THE CITY OF DULUTH MINNESOTA

Purchasing Division
Finance Department

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Duluth, Minnesota 55802

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ADDENDUM No. 2
Solicitation 26-99071
Palm Street Smart Pond

This addendum serves to notify all bidders of the following changes to the solicitation documents:

GENERAL

1. Descriptions of changes to drawings are for reference only and provide only a general overview of changes made. It is the Contractor's responsibility to fully assess and provide the specific requirements of the Work on all Plan sheets regardless of the description of sheet change(s) provided herein.

BID FORM

Quantities of 24" RC PIPE SEWER CLASS III and CONSTRUCT DRAINAGE STRUCTURE DESIGN F changed in the bid form.

DRAWINGS

1. Drawing changes to the SEQ NOTES AND STANDARD PLATES are as follows:
    a. Sheet 3; Delete Sheet 3 in its entirety and replace with revised Sheet 3.

2. Drawing changes to the STATEMENT OF ESTIMATED QUANTITIES are as follows:
    a. Sheet 4; Delete Sheet 4 in its entirety and replace with revised Sheet 4.

3. Drawing changes to the CONSTRUCTION CHARTS are as follows:
    a. Sheet 6; Delete Sheet 6 in its entirety and replace with revised Sheet 6.

4. Drawing changes to the CONSTRUCTION DETAILS are as follows:
    a. Sheet 15; Delete Sheet 15 in its entirety and replace with revised Sheet 15.
    b. Sheet 18; Delete Sheet 18 in its entirety and replace with revised Sheet 18.

5. Drawing changes to the EXISTING CONDITIONS & REMOVALS are as follows:
    a. Sheet 19; Delete Sheet 19 in its entirety and replace with revised Sheet 19.
    b. Sheet 20; Delete Sheet 20 in its entirety and replace with revised Sheet 20.

6. Drawing changes to the CONSTRUCTION PLAN & PROFILE are as follows:
    a. Sheet 23; Delete Sheet 23 in its entirety and replace with revised Sheet 23.
    b. Sheet 24; Delete Sheet 24 in its entirety and replace with revised Sheet 24.
    c. Sheet 25; Delete Sheet 25 in its entirety and replace with revised Sheet 25.

7. Drawing changes to the SMART POND CONTROLS are as follows:
    a. Sheet SC01; Delete Sheet SC01 in its entirety and replace with revised Sheet SC01.
    b. Sheet SC02; Delete Sheet SC02 in its entirety and replace with revised Sheet SC02.
    c. Sheet SC03; Delete Sheet SC03 in its entirety and replace with revised Sheet SC03.
    d. Sheet SC04; Delete Sheet SC04 in its entirety and replace with revised Sheet SC04.

SPECIFICATIONS

1. SP-10, (1507) UTILITY PROPERTY AND SERVICE is hereby amended as follows:

    S-10.3 Contractors and sub-contractors shall follow the state statute 216D Excavation Notice System requirements for City of Duluth projects. The City of Duluth, being a facility operator on all city projects, shall require that following the use of optional electronic white lining in the Gopher State One Call system submission process, <u>any one call ticket associated with the project shall be accompanied with physical markings</u> as allowed by part 216D.05.c of the statue. The physical markings must be placed the same day or prior to submission of the ticket to avoid delays in response.

2. SP-31, (2503) HDPE PIPE SEWER-DIRECTIONAL DRILLED is hereby amended as follows:

    S-31.3A TOLERANCE

    Ensure the flow line elevation at the starting point is within 0.1 feet of the staked grade. Ensure the line and grade at any point within the pipe does not vary by greater than 0.5 feet from the line and grade designated on the Plans.

    S-31.3B ALTERNATIVE METHOD

    Jack and bore or similar method with a 24” steel casing is an acceptable alternative to directional drilling. To facilitate the work contractor may submit, for approval by engineer, during construction, alternative locations of bore pits, manhole structures, and sections of open cut instillation.

    50-pound zinc anodes, placed in anode bags, shall be welded to steel pipe and connected with a copper lead wire. Place at each bore pit and on both sizes of placed manholes. Coat exposed metal with mastic.

    Anode shall be composed of LME Grade Zinc, Super High-Grade Zinc, or High Grade Zinc conforming to ASTM B-418 Type II alloy standard. The anode shall be packaged in a low resistance backfill mixture (gypsum) bag and supplied with 10 feet of #12 solid copper lead wire that is connected to galvanized steel core by manufacturer.

3. SP-43, (2550) ELECTRICAL SERVICE is hereby amended as follows:

    S-43.4

S-43.4C Conductor and Cable General Requirements

a. Provide products that comply with requirements of NFPA 70, MNDOT 3815m and MNDOT 3818.
b. Provide products listed, classified, and labeled as suitable for the purpose intended.
c. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.

Minimum Conductor Size:

Branch Circuits: 12 AWG.

Exceptions:

20 A, 120V circuits longer than 75 feet: 10 AWG, for voltage drop.

20 A, 120V circuits longer than 150 feet: 8 AWG, for voltage drop.

CONTRACTOR QUESTIONS

1. **Question:** What is the material and age of the existing sanitary in Clearwood Drive?
   Answer: Records show that the existing sanitary pipe is concrete and was installed in the 1970's.

2. **Question:** What is the tolerance for installing the drilled pipe?
   Answer: Install pipe to meet tolerances outlined in SP-31 as revised in this addendum**.**

3. **Question:** For installation of the dewatering pipe, could the contractor elect to jack & bore a steel pipe in lieu of directionality drilling an HDPE pipe?
   Answer: Yes. Record bid price for installing pipe under 24" HDPE PIPE SEWER-DRILLED DIRECTIONAL regardless of proposed installation method. Refer to SP-31 as revised in this addendum for additional requirements.

4. **Question:** Can location of existing sanitary pipe be confirmed using televising rather than potholing?
   Answer: Yes.

5. **Question:** In spec section SP-35 the size of the control gate is called out as 24"X24"and on plan sheet SC-02 its calling for a 36"X36" slide gate. Which size gate should we include in our pricing because it was our understanding the 24" diam outlet pipe controls and that a 24"X24" gate is adequate for this application?
   Answer: This was a plan inaccuracy; the addendum will address this.

6. **Question:** Does the City have a preference on whether the gate is actuated or uses a threaded stem screw gate?
   Answer: The City prefers the gate is controlled with a non-rising threaded stem screw.

7. **Question:** Can you confirm if the slide gates listed under SP-35 provide water tightness certification for up to 10 ft?

Answer: Water tightness of the slide gate shall be 0.05 gpm/ft or less. All the slide gates listed in SP-35 meet this requirement.

8. **Question:** In addition to the forecast for precipitation (rain) and probability for precipitation, are you also basing your logic on a certain depth of precipitation forecasted or will it be for any amount of rain?
   Answer: Weather predictions should include the depth of rain in the logic.

9. **Question:** Will the City provide a stage storage table for the pond so we can provide display the volume of water behind the gate by measuring depth of water at the gate?
   Answer: Yes, preliminary stage storage discharge table is included in this addendum. The final table will be provided after an As-built survey is completed.

10. **Question:** Will the City provide the target flow rate for discharge when the gate opens? Would it be easier, knowing the 24" outlet pipe is the control, to open the gate fully no matter the head level?
    Answer: The target flow rate for discharge will be programable based on operational scenarios.

11. **Question:** What is an intrusion alarm?
    Answer: An alarm that notifies SCADA when the cabinet is opened

12. **Question:** There does not appear to be any fencing around the control box – do you plan to add any perimeter control other than a locking control cabinet?
    Answer: No

13. **Question:** Is there a provision in the bid for inflation whereby if we quote the system now but it's not ordered by the contractor for another year, is one allowed to add a percent increase to cover material price changes?
    Answer: No

Please acknowledge receipt of this Addendum by checking the acknowledgment box within the www.bidexpress.com solicitation.

Posted: **January 28, 2026**

SEQ NOTES:

1) BASED ON 1.75 ACRES. CONTRACTOR SHALL PERFORM A FIELD REVIEW WITH ENGINEER PRIOR TO CLEARING AND GRUBBING. CONTRACTOR SHALL PROTECT TREES NOT DESIGNATED FOR REMOVAL.
2) QUANTITY IS CALCULATED USING 120 LB/SQ/IN.
3) INCLUDES REMOVAL OF ASSOCIATED APRONS.
4) FOR ALL PROPOSED CATCH BASINS AND FOR EXISTING CATCH BASINS DOWN GRADIENT OF PROPOSED CONSTRUCTION.
5) ASSUMES ONE 50' X 20' CONSTRUCTION EXIST.
6) ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED PER THE LANDSCAPE PLAN AND SWPPP.
7) ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL CONFORM TO AND BE PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE MINNESOTA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) INCLUDING PART VI, THE CURRENT FIELD MANUAL, THE MINNESOTA STANDARD SIGNS MANUAL PART I, II, III, AND APPROPRIATE MATERIAL SPECIFICATIONS, THE CONTRACTOR MUST PROVIDE TERMINI SIGNING AND ANY BARRICADES, BARRELS, OR DELINEATION DEVICES NECESSARY TO ENSURE PUBLIC SAFETY.
8) PROVIDE ROLLED EROSION PREVENTION CATEGORY 20 ON ALL DISTURBED ARES THAT ARE NOT SODDED OR ARMORED WITH BLOCK OR RIPRAP.
9) FOR STABILITY AND INTERLOCKING, EACH RIPRAP STONE SHALL EXHIBIT ANGULAR SURFACES AND SHALL HAVE ONE OR MORE FRACTURED SURFACES.
10) MnDOT STANDARD PLANS 5-297.405 SHALL APPLY FOR STORM DRAIN INLET PROTECTION, SILT FENCE, AND STABILIZED CONSTRUCTION EXIT.
11) INCLUDES EXCAVATION AND GRANULAR BEDDING IN ENCASEMENT ZONE AND BACKFILL WITH NATIVE MATERIAL FROM TOP OF ENCASEMENT ZONE TO FINISHED GRADE.
12) STRUCTURES INCLUDE EXCAVATION AND GRANULAR BACKFILL.
13) SHALL BE INSTALLED PRIOR TO ANY OPERATION THAT DISTURBS INPLACE VEGETATION.
14) INSULATION TO BE USED ALONG PIPE RUN A WHERE STORM IS OVER AND ADJACENT TO EXISTING SANITARY SEWER.
15) INCLUDES RELOCATION OF EXISTING HOOD OR SNOUT TO NEW OUTLET PIPE IN STRUCTURE SC0640009.
16) SINGLE 12 FT WIDE GATE, BLACK VINYL COATED.
17) INCLUDES PERPENDICULAR SAW-CUTTING AT REMOVAL LIMITS.
18) UNDISTRIBUTED QUANTITY FOR BACKFILLING PIPE TRENCHES UNDER ROADWAYS IF NATIVE MATERIAL IS NOT SUITABLE. ALL TRENCH BACKFILL OUTSIDE OF ROADWAY SHALL BE INCIDENTAL.
19) SUBSOILING AND SOIL BED PREPARATION FOR 0.95 ACRE SHALL BE CONSIDERED INCIDENTAL.
20) INCLUDES AREA TO TERMINATE BLOCK AS SHOWN IN DETAILS ON SHEET 9.

GENERAL NOTES:

1) WHEREVER THE WORD "INCIDENTAL" IS USED IN THIS PLAN IT SHALL MEAN NO DIRECT PAYMENT WILL BE MADE FOR THAT ITEM.
2) ANY DAMAGE TO INPLACE SURFACING, UTILITIES, OR ANY ITEM NOT DESIGNED FOR REMOVAL SHALL BE REPAIRED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE CITY.
3) ALL CONSTRUCTION DEWATERING SHALL BE CONSIDERED INCIDENTAL.
4) THE CONTRACTOR SHALL NOT STORE EXCAVATED MATERIAL OUTSIDE THE PLANNED CONSTRUCTION LIMITS UNLESS APPROVED BY THE ENGINEER.
5) THE CONTRACTOR SHALL OBTAIN THE REQUIRED CITY OF DULUTH PERMIT FOR WORK WITHIN THE RIGHT-OF-WAY.
6) EMBANKMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY STANDARD SPECIFICATIONS, MnDOT SPECIFICATION 2106, AND PROJECT SPECIAL PROVISIONS.
7) UNLESS A PAY ITEM IS PROVIDED, ABANDONED UTILITY ITEMS OR ANY OTHER INPLACE MATERIAL WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED DISPOSAL SITE AND SUCH COSTS SHALL BE CONSIDERED INCLUDED FOR PAYMENT IN THE ASSOCIATED PAY ITEM FOR THE EXCAVATION.
8) REINFORCEMENT BARS SHALL BE PROVIDED AT ALL ADA LANDINGS PER THE STANDARD PLANS AND SHALL BE CONSIDERED INCIDENTAL
9) LOCATIONS OF EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE UNLESS SPECIFICALLY INDICATED ON THESE PLANS. THE CONTRACTOR SHALL IDENTIFY THE EXACT LOCATIONS.
10) THE BOTTOM OF ALL EXCAVATIONS SHALL BE SHAPED AND COMPACTED WITH A MINIMUM OF FOUR PASSES OF AN APPROVED ROLLER.
11) WHERE CONNECTING TO EXISTING ROADWAYS AND CROSS STREETS AT THE TERMINI OF THE PROPOSED CONSTRUCTION, CUT VERTICALLY TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:5 (V:H) SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
12) AVERAGE INPLACE PAVEMENT THICKNESSES ARE PROVIDED ON THE TYPICAL SECTION BASED ON THE SOIL BORINGS. THE CONTRACTOR SHALL EXPECT INPLACE PAVEMENT DEPTHS AND COMPOSITION TO VARY. NO ADJUSTMENT IN UNIT PRICES SHALL BE ALLOWED BASED ON VARYING INPLACE PAVEMENT THICKNESS OR COMPOSITION.
13) ALL PIPE LENGTHS AND SLOPES ARE BASED ON THE DISTANCE FROM CENTER TO CENTER OF CATCH BASIN OR MANHOLE STRUCTURE ROUNDED TO THE NEAREST FOOT.
14) THE CONTRACTOR SHALL PRESERVE ALL LAND AND PROPERTY CORNERS, VERTICAL AND HORIZONTAL CONTROLS AND RIGHT OF WAY MONUMENTS.
15) PLACE ½" BIT FELT (FULL HEIGHT) AT ALL JOINTS WHERE PROPOSED CONCRETE DRIVEWAYS AND WALKS MEET EXISTING CONCRETE DRIVEWAYS, SIDEWALKS, OR RETAINING WALLS. (INCIDENTAL)
16) PROVIDE A SAWCUT WHERE PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT TO ENSURE A UNIFORM JOINT. PAID FOR AS SAWING BITUMINOUS PAVEMENT (FULL DEPTH) OR SAWING CONCRETE PAVEMENT (FULL DEPTH).
17) MNDOT STANDARD PLANS 5-297.250 SHALL APPLY TO ALL PEDESTRIAN CURB RAMPS.

BASIS FOR PLANNED QUANTITIES

BITUMINOUS MIXTURES	120 LBS PER SQ YD PER INCH OF DEPTH
BITUMINOUS MATERIAL FOR TACK COAT (CSS-1 OR CSS-1H) (INCIDENTAL)	0.06 GALLONS PER SQ YD (UNDILUTED)
RAPID STABILIZATION METHOD 3	6000 GALLONS PER ACRE
SEED WET DITCH (WD)	20 LBS/ACRE
SEED NORTHEAST ROADSIDE (NER)	26 LBS/ACRE
FERTILIZER TYPE 3 (SLOW RELEASE) (22-5-10)	350 LBS/ACRE

KNOWN UTILITIES

COMPANY	SERVICE	CONTACT NUMBER
CHARTER SPECTRUM	COMMUNICATION	(218) 529-8042
CITY OF DULUTH	SEWER/GAS/WATER	(218) 730-5200
LUMEN (CENTURY LINK)	COMMUNICATION	(218) 263-5328
MN POWER	ELECTRICAL	(218) 213-7442

UTILITY RELOCATIONS AND ADJUSTMENTS ARE REQUIRED AND SHALL REQUIRE CONTRACTOR WORK AND COORDINATION.

STANDARD PLATES

THE FOLLOWING STANDARD PLATES APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

3000M	REINFORCED CONCRETE PIPE (6 SHEETS)
3006H	GASKET JOIN FOR R.C. PIPE (2 SHEETS)
3014L	REINFORCED CONCRETE PIPE ARCH
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
3133D	RIPRAP AT RCP OUTLETS
4005M	MANHOLE OR CATCH BASIN TYPE A & B CONE SECTIONS PRECAST - DESIGN F
4006L	MANHOLE OR CATCH BASIN PRECAST - DESIGN G AND H
4011E	PRECAST CONCRETE BASE
4020J	MANHOLE OR CATCH BASIN (2 SHEETS)
4143E	STOOL GRATE & CONCRETE FRAME (MEDIAN DRAIN) - CASTING NO. 731
7020K	CONCRETE CURB (DESIGN B)
7038A	DETECTABLE WARNING SURFACE TRUNCATED DOMES
7100H	CONCRETE CURB AND GUTTER (DESIGN B)
8000K	TEMPORARY CHANNELIZERS
9322K	CHAIN LINK FENCE

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.

MEGAN GOPLIN
PRINTED NAME

SIGNATURE

01/23/2026
DATE

53018
LIC. NO.

CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

REVISION
⚠ 01/23/26

NOTES AND STANDARD PLATES

SHEET NO. 3 OF 47 SHEETS

LHB PROJECT NO. 240078

STATEMENT OF ESTIMATED QUANTITIES

NOTES	CHART	SHEET NO.	ITEM NO.	ITEM DESCRIPTION	UNIT	BASE BID QUANTITY
			2021.501	MOBILIZATION	LUMP SUM	1
1			2101.501	CLEARING AND GRUBBING	LUMP SUM	1
	B	5	2104.502	REMOVE DRAINAGE STRUCTURE	EACH	8
	A	5	2104.502	SALVAGE SIGN	EACH	2
	A	5	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	140
3	B	5	2104.503	REMOVE PIPE CULVERTS	LIN FT	160
3	B	5	2104.503	REMOVE PIPE SEWERS	LIN FT	332
17	A	5	2104.503	REMOVE CURB AND GUTTER	LIN FT	1 127
17	A	5	2104.504	REMOVE CONCRETE WALK	SQ YD	21
	A	5	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	2 639
	A	5	2104.504	REMOVE BITUMINOUS WALK	SQ YD	937
	I	7	2106.507	EXCAVATION – COMMON (P)	CU YD	526
	I	7	2106.507	EXCAVATION – MUCK	CU YD	17 536
	I	7	2106.507	GRANULAR EMBANKMENT (CV) (P)	CU YD	88
	I	7	2106.507	SELECT GRANULAR EMBANKMENT MOD 7% (CV) (P)	CU YD	224
	I	7	2106.507	COMMON EMBANKMENT (CV)	CU YD	71
	I	7	2106.607	HAUL & DISPOSE OF CONTAMINATED MATERIAL	CU YD	4 384
	C	5	2108.504	GEOTEXTILE FABRIC TYPE 10	SQ YD	529
	I	7	2118.507	AGGREGATE SURFACING CLASS 5 (CV)	CU YD	43
	I	7	2211.507	AGGREGATE BASE (CV) CLASS 5 (P)	CU YD	341
2	C	5	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C)	TON	643
2	C	5	2360.509	TYPE SP 12.5 NON WEARING COURSE MIXTURE (3,C)	TON	475
	RW	RW01	2402.508	STRUCTURAL STEEL (3306)	POUND	61 944
	RW	RW01	2411.602	CONSTRUCT PIPE PENETRATION A	EACH	2
	RW	RW01	2411.602	CONSTRUCT PIPE PENETRATION B	EACH	4
18			2451.507	GRANULAR BACKFILL (CV)	CU YD	200
	RW	RW01	2452.618	STEEL SHEET PILING (PERMANENT)	SQ FT	64 591
	E	6	2501.502	15" RC PIPE APRON	EACH	1
	E	6	2501.502	24" RC PIPE APRON	EACH	2
	E	6	2501.502	48" RC PIPE APRON	EACH	2
	E	6	2501.502	51" SPAN RC PIPE–ARCH APRON	EACH	4
11	E	6	2501.503	51" SPAN RC PIPE–ARCH CULVERT CLASS IIIA	LIN FT	164
	E	6	2501.602	TRASH GUARD FOR 15" RC PIPE APRON	EACH	1
	E	6	2501.602	TRASH GUARD FOR 30" RC PIPE APRON	EACH	1
	C	5	2502.503	4" PERFORATED TP PIPE DRAIN	LIN FT	262
11	F	6	2503.503	15" RC PIPE SEWER CLASS III	LIN FT	614
11	F	6	2503.503	18" RC PIPE SEWER CLASS III	LIN FT	370
11	F	6	2503.503	24" RC PIPE SEWER CLASS III	LIN FT	308
11	F	6	2503.503	30" RC PIPE SEWER CLASS III	LIN FT	31
11	F	6	2503.503	48" RC PIPE SEWER CLASS III	LIN FT	115
	F	6	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	3
	F	6	2503.603	24" HDPE PIPE SEWER–DIRECTIONAL DRILLED	LIN FT	699
14		32	2504.604	3" POLYSTYRENE INSULATION	SQ YD	35
	F	6	2506.502	CASTING ASSEMBLY	EACH	17
		22, 23	2506.502	ADJUST FRAME & RING CASTING	EACH	2

(P) DENOTES PLAN QUANTITY

STATEMENT OF ESTIMATED QUANTITIES

NOTES	CHART	SHEET NO.	ITEM NO.	ITEM DESCRIPTION	UNIT	BASE BID QUANTITY
12	F	6	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN F	LIN FT	70.9
12	F	6	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	LIN FT	6.7
12	F	6	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 72–4020	LIN FT	21.3
12	F	6	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48–4020	LIN FT	67.1
12	F	6	2506.602	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 1	EACH	1
12	F	6	2506.602	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 2	EACH	1
12	F	6	2506.602	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 3	EACH	1
		SC01–SC04	2506.601	SMART POND CONTROL SYSTEM	LUMP SUM	1
15	F	6	2506.602	CONNECT INTO EXISTING MH OR CB	EACH	2
	F	6	2506.602	CONCRETE ENCASED CASTING COLLAR	EACH	3
9	E, RW	6, RW01	2511.507	RANDOM RIPRAP CLASS II	CU YD	1 881
9	E	6	2511.507	RANDOM RIPRAP CLASS III	CU YD	52.2
	E, G, RW	6, 7, RW01	2511.504	GEOTEXTILE FILTER TYPE 7	SQ YD	6 890
20	G	7	2515.504	ARTICULATED BLOCK MAT OPEN CELL TYPE A	SQ YD	1 173
	C	5	2521.518	4" CONCRETE WALK	SQ FT	68
	C	5	2521.518	6" CONCRETE WALK	SQ FT	225
	C	5	2531.503	CONCRETE CURB AND GUTTER DESIGN B624	LIN FT	1 126
	C	5	2531.504	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	27
	C	5	2531.618	TRUNCATED DOMES	SQ FT	12
	D	5	2540.602	INFORMATION SIGN	EACH	1
	H	7	2540.603	LANDSCAPE EDGER	LIN FT	910
			2550.601	ELECTRICAL SERVICE	LUMP SUM	1
16	RW	RW01	2557.502	VEHICULAR GATE DESIGN SPECIAL–SINGLE	EACH	1
	RW	RW01	2557.503	WIRE FENCE DESIGN SPECIAL VINYL COATED	LIN FT	1 802
7			2563.601	TRAFFIC CONTROL	LUMP SUM	1
	D	5	2564.502	INSTALL SIGN	EACH	2
	H	7	2571.502	DECIDUOUS TREE 2" CAL CONT	EACH	41
	H	7	2571.502	DECIDUOUS TREE 1.5" CAL CONT	EACH	21
	H	7	2571.502	DECIDUOUS SHRUB 2' HT CONT	EACH	263
	H	7	2571.502	PERENNIAL 4" CONT	EACH	390
5, 10			2573.501	STABILIZED CONSTRUCTION EXIT	LUMP SUM	1
4, 10, 13	G	7	2573.502	STORM DRAIN INLET PROTECTION	EACH	14
	G	7	2573.502	CULVERT END CONTROLS	EACH	4
10, 13	G	7	2573.503	SILT FENCE, TYPE HI	LIN FT	432
			2573.601	TEMPORARY STREAM DIVERSION SYSTEM	LUMP SUM	1
	G	7	2573.602	ROCK DITCH CHECK	EACH	2
6	H	7	2574.507	COMMON TOPSOIL BORROW	CU YD	572
6	H	7	2574.508	FERTILIZER TYPE 3	POUND	315
8	H	7	2575.504	ROLLED EROSION PREVENTION CATEGORY 20	SQ YD	2 936
	H	7	2575.523	RAPID STABILIZATION METHOD 3	MGAL	4.62
6	H	7	2575.618	RESTORATION PLANTING ZONE 1 – AQUATIC/TRANSITIONAL LEDGE	SQ FT	15 441
6	H	7	2575.618	RESTORATION PLANTING ZONE 2 – UPLAND	SQ FT	13 734
6	H	7	2575.618	RESTORATION PLANTING ZONE 3 – WILLOW STAKE/BUNDLES	SQ FT	3 164
6	H	7	2575.618	RESTORATION PLANTING ZONE 4 – TURF SOD	SQ FT	5 473
6, 19	H	7	2575.505	SEEDING	ACRE	0.90
6	H	7	2575.608	SEED NORTHEAST ROADSIDE	POUND	2.53
6	H	7	2575.608	SEED WET DITCH	POUND	3.44
	D	5	2582.503	4" DOUBLE SOLID LINE MULTI–COMPONENT GROUND IN (WR)	LIN FT	865

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.

MEGAN GOPLIN
PRINTED NAME

Megan Goplin
SIGNATURE

01/27/2026
DATE

53018
LIC. NO.

CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

REVISION
⚠ 01/23/26

STATEMENT OF ESTIMATED QUANTITIES

PLOT DATE: 1/27/2026 12:24:15 PM FILE: \\hbdlhw24\DLHprojects\24Pro\240078\500 Drawings\Civil\240078 03.0 SEQ & Notes.dwg

LHB PROJECT NO. 240078

STORM SEWERS – PIPE CULVERTS AND APRONS

E

PIPE NUMBER	STATION	LOCATION	BEGIN STRUCTURE	INVERT ELEVATION	TRASH GUARD FOR 15" RC PIPE APRON	TRASH GUARD FOR 30" RC PIPE APRON	51" SPAN RC PIPE–ARCH CULVERT CLASS IIIA	RC PIPE APRON			SPAN RC PIPE–ARCH APRON	RANDOM RIPRAP CLASS II	RANDOM RIPRAP CLASS III (5)	GRANULAR FILTER (6)	GEOTEXTILE FILTER TYPE 7 (5)	REMARKS
					2501	2501	2501	2501			2501	2511	2511	2511	2511	
								15"	24"	48"	51					
					EACH	EACH	LIN FT	EACH	EACH	EACH	EACH	CU YD	CU YD	CU YD	SQ YD	
DRAINAGE ALIGNMENT																
OUT–10	11+06.00	0.00	FOREBAY	1218.25												OUTLET (4)
AP–11	12+96.90	134.01 LT	PMH–102	1218.36						1						INLET
AP–1	13+50.11	38.43 LT	POND	1210.71						1		14.8		1.5	61.1	OUTLET
OUT–3	16+09.91	41.28 RT	POND	1216.20								3.2		0.2	18.0	OUTLET
OUT–4	17+26.03	21.37 RT	POND	1216.38								3.2		0.2	18.0	OUTLET (4)
AP–5	19+49.36	0.00	SS–107	1209.50		1										INLET (1)
AP–12	19+60.16	23.87 RT	TO AP–7	1215.25			82				1					INLET (2)
AP–13	19+54.22	27.58 RT	TO AP–8	1215.25			82				1					INLET (2)
AP–7	19+89.13	95.80 RT	CREEK	1215.00							1		16.9	1.7	57.5	OUTLET
AP–8	21+56.79	184.21 RT	CREEK	1215.00							1		16.9	1.7	57.5	OUTLET
AP–9	28+68.78	0.00	CREEK	1195.96					1				9.2	0.8	33.4	OUTLET
POND BYPASS ALIGNMENT																
AP–2	0+09.05	0.00	SS–199	1217.20	1			1								INLET (3)
AP–6	9+03.77	0.00	CREEK	1215.00					1				9.2	0.8	33.4	OUTLET
PROJECT TOTALS					**1**	**1**	**164**	**1**	**2**	**2**	**4**	**21.2**	**52.2**	**6.9**	**279**	

KEYNOTES:

1. DEWATERING OUTLET
2. POND MAIN OUTLET
3. POND BYPASS OUTLET
4. OUTLET WITHOUT APRON
5. SEE OTHER CHARTS FOR ADDITIONAL QUANTITIES
6. INCIDENTAL
7. INCLUDES 2' SUMP
8. USE MNDOT STANDARD PLATE 4143

STORM SEWERS – PIPES, MANHOLES, AND CATCH BASINS

F

STRUCTURE NUMBER	STATION	LOCATION	RIM	UP–STREAM INVERT	PIPE NAME	CONSTRUCT DRAINAGE STRUCTURE DESIGN 2506							CASTING ASSEMBLY 2506	CONCRETE ENCASED CASTING COLLAR 2506	STORM CASTING TYPE	15" RC PIPE SEWER CLASS III 2503	18" RC PIPE SEWER CLASS III 2504	24" RC PIPE SEWER CLASS III 2503	30" RC PIPE SEWER CLASS III 2503	48" RC PIPE SEWER CLASS III 2503	24" HDPE PIPE SEWER–DIRECTIONAL DRILLED 2503	CONNECT TO EXISTING STORM SEWER 2503	CONNECT INTO EXISTING MH OR CB 2506	DRAINS TO	DOWN–STREAM INVERT	GRADE	REMARKS
						48–4020	72–4020	F	H	SPECIAL 1	SPECIAL 2	SPECIAL 3														
			ELEV	ELEV		LIN FT	LIN FT	LIN FT	LIN FT	EACH	EACH	EACH	EACH	EACH		LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	EACH	EACH		ELEV	%	
DRAINAGE ALIGNMENT																											
PMH–100	10+95.55	0.00	1226.30	1218.40			7.90													11				OUT–10	1218.25	1.36%	
SC0640009	10+98.00	30.00 RT	1226.19	1222.00												30							1	PMH–100	1221.50	1.67%	
AP–11	13+03.26	126.65 LT		1218.36																78				PMH–102	1217.70	0.85%	
PMH–102	13+44.75	65.06 LT	1224.40	1210.98			13.42								STRM–1					26				AP–1	1210.70	1.08%	
PCB–105	16+10.01	62.89 RT	1219.53	1216.30					3.23				1		M11 (8)	7								OUT–3	1216.20	1.43%	
PMH–104	17+34.03	50.04 RT	1222.39	1216.47		5.92							1		STRM–1	9						1		OUT–4	1216.38	1.00%	
AP–5	19+49.36	0.00		1209.50															31					SS–107	1209.20	0.97%	
SS–107	19+83.84	0.00	1220.70	1207.20								1									155			PMH–109	1203.92	2.11%	
PMH–109	21+39.29	0.00	1226.10	1203.92				22.18					1		STRM–1						285			PMH–110	1200.84	1.08%	
PMH–110	24+24.31	0.00	1221.16	1200.84				20.32					1		STRM–1						259			PMH–111	1198.04	1.08%	
PMH–111	26+83.35	0.00	1210.86	1198.04				12.82					1		STRM–1			193						AP–9	1195.96	1.08%	
POND BYPASS ALIGNMENT																											
AP–2	0+09.05	0.00		1217.20												40								SS–199	1217.10	0.25%	
SS–199	0+48.72	0.00	1224.47	1217.10							1				STRM–1	18								PMH–200	1217.06	0.22%	
PCB–200B	0+60.04	45.41 LT	1224.42	1219.02		5.40							1		STRM–3	26								PCB–200A	1218.50	2.00%	
PCB–200A	0+63.47	19.70 LT	1224.44	1218.50		7.94							1		STRM–3	22								PMH–200	1218.06	2.00%	
PMH–200	0+66.70	0.00	1225.14	1217.06				8.08							STRM–1	99								PMH–201	1216.81	0.25%	
PMH–201	1+65.66	0.00	1224.33	1216.81				7.52					1		STRM–1	302								PMH–202	1216.06	0.25%	
CB0640040	4+65.37	42.32 LT	1222.17	1216.25													26						1	PCB–103	1216.14	0.42%	
PCB–103	4+66.74	16.11 LT	1222.27	1216.14		8.13 (7)							1		STRM–3		16							PMH–202	1216.06	0.50%	
PMH–202	4+67.47	0.00	1223.08	1216.06		7.02							1		STRM–1		290							PMH–203	1215.33	0.25%	
PCB–203A	7+47.22	45.71 LT	1221.69	1217.00		4.69							1		STRM–3	19						1		PMH–203	1216.81	1.00%	
PMH–203	7+57.28	0.00	1222.02	1215.33		8.69							1		STRM–1		38							PMH–204	1215.23	0.26%	
PMH–204	7+95.30	0.00	1221.09	1215.23		5.86							1	1	STRM–1			27				1		WQ–VAULT	1215.18	0.19%	
WQ–VAULT	8+22.42	0.00	1220.27	1215.18						1				2	STRM–1			27						PCB–205	1215.13	0.19%	
PCB–205	8+48.71	0.00	1219.97	1215.13		4.84							1		STRM–3			26						PMH–206	1215.07	0.23%	
PCB–206	8+74.42	0.00	1220.11	1215.07		5.04							1		STRM–3			35						AP–6	1215.00	0.20%	
PCB–205B	8+23.86	17.85 RT	1220.04	1216.62					3.42				1		STRM–3	20								PMH–205A	1216.40	1.10%	
PCB–205A	8+48.71	21.86 RT	1219.92	1216.40		3.52							1		STRM–3	22								PMH–205	1216.17	1.05%	
PROJECT TOTALS						**67.1**	**21.3**	**70.9**	**6.7**	**1**	**1**	**1**	**17**	**3**		**614**	**370**	**308**	**31**	**115**	**699**	**3**	**2**				

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MEGAN GOPLIN
PRINTED NAME

SIGNATURE

01/27/2026
DATE

53018
LIC. NO.

CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

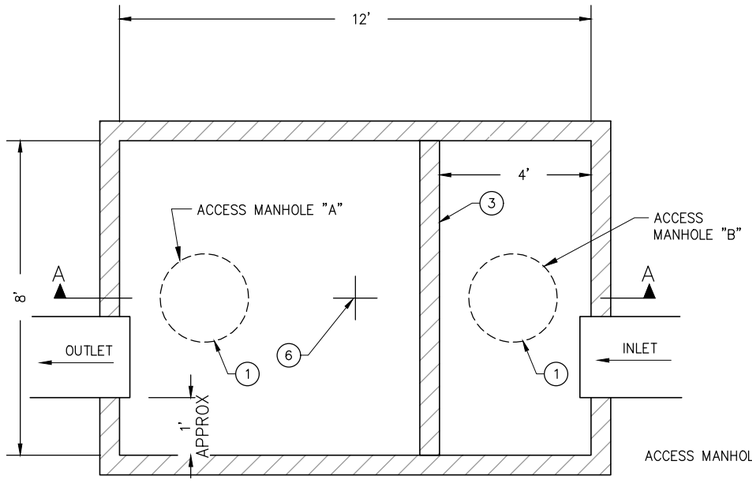
REVISION
⚠ 01/23/26

CONSTRUCTION CHARTS

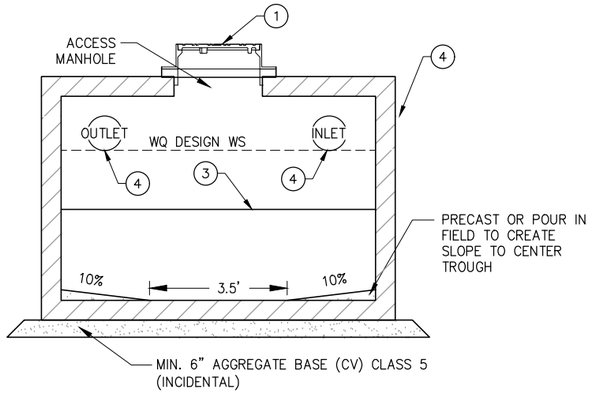
SHEET NO. 6 OF 47 SHEETS

PLOT DATE: 1/27/2026 3:01:29 PM FILE: Q:\24Proj\240078\500 Drawings\Civil\240078 04.0 Charts.dwg

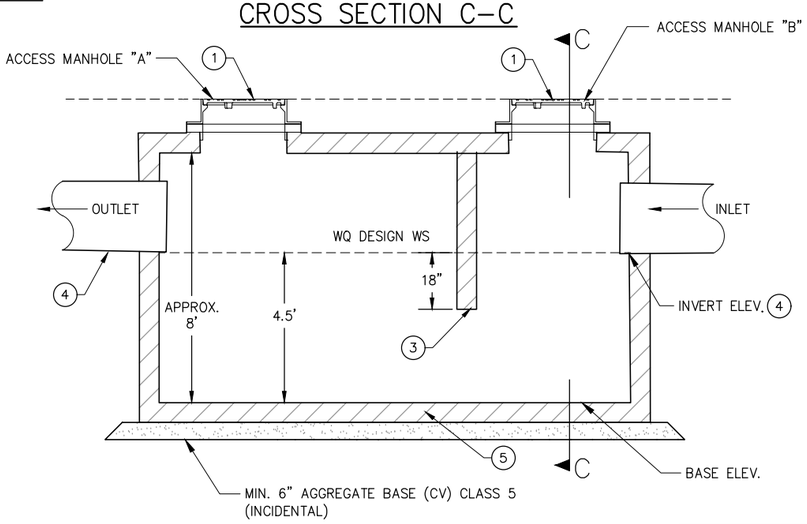
LHB PROJECT NO. 240078



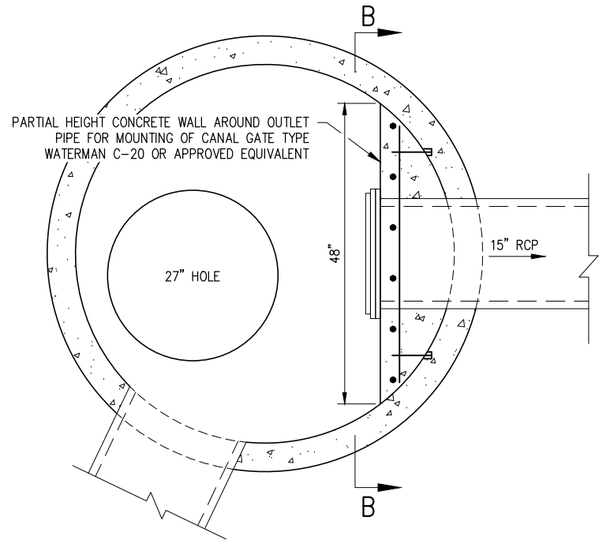
PLAN VIEW



CROSS SECTION C–C



SECTION A–A



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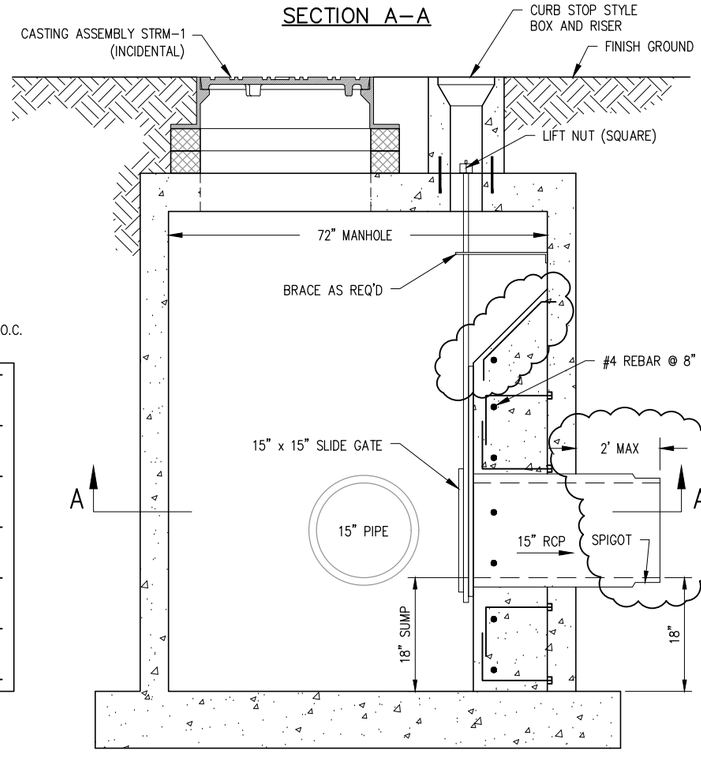


NOTES:

1. TOP SLAB THICKNESS AND REINFORCEMENT SHALL CONFORM TO MNDOT STANDARD PLATE 4020J.
2. ENTRY ACCESS HOLE SHALL BE ECCENTRIC OPPOSITE LOCATION OF SLIDE GATE.

SS–199 DRAINAGE STRUCTURE DESIGN SPECIAL 2 – FLOW CONTROL GATE

NOT TO SCALE

KEY NOTES:

(1) CASTING ASSEMBLY STRM–1 (INCIDENTAL)

(2) PAID FOR AS DRAINAGE STRUCTURE DESIGN SPECIAL 1

(3) WEIR TO BE PRECAST IN STRUCTURE.

(4) INLET AND OUTLET INVERTS SHALL BE THE SAME, SEE PLAN FOR ELEVATION AND ACTUAL LOCATION.

(5) STRUCTURE TO BE SET LEVEL, SEE CHART THIS SHEET.

(6) CENTER OF STRUCTURE ALONG BLACKMAN AVENUE ALIGNMENT.

WATER QUALITY BMP SUMMARY						
STRUCTURE NO.	(6)		RIM ELEVATION		IE ELEV.	BASE ELEV.
	STATION	OFFSET	A	B		
WQ VAULT	201+02.74	5.53 RT	1220.23	1220.42	1215.18	1210.68

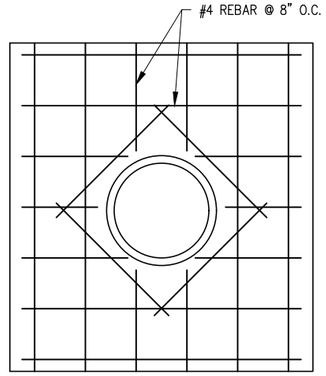
WATER QUALITY BMP

NOTES:

1. STRUCTURE TO BE DESIGNED FOR HL–93 LOADING.
2. ALL TEMPORARY EXCAVATIONS SHORING, UTILITY SHORING, DEWATERING, AND COORDINATION WITH OVERHEAD POWER UTILITY COMPANY TO EXCAVATE AND PLACE STRUCTURE USING CRANES OR OTHER CONSTRUCTION EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL.

WATER QUALITY VAULT (2)

(NOT TO SCALE)



SECTION B–B

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.

MEGAN GOPLIN
PRINTED NAME

SIGNATURE

01/27/2026
DATE

53018
LIC. NO.

CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

REVISION
⚠ 01/23/26

CONSTRUCTION DETAILS

SHEET NO. 15 OF 47 SHEETS

LHB PROJECT NO. 240078

PLOT DATE: 1/27/2026 2:53:27 PM FILE: Q:\24Proj\240078\500 Drawings\Civil\240078 06.1 Construction Details.dwg

LEGEND

- UNDERGROUND CONDUIT
- HANDHOLE
- ELECTRICAL PANEL

GENERAL NOTES

A. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF POWER WITH LOCAL UTILITY. EXISTING POWER POLE LOCATION SHOWN FOR REFERENCE ONLY. COORDINATE WITH LOCAL UTILITY.

B. CONDUIT ROUTING AND HANDHOLE LOCATIONS SHOWN FOR REFERENCE ONLY. COORDINATE EXACT LOCATIONS AND ROUTING WITH OTHER TRADES AND ON SITE CONDITIONS.

C. ALL CONDUITS SHALL BE SCHEDULE 80 NMC.

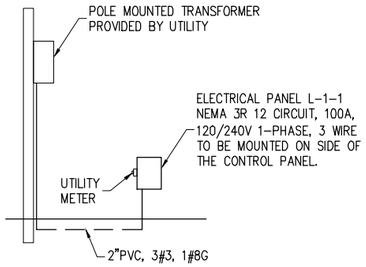
D. CABINET INCLUDED IN SMART POND CONTROL SYSTEM (LUMP SUM) BID ITEM. SEE SC SHEETS FOR DETAILS.

◇ KEYED NOTES

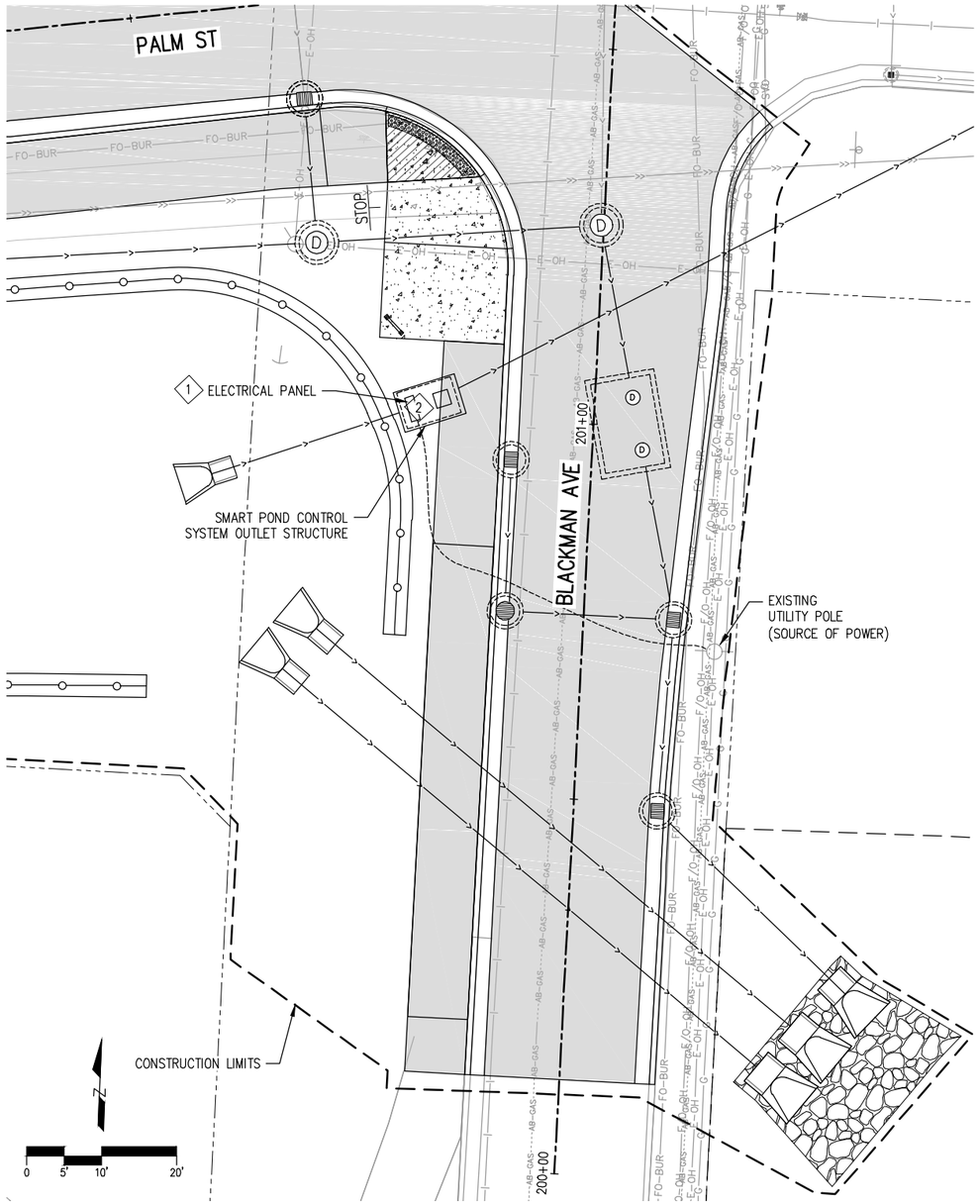
1. PROPOSED LOCATION OF NEW ELECTRICAL PANEL. COORDINATE EXACT LOCATION WITH ON SITE CONDITIONS. PROVIDE PANEL MOUNTED UTILITY METER. COORDINATE METERING REQUIREMENTS WITH LOCAL UTILITY. PANEL TO BE NEMA 3R, MOUNTED TO UNISTRUT, AND PROVIDED WITH LOCKABLE COVER. PROVIDE (6)1P–20A BREAKERS WITHIN NEW ELECTRICAL PANEL.

2. PROVIDE 2#12 CONDUCTORS AND 1#12G, IN 1/2"C FOR CONNECTION TO POND CONTROLLER. COORDINATE CONNECTION REQUIREMENTS WITH MANUFACTURER.

ELECTRICAL RISER DIAGRAM



ALL CONDUIT, WIRING, AND HANDHOLE INCLUDED IN LUMP SUM ITEM ELECTRICAL SERVICE.



ELECTRICAL PLAN

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.

JAKE MELBOSTAD
PRINTED NAME

SIGNATURE

01/19/2026
DATE

56200
LIC. NO.

CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

CONSTRUCTION DETAILS

SHEET NO. 18 OF 47 SHEETS

PLOT DATE: 1/19/2026 9:22:48 AM FILE: Q:\24Pro\240078\500 Drawings\Civil\240078 06.3 Construction Details.dwg

LHB PROJECT NO. 240078

LEGEND

- CONSTRUCTION LIMITS
- SAWING BITUMINOUS PAVEMENT (FULL DEPTH)
- REMOVE PIPE SEWER/CULVERT
- REMOVE MANHOLE OR CATCH BASIN
- REMOVE BITUMINOUS PAVEMENT
- REMOVE BITUMINOUS WALK
- REMOVE CONCRETE WALK
- REMOVE CURB & GUTTER
- CLEARING & GRUBBING
- REMOVE TREE (INCLUDED IN CLEARING & GRUBBING)

SEE SHEET 15 FOR CONTINUATION OF NORTH DITCH

PID 010-0360-00540
322 E CENTRAL ENT

PID 010-2710-05982
326 E CENTRAL ENT

PID 010-2710-05984
328 E CENTRAL ENT

PID 010-2710-05983
332 E CENTRAL ENT

33.00'

R/W

CB0640030
RIM: 1226.24
IE S OUT: 1222.41

CB0640031
RIM: 1226.06
IE N IN: 1220.06
IE W IN: 1217.06
IE SE OUT: 1217.06

CB0640040
RIM: 1222.17
IE N IN: 1215.90
IE S OUT: 1216.25

24" RC PIPE

CONSTRUCTION LIMITS (TYP.)

REMOVE CURB & GUTTER

REMOVE PIPE SEWERS

REMOVE DRAINAGE STRUCTURE
CB0640038

PROTECT CURB (INCIDENTAL)

PALM ST. ALIGNMENT

PALM ST

REMOVE DRAINAGE STRUCTURE
CB0640041

SA0640006
RIM: 1226.72
IE NW IN: 1213.00
IE S IN: 1212.80
IE E OUT: 1212.80

REMOVE PIPE SEWERS

REMOVE PIPE SEWERS

REMOVE DRAINAGE STRUCTURE
CB0640039

REMOVE CURB AND GUTTER

RELOCATE OVERHEAD UTILITY POLE AND ANCHOR (BY OTHERS)

SA0640007
RIM: 1225.16
IE W IN: 1212.08
IE E OUT: 1212.08

BURIED FIBER TO BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION

REMOVE PIPE SEWERS

REMOVE BITUMINOUS WALK

REMOVE PIPE SEWERS

DRAINAGE ALIGNMENT

CONSTRUCTION LIMITS (TYP.)

PID 010-2710-05980

PID 010-0360-00570
330 E PALM ST

20.00' UTILITY EASEMENT

PID 010-2710-05986
330 E PALM ST

PROTECT EXISTING BLOCK WALLS (INCIDENTAL)

20.00' UTILITY EASEMENT

0 10' 20' 40'

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CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

REVISION
△ 01/23/26

EXISTING CONDITIONS & REMOVALS

SHEET NO. 19 OF 47 SHEETS

LHB PROJECT NO. 240078

PLOT DATE: 1/22/2026 9:07:29 AM FILE: O:\24Proj\240078\500 Drawings\Civil\240078 07.0 Existing Conditions & Removals.dwg

LEGEND

- CONSTRUCTION LIMITS
- SAWING BITUMINOUS PAVEMENT (FULL DEPTH)
- REMOVE PIPE SEWER/CULVERT
- REMOVE MANHOLE OR CATCH BASIN
- REMOVE BITUMINOUS PAVEMENT
- REMOVE BITUMINOUS WALK
- REMOVE CONCRETE WALK
- REMOVE CURB & GUTTER
- CLEARING & GRUBBING
- REMOVE TREE (INCLUDED IN CLEARING & GRUBBING)

PID 010-2710-05990
338 E CENTRAL ENT

PID 010-2710-05983
332 E CENTRAL ENT

CB0640040
RIM: 1222.17
IE N IN: 1215.90
IE S OUT: 1216.25

CONSTRUCTION LIMITS (TYP.)

24" RC PIPE

PALM ST. ALIGNMENT

PROTECT CURB (INCIDENTAL)

REMOVE DRAINAGE STRUCTURE
CB0640041

REMOVE DRAINAGE STRUCTURE
CB0640043

CB0640042
RIM: 1221.50
IE S OUT: 1217.45

12" RC PIPE

PALM ST

106+00
107+00
108+00
109+00

SA0640008
RIM: 1223.27
IE W IN: 1210.35
IE E OUT: 1210.35

REMOVE PIPE SEWERS

RELOCATE OVERHEAD UTILITY POLE AND ANCHOR (BY OTHERS)

REMOVE BITUMINOUS WALK

REMOVE CURB AND GUTTER

REMOVE PIPE SEWERS

REMOVE PIPE SEWERS

REMOVE DRAINAGE STRUCTURE
CB0640083

REMOVE PIPE SEWERS

REMOVE PIPE CULVERTS

REMOVE PIPE CULVERTS

DRAINAGE ALIGNMENT

CONSTRUCTION LIMITS (TYP.)

16+00
17+00
18+00
19+00

REMOVE PIPE SEWERS
15" CP PIPE

PID 010-2604-00010
330 E PALM ST

PID 010-2710-06002
123 S BLACKMAN AVE

UTILITY EASEMENT
30.00'

BLACKMAN AVE.

BLACKMAN AVE

ST0640054
RIM: 1222.51
IE S IN: 1216.68
IE E OUT: 1216.68

20+00
200+00
201+00
201+67

SA0640010
RIM: 224.61
IE W IN: 1210.41
IE N IN: 1210.41
IE S IN: 1210.41
IE E OUT: 1210.41

21+00
22+00

REMOVE CURB & GUTTER

REMOVE PIPE SEWERS

REMOVE DRAINAGE STRUCTURE
ST0640038

REMOVE PIPE SEWERS

REMOVE DRAINAGE STRUCTURE
CB0640084

BLACKMAN AVE. ALIGNMENT

REMOVE PIPE SEWERS

REMOVE DRAINAGE STRUCTURE
CB0640085

REMOVE PIPE SEWERS

CB06XXXX1
RIM: 1222.04
IE W IN: 1216.46
IE E OUT: 1216.34

111+00
111+20
CLEARWOOD DRIVE

PID 010-0550-00435
PO BOX 176
COTTON MN 55724

PID 010-0550-00420
PO BOX 176
COTTON MN 55724

UTILITY EASEMENT
10.00'

R/W

0 10' 20' 40'

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PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

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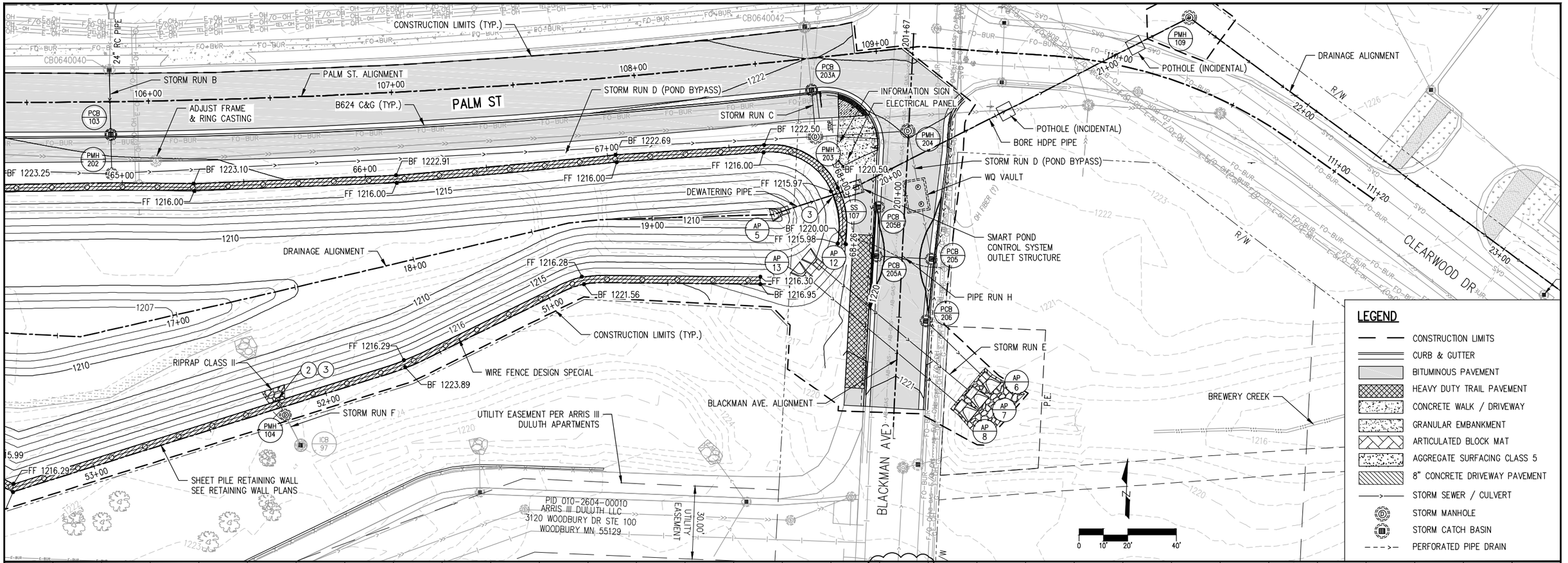
△ 01/23/26

EXISTING CONDITIONS & REMOVALS

SHEET NO. 20 OF 47 SHEETS

LHB PROJECT NO. 240078

PLOT DATE: 1/22/2026 9:07:15 AM FILE: O:\24Proj\240078\500 Drawings\Civil\240078 07.0 Existing Conditions & Removals.dwg



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PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

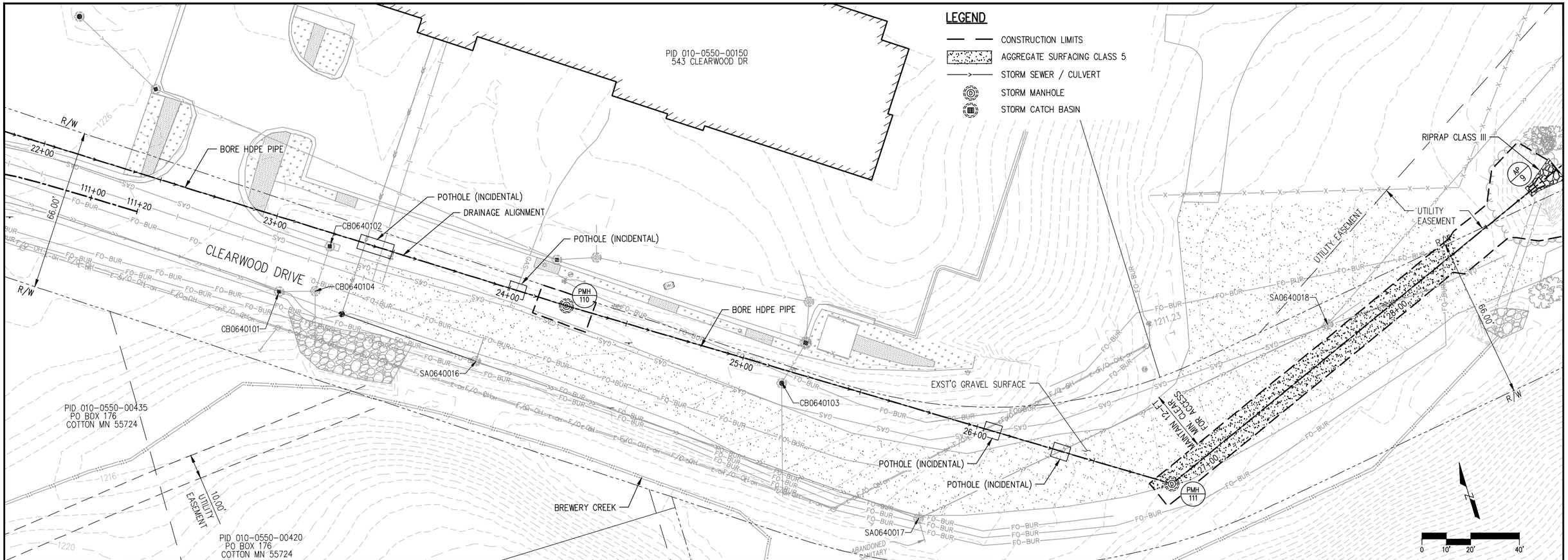
REVISION
⚠ 01/23/26

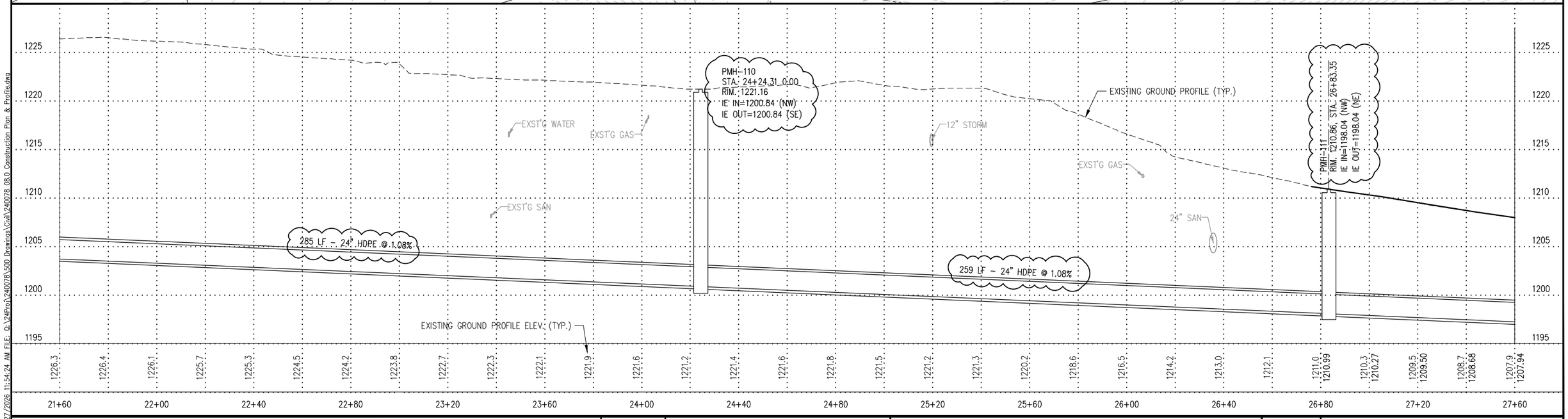
CONSTRUCTION PLAN & PROFILE

SHEET NO. 23 OF 47 SHEETS

LHB PROJECT NO. 240078

PLOT DATE: 1/27/2026 11:54:09 AM FILE: Q:\24Proj\240078\500 Drawings\Civil\240078 08.0 Construction Plan & Profile.dwg





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MEGAN GOPLIN
PRINTED NAME

SIGNATURE

01/27/2026
DATE

53018
LIC. NO.

CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

REVISION
△ 01/23/26

PLAN & PROFILE

SHEET NO. 24 OF 47 SHEETS

LHB PROJECT NO. 240078

PLOT DATE: 1/27/2026 11:54:24 AM FILE: Q:\24Pro\\240078\500 Drawings\Civil\240078 08.0 Construction Plan & Profile.dwg

CLEARWOOD DRIVE

CB0640193

SA0640017

POTHOLE (INCIDENTAL)

POTHOLE (INCIDENTAL)

25+00

EXST'G GRAVEL SURFACE

AGGREGATE SURFACING CLASS 5

MAINTAIN 12-FT MIN. CLEAR FOR ACCESS

UTILITY EASEMENT

UTILITY EASEMENT

SA0640018

R/W

AP 9

PMH 111

27+00

28+00

28+98

OPEN TRENCH INSTALLATION

CONSTRUCTION LIMITS (TYP.)

RIPRAP CLASS III

66.00'

R/W

N

0 10' 20' 40'

PID 010-0435-00010
709 PORTA JOHNSON

LEGEND

- CONSTRUCTION LIMITS
- CURB & GUTTER
- BITUMINOUS PAVEMENT
- HEAVY DUTY TRAIL PAVEMENT
- CONCRETE WALK / DRIVEWAY
- GRANULAR EMBANKMENT
- ARTICULATED BLOCK MAT
- AGGREGATE SURFACING CLASS 5
- 8" CONCRETE DRIVEWAY PAVEMENT
- STORM SEWER / CULVERT
- STORM MANHOLE
- STORM CATCH BASIN
- PERFORATED PIPE DRAIN

PALM ST

PALM ST. ALIGNMENT

WALL ALIGNMENT

AP 5

AP 13

AP 12

DEWATERING PIPE

50+00

19+00

108+

CB0640042

PMH 203

STOP

PCB 203A

LIMIT OF FULL RECONSTRUCTION

+19.93, 12.63 LT

+83.02, 12.42 LT

68+26

SS 107

68+00

109+00

BLACKMAN AVE

200+00

PCB 205A

PCB 205B

201+00

201+67

PMH 204

PCB 206

PCB 205

WQ VAULT

DRAINAGE ALIGNMENT

AP 8

AP 7

AP 6

RIPRAP CLASS III

P.E.

110+00

PMH 109

EXISTING GROUND PROFILE (TYP.)

PMH-111
RIM. 1210.86, STA. 26+83.35
IE IN=1198.04 (NW)
IE OUT=1198.04 (NE)

PROPOSED GRADE PROFILE (TYP.)

FO-BUR

EXST'G GAS

24" SAN

EXST'G GAS

EXST'G FO

193 LF. - 24" RC PIPE SEWER @ 1.08%

AP-9
IE OUT=1195.96

TIE PIPES BETWEEN PMH-111 AND AP-9 OUTLET
WITH GALVANIZED STEEL RODS (INCIDENTAL)

EXISTING GROUND PROFILE ELEV. (TYP.)

PROPOSED GRADE PROFILE ELEV. (TYP.)

1220.2 1218.6 1216.5 1214.2 1213.0 1212.1 1211.0 1210.99 1210.3 1210.27 1209.5 1209.50 1208.7 1208.68 1207.9 1207.94 1207.3 1207.28 1207.0 1206.95 1206.7 1206.70 1206.4 1206.28 1204.7 1204.58 1196.1 1196.26

25+60 26+00 26+40 26+80 27+20 27+60 28+00 28+40 28+80 29+00

P.V.I. STA = 200+12.57
P.V.I. ELEV = 1221.50

LOW P.T. ELEV = 1220.15
LOW P.T. STA. = 200+74.58
P.V.I. STA. = 200+70
P.V.I. ELEV. = 1219.26
A.D. = 7.14%
K = 14.00
100.00' VC

PVC 260+20.09
ELEV-1221.21

EXISTING GROUND PROFILE (TYP.)

PROPOSED GRADE PROFILE (TYP.)

PVT 201+20.09
ELEV 1220.89
PMH-204
RIM. 1221.09, STA. ???
IE IN=1215.23 (W)
IE IN=1216.38 (N)
IE OUT=1215.23 (S)

3.25%

P.V.I. STA = 201+56.93
P.V.I. ELEV = 1222.08

15" STORM

51" SPAN PIPE-ARCH CULVERT

EXISTING GROUND PROFILE ELEV. (TYP.)

PROPOSED GRADE PROFILE ELEV. (TYP.)

1221.7 1221.2 1221.21 1220.4 1220.57 1220.2 1220.22 1220.2 1220.16 1220.5 1220.38 1220.9 1220.88 1221.5 1221.53 1222.2

199+80 200+00 200+40 200+80 201+20 201+60 202+00

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.

MEGAN GOPLIN
PRINTED NAME

SIGNATURE

01/27/2026
DATE

53018
LIC. NO.

CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

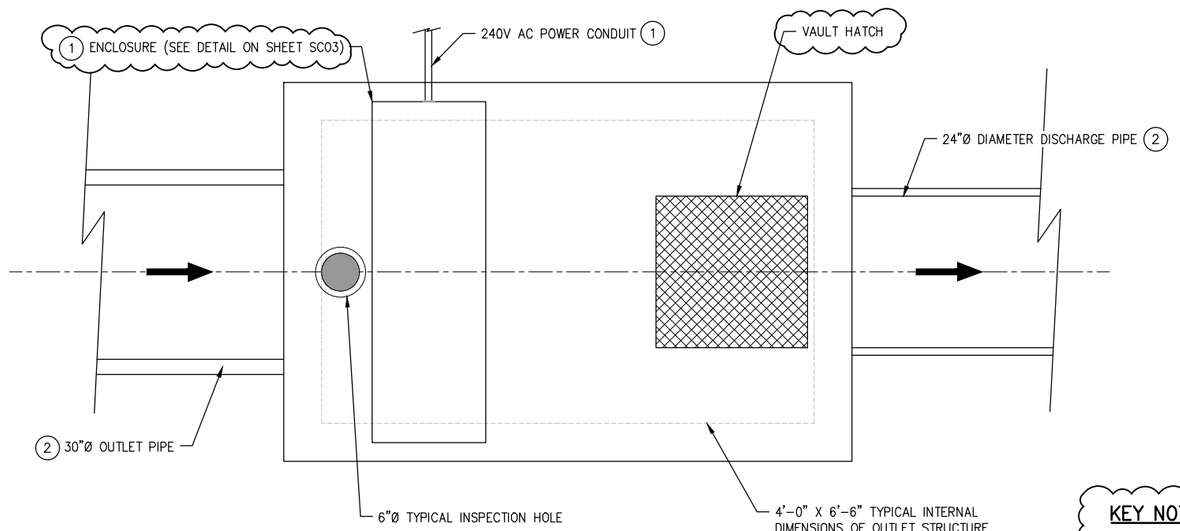
REVISION
△ 01/23/26

PLAN & PROFILE

SHEET NO. 25 OF 47 SHEETS

PLOT DATE: 1/27/2026 11:54:44 AM FILE: C:\24Proj\240078\500 Drawings\Civil\240078 08.0 Construction Plan & Profile.dwg

LHB PROJECT NO. 240078



CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 3

KEY NOTES

1. PAID FOR AS SMART POND CONTROLS.
2. PAID FOR UNDER ANOTHER ITEM.

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MEGAN GOPLIN
PRINTED NAME

SIGNATURE

01/23/2026
DATE

53018
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CITY PROJECT NO. 2208

PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

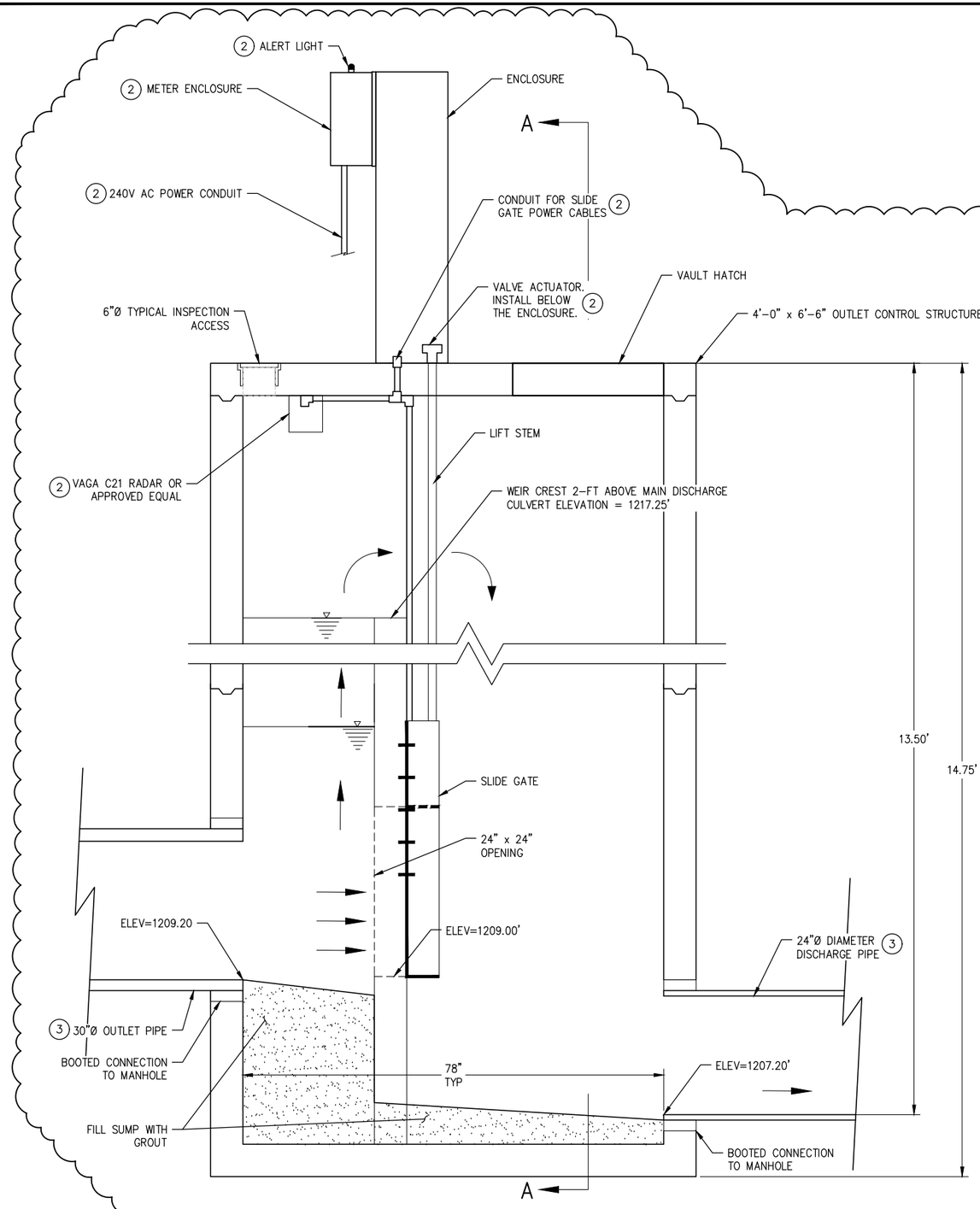
REVISION
⚠ 01/23/26

SMART POND CONTROLS

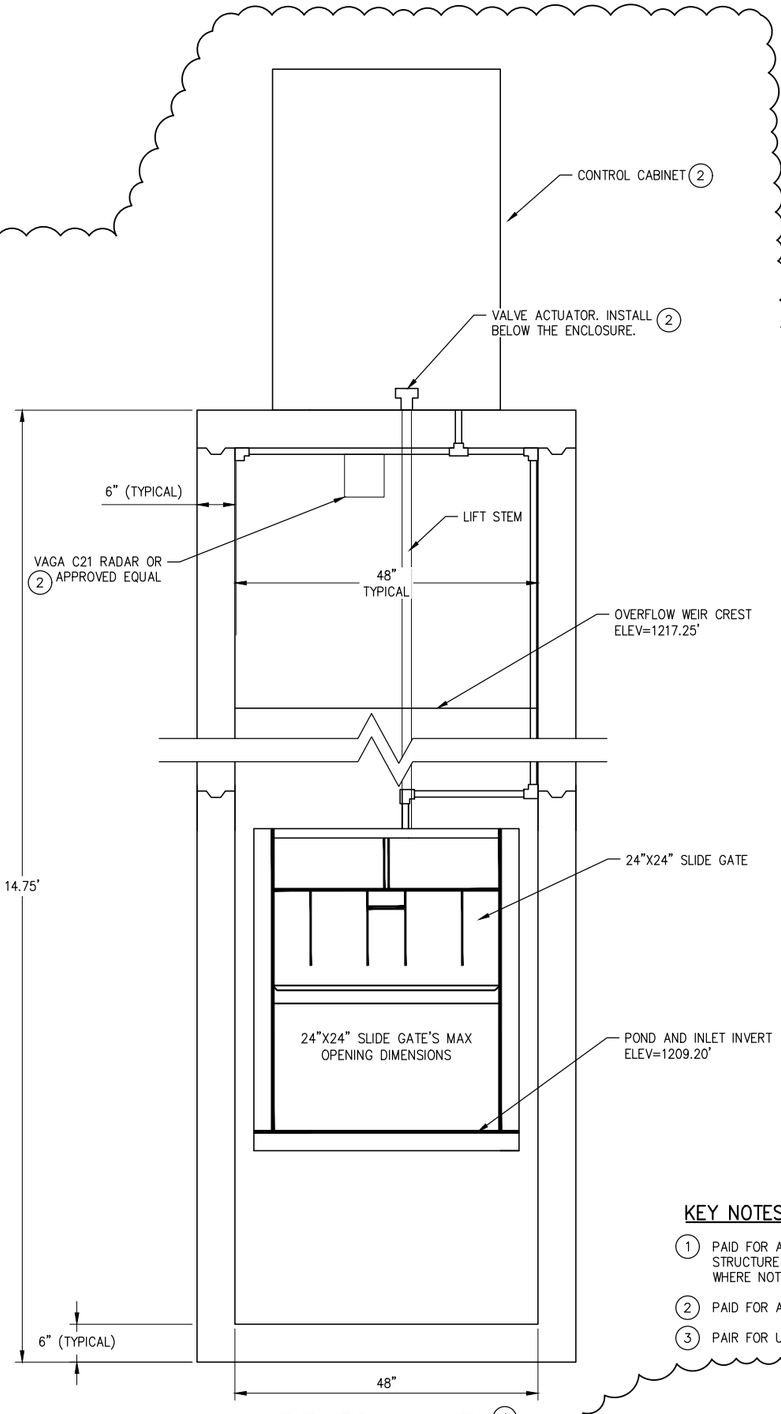
SHEET NO. SC01 OF SC04 SHEETS

LHB PROJECT NO. 240078

PLOT DATE: 1/22/2026 8:53:54 AM FILE: Q:\24Proj\240078\500 Drawings\Civil\240078 SC01 Structure Detail.dwg



ELEVATION VIEW, OUTLET STRUCTURE WITH CONTROL ENCLOSURE & SLIDE GATE 1



ELEVATION A-A VIEW 1

KEY NOTES

1. PAID FOR AS CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 3 EXCEPT WHERE NOTED.
2. PAID FOR AS SMART POND CONTROLS.
3. PAIR FOR UNDER ANOTHER ITEM.

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MEGAN GOPLIN
PRINTED NAME

Megan Goplin
SIGNATURE

01/27/2026
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PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

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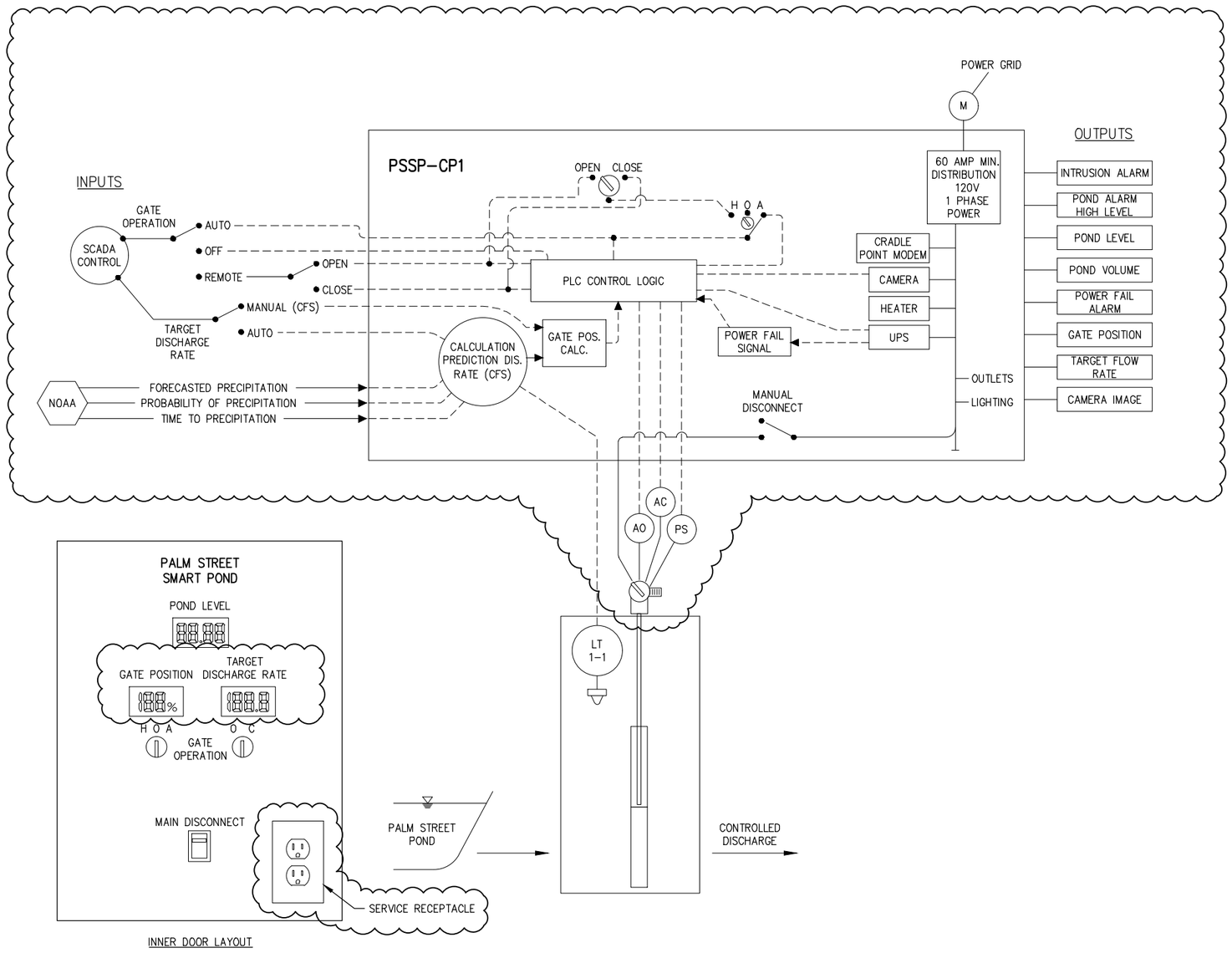
SMART POND CONTROLS

SHEET NO. SC02R OF SC04 SHEETS

PLOT DATE: 1/27/2026 2:41:16 PM FILE: Q:\24Proj\240078\500 Drawings\Civil\240078 SC01 Structure Detail.dwg

LHB PROJECT NO. 240078



PROCESS AND INSTRUMENTATION DIAGRAM (P&ID)

PLOT DATE: 1/27/2026 11:56:14 AM FILE: Q:\24Proj\240078\500 Drawings\Civil\240078 SC01 Structure Detail.dwg

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MEGAN GOPLIN
PRINTED NAME

SIGNATURE

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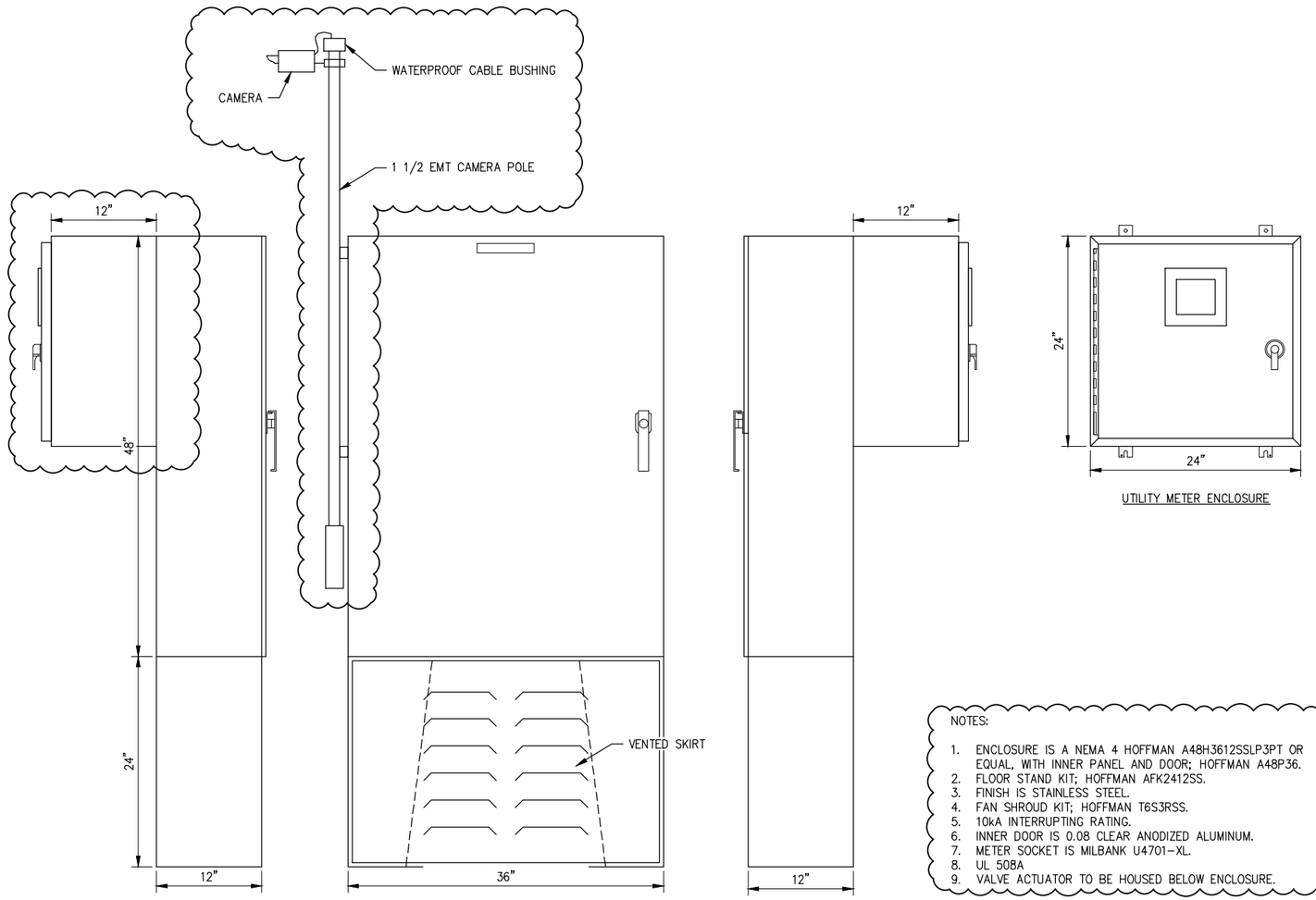
PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

REVISION
⚠ 01/23/26

SMART POND CONTROLS

SHEET NO. SC03R OF SC04 SHEETS



UTILITY METER ENCLOSURE

NOTES:

1. ENCLOSURE IS A NEMA 4 HOFFMAN A48H3612SSLP3PT OR EQUAL, WITH INNER PANEL AND DOOR; HOFFMAN A48P36.
2. FLOOR STAND KIT; HOFFMAN AFK2412SS.
3. FINISH IS STAINLESS STEEL.
4. FAN SHROUD KIT; HOFFMAN T6S3RSS.
5. 10kA INTERRUPTING RATING.
6. INNER DOOR IS 0.08 CLEAR ANODIZED ALUMINUM.
7. METER SOCKET IS MILBANK U4701-XL.
8. UL 508A
9. VALVE ACTUATOR TO BE HOUSED BELOW ENCLOSURE.

ENCLOSURE DETAIL

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PALM STREET PERMANENT STORMWATER MANAGEMENT SYSTEM IMPROVEMENTS

REVISION
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SMART POND CONTROLS

SHEET NO. SC04 OF SC04 SHEETS

LHB PROJECT NO. 240078

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Elevation	Area (ac)	0.5' "sliced" volume (ac-ft)	Cumulative Volume (ac-ft)	Flow rate esimate (cfs)	
1208.0	0.17		range below	through	
1208.5	0.34	0.12	smart outlet	fully open *	
1209.0	0.50	0.21	always with	smart	
1209.5	0.66	0.29	water	structure:	
1210.0	0.82	0.37	**0.00**	**0.00**	**smart outlet invert elevation**
1210.5	0.89	0.43	**0.43**	**1.85**	
1211.0	0.95	0.46	**0.89**	**6.69**	
1211.5	1.01	0.49	**1.37**	**13.17**	
1212.0	1.07	0.52	**1.89**	**18.91**	
1212.5	1.12	0.55	**2.44**	**23.16**	
1213.0	1.17	0.57	**3.02**	**26.74**	
1213.5	1.22	0.60	**3.61**	**28.60**	
1214.0	1.27	0.62	**4.24**	**29.06**	
1214.5	1.33	0.65	**4.89**	**29.51**	
1215.0	1.39	0.68	**5.56**	**29.95**	pond regular outlet invert is 1215.20
1215.5	1.44	0.71	**6.27**	**30.39**	i.e. invert of twin arch pipes
1216.0	1.50	0.74	**7.01**	**30.82**	**
1216.5	1.55	0.76	**7.77**	**31.25**	**
1217.0	1.61	0.79	**8.56**	**31.67**	**
1217.5	1.66	0.82	**9.38**	**32.08**	**
1218.0	1.72	0.84	**10.22**	**32.49**	**
1218.5	1.75	0.87	**11.09**	**32.89**	**
1219.0	1.79	0.88	**11.97**	**33.29**	**
1219.5	1.82	0.90	**12.87**	**33.69**	**
1220.0	1.86	0.92	**13.79**	**34.08**	pond overflow (over Blackman Ave) level

* Flow rates are estimated assuming that flow control is exerted by the 24" pipe out of smart structure
i.e., the smart structure gate is open and allows more flow than the pipe can convey

** In this range, there is more flow out of the pond via the regular outlet (twin arch pipe at 1215.20)