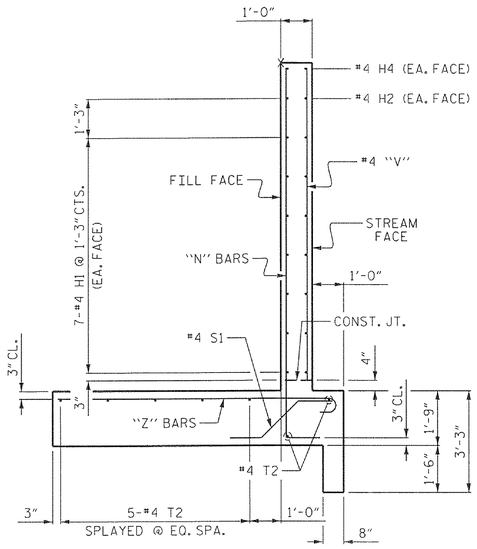
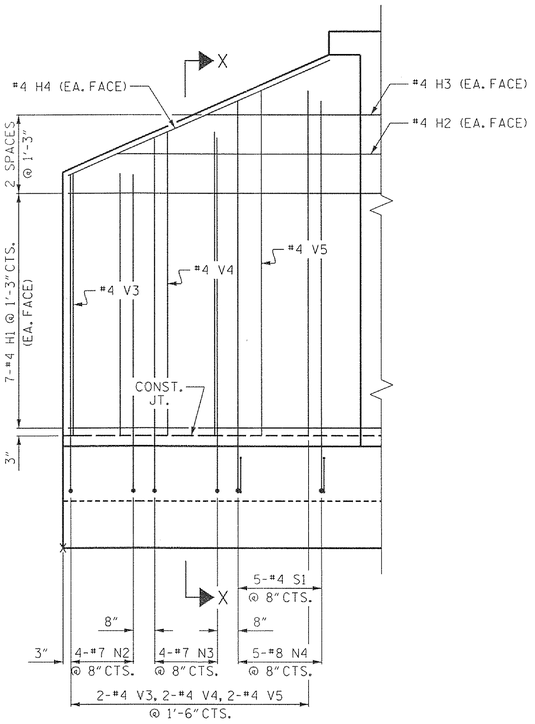
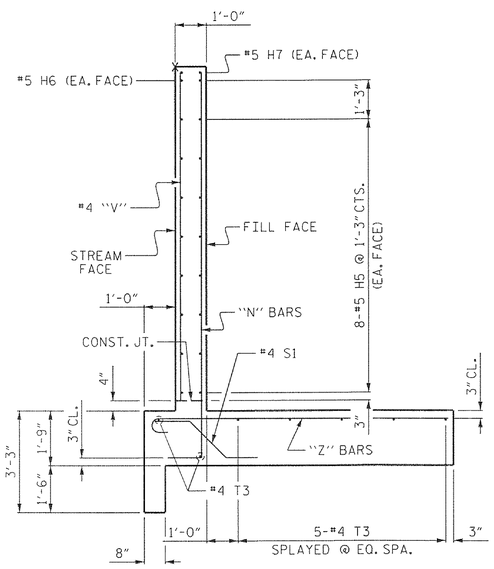


SECTION X-X

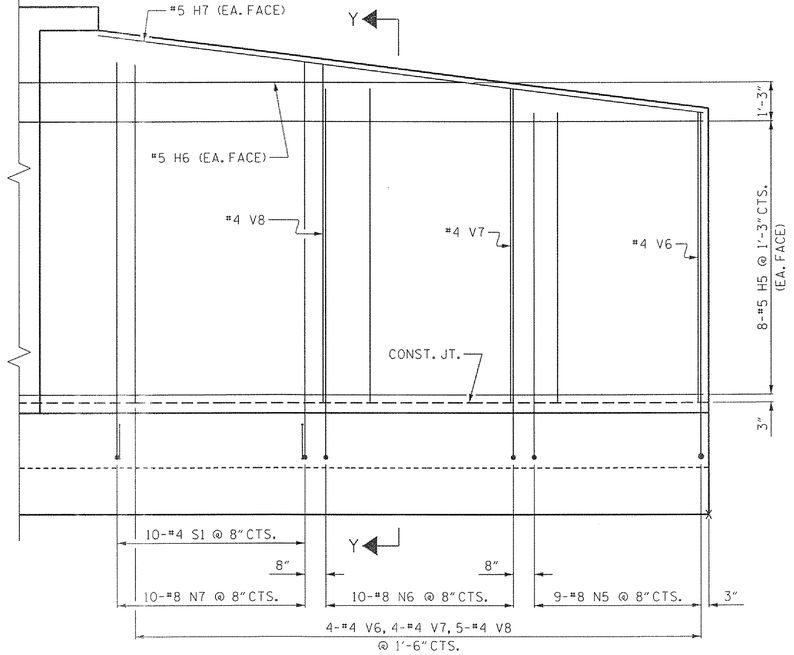


ELEVATION (W1)

"T" AND "Z" BARS IN FOOTING NOT SHOWN FOR CLARITY.
FOR "T" BAR LAYOUT SEE "SECTION X-X"
FOR "Z" BAR LAYOUT SEE "PLAN" ON SHEET S 5.0



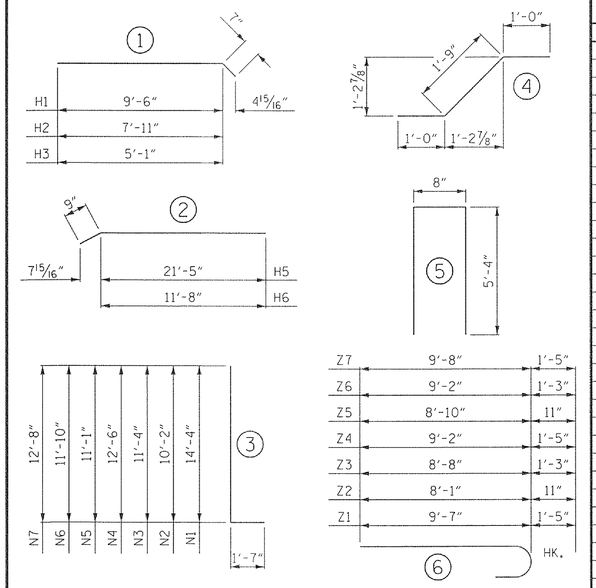
SECTION Y-Y



ELEVATION (W2)

"T" AND "Z" BARS IN FOOTING NOT SHOWN FOR CLARITY.
FOR "T" BAR LAYOUT SEE "SECTION Y-Y"
FOR "Z" BAR LAYOUT SEE "PLAN" ON SHEET S 5.0

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

NOTES:

MINIMUM CONCRETE STRENGTH (f'c) SHALL BE 3000 PSI.

REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.

CHAMFER ALL EXPOSED CORNERS 1".

AN ALLOWABLE SOIL BEARING PRESSURE OF 4000 PSF WAS ASSUMED IN THE DESIGN OF THE FOOTING. THE ACTUAL SOIL BEARING PRESSURE SHALL BE DETERMINED IN THE FIELD BY A GEOTECHNICAL ENGINEER TO VERIFY THIS ASSUMPTION.

PLACE A STONE DRAIN CONSISTING OF ONE (1) CUBIC FOOT OF NUMBER 78M STONE CONTAINED IN A POROUS FABRIC AT EACH WEEP HOLE. PLACE SUBDRAIN FINE AGGREGATE BENEATH, AROUND, AND OVER THE STONE DRAIN SO THE DRAIN IS COMPLETELY COVERED BY A LAYER OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT THICK. WHERE THERE IS MORE THAN ONE WEEP HOLE IN A WING WALL, PLACE A HORIZONTAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION TO CONNECT ALL STONE DRAINS. PLACE A VERTICAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION AT EACH WEEP HOLE TO AN ELEVATION OF TWO (2) FEET BELOW THE SURFACE OF THE EMBANKMENT.

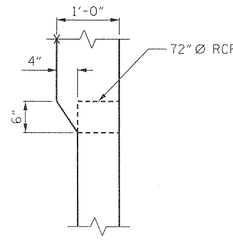
BILL OF MATERIAL

1 HEADWALL AND 2 WINGS

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	4	4	STR	7'-10"	21
B2	4	4	STR	5'-0"	13
G1	10	5	STR	12'-2"	127
H1	14	4	1	10'-1"	94
H2	2	4	1	8'-6"	11
H3	2	4	1	5'-8"	8
H4	2	4	STR	9'-1"	12
H5	16	5	2	22'-2"	370
H6	2	5	2	12'-5"	26
H7	2	5	STR	19'-6"	41
N1	8	7	3	15'-11"	260
N2	4	7	3	11'-9"	96
N3	4	7	3	12'-11"	106
N4	5	8	3	14'-1"	188
N5	9	8	3	12'-8"	304
N6	10	8	3	13'-5"	358
N7	10	8	3	14'-3"	380
S1	15	4	4	3'-9"	38
T1	8	4	STR	17'-10"	95
T2	7	4	STR	12'-3"	57
T3	7	4	STR	22'-3"	104
V1	6	4	STR	12'-6"	50
V2	11	4	5	11'-4"	83
V3	2	4	STR	8'-4"	11
V4	2	4	STR	9'-8"	13
V5	2	4	STR	11'-0"	15
V6	4	4	STR	9'-3"	25
V7	4	4	STR	10'-0"	27
V8	5	4	STR	10'-9"	36
Z1	19	10	6	11'-0"	899
Z2	4	8	6	9'-0"	96
Z3	4	9	6	9'-11"	135
Z4	5	10	6	10'-7"	228
Z5	9	8	6	9'-9"	234
Z6	10	9	6	10'-5"	354
Z7	10	10	6	11'-1"	477

TOTAL REINFORCING STEEL 5392 LBS.

3000 PSI CONCRETE	
POUR 1 (WING AND HEADWALL FOOTINGS INCLUDING 4" OF ALL VERTICAL WALLS)	31.0 CU. YDS.
POUR 2 (REMAINING PORTION OF HEADWALL AND WINGS FULL HEIGHT)	16.4 CU. YDS.
TOTAL	47.4 CU. YDS.



TAPER DETAIL

Cary Project Number (10-SB-004-B)
Cary HTE Number (12-1085)

Approved by the Town of Cary
Development Review Committee

Planner KAH Date 8/24/2012

PLANS PREPARED BY:
SIMPSON ENGINEERING & ASSOCIATES
5520 Dillard Drive
Suite 120
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
Licensure No. C2521

SEALS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18056 JOHN A. BATTS 8/24/2012

REVISIONS

DATE	COMMENTS

CONSTRUCTION DOCUMENT

HIGHCROFT VILLAGE PHASE 5
UPSTREAM HEADWALL AT STA. 106+60
CARY WAKE COUNTY NORTH CAROLINA

REVIEWED BY:	MAA
DESIGNED BY:	JAB
DRAWN BY:	TJB
DATE:	4-15-12
PROJECT NUMBER:	

HEADWALL DETAILS

S 6.0

MAY 2012

8/2/2012 4:23:47 PM G:\Projects\Withers & Ravenel\Designs\Highcroft Village\Drawings\WR_HIGHCROFT_headwall.dgn