Chesapeake Bay Bridge and Tunnel District

Parallel Thimble Shoal Tunnel

October 16, 2014

WEDA Eastern Chapter

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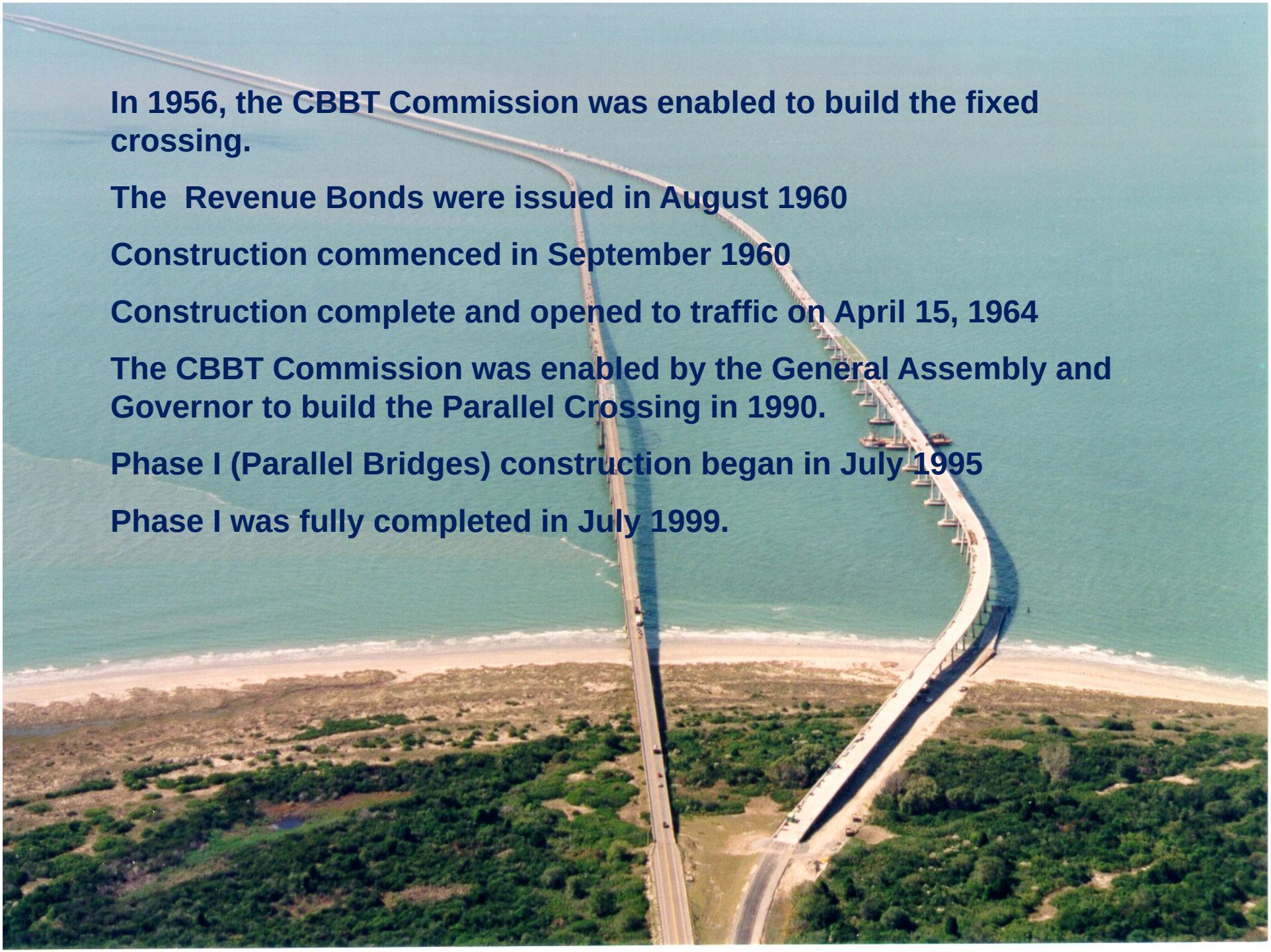


In 1956, the CBBT Commission was enabled to build the fixed crossing.

The Revenue Bonds were issued in August 1960

Construction commenced in September 1960

Construction complete and opened to traffic on April 15, 1964

The CBBT Commission was enabled by the General Assembly and Governor to build the Parallel Crossing in 1990.

Phase I (Parallel Bridges) construction began in July 1995

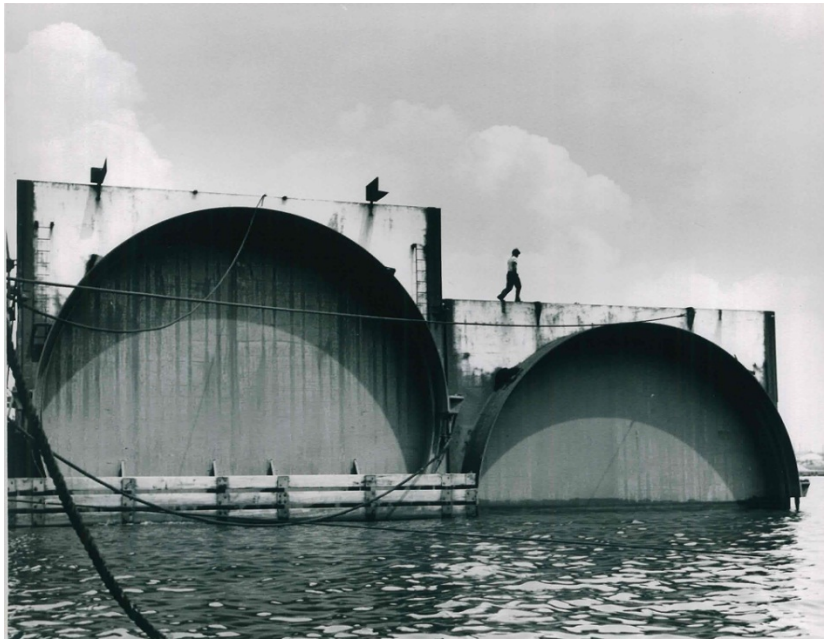
Phase I was fully completed in July 1999.

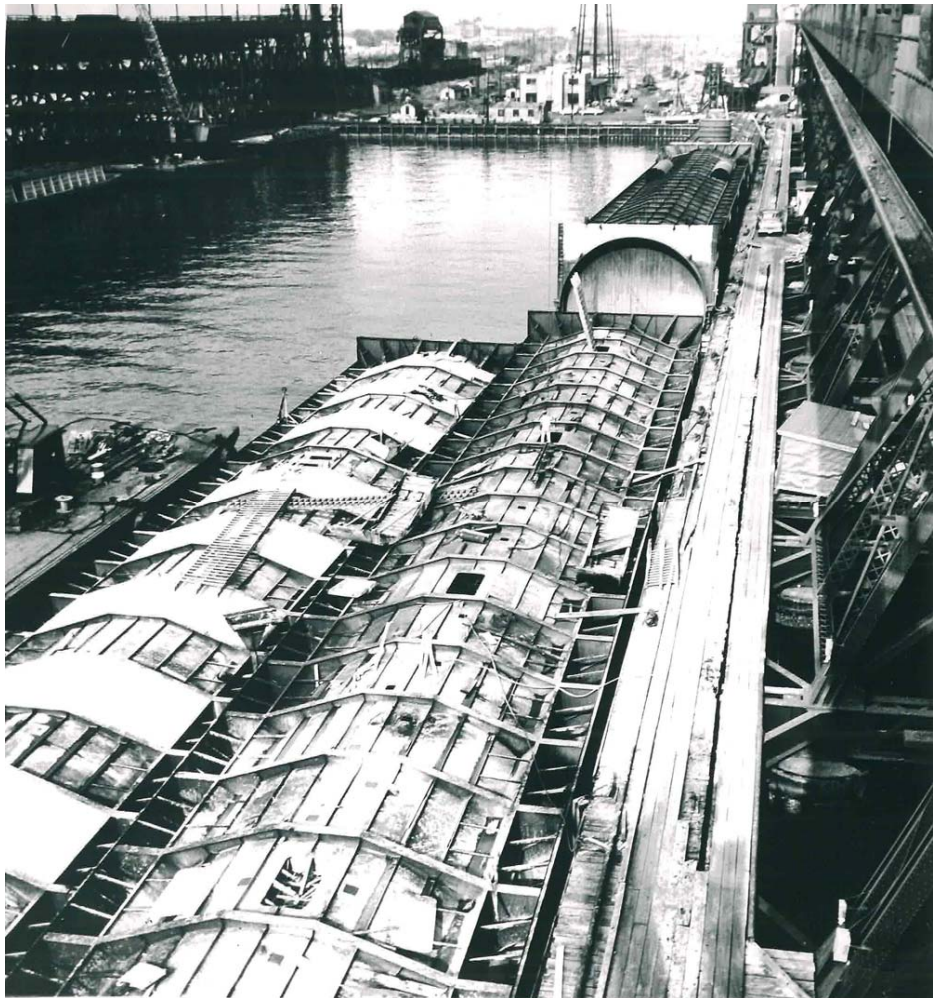
Tunnel Geometry Criteria

- Provide profile for a 1000-ft wide, 70-ft deep channel (67-ft channel with 3-ft over-dredge allowance) over top of tunnel
- Provide 6-ft of fill & 4-ft of scour protection over top of tunnel
- Tunnel cross section to have two 12-ft lanes with 2-ft shoulders
- Profile to meet all applicable AASHTO and VDOT codes and standards
- Verify alignment proposed during layout of Parallel Crossing (250-ft west of existing) does not impact existing tunnel during construction

Trench-type tunnels:

- Thimble Shoal Channel Tunnel: 5,734 ft.
- Chesapeake Channel Tunnel: 5,423 ft.
- Tunnel Clearance – 13’ 6”; 24’ horizontal





- Each island approx. 5 acres in surface
- 30 feet above sea level
- 1.2 million tons of rock armor around islands

Parallel Crossing Phase II-A (Parallel Thimble Shoal Tunnel):

- May 2013 – Commission Adopts Resolution to accelerate this phase
- August 2013 – Commission Adopts Revised Toll Rate Structure
- November 2013 – Unsolicited Proposal from PC2
- January 2014 – Toll Rate Schedule Implemented
- April 2014 – PC2 Proposal Rejected

Parallel Crossing Phase II-B (Parallel Chesapeake Tunnel):

- 2030 to 2040

Chesapeake Bay Bridge-Tunnel Commission Resolution Summary

Low Interest Rate Environment + Favorable Construction Market + Design-Build Delivery Model

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Approximately $200 million in project cost savings

as compared to 2012 Commission-approved Capital Plan

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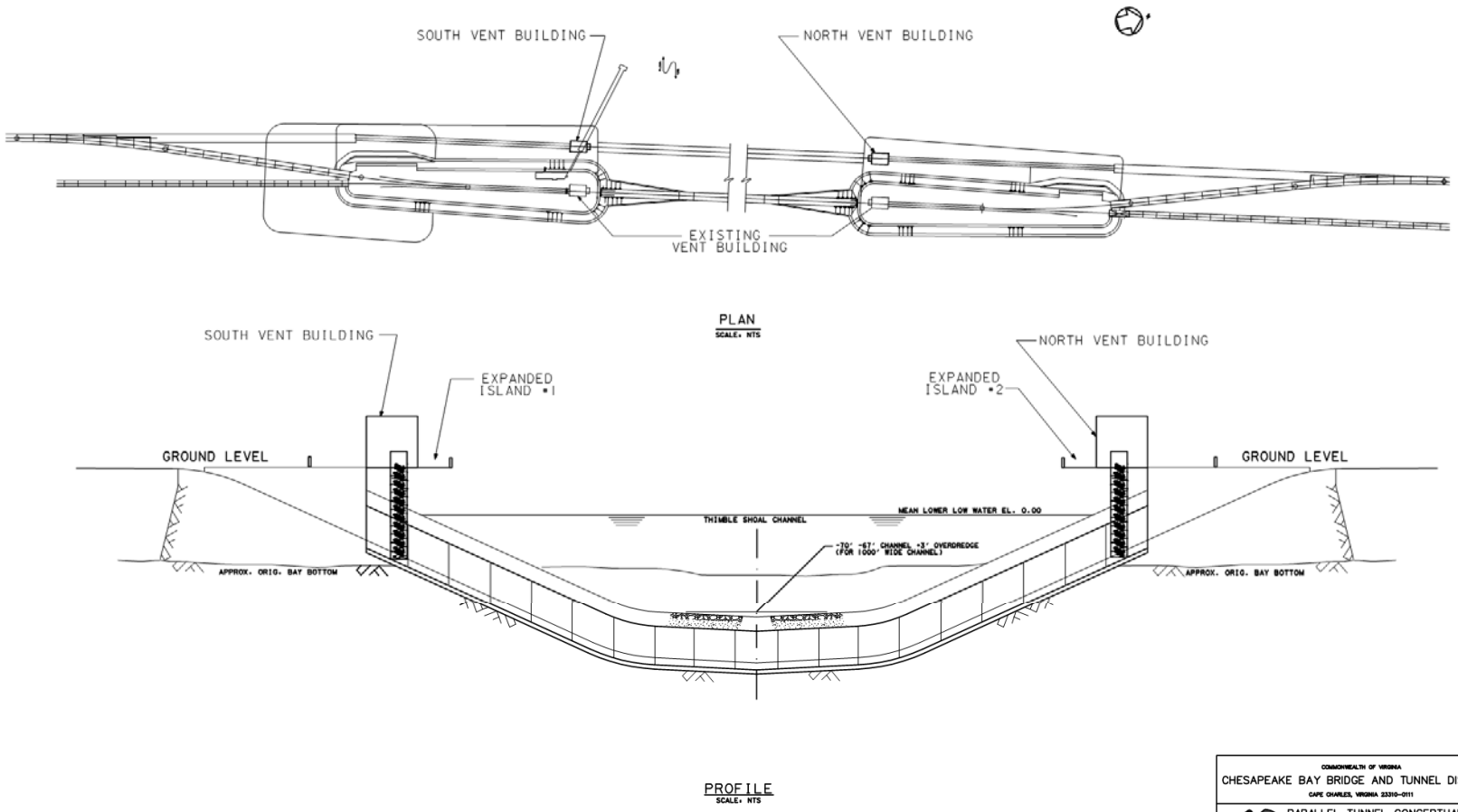
Proposed Plan and Profile



COMMONWEALTH OF VIRGINIA
CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT
CAPE CHARLES, VIRGINIA 23310-0111

PARALLEL TUNNEL CONCEPTUAL STUDY
TO
LUCIUS J. KELLAM, JR. BRIDGE-TUNNEL

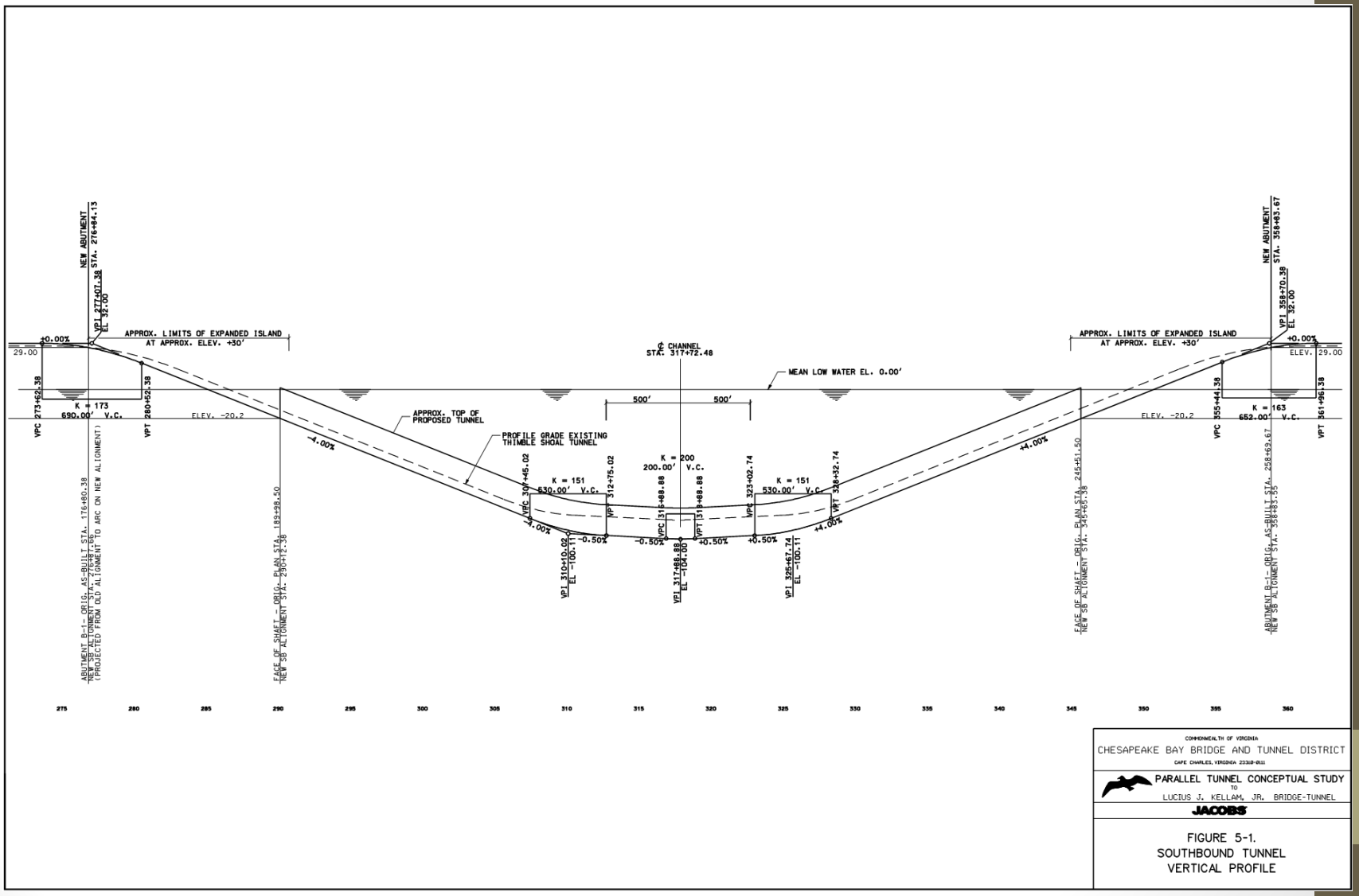
JACOBS

FIGURE 3.2
TUNNEL CROSS SECTION
PROPOSED PLAN AND PROFILE

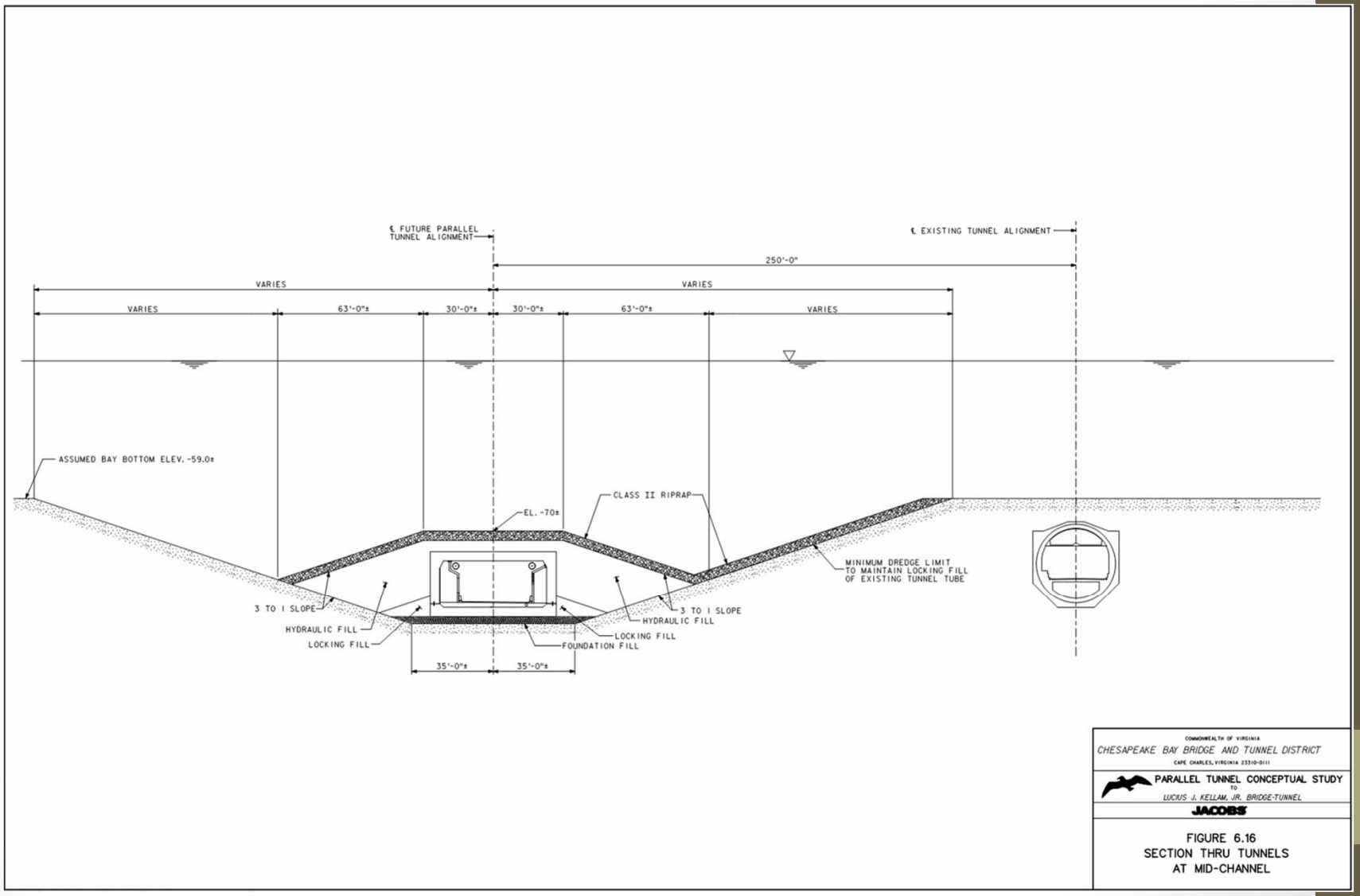
Alignment for Parallel Tunnel

General Features

Proposed Profile Grade



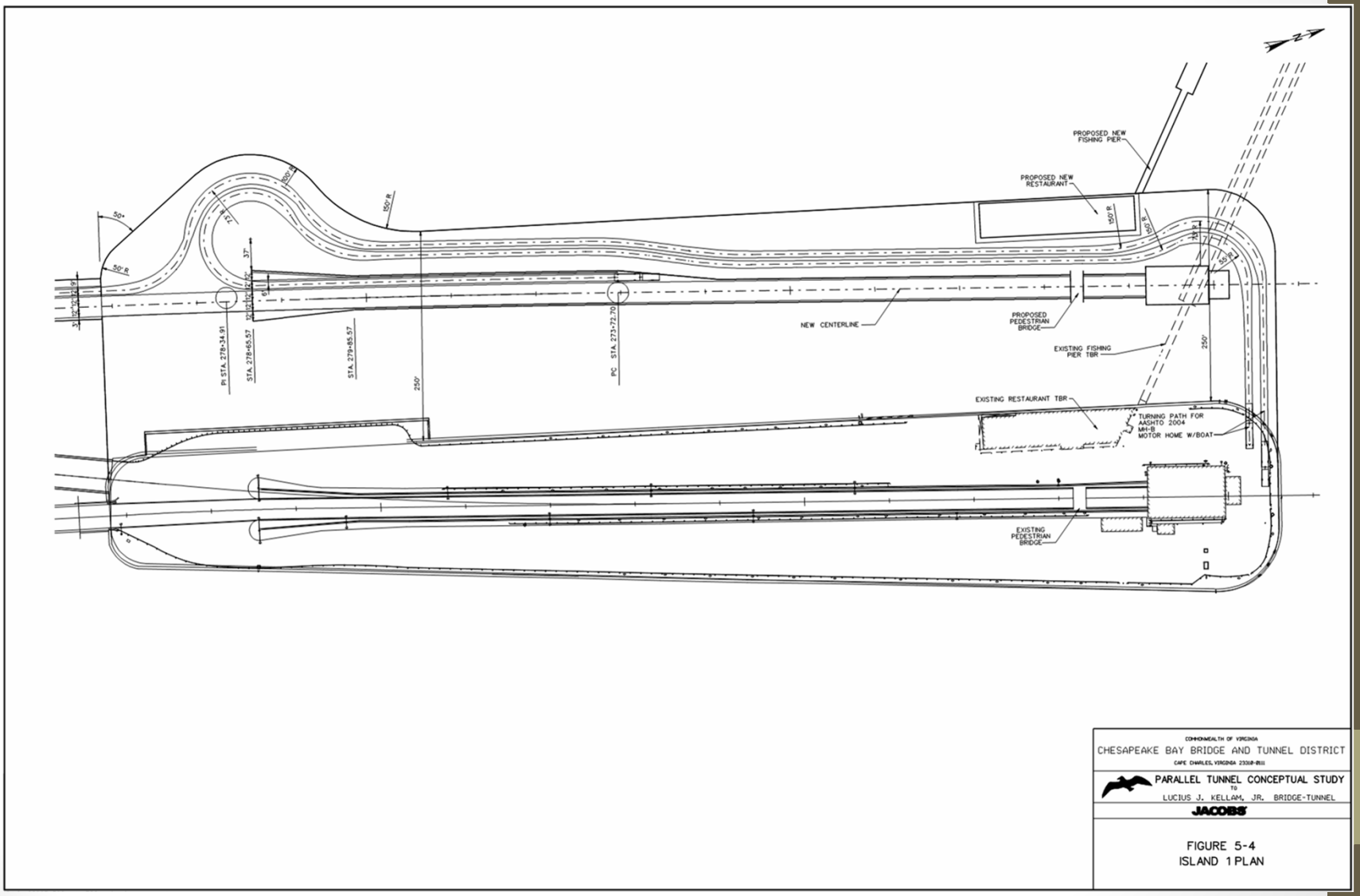
Tunnel Cross Section in Trench



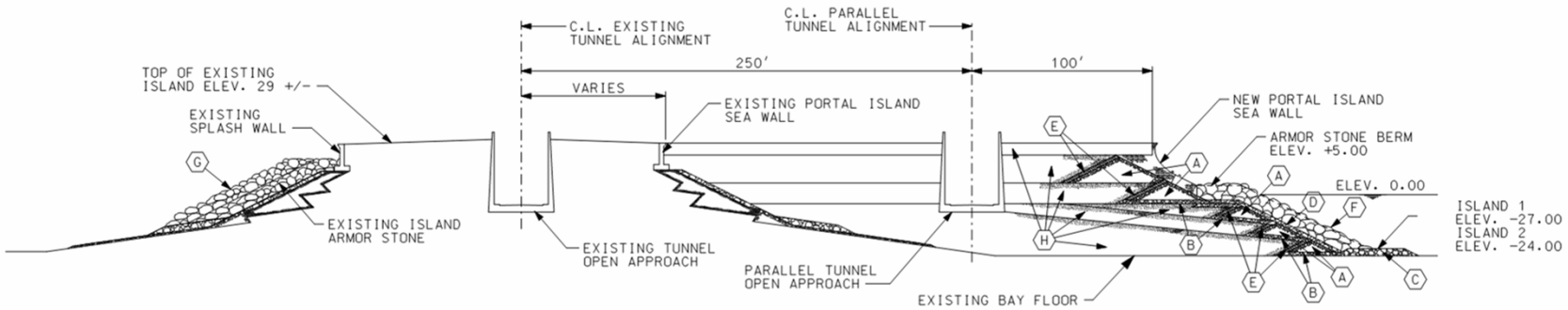
Portal Island Expansion

- Existing portal islands expanded to the west for acceptance of trestle structures and open approaches along proposed tunnel alignment
- To minimize environmental impacts, limit island expansion length to match existing
- Perimeter of expanded island to utilize cross section developed during Parallel Crossing Project
- Existing armor stone along west side of existing islands to be relocated to fortify east side of islands
- Material excavated for tunnel trench generally not suitable for island fill

Expansion of Portal Island No. 1



Proposed Island Widening / Protection



MATERIAL LEGEND

A	VDOT CLASS IA DRY RIP RAP	25 - 75 POUND STONE
B	VDOT CLASS I DRY RIP RAP	50 - 150 POUND STONE
C	CLASS II	150 - 500 POUND STONE
D	CLASS III	500 - 1500 POUND STONE
E	VDOT SIZE NO. 1 AGGREGATE	4" - 3/4" GRAVEL
F	8' ARMOR COURSE	
G	EXISTING STONE ARMOR COURSE RELOCATED FROM BAY SIDE OF ISLAND	
H	HYDRAULIC FILL	

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FIGURE 6.8
TYPICAL SECTION
FOR ISLAND EXPANSION

Project Schedule

- Oct. 2013 – Start Survey and Geotechnical
- Mar. 2014 – Start NEPA
- Mar. 2014 – Start TIFIA Process
- Sep. 2014 – Start Design Build Bridging Documents
- Oct. 2014 – Start Dredge Sampling Process
- May 2015 – Issue RFQ for Design Build Contractor
- July 2015 – Qualifications Submittals Due
- Feb. 2016 – Issue final RFP for Design Build Contractor
- May 2016 – Notice of intent to Award

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