

SEE NOTE 3

PROPOSED 4'X8'  
BOX CULVERT  
(250 LF. IN  
WETLANDS)

PROPOSED  
JUNCTION BOX  
  
WETLAND FILL  
0.322 AC.

DEMOLISHED  
EXISTING PIPE

PROPOSED OUTFALL CHANNEL  
8' CHANNEL BOTTOM WIDTH  
2:1 SIDE SLOPES  
CHANNEL INVERT ELEV. OF -2.0'  
MAINTAINED ENTIRE LENGTH OF CHANNEL  
INTO SOUTHERN BRANCH OF ELIZABETH RIVER  
CHANNEL TOP WIDTH VARIES WITH EXISTING GROUND

PROP. 10' WIDE AQUATIC BENCH

DITCH EXCAVATION  
2,050 S.F.

EXCAVATE 0.047 AC.

MAX. CHANNEL ENCROACHMENT  
WITH 2:1 SIDE SLOPES  
APPROX. 13.5' FROM EXIST. CHANNEL  
ROW AT MAX. GROUND ELEV. = 9.0'

PROP. 12' WIDE  
MAINTENANCE EASEMENT

**PURPOSE:** Drainage Improvements

**ADJACENT PROPERTY OWNERS:**

- 1 U.S. GYPSUM
- 2 CITY OF NORFOLK (NORFOLK PORT AND INDUSTRIAL COMMISSION)

**PROPOSED STORM DRAIN ALIGNMENT  
AND OUTFALL SWALE**

**SOUTH MAIN STREET  
DRAINAGE IMPROVEMENTS  
NORFOLK**



**Kimley-Horn  
and Associates, Inc.**

**IN:** Elizabeth River - Southern Branch

**CITY:** Norfolk

**STATE:** Virginia

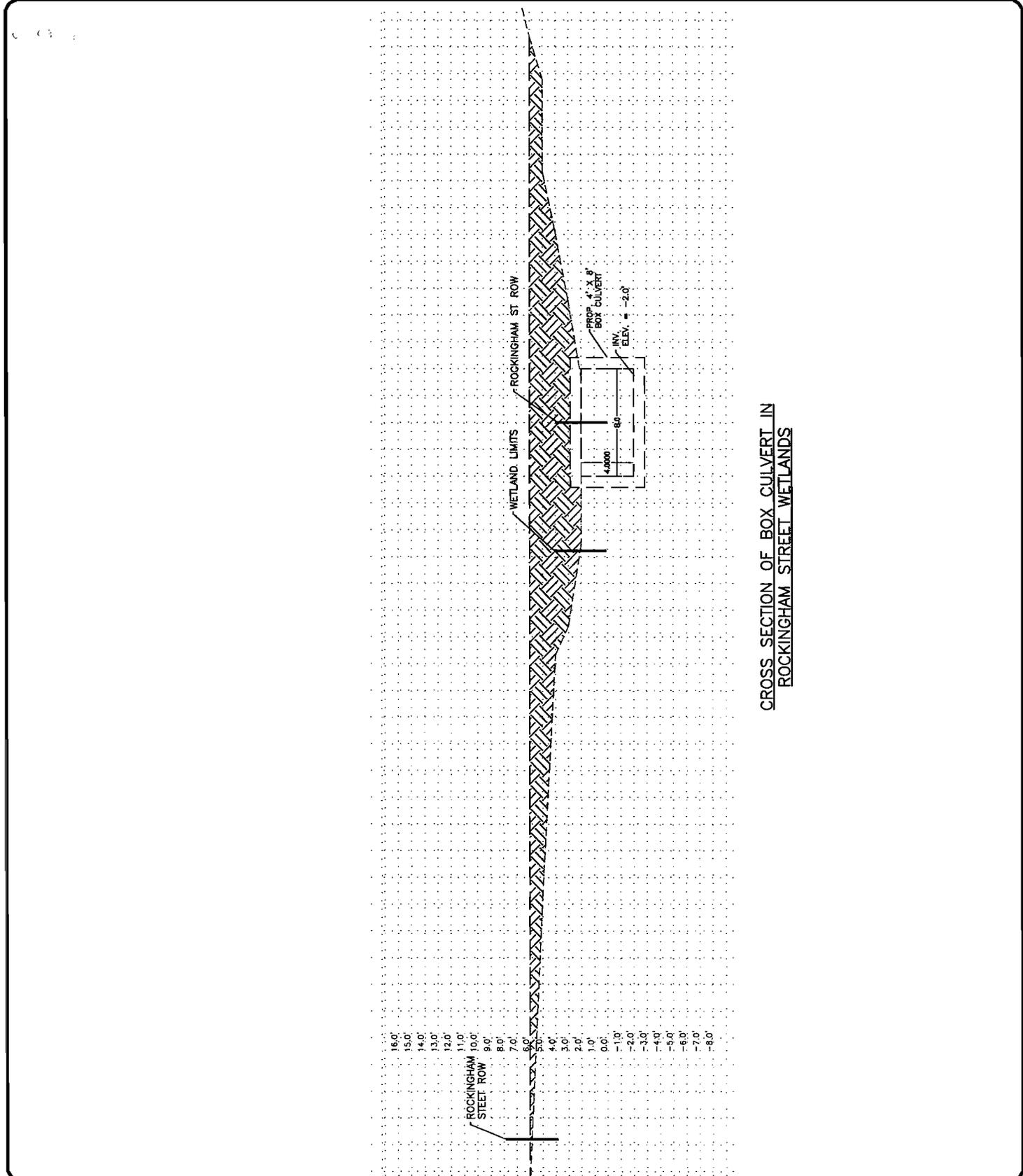
**APPLICATION BY:**

City of Norfolk

**SCALE:** 1" = 20'

**DATE:** February '06

**SHEET:** 3



CROSS SECTION OF BOX CULVERT IN  
ROCKINGHAM STREET WETLANDS

**PURPOSE: DRAINAGE IMPROVEMENTS**

**ADJACENT PROPERTY OWNERS:**

- 1 U.S. GYPSUM
- 2 CITY OF NORFOLK (NORFOLK PORT AND INDUSTRIAL COMMISSION)

**PROPOSED OUTFALL SWALE  
TYP. CROSS SECTION (LOOKING NORTH)**

**SOUTH MAIN STREET  
DRAINAGE IMPROVEMENTS  
NORFOLK**



**Kimley-Horn  
and Associates, Inc.**

**IN: Elizabeth River - Southern Branch**

**CITY: Norfolk**

**STATE: Virginia**

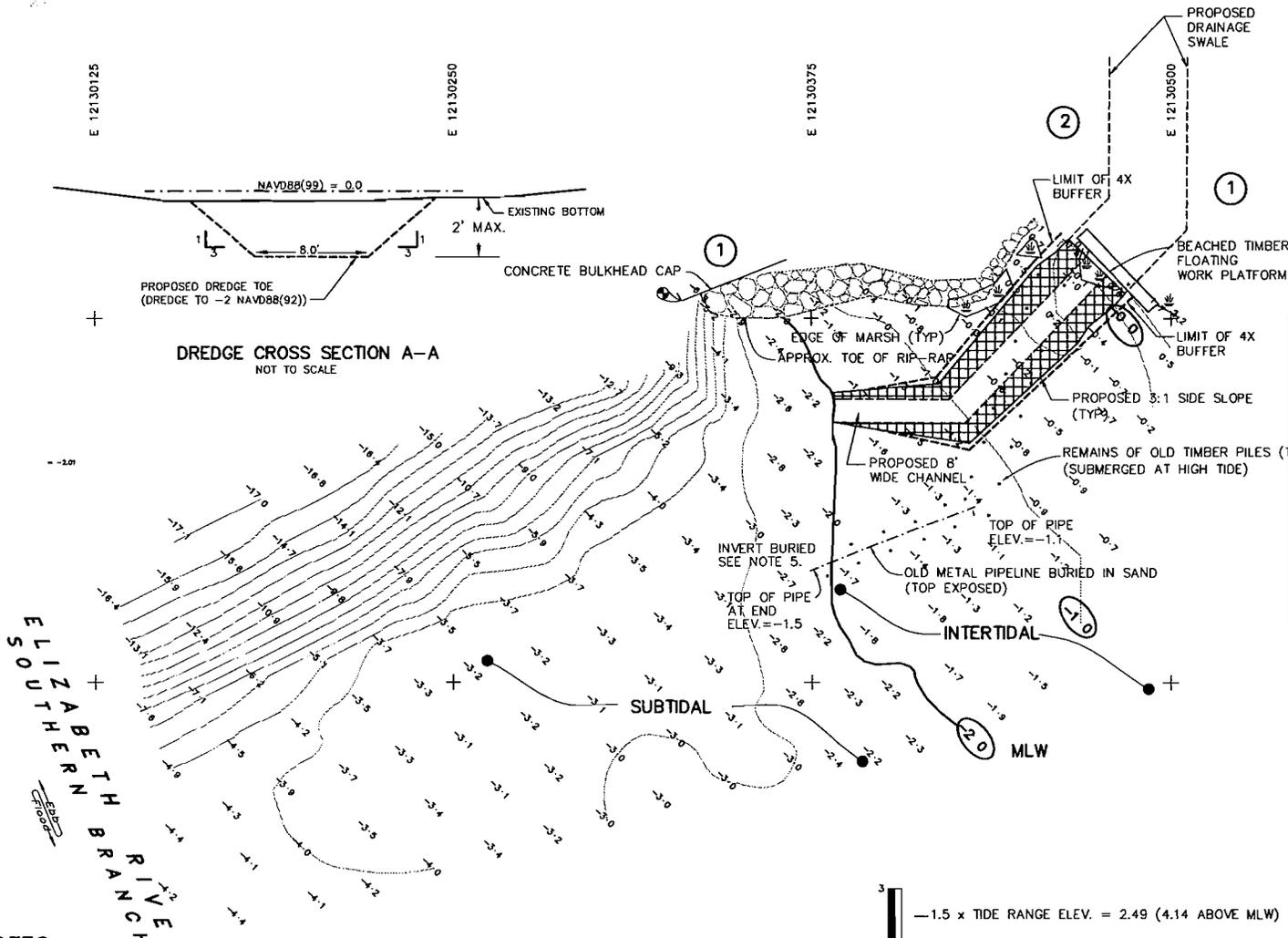
**APPLICATION BY:**

*City of Norfolk*

**SCALE: 1" = 10'**

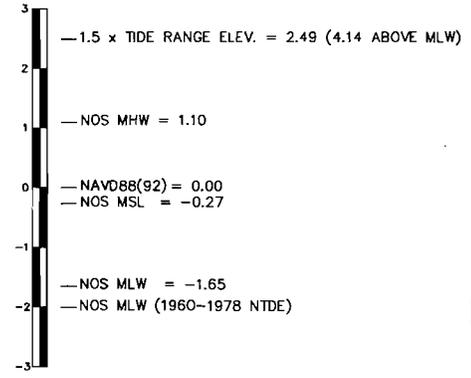
**DATE: February '06**

**SHEET: 4**



**NOTES:**

- SOUNDINGS AND ELEVATIONS ARE IN FEET REFERRED TO THE CITY OF NORFOLK'S 1992 ADJUSTMENT OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88(92)) AND WERE TAKEN USING AN ODOM HYDROTRAC RECORDING ECHO SOUNDER OPERATING AT 200 KHZ ON 28 SEPTEMBER, 2005 AND SUPPLEMENTED BY CONVENTIONAL SHORE BASED METHODS. REF. BENCHMARK: CHISLED SQUARE "CUL-DE-SAC" ESTABLISHED BY ROUSE-SIRINE, ELEV. = +4.51
- ON-SITE BENCHMARK: TOP OF CONCRETE BULKHEAD CAP, ELEV. = +5.04
- CONTOURS ARE DISPLAYED AT ONE FOOT INTERVALS.
- TIDE RANGE DATA AND TIDAL DATUM RELATIONSHIPS BASED ON DATA SUPPLIED BY THE NATIONAL OCEAN SERVICE AND ARE BASED ON THE 1983-2001 NATIONAL TIDAL DATUM EPOCH (NTDE). REFERENCE NOS TIDE STATION No. 8638660 (NORFOLK NAVAL SHIPYARD). SEE TIDAL DATUM DIAGRAM.
- COORDINATES ARE IN FEET REFERRED TO THE VIRGINIA COORDINATE SYSTEM OF 1983, SOUTH ZONE, AND ARE BASED ON THE HORIZONTAL CONTROL POINTS LISTED (POSITIONS SUPPLIED BY ROUSE-SIRINE).
- APPARENT END OF PARTIALLY BURIED, SUBMERGED PIPELINE VISIBLE AT LOW TIDE.



DATUM DIAGRAM (N.T.S.)  
ELEVATIONS/SOUNDINGS ARE IN FEET REFERRED TO NAVD88(92)  
SEE NOTE 3.

**SURVEY CONTROL DATA**

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	3488197.27	12130953.24	5.36	PK NAIL IN AERIAL TARGET
4	3487023.19	12130575.68	4.48	DRILL HOLE IN CURB

**PURPOSE:** Drainage Improvements

**ADJACENT PROPERTY OWNERS:**

- U.S. GYPSUM
- CITY OF NORFOLK (NORFOLK PORT AND INDUSTRIAL COMMISSION)

**PROPOSED OUTFALL CHANNEL**

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**SOUTH MAIN STREET  
DRAINAGE IMPROVEMENTS**

NORFOLK

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**Kimley-Horn  
and Associates, Inc.**

**IN:** Elizabeth River - Southern Branch  
**CITY:** Norfolk  
**STATE:** Virginia  
**APPLICATION BY:**  
 City of Norfolk  
**SCALE:** 1" = 80'  
**DATE:** February '06  
**SHEET:** 5