

Huntington Levee

Community Meeting

Department of Public Works and Environmental Services



October 26, 2016

Huntington Levee
Agenda

- I. Project Background
- II. Levee System Design
- III. Construction
- IV. Community Amenities
- V. Flood Modeling Results
- VI. Permitting
- VII. Schedule
- VIII. Environmental Design
- IX. Community Outreach
- X. Questions



Project Background

- **June 2006** -160 homes were flooded from a storm event
- **2009** – US Army Corps of Engineers (USACE) completed a study to evaluate flood damage reduction measures in the Huntington Community
- **November 6, 2012** – Fairfax County voters approved stormwater bond referendum
- **November 2013** – Phase I design completed
- **January 2014** – Fairfax County and Huntington Community reached consensus on conceptual design features

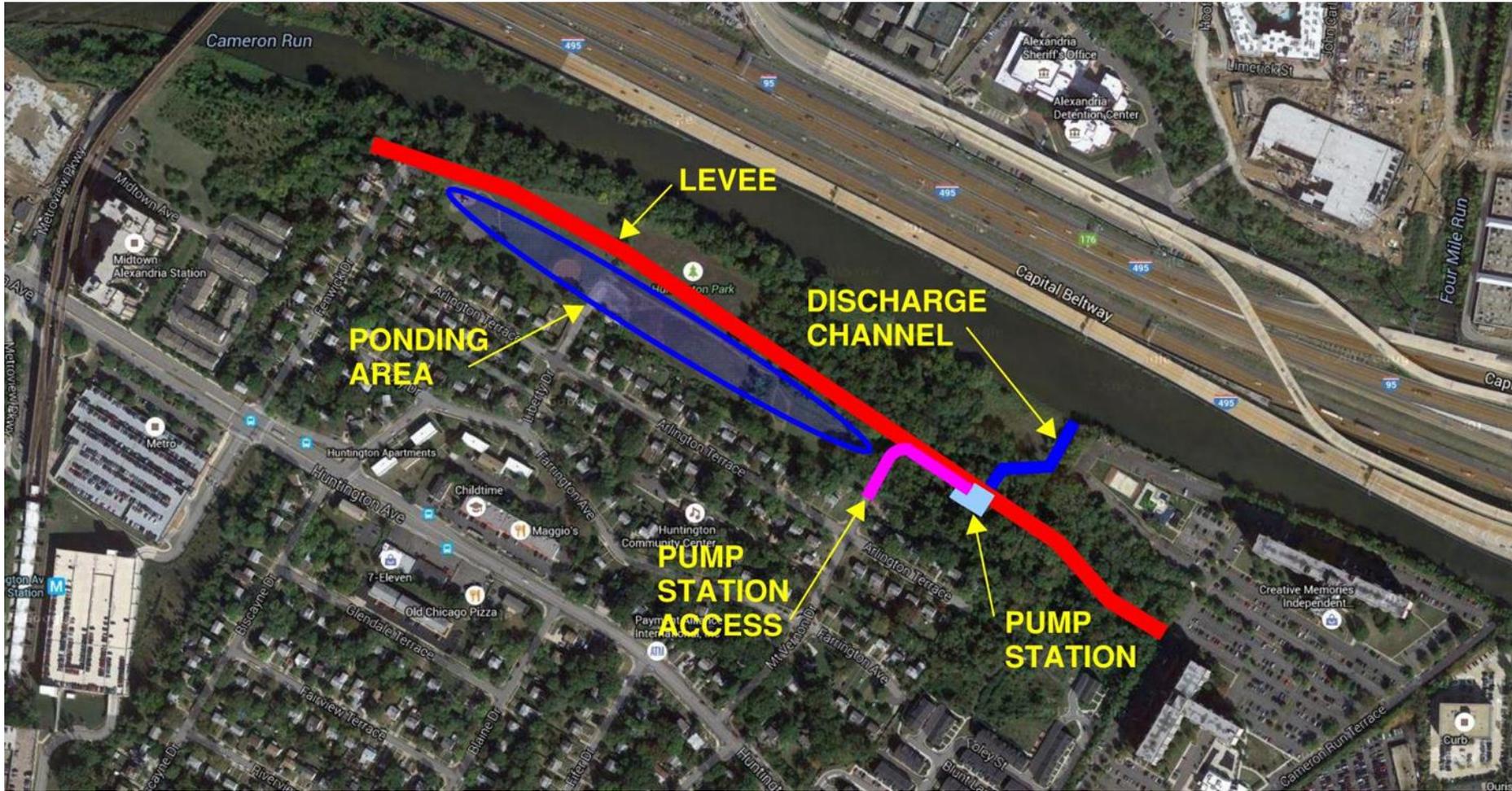


Project Background

- **July 2014** – Hydraulic and Hydrologic Modelling for Cameron Run
- **September 2014** – Schematic (30%) Design
- **October 2014** - Value Engineering Workshop
- **June 2015** – Design Development (60%) Design
- **February 2016** – Construction Documents (100%) Design
- **Spring 2016** – Technical review by County and Corps of Engineers
- **July 2016** – CLOMR approved by FEMA
- **August 2016** – Project advertised for bid to pre-qualified contractors
- **September 2016** – Wetlands permitting approved by DEQ and Corps of Engineers

Levee System Design

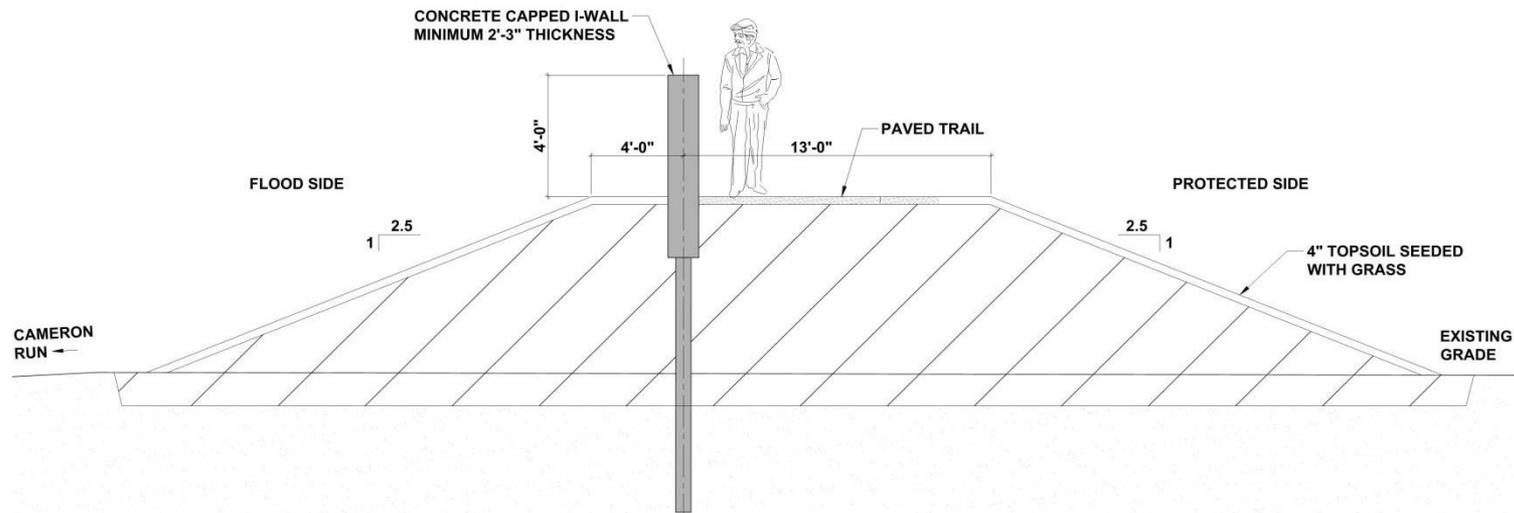
Levee System



Levee System Design

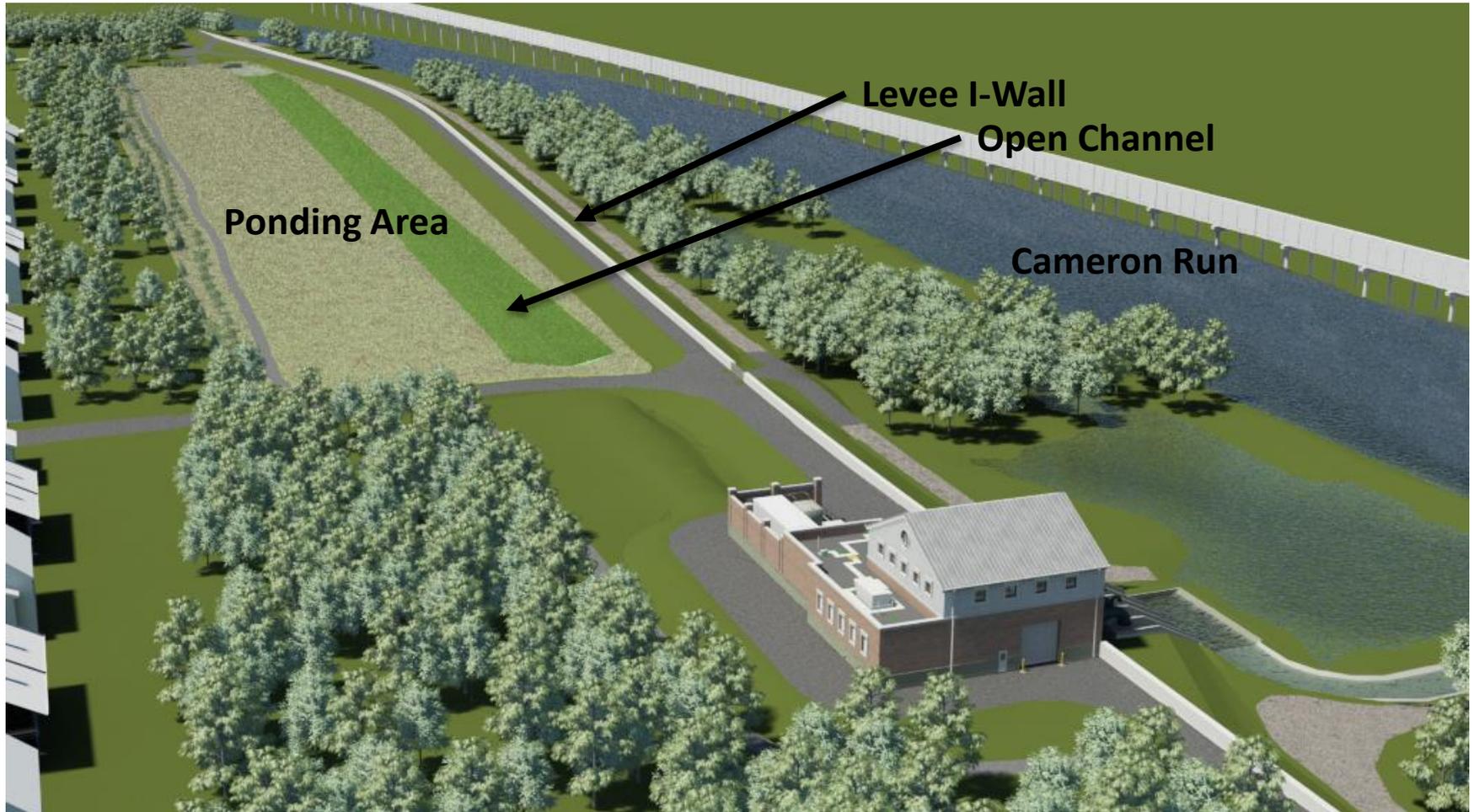
Key Design Features

- Earthen Levee/I-Wall Combination
- Pump Station
- Stormwater Diversion



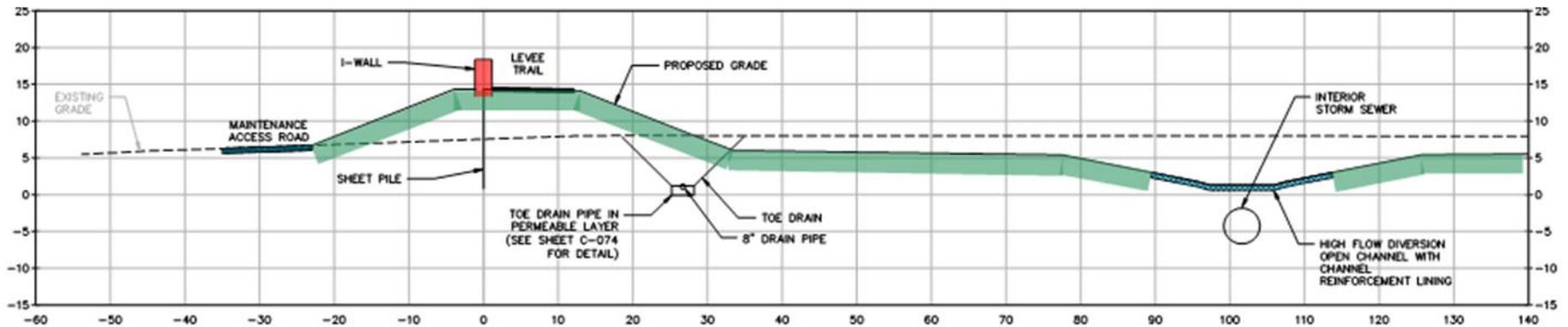
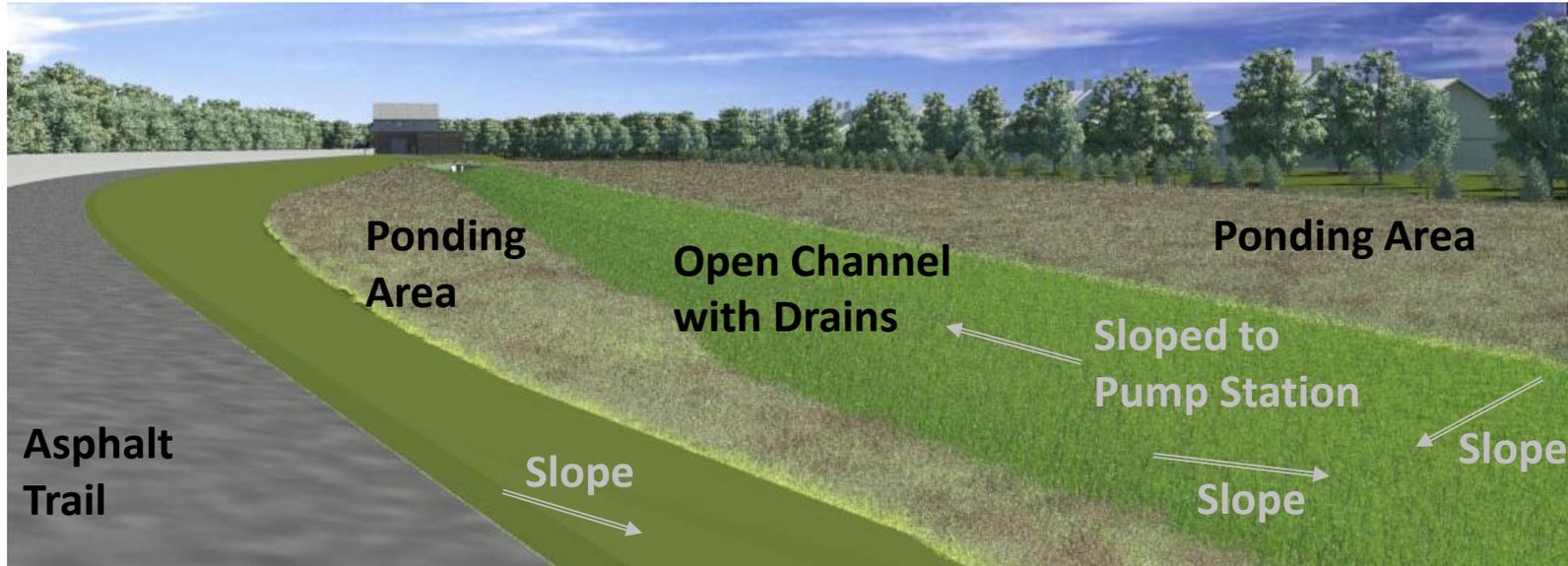
Levee System Design

Rendering – Looking West



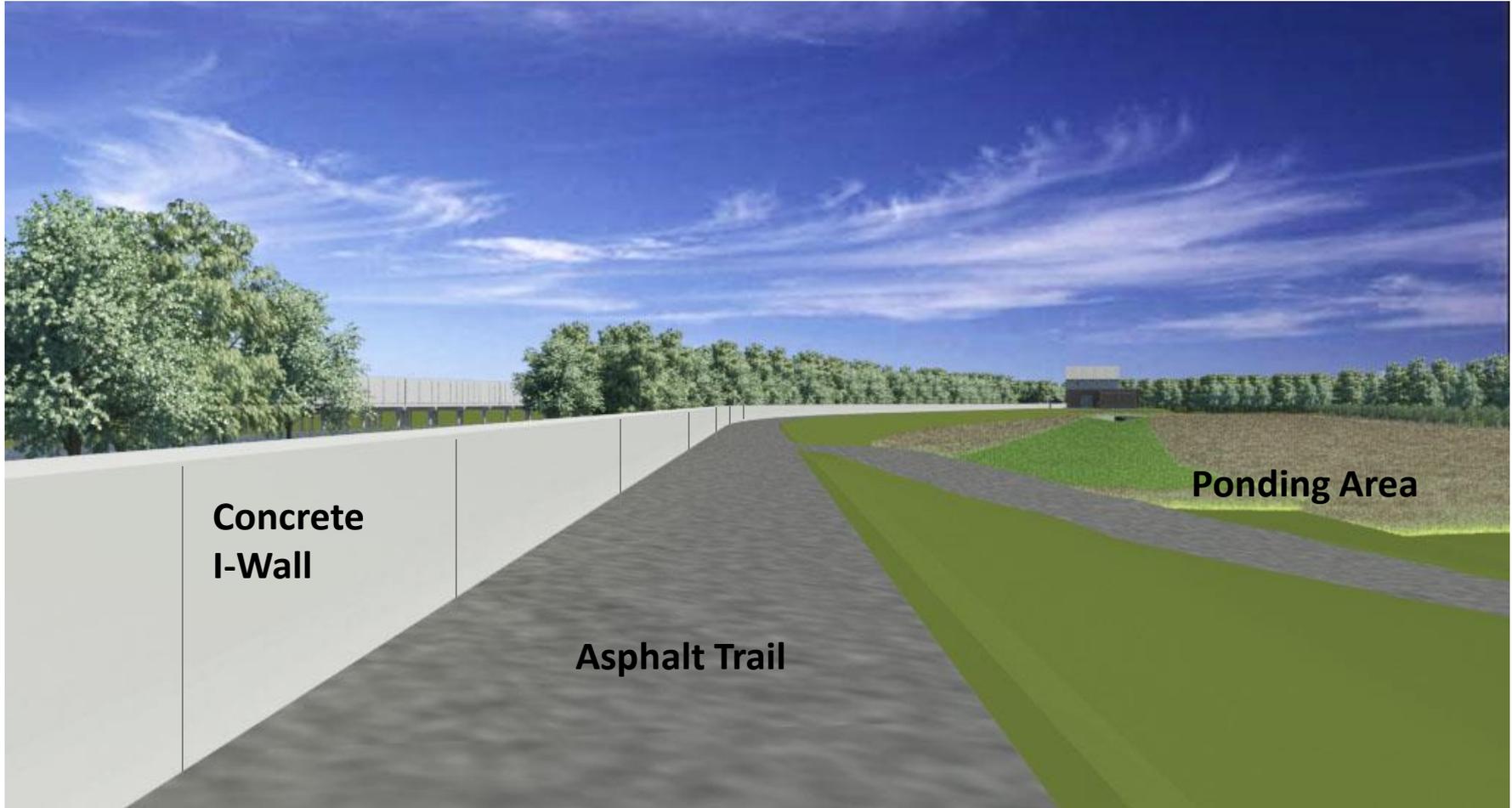
Levee System Design

Rendering – Looking East with Cross Section



Levee System Design

Rendering – Looking East from Top of Levee Trail



Levee System Design

Rendering – Looking Northeast Toward Pump Station



Note: Fence with gate to be constructed around Pump Station

Levee System Design

Rendering – Cross Section of Pump Station



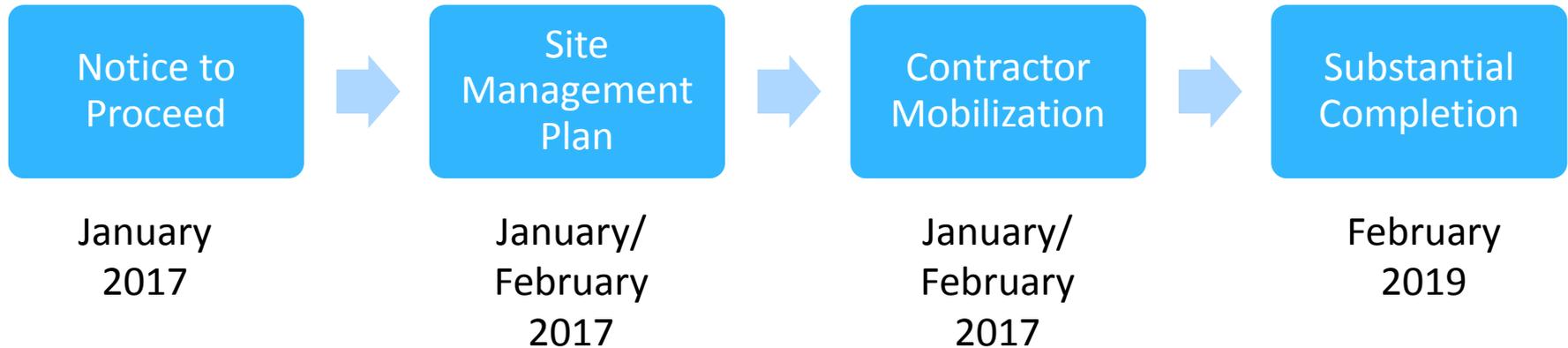
Construction

Next Steps in Construction



Construction

Key Activities during Construction



Construction

Site Management Plan

- Submitted by contractor 30 days after NTP
- Approved by County

Included in Site Management Plan

- Phasing of Construction
- Control of Water
- Emergency Response

Construction

Contractor Restrictions

- Construction activities limited to 7:00am to 7:00pm, Monday – Friday
- Weekend and holiday work to be approved by County
- Contractor parking prohibited in neighborhood
- Truck traffic through neighborhood restricted
- Noise per Fairfax County Noise Ordinance

Construction

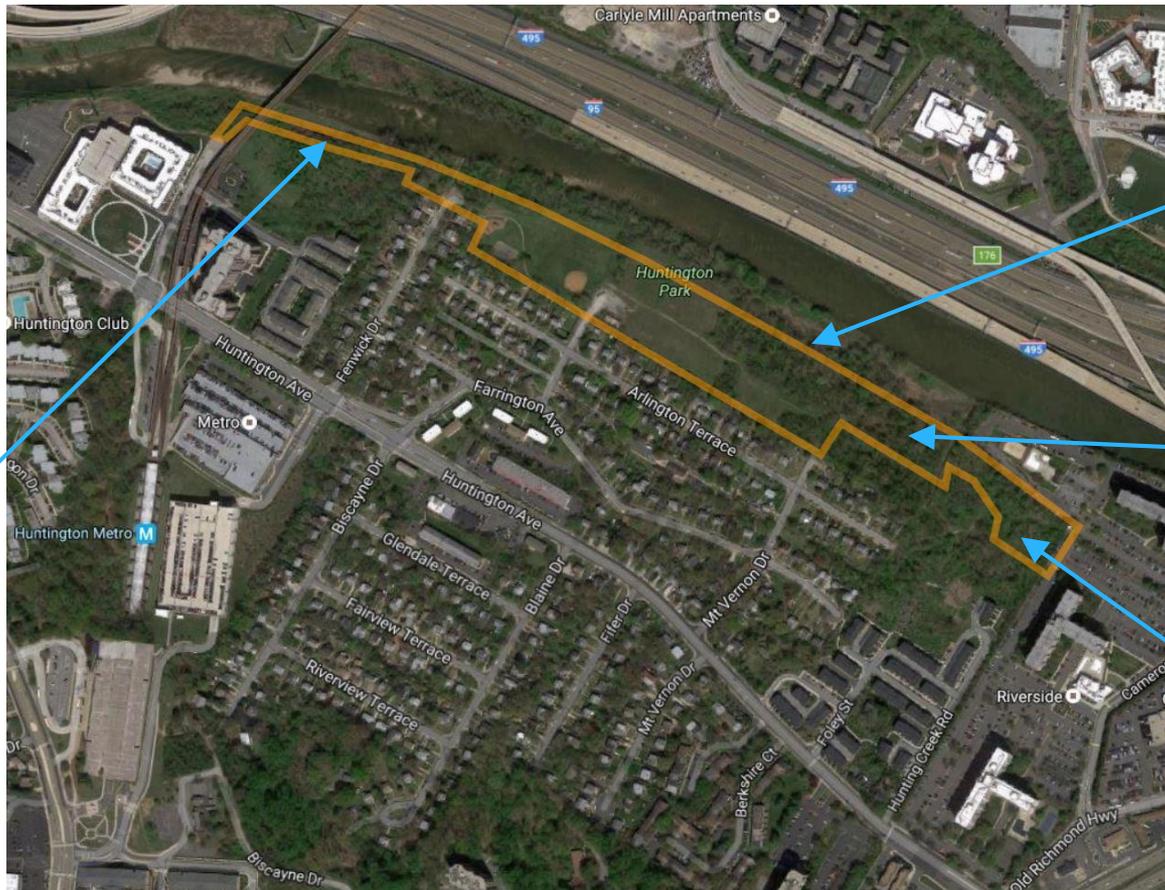
First Construction Activities

- Identification of Limits of Disturbance
- Safety Fencing
- Erosion and Sediment Control
- Construction of Access Road

Construction

Construction Extents

For General Reference – Actual Extent determined by Contractor



Construction Access Road

Construction Safety Fence around Site Perimeter

Location of Pump Station

Utility Work

Construction

Construction Access

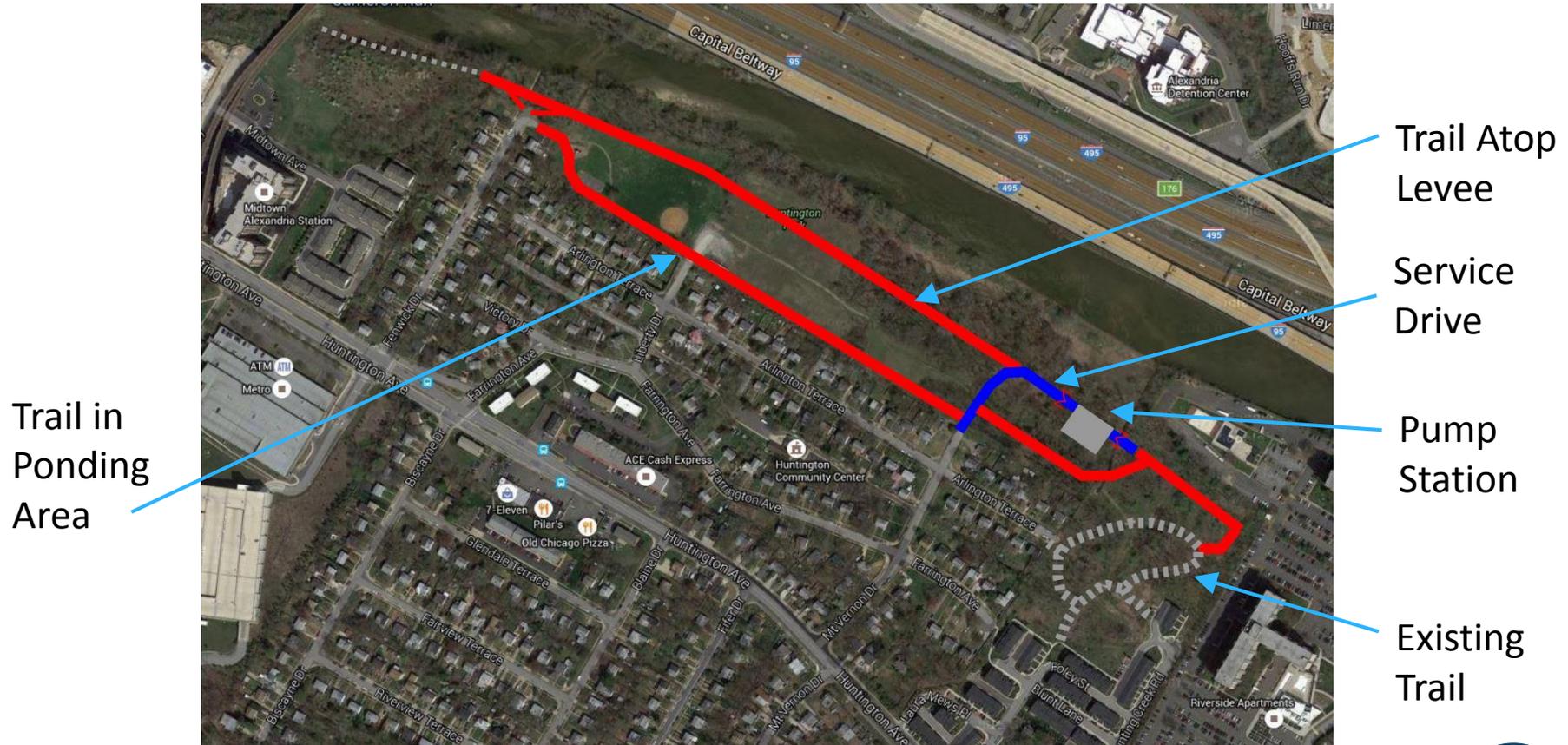


- Route A: Primary Construction Access
- Route D: Secondary Access for Pump Station
- Routes B and C: Possible Tertiary Construction Access

Community Amenities

Trails

- Native Grasses in Ponding Area, Mowed 1-3 times per Year
- Coarse Turf Grass on Levee



Community Amenities

Playground Area in Farrington Park

- Worked with Community Group in Fall 2015
- Separate Equipment for Age Groups
- Construction in December 2016/ January 2017



Community Amenities

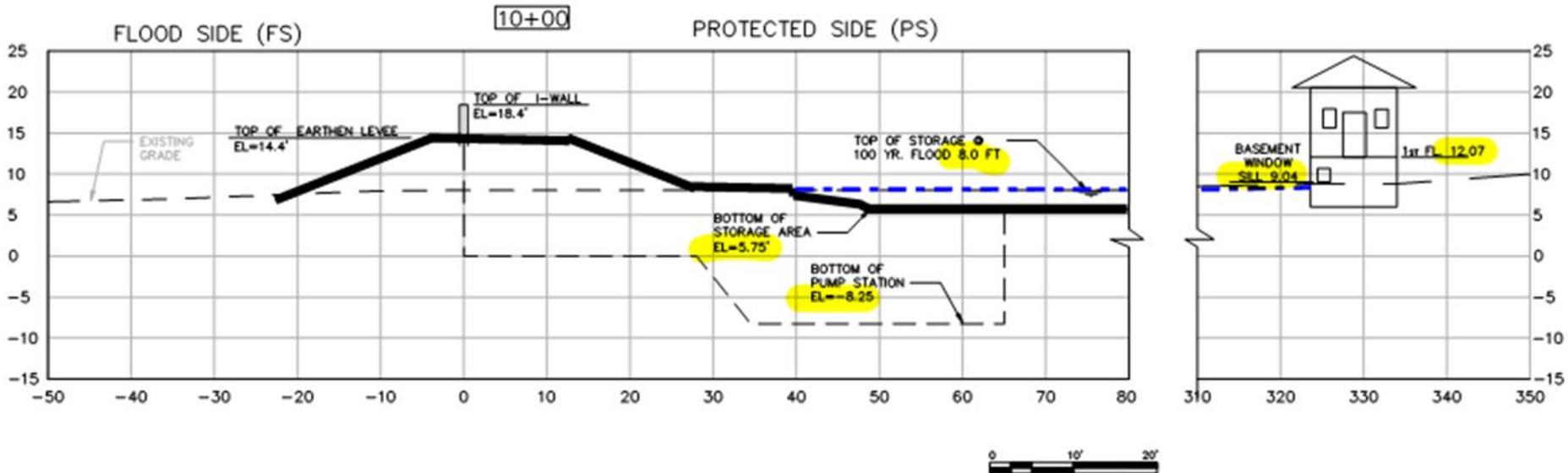
Playground Area in Farrington Park – Proposed Design



Flood Modelling Results

Protection of Homes from 100-Year Storm

Flood elevation 1-ft below lowest home opening



Flood Modelling Results

100-year Stormwater Ponding



Some Street Flooding, but Water Surface Elevation Below Structures

Flood Modelling Results

25-year Stormwater Ponding



Some Street Flooding, but Water Surface Elevation Below Structures

Flood Modelling Results

10-year Stormwater Ponding



Some Street Flooding, but Water Surface Elevation Below Structures

Permitting Update

All Permitting Completed

- Joint Permit Application (Wetlands)
- Conditional Letter of Map Revision (CLOMR)
- DEQ Stormwater Permit
- Building Permit
- Site Permit
- Zoning
- Floodplain Study



Wetlands Board

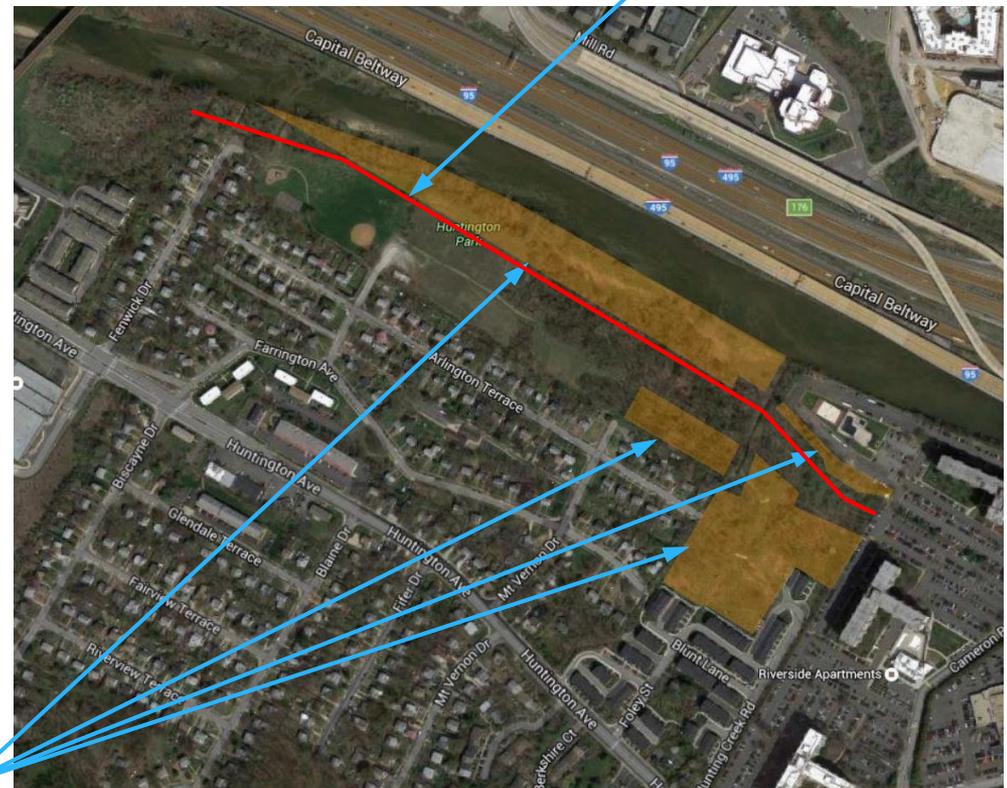
Permitting Update

Permitting Requirements

- Construction Limits marked with 4-foot tall orange fencing
- Non-impacted surface waters with 50-feet of construction limits clearly demarcated
- Monthly DEQ inspection checklist
- Inspections by DEQ and US Army Corps of Engineers

**Tree
Preservation
Areas**

Levee



Schedule

- **Phase II (January 2014-Winter 2017)**
 - ✓ Schematic Design (30%)
 - ✓ Design Development (60%)
 - ✓ Permitting (began March 2015)
 - ✓ Land Acquisition (began September 2014)
 - ✓ Construction Documents
 - Bidding
- **Phase III (Winter 2017-Spring 2019)**
 - Construction

Project Remains on Schedule

Environmental Design

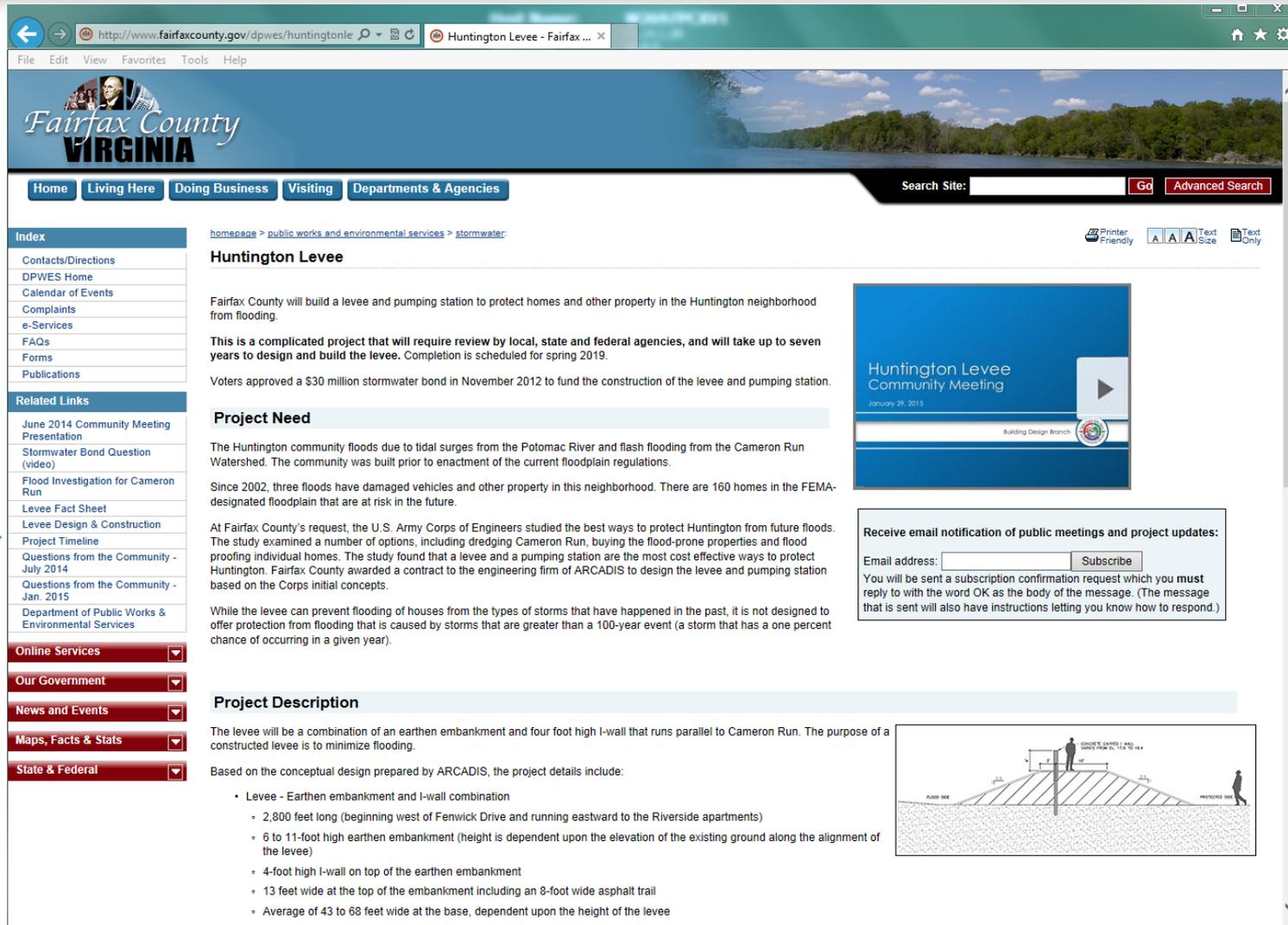
Envision

- Rating System for Infrastructure Projects
- Bronze Level
- Similar to LEED

- 5 Categories:
 - Quality of Life
 - Leadership
 - Resource Allocation
 - Natural World
 - Climate and Risk



Community Outreach



http://www.fairfaxcounty.gov/dpwes/huntingtonle

Huntington Levee - Fairfax ...

File Edit View Favorites Tools Help

Fairfax County VIRGINIA

Home Living Here Doing Business Visiting Departments & Agencies

Search Site: GO Advanced Search

Printer Friendly Text Size Text Only

homepage > public works and environmental services > stormwater

Huntington Levee

Fairfax County will build a levee and pumping station to protect homes and other property in the Huntington neighborhood from flooding.

This is a complicated project that will require review by local, state and federal agencies, and will take up to seven years to design and build the levee. Completion is scheduled for spring 2019.

Voters approved a \$30 million stormwater bond in November 2012 to fund the construction of the levee and pumping station.

Project Need

The Huntington community floods due to tidal surges from the Potomac River and flash flooding from the Cameron Run Watershed. The community was built prior to enactment of the current floodplain regulations.

Since 2002, three floods have damaged vehicles and other property in this neighborhood. There are 160 homes in the FEMA-designated floodplain that are at risk in the future.

At Fairfax County's request, the U.S. Army Corps of Engineers studied the best ways to protect Huntington from future floods. The study examined a number of options, including dredging Cameron Run, buying the flood-prone properties and flood proofing individual homes. The study found that a levee and a pumping station are the most cost effective ways to protect Huntington. Fairfax County awarded a contract to the engineering firm of ARCADIS to design the levee and pumping station based on the Corps initial concepts.

While the levee can prevent flooding of houses from the types of storms that have happened in the past, it is not designed to offer protection from flooding that is caused by storms that are greater than a 100-year event (a storm that has a one percent chance of occurring in a given year).

Project Description

The levee will be a combination of an earthen embankment and four foot high I-wall that runs parallel to Cameron Run. The purpose of a constructed levee is to minimize flooding.

Based on the conceptual design prepared by ARCADIS, the project details include:

- Levee - Earthen embankment and I-wall combination
 - 2,800 feet long (beginning west of Fenwick Drive and running eastward to the Riverside apartments)
 - 6 to 11-foot high earthen embankment (height is dependent upon the elevation of the existing ground along the alignment of the levee)
 - 4-foot high I-wall on top of the earthen embankment
 - 13 feet wide at the top of the embankment including an 8-foot wide asphalt trail
 - Average of 43 to 68 feet wide at the base, dependent upon the height of the levee

Huntington Levee Community Meeting

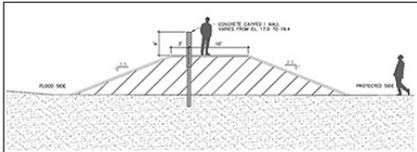
January 29, 2015

Building Design Branch

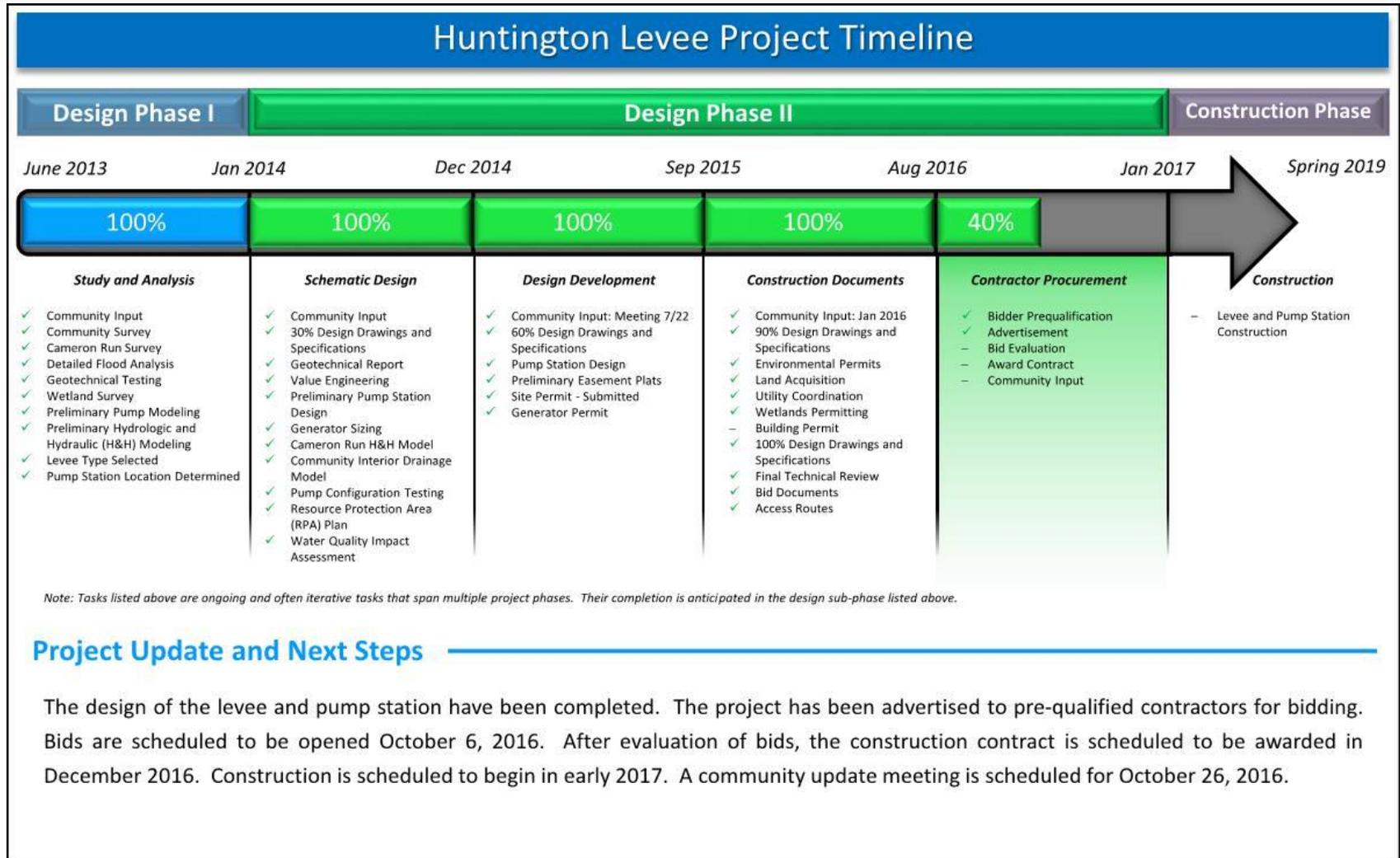
Receive email notification of public meetings and project updates:

Email address:

You will be sent a subscription confirmation request which you must reply to with the word OK as the body of the message. (The message that is sent will also have instructions letting you know how to respond.)



Community Outreach



Project Update and Next Steps

The design of the levee and pump station have been completed. The project has been advertised to pre-qualified contractors for bidding. Bids are scheduled to be opened October 6, 2016. After evaluation of bids, the construction contract is scheduled to be awarded in December 2016. Construction is scheduled to begin in early 2017. A community update meeting is scheduled for October 26, 2016.

Community Outreach

Community Meetings

- Bi-annually
- Important Milestones
- Next Community meeting – Spring 2017

Community Outreach

Storm Events

- Similar to current response
- Contractor responsible to maintain current condition (no worse)
- Temporary pumping as needed
- Contractor will be notified when County dispatches to site

Community Outreach

- Contact Information – Huntington Levee Project
 - Phone #: 703-324-5800
 - Email address: HuntingtonLevee@fairfaxcounty.gov
- Huntington Levee Website:
www.fairfaxcounty.gov/dpwes/huntingtonlevee

To request this document in an alternate format call 703-324-5800, TTY 711.