

**APPROVED JURISDICTIONAL DETERMINATION FORM**  
**U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

- A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 06/17/2016**  
**B. Rapanos Guidance Memo Note: In addition, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not waters of the United States because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters.**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:**

**DISTRICT: NAO**

**FILE NAME: Light Rail      PROJECT NUMBER: NAO-2009-2117**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: VA      County/parish/borough: Virginia Beach      City: Virginia Beach  
Center coordinates of site (lat/long in degree decimal format): Lat. 36.839482° **N**, Long. 76.140761° **W**.  
Universal Transverse Mercator:

Name of nearest waterbody: None. Ditches excavated from upland and part of stormwater management.

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Elizabeth River and Thalia Creek

Name of watershed or Hydrologic Unit Code (HUC): 02080208, 02080108

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.  
 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

- Office (Desk) Determination. Date: 6/17/2016  
 Field Determination. Date(s): 2/2/2016

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.  
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  
 Non-RPWs that flow directly or indirectly into TNWs  
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  
 Impoundments of jurisdictional waters  
 Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet:      width (ft) and/or      acres.  
Wetlands:      acres.

**c. Limits (boundaries) of jurisdiction based on: Pick List**

Elevation of established OHWM (if known): n/a.

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: .

**SECTION III: CWA ANALYSIS**

**A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

**1. TNW**

Identify TNW: .

Summarize rationale supporting determination: .

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”:

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

**1. Characteristics of non-TNWs that flow directly or indirectly into TNW**

**(i) General Area Conditions:**

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: 40 inches

Average annual snowfall: inches

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW<sup>5</sup>: .

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

**Tributary is:**  Natural  
 Artificial (man-made). Explain: .  
 Manipulated (man-altered). Explain: .

**Tributary properties with respect to top of bank (estimate):**

Average width: feet  
Average depth: feet  
Average side slopes: **Pick List**.

**Primary tributary substrate composition (check all that apply):**

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover:  
 Other. Explain: .

**Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:** .

**Presence of run/riffle/pool complexes. Explain:** .

**Tributary geometry: Pick List**

**Tributary gradient (approximate average slope):** %

(c) Flow:

**Tributary provides for: Pick List**

**Estimate average number of flow events in review area/year: Pick List**

Describe flow regime: .

**Other information on duration and volume:** .

**Surface flow is: Pick List. Characteristics:** .

**Subsurface flow: Pick List. Explain findings:** .

Dye (or other) test performed: .

**Tributary has (check all that apply):**

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain: .

**If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):**

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;  
 physical markings/characteristics  vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

<sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width): .
- Wetland fringe. Characteristics: .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
  - Aquatic/wildlife diversity. Explain findings: .

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size:        acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: .

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width): .
- Vegetation type/percent cover. Explain: .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
  - Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately (        ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)      Size (in acres)      Directly abuts? (Y/N)      Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

### C. SIGNIFICANT NEXUS DETERMINATION

**A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.**

**Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:**

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:  
 TNWs:      linear feet      width (ft), Or,      acres.  
 Wetlands adjacent to TNWs:      acres.
2. **RPWs that flow directly or indirectly into TNWs.**  
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .  
 Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
  - Other non-wetland waters: acres.
- Identify type(s) of waters: .

**3. Non-RPW<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
  - Other non-wetland waters: acres.
- Identify type(s) of waters: .

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
  - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
  - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: \_\_\_\_\_ linear feet \_\_\_\_\_ width (ft).
- Other non-wetland waters: \_\_\_\_\_ acres.  
Identify type(s) of waters: \_\_\_\_\_.
- Wetlands: \_\_\_\_\_ acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: \_\_\_\_\_.
- Other: (explain, if not covered above): **As stated in the Federal Register, page 41217, November 13, 1986 regarding Section 328.3 definitions: For clarification it should be noted that we generally do not consider the following waters to be "Waters of the United States." However, the Corps reserves the right on a case-by-case basis to determine that a particular waterbody within these categories of waters is a water of the United States. EPA also has the right to determine on a case-by-case basis if any of these waters are "waters of the United States." (a) Non-tidal drainage and irrigation ditches excavated on dry land.**

**328.3 definitions: For clarification it should be noted that we generally do not consider the following waters to be "Waters of the United States." However, the Corps reserves the right on a case-by-case basis to determine that a particular waterbody within these categories of waters is a water of the United States. EPA also has the right to determine on a case-by-case basis if any of these waters are "waters of the United States." (a) Non-tidal drainage and irrigation ditches excavated on dry land.**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): \_\_\_\_\_ linear feet \_\_\_\_\_ width (ft).
- Lakes/ponds: \_\_\_\_\_ acres.
- Other non-wetland waters: \_\_\_\_\_ acres. List type of aquatic resource: \_\_\_\_\_.
- Wetlands: \_\_\_\_\_ acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): \_\_\_\_\_ linear feet, \_\_\_\_\_ width (ft).
- Lakes/ponds: \_\_\_\_\_ acres.
- Other non-wetland waters: \_\_\_\_\_ acres. List type of aquatic resource: \_\_\_\_\_.
- Wetlands: \_\_\_\_\_ acres.

**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: \_\_\_\_\_.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: \_\_\_\_\_.
- Corps navigable waters' study: \_\_\_\_\_.
- U.S. Geological Survey Hydrologic Atlas: \_\_\_\_\_.
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: \_\_\_\_\_.
- USDA Natural Resources Conservation Service Soil Survey. Citation: \_\_\_\_\_.
- National wetlands inventory map(s). Cite name: \_\_\_\_\_.
- State/Local wetland inventory map(s): \_\_\_\_\_.
- FEMA/FIRM maps: \_\_\_\_\_.
- 100-year Floodplain Elevation is: \_\_\_\_\_ (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Various Google Earth and Bing.  
or  Other (Name & Date): \_\_\_\_\_.
- Previous determination(s). File no. and date of response letter: \_\_\_\_\_.
- Applicable/supporting case law: \_\_\_\_\_.
- Applicable/supporting scientific literature: \_\_\_\_\_.

Other information (please specify): These are ditches excavated from upland, lack any bed or bank features, flow only during storm events, are located within a railroad corridor generally adjacent to urban developed area, and are a part of the Virginia Beach maintained stormwater management system.

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

On-Site

February 2, 2016

John Evans, USACE, 757-201-7794, John.D.Evans@usace.army.mil

Jeff Hannah, DEQ, 757-518-2146, jeffrey.hannah@deq.virginia.gov

Ricky Woody, PWS, RK&K, 804-771-9123, rwoody@rkk.com

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Andrew Griffey, RK&K, 757-306-6879, agriffey@rkk.com

On February 2, 2016, the waters of the U. S. (WOUS) Jurisdictional Determination (JD) field review was performed for the Virginia Beach Transit Extension Project. The field review covered the current project limits from the Newtown Road Station in the City of Norfolk to east of Thalia Creek in the City of Virginia Beach. The purpose of the review was to field review the wetland and stream boundaries as delineated and reported by Rummel, Klepper, and Kahl (RK&K) field scientists. Previous reports investigated by others, indicated thirty-nine linear depressions as possible wetlands. The wetlands and waters investigation performed by RK&K examined all of these areas as well as an area near the existing train station. The Wetlands and Waters Technical Report describing RK&K findings was submitted to USACE and DEQ in December 2015.

In a brief overview meeting, the previous WOUS reports and JD were discussed in relation to the RK&K WOUS report. The field review commenced at the Newtown Station and concluded to the east of Thalia Creek. The corridor is linear and the wetlands and waters in question were easily accessed. The Agencies determined that most wetlands in the corridor were non-jurisdictional. The attached Jurisdictional Table reflects the status determined during the field review. The basis of determination for the non-jurisdictional decision is as follows:

1. The areas originally were excavated in uplands.
2. The areas are not draining wetland features.
3. The areas were created specifically for the purpose of conveying stormwater.

The current delineation of U-22-dp1, with USM-22 and USM-23, includes several coincidental JDs. NAO-2014-1830 for a City of Virginia Beach sewer line aerial crossing, NAO-2003-2206, "Site-6" that was a part of a "Rail Abandonment" pre-application action, and NAO-2013-0387 for the "15-Clearfield" site, a part of FY2013 Virginia Beach ditch maintenance. I concur that the culverted crossing includes a north/south jurisdictional tributary, but east/west ditches are not jurisdictional.

NAO-2003-2206, Rail Abandonment, identified a minimum of 11 Section 10 and 404 locations, in a 15 mile rail segment. Site-5 is west of the current JD and may have been affected by the initial light rail construction. As noted, "Site-6" is within the current 3-mile segment JD and is consistent with Section 404 authority. Site-7 is east of the current JD, but would be consistent with Section 10 and 404 authority in and near Thalia Creek. No other wetlands or tributaries were identified by the 2003 action..

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**U.S. Army Corps of Engineers**

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**SECTION I: BACKGROUND INFORMATION**

- A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 06/21/2016**  
**B. This is for two isolated depressions, often ponded, possibly construction related, but naturalized with no observed overflow feature. Iso-13 (PFO) is 1700 square feet and Iso-14 (PEM) is 7188 square feet..**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:**

**DISTRICT: NAO**

**FILE NAME: Light Rail      PROJECT NUMBER: NAO-2009-2117**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: VA                      County/parish/borough: Virginia Beach                      City: Virginia Beach  
Center coordinates of site (lat/long in degree decimal format): Lat. 36.839482° **N**, Long. 76.140761° **W**.  
Universal Transverse Mercator:

Name of nearest waterbody: None. Ditches excavated from upland and part of stormwater management.

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Elizabeth River and Thalia Creek

Name of watershed or Hydrologic Unit Code (HUC): 02080208, 02080108

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.  
 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

- Office (Desk) Determination. Date: 6/17/2016  
 Field Determination. Date(s): 2/2/2016

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.  
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  
 Non-RPWs that flow directly or indirectly into TNWs  
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  
 Impoundments of jurisdictional waters  
 Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet:              width (ft) and/or              acres.  
Wetlands:              acres.

**c. Limits (boundaries) of jurisdiction based on: Pick List**

Elevation of established OHWM (if known): n/a.

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: **This is for two isolated depressions, often ponded, possibly construction related, but naturalized with no observed overflow feature. Iso-13 (PFO) is 1700 square feet and Iso-14 (PEM) is 7188 square feet.**

**SECTION III: CWA ANALYSIS**

**A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

**1. TNW**

Identify TNW: .

Summarize rationale supporting determination: .

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”:

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

**1. Characteristics of non-TNWs that flow directly or indirectly into TNW**

**(i) General Area Conditions:**

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: 40 inches

Average annual snowfall: inches

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW<sup>5</sup>: .

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

**Tributary is:**  Natural  
 Artificial (man-made). Explain: .  
 Manipulated (man-altered). Explain: .

**Tributary properties with respect to top of bank (estimate):**

Average width: feet  
Average depth: feet  
Average side slopes: **Pick List**.

**Primary tributary substrate composition (check all that apply):**

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover:  
 Other. Explain: .

**Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:** .

**Presence of run/riffle/pool complexes. Explain:** .

**Tributary geometry: Pick List**

**Tributary gradient (approximate average slope):** %

(c) Flow:

**Tributary provides for: Pick List**

**Estimate average number of flow events in review area/year: Pick List**

Describe flow regime: .

**Other information on duration and volume:** .

**Surface flow is: Pick List. Characteristics:** .

**Subsurface flow: Pick List. Explain findings:** .

Dye (or other) test performed: .

**Tributary has (check all that apply):**

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain: .

**If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):**

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;  
 physical markings/characteristics  vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

<sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width): .
- Wetland fringe. Characteristics: .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
  - Aquatic/wildlife diversity. Explain findings: .

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size:        acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: .

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width): .
- Vegetation type/percent cover. Explain: .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
  - Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately (        ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)      Size (in acres)      Directly abuts? (Y/N)      Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

### C. SIGNIFICANT NEXUS DETERMINATION

**A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.**

**Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:**

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:  
 TNWs:      linear feet      width (ft), Or,      acres.  
 Wetlands adjacent to TNWs:      acres.
2. **RPWs that flow directly or indirectly into TNWs.**  
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .  
 Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters:          linear feet          width (ft).
- Other non-wetland waters:          acres.
- Identify type(s) of waters:          .

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters:          linear feet          width (ft).
- Other non-wetland waters:          acres.
- Identify type(s) of waters:          .

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
  - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:          .
  - Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:          .

Provide acreage estimates for jurisdictional wetlands in the review area:          acres.

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area:          acres.

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area:          acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:          .
- Other factors. Explain:          .

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.  
Identify type(s) of waters: .
- Wetlands: acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: .
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Various Google Earth and Bing.  
or  Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): This is for two isolated depressions, often ponded, possibly construction related, but naturalized with no observed overflow feature. .

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

On-Site

February 2, 2016

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On February 2, 2016, the waters of the U. S. (WOUS) Jurisdictional Determination (JD) field review was performed for the Virginia Beach Transit Extension Project. The field review covered the current project limits from the Newtown Road Station in the City of Norfolk to east of Thalia Creek in the City of Virginia Beach. The purpose of the review was to field review the wetland and stream boundaries as delineated and reported by Rummel, Klepper, and Kahl (RK&K) field scientists. Previous reports investigated by others, indicated thirty-nine linear depressions as possible wetlands. The wetlands and waters investigation performed by RK&K examined all of these areas as well as an area near the existing train station. The Wetlands and Waters Technical Report describing RK&K findings was submitted to USACE and DEQ in December 2015.

In a brief overview meeting, the previous WOUS reports and JD were discussed in relation to the RK&K WOUS report. The field review commenced at the Newtown Station and concluded to the east of Thalia Creek. The corridor is linear and the wetlands and waters in question were easily accessed. The Agencies determined that most wetlands in the corridor were non-jurisdictional. The attached Jurisdictional Table reflects the status determined during the field review. The basis of determination for the non-jurisdictional decision is as follows:

1. The areas originally were excavated in uplands.
2. The areas are not draining wetland features.
3. The areas were created specifically for the purpose of conveying stormwater.
4. This includes two isolated depressions, often ponded, possibly construction related, but naturalized with no observed overflow feature.

The current delineation of U-22-dp1, with USM-22 and USM-23, includes several coincidental JDs. NAO-2014-1830 for a City of Virginia Beach sewer line aerial crossing, NAO-2003-2206, "Site-6" that was a part of a "Rail Abandonment" pre-application action, and NAO-2013-0387 for the "15-Clearfield" site, a part of FY2013 Virginia Beach ditch maintenance. The culverted crossing includes a north/south jurisdictional tributary, but east/west ditches are not jurisdictional.

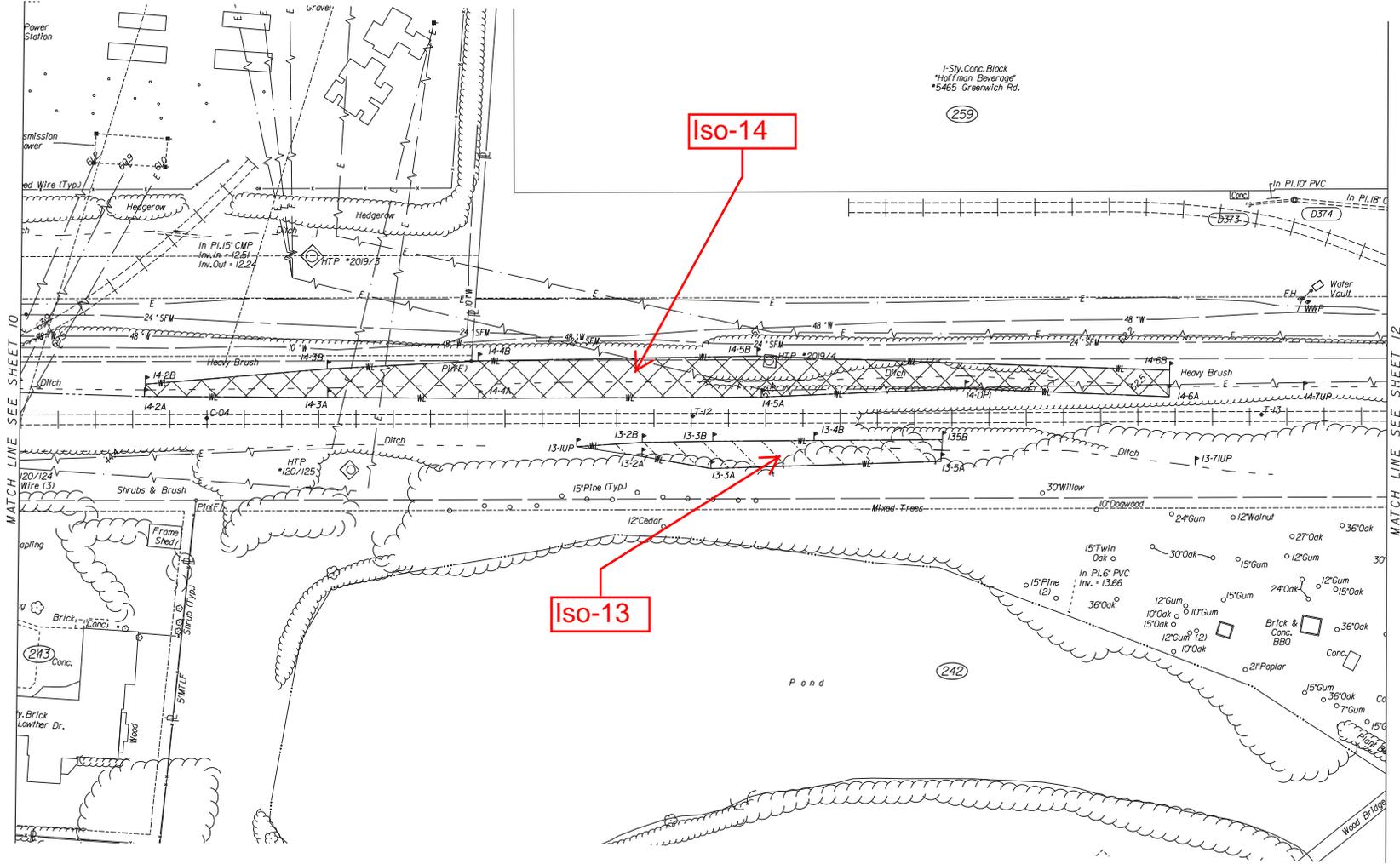
NAO-2003-2206, Rail Abandonment, identified a minimum of 11 Section 10 and 404 locations, in a 15 mile rail segment. Site-5 is west of the current JD and may have been affected by the initial light rail construction. As noted, "Site-6" is within the current 3-mile segment JD and is consistent with Section 404 authority. Site-7 is east of the current JD, but would be consistent with Section 10 and 404 authority in and near Thalia Creek. No other wetlands or tributaries were identified by the 2003 action..

Length or sq.ft.	Virginia Beach Transit Extension Waters Locations			NAO-2009-2117		*unless noted
	SW= stormwater ditch					
	USM=stream	W=wetland	Decimal Degrees			
	Iso=Isolated					
	Considered WOUS	Type	Area	West *	East*	noted
300	no	SW	101	36.840971, -76.191171	36.840980, -76.190192	
400	no	SW	1	36.840968, -76.189248	36.840896, -76.187863	
200	no	SW	2	36.841042, -76.188501	36.841018, -76.187730	
100	no	SW	3	36.841025, -76.187703	36.841014, -76.187439	
200	no	SW	5	36.840896, -76.187863	36.840934, -76.187077	
100	no	SW	6	36.840873, -76.186555	36.840901, -76.186159	
200	no	SW	7	36.840962, -76.185000	36.840949, -76.184333	
100	no	SW	8	36.840845, -76.184686	36.840843, -76.184317	
200	no	SW	9	36.840956, -76.183958	36.840965, -76.183215	
2500	no	SW	10	36.840948, -76.184077	36.840715, -76.175468	
10	no	SW	11	36.840836, -76.177988	36.840849, -76.177944	
500	no	SW	12	36.840849, -76.177597	36.840817, -76.175968	
1700 sq.ft.	no-isolated-DEQ	Iso	13	36.840726, -76.175293	36.840665, -76.173243	
7188 sq.ft.	no-isolated-DEQ	Iso	14	36.840793, -76.175017	36.840745, -76.172466	
20	no	SW	15	36.840663, -76.172284	36.840669, -76.172178	
250	no	SW	16	36.840772, -76.172322	36.840757, -76.171478	
100	no	SW	17	36.840746, -76.171151	36.840649, -76.170739	
30	no	SW	18	36.840742, -76.171179	36.840747, -76.171063	
300	no	SW	19	36.840736, -76.170708	36.840755, -76.169781	
100	no	SW	20	36.840755, -76.169571	36.840751, -76.169235	
200	no	SW	21	36.840676, -76.167490	36.840650, -76.166965	
100	no	SW	22	36.840667, -76.165861	36.840650, -76.165593	
200	yes	USM	S22/23	36.840767, -76.165572	36.840426, -76.165273	
100	no	SW	23	36.840538, -76.165400	36.840564, -76.165186	
900	no	SW	24	36.840427, -76.158409	36.840384, -76.155296	
1400	no	SW	25	36.840401, -76.155060	36.840349, -76.150221	
100	no	SW	O25A	36.840759, -76.150332	36.840602, -76.150163	NW to SE
100	no	SW	O25B	36.840656, -76.150426	36.840523, -76.150286	NW to SE
1700	no	SW	26	36.840372, -76.149889	36.840266, -76.144181	
1000	no	SW	27	36.840202, -76.147392	36.840116, -76.144204	
1000	no	SW	28	36.840126, -76.143935	36.840107, -76.140657	
200	no	SW	29	36.840245, -76.142869	36.840238, -76.142089	
400	no	SW	30	36.840213, -76.140315	36.840195, -76.138984	
300 sq. ft.	yes	W	32	36.840257, -76.138127	36.840259, -76.138064	
200	yes	USM	S32	36.840287, -76.138047	36.839806, -76.138075	N to S
600	yes	USM	31-N	36.840042, -76.140139	36.839955, -76.138193	
10	no	SW	33	36.840056, -76.136607	36.840067, -76.136552	
50	no	SW	34	36.840045, -76.135214	36.840056, -76.135061	
1000	no	SW	35	36.840150, -76.134769	36.840113, -76.131334	
100	no	SW	36	36.839994, -76.134660	36.840005, -76.134197	
500	no	SW	37	36.840005, -76.133086	36.839994, -76.131353	
1000	no	SW	38	36.839975, -76.130989	36.839905, -76.127618	
300	no	SW	39	36.840087, -76.130583	36.840069, -76.129468	
200	no	SW	40W	36.840038, -76.128268	36.840038, -76.127692	
1000 sq. ft.	yes	W	40N	36.840023, -76.127377	36.840001, -76.126976	
1900 sq. ft.	yes	W	40S	36.839924, -76.127271	36.839920, -76.126981	
440	yes	USM	S10	36.839531, -76.151587	36.839901, -76.150135	SW to NE

4-20-2016, jde  
**RECEIVED USACE**

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 1:1807 PM  
 2/10/2016



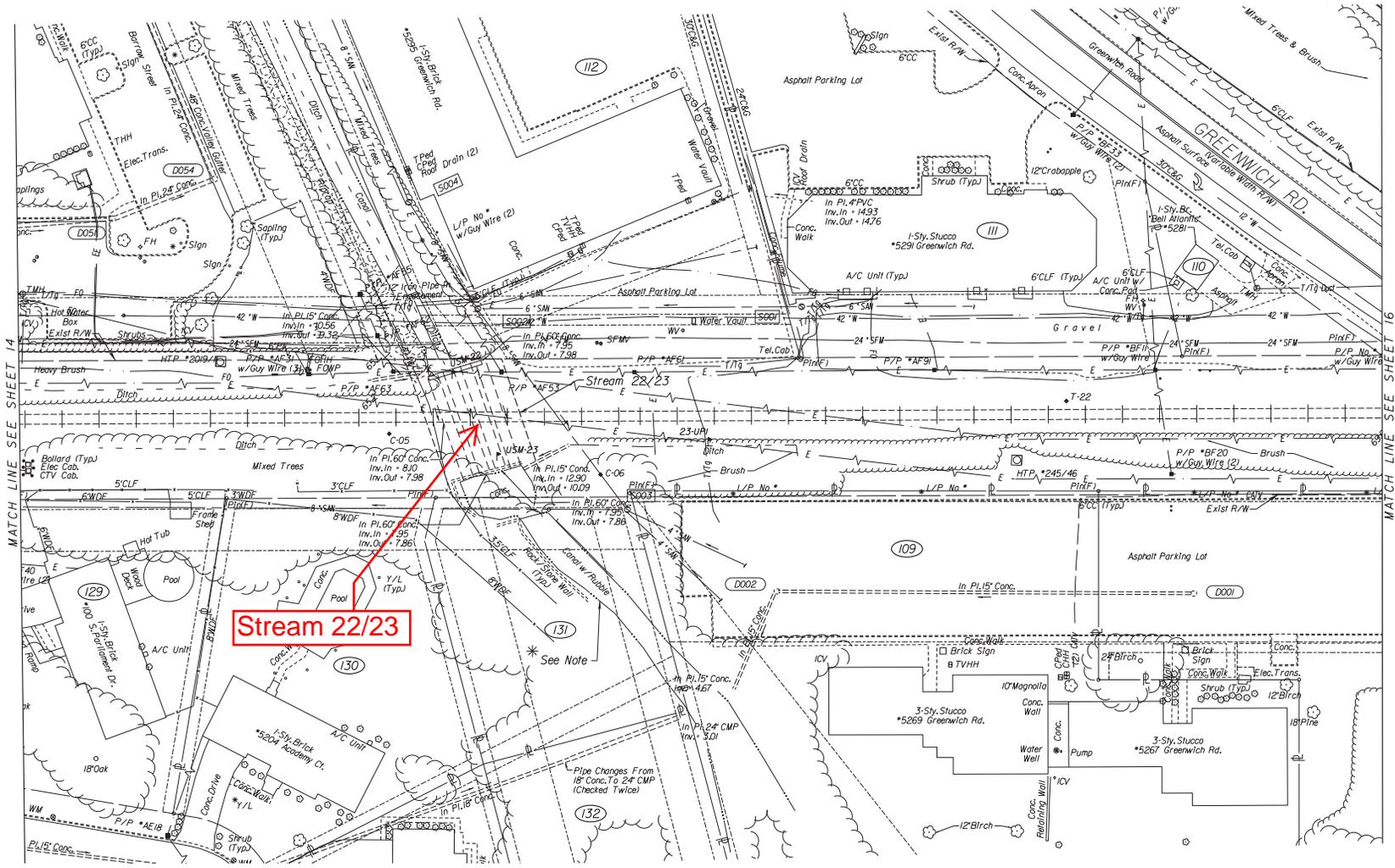
- PEM Wetland (Isolated) = 7188 SQ.FT.
- PFO Wetland (Isolated) = 1700 SQ.FT.



CONTRACT NO. HRT 15-68480R	DRAWING NO. 11	PRELIMINARY JURISDICTIONAL REVIEW	DATE 02/10/16
DATE DATE DATE DATE	DATE DATE DATE DATE	DATE DATE DATE DATE	DATE DATE DATE DATE
NO. REVISION DESCRIPTION	BY	DATE	DATE
<b>HRT LIGHT RAIL PARTNERS</b>  <b>HARTMAN HOLDINGS</b>  <b>TRANSIT</b>			
15% PRELIMINARY ENGINEERING FOR REVIEW ONLY BEACH TRANSIT EXTENSION 4-20-2016, jde <b>RECEIVED USACE</b>			
SUBJECT TO CHANGE WITHOUT NOTICE NOT TO BE USED FOR ACQUISITION OR CONSTRUCTION			

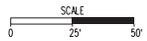
RECEIVED USACE  
 4-20-2016, jde

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--- Denotes Stream Area

NOTE: Stream Continues Beyond Limits Of Study Area.



CONTRACT NO. HRT 15-68480R		DRAWING NO. 15	
PRELIMINARY JURISDICTIONAL REVIEW		02/10/16	
DATE	DATE	DATE	DATE
BY	BY	BY	BY
NO.	REVISION DESCRIPTION	BY	DATE
15% PRELIMINARY ENGINEERING FOR REVIEW OF BEACH TRANSIT EXTENSION			
SUBJECT TO CHANGE WITHOUT NOTICE. NOT TO BE USED FOR ACQUISITION OR CONSTRUCTION.			

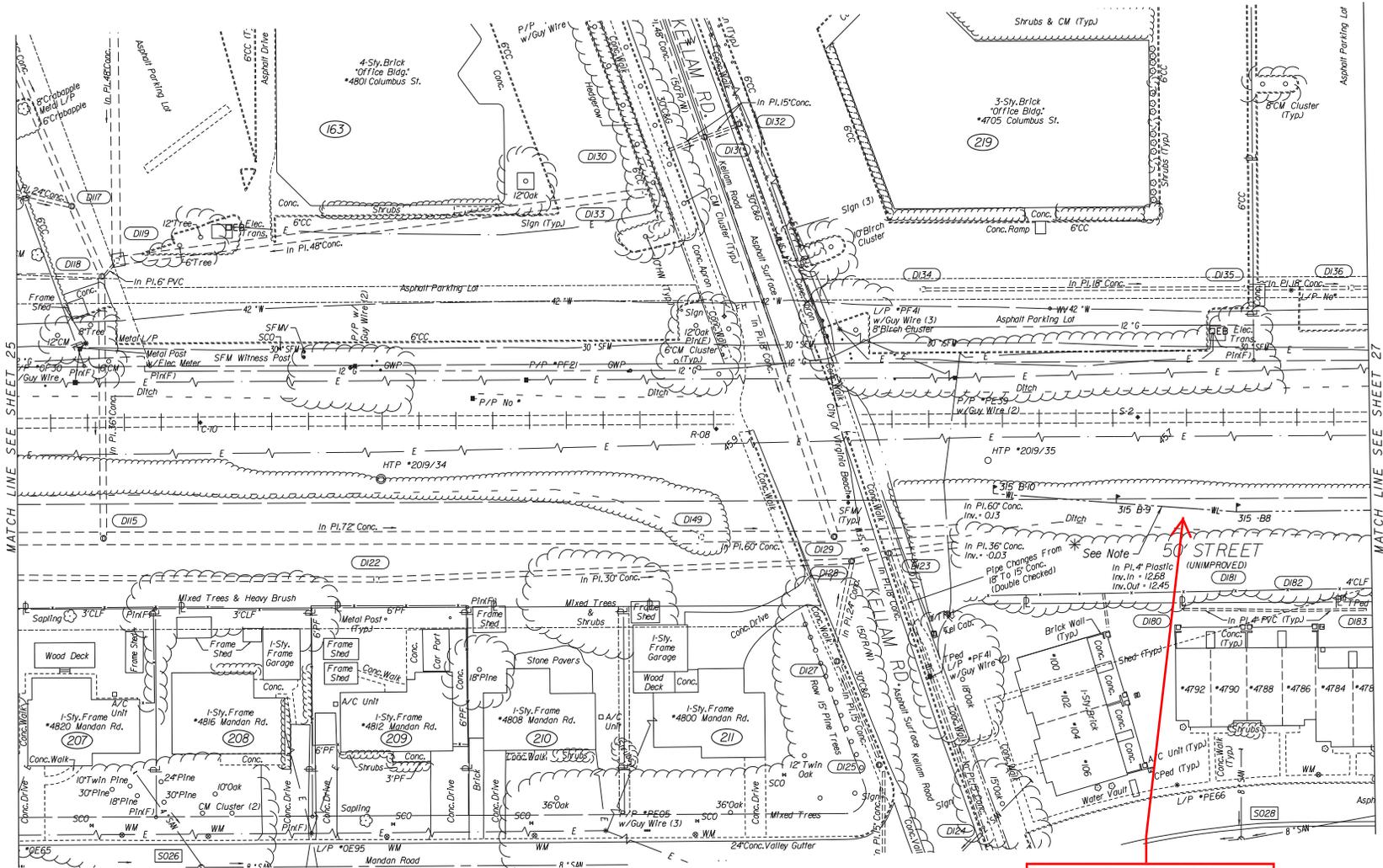
RECEIVED USACE  
 4-20-2016, jde

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 11:21:15 PM  
 2/10/2016

4-20-2016, jde

RECEIVED USACE

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MATCH LINE SEE SHEET 25

MATCH LINE SEE SHEET 27

NOTE: Stream Continues Beyond Limits Of Study Area.



CONTRACT NO. HRT 15-68480R		DRAWING NO. 26	
PRELIMINARY JURISDICTIONAL REVIEW		2/10/16	
DATE	DATE	DATE	DATE
BY	DATE	BY	DATE
NO.	REVISION DESCRIPTION	NO.	REVISION DESCRIPTION
15% PRELIMINARY ENGINEERING FOR REVIEW ONLY SUBJECT TO CHANGE WITHOUT NOTICE NOT TO BE USED FOR ACQUISITION OR CONSTRUCTION			

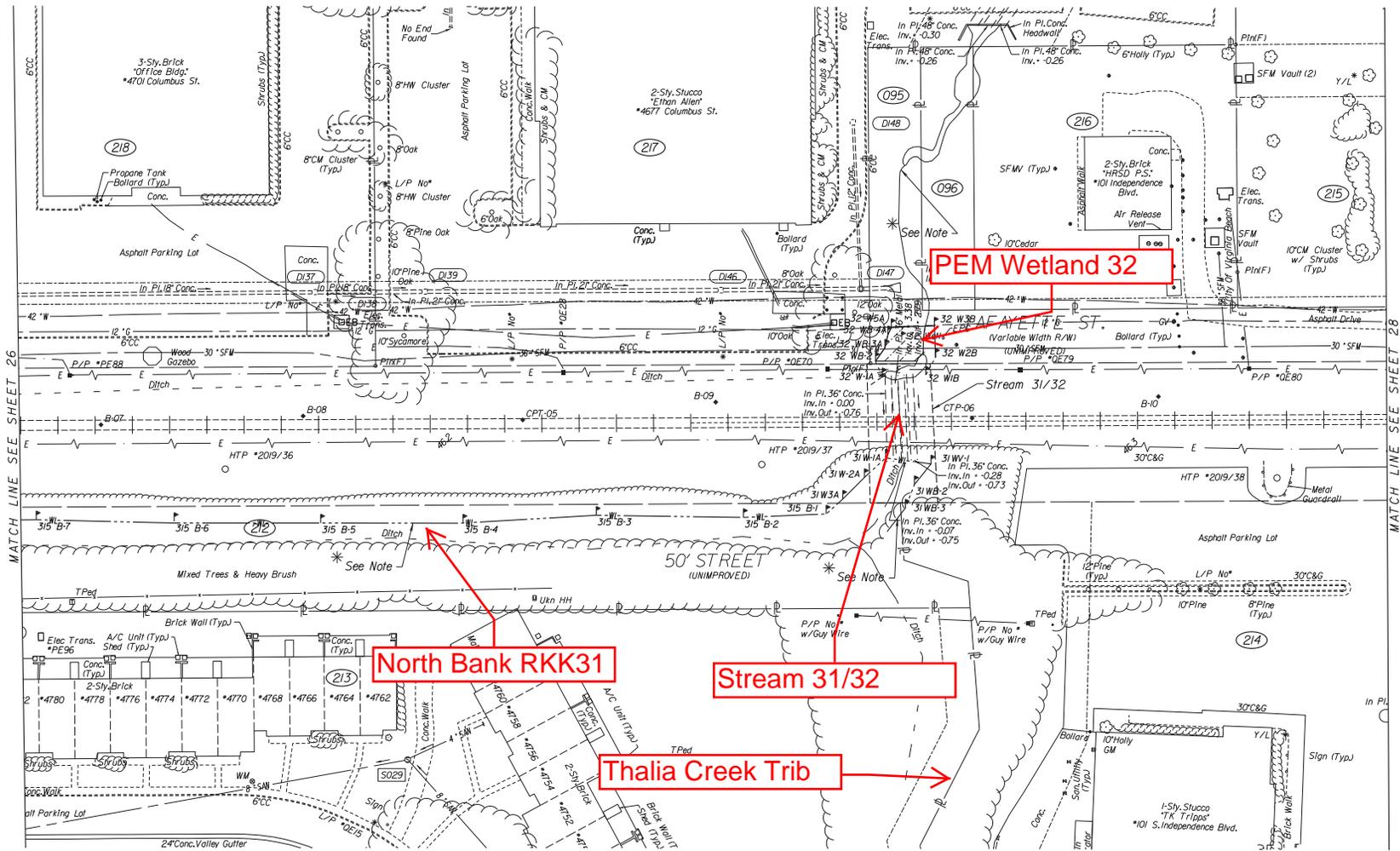
RECEIVED USACE

4-20-2016, jde

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11:56:51 PM  
2/10/2016

4-20-2016, jde  
**RECEIVED USAGE**

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--- Denotes Stream Area  
 PEM Wetland = 294 SQ.FT.

NOTE: Stream Continues Beyond Limits Of Study Area.

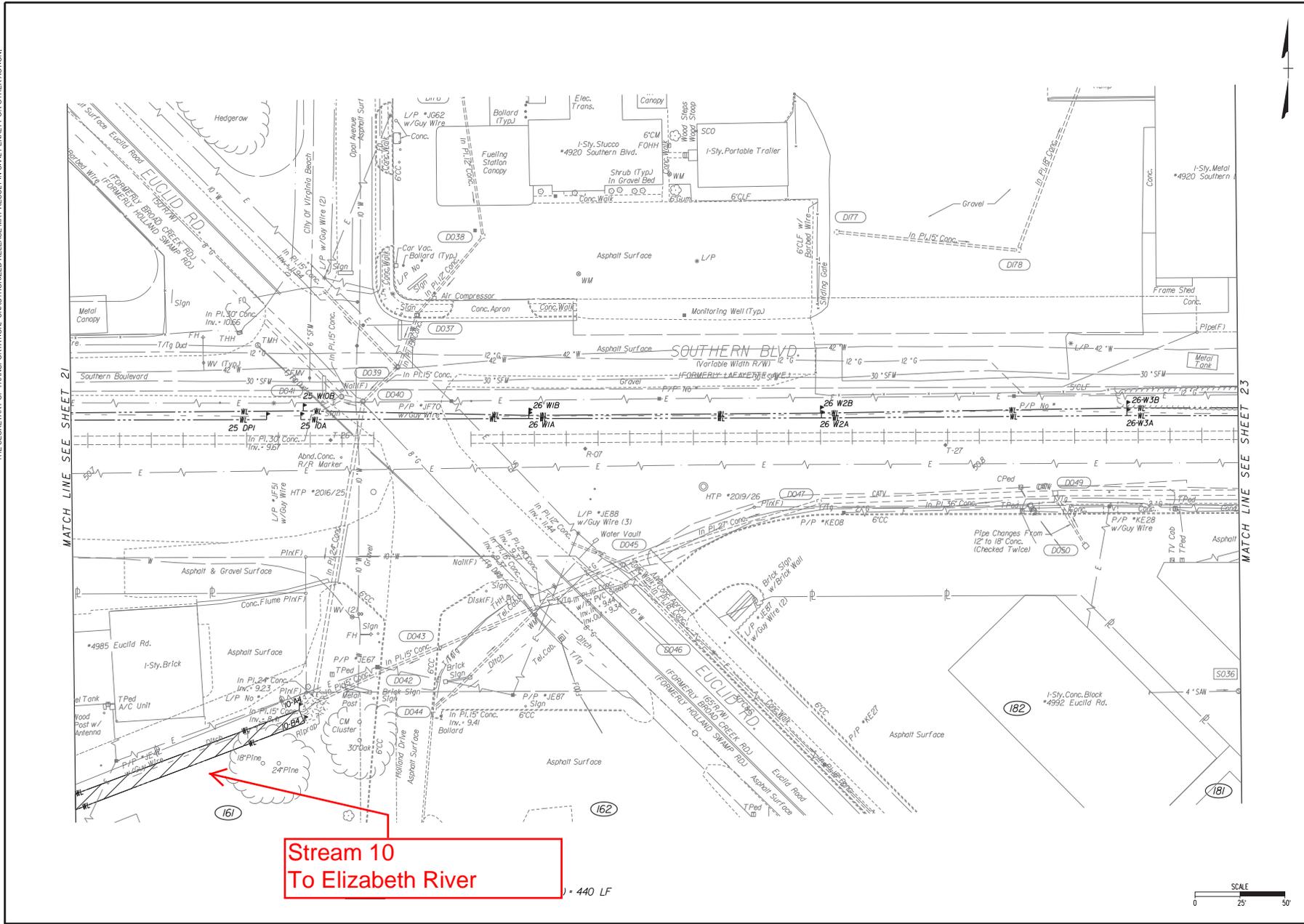


CONTRACT NO. HRT 15-68480R		DRAWING NO. 27	
PRELIMINARY JURISDICTIONAL REVIEW			
DATE	DATE	DATE	DATE
NO.	REVISION DESCRIPTION	BY	DATE
			02/10/16
HRT LIGHT RAIL PARTNERS		HRT BEACH TRANSIT EXTENSION	
15% PRELIMINARY ENGINEERING FOR REVIEW ONLY		4-20-2016, jde	
SUBJECT TO CHANGE WITHOUT NOTICE		RIGHT OF WAY ACQUISITION CONSTRUCTION	

**RECEIVED USAGE**

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8/6/67 AM  
4/1/2016



Stream 10  
To Elizabeth River

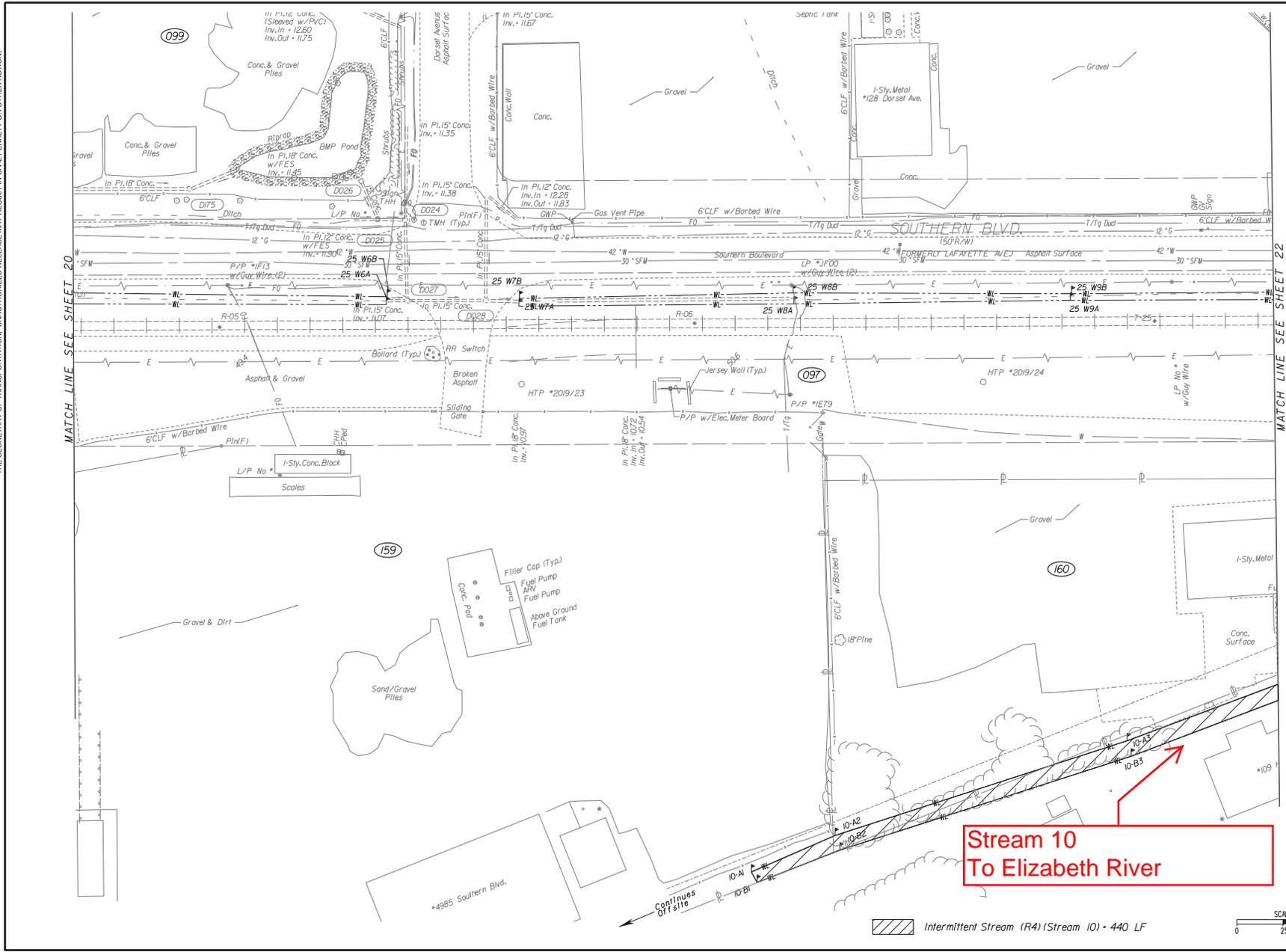
440 LF



CONTRACT NO. HRT 15-6848UR		DRAWING NO. 22	
PRELIMINARY JURISDICTIONAL REVIEW			
DATE	DATE	DATE	DATE
DESIGN	CHKD	APP	DATE
NO. REVISION DESCRIPTION			BY
NO.			DATE
VIRGINIA BEACH TRANSIT EXTENSION			
30% PRELIMINARY ENGINEERING FOR REVIEW ONLY			
SUBJECT TO CHANGE WITHOUT NOTICE			
NOT TO BE USED FOR RIGHT OF WAY ACQUISITION OR CONSTRUCTION			

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8/4/2016 4:17:20 AM



Stream 10  
To Elizabeth River

CONTRACT NO. HRT 15-68480R		DRAWING NO. 21	
PRELIMINARY JURISDICTIONAL REVIEW			
DATE	DATE	DATE	DATE
NO.	NO.	NO.	NO.
BY	DATE	BY	DATE
NO. REVISION DESCRIPTION			
HRT LIGHT RAIL PARTNERS			
VIRGINIA BEACH TRANSIT EXTENSION			
30% PRELIMINARY ENGINEERING FOR REVIEW ONLY			
SUBJECT TO CHANGE WITHOUT NOTICE			
NOT TO BE USED FOR RIGHT OF WAY ACQUISITION OR CONSTRUCTION			

