

CONSTRUCTION SEQUENCE

1. INSTALL TREE PROTECTION FENCING
2. CONTACT TOWN OF CARY EROSION CONTROL ENGINEER AT 468-4347 AND ENGINEER AT 851-4422 TO SCHEDULE PRE-CONSTRUCTION MEETING AND TREE PROTECTION FENCE INSPECTION.
3. OBTAIN GRADING PERMIT.
4. CLEAR AND GRUB ONLY AS NEEDED TO INSTALL TEMPORARY DIVERSIONS, SLOPE DRAINS, SILT FENCING AND CONSTRUCTION ENTRANCE. CONTACT THE TOWN OF CARY EROSION CONTROL ENGINEER FOR ON-SITE INSPECTION. (NOTE: SLOPE DRAINS TO TIE INTO EXISTING CURB INLETS SEE DETAIL. SLOPE DRAINS MAY BE REMOVED WHEN STRUCTURES 2, 21 AND 22 ARE IN PLACE AND CONNECTED TO DETENTION BASIN. A CATCH BASIN RISER FILTER (TOWN OF CARY DETAIL 4.05) MAY BE REQUIRED AT STRUCTURES 3, 21 AND 22 IF SEDIMENT RESTRICTING THE STORMWATER PIPING BECOMES A PROBLEM.)
5. THE EXISTING DETENTION BASIN SHALL BE USED AS THE MAJOR SEDIMENT BASIN DURING CONSTRUCTION. THE EXISTING SKIMMER DEVICE SHALL REMAIN IN PLACE UNTIL SITE IS STABILIZED. COORDINATE WITH CONTRACTOR ON CROSSROADS FORD BODY SHOP SITE.
6. CLEAR AND GRUB THE REMAINDER OF THE SITE AS NEEDED AND BEGIN GRADING, SEED AND MULCH ALL BARE SOIL AREAS WITHIN 30 DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION (15 DAYS FOR ANY SLOPE EXCEEDING 5:1).
7. ROUGH GRADE SITE AND INSTALL STORM DRAINAGE AS SHOWN. PROTECT ALL DRAINAGE STRUCTURES WITH INLET PROTECTION DEVICE PER DETAIL. EXCEPT STRUCTURES 3, 21 AND 22. MAINTAIN OTHER DEVICES AS NEEDED.
8. AS AREAS ARE BROUGHT TO FINISHED GRADE, STABILIZE WITH VEGETATION, PAVING, ETC. AS APPROPRIATE.
9. WHEN SITE IS COMPLETELY STABILIZED, REMOVE ALL TEMPORARY DEVICES INCLUDING SKIMMER DEVICE AND STABILIZE ANY BARE SOIL AREAS WITH SEED AND MULCH. PAVING, DITCH Lining, ETC. AS APPROPRIATE. FLUSH ACCUMULATED SEDIMENT FROM STORMWATER PIPING AND REMOVE ALL ACCUMULATED SEDIMENT FROM DETENTION BASIN AND GRADE TO FINAL CONTOURS. SEED AND MULCH ALL BARE AREAS. ALL PERMANENT DEVICES (VELOCITY REDUCTION APRONS, DITCH LININGS, ETC.) SHOULD BE IN PLACE.
11. CONTACT THE TOWN OF CARY EROSION CONTROL ENGINEER FOR ON-SITE INSPECTION AND OBTAIN A CERTIFICATE OF COMPLETION.
12. TOTAL DENuded AREA = 11.4 ACRES.

NOTES:

1. STREETS IN FRONT OF THE PROJECT WILL BE KEPT CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.
2. THIS SITE IS WITHIN THE SWIFT CREEK WATERSHED. WATER QUALITY REQUIREMENTS ARE TO BE MET THROUGH USE OF THE EXISTING WATER QUALITY BASIN LOCATED ON THE ADJACENT PROPERTY (CROSSROADS FORD BODY SHOP).
3. ALL CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH CURRENT TOWN OF CARY STANDARD SPECIFICATIONS AND DETAILS.
4. EXISTING TREES AT END OF CLEARING LIMITS SHALL BE ROOT PRUNED BY CONTRACTOR PRIOR TO STARTING GRADING ACTIVITIES. THIS SHALL BE DONE BY EXCAVATING A MINIMUM 2' TRENCH ALONG THE LIMITS OF DISTURBANCE, SO AS TO CUT, RATHER THAN TEAR TREE ROOTS.
5. TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION PRIOR TO THE CERTIFICATE OF OCCUPANCY (CO) IS SCHEDULED. THE FENCING SHALL BE REMOVED PRIOR TO FINAL SITE INSPECTION FOR CO.
6. THERE ARE NO JURISDICTIONAL WETLANDS WITHIN THE LIMITS OF THIS SITE.
7. THERE ARE NO DRAINAGE FEATURES WITHIN THE SITE WHICH REQUIRE RIPARIAN BUFFERS UNDER THE NEUSE RIVER BASIN RULES.
8. THERE ARE NO MAPPED FLOOD AREAS WITHIN THIS SITE.

PEAK DISCHARGE CALCULATIONS

BASED ON SCS TYPE II, 24 HOUR STORM AT DISCHARGE POINT OF DETENTION BASIN

CONDITION	PEAK RUNOFF	PEAK DISCHARGE
"PREDEVELOPED"	36.3 CFS	36.3 CFS
BODY SHOP ONLY	49.9 CFS	21.3 CFS
AS SHOWN	83.3 CFS	70.7 CFS

STORM DRAINAGE STRUCTURES

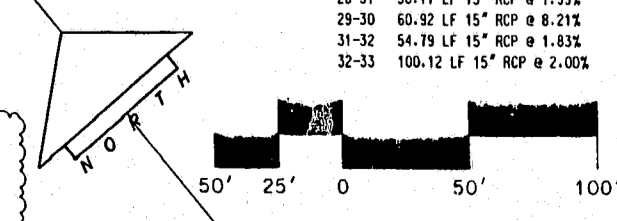
1. 48" FLARED END SECTION WITH VELOCITY REDUCTION TO PAVING. (TOTAL PROTECTION FENCE INSPECTION. C (LAVE.) = 0.80. Q10 (TOTAL) = 50.6 CFS. HW10 (15') = 483.8. INVERT = 483.00. USE 27" CLASS 2 EROSION CONTROL STONE (400 = 23") OVER GEOTEXTILE.
2. YARD INLET (CARY STD.) DA = 0.2 ACRES. C = 0.40. Q10 = 0.7 CFS. Q10 (TOTAL) = 60.6 CFS. HW10 (148") = 438.9. TOP = 482.50. INVERT IN = 436.50. INVERT OUT = 443.00.
3. CURB INLET (CARY STD.) DA = 0.3 ACRES. C = 0.50. Q10 = 5.5 CFS. Q10 (TOTAL) = 59.9 CFS. HW10 (148") = 452.5. TOP = 472.50. INVERT IN = 455.50 (21). INVERT IN = 455.00 (14). INVERT OUT = 451.50.
4. CURB INLET (CARY STD.) DA = 0.1 ACRES. C = 0.30. Q10 = 0.4 CFS. Q10 (TOTAL) = 32.5 CFS. HW10 (142") = 462.7. TOP = 472.25. INVERT = 457.75.
5. CURB INLET (CARY STD.) DA = 1.8 ACRES. C = 0.50. Q10 = 6.7 CFS. Q10 (TOTAL) = 32.1 CFS. HW10 (142") = 463.1. TOP = 470.00. INVERT = 459.50.
6. CURB INLET (CARY STD.) DA = 0.4 ACRES. C = 0.50. Q10 = 0.3 CFS. Q10 (TOTAL) = 25.6 CFS. HW10 (136") = 462.3. TOP = 471.00. INVERT = 460.75.
7. CURB INLET (CARY STD.) DA = 0.7 ACRES. C = 0.50. Q10 = 3.7 CFS. Q10 (TOTAL) = 29.4 CFS. HW10 (136") = 463.5. TOP = 474.00. INVERT = 462.00.
8. YARD INLET (CARY STD.) DA = 0.1 ACRES. C = 0.40. Q10 = 0.4 CFS. Q10 (TOTAL) = 21.8 CFS. HW10 (136") = 464.5. TOP = 472.00. INVERT IN = 468.00 (9). INVERT IN = 463.00 (10). INVERT OUT = 463.00.
9. CURB INLET (CARY STD.) DA = 0.5 ACRES. C = 0.50. Q10 = 2.9 CFS. Q10 (TOTAL) = 47.7. TOP = 476.00. INVERT = 470.00.
10. JUNCTION BOX (CARY STD.) DA = 0.2 ACRES. C = 0.40. Q10 (TOTAL) = 9.3 CFS. HW10 (130") = 465.5. TOP = 476.50. INVERT IN (11) = 471.50. INVERT IN (12) = 464.50. INVERT OUT = 464.50.
11. CURB INLET (CARY STD.) DA = 0.6 ACRES. C = 0.50. Q10 = 4.0 CFS. Q10 (TOTAL) = 47.4. TOP = 476.25. INVERT = 472.00.
12. CURB INLET (CARY STD.) DA = 0.2 ACRES. C = 0.50. Q10 = 1.4 CFS. Q10 (TOTAL) = 5.4 CFS. HW10 (130") = 465.8. TOP = 474.00. INVERT = 465.00.
13. CURB INLET (CARY STD.) DA = 0.2 ACRES. C = 0.50. Q10 = 0.6 CFS. Q10 (TOTAL) = 4.0 CFS. HW10 (124") = 466.2. TOP = 474.00. INVERT = 465.50.
14. YARD INLET (CARY STD.) DA = 0.2 ACRES. C = 0.50. Q10 = 0.6 CFS. Q10 (TOTAL) = 2.8 CFS. HW10 (115") = 464.5. TOP = 472.00. INVERT = 467.00.
15. CURB INLET (CARY STD.) DA = 0.1 ACRES. C = 0.80. Q10 = 1.5 CFS. Q10 (TOTAL) = 2.2 CFS. HW10 (116") = 480.6. TOP = 485.00. INVERT = 480.00.
16. CURB INLET (CARY STD.) DA = 0.1 ACRES. C = 0.50. Q10 = 1.3 CFS. Q10 (TOTAL) = 1.6 CFS. HW10 (115") = 484.5. TOP = 489.00. INVERT = 484.00.
17. CURB INLET (CARY STD.) DA = 0.1 ACRES. C = 0.80. Q10 = 0.5 CFS. Q10 (TOTAL) = 4.3 CFS. HW10 (116") = 481.8. TOP = 486.50. INVERT = 481.00.
18. CURB INLET (CARY STD.) DA = 0.1 ACRES. C = 0.80. Q10 = 1.5 CFS. Q10 (TOTAL) = 2.31%
2-3 85.00 LF 48" RCP @ 2.31%
3-4 204.25 LF 42" RCP @ 1.35%
3-21 282.51 LF 36" RCP @ 1.33%
4-5 156.40 LF 42" RCP @ 1.12%
5-6 81.61 LF 36" RCP @ 1.53%
6-7 112.83 LF 36" RCP @ 1.11%
7-8 53.76 LF 36" RCP @ 1.86%
8-9 21.76 LF 15" RCP @ 9.19%
8-10 78.00 LF 30" RCP @ 1.92%
8-18 216.48 LF 18" RCP @ 8.31%
10-11 11.51 LF 15" RCP @ 4.34%
10-12 21.68 LF 30" RCP @ 2.31%
12-13 40.60 LF 24" RCP @ 1.23%
13-14 53.26 LF 24" RCP @ 2.82%
14-15 156.46 LF 18" RCP @ 8.31%
15-16 162.44 LF 15" RCP @ 2.46%
16-17 124.28 LF 15" RCP @ 1.30%
17-19 84.45 LF 42" RCP @ 2.12%
18-20 181.18 LF 15" RCP @ 1.66%
21-22 142.32 LF 36" RCP @ 1.40%
22-23 161.04 LF 30" RCP @ 1.55%
23-24 61.42 LF 15" RCP @ 1.63%
23-25 151.10 LF 24" RCP @ 0.99%
23-26 248.52 LF 15" RCP @ 1.00%
25-27 36.63 LF 24" RCP @ 1.37%
27-28 111.98 LF 24" RCP @ 1.79%
28-29 133.09 LF 18" RCP @ 1.50%
28-31 30.17 LF 15" RCP @ 1.89%
29-30 60.32 LF 15" RCP @ 8.21%
31-32 54.79 LF 15" RCP @ 1.83%
32-33 100.12 LF 15" RCP @ 2.00%.

STORM PIPE SCHEDULE

1-2	65.00 LF 48" RCP @ 2.31%
2-3	85.00 LF 48" RCP @ 9.99%
3-4	204.25 LF 42" RCP @ 1.35%
3-21	282.51 LF 36" RCP @ 1.33%
4-5	156.40 LF 42" RCP @ 1.12%
5-6	81.61 LF 36" RCP @ 1.53%
6-7	112.83 LF 36" RCP @ 1.11%
7-8	53.76 LF 36" RCP @ 1.86%
8-9	21.76 LF 15" RCP @ 9.19%
8-10	78.00 LF 30" RCP @ 1.92%
8-18	216.48 LF 18" RCP @ 8.31%
10-11	11.51 LF 15" RCP @ 4.34%
10-12	21.68 LF 30" RCP @ 2.31%
12-13	40.60 LF 24" RCP @ 1.23%
13-14	53.26 LF 24" RCP @ 2.82%
14-15	156.46 LF 18" RCP @ 8.31%
15-16	162.44 LF 15" RCP @ 2.46%
16-17	124.28 LF 15" RCP @ 1.30%
17-19	84.45 LF 42" RCP @ 2.12%
18-20	181.18 LF 15" RCP @ 1.66%
21-22	142.32 LF 36" RCP @ 1.40%
22-23	161.04 LF 30" RCP @ 1.55%
23-24	61.42 LF 15" RCP @ 1.63%
23-25	151.10 LF 24" RCP @ 0.99%
23-26	248.52 LF 15" RCP @ 1.00%
25-27	36.63 LF 24" RCP @ 1.37%
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28-29	133.09 LF 18" RCP @ 1.50%
28-31	30.17 LF 15" RCP @ 1.89%
29-30	60.32 LF 15" RCP @ 8.21%
31-32	54.79 LF 15" RCP @ 1.83%
32-33	100.12 LF 15" RCP @ 2.00%

99-SP-259-A
APPROVED
8/28/00
2/28/11/00

NOTE: SEE ROOF DRAINAGE PLAN FOR SIZE AND ROUTING OF ROOF DRAIN PIPING TO INLETS.



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PROJECT

CROSSROADS FORD SERVICE CENTER
1660 PINEY PLAINES ROAD
CARY, NORTH CAROLINA

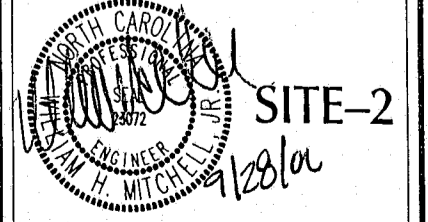


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MARCH 6, 2000
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OCTOBER 2, 2000

DRAWN: BCB
CHECKED: WHM
SCALE: DATE
1" = 50' 12/06/99

TITLE: GRADING, STORM DRAINAGE & EROSION CONTROL PLAN

FILE NO.: JOB NO.:
SCALE: BNA # 2351.02
SHEET NO.: BNA # 99472000



SITE-2

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