



Lake Geneva Utility Commission

MUNICIPAL WATER AND WASTEWATER SERVICES

361 W Main Street
P.O. Box 187
Lake Geneva, WI 53147
262-248-2311
www.lgutilitycommission.com

Dennis Lyon – President
Josh Gajewski – Utility Director
Jeff Ecklund – Water Superintendent
Ken Bauman – Wastewater Superintendent

LAKE GENEVA UTILITY COMMISSION MONDAY DECEMBER 18, 2023 4:00 PM COUNCIL CHAMBERS - CITY HALL, 626 GENEVA STREET

CITY HALL WILL BE OPEN TO THE PUBLIC DURING ALL MEETINGS. MEETINGS WILL BE HELD VIRTUALLY AS WELL AS IN PERSON. IF YOU WISH TO LISTEN OR WATCH THE MEETING YOU MAY DO SO BY USING THE FOLLOWING:

1. Links to the Lake Geneva Utility Commission's live video stream can be found at <https://cityoflakegeneva.gov/319/City-Meetings-Video-Stream>
2. Television: Watch live broadcast of the meeting on Spectrum Cable Channel 25
3. Listen to audio via phone: (602) 333-2017 (Long distance rates may apply) (888) 204-5987 (Toll Free) **Access Code: 9746153**

AGENDA

1. Call Meeting to Order
2. Roll Call
3. Comments from the public as allowed by Wis. Statutes §19.84 (2), limited to items on this agenda except for public hearing items. Comments will be limited to 5 minutes.
4. Approve Utility Commission Minutes from November 20, 2023 as prepared and distributed
5. Acknowledgement of Correspondence
 - Thank you from the Bauman Family
6. Approval of November 2023 Financials
7. Approval of November 2023 Bills
8. Directors Report
9. Discussion/Action on proposed cellular equipment modifications by AT&T at the Host Tower
10. Discussion/Action on professional services agreement with Clean Water Engineering
11. Discussion/Action on acceptance of water and sanitary sewer improvements – Symphony Bay Phase 4
12. Discussion/Action on request for participation in tuition reimbursement program for Jo Busch – Utilities Coordinator
13. Discussion/Action on the proposed scope of work to be performed on Well #5
14. Discussion/Action on utility improvements along the WisDOT STH project corridor
15. Discussion/Action on Resolution 2023-002 Amending the 2023 Water and Wastewater Utility Budgets
16. Motion to go into closed session pursuant to Wis. Stat. 19.85(1)(e) Deliberating or negotiating the purchasing of public properties, the investing of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a closed session, specifically regarding the purchase and/or sale of property
17. Motion to return to open session pursuant to Wis. Stat. 19.85(2) and take action on any items discussed in the closed session
18. Adjourn

Lake Geneva Utility Commission Minutes
Lake Geneva Utility Commission Meeting
Monday November 20, 2023, 4:00pm
Council Chambers, City Hall – 626 Geneva St

THIS MEETING WAS HELD IN PERSON

Call Meeting to Order – Lyon called the meeting to order at 4:00pm

Roll Call – Lyon, Howell, Nord, Binn & Stanczak Excused - Klein & Frame

Staff in Attendance – Gajewski

Comments from the public as allowed by Wis. Statutes §19.84(2), limited to items on this agenda except for public hearing items. Comments will be limited to 5 minutes.
None

Approve Utility Commission Minutes from October 16, 2023, as prepared and distributed.
Nord/Binn motion to approve. Passed 5-0

Acknowledgement of Correspondence
None

Approval of October 2023 Financials
Howell/Binn motion to approve. Passed 5-0.

Approval of October 2023 Bills
Binn/Stanczak motion to approve. Passed 5-0.

Director's Report
Gajewski reviewed the submitted Director's report.
Howell/Binn motion to approve the Directors report. Passed 5-0.

Discussion/Action on Payment Request #5 for the Pine Tree Lane & Mariane Terrace Improvement Project prepared by Asphalt Contractors Inc.

Gajewski explained that this is the fifth payment application for this project, and we expect one more yet to come. The difference with this request is that we are paying down the retainage portion as there is very little outstanding work to be done. He explained that this project has been approved for use of ARPA funds which will be sent to us from the City.

Binn/Lyon motion to approve the payment of \$23,464.62 for Pay Application #5 to Asphalt Contractors Inc. for work completed on the Pine Tree Lane and Marianne Terrace Improvement Project. Passed 5-0.

Discussion/Action on the proposed scope of work to be performed on Well #5 pumping equipment, Dodge St. boost pump #2 and Treatment Plant pump 2B

Gajewski stated that the proposal was expected to arrive before the meeting, but he did not receive it. He requests that this item be tabled until the next meeting.

Nord/Howell motion to table this agenda item until the December Utility Commission meeting.
Passed 5-0.

Discussion/Action on the proposed 2024 Operating and Capital Budgets for the Wastewater Utility and Water Utility

Gajewski detailed the changes and additions to the proposed Budgets compared to prior years and since the last meeting.

Howell/Binn motion to approve the 2024 Operating and Capital Budgets for the Wastewater Utility and the Water Utility. Passed 5-0.

Lyon/Nord motion to go into closed session pursuant to Wis. Stat. 19.85(1)(c) considering employment, promotion, compensation, or performance evaluation data of any public employee over which the governmental body has jurisdiction or exercises responsibility, regarding the Wastewater Superintendent.

The Commission convened into closed session on a 5-0 roll call vote at 4:12pm.

Howell/Binn motion to return to open session pursuant to Wisconsin Statutes 19.85(2) and take action on any items discussed in closed session.

The Commission returned to open session on a 5-0 roll call vote at 4:38pm.

Howell/Lyon motion to direct the Utility Director to follow the policy as discussed in closed session. Passed 5-0.

Adjourn

Stanczak/Binn motion to adjourn at 4:39pm. Passed 5-0.

**THESE MINUTES ARE NOT OFFICIAL UNTIL APPROVED BY
THE LAKE GENEVA UTILITY COMMISSION**

LAKE GENEVA UTILITY COMMISSION

BUDGET COMPARISON THRU:

11 / 2023

FUND 61 - WASTEWATER UTILITY

REVENUES	Current Period	YTD	2023 Budget	YTD vs Budget	YTD % of Budget 92%	Prior YTD 2022	Prior YTD 5 Year Avg.
INTEREST EARNED	58,756	275,657	69,600	206,057	396.06%	62,265	26,427
CUSTOMER SALES	56,710	1,700,011	2,104,937	-404,926	80.76%	1,631,922	1,554,693
OTHER REVENUE	3,427	15,690	11,225	4,465	139.77%	11,893	9,895
CAPITAL CONTRIBUTIONS	24,618	454,314	205,150	249,164	221.45%	172,699	170,367
TOTAL REVENUES	143,511	2,445,672	2,390,912	54,760	102.29%	1,878,780	1,761,382
EXPENSES							
TOTAL OUTSIDE SERVICES	65,417	273,479	408,455	-134,976	66.95%	258,827	241,322
TOTAL OPERATING EXPENSES	6,693	36,096	45,550	-9,454	79.24%	32,140	27,579
TOTAL INSURANCE	0	25,269	29,450	-4,181	85.80%	21,962	19,310
TOTAL SALARY & BENEFITS	104,380	596,398	668,150	-71,752	89.26%	515,328	492,152
TOTAL LAB SUPPLIES	1,806	18,014	21,250	-3,236	84.77%	21,436	14,953
TOTAL MISCELLANEOUS EXPENSE	0	142	1,000	-858	14.17%	121	550
TOTAL MAINTENANCE	73,366	221,582	301,600	-80,018	73.47%	91,767	160,934
TOTAL OPERATION & MAINTENANCE EXPENSES	251,662	1,170,980	1,475,455	-304,475	79.36%	941,580	956,801
REVENUES OVER O&M EXPENSES	-108,151	1,274,692	915,457	359,235		937,200	804,581
TOTAL CAPITAL OUTLAY	18,883	35,484	1,324,700	-1,289,216	2.68%	119,257	75,604
REVENUES OVER TOTAL EXPENSES	-127,034	1,239,208	-409,243	1,648,451		817,943	728,977
TOTAL CASH TRANSFERS	55,225	1,188,223	-413,250	1,601,473	-287.53%	834,280	502,340
NET CHANGE IN CASH BALANCE	-182,259	50,985	4,007	46,978		-16,337	226,637

FUND CASH AND INVESTMENT SUMMARY	<u>Opening Balance</u>	<u>Period Activity</u>	<u>Ending Balance</u>
Wastewater Utility Fund Cash	349,666	352,963	702,629
LGIP #10 - Capital Project Fund	3,156,473	28,436	3,184,910
LGIP #11 - Debt Service Fund	0	0	0
LGIP #12 - Impact Fee Fund	1,733,770	42,114	1,775,884
LGIP #13 - Equipment Replacement Fund	1,563,830	14,088	1,577,919
TOTAL WASTEWATER CASH AND INVESTMENT	6,803,740	437,601	7,241,341

LAKE GENEVA UTILITY COMMISSION

BUDGET COMPARISON THRU:

11 / 2023

FUND 62 - WATER UTILITY

REVENUES	Current Period	YTD	2023 Budget	YTD vs Budget	YTD % of Budget 92%	Prior YTD 2022	Prior YTD 5 Year Avg.
INTEREST EARNED	35,104	160,294	61,200	99,094	261.92%	35,514	14,198
CUSTOMER SALES	13,170	1,455,070	1,833,474	-378,404	79.36%	1,425,332	1,362,783
OTHER REVENUE	7,592	292,297	306,498	-14,201	95.37%	280,162	261,549
CAPITAL CONTRIBUTIONS	15,180	402,006	185,900	216,106	216.25%	156,494	218,100
TOTAL REVENUES	71,046	2,309,668	2,387,072	-77,404	96.76%	1,897,502	1,856,630
EXPENSES							
TOTAL SOURCE OF SUPPLY - OPERATION	9,465	63,204	69,850	-6,646	90.48%	56,585	50,050
TOTAL SOURCE OF SUPPLY - MAINTENANCE	1,361	13,926	66,500	-52,574	20.94%	9,377	31,781
TOTAL PUMPING EXPENSE - OPERATION	11,953	67,981	83,500	-15,519	81.41%	62,604	60,203
TOTAL PUMPING EXPENSE - MAINTENANCE	483	8,907	45,950	-37,043	19.38%	6,008	16,662
TOTAL WATER TREATMENT - OPERATION	6,997	89,661	116,900	-27,239	76.70%	84,156	79,464
TOTAL WATER TREATMENT - MAINTENANCE	9,943	69,820	76,000	-6,180	91.87%	70,280	76,106
TOTAL TRANS. & DISTRIBUTION - OPERATION	9,289	55,505	63,900	-8,395	86.86%	42,733	37,043
TOTAL TRANS. & DISTRIBUTION - MAINTENANCE	23,035	144,863	194,150	-49,287	74.61%	251,123	169,037
TOTAL CUSTOMER ACCOUNTS	12,460	71,894	76,025	-4,131	94.57%	62,511	56,198
TOTAL ADMIN & GENERAL OPERATIONS	66,970	449,542	463,540	-13,998	96.98%	405,497	334,863
TOTAL OTHER EXPENSES	50,000	275,000	310,000	-35,000	88.71%	275,000	273,567
TOTAL OPERATION & MAINTENANCE EXPENSES	201,956	1,310,302	1,566,315	-256,013	83.66%	1,325,873	1,184,973
REVENUES OVER O&M EXPENSES	-130,910	999,366	820,757	178,609		571,629	671,658
TOTAL CAPITAL OUTLAY	18,667	557,992	576,000	-18,008	96.87%	70,936	196,876
REVENUES OVER TOTAL EXPENSES	-149,576	441,373	244,757	196,616		500,693	474,782
TOTAL CASH TRANSFERS	33,842	819,960	241,600	578,360	339.39%	536,680	218,808
NET CHANGE IN CASH BALANCE	-183,418	-378,587	3,157	-381,744		-35,987	255,974

FUND CASH AND INVESTMENT SUMMARY	<u>Opening Balance</u>	<u>Period Activity</u>	<u>Ending Balance</u>
Water Utility Fund Cash	-73,400	327,646	254,246
LGIP #1 - Capital Project Fund	1,975,917	17,801	1,993,718
LGIP #2 - Impact Fee Fund	1,026,602	26,126	1,052,728
LGIP #3 - Equipment Replacement Fund	814,821	7,341	822,161
TOTAL WATER FUND CASH AND INVESTMENT	3,743,940	378,913	4,122,853

Report Criteria:

Detail report.

Invoices with totals above \$5000.00 included.

Paid and unpaid invoices included.

Invoice Detail.GL account (2 Characters) = "61","62"

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
61				
S.J. ELECTRO SYSTEMS LLC (SJE)				
CD99504162	11/20/2023	NEW VFD INSTALL PLUS DITCH	61-00-00-10700 CONSTRUCTION WORK IN PROCESS	10,883.24
Total S.J. ELECTRO SYSTEMS LLC (SJE):				10,883.24
ALLIANT ENERGY				
280954000023	12/04/2023	HASKINS ST SEWER PLANT	61-00-00-52520 UTILITY-ELECTRICITY-PLANT	14,776.94
Total ALLIANT ENERGY:				14,776.94
DAHME ENTERPRISES INC				
1940	11/17/2023	FALL SPREADING - BARN EMPT	61-00-00-52950 BIO-MASS HAUL/REMOVE (SLUDGE)	19,845.00
Total DAHME ENTERPRISES INC:				19,845.00
Total 61:				45,505.18
62				
ASPHALT CONTRACTORS INC				
APPLICATION	08/30/2023	2023-MARIANNE TER & PINE TR	62-00-00-10700 CONSTRUCTION WORK IN PROCESS	23,464.62
Total ASPHALT CONTRACTORS INC:				23,464.62
CORE & MAIN LP				
U062455	12/08/2023	SENSUS SUPPORT 1/9/2024-1/8	62-00-00-16500 PREPAYMENTS	14,598.83
T913361	11/21/2023	3/4S IPERL METERS	62-00-00-34600 METERS	10,301.30
Total CORE & MAIN LP:				24,900.13
MARTELLE WATER TREATMENT				
26175	11/15/2023	SODIUM HYPOCHLORITE	62-00-00-60200 CHEMICALS	1,320.68
26175	11/15/2023	CHLORINE & CARUS	62-00-00-64100 CHEMICALS	5,023.06
Total MARTELLE WATER TREATMENT:				6,343.74
Total 62:				54,708.49
Grand Totals:				100,213.67

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
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Dated: _____

Mayor: _____

City Council: _____

City Recorder: _____

Report Criteria:

Detail report.

Invoices with totals above \$5000.00 included.

Paid and unpaid invoices included.

Invoice Detail.GL account (2 Characters) = "61","62"

Report Criteria:

Detail report.

Invoices with totals above \$0.00 included.

Paid and unpaid invoices included.

Invoice Detail.GL account (2 Characters) = "61","62"

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
61				
CITY ELECTRIC				
LKG/090506	11/14/2023	PROCESS COMM CABINET UP	61-00-00-10700 CONSTRUCTION WORK IN PROCESS	34.03
Total CITY ELECTRIC:				34.03
S.J. ELECTRO SYSTEMS LLC (SJE)				
CD99504162	11/20/2023	NEW VFD INSTALL PLUS DITCH	61-00-00-10700 CONSTRUCTION WORK IN PROCESS	10,883.24
Total S.J. ELECTRO SYSTEMS LLC (SJE):				10,883.24
NORTHERN LAKE SERVICE INC				
2320065	11/20/2023	WEEKLY NITROGEN TESTING	61-00-00-52100 LABORATORY SERVICES	293.79
2320472	11/27/2023	WEEKLY NITROGEN TESTING	61-00-00-52100 LABORATORY SERVICES	293.79
2320473	11/27/2023	FOURTH QTR MW TESTING	61-00-00-52100 LABORATORY SERVICES	1,558.28
2320542	11/29/2023	FOURTH QUARTER SLUDGE TE	61-00-00-52100 LABORATORY SERVICES	758.60
2320790	12/04/2023	WEEKLY NITROGEN TESTING	61-00-00-52100 LABORATORY SERVICES	293.79
2320996	12/08/2023	WEEKLY NITROGEN TESTING	61-00-00-52100 LABORATORY SERVICES	293.79
Total NORTHERN LAKE SERVICE INC:				3,492.04
WE ENERGIES				
4835771308	12/08/2023	HASKINS ST DEWATERING BLD	61-00-00-52500 UTILITY-GAS-PLANT	116.72
4836344738	12/08/2023	HASKINS ST WEST BLDG-STOR	61-00-00-52500 UTILITY-GAS-PLANT	153.25
4836645066	12/08/2023	HASKINS ST WWTF-SEWER PL	61-00-00-52500 UTILITY-GAS-PLANT	272.54
4814084441	11/20/2023	EDGEWOOD DR LIFT STN	61-00-00-52505 UTILITY-GAS-COLLECTION SYSTEM	10.82
4833774642	12/07/2023	EDGEWOOD DR LIFT STN	61-00-00-52505 UTILITY-GAS-COLLECTION SYSTEM	13.53
Total WE ENERGIES:				566.86
ALLIANT ENERGY				
143875000023	12/01/2023	191 HASKINS ST DEWATER BLD	61-00-00-52520 UTILITY-ELECTRICITY-PLANT	335.72
280954000023	12/04/2023	HASKINS ST SEWER PLANT	61-00-00-52520 UTILITY-ELECTRICITY-PLANT	14,776.94
507753000023	12/01/2023	361 W MAIN ST SIGN	61-00-00-52520 UTILITY-ELECTRICITY-PLANT	35.70
974671000023	12/01/2023	361 MAIN ST HALLWAY	61-00-00-52520 UTILITY-ELECTRICITY-PLANT	102.99
055361000023	12/01/2023	361 MAIN ST CC LIFT	61-00-00-52525 UTILITY-ELECTRICITY-COLL SYS	66.01
141180000023	12/01/2023	LAGRANGE DR LIFT STN	61-00-00-52525 UTILITY-ELECTRICITY-COLL SYS	150.44
277971000023	12/01/2023	MARIANE TER LIFT STN	61-00-00-52525 UTILITY-ELECTRICITY-COLL SYS	33.78
307955000023	12/01/2023	MAXWELL ST LIFT STN	61-00-00-52525 UTILITY-ELECTRICITY-COLL SYS	48.29
327113000023	12/01/2023	BAYVIEW DR LIFT STN	61-00-00-52525 UTILITY-ELECTRICITY-COLL SYS	49.78
599411000023	12/01/2023	361 STATE ROAD 120 BIG FOOT	61-00-00-52525 UTILITY-ELECTRICITY-COLL SYS	245.44
962961000023	12/01/2023	EDGEWOOD DR LIFT STN	61-00-00-52525 UTILITY-ELECTRICITY-COLL SYS	214.34
Total ALLIANT ENERGY:				16,059.43
DAHM ENTERPRISES INC				
1940	11/17/2023	FALL SPREADING - BARN EMPT	61-00-00-52950 BIO-MASS HAUL/REMOVE (SLUDGE)	19,845.00
Total DAHM ENTERPRISES INC:				19,845.00

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
FNBO				
554295033227	11/18/2023	ACROBAT PRO SUBSCRIPTION	61-00-00-53050 COMPUTER EXPENSE	126.53
554328633282	11/24/2023	VONAGE PHONE SVC 11/23/202	61-00-00-53050 COMPUTER EXPENSE	133.06
823050933330	11/29/2023	P2P NETWORK EQUIP	61-00-00-53050 COMPUTER EXPENSE	441.00
Total FNBO:				700.59
CHARTER COMMUNICATIONS				
0123951111123	11/11/2023	NOV INTERNET SVC	61-00-00-53100 OFFICE SUPPLIES EXPENSE	109.98
Total CHARTER COMMUNICATIONS:				109.98
MARTIN BUSINESS GROUP				
1302146	11/20/2023	SERVICE CONTRACT/COPIES	61-00-00-53100 OFFICE SUPPLIES EXPENSE	126.05
Total MARTIN BUSINESS GROUP:				126.05
ODP BUSINESS SOLUTIONS LLC				
343135980001	11/17/2023	PAPER CLIPS, BINDER CLIPS, C	61-00-00-53100 OFFICE SUPPLIES EXPENSE	8.66
343135982001	11/17/2023	BINDER CLIPS	61-00-00-53100 OFFICE SUPPLIES EXPENSE	1.58
Total ODP BUSINESS SOLUTIONS LLC:				10.24
AT&T				
262248865611-	11/13/2023	NOV 2023 MONTHLY PHONE BI	61-00-00-53110 TELEPHONE EXPENSE	114.74
Total AT&T:				114.74
US CELLULAR				
0616010109	11/04/2023	WWTF MONTHLY PHONE BILL	61-00-00-53110 TELEPHONE EXPENSE	119.71
Total US CELLULAR:				119.71
PITNEY BOWES BANK INC RESERVE ACCOUNT				
PB11172023	11/17/2023	RESERVE ACCT 19274125-REP	61-00-00-53120 POSTAGE	750.00
Total PITNEY BOWES BANK INC RESERVE ACCOUNT:				750.00
PITNEY BOWES GLOBAL LEASE				
3318366642	11/29/2023	POSTAGE METER LEASE ACCT	61-00-00-53120 POSTAGE	87.00
Total PITNEY BOWES GLOBAL LEASE:				87.00
HOME DEPOT CREDIT SERVICES				
8073599	11/20/2023	SNOW SHOVEL/2500 LUMEN D	61-00-00-53500 OPERATIONS TOOLS & EQUIP	57.94
Total HOME DEPOT CREDIT SERVICES:				57.94
CINTA FIRE PROTECTION F36				
0F36678765	11/22/2023	ANNUAL FIRE EXTINGUISHER I	61-00-00-53900 FIRST AID & SAFETY SUPPLIES	1,357.60
Total CINTA FIRE PROTECTION F36:				1,357.60
HOME DEPOT CREDIT SERVICES				
8073599	11/20/2023	WORK GLOVES	61-00-00-53900 FIRST AID & SAFETY SUPPLIES	20.85

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
Total HOME DEPOT CREDIT SERVICES:				20.85
ROTE OIL				
817667	11/29/2023	WINTER SALT	61-00-00-53990 MISCELLANEOUS EXPENSE	343.00
Total ROTE OIL:				343.00
AMAZON CAPITAL SERVICES				
89C4-OCT 202	11/01/2023	COUNTERFGEIT BILL MARKER	61-00-00-63100 POLYMER	4.44
Total AMAZON CAPITAL SERVICES:				4.44
KETTLE MORAINHE HEATING & A/C, LLC				
118308	11/01/2023	HEADWORKS BLDG FURNACE	61-00-00-93501 MAINT-HEADWORKS BLDG	189.00
Total KETTLE MORAINHE HEATING & A/C, LLC:				189.00
DUNN LUMBER				
1591788	11/29/2023	BRACKETS-VEHICLE STORAGE	61-00-00-93506 MAINT-VEHICLE STORAGE BLDGS	86.19
Total DUNN LUMBER:				86.19
HOME DEPOT CREDIT SERVICES				
8020776	11/30/2023	SLUDGE STORAGE BLDG-LIGH	61-00-00-93507 MAINT-DEWATERING-B/PRESS BLDG	152.57
Total HOME DEPOT CREDIT SERVICES:				152.57
S.J. ELECTRO SYSTEMS LLC (SJE)				
CD99503602	11/15/2023	HEADWORKS PANEL MAINT/RE	61-00-00-93601 MAINT-HEADWORKS EQUIP	1,397.78
Total S.J. ELECTRO SYSTEMS LLC (SJE):				1,397.78
ALFA LAVAL				
283067168	12/06/2023	NEW SCRAPERS-BELT PRESS	61-00-00-93607 MAINT-DEWATERING-B/PRESS EQUIP	247.46
Total ALFA LAVAL:				247.46
BUMPER TO BUMPER AUTO PARTS				
662-480547	12/01/2023	TRUCK 27 MAINT-OIL FILTER/F	61-00-00-93700 MAINT-VEHICLES & EQUIP	122.09
662-480576	12/01/2023	TRUCK 27 MAINT-COOLANT FIL	61-00-00-93700 MAINT-VEHICLES & EQUIP	109.33
662-480604	12/01/2023	TRUCK 27 MAINT-KWIK CONN B	61-00-00-93700 MAINT-VEHICLES & EQUIP	13.18
662-480666	12/04/2023	TRUCK 27 MAINT-WC MIRROR	61-00-00-93700 MAINT-VEHICLES & EQUIP	23.89
Total BUMPER TO BUMPER AUTO PARTS:				268.49
DUNN LUMBER				
1597407	12/05/2023	NUTS & BOLTS	61-00-00-93700 MAINT-VEHICLES & EQUIP	4.78
Total DUNN LUMBER:				4.78
HOME DEPOT CREDIT SERVICES				
7073866	12/04/2023	TRUCK #27 PAINT SUPPLIES	61-00-00-93700 MAINT-VEHICLES & EQUIP	66.14
Total HOME DEPOT CREDIT SERVICES:				66.14

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
ITU ABSORB TECH INC				
8245277	12/08/2023	SHOP RAGS	61-00-00-93700 MAINT-VEHICLES & EQUIP	32.88
Total ITU ABSORB TECH INC:				32.88
DOWN TO EARTH				
8239	12/04/2023	BIGFOOT LS FORCEMAIN BREA	61-00-00-93810 MAINT-MAINS	2,719.00
Total DOWN TO EARTH:				2,719.00
ALLIANT ENERGY				
252422000023	12/01/2023	E STATE ROAD 50 GATE	61-00-00-93820 MAINT-RECEIVING STATION	17.56
054885000023	12/01/2023	E STATE ROAD 50 SEEPAGE	61-00-00-93830 MAINT-SEEPAGE CELLS/POND	97.49
Total ALLIANT ENERGY:				115.05
Total 61:				59,962.08
62				
ASPHALT CONTRACTORS INC				
APPLICATION	08/30/2023	2023-MARIANNE TER & PINE TR	62-00-00-10700 CONSTRUCTION WORK IN PROCESS	23,464.62
Total ASPHALT CONTRACTORS INC:				23,464.62
CORE & MAIN LP				
U062455	12/08/2023	SENSUS SUPPORT 1/9/2024-1/8	62-00-00-16500 PREPAYMENTS	14,598.83
T913361	11/21/2023	3/4S IPERL METERS	62-00-00-34600 METERS	10,301.30
T970610	11/17/2023	TC FXU'S RADIOS	62-00-00-34600 METERS	4,483.70
Total CORE & MAIN LP:				29,383.83
MARTELLE WATER TREATMENT				
26175	11/15/2023	SODIUM HYPOCHLORITE	62-00-00-60200 CHEMICALS	1,320.68
Total MARTELLE WATER TREATMENT:				1,320.68
ALLIANT ENERGY				
145511000023	12/01/2023	361 MAIN ST WELL 2	62-00-00-60300 MISC EXPENSES & UTILITY	1,374.36
327391000023	12/01/2023	WAVERLY ST WELL 4	62-00-00-60300 MISC EXPENSES & UTILITY	513.49
348370000023	12/01/2023	WAVERLY ST WELL 3	62-00-00-60300 MISC EXPENSES & UTILITY	541.20
972745000023	12/04/2023	HASKINS ST WELL 5	62-00-00-60300 MISC EXPENSES & UTILITY	58.07
Total ALLIANT ENERGY:				2,487.12
WE ENERGIES				
4731871672	09/14/2023	HASKINS ST WELLHOUSE #5	62-00-00-60300 MISC EXPENSES & UTILITY	47.77-
4768006760	10/11/2023	HASKINS ST WELLHOUSE #5	62-00-00-60300 MISC EXPENSES & UTILITY	8.91
4803369432	11/09/2023	HASKINS ST WELLHOUSE #5	62-00-00-60300 MISC EXPENSES & UTILITY	10.23
4835311184	12/08/2023	WAVERLY ST WELLHOUSE #4	62-00-00-60300 MISC EXPENSES & UTILITY	50.29
4835951681	12/08/2023	HASKINS ST WELLHOUSE #5	62-00-00-60300 MISC EXPENSES & UTILITY	69.59
Total WE ENERGIES:				91.25
ALLIANT ENERGY				
347962000023	11/10/2023	DODGE ST BOOSTER	62-00-00-62300 PUMPING POWER PURCHASED	157.95
576425000023	12/04/2023	MAIN ST ENGINE ROOM	62-00-00-62300 PUMPING POWER PURCHASED	4,177.48
717061000023	12/01/2023	1401 CENTER ST BOOSTER	62-00-00-62300 PUMPING POWER PURCHASED	200.26

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
Total ALLIANT ENERGY:				4,535.69
WE ENERGIES				
4835513908	12/08/2023	CENTER ST BOOSTER STN	62-00-00-62300 PUMPING POWER PURCHASED	22.54
4835986177	12/08/2023	WATER DEPT MAIN BLDG	62-00-00-62300 PUMPING POWER PURCHASED	533.83
Total WE ENERGIES:				556.37
MARTELLE WATER TREATMENT				
26175	11/15/2023	CHLORINE & CARUS	62-00-00-64100 CHEMICALS	5,023.06
Total MARTELLE WATER TREATMENT:				5,023.06
ALLIANT ENERGY				
974671000023	12/01/2023	361 MAIN ST HALLWAY	62-00-00-64200 LABOR & EXPENSES (LAB)	102.99
Total ALLIANT ENERGY:				102.99
NORTHERN LAKE SERVICE INC				
2319790	11/14/2023	MANGANESE MONTHLY	62-00-00-64200 LABOR & EXPENSES (LAB)	47.91
Total NORTHERN LAKE SERVICE INC:				47.91
WI DEPT OF AG TRADE & CONSUMER				
5637480271	12/05/2023	WDATCP ANNUAL LAB LICENSE	62-00-00-64200 LABOR & EXPENSES (LAB)	408.00
Total WI DEPT OF AG TRADE & CONSUMER:				408.00
HOME DEPOT CREDIT SERVICES				
9023799	11/09/2023	SOAP/HOSE	62-00-00-65100 PLANT MAINTENANCE	29.83
9023799	11/09/2023	SOAP/HOSE-GIFT CERTIFICATE	62-00-00-65100 PLANT MAINTENANCE	28.76
Total HOME DEPOT CREDIT SERVICES:				1.07
ALLIANT ENERGY				
098433000023	12/01/2023	750 WILD RIDGE DR WATER TO	62-00-00-66100 MAINT OPS-STANDPIPES	120.42
520171000023	12/01/2023	1887 DODGE ST TOWER	62-00-00-66100 MAINT OPS-STANDPIPES	36.98
Total ALLIANT ENERGY:				157.40
DUNN LUMBER				
1589926	11/27/2023	MAGNET	62-00-00-66500 MISC EXPENSE LICENSE & TOOLS	8.52
Total DUNN LUMBER:				8.52
HOME DEPOT CREDIT SERVICES				
9020635	11/29/2023	MASON LINE	62-00-00-66500 MISC EXPENSE LICENSE & TOOLS	11.97
Total HOME DEPOT CREDIT SERVICES:				11.97
AMAZON CAPITAL SERVICES				
89C4-OCT 202	11/01/2023	CENTER TOWER HEAT TAPE	62-00-00-67200 RESERVOIR & STANDPIPES	44.88
Total AMAZON CAPITAL SERVICES:				44.88

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
HOME DEPOT CREDIT SERVICES				
4511986	11/14/2023	CENTER ST TOWER INSULATIO	62-00-00-67200 RESERVOIR & STANDPIPES	37.86
Total HOME DEPOT CREDIT SERVICES:				37.86
CORE & MAIN LP				
T949798	11/15/2023	8" METER REGISTER REPLACE	62-00-00-67600 MAINT OF METERS	408.83
Total CORE & MAIN LP:				408.83
HOME DEPOT CREDIT SERVICES				
3525780	11/15/2023	THERMOSTAT WIRE-METER IN	62-00-00-67600 MAINT OF METERS	91.27
3525780	11/15/2023	THERMOSTAT WIRE-METER IN	62-00-00-67600 MAINT OF METERS	4.78-
Total HOME DEPOT CREDIT SERVICES:				86.49
AMAZON CAPITAL SERVICES				
89C4-OCT 202	11/01/2023	COUNTERFGEIT BILL MARKER	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	4.44
Total AMAZON CAPITAL SERVICES:				4.44
AT&T				
262248865611-	11/13/2023	NOV 2023 MONTHLY PHONE BI	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	114.74
Total AT&T:				114.74
AT&T LONG DISTANCE				
816988240-112	11/04/2023	262-248-8617	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	.83
Total AT&T LONG DISTANCE:				.83
CAPITAL ONE				
513303482854	10/30/2023	KITCHEN SUPP, CUTTLERY, CO	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	129.27
643299669663	10/26/2023	KITCHEN SUPP-OVERSINK CA	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	42.55
Total CAPITAL ONE:				171.82
CHARTER COMMUNICATIONS				
010682411212	11/21/2023	WATER NOVEMBER INTERNET	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	119.98
Total CHARTER COMMUNICATIONS:				119.98
FNBO				
554328633282	11/24/2023	VONAGE PHONE SVC 11/23/202	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	133.05
Total FNBO:				133.05
MARTIN BUSINESS GROUP				
1302146	11/20/2023	SERVICE CONTRACT/COPIES	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	126.05
Total MARTIN BUSINESS GROUP:				126.05
ODP BUSINESS SOLUTIONS LLC				
343135581001	11/17/2023	WALL CALENDAR	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	24.99
343135980001	11/17/2023	PAPER CLIPS, BINDER CLIPS, C	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	8.66
343135982001	11/17/2023	BINDER CLIPS	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	1.58

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
Total ODP BUSINESS SOLUTIONS LLC:				35.23
PITNEY BOWES BANK INC RESERVE ACCOUNT				
PB11172023	11/17/2023	RESERVE ACCT 19274125-REP	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	750.00
Total PITNEY BOWES BANK INC RESERVE ACCOUNT:				750.00
PITNEY BOWES GLOBAL LEASE				
3318366642	11/29/2023	POSTAGE METER LEASE ACCT	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	87.00
Total PITNEY BOWES GLOBAL LEASE:				87.00
US CELLULAR				
0616010109	11/04/2023	WATER MONTHLY PHONE BILL	62-00-00-92100 OFFICE SUPPLIES & EXPENSE	222.33
Total US CELLULAR:				222.33
CLEAN WATER ENGINEERING LLC				
1044	11/29/2023	CROSS CONNECTION INSPECT	62-00-00-92300 OUTSIDE SERVICES EMPLOYED	2,088.00
Total CLEAN WATER ENGINEERING LLC:				2,088.00
FNBO				
554295033227	11/18/2023	ACROBAT PRO SUBSCRIPTION	62-00-00-92300 OUTSIDE SERVICES EMPLOYED	126.54
823050933330	11/29/2023	P2P NETWORK EQUIP	62-00-00-92300 OUTSIDE SERVICES EMPLOYED	441.00
Total FNBO:				567.54
ROTE OIL				
817667	11/29/2023	WINTER SALT	62-00-00-93000 MISCELLANEOUS GENERAL EXP	343.00
Total ROTE OIL:				343.00
WI RURAL WATER ASSN				
S6108	12/01/2023	WRWA ANNUAL MEMBERSHIP	62-00-00-93000 MISCELLANEOUS GENERAL EXP	550.00
Total WI RURAL WATER ASSN:				550.00
AMAZON CAPITAL SERVICES				
89C4-OCT 202	11/01/2023	PLANT ALARM BATTERY	62-00-00-93200 MAINTENANCE OF GENERAL PLANT	22.53
Total AMAZON CAPITAL SERVICES:				22.53
HOME DEPOT CREDIT SERVICES				
4024378	11/14/2023	ELECTRICAL GREASE/GLOVES	62-00-00-93200 MAINTENANCE OF GENERAL PLANT	19.95
Total HOME DEPOT CREDIT SERVICES:				19.95
Total 62:				73,535.03
Grand Totals:				133,497.11
Customer Refund:				31.99
				133,529.10

Invoice Number	Invoice Date	Description	GL Account and Title	Net Invoice Amount
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Dated: _____

Mayor: _____

City Council: _____

City Recorder: _____

Report Criteria:

Detail report.

Invoices with totals above \$0.00 included.

Paid and unpaid invoices included.

Invoice Detail.GL account (2 Characters) = "61","62"



Lake Geneva Utility Commission

MUNICIPAL WATER AND WASTEWATER SERVICES

361 W Main Street
P.O. Box 187
Lake Geneva, WI 53147
262-248-2311
www.lgutilitycommission.com

Dennis Lyon – President
Josh Gajewski – Utility Director
Jeff Ecklund – Water Superintendent
Ken Bauman – Wastewater Superintendent

TO: Lake Geneva Utility Commission
FROM: Josh Gajewski, Utility Director
SUBJECT: December 2023 Director's Report

OPERATIONS UPDATE

WATER OPERATIONS

During the first snow event of the season, we had 4 hit and run incidents where hydrants were damaged. Unfortunately, the Police Department didn't have any accident reports filed by motorists and at this point we don't have much hope for restitution. Staff have since completed the necessary repairs to return the hydrants to service.

We continue to work through our meter replacement program and are nearing our quota for the year. It seems at the moment that there has been a bit of relief in the supply chain for meters, though we are still struggling to obtain radios from time to time.

WASTEWATER OPERATIONS

We have been coordinating with the HOA along Pine Tree Ln. and have been able to complete a much-needed tree trimming, removal, and stump grinding project that will allow easier access to the lift station located off of Mariane Terrace. We hope to continue coordination efforts with them in the coming months to facilitate the control panel replacement project that was approved in 2023 and 2024.

The order for our entry door replacement project was placed with the vendor, and with lead times included we hope this project will be complete by the end of February.

OFFICE & ADMINISTRATION

The fourth quarter billing cycle has started, and bills are expected to be issued just before the new year, with a due date of January 20, 2024.

Staff has been corresponding with various stakeholder groups associated with developments and new construction in our service area. We anticipate having preliminary information to be available for Commission review at the January meeting.

DECEMBER 2023 UTILITY COMMISSION AGENDA - BACKGROUND INFORMATION

9. Proposed AT&T Modifications – Host Tower

The Utility received proposed plans from AT&T for equipment upgrades to their existing facilities located at the Host Dr. Tower. Through a process of review and resubmittal, the plans have been found acceptable to Staff and Dixon Engineering, a copy of whose review letter is included for Commission review.

Action is recommended to approve the proposed AT&T equipment upgrades as submitted on 5/15/2023.

10. Professional Services Agreement – Clean Water Engineering

The Utility has contracted with Clean Water Engineering over the last 4 years to have them facilitate cross connection inspections of the commercial, industrial, and public authority customers to comply with the requirements of NR 810.15. The proposed agreement would extend inspection services through 12/31/2026 and increase the cost per inspection by \$3 an inspection over the last agreement.

Action is recommended to approve the Professional Services Agreement with Clean Water Engineering for inspection services provided between 1/1/2024 and 12/31/2026.

11. Acceptance of Water and Sewer Improvements – Symphony Bay Phase 4

The referenced utility improvements were installed along Soprano, Debussy, and Beethoven, which were inspected in 2021. The Developer has requested to initiate the process for dedication of the related improvements to the Utility. An itemized inventory of the improvements and a letter of recommendation from Kapur have been prepared and are included for Commission review.

Action is recommended to accept the water and sanitary sewer improvements that have been completed in Phase 4 of the Symphony Bay Development.

12. Tuition Reimbursement Program Participation Request – Jo Busch

As described in the accompanying letter, Jo Busch – Utilities Coordinator, has requested to participate in the LGUC's tuition reimbursement program. The requested class is compliant with Section 510.2 of the LGUC Employee Handbook and is pertinent to the employee's job duties but had not been requested for during the 2024 budget process, which is the reason for presentation to the Commission for action at this time.

Action is recommended to approve tuition reimbursement for Jo Busch, to participate in the Local Government Leadership Academy, as outlined in the Lake Geneva Utility Commission's Employee Handbook Section 510.2.

13. Proposed Scope of Work – Well #5 – Water Well Solutions

Work has proceeded forward on Well 5 and Staff received recommendations from WWS regarding repair and refurbishment needs for the pumping equipment due to deterioration. Additionally, we have received recommendations for work to clean and restore the well casing, screen, and geology immediately surrounding the well. The recommendations propose to use similar processes that have proven effective on our other wells. A line item proposal has been prepared and is included for Commission review.

Action is recommended to approve the itemized work to be performed on Well 5 by Water Well Solutions.

14. STH 50 Utility Improvements

Since November's meeting, the soil boring information has been reviewed by engineering and specific to the potential deep sewer, a summary of findings was provided to Staff. The soil borings revealed the real potential of encountering sandstone at approximately 15'-20' and loosely consolidated soils generally above 15-20'. This combination of soils would likely require a trench width of 50'-60' to comply with OSHA requirements. Given the narrow nature of the road right of way in the deepest sections of the proposed gravity sewer, this requirement may be difficult to complete without additional research and potential acquisition of temporary easements.

When combining all of the current knowns, the installation of a gravity sewer below a depth of 25' in this area would likely be very slow and costly. MSA preliminary estimate of construction costs has been updated to include these factors and increased the cost by approximately \$300,000. The current estimate of probable construction costs is \$1,400,000 - \$3,000,000.

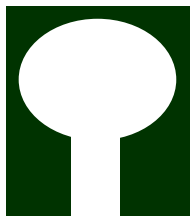
In reaction to these updates, Staff has discussed preliminary revisions to evaluate the service area for sanitary sewer, and we anticipate more information to be available for the January 2024 meeting.

Action is recommended to continue the evaluation of the sanitary sewer and water improvements for the STH 50 project, abandoning future work on the potential installation of a deep sewer between Linda Ln. and Lakeview Dr.

15. 2023 Utility Budget Amendment

During the preparation of the 2024 budget, year-end projections for revenues and expenditures in the Wastewater and Water budgets were completed. Staff has since evaluated the variances between the 2023 budget and projections using the PSC's guidelines from our annual report. Accounts that have a difference between This Year and Last Year greater than 15 percent and more than \$10,000 have been identified. A summary of those accounts has been included in the draft resolution for Commission consideration in the adoption of a budgetary amendment for 2023.

Action is recommended to approve Resolution 2023-02 authorizing the amendment of the 2023 Wastewater and Water Utility budgets.



DIXON

**ENGINEERING & INSPECTION SERVICES
FOR THE COATING INDUSTRY**

4811 S. 76th Street
Suite 109
Greenfield, WI 53220
Telephone: (414) 529-1859
Fax: (414) 282-7830

June 17, 2023

RE: Lake Geneva Utility Commission
Host Tank
AT&T (WI2673)
Review #2 (Final)

Mr. Josh Gajewski
Utility Director
Lake Geneva Utility Commission
361 Main Street
Lake Geneva, WI 53147

Dear Mr. Gajewski:

Dixon Engineering, Inc. (DIXON) has reviewed the revised design drawings and the revised structural documents for the proposed AT&T antenna upgrade project on the Host water tank located in Lake Geneva, Wisconsin. The documents reviewed include:

- The revised design drawings for the project were completed by Apex Engineers, Inc. and they are dated May 15, 2023.
- The revised structural calculations for the tank were completed by Apex Engineers, Inc. and they are dated May 15, 2023.
- The revised mount analysis for the tank was completed by Apex Engineers, Inc. and it is dated May 15, 2023.

This is the second review by DIXON for this project. In the first review DIXON had a list of items to be addressed labeled A to I. The following is a comment regarding each of the items as they were addressed in the revised documents.

- A. The revised structural calculations for the tank have been reviewed by our structural engineer and found to be in order.
 - i. The document is stamped and signed by a Licensed Professional Engineer in the State of Wisconsin.
 - ii. The conclusion in this document is “existing water tank is still adequate for proposed AT&T antenna configuration”.
 - iii. This document with a date is referenced in the design drawings on Sheet 05.
- B. The revised mount analysis for the tank has been reviewed by our structural engineer and found to be in order.
 - i. The document is stamped and signed by a Licensed Professional Engineer in the State of Wisconsin.
 - ii. The conclusion in this document is “the existing antenna mounting frame is capable of supporting the proposed antennas”.
 - iii. This document with a date is referenced in the design drawings on Sheet 05.

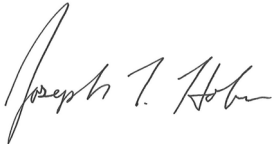
- C. The revised design drawings are stamped and signed by a Licensed Professional Engineer in the State of Wisconsin.
- D. This item has been addressed.
- E. This item has been addressed.
- F. This item has been addressed.
- G. No changes are required for this comment.
- H. These items have been addressed.
- I. This item has been addressed.

DIXON does not find any reasons for further review of these design drawings or structural documents. If completed per the approved design drawings, the upgrade antenna installation for AT&T will not affect the Host water tank with respect to OSHA (safety), tank operations, or water quality.

DIXON has to schedule and lead a preconstruction meeting at the site prior to the start of any work on the project. During the installation portion of the project, DIXON has two installation inspections contracted to be completed for this project.

If you have any questions, you can call me at 920-470-0957.

FOR DIXON ENGINEERING, INC.,



Joseph T. Hoban, P.E.
Vice President

c: Chris Kreiner, DIXON
Kayla Mulcahy, DIXON



SITE NUMBER:

WI2673

SITE NAME:

AWE - LAKE GENEVA WATER TOWER

PROJECT:

5G NR 1SR CBAND

FA CODE:

10080263

PTN # :

3352A15QXR, 3352A15QXS, 3352A15QJX

PACE ID:

MRCHI071172, MRCHI071298, MRCHI069925, MRCHI069923, MRCHI070688

SITE ADDRESS:

1005 HOST DRIVE
LAKE GENEVA, WI 53147

PROJECT INFORMATION		VICINITY MAP		SCOPE OF WORK		DRAWING INDEX																																																																							
APPLICANT: AT&T 95 W ALGONQUIN RD ARLINGTON HEIGHTS, IL 60005 FA CODE: 10080263 PROPOSED USE: TELECOMMUNICATIONS FACILITY STRUCTURE TYPE: WATER TANK PROPERTY OWNER: LAKE GENEVA UTILITY COMMISSION 361 W. MAIN STREET LAKE GENEVA, WI 53147 CONTACT PERSON: JOSH GAJEWSKI – UTILITY DIRECTOR PHONE: (262) 248–2311 EXT 6115 JURISDICTION: CITY OF SUN PRAIRIE LATITUDE: 42° 34' 44.92596" N/ 42.5791461° LONGITUDE: 88° 25' 1.53516" W/ –88.4170931° LAT/ LONG TYPE: NAD 83 GROUND ELEVATION: 1001 FT AMSL POWER COMPANY: WISCONSIN ENERGY (800) 714–7777 TELEPHONE COMPANY: AT&T PHONE: (800) 257–0902		DIRECTION: (FROM O'HARE INTERNATIONAL AIRPORT) HEAD SOUTHWEST ON I–190 W. TAKE THE BESSIE COLEMAN DR EXIT TOWARD AIRPORT TERMINAL 5/A.R.F.F. STAGING AREA D. TURN RIGHT ONTO BESSIE COLEMAN DR. MERGE ONTO I–190 E VIA THE RAMP TO AIRPORT TERMINAL 5/I–90/I–294/CHICAGO. MERGE ONTO I–190 E. EXIT TOWARD I–294 N. CONTINUE ONTO I–94 W. TAKE EXIT 344 FOR WI–50 W. USE THE 2ND FROM THE LEFT LANE TO TURN LEFT ONTO WI–50 W/75TH ST. CONTINUE STRAIGHT TO STAY ON WI–50 W/75TH ST. CONTINUE TO FOLLOW WI–50 W. PASS BY BMO HARRIS BANK (ON THE RIGHT IN 7.8 MI). TURN LEFT ONTO EASTSIDE RD. TURN RIGHT ONTO N BLOOMFIELD RD. TURN RIGHT ONTO S WELLS ST. TURN RIGHT ONTO HOST DR. DESTINATION WILL BE ON THE LEFT. PROJECT SITE WALWORTH COUNTY		EXISTING EQUIPMENT TO BE REMOVED: – REMOVE (6) EXISTING ANTENNAS FROM POS.1 & POS.3 – REMOVE (3) EXISTING FC12–PC6–10E & (9) DC2–48–60–0–9E – REMOVE (3) EXISTING 12 PAIR FIBER TRUNKS – REMOVE (2) EXISTING 6630 NEW EQUIPMENT TO BE INSTALLED: – INSTALL (6) NEW STACKED ANTENNAS (TYP.2 PER SECTOR) ON POS.2 – INSTALL (3) NEW #6AWG DC POWER TRUNKS & (3) NEW 24 PAIR FIBER TRUNKS – INSTALL (3) NEW RAYCAP DC9 – INSTALL (1) NEW 6648 EXISTING EQUIPMENT TO BE RELOCATED: – RELOCATE (3) EXISTING ANTENNAS, (3) EXISTING RRUS 4449 B5/B12 & (3) EXISTING AWS RRUS 4426 B66 FROM POS.2 TO POS.1; – RELOCATE (3) EXISTING 1900 RRUS32 B2 FROM POS.3 TO POS.4 CODE COMPLIANCE • BUILDING CODE: WISCONSIN ADMINISTRATIVE CODE IS ADOPTED SPS CHAPTERS 320 THROUGH 325, WISCONSIN UNIFORM DWELLING CODE. • ELECTRICAL CODE: WIS. ADM. CODE CHAPTER SPS 316, AND CURRENT ADOPTED STATE NATIONAL ELECTRICAL CODE. • (ORD. NO. 690, § 1, 8–15–2017 ; PRIOR CODE § 15–1–20) • TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222–H		<table><thead><tr><th>SHEET</th><th>DESCRIPTION</th></tr></thead><tbody><tr><td>WI2673–01</td><td>TITLE SHEET</td></tr><tr><td>WI2673–02</td><td>GENERAL NOTES</td></tr><tr><td>WI2673–03</td><td>ELECTRICAL AND GROUNDING NOTES</td></tr><tr><td>WI2673–04</td><td>SITE PLAN</td></tr><tr><td>WI2673–05</td><td>ELEVATION</td></tr><tr><td>WI2673–06</td><td>ANTENNAS LAYOUT</td></tr><tr><td>WI2673–07</td><td>EQUIPMENT LAYOUT</td></tr><tr><td>WI2673–08</td><td>EQUIPMENT SPECIFICATIONS</td></tr><tr><td>WI2673–09</td><td>ANTENNA MATRIX</td></tr><tr><td>WI2673–10</td><td>COAX COLOR CODING</td></tr><tr><td>WI2673–11</td><td>FIBER–OPTIC JUMPER COLOR CODING</td></tr></tbody></table> REFERENCE MATERIALS THESE DRAWINGS ARE PREPARED BASED ON RFDS DATED 08/26/2022 REVISION # V1.0 GENERAL CONTRACTOR TO VERIFY AND INCORPORATE MOST RECENT VERSION OF RFDS PRIOR TO CONSTRUCTION. DO NOT SCALE DRAWINGS CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME. I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE THEY COMPLY WITH THE REQUIREMENT OF ALL APPLICABLE CODES AND ORDINANCES. DATE: 05/15/23 RAJESH K. GOYAL, P.E. WISCONSIN P.E. LICENSE # 34411–006 EXPIRES 07–31–2024		SHEET	DESCRIPTION	WI2673–01	TITLE SHEET	WI2673–02	GENERAL NOTES	WI2673–03	ELECTRICAL AND GROUNDING NOTES	WI2673–04	SITE PLAN	WI2673–05	ELEVATION	WI2673–06	ANTENNAS LAYOUT	WI2673–07	EQUIPMENT LAYOUT	WI2673–08	EQUIPMENT SPECIFICATIONS	WI2673–09	ANTENNA MATRIX	WI2673–10	COAX COLOR CODING	WI2673–11	FIBER–OPTIC JUMPER COLOR CODING																																														
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PROJECT CONSULTANTS SITE ACQUISITION: MASTEC NETWORK SOLUTIONS 1351 E. IRVING PARK RD, ITASCA, IL 60143 ERIN OSMUS PHONE: (630) 341–1982 ENGINEER: APEX ENGINEERS, INC. 500 EAST 22ND STREET, SUITE B LOMBARD, IL 60148, RAJESH K. GOYAL PHONE: (630) 627–1800 RF ENGINEER: AT&T MOBILITY KENT BERNER, wb1306@att.com PHONE: (312) 320–3277		TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN. MEMBER ONE CALL SYSTEMS INTERNATIONAL CALL DIGGERS HOT LINE 1-800-242-8511 TOLL FREE FAX A LOCATE 1–800–338–3860 TDD (FOR HEARING IMPAIRED) 1–800–542–2289 HANDICAPPED REQUIREMENTS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS REQUIREMENTS NOT REQUIRED PLUMBING REQUIREMENTS FACILITY HAS NO PLUMBING FIRE PROTECTION NOTE NONE		SPECIAL NOTES • ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT AT&T CONSTRUCTION INSTALLATION GUIDE. • EXISTING CONDITIONS MUST BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION. IF THERE IS ANY SIGNIFICANT DEVIATION FROM THE DESIGN DRAWINGS, NOTIFY ENGINEER IMMEDIATELY. • STATEMENT THAT COMPLIANCE WITH THE ENERGY CODE IS NOT REQUIRED. – SCOPE OF WORK DOES NOT INVOLVE MODIFICATIONS TO EXTERIOR ENVELOPE OF BUILDING, HVAC SYSTEMS OR ELECTRICAL LIGHTING.		MasTec Network Solutions 1351 E. Irving Park Rd Itasca, IL 60143 Apex Engineers, Inc. Structural & Civil Engineers 500 East 22nd Street, Suite B Lombard, Illinois 60148 Ph. (630) 627–1800 Fax. (630) 627–1165 APEX JOB No. AT04–035 AWE - LAKE GENEVA WATER TOWER SITE NO. WI2673 1005 HOST DRIVE LAKE GENEVA, WI 53147 <table><thead><tr><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr></thead><tbody><tr><td>D</td><td>05/15/23</td><td>FINAL CDs – REVISED PER COMMENTS</td><td>PD</td><td>PB</td><td>RG</td><td></td><td></td><td></td><td></td></tr><tr><td>C</td><td>05/12/23</td><td>FINAL CDs – REVISED PER DIXON COMMENTS</td><td>PD</td><td>PB</td><td>RG</td><td></td><td></td><td></td><td></td></tr><tr><td>B</td><td>10/07/22</td><td>FINAL CDs – ISSUED FOR CONSTRUCTION</td><td>PD</td><td>PB</td><td>RG</td><td></td><td></td><td></td><td></td></tr><tr><td>A</td><td>09/29/22</td><td>ISSUED FOR REVIEW</td><td>PD</td><td>PB</td><td>RG</td><td></td><td></td><td></td><td></td></tr><tr><td>NO.</td><td>DATE</td><td>REVISIONS</td><td>BY</td><td>CHK</td><td>APP'D</td><td></td><td></td><td></td><td></td></tr><tr><td colspan="2">SCALE: AS SHOWN</td><td colspan="2">DESIGNED BY: XX</td><td colspan="2">DRAWN BY: XX</td><td colspan="4"></td></tr></tbody></table> AT&T MOBILITY TITLE SHEET DRAWING NUMBER WI2673–01 REV D												D	05/15/23	FINAL CDs – REVISED PER COMMENTS	PD	PB	RG					C	05/12/23	FINAL CDs – REVISED PER DIXON COMMENTS	PD	PB	RG					B	10/07/22	FINAL CDs – ISSUED FOR CONSTRUCTION	PD	PB	RG					A	09/29/22	ISSUED FOR REVIEW	PD	PB	RG					NO.	DATE	REVISIONS	BY	CHK	APP'D					SCALE: AS SHOWN		DESIGNED BY: XX		DRAWN BY: XX					
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GENERAL NOTES

1.

FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

OWNER

CONTRACTOR

LANDLORD

PROJECT MANAGER

OEM

—

AT&T

GENERAL CONTRACTOR (CONSTRUCTION)

BUILDING/PROPERTY OWNER

OWNER’S FIELD REPRESENTATIVE

ORIGINAL EQUIPMENT MANUFACTURER
2.

PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF OWNER’S REPRESENTATIVE.
3.

ALL EXISTING UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT/ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL SAID UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING AFFECTED UTILITIES.
4.

THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND COMPLIMENTARY. HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE THE SAME AS IF SHOWN, INDICATED OR SPECIFIED IN BOTH.
5.

THE INTENTION OF DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS INDICATED IN THE DOCUMENTS.
6.

OWNER FURNISHED EQUIPMENT/ MATERIALS SHALL BE PICKED UP AT THE OWNER’S WAREHOUSE, INSURED, STORED, UNCRATED, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL THE APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING UP.
7.

ALL EQUIPMENT FURNISHED AND WORK PERFORMED UNDER THE CONTRACT DOCUMENTS SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP AS SPECIFIED PER OWNERS CONTRACT FROM THE DATE OF FINAL ACCEPTANCE, UNLESS NOTED OTHERWISE. ANY FAILURE OF EQUIPMENT OR WORK DUE TO DEFECTS IN MATERIALS OR WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR AT NO COST TO THE OWNER.
8.

ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
9.

ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
10.

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH OEM’S RECOMMENDATIONS & OWNERS SPECIFICATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
11.

IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE OWNER.
12.

FOR CLARITY OF ALL PLANS, SOME EQUIPMENT CONDUIT AND WIRE HAS NOT BEEN SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE AND OPERATING SYSTEMS INCLUDING ALL CONDUITS NAD WIRING. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND FIBER CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND FIBER PLAN DRAWING.
13.

THE CONTRACTOR SHALL COORDINATE ALL SITE WORK WITH LOCAL OR OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS SITE & IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
14.

THE CONTRACTOR SHALL AT ALL TIMES DURING CONSTRUCTION MAINTAIN THE UTILITIES OF THE BUILDINGS/SITE WITHOUT INTERRUPTION. SHOULD IT BE NECESSARY TO INTERRUPT ANY SERVICE OR UTILITY, THE CONTRACTOR SHALL SECURE PERMISSION IN WRITING FROM THE LANDLORD FOR SUCH INTERRUPTION AT LEAST 72 HOURS IN ADVANCE. ANY INTERRUPTION SHALL BE MADE WITH A MINIMUM AMOUNT OF INCONVENIENCE TO THE LANLORD AND ANY SUCH SHUTDOWN TIME SHALL BE COORDINATED WITH THE LANDLORD.
15.

THE CONTRACTOR SHALL COORDINATE AND REVIEW THE ELECTRICAL CHARACTERISTICS, AMPACITY AND OTHER REQUIREMENTS OF ALL EQUIPMENT PRIOR TO INSTALLATION.
16.

THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF CONDUIT ROUTING, EQUIPMENT, LIGHTING, ETC. WITH ALL OTHER TRADES IN THE FIELD PRIOR TO INSTALLATION.
17.

PROVIDE ALL TEMPORARY WIRING FOR ALL TRADES FOR CONSTRUCTION EQUIPMENT (i.e. HANDTOOLS, WELDERS, PIPE BENDERS, ETC.) AND CONSTRUCTION LIGHTING PER THE LATEST OSHA STANDARDS. INCLUDE ALL COSTS IN THE BASE BID. THE CONTRACTOR SHALL ESTABLISH SAFE WORKING PROCEDURES FOR THE PROTECTION OF THE WORKMEN IN ALL PHASES OF THE WORK, COMPLYING WITH THE APPLICABLE PROVISIONS OF ALL CITY, STATE AND FEDERAL SAFETY LAWS.
18.

THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR’S EXPENSE TO THE SATISFACTION OF OWNER.
19.

CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS FROM THE EXISTING FACILITY AND HOWEVER SHALL RETURN ALL REMOVED COAX LINES, ANTENNAS, RADIOS, DI–PLEXERS, EQUIPMENT CABINETS, PLINTHS ETC TO THE OWNER’S DESIGNATED LOCATION.
20.

CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
21.

THE CONTRACTOR SHALL SUBMIT AT THE END OF THE PROJECT A COMPLETE SET OF AS–BUILT DRAWINGS TO THE OWNER’S PROJECT MANAGER.

SITE WORK GENERAL NOTES:

1.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO COMMENCING CONSTRUCTION ACTIVITY. TRENCHES IN PUBLIC ROADS, RIGHT OF WAYS AND PRIVATE PROPERTY SHALL BE EXCAVATED IN SUCH A MANNER THAT NO DAMAGE TO A UTILITY IS LIKELY TO OCCUR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND IF NECESSARY REPAIR OF ALL PUBLIC UTILITY SERVICES SUCH AS GAS, ELECTRICITY, WATER, TELEPHONE, AND THE LIKE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF ALL FINES ASSOCIATED WITH INTERRUPTION OF EXISTING UTILITIES.
2.

THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING STRUCTURES, UTILITIES, WALKWAYS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE DURING CONSTRUCTION OPERATIONS.
3.

DO NOT INTERRUPT EXISTING UTILITIES SERVING THE LANDLORD OR OTHERS WITHOUT WRITTEN PERMISSION FROM THE LANDLORD AND APPROVAL FROM THE PROJECT MANAGER. PROVIDE 72 HOUR NOTIFICATION TO THE LANDLORD AND PROJECT MANAGER PRIOR TO INTERRUPTION OF EXISTING UTILITIES AND ONLY AFTER MAKING PROVISION FOR TEMPORARY UTILITY SERVICES. RELOCATE EXISTING UTILITIES AS DIRECTED ON THE CONSTRUCTION PLANS.
4.

SAFETY MEASURES WILL BE REQUIRED OF THE CONTRACTOR TO PROTECT ALL PERSONNEL DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
5.

THE CONTRACTOR SHALL GIVE NOTICES AND COMPLY WITH APPLICABLE LAWS, ORDINACES, RULES, REGULATIONS AND LAWFUL ORDERS OF PUBLIC AUTHORITIES BEARING ON SAFETY OF PERSONS AND PROPERTY AND THEIR PROTECTION FROM DAMAGE, INJURY OR LOSS. THE CONTRACTOR SHALL PROMPTLY REMEDY DAMAGE AND LOSS TO PROPERTY AT THE SITE CAUSED IN WHOLE OR IN PART BY THE CONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY HIM.
6.

THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
7.

ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
8.

THE CONTRACTOR SHALL MEET WITH LANDLORD PRIOR TO CONSTRUCTION AND OBTAIN APPROVAL TO USE OF AREAS FOR PARKING AND ACCESS TO SITE. THE CONTRACTOR SHALL LIMIT USE OF SITE FOR WORK AND STORAGE WITHIN A REASONABLE PERIPHERY OF SCOPE OF THE WORK.

GENERAL PAINT NOTES:

- SURFACE PREPARATION (EXTERIOR & DRY INTERIOR):
- CLEAN ALL DAMAGED SURFACES IN ACCORDANCE WITH SSPC–SP3 “POWER TOOL CLEANING” CONDITION PRIOR TO APPLICATION OF PRIME COAT.
- COATING (EXTERIOR):
- THE EXTERIOR PAINT REPAIR SYSTEM WILL BE ONE PRIME COAT OF TNE MEC SERIES 66, ONE INTERMEDIATE COAT OF TNE MEC SERIES 1074, AND ONE TOPCOAT OF TNE MEC SERIES 1074UV. PAINT THE EXTERIOR TO MATCH THE EXISTING TOPCOAT COLOR.
 - THE THREE–COAT SYSTEM WILL BE APPLIED AT 3.0 – 4.0 MILS PER COAT, TO A THICKNESS OF 9.0 – 12.0 MILS.
- COATING (DRY INTERIOR):
- THE DRY INTERIOR PAINT REPAIR SYSTEM WILL BE THREE COATS OF TNE MEC SERIES 66. PAINT THE DRY INTERIOR TO MATCH THE EXISTING TOPCOAT COLOR.
 - THE THREE–COAT SYSTEM WILL BE APPLIED AT 3.0 – 4.0 MILS PER COAT, TO A THICKNESS OF 9.0 – 12.0 MILS.
- NOTES:
- FOLLOW ALL PAINT MANUFACTURERS’ RECOMMENDATIONS WHEN USING THEIR PRODUCTS.



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APEX JOB No. AT04–035

AWE - LAKE GENEVA
WATER TOWER

SITE NO. WI2673

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LAKE GENEVA, WI 53147

AT&T
Mobility

D	05/15/23	FINAL CDs – REVISED PER COMMENTS	PD	PB	RG	
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AT&T MOBILITY

GENERAL NOTES

DRAWING NUMBER

WI2673–02

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ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC CODE.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC CODE.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.
6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANEL BOARD AND CIRCUIT ID’S).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
15. GALVANIZED STEEL RIGID METALLIC CONDUIT (RMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE. EMT SHALL BE USED FOR INTERIOR RUNS ONLY.
16. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
17. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
18. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
19. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
20. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
21. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS
22. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
23. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
24. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
25. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES’S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT. MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. GROUND RING SHALL BE 24 INCHES FROM EDGE OF EQUIPMENT SHELTER AND WITHIN 18 TO 36 INCHES OF THE EQUIPMENT PLATFORM.
12. GROUND RODS SHALL BE 5/8 INCH DIAMETER x 10’–0” LONG “COPPERWELD” OR APPROVED EQUAL. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH AT SPACING OF A MINIMUM OF 10’–0” AND A MAXIMUM OF 15’–0” ON CENTERS.
13. DEPTH OF THE GROUND RING SHALL BE EITHER 3’–6” BELOW FINAL GRADE OR THE MINIMUM DEPTH REQUIRED BY LOCAL CODES, REGULATIONS AND ORDINANCES, WHICHEVER IS DEEPER.
14. THE ELECTRICAL SERVICE TO THE SITE SHALL BE GROUNDED AT THE SERVICE DISCONNECTING MEANS REQUIRED IN ARTICLE 250 OF THE NEC., AND IN ACCORDANCE WITH ANY LOCAL CODE.
15. ALL BELOW GRADE GROUNDING CONDUCTORS SHALL BE BARE TINNED SOLID COPPER WIRE. GROUND RING SHALL BE #2 AWG BARE TINNED SOLID COPPER WIRE.
16. ALL ABOVE GRADE GROUNDING CONDUCTORS MAY BE EITHER:

BARE TINNED SOLID COPPER WIRE

THWN–INSULATED, CONTINUOUS GREEN COLOR, SOLID COPPER WIRE

THWN–INSULATED, CONTINUOUS GREEN COLOR, STRANDED COPPER WIRE
17. ALL ABOVE GRADE GROUND CONNECTIONS (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
18. ALL BELOW GRADE GROUNDING CONNECTIONS SHALL BE MADE BY THE CADWELD PROCESS. MECHANICAL LUG ATTACHMENTS BELOW GRADE ARE NOT ACCEPTABLE. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE SPLICES (TEES, Xs, ETC) ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE BY CADWELD AND INSTALLED PER MANUFACTURER’S RECOMMENDATION AND PROCEDURES.
19. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
20. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
21. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL GROUNDING CONNECTIONS INCLUDING COMPRESSION AND BOLTED GROUND CONNECTIONS.
22. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
23. MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
24. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND WIRES WITH 1–#2 AWG TIN–PLATED COPPER GROUND CONDUCTOR.
25. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON–METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON–METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.



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APEX JOB No. AT04–035

**AWE - LAKE GENEVA
WATER TOWER**
SITE NO. WI2673

1005 HOST DRIVE
LAKE GENEVA, WI 53147



AT&T
Mobility

D	05/15/23	FINAL CDs – REVISED PER COMMENTS	PD	PB	RG
C	05/12/23	FINAL CDs – REVISED PER DIXON COMMENTS	PD	PB	RG
B	10/07/22	FINAL CDs – ISSUED FOR CONSTRUCTION	PD	PB	RG
A	09/29/22	ISSUED FOR REVIEW	PD	PB	RG
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: XX	DRAWN BY: XX		

AT&T MOBILITY

ELECTRICAL AND GROUNDING NOTES

DRAWING NUMBER

WI2673–03

REV

D

6

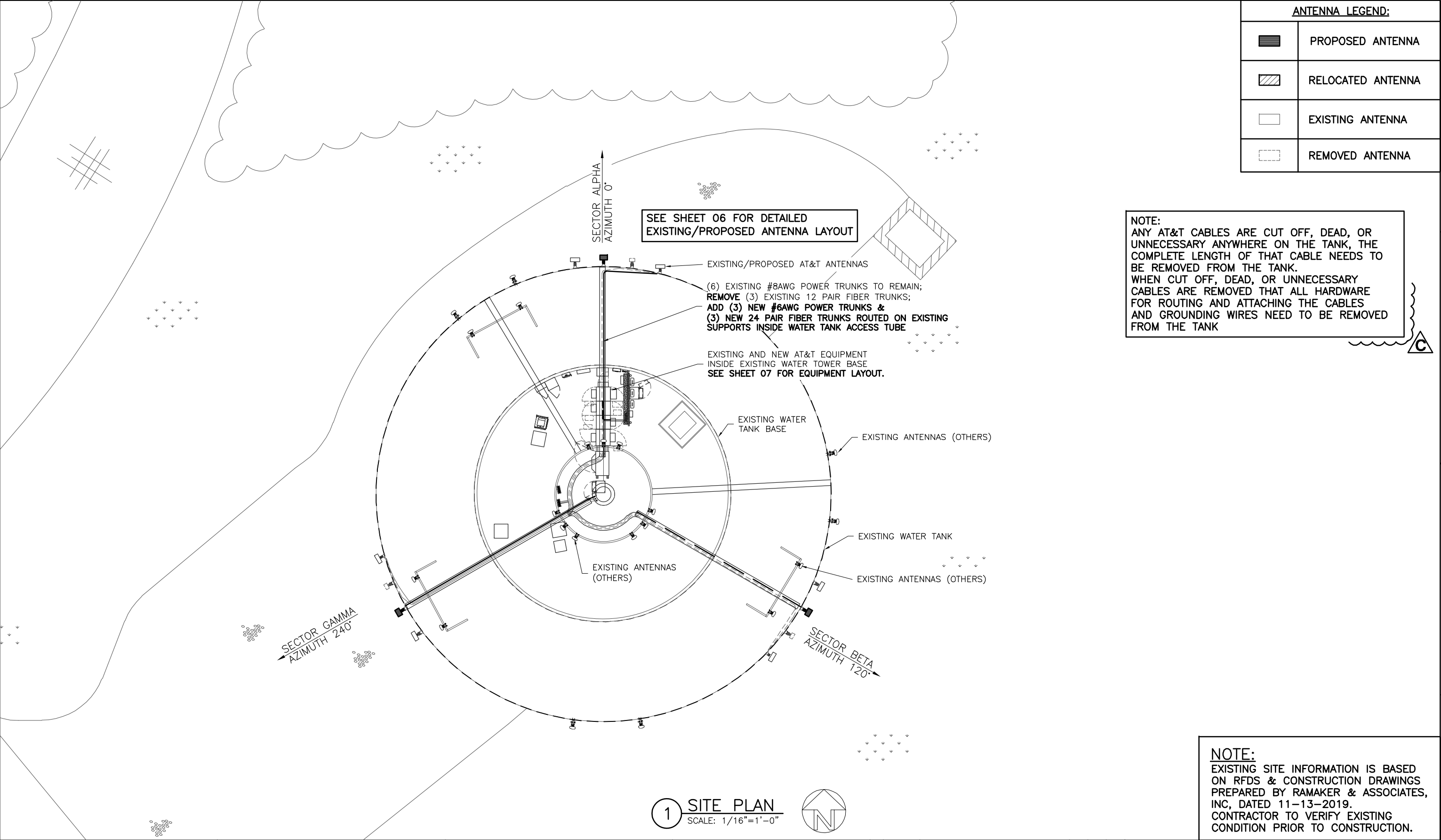
5

4

3

2

11 x 17 "B" SIZE



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SCALE: AS SHOWN		DESIGNED BY: XX	DRAWN BY: XX		

AT&T MOBILITY	
SITE PLAN	
DRAWING NUMBER	REV
WI2673-04	D

6

5

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11 x 17 "B" SIZE

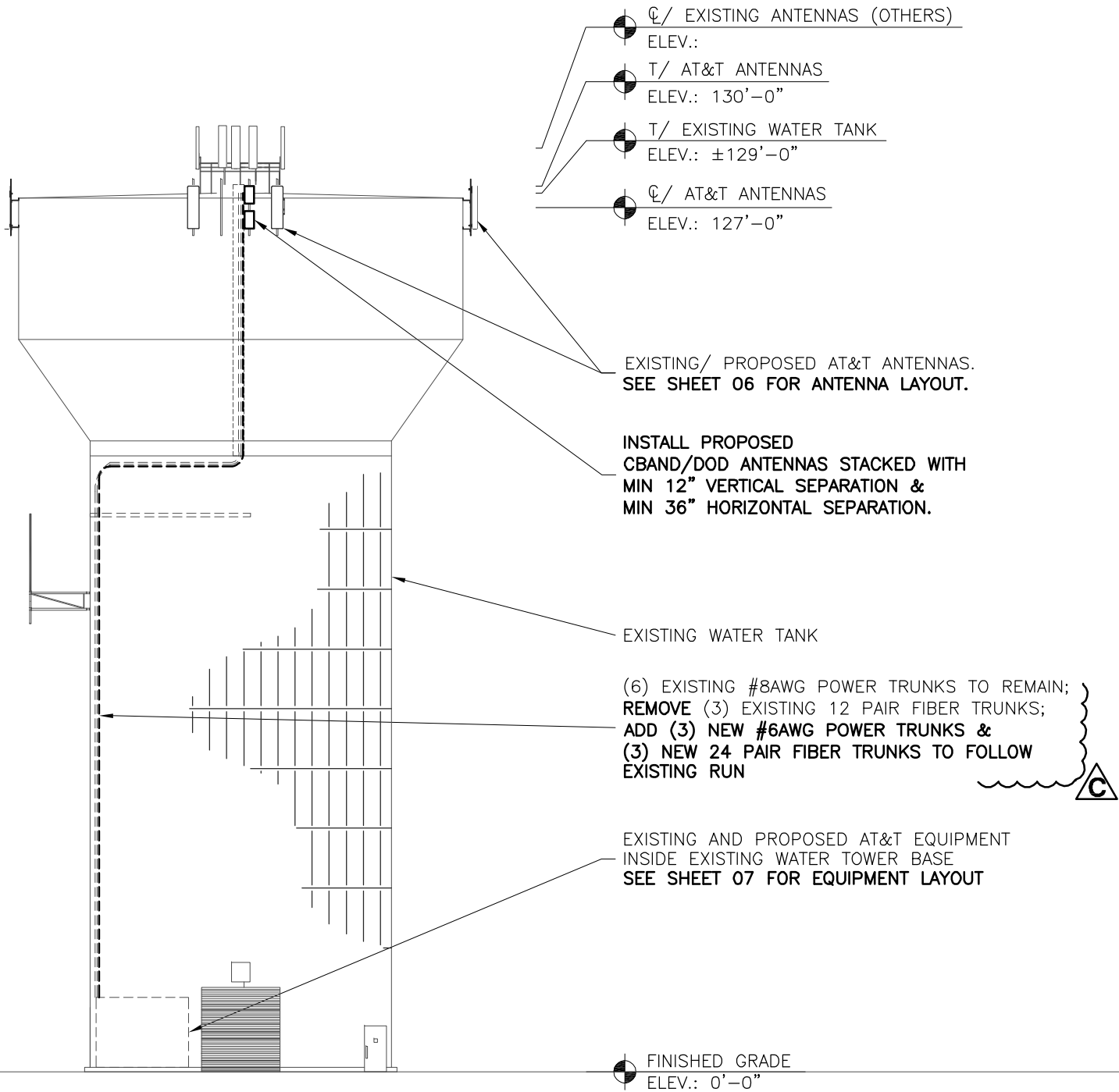
STRUCTURAL ANALYSIS PREPARED BY APEX ENGINEERS, INC. DATED 05/15/2023.
ANTENNA MOUNT ANALYSIS PREPARED BY APEX ENGINEERS, INC. DATED 05/15/2023.

NOTE:
ENSURE THE GROUNDS & TANK, INSIDE & OUT ARE FULLY RESTORED TO BRING THE SITE TO PRE-PROJECT CONDITIONS OR BETTER AT END OF PROJECT.

NOTE:
ANY NEW ANGLE ADAPTORS AND PIPE CLAMPS THAT MIGHT BE ADDED NEED TO BE ATTACHED WITH RUBBER STRIPS TO PREVENT METAL ON METAL CONTACT.

NOTE:
ANY AT&T CABLES ARE CUT OFF, DEAD, OR UNNECESSARY ANYWHERE ON THE TANK, THE COMPLETE LENGTH OF THAT CABLE NEEDS TO BE REMOVED FROM THE TANK.
WHEN CUT OFF, DEAD, OR UNNECESSARY CABLES ARE REMOVED THAT ALL HARDWARE FOR ROUTING AND ATTACHING THE CABLES AND GROUNDING WIRES NEED TO BE REMOVED FROM THE TANK

NOTE:
REFER TO RF DESIGN SHEET/ SCOPING FORM & INSTALL AS REQUIRED BBU 6630, DC/FC BOX, XMU, FIBER BOX, RBS 6601, DUS41, PATCH PANEL TELECT 5216, BREAKERS & MISC. EQUIPMENT. ALSO, DECOM GSM/UMTS EQUIPMENT/COAX AS SHOWN ON SCOPING FORM.



1 ELEVATION
SCALE: 3/64"=1'-0"

MasTec
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APEX JOB No. AT04-035

**AWE - LAKE GENEVA
WATER TOWER**
SITE NO. WI2673
1005 HOST DRIVE
LAKE GENEVA, WI 53147



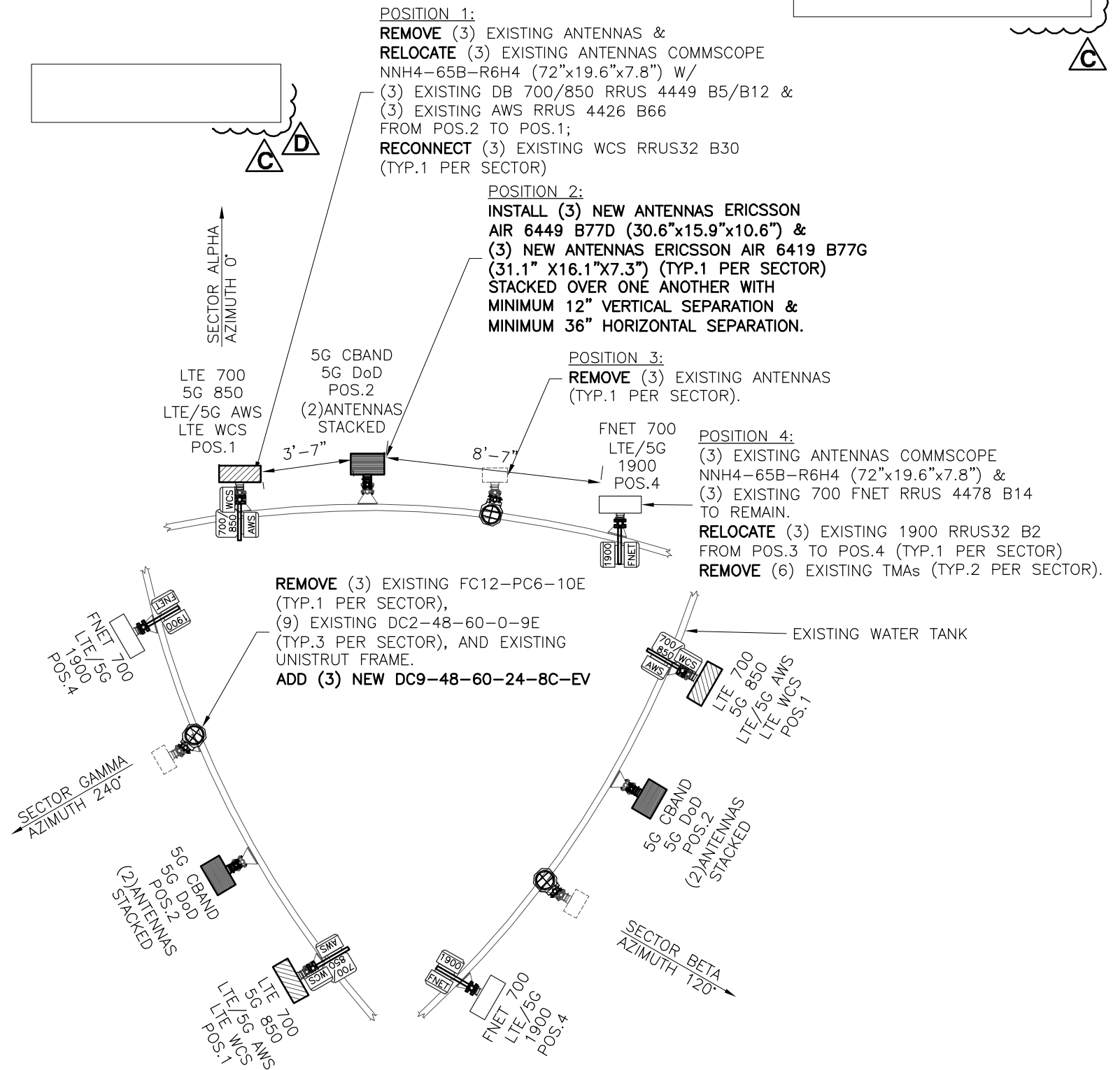
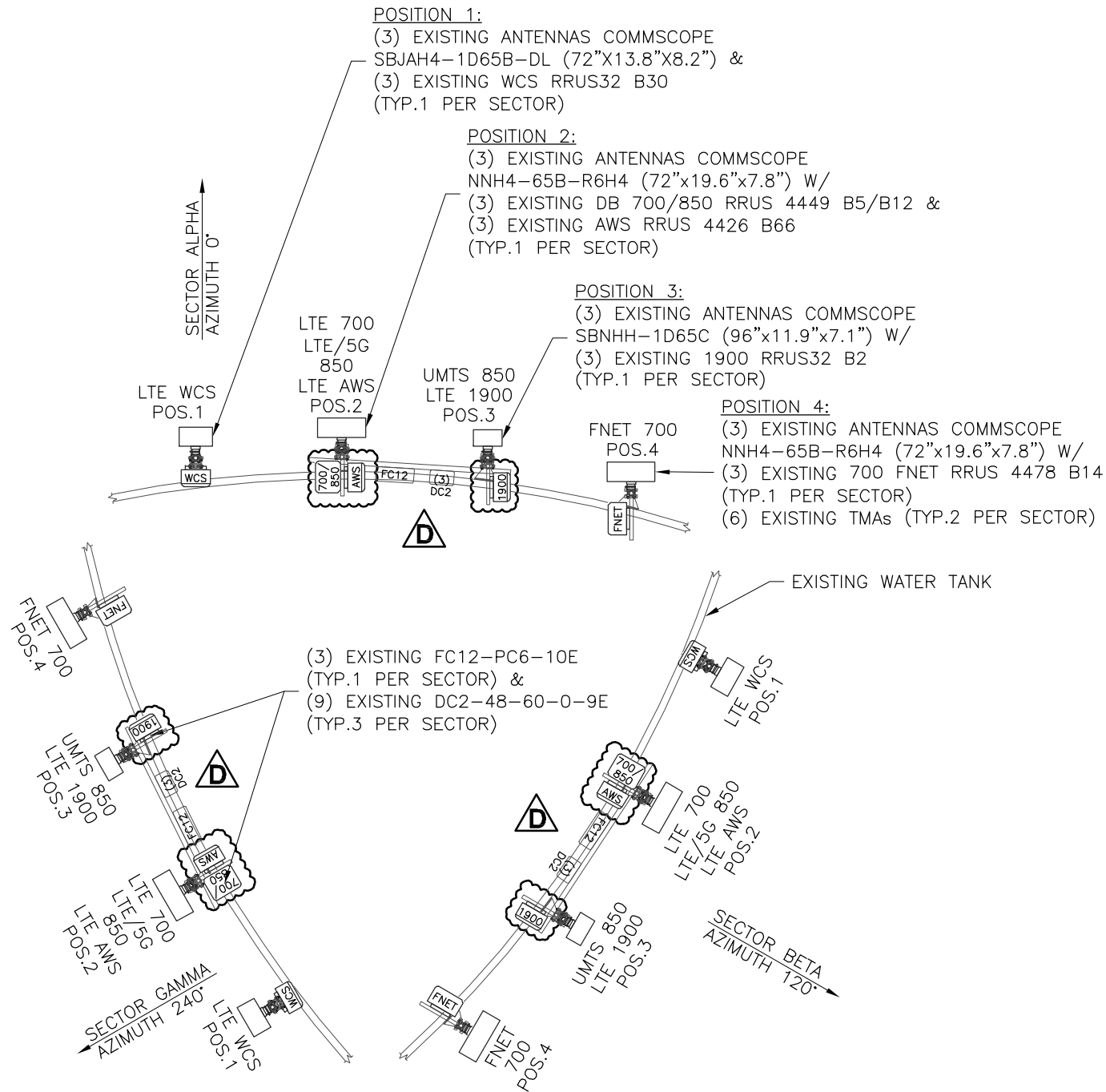
D	05/15/23	FINAL CDs - REVISED PER COMMENTS	PD	PB	RG
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SCALE: AS SHOWN		DESIGNED BY: XX	DRAWN BY: XX		

AT&T MOBILITY	
ELEVATION	
DRAWING NUMBER	REV
WI2673-05	D

NOTE:
ANTENNA LAYOUT IS BASED ON RFDS &
CONSTRUCTION DRAWINGS PREPARED BY RAMAKER
& ASSOCIATES, INC, DATED 11-13-2019.
CONTRACTOR TO VERIFY EXISTING CONDITION
PRIOR TO CONSTRUCTION.

EXISTING ANTENNA MODELS, POSITIONS & AZIMUTHS ARE
ASSUMED BASED ON RFDS. CONTRACTOR TO VERIFY
PRIOR TO CONSTRUCTION & COORDINATE WITH AT&T RF
ENGINEER FOR ANY DISCREPANCY.

REFER TO RF DESIGN SHEET FOR ADDITIONAL
INFORMATION ON TMA'S/DIPLEXERS/DC&FIBER BOX/SQUID



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APEX JOB No. AT04-035

**AWE - LAKE GENEVA
WATER TOWER**
SITE NO. WI2673
1005 HOST DRIVE
LAKE GENEVA, WI 53147



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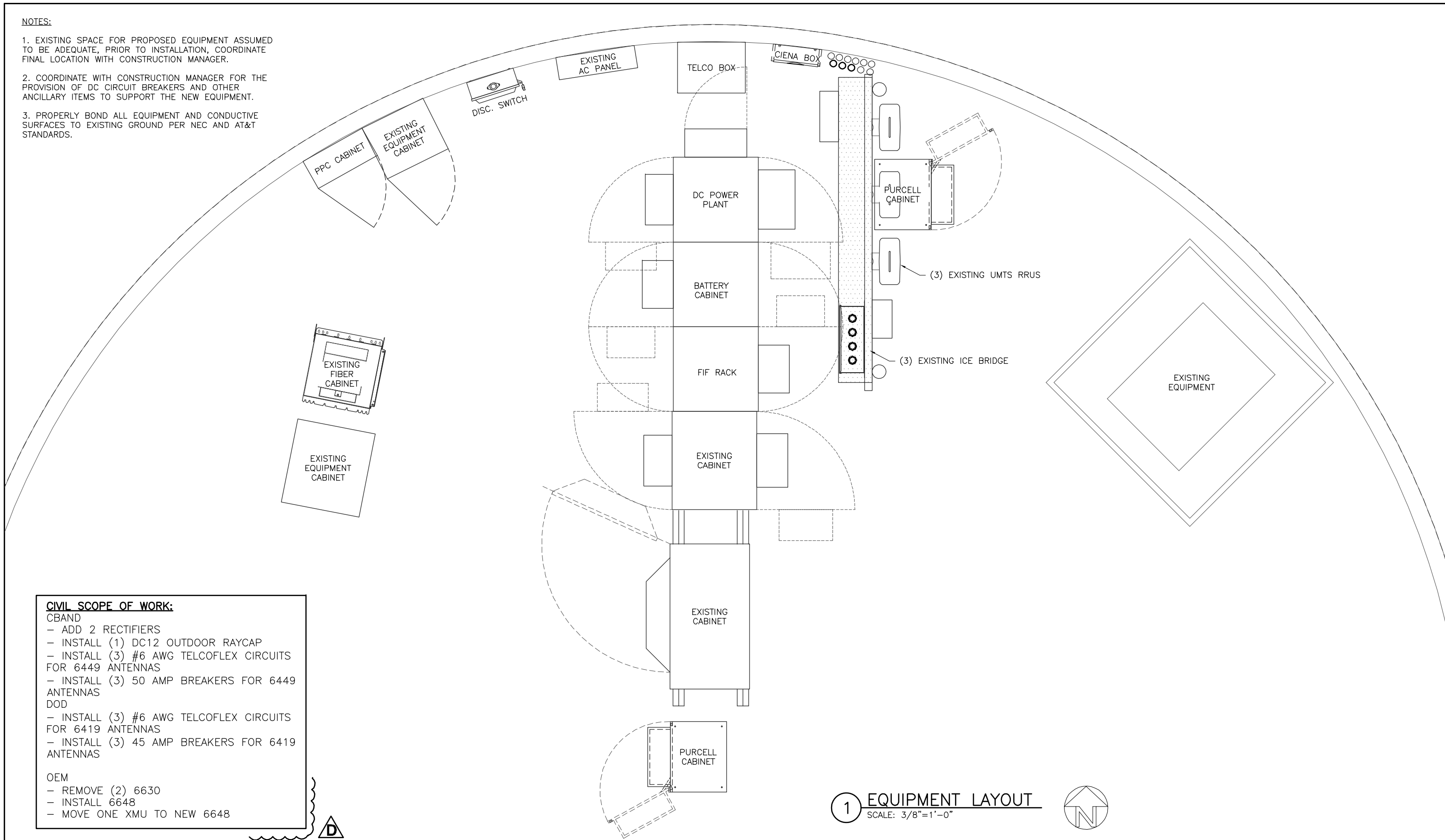
AT&T MOBILITY

ANTENNA LAYOUT

DRAWING NUMBER
WI2673-06

11 x 17 "B" SIZE

- NOTES:
- 1. EXISTING SPACE FOR PROPOSED EQUIPMENT ASSUMED TO BE ADEQUATE, PRIOR TO INSTALLATION, COORDINATE FINAL LOCATION WITH CONSTRUCTION MANAGER.
 - 2. COORDINATE WITH CONSTRUCTION MANAGER FOR THE PROVISION OF DC CIRCUIT BREAKERS AND OTHER ANCILLARY ITEMS TO SUPPORT THE NEW EQUIPMENT.
 - 3. PROPERLY BOND ALL EQUIPMENT AND CONDUCTIVE SURFACES TO EXISTING GROUND PER NEC AND AT&T STANDARDS.



CIVIL SCOPE OF WORK:

- CBAND
- ADD 2 RECTIFIERS
 - INSTALL (1) DC12 OUTDOOR RAYCAP
 - INSTALL (3) #6 AWG TELCOFLEX CIRCUITS FOR 6449 ANTENNAS
 - INSTALL (3) 50 AMP BREAKERS FOR 6449 ANTENNAS
- DOD
- INSTALL (3) #6 AWG TELCOFLEX CIRCUITS FOR 6419 ANTENNAS
 - INSTALL (3) 45 AMP BREAKERS FOR 6419 ANTENNAS
- OEM
- REMOVE (2) 6630
 - INSTALL 6648
 - MOVE ONE XMU TO NEW 6648

1 EQUIPMENT LAYOUT
SCALE: 3/8"=1'-0"

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**AWE - LAKE GENEVA
WATER TOWER**
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1005 HOST DRIVE
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AT&T MOBILITY	
EQUIPMENT LAYOUT	
DRAWING NUMBER	REV
WI2673-07	D

ERICSSON AIR 6449 B77D

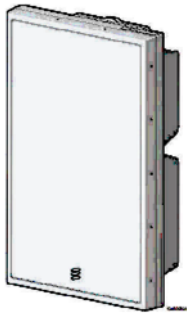
ADVANCED ANTENNA SYSTEM (AAS)

- 64TX/64RX WITH 192 AE
- UP TO 320W
- EIRP (BORESIGHT): 81 dBm (DUAL-POLARIZATION)
- EIRP (ANGULAR AVERAGE): 79 dBm (DUAL-POLARIZATION)
- UP TO 200 MHz IBW & TCBW
- NR ONLY
- 4 X 25 Gbps eCPRI (FROM DAY 1)
- WEIGHT: 38 KG (83.8 POUNDS)
- SIZE (HxWxD): 778x403x268 MM (EXCLUDING BRACKETS)
- SIZE (HXWXD): 30.6x15.9x10.6 INCHES (EXCLUDING BRACKETS)
- -48 VDC (3-wire OR 2-wire)
- -40°C to +55°C
- SUPPORTED NUMBER OF LAYERS: DL/UL 16/8



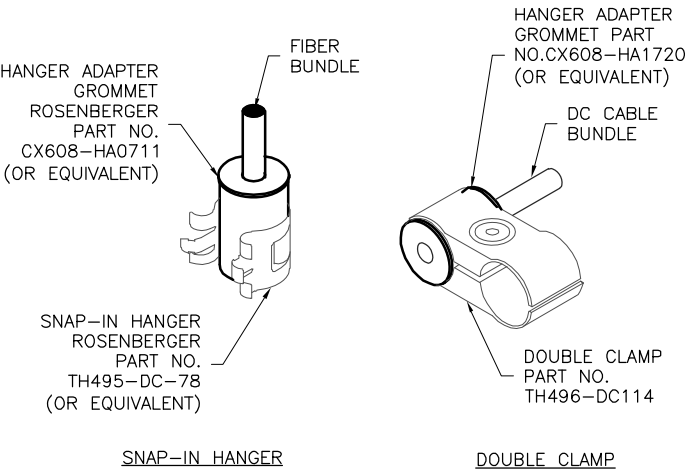
1 AIR 6449 B77D ANTENNA
SCALE: N.T.S.

ERICSSON AIR 6419 B77G



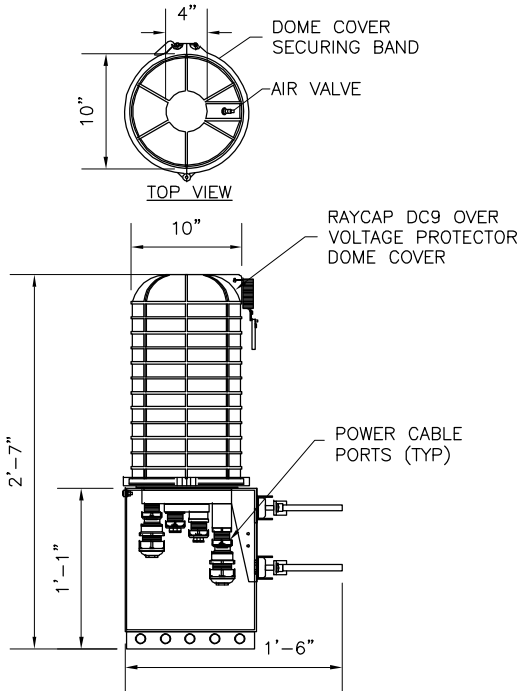
- ERICSSON AIR 6419 has a total of 2ECPRI connections @ 25.8 Gbps, 1 DC Power cable connection
- Operates over B77G DOD band (3.4–3.6 GHz)
- Breaker size = 45ADC, DC Power Consumption = 1280W (for dimensioning)
- Dimensions
 - Height: 31.1" (790 mm)
 - Width: 16.1" (408 mm)
 - Depth: 7.3" (186 mm)
- Weight, excl. mounting hardware = 44lbs(20 kg)
- Weight with Mounting Hardware = 55.4lbs(25.2 kg)
- Max Frontal Wind Load @ 42m/s = 454 N
- Horizontal Separation Required between AIR 6419 = 4" (100mm)
- Minimum Vertical Space Required below/above AIR 6419 = 12" (300mm)
- Minimum Height Above Users = 16.4' (5m)

2 AIR 6419 B77G ANTENNA
SCALE: N.T.S.

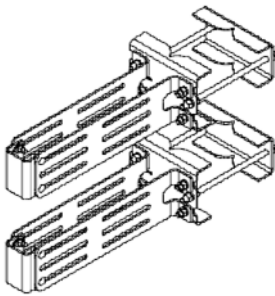


- NOTES:
1. REFER TO JSA DOCUMENT FOR EXACT CABLE MODEL NUMBERS AND MANUFACTURER SPECIFICATIONS FOR PROPER GROMMETS AND HANGERS TO SUPPORT THE FIBER AND DC CABLE BUNDLES.
 2. REFER TO STRUCTURAL ANALYSIS FOR EXACT CABLE ROUTING AND MOUNTING CONFIGURATION.

3 FIBER/DC CABLE SUPPORT
SCALE: N.T.S.



4 RAYCAP
DC9-48-60-24-8C-EV



RR-FA2

RRUS BRACKET COMMSCOPE RR-FA2	
DIMENSIONS (HxWxL)	16.4"x8.6"x18" (416.56mm x 218.44mm x 457.2mm)
WEGHT	36 lb (16.329 kg)
MOUNTING DIAMETER, MAXIMUM	5.6" (142.24mm)
MOUNTING DIAMETER, MINIMUM	0" (0mm)

- COMMSCOPE RR-FA2 – HOT DIP GALVANIZED STEEL BRACKET FOR BOTH THE SINGLE AND DUAL BAND ERICSSON RRUS.
- STIFFENER BRACKET ADDED TO REDUCE EFFECTS OF EXTERNAL FACTORS SUCH AS WIND LOAD AND VIBRATION
 - SUITABLE FOR MOUNTING DIRECTLY ONTO SECTOR FRAME ANTENNA PIPES
 - HOT DIP GALVANIZED STEEL
 - AISC CERTIFIED MANUFACTURING PROCESSES

5 RRUS BRACKET SPECIFICATION
SCALE: N.T.S.



CLAMP MOUNTING RANGE	TUBES	SQUARE PROFILES	90° ANGLE
MINIMUM	ø25 mm (1,0 in)	35 x 35 mm (1,4 x 1,4 in)	35 x 35 mm (1,4 x 1,4 in)
MAXIMUM	ø114 mm (4,5 in)	80 x 80 mm (3,2 x 3,2 in)	80 x 80 mm (3,2 x 3,2 in)

- HOT DIP GALVANIZED STEEL BRACKET
- MATERIAL: S355MC FZV, FASTENERS 8.8 FZV OR EQUIVALENT
 - MINIMUM 70 UM ZINC COATING, DESIGNED FOR >20 YEARS CORROSION-FREE
 - DESIGNED TO 67 M/S WIND SPEED REQUIREMENT (150 MPH)

- SUPPORTS RRUS/RRUS01, RRUS11/12, RRUS32 WITH RRUSA2 OR PSU
- SXK1091946/1 FOR FIRST RRUS & SXK109146/2 TO ADD SECOND RRUS

6 RRUS BRACKET SXK1091946/1 & SXK1091946/2 SPECIFICATION
SCALE: N.T.S.

SECTOR	ANTENNA NUMBER	POLARITY/PORT	ANTENNA MODEL NUMBER	ANTENNA VENDOR	TMA/ RRU MODEL NUMBER	AZIMUTH	ANTENNA CENTERLINE FROM GROUND	ANTENNA TIP HEIGHT	ANTENNA TYPE	DC SURGE AND DISTRIBUTION	COAX/ FIBER/ DC POWER CABLES		
											COAX CABLE	OTHER CABLES	LENGTH
A	A1	700	NNH4-65B-R6H4	COMMSCOPE	(1) RRUS 4449 B5/B12	0°	127'-0"	130'-0"	LTE 700	(3) DC9-48-60-24-8C-EV	-	(6) #8AWG POWER TRUNKS (3) #6AWG POWER TRUNKS & (3) 24 PAIR FIBER TRUNKS	±185'-0"
		850			(1) RRUS 4426 B66				5G 850				
		AWS			(1) RRUS32 B30				LTE/5G AWS				
		WCS							LTE WCS				
	A2	5G DoD	AIR 6419 B77G	ERICSSON	INTEGRATED WITHIN ANTENNA	0°	128'-9"	130'-0"	5G DoD				
		5G CBAND	AIR 6449 B77D		INTEGRATED WITHIN ANTENNA				5G CBAND				
	A3												
	A4	FNET 700	NNH4-65B-R6H4	COMMSCOPE	(1) RRUS 4478 B14	0°	127'-0"	130'-0"	FNET 700				
		1900			(1) RRUS32 B2				LTE/5G 1900				
B	B1	700	NNH4-65B-R6H4	COMMSCOPE	(1) RRUS 4449 B5/B12	120°	127'-0"	130'-0"	LTE 700	(3) DC9-48-60-24-8C-EV	-	(6) #8AWG POWER TRUNKS (3) #6AWG POWER TRUNKS & (3) 24 PAIR FIBER TRUNKS	±185'-0"
		850			(1) RRUS 4426 B66				5G 850				
		AWS			(1) RRUS32 B30				LTE/5G AWS				
		WCS							LTE WCS				
	B2	5G DoD	AIR 6419 B77G	ERICSSON	INTEGRATED WITHIN ANTENNA	120°	128'-9"	130'-0"	5G DoD				
		5G CBAND	AIR 6449 B77D		INTEGRATED WITHIN ANTENNA				5G CBAND				
	B3												
	B4	FNET 700	NNH4-65B-R6H4	COMMSCOPE	(1) RRUS 4478 B14	120°	127'-0"	130'-0"	FNET 700				
		1900			(1) RRUS32 B2				LTE/5G 1900				
C	C1	700	NNH4-65B-R6H4	COMMSCOPE	(1) RRUS 4449 B5/B12	240°	127'-0"	130'-0"	LTE 700	(3) DC9-48-60-24-8C-EV	-	(6) #8AWG POWER TRUNKS (3) #6AWG POWER TRUNKS & (3) 24 PAIR FIBER TRUNKS	±185'-0"
		850			(1) RRUS 4426 B66				5G 850				
		AWS			(1) RRUS32 B30				LTE/5G AWS				
		WCS							LTE WCS				
	C2	5G DoD	AIR 6419 B77G	ERICSSON	INTEGRATED WITHIN ANTENNA	240°	128'-9"	130'-0"	5G DoD				
		5G CBAND	AIR 6449 B77D		INTEGRATED WITHIN ANTENNA				5G CBAND				
	C3												
	C4	FNET 700	NNH4-65B-R6H4	COMMSCOPE	(1) RRUS 4478 B14	240°	127'-0"	130'-0"	FNET 700				
		1900			(1) RRUS32 B2				LTE/5G 1900				

THIS ANTENNA MATRIX TABLE IS PREPARED BASED ON RFDS
DATED 08/26/2022 REVISION # V1.0
GENERAL CONTRACTOR TO VERIFY AND INCORPORATE MOST
RECENT VERSION OF RFDS PRIOR TO CONSTRUCTION.

1

ANTENNA MATRIX

NTS

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APEX JOB No. AT04-035

**AWE - LAKE GENEVA
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AT&T
Mobility

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NO.	DATE	REVISIONS	BY	CHK	APP'D								
SCALE: AS SHOWN			DESIGNED BY: XX		DRAWN BY: XX								

AT&T MOBILITY

ANTENNA MATRIX

DRAWING NUMBER

WI2673-09

REV

D

11 x 17 "B" SIZE

CABLE MARKING COLOR CONVENTION TABLE								
ALPHA, A, X, #1 SECTOR ANTENNA PORT (+/-) BAND (LOW/HI) *SEE NOTES 13 AND 15 BEAM (LEFT/RIGHT) *SEE NOTE 14 BELOW	A1-1 +45	A1-2 -45	A2-1 +45	A2-2 -45	A3-1 +45	A3-2 -45	A4-1 +45	A4-2 -45
	RED	RED	RED	RED	RED	RED	RED	RED
	WHITE	WHITE	ORANGE	ORANGE	BROWN	BROWN	VIOLET	VIOLET
	SLATE	BROWN	SLATE	BROWN	SLATE	BROWN	SLATE	BROWN
	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET
BETA, B, Y, #2 SECTOR ANTENNA PORT BAND (LOW/HI) *SEE NOTES 13 AND 15 BEAM (LEFT/RIGHT) *SEE NOTE 14 BELOW	B1-1 +45	B1-2 -45	B2-1 +45	B2-2 -45	B3-1 +45	B3-2 -45	B4-1 +45	B4-2 -45
	BLUE	BLUE	BLUE	BLUE	BLUE	BLUE	BLUE	BLUE
	WHITE	WHITE	ORANGE	ORANGE	BROWN	BROWN	VIOLET	VIOLET
	SLATE	BROWN	SLATE	BROWN	SLATE	BROWN	SLATE	BROWN
	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET
GAMMA, C, Z, #3 SECTOR ANTENNA PORT BAND (LOW/HI) *SEE NOTES 13 AND 15 BEAM (LEFT/RIGHT) *SEE NOTE 14 BELOW	C1-1 +45	C1-2 -45	C2-1 +45	C2-2 -45	C3-1 +45	C3-2 -45	C4-1 +45	C4-2 -45
	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN
	WHITE	WHITE	ORANGE	ORANGE	BROWN	BROWN	VIOLET	VIOLET
	SLATE	BROWN	SLATE	BROWN	SLATE	BROWN	SLATE	BROWN
	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET
DELTA, D, #4 SECTOR ANTENNA PORT BAND (LOW/HI) *SEE NOTES 13 AND 15 BEAM (LEFT/RIGHT) *SEE NOTE 14 BELOW	D1-1 +45	D1-2 -45	D2-1 +45	D2-2 -45	D3-1 +45	D3-2 -45	D4-1 +45	D4-2 -45
	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW
	WHITE	WHITE	ORANGE	ORANGE	BROWN	BROWN	VIOLET	VIOLET
	SLATE	BROWN	SLATE	BROWN	SLATE	BROWN	SLATE	BROWN
	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET	ORANGE / VIOLET
	SLATE / YELLOW	SLATE / YELLOW	SLATE / YELLOW	SLATE / YELLOW	SLATE / YELLOW	SLATE / YELLOW	SLATE / YELLOW	SLATE / YELLOW

NOTE 1*: ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) WRAPS OF TAPE.

NOTE 2*: ALL COLOR BANDS INSTALLED AT THE TOWER TOP SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF ¾" OF SPACING BETWEEN EACH COLOR.

NOTE 3*: ALL COLOR BANDS INSTALLED AT OR NEAR THE GROUND MAY BE ONLY ¾" WIDE. EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.

NOTE 4*: EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH ¾" COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.

NOTE 5*: ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF ¾" BANDS ON EACH END OF THE BOTTOM JUMPER.

NOTE 6*: ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE-TO-SIDE.

NOTE 7*: EACH COLOR BAND SHALL HAVE A MINIMUM OF (3) WRAPS AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.

NOTE 8*: X-POLE ANTENNAS SHOULD USE "XX-1" FOR THE "+45" PORT, "XX-2" FOR THE "-45" PORT.

NOTE 9*: COLORBAND #4 REFERS TO THE FREQUENCY BAND: ORANGE=850, VIOLET=1900. USED ON JUMPERS ONLY.

NOTE 10*: RF FEEDLINE SHALL BE IDENTIFIED WITH A METAL TAG (STAINLESS OR BRASS) AND STAMPED WITH THE SECTOR, ANTENNA POSITION, AND CABLE NUMBER.

NOTE 11*: ANTENNAS MUST BE IDENTIFIED, USING THE SECTOR LETTER AND ANTENNA NUMBER, WITH A BLACK MARKER PRIOR TO INSTALLATION.

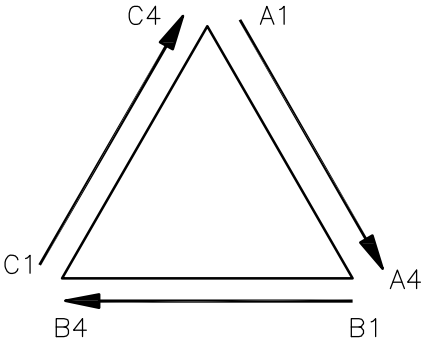
NOTE 12*: ONLY "SECTOR-SPLIT" ANTENNA COAX SHALL CONTAIN A 5TH COLORBAND TO INDICATE "LEFT" OR "RIGHT" BEAM.

NOTE 13*: "SECTOR-SPLIT" ANTENNA COAX SHALL USE BLACK TAPE AS A PLACEHOLDER ON MAINLINE FOR COLORBAND #4 (FREQ BAND)

NOTE 14*: "SECTOR-SPLIT" ANTENNAS SLATE FOR THE LEFT BEAM, AND YELLOW FOR THE RIGHT BEAM

NOTE 15*: "LOW" BAND REFERS TO 700MHZ OR 850MHZ, "HI" BAND REFERS TO 1900MHZ OR 2100MHZ

FIGURE 1: ANTENNA ORIENTATION



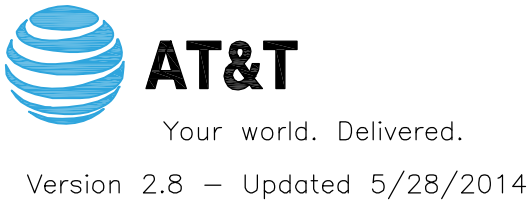
NOTE: ALPHA STARTS AT 0 (NORTH) OR FIRST AZIMUTH AFTER 0

NOTE: BETA IS FIRST AZIMUTH AFTER ALPHA IN CLOCK-WISE DIRECTION

NOTE: GAMMA IS FIRST AZIMUTH AFTER BETA IN CLOCK-WISE DIRECTION

NOTE: DELTA IS FIRST AZIMUTH AFTER GAMMA IN CLOCK-WISE DIRECTION

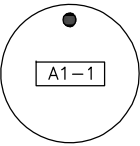
NOTE: AZIMUTH IS IDENTIFIED BY THE PANEL, NOT THE ELEMENTS INSIDE



CABLE MARKING TAGS

TO PROVIDE ADDITIONAL IDENTIFICATION RF CABLES SHALL BE IDENTIFIED WITH A METAL TAG MADE OF STAINLESS STEEL OR BRASS AND STAMPED WITH THE SECTOR, ANTENNA POSITION, AND CABLE NUMBER. THE ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSIVE PROOF WIRE OR WAX STRING AROUND THE CABLE. THE TAG SHOULD BE LABLED AS SHOWN BELOW IN FIGURE 2.

FIGURE 2: TAG DETAIL EXAMPLE



CABLE MARKING LOCATIONS TABLE		
TAPE	TAG	LOCATIONS
X		EACH TOP JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
X		EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JAST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.
	X	MARKING TAGS SHALL BE ATTACHED AT CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER
X		ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4 " WIDE BANDS ON EACH END OF BOTTOM JUMPER.

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APEX JOB No. AT04-035

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WATER TOWER
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1005 HOST DRIVE
LAKE GENEVA, WI 53147



D	05/15/23	FINAL CDs - REVISED PER COMMENTS	PD	PB	RG				
C	05/12/23	FINAL CDs - REVISED PER DIXON COMMENTS	PD	PB	RG				
B	10/07/22	FINAL CDs - ISSUED FOR CONSTRUCTION	PD	PB	RG				
A	09/29/22	ISSUED FOR REVIEW	PD	PB	RG				
NO.	DATE	REVISIONS	BY	CHK	APP'D				
SCALE: AS SHOWN		DESIGNED BY: XX	DRAWN BY: XX						

AT&T MOBILITY

COAX COLOR CODING

DRAWING NUMBER

WI2673-10

REV

D

11 x 17 "B" SIZE

WISIL STANDARD FIBER–OPTIC DEPLOYMENT PLANS (Version 2.8 – Updated 5/28/2014)						
NOTE: ** DENOTES SPECIAL DEPLOYMENT WHERE RRH IS TECHNOLOGY SPLIT WITH UMTS AND LTE						
NOTE: RRH’S DICTED IN PARENTHESES AND ITALICS INDICATE ERICSSON “A2” MODULES						
FIBER TRUNK #1						
RRH NAME	SECTOR	TECHNOLOGY	BAND	FIBER TRAY ID	FIBER TRAY PORT	SQUID/TRUNK PAIR
LTE–700–A1	A	LTE	700	A	1	1
LTE–700–B1	B	LTE	700	A	2	2
LTE–700–C1	C	LTE	700	A	3	3
LTE–2100–A2 (LTE-2100-A3)	A	LTE	2100	A	4	4
LTE–2100–B2 (LTE-2100-B3)	B	LTE	2100	A	5	5
LTE–2100–C2 (LTE-2100-C3)	C	LTE	2100	A	6	6
LTE–1900–A10 (LTE-1900-A11)	A	LTE	1900	A	7	7
**LTE–1900–A5s (LTE-1900-A6)						
LTE–1900–B10 (LTE-1900-B11)	B	LTE	1900	A	8	8
**LTE–1900–B5s (LTE-1900-B6)						
LTE–1900–C10 (LTE-1900-C11)	C	LTE	1900	A	9	9
**LTE–1900–C5s (LTE-1900-C6)						
LTE–850–A9/LTE–850–A4s	A	LTE	850	A	10	10
LTE–850–B9/LTE–850–B4s	B	LTE	850	A	11	11
LTE–850–C9/LTE–850–C4s	C	LTE	850	A	12	12
SPARE				B	7	13
SPARE				B	8	14
SPARE				B	9	15
SPARE				B	10	16
SPARE				B	11	17
SPARE				B	12	18

FIBER TRUNK #2						
RRH NAME	SECTOR	TECHNOLOGY	BAND	FIBER TRAY ID	FIBER TRAY PORT	SQUID/TRUNK PAIR
UMTS–850–A4	A	UMTS	850	C	1	1
UMTS–850–B4	B	UMTS	850	C	2	2
UMTS–850–C4	C	UMTS	850	C	3	3
UMTS–1900–A5	A	UMTS	1900	C	4	4
UMTS–1900–B5	B	UMTS	1900	C	5	5
UMTS–1900–C5	C	UMTS	1900	C	6	6
UMTS–1900–A6	A	UMTS	1900	C	7	7
UMTS–1900–B6	B	UMTS	1900	C	8	8
UMTS–1900–C6	C	UMTS	1900	C	9	9
LTE–700–DE–A7	A	LTE	700DE	C	10	10
LTE–700–DE–B7	B	LTE	700DE	C	11	11
LTE–700–DE–C7	C	LTE	700DE	C	12	12
LTE–WCS–A8	A	LTE	WCS	B	1	13
LTE–WCS–B8	B	LTE	WCS	B	2	14
LTE–WCS–C8	C	LTE	WCS	B	3	15
SPARE				B	4	16
SPARE				B	5	17
SPARE				B	6	18

SECTORS	ALPHA	RED
	BETA	BLUE
	GAMMA	GREEN
TECH	UMTS	SLATE
	LTE	ORANGE
FREQBAND	700	BROWN
	850	VIOLET
	1900	ORANGE
	2100	WHITE
	WCS	YELLOW
	700DE	SLATE
PORT	MASTER	VIOLET
	SPLIT/SLAVE	YELLOW
	>10MHZ A2 MODULE F1	BROWN
	>10MHZ A2 MODULE F2	SLATE

NOTE: "RED", "BLUE", AND "GREEN" ARE NOT USED ON ANY OTHER COLOR BAND AND ALWAYS DE–NOTE THE 1st COLOR BAND

MIDWEST FIBER–OPTIC JUMPER COLOR CODE STANDARD (Version 2.8 – Updated 5/28/2014)								
SECTOR	TECHNOLOGY	BAND	RADIO NAME	COLOR CODE				NOTES
A	LTE	700	LTE–700–A1	RED	ORANGE	BROWN	VIOLET	
A	LTE	2100	LTE–2100–A2	RED	ORANGE	WHITE	VIOLET	
A	LTE	2100	LTE–2100–A3	RED	ORANGE	WHITE	BROWN	"A2" MODULE, SEE NOTE 1 BELOW
A	UMTS	850	UMTS–850–A4	RED	SLATE	VIOLET	VIOLET	
A	LTE	850	LTE–850–A4S	RED	ORANGE	VIOLET	YELLOW	"TECHNOLOGY–SPLIT"
A	UMTS	1900	UMTS–1900–A5	RED	SLATE	ORANGE	VIOLET	
A	LTE	1900	LTE–1900–A5S	RED	ORANGE	ORANGE	YELLOW	"TECHNOLOGY–SPLIT"
A	LTE	1900	LTE–1900–A6	RED	ORANGE	ORANGE	SLATE	"A2" MODULE, SEE NOTE 1&2 BELOW
A	LTE	700D/E	LTE–700DE–A7	RED	ORANGE	YELLOW	VIOLET	
A	LTE	WCS	LTE–WCS–A8	RED	ORANGE	SLATE	VIOLET	
A	LTE	850	LTE–850–A9	RED	ORANGE	VIOLET	VIOLET	
A	LTE	1900	LTE–1900–A10	RED	ORANGE	ORANGE	VIOLET	
A	LTE	1900	LTE–1900–A11	RED	ORANGE	ORANGE	BROWN	"A2" MODULE, SEE NOTE 1 BELOW
B	LTE	700	LTE–700–B1	BLUE	ORANGE	BROWN	VIOLET	
B	LTE	2100	LTE–2100–B2	BLUE	ORANGE	WHITE	VIOLET	
B	LTE	2100	LTE–2100–B3	BLUE	ORANGE	WHITE	BROWN	"A2" MODULE, SEE NOTE 1 BELOW
B	UMTS	850	UMTS–850–B4	BLUE	SLATE	VIOLET	VIOLET	
B	LTE	850	LTE–850–B4S	BLUE	ORANGE	VIOLET	YELLOW	"TECHNOLOGY–SPLIT"
B	UMTS	1900	UMTS–1900–B5	BLUE	SLATE	ORANGE	VIOLET	
B	LTE	1900	LTE–1900–B5S	BLUE	ORANGE	ORANGE	YELLOW	"TECHNOLOGY–SPLIT"
B	LTE	1900	LTE–1900–B6	BLUE	ORANGE	ORANGE	SLATE	"A2" MODULE, SEE NOTE 1&2 BELOW
B	LTE	700D/E	LTE–700DE–B7	BLUE	ORANGE	YELLOW	VIOLET	
B	LTE	WCS	LTE–WCS–B8	BLUE	ORANGE	SLATE	VIOLET	
B	LTE	850	LTE–850–B9	BLUE	ORANGE	VIOLET	VIOLET	
B	LTE	1900	LTE–1900–B10	BLUE	ORANGE	ORANGE	VIOLET	
B	LTE	1900	LTE–1900–B11	BLUE	ORANGE	ORANGE	BROWN	"A2" MODULE, SEE NOTE 1 BELOW
C	LTE	700	LTE–700–C1	GREEN	ORANGE	BROWN	VIOLET	
C	LTE	2100	LTE–2100–C2	GREEN	ORANGE	WHITE	VIOLET	
C	LTE	2100	LTE–2100–C3	GREEN	ORANGE	WHITE	BROWN	"A2" MODULE, SEE NOTE 1 BELOW
C	UMTS	850	UMTS–850–C4	GREEN	SLATE	VIOLET	VIOLET	
C	LTE	850	LTE–850–C4S	GREEN	ORANGE	VIOLET	YELLOW	"TECHNOLOGY–SPLIT"
C	UMTS	1900	UMTS–1900–C5	GREEN	SLATE	ORANGE	VIOLET	
C	LTE	1900	LTE–1900–C5S	GREEN	ORANGE	ORANGE	YELLOW	"TECHNOLOGY–SPLIT"
C	LTE	1900	LTE–1900–C6	GREEN	ORANGE	ORANGE	SLATE	"A2" MODULE, SEE NOTE 1&2 BELOW
C	LTE	700D/E	LTE–700DE–C7	GREEN	ORANGE	YELLOW	VIOLET	
C	LTE	WCS	LTE–WCS–C8	GREEN	ORANGE	SLATE	VIOLET	
C	LTE	850	LTE–850–C9	GREEN	ORANGE	VIOLET	VIOLET	
C	LTE	1900	LTE–1900–C10	GREEN	ORANGE	ORANGE	VIOLET	
C	LTE	1900	LTE–1900–C11	GREEN	ORANGE	ORANGE	BROWN	"A2" MODULE, SEE NOTE 1 BELOW

NOTE 1: A SECONDARY JUMPER TO A2 MODULES IS REQUIRED WHEN A CARRIER BANDWIDTH EXCEEDS 10x10MHZ. A2 COLOR CODE IS REQUIRED.
NOTE 2: WHEN DEPLOYING 2 LTE CARRIERS WITHIN THE SAME BAND, F1 IS IDENTIFIED BY BROWN, F2 IS IDENTIFIED BY SLATE.



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D	05/15/23	FINAL CDs – REVISED PER COMMENTS	PD	PB	RG				
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NO.	DATE	REVISIONS	BY	CHK	APP'D				
SCALE: AS SHOWN		DESIGNED BY: XX	DRAWN BY: XX						

AT&T MOBILITY

FIBER–OPTIC JUMPER COLOR CODING

DRAWING NUMBER	REV
WI2673–11	D

6

5

4

3

2

11 x 17 "B" SIZE

CROSS-CONNECTION CONTROL PROGRAM INSPECTION PROFESSIONAL SERVICES AGREEMENT

This Professional Services Agreement (this “Agreement”), is made and entered into as of the day of (the “Effective Date”) by and between the City of Lake Geneva, Water Utility organized and existing under the laws of the State of Wisconsin, referred to as “Utility,” and Clean Water Engineering, LLC, a Wisconsin Domestic Limited Liability Company, referred to as “CWE.”

WHEREAS the Utility wishes to obtain the professional services of CWE; and

WHEREAS, CWE has the knowledge, skill, and capability to perform such services for the Utility; and

WHEREAS the Utility supplies potable water throughout its geographic locations to property owners; and desires to enter into a professional services contract for cross-connection control program inspection, reporting and management services.

WHEREAS CWE is experienced in and capable of supplying professional inspection of potable water distribution system and cross-connection control program management to the Utility and the Utility desires to engage CWE to act as its independent contractor in its cross-connection control program.

WHEREAS, the Utility has the authority under the laws of the State of Wisconsin and its local governing body to enter into this professional services contract.

NOW THEREFORE, in consideration of the mutual agreements herein contained, and subject to the terms and conditions herein stated, the parties agree as follows:

ARTICLE I. Purpose

During the term of this Agreement, the Utility agrees to engage CWE as an independent contractor to inspect its potable water distribution system in public, commercial and industrial facilities within the community and document its findings. Each party to this agreement agrees that it will cooperate in good faith with the other, its agents, and subcontractors to facilitate the performance of the mutual obligations set forth in this Agreement. Both Parties to this agreement recognize and acknowledge that the information presented to them is complete and accurate, yet due to the inaccessible nature of water piping or due to access constraints within water user’s facilities, complete and accurate data is not always available.

ARTICLE II. Scope of Services

The scope of services to be provided by CWE under this Agreement will include the inspections, compliance, preparation of quarterly management reports, and annual cross-connection reports with respect to the Facilities to the extent specifically set forth in this Article II (hereinafter the “Scope of Service”). Should other reports be included within the scope of services, the same shall be appended to this Agreement as Exhibit A.

2.1 PROGRAM START-UP MEETING

CWE will conduct a Program Start-up Meeting for the Utility Cross-Connection Control/Backflow Prevention Program. Items for discussion include the following:

- Review state & local regulations
- Establish wording and timeliness for program notifications including:
- Inspection Notice
- Compliance Notice
- Non-Compliance Notices 1
- Penalty Notices
- Special Program Notices
- Prioritize Inspections – (i.e., Utility Buildings)
- Establish procedures and protocol for addressing specific hazards.
- Establish program reporting procedures.
- Review educational and public awareness brochures.
- Obtain complete facility listing and address information.
- Establish facility inspection schedule.

2.2 INSPECTIONS

CWE will perform initial inspections of individual industrial, commercial, institutional facilities and miscellaneous water users within the Utility served by the public water supply for cross-connections. Inspections will be conducted utilizing the Isolation approach as supported by the Wisconsin Department of Commerce, COMM 82 standards. Follow-up compliance inspections are offered at no extra cost.

- Initial Inspection – the first time CWE representative inspects a facility for cross-connections. Degree of Hazard is assigned to facility. The Degree of Hazard will dictate future re-inspection frequency/schedule of facility. (Facility will be either compliant or non-compliant after this inspection.)
- Compliance Inspection – subsequent visit by an CWE representative to a facility that was non-compliant during the initial inspection to verify that the work was completed and meets the program compliance.
- Re-Inspection – Revisit by a CWE representative to a facility that was initially inspected. The re-inspection frequency/schedule is based on the degree of hazard assigned to the facility during the initial inspection. (Two to six-year re-inspection cycle)

2.3 INSPECTION SCHEDULE

CWE shall determine and coordinate the inspection schedule, which will be reviewed by the Utility prior to CWE contacting utility customers. Initial check in to include a list of inspections scheduled. An exit interview may include a list of inspections completed.

2.4 PROGRAM DATA

CWE will generate and document the required program data for the facilities listed below (see 2.10) using the CWE Software and Data. The Program Data shall remain property of the Utility; however, the CWE Software Data Management program shall remain the property of CWE and

can be purchased by the Utility for a price to be agreed upon in the future by CWE and the Utility. Data Services are to include:

- Prioritizing and scheduling inspections.
- Notify users of inspections, backflow device installation and testing requirements.
- Monitor inspection and testing compliance.
- Maintenance of program to comply with all WI Department of Natural Resources & Department of Commerce requirements.

2.5 MANAGEMENT REPORTS

CWE will submit comprehensive management reports on a monthly & annual basis to the Utility, which will include the following:

- Report format to include electronic updates and/or hard copy.
- Electronic reports will be made available in a downloadable format.
- Inspection/Testing notices sent.
- Number of facilities inspected.
- Number of facilities compliant/non-compliant

2.6 REVIEW OF CROSS-CONNECTION CONTROL ORDINANCE

CWE will review the current cross-connection control ordinance and develop a cross-connection control plan specific to the Utility as required by the Wisconsin Department of Natural Resources.

- Plan will include code adoption references, standard operational procedures, program notice documentation, reporting procedures and reference standards.
- Plan will also include a detailed re-inspection frequency for all facilities.

2.7 VACUUM BREAKERS

CWE will provide up to six (6) ASSE approved hose bibb vacuum breakers or anti-frost hose bibb vacuum breakers per facility in order to be placed into compliance, if no other cross-connections are identified.

2.8 PUBLIC RELATIONS PROGRAM

CWE may assist the Utility to establish a community wide public relations program including general awareness brochures as well as input for the Utility's website cross-connection control program overview content and resources.

2.9 SUPPORT

CWE will provide ongoing support by phone, facsimile, and/or e-mail.

2.10 FACILITY TYPES

The facility types included in the program are as follows:

Cross-Connection Control Program Contract for DNR 810.15 Compliance & Safe Drinking Water

- Industrial
- Public Authority
- Commercial

2.11 LARGE, HIGH HAZARD FACILITIES

Large industrial and high hazard complexes or facilities may require containment and additional assessment of the facility operations and/or processes. These facilities may require inspection/survey services outside the scope of this agreement. An independent cross-connection control survey (at the business owner's expense) may be required of these facilities and the results submitted to the water utility to help verify program compliance.

2.12 INSPECTION TERMS

The number of inspections to be determined by Utility and provided to CWE. Inspection will be performed within twenty-four (24) months of the effective date of this Agreement. The total inspections include all initial inspections, notification of inspections and notification of compliance or non-compliance. Follow up inspections or compliance inspections are included in this Agreement.

2.13 COMPLIANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES AND WISCONSIN ADMINISTRATIVE CODE

CWE will assist in compliance with WDNR and WI Administrative Code cross-connection control program requirements for non-residential facilities.

2.14 POLICY MANUAL

CWE will prepare a comprehensive cross-connection control policy manual/plan and submit it to the Utility for WI-DNR approval.

2.15 INVENTORY

CWE shall inventory all accessible (ground level) testable and non-testable backflow prevention devices. Information to include location, size, make, model, and serial number if applicable.

2.16 DATA MANAGEMENT

CWE shall provide data management and program notices for all inspection services throughout the contract period.

2.17 ANNUAL YEAR END REVIEW

CWE will conduct an on-site annual year-end review meeting to discuss overall program status and specific program recommendations.

2.18 CROSS-CONNECTION CONTROL BROCHURES

CWE will provide two hundred fifty (250) cross-connection control educational brochures annually.

ARTICLE III. Responsibilities of the Utility

3.1 UTILITY'S REPRESENTATIVE

On or before the date services are to commence under this Agreement, the Utility shall designate an authorized representative ("Authorized Representative") to administer this Agreement.

3.2 COMPLIANCE WITH LAWS

The Utility, with the technical and professional assistance of CWE, shall comply with all applicable local, state, and federal laws, codes, ordinances, and regulations as they pertain to the water distribution system cross-connection control program inspection/surveys and testing and shall pay for any capital improvements needed to bring the water treatment and delivery system into compliance with the aforementioned laws.

3.3 NOTICE OF LITIGATION

In the event that the Utility or CWE has or receives notice of or undertakes the prosecution of any actions, claims, suits, administrative or undertakes the prosecution of any actions, claims, suits, administrative or arbitration proceedings, or investigations in connection with this agreement, the party receiving such notice or undertaking such prosecution shall give the other party timely notice of such proceedings and will inform the other party in advance of all hearings regarding such proceedings.

3.4 FACILITY LISTING

The Utility must provide CWE a complete list of facilities to be inspected. Information to include facility name, address, contact person (if available), and phone number. (Electronic file format such as Microsoft Excel, csv or pdf preferred.) Incorrect facility addresses will be returned to the Utility contact and corrected address will be requested. If Utility is unable to provide an electronic file copy of facility information, CWE will assess a data transfer fee of \$80/hour to manually input the facility listing and/or assembly test record information into the CWE Software Data Management Program. This fee will be invoiced separately outside the scope of this service Agreement.

3.5 LETTERHEAD/LOGO

The Utility shall provide CWE with an electronic file copy of logo for mailing notices, and envelopes for the program, which shall be used as authorized by the Utility and for the purpose of performing the scope of services under this Professional Services Agreement.

ARTICLE IV. Term

4.1 TERM AND TERMINATION TERM

Services by CWE under this Agreement shall commence on the _____ day of _____, and end two years from such date, unless this Agreement is renewed or terminated as provided herein. The terms of this Agreement shall be valid only upon the execution of this agreement within ninety (90) days of this receipt. Failure to execute this Agreement within the ninety (90) day period shall deem the proposed terms void.

4.2 TERMINATION

Contract cancellation may be exercised by the Utility at any time for non-performance by CWE, by giving written notice of such intent to terminate to CWE by the Utility, at least ninety (90) days prior to the effective date of termination. Notice of the intent to terminate shall be given in writing by personal service, by an authorized agent, or by certified mail, return receipt requested. The Utility shall pay the balance of any outstanding accounts of work performed by CWE.

4.3 BASE COMPENSATION

Commencing on the _____ day of _____, the Utility shall pay CWE as compensation (“Base Compensation”) for labor, equipment, material, supplies, and utilities provided and the services performed pursuant to this Agreement, the sum of **\$90.00** per connection inspected per month.

4.4 PAYMENT OF INVOICES

Upon presentation of invoices by CWE, all payments including base and other compensation shall be due and payable on the first day of each month (due date) for which services have been rendered. All such payments shall be made no later than thirty (30) days after the due date. Failure to pay shall be deemed a default under this agreement. For any payment to CWE which is not made within thirty (30) calendar days after the due date, CWE shall receive interest at one and one-half (1 ½) percent per month on the unpaid balance.

4.5 CHANGES IN SCOPE OF SERVICES

In the event that the Utility requests and CWE consents to perform additional work or services involving the consulting, management, operation, maintenance, and repair of the Utility’s water delivery system where such services or work exceeds or changes the Scope of Services contemplated under this Agreement, CWE shall be provided additional compensation. Within thirty (30) calendar days from the date of notice of such additional work or services, the parties shall mutually agree upon an equitable sum for additional compensation. This amount shall be added to the monthly sum effective at the time of change in scope. Changes in the Scope of Service include, but are not limited to, requests for additional service by the Utility, additional costs incurred in (a) treatment of Abnormal or Biological Toxic Materials; (b) disposition of process residue; (c) meeting new or changed government regulations or reporting requirements, including changed effluent or potable water standards which increase the cost of operating the Facilities; (d) arising from construction or medication in the Facilities, or (e) expenditures for Capital Improvement and Capital Repairs.

4.6 CLIENT CONFIDENTIALITY

All communications between CWE and the Utility regarding business practices and other methods and forms of doing business will be considered confidential, subject to the requirements of Wisconsin Public Records Law. Any and all reports, documentations, files, media, and other materials created or produced by CWE in connection with the services rendered hereunder shall be deemed “Work Product.” CWE agrees to assign and transfer all of its right, title, and interest in such Work Product to the Utility. The Utility does not, under this Agreement, acquire any ownership rights in and/or to any software, documentation, tools, techniques, methodologies, or other material which has not or is not created as part of the services to be provided hereunder which is proprietary to CWE.

4.7 ACCESSIBILITY

Backflow prevention device information will be completed in full only when the identifying information (i.e., data plate, brass tag, etc.) is accessible and visible from ground level or from a fixed platform/mezzanine.

4.8 CONFINED SPACES

CWE personnel will not enter confined spaces.

ARTICLE V. Risk Management

5.1 INFORMATION

Both Parties to this agreement recognize and acknowledge that the information presented to them is complete and accurate, yet due to the inaccessible nature of water piping or lack of access provided by property owner/water user; complete accurate data is not always available. Cross-Connection control inspection and results are documented as of a specific date. The property owner and/or water user may make modifications to the potable water system after the inspection date that may impact compliance with the program.

5.2 INDEMNIFICATION

CWE agrees to and shall hold the Utility, its elected and appointed officers, and employees harmless from any liability for claims or damages for personal injury or property damage which is caused by or arises from the sole negligence of CWE in the performance of its services under this Agreements.

5.3 CWE INSURANCE

CWE currently maintains the following insurance coverages and limits:

	Occurrence	Aggregate
Comprehensive General Management	\$1,000,000	\$2,000,000
Automobile Liability (Combined Single Limit)	\$1,000,000	\$1,000,000
Worker's Compensation/Employer's Liability	\$100/50/100	
Errors and Omissions	\$1,000,000	\$1,000,000

Within thirty (30) calendar days of the start of the project CWE shall furnish the Utility with satisfactory proof of such insurance, and each policy will require a 30-day notice of cancellation to be given to the Utility while this Agreement is in effect. These policies will be in effect at the time CWE takes possession of the Facilities. The Utility shall be named as an additional insured according to its interest under the general liability policy during the term of this Agreement.

5.4 UTILITY INSURANCE

The Utility will maintain liability insurance on an all-risk basis and including extended coverage for matters set forth in this agreement.

5.5 RELATIONSHIP

The Relationship of CWE to the Utility is that of independent contractor and not one of employment. None of the employees or agents of CWE shall be considered employees of the Utility. For the purposes of all state, local, and federal laws and regulations, the Utility shall exercise primary management, and operational and financial decision-making authority.

5.6 ENTIRE AGREEMENT AMENDMENTS

This Agreement, including the exhibits hereto, represents the entire Agreement between the parties hereto, and supersedes all prior or contemporaneous written or oral agreements and all other communications between the parties relating to the Services to be rendered hereunder. Any additions, deletions, or modifications shall not be binding on either party unless accepted and approved in writing by duly authorized representatives of both CWE and the Utility. In the event of any contradictory provisions between this Agreement and the terms of any Exhibits, attachments, or schedules hereto or any purchase order or other document issued by the Utility or CWE in connection herewith, the terms set forth in the body of this Agreement shall prevail.

5.7 HEADINGS, ATTACHMENTS, AND EXHIBITS

The heading contained in this Agreement is for reference only and shall not in any way affect the meaning or interpretation of this Agreement. The Attachments and Exhibits to this Agreement shall be construed as an integral part of this Agreement.

5.8 WAIVER

The failure on the part of either party to enforce its rights as to any provision of this Agreement shall not be construed as a waiver of its rights to enforce such provisions in the future.

5.9 ASSIGNMENT

This Agreement shall not be assigned by either party without the prior written consent of the other unless such assignment shall be to the affiliate or successor of either party. If reassignment of the Agreement is to occur to an affiliate or successor, a notice of not less than thirty (30) days shall be provided to the remaining party.

5.10 REIMBURSABLE EXPENSES

For the purpose of this Agreement, employee reimbursable expenses shall comply with the published Federal guidelines.

5.11 AUTHORITY TO CONTRACT

Each party warrants and represents that it has power authority to enter into this Agreement and to perform the obligations, including any payment obligations, under this Agreement.

5.12 GOVERNING LAW AND VENUE

This Agreement shall be governed by and construed in accordance with the laws of the State of Wisconsin, regardless of the fact that any of the parties hereto may be or may become a resident of a different state or jurisdiction. Any suit or action arising shall be filed in a court of competent

jurisdiction within the State of Wisconsin, venue by Walworth County. The parties hereby consent to the personal jurisdiction of said court within the State of Wisconsin.

5.13 COUNTERPARTS

This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original and all of which together shall be deemed to be one and the same instrument.

5.14. SEVERABILITY

The provisions of this Agreement shall be deemed severable, and if any portion shall be held invalid, illegal, or unenforceable by any reason, the remainder of this Agreement shall be effective and binding upon the parties, unless to do so would clearly violate the present legal and valid intention of the parties.

5.15 REMEDIES

Pursuant by either party of any remedies described herein, or otherwise available at law or in equity, shall not preclude pursuit by that party of any other remedy or remedies provided herein or otherwise available at law or in equity. All remedies, rights, undertakings, obligations, and agreements shall be cumulative and none of them shall be in limitation of any other remedy, right, undertaking, obligation, or agreement of either party.

5.16 NOTICES

All notices, requests, demands, payments, and other communications which are required or may be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally, telecopied or sent by nationally recognized overnight carrier, or mailed by certified mail, postage prepaid, return receipt requested, as follows:

If to CWE:

Clean Water Engineering, LLC
c/o Harold Wodicka
W5140 Katy Ct.
Elkhorn, WI 53121
(262) 742-4200
(262) 742-4202 fax
office@cleanwaterengineering.org (e-mail)

If to Utility:

Telephone: _____

Facsimile: _____

E-mail: _____

IN WITNESS WHEREOF, this Professional Services Agreement has been duly executed by the authorized representative(s) of the parties hereto as of the date first set forth above.

Utility

By: Signature

Authorized Representative

Its: _____

Clean Water Engineering, LLC

By: Harold Wodicka

Title: Member/Registered Agent/Authorized Agent

Addendum to Professional Service Contract:

Clean Water Engineering LLC or any of its' employees, while servicing the community of Lake Geneva's Cross-Connection Program, will not engage in any conflict-of-interest activities with HW Plumbing & Mechanical, LLC. Any requests for referrals to correct, replace, install those items necessary to place a community member in compliance will be referred to the City of Lake Geneva Building Inspector.

Clean Water Engineering, LLC

By: Harold Wodicka

Title: Member/Registered Agent/Authorized Agent

Memo to City of Lake Geneva

To: Josh Gajewski – Utility Director **Date:** December 4, 2023

From: Naomi Rauch, P.E.
262-758-6032

CC: Dave Nord – City Administrator
Dan Draper – City Attorney
Mike Timmers P.E. – Kapur & Associates, Inc.
Greg Governatori P.E. – Kapur & Associates, Inc.

Subject: Symphony Bay Phase 4 – Utility Approval Recommendation

The utility items have been completed in Symphony Bay Phase 4.

The sanitary sewer, water main, and fire hydrants, within the public rights of way, have been installed, tested, and approved pursuant to State of Wisconsin and City of Lake Geneva standards and approved construction documents for the above listed project. Inspection and testing of utility installation has been completed and all as-built drawings have been received & updated in GIS.

The work has been acceptably completed and it is Kapur's recommendation that the public improvements be accepted as public infrastructure.

The general list of utilities that are recommended for acceptance are located within Beethoven Drive (Cadence Cir to Sonata Way), Soprano Drive (Cadence Cir to Beethoven Dr), & Debussy Drive (Cadence Cir to Soprano Dr). Please see the attached map for more clarification.

The City currently retains a letter of credit in the amount of **\$129,000** that covers the required maintenance bond of 20% of the improvements per the developer's agreement.

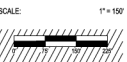
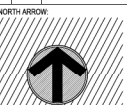
PROJECT:
SYMPHONY BAY

LOCATION:
CITY OF LAKE GENEVA, WI

CLIENT:
FAIRWYN

RELEASE:
**PHASE 4
CONSTRUCTION
SET**

REVISIONS:		
#	DATE	DESCRIPTION
1	06/04/21	REVISION 1



SEAL

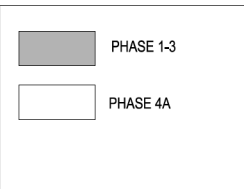
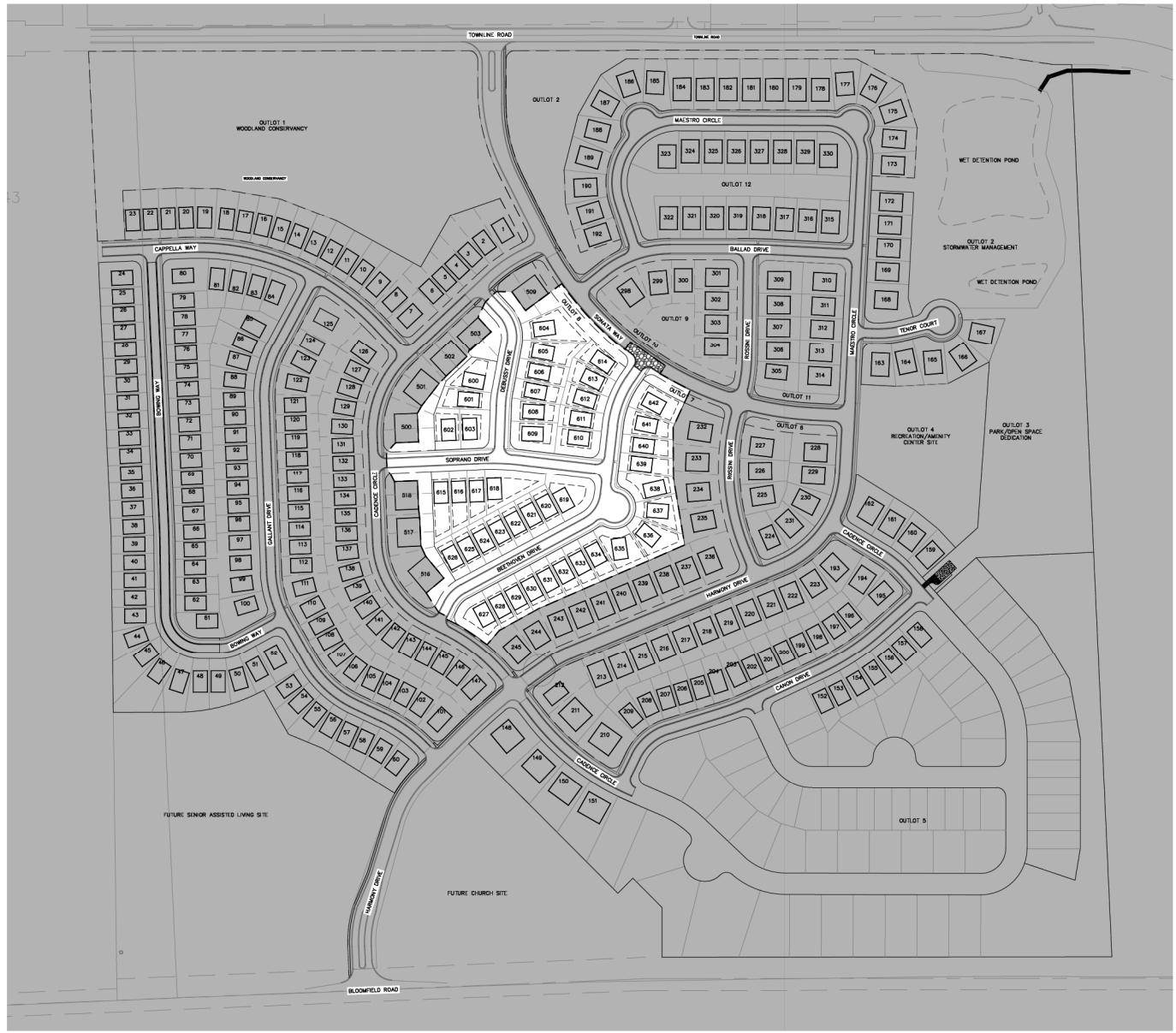
all in

SHEET:

**OVERALL
PHASING PLAN**

PROJECT MANAGER: DMJ
PROJECT NUMBER: 17.0001.004
DATE: 4-16-2021

SHEET NUMBER:
2.0



CITY OF LAKE GENEVA - WATERMAIN ACCEPTED IN 2023

Prepared by: Kapur & Associates, Inc.

Symphony Bay Phase 4 (installed in 2021)

Location	6" Hydrant Lead (LF)	6" PVC Main (LF)	8" PVC Main (LF)	6" Wat. Hyd. Valve (EA)	8" Water Valve (EA)	Hydrant (EA)
Debussy Drive - 8"x8" Tee (STA 3+72 - Soprano) to 8"x8" Tee (STA 132+06 - Cadence)	6.00		423.60	2.00	2.00	2.00
Beethoven Drive - 8" Valve (STA 25+35) to 8" Valve (STA 35+03)	6.00		990.20	2.00	1.00	2.00
Soprano Drive - 8" Valve (STA 0+34) to 8"x8" Tee (STA 32+13 - Beethoven)	6.00		652.90	2.00	2.00	2.00
Quantity Total	18.00	0.00	2066.70	6.00	5.00	6.00
Estimated cost per unit	\$ 85.00	\$ -	\$ 58.00	\$ 1,000.00	\$ 2,050.00	\$ 5,620.00
Cost Total	\$ 1,530.00	\$ -	\$ 119,868.60	\$ 6,000.00	\$ 10,250.00	\$ 33,720.00

TOTAL WATERMAIN COST \$ - ACCEPTED IN 2023**\$ 171,368.60**

CITY OF LAKE GENEVA - WATER SERVICES* ACCEPTED 2023

Prepared by: Kapur & Associates, Inc.

Symphony Bay Phase 4 (installed in 2021)

Location	1" PVC Service (LF)	Curb & Corp Stops (EA)
Debussy Drive - Lot #600	50.2	1.0
Debussy Drive - Lot #601	20.7	1.0
Debussy Drive - Lot #604	11.1	1.0
Debussy Drive - Lot #605	10.8	1.0
Debussy Drive - Lot #606	10.6	1.0
Debussy Drive - Lot #607	10.0	1.0
Debussy Drive - Lot #608	9.7	1.0
Debussy Drive - Lot #609	11.0	1.0
Beethoven Drive - Lot #610	49.6	1.0
Beethoven Drive - Lot #611	49.1	1.0
Beethoven Drive - Lot #612	53.0	1.0
Beethoven Drive - Lot #613	50.0	1.0
Beethoven Drive - Lot #614	50.1	1.0
Beethoven Drive - Lot #619	50.0	1.0
Beethoven Drive - Lot #620	50.0	1.0
Beethoven Drive - Lot #621	50.0	1.0
Beethoven Drive - Lot #622	50.0	1.0
Beethoven Drive - Lot #623	50.0	1.0
Beethoven Drive - Lot #624	50.0	1.0
Beethoven Drive - Lot #625	50.0	1.0
Beethoven Drive - Lot #626	50.0	1.0
Beethoven Drive - Lot #627	10.0	1.0
Beethoven Drive - Lot #628	10.0	1.0
Beethoven Drive - Lot #629	10.0	1.0
Beethoven Drive - Lot #630	10.0	1.0
Beethoven Drive - Lot #631	10.0	1.0
Beethoven Drive - Lot #632	10.0	1.0
Beethoven Drive - Lot #633	10.0	1.0
Beethoven Drive - Lot #634	10.0	1.0
Beethoven Drive - Lot #635	24.8	1.0
Beethoven Drive - Lot #636	53.6	1.0
Beethoven Drive - Lot #637	65.9	1.0
Beethoven Drive - Lot #638	59.5	1.0
Beethoven Drive - Lot #639	9.8	1.0
Beethoven Drive - Lot #640	10.5	1.0
Beethoven Drive - Lot #641	9.8	1.0
Beethoven Drive - Lot #642	9.8	1.0
Soprano Drive - Lot #602	10.3	1.0
Soprano Drive - Lot #603	10.1	1.0
Soprano Drive - Lot #615	10.1	1.0
Soprano Drive - Lot #616	10.1	1.0
Soprano Drive - Lot #617	10.1	1.0
Soprano Drive - Lot #618	10.0	1.0
Quantity Total	1170.2	43.0
Estimated cost per unit	\$ 69.00	\$ 450.00
Cost Total	\$ 80,741.73	\$ 19,350.00

TOTAL WATER SERVICES COST \$ - ACCEPTED 2023 \$ 100,091.73

*NOTE: Water Service lengths are measured to Right of Way

CITY OF LAKE GENEVA - SANITARY SEWER ACCEPTED IN 2023

Prepared by: Kapur & Associates, Inc.

Symphony Bay Phase 4 (installed in 2021)

Location	4" PVC Lateral (LF)	8" PVC Main (LF)	48" SAN MH (EA)	6" SAN FM (LF)
Debussy Drive - SAN MH 53 to SAN MH 78		116.0	1.0	
Debussy Drive - SAN MH 78 to SAN MH 77		62.8	1.0	
Debussy Drive - SAN MH 77 to SAN MH 76		157.5	1.0	
Debussy Drive - SAN MH 76 TO SAN MH 75		116.1	1.0	
Debussy Drive - Lot #609	23.1			
Debussy Drive - Lot #608	22.8			
Debussy Drive - Lot #607	25.0			
Debussy Drive - Lot #606	26.0			
Debussy Drive - Lot #605	26.4			
Debussy Drive - Lot #604	31.9			
Debussy Drive - Lot #601	36.7			
Debussy Drive - Lot #600	35.0			
Beethoven Drive - SAN MH 60 to SAN MH 69		138.1	1.0	
Beethoven Drive - SAN MH 69 to SAN MH 70		394.0	1.0	
Beethoven Drive - SAN MH 70 to SAN MH 71		70.4	1.0	
Beethoven Drive - SAN MH 72 to SAN MH 73		116.5	1.0	
Beethoven Drive - SAN MH 73 to SAN MH 74		138.7	1.0	
Beethoven Drive - Lot #610	30.0			
Beethoven Drive - Lot #611	30.0			
Beethoven Drive - Lot #612	36.3			
Beethoven Drive - Lot #613	36.8			
Beethoven Drive - Lot #614	31.4			
Beethoven Drive - Lot #619	30.6			
Beethoven Drive - Lot #620	30.5			
Beethoven Drive - Lot #621	30.4			
Beethoven Drive - Lot #622	30.3			
Beethoven Drive - Lot #623	30.3			
Beethoven Drive - Lot #624	30.1			
Beethoven Drive - Lot #625	30.1			
Beethoven Drive - Lot #626	33.5			
Beethoven Drive - Lot #627	28.7			
Beethoven Drive - Lot #628	29.9			
Beethoven Drive - Lot #629	29.8			
Beethoven Drive - Lot #630	29.7			
Beethoven Drive - Lot #631	29.6			
Beethoven Drive - Lot #632	29.5			
Beethoven Drive - Lot #633	29.4			
Beethoven Drive - Lot #634	29.4			
Beethoven Drive - Lot #635	45.8			
Beethoven Drive - Lot #636	78.8			
Beethoven Drive - Lot #637	83.8			
Beethoven Drive - Lot #638	78.4			
Beethoven Drive - Lot #639	30.0			
Beethoven Drive - Lot #640	30.0			
Beethoven Drive - Lot #641	26.8			
Beethoven Drive - Lot #642	26.2			
Soprano Drive - SAN MH 57 to SAN MH 12		293.1	1.0	
Soprano Drive - SAN MH 12 to SAN MH 13		58.6	1.0	
Soprano Drive - SAN MH 13 to SAN MH 72		307.7	1.0	
Soprano Drive - Lot #602	30.0			
Soprano Drive - Lot #603	30.0			
Soprano Drive - Lot #615	30.0			
Soprano Drive - Lot #616	30.0			
Soprano Drive - Lot #617	29.7			
Soprano Drive - Lot #618	29.9			
Sonata Way - SAN MH 74 to STUB FOR FUTURE				79.7
Quantity Total	1452.6	1969.5	12.0	79.7
Estimated cost per unit	\$ 83.00	\$ 80.00	\$ 3,500.00	\$ 124.00
Cost Total	\$120,565.80	\$157,559.20	\$ 42,000.00	\$ 9,882.80

TOTAL SANITARY SEWER COST \$ - ACCEPTED IN 2023

\$ 330,007.80

Joanne Busch
6343 1st Ave
Lake Geneva, WI 53147

December 12, 2023

Dear Josh Gajewski & The Lake Geneva Utility Commissioners,

Re: Local Government Leadership Academy (LGLA)

I recently discovered a program being held in 2024 that I would love the opportunity to participate in, and I am writing to ask that The Utility Commission consider covering the cost of my attendance.

The Local Government Leadership Academy is a nine-month, cohort-based program that is run as a collaborative effort between the Wisconsin Counties Association, Leadership Wisconsin Inc., and UW-Madison Division of Extension. It serves all types of people in local government positions and is made up of in person workshops, virtual sessions, online self-study and goal setting.

The cost to attend the program is \$1,200 and it runs from January through August. I have included the schedule with this letter. There are multiple online sessions on Thursdays from 12 – 1:15pm as well as two 1-day workshops in Stevens Point. Graduation is held in September at the Kalahari Resort & Convention Center in Wisconsin Dells. There will be some additional cost beyond tuition for hotel stays and travel to Steven's Point and also for travel and a possible overnight stay to attend graduation. I do not expect the total cost of my participation to exceed \$2,000.

I believe this would be a great opportunity to develop my leadership skills and be more intentional in my role as Utilities Coordinator for the Utility Commission. It will also be an opportunity to connect with other local government employees and share feedback and ideas on continual improvement.

I hope that you will agree to sponsor me in this opportunity, and I would like to thank you for your consideration.

Sincerely,



Jo Busch
Utilities Coordinator

Encl: 2024 Academy Schedule

LOCAL GOVERNMENT LEADERSHIP ACADEMY

2024 Academy Schedule*

All sessions are virtual and held on Thursdays from 12:00 p.m. – 1:15 p.m. unless otherwise noted.

**Specific topics and order of delivery are subject to change.*

September 15, 2023 – Registration opens

December 22, 2023 – Registration closes

Getting Started:

January 11, 2024 – OPTIONAL technology check

January 18 – virtual orientation

February 1 – conversation with LGLA Alum

Relationships Unit:

February 15 (9:00 a.m. – 4:00 p.m. in Stevens Point) – building trust, clarifying your professional challenge, and relational networking skills for shaping change

February 29 – leading across boundaries

March 14 – leadership essentials (featured leader(s) sharing their experience and advice regarding relationship building)

Communications Unit:

April 4 – understanding conflict

April 18 – effective communication strategies

May 2 – leadership essentials (featured leader(s) sharing their experience and advice regarding effective communication)

Mid-Point:

May 16 – Stevens Point In-person: professional challenge check-in

Decision-making Unit:

May 30 – using data to inform decisions

June 13 – outcome-based and participatory budgeting

July 11 – systems thinking

July 25 – leadership essentials (featured leader(s) sharing their experience and advice regarding effective decision-making)

Visionary Leadership Unit:

August 1 – leadership essentials (featured leader(s) sharing their experience and advice regarding visionary leadership)

August 15 (9:00 a.m. – 4:00 p.m. in Stevens Point) – turning your WHY into action, professional challenge peer coaching

Graduation:

September 2024 (10:00 a.m. – 1:00 p.m. TBD) – graduation takes place at the closing assembly for the Wisconsin Counties Association annual conference at the Kalahari Resort & Convention Center in the Wisconsin Dells



November 9, 2023

Mr. Josh Gajewski / Mr. Jeff Ecklund
Lake Geneva Water Utility
P. O. Box 187
Lake Geneva, Wisconsin 53147

Well No. 5, Booster 2B and Dodge St Booster

Gentlemen,

We have completed the removal and inspection of the pump from the Utility's Well No. 5. The pump was removed to perform an inspection of the equipment. Prior to pulling the pump a test was performed on the well. The well was found to be pumping with a specific capacity of 17.6 GPM/Ft. of drawdown. This is a decrease of 2.4 gpm/ft (~14%) since the last service cycle in 2014.

After the pump was removed, we performed a downhole video inspection to evaluate the condition of the screen and well casing. One side of the well screen from a depth of about 75 feet to about 90 feet below the casing is heavily encrusted with biological build up. This fouling is the likely culprit for diminishing specific capacity.

The following is a breakdown of our inspection findings along with repair and rehabilitation recommendations.

Well 5:

Pump Bowl Assembly: The (Verti-line) 4-stage 14RM pump was inspected and found to be unrepairable due to softening of the cast iron bowl housings, a process known as graphitization, whereby the iron is removed from the cast iron leaving a very soft graphite material. The pump cannot be re-machined and will require replacement.

Column Assembly: All of the 10-inch Epoxy coated column pipe including the suction pipe are showing substantial pitting. The column pipe is also fitted internally with sacrificial zinc anode sleeves in each pipe.

We recommend the old column pipe be replaced with new 10" column pipe that is sandblasted and epoxy coated as well as fitted with internal sacrificial zinc anodes.

The suction pipe is in good condition – we recommend re-using.

All of the 416 stainless steel line-shafts have been cleaned and flame straightened. All are within specs and we recommend re-using all of them.



The stainless-steel bearing sleeves are worn and will require replacement as will the rubber line shaft bearings. The Rubber bearings have been replaced and the sleeves are installed.

Discharge Head: The discharge head is in good reusable condition. The stuffing box is already rebuilt and has new graphite packing. We have cleaned and painted the head and it is ready for re-installation.

VHS Motor: Bench test showed minor vibration and slight bearing noise. Inspection revealed the ODE bearing housing is worn oversized. Recommend motor repairs including steam clean, bake windings, machine / sleeve ODE bearing shuttle, install new thrust and ODE bearings. Motor will be meg tested and surge tested, sight glass cleaned or replaced and painted.

Well Rehabilitation: To clean the well screen, gravel pack and native formation to return the well's efficiency we recommend performing a two-step treatment with a chemistry designed to attack bio-films created by iron related bacteria. Based on our experience with gavel packed wells and biofouling we propose the following treatment on the well.

1. Obtain permit from Wisconsin DNR for chemical treatment of well.
2. Wire brush the casing with a stiff wire brush and brush the well screen with nylon brush to remove as much surface build up as possible. Bail fill from bottom the bottom of the well.
3. Install submersible test pump rated up to 1,000 GPM with a fabricated steel diverter at the surface.
4. Run airburst gun past pump and Airburst screen while intermittently running sub test pump to remove debris generated by Airburst.
5. Mix and inject a solution consisting of Pantonite PM77 and WD-3100 mineral dispersant. Inject into well and Airburst chemistry into the formation.
6. Return to site day 2 and use test pump to check ph. If ph has risen above 3.5, immediately pump to waste. If below 3.0 ph, surge to circulate until ph rises to 3.0 and pump to waste.
7. Neutralize while pumping waste down sanitary sewer system until pH is neutral and water is clear.
8. Perform brief pump test for 30-60 minutes to determine results of treatment.
9. mix and inject a final chlorination chemistry consisting of 500 ppm chlorine and BD-2000 bio-dispersing agent. Inject into well and follow with well volume of 500 ppm chlorine solution with BD-2000 to force the chemistry into the



10. formation. Once injected the solution will be left for 1 hour to react then surged every 15 minutes for 4 hours. After the surging period the spent chemicals will be neutralized while pumping to waste then the well will be purged to waste.
11. Perform final pump test for 1 hour to determine results of treatment.
12. Remove Hy-RIP® equipment and bail any fill from the bottom of the well.
13. **Optional:** Perform follow-up downhole video survey of well after cleaning.

Once the treatment is complete, we will add a 500ppm chlorine solution into the well, install the repaired pump in the well and neutralize as pumping to waste. Once all chlorine is absent from water for at least 15 minutes we will continue to purge the well while flow testing to determine final capacity. Required bacti sample will be collected and a 2nd required bacti sample will be collected 24 hrs. later.

Outlined below are the costs to perform the scope of work outlined above for Well 5:

1. New Bowl assembly - 1200 RPM, water lubricated cast iron bronze fitted pump at 1300 GPM @ 144' TDH. Fitted with replaceable bronze wear rings, 416 stainless steel collets and stainless steel bolting.	\$15,175.00
2. New 10" epoxy coated pipe with weld-in zinc anodes. (Including labor to prep pipe, install anodes and blast / epoxy)	\$17,450.00
3. New Rubber line shaft bearings (including labor to R/R)	\$385.00
4. New 304SS sacrificial shaft sleeves (incl. labor to R/R)	\$665.00
5. Brush well screen and bail fill (4 hrs @ \$350/hr.per proposal)	\$1,400.00
6. Well Rehabilitation as outlined above (includes dnr submittals)	\$22,625.00
7. Post brushing (or post well rehab) Video log	\$675.00
8. Rebuild stuffing box and paint disch head	\$595.00
9. Perform VHS Motor Refurbish	\$5,575.00
10. Labor to Re-install refurbished pump (est. 16hrs @ \$245/hr.)	\$3,920.00
11. Pump Hoist (est. 3-days @ \$500/day)	\$1,500.00
12. Dual airlines, tape, splice materials, lubricants, sealers, and fuel	\$850.00

Recommended
work to be
completed
beyond service
quote

\$62,470

Repair parts we will require about 2 weeks. The chemical treatment and reinstalling of the pump will take about 6 to 7 days to complete.

**STATE OF WISCONSIN
WALWORTH COUNTY
CITY OF LAKE GENEVA
UTILITY COMMISSION**

RESOLUTION NO. 2023 – 02

A Resolution approving the amendment of the 2023 Wastewater Utility and Water Utility Operating, Maintenance, and Capital Budgets

WHEREAS, the City of Lake Geneva Utility Commission previously approved budgetary appropriations for use in the operation, maintenance, and improvement of the municipal water and wastewater systems in 2023; and

WHEREAS, the Utility Director has reported there is a need to amend the 2023 Wastewater Utility and Water Utility Budgets to reflect material changes in revenues and expenses.

NOW, THEREFORE, BE IT HEREBY RESOLVED that the City of Lake Geneva Utility Commission does hereby approve the following amendments of the 2023 Wastewater Utility and Water Utility Operating, Maintenance, and Capital Budgets.

		<u>Approved Budget</u> <u>12/31/2023</u>	<u>Amended Budget</u> <u>2023</u>	<u>Amendment</u> <u>Amount</u>
REVENUES				
61-00-00-41900	INTEREST EARNED	48,000	292,107	244,107
61-00-00-41910	LGIP IMPACT FEES INTEREST	21,600	72,700	51,100
61-00-00-46500	REVENUE-OUTSIDE HAULERS	176,400	217,500	41,100
61-00-00-99005	CAP CNTRBTNS-IMPACT FEES	205,150	466,250	261,100
EXPENSES				
OUTSIDE SERVICES				
61-00-00-52160	ENGINEERING EXPENSE	77,000	7,900	-69,100
61-00-00-52520	UTILITY-ELECTRICITY-PLANT	170,300	183,400	13,100
SALARY AND BENEFITS				
61-00-00-92610	HEALTH INSURANCE EXPENSE	129,900	108,637	-21,263
61-00-00-60000	OPERATIONS WAGES	143,710	110,327	-33,383
61-00-00-60010	MAINTENANCE WAGES	34,210	51,351	17,141
61-00-00-60030	COLLECTION SYSTEM WAGES	17,940	28,466	10,526
MAINTENANCE				
61-00-00-93501	MAINT-HEADWORKS BLDG	36,000	700	-35,300
61-00-00-93502	MAINT-DIGESTER & AER/TRANS BLD	17,000	500	-16,500
61-00-00-93800	MAINT-LIFT STATIONS	37,700	85,109	47,409
61-00-00-93810	MAINT-MAINS	125,750	81,615	-44,135
CAPITAL OUTLAY				
61-00-00-58000	OUTLAY-EQUIPMENT	1,220,700	21,884	-1,198,816
61-00-00-58400	OUTLAY-COLLECTION SYSTEM	104,000	12,525	-91,475
TRANSFERS				
61-00-00-13240	FROM CAPITAL PROJECT FUND	-765,000	0	765,000
61-00-00-13220	TRANS TO IMPACT FEE RESERVE FUND	226,750	538,950	312,200
61-00-00-13230	TRANS TO EQUIPMENT REPLACEMENT FUND	125,000	410,479	285,479
61-00-00-13240	TRANS TO CAPITAL PROJECT FUND	0	801,266	801,266

		<u>Approved Budget 12/31/2023</u>	<u>Amended Budget 2023</u>	<u>Amendment Amount</u>
REVENUES				
62-00-00-41900	INTEREST EARNED	48,000	134,800	86,800
62-00-00-41910	LGIP IMPACT FEES INTEREST	13,200	53,000	39,800
62-00-00-43695	OTHER FEDERAL AIDS	0	403,348	403,348
62-00-00-99005	CAP CONTRIBUTIONS-IMPACT FEES	185,900	396,899	210,999
EXPENSES				
SOURCE OF SUPPLY - MAINTENANCE				
62-00-00-61400	WELLS MAINTENANCE	60,000	85,000	25,000
TRANSMISSION & DISTRIBUTION - OPERATION				
62-00-00-66100	MAINT OPS-STANDPIPES	24,000	11,600	-12,400
TRANSMISSION & DISTRIBUTION - MAINTENANCE				
62-00-00-67200	RESERVOIR & STANDPIPES	23,200	7,400	-15,800
62-00-00-67300	MAINT OF MAINS & VALVES	85,000	62,341	-22,659
62-00-00-67600	MAINT OF METERS	6,400	17,100	10,700
ADMIN & GENERAL OPERATIONS				
62-00-00-92300	OUTSIDE SERVICES EMPLOYED	46,000	63,200	17,200
CAPITAL OUTLAY				
62-00-00-10700	OUTLAY - BUILDINGS	80,000	0	-80,000
62-00-00-10700	OUTLAY - MAINS	355,000	433,300	78,300
TRANSFERS				
62-00-00-13230	TRANS TO IMPACT FEE RESERVE FUND	199,100	452,250	253,150
62-00-00-13220	TRANS TO CAPITAL PROJECT FUND	0	744,800	744,800

BE IT FURTHER RESOLVED that this resolution be published on the City website within 15 days of adoption as prescribed under Wis. Statutes 65.90(5)(ar).

Adopted this 18th day of December 2023, on a ____ - ____ vote.

CITY OF LAKE GENEVA
UTILITY COMMISSION

By: _____
Dennis Lyon, President

Attest: _____
Jo Busch, Utilities Coordinator