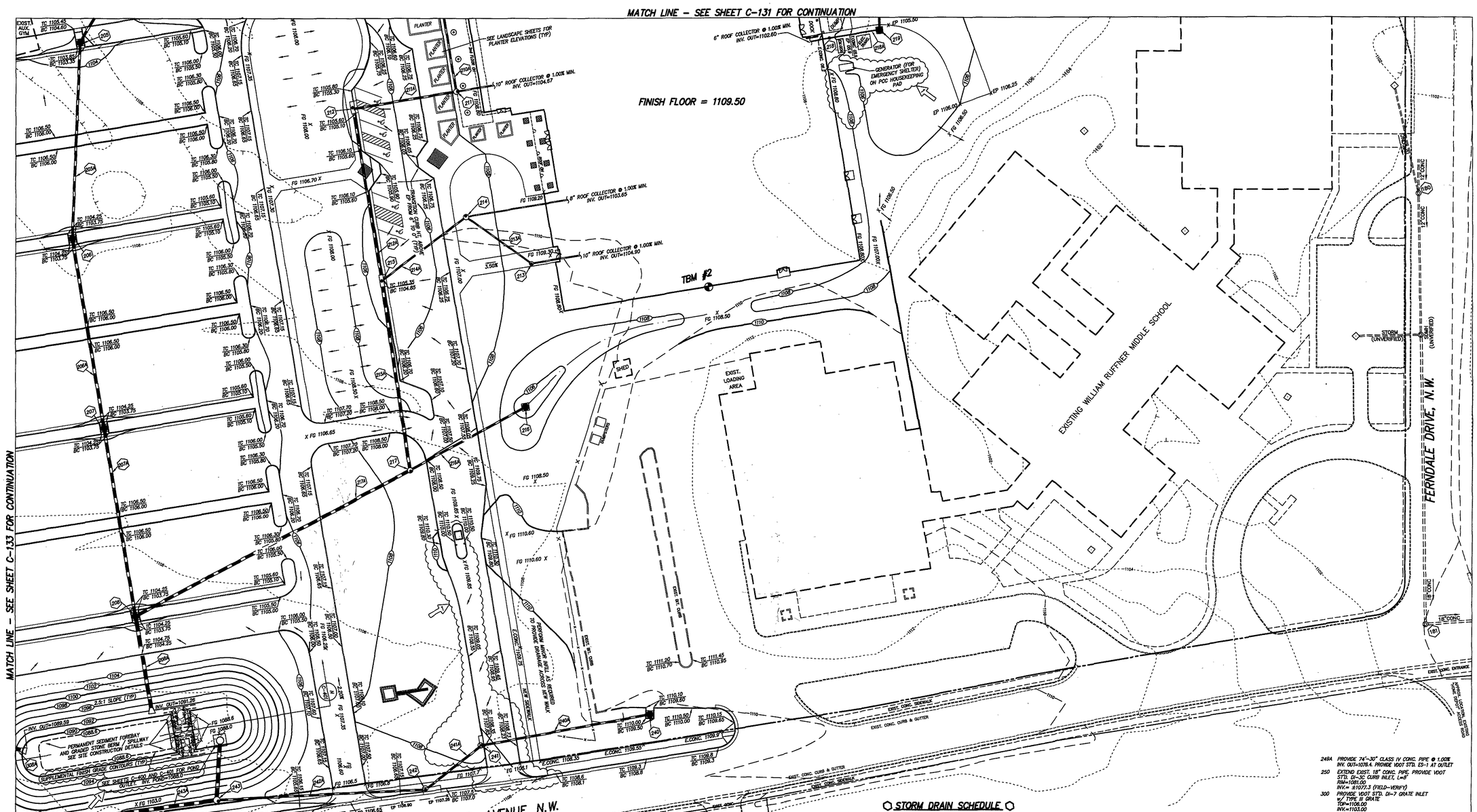

STORM DRAIN SCHEDULE

–STORM DRAIN ITEMS IN THE "100 SERIES" ARE STRUCTURES IN PLACE PRIOR TO THE COMMENCEMENT OF THIS PROJECT.
–STORM DRAIN ITEMS IN THE "200" SERIES ARE STRUCTURES THAT ARE TO BE INSTALLED IN CONJUNCTION WITH CONSTRUCTION OF THE NEW SCHOOL AND PARKING.
–STORM DRAIN ITEMS IN THE "300" SERIES ARE STRUCTURES THAT ARE TO BE INSTALLED IN CONJUNCTION WITH CONSTRUCTION OF THE NEW WESTERN ATHLETIC FIELDS AND FUTURE STADIUM GRADING.
–SEE SHEETS C-300 THROUGH C-302 FOR NEW STORM DRAIN PROFILES.
–ALL STORM DRAINAGE STRUCTURES SHALL BE PRE-CAST CONCRETE. MATERIALS, FABRICATION, AND INSTALLATION SHALL BE IN STRICT CONFORMANCE TO VDOT STANDARDS AND SPECIFICATIONS.
–ALL NEW STORM STRUCTURES 4' INSIDE DIAMETER AND LARGER TO RECEIVE VDOT IS-1 INLET SHAPING
–NEW CONCRETE PIPE SHALL BE MINIMUM VDOT CLASS III REINFORCED CONCRETE, UNLESS OTHERWISE SPECIFIED
–SEE SOIL EROSION CONTROL PLAN FOR PERMANENT EROSION CONTROL STONE TO BE PLACED AT PIPE OUTFALLS, AS APPLICABLE.
–ALL STORM DRAIN BEDDING AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.
–ALL EXTERIOR CLEANOUTS FOR ROOF COLLECTOR SYSTEM SHALL BE CONSTRUCTED WITH TRAFFIC-BEARING FRAMES AND COVERS

200 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1106.00 INV.=1103.00
200A PROVIDE 175'-15" CONC. PIPE @ 0.75%
201 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1106.00 INV. IN (NORTH)=1101.69 INV. IN (WEST)=1102.48 INV. IN (ROOF)=1101.69 INV. OUT=1101.59
201A PROVIDE 164'-15" CONC. PIPE @ 0.75%
202 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1106.00 INV.=1103.00
202A PROVIDE 51'-15" CONC. PIPE @ 1.00%
203 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1105.00 INV. IN=1103.36 INV. IN (ROOF)=1100.36 INV. OUT=1103.26
203A PROVIDE 112'-15" CONC. PIPE @ 1.00%
204 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1105.20 INV. IN=1099.14 INV. OUT=1099.04
204A PROVIDE 65'-18" CONC. PIPE @ 0.75%
205 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1102.90 INV. IN=1098.40 INV. OUT=1098.30
205A PROVIDE 145'-18" CONC. PIPE @ 1.20%
206 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1103.25 INV. IN=1096.56 INV. OUT=1096.46
206A PROVIDE 142'-24" CONC. PIPE @ 0.75%
207 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1103.25 INV. IN=1095.40 INV. OUT=1093.52
207A PROVIDE 142'-24" CONC. PIPE @ 1.00%
208 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1103.25 INV. IN (NORTH)=1092.10 INV. IN (EAST)=1094.40 INV. OUT=1092.00
208A PROVIDE 74'-30" CONC. PIPE @ 1.00% PROVIDE VDOT ES-1 AT OUTLET (LENGTH INCLUDES ES-1) INV. OUT=1091.26 (AT OUTLET OF ES-1)
209 PROVIDE NEW 3' DIA. STORM MH RIM=1107.50 INV. IN=1103.80 INV. OUT=1103.70
209A PROVIDE 113'-10" PVC PIPE @ 2.52%
210 PROVIDE NEW 4' DIA. STORM MH RIM=1105.50 INV. IN (WEST)=1100.85 INV. IN (EAST)=1104.67 INV. OUT=1100.75
210A PROVIDE 125'-12" PVC PIPE @ 1.00%
211 PROVIDE NEW 4' DIA. STORM MH RIM=1108.50 INV. IN (EAST)=1104.67 INV. IN (NORTH)=1099.50 INV. OUT=1099.40
211A PROVIDE 76'-15" CONC. PIPE @ 1.00%
212 PROVIDE VDOT STD. DI-3C CURB INLET, L=8' RIM=1105.50 INV. IN=1099.65 INV. OUT=1099.55
212A PROVIDE 128'-18" CONC. PIPE @ 0.75%
213 PROVIDE NEW 3' DIA. STORM MH RIM=1108.80 INV. IN=1104.90 INV. OUT=1104.80
213A PROVIDE 56'-10" PVC PIPE @ 2.41%
214 PROVIDE NEW 4' DIA. STORM MH RIM=1107.30 INV. IN (SOUTH)=1103.40 INV. IN (EAST)=1103.65 INV. OUT=1103.30
214A PROVIDE 78'-12" PVC PIPE @ 2.95%
215 PROVIDE VDOT STD. DI-3C CURB INLET, L=8' RIM=1106.35 INV. IN (NORTH)=1097.60 INV. IN (EAST)=1101.00 INV. OUT=1097.50
215A PROVIDE 142'-24" CONC. PIPE @ 0.50%
216 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1105.20 INV.=1102.20
216A PROVIDE 95'-15" CONC. PIPE @ 1.00%
217 PROVIDE NEW VDOT STD. STORM MANHOLE RIM=1108.40 INV. IN (NORTH)=1096.80 INV. IN (EAST)=1104.67 INV. OUT=1096.70
217A PROVIDE 230'-24" CONC. PIPE @ 1.00%
218 PROVIDE NEW CO, INV.=1102.60
218A PROVIDE 38' NEW 6" PVC @ 1.67%
219 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1105.00 INV.=1102.10 INV. OUT=1102.00
219A PROVIDE 54'-15" CONC. PIPE @ 1.52%
220 PROVIDE NEW CO, INV.=1103.50
220A PROVIDE 40' NEW 6" PVC @ 5.00%
221 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1103.00 INV. IN (SOUTH)=1101.18 INV. IN (WEST)=1101.50 INV. OUT=1101.08
221A PROVIDE 56'-15" CONC. PIPE @ 0.75%
222 PROVIDE NEW 3' DIA. STORM MH RIM=1108.00 INV. IN =1104.10 INV. OUT=1104.00
222A PROVIDE 38' NEW 8" PVC @ 1.00%
223 PROVIDE NEW STORM MH RIM=1107.90 INV. IN (WEST)=1104.00 INV. IN (SOUTH)=1103.62 INV. OUT=1103.52
223A PROVIDE 33' NEW 10" PVC @ 1.00%
224 PROVIDE NEW STORM MH RIM=1107.60 INV. IN (SOUTH)=1100.66 INV. IN (WEST)=1103.19 INV. OUT=1100.54
224A PROVIDE 72'-15" CONC. PIPE @ 0.75%
225 PROVIDE NEW STORM MH RIM=1107.80 INV. IN (SOUTH)=1100.00 INV. IN (WEST)=1104.00 INV. OUT=1099.90
225A PROVIDE 111'-18" CONC. PIPE @ 0.75%
226 PROVIDE NEW STORM MH RIM=1106.00 INV. IN (SOUTH)=1099.07 INV. IN (WEST)=1102.00 INV. OUT=1098.97
226A PROVIDE 162'-18" CONC. PIPE @ 2.45% PROVIDE VDOT ES-1 AT OUTLET (LENGTH INCLUDES ES-1) INV. OUT=1095.00 (AT OUTLET OF ES-1)
227 PROVIDE NEW STORM MH RIM=1107.35 INV. IN=1102.10 INV. OUT=1102.00
227A PROVIDE 91'-24" CONC. PIPE @ 0.97% INV. OUT=1101.10
228 NOT USED
228A PROVIDE 20'-15" CONC. PIPE @ 1.00% INV. IN=1100.60 INV. OUT=1099.90
229 NOT USED
229A PROVIDE 40'-NEW 30" CONC. AT 0.50% INV. IN=1099.0
230 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1104.40 INV. =1101.50
230A PROVIDE 150'-15" CONC. PIPE @ 1.20%
231 PROVIDE NEW STORM MH RIM=1106.50 INV. IN=1104.40 INV. OUT=1104.30
231A PROVIDE 160'-10" PVC PIPE @ 1.25%
232 PROVIDE NEW STORM MH RIM=1106.30 INV. IN (230A)=1099.70 INV. IN (231A)=1102.30 INV. OUT=1099.60
232A PROVIDE 130'-15" CONC. PIPE @ 2.00%
233 PROVIDE NEW STORM MH RIM=1107.80 INV. IN (229A)=1097.0 INV. IN (232A)=1097.0 INV. OUT=1096.90
233A PROVIDE 164'-30" CONC. PIPE @ 0.75%
234 PROVIDE VDOT STD. DI-3C CURB INLET, L=8' RIM=1099.80 INV. OUT=1095.00
234A PROVIDE 108'-15" CONC. PIPE @ 1.00%
235 PROVIDE VDOT STD. DI-3B CURB INLET, L=6' RIM=1102.30 INV. OUT=1097.47
235A PROVIDE 72'-15" CONC. PIPE @ 2.27%
236 PROVIDE VDOT STD. DI-3B CURB INLET, L=6' RIM=1100.00 INV. IN (233A)=1095.67 INV. IN (234A)=1095.52 INV. IN (235A)=1095.63 INV. OUT=1093.82
236A PROVIDE 312'-36" CONC. PIPE @ 0.50%
237 PROVIDE VDOT STD. DI-3B CURB INLET, L=6' RIM=1099.80 INV. IN=1092.98 INV. OUT=1092.18
237A PROVIDE 76'-24" CONC. PIPE @ 1.00% PROVIDE VDOT ES-1 AT OUTLET (LENGTH INCLUDES ES-1) INV. OUT=1091.40 (AT OUTLET OF ES-1)
238 PROVIDE VDOT STD. DI-3B CURB INLET, L=10' RIM=1101.50 INV. OUT=1096.55
238A PROVIDE 62'-15" CONC. PIPE @ 2.50% PROVIDE VDOT ES-1 AT OUTLET (LENGTH INCLUDES ES-1) INV. OUT=1095.00 (AT OUTLET OF ES-1)
239 PROVIDE NEW STORM MH w/5000LBS BASE RIM=1095.5 INV.=1092.8 (VERIFY PRIOR TO CONSTRUCTION)
239A NOT USED
240 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1092.50 INV.=1086.50
240A PROVIDE 109'-15" CONC. PIPE @ 3.37%
241 PROVIDE VDOT STD. DI-3B CURB INLET, L=6' RIM=1108.40 INV. IN=1103.52 INV. OUT=1103.42
241A PROVIDE 32'-15" CONC. PIPE @ 1.00%
242 PROVIDE VDOT STD. DI-3B CURB INLET, L=12' RIM=1107.35 INV. IN=1102.70 INV. OUT=1102.60
242A PROVIDE 154'-15" CONC. PIPE @ 2.33%
243 PROVIDE VDOT STD. STORM MANHOLE RIM=1104.2 INV. IN (EAST)=1099.00 INV. IN (NORTH)=1097.17 INV. OUT=1097.07
243A PROVIDE 370'-30" VDOT CLASS IV CONC. PIPE @ 0.75%
244 PROVIDE VDOT STD. STORM MANHOLE RIM=1093.50 INV. IN=1084.30 INV. OUT=1084.20
244A PROVIDE 154'-30" CONC. PIPE @ 1.31%
245 PROVIDE VDOT STD. DI-3B CURB INLET, L=16' RIM=1086.72 INV.=1082.30
245A PROVIDE 12'-15" CONC. PIPE @ 1.00%
246 PROVIDE VDOT STD. STORM MANHOLE RIM=1084.5 INV. IN (EAST)=1082.18 INV. IN (SOUTH)=1082.18 INV. OUT=1082.08
246A PROVIDE 190'-30" CONC. PIPE @ 1.97%
247 PROVIDE VDOT STD. DI-3B CURB INLET, L=10' RIM=1082.85 INV.=1078.45
247A PROVIDE 12'-15" CONC. PIPE @ 1.00%
248 PROVIDE VDOT STD. STORM MANHOLE RIM=1084.3 INV. IN (EAST)=1078.33 INV. IN (SOUTH)=1078.33 INV. OUT=1078.23
248A PROVIDE 265'-30" CONC. PIPE @ 0.41%
249 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1081.1 INV.= 1077.14
249A PROVIDE 74'-30" CLASS IV CONC. PIPE @ 1.00% INV. OUT=1078.4. PROVIDE VDOT STD. ES-1 AT OUTLET
250 EXTEND EXIST. 18" CONC. PIPE. PROVIDE VDOT STD. DI-3C CURB INLET, L=8' RIM=1081.00 INV.= ±1077.3 (FIELD-VERIFY)
300 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1106.00 INV.=1103.00
300A PROVIDE 209'-15" CONC. PIPE @ 0.75%
301 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1106.45 INV.=1103.45
301A PROVIDE 131'-15" CONC. PIPE @ 0.50%
302 PROVIDE VDOT STD. DI-1 GRATE INLET TOP=1106.45 INV. IN=1102.80 INV. OUT=1102.70
302A PROVIDE 74'-18" CONC. PIPE @ 1.70%
303 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1106.00 INV. IN (302A)=1101.43 INV. IN (300A)=1101.43 INV. OUT=1101.33
303A PROVIDE 172'-15" CONC. PIPE @ 1.25%
304 PROVIDE VDOT STD. DI-7 GRATE INLET w/ TYPE III GRATE TOP=1100.00 INV.=1096.80
304A PROVIDE 86'-18" CONC. PIPE @ 0.75%
305 PROVIDE NEW VDOT STD. STORM MANHOLE RIM=1107.30 INV. IN (304A)=1099.18 INV. IN (304A)=1096.15 INV. OUT=1096.05
305A PROVIDE 330'-24" CONC. PIPE @ 0.88%
306 PROVIDE NEW VDOT STD. STORM MANHOLE RIM=1103.00 INV. IN=1093.10 INV. OUT=1093.00
306A PROVIDE 167'-24" VDOT CLASS IV CONC. PIPE @ 0.50%
307 PROVIDE VDOT STD. DI-1A GRATE INLET TOP=1106.45 INV. IN (306A)=1092.17 INV. IN (FUTURE 15" SUB-DRAIN)=1100.00. PROVIDE 10' STUB OF NEW 15"CONC. @ 1.0% CAP AND PLUG FOR FUTURE EXTENSION. INV. OUT=1092.07
307A PROVIDE 130'-24" CONC. PIPE @ 0.75%
308 PROVIDE VDOT STD. DI-1A GRATE INLET TOP=1106.45 INV. IN (307A)=1091.10 INV. IN (FUTURE 15" SUB-DRAIN)=1100.00. PROVIDE 10' STUB OF NEW 15"CONC. @ 1.0% CAP AND PLUG FOR FUTURE EXTENSION. INV. OUT=1091.00
308A PROVIDE 283'-30" CONC. PIPE @ 0.50% PROVIDE VDOT ES-1 AT OUTLET (LENGTH INCLUDES ES-1) INV. OUT=1089.59 (AT OUTLET OF ES-1)

BENCHMARK:

CITY OF ROANOKE GPS MONUMENT "HERSH (Roanoke 2000)", AN ALUMINUM DISK LOCATED IN THE GRASS MEDIAN STRIP OF HERSHBERGER ROAD, N.W. (VA RTE. 101), APPROXIMATELY 60' SOUTH OF THE I-581 UNDERPASS.
ELEVATION = 1066.89 (NGVD 1929)

TEMPORARY BENCHMARK (TBM) #1:

CHISELED SQUARE FOUND ON END OF CONCRETE CURB AT THE SOUTHWESTERN CORNER OF BRICK DUMPSTER ENCLOSURE, LOCATED ON THE WESTERN SIDE OF FERNDALE DRIVE, AT THE EASTERN-MOST CORNER OF WILLIAM RUFFNER MIDDLE SCHOOL.
ELEVATION = 1102.64

TEMPORARY BENCHMARK (TBM) #2:

RAILROAD SPIKE IN UTILITY POLE NUMBER 229-1279, LOCATED APPROXIMATELY 60' NORTH OF THE WESTERN-MOST PARKING LOT AT WILLIAM RUFFNER MIDDLE SCHOOL.
ELEVATION = 1110.49

TEMPORARY BENCHMARK (TBM) #3:

CHISELED SQUARE SET ON THE CORNER OF SIDEWALK NEAR THE SOUTHWESTERN BUILDING EXIT AT "THE LAWSON CENTER", LOCATED ON THE WILLIAM FLEMING HIGH SCHOOL CAMPUS.
ELEVATION = 1108.95

30' 0' 30' 60'
1" = 30'
GRAPHIC SCALE

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CWA W.O.: 06-0089 NB: Rkn. City Schools

WILLIAM FLEMING HIGH SCHOOL

School Site Project No. 124-40A
Literary Loan No. 11255

KEY PLAN

NUMBER	ISSUE	DATE
1	PER CITY and ADDEN. 2	08/13/07

Revisions

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COMMONWEALTH OF VIRGINIA
CORBIN L. WHITE
Lic. No. 23843
08-13-07
PROFESSIONAL ENGINEER

Sheet Information

Date	May 15, 2007
Job Number	8003720.000
Scale	1" = 30'
Drawn	C.L. White
Checked	
Approved	

Title

GRADING AND STORM DRAINAGE PLAN

Sheet

C-130

ISSUED FOR CONSTRUCTION