Town of Greenwich  
Harbor Management Commission  
Meeting  
November 14, 2018  
6:00 P.M.  
Cone Room, Town Hall  
Minutes

Members in attendance:

Bruce Angiolillo            Chairman  
Lile Gibbons                Vice Chairman  
Bill Ingraham               
Frank Mazza                 

Absent:

Bernard Armstrong  
Don Carlson                
Mike Van Oss               Secretary

Alternates:

Casey McKee  
David Noble

Ex-Officio Members in Attendance:

Sue Baker                                    Conservation Commission  
Joseph Benoit                                 RTM  
Brian Kerzner                                  Department of Parks & Recreation  
Ian MacMillan                                 Harbormaster  
John Toner                                    Board of Selectmen

Absent:

Roger Bowgen                                Shellfish Commission  
Katie DeLuca                                  Planning & Zoning Commission  
Rick Loh                                      Board of Parks & Recreation  
Michael O’Connor                             Police Department
1. Meeting called to order at 6:04 P.M. by Chairman Bruce Angiolillo

In the absence of Bernie Armstrong, Don Carlson and Mike Van Oss, Chairman Angiolillo seated Casey McKee and David Noble.

2. Approval of Minutes of the October 10, 2018 Special Meeting and October 17, 2018 Regular Meeting

Separate motions to approve the Minutes of the October 10, 2018 Special Meeting and the October 17, 2018 Regular Meeting by Lile Gibbons, seconded by Casey McKee. Motions carried (Unanimous).

3. Chairman’s Report

Chairman Angiolillo reported that he met with Jim Michel and his project team at DPW on October 29, 2018 to review plans for the rehabilitation of the Davis Avenue bridge in Bruce Park and the construction of a separate pedestrian bridge north of the existing roadway. Mr. Angiolillo stated that Jason Kaufman of DPW will address the Commission at tonight’s meeting on the proposed pedestrian bridge.

Chairman Angiolillo reported that, he, together with Frank Mazza and Lile Gibbons met with BET Chair Jill Oberlander and BET Member Mike Mason on November 5, 2018 to discuss long range capital planning.

He also reported that Katie DeLuca of Planning and Zoning has advised that the most recent draft (“Updated October 2018”) of the proposed changes to the WB zoning regulations will be on the agenda for the November 20 Planning and Zoning Commission meeting.

4. Greenwich Harbor Dredge Project

Frank Mazza reported that RACE Engineering had completed its “Dredged Material Relocation Feasibility Assessment” (Draft: October 26, 2018) and that copies had been distributed to the Commission in advance of tonight’s meeting. He summarized the study’s central conclusion, namely, that under various federal channel dredge depth scenarios there is sufficient area between the existing waterfront boundary of Rodger S. Baldwin Park and the federal channel/anchorage to accept the estimated quantities of “unsuitable” for open water disposal material. Mr. Mazza underscored that the ex-
pansion of the Park would be a Town sponsored project and not one that would be under the jurisdiction or leadership of the Harbor Management Commission. He noted that the RACE study had been forwarded to the Board of Selectmen and the Department of Parks and Recreation. He also emphasized that such a project would be subject to an uncertain, lengthy and complex regulatory process, and would require a substantial funding commitment from the Town, as it was unlikely that either the State or federal governments would contribute any funds beyond those required for the actual dredging activities.

Mr. Mazza then introduced Steve Sternberg of RACE, who walked the Commission through the study, confirming that “in concept” the reuse of dredge material to expand the footprint of Roger S. Baldwin Park is feasible. As part of his presentation, Mr. Sternberg reviewed RACE’s opinion of probable costs under the various scenarios. He answered questions posed by Commission Members and from the audience.

At the conclusion of the presentation and discussion, Chairman Angiolillo asked for a show of hands from all in attendance as to whether they thought sufficient public support could be mustered to undertake a project to expand the Park. A large majority of those present raised their hands in support of such a project. Sue Baker, Ex-Officio Member (Conservation Commission), observed that it should be anticipated that there will be members of the public who will have an automatic, negative reaction to any plan that involves the utilization of material that is considered contaminated in any way, no matter what remediation steps are employed.

A copy of the RACE study is attached to the Minutes.

5. Finance Committee Report

Frank Mazza reported that a meeting of the Finance Committee will be noticed for December 5, 2018 for the purpose of preparing the budget for the 2019-2020 fiscal year, which will begin on July 1, 2019. He again encouraged everyone to send him suggestions for next year’s budget.

6. Mooring Committee Report

Bill Ingraham and Casey McKee updated the Commission on the work of the Mooring Committee at the close of the boating season. Fee revenue totaled approximately $47,000 in 2018. There were 638 mooring registrations this year, which included 52 new registrations. They reported that the Committee had completed a review of past registrations stretching back many years and had produced a list of names and addresses for 230 individuals who at
one time in the past had had a mooring in the GHA. They reported that letters and emails will be sent shortly to those on that list to inquire whether they still have a mooring and, if so, to get them registered. Bill Ingraham reported that the Committee had completed its on-water survey of unregistered moorings in Greenwich Cove and 15 moorings have been tagged with orange balls. Casey McKee reported that the Committee is on track to send out mooring renewal letters to existing mooring holders in the first week of January 2019, which will be much earlier than last year. Chairman Angiolillo reconfirmed that the annual $75 fee will remain unchanged for 2019.

7. Application Review Committee

A copy of the monthly Application Review Committee report submitted by Bernie Armstrong is attached to the Minutes.

Chairman Angiolillo introduced Jason Kaufman from the Department of Public Works, who outlined for the Commission DPW’s two phase plan to rebuild the Davis Street Bridge in Bruce Park. A copy of Mr. Kaufman’s letter, dated November 6, 2018, to the Commission is attached to the Minutes. Mr. Kaufman explained that the first phase of the project will be to construct a pedestrian bridge across Indian Harbor, north of the existing Davis Avenue vehicular bridge. The pedestrian bridge is proposed as a clear span across Indian Harbor with concrete abutments on the embankments on either side of the pond. If permitted, it is scheduled for construction during the spring or summer of 2019. The vehicular bridge will be permitted separately and is anticipated to go to construction during the summer of 2020. He explained that DPW has been requested by DEEP to submit the proposed pedestrian bridge project to the Harbor Management Commission for review.

Mr. Kaufman addressed and answered questions from the Commission and the audience. Chairman Angiolillo, after determining that Commission Members believed that they had sufficient information to express a view on the pedestrian bridge proposal, requested that the Commission authorize him, as Chairman, to execute and submit the Harbor Management Commission DEEP Permit Consultation Form and indicate thereon the Commission’s finding that the pedestrian bridge project as proposed by DPW is consistent with the Harbor Management Plan for the Town of Greenwich. Said motion made by Lile Gibbons, seconded by Frank Mazza. Motion carried (Unanimous).
8. **Long Range Planning Committee Report**

No report.

9. **Harbormaster Liaison Report**

Bill Ingraham reported little activity during the last month and nothing to report.

10. **Unfinished Business**

(i) **Update on Speed Restriction buoys for Great Captain's Island.** Bill Ingraham reported on the progress being made with the help and participation of Brian Kerzner and Geoff Steadman to obtain the necessary approvals and permit from DEEP to install two speed restriction markers at each end of the so-called “short cut”. Mr. Ingraham noted that the burden is on the Town to prove a need for these buoys. He also reported that once permitted and deployed, the Department of Parks and Recreation has agreed to maintain them at its expense. Mr. Ingraham stated that he believes the work is on track to have these markers in place by the start of the 2019 boating season.

(ii) **Continuation of discussion and Commission consideration of proposed revisions to Waterfront Business Zone.** Chairman Angiolillo invited Commission Members to share their individual views on whether they believed the latest version of the proposed revisions to the WB Zoning regulations is consistent with the Harbor Management Plan, which, he noted, is the question that the Plan obliges the Commission answer. Frank Mazzara stated that the proposed revisions “don’t do any favors to the WB Zone” and he reiterated that the proposed deletion of the following language in Sec. 6-107(a)(4) would undermine the WB Zone: “and to assure that these limited waterfront areas are reserved for the uses they are uniquely suited for and are not pre-empted by uses which can be more appropriately located elsewhere.” He also noted that the proposed language in Sec. 6-107(c)(11)(g) fails to provide for dedicated parking for slip holders, which effectively makes them undesirable. Lile Gibbons stated that the Commission’s role is not to be “estate planners” for waterfront property owners, but to honor the policies of the Harbor Management Plan. She said she did not support the proposed WB Zone changes and remains “concerned about the dilution” of the WB Zone. Casey McKee underscored “the amount of time the went into the Plan” and in the building of a Town-wide consensus for it. He stated it would not be “prudent” to support proposed zoning changes that are inconsistent with the Plan. Bill Ingraham stated that the Harbor Management
Plan is “the Bible to go by here”, but said he would not rule out “making changes to the WB Zone”. However, he viewed these to be “too drastic”. David Noble stated that “as a conservative guy by nature”, he is concerned about making changes that once done, “can’t be put back in the box.” Chairman Angiolillo stated that there appeared to be a consensus among the Commission Members. Mr. Angiolillo then invited a motion to be made authorizing him, as Chairman, to prepare and submit a letter memorandum to the Planning and Zoning Commission expressing the HMC’s specific concerns about the proposed changes to the WB Zoning regulations and the HMC’s finding that said proposed changes are inconsistent with the Harbor Management Plan for the Town of Greenwich. Said motion made by Lile Gibbons, seconded by Casey McKee. Motion carried (Unanimous).

11. New Business

(i) Discussion of proposed Kelp farm. David Noble reported that Mr. Steve Timchak, the applicant, had furnished him with a written outline of his proposed project. Mr. Noble provided a summary of the project and Mr. Timchak addressed and answered questions from Commission Members and the audience. Chairman Angiolillo reminded the Commission that DEEP has asked for the HMC’s view on this project as part of its permitting process. After discussion, Mr. Angiolillo stated that the Commission would plan on taking action on this matter at its December meeting and asked Mr. Timchak to consider adding to his proposal a commitment to obtain appropriate insurance coverage and an undertaking to remove all tackle during the active recreational boating season and in the event he ever discontinued operations. Mr. Angiolillo also indicated that Mr. Timchak was authorized to tell DEEP that as of this time the Commission appears favorably disposed towards his project.

A copy of Mr. Timchak’s written outline, dated November 5, 2018 is attached to the Minutes.

12. Public Comment

None.
12. Adjournment

Motion to adjourn made by Frank Mazza, seconded by Casey McKee. Motion carried (Unanimous).

Meeting adjourned at 7:48 P.M

[Signatures]

Bruce Angiolillo
Chairman

Mike Van Oss
Secretary

Penny Monahan assisted the Secretary in the preparation of these minutes.
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APPENDICES:

Appendix A – US Army Corps of Engineers Condition Survey – September 2015

Appendix B – Concept Dredged Material Placement Plans
1. INTRODUCTION

RACE COASTAL ENGINEERING ("RACE"), at the request of the Town of Greenwich, Harbor Management Commission (HMC), conducted a limited scope, feasibility assessment on the potential to relocate dredged material from the Greenwich Harbor Federal Navigation Project (FNP) that was deemed unsuitable for relocation to an open-water site in Long Island Sound (LIS), to Roger S. Baldwin Park, located at the head of the FNP. More specifically, the purpose of this assessment was to determine a high-level, conceptual dredged material relocation alternative for the park, including concepts sketches, and associated Opinion of Probable Costs (OPCs) for implementation. It is understood that this feasibility review is part of an overall dredged material relocation alternatives analysis as required for dredging of the FNP. In presenting the conceptual alternatives within this assessment, RACE does not imply or assure approval of the work by the State and Federal regulatory agencies preceding over their implementation. Furthermore, RACE did not review sediment chemistry data pertaining to the dredged material in preparation of this assessment and any alternative shown should be considered conceptual, based on common engineering practice.

2. GREENWICH HARBOR FEDERAL NAVIGATION PROJECT

The existing Greenwich Harbor Federal Navigation Project (FNP) includes an approximate 1.35-mile-long by 100' to 140' wide navigation channel, and two federal anchorages of approximately 19.5 and 9.8 acres each. The channel is authorized to a depth of 12' below local Mean Lower Low Water datum (MLLW) while the anchorages are authorized to depths of 8' and 6' below MLLW.

The channel provides access to multiple boat and yacht clubs, as well as Town, commercial, and condominium association marinas. The Town of Greenwich also operates ferry services to the outer Greenwich Islands through ferry landings at Roger S. Baldwin Park at the head of the channel, while the anchorages provide “safe-harbor” for local and visiting boaters transiting the area.

The most recent hydrographic survey of the FNP was conducted by the US Army Corps of Engineers (USACE) in September 2015. This survey indicated that depths in the 12′ MLLW channel vary from approximately 7.0′ to 8.2′ below MLLW, while depths in the 8′ MLLW anchorage are approximately 3.9′ to 4.4′ below MLLW, and depths in the 6′ MLLW anchorage are approximately 3.8′ below MLLW but shoal up as shallow as 0′ below MLLW. The results of this survey are provided in Appendix A of this assessment.

Based on correspondence between the HMC and USACE, it is understood that approximately 120,000 CY of in-situ material would need to be dredged in order to restore the channel to is authorized 12′ MLLW depth, while an additional 155,000 CY would be required to restore both of the anchorages to their respective depths. These volumes include a 1′ dredging overdepth allowance. In regards to the channel, it has been noted that approximately 60,000 CY of the material required to be dredged is unsuitable for relocation to either of the open-water disposal sites in Long Island Sound (Western or Central), while the remaining 60,000 CY could be relocated to one or both of these sites. The 60,000 CY of suitable material along with an additional 16,000 CY of unsuitable material, resulting in approximately 76,000 CY, is understood to be present in the outer channel area, from the entrance to the northern end of the Indian Harbor Yacht Club (IHYC).

In an effort to reduce the amount of unsuitable dredged material generated from the project, the HMC reviewed alternative dredging depths of 11′, 10′ and 9′ from just north of IHYC to the head of the
channel. The resulting dredge volumes were as follows, all of which is considered unsuitable for relocation to an open-water disposal site.

**TABLE 1: MODIFIED DREDGE DEPTH vs DREDGE VOLUME (NORTH OF IHYC)**

<table>
<thead>
<tr>
<th>Dredge Depth (MLLW)</th>
<th>Volume North of IHYC to Head of Channel (CY, Unsuitable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11' + 1' Overdepth</td>
<td>25,000</td>
</tr>
<tr>
<td>10' + 1' Overdepth</td>
<td>16,000</td>
</tr>
<tr>
<td>9' + 1' Overdepth</td>
<td>9,000</td>
</tr>
</tbody>
</table>

Combining each of the alternative dredge depth volumes north of IHYC, with the unsuitable volume south of IHYC, would result in the following total unsuitable volumes for a modified project.

**TABLE 2: MODIFIED DREDGE DEPTH vs TOTAL DREDGE VOLUME**

<table>
<thead>
<tr>
<th>Dredge Depth (MLLW)</th>
<th>Volume North (CY, Unsuitable)</th>
<th>Volume South (CY, Unsuitable)</th>
<th>Total Volume (CY, Unsuitable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11' + 1' Overdepth</td>
<td>25,000</td>
<td>16,000</td>
<td>41,000</td>
</tr>
<tr>
<td>10' + 1' Overdepth</td>
<td>16,000</td>
<td>16,000</td>
<td>32,000</td>
</tr>
<tr>
<td>9' + 1' Overdepth</td>
<td>9,000</td>
<td>16,000</td>
<td>25,000</td>
</tr>
</tbody>
</table>

3. **ROGER S. BALDWIN PARK RELOCATION ALTERNATIVE**

It is understood that the HMC is interested in exploring the alternative of placing the unsuitable dredged material from the channel, in a confined disposal facility (CDF) to be constructed as Roger S. Baldwin Park (RSBP). RSBP is an approximate 7-acre Town park located at the head of the federal channel. The park is home to maintenance and operations facilities for the parks and recreation department, marine division of the police department, and teen community center. The park also contains open-space recreational areas, skate park, and dock access to the Town operated ferry services to the outer Greenwich Islands. The shoreline of the Site is characterized by shoreline flood and erosion control structures including stone seawalls and revetments. An aerial overview of the subject site is provided in Appendix B.

The CDF concept for the park is envisioned as steel-sheet-piling (SSP) bulkhead design, where SSP would be installed around the seaward perimeter of the park, and dredged material placed behind it. The material would likely need to be contained within a geosynthetic lining, and topped with appropriate cap to sequester and isolate it from the aquatic environment. A means to control effluent releases during filing and for the long-term would need to be established. A direct interchange between the CDF and the surrounding tidal waters would likely need to be restricted. RACE prepared conceptual plans of the SSP bulkhead concept, for each of the alternative dredge depths. The approximate maximum bulkhead build-outs from existing shoreline at the Park, have been shown in Appendix B, and summarized in the table below:
TABLE 3: MODIFIED DREDGE DEPTH vs MAXIMUM SHORELINE BUILD-OUT

<table>
<thead>
<tr>
<th>Dredge Depth (MLLW)</th>
<th>Total Volume (CY, Unsuitable)</th>
<th>Max. Build-Out from Existing Shoreline</th>
</tr>
</thead>
<tbody>
<tr>
<td>11' + 1' Overdepth</td>
<td>41,000</td>
<td>±140'</td>
</tr>
<tr>
<td>10' + 1' Overdepth</td>
<td>32,000</td>
<td>±120'</td>
</tr>
<tr>
<td>9' + 1' Overdepth</td>
<td>25,000</td>
<td>±105'</td>
</tr>
</tbody>
</table>

It should be noted that the bulkhead alignments were conceptualized so as to stay out of the existing FNP, and where possible, out of the buffer zone (3 x the FNP depth). The build-outs shown are based on in-situ dredge volume and do not account for potential bulking of dredge material following placement, or soil amending as may be required. A 3’ layer of capping material was additionally conceptualized, and has been accounted for in the volume capacity of the build-outs. A review of geotechnical and/or geochemical data as required for a final design of such structures was not performed in preparation of the concepts. Furthermore, a review of hydrological effects including wave reflection or harbor resonance was not performed.

4. REGULATORY & ENVIRONMENTAL CONSIDERATIONS

The implementation of any of the conceptualized plans will require significant planning with and approval from the Federal, State and Local regulatory agencies including USACE, Connecticut Department of Energy & Environmental Protection (DEEP), and Town of Greenwich Planning and Zoning department. It is likely that an Environmental Impact Statement (EIS), will be required to conduct the work. This EIS would specifically review potential impacts to coastal resources including but not limited to, benthic habitat, intertidal habitat, rocky shorefront, tidal wetlands, etc. that would likely be affected by the work. Due to the potential for impacts to these resources, any approval would likely require significant coastal resource mitigation. RACE cannot imply or assure approval by the Federal, State, and Local regulatory agencies for any of the concepts noted.

It is important to note that RACE did not review any sediment chemistry data pertaining to the dredged material in preparation of this assessment, but it has been assumed that the dredged material, once ashore, would need to be adequately contained, capped, and sequestered from future disturbance. Alternatively, the material would need to be remediated to meet the Direct Exposure and Pollutant Mobility Criteria set forth in the State of Connecticut, Remediation Standard Regulations. Material not meeting these standards, would require that an Engineered Control (EC) be established, or a permanent structure designed to isolate the pollutants, requiring long-term inspection, maintenance, and monitoring, including ground-water monitoring. The implementation of the EC would additionally require that an Environmental Land Use Restriction (ELUR) be filed on land records with the Town of Greenwich to ensure that the future use of the Site could not go forth in a manner that might disturb the EC or dredged material. Any such soil remediation or EC construction, should be overseen by a Licensed Environmental Professional (LEP).
5. OPINION OF PROBABLE COSTS

The costs associated with a project of this type and magnitude, would typically be divided into 2 main categories:

- Professional Services
- Construction Costs

The professional services associated with this work would include those services associated with planning, engineering, and regulatory permitting. Such services would include but not be limited to; architectural and engineering design, site planning, geotechnical explorations and testing, coordination with Federal, State, and Local regulatory agencies including application preparation, biological resource studies, coastal resource mitigation plan development, environmental monitoring, and engineering services during construction, etc. Construction costs would include the hard costs associated with the actual construction work. For the purpose of this OPC development, fees for professional services have been taken as 10% of the estimated construction costs.

RACE offers the following summary of anticipated costs associated with each of these items. It’s noted that these costs are based on a high-level, conceptual plans that represents an approximate 10% design level. As such, appropriate design contingencies have been incorporated into the pricing, and should be considered no more than a Rough Order of Magnitude (ROM) cost for the work.

The Opinion of Probable Costs (OPCs) for work in this Section are made by RACE on the basis of professional judgement and experience. In consideration of these OPCs, it is critical to note that RACE has no control over the cost or availability of labor, equipment, materials, market conditions, or the Contractor’s method of pricing. RACE makes no warranty or implies, that any bids or negotiated costs of the work will not vary from the OPC provided. If the client requires greater assurance of estimated construction costs, then the client may consider engaging an independent cost estimator for this service.

<table>
<thead>
<tr>
<th>Dredge Depth (MLLW)</th>
<th>Professional Services</th>
<th>Construction Services</th>
<th>Total ROM Cost (PS + CS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11’ + 1’ Overdepth</td>
<td>$1,240,000</td>
<td>$12,400,000</td>
<td>$13,640,000</td>
</tr>
<tr>
<td>10’ + 1’ Overdepth</td>
<td>$1,120,000</td>
<td>$11,200,000</td>
<td>$12,320,000</td>
</tr>
<tr>
<td>9’ + 1’ Overdepth</td>
<td>$1,000,000</td>
<td>$10,000,000</td>
<td>$11,000,000</td>
</tr>
</tbody>
</table>

6. CONCLUSION

RACE COASTAL ENGINEERING (“RACE”), at the request of the Town of Greenwich, Harbor Management Commission (HMC), conducted a limited scope, feasibility study on the potential to relocate dredged material from the Greenwich Harbor, federal navigation project, to the neighboring Roger S. Baldwin Park. The dredged material relocation facility on the Park was envisioned as a confined disposal facility, comprised of a SSP bulkhead, backfilled and capped with the dredge material...
that was deemed unsuitable for relocation to an open-water site. Three potential (unsuitable) dredged material volumes associated with three modified depths for the upper reaches of Greenwich Harbor FNP were reviewed. These modified depths were 11’, 10’ and 9’ below the plane of MLLW. The material generated from these modified projects were added to the approximate 16,000 CY of unsuitable material found in the lower reaches of the FNP, when taken to the authorized project depth of 12’ below MLLW, plus 1’ of allowable overdepth. The resulting maximum ssp bulkhead build-out distances from existing shoreline, with associated ROM costs were determined from this review, and summarized in the table below.

<table>
<thead>
<tr>
<th>Dredge Depth (MLLW)</th>
<th>Total Volume (CY, Unsuitable)</th>
<th>Max. Build-Out from Existing Shoreline</th>
<th>Total ROM Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>11’ + 1’ Overdepth</td>
<td>41,000</td>
<td>±140’</td>
<td>$13,640,000</td>
</tr>
<tr>
<td>10’ + 1’ Overdepth</td>
<td>32,000</td>
<td>±120’</td>
<td>$12,320,000</td>
</tr>
<tr>
<td>9’ + 1’ Overdepth</td>
<td>25,000</td>
<td>±105’</td>
<td>$11,000,000</td>
</tr>
</tbody>
</table>

The construction of any CDF at the Roger S. Baldwin park site would require substantial planning and design with professionals familiar with the construction of coastal structures and environmental remediation. Significant coordination with Federal, State, and local regulatory agencies would need to be at the forefront of any further development of these alternatives. As noted, coastal resource mitigation would likely be required as a condition of any such approval from the governing regulatory bodies. Due to the current use of the park as an open-space recreational area, public involvement early in the design phase would be recommended.
APPENDIX A
US Army Corps of Engineers Condition Survey
September 2015
REPORT OF CHANNEL CONDITIONS
100 TO 400 FEET WIDE
(ER 1130-2-520)

DATE: October 19, 2015

TO: NAVIGATION INTEREST
FROM:

RIVER/HARBOR NAME AND STATE: Greenwich Harbor, Greenwich, Connecticut
Dwg. No. GRW-301, Sheets 1-3 of 3, Dated 19 October 2015

NAME OF CHANNEL | DATE OF SURVEY | WIDTH (feet) | LENGTH (nautical miles) | MLLW DEPTH (feet) | LEFT OUTSIDE QUARTER (feet) | MIDDLE HALF (feet) | RIGHT OUTSIDE QUARTER (feet)
--- | --- | --- | --- | --- | --- | --- | ---
12-Foot Channel
From about 240' seaward of Buoy RN-2 upstream about 3,270' to Buoy RN-6
9/15 | 130 | .54 | 12.0 | 8.0 | 8.1 | 8.2
Thence upstream 3,865' to the upstream end of the Federal Navigation Project
9/15 | 130 to 100 to 140 | .64 | 12.0 | (1) | (2) | (3)
8-Foot Anchorage
Northeast Portion
From opposite Grass Island Marina upstream 860' (Eastern 250' width area)
9/15 | | | | | 19.5 acres | 8.0 | (4)
Southeast Portion
From about 360' seaward of Buoy GC-9 upstream 900' to Grass Island Marina (Eastern 250' width area)
| | | | | | | 4.0 Available
Western Portion
From about 210 west of Buoy GC-9 upstream 870' to northwest end of the Federal Navigation Project
| | | | | | | 3.9 Available

GENERAL NOTE: The information shown on this sheet(s) represents the results of surveys made on the dates indicated and can only be considered as indicating the general conditions existing at that time.

FOOT NOTES:
(1). Except for shoaling to 4.3' within 220' of upstream end of Federal Navigation Project.
(2). Except for shoaling to 2.0' within 50' of upstream end of Federal Navigation Project.
(3). Except for shoaling to 3.4' within 80' of upstream end of Federal Navigation Project, and encroachment of a dock and a pile.
(4). Except for shoaling to 2.6' within 30' along northwest limit, and encroachment of numerous docks and piles in the vicinity of northwest limit.
(5). Except for shoaling to 0.2' within 30' of north limit and shoaling to +2.5' within 35' of southwest limit.

NOAA Chart 12367
TO: NAVIGATION INTEREST  

FROM:  

RIVER/HARBOR NAME AND STATE: Greenwich Harbor, Greenwich, Connecticut  
Dwg. No. GRW-301, Sheets 1-3 of 3, Dated 19 October 2015  

NAME OF CHANNEL | CONDITION SURVEY  
--- | ---  
6-Foot Anchorage |  
**Southern Portion**  
From about 270' upstream of Greenwich South Town Dock to northwestern end of Greenwich North Town Dock  
**Northern Portion**  
Thence upstream about 750' to the upstream end of the Federal Navigation Project  

<table>
<thead>
<tr>
<th>DATE</th>
<th>WIDTH (feet)</th>
<th>LENGTH (nautical miles)</th>
<th>MLLW DEPTH (feet)</th>
<th>LEFT OUTSIDE QUARTER (feet)</th>
<th>MIDDLE HALF (feet)</th>
<th>RIGHT Outside Quarter (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/15</td>
<td>9.8 acres</td>
<td>6.0</td>
<td></td>
<td>(6) 3.8 Available</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(7) +0.7 Available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GENERAL NOTE:** The information shown on this sheet(s) represents the results of surveys made on the dates indicated and can only be considered as indicating the general conditions existing at that time.  

**FOOTNOTES:**  
(6). Except for shoaling to 2.7' within 10' of north limit, and encroachment by numerous docks and piles located within the vicinity of south limit.  
(7). Except for shoaling to +1.6' within 10' of western limit.
APPENDIX B
Concept Dredged Material Placements Plans
DREDGE MATERIAL PLACEMENT PLAN

CONCEPT ONLY

PROJECT:
GREENWICH HARBOR DREDGED MATERIAL RELOCATION ALTERNATIVES

APPLICANT:
TOWN OF GREENWICH HARBOR MANAGEMENT COMM. 101 FIELD POINT ROAD GREENWICH, CT 06830

NOT FOR CONSTRUCTION FOR REGULATORY REVIEW ONLY

DRAWN BY: 505
CHECKED BY: DJ5
DATUM: N/A
SCALE: 1" = 200'
DATE: 10/15/2018
REV:

PROJECT #: 2018084 NOT VALID WITHOUT ENGINEER'S SEAL
Application Review Committee Report
11/14/18 HMC Meeting
Bernard Armstrong, Chairman
Casey Mc Kee, Bruce Angilillo
Finished business
None

9 open Items

1. **Marache Dock**  
   Request for public hearing received by DEEP which conducted a Status Meeting including representatives of the HMC in Hartford on May 22, 2018. This was a preliminary meeting to a site visit and pre-hearing conference to be held in Greenwich on August 8, 2018 and a public meeting to be held in Greenwich on September 13, 2018.
   
   6/6/18 received a petition of Intervention by Susan Cohen
   6/13/18 received an Objection to the above petition of Intervention
   6/15/18 received Susan Cohen’s response to the above Objection.
   8/8/18 DEEP and HMC site visit/ and 9/13/18 Public Hearing
   9/24-26 DEEP Major Hearing in Hartford. Steadman and Armstrong attended.
   11/9/18 received DEEP notification that a permit to build dock has been issued
   11/9/18 received Post Hearing memorandum from Bruce Cohen.
   11/9/18 received Post Hearing memorandum from John Casey (attorney for Marache)
   This is all preliminary to the Hearing Officer making his ruling on the matter expected later this month. This can then be appealed to the DEEP Commissioner.

2. **Eversource**  
   The HMC has deferred a review of this request until such time that the Town ‘s petition to revise the Siting Council’s decision is resolved.

3. **WH House LLC**  
   4/16/18 WH House LLC (109 Byram Shore Road) filed a Certification of Permission Application Form proposing to retain unauthorized davit and platform installed
during reconstruction of pier. The HMC noted that the existing, unauthorized work pre-dates the Harbor Management Plan and does not affect coastal resources and therefore the HMC has no objection to the proposal.

4. Oneida Indian Harbor, LLC

5/11/18 Received a Certificate of Permission Application for substantial maintenance of existing waterfront structures, including a pier, gangway, floating dock, and pier foundation at 60 Oneida Drive, Greenwich. This application is consistent with the Harbor Management Plan with the understanding that the existing, unpermitted structures pre-date the Harbor Management Plan and do not have an adverse impact on coastal resources, including shellfish resources. Sent 6/26/18 Draft Certificate of Permission Application letter to DEEP.

5. 7/9/18 Rec’d General Permit Registration Form for 9 Gamecock Rd, Greenwich, CT to install a concrete landing, ramp and float to be reviewed 7/18/18. Shellfish commission reported “no objections” to this application. 8/10/18 BFA sent General Permit Registration to Jeff Caiola (DEEP).

6. 6/8/18 Rec’d Certificate of Permission application by Quatro Partners for 5 Meadow Place to retain and maintain an existing seawall and pier. Committee agreed that application is consistent with the Harbor Management Plan. Pending DEEP approval.

7. 8/2/18 73 Willowmere Circle, Riverside. Received COP application to rebuild a seawall and install a 4/40 dock and stairs. HMC approved on 9/19/18 and sent approval letter to DEEP. Now pending.

8. 9/17/18 57 Willowmere Circle, Riverside. Received a COP application for Seawall and Floating Dock Improvements. Adam Potter applicant. Former owners Joseph and Suzanne Wilcox. HMC approved this application on 10/17/18

9. 10/9/18 Received Registration Form for Establishment of Marina Boundary at Byram Shore Park Marina. Byram. CT. HMC approved this application on 10/17/18

New Business

1 New Item

10/26/18 Draft Roger S. Baldwin Dredged Material Relocation. The size would be between 9000-25,000 cubic yards depending on depth and width considerations.

No other permit actions were received by the HMC affecting the GHA since the October 17th meeting.
November 6, 2018

Bruce Angiolillo, Chairman
Greenwich Harbor Management Commission
Selectman’s Office
101 Field Point Road
Greenwich, CT 06830

Re: Davis Avenue Pedestrian Bridge
Town Project No. 17-16

Dear Mr. Angiolillo,

Thank you for taking the time to meet with us regarding the Department of Public Works’ proposed construction of a pedestrian bridge across Indian Harbor, parallel to the Davis Avenue vehicular bridge. The proposed work is based on recent inspections of the vehicular bridge which determined it is in poor condition. In order to bring the vehicular bridge up to current standards with wider travel lanes, a pedestrian bridge will be constructed to accommodate pedestrians. Please find below a description of the project and list of attachments to this letter:

Project Description

This project consists of the construction of a pedestrian bridge across Indian Harbor, north of the existing Davis Ave vehicular bridge. Once the pedestrian bridge is complete, the vehicular bridge will be replaced. This will allow for widening of the travel lanes to meet current standards. The pedestrian bridge is proposed to support various utilities (electric, gas, and water) to facilitate the removal of the existing vehicular bridge, and support some of these utilities in the future condition.

The pedestrian bridge is proposed as a clear span across Indian Harbor with concrete abutments on the embankments on either side of the pond. The abutments are sited to avoid interference with the existing stone walls on either side of the vehicular bridge, as these walls serve a flood control purpose. The pedestrian bridge will be a steel truss structure with concrete deck. Existing utilities within the area will be protected through construction and relocated as necessary where they are in conflict with the proposed abutments. We do not anticipate a significant impact to the pond or downstream area due to proposed construction activity.

Alfred Benesch and Company has been contracted by the Town to provide design services for the pedestrian bridge. The pedestrian bridge is scheduled for construction during the spring or summer of 2019. This will facilitate the reconstruction of the vehicular bridge soon thereafter. The design for the vehicular bridge phase is ongoing. The vehicular bridge will be permitted separately and is anticipated to go to construction during the summer of 2020.
The Department of Public Works and its consultant have been requested by DEEP to submit this information to your Commission for review. Please review along with the attached documents and provide our office with a letter of determination.

Please do not hesitate to contact me at (203) 622-3839 or jkaufman@greenwichct.org with any questions.

Attachments
- Project Location Map
- Project Aerial
- Proposed Plan
- Attachment E: Harbor Management Commission DEEP Permit Consultation Form

Sincerely,

Jason Kaufman, P.E.
Senior Civil Engineer

cc: J. Michel (Greenwich DPW)
    S. Drechsler (Benesch)
    File 17-16
APPROXIMATE LOCATION OF PROPOSED PEDESTRIAN BRIDGE
PHASE 1 - PEDESTRIAN BRIDGE
(ONLY PORTION OF WORK TO BE CONSIDERED FOR THIS PERMIT)

REPLACEMENT OF BRIDGE #05012
DAVIS MILL POND
INDIAN HARBOR

PROPOSED PLAN
SCALE: 1" = 10'-0"
Proposed kelp farm

Dear David

The following is an overview of the proposed kelp farm I discussed at the GHC at the October meeting. The exact location, marked with lat/long for the corners will be sent separate your. It is a 5 acre plot, to the north of L-481. L-481 is leased by shell fisherman Ed Stilwagen. I recently spoke with Ed about my plans and he had no complaints regarding the proposed location. I have also spoken with George and Sandra Weiksner, owners of Wee Captains Island to the west of the proposed plot. They expressed no complaints or issues with the location as well. I have emailed the chart showing location to Roger Bowgen of the Greenwich Shellfish Commission as well as Mike O’Conner of the Greenwich Marine division. I’m hoping to hear back from both parties prior to he next meeting.

I would be growing sugar kelp on the plot. I was one of ten, out of 130 applicants, selected for Greenwave’s farmer in training program. Greenwave is a non profit organization based out of New Haven. They are attempting to promote small kelp and shellfish farms in Long Island sound. They will be helping me through the permit process as well as hosting seeding and harvesting workshops. Greenwave also supplies the first two years of kelp seed, which they cultivate in New Haven. Greenwave also will buy a percentage of the harvested kelp.

I am now searching for a proper boat to work the farm. The seed is attached to horizontal lines attached at the ends to vertical lines held in place with anchors and suspended by bouys. There are also suspension bouys placed along the line to keep the line suspended evenly. The horizontal lines are 5 to 8 feet in depth, depending on turbidity of the water. The seeding is done in October or November, dependent on water temp and other biological factors. Harvest is April or May, before the water warms up.

Kelp is used for human consumption as it is a natural source of vitamins A, B1, B2, C, D and E as well as minerals zinc, iodine, magnesium, iron, potassium and copper. It also has the highest natural concentration of calcium of any food, 10 times more than milk. It is also used as animal feed, in cosmetics, fertilizers and pharmaceuticals. Kelp also provides shelter for fish, invertebrates and mammals. Kelp has the potential to reduce ocean acidification, it grows quickly without the need for fertilizers, it sequesters carbon dioxide as well as excess nitrogen and phosphorus. As you can see, not a lot of negatives.

Please let me know if there is any other information I can supply prior to the next Harbor Commision meeting

Steve Timchak