**6. ENGINEERING SYSTEMS REQUIREMENTS**

**H40 NAVIGATION DREDGING AND RECLAMATION**

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SYSTEMS REQUIREMENTS
NAVIGATION DREDGING AND RECLAMATION TEMPLATE 02/18

Instructions for using this template: There are template files for each UNIFORMAT Level 2 Group Elements. This template is for Group Element H40-NAVIGATION DREDGING AND RECLAMATION. Text such as this is hidden text that will not print when the hidden text box in "Print/Options" is un-checked.

Edit this template for the requirements of the project and wherever brackets [ ] appear. Use UFC 4-150-06 when determining Navigation Dredging and Reclamation system requirements.

The SYSTEMS REQUIREMENTS are intended to define items that are required throughout the facility or on a system wide basis that is common to several waterfront facilities. Navigation Dredging and Reclamation-specific requirements are defined in GENERAL SYSTEM REQUIREMENTS paragraph of Section H40. Coordinate with the lead programmer for interface requirement with other elements of the program. Editing is required where brackets [ ] appear. Delete all Navigation Dredging and Reclamation elements that are not required for the project. If additional required elements or sub-elements for the project that do not appear in the template, consult with the Capital Improvements section at NAVFAC Atlantic for additional element numbers and description. Coordinate with the PERFORMANCE TECHNICAL SPECIFICATION SECTION H40 to ensure that performance requirements are provided for all of the Waterfront Facility Elements listed here and that paragraph numbering matches.

There may be rare occasions when prescriptive specifications may either be edited and included in Part 5 of the RFP or required in PTS Section H40 to be edited by the Contractor's Designer of Record. In both cases, the Engineering Systems Requirements (ESR) must include references to these documents.
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**SYSTEM DESCRIPTION**
The Navigation Dredging and Reclamation System consists of all [dredging of [navigation channel,] [approach,] [turning basin,] [and] [berthing area near [pier,] [wharf,] [breasting dolphin,] [and] [mooring dolphin,]] [reclamation] [and] [\_\_\_\_\_\_\_\_] at [\_\_\_project site\_\_\_\_\_] necessary and required to navigate the design vessel to the berths [and] [produce reclaimed land to support construction of the project waterfront facilities].

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NOTE: Provide additional navigation dredging and reclamation system scope description if not already coved above. List the dredging and reclamation elements in the project.
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**GENERAL SYSTEM REQUIREMENTS**
Provide a Navigation Dredging and Reclamation System complete in place, tested and approved, as specified throughout this RFP, as needed for a complete, usable and proper installation. Install all material in accordance with ESR and PTS Sections H40. Where the word "should" is used in the manufacturer's recommendations, substitute the word "must".

Do not commence in-water dredging work until the required permits listed in Paragraph titled, "Permitting and Agency Review" in Chapter 3, Site Analysis of Part 3 are obtained. Work to be done below [Mean Higher High Water (MHHW)] [\_\_\_\_\_\_\_\_] is considered in-water work.

[[The dredging requirements and channel design that govern the areas to be dredged and dredge depth have been determined by the Government and are specified in this ESR H40 and shown on the RFP drawings provided in Part 6.] [Perform a ship maneuverability study and appropriate channel design to determine the areas to be dredged and the dredge depth.]]

[Dredging will be done to increase water depth in the vicinity of existing waterfront structure. Consider impact of dredging on structural integrity of the existing waterfront structure. See ESR H10 for additional requirements.]

 **H4010 DREDGING**

[[Minimum dimensions of the navigation channel and its approach must be [\_\_\_\_\_\_\_\_] and is shown on the RFP drawings provided in Part 6.] [Minimum dimensions of the berth and turning basin must be [\_\_\_\_\_\_\_\_] and as shown on the RFP drawings provided in Part 6.] The minimum dredge depth must be [\_\_\_\_\_ft (\_\_\_ m) below MLLW] [with \_\_\_\_ ft (\_\_ m) over dredge tolerance.] [with over dredge tolerance to be determined by the Contractor]]

[[Determine the minimum dimensions of the navigation channel and its approach, the berth and turning basin. Also determine the minimum dredge depth and over dredge tolerance]. [\_\_\_\_Provide basis of the vessel maneuverability study and channel design to be performed by Contractor\_\_\_\_\_.]]

[Existing navigation in the [channel,] [approach,] [and] [turning basin] must be allowed to continue which would require the dredge equipment to be moved out at Contractor's expense when a conflict occurs.] [Contractor must expect \_\_\_\_\_describe the level of disruption\_\_\_\_\_\_\_\_ during dredging operation.]
Preliminary hydrographic study has been performed by the Government and copy of the report or mapping is provided in Part 6 for information only. Approximate dredge limits shown on the drawings provided in Part 6 are for information only and must be finalized by the Contractor. It is the Contractor's responsibility to perform a detailed hydrographic survey and to determine the final dredge limits and volume. Verify the required dredged depth by post-dredge hydrographic survey.

[The site has high siltation rate. Contractor must include advanced maintenance dredging prior to completion of the project and turn-over of the project to the Government.]

[Blasting will not be allowed during dredging operation.] [ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .]

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NOTE: If the environmental or permit conditions dictate the type of dredging equipment or method to be used, specify the requirements below.
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 **H4020 DREDGING DISPOSAL**

[Dredge material characterization and management plan have been prepared and the results and recommendation are included in Attachment [\_\_\_] of Part 6.]. [Dispose of dredge material at a designated site located at [information on the approved ocean disposal site] [information on the approved existing confined disposal facility including available capacity] meeting the requirements of the [\_\_\_\_\_\_\_] report(s). Location of the disposal site is shown on the RFP drawings provided in Part 6.] [Dispose of dredge material at a Confined Disposal Facility (CDF) to be designed and constructed by the Contractor. Location and design of the CDF and the disposal handling shall meet the requirements of the [\_\_\_\_\_\_] report(s). Location of the disposal site is shown on the drawings provided in Part 6.] [The dredge material will become property of the Contractor and must be disposed of at Contractor’s expense at a suitable site to be arranged by the Contractor.]

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NOTE: Provide detailed requirements of project specific disposal site(s) below.
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 **H4030 RECLAMATION**

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NOTE: If the project includes reclaimed land as part of the scope, specify the location and requirements of the reclamation. If reclamation is a result of the contractor's design, edit the following paragraph.
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[Reclamation, if accomplished, must support the loads specified in this RFP and the fill material must be densified to avoid short and long term settlements consistent with the Contractor’s design of waterfront facility.]

--End of Section--