



CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC WORKS ENGINEERING

HURDS COVE SSD DREDGING PROJECT

CIP PROJECT #8-505

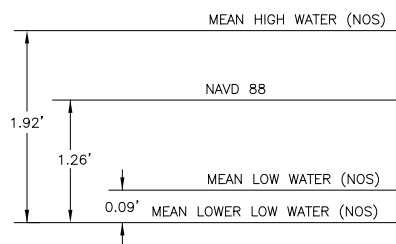
LEGEND:

- PROPOSED SSD CHANNEL
- PROPOSED DRIVEWAYS
- SSD 2X BUFFER
- SSD 4X BUFFER
- PRIVATE 2X BUFFER
- PRIVATE 4X BUFFER
- LIMITS OF VEGETATED WETLANDS

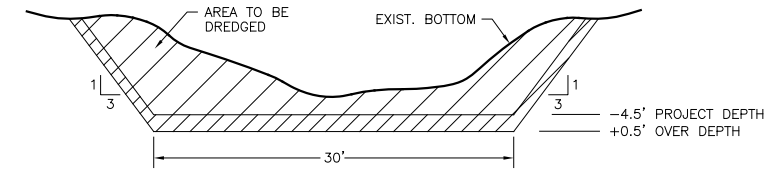
SURVEY NOTES:

1. SOUNDINGS WERE TAKEN USING A RECORDING FATHOMETER OPERATING AT 208KHz AND A DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS) WAS USED TO OBTAIN HORIZONTAL POSITIONS.
2. SOUNDINGS ARE IN FEET REFERRED TO MEAN LOW WATER (MLW) BASED ON N.O.S. OBSERVATIONS AND WERE TAKEN IN JUNE, JULY & AUGUST, 2015. TIDAL EPOCH 1983-2001.
3. BENCH MARK IS BRASS DISK SET IN CONCRETE NORTHEAST OF THE NORTHWEST CORNER OF ONE STORY BRICK PUMP STATION #253 LOCATED AT THE INTERSECTION OF VIRGINIA BEACH BOULEVARD AND CRIPPLE CREEK COURT. ELEVATION = 7.73' ABOVE NOS MLW.
4. COORDINATES ARE IN U.S. SURVEY FEET REFERRED TO THE VIRGINIA STATE GRID (SOUTH ZONE) BASED ON NAD83.

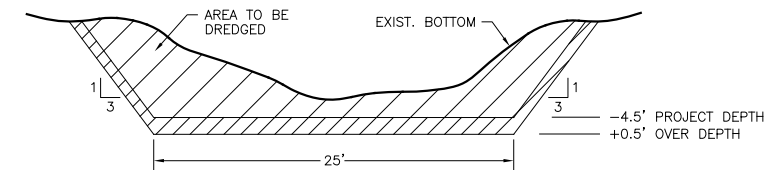
DIAGRAM OF DATUM PLANE



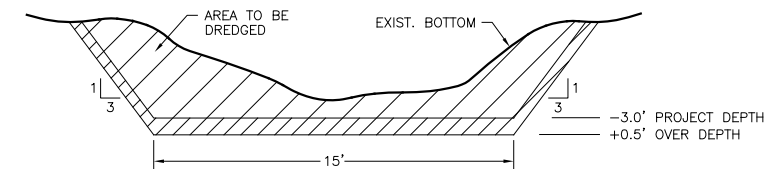
VICINITY MAP & SHEET LAYOUT



TYPICAL SECTION SHOWING
30' WIDE CHANNEL
(NOT TO SCALE)



TYPICAL SECTION SHOWING
25' WIDE CHANNEL
(NOT TO SCALE)



TYPICAL SECTION SHOWING
15' WIDE CHANNEL
(NOT TO SCALE)

SHEET INDEX

SHEET	SHEET DESCRIPTION
S-01	COVER SHEET, SHEET INDEX AND SURVEY NOTES
S-02	CONDITION SURVEY PLAN VIEW
S-03	CONDITION SURVEY PLAN VIEW
S-04	CONDITION SURVEY PLAN VIEW
S-05	CONDITION SURVEY PLAN VIEW
S-06	CONDITION SURVEY PLAN VIEW
S-07	CONDITION SURVEY PLAN VIEW
S-08	CONDITION SURVEY PLAN VIEW
S-09	CONDITION SURVEY PLAN VIEW
S-10	CONDITION SURVEY PLAN VIEW
S-11	CONDITION SURVEY PLAN VIEW

DATE	DESCRIPTION OF REVISION	BY

Waterway
Surveys & Engineering, Ltd.
321 Cleveland Place, Virginia Beach, Va. 23462
Tel: (757) 490-1691 Fax: (757) 490-1348

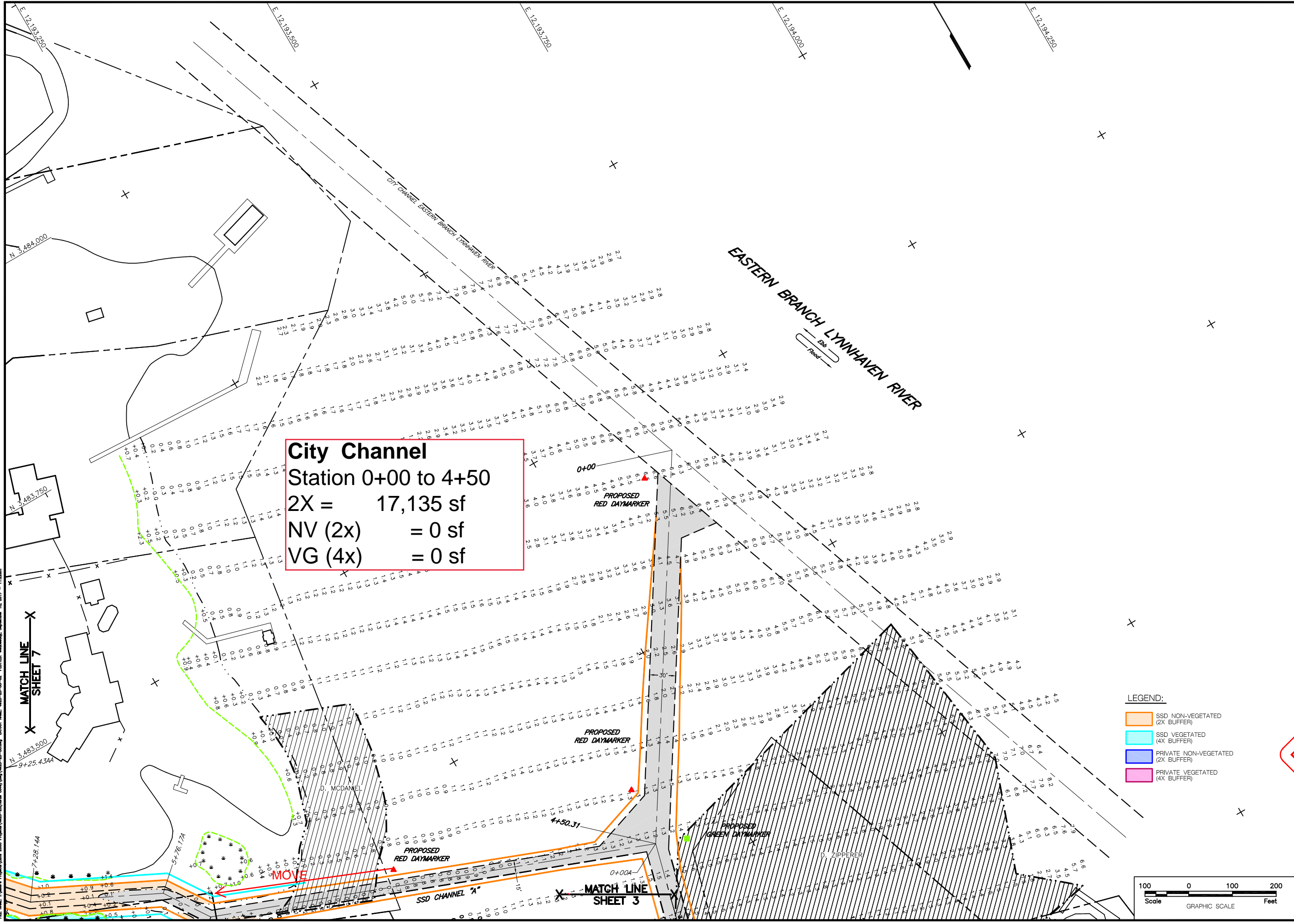
CITY OF VIRGINIA BEACH
DEPARTMENT OF PUBLIC WORKS-ENGINEERING
HURDS COVE SSD DREDGING PROJECT
JOINT PERMIT APPLICATION
SURVEY OF JUNE & JULY 2015

PRELIMINARY
NOT FOR CONSTRUCTION

SURVEYED	DESIGNED
W.S.&E.	R.S.F./M.S.P.
DRAWN	REVIEWED
M.S.P.	T.G.Q.
SCALE	DATE
AS SHOWN	06/09/17
DRAWING NO.	4923-23-35-01
S-01	SHEET 1 OF 11

FILE NAME: I:\Users\j\Projects\2015\Hurds Cove\Drawings\4923-23-35-01.dwg LAYOUT NAME: 4923-23-35-01.dwg PLOTTED: Thursday, September 28, 2017 10:40am

FILE NAME: I:\Vista\Projects\Land 2008\Projects\4923-23-22\Drawings\4923-23-22-02.dwg PLOTTED: Wednesday, September 13, 2017 - 11:20am



City Channel
 Station 0+00 to 4+50
 2X = 17,135 sf
 NV (2x) = 0 sf
 VG (4x) = 0 sf

- LEGEND:**
- SSD NON-VEGETATED (2X BUFFER)
 - SSD VEGETATED (4X BUFFER)
 - PRIVATE NON-VEGETATED (2X BUFFER)
 - PRIVATE VEGETATED (4X BUFFER)



DATE	DESCRIPTION OF REVISION	BY	APP.

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 321 Cleveland Place, Virginia Beach, Va., 23462
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W.S.&E.	R.S.F./M.S.P.
DRAWN	REVIEWED
M.S.P.	T.G.Q.
SCALE	DATE
1"=100'	06/09/17
DRAWING NO.	4923-23-22-02

S-02
 SHEET 2 OF 11

CITY SSD MAIN CHANNEL
STATIONS 24+40 TO 34+57
 2X = 30,640 sf
 NV = 0 sf
 VG = 0 sf

HC 57 (-3.5 ft)
 2x = 9,905 sf
 NV = 0 sf
 VG = 0 sf

SSD SPUR "EE"
 2X = 2,285 sf
 NV = 0 sf
 VG = 0 sf

LEGEND:

- SSD NON-VEGETATED (2X BUFFER)
- SSD VEGETATED (4X BUFFER)
- PRIVATE NON-VEGETATED (2X BUFFER)
- PRIVATE VEGETATED (4X BUFFER)

HC 51 (-3.5 ft)
 2X = 580 sf
 NV = 0 sf
 VG = 0 sf

HC 54 (-3.5 ft)
 2X = 1,855 sf
 NV = 0 sf
 VG = 0 sf

HC 55 (-3.5 ft)
 2X = 1,425 sf
 NV = 0 sf
 VG = 0 sf

HC 99 (-3.5 ft)
 2X = 3,575 sf
 NV = 1,230 sf
 VG = 0 sf

HC 53 (-3.5 ft)
 2X = 640 sf
 NV = 485 sf
 VG = 0 sf

HC 77 (-3.5 ft)
 2x = 650 sf
 NV = 0 sf
 VG = 0 sf

HC 52 (-3.5)
 2X = 2,770 sf
 NV = 140 sf
 VG = 530 sf

HC 56 (-3.5 ft)
 2X = 2,435 sf
 NV = 85 sf
 VG = 0 sf

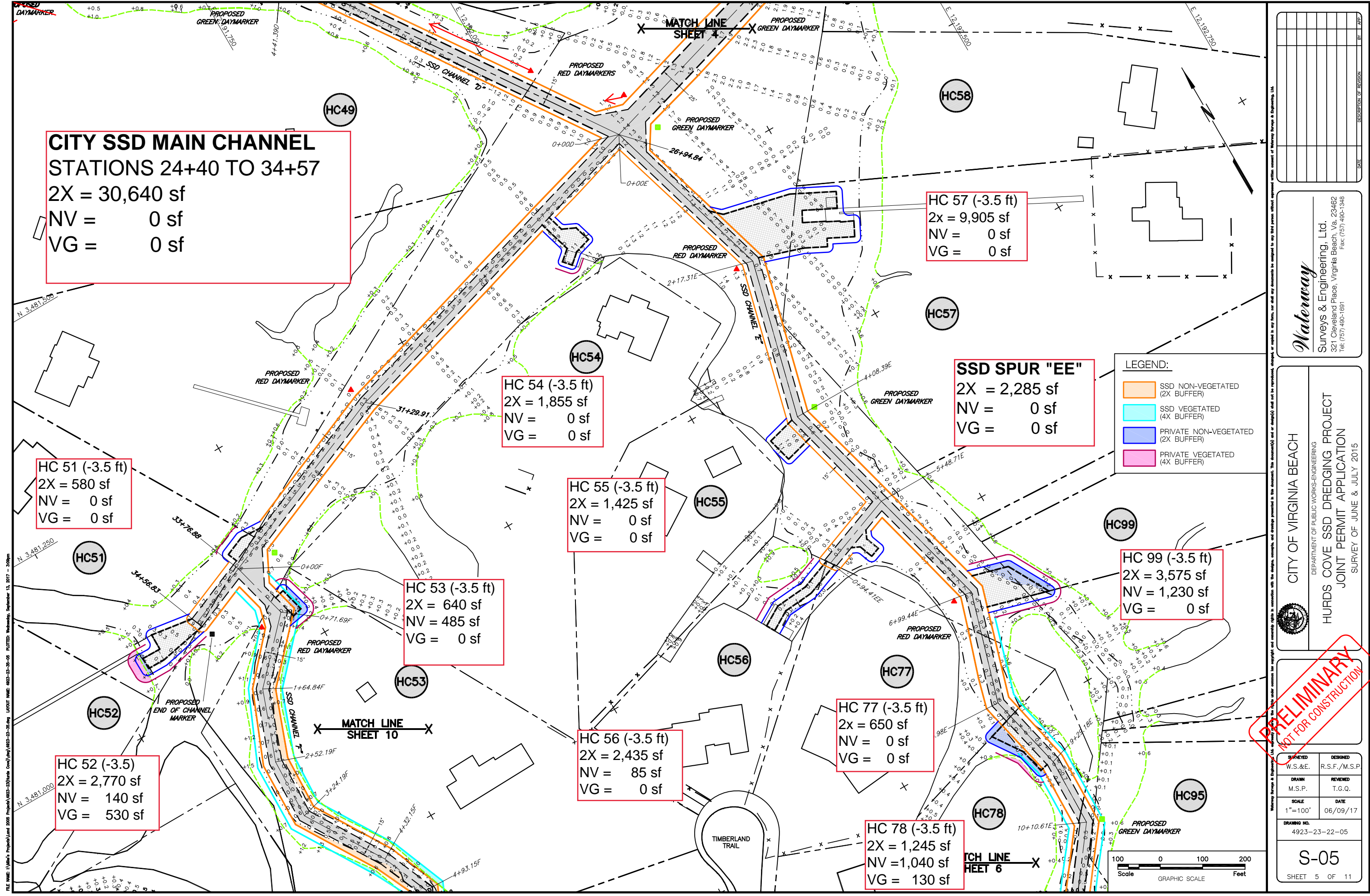
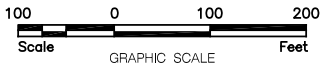
HC 78 (-3.5 ft)
 2X = 1,245 sf
 NV = 1,040 sf
 VG = 130 sf

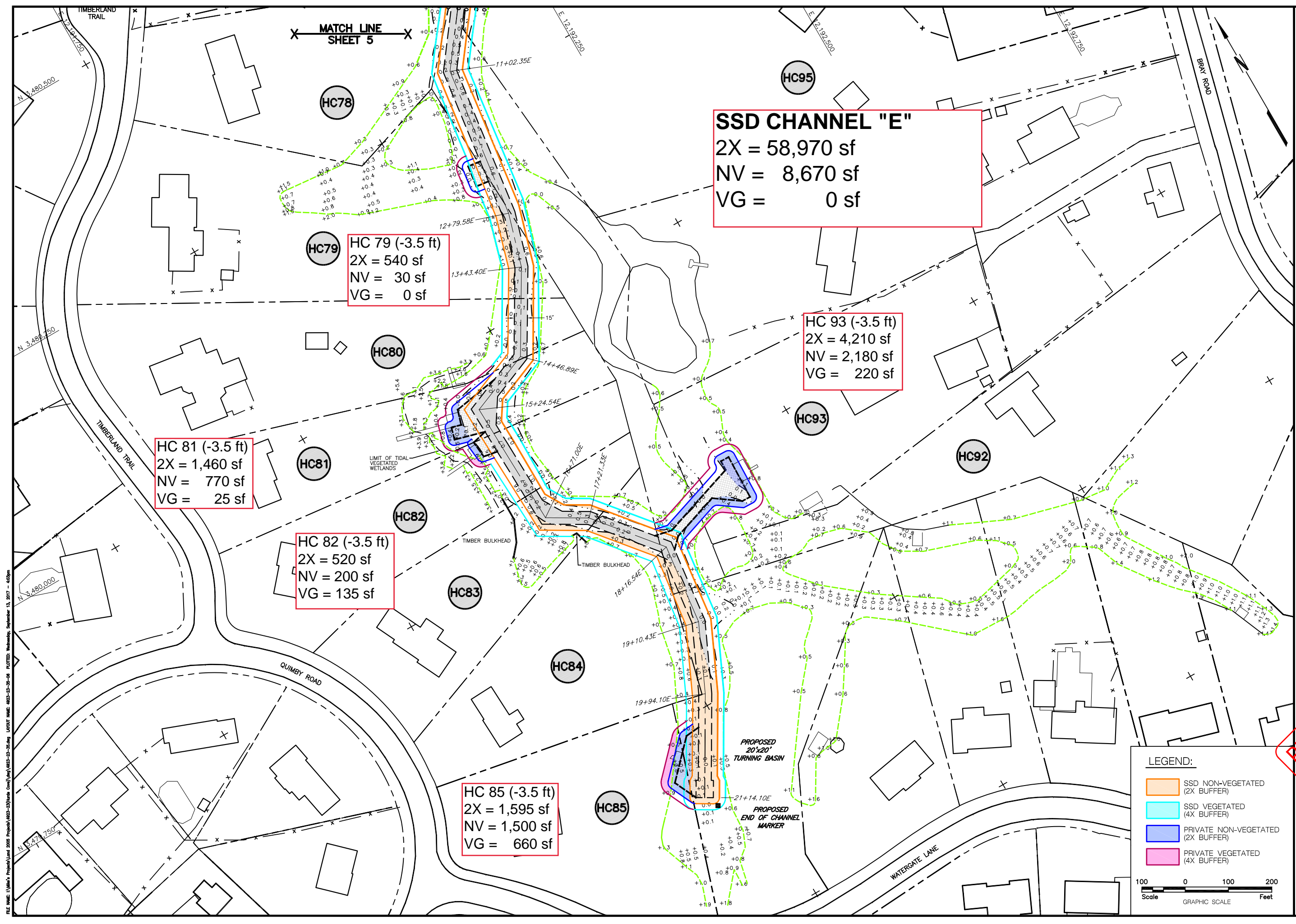
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SURVEYED W.S.&E.	DESIGNED R.S.F./M.S.P.
DRAWN M.S.P.	REVIEWED T.G.Q.
SCALE 1"=100'	DATE 06/09/17
DRAWING NO. 4923-23-22-05	
S-05	
SHEET 5 OF 11	





SSD CHANNEL "E"
 2X = 58,970 sf
 NV = 8,670 sf
 VG = 0 sf

HC 79 (-3.5 ft)
 2X = 540 sf
 NV = 30 sf
 VG = 0 sf

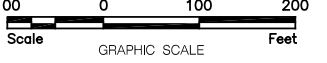
HC 93 (-3.5 ft)
 2X = 4,210 sf
 NV = 2,180 sf
 VG = 220 sf

HC 81 (-3.5 ft)
 2X = 1,460 sf
 NV = 770 sf
 VG = 25 sf

HC 82 (-3.5 ft)
 2X = 520 sf
 NV = 200 sf
 VG = 135 sf

HC 85 (-3.5 ft)
 2X = 1,595 sf
 NV = 1,500 sf
 VG = 660 sf

- LEGEND:**
- SSD NON-VEGETATED (2X BUFFER)
 - SSD VEGETATED (4X BUFFER)
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 - PRIVATE VEGETATED (4X BUFFER)



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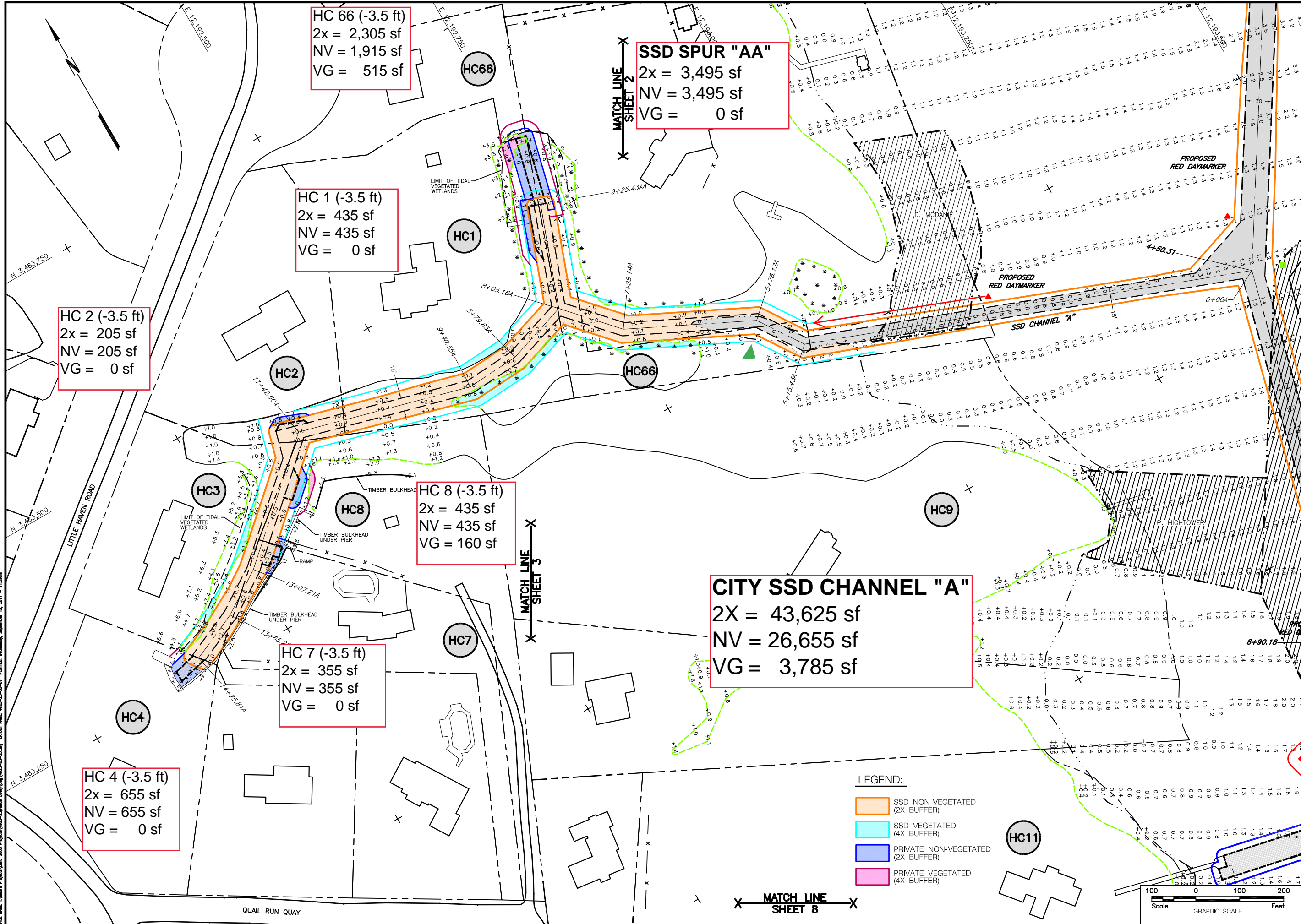
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M.S.P.	T.G.Q.
SCALE	DATE
1"=100'	06/09/17
DRAWING NO.	4923-23-22-06
S-06	
SHEET 6 OF 11	

FILE NAME: I:\New's Projects\Land 2008\Projects\4923-23-22\Draws\4923-23-22-06 LAYOUT NAME: 4923-23-22-06 PLOTTED: Wednesday, September 13, 2017 - 4:03pm
 N 3,480,500
 N 3,480,750
 N 3,480,000
 N 3,479,750

FILE NAME: I:\Water's Projects\Land 2008\Projects\4923-23-22\Drawings\Layout\NAME: 4923-23-22-07 PLOTTED: Wednesday, September 13, 2017 - 11:30am



HC 66 (-3.5 ft)
 2x = 2,305 sf
 NV = 1,915 sf
 VG = 515 sf

SSD SPUR "AA"
 2x = 3,495 sf
 NV = 3,495 sf
 VG = 0 sf

HC 1 (-3.5 ft)
 2x = 435 sf
 NV = 435 sf
 VG = 0 sf

HC 2 (-3.5 ft)
 2x = 205 sf
 NV = 205 sf
 VG = 0 sf

HC 8 (-3.5 ft)
 2x = 435 sf
 NV = 435 sf
 VG = 160 sf

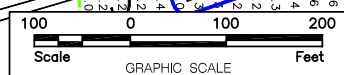
CITY SSD CHANNEL "A"
 2X = 43,625 sf
 NV = 26,655 sf
 VG = 3,785 sf

HC 7 (-3.5 ft)
 2x = 355 sf
 NV = 355 sf
 VG = 0 sf

HC 4 (-3.5 ft)
 2x = 655 sf
 NV = 655 sf
 VG = 0 sf

LEGEND:

- SSD NON-VEGETATED (2X BUFFER)
- SSD VEGETATED (4X BUFFER)
- PRIVATE NON-VEGETATED (2X BUFFER)
- PRIVATE VEGETATED (4X BUFFER)



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 JOINT PERMIT APPLICATION
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M.S.P.	T.G.Q.
SCALE	DATE
1"=100'	06/09/17
DRAWING NO.	4923-23-22-07
S-07	
SHEET 7 OF 11	

FILE NAME: I:\Vista's Projects\Land 2009\Projects\4923-23-22\Hards_Cover\4923-23-22-10_PLOTTED_Tuesday, September 14, 2017 - 12:29pm
 LAYOUT NAME: 4923-23-22-10
 PROJECT: 4923-23-22-10
 DATE: 06/09/17

CITY SSD CHANNEL "F"
 2X = 21,800 sf
 NV = 7,910 sf
 VG = 1,655 sf

HC 69 (-3.5 ft)
 2X = 1,350 sf
 NV = 1,060 sf
 VG = 640 sf

- LEGEND:**
- SSD NON-VEGETATED (2X BUFFER)
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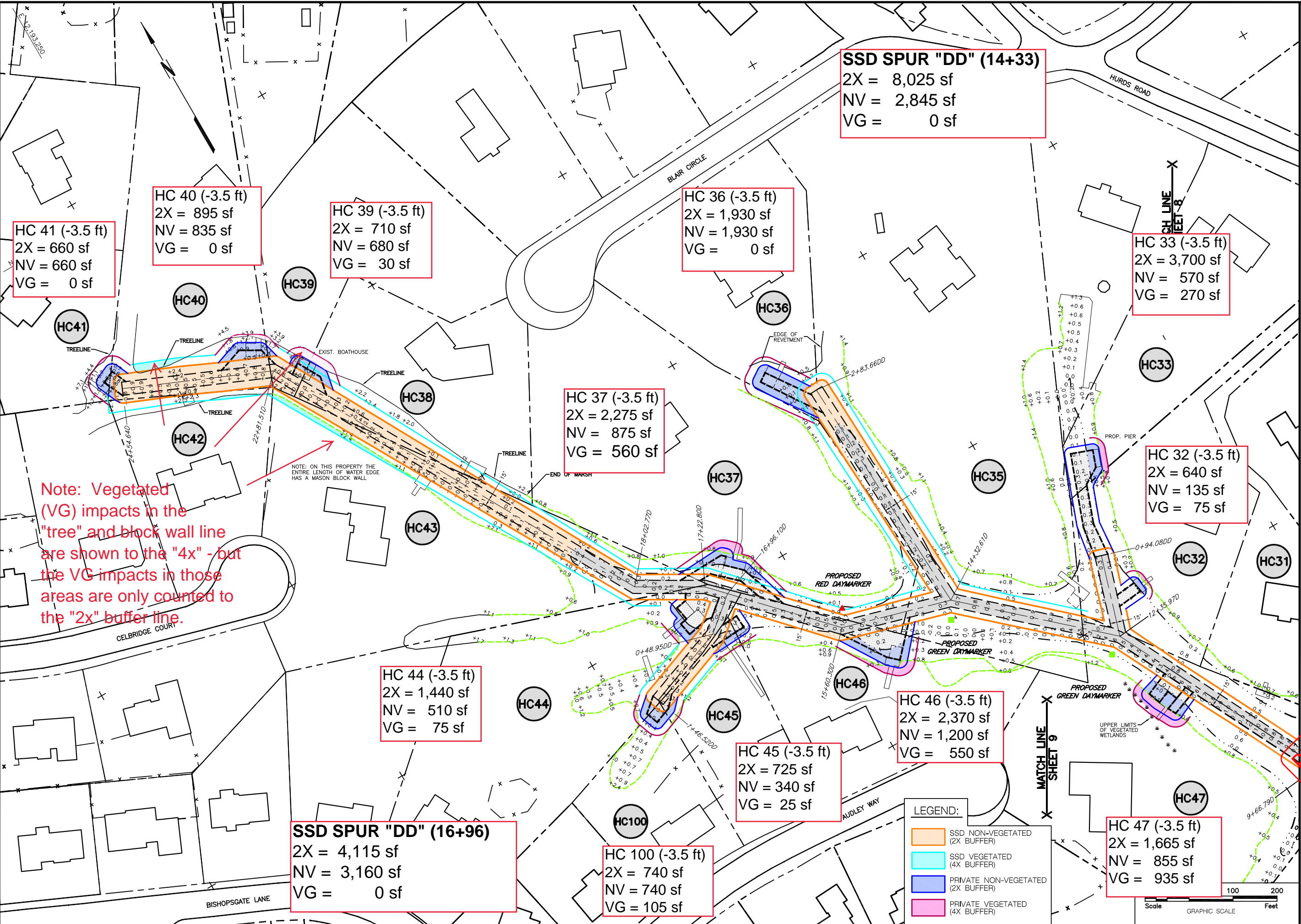
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SCALE 1"=100'	DATE 06/09/17
DRAWING NO. 4923-23-22-10	
S-10	
SHEET 10 OF 11	

REC. MADE: 1/16/16; PROJECT: 4923-23-22-11; PLOTTED: Wednesday, September 13, 2017 - 2:21pm
 FILE NAME: I:\Users\j\Projects\4923-23-22-11\Projects\4923-23-22-11\Layout\4923-23-22-11.dwg; LAYOUT NAME: 4923-23-22-11



HC 41 (-3.5 ft)
 2X = 660 sf
 NV = 660 sf
 VG = 0 sf

HC 40 (-3.5 ft)
 2X = 895 sf
 NV = 835 sf
 VG = 0 sf

HC 39 (-3.5 ft)
 2X = 710 sf
 NV = 680 sf
 VG = 30 sf

HC 36 (-3.5 ft)
 2X = 1,930 sf
 NV = 1,930 sf
 VG = 0 sf

HC 33 (-3.5 ft)
 2X = 3,700 sf
 NV = 570 sf
 VG = 270 sf

HC 37 (-3.5 ft)
 2X = 2,275 sf
 NV = 875 sf
 VG = 560 sf

HC 32 (-3.5 ft)
 2X = 640 sf
 NV = 135 sf
 VG = 75 sf

HC 44 (-3.5 ft)
 2X = 1,440 sf
 NV = 510 sf
 VG = 75 sf

HC 46 (-3.5 ft)
 2X = 2,370 sf
 NV = 1,200 sf
 VG = 550 sf

HC 45 (-3.5 ft)
 2X = 725 sf
 NV = 340 sf
 VG = 25 sf

SSD SPUR "DD" (16+96)
 2X = 4,115 sf
 NV = 3,160 sf
 VG = 0 sf

HC 100 (-3.5 ft)
 2X = 740 sf
 NV = 740 sf
 VG = 105 sf

HC 47 (-3.5 ft)
 2X = 1,665 sf
 NV = 855 sf
 VG = 935 sf

SSD SPUR "DD" (14+33)
 2X = 8,025 sf
 NV = 2,845 sf
 VG = 0 sf

Note: Vegetated (VG) impacts in the "tree" and block wall line are shown to the "4x" - but the VG impacts in those areas are only counted to the "2x" buffer line.

NOTE: ON THIS PROPERTY THE ENTIRE LENGTH OF WATER EDGE HAS A MASON BLOCK WALL

LEGEND:

- SSD NON-VEGETATED (2X BUFFER)
- SSD VEGETATED (4X BUFFER)
- PRIVATE NON-VEGETATED (2X BUFFER)
- PRIVATE VEGETATED (4X BUFFER)

MATCH LINE SHEET 9



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DRAWN	REVIEWED
M.S.P.	T.G.Q.
SCALE	DATE
1"=100'	06/09/17
DRAWING NO.	4923-23-22-11
S-11	
SHEET 11 OF 11	