



THE CRANEY ISLAND CONNECTION

CRANEY ISLAND EASTWARD EXPANSION NEWS AND INFORMATION

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Scheduling Update

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THE CRANEY ISLAND CONNECTION IS PUBLISHED MONTHLY UNDER THE AUSPICES OF THE VIRGINIA PORT AUTHORITY AND THE U.S. ARMY CORPS OF ENGINEERS, TO PROVIDE READERS WITH REPORTS RELATED TO THE DEVELOPMENT OF THE EASTWARD EXPANSION OF CRANEY ISLAND. ARTICLES PRINTED HEREIN ARE FOR INFORMATIONAL PURPOSES ONLY. WE INVITE READERS TO COMMENT ON ARTICLES AND SUGGEST FUTURE TOPICS FOR CONSIDERATION.

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OVERVIEW

A partnership between the Virginia Port Authority (VPA) and the U.S. Army Corps of Engineers (USACE), the Craney Island Eastward Expansion is a large-scale public investment that represents significant economic benefits for Hampton Roads, Virginia, and the Nation. Project engineers have worked to optimize the project's construction schedule to meet the regional need for expanded cargo capacity, while simultaneously weighing funding and technical constraints. As reported in local media outlets, the current economic climate may delay the start date for expansion construction from July 2009 until July 2010, while emerging technical challenges related to project engineering could delay the opening of the terminal from 2017 to 2020. This issue of The Craney Island Connection will explore the changes to the schedule, clarify misconceptions, and provide additional details on the status of project development.

FINANCIAL FACTORS

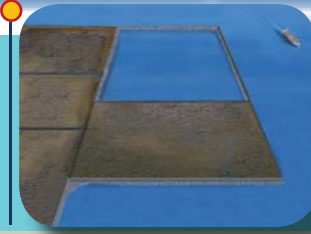
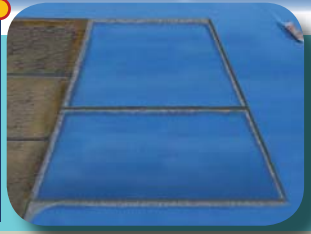
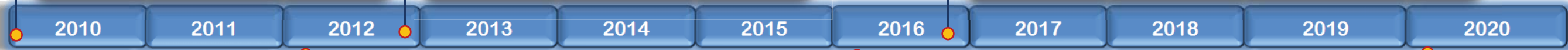
The VPA and USACE take a long-term view on capital projects and are working diligently to maintain an appropriate pace of construction in the context of today's financial environment. While the original construction start date was July 2009, as part of its strategy to weather the economic downturn, the VPA will delay the start of construction until July 2010. Two issues combine to make this one year delay a prudent strategy. First, setbacks emerged in the release of Federal allocations. Second, the economic slowdown has affected revenues, which in turn reduces the amount of the bond that could be issued. Therefore, VPA has elected to defer the expenses until the economy shows signs of improvement.

The funding method for the Craney Island Eastward Expansion utilizes a combination of Federal and state funds. Federal funds were authorized under the 2007 Water Resources Development Act (WRDA), a law that authorizes water-related projects. In the approved version of WRDA, the Federal government would share 50% of the cost for dike construction. However, these funds have not yet been appropriated. That means that the Craney Island project has not received any Federal funds to begin dike construction by the targeted start date of July 2009. Project representatives are confident that the Craney Island Eastward Expansion will begin construction by summer 2010.

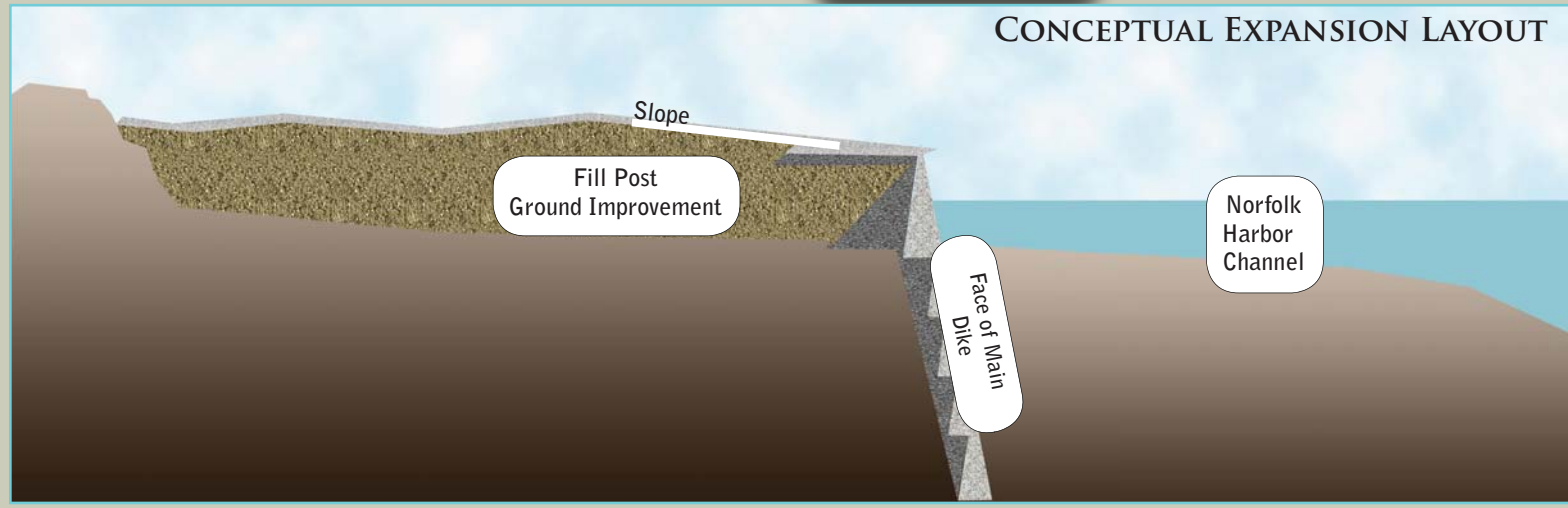
**Dike Construction
2010 – 2012**
The construction method begins with the building of perimeter dikes to create a new cell on the east side of the existing facility. This process will begin in July 2010.

**Filling
2012-2016**
The filling of the expansion with dredged material will supply the foundation for the construction of a marine terminal. This process will take 3 to 4 years.

Phase I Complete
The first phase of the marine terminal is now scheduled to be operational in 2020 and will occupy a third of the new cell. The remainder of the cell will continue to receive dredged material. Additional phases of the terminal will be constructed to meet the business needs of the Virginia Port Authority.



CRANEY ISLAND EASTWARD EXPANSION UPDATED PROJECT SCHEDULE



22 MCY¹, as reported in the Final Environmental Impact Study (FEIS). With the raise in the fill height, the 10% design quantities show an almost twofold increase in material, with fill quantities now estimated at 43.4 MCY. This additional material will require four years for placement and settlement, instead of the two years originally anticipated. The increased settlement is described in detail below.

Increased Settlement

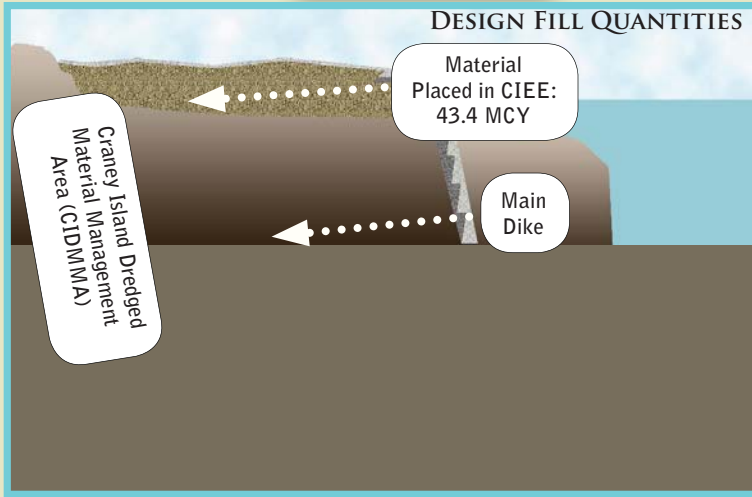
Previous issues of The Craney Island Connection have detailed the extensive ground exploration program conducted at the project site. Through the use of sophisticated exploration methods and equipment, geotechnical engineers are able to understand and analyze the characteristics of the sediments underlying the project site, and how these characteristics will affect project development. These investigations found that the expansion site is underlain by a thick sequence of soft clay soils of the Norfolk Formation.

Engineers are now processing data from these early exploration programs and refining the analytical models to predict settlement under the future marine terminal. Among other characteristics, the settlement models observe the permeability (measurement of the ability of a material to transmit fluids), consolidation, and water content of the land underlying the expansion area. This model is being used because Norfolk clay is spongy and effectively the fill is being placed on a settling platform with the clay acting as a spring.

Nevertheless, combining the additional fill (as discussed above) with the current information on the physical ground properties indicates that the site will experience 25 to 30 ft of settlement.

A ground improvement program is being designed to accommodate the additional fill and physical properties of the expansion site. Developing the ground improvement program

¹ 1 Million Cubic Yards (MCY)



is a complex process in which the subsurface characteristics of the project site, the amount of fill material being placed, the drainage tools and techniques, and ultimate stability of the site must be thoroughly considered.

Conclusions

The current economic downturn may delay the start date for expansion construction from July 2009 until July 2010, while engineering challenges related could delay the opening of the terminal from 2017 to 2020. Despite these immediate challenges to development, the Craney Island Eastward Expansion represents a unique opportunity to create jobs, address critical national needs, and spur economic growth. Delaying the start of the project in light of economic challenges represents a prudent project development strategy on behalf of VPA and USACE that will ultimately allow The Port of Virginia to remain an economic engine for Hampton Roads and the greater Commonwealth. The cyclical nature of the economy will see growth and demand increasing in ports over time. Through the Craney Island Eastward Expansion, The Port of Virginia is poised to capture this growth while providing a stimulus for the regional and national economy.

ENGINEERING FACTORS

The design and construction process for the project has always required significant time between the completion of the various project phases. This lead time is required to design and construct the eastward expansion, fill it with dredged material, perform ground improvements, and then construct the marine terminal. The eastward expansion of Craney Island will include significant ground improvements prior to the construction of the marine terminal. Once the settlement is out of the soft clays, the marine terminal can be constructed on the stabilized foundation. Previous projections, developed during the feasibility study phase of project development (2006), anticipated an eight-year construction cycle to open the first phase of the marine terminal. Current scheduling will require at least 10 years of lead time before the opening of the terminal. This delay is due to an increase in the amount of materials required during the fill phase of construction and predicted additional settlement.

Additional Fill

In preparation for future port development, the eastward expansion project area will become a dredged material

receiving cell. The feasibility study recommended filling the new cell to an elevation of +18ft, because at that time, it was anticipated that this height would provide the additional dredged material capacity and provide a suitable platform on which to construct a terminal. However, before a marine terminal can be constructed on the new cell, the ground must be stabilized.

Engineering techniques will be utilized to achieve maximum drainage and consolidation across the site. A prerequisite for drainage is the presence of a slope. For instance, to eliminate standing water problems around your house, foundation drainage codes require a natural slope away from the house for water flow. Similarly, to achieve positive drainage on the Craney Island project site, the team will utilize multiple slopes in an up and down/washboard pattern, rather than having a constant slope across the site. While the multiple slopes will account for the drainage on the site, the average height of the terminal will rise to between +26 ft to +30 ft. This additional fill height will require a substantial increase in the amount of dredged material that will need to be placed, thus extending the time it will take for placement and consolidation. Original placement volumes for the expansion were projected at

CRANEY ISLAND EASTWARD EXPANSION Year in Review

Community Outreach

The Community Outreach Program has been spreading the word on the Craney Island Eastward Expansion to neighborhood civic leagues, interested contractors, university students, and the greater Hampton Roads community. Through the project newsletter and web site, we want to provide you with up to date news and information on project development. For more information, visit www.craneyisland.info.

Engineering

The engineering program has been extremely productive throughout 2008. The design team has completed a number of investigations including geophysical site characterization of existing Craney Island. With the assistance of the Blue Ribbon Panel, engineers selected a main dike alternative, completing the Main Dike Alternative Analysis report. Other reports and studies completed over the last year include the Dredged Material Management Plan and the 10% Design Package.

Environment

Respect for the environment has been a central part of the planning for the Craney Island Eastward Expansion. Environmental initiatives have included the completion of hydrodynamic water quality modeling, submittal of the Joint Permit Application, and sediment restoration Sampling operations.

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- Project Update
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