance or rejection, as may be in the best interest of Owner, and in its discretion.

- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Article 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If, within 24 hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

- 17.01 Bids will be opened at the time and place stated in the Advertisement for Bids and, unless obviously non-responsive, read aloud publicly. Bidders or their authorized agents are invited to be present. An abstract of the amounts of the base Bids will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject any Bid that Owner finds, after reasonable inquiry and evaluation, to not be responsible. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.04 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.05 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Bidding Documents.
- 19.06 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors, Suppliers,

individuals, or entities proposed for those portions of the Work in accordance with the Bidding Documents.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

- 20.01 Article 6 of the General Conditions, and Article 6 of the Supplementary Conditions, set forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by required bonds and certificates of insurance.

ARTICLE 21 – SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents as identified in the Agreement as attached thereto. Within 15 days, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement, attached documents, and any other required submittals to Owner.
- 21.02 Owner or Engineer will review required submittals and may require Successful Bidder to make revisions. Within ten days after final receipt of all acceptable materials, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Article 2.02 of the General Conditions.

ARTICLE 22 – RETAINAGE

- 22.01 Provisions concerning retainage are set forth in the Agreement.

END OF SECTION 00 20 00

City Project No. 25-7
Well 16
City of New Brighton, MN

00 41 00
BID FORM

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of New Brighton
City Hall
803 Old Hwy 8 NW
New Brighton, MN 55112

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and

procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

- E. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- F. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- H. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- I. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization/ Demobilization	LS	1		
2	Setup/ Takedown on Well	EA	1		
3	Furnish, Drill, and Drive 24-inch Diameter Casing	LF	255		
4	Drill 23.25-inch Diameter Borehole	LF	73		
5	Furnish and Install 18-inch Casing	LF	328		
6	Drill 17.25-inch Borehole	LF	67		
7	Furnish and Install Neat Cement Grout	CY	16		
8	Plumbness and Alignment Test	LS	1		
9	Furnish Well Development Equipment	LS	1		
10	Install and Remove Well Development Equipment	EA	1		
11	Operate Well Development Equipment	HR	100		
12	Remove Fill From Well	CY	50		
13	Furnish Test Pumping Equipment	LS	1		
14	Install and Remove Test Pumping Equipment	EA	1		
15	Operate Test Pumping Equipment	HR	32		

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
16	Televiser Well	EA	1		
17	Furnish, Install, and Remove Water Discharge Piping	LS	1		
18	Furnish, Install, and Remove Water Treatment Equipment	LS	1		
19	Operate Water Treatment Equipment	LS	1		
20	Provide Water Treatment Chemical(s)	LS	1		
21	Well Disinfection and Sampling	EA	1		
22	Erosion Control	LS	1		
23	Site Restoration	LS	1		
Base Bid Total of All Unit Price Bid Items					\$

Unit Prices have been computed in accordance with Paragraph 13.03 of the General Conditions.

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. (3) In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner shall announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.

Total of Unit Price Bids = Total Base Bid Price \$ _____

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security
 - B. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;
 - C. Contractor's License No.: _____
 - D. Required Bidder Qualification Statement with supporting data; and
 - E. Non-Collusion Affidavit (Bid for Attachment A)
 - F. Equal Employment Opportunity Affidavit (Bid for Attachment B)
 - G. Responsible Contractor Verification Form (Bid for Attachment C)

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature] _____

[Printed name] _____

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number:

Fax Number:

Contact Name and e-mail address:

Bidder's License No.:

(where applicable)

END OF SECTION 00 41 00

Attachment A

Non-Collusion Affidavit

I hereby swear (or affirm) under the penalty for perjury:

1. That I am the Bidder (if the Bidder is an individual), a partner of the Bidder (if the Bidder is a partnership) or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);
2. That the attached Bid has been arrived at by the Bidder independently, and has been submitted without collusion with, and without any agreement, understanding, or planned common course of action with, any other vendor of materials, supplies, equipment or services described in the invitation to bid, designed to limit independent bidding or competition;
3. That the content of the Bid has not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the Bid, and will not be communicated to any such person prior to the official opening of the Bid; and
4. That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed _____

Firm Name _____

Subscribed and sworn to before me

this ____ day of _____, 20____.

Notary Public

My Commission expires _____, 20____.

Bidder's E.I. Number: _____

(Number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941)

Attachment B

Equal Employment Opportunity Affidavit

Pursuant to Minn. Stat. § 181.59, Bidder agrees as follows:

- a. That, in hiring of common or skilled labor for the performance of any work under this Contract, or any subcontract hereunder, no contractor, material supplier, or vendor shall, by reason of race, creed, or color, discriminate against any person or persons who are citizens of the United States who are qualified and available to perform the work to which such employment relates;
- b. That no contractor, material supplier or vendor shall, in any manner, discriminate against, or intimidate, or prevent the employment of any such persons or persons, or on being hired, prevent, or conspire to prevent, any such person or persons from the performance of work under this contract on account of race, creed or color;
- c. That any violation of this section shall be a misdemeanor; and
- d. That this contract may be canceled or terminated by the Owner, and all money due, or to become due hereunder, may be forfeited for a second or any subsequent violation of the terms or conditions of this contract.

BIDDER

Date

SUBCONTRACTOR

Date

SUBCONTRACTOR

Date

SUBCONTRACTOR

Date

**Attachment C
State of Minnesota
Responsible Contractor Certificate**

Contractor Response

Responsible Contractor Verification and Certification of Compliance

The term Responsible Contractor as used herein means a contractor as defined in Minn. Stat. § 16C.285, subd. 3.

The undersigned understands that any prime contractor or subcontractor that does not meet the minimum criteria in Minn. Stat. § 16C.285, subd. 3, or fails to verify that it meets those criteria is not a Responsible Contractor and is not eligible to be awarded a construction contract for the project or to perform work on the project.

The undersigned understands that a false statement under oath verifying compliance with any of the minimum criteria shall make the undersigned, or its subcontractor that makes the false statement, ineligible to be awarded a construction project and may result in termination of a contract awarded to the undersigned or its subcontractor that submits a false statement.

Certification

By signing this document, I certify that I am an owner or officer of the company named below, and I swear under oath that:

1. My company meets each of the Minimum Criteria to be a Responsible Contractor as defined and is in compliance with Minn. Stat. § 16C.285, subd. 3.
2. If my company is awarded a contract, I or another owner or officer will also submit certificates or verifications of compliance for any subcontractor or motor carrier of any tier as required.

Contractor Company Name

Date

Authorized Signature of Owner or Officer

Printed Name

Title

Part C-1: First-Tier Subcontractor List
(Initial List)

SUBMIT WITH CONTRACTOR SOLICITATION RESPONSE

As required under Minn. Stat. § [16C.285](#), subd. 5, a prime contractor or subcontractor shall include in its certificate of compliance a list of all of its first-tier subcontractors that it intends to retain for work on the project.

NAMES OF FIRST TIER SUBCONTRACTORS (Legal name of company as registered with the Secretary of State)	Company Address

FORM OF AGREEMENT

THIS AGREEMENT is by and
between

City of New Brighton

("Owner") and

("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents.

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents may be the whole or only a part, is generally described in Specification Section 01 10 00, Part 1.03.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Barr Engineering Co.

3.02 Owner has retained Barr Engineering Co. ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents. The duties and responsibilities and rights and authority of Engineer cannot be extended without written consent of Owner and Engineer.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits are of the essence.

4.02 *Contract Times: Dates*

A. The Work will be substantially completed on or before October 1, 2026, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before November 15, 2026.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Article 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Article 4.02 above, plus any extensions thereof allowed in accordance with the Contract Documents. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner \$2,500.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Article 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment,

Contractor shall pay Owner \$1,000.00 for each day that expires after such time until the Work is completed and ready for final payment.

3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

ARTICLE 5 – CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. The prices stated in the Bid Form, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

- 6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions, Article 15 of the Supplemental Conditions and Specification Section 01 29 00. Applications for Payment will be processed by Engineer as provided in the General Conditions. Contractor shall submit itemized copies of all invoices for materials, if requested. If applicable, any sales tax rebate will be retained by Owner.
- B. The prices stated in the Bid Form are inclusive of all sales and use taxes and fees, of all kinds imposed at any level of government, and no additional amount shall be requested by Contractor or paid by Owner for taxes or fees of any kind.

- 6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment in accordance Article 6.02.B below, provided that such Applications for Payment meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions.
- B. Payments shall be made in accordance with Minnesota Stat. § 429.041, Subd. 6, with regard to retainage and payments after Substantial Completion.

- 6.03 *Alternate Form of Retainage*

- A. Contractor may, at its option, elect an alternative form of retainage in accordance with Minnesota Stat. § 15.73.

- 6.04 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Article 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as described in Article 15.06 of the General Conditions, and in accordance with Minnesota Stat. § 429.041.

ARTICLE 7 – INTEREST

- 7.01 All amounts not paid when due as provided in Article 13 of the General Conditions shall bear interest at the rate in accordance with Minnesota Stat. § 471.425, Subd.4.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents and the other related data and reference items identified in the Bidding Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor’s safety precautions and programs.
 - F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 - G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
 - H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
 - I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
 - J. Contractor’s entry into this Agreement constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

- 9.01 *Contents*
- A. The Contract Documents consist of the following:
 - 1. This executed Agreement;
 - 2. The executed Performance bond;

3. The executed Payment bond;
4. The General Conditions;
5. The Supplementary Conditions;
6. Specifications;
7. Drawings consisting of the sheet C-01 and C-02
8. Addenda;

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's completed Bid;
 - b. Documentation requested by Owner and submitted by Contractor prior to Notice of Award.
10. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed;
 - b. Work Change Directives;
 - c. Change Orders;
 - d. Field Orders.
- B. The documents listed in Article 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 Successors and Assigns

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.03 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor. The Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.04 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Article 10.05:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.05 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, in the Supplementary Conditions.
- B. This Agreement shall be governed by the laws of the State of Minnesota.
- C. There are no other provisions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on [] (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

City of New Brighton

By:

By:

Karl Niedfeldt-Thomas, Mayor

Title:

(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

Attest:

Devin Massopust, City Manager

Title:

Address for giving notices:

Address for giving notices:

803 Old Highway 8 NW

New Brighton, MN 55112

License No.:

(where applicable)

PERFORMANCE BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(seal)

Contractor's Name and Corporate Seal

(seal)

Surety's Name and Corporate Seal

By: _____

Signature

By: _____

Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____

Attest: _____

Signature

Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:
 - 3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the

payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(seal)

Contractor's Name and Corporate Seal

(seal)

Surety's Name and Corporate Seal

By: _____

Signature

By: _____

Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____

Signature

Attest: _____

Signature

Title

Title

Notes: *(1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.*

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. In the event of a claim on this Bond by a person furnishing labor and materials, no action shall be maintained on the payment bond unless:
 - 5.1 Within 120 days after completion, delivery, or provision by the person of its last item of labor and materials, for the public work, the person serves written notice of claim under the payment bond personally or by certified mail upon the surety that issued the bond and the contractor on whose behalf the bond was issued at their addresses as stated in the bond specifying the nature and amount of the claim and the date the claimant furnished its last item of labor and materials for the public work.
6. When a Claimant has satisfied the conditions of Paragraph 5.1, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 6.2 Pay or arrange for payment of any undisputed amounts.
 - 6.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
7. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
9. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. An action to enforce a claim against the surety under the Bond must be commenced within one year from the date of completion, delivery, or provision by the claimant of its last item of labor and materials for the public work stated in its notice of claim. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

15.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance

of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

15.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

15.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

16. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

17. Modifications to this Bond are as follows:

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. abnormal weather conditions;
 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part

by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

- c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
- 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
- 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 - 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 - 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after

becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 - 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 - 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is

maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
 - 1. include at least the specific coverages provided in this Article.
 - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 - 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
- d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or

exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
- 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
- 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to

provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples:*

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.

- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during

or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on

the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim

submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 Cost of the Work

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes

other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will

include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 - 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 - 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
 - 1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 - 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

- 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount

remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

- A. *Application for Payment:*
 - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of

inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses,

and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for

expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition) hereinafter referred to as the "General Conditions," and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below or elsewhere in the Contract Documents, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01 *Defined Terms*

- SC-1.01 Add to the list of definitions in Article 1.01.A by inserting the following defined terms in their proper alphabetical positions:

Bid Form - The prescribed form on which Bidder submits Bidder's offer or proposal setting forth the bidder's prices for the Work to be performed.

General Conditions – Standard General Conditions of the Construction Contract (EJCDC C-700, 2013 Edition). Any reference to the General Conditions shall also be a reference to the Supplementary Conditions.

Technical Specifications – The Specifications.

- SC-1.01 Delete Article 1.01.A.20 in its entirety and insert the following in its place:

Engineer – Barr Engineering Co., 4300 MarketPointe Drive, Suite 200, Minneapolis, Minnesota, 55435 (Phone: 952-832-2600; Fax: 952-832-2601).

- SC-1.01 Delete Article 1.01.A.28 in its entirety and insert the following in its place:

Owner – City of New Brighton, with whom Contractor has entered into the Agreement and for whom the Work is to be provided.

- SC-1.01 Delete Article 1.01.A.44 in its entirety and insert the following in its place:

Technical Data—Those items identified in the Supplementary Conditions Article 5, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site including without limitation the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor. **Any use of the Technical Data made available to Contractor is entirely at Contractor's own risk and at its own discretion.**

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.01 *Delivery of Bonds and Evidence of Insurance*

SC-2.01 Delete Articles 2.01 B and C in their entirety and insert the following in their place:

- B. Evidence of Contractor's Insurance: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies of insurance (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in Article 6. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- C. Evidence of Owner's Insurance: After receipt from Contractor of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner under Article 6 (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

SC-2 .02 *Copies of Documents*

SC-2.02 Delete the first sentence of Article 2.02.B and insert the following in its place:

- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications bearing the certification or seal of Engineer and other design professionals.

SC-2 .06 *Electronic Transmittals.*

SC-2.06 Add the following new article immediately after Article 2.06.C:

Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance test or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party, except those errors resulting from the use of software application package, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

SC-3.01 *Intent*

SC-3.01 Add the following language at the end of the second sentence of Article 3.01.B:

Any item or items shown on the Drawings or described in the Specifications, but not specifically included in any of the unit prices, shall be considered incidental to the other work.

SC-3.05 *Reuse of Documents*

SC-3.05 Delete Article 3.05.A.1 in its entirety and insert the following in its place:

"have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the certification or seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer; or"

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.01 *Availability of Lands*

SC-5.01 Delete Article 5.01C in its entirety and insert the following in its place:

Contractor shall provide for all additional lands and access thereto that Contractor may require for performance of the Work.

5.03 *Subsurface and Physical Conditions*

SC-5.03 Delete Article 5.03B in its entirety and insert the following in its place:

- B. Reliance by Contractor on Technical Data Not Authorized: Contractor may not rely upon the accuracy of the Technical Data identified in the Supplementary Conditions with respect to such reports and drawings, and such reports and drawings are not Contract Documents. Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.
 4. the accuracy of the Technical Data (as defined in Article 1) contained in any reports and drawings prepared for the Project and made available to Contractor.

Add the following new Articles immediately after Article 5.03.B:

- C. The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:
1. Report dated January 24, 2022, prepared by Arcadis U.S., Inc., Minneapolis, MN., entitled: "Phase II Geophysics Field Summary Report"

- E. Contractor may examine copies of reports and drawings identified in SC 5.03.C and SC 5.03.D that were not included with the Bidding Documents at Barr Engineering Co. during regular business hours, or may request copies from Engineer.

SC-5.06 *Hazardous Environmental Conditions*

SC 5.06 Delete Articles 5.06.A and 5.06.B in their entirety and insert the following:

- A. The Site is underlain by a groundwater plume emanating from Twin Cities Army Ammunition Plant (TCAAP) and is contaminated with volatile organic compounds (VOCs) in detectable concentrations. TCAAP is a superfund site and WTP1 treats this groundwater to remove the following compounds:

1. 1,1-Dichloroethane
2. 1,1-Dichloroethylene
3. Trichloroethylene
4. 1,1,1-Trichloroethane
5. 1,4-Dioxane

Upon request, Owner or Engineer will provide additional water quality data and other information as is relevant to the Work.

- B. *Reliance by Contractor on Technical Data Not Authorized:* Contractor may not rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, and such reports and drawings are not Contract Documents. Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information;
 4. the accuracy of the Technical Data (as defined in Article 1) contained in any reports and drawings prepared for the Project and made available to Contractor.

ARTICLE 6 – BONDS AND INSURANCE

SC-6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Amend the first sentence of Article 6.01.A to read as follows:

Contractor shall furnish performance bond and payment bond, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of

Contractor's obligations under the Contract. The Contract Price shall include the price of the assigned contract.

SC-6.01 Add the following sentence to the end of Article 6.01.A of the General Conditions:

Contractor shall furnish such additional Bonds as may be required by any permitting authority as a condition of any such permit.

SC-6.03 *Contractor's Liability Insurance*

SC-6.03 Amend the first sentence of Article 6.03.C.2 to read as follows:

2. Blanket contractual liability coverage, to the extent permitted by law, covering all of Contractor's contractual indemnity obligations.

SC-6.03 Add the following new Article immediately after Article 6.03.C.8:

9. Where applicable, claims arising out of blasting, elevators, aviation, and marine exposures.

SC-6.03 Delete Article 6.03.F in its entirety.

SC-6.03 Amend the first sentence of Article 6.03.I.3 to read as follows:

contain a provision or endorsement that the coverage afforded will not be canceled, or coverages or limits reduced, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.

SC-6.03 Add the following Article to the end of Article 6.03.I:

6. The coverage shall include all property under the care, custody, or control of Contractor.

SC 6.03 Add the following new article immediately after Article 6.03.J:

K. The limits of liability for the insurance required by Article 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Articles 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>
Employer's Liability:	\$ <u>Statutory</u>

2. Contractor's Commercial General Liability under Articles 6.03.B and 6.03.C of the General Conditions:

General Aggregate	\$ <u>\$2,000,000</u>
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Each Occurrence (Bodily Injury and Property Damage)	\$ <u>\$1,000,000</u>
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3. Automobile Liability under Article 6.03.D. of the General Conditions:

Combined Single Limit of	\$ <u>\$2,000,000</u>
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4. Excess or Umbrella Liability:

Per Occurrence	\$ <u>\$5,000,000</u>
General Aggregate	\$ <u>\$5,000,000</u>

5. Each of the Commercial General Liability, Automobile Liability and Umbrella policies shall include cross liability coverage so that the insurance applies separately to each insured against whom claim is made or suit is brought, even in instances where one insured claims against or sues another insured and provide that its insurance provider shall waive all rights of subrogation against Owner and Engineer and their agents and employees, and shall waive any setoff or counterclaim or any other deduction whether by attachment or otherwise as applicable.

SC 6.05 Delete the first sentence of Article 6.05.A and insert the following sentence in its place:

Owner shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost. Details of Owner's policy will be made available upon request.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC-7.02 *Labor; Working Hours*

- SC-7.02 Delete Article 7.02.B in its entirety, and insert the following:
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed only during the times set forth, and in accordance with other requirements and limitations set forth Division 01 of the Specifications.

SC-7.06 *Concerning Subcontractors, Suppliers, and Others*

SC 7.06.P Add a new article immediately after Article 7.09.O:

Contractor shall pay any Subcontractor within ten days of receipt of payment from the municipality for undisputed services provided by the Subcontractor in accordance with Laws and Regulations. Contractor shall pay interest of 1-1/2 percent per month or any part of a month to the Subcontractor on any undisputed amount not paid on time to the subcontractor. The minimum monthly interest penalty payment for an unpaid balance of \$100 or more is \$10. For an unpaid balance of less than \$100, Contractor shall pay the actual penalty due to the Subcontractor.

ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION

SC-10.03 *Project Representative*

SC-10.03 Add the following new Articles immediately after Article 10.03.A:

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.

Contractor shall observe the following additional instructions as to reporting and authority over the Work:

1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
4. Liaison:
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, at Engineer's direction, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist Engineer in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. Shop Drawings and Samples:
 - a. If so directed by Engineer, record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. If so directed by Engineer, receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.

7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer.
8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
9. Inspections, Tests, and System Start-ups:
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
10. Records:
 - a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
 - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
 - c. Maintain records for use in preparing Project documentation.
11. Reports:
 - a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
 - b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.
- 12. Payment Requests: When directed by Engineer, review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
- 13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
- 14. Completion:
 - a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
 - b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
 - c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.
- C. The RPR shall not:
 - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents, including, but not limited to, issuing clarification or interpretation of the requirements of the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.

8. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC-13.01 Cost of the Work

SC 13.01 Delete Article 13.01.B.5.c in its entirety and insert the following in its place:

- c. Construction Equipment and Machinery:
 - 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in the "Rental Rate Blue Book" published by Dataquest, Inc. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC-14.01 Access to Work

SC -14.01 Add the following new Article immediately after Article 14.01.A.

- B. Said access shall conform to all requirements of the regulatory agency or agencies who claim jurisdiction over the safety of the project site. Contractor shall provide, at its non-reimbursed cost, all scaffolding, fall protection, ventilation, and similar items needed for required third-party observation and testing, not including personal protective gear of others. Failure by Contractor to provide safe access for the above parties will be a default of the provisions of the Contract Documents as provided for in Article 16.02.A.4.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

SC-15.01 Progress Payments

SC-15.01 Delete the first sentence in Article 15.01.B.1 in its entirety and insert the following in its place:

Not more than once per month Contractor shall submit to Engineer for review an Application for Payment, on forms furnished by Engineer or otherwise acceptable to

Engineer, filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

SC-15.01 Delete the word "Ten" in Article 15.01.D.1 and replace with Thirty.

SC-15.07 Waiver of Claims

SC-15.07 Delete the word "Owner" from Article 15.07.B and replace with the following:

"Owner and Engineer and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each"

Division 01

General Requirements

01 11 00
SUMMARY OF WORK

PART 1: GENERAL

1.01 SUMMARY

- A. This section includes a summary of the work required for this project.

1.02 CONTRACT DOCUMENTS

- A. The Contract Documents are as defined in the Supplemental Conditions. The terms of the Contract Documents apply to these Specifications as fully as though repeated herein.
- B. Division of the Work as made in these Contract Documents is for the purpose of specifying and describing work which is to be completed. There has been no attempt to make a classification according to trade or agreements which may exist between Contractor, Subcontractors, trade unions, or other organizations. Such division and classification of the Work shall be the Contractor's sole responsibility.
- C. All work shall be done in accordance with Laws and Regulations including Federal, State, and local codes, statutes, ordinances, and permits. All licenses and permits necessary for the execution of the Work shall be secured by Contractor. All permits shall be executed and implemented by Contractor as part of the Work.

1.03 PROJECT INFORMATION

- A. General Description of Work
1. Project/Site Background: The City is planning to install a new municipal water supply well (Well 16) at Driftwood Park, 2705 5th Street NW, New Brighton, MN.
 2. Project Description: Well 16 is anticipated to be completed with an open hole in the Prairie du Chein aquifer.

1.04 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work as described in these Contract Documents generally consists of the construction of a municipal water supply well all complete, as specified. The overall scope of the Work which is more fully described in these Contract Documents includes, but is not limited to, furnishing all labor, tools, equipment, and materials necessary to:
1. Mobilization and demobilization of all work
 2. Drill and complete a new 18" diameter municipal water supply well
 3. Provide water quality testing of new well
 4. Site restoration
- B. It is the intent of the Contract Documents to describe a functionally complete Project to be constructed in accordance with the Contract Documents.
- C. The Work includes the furnishing of all equipment and machinery such as scaffolds, additional casings, false work, forms, centers, and other items required for the construction of a complete Project as specified. Equipment furnished shall be in safe operating condition and of adequate size, capacity, and condition for the performance of the Work. However, the selection of means, methods, techniques, sequences, procedures of construction, and all matters pertaining to safety precautions incidental to the Work shall be the sole responsibility of Contractor.

- D. Contractor shall obtain all measurements necessary for the Work and shall be responsible for establishing all dimensions, levels, and layout of the Work. Where work of one trade joins to or is part of other work, there shall be no discrepancy or incompleteness in the finished Work.
- E. Contractor shall be solely responsible for coordinating all parts of the Work and at the proper time provide and set all required anchors, blocking, sleeves, inserts, and similar required materials whether or not specifically shown on the Drawings or described in these Specifications. Where an item is not specifically mentioned and is reasonably necessary for the complete work, Contractor shall furnish and install same under this contract as an incidental cost without expecting additional compensation.
- F. The Work includes all cutting and patching, cleaning and testing required for a complete Project meeting the requirements of the Contract Documents whether or not specifically identified herein.
- G. Contractor is responsible for determining to their satisfaction all conditions that need to be accounted for during construction. This includes, but is not limited to: presence, elevation, need for dewatering, soil conditions, site access, site utilities, site drainage, storage and laydown areas, site access and restrictions, and other conditions.

1.05 CONTRACT TIMES

- A. The Work shall be Substantially Complete and ready for use in accordance with the General Conditions on or before the date listed in Article 4 of the Agreement. Substantial completion includes the borings being advanced, wells installed and complete. Substantial Completion is defined as a construction of a fully functioning water supply well that can be used by the City for its intended purpose as designed.
- B. The Work shall be complete and ready for final payment in accordance the General Conditions. Final completion includes the completion of site work and restoration.
- C. Final completion shall be on or before the date listed in Article 4 of the Agreement, and shall be defined as completion of the contract. Final completion shall include all site restoration and clean up.

1.06 SUPERVISION

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.
- B. Contractor shall keep on the Work at all times during its progress a competent resident superintendent that is specifically identified to Owner and Engineer and who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications to the superintendent shall be as binding as if given to Contractor.

1.07 SITE CONDITIONS AND COORDINATION

- A. The proposed well location is shown on the Drawings. Contractor shall field verify site conditions prior to construction. Coordinate all Work with the Owner.
- B. The property is owned by the City. Adjacent driveways, parking area, and trailheads used for access to the site shall be closed and secured by the Contractor during the work. Contractor shall maintain the roads and parking areas in clean, usable condition at all times. Contractor shall promptly correct conditions caused by construction operations that will interfere with normal use of the roadways or parking including, but not limited to, snow, ice and mud.

- C. Contractor shall install stormwater pollution prevention features as required to prevent silt and sediment from eroding and leaving the project site in accordance with these Specifications and all Laws and Regulations.
 - D. Existing buried and above grade utilities are present at the site. Plan to work with the City as needed during the project to ensure site access and protection of all utilities.
 - 1. Prior to starting and work, call Gopher One to perform utility locates.
 - E. Working hours shall be from 7:00 AM to 7:00 PM weekdays and 9:00 AM to 7:00 PM weekends.
- 1.08 PROJECT OWNER
- A. The Project Owner is the City of New Brighton.
- 1.09 PROJECT ENGINEER
- A. The water supply well on this project has been designed by:
 - Barr Engineering Co.
 - 4300 MarketPointe Drive, Suite 200
 - Minneapolis, MN 55435
 - Phone: (952) 832-2600

PART 2: PRODUCTS – NOT USED

PART 3: EXECUTION

- 3.01 UTILITY LOCATES
- A. Prior to starting any work, utilize the Gopher State One Call system to file a utility locate.

END OF SECTION 01 11 00

MEASUREMENT AND PAYMENT**PART 1: GENERAL****1.01 SUMMARY**

- A. This Section of the Specifications describes the measurement and payment for the Work to be done under the items listed in the bid proposal.
- B. Each unit or lump sum price stated on the Bid Form shall constitute full compensation as herein specified for each item of work completed in accordance with the requirements of the Contract Documents including the Drawings and Specifications, including all clean up and restoration.
- C. The bid prices stated in the Bid Proposal shall constitute full compensation for all work completed in accordance with the Contract Drawings and Specifications, including furnishing all materials, machinery, sales tax, fees, supplies and appurtenances; providing all construction equipment and tools; and performing all necessary labor, coordination, supervision, management, overhead and profit to fully complete the Work. All Work not specifically set forth as a separate bid item in the Bid Proposal shall be considered a subsidiary obligation of Contractor and all costs in connection therewith shall be included in the total price submitted in the Bid Proposal.

1.02 ESTIMATED QUANTITIES

- A. Estimated quantities for Unit Price items in the Bid Form are approximate and are to be used only as a basis for determining the Estimated Contract Price. The actual amount of work to be done under the Unit Price items may differ from the estimated quantities. The basis of payment will be the actual amount of work done. Contractor agrees to make no claim for damages, anticipated profits, or otherwise due to any difference between the amounts of work actually performed and the estimated amounts included in the Bid Form.

1.03 INTENT OF BID FORM ORGANIZATION

- A. Payment for Work shall be in accordance with the terms and conditions set forth elsewhere in the Contract Documents and Contractor's Bid prices set forth in Contractor's conformed Bid Form. The Bid items set forth in the Bid Form subdivide the Project for purposes of measurement and payment only, and are intended to represent the entire and complete Project as set forth in the Contract Documents.
- B. The following paragraphs describe the materials, equipment, labor, and supplies that are included in each of the Bid items. Where Bid items are based on Unit Prices, progress payments shall be based on the actual quantities of each item of Work completed in accordance with the Contract Documents. The procedures for submitting and processing progress payments are set forth elsewhere in the Contract Documents.

1.04 ITEM 1: MOBILIZATION/DEMOBILIZATION

- A. Method of Measurement: Mobilization/Demobilization will be measured on the basis of a single lump sum (L.S.) unit.
- B. Basis of Payment: A unit price will be paid on a lump sum (L.S.) price for the Mobilization/Demobilization. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary mobilization/demobilization as set forth in these contract documents. The Mobilization/Demobilization as stated in the Bid Proposal shall including all testing and work needed to pass state and local inspections.
- C. The actual payment will occur as follows:

1. 50 percent of the lump sum bid will be paid when the total of the work to date and materials stored on site exceeds 10 percent of the total contract amount.
2. 25 percent of the lump sum bid will be paid when the total of the work to date and materials stored on site exceeds 40 percent of the total contract amount.
3. The final 25 percent of the lump sum bid will be paid when the work is complete, the site is cleaned and restored to the Owners satisfaction and all paperwork and samples pertaining to the project have been submitted Engineer.

1.05 ITEM 2: SETUP/TAKEDOWN ON WELL

- A. Method of Measurement: Set Up/Take Down On Well will be measured on the basis of per each (Ea.) set up/take down.
- B. Basis of Payment: Contractor will be paid a unit price for each borehole or well set up and take down. Contractor will be paid per each time the drilling rig is set up/taken down after completion of a borehole or well. Contractor will not be paid more than one set up/take down at a borehole or well per completed borehole or well. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations for set up/take down at a borehole or well.

1.06 ITEM 3:FURNISH, DRILL, AND DRIVE 24-INCH DIAMETER CASING

- A. Method of Measurement: Furnish and Install 24-inch Diameter Casing will be measured per linear foot (L.F.) furnished and installed.
- B. Basis of Payment: Contractor will be paid a unit price per linear foot (L.F.) measured from the ground surface to the final permanent depth of penetration by the casing. Any casing extended above grade for final completion is considered incidental. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations required for assembling and installing the casing. The quantity for this item may be modified based on the results of the main hole drilling.

1.07 ITEM 4: DRILL 23.25-INCH DIAMETER BOREHOLE

- A. Method of Measurement: Drill 23.25-inch Diameter Borehole will be measured per linear foot (L.F.) drilled.
- B. Basis of Payment: Contractor will be paid a unit price per linear foot (L.F.) measured from the bottom of the 24-inch casing to the final depth of the borehole. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations required for drilling the borehole. The quantity for this item may be modified based on the results of the main hole drilling

1.08 ITEM 5: FURNISH AND INSTALL 18-INCH DIAMETER CASING

- A. Method of Measurement: Furnish and Install 18-inch Diameter Casing will be measured per linear foot (L.F.) furnished and installed.
- B. Basis of Payment: Contractor will be paid a unit price per linear foot (L.F.) measured from the ground surface to the final permanent depth of penetration by the casing. Any casing extended above grade for final completion is considered incidental. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations required for assembling and installing the casing. The quantity for this item may be modified based on the results of the main hole drilling.

1.09 ITEM 6: DRILL 17.25-INCH OPEN HOLE

- A. Method of Measurement: Drill 17.25-inch Open Hole will be measured per linear foot (L.F.) drilled.

- B. Basis of Payment: Contractor will be paid a unit price per linear foot (L.F.) measured from the bottom of the 18-inch casing to the final permanent depth of the open hole. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations required for drilling the open hole.
- 1.10 ITEM 7: FURNISH AND INSTALL NEAT CEMENT GROUT
- A. Method of Measurement: Furnish and Install Neat Cement Grout will be measured per cubic yard (C.Y.) furnished and installed.
 - B. Basis of Payment: A unit price will be paid per cubic yard (C.Y.) of Neat Cement Grout furnished and installed to meet state well code. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations required to furnish and install the neat cement grout.
- 1.11 ITEM 8: PLUMBNESS AND ALIGNMENT TEST
- A. Method of Measurement: Plumbness and Alignment Test will be measured on the basis of a single lump sum (L.S.) unit.
 - B. Basis of Payment: Contractor will be paid a single lump sum (L.S.) price for the plumbness and alignment test. Contractor will be paid for only one test, however, if Contractor elects to construct the well with additional casings beyond the one shown in the drawing, they shall run additional plumbness and alignment tests for each casing. The costs of those tests shall be incidental to the project. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations for required to conduct the plumbness and alignment test. Note the quantity for this item may be modified based on the results of the drilling.
- 1.12 ITEM 9: FURNISH DEVELOPMENT EQUIPMENT
- A. Method of Measurement: Furnish Development Equipment will be measured on the basis of a single lump sum (L.S.) unit.
 - B. Basis of Payment: Contractor will be paid a single lump sum (L.S.) price for furnishing development equipment for the entire project. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to furnish development equipment for development of the well including the necessary discharge pipe, drivable ramps, treatment equipment or above grade storage tanks or dumpsters, or traffic control.
- 1.13 ITEM 10: INSTALL AND REMOVE WELL DEVELOPMENT EQUIPMENT
- A. Method of Measurement: Install and Remove Development Equipment will be measured on the basis of per each (Ea.) unit which is installed and removed from a monitoring well.
 - B. Basis of Payment: A unit price will be paid per each (Ea.) installation and removal of the development equipment. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to install and remove the development equipment.
- 1.14 ITEM 11: OPERATE WELL DEVELOPMENT EQUIPMENT
- A. Method of Measurement: Operate Development Equipment will be measured to the nearest hour of operation of development equipment when development equipment is actually in operation.
 - B. Basis of Payment: A unit price will be paid per hour (Hour) for well development. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to develop the well as specified and handle the sand produced by or water treatment needed from development.

1.15 ITEM 12: REMOVE FILL FROM WELL

- A. Method of Measurement: Remove Fill from Well will be measured per cubic yard (C.Y.) removed.
- B. Basis of Payment: A unit price will be paid per cubic yard (C.Y.) of fill removed from the well. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations required to remove fill from the well.

1.16 ITEM 13: FURNISH TEST PUMPING EQUIPMENT

- A. Method of Measurement: Furnish Test Pumping Equipment will be measured on the basis of a single lump sum (L.S.) unit.
- B. Basis of Payment: Contractor will be paid a single lump sum (L.S.) price for furnishing test pumping equipment for the entire project. This applies for equipment to be used for the well pumping test. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to furnish test pumping equipment, including the necessary discharge pipe, treatment equipment, or above grade storage tanks or dumpsters, or traffic control, as described in these Specifications.

1.17 ITEM 14: INSTALL AND REMOVE TEST PUMPING EQUIPMENT

- A. Method of Measurement: Install and Remove Test Pumping Equipment will be measured on the basis of per each (Ea.) unit.
- B. Basis of Payment: Contractor will be paid per each (Ea.) installation and removal of the test pumping equipment. This applies for each individual well test pump. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to install and remove the test pumping equipment, including providing a power source for the pump and the necessary materials for the discharge pipe. Note the quantity for this item may be modified based on the results of the drilling or on information gathered during the pumping test.

1.18 ITEM 15: OPERATE TEST PUMPING EQUIPMENT

- A. Method of Measurement: Operate Test Pumping Equipment will be measured to the nearest hour (Hr.) of operation of test pumping equipment.
- B. Basis of Payment: Contractor will be paid a unit price per hour (Hr.) of test pumping. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to operate test pumping equipment, and sand content testing. If the test pump procedure is interrupted due to fault of Contractor, such as equipment problems, Contractor supplied power source failure, and human error, test pumping shall be restarted from the beginning; no compensation will be made for the unsuccessful period of test pumping. Note the quantity for this item may be modified based on the results of the drilling or on information gathered during the pumping test.

1.19 ITEM 16: TELEWISE WELL

- A. Method of Measurement: Telewise Well will be measured per each (Ea.) well televising that is completed.
- B. Basis of Payment: Contractor will be paid a unit price per each (Ea.) successful recorded televised inspection of the full depth of well requested and accepted by Owner that conforms to these Specifications. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to televise well. Note the quantity for this item may be modified based on the results of the pilot hole information.

- 1.20 ITEM 17: FURNISH, INSTALL, AND REMOVE WATER DISCHARGE PIPING
- A. Method of Measurement: Furnish, Install, and Remove Water Discharge Piping will be measured on the basis of a single lump sum (L.S.) unit.
 - B. Basis of Payment: Contractor will be paid a single lump sum (L.S.) price for furnishing, installing, and removing water discharge piping for the entire project. This applies for equipment to be used for the well development and test pumping water discharge. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to furnish discharge piping, including the necessary discharge pipe, fittings flowmeters, other appurtenances, or traffic control, as described in these Specifications.
- 1.21 ITEM 18: FURNISH, INSTALL, AND REMOVE WATER TREATMENT EQUIPMENT
- A. Method of Measurement: Furnish, Install, and Remove Water Treatment Equipment will be measured on the basis of a single lump sum (L.S.) unit.
 - B. Basis of Payment: Contractor will be paid a single lump sum (L.S.) price for furnishing, installing, and removing water treatment equipment for the entire project. This applies for equipment to be used for the well development and test pumping water treatment prior to discharge offsite. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to furnish water treatment equipment, including the necessary tanks, vessels, granular activated carbon, valves, pipe, fittings flowmeters, other appurtenances, or traffic control, as described in these Specifications.
- 1.22 ITEM 19: OPERATE WATER TREATMENT EQUIPMENT
- A. Method of Measurement: Operate Water Treatment Equipment will be measured on the basis of a single lump sum (L.S.) unit.
 - B. Basis of Payment: Contractor will be paid a single lump sum (L.S.) price for operating the water treatment equipment for the entire project. This applies for water treatment equipment to be operated for treatment of the well development and test pumping water prior to discharge offsite. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations and sampling necessary to operate the water treatment equipment, as described in these Specifications.
- 1.23 ITEM 20: PROVIDE WATER TREATMENT CHEMICAL(S)
- A. Method of Measurement: Provide Water Treatment Chemical(s) will be measured on the basis of a single lump sum (L.S.) unit.
 - B. Basis of Payment: Contractor will be paid a single lump sum (L.S.) price for providing any water treatment chemicals used in the water treatment equipment for the entire project. This applies for water treatment equipment for treatment of the well development and test pumping water prior to discharge offsite. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, for the water treatment chemical(s) described in these Specifications.
- 1.24 ITEM 21: WELL DISINFECTION AND SAMPLING
- A. Method of Measurement: Well Disinfection and Sample will be measured per each (Ea.) well disinfection and sampling.
 - B. Basis of Payment: Contractor will be paid a unit price per each (Ea.) well disinfection and sampling. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to disinfect and sample the well as specified. Contractor will be paid for disinfection one time only for the well. The Contractor shall bear the costs of additional disinfections.

1.25 ITEM 22: EROSION CONTROL

- A. Method of Measurement: Erosion Control will be measured on the basis of a single lump sum (L.S.).
- B. Basis of Payment: Contractor will be paid a lump sum (L.S.) price for all erosion control, all complete as specified. This unit price shall be payment in full for the costs of all supervision, materials, equipment, labor, supplies, profit and overhead, and performing all operations as are necessary to furnish, install, and maintain the silt fence, erosion control logs, construction entrances, and any other means needs for control of erosion from the site for the duration of the work, and removal at the completion of the project, all complete as specified. Eighty percent of the unit price will be paid for furnishing and installing erosion control and 20 percent of the unit price will be paid upon removal of the erosion control at the completion of the project.

1.26 ITEM 23: SITE RESTORATION

- A. Method of Measurement: Site Restoration will be measured on the basis of a single lump sum (L.S.) unit.
- B. Basis of Payment: Contractor will be paid a lump sum (L.S.) price for the Site Restoration. This unit price shall be payment in full for the costs of all supervision, labor, materials, equipment, overhead and profit, and performing all operations necessary to restore the site, including grading, spreading top soil, or spreading Owner-supplied borrow if needed, as set forth in these Contract Documents.

1.27 SUMMARY

- A. Section includes a listing of necessary permits and regulatory requirements for the work.

PART 2: PRODUCTS – NOT USED

PART 3: EXECUTION – NOT USED

END OF SECTION 01 29 00

01 33 00
SUBMITTAL PROCEDURES

PART 1: GENERAL

1.01 SUBMITTAL LIST

The following is a partial submittal list for this project:

- A. Progress Schedule
- B. Applications for Payment
- C. Test Results and Certificates
- D. Manufacturer's Data as Requested
- E. Shop Drawings
- F. Record Drawings
- G. Application for Final Payment and Closeout Forms

1.02 GENERAL SUBMITTAL PROCEDURES

- A. Contractor shall:
 - 1. Transmit each submittal labeled with the Project name, name of the submittal, and Section and page number of these Contract Documents in which the submittal was required. Indicate the type or purpose of the submittal as more fully described elsewhere in this Section with regard to the Schedule of Submittals. Transmit the correct number of copies as described below for each type of submittal. Each submittal shall be accompanied by a transmittal letter stating the same information.
 - 2. Transmit all submittals to Engineer at the address set forth in the Agreement for notices. Submittals will be accepted electronically.
 - 3. Apply Contractor's stamp, signed or initialed certifying that review and verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents. Unstamped or unsigned submittals will be returned without action.
 - 4. Schedule submittals to expedite Project and in accordance with the Schedule of Submittals to be prepared by Contractor. Coordinate submission of related items.
 - 5. Identify all variations or deviations from the Contract Documents and identify alternative products or system limitations which may be detrimental to successful performance of the completed Work.
 - 6. Provide space for Engineer review stamps and comments on all submittals.
 - 7. Revise and resubmit submittals as required in a timely manner. Identify all changes made since previous submittal.

8. Promptly distribute copies of reviewed submittals to Subcontractors, suppliers, and other concerned parties. Instruct parties to promptly report any inability to comply with provisions.
 9. Not proceed with any Work requiring a submittal, including resubmittal, to Engineer until the submittal has been returned to Contractor without a requirement for resubmittal.
- B. All submittals that are made that are not specifically required by the Contract Documents will be returned without action.
 - C. All submittals shall come from Contractor and submittals directly from Subcontractors or vendors will be returned without action.
 - D. The cost of submittals shall be included in the Contract Price and no additional compensation will be provided.

1.03 PROGRESS SCHEDULE

- A. Contractor shall submit an estimated progress schedule and a finalized progress schedule in accordance with the requirements of the General Conditions.
- B. Contractor shall revise the finalized progress schedule from time to time, as may reasonably be requested by Engineer, to reflect the current status and progress of the Work and the operations necessary to complete the Work as required.
- C. If requested, Contractor shall have a current progress schedule for review by the Engineer and Owner before partial estimates are processed and paid.
- D. The Schedule of Submittals will be reviewed by Engineer and Engineer will respond in writing listing deficiencies. Contractor shall not list submittals not called for in the Contract Documents. The schedule shall include all items for which Contractor proposes to use substitute or "or equal" products. Contractor shall correct deficiencies and resubmit schedule of submittals prior to beginning any Work.

1.04 APPLICATIONS FOR PAYMENT

- A. General
 1. Applications for progress payments shall be submitted as set forth in the General Conditions except as herein modified. Each Application for Payment shall be accompanied by the required supporting data as specified in the Contract Documents. Submit three signed counterparts.
 2. Owner will act on payment requests approximately once each month.
 3. All Applications for Payment shall be made on forms provided by Engineer or otherwise acceptable to Engineer. Forms shall be completed in their entirety and all signatures and notarizations shall be completed.
 4. Applications for Payment shall be consistent with the actual Work completed as of the date of application. Applications should be consistent with the current schedule of values and progress schedule, and if not, those schedules should be modified as set forth elsewhere in this Section.

5. Incomplete or deficient Applications for Payment will be returned to Contractor by Engineer as set forth in the General Conditions. Contractor shall correct such deficiencies and resubmit the Application for Payment.

C. Initial Application for Payment

1. Contractor shall not make its initial application for payment until the required administrative procedures have been complied with. These procedures include, but may not be limited to, submittal of acceptable:
 - a. Proof of insurance
 - b. Progress schedule
 - c. Schedule of values
 - d. Schedule of submittals

D. Supporting Data

1. Each Application for Payment shall be accompanied by such supporting data as may be required by Owner or Engineer to substantiate Contractor's application. All Applications for Payment which include payment for shop fabricated equipment shall be accompanied by invoices and records from the fabricator substantiating the progress of the Work on each of the individual pieces of equipment. Receipts for materials shall indicate the specific piece of equipment for which the materials will be used. Time reports and other records shall be furnished to verify the fabricator's costs. Reports shall contain only information pertinent to this Project and shall contain summaries of all detailed information. If requested, Contractor shall provide photographs showing the status of construction of the shop fabricated components. Photographs shall have the date of the photograph displayed on the photo.

E. Application for Final Payment

1. The administrative procedures which shall be completed by Contractor prior to application for final payment include, but may not be limited to, the following:
 - a. Completion of items on the tentative list of items to be completed or corrected as determined for Substantial Completion and other items related to defective Work that become apparent following Substantial Completion.
 - b. Assurance, satisfactory to Owner, that there are no unsettled claims.
 - c. Submittal of the required construction records, including record drawings, to Engineer.
 - d. Contractor and all Subcontractors shall furnish a certificate showing that they have complied with the provisions of M.S.A. 290.92 requiring withholding of income tax on wages at the source. Said certificates shall be executed by the Commissioner of Taxation. IC-134 forms for certifications may be obtained from the Department of Revenue, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155.
 - e. Contractor must provide a one-year guarantee bond(s) from date of final acceptance and final payment.
 - f. Consent of surety for final payment.

1.05 SUBMITTAL OF TEST RESULTS AND CERTIFICATES

- A. When required in individual sections of these Specifications, or when required by reference specification, submit four (4) copies of manufacturer's certificates and/or test results. These submittals may be submitted electronically with the approval of the Owner and Engineer.
- B. Submit at least ten (10) days prior to incorporation into the Work the results of mill tests, laboratory tests, and factory tests.
- C. Indicate that material or product conforms to or exceeds the specified requirements and submit supporting data and affidavits.
- D. When material or product meets Specifications, no action by Engineer is necessary.

1.06 SUBMITTAL OF MANUFACTURER'S LITERATURE OR INSTRUCTIONS WHEN REQUESTED FOR INFORMATIONAL PURPOSES

- A. When required in individual sections of these Specifications, submit four (4) copies of manufacturer's product data requested. These submittals may be submitted electronically with the approval of the Owner and Engineer.
- B. Mark each copy neatly to identify applicable products, models, options, and other data. Identify conflicts between manufacturer's instructions and Contract Documents.
- C. When submittal is for informational purposes only or when material or product meets requirements of Contract Documents, no action by Engineer is necessary.

1.07 SUBMITTAL OF SHOP DRAWINGS

- A. When required in individual sections of these Specifications, submit four (4) opaque reproductions of Shop Drawings in accordance with the Schedule of Submittals. In lieu of hard copies, submittals may be transmitted electronically for review, but Contractor shall provide the Owner with hard copies of the submittals at the end of the project for their records.
- B. Contractor shall comply with all requirements of the General Conditions, in particular with paragraphs 6.17, with regard to Shop Drawing Submittal.
- C. The data shown on the Shop Drawings shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the materials and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes indicated below.
- D. Before submitting each Shop Drawing, Contractor shall have determined, verified, and certified that:
 - 1. All field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information as required.
 - 2. All issues regarding fitness for intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the Work.
 - 3. All information relative to Contractor's sole responsibilities in respect of means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto.

4. Contractor shall also have reviewed and coordinated each Shop Drawing with other Shop Drawings and with the requirements of the Work and the Contract Documents. Any disclaimers on Contractor's stamp or otherwise stated by Contractor on Shop Drawings shall not limit Contractor's responsibilities set forth above.
 - E. Engineer will review and approve Shop Drawings in accordance with the schedule of Shop Drawings. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer's review will be limited to the above areas and will not extend to those areas for which Contractor is responsible. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. Engineer's review and approval of Shop Drawings shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has, in writing, called Engineer's attention to each variation at the time of submission.
 - F. Engineer will review and return two marked copies of Shop Drawings to Contractor within fourteen (14) calendar days following receipt of submittal. Contractor shall not proceed with related Work until approved submittal is returned.
 - G. If Engineer's comments require resubmittal, Contractor shall make the revisions indicated and resubmit as for an original submittal. Engineer will review as for an original submittal.
 - H. If Engineer's comments do not require resubmittal, Contractor shall make the revisions indicated and transmit to Engineer one (1) reproducible transparency (if larger than 11 inches by 17 inches) or one clean first generation copy suitable for reproduction. This original shall bear Contractor's certification in accordance with the requirements of the General Conditions.
 - I. Following preparation and submittal of final corrected reproducible, Contractor shall reproduce and distribute to Subcontractors and/or suppliers.
 - J. If actual installation does not conform to approved Shop Drawings, notify Engineer. Note revisions on reproducible and submit with record documents.
- 1.08 SUBMITTAL OF SAMPLES
- A. When required in individual sections of these Specifications, submit the number of samples of materials, finishes, colors, etc. as required but not less than two (2).
 - B. Submit samples to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Coordinate with submittals for interfacing Work.
 - C. Submit samples of finishes from the full range of manufacturer's standard colors (or in custom colors if required), textures, and patterns for Engineer or Owner selection.
 - D. Engineer will return one sample of selected material or finish or will provide written comment on submitted material.

1.09 LIST OF SUBMITTALS

Submittal	Reference Section
Final Well Log	01 41 00
Pumping Test and water quality testing Results	01 45 00
Erosion Control Inspection Records	31 25 00
Mill Certification for all Casing Material	33 21 00
Plan for Developing Well	33 21 00
Water Treatment Plan	33 21 00

1.10 RECORD DOCUMENTS

- A. Submit all record documents (or clearly legible copies) prior to substantial Completion.
- B. Record documents consist of all Drawings, Specifications, Addenda, Change Orders, and Shop Drawings legibly annotated to reflect all changes made during construction.

PART 2: PRODUCTS – NOT USED

PART 3: EXECUTION – NOT USED

END OF SECTION 01 33 00

PERMITS AND REGULATORY REQUIREMENTS**PART 1: GENERAL****1.01 SUMMARY**

- A. Section includes a listing of necessary permits and regulatory requirements for the work.

1.02 PERMITS REQUIRED

- A. Obtain and pay for all fees for the required permits, unless otherwise noted below. Work cannot begin until all permits are received. The regulatory requirements for construction of the work shall include, but are not limited to:

1. City of New Brighton
 - a. None
2. Minnesota Department of Health (MDH)
 - a. Well Construction Permit (Owner will submit). Needed prior to construction.
 - b. Wellhead Protection Area Delineation (Owner to submit). Not needed prior to construction.
 - c. Final Well Log (contractor to submit upon project completion)
3. Minnesota Department of Natural Resources (DNR)
 - a. Pre-Construction approval (Owner will submit). Needed prior to construction.
 - b. Water Appropriations Permit (Owner will submit). Not needed prior to construction. Needed prior to permanent well operation.
4. Rice Creek Watershed District
 - a. Plan Review (Owner will submit).
 - b. Discharge water quality requirements (prior to discharge).
5. Minnesota Pollution Control Agency
 - a. Groundwater Pump-out General Permit (Contractor to submit prior to drilling)

1.03 SUBMITTALS

- A. Engineer and Owner should be given a copy of all permits related to the project.

1.04 SEQUENCING AND SCHEDULING

- A. Work can begin once all the permits are approved for the project, regardless if Owner or Contractor submitted the permit application.
- B. Contractor shall not receive any compensation for the delays in starting of the work due to permit approvals.

PART 2: PRODUCTS – NOT USED

PART 3: EXECUTION – NOT USED

END OF SECTION 01 41 00

TESTING AND QUALITY CONTROL**PART 1: GENERAL****1.01 SUMMARY**

- A. This Section includes the testing and quality control requirements for the project.

1.02 QUALITY CONTROL, GENERAL

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce Work of the specified quality. Maintain records of Contractor's tests and results for reference by Engineer or Owner at any time and furnish copies of all test results and quality control procedures as part of Record Documents.
- B. Comply fully with manufacturer's instructions, including each step in sequence. Request clarification from Engineer before proceeding should manufacturer's instructions conflict with Contract Documents.
- C. Obtain copies of and meet the requirements of reference specifications. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified reference standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce workmanship of specified quality. Use persons licensed to perform Work where required by these Specifications or Laws and Regulations.
- F. Secure products and Work in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
- G. Materials furnished and finished or intermediate stages of the Work shall be sampled, tested and inspected as specified in the individual sections of these Specifications and as required by reference specifications.
- H. Performance of tests or observations by Engineer or Owner are for the sole benefit of Engineer and Owner and are not intended to replace Contractor's quality control program. Contractor is solely responsible for establishing and implementing a quality control program to ensure that the Work is in accordance with the Contract Documents.
- I. It is Contractor's responsibility to notify Engineer when Contractor believes Work (or intermediate stages or parts of Work) is of specified quality and to permit Engineer or Owner to perform independent tests or analyses.
- J. The contractual relationship of the parties to the Agreement shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.
- K. The cost of all quality control shall be included in the Contract Price and no additional compensation will be provided.

1.03 MILL TESTS

- A. Mill or shop tests shall be conducted and test results, certificates and/or affidavits shall be submitted as required in the individual sections of these Specifications. Submit in the quantity and in accordance with the requirements of Section 01 33 00. Mill tests refer to those tests typically performed as part of the manufacturer's quality control program and not specifically performed for this Project.

- B. Mill or shop tests shall be accomplished by the manufacturer, fabricator, or supplier of the product. Mill tests may be conducted by an independent testing laboratory and shall be conducted in accordance with specific or standard procedures as specified. ASTM procedures shall be used if other procedures are not specifically required.

1.04 LABORATORY TESTS

- A. Laboratory tests shall be conducted and test results, certificates, and/or affidavits shall be submitted as required in the individual sections of these Specifications. Submit in the quantity and in accordance with the requirements of Section 01 33 00 Submittals. Laboratory tests refer to those tests made by manufacturers, fabricators, suppliers, or Contractor specifically for this Project and conducted by an independent testing laboratory.
- B. All laboratory tests shall be made by an independent testing laboratory approved by Owner or Engineer. These tests shall be performed in accordance with the specified procedures or in accordance with ASTM procedures if no reference is included.
- C. Laboratory tests may be witnessed by Owner, or Engineer, or their representatives. Contractor shall notify Engineer at least four working days (Monday through Friday) in advance of testing to allow Engineer or Owner opportunity to witness. Failure of Contractor to notify will be grounds for rejection of the test results and may require Contractor to repeat testing and/or replace affected Work.
- D. Conduct routine testing of materials used in the Work to satisfy itself that the quality of the Work meets the requirements of the Contract Documents. Owner or Engineer may also conduct routine sampling and analysis to ascertain same. Where laboratory testing or material specifications or quality control requirements are specified in the individual sections of these Specifications, do not proceed with phases of the Work until Owner or Engineer have had opportunity to collect samples or conduct testing necessary to establish the specified quality of the Work. Such instances may include, but are not limited to, soil compaction control, soil gradation testing, moisture content testing, testing of finishes, testing of roofing samples, or any other specified tests.
- E. Pay for all laboratory testing. If testing by Owner identifies defective Work, Contractor shall pay for all subsequent sample collection and testing costs required to convince Owner that the defective Work has been repaired or replaced.

1.05 FIELD TESTS

- A. Field tests shall be conducted and test results, certificates and/or affidavits shall be submitted as required in the individual sections of these Specifications. Submit in the quantity and in accordance with the requirements of Section 01 33 00 Submittals.
- B. Field tests shall be conducted in accordance with the individual sections to establish the quality of complete systems or individual components of process, mechanical and electrical equipment including, but not limited to, piping systems, electrical systems, control systems, ventilation systems, heating systems, water mains, sewers and drains, reservoirs, and similar facilities.
- C. Field tests shall be conducted to establish the performance, capacity, function, efficiency, tightness, leakage, operating characteristics or other special requirements. Tests shall be conducted in accordance with specified procedures or standards. Use applicable standards or codes where none are specified.
- D. Field tests shall be set up and conducted by Contractor or a Subcontractor who shall provide all tools, equipment, instruments, personnel and other facilities required for the satisfactory completion of each test.
- E. Field tests may be witnessed by Owner, or Engineer, or their representatives. Notify Engineer at least four working days (Monday through Friday) in advance of testing to allow Owner or Engineer opportunity to witness. Failure of Contractor to notify will be grounds for rejection of test results and Contractor may be required to repeat testing and/or replace affected Work.

1.06 TESTING SUMMARY

- A. To assist Contractor, the following summary of testing requirements is given. This list is not necessarily complete and tests specified elsewhere shall be performed as required even though not listed hereinafter.
- B. If not otherwise stated in the referenced specification or paragraph or article, or not otherwise directed, signed copies of all test reports from independent testing services shall be sent at once to Owner and Engineer.
- C. Test samples and locations shall be selected or approved by Engineer. Test samples shall be delivered to the testing laboratory as soon as is practicable. Should any of the specified tests fail to meet the requirements of the Specifications, Contractor shall take such additional tests as may be required to satisfy Engineer that the specified test requirements have been obtained.

Test	Reference	Requirements	Frequency
Mill Certification Test	33 21 00 Well Construction		Any well casings
Pumping Test	33 21 00 Well Construction	30- hour pump test	Once after well is completed
Bacteriological Test	33 21 00 Well Construction	Non-detect per AWWA C651	
Water Quality Testing	33 21 00 Well Construction	Complete testing as described in Specifications	Once after well is completed

1.07 CUTTING AND PATCHING

- A. Execute cutting, fitting and patching (including excavation and filling) to complete the Work, and to:
 - 1. Fit the several parts of the Work together, and to integrate parts of the Work with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.
- B. Submit written request in advance of cutting, fitting, and patching elements which affects:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety features of element.
 - 4. Visual quality of sight-exposed element.

PART 2: PRODUCTS – NOT USED

PART 3: EXECUTION – NOT USED

END OF SECTION 01 45 00

Division 31

Earthwork

EROSION AND SEDIMENTATION CONTROL**PART 1: GENERAL****1.01 SUMMARY**

- A. Section includes providing all materials, equipment, and labor to complete erosion and sediment control at the site, including, but not limited to:
 - 1. Provide temporary erosion control to meet the requirements of all federal, state and local agencies.
 - 2. Prevent transport of soil and removed sediment materials from the sites of the Work in compliance with this Section of the Specifications.

1.02 RELATED SECTIONS

- A. Section 33 21 00 Well Construction.

1.03 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only. All revisions of standards and publications are current editions in effect at the date of this document shall apply unless noted otherwise.
- B. Minnesota Department of Transportation Standard Specifications for Construction, 2020 Edition, hereafter referred to as MnDOT Standard Specifications.
- C. Minnesota Pollution Control Agency, Storm Water Manual.
- D. Storm Water Pollution Prevention Plan (SWPPP; included in the Drawings)
- E. Minnesota Pollution Agency NPDES/SDS Construction Stormwater General Permit.

1.04 SEQUENCING

- A. BMPs must be installed on all down gradient perimeters before any upgradient land disturbing activities begin and must remain in place until final stabilization is established.
- B. The timing of the installation of sediment control measures may be adjusted to accommodate short-term activities such as clearing or grubbing, or passage of vehicles. Any short-term activity must be completed as quickly as possible and the sediment control measures must be installed before the next precipitation event even if the activity is not complete.
- C. Maintain and replace the erosion prevention and sediment control measures for the duration of the construction as necessary in accordance with this Section of the Specifications as directed by the Engineer.

1.05 SUBMITTALS

- A. Test results and certificates including:
 - 1. Submit all inspection records completed to Owner at the end of the project.

1.06 QUALITY ASSURANCE

- A. Owner may stop work on the project if Contractor is operating in violation of these Specifications. Commence to diligently restore the project to conform to the conditions of these Specifications within 24 hours. If, in Owner's opinion, Contractor has not, within 24 hours after work stoppage, commenced to diligently restore the project to conform to the conditions of the permit, then Owner may, without further notice to Contractor, take actions to immediately restore the project to the

conditions of these Specifications. The cost of actions by Owner required to restore the project to conditions of these Specifications will be paid by Contractor.

1.07 BASIS FOR COMPENSATION

- A. Compensation for all Work included under this Section shall be as set forth in Section 01 29 00, Measurement and Payment.

PART 2: PRODUCTS

2.01 CONSTRUCTION ENTRANCE

- A. Coarse aggregate shall not consist of crushed concrete or bituminous materials.
- B. Contractor may substitute wood chip or rumble mat construction entrances for the rock construction entrances with prior approval of Engineer.
- C. Contractor shall sweep entrances free of all sediment which is transported onto them as a result of construction.

2.02 SILT FENCE

- A. Silt fence shall conform to MnDOT Standard Specifications 2573 and 3886 for heavy duty silt fence

2.03 SEDIMENT LOG

- A. Sediment log shall conform to MnDOT Standard Specifications 2573 and 3897 for sediment control log.

PART 3: EXECUTION

3.01 CONSTRUCTION ENTRANCE

- A. Contractor shall maintain existing construction entrance through the duration of excavation activities.
- B. Additional construction entrances may be constructed at locations determined in the field at access points by the Contractor and may be modified in the field by Engineer.
- C. Construction entrances shall reduce the amount of soil tracked off-site by vehicles and shall be cleaned and maintained throughout the duration of the Work.
- D. Construction entrances shall be removed at the completion of the project and the area restored to preconstruction conditions. The restoration shall include grading and establishing ground cover in these areas.

3.02 SILT FENCE

- A. Silt Fence shall be installed in accordance with Mn/DOT Standard Specification 2573.3.B. Steel post maximum spacing shall be 4 feet. Minimum post embedment below grade shall be 24 inches.
- B. Silt fence shall be installed at locations shown on the Drawings, or as modified in the field by the Engineer.
- C. Silt fencing shall be removed after a minimum 70% density of a uniform perennial vegetative cover has been established.

3.03 DUST CONTROL AND STREET SWEEPING

- A. Contractor shall implement measures to control fugitive dust.

- B. Sweep roads free of all sediment that is transported onto them as a result of construction. Sweeping shall be done at least weekly or more frequently if requested by Owner, Engineer or the City/County Highway Department.
- C. Materials from street sweeping shall be collected and placed with materials targeted for off-site disposal.

3.04 INSPECTION AND MAINTENANCE

- A. Sconduct routine inspections and perform maintenance to ensure integrity and effectiveness of the erosion and sediment controls.
- B. Engineer may conduct independent inspections and suggest corrective actions based on the findings of the inspections.

END OF SECTION 31 25 00

Division 33

Utilities

33 21 13
WELL CONSTRUCTION

PART 1: GENERAL

1.01 DESCRIPTION OF WORK

- A. Perform all Work included in this Section in accordance with the following paragraphs and the general requirements.
- B. This section includes furnishing all labor, equipment, and materials and performing all operations necessary for the construction of a large diameter well. The new well is to be located as shown on the Drawings. Engineer will stake the well location.
- C. The well will include approximately 255 feet of a 24-inch casing drilled to a depth needed to facilitate the remainder of well construction. It is estimated the well will have a 328-foot long, 18-inch diameter casing terminating approximately 78 feet into the Prairie du Chien formation, as shown in the Drawings. Once casings are set, Contractor will construct a 67-foot open hole into the Prairie du Chien formation. Pilot hole information and conditions encountered during drilling are included in the attachments. Make no changes to the Specifications or Drawings without written direction from Engineer. If additional casings are needed to facilitate construction, provide additional casings, installed according to the State Well Code, necessary to facilitate construction. Additional casings will be incidental to the project.
- D. Anticipated well capacity is 1,000 to 1,400 gallons per minute (gpm) of potable sand-free water with an anticipated 40 to 80-foot drawdown or less and be open to the Prairie du Chien formation.
- E. Following development, perform a pumping test as described in these Specifications and as directed by Engineer.
- F. Construct the well using dual rotary driven-casing techniques. Acceptable equipment includes dual-rotary rigs manufactured under the names Foremost, Barber, or Canterra.

1.02 REFERENCES

- A. The following are complete titles of references cited in this section.
 - 1. AWWA A100, The American Water Works Association Standard for Water Wells.
 - 2. AWWA C206, The American Water Works Association Standard for Field Welding of Steel Water Pipe.
 - 3. AWWA C654 Disinfection of Wells.
 - 4. Minnesota Rules Chapter 4725 Department of Health Water Well Construction Code.

1.03 CONTRACTOR QUALIFICATIONS

- A. All well-related work described in these Specifications shall be performed by a water well Contractor licensed by the state of Minnesota with experience constructing a minimum of five wells of similar dimension and design using the specified dual rotary equipment.

1.04 SEQUENCING AND SCHEDULING

- A. Coordinate Work performed in this Section with the Work performed in the related Sections. Products and equipment furnished and installed under this Section shall be totally compatible both in type and location with materials furnished and installed under related Sections.

1.05 BASIS FOR COMPENSATION

- A. Compensation for all Work included under this Section of these Specifications shall be in accordance with the provisions set forth in Division 2.

1.06 SUBMITTALS

- A. Submit plan to treat all water discharged from the well during construction development and test pumping so that it meets or will exceed all appropriate water quality standards. Assume that treatment of water discharged to the environment is required to remove sand, sediment, suspended solids, cloudiness, discoloration and trichloroethylene (TCE). The methods to be used shall be documented and submitted to Engineer only for review. Engineer will not approve treatment methods if the proposed methods do not produce satisfactory results. It is Contractor's responsibility to modify the methods as needed to meet all requirements placed upon them by regulatory agencies at no additional cost to Owner.
- B. Submit mil certs for all casing supplied for the well construction. Note that mil certs must be provided to match all heat numbers printed on casings to be used in the permanent installation of the well.
- C. Submit plan for developing the well to meet the intended well characteristics.

PART 2: PRODUCTS

2.01 CASING

- A. All casing shall be new (not previously used) steel pipe conforming to the latest requirements of the American Society for Testing Materials (ASTM) Designation A-53 for Type E (electric resistance welded) Grade B or higher. At Contractor's option, equivalent pipe conforming to the latest requirements of the American Petroleum Institute (API) Designation 5L may be used. All pipe used in any given casing shall be of the same material specification. New steel pipe shall meet the requirements of the Minnesota Department of Health Code. Furnish to Owner a certificate of inspection stating that the pipe has been manufactured, sampled, tested, and inspected in accordance with ASTM A-53 or API-5L. Each length of pipe shall be legibly marked with the name of the manufacturer, type of pipe, grade, specification number, and heat number.
- B. Casing pipe shall be joined with welded joints made and inspected in accordance with the latest requirements of the American Water Works Association (AWWA) Standard for Field Welding of Steel Water Pipe, AWWA C206. Welds shall be full penetration, single groove, butt joint arc weld with chamfers, and other weld details in accordance with the American Institute of Steel Construction.
- C. The outer well casing shall be a 24-inch nominal diameter steel pipe with a minimum wall thickness of 0.375 inches and a weight of 94.62 pounds per foot, conforming to the Minnesota Department of Health Water Well Construction Code.
- D. The inner well casing shall be an 18-inch nominal diameter steel pipe with a minimum wall thickness of 0.375 inches and a weight of 70.60 pounds per foot, conforming to the Minnesota Department of Health Water Well Construction Code.
- E. If additional casings are needed to accomplish the construction, they shall be supplied and installed by Contractor and be incidental to the well installation. All casings installed shall conform to the Minnesota Department of Health Water Well Construction Code.
- F. The base of the casing shall be fitted with an appropriately sized drive shoe, such as one constructed of a heat-treated (Rockwell C Hardness 30-32) SAE 1040 steel ring or equal.
- G. Shoes with Rockwell C Hardness 48-54 and constructed of SAE 1026-1035 steel, or those specially designed for use with dual rotary methods, are also acceptable.

2.02 CENTERING GUIDES

- A. The centering guides shall be stave-type centralizers as manufactured by Johnson Screens or equal. Centering guides such as these shall be used to center inner casings inside outer casings.

2.03 DRILLING FLUID

- A. Drilling fluid shall be potable water as defined by the Minnesota Department of Health (Chapter 4725). If used, drilling fluid for dual-rotary methods shall be bentonite, as described below. The driller shall take care to limit the introduction of bentonite into the aquifer to the extent possible and shall be responsible for removing any bentonite from the aquifer that interferes with well production.

2.04 PORTLAND CEMENT

- A. Portland cement (Type 1) shall meet the requirements of ASTM C-150.

2.05 NEAT CEMENT GROUT

- A. The neat cement grout shall consist of a mixture of one bag (94 pounds) of Portland cement (Type 1) to not more than six gallons of potable water. The mixture shall weigh approximately 15 pounds per gallon. Additives will not be permitted.

2.06 BENTONITE

- A. Bentonite shall be finely ground, premium-grade, bentonite equal to that manufactured by NL Baroid Industries, Inc. of Houston, Texas. The bentonite shall be free of lumps and objectionable material that would prevent easy mixing into a smooth fluid free from lumps of unmixed bentonite.

2.07 TEST PUMP AND ACCESSORY EQUIPMENT

- A. Provide a test pump complete with controls with a capacity of 2,000 gpm against a total head of approximately 300 feet. The test pump shall not be the new pump to be installed for future use of the well. The discharge rate shall be controllable over a range from 500 gpm to 2,000 gpm. Provide metering equipment suitable for accurate measuring of the discharge rates. Pumping, throttling, and metering equipment shall be capable of maintaining a steady rate of flow, not varying more than 5 percent from the average. The pumping unit shall be capable of being operated continuously at maximum capacity or lesser rates for a period of at least 24 hours.
- B. The test pumping system shall be equipped to permit measurement of drawdown. Engineer shall approve the proposed method of drawdown measurement.
- C. A discharge pipe shall be installed to conduct the water from the well site as shown on the Contract Drawings.

2.08 WELL DEVELOPMENT EQUIPMENT

- A. Provide the following equipment for the purpose of air pressurization development of the well:
 - 1. Air compressor capable of pressurizing the well as specified in this Section of these Specifications and airlifting out fill produced by development without additional mechanical bailing.
 - 2. Six-inch-diameter eductor piping long enough to reach into the well and permit airlifting of all sand produced during development.
 - 3. Two-inch-diameter air line.
 - 4. A 6-inch or larger diameter butterfly valve for the purpose of rapid well decompression.

5. Valves to control the flow rate of the air pumping procedure and the mixture of air and water produced in air pumping.
 6. A baffle box designed to still the air pump flow and allow the air and water to separate.
 7. A weir box capable of measuring flows of up to 2,500 gpm (either a flat sharp-crested or a 90-degree vee notch).
 8. Equipment needed to construct and maintain a sand pit.
 9. Piping (rigid and/or flexible) to connect all items listed and finally direct the flow to the location shown on the Contract Drawings. Contractor is responsible for providing pipe of sufficient size and strength to withstand the pressures and flows expected from the well during development procedures. Whenever pipes cross driveways, ramps or similar, devices shall be constructed by Contractor to allow residents smooth access to the roads from their driveways.
 10. Tanks, pits piping, valves chemical addition devices and other equipment as determined by Contractor that are needed to provide for treatment of all water discharged from the site so that it complies with all regulatory requirements related to water quality, including but not limited to sand content, turbidity or other water quality standards imposed by a regulatory authority.
 - a. Flocculants may be used if necessary to treat water discharged from the well during development or test pumping. The flocculant shall be a natural biopolymer such as BioStar-CH, or Engineer approved equal.
 - b. Assume that treatment of water discharged to the environment is required to remove sand, sediment, suspended solids, cloudiness and discoloration. The methods to be used shall be documented and submitted to Engineer for review purposes only. Treatment methods will not be approved by Engineer. If the proposed methods do not produce satisfactory results it is Contractor's responsibility to modify the methods as needed to meet all requirements placed upon them by regulatory agencies at no additional cost to Owner.
 - c. All development or test pumping water shall be contained above ground. No subsurface excavations for pits will be allowed.
 - d. Water treatment equipment shall include all temporary piping, hoses, valves, meters, and other appurtenances to allow discharge to the locations shown in the Drawings.
 11. All additional valves, fittings, gages, anchors, safety gear, and other equipment as needed to perform the specified procedure.
- B. The list of equipment above is not all-inclusive. Contractor is responsible for providing all materials and equipment listed and any additional ones required for compression-decompression development procedures. Verify if the equipment specified is sufficient to perform the development required. If needed, larger equipment shall be provided. The need for additional materials and equipment may be implied by using these procedures at the specific site. Contractor is responsible for visiting the site and providing such implied materials and equipment.

PART 3: EXECUTION

3.01 OPEN HOLE WELL CONSTRUCTION

- A. The following discusses the major tasks to be performed in the order of anticipated performance. The discussion shall not relieve Contractor of full responsibility for organizing and performing the work to conform to regulatory requirements and these Specifications.

B. Well Installation

1. The well shall be constructed by dual rotary methods.
2. Provide a 24-inch diameter casing as shown on the Drawings. Advance the 24-inch diameter casing to a depth of approximately 255 feet. The intent is that the casing will be set into the top of the Prairie du Chien formation. During the advancement of the casing, collect samples every 10 feet or at significant changes in the formation as indicated by the drilling characteristics and cuttings. Label samples with the depth at which the samples are taken. In addition to samples taken to comply with regulatory requirements, take one complete set of samples to be submitted to Engineer.
3. Advance a 23.25-inch borehole from the bottom of the 24-inch casing approximately 73 feet into the Prairie du Chien, as shown on the Contract Drawings. During the advancement of the borehole, collect samples every 10 feet or at significant changes in the formation as indicated by the drilling characteristics and cuttings. Label samples with the depth at which the samples are taken. In addition to samples taken to comply with regulatory requirements, take one complete set of samples to be submitted to Engineer.
4. Following completion of the 23.25-inch open borehole, set an 18-inch casing centered in the 24-inch casing. The bottom of the 18-inch casing shall set on the bottom of the rock hole. Grout the annulus between the 18-inch casing and the 23.25-inch open-rock hole and 24-inch casing.
5. Advance a 17.25-inch borehole from the bottom of the 18-inch casing to the top of the Jordan formation, as shown on the Contract Drawings. During advancement of the borehole, collect samples every 10 feet or at significant changes in the formation as indicated by the drilling characteristics and cuttings. Label samples with the depth at which the samples are taken. In addition to samples taken to comply with regulatory requirements, take one complete set of samples to be submitted to Engineer.
6. All welding shall be in accordance with AWWA C206. The top of the casing shall extend above the surrounding ground elevation by at least three feet. During advancement of the casing, a trench around the casing shall be kept filled with dry bentonite powder if drilled by a driven-casing method.
7. Check the well for alignment and plumbness, develop the well, disinfect the well, pump test the well and collect water samples for biological and chemical analysis.
8. Maintain the sand pit so that deposition of the cuttings onsite are not under a bearing portion of any planned future structure. Remove excess cuttings from the drilling procedure and take off site. Contractor will take ownership of the cuttings and provide all labor and machinery needed to handle, transport, and stockpile the cuttings until they are removed from the site. Additional handling, moving, stockpiling, or respreading of cuttings will not be paid for under any item in this contract and is incidental to the well installation.

C. Grouting

1. Completely fill the annulus between the 18-inch casing and the 24-inch casing and the annulus between the 18-inch casing and 23.25-inch rock hole with neat cement grout by pumping under pressure through a tremie pipe.
2. After 6 inches of grout have been placed, maintain the discharge point of the tremie pipe at 3 inches or more below the grout surface. Place full-strength grout up to the point of casing cutoff. Complete grouting in one continuous operation. No work on the well will be permitted for 72 hours after the completion of grouting.

D. Well Development

1. Develop the well to remove fines, stabilize the aquifer around the borehole, and maximize the specific capacity of the well.

2. It is the intention of this specification to improve the specific capacity of the well, reduce sand content in the pumped well water, still the violent bursts during air pumping, measure the total volume of sand removed from the well, and measure the flow rate produced by the well during air pumping.
3. Well development will be accomplished using the compression-decompression and air-surfing methods. Calculate the pressure required to force the water level in the well down to within 20 feet of the bottom of the casing without forcing air into the formation. Then direct air from the compressor into the well at the top of the casing until it reaches this pressure. Suddenly decompress the casing, causing a rush of water into the well. Use repeated compression and decompression cycles.
4. Lift out the resulting sand and fines that accumulate at the bottom of the well with air-lift pumping. During the air-lift pumping, adjust the mixture of air and water flowing in the eductor pipe to maximize the rate at which water is lifted from the well. Monitor sand content of the pumped water to determine when the well has been pumped clean, at which time, begin another cycle of compression and decompression.
5. Direct all water pumped out of the well during air lifting to a baffle box specifically designed to still the violent bursts of air and water flowing out of the well. The box shall also allow the air and water to separate to different discharge points. Secure all piping leading to the box and the box itself to prevent movement.
6. Following the baffle box, direct flow to a pit explicitly constructed for the purpose of measuring the volume of sand removed from the well during development. The pit shall be large enough to contain at least 40 cubic yards of fill from the well and have an outlet designed to retain all fines in the pit while passing water to a final discharge point designated by Owner. Contractor shall be responsible for cleaning out the pit as it fills with fines and sand. Contractor shall be responsible for recording the quantity of sand removed from the well as development proceeds. Include these records in the daily report.
7. Direct the water from the pit over a sharp-crested or 90-degree vee-notch weir and pipe to the final discharge point. Contractor shall be responsible for installing the baffle box, pit, and weir in such a way that allows for continuous flow of the water from the well to the final discharge point designated by Owner. Take measures to prevent erosion during discharge of development water.
8. Prior to discharge to the environment, provide for treatment of the development water to meet all water quality standards imposed by regulatory authorities. Assume that treatment of the discharge water is required and provide appropriate additional tanks, piping valves, chemical addition devices and other equipment as needed to meet these requirements.
9. Proceed with development until the well yields a sustained discharge of 1,000 to 1,400 gpm with a sand content of 2 parts per million (by volume) or less.

E. Bailing Fill from Well

1. Bail the well after each sequence of blasting. Upon completion of blasting, continue bailing until the well reaches its original drilled depth.
2. Provide necessary facilities for the deposit of materials bailed from the well. Contractor is responsible for any damage that may occur. Repair damages to the satisfaction of Owner at no cost to Owner, or Owner may repair damages, and cost of repairs will be deducted from monies due Contractor.
3. It is the intention of these specifications that all fill bailed from the well be removed from the site and disposed of by Contractor. Provide the necessary equipment and facilities for moving, stockpiling, storing, and transporting the material as needed.

4. Should the bailer become stuck in the well during bailing operations, remove the bailer from the well at no cost to Owner.

3.02 TEMPORARY CAPPING

- A. At all times during construction, protect the well in a satisfactory manner to prevent tampering with the well or entrance of foreign matter into it. Install a temporary cap over the well at the end of each day's work and whenever the driller leaves the site. Firmly fix the temporary cap to the casing. The cost of temporary capping will be considered incidental to the work.

3.03 TESTING FOR PLUMBNESS AND ALIGNMENT

- A. Upon completion of the well construction, demonstrate to Owner that the well is straight and vertical. Perform test in accordance with the methods established in AWWA A100, Appendix C, and witnessed by Owner's Representative.
- B. Maintain the following tolerances:
 1. Plumbness — The maximum allowable horizontal deviation (drift) of the well from the vertical shall not exceed two-thirds of the smallest inside diameter of that part of the well being tested per 100 feet of the depth.
 2. Alignment — The alignment must be satisfactory for the successful operation of the permanent pumping equipment.
- C. If the results of the plumbness test indicate that the alignment is not satisfactory for the successful operation of the permanent pumping equipment, Engineer may request that Contractor perform an alignment test in accordance with the methods established in AWWA A100, Section 8.
- D. Should the well fail the plumbness and alignment requirements stated above, correct such faults as exist or drill a new well and abandon the unsuccessful well at Contractor's expense. No payment will be made for well construction, well development, and grouting for wells not meeting the alignment and plumbness requirements.
- E. Owner may waive the requirements of this alignment or plumbness if, in their judgment: (1) Contractor has exercised all possible care in constructing the well and the defect is due to circumstances beyond its control; and (2) the utility of the completed well will not be materially affected.
- F. Contractor shall be paid for one plumbness and alignment test made upon well completion. Contractor may make alignment tests at his own expense at any time during well construction. Owner reserves the right to require Contractor to make alignment tests at any time during the well construction. If the well passes the alignment test, Owner will be responsible for the cost of the test. If the well fails an alignment test, Contractor shall bear all costs of all further alignment tests made to verify the adequacy of collective work or the alignment tests of a new well drilled by Contractor.
- G. Perform an alignment test on every casing installed to identify problems early. If plumbness or alignment problems are noted in the outer casing, bring problems to the attention of Engineer in writing immediately. Tests performed on casings other than the main 18" casing are incidental to well construction. Only the test performed on the inner casing must be witnessed by Engineer.

3.04 TEST PUMPING

- A. Upon well development completion, clean out the well to the bottom of the open hole and install temporary pumping equipment, throttling valves, and suitable measuring devices approved by Engineer. The devices shall be capable of producing and measuring a flow of 2,000 gpm and 300 feet drawdown at the well. Coordinate the test pumping with Owner so that the other municipal wells are shut down during the procedure and static water levels in other wells can be

measured. Discharge water pumped during test pumping as shown on the Drawings. Provide enough piping to discharge water at this location. Conduct the test at such various flow rates as Engineer directs, and accurately measure drawdown and discharge rates at such intervals as directed by Engineer. Record the sand content of the pumped water at stable drawdowns for each pumping rate. It is anticipated that the test will be carried on for a 30-hour period of continuous operation, but Engineer reserves the right to lengthen or shorten this period as may be indicated by the results. If, at the completion of the test, Engineer determines that the test is insufficient, Engineer may direct Contractor to remove the test pump and equipment and proceed with further development.

- B. Monitor sand content during test pumping. Conduct the sand content test using a centrifugal sand sampler located on a tap at the discharge pipe centerline. The centrifuge collects the sand in a removable vial for direct measurement of sand volume. Proceed with continuous sand sampling from the beginning of the test pumping. If possible, do not empty the sand vial shall during the entire test pumping period. If the vial fills with sand and must be emptied during the test pumping period, record the amount of sand discarded and the time at which the vial was emptied. Take readings of the amount of sand collected in the vial every 15 minutes for the first hour at each pumping rate and hourly thereafter. Maintain a constant flow rate through the sand sampler as the pumping rate is changed during the test pumping period. Verify the flow rate using the timed volumetric method.
- C. Provide the centrifugal sampler, along with a drum or other vessel of known volume for measuring the discharge volume. The discharge will be considered acceptable if the average sand concentration measured over the length of the test pumping is less than one part per million, and consecutive readings have shown a trend toward decreasing or stable sand content values.

3.05 WATER TREATMENT DURING TEST PUMPING AND DEVELOPMENT

- A. Apply appropriate methods to ensure that the water being discharged to the environment is appropriately treated to remove sand, sediment, suspended solids, cloudiness and discoloration. The methods employed shall meet the requirements of all governing and regulatory bodies including but not limited to Watershed Districts, the Minnesota Pollution Control Agency, the Minnesota Department of Health or similar State agencies, the City and the county. Assume such treatment is required, and include the costs as an incidental item in their project costs associated with the related pumping. If the proposed methods do not produce satisfactory results it is Contractor's responsibility to modify the methods as needed to meet all requirements placed upon them by regulatory agencies at no additional cost to Owner.
- B. Water generated during development and test pumping is anticipated to contain trichloroethylene (TCE) in the range of 5-10 ug/L. Contractor shall provide treatment with granular activated carbon (GAC) prior to discharge offsite. It is anticipated that two treatment vessels containing 10,000 lbs of GAC each will be required. Water discharged offsite shall have a TCE concentration of 5 ug/L or less.

3.06 TELEVISION WELL

- A. Following the removal of downhole equipment and grouting, televise the completed well.
- B. Conduct a televised and videotaped inspection of the entire well using state-of-the-art color camera equipment complete with an articulated lens operated by trained employees. Provide, install, and operate all necessary equipment and procedures necessary to perform the work. Stop the video at each casing joint and inspect the entire joint before proceeding to the next joint. Provide a typed report noting the location and condition of each joint. It is the responsibility of Contractor to discharge sufficient water into the well to clear the well before videotaping. If the recorded results do not produce a sharp image of the well, conduct additional cleaning and taping at Contractor's expense until the results produce an acceptable record. Owner's Representative must be onsite to view the recording. Following the work, submit an electronic copy of the inspection and two copies of the written report to Engineer.

3.07 WELL ABANDONMENT

- A. If the well fails to conform to these specifications and Contractor is unable to correct the condition or negotiate a mutually acceptable cost reduction for specific deviations, it will be considered an abandoned hole, and Contractor shall immediately start a new well at a nearby location designated by Owner.
- B. Seal the abandoned well from the bottom upward with neat cement grout in accordance with the Minnesota Rules, Chapter 4725. Labor, equipment, and materials for well abandonment will be considered incidental to the Work.

3.08 WELL DISINFECTION, SAMPLING, AND COMPLETION

- A. After all work on the well has been completed, disinfect and sample the well in accordance with the requirements of the Minnesota Department of Health Water Well Construction Code, S 4725.5550 and 4725.5650.
- B. Notify Engineer 7 days prior to sampling event. Allow Engineer to collect samples concurrent with Contractor sampling event.
- C. The following analyses shall be conducted by a qualified environmental professional, on-site, immediately after collection, near the end of the pumping test using industry standard water quality meter such as a YSI ProDDS or equivalent instrument. Document instrument calibration verification.
 - 1. pH
 - 2. Water temperature
 - 3. Conductivity
 - 4. Turbidity
- D. Samples of water shall be collected by a qualified environmental professional near the end of the pumping test. Preserve the samples as directed by the laboratory. Chemical analysis shall be conducted by a National Environmental Laboratory Accreditation Conference (NELAC) laboratory using EPA methods as required by SWDA and cited below. The chemical analysis shall include the following determinations:

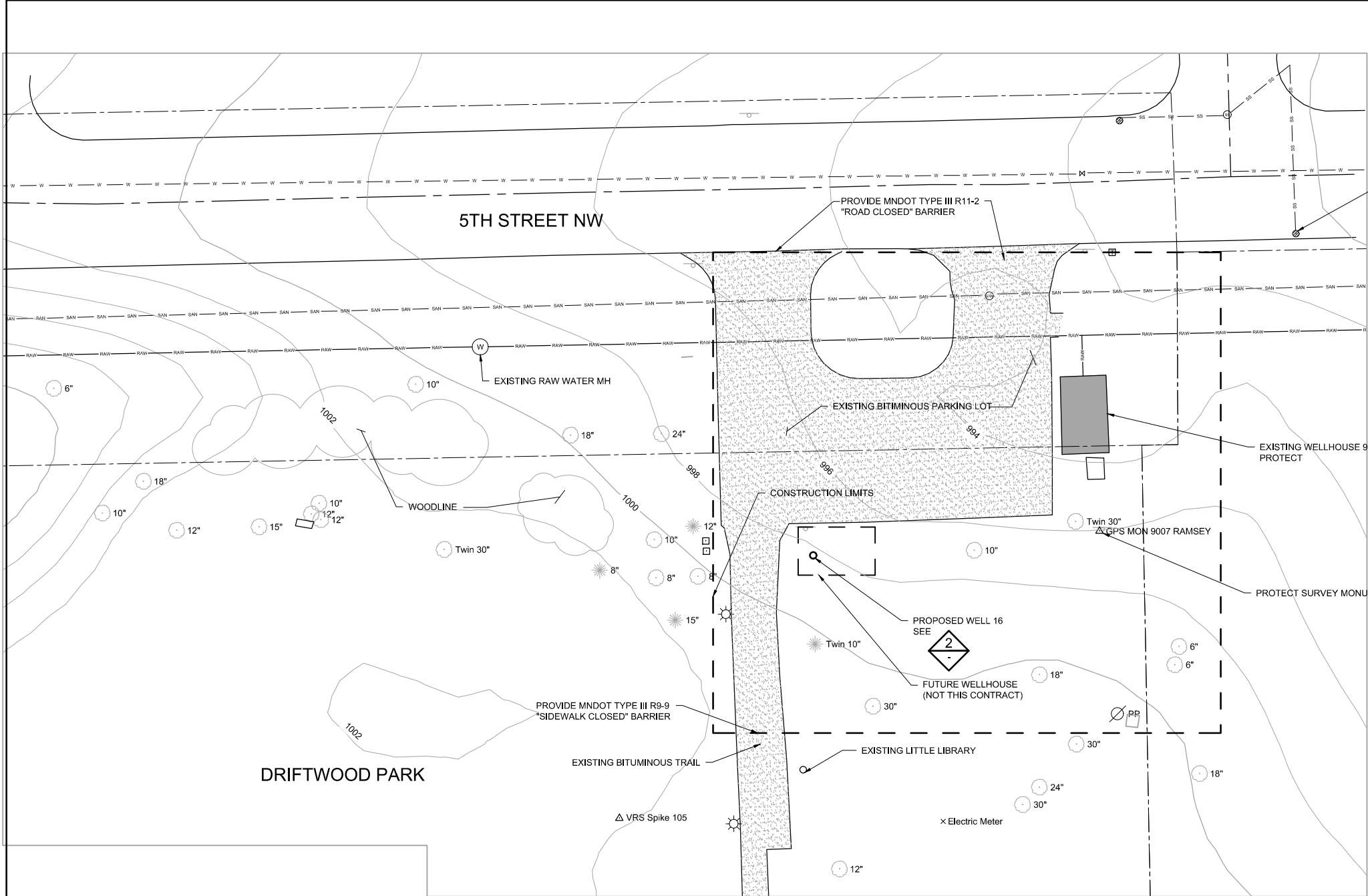
Parameter	EPA Approved Method
Inorganic Testing	
General Chemistry:	
Total Solids	SM 2540 B
Total Dissolved Solids	SM 2540 C
Total Hardness (as CaCO ₃)	SM 2340 B
Total Alkalinity (as CaCO ₃)	SM 2320 B
Chloride, Fluoride, Sulfate, Nitrate, Nitrite	EPA 300.0
Total and Dissolved Organic Carbon	SM 5310 C
Nitrogen, Ammonia, as N	SM 4500 NH ₃ D
Bacteria:	
Total Coliform	SM 9223 B (Coli-ert)
Metals:	
Calcium, Iron (total), Potassium, Magnesium, and Sodium	EPA 200.7
Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Antimony, Selenium, Titanium, and Manganese	EPA 200.8

Mercury	EPA 245.1
Radionuclides:	
Gross Alpha/Gross Beta	EPA 900
Radium 226/Radium 228	EPA 903/904
Organic Testing	
Volatile Organic Compounds (VOCs)	EPA 524.3
Semi-Volatile Organic Compounds (SVOCs) + PFOs	EPA 525.3
Per and Polyfluoroalkyl Substances (PFAS)	EPA 533 & EPA 537.1
Other:	
Asbestos	EPA 100.2

- E. Weld a temporary cap over the casing, as described in Section 3.04, upon completion of all well construction activities under this project. Labor, equipment, and materials for final well capping will be considered incidental to the Work.

END OF SECTION 33 21 13

Drawings

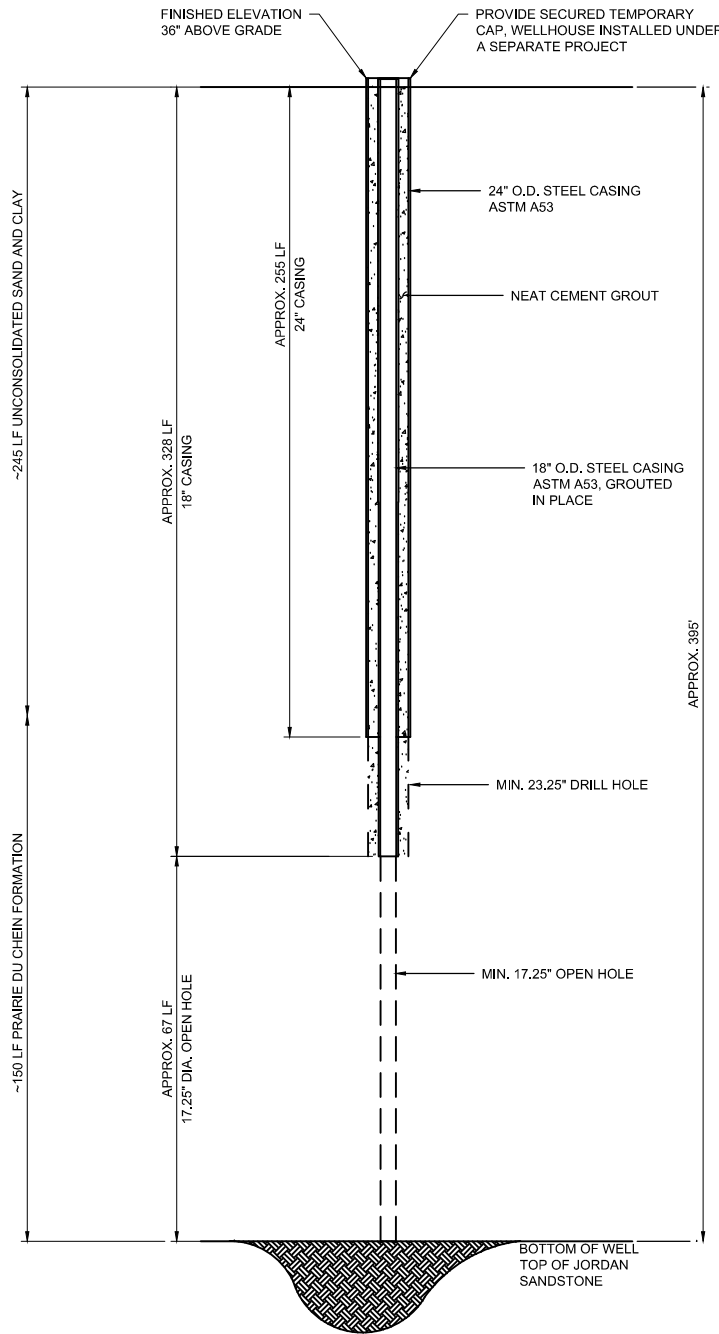
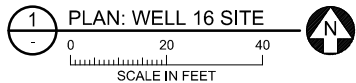


NOTES:

- FINAL CONFIGURATION OF WELL CONSTRUCTION SHALL BE DEPENDENT ON CONDITIONS ENCOUNTERED IN THE FIELD AS DETERMINED DURING DRILLING.
- ADDITIONAL TEMPORARY OUTER CASING IF NEEDED TO FACILITATE INSTALLATION SHALL BE INCIDENTAL TO WELL CONSTRUCTION.
- GROUT WELL TO A MINIMUM DEPTH PER MDH REQUIREMENTS.
- GEOLOGIC CONDITIONS ASSUMED BASED ON TEST WELL (UNIQUE WELL ID 854560).
- THE SUBSURFACE UTILITY INFORMATION ON THIS PLAN IS SHOWN TO UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".
- CALL FOR UTILITY LOCATE PRIOR TO ANY CONSTRUCTION.
- ALL CONSTRUCTION ACTIVITY MUST REMAIN ON OWNER'S PROPERTY.
- FIELD VERIFY DIMENSIONS AND EXISTING UTILITIES.
- PROVIDE SILT FENCE AT CONSTRUCTION LIMITS. PROVIDE FENCING OR OTHER BARRIER AT DRIVEWAY AND TRAILHEAD. SEE SHEET C-02 FOR EROSION CONTROL DETAILS.
- PROVIDE TEMPORARY TRAFFIC CONTROL SIGNAGE AS SHOWN AT SITE ENTRANCES AND TRAIL.
- ROUTE TEST PUMPING AND DEVELOPMENT WATER THROUGH STORM SEWER AS SHOWN ON DRAWINGS. PROVIDE SETTLING TANK AND HEAVY DUTY SILT FENCE.
- THE FINAL LOCATION OF THE WELL WILL BE STAKED IN THE FIELD BY ENGINEER.

LEGEND

	STRUCTURE		SURVEY MONUMENT
	SANITARY SEWER LINE		FOUND IRON PIPE
	STORM SEWER LINE		GPS CONTROL POINT
	FINISHED WATERMAIN		VERTICAL BENCHMARK
	RAW WATERMAIN		CONTROL HUB/LATH
	PROPERTY LINE		STORM SEWER CATCH BASIN
	EXISTING GUTTER LINE		POWER POLE
	ROAD CENTER LINE		LIGHT POLE
	EXISTING MAJOR CONTOUR		HYDRANT
	EXISTING MINOR CONTOUR		GATE VALVE
	CONSTRUCTION LIMITS		SIGN POST
	EXISTING STRUCTURE		DECIDUOUS TREE
	EXISTING PAVEMENT		CONIFEROUS TREE
			MANHOLE
			FIBER OPTIC BOX
			ELECTRICAL BOX
			COMMUNICATIONS BOX



2 DETAIL: WELL 16 CONSTRUCTION
NOT TO SCALE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME: DANIEL A NESLER
SIGNATURE: [Signature]
DATE: 09/29/2025 LICENSE #: 47523

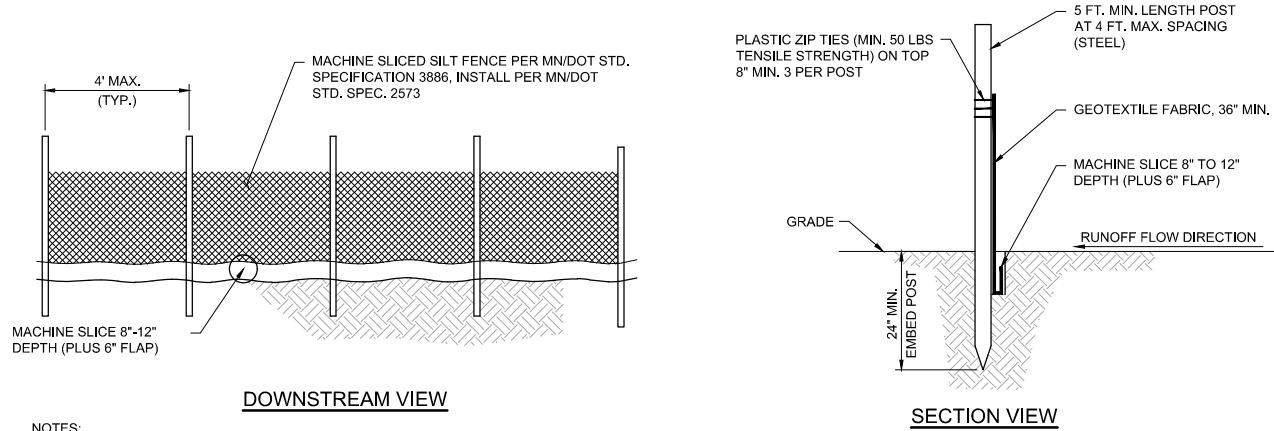
#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION
0	DAN	JMA	DAN	05/29/2025	ISSUED FOR BID

BARR
BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
SUITE 200
MINNEAPOLIS, MN 55435
PH: 1-800-632-2277
WWW.BARR.COM

CITY OF NEW BRIGHTON
NEW BRIGHTON, MN

WELL 16
NEW BRIGHTON, MN
PROPOSED WELL 16
SITE PLAN AND WELL DETAIL

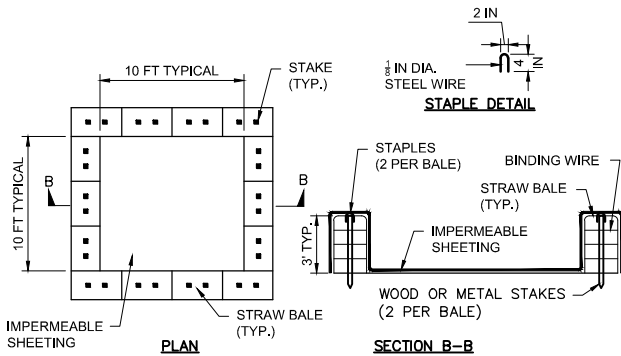
BARR PROJECT #	23621534.00
DWG #	C-01
REV #	0



NOTES:

1. INSTALL SILT FENCE PRIOR TO ANY WORK IN THE AREA TO BE PROTECTED AND MAINTAIN THROUGHOUT THE CONSTRUCTION PERIOD. REMOVE SILT FENCE AND ANY ACCUMULATED SEDIMENT IN CONJUNCTION WITH SITE RESTORATION.
2. SILT FENCE MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF MN/DOT SPECIFICATIONS 2573 AND 3886.
3. NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SILT FENCE. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
4. REMOVE ACCUMULATED SEDIMENT WHEN BUILD UP REACHES 1/3 OF FENCE HEIGHT. OR INSTALL A SECOND SILT FENCE DOWNSTREAM OF THE ORIGINAL FENCE AT A SUITABLE DISTANCE.
5. WHEN SPLICES ARE NECESSARY MAKE SPlice AT POST ACCORDING TO SPlice DETAIL, PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP, THEN DRIVE BOTH POSTS AND BURY THE FLAP AND COMPACT BACKFILL.

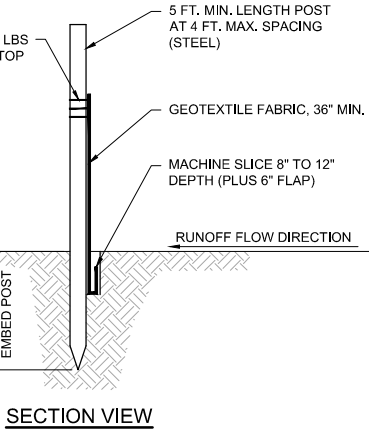
1
-
DETAIL: SILT FENCE - MACHINE SLICED
NOT TO SCALE



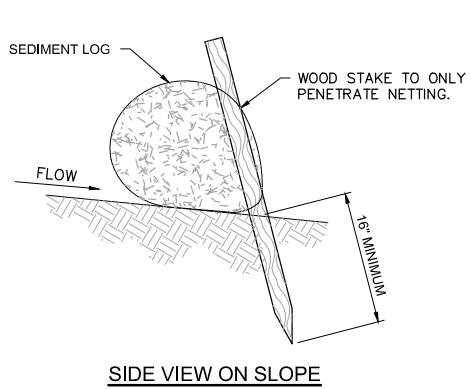
NOTES:

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED), EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER, WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

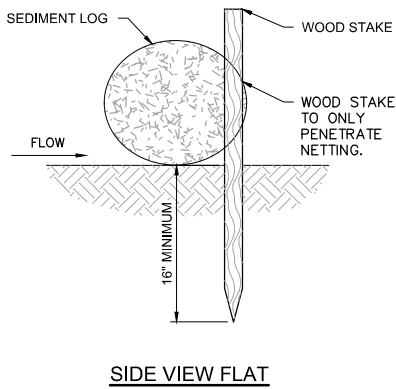
3
-
DETAIL: CONCRETE WASHOUT - STRUCTURE WITH STRAW BALES
NOT TO SCALE



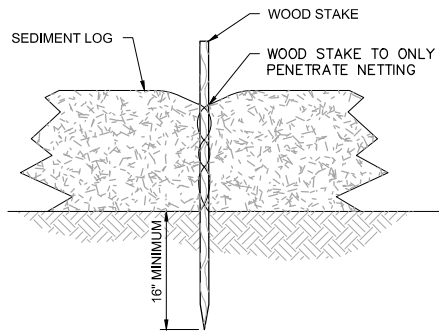
SECTION VIEW



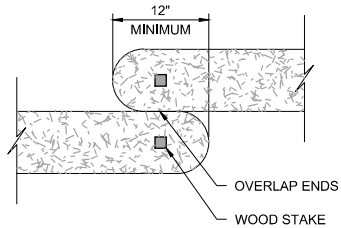
SIDE VIEW ON SLOPE



SIDE VIEW FLAT



FRONT VIEW

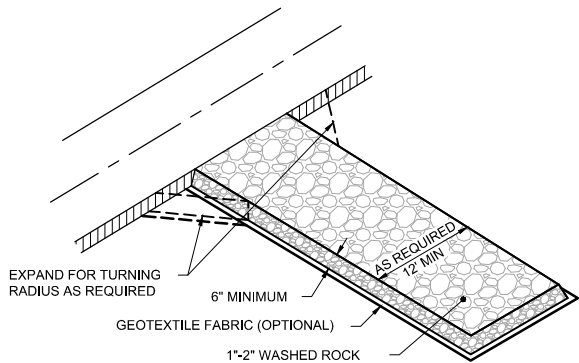


TOP VIEW

NOTES:

1. INSTALL SEDIMENT LOG ALONG CONTOURS (CONSTANT ELEVATION).
2. NO GAPS SHALL BE PRESENT UNDER SEDIMENT LOG. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
3. REMOVE ACCUMULATED SEDIMENT WHEN REACHING 1/3 OF LOG HEIGHT.
4. MAINTAIN SEDIMENT LOG THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACED AS REQUIRED.

2
-
DETAIL: EROSION LOG - STAKING
NOT TO SCALE



NOTES:

1. MAINTAIN ENTRANCE THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACE AS REQUIRED TO PREVENT TRACKING OFFSITE.
2. REMOVE ENTRANCE IN CONJUNCTION WITH SITE RESTORATION.

4
-
DETAIL: CONSTRUCTION ENTRANCE - ROCK
NOT TO SCALE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME DANIEL A NESLER
SIGNATURE [Signature]
DATE 09/28/2025 LICENSE # 47523

-	-	-	-	-	-	-
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#	BY	CHK	APP	DATE	RELEASE/REVISION DESCRIPTION	



BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
SUITE 200
MINNEAPOLIS, MN 55435

PH: 1-800-632-2277
WWW.BARR.COM

CITY OF NEW BRIGHTON
NEW BRIGHTON, MN

WELL 16
NEW BRIGHTON, MN
PROPOSED WELL 16
DETAILS

BARR PROJECT #	23621534.00
DWG #	C-02
REV #	0

Attachment A

Final Operable Unit 1 Optimization Deep Groundwater – Phase II Geophysics Field Summary Report



ATTENTION OF

REPLY TO AMIM-AEC-M

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
US ARMY ENVIRONMENTAL COMMAND
2455 REYNOLDS ROAD
JOINT BASE SAN ANTONIO FORT SAM HOUSTON, TX 78234-7588

January 24, 2022

SUBJECT: Final Operable Unit 1 Optimization Deep Groundwater – Phase II Geophysics Field Summary Report

U.S. EPA
Region V
ATTN: Ms. Viral Patel
77 West Jackson Boulevard
Chicago, IL 60604

Minnesota Pollution Control Agency
ATTN: Ms. Brigitte Hay, Project Leader
Metro District Office
Site Remediation Section
520 Lafayette Road North
St. Paul, MN 55155

Dear Ms. Patel and Ms. Hay:

The United States Army (Army) has prepared this Operable Unit 1 (OU1) Optimization Deep Groundwater – Geophysics Field Summary Report (Report) for the Twin Cities Army Ammunition Plant (TCAAP), in Arden Hills, Minnesota. This report documents field activities completed between June 14 and July 12, 2021, consisting of drilling and well installation activities, and downhole hydrostratigraphic and groundwater quality profiling on a newly installed monitoring well. The work was completed in accordance with the OU1 Optimization Work Plan (Work Plan), which was approved by the United States Environmental Protection Agency (U.S. EPA) and Minnesota Pollution Control Agency (MPCA) on October 15, 2020, and the Addendum to the OU1 Optimization Work Plan, which was approved by the U.S. EPA and MPCA on June 7, 2021.

The work described in this Report represents the second part of a two-phase program to improve the overall OU1 conceptual site model (CSM) and support potential expansion of the NBCGRS with a new production well. The first phase of work, submitted under the cover Operable Unit 1 Optimization Deep Groundwater – Geophysics Field Summary Report, July 6, 2021, evaluated hydrostratigraphic and groundwater quality variability across portions of the Prairie du Chien Group (PdC) and Jordan Formation bedrock units that contribute groundwater to the NBCGRS and OU1 well fields. The second phase of work, described below, included completion and testing of one pilot boring. Collectively, the two phases of work are intended to support recommendations for placement and design of a potential new production well in order to most meaningfully contribute to OU1 plume containment and contaminant mass removal.

SCOPE OF WORK

Based on the results of the completed Phase 1 scope presented in the Work Plan, the scope of work for Phase 2 consisted of the following:

- Completion of a 395-foot-deep pilot boring located in Driftwood Park at 2705 5th Street NW in New Brighton, MN, near the potential location of a new production well within the New Brighton

Contaminated Groundwater Recovery System (NBCGRS) and approximately 750 feet east of the New Brighton Water Treatment Plant (**Figure 1**).

- Geophysical logging and vertical profiling of the pilot boring across an interval of approximately 112 feet within the PdC bedrock unit to evaluate the site-specific geology and groundwater quality within the zone considered most favorable for a future production well.
- Installation of one new monitoring well (04U884) within the pilot boring to provide a hydraulic and groundwater quality monitoring location adjacent to the potential future production well.
- Groundwater sampling of the completed well for volatile organic compounds (VOCs) using U.S. EPA Method 8260D and 1,4-Dioxane using U.S. EPA Method 8270C SIM, approximately 10 days after development.

Note the Addendum to the Work Plan included provisions for a second borehole as a contingency if the primary location was unsuccessful. Based on satisfactory results at the primary location, the contingency boring was not completed. A site map with the location of the pilot boring is shown on **Figure 1**. Well and drilling services were provided by Traut Companies (Traut) of Waite Park, Minnesota. Geophysical logging services were provided by Colog Inc (Colog) of Boulder, Colorado.

The activities associated with Phase 2 of the OU1 optimization program are described below. All work was completed in accordance with the *Quality Assurance Project Plan for Performance Monitoring* (QAPP; JV 2020)¹ and *Final Site Health and Safety Plan* (HASP; JV 2019)². All geophysics work was completed as described in the Operable Unit 1 Optimization Deep Groundwater – Geophysics Field Summary Report, the Work Plan, and the Addendum Work plan.

FIELD ACTIVITIES

Utility Locating

The pilot boring location was staked and marked out with white paint. On June 8, 2021, Gopher State One Call was contacted (Ticket #211590864) to notify companies with public utilities in the area of the proposed field activities.

A subsurface geophysical survey was conducted on June 14, 2021 by Ground Penetrating Radar Systems, LLC (GPRS) of Bloomington, Minnesota to locate and mark any additional subsurface utilities or obstructions near the pilot boring. Prior to utilizing the drill rig, the pilot boring was cleared using a post hole digger to a depth of five feet below ground surface (bgs).

Drilling

The borehole was completed using a combination of mud-rotary and sonic drilling. All available soil and rock core samples were logged under the supervision of a Professional Geologist following the procedures outlined in the Addendum to the Work Plan.

The pilot boring was successfully drilled as follows:

¹ JV. 2020. Quality Assurance Project Plan for Performance Monitoring, New Brighton/Arden Hills Superfund Site. June.

² JV. 2019. Final Site Health and Safety Plan. Twin Cities Army Ammunition Plant, Arden Hills, Minnesota. September.

- A 14-inch diameter borehole was advanced with a mud-rotary drill rig through the overburden and into the top of the PdC, encountered at 277 feet bgs. Mud-rotary was halted at 282 feet bgs due to large voids and loss of circulation that prevented the rig from drilling any further.
- A 10-inch diameter steel permanent surface casing was then installed to 242 feet bgs and grouted in place with a neat cement seal.
- An 8-inch diameter borehole was then advanced via sonic drilling through the 10-inch permanent casing, continuing through the PdC to the target of 395 feet bgs, approximately 10 to 20 feet above the expected base of the PdC.
- After drilling was complete, the 8-inch diameter sonic casing was withdrawn to a depth of 283 feet bgs, but then left in the borehole as a temporary casing to prevent borehole caving from the voids encountered between 277 and 282 feet. This temporary casing was left in place during geophysical logging, and was removed during installation of the monitoring well, described below.

A final boring log of the newly installed well is provided in **Attachment 1**.

Preliminary Well Development

After the borehole was drilled to its total depth, Traut conducted preliminary well development to prepare the borehole for geophysical logging by clearing out any excess drilling fluids or cuttings. Additionally, the preliminary well development served as a pumping test to provide an estimated yield of the well. During development the open borehole was pumped at a rate between 60 and 70 gallons per minute (gpm) for 35 minutes. Water-levels recorded while purging showed drawdown of 1.3-feet over the span of the pumping test. Initial yield from this preliminary well development showed a specific capacity of approximately 50 gpm/foot.

Geophysical Profiling

Geophysical logging was conducted in accordance with the Work Plan and was described in the Geophysics Field Summary Report. Logs depicting borehole geophysics and flow logging are included in **Attachment 2**.

At the profiled pilot boring, the sequence of tasks was as follows:

1. Geophysical logging was completed under ambient (non-pumping) conditions. The logging suite included caliper, natural gamma, fluid-temperature, fluid conductivity, and optical televiewer (OTV). Flow meter logging was performed under ambient conditions using an electromagnetic Corehole Dynamic Flowmeter (CDFM).
2. After ambient logging, a submersible pump was deployed near the top of the water column and operated at a rate of approximately 15 gpm in the borehole to stress it and attempt to create upward flow across the length of the open interval. Due to strong ambient downward flow, purging was not able to reverse the vertical flow direction in the borehole below the bottom of the temporary casing.

Point sampling was only completed at the top of the PdC water column, at 287 feet bgs, due to the lack of upward flow in the borehole. One duplicate sample was collected for quality control.

Groundwater samples were shipped under appropriate chain-of-custody procedures to Pace National Laboratory of Mt. Juliet, Tennessee. Samples were analyzed for the following:

- VOCs using U.S. EPA Method 8260D; and

- 1,4-dioxane using U.S. EPA Method 8270C SIM.

Laboratory reports are included in **Attachment 3**. Data validation was completed in accordance with the QAPP; validation reports are included in **Attachment 4**.

Well Construction

After geophysical logging and point sampling, the preliminary results were reviewed in order to complete design for the final well construction. To avoid potential borehole stability concerns associated with the large voids in the upper portion of the PdC, the well was constructed across a 67-foot zone within the bottom half of the unit. Construction was completed adhering to Minnesota Department of Health (MDH) well code, as follows:

- The basal portion of the borehole from 328 feet bgs to 395 feet bgs was left as an 8-inch diameter open borehole.
- To isolate this zone, a permanent 4-inch diameter steel casing was set to 328 feet bgs, grouted in place using a cement well basket that was fixed to the base of the casing. Prior to grouting the casing, two feet of bentonite was added to seal the base of the well basket in place. The 4-inch casing was then grouted in place to surface with a neat cement grout.
- An 8-inch diameter steel outer protective casing was installed around the well casing to approximately two feet above ground surface.

Following the Army standardized naming convention for TCAAP within installation restoration data management information system (IRDMIS), the new monitoring well was assigned 04U884 for its identification. **Attachment 5** summarizes the well construction details of the completed well. A copy of the Minnesota Department of Health well record is included as **Attachment 6**.

Final Well Development

Once well construction and geophysics activities were completed, a second and final well development was implemented. The well was purged using air lifting methods and was pumped at a rate of approximately 100 gpm for approximately 110 minutes with drawdown of 0.36-feet during the duration of the pumping test. While air lifting, water quality parameters were collected for pH, conductivity, temperature, and turbidity. Air lifting was conducted until turbidity stabilized to less than 50 Nephelometric Turbidity Units (NTUs), and pH, temperature and conductivity values remained within 10% for more than three consecutive readings. While waiting for the turbidity to stabilize, the well was purged of at least three well volumes plus the volume of any water that was added during drilling. During final well development, the calculated yield showed a specific capacity of approximately 305 gpm/foot.

Post-Installation Groundwater Sampling

An additional groundwater sample was collected after well completion to document groundwater quality in the completed well, 04U884. While this sampling was not proposed as a component of the Addendum to the Work Plan, it was conducted to better understand groundwater quality in the deeper portion of the PdC. Note that vertical profiling of the open borehole could not be completed because of strong ambient downward flow entering near the top of the PdC. A representative sample of the deeper portion of the borehole could not be collected until the well was installed isolating the deeper zone and cutting off the downward flow. The post-installation groundwater sample was collected using a Hydrasleeve, a no-purge methodology, consistent with all other OU1 groundwater sampling.

Groundwater samples were shipped under appropriate chain-of-custody procedures to Pace National Laboratory of Mt. Juliet, Tennessee. Samples were analyzed for the following:

- VOCs using U.S. EPA Method 8260D; and
- 1,4-dioxane using U.S. EPA Method 8270C SIM.

Laboratory reports are included in **Attachment 3**. Data validation was completed in accordance with the QAPP; validation reports are included in **Attachment 4**.

Investigation Derived Waste

Soil and rock cuttings generated during the well installation activities were placed in a roll-off and stored on site pending disposal. All soil and rock cuttings were stored on Site until it was disposed of July 27 and August 2, 2021.

Approximately 13,000 gallons of water were removed during well installation, development, and geophysical activities. Due to the large volume accumulated, all water was containerized and stored at Driftwood Park pending disposal. Water was then transported and discharged directed into the TCAAP Groundwater Remediation System (TGRS) located on-post at TCAAP.

Surveying

On August 11, 2021, monitoring well 04U884 was surveyed by Sunde Land Surveying of Bloomington, Minnesota, for X, Y, and Z (ground surface) coordinates referencing the National Geodetic Vertical Datum of 1988 and North American Datum of 1983. Survey data for well 04U884 is included on the boring log included in Attachment 1 and will be added to the appropriate databases.

INVESTIGATION RESULTS

Geophysical Data Interpretation

Geophysical logging and point sampling results were evaluated to help identify the distribution and transport pathways of contaminants of concern (COCs). Analysis focused on the locations of fractures and voids that contribute groundwater to the borehole and understanding how concentrations of COCs vary across zones screened.

Figure 2 synthesizes the profiling results and presents a series of graphs depicting the primary observations as follows:

- **Depth and Ranks of Observed Fractures:** Rankings reflect the size or aperture of the fracture, based on a review performed by Colog. In the PdC, the higher rank fractures often reflect karst conduits, which typically dominate flow in the aquifer. The interval of the PdC tested during geophysical logging was from 283 feet bgs to 395 feet bgs. The upper 80 feet of this interval contains a high frequency of fractures and voids, the most significant occurring just below the top of the temporary casing (284 to 289 feet bgs), a zone approximately 50 feet deeper (335 to 346 feet bgs) and at a single large solution enlarged fracture at 358 feet bgs (Note also that a shallower zone of voids was noted during drilling at the top of the PdC between about 277 and 282 feet bgs, but was cased-off during geophysical logging to prevent caving). Below 350 feet bgs both the frequency of fractures and typical fracture aperture decrease.

- **Ambient Flow:** In the ambient flow plot, negative values indicate downward flow. Note that under ambient conditions, flow occurs between fractures, entering the borehole at one depth then moving upward or downward in the borehole to a different fractures or void. In the pilot borehole, significant downward ambient flow was observed. All measurable flow entered the borehole from the shallow zone of voids near the bottom of casing, moved downward at approximately five gpm, and exited the borehole at the large fracture at 358 feet bgs. The strength of flow between these zones indicates that both zones are transmissive, but that in the aquifer (in the absence of a cross-connecting borehole) they are hydraulically separated.
- **Dynamic Flow:** Under dynamic flow logging conditions, flow typically enters the borehole from all hydraulically active fractures, and then flows upward to the pump. However, during dynamic flow testing the well was pumped at approximately 15 gpm but was unable to create any upward flow.
- **Trichloroethene (TCE) Point Sampling Results.** Point-sampling data are grab samples from the water column of the open borehole. The intent of dynamic point-sampling is to profile the concentrations of contaminants entering the borehole while maintaining continuous upward-flow across the water column. Because upward flow could not be created in this borehole, only a single point sample was collected at the depth where water was entering the borehole. This point sample collected at 287 feet bgs contained TCE at 8.8 micrograms per liter ($\mu\text{g/L}$) and 1,4-dioxane at 1.28 $\mu\text{g/L}$. The plot also shows the sample result from the completed well 04U884, although it was collected later after well construction isolated the bottom portion of the borehole.

Groundwater sampling results for all detectable COCs are summarized in **Table 1**.

In-Situ Groundwater Sample Results

Following well completion, a grab sample was collected using a Hydrasleeve to assess groundwater concentrations in monitoring well 04U884. The well is open to significant fractures and voids observed from 335 to 346 feet bgs and at 358 ft bgs. These zones could not be tested in the open borehole due to downward flow from a shallower zone but could be assessed in the completed well. Grab sample results detected TCE at 17.4 $\mu\text{g/L}$ and 1,4-dioxane at 1.64 $\mu\text{g/L}$.

Groundwater sampling results for all detectable COCs are summarized in **Table 1**.

New Brighton Municipal Well Data

In accordance with the Addendum to the Work Plan, the completed well was terminated at least 20 feet above the bottom of casing elevation at existing New Brighton Municipal (NBM) Wells 5 and 6 to limit potential hydraulic connection or interference with the existing wells. Monitoring well 04U884 was completed approximately 28 to 30 feet above the bottom of casing at NBM-5 and NBM-6.

After completion of monitoring well 04U884, transducer data was provided by the City of New Brighton from NBM Wells 5 and 6. Water levels at NBM-5 and NBM-6 exhibited no observable change during periods of development and pumping at the pilot borehole.

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this work was to support siting of a new production well for the NBCGRS. The findings support the following conclusions:

- TCE concentrations detected in the pilot borehole and completed well confirm that the location is within the footprint of the TCE plume and therefore a potential future extraction well would contribute to plume containment and mass removal.
- During the two short-duration pumping tests completed during installation and development, the well exhibited a high specific capacity, suggesting that the location can produce groundwater at a rate consistent with existing production wells completed in the PdC; and
- Testing of the pilot borehole created no impact on the performance of NBM-5 or NBM-6.

The conditions and pumping rates observed within the PdC during completion of the pilot boring align with the results that were noted in Phase 1 of the OU1 Optimization work (**Attachment 7**) and are believed to be favorable for siting a new production well for the NBCGRS at the City of New Brighton's proposed location at Driftwood Park.

Operable Unit 1 Optimization Deep Groundwater – Geophysics Field Summary Report
January 24, 2022

If you have any questions, please contact me at (210) 861-4050, or email me at linda.b.albrecht.civ@army.mil.

Sincerely,

Linda B. Albrecht
Digitally signed by Linda B. Albrecht
Date: 2022.02.02 09:10:58 -06'00'
Linda Albrecht, P.E., C.H.M.M, C.E.M
Remedial Project Manager

Enclosures:

Table 1 – Groundwater Sampling Results
Figure 1 – Completed Geophysics Locations
Figure 2 – 04U884 Aquifer Plot
Attachment 1 – Final Boring Log
Attachment 2 – Borehole Geophysical Logs
Attachment 3 – Laboratory Analytical Reports
Attachment 4 – Data Validation Reports
Attachment 5 – Well Construction Log
Attachment 6 – Minnesota Department of Health Well Record
Attachment 7 – Associated Field Reports

Copies Furnished:

MPCA (Katy Grant)
AHATs, MN ARNG (Mary Lee)
Army (Paul Muething)
USGS (Jeff Raffensperger)
Barr Engineering (Greg Keil)
Barr Engineering (Julia Macejkovic)
City of New Brighton (Craig Schlichting)
City of New Brighton (Eric Volk)
PIKA-Arcadis JV (Hoa Voscott)
PIKA-Arcadis JV (Mike Cobb)
PIKA-Arcadis JV (Tim Molitor)
EA (Art Peitsch)
GHD (Shawn Horn)
TCAAP Admin Records

Tables

Table 1
Groundwater Sampling Results
Geophysics Field Summary Report
Twin Cities Army Ammunitions Plant
Arden Hills, Minnesota

				Constituents of Concern				Other Detected VOCs					
Well ID	Sample Date	Average Pumping Rate (gpm)	Sample Depth (feet bgs)	1,4-Dioxane (µg/L)	Trichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	Vinyl chloride (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)	1,2-Dichloropropane (µg/L)	Chloroform (µg/L)	Xylenes (µg/L)
OU1 Cleanup Level				---	5.00	70.00	---	200	70	6	---	---	---
MDH Health Risk Limit				1.00	---	---	0.20	---	---	---	---	---	---
04U884	7/1/2021	0	287	1.28	8.88	0.221 J	< 1.00	0.299 J	0.735 J	0.606 J	< 1.00	0.221 J	0.188 JB
	7/1/2021		287 DUP	1.10	8.67	0.210 J	< 1.00	0.295 J	0.729 J	0.565 J	0.170 J	0.210 J	0.186 JB
	7/22/2021	---	365 ¹	1.64	17.4	< 5.00	< 1.00	0.511 J	1.40	1.28	< 1.00	< 5.00	< 3.00

Footnotes:

1. The groundwater sampled at 365 feet bgs was collected after well completion and is representative of in-situ conditions at this location.

Notes:

The cleanup level for OU1 Groundwater is from page 18 of OU1 Record of Decision.

No OU1 cleanup level has been established for 1,4-dioxane. For reference, the Minnesota Department of Health (MDH) Health Risk Limit (HRL) for 1,4-dioxane is 1 µg/L. Gray shading indicates exceedance of the HRL.

Bold = Value exceeds the OU1 Cleanup Level

Shade = Value exceeds MDH Health Risk Limit

--- = not applicable/not available

< X.X = analyte was not detected above the Reporting Limit (RL)

Acronyms and Abbreviations:

B = The same analyte is found in the associated blank.

bgs = feet below ground surface

DUP = duplicate sample

gpm= gallons per minute

HRL = Health Risk Limit

J = reported value is between the method detection limit and the RL

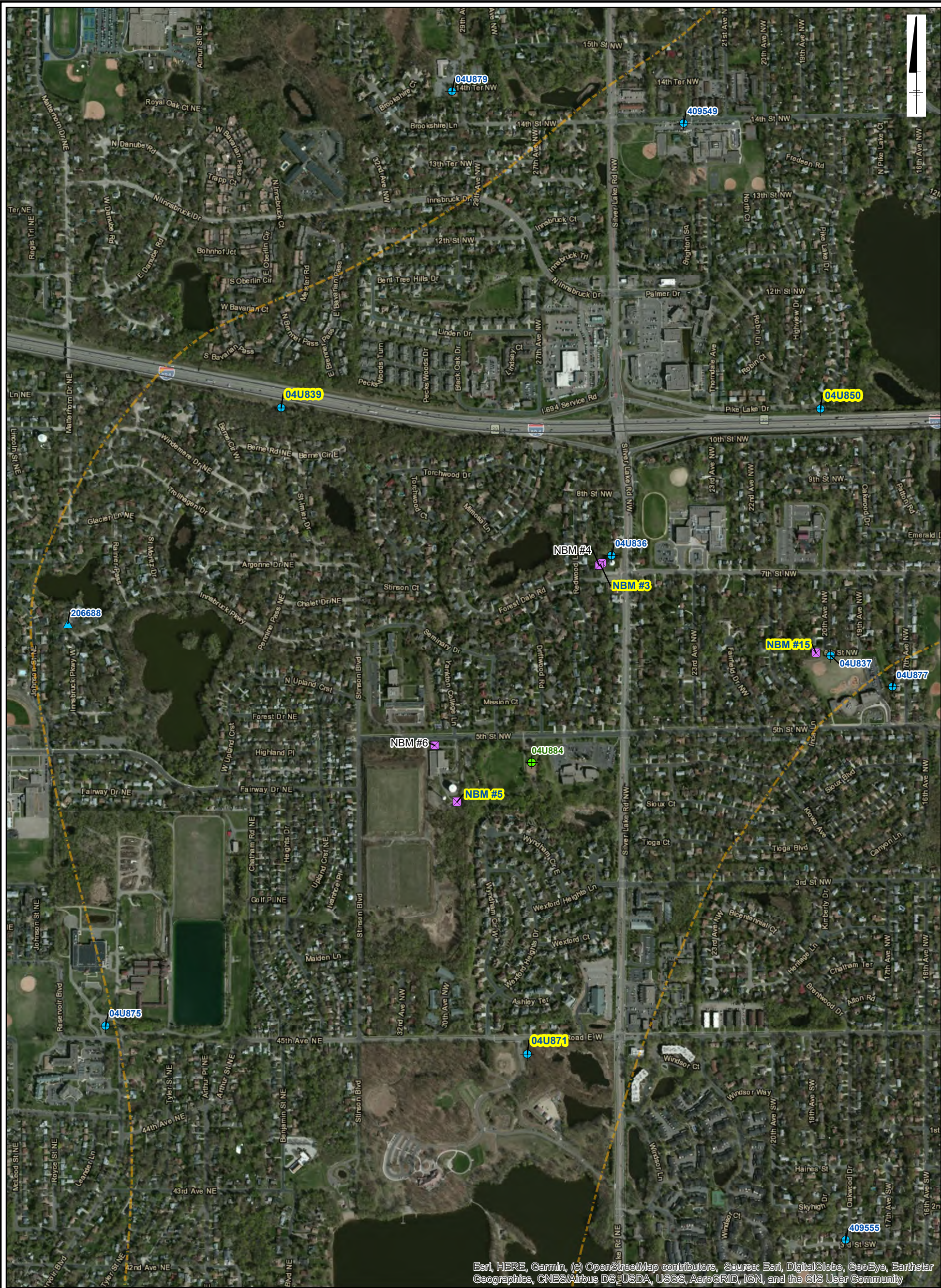
MDH = Minnesota Department of Health

OU = Operable Unit

VOCs = Volatile organic compounds

µg/L = micrograms per liter

Figures



LEGEND:

2019 Trichloroethene Concentrations (µg/L)

Upper Unit 4 (Dashed Where Inferred)

5-100

INTERSTATE

MONITORING WELL

PRIVATE WELL

PILOT BORING LOCATION

NEW BRIGHTON MUNICIPAL WELLS

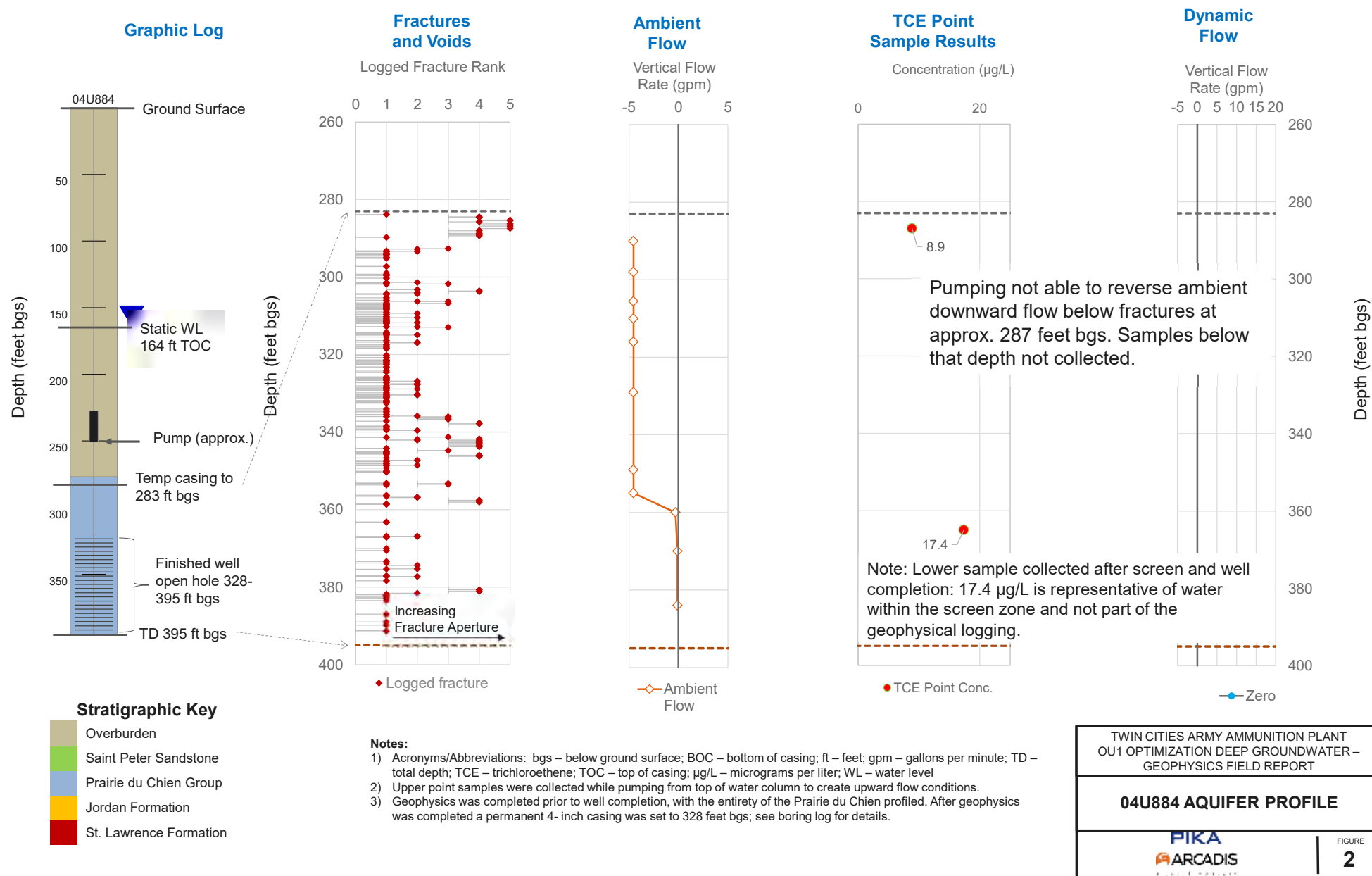
WELLS FOR PREVIOUS COMPLETED GEOPHYSICS

TWIN CITIES ARMY AMMUNITION PLANT
ARDEN HILLS, MINNESOTA

COMPLETED GEOPHYSICS LOCATIONS

FIGURE
1

0 800 1,600 Feet



Attachments

Attachment 1

Final Boring Log

Soil Boring Log

Sheet: 1 of 5

Project Name: TCAAP Date Started: 06-15-2021 Logger: Erika Jarchow
Project Number: 30034568 Date Completed: 07-12-2021 Editor: Abby Grein
Project Location: 2741-2777 Fifth St NW New Brighton MN 55112 US Weather Conditions: NA

Depth (feet)	Recovery (in.)	Sample ID	PID (ppm)	Graphic	Description	Construction Details	Well
					No Recovery. Hand augered.	8" diameter Pro Top, welded 2 ft ags	
5							
10					CLAY.		
15							
20					SAND, medium to very coarse.		
25						Annular seal - neat cement grout (0-326 ft bgs)	
30					CLAY.		
35							
40					SAND, very fine to medium.	10" diameter low carbon steel outer casing (0-242 ft bgs)	
45							
50							
55							
60							
65						4" diameter low carbon steel inner casing (0-328 ft bgs)	
70							
75							

Drilling Co.: Traut Companies Sampling Method: Sonic
Driller: Perry Storkamp/Dan Pflipsen Sampling Interval: 10
Drilling Method: Mud Rotary (0-282 ft bgs)/Sonic (282-395 ft bgs) Water Level Start (ft. bgs.): 167.11
Drill Rig: Mud Rotary/Sonic Water Level Finish (ft. btoc.): 167.4
Remarks: Borehole diameter is 14" from 0-278 ft bgs and 8" from 278 to
395 ft bgs. Soil descriptions are minimal due to the limited
recovery and nature of mud rotary drilling in unconsolidated
soils. Surface Elev.: 1001.37 TOC Elev.: 1002.92
North Coor: 196824.32
East Coor: 541870.16

Soil Boring Log

Sheet: 2 of 5

Project Name: TCAAP Date Started: 06-15-2021 Logger: Erika Jarchow
 Project Number: 30034568 Date Completed: 07-12-2021 Editor: Abby Grein
 Project Location: 2741-2777 Fifth St NW New Brighton MN 55112 US Weather Conditions: NA

Depth (feet)	Recovery (in.)	Sample ID	PID (ppm)	Graphic	Description	Construction Details	Well
80					SAND, very fine to medium.		
85					CLAY.		
90							
95					SAND, fine.		
100							
105							
110							
115							
120							
125							
130							
135							
140							
145							
150					SAND, fine to coarse, subangular to subround; little (10-20%) granules to small pebbles.		
155							

Remarks: Acronyms: ft bgs - feet below ground surface, ft ags - feet above ground surface, btoc - below top of casing, NA - not available/applicable.

Soil Boring Log

Sheet: 3 of 5

Project Name: TCAAP Date Started: 06-15-2021 Logger: Erika Jarchow
 Project Number: 30034568 Date Completed: 07-12-2021 Editor: Abby Grein
 Project Location: 2741-2777 Fifth St NW New Brighton MN 55112 US Weather Conditions: NA

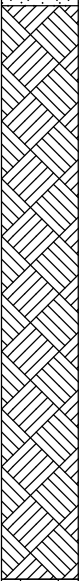
Depth (feet)	Recovery (in.)	Sample ID	PID (ppm)	Graphic	Description	Construction Details	Well
160					SAND, fine to very coarse, subangular to subround; little (10-20%) small pebbles; trace (<10%) clay.		
165							
170							
175							
180					SAND, fine to very coarse, subangular to subround; little (10-20%) clay.		
185							
190							
195							
200							
205							
210							
215					CLAY; little (10-20%) fine sand to coarse sand; trace (<10%) small pebbles.		
220							
225							
230							
235							

Remarks:

Soil Boring Log

Sheet: 4 of 5

Project Name: TCAAP Date Started: 06-15-2021 Logger: Erika Jarchow
 Project Number: 30034568 Date Completed: 07-12-2021 Editor: Abby Grein
 Project Location: 2741-2777 Fifth St NW New Brighton MN 55112 US Weather Conditions: NA

Depth (feet)	Recovery (in.)	Sample ID	PID (ppm)	Graphic	Description	Construction Details	Well
240					SAND, fine to very coarse, subangular to subround; little (10-20%) small pebbles to medium pebbles.		
245					CLAY; little (10-20%) fine sand to coarse sand; trace (<10%) small pebbles.		
250					WEATHERED BEDROCK; little (10-20%) clay. Driller notes: sticky, gummy clay based shale.		
255							
260							
265							
270							
275							
280					DOLOMITE; fractures noted at 280. Another large fracture at 282.	Borehole diameter changes from 14" to 8"	
285							
290					Sand inclusions.		
295					DOLOMITE.		
300							
305					DOLOMITE; and (36-50%) sand inclusions.		
310					Sand inclusions.		
315					DOLOMITE.		

Remarks: Drill rig lost circulation at 282 ft bgs.

Soil Boring Log

Sheet: 5 of 5

Project Name: TCAAP Date Started: 06-15-2021 Logger: Erika Jarchow
 Project Number: 30034568 Date Completed: 07-12-2021 Editor: Abby Grein
 Project Location: 2741-2777 Fifth St NW New Brighton MN 55112 US Weather Conditions: NA

Depth (feet)	Recovery (in.)	Sample ID	PID (ppm)	Graphic	Description	Construction Details	Well
320					DOLOMITE.	Bentonite seal added 2' above cement well basket. Neat cement seal to ground surface.	
325							
330						Cement well basket attached to base of 4" steel casing (328 ft bgs)	
335							
340							
345						Open borehole (328-395 ft bgs)	
350							
355							
360							
365							
370							
375							
380							
385							
390							
395							

End of boring at 395 ft bgs.

Remarks:

Attachment 2

Borehole Geophysical Logs

Table 854560:2. Summary of Corehole Dynamic Flowmeter Test-Station Results During Ambient Testing; Arcadis; Arden Hills TCAAP; Wellbore: 854560

854560					
Depth	Flow in Borehole During Ambient Testing (GPM)	Ambient Flow Direction in Borehole	Flow in Borehole During Extraction Stress Testing (GPM)	% of Total Extraction Flow	Comments
200.0	0.00		NA	NA	Test shot inside casing to zero tool.
290.0	-4.54	↓	NA	NA	4.54 gpm enters the borehole below casing at 283 feet. Large void from 283.9 to 289.7 feet.
298.0	-4.54	↓	NA	NA	no change in flow observed.
305.5	-4.54	↓	NA	NA	no change in flow observed.
310.0	-4.54	↓	NA	NA	no change in flow observed.
316.0	-4.54	↓	NA	NA	no change in flow observed.
329.0	-4.54	↓	NA	NA	no change in flow observed.
349.0	-4.54	↓	NA	NA	no change in flow observed.
355.0	-4.54	↓	NA	NA	no change in flow observed.
360.0	-0.30	↓	NA	NA	4.24 gpm exits the borehole between 356.6 to 367.1 feet.
370.0	-0.09	↓	NA	NA	0.21 gpm exits the borehole between 370.7 to 383.4 feet.
384.0	-0.09	↓	NA	NA	0.09 gpm exits the borehole below 384.0 to TD (395.0 ft), solution openings and slight fractures evident on televiewer image.

Note: Negative flow is downflow in the borehole. Positive flow is upflow in the borehole.

Ambient WL = 165.35 ftbgs. Bottom of casing = 283 ftbgs. TD = 395.0 ftbgs.

Table 854560:3. Summary Of Corehole Dynamic Flow Meter Logging Results; Arcadis; Arden Hills TCAAP; Wellbore: 854560

Well Name	854560
Ambient Depth to Water (ftbtoc)	167.55
Ambient Depth to Water (ftbgs)	165.35
Open Borehole Interval (ftbgs)	283.1 - 392.7

Diameter of Well (ft)	0.583
Maximum Raised Head (ft)	NA
Effective Radius (ft)	NA
Well Specific Capacity (gpm/ft-dd)	NA

Corehole Dynamic Flow Meter Logging Results: 854560									
Interval No.	Top of Interval (ft)	Bottom of Interval (ft)	Length of Interval (ft)	Ambient Flow ¹ (gpm)	Darcy Velocity in Aquifer ² (ft/day)	Interval-Specific Flow Rate During Pumping (gpm)	Interval-Specific Hydraulic Conductivity (ft/day)	Transmissivity (ft ² /day)	Comment
1	283.9	289.7	5.8	4.54	NA	NA	NA	NA	fx's based on OBI
2	356.6	367.1	10.5	-4.24	NA	NA	NA	NA	fx's based on OBI
3	370.7	383.4	12.7	-0.21	NA	NA	NA	NA	fx's based on OBI
4*	384.1	392.7	8.6	-0.09	NA	NA	NA	NA	fx's based on OBI

Note: Negative flow, if any, is outflow from the borehole to the aquifer, positive flow is inflow to the borehole.

* The bottom of this zone is assumed to be TD.

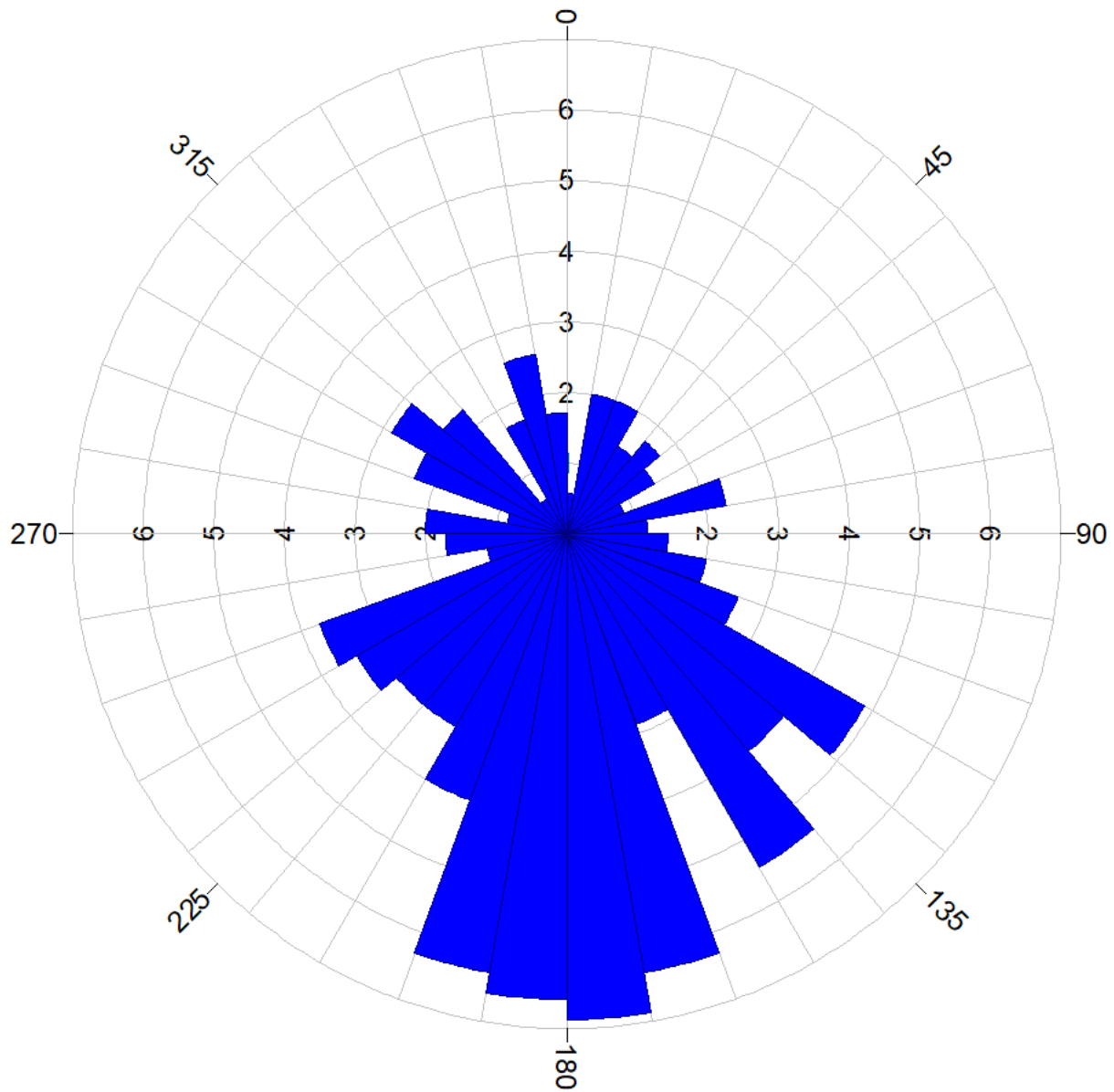
¹ Ambient downflow are identified in this borehole under ambient conditions.

² Darcy Velocity, or Specific Discharge in aquifer, is calculated using the observed volumetric flow rate, the cross-sectional area of the flow interval in the wellbore and a wellbore convergence factor of 3.0 (Drost, 1968). The Darcy Velocity is only applicable to ambient horizontal flow.

All depths are referenced to ground surface.

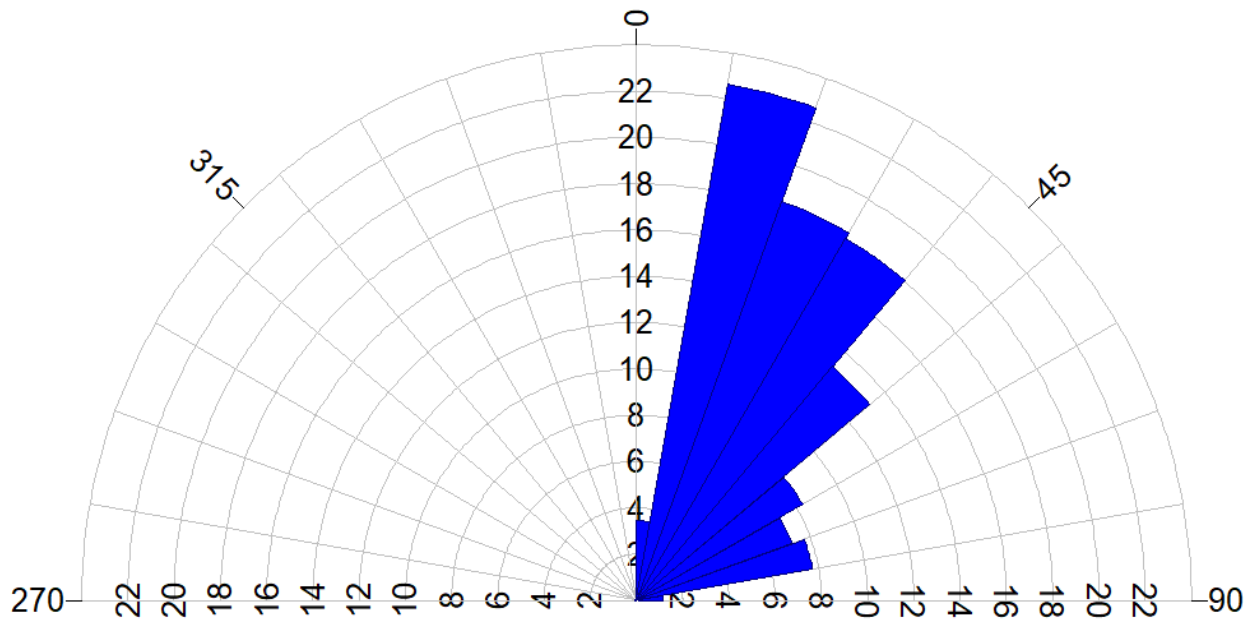
NA = Not Applicable

Figure 854560: 1. Rose Diagram - Dip Directions
Televiewer Image Features
Arcadis
854560
TCAAP
30 June 2021



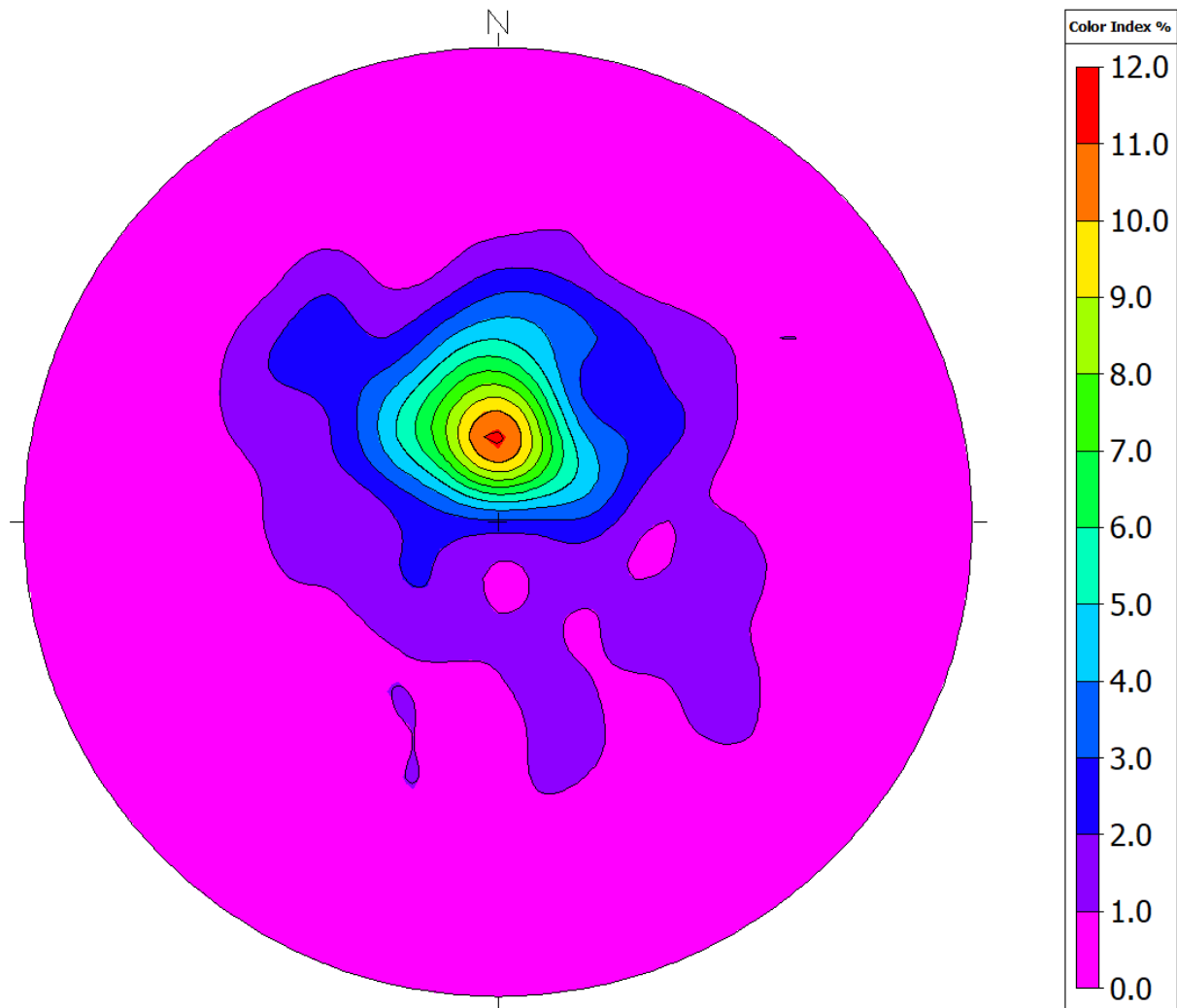
All directions are with respect to Magnetic North.

Figure 854560: 2. Rose Diagram - Dip Angles
Televiewer Image Features
Arcadis
854560
TCAAP
30 June 2021



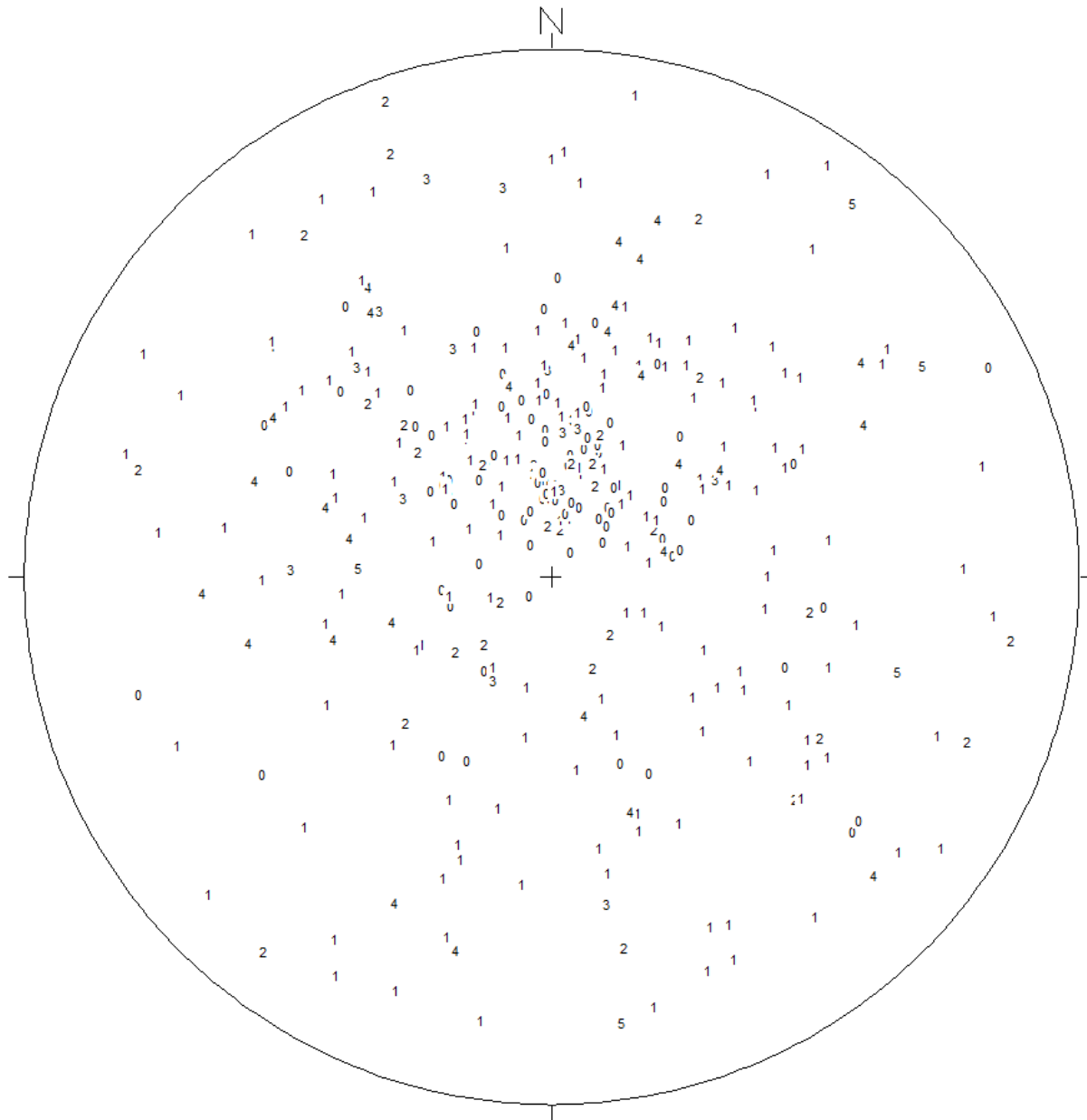
All directions are with respect to Magnetic North.

**Figure 854560: 3. Stereonet Diagram - Schmidt Projection
 Televiewer Image Features
 Arcadis
 854560
 TCAAP
 30 June 2021**



All directions are with respect to Magnetic North.

**Figure 854560: 4. Stereonet Diagram - Schmidt Projection
 Televiewer Image Features
 Arcadis
 854560
 TCAAP
 30 June 2021**



All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
1	86.54	283.9	318	34	1
2	86.72	284.5	15	64	4
3	86.75	284.6	146	54	4
4	86.97	285.3	219	78	5
5	87.02	285.5	287	57	5
6	87.11	285.8	72	27	4
7	87.26	286.3	352	76	5
8	87.45	286.9	90	31	5
9	87.64	287.5	241	68	5
10	87.77	288.0	26	60	4
11	87.90	288.4	192	38	4
12	87.91	288.4	106	50	4
13	88.03	288.8	86	57	4
14	88.04	288.8	245	54	4
15	88.12	289.1	236	59	4
16	88.22	289.4	128	58	4
17	88.34	289.8	174	29	1
18	88.48	290.3	223	28	0
19	88.62	290.8	229	10	0
20	88.76	291.2	264	18	0
21	88.93	291.8	254	17	0
22	89.02	292.1	186	16	0
23	89.13	292.4	200	19	0
24	89.20	292.7	186	23	3
25	89.24	292.8	199	17	2
26	89.39	293.3	194	15	1
27	89.44	293.4	248	16	2
28	89.46	293.5	224	49	1
29	89.59	293.9	192	16	1
30	89.68	294.2	181	68	1
31	89.71	294.3	246	39	1
32	89.88	294.9	281	33	1
33	89.99	295.2	270	66	1
34	90.60	297.3	297	15	1
35	90.62	297.3	225	14	1
36	90.82	298.0	94	12	0
37	91.14	299.0	244	43	1

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
38	91.26	299.4	244	17	1
39	91.27	299.4	160	18	1
40	91.29	299.5	185	36	1
41	91.31	299.6	31	71	1
42	91.48	300.1	250	22	0
43	91.53	300.3	193	10	1
44	91.54	300.3	110	45	0
45	91.77	301.1	198	20	0
46	91.82	301.2	336	35	0
47	91.85	301.4	205	14	2
48	91.91	301.5	202	39	1
49	91.95	301.7	66.6	11.3	1
50	91.99	301.8	167.7	16.4	3
51	92.02	301.9	114.1	14.9	1
52	92.41	303.2	219.8	12.2	0
53	92.46	303.3	168.0	6.7	2
54	92.53	303.6	177.6	12.8	4
55	92.58	303.8	174.9	37.0	4
56	92.70	304.1	43.9	16.2	2
57	92.74	304.3	107.9	36.4	1
58	92.79	304.4	50.6	20.4	2
59	92.82	304.5	19.8	46.3	1
60	92.97	305.0	218.7	3.1	0
61	93.07	305.4	120.3	10.1	1
62	93.24	305.9	237.7	19.5	0
63	93.27	306.0	60.5	24.1	1
64	93.34	306.2	341.0	21.2	1
65	93.36	306.3	279.8	40.3	2
66	93.36	306.3	89.8	41.8	3
67	93.36	306.3	154.4	38.0	3
68	93.48	306.7	118.1	28.8	1
69	93.52	306.8	171.8	62.0	3
70	93.59	307.1	299.3	32.6	1
71	93.63	307.2	135.1	14.0	1
72	93.64	307.2	64.9	68.5	1
73	93.69	307.4	229.2	47.5	1
74	93.71	307.5	6.5	50.5	1

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
75	93.76	307.6	233.7	32.3	1
76	93.81	307.8	244.0	29.6	1
77	93.88	308.0	237.9	26.2	1
78	93.90	308.1	104.7	31.1	1
79	93.95	308.2	216.7	16.0	1
80	94.01	308.4	256.5	71.7	1
81	94.11	308.8	277.7	42.8	1
82	94.12	308.8	120.8	50.2	1
83	94.23	309.2	280.7	48.1	1
84	94.26	309.3	218.6	66.6	1
85	94.32	309.4	321.1	13.1	2
86	94.40	309.7	193.5	31.2	1
87	94.43	309.8	189.4	16.0	0
88	94.47	309.9	214.9	15.2	0
89	94.52	310.1	186.3	17.7	0
90	94.56	310.2	102.2	19.7	1
91	94.62	310.4	169.5	10.7	0
92	94.63	310.5	279.1	76.1	2
93	94.63	310.5	240.9	39.1	1
94	94.70	310.7	241.5	25.7	1
95	94.76	310.9	114.7	67.6	1
96	94.87	311.3	264.0	43.0	1
97	94.94	311.5	18.4	48.6	1
98	94.97	311.6	293.7	67.7	1
99	95.03	311.8	103.3	70.5	2
100	95.05	311.8	306.7	31.0	1
101	95.07	311.9	180.4	25.7	1
102	95.09	312.0	209.9	41.4	1
103	95.23	312.4	239.7	8.0	0
104	95.34	312.8	239.7	15.9	1
105	95.37	312.9	188.1	16.3	2
106	95.39	313.0	183.4	12.2	3
107	95.56	313.5	175.3	21.4	0
108	95.62	313.7	166.4	15.4	0
109	95.78	314.3	334.4	44.6	1
110	95.82	314.4	194.7	35.3	1
111	95.84	314.4	151.8	27.9	1

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
112	95.90	314.6	43.1	37.7	1
113	95.98	314.9	194.3	29.0	1
114	96.00	315.0	216.8	37.2	2
115	96.00	315.0	10.7	26.7	1
116	96.16	315.5	266.2	14.1	1
117	96.37	316.2	176.5	27.1	0
118	96.37	316.2	293.4	38.9	0
119	96.44	316.4	309.7	72.9	1
120	96.57	316.8	248.3	33.3	1
121	96.58	316.9	44.4	33.8	2
122	96.62	317.0	198.0	21.6	2
123	96.68	317.2	170.1	13.4	0
124	96.77	317.5	165.5	14.6	1
125	96.86	317.8	173.7	26.3	1
126	96.91	317.9	187.3	33.2	1
127	96.95	318.1	202.0	34.1	1
128	97.04	318.4	181.9	38.5	1
129	97.07	318.5	153.9	68.4	1
130	97.12	318.6	161.3	39.2	0
131	97.24	319.0	191.5	24.9	0
132	97.35	319.4	192.6	19.0	0
133	97.46	319.7	170.4	23.4	0
134	97.59	320.2	168.1	26.2	1
135	97.77	320.8	308.1	50.6	1
136	97.78	320.8	129.3	21.5	0
137	97.78	320.8	299.0	18.3	1
138	97.94	321.3	168.2	10.9	0
139	97.97	321.4	336.9	63.0	1
140	98.00	321.5	347.6	73.9	1
141	98.12	321.9	145.9	55.6	1
142	98.17	322.1	341.9	40.5	1
143	98.22	322.3	194.4	42.6	1
144	98.23	322.3	350.5	48.9	1
145	98.33	322.6	153.5	28.6	1
146	98.45	323.0	164.4	21.0	0
147	98.52	323.2	166.9	35.4	1
148	98.58	323.4	164.2	21.4	1

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
149	98.79	324.1	155.2	18.5	1
150	98.81	324.2	136.7	28.5	0
151	98.91	324.5	212.5	37.7	1
152	99.29	325.8	28.5	76.9	1
153	99.35	326.0	87.8	46.7	1
154	99.43	326.2	231.8	49.0	1
155	99.49	326.4	159.4	36.8	1
156	99.57	326.7	25.0	40.1	1
157	99.58	326.7	44.4	58.0	1
158	99.64	326.9	133.2	32.7	2
159	99.75	327.3	125.0	49.4	1
160	99.84	327.6	131.1	39.4	2
161	99.92	327.8	142.8	68.1	2
162	100.01	328.1	134.4	39.3	1
163	100.15	328.6	136.5	47.2	1
164	100.21	328.8	135.7	43.2	1
165	100.23	328.9	158.1	73.5	2
166	100.33	329.2	117.4	77.4	1
167	100.35	329.2	304.4	48.0	1
168	100.39	329.4	164.2	31.4	0
169	100.46	329.6	177.0	40.7	0
170	100.54	329.9	189.3	80.1	1
171	100.67	330.3	129.2	43.8	2
172	100.71	330.4	216.5	47.4	1
173	100.73	330.5	350.1	62.2	2
174	100.75	330.5	276.2	72.0	1
175	100.87	330.9	303.1	34.8	1
176	100.90	331.0	265.0	33.8	1
177	100.93	331.2	148.5	27.3	1
178	100.95	331.2	272.0	32.7	1
179	101.16	331.9	97.1	53.4	1
180	101.27	332.2	59.3	42.1	1
181	101.31	332.4	59.9	25.2	1
182	101.39	332.6	95.1	65.0	1
183	101.49	333.0	35.8	19.4	0
184	101.52	333.1	224.6	12.0	0
185	101.58	333.3	70.4	17.4	0

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
186	101.70	333.7	174.6	10.8	0
187	101.82	334.1	129.6	46.8	1
188	101.95	334.5	236.3	64.3	1
189	102.04	334.8	237.9	62.0	1
190	102.13	335.1	147.3	44.7	1
191	102.25	335.5	183.5	62.5	1
192	102.27	335.5	304.8	52.5	1
193	102.38	335.9	302.9	49.5	2
194	102.42	336.0	47.0	79.6	1
195	102.43	336.1	351.6	54.2	3
196	102.43	336.1	135.1	44.8	3
197	102.53	336.4	145.4	49.6	3
198	102.53	336.4	240.7	28.2	3
199	102.53	336.4	161.4	66.9	3
200	102.61	336.7	177.4	30.8	3
201	102.79	337.2	142.3	28.0	1
202	102.92	337.7	143.9	50.3	4
203	102.92	337.7	72.3	36.8	4
204	103.00	337.9	192.4	42.4	4
205	103.17	338.5	230.5	40.1	1
206	103.18	338.5	162.0	24.5	1
207	103.23	338.7	76.5	37.2	1
208	103.26	338.8	218.6	34.0	1
209	103.39	339.2	113.0	38.1	1
210	103.46	339.4	351.4	44.5	1
211	103.48	339.5	171.1	51.7	1
212	103.50	339.6	129.7	28.1	2
213	103.68	340.2	140.5	36.1	0
214	103.73	340.3	278.3	42.4	0
215	103.89	340.9	168.0	26.7	0
216	104.04	341.3	143.6	19.7	3
217	104.06	341.4	179.2	66.6	1
218	104.18	341.8	98.2	32.8	4
219	104.20	341.9	179.8	45.4	2
220	104.28	342.1	314.3	52.8	2
221	104.28	342.1	104.8	37.5	4
222	104.34	342.3	190.6	53.0	4

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
223	104.44	342.7	196.1	58.2	4
224	104.54	343.0	349.9	23.2	4
225	104.57	343.1	194.9	50.9	4
226	104.67	343.4	343.2	39.8	4
227	104.75	343.7	314.2	72.6	4
228	104.78	343.8	260.7	16.6	4
229	104.92	344.2	147.5	72.0	1
230	104.92	344.2	144.7	24.7	1
231	105.10	344.8	114.5	26.2	3
232	105.10	344.8	188.1	21.9	3
233	105.19	345.1	224.7	15.9	1
234	105.24	345.3	354.5	31.5	1
235	105.33	345.6	176.3	31.7	1
236	105.36	345.7	128.7	31.4	1
237	105.45	346.0	183.7	34.9	4
238	105.49	346.1	76.4	50.4	4
239	105.56	346.3	203.5	32.9	4
240	105.69	346.7	123.4	19.8	1
241	105.87	347.3	165.9	15.0	2
242	105.88	347.4	340.3	27.4	1
243	105.89	347.4	298.9	25.9	1
244	105.95	347.6	315.0	42.9	1
245	106.06	348.0	147.3	19.8	1
246	106.13	348.2	146.0	15.4	1
247	106.23	348.5	313.6	29.1	1
248	106.25	348.6	184.1	6.0	2
249	106.28	348.7	168.8	14.2	1
250	106.28	348.7	175.3	37.5	1
251	106.46	349.3	193.1	7.9	1
252	106.62	349.8	232.9	20.9	0
253	106.72	350.1	208.0	21.7	1
254	106.73	350.2	116.0	51.9	0
255	106.74	350.2	128.8	22.8	1
256	106.78	350.3	245.0	79.2	0
257	106.80	350.4	229.4	40.6	1
258	106.81	350.4	136.1	43.0	1
259	106.98	351.0	178.4	10.5	0

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
260	107.06	351.3	146.1	9.1	0
261	107.38	352.3	138.6	18.2	0
262	107.46	352.6	342.0	31.9	0
263	107.48	352.6	79.4	18.2	0
264	107.51	352.7	126.1	21.9	0
265	107.65	353.2	141.3	21.5	1
266	107.67	353.2	13.8	38.6	1
267	107.68	353.3	29.6	20.0	3
268	107.73	353.5	182.2	21.0	3
269	107.80	353.7	134.0	11.8	0
270	107.82	353.7	339.5	70.4	1
271	107.94	354.2	246.1	40.7	0
272	108.01	354.4	151.1	20.0	0
273	108.09	354.6	122.1	18.8	0
274	108.12	354.7	73.3	71.9	0
275	108.20	355.0	132.3	5.5	0
276	108.23	355.1	200.0	24.1	0
277	108.44	355.8	134.9	31.2	0
278	108.58	356.2	188.8	39.0	0
279	108.58	356.2	311.7	64.1	0
280	108.60	356.3	335.6	70.2	1
281	108.62	356.4	141.1	53.7	0
282	108.65	356.5	313.3	53.4	1
283	108.70	356.6	183.2	7.4	1
284	108.75	356.8	59.2	10.2	2
285	108.80	356.9	170.2	14.8	2
286	108.99	357.6	165.7	29.8	4
287	109.04	357.8	118.1	51.1	4
288	109.16	358.1	165.1	29.2	4
289	109.30	358.6	9.7	75.9	1
290	109.32	358.7	302.0	12.6	1
291	109.33	358.7	75.6	17.3	1
292	109.33	358.7	187.3	24.3	1
293	109.48	359.2	172.1	13.4	0
294	109.59	359.6	199.7	9.9	0
295	109.74	360.1	55.1	57.7	0
296	109.79	360.2	172.1	11.6	0

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
297	109.94	360.7	161.1	26.6	0
298	109.99	360.9	25.3	33.1	0
299	110.00	360.9	190.3	25.5	0
300	110.24	361.7	193.1	20.8	0
301	110.30	361.9	31.7	34.3	0
302	110.32	362.0	167.4	13.5	0
303	110.45	362.4	45.3	6.0	0
304	110.52	362.6	220.1	10.0	0
305	110.64	363.0	174.5	19.7	0
306	110.70	363.2	208.2	35.8	1
307	110.73	363.3	252.3	11.4	1
308	110.74	363.3	33.2	18.3	1
309	110.89	363.8	310.0	63.6	0
310	110.90	363.9	129.1	44.1	0
311	111.13	364.6	206.0	35.6	0
312	111.30	365.2	171.1	14.9	0
313	111.40	365.5	188.9	8.5	0
314	111.83	366.9	83.2	33.9	1
315	111.84	366.9	144.6	19.7	2
316	111.86	367.0	340.5	16.3	2
317	111.88	367.1	21.0	74.6	1
318	111.92	367.2	306.1	79.0	1
319	112.82	370.1	104.9	73.5	1
320	112.82	370.1	181.5	23.5	1
321	112.96	370.6	16.7	62.0	1
322	113.80	373.4	137.7	74.8	1
323	113.94	373.8	208.1	73.7	1
324	114.13	374.4	293.0	73.3	2
325	114.33	375.1	121.3	22.9	0
326	114.40	375.3	37.4	80.8	2
327	114.42	375.4	177.2	12.0	1
328	114.92	377.1	334.3	63.9	1
329	114.98	377.2	290.0	45.6	1
330	115.00	377.3	159.8	83.7	2
331	115.32	378.4	213.8	81.2	1
332	116.04	380.7	238.7	29.6	4
333	116.17	381.1	229.3	24.9	4

All directions are with respect to Magnetic North.



Table 854560: 1. Orientation Summary Table
Televiewer Image Features
Arcadis
TCAAP
854560
30 June 2021

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)	Feature Rank (0 to 5)
334	116.30	381.6	202.0	60.8	2
335	116.36	381.8	342.8	43.3	1
336	116.43	382.0	125.7	21.2	1
337	116.54	382.4	221.6	38.9	1
338	116.62	382.6	20.2	52.6	1
339	116.71	382.9	128.6	58.6	1
340	116.88	383.5	300.6	42.2	1
341	117.90	386.8	261.7	19.2	0
342	117.96	387.0	205.4	17.0	1
343	118.29	388.1	180.1	45.9	0
344	118.56	389.0	145.9	25.1	1
345	118.80	389.8	323.5	71.1	1
346	119.24	391.2	14.3	19.0	1
347	119.26	391.3	204.2	38.7	1
348	119.39	391.7	155.0	9.7	0
349	119.49	392.0	191.9	10.3	0

All directions are with respect to Magnetic North.



Optical Televiewer & 3-Arm Caliper

COMPANY: Arcadis

PROJECT: Arden Hills TCAAP

DATE LOGGED: 30 June 2021

WELL: 854560

Colog, Inc.

Ocean Springs, MS 39564

Phone: (256) 325-1504

www.colog.com

LOCATION: New Brighton, MN

LOG MEASURED FROM: Ground Surface

FIELD ENGINEER(S): J. Grace

TOP & BOTTOM OF CASING: GS to 283ft

WITNESSED BY: NA

BOREHOLE DIAMETER: 7 inches

DEPTH DRILLER: 395 ft

FLUID LEVEL DEPTH: 167 ftbgs

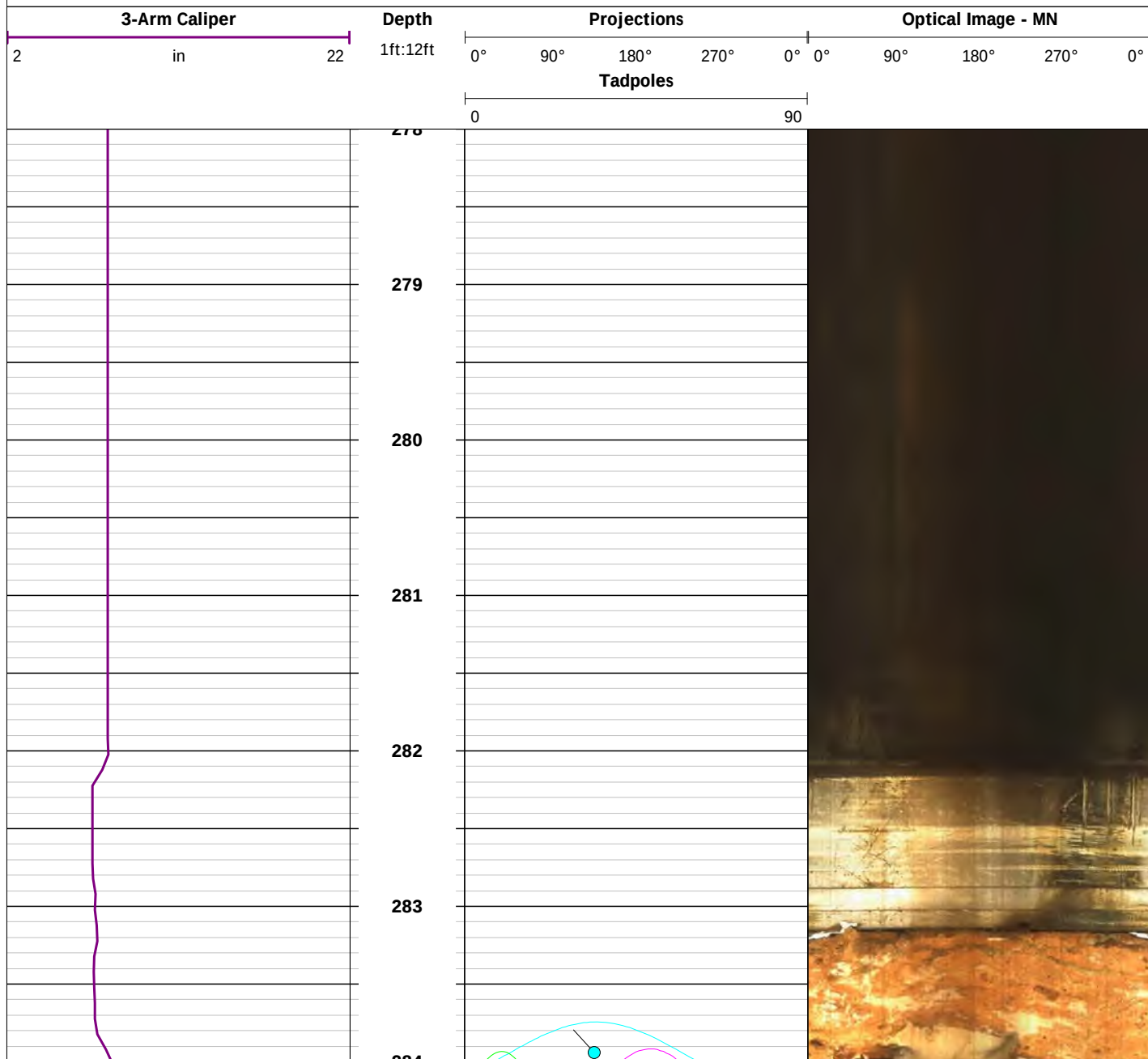
DEPTH LOGGER: 392.7 ft

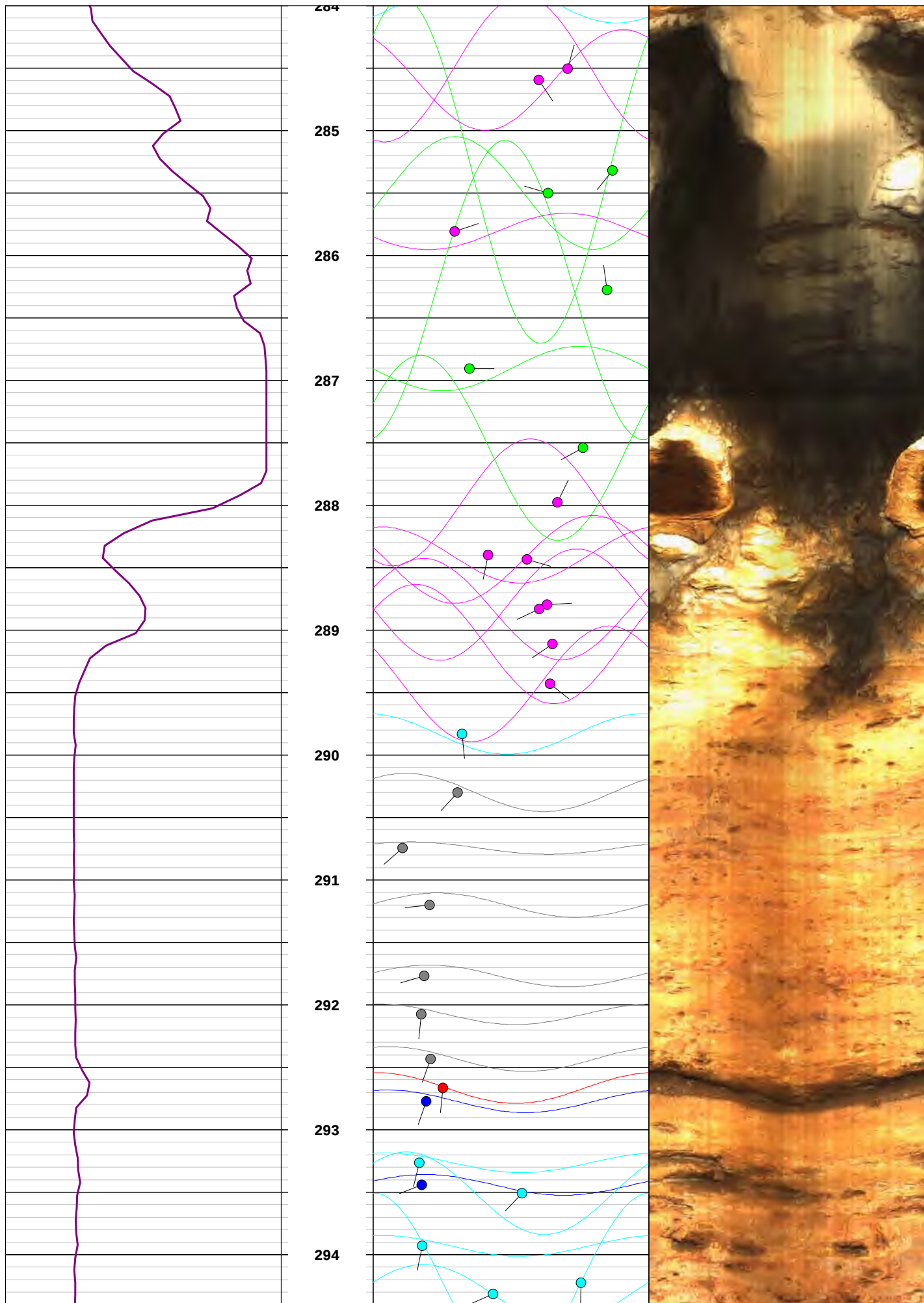
ORIENTATION REFERENCE: Magnetic North

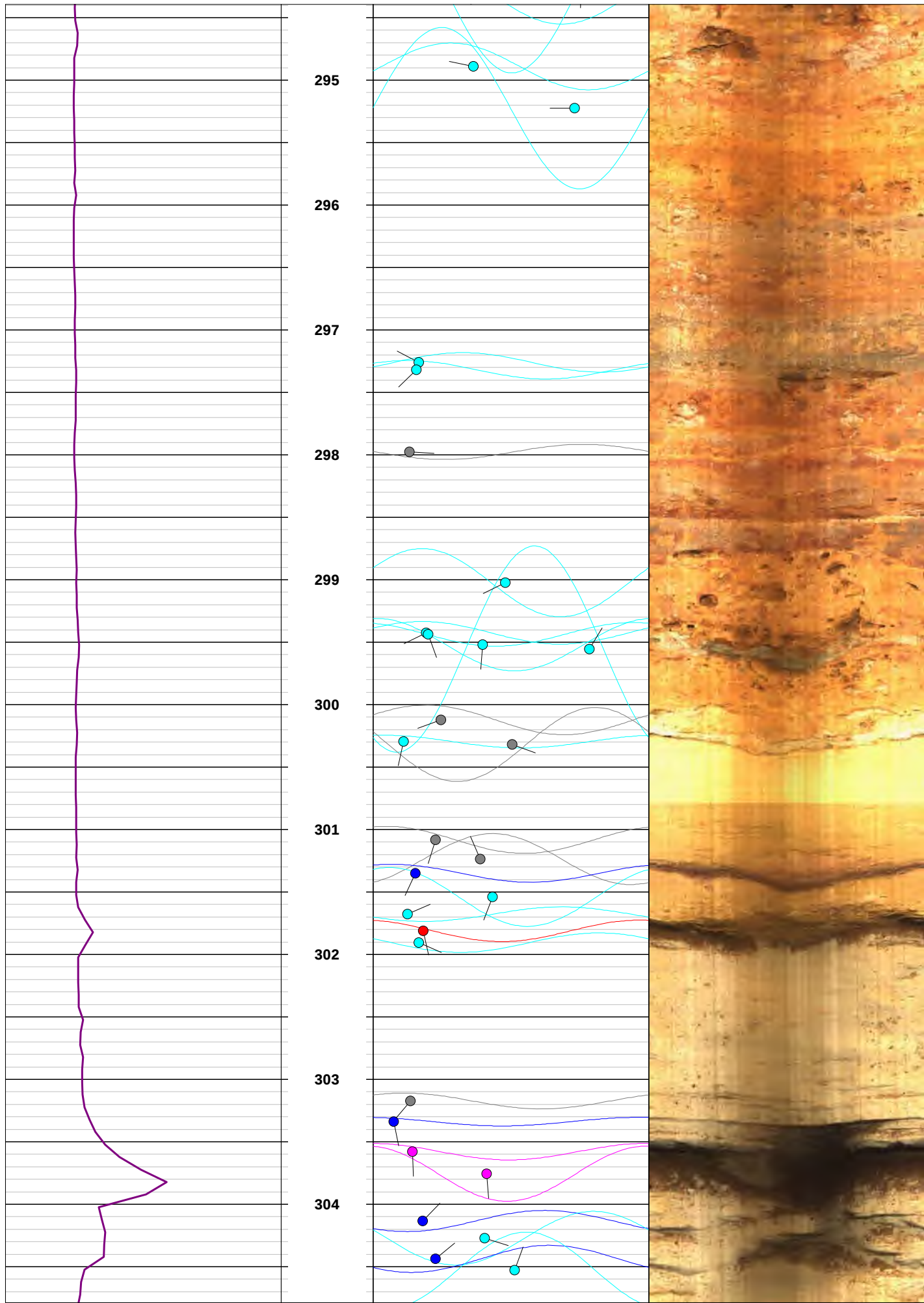
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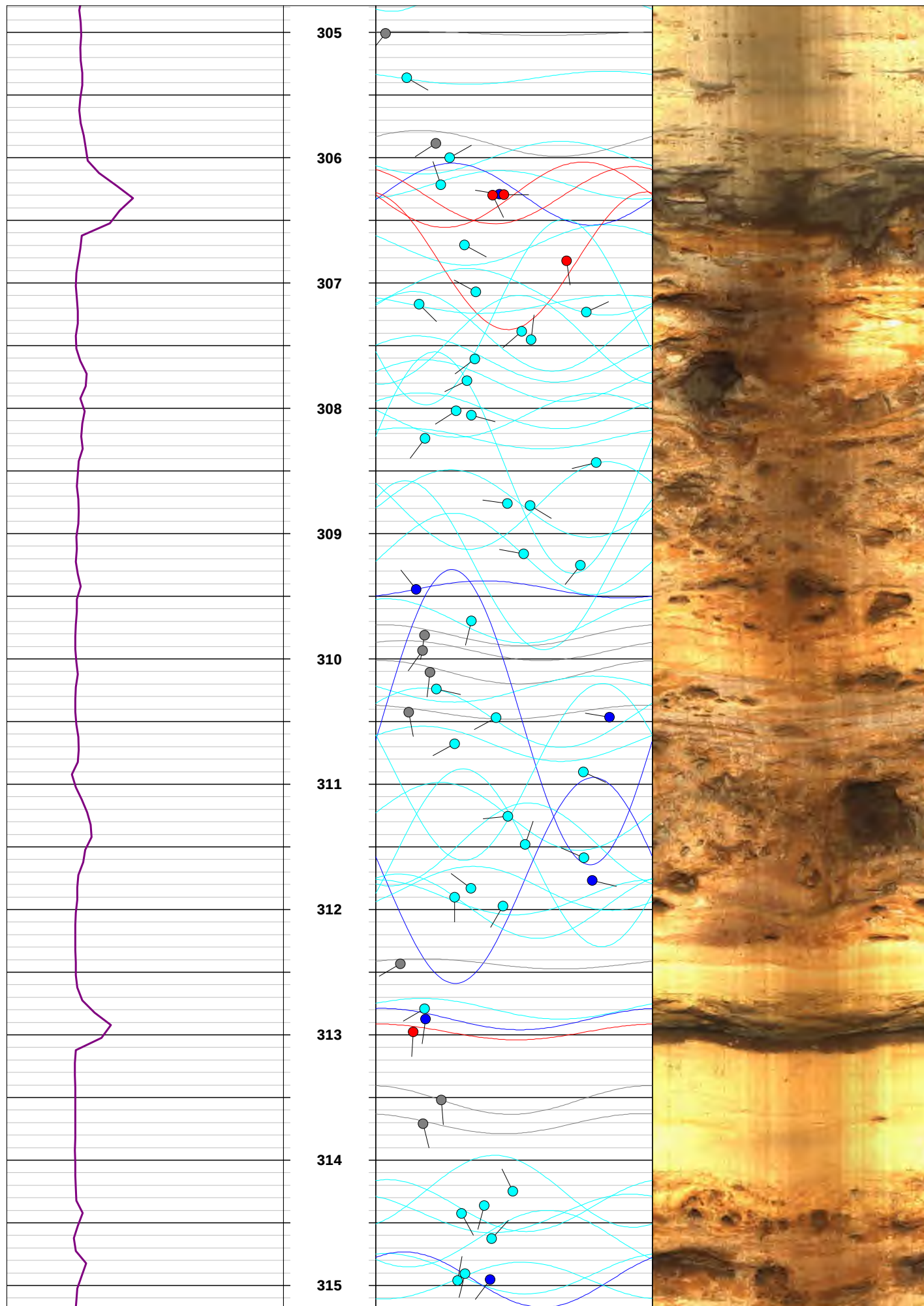
STRUCTURE LEGEND:

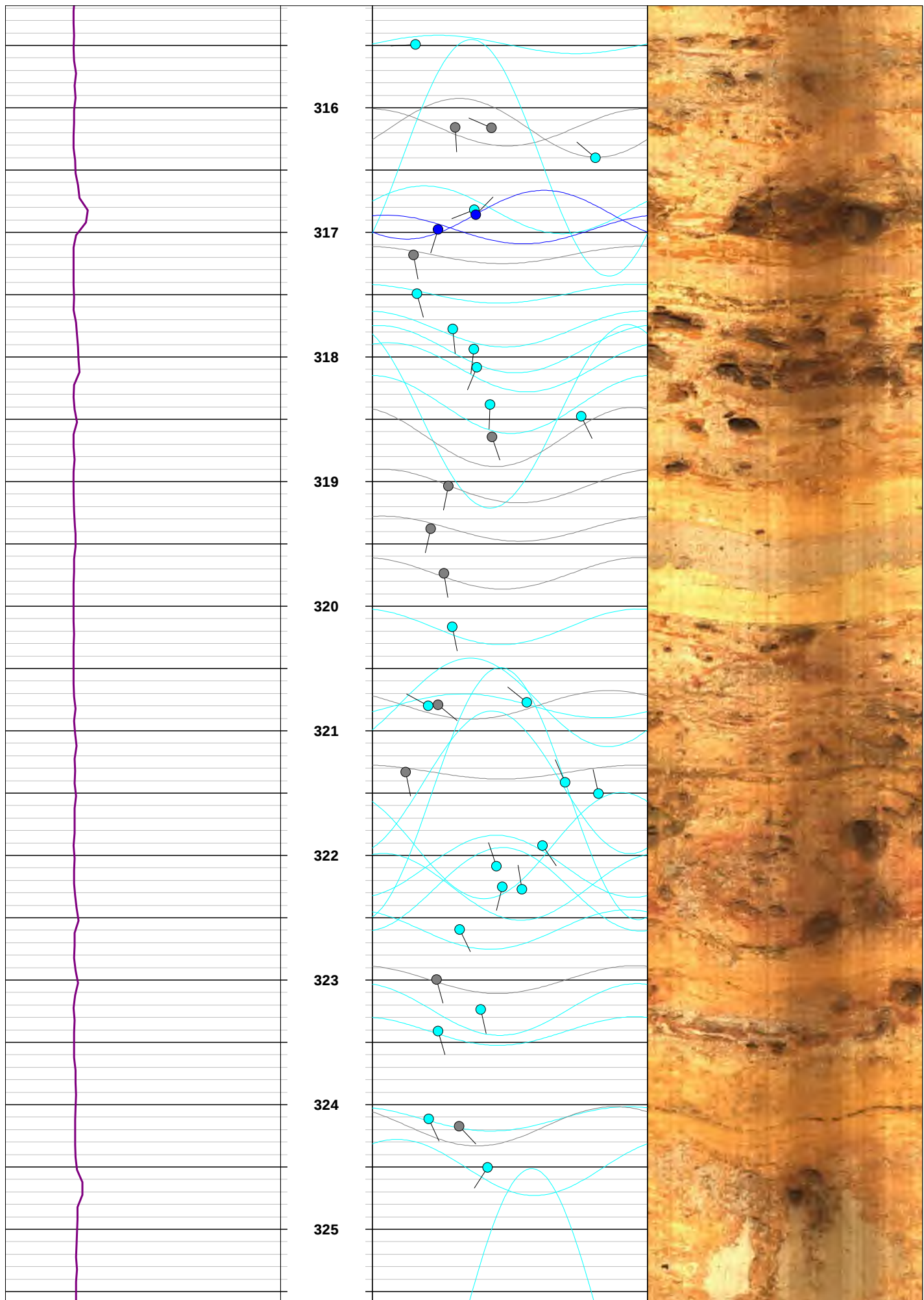
- 0 - Healed Fracture/Bedding Plane
- 1 - Partial Fracture
- 2 - Complete Fracture
- 3 - Open Fracture
- 4 - Wide Fracture/Multiple Fractures
- 5 - Washout/Wide Fracture Zone

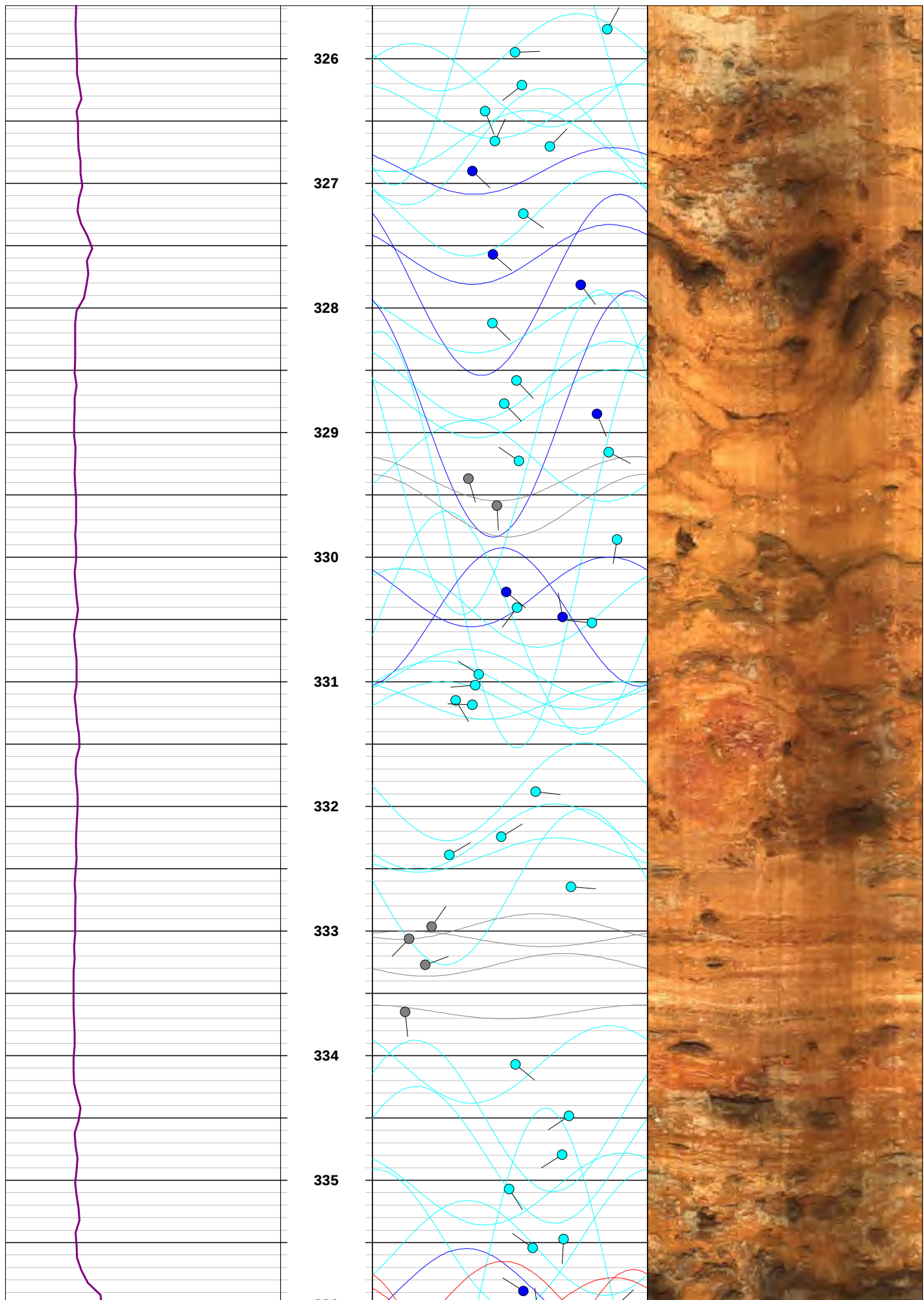


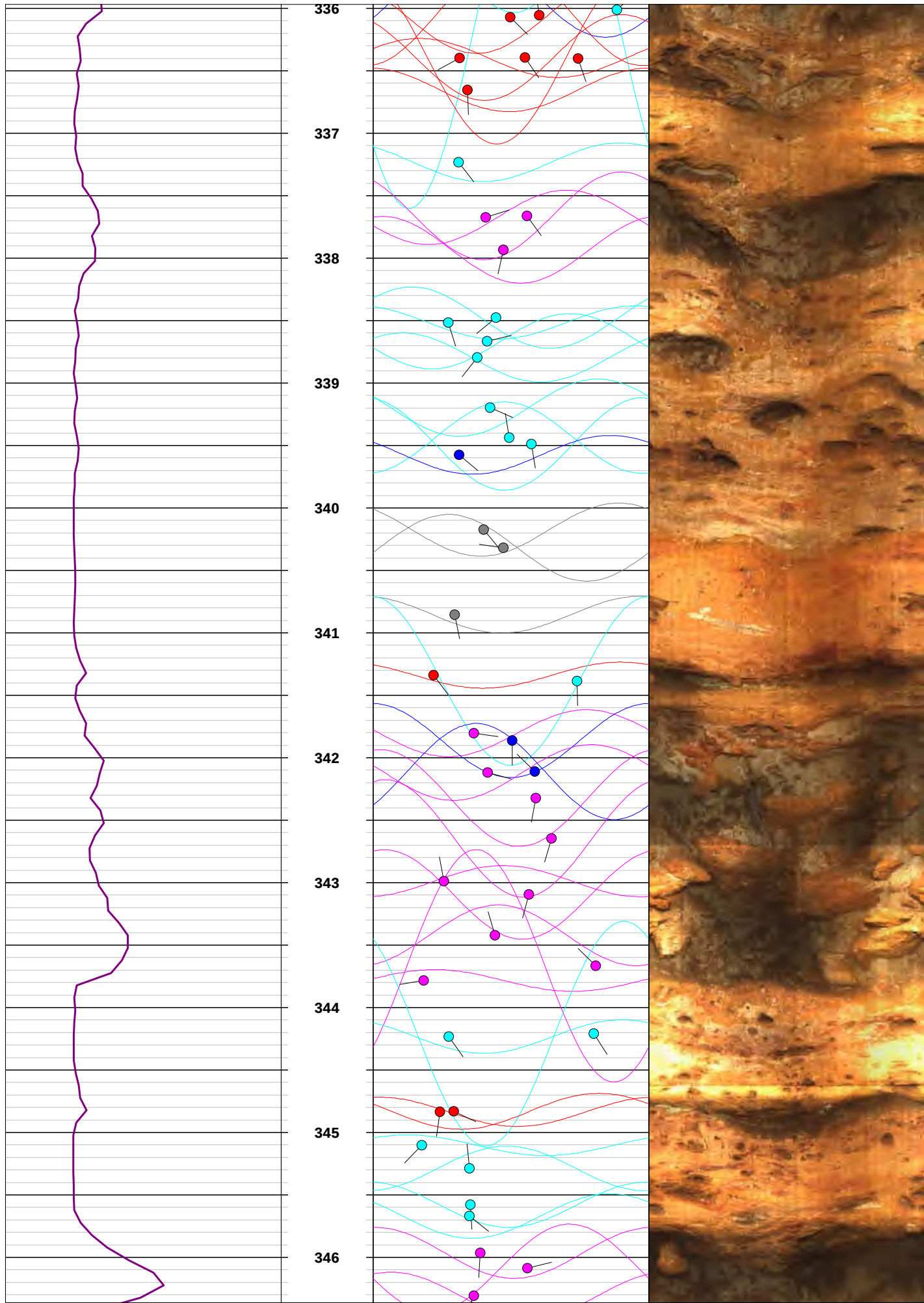


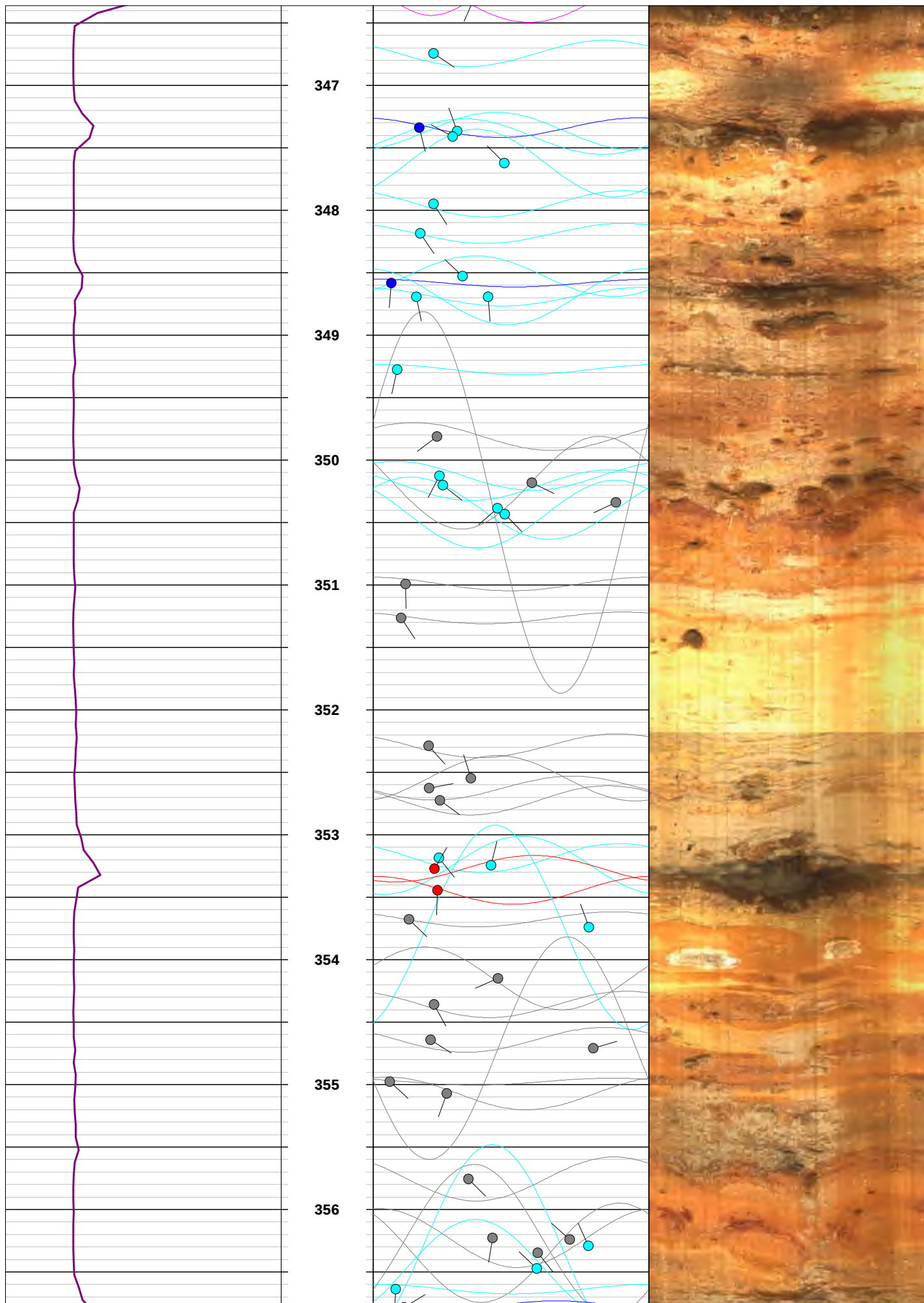


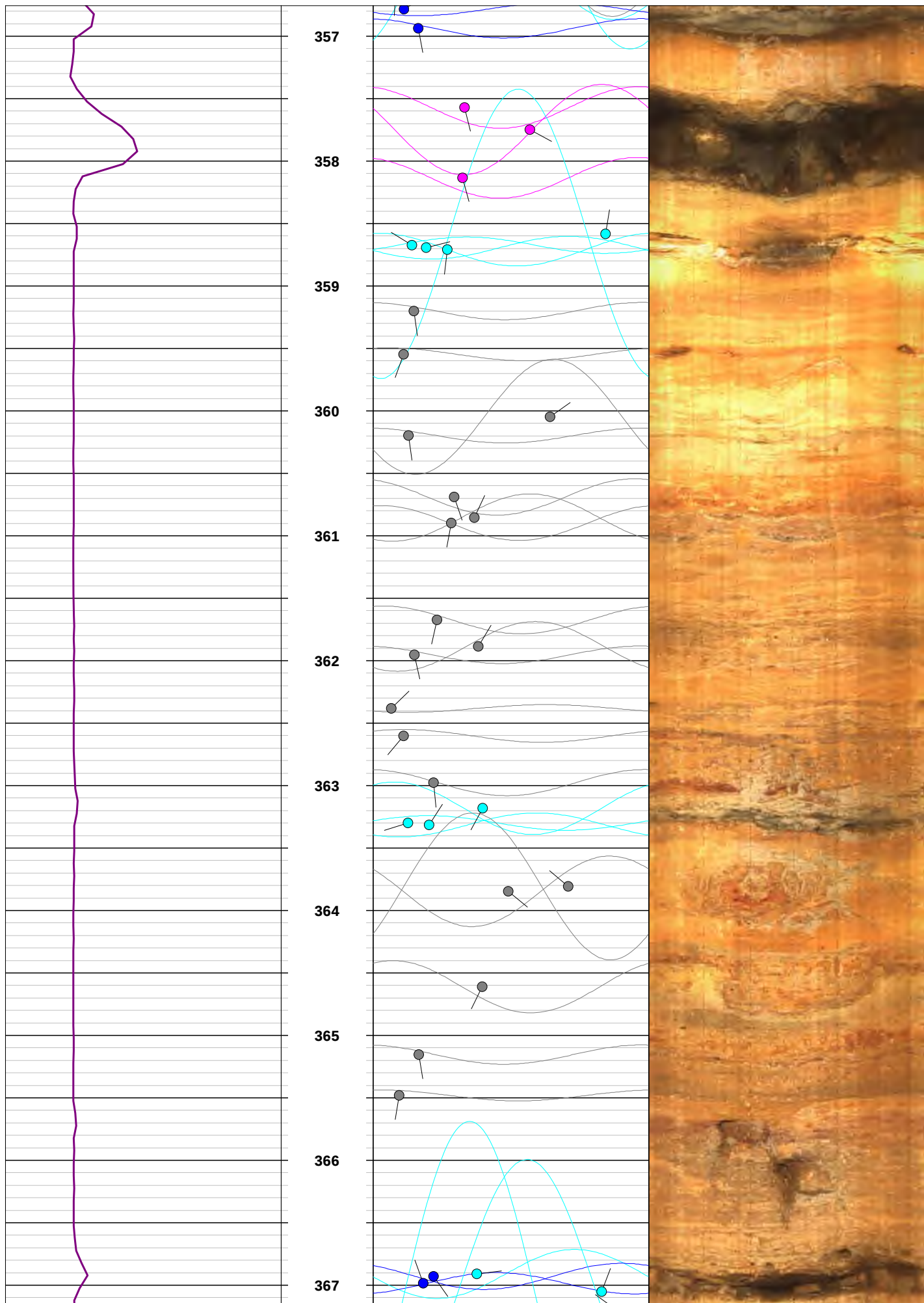


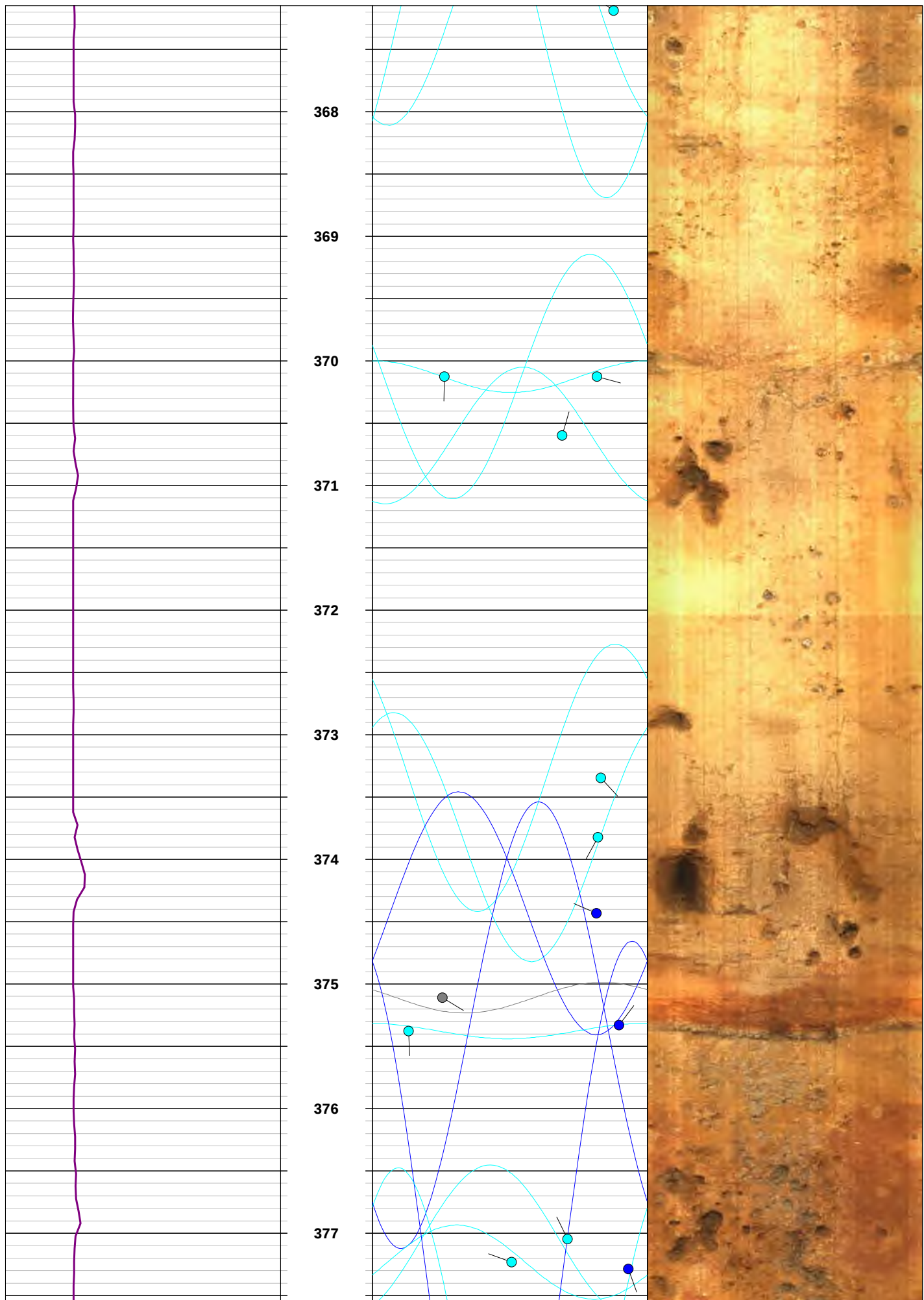


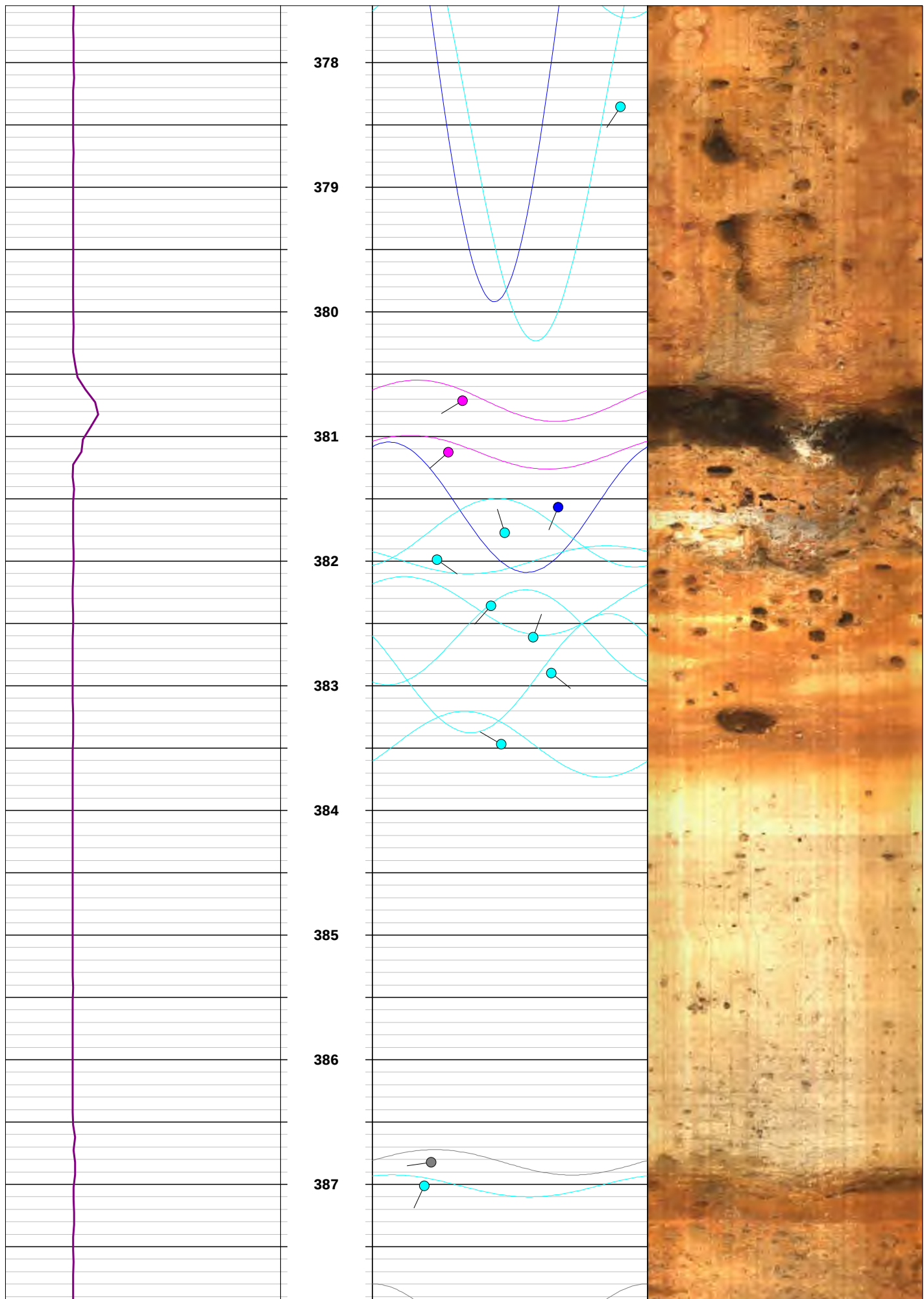


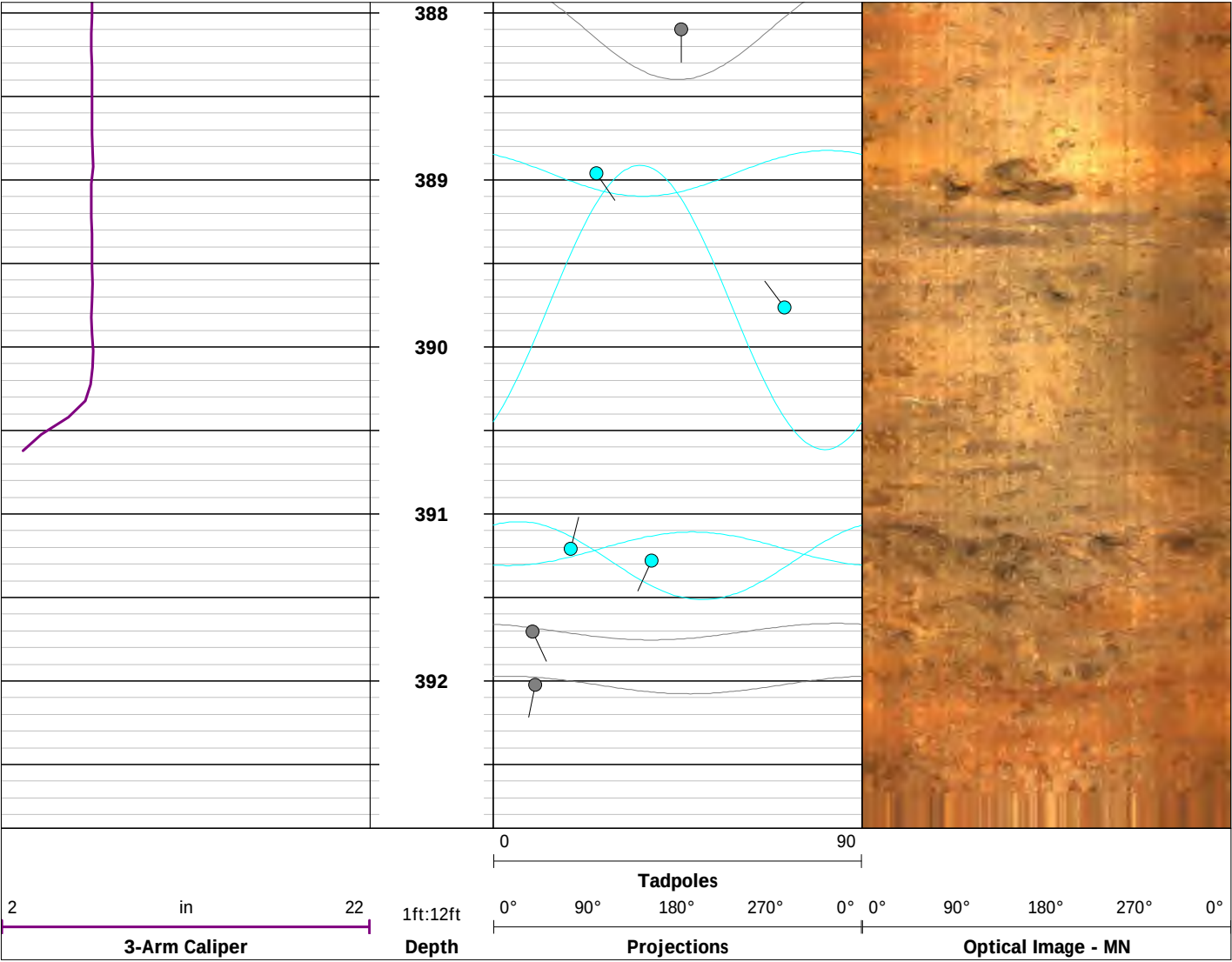














Natural Gamma, Caliper, & FTC

COMPANY: Arcadis

PROJECT: Arden Hills TCAAP

DATE LOGGED: 30 June 2021

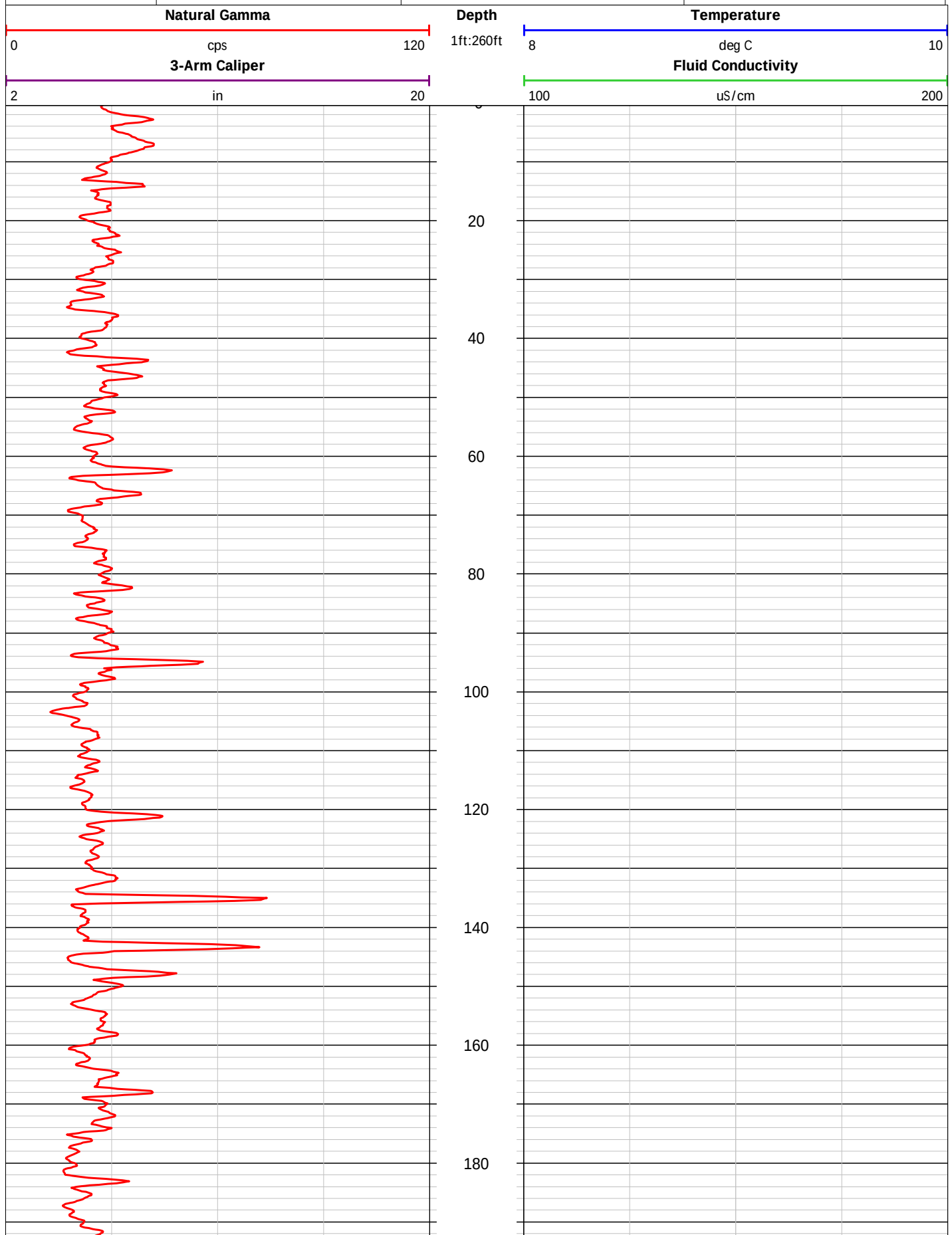
WELL: 854560

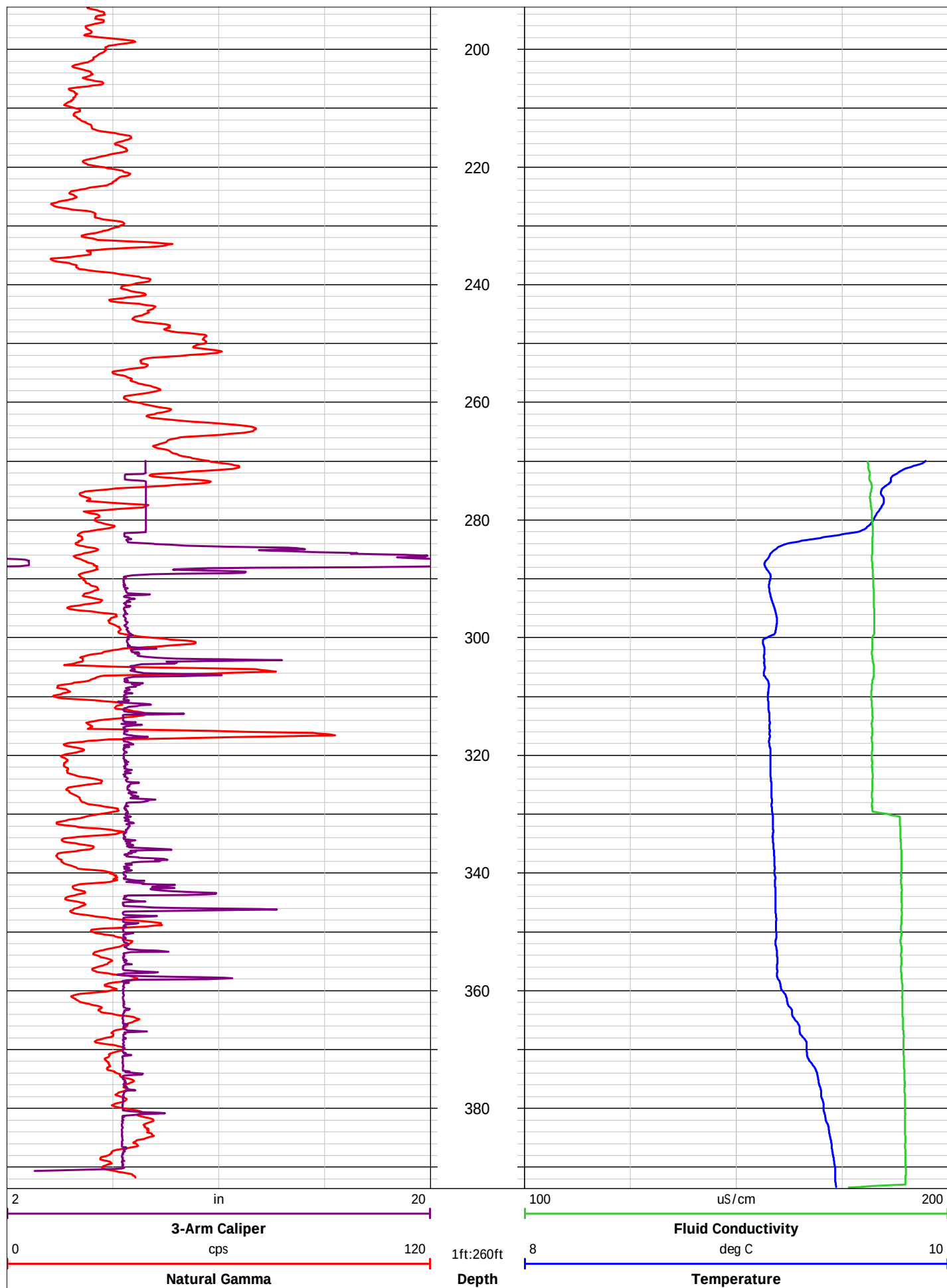
Colog, Inc.

Ocean Springs, MS 39564

Phone: (256) 325-1504

www.colog.com





Attachment 3

Laboratory Analytical Reports

August 30, 2021

Arcadis - Minneapolis MN

Sample Delivery Group: L1382382

Samples Received: 07/23/2021

Project Number:

Description: TCAAP

Report To: Jackelyn Anderson
123 North Third Street
Suite 705
Minneapolis, MN 55401

Entire Report Reviewed By:



John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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TRIP BLANK L1382382-02	7
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Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	13
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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

854560(20210722) L1382382-01 GW

Collected by

Collected date/time

Received date/time

07/22/21 14:35

07/23/21 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1714779	1	07/30/21 17:03	07/30/21 17:03	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1714424	1.05	07/29/21 23:13	07/30/21 07:49	AMG	Mt. Juliet, TN

TRIP BLANK L1382382-02 GW

Collected by

Collected date/time

Received date/time

07/22/21 00:00

07/23/21 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1714779	1	07/30/21 16:42	07/30/21 16:42	ADM	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

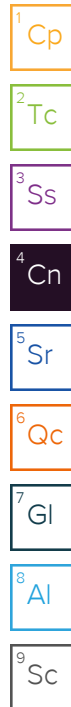
Project Narrative

Reprint level 2 report.

Sample Delivery Group (SDG) Narrative

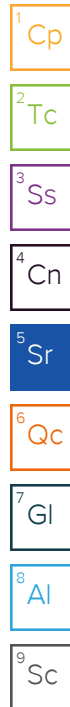
Analyzed from headspace vial.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1382382-02	TRIP BLANK	8260D



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/30/2021 17:03	WG1714779
Allyl chloride	U		0.500	5.00	1	07/30/2021 17:03	WG1714779
Benzene	U		0.0941	1.00	1	07/30/2021 17:03	WG1714779
Bromobenzene	U		0.118	1.00	1	07/30/2021 17:03	WG1714779
Bromochloromethane	U	J4	0.128	1.00	1	07/30/2021 17:03	WG1714779
Bromodichloromethane	U		0.136	1.00	1	07/30/2021 17:03	WG1714779
Bromoform	U		0.129	1.00	1	07/30/2021 17:03	WG1714779
Bromomethane	U		0.605	5.00	1	07/30/2021 17:03	WG1714779
n-Butylbenzene	U		0.157	1.00	1	07/30/2021 17:03	WG1714779
sec-Butylbenzene	U		0.125	1.00	1	07/30/2021 17:03	WG1714779
tert-Butylbenzene	U		0.127	1.00	1	07/30/2021 17:03	WG1714779
Carbon tetrachloride	U		0.128	1.00	1	07/30/2021 17:03	WG1714779
Chlorobenzene	U		0.116	1.00	1	07/30/2021 17:03	WG1714779
Chlorodibromomethane	U		0.140	1.00	1	07/30/2021 17:03	WG1714779
Chloroethane	U		0.192	5.00	1	07/30/2021 17:03	WG1714779
Chloroform	U		0.111	5.00	1	07/30/2021 17:03	WG1714779
Chloromethane	U	C3	0.960	2.50	1	07/30/2021 17:03	WG1714779
2-Chlorotoluene	U		0.106	1.00	1	07/30/2021 17:03	WG1714779
4-Chlorotoluene	U		0.114	1.00	1	07/30/2021 17:03	WG1714779
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/30/2021 17:03	WG1714779
1,2-Dibromoethane	U		0.126	1.00	1	07/30/2021 17:03	WG1714779
Dibromomethane	U		0.122	1.00	1	07/30/2021 17:03	WG1714779
1,2-Dichlorobenzene	U		0.107	1.00	1	07/30/2021 17:03	WG1714779
1,3-Dichlorobenzene	U		0.110	1.00	1	07/30/2021 17:03	WG1714779
1,4-Dichlorobenzene	U		0.120	1.00	1	07/30/2021 17:03	WG1714779
Dichlorodifluoromethane	U		0.374	5.00	1	07/30/2021 17:03	WG1714779
Dichlorofluoromethane	U		0.130	5.00	1	07/30/2021 17:03	WG1714779
1,1-Dichloroethane	1.40		0.100	1.00	1	07/30/2021 17:03	WG1714779
1,2-Dichloroethane	U		0.0819	1.00	1	07/30/2021 17:03	WG1714779
1,1-Dichloroethene	1.28		0.188	1.00	1	07/30/2021 17:03	WG1714779
cis-1,2-Dichloroethene	0.582	J	0.126	1.00	1	07/30/2021 17:03	WG1714779
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/30/2021 17:03	WG1714779
1,2-Dichloropropane	U		0.149	1.00	1	07/30/2021 17:03	WG1714779
1,1-Dichloropropene	U		0.142	1.00	1	07/30/2021 17:03	WG1714779
1,3-Dichloropropane	U		0.110	1.00	1	07/30/2021 17:03	WG1714779
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/30/2021 17:03	WG1714779
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/30/2021 17:03	WG1714779
2,2-Dichloropropane	U		0.161	1.00	1	07/30/2021 17:03	WG1714779
Ethylbenzene	U		0.137	1.00	1	07/30/2021 17:03	WG1714779
Ethyl ether	U		0.115	1.00	1	07/30/2021 17:03	WG1714779
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/30/2021 17:03	WG1714779
Isopropylbenzene	U		0.105	1.00	1	07/30/2021 17:03	WG1714779
p-Isopropyltoluene	U		0.120	1.00	1	07/30/2021 17:03	WG1714779
2-Butanone (MEK)	U		1.19	10.0	1	07/30/2021 17:03	WG1714779
Methylene Chloride	U		0.430	5.00	1	07/30/2021 17:03	WG1714779
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/30/2021 17:03	WG1714779
Methyl tert-butyl ether	U		0.101	1.00	1	07/30/2021 17:03	WG1714779
Naphthalene	U	J3	1.00	5.00	1	07/30/2021 17:03	WG1714779
n-Propylbenzene	U		0.0993	1.00	1	07/30/2021 17:03	WG1714779
Styrene	U		0.118	1.00	1	07/30/2021 17:03	WG1714779
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/30/2021 17:03	WG1714779
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/30/2021 17:03	WG1714779
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/30/2021 17:03	WG1714779
Tetrachloroethene	U		0.300	1.00	1	07/30/2021 17:03	WG1714779
Tetrahydrofuran	U		0.929	5.00	1	07/30/2021 17:03	WG1714779
Toluene	U		0.278	1.00	1	07/30/2021 17:03	WG1714779



854560(20210722)

SAMPLE RESULTS - 01

Collected date/time: 07/22/21 14:35

L1382382

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/30/2021 17:03	WG1714779
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/30/2021 17:03	WG1714779
1,1,1-Trichloroethane	0.511	J	0.149	1.00	1	07/30/2021 17:03	WG1714779
1,1,2-Trichloroethane	U		0.158	1.00	1	07/30/2021 17:03	WG1714779
Trichloroethene	17.4		0.190	1.00	1	07/30/2021 17:03	WG1714779
Trichlorofluoromethane	U		0.160	5.00	1	07/30/2021 17:03	WG1714779
1,2,3-Trichloropropane	U		0.237	2.50	1	07/30/2021 17:03	WG1714779
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/30/2021 17:03	WG1714779
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/30/2021 17:03	WG1714779
Vinyl chloride	U		0.234	1.00	1	07/30/2021 17:03	WG1714779
Xylenes, Total	U		0.174	3.00	1	07/30/2021 17:03	WG1714779
(S) Toluene-d8	97.1			80.0-120		07/30/2021 17:03	WG1714779
(S) 4-Bromofluorobenzene	95.6			77.0-126		07/30/2021 17:03	WG1714779
(S) 1,2-Dichloroethane-d4	96.6			70.0-130		07/30/2021 17:03	WG1714779

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	1.64		0.0469	0.420	1.05	07/30/2021 07:49	WG1714424
(S) Nitrobenzene-d5	76.8			10.0-120		07/30/2021 07:49	WG1714424

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/30/2021 16:42	WG1714779
Allyl chloride	U		0.500	5.00	1	07/30/2021 16:42	WG1714779
Benzene	U		0.0941	1.00	1	07/30/2021 16:42	WG1714779
Bromobenzene	U		0.118	1.00	1	07/30/2021 16:42	WG1714779
Bromochloromethane	U	J4	0.128	1.00	1	07/30/2021 16:42	WG1714779
Bromodichloromethane	U		0.136	1.00	1	07/30/2021 16:42	WG1714779
Bromoform	U		0.129	1.00	1	07/30/2021 16:42	WG1714779
Bromomethane	U		0.605	5.00	1	07/30/2021 16:42	WG1714779
n-Butylbenzene	U		0.157	1.00	1	07/30/2021 16:42	WG1714779
sec-Butylbenzene	U		0.125	1.00	1	07/30/2021 16:42	WG1714779
tert-Butylbenzene	U		0.127	1.00	1	07/30/2021 16:42	WG1714779
Carbon tetrachloride	U		0.128	1.00	1	07/30/2021 16:42	WG1714779
Chlorobenzene	U		0.116	1.00	1	07/30/2021 16:42	WG1714779
Chlorodibromomethane	U		0.140	1.00	1	07/30/2021 16:42	WG1714779
Chloroethane	U		0.192	5.00	1	07/30/2021 16:42	WG1714779
Chloroform	U		0.111	5.00	1	07/30/2021 16:42	WG1714779
Chloromethane	U	C3	0.960	2.50	1	07/30/2021 16:42	WG1714779
2-Chlorotoluene	U		0.106	1.00	1	07/30/2021 16:42	WG1714779
4-Chlorotoluene	U		0.114	1.00	1	07/30/2021 16:42	WG1714779
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/30/2021 16:42	WG1714779
1,2-Dibromoethane	U		0.126	1.00	1	07/30/2021 16:42	WG1714779
Dibromomethane	U		0.122	1.00	1	07/30/2021 16:42	WG1714779
1,2-Dichlorobenzene	U		0.107	1.00	1	07/30/2021 16:42	WG1714779
1,3-Dichlorobenzene	U		0.110	1.00	1	07/30/2021 16:42	WG1714779
1,4-Dichlorobenzene	U		0.120	1.00	1	07/30/2021 16:42	WG1714779
Dichlorodifluoromethane	U		0.374	5.00	1	07/30/2021 16:42	WG1714779
Dichlorofluoromethane	U		0.130	5.00	1	07/30/2021 16:42	WG1714779
1,1-Dichloroethane	U		0.100	1.00	1	07/30/2021 16:42	WG1714779
1,2-Dichloroethane	U		0.0819	1.00	1	07/30/2021 16:42	WG1714779
1,1-Dichloroethene	U		0.188	1.00	1	07/30/2021 16:42	WG1714779
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/30/2021 16:42	WG1714779
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/30/2021 16:42	WG1714779
1,2-Dichloropropane	U		0.149	1.00	1	07/30/2021 16:42	WG1714779
1,1-Dichloropropene	U		0.142	1.00	1	07/30/2021 16:42	WG1714779
1,3-Dichloropropane	U		0.110	1.00	1	07/30/2021 16:42	WG1714779
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/30/2021 16:42	WG1714779
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/30/2021 16:42	WG1714779
2,2-Dichloropropane	U		0.161	1.00	1	07/30/2021 16:42	WG1714779
Ethylbenzene	U		0.137	1.00	1	07/30/2021 16:42	WG1714779
Ethyl ether	U		0.115	1.00	1	07/30/2021 16:42	WG1714779
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/30/2021 16:42	WG1714779
Isopropylbenzene	U		0.105	1.00	1	07/30/2021 16:42	WG1714779
p-Isopropyltoluene	U		0.120	1.00	1	07/30/2021 16:42	WG1714779
2-Butanone (MEK)	U		1.19	10.0	1	07/30/2021 16:42	WG1714779
Methylene Chloride	1.01	J	0.430	5.00	1	07/30/2021 16:42	WG1714779
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/30/2021 16:42	WG1714779
Methyl tert-butyl ether	U		0.101	1.00	1	07/30/2021 16:42	WG1714779
Naphthalene	1.69	J J3	1.00	5.00	1	07/30/2021 16:42	WG1714779
n-Propylbenzene	U		0.0993	1.00	1	07/30/2021 16:42	WG1714779
Styrene	U		0.118	1.00	1	07/30/2021 16:42	WG1714779
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/30/2021 16:42	WG1714779
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/30/2021 16:42	WG1714779
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/30/2021 16:42	WG1714779
Tetrachloroethene	U		0.300	1.00	1	07/30/2021 16:42	WG1714779
Tetrahydrofuran	U		0.929	5.00	1	07/30/2021 16:42	WG1714779
Toluene	U		0.278	1.00	1	07/30/2021 16:42	WG1714779

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/30/2021 16:42	WG1714779
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/30/2021 16:42	WG1714779
1,1,1-Trichloroethane	U		0.149	1.00	1	07/30/2021 16:42	WG1714779
1,1,2-Trichloroethane	U		0.158	1.00	1	07/30/2021 16:42	WG1714779
Trichloroethene	U		0.190	1.00	1	07/30/2021 16:42	WG1714779
Trichlorofluoromethane	U		0.160	5.00	1	07/30/2021 16:42	WG1714779
1,2,3-Trichloropropane	U		0.237	2.50	1	07/30/2021 16:42	WG1714779
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/30/2021 16:42	WG1714779
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/30/2021 16:42	WG1714779
Vinyl chloride	U		0.234	1.00	1	07/30/2021 16:42	WG1714779
Xylenes, Total	U		0.174	3.00	1	07/30/2021 16:42	WG1714779
(S) Toluene-d8	98.6			80.0-120		07/30/2021 16:42	WG1714779
(S) 4-Bromofluorobenzene	95.8			77.0-126		07/30/2021 16:42	WG1714779
(S) 1,2-Dichloroethane-d4	97.8			70.0-130		07/30/2021 16:42	WG1714779

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

Method Blank (MB)

(MB) R3686224-4 07/30/21 11:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromochloromethane	U		0.128	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
Dichlorofluoromethane	U		0.130	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Ethylbenzene	U		0.137	1.00
Ethyl ether	U		0.115	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3686224-4 07/30/21 11:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00
Tetrahydrofuran	U		0.929	5.00
Toluene	U		0.278	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
Allyl Chloride	U		0.500	5.00
(S) Toluene-d8	99.4			80.0-120
(S) 4-Bromofluorobenzene	95.3			77.0-126
(S) 1,2-Dichloroethane-d4	95.4			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3686224-1 07/30/21 09:26 • (LCSD) R3686224-2 07/30/21 09:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	27.5	28.2	110	113	19.0-160			2.51	27
Benzene	5.00	5.43	5.23	109	105	70.0-123			3.75	20
Bromobenzene	5.00	5.36	5.27	107	105	73.0-121			1.69	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3686224-1 07/30/21 09:26 • (LCSD) R3686224-2 07/30/21 09:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	5.00	5.67	5.44	113	109	75.0-120			4.14	20
Bromochloromethane	5.00	6.56	6.35	131	127	76.0-122	J4	J4	3.25	20
Bromoform	5.00	5.21	5.35	104	107	68.0-132			2.65	20
Bromomethane	5.00	4.23	3.93	84.6	78.6	30.0-160			7.35	25
n-Butylbenzene	5.00	4.94	5.00	98.8	100	73.0-125			1.21	20
sec-Butylbenzene	5.00	5.00	5.06	100	101	75.0-125			1.19	20
tert-Butylbenzene	5.00	4.88	4.81	97.6	96.2	76.0-124			1.44	20
Carbon tetrachloride	5.00	5.18	4.96	104	99.2	68.0-126			4.34	20
Chlorobenzene	5.00	5.59	5.28	112	106	80.0-121			5.70	20
Chlorodibromomethane	5.00	5.23	5.04	105	101	77.0-125			3.70	20
Chloroethane	5.00	5.89	6.27	118	125	47.0-150			6.25	20
Chloroform	5.00	5.45	5.38	109	108	73.0-120			1.29	20
Chloromethane	5.00	3.40	3.15	68.0	63.0	41.0-142			7.63	20
2-Chlorotoluene	5.00	5.24	5.17	105	103	76.0-123			1.34	20
4-Chlorotoluene	5.00	5.09	5.21	102	104	75.0-122			2.33	20
1,2-Dibromo-3-Chloropropane	5.00	4.83	5.17	96.6	103	58.0-134			6.80	20
1,2-Dibromoethane	5.00	5.21	5.08	104	102	80.0-122			2.53	20
Dibromomethane	5.00	5.30	5.10	106	102	80.0-120			3.85	20
1,2-Dichlorobenzene	5.00	5.42	5.29	108	106	79.0-121			2.43	20
1,3-Dichlorobenzene	5.00	5.33	5.27	107	105	79.0-120			1.13	20
1,4-Dichlorobenzene	5.00	5.05	5.08	101	102	79.0-120			0.592	20
Dichlorodifluoromethane	5.00	5.63	5.47	113	109	51.0-149			2.88	20
Dichlorofluoromethane	5.00	5.31	5.19	106	104	65.0-133			2.29	20
1,1-Dichloroethane	5.00	5.46	5.42	109	108	70.0-126			0.735	20
1,2-Dichloroethane	5.00	5.40	5.16	108	103	70.0-128			4.55	20
1,1-Dichloroethene	5.00	5.55	5.65	111	113	71.0-124			1.79	20
cis-1,2-Dichloroethene	5.00	5.50	5.45	110	109	73.0-120			0.913	20
trans-1,2-Dichloroethene	5.00	5.39	5.27	108	105	73.0-120			2.25	20
1,2-Dichloropropane	5.00	5.63	5.19	113	104	77.0-125			8.13	20
1,1-Dichloropropene	5.00	5.40	5.35	108	107	74.0-126			0.930	20
1,3-Dichloropropane	5.00	5.44	5.42	109	108	80.0-120			0.368	20
cis-1,3-Dichloropropene	5.00	5.63	5.36	113	107	80.0-123			4.91	20
trans-1,3-Dichloropropene	5.00	5.25	5.17	105	103	78.0-124			1.54	20
2,2-Dichloropropane	5.00	5.54	5.23	111	105	58.0-130			5.76	20
Ethylbenzene	5.00	5.35	5.06	107	101	79.0-123			5.57	20
Ethyl ether	5.00	5.23	5.05	105	101	66.0-130			3.50	20
Hexachloro-1,3-butadiene	5.00	4.74	4.98	94.8	99.6	54.0-138			4.94	20
Isopropylbenzene	5.00	5.04	5.01	101	100	76.0-127			0.597	20
p-Isopropyltoluene	5.00	4.82	5.00	96.4	100	76.0-125			3.67	20
2-Butanone (MEK)	25.0	27.2	26.8	109	107	44.0-160			1.48	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3686224-1 07/30/21 09:26 • (LCSD) R3686224-2 07/30/21 09:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methylene Chloride	5.00	5.33	5.19	107	104	67.0-120			2.66	20
4-Methyl-2-pentanone (MIBK)	25.0	25.9	26.2	104	105	68.0-142			1.15	20
Methyl tert-butyl ether	5.00	5.79	5.37	116	107	68.0-125			7.53	20
Naphthalene	5.00	4.01	5.43	80.2	109	54.0-135		J3	30.1	20
n-Propylbenzene	5.00	5.04	5.09	101	102	77.0-124			0.987	20
Styrene	5.00	5.04	5.12	101	102	73.0-130			1.57	20
1,1,1,2-Tetrachloroethane	5.00	5.16	5.11	103	102	75.0-125			0.974	20
1,1,2,2-Tetrachloroethane	5.00	5.22	5.28	104	106	65.0-130			1.14	20
Tetrachloroethene	5.00	5.42	5.25	108	105	72.0-132			3.19	20
Tetrahydrofuran	5.00	5.02	5.44	100	109	41.0-146			8.03	20
Toluene	5.00	5.43	5.29	109	106	79.0-120			2.61	20
1,1,2-Trichlorotrifluoroethane	5.00	6.02	6.01	120	120	69.0-132			0.166	20
1,2,3-Trichlorobenzene	5.00	4.37	5.30	87.4	106	50.0-138			19.2	20
1,2,4-Trichlorobenzene	5.00	4.51	5.13	90.2	103	57.0-137			12.9	20
1,1,1-Trichloroethane	5.00	5.35	5.04	107	101	73.0-124			5.97	20
1,1,2-Trichloroethane	5.00	5.59	5.48	112	110	80.0-120			1.99	20
Trichloroethene	5.00	5.46	5.46	109	109	78.0-124			0.000	20
Trichlorofluoromethane	5.00	5.37	5.21	107	104	59.0-147			3.02	20
1,2,3-Trichloropropane	5.00	5.18	5.28	104	106	73.0-130			1.91	20
1,2,4-Trimethylbenzene	5.00	5.00	5.02	100	100	76.0-121			0.399	20
1,3,5-Trimethylbenzene	5.00	4.94	5.00	98.8	100	76.0-122			1.21	20
Vinyl chloride	5.00	4.97	4.88	99.4	97.6	67.0-131			1.83	20
Xylenes, Total	15.0	15.1	15.3	101	102	79.0-123			1.32	20
Allyl chloride	25.0	29.4	28.9	118	116	72.0-128			1.72	20
(S) Toluene-d8				97.4	98.8	80.0-120				
(S) 4-Bromofluorobenzene				94.7	98.1	77.0-126				
(S) 1,2-Dichloroethane-d4				97.1	96.4	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3686319-3 07/30/21 07:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,4-Dioxane	U		0.0447	0.400
(S) Nitrobenzene-d5	81.9			10.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3686319-1 07/30/21 06:51 • (LCSD) R3686319-2 07/30/21 07:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	50.0	37.1	37.0	74.2	74.0	73.0-146			0.270	20
(S) Nitrobenzene-d5				81.2	80.9	10.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

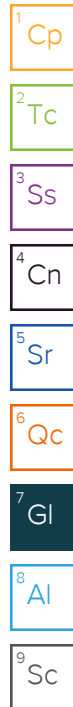
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.



ACCREDITATIONS & LOCATIONS

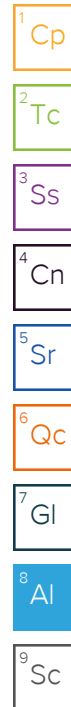
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Arcadis - Minneapolis MN

Sample Delivery Group: L1373980
Samples Received: 07/02/2021
Project Number: 30034568.0004
Description: TCAAP-Arden hills, MN

Report To: Tim Molitor
123 North Third Street
Suite 705
Minneapolis, MN 55401

Entire Report Reviewed By:



John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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¹ Cp
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⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

854560_287(20210701) L1373980-01 GW

Collected by Erica A. Collected date/time 07/01/21 11:00 Received date/time 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1699717	1	07/04/21 13:22	07/04/21 13:22	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702029	1	07/08/21 17:02	07/08/21 17:02	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1700051	1	07/06/21 10:12	07/07/21 17:54	SHG	Mt. Juliet, TN

DUP-01(20210701) L1373980-02 GW

Collected by Erica A. Collected date/time 07/01/21 00:00 Received date/time 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1699717	1	07/04/21 13:41	07/04/21 13:41	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702029	1	07/08/21 17:25	07/08/21 17:25	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1700051	1	07/06/21 10:12	07/07/21 18:13	SHG	Mt. Juliet, TN

EB-01(20210701) L1373980-03 GW

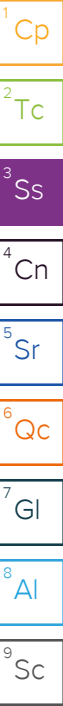
Collected by Erica A. Collected date/time 07/01/21 11:20 Received date/time 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1699717	1	07/04/21 08:37	07/04/21 08:37	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702029	1	07/08/21 17:48	07/08/21 17:48	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1700051	1	07/06/21 10:12	07/07/21 14:02	SHG	Mt. Juliet, TN

TRIP BLANK L1373980-04 GW

Collected by Erica A. Collected date/time 07/01/21 11:00 Received date/time 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1699717	1	07/04/21 08:56	07/04/21 08:56	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702029	1	07/08/21 15:52	07/08/21 15:52	DWR	Mt. Juliet, TN



CASE NARRATIVE

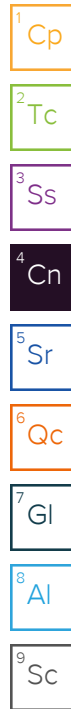
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

Project Narrative

Reprint to run level 2 report



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/04/2021 13:22	WG1699717
Allyl chloride	U		0.500	5.00	1	07/04/2021 13:22	WG1699717
Benzene	U		0.0941	1.00	1	07/04/2021 13:22	WG1699717
Bromobenzene	U		0.118	1.00	1	07/04/2021 13:22	WG1699717
Bromochloromethane	U		0.128	1.00	1	07/04/2021 13:22	WG1699717
Bromodichloromethane	U		0.136	1.00	1	07/04/2021 13:22	WG1699717
Bromoform	U		0.129	1.00	1	07/04/2021 13:22	WG1699717
Bromomethane	U	C3	0.605	5.00	1	07/04/2021 13:22	WG1699717
n-Butylbenzene	U		0.157	1.00	1	07/04/2021 13:22	WG1699717
sec-Butylbenzene	U		0.125	1.00	1	07/04/2021 13:22	WG1699717
tert-Butylbenzene	U		0.127	1.00	1	07/04/2021 13:22	WG1699717
Carbon tetrachloride	U		0.128	1.00	1	07/04/2021 13:22	WG1699717
Chlorobenzene	U		0.116	1.00	1	07/04/2021 13:22	WG1699717
Chlorodibromomethane	U		0.140	1.00	1	07/04/2021 13:22	WG1699717
Chloroethane	U	C3	0.192	5.00	1	07/04/2021 13:22	WG1699717
Chloroform	0.221	U	0.111	5.00	1	07/04/2021 13:22	WG1699717
Chloromethane	U		0.960	2.50	1	07/04/2021 13:22	WG1699717
2-Chlorotoluene	U		0.106	1.00	1	07/04/2021 13:22	WG1699717
4-Chlorotoluene	U		0.114	1.00	1	07/04/2021 13:22	WG1699717
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/04/2021 13:22	WG1699717
1,2-Dibromoethane	U		0.126	1.00	1	07/04/2021 13:22	WG1699717
Dibromomethane	U		0.122	1.00	1	07/04/2021 13:22	WG1699717
1,2-Dichlorobenzene	U		0.107	1.00	1	07/04/2021 13:22	WG1699717
1,3-Dichlorobenzene	U		0.110	1.00	1	07/04/2021 13:22	WG1699717
1,4-Dichlorobenzene	U		0.120	1.00	1	07/04/2021 13:22	WG1699717
Dichlorodifluoromethane	U		0.374	5.00	1	07/04/2021 13:22	WG1699717
Dichlorofluoromethane	U		0.130	5.00	1	07/04/2021 13:22	WG1699717
1,1-Dichloroethane	0.735	U	0.100	1.00	1	07/04/2021 13:22	WG1699717
1,2-Dichloroethane	U		0.0819	1.00	1	07/04/2021 13:22	WG1699717
1,1-Dichloroethene	0.606	U	0.188	1.00	1	07/04/2021 13:22	WG1699717
cis-1,2-Dichloroethene	0.287	U	0.126	1.00	1	07/08/2021 17:02	WG1702029
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/04/2021 13:22	WG1699717
1,2-Dichloropropane	U		0.149	1.00	1	07/04/2021 13:22	WG1699717
1,1-Dichloropropene	U		0.142	1.00	1	07/04/2021 13:22	WG1699717
1,3-Dichloropropane	U		0.110	1.00	1	07/04/2021 13:22	WG1699717
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/04/2021 13:22	WG1699717
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/04/2021 13:22	WG1699717
2,2-Dichloropropane	U		0.161	1.00	1	07/04/2021 13:22	WG1699717
Ethylbenzene	U		0.137	1.00	1	07/04/2021 13:22	WG1699717
Ethyl ether	U		0.115	1.00	1	07/04/2021 13:22	WG1699717
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/04/2021 13:22	WG1699717
Isopropylbenzene	U		0.105	1.00	1	07/04/2021 13:22	WG1699717
p-Isopropyltoluene	U		0.120	1.00	1	07/04/2021 13:22	WG1699717
2-Butanone (MEK)	U		1.19	10.0	1	07/04/2021 13:22	WG1699717
Methylene Chloride	U		0.430	5.00	1	07/04/2021 13:22	WG1699717
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/04/2021 13:22	WG1699717
Methyl tert-butyl ether	U		0.101	1.00	1	07/04/2021 13:22	WG1699717
Naphthalene	U		1.00	5.00	1	07/04/2021 13:22	WG1699717
n-Propylbenzene	U		0.0993	1.00	1	07/04/2021 13:22	WG1699717
Styrene	U		0.118	1.00	1	07/04/2021 13:22	WG1699717
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/04/2021 13:22	WG1699717
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/04/2021 13:22	WG1699717
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/04/2021 13:22	WG1699717
Tetrachloroethene	U		0.300	1.00	1	07/08/2021 17:02	WG1702029
Tetrahydrofuran	U		0.929	5.00	1	07/04/2021 13:22	WG1699717
Toluene	U		0.278	1.00	1	07/04/2021 13:22	WG1699717

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

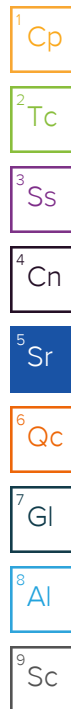
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	07/04/2021 13:22	WG1699717
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	07/04/2021 13:22	WG1699717
1,1,1-Trichloroethane	0.299	J	0.149	1.00	1	07/04/2021 13:22	WG1699717
1,1,2-Trichloroethane	U		0.158	1.00	1	07/04/2021 13:22	WG1699717
Trichloroethene	8.88	C5	0.190	1.00	1	07/04/2021 13:22	WG1699717
Trichlorofluoromethane	U	C3	0.160	5.00	1	07/04/2021 13:22	WG1699717
1,2,3-Trichloropropane	U		0.237	2.50	1	07/04/2021 13:22	WG1699717
1,2,4-Trimethylbenzene	U	J4	0.322	1.00	1	07/04/2021 13:22	WG1699717
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/04/2021 13:22	WG1699717
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/04/2021 13:22	WG1699717
Vinyl chloride	U		0.234	1.00	1	07/04/2021 13:22	WG1699717
Xylenes, Total	0.188	B J	0.174	3.00	1	07/04/2021 13:22	WG1699717
(S) Toluene-d8	98.8			80.0-120		07/04/2021 13:22	WG1699717
(S) Toluene-d8	101			80.0-120		07/08/2021 17:02	WG1702029
(S) 4-Bromofluorobenzene	106			77.0-126		07/04/2021 13:22	WG1699717
(S) 4-Bromofluorobenzene	97.5			77.0-126		07/08/2021 17:02	WG1702029
(S) 1,2-Dichloroethane-d4	96.1			70.0-130		07/04/2021 13:22	WG1699717
(S) 1,2-Dichloroethane-d4	99.5			70.0-130		07/08/2021 17:02	WG1702029

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	1.28		0.0447	0.400	1	07/07/2021 17:54	WG1700051
(S) Nitrobenzene-d5	30.9			10.0-120		07/07/2021 17:54	WG1700051



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/04/2021 13:41	WG1699717
Allyl chloride	U		0.500	5.00	1	07/04/2021 13:41	WG1699717
Benzene	U		0.0941	1.00	1	07/04/2021 13:41	WG1699717
Bromobenzene	U		0.118	1.00	1	07/04/2021 13:41	WG1699717
Bromochloromethane	U		0.128	1.00	1	07/04/2021 13:41	WG1699717
Bromodichloromethane	U		0.136	1.00	1	07/04/2021 13:41	WG1699717
Bromoform	U		0.129	1.00	1	07/04/2021 13:41	WG1699717
Bromomethane	U	C3	0.605	5.00	1	07/04/2021 13:41	WG1699717
n-Butylbenzene	U		0.157	1.00	1	07/04/2021 13:41	WG1699717
sec-Butylbenzene	U		0.125	1.00	1	07/04/2021 13:41	WG1699717
tert-Butylbenzene	U		0.127	1.00	1	07/04/2021 13:41	WG1699717
Carbon tetrachloride	U		0.128	1.00	1	07/04/2021 13:41	WG1699717
Chlorobenzene	U		0.116	1.00	1	07/04/2021 13:41	WG1699717
Chlorodibromomethane	U		0.140	1.00	1	07/04/2021 13:41	WG1699717
Chloroethane	U	C3	0.192	5.00	1	07/04/2021 13:41	WG1699717
Chloroform	0.210	U	0.111	5.00	1	07/04/2021 13:41	WG1699717
Chloromethane	U		0.960	2.50	1	07/04/2021 13:41	WG1699717
2-Chlorotoluene	U		0.106	1.00	1	07/04/2021 13:41	WG1699717
4-Chlorotoluene	U		0.114	1.00	1	07/04/2021 13:41	WG1699717
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/04/2021 13:41	WG1699717
1,2-Dibromoethane	U		0.126	1.00	1	07/04/2021 13:41	WG1699717
Dibromomethane	U		0.122	1.00	1	07/04/2021 13:41	WG1699717
1,2-Dichlorobenzene	U		0.107	1.00	1	07/04/2021 13:41	WG1699717
1,3-Dichlorobenzene	U		0.110	1.00	1	07/04/2021 13:41	WG1699717
1,4-Dichlorobenzene	U		0.120	1.00	1	07/04/2021 13:41	WG1699717
Dichlorodifluoromethane	U		0.374	5.00	1	07/04/2021 13:41	WG1699717
Dichlorofluoromethane	U		0.130	5.00	1	07/04/2021 13:41	WG1699717
1,1-Dichloroethane	0.729	U	0.100	1.00	1	07/04/2021 13:41	WG1699717
1,2-Dichloroethane	U		0.0819	1.00	1	07/04/2021 13:41	WG1699717
1,1-Dichloroethene	0.565	U	0.188	1.00	1	07/04/2021 13:41	WG1699717
cis-1,2-Dichloroethene	0.309	U	0.126	1.00	1	07/08/2021 17:25	WG1702029
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/04/2021 13:41	WG1699717
1,2-Dichloropropane	0.170	U	0.149	1.00	1	07/04/2021 13:41	WG1699717
1,1-Dichloropropene	U		0.142	1.00	1	07/04/2021 13:41	WG1699717
1,3-Dichloropropane	U		0.110	1.00	1	07/04/2021 13:41	WG1699717
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/04/2021 13:41	WG1699717
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/04/2021 13:41	WG1699717
2,2-Dichloropropane	U		0.161	1.00	1	07/04/2021 13:41	WG1699717
Ethylbenzene	U		0.137	1.00	1	07/04/2021 13:41	WG1699717
Ethyl ether	U		0.115	1.00	1	07/04/2021 13:41	WG1699717
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/04/2021 13:41	WG1699717
Isopropylbenzene	U		0.105	1.00	1	07/04/2021 13:41	WG1699717
p-Isopropyltoluene	U		0.120	1.00	1	07/04/2021 13:41	WG1699717
2-Butanone (MEK)	U		1.19	10.0	1	07/04/2021 13:41	WG1699717
Methylene Chloride	U		0.430	5.00	1	07/04/2021 13:41	WG1699717
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/04/2021 13:41	WG1699717
Methyl tert-butyl ether	U		0.101	1.00	1	07/04/2021 13:41	WG1699717
Naphthalene	U		1.00	5.00	1	07/04/2021 13:41	WG1699717
n-Propylbenzene	U		0.0993	1.00	1	07/04/2021 13:41	WG1699717
Styrene	U		0.118	1.00	1	07/04/2021 13:41	WG1699717
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/04/2021 13:41	WG1699717
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/04/2021 13:41	WG1699717
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/04/2021 13:41	WG1699717
Tetrachloroethene	U		0.300	1.00	1	07/08/2021 17:25	WG1702029
Tetrahydrofuran	U		0.929	5.00	1	07/04/2021 13:41	WG1699717
Toluene	U		0.278	1.00	1	07/04/2021 13:41	WG1699717

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

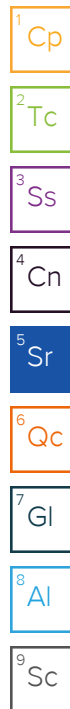
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	07/04/2021 13:41	WG1699717
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	07/04/2021 13:41	WG1699717
1,1,1-Trichloroethane	0.295	J	0.149	1.00	1	07/04/2021 13:41	WG1699717
1,1,2-Trichloroethane	U		0.158	1.00	1	07/04/2021 13:41	WG1699717
Trichloroethene	8.67	C5	0.190	1.00	1	07/04/2021 13:41	WG1699717
Trichlorofluoromethane	U	C3	0.160	5.00	1	07/04/2021 13:41	WG1699717
1,2,3-Trichloropropane	U		0.237	2.50	1	07/04/2021 13:41	WG1699717
1,2,4-Trimethylbenzene	U	J4	0.322	1.00	1	07/04/2021 13:41	WG1699717
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/04/2021 13:41	WG1699717
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/04/2021 13:41	WG1699717
Vinyl chloride	U		0.234	1.00	1	07/04/2021 13:41	WG1699717
Xylenes, Total	0.186	B J	0.174	3.00	1	07/04/2021 13:41	WG1699717
(S) Toluene-d8	100			80.0-120		07/04/2021 13:41	WG1699717
(S) Toluene-d8	104			80.0-120		07/08/2021 17:25	WG1702029
(S) 4-Bromofluorobenzene	104			77.0-126		07/04/2021 13:41	WG1699717
(S) 4-Bromofluorobenzene	96.8			77.0-126		07/08/2021 17:25	WG1702029
(S) 1,2-Dichloroethane-d4	95.8			70.0-130		07/04/2021 13:41	WG1699717
(S) 1,2-Dichloroethane-d4	101			70.0-130		07/08/2021 17:25	WG1702029

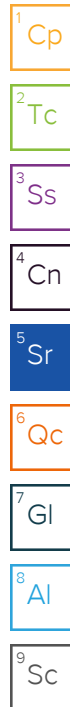
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	1.10		0.0447	0.400	1	07/07/2021 18:13	WG1700051
(S) Nitrobenzene-d5	43.6			10.0-120		07/07/2021 18:13	WG1700051



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	22.5	J	11.3	50.0	1	07/04/2021 08:37	WG1699717
Allyl chloride	U		0.500	5.00	1	07/04/2021 08:37	WG1699717
Benzene	0.219	J	0.0941	1.00	1	07/04/2021 08:37	WG1699717
Bromobenzene	U		0.118	1.00	1	07/04/2021 08:37	WG1699717
Bromochloromethane	U		0.128	1.00	1	07/04/2021 08:37	WG1699717
Bromodichloromethane	U		0.136	1.00	1	07/04/2021 08:37	WG1699717
Bromoform	U		0.129	1.00	1	07/04/2021 08:37	WG1699717
Bromomethane	U	C3	0.605	5.00	1	07/04/2021 08:37	WG1699717
n-Butylbenzene	U		0.157	1.00	1	07/04/2021 08:37	WG1699717
sec-Butylbenzene	U		0.125	1.00	1	07/04/2021 08:37	WG1699717
tert-Butylbenzene	U		0.127	1.00	1	07/04/2021 08:37	WG1699717
Carbon tetrachloride	U		0.128	1.00	1	07/04/2021 08:37	WG1699717
Chlorobenzene	U		0.116	1.00	1	07/04/2021 08:37	WG1699717
Chlorodibromomethane	U		0.140	1.00	1	07/04/2021 08:37	WG1699717
Chloroethane	U	C3	0.192	5.00	1	07/04/2021 08:37	WG1699717
Chloroform	U		0.111	5.00	1	07/04/2021 08:37	WG1699717
Chloromethane	U		0.960	2.50	1	07/04/2021 08:37	WG1699717
2-Chlorotoluene	U		0.106	1.00	1	07/04/2021 08:37	WG1699717
4-Chlorotoluene	U		0.114	1.00	1	07/04/2021 08:37	WG1699717
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/04/2021 08:37	WG1699717
1,2-Dibromoethane	U		0.126	1.00	1	07/04/2021 08:37	WG1699717
Dibromomethane	U		0.122	1.00	1	07/04/2021 08:37	WG1699717
1,2-Dichlorobenzene	U		0.107	1.00	1	07/04/2021 08:37	WG1699717
1,3-Dichlorobenzene	U		0.110	1.00	1	07/04/2021 08:37	WG1699717
1,4-Dichlorobenzene	U		0.120	1.00	1	07/04/2021 08:37	WG1699717
Dichlorodifluoromethane	U		0.374	5.00	1	07/04/2021 08:37	WG1699717
Dichlorofluoromethane	U		0.130	5.00	1	07/04/2021 08:37	WG1699717
1,1-Dichloroethane	U		0.100	1.00	1	07/04/2021 08:37	WG1699717
1,2-Dichloroethane	U		0.0819	1.00	1	07/04/2021 08:37	WG1699717
1,1-Dichloroethene	U		0.188	1.00	1	07/04/2021 08:37	WG1699717
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/04/2021 08:37	WG1699717
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/04/2021 08:37	WG1699717
1,2-Dichloropropane	U		0.149	1.00	1	07/04/2021 08:37	WG1699717
1,1-Dichloropropene	U		0.142	1.00	1	07/04/2021 08:37	WG1699717
1,3-Dichloropropane	U		0.110	1.00	1	07/04/2021 08:37	WG1699717
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/04/2021 08:37	WG1699717
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/04/2021 08:37	WG1699717
2,2-Dichloropropane	U		0.161	1.00	1	07/04/2021 08:37	WG1699717
Ethylbenzene	U		0.137	1.00	1	07/04/2021 08:37	WG1699717
Ethyl ether	U		0.115	1.00	1	07/04/2021 08:37	WG1699717
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/04/2021 08:37	WG1699717
Isopropylbenzene	U		0.105	1.00	1	07/04/2021 08:37	WG1699717
p-Isopropyltoluene	U		0.120	1.00	1	07/04/2021 08:37	WG1699717
2-Butanone (MEK)	9.43	J	1.19	10.0	1	07/04/2021 08:37	WG1699717
Methylene Chloride	U		0.430	5.00	1	07/04/2021 08:37	WG1699717
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/04/2021 08:37	WG1699717
Methyl tert-butyl ether	U		0.101	1.00	1	07/04/2021 08:37	WG1699717
Naphthalene	U		1.00	5.00	1	07/04/2021 08:37	WG1699717
n-Propylbenzene	0.109	B J	0.0993	1.00	1	07/04/2021 08:37	WG1699717
Styrene	U		0.118	1.00	1	07/04/2021 08:37	WG1699717
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/04/2021 08:37	WG1699717
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/04/2021 08:37	WG1699717
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/04/2021 08:37	WG1699717
Tetrachloroethene	U		0.300	1.00	1	07/04/2021 08:37	WG1699717
Tetrahydrofuran	U		0.929	5.00	1	07/04/2021 08:37	WG1699717
Toluene	U		0.278	1.00	1	07/04/2021 08:37	WG1699717



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	07/04/2021 08:37	WG1699717
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	07/04/2021 08:37	WG1699717
1,1,1-Trichloroethane	U		0.149	1.00	1	07/04/2021 08:37	WG1699717
1,1,2-Trichloroethane	U		0.158	1.00	1	07/04/2021 08:37	WG1699717
Trichloroethene	U		0.190	1.00	1	07/04/2021 08:37	WG1699717
Trichlorofluoromethane	U	C3	0.160	5.00	1	07/04/2021 08:37	WG1699717
1,2,3-Trichloropropane	U		0.237	2.50	1	07/04/2021 08:37	WG1699717
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/08/2021 17:48	WG1702029
1,2,3-Trimethylbenzene	0.958	B J	0.104	1.00	1	07/04/2021 08:37	WG1699717
1,3,5-Trimethylbenzene	0.164	B J	0.104	1.00	1	07/04/2021 08:37	WG1699717
Vinyl chloride	U		0.234	1.00	1	07/04/2021 08:37	WG1699717
Xylenes, Total	0.633	B J	0.174	3.00	1	07/04/2021 08:37	WG1699717
(S) Toluene-d8	103			80.0-120		07/04/2021 08:37	WG1699717
(S) Toluene-d8	101			80.0-120		07/08/2021 17:48	WG1702029
(S) 4-Bromofluorobenzene	106			77.0-126		07/04/2021 08:37	WG1699717
(S) 4-Bromofluorobenzene	93.9			77.0-126		07/08/2021 17:48	WG1702029
(S) 1,2-Dichloroethane-d4	90.3			70.0-130		07/04/2021 08:37	WG1699717
(S) 1,2-Dichloroethane-d4	99.5			70.0-130		07/08/2021 17:48	WG1702029

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.0447	0.400	1	07/07/2021 14:02	WG1700051
(S) Nitrobenzene-d5	81.1			10.0-120		07/07/2021 14:02	WG1700051

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

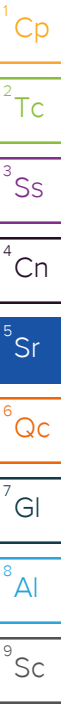
7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/04/2021 08:56	WG1699717
Allyl chloride	U		0.500	5.00	1	07/04/2021 08:56	WG1699717
Benzene	U		0.0941	1.00	1	07/04/2021 08:56	WG1699717
Bromobenzene	U		0.118	1.00	1	07/04/2021 08:56	WG1699717
Bromochloromethane	U		0.128	1.00	1	07/04/2021 08:56	WG1699717
Bromodichloromethane	U		0.136	1.00	1	07/04/2021 08:56	WG1699717
Bromoform	U		0.129	1.00	1	07/04/2021 08:56	WG1699717
Bromomethane	U	C3	0.605	5.00	1	07/04/2021 08:56	WG1699717
n-Butylbenzene	U		0.157	1.00	1	07/04/2021 08:56	WG1699717
sec-Butylbenzene	U		0.125	1.00	1	07/04/2021 08:56	WG1699717
tert-Butylbenzene	U		0.127	1.00	1	07/04/2021 08:56	WG1699717
Carbon tetrachloride	U		0.128	1.00	1	07/04/2021 08:56	WG1699717
Chlorobenzene	U		0.116	1.00	1	07/04/2021 08:56	WG1699717
Chlorodibromomethane	U		0.140	1.00	1	07/04/2021 08:56	WG1699717
Chloroethane	U	C3	0.192	5.00	1	07/04/2021 08:56	WG1699717
Chloroform	U		0.111	5.00	1	07/04/2021 08:56	WG1699717
Chloromethane	U		0.960	2.50	1	07/04/2021 08:56	WG1699717
2-Chlorotoluene	U		0.106	1.00	1	07/04/2021 08:56	WG1699717
4-Chlorotoluene	U		0.114	1.00	1	07/04/2021 08:56	WG1699717
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/04/2021 08:56	WG1699717
1,2-Dibromoethane	U		0.126	1.00	1	07/04/2021 08:56	WG1699717
Dibromomethane	U		0.122	1.00	1	07/04/2021 08:56	WG1699717
1,2-Dichlorobenzene	U		0.107	1.00	1	07/04/2021 08:56	WG1699717
1,3-Dichlorobenzene	U		0.110	1.00	1	07/04/2021 08:56	WG1699717
1,4-Dichlorobenzene	U		0.120	1.00	1	07/04/2021 08:56	WG1699717
Dichlorodifluoromethane	U		0.374	5.00	1	07/04/2021 08:56	WG1699717
Dichlorofluoromethane	U		0.130	5.00	1	07/04/2021 08:56	WG1699717
1,1-Dichloroethane	U		0.100	1.00	1	07/04/2021 08:56	WG1699717
1,2-Dichloroethane	U		0.0819	1.00	1	07/04/2021 08:56	WG1699717
1,1-Dichloroethene	U		0.188	1.00	1	07/04/2021 08:56	WG1699717
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/04/2021 08:56	WG1699717
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/04/2021 08:56	WG1699717
1,2-Dichloropropane	U		0.149	1.00	1	07/04/2021 08:56	WG1699717
1,1-Dichloropropene	U		0.142	1.00	1	07/04/2021 08:56	WG1699717
1,3-Dichloropropane	U		0.110	1.00	1	07/04/2021 08:56	WG1699717
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/04/2021 08:56	WG1699717
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/04/2021 08:56	WG1699717
2,2-Dichloropropane	U		0.161	1.00	1	07/04/2021 08:56	WG1699717
Ethylbenzene	U		0.137	1.00	1	07/04/2021 08:56	WG1699717
Ethyl ether	U		0.115	1.00	1	07/04/2021 08:56	WG1699717
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/04/2021 08:56	WG1699717
Isopropylbenzene	U		0.105	1.00	1	07/04/2021 08:56	WG1699717
p-Isopropyltoluene	U		0.120	1.00	1	07/04/2021 08:56	WG1699717
2-Butanone (MEK)	U		1.19	10.0	1	07/04/2021 08:56	WG1699717
Methylene Chloride	U		0.430	5.00	1	07/04/2021 08:56	WG1699717
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/04/2021 08:56	WG1699717
Methyl tert-butyl ether	U		0.101	1.00	1	07/04/2021 08:56	WG1699717
Naphthalene	U		1.00	5.00	1	07/04/2021 08:56	WG1699717
n-Propylbenzene	U		0.0993	1.00	1	07/04/2021 08:56	WG1699717
Styrene	U		0.118	1.00	1	07/04/2021 08:56	WG1699717
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/04/2021 08:56	WG1699717
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/04/2021 08:56	WG1699717
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/04/2021 08:56	WG1699717
Tetrachloroethene	U		0.300	1.00	1	07/04/2021 08:56	WG1699717
Tetrahydrofuran	U		0.929	5.00	1	07/04/2021 08:56	WG1699717
Toluene	U		0.278	1.00	1	07/04/2021 08:56	WG1699717



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Collected date/time: 07/01/21 11:00

SAMPLE RESULTS - 04

L1373980

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	07/04/2021 08:56	WG1699717
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	07/04/2021 08:56	WG1699717
1,1,1-Trichloroethane	U		0.149	1.00	1	07/04/2021 08:56	WG1699717
1,1,2-Trichloroethane	U		0.158	1.00	1	07/04/2021 08:56	WG1699717
Trichloroethene	U		0.190	1.00	1	07/04/2021 08:56	WG1699717
Trichlorofluoromethane	U	C3	0.160	5.00	1	07/04/2021 08:56	WG1699717
1,2,3-Trichloropropane	U		0.237	2.50	1	07/04/2021 08:56	WG1699717
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/08/2021 15:52	WG1702029
1,2,3-Trimethylbenzene	0.152	B J	0.104	1.00	1	07/04/2021 08:56	WG1699717
1,3,5-Trimethylbenzene	0.137	B J	0.104	1.00	1	07/04/2021 08:56	WG1699717
Vinyl chloride	U		0.234	1.00	1	07/04/2021 08:56	WG1699717
Xylenes, Total	0.461	B J	0.174	3.00	1	07/04/2021 08:56	WG1699717
(S) Toluene-d8	101			80.0-120		07/04/2021 08:56	WG1699717
(S) Toluene-d8	100			80.0-120		07/08/2021 15:52	WG1702029
(S) 4-Bromofluorobenzene	107			77.0-126		07/04/2021 08:56	WG1699717
(S) 4-Bromofluorobenzene	94.9			77.0-126		07/08/2021 15:52	WG1702029
(S) 1,2-Dichloroethane-d4	90.1			70.0-130		07/04/2021 08:56	WG1699717
(S) 1,2-Dichloroethane-d4	99.4			70.0-130		07/08/2021 15:52	WG1702029

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Method Blank (MB)

(MB) R3676943-3 07/04/21 07:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromochloromethane	U		0.128	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	0.241	U	0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
Dichlorofluoromethane	U		0.130	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Ethylbenzene	0.141	U	0.137	1.00
Ethyl ether	U		0.115	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00

1
Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3676943-3 07/04/21 07:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	0.183	U	0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00
Tetrahydrofuran	U		0.929	5.00
Toluene	U		0.278	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,3-Trimethylbenzene	0.270	U	0.104	1.00
1,2,4-Trimethylbenzene	0.867	U	0.322	1.00
1,3,5-Trimethylbenzene	0.267	U	0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	0.850	U	0.174	3.00
Allyl Chloride	U		0.500	5.00
(S) Toluene-d8	101			80.0-120
(S) 4-Bromofluorobenzene	109			77.0-126
(S) 1,2-Dichloroethane-d4	87.6			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3676943-1 07/04/21 06:23 • (LCSD) R3676943-2 07/04/21 06:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	29.6	29.7	118	119	19.0-160			0.337	27
Benzene	5.00	5.63	5.38	113	108	70.0-123			4.54	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3676943-1 07/04/21 06:23 • (LCSD) R3676943-2 07/04/21 06:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromobenzene	5.00	4.75	4.52	95.0	90.4	73.0-121			4.96	20
Bromodichloromethane	5.00	4.98	4.75	99.6	95.0	75.0-120			4.73	20
Bromochloromethane	5.00	5.58	5.30	112	106	76.0-122			5.15	20
Bromoform	5.00	4.60	4.41	92.0	88.2	68.0-132			4.22	20
Bromomethane	5.00	3.62	3.39	72.4	67.8	30.0-160			6.56	25
n-Butylbenzene	5.00	4.94	4.78	98.8	95.6	73.0-125			3.29	20
sec-Butylbenzene	5.00	5.15	5.28	103	106	75.0-125			2.49	20
tert-Butylbenzene	5.00	5.20	5.28	104	106	76.0-124			1.53	20
Carbon tetrachloride	5.00	5.11	4.83	102	96.6	68.0-126			5.63	20
Chlorobenzene	5.00	5.15	4.80	103	96.0	80.0-121			7.04	20
Chlorodibromomethane	5.00	5.06	4.84	101	96.8	77.0-125			4.44	20
Chloroethane	5.00	3.83	3.61	76.6	72.2	47.0-150			5.91	20
Chloroform	5.00	4.82	4.62	96.4	92.4	73.0-120			4.24	20
Chloromethane	5.00	4.32	3.92	86.4	78.4	41.0-142			9.71	20
2-Chlorotoluene	5.00	5.39	5.03	108	101	76.0-123			6.91	20
4-Chlorotoluene	5.00	5.04	4.86	101	97.2	75.0-122			3.64	20
1,2-Dibromo-3-Chloropropane	5.00	4.79	4.65	95.8	93.0	58.0-134			2.97	20
1,2-Dibromoethane	5.00	5.21	4.90	104	98.0	80.0-122			6.13	20
Dibromomethane	5.00	4.86	4.61	97.2	92.2	80.0-120			5.28	20
1,2-Dichlorobenzene	5.00	5.05	4.97	101	99.4	79.0-121			1.60	20
1,3-Dichlorobenzene	5.00	4.84	4.83	96.8	96.6	79.0-120			0.207	20
1,4-Dichlorobenzene	5.00	4.77	4.57	95.4	91.4	79.0-120			4.28	20
Dichlorodifluoromethane	5.00	5.14	5.01	103	100	51.0-149			2.56	20
Dichlorofluoromethane	5.00	4.78	4.53	95.6	90.6	65.0-133			5.37	20
1,1-Dichloroethane	5.00	5.42	5.15	108	103	70.0-126			5.11	20
1,2-Dichloroethane	5.00	4.53	4.38	90.6	87.6	70.0-128			3.37	20
1,1-Dichloroethene	5.00	5.29	5.08	106	102	71.0-124			4.05	20
cis-1,2-Dichloroethene	5.00	5.38	4.98	108	99.6	73.0-120			7.72	20
trans-1,2-Dichloroethene	5.00	5.28	5.06	106	101	73.0-120			4.26	20
1,2-Dichloropropane	5.00	5.82	5.56	116	111	77.0-125			4.57	20
1,1-Dichloropropene	5.00	5.30	5.04	106	101	74.0-126			5.03	20
1,3-Dichloropropane	5.00	5.25	5.07	105	101	80.0-120			3.49	20
cis-1,3-Dichloropropene	5.00	5.17	4.95	103	99.0	80.0-123			4.35	20
trans-1,3-Dichloropropene	5.00	5.05	4.88	101	97.6	78.0-124			3.42	20
2,2-Dichloropropane	5.00	4.53	4.33	90.6	86.6	58.0-130			4.51	20
Ethylbenzene	5.00	5.33	5.02	107	100	79.0-123			5.99	20
Ethyl ether	5.00	5.29	5.10	106	102	66.0-130			3.66	20
Hexachloro-1,3-butadiene	5.00	5.68	5.29	114	106	54.0-138			7.11	20
Isopropylbenzene	5.00	5.73	5.40	115	108	76.0-127			5.93	20
p-Isopropyltoluene	5.00	5.24	5.16	105	103	76.0-125			1.54	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3676943-1 07/04/21 06:23 • (LCSD) R3676943-2 07/04/21 06:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	25.0	30.4	29.8	122	119	44.0-160			1.99	20
Methylene Chloride	5.00	5.36	5.04	107	101	67.0-120			6.15	20
4-Methyl-2-pentanone (MIBK)	25.0	28.6	27.8	114	111	68.0-142			2.84	20
Methyl tert-butyl ether	5.00	5.49	5.42	110	108	68.0-125			1.28	20
Naphthalene	5.00	4.56	5.05	91.2	101	54.0-135			10.2	20
n-Propylbenzene	5.00	5.01	4.94	100	98.8	77.0-124			1.41	20
Styrene	5.00	5.37	5.06	107	101	73.0-130			5.94	20
1,1,1,2-Tetrachloroethane	5.00	5.26	4.84	105	96.8	75.0-125			8.32	20
1,1,2,2-Tetrachloroethane	5.00	4.50	4.55	90.0	91.0	65.0-130			1.10	20
Tetrachloroethene	5.00	5.07	4.85	101	97.0	72.0-132			4.44	20
Tetrahydrofuran	5.00	7.03	7.06	141	141	41.0-146			0.426	20
Toluene	5.00	5.55	5.15	111	103	79.0-120			7.48	20
1,1,2-Trichlorotrifluoroethane	5.00	4.50	4.35	90.0	87.0	69.0-132			3.39	20
1,2,3-Trichlorobenzene	5.00	4.14	4.38	82.8	87.6	50.0-138			5.63	20
1,2,4-Trichlorobenzene	5.00	4.77	4.97	95.4	99.4	57.0-137			4.11	20
1,1,1-Trichloroethane	5.00	4.82	4.80	96.4	96.0	73.0-124			0.416	20
1,1,2-Trichloroethane	5.00	5.21	4.89	104	97.8	80.0-120			6.34	20
Trichloroethene	5.00	6.07	5.56	121	111	78.0-124			8.77	20
Trichlorofluoromethane	5.00	3.36	3.14	67.2	62.8	59.0-147			6.77	20
1,2,3-Trichloropropane	5.00	5.07	5.14	101	103	73.0-130			1.37	20
1,2,3-Trimethylbenzene	5.00	5.18	5.09	104	102	77.0-120			1.75	20
1,2,4-Trimethylbenzene	5.00	6.59	6.24	132	125	76.0-121	J4	J4	5.46	20
1,3,5-Trimethylbenzene	5.00	5.42	5.31	108	106	76.0-122			2.05	20
Vinyl chloride	5.00	4.14	4.06	82.8	81.2	67.0-131			1.95	20
Xylenes, Total	15.0	17.7	14.8	118	98.7	79.0-123			17.8	20
Allyl chloride	25.0	27.3	25.6	109	102	72.0-128			6.43	20
(S) Toluene-d8				101	99.9	80.0-120				
(S) 4-Bromofluorobenzene				109	106	77.0-126				
(S) 1,2-Dichloroethane-d4				85.4	87.3	70.0-130				

L1372955-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1372955-01 07/04/21 11:47 • (MS) R3676943-4 07/04/21 14:00 • (MSD) R3676943-5 07/04/21 14:19

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	U	48.6	47.0	194	188	1	10.0-160	J5	J5	3.35	35
Benzene	5.00	U	6.57	6.05	131	121	1	17.0-158			8.24	27
Bromobenzene	5.00	U	4.99	4.83	99.8	96.6	1	30.0-149			3.26	28
Bromodichloromethane	5.00	U	5.81	5.48	116	110	1	31.0-150			5.85	27

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1372955-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1372955-01 07/04/21 11:47 • (MS) R3676943-4 07/04/21 14:00 • (MSD) R3676943-5 07/04/21 14:19

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	5.00	U	5.93	5.38	119	108	1	38.0-142			9.73	26
Bromoform	5.00	U	4.82	4.36	96.4	87.2	1	29.0-150			10.0	29
Bromomethane	5.00	U	3.94	3.65	78.8	73.0	1	10.0-160			7.64	38
n-Butylbenzene	5.00	U	5.86	5.56	117	111	1	31.0-150			5.25	30
sec-Butylbenzene	5.00	U	6.23	5.91	125	118	1	33.0-155			5.27	29
tert-Butylbenzene	5.00	U	6.04	5.83	121	117	1	34.0-153			3.54	28
Carbon tetrachloride	5.00	U	6.64	5.87	133	117	1	23.0-159			12.3	28
Chlorobenzene	5.00	U	5.35	5.00	107	100	1	33.0-152			6.76	27
Chlorodibromomethane	5.00	U	5.41	4.92	108	98.4	1	37.0-149			9.49	27
Chloroethane	5.00	U	4.69	4.28	93.8	85.6	1	10.0-160			9.14	30
Chloroform	5.00	0.280	5.92	5.52	113	105	1	29.0-154			6.99	28
Chloromethane	5.00	U	4.90	4.50	98.0	90.0	1	10.0-160			8.51	29
2-Chlorotoluene	5.00	U	5.81	5.50	116	110	1	32.0-153			5.48	28
4-Chlorotoluene	5.00	U	5.83	5.54	117	111	1	32.0-150			5.10	28
1,2-Dibromo-3-Chloropropane	5.00	U	5.47	5.00	109	100	1	22.0-151			8.98	34
1,2-Dibromoethane	5.00	U	5.46	5.11	109	102	1	34.0-147			6.62	27
Dibromomethane	5.00	U	5.50	5.11	110	102	1	30.0-151			7.35	27
1,2-Dichlorobenzene	5.00	U	5.65	5.38	113	108	1	34.0-149			4.90	28
1,3-Dichlorobenzene	5.00	U	5.49	5.10	110	102	1	36.0-146			7.37	27
1,4-Dichlorobenzene	5.00	U	5.19	4.97	104	99.4	1	35.0-142			4.33	27
Dichlorodifluoromethane	5.00	U	7.27	6.49	145	130	1	10.0-160			11.3	29
Dichlorofluoromethane	5.00	U	6.00	5.44	120	109	1	59.0-143			9.79	33
1,1-Dichloroethane	5.00	U	6.67	6.21	133	124	1	25.0-158			7.14	27
1,2-Dichloroethane	5.00	U	5.75	5.09	115	102	1	29.0-151			12.2	27
1,1-Dichloroethene	5.00	U	6.93	6.25	139	125	1	11.0-160			10.3	29
cis-1,2-Dichloroethene	5.00	0.160	6.13	5.67	119	110	1	10.0-160			7.80	27
trans-1,2-Dichloroethene	5.00	U	5.89	5.44	118	109	1	17.0-153			7.94	27
1,2-Dichloropropane	5.00	U	6.95	6.36	139	127	1	30.0-156			8.87	27
1,1-Dichloropropene	5.00	U	6.64	6.06	133	121	1	25.0-158			9.13	27
1,3-Dichloropropane	5.00	U	5.90	5.49	118	110	1	38.0-147			7.20	27
cis-1,3-Dichloropropene	5.00	U	5.66	5.23	113	105	1	34.0-149			7.90	28
trans-1,3-Dichloropropene	5.00	U	5.51	5.18	110	104	1	32.0-149			6.17	28
2,2-Dichloropropane	5.00	U	5.65	4.92	113	98.4	1	24.0-152			13.8	29
Ethylbenzene	5.00	U	5.67	5.19	113	104	1	30.0-155			8.84	27
Ethyl ether	5.00	U	6.37	5.82	127	116	1	45.0-135			9.02	23
Hexachloro-1,3-butadiene	5.00	U	6.10	5.21	122	104	1	20.0-154			15.7	34
Isopropylbenzene	5.00	U	6.34	5.79	127	116	1	28.0-157			9.07	27
p-Isopropyltoluene	5.00	U	6.02	5.69	120	114	1	30.0-154			5.64	29
2-Butanone (MEK)	25.0	U	38.1	35.3	152	141	1	10.0-160			7.63	32
Methylene Chloride	5.00	U	5.74	5.27	115	105	1	23.0-144			8.54	28

1
Cp

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Tc

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

L1372955-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1372955-01 07/04/21 11:47 • (MS) R3676943-4 07/04/21 14:00 • (MSD) R3676943-5 07/04/21 14:19

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	25.0	U	35.6	33.1	142	132	1	29.0-160			7.28	29
Methyl tert-butyl ether	5.00	U	6.92	6.19	138	124	1	28.0-150			11.1	29
Naphthalene	5.00	U	4.81	4.95	96.2	99.0	1	12.0-156			2.87	35
n-Propylbenzene	5.00	U	5.78	5.56	116	111	1	31.0-154			3.88	28
Styrene	5.00	U	5.18	5.03	104	101	1	33.0-155			2.94	28
1,1,1,2-Tetrachloroethane	5.00	U	5.70	5.10	114	102	1	36.0-151			11.1	29
1,1,2,2-Tetrachloroethane	5.00	U	6.18	5.69	124	114	1	33.0-150			8.26	28
Tetrachloroethene	5.00	U	5.76	5.22	115	104	1	10.0-160			9.84	27
Tetrahydrofuran	5.00	U	10.2	9.42	204	188	1	12.0-156	J5	J5	7.95	27
Toluene	5.00	U	5.80	5.39	116	108	1	26.0-154			7.33	28
1,1,2-Trichlorotrifluoroethane	5.00	U	5.97	5.42	119	108	1	23.0-160			9.66	30
1,2,3-Trichlorobenzene	5.00	U	4.63	4.57	92.6	91.4	1	17.0-150			1.30	36
1,2,4-Trichlorobenzene	5.00	U	5.42	5.14	108	103	1	24.0-150			5.30	33
1,1,1-Trichloroethane	5.00	U	6.41	5.82	128	116	1	23.0-160			9.65	28
1,1,2-Trichloroethane	5.00	U	5.58	5.24	112	105	1	35.0-147			6.28	27
Trichloroethene	5.00	U	6.02	5.64	120	113	1	10.0-160			6.52	25
Trichlorofluoromethane	5.00	U	4.74	4.00	94.8	80.0	1	17.0-160			16.9	31
1,2,3-Trichloropropane	5.00	U	5.75	5.38	115	108	1	34.0-151			6.65	29
1,2,3-Trimethylbenzene	5.00	U	5.63	5.35	113	107	1	32.0-149			5.10	28
1,2,4-Trimethylbenzene	5.00	U	6.13	5.78	123	116	1	26.0-154			5.88	27
1,3,5-Trimethylbenzene	5.00	U	5.91	5.64	118	113	1	28.0-153			4.68	27
Vinyl chloride	5.00	U	5.38	4.97	108	99.4	1	10.0-160			7.92	27
Xylenes, Total	15.0	0.254	17.7	16.4	116	108	1	29.0-154			7.62	28
Allyl chloride	25.0	U	30.0	27.7	120	111	1	39.0-145			7.97	30
(S) Toluene-d8					95.3	96.7		80.0-120				
(S) 4-Bromofluorobenzene					107	106		77.0-126				
(S) 1,2-Dichloroethane-d4					99.7	97.7		70.0-130				

1
Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

9
Sc

Method Blank (MB)

(MB) R3677226-3 07/08/21 13:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
cis-1,2-Dichloroethene	U		0.126	1.00
Tetrachloroethene	U		0.300	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
(S) Toluene-d8	99.9			80.0-120
(S) 4-Bromofluorobenzene	98.7			77.0-126
(S) 1,2-Dichloroethane-d4	98.3			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3677226-1 07/08/21 12:38 • (LCSD) R3677226-2 07/08/21 13:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	5.00	4.47	4.55	89.4	91.0	73.0-120			1.77	20
Tetrachloroethene	5.00	4.46	4.49	89.2	89.8	72.0-132			0.670	20
1,2,4-Trimethylbenzene	5.00	4.02	4.62	80.4	92.4	76.0-121			13.9	20
(S) Toluene-d8				98.9	98.8	80.0-120				
(S) 4-Bromofluorobenzene				102	99.8	77.0-126				
(S) 1,2-Dichloroethane-d4				99.7	102	70.0-130				

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Cp

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Tc

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Ss

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Cn

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3676763-2 07/07/21 11:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,4-Dioxane	U		0.0447	0.400
(S) Nitrobenzene-d5	78.9			10.0-120

Laboratory Control Sample (LCS)

(LCS) R3676763-1 07/07/21 11:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,4-Dioxane	50.0	43.6	87.2	73.0-146	
(S) Nitrobenzene-d5			73.7	10.0-120	

L1374339-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1374339-01 07/07/21 15:58 • (MS) R3676763-3 07/07/21 16:17 • (MSD) R3676763-4 07/07/21 16:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	45.5	2.64	42.2	42.1	86.9	86.7	1	38.0-160			0.237	21
(S) Nitrobenzene-d5					74.4	75.9		10.0-120				

1
Cp

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Tc

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Cn

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Qc

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Gl

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Al

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Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

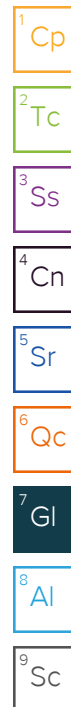
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
C5	The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.



ACCREDITATIONS & LOCATIONS

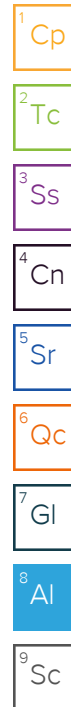
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



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Attachment 4

Data Validation Reports

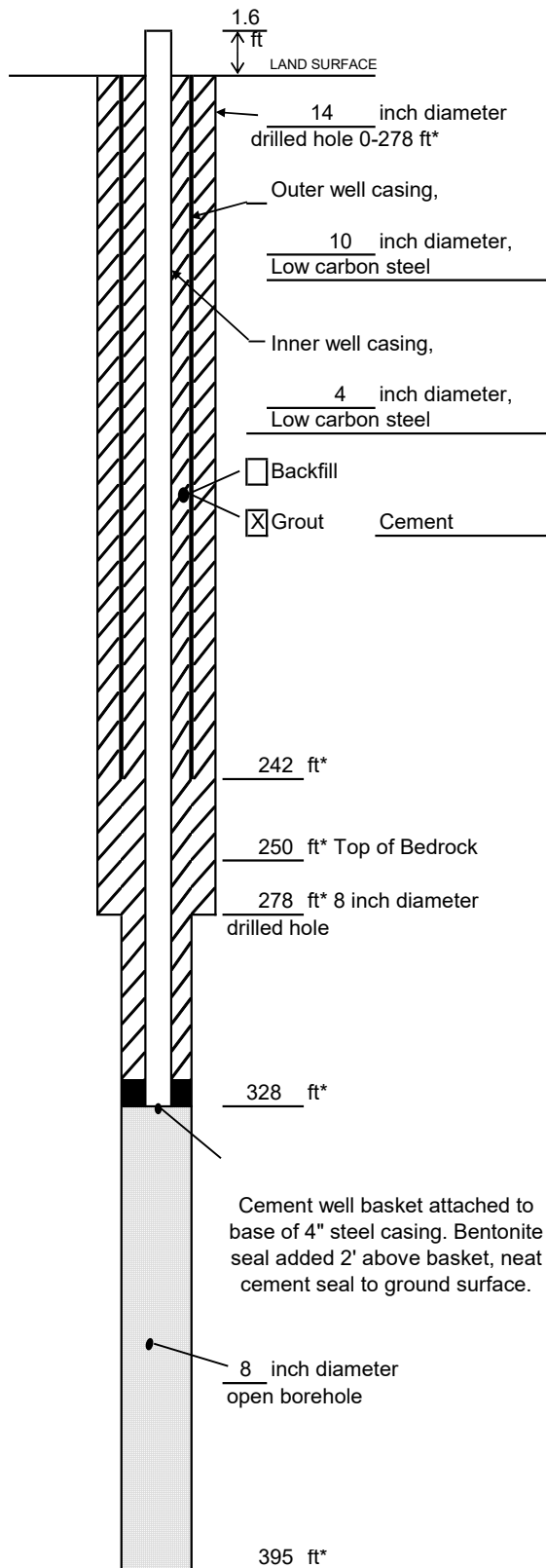
Data validation reports for Attachment 4 undergoing revision via third party validator. Updated final report to be included in final submission.

Attachment 5

Well Construction Log

WELL CONSTRUCTION LOG

(Bedrock)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.
* Depth Below Land Surface

Project TCAAP Well 04U884

Town/City New Brighton

County Ramsey State MN

Permit No. _____

Land-Surface (LS) Elevation and Datum:

1001.37 NAVD 88 feet ☒ Surveyed

☐ Estimated

Installation Date(s) 7/12/2021

Drilling Method Mud Rotary/Sonic

Drilling Contractor Traut Companies

Drilling Fluid Bentonite Mud/Water

Development Technique(s) and Date(s)

6/29/21: Predevelopment - pumping at 65 gpm.

7/12/21: Air lifting and pumping at a rate of 100 gpm.

Fluid Loss During Drilling N/A gallons

Water Removed During Development 13,000 gallons

Static Depth to Water 167.40 feet below M.P.

Pumping Depth to Water 167.52 feet below M.P.

Pumping Duration 1.75 hours

Yield 100 gpm Date 7/12/21

Specific Capacity 305 gpm/ft

Well Purpose Monitoring Well

Remarks Borehole diameter is 14" from 0-278 ft bgs and

8" from 278 to 395 ft bgs.

MN Unique ID #854560

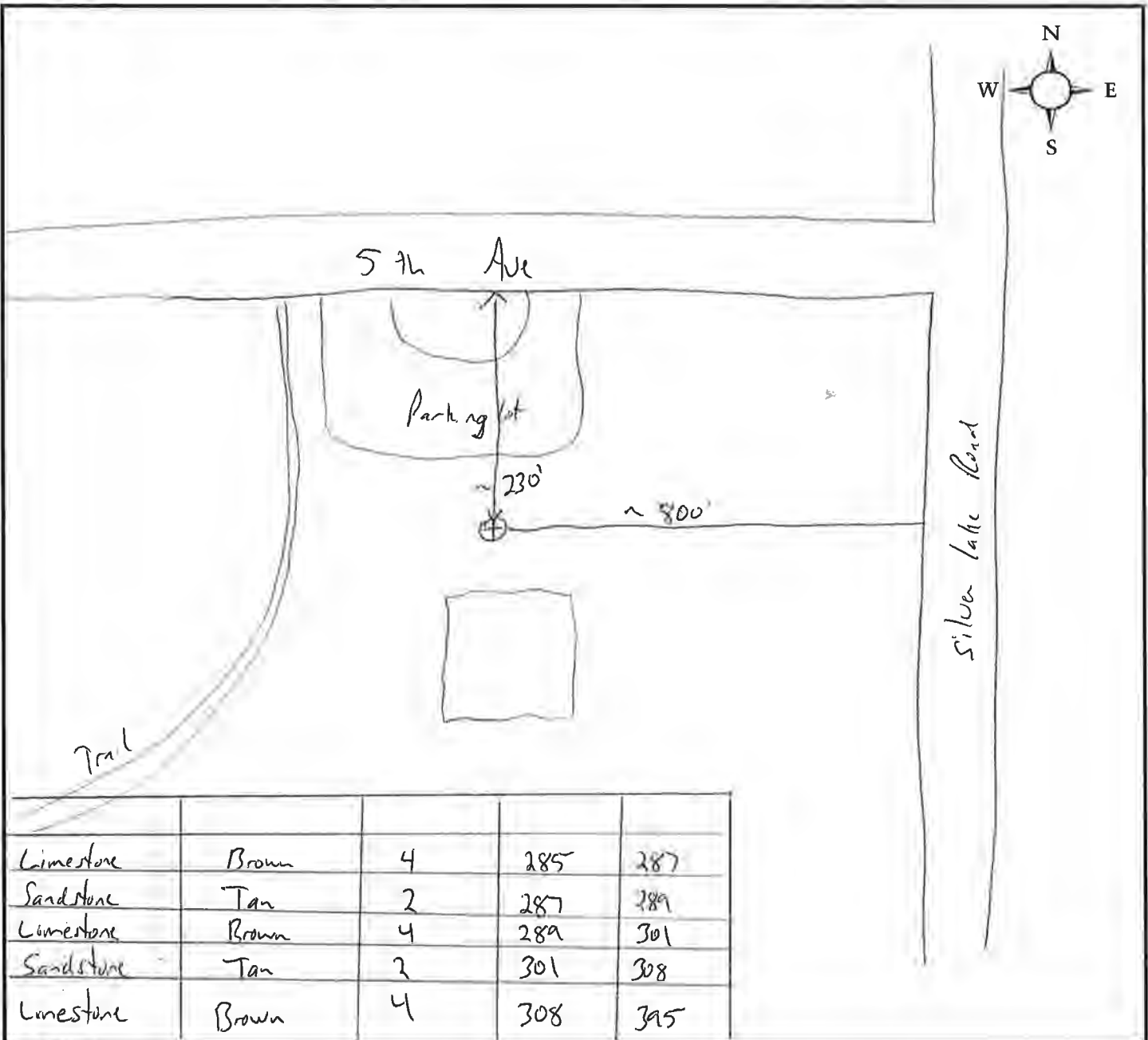
Prepared by Abigail Grein

Attachment 6

Minnesota Department of Health Well Record

WELL OR BORING LOCATION					MINNESOTA DEPARTMENT OF HEALTH		MINNESOTA UNIQUE WELL AND BORING NO.	
County Name Ramsey					WELL AND BORING CONSTRUCTION RECORD		854560	
Township Name New Brighton		Township No. 30N	Range No. 23W	Section No. 30	Fraction (sm. → lg.) NW NE SW	WELL/BORING DEPTH (completed) 395 ft.		DATE WORK COMPLETED July 12 2021
GPS LOCATION — decimal degrees (to four decimal places) Latitude 45.056559 Longitude -93.221404						DRILLING METHOD ☐ Cable Tool ☐ Driven ☐ Dual Rotary ☐ Auger ☒ Rotary ☒ Rotasonic ☐ Other		
House Number, Street Name, City and ZIP Code of Well Location 2705 5th Street NW New Brighton 55112						DRILLING FLUID Bentonite Mud		
Show exact location of well/boring in section grid with "X" Sketch map of well/boring location.						WELL HYDROFRACTURED? ☐ Yes ☒ No		
SEE Back						USE ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Irrigation ☐ Industry/Commercial ☐ Community PWS ☐ Dewatering ☐ Remedial ☐ Elevator		
						CASING MATERIAL Drive Show? ☐ Yes ☒ No ☒ Steel ☐ Threaded ☒ Welded ☐ Plastic		
PROPERTY OWNER'S NAME/COMPANY NAME City of New Brighton						HOLE DIAM. 14 in. To 280 ft.		
Property owner's mailing address if different than well location address indicated above. 803 5th Avenue NW New Brighton MN 55112						Casing Diameter Weight Specifications 10 in. To 242 ft. lbs./ft. A53 4 in. To 328 ft. lbs./ft. A53		
WELL OWNER'S NAME/COMPANY NAME United States Army (Linda Albrecht)						SCREEN No OPEN HOLE From 328 ft. To 395 ft.		
Well/boring owner's mailing address if different than property owner's address indicated above. 2455 Reynolds Road, Bldg 2266 Fort Sam Houston, TX 78234						Type Drain Slot/Gauze Length Set Between ft. and ft. FITTINGS		
GEOLOGICAL MATERIALS						STATIC WATER LEVEL 167 ft. ☒ Below ☐ Above land surface		
COLOR						Date Measured July 2 2021 Dry Hole ☐ Yes ☒ No		
HARDNESS OF MATERIAL						PUMPING LEVEL (below land surface) 395 ft. after 4 hrs. pumping 40 g.p.m.		
FROM						WELLHEAD COMPLETION ☐ Pitless/adaptor manuf. Model ☒ Casing protection 8" Proton ☐ 12 in. above grade ☐ At-grade ☐ Well House ☐ Hand Pump		
TO						GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, cuttings, or other) Material Neat Cement From 0 To 242 ft. 6 Yds. ☒ Bags Material Neat Cement From 0 To 328 ft. 140 Yds. ☒ Bags Material From To ft. Yds. ☐ Bags Driven casing seal From N/A To ft. Bags One bag = 94 lbs. cement or 50 lbs. bentonite		
See Attached Page 2						NEAREST KNOWN SOURCE OF CONTAMINATION Well is N/A feet direction from type Well disinfected upon completion? ☐ Yes ☒ No		
						PUMP ☒ Not installed Date installed		
						Manufacturer's name		
						Model number HP Volts		
						Length of drop pipe Capacity g.p.m.		
						Type ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐		
						ABANDONED WELLS Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No		
						VARIANCE Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN#		
						WELL CONTRACTOR CERTIFICATION This well was drilled under my supervision and in accordance with Minnesota Rules, chapter 4725. The information contained in this report is true to the best of my knowledge		
						REMARKS< ELEVATION, SOURCE OF DATA, etc.		
MINN DEPT. OF HEALTH COPY						854560		

Client: Arcadis TCAAP Job # 6013598/8013598
 Location: 2705 5th Street NW Boring # _____
 City: New Brighton State: MN Date: _____
 Driller: Perry/Dan Flipsen Asst.: Jason/Tanner/Dylan Stake # _____
 County: Ramsey Township: 30N Range: 23W Section: 30 1/4's : NW NE SW



Notes :

Attachment 7

Associated Field Reports



ATTENTION OF

REPLY TO AMIM-AEC-M

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
US ARMY ENVIRONMENTAL COMMAND
2455 REYNOLDS ROAD
JOINT BASE SAN ANTONIO FORT SAM HOUSTON, TX 78234-7588

July 6, 2021

SUBJECT: Operable Unit 1 Optimization Deep Groundwater – Geophysics Field Summary Report

U.S. EPA
Region V
ATTN: Ms. Viral Patel
77 West Jackson Boulevard
Chicago, IL 60604

Minnesota Pollution Control Agency
ATTN: Ms. Brigitte Hay, Project Leader
Metro District Office
Site Remediation Section
520 Lafayette Road North
St. Paul, MN 55155

Dear Ms. Patel and Ms. Hay:

The United States Army (Army) has prepared this Operable Unit 1 (OU1) Optimization Deep Groundwater – Geophysics Field Summary Report (Report) for the Twin Cities Army Ammunition Plant (TCAAP), in Arden Hills, Minnesota. This Report documents field activities completed between November 4 and December 4, 2020, consisting of downhole hydrostratigraphic and groundwater quality profiling on existing OU1 monitoring wells and New Brighton Contaminated Groundwater Recovery System (NBCGRS) production wells. The work was completed in accordance with the OU1 Optimization Work Plan (Work Plan), which was approved by the United States Environmental Protection Agency (U.S. EPA) and Minnesota Pollution Control Agency (MPCA) on October 15, 2020.

The work described in this Report represents the first part of a two-phase program to improve the overall OU1 conceptual site model (CSM) and support potential expansion of the NBCGRS with a new production well. The second phase of work, planned for summer 2021, will include completion and testing of one to two pilot boreholes. Collectively, the two phases of work are intended support recommendations for placement and design of the potential new production well so that the well can most meaningfully contribute to OU1 plume containment and contaminant mass removal. This Geophysics Field Summary Report is an interim deliverable. Final recommendations will be provided after completion of the second phase of work.

INVESTIGATION ACTIVITIES

This investigation was undertaken to evaluate hydrostratigraphic and groundwater quality variability across portions of the Prairie du Chien Group (PdC) and Jordan Formation (Jordan) bedrock units that contribute groundwater to the NBCGRS and OU1 well fields. The tasks were designed to improve the understanding of the distribution and transport pathways of the primary contaminants of concern (COCs), trichloroethene (TCE) and 1,4-dioxane, in targeted areas of OU1.

Scope of Work

Geophysical logging and point groundwater sampling were completed at eight existing wells:

- Three active production wells: New Brighton Municipal (NBM) well(s) 3, NBM-5, and NBM-15.
- Five monitoring wells: 04U839, 04U843, 04U844, 04U850, and 04U871.

The scope of work consisted of the following:

- Geophysical logging at each well to characterize lithology, fractures and voids, and zones of groundwater yield under both ambient and pumping conditions.
- Vertical profiling at each well by collecting water samples at multiple depths within the well's water column under pumping conditions to map the concentration distribution of COCs vertically across the aquifer and (in combination with the borehole flow data) and identify fractures or zones with the greatest contaminant mass flux. Samples were also analyzed for a suite of ions and metals to be used as a fingerprinting tool to assess whether varying ionic mixtures may inform interpretation of groundwater transport pathways.

A site map with locations of the wells used for profiling is shown on **Figure 1**. **Table 1** summarizes the well construction details. Well and pump services were provided by Bergerson-Caswell (BC), of Maple Plain, Minnesota. Geophysical logging services were provided by Colog, Inc (Colog), of Boulder, Colorado.

The activities associated with the OU1 optimization program are described below. All work was completed in accordance with the *Quality Assurance Project Plan for Performance Monitoring* (QAPP; JV 2020)¹ and *Final Site Health and Safety Plan* (HASP; JV 2019)².

Profiling Procedures

At each well profiled, the sequence of tasks was as follows:

1. Geophysical logging was completed under ambient (non-pumping conditions). The logging suite included caliper, natural gamma, fluid-temperature, fluid conductivity, and optical and/or acoustic televiewer (OTV/ATV). Flow meter logging was performed under ambient conditions using an electromagnetic Corehole Dynamic Flowmeter (CDFM) at most locations, or spinner flowmeter where flow-rates exceeded about 15 gallons per minute (gpm).
2. After ambient logging, a submersible pump was deployed near the top of the water column in each well and purged at a rate (ranging from about eight to 20 gpm in monitoring wells, and 350-680 gpm in the production wells) to stress the well and create upward flow across the length of the open interval. In the production wells, a drop pipe was installed to act as a conduit for the geophysical logging tools to reach the open borehole below the pump.
3. Once the temporary pump was activated, the wells were pumped long enough to establish equilibrium conditions. Each production well was pumped for at least 24 hours. Monitoring wells were purged for a minimum of one hour. Purge water from the monitoring wells was discharged to the ground surface per QAPP standards. Purge water from the production well NBM-3 was discharged to a sanitary sewer at the direction of the New Brighton public works department (PWD). Purge water from NBM-5 and NBM-15 was piped to the New Brighton water treatment plant for treatment for distribution.

¹ JV. 2020. Quality Assurance Project Plan for Performance Monitoring, New Brighton/Arden Hills Superfund Site. June.

² JV. 2019. Final Site Health and Safety Plan. Twin Cities Army Ammunition Plant, Arden Hills, Minnesota. September.

4. While pumping, flow meter logging was repeated to evaluate which fractures or zones contribute groundwater under stressed (dynamic) conditions.
5. While still pumping, point samples were collected at up to eight depths, selected to be above or below fractures and voids observed to be contributing water to the borehole. At monitoring wells, point samples were collected using a low-flow bladder pump, deployed below the high-flow submersible pump and raised or lowered to the target sample depths. In the production wells, point samples were collected with a stainless steel piston point-sampler.

Point samples in each well were collected from the bottom up. Because groundwater was flowing upward in the boreholes during sampling, each successive sample represented a flow-weighted sample of all the groundwater that had entered the hole to that depth. At each location, an additional sample was collected from the pump effluent to represent a full-well composite. Logs depicting borehole geophysics and flow logging are included in **Attachment 1**.

Groundwater samples were shipped under appropriate chain-of-custody procedures to Pace National Laboratory of Mt. Juliet, Tennessee. Samples were analyzed for the following:

- Volatile organic compounds (VOCs) using U.S. EPA Method 8260D;
- 1,4-dioxane using U.S. EPA Method 8270C SIM; and
- Select ions and metals using U.S. EPA Methods 9056A, 6020, and 2320B-2011. Analytes included sodium, potassium, calcium, magnesium, chloride, sulfate, nitrate, nitrite, fluoride, bromide, ortho-phosphate and alkalinity as carbonate.

In total, 44 samples were collected for analysis. Six duplicate samples and six equipment blanks were collected for quality control. Analytical results are summarized in **Tables 2** and **3**. Laboratory reports are included in **Attachment 2**. Data validation was completed in accordance with the QAPP; validation reports are included in **Attachment 3**.

Production Well Sanitization

Additional steps were required to complete this process at the NBM production wells to ensure uninterrupted water service and a safe drinking water supply. Because the wells were active prior to the test, each well had to be shut down and have its permanent pump removed. After ambient logging was completed and a temporary submersible was deployed, wells NMB-5 and NMB-15 were disinfected by BC so that the temporary pump discharge could be fed into the water-supply lines for treatment and distribution. New Brighton PWD completed a series of two tests to verify that the well had been sanitized, and then started the temporary pump. Disinfection at NMB-3 was not needed, because the water could be discharged directly to a sanitary sewer. After completion of profiling, BC removed the temporary pump, reinstalled the permanent pump, and disinfected the wells a second time. After New Brighton PWD completed a second series of two tests to verify that each well had been sanitized, the well returned to normal service. All work was coordinated with New Brighton PWD to prevent any disruption of water-service and avoid periods in which more than two wells were offline.

INVESTIGATION RESULTS

Geophysical logging and point sampling results were evaluated to help identify the distribution and transport pathways of COCs. Analysis focused on the locations of fractures and voids that contribute groundwater to the wells and understanding how concentrations of COCs vary across zones screened.

Figures 2a through 2h synthesize the profiling results. The Figures present a series of graphs depicting the following:

- **Depth and Ranks of Observed Fractures.** Rankings reflect the size or aperture of the fracture, based on a review performed by the geophysical logging vendor. In the PdC, the higher rank fractures often reflect karst conduits, which typically dominate flow in the aquifer.
- **Ambient and Dynamic Flow.** In these plots, positive flows are upward and negative flows are downward. Note that under ambient conditions, flow occurs between fractures, entering the borehole at one depth then moving upward or downward in the borehole to a different fractures or void. Under dynamic conditions, flow typically enters the borehole from all hydraulically active fractures, and then flows upward to the pump.
- **TCE Point Sampling Results.** These data are the raw point-sampling results, reflecting the concentration of the TCE in the upward-flowing water column under dynamic conditions. Concentrations at each point reflect a mixture of the water entering from all fractures below that point.
- **Estimated TCE Concentrations.** These values are based on a mass-balance calculation using the dynamic flow rates and point sample concentrations. The values are estimates of concentration of the TCE of groundwater entering the well at the approximate depth posted. Estimates are only posted where a measurable flow enters the borehole. Estimates are sensitive to minor changes in flow rates and should be considered approximate.
- **Percent Flow and Mass by Zone.** The final plot presents estimates of the percent of flow and TCE mass entering the well under pumping conditions in series of zones, assigned based on the distribution of fractures in the well. Estimates are based on mass-balance calculations and should be considered approximate.

The major observations for each profiled well are summarized below. Note that this analysis is based on concentrations of TCE, the primary COC. Discussion of results of other COCs is provided after the well-by-well results. Point groundwater sampling results for all COCs are summarized in **Table 2**.

Monitoring Well 04U839 Results

Profiling results of Well 04U839 are summarized on **Figure 2a**. The primary observations for this location are as follows:

- **Interval tested:** 331 to 386 feet below ground surface (bgs), representing approximately the upper two-thirds of the PdC.
- **Major fracture zones:** Two major zones observed at approximately 333 and 368 feet bgs. Under ambient conditions, water was flowing downward between zones at approximately 1.5 gpm. Pumping at 10.2 gpm (the maximum pumping rate) was insufficient to reverse the natural downward flow direction below the shallower fracture.
- **Point sampling result:** Because upward flow could not be created in this well, only a single point sample was collected adjacent to the shallower fracture. TCE was detected at 34.3 micrograms per liter (µg/L).
- **Flux interpretation:** Water from the shallow fracture zone flows downward; therefore, a sample collected at any depth would be representative of the shallower fracture zone.

Monitoring Well 04U843 Results

Profiling results of Well 04U843 are summarized on **Figure 2b**. The primary observations for this location are as follows:

- **Interval tested:** 152 to 257 feet bgs, representing the entirety of the PdC, terminating at the Jordan.
- **Major fracture zones:** Three major fracture zones were observed, the largest at approximately 186 feet bgs. This major fracture zone in the center of the borehole was a convergent water-bearing zone, with water flowing downward at approximately 2 gpm, and upward to this fracture at approximately 2.5 gpm. Pumping at 21.8 gpm created an upward flow throughout the borehole, with the most flow entering at and above the major fracture zone at 186 feet bgs.
- **Point sampling results:** Eight-point samples were collected under dynamic conditions, with TCE concentrations ranging from 168 µg/L to 281 µg/L. The estimated concentration of TCE entering the well was highest in the deepest fracture zone (near the base of the PdC), and lowest just below the casing, near the top of the PdC.
- **Flux interpretation:** The greatest TCE mass flux was estimated in the central fracture zone, contributing approximately 53% to the total mass observed at Well 04U843.

Monitoring Well 04U844 Results

Profiling results of Well 04U844 are summarized on **Figure 2c**. The primary observations for this location are as follows:

- **Interval tested:** 210 to 270 feet bgs, representing the lower two-thirds of the PdC.
- **Major fracture zones:** No major fractures or voids were found in the well, which had a significantly lower total yield than the other wells tested. Pumping at 8.94 gpm created an upward flow throughout the borehole. The majority of the water was entering the well from fractures near about 215 feet and 250 feet bgs.
- **Point sampling results:** Five-point samples were collected under dynamic conditions, with TCE concentrations ranging from 29.5 µg/L to 183 µg/L.
- **Flux interpretation:** Water that was entering the borehole at the deepest part of the well (e.g., below 260 feet bgs) was significantly cleaner than water entering from 250 feet bgs and above. The majority of mass flux in this well was distributed among multiple fractures between about 215 and 250 feet bgs.

Monitoring Well 04U850 Results

Profiling results of Well 04U850 are summarized on **Figure 2d**. The primary observations for this location are as follows:

- **Interval tested:** 201 to 304 feet bgs, representing the entirety of the PdC.
- **Major fracture zones:** Flow in this well is dominated by a zone of fractures and voids between about 243 and 250 feet bgs. A secondary fracture zone was also present at around 202 feet bgs. Ambient flow of approximately 1.1 gpm moved upward between the two zones. Under pumping conditions, nearly all flow entered the well from the major zone. No ambient or dynamic flow occurred below 260 feet bgs, therefore, no point samples were collected below that point.

- **Point sampling results:** Four-point samples were collected under dynamic conditions, with TCE concentrations ranging from 12.3 µg/L to 22.7 µg/L. Results suggest that water with lower TCE concentrations entered the well between the two major flow zones.
- **Flux interpretation:** Flow in the well is dominated by the major fracture zone between about 243 and 250 feet bgs. TCE mass recovery appears divided between that major zone and the secondary zone near the bottom of casing.

Monitoring Well 04U871 Results

Profiling results of Well 04U871 are summarized on **Figure 2e**. The primary observations for this location are as follows:

- **Interval tested:** 267 to 380 feet bgs, representing the entirety of the PdC, terminating at the top of the Jordan.
- **Major fracture zones:** Upper portion of well contains numerous fractures, but the flow was dominated by a major void/fracture at 320 feet. Below this zone, pumping conditions could not reverse the ambient downward flow.
- **Point sampling results:** Four-point samples were collected under dynamic conditions, with TCE concentrations ranging from 6.5 µg/L to 10.8 µg/L.
- **Flux interpretation:** Flow and mass flux in this well is dominated by the major fracture/void at 320 feet bgs. No flow or mass was contributed from deeper portions of the well.

Production Well NBM-3 Results

Profiling results of Well NBM-3 are summarized on **Figure 2f**. The primary observations for this location are as follows:

- **Interval tested:** 276 to 491 feet bgs, this well screening across the entirety of the PdC and Jordan.
- **Major fracture zones:** Flow was dominated by cavernous zones in the upper half of the PdC (approximately 280-340 feet bgs). There was significant ambient flow (both up and down), but this is likely due to the operation of NBM-4 close by while NBM-3 was conducting ambient testing. There was no significant flow contribution from the Jordan.
- **Point sampling results:** Seven-point samples were collected under dynamic conditions, with TCE concentrations ranging from 37.1 µg/L to 51.1 µg/L.
- **Flux interpretation:** TCE concentrations appear uniform, with less impacted water entering the well from below the casing. Both flow and mass flux at NBM-3 are dominated by the cavernous zone above about 340 feet bgs.

Production Well NBM-5 Results

Profiling results of Well NBM-5 are summarized on **Figure 2g**. The primary observations for this location are as follows:

- **Interval tested:** 428 to 465 feet bgs, representing approximately the upper half of the Jordan. Note that the borehole was reported drilled to 500 feet bgs, but about 35 feet at the base of the well is collapsed.

- **Major fracture zones:** The upper half $\mu\text{g/L}$ of the borehole is an irregular blasted cavern, reflecting past efforts to improve flow to the well using explosives. The well has a very high yield; however, no specific fractures could be identified as the source. The flow meter logging completed in NMB-5 is not reliable, due to the size and irregular shape of the borehole. It is reasonable to assume the dynamic pumping (at an estimated 680 gpm) created upward flow across the open interval; however, that flow could not be measured.
- **Point sampling results:** Three-point samples were collected under dynamic conditions, with TCE concentrations ranging from 36.8 $\mu\text{g/L}$ to 37.9 $\mu\text{g/L}$.
- **Flux interpretation:** It was not feasible to differentiate zones within the 37 feet of open borehole. Based on the nearly identical concentrations of TCE measured across the open interval of the well, water entering the borehole near the center of the Jordan appears to be similarly impacted to water entering just beneath the PdC. While these data are not conclusive, they suggest the source of TCE to NBM-5 is not directly from the overlying PdC.

Production Well NBM-15 Results

Profiling results of Well NBM-15 are summarized on **Figure 2h**. The primary observations for this location are as follows:

- **Interval tested:** 247 to 349 feet bgs, representing the majority of the PdC, terminating at the Jordan.
- **Major fracture zones:** Flow into the well under pumping conditions is dominated by the fractures/voids zones at approximately 270 and 283 feet bgs. No ambient flow was detected. No significant fractures or flow zones were found in the bottom half of the borehole.
- **Point sampling results:** Four-point samples were collected under dynamic conditions, with TCE concentrations ranging from 1.15 $\mu\text{g/L}$ to 2.09 $\mu\text{g/L}$ (estimated).
- **Flux interpretation:** Concentrations appear uniform throughout the well. Both TCE mass flux and groundwater flow were dominated by the voids between about 270 and 283 feet bgs.

Supplemental Discussion

In addition to TCE, discussed above, point samples were analyzed for other VOCs, 1,4-dioxane, and a suite of major ions and metals. Point groundwater sampling results for all COCs and TCE daughter products are summarized in **Table 2**. Point sample results for TCE, cis-1,2-dichloroethene (DCE) and 1,4-dioxane are shown plotted by depth on **Figure 3a** through **Figure 3c**. These results support the following observations:

- 1,4-dioxane was found at concentrations ranging from 0.559 $\mu\text{g/L}$ (NBM-15) to 24.0 $\mu\text{g/L}$ (04U843), decreasing from upgradient to downgradient with distance from TCAAP. Concentrations of 1,4-dioxane generally tracked TCE concentrations in a given well, at a ratio that averaged about 7:1 TCE to 1,4-dioxane. That relationship was slightly higher in the Jordan at NBM-5 (approximately 13:1).
- Concentrations of cis-1,2-DCE also generally tracked concentrations of TCE, with a few exceptions. Results from NBM-3 show relatively higher concentrations of cis-1,2-DCE from point samples collected from the deeper portion of the well open to the Jordan than from the shallower portion screening the PdC. In general, locations in the center of the plume and open to the highly transmissive upper portion of the PdC had higher ratios of TCE-to-cis-1,2-DCE, while wells open in

the Jordan or on the plume periphery had lower ratios. This may indicate relatively more rapid transport in the plume core and PdC.

- Concentrations of 1,1,1-trichloroethane (TCA) and its breakdown product, 1,1-DCE, were also detected in point sample data, with results generally tracking in magnitude with 1,4-dioxane (their co-contaminant).

Major ions were also analyzed in an attempt to determine if any variability across aquifers could be established. Point groundwater sampling results for major ions and metals are presented on **Table 3**. Stiff diagrams showing the distribution of major ions based on the average of all point concentrations at each well are shown on **Figure 4**. As illustrated on the Figure, subtle differences in ion mixtures exist between locations; however, these differences are insufficient to draw conclusions about varying source waters or transport pathways influencing the wells profiles.

CONCLUSIONS AND RECOMMENDATIONS

This study was undertaken to evaluate hydrostratigraphic and groundwater quality variability across portions of the PdC and Jordan bedrock units that influence the OU1 plumes and contribute groundwater to the NBCGRS well field. The findings support the following conclusions:

- The lateral distribution of COCs was consistent with the current understanding of the OU1 plumes. Highest concentrations of TCE and other COCs were present in the most upgradient wells sampled (04U843 and 04U844), closer to TCAAP. If achieving greatest mass recovery for volume pumped were the only objective for siting a new supply well, a location in the vicinity of those wells would be most effective. However, because potential upgradient well sites pose significant challenges for integration with the existing NBCGRS, locations within the vicinity of the existing wellfield may prove most feasible.
- The vertical variability of COCs in groundwater at the profiled wells was highest in the more upgradient wells (e.g., 04U843 and 04844) and most uniform in the production wells. This suggests that the plume becomes less stratified (more vertically dispersed) in the vicinity of the wellfield, where pumping stresses from multiple fully penetrating wells alter the normal transport patterns.
- With the exception of the blasted interval of the Jordan at NBM-5 (which is not considered representative of natural conditions), the most significant zone of groundwater production was consistently observed in the upper half of the PdC. Where wells were open to this zone, it was found to dominate the groundwater yield. Because the zone is so dominant hydraulically, and COC concentrations are relatively more uniform, the upper PdC is also the zone of greatest mass flux and potential mass recovery.

Based on the results of this study, Army is completing a second phase of investigations. That scope of work will include one to two pilot borings to evaluate the site-specific conditions at potential future production wells sites. The details of the proposed next steps are outlined in the Addendum to the Work Plan, submitted May 10, 2021.

Operable Unit 1 Optimization Deep Groundwater – Geophysics Field Summary Report
July 6, 2021

If you have any questions, please contact me at (865) 599-0055, or email me at linda.b.albrecht.civ@mail.mil.

Sincerely,

Linda B. Albrecht

Digitally signed by Linda B.
Albrecht
Date: 2021.07.08 15:16:18 -05'00'

Linda Albrecht, P.E., C.H.M.M, C.E.M
Remedial Project Manager

Enclosures:

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Attachment 4 – Weekly Field Reports

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TCAAP Admin Records, PIKA-Arcadis JV (Louise Anderson)
USGS (Jeff Raffensperger)

TABLES



Table 1
Well Construction Information
Geophysics Field Summary Report
Twin Cities Army Ammunitions Plant
Arden Hills, Minnesota



Common Name	Aquifer	Diameter (in.)	Bottom of Casing (ft bgs)	Depth to Water (ft bgs)	Depth (ft bgs)	Open Hole Length (ft)	Top of PdC (ft bgs)	Top of Jordan (ft bgs)
Monitoring Wells								
04U839	PDC	4	330	148.5	387	57	325	---
04U843	PDC/Jordan	5	151	40.9	255	106	130	250
04U844	PDC/Jordan	5	210	40.4	270	62	175	270
04U850	PDC	5	201	77.3	310	109	190	---
04U871	PDC/Jordan	6	269	135.7	384	115	260	381
Production Wells								
NBM-3	PDC/Jordan	16	276	163.3	491	215	268	393
NBM-5	Jordan	16	428	204	465	37	307	420
NBM-15	PDC	17	247	91.1	338	91	221	340

Notes:

--- = not applicable/not available

ft bgs = feet below ground surface

ft = feet

in = inches

PDC = Prairie du Chien

NBM = New Brighton Municipal Well

Table 2
Vertical Point Groundwater Sampling Results
Geophysics Field Summary Report
Twin Cities Army Ammunitions Plant
Arden Hills, Minnesota



Notes and Abbreviations on page 3.

Notes and Abbreviations on page 3.				Constituents of Concern				Other Detected VOCs			
Well ID	Sample Date	Average Pumping Rate (gpm)	Sample Depth (feet bgs)	1,4-Dioxane (µg/L)	Trichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	Vinyl chloride (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)
OU1 Cleanup Level				1.00	5.00	70.00	---	200	3.00	70	6
MDH Health Risk Limit				---	---		1.00	---	---	---	---
04U839	11/20/2020	10.2	Pump Discharge	6.13	29.2	0.489 J	< 1.00	0.653 J	< 1.00	1.94	2.14
			332.0	6.09	34.3	0.659 J	< 1.00	0.781 J	< 1.00	2.42	2.54
04U843	11/8/2020	21.8	Pump Discharge	22.4	157	2.11	< 1.00	7.16	< 1.00	10.9	13.6
			140.0	20.6	168	2.20	< 1.00	7.17	< 1.00	10.8	14.9
			152.0	23.1	173	2.13	< 1.00	7.37	< 1.00	10.9	14.9
			161.0	22.9	199	2.58	< 1.00	8.88	< 1.00	13.4	18.1
			183.0	21.9	220	2.99	< 1.00	9.81	< 1.00	14.5	19.2
			196.0	24.0	242	3.78	< 1.00	15.4	< 1.00	20.4	28.1
			196 DUP	22.9	243	3.25	< 1.00	17.1	< 1.00	18.3	32.3
			220.0	24.0	244	5.69	< 1.00	29.9	< 1.00	37.0	46.9
			240.0	22.8	228	5.80	< 1.00	33.5	< 1.00	37.2	51.8
			255.0	19.1	281	5.01	< 1.00	31.3	< 1.00	31.8	47.5
04U844	11/7/2020	8.94	Pump Discharge	16.2	142	3.99	< 1.00	6.90	< 1.00	11.6	9.54
			202.0	16.5	183	5.00	< 1.00	10.5	0.206 J	14.3	17.3
			216.0	17.4	179	4.71	< 1.00	9.79	< 1.00	14.1	15.9
			233.0	15.9	165	4.79	< 1.00	9.95	< 1.00	14.1	15.1
			233 DUP	17.5	165	4.82	< 1.00	9.99	< 1.00	14.1	15.6
			246.0	15.6	146	4.48	< 1.00	8.38	< 1.00	12.3	12.4
			262.0	14.9	29.5	3.32	< 1.00	3.58	< 1.00	10.4	5.46
04U850	12/3/2020	14.7	Pump Discharge	3.87	21.4	5.91	< 1.00	< 1.00	< 1.00	2.50	2.09
			212.0	2.14	12.3	5.77	< 1.00	< 1.00	< 1.00	1.52	1.53
			240.0	2.16	13.2	5.65	< 1.00	< 1.00	< 1.00	1.51	1.62
			247.0	3.73	22.2	6.31	< 1.00	< 1.00	< 1.00	2.67	2.44
			255.0	3.49	22.7	6.07	< 1.00	< 1.00	< 1.00	2.83	2.47

Table 2
Vertical Point Groundwater Sampling Results
Geophysics Field Summary Report
Twin Cities Army Ammunitions Plant
Arden Hills, Minnesota



Notes and Abbreviations on page 3.

Notes and Abbreviations on page 3.				Constituents of Concern				Other Detected VOCs			
Well ID	Sample Date	Average Pumping Rate (gpm)	Sample Depth (feet bgs)	1,4-Dioxane (µg/L)	Trichloro-ethene (µg/L)	cis-1,2-Dichloro-ethene (µg/L)	Vinyl chloride (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	1,1-Dichloro-ethane (µg/L)	1,1-Dichloro-ethene (µg/L)
OU1 Cleanup Level				1.00	5.00	70.00	---	200	3.00	70	6
MDH Health Risk Limit				---	---		1.00	---	---	---	---
04U871	12/1/2020	12.6	Pump Discharge	3.30	11.1	0.334 J	< 1.00	0.251 J	< 1.00	2.81	0.755 J
			282.0	2.97	10.8	0.279 J	< 1.00	0.232 J	< 1.00	2.90	0.876 J
			282 DUP	3.09	10.7	0.269 J	< 1.00	0.241 J	< 1.00	2.91	0.782 J
			311.0	3.28	10.1	0.259 J	< 1.00	0.168 J	< 1.00	2.81	0.771 J
			337.0	---	6.54	0.299 J	< 1.00	< 1.00	< 1.00	3.40	0.566 J
			360.0	3.58	6.60	0.349 J	< 1.00	< 1.00	< 1.00	3.66	0.635 J
NBM-3	11/13/2020	550	Pump Discharge	5.46	34.5	0.272 J	< 1.00	0.612 J	< 1.00	2.56	2.55
			285.0	7.45	46.8	0.274 J	< 1.00	0.933 J	< 1.00	3.62	3.81
			305.0	7.91	47.7	0.307 J+	< 1.00	0.729 J	< 1.00	3.39	3.63
			345.0	7.12	51.1	0.395 J	< 1.00	1.77	< 1.00	3.23	4.18
			380.0	7.10	46.8	0.224 J+	< 1.00	0.722 J	< 1.00	3.55	4.02
			400.0	7.08	47.1	0.181 J	< 1.00	0.776 J	< 1.00	3.79	4.13
			430.0	7.60	47.5	2.58	< 1.00	0.747 J	< 1.00	3.74	3.90
			430 DUP	---	48.2	3.33	< 1.00	0.722 J	< 1.00	3.71	3.84
			460.0	7.84	37.1	3.63	< 1.00	0.840 J	< 1.00	3.72	3.68
NBM-5	12/4/2020	680	Pump Discharge	2.91	35.3	2.76	< 1.00	1.23	< 1.00	1.66	2.41
			Pump Discharge DUP	2.97	35.0	4.60	< 1.00	1.06	< 1.00	1.68	2.12
			410.0	2.66	36.8	4.90	< 1.00	0.963 J	< 1.00	1.75	1.61
			430.0	2.79	37.9	4.78	< 1.00	1.12	< 1.00	1.81	1.87
			460.0	2.57	37.9	4.26	2.6	1.05	< 1.00	1.77	2.02
NBM-15	11/19/2020	350	Pump Discharge	0.521	1.07	0.352 J	< 1.00	< 1.00	< 1.00	0.152 J	< 1.00
			258.0	0.559	1.15	0.302 J	< 1.00	< 1.00	< 1.00	0.162 J	< 1.00
			258 DUP	0.844	1.23 J	0.392 J	< 1.00	< 1.00	< 1.00	0.148 J+	< 1.00
			282.0	0.590	1.26	0.385 J	< 1.00	< 1.00	< 1.00	0.164 J	< 1.00
			296.0	0.798	2.09 J	0.378 J	< 1.00	< 1.00	< 1.00	0.181 J+	< 1.00
			318.0	0.700	1.15	< 1.00	< 1.00	< 1.00	< 1.00	0.150 J	< 1.00

Table 2
Vertical Point Groundwater Sampling Results
Geophysics Field Summary Report
Twin Cities Army Ammunitions Plant
Arden Hills, Minnesota



General Notes:

The cleanup level for OU1 Groundwater is from page 18 of OU1 Record of Decision. Gray shading indicates exceedance of the cleanup level.

No OU1 cleanup level has been established for 1,4-dioxane. For reference, the Minnesota Department of Health (MDH) Health Risk Limit (HRL) for 1,4-dioxane is 1 µg/L. Gray shading indicates exceedance of the HRL.

Acronyms and Abbreviations:

Bold = Value exceeds the OU1 Cleanup Level

Shade = Value exceeds MDH Health Risk Limit

--- = not applicable/not available

< X.X = analyte was not detected above the Reporting Limit (RL)

+ = reported value may have a potential positive bias

- = reported value may have a potential negative bias

bgs = feet below ground surface

DUP = duplicate sample

gpm= gallons per minute

HRL = Health Risk Limit

J = reported value is between the method detection limit and the RL

MDH = Minnesota Department of Health

NBM = New Brighton Municipal Well

OU = Operable Unit

VOCs = Volatile organic compounds

µg/L = micrograms per liter

Table 3
Vertical Point Groundwater Sampling Results for Major Ions
Geophysics Field Summary Report
Twin Cities Army Ammunitions Plant
Arden Hills, Minnesota



Well ID	Sample Date	Average Pumping Rate (gpm)	Sample Depth (feet bgs)	Bromide (µg/L)	Chloride (µg/L)	Fluoride (F-, Anion) (µg/L)	Nitrate-N (µg/L)	Nitrite (µg/L)	ortho-Phosphate (µg/L)	Sulfate (µg/L)	Calcium (µg/L)	Magnesium (µg/L)	Potassium (µg/L)	Sodium (µg/L)	Alkalinity, Carbonate (µg/L)
04U839	11/20/2020	10.2	Pump Discharge	< 1000	7140	157	< 100	< 100	22.0 J	12900	66000	24800	2740	8680	< 20000
			332.0	< 1000	7150	156	< 100	< 100	24.0 J	13000	66800	25300	2990	9550	< 20000
04U843	11/8/2020	21.8	Pump Discharge	< 1000	7990	162	< 100	< 100	< 30.0	8050	63900	22500	2170	6690	< 20000
			140.0	< 1000	7900	157	< 100	< 100	< 30.0 J-	7950	65400	22800	2170	6790	< 20000
			152.0	< 1000	7920	158	< 100	< 100	< 30.0	7940	64900	22700	2160	6770	< 20000
			161.0	< 1000	7970	157	< 100	< 100	< 30.0	8030	65500	22800	2230	6730	< 20000
			183.0	< 1000	8280	154	< 100	< 100	< 30.0	7980	65500	22600	2190	6580	< 20000
			196.0	< 1000	7450	152	< 100	< 100	< 30.0	7110	66100	22700	2220	6480	< 20000
			196 DUP	< 1000	7470	162	< 100	< 100	< 30.0 J-	7170	63400	22400	1950 J	6200	< 20000
			220.0	< 1000	6390	147 J	< 100	< 100	< 30.0	4660 J	69200	24500	2470	6270	< 20000
			240.0	< 1000	6200	158	< 100	< 100	< 30.0	4730 J	68200	24100	2390	6140	< 20000
			255.0	< 1000	5270	160	< 100	< 100	< 30.0	3600 J	69200	24500	2460	6420	< 20000
04U844	11/7/2020	8.94	Pump Discharge	< 1000	15100	153	65.6 J+	< 100J	148 J-	12100	71200	26900	1800 J	6670	< 20000
			202.0	< 1000	15100	151	64.8 J+	< 100J	87.0 J-	12100	74100	27300	2070	6890	< 20000
			216.0	< 1000	15200	150 J	69.1 J+	< 100J	217 J-	12300	77300	28000	2060	6930	< 20000
			233.0	< 1000	14800	150 J	< 100	< 100	377 J-	11700	71200	26800	1820 J	6650	< 20000
			233 DUP	< 1000	14900	155	< 100	< 100	364 J-	11700	71900	27000	1800 J	6680	< 20000
			246.0	< 1000	14800	151	< 100	< 100	149 J-	11600	70000	26800	1810 J	6660	< 20000
			262.0	< 1000	17000	153	< 100	< 100	318 J-	13900	78000	27000	1780 J	6900	< 20000
04U850	12/3/2020	14.7	Pump Discharge	< 1000	36500	184	< 100	< 100	41.0	16700	86800	33500	2600	11100	< 20000
			212.0	< 1000	39400	184	< 100	< 100	45.0	16400	88400	34200	2600	12000	< 20000
			240.0	< 1000	39100	175	< 100	< 100	43.0	16700	88500	34300	2650	11700	< 20000
			247.0	< 1000	36700	176	< 100	< 100	40.0	17000	86000	32900	2510	11100	< 20000
			255.0	< 1000	36700	175	< 100	< 100	41.0	16900	85800	33100	2570	11000	< 20000
04U871	12/1/2020	12.6	Pump Discharge	< 1000	30600	180	< 100	< 100	26.0 J	33200	90600	34000	2340	8420	< 20000
			282.0	< 1000	30500	177	< 100	< 100	29.0 J	34600	91400	34300	2420	8510	< 20000
			282 DUP	---	---	---	---	---	---	---	---	---	---	---	---
			311.0	< 1000	30400	170	< 100	< 100	30.0 J	34300	91300	34200	2310	8480	< 20000
			337.0	< 1000	33600	150 J	< 100	< 100	29.0 J	33600	91600	34100	2330	8870	< 20000
			360.0	< 1000	33000	148 J	< 100	< 100	31.0	33000	92300	34400	2420	8940	< 20000
NBM-3	11/13/2020	550	Pump Discharge	< 1000	33000	125 J	< 100	< 100	39.0 J-	32700	89800	34800	2660	9690	< 20000
			285.0	< 1000	26800	173	< 100	< 100	29.0 J-	20600	79700	30500	2560	9810	< 20000
			305.0	< 1000	28700	176	370 J+	R	28.0 J-	18900	80300	30600	2550	10100	< 20000
			345.0	< 1000	21600	180	< 100	< 100	18.0 J-	13000	73400	28800	2500	9210	< 20000
			380.0	< 1000	31900	178	< 100	< 100	28.0 J-	17700	81600	31200	2460	10500	< 20000
			400.0	< 1000	32700	179	< 100	< 100	29.0 J-	18000	82000	31100	2510	10800	< 20000
			430.0	< 1000	32500	188	< 100	< 100	30.0 J-	18300	81800	31000	2520	10800	< 20000
			430 DUP	---	---	---	---	---	---	---	---	---	---	---	---
			460.0	< 1000	31900	209	< 100	< 100	31.0 J-	17800	82900	31400	2580	10900	< 20000
NBM-5	12/4/2020	680	Pump Discharge	< 1000	13500	175	< 100	< 100	< 30.0	18700	65400	28500	2410	7220	< 20000
			Pump Discharge DUP	---	---	---	---	---	---	---	---	---	---	---	---
			410.0	< 1000	13700	181	< 100	< 100	< 30.0	18900	65300	28100	3170	8600	< 20000
			430.0	< 1000	13700	178	< 100	< 100	< 30.0	19200	65600	28300	2710	7930	< 20000
			460.0	< 1000	15400	176	< 100	< 100	< 30.0	20000	68000	28900	2610	8060	< 20000

Acronyms and Abbreviations on Page 2.

Table 3
Vertical Point Groundwater Sampling Results for Major Ions
Geophysics Field Summary Report
Twin Cities Army Ammunitions Plant
Arden Hills, Minnesota

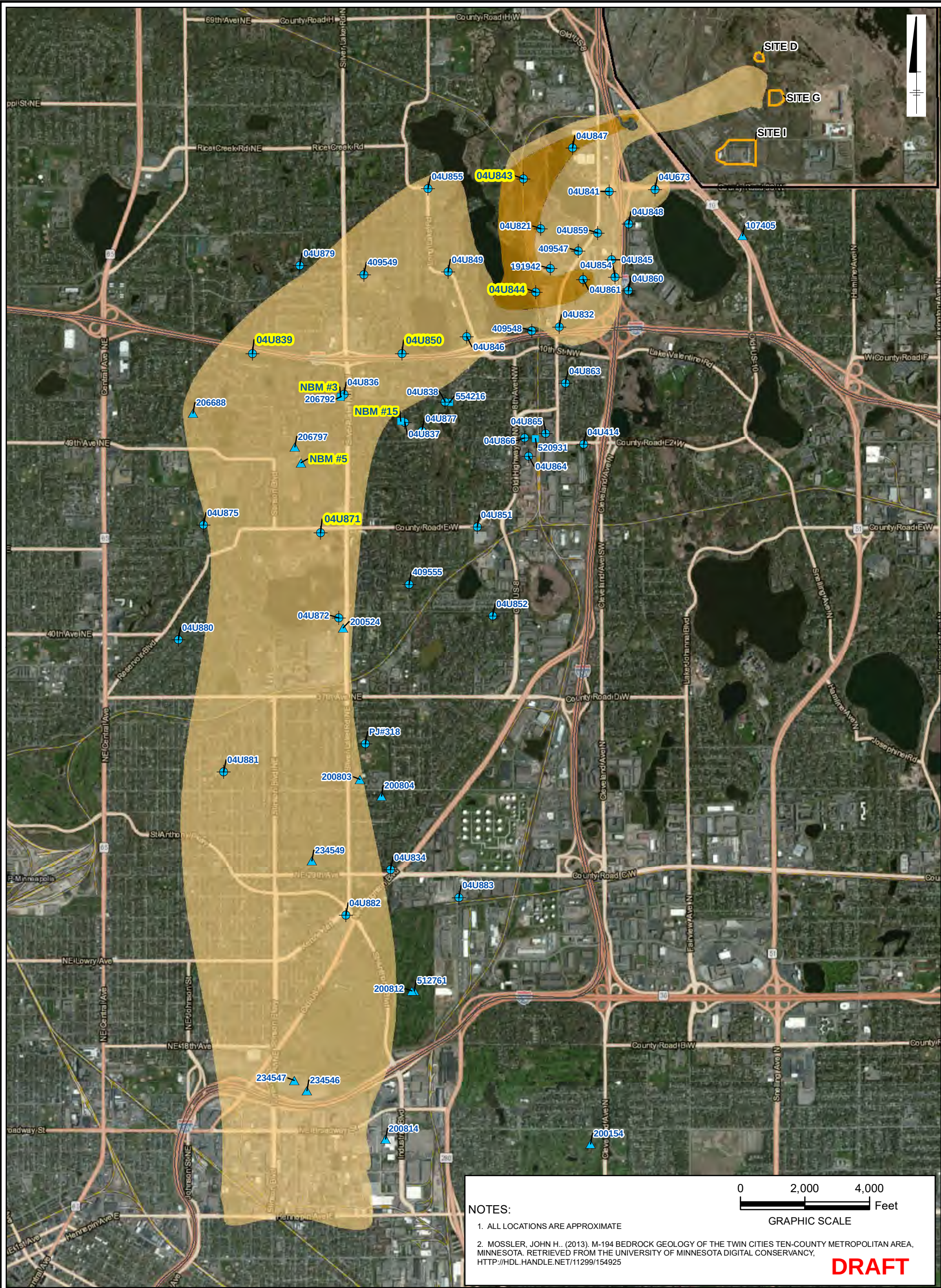


Well ID	Sample Date	Average Pumping Rate (gpm)	Sample Depth (feet bgs)	Bromide (µg/L)	Chloride (µg/L)	Fluoride (F-, Anion) (µg/L)	Nitrate-N (µg/L)	Nitrite (µg/L)	ortho-Phosphate (µg/L)	Sulfate (µg/L)	Calcium (µg/L)	Magnesium (µg/L)	Potassium (µg/L)	Sodium (µg/L)	Alkalinity, Carbonate (µg/L)
NBM-15	11/19/2020	350	Pump Discharge	< 1000	34000	182	< 100	< 100	65.0	25500	90800	36500	2600	11900	< 20000
			258.0	< 1000	33900	180	< 100	< 100	37.0	25600	88300	34200	2300	10000	< 20000
			258 DUP	---	---	---	---	---	---	---	---	---	---	---	---
			282.0	< 1000	34800	185	< 100	< 100	41.0	24600	89900	36000	2640	11600	< 20000
			296.0	< 1000	32900	179	< 100	< 100	45.0	24900	89600	36000	2570	11200	< 20000
			318.0	< 1000	33200	189	< 100	< 100	51.0	25700	90700	36600	2640	11800	< 20000

Acronyms and Abbreviations:
--- = not applicable/not available
< X.X = analyte was not detected above the Reporting Limit (RL)
+ = reported value may have a potential positive bias
- = reported value may have a potential negative bias
bgs = feet below ground surface
DUP = duplicate sample
gpm= gallons per minute
J = reported value is between the method detection limit and the RL
MDH = Minnesota Department of Health
NBM = New Brighton Municipal Well
R = sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria
µg/L = micrograms per liter

FIGURES





LEGEND:

2020 Trichloroethene Concentrations (µg/L)
Upper Unit 4 (Dashed Where Inferred)
5-100
100-1,000
1,000+
Site Boundaries
Operable Unit 2
Interstate

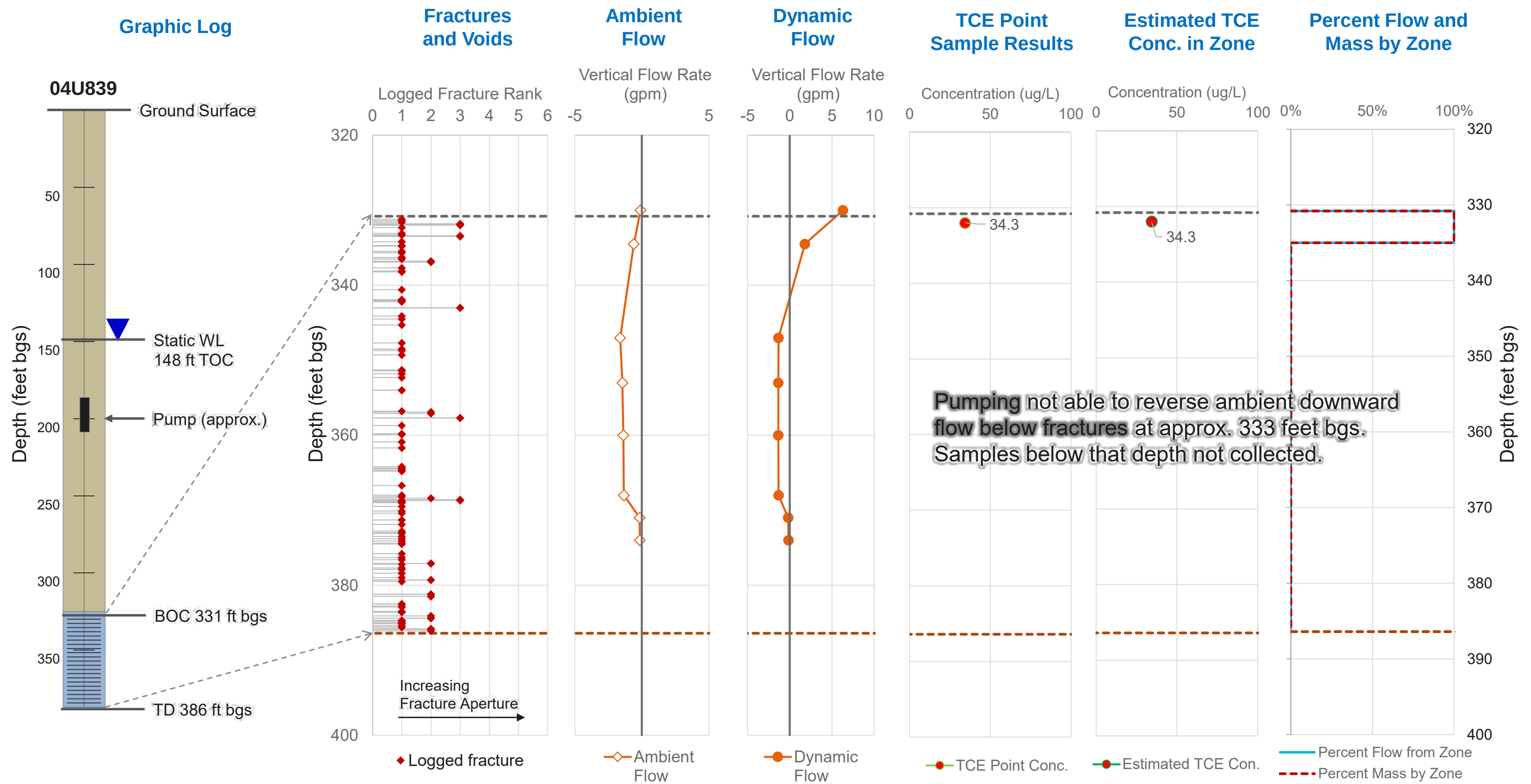
Monitoring Well
Extraction Well
Private Well
Wells Logged with Geophysics

TWIN CITIES ARMY AMMUNITION PLANT
ARDEN HILLS, MINNESOTA

GEOPHYSICS LOCATIONS

PIKA
ARCADIS

FIGURE
1



Stratigraphic Key



Dynamic Sampling Conditions

Avg. Extraction Rate (gpm)	10.2
Observed Drawdown (ft)	0.25
Specific Capacity (gpm/ft)	40.7

Notes:

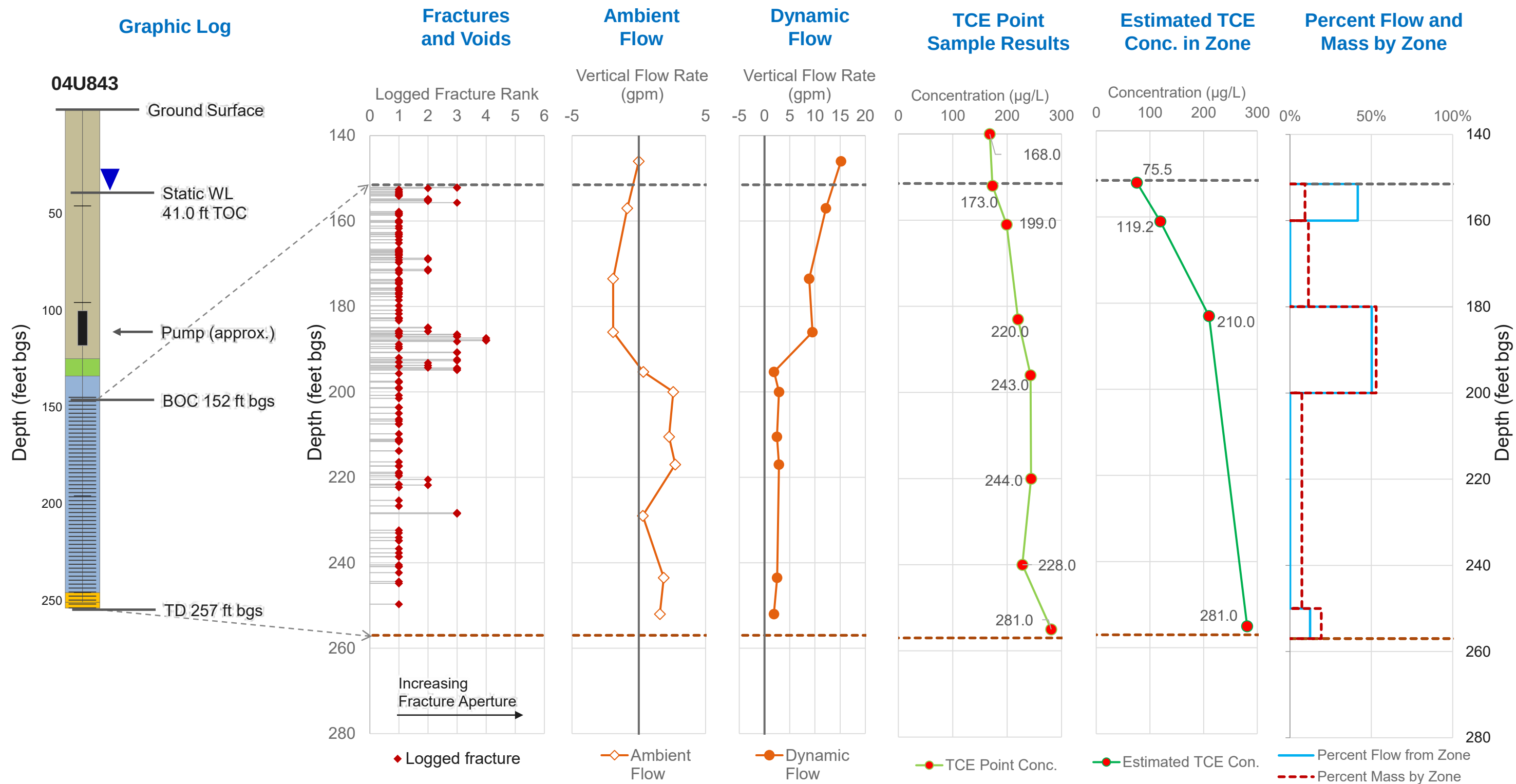
- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; ft – feet; gpm – gallons per minute; TD – total depth; TCE – trichloroethene; TOC – top of casing; ug/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.

TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

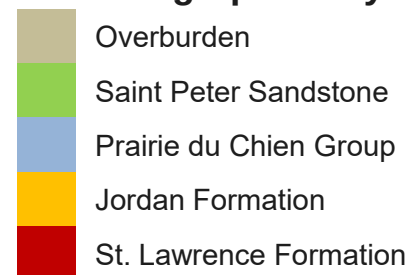
04U839 AQUIFER PROFILE



FIGURE
2a



Stratigraphic Key



Dynamic Sampling Conditions

Avg. Extraction Rate (gpm)	21.8
Observed Drawdown (ft)	0.57
Specific Capacity (gpm/ft)	38.2

Notes:

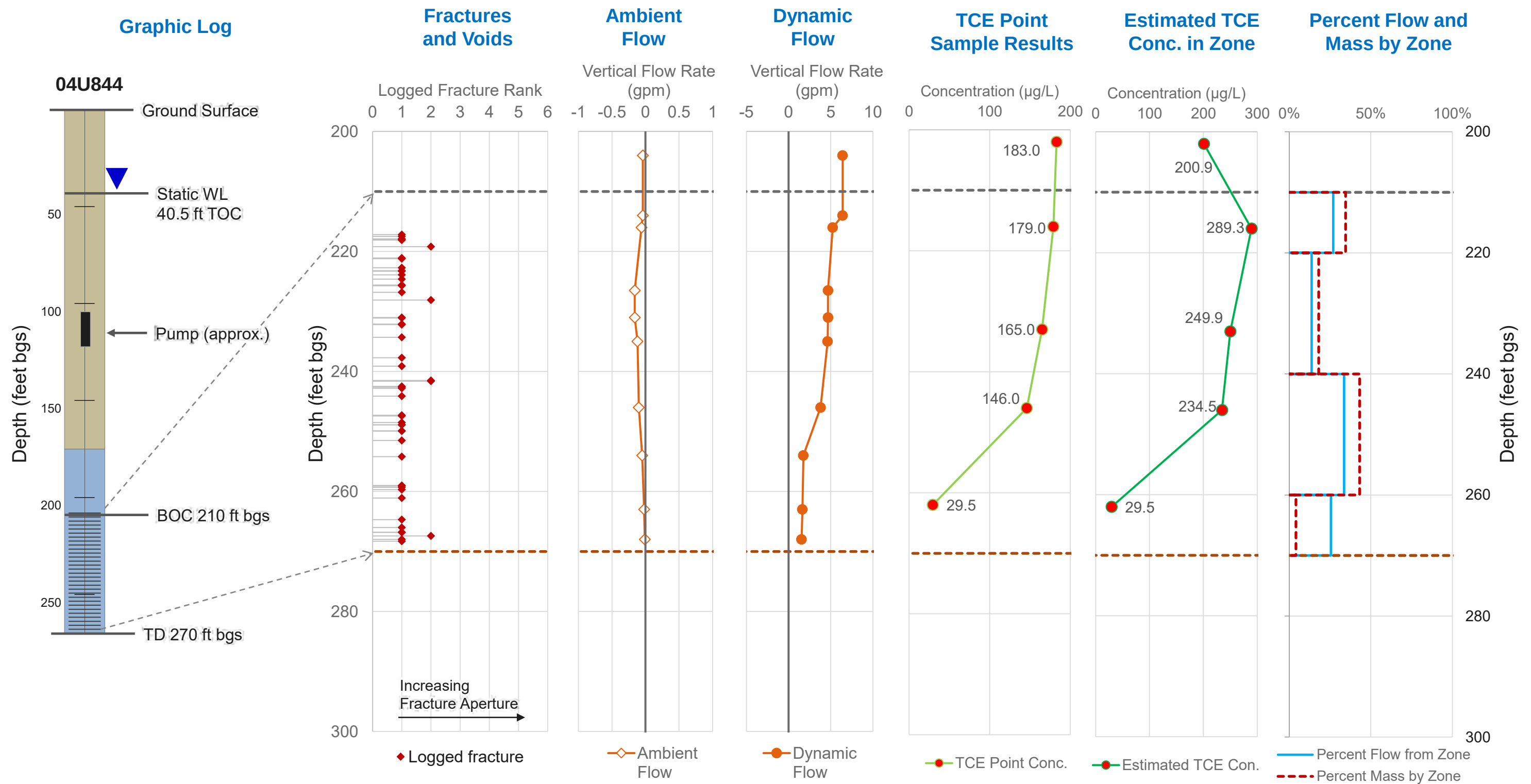
- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; ft – feet; gpm – gallons per minute; TD – total depth; TCE – trichloroethene; TOC – top of casing; µg/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.

TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

04U843 AQUIFER PROFILE



FIGURE
2b



Stratigraphic Key



Dynamic Sampling Conditions

Avg. Extraction Rate (gpm)	8.94
Observed Drawdown (ft)	7.15
Specific Capacity (gpm/ft)	1.25

Notes:

- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; ft – feet; gpm – gallons per minute; TD – total depth; TCE – trichloroethene; TOC – top of casing; µg/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.

TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

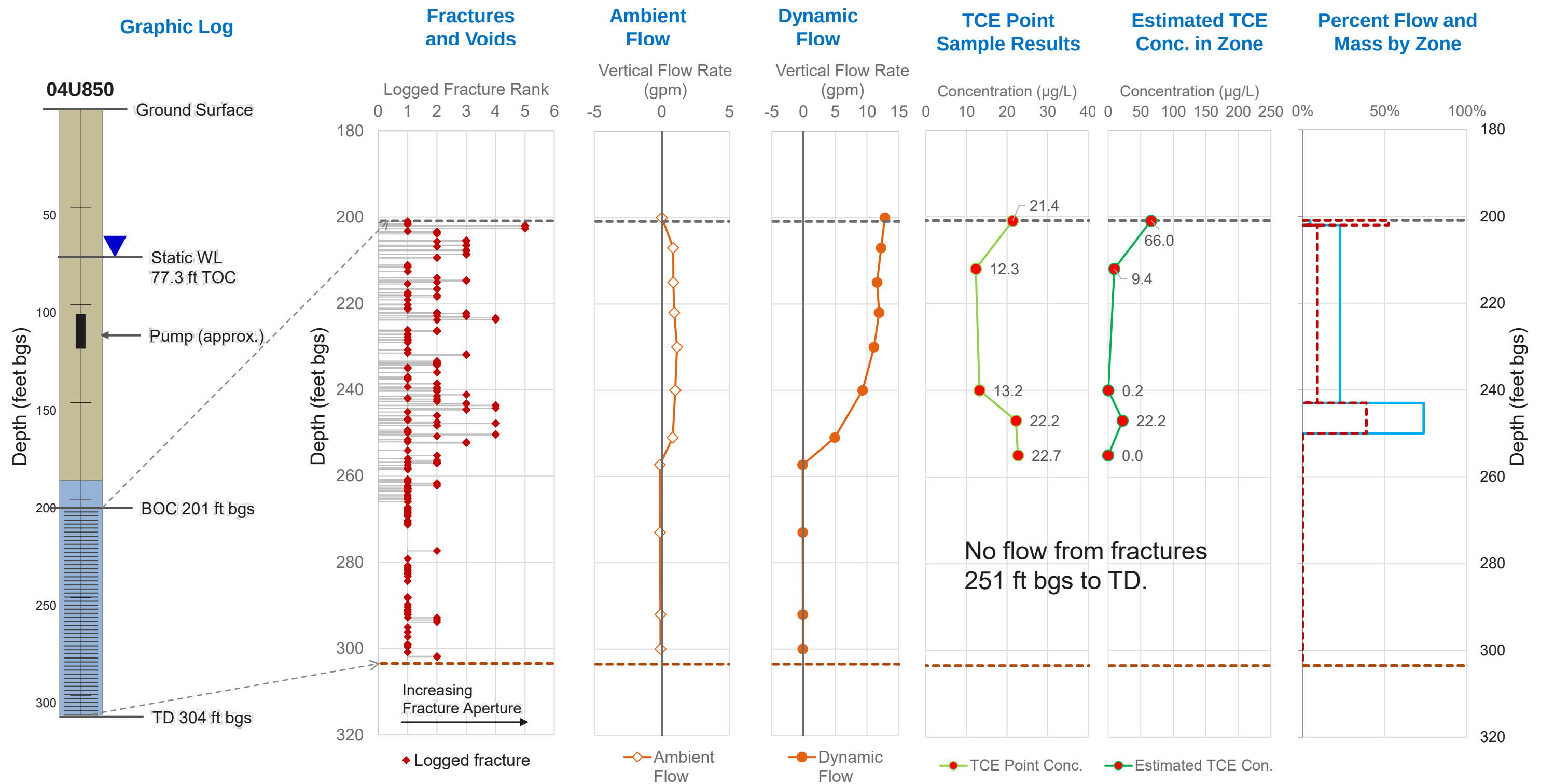
04U844 AQUIFER PROFILE



FIGURE

2c

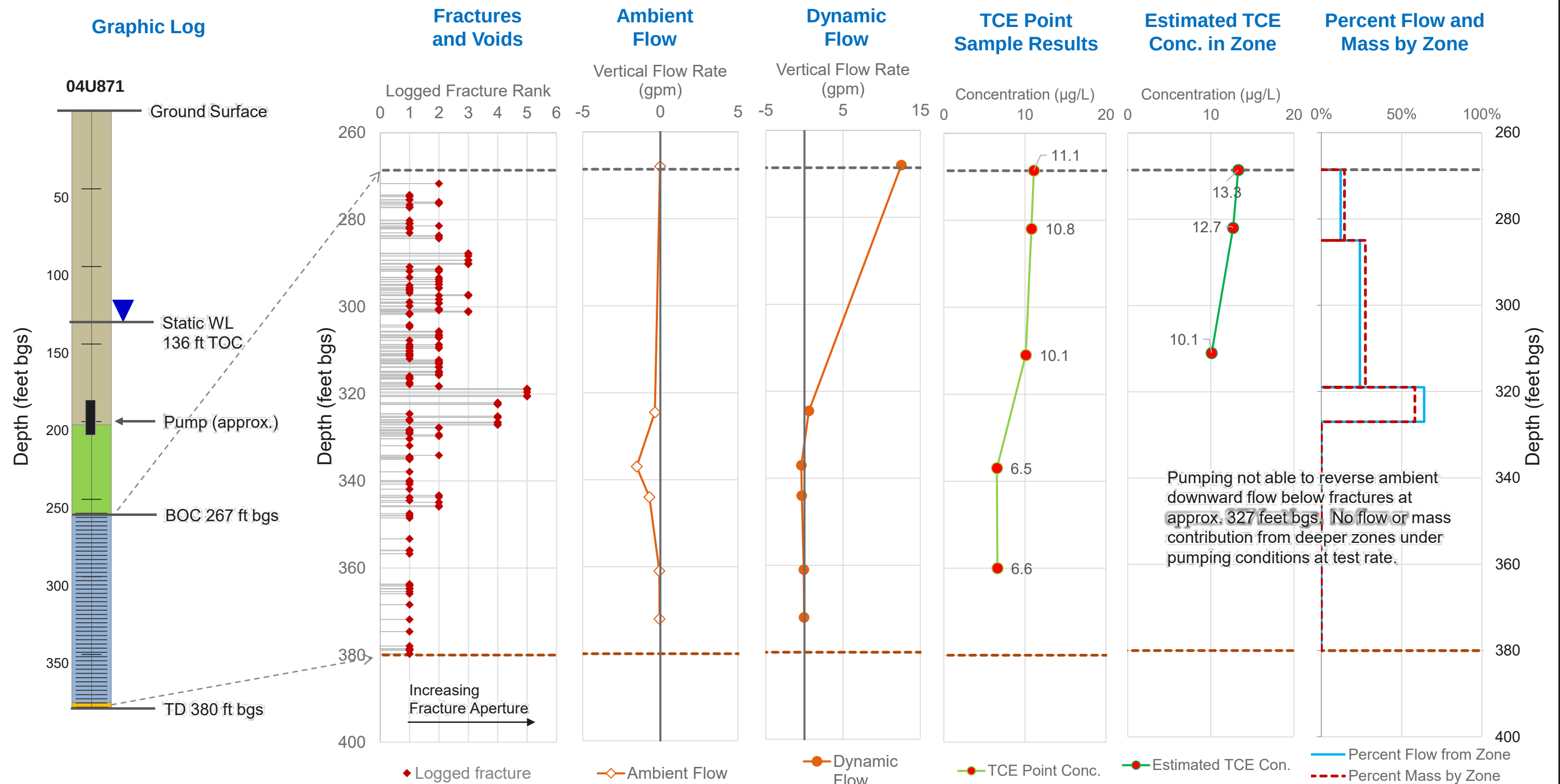
5/18/2021 10:03:27 AM



TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

04U850 AQUIFER PROFILE

FIGURE
2d



Stratigraphic Key

Overburden
Saint Peter Sandstone
Prairie du Chien Group
Jordan Formation
St. Lawrence Formation

Dynamic Sampling Conditions

Avg. Extraction Rate (gpm)	12.6
Observed Drawdown (ft)	0.11
Specific Capacity (gpm/ft)	114

Notes:

- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; ft – feet; gpm – gallons per minute; TD – total depth; TCE – trichloroethene; TOC – top of casing; µg/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.

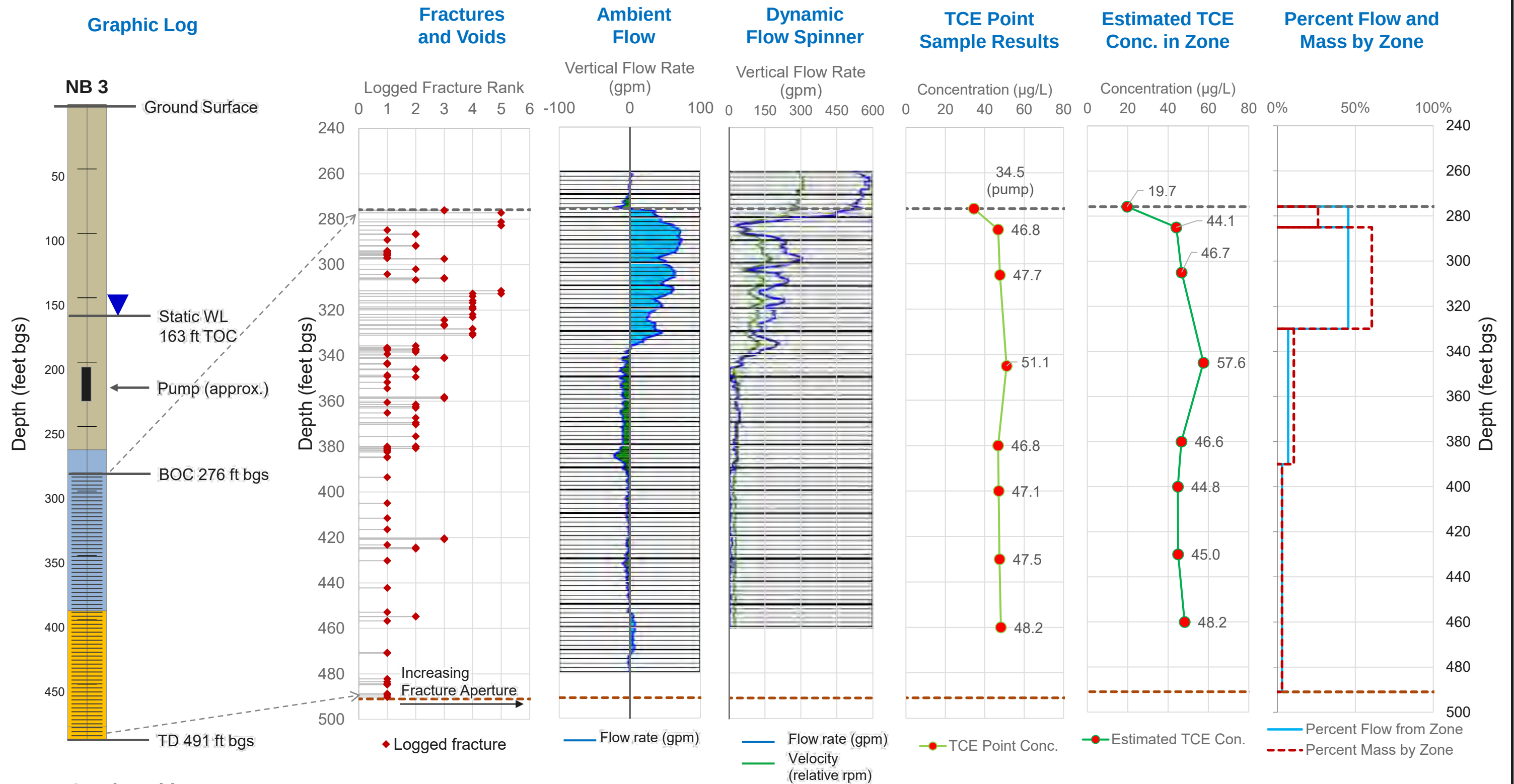
TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

04U871 AQUIFER PROFILE

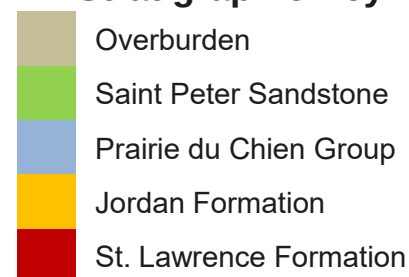


FIGURE

2e



Stratigraphic Key



Dynamic Sampling Conditions

Avg. Extraction Rate (gpm)	~550
Observed Drawdown (ft)	2.15
Specific Capacity (gpm/ft)	256

Notes:

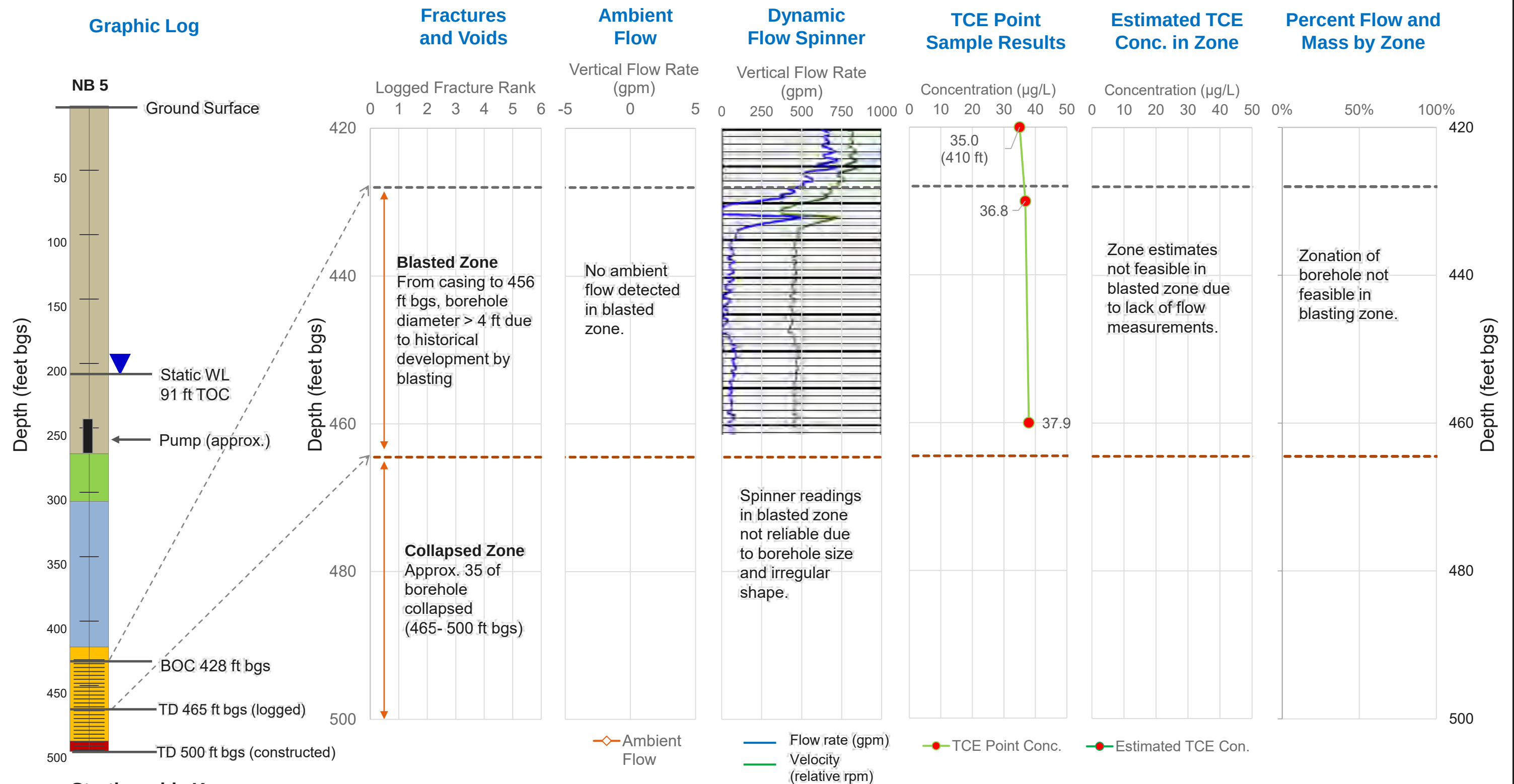
- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; ft – feet; gpm – gallons per minute; TD – total depth; TCE – trichloroethene; TOC – top of casing; µg/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.

TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

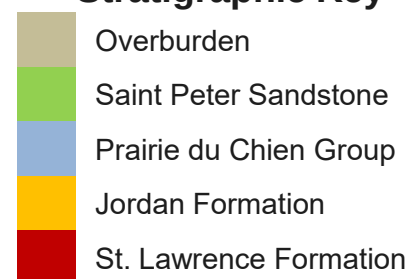
NBM-3 AQUIFER PROFILE



FIGURE
2f



Stratigraphic Key



Dynamic Sampling Conditions

Avg. Extraction Rate (gpm)	~680
Observed Drawdown (ft)	0.2
Specific Capacity (gpm/ft)	3400

Notes:

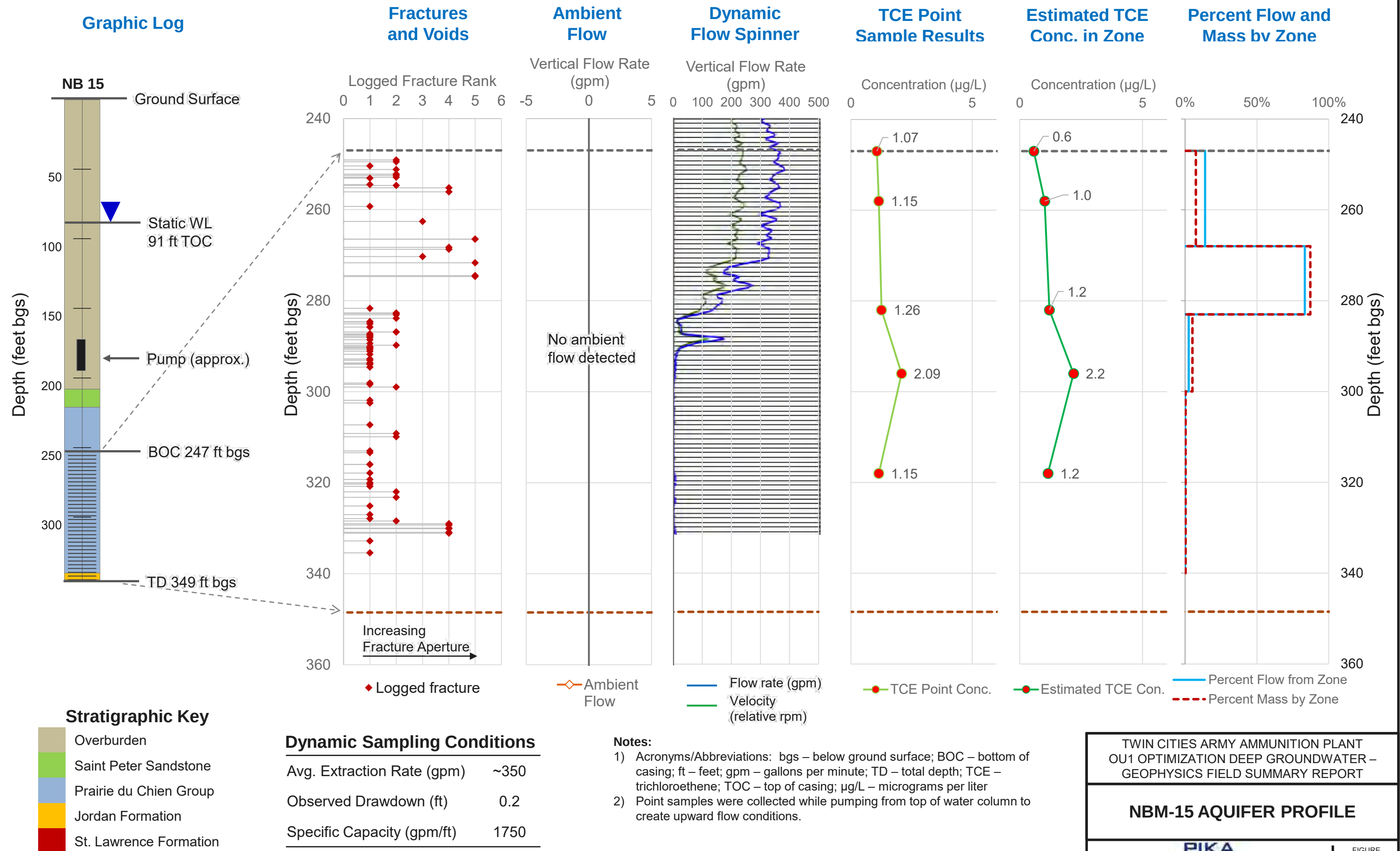
- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; ft – feet; gpm – gallons per minute; TD – total depth; TCE – trichloroethene; TOC – top of casing; µg/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.

TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

NBM-5 AQUIFER PROFILE



FIGURE
2g

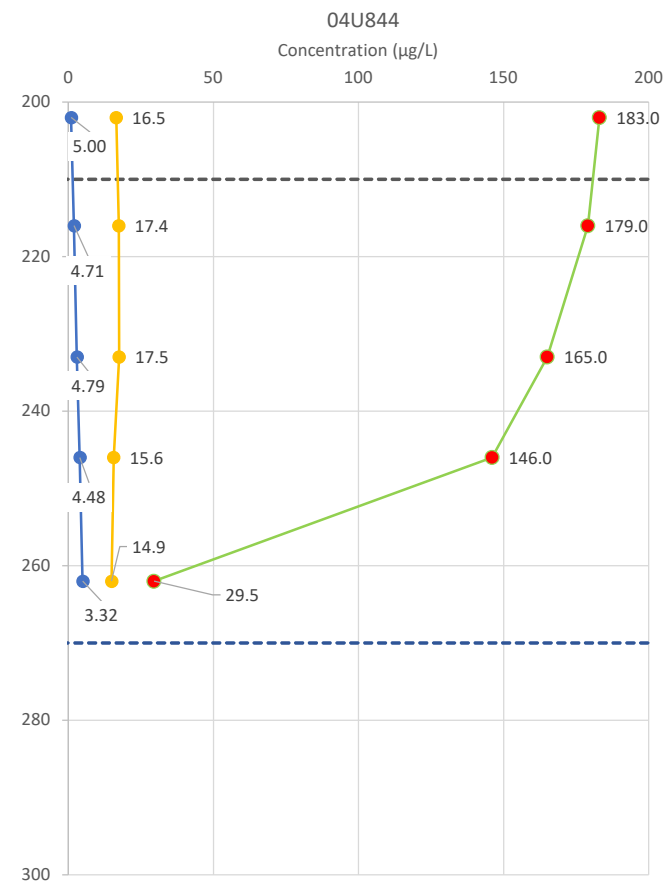
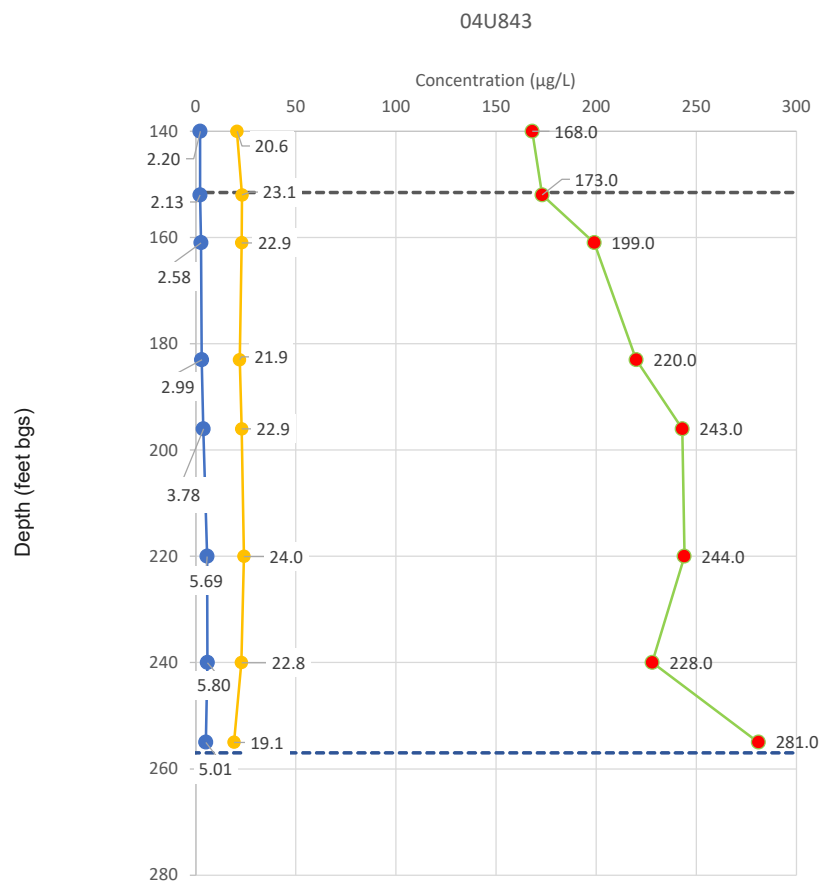


TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

NBM-15 AQUIFER PROFILE



FIGURE
2h



Legend

-----BOC -----TD TCE cis-1,2-Dichloroethene 1,4-Dioxane

Notes:

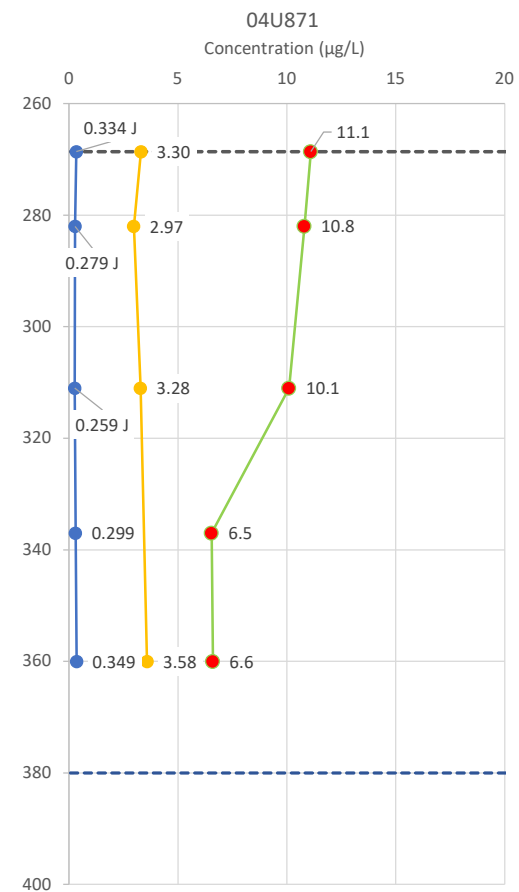
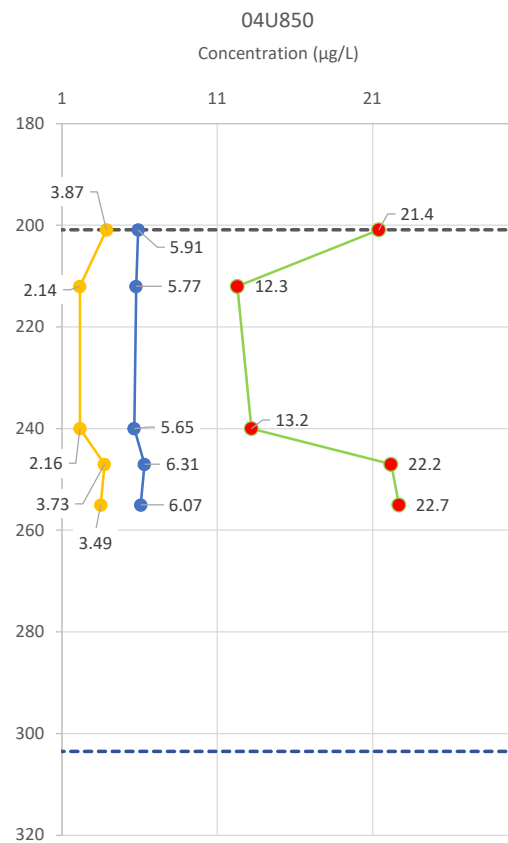
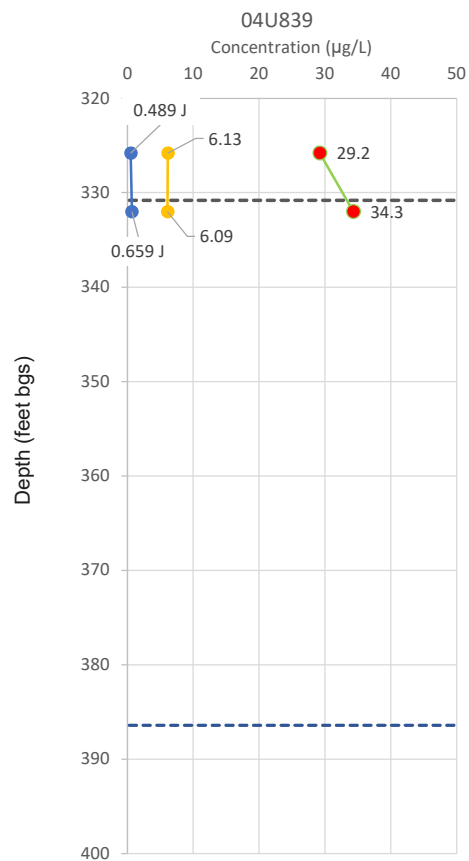
- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; TCE – trichloroethene; TD – total depth; µg/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.

TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

UPGRADIENT MONITORING WELLS POINT SAMPLING RESULTS

FIGURE

3a



Legend

-----BOC -----TD ● TCE ● cis-1,2-Dichloroethene ● 1,4-Dioxane

Notes:

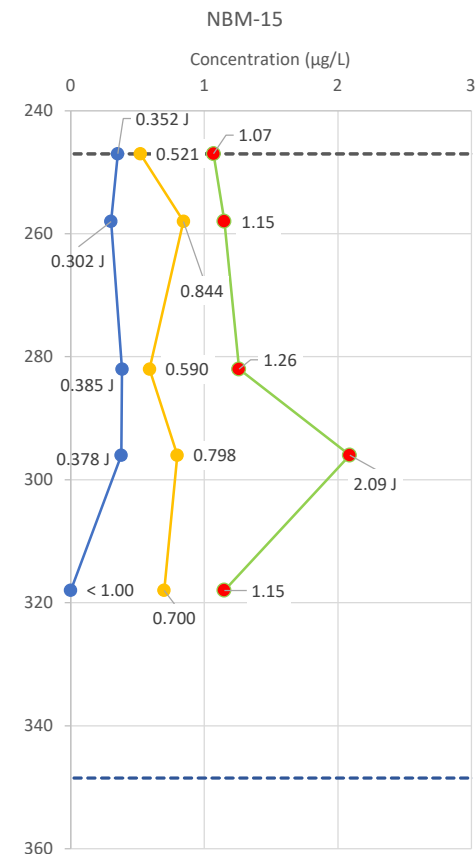
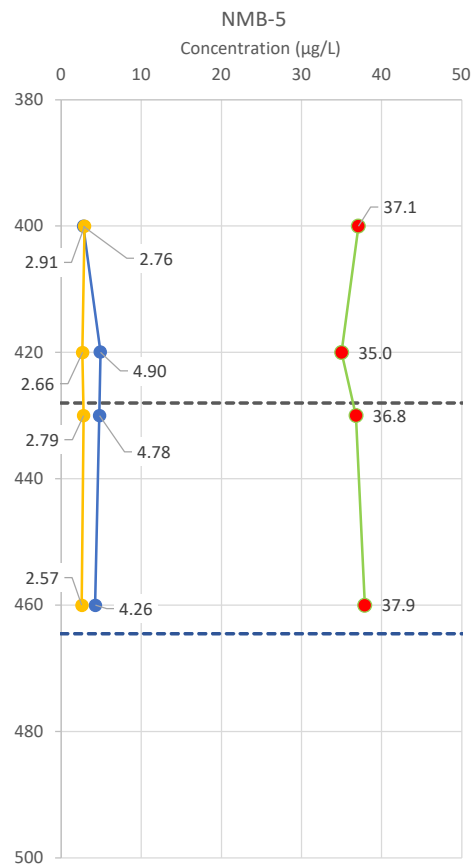
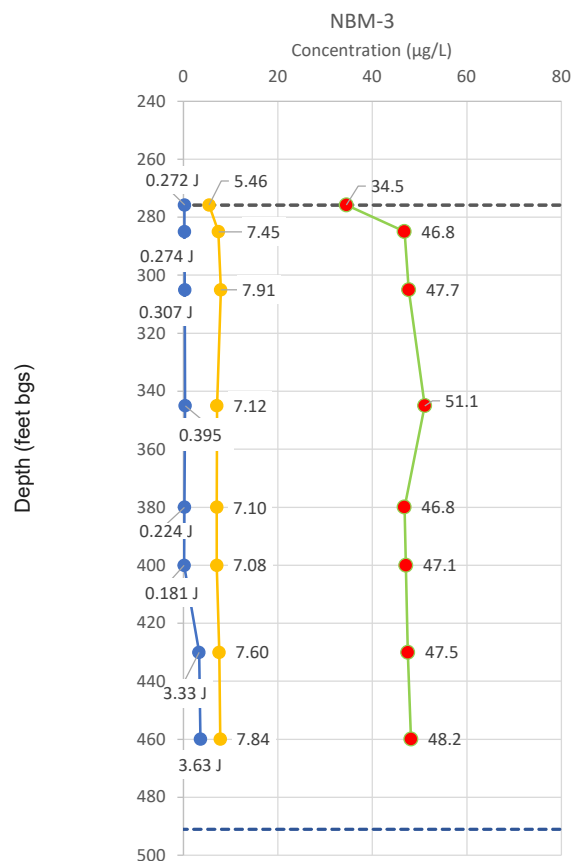
- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; TCE – trichloroethene; TD – total depth; µg/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.
- 3) J = reported value is between the method detection limit and the reporting limit.

TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

SIDE AND DOWNGRADIENT MONITORING WELL POINT SAMPLING RESULTS

FIGURE

3b



Legend

-----BOC -----TD ● TCE ● cis-1,2-Dichloroethene ● 1,4-Dioxane

Notes:

- 1) Acronyms/Abbreviations: bgs – below ground surface; BOC – bottom of casing; TCE – trichloroethene; TD – total depth; µg/L – micrograms per liter
- 2) Point samples were collected while pumping from top of water column to create upward flow conditions.
- 3) J = reported value is between the method detection limit and the reporting limit.

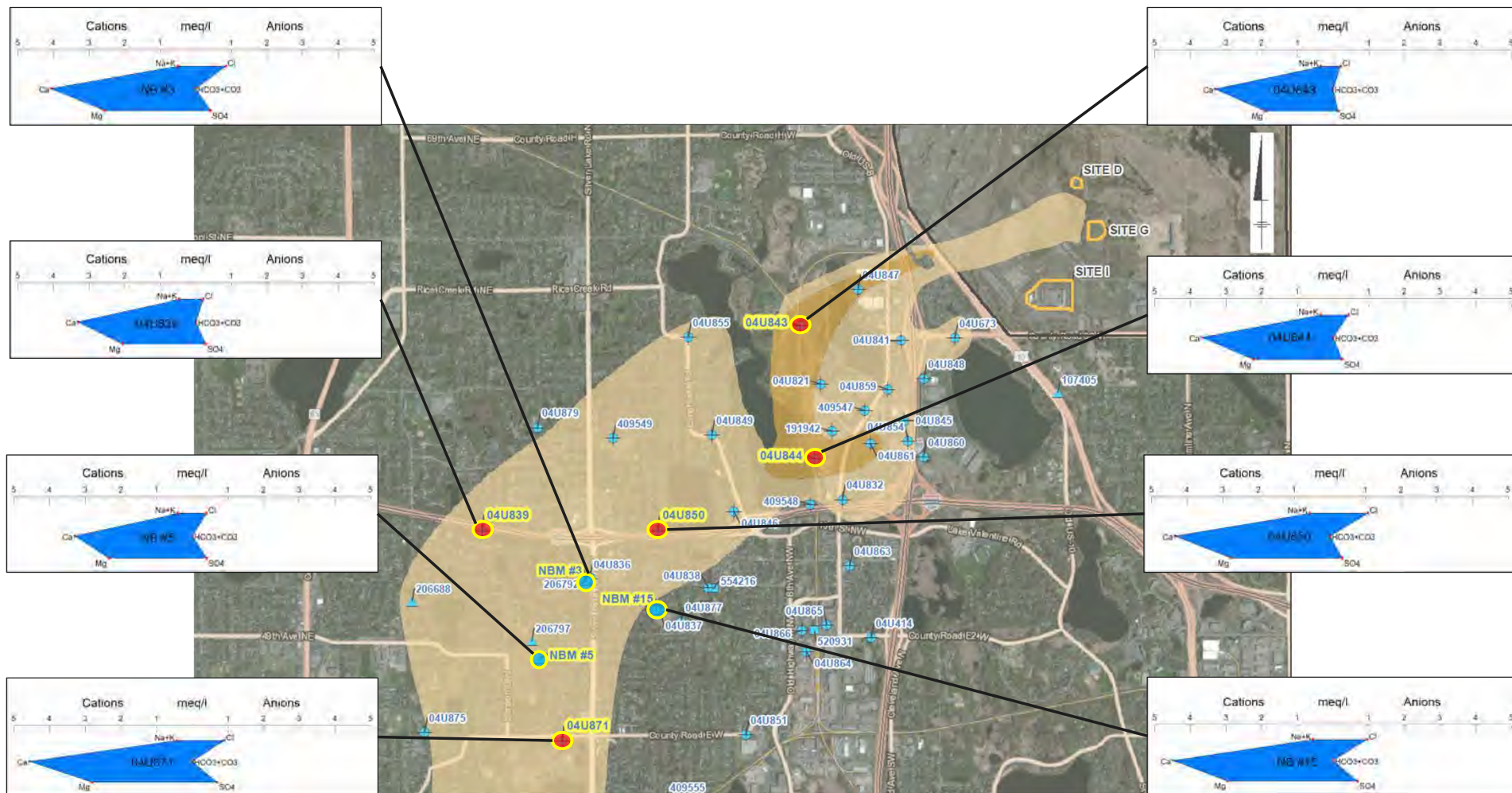
TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

NEW BRIGHTON MUNICIPAL WELLS POINT SAMPLING RESULTS

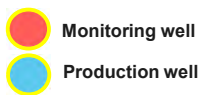
FIGURE

3c

5/18/2021 7:45:51 AM



Legend



2020 Trichloroethene Concentrations (µg/L)
Upper Unit 4 (PdC)
5-100
100-1,000

Notes:

- 1) Acronyms/Abbreviations: Ca – calcium; Cl – chloride; CO₃ – carbonate; HCO₃ – bicarbonate; K – potassium; Mg – magnesium; meq/l = milliequivalents per liter; Na – sodium; PdC – Prairie du Chien Group; SO₄ – sulfate; µg/L – micrograms per liter.
- 2) No alkalinity data was available to calculate HCO₃⁻ and CO₃²⁻.



TWIN CITIES ARMY AMMUNITION PLANT
OU1 OPTIMIZATION DEEP GROUNDWATER –
GEOPHYSICS FIELD SUMMARY REPORT

STIFF DIAGRAMS OF MAJOR ION ANALYSES

FIGURE
4

TCAAP FIELD REPORT

Site:	TCAAP – OU1 Drilling	Weather:	Sunny
Project No.:	30034568	Temp:	80s F
Date	06/21/2021	Wind:	Calm
Field Team:	Erika Jarchow (Arcadis)	Humidity:	

Subcontractors (personnel, companies) and Equipment on Site:

Arcadis: Erika Jarchow (field engineer, M-F), Jackie Anderson (field geologist, T-W), Abby Grein (field engineer, T-W)
 Cascade Drilling: Drilling crew (Perry, Dan, and Steve) onsite (T-F)
 GPRS: Private Locator (Alex) onsite (M)

PPE Level: (circle)	D	Mod. D	C	B	A
---------------------	---	--------	---	---	---

Summary of Health and Safety Activities:

COVID-19 basic health measures (6 feet apart and masks where necessary)
 Four gas meter onsite while drilling

Summary of Work Performed:

Monday 06/14/2021:

- Erika Jarchow and GPRS (private locator) arrive onsite to clear well installation location.
 - o Locations clear for advancement.
- Adler Tank rental on site to drop off IDW containment (2 dewatering boxes, bag filter, and frac tank).

Tuesday 06/15/2021:

- All personnel arrive onsite for well installation.
- Traut Companies (Traut) mobilized the mud rotary rig to site with necessary equipment,
- City of New Brighton worked with Traut to provide water for drilling,
- Traut set up the drill rig at the pilot boring/observation well,
 - o Drilled the inner pilot boring to a depth of 20 feet below ground surface (bgs),

Wednesday 06/16/2021:

- All personnel arrive onsite to continue well installation.
- Traut set up the drill rig at the pilot boring/observation well,
 - o Drilled the inner pilot boring to a depth of 265 feet bgs,

Thursday 06/17/2021:

- All personnel arrive onsite to continue well installation.
- Traut set up the drill rig at the pilot boring/observation well,
 - o Drilled the inner pilot boring to a depth of 282 feet bgs,
 - o Encountered the Prairie du Chien (PdC) at 277 feet bgs,
- Traut set up the full 14.25-inch bit and drill rod to complete the pilot boring,
 - o Drilled the full diameter pilot boring to a depth of 160 feet bgs.

Friday 06/18/2021:

- All personnel arrive onsite to continue well installation.
- Traut set up the drill rig at the pilot boring/observation well,
 - o Drilled the full diameter pilot boring to a depth of 260 feet bgs.

TCAAP FIELD REPORT

Summary of Work Planned:

Tentative schedule for the week of June 21, 2021:

- Drill 14.25-inch boring to a depth of 282-285 feet bgs,
- Traut to set and weld the permanent 10-inch casing in place to 282-285 feet bgs,
- Grout the casing in place,
- Mobilize the sonic drill rig to site,
- Drill and complete the bedrock coring in the PdC to an approximate depth of 395 feet bgs,
- Pump and clean the well out,
- Perform a pumping test on the open bore hole bedrock.

Tentative schedule for the week of June 28, 2021:

- Mobilize the geophysical subcontractor to site (Colog),
- Complete all geophysical logging and sampling activities within the PdC,
- Complete final construction of the observation well,
- Demobilize all parties from the site,
- Remove IDW from site as available.

Well will be surveyed by Sunde Land Surveying, LLC and appropriate databases updated.

Issues encountered/resolutions:

PHOTOGRAPH LOG

United States Army Environmental Command
Twin Cities Army Ammunition Plant
Arden Hills, Minnesota



Photograph: 1

Description:

Pilot boring location in Driftwood Park.

Location:

Pilot boring/observation well

Photograph taken by:

Erika Jarchow

Date: 6/15/2021



Photograph: 2

Description:

Mud rotary set up.

Location:

Pilot boring/observation well

Photograph taken by:

Erika Jarchow

Date: 6/15/2021

PHOTOGRAPH LOG

United States Army Environmental Command
Twin Cities Army Ammunition Plant
Arden Hills, Minnesota



Photograph: 3

Description:

Soil capture at 265 feet
below ground surface.

Location:

Pilot boring/observation
well

Photograph taken by:

Erika Jarchow

Date: 6/16/2021

TCAAP FIELD REPORT

Site:	TCAAP – OU1 Drilling	Weather:	Sunny
Project No.:	30034568	Temp:	80s F
Date	06/28/2021	Wind:	Calm
Field Team:	Erika Jarchow (Arcadis)	Humidity:	

Subcontractors (personnel, companies) and Equipment on Site:

Arcadis: Erika Jarchow (field engineer, M-F), Kevin Havlicek (field engineer, Th)
 Traut Drilling: Drilling crew (Perry, Dan, and Steve) onsite (M-F)

PPE Level: (circle)	D	Mod. D	C	B	A
---------------------	---	--------	---	---	---

Summary of Health and Safety Activities:

COVID-19 basic health measures (6 feet apart and masks where necessary)
 Four gas meter onsite while drilling

Summary of Work Performed:

Monday 06/21/2021:

- Traut continued drilling at the pilot boring down to 282 feet below ground surface (bgs),
 - Drilling encountered a void/collapse and re-drilled a portion of the boring,
- Traut ended the day at 220 feet bgs.

Tuesday 06/22/2021:

- Traut welded and set permanent 10-inch casing in place to a depth of 242 feet below ground surface (bgs),
- The casing was grouted in place with neat cement grout.

Wednesday 06/23/2021:

- Traut demobilized the mud rotary rig from site,
- Traut mobilized the sonic rig to site,
- Traut begin installing the temporary 8-inch casing into the top of the PdC,
 - Casing installed to a depth of 240 feet bgs.

Thursday 06/24/2021:

- Traut set temporary 8-inch and 6-inch casing to a depth of 290 feet.
- Traut began sonic drilling and reached a depth of 360 feet bgs.

Friday 06/25/2021:

- Traut continued sonic drilling to the targeted well depth of 395 feet bgs.
- Traut demobilized the sonic drilling rig from site.

TCAAP FIELD REPORT

Summary of Work Planned:

Tentative schedule for the week of June 28, 2021:

- Traut will pump and clean the well out.
- Traut will perform a pumping test on the open bore hole bedrock.
- Mobilize the geophysical subcontractor to site (Colog).
- Complete all geophysical logging and sampling activities within the PdC.
- Potentially begin final construction of the observation well.

Tentative schedule for the week of July 12, 2021 (Traut is off for the week of July 5th):

- Complete final construction of the observation well.
- Demobilize all parties from the site.
- Remove IDW from site as available.

Well will be surveyed by Sunde Land Surveying, LLC and appropriate databases updated.

Issues encountered/resolutions:

Traut's sonic drill rig broke down on Friday afternoon and Traut mobilized a nearby drill rig to continue drilling.

PHOTOGRAPH LOG

United States Army Environmental Command
Twin Cities Army Ammunition Plant
Arden Hills, Minnesota



Photograph: 1

Description:

Sonic drill rig set up.

Location:

Pilot boring/observation well

Photograph taken by:

Erika Jarchow

Date: 6/24/2021



Photograph: 2

Description:

Soil cores taken from 290 to 395 feet bgs.

Location:

Pilot boring/observation well

Photograph taken by:

Erika Jarchow

Date: 6/25/2021

PHOTOGRAPH LOG

United States Army Environmental Command
Twin Cities Army Ammunition Plant
Arden Hills, Minnesota



Photograph: 3

Description:

Permanent outer casing
for the observation well.

Location:

Pilot boring/observation
well

Photograph taken by:

Erika Jarchow

Date: 6/25/2021

TCAAP FIELD REPORT

Site:	TCAAP – OU1 Drilling	Weather:	Sunny
Project No.:	30034568	Temp:	80s F
Date	07/06/2021	Wind:	Calm
Field Team:	Erika Jarchow (Arcadis)	Humidity:	

Subcontractors (personnel, companies) and Equipment on Site:

Arcadis: Erika Jarchow (field engineer, M-F), Kevin Havlicek (field engineer, Th)
 Traut Drilling: Drilling crew (Perry, Dan, and Steve) onsite (M-F)

PPE Level: (circle)

<u>D</u>	Mod. D	C	B	A
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Summary of Health and Safety Activities:

COVID-19 basic health measures (6 feet apart and masks where necessary)
 Four gas meter onsite while drilling

Summary of Work Performed:

Monday 06/28/2021:

- No work conducted onsite while drill rig was under repair at Traut's workshop

Tuesday 06/29/2021:

- Traut pumped and rinsed the well out.
- Traut performed a pumping test on the open bore hole bedrock.

Wednesday 06/30/2021:

- The geophysical subcontractor (Colog) arrived on site,
- Completed all ambient logging, and
- Traut re-mobilized to site to clear an obstruction found in the well by Colog (most likely a lodged rock).

Thursday 07/01/2021:

- Completed all dynamic logging,
- Collected a sample at 287 feet bgs, and
- Traut began the final construction of the well.

Friday 07/02/2021:

- Colog demobilized from site.
- Traut continued final construction of the well.

TCAAP FIELD REPORT

Summary of Work Planned:

Tentative schedule for the week of July 12, 2021 (Traut is off for the week of July 5th):

- Complete final construction of the observation well.
- Demobilize all parties from the site.
- Remove IDW from site as available.

Well will be surveyed by Sunde Land Surveying, LLC and appropriate databases updated.

Issues encountered/resolutions:

PHOTOGRAPH LOG

United States Army Environmental Command
Twin Cities Army Ammunition Plant
Arden Hills, Minnesota



Photograph: 1

Description:

Colog set up on well for geophysics.

Location:

Pilot boring/observation well.

Photograph taken by:

Erika Jarchow

Date: 6/30/2021



Photograph: 2

Description:

Permanent outer casing of observation well.

Location:

Pilot boring/observation well

Photograph taken by:

Erika Jarchow

Date: 7/1/2021

PHOTOGRAPH LOG

United States Army Environmental Command
Twin Cities Army Ammunition Plant
Arden Hills, Minnesota



Photograph: 3

Description:

Settling tanks and site conditions post drilling.

Location:

Pilot boring/observation well

Photograph taken by:

Erika Jarchow

Date: 7/1/2021

Arcadis U.S., Inc.
123 North Third Street, Suite 705
Minneapolis
Minnesota 55401
Phone: 612 339 9434
www.arcadis.com



City Project 25-7, Well #16 Well Drilling and Construction

Craig Schlichting, Director DCAD
Eric Volk, Public Works Superintendent

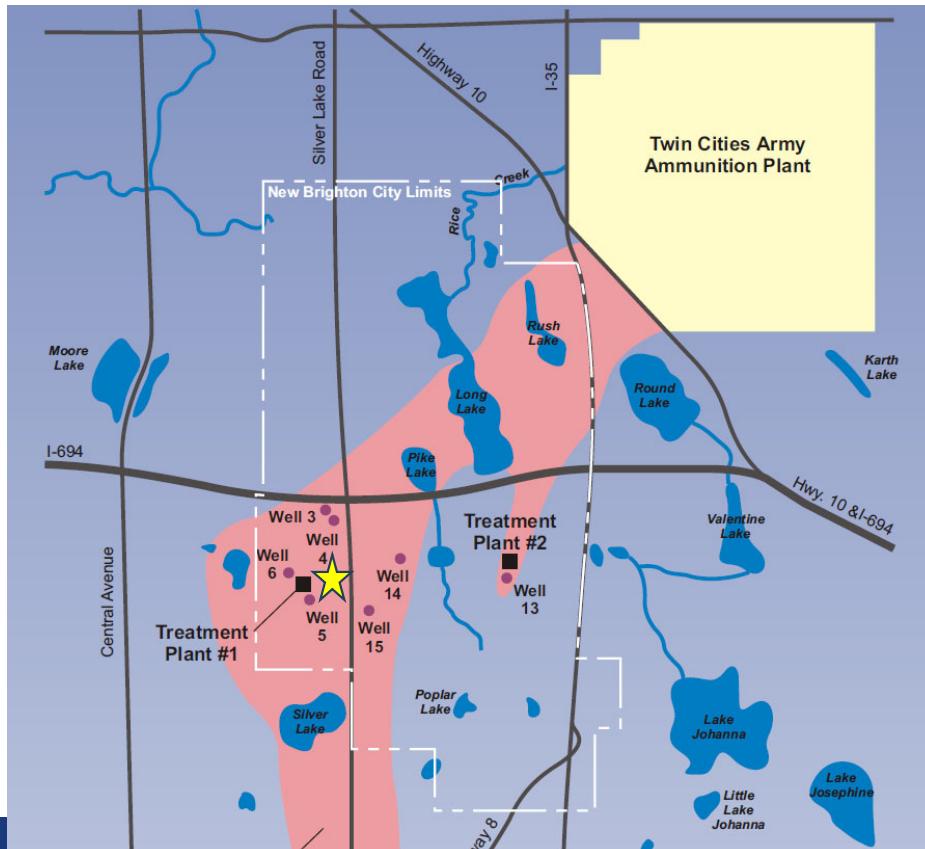


Well 16 Timeline

- 2015 – A Barr study identified a new well in center of plume (near WTP1) that could expedite cleanup
 - Identified incidentally during groundwater modeling effort to evaluate NBCGRS shut-down impacts
 - Would remove more contaminants than the existing well at edge of plume
 - Is not needed for water supply (would substitute current capacity)
- 2024 – Army includes funding for Well 16 in settlement
- 2025 – Construct new well
- 2026 – Construct wellhouse, well operational

Well 16 Location

A pilot hole was drilled in the vicinity to confirm water quality and pumping availability.



PHOTOGRAPH LOG

United States Army Environmental Command
Twin Cities Army Ammunition Plant
Arden Hills, Minnesota



Photograph: 1

Description:
Pilot boring location in Driftwood Park.

Location:
Pilot boring/observation well

Photograph taken by:
Erika Jarchow

Date: 6/15/2021



Photograph: 2

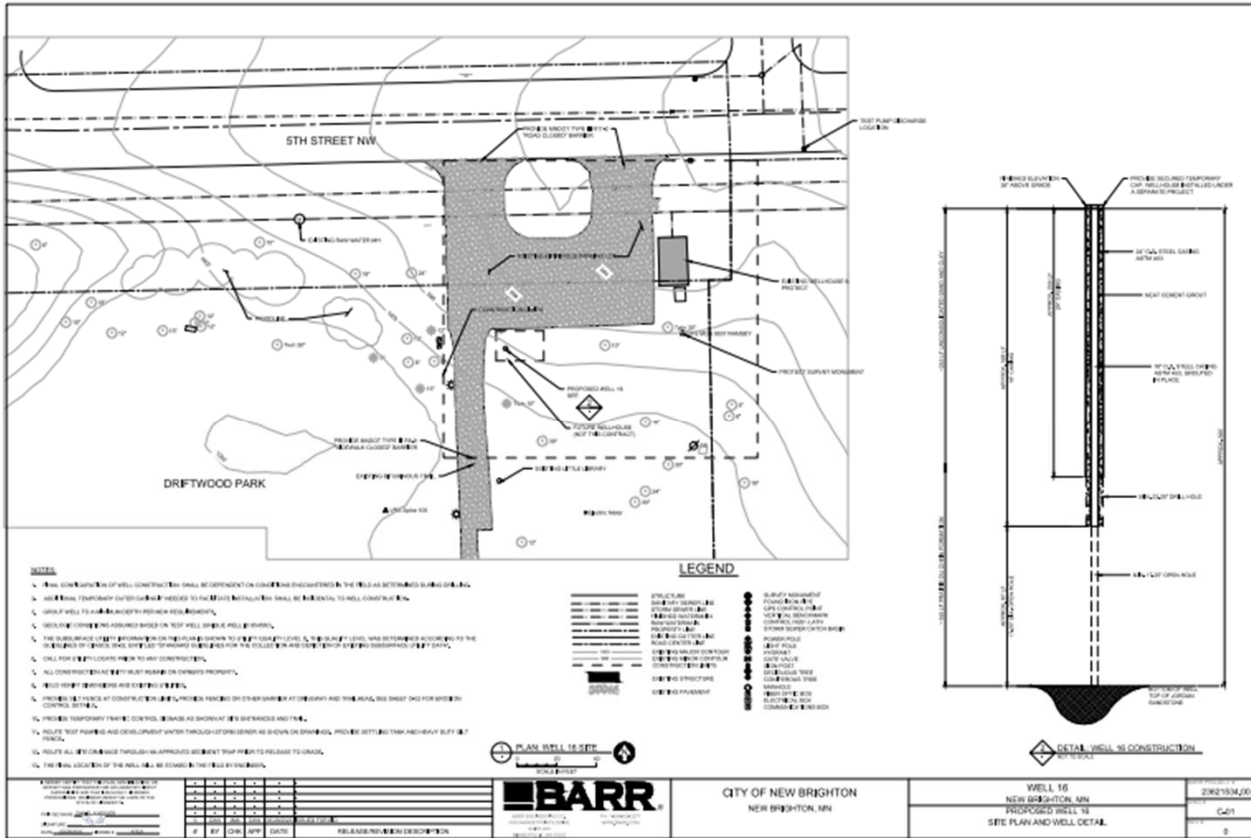
Description:
Mud rotary set up.

Location:
Pilot boring/observation well

Photograph taken by:
Erika Jarchow

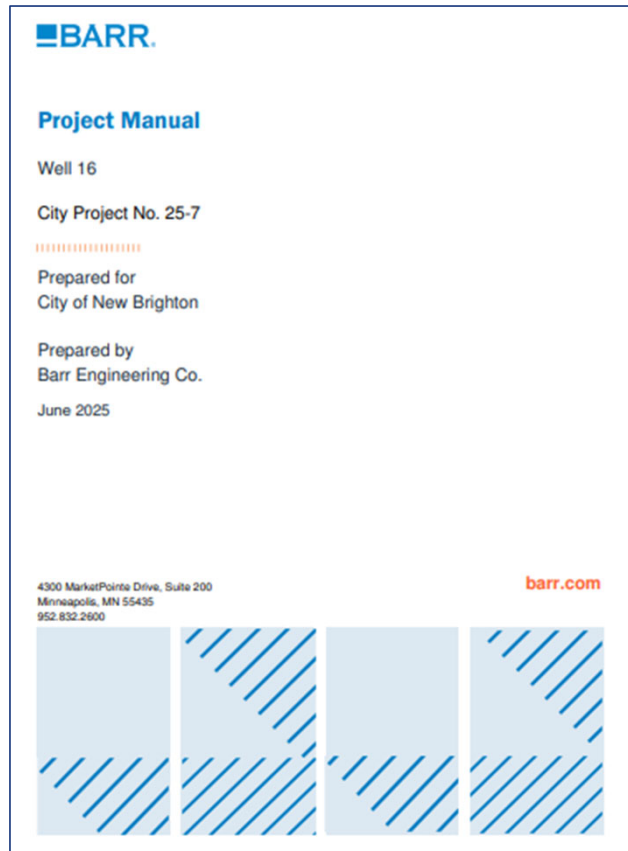
Date: 6/15/2021

Well 16 Location



Approve Plans and Specifications, Authorize Bids

Barr has prepared plans and specifications meeting MDH requirements



New Municipal Public Water Supply Well Checklist

All municipal public water supply wells must be installed according to Minnesota Statutes and Rules. A guideline for meeting these requirements is below. More details are available at the resources below or by contacting your MDH district engineer.

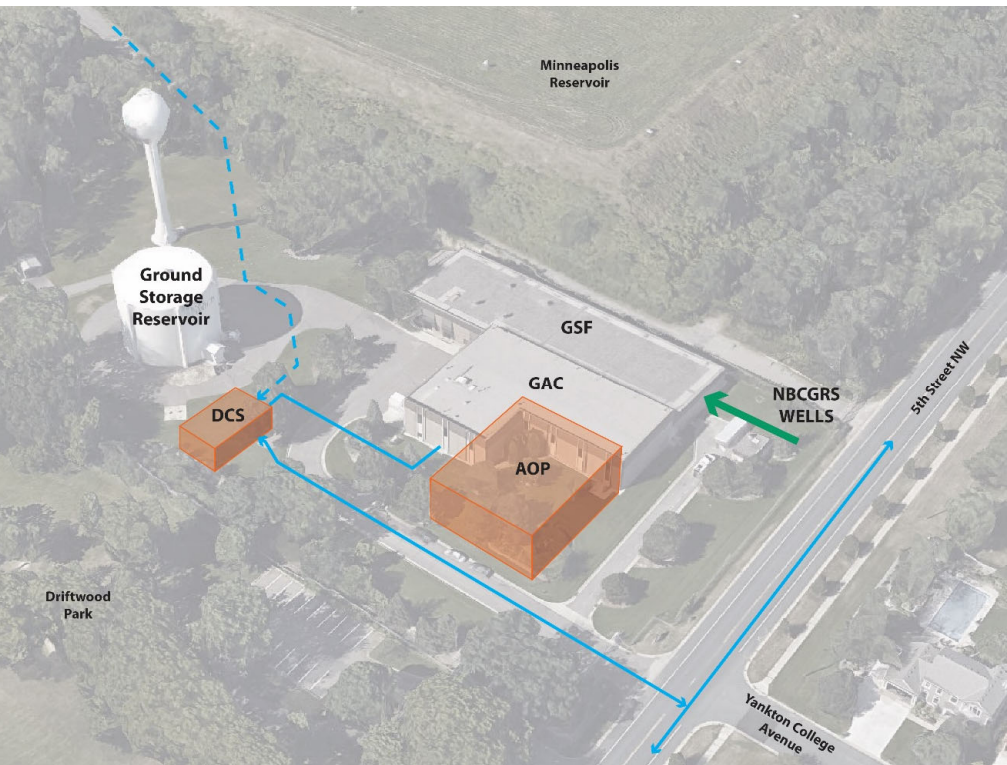
- [Community Public Water Supply Unit: Contacts and Districts \(PDF\)](#)

Prior to Well Construction

- ☐ Apply for an appropriation permit from the Minnesota Department of Natural Resources (MNDNR) for any water system that uses greater than 10,000 gallons per day or 1 million Gallons per year using the [MNDNR Permitting and Reporting System \(MPARS\)](#).
 - ☐ Obtain Well Construction Preliminary Assessment from MNDNR.
 - ☐ Have an approved [MNDNR Water Supply Plan](#) in place for systems serving a population greater than 1,000 people in Greater Minnesota and all cities in the seven-county metro area.
 - ☐ Submit engineer-signed plans/specifications, [plan review fee sheet \(PDF\)](#), and associated fees for the well and any related components to MDH.
 - ☐ Submit a completed [Preliminary Wellhead Protection Area Delineation \(PDF\)](#) to MDH. (Can be submitted with plans and specifications.)
 - ☐ Submit documentation showing that the system owner either owns or legally controls all land within a 50 foot radius from the outside edge of the proposed well casing. (Can be submitted with plans and specifications.)
 - ☐ Wait to be contacted by an MDH representative to conduct a site inspection of the proposed well location.
 - ☐ Receive the written plan review approval letter for construction, which includes well site approval from MDH.
 - ☐ Use a Minnesota licensed well contractor.
 - [Licensed Well and Boring Contractor Directory](#)
- Well contractor will:
- Submit a well notification form and appropriate fee to MDH.
 - Contact [MDH Well Management](#) at least 24 hours prior to the start of well construction to have a well inspector on-site for well drilling.

Future Bid Package(s)

Wellhouse Building (DCS established aesthetic guidelines)
Piping from new well to WTP 1





Council Consideration

- Approve Plans and Specifications
- Authorize Advertisement for Bids
- Questions?





Agenda Section:	Council Business
Report Date:	06/18/2025
Meeting Date:	June 24, 2025

REQUEST FOR COUNCIL CONSIDERATION – EXECUTIVE SUMMARY

ITEM DESCRIPTION: Consider Resolution Authorizing Acceptance of an Implementation Stormwater Resilience Grant, Approval of Plans and Specifications, and Authorization to bid.

Action Requested:

Public Hearing:	Motion: X
Discussion:	Informational:

Form of Action:

Resolution: X	Ordinance:
Contract/Agreement: X	N/A or Other:

Votes Needed:

3 Votes: X	4 Votes:
5 Votes:	N/A:

Summary Statement:

- The effects of climate change are being felt across the state, from overwhelmed infrastructure, damaged property, dying trees, and culturally important native species, to excessive heat, worsening air quality, and other health threats.
- Minnesota state government is partnering with local communities to assess needs, develop climate adaptation plans, and make changes so that we are ready for what lies ahead.
- New Brighton was selected as a grant recipient for the 10th

	Street NW/County Ditch 2 - Phase 1 Construction Plans Project for a grant of \$103,842. - Plans and Specifications were created and the City applied for an implementation Grant. - New Brighton was selected as a grant recipient for the 10th Street NW/County Ditch 2 Implementation for a grant of \$698,755.29.
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Recommendations:	To adopt the attached Resolution accepting the MPCA grant and authorizing advertisement for bids.
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Applicable Deadlines:	No money can be spent on project elements until the Grant Agreement is signed and approved.
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Community Impact:	The pipe replacement will lower the HWL and help protect people and property while providing access to the adjacent apartments.
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Legislative History:	5/12/2024 Accepted MPCA Stormwater Planning Grant
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Strategic Priority:	Financial Sustainability	Staff Capabilities
	Economic Development	Community Engagement & Belonging
	City Assets X	N/A

Fiscal Impact:	Financial Impact: Is there a financial consideration?		No	Yes: \$698,755.29.
	Financing Sources:	Budgeted	Budget Modification	
	New Revenue	Use of Reserves	Other X Grant (additional expenditures will be paid for by the benefiting property	

			owner - Garden View)

Attachments:	Resolution MPCA Grant Contract (Phase II Implementation), City of New Brighton SW Grant Agreement, 7_CONSTRUCTION PLANS 10TH STREET CULVERT REPLACEMENT, Garden View Culvert Utilities Presentation
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RESOLUTION NO. 24-

**STATE OF MINNESOTA
COUNTY OF RAMSEY
CITY OF NEW BRIGHTON**

**RESOLUTION AUTHORIZING ACCEPTANCE OF AN IMPLEMENTATION STORMWATER
RESILIENCE GRANT**

WHEREAS, the MPCA launched a Request for Proposals (RFP) to distribute \$35 million to communities for projects to prepare local stormwater infrastructure for the impacts of climate change; and

WHEREAS, New Brighton was previously selected to receive a grant not to exceed \$103,842 for the 10th Street NW/County Ditch 2 - Phase 1 Construction Plans; and

WHEREAS, past flood events have adversely impacted low areas near the Garden View Apartments; and

WHEREAS, the City of New Brighton has been selected for a Implementation Stormwater Resilience grant award in the amount of \$698,755.29.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of New Brighton, Minnesota:

1. The City accepts the terms of the Grant Contract, and
2. The Director of Community Assets and Development, the City Engineer, is hereby the Grantee's Authorized Representative to sign grant documents and request payment, and
3. The City approves the plans and specifications and authorizes advertisement for bids,

Adopted this 124th day of June, 2025, by the New Brighton City Council with a vote of _____ ayes and _____ nays.

Kari Niedfeldt-Thomas, Mayor

ATTEST:

Devin Massopust, City Manager

Terri Spangrud, City Clerk

This grant agreement is between the state of Minnesota, acting through its Commissioner of the **Minnesota Pollution Control Agency**, 520 Lafayette Road North, St. Paul, MN 55155-4194 ("MPCA" or "State"), and the **City New Brighton**, 803 Old Highway 8 NW, New Brighton, MN 55112 ("Grantee").

Recitals

1. Under Minn. Stat. § 116.03, subd. 2, the State is empowered to enter into this grant.
2. The State is in need of the **New Brighton 10th Street NW Culvert Replacement project** ("Project").
3. Grantee will comply with required grants management policies and procedures set forth through [Minn. Stat. § 16B.97](#), subd. 4(a)(1).
4. The Grantee represents that it is duly qualified and agrees to perform all services described in this grant agreement to the satisfaction of the State. Pursuant to [Minn. Stat. § 16B.98](#), subd. 1, the Grantee agrees to minimize administrative costs as a condition of this grant.

Grant Agreement

1. Term of Grant Agreement

- 1.1 **Effective date:** **June 30, 2025**, Per [Minn. Stat. § 16B.98](#), subd. 5, the Grantee must not begin work until this grant contract is fully executed and the State's Authorized Representative has notified the Grantee that work may commence. Per [Minn. Stat. § 16B.98](#), subd. 7, no payments will be made to the Grantee until this grant agreement is fully executed.
- 1.2 **Expiration date:** **June 30, 2027**, or until all obligations have been satisfactorily fulfilled, whichever occurs first.
- 1.3 **Survival of terms.** The following clauses survive the expiration or cancellation of this grant agreement: Indemnification; State Audits; Government Data Practices and Intellectual Property; Publicity and Endorsement; Governing Law, Jurisdiction, and Venue; and Data Disclosure.

2. Grantee's duties

The Grantee will contract, manage, and implement the construction of the Project. The Grantee will construct the Project, project capacity and features in a way that is consistent with documented agreed upon attributes.

3. Time

The Grantee must comply with all the time requirements described in this grant agreement. In the performance of this grant agreement, time is of the essence.

4. Consideration and payment

- 4.1 **Consideration.** The State will pay for all services performed by the Grantee under this grant agreement as follows:

- (a) **Compensation.** The Grantee will be compensated for eligible costs related to the project listed in Clause 2 and as outlined in **Attachment A**, which is attached and incorporated into this agreement. Items that are determined ineligible will not be reimbursed. The total obligation includes **\$46,304.00 (Forty Six Thousand Three Hundred Four Dollars and Zero Cents)** for contingency costs. The Grantee must submit a request in writing to the MPCA for approval prior to using the contingency funds.
- (b) **Travel expenses.** Reimbursement for travel and subsistence expenses actually and necessarily incurred by the Grantee as a result of this grant agreement will not exceed \$0.00; provided that the Grantee will be reimbursed for travel and subsistence expenses in the same manner and in no greater amount than provided in the current "Commissioner's Plan" promulgated by the Commissioner of Minnesota Management and Budget (MMB). The Grantee will not be reimbursed for travel and subsistence expenses incurred outside Minnesota unless it has received the State's prior written approval for out of state travel. Minnesota will be considered the home state for determining whether travel is out of state.
- (c) **Total obligation.** The total obligation of the State for all compensation and reimbursements to the Grantee under this grant agreement will not exceed **\$698,775.29 (Six Hundred Ninety Eighty Thousand Seven Hundred Seventy Five Dollars and Twenty Nine Cents)**.

4.2 **Payment**

- (a) **Invoices.** The State will promptly pay the Grantee after the Grantee presents an itemized invoice for the services actually performed and the State's Authorized Representative accepts the invoiced services. Invoices must be submitted timely and according to the following schedule:

Invoices for expenses incurred to-date may be submitted as frequently as monthly. First invoice is encouraged no later than 6 (six) months or midway through the project, whichever comes first. Emailed progress reports about the status of the project are required to be provided to the State's Authorized Representative whenever an invoice is submitted to MPCA Accounts Payable. The State's Authorized Representative will not approve an invoice through the state system without this progress report. A final invoice for payment of remaining grant funds expended by the project is required to be submitted at the completion of the project after a Grant Project Final Report, in a format provided to the Grantee by the MPCA, has been submitted to the State's Authorized Representative and approved. Payment of the final 10% (ten percent) of grant funds will be held back until the project is completed satisfactorily and all deliverables have been submitted and approved.

Invoices must be emailed to mpca.ap@state.mn.us, and contain the following information:

- Name of Grantee
- Grantee project manager
- Project grant amount
- Grant funds expended this invoice
- Matching funds expended this invoice
- Grant funds expended to date
- Matching funds expended to date
- Invoice number
- Invoice date
- MPCA project manager;
- SWIFT Contract No.
- Invoicing period (actual working period)
- Consultant costs; invoices may be requested
- Time breakdown of invoice. Amount billed to date for work, including itemization of actual hourly rates
- Itemized per diem expenses; receipts may be requested to be submitted with invoice

- Copies of paid in full invoices
- Other items as requested

If there is a problem with submitting an invoice electronically, please contact the Accounts Payable Unit at 651-757-2491.

The Grantee shall submit an invoice for the final payment within 15 (fifteen) days of the original or amended end date of this grant agreement. The State reserves the right to review submitted invoices after 15 (fifteen) days and make a determination as to payment.

- (b) The Grantee must promptly return to the State any unexpended funds that have not been accounted for annually in a financial report to the State due at grant closeout.

4.3 Contracting and bidding requirements

Per [Minn. Stat. §471.345](#), grantees that are municipalities as defined in Subd. 1 must follow the law.

- (a) For projects that include construction work and have a total project cost of \$25,000 or more, prevailing wage rules apply per [Minn. Stat. §§ 177.41](#) through [177.44](#); consequently, the bid request must state the project is subject to prevailing wage. These rules require that the wages of laborers and workers should be comparable to wages paid for similar work in the community as a whole. A prevailing wage form should accompany these bid submittals.
- (b) The grantee must not contract with vendors who are suspended or debarred in Minnesota (found on the Minnesota Department of Administration website at <https://mn.gov/admin/osp/government/suspended-debarred/>).

4.4 Prevailing Wage

Pursuant to Minnesota Statutes 177.41 to 177.44 and corresponding Minnesota Rules 5200.1000 to 5200.1120, this contract is subject to the prevailing wages as established by the Minnesota Department of Labor and Industry. Specifically, all contractors and subcontractors must pay all laborers and mechanics the established prevailing wages for work performed under the contract. Failure to comply with the aforementioned may result in civil or criminal penalties. Rates are listed in **Attachment B**.

In compliance with Minn. Stat. § 177.43, subd. 3 and §177.44, subd. 5, the wages of laborers, workers, and the mechanics on projects financed in whole or part by State Funds should be comparable to wages paid for similar work in the community as a whole. Project includes erection, construction, remodeling, or repairing of a public building or other public work financed in whole or part by State funds.

Any work on real property which uses the skill sets of any trades covered by Labor Code and Class under prevailing wages is construction and requires prevailing wages. See [Prevailing-wage information | Minnesota Department of Labor and Industry \(mn.gov\)](#) for a list of affected trades.

The Contractor shall pay prevailing wages to its employees when conducting construction activities under this agreement.

Applicability. In accordance with Minn. Stat. § 177.43, subd. 7. This does not apply to an agreement or work under an agreement, under which:

- A. the estimated total cost of completing the project is less than \$2,500 and only one trade or occupation is required to complete the work; or
- B. the estimated total cost of completing the project is less than \$25,000 and more than one trade or occupation is required to complete it.

Choose from Commercial, Highway/Heavy, or Residential Wage Rates:

The prevailing wage rate requirements are attached as **Attachment B**.

Prevailing Wage Payroll Information:

In accordance with Minn. Stat. § 177.30, subd. 4, and § 177.43, subd. 3, the Contractor and Subcontractor shall furnish to the Contracting Authority and the Project Owner:

- All payrolls, of all workers on the project, a certified payroll report via e-mail as attachments, a State of Minnesota Prevailing Wage Payroll Report as a Microsoft Excel file and Statement of Compliance Form as a PDF file to the appropriate e-mail addresses: prevailingwage.pca@state.mn.us and MPCA's Authorized Representative listed in Clause 6.
- The Subject line on the Contractor's or Subcontractor's e-mail must give their firm's name and the Contract or Purchase Order Number.
- These completed forms must be furnished not more than 14 days after the end of each pay period.
- The State of Minnesota Prevailing Wage Payroll Report and Statement of Compliance Form are available on the MMD website at [Certified payroll form; statement of compliance \(mn.gov\)](https://www.mmd.mn.gov/Certified-payroll-form;statement-of-compliance). Submit the completed and signed State of Minnesota Prevailing Wage Payroll Report as a Microsoft Excel file and the Statement of Compliance Form as a PDF file, no other payroll forms will be accepted to meet this requirement.

The prevailing wage payroll information forms that are submitted shall be maintained by the contracting agency for a minimum of three years after final payment has been made on the project. All of the data provided on the Prevailing Wage Payroll Information Form will be public data, which is available to anyone upon request.

Refer vendor questions regarding the Prevailing Wage Laws to the Department of Labor and Industry at 651-284-5091 or visit the website for Labor Standards Section, Prevailing Wage [Prevailing-wage information | Minnesota Department of Labor and Industry \(mn.gov\)](https://www.dli.state.mn.us/Prevailing-wage-information).

All construction work needs an IC-134 form submitted by the Contractor before payment can be made. The Contractor can find a copy of the IC-134 online at the Minnesota Department of Revenue website at <https://www.revenue.state.mn.us/sites/default/files/2019-01/ic134.pdf>.

5. Conditions of Payment

All services provided by the Grantee under this grant agreement must be performed to the State's satisfaction, as determined at the sole discretion of the State's Authorized Representative and in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations. The Grantee will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, state, or local law.

6. Authorized Representative

The State's Authorized Representative is **Aimee Duchene**, 714 Lake Avenue, Suite 220, Detroit Lakes, MN 56501, 218-846-8133, aimee.duchene@state.mn.us, or their successor, and has the authority to monitor the Grantee's performance and to accept the services provided under this agreement.

The Grantee's Authorized Representative is **Craig Schlichting, PE**, 803 Old Highway 8 NW, New Brighton, MN 55112, 651-638-2056, Craig.schlichting@newbrightonmn.gov, or their successor. If the Grantee's Authorized Representative changes at any time during this grant agreement, the Grantee must immediately notify the State.

7. Assignment, Amendments, Change Orders, Waiver, and Grant Agreement complete

- 7.1 **Assignment.** The Grantee shall neither assign nor transfer any rights or obligations under this grant agreement without the prior written consent of the State, approved by the same parties who executed and approved this grant agreement, or their successors in office.
- 7.2 **Amendments.** Any amendments to this grant agreement must be in writing and will not be effective until it has been executed and approved by the same parties who executed and approved the original grant agreement, or their successors in office.
- 7.3 **Change Orders.** If the State's Project Manager or the Grantee's Authorized Representative identifies a change needed in the budget, either party may initiate a Change Order using the Change Order Form provided by the MPCA. Change Orders may not delay or jeopardize the success of the Project, alter the overall scope of the Project, increase or decrease the overall amount of the Contract/Agreement, or cause an extension of the term of this Agreement. Major changes require an Amendment rather than a Change Order.
- The Change Order Form must be approved and signed by the State's Project Manager and the Grantee's Authorized Representative **in advance of doing the work**. Documented changes will then become an integral and enforceable part of the Agreement. The MPCA has the sole discretion on the determination of whether a requested change is a Change Order or an Amendment. The state reserves the right to refuse any Change Order requests.
- 7.4 **Waiver.** If the State fails to enforce any provision of this grant agreement, that failure does not waive the provision or the State's right to enforce it.
- 7.5 **Grant Agreement complete.** This grant agreement contains all negotiations and agreements between the State and the Grantee. No other understanding regarding this grant agreement, whether written or oral, may be used to bind either party.

8. Indemnification

The Grantee must indemnify, save, and hold the State, its agents, and employees harmless from any claims or causes of action, including attorney's fees incurred by the State, arising from the performance of this grant agreement by the Grantee or the Grantee's agents or employees. This clause will not be construed to bar any legal remedies the Grantee may have for the State's failure to fulfill its obligations under this grant agreement.

9. State audits

Under [Minn. Stat. § 16B.98](#), subd.8, the Grantee's books, records, documents, and accounting procedures and practices of the Grantee or other party relevant to this grant agreement or transaction are subject to examination by the State and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this grant agreement, receipt and approval of all final reports, or the required period of time to satisfy all state and program retention requirements, whichever is later.

10. Government data practices and intellectual property

10.1 **Government data practices.** The Grantee and State must comply with the Minnesota Government Data Practices Act, [Minn. Stat. Ch. 13](#), as it applies to all data provided by the State under this grant agreement, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Grantee under this grant agreement. The civil remedies of [Minn. Stat. § 13.08](#) apply to the release of the data referred to in this clause by either the Grantee or the State. If the Grantee receives a request to release the data referred to in this Clause, the Grantee must immediately notify the State. The State will give the Grantee instructions concerning the release of the data to the requesting party before the data is released. The Grantee's response to the request shall comply with applicable law.

10.2 Intellectual property rights

- (a) **Intellectual property rights.** The State owns all rights, title and interest in all of the intellectual property rights, including copyrights, patents, trade secrets, trademarks, and service marks in the Works and Documents created and paid for under this grant agreement. Works means all inventions, improvements, discoveries (whether or not patentable), databases, computer programs, reports, notes, studies,

photographs, negatives, designs, drawings specifications, materials, tapes, and disks conceived, reduced to practice, created or originated by the Grantee, its employees, agents, and subcontractors, either individually or jointly with others in the performance of this grant agreement. Works includes "Documents." Documents are the originals of any databases, computer programs, reports, notes studies, photographs, negatives, designs, drawings, specifications, materials, tapes, disks, or other materials, whether in tangible or electronic forms, prepared by the Grantee, its employees, agents, or subcontractors, in the performance of this grant agreement. The Documents shall be the exclusive property of the State and all such Documents must be immediately returned to the State by the Grantee, at the Grantee's expense, upon the written request of the State, or upon completion, termination, or cancellation of this grant agreement. To the extent possible, those Works eligible for copyright protection under the United States' Copyright Act will be deemed to be "works made for hire." The Grantee assigns all right, title, and interest it may have in the Works and the Documents to the State. The Grantee must, at the request of the State, execute all papers and perform all other acts necessary to transfer or record the State's ownership interest in the Works and Documents.

(b) **Obligations.**

- (1) **Notification.** Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived for the first time or actually or constructively reduced to practice by the Grantee, including its employees and subcontractors, in the performance of this grant agreement, the Grantee shall immediately give the State's Authorized Representative written notice thereof, and must promptly furnish the Authorized Representative with complete information and/or disclosure therein.
- (2) **Representation.** The Grantee must perform all acts, and take all steps necessary to ensure that all intellectual property rights in the Works and Documents are the sole property of the State, and that neither Grantee nor its employees, agents, or subcontractors retain any interest in and to the Works and Documents. The Grantee represents and warrants that the Works and Documents do not and will not infringe upon any intellectual property rights of other persons or entities. Notwithstanding Clause Liability, the Grantee shall indemnify, defend, to the extent permitted by the Attorney General, and hold harmless the State, at the Grantee's expense, from any action or claim brought against the State to the extent that it is based on a claim that all or part of the Works or Documents infringe upon the intellectual property rights of others. The Grantee will be responsible for payment of any and all such claims, demands, obligations, liabilities, costs, and damages, including, but not limited to, attorney fees. If such a claim or action arises or in Grantee's or the State's opinion is likely to arise, the Grantee must, at the State's discretion, either procure for the State the right or license to use the intellectual property rights at issue or replace or modify the allegedly infringing Works or Documents as necessary and appropriate to obviate the infringement claim. This remedy of the State will be in addition to and not exclusive of other remedies provided by law.
- (3) **License.** The State hereby grants a limited, no-fee, noncommercial license to the Grantee to enable the Grantee's employees engaged in research and scholarly pursuits to make, have made, reproduce, modify, distribute, perform, and otherwise use the Works, including Documents, for research activities or to publish in scholarly or professional journals, provided that any existing or future intellectual property rights in the Works or Documents (including patents, licenses, trade or service marks, trade secrets, or copyrights) are not prejudiced or infringed upon, that the Minnesota Data Practices Act is complied with, and that individual rights to privacy are not violated. The Grantee shall indemnify and hold harmless the State for any claim or action based on the Grantee's use of the Works or Documents under the provisions of Clause 10.2(b)(2). Said license is subject to the State's publicity and acknowledgement requirements set forth in this grant agreement. The Grantee may reproduce and retain a copy of the Documents for research and academic use. The Grantee is responsible for security of the Grantee's copy of the Documents. A copy of any articles, materials or documents produced by the Grantee's employees, in any form, using or derived from the subject matter of this license, shall be promptly delivered without cost to the State.

11. Workers' compensation

The Grantee certifies that it is in compliance with [Minn. Stat. § 176.181](#), subd. 2, pertaining to workers' compensation insurance coverage. The Grantee's employees and agents will not be considered State employees. Any claims that may arise under the Minnesota Workers' Compensation Act on behalf of these employees and any claims made by any third party as a consequence of any act or omission on the part of these employees are in no way the State's obligation or responsibility.

12. Publicity and endorsement

12.1 Publicity. Any publicity regarding the subject matter of this grant agreement must identify the State as the sponsoring agency and must not be released without prior written approval from the State's Authorized Representative. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Grantee individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this grant agreement.

12.2 Endorsement. The Grantee must not claim that the State endorses its products or services.

13. Governing law, jurisdiction, and venue

Minnesota law, without regard to its choice-of-law provisions, governs this grant agreement. Venue for all legal proceedings out of this grant agreement, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

14. Termination

14.1 Termination by the State.

14.1 (a) Without Cause

The State may terminate this grant contract agreement without cause, upon 30 days' written notice to the Grantee. Upon termination, the Grantee will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed.

14.1 (b) With Cause

The State may immediately terminate this grant contract agreement if the State finds that there has been a failure to comply with the provisions of this grant contract, that reasonable progress has not been made or that the purposes for which the funds were granted have not been or will not be fulfilled. The State may take action to protect the interests of the State of Minnesota, including the refusal to disburse additional funds and requiring the return of all or part of the funds already disbursed.

14.2 Termination by the Commissioner of Administration

The Commissioner of Administration may immediately and unilaterally cancel this grant contract agreement if further performance under the agreement would not serve agency purposes or is not in the best interest of the State.

14.3 Termination for Insufficient Funding

The State may immediately terminate this grant contract if:

- (a) Funding is withdrawn by the Minnesota Legislature;
- (b) Or, if funding cannot be continued at a level sufficient to allow for the payment of the services covered here. Termination must be by written or fax notice to the Grantee. The State is not obligated to pay for any services that are provided after notice and effective date of termination. However, the Grantee will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed to the extent that funds are available. The State will not be assessed any penalty if the contract is terminated because of the decision of the Minnesota Legislature, or other funding source, not to appropriate funds. The State must provide the Grantee notice of the lack of funding within a reasonable time of the State's receiving that notice.

15. Data disclosure

Under [Minn. Stat. § 270C.65](#), subd. 3, and other applicable law, the Grantee consents to disclosure of its social security number, federal employer tax identification number, and/or Minnesota tax identification number, already provided to the State, to federal and state tax agencies and state personnel involved in the payment of state

obligations. These identification numbers may be used in the enforcement of federal and state tax laws which could result in action requiring the Grantee to file state tax returns and pay delinquent state tax liabilities, if any. To protect Grantee's personal data, Grantee is strongly encouraged to obtain and use a Minnesota tax identification number.

16. Reporting requirements

Construction. The Grantee shall notify the MPCA when project construction begins and ends. The project needs to be available to MPCA staff during and after construction.

Progress Report. The Grantee shall provide a progress report (in a format provided by the MPCA) on a six-month schedule and whenever an invoice is submitted, or upon request. This progress report will include metrics as appropriate for the project.

Final Report. By the date specified in the grant agreement and in a format provided by the MPCA, the Grantee shall submit a final report to the MPCA, including as-builts, relevant metrics and all project deliverables identified in the application. MPCA will need to certify that the project has been constructed as described in the application.

If the MPCA determines that the information submitted in the Final Report and/or Project Deliverables is inadequate, the Grantee shall prepare and submit additional / corrected information reasonably requested by the MPCA. The Final Report and Project Deliverables shall not be approved by the MPCA and final payment shall not be disbursed unless the Report and Deliverables contains the specified information to the satisfaction of the MPCA.

17. Payment to subcontractors (if applicable)

As required by Minn. Stat. § 16A.1245, the prime contractor must pay all subcontractors, less any retainage, within 10 calendar days of the prime contractor's receipt of payment from the State for undisputed services provided by the subcontractor(s) and must pay interest at the rate of one and one-half percent per month or any part of a month to the subcontractor(s) on any undisputed amount not paid on time to the subcontractor(s).

Signatures

Title

Name

Signature

Date

DRAFT

CITY OF NEW BRIGHTON

CONSTRUCTION PLANS FOR

10TH STREET CULVERT REPLACEMENT

ROAD REPAIR, CULVERT REPLACEMENT

FEBRUARY 2024

RESOURCE LIST

CITY OF NEW BRIGHTON

MAYOR:
KARI NIEDFELDT-THOMAS

CITY COUNCIL MEMBERS:
ABDULLAH ABDULLE
GRAEME ALLEN
EMILY DUNSWORTH
PAMELA STEGORA AXBERG

CITY MANAGER:
DEVIN MASSOPUST

DIRECTOR OF COMMUNITY
ASSETS AND DEVELOPMENT:
CRAIG SCHLICHTING, PE

PRIVATE UTILITIES

XCEL GAS
SCOTT WIDMER
651-779-3506
SCOTT.A.WIDMER@XCELENERGY.COM

CENTURYLINK
COMMUNICATIONS
CHARLES DAHER (TERRA TECH)
612-298-2825
CDAHER@TERRATECHLLC.NET

XCEL ELECTRIC
TALENE EDDLESTON
651-462-6201
TALENE.J.EDDLESTON@XCELENERGY.COM

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

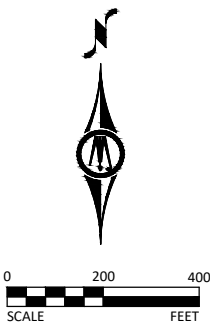
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES".

PROJECT LOCATION



Sheet List Table	
Sheet Number	Sheet Title
G0.01	TITLE SHEET
G0.02	LEGEND
G1.01	STATEMENT OF ESTIMATED QUANTITIES
C0.01	EXISTING CONDITIONS AND REMOVAL PLAN
C1.01	DETAILS
C1.02	DETAILS
C1.03	MNDOT STANDARD PLAN 5-395
C1.04	MNDOT STANDARD PLAN 5-395
C1.05	MNDOT STANDARD PLAN 5-395
C1.06	MNDOT STANDARD PLAN 5-395
C1.07	TEMPORARY UTILITY PLAN
C2.01	EROSION CONTROL PLAN
C4.01	SANITARY AND WATERMAIN
C5.01	BOX CULVERT
C5.02	STORM SEWER PLAN AND PROFILE
C6.01	STREET IMPROVEMENTS
C7.01	TRAFFIC BYPASS PLAN

MAP OF THE
CITY OF NEW BRIGHTON
RAMSEY COUNTY, MN



APPROVED: _____
CITY OF NEW BRIGHTON ENGINEER - CRAIG SCHLICHTING, PE

⚡ BM=882.277
TOP NUT OF HYDRANT
(CORNER OF BUILDING,
WEST OF CULVERTS)

PROJECT DATUM:
HORIZONTAL: RAMSEY COUNTY US SURVEY FT(NAD
83 1986 ADJUSTMENT)
VERTICAL: NAVD 88

RECORD DRAWING
INFORMATION
OBSERVER:
CONTRACTOR:
DATE:

CITY OF NEW BRIGHTON, MINNESOTA
10TH STREET CULVERT REPLACEMENT
GENERAL
TITLE SHEET

SHEET

G0.01



3507 HIGH POINT DRIVE NORTH,
BLDG. 1 SUITE E130
OAKDALE, MN 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
BHJ		90% PLAN	10/25/2024
DRAWN	BR		
CHECKED	BHJ		
CLIENT PROJ. NO.	017.133932		

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

BRENT H. JOHNSON
LIC. NO. 20378 DATE 02/21/2025

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\\NW05\017133932\CAD\CAD1133932_0001.dwg 2/25/2025 10:46:25 AM

EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE	GRAT		REGULATION STATION GAS	RGNG
	AIR CONDITION UNIT	ACON		SATELLITE DISH	SATD
	ANTENNA	ATNA		SIGN TRAFFIC	TFSG
	AUTO SPRINKLER CONNECTION	BLAS		SIGNAL CONTROL CABINET	TFSC
	BARRICADE PERMANENT	BARR		SOIL BORING	SBOR
	BASKETBALL POST	BBHP		SIREN	SIRN
	BENCH	BNCH		TELEPHONE BOOTH	TPHB
	BIRD FEEDER	BIRD		TILE INLET	TIIN
	BOLLARD	BOLL		TILE OUTLET	TIOU
	BUSH	TRBS		TILE RISER	TIOR
	CATCH BASIN RECTANGULAR CASTING	CBRC,CBRE		TRANSFORMER-ELECTRIC	ETRN
	CATCH BASIN CIRCULAR CASTING	CBCC,CBCE		TREE-CONIFEROUS	TRCT
	CURB STOP	CSSN,CSWM		TREE-DEAD	TRIP
	CLEAN OUT	COSN,COST		TREE-DECIDUOUS	TRDT
	CULVERT END	CLVT		TREE STUMP	TRSP
	DRINKING FOUNTAIN	DRNK		TRAFFIC ARM BARRIER	TFAM
	DOWN SPOUT	BLDS		TRAFFIC SIGNAL	TFSP
	ELECTRIC CAR CHARGE STATION	EVCH		TRASH CAN	TRSH
	FILL PIPE	FPIP		UTILITY MARKER	MKCM,MKEL,MKFO,MKNG
	FIRE HYDRANT	HYWM		VALVE	VADH,VAOT,VASN,VAWM,VANG,VAST
	FLAG POLE	FLAG		VALVE POST INDICATOR	VAPI
	FLARED END / APRON	FEST		VALVE VAULT	VVSN, VVST
	FUEL PUMP	FUEL		VAULT	VTM,VTEL,VTFO,VTOT,VTTF
	GRILL	GRIL		VENT PIPE	VNEX,VNPI
	GUY WIRE ANCHOR	PLGW		WATER SPIGOT	BLSP
	HANDHOLE	HHCM,HHDE,HHEL,HHFO,HHTF		WELL	WEMT,WEWM,WEOT
	HANDICAP SPACE	PMHC		WETLAND DELINEATED MARKER	SPWL
	IRRIGATION SPRINKLER HEAD	IRSH		WETLAND	SPWL
	IRRIGATION VALVE BOX	IRCV		WET WELL	WWSN, WWST
	LIFT STATION CONTROL PANEL	CPSN,CPST		YARD HYDRANT	HYXD
	LIFT STATION	LSSN,LSST			
	LIGHT POLE	PLLP			
	MAILBOX	MBOX			

PROPOSED TOPOGRAPHIC SYMBOLS

	CLEANOUT
	MANHOLE
	LIFT STATION
	STORM SEWER CIRCULAR CASTING
	STORM SEWER RECTANGULAR CASTING
	STORM SEWER FLARED END / APRON
	STORM SEWER OUTLET STRUCTURE
	STORM SEWER OVERFLOW STRUCTURE
	CURB BOX
	FIRE HYDRANT
	WATER VALVE
	WATER REDUCER
	WATER BEND
	WATER TEE
	WATER CROSS
	WATER SLEEVE
	WATER CAP / PLUG
	RIP RAP
	DRAINAGE FLOW
	TRAFFIC SIGNS

SURVEY SYMBOLS

	BENCHMARK LOCATION	VFBM		CAST IRON MONUMENT	LMFC
	CONTROL POINT	VFCP		STONE MONUMENT	LMFS
	MONUMENT FOUND	LMFD,LMFJ,LMFM,LMFP,LMFR,LMFS,LMFX			

EXISTING TOPOGRAPHIC LINES

	RETAINING WALL
	FENCE
	FENCE-DECORATIVE
	GUARD RAIL
	TREE LINE
	BUSH LINE

SURVEY LINES

	CONTROLLED ACCESS
	BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

EXISTING UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	RECLAIMED WATER

PROPOSED UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	PIPE CASING
	TRENCHLESS PIPE (PLAN VIEW)
	TRENCHLESS PIPE (PROFILE VIEW)

GRADING INFORMATION

	EXISTING CONTOUR MINOR
	EXISTING CONTOUR MAJOR
	PROPOSED CONTOUR MINOR
	PROPOSED CONTOUR MAJOR
	PROPOSED GRADING LIMITS / SLOPE LIMITS
	PROJECT LIMITS
	PROPOSED SPOT ELEVATION
	RISE:RUN (SLOPE)

HATCH PATTERNS

	BITUMINOUS		GRAVEL
	CONCRETE		

EXISTING PRIVATE UTILITY LINES

NOTE:
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THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES".

	UNDERGROUND FIBER OPTIC
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	UNDERGROUND COMMUNICATION
	OVERHEAD ELECTRIC
	OVERHEAD COMMUNICATION
	OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL :

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: G-A G-A UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-22.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

BRENT H. JOHNSON
LIC. NO. 20378 DATE 02/21/2025



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Email: Oakdale@bolton-menk.com
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DESIGNED	NO.	ISSUED FOR	DATE
BHJ		90% PLAN	10/25/2024
DRAWN			
BR			
CHECKED			
BHJ			
CLIENT PROJ. NO.			
017.133932			

CITY OF NEW BRIGHTON, MINNESOTA

10TH STREET CULVERT REPLACEMENT

GENERAL
LEGEND

SHEET

G0.02

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STATEMENT OF ESTIMATED QUANTITIES					
ITEM NO.	MnDOT ITEM NO.	ITEM	NOTES	UNIT	TOTAL QUANTITY
BASE BID					
1	2021.501	MOBILIZATION		LUMP SUM	1
2	2101.501	CLEARING & GRUBBING		AC	0.29
3	2104.503	REMOVE WOODEN GUARDRAIL		LF	150
4	2104.504	REMOVE BITUMINOUS PAVEMENT (P)		SQ YD	1,161
5	2104.503	REMOVE SEWER PIPE (STORM) - 48" CMP		LIN FT	200
6	2105.607	COMMON EXCAVATION (P)		CU YD	1,350
7	2531.503	CONCRETE CURB & GUTTER DESIGN B612		LF	190
8	2211.509	AGGREGATE BASE, CLASS 5		TON	277
9	2451.507	AGGREGATE PIPE BEDDING		TON	404
10	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) - SPWEA340C		TON	106
11	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (3,C) - SPWEB330C		TON	141
12	2357.506	BITUMINOUS MATERIAL FOR TACK COAT		GAL	58
13	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)		LIN FT	116
14	2511.509	RANDOM RIPRAP CLASS IV		TON	312
15	2563.601	TRAFFIC CONTROL		LUMP SUM	1
16	2573.503	FLOATATION SILT CURTAIN (MOVING WATER)		LIN FT	50
17	2573.503	SILT FENCE MACHINE SLICED		LIN FT	500
18	2574.507	ORGANIC TOPSOIL BORROW (LV)		CU YD	37
19	2575.604	SEEDING, INCL SEED (MNDOT SEED MIX 35-241) AND FERTILIZER		SQ YD	469
20	2575.504	EROSION CONTROL BLANKET CATEGORY 25		SQ YD	926
21	2106.507	SELECT CLAY END CAP		CU YD	310
22	2104.502	SALVAGE AND REINSTALL SIGNS		EACH	2
23	2106.507	GRANULAR EMBANKMENT (CV)		CU YD	92
24	2106.601	DEWATERING AND WATER CONTROL		LUMP SUM	1
25	2106.507	TOPSOIL SALVAGE AND RESPREAD 6"		CU YD	42
26	2106.508	HAUL AND DISPOSE OF EXCESS MATERIAL (LV)		CU YD	1,258
27	2575.523	RAPID STABILIZATION, METHOD 3		M GAL	2
28	2412.503	5' x 8' CONCRETE BOX CULVERT		LF	208
29	2412.502	8' X 5' PRECAST CONCRETE BOX CULVERT END SECTION		EACH	4
30	2461.501	LEAN CONCRETE MIX		CY	40
31	2554.603	GUARD RAIL		LF	150
32	2503.503	6" PVC PIPE SEWER, 0'-10' DEPTH		LF	348
33	2104.503	REMOVE SEWER PIPE (SANITARY) - 6 INCH DUCTILE IRON PIPE		LF	348
34	2104.503	REMOVE WATERMAIN - 6 INCH DUCTILE IRON PIPE		LF	56
35	2504.603	6" WATERMAIN DUCTILE IRON CL 52		LF	56
36	2104.502	REMOVE MANHOLE		EACH	1
37	SPECIAL	BYPASS PUMPING		LS	1
38	SPECIAL	TEMPORARY WATER SERVICE		LS	1
39	SPECIAL	TEMPORARY ROAD EMBANKMENT		LS	1

TEMPOARY ROAD CROSSING	
REMOVE AND REPLACE BITUMINOUS PAVEMENT	0 SY
REMOVE AND REPLACE CONCRETE CURB AND GUTTER	0 LF
COMMON EMBANKMENT (LV)	598 CY
STRIP AND RESPREAD TOPSOIL (P)	950 SY
COMMON EXCAVATION (LV)	699 CY
CLASS 5	350 SY
CONCRETE J-BARRIER	220 LF
EROSION CONTROL BLANKET (MNDOT CAT 15)	210 SY
EROSION CONTROL BLANKET (MNDOT CAT 35)	410 SY
SEEDING	17 LB
60" STORM SEWER ("n"=0.013)	160 LF
REMOVE 60" STORM SEWER	160 LF

Earthwork Estimate		
Items	Units	Total
Excavation		
Common Excavation	CY	1360
Granular Embankment	CY	92
Estimated Excess Earthwork Hauled off Site	CY	1258
Class V Gravel		
Roadway Base Class V	CY	128
Top Soil		
Top Soil to Strip 6"	CY	42
Top Soil To Respread 6"	CY	37
Clay Cap		
Select Clay End Cap	CY	310
Note: All Quantities are compacted volume (Cv) estimates		

CONSTRUCTION NOTES

- SUITABLE EXCAVATED MATERIAL MAY BE USED FOR BACKFILLING IF APPROVED BY THE ENGINEER IN THE FIELD.
- GEOTEXTILE FILTER MATERIAL WILL BE CONSIDERED TO BE INCIDENTAL TO THE RIPRAP CONSTRUCTION.

MnDOT STANDARD PLATES

Plate No.	The following MnDOT Standard Plates shall apply to the construction of this project.
3145G	CONCRETE PIPE OR PRECAST BOX CULVERT TIES
8307S	GUARD RAIL AND END ANCHORAGES

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Brent H. Johnson
BRENT H. JOHNSON
LIC. NO. 20378 DATE 02/21/2025



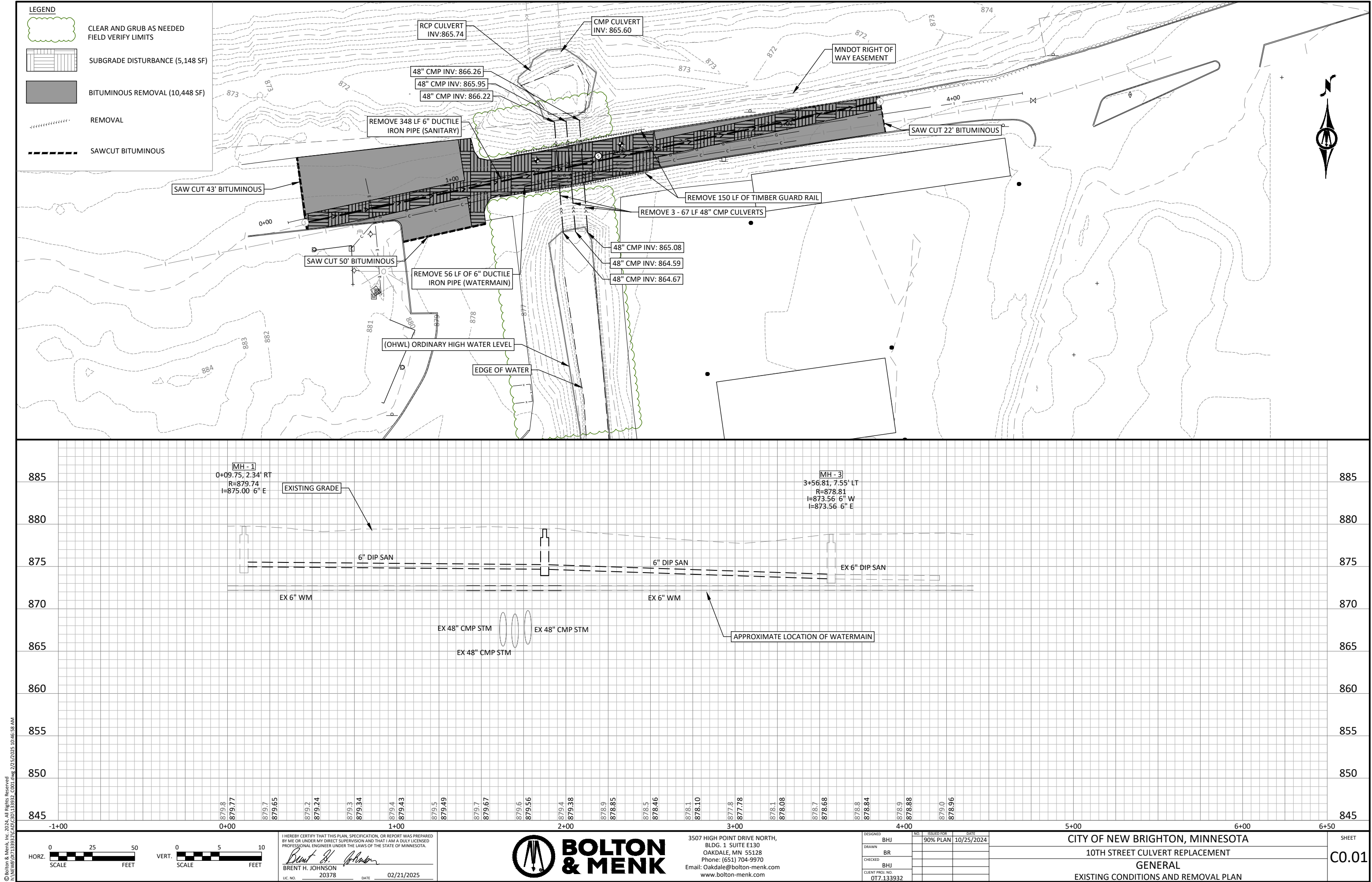
3507 HIGH POINT DRIVE NORTH,
BLDG. 1 SUITE E130
OAKDALE, MN 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

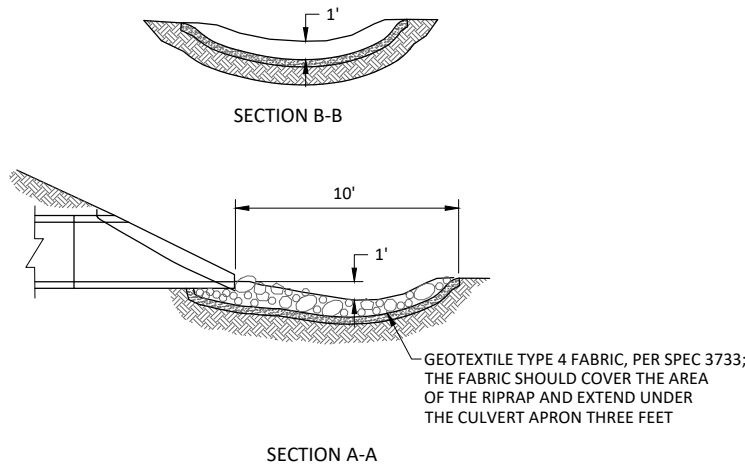
DESIGNED	NO.	ISSUED FOR	DATE
BHJ		90% PLAN	10/25/2024
DRAWN	BR		
CHECKED	BHJ		
CLIENT PROJ. NO.	017.133932		

CITY OF NEW BRIGHTON, MINNESOTA
10TH STREET CULVERT REPLACEMENT
GENERAL
STATEMENT OF ESTIMATED QUANTITIES

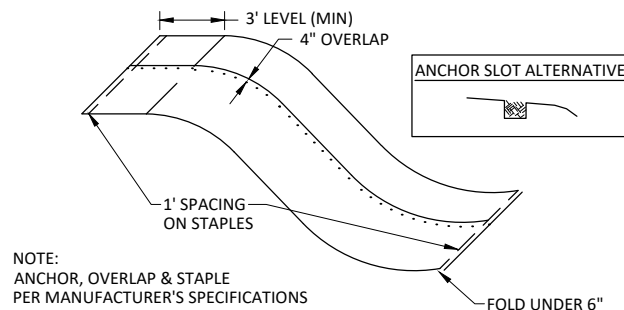
SHEET

G1.01

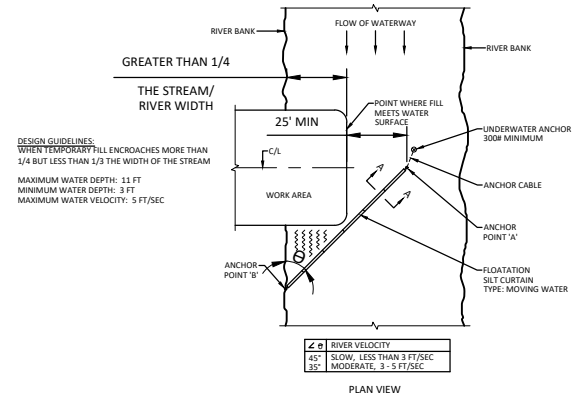




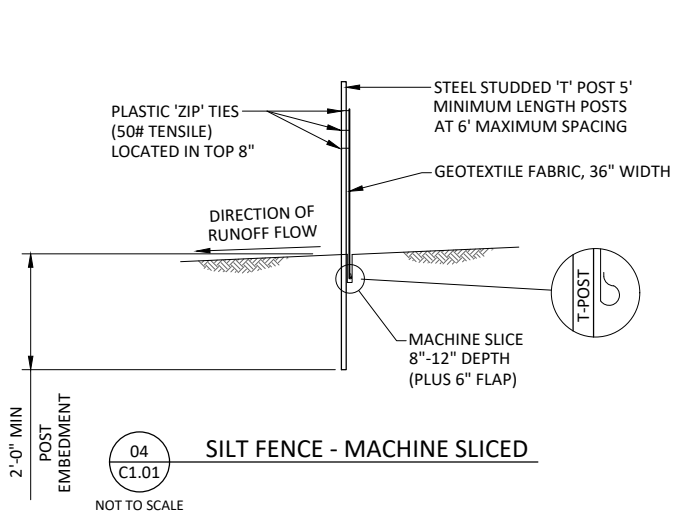
01
C1.01
RIPRAP BOX CULVERT OUTLET
NOT TO SCALE



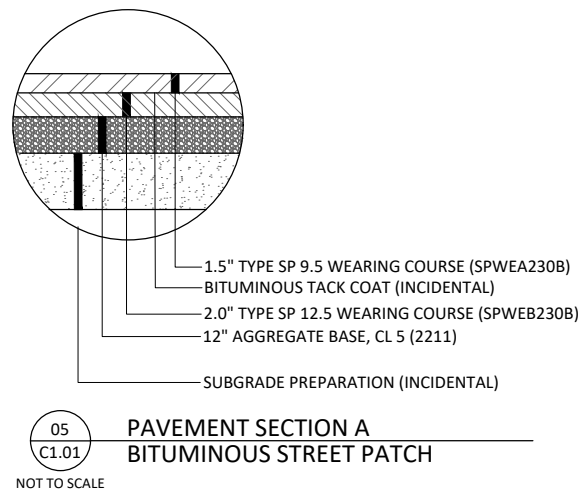
02
C1.01
EROSION CONTORL BLANKET INSTALLATION
NOT TO SCALE



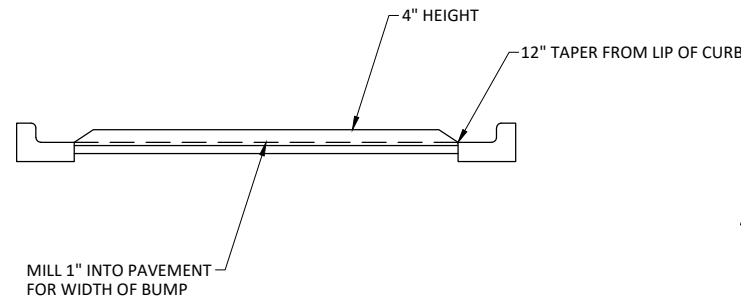
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FLOATING SILT CURTAIN
NOT TO SCALE



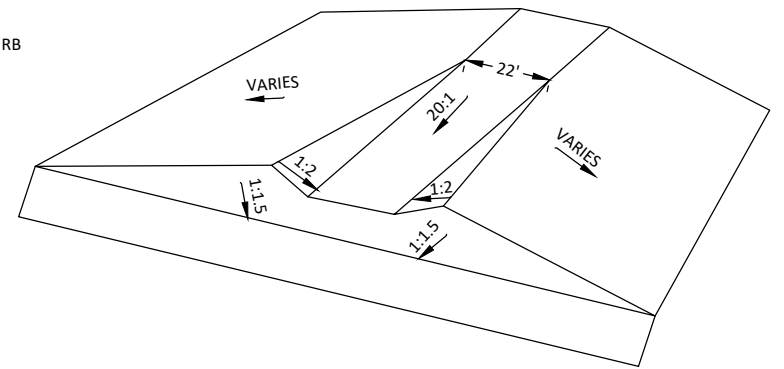
04
C1.01
SILT FENCE - MACHINE SLICED
NOT TO SCALE



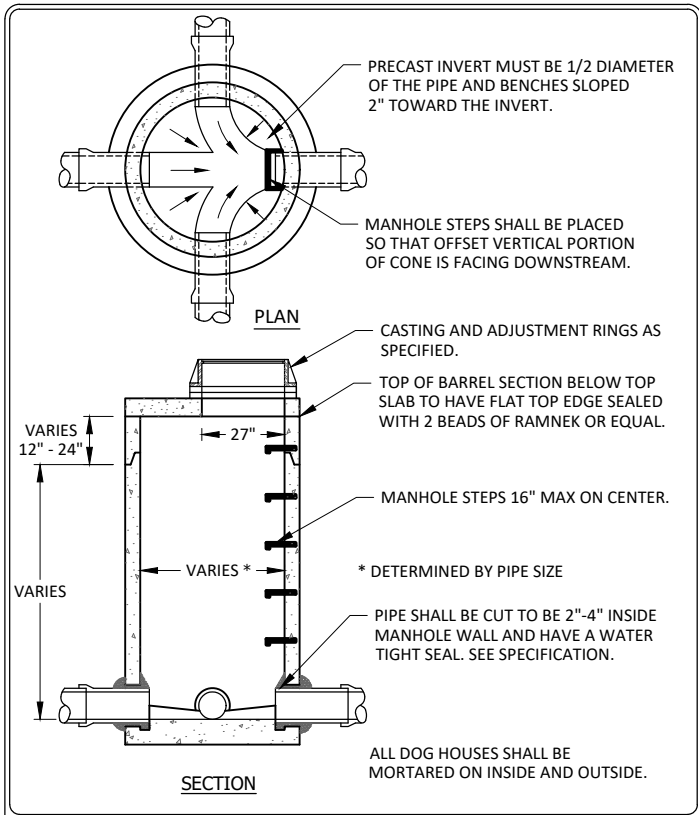
05
C1.01
PAVEMENT SECTION A
BITUMINOUS STREET PATCH
NOT TO SCALE



06
C1.01
16" SPEED BUMP DIAGRAM
NOT TO SCALE

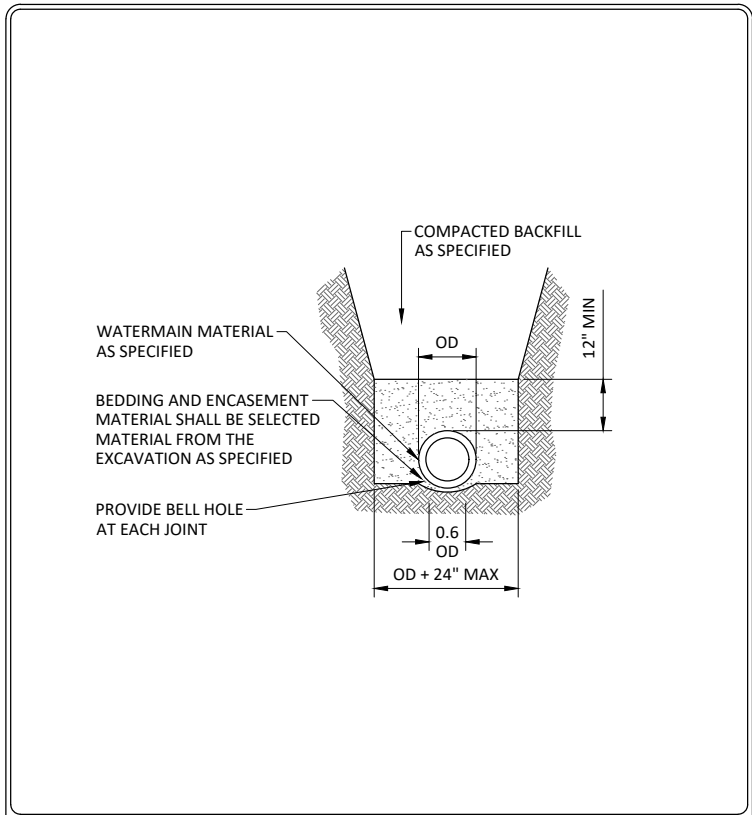


07
C1.01
EARTHWORK DIAGRAM
NOT TO SCALE



STANDARD DETAILS
SANITARY SEWER JUNCTION MANHOLE
WITH REINFORCED TOP SLAB

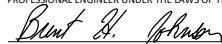
01
C1.02
SANITARY MANHOLE
CONNECTION TO MANHOLE
NOT TO SCALE



DIP WATERMAIN
TRENCH
NOT TO SCALE

02
C1.02
PIPE BEDDING
CONNECTION TO MANHOLE
NOT TO SCALE

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P:\NEWS\017133932\017133932_010.dwg 2/25/2025 10:47:07 AM

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BRENT H. JOHNSON
LIC. NO. 20378 DATE 02/21/2025

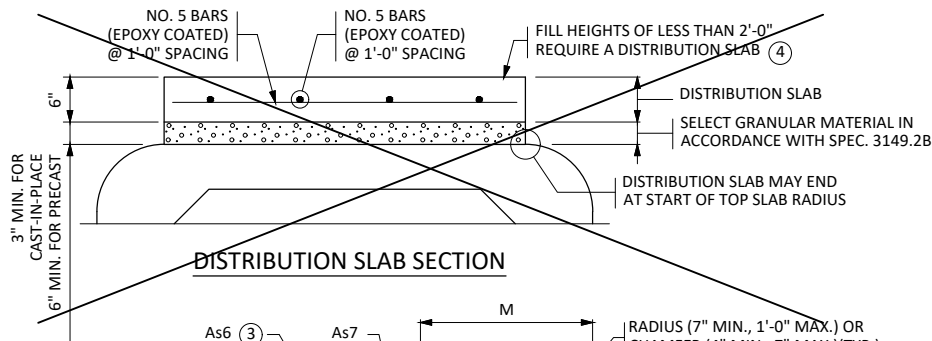


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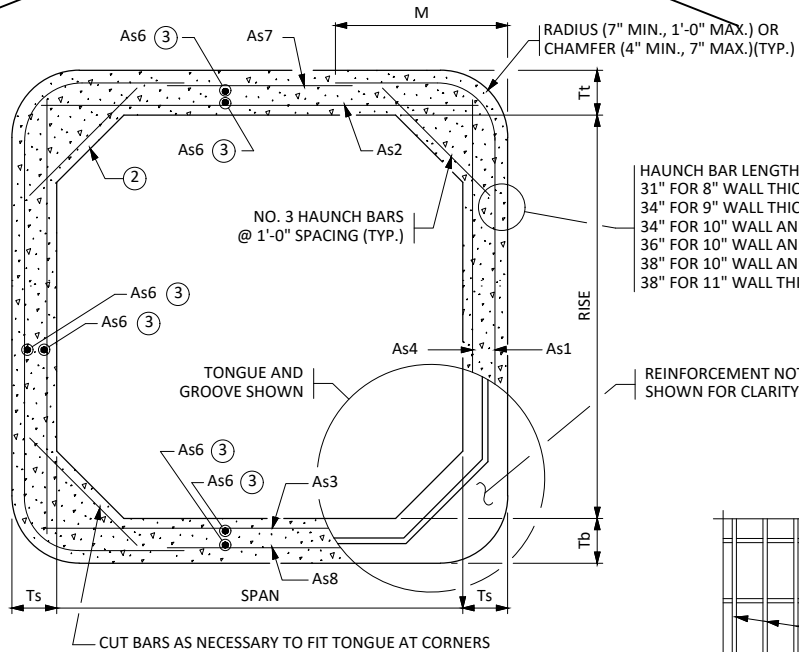
DESIGNED	NO.	ISSUED FOR	DATE
BHJ		90% PLAN	10/25/2024
DRAWN	BR		
CHECKED	BHJ		
CLIENT PROJ. NO.	017.133932		

CITY OF NEW BRIGHTON, MINNESOTA
10TH STREET CULVERT REPLACEMENT
DETAILS
DETAILS

SHEET
C1.02

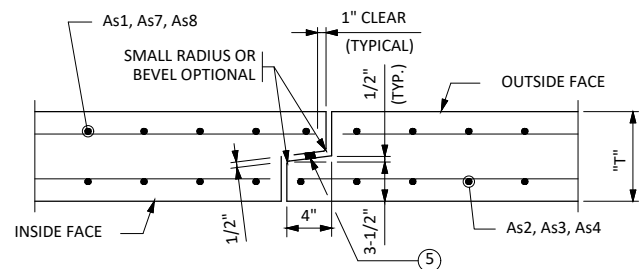


DISTRIBUTION SLAB SECTION

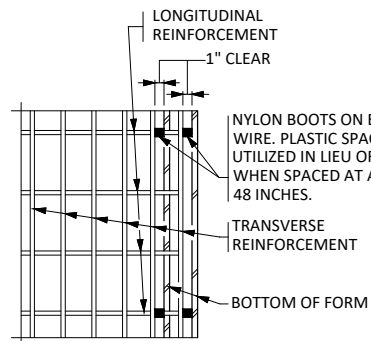


TRANSVERSE BARREL SECTION

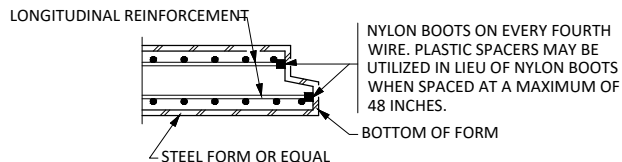
BAR REINFORCEMENT OPTION SHOWN



TONGUE AND GROOVE JOINT DETAIL

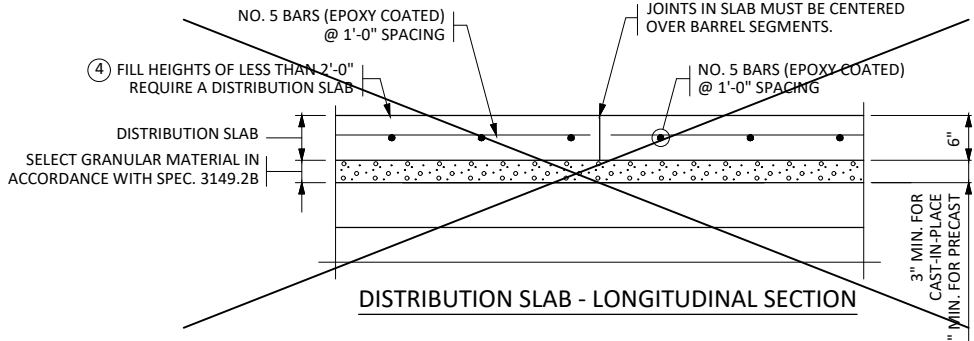


PLAN

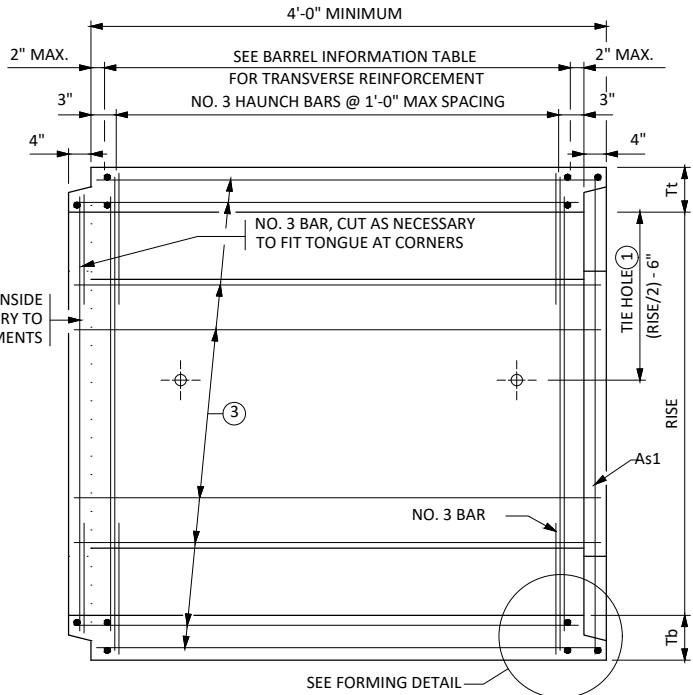


SECTION

FORMING DETAIL

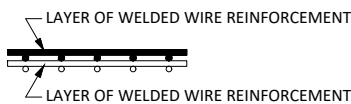


DISTRIBUTION SLAB - LONGITUDINAL SECTION



LONGITUDINAL BARREL SECTION

BAR REINFORCEMENT OPTION SHOWN



REINFORCEMENT LAYER DETAIL

WHEN MORE THAN ONE LAYER OF WELDED WIRE REINFORCEMENT IS USED TO OBTAIN THE REQUIRED REINFORCEMENT AREAS, PLACE THE WIRES OF THE WELDED WIRE REINFORCEMENT AS SHOWN

CONSTRUCTION NOTES

CONSTRUCT CULVERTS IN ACCORDANCE WITH SPEC. 2412 EXCEPT AS NOTED.

REFER TO THE GENERAL PLAN AND ELEVATION SHEET FOR THE DISTANCE BETWEEN BARRELS OF ADJACENT BOXES AND TO STANDARD FIGURE 5-395.115 FOR MATERIAL REQUIREMENTS FOR FILL BETWEEN ADJACENT BOXES.

PROVIDE WELDED WIRE REINFORCEMENT, SHEAR REINFORCEMENT AND REINFORCEMENT BARS IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M259.

1-1/2" MIN. AND 2" MAX. CONCRETE COVER ON ALL REINFORCEMENT, INCLUDING SHEAR REINFORCEMENT, EXCEPT FOR TONGUE AND GROOVE DETAIL.

ANY OF THE FOLLOWING COMBINATIONS OF STEEL REINFORCEMENT MAY BE USED:
(a) 1 OR 2 LAYERS OF WELDED WIRE REINFORCEMENT OR
(b) 1 LAYER OF WELDED WIRE REINFORCEMENT AND 1 LAYER OF REINFORCEMENT BARS OR
(c) 1 LAYER OF REINFORCEMENT BARS.

DEVELOP REINFORCEMENT IN ACCORDANCE WITH AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS". IF BAR REINFORCEMENT IS SUBSTITUTED FOR WELDED WIRE REINFORCEMENT, INCREASE THE AREA OF REINFORCEMENT BY 8%, AND SUBMIT DESIGN CALCULATIONS VERIFYING COMPLIANCE WITH AASHTO 5.7.3.4. "CONTROL OF CRACKING BY DISTRIBUTION OF REINFORCEMENT".

MAXIMUM SIZE OF REINFORCEMENT BARS IS NO. 6. THE MAXIMUM WELDED WIRE REINFORCEMENT SIZE IS W23 PER LAYER (MAXIMUM OF 2 LAYERS).

SPACE CENTER TO CENTER OF TRANSVERSE WIRES NOT LESS THAN 2" NOR MORE THAN 4". SPACE CENTER TO CENTER OF LONGITUDINAL WIRES NOT MORE THAN 8".

WHEN USING AS1, AS7, AND AS8 REINFORCEMENT AS ONE CONTINUOUS CAGE WITH SPLICES OCCURRING IN THE CENTER OF THE TOP AND BOTTOM OF THE BOX SECTION, THE MIN. LAP LENGTH FOR THE AS7 AND AS8 IS 15".

WELDING IS NOT PERMITTED ON REINFORCEMENT BARS OR WELDED WIRE REINFORCEMENT, EXCEPT THAT THE ORIGINAL WELDING REQUIRED TO MANUFACTURE WIRE REINFORCEMENT IS ACCEPTABLE.

WHEN REINFORCEMENT IS CUT, PLACE ADDITIONAL REINFORCEMENT ON BOTH SIDES OF THE CUT MEMBER TO REPLACE OR EXCEED THE CUT STEEL.

USE CONCRETE MIX NO. 3W82 WITH NO CALCIUM CHLORIDE ALLOWED.

SHOP DRAWING APPROVAL IN ACCORDANCE WITH SPEC. 3238.2A IS NOT REQUIRED UNLESS OPENINGS OR ATTACHMENTS ARE PLACED ON A BARREL SEGMENT.

COMPACT THE FIRST 1.5' (LOOSE) OF FILL ABOVE THE BOX WITH LIGHT COMPACTION EQUIPMENT SUCH AS PLATE COMPACTORS OR WALK BEHIND ROLLERS.

TRANSVERSE REINFORCEMENT IS PARALLEL TO THE CULVERT SPAN. LONGITUDINAL REINFORCEMENT IS PERPENDICULAR TO THE CULVERT SPAN.

① USE 1" DIAMETER CULVERT TIES. SEE STANDARD PLATE NO. 3145 FOR DETAILS.

② USE 12" VERTICAL, 12" HORIZONTAL HAUNCHES ON ALL BOX SIZES.

③ PLACE LONGITUDINAL REINFORCEMENT DENOTED AS AS6 IN ALL SLABS AND WALLS WITH A MINIMUM OF 0.06 SQ. IN./FT.

④ ROADWAY OR SHOULDER FILL HEIGHTS OF LESS THAN 2'-0" REQUIRE A 6" THICK DISTRIBUTION SLAB WITH CONCRETE MIX 3552.

PLACE CAST-IN-PLACE DISTRIBUTION SLABS WITH 3" MIN. SELECT GRANULAR MATERIAL IN ACCORDANCE WITH SPEC. 3149.2B BETWEEN BARREL AND DISTRIBUTION SLAB.

PRECAST DISTRIBUTION SLABS MAY BE USED FOR FILL HEIGHTS OVER 1'-0". PROVIDE 6" MINIMUM SELECT GRANULAR MATERIAL IN ACCORDANCE WITH SPEC. 3149.2B BETWEEN BARREL AND SLAB.

EXTEND THE WIDTH OF THE DISTRIBUTION SLAB TO THE OUTSIDE EDGES OF THE ROADWAY SHOULDERS UNLESS DIRECTED BY THE ENGINEER.

REDESIGN THE DISTRIBUTION SLAB PER THE MnDOT PAVEMENT DESIGN MANUAL IF IT IS USED AS PAVEMENT SURFACE.

PAYMENT FOR THE DISTRIBUTION SLAB AND SELECT GRANULAR MATERIAL BENEATH THE SLAB IS INCLUDED IN THE PRECAST CONCRETE BOX CULVERT PAY ITEM.

⑤ REFER TO SPEC, 2412 FOR SEALANT REQUIREMENTS.

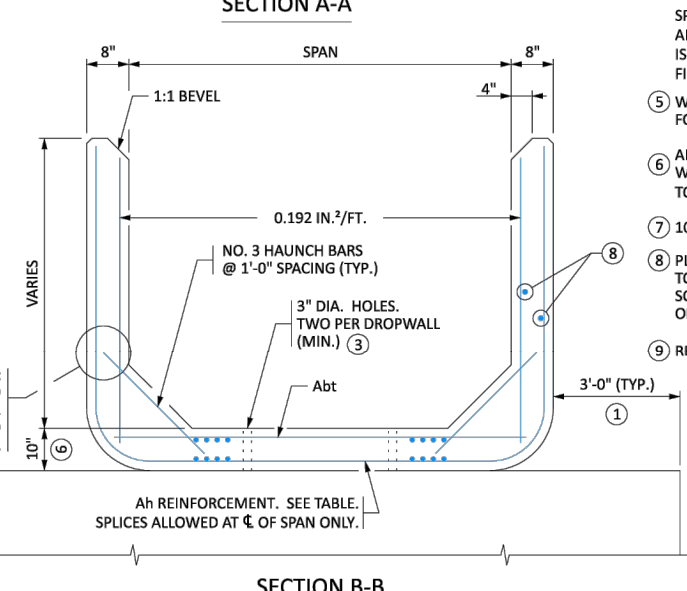
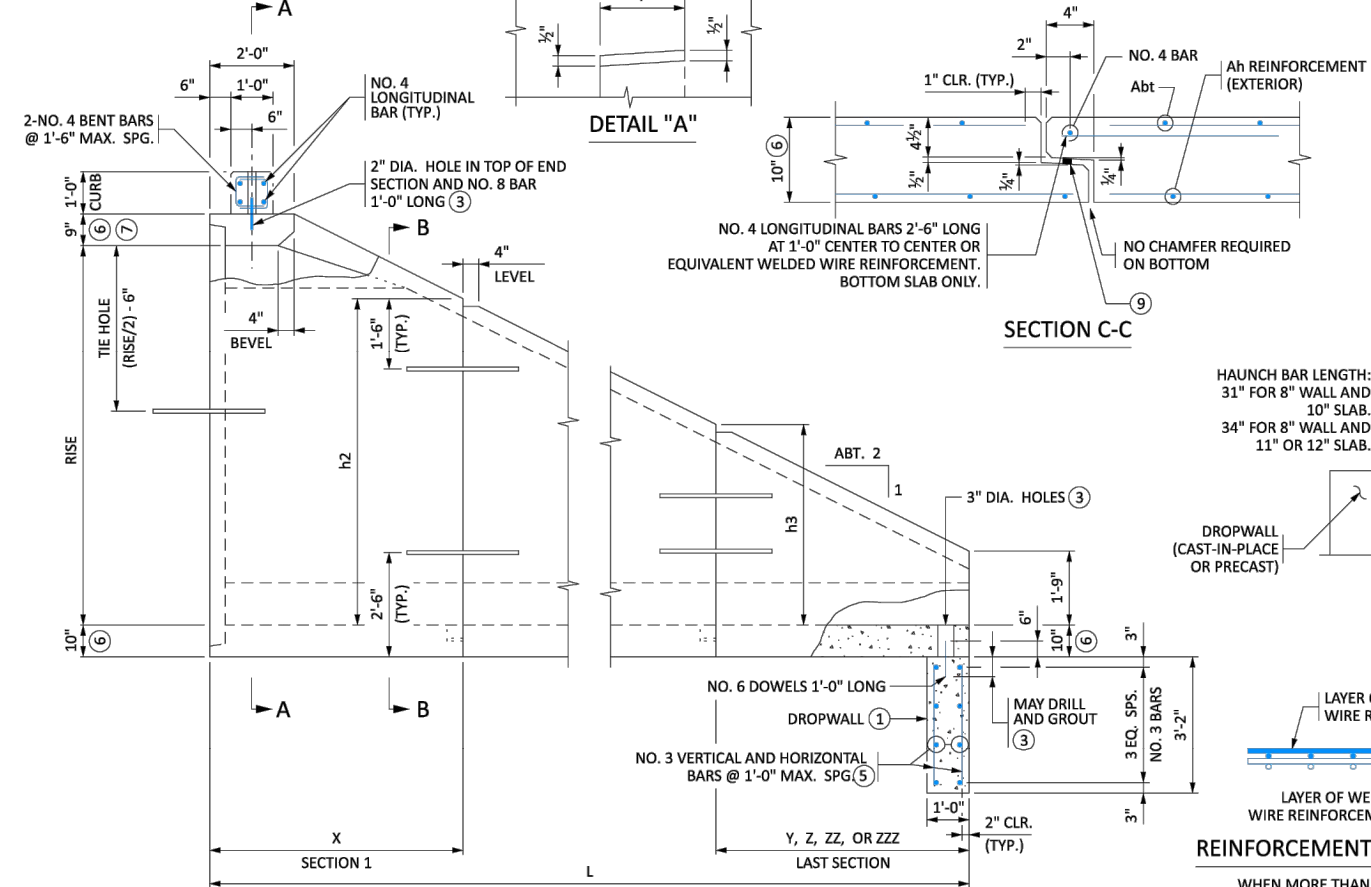
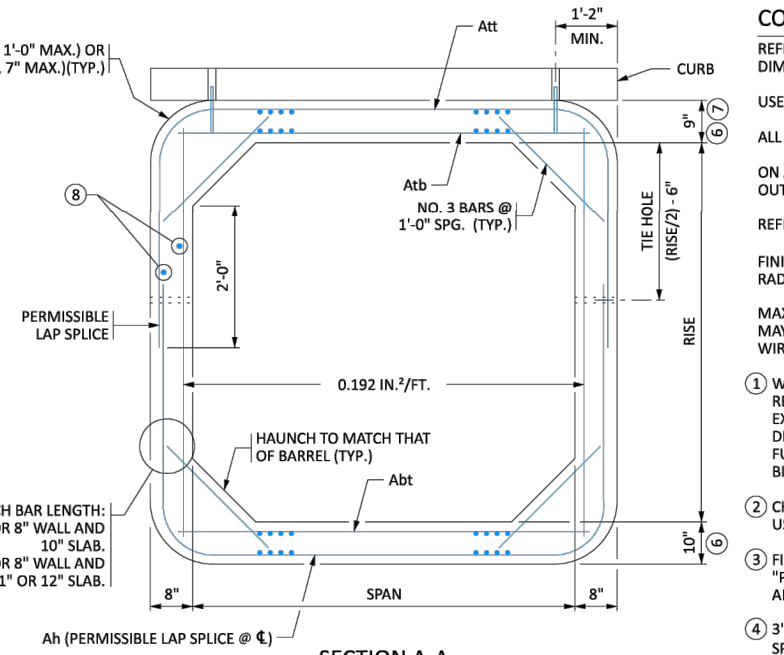
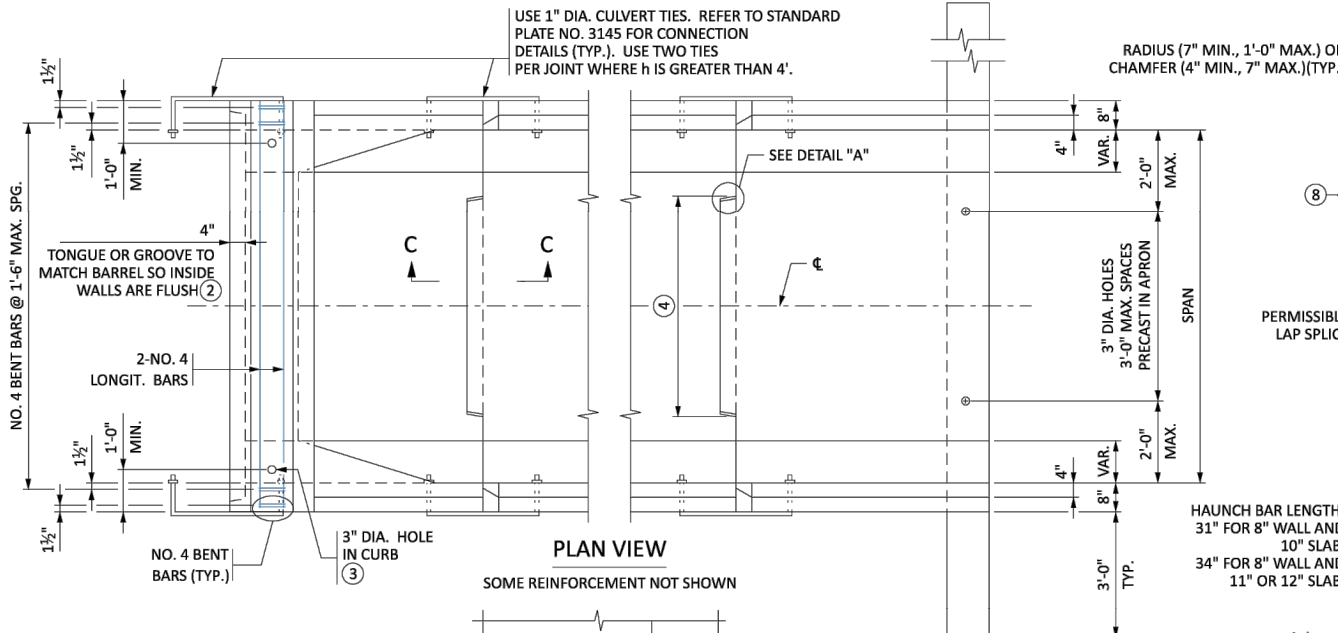
BARREL INFORMATION TABLE * * *

BARREL INFORMATION TABLE * * *																									
LOCATION	SIZE	CLASS	f _c (P.S.I.)	FILL HEIGHT RANGE (FT.)	DISTRIBUTION SLAB REQUIRED *	RECESSED TIE RODS REQUIRED * *	DIMENSIONS					WEIGHT (LBS./FT.)	WELDED WIRE REINFORCEMENT												
							SPAN (FT.)	RISE (FT.)	T _t (IN.)	T _b (IN.)	T _s (IN.)		As1			As2		As3		As4		As7		As8	
													AREA (IN ² /FT.)	LENGTH (FT.)	M (FT.)	AREA (IN ² /FT.)	LENGTH (FT.)	AREA (IN ² /FT.)	LENGTH (FT.)	AREA (IN ² /FT.)	LENGTH (FT.)	AREA (IN ² /FT.)	LENGTH (FT.)	AREA (IN ² /FT.)	LENGTH (FT.)
10TH ST STA: 1+72.86	8 X 5	3	5000	8-17	NO	NO	8	5	9	10	8	3525	0.51	11'-8"	2'-10"	0.65	8'-6"	0.68	8'-6"	0.20	5'-6"	0.24	6'-3"	0.24	6'-3"
10TH ST STA: 1+83.92	8 X 5	3	5000	8-17	NO	NO	8	5	9	10	8	3525	0.51	11'-8"	2'-10"	0.65	8'-6"	0.68	8'-6"	0.20	5'-6"	0.24	6'-3"	0.24	6'-3"

* ALL CLASS 1 CULVERTS WITH FILL HEIGHTS OF LESS THAN 2'-0" REQUIRE A DISTRIBUTION SLAB. IF A DISTRIBUTION SLAB IS NOT REQUIRED, INDICATE "NO" IN THIS BOX.

* * FOR PEDESTRIAN CULVERT APPLICATIONS HIDE-AWAY OR RECESSED TIE CONNECTIONS ARE REQUIRED, SEE STANDARD PLATE 3145. IF REQUIRED, INDICATE "YES" IN THIS BOX.

* * * BOX CULVERTS WITH SPANS FROM 6 TO 14 FT. ARE DESIGNED FOR HL-93 LIVE LOADS (AASHTO LRFD 3.6.2.1) NOT INCLUDING THE DESIGN LANE LOAD. BOXES WITH SPANS OF 16 FT. ARE DESIGNED FOR HL-93 LIVE LOADS INCLUDING THE DESIGN LANE LOAD.



- ### CONSTRUCTION NOTES
- REFER TO STANDARD FIG. 5-395.101(A) AND FIG. 5-395.101(B) FOR ADDITIONAL DIMENSIONS AND CONSTRUCTION NOTES.
- USE CONCRETE MIX NO. 3W82 WITH NO CALCIUM CHLORIDE ALLOWED.
- ALL END SECTIONS REQUIRE CURB ON LINTEL BEAM.
- ON ALL END SECTIONS FOR WATERWAYS, USE DROPWALLS ON INLET AND OUTLET ENDS.
- REFER TO STANDARD FIG. 5-395.115 FOR EMBANKMENT PROTECTION.
- FINISH ALL EXPOSED EDGES OF CONCRETE WITH $\frac{1}{2}$ " OR $\frac{3}{4}$ " CHAMFER OR RADIUS UNLESS OTHERWISE NOTED.
- MAXIMUM SIZE OF REINFORCEMENT BARS IS NO. 6, EXCEPT NO. 7 OR 8 BARS MAY BE USED FOR Att ON SPANS GREATER THAN 14'. THE MAXIMUM WELDED WIRE REINFORCEMENT SIZE IS W23 PER LAYER (MAXIMUM OF 2 LAYERS).
- WITH DOUBLE BOXES LOCATE DROPWALL JOINTS BETWEEN END SECTIONS. REFER TO STANDARD FIG. 5-395.111 FOR ALTERNATE DROPWALLS. LIMITS OF EXCAVATION FOR DROPWALL ARE APPROXIMATELY THE SAME AS DROPWALL DIMENSIONS. DROPWALL CONCRETE MIX IS 3G52, OR 3W82 IF PRECAST. FURNISHING AND INSTALLATION OF DROPWALL TO BE INCLUDED IN PRICE BID FOR END SECTIONS. DROPWALL NOT REQUIRED FOR NON-WATERWAY USE.
 - CHECK LOCATION TO DETERMINE WHETHER A TONGUE OR A GROOVE IS USED.
 - FILL HOLE WITH GROUT. PROVIDE GROUT IN ACCORDANCE WITH THE MnDOT APL "PRE-BLENDED, DRY, AIR-ENTRAINED, BAGGED MORTAR MIX FOR UTILITY/SEWER APPLICATIONS". PREVENT BLEEDOUT.
 - 3'-6" MIN. TONGUE AND 3'-7" MIN. GROOVE FOR CULVERTS WITH 6'-0" SPANS. 5'-0" MIN. TONGUE AND 5'-1" MIN. GROOVE FOR CULVERTS WITH SPANS GREATER THAN 6'-0". CENTER TONGUE AND GROOVE ON $\frac{1}{2}$ " OF EACH APRON JOINT. TONGUE AND GROOVE JOINT ON ALL THREE SIDES OF APRON IS PERMISSIBLE. REFER TO TONGUE AND GROOVE JOINT DETAIL ON STANDARD FIGURE 5-395.101(A) AND 5-395.101(B) WHEN THIS OPTION IS USED.
 - WELDED WIRE REINFORCEMENT OF EQUAL AREA MAY BE SUBSTITUTED FOR REBAR.
 - APRON TOP AND BOTTOM SLAB THICKNESS MAY BE 8" FOR CULVERTS WITH 6' SPANS ONLY. BOTTOM SLAB THICKNESS MAY BE INCREASED UP TO 2" MAX. PROVIDED CONCRETE COVER IS $1\frac{1}{2}$ " MIN., 2" MAX.
 - 10" MINIMUM TOP SLAB FOR 14' AND 16' SPANS.
 - PLACE LONGITUDINAL REINFORCEMENT PERPENDICULAR TO THE CULVERT SPAN WITH A MINIMUM OF 0.06 SQUARE INCHES PER PERIPHERAL FOOT ON ALL FACES OF THE BARREL.
 - REFER TO SPEC, 2412 FOR SEALANT REQUIREMENTS.

Att, Atb REINFORCEMENT		
SPAN (FT.)	Att (IN ² /FT.)	Atb (IN ² /FT.)
6	0.27	0.44
8	0.47	0.60
10	0.62	0.74
12	0.88	1.06
14	1.20	1.58
16	1.52	2.09

Abt REINFORCEMENT	
SPAN (FT.)	Abt (IN ² /FT.)
6-10	0.20
12	0.30
14	0.39
16	0.39

APRON DIMENSIONS & Ah REINFORCEMENT													
RISE FT.	L FT.	SECTION 1		h2	SECTION 2		h3	SECTION 3		h4	SECTION 4		h5
		X	Ah		Y	Ah		Z	Ah		ZZ	Ah	
4	8	8' (4')	0.192	1'-9" (3'-9")	(4')	(0.192)	(1'-9")						
5	10	6'	0.192	3'-9"	4'	0.192	1'-9"						
6	12	6'	0.192	4'-9"	6'	0.192	1'-9"						
7	14	6'	0.192	5'-9"	8' (4')	0.192	1'-9" (3'-9")	(4')	(0.192)	(1'-9")			
8	16	6'	0.20	6'-9"	6'	0.192	3'-9"	4'	0.192	1'-9"			
9	18	6'	0.29	7'-9"	6'	0.20	4'-9"	6'	0.192	1'-9"			
10	20	6'	0.42	8'-9"	6'	0.29	5'-9"	8' (4')	0.192	1'-9" (3'-9")	(4')	(0.192)	(1'-9")
11	22	6'	0.60	9'-9"	6'	0.42	6'-9"	6'	0.192	3'-9"	4'	0.192	1'-9"
12	24	6'	0.78	10'-9"	6'	0.60	7'-9"	6'	0.20	4'-9"	6'	0.192	1'-9"
13	26	6'	1.03	11'-9"	6'	0.78	8'-9"	6'	0.28	5'-9"	8' (4')	0.192	1'-9" (3'-9")
14	28	6'	1.38	12'-9"	6'	1.03	9'-9"	6'	0.40	6'-9"	6'	0.192	3'-9"

NOTE: Ah is AREA OF REINFORCEMENT PER FOOT OF LENGTH (IN²/FT.) VALUES IN () MAY BE USED FOR END SECTIONS WITH SPANS OF 14' AND 16' ONLY.

REVISION: AUGUST 21, 2024

APPROVED: MARCH 24, 2011

Nancy Dubenberger
STATE BRIDGE ENGINEER

SIDE ELEVATION

REV. NO.	DATE	REVISION DESCRIPTION	BY	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	CERTIFIED BY: _____ NAME: _____ LIC. NO.: _____ DATE _____	STATE PROJ. NO. ____ (T.H.) STA. ____ + ____	TITLE: PRECAST CONCRETE END SECTION TYPE I - SINGLE OR MULTIPLE BARREL FOR SKEWS UP TO 7½"	DES: _____ CHK: _____	DR: _____ CHK: _____	APPROVED: _____	BRIDGE NO. _____
SHEET NO. ____ OF ____ SHEETS											

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Eric Leagfield
ERIC LEAGFIELD
LIC. NO. 40430 DATE 02/21/2025

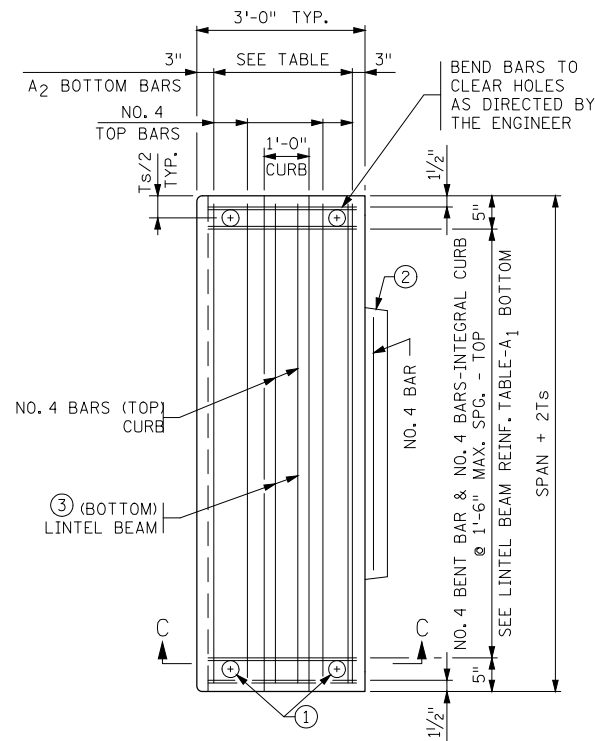


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AEB			
CHECKED			
EEL			
CLIENT PROJ. NO.	017.133932		

CITY OF NEW BRIGHTON
10TH STREET CULVERT REPLACMENT
MNDOT STANDARD PLAN 5-395
BOX CULVERT DETAILS

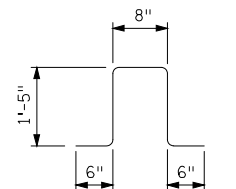
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C1.04



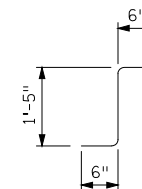
PLAN VIEW OF SQUARE LINTEL BEAM

LINTEL BEAM BOTTOM REINFORCEMENT		
SPAN (FT.)	A ₁	A ₂
6	NO. 4 @ 1'-2"	NO. 4 @ 9 1/2"
8	NO. 4 @ 8"	NO. 5 @ 8"
10	NO. 5 @ 8"	NO. 6 @ 7 1/2"
12	NO. 5 @ 6"	NO. 6 @ 6"
14	NO. 6 @ 6"	NO. 7 @ 6"
16	NO. 6 @ 6"	NO. 7 @ 6"

NOTE: MAXIMUM BAR SPACING GIVEN,
REDUCE AS NECESSARY

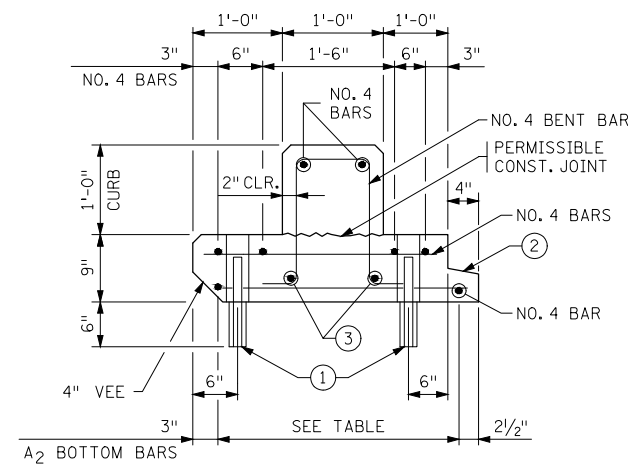


NO. 4 BENT BAR



NO. 4 BENT BAR
ALTERNATE

④
2 REQUIRED



SECTION C-C

INTEGRAL CURB WITH TONGUE.
ADDITIONAL REINFORCEMENT IN TONGUE NOT SHOWN.

CONSTRUCTION NOTES

SEE STANDARD FIG. 5-395.101(A) AND FIG. 5-395.101(B) FOR ADDITIONAL DIMENSIONS AND CONSTRUCTION NOTES.

ALL END SECTIONS REQUIRE CURB ON LINTEL BEAM.

GROUT CONSISTS OF 1 PART CEMENT AND 2 PARTS SAND. USE TYPE 1A AIR ENTRAINED PORTLAND CEMENT. GROUT MIX MAXIMUM SLUMP IS 4".

- 3" DIA. HOLE THROUGH LINTEL BEAM AND 2" DIA. HOLE IN TOP OF WALL SECTION. PLACE NO. 8 DOWEL, 1'-0" LONG, IN HOLE AND FILL HOLE WITH GROUT.
- CHECK THE LOCATION TO DETERMINE WHETHER A TONGUE OR A GROOVE IS USED. TONGUE AND GROOVE TO TERMINATE AT HAUNCH.
- FOR SPANS UNDER 10'-0" USE NO. 8 BARS. FOR SPANS OF 10'-0" TO 12'-0" USE NO. 9 BARS. FOR 14'-0" AND 16'-0" SPAN, USE NO. 10 BARS.
- ALTERNATE BAR BEND MAY BE USED FOR NO. 4 BENT BAR.

CONSTRUCTION NOTES

THIS PLAN SHEET IS FOR CULVERT EMBANKMENT PROTECTION ONLY. REFER TO THE GRADING PLANS FOR ADDITIONAL RIPRAP OR OTHER SCOUR PROTECTION MEASURES.

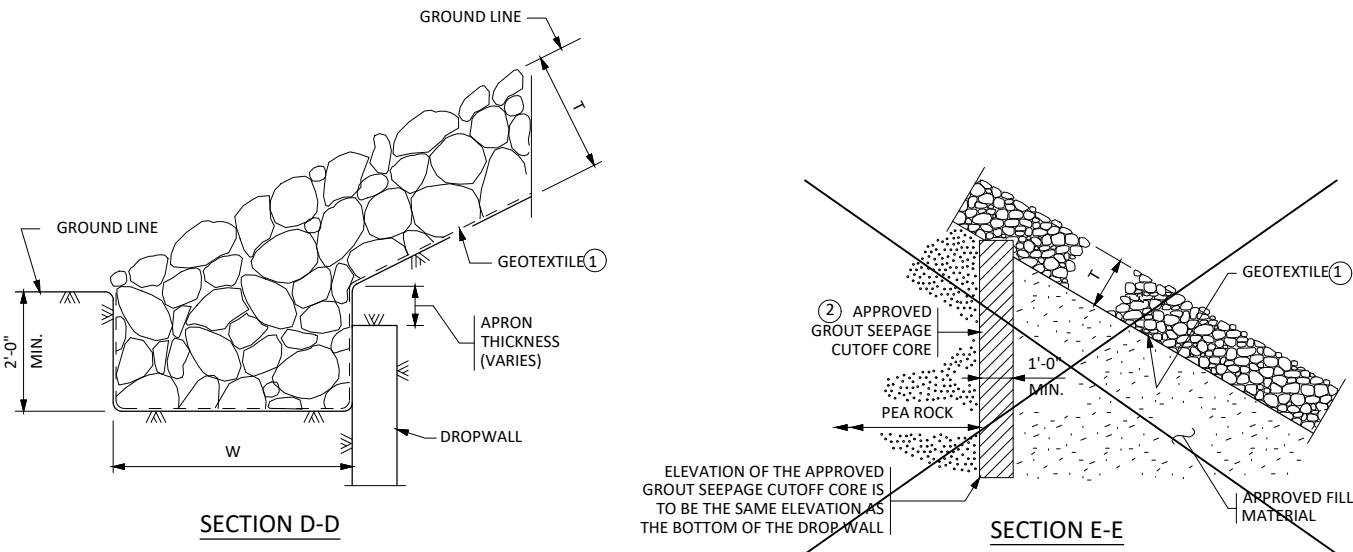
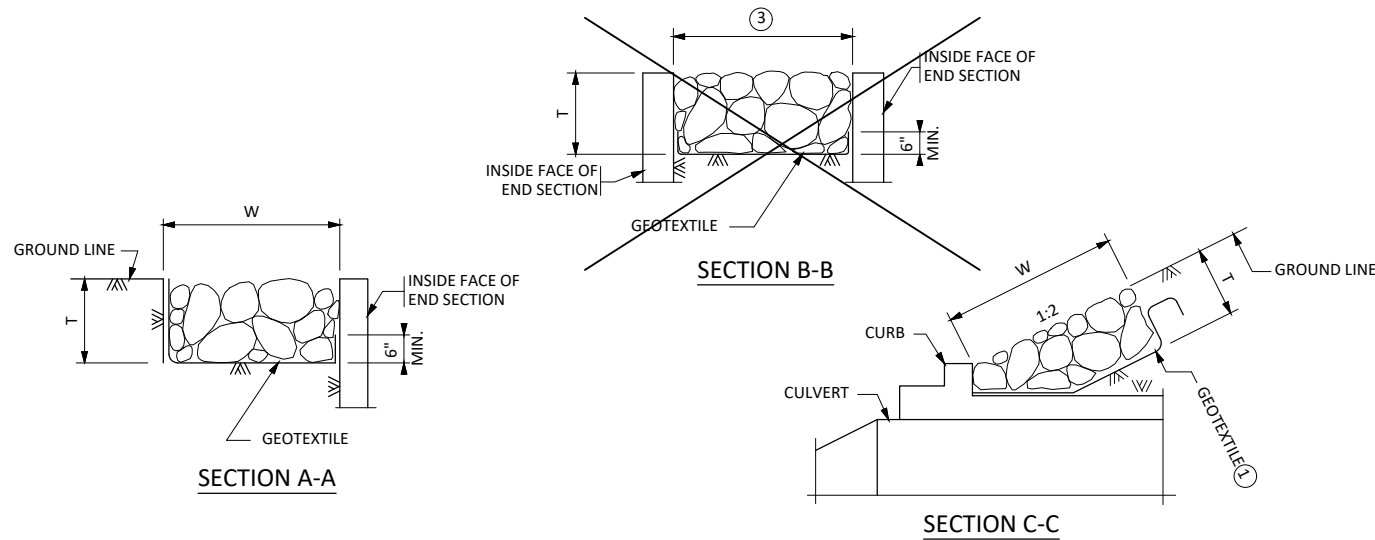
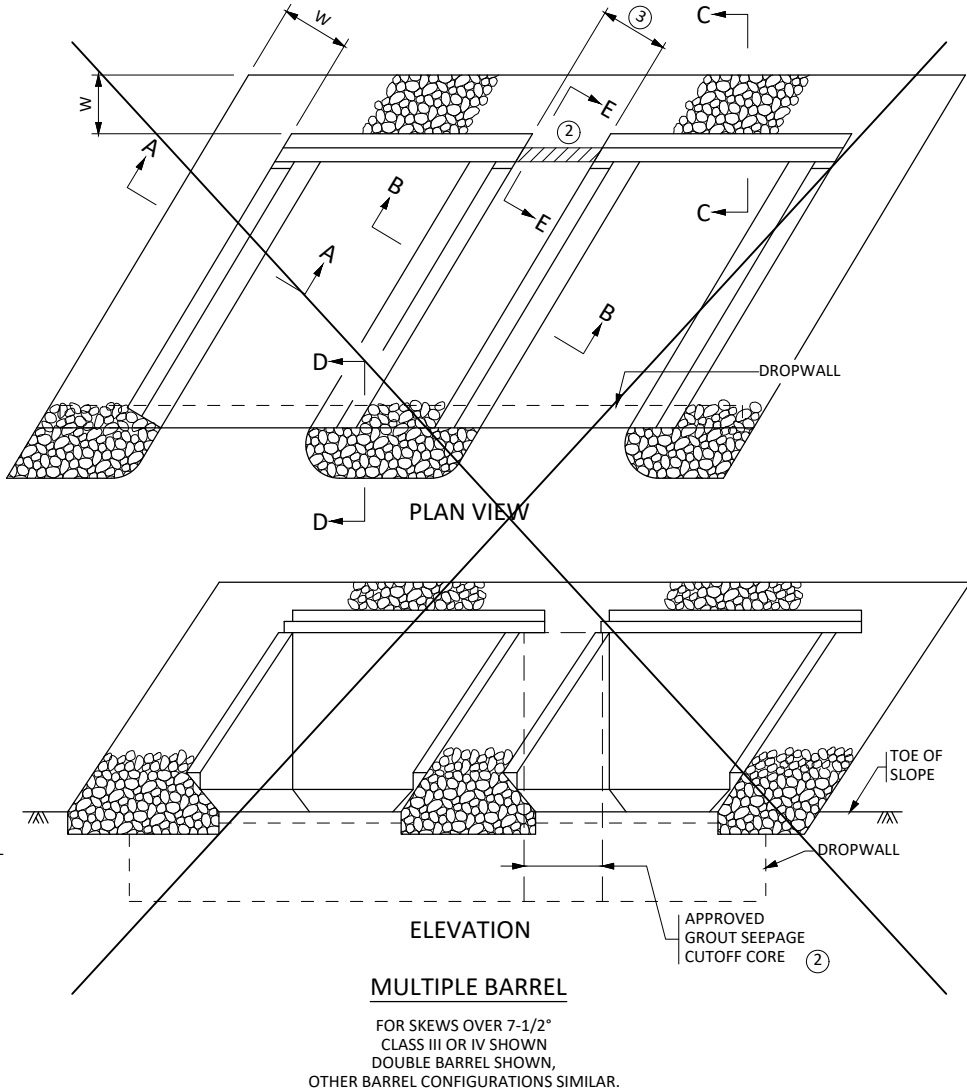
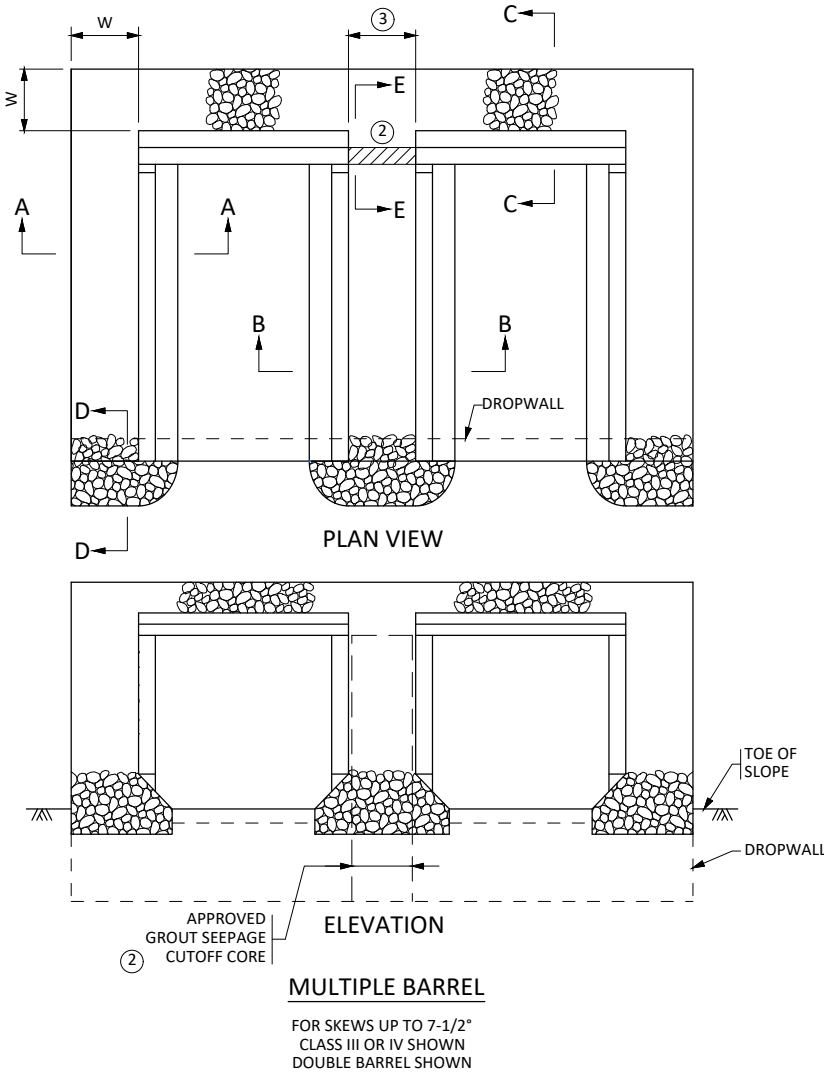
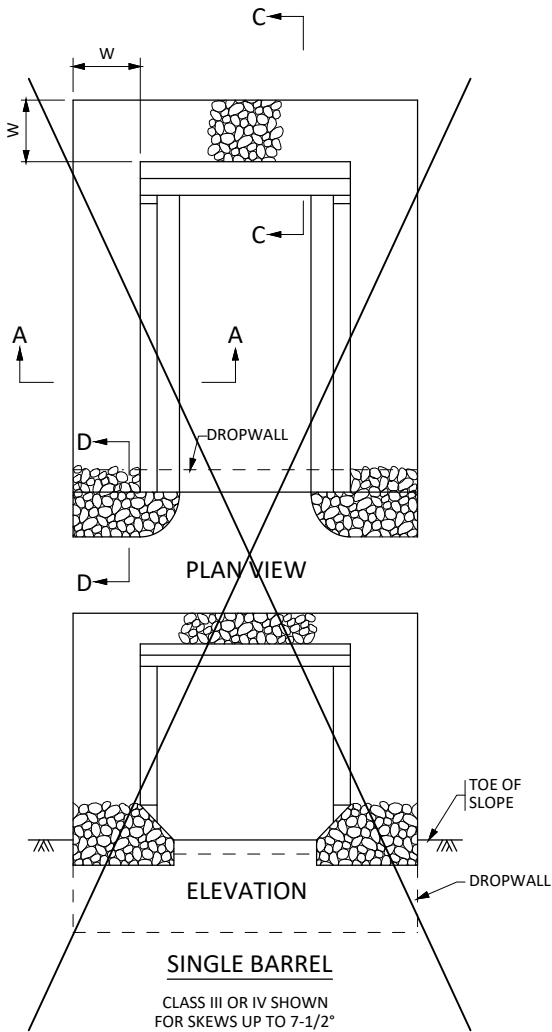
PROVIDE RIPRAP IN ACCORDANCE WITH SPECS. 2511 AND 3601.

EMBANKMENT PROTECTION, INCLUDING MATERIAL PLACED BETWEEN BARRELS THAT ARE LESS THAN 2'-0" APART, IS INCLUDED IN THE PRECAST CONCRETE BOX CULVERT PAY ITEMS.

- ① PROVIDE TYPE 7 GEOTEXTILE IN ACCORDANCE WITH SPEC. 3733. PROVIDE GEOTEXTILE STRIPS CONTINUOUS WITHOUT OVERLAPS, EXCEPT FOR THE TOP STRIP, WHICH SHOULD SHINGLE VERTICAL STRIPS. BURY THE TOP EDGE TO PREVENT UNDERMINING.
- ② IF THE DISTANCE BETWEEN MULTIPLE BARRELS IS LESS THAN 2'-0" USE EITHER PEA ROCK OR LEAN MIX BACKFILL (SPEC. 2520) BETWEEN THE CULVERTS AS APPROVED BY THE ENGINEER. IF PEA ROCK IS USED PROVIDE APPROVED GROUT SEEPAGE CUTOFF CORE, MINIMUM 12" THICK BETWEEN THE CULVERT'S TWO ENDS AND PROVIDE CLASS I GROUTED RIPRAP IN LIEU OF CLASS III RIPRAP.
- ③ REFER TO THE GENERAL PLAN AND ELEVATION SHEET FOR THE DISTANCE BETWEEN BARRELS OF ADJACENT BOXES.

RIPRAP CLASS

RIPRAP CLASS	RIPRAP CLASS	T	W
	III	1'-6"	3'-0"
	IV	2'-0"	4'-0"



EROSION CONTROL LEGEND

- MS

MACHINE SLICED SILT FENCE

PROJECT LIMITS
- FLOATING SILT CURTAIN
- ROLLED EROSION CONTROL PREVENTION CAT 25, W/ SEED MIX 35-241
- CLASS IV RIP RAP
- BITUMINOUS REMOVAL
- LIMITS OF DISTURBANCE
- EXISTING DRAINAGE
- PROPOSED DRAINAGE

- NOTES:
- CONSTRUCT RAPID STABILIZATION, METHOD 3 ON ALL DISTURBED TURF AREAS.
 - THERE IS NO NET INCREASE IN IMPERVIOUS SURFACE FROM EXISTING TO PROPOSED CONDITIONS
 - TOTAL AREA OF DISTURBANCE 10,311 SF

Disturb Pervious Surface	4220	SF
Existing Impervious Surface	10448	SF
Proposed Impervious Surface	10448	SF
New Impervious Surface	0	SF
Milled/Overlaid Impervious Surface	5300	SF
Fully Reconstructed Impervious Surface	5148	SF



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Brent H. Johnson
BRENT H. JOHNSON
LIC. NO. 20378 DATE 02/21/2025

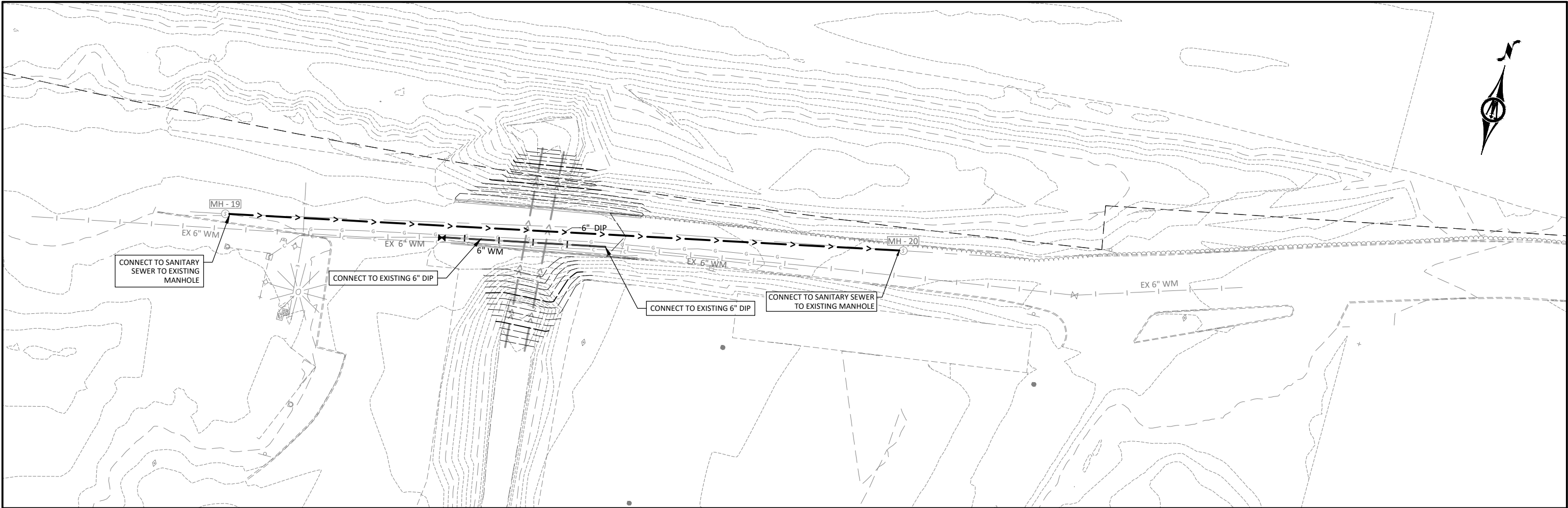


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www.bolton-menk.com

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CHECKED	BHJ		
CLIENT PROJ. NO.	017.133932		

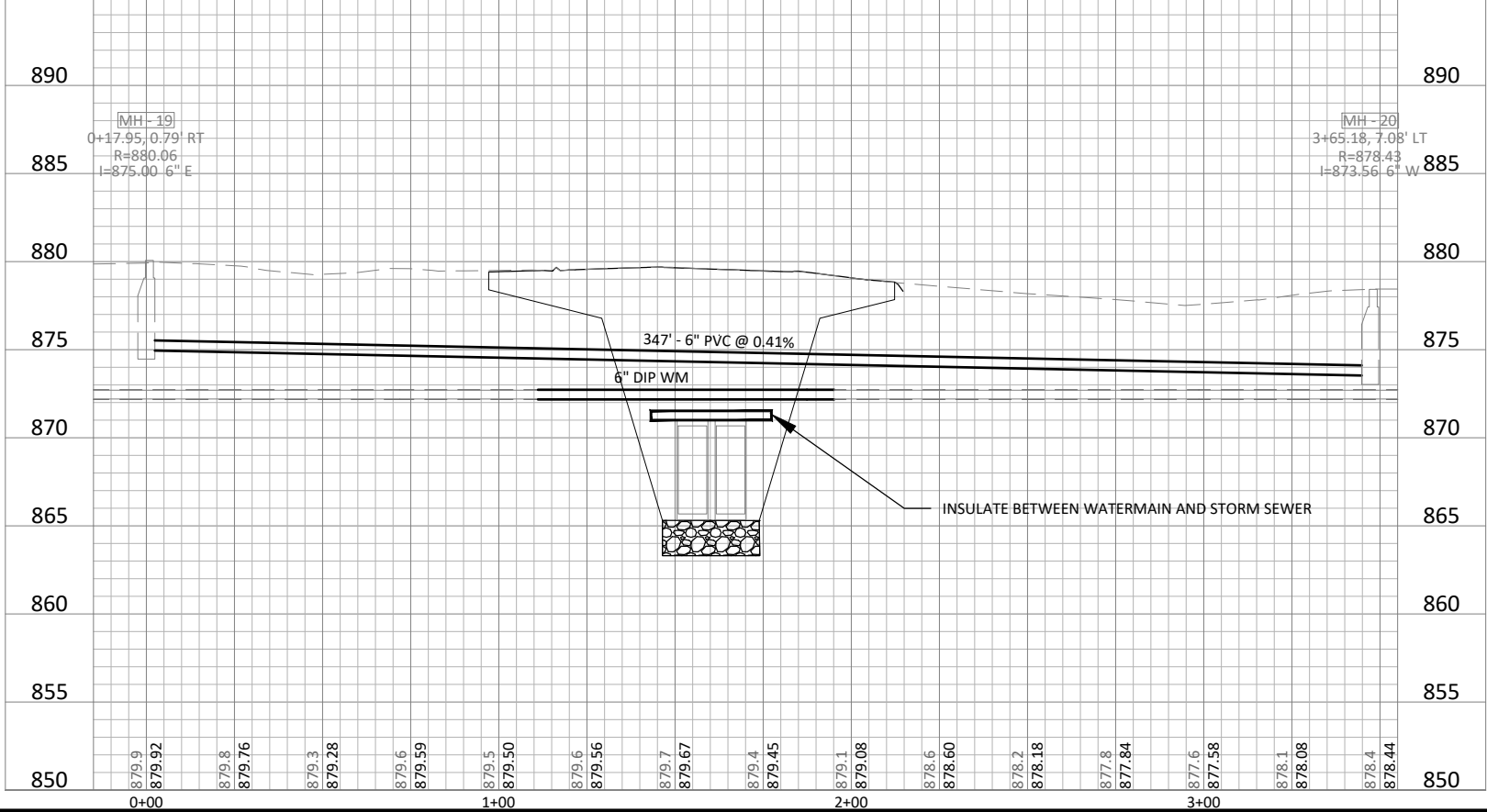
CITY OF NEW BRIGHTON, MINNESOTA
10TH STREET CULVERT REPLACEMENT
EROSION CONTROL PLAN
EROSION CONTROL PLAN

SHEET
C2.01

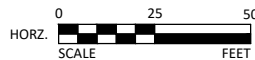


SANITARY SEWER AND WATERMAIN NOTES:

1. ALL WATERMAIN SHALL BE DIP, CLASS 52
2. ALL SANITARY SEWER PIPE SHALL BE SDR 35 UNLESS OTHERWISE NOTED
3. INSULATE ALL WATERMAIN CROSSINGS WHEN SPARATION IS LESS THAN 24 INCHES
4. INSULATE ALL WATERMAIN WHEN COVER IS LESS THAN 7 FEET PER DETAIL
5. ALL FITTINGS SHALL BE DUCTILE IRON MEETING AWWA C151
6. WATERMAIN JOINTS SHALL BE TIED OR USE FIELD LOK 350 OR APPROVED EQUAL GASKETS



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Brent H. Johnson
BRENT H. JOHNSON
LIC. NO. 20378 DATE 02/21/2025



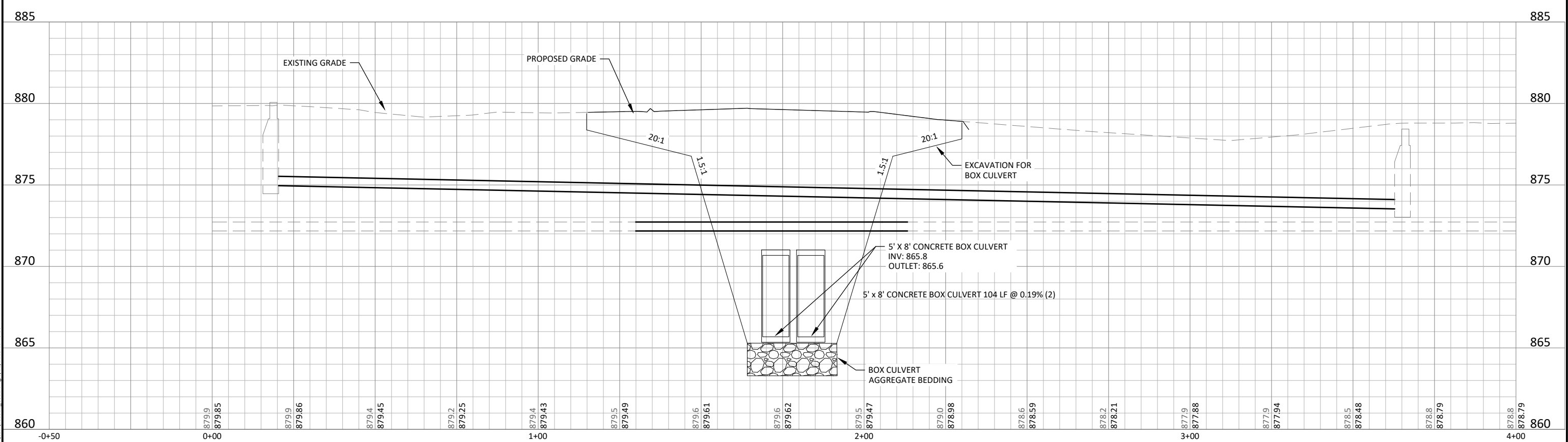
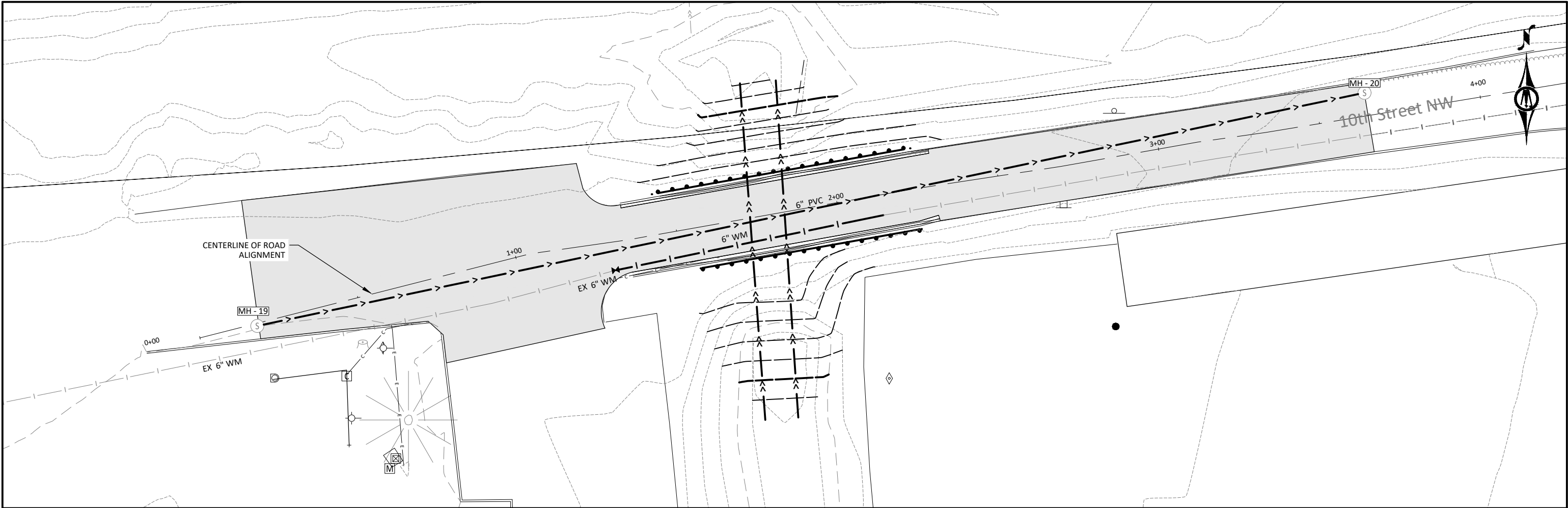
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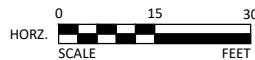
CITY OF NEW BRIGHTON, MINNESOTA
10TH STREET CULVERT REPLACEMENT
C4 - UTILITIES
SANITARY AND WATERMAIN

SHEET

C4.01



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Brent H. Johnson
BRENT H. JOHNSON
LIC. NO. 20378 DATE 02/21/2025



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CITY OF NEW BRIGHTON, MINNESOTA
10TH STREET CULVERT REPLACEMENT
STORM SEWER PLAN & PROFILE
BOX CULVERT

SHEET
C5.01

- GENERAL NOTES:
- FOR ALL ITEMS NOT SPECIFIED UNDER THIS CONTRACT, THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN FOR BOX CULVERT CONSTRUCTION.

- KEYNOTES: (X)
- BED CULVERT WITH MNDOT 3149 FINE FILTER AGGREGATE BEDDING MATERIAL. USE OF EXISTING ON-SITE GRANULAR MATERIAL ONLY ALLOWED WITH APPROVAL FROM THE ENGINEER.
 - DOUBLE CONNECTION TIE ROD PER MNDOT STANDARD PLATE NO. 3145G.
 - EST. MAX FILL DEPTH = 8.50'

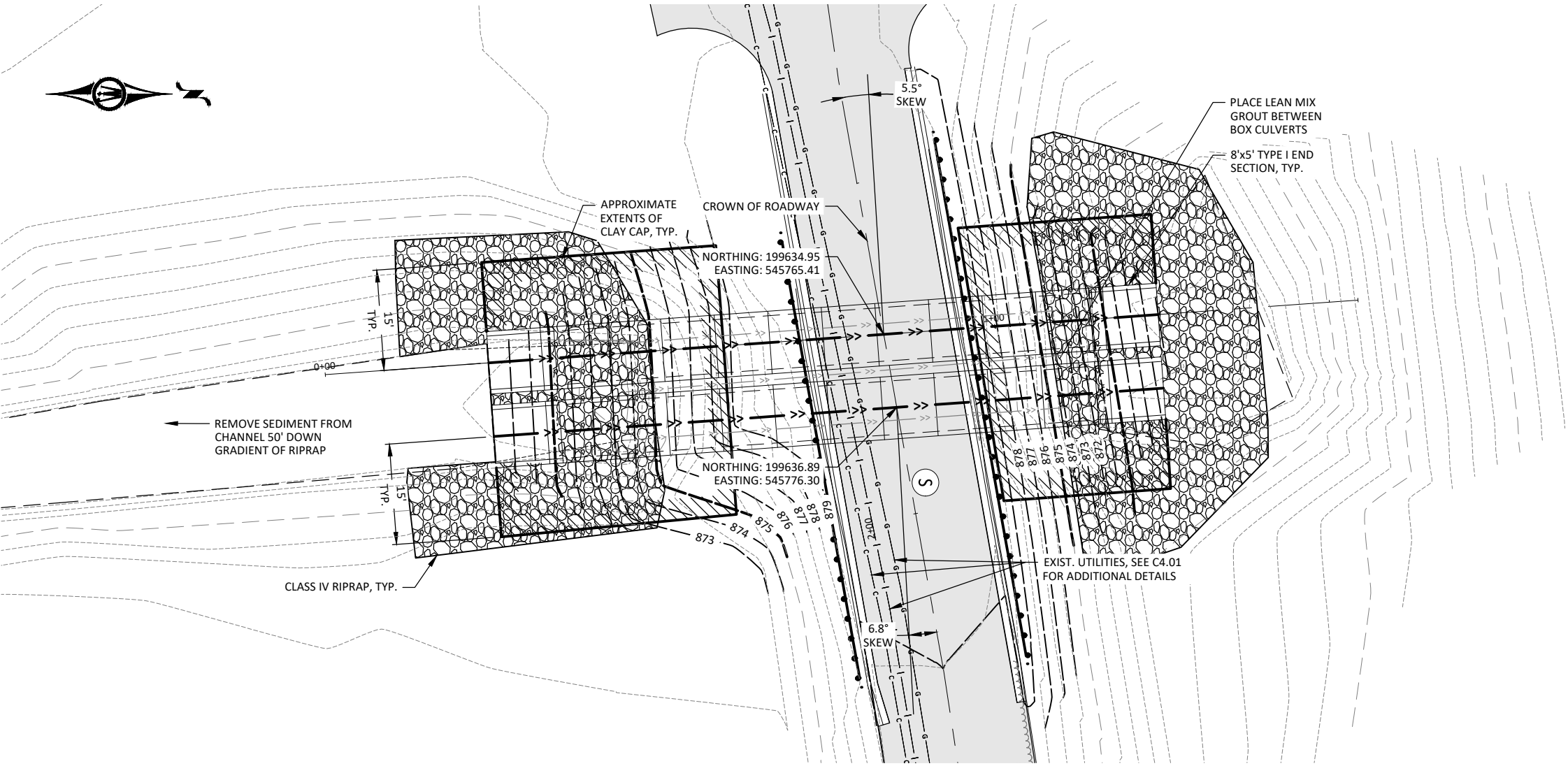
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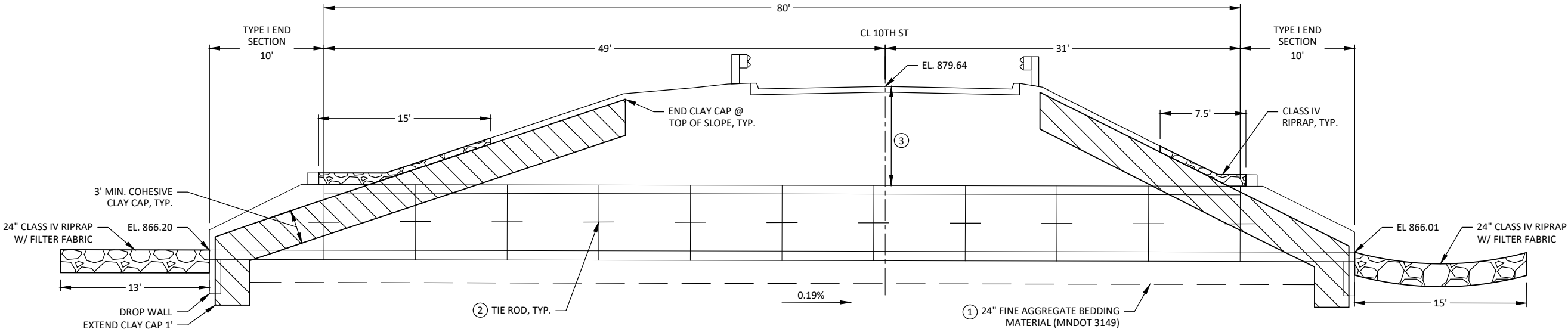
RIP RAP



CLAY CAP



GENERAL PLAN
1" = 10'



GENERAL PROFILE
1" = 5'

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Eric Leagfeld
ERIC LEAGFELD
LIC. NO. 40430 DATE 02/21/2025

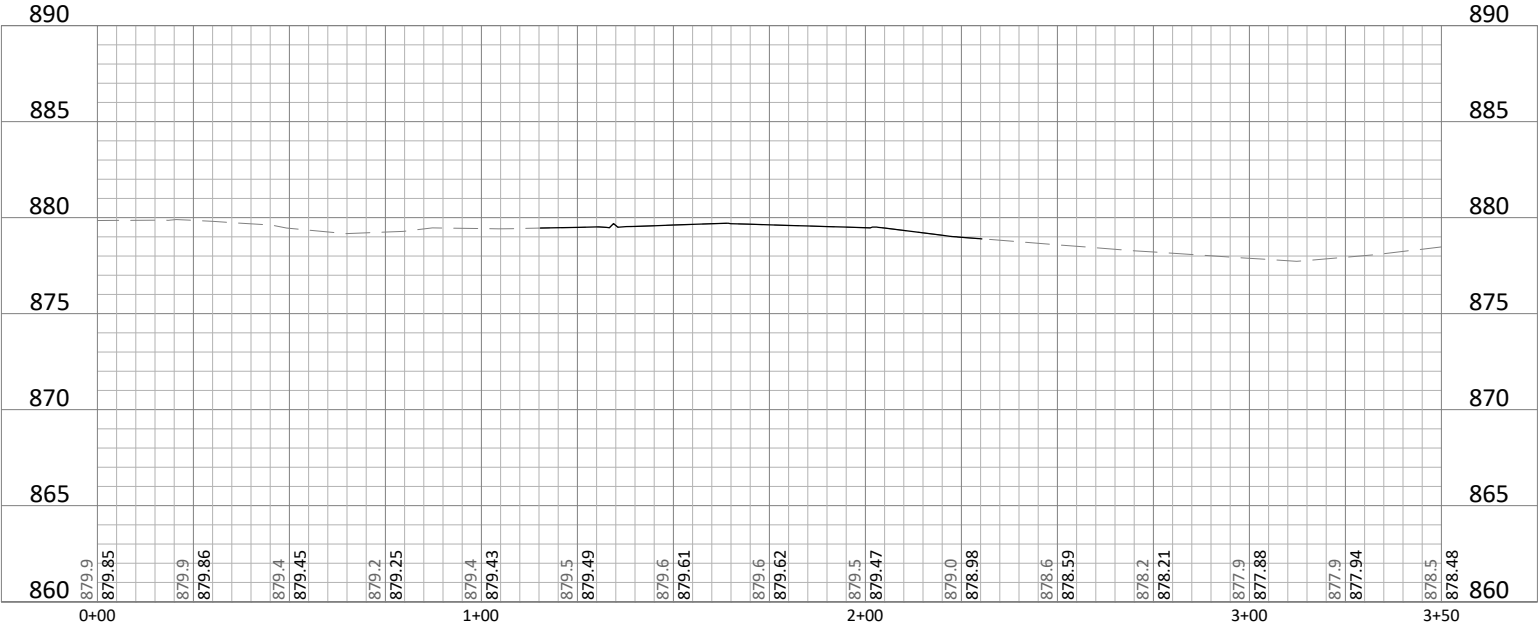
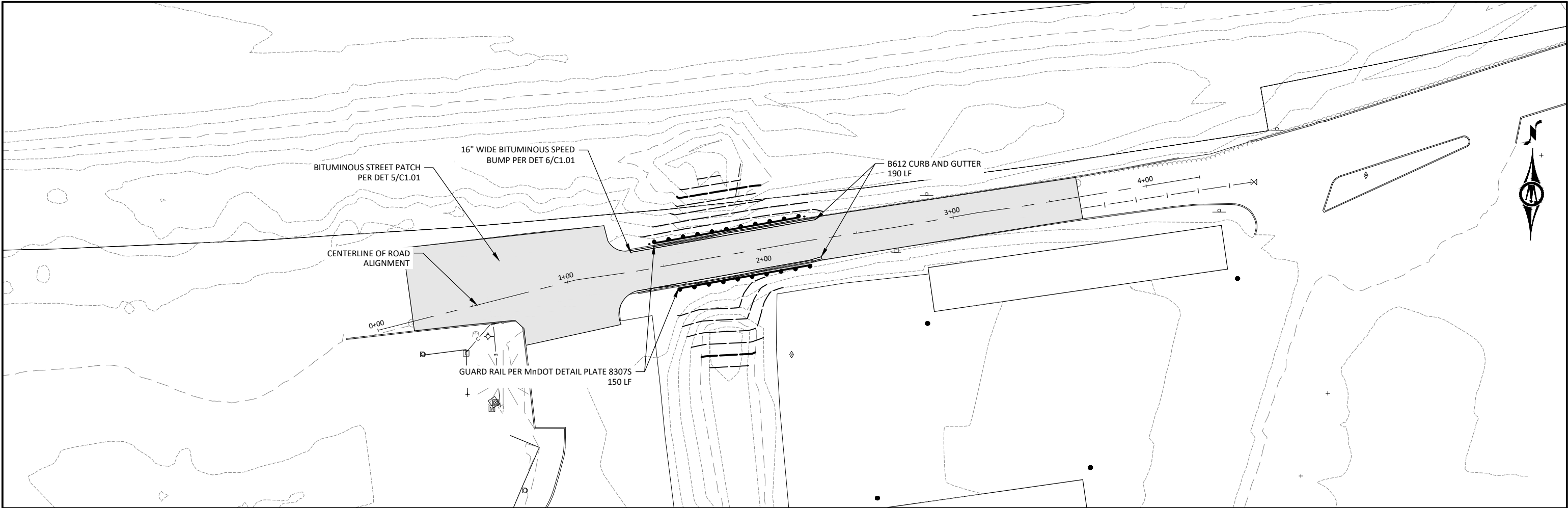


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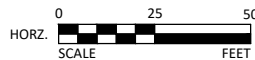
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CITY OF NEW BRIGHTON
10TH STREET CULVERT REPLACEMENT
STORM SEWER PLAN & PROFILE
BOX CULVERT

SHEET
C5.02



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Brent H. Johnson
BRENT H. JOHNSON
LIC. NO. 20378 DATE 02/21/2025



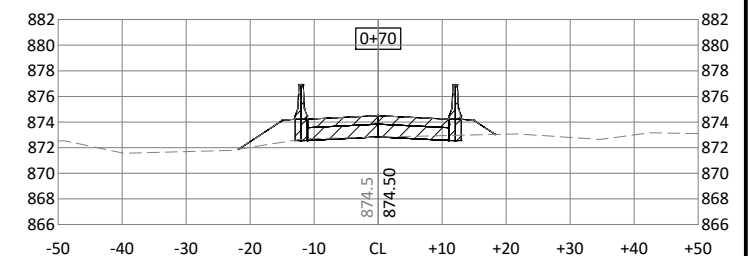
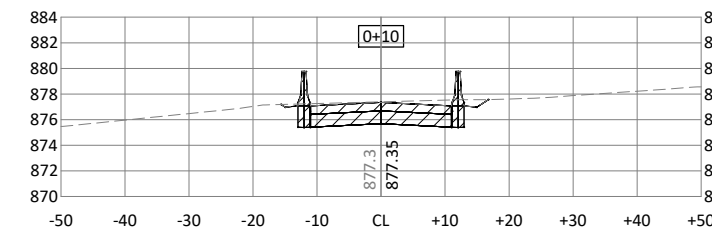
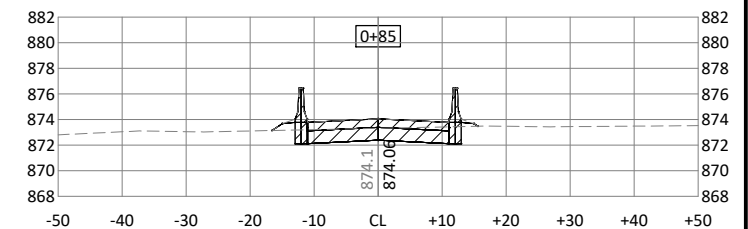
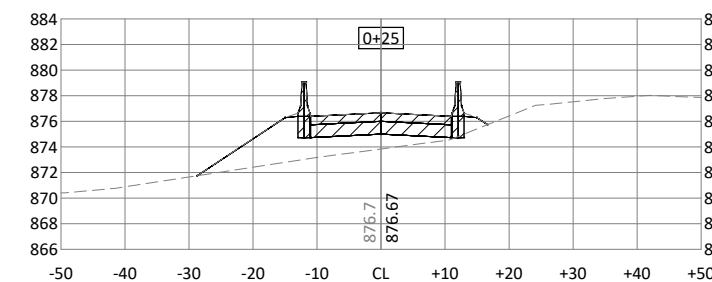
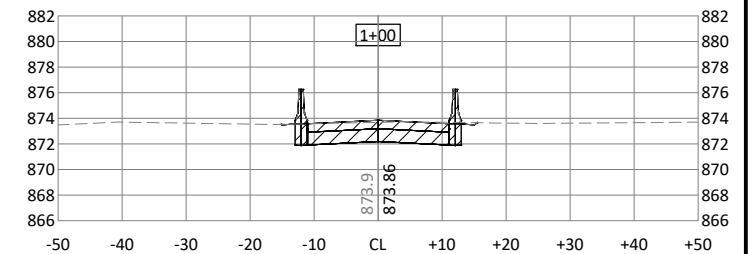
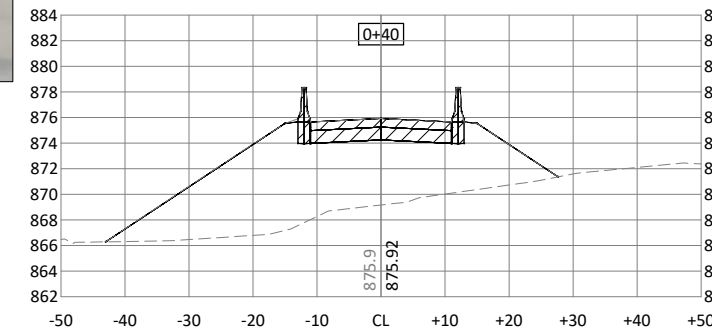
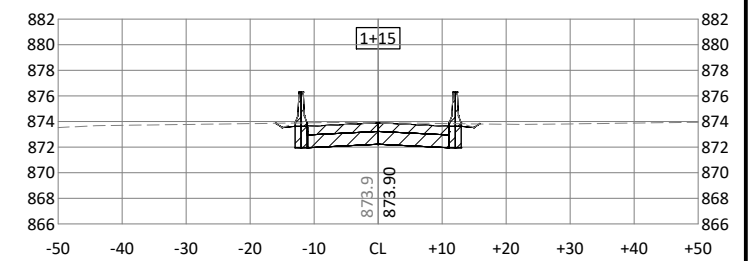
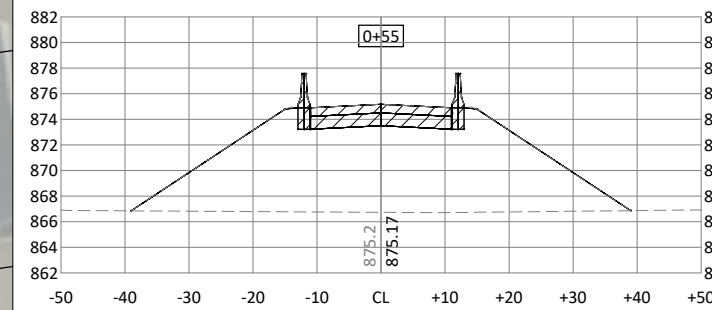
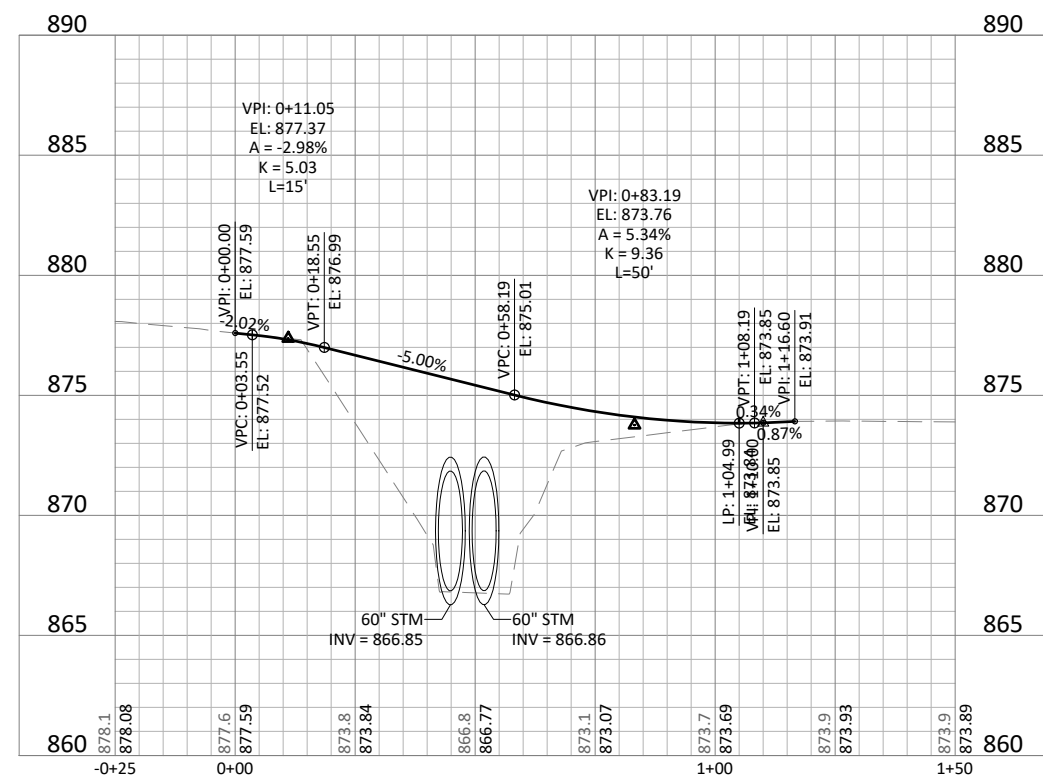
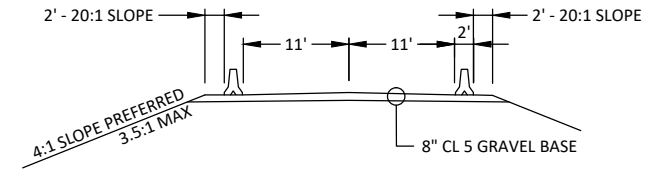
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CITY OF NEW BRIGHTON, MINNESOTA
10TH STREET CULVERT REPLACEMENT
C6 - STREET PLAN & PROFILE
STREET IMPROVEMENTS

SHEET

C6.01



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BRENT H. JOHNSON
LIC NO. 20378 DATE 02/21/2025



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CITY OF NEW BRIGHTON, MINNESOTA
10TH STREET CULVERT REPLACEMENT
TRAFFIC CONTROL PLANS
TRAFFIC BYPASS PLAN

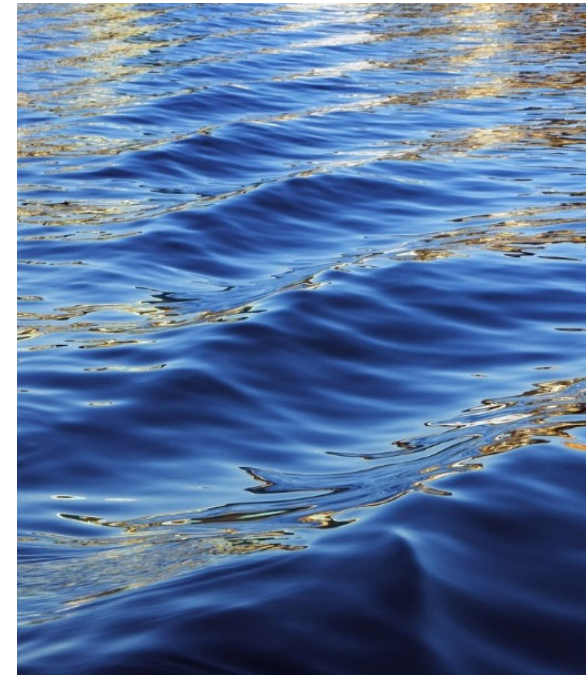
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C7.01

10th Street NW County Ditch 2

Implementation Stormwater Resilience Grant

Craig Schlichting,
Director Community Assets and Development



History of Flooding

1. July 23-24, 1987 average of 6.75 inches over watershed of RC Ditch 2 in approximately 6 hours from 7PM to 1AM (150-yr frequency)₁
2. July 2, 1997 nearly 5 inches in 3 hours (85-yr frequency)₂
3. July 16, 2011 approximately 4.5 inches in 2 hours (100-yr frequency)₃



7-23-87
POLY VILLAGE APTS.



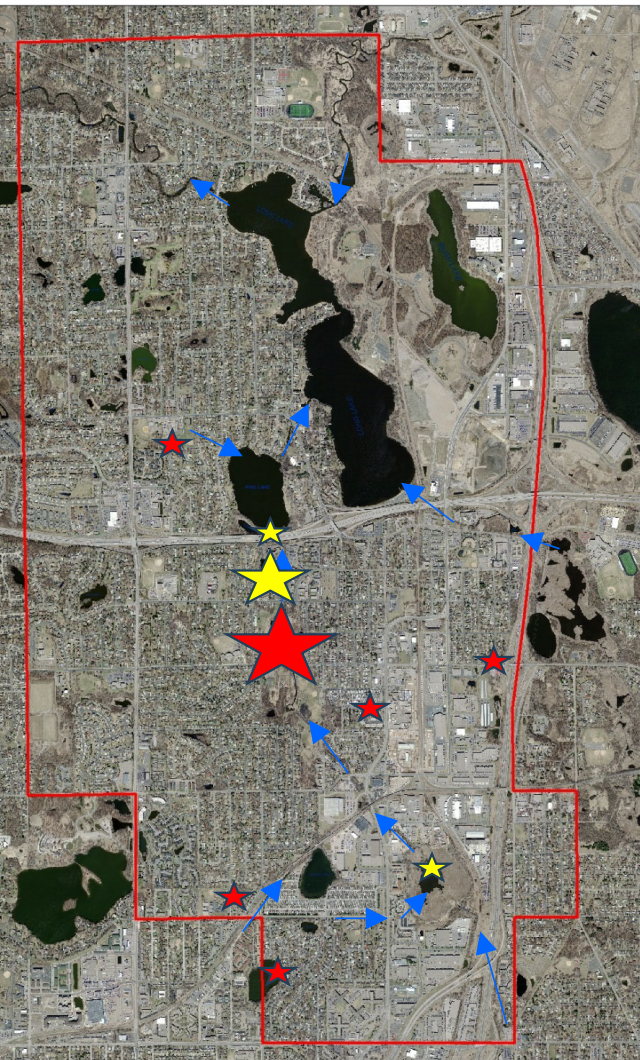
7-23-87
POLY VILLAGE APTS.

2011 at Garden View



Collapsed CMP Replacement





July 16, 2011 Storm Overview/Response Areas

- Basic Water Management Project Petition to RCWD in 2013
 - Cities of New Brighton, Saint Anthony & Roseville petitioned the RCWD to pursue multi-purpose projects to address flood storage and flow capacity of the Ramsey County Ditches 2/3/5 System
- **RCWD awarded \$3,000,000 Targeted Watershed Demonstration grant from BWSR Clean Water Fund in 2014**
 - **Hansen Park Improvement (\$4.8M)**
- Implementation of Hansen Park Comprehensive Water Management Project began in 2015 with direct collaboration between RCWD and City staff





Garden View Apartments (Planning Grant Complete)



Planning Grants for Stormwater,
Wastewater, and Community Resilience
Application
FY 2024

Doc Type: Grant Application

Instructions: Read the complete *Request for Proposal (RFP)* and other associated documents before submitting this application.

Check the [SWIFT Supplier Portal](#) and the Minnesota Pollution Control Agency (MPCA) [Planning Grants for SWC Resilience](#) webpage for the most recent updates.

Applications are due no later than 4:00 p.m. Central Time (CT) on Thursday, December 14, 2023.

Submit application, workplan and budget (as Microsoft Word and Excel documents) per the instructions listed in Section 7 and 8 of the RFP.

1. Project information

Organization name:	City of New Brighton		
Organization address:	803 Old Highway 8 NW Suite 1		
City:	New Brighton	State:	MN
Zip code:	55112	County:	Ramsey
Contact name:	Craig Schlichting	Title:	Director of Community Assets and Development
Phone:	651-638-2056	Email address:	Craig.Schlichting@newbrightonmn.gov
Organization type:	☐ Tribal government ☒ Local/Regional government (plus select one below) ☒ City		

Planning Grant
\$103,842
Cash/in-kind match
\$11,538



Permit Number
2024-3525

Public Waters Work Permit

Expiration Date: 02/27/2028

Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made part hereof by reference, PERMISSION IS HEREBY GRANTED to the applicant to perform actions as authorized below.

Project Name: New Brighton - 10th Street NW Culvert Replacement	County: Ramsey	Watershed: Mississippi River - Twin Cities	Resource: Ditch: Unnamed Stream (M-059-000.5-001)
Purpose of Permit: Roadway/Pathway Fill (temporary), Culvert Construction/Modification/Replacement		Authorized Action: Remove existing (3) 48-inch diameter corrugated steel pipe culverts on Ramsey County Ditch 2 / Unnamed Stream (M-059-000.5-001) at 10th Street NW; Replace existing culverts with (2) 5-foot by 8-foot reinforced concrete box culverts; Construct temporary bypass crossing upstream of 10th Street NW with (2) 60-inch diameter smooth wall pipe culverts; All in accordance with the permit application, associated reports, and plans received 2/27/2025, and the conditions of this permit.	
Permittee: CITY OF NEW BRIGHTON CONTACT: SCHLICHTING, CRAIG, (651) 638-2056 803 OLD HIGHWAY 8 NW NEW BRIGHTON, MN 55112 (651) 638-2059		Authorized Agent: BOLTON & MENK CONTACT: BOHKS, BRANDON, (507) 469-4626 3507 HIGH POINT DRIVE NORTH BLDG. 1 SUITE E130 OKADALE, MN 55128 (651) 704-9970 x3173	
Property Description (land owned or leased or where work will be conducted): UTM zone 15N, 483766m east, 4990081m north (centroid), NWNW of Section 29, T30N, R23W, UTM zone 15N, 483769m east, 4990105m north, NWNW of Section 29, T30N, R23W			
Issued Date: 02/27/2025	Effective Date: 02/27/2025	Expiration Date: 02/27/2028	
Authorized Issuer: Daniel Scollan	Title: Area Hydrologist	Email Address: daniel.scollan@state.mn.us	Phone Number: 651-259-5732

This permit is granted **subject to** the following **CONDITIONS**:

APPLICABLE FEDERAL, STATE, OR LOCAL REGULATIONS: The permittee is not released from any rules, regulations, requirements, or standards of any applicable federal, state, or local agencies; including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning.

NOT ASSIGNABLE: This permit is not assignable by the permittee except with the written consent of the Commissioner of Natural Resources.

Floodplain w/ Hansen, Garden View and 694)

Source	Garden View Apartments HWL (ft NAVD88)
FEMA ¹⁴ FIRM Panel 27123C0004G/ FIS #27123CV000B	879.60
Existing Condition with Model Corrections	876.01
Alternative 1: Increase Capacity at 10th Street Culverts	874.69
Alternative 2: Increase Capacity at 10th St and I-694 Culverts	873.03



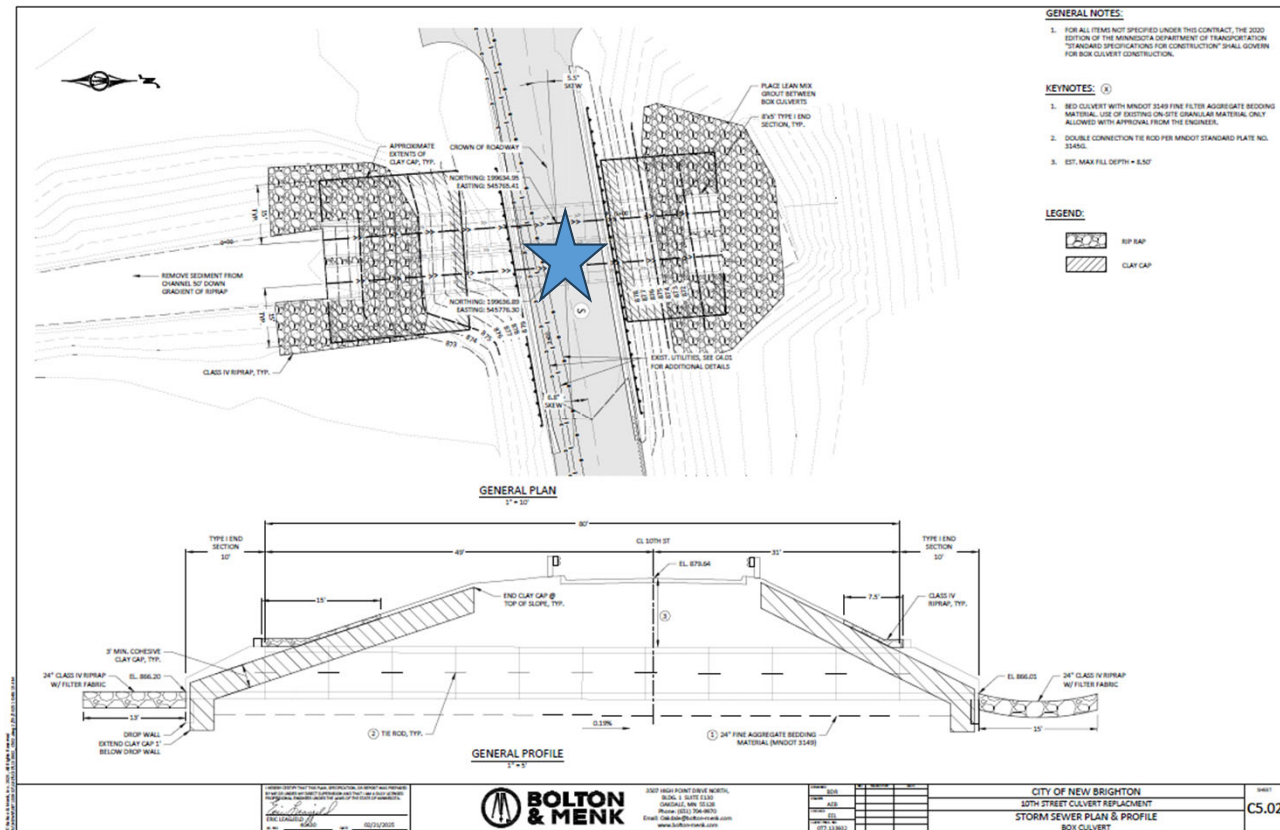
Implementation Stormwater Resilience Grant

Grant
\$698,775.29

Cash/in-kind match
\$210,153.82*

*City Attorney is drafting
sub-grant agreement

Total with previous grant
\$1,024,309





Council Consider Resolution

- Approve Plans and Specifications
- Authorize Advertisement for Bids
- Accept Implementation Grant

Thank you and questions?

