

**US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KRD
Date: October 18, 2013**

**APPLICATION BY: City of Virginia Beach
PURPOSE: Navigational Access
REC'G WATER BODY: Bayville Creek
LATITUDE: 36°53'30"N
LONGITUDE: 76°6'29"W**

20130604_(1) Vic Map.MXD



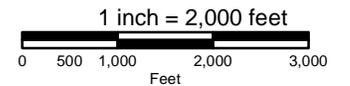
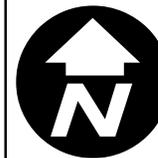
**Kerr Environmental
Services Corp.**

&



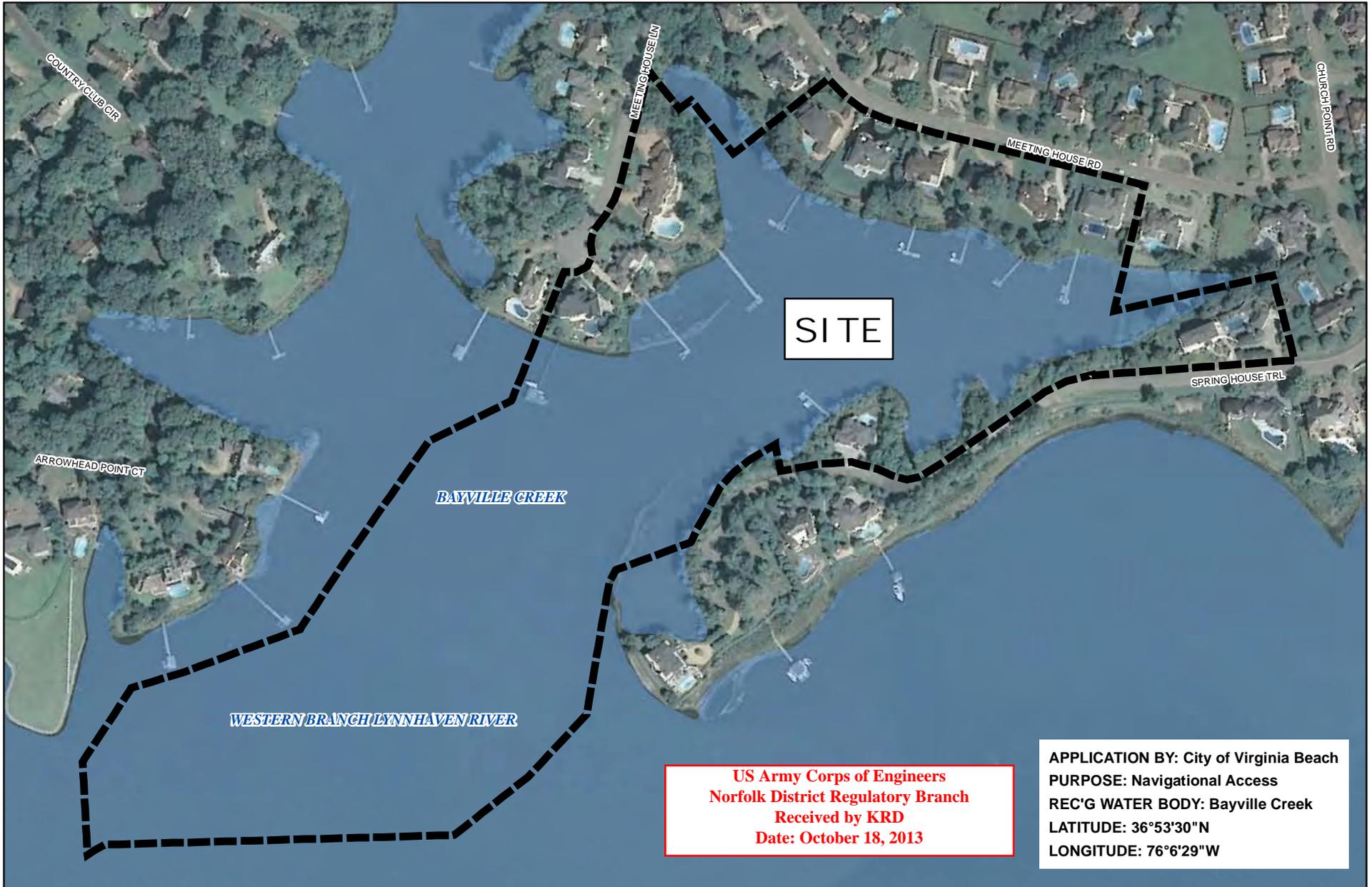
Langley & McDonald, Inc.
Engineering • Planning • Surveying

**JOINT PERMIT APPLICATION DRAWINGS
VICINITY MAP
BAYVILLE CREEK SSD NEIGHBORHOOD DREDGING
VIRGINIA BEACH, VIRGINIA**



Date:
10/10/2013

SHEET
1 OF 14



**US Army Corps of Engineers
 Norfolk District Regulatory Branch
 Received by KR D
 Date: October 18, 2013**

**APPLICATION BY: City of Virginia Beach
 PURPOSE: Navigational Access
 REC'G WATER BODY: Bayville Creek
 LATITUDE: 36°53'30"N
 LONGITUDE: 76°6'29"W**

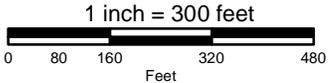


**Kerr Environmental
 Services Corp.**

&



**JOINT PERMIT APPLICATION DRAWINGS
 PROJECT AREA MAP
 BAYVILLE CREEK SSD NEIGHBORHOOD DREDGING
 VIRGINIA BEACH, VIRGINIA**



Date:
 10/10/2013

SHEET
 2 OF 14

LEGEND



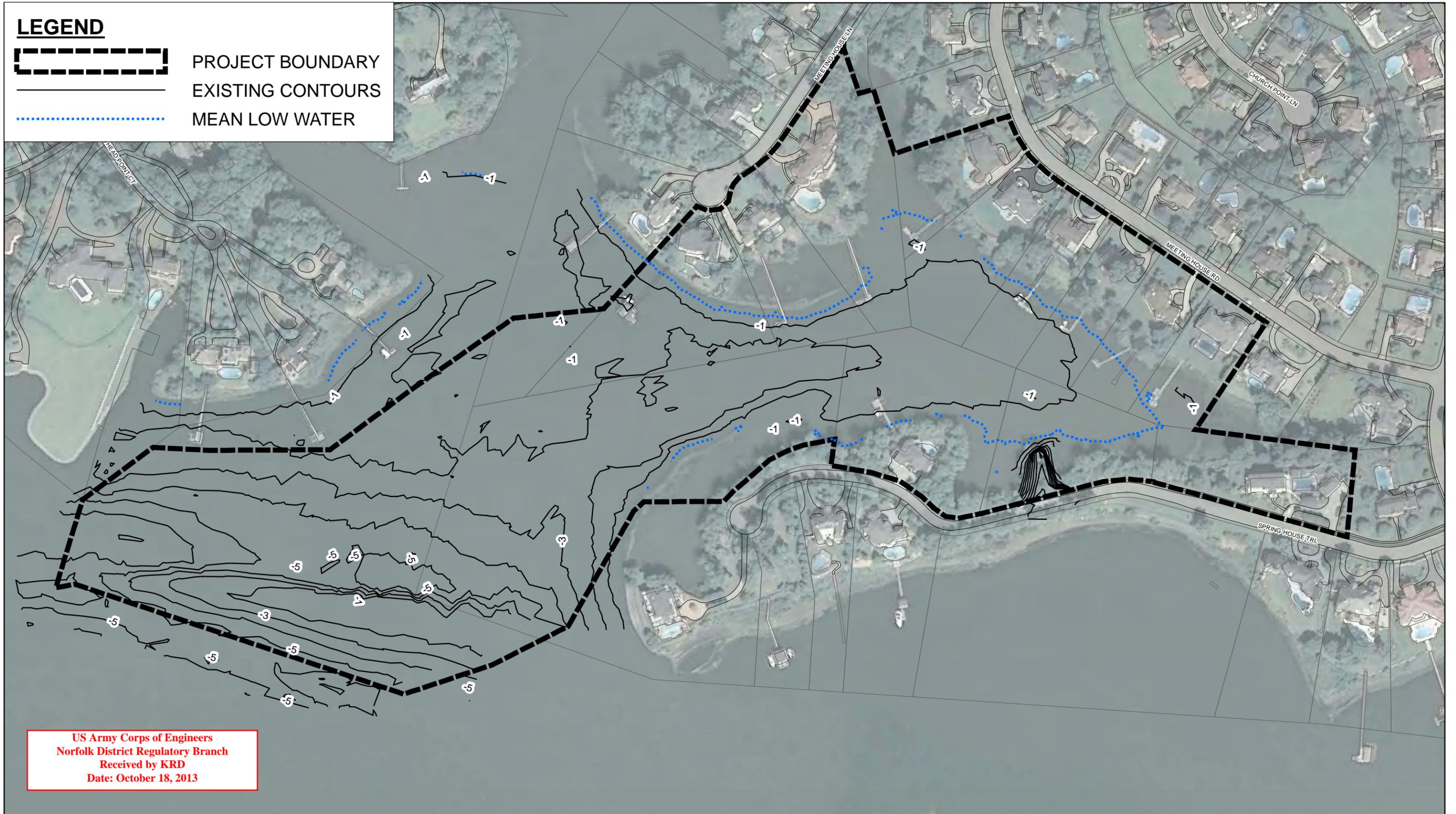
PROJECT BOUNDARY



EXISTING CONTOURS



MEAN LOW WATER



US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KR
Date: October 18, 2013

20130604_(3) Existing Conditions.MXD

Kerr Environmental Services Corp.
& **L&M**
Langley & McDonald, Inc.
Engineering • Planning • Surveying

APPLICATION BY: City of Virginia Beach
PURPOSE: Navigational Access
REC'G WATER BODY: Bayville Creek
LATITUDE: 36°53'30"N
LONGITUDE: 76°6'29"W

JOINT PERMIT APPLICATION DRAWINGS
EXISTING CONDITIONS
BAYVILLE CREEK SSD NEIGHBORHOOD DREDGING
VIRGINIA BEACH, VIRGINIA

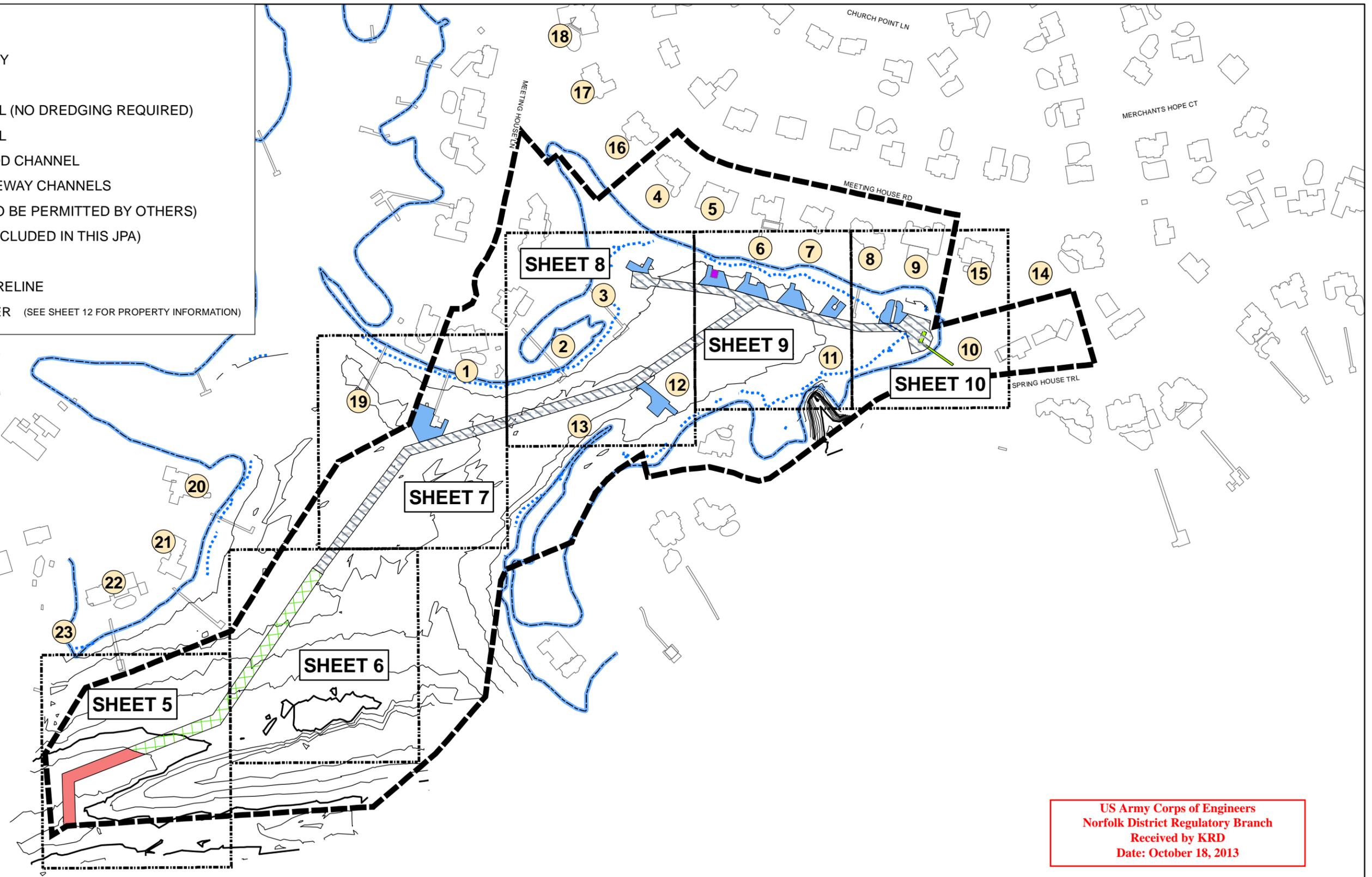
1 inch = 200 feet
0 60 120 240 360 Feet

Date: 10/10/2013

SHEET
3 OF 14

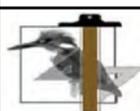
LEGEND

-  PROJECT BOUNDARY
-  SHEET INDEX
-  CITY SPUR CHANNEL (NO DREDGING REQUIRED)
-  CITY SPUR CHANNEL
-  SSD NEIGHBORHOOD CHANNEL
-  HOMEOWNER DRIVEWAY CHANNELS
-  PROPOSED PIER (TO BE PERMITTED BY OTHERS)
-  PROPOSED PIER (INCLUDED IN THIS JPA)
-  MEAN LOW WATER
-  APPROXIMATE SHORELINE
-  # PROPERTY IDENTIFIER (SEE SHEET 12 FOR PROPERTY INFORMATION)



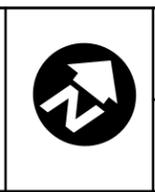
US Army Corps of Engineers
 Norfolk District Regulatory Branch
 Received by KRD
 Date: October 18, 2013

20130604_(4) Prop Cond - Sheet Index.MXD


Kerr Environmental Services Corp.
 & 
L&M
Landmark & Marine, Inc.
 Engineering • Planning • Surveying

APPLICATION BY: City of Virginia Beach
 PURPOSE: Navigational Access
 REC'G WATER BODY: Bayville Creek
 LATITUDE: 36°53'30"N
 LONGITUDE: 76°6'29"W

JOINT PERMIT APPLICATION DRAWINGS
PROPOSED CONDITIONS / SHEET INDEX
 BAYVILLE CREEK SSD NEIGHBORHOOD DREDGING
 VIRGINIA BEACH, VIRGINIA

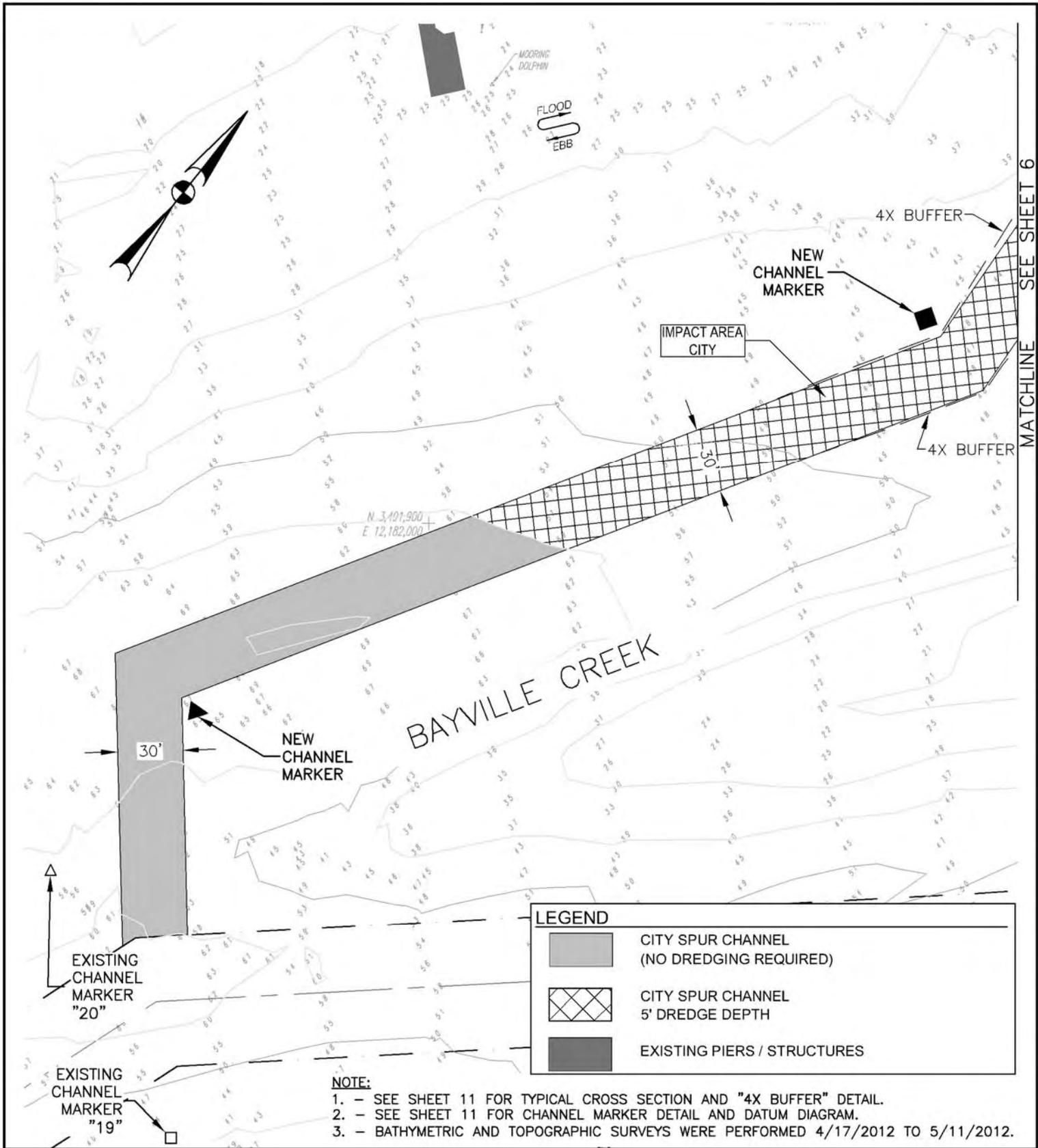


1 inch = 250 feet



Feet

Date: 10/10/2013	SHEET 4 OF 14
------------------	------------------



LEGEND	
	CITY SPUR CHANNEL (NO DREDGING REQUIRED)
	CITY SPUR CHANNEL 5' DREDGE DEPTH
	EXISTING PIERS / STRUCTURES

- NOTE:**
1. - SEE SHEET 11 FOR TYPICAL CROSS SECTION AND "4X BUFFER" DETAIL.
 2. - SEE SHEET 11 FOR CHANNEL MARKER DETAIL AND DATUM DIAGRAM.
 3. - BATHYMETRIC AND TOPOGRAPHIC SURVEYS WERE PERFORMED 4/17/2012 TO 5/11/2012.

Permit_ Exhibits.dwg



Kerr Environmental Services Corp.

&

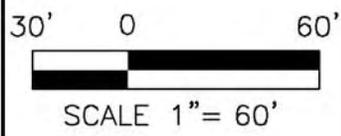


Langley & McDonald, Inc
Engineering • Planning • Surveying

JOINT PERMIT APPLICATION DRAWINGS

BAYVILLE CREEK SSD
NEIGHBORHOOD DREDGING

VIRGINIA BEACH, VIRGINIA



DATUM: MLW = 0.0

DATE:
10/10/13

SHEET:
5 OF 14

**US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KR D
Date: October 18, 2013**

MATCHLINE SEE SHEET 7



4X BUFFER

4X BUFFER

IMPACT AREA
SSD-A

NEW
CHANNEL
MARKERS

IMPACT AREA
CITY



4X BUFFER

4X BUFFER

BAYVILLE CREEK

MATCHLINE SEE SHEET 5

LEGEND

	CITY SPUR CHANNEL 5' DREDGE DEPTH
	SSD NEIGHBORHOOD CHANNEL 5' DREDGE DEPTH

NOTE:

1. - SEE SHEET 11 FOR TYPICAL DREDGE CROSS SECTION AND "4X BUFFER" DETAIL.
2. - SEE SHEET 11 FOR CHANNEL MARKER DETAIL AND DATUM DIAGRAM.
3. - BATHYMETRIC AND TOPOGRAPHIC SURVEYS WERE PERFORMED 4/17/2012 TO 5/11/2012.



Kerr Environmental Services Corp.

&



JOINT PERMIT APPLICATION DRAWINGS

30' 0 60'

SCALE 1" = 60'

BAYVILLE CREEK SSD NEIGHBORHOOD DREDGING

DATUM: MLW = 0.0

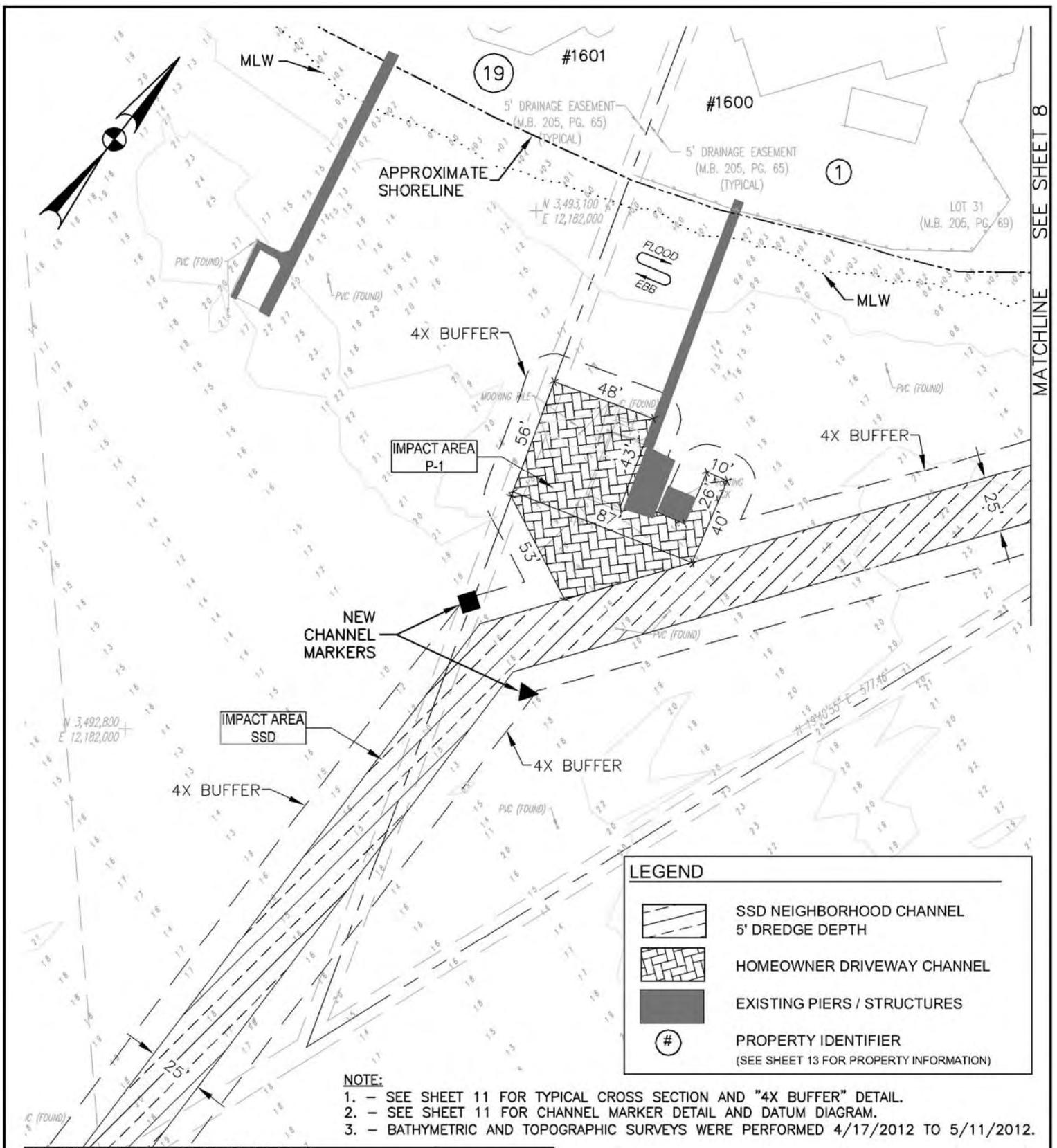
VIRGINIA BEACH, VIRGINIA

DATE:
10/10/13

SHEET:
6 OF 14

US Army Corps of Engineers
Norfolk District Regulatory Branch
 Received by KRD
 Date: October 18, 2013

Permit_ Exhibits.dwg



LEGEND	
	SSD NEIGHBORHOOD CHANNEL 5' DREDGE DEPTH
	HOMEOWNER DRIVEWAY CHANNEL
	EXISTING PIERS / STRUCTURES
	PROPERTY IDENTIFIER (SEE SHEET 13 FOR PROPERTY INFORMATION)

- NOTE:**
1. - SEE SHEET 11 FOR TYPICAL CROSS SECTION AND "4X BUFFER" DETAIL.
 2. - SEE SHEET 11 FOR CHANNEL MARKER DETAIL AND DATUM DIAGRAM.
 3. - BATHYMETRIC AND TOPOGRAPHIC SURVEYS WERE PERFORMED 4/17/2012 TO 5/11/2012.

MATCHLINE SEE SHEET 6

Permit_ Exhibits.dwg



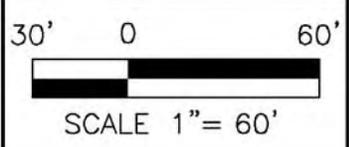
Kerr Environmental Services Corp.

&



Langley & McDonald, Inc
Engineering • Planning • Surveying

JOINT PERMIT APPLICATION DRAWINGS



BAYVILLE CREEK SSD NEIGHBORHOOD DREDGING

DATUM: MLW = 0.0

VIRGINIA BEACH, VIRGINIA

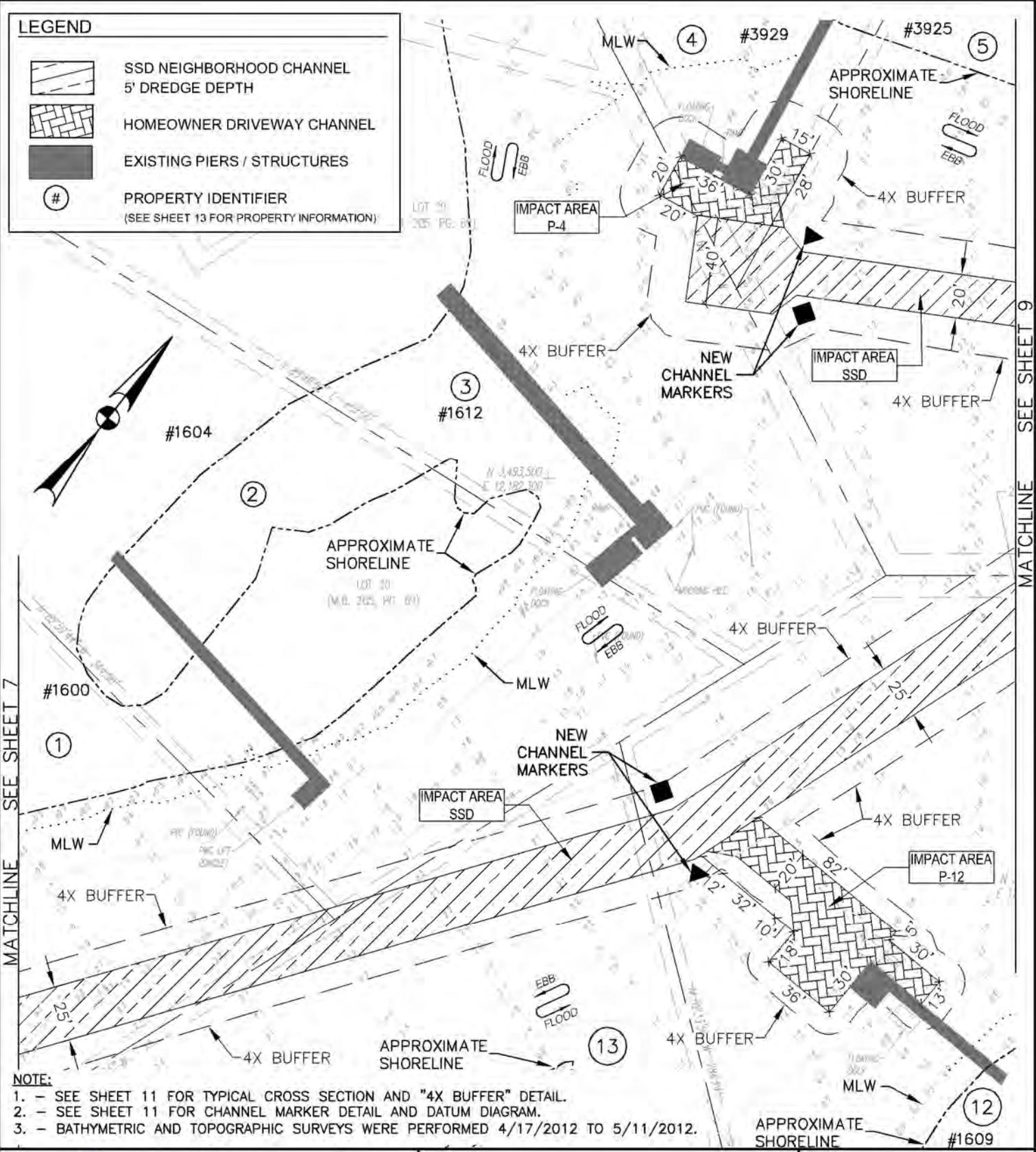
DATE:
10/10/13

SHEET:
7 OF 14

US Army Corps of Engineers
Norfolk District Regulatory Branch
 Received by KR D
 Date: October 18, 2013

LEGEND

-  SSD NEIGHBORHOOD CHANNEL
5' DREDGE DEPTH
-  HOMEOWNER DRIVEWAY CHANNEL
-  EXISTING PIERS / STRUCTURES
-  # PROPERTY IDENTIFIER
(SEE SHEET 13 FOR PROPERTY INFORMATION)



NOTE:
 1. - SEE SHEET 11 FOR TYPICAL CROSS SECTION AND "4X BUFFER" DETAIL.
 2. - SEE SHEET 11 FOR CHANNEL MARKER DETAIL AND DATUM DIAGRAM.
 3. - BATHYMETRIC AND TOPOGRAPHIC SURVEYS WERE PERFORMED 4/17/2012 TO 5/11/2012.



Kerr Environmental Services Corp.

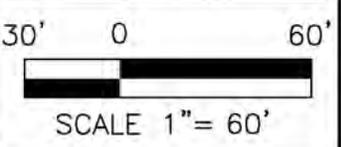
&



Langley & McDonald, Inc.
 Engineering • Planning • Surveying

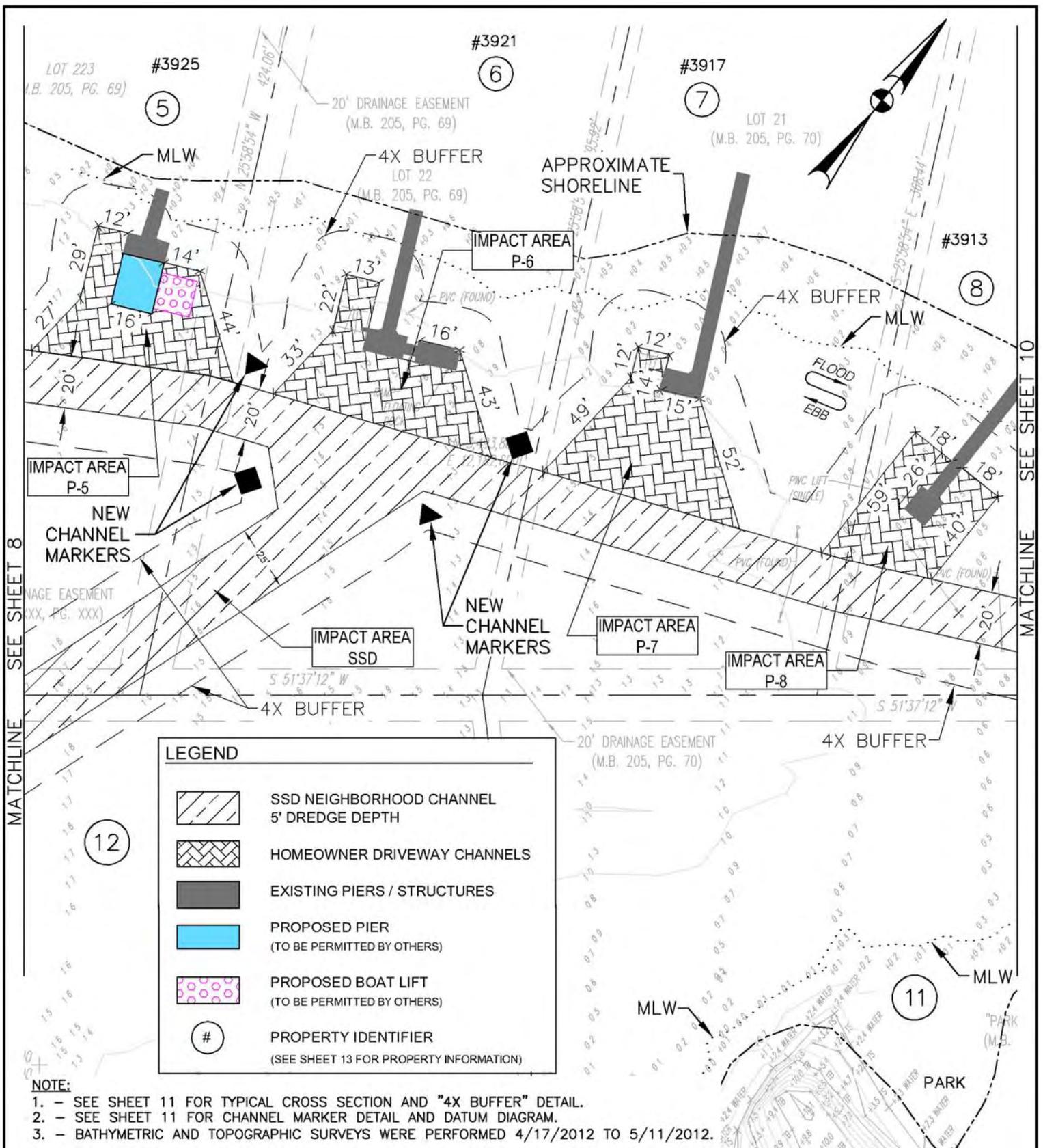
JOINT PERMIT APPLICATION DRAWINGS

BAYVILLE CREEK SSD
 NEIGHBORHOOD DREDGING
 VIRGINIA BEACH, VIRGINIA



DATUM: MLW = 0.0
 DATE: 10/10/13
 SHEET: 8 OF 14

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KR D
Date: October 18, 2013



LEGEND

-  SSD NEIGHBORHOOD CHANNEL
5' DREDGE DEPTH
-  HOMEOWNER DRIVEWAY CHANNELS
-  EXISTING PIERS / STRUCTURES
-  PROPOSED PIER
(TO BE PERMITTED BY OTHERS)
-  PROPOSED BOAT LIFT
(TO BE PERMITTED BY OTHERS)
-  PROPERTY IDENTIFIER
(SEE SHEET 13 FOR PROPERTY INFORMATION)

- NOTE:**
1. - SEE SHEET 11 FOR TYPICAL CROSS SECTION AND "4X BUFFER" DETAIL.
 2. - SEE SHEET 11 FOR CHANNEL MARKER DETAIL AND DATUM DIAGRAM.
 3. - BATHYMETRIC AND TOPOGRAPHIC SURVEYS WERE PERFORMED 4/17/2012 TO 5/11/2012.



Kerr Environmental Services Corp.

&



Langley & McDonald, Inc.
Engineering • Planning • Surveying

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KRD
Date: October 18, 2013

JOINT PERMIT APPLICATION DRAWINGS

BAYVILLE CREEK SSD
NEIGHBORHOOD DREDGING

VIRGINIA BEACH, VIRGINIA

25' 0 50'



SCALE 1" = 50'

DATUM: MLW = 0.0

DATE: 10/10/13	SHEET: 9 OF 14
-------------------	-------------------

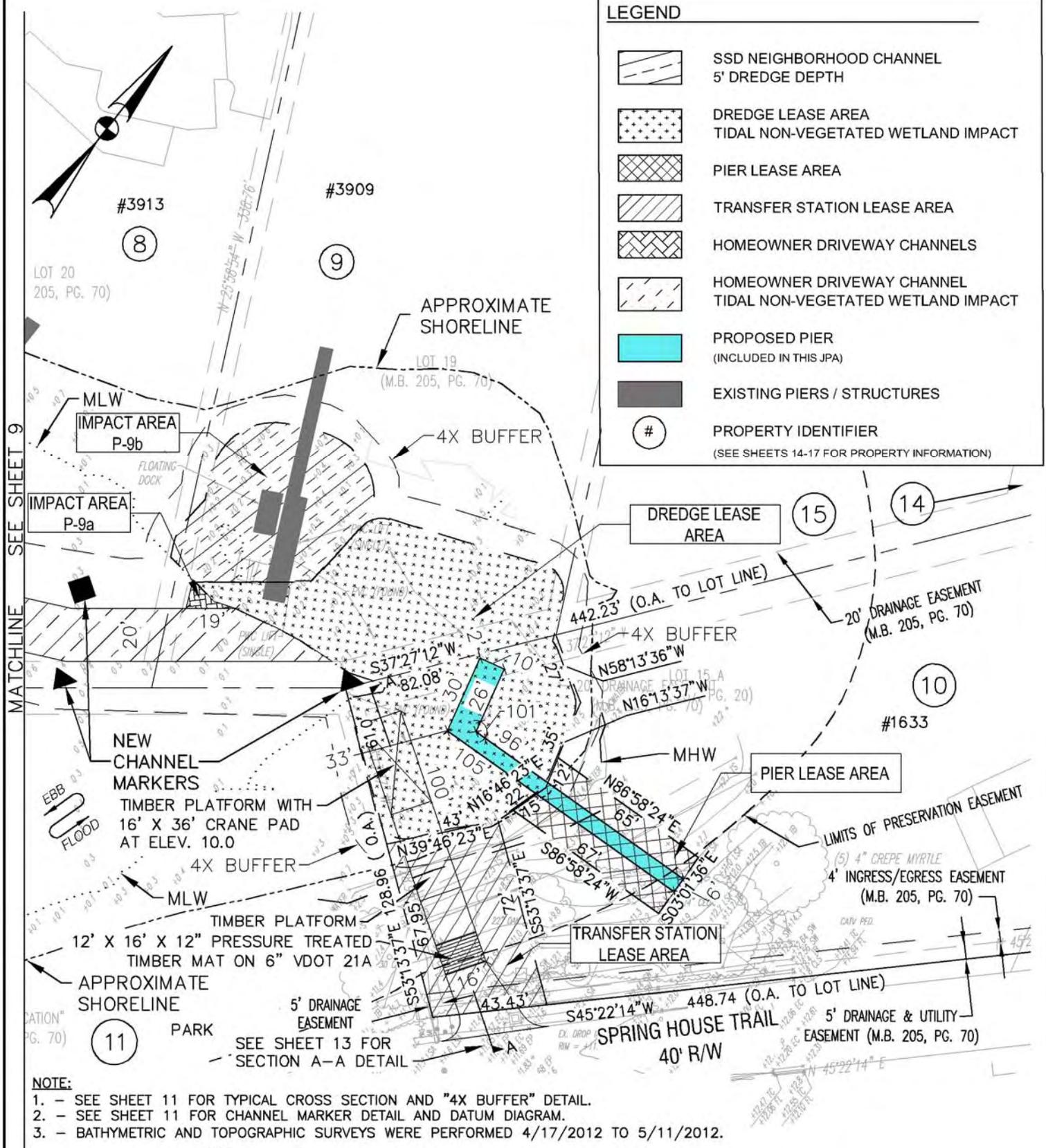
Permit_ Exhibits.dwg

MATCHLINE SEE SHEET 8

MATCHLINE SEE SHEET 10

LEGEND

-  SSD NEIGHBORHOOD CHANNEL
5' DREDGE DEPTH
-  DREDGE LEASE AREA
TIDAL NON-VEGETATED WETLAND IMPACT
-  PIER LEASE AREA
-  TRANSFER STATION LEASE AREA
-  HOMEOWNER DRIVEWAY CHANNELS
-  HOMEOWNER DRIVEWAY CHANNEL
TIDAL NON-VEGETATED WETLAND IMPACT
-  PROPOSED PIER
(INCLUDED IN THIS JPA)
-  EXISTING PIERS / STRUCTURES
-  #
PROPERTY IDENTIFIER
(SEE SHEETS 14-17 FOR PROPERTY INFORMATION)



- NOTE:**
1. - SEE SHEET 11 FOR TYPICAL CROSS SECTION AND "4X BUFFER" DETAIL.
 2. - SEE SHEET 11 FOR CHANNEL MARKER DETAIL AND DATUM DIAGRAM.
 3. - BATHYMETRIC AND TOPOGRAPHIC SURVEYS WERE PERFORMED 4/17/2012 TO 5/11/2012.

Permit Exhibits.dwg



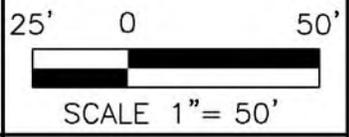
Kerr Environmental Services Corp.

&



Langley & McDonald, Inc
Engineering • Planning • Surveying

JOINT PERMIT APPLICATION DRAWINGS



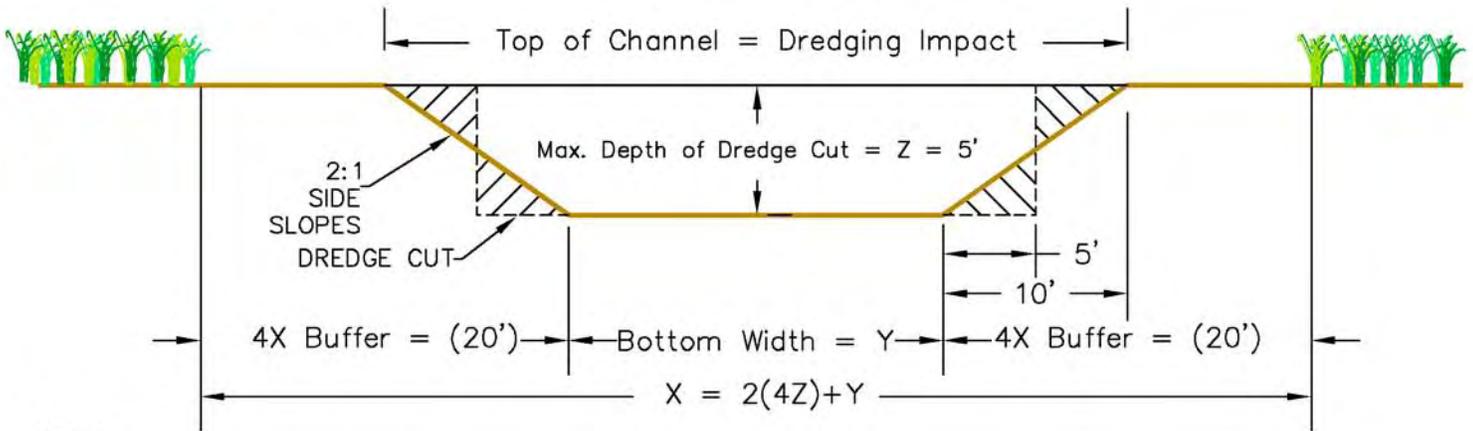
BAYVILLE CREEK SSD NEIGHBORHOOD DREDGING

VIRGINIA BEACH, VIRGINIA

DATUM: MLW = 0.0	
DATE: 10/10/13	SHEET: 10 OF 14

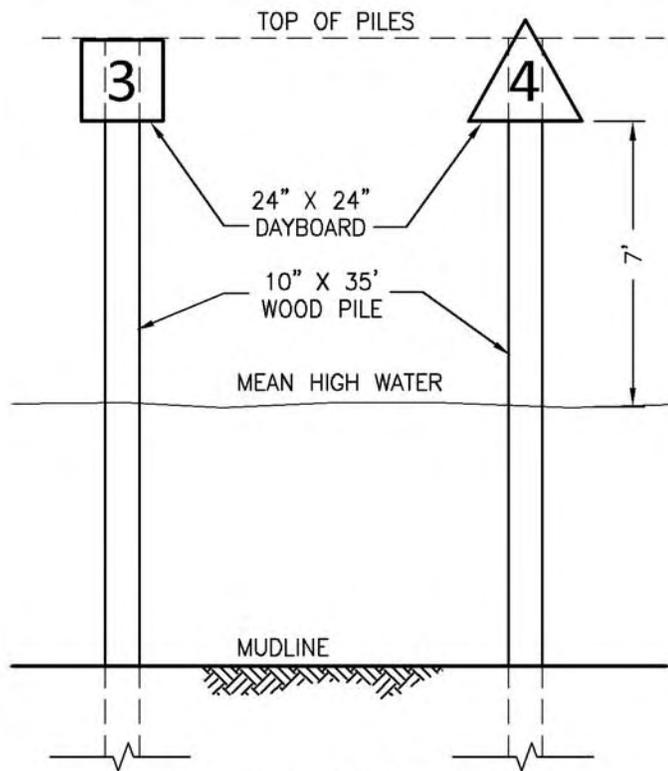
**US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KRJ
Date: October 18, 2013**

TYPICAL DREDGE SECTION (WITH MAXIMUM BUFFER WIDTH)



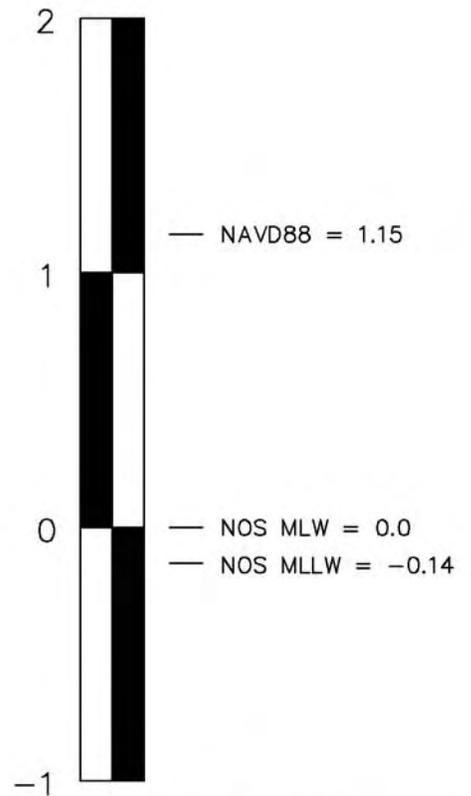
NOTE:
"4X BUFFER" IS FOUR TIMES THE DREDGE CUT DEPTH.

TYPICAL CROSS SECTION (NTS)



DAY MARKER DETAIL (NTS)

SINGLE PILE WOOD STRUCTURE (UNLIGHTED)



DATUM DIAGRAM (NTS)

ELEVATIONS ARE IN FEET REFERRED TO NOS MLW
BASED ON THE 1983-2001 NATIONAL TIDAL DATUM EPOCH



Kerr Environmental
Services Corp.

&



JOINT PERMIT APPLICATION DRAWINGS

SCALE: N/A

BAYVILLE CREEK SSD
NEIGHBORHOOD DREDGING

DATUM: MLW = 0.0

DATE:
10/10/13

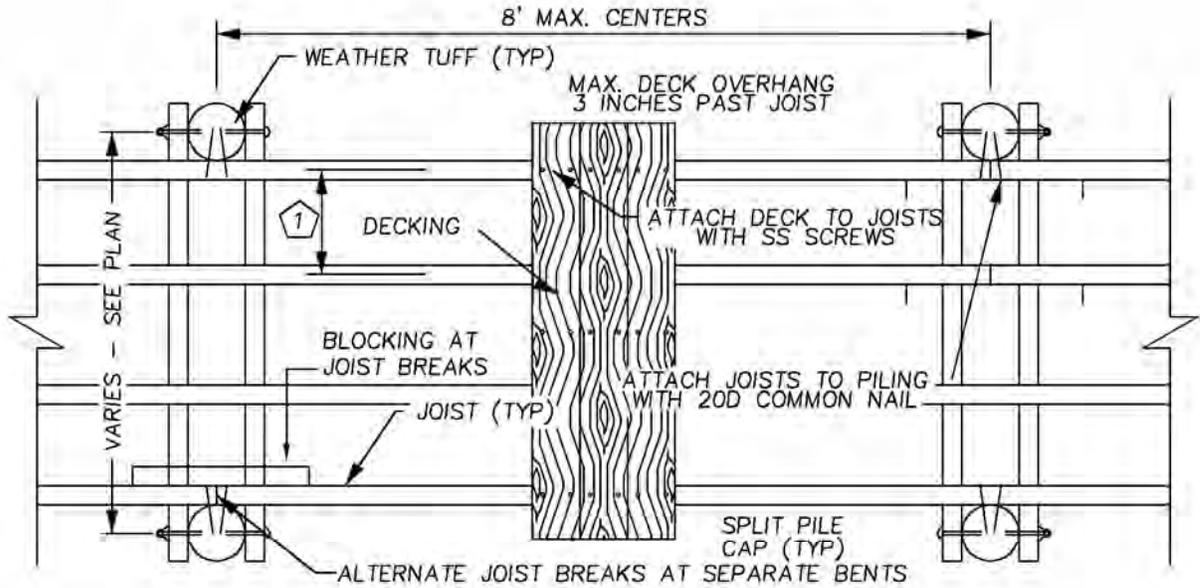
SHEET:
11 OF 14

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KRD
Date: October 18, 2013

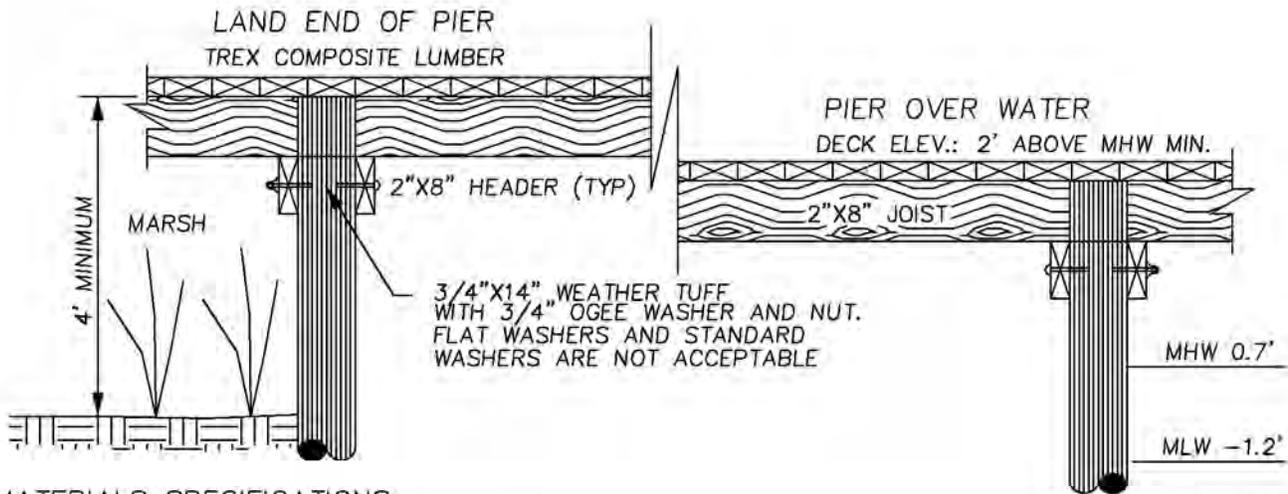
VIRGINIA BEACH, VIRGINIA

PROPOSED HOMEOWNER PIER DETAILS

SCALE 1/2" = 1.0'



① JOIST SPACING 16" O/C IF USING 5/4 BOARD DECKING.



MATERIALS SPECIFICATIONS:

- PILING: C.C.A. 2.5 PCF
- HEADERS AND JOISTS: C.C.A. 0.6 PCF (ALL WOOD TO BE GRADE 2 OR BETTER)
- DECKING: TREX COMPOSITE LUMBER
- HARDWARE: H.D. GALVANIZED ASTM-A153 AND SS SCREWS.

PIER DESIGN BASED ON STANDARD DESIGN PRACTICES. ATYPICAL SITE CONDITIONS NOT VISIBLY APPARENT HAVE NOT BEEN TAKEN INTO ACCOUNT.

8" DIA. PIER PILING LENGTH VARIES AS PER FIELD CONDITIONS 50% PENETRATION MINIMUM BELOW MUD LINE.



Kerr Environmental Services Corp.

&



Langley & McDonald, Inc.
Engineering • Planning • Surveying

JOINT PERMIT APPLICATION DRAWINGS

SCALE: 1/2" = 1.0'

BAYVILLE CREEK SSD NEIGHBORHOOD DREDGING

DATUM: MLW = 0.0

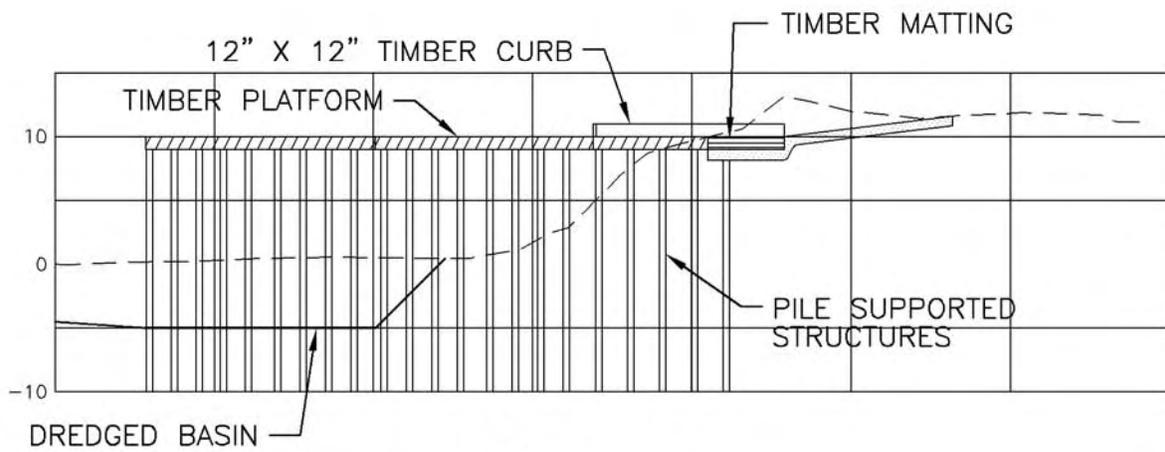
VIRGINIA BEACH, VIRGINIA

DATE: 10/10/13

SHEET: 12 OF 14

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KRJ
Date: October 18, 2013

TRANSFER STATION PIER DETAIL



SECTION A-A

HOR. SCALE: 1" = 30'

VER. SCALE: 1" = 15'

DESIGN IS OR APPROVED EQUAL; CONTRACTOR
MAY DEVIATE FROM DESIGN SHOWN



**Kerr Environmental
Services Corp.**

&



**JOINT PERMIT
APPLICATION DRAWINGS**

SCALE: AS SHOWN

BAYVILLE CREEK SSD
NEIGHBORHOOD DREDGING

DATUM: MLW = 0.0

VIRGINIA BEACH, VIRGINIA

DATE:
10/10/13

SHEET:
13 OF 14

**US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KRJ
Date: October 18, 2013**

PARTICIPATING HOMEOWNERS

ADJACENT PROPERTY OWNERS

- 1 Evelyn A. Kalagayan Revocable Trus
1600 Meeting House Lane
Virginia Beach, VA 23455-7003
GPIN: 1489-23-1164-0000
- 4 Theodore A. Jr. & Debra J. Grell
3929 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-23-2813-0000
- 5 Leavy & Mildred C. Harold
3925 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-23-3799-0000
- 6 Robert C. & Jennifer Squatrito
3921 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-23-5836-0000
- 7 Joseph E. Sr. & Sarah F. Antle
3917 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-23-6933-0000
- 8 Venkat M. & Madhavi Reddy
3913 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-24-7031-0000
- 9 Robert R. Fitzgerald LT ETAL
3909 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-24-8067-0000
- 10 Arthur R. & Sunni P. Jenkins
1633 Spring House Trail
Virginia Beach, VA 23455-7005
GPIN: 1489-34-1193-0000
- 12 Chris & Cindy Gooch
1609 Spring House Trail
Virginia Beach, VA 23455-7005
GPIN: 1489-23-6459-0000

- 2 Barbara A. Salter
1604 Meeting House Lane
Virginia Beach, VA 23455-7003
GPIN: 1489-23-2308-0000
- 3 Ikshvanku A. Barot
1612 Meeting House Lane
Virginia Beach, VA 23455-7003
GPIN: 1489-23-0626-0000
- 11 Church Point Homeowners ETC
2622 Southern Blvd Ste 102
Virginia Beach, VA 23452-7439
GPIN: 1489-23-9813-0000
- 13 Christopher Sinesi
1601 Spring House Trail
Virginia Beach, VA 23455-7005
GPIN: 1489-22-4890-0000
- 14 Gary T. McCollum
3901 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-34-1335-0000
- 15 Michael Hauser
3905 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-24-9188-0000
- 16 Mohammad Yunes ET
3933 Meeting House Road
Virginia Beach, VA 23455-7001
GPIN: 1489-23-0867-0000
- 17 Angelopoulous K.T.
PO BOX 1098
Newport News, VA 23601-0098
GPIN: 1489-13-9923-0000
(3937 Meeting House Road)
- 18 Mathew Hitted
1632 Meeting House Lane
Virginia Beach, VA 23455-7003
GPIN: 1489-14-8006-0000
- 19 Riess Family Trust
1601 Meeting House Lane
Virginia Beach, VA 23455-7003
GPIN: 1489-13-9034-0000

- 20 David Young
4000 Arrowhead Point Court
Virginia Beach, VA 23455-4453
GPIN: 1489-12-6571-0000
- 21 Edward C. Miller
4001 Arrowhead Point Court
Virginia Beach, VA 23455-4452
GPIN: 1489-12-8326-0000
- 22 Wilford Gibson
4003 Arrowhead Point Court
Virginia Beach, VA 23455-4452
GPIN: 1489-12-7290-0000
- 23 Marthal Mooney
4007 Arrowhead Point Court
Virginia Beach, VA 23455-4452
GPIN: 1489-12-5240-0000



**Kerr Environmental
Services Corp.**

&



Langley & McDonald, Inc
Engineering • Planning • Surveying

**JOINT PERMIT
APPLICATION DRAWINGS**

**BAYVILLE CREEK SSD
NEIGHBORHOOD DREDGING**

VIRGINIA BEACH, VIRGINIA

SCALE: N/A

DATUM: MLW = 0.0

DATE:
10/10/13

SHEET:
14 OF 14

**US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KR D
Date: October 18, 2013**

D:\Projects\2013\101813_01.dwg

Impact Summary Table

Joint Permit Application
Bayville Creek SSD
Virginia Beach, Virginia

US Army Corps of Engineers
Norfolk District Regulatory Branch
Received by KRD
Date: October 18, 2013

Impact Site Number	Impact Description * (see below)	Subaqueous Bottom Area	Non-Vegetated Wetland Impact Area	Cowardin Classification of Impacted Wetland/Water	Subaqueous Bottom Cut Volume	Non-Vegetated Wetland Cut Volume	Depth of Dredging	DEQ Classification
(1, 2, etc.)		(square feet)	(square feet)	(PEM, PSS, PFO, etc.)	(cubic yards)	(cubic yards)	(feet below mean low water)	Description * (see below)
City A	EX, T, PE, PR, SB, NV	16,717	0	E1UBL	1,336	0	5	Estuarine Class II
SSD	EX, T, PE, PR, SB, NV	47,830	0	E1UBL	7,894	0	5	Estuarine Class II
Transfer Station Lease Area	EX, T, PE, PR, NV	17	9,272	E2USN	103	1,341	5	Estuarine Class II
P-1	EX, T, PE, PR, SB, NV	5,113	0	E1UBL	678	0	5	Estuarine Class II
P-4	EX, T, PE, PR, SB, NV	1,308	0	E1UBL	298	0	5-6	Estuarine Class II
P-5	EX, T, PE, PR, SB, NV	2,076	0	E1UBL	370	0	5-6	Estuarine Class II
P-6	EX, T, PE, PR, SB, NV	2,405	0	E1UBL	397	0	5-6	Estuarine Class II
P-7	EX, T, PE, PR, SB, NV	2,475	0	E1UBL	427	0	5-6	Estuarine Class II
P-8	EX, T, PE, PR, SB, NV	1,807	0	E1UBL	385	0	5	Estuarine Class II
P-9a	EX, T, PE, PR, SB, NV	80	0	E1UBL	33	0	5	Estuarine Class II
P-9b	EX, T, PE, PR, SB, NV	0	3,429	E1UBL	0	570	5	Estuarine Class II
P-10	EX, T, PE, PR, NV	0	0	E2USN	0	0	5	Estuarine Class II
P-12	EX, T, PE, PR, SB, NV	3,182	0	E1UBL	342	0	4-5	Estuarine Class II
TOTAL		83,010	12,701		12,263	1,911		

* use all that apply: F-fill, EX-excavation, T-tidal, NT-non-tidal, TE-temporary, PE-permanent, PR-perennial, IN-intermittent, SB-subaqueous bottom, IS-hydrologically isolated, V-vegetated, NV-non-vegetated, MC-mechanized clearing of PFO

**Estuarine Class II, Non-tidal waters Class III, Mountainous zone waters Class IV, Stockable trout waters Class IV, Natural trout waters Class VI, Wetlands Class VII