Stan A. Huber Consultants, Inc.
Health Physics and Radiation Safety Services

200 North Cedar Road – New Lenox, Illinois 60451-1751 – (800) 383-0468 or (815) 485-6161 – FAX (815) 485-4433 – Email sahci@sahci.com – Home Page www.sahci.com

July 9, 2019 **(Revised 8/28/19 GAH)**

Mike Lanenga
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Chicago Riverwalk Renovation Thorium Monitoring – City of Chicago Department of Fleet and Facility Management (2FM)
January 11, 2019 – June 7, 2019

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide thorium monitoring during excavation and soil handling activities associated with the 2019 renovation of the Chicago Riverwalk. The Riverwalk area being renovated under the supervision of the City of Chicago Department of Fleet and Facility Management (2FM) and is located on the south side of the Chicago River, along E. Lower Wacker Drive, between N. Lake Shore Drive and N. Wabash Avenue.

This portion of the Chicago Riverwalk falls within the U.S. Environmental Protection Agency (USEPA) Streeterville Thorium Monitoring Area. Monitoring for thorium is required per Section 11-4-1100 of Chapter 11-4 of the Municipal Code of Chicago. This report covers monitoring performed by Brian Schmidt and Glenn Huber, SAHCI Health Physics Technicians, from January 11, 2019 through June 7, 2019. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring.*

Thorium monitoring was performed for the following construction activities:

A.	Electric Main Installation	1/11/19 – 3/23/19
B.	Site Grading	2/14/19 – 4/3/19
C.	Seawall Inspection Excavation	2/14/19
D.	Seat Wall Excavation	2/18/19 – 4/11/19
E.	Light Pole Installation and Trenching	2/21/19 – 3/18/19
F.	Boat Ramp Excavation	3/22/19 – 3/26/19
G.	Columbus Drive Bridge Concrete Removal	4/5/19
H.	Wacker Drive Fence Post Installation	4/8/19 – 4/26/19
I.	Electrical Cabinet Installation	4/16/19
J.	Submarine Pad Excavation	4/18/19 – 4/19/19
K.	Electrical Room Installation	4/22/19
L.	Landscaping – Tree Installation	4/26/19 – 5/17/19
M.	Wabash Sewer Line Installation	5/3/19 – 5/4/19
N.	Island Party Hut Surface Survey	5/6/19
O.	Parking Lot Bollard Installation	5/9/19 – 5/10/19
P.	Wabash Electric Transformer Installation	5/9/19
Q.	Wabash Injection Basin Installation	5/20/19
R.	Wabash Concrete Removal	5/13/19 – 5/17/19
S.	Northman Water Service Installation	5/22/19 – 5/31/19
T.	Island Party Hut Gas Line Installation	6/6/19 – 6/7/19

Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaler / Ratemeters (serial no. 132844 and 134542) with attached Ludlum Model 44-10 2"x2" NaI Detectors (w/ 6" collimated lead shields).

Instrument serial number 132844 (used by Brian Schmidt) was calibrated on August 6, 2018. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,391 counts per minute (cpm). The average background count rate at this location for this instrument ranged from 1,754 cpm – 2,316 cpm.

Instrument serial number 134542 (used by Glenn Huber) was calibrated on August 6, 2018. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,262 counts per minute (cpm). The average background count rate at this location for this instrument was determined to be 1,387 cpm.

Surface Gamma Scans

Surface gamma scans were performed using the Ludlum Model 2221 Scaler / Ratemeters described above. Survey data was collected by entering the excavation after each 18-inch lift and recording the highest count rate for the floors and walls. Soil excavated below 4 feet below ground surface was surveyed in the excavator bucket as it was removed and stockpiled at the surface. See attached Radiation Survey Forms, for individual tasks detailed above (Appendix A – T).

No count rates were observed at any time that exceeded the threshold limit of 7,391 cpm and 6,262 cpm, respectively.

Additional Monitoring

Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

Thank you for your assistance with this project. If you have any questions or need additional information, please call me at (815) 485-6161.

Sincerely,
Stan A. Huber Consultants, Inc.

Glenn Huber, CHP
President

Appendix A – Electric Main Installation

1/11/19 – 3/23/19

Chicago Riverwalk

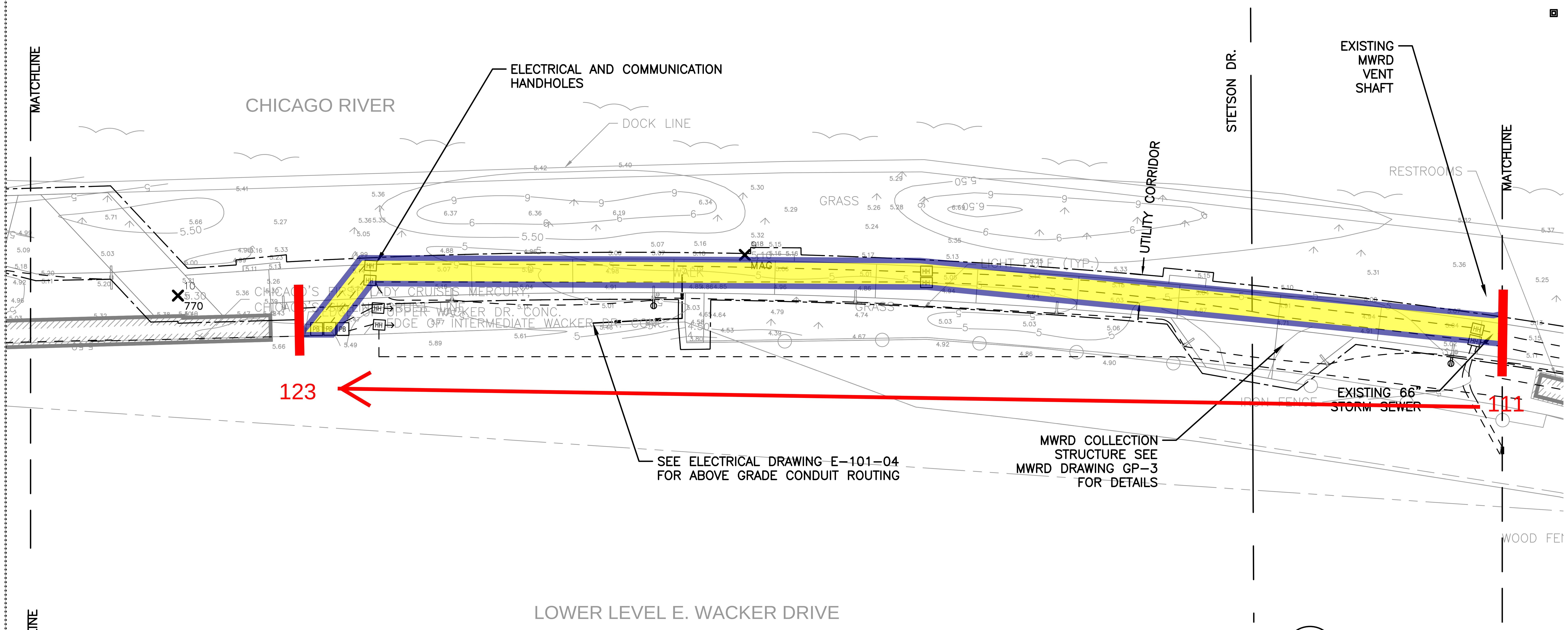
Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

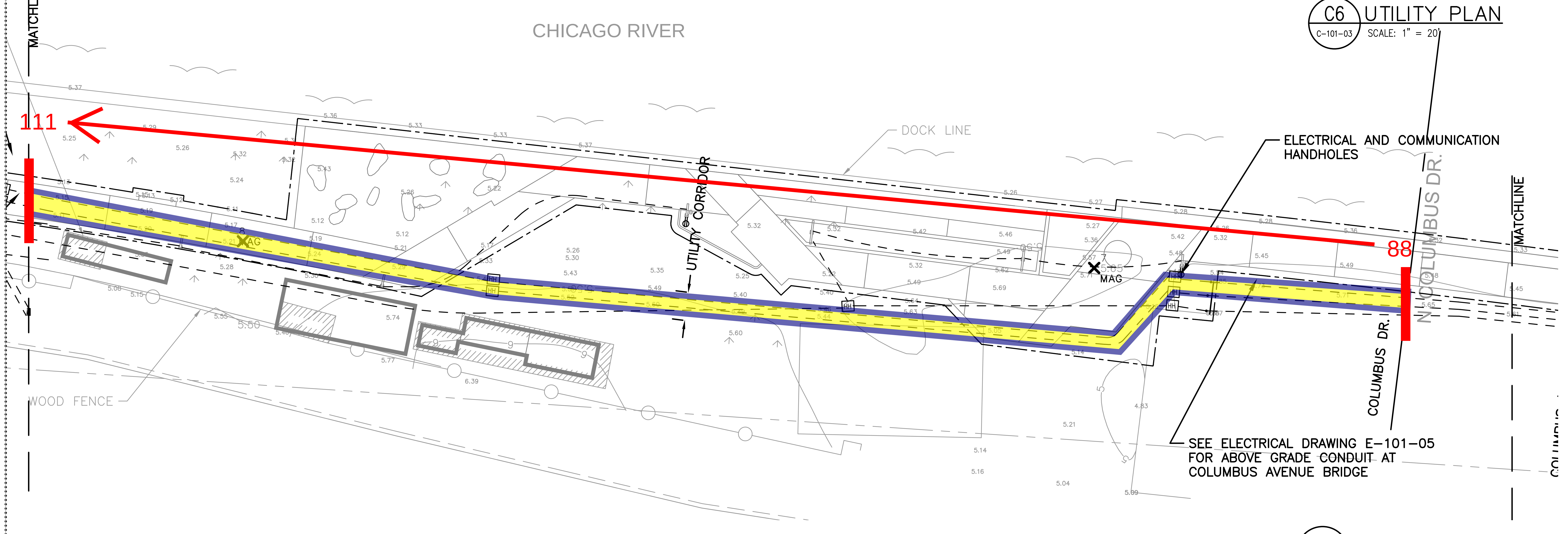
Riverwalk - Chicago, IL - Electrical Main Installation Excavation Location Map

LEGEND

- UTILITY CORRIDOR
- COMMUNICATIONS
- ELECTRIC, UNDERG
- ELECTRIC, ABOVE G
- ELECTRIC / COMMU



C6 C-101-03 UTILITY PLAN
SCALE: 1" = 20'



C5 C-101-03 UTILITY PLAN
SCALE: 1" = 20'

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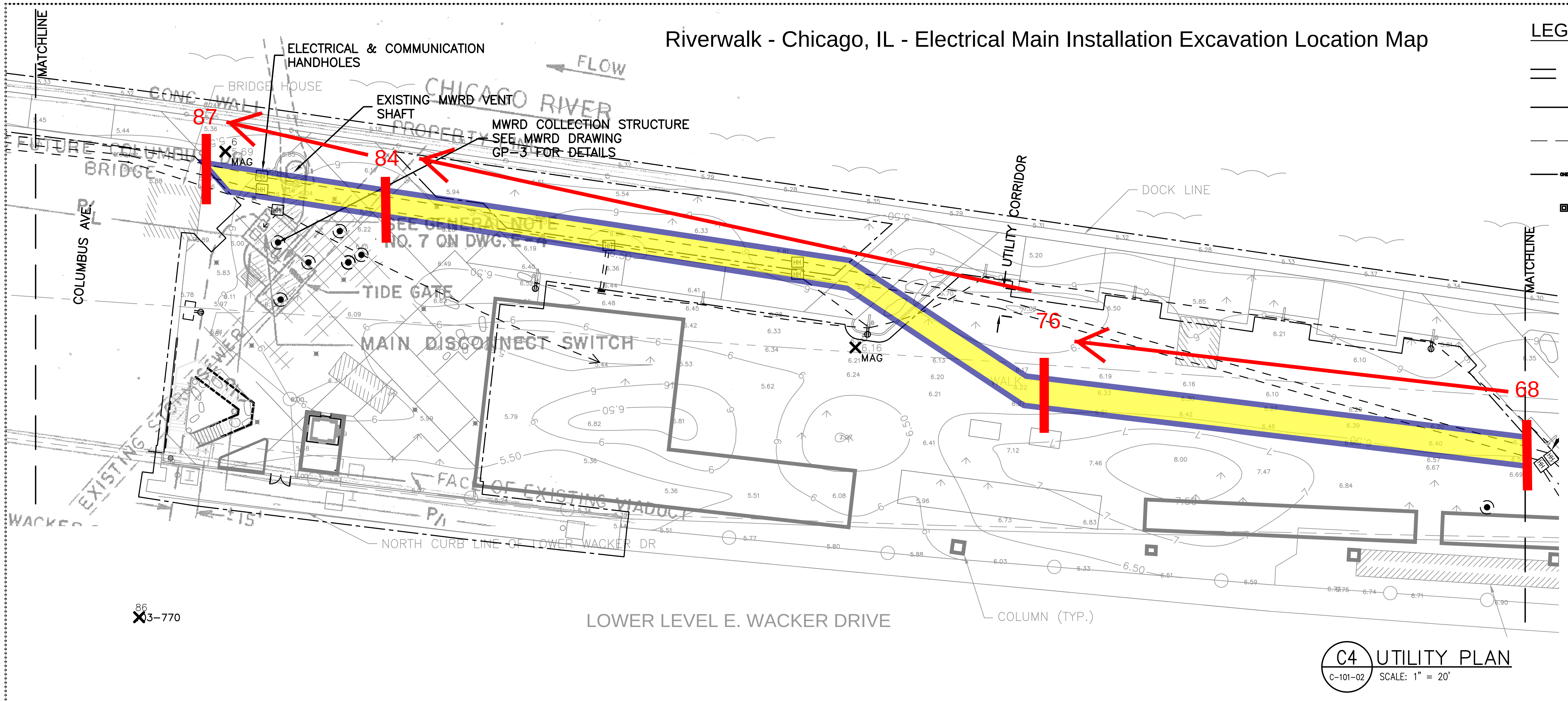
Riverwalk - Chicago, IL - Electrical Main Installation Excavation Location Map



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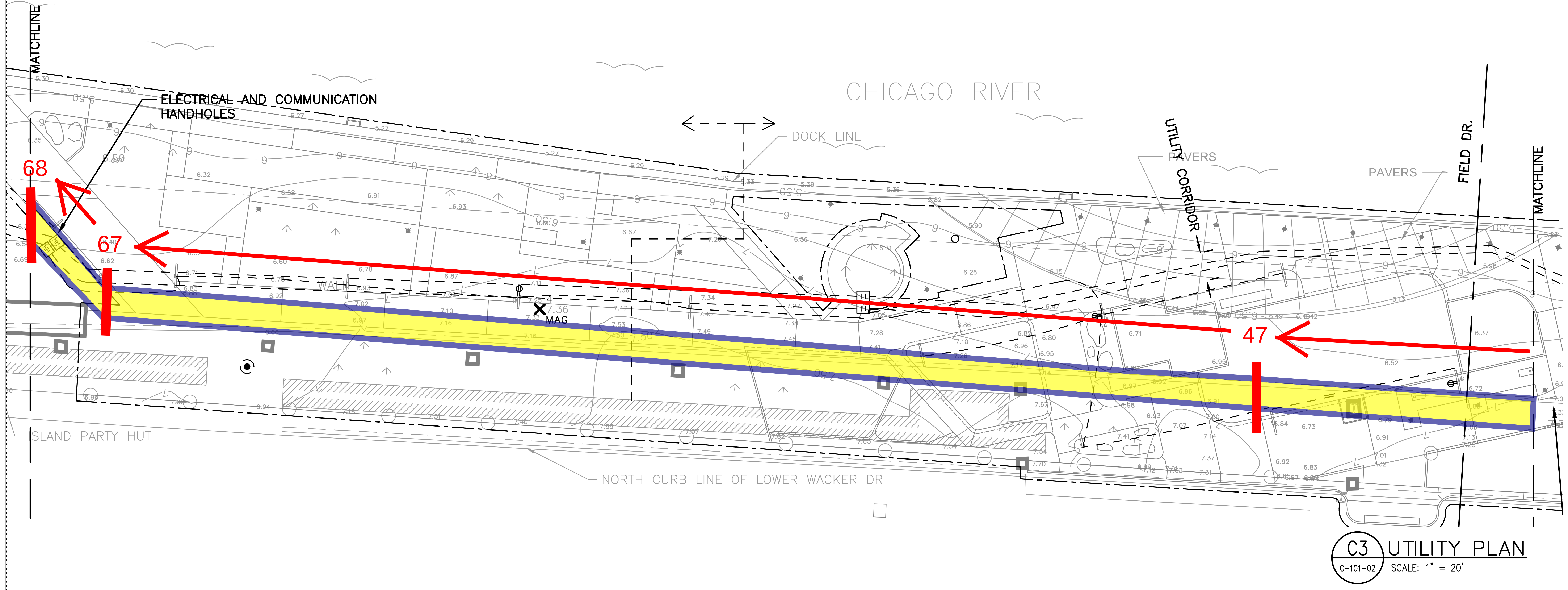

C3 C-101-02 UTILITY PLAN
SCALE: 1" = 20'

LEGEND

UTILITY CORRIDO
COMMUNICATION
ELECTRIC, UNDE
ELECTRIC, ABOV
ELECTRIC / COM

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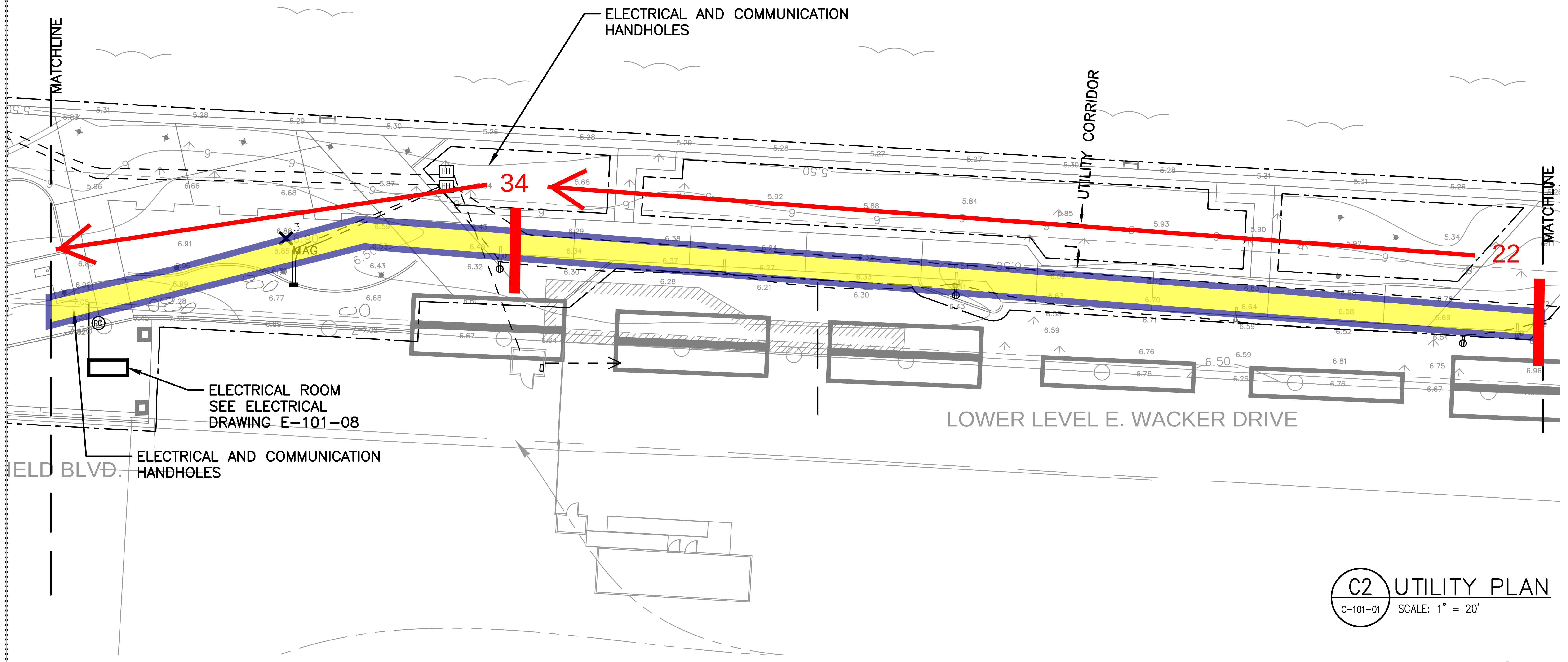
Riverwalk - Chicago, IL - Electrical Main Installation Excavation Location Map

LEGEND

═ ═ UTILITY CORRIDO
— COMMUNICATION
– – – ELECTRIC, UNDER
—OHE— ELECTRIC, ABOVE
▣ ELECTRIC / COMM



C2 C-101-01 UTILITY PLAN
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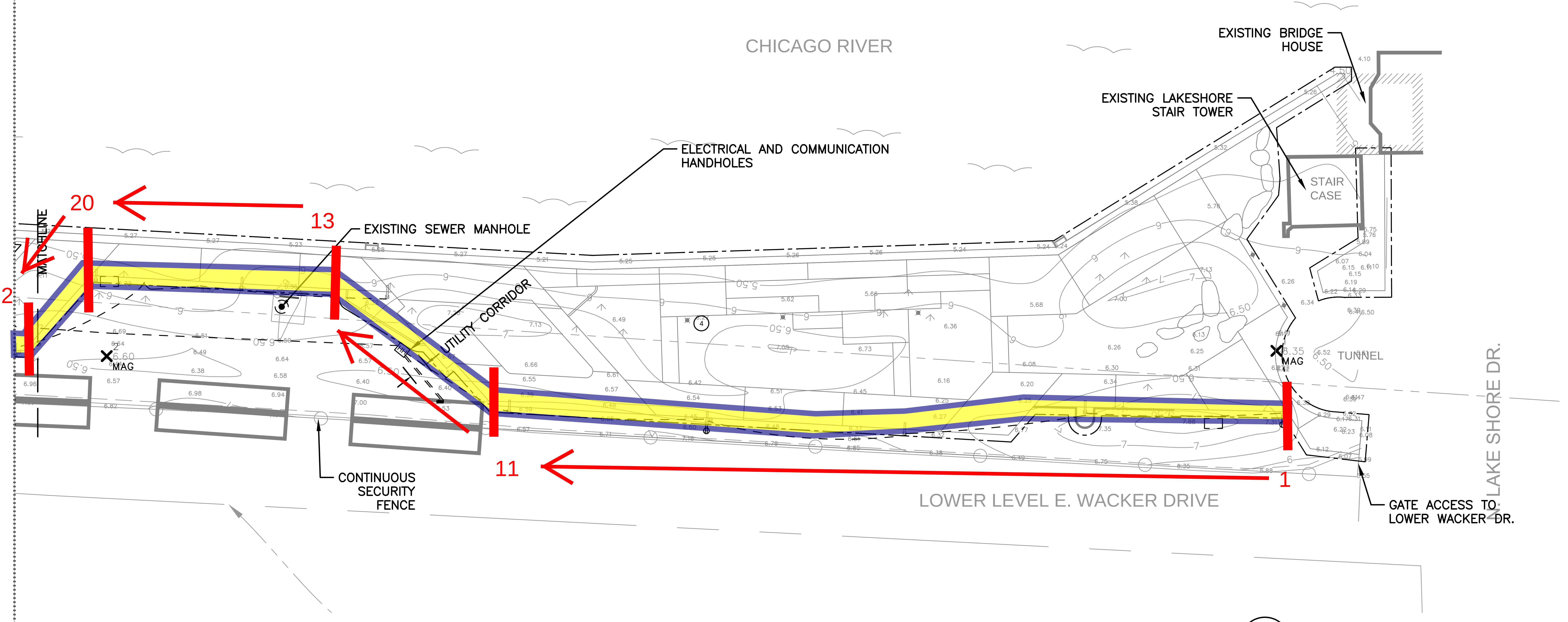

C1 C-101-01 UTILITY PLAN
SCALE: 1" = 20'

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Radiation Survey Form - Data

Location / Project ID: Chicago Riverwalk - Electrical Main Installation
HP Technician: Brian Schmidt
Date: 1/11/19 - 3/23/19
Instrument ID: Ludlum Model 2221 Scaler/Ratemeter (serial # 132844)
w/ Ludlum Model 44-10 2" NaI Detector (w/ 6" shield)

7.1 pCi/g Action Level: 7,391 cpm

	Depth	0"-18" (bgs)	18"-36" (bgs)	36"-54" (bgs)	54"-72" (bgs)	60"-78" (bgs)
Date	Excavation ID	Survey Results (counts per minute)				
1/11/2019	1	Max Value: 3800				
1/11/2019	2	Max Value: 3600				
1/11/2019	3	Max Value: 4000				
1/11/2019	4	Max Value: 4100				
1/11/2019	5	Max Value: 3800				
1/11/2019	6	Max Value: 3600				
1/11/2019	7	Max Value: 3400				
1/11/2019	8	Max Value: 3100				
1/11/2019	9	Max Value: 3500				
1/11/2019	10	Max Value: 3300				
1/11/2019	11	Max Value: 3100				
1/11/2019	12	2800	2900	3600	3400	3300
1/11/2019	13	2600	3100	3400	3200	3200
1/11/2019	14	2500	2700	3000	3100	2800
1/11/2019	15	2800	2400	2700	2400	2500
1/11/2019	16	2100	2200	2800	2300	2400
1/11/2019	17	2800	3100	3400	3500	3600
1/11/2019	18	2800	3400	3900	3500	2600
1/14/2019	19	2400	2800	2500	2900	2600
1/14/2019	20	2200	2400	2400	2900	2500
1/14/2019	21	2900	2800	3100	3600	3400
1/14/2019	22	2000	2400	3400	3600	4000
1/14/2019	23	2600	2600	3400	3300	2900
1/14/2019	24	2700	3100	3600	3500	3200
1/14/2019	25	2200	2900	3600	3700	4400
1/14/2019	26	2700	2400	2900	3400	3200
1/15/2019	27	2900	3300	3800	4700	4000
1/15/2019	28	2600	2800	3300	4100	4400
1/15/2019	29	2400	2700	2800	3300	3200
1/15/2019	30	2200	2600	3100	3200	2800
1/15/2019	31	2400	2200	3100	2700	2800
1/15/2019	32	2400	2800	2900	3000	2600
1/15/2019	33	2200	2400	2800	2700	2700
1/15/2019	34	2800	3000	3700	3800	4400

1/15/2019	35	2700	2900	3600	4700	3800
1/15/2019	36	2800	3000	3200	4400	4600
1/15/2019	37	2300	2700	3600	4300	4100
1/18/2019	38	2800	3100	3700	4300	4400
1/18/2019	39	2900	3100	3700	4100	4600
1/18/2019	40	2800	3700	3900	4400	4100
1/18/2019	41	2500	2900	3800	4500	4700
1/18/2019	42	2700	3000	3900	4300	4500
1/18/2019	43	2600	2900	3400	3600	3800
1/18/2019	44	2800	3200	3800	4400	4000
1/18/2019	45	2900	3000	3100	3500	3700
1/18/2019	46	2500	2800	3200	3300	3500
1/18/2019	47	2700	3100	3700	3600	3900
1/22/2019	48	2400	2700	2900	3000	3900
1/22/2019	49	2700	2900	3100	3700	3800
1/22/2019	50	2600	3000	3700	3900	4000
1/22/2019	51	2400	2900	3400	4000	4400
1/22/2019	52	2900	3100	3200	4100	4500
1/22/2019	53	2700	2900	3800	4400	5000
1/22/2019	54	2800	3100	4100	4400	4500
1/22/2019	55	2600	3000	3600	4200	4400
1/23/2019	56	2500	2800	3700	3500	4000
1/23/2019	57	2800	3500	3800	4300	4500
1/23/2019	58	2400	2800	3400	3800	3500
1/23/2019	59	2600	3000	3400	3500	3700
1/23/2019	60	2500	2700	3100	3600	3700
1/23/2019	61	2800	2800	3200	3600	3600
1/23/2019	62	2400	2800	2800	3100	3300
1/23/2019	63	2500	2500	2900	3300	3500
1/23/2019	64	2700	2800	3600	3900	4100
2/2/2019	65	2600	2800	3100	3500	3800
2/2/2019	66	2900	3500	3800	4200	4400
2/2/2019	67	3000	3400	4100	4300	4400
2/2/2019	68	2800	3100	4300	4500	4700
2/2/2019	69	3000	4100	4700	5100	5300
2/2/2019	70	2600	2900	3700	3800	4600
2/4/2019	71	2900	3700	3800	4000	4500
2/4/2019	72	2700	2900	3500	3600	3900
2/4/2019	73	2500	2700	2700	2900	3100
2/4/2019	74	2800	3000	3100	3400	3800
2/4/2019	75	2500	2800	3100	3300	3700
2/4/2019	76	2600	2900	3500	3400	3700
2/5/2019	77	2700	3300	4100	4200	4400
2/5/2019	78	2800	2800	3800	4200	4500
2/5/2019	79	2800	3200	4100	4500	5100
2/5/2019	80	3100	3700	4600	4800	5100
2/5/2019	81	2900	2900	3800	4300	4600

2/5/2019	82	2600	2900	3400	4200	4500
2/5/2019	83	2800	2800	3500	4200	4800
2/5/2019	84	2700	3200	3700	4600	4800
3/6/2019	85	2100	2400	2700	3500	3900
3/6/2019	86	2300	2400	2800	3000	NS
3/6/2019	87	2300	2600	2700	2900	NS
3/14/2019	88	1700	1900	2100	2300	NS
3/14/2019	89	1600	1700	1800	2100	NS
3/14/2019	90	1800	1700	1900	2200	NS
3/14/2019	91	2400	2700	2800	2400	NS
3/15/2019	117	2100	2300	2500	2400	NS
3/15/2019	116	2200	2500	2600	2400	NS
3/15/2019	115	2100	2400	2300	2500	NS
3/18/2019	114	2100	2400	2500	2300	NS
3/18/2019	113	2000	2300	2400	2200	NS
3/18/2019	112	1900	2000	2300	2500	NS
3/18/2019	111	2200	2400	2600	2700	NS
3/18/2019	110	2400	2900	3100	3400	NS
3/18/2019	118	2500	2900	3500	3600	NS
3/19/2019	119	2200	2600	2500	2700	NS
3/19/2019	120	2100	2500	2600	2700	NS
3/19/2019	121	2200	2400	2300	2500	NS
3/19/2019	122	1700	1900	2100	2300	NS
3/19/2019	123	1900	2300	2500	2600	NS
3/19/2019	92	2000	2100	2300	2600	NS
3/19/2019	93	2500	3200	3600	3900	NS
3/19/2019	94	2600	2800	2900	3100	NS
3/21/2019	95	2600	2800	3200	3500	NS
3/21/2019	96	2700	2900	3300	3100	NS
3/21/2019	97	2400	2600	3200	3400	NS
3/21/2019	98	2800	3200	3700	3800	NS
3/21/2019	99	2900	3400	3600	4000	NS
3/21/2019	100	3100	3300	3700	4200	NS
3/21/2019	101	3000	3600	4500	4400	NS
3/22/2019	102	3200	4400	5900	4800	NS
3/22/2019	103	2800	3600	4000	4200	NS
3/22/2019	104	2700	3100	3800	4500	NS
3/23/2019	105	2100	2300	2400	2900	NS
3/23/2019	106	2200	2400	3300	2900	NS
3/23/2019	107	1900	2400	3100	2700	NS
3/23/2019	108	2600	2900	3000	3200	NS
3/23/2019	109	2100	2700	2800	3100	NS

Notes: - Max Value = Maximum Value (cpm) taken from within the previously excavated trench on 1/10/2019

- NS = Not Surveyed (final excavation depth reached at the previous interval)

Appendix B – Site Grading

2/14/19 – 4/3/19

Chicago Riverwalk

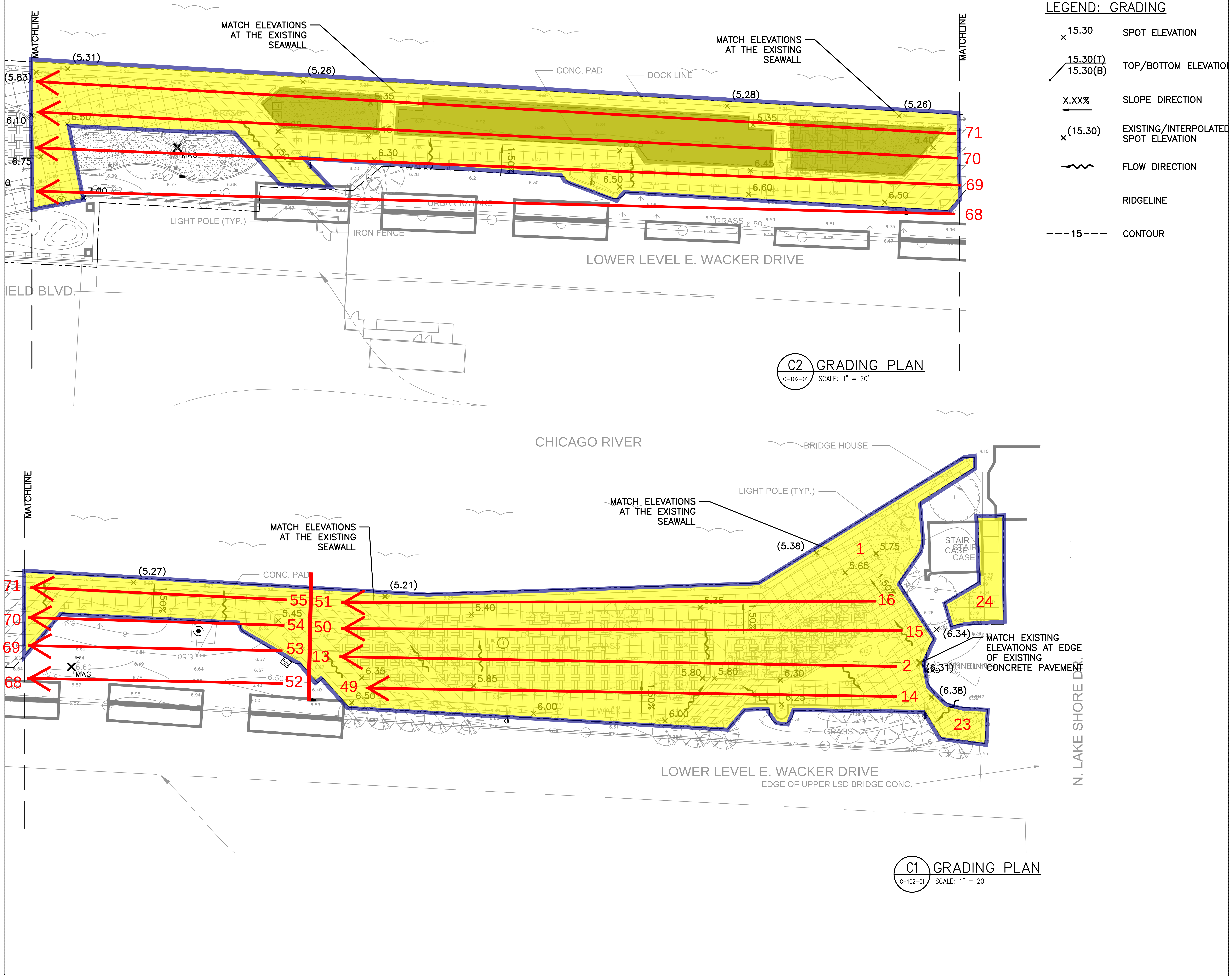
Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Site Grading Excavation Location Map

12/14/2018 9:39:40 AM

Riverwalk - Chicago, IL - Site Grading Excavation Location Map



12/14/2018 9:39:40 AM

Radiation Survey Form - Data

Location / Project ID:	Chicago Riverwalk - Site Grading
HP Technician:	Brian Schmidt
Date:	2/14/19 - 4/3/19
Instrument ID:	Ludlum Model 2221 Scaler/Ratemeter (serial # 132844) w/ Ludlum Model 44-10 2" NaI Detector (w/ 6" shield)
7.1 pCi/g Action Level:	7,391 cpm

	Depth	0"-18" (bgs)	12"-30" (bgs)		Depth	0"-18" (bgs)	12"-30" (bgs)
Date	Excavation ID	Survey Results (cpm)		Date	Excavation ID	Survey Results (cpm)	
2/14/2019	1	2700	2800	2/14/2019	2	1600	1900
2/14/2019	3	1700	2300	2/14/2019	4	1900	2100
2/14/2019	5	1400	1700	2/14/2019	6	1600	2100
2/14/2019	7	1900	2400	2/14/2019	8	1800	2300
2/14/2019	9	1500	1900	2/14/2019	10	1500	1700
2/14/2019	11	1500	1900	2/14/2019	12	1600	1800
2/14/2019	13	1500	1700	2/14/2019	14	2400	3000
2/14/2019	15	2500	3200	2/14/2019	16	2800	3000
2/14/2019	17	2500	2800	2/14/2019	18	2700	2800
2/14/2019	19	2600	2900	2/14/2019	20	2700	3200
2/14/2019	21	2800	2900	2/14/2019	22	2500	2800
2/18/2019	23	2600	2800	2/18/2019	24	2900	3100
2/19/2019	25	2400	2700	2/19/2019	26	2800	2900
2/19/2019	27	2300	2900	2/19/2019	28	1800	2600
2/19/2019	29	1900	2700	2/19/2019	30	2100	2500
2/21/2019	31	2100	2700	2/21/2019	32	1900	2400
2/21/2019	33	2300	2600	2/21/2019	34	2400	2800
2/21/2019	35	2200	2400	2/21/2019	36	2100	2300
2/21/2019	37	2300	2600	2/21/2019	38	1900	2200
2/21/2019	39	2400	2900	2/21/2019	40	1900	2000
2/21/2019	41	2100	2300	2/21/2019	42	1800	2200
2/21/2019	43	1900	2200	2/21/2019	44	2400	2500
2/21/2019	45	2500	2700	2/22/2019	46	2100	2300
2/22/2019	47	2700	2800	2/22/2019	48	2500	2900
2/23/2019	49	1800	2600	2/23/2019	50	2400	2900
2/23/2019	51	2700	2800	2/23/2019	52	2000	2400
2/23/2019	53	2100	2300	2/23/2019	54	1900	2000
2/23/2019	55	2200	2500	2/23/2019	56	2300	2300
2/23/2019	57	1600	2100	2/23/2019	58	1900	2600
2/23/2019	59	2400	2700	2/23/2019	60	2000	2000
2/23/2019	61	2400	2900	2/23/2019	62	1900	2000
2/23/2019	63	1600	1900	2/23/2019	64	2300	2600
2/23/2019	65	2200	2700	2/23/2019	66	2000	2400
2/23/2019	67	2100	2400	2/23/2019	68	2800	2600

2/23/2019	69	1800	1800	2/23/2019	70	1700	2500
2/23/2019	71	2300	2200	2/23/2019	72	2100	2700
2/23/2019	73	1600	2400	2/23/2019	74	1800	1800
2/23/2019	75	2200	2600	2/23/2019	76	1900	2200
2/23/2019	77	1700	2200	2/23/2019	78	1900	2000
2/23/2019	79	1800	2300	2/25/2019	80	2200	2500
2/25/2019	81	2400	2800	2/25/2019	82	2400	3000
2/25/2019	83	2300	2700	2/25/2019	84	2500	2800
2/25/2019	85	2700	2700	2/25/2019	86	2000	2400
2/25/2019	87	2100	2500	2/25/2019	88	2400	2500
2/25/2019	89	2000	2400	2/25/2019	90	2100	2300
2/25/2019	91	2500	2600	2/26/2019	92	1900	2300
2/26/2019	93	1700	2100	2/26/2019	94	2000	2100
2/26/2019	95	1600	1900	2/26/2019	96	2200	2600
2/26/2019	97	2000	2400	2/26/2019	98	1800	2500
2/26/2019	99	1900	1900	2/26/2019	100	2300	2400
2/26/2019	101	2100	2800	2/26/2019	102	1800	2400
2/26/2019	103	1900	2600	2/26/2019	104	2300	2400
2/26/2019	105	1800	1800	2/26/2019	106	1700	1900
2/26/2019	107	1700	2100	2/27/2019	108	2000	2200
2/27/2019	109	1700	2300	2/27/2019	110	2200	2400
2/27/2019	111	1900	2000	2/27/2019	112	2200	2500
2/27/2019	113	2000	2100	2/27/2019	114	1900	2300
2/27/2019	115	1700	2200	2/27/2019	116	1800	2200
2/27/2019	117	1700	2300	2/27/2019	118	1700	2400
2/27/2019	119	1900	2300	2/27/2019	120	1700	2000
2/27/2019	121	2000	2500	2/27/2019	122	1800	2300
2/27/2019	123	2100	2100	2/27/2019	124	1600	2400
2/27/2019	125	1800	2000	2/27/2019	126	1900	2200
2/27/2019	127	1900	2600	2/27/2019	128	1800	2100
2/27/2019	129	1700	2000	2/27/2019	130	1700	2400
2/27/2019	131	1900	2100	2/27/2019	132	2200	2500
2/27/2019	133	2000	2500	2/27/2019	134	1800	2300
2/27/2019	135	1900	2300	2/28/2019	136	2000	2500
2/28/2019	137	1700	2100	2/28/2019	138	2200	2600
2/28/2019	139	2300	2400	2/28/2019	140	1700	2200
2/28/2019	141	1600	2100	2/28/2019	142	1800	2300
2/28/2019	143	1800	2100	2/28/2019	144	2100	2200
2/28/2019	145	1800	2000	2/28/2019	146	2300	2500
2/28/2019	147	2400	2600	2/28/2019	148	1900	2100
2/28/2019	149	1900	2300	2/28/2019	150	2200	2400
2/28/2019	151	2400	2500	3/1/2019	152	1700	2200
3/1/2019	153	1900	2100	3/1/2019	154	2400	2500
3/1/2019	155	2500	2700	3/1/2019	156	1700	2400
3/1/2019	157	1800	2200	3/1/2019	158	1900	2300
3/1/2019	159	1800	2500	3/1/2019	160	2300	2800
3/1/2019	161	2000	2500	3/1/2019	162	2100	2600

3/1/2019	163	2200	2700	3/1/2019	164	2500	3000
3/1/2019	165	2700	2900	3/1/2019	166	2300	2700
3/1/2019	167	1900	2700	3/1/2019	168	2200	2900
3/1/2019	169	2500	3100	3/1/2019	170	2100	2700
3/1/2019	171	2000	2400	3/1/2019	172	2400	2800
3/1/2019	173	2600	3100	3/1/2019	174	2700	2800
3/1/2019	175	2600	3100	3/6/2019	176	1700	2100
3/6/2019	177	1900	2300	3/6/2019	178	1800	2500
3/6/2019	179	2200	2600	3/6/2019	180	1900	2100
3/6/2019	181	1800	2500	3/6/2019	182	2000	2300
3/6/2019	183	1700	1900	3/7/2019	184	1800	2100
3/7/2019	185	1600	2200	3/7/2019	186	2100	2400
3/7/2019	187	1900	2200	3/7/2019	188	2200	2300
3/7/2019	189	1600	2000	3/7/2019	190	2000	2100
3/7/2019	191	1800	2200	3/8/2019	192	2500	2800
3/8/2019	193	2100	2600	3/8/2019	194	2600	2900
3/8/2019	195	2400	3100	3/8/2019	196	2600	3300
3/8/2019	197	2000	2700	3/8/2019	198	1800	2600
3/8/2019	199	2300	2900	3/8/2019	200	2500	3200
3/8/2019	201	2100	2800	3/8/2019	202	2300	3000
3/8/2019	203	1800	2700	3/8/2019	204	2500	2900
3/8/2019	205	2900	3100	3/8/2019	206	2300	2600
3/8/2019	207	2400	3000	3/8/2019	208	2600	3400
3/8/2019	209	2700	2800	3/9/2019	210	2500	2600
3/9/2019	211	2200	2800	3/9/2019	212	2200	2900
3/9/2019	213	2700	3200	3/9/2019	214	2500	2900
3/9/2019	215	2200	2600	3/9/2019	216	2800	3100
3/9/2019	217	2600	2700	3/9/2019	218	2400	3100
3/9/2019	219	2800	3000	3/11/2019	220	1900	2400
3/11/2019	221	2300	2300	3/11/2019	222	2100	2900
3/11/2019	223	1700	2100	3/11/2019	224	1900	2600
3/11/2019	225	2000	2200	3/11/2019	226	1800	2200
3/11/2019	227	2100	2000	3/11/2019	228	1600	2400
3/11/2019	229	1600	1900	3/11/2019	230	1800	2100
3/11/2019	231	1700	2300	3/11/2019	232	2100	2700
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3/11/2019	235	1700	2400	3/11/2019	236	1800	2300
3/11/2019	237	2000	2100	3/11/2019	238	1900	2000
3/11/2019	239	2200	2400	3/11/2019	240	2000	2400
3/11/2019	241	2100	2500	3/11/2019	242	1700	2200
3/11/2019	243	1700	2100	3/11/2019	244	1600	2000
3/11/2019	245	1900	2300	3/11/2019	246	2100	2600
4/3/2019	247	2400	3100	4/3/2019	248	2700	3300
4/3/2019	249	2300	3400	4/3/2019	250	3100	3700

Appendix C – Seawall Inspection Excavation

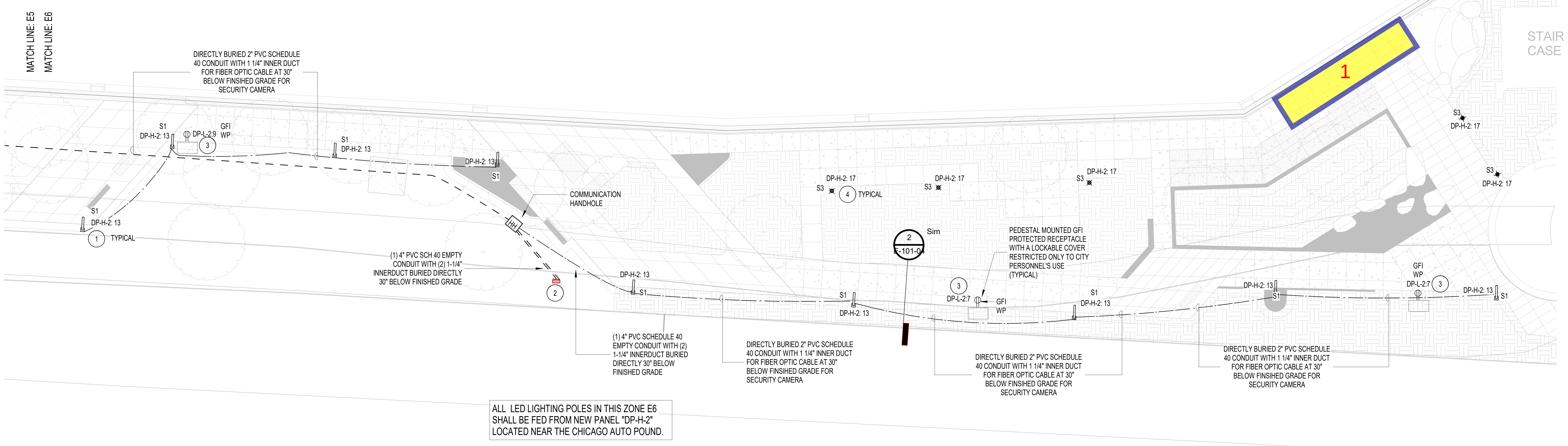
2/14/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Sea Wall Inspection Excavation - Radiological Soil Survey - 2/14/2019



Sea Wall ID	Depth	Counts Per Minute (cpm)
1	0-18"	2700
	18-36"	2800
	36-54"	3200
	54-72"	2800
	72-90"	2900

1 LEVEL 1 ELECTRICAL POWER PLAN - E6

1/16" = 1'-0"

32' 16' 8' 0
SCALE: 1/16" = 1'-0"

SHEET NOTES:

① NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN.

② NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL)

③ CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 10 AND 1#10 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

④ CONTRACTOR SHALL PROVIDE DEDICATED 20A, 277V, 1-PHASE CIRCUIT WITH 2#8 AND 1#8 IN A 3/4" CONDUIT FOR BOLLARD LIGHTING FIXTURES. ALL BOLLARD FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND 6-POLE CONTACTOR. REFER DETAIL #7 IN SHEET E-601-01 FOR ADDITIONAL INFORMATION AND REFER PLANS FOR BRANCH CIRCUITRY DETAILS.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADIITIONAL INFORMATION ON DUCT BANK, HAND HOLES DIMENSIONS. HAND HOLES LOCATIONS SHOWN IS TENTATIVE . REFER CIVIL DRAWINGS FOR EXACT LOCATION AND QUANTITY.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULE.
7. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
8. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

1/7/2019 10:03:54 AM

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

2FM
FLEET & FACILITY MANAGEMENT

30 North LaSalle St.
Suite 300
Chicago, IL 60602

MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

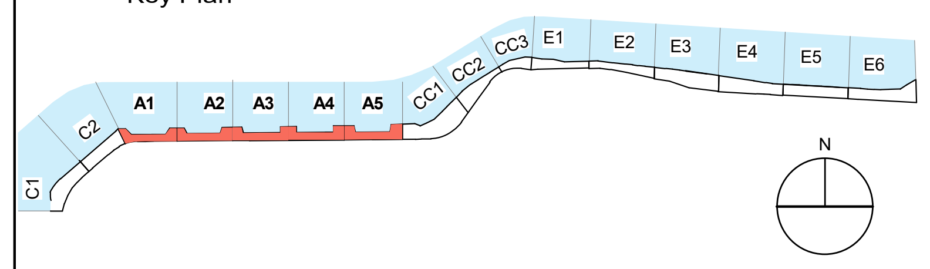
MULLER2
700 N Sangamon
Chicago, IL 60642

site
888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

db|HMS
303 W Erie St, Suite 510
Chicago, IL 60654

Key Plan



Issue

Riverwalk - Pathway

Issue Date: 11.07.2018

Professional Seals

No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

Project No: 8103

Sheet Title

LEVEL 1 ELECTRICAL POWER PLAN - E6

Sheet Number

E-101-09

Appendix D – Seatwall Excavation

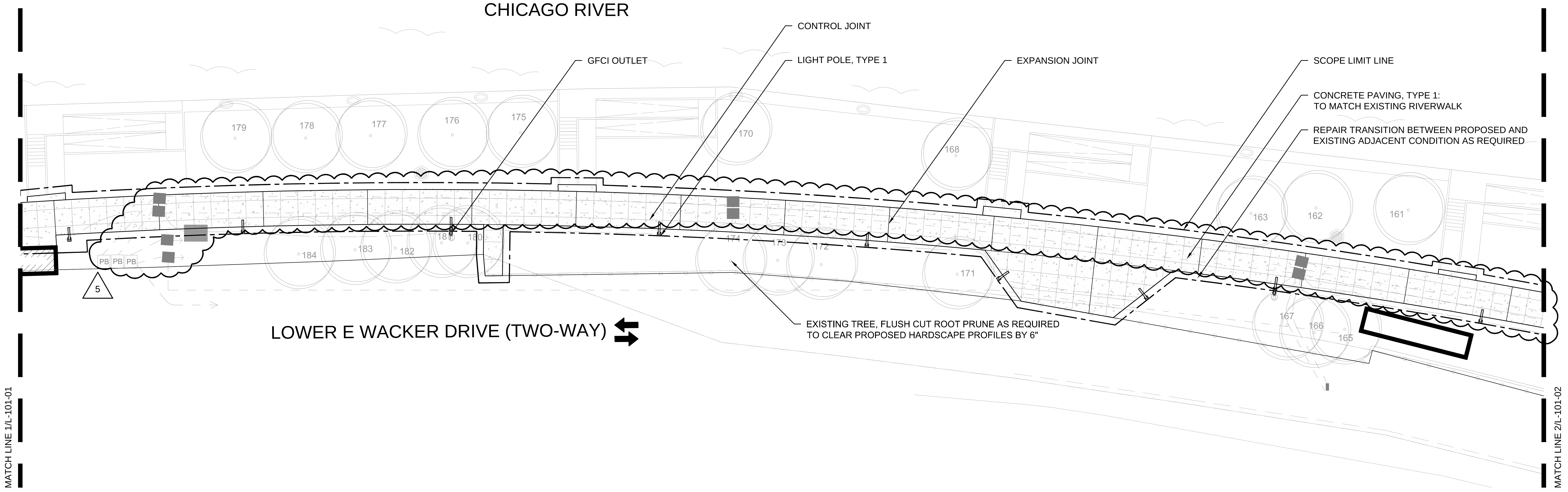
2/18/19 – 4/11/19

Chicago Riverwalk

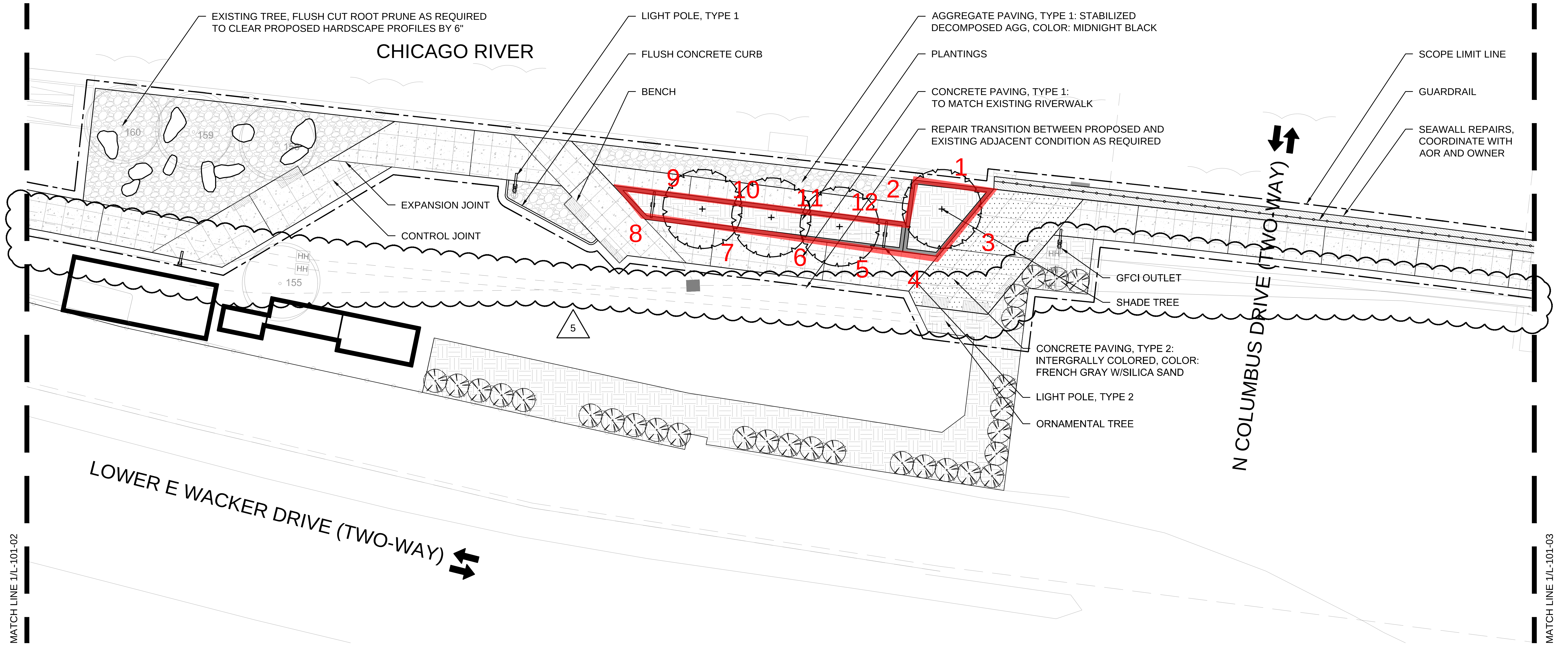
Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Seat Wall Installation Excavation Location Map - 4/11/2019



1 LANDSCAPE SITE PLAN
1" = 20'-0"



2 LANDSCAPE SITE PLAN
1" = 20'-0"

2/7/2019 2:33:14 PM

LEGEND

- SCOPE LIMIT LINE
- CONCRETE PAVING, TYPE 1: TO MATCH EXISTING RIVERWALK
- CONCRETE PAVING, TYPE 2: INTEGRALLY COLORED, COLOR: FRENCH GRAY W/SILICA SAND
- PROTECTIVE SURFACING: PIP RUBBER SURFACING
- AGGREGATE PAVING, TYPE 1: STABILIZED DECOMPOSED AGG, COLOR: MIDNIGHT BLUE
- ASPHALT PAVING
- CONCRETE SEATWALL
- RAISED CONCRETE CURB
- FLUSH CONCRETE CURB
- BENCH
- TABLE
- POLE LIGHT, TYPE 1
- POLE LIGHT, TYPE 2
- BOLLARD LIGHT
- GFCI OUTLET
- LADDER
- PLANTINGS
- SOD
- EXISTING TREE, FLUSH CUT ROOT PRUNE AS REQUIRED TO CLEAR PROPOSED HARDSCAPE PROFILES BY 6"
- SHADE TREE
- ORNAMENTAL TREE
- BOULDERS
- EXISTING SCULPTURE
- EXISTING LADDER
- SEAWALL REPAIRS, COORDINATE WITH AOR AND OWNER
- GUARDRAIL

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
Project Address
485 E Lake Shore Drive to 101 E Michigan Avenue
Prepared For

30 North LaSalle St.
Suite 300
Chicago, IL 60602

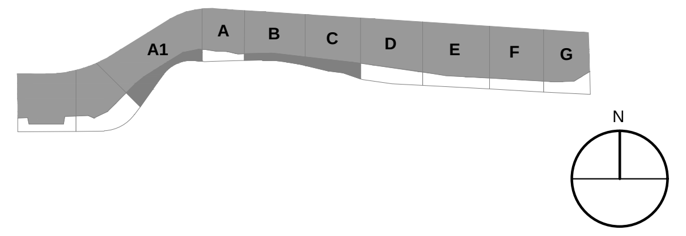
MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

MULLER2
700 N Sangamon
Chicago, IL 60642

site
888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

Key Plan



Issue
Riverwalk - Pathway

Issue Date:
01.07.2019

Professional Seals

BRADLEY C. McCAULEY
157-001466

EXP. 08.31.2019

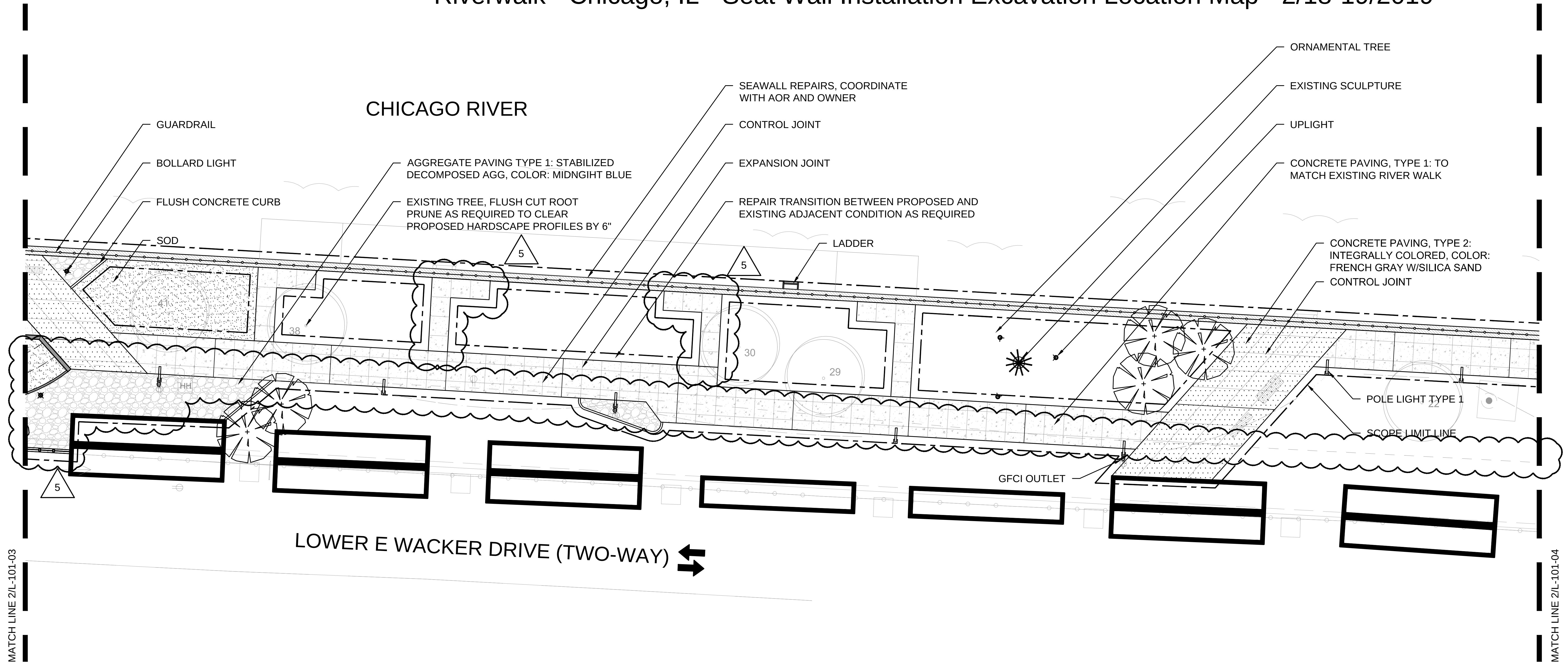
No.	Description	Date
1	Issued For Pricing	11.27.2018
2	Issued For Permit	12.04.2018
3	Issued For Construction	01.07.2019
4	Bulletin 01	01.15.2019
5	Bulletin 02	02.06.2019

Project No: 8103

Sheet Title
LANDSCAPE
SITE PLANS
(FOR REFERENCE ONLY)

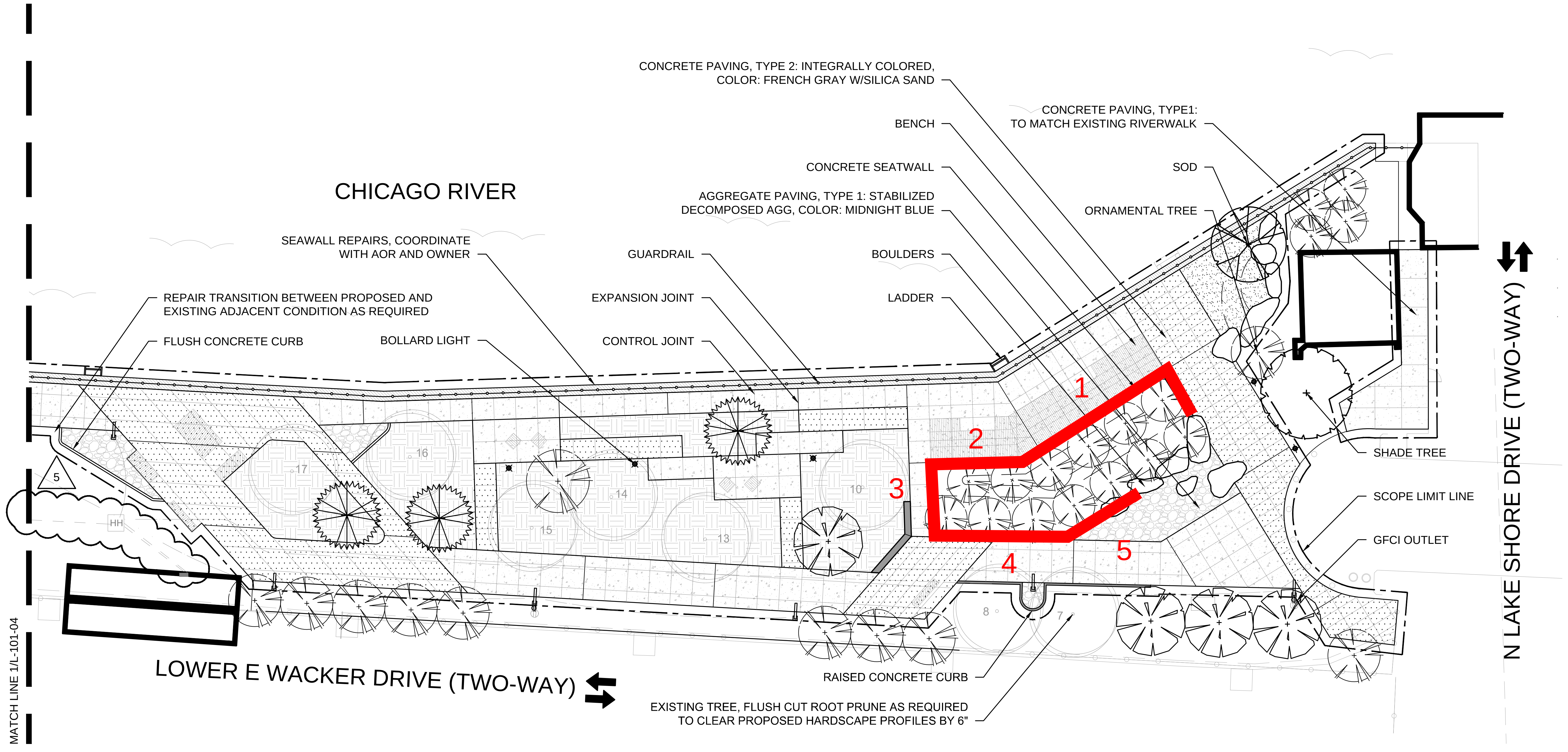
Sheet Number
L-101-02

Riverwalk - Chicago, IL - Seat Wall Installation Excavation Location Map - 2/18-19/2019



1 LANDSCAPE SITE PLAN
1" = 20'-0"

0 10 20 30 40'



2 LANDSCAPE SITE PLAN
1" = 20'-0"

0 10 20 30 40'

LEGEND

— · —	SCOPE LIMIT LINE
▨	CONCRETE PAVING, TYPE 1: TO MATCH EXISTING RIVERWALK
▨	CONCRETE PAVING, TYPE 2: INTEGRALLY COLORED, COLOR: FRENCH GRAY W/SILICA SAND
▨	PROTECTIVE SURFACING: PIP RUBBER SURFACING
▨	AGGREGATE PAVING, TYPE 1: STABILIZED DECOMPOSED AGG, COLOR: MIDNIGHT BLUE
▨	ASPHALT PAVING
▬	CONCRETE SEATWALL
—	RAISED CONCRETE CURB
—	FLUSH CONCRETE CURB
▨	BENCH
▨	TABLE
⊸	POLE LIGHT, TYPE 1
⊸	POLE LIGHT, TYPE 2
✕	BOLLARD LIGHT
●	GFCI OUTLET
⊔	LADDER
▨	PLANTINGS
▨	SOD
○	EXISTING TREE, FLUSH CUT ROOT PRUNE AS REQUIRED TO CLEAR PROPOSED HARDSCAPE PROFILES BY 6"
⊙	SHADE TREE
✲	ORNAMENTAL TREE
○	BOULDERS
✳	EXISTING SCULPTURE
H	EXISTING LADDER
▨	SEAWALL REPAIRS, COORDINATE WITH AOR AND OWNER
—+—	GUARDRAIL

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
Project Address
485 E Lake Shore Drive to 101 E Michigan Avenue
Prepared For

30 North LaSalle St.
Suite 300
Chicago, IL 60602

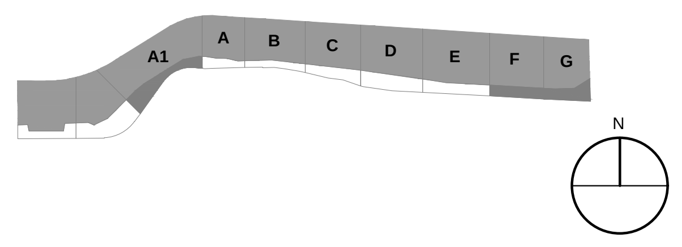
MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

700 N Sangamon
Chicago, IL 60642

888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

Key Plan



Issue
Riverwalk - Pathway

Issue Date: 01.07.2019

Professional Seals

BRADLEY C. McCAULEY
157-001466

EXP. 08.31.2019

No.	Description	Date
1	Issued For Pricing	11.27.2018
2	Issued For Permit	12.04.2018
3	Issued For Construction	01.07.2019
5	Bulletin 02	02.06.2019

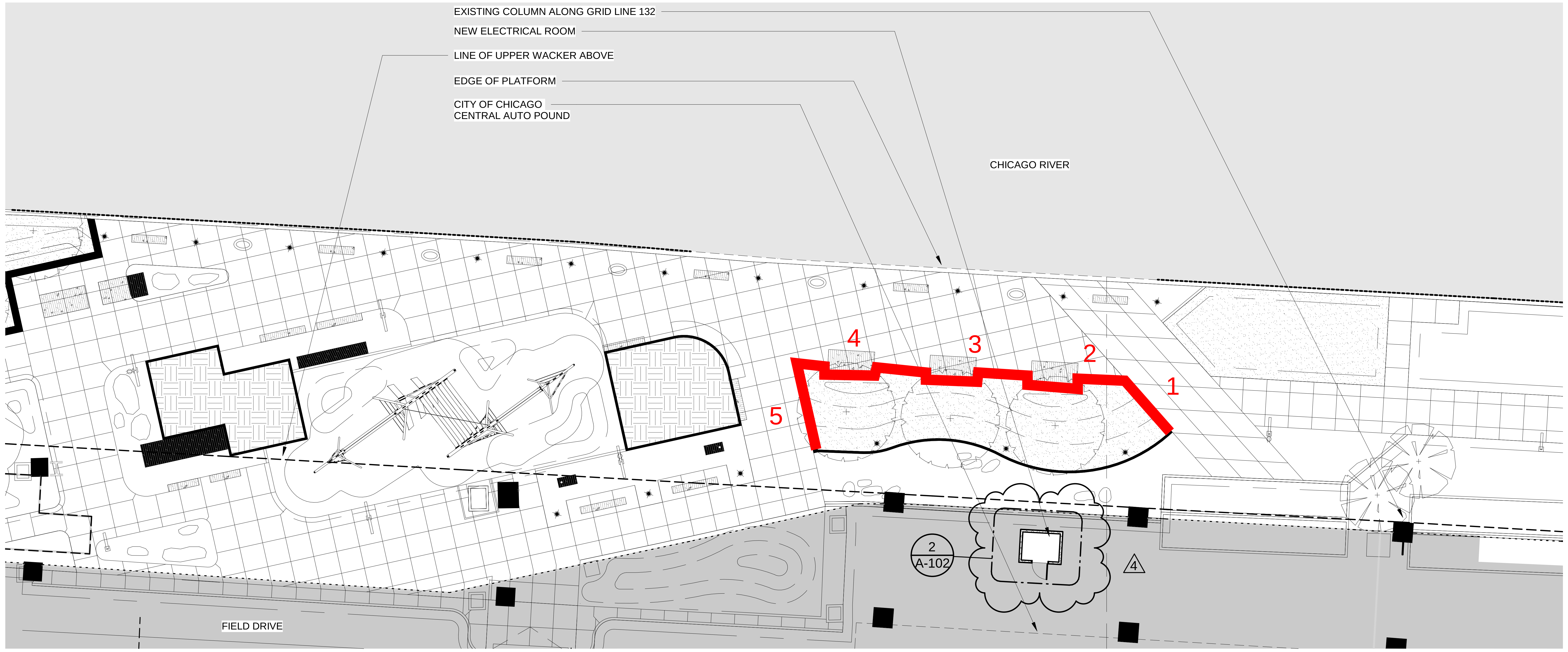
Project No: 8103

Sheet Title
LANDSCAPE
SITE PLANS
(FOR REFERENCE ONLY)

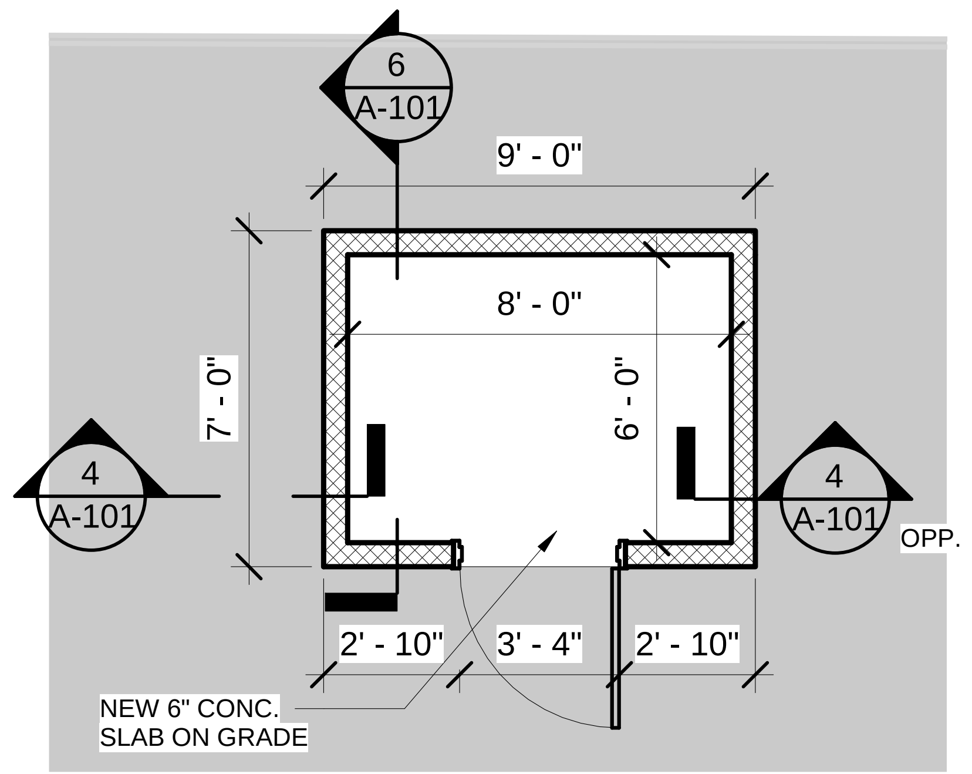
Sheet Number
L-101-04

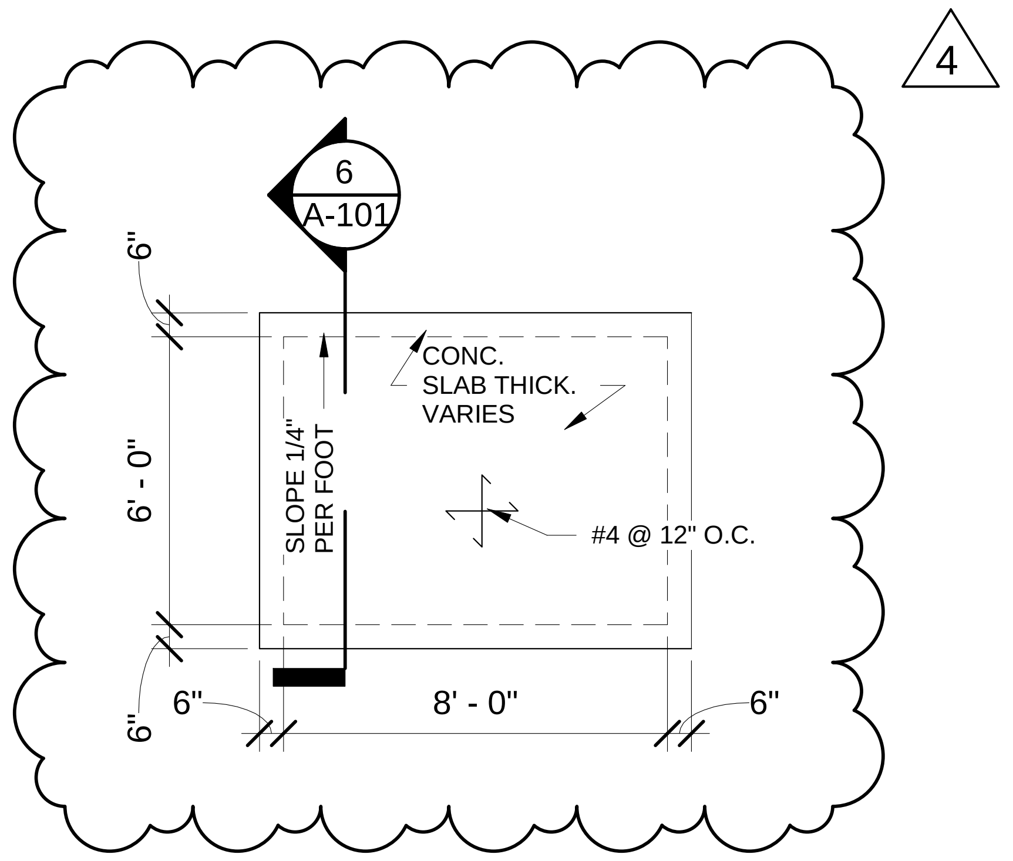
2/7/2019 2:33:04 PM

Riverwalk - Chicago, IL - Seat Wall Installation Excavation Location Map - 4/4-5/2019



1 ELECTRICAL ROOM LOCATION PLAN
1/16" = 1'-0"





2 ELECTRICAL ROOM PLAN
1/4" = 1'-0"

3 CONC. ROOF SLAB PLAN
1/4" = 1'-0"

2/7/2019 6:27:53 PM

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
Project Address
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

FLEET & FACILITY MANAGEMENT

30 North LaSalle St.
Suite 300
Chicago, IL 60602

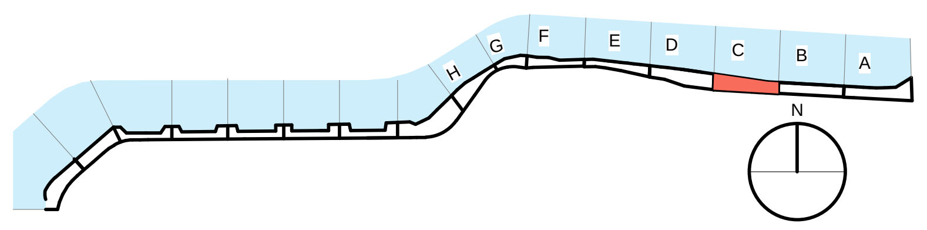
MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

MULLER2
700 N Sangamon
Chicago, IL 60642

site
888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

Key Plan



Issue
Riverwalk - Pathway

Issue Date:
02.06.2019

Professional Seals

KAITLIN STREYLE
001-022682

Kaitlin Streyle

No.	Description	Date
1	ISSUED FOR PRICING	11.27.10218
2	ISSUED FOR PERMIT	12.04.2018
3	ISSUED FOR CONSTRUCTION	01.07.2019
4	ISSUED FOR BULLETIN 2	02.06.2019

Project No: 8103

Sheet Title
ELECTRICAL ROOM PLAN AND DETAILS

Sheet Number
A-102

Radiation Survey Form - Data

Location / Project ID:	Chicago Riverwalk - Seat Wall Installation
HP Technician:	Brian Schmidt
Date:	2/18/19 - 4/11/19
Instrument ID:	Ludlum Model 2221 Scaler/Ratemeter (serial # 132844) w/ Ludlum Model 44-10 2" NaI Detector (w/ 6" shield)
7.1 pCi/g Action Level:	7,391 cpm

	Depth	0"-18" (bgs)	18"-36" (bgs)	36"-54" (bgs)
Date	Excavation ID	Survey Results (cpm)		
2/18/2019	1	2900	3600	4000
2/18/2019	2	2500	3100	4300
2/18/2019	3	2600	3300	3700
2/19/2019	4	2700	2900	3200
2/19/2019	5	2800	3100	3500
4/4/2019	1	2800	4800	5300
4/4/2019	2	2800	3200	5100
4/4/2019	3	2500	3400	4100
4/5/2019	4	2700	3600	3900
4/5/2019	5	2400	2600	3100
4/11/2019	1	1900	2100	2400
4/11/2019	2	2200	2600	2800
4/11/2019	3	1800	2400	2400
4/11/2019	4	1900	2300	2600
4/11/2019	5	2000	2500	2900
4/11/2019	6	2100	2200	2600
4/11/2019	7	1800	2400	2700
4/11/2019	8	2100	2800	2900
4/11/2019	9	1800	2000	2400
4/11/2019	10	2200	2500	2700
4/11/2019	11	2000	2400	2800
4/11/2019	12	1700	2000	2600

Appendix E – Light Pole Installation and Trenching

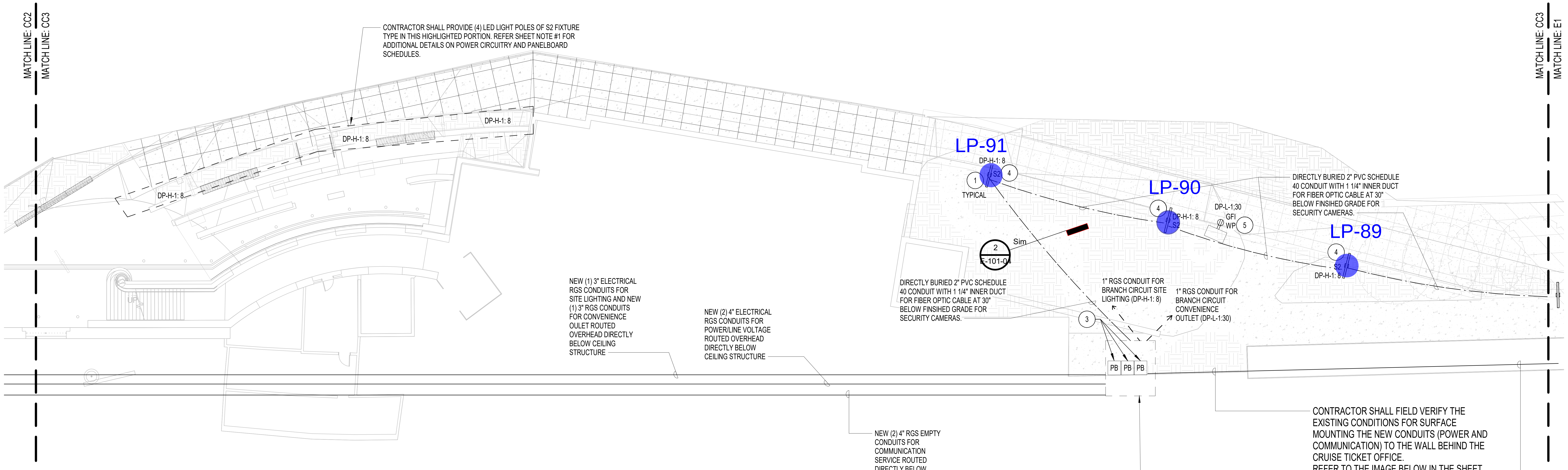
2/21/19 – 3/18/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Light Pole Installation and Electrical Service Connection Trench Excavation

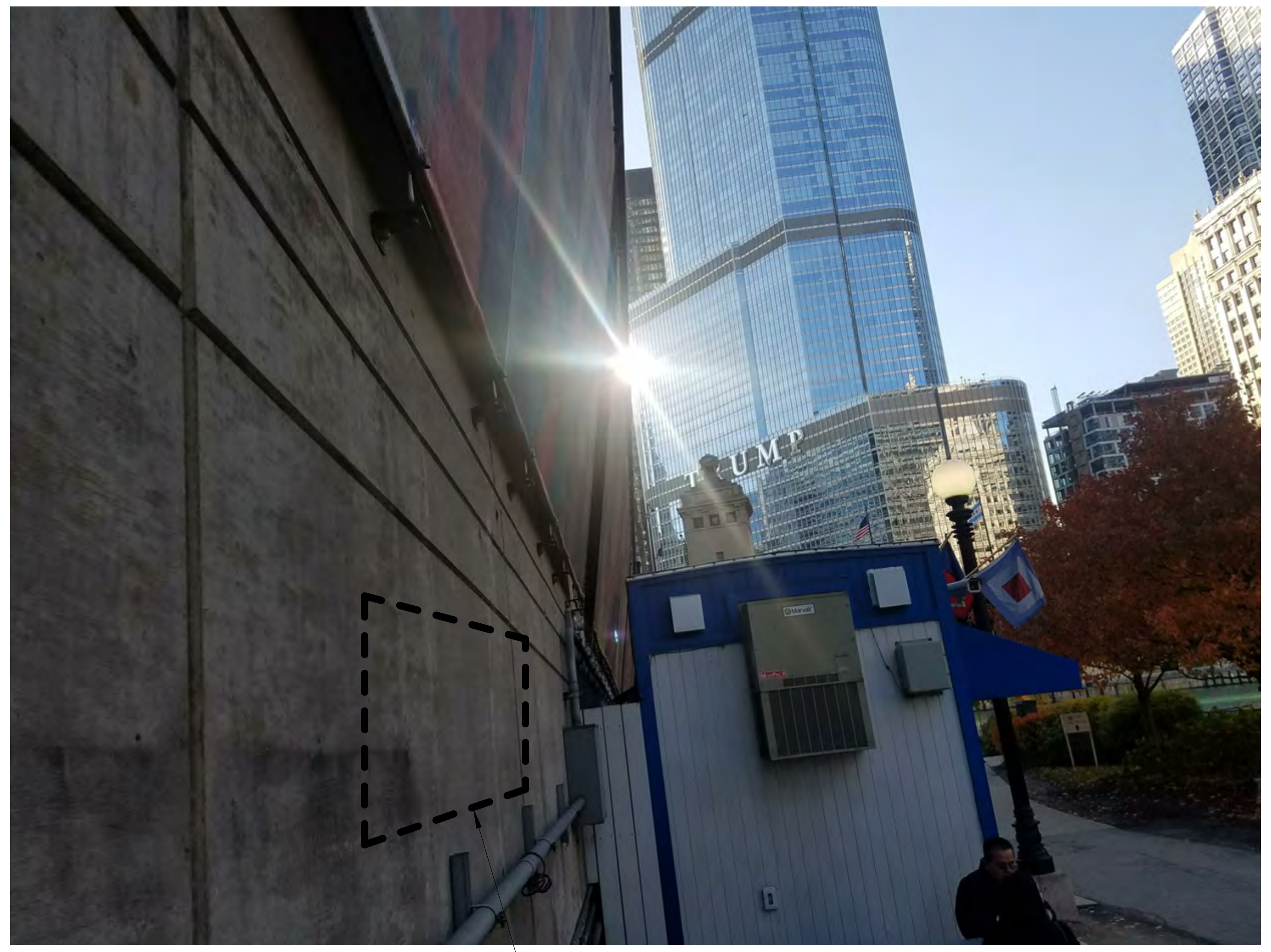


1 LEVEL 1 ELECTRICAL POWER PLAN - CC3

1/16" = 1'-0"

32' 16' 8' 0

SCALE: 1/16" = 1'-0"



PROPOSED LOCATION OF WALL MOUNTED PULL BOXES AND SURFACE MOUNTED CONDUITS.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADIITIONAL INFORMATION ON DUCT BANK, HAND HOLES DIMENSIONS. HAND HOLES LOCATIONS SHOWN IS TENTATIVE . REFER CIVIL DRAWINGS FOR EXACT LOCATION AND QUANTITY.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER SHEET E.402 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE TECHNOLOGY/COMMUNICATION SYSTEM SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
7. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULE.
8. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
9. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN. REFER E-000-01 FOR PRODUCT PART NUMBER.

POWER NOTES

① NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL . PROVIDE 24"X24"X24" DEEP OPEN BOTTOM, PRECAST CONCRETE HAND HOLE AS REQUIRED FOR EACH LIGHTING POLE. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN. REFER LANDSCAPE DRAWINGS FOR FOUNDATION DETAILS.

② LOCATION FOR TRANSITION OF CONDUITS (POWER AND LOW VOLTAGE) . ALL NEW CONDUITS SHALL BE SURFACE MOUNTED TO THE EXISTING WALL FROM THIS IDENTIFIED TRANSITION POINT. CONDUITS SHALL BE DROPPED DOWN FROM THE DECK THROUGH THE EXISTING COLUMN (EXISTING BRIDGE SUPPORT STRUCTURE) TO THE EXISTING WALL.

③ NEMA 4X WALL MOUNTED PULL BOX (TYPICAL). CONTRACTOR SHALL SIZE PULL BOX ACCORDINGLY TO ACCOMODATE THE IDENTIFIED NUMBER OF CONDUITS.
PROVIDE PULL BOX SEPARATELY FOR POWER AND LOW VOLTAGE.

④ CONTRACTOR SHALL PROVIDE GENTTECH COMPATIBLE CAMERAS INSTALLED AT TOP OF EACH SITE LIGHTING LED LIGHT POLES (S1 AND S2 POLE TYPE). ALL NEW CAMERAS SHALL MATCH THE SPECIFICATIONS OF THE EXISTING RIVERWALK CAMERAS.

⑤ CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 10 AND 1#10 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

1/7/2019 10:02:46 AM

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For
2FM
FLEET & FACILITY MANAGEMENT

30 North LaSalle St.
Suite 300
Chicago, IL 60602

MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

MULLER2
700 N Sangamon
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888 S Michigan Ave, Suite 1000
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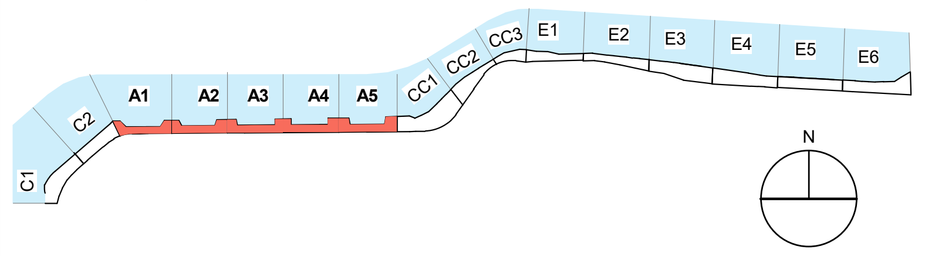
In Association with

db|HMS
303 W Erie St, Suite 510
Chicago, IL 60654

Key Plan



Issue
Riverwalk - Pathway

Issue Date: 11.07.2018

Professional Seals

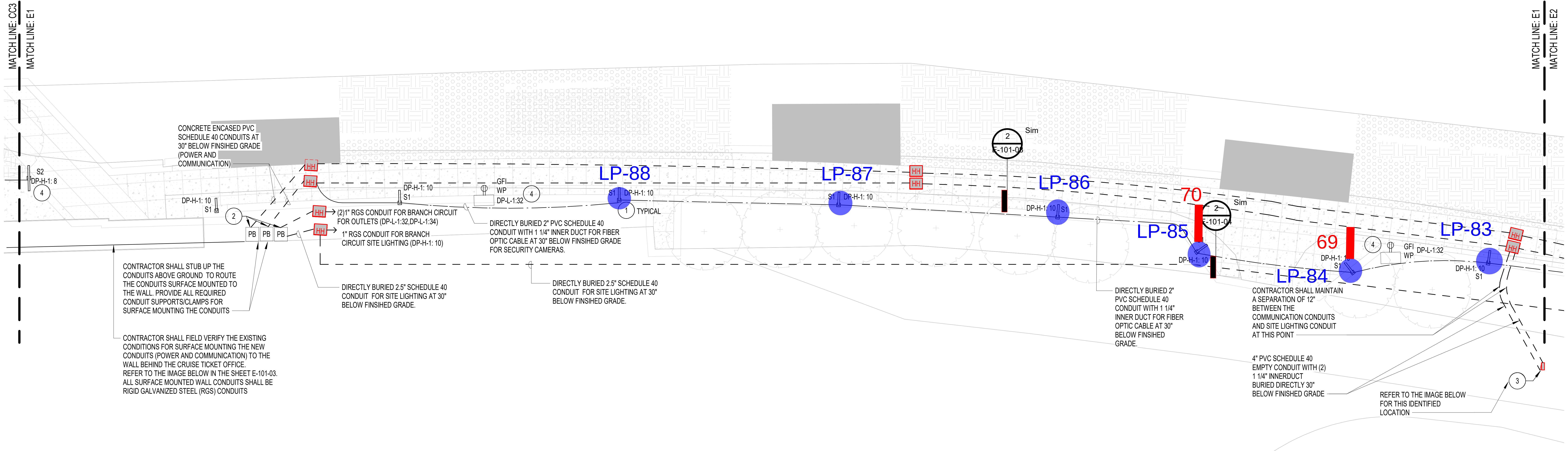
No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

Project No: 8103

Sheet Title
LEVEL 1 ELECTRICAL POWER PLAN - CC3

Sheet Number
E-101-03

Riverwalk - Chicago, IL - Light Pole Installation and Electrical Service Connection Trench Excavation



CONCRETE ENCASED PVC SCHEDULE 40 CONDUITS AT 30" BELOW FINSIHED GRADE (POWER AND COMMUNICATION)

(2)1" RGS CONDUIT FOR BRANCH CIRCUIT FOR OUTLETS (DP-L-1:32,DP-L-1:34)

1" RGS CONDUIT FOR BRANCH CIRCUIT SITE LIGHTING (DP-H-1: 10)

DIRECTLY BURIED 2" PVC SCHEDULE 40 CONDUIT WITH 1 1/4" INNER DUCT FOR FIBER OPTIC CABLE AT 30" BELOW FINSIHED GRADE FOR SECURITY CAMERAS.

CONTRACTOR SHALL STUB UP THE CONDUITS ABOVE GROUND TO ROUTE THE CONDUITS SURFACE MOUNTED TO THE WALL. PROVIDE ALL REQUIRED CONDUIT SUPPORTS/CLAMPS FOR SURFACE MOUNTING THE CONDUITS

DIRECTLY BURIED 2.5" SCHEDULE 40 CONDUIT FOR SITE LIGHTING AT 30" BELOW FINSIHED GRADE.

DIRECTLY BURIED 2.5" SCHEDULE 40 CONDUIT FOR SITE LIGHTING AT 30" BELOW FINSIHED GRADE.

CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDITIONS FOR SURFACE MOUNTING THE NEW CONDUITS (POWER AND COMMUNICATION) TO THE WALL BEHIND THE CRUISE TICKET OFFICE.
REFER TO THE IMAGE BELOW IN THE SHEET E-101-03.
ALL SURFACE MOUNTED WALL CONDUITS SHALL BE RIGID GALVANIZED STEEL (RGS) CONDUITS

DIRECTLY BURIED 2" PVC SCHEDULE 40 CONDUIT WITH 1 1/4" INNER DUCT FOR FIBER OPTIC CABLE AT 30" BELOW FINSIHED GRADE.

CONTRACTOR SHALL MAINTAIN A SEPARATION OF 12" BETWEEN THE COMMUNICATION CONDUITS AND SITE LIGHTING CONDUIT AT THIS POINT

4" PVC SCHEDULE 40 EMPTY CONDUIT WITH (2) 1 1/4" INNERDUCT BURIED DIRECTLY 30" BELOW FINISHED GRADE

REFER TO THE IMAGE BELOW FOR THIS IDENTIFIED LOCATION

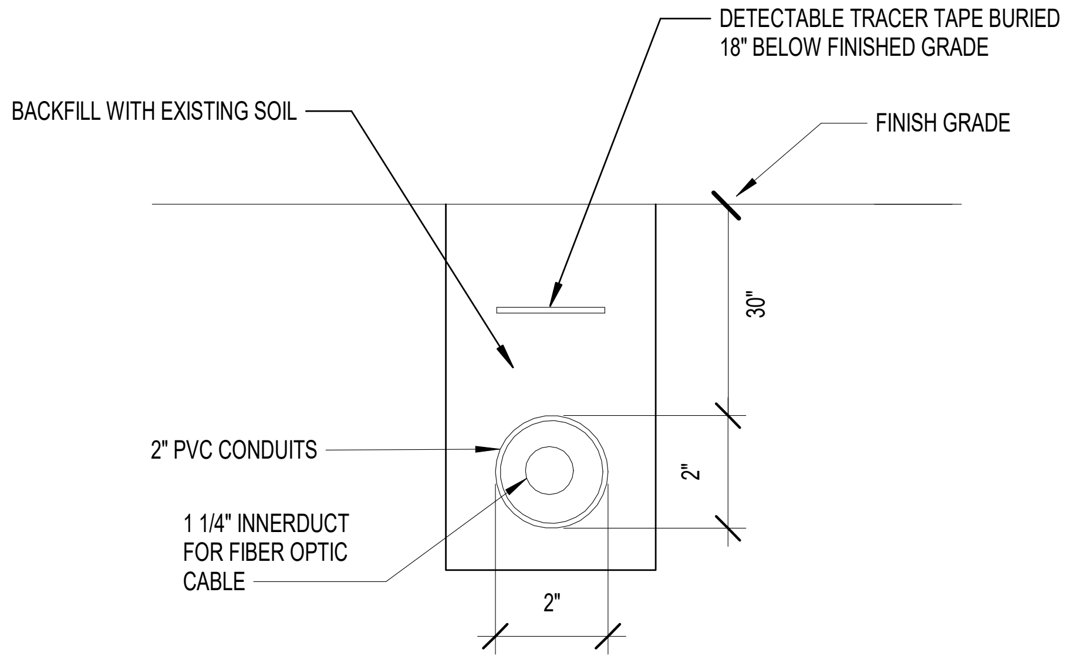
1 LEVEL 1 ELECTRICAL POWER PLAN - E1

1/16" = 1'-0"

32' 16' 8' 0

SCALE: 1/16" = 1'-0"

LOCATION OF NEMA 4X COMMUNICATION CABINET



NOTES:
CONDUIT SHALL BE PVC SCHEDULE 40 U.O.N.

2 2" CONDUIT WITH INNERDUCT FOR FIBER OPTIC CABLES

NTS

SHEET NOTES:

1. NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN. REFER LANDSCAPE DRAWINGS FOR FOUNDATION DETAILS.
2. NEMA 4X WALL MOUNTED PULL BOX (TYPICAL). CONTRACTOR SHALL SIZE PULL BOX ACCORDINGLY TO ACCOMODATE THE IDENTIFIED NUMBER OF CONDUITS.PROVIDE PULL BOX SEPARATELY FOR POWER AND LOW VOLTAGE.
3. NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL). REFER TO THE ENCIRCLED LOCATION IN THE IMAGE IN SHEET E-101-04.
4. CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 8 AND 1#8 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. REFER CIVIL DRAWINGS FOR EXACT LOCATION AND QUANTITY.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER TO SHEET E.402 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE TECHNOLOGY/COMMUNICATION SYSTEM SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
7. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULES.
8. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
9. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH NYLON PULL ROPE FOR FUTURE CABLE INSTALLATION.
10. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

1/7/2019 10:03:01 AM

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

2FM
FLEET & FACILITY MANAGEMENT

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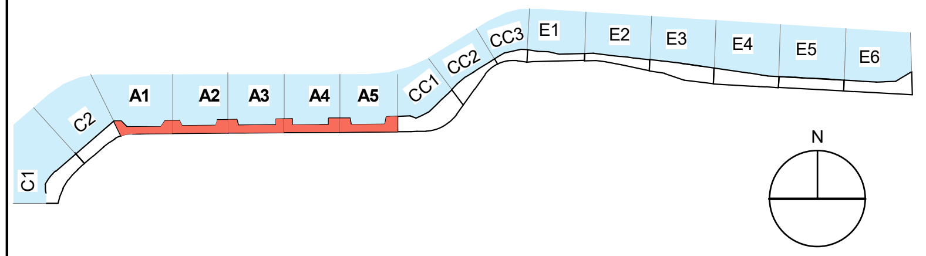
Key Plan



Issue

Riverwalk - Pathway

Issue Date:
11.07.2018

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1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
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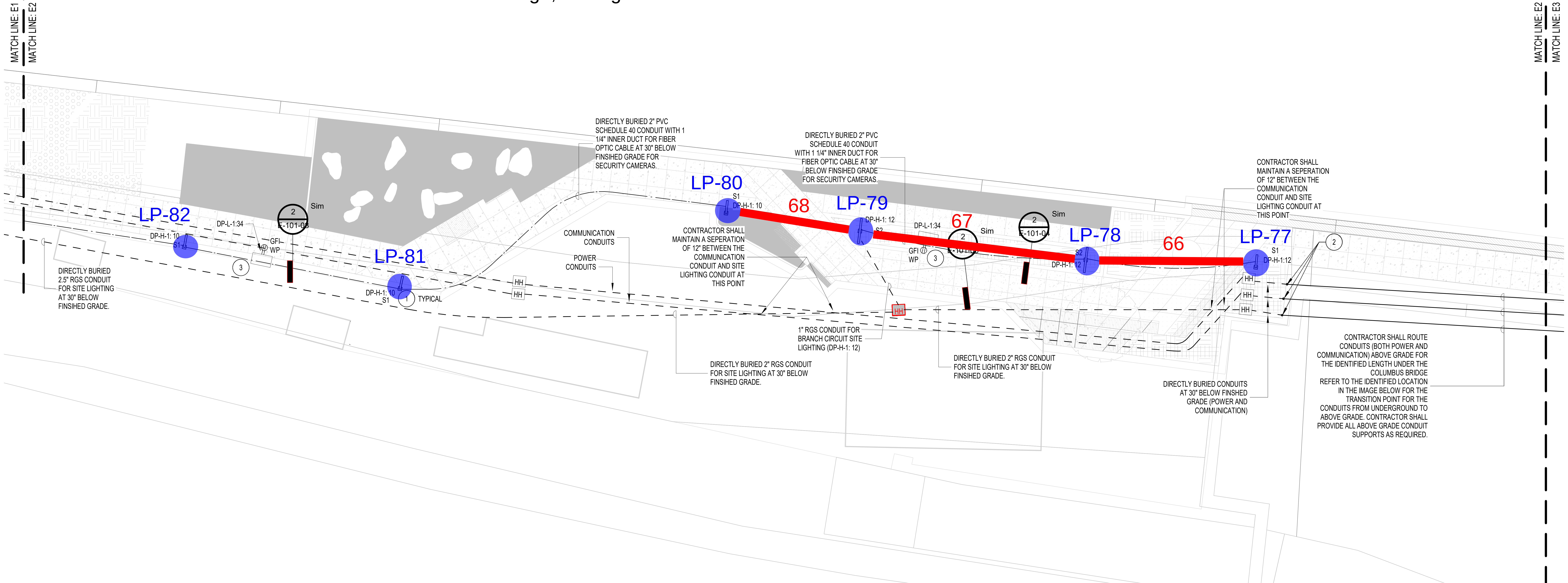
Project No: 8103

Sheet Title
LEVEL 1 ELECTRICAL POWER PLAN - E1

Sheet Number
E-101-04

Riverwalk - Chicago, IL - Light Pole Installation and Electrical Service Connection Trench Excavation



1 LEVEL 1 ELECTRICAL POWER PLAN - E2

1/16" = 1'-0"

32' 16' 8' 0
SCALE: 1/16" = 1'-0"

SHEET NOTES:

① NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN.

② CONTRACTOR SHALL TRANSITION FROM UNDERGROUND TO ABOVE GRADE CONDUITS AT THIS IDENTIFIED LOCATION. DUCTBANK ROUTING SHALL BE AVOIDED BELOW THE COLUMBUS BRIDE.
CONDUITS (BOTH POWER AND COMMUNICATION) SHALL BE STUBBED UP WITH CONDULET FITTINGS AND ROUTED ABOVE GRADE FOR THE WIDTH OF THE BRIDGE.
CONDUITS SHALL BE ROUTED AS IDENTIFIED IN THE DRAWINGS AND SHELL BE PVC COATED RIGID GALVANIZED STILL (RGS) HEAVY-WALL WHERE ROUTED EXPOSED, SURFACE MOUNTED ALONG FINISHED FLOOR.

③ CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 6 AND 1#6 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. REFER CIVIL DRAWINGS FOR EXACT LOCATION AND QUANTITY.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER TO SHEET E.402 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE TECHNOLOGY/COMMUNICATION SYSTEM SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
7. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULES.
8. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
9. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH NYLON PULL ROPE FOR FUTURE CABLE INSTALLATION.
10. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

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Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

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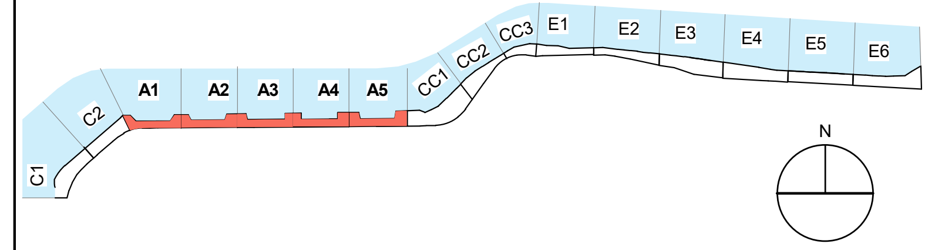
Key Plan



Issue

Riverwalk - Pathway

Issue Date: 11.07.2018

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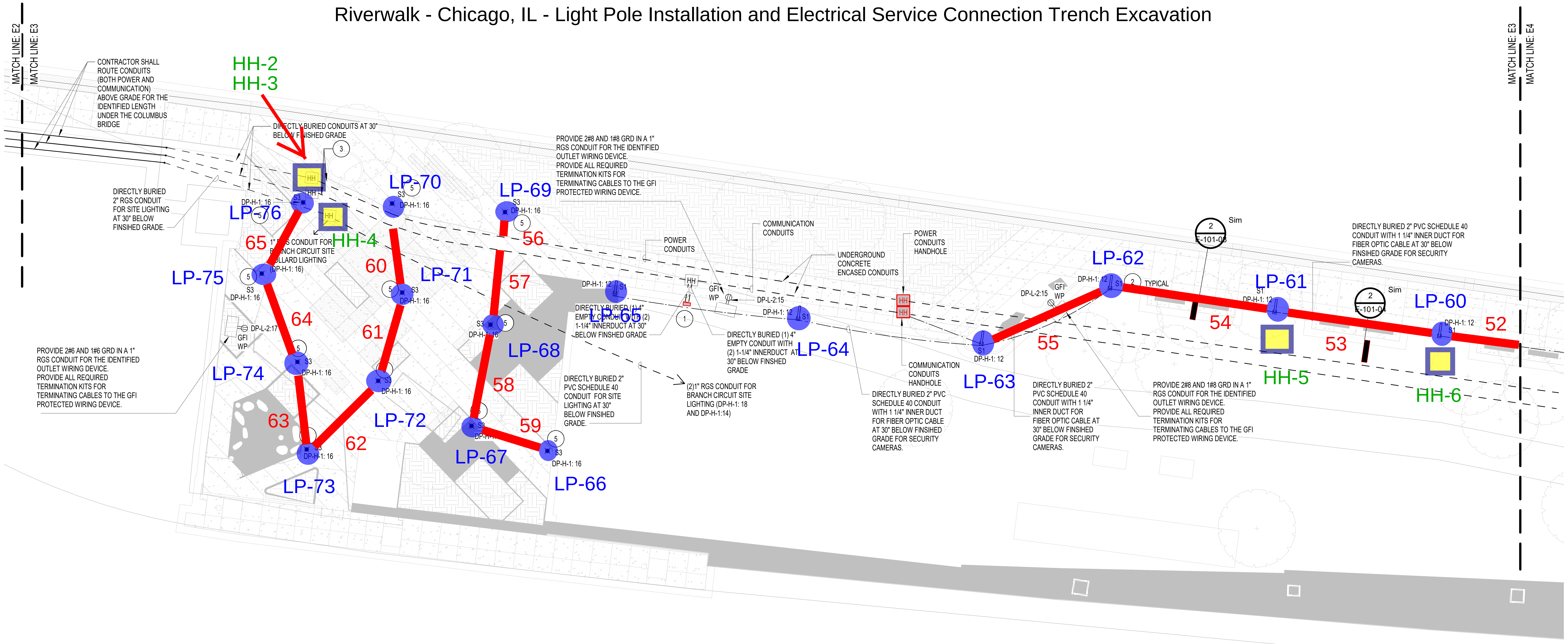
Sheet Title

LEVEL 1 ELECTRICAL POWER PLAN - E2

Sheet Number

E-101-05

Riverwalk - Chicago, IL - Light Pole Installation and Electrical Service Connection Trench Excavation



1 LEVEL 1 ELECTRICAL POWER PLAN - E3

1/16" = 1'-0"

32' 16' 8' 0

SCALE: 1/16" = 1'-0"

CONDUITS SHALL RUN ABOVE GRADE FOR THE WIDTH OF THE COLUMBUS BRIDGE TILL THIS ENCIRCLED LOCATION (EAST OF COLUMBUS BRIDGE)

CONDUITS SHALL BE DIRECTLY BURIED AT 30" BELOW FINSHED GRADE

CONCRETE ENCASED DUCTBANK. TOP IOF DUCTBANK SHALL BE 36" BELOW FINSHED GRADE. REFER DETAIL #2 IN SHEET E-101-09 FOR ADDITIONAL DETAILS ON DUCTBANK

LOCATION OF COMMUNICATION CABINET

SHEET NOTES:

① NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL)

② NEW SITE LIGHTING LED LIGHT POLES (TYPE S1/TYPE S2/TYPE S3-BOLLARD). CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN. ALL LED LIGHTING POLES SHALL OPERATE AT 277V, SINGLE PHASE.

③ CONTRACTOR SHALL TERMINATE THE DUCTBANK AT THIS IDENTIFIED LOCATION. DUCTBANK ROUTING SHALL BE AVOIDED BELOW THE COLUMBUS BRIDE.
CONDUITS (BOTH POWER AND COMMUNICATION) SHALL BE STUBBED UP AND ROUTED ABOVE GRADE FOR THE WIDTH OF THE BRIDGE. CONDUITS SHALL BE ROUTED AS IDENTIFIED IN THE DRAWINGS.

④ NOT USED.

⑤ CONTRACTOR SHALL PROVIDE DEDICATED 20A, 277V,1-PHASE CIRCUIT WITH 2#8 AND 1#8 IN A 3/4" CONDUIT FOR BOLLARD LIGHTING FIXTURES. ALL BOLLARD FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND 6-POLE CONTACTOR. REFER DETAIL #7 IN SHEET E-601-01 FOR ADDITIONAL INFORMATION AND REFER PLANS FOR BRANCH CIRCUITRY DETAILS.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. REFER CIVIL DRAWINGS FOR EXACT LOCATION AND QUANTITY.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER TO SHEET E.402 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE TECHNOLOGY/COMMUNICATION SYSTEM SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
7. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULES.
8. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
9. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH NYLON PULL ROPE FOR FUTURE CABLE INSTALLATION.
10. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

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Project

Chicago Riverwalk - Lake Shore Drive to Michigan Avenue

485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

FLEET & FACILITY MANAGEMENT

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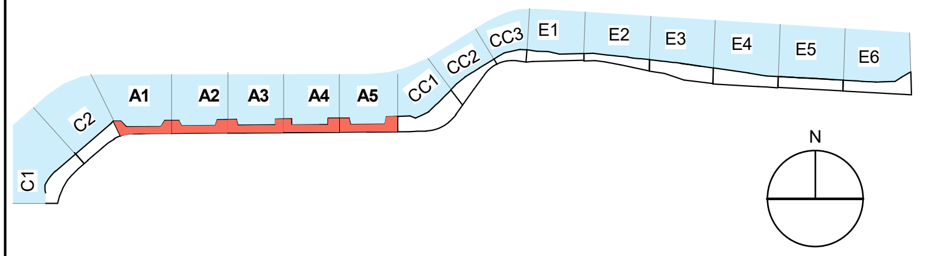
Key Plan



Issue

Riverwalk - Pathway

Issue Date:
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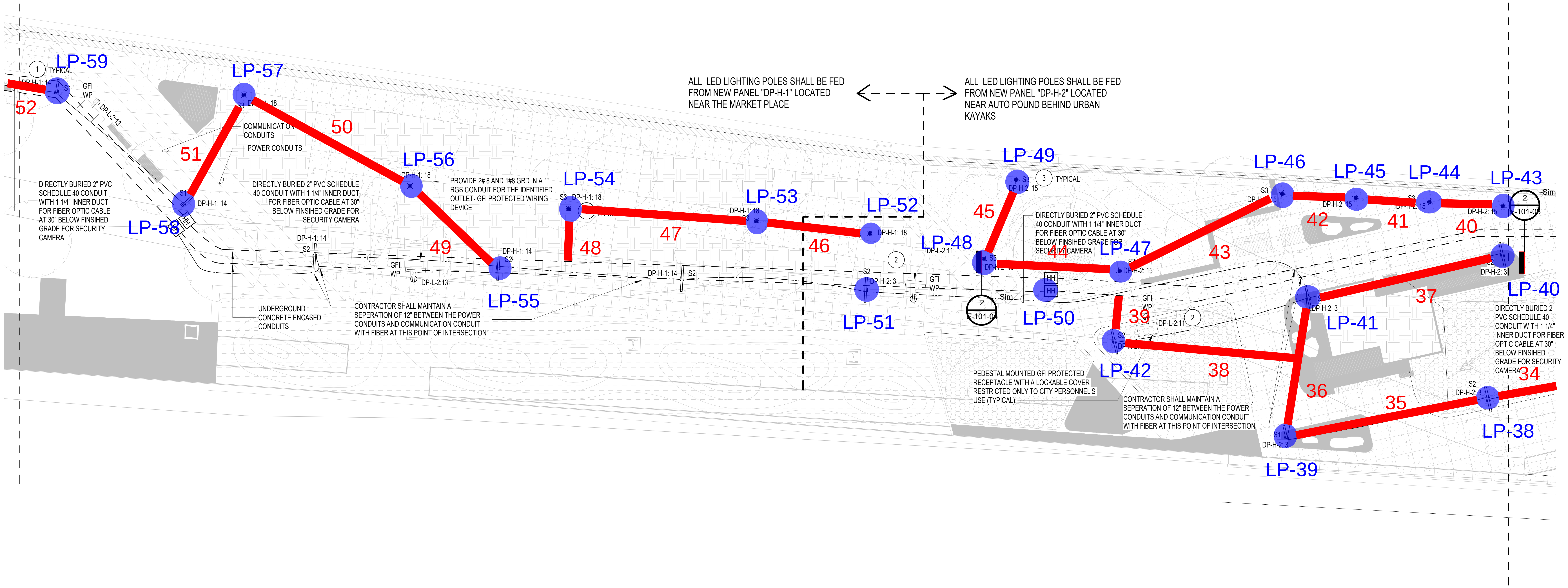
Sheet Title

LEVEL 1 ELECTRICAL POWER PLAN - E3

Sheet Number

E-101-06

Riverwalk - Chicago, IL - Light Pole Installation and Electrical Service Connection Trench Excavation



① LEVEL 1 ELECTRICAL POWER PLAN - E4

1/16" = 1'-0"

32' 16' 8' 0
SCALE: 1/16" = 1'-0"

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. HAND HOLES LOCATIONS SHOWN IS TENTATIVE. REFER CIVIL DRAWINGS FOR EXACT LOCATION.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULE.
7. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
8. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

SHEET NOTES:

① NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN. ALL LED LIGHTING POLES SHALL OPERATE AT 277V, SINGLE PHASE.

② CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 10 AND 1#10 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

③ CONTRACTOR SHALL PROVIDE DEDICATED 20A, 277V,1-PHASE CIRCUIT WITH 2#8 AND 1#8 IN A 3/4" CONDUIT FOR BOLLARD LIGHTING FIXTURES. ALL BOLLARD FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND 6-POLE CONTACTOR. REFER DETAIL #7 IN SHEET E-601-01 FOR ADDITIONAL INFORMATION AND REFER PLANS FOR BRANCH CIRCUITRY DETAILS.

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Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

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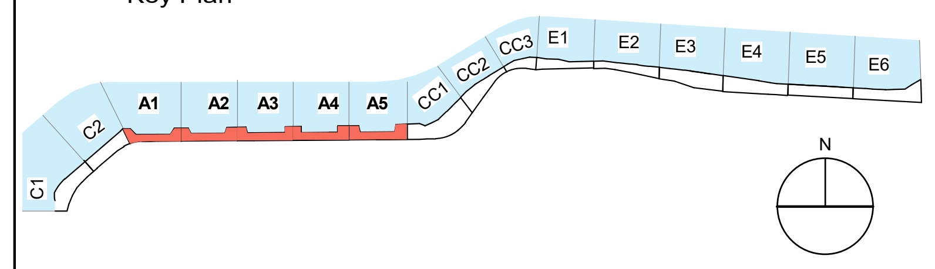
Key Plan



Issue
Riverwalk - Pathway

Issue Date: 11.07.2018

Professional Seals

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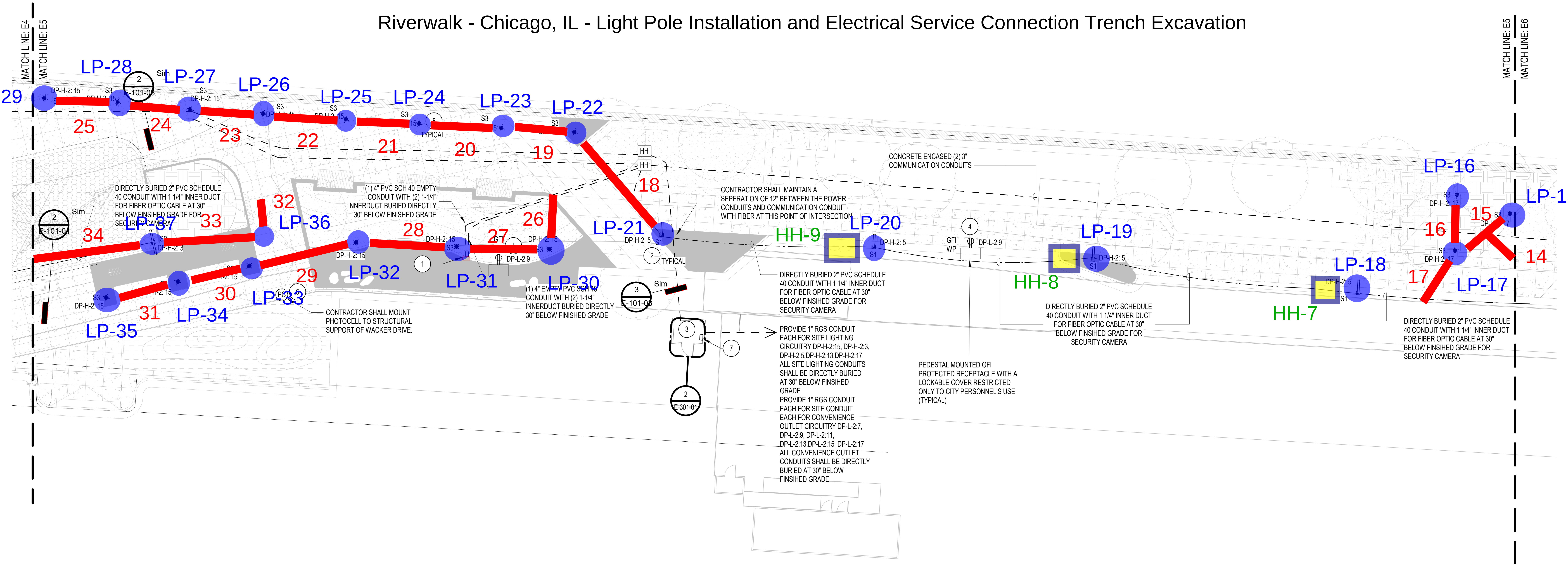
Sheet Title
LEVEL 1 ELECTRICAL POWER PLAN - E4

Sheet Number
E-101-07

Riverwalk - Chicago, IL - Light Pole Installation and Electrical Service Connection Trench Excavation

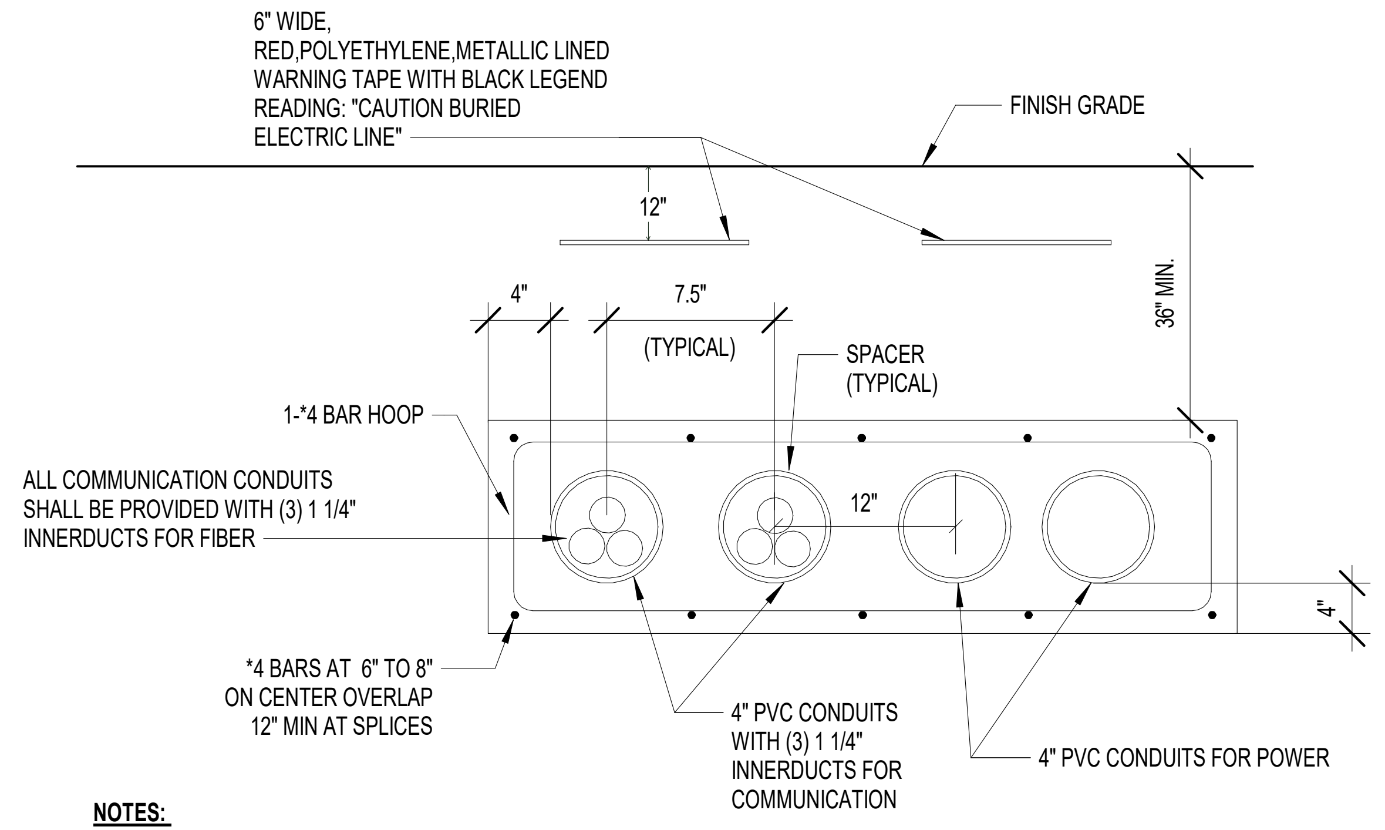


① LEVEL 1 ELECTRICAL POWER PLAN - E5

1/16" = 1'-0"

32' 16' 8' 0

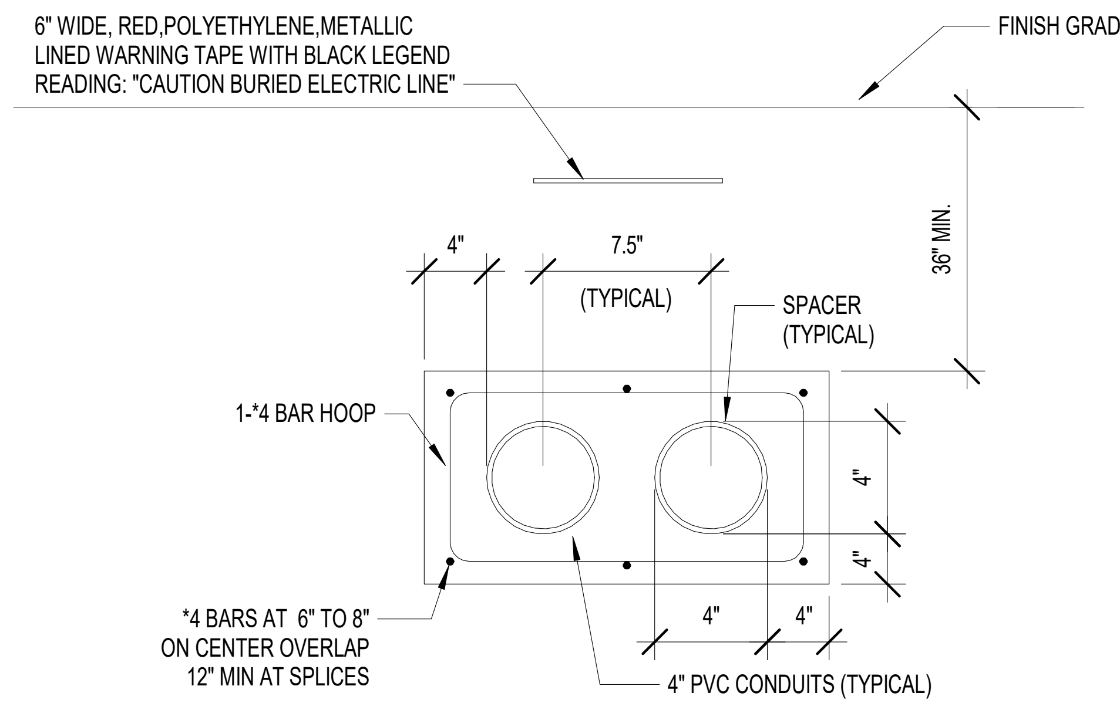
SCALE: 1/16" = 1'-0"



NOTES:
1.CONDUIT SHALL BE PVC SCHEDULE 40 U.O.N. SEE SHEET E-401-01 FOR ADDITIONAL INFORMATION.
2.CONTRACTOR SHALL MAINTAIN A 12" SEPARATION BETWEEN POWER CONDUITS AND COMMUNICATION CONDUITS TO AVOID INTERFERENCE.

② ELECTRICAL/COMMUNICATION SERVICE DUCT BANK

NTS



NOTES:
CONDUIT SHALL BE PVC SCHEDULE 40 U.O.N.

③ DUCT BANK - 2 CONDUITS

NTS

SHEET NOTES:

① NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL)

② NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN.

③ CONTRACTOR SHALL PROVIDE AND RUN (5) DEDICATED 20A, 277V,1-PHASE CIRCUIT FOR THE NEW SITE LIGHTING LED POLES AND BOLLARD LIGHTING. REFER OTHER ELECTRICAL SHEETS FOR THE QUANTITY AND LOCATION OF LIGHT FIXTURES FED FROM NEW PANEL "DP-H-2".

④ CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 10 AND 1#10 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

⑤ CONTRACTOR SHALL PROVIDE DEDICATED 20A, 277V, 1-PHASE CIRCUIT WITH 2#8 AND 1#8 IN A 3/4" CONDUIT FOR BOLLARD LIGHTING FIXTURES. ALL BOLLARD FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND 6-POLE CONTACTOR. REFER DETAIL #7 IN SHEET E-601-01 FOR ADDITIONAL INFORMATION AND REFER PLANS FOR BRANCH CIRCUITRY DETAILS.

⑥ WEATHERPROOF PHOTOCELL - 277V, 20A RATED MOUNTED IN A WEATHERPROOF BACKBOX.

⑦ LIGHTING CONTACTOR "TC-2" FOR BOLLARD LIGHTING CONTROL.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. HAND HOLES LOCATIONS SHOWN IS TENTATIVE . REFER CIVIL DRAWINGS FOR EXACT LOCATION.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULE.
7. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
8. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

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Project

Chicago Riverwalk - Lake Shore Drive to Michigan Avenue

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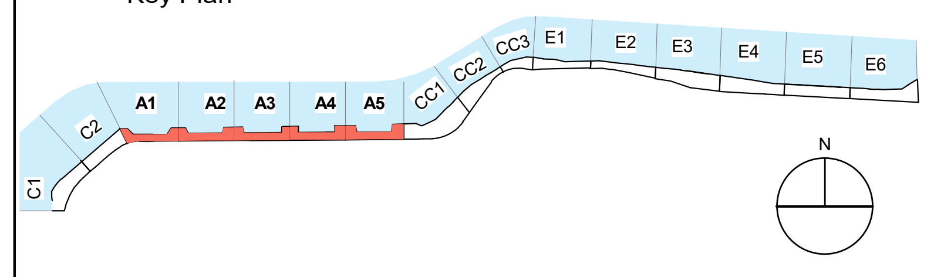
Chicago, IL 60654

Key Plan



Issue

Riverwalk - Pathway

Issue Date:
11.07.2018

Professional Seals

No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

Project No: 8103

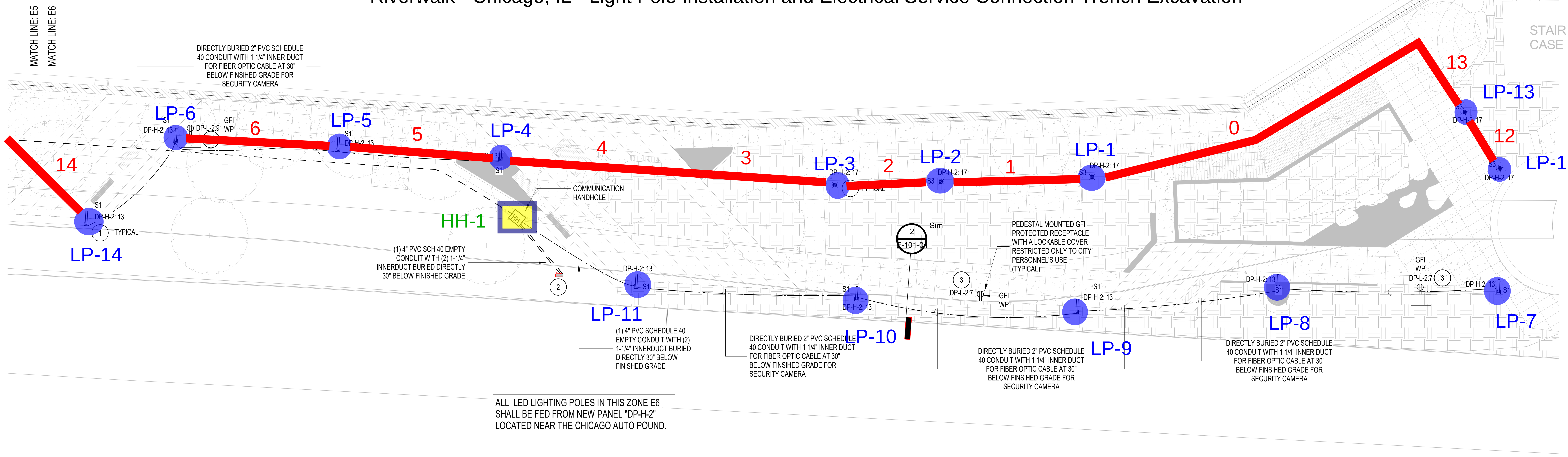
Sheet Title

LEVEL 1 ELECTRICAL POWER PLAN - E5

Sheet Number

E-101-08

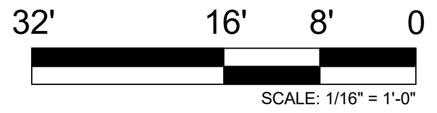
Riverwalk - Chicago, IL - Light Pole Installation and Electrical Service Connection Trench Excavation



ALL LED LIGHTING POLES IN THIS ZONE E6
SHALL BE FED FROM NEW PANEL "DP-H-2"
LOCATED NEAR THE CHICAGO AUTO POUND.

1 LEVEL 1 ELECTRICAL POWER PLAN - E6

1/16" = 1'-0"



SHEET NOTES:

① NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN.

② NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL)

③ CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 10 AND 1#10 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

④ CONTRACTOR SHALL PROVIDE DEDICATED 20A, 277V, 1-PHASE CIRCUIT WITH 2#8 AND 1#8 IN A 3/4" CONDUIT FOR BOLLARD LIGHTING FIXTURES. ALL BOLLARD FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND 6-POLE CONTACTOR. REFER DETAIL #7 IN SHEET E-601-01 FOR ADDITIONAL INFORMATION AND REFER PLANS FOR BRANCH CIRCUITRY DETAILS.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADIITIONAL INFORMATION ON DUCT BANK, HAND HOLES DIMENSIONS. HAND HOLES LOCATIONS SHOWN IS TENTATIVE . REFER CIVIL DRAWINGS FOR EXACT LOCATION AND QUANTITY.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULE.
7. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
8. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

1/7/2019 10:03:54 AM

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

2FM
FLEET & FACILITY MANAGEMENT

30 North LaSalle St.
Suite 300
Chicago, IL 60602

MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

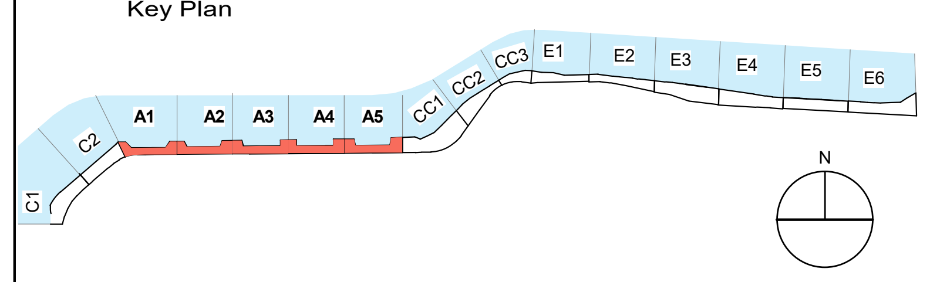
MULLER2
700 N Sangamon
Chicago, IL 60642

site
888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

db|HMS
303 W Erie St, Suite 510
Chicago, IL 60654

Key Plan



Issue
Riverwalk - Pathway

Issue Date: 11.07.2018

Professional Seals

No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

Project No: 8103

Sheet Title
LEVEL 1 ELECTRICAL POWER PLAN - E6

Sheet Number
E-101-09

Radiation Survey Form - Data

Location / Project ID:	Chicago Riverwalk - Light Pole, Trenches, and Handholes Installation
HP Technician:	Brian Schmidt
Date:	2/21/19 - 4/30/19
Instrument ID:	Ludlum Model 2221 Scaler/Ratemeter (serial # 132844)
	w/ Ludlum Model 44-10 2" NaI Detector (w/ 6" shield)
7.1 pCi/g Action Level:	7,391 cpm

Light Poles

	Depth	0'-4' Max (bgs)		Depth	0'-4' Max (bgs)
Date	Light Pole ID	Survey Results (cpm)	Date	Light Pole ID	Survey Results (cpm)
2/21/2019	0	NA	4/11/2019	32	2500
2/21/2019	1	4100	4/11/2019	33	3500
2/21/2019	2	3500	4/11/2019	34	2800
2/21/2019	3	2800	4/12/2019	35	3500
2/21/2019	4	2800	4/12/2019	36	3300
2/21/2019	5	2100	4/12/2019	37	4000
2/21/2019	6	3300	4/15/2019	38	2500
2/21/2019	7	3400	4/29/2019	39	3400
2/21/2019	8	3200	4/30/2019	40	3000
2/21/2019	9	4100	4/30/2019	41	2900
2/21/2019	10	3700	4/26/2019	42	3800
2/21/2019	11	2900	4/1/2019	43	4200
2/18/2019	12	4300	4/1/2019	44	4100
2/18/2019	13	5000	4/1/2019	45	3300
3/26/2019	14	3300	4/1/2019	46	2800
3/26/2019	15	2800	4/2/2019	47	3400
3/26/2019	16	3100	4/3/2019	48	4300
3/26/2019	17	3300	3/29/2019	49	4700
3/26/2019	18	2600	3/29/2019	50	2600
3/27/2019	19	4000	3/29/2019	51	2800
3/29/2019	20	2600	3/29/2019	52	4300
4/3/2019	21	3100	3/28/2019	53	3900
3/30/2019	22	1700	3/28/2019	54	4600
4/1/2019	23	4200	3/28/2019	55	3600
4/1/2019	24	3000	3/28/2019	56	3900
4/1/2019	25	2200	3/21/2019	57	5100
4/1/2019	26	1800	3/21/2019	58	3100
4/1/2019	27	2800	3/18/2019	59	4100
4/1/2019	28	4100	3/18/2019	60	3500
4/1/2019	29	4700	3/15/2019	61	3200
4/3/2019	30	3100	3/14/2019	62	3900
4/3/2019	31	3600	3/15/2019	63	3100

	Depth	0'-4' Max (bgs)
Date	Light Pole ID	Survey Results (cpm)
3/12/2019	64	3600
3/13/2019	65	2600
3/15/2019	66	3800
3/15/2019	67	4000
3/14/2019	68	4100
3/13/2019	69	3800
3/13/2019	70	1900
3/13/2019	71	3200
3/13/2019	72	3400
3/12/2019	73	3300
3/12/2019	74	4200
3/12/2019	75	2600
3/12/2019	76	2800
4/5/2019	77	2500
4/5/2019	78	2600
4/5/2019	79	3500
4/5/2019	80	4300
3/29/2019	81	4700
3/28/2019	82	2300
3/28/2019	83	3300
3/29/2019	84	2600
3/27/2019	85	2600
3/27/2019	86	2900
3/19/2019	87	3200
3/19/2019	88	3600
3/14/2019	89	2200
3/14/2019	90	3300
3/14/2019	91	3000

Handholes

	Depth	0"-18" (bgs)	18"-36" (bgs)	36"-54" (bgs)	54"-72" (bgs)	60"-78" (bgs)
Date	Handhole ID	Survey Results (cpm)				
2/23/2019	HH-1	2700	2800	3000	3400	3700
3/12/2019	HH-2	1800	2100	2600	2800	NS
3/12/2019	HH-3	NS	NS	NS	NS	NS
3/12/2019	HH-4	2200	2300	2900	2600	NS
3/14/2019	HH-5	2200	1800	1800	1900	NS
3/14/2019	HH-6	2400	2700	2900	3300	NS
3/14/2019	HH-7	2600	2900	2700	3000	NS
3/15/2019	HH-8	2400	2500	2800	3200	NS
3/18/2019	HH-9	2400	2700	3100	3600	NS

Light Pole Trenches

	Depth	0"-18" (bgs)	18"-36" (bgs)	36"-54" (bgs)
Date	Trench ID	Survey Results (cpm)		
2/21/2019	0	2800	3100	3700
2/21/2019	1	2600	2700	3300
2/21/2019	2	2600	3100	3400
2/21/2019	3	2900	3100	3200
2/21/2019	4	2300	2800	3700
2/21/2019	5	2600	3200	3400
2/21/2019	6	2800	3200	3600
2/21/2019	7	NA	NA	NA
2/21/2019	8	NA	NA	NA
2/21/2019	9	NA	NA	NA
2/21/2019	10	NA	NA	NA
2/21/2019	11	NA	NA	NA
2/18/2019	12	2900	3300	3400
2/18/2019	13	2500	3200	4100
3/26/2019	14	2100	2600	2700
3/26/2019	15	2700	3000	3300
3/26/2019	16	2600	2800	2900
3/26/2019	17	2600	2900	3300
4/1/2019	18	2900	3100	3700
3/30/2019	19	2100	2400	2700
4/1/2019	20	2800	3300	3700
4/1/2019	21	1700	2100	2400
4/1/2019	22	1900	2100	2400
4/1/2019	23	2400	2700	NS
4/1/2019	24	2200	2300	NS
4/1/2019	25	2800	3100	3600
4/3/2019	26	2500	3200	3600
4/3/2019	27	2700	3100	NS
4/11/2019	28	2200	2500	2600
4/11/2019	29	2400	2600	2900
4/11/2019	30	2300	2900	3500
4/12/2019	31	2500	3000	3400
4/12/2019	32	2300	2700	3200
4/12/2019	33	2100	3200	4000
4/15/2019	34	2100	2300	2600
4/29/2019	35	2600	2900	3100
4/29/2019	36	2100	2500	2600
4/30/2019	37	2700	3600	4000
4/29/2019	38	2300	2400	2900
4/26/2019	39	2600	3100	3400
4/1/2019	40	2400	3200	3700

	Depth	0"-18" (bgs)	18"-36" (bgs)	36"-54" (bgs)
Date	Trench ID	Survey Results (cpm)		
4/1/2019	41	2600	3000	3600
4/1/2019	42	2300	3000	3100
4/2/2019	43	2900	3600	4100
4/3/2019	44	2700	3200	3800
4/3/2019	45	3100	3900	4800
3/29/2019	46	3000	3800	4100
3/28/2019	47	3200	3700	4300
3/28/2019	48	2600	3200	3800
3/28/2019	49	2900	3800	4200
3/28/2019	50	3100	3700	5200
3/21/2019	51	3000	3600	3900
3/18/2019	52	3000	3800	4100
3/18/2019	53	2800	3400	3700
3/15/2019	54	2800	3100	3600
3/15/2019	55	2900	3400	3700
3/13/2019	56	2800	3600	4100
3/13/2019	57	3000	4000	4500
3/15/2019	58	2800	3600	4100
3/15/2019	59	2900	3000	3400
3/13/2019	60	2600	2900	3400
3/13/2019	61	2500	2600	3100
3/12/2019	62	2800	3300	3500
3/12/2019	63	2600	3600	4100
3/12/2019	64	2400	2900	3200
3/12/2019	65	2400	2800	3000
4/5/2019	66	1700	1800	2400
4/5/2019	67	2100	2600	2900
4/5/2019	68	2400	2800	3100
3/29/2019	69	2000	2100	2300
3/29/2019	70	3100	4200	4700

Appendix F – Boat Ramp Excavation

3/22/19 – 3/26/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Page 1 of 1

sahci
Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: Riverwalk - Chicago, IL - Boat Ramp Installation Excavation - ROW Radiological Soil Survey

Date: 3/22-26/2019 **Technician:** Brian Schmidt

Inst Model: Ludlum - 2221 **Serial No. :** 132844

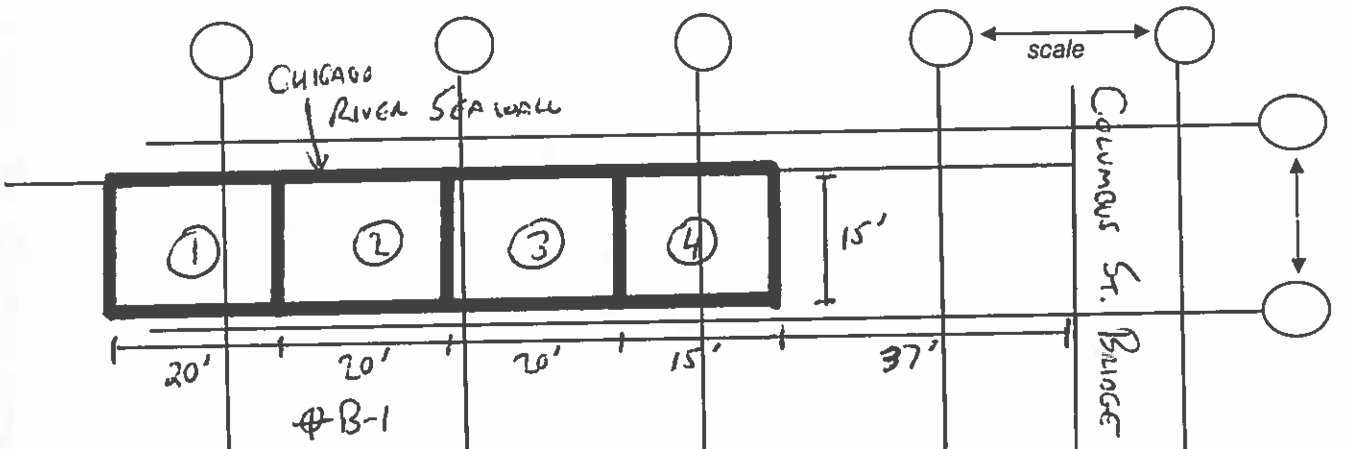
Probe Type: 1"x1" NaI / [✓ 2"x2" NaI]
[✓ Shielded] / Not Shielded

Lift Elevation: 0-84"

Background 2316 cpm **Action Level:** 7391 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

N



Excavation ID	Depth	cpm	Excavation ID	Depth	cpm
①	0-18"	2500	③	0-18"	2900
	18-36"	2900		18-36"	3300
	36-54"	3300		36-54"	3800
	54-72"	3700		54-72"	3600
	72-90"	3400		72-90"	2700
	84-102"	3100		84-102"	2800
②	0-18"	2600	④	0-18"	2800
	18-36"	2600		18-36"	2700
	36-54"	3800		36-54"	2800
	54-72"	4100		54-72"	3500
	72-90"	3700		72-90"	3600
	84-102"	2700		84-102"	3000

B-1 = 2316 cpm (Background 1 min Count)

Appendix G – Columbus Dr. Bridge Concrete Removal

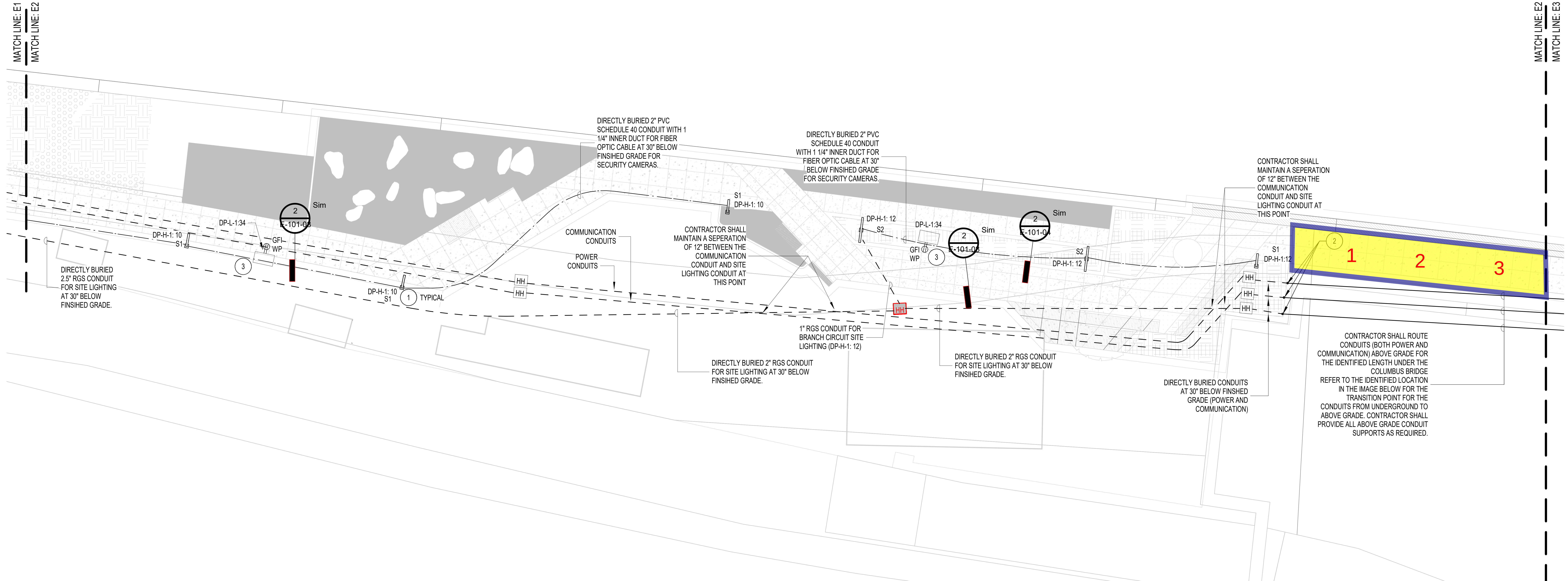
4/5/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Columbus Street Bridge Concrete Replacement - Radiological Surface Survey Location Map 4/5/19



① LEVEL 1 ELECTRICAL POWER PLAN - E2

1/16" = 1'-0"

32' 16' 8' 0

SCALE: 1/16" = 1'-0"

Surface Survey Location ID	Depth	Counts Per Minute (cpm)
1	0-12"	1300
	12-30"	1500
2	0-12"	1000
	12-30"	1400
3	0-12"	1200
	12-30"	1300

SHEET NOTES:

① NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN.

② CONTRACTOR SHALL TRANSITION FROM UNDERGROUND TO ABOVE GRADE CONDUITS AT THIS IDENTIFIED LOCATION. DUCTBANK ROUTING SHALL BE AVOIDED BELOW THE COLUMBUS BRIDE.
CONDUITS (BOTH POWER AND COMMUNICATION) SHALL BE STUBBED UP WITH CONDULET FITTINGS AND ROUTED ABOVE GRADE FOR THE WIDTH OF THE BRIDGE.
CONDUITS SHALL BE ROUTED AS IDENTIFIED IN THE DRAWINGS AND SHELL BE PVC COATED RIGID GALVANIZED STILL (RGS) HEAVY-WALL WHERE ROUTED EXPOSED, SURFACE MOUNTED ALONG FINISHED FLOOR.

③ CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 6 AND 1#6 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. REFER CIVIL DRAWINGS FOR EXACT LOCATION AND QUANTITY.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER TO SHEET E.402 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE TECHNOLOGY/COMMUNICATION SYSTEM SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
7. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULES.
8. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
9. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH NYLON PULL ROPE FOR FUTURE CABLE INSTALLATION.
10. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

1/7/2019 10:03:13 AM

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

2FM
FLEET & FACILITY MANAGEMENT

30 North LaSalle St.
Suite 300
Chicago, IL 60602

MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

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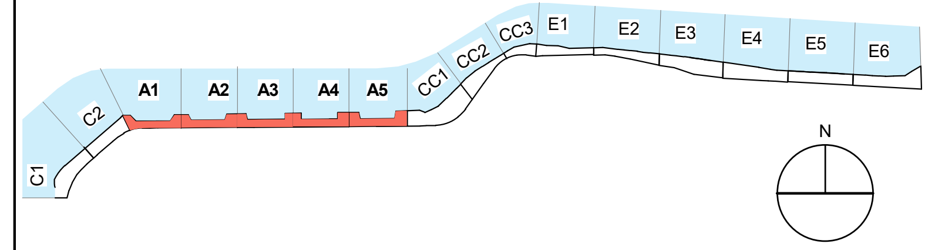


Issue

Riverwalk - Pathway

Issue Date:
11.07.2018

Professional Seals

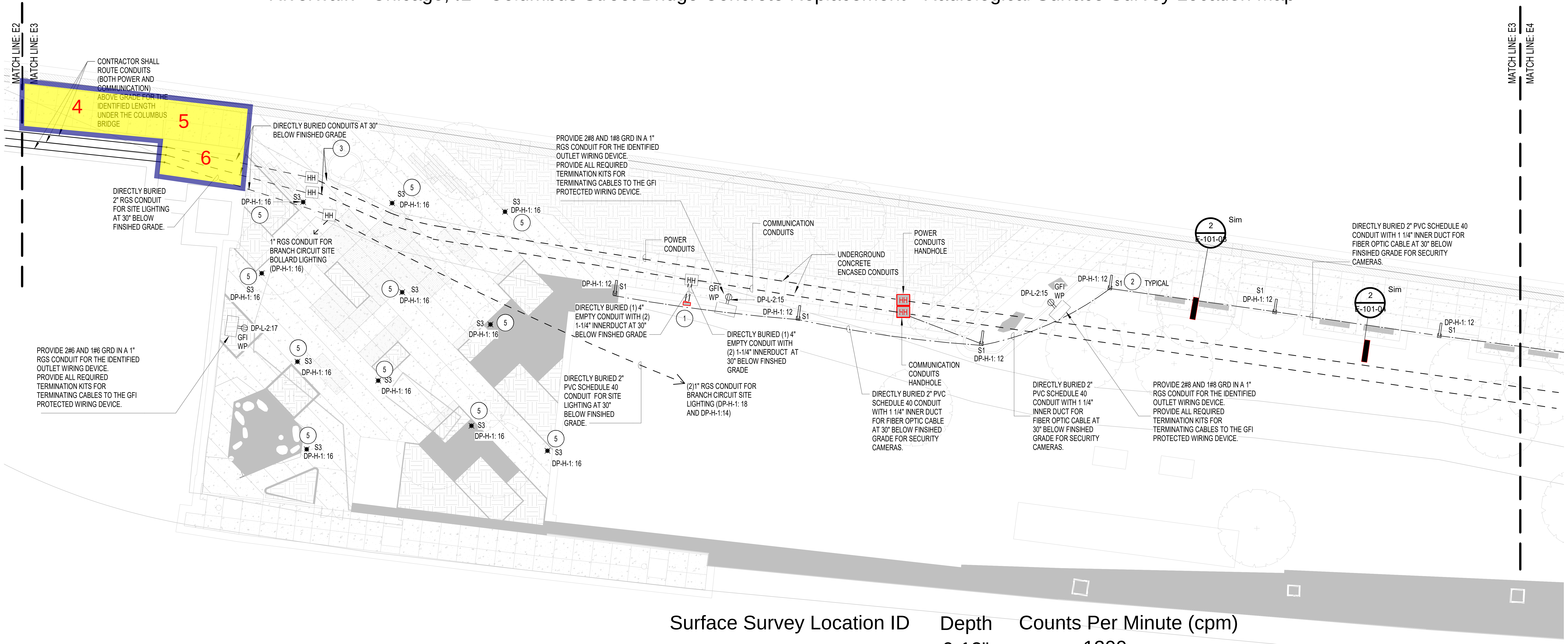
No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

Project No: 8103

Sheet Title
LEVEL 1 ELECTRICAL POWER PLAN - E2

Sheet Number
E-101-05

Riverwalk - Chicago, IL - Columbus Street Bridge Concrete Replacement - Radiological Surface Survey Location Map



Surface Survey Location ID	Depth	Counts Per Minute (cpm)
4	0-12"	1200
	12-30"	1600
5	0-12"	1100
	12-30"	1400
6	0-18"	1600
	18-36"	1700
	36-54"	1900
	48-66"	2100

1 LEVEL 1 ELECTRICAL POWER PLAN - E3

1/16" = 1'-0"

32' 16' 8' 0
SCALE: 1/16" = 1'-0"

CONDUITS SHALL RUN ABOVE GRADE FOR THE WIDTH OF THE COLUMBUS BRIDGE TILL THIS ENCIRCLED LOCATION (EAST OF COLUMBUS BRIDGE)

CONDUITS SHALL BE DIRECTLY BURIED AT 30" BELOW FINSHED GRADE

CONCRETE ENCASED DUCTBANK. TOP IOF DUCTBANK SHALL BE 36" BELOW FINSHED GRADE. REFER DETAIL #2 IN SHEET E-101-09 FOR ADDITIONAL DETAILS ON DUCTBANK

LOCATION OF COMMUNICATION CABINET

SHEET NOTES:

① NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL)

② NEW SITE LIGHTING LED LIGHT POLES (TYPE S1/TYPE S2/TYPE S3-BOLLARD). CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN. ALL LED LIGHTING POLES SHALL OPERATE AT 277V, SINGLE PHASE.

③ CONTRACTOR SHALL TERMINATE THE DUCTBANK AT THIS IDENTIFIED LOCATION. DUCTBANK ROUTING SHALL BE AVOIDED BELOW THE COLUMBUS BRIDE.
CONDUITS (BOTH POWER AND COMMUNICATION) SHALL BE STUBBED UP AND ROUTED ABOVE GRADE FOR THE WIDTH OF THE BRIDGE. CONDUITS SHALL BE ROUTED AS IDENTIFIED IN THE DRAWINGS.

④ NOT USED.

⑤ CONTRACTOR SHALL PROVIDE DEDICATED 20A, 277V,1-PHASE CIRCUIT WITH 2#8 AND 1#8 IN A 3/4" CONDUIT FOR BOLLARD LIGHTING FIXTURES. ALL BOLLARD FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND 6-POLE CONTACTOR. REFER DETAIL #7 IN SHEET E-601-01 FOR ADDITIONAL INFORMATION AND REFER PLANS FOR BRANCH CIRCUITRY DETAILS.

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7. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULES.
8. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
9. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH NYLON PULL ROPE FOR FUTURE CABLE INSTALLATION.
10. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

2FM
FLEET & FACILITY MANAGEMENT

30 North LaSalle St.
Suite 300
Chicago, IL 60602

MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

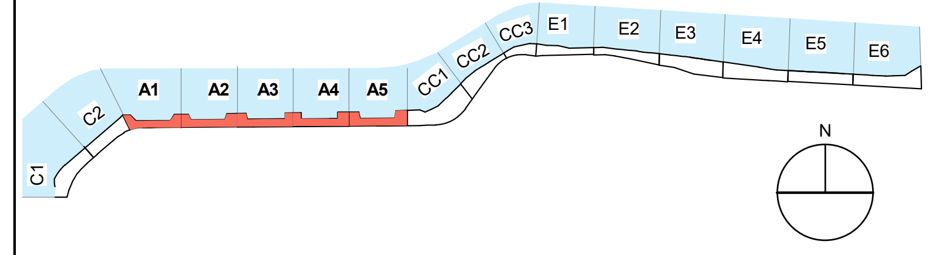
MULLER2
700 N Sangamon
Chicago, IL 60642

site
888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

db|HMS
303 W Erie St, Suite 510
Chicago, IL 60654

Key Plan



Issue
Riverwalk - Pathway

Issue Date: 11.07.2018

Professional Seals

No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

Project No: 8103

Sheet Title
LEVEL 1 ELECTRICAL POWER PLAN - E3

Sheet Number
E-101-06

1/7/2019 10:03:23 AM

Appendix H – Wacker Drive Fence Post Installation

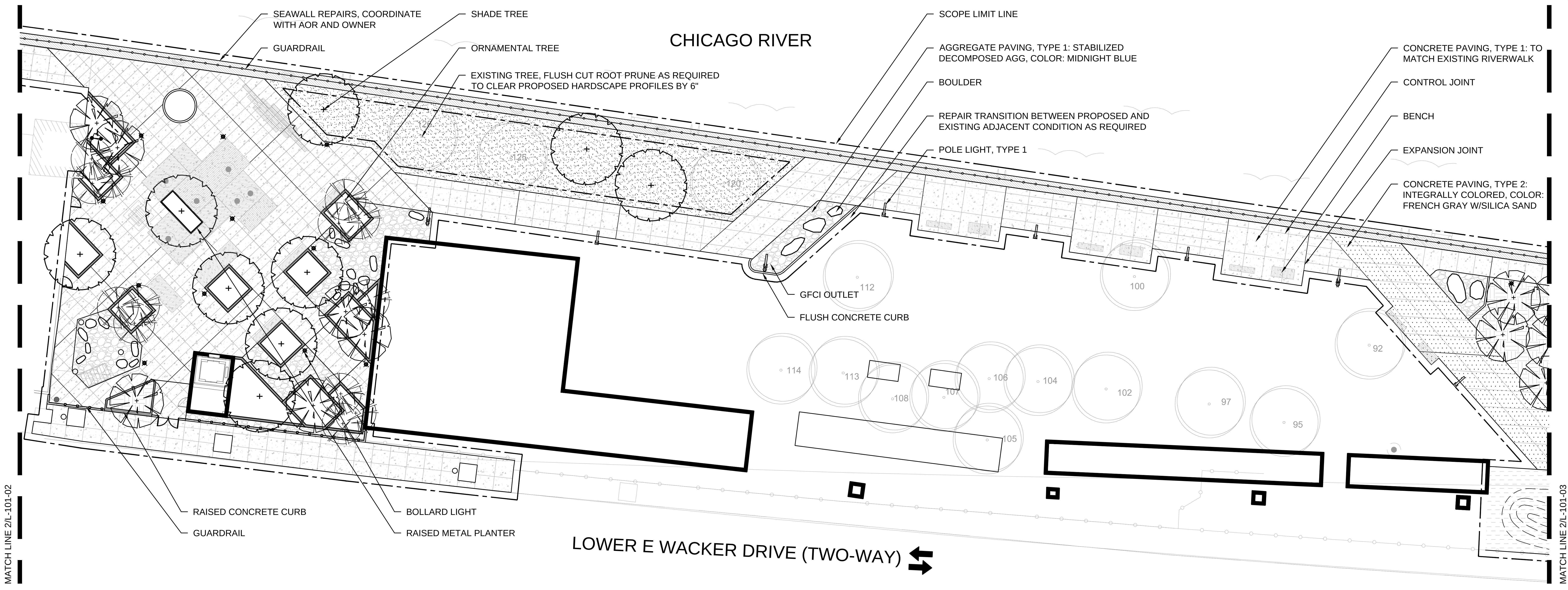
4/8/19 – 4/26/19

Chicago Riverwalk

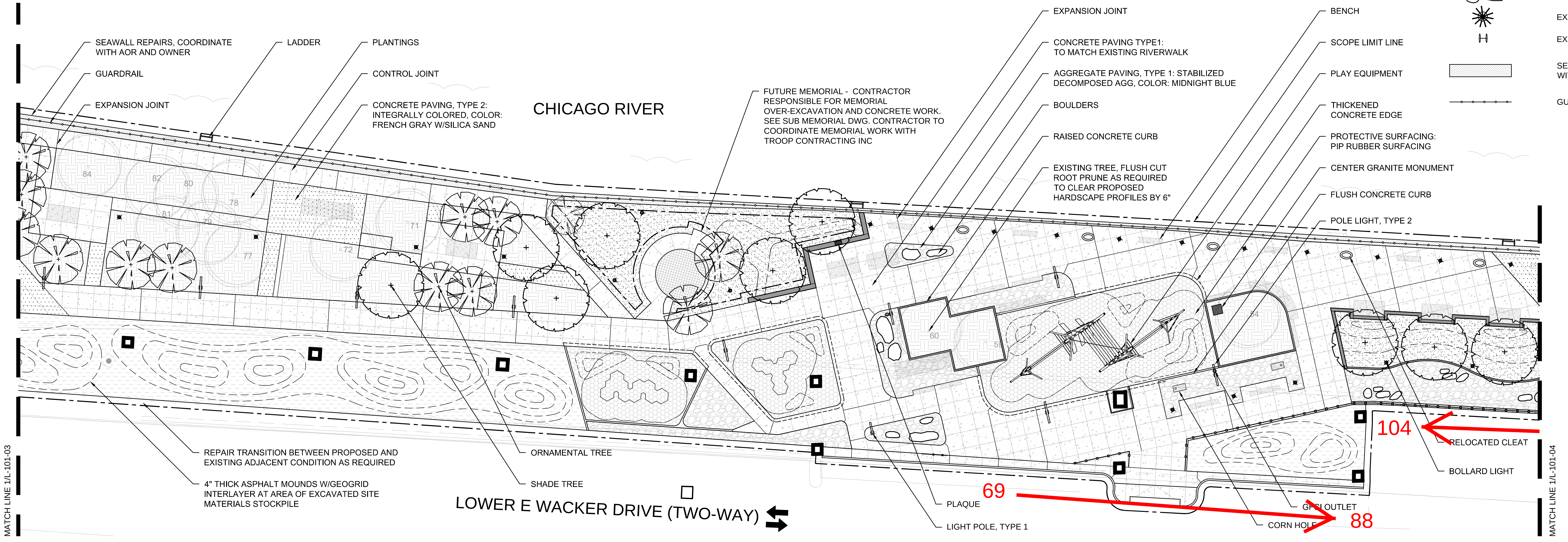
Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Fence Post Replacement Installation Excavation - Radiological Soil Survey Location Map



1 LANDSCAPE SITE PLAN
1" = 20'-0"



2 LANDSCAPE SITE PLAN
1" = 20'-0"

* - Fence Posts Installed in an 8-foot spacing to a depth of 4-feet below ground surface (bgs)

1/8/2019 7:31:48 PM

LEGEND

— · — · —	SCOPE LIMIT LINE
▭	CONCRETE PAVING, TYPE 1: TO MATCH EXISTING RIVERWALK
▨	CONCRETE PAVING, TYPE 2: INTEGRALLY COLORED, COLOR: FRENCH GRAY W/SILICA SAND
▨	PROTECTIVE SURFACING: PIP RUBBER SURFACING
▨	AGGREGATE PAVING, TYPE 1: STABILIZED DECOMPOSED AGG, COLOR: MIDNIGHT BLUE
▭	ASPHALT PAVING
▬	CONCRETE SEAWALL
—	RAISED CONCRETE CURB
—	FLUSH CONCRETE CURB
▭	BENCH
▨	TABLE
⊸	POLE LIGHT, TYPE 1
⊸	POLE LIGHT, TYPE 2
✱	BOLLARD LIGHT
•	GFCI OUTLET
⊏	LADDER
▨	PLANTINGS
▨	SOD
○	EXISTING TREE, FLUSH CUT ROOT PRUNE AS REQUIRED TO CLEAR PROPOSED HARDSCAPE PROFILES BY 6"
⊕	SHADE TREE
✳	ORNAMENTAL TREE
○	BOULDERS
✷	EXISTING SCULPTURE
H	EXISTING LADDER
▨	SEAWALL REPAIRS, COORDINATE WITH AOR AND OWNER
—+—+—	GUARDRAIL

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
Project Address
485 E Lake Shore Drive to 101 E Michigan Avenue
Prepared For

2FM

30 North LaSalle St.
Suite 300
Chicago, IL 60602

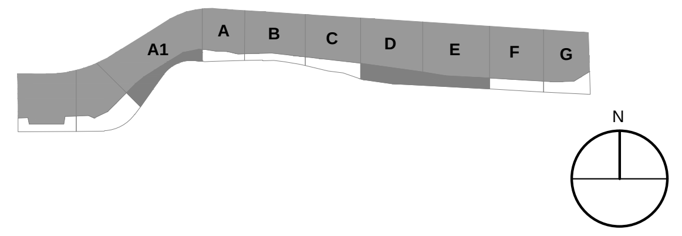
MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

MULLER2
700 N Sangamon
Chicago, IL 60642

site
888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

Key Plan



Issue
Riverwalk - Pathway

Issue Date: 01.07.2019

Professional Seals

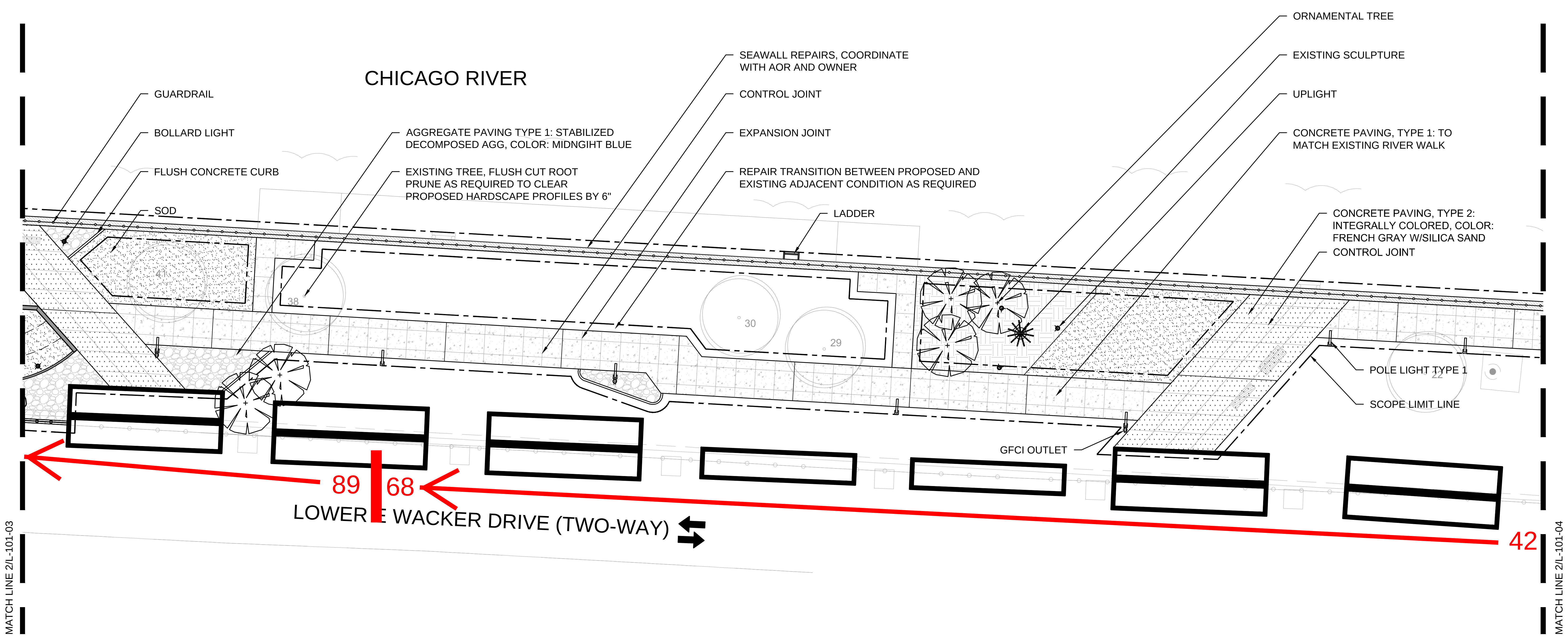
No.	Description	Date
1	Issued For Pricing	11.27.2018
2	Issued For Permit	12.04.2018
3	Issued For Construction	01.07.2019

Project No: 8103

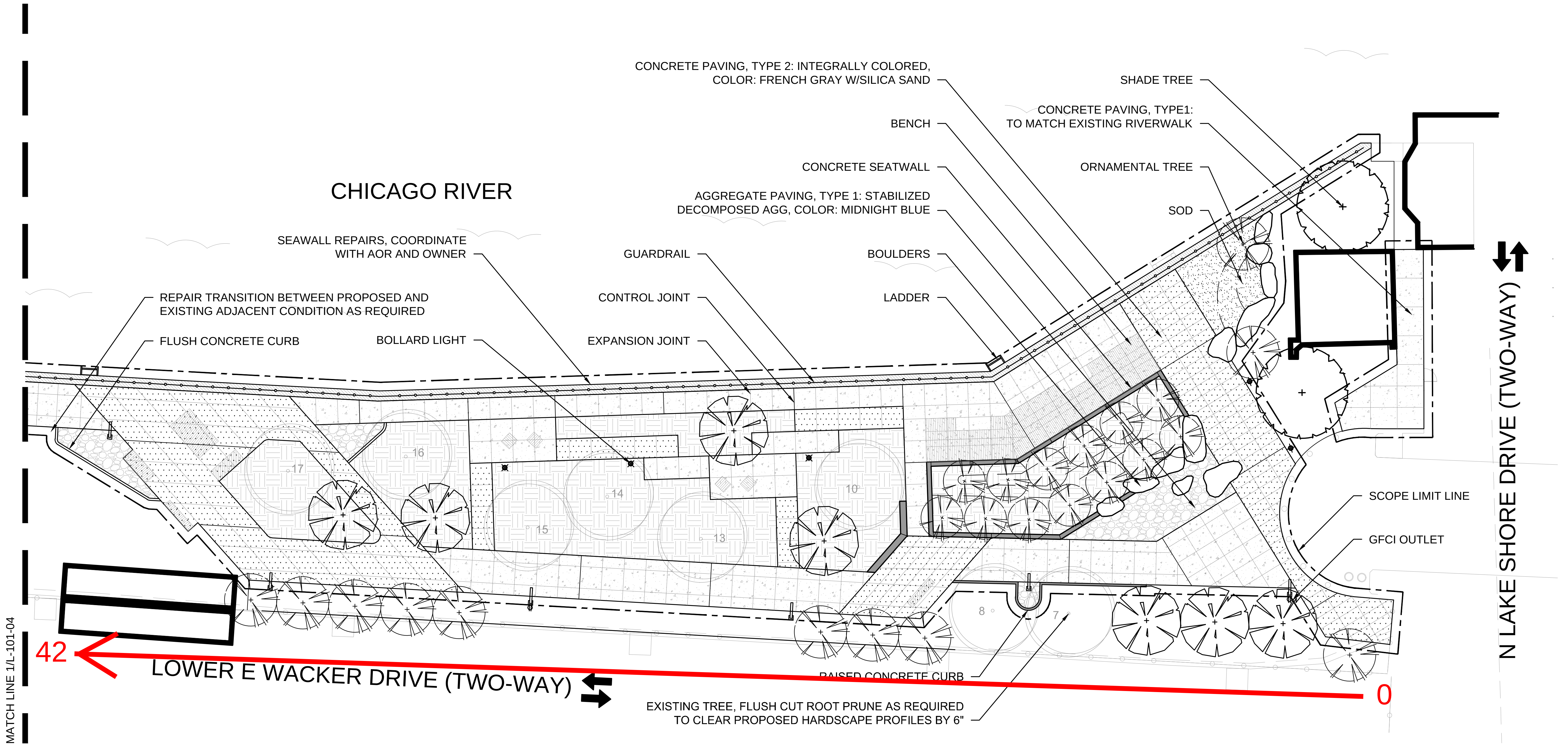
Sheet Title
LANDSCAPE
SITE PLANS
(FOR REFERENCE ONLY)

Sheet Number
L-101-03

Riverwalk - Chicago, IL - Fence Post Replacement Installation Excavation - Radiological Soil Survey Location Map



① LANDSCAPE SITE PLAN
1" = 20'-0"



② LANDSCAPE SITE PLAN
1" = 20'-0"

* - Fence Posts Installed in an 8-foot spacing to a depth of 4-feet below ground surface (bgs)

LEGEND

- SCOPE LIMIT LINE
- CONCRETE PAVING, TYPE 1: TO MATCH EXISTING RIVERWALK
- CONCRETE PAVING, TYPE 2: INTEGRALLY COLORED, COLOR: FRENCH GRAY W/SILICA SAND
- PROTECTIVE SURFACING: PIP RUBBER SURFACING
- AGGREGATE PAVING, TYPE 1: STABILIZED DECOMPOSED AGG, COLOR: MIDNIGHT BLUE
- ASPHALT PAVING
- CONCRETE SEAWALL
- RAISED CONCRETE CURB
- FLUSH CONCRETE CURB
- BENCH
- TABLE
- POLE LIGHT, TYPE 1
- POLE LIGHT, TYPE 2
- BOLLARD LIGHT
- GFCI OUTLET
- LADDER
- PLANTINGS
- SOD
- EXISTING TREE, FLUSH CUT ROOT PRUNE AS REQUIRED TO CLEAR PROPOSED HARDSCAPE PROFILES BY 6"
- SHADE TREE
- ORNAMENTAL TREE
- BOULDERS
- EXISTING SCULPTURE
- EXISTING LADDER
- SEAWALL REPAIRS, COORDINATE WITH AOR AND OWNER
- GUARDRAIL

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
Project Address
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Prepared For

2FM

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MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

MULLER2
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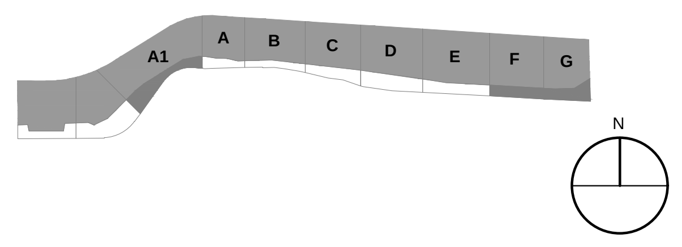
Key Plan



Issue
Riverwalk - Pathway

Issue Date:
01.07.2019

Professional Seals

No.	Description	Date
1	Issued For Pricing	11.27.2018
2	Issued For Permit	12.04.2018
3	Issued For Construction	01.07.2019

Project No: 8103
Sheet Title
LANDSCAPE
SITE PLANS
(FOR REFERENCE ONLY)

Sheet Number
L-101-04

1/8/2019 7:31:45 PM

Radiation Survey Form - Data

Location / Project ID:	Chicago Riverwalk - Fence Post Installation
HP Technician:	Brian Schmidt
Date:	4/8/2019 - 4/26/19
Instrument ID:	Ludlum Model 2221 Scaler/Ratemeter (serial # 132844) w/ Ludlum Model 44-10 2" NaI Detector (w/ 6" shield)
7.1 pCi/g Action Level:	7,391 cpm

	Depth	0'-4' (bgs)	Soil Spoils		Depth	0'-4' (bgs)	Soil Spoils
Date	Excavation ID	Survey Results (cpm)		Date	Excavation ID	Survey Results (cpm)	
4/8/2019	0	2000	1700	4/9/2019	34	4900	1500
4/8/2019	1	2100	1500	4/9/2019	35	4300	1300
4/8/2019	2	2400	1600	4/9/2019	36	5600	1800
4/8/2019	3	3000	1200	4/9/2019	37	5300	1700
4/8/2019	4	3100	1500	4/9/2019	38	4800	1900
4/8/2019	5	1900	1400	4/9/2019	39	1600	1100
4/8/2019	6	3400	1900	4/9/2019	40	2800	1400
4/8/2019	7	3600	1800	4/9/2019	41	3000	1400
4/8/2019	8	2600	1200	4/9/2019	42	3200	1800
4/8/2019	9	3300	2000	4/9/2019	43	2500	1500
4/8/2019	10	3200	1500	4/9/2019	44	4800	1800
4/8/2019	11	4300	1800	4/9/2019	45	5200	1700
4/8/2019	12	3900	1400	4/9/2019	46	3700	1800
4/8/2019	13	2200	1300	4/9/2019	47	1800	1000
4/8/2019	14	2100	1300	4/9/2019	48	4900	1800
4/8/2019	15	3200	1500	4/9/2019	49	2800	1500
4/8/2019	16	2600	1600	4/9/2019	50	2300	1300
4/8/2019	17	4900	2000	4/9/2019	51	4600	1400
4/8/2019	18	3500	1900	4/9/2019	52	4500	2100
4/8/2019	19	4700	2600	4/11/2019	53	2500	1600
4/8/2019	20	3300	1600	4/11/2019	54	2500	1700
4/8/2019	21	4800	1900	4/11/2019	55	1500	1400
4/8/2019	22	1600	1100	4/11/2019	56	1900	1500
4/8/2019	23	2600	1800	4/11/2019	57	2800	1800
4/8/2019	24	2800	1400	4/11/2019	58	2100	1600
4/8/2019	25	2100	1800	4/11/2019	59	2300	1700
4/8/2019	26	2100	1400	4/11/2019	60	1900	1200
4/9/2019	27	3000	1300	4/11/2019	61	1600	1200
4/9/2019	28	2000	1100	4/11/2019	62	1500	1300
4/9/2019	29	3700	1700	4/11/2019	63	2500	1900
4/9/2019	30	2500	1200	4/11/2019	64	2200	1000
4/9/2019	31	1900	1200	4/11/2019	65	2300	1000
4/9/2019	32	3100	1800	4/11/2019	66	2400	1600
4/9/2019	33	4800	2000	4/11/2019	67	2000	1300

	Depth	0'-4' (bgs)	Soil Spoils
Date	Excavation ID	Survey Results (cpm)	
4/11/2019	68	2100	1300
4/24/2019	69	1700	1600
4/24/2019	70	2100	1900
4/24/2019	71	2100	1800
4/24/2019	72	2400	2100
4/24/2019	73	2600	2000
4/24/2019	74	2800	2100
4/24/2019	75	3100	1800
4/24/2019	76	3000	2100
4/24/2019	77	3100	2200
4/24/2019	78	2800	2100
4/24/2019	79	2100	1600
4/24/2019	80	2400	1600
4/24/2019	81	2100	1900
4/24/2019	82	2600	1900
4/24/2019	83	2500	2000
4/24/2019	84	2900	1700
4/24/2019	85	2700	1800
4/24/2019	86	1900	1800
4/24/2019	87	1800	1600
4/24/2019	88	2100	1800
4/26/2019	89	2000	1600
4/26/2019	90	2800	2200
4/26/2019	91	2700	2100
4/26/2019	92	1900	1700
4/26/2019	93	1900	1800
4/26/2019	94	2600	2000
4/26/2019	95	2300	1900
4/26/2019	96	1800	1500
4/26/2019	97	3000	2100
4/26/2019	98	2900	2200
4/26/2019	99	3400	1800
4/26/2019	100	3700	1900
4/26/2019	101	3100	2300
4/26/2019	102	3900	2100
4/26/2019	104	3300	2100

- Fence posts drilled with a 6-inch augur to a depth of 4-feet below ground surface (bgs)

Appendix I – Electrical Cabinet Installation

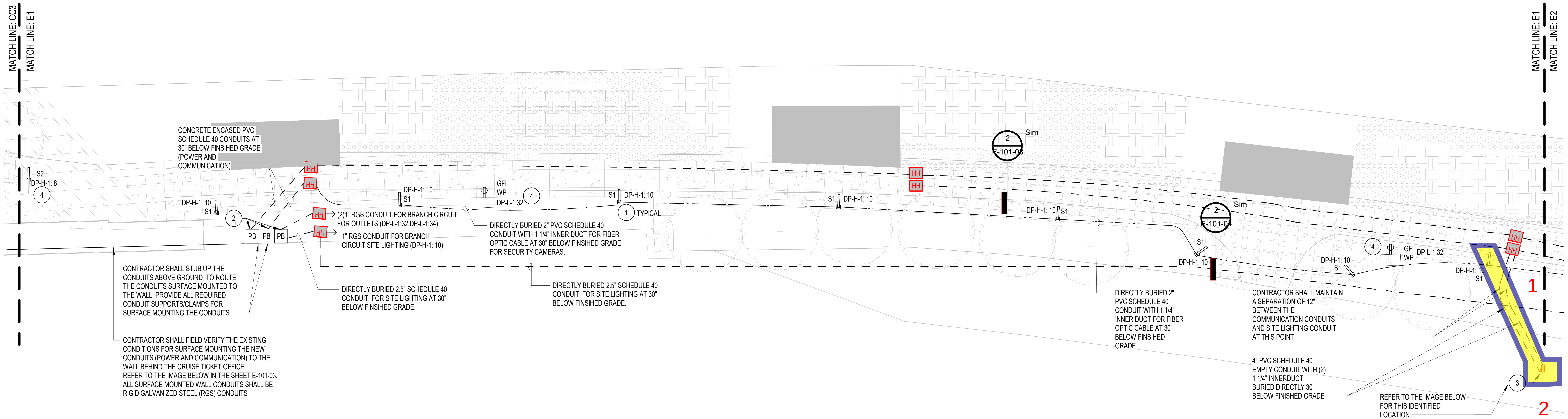
4/16/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Electrical Cabinet Installation Excavation - Radiological Soil Survey - 4/16/2019



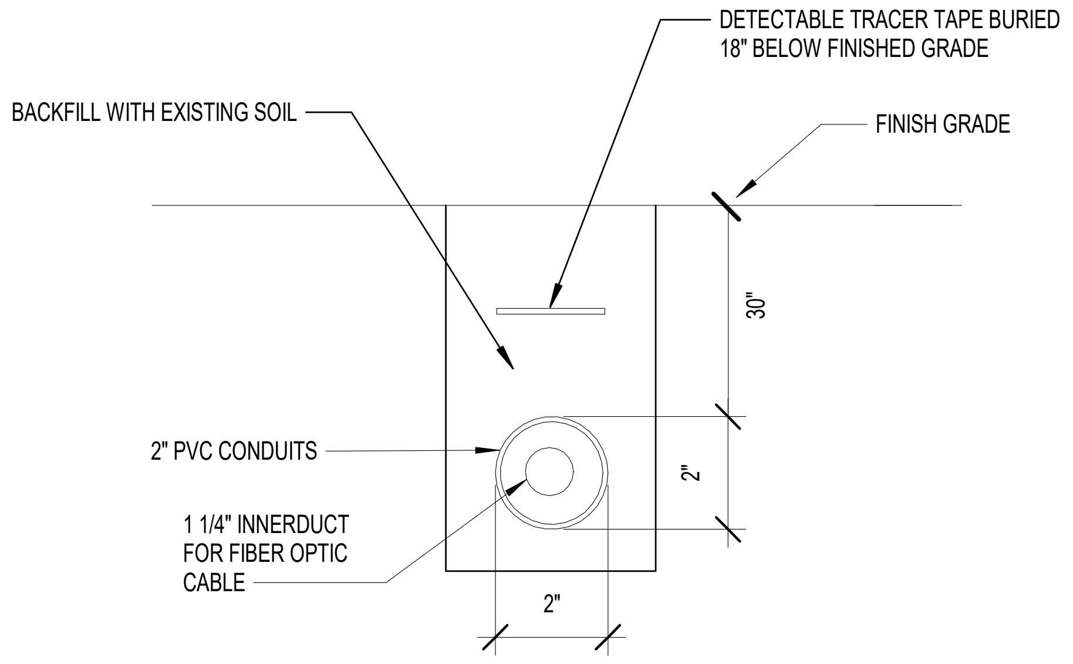
Electrical Cabinet ID	Depth	Counts Per Minute (cpm)
1	0-18"	2100
	18-36"	2300
	36-54"	2400
2	0-18"	1800
	18-36"	2100
	36-54"	2300

1 LEVEL 1 ELECTRICAL POWER PLAN - E1

1/16" = 1'-0"

32' 16' 8' 0
SCALE: 1/16" = 1'-0"

LOCATION OF NEMA 4X COMMUNICATION CABINET



NOTES:
CONDUIT SHALL BE PVC SCHEDULE 40 U.O.N.

2 2" CONDUIT WITH INNERDUCT FOR FIBER OPTIC CABLES

NTS

SHEET NOTES:

① NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN. REFER LANDSCAPE DRAWINGS FOR FOUNDATION DETAILS.

② NEMA 4X WALL MOUNTED PULL BOX (TYPICAL). CONTRACTOR SHALL SIZE PULL BOX ACCORDINGLY TO ACCOMODATE THE IDENTIFIED NUMBER OF CONDUITS.PROVIDE PULL BOX SEPARATELY FOR POWER AND LOW VOLTAGE.

③ NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL). REFER TO THE ENCIRCLED LOCATION IN THE IMAGE IN SHEET E-101-04.

④ CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 8 AND 1#8 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. REFER CIVIL DRAWINGS FOR EXACT LOCATION AND QUANTITY.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER TO SHEET E.402 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE TECHNOLOGY/COMMUNICATION SYSTEM SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
7. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULES.
8. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
9. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH NYLON PULL ROPE FOR FUTURE CABLE INSTALLATION.
10. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

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FLEET & FACILITY MANAGEMENT

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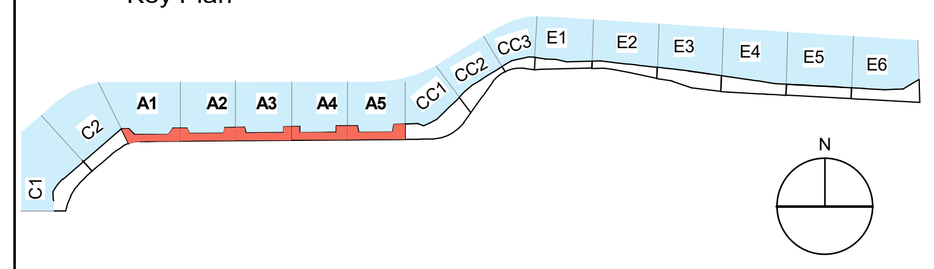


Issue
Riverwalk - Pathway

Issue Date:
11.07.2018

Professional Seals

No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

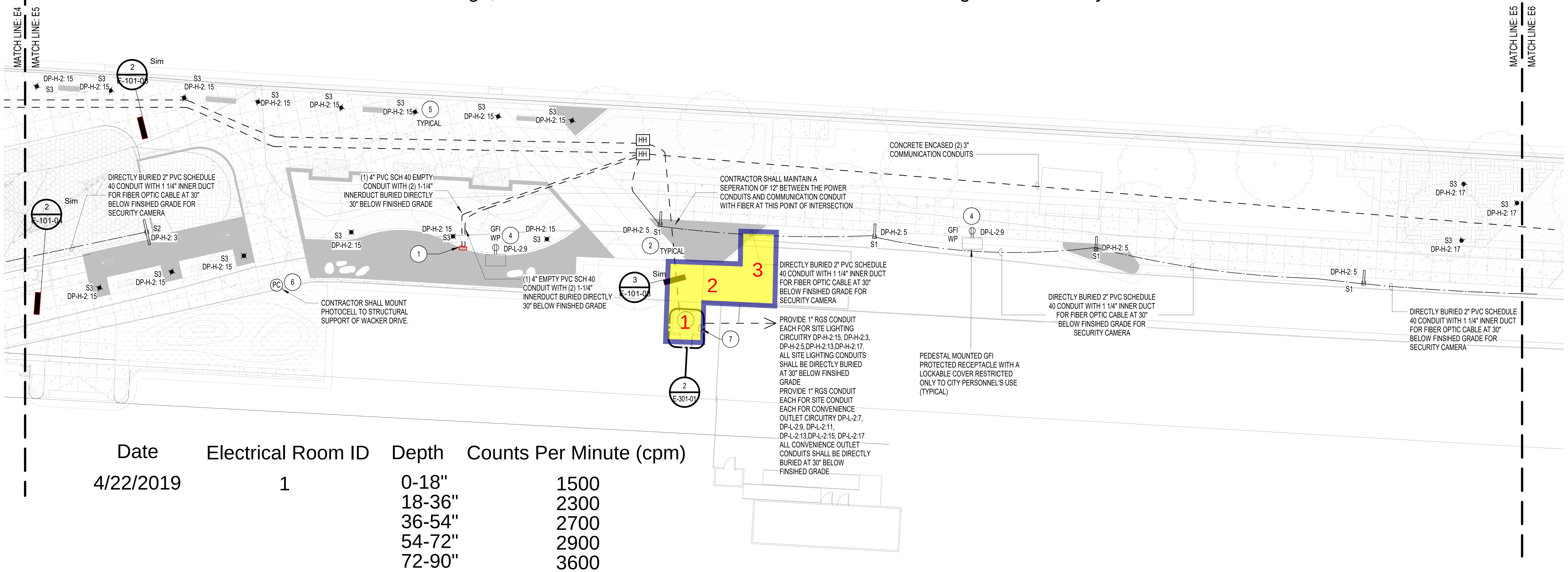
Project No: 8103

Sheet Title
LEVEL 1 ELECTRICAL POWER PLAN - E1

Sheet Number
E-101-04

1/7/2019 10:03:01 AM

Riverwalk - Chicago, IL - Electrical Room Installation Excavation - Radiological Soil Survey - 3/22/2019 & 4/22/2019

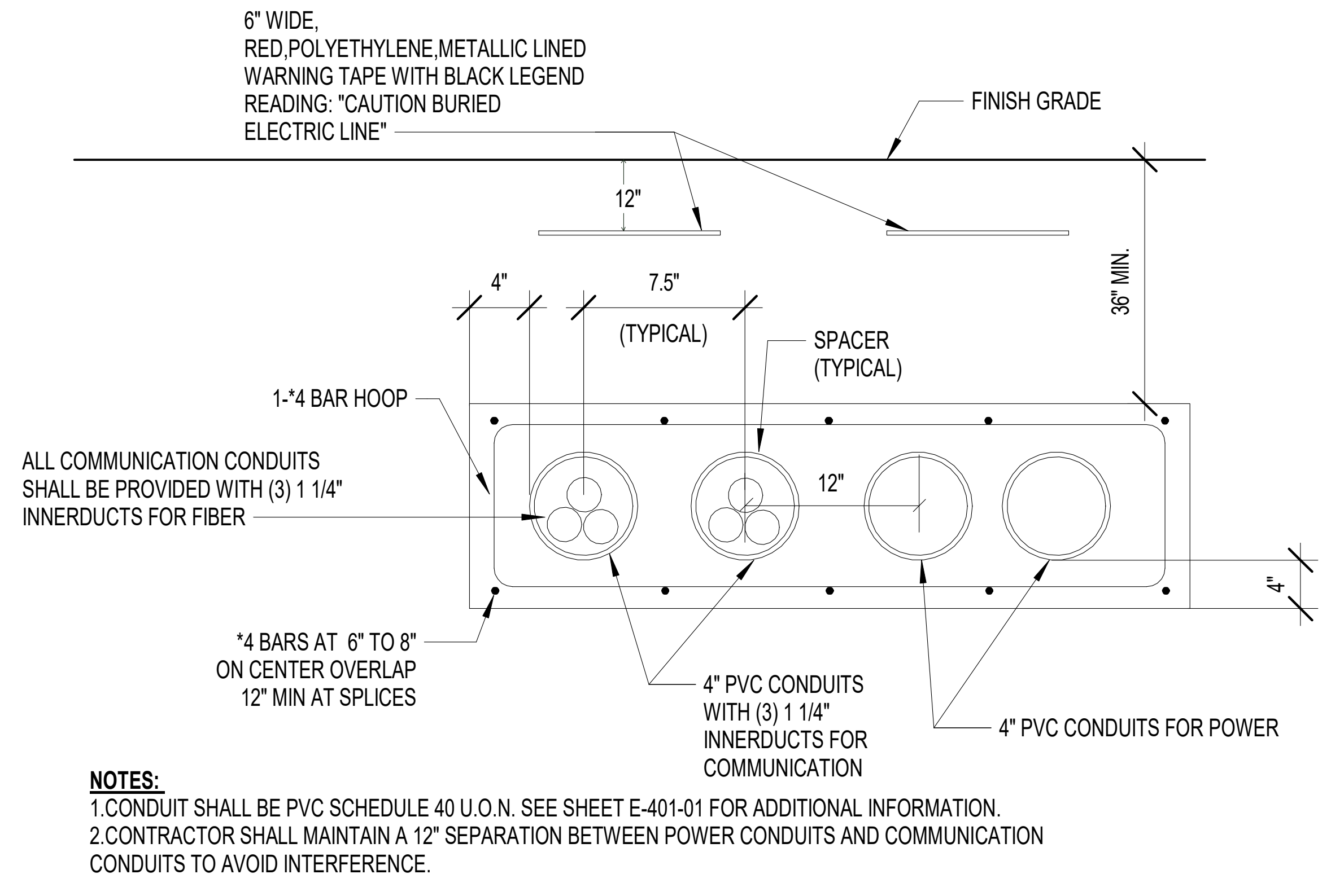


Date	Electrical Room ID	Depth	Counts Per Minute (cpm)
4/22/2019	1	0-18"	1500
		18-36"	2300
		36-54"	2700
		54-72"	2900
		72-90"	3600
3/22/2019	2	0-18"	2800
		18-36"	3600
		36-54"	4000
3/22/2019	3	0-18"	2900
		18-36"	3700
		36-54"	4800

1 LEVEL 1 ELECTRICAL POWER PLAN - E5

1/16" = 1'-0"

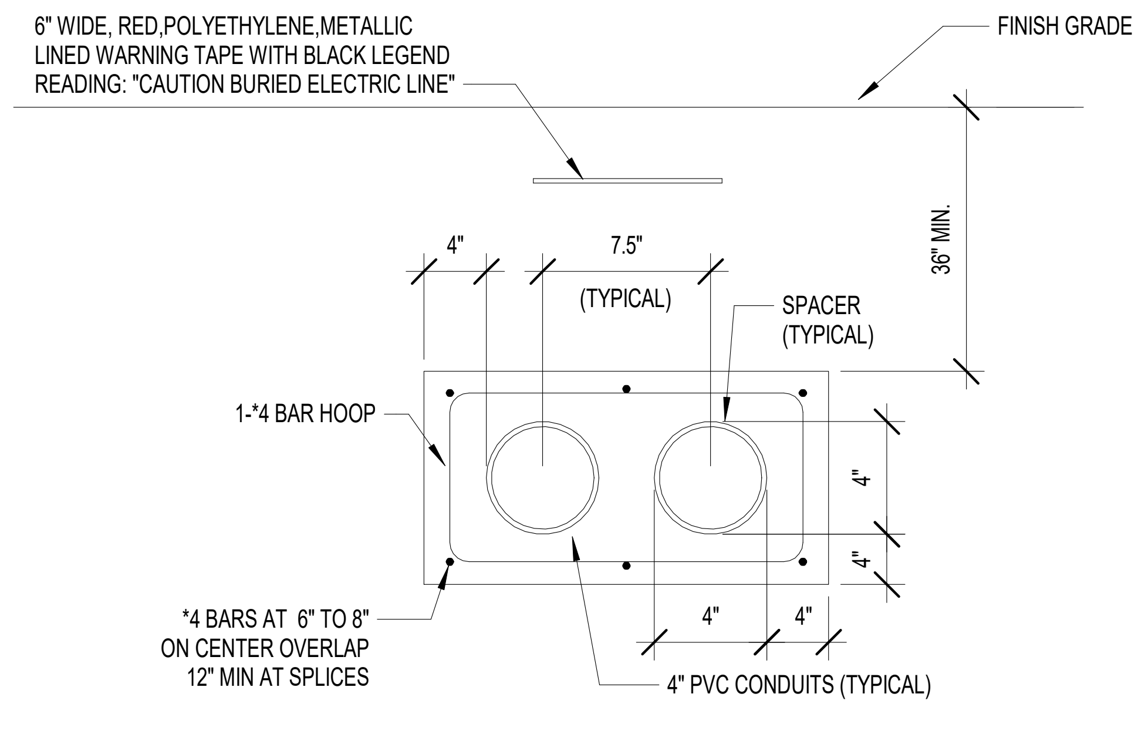
32' 16' 8' 0
SCALE: 1/16" = 1'-0"



NOTES:
1.CONDUIT SHALL BE PVC SCHEDULE 40 U.O.N. SEE SHEET E-401-01 FOR ADDITIONAL INFORMATION.
2.CONTRACTOR SHALL MAINTAIN A 12" SEPARATION BETWEEN POWER CONDUITS AND COMMUNICATION CONDUITS TO AVOID INTERFERENCE.

2 ELECTRICAL/COMMUNICATION SERVICE DUCT BANK

NTS



NOTES:
CONDUIT SHALL BE PVC SCHEDULE 40 U.O.N.

3 DUCT BANK - 2 CONDUITS

NTS

SHEET NOTES:

1. NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL)
2. NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN.
3. CONTRACTOR SHALL PROVIDE AND RUN (5) DEDICATED 20A, 277V,1-PHASE CIRCUIT FOR THE NEW SITE LIGHTING LED POLES AND BOLLARD LIGHTING. REFER OTHER ELECTRICAL SHEETS FOR THE QUANTITY AND LOCATION OF LIGHT FIXTURES FED FROM NEW PANEL "DP-H-2".
4. CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 10 AND 1#10 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.
5. CONTRACTOR SHALL PROVIDE DEDICATED 20A, 277V, 1-PHASE CIRCUIT WITH 2#8 AND 1#8 IN A 3/4" CONDUIT FOR BOLLARD LIGHTING FIXTURES. ALL BOLLARD FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND 6-POLE CONTACTOR. REFER DETAIL #7 IN SHEET E-601-01 FOR ADDITIONAL INFORMATION AND REFER PLANS FOR BRANCH CIRCUITRY DETAILS.
6. WEATHERPROOF PHOTOCELL - 277V, 20A RATED MOUNTED IN A WEATHERPROOF BACKBOX.
7. LIGHTING CONTACTOR "TC-2" FOR BOLLARD LIGHTING CONTROL.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. HAND HOLES LOCATIONS SHOWN IS TENTATIVE . REFER CIVIL DRAWINGS FOR EXACT LOCATION.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULE.
7. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
8. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

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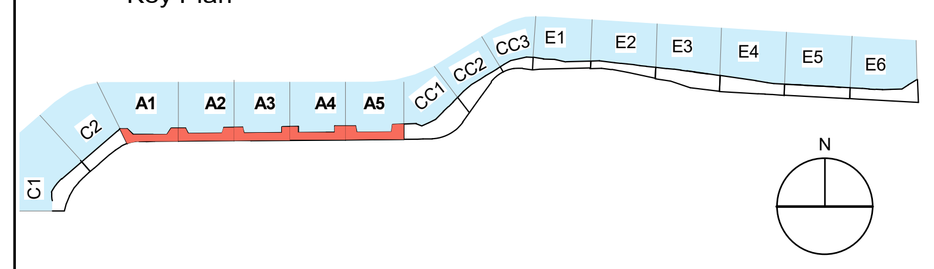


Issue
Riverwalk - Pathway

Issue Date: 11.07.2018

Professional Seals

No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

Project No: 8103

Sheet Title
LEVEL 1 ELECTRICAL POWER PLAN - E5

Sheet Number
E-101-08

1/7/2019 10:03:47 AM

Appendix J – Submarine Pad Excavation

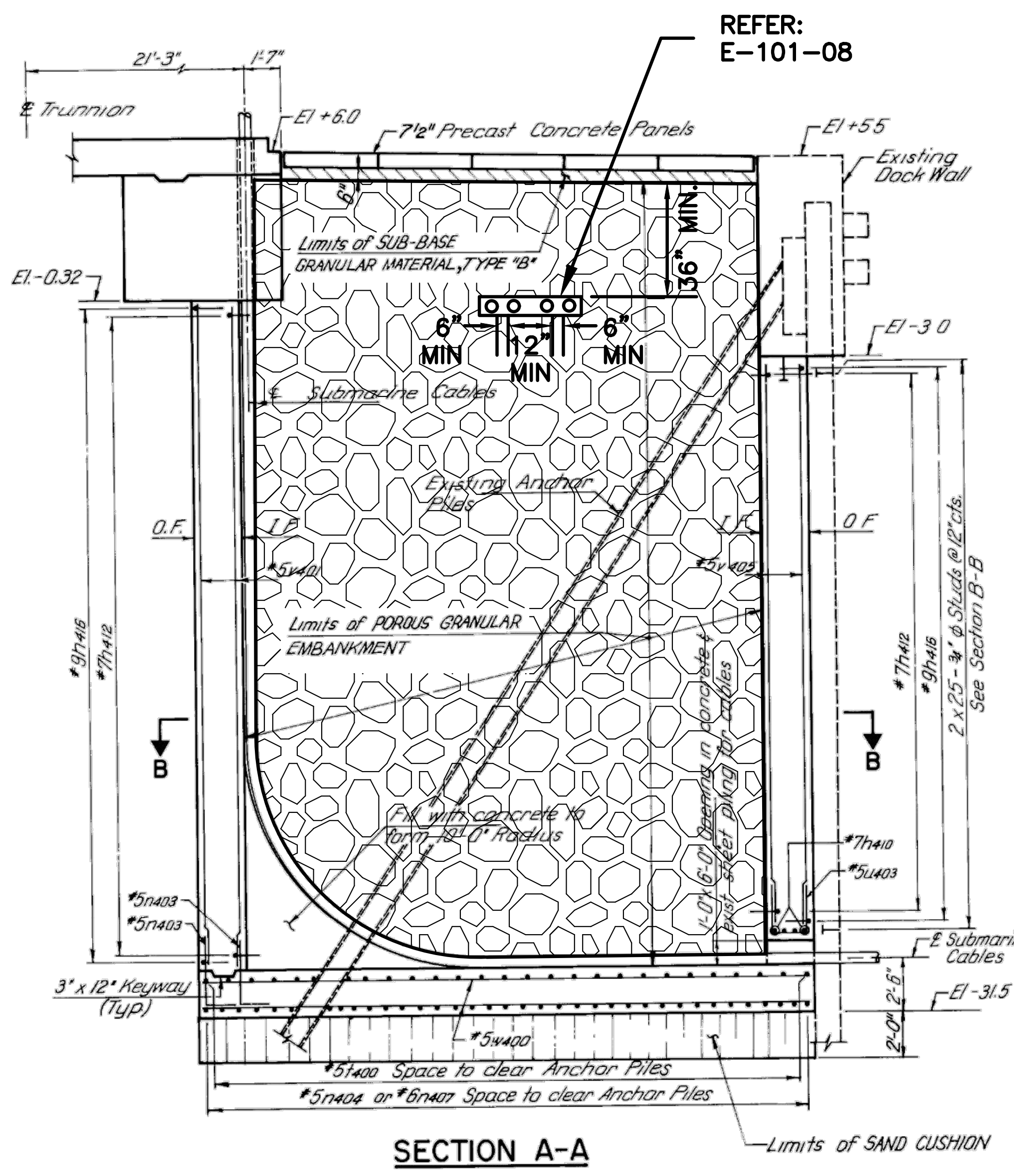
4/18/19 – 4/19/19

Chicago Riverwalk

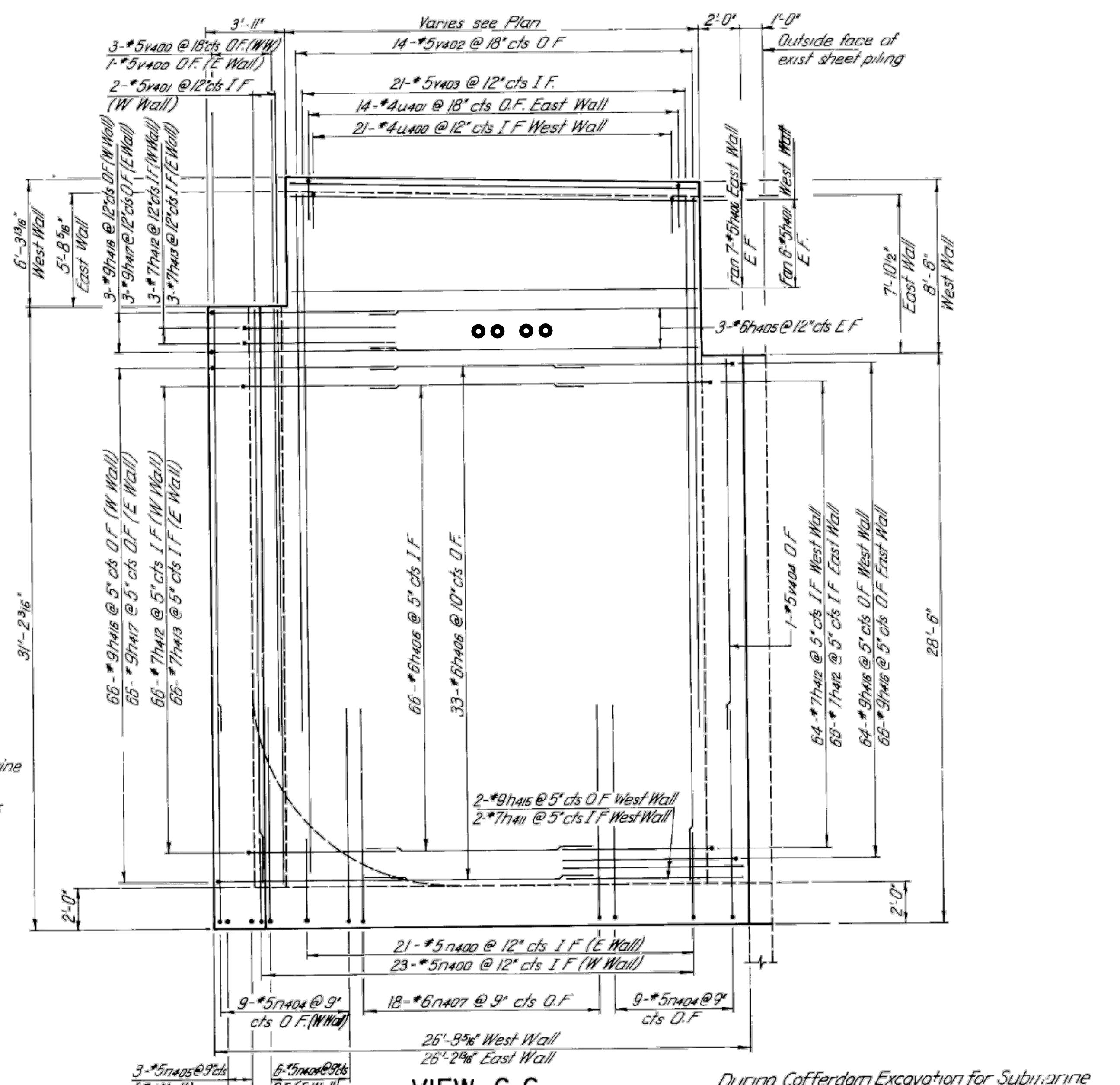
Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Submarine Pad Excavation 4/18-19/2019



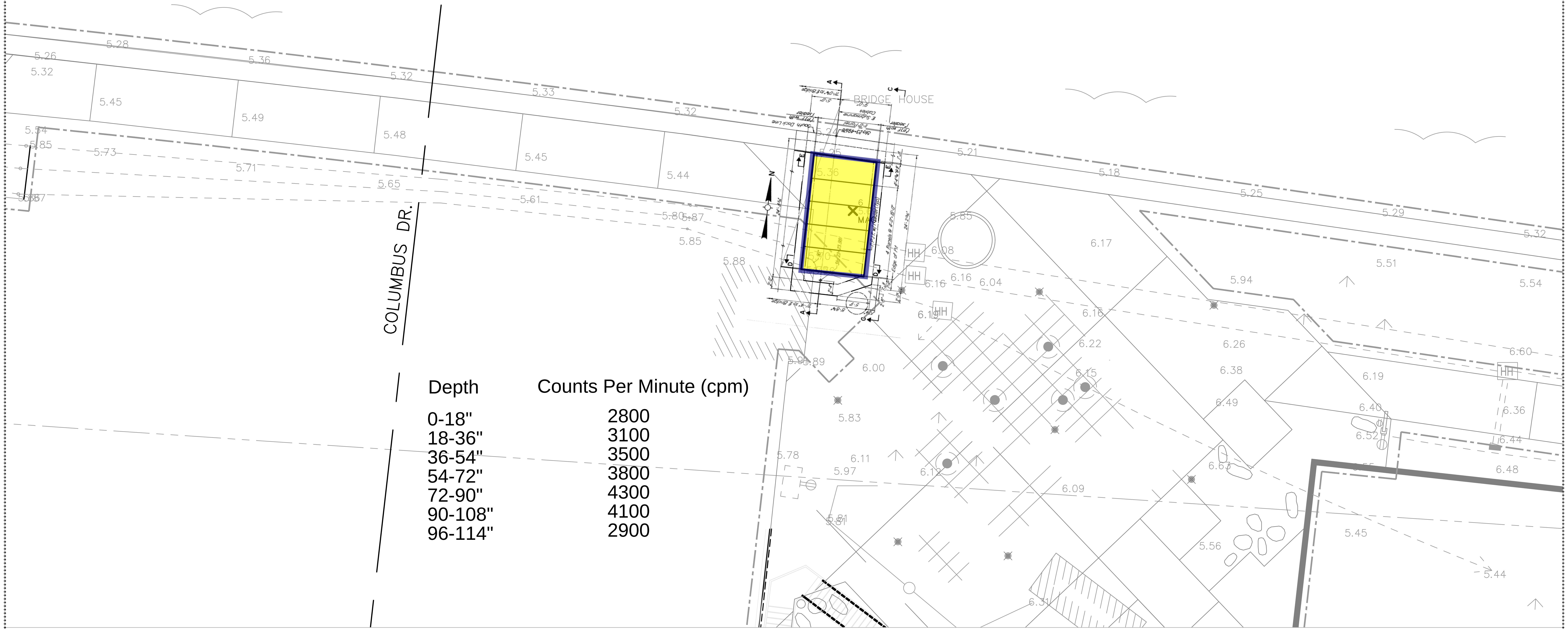
SECTION A-A



VIEW C-C

East Wall Shown
West Wall- Opposite Hand

During Cofferdam Excavation for Submarine Cable Support Structure a few steel batter piles will be encountered The steel piles shall not be cut or bonded into the Submarine Cable Support Structure. A sleeve shall be provided to keep the pile free of the concrete



Depth	Counts Per Minute (cpm)
0-18"	2800
18-36"	3100
36-54"	3500
54-72"	3800
72-90"	4300
90-108"	4100
96-114"	2900

12/14/2018 9:39:40 AM

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue

Project Address
485 E Lake Shore Drive to 101 E Michigan Avenue
Prepared For

2FM

30 North LaSalle St.
Suite 300
Chicago, IL 60602

MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

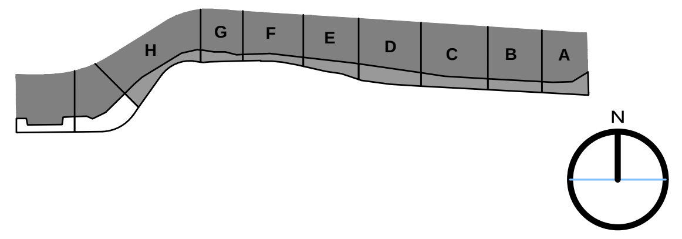
MULLER2
700 N Sangamon
Chicago, IL 60642

site
888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

DAVID MASON + ASSOCIATES
davidmason.com
464 N. Milwaukee Ave.
Chicago, IL 60654

Key Plan



Issue

Riverwalk - Pathway

Issue Date: 02.06.2019

Professional Seals

LOUIS WISLOCKI
062-064958

EXPIRES 11-30-2019

No.	Description	Date
1	Issued For Pricing	11.27.2018
2	Issued For Permit	12.04.2018
3	Issued For Construction	01.07.2019
4	Issued For Construction	01.31.2019
5	Issued For Bulletin #3	02.06.2019

Project No: 8103

Sheet Title

SUBMARINE CABLE SUPPORT STRUCTURE

Sheet Number

CSK-001

Appendix K – Electrical Room Installation

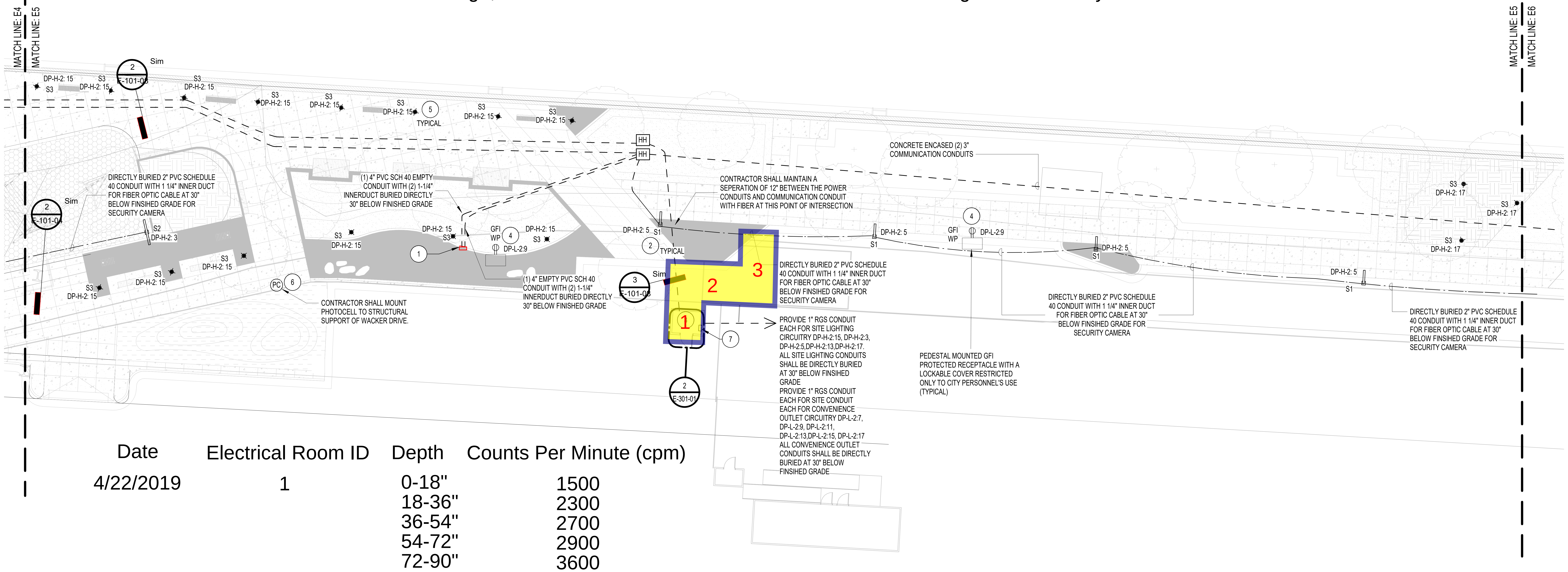
4/22/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Electrical Room Installation Excavation - Radiological Soil Survey - 3/22/2019 & 4/22/2019



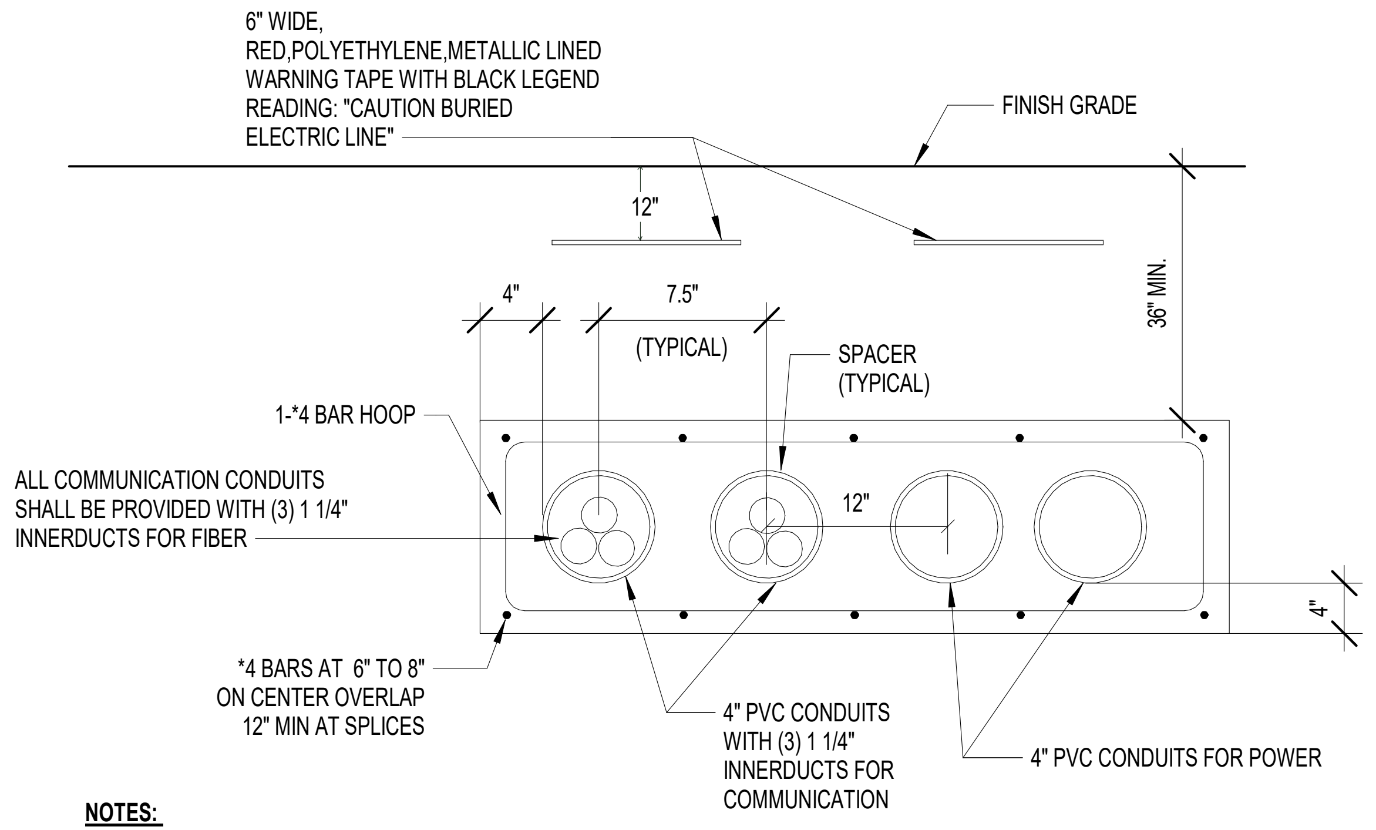
Date	Electrical Room ID	Depth	Counts Per Minute (cpm)
4/22/2019	1	0-18"	1500
		18-36"	2300
		36-54"	2700
		54-72"	2900
		72-90"	3600
3/22/2019	2	0-18"	2800
		18-36"	3600
		36-54"	4000
3/22/2019	3	0-18"	2900
		18-36"	3700
		36-54"	4800

1 LEVEL 1 ELECTRICAL POWER PLAN - E5

1/16" = 1'-0"

32' 16' 8' 0

SCALE: 1/16" = 1'-0"

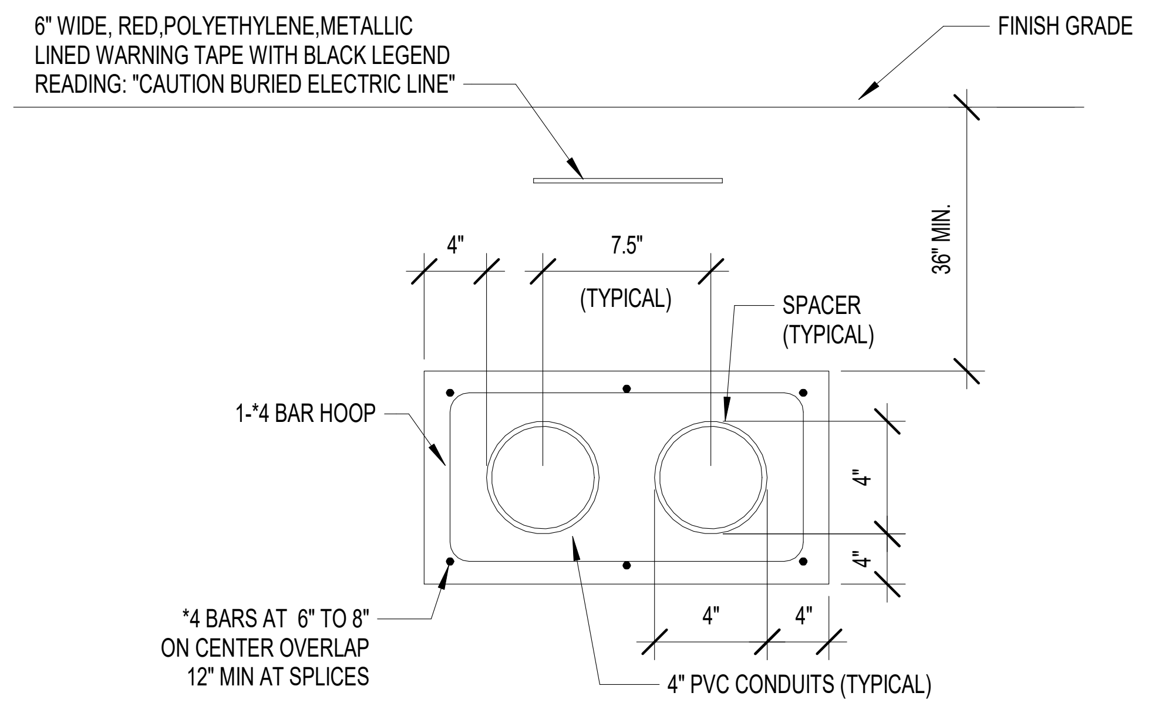


NOTES:

1.CONDUIT SHALL BE PVC SCHEDULE 40 U.O.N. SEE SHEET E-401-01 FOR ADDITIONAL INFORMATION.
2.CONTRACTOR SHALL MAINTAIN A 12" SEPARATION BETWEEN POWER CONDUITS AND COMMUNICATION CONDUITS TO AVOID INTERFERENCE.

2 ELECTRICAL/COMMUNICATION SERVICE DUCT BANK

NTS



NOTES:

CONDUIT SHALL BE PVC SCHEDULE 40 U.O.N.

3 DUCT BANK - 2 CONDUITS

NTS

SHEET NOTES:

① NEMA 4X, 60" X 60" X 24" DEEP WITH DOUBLE DOOR AND PAD LOCKING HANDLES MOUNTED ON A 6" HIGH CONCRETE PAD (AUSTIN ELECTRICAL ENCLOSURES OR APPROVED EQUAL)

② NEW SITE LIGHTING LED LIGHT POLES. CONTRACTOR SHALL PROVIDE 2#4 AND 1#4 GRD IN A 1" CONDUIT FOR EACH LED LIGHTING POLE. EACH NEW LED POLES TO BE CONTROLLED VIA THE INTEGRATED PHOTOCELL. PROVIDE PVC SCHEDULE 40 CONDUIT AND INSTALL AT 30 INCHES BELOW FINISHED GRADE. COORDINATE EXACT LOCATION OF LIGHT POLES WITH LANDSCAPE DRAWINGS PRIOR TO ROUGH-IN.

③ CONTRACTOR SHALL PROVIDE AND RUN (5) DEDICATED 20A, 277V,1-PHASE CIRCUIT FOR THE NEW SITE LIGHTING LED POLES AND BOLLARD LIGHTING. REFER OTHER ELECTRICAL SHEETS FOR THE QUANTITY AND LOCATION OF LIGHT FIXTURES FED FROM NEW PANEL "DP-H-2".

④ CONTRACTOR SHALL PROVIDE A 20A/120V, 1-PHASE CIRCUITRY FOR ALL THE IDENTIFIED CONVENIENCE OUTLETS WITH 2# 10 AND 1#10 GRD IN A 1" RGS CONDUIT. PROVIDE ALL REQUIRED TERMINATION KITS FOR TERMINATING CABLES TO THE GFI PROTECTED WIRING DEVICE.

⑤ CONTRACTOR SHALL PROVIDE DEDICATED 20A, 277V, 1-PHASE CIRCUIT WITH 2#8 AND 1#8 IN A 3/4" CONDUIT FOR BOLLARD LIGHTING FIXTURES. ALL BOLLARD FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL AND 6-POLE CONTACTOR. REFER DETAIL #7 IN SHEET E-601-01 FOR ADDITIONAL INFORMATION AND REFER PLANS FOR BRANCH CIRCUITRY DETAILS.

⑥ WEATHERPROOF PHOTOCELL - 277V, 20A RATED MOUNTED IN A WEATHERPROOF BACKBOX.

⑦ LIGHTING CONTACTOR "TC-2" FOR BOLLARD LIGHTING CONTROL.

GENERAL NOTES:

1. PRECAST CONCRETE HANDHOLES SHALL BE PROVIDED AS REQUIRED. COORDINATE WITH CDOT FOR HANDHOLE REQUIREMENTS AND LOCATIONS.
2. TOP OF DUCTBANK SHALL BE 36" BELOW FINIDHED GRADE UNLESS OTHERWISE NOTED.
3. REFER CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. HAND HOLES LOCATIONS SHOWN IS TENTATIVE . REFER CIVIL DRAWINGS FOR EXACT LOCATION.
4. CONTRACTOR SHALL PROVIDE SEPARATE HAND HOLES FOR COMMUNICATION CONDUITS AND POWER CONDUITS.
5. REFER SHEET E.400 RISER DIAGRAM FOR ADDITIONAL INFORMATION ON THE POWER DISTRIBUTION SCHEME FOR THE PROPOSED NEW SCOPE OF WORK.
6. REFER SHEET E.401 FOR LIGHT FIXTURE SCHEDULE.
7. PROVIDE EXPANSION JOINT FITTINGS FOR RIGID GALVANIZED STEEL CONDUIT (EATON #XJG SERIES WITH BONDING JUMPER, HOT DIP GALVANIZED OR APPROVED EQUAL) FOR ALL EXPOSED OVERHEAD CONDUITS WHICH CROSS ESTABLISHED EXPANSION JOINTS. EXPANSION JOINT CONDUIT FITTINGS SHALL ALLOW FOR 8" MINIMUM CONDUIT MOVEMENT.
8. LOCATIONS FOR PEDESTAL MOUNTED CONVENIENCE OUTLET IS TENTATIVE. CONTRACTOR SHALL CONFIRM THE LOCATION OF THE OUTLETS WITH OWNER PRIOR TO INSTALLATION/ROUGH-IN.REFER E-000-01 FOR PRODUCT PART NUMBER.

1/7/2019 10:03:47 AM

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
485 E Lake Shore Drive to 101 E Michigan Avenue

Prepared For

FLEET & FACILITY MANAGEMENT
30 North LaSalle St.
Suite 300
Chicago, IL 60602

MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

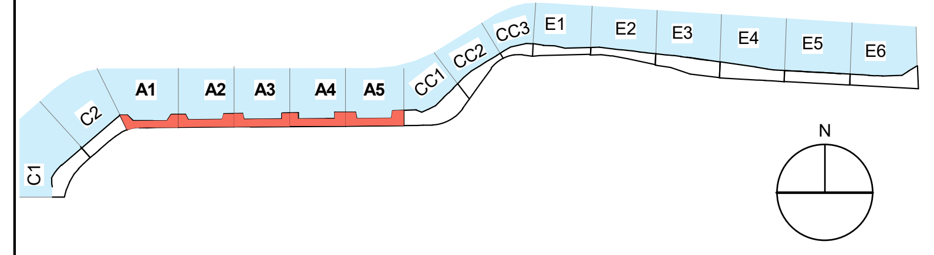
MULLER2
700 N Sangamon
Chicago, IL 60642

888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

303 W Erie St, Suite 510
Chicago, IL 60654

Key Plan



Issue

Riverwalk - Pathway

Issue Date: 11.07.2018

Professional Seals

No.	Description	Date
1	Issued for Pricing	11.27.2018
2	Issued for Permit	12.04.2018
4	Issued For Construction	01.07.2019

Project No: 8103

Sheet Title

LEVEL 1 ELECTRICAL
POWER PLAN - E5

Sheet Number

E-101-08

Appendix L – Landscaping / Tree Installation

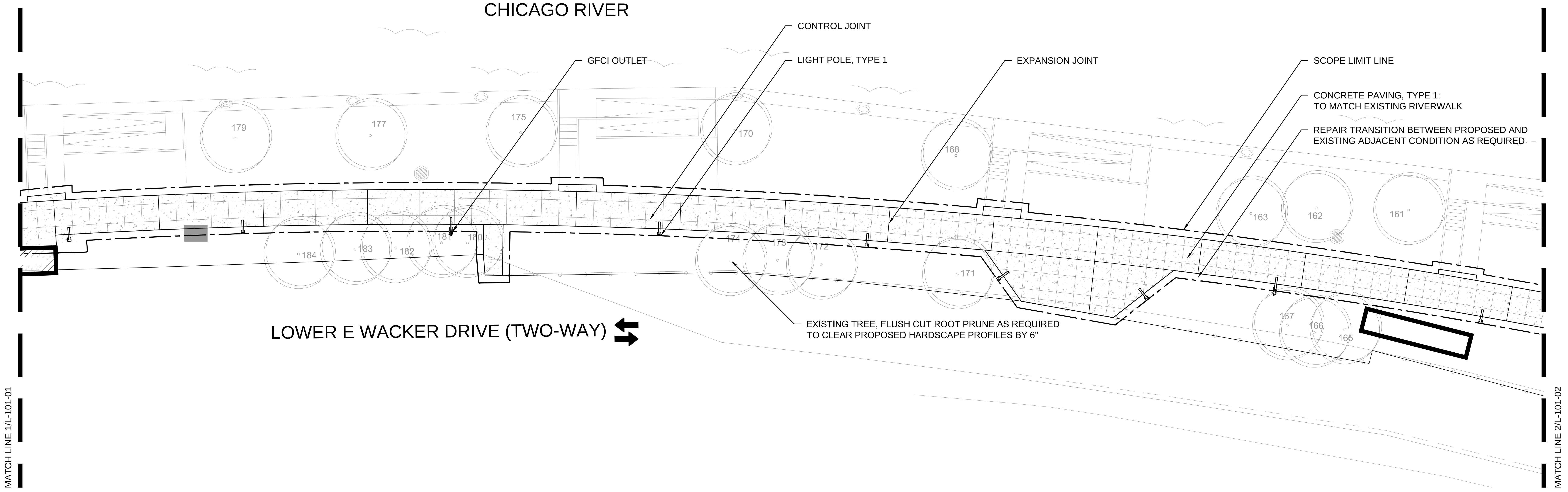
4/26/19 – 5/17/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

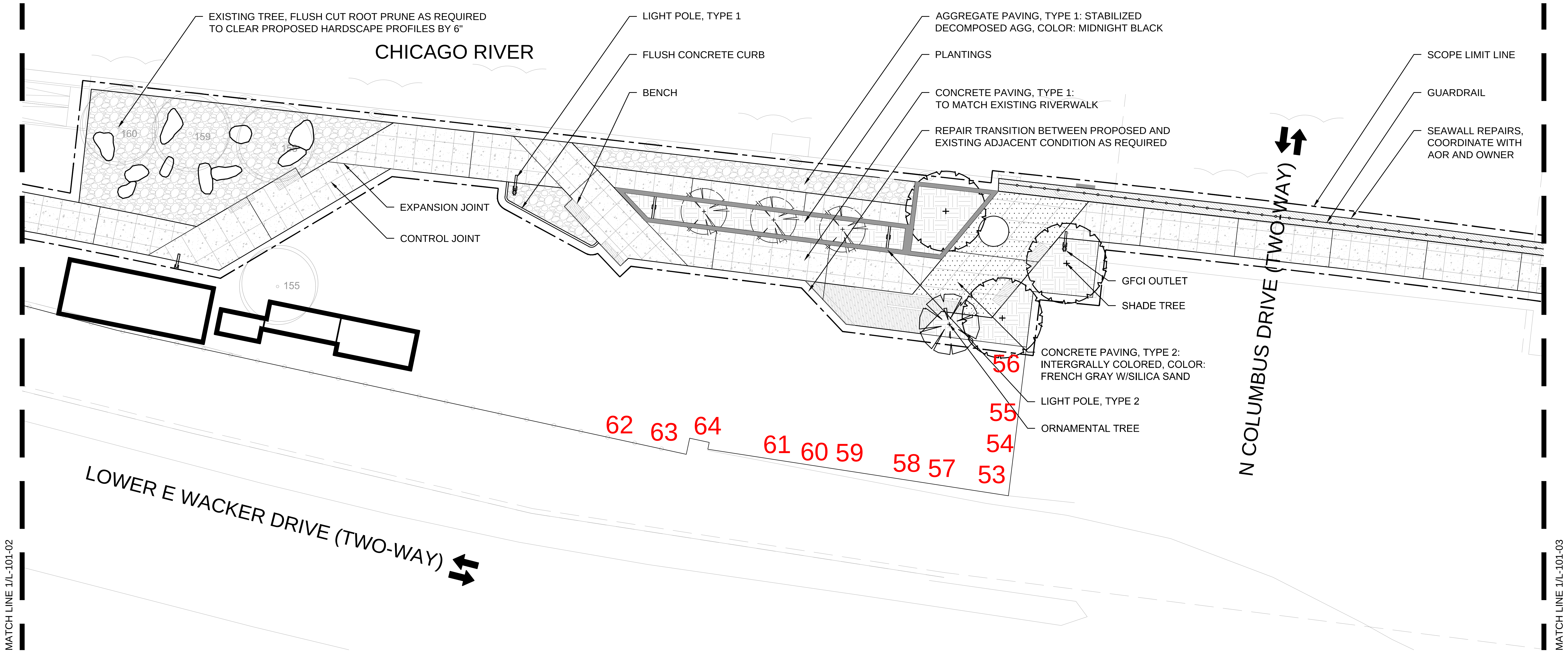
Riverwalk - Chicago, IL - Landscaping - Tree Installation Excavation Location Map



1 LANDSCAPE SITE PLAN

1" = 20'-0"

0 10 20 30 40'



2 LANDSCAPE SITE PLAN

1" = 20'-0"

0 10 20 30 40'

LEGEND

— - —	SCOPE LIMIT LINE
▨	CONCRETE PAVING, TYPE 1: TO MATCH EXISTING RIVERWALK
▨	CONCRETE PAVING, TYPE 2: INTEGRALLY COLORED, COLOR: FRENCH GRAY W/SILICA SAND
▨	PROTECTIVE SURFACING: PIP RUBBER SURFACING
▨	AGGREGATE PAVING, TYPE 1: STABILIZED DECOMPOSED AGG, COLOR: MIDNIGHT BLUE
▨	ASPHALT PAVING
▬	CONCRETE SEAWALL
—	RAISED CONCRETE CURB
—	FLUSH CONCRETE CURB
▨	BENCH
▨	TABLE
⊸	POLE LIGHT, TYPE 1
⊸	POLE LIGHT, TYPE 2
✕	BOLLARD LIGHT
◆	GFCI OUTLET
⊔	LADDER
▨	PLANTINGS
▨	SOD
○	EXISTING TREE, FLUSH CUT ROOT PRUNE AS REQUIRED TO CLEAR PROPOSED HARDSCAPE PROFILES BY 6"
○	SHADE TREE
✻	ORNAMENTAL TREE
○	BOULDERS
✳	EXISTING SCULPTURE
H	EXISTING LADDER
▨	SEAWALL REPAIRS, COORDINATE WITH AOR AND OWNER
—+—+—	GUARDRAIL

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
Project Address
485 E Lake Shore Drive to 101 E Michigan Avenue
Prepared For

30 North LaSalle St.
Suite 300
Chicago, IL 60602

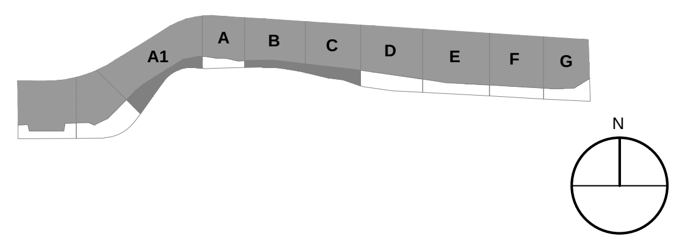
MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

700 N Sangamon
Chicago, IL 60642

888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

Key Plan



Issue
Riverwalk - Pathway

Issue Date:
01.07.2019

Professional Seals

No.	Description	Date
1	Issued For Pricing	11.27.2018
2	Issued For Permit	12.04.2018
3	Issued For Construction	01.07.2019

Project No: 8103

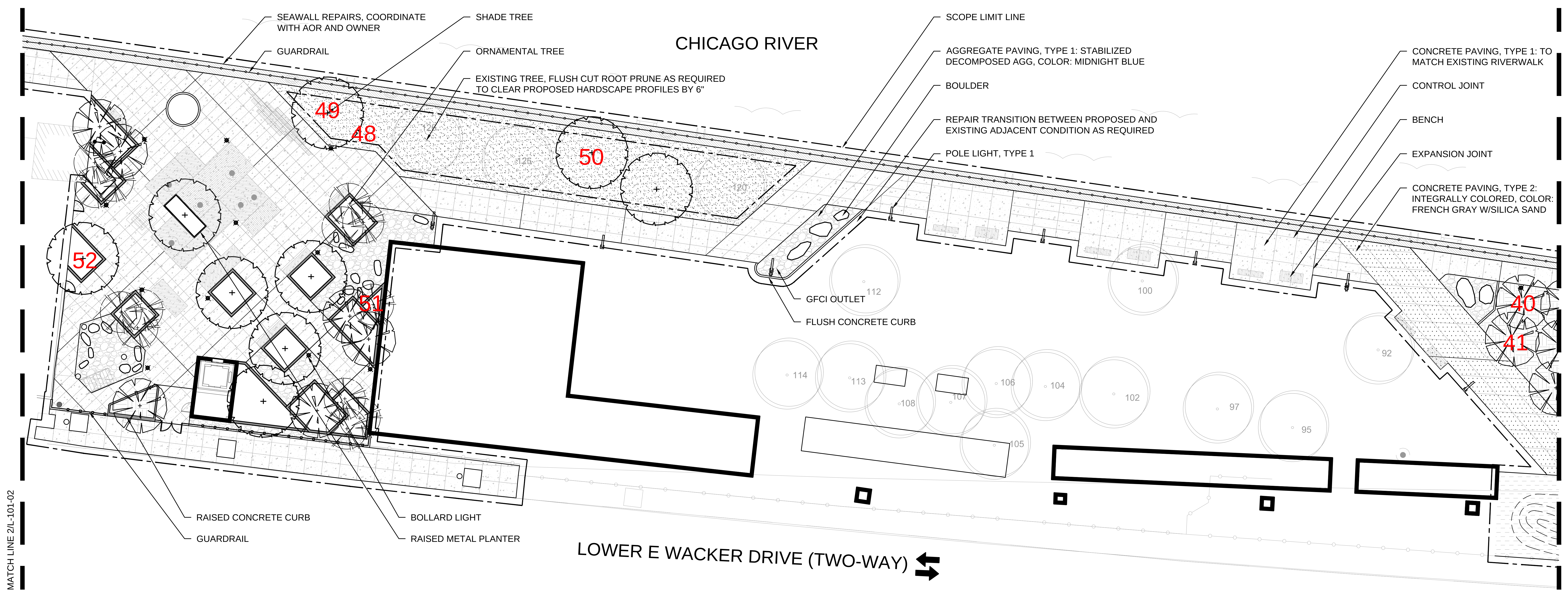
Sheet Title

LANDSCAPE
SITE PLANS
(FOR REFERENCE ONLY)

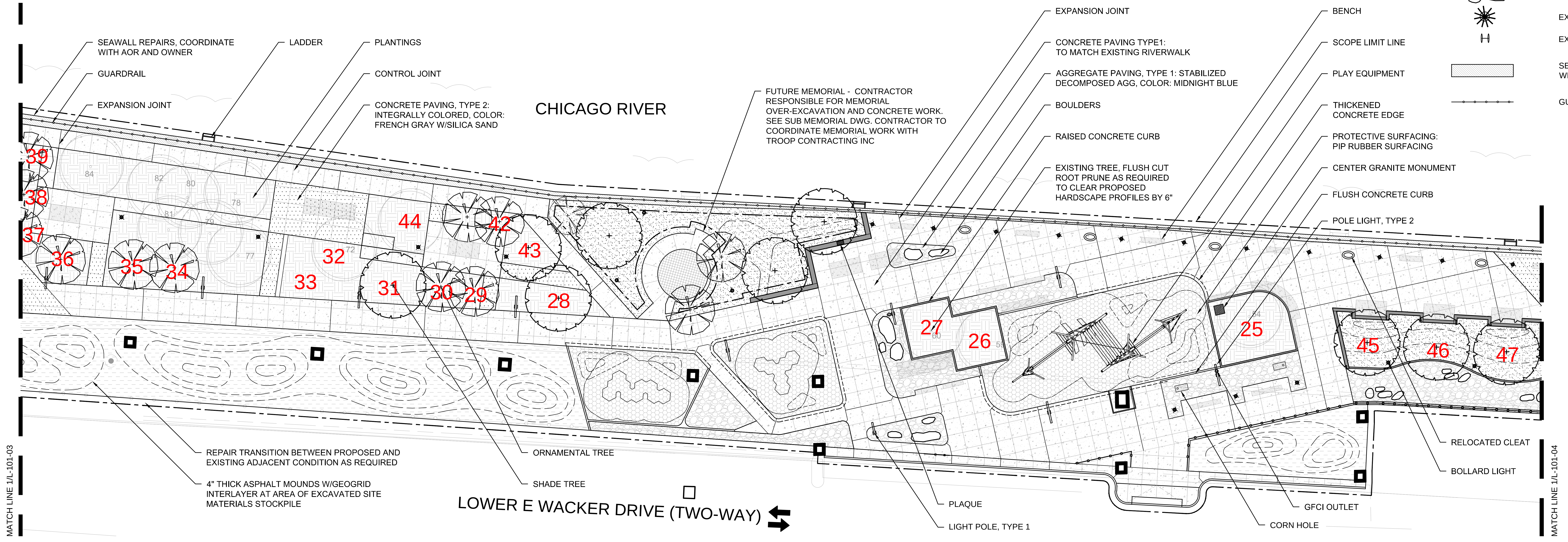
Sheet Number
L-101-02

1/8/2019 7:31:52 PM

Riverwalk - Chicago, IL - Landscaping - Tree Installation Excavation Location Map



1 LANDSCAPE SITE PLAN
1" = 20'-0"



2 LANDSCAPE SITE PLAN
1" = 20'-0"

LEGEND

- SCOPE LIMIT LINE
- CONCRETE PAVING, TYPE 1: TO MATCH EXISTING RIVERWALK
- CONCRETE PAVING, TYPE 2: INTEGRALLY COLORED, COLOR: FRENCH GRAY W/SILICA SAND
- PROTECTIVE SURFACING: PIP RUBBER SURFACING
- AGGREGATE PAVING, TYPE 1: STABILIZED DECOMPOSED AGG, COLOR: MIDNIGHT BLUE
- ASPHALT PAVING
- CONCRETE SEATWALL
- RAISED CONCRETE CURB
- FLUSH CONCRETE CURB
- BENCH
- TABLE
- POLE LIGHT, TYPE 1
- POLE LIGHT, TYPE 2
- BOLLARD LIGHT
- GFCI OUTLET
- LADDER
- PLANTINGS
- SOD
- EXISTING TREE, FLUSH CUT ROOT PRUNE AS REQUIRED TO CLEAR PROPOSED HARDSCAPE PROFILES BY 6"
- SHADE TREE
- ORNAMENTAL TREE
- BOULDERS
- EXISTING SCULPTURE
- H EXISTING LADDER
- SEAWALL REPAIRS, COORDINATE WITH AOR AND OWNER
- GUARDRAIL

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
Project Address
485 E Lake Shore Drive to 101 E Michigan Avenue
Prepared For

30 North LaSalle St.
Suite 300
Chicago, IL 60602

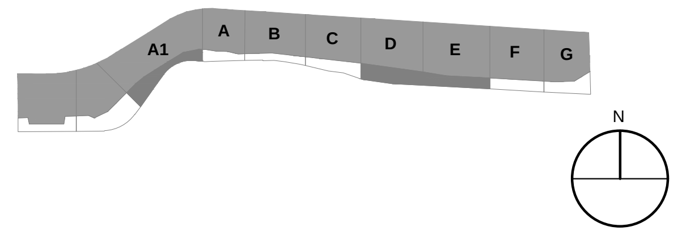
MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

700 N Sangamon
Chicago, IL 60642

888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

Key Plan



Issue
Riverwalk - Pathway

Issue Date: 01.07.2019

Professional Seals

No.	Description	Date
1	Issued For Pricing	11.27.2018
2	Issued For Permit	12.04.2018
3	Issued For Construction	01.07.2019

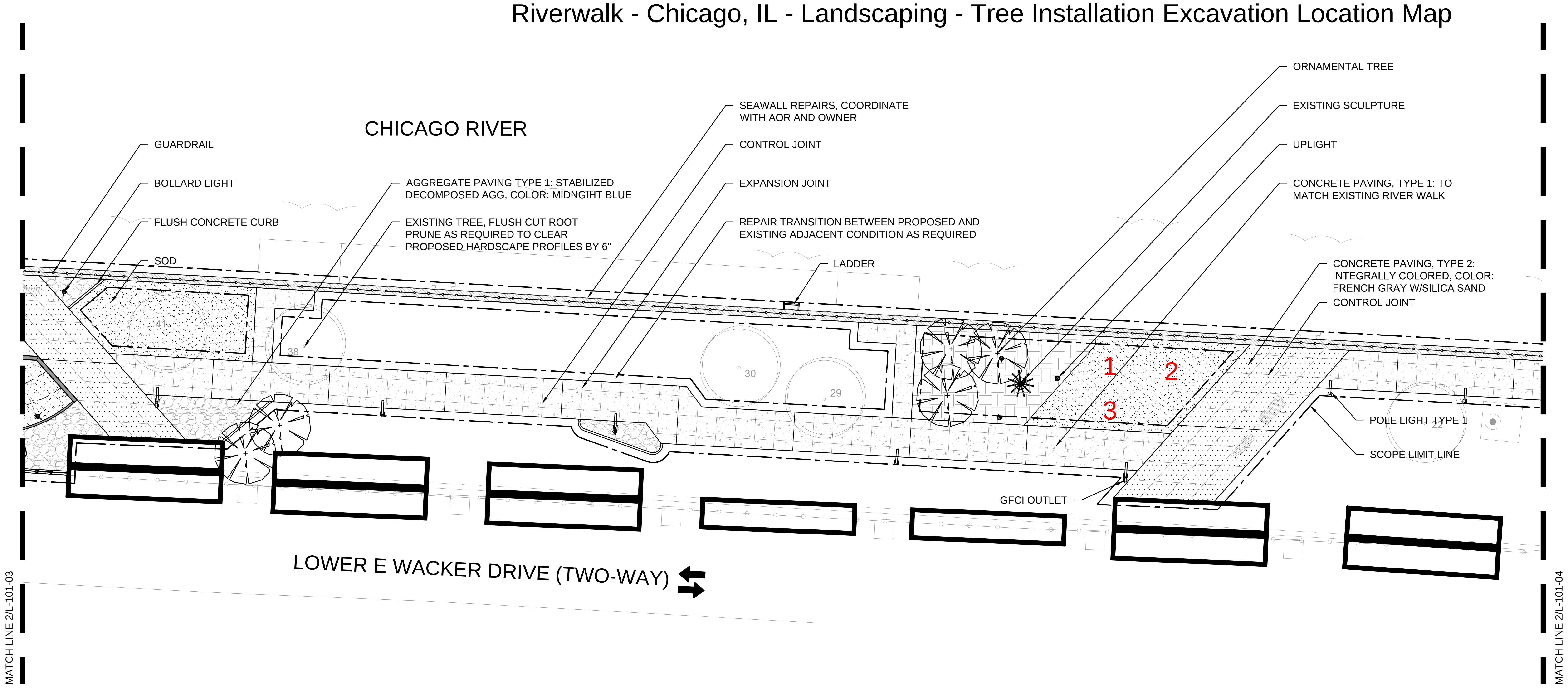
Project No: 8103

Sheet Title
LANDSCAPE
SITE PLANS
(FOR REFERENCE ONLY)

Sheet Number
L-101-03

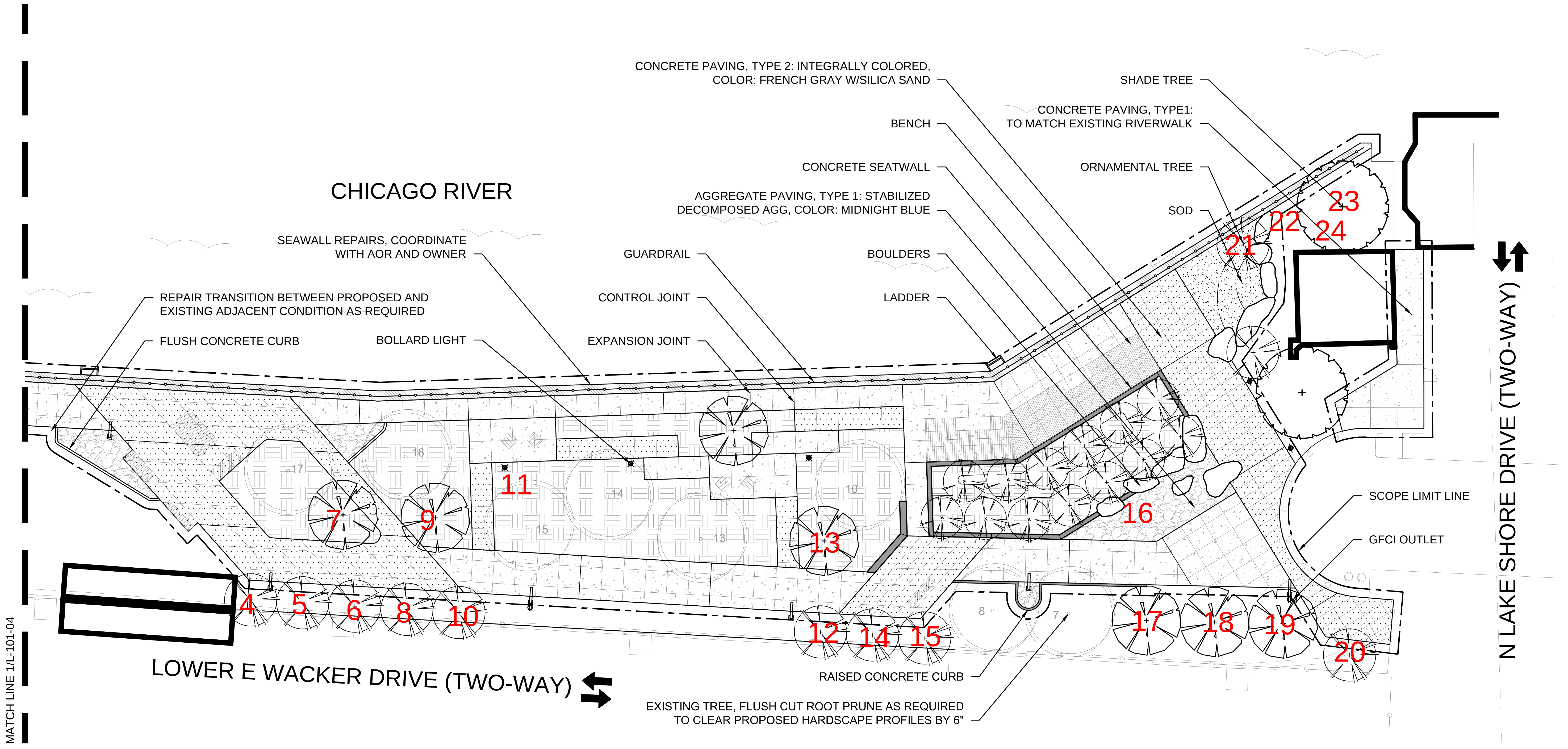
1/8/2019 7:31:48 PM

Riverwalk - Chicago, IL - Landscaping - Tree Installation Excavation Location Map



1 **LANDSCAPE SITE PLAN**
1" = 20'-0"

0 10 20 30 40'



2 **LANDSCAPE SITE PLAN**
1" = 20'-0"

0 10 20 30 40'

1/8/2019 7:31:45 PM

LEGEND

- SCOPE LIMIT LINE
- CONCRETE PAVING, TYPE 1: TO MATCH EXISTING RIVERWALK
- CONCRETE PAVING, TYPE 2: INTEGRALLY COLORED, COLOR: FRENCH GRAY W/SILICA SAND
- PROTECTIVE SURFACING: PIP RUBBER SURFACING
- AGGREGATE PAVING, TYPE 1: STABILIZED DECOMPOSED AGG, COLOR: MIDNIGHT BLUE
- ASPHALT PAVING
- CONCRETE SEATWALL
- RAISED CONCRETE CURB
- FLUSH CONCRETE CURB
- BENCH
- TABLE
- POLE LIGHT, TYPE 1
- POLE LIGHT, TYPE 2
- BOLLARD LIGHT
- GFCI OUTLET
- LADDER
- PLANTINGS
- SOD
- EXISTING TREE, FLUSH CUT ROOT PRUNE AS REQUIRED TO CLEAR PROPOSED HARDSCAPE PROFILES BY 6"
- SHADE TREE
- ORNAMENTAL TREE
- BOULDERS
- EXISTING SCULPTURE
- EXISTING LADDER
- SEAWALL REPAIRS, COORDINATE WITH AOR AND OWNER
- GUARDRAIL

Project
Chicago Riverwalk - Lake Shore Drive to Michigan Avenue
Project Address
485 E Lake Shore Drive to 101 E Michigan Avenue
Prepared For

2FM
30 North LaSalle St.
Suite 300
Chicago, IL 60602

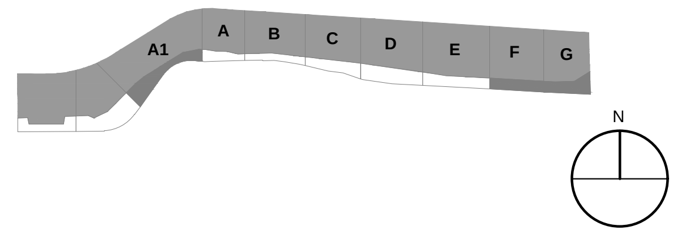
MAYOR RAHM EMANUEL
COMMISSIONER DAVID REYNOLDS

MULLER2
700 N Sangamon
Chicago, IL 60642

site
888 S Michigan Ave, Suite 1000
Chicago, IL 60605

In Association with

Key Plan



Issue
Riverwalk - Pathway

Issue Date:
01.07.2019

Professional Seals

No.	Description	Date
1	Issued For Pricing	11.27.2018
2	Issued For Permit	12.04.2018
3	Issued For Construction	01.07.2019

Project No: 8103

Sheet Title
LANDSCAPE
SITE PLANS
(FOR REFERENCE ONLY)

Sheet Number
L-101-04

Radiological Soil Investigation for Tree Installation
Riverwalk - Chicago, IL

Radiation Survey Form - Data

Location / Project ID:	Chicago Riverwalk - Tree and Bush Excavations
HP Technician:	Brian Schmidt
Date:	4/26/2019 - 5/17/19
Instrument ID:	Ludlum Model 2221 Scaler/Ratemeter (serial # 132844)
	w/ Ludlum Model 44-10 2" NaI Detector (w/ 6" shield)
7.1 pCi/g Action Level:	7,391 cpm

	Depth	3' (bgs)		Depth	3' (bgs)
Date	Excavation ID	Survey Results (cpm)	Date	Excavation ID	Survey Results (cpm)
4/26/2019	1	2300	5/6/2019	35	2000
4/26/2019	2	1900	5/6/2019	36	2300
4/26/2019	3	2700	5/6/2019	37	2100
4/26/2019	4	2100	5/6/2019	38	1900
4/26/2019	5	2300	5/6/2019	39	2500
4/26/2019	6	2100	5/6/2019	40	2100
4/26/2019	7	2900	5/6/2019	41	2400
4/26/2019	8	2100	5/6/2019	42	2500
4/26/2019	9	3300	5/6/2019	43	2500
4/26/2019	10	2400	5/6/2019	44	2200
4/26/2019	11	3000	5/6/2019	45	2400
4/26/2019	12	2200	5/6/2019	46	2100
4/26/2019	13	2900	5/6/2019	47	2300
4/26/2019	14	2000	5/10/2019	48	2800
4/26/2019	15	2500	5/10/2019	49	2700
4/26/2019	16	3100	5/10/2019	50	2400
4/26/2019	17	2600	5/10/2019	51	2500
4/26/2019	18	2600	5/10/2019	52	2300
4/26/2019	19	2800	5/16/2019	53	2900
4/26/2019	20	3600	5/16/2019	54	3100
4/26/2019	21	2800	5/16/2019	55	3300
4/26/2019	22	2600	5/16/2019	56	3900
4/26/2019	23	2900	5/16/2019	57	2700
5/2/2019	24	2100	5/16/2019	58	2200
5/6/2019	25	1900	5/17/2019	59	2200
5/6/2019	26	2600	5/17/2019	60	2400
5/6/2019	27	2400	5/17/2019	61	2300
5/6/2019	28	2200	5/17/2019	62	2700
5/6/2019	29	2100	5/17/2019	63	2500
5/6/2019	30	2400	5/17/2019	64	2900
5/6/2019	31	2000			
5/6/2019	32	1900			
5/6/2019	33	2300			
5/6/2019	34	2500			

Appendix M – Wabash Sewer Line Excavation

5/3/19 – 5/4/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Page 1 of 1

Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: Riverwalk – Sewer Trench Excavation – ROW Radiological Soil Survey

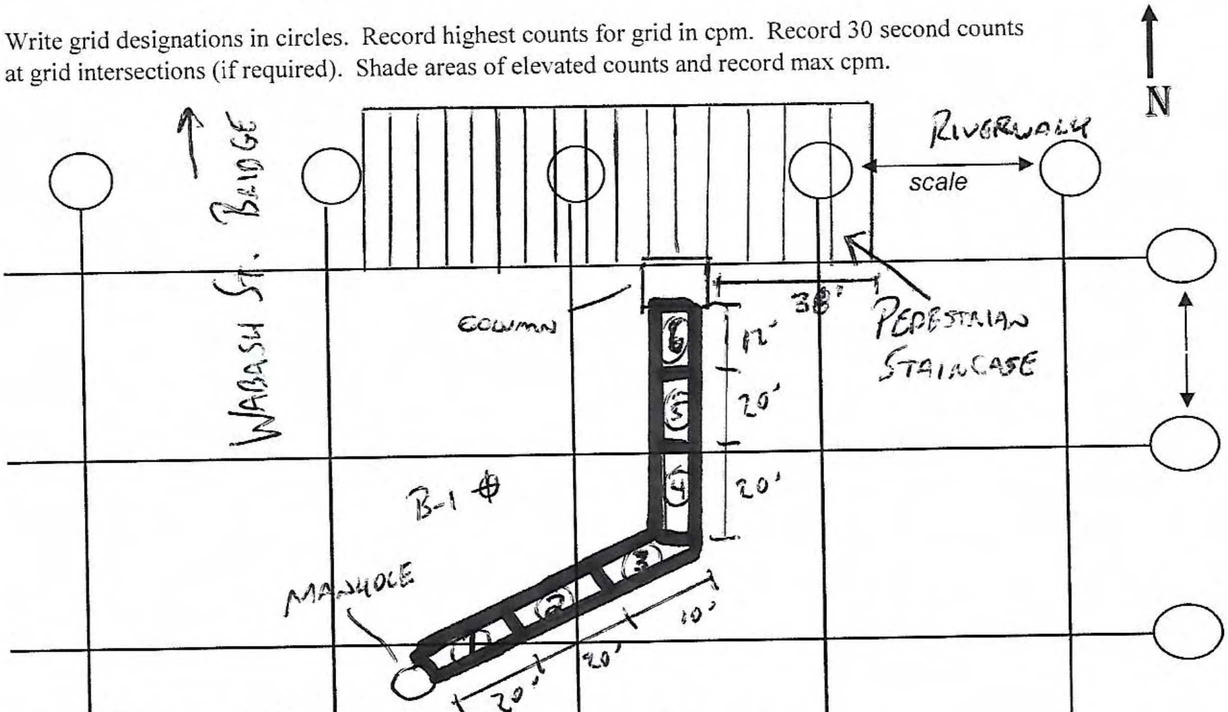
Date: 5/3-4/2019 **Technician:** Brian Schmidt

Inst Model: Ludlum-2221 **Serial No. :** 132844

Probe Type: 1"x1" NaI / [✓ 2"x2" NaI] [✓ Shielded] / Not Shielded **Lift Elevation:** 0-42"

Background 1754 cpm **Action Level:** 7391 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Excavation ID	Depth	CPM
①	0-6"	1500
	6-24"	1600
	24-42"	1900
	42-60"	2000
②	0-6"	1500
	6-24"	1800
	24-42"	1900
	42-60"	1600
③	0-6"	1300
	6-24"	1400
	24-42"	2200
	42-60"	2500

Excavation ID	Depth	CPM
④	0-6"	1600
	6-24"	1800
	24-42"	1900
	42-60"	2100
⑤	0-6"	1400
	6-24"	1600
	24-42"	2000
	42-60"	1800
⑥	0-6"	1700
	6-24	2000
	24-42"	2300
	42-60"	2500

B-1 = 1754 cpm = Background (1 min count)

Appendix N – Island Party Hut Surface Survey

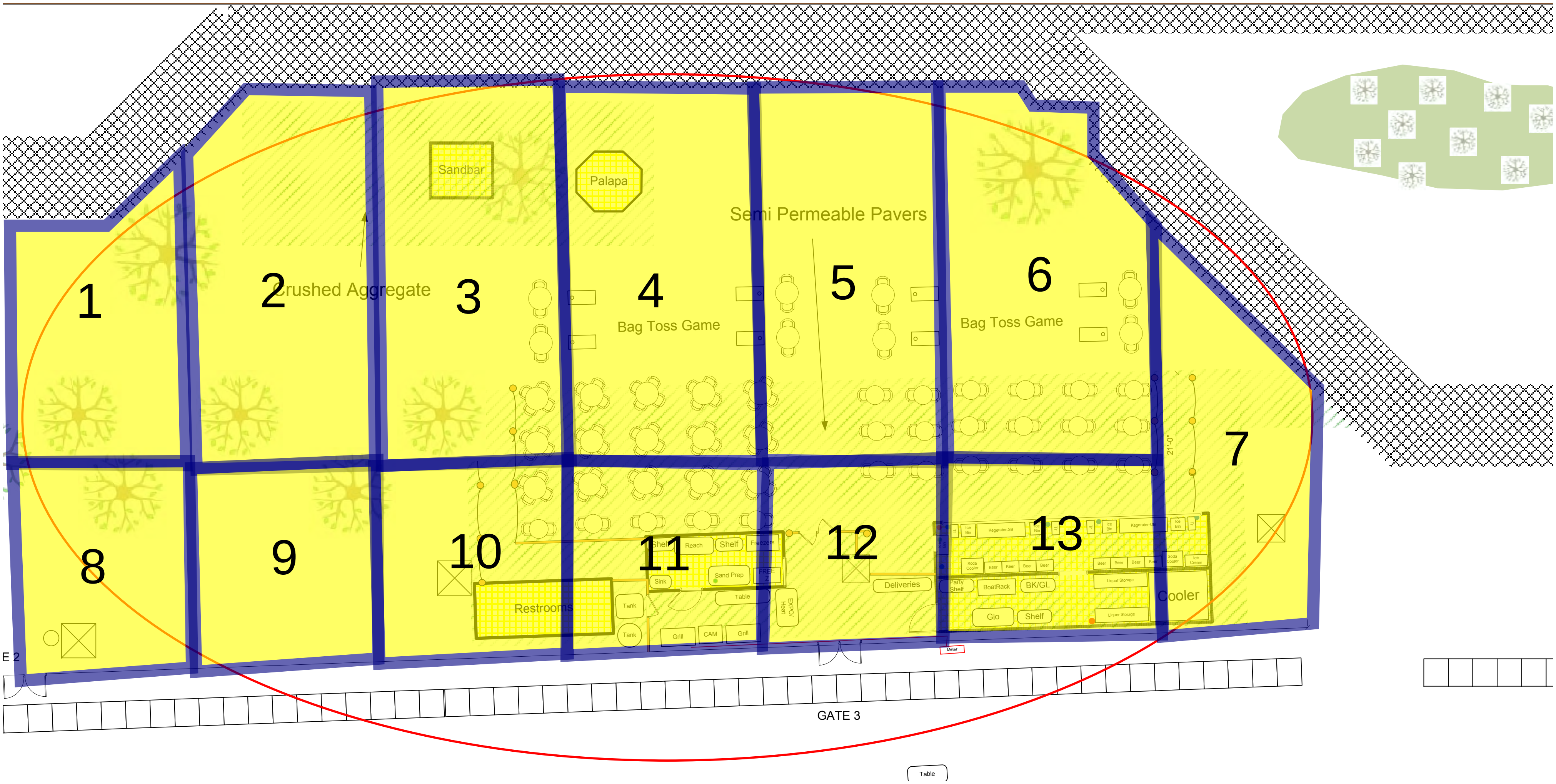
5/6/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Riverwalk - Chicago, IL - Oasis Bar - Radiological Surface Survey Investigation Location Map



Page 1 of 1

sahci
Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: Riverwalk-Chicago IL-Oasis Bar-Radiological Surface Survey

Date: 5/6/2019

Technician: Brian Schmidt

Inst Model: Ludlum-2221

Serial No. : 132844

Probe Type: 1"x1" NaI / [✓ 2"x2" NaI]
[✓ Shielded] / Not Shielded

Lift Elevation: 0-18"

Background 2026 **cpm**

Action Level: 7391 **cpm**

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

N

scale

Location ID	Depth	CPM
①	0-18"	2400
②	0-18"	2200
③	0-18"	2100
④	0-18"	2300
⑤	0-18"	2400
⑥	0-18"	3000
⑦	0-18"	2800
⑧	0-18"	2600
⑨	0-18"	2300
⑩	0-18"	2400
⑪	0-18"	2100
⑫	0-18"	2500
⑬	0-18"	2700

Appendix O – Parking Lot Bollard Installation

5/9/19 – 5/10/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Page 1 of 1

sahci
Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: Riverwalk - Parking Lot Replacement + Bollard Post Installation

Date: 5/9-10/2019

Technician: Brian Schmidt

Inst Model: Ludlum-2221

Serial No. : 132844

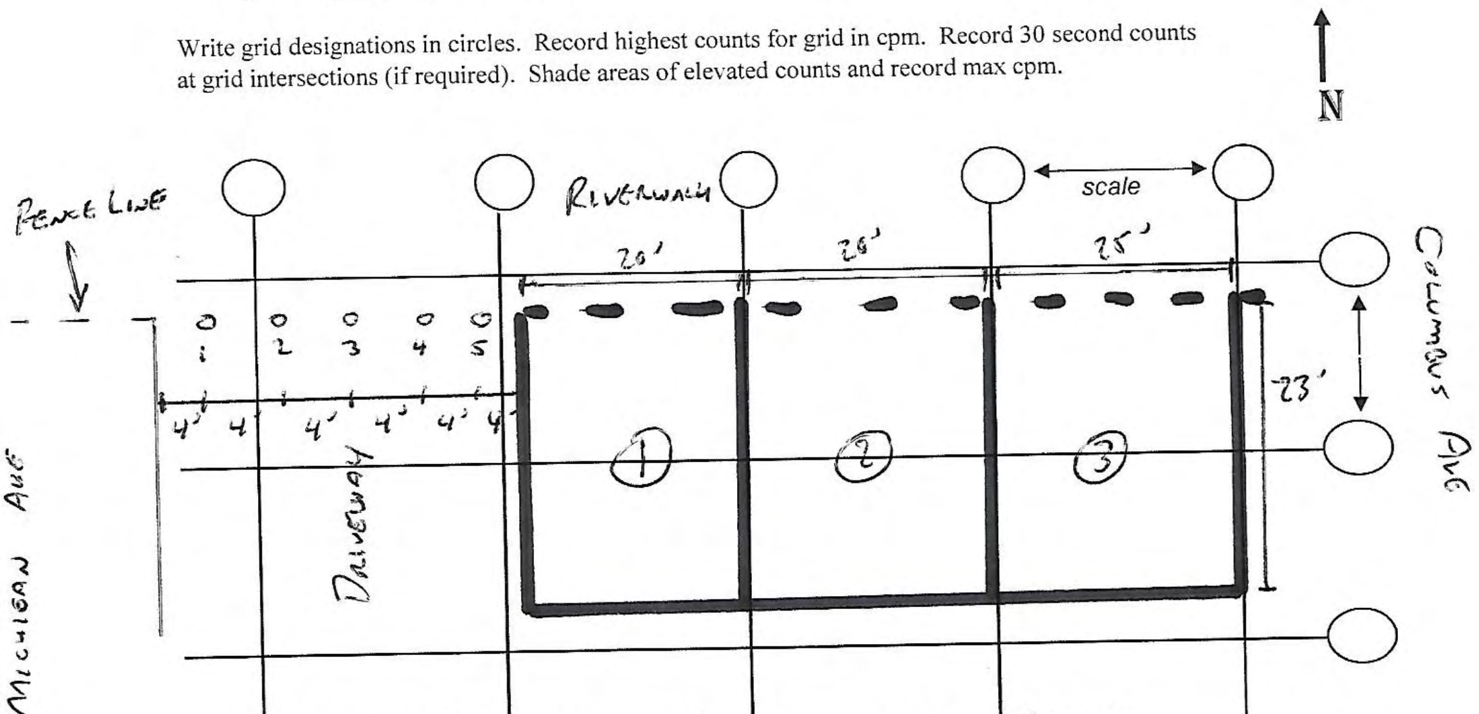
Probe Type: 1"x1" NaI / [✓ 2"x2" NaI]
[✓ Shielded] / Not Shielded

Lift Elevation: 0-4'

Background 2291 **cpm**

Action Level: 7391 **cpm**

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Parking Lot ID	Depth	CPM
①	0-18"	1800
	12-30"	2400
②	0-18"	1600
	12-30"	2700
③	0-18"	1900
	12-30"	2600

Bollard Post ID	Max	Spoils
①	3700	1900
②	3100	2500
③	3000	2100
④	4300	2600
⑤	4500	2900

Appendix P – Wabash Electric Transformer Installation

5/9/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Page 1 of 1

Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: Riverwalk - Chicago, IL - Transformer Pad Installation Excavation - Radiological Soil Survey

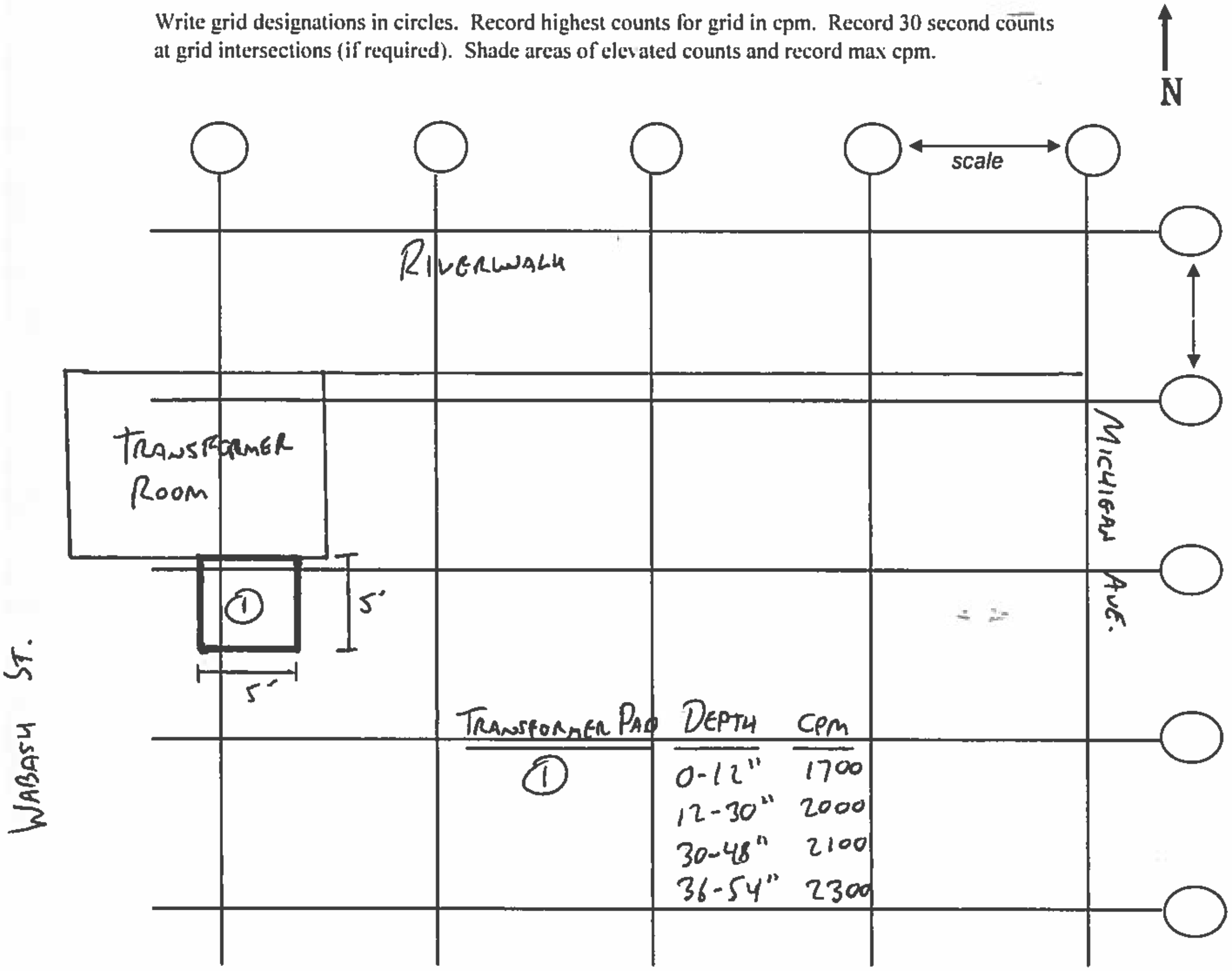
Date: 5/9/2019 **Technician:** Brian Schmidt

Inst Model: Ludlum - 2221 **Serial No. :** 132844

Probe Type: 1"x1" NaI / [✓ 2"x2" NaI] [✓ Shielded] / Not Shielded **Lift Elevation:** 0-36"

Background 1754 **cpm** **Action Level:** 7391 **cpm**

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Transformer Pad	Depth	cpm
①	0-12"	1700
	12-30"	2000
	30-48"	2100
	36-54"	2300

Appendix Q – Wabash Injection Basin Installation

5/20/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

Page 1 of 1

Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: RIVERWALK - CHICAGO, IL - INJECTION BASIN EXCAVATION RADIOLOGICAL SOIL SURVEY

Date: 5/20/2019

Technician: BRIAN SCHMIDT

Inst Model: LUDLUM - 2221

Serial No. : 132844

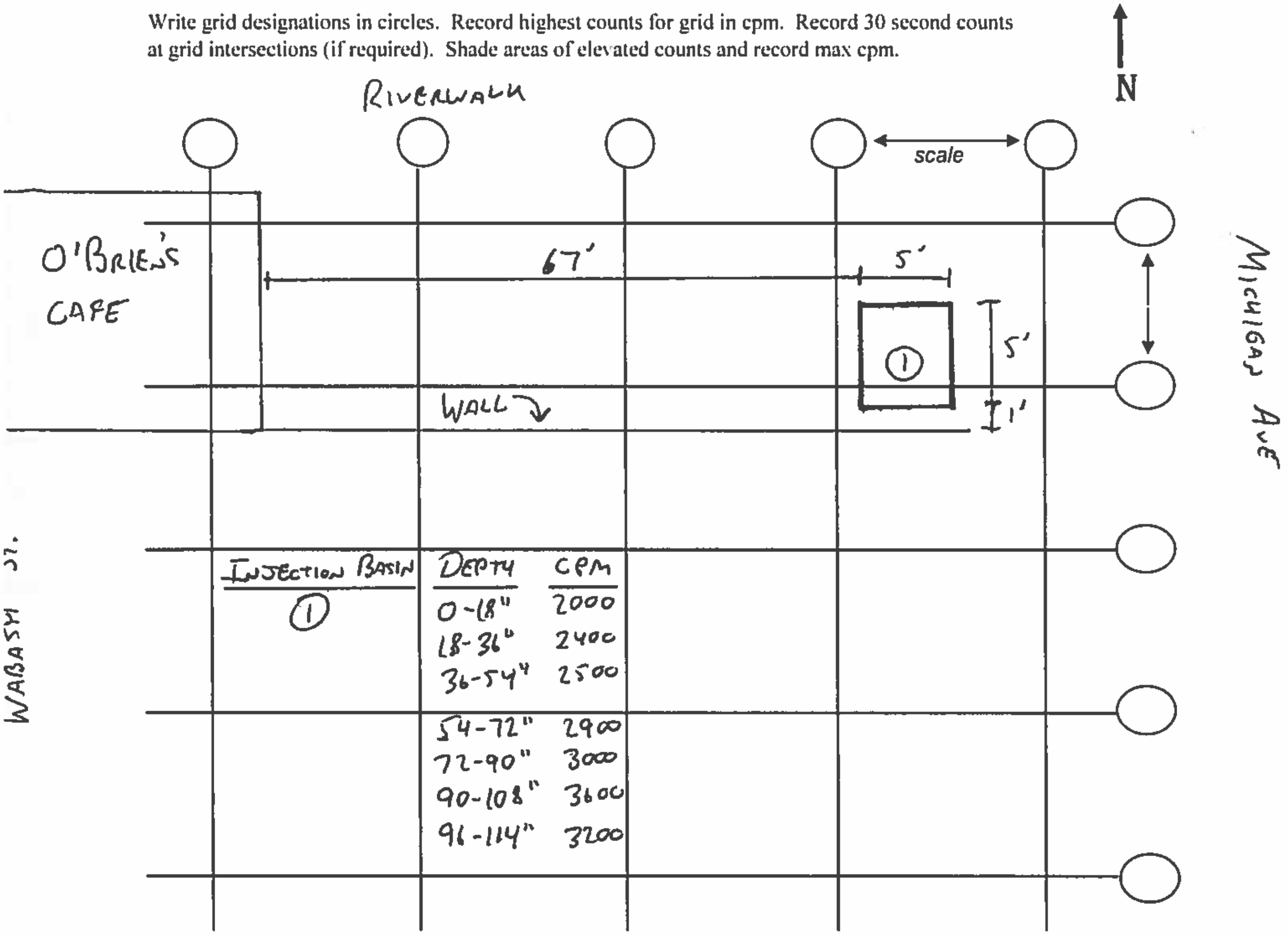
Probe Type: 1"x1" NaI / [✓ 2"x2" NaI]
[✓ Shielded] / Not Shielded

Lift Elevation: 0 - 96"

Background 1754 **cpm**

Action Level: 7391 **cpm**

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



INJECTION BASIN	DEPTH	CPM
①	0-18"	2000
	18-36"	2400
	36-54"	2500
	54-72"	2900
	72-90"	3000
	90-108"	3600
	96-114"	3200

Appendix R – Wabash Concrete Removal

5/13/19 – 5/17/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

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Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: Riverwalk - Chicago, IL - Concrete Removal Surface Survey

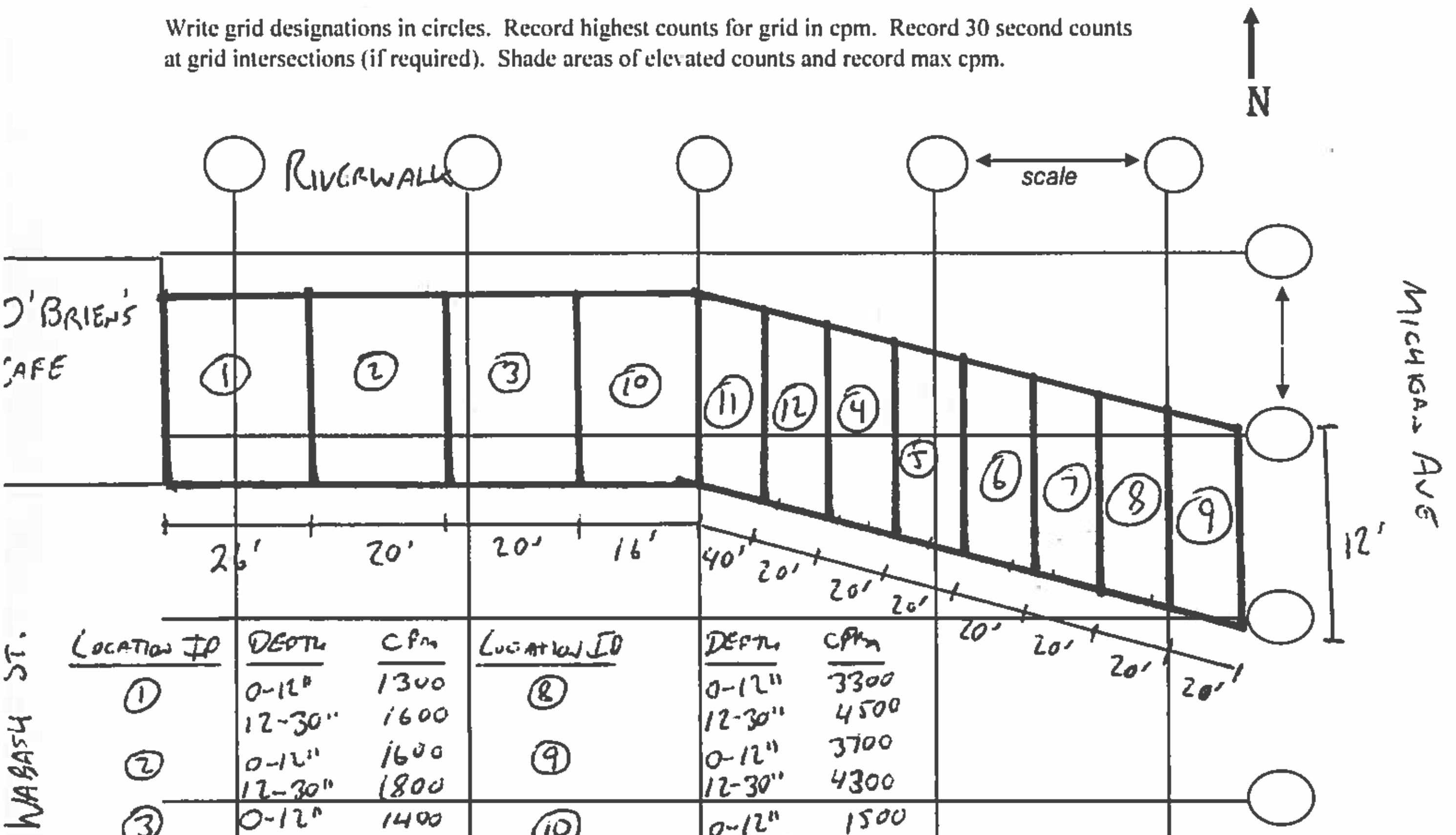
Date: 5/13/2019 **Technician:** Brian Schmitt

Inst Model: Ludlum - 2221 **Serial No. :** 132 844

Probe Type: 1"x1" NaI / [✓ 2"x2" NaI]
[✓ Shielded] / Not Shielded
Lift Elevation: 0 - 12"

Background 1754 cpm **Action Level:** 7391 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



Location ID	Depth	CPM	Location ID	Depth	CPM
①	0-12"	1300	⑧	0-12"	3300
	12-30"	1600		12-30"	4500
②	0-12"	1600	⑨	0-12"	3700
	12-30"	1800		12-30"	4300
③	0-12"	1400	⑩	0-12"	1500
	12-30"	1500		12-30"	1900
④	0-12"	3100	⑪	0-12"	1800
	12-30"	4000		12-30"	2000
⑤	0-12"	2800	⑫	0-12"	1600
	12-30"	4100		12-30"	1700
⑥	0-12"	2600			
	12-30"	4100			
⑦	0-12"	3600			
	12-30"	4700			

Appendix S – Northman Water Service Installation

5/22/19 – 5/31/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451

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Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: RIVERWALK - THE NORTHMAN - WATER SERVICE UTILITY INSTALLATION - ROW RADIOLOGICAL SOIL SURVEY

Date: 5/22-31/2019 **Technician:** BRIAN SCHMIDT

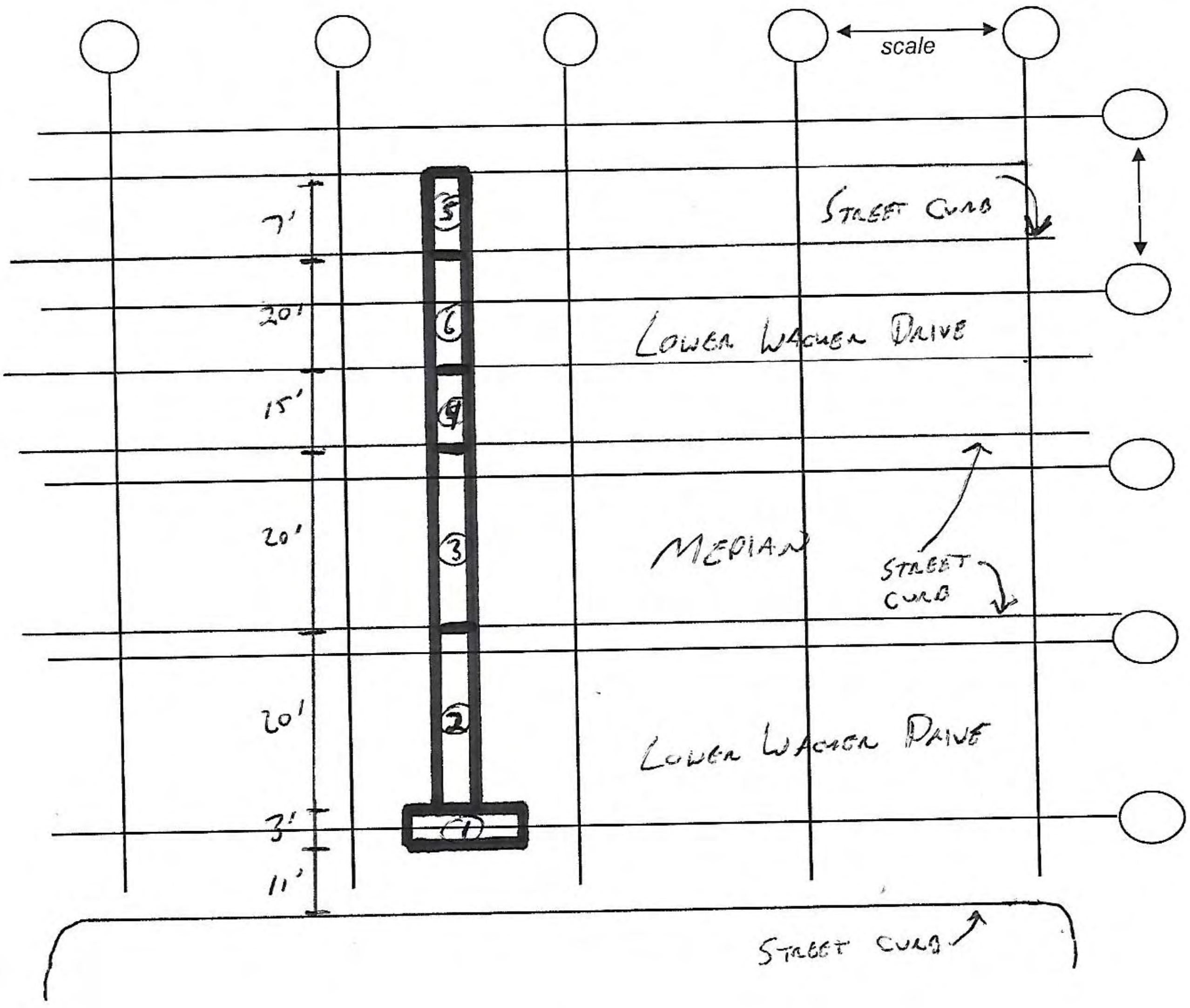
Inst Model: LUDLUM - 2221 **Serial No. :** 132844

Probe Type: 1"x1" NaI / [✓ 2"x2" NaI] [✓ Shielded] / Not Shielded **Lift Elevation:** 0-66"

Background 2132 **cpm** **Action Level:** 7391 **cpm**

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

N



sahci
Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: Riverwalk - The Northman - Water Service Utility Installation - ROW Radiological Soil Survey

Date: 5/22-31/2019

Technician: Brian Schmidt

Inst Model: Ludlum - 2221

Serial No. : 132844

Probe Type: 1"x1" NaI / [✓ 2"x2" NaI]
[✓ Shielded] / Not Shielded

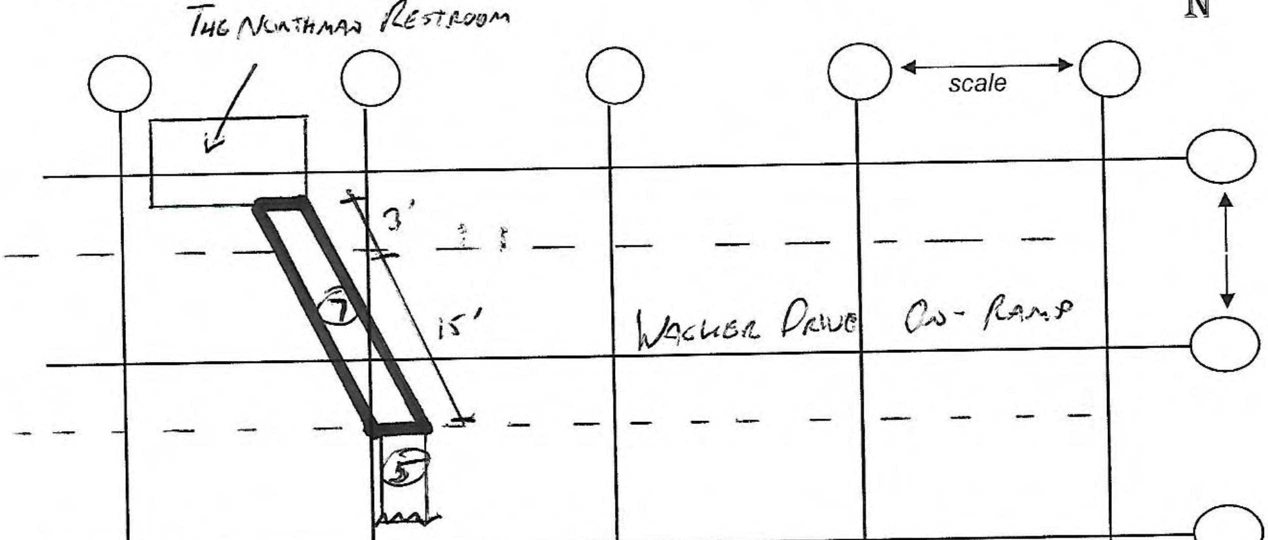
Lift Elevation: 0-66"

Background 2132 cpm

Action Level: 7391 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

N



Excavation ID	Depth	CPM	Excavation ID	Depth	CPM
①	0-18"	1600	④	0-18"	1600
	18-36"	1800		18-36"	2300
	36-54"	1500		36-54	2900
	54-72"	2200		54-72"	3900
	66-84	2600		66-84"	4400
②	0-18"	1900	⑤	0-18"	2100
	18-36"	2400		18-36"	3200
	36-54"	3700		36-54"	3800
	54-72"	3400		54-72"	4100
	66-84"	3200		66-84"	4200
③	0-18"	1900	⑥	0-18"	2400
	18-36"	2700		18-36"	2900
	36-54"	3600		36-54"	4000
	54-72"	4100		54-72"	4300
	66-84"	3800		66-84"	4700
			⑦	0-18"	2200
				18-36"	2600
				36-54"	3100
				54-72"	3600
				66-84"	3700

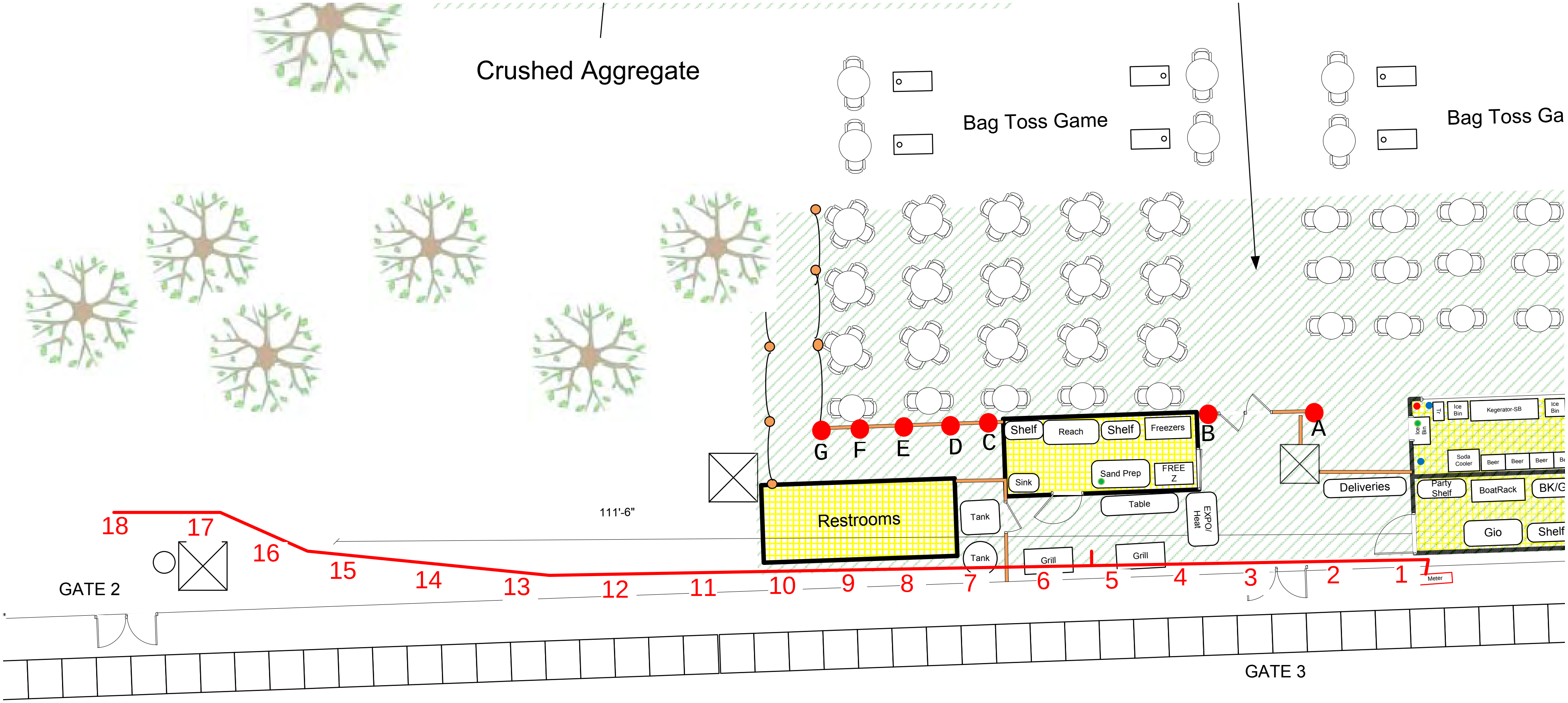
Appendix T – Island Party Hut Gas Line Installation

6/6/19 – 6/7/19

Chicago Riverwalk

Performed by:

Stan A. Huber Consultants, Inc.
200 N. Cedar Rd.
New Lenox, IL 60451


Crushed Aggregate
Bag Toss Game
Bag Toss Ga
G
F
E
D
C
B
A
Shelf
Reach
Shelf
Freezers
Sink
Sand Prep
FREE
Z
Table
EXPO/
Heat
Tank
Tank
Grill
Grill
Restrooms
Deliveries
Tr
Ice
Bin
Kegerator-SB
Ice
Bin
Ice
Bin
Soda
Cooler
Beer
Beer
Beer
Be
Party
Shelf
BoatRack
BK/G
Gio
Shelf
Meter
111'-6"
18
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1
GATE 2
GATE 3

Radiation Survey Form - Data

Location / Project ID:	Chicago Riverwalk - Gas Line and Fence Post Installation
HP Technician:	Glenn Huber
Date:	6/6/19 - 6/7/19
Instrument ID:	Ludlum Model 2221 Scaler/Ratemeter (serial # 132844) w/ Ludlum Model 44-10 2" NaI Detector (w/ 6" shield)
7.1 pCi/g Action Level:	6,262 cpm

Gas Line

*Each segment 8' along fence

	Depth	0"-18" (bgs)	18"-36" (bgs)	36"-54" (bgs)
Date	Excavation ID	Survey Results (cpm)		
6/6/2019	1	2400	2700	3300
6/6/2019	2	2600	2800	3900
6/6/2019	3	2300	3000	3800
6/6/2019	4	2400	2900	3600
6/6/2019	5	2300	2700	4000
6/6/2019	6	2100	2600	3400
6/6/2019	7	1200	2500	3400
6/6/2019	8	1100	2300	3100
6/6/2019	9	1300	2400	3500
6/6/2019	10	1400	2400	3000
6/6/2019	11	1200	2800	3400
6/6/2019	12	1200	2700	3300
6/6/2019	13	1100	2600	4100
6/6/2019	14	1300	2900	3800
6/6/2019	15	1400	2700	3600
6/6/2019	16	1200	3000	3800
6/6/2019	17	2800	3300	3700
6/6/2019	18	3100	3200	3800

Fence Posts 0-3' below ground surface spoils

6/7/2019	A	<3000
6/7/2019	B	<3000
6/7/2019	C	<3000
6/7/2019	D	<3000
6/7/2019	E	<3000
6/7/2019	F	<3000
6/7/2019	G	<3000