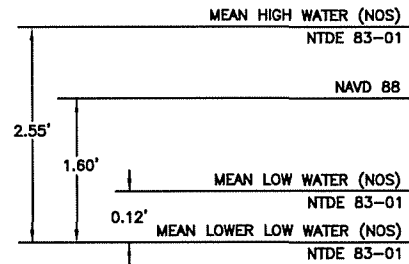


**NOTES:**

1. SOUNDINGS WERE TAKEN USING A MULTIBEAM SONAR SYSTEM OPERATING AT 200KHz AND A DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS) WAS USED TO OBTAIN HORIZONTAL POSITIONS.
2. SOUNDINGS ARE IN FEET REFERRED TO MEAN LOWER LOW WATER (MLLW), NATIONAL TIDAL DATUM EPOCH (NTDE) OF 1983-2001, AND WAS DETERMINED BY THE NATIONAL OCEAN SERVICE (NOS) AT SEWELLS POINT.
3. BENCH MARK IS A VIRGINIA PORT AUTHORITY BRASS DISK STAMPED "NIT WHARF 1". ELEVATION = +9.08' ABOVE MLLW (NOS), 83-01 NTDE.
4. COORDINATES ARE IN U.S. SURVEY FEET REFERRED TO THE VIRGINIA STATE GRID (SOUTH ZONE) BASED ON NAD83.
5. PROJECT DEPTH AS SHOWN: **(-57')**

**DIAGRAM OF DATUM PLANE**

NATIONAL TIDAL DATUM EPOCH (NTDE) 1983-2001



PURPOSE: PRIVATE  
 DATUM: N.O.S. MLLW=0.0'

ADJACENT PROPERTY OWNERS:

- ① HRSD
- ② LEHIGH CEMENT

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MARINE RESOURCES

**LOCATION MAP**

PREPARED BY:

*Waterway*

Surveys & Engineering, Ltd.  
 Virginia Beach, Virginia

PROPOSED DREDGING  
 IN: NORFOLK HARBOR

CITY: NORFOLK

STATE: VIRGINIA

APPLICATION BY: VIRGINIA PORT AUTHORITY

SCALE: N.T.S.

DATE: MAY 31, 2017

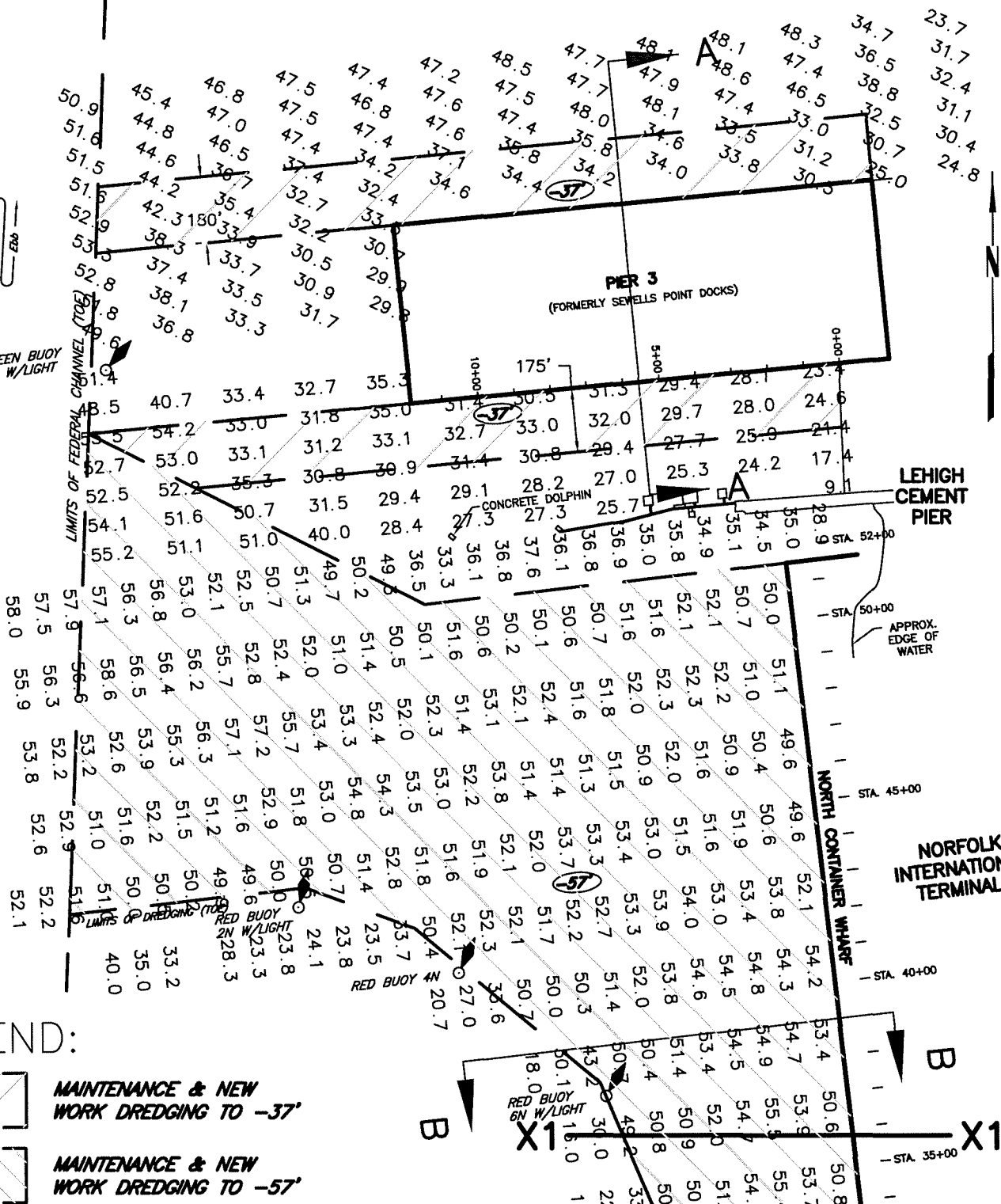
SHEET 1 OF 8

5082-34-22-01

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# NORFOLK HARBOR 50 FT. - CHANNEL

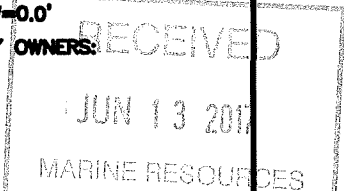
GREEN BUOY  
11 W/LIGHT



## LEGEND:

- MAINTENANCE & NEW WORK DREDGING TO **-37'**
- MAINTENANCE & NEW WORK DREDGING TO **-57'**

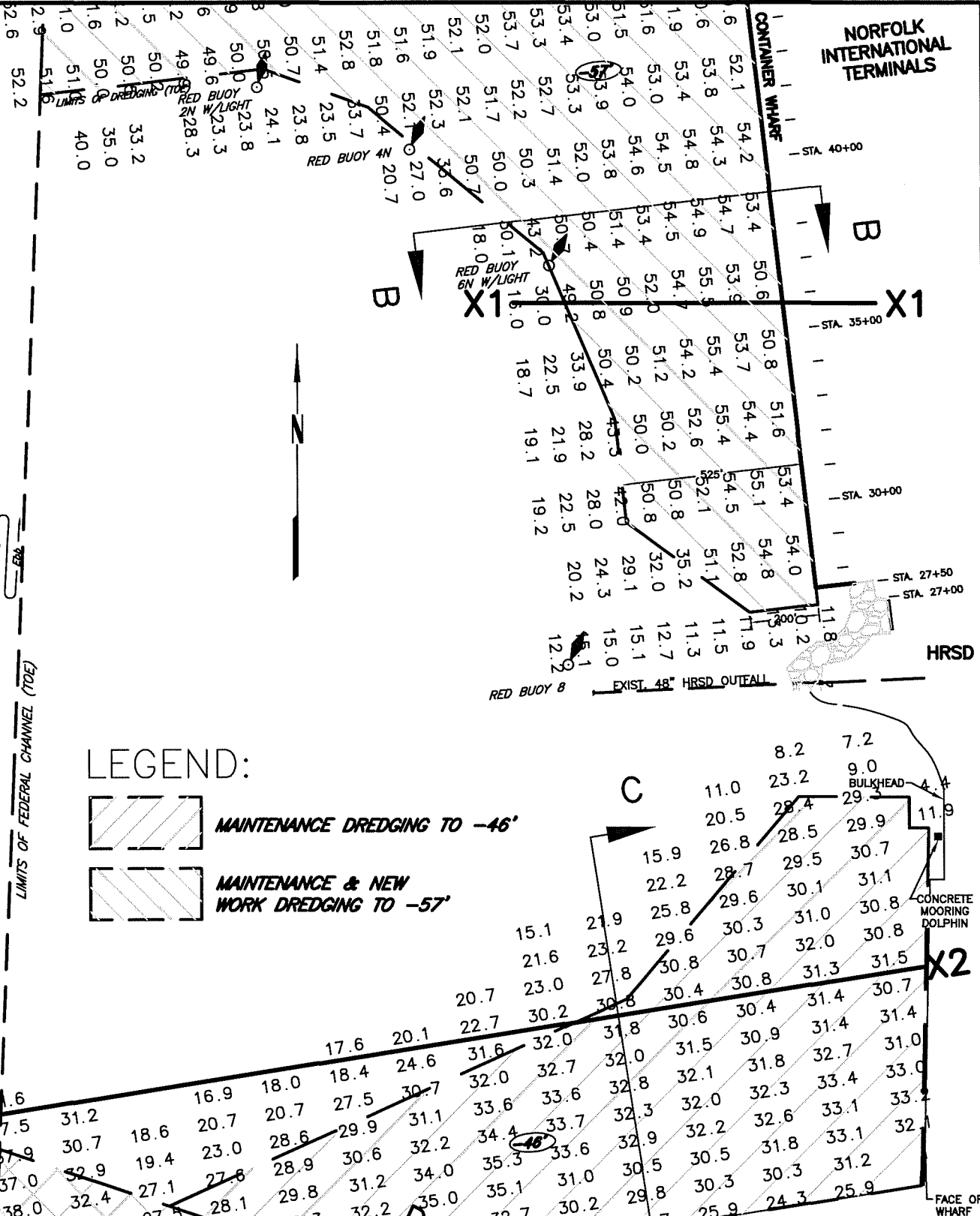
PURPOSE: PRIVATE  
 DATUM: N.O.S. MLLW-0.0'  
 ADJACENT PROPERTY OWNERS:  
 ① HRSD  
 ② LEHIGH CEMENT



**PLAN VIEW**  
 PREPARED BY:  
*Waterway*  
 Surveys & Engineering, Ltd.  
 Virginia Beach, Virginia

PROPOSED DREDGING  
 IN: NORFOLK HARBOR  
 CITY: NORFOLK STATE: VIRGINIA  
 APPLICATION BY: VIRGINIA PORT AUTHORITY  
 SCALE: 1"=400' DATE: MAY 31, 2017  
 SHEET 2 OF 8

# NORFOLK HARBOR 50 FT. - CHANNEL



## LEGEND:

-  MAINTENANCE DREDGING TO **-46'**
-  MAINTENANCE & NEW WORK DREDGING TO **-57'**

## PLAN VIEW

PREPARED BY:

*Waterway*  
Surveys & Engineering, Ltd.  
Virginia Beach, Virginia

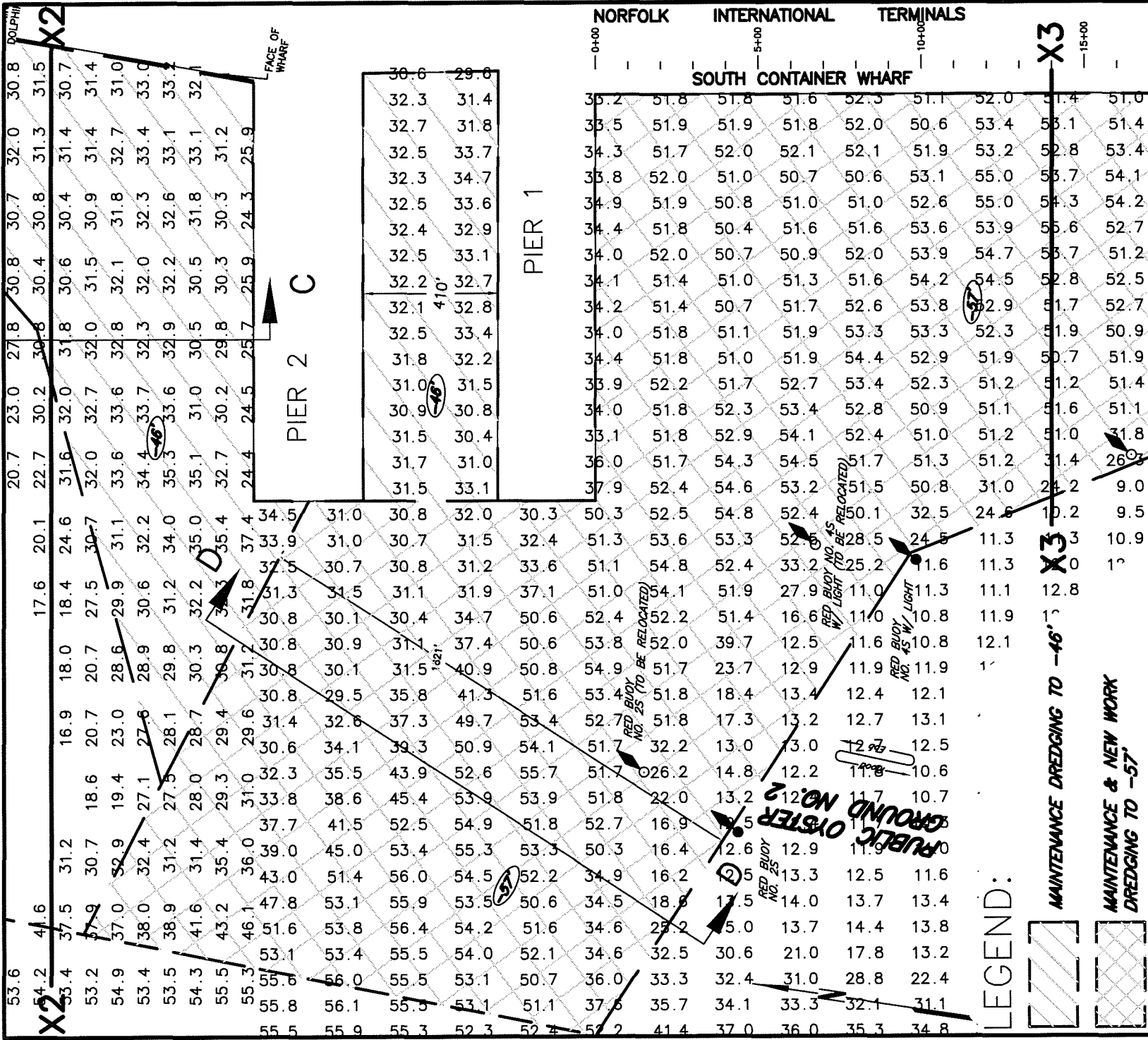
## PROPOSED DREDGING

IN: NORFOLK HARBOR  
CITY: NORFOLK STATE: VIRGINIA  
APPLICATION BY: VIRGINIA PORT AUTHORITY  
SCALE: 1"=400' DATE: MAY 31, 2017  
SHEET 3 OF 8

PURPOSE: PRIVATE  
DATUM: N.O.S. MLLW=0.0'  
ADJACENT PROPERTY OWNERS:  
① HRSD  
② LEHIGH CEMENT

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MARINE RESOURCES

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**PROPOSED DREDGING**  
**IN: NORFOLK HARBOR**  
**CITY: NORFOLK**  
**STATE: VIRGINIA**

**APPLICATION BY: VIRGINIA PORT AUTHORITY**  
**SCALE: 1"=400'**  
**DATE: MAY 31, 2017**

**SHEET 4 OF 8**

---

**PLAN VIEW**

PREPARED BY:  
*Waterway*  
 Surveys & Engineering, Ltd.  
 Virginia Beach, Virginia

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**RECEIVED**  
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 MARINE RESOURCES

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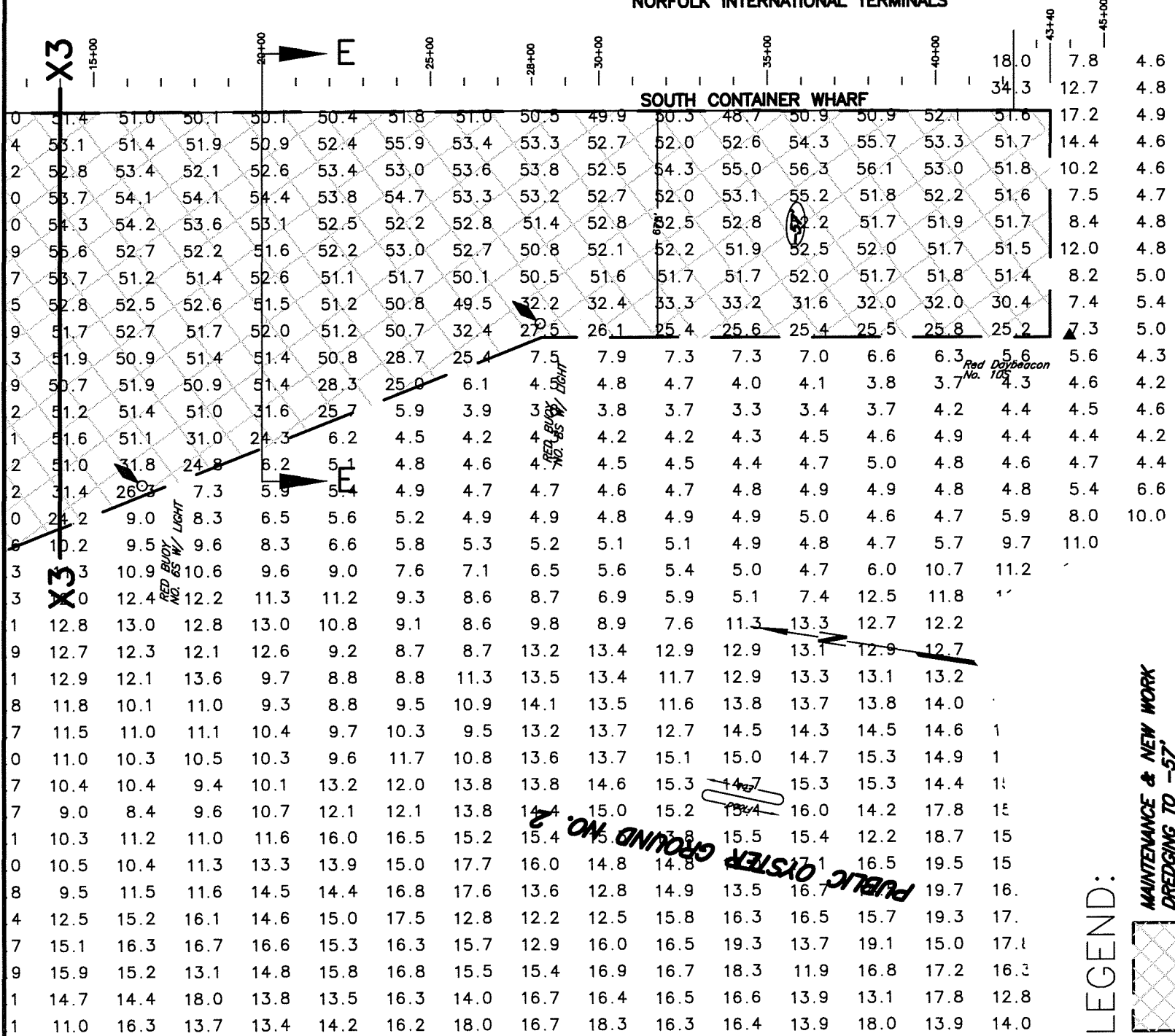
**PURPOSE: PRIVATE**  
**DATUM: N.O.S. MLLW+0.0'**  
**ADJACENT PROPERTY OWNERS:**  
 ① HRSD  
 ② LEHIGH CEMENT

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588-31-20-04

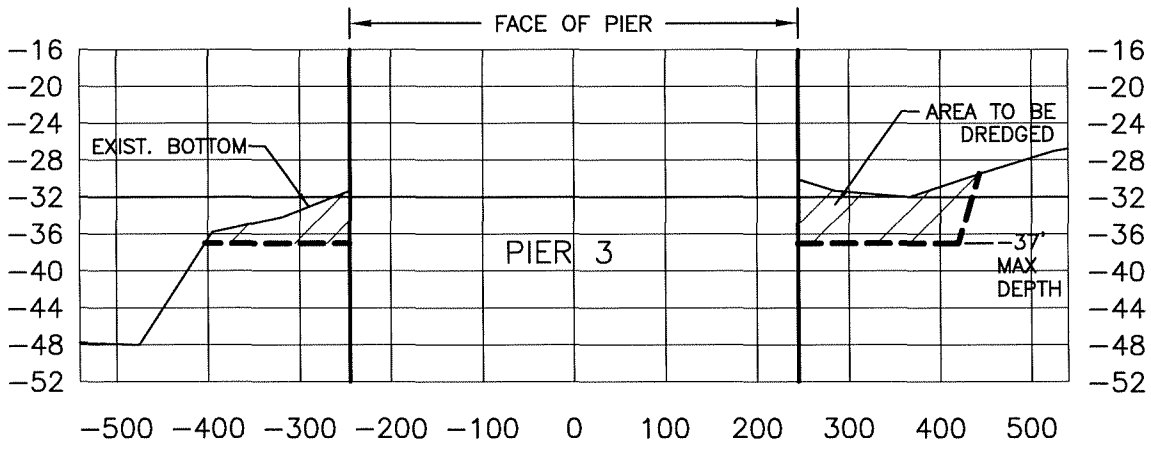
NORFOLK INTERNATIONAL TERMINALS



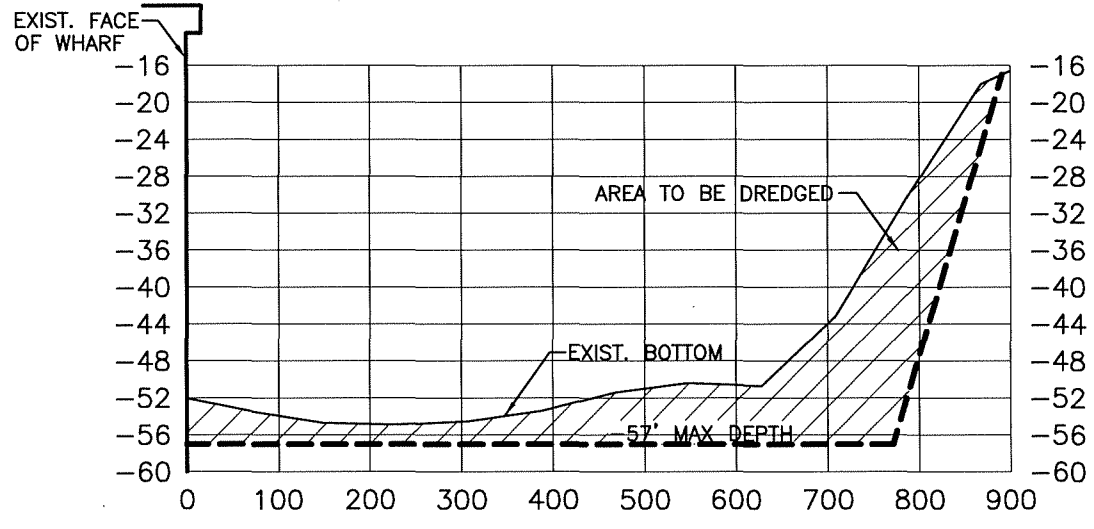
PROPOSED DREDGING  
 IN: NORFOLK HARBOR  
 CITY: NORFOLK  
 STATE: VIRGINIA  
 APPLICATION BY: VIRGINIA PORT AUTHORITY  
 SCALE: 1"=100'  
 DATE: MAY 31, 2017  
 SHEET 5 OF 8

PLAN VIEW  
 PREPARED BY:  
*Waterway*  
 Surveys & Engineering, Ltd.  
 Virginia Beach, Virginia

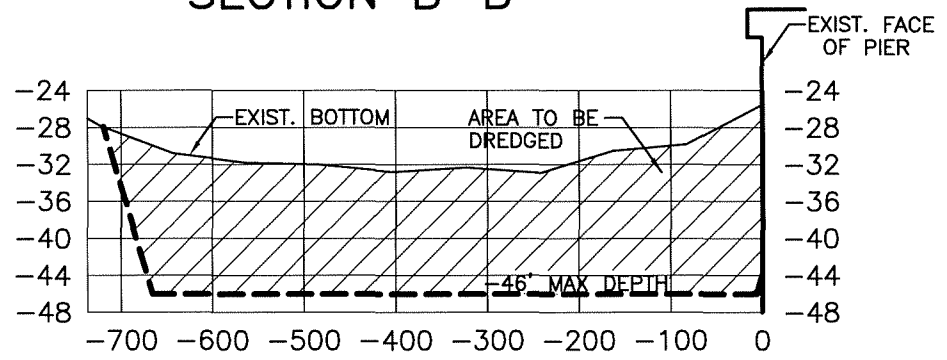
RECEIVED  
 JUN 13 2017  
 PUBLIC OYSTER GROUNDS NO. 2  
 MAINTENANCE & NEW WORK  
 DREDGING TO -57'  
 LEGEND:  
 PURPOSE: PRIVATE  
 DATUM: N.O.S. MLLW=0.0'  
 ADJACENT PROPERTY OWNERS:  
 ① HRSD  
 ② LEHIGH CEMENT  
 DISCLAIMER: JOINT PERMIT APPLICATION IS NOT FOR CONSTRUCTION. TO BE USED FOR PERMITTING PURPOSES ONLY.  
 502-31-22-05



SECTION A-A



SECTION B-B



SECTION C-C

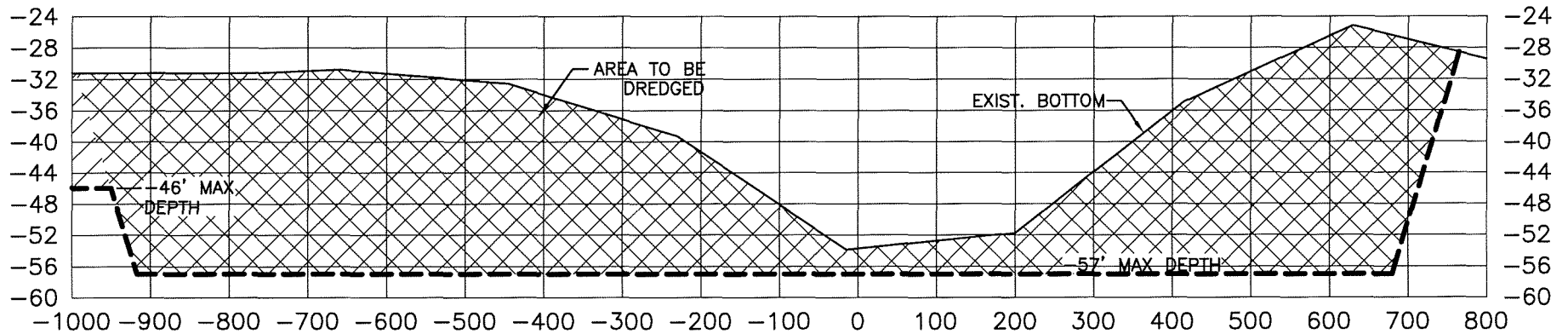
RECEIVED  
 JUN 13 2017  
 MARINE RESOURCES  
 COMMISSION

PURPOSE: PRIVATE  
 DATUM: N.O.S. MLLW=0.0'  
 ADJACENT PROPERTY OWNERS:  
 ① HRSD  
 ② LEHIGH CEMENT

**SECTIONS**  
 PREPARED BY:  
*Waterway*  
 Surveys & Engineering, Ltd.  
 Virginia Beach, Virginia

PROPOSED DREDGING  
 IN: NORFOLK HARBOR  
 CITY: NORFOLK STATE: VIRGINIA  
 APPLICATION BY: VIRGINIA PORT AUTHORITY  
 SCALE: 1"=200' DATE: MAY 31, 2017  
 SHEET 6 OF 8

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 JUN 13 2017  
 MARINE RESOURCES  
 COMMISSION

PURPOSE: PRIVATE  
 DATUM: N.O.S. MLLW=0.0'  
 ADJACENT PROPERTY OWNERS:  
 ① HRSD  
 ② LEHIGH CEMENT

**SECTION D-D**

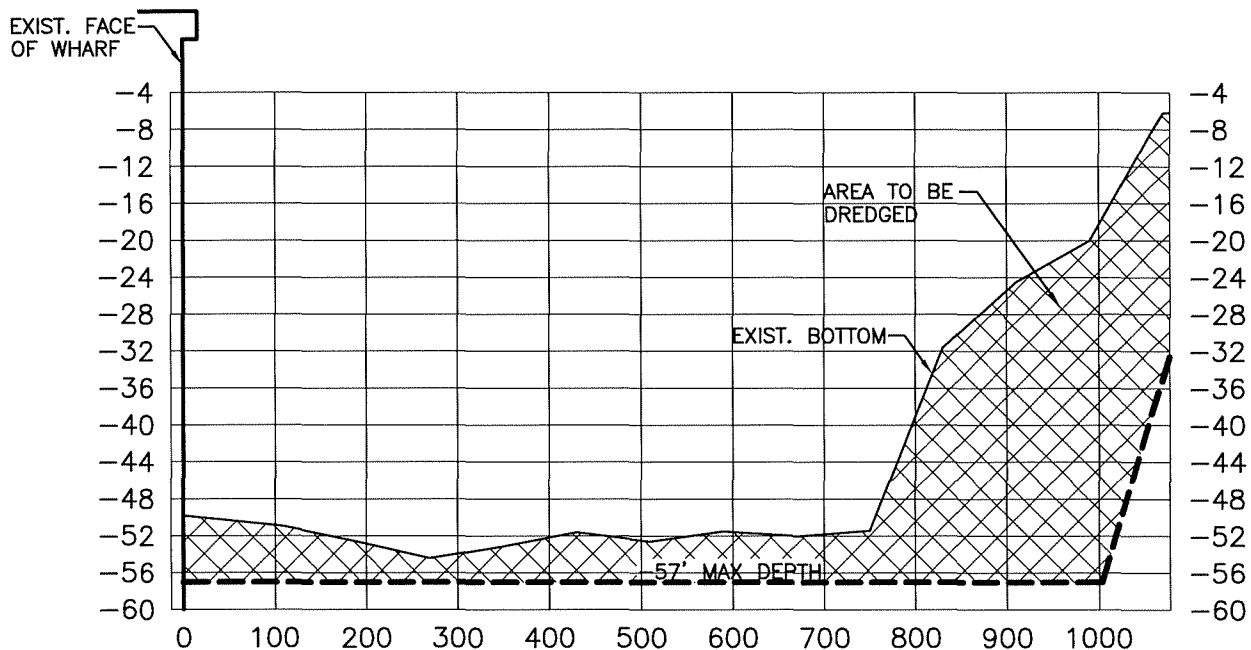
PREPARED BY:  
*Waterway*  
 Surveys & Engineering, Ltd.  
 Virginia Beach, Virginia

PROPOSED DREDGING  
 IN: NORFOLK HARBOR  
 CITY: NORFOLK STATE: VIRGINIA  
 APPLICATION BY: VIRGINIA PORT AUTHORITY  
 SCALE: 1"=200' DATE: MAY 31, 2017  
 SHEET 7 OF 8

5082-34-22-07

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RECEIVED  
 JUN 13 2017  
 MARINE RESOURCES  
 COMMISSION



PURPOSE: PRIVATE  
 DATUM: N.O.S. MLLW=0.0'  
 ADJACENT PROPERTY OWNERS:  
 ① HRSD  
 ② LEHIGH CEMENT

### SECTION E-E

PREPARED BY:

*Waterway*

Surveys & Engineering, Ltd.  
 Virginia Beach, Virginia

PROPOSED DREDGING  
 IN: NORFOLK HARBOR  
 CITY: NORFOLK STATE: VIRGINIA  
 APPLICATION BY: VIRGINIA PORT AUTHORITY  
 SCALE: 1"=200' DATE: MAY 31, 2017  
 SHEET 8 OF 8

5042-34-22-06

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