

Parks & Recreation Committee Board of Representatives 3/20/2018



**REVIEW; PROPOSED COVE ISLAND MARINA
AND CUMMINGS MARINA DREDGING**

**PRESENTED BY
ENGINEERING BUREAU**

Dredging Start Date

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Dredging start date is dependent on 3 major components

- 1) Completing project design
- 2) Obtaining permits to undertake the work
- 3) Having funds to bid and award the works

Cove Island

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Cove Island – Work completed

- Developed preliminary dredge plan. Dredge -6' MLW (+1' over dredge = 29,296 cy.)
- Collected and tested dredge sediment for disposal and/or re-use
- Conducted engineering evaluation of floating dock and piles
- Prepared engineering cost estimates

Cove Island – Work to be completed

- Obtain permits (need 6-12 months from 3/8/18) dictates disposal location which drives cost
- Obtain funds to undertake construction (dredging, pile driving and dock work)

Cove Island – Work Constraint

- In water work, only permitted between Oct & Feb
- *If funds are in place, earliest work can begin is Fall 2019*

Aerial Map – Cove Island Marina

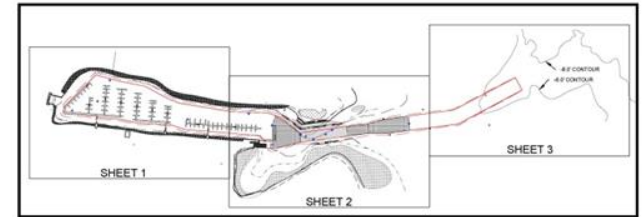


Preliminary Dredge Plan- Cove

29,296 cy of material to be dredged

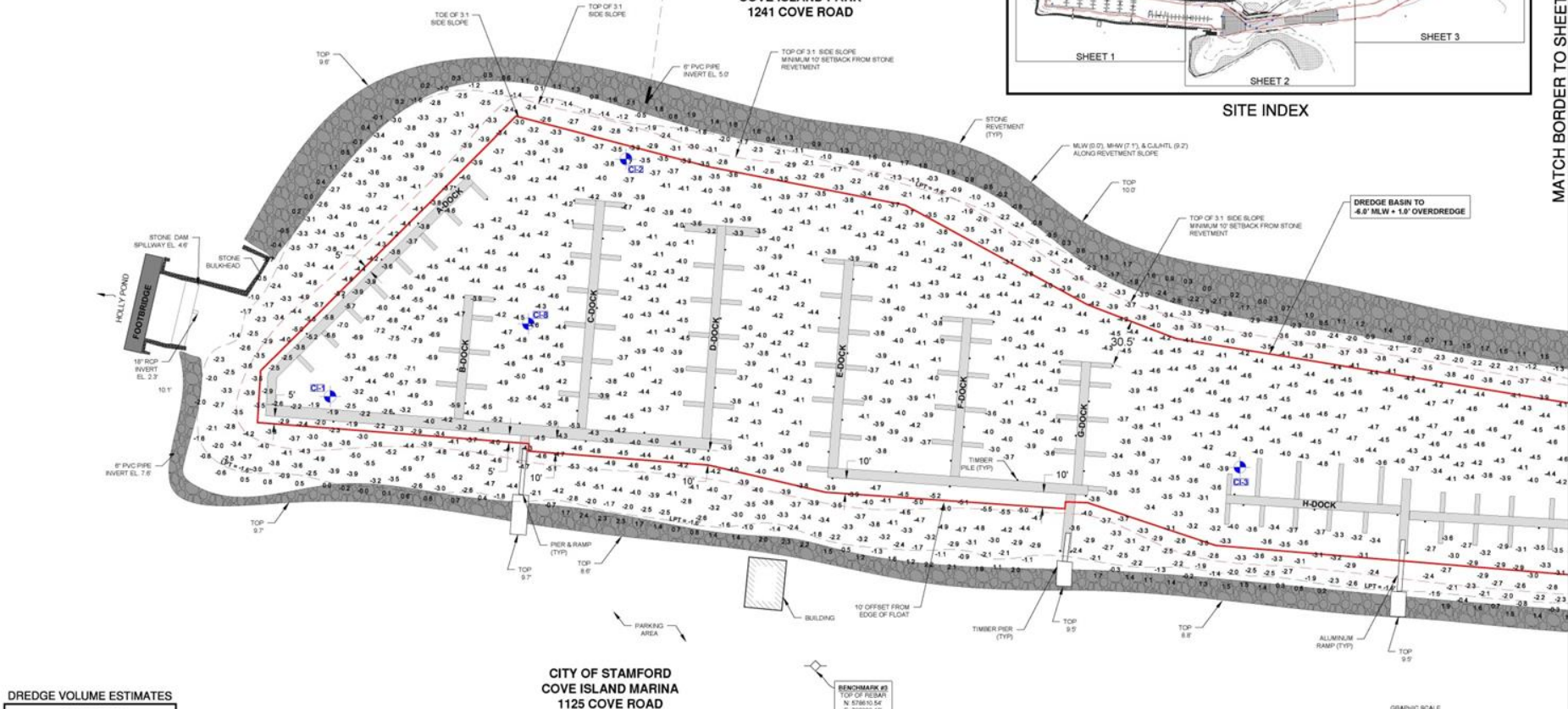
CT STATE PLANE COORDINATE
SYSTEM (NAD 83)

CITY OF STAMFORD
COVE ISLAND PARK
1241 COVE ROAD



SITE INDEX

MATCH BORDER TO SHEET 2 OF 3



CITY OF STAMFORD
COVE ISLAND MARINA
1125 COVE ROAD

BENCHMARK #3
TOP OF PILE
N 578610.54
E 796008.15
EL. 7.59 NAVD83
EL. 11.20 MLW
SEE NOTE 6



DREDGE VOLUME ESTIMATES

BASIN FOOTPRINT
CONTROL DEPTH (4.0') = 10,609.2 CUBIC YARDS
SIDE SLOPE = 995.0 CUBIC YARDS
+10' OVERDREDGE = 7,384.5 CUBIC YARDS
TOTAL = 18,609.7 CUBIC YARDS

57' CHANNEL FOOTPRINT
CONTROL DEPTH (4.0') = 2,662.3 CUBIC YARDS
SIDE SLOPE = 147.4 CUBIC YARDS
+10' OVERDREDGE = 1,346.6 CUBIC YARDS
TOTAL = 4,261.8 CUBIC YARDS

75' CHANNEL FOOTPRINT
CONTROL DEPTH (4.0') = 1,324.3 CUBIC YARDS
SIDE SLOPE = 147.4 CUBIC YARDS
+10' OVERDREDGE = 2,662.3 CUBIC YARDS
TOTAL = 4,144.0 CUBIC YARDS

PROJECT TOTAL = 29,296.7 CUBIC YARDS

SANDY MATERIAL - NEARSHORE OR UPLAND
DISPOSAL = 5,316.6 CUBIC YARDS
OPEN WATER DISPOSAL = 24,079.1 CUBIC YARDS

VOLUME COMPUTATIONS ARE BASED ON JULY 2, 2015 SURVEY DATA AND WERE PERFORMED USING HYDRA VERSION 17.0.0.3, TIN MODEL.

REFERENCE MADE TO:
A. TOPOGRAPHIC SURVEY, CITY OF STAMFORD, COVE ISLAND MARINA, 1125 COVE ROAD, STAMFORD, CONNECTICUT, DATED JULY 31, 2015 & REVISED 06/30/15, SCALE 1" = 50' AND PREPARED BY JAMES E. NADLE, L.S.

B. HYDROGRAPHIC SURVEY, CITY OF STAMFORD, COVE ISLAND MARINA, 1125 COVE ROAD, STAMFORD, CONNECTICUT, SHEETS 1 - 3 OF 3, DATED JULY 2, 2015, SCALE 1" = 30' AND PREPARED BY COASTLINE CONSULTING & DEVELOPMENT, LLC.

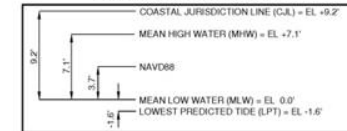
SOUNDING

NOTE: MEASURING POINT FOR INDIVIDUAL SOUNDINGS IS LOCATED AT THE DECIMAL POINT

LEGEND

MLW = MEAN LOW WATER
MHW = MEAN HIGH WATER
C.L. = COASTAL JURISDICTION LINE
M.T.L. = MEAN TIDE LINE
LPT = LOWEST PREDICTED TIDE
SPT = SPOT ELEVATION
RCP = REINFORCED CONCRETE PIPE
TYP = TYPICAL

TIDAL DATUM PLANE



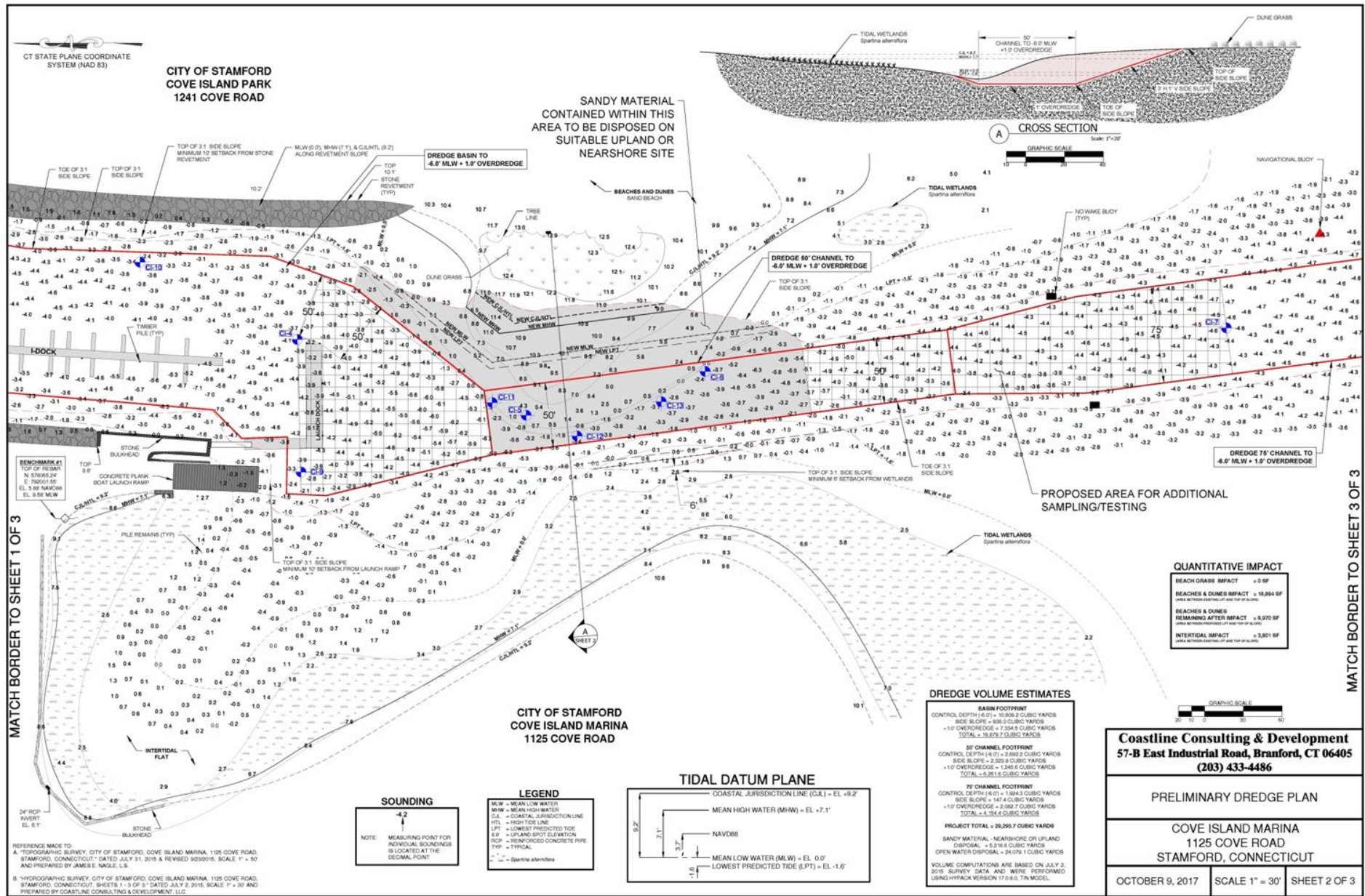
Coastline Consulting & Development
57-B East Industrial Road, Branford, CT 06405
(203) 433-4486

PRELIMINARY DREDGE PLAN

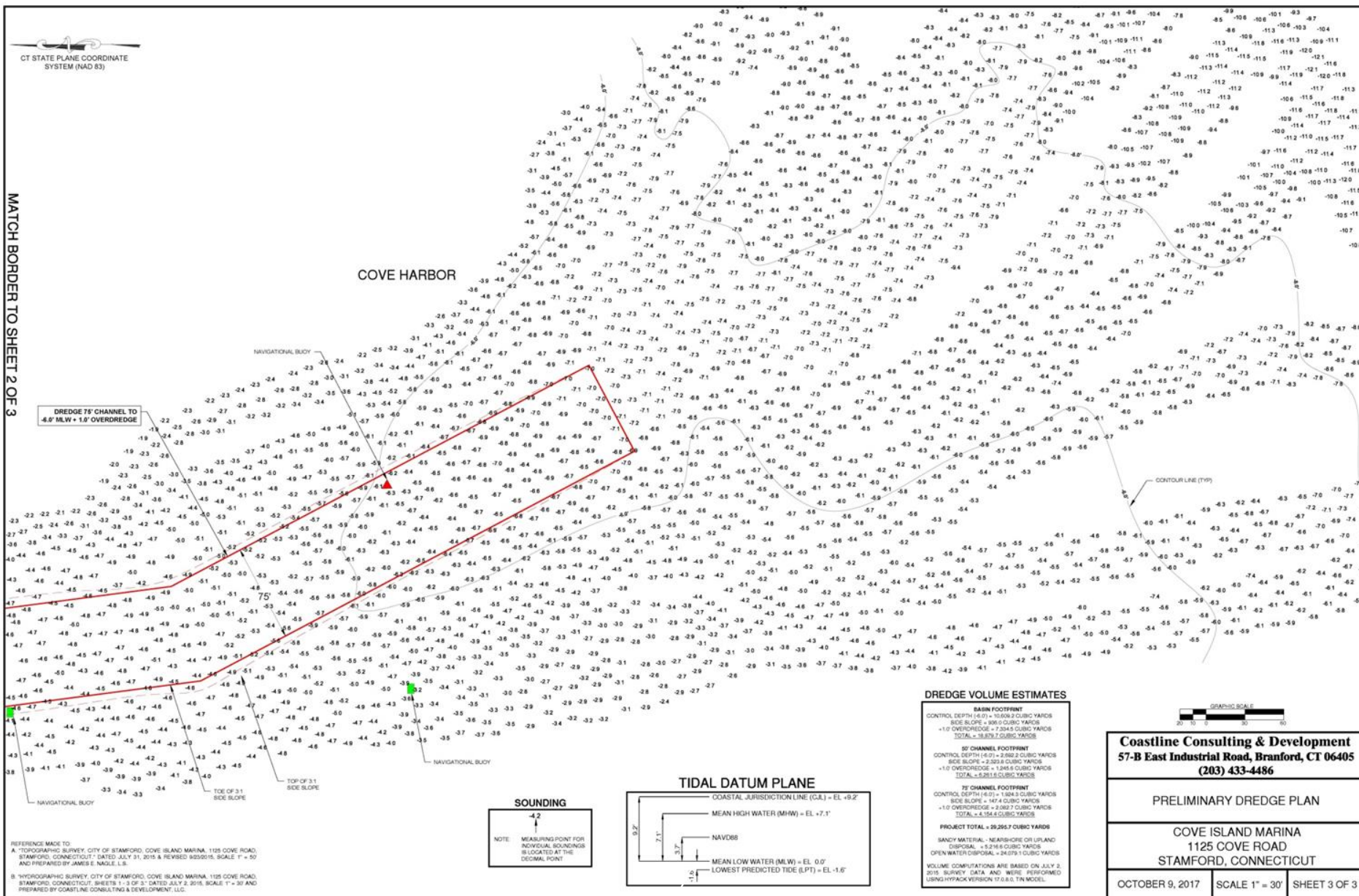
COVE ISLAND MARINA
1125 COVE ROAD
STAMFORD, CONNECTICUT

OCTOBER 9, 2017 SCALE 1" = 30' SHEET 1 OF 3

Preliminary Dredge Plan - Cove



MATCH BORDER TO SHEET 2 OF 3



Opinion Of Probable Construction Costs

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The opinion of probable *preliminary* construction costs (OPC) for the City of Stamford – Cove Island Marina dredging and pile replacement project was prepared from preliminary dredging plans prepared by Coastline Consulting & Development, LLC (Coastline), and the Floating Dock Anchor Pile Evaluation performed by Pennmax Consulting Engineers, PC.

Professional Services

Professional Services (per contract)	\$25,760
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Float Anchor Piles

Timber, 795 piles (per Pile Evaluation, Table 2, E2)	\$1,430,000
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Steel, 88 piles (per Pile Evaluation, Table 2, E2)	\$1,840,000
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Dredging & Disposal

Dredging with Beneficial Reuse (5,217 CY sandy material) & Disposal at Western Long Island Sound (24,079 CY silty material)	\$1,130,000
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Dredging with Beneficial Reuse (5,217 CY sandy material) & Disposal at Central Long Island Sound (24,079 CY silty material)	\$1,500,000
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Dredging with Beneficial Reuse (5,217 CY sandy material) & Upland Disposal/Treatment (24,079 CY silty material)	\$5,320,000
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Cummings Marina Basin

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Cummings – Work completed

- Developed preliminary dredge plan for marina basin. Dredge -4' MLW (580 cy.), +1' over dredge (1,170 cy.)
- Developed preliminary dredge plan for federal channel (dredge by others)
- Collected and tested dredge sediment for disposal and/or re-use
- Conducted engineering for new marina floating dock and piles
- Prepared engineering cost estimates
- Obtained DEEP Permit, COP maintenance dredge on 11/22/16 (valid for 3 years w/ 1 yr. ext.)

Cummings– Work to be completed

- Obtain ACOE permit
- Obtain funds to undertake construction (dredging, pile driving and dock work). Est. dredging cost \$200,000 (does not include channel dredge or new marina)

Cummings – Work Constraint

- In water work, only permitted between Oct & Feb
- *If funds are in place, earliest work can begin is Winter 18/19 (assuming DEEP and ACOE approve same dump site)*

Aerial Map – Cummings Marina



Preliminary Dredge Plan - Cummings

