



**COUNTY OF ORANGE
OC PUBLIC WORKS DEPARTMENT
SANTA ANA, CALIFORNIA**

JAMES TREADAWAY, DIRECTOR

**2023
AGUA CHINON RETARDING BASIN
SCOUR STUDY**

Prepared by:

**KEVIN HILLS, COUNTY SURVEYOR
COUNTY OF ORANGE PUBLIC WORKS
SURVEY FIELD UNIT**

ORANGE COUNTY BOARD OF SUPERVISORS

**ANDREW DO, Vice Chair
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Fifth District**

2023
SCOUR STUDY

AGUA CHINON RETARDING BASIN (F18B01)

STATION 0+50 TO 19+50

AS-BUILT PLANS:F18-B01-1-A

NOTE: BASIS OF SPILLWAY CREST WAS DERIVED FROM O&M MANUAL DATED MAY 1998. ALL ELEVATIONS HAVE BEEN ADJUSTED FROM NGVD29 DATUM TO NAVD88 DATUM, WITH AN ADDITIONAL +0.15' ADJUSTMENT FOR MSL (MEAN SEA LEVEL).

VERTICAL DATUM

NAVD 1988/O.C.S. 1995 ADJUSTMENT

Office Check by:	Michael LaFontaine, PLS, Deputy County Surveyor Elliott Medina, PLS, Senior Land Surveyor
Field Data Provided by:	OCS UAV Unit
Survey Party Chief:	Kevin Martinez, Surveyor III
Computer processing done by:	Josef D. Pedretti, Surveyor II

COUNTY of ORANGE
OC PUBLIC WORKS DEPARTMENT

OC SURVEY SERVICE AREA
FIELD UNIT

2023 SCOURS STUDY (AS-BUILT PLAN) – VOLUME REPORT

AGUA CHINON RETARDING BASIN (F18B01), STATION 0+50 to 19+50

ALIGNMENT: Agua Chinon Basin Control Line

SURFACE 1: Agua_Chinon_EG_UAV_LIDAR_2023 (2023 Ground)

SURFACE 2: Aguaplan As-Built Plan(1998 Plan)

BASELINE STATION NUMBER	STATION CUT AREA	STATION CUT VOLUME	STATION FILL AREA	STATION FILL VOLUME	MASS ORDINATE VOLUME
0+50	57.1	0.00	67.92	0.00	0.00
1+00	543.82	479.72	19.02	75.86	403.86
1+50	1107.51	1498.4	25.63	41.19	1861.07
2+00	1465.99	2375.12	85.01	97.1	4139.09
2+50	1597.75	2835.92	141.26	207.32	6767.69
3+00	1539.55	2904.74	149.3	269	9403.43
3+50	1487.04	2802.26	109.83	239	11966.69
3+82	1361.35	1687.3	90.58	118.57	13535.42
4+00	1442.47	934.57	39.56	42.23	14427.76
4+50	1286.88	2525.81	37.24	71.1	16882.47
5+00	902.25	2016.46	34.16	66.1	18832.83
5+50	802.03	1577.13	58.06	84.42	20325.54
6+00	738.02	1425.57	41.89	92.14	21658.97
6+32	695.19	849.09	19.32	35.42	22472.64
6+50	780.28	491.64	0.01	4.38	22959.90
7+00	666.72	1338.43	16.8	10.6	24287.73
7+50	438.22	1015.72	68.07	73.26	25230.19
8+00	365.69	743.36	114.14	166.89	25806.66
8+50	433.98	739.54	43.29	140.58	26405.62

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2023 SCOURS STUDY (AS-BUILT PLAN) – VOLUME REPORT

AGUA CHINON RETARDING BASIN (F18B01), STATION 0+50 to 19+50

ALIGNMENT: Agua Chinon Basin Control Line

SURFACE 1: Agua_Chinon_EG UAV_LIDAR_2023 (2023 Ground)

SURFACE 2: Aguaplan As-Built Plan(1998 Plan)

BASELINE STATION NUMBER	STATION CUT AREA	STATION CUT VOLUME	STATION FILL AREA	STATION FILL VOLUME	MASS ORDINATE VOLUME
8+82	739.42	687.45	16.34	34.07	27059.00
9+00	879.73	538.91	16.33	10.89	27587.02
9+50	656.69	1417.58	73.39	76.75	28927.85
10+00	678.41	1236.15	52.2	115.73	30048.27
10+45	597.02	1062.14	128.52	145.9	30964.51
10+50	588.35	109.76	116.11	22.64	31051.63
11+00	537.68	1042.27	88.12	188.51	31905.39
11+32	425.88	569.63	33.06	69.19	32405.83
11+50	471.67	299.13	77.76	35.9	32669.06
12+00	703.17	1080.71	0.00	48.24	33701.53
12+50	739.08	1335.28	0.01	0.01	35036.80
13+00	537.61	1177.18	31.34	19.7	36194.28
13+50	494.88	955.73	25.56	52.59	37097.42
13+82	453.74	561.89	17.96	25.65	37633.66
14+00	494.1	315.94	2.57	6.08	37943.52
14+50	489.67	910.9	32.99	27.64	38826.78
15+00	459.98	879.16	60.47	85.26	39620.68
15+50	630.01	1005.13	44.57	96.89	40528.92
16+00	710.14	1240.14	58.04	94.74	41674.32

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2023 SCOURS STUDY (AS-BUILT PLAN) – VOLUME REPORT

AGUA CHINON RETARDING BASIN (F18B01), STATION 0+50 to 19+50

ALIGNMENT: Agua Chinon Basin Control Line

SURFACE 1: Agua_Chinon_EG UAV_LIDAR_2023 (2023 Ground)

SURFACE 2: Aguaplan As-Built Plan(1998 Plan)

BASELINE STATION NUMBER	STATION CUT AREA	STATION CUT VOLUME	STATION FILL AREA	STATION FILL VOLUME	MASS ORDINATE VOLUME
16+08	727.84	213.03	90.78	21.87	41865.48
16+50	944.91	1297.37	31.97	91.57	43071.28
17+00	1080.42	1873.9	44.1	70.13	44875.05
17+45	1394.07	2056.52	13.18	45.21	46886.36
17+50	1399.31	258.65	25.66	3.53	47141.48
18+00	1142.94	2349.94	23.48	45.49	49445.93
18+50	111.81	995.19	0.00	14.64	50426.48
19+00	0.00	0.00	0.00	0.00	50495.50
19+50	0.00	0.00	0.00	0.00	50495.50

CUT: 53,779.48 CU. YDS.

FILL: 3,283.98 CU. YDS.

NET: 50,495.50 CU. YDS.

COUNTY of ORANGE
OC PUBLIC WORKS DEPARTMENT

**OC SURVEY SERVICE AREA
FIELD UNIT**

2023 SCOURS STUDY – PERCENTAGE OF MAXIMUM SEDIMENT CAPACITY -VOLUME REPORT

AGUA CHINON RETARDING BASIN (F18B010) STATION 0+50 TO 18+50

<u>STATION</u>	<u>CUT AREA</u>	<u>CUT VOLUME</u>	<u>FILL AREA</u>	<u>FILL VOLUME</u>	<u>% OF CAPACITY</u>
0+50	57.1	0.00	1578.57	0.00	0.00%
1+00	543.82	479.72	7311.81	7585.04	6.32%
1+50	1107.51	1498.4	12549.12	18172.78	8.25%
2+00	1465.99	2375.12	13794.83	24383.45	9.74%
2+50	1597.75	2835.92	14383.76	26089.39	10.87%
3+00	1539.55	2904.74	14310.74	26568.96	10.93%
3+50	1487.04	2802.26	14068.28	26276.55	10.66%
3+82	1361.35	1687.3	13785.8	16504.93	10.22%
4+00	1442.47	934.57	13648.55	9145.64	10.22%
4+50	1286.88	2525.81	12812.03	24496.45	10.31%
5+00	902.25	2016.46	11612.61	22606.31	8.92%
5+50	802.03	1577.13	10707.43	20661.03	7.63%
6+00	738.02	1425.57	10346.78	19493.69	7.31%
6+30	695.19	849.09	9989.45	12049.17	7.05%
6+50	780.28	491.64	9906.08	6633.1	7.41%
7+00	666.72	1338.43	9239.74	17724.03	7.55%
7+50	438.22	1015.72	8541.1	16459.5	6.17%

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2023 SCOURS STUDY – PERCENTAGE OF MAXIMUM SEDIMENT CAPACITY -VOLUME REPORT

AGUA CHINON RETARDING BASIN (F18B010) STATION 0+50 TO 18+50

<u>STATION</u>	<u>CUT AREA</u>	<u>CUT VOLUME</u>	<u>FILL AREA</u>	<u>FILL VOLUME</u>	<u>% OF CAPACITY</u>
8+00	365.69	743.36	7991.23	15304.89	4.86%
8+50	433.98	739.54	7667.81	14498.08	5.10%
8+82	739.42	687.45	7591.09	9043.45	7.60%
9+00	879.73	538.91	7590.58	5059.38	10.65%
9+50	656.69	1417.58	7220.19	13712.24	10.34%
10+00	678.41	1236.15	7144.23	13300.33	9.29%
10+45	597.02	1062.14	6640.7	11484.89	9.25%
10+50	588.35	109.76	6635.96	1229.32	8.93%
11+00	537.68	1042.27	6496.28	12159.25	8.57%
11+32	425.88	569.63	6390.97	7635.71	7.46%
11+50	471.67	299.13	6305.57	4233.22	7.07%
12+00	703.17	1080.71	6261.16	11635.84	9.29%
12+50	739.08	1335.28	5934.47	11290.9	11.83%
13+00	537.61	1177.18	5422.49	10512.14	11.20%
13+50	494.88	955.73	4891.47	9545.68	10.01%
13+82	453.74	561.89	4563.3	5600.91	10.03%
14+00	494.1	315.94	4421.4	2995.59	10.55%
14+50	489.67	910.9	3929.14	7727.5	11.79%
15+00	459.98	879.16	3517.03	6891.08	12.76%
15+50	630.01	1005.13	3464.26	6464.09	15.55%

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2023 SCOURS STUDY – PERCENTAGE OF MAXIMUM SEDIMENT CAPACITY -VOLUME REPORT

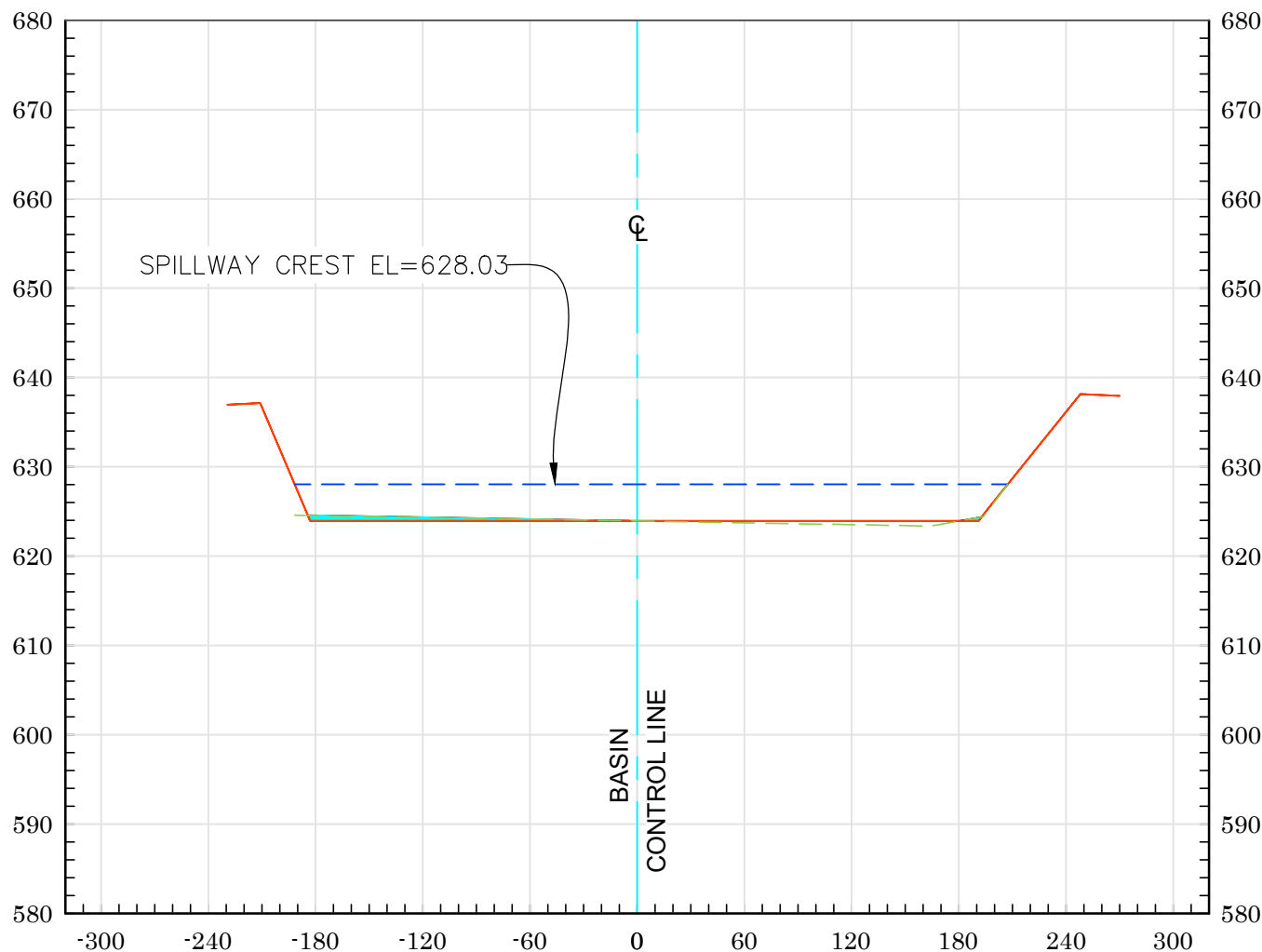
AGUA CHINON RETARDING BASIN (F18B010) STATION 0+50 TO 18+50

<u>STATION</u>	<u>CUT AREA</u>	<u>CUT VOLUME</u>	<u>FILL AREA</u>	<u>FILL VOLUME</u>	<u>% OF CAPACITY</u>
16+00	710.14	1240.14	3390.19	6346.59	19.54%
16+08	727.84	213.03	3419.84	1008.89	21.12%
16+50	944.91	1297.37	3700.44	5536.56	23.43%
17+00	1080.42	1873.9	3766.06	6913.33	27.11%
17+45	1394.07	2056.52	3793.26	6299.42	32.65%
17+50	1399.31	258.65	3782.57	701.47	36.87%
18+00	1142.94	2349.94	3046.76	6311.18	37.23%
18+50	111.81	995.19	729.22	3250.95	30.61%
		TOTAL CUT VOLUME		TOTAL MODIFIED BASIN VOLUME	PERCENT OF CAPACITY
Cu.Yds.		53,779.48		511,542.90	8.02%

NOTE: NO STATIONS ARE FILLED BEYOND 50% OF THE MAXIMUM BASIN CAPACITY

**STATIONS 19+00 AND 19+50 ARE NOT INCLUDED DUE TO STATIONS BEING ABOVE
THE SPILLWAY CREST ELEVATION.**

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

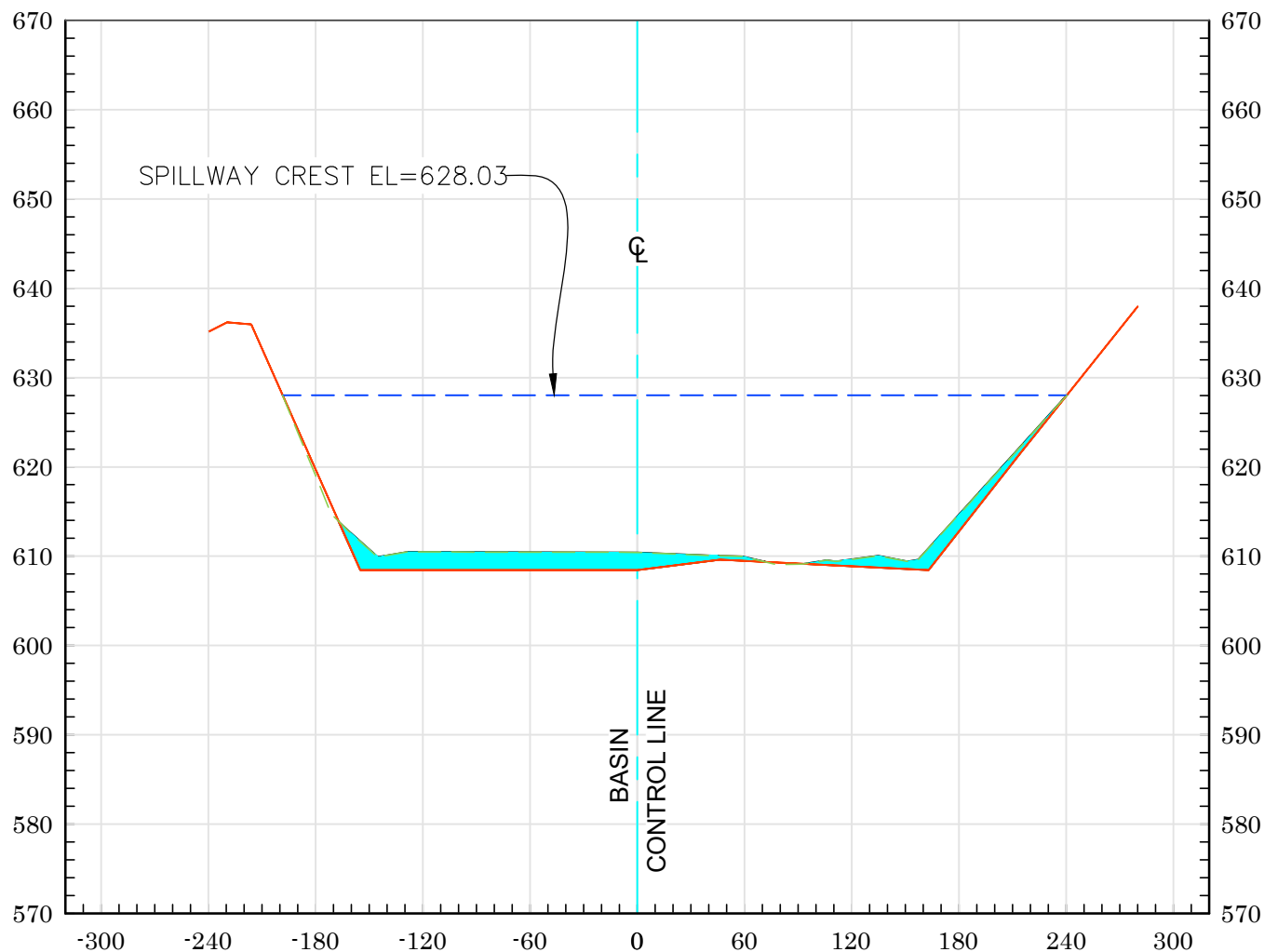


0+50

As-Built Plan ——— 2023 Ground - - - - -
 Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
 Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

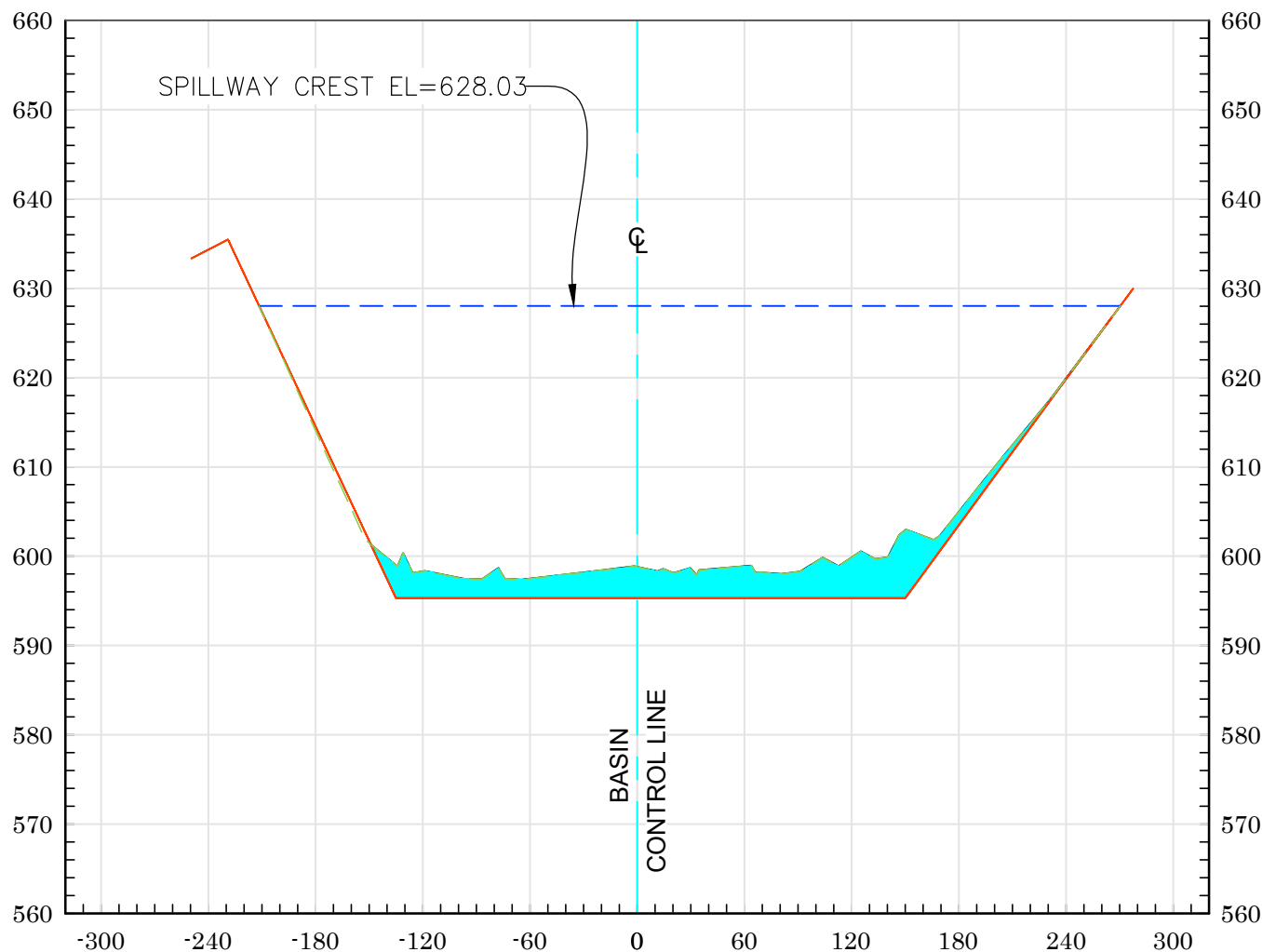


1+00

As-Built Plan ——— 2023 Ground - - - - -
 Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
 Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

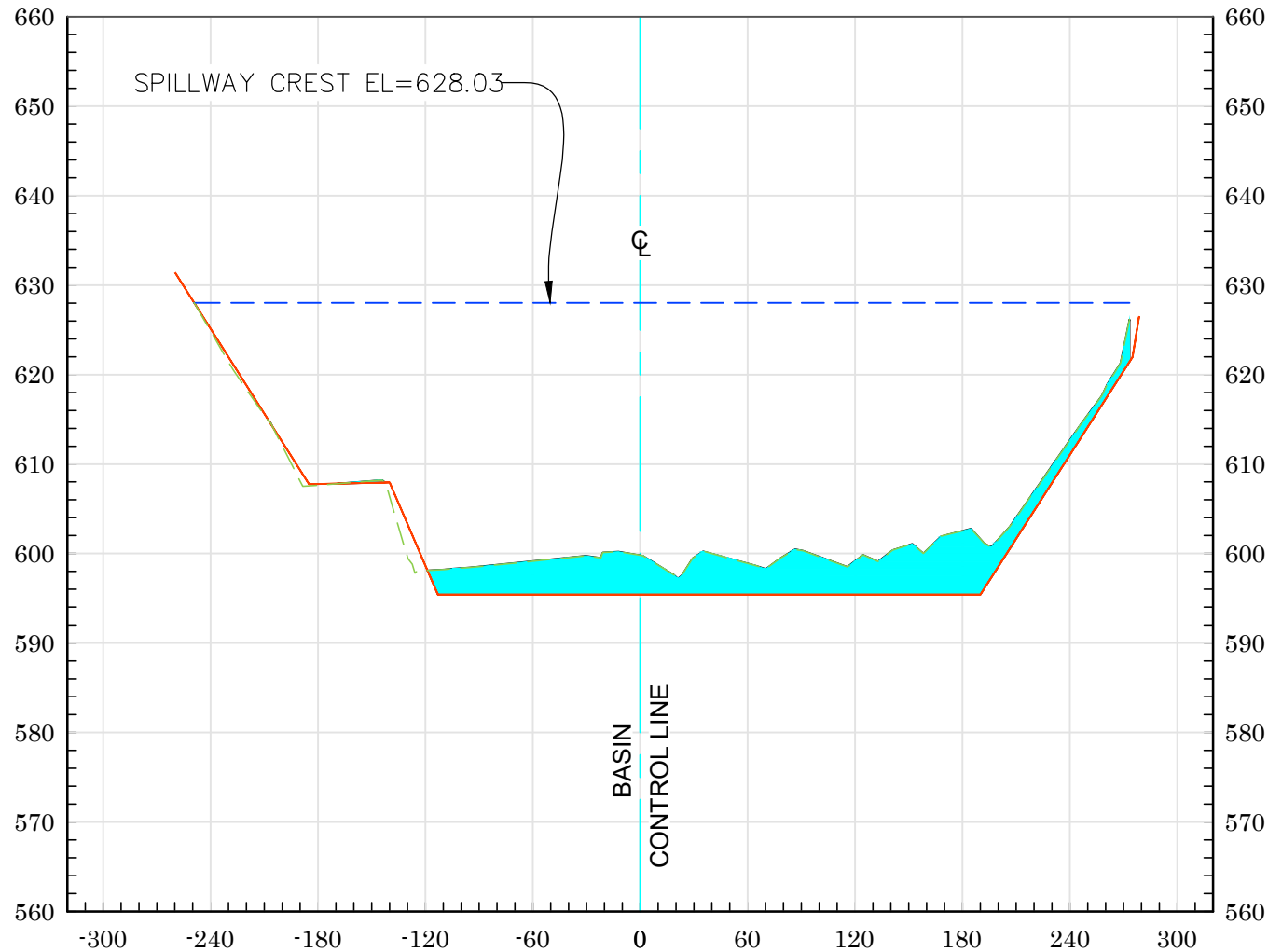


1+50

As-Built Plan ——— 2023 Ground - - - - -
 Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
 Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

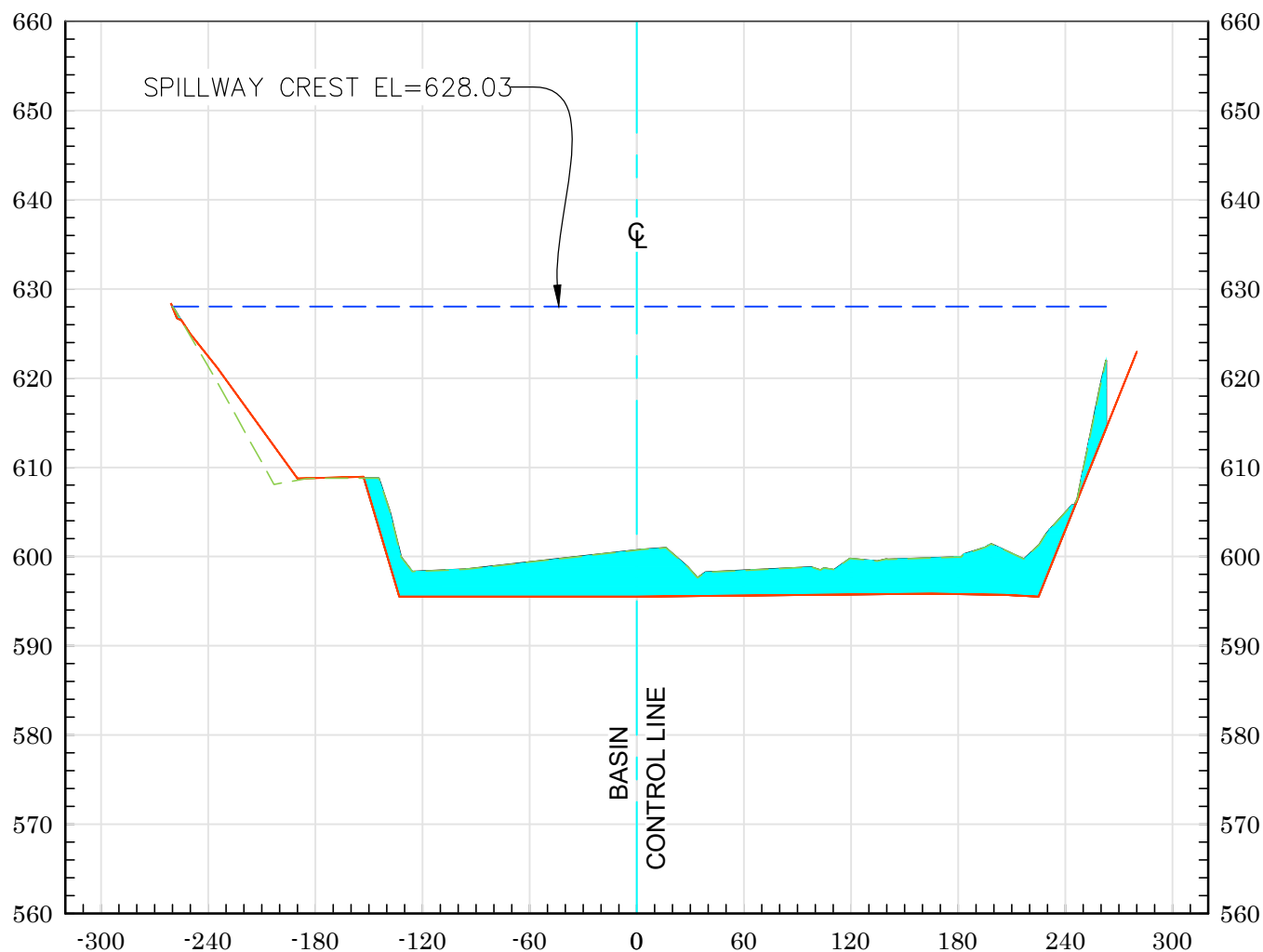


2+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

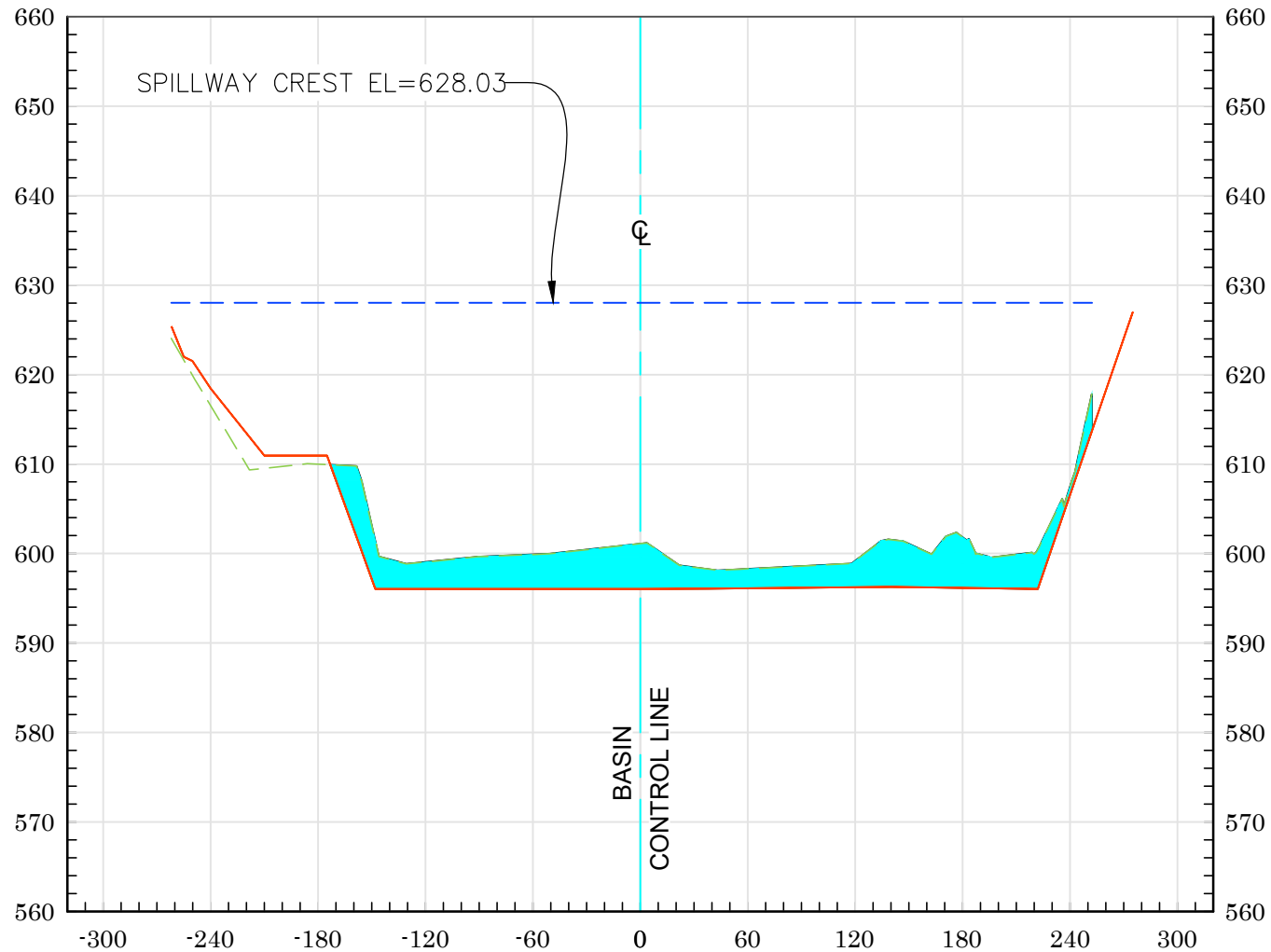


2+50

As-Built Plan ——— 2023 Ground - - -
 Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
 Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

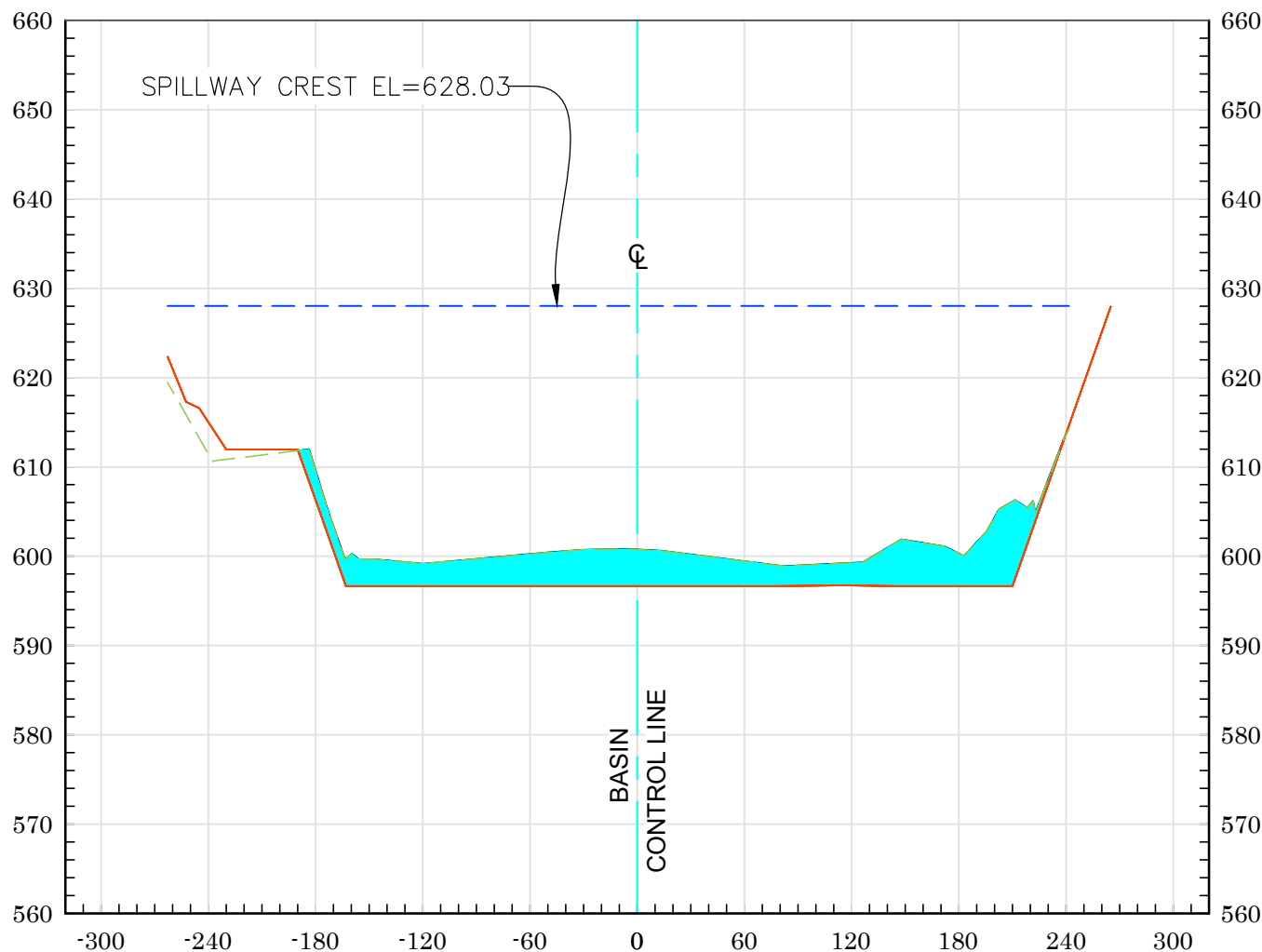


3+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

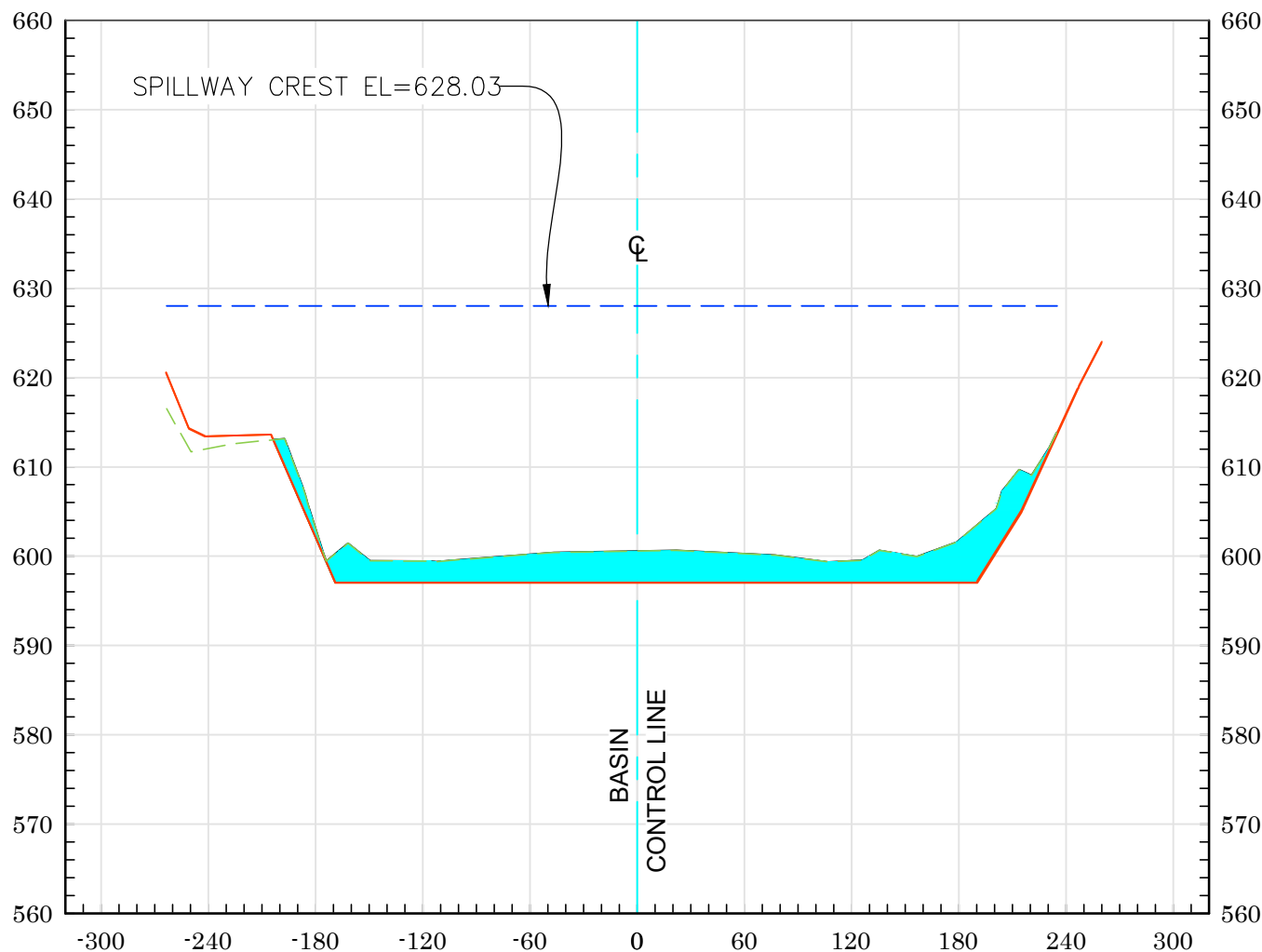
AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ——— 2023 Ground - - - - -
 Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
 Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

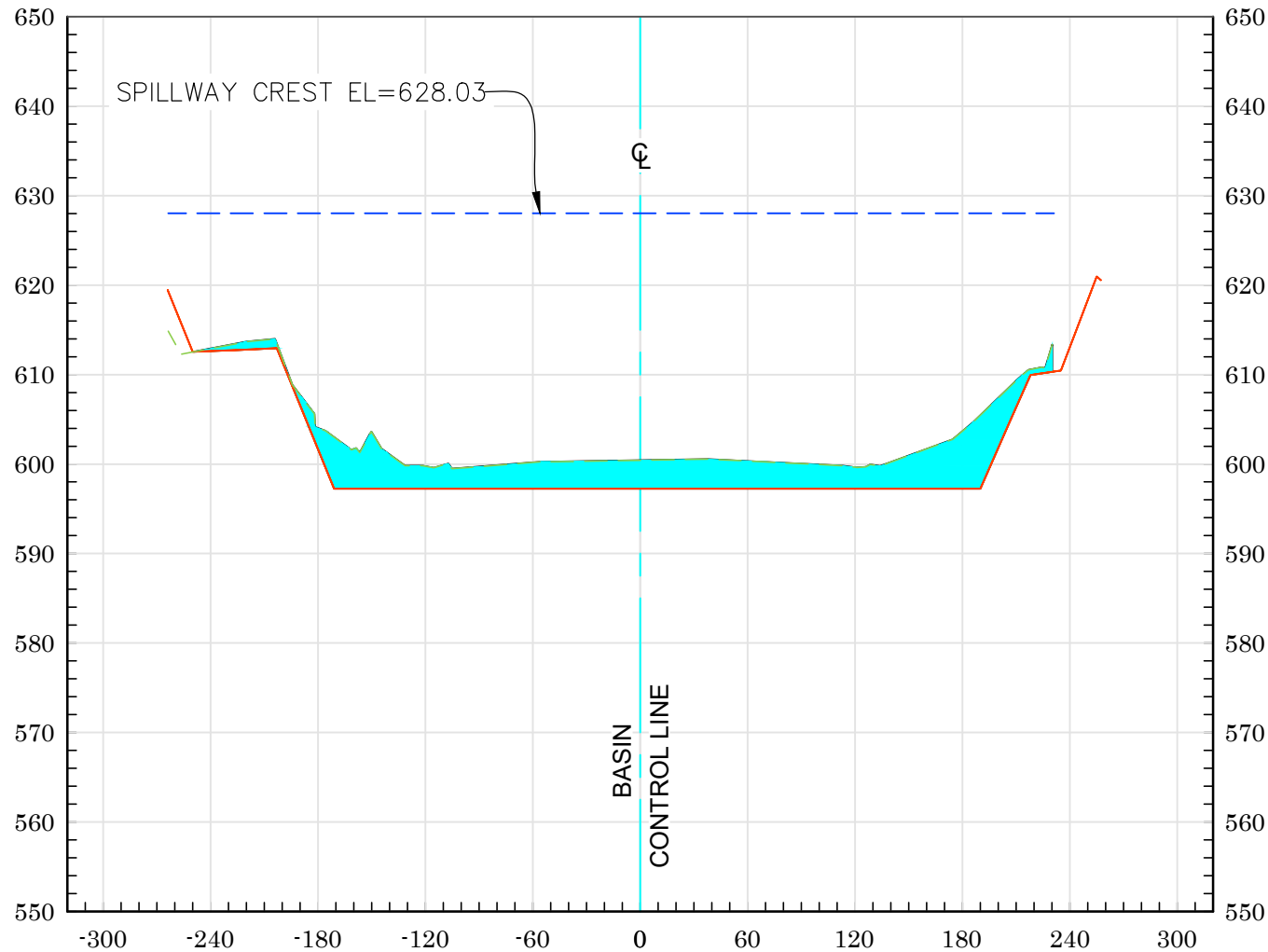


3+82

As-Built Plan ——— 2023 Ground - - - - -
 Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
 Horiz. Scale: 1" = 100'

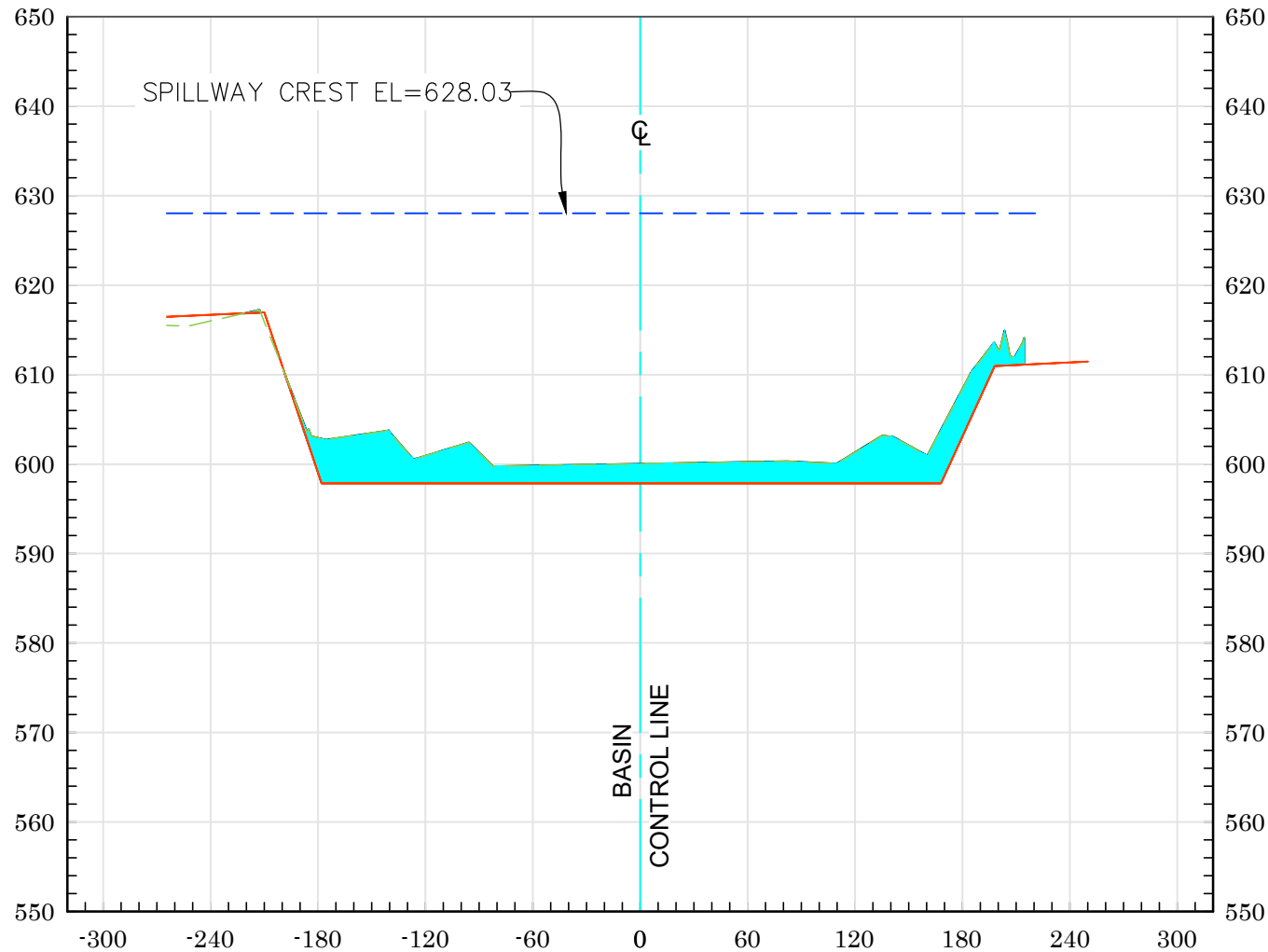
AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ———— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

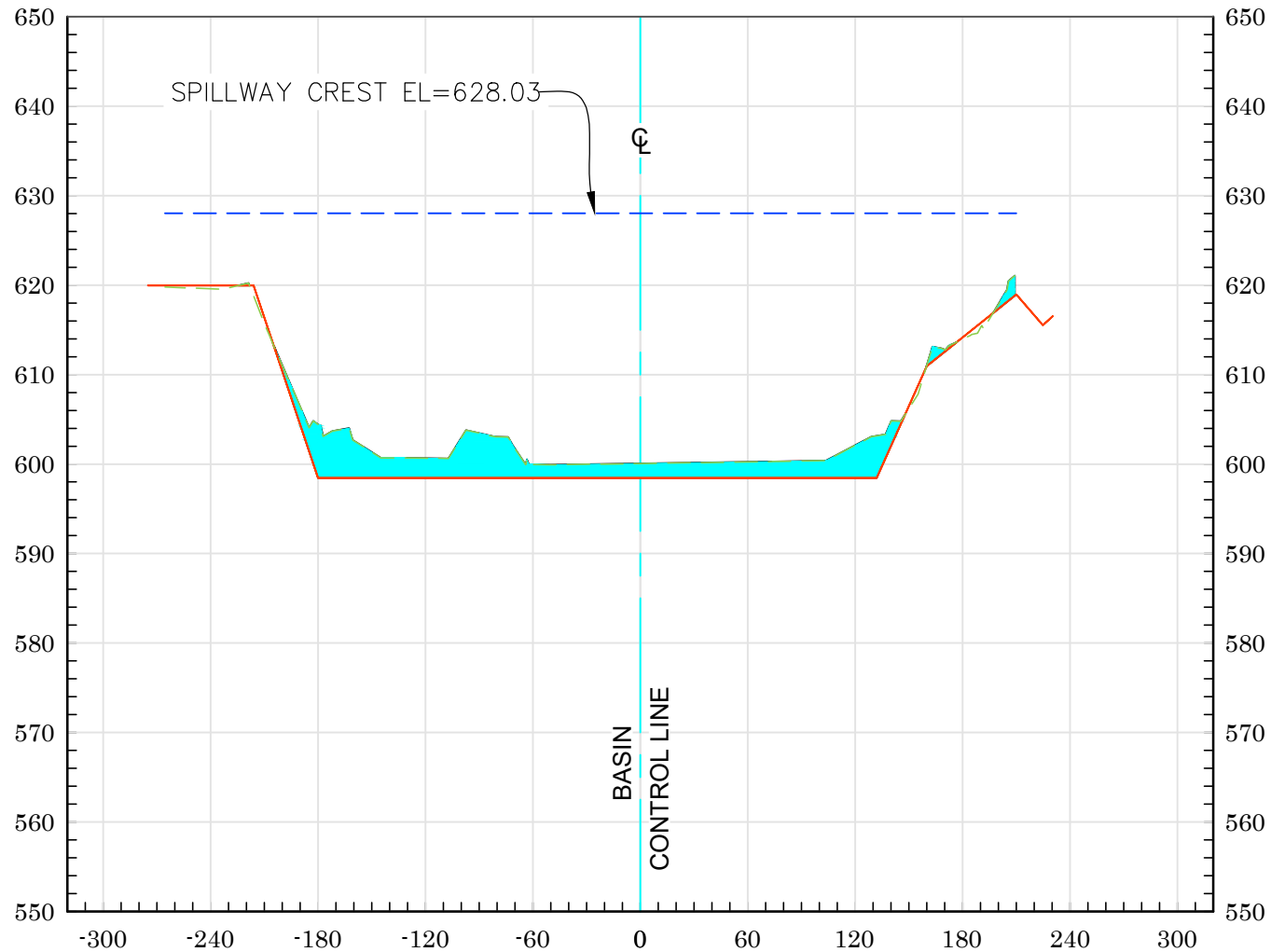


4+50

As-Built Plan ——— 2023 Ground ———
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

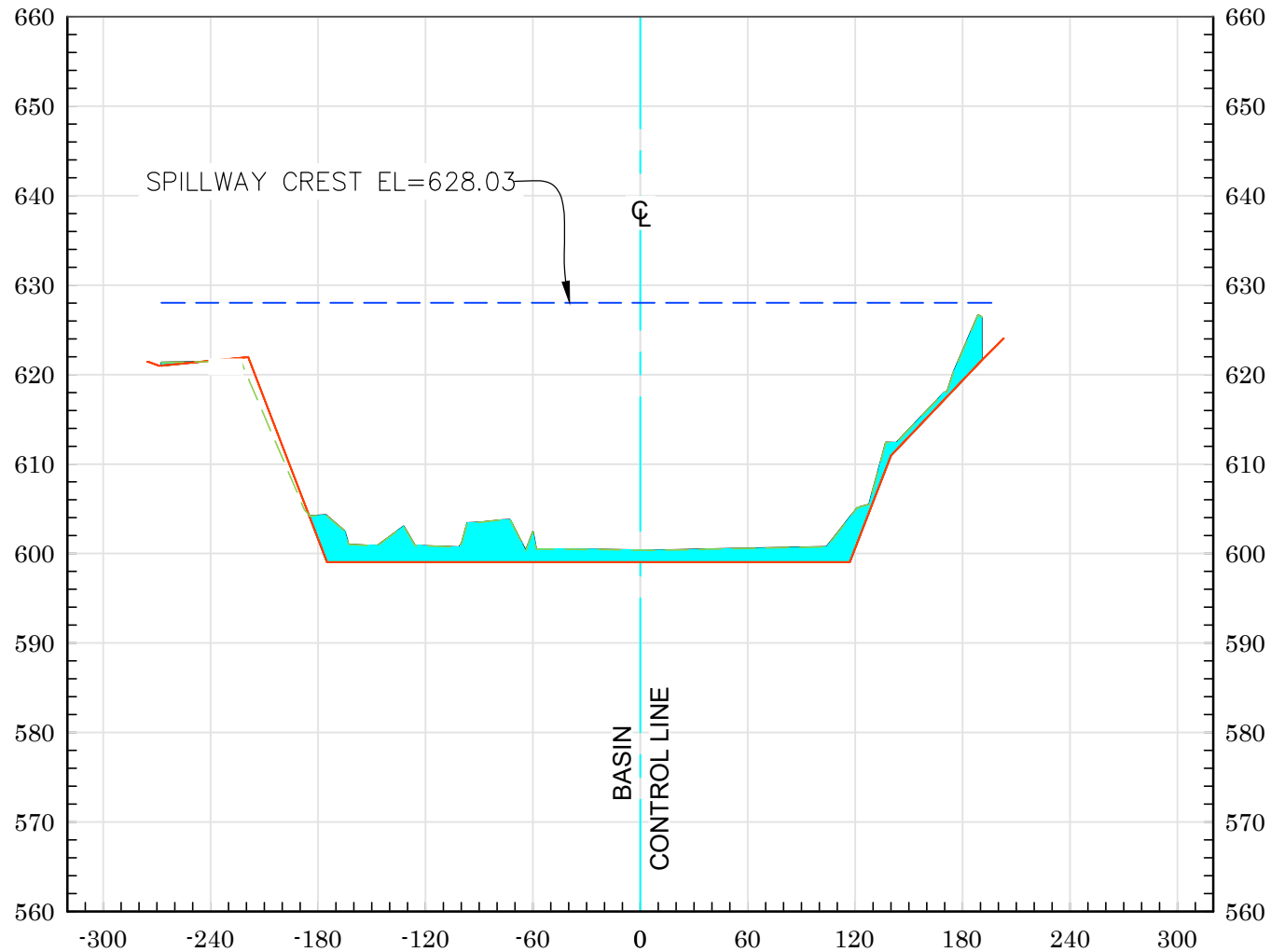
AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

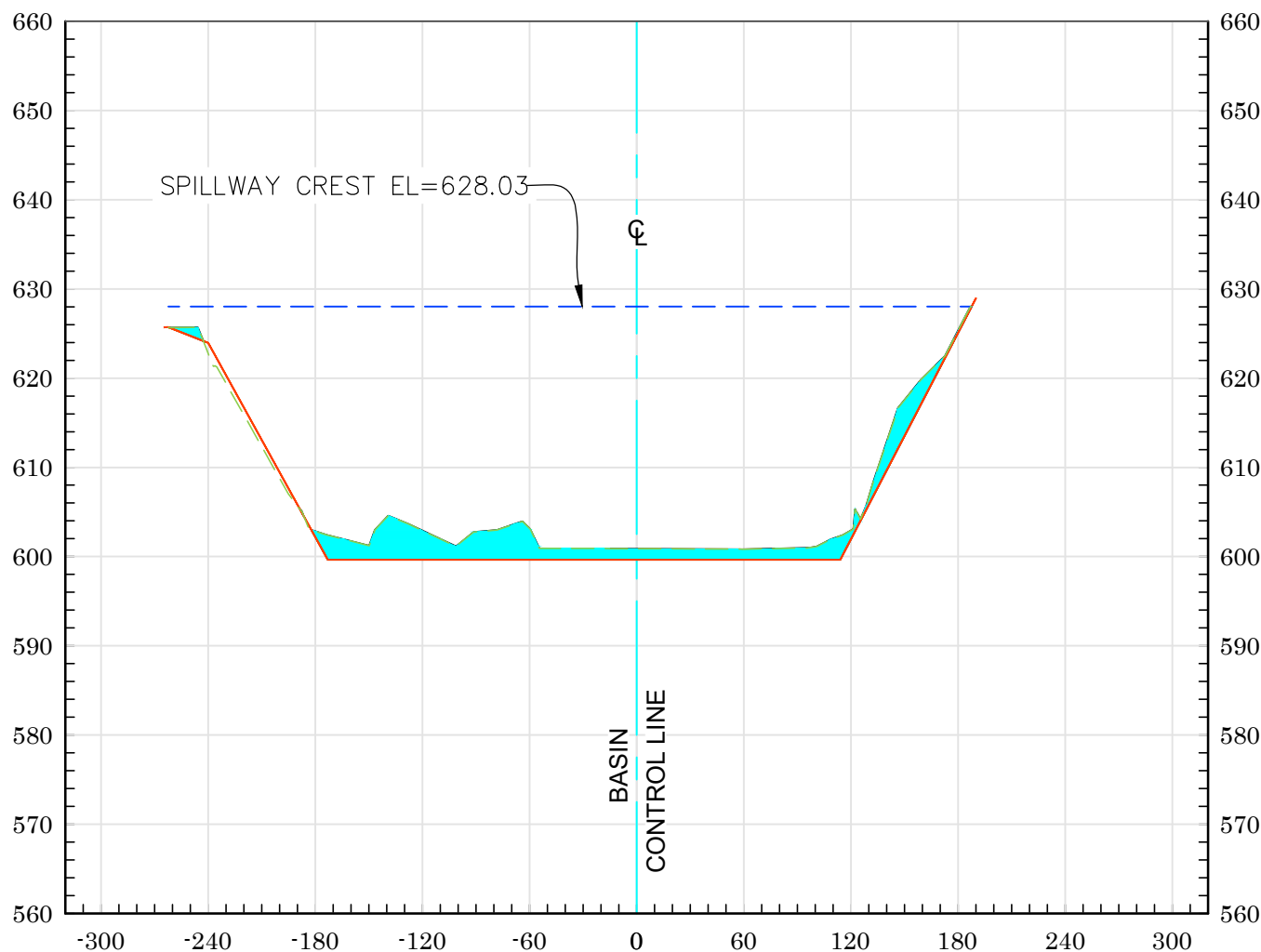


5+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

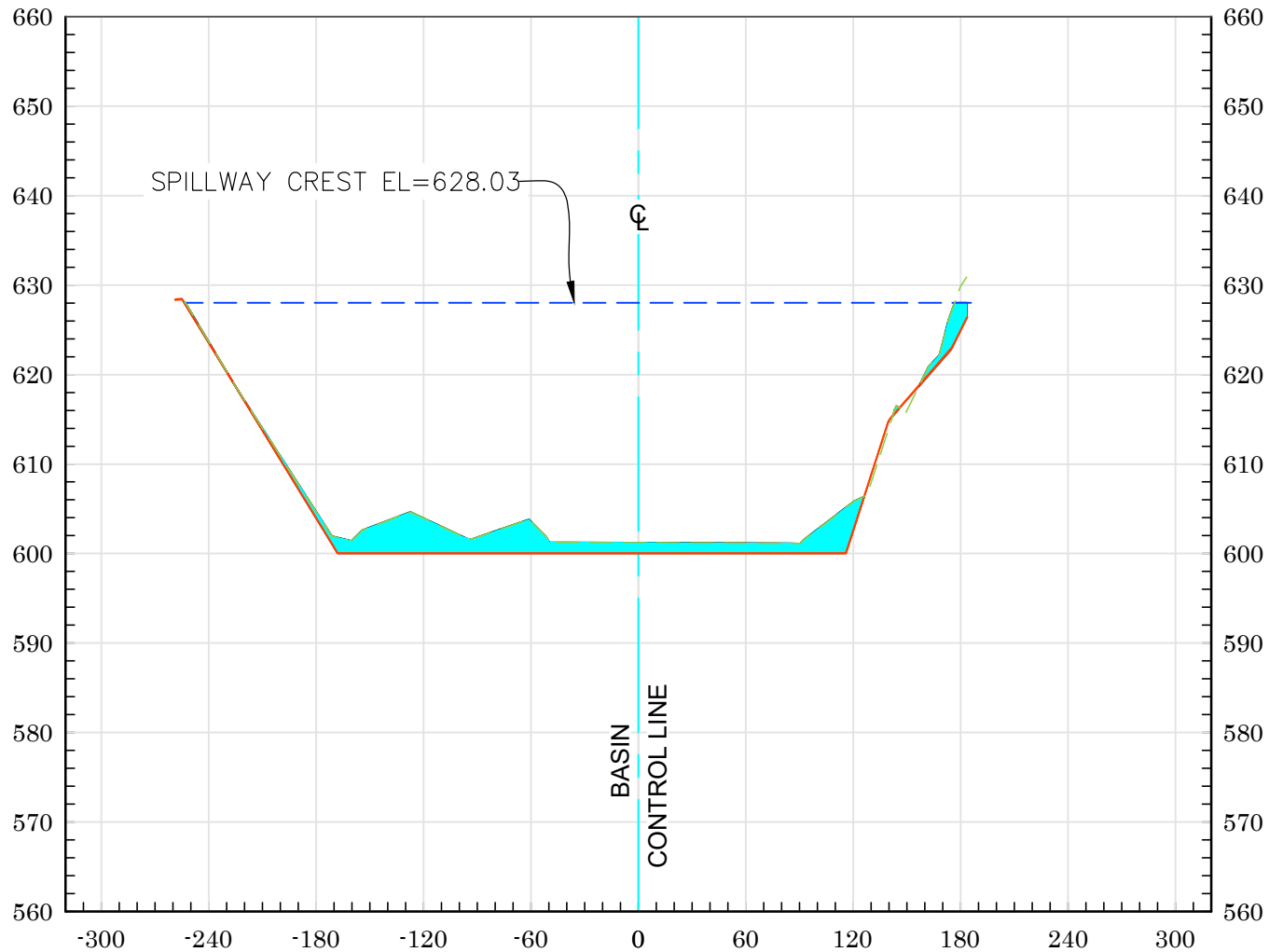


6+00

As-Built Plan ——— 2023 Ground - - - - -
 Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
 Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

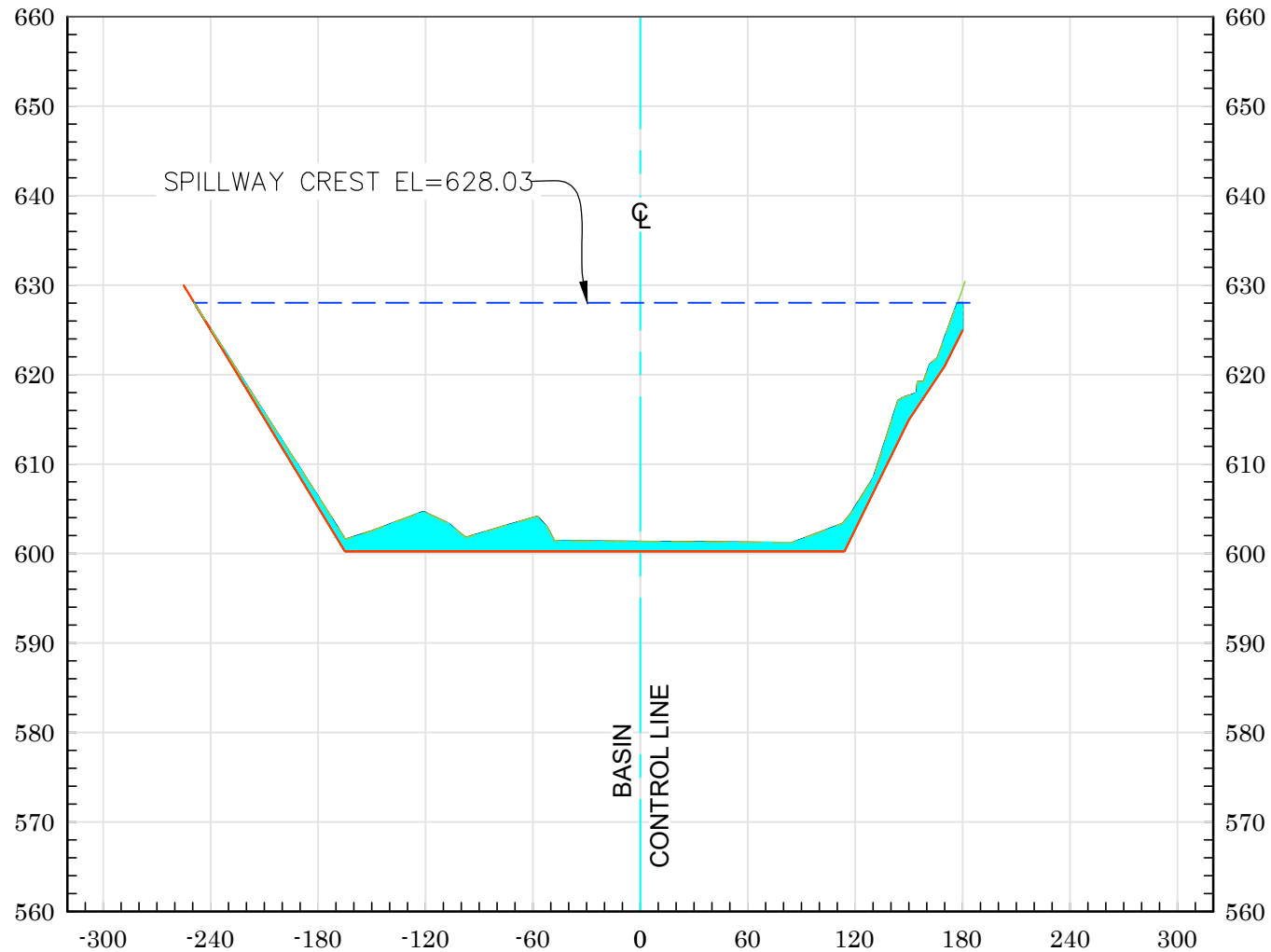


6+32

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

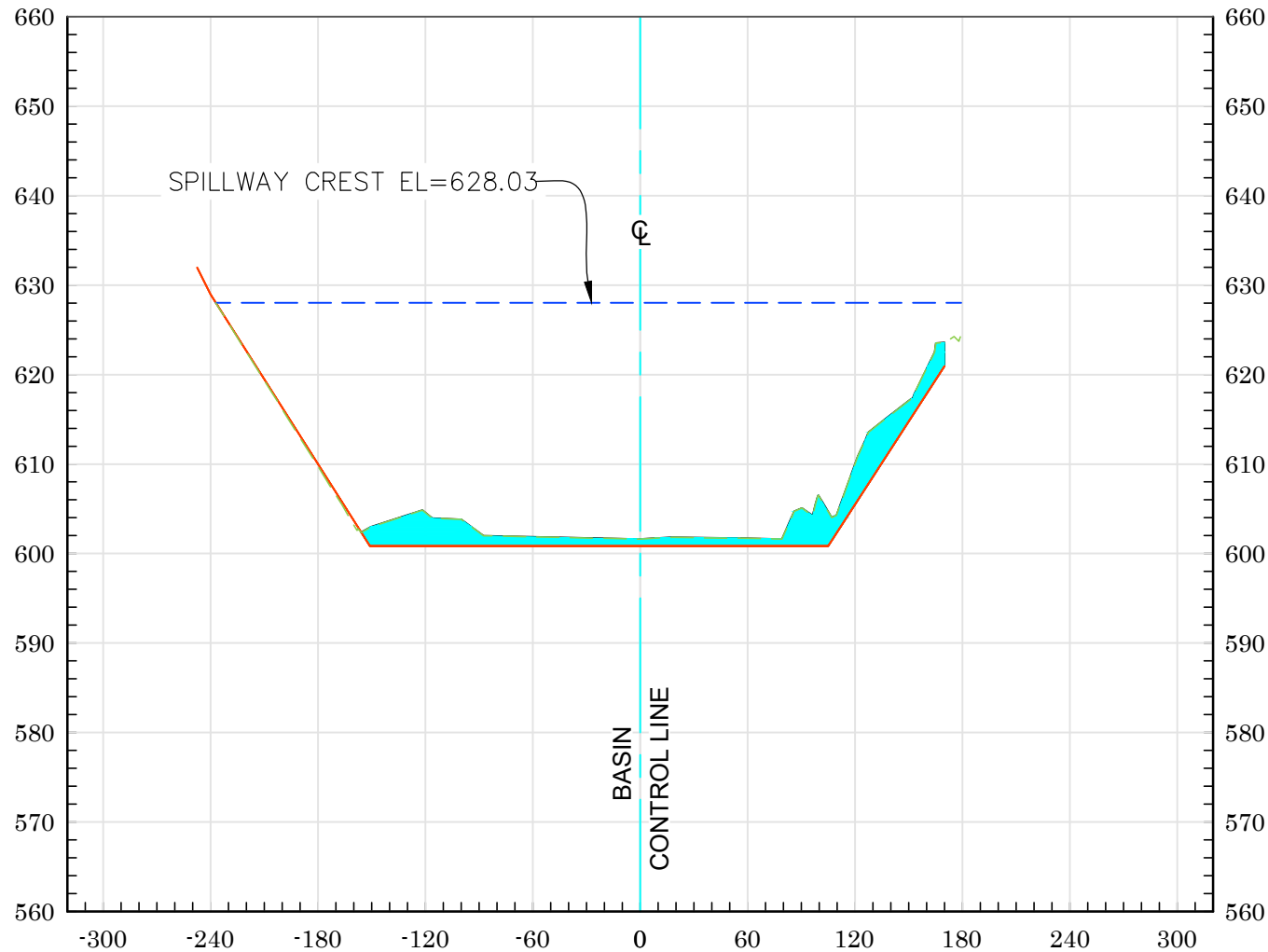


6+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

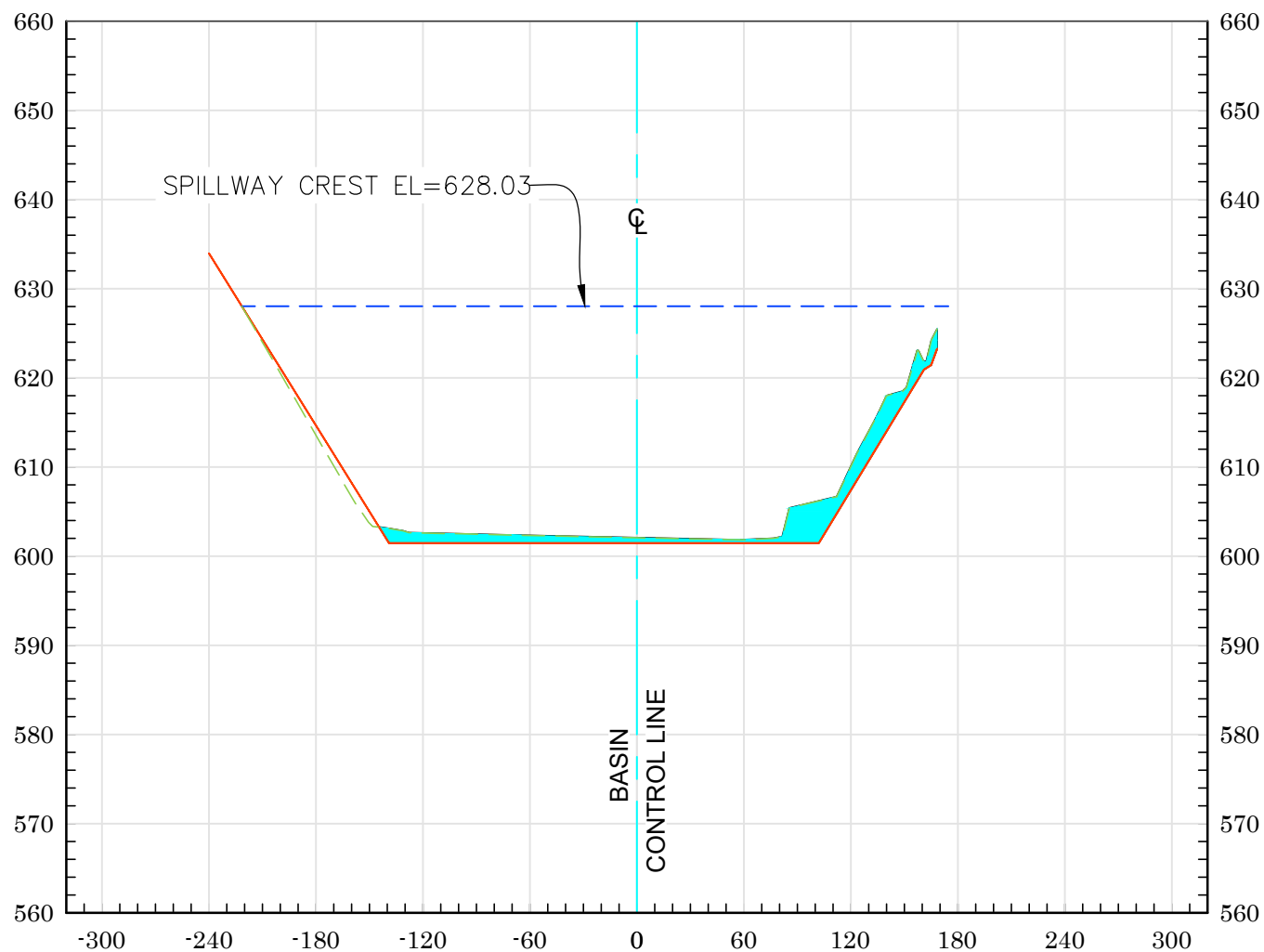
AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



7+50

As-Built Plan ——— 2023 Ground - - - - -
 Max Cap Line - - - - - Sediment

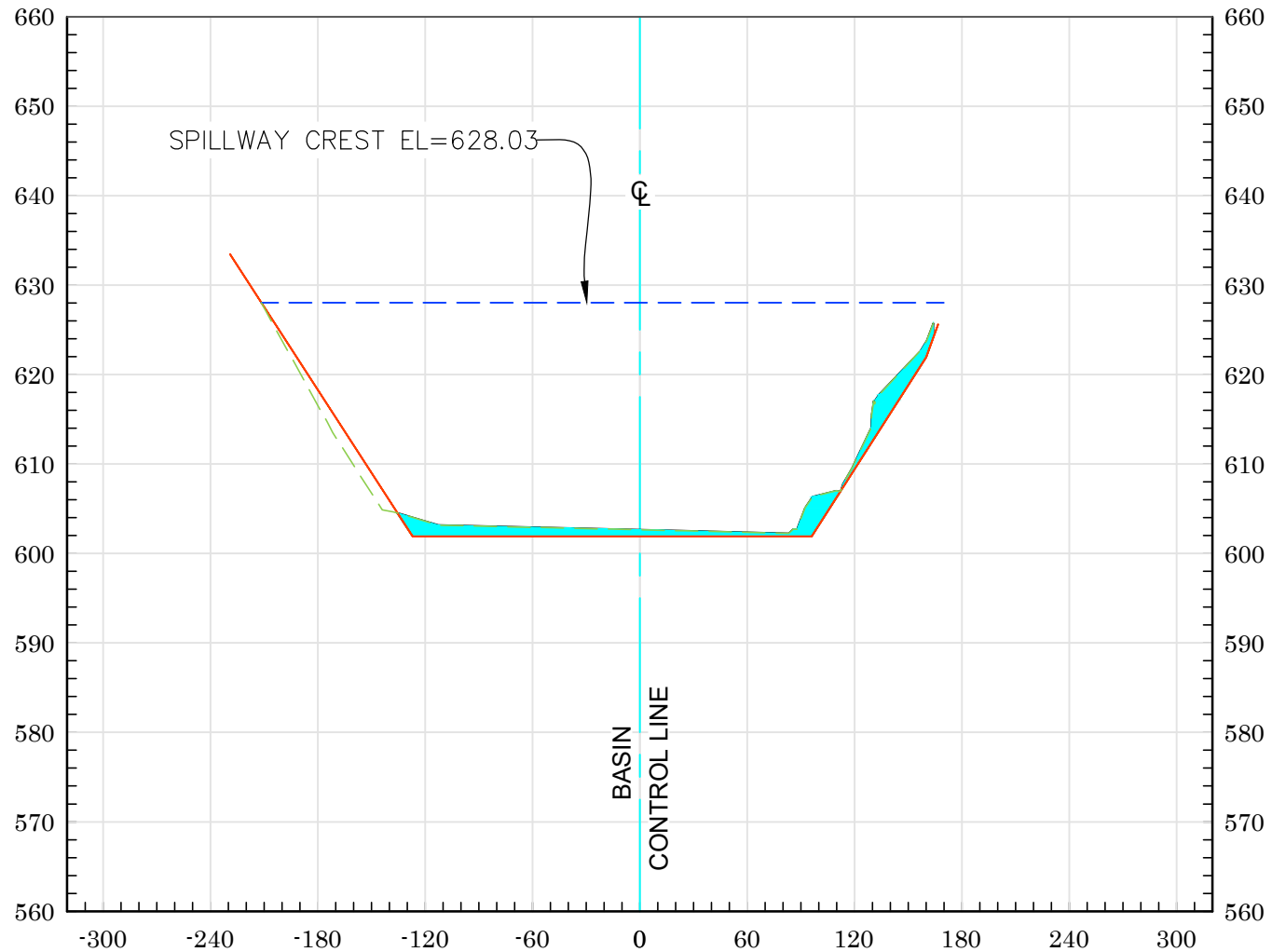
Vert. Scale: 1" = 20'
 Horiz. Scale: 1" = 100'

U.S. Survey
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023

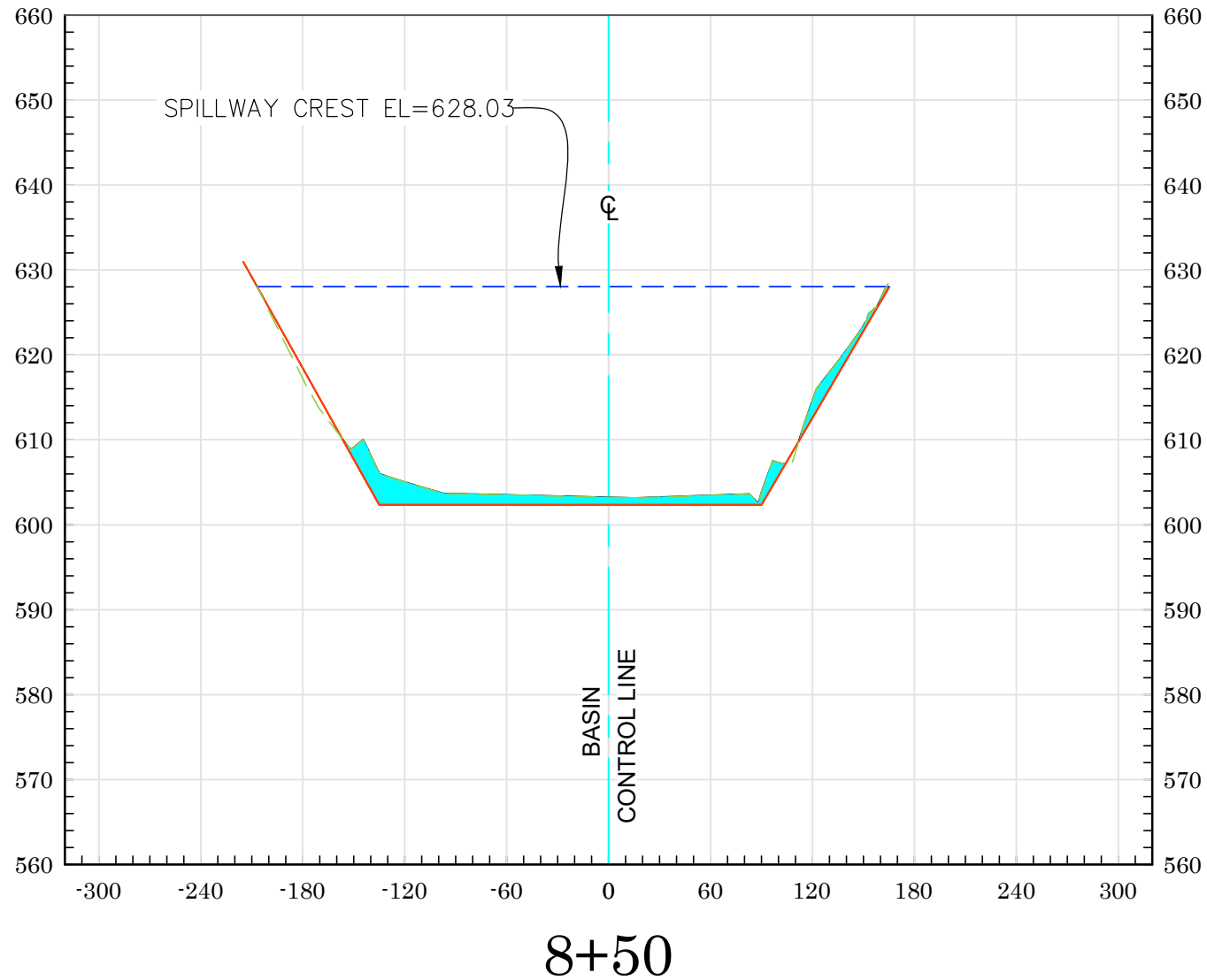


8+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment 

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

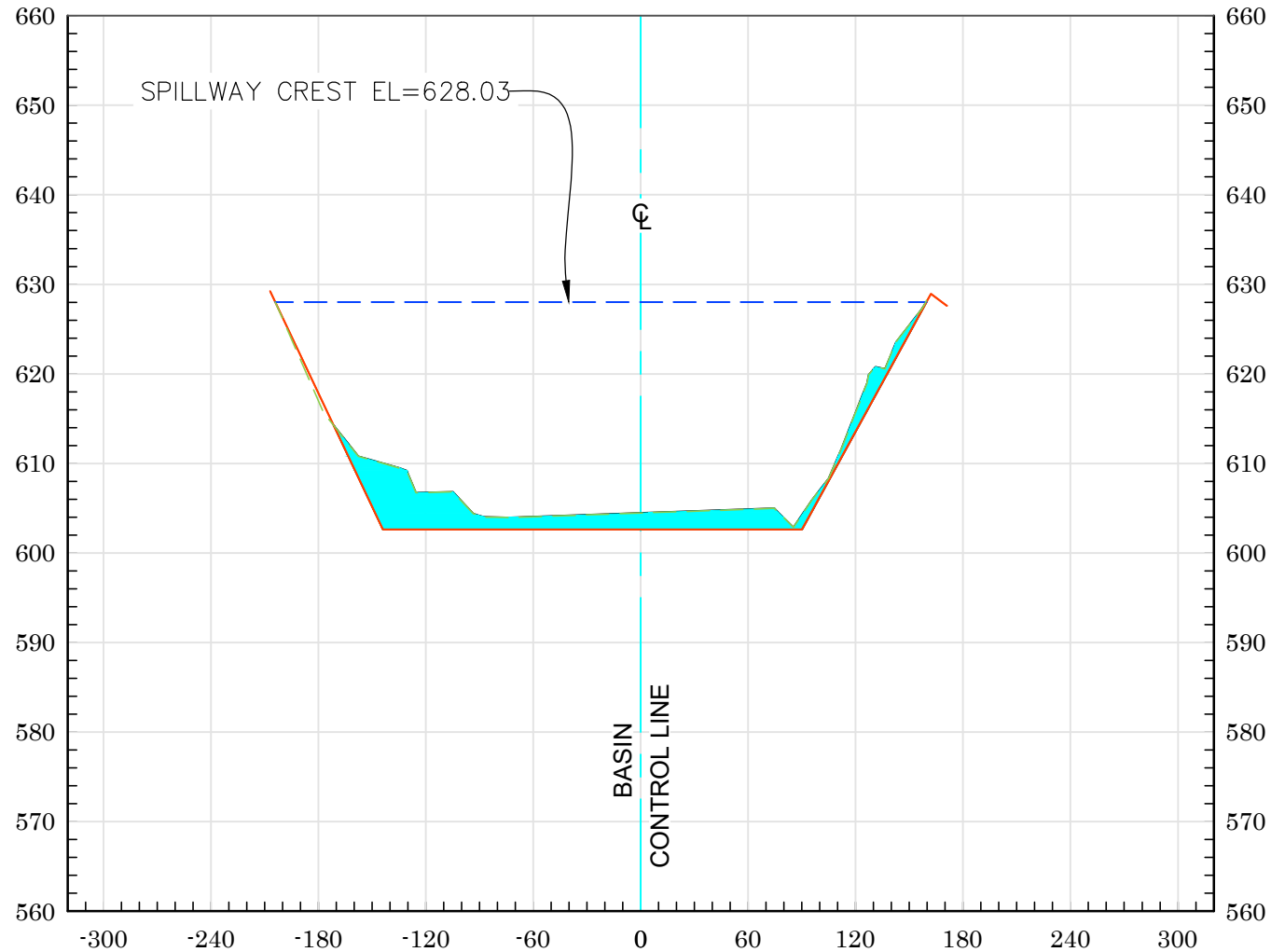
AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



8+82

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

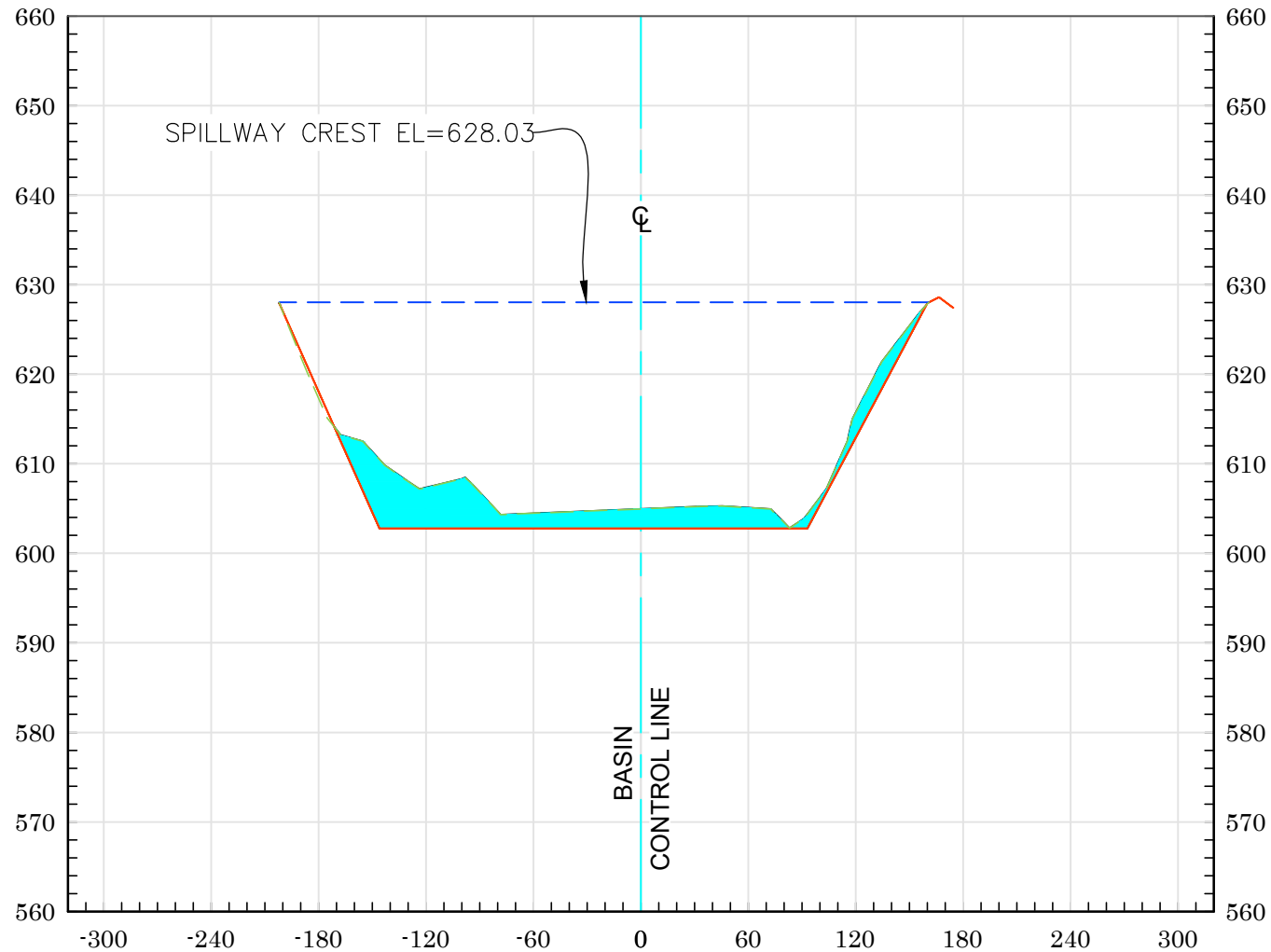
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023

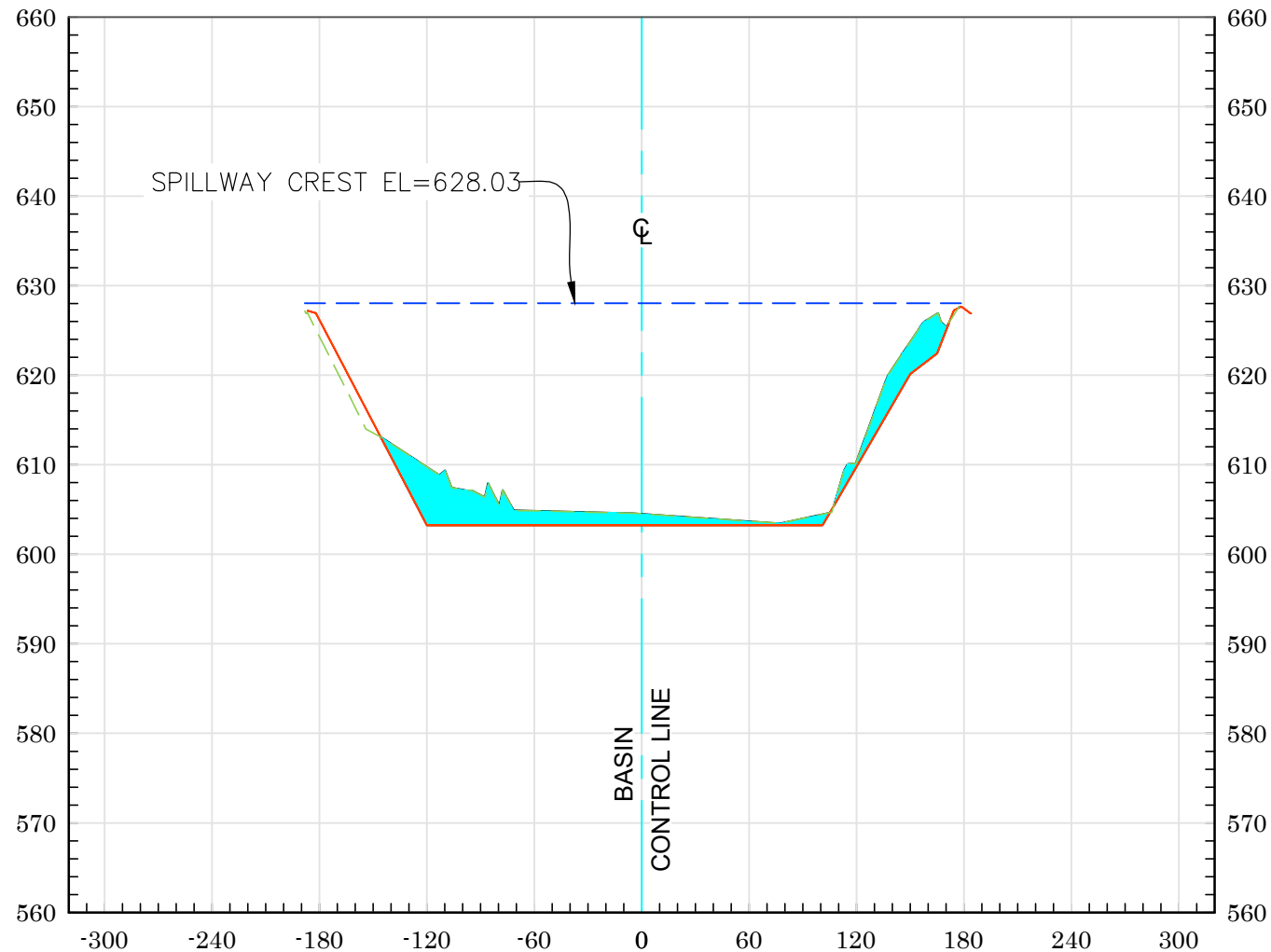


9+00

As-Built Plan ——— 2023 Ground ———
Max Cap Line ——— Sediment 

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023

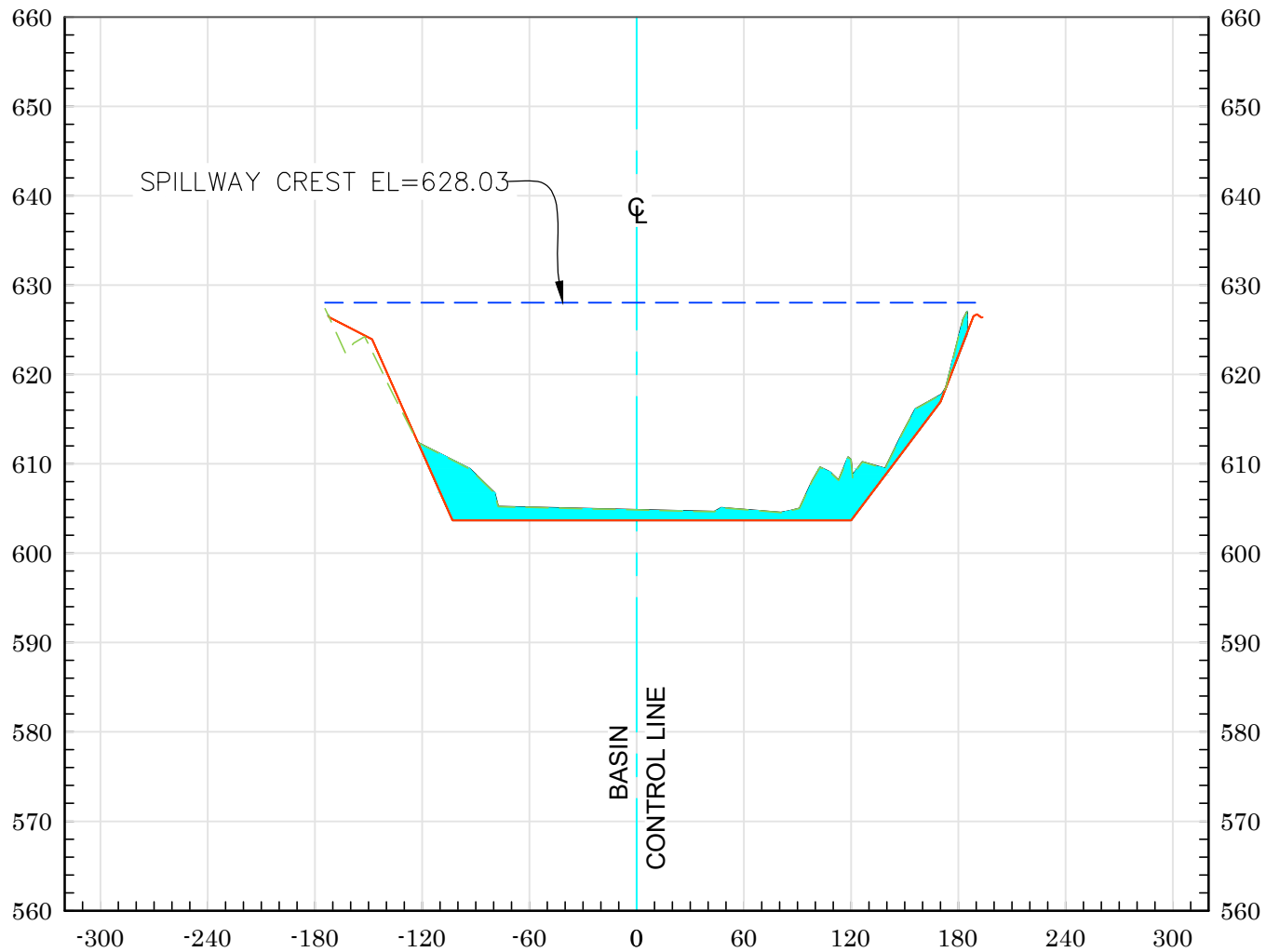


9+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



10+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

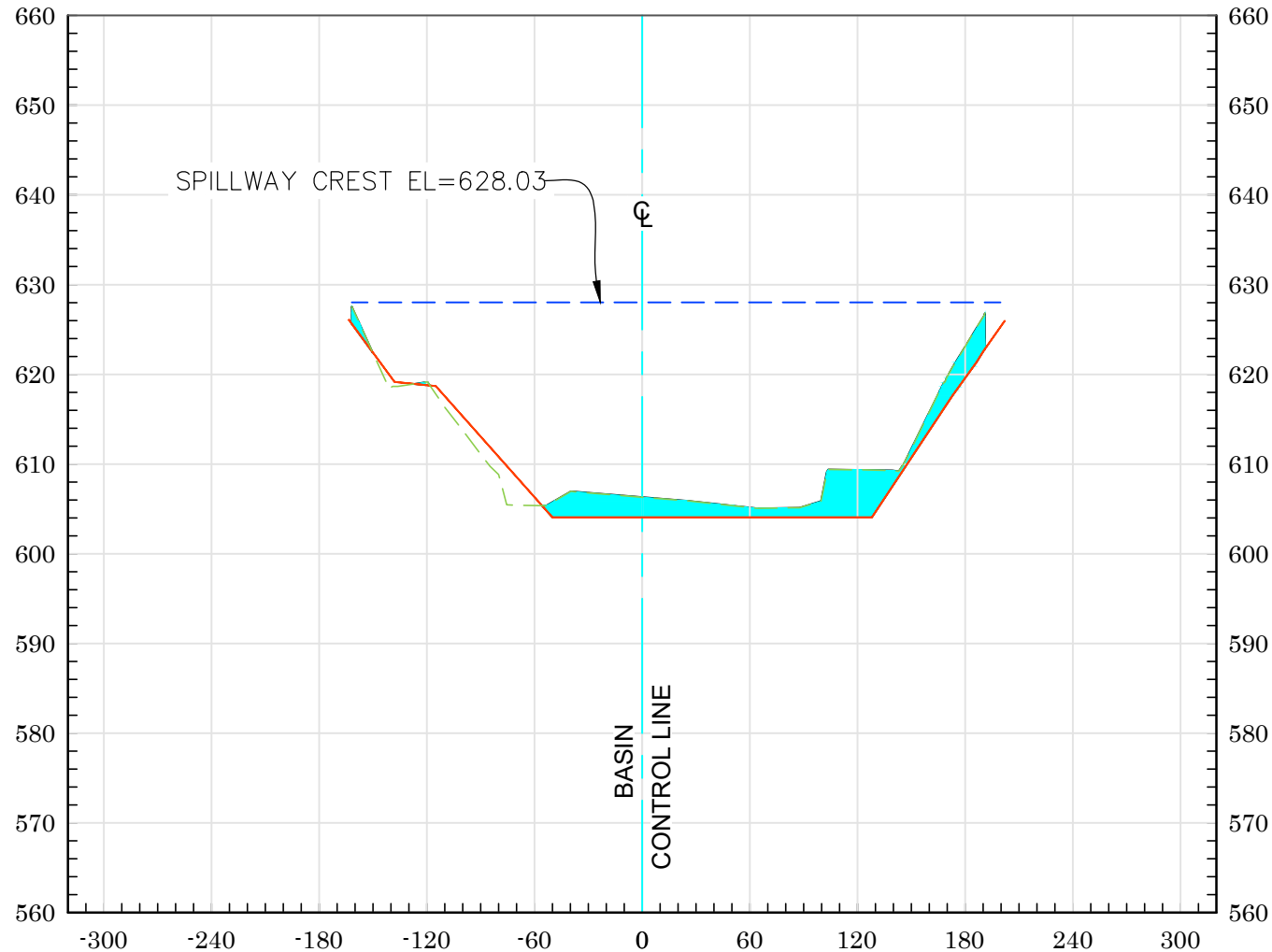
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



10+45

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment 

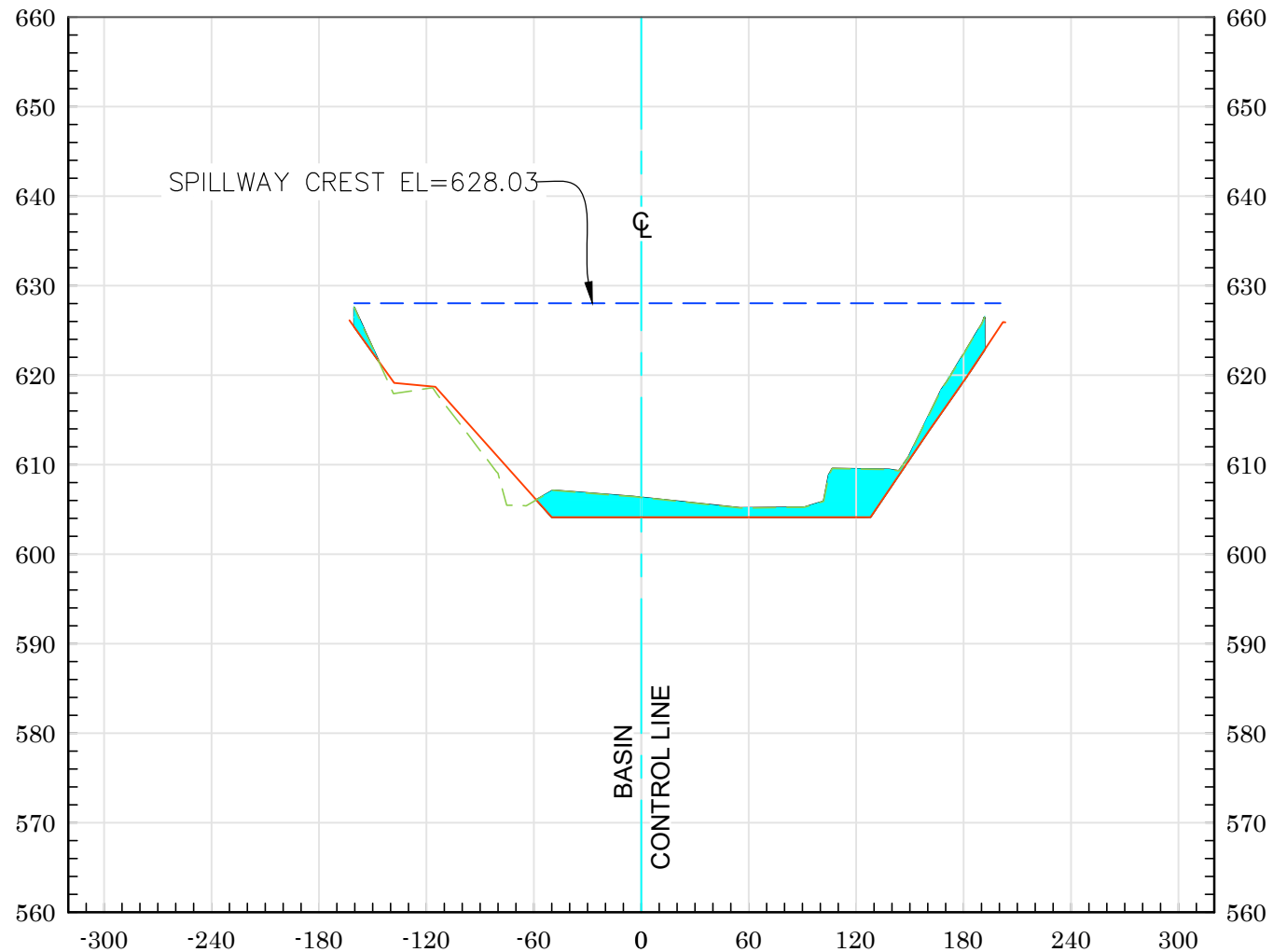
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. Survey
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



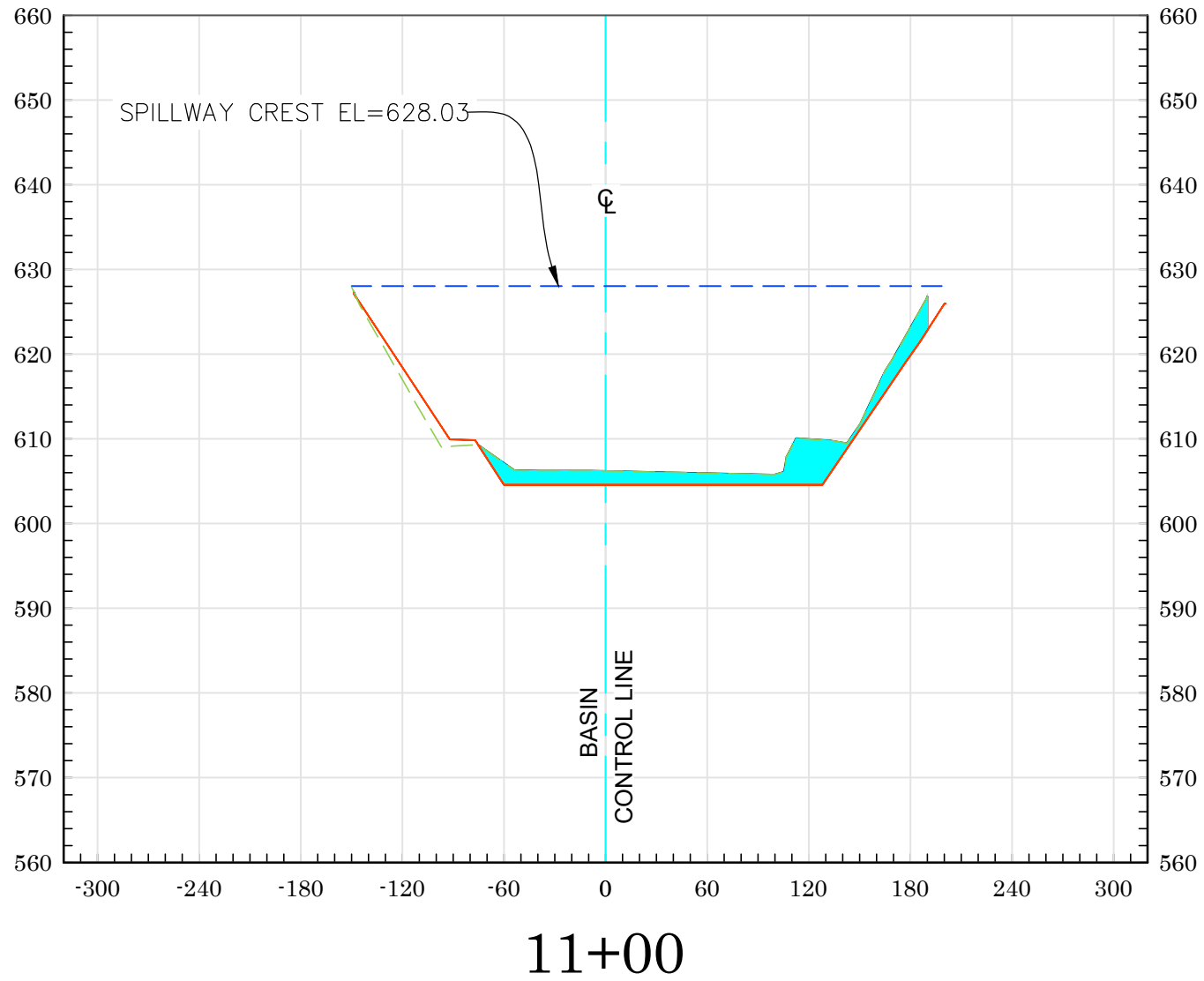
AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

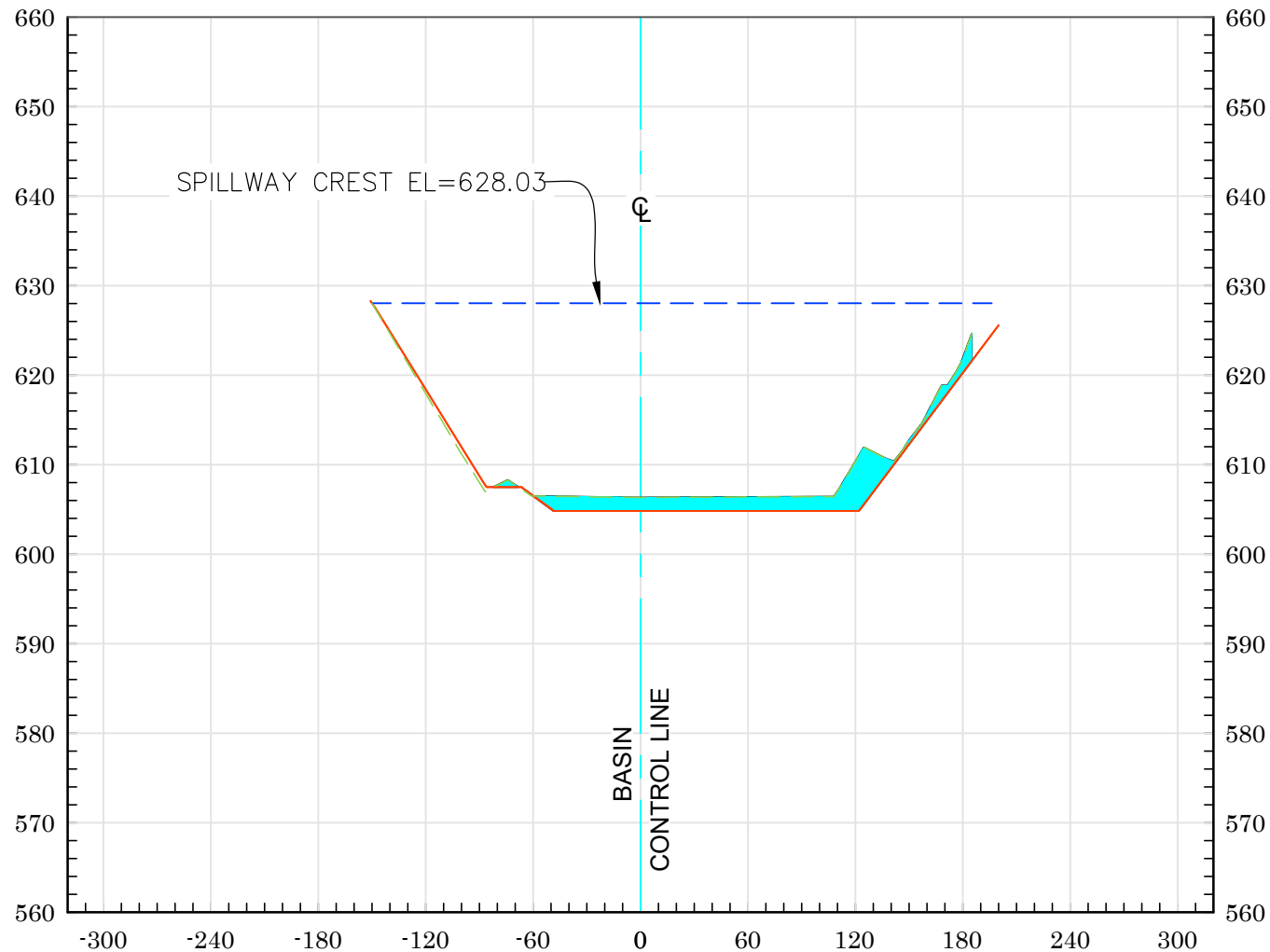
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. Survey
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023

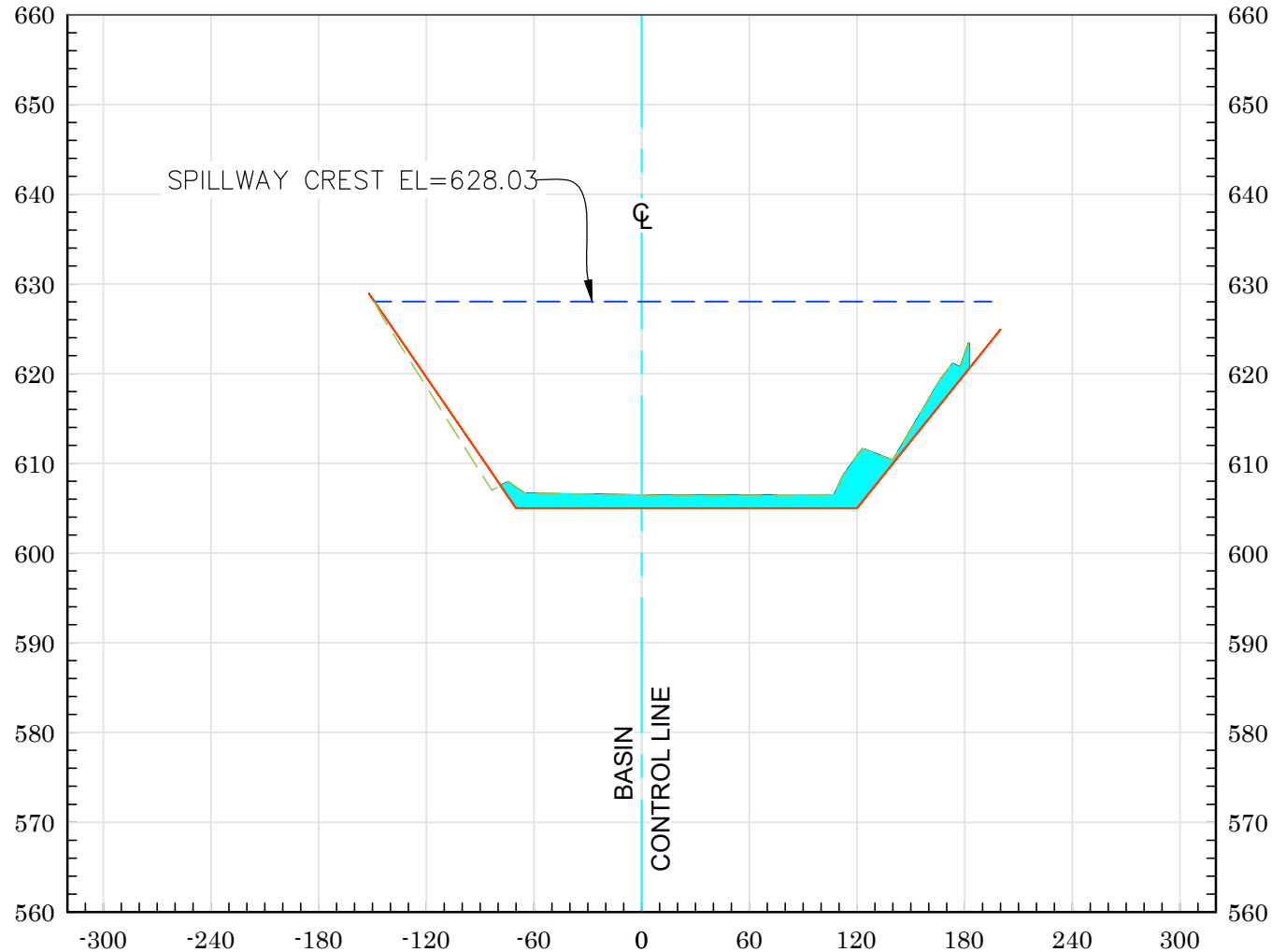


11+32

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment [Cyan Fill]

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



11+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

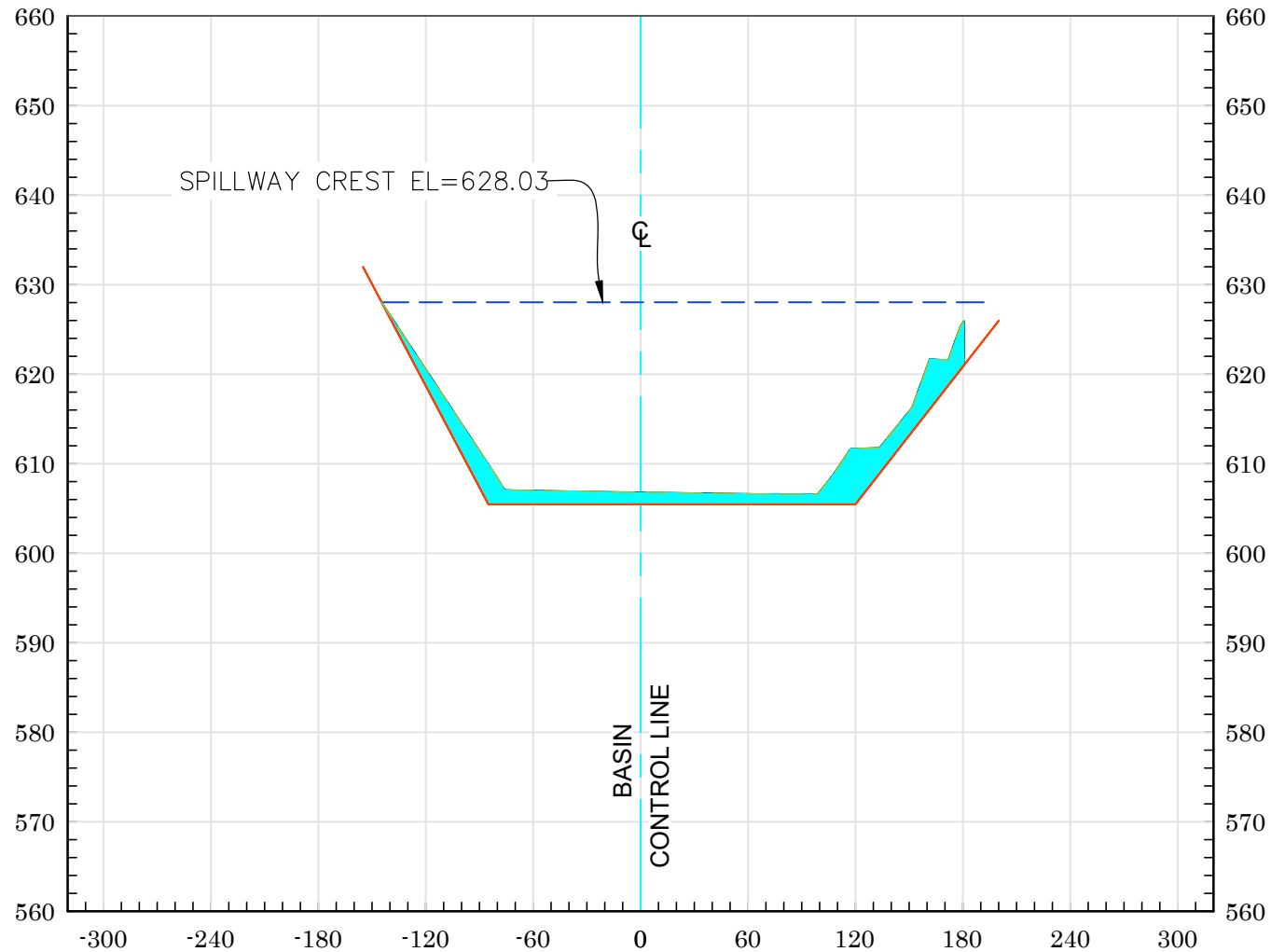
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023

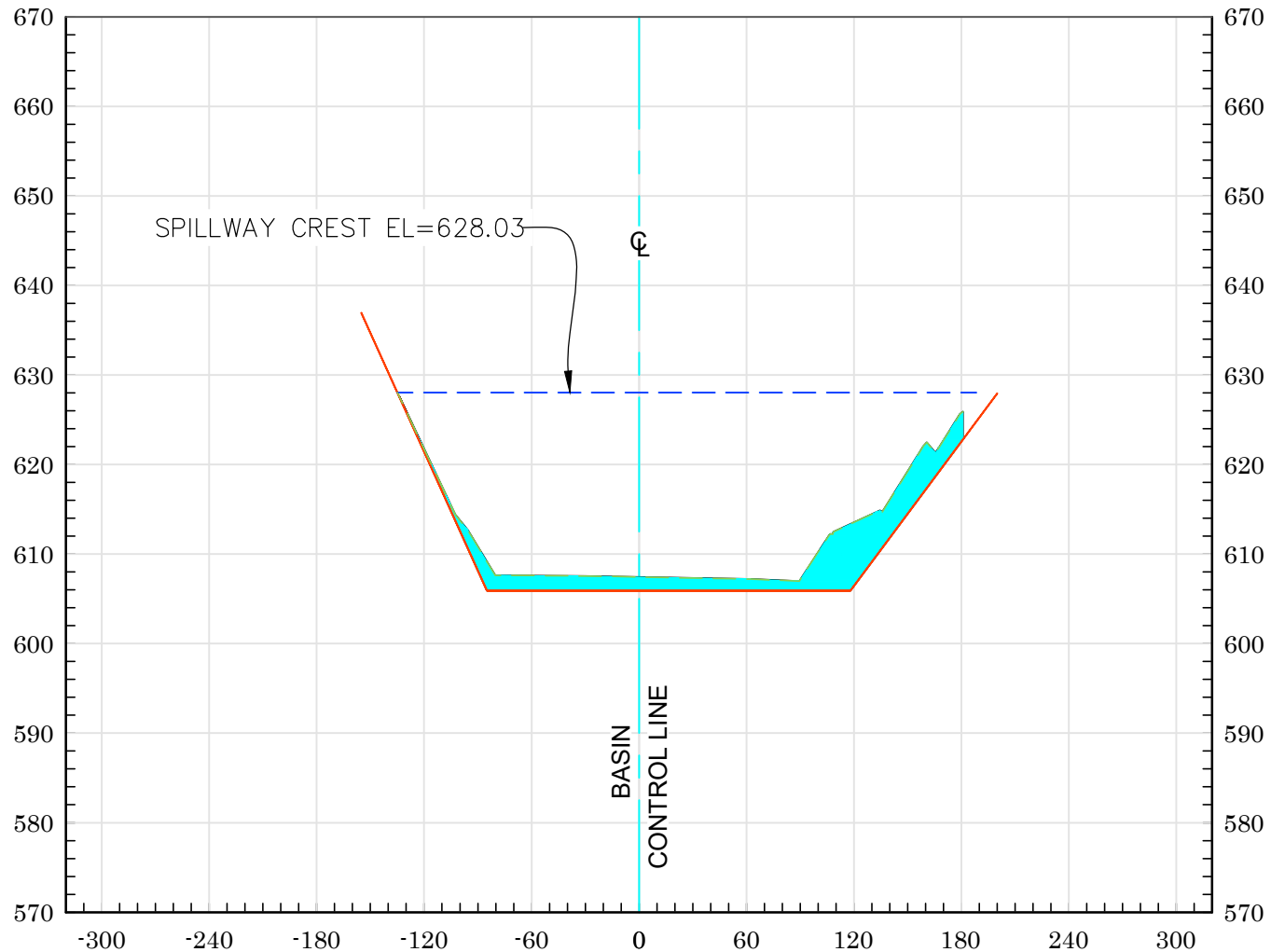


12+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



12+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

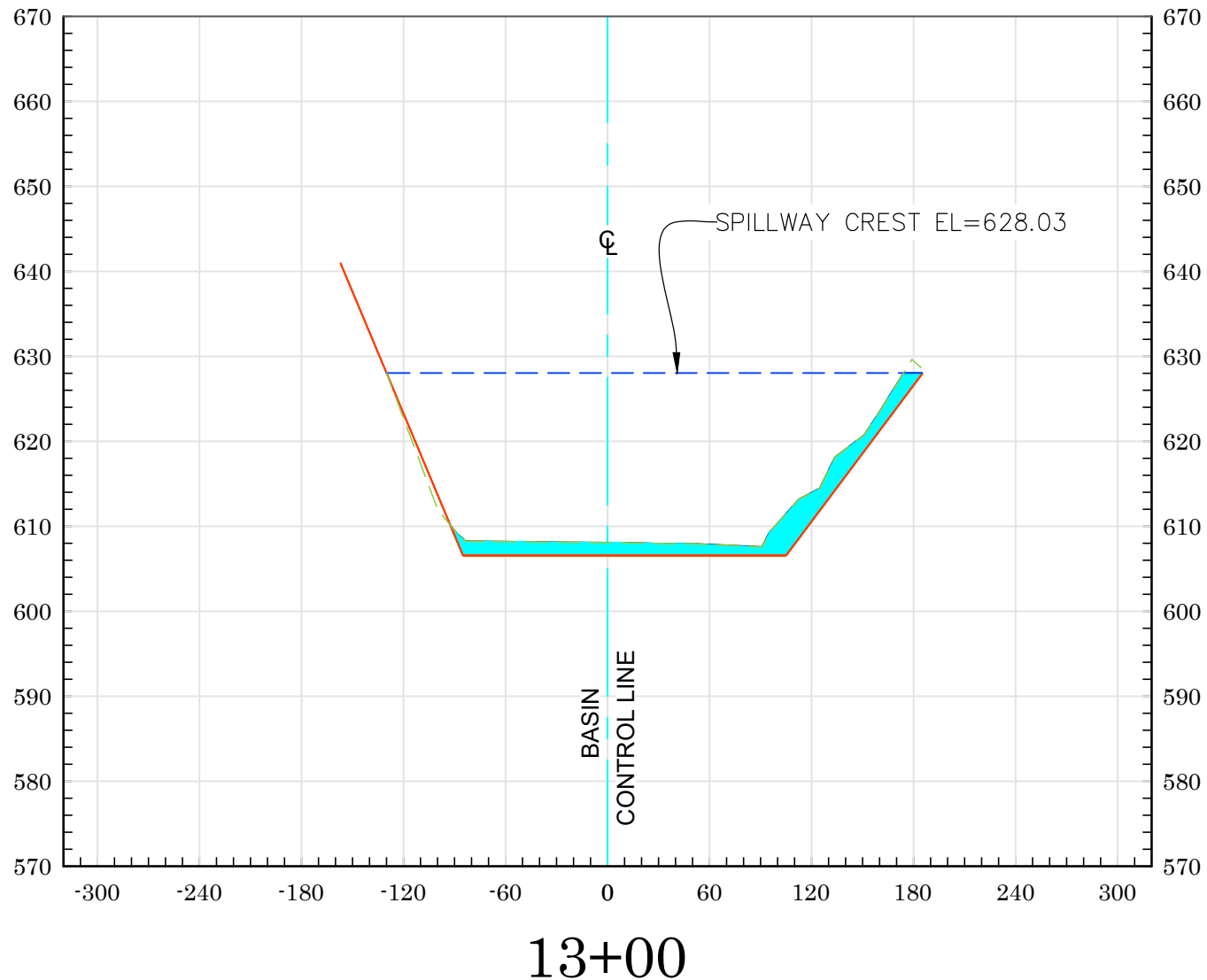
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



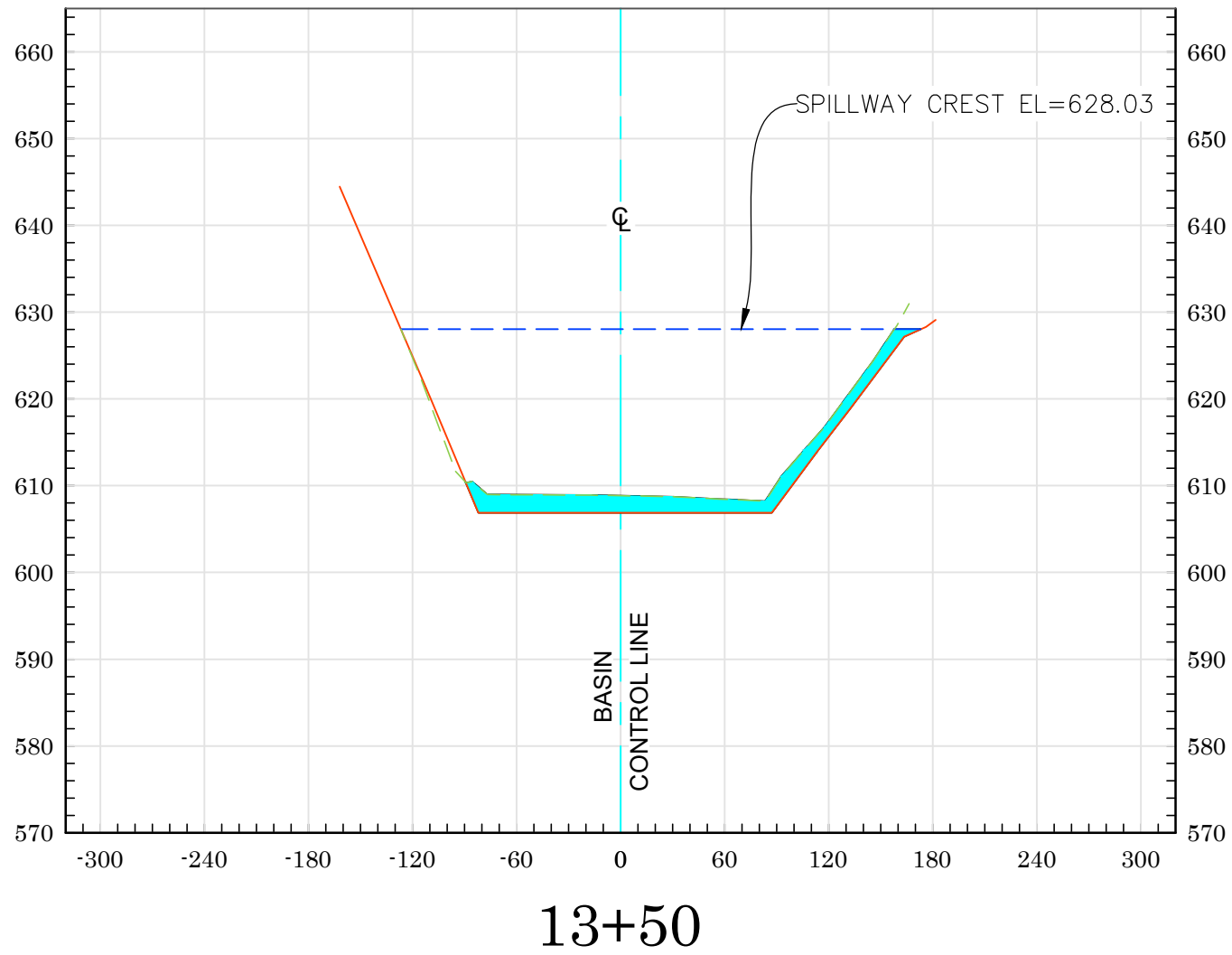
AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment [Cyan Fill]

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

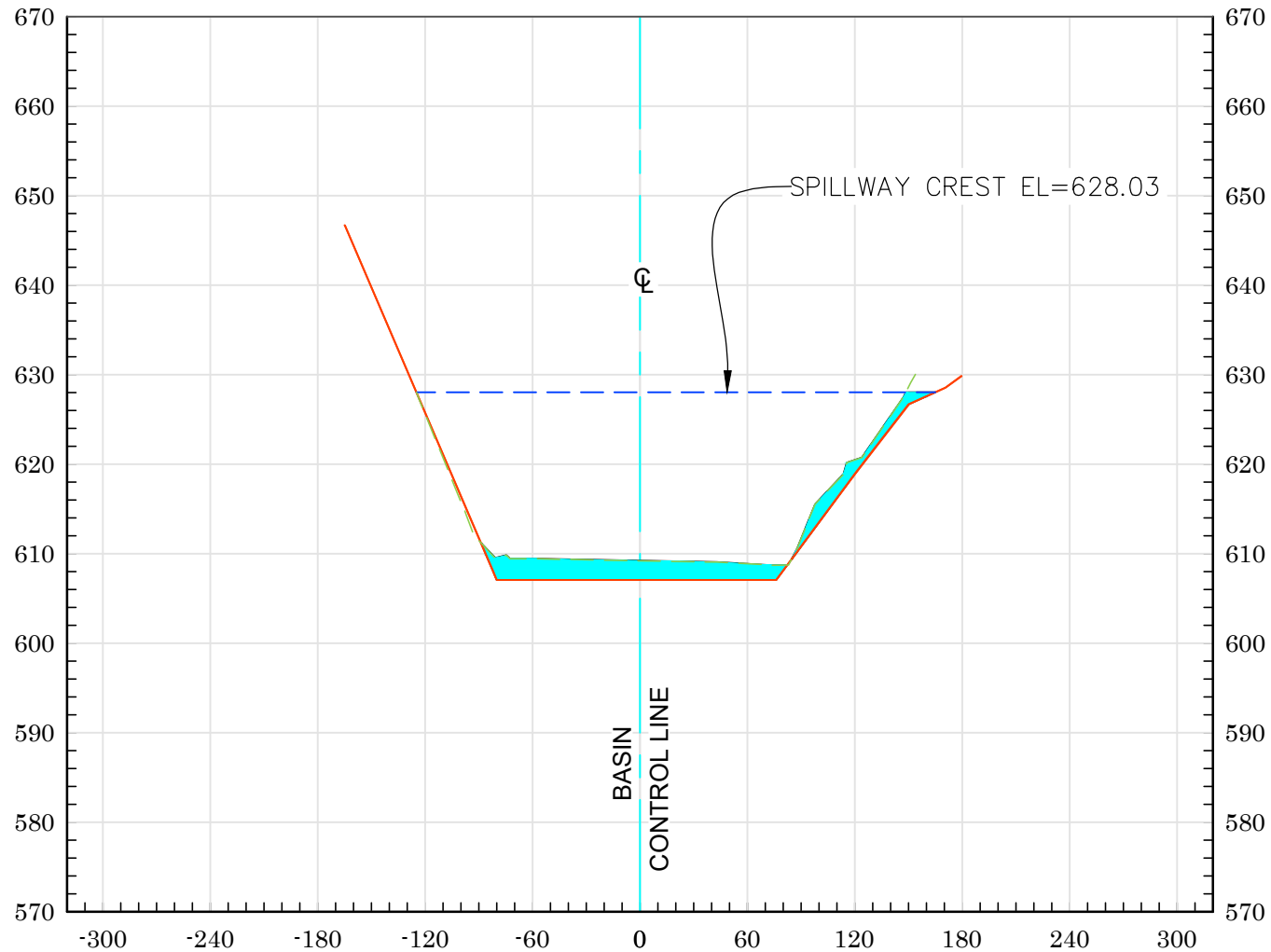
AGUA CHINON RETARDING BASIN (F18-B01) - 2023



As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



13+82

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

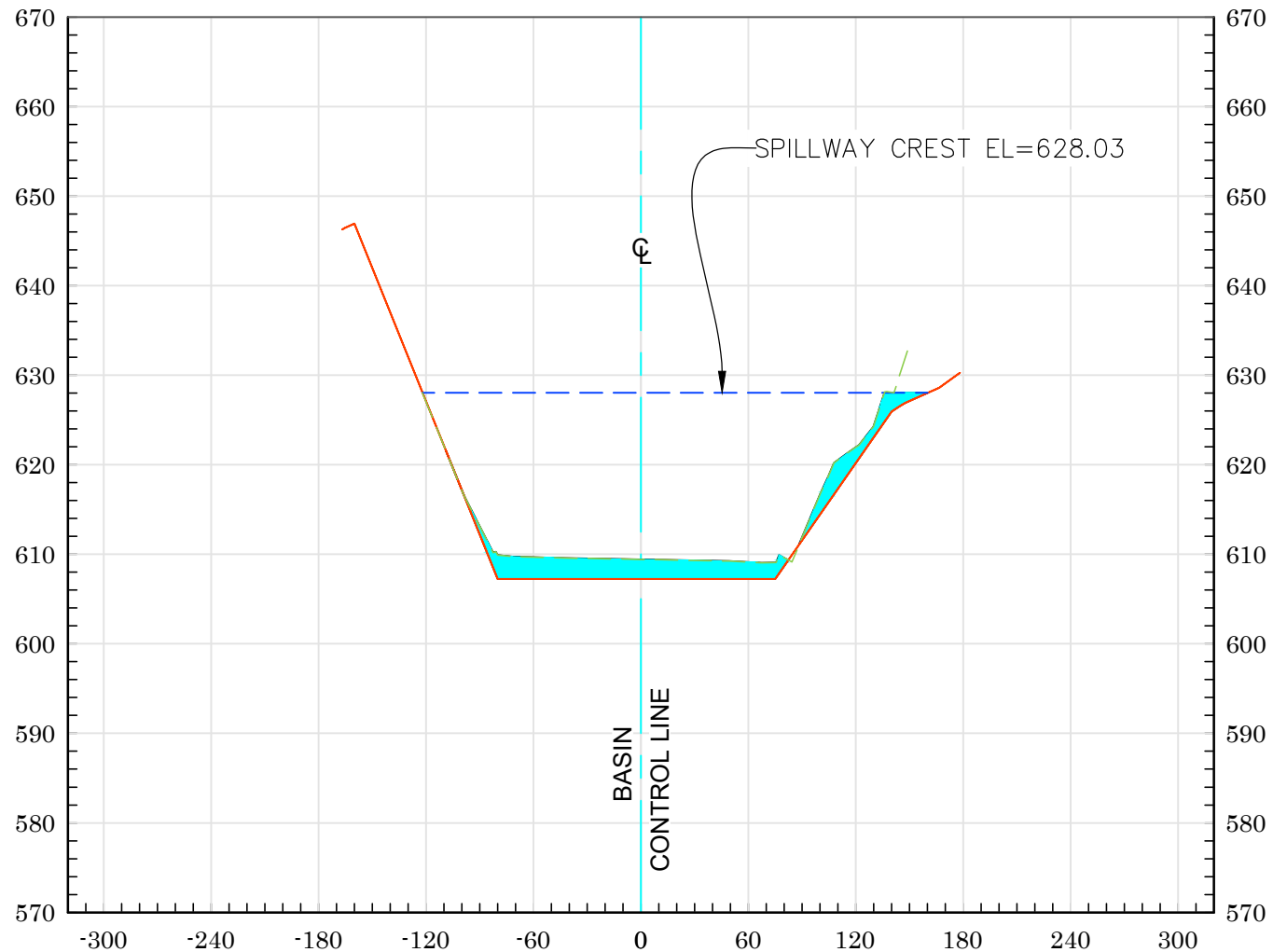
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023

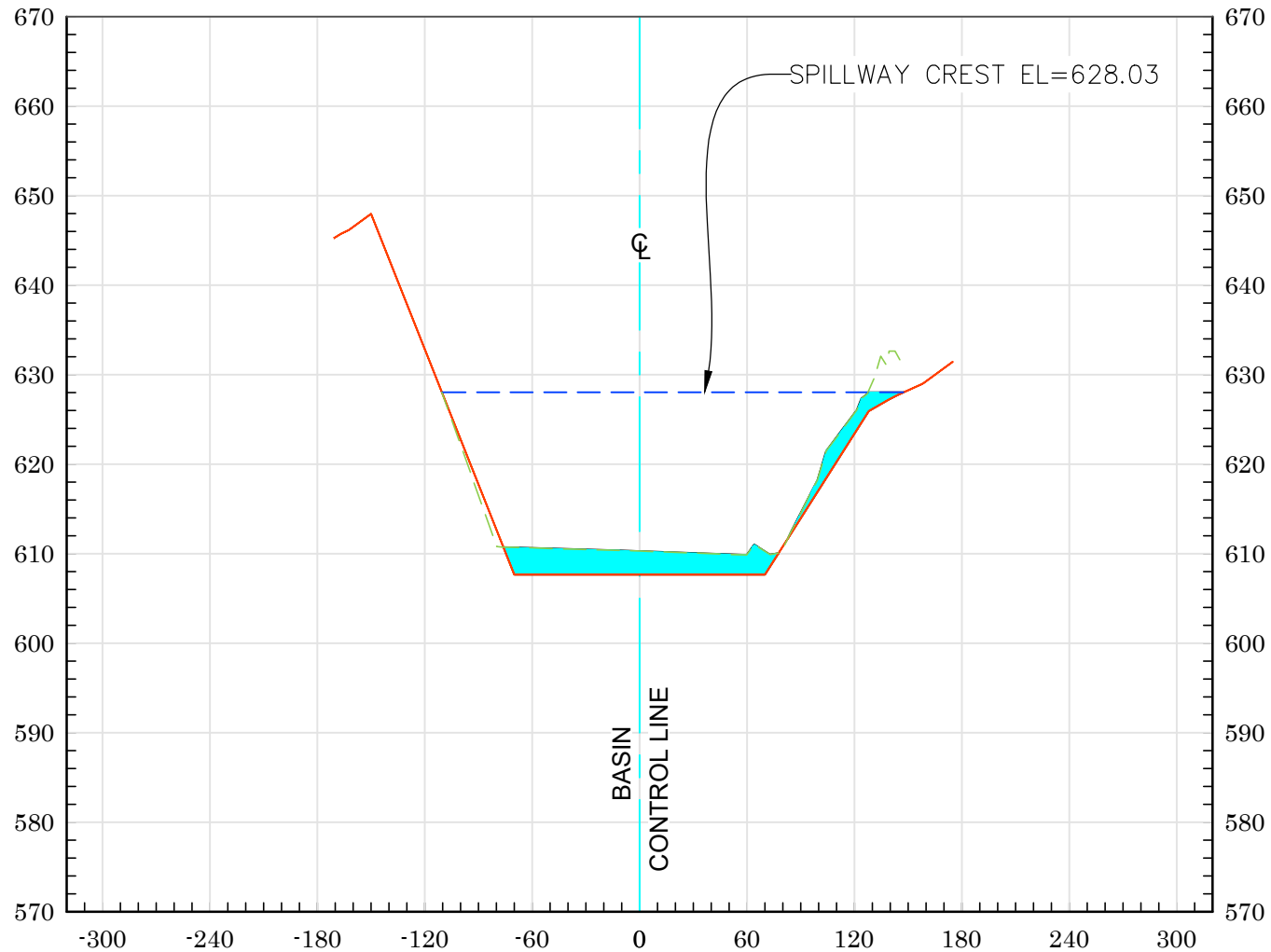


14+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



14+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

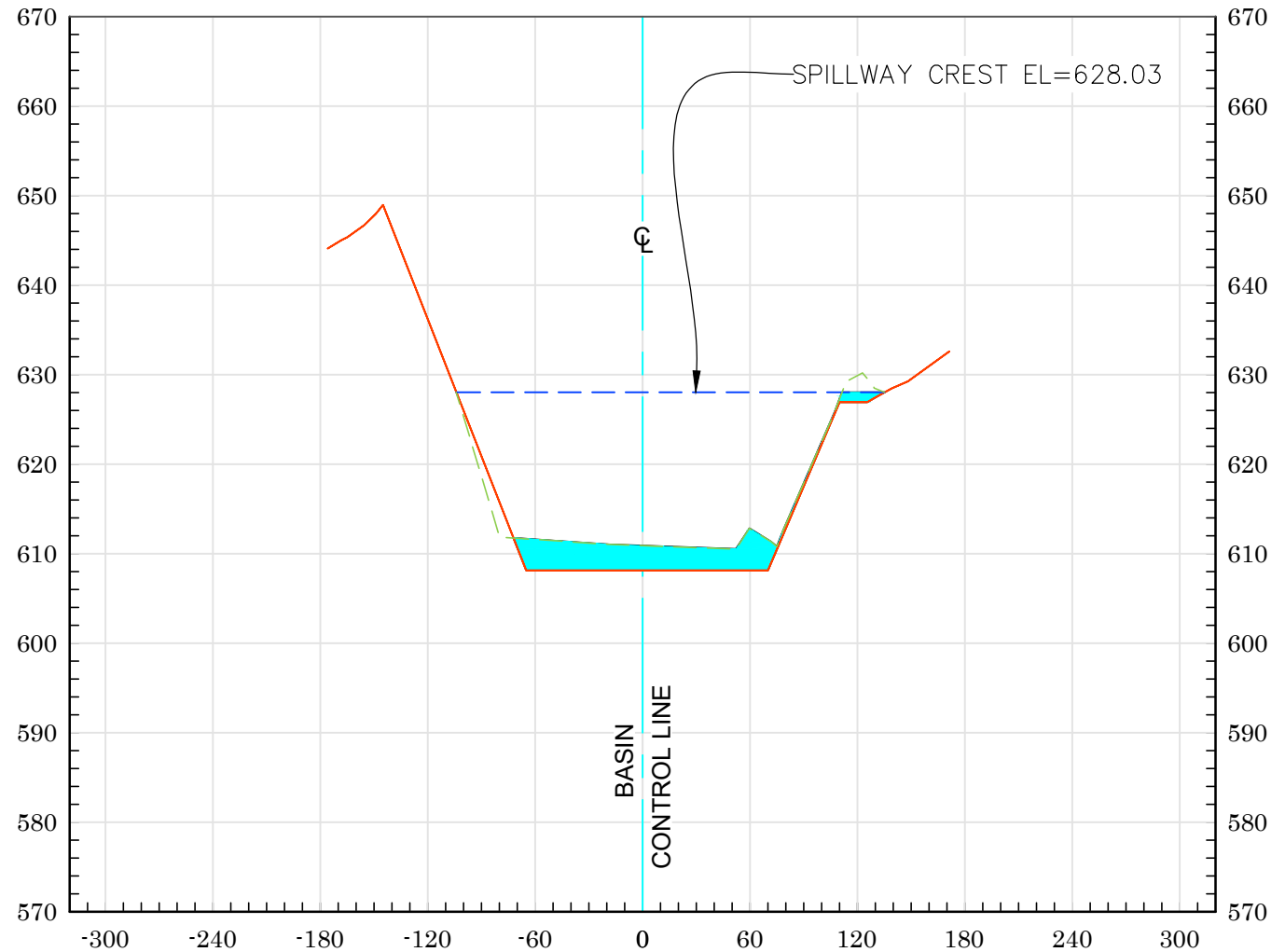
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



15+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

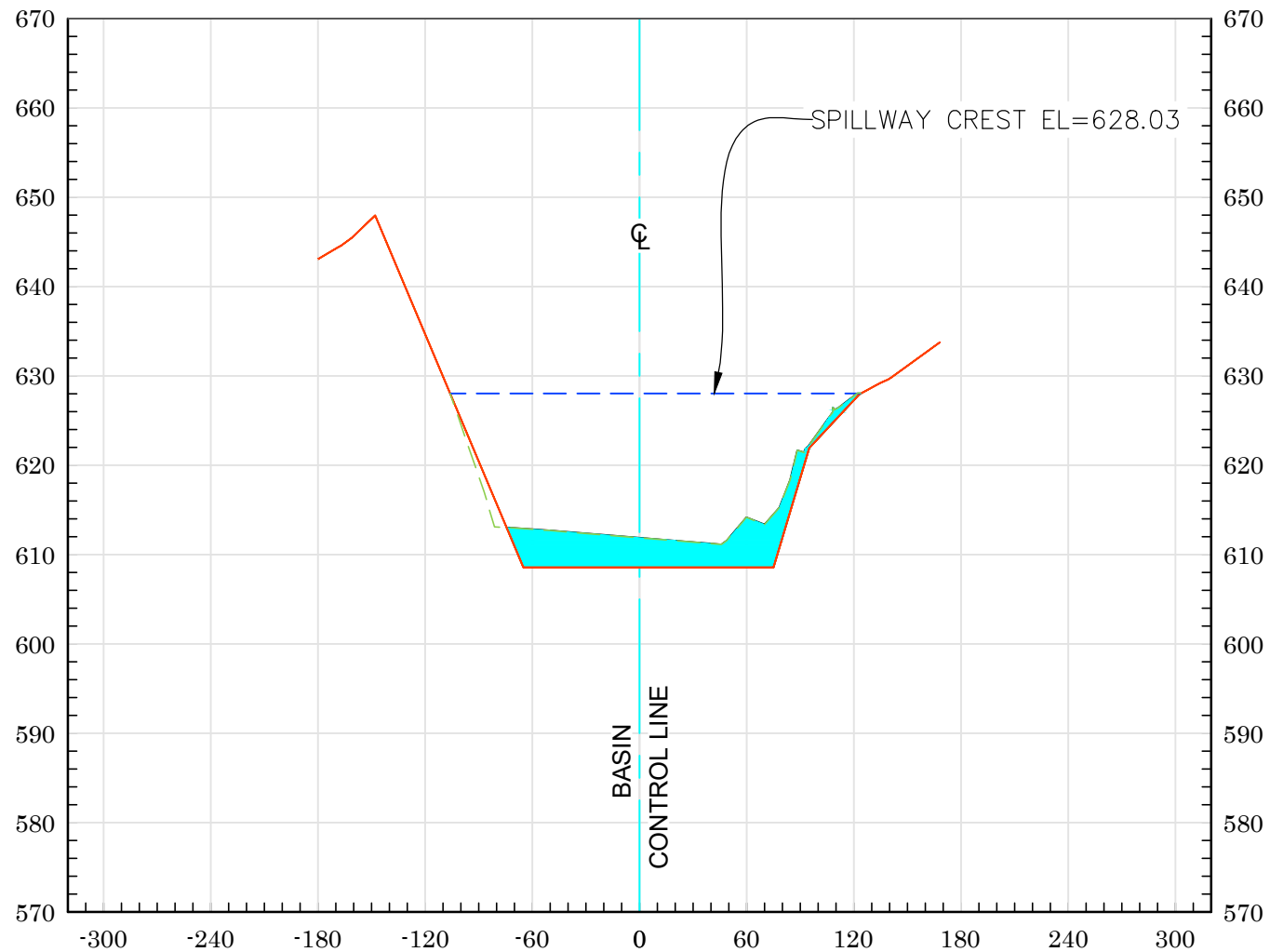
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



15+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

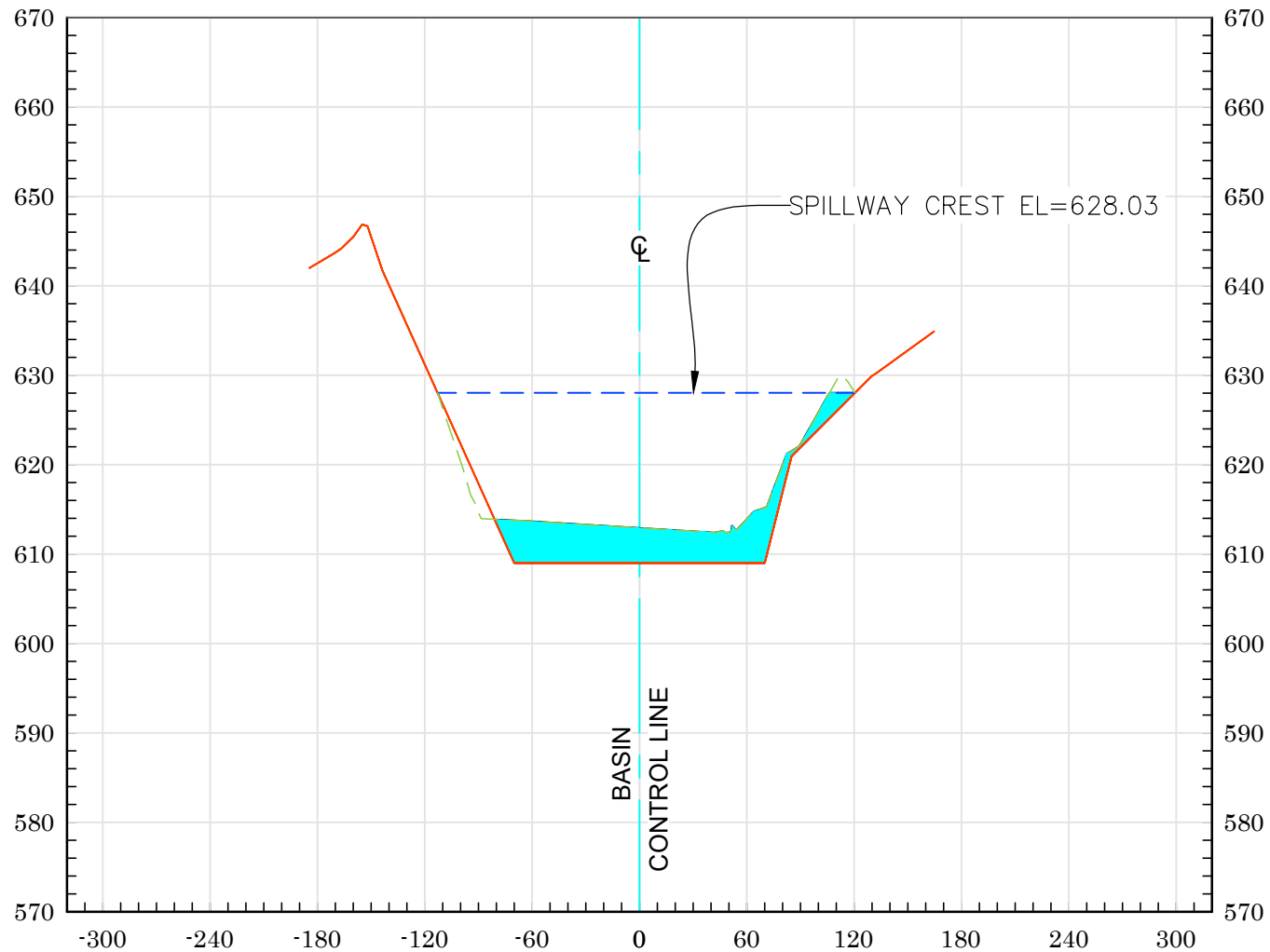
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



16+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

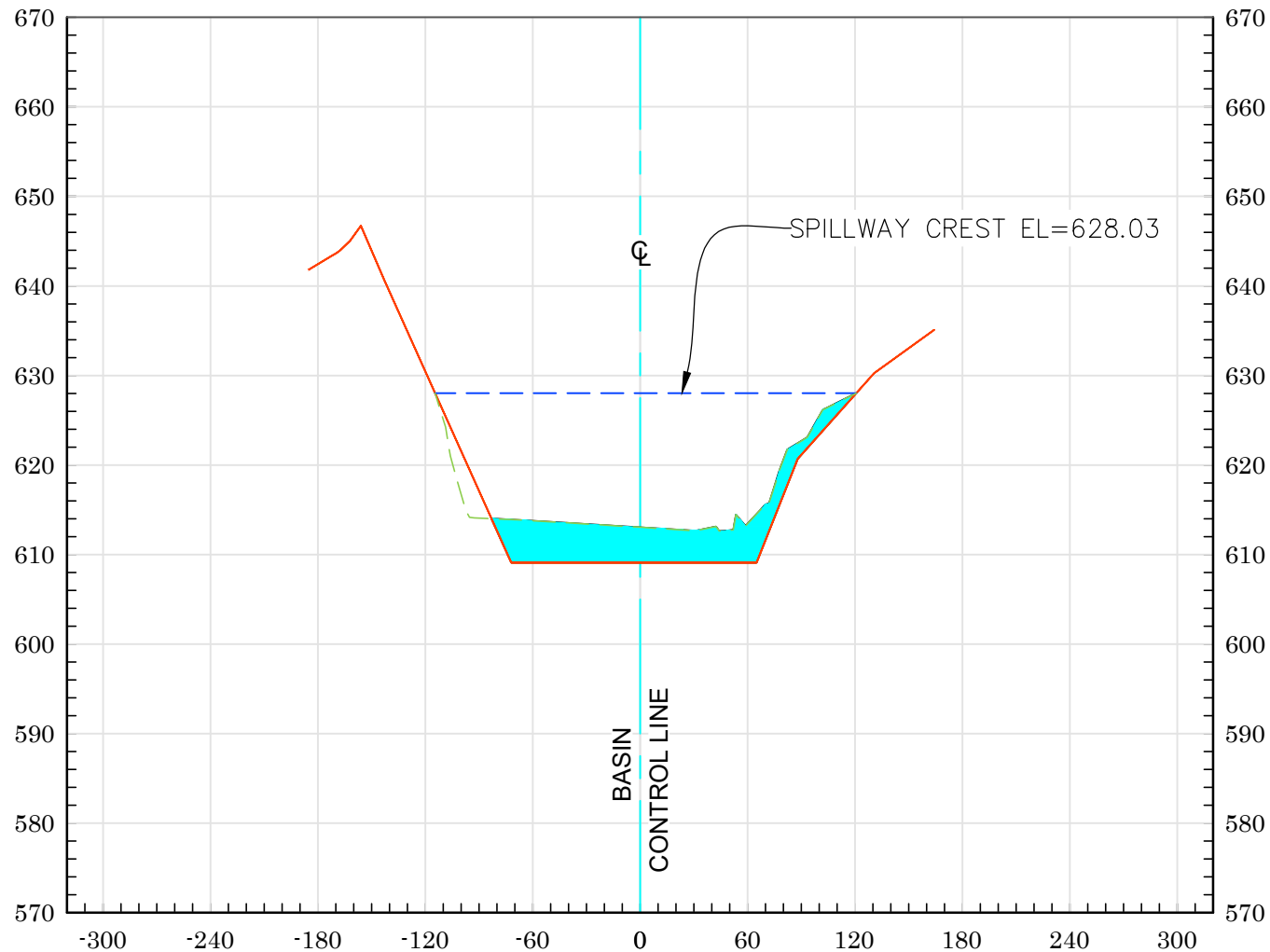
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023

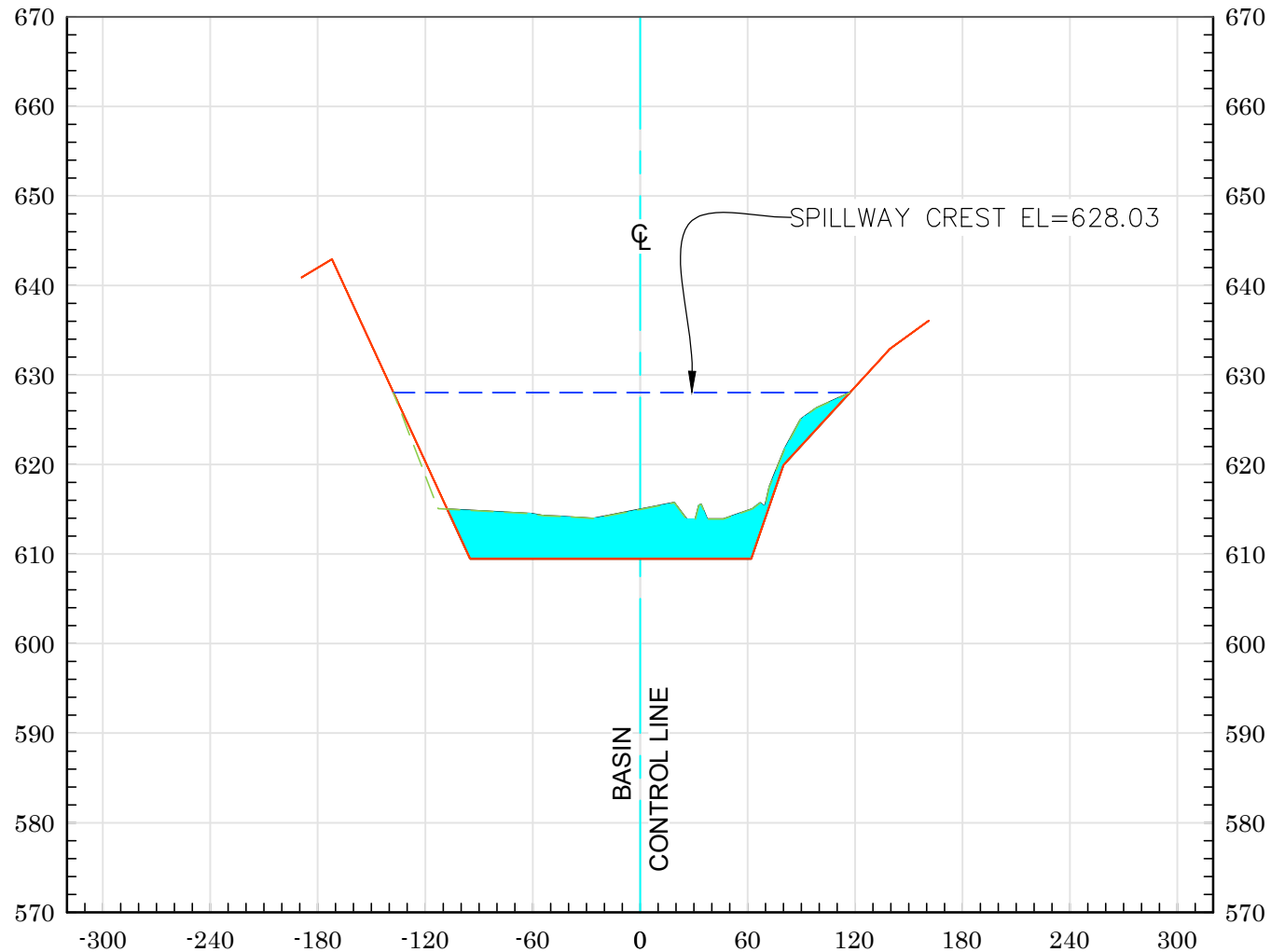


16+08

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

AGUA CHINON RETARDING BASIN (F18-B01) - 2023



16+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment

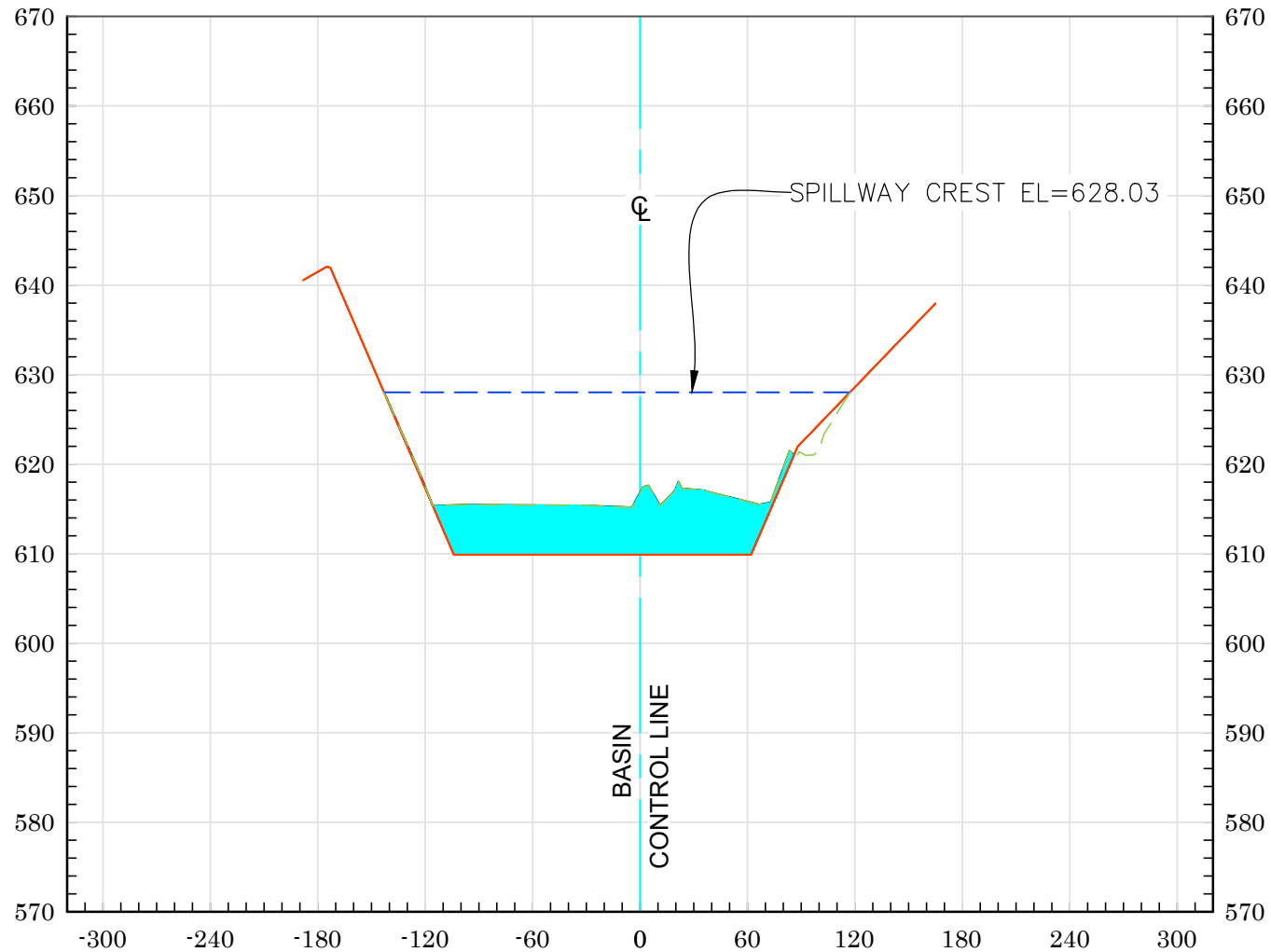
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



17+00

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment 

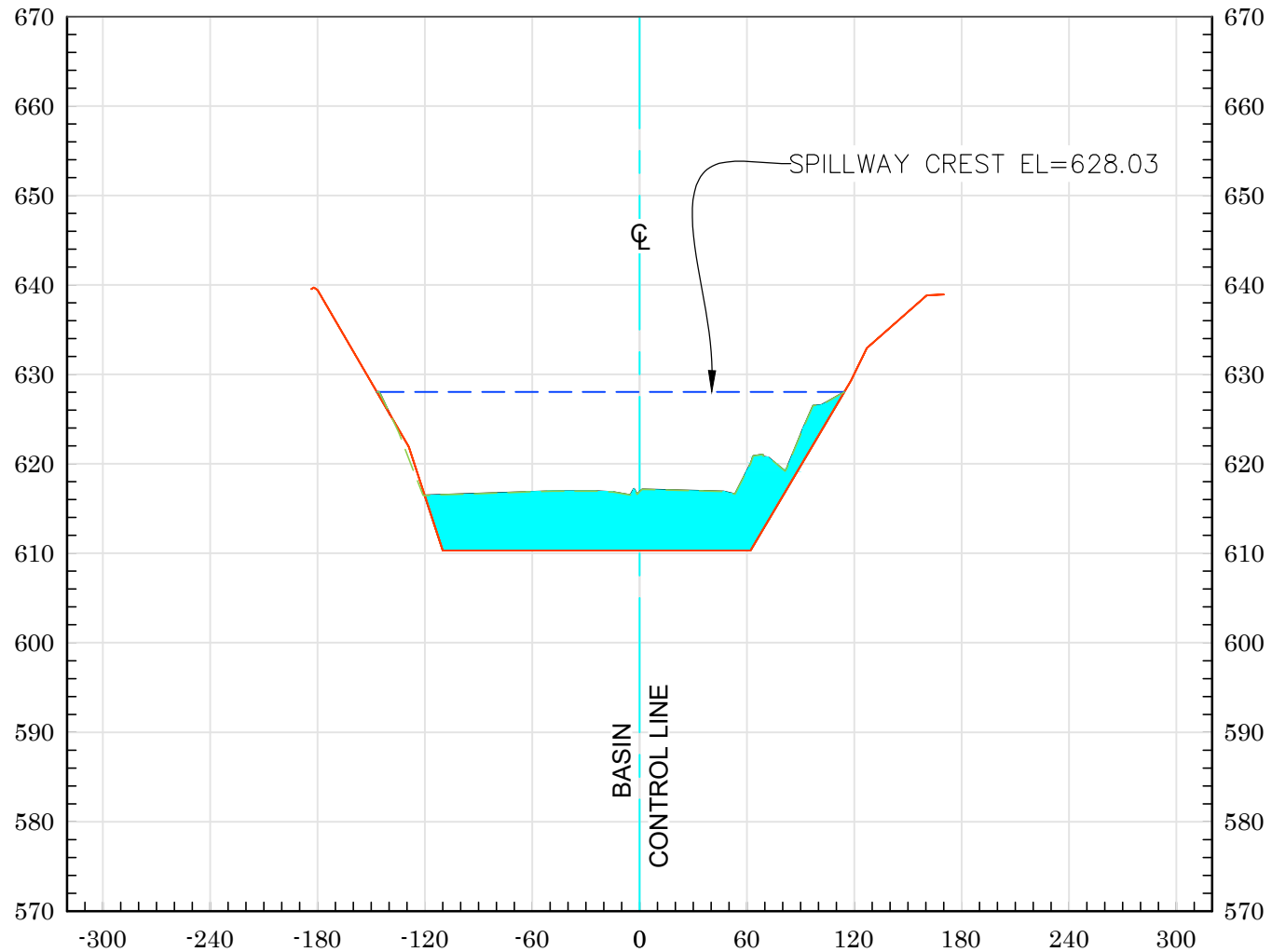
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



17+45

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment 

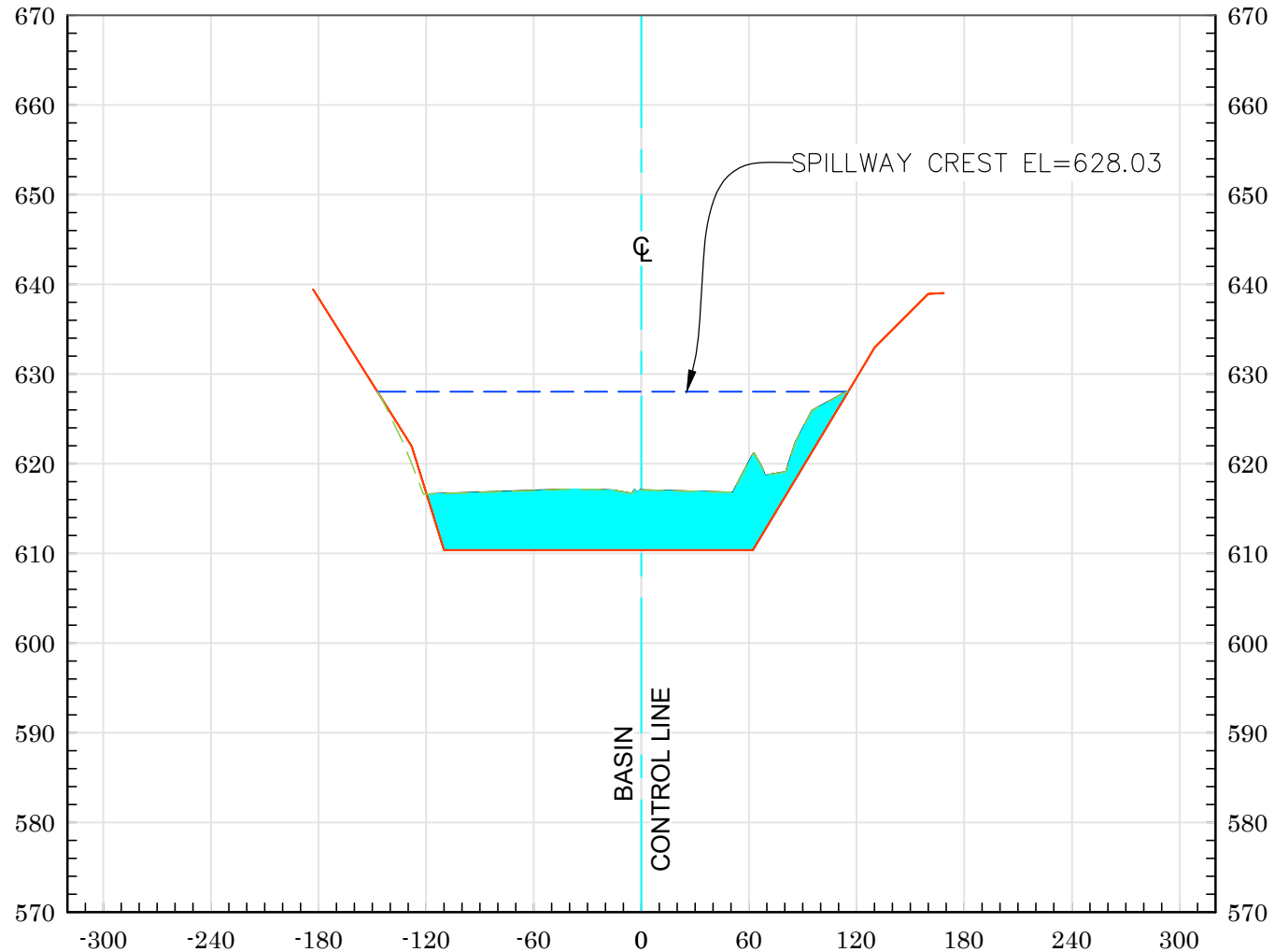
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



17+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment [Cyan Box]

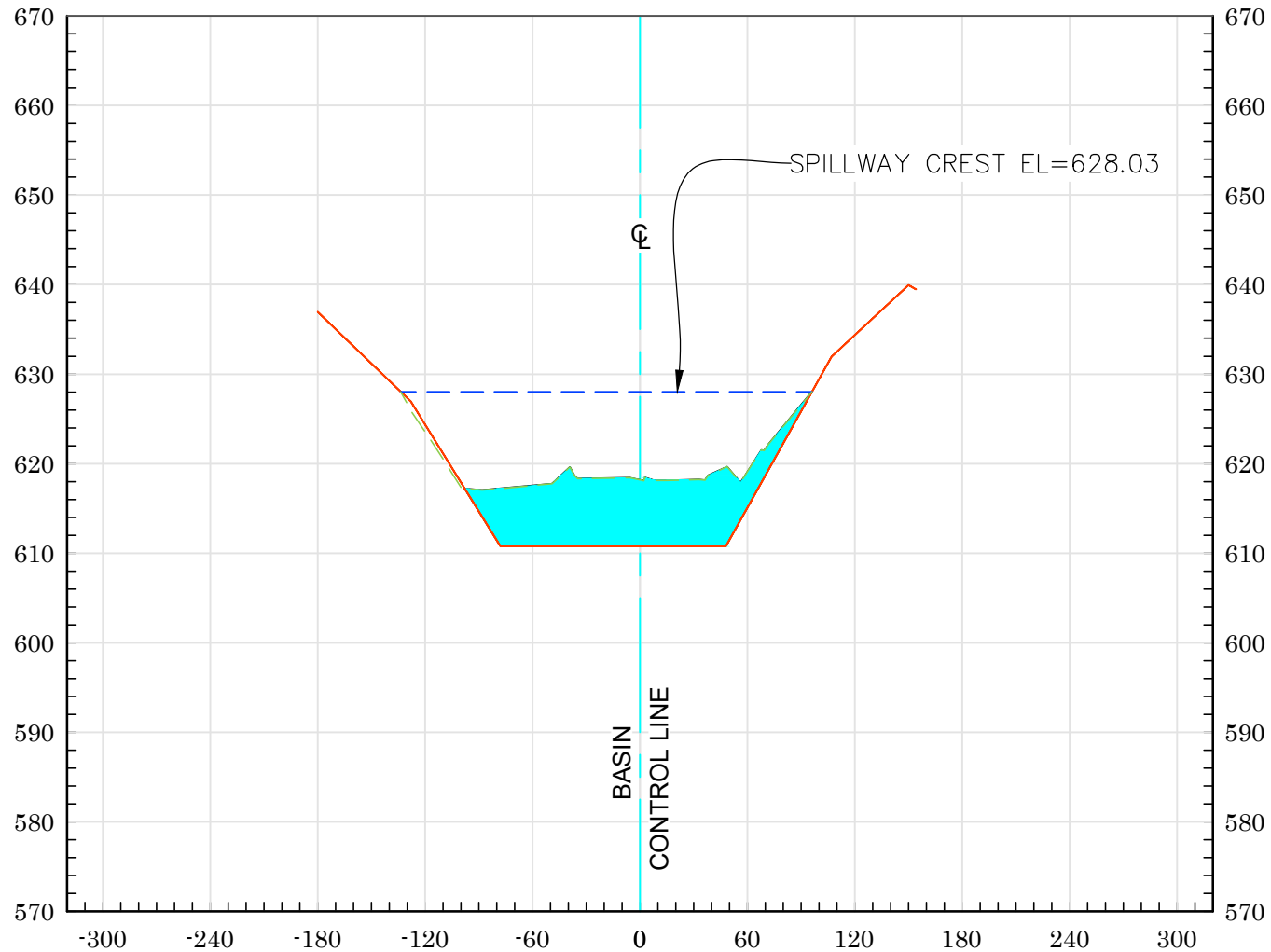
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. Survey
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



18+00

As-Built Plan ——— 2023 Ground ———
Max Cap Line ——— Sediment

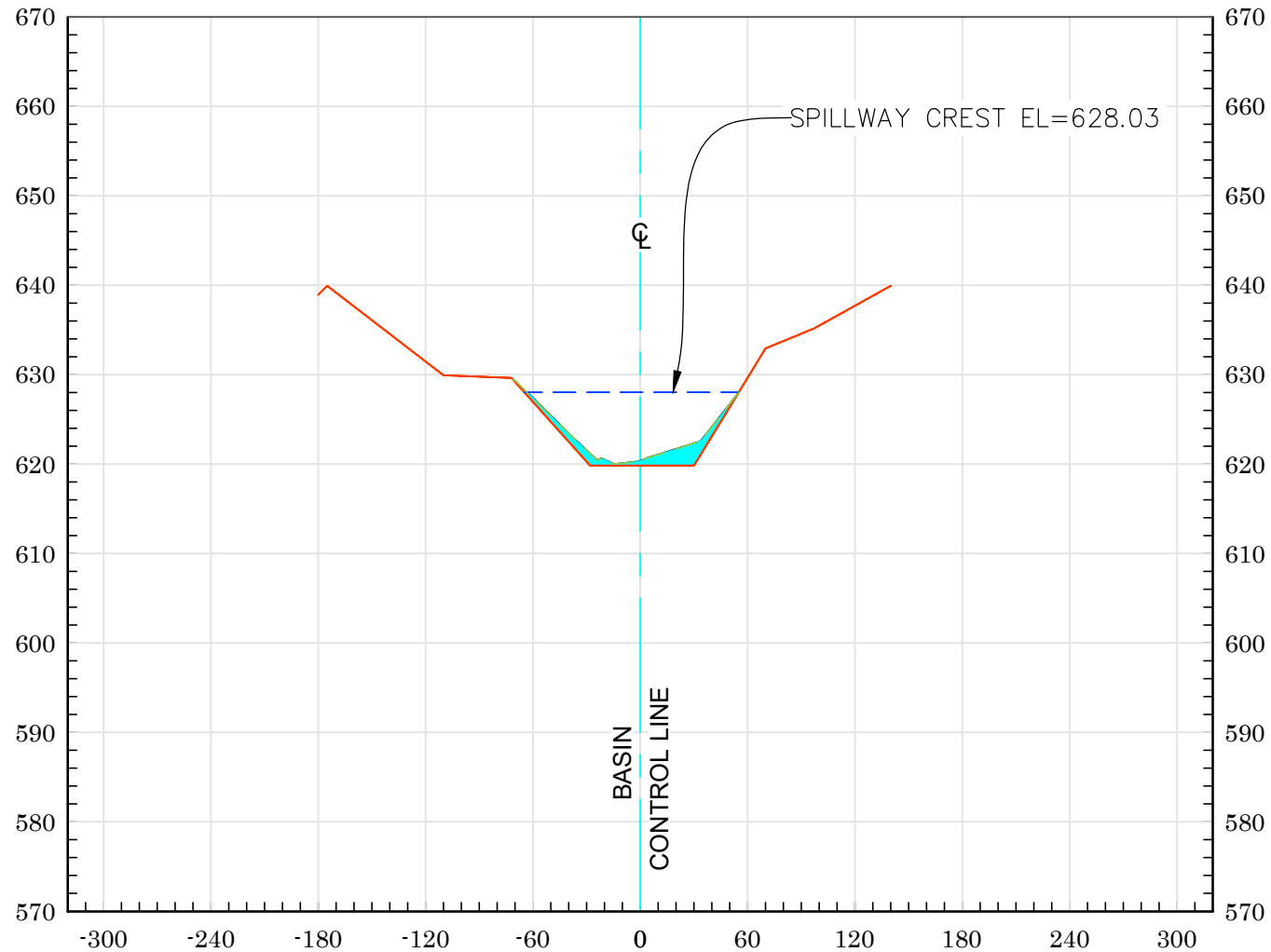
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



18+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line - - - - - Sediment 

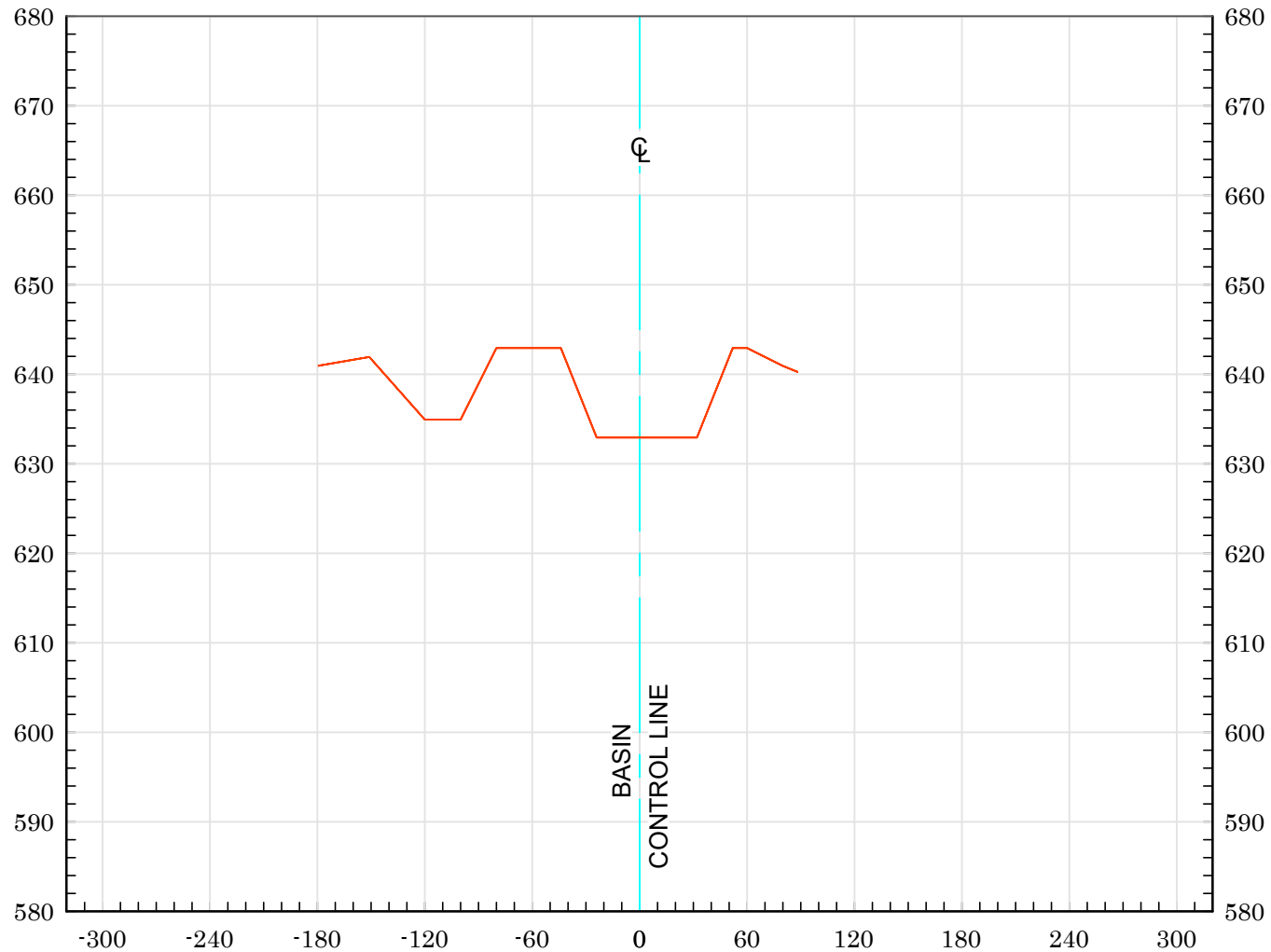
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. Survey
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



19+00

NOTE: THE GROUND SURFACE FOR THIS SECTION IS ABOVE THE MAX CAP LINE, THEREFORE IT IS BEING OMITTED.

As-Built Plan ——— 2023 Ground ———
Max Cap Line ——— Sediment ———

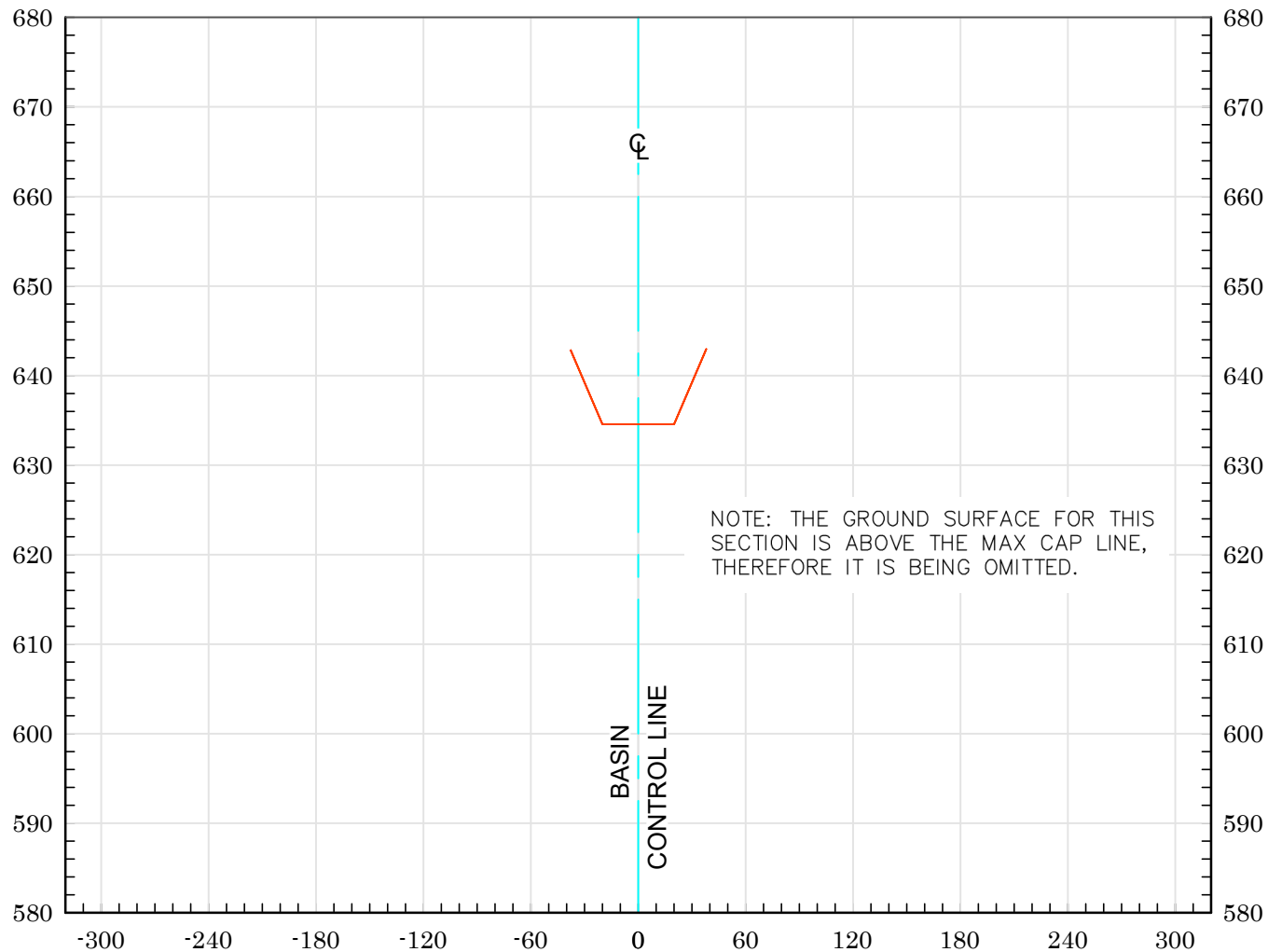
Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'

U.S. *Survey*
Foot

OC Public Works/Engineering Services
OC Survey/Field Services
Boundary Analysis & Mapping



AGUA CHINON RETARDING BASIN (F18-B01) - 2023



19+50

As-Built Plan ——— 2023 Ground - - - - -
Max Cap Line ——— Sediment 

Vert. Scale: 1" = 20'
Horiz. Scale: 1" = 100'