



COUNTY OF ORANGE
OC PUBLIC WORKS DEPARTMENT
SANTA ANA, CALIFORNIA
JAMES, TREADWAY, DIRECTOR

2023 SCOUR STUDY

PREPARED BY:
COUNTY OF ORANGE PUBLIC WORKS
SURVEY FIELD UNIT

KEVIN HILLS, COUNTY SURVEYOR

ORANGE COUNTY BOARD OF SUPERVISORS

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THIRD DISTRICT

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THIRD DISTRICT

2023 ANNUAL SCOUR STUDY

SAN DIEGO CREEK CHANNEL (F05)

MAXIMUM CAPACITY OF BASIN 2

STATIONS 82+00 to 98+00

AS-BUILT PLANS: F05-101-1-A STA. 25+00 TO 98+00

NOTE: As-Built plans were used for left side of the basin, the right side of the template was modified based on the San Diego Creek 2004 Emergency Repair Agreement whereas, a 40' Wildlife Corridor was established on the right side of the channel

HORIZONTAL DATUM: NAD83 2017.5 EPOCH

VERTICAL DATUM: NAVD 1988 (O.C.S. 1995 ADJUSTMENT)

OFFICE CHECK BY: Hanna Aftim, PLS, Senior Land Surveyor
Michael Kubisty, PLS, Senior Land Surveyor

SURVEY PARTY CHIEF: James Russo, Surveyor III

MAPPING DONE BY: Hanna Aftim, PLS, Senior Land Surveyor

COUNTY of ORANGE

OC PUBLIC WORKS

OC SURVEY

FIELD UNIT-BOUNDARY ANALYSIS & MAPPING

2023 SCOURS STUDY (MAX. CAPACITY BASIN TEMPLATE) - VOLUME REPORT

SAN DIEGO CREEK (F05) BASIN #2, STATION 82+00 to 98+00

Date of Survey October 2023

ALIGNMENT: CENTERLINE ALIGNMENT REACH 1

SURFACE 1: SDCR2_2023

SURFACE 2: F05B2 MAX CAP (2010 MAX CAP Basin #3 Template)

BASILINE STATION NUMBER	STATION CUT AREA (Sq. Ft)	STATION CUT VOLUME (Cu. Yds)	STATION FILL AREA (Sq. Ft)	STATION FILL VOLUME (Cu. Yds)	MASS ORDINANCE VOLUME (Cu. Yds)
82+00	775.05	0.00	3.54	0.00	0.00
83+00	513.27	1803.52	91.08	175.18	1628.34
84+00	474.53	1829.26	58.95	277.84	3179.76
85+00	390.56	1602.04	6.79	121.74	4660.06
86+00	395.48	1455.64	31.39	70.70	6045.00
87+00	439.65	1546.54	7.11	71.30	7520.24
88+00	511.51	1761.41	57.49	119.63	9162.02
89+00	472.65	1822.52	28.66	159.54	10825.00
90+00	434.59	1680.07	18.58	87.47	12417.60
91+00	336.01	1427.04	34.86	98.96	13745.68
92+00	355.01	1279.68	38.60	136.05	14889.31
93+00	417.24	1430.1	22.75	113.61	16205.80
94+00	425.02	1559.74	2.25	46.29	17719.25
95+00	323.92	1386.92	102.42	193.83	18912.34
96+00	364.17	1274.24	75.35	329.21	19857.37
97+00	450.33	1508.33	78.63	285.15	21080.55
98+00	670.62	2075.84	66.10	268.02	22888.37
	CUT: 25,442.89 Cu. Yds		FILL: 2,554.52 Cu. Yds		NET: 22,888.37 Cu. Yds

COUNTY of ORANGE
OC PUBLIC WORKS

OC SURVEY

FIELD UNIT-BOUNDARY ANALYSIS & MAPPING

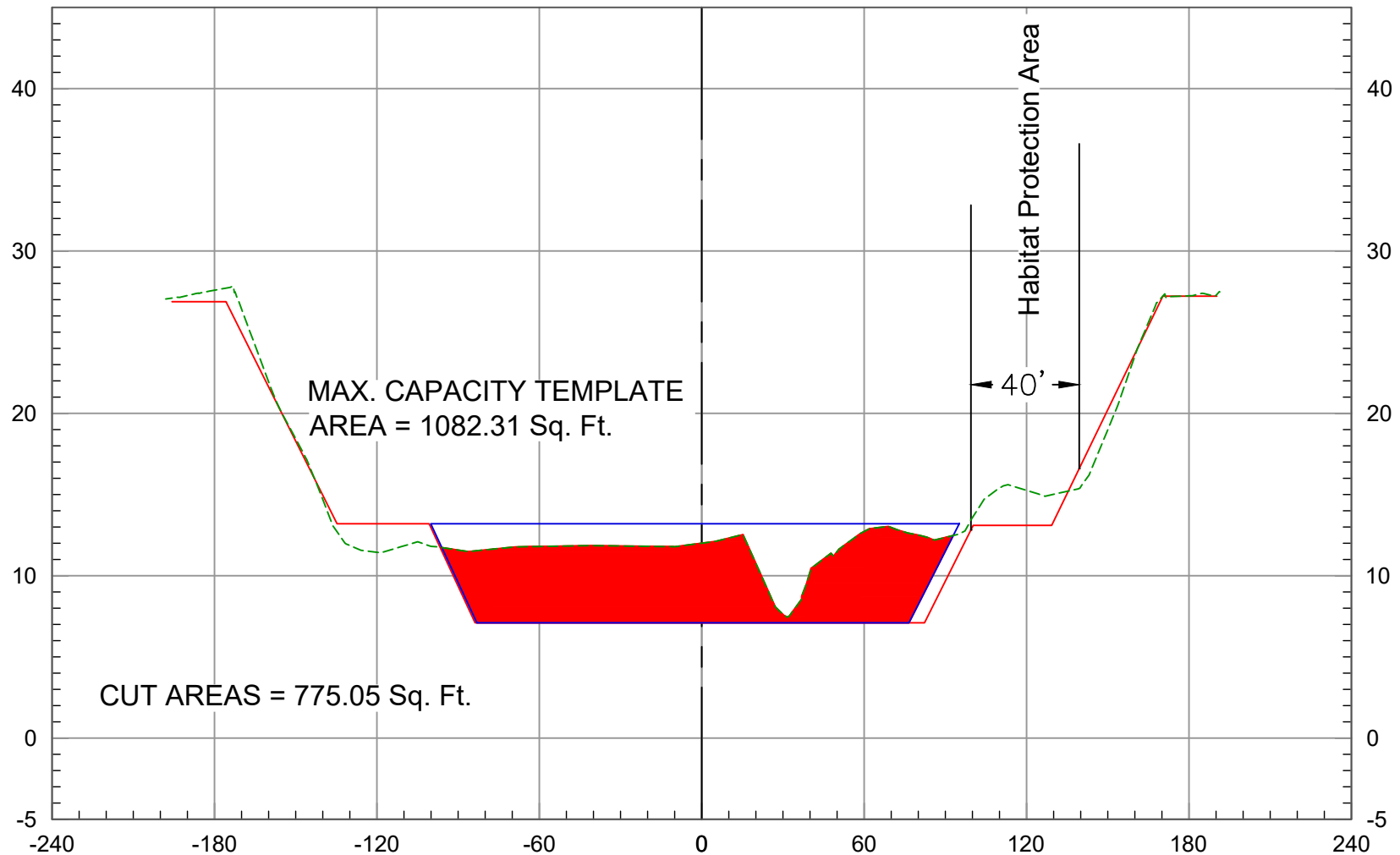
2023 SCOURS STUDY- % MAX. CAPACITY BASIN TEMPLATE - VOLUME REPORT (OCTOBER 30, 2023)

SAN DIEGO CREEK (F05) BASIN #2, (STATION 82+00 TO 98+00)

STATION	CUT AREA	CUT VOLUME	FILL AREA	FILL VOLUME	% of CAPACITY
	(Sq. Ft)	(Cu. Yds)	(Sq. Ft)	(Cu. Yds)	
82+00	775.05	0.00	1082.31	0.00	
83+00	513.27	1803.52	1104.24	4049.00	44.54%
84+00	474.53	1829.26	1042.63	3976.00	46.01%
85+00	390.56	1602.04	970.78	3729.00	42.96%
86+00	395.48	1455.64	974.99	3603.00	40.40%
87+00	439.65	1546.54	1005.25	3667.00	42.17%
88+00	511.51	1761.41	1048.59	3803.00	46.32%
89+00	472.65	1822.52	1268.96	4292.00	42.46%
90+00	434.59	1680.07	1506.45	5140.00	32.69%
91+00	336.01	1427.04	1577.62	5711.00	24.99%
92+00	355.01	1279.68	1473.94	5651.00	22.65%
93+00	417.24	1430.10	1610.97	5713.00	25.03%
94+00	425.02	1559.74	1286.18	5365.00	29.07%
95+00	323.92	1386.92	1737.43	5599.00	24.77%
96+00	364.17	1274.24	1816.07	6581.00	19.36%
97+00	450.33	1508.33	1911.00	6902.00	21.85%
98+00	670.62	2075.84	1920.00	7094.00	29.26%
		TOTAL CUT VOLUME		MAX. CAPACITY BASIN 3 VOLUME	TOTAL % OF CAPACITY
		25,442.89 Cu. Yds		80,875.00 Cu. Yds	31.46%

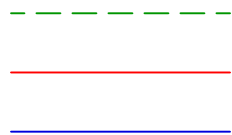
NOTE: NO STATIONS ARE FILLED BEYOND 50% OF THE MAXIMUM CAPACITY OF BASIN #2

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



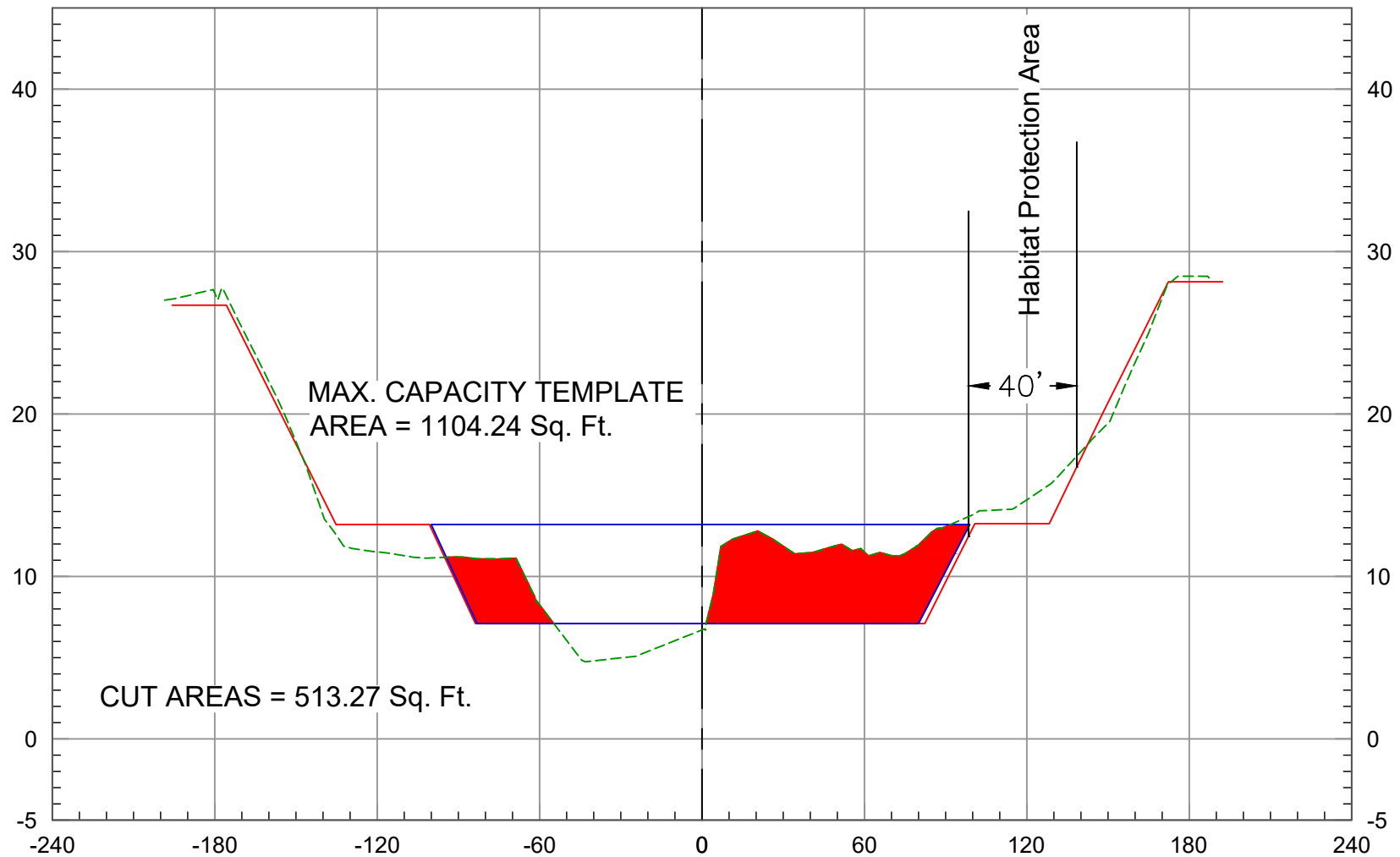
2023 Ground
As-Built Plan

Maximum Capacity



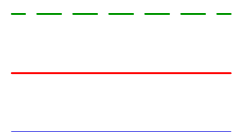
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Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan

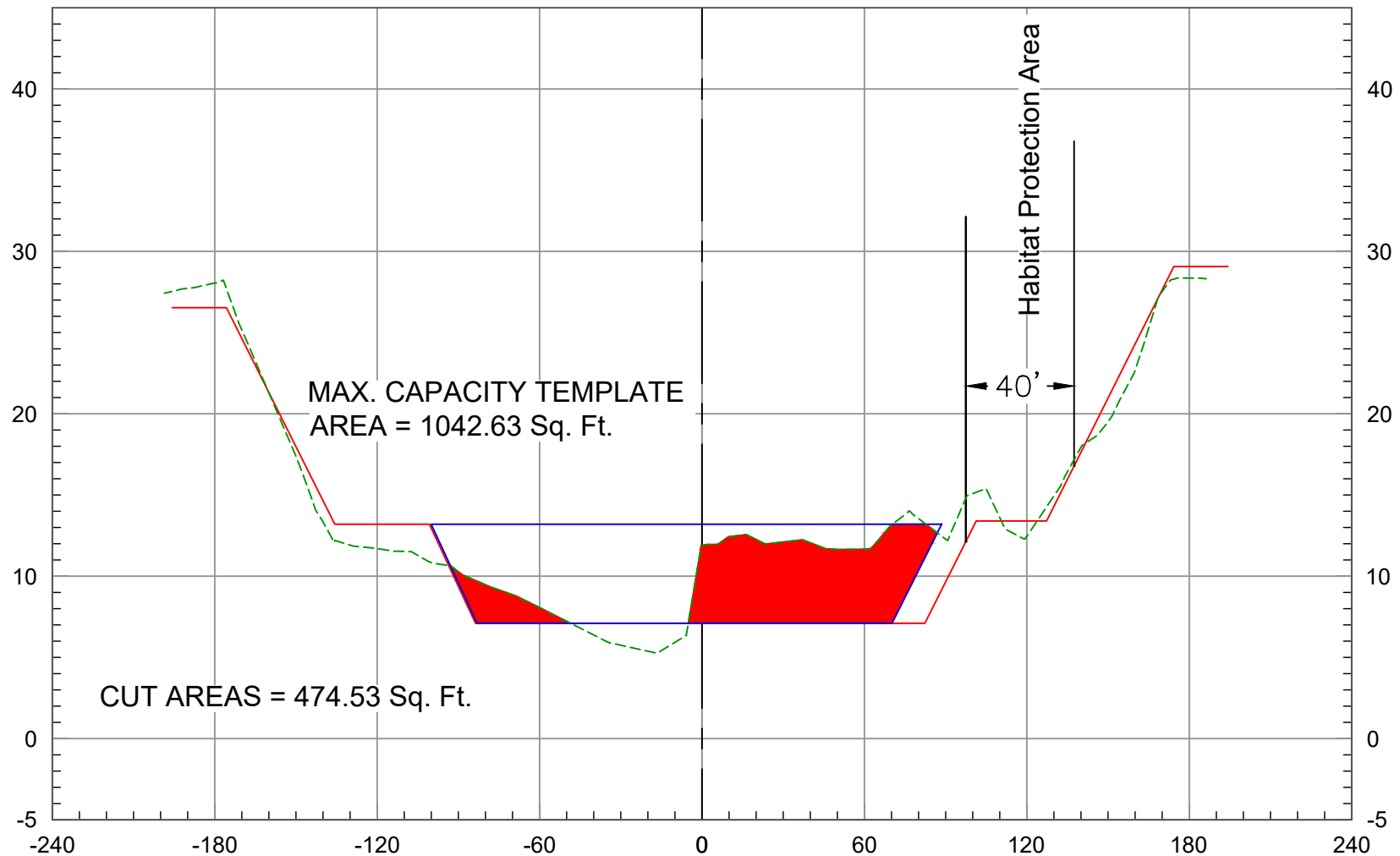
Maximum Capacity



83+00

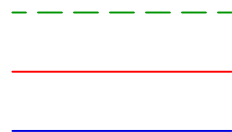
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SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



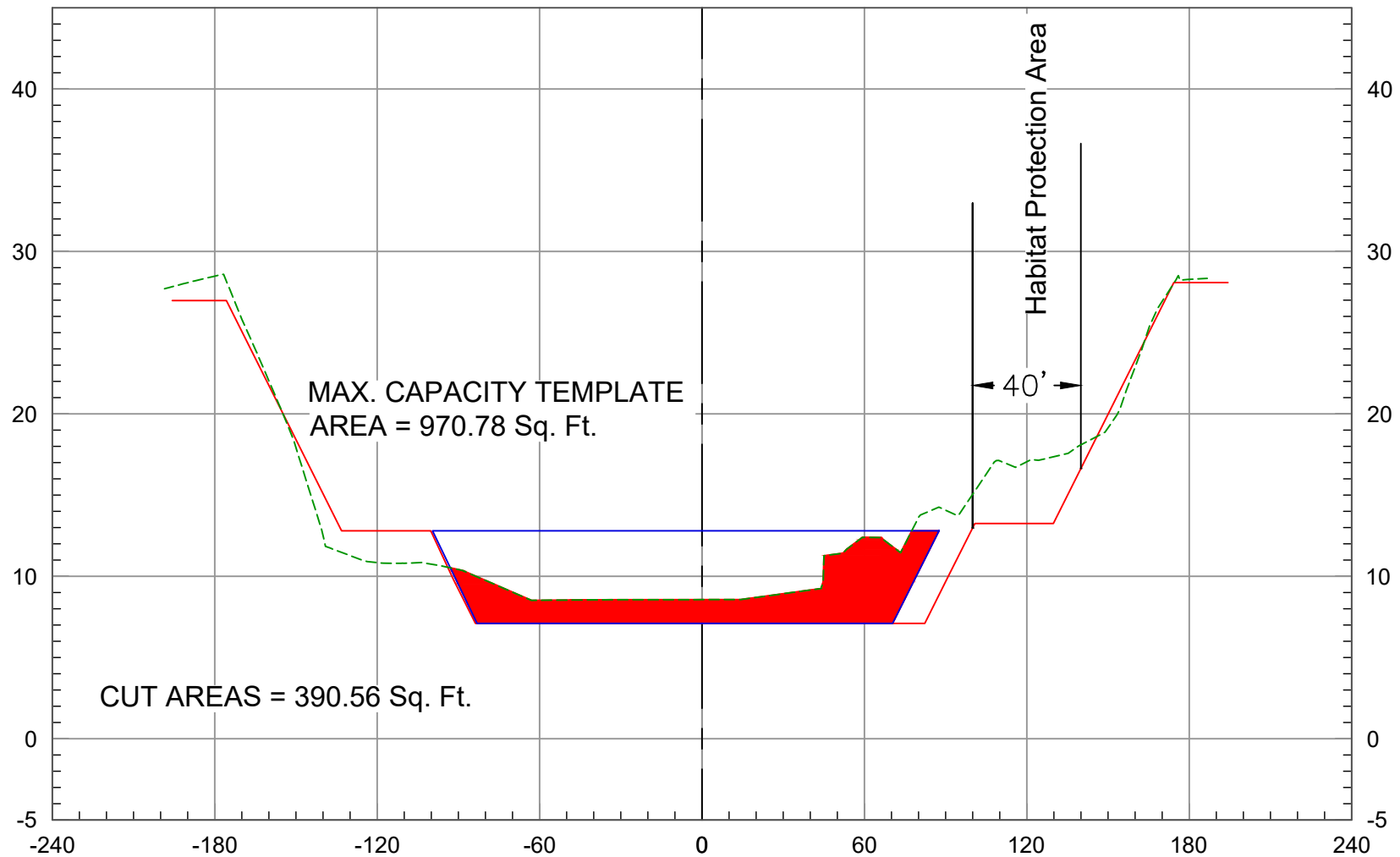
2023 Ground
As-Built Plan

Maximum Capacity



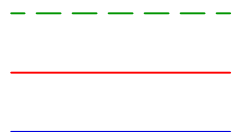
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SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan

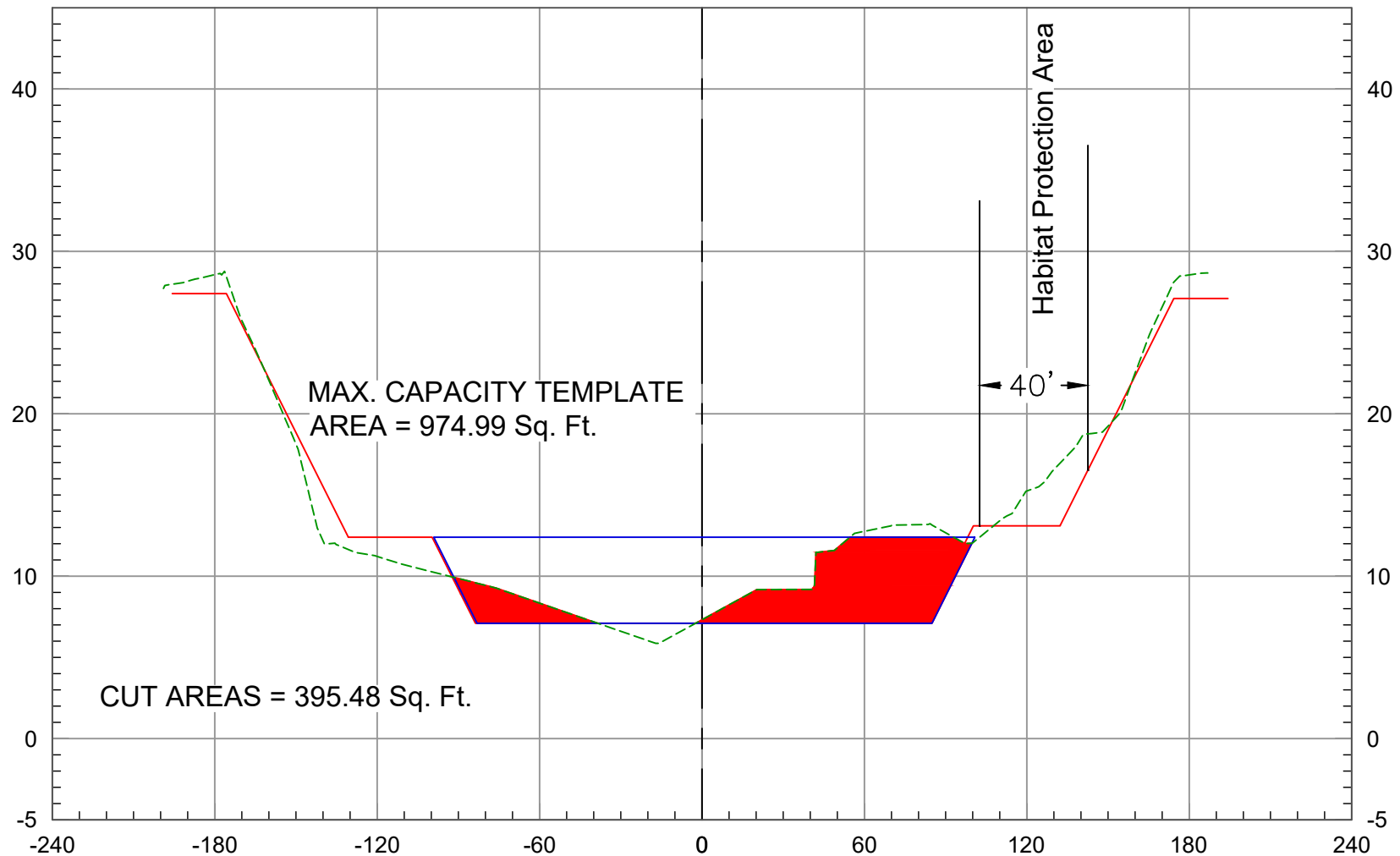
Maximum Capacity



85+00

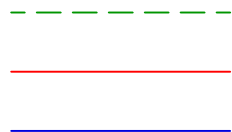
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Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan

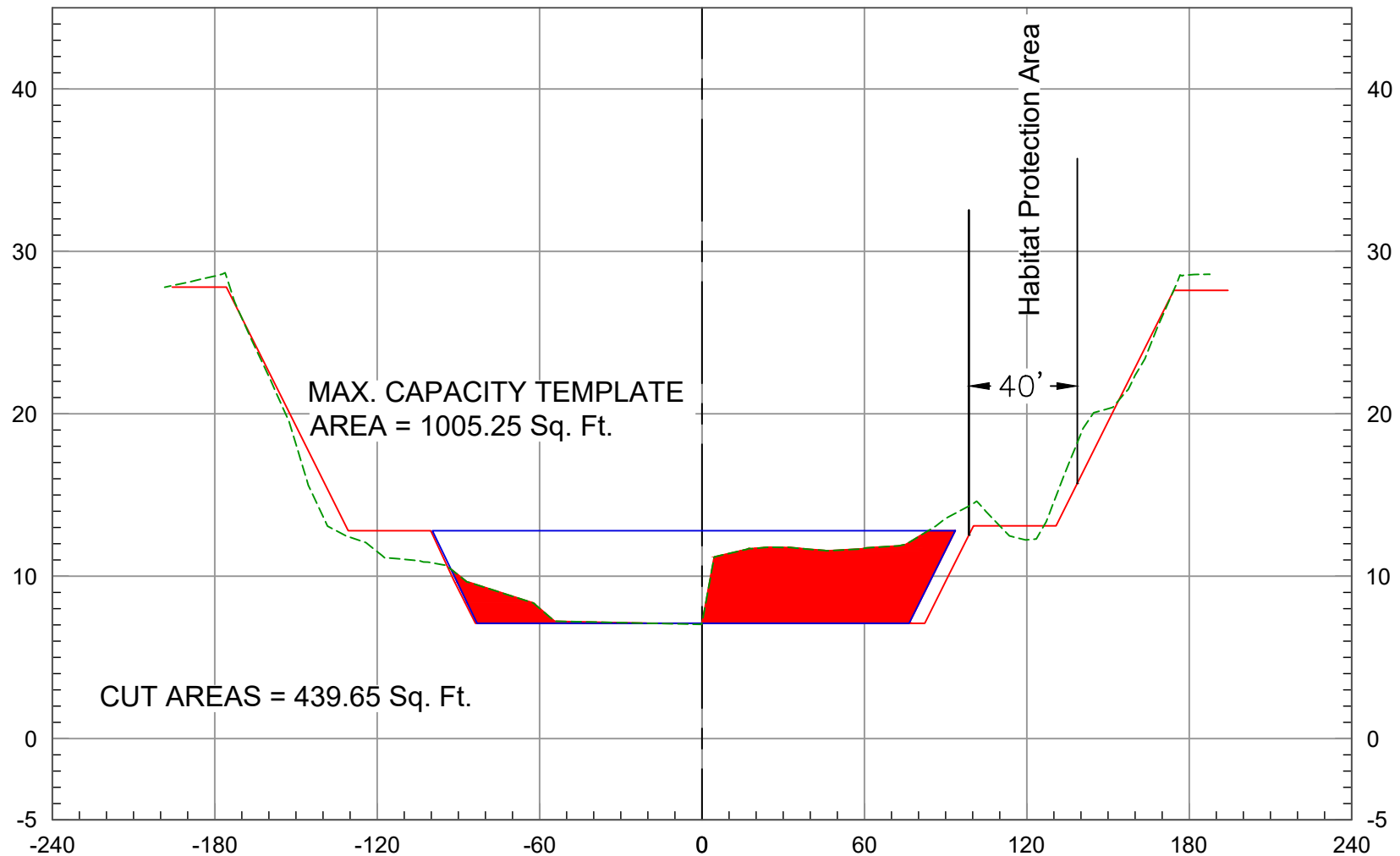
Maximum Capacity



86+00

Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'

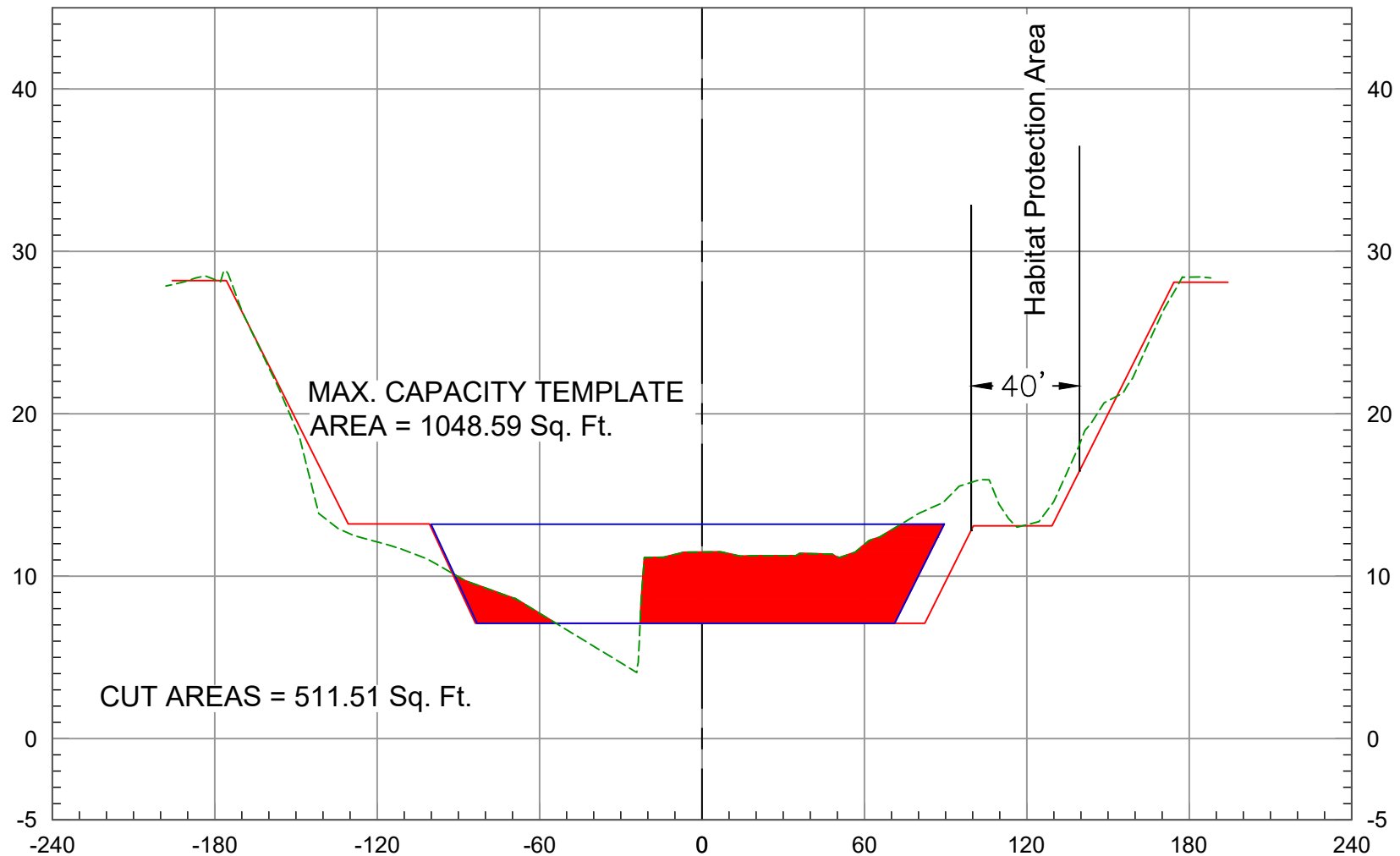
SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan
Maximum Capacity

Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL

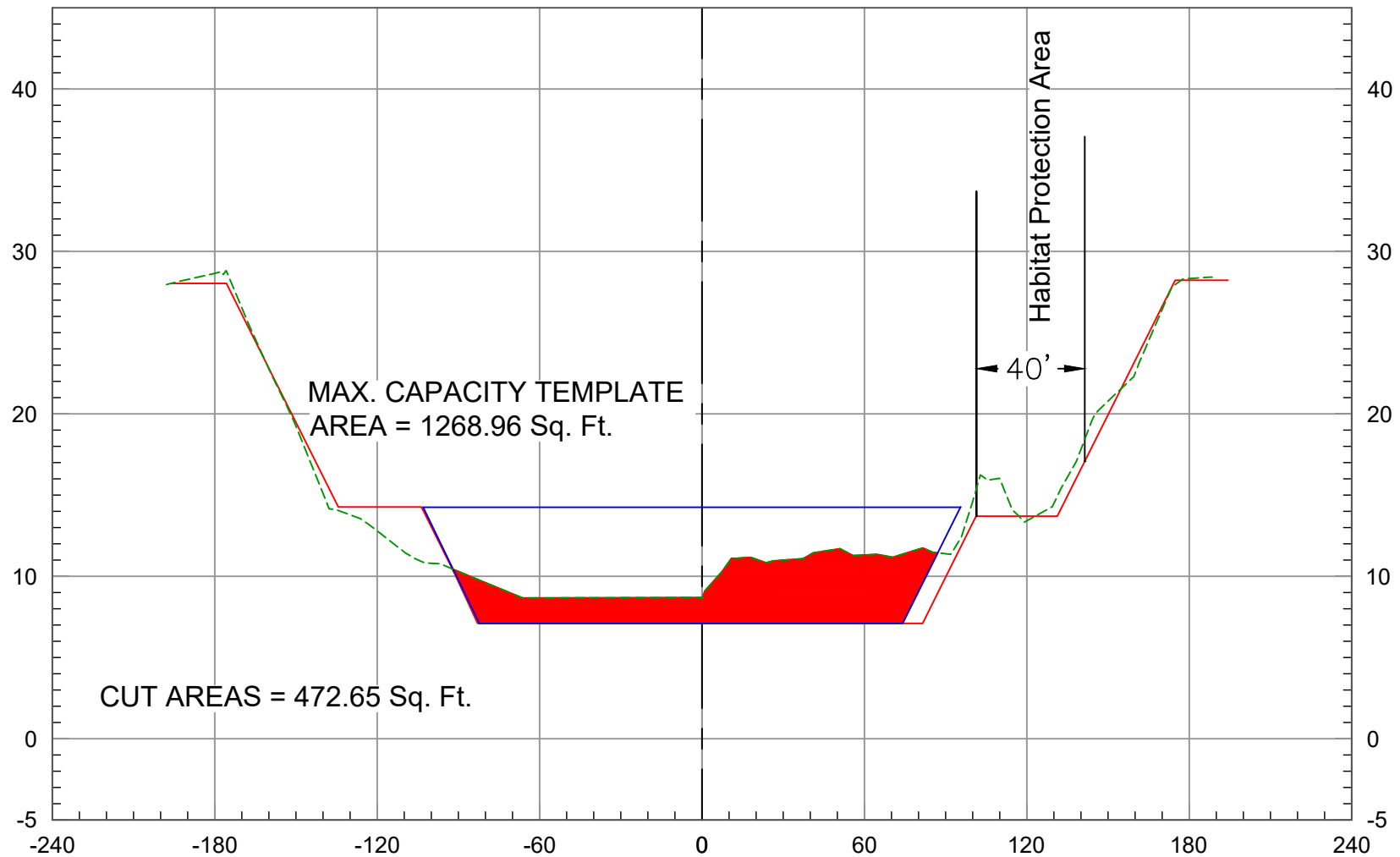


2023 Ground
As-Built Plan
Maximum Capacity

88+00

Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



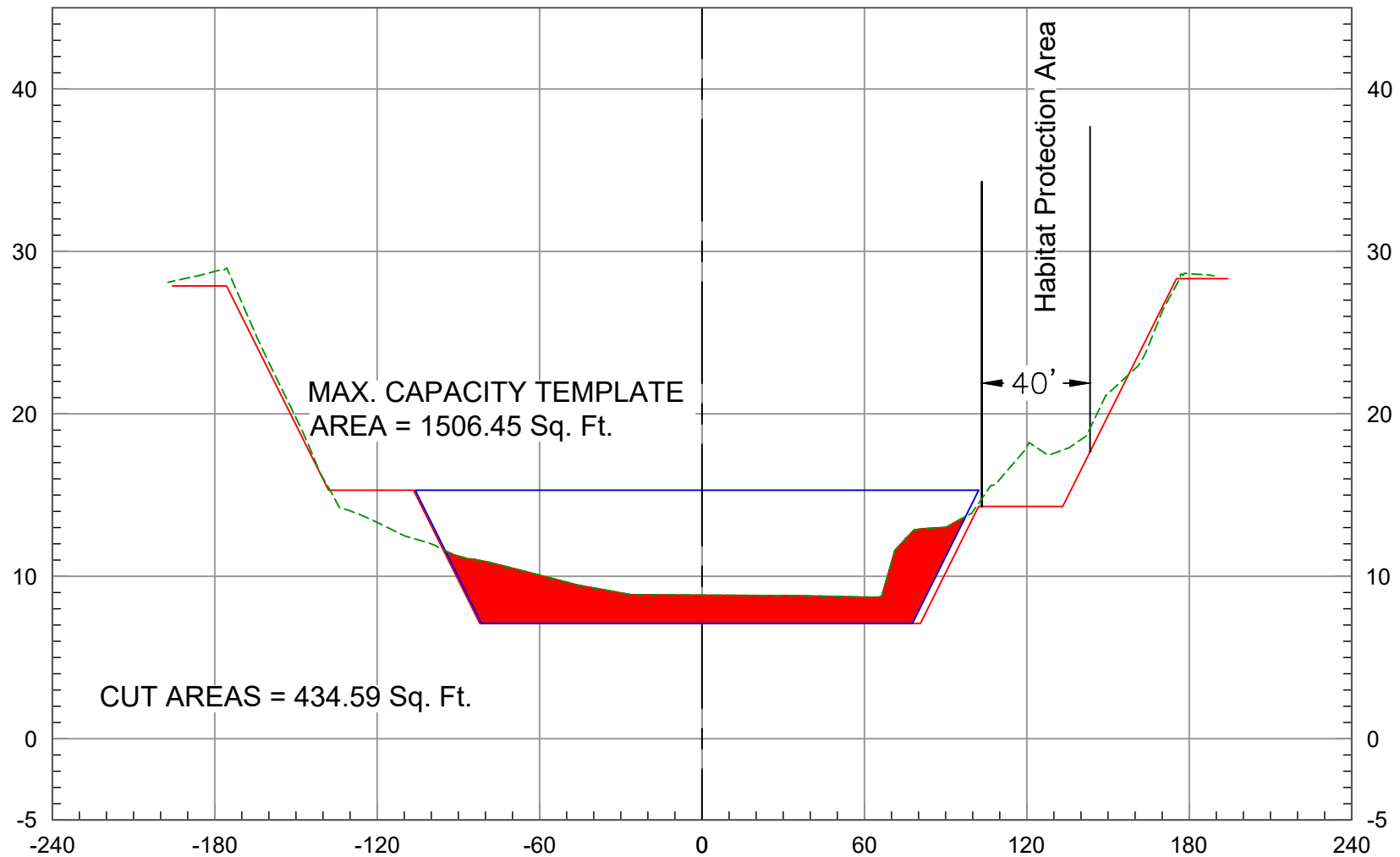
2023 Ground
As-Built Plan

Maximum Capacity

89+00

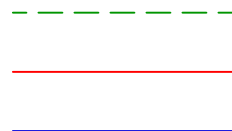
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SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan

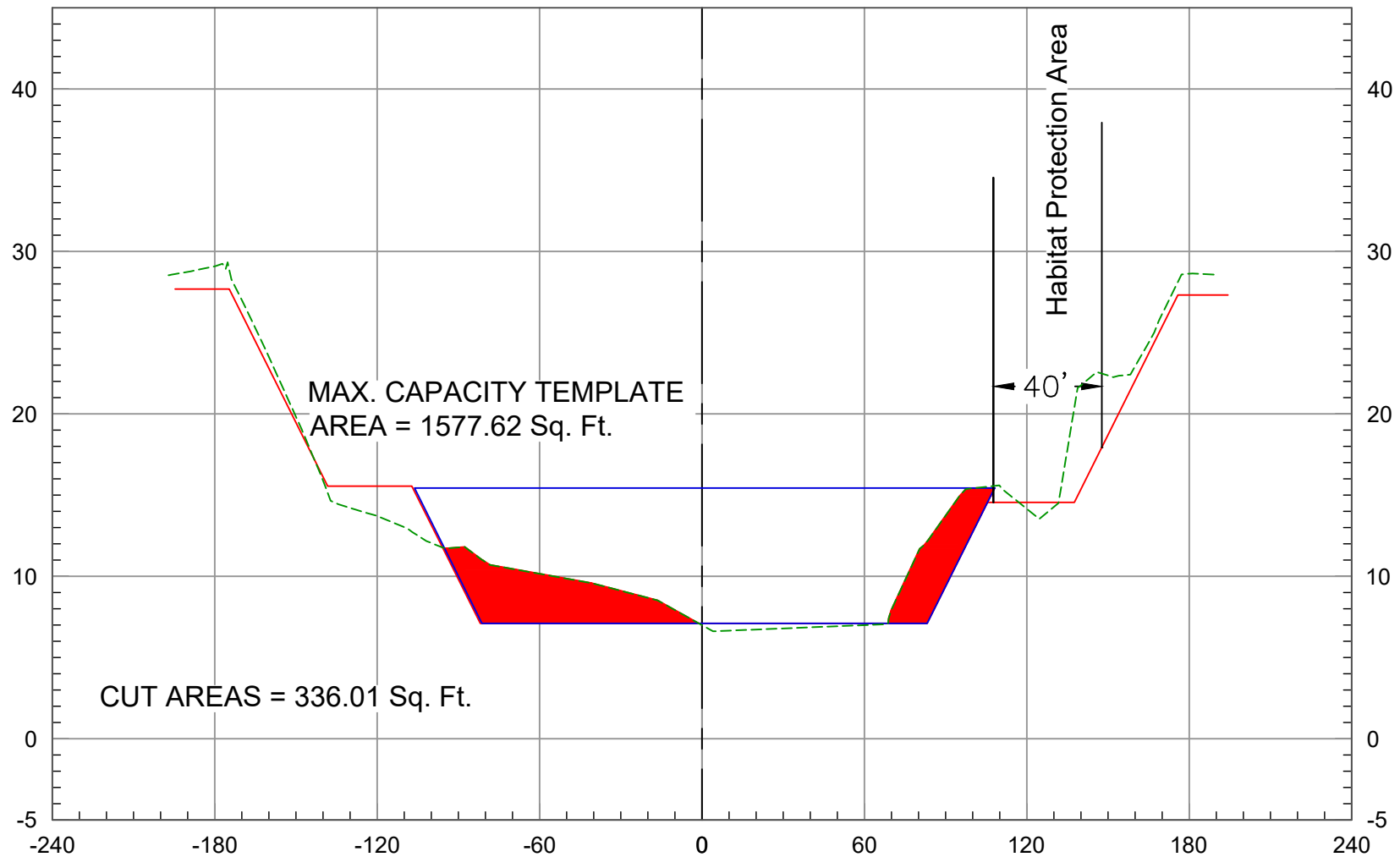
Maximum Capacity



90+00

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Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL

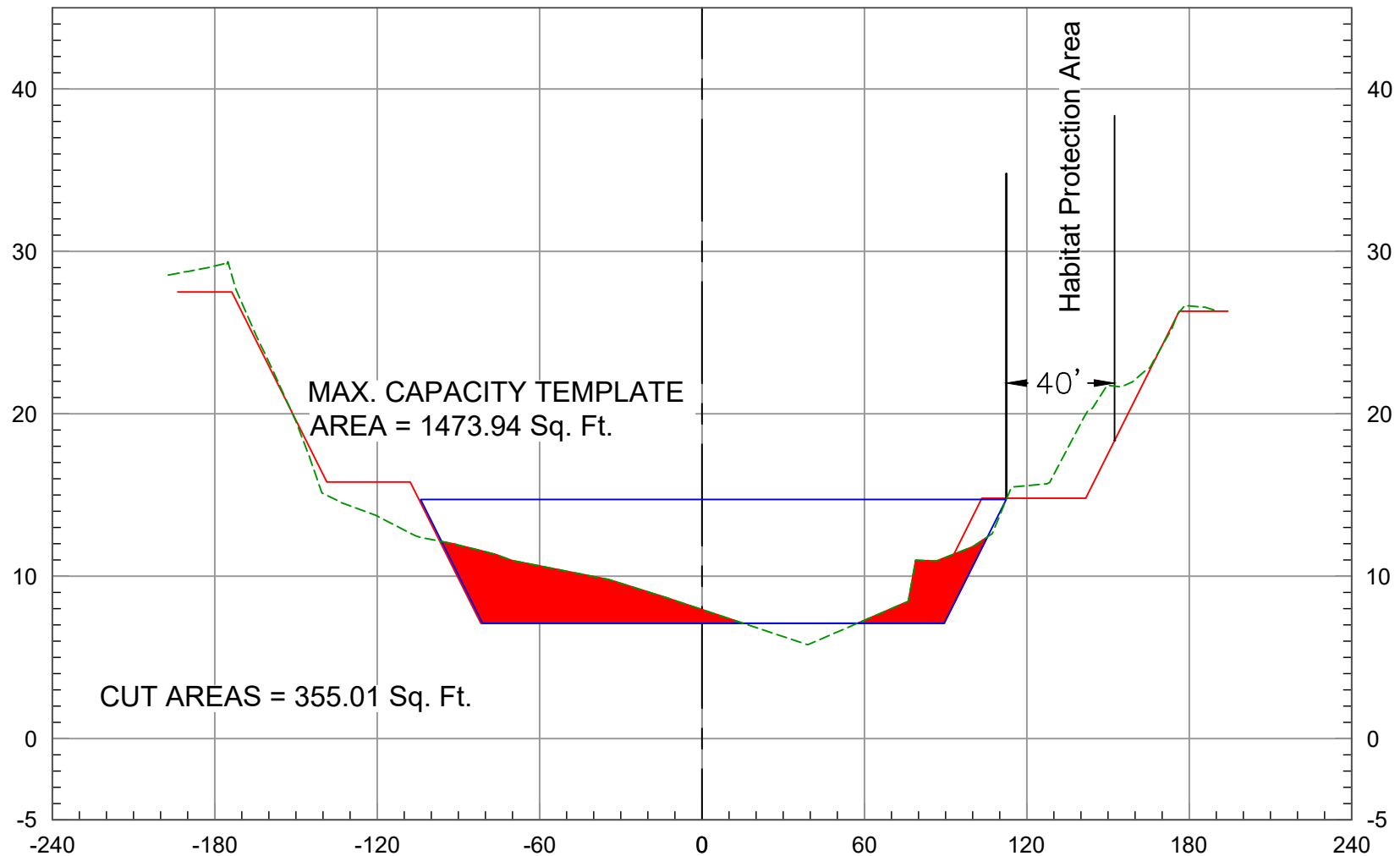


2023 Ground
As-Built Plan
Maximum Capacity

91+00

Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL

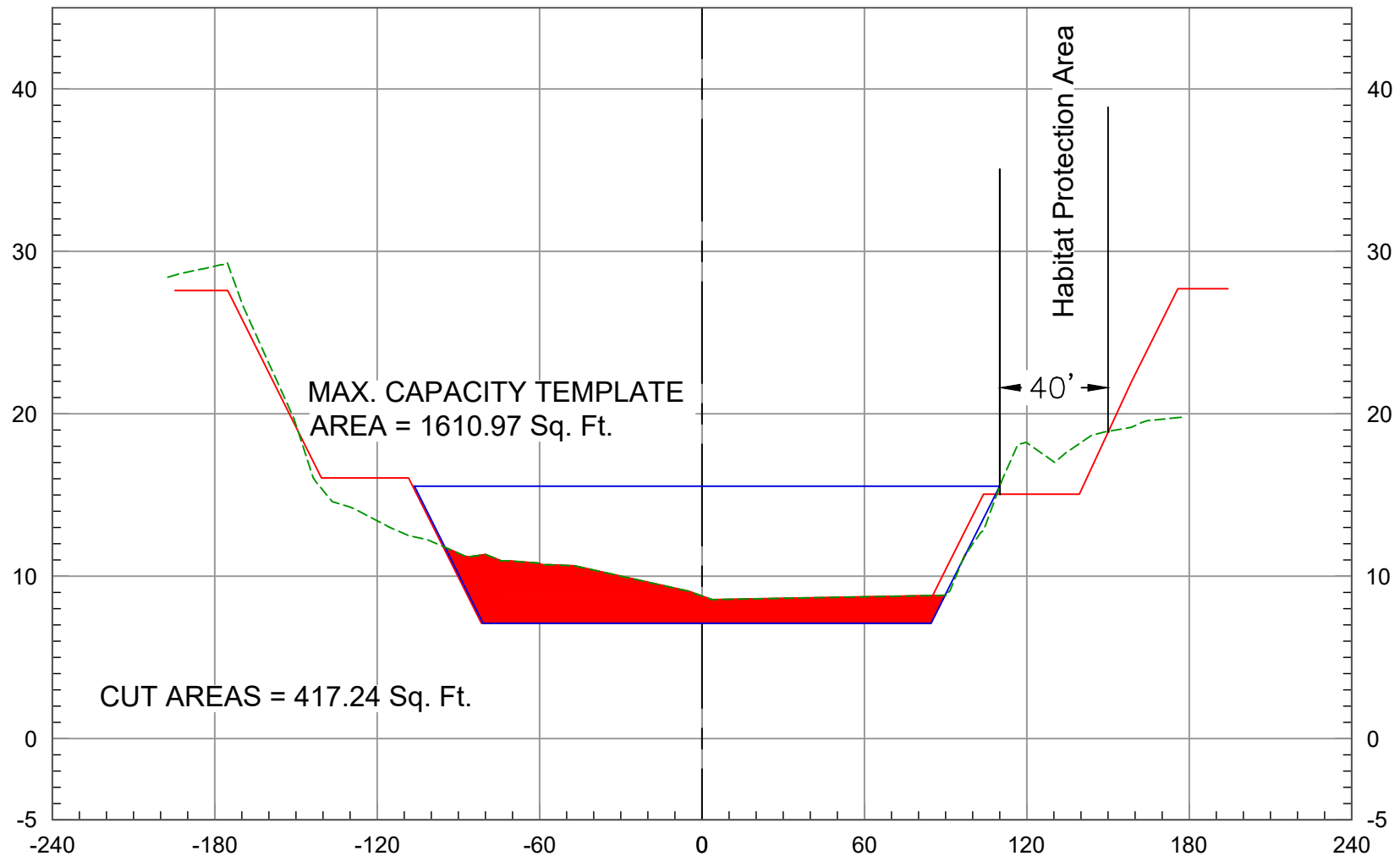


2023 Ground - - - - -
As-Built Plan - - - - -
Maximum Capacity - - - - -

92+00

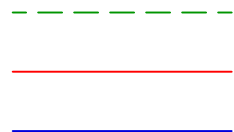
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SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan

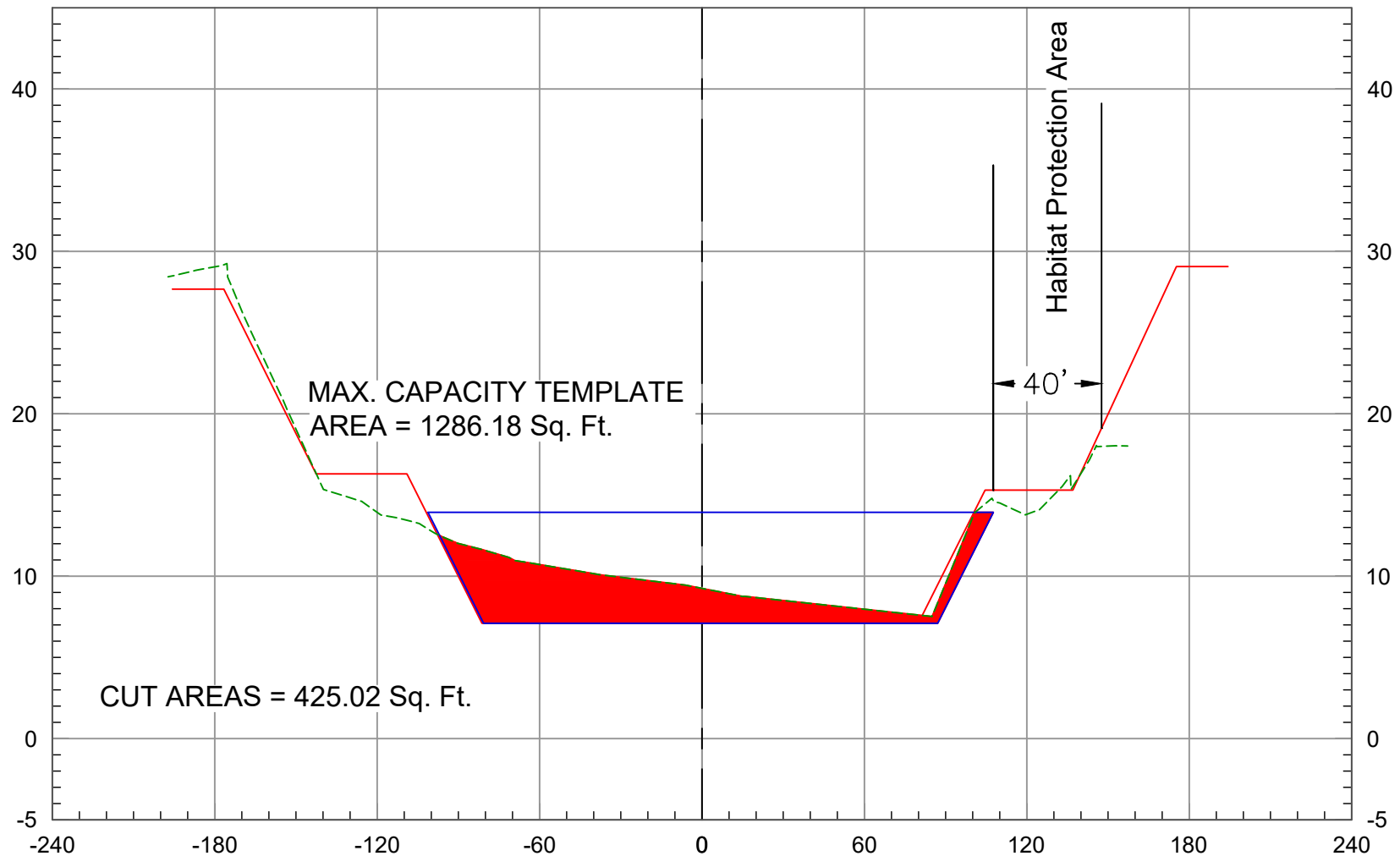
Maximum Capacity



93+00

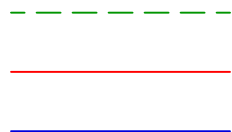
Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan

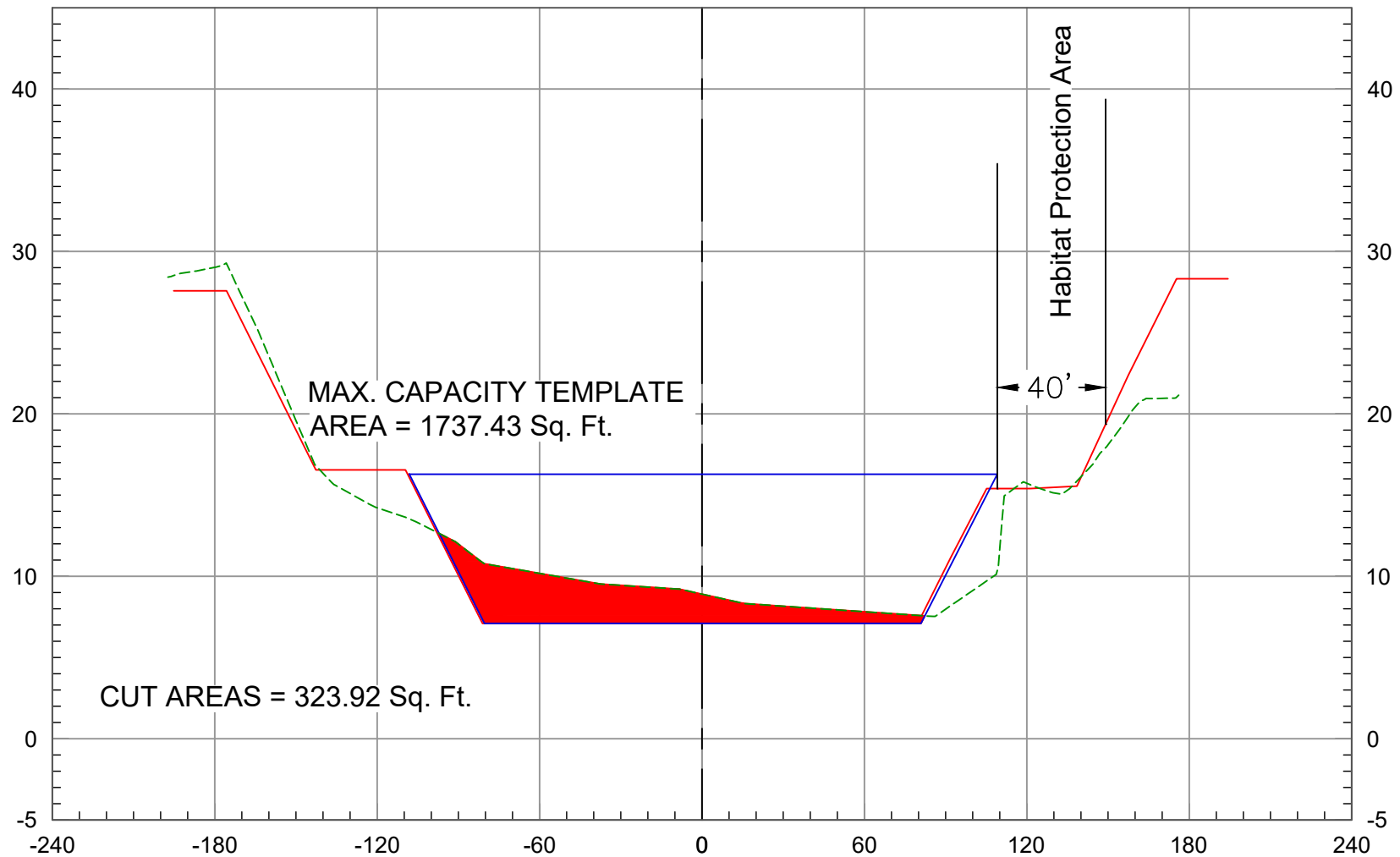
Maximum Capacity



94+00

Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL

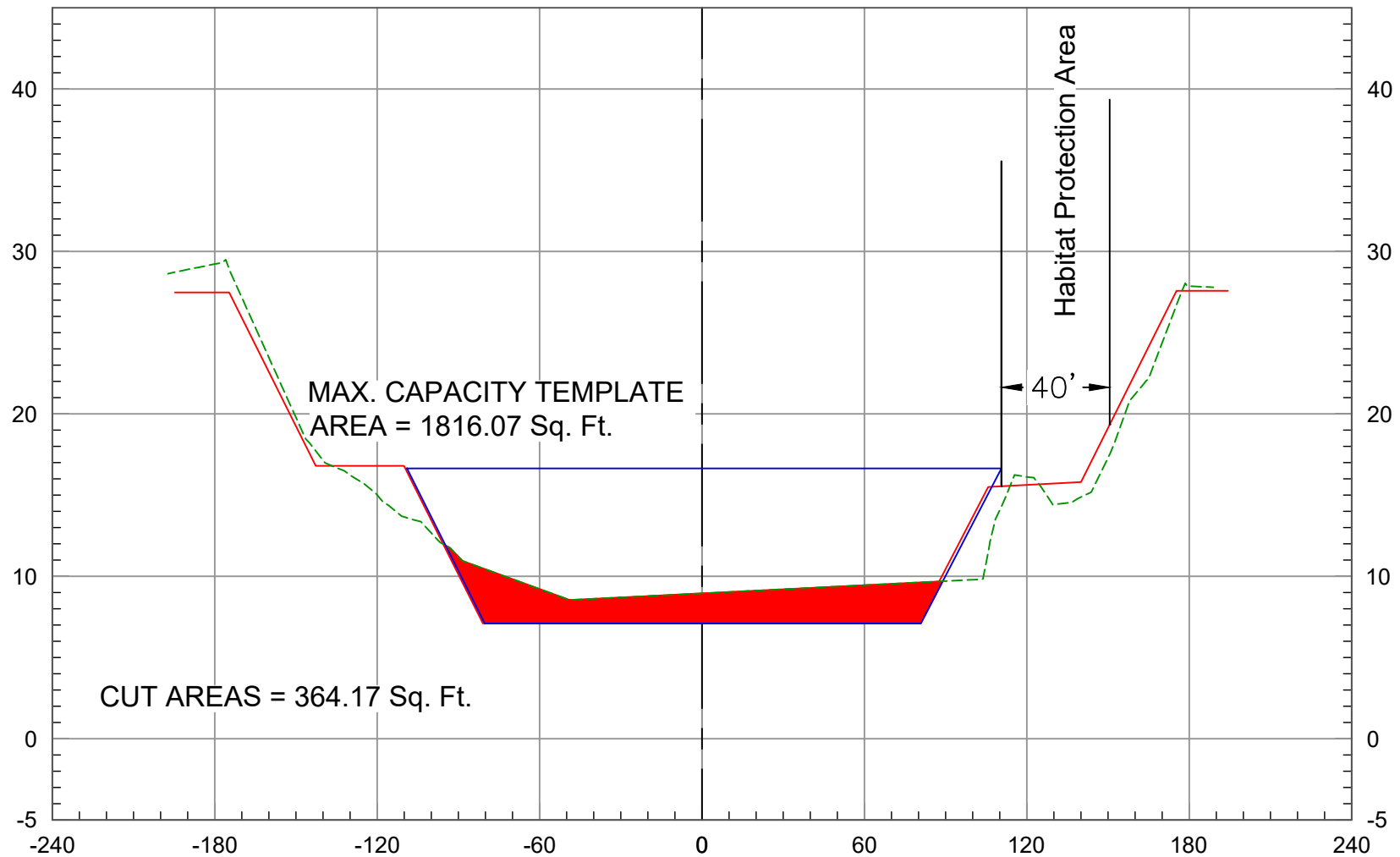


2023 Ground
As-Built Plan
Maximum Capacity

95+00

Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground

As-Built Plan

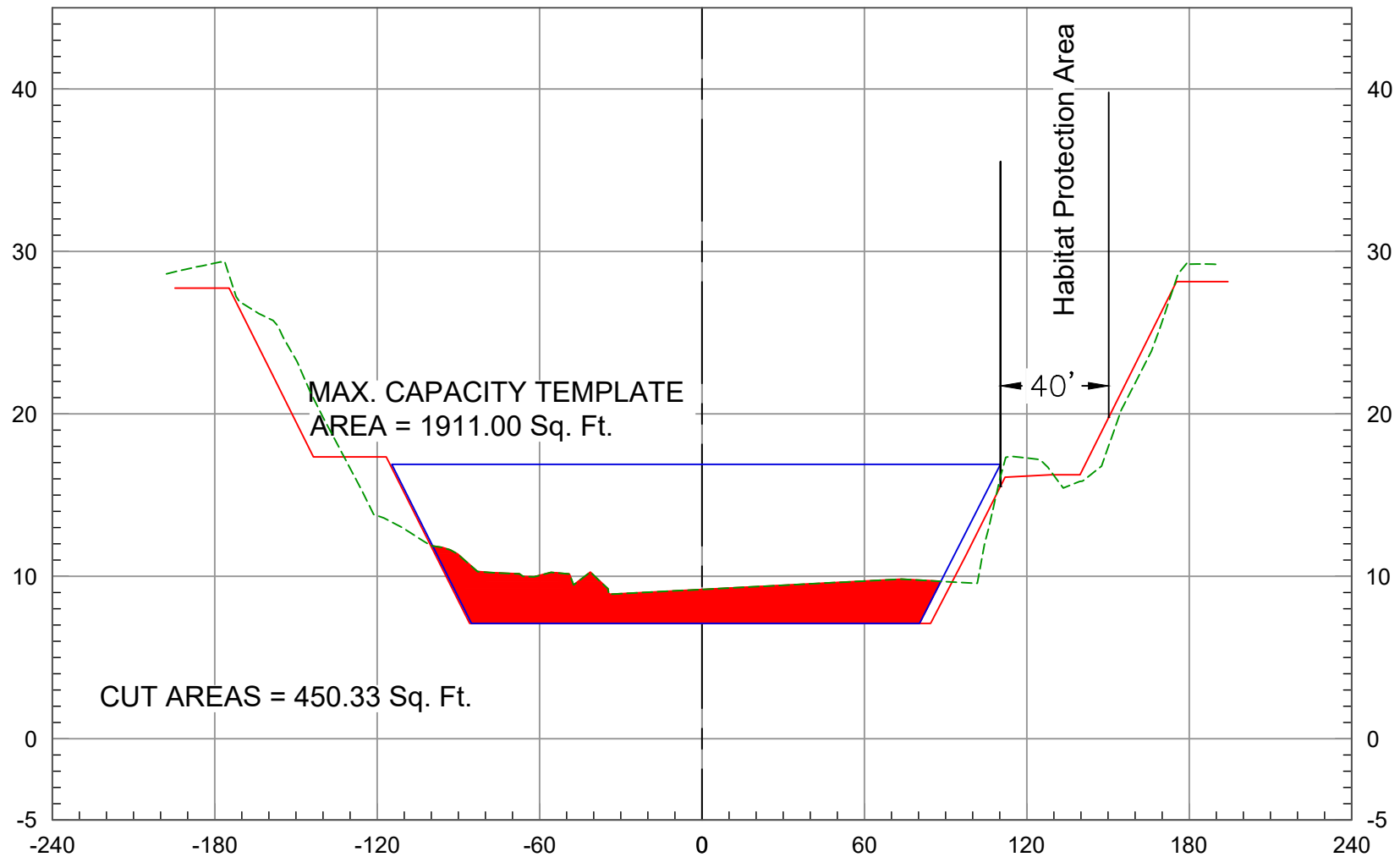
Maximum Capacity

96+00

Vert. Scale: 1" = 10'

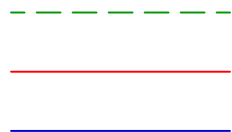
Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan

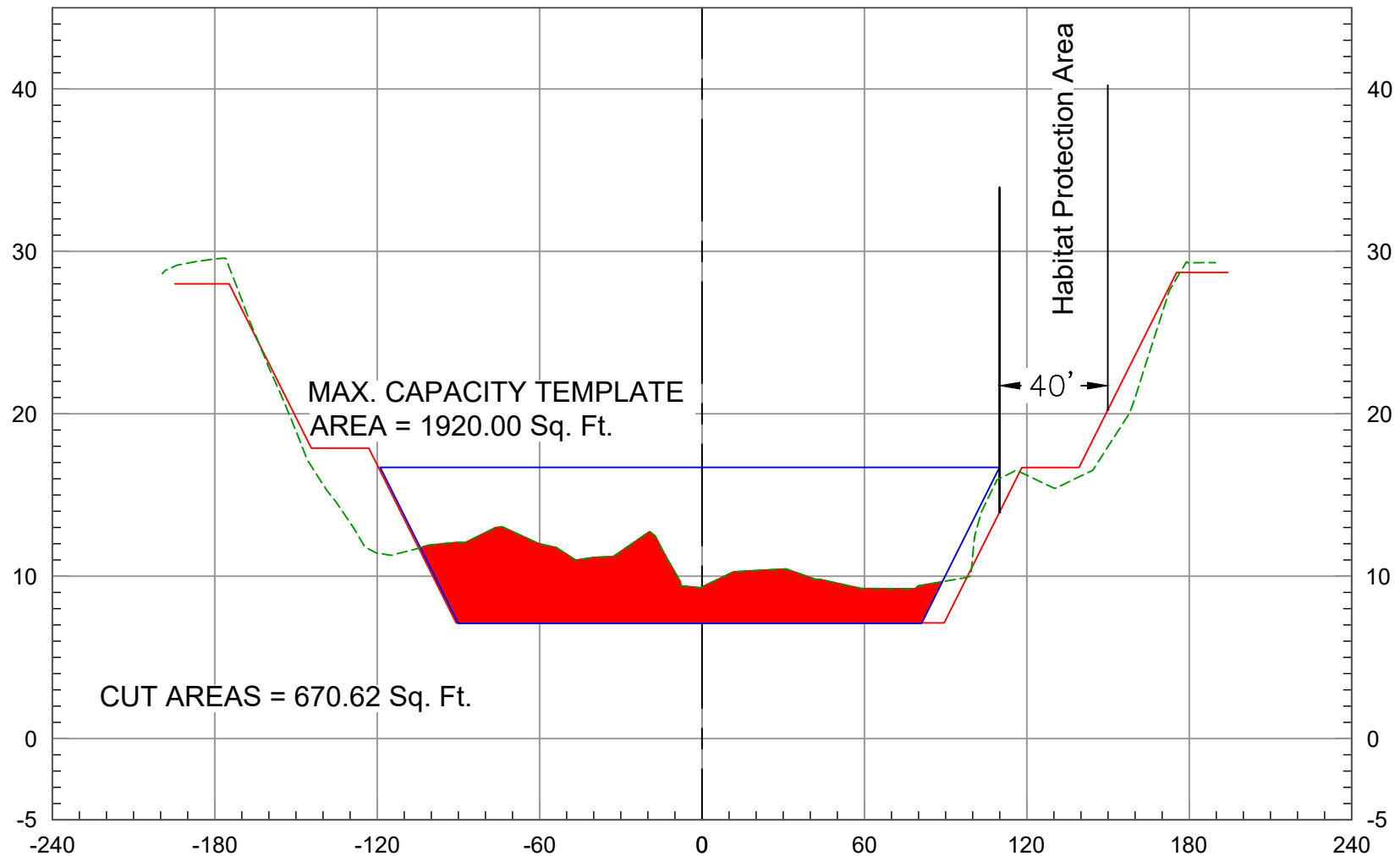
Maximum Capacity



97+00

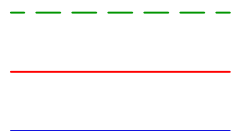
Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'

SAN DIEGO CREEK (F05) BASIN 2 - 2023 SCOURS CL



2023 Ground
As-Built Plan

Maximum Capacity



98+00

Vert. Scale: 1" = 10'
Horiz. Scale: 1" = 60'