

REVISIONS	BY

**FREELAND and KAUFFMAN, INC.**  
 Engineers • Landscape Architects  
 209 West Stone Avenue  
 Greenville, South Carolina 29609  
 864-233-5497

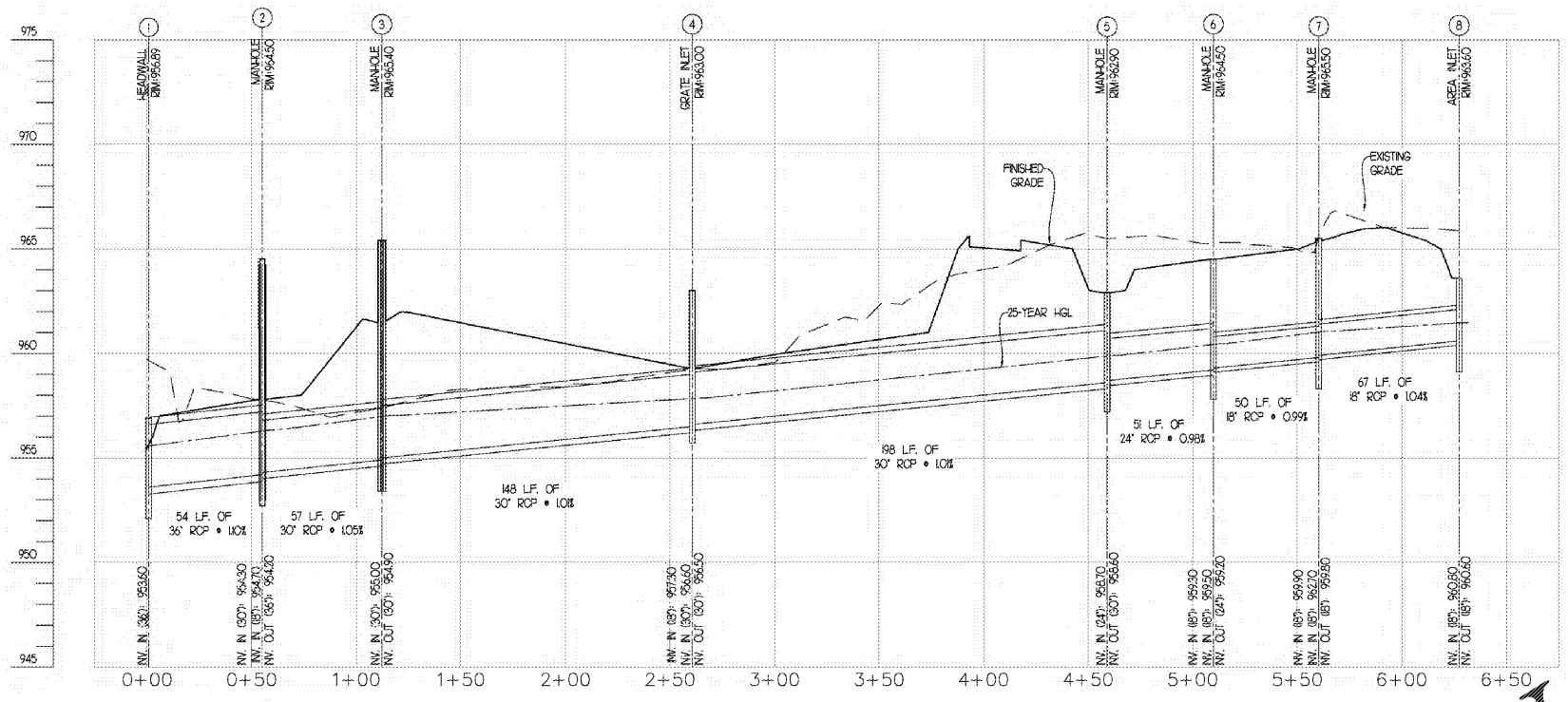
**NO SET  
 NOT FOR  
 CONSTRUCTION**



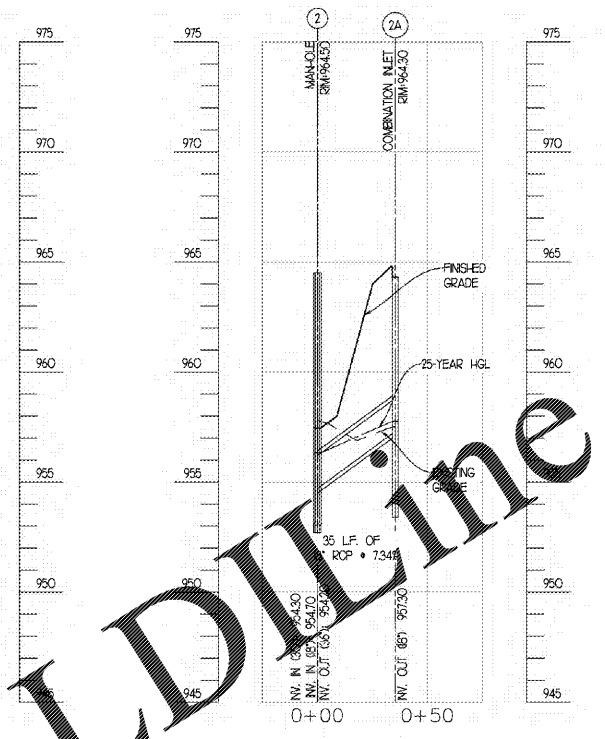
**CALIBER COLLISION**  
 1233 E. BUTLER ROAD  
 GREENVILLE, SC 29607  
 CROSS DEVELOPMENT CC FIVE FORKS, LLC  
 4336 MARSH RIDGE  
 CARROLLTON, TX 75010  
 TEL. (214) 614-8252

DRAWN: BAC  
 CHECKED: TMB  
 DATE: 01/04/2021  
 SCALE:

DRAWING: 18



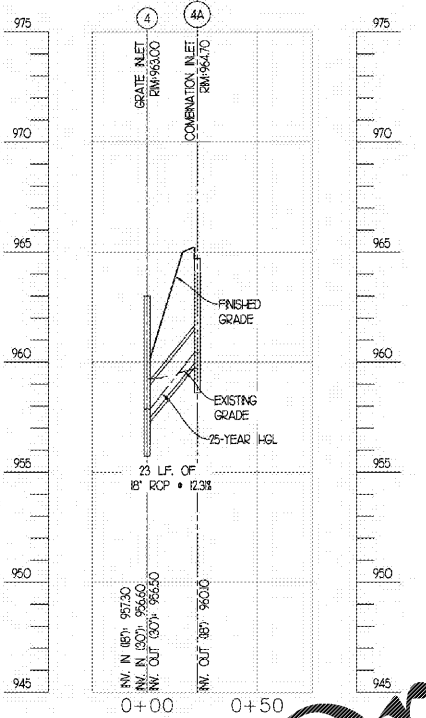
STORM DRAIN PROFILE 1-8



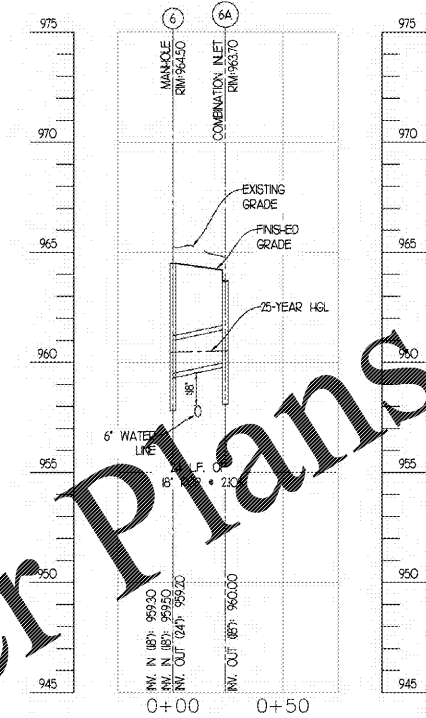
STORM DRAIN PROFILE 2-2A

**LEGEND**

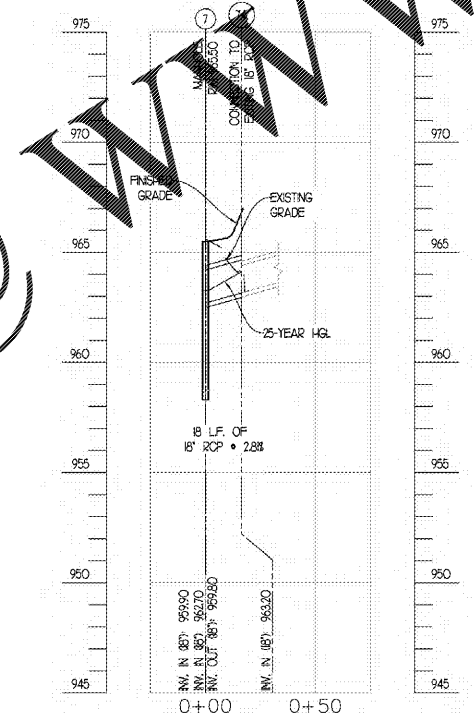
FEATURE	SYMBOL
EXISTING GRADE	(Solid line)
FINISHED GRADE (DELIVERED BY CALIBER COLLISION CONTRACTOR)	(Dashed line)
25-YEAR HYDRAULIC GRADE LINE (INCLUDES APPROXIMATE RUNOFF FROM PHASE 2 DEVELOPMENT)	(Dotted line)



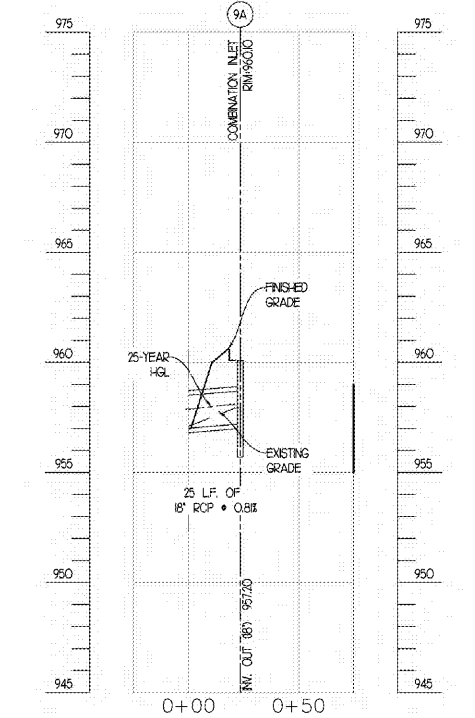
STORM DRAIN PROFILE 4-4A



STORM DRAIN PROFILE 6-6A



STORM DRAIN PROFILE 7-7A



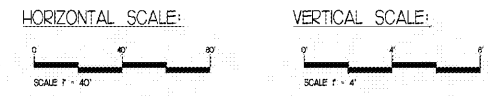
STORM DRAIN PROFILE 9-9A

**STORM DRAIN STRUCTURE TABLE**

STR. #	TYPE	RW/THROAT	INV. IN	INV. OUT
1	HEADWALL	95.89	95.80 (D)	95.20 (R)
2	MANHOLE	96.50	95.30 (D) 95.470 (2A)	95.20 (R)
2A	COMBINATION INLET	96.450	95.30 (D)	95.30 (D)
3	MANHOLE	96.40	95.00 (4)	95.40 (D)
4	GRATE INLET	96.00	95.70 (2A) 95.60 (D)	95.60 (D)
4A	COMBINATION INLET	96.70	96.00 (4)	96.00 (4)
5A	MANHOLE	96.00	95.70 (6)	95.60 (4)
6	MANHOLE	96.450	95.50 (D) 95.50 (6A)	95.20 (D)
6A	COMBINATION INLET	96.70	96.00 (4)	96.00 (4)
7	MANHOLE	96.50	95.90 (B) 96.20 (7A)	95.80 (4)
7A	EXISTING PIPE	96.4	96.20 (D)	96.20 (D)
8	AREA INLET	96.30	96.00 (8A)	96.00 (D)
8A	MANHOLE	96.00	96.00 (B)	96.00 (B)
9	HEADWALL	95.82	95.70 (9A)	95.70 (R)
9A	COMBINATION INLET	96.00	95.70 (R)	95.70 (R)

**STORM PIPE TABLE**

STORM DRAIN PIPE	SIZE	LENGTH	SLOPE	INV. IN	INV. OUT
2 - 1	36"	54'	1.0%	95.20	95.60
2A - 2	18"	35'	7.34%	95.30	95.470
3 - 2	30"	57'	1.0%	95.40	95.430
4 - 3	30"	148'	1.0%	95.60	95.00
4A - 4	18"	23'	1.2%	96.00	95.70
5 - 4	30"	67'	1.0%	95.60	95.60
6 - 5	24"	51'	0.9%	95.60	95.70
6A - 6	18"	24'	2.0%	96.00	95.90
7 - 6	18"	30'	0.9%	95.90	95.90
7A - 7	18"	18'	2.28%	96.20	96.20
8 - 7	18"	67'	1.04%	96.00	95.90
8A - 8	18"	3'	3.9%	96.00	96.00
9A - 9	18"	25'	0.8%	95.70	95.70



DRAINAGE BASIN:  
 BROAD RIVER WATERSHED

RECEIVING WATERS:  
 UPPER ENOREE RIVER -  
 TRIBUTARY OF THE BROAD RIVER  
 WATERSHED

**STORM DRAIN NOTES**

- ALL HYDRAULIC DATA FOR THE STORM DRAINAGE PIPES ARE BASED ON THE 25-YEAR DESIGN STORM.
- ALL INLET DIMENSIONS SHALL HAVE A MINIMUM INSIDE DIMENSION OF 4" DIAMETER (CIRCULAR) OR 4"x4" (SQUARE). STRUCTURES SHALL BE UP-SIZED AS NEEDED TO ACCOMMODATE THE CONNECTING PIPE SIZES/ ANGLES.
- STORM DRAIN PIPE SHALL BE CLASS 4 WALL 18" RCP IN ACCORDANCE WITH ASTM C-76, UNLESS NOTED OTHERWISE. HIGH DENSITY POLYETHYLENE PIPE (HDPE) MAY BE USED AS AN ALTERNATE. ALL HDPE PIPE, JOINTS, AND FITTINGS SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATIONS M252 AND M234 TYPE S.
- PIPE LENGTHS ARE BASED ON HORIZONTAL DISTANCE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND USED FOR DESIGN ONLY. CONTRACTOR TO FIELD VERIFY ACTUAL PIPE LENGTHS NEEDED FOR CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR COMPARING THE STORM DRAIN WITH THE PROFILES FOR THE STORM DRAIN LINES AND INFORMING THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- STORM DRAIN PIPE SHALL HAVE WATER TIGHT JOINTS IN ACCORDANCE WITH ASTM C 361, C443, AND D322.

**STORM PROFILE NOTES**

- CALIBER COLLISION CONTRACTOR SHALL NOTE THAT THE FINISHED GRADE AFTER THE PHASE 2 DEVELOPMENT IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. CALIBER COLLISION CONTRACTOR IS ONLY RESPONSIBLE FOR PROVIDING THE GRADE ELEVATIONS LABELED "FINISHED GRADE".
- THE 25-YEAR HYDRAULIC GRADE LINES SHOWN WITHIN THE PROPOSED STORM SEWER SYSTEM ACCOUNT FOR RUNOFF GENERATED BY THE PHASE 2 DEVELOPMENT. THE HYDRAULIC LINES SHOWN REPRESENT APPROXIMATE DISCHARGE OF THE FUTURE DEVELOPMENT IF IT WAS TO BE DESIGNED FOR 100% IMPERVIOUS AREA, NOT FOR THE DRAINAGE AREAS AND RUNOFF VALUES SHOWN ON THE PLAN LABELED "INLET AREA MAP".

STORM PROFILES

