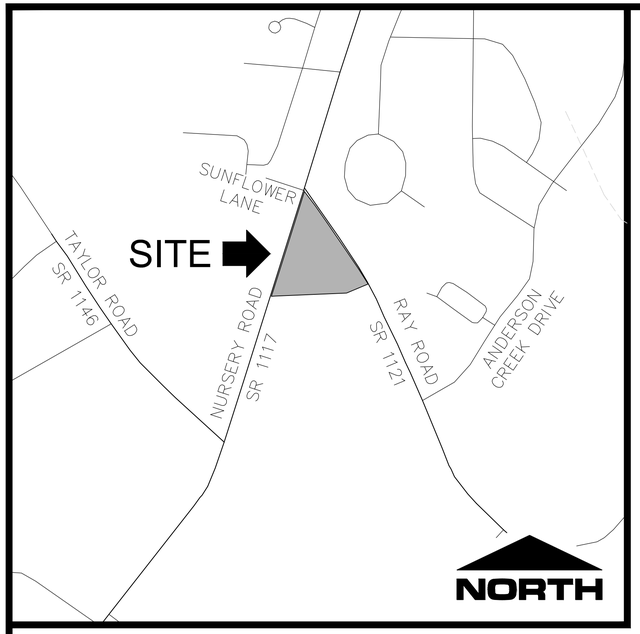

VICINITY MAP
NOT TO SCALE

SPRING LAKE RAY ROAD DOLLAR GENERAL SITE DEVELOPMENT PLANS

ANDERSON CREEK TOWNSHIP
NEAR SPRING LAKE, NORTH CAROLINA
HARNETT COUNTY

EXISTING UTILITY OWNER

WATER

HARNETT REGIONAL WATER
700 McKinney Parkway
Lillington, North Carolina 27546
910-893-7575
Contact: Shane Cummings, PE

811 Know what's below. Call before you dig.

INDEX OF DRAWINGS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027452 SCOTT BROWN
04-22-21

NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L4571 JEAN R. SEEVERS
04-22-21

CIVIL ENGINEER
4D SITE SOLUTIONS, INC.
409 Chicago Drive - Suite 112
Fayetteville, North Carolina 28306
910-426-6777
Contact: Scott Brown, PE
email: sbrown@4dsitesolutions.com

OWNER/DEVELOPER
RHETSON COMPANIES, INC
2075 Juniper Lake Road
West End, North Carolina, 27376
910-944-0881
Contact: JOHN PARKER
email: john@rhetson.com

SURVEYOR
4D SITE SOLUTIONS, INC.
409 Chicago Drive - Suite 112
Fayetteville, North Carolina 28306
910-426-6777
Contact: Jimmy Holland, PLS
email: jholland@4dsitesolutions.com

THE CONTRACTOR MUST CONTACT NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 A MINIMUM OF 72 HOURS PRIOR TO DIGGING IN ORDER TO HAVE THE EXISTING UTILITIES LOCATED

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 licenses number | C-2354
www.4dsitesolutions.com

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

TAX ID# 0505-48-7310.000
RAY ROAD
ANDERSON CREEK
TOWNSHIP
NEAR SPRING LAKE
HARNETT COUNTY
NORTH CAROLINA

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

SEE SHEETS

DATE RELEASED

APRIL 22, 2021

2020 HRW REQUIRED UTILITY NOTES

(REVISION 8 – MARCH 2020)

WATER

A. THE FIRE MARSHAL'S OFFICE SHALL APPROVE ALL HYDRANT TYPES AND LOCATIONS IN NEW SUBDIVISIONS. HOWEVER, HARNETT REGIONAL WATER (HRW) PREFERS THE CONTRACTORS TO INSTALL ONE OF THE FOLLOWING FIRE HYDRANTS:

1. MUELLER – SUPER CENTURION 250 A–423 MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE);
2. AMERICAN DARLING – MARK B–84–B MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE);
3. WATEROUS – PACER B–67–250 MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE) OR APPROVED EQUAL FOR STANDARDIZATION.

B. FIRE HYDRANTS ARE INSTALLED AT CERTAIN ELEVATIONS. ANY GRADE CHANGE NEAR ANY FIRE HYDRANT, WHICH IMPEDES ITS OPERATION, SHALL BECOME THE RESPONSIBILITY OF THE UTILITY CONTRACTOR FOR CORRECTION. CORRECTIONS WILL BE MONITORED BY THE HRW UTILITY CONSTRUCTION INSPECTOR AND THE HARNETT COUNTY FIRE MARSHAL.

C. THE PROFESSIONAL ENGINEER (PE) SHALL OBTAIN AND PROVIDE THE NCDEQ "AUTHORIZATION TO CONSTRUCT" PERMIT TO THE UTILITY CONTRACTOR BEFORE THE CONSTRUCTION OF THE WATER LINE SHALL BEGIN. THE UTILITY CONTRACTOR MUST POST A COPY OF THE NCDEQ "AUTHORIZATION TO CONSTRUCT" PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCDEQ) ON SITE PRIOR TO THE START OF CONSTRUCTION. THE PERMIT MUST BE MAINTAINED ON SITE THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS OF THE PROPOSED WATER LINES THAT WILL SERVE THIS PROJECT.

D. THE UTILITY CONTRACTOR SHALL NOTIFY HARNETT REGIONAL WATER (HRW) AND THE PROFESSIONAL ENGINEER (PE) AT LEAST TWO DAYS PRIOR TO CONSTRUCTION COMMENCING. THE UTILITY CONTRACTOR MUST SCHEDULE A PRE–CONSTRUCTION CONFERENCE WITH MR. ALAN MOSS, HRW UTILITY CONSTRUCTION INSPECTOR AT LEAST TWO (2) DAYS BEFORE CONSTRUCTION WILL BEGIN AND THE UTILITY CONTRACTOR MUST COORDINATE WITH HRW FOR REGULAR INSPECTION VISITATIONS AND ACCEPTANCE OF THE WATER SYSTEM(S). CONSTRUCTION WORK SHALL BE PERFORMED ONLY DURING THE NORMAL WORKING HOURS OF HRW WHICH IS 8:00 AM – 5:00 PM MONDAY THROUGH FRIDAY. HOLIDAY AND WEEKEND WORK IS NOT PERMITTED BY HRW.

E. THE PROFESSIONAL ENGINEER (PE) SHALL PROVIDE HRW AND THE UTILITY CONTRACTOR WITH A SET OF NCDEQ APPROVED PLANS MARKED "RELEASED FOR CONSTRUCTION" AT LEAST TWO DAYS PRIOR TO CONSTRUCTION COMMENCING. THE REGISTERED LAND SURVEYOR (RLS) SHOULD STAKE OUT ALL LOT CORNERS AND THE GRADE STAKES FOR THE PROPOSED FINISH GRADE FOR EACH STREET BEFORE THE UTILITY CONTRACTOR BEGINS CONSTRUCTION OF THE WATER LINE(S). THE GRADE STAKES SHOULD BE SET WITH A CONSISTENT OFFSET FROM THE STREET CENTERLINE SO AS NOT TO INTERFERE WITH THE STREET GRADING AND UTILITY CONSTRUCTION.

F. THE UTILITY CONTRACTOR SHALL PROVIDE THE HRW UTILITY CONSTRUCTION INSPECTOR WITH MATERIAL SUBMITTALS AND SHOP DRAWINGS FOR ALL PROJECT MATERIALS PRIOR TO THE CONSTRUCTION OF ANY WATER LINE EXTENSION(S), AND ASSOCIATED WATER SERVICES IN HARNETT COUNTY. THE MATERIALS TO BE USED ON THE PROJECT MUST MEET THE ESTABLISHED SPECIFICATIONS OF HRW AND BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION. ALL SUBSTANDARD MATERIALS OR MATERIALS NOT APPROVED FOR USE IN HARNETT COUNTY FOUND ON THE PROJECT SITE MUST BE REMOVED IMMEDIATELY WHEN NOTIFIED BY THE HRW UTILITY CONSTRUCTION INSPECTOR.

G. THE WATER MAIN(S), FIRE HYDRANTS, SERVICE LINES, METER SETTERS AND ALL ASSOCIATED APPURTENANCES SHALL BE CONSTRUCTED IN STRICT IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE HARNETT REGIONAL WATER (HRW). THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE THE NEWLY INSTALLED WATER MAIN(S), WATER SERVICE LINES AND ALL ASSOCIATED METER SETTERS AND METER BOXES FOR OTHER UTILITY COMPANIES AND THEIR CONTRACTORS UNTIL THE NEW WATER MAIN(S) HAVE BEEN APPROVED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF ENVIRONMENTAL HEALTH, PUBLIC WATER SUPPLY SECTION (NCDEQ, DEH, PWS) AND ACCEPTED BY HRW.

H. PRIOR TO ACCEPTANCE, ALL SERVICES WILL BE INSPECTED TO INSURE THAT THEY ARE INSTALLED AT THE PROPER DEPTH. ALL METER BOXES MUST BE FLUSH WITH THE GROUND LEVEL AT FINISH GRADE AND THE METER SETTERS MUST BE A MINIMUM OF 8" BELOW THE METER BOX LID. METER SETTERS SHALL BE CENTERED IN THE METER BOX AND SUPPORTED BY BRICK, BLOCK OR STONE.

I. THE UTILITY CONTRACTOR SHALL PROVIDE THE PROFESSIONAL ENGINEER (PE) AND HRW UTILITY CONSTRUCTION INSPECTOR WITH A SET OF RED LINE DRAWINGS IDENTIFYING THE COMPLETE WATER SYSTEM INSTALLED FOR EACH PROJECT. THE RED LINE DRAWINGS SHOULD IDENTIFY THE MATERIALS, PIPE SIZES AND APPROXIMATE DEPTHS OF THE WATER LINES AS WELL AS THE GATE VALVES, FIRE HYDRANTS, METER SETTERS, BLOW OFF ASSEMBLIES AND ALL ASSOCIATED APPURTENANCES FOR ALL WATER LINE(S) CONSTRUCTED IN HARNETT COUNTY. THE RED LINE DRAWINGS SHOULD CLEARLY IDENTIFY ANY DEVIATIONS FROM THE NCDEQ APPROVED PLANS. ALL CHANGE ORDERS MUST BE APPROVED BY HRW AND THE PROFESSIONAL ENGINEER (PE) IN WRITING AND PROPERLY DOCUMENTED IN THE RED LINE FIELD DRAWINGS.

J. POTABLE WATER MAINS CROSSING OTHER UTILITIES AND NON–POTABLE WATER LINES (SANITARY SEWER, STORM SEWER, RCP, ETC.) SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF TWENTY–FOUR (24") INCHES BETWEEN THE POTABLE WATER MAIN AND ALL OTHER UTILITIES. NCDOT REQUIRES THE NEW WATER MAINS TO BE INSTALLED UNDER THE STORM WATER LINES. THE POTABLE WATER MAIN SHALL BE INSTALLED WITH TWENTY–FOUR (24") INCHES OF VERTICAL SEPARATION AND WITH DUCTILE IRON PIPE WHEN DESIGNED TO BE PLACED UNDER A NON– POTABLE WATER LINE SUCH AS SANITARY SEWER OR STORM SEWER LINES. IF THESE SEPARATIONS CANNOT BE MAINTAINED THEN THE WATER MAIN SHALL BE INSTALLED WITH DUCTILE IRON PIPE. BOTH THE POTABLE WATER MAIN AND THE NON–POTABLE WATER LINE MUST BE CAST IRON OR DUCTILE IRON PIPE (DIP) IF THE STATE MINIMUM SEPARATIONS CANNOT BE MAINTAINED. THE DUCTILE IRON PIPE MUST BE LAID SO THE MECHANICAL JOINTS ARE AT LEAST (10') FEET FROM THE POINT WHERE THE POTABLE WATER MAIN CROSSES THE NON–POTABLE WATER LINE.

K. POTABLE WATER MAINS INSTALLED PARALLEL TO NON–POTABLE WATER LINES (SANITARY SEWER, STORM SEWER, RCP, ETC.) SHALL BE LAID TO PROVIDE A MINIMUM HORIZONTAL DISTANCE OF TEN (10') FEET BETWEEN THE POTABLE WATER MAIN AND SANITARY SEWER MAINS, SEWER LATERALS AND SERVICES. THE HORIZONTAL SEPARATION BETWEEN THE POTABLE WATER MAIN AND ANY OTHER UTILITY OR STORM SEWER SHALL NOT BE LESS THAN FIVE (5') FEET. THE POTABLE WATER MAIN MUST BE DUCTILE IRON PIPE IF THIS HORIZONTAL SEPARATION OF TEN (10') FEET CANNOT BE MAINTAINED. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST TEN (10') FEET BEYOND THE POINT WHERE THE MINIMUM REQUIRED HORIZONTAL SEPARATION OF TEN (10') FEET CAN BE RE–ESTABLISHED.

L. METER SETTERS SHALL BE INSTALLED IN PAIRS ON EVERY OTHER LOT LINE WHERE POSSIBLE TO LEAVE ADEQUATE SPACE FOR OTHER UTILITIES TO BE INSTALLED AT A LATER TIME. THE METER SETTERS SHALL BE INSTALLED AT LEAST ONE (1') FOOT INSIDE THE RIGHT–OF–WAY AND AT LEAST THREE (3') TO FIVE (5') FEET FROM THE PROPERTY LINE BETWEEN THE LOTS.

M. HRW REQUIRES THAT METER BOXES FOR ¾" SERVICES SHALL BE 12" WIDE X 17" LONG ABS PLASTIC BOXES AT LEAST 18" IN HEIGHT WITH CAST IRON LIDS/COVERS. METER BOXES FOR 1" SERVICES SHALL BE 17" WIDE X 21" LONG ABS PLASTIC BOXES AT LEAST 18" IN HEIGHT WITH PLASTIC LIDS AND CAST IRON FLIP COVERS IN THE CENTER OF THE LIDS. METER BOXES FOR 2" SERVICES SHALL BE 20" WIDE X 32" LONG ABS PLASTIC BOXES AT LEAST 20" IN HEIGHT WITH PLASTIC LIDS AND CAST IRON FLIP COVERS IN THE CENTER OF THE LIDS.

N. MASTER METERS MUST BE INSTALLED IN CONCRETE VAULTS SIZED FOR THE METER ASSEMBLY AND ASSOCIATED APPURTENANCES SO AS TO PROVIDE AT LEAST EIGHTEEN (18") INCHES OF CLEARANCE BETWEEN THE BOTTOM OF THE CONCRETE VAULT AND THE BOTTOM OF THE METER SETTER. THE MASTER METER MUST BE PROVIDED TEST PORTS IF THE METER IS NOT EQUIPPED WITH TEST PORTS FROM THE MANUFACTURER IN ACCORDANCE WITH THE HRW ESTABLISHED STANDARD SPECIFICATIONS AND DETAILS. DUCTILE IRON PIPE MUST BE USED FOR THE MASTER METER VAULT PIPING AND VALVE VAULT PIPING. THE UTILITY CONTRACTOR MUST PROVIDE SHOP DRAWINGS FOR THE METER VAULTS TO HRW PRIOR TO ORDERING THE CONCRETE VAULTS.

O. THE UTILITY CONTRACTOR WILL INSTALL POLYETHYLENE SDR–9 WATER SERVICE LINES THAT CROSS UNDER THE PAVEMENT INSIDE A SCHEDULE 40 PVC CONDUIT TO ALLOW FOR REMOVAL AND REPLACEMENT IN THE FUTURE. TWO (2) INDEPENDENT ¾" WATER SERVICE LINES MAY BE INSTALLED INSIDE ONE (1) – TWO (2") INCH SCHEDULE 40 PVC CONDUIT OR TWO (2) INDEPENDENT 1" WATER SERVICE LINES MAY BE INSTALLED INSIDE ONE (1) – THREE (3") INCH SCHEDULE 40 PVC CONDUIT, BUT EACH WATER SERVICE SHALL BE TAPPED DIRECTLY TO THE WATER MAIN. SPLIT SERVICES ARE NOT ALLOWED BY HRW. IF SIDEWALKS ARE PROPOSED, THE CONDUIT MUST EXTEND PAST THE SIDEWALK.

P. THE WATER MAIN(S), FIRE HYDRANTS, GATE VALVES, SERVICE LINES, METER SETTERS AND ASSOCIATED APPURTENANCES MUST BE RATED FOR 200 PSI AND HYDROSTATICALLY PRESSURE TESTED TO 200 PSI. THE HYDROSTATIC PRESSURE TEST(S) MUST BE WITNESSED BY THE HRW UTILITY CONSTRUCTION INSPECTOR. THE UTILITY CONTRACTOR MUST NOTIFY HRW WHEN THEY ARE READY TO BEGIN FILLING IN LINES AND COORDINATE WITH HARNETT REGIONAL WATER TO WITNESS ALL PRESSURE TESTING.

Q. THE UTILITY CONTRACTOR SHALL CONDUCT A PNEUMATIC PRESSURE TEST USING COMPRESSED AIR OR OTHER INERT GAS ON THE STAINLESS STEEL TAPPING SLEEVE(S) PRIOR TO MAKING THE TAP ON THE EXISTING WATER MAIN. THIS PNEUMATIC PRESSURE TEST MUST BE WITNESSED BY THE HRW UTILITY CONSTRUCTION INSPECTOR. THE UTILITY CONTRACTOR SHALL USE ROMAC BRAND STAINLESS STEEL TAPPING SLEEVE(S) OR APPROVED EQUAL FOR ALL TAPS MADE IN HARNETT COUNTY. ALL NEW WATER LINE EXTENSIONS MUST BEGIN WITH A RESILIENT WEDGE TYPE GATE VALVE SIZED EQUAL TO THE DIAMETER OF THE NEW WATER LINE EXTENSION IN ORDER TO PROVIDE A MEANS OF ISOLATION BETWEEN HARNETT REGIONAL WATER'S EXISTING WATER MAINS AND THE NEW WATER LINE EXTENSIONS UNDER CONSTRUCTION.

R. ALL WATER MAINS WILL BE CONSTRUCTED WITH SDR–21 PVC PIPE OR CLASS 50 DUCTILE IRON PIPE RATED FOR AT LEAST 200 PSI OR GREATER. ALL PIPES MUST BE PROTECTED DURING LOADING, TRANSPORT, UNLOADING, STAGING, AND INSTALLATION. PVC PIPE MUST BE PROTECTED FROM EXTENDED EXPOSURE TO SUNLIGHT PRIOR TO INSTALLATION.

S. ALL WATER MAINS WILL BE FLUSHED AND DISINFECTED IN STRICT ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE HARNETT REGIONAL WATER. ALL WATER SAMPLES COLLECTED FOR BACTERIA TESTING WILL BE COLLECTED BY THE HRW UTILITY CONSTRUCTION INSPECTOR AND TESTED IN THE HRW LABORATORY.

T. ALL FITTINGS LARGER THAN TWO (2") INCHES DIAMETER SHALL BE DUCTILE IRON. HRW REQUIRES THAT MECHANICAL JOINTS BE ASSEMBLED WITH GRIP RINGS AS "MEGALUG" FITTINGS ARE NOT APPROVED BY HARNETT REGIONAL WATER FOR PIPE SIZES SMALLER THAN TWELVE INCHES (12") DIAMETER. PVC PIPE USED FOR WATER MAINS SHALL BE CONNECTED BY SLIP JOINT OR MECHANICAL JOINT WITH GRIP RINGS. GLUED PIPE JOINTS ARE NOT ALLOWED ON PVC PIPE USED FOR WATER MAINS IN HARNETT COUNTY.

U. HRW REQUIRES THAT THE UTILITY CONTRACTOR INSTALL TRACER WIRE IN THE TRENCH WITH ALL WATER LINES. THE TRACER WIRE SHALL BE 12 GA. INSULATED, SOLID COPPER CONDUCTOR AND IT SHALL BE TERMINATED AT THE TOP OF THE VALVE BOXES OR MANHOLES. NO SPLICED WIRE CONNECTIONS SHALL BE MADE UNDERGROUND ON TRACER WIRE INSTALLED IN HARNETT COUNTY. THE TRACER WIRE MAY BE SECURED WITH DUCT TAPE TO THE TOP OF THE PIPE BEFORE BACKFILLING.

V. THE UTILITY CONTRACTOR WILL PROVIDE PROFESSIONAL ENGINEER (PE) AND THE HRW UTILITY CONSTRUCTION INSPECTOR WITH A SET OF RED LINE FIELD DRAWINGS TO IDENTIFY THE INSTALLED LOCATIONS OF THE WATER LINE(S) AND ALL ASSOCIATED SERVICES. ALL CHANGE ORDERS MUST BE PRE–APPROVED BY HRW AND THE PROFESSIONAL ENGINEER (PE) IN WRITING AND PROPERLY DOCUMENTED IN THE RED LINE FIELD DRAWINGS.

W. THE UTILITY CONTRACTOR SHALL SPOT DIG TO EXPOSE EACH UTILITY PIPE OR LINE WHICH MAY CONFLICT WITH CONSTRUCTION OF PROPOSED WATER LINE EXTENSIONS WELL IN ADVANCE TO VERIFY LOCATIONS OF THE EXISTING UTILITIES. THE UTILITY CONTRACTOR SHALL PROVIDE BOTH HORIZONTAL AND VERTICAL CLEARANCES TO THE PROFESSIONAL ENGINEER (PE) TO ALLOW THE PE TO ADJUST THE WATER LINE DESIGN IN ORDER TO AVOID CONFLICTS WITH EXISTING UNDERGROUND UTILITIES. THE UTILITY CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER AND BE RESPONSIBLE FOR TEMPORARY RELOCATION AND/OR SECURING EXISTING UTILITY POLES, PIPES, WIRES, CABLES, SIGNS AND/OR UTILITIES INCLUDING SERVICES IN ACCORDANCE WITH THE UTILITY OWNER REQUIREMENTS DURING WATER LINE INSTALLATION, GRADING AND STREET CONSTRUCTION.

X. PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN ESTABLISHED UTILITY EASEMENTS OR NCDOT RIGHT–OF–WAYS THE UTILITY CONTRACTOR IS REQUIRED TO HAVE A SIGNED NCDOT ENCROACHMENT AGREEMENT POSTED ON SITE AND NOTIFY ALL CONCERNED UTILITY COMPANIES IN ACCORDANCE WITH G.S. 87–102. THE UTILITY CONTRACTOR MUST CALL THE NC ONE CALL CENTER AT 811 OR (800) 632–4949 TO VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION. EXISTING UTILITIES SHOWN IN THESE PLANS ARE TAKEN FROM MAPS FURNISHED BY VARIOUS UTILITY COMPANIES AND HAVE NOT BEEN PHYSICALLY LOCATED OR VERIFIED BY THE P.E. (I.E. TELEPHONE, CABLE, WATER, SEWER, ELECTRICAL POWER, FIBER OPTIC, NATURAL GAS, ETC.). THE UTILITY CONTRACTOR WILL BE RESPONSIBLE TO REPAIR ANY AND ALL DAMAGES TO THE SATISFACTION OF THE RELATED UTILITY COMPANY.

Y. THE UTILITY CONTRACTOR SHALL PROVIDE HRW WITH AT LEAST ONE (1) FIRE HYDRANT WRENCH AND ONE (1) BREAK–AWAY FLANGE KIT FOR EVERY SUBDIVISION WITH FIRE HYDRANTS DEVELOPED IN HARNETT COUNTY. THESE ITEMS MUST BE PROVIDED TO HRW BEFORE THE FINAL INSPECTION WILL BE SCHEDULED BY THE HRW UTILITY CONSTRUCTION INSPECTOR. IN ADDITION, THE UTILITY CONTRACTOR SHALL INSTALL A 4" X 4" CONCRETE VALVE MARKER AT THE EDGE OF THE RIGHT–OF–WAY TO IDENTIFY THE LOCATION OF EACH GATE VALVE INSTALLED IN THE NEW WATER SYSTEM WITH THE EXCEPTION OF THE FIRE HYDRANT ISOLATION VALVES. THE CONTRACTOR SHALL MEASURE THE DISTANCE FROM THE CENTER OF THE CONCRETE MARKER TO THE CENTER OF THE VALVE BOX. THIS DISTANCE (IN LINEAR FEET) SHALL BE STAMPED ON THE BRASS PLATE LOCATED ON THE TOP OF THE CONCRETE VALVE MARKER. IN LIEU OF INSTALLING THE CONCRETE VALVE MARKERS, THE UTILITY CONTRACTOR MAY PROVIDE AT LEAST TWO MEASUREMENTS FROM TWO INDEPENDENT PERMANENT ABOVE GROUND STRUCTURES TO THE PROFESSIONAL ENGINEER (PE) IN THE RED LINE DRAWINGS TO IDENTIFY THE VALVE LOCATIONS. THE PROFESSIONAL ENGINEER (PE) MUST INCLUDE THESE MEASUREMENTS IN THE AS–BUILT RECORD DRAWINGS SUBMITTED TO HRW.

Z. THE UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL REPAIRS DUE TO LEAKAGE DAMAGE FROM POOR WORKMANSHIP DURING THE ONE (1) YEAR WARRANTY PERIOD ONCE THE WATER SYSTEM IMPROVEMENTS HAVE BEEN ACCEPTED BY HARNETT REGIONAL WATER. HARNETT REGIONAL WATER WILL PROVIDE MAINTENANCE AND REPAIRS WHEN REQUESTED AND BILL THE DEVELOPER AND/OR UTILITY CONTRACTOR IF NECESSARY DUE TO LACK OF RESPONSE WITHIN 48 HOURS OF NOTIFICATION OF WARRANTY WORK. THE UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL REPAIRS DUE TO DAMAGES RESULTING FROM FAILURE TO LOCATE THE NEW WATER LINES AND ASSOCIATED APPURTENANCES FOR OTHER UTILITIES AND THEIR CONTRACTORS UNTIL THE WATER LINES HAVE BEEN APPROVED BY NCDEQ AND ACCEPTED BY HRW. THE FINAL INSPECTION OF WATER SYSTEM IMPROVEMENTS CANNOT BE SCHEDULED WITH HRW UNTIL THE STREETS HAVE BEEN PAVED; THE RIGHTS–OF–WAY AND UTILITY EASEMENTS HAVE BEEN SEEDED AND STABILIZED WITH AN ADEQUATE STAND OF GRASS IN PLACE TO PREVENT EROSION ISSUES ON SITE.

AA THE ENGINEER OF RECORD IS RESPONSIBLE TO INSURE THAT CONSTRUCTION IS, AT ALL TIMES, IN COMPLIANCE WITH ACCEPTED SANITARY ENGINEERING PRACTICES AND APPROVED PLANS AND SPECIFICATIONS. NO FIELD CHANGES TO THE APPROVED PLANS ARE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY HRW. A COPY OF EACH ENGINEER'S FIELD REPORT IS TO BE SUBMITTED TO HRW AS EACH SUCH INSPECTION IS MADE ON SYSTEM IMPROVEMENTS OR TESTING IS PERFORMED BY THE CONTRACTOR. WATER AND SEWER INFRASTRUCTURE MUST PASS ALL TESTS REQUIRED BY HRW SPECIFICATIONS AND THOSE OF ALL APPLICABLE REGULATORY AGENCIES. THESE TESTS INCLUDE, BUT ARE NOT LIMITED TO: AIR TEST, VACUUM TEST, MANDREL TEST, VISUAL TEST, PRESSURE TEST, BACTERIOLOGICAL TEST, ETC. A HRW INSPECTOR MUST BE PRESENT DURING TESTING AND ALL TEST RESULTS SHALL BE SUBMITTED TO HRW. ALL TESTS MUST BE SATISFIED BEFORE THE FINAL INSPECTION WILL BE SCHEDULED WITH THE HRW INSPECTOR. THE ENGINEER OF RECORD MUST REQUEST IN WRITING TO SCHEDULE THE FINAL INSPECTION ONCE ALL CONSTRUCTION IS COMPLETE. THE DEVELOPER'S ENGINEER OF RECORD AND THE HRW UTILITY CONSTRUCTION INSPECTOR SHALL PREPARE A WRITTEN PUNCH LIST OF ANY DEFECTS OR DEFICIENCIES NOTED DURING THE FINAL INSPECTION, SHOULD ANY EXIST. UPON COMPLETION OF THE PUNCH LIST, THE DEVELOPER'S ENGINEER OF RECORD WILL SCHEDULE ANOTHER INSPECTION. IN THE EVENT THE NUMBER OF INSPECTIONS PERFORMED BY THE HRW EXCEEDS TWO, ADDITIONAL FEES MAY BE ACCESSED TO THE DEVELOPER.

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civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 license number | C-2354
www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL 027452 ENGINEER C. SCOTT BROWN

[illegible]

04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

UTILITY NOTES

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

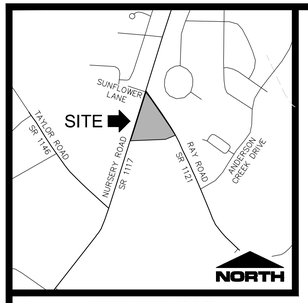
SEE SHEETS

DATE RELEASED

APRIL 22, 2021

SHEET NUMBER

G-1.0



VICINITY MAP
NOT TO SCALE

TOTAL AREA: (BY COORDINATE COMPUTATION)
316,312 SF (7.26 AC)

PIN NO: 0505-48-7310.000

ZONING: COMM

FRONT	35'
SIDE	0', 20' IF ADJACENT TO RESIDENTIAL ZONED LOT
CORNER SIDE	20', 15' IF ADJACENT TO ACCESS EASEMENT OR PRIVATE STREET
REAR	25'

TO VERIFY SETBACK INFORMATION
CONTACT THE HARNETT COUNTY
PLANNING DEPARTMENT 910-893-7525

SOURCE OF TITLE
DB 872, PG 506
DB 1673, PG 496
PB 2002, PG 1065
HARNETT COUNTY
REGISTER OF DEEDS

LEGEND:
- ECM – ECM–EXISTING CONCRETE MONUMENT
- EIP – EIP–EXISTING IRON PIPE
- EIR – EIR–EXISTING IRON ROD
- EPK – EPK–EXISTING PK NAIL
- SRB – SRB–SET REBAR
- COMPUTED POINT
- N/F – NOW OR FORMERLY
- R/W – RIGHT OF WAY
- RCP – REINFORCED CONCRETE PIPE
- PROPERTY LINE
- OPL – OLD PROPERTY LINE
- ADJACENT PROPERTY LINE
- RIGHT–OF–WAY
- W – WATER LINE
- // – OVERHEAD UTILITY
- TREE LINE
- 280 – MAJOR CONTOUR
- 274 – MINOR CONTOUR
- x 263.96' SPOT ELEVATION
- BENCHMARK
- PP – UTILITY POLE
- WATER VALVE
- FIRE HYDRANT
- ASPHALT
- BUILDING

NOTES:
1. ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.
2. COMBINED SCALE FACTOR: 0.99987276
   LOCALIZATION POINT N: 558676.845 E: 2,004,634.094
   CONTROL ESTABLISHED VIA NORTH CAROLINA GEODETIC SURVEY VIRTUAL REFERENCE SYSTEM.
3. THE HORIZONTAL AND VERTICAL CONTROL FOR THIS SURVEY WERE ESTABLISHED USING THE NORTH CAROLINA GEODETIC SURVEY VIRTUAL REFERENCE SYSTEM.
4. LINES NOT SURVEYED ARE SHOWN AS DASHED LINES FROM INFORMATION REFERENCED ON THE FACE OF THIS MAP.
5. NONCONFORMING STRUCTURES HAVE NOT BEEN CREATED BY THIS SURVEY.
6. THE SUBJECT PROPERTY IS THE SAME AS THE PROPERTY DESCRIBED IN THAT CERTAIN TITLE COMMITMENT ID. 2020111492ASL ISSUED BY INVESTORS TITLE INSURANCE COMPANY WITH AN EFFECTIVE DATE OF MARCH 12, 2020, AND ALL EASEMENTS, COVENANTS AND RESTRICTIONS REFERENCED IN SAID TITLE COMMITMENT OR APPARENT FROM A PHYSICAL INSPECTION OF THE SUBJECT PROPERTY OR OTHERWISE KNOWN TO ME HAVE BEEN PLOTTED HEREON OR OTHERWISE NOTED AS TO THEIR EFFECT ON THE SUBJECT PROPERTY.
7. LOCATIONS OF ALL UNDERGROUND UTILITIES LYING WITHIN THIS MAPPED AREA MAY NOT BE SHOWN ON THIS PLAN. DEVELOPERS OR CONTRACTORS SHOULD NOT ONLY MAKE SUBSURFACE INVESTIGATIONS BUT SHOULD ALSO ALLOW FOR CONTINGENCIES WHICH MIGHT ARISE BY REASON OF ENCOUNTERING UNRECORDED LINES OR OF LINES BEING IN DIFFERENT LOCATIONS THAN INDICATED ON THIS SURVEY.
8. THIS PROPERTY LIES WITHIN FLOOD ZONE "X" ACCORDING TO MAP# 3720050400J OF THE FLOOD INSURANCE RATE, DATED OCTOBER 3, 2006.

NORTH CAROLINA PROFESSIONAL SEAL L-4571 LAND SURVEYOR SEAN R. SEEVER
04-22-21

I, SEAN R. SEEVER, CERTIFY THAT THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND OR ONE OR MORE EXISTING EASEMENTS AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.

PROFESSIONAL LAND SURVEYOR – L-4571

I, SEAN R. SEEVER, CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN BOOK SHOWN, PAGE HEREON OR OTHER REFERENCE SOURCE _____); THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION IN BOOK _____, PAGE _____ OR OTHER REFERENCE SOURCE _____; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY IS 1:10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56. 1600). WITNESS MY HAND AND SEAL THIS 22 DAY OF APRIL, 2021.

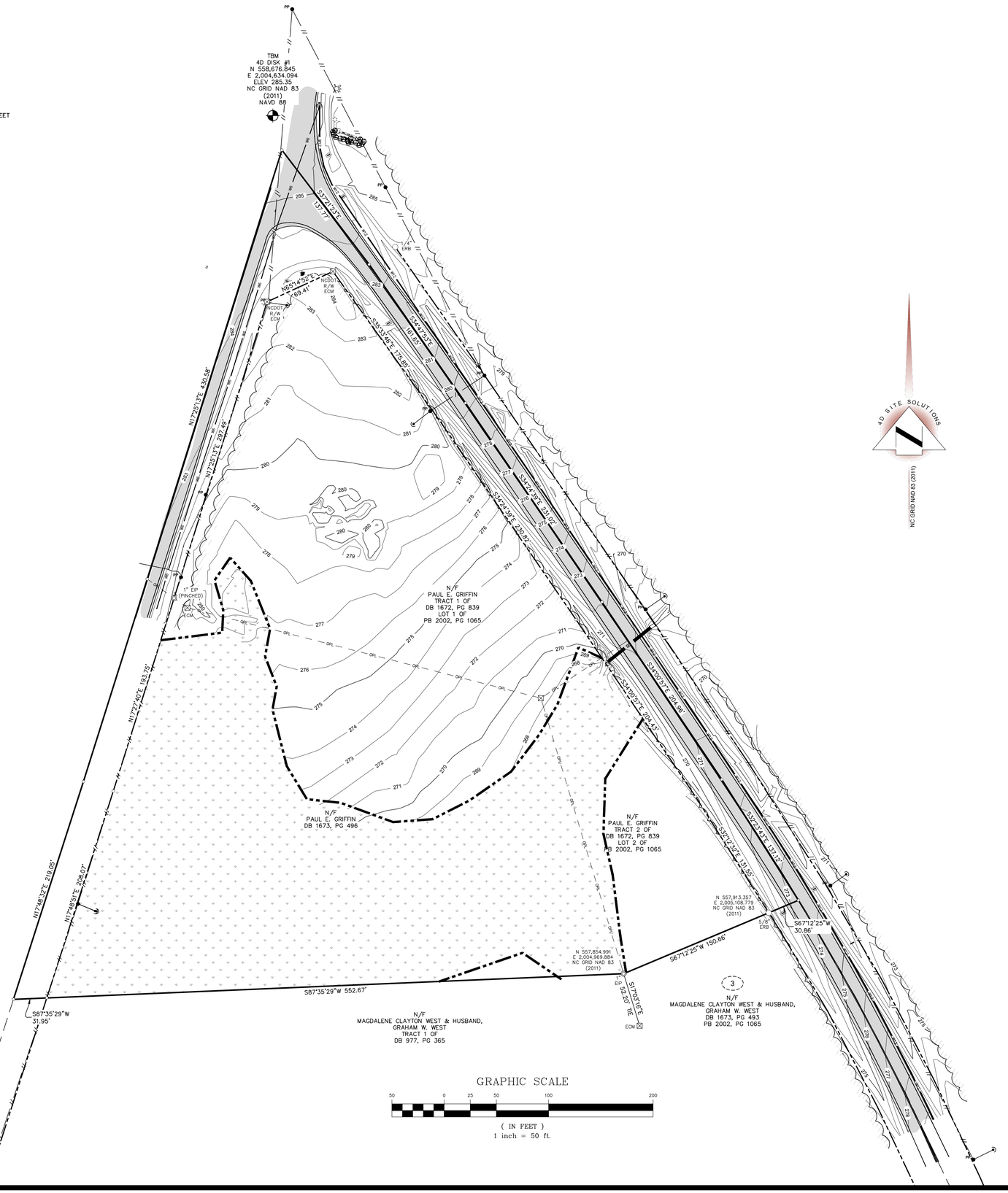
PROFESSIONAL LAND SURVEYOR – L-4571

I, SEAN R. SEEVER, CERTIFY THAT THIS CLASS "C" TOPOGRAPHIC MAP WAS DRAWN FROM AN ACTUAL SURVEY PERFORMED UNDER MY DIRECT SUPERVISION AND THAT IT MEETS OR EXCEEDS THE NORTH CAROLINA ADMINISTRATIVE CODE 21.56.1605 AND 21.56.1606. WITNESS MY HAND AND SEAL THIS 22 DAY OF APRIL, A.D., 2021.

PROFESSIONAL LAND SURVEYOR – L-4571

I, SEAN R. SEEVER, CERTIFY THAT THE CONTROL FOR THIS SURVEY WAS ESTABLISHED FROM AN ACTUAL GPS SURVEY UNDER MY SUPERVISION. THIS GPS SURVEY WAS PERFORMED TO C-2II FGCC SPECIFICATIONS RTK GPS WITH VRS FIELD PROCEDURES WERE USED. THE COORDINATES WERE OBTAINED THROUGH A GRID TO GROUND ADJUSTMENT USING THE COMBINED SCALE FACTOR SHOWN HEREON. THIS SURVEY WAS PERFORMED ON JULY 9, 2020 USING TWO TRIMBLE 5700 RECEIVERS.

PROFESSIONAL LAND SURVEYOR – L-4571



GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 licenses number | C-2354
www.4dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL L-4571 LAND SURVEYOR SEAN R. SEEVER
04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

EXISTING CONDITIONS

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

SURVEYED BY:	CLIFF
DRAWN BY:	SEAN
CHECKED BY:	JIMMY
PROJECT NUMBER:	1644

DRAWING SCALE

HORIZONTAL: 1"=40'

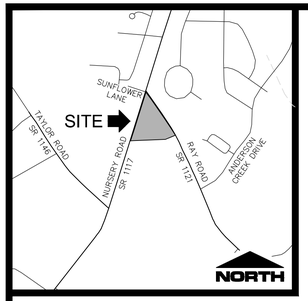
DATE SURVEYED

JULY 9, 2020

SHEET NUMBER

C-1.0

L:\Part Development\1644-Spring Lake Ray Rd Dollar General\CIVIL_SD\DWG\1644-EXISTING.SURF.dwg • C1.0 EX.COND.a • 4.22.2021 12:58:30 PM



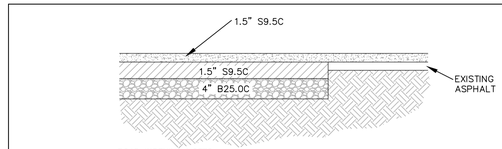
VICINITY MAP
NOT TO SCALE

	QTY.	TYPE	PLANTING SIZE	MIN. HEIGHT	SCIENTIFIC NAME
		CANOPY TREES			
	11	WILLOW OAK	2" CALIPER	6'	QUERCUS PHELLOS
	4	YOSHINO CHERRY	2" CALIPER	6'	PRUNUS X YEDOENSIS
		SHRUBS			
	22	FLOWERING QUINCE	2 GAL.	18"	CHAENOMELES
	56	LITTLELEAF BOXWOOD	2 GAL.	18"	BUXUS MICROPHYLLA

LANDSCAPING NOTES:

1. HEIGHT AND SPREAD OF TREE SPECIMEN SHALL MEET REQUIREMENTS OF THE AMERICAN ASSOCIATION OF NURSERYMEN, AMERICAN STANDARD FOR NURSERY STOCK.
2. EACH TREE SHALL BE PLANTED SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE ROOT FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE ROOT FLARE WITH MULCH.
3. DO NOT PLACE MULCH IN CONTACT WITH THE TREE TRUNK. KEEP MULCH A MINIMUM OF 4 INCHES AWAY FROM THE TRUNK BASE.

*THIS LANDSCAPING PLAN IS THE MINIMUM REQUIRED TO MEET WITH THE HARNETT COUNTY UDO. THE OWNER OR DEVELOPER IS ENCOURAGED TO CONSULT WITH A LANDSCAPE ARCHITECT IN ORDER TO DEVELOP A PLAN THAT IS MORE IN DEPTH THAN THE MINIMUM REQUIREMENTS. THIS PLAN IS FOR PERMITTING PURPOSES ONLY.



ROAD WIDENING NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH POLICY ON STREET AND DRIVEWAY ACCESS TO NORTH CAROLINA HIGHWAY MANUAL AND NCDOT STANDARD DRAWING 1205.04 AND 1205.05.
2. CONTRACTOR SHALL COORDINATE ALL ROAD WIDENING AND PAVEMENT MARKINGS WITH THE NCDOT DISTRICT OFFICE PRIOR TO CONSTRUCTION. CONTACT INFORMATION: FRANK WEST (910) 364-0606
3. CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL DURING THE ROAD WIDENING OPERATIONS.
4. CONTRACTOR SHALL NOTIFIY ALL PROPERTY OWNERS THAT ARE AFFECTED BY THE ROAD WIDENING INCLUDING BUT NOT LIMITED TO DRIVEWAY REPAIR.
5. CONTRACTOR IS RESPONSIBLE FOR RELOCATING ALL UTILITIES AND INFRASTRUCTURE AFFECTED BY THE WIDENING TO INCLUDE BUT NOT LIMITED TO SIGNS, MAILBOXES, POWER POLES, ETC. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING PROPERTY RESULTING FROM CONSTRUCTION OF THE IMPROVEMENTS.

NTS

PAVEMENT WIDENING SECTION

LEGEND:
- ECM – EXISTING CONCRETE MONUMENT
- EIP – EIP–EXISTING IRON PIPE
- EIR – EIR–EXISTING IRON ROD
- EPK – EPK–EXISTING PK NAIL
- SRB – SRB–SET REBAR
- COMPUTED POINT
- N/F – NOW OR FORMERLY
- R/W – RIGHT OF WAY
- RCP – REINFORCED CONCRETE PIPE
- PROPERTY LINE
- OPL — OLD PROPERTY LINE
- ADJACENT PROPERTY LINE
- RIGHT–OF–WAY
- W — WATER LINE
- // — OVERHEAD UTILITY
- TREE LINE
- 280 — MAJOR CONTOUR
- 274 — MINOR CONTOUR
- x 263.96' SPOT ELEVATION
- BENCHMARK
- PP UTILITY POLE
- WATER VALVE
- FIRE HYDRANT
- ASPHALT
- BUILDING

SITE DATA

DEVELOPER	RHETSON COMPANIES, INC
MAILING ADDRESS	2075 JUNIPER LAKE ROAD
CITY, STATE	WEST END, NORTH CAROLINA 27376
PIN NUMBER	PORTION OF 0505–48–7310.000
TOWNSHIP	ANDERSON CREEK
TOTAL SITE AREA	3.11 AC
ACREAGE TO BE DEVELOPED	3.11 AC
ZONING	COMM
EXISTING USE	UNDEVELOPED
PROPOSED USE	COMMERCIAL RETAIL
DISTURBED/DENUDED AREA	3.6 AC
IMPERVIOUS CALCS:	
TOTAL SITE AREA	135,590 SF
PRE–DEVELOPMENT	0 SF 0%
POST–DEVELOPMENT	31,199 SF 23.0%
SETBACKS REQUIRED:	
FRONT	35 FT
SIDE	0 FT
REAR	25 FT
PARKING:	
TOTAL REQUIRED	31 SPACES
PROVIDED (INCLUDING HC)	32 SPACES
HANDICAP SPACES	2 SPACES

SITE NOTES

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN ONLY WHERE EVIDENCE COULD BE FOUND TO VERIFY LOCATION. PRIOR TO CONSTRUCTION OR EXCAVATION OF THE SITE, THE GENERAL CONTRACTOR SHALL VERIFY ALL UTILITY COMPANIES TO VERIFY THE LOCATION OF THEIR RESPECTIVE UTILITIES. ALL DAMAGE INCURRED TO EXISTING UTILITIES DURING CONSTRUCTION SHALL BE REPAIRED AT THE GENERAL CONTRACTOR'S EXPENSE.
2. ASPHALT AND BASE TYPE SHALL BE PER THE DETAILS.
3. HANDICAP RAMPS, SIGNAGE AND PARKING SPACES SHALL BE PROVIDED BY THE CONTRACTOR AND INSTALLED PER FEDERAL ADA AND LOCAL REQUIREMENTS.
4. ALL DIMENSIONS ARE TO THE BACK OF CURB OR TO THE FACE OF SIDEWALK UNLESS OTHERWISE NOTED.
5. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
6. PARKING STALLS MUST BE STRIPED WITH A 4 INCH CONTRASTING STRIPE (YELLOW ON CONCRETE AND YELLOW OR WHITE ON ASPHALT PARKING LOT).
7. HANDICAP PARKING SPACES ARE TO BE DESIGNATED BY BLUE STRIPING AND EITHER A BLUE SYMBOL ON A WHITE BACKGROUND OR A WHITE SYMBOL ON A BLUE BACKGROUND. ALL HANDICAP PARKING STALLS REQUIRE THE INSTALLATION OF THE PROPER SIGNAGE.
8. ALL PARKING SPACES ARE TO BE LAID OUT IN ACCORDANCE WITH THE SITE PLAN DIMENSIONS.
9. LAND USE CLASSIFICATION IS COMPACT MIXED USE.
10. PROPERTY OWNER WILL BE RESPONSIBLE FOR MAINTAINING THE PARKING AREAS, DRIVE AISLES AND ALL LANDSCAPE BUFFERING.
11. ALL MECHANICAL AREAS LOCATED ON, BESIDE OR ADJACENT TO ANY BUILDING SHALL BE SCREENED FROM VIEWS OF STREETS AND ADJACENT PROPERTY.
12. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF–SITE IN ACCORDANCE WITH STATE AND LOCAL LAWS AND REGULATIONS.
13. ALL SITE IMPROVEMENTS SHALL BE INSTALLED PER HARNETT COUNTY AND STATE REGULATIONS.

GRAPHIC SCALE

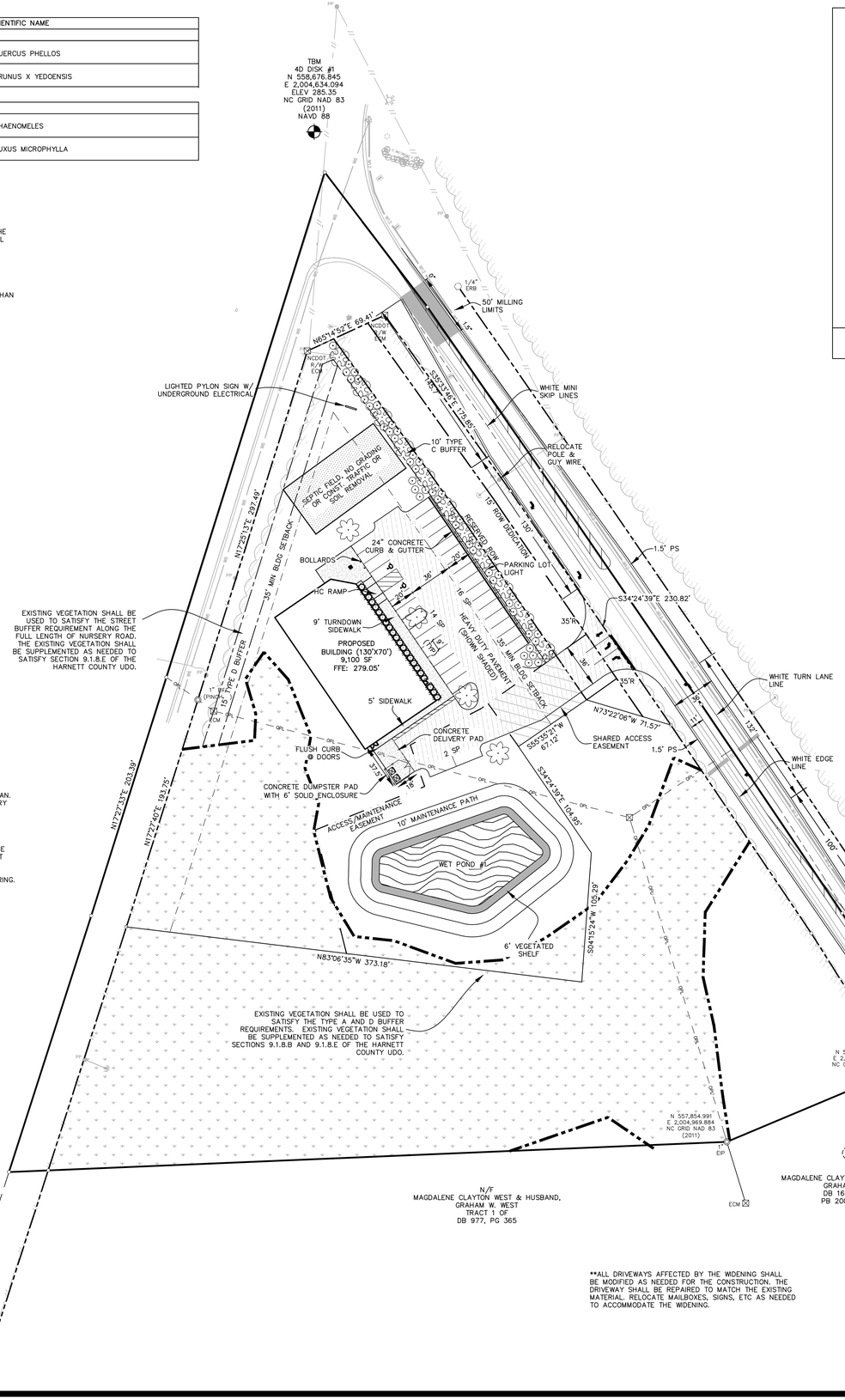
50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

ADDITIONAL NOTES

1. RAY ROAD AND NURSERY ROAD AREA ARE ON THE HARNETT COUNTY COMPREHENSIVE TRANSPORTATION PLAN.
2. THIS DEVELOPMENT IS WITHIN ONE MILE OF A VOLUNTARY AGRICULTURE DISTRICT.
3. THIS DEVELOPMENT IS WITHIN THE FIVE MILE MILITARY CORRIDOR OVERLAY ZONE AND MAY BE SUBJECT TO MILITARY TRAINING ACTIVITIES.
4. ALL MECHANICAL AREAS LOCATED ON, BESIDE OR ADJACENT TO ANY BUILDING OR DEVELOPMENT SHALL BE SCREENED FROM THE VIEWS OF STREETS AND ADJACENT PROPERTY.
5. THE OWNER IS RESPONSIBLE FOR MAINTENANCE OF ALL PARKING AREAS, DRIVE AISLES AND LANDSCAPE BUFFERING.

**HOURS OF OPERATION: 8 AM – 10 PM, 7 DAYS A WEEK



**ALL DRIVEWAYS AFFECTED BY THE WIDENING SHALL BE MODIFIED AS NEEDED FOR THE CONSTRUCTION. THE DRIVEWAY SHALL BE REPAIRED TO MATCH THE EXISTING MATERIAL. RELOCATE MAILBOXES, SIGNS, ETC AS NEEDED TO ACCOMMODATE THE WIDENING.

OWNER'S CONSENT

AS THE OWNER OF RECORD, I HEREBY FORMALLY CONSENT TO THE PROPOSED DEVELOPMENT SHOWN ON THE SITE PLAN AND ALL REGULATIONS AND REQUIREMENTS OF THE HARNETT COUNTY ORDINANCES.

_____ DATE

_____ OWNER'S SIGNATURE

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 licenses number | C-2354
www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027462 SCOTT BROWN
04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

SITE/LANDSCAPE PLAN

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

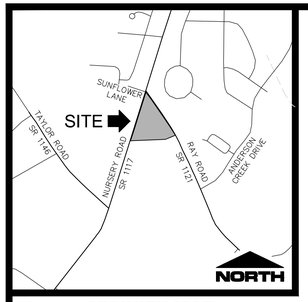
HORIZONTAL: 1"=50'

DATE RELEASED

APRIL 22, 2021

SHEET NUMBER

C-2.0



VICINITY MAP
NOT TO SCALE

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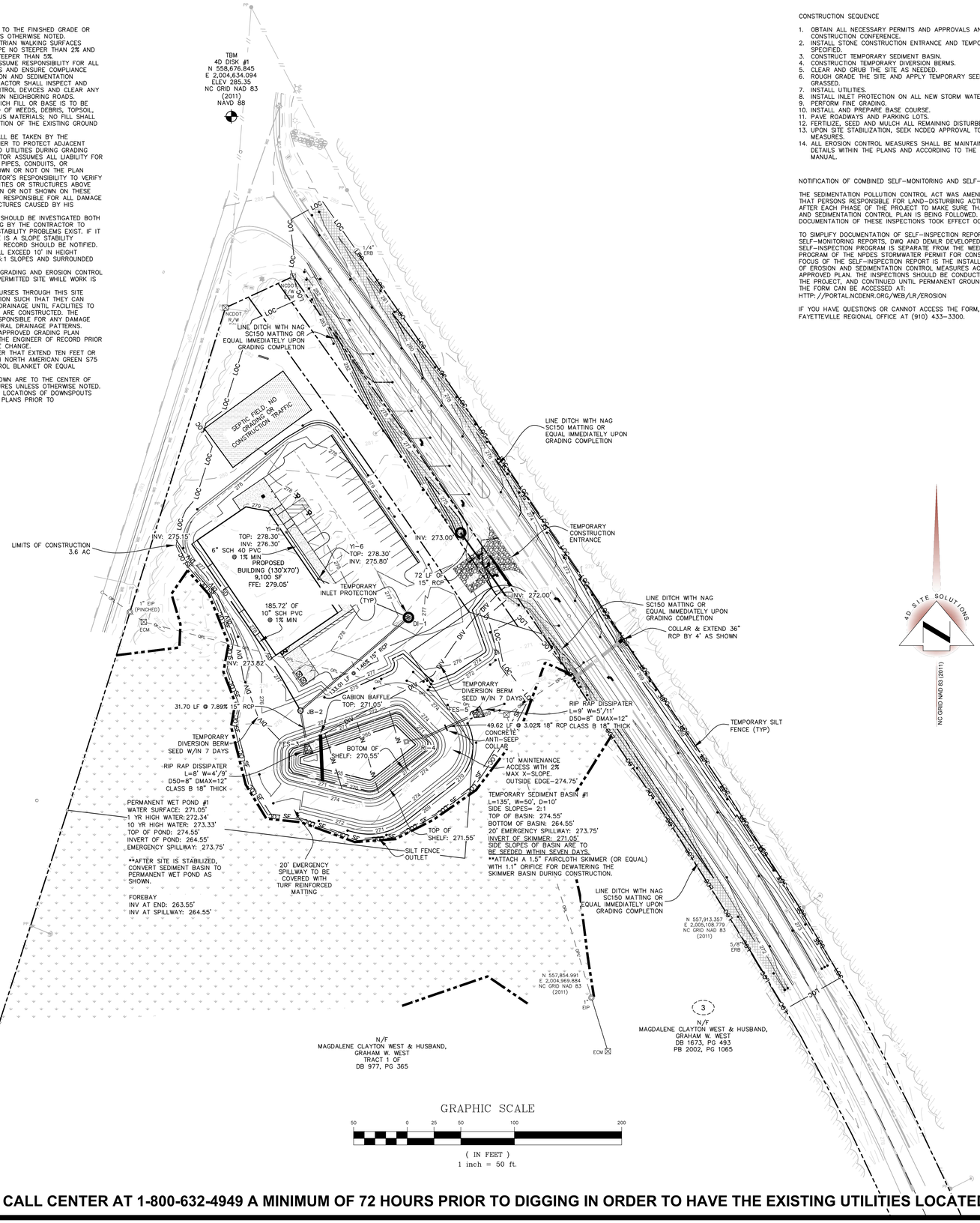
- FIRE HYDRANT
- ASPHALT
- BUILDING

EROSION CONTROL NOTES

1. ALL INLET/OUTLET PROTECTION WILL BE CHECKED FOR MAINTENANCE AND FAILURE EACH ACTIVE DAY ON SITE. SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAP AND INLET PROTECTION DEVICES WHEN THE STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS PROPERLY. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES ABOUT 0.5' DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NEEDED TO MAINTAIN A PROPER BARRIER.
2. TEMPORARY EROSION CONTROL FACILITIES AND/OR PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF AND EARTH DISTURBANCE OPERATION SHALL BE INSTALLED BEFORE ANY EARTH DISTURBANCE OPERATIONS TAKE PLACE OR AT THE EARLIEST POSSIBLE POINT DURING CONSTRUCTION.
3. TEMPORARY & PERMANENT EROSION CONTROL MEASURES SHALL BE CONSTRUCTED PER THE DETAILS HEREIN, OR SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
4. THE CONTRACTOR MUST NOTIFY THE APPROPRIATE NCDEQ OFFICE A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES. 910–433–3300
5. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS WHEN TRACKING OCCURS.
6. LOCATE SOIL STOCKPILES NO LESS THAN TWENTY–FIVE (25) FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES. TEMPORARY STOCKPILES LOCATED ON PAVED SURFACES MUST BE NO LESS THAN FIVE FEET FROM THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED IF LEFT MORE THAN 24 HOURS.
7. MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
8. TEMPORARILY OR PERMANENTLY STABILIZE ALL DENUDED AREAS WHICH HAVE BEEN FINISH GRADED, AND ALL DENUDED AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER WITHIN 14 DAYS. USE SEEDING AND MULCHING, EROSION CONTROL MATTING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS AND OTHERWISE APPROPRIATE MEASURES. USE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED.
9. DO NOT REMOVE ANY EROSION AND SEDIMENT CONTROL DEVICES AFTER THE PROTECTED AREA HAS UNDERGONE FINAL STABILIZATION AND PERMANENT VEGETATION HAS BEEN ESTABLISHED, IT IS RECOMMENDED THAT NCDEQ APPROVE THE ACTION PRIOR TO REMOVAL.
10. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED CONCURRENTLY WITH THE INITIATION OF CONSTRUCTION ACTIVITY.
11. THE INSTALLATION OF EROSION CONTROL MEASURES SHALL TAKE PRECEDENCE OVER ALL OTHER CONSTRUCTION ACTIVITIES.
12. THE PERMITTEE SHALL BE HELD RESPONSIBLE FOR THE ACTIONS AND PERFORMANCE OF ANY OTHER PARTIES PERFORMING WORK ON THIS PROJECT.
13. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF–PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
14. PURSUANT TO G.S. 113A–57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 7 OR 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PURSUANT TO G.S. 113A–57(3), PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RETAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 14 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION DEVELOPMENT.
15. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EROSION CONTROL MEASURES SHOWN AND ANY ADDITIONAL MEASURES REQUIRED TO CONTROL THE SEDIMENT DURING THE COURSE OF CONSTRUCTION.
16. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO THE DETAILS HEREIN.
17. THE CONTACT PERSON FOR EROSION CONTROL ISSUES THAT ARISE ON SITE IS JOHN PARKER. CONTACT 910–944–0881.

GRADING NOTES

1. ALL SPOT ELEVATIONS ARE TO THE FINISHED GRADE OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
2. ALL SIDEWALKS AND PEDESTRIAN WALKING SURFACES SHALL HAVE A CROSS SLOPE NO STEEPER THAN 2% AND LONGITUDINAL SLOPE NO STEEPER THAN 5%
3. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ALL LAND DISTURBING ACTIVITIES AND ENSURE COMPLIANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES AND CLEAR ANY DEBRIS LEAVING THE SITE ON NEIGHBORING ROADS.
4. EXISTING GROUND UPON WHICH FILL OR BASE IS TO BE PLACED SHALL BE CLEARED OF WEEDS, DEBRIS, TOPSOIL, AND ALL OTHER DELETERIOUS MATERIALS. NO FILL SHALL BE PLACED UNTIL PREPARATION OF THE EXISTING GROUND HAS BEEN COMPLETED
5. PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR AND THE OWNER TO PROTECT ADJACENT PROPERTY, THE PUBLIC AND UTILITIES DURING GRADING OPERATIONS. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES, WHETHER SHOWN OR NOT ON THE PLAN
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES OR STRUCTURES ABOVE AND BELOW GROUND, SHOWN OR NOT SHOWN ON THESE PLANS. THEY WILL BE HELD RESPONSIBLE FOR ALL DAMAGE TO ANY UTILITIES OR STRUCTURES CAUSED BY HIS OPERATION.
7. ALL CUT AND FILL SLOPES SHOULD BE INVESTIGATED BOTH DURING AND AFTER GRADING BY THE CONTRACTOR TO DETERMINE IF ANY SLOPE STABILITY PROBLEMS EXIST. IF IT IS DETERMINED THAT THERE IS A SLOPE STABILITY PROBLEM THE ENGINEER OF RECORD SHOULD BE NOTIFIED.
8. STOCKPILE AREAS THAT WILL EXCEED 10' IN HEIGHT SHOULD BE GRADED WITH 3:1 SLOPES AND SURROUNDED BY SILT FENCE.
9. APPROVED COPIES OF THE GRADING AND EROSION CONTROL PLANS SHALL BE ON THE PERMITTED SITE WHILE WORK IS IN PROGRESS.
10. ALL EXISTING DRAINAGE COURSES THROUGH THIS SITE SHALL REMAIN IN A CONDITION SUCH THAT THEY CAN TRANSPORT THE NATURAL DRAINAGE UNTIL FACILITIES TO HANDLE THE STORM WATER ARE CONSTRUCTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DUE TO OBSTRUCTING NATURAL DRAINAGE PATTERNS.
11. ANY DEVIATION FROM THE APPROVED GRADING PLAN SHOULD BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO IMPLEMENTATION OF THE CHANGE.
12. ALL SLOPES 3:1 OR STEEPER THAT EXTEND TEN FEET OR MORE SHALL BE LINED WITH NORTH AMERICAN GREEN S75 TEMPORARY EROSION CONTROL BLANKET OR EQUAL SUBSTITUTE.
13. STORM PIPE DISTANCES SHOWN ARE TO THE CENTER OF THE BOX FOR ALL STRUCTURES UNLESS OTHERWISE NOTED.
14. CONTRACTOR SHALL VERIFY LOCATIONS OF DOWNSPOUTS USING THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

CONSTRUCTION SEQUENCE

1. OBTAIN ALL NECESSARY PERMITS AND APPROVALS AND HOLD PRE CONSTRUCTION CONFERENCE.
2. INSTALL STONE CONSTRUCTION ENTRANCE AND TEMPORARY SILT FENCE WHERE SPECIFIED.
3. CONSTRUCT TEMPORARY SEDIMENT BASIN.
4. CONSTRUCTION TEMPORARY DIVERSION BERMS.
5. CLEAR AND GRUB THE SITE AS NEEDED.
6. ROUGH GRADE THE SITE AND APPLY TEMPORARY SEEDING TO AREAS REMAIN GRASSED.
7. INSTALL UTILITIES.
8. INSTALL INLET PROTECTION ON ALL NEW STORM WATER INLETS.
9. PERFORM FINE GRADING.
10. INSTALL AND PREPARE BASE COURSE.
11. PAVE ROADWAYS AND PARKING LOTS.
12. FERTILIZE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.
13. UPON SITE STABILIZATION, SEEK NCDEQ APPROVAL TO REMOVE ALL TEMPORARY MEASURES.
14. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED AS OUTLINED IN THE DETAILS WITHIN THE PLANS AND ACCORDING TO THE NCDEQ EROSION CONTROL MANUAL.

NOTIFICATION OF COMBINED SELF–MONITORING AND SELF–INSPECTION FORM:

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND–DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

TO SIMPLIFY DOCUMENTATION OF SELF–INSPECTION REPORTS AND NPDES SELF–MONITORING REPORTS, DWQ AND DEMLR DEVELOPED A COMBINED FORM. THE SELF–INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF–MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF–INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE FORM CAN BE ACCESSED AT:
HTTP://PORTAL.NCDENR.ORG/WEB/LR/EROSION

IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CONTACT THE FAYETTEVILLE REGIONAL OFFICE AT (910) 433–3300.

GROUND STABILIZATION CHART

SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITHCES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7–DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)

811 Know what's below. Call before you dig.

THE CONTRACTOR MUST CONTACT NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 A MINIMUM OF 72 HOURS PRIOR TO DIGGING IN ORDER TO HAVE THE EXISTING UTILITIES LOCATED

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 332, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 licenses number | C-2354
www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027453 SCOTT BROWN
04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

GRADING AND EROSION CONTROL PLAN

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

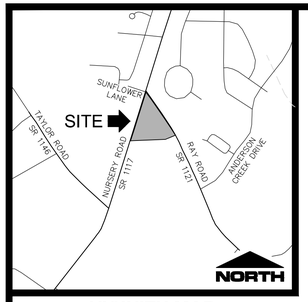
HORIZONTAL: 1"=50'

DATE RELEASED

APRIL 22, 2021

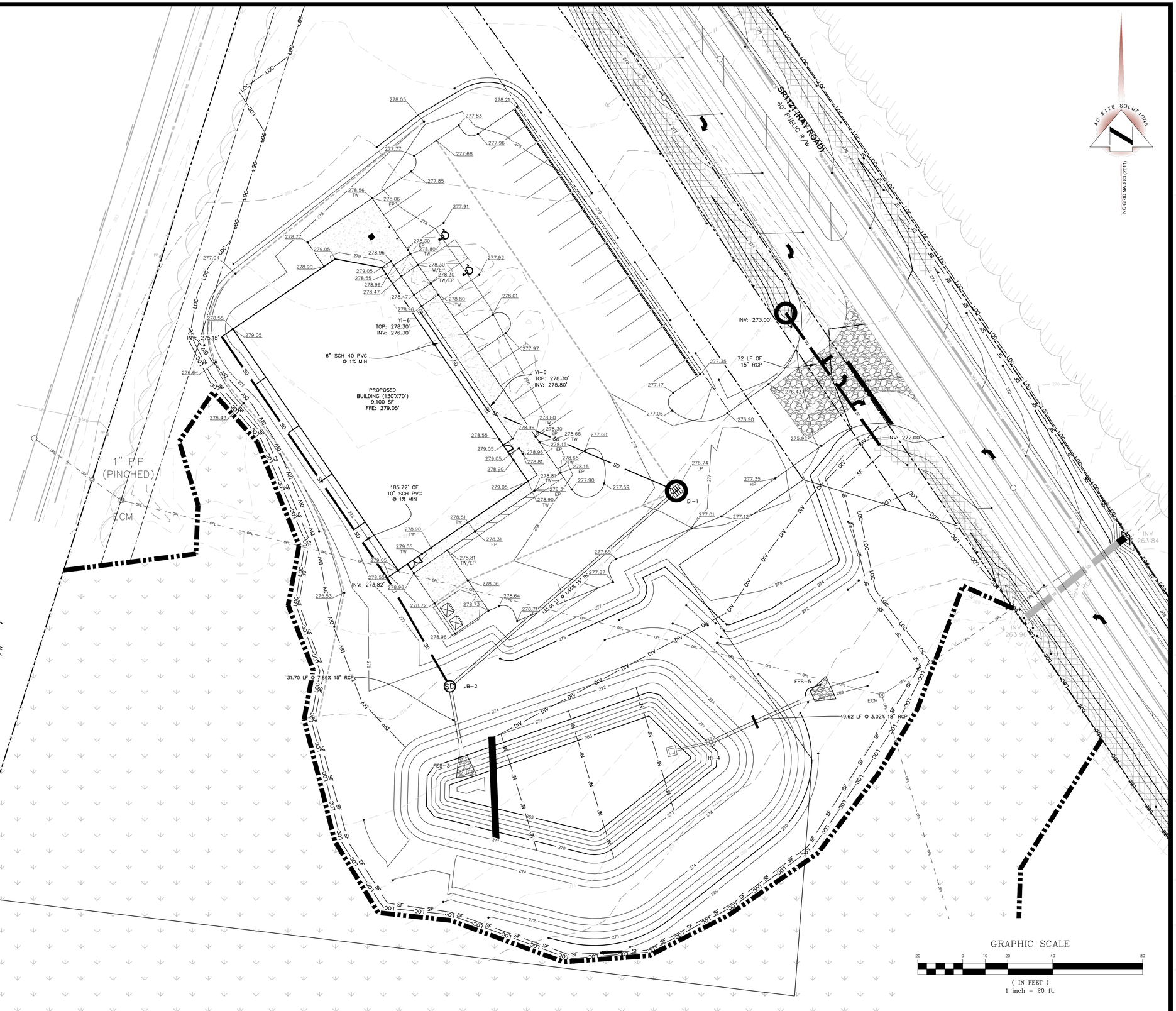
SHEET NUMBER

C-3.0



VICINITY MAP
NOT TO SCALE

LEGEND:
- ECM – ECM–EXISTING CONCRETE MONUMENT
- EIP – EIP–EXISTING IRON PIPE
- EIR – EIR–EXISTING IRON ROD
- EPK – EPK–EXISTING PK NAIL
- SRB – SRB–SET REBAR
- COMPUTED POINT
- N/F – NOW OR FORMERLY
- R/W – RIGHT OF WAY
- RCP – REINFORCED CONCRETE PIPE
- PROPERTY LINE
- OPL — OLD PROPERTY LINE
- ADJACENT PROPERTY LINE
- RIGHT–OF–WAY
- W — WATER LINE
- // — OVERHEAD UTILITY
- TREE LINE
- 280 — MAJOR CONTOUR
- 274 — MINOR CONTOUR
- x 263.96' SPOT ELEVATION
- BENCHMARK
- PP UTILITY POLE
- WATER VALVE
- FIRE HYDRANT
- ASPHALT
- BUILDING



Know what's below. Call before you dig.

THE CONTRACTOR MUST CONTACT NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 A MINIMUM OF 72 HOURS PRIOR TO DIGGING IN ORDER TO HAVE THE EXISTING UTILITIES LOCATED

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NORTH CAROLINA PROFESSIONAL SEAL 027462 ENGINEER SCOTT BROWN
04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

DETAILED GRADING PLAN

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

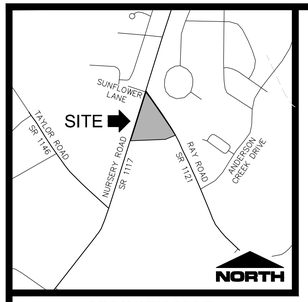
HORIZONTAL: 1"=20'

DATE RELEASED

APRIL 22, 2021

SHEET NUMBER

C-3.1



VICINITY MAP
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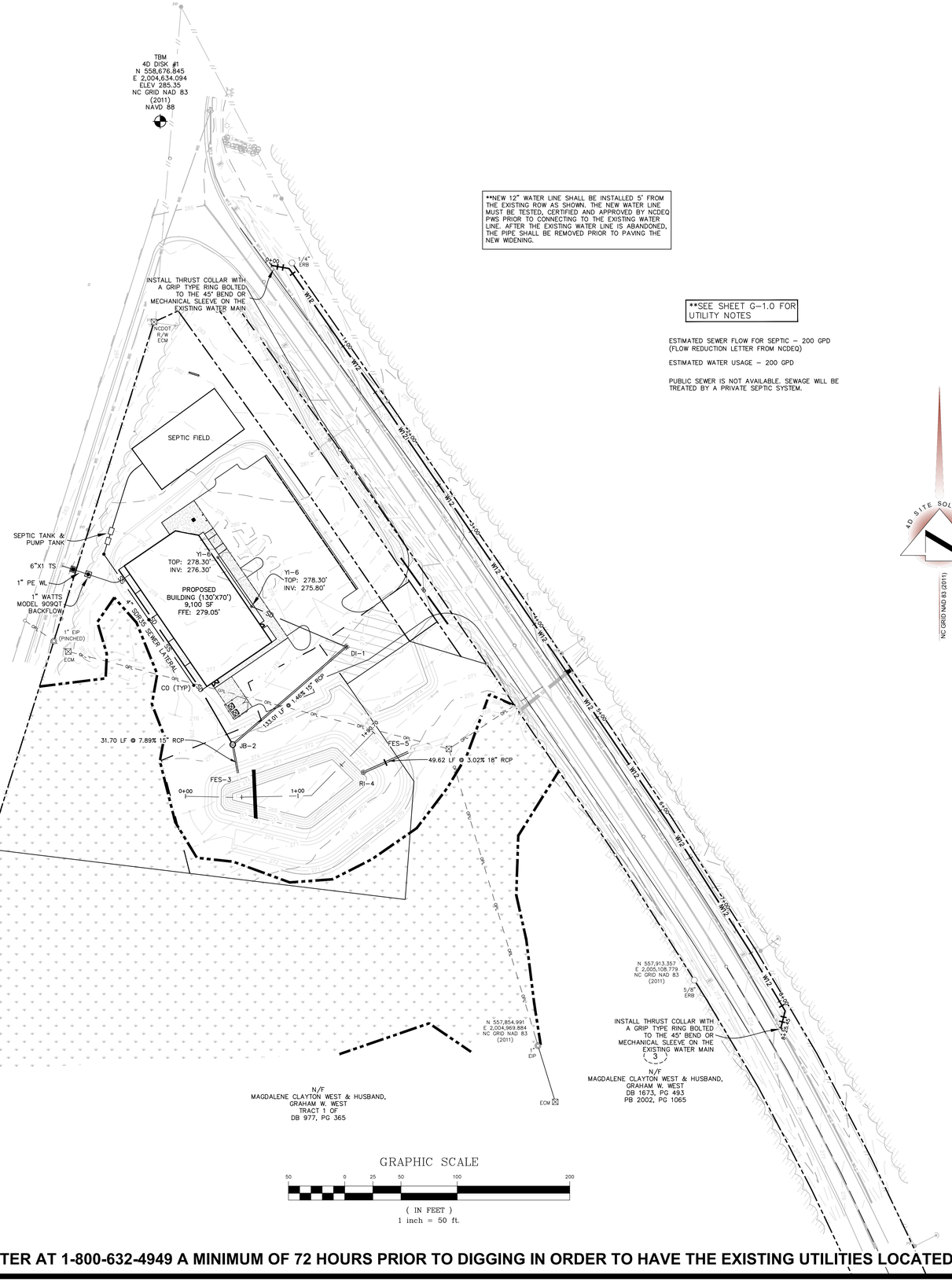

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

811 Know what's **below.** **Call** before you dig.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027482 C. SCOTT BROWN
04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

UTILITY PLAN

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

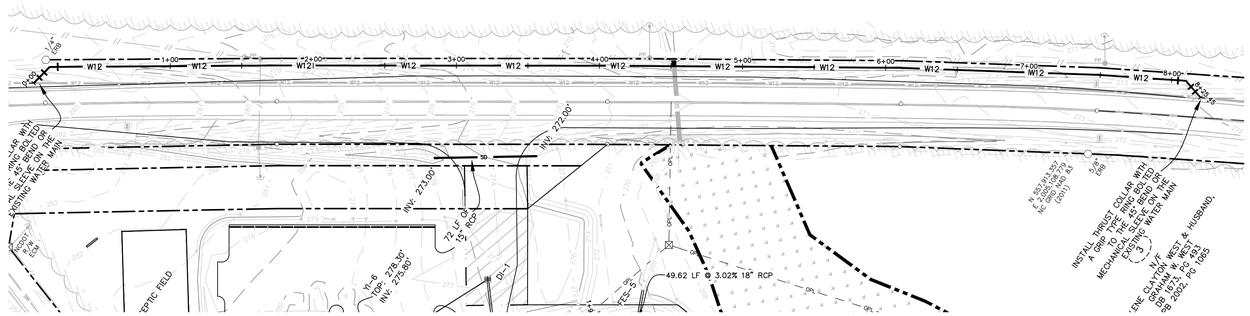
PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE
HORIZONTAL: 1"=50'

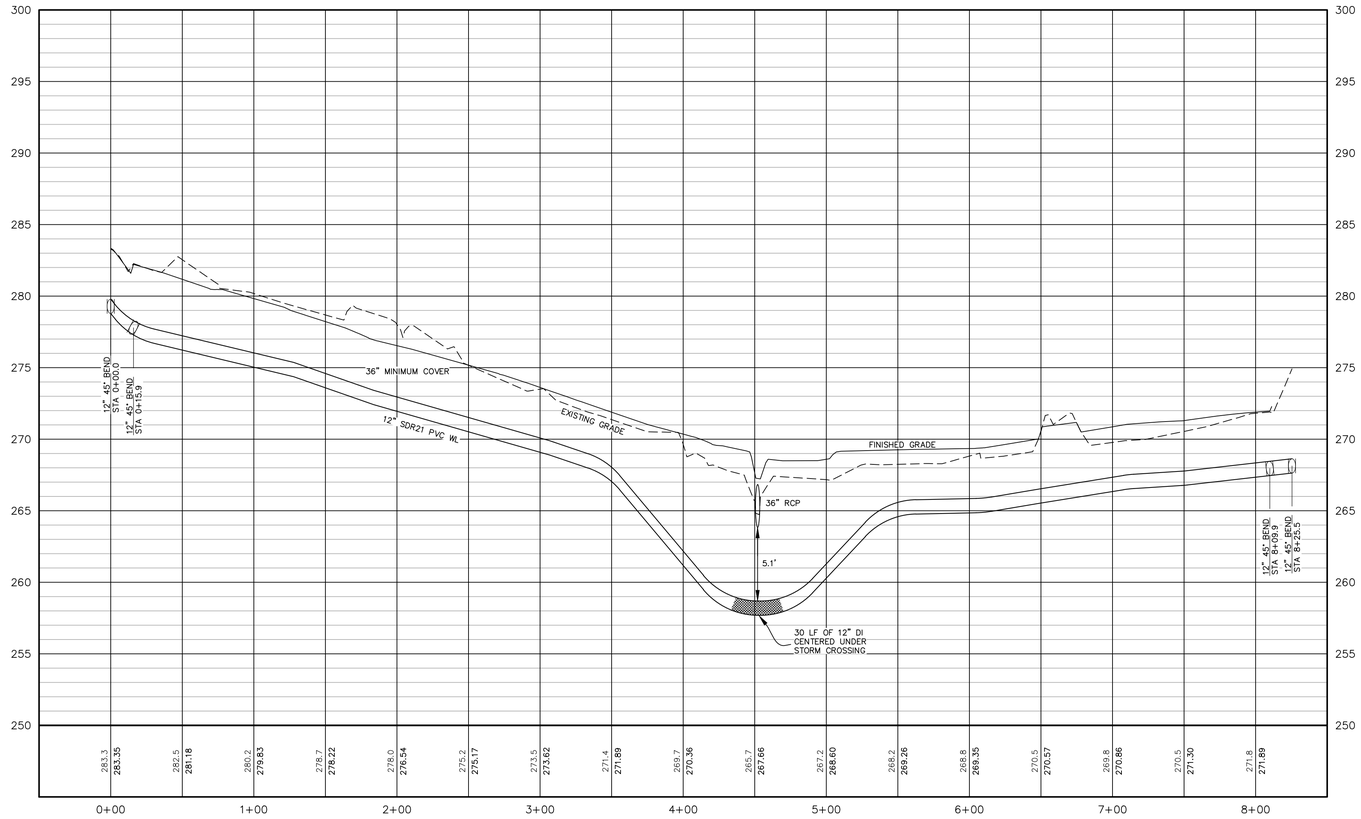
DATE RELEASED
APRIL 22, 2021

SHEET NUMBER
C-4.0



WATER LINE RELOCATION

WATER MAIN -0+50 TO 8+50



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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NORTH CAROLINA PROFESSIONAL SEAL 027462 ENGINEER SCOTT BROWN

04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

WATER PROFILE

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

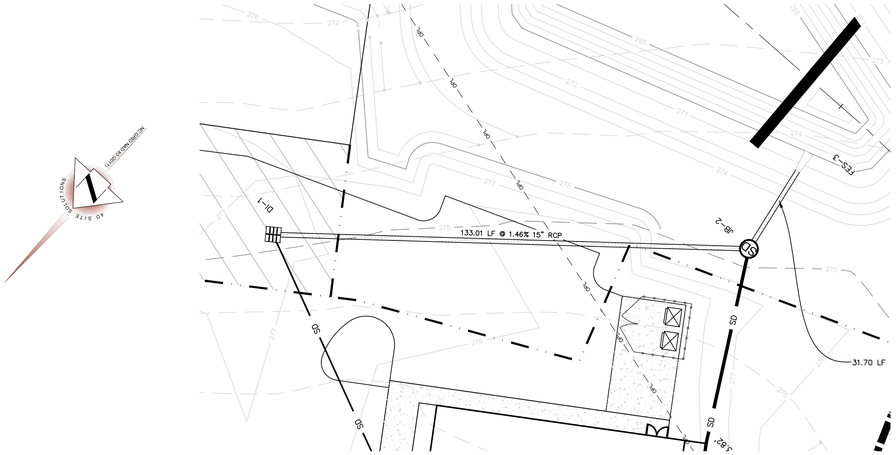
HORIZONTAL: 1"=50'
VERTICAL: 1"=5'

DATE RELEASED

APRIL 22, 2021

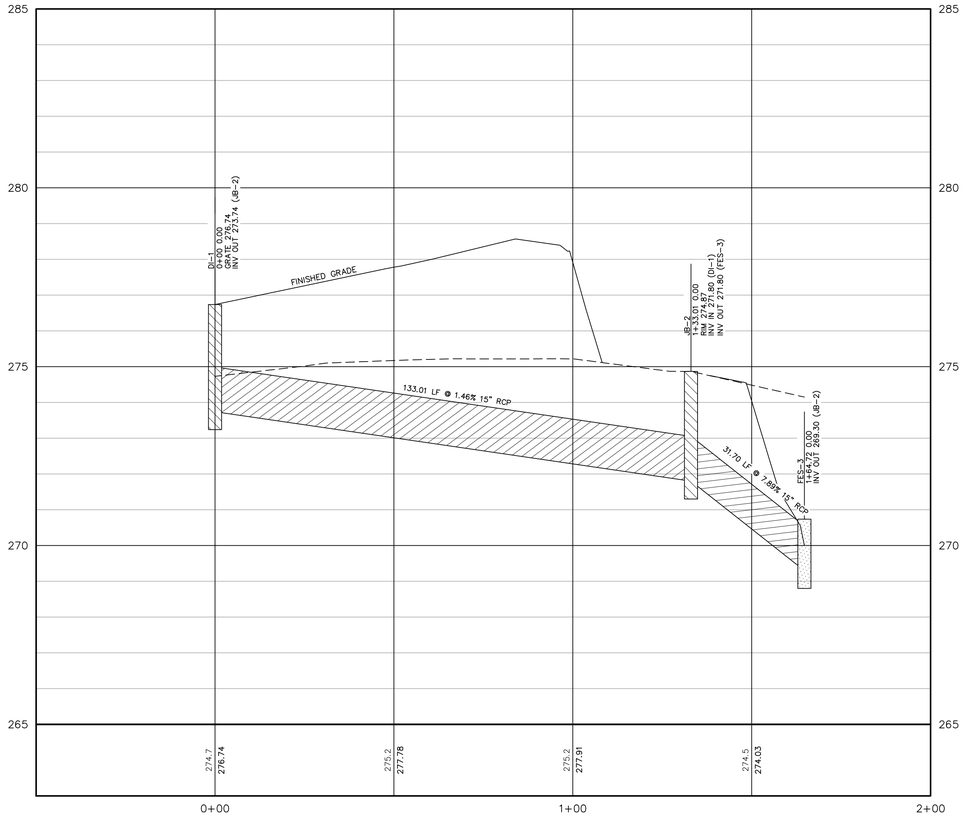
SHEET NUMBER

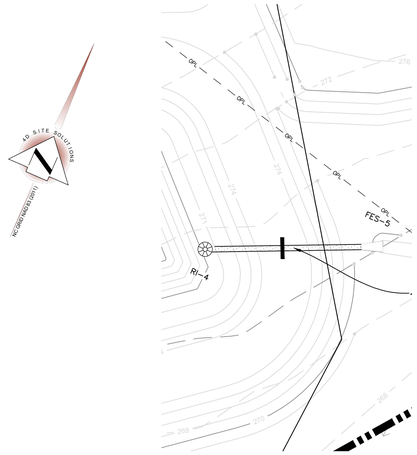
C-5.0



DI-1 TO FES-3

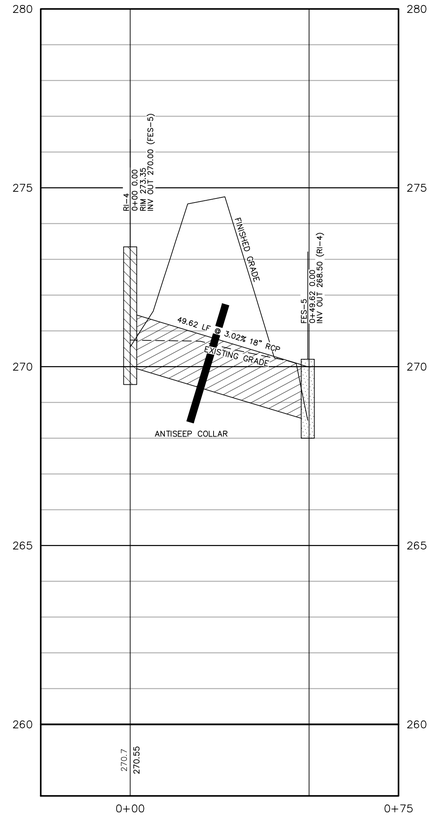
STORM DRAIN -0+50 TO 2+00





RI-4 TO FES-5

STORM DRAIN -0+25 TO 0+75



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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NORTH CAROLINA PROFESSIONAL SEAL 027462 ENGINEER SCOTT BROWN

04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

STORM PROFILES

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

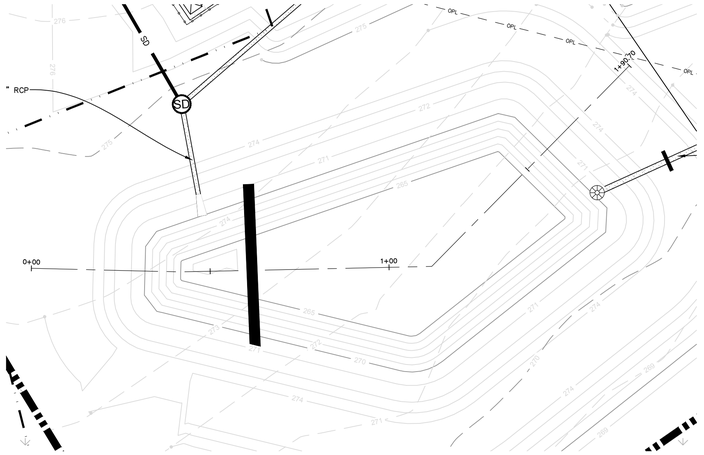
HORIZONTAL: 1"=20'
VERTICAL: 1"=2'

DATE RELEASED

APRIL 22, 2021

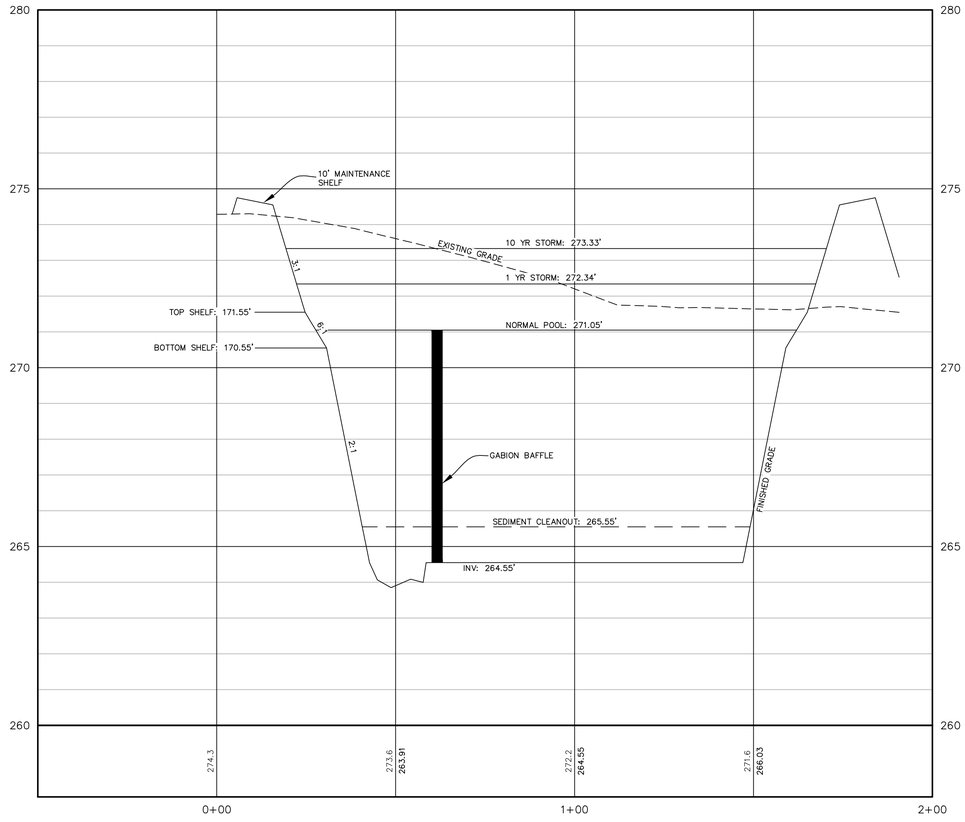
SHEET NUMBER

C-5.1



WET POND #1

STORM DRAIN -0+50 TO 2+00



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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NORTH CAROLINA PROFESSIONAL SEAL 027482 ENGINEER CHRISTOPHER SCOTT BROWN

04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

STORM PROFILES

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

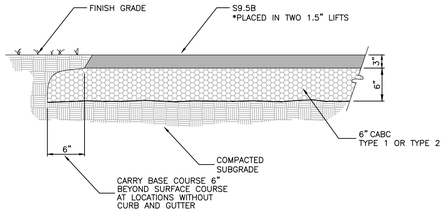
HORIZONTAL: 1"=20'
VERTICAL: 1"=2'

DATE RELEASED

APRIL 22, 2021

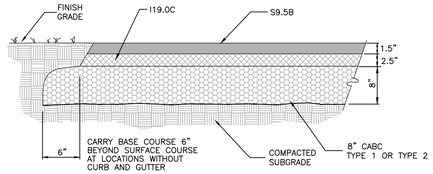
SHEET NUMBER

C-5.2



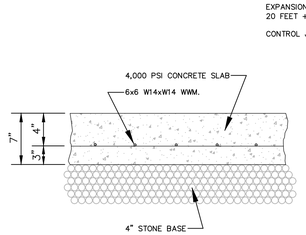
NTS

1 LIGHT DUTY PAVEMENT



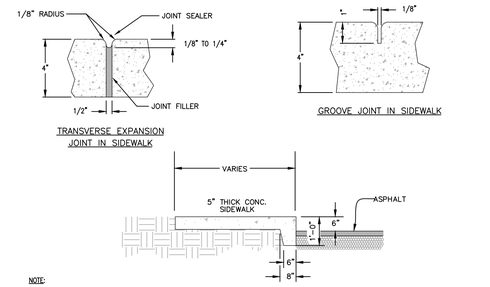
NTS

2 HEAVY DUTY PAVEMENT



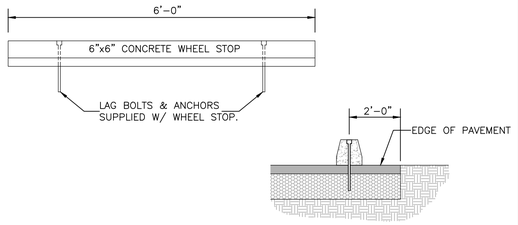
NTS

3 CONCRETE PAVEMENT SECTION



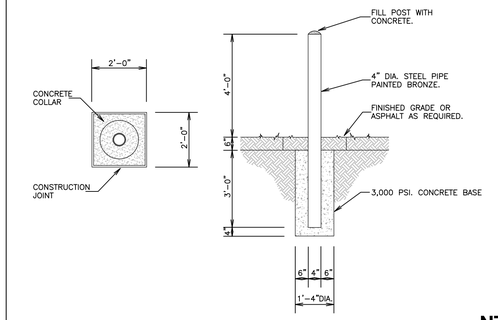
NTS

4 TURN DOWN SIDEWALK



NTS

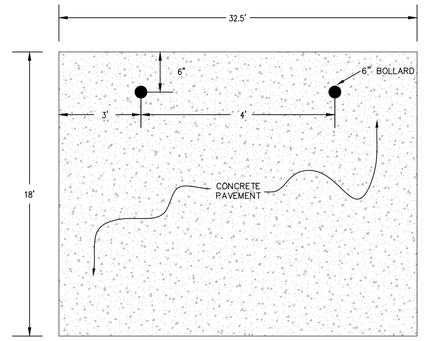
5 CONCRETE WHEEL STOP



NOTE: SEE ARCHITECTURAL PLANS FOR BUILDING BOLLARD DETAIL

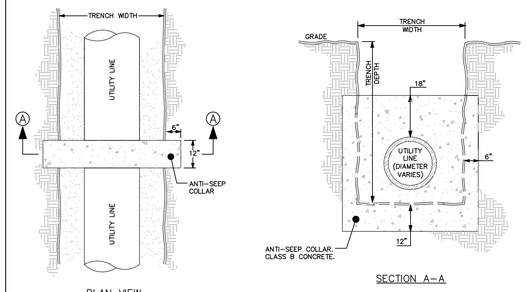
NTS

6 6" DUMPSTER BOLLARD



NTS

7 DUMPSTER PAD



NTS

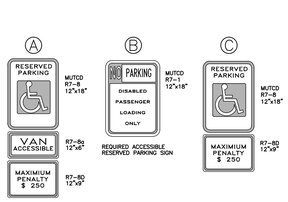
8 ANTI-SEEP COLLAR

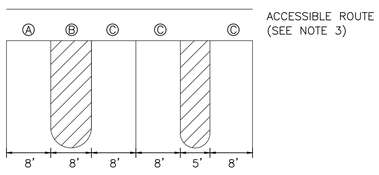
ACCESSIBLE PARKING REQUIREMENTS

TOTAL PARKING SPACES PROVIDED	MINIMUM NUMBER OF ACCESSIBLE SPACES SPACES REQUIRED	MINIMUM NUMBER OF ACCESSIBLE SPACES REQUIRED TO BE VAN ACCESSIBLE
1 TO 25	1	1
26 TO 50	2	1
51 TO 75	3	1
76 TO 100	4	1
101 TO 150	5	1
151 TO 200	6	1
201 TO 300	7	1
301 TO 400	8	1
401 TO 500	9	2
501 TO 1000	2% OF TOTAL	1 IN EVERY 8 ACCESSIBLE SPACES
1001 AND OVER	20 PLUS 1 FOR EACH 100 OVER 1000	1 IN EVERY 8 ACCESSIBLE SPACES

SECTION 4.1.2 (5) OF THE AMERICANS WITH DISABILITIES ACT (ADA). SEE 4.1.2,(5) (d) FOR MEDICAL CARE FACILITIES

NOTES:
1. ALL 12"x18" ACCESSIBLE SIGNS (R7-8 & R7-1) SHALL BE MOUNTED AT 7 FEET FROM GRADE TO BOTTOM EDGE OF SIGN FACE (MUTCD). MOUNTING HEIGHT CAN BE REDUCED TO 5 FEET IF PLACED IN AN AREA BETWEEN SIDEWALK AND BUILDING FACE IN WHICH PEDESTRIANS ARE NOT EXPECTED TO USE.
2. REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) U.S. DEPARTMENT OF TRANSPORTATION AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SUPPLEMENT.
3. IF ACCESSIBLE ROUTE IS A RAISED SIDEWALK AREA, THEN RAMPS ARE REQUIRED AT LOADING ZONE AREA.
4. ALL DIMENSIONS, PAVEMENT MARKINGS AND SIGNAGE SHALL COMPLY WITH CURRENT ADA REQUIREMENTS.



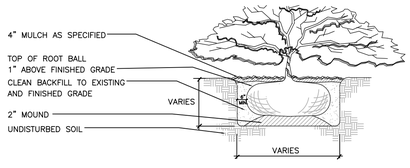


ONE OUT OF EVERY EIGHT (8) ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE.

PARKING SPACE PAVEMENT MARKINGS

NTS

9 HANDICAP SIGNAGE AND PAVEMENT MARKINGS



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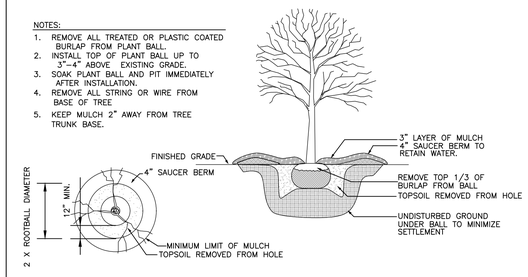
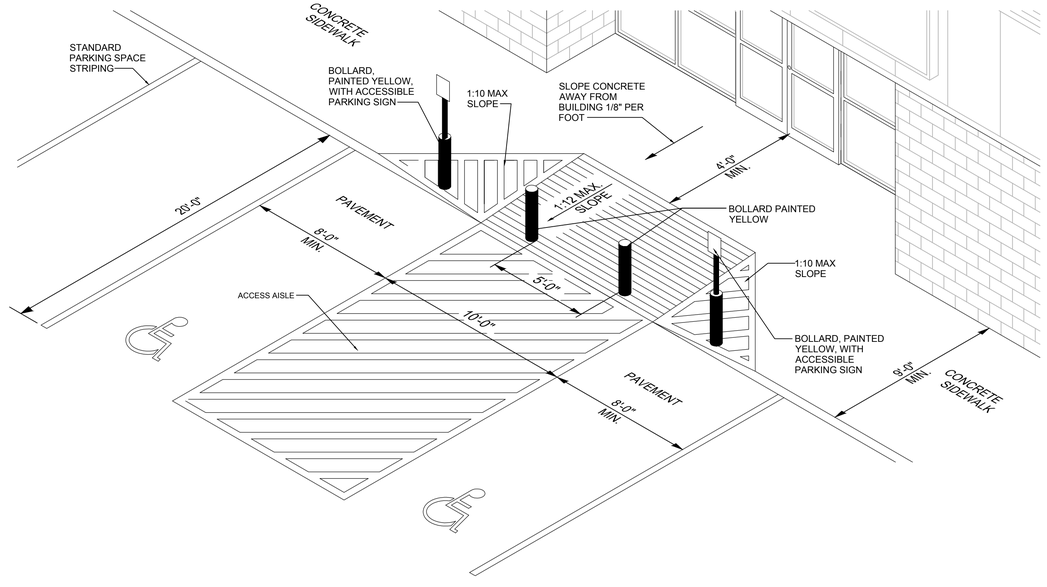
10 SHRUB PLANTING

NOTES:
1. REMOVE ALL TREATED OR PLASTIC COATED BURLAP FROM PLANT BALL.
2. INSTALL TOP OF PLANT BALL UP TO 3"-4" ABOVE EXISTING GRADE.
3. SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.
4. REMOVE ALL STRING OR WIRE FROM BASE OF TREE
5. KEEP MULCH 2" AWAY FROM TREE TRUNK BASE.



NTS

11 TREE PLANTING



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12 HANDICAP RAMP

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NORTH CAROLINA PROFESSIONAL SEAL 027462 ENGINEER SCOTT BROWN

04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

SITE DETAILS

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

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DRAWN BY:	SCOTT
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PROJECT NUMBER:	1644

DRAWING SCALE

NOT TO SCALE

DATE RELEASED

APRIL 22, 2021

SHEET NUMBER

C-6.0

1 TEMPORARY SEEDING SPECIFICATIONS

TEMPORARY SEEDING/MULCHING SPECIFICATIONS (FOR LATE WINTER AND EARLY SPRING)
SEEDING MIXTURE:

SPECIES	RATE (LB./ACRE)
RYE (GRAIN)	120
ANNUAL KOBE LESPEDEZA	50

OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT EXTEND BEYOND JUNE.

SEEDING DATES:
JANUARY 1 - MAY 1

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB./ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB./ACRE 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 LB./ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING/MULCHING SPECIFICATIONS (FOR SUMMER)
SEEDING MIXTURE:

SPECIES	RATE (LB./ACRE)
GERMAN MILLET	40

A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB./ACRE.

SEEDING DATES:
MAY 1 - AUGUST 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB./ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB./ACRE 10-10-10 FERTILIZER.

MULCH:
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MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING/MULCHING SPECIFICATIONS (FOR FALL)
SEEDING MIXTURE:

SPECIES	RATE (LB./ACRE)
RYE (GRAIN)	120

SEEDING DATES:
AUGUST 15 - DECEMBER 30

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB./ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB./ACRE 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 LB./ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOP DRESS WITH 50 LB./ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB./ACRE KOBE LESPEDEZA IN LATE OR EARLY MARCH.

2 PERMANENT SEEDING SPECIFICATIONS

SEEDING SPECIFICATIONS

SEEDING MIXTURES:

SPECIES	RATE (LBS./ACRE)
TALL FESCUE	80
PENSACOLA BAHIAGRASS	50
SERICEA LESPEDEZA	30
KOBE LESPEDEZA	10

SEEDING NOTES:
1. FROM SEPT. 1 TO MAR. 1 USE UNSCARIFIED SERICEA SEED.
2. ON POORLY DRAINED SITES OMIT SERICEA AND INCREASE KOBE TO 30 LB./ACRE.
3. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE TO 40 LB./ACRE.

NURSE PLANTS:
BETWEEN APRIL 15 AND AUG. 15, ADD 10 LB./ACRE OF GERMAN MILLET OR 15 LB./ACRE SUDANGRASS. PRIOR TO MAY 1 OR AFTER AUG. 15, ADD 25 LB./ACRE RYE (GRAIN).

SEEDING DATES:

	BEST	POSSIBLE
EARLY SPRING:	FEB. 15 - MAR. 20	FEB. 15 - APR. 30
FALL:	SEPT. 1 - SEPT. 30	SEPT. 1 - OCT. 31

SOIL AMENDMENTS:
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST, OR APPLY 3,000 - 5,000 LB./ACRE GROUND AGRICULTURAL LIMESTONE (USE THE LOWER RATE ON SANDY SOILS) AND 1,000 LB./ACRE 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 LB./ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
IF GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE IN THE SECOND YEAR, ACCORDING TO THE SOIL TESTS OR TOP DRESS WITH 500 LB./ACRE 10-10-10 FERTILIZER. MOW AS NEEDED WHEN SERICEA IS OMITTED FROM THE MIXTURE. RESEED, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY.

SEEDING SPECIFICATIONS

SEEDING MIXTURE:

SPECIES	RATE (LB./ACRE)
COMMON BERMUDAGRASS	40-80(1-2 LB./1,000 FT²)

SEEDING DATES:
COASTAL PLAIN: APR. - JULY

SOIL AMENDMENTS:
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST, OR APPLY 3,000 LB./ACRE GROUND AGRICULTURAL LIMESTONE AND 500 LB./ACRE 10-10-10 FERTILIZER.

MULCH:
USE JUTE, EXCELSIOR MATTING, OR OTHER EFFECTIVE CHANNEL LINING MATERIAL TO COVER THE BOTTOM OF CHANNELS AND DITCHES. THE LINING SHOULD EXTEND ABOVE THE HIGHEST CALCULATED DEPTH OF FLOW. ON CHANNEL SIDE SLOPES ABOVE THIS HEIGHT, AND IN DRAINAGES NOT REQUIRING TEMPORARY LININGS, APPLY 4,000 LB./ACRE GRAIN STRAW AND ANCHOR STRAW BY STAPLING NETTING OVER THE TOP.

MULCH AND ANCHORING MATERIALS MUST NOT BE ALLOWED TO WASH DOWN SLOPES WHERE THEY CAN CLOG DRAINAGE DEVICES.

MAINTENANCE:
A MINIMUM OF 3 WEEKS IS REQUIRED FOR ESTABLISHMENT. INSPECTION AND REPAIR MULCH FREQUENTLY. REFERTILIZE THE FOLLOWING APR. WITH 50 LB./ACRE NITROGEN.

3 GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK.

2. THE CONTRACTOR SHALL NOTIFY PLAN APPROVING AUTHORITY ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO FINAL INSPECTION.

3. IF POSSIBLE ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.

4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO NCDENR REGIONAL OFFICE FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.

6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY EITHER NCDENR OR THE ENGINEER.

7. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

8. ALL AREAS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE IMPROVED SHALL BE SODDED OR SEEDED AS INDICATED AND STABILIZED.

9. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.

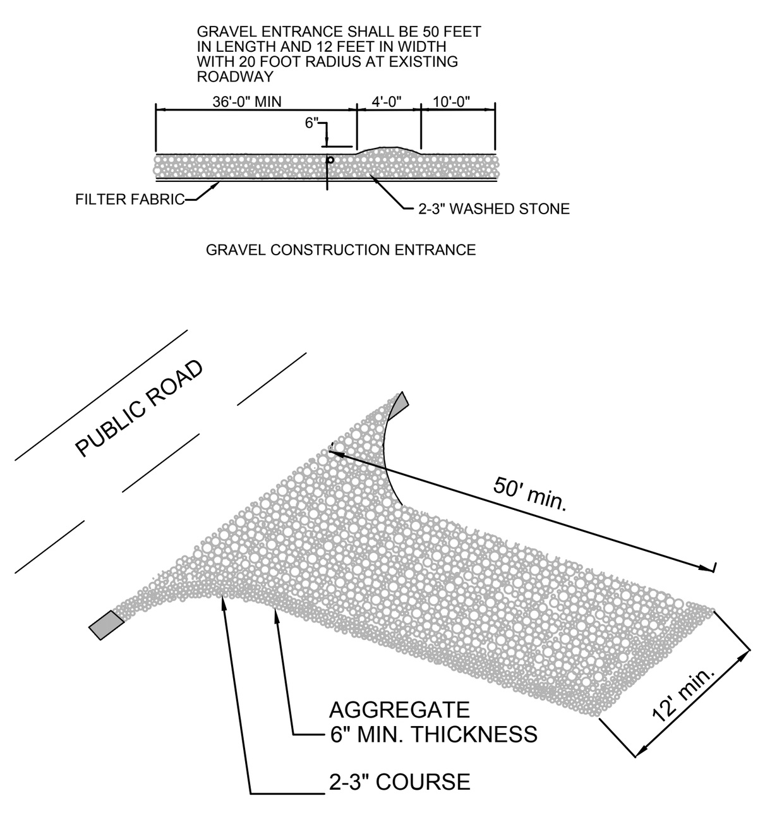
10. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER. NCDENR'S FINAL APPROVAL IS REQUIRED.

12. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA.

13. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE CONTRACTOR SHALL RIP-RAP WITH FABRIC DISTURBED BANKS AND CHANNEL AND RESTORE SLOPES TO ORIGINAL CONTOURS, BUT NOT STEEPER THAN 2:1 MAXIMUM. DISTURBED CREEK AREA SHALL BE STABILIZED IMMEDIATELY.

4 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE



DESIGN CRITERIA

AGGREGATE SIZE - USE 2-3 INCH WASHED STONE

DIMENSION OF GRAVEL PAD

THICKNESS - 6 INCHES MINIMUM

WIDTH - 12 FT. MINIMUM OR FULL WIDTH AT ACCESS POINTS OF THE VEHICULAR ENTRANCE AND EXIT AREA, WHICHEVER IS GREATER

LENGTH - 50 FT. MINIMUM.

LOCATION - LOCATE CONSTRUCTION ENTRANCES AND EXITS TO LIMIT SEDIMENT FROM LEAVING THE SITE AND TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. AVOID STEEP GRADES AND ENTRANCES AT CURVES IN PUBLIC ROADS.

CONTRACTOR SHALL INSTALL ADDITIONAL GRAVEL CONSTRUCTION ENTRANCES NOT INDICATED ON THE PLANS REQUIRED FOR STAGING AND/OR BORROW AREAS AND MAINTAIN AT NO ADDITIONAL EXPENSE TO THE OWNER.

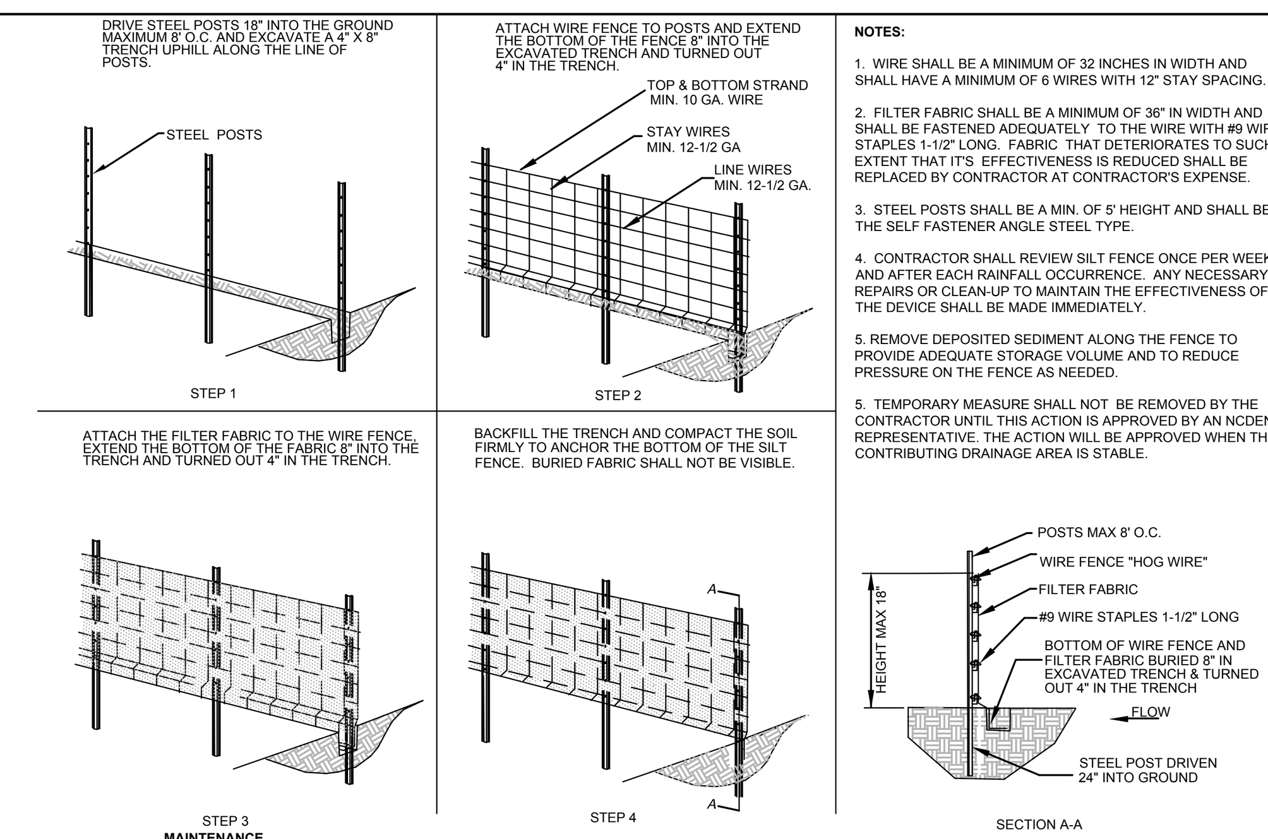
CONTRACTOR SHALL SUPPLEMENT AND MAINTAIN GRAVEL CONSTRUCTION ENTRANCES AT HIS EXPENSE UNTIL FINAL ACCEPTANCE.

MAINTENANCE

MAINTAIN THE GRAVEL PAD INBA CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED OR TRACKED ONTO PUBLIC ROADWAYS.

NTS

5 SILT FENCE



NOTES:

1. WIRE SHALL BE A MINIMUM OF 32 INCHES IN WIDTH AND SHALL HAVE A MINIMUM OF 6 WIRES WITH 12" STAY SPACING.

2. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE WITH #9 WIRE STAPLES 1-1/2" LONG. FABRIC THAT DETERIORATES TO SUCH EXTENT THAT IT'S EFFECTIVENESS IS REDUCED SHALL BE REPLACED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.

3. STEEL POSTS SHALL BE A MIN. OF 5' HEIGHT AND SHALL BE THE SELF FASTENER ANGLE STEEL TYPE.

4. CONTRACTOR SHALL REVIEW SILT FENCE ONCE PER WEEK AND AFTER EACH RAINFALL OCCURRENCE. ANY NECESSARY REPAIRS OR CLEAN-UP TO MAINTAIN THE EFFECTIVENESS OF THE DEVICE SHALL BE MADE IMMEDIATELY.

5. REMOVE DEPOSITED SEDIMENT ALONG THE FENCE TO PROVIDE ADEQUATE STORAGE VOLUME AND TO REDUCE PRESSURE ON THE FENCE AS NEEDED.

5. TEMPORARY MEASURE SHALL NOT BE REMOVED BY THE CONTRACTOR UNTIL THIS ACTION IS APPROVED BY AN NCDENR REPRESENTATIVE. THE ACTION WILL BE APPROVED WHEN THE CONTRIBUTING DRAINAGE AREA IS STABLE.

MAINTENANCE

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

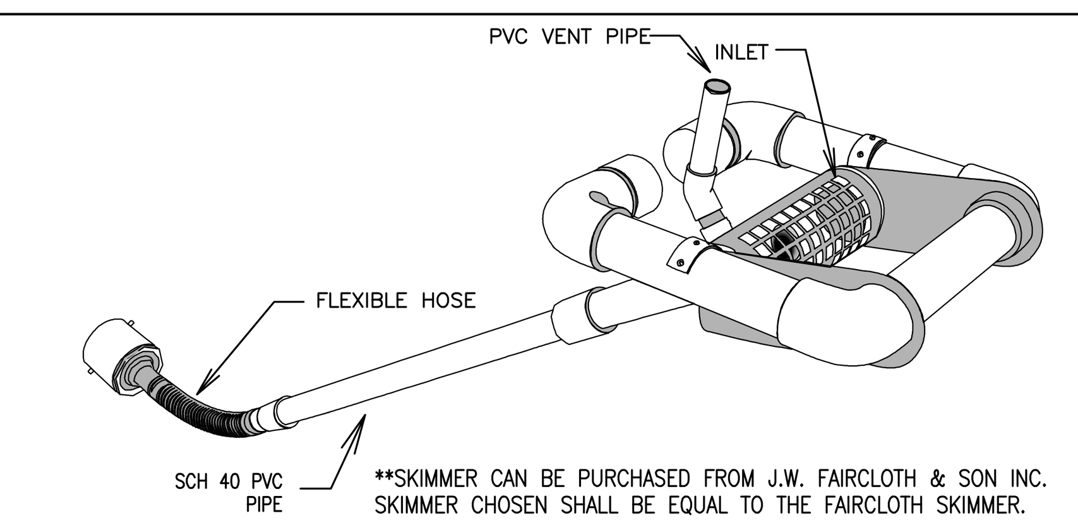
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED AND NCDENR APPROVES REMOVAL.

NTS

6 FAIRCLOTH SKIMMER



MAINTENANCE

INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AN AFTER EACH SIGNIFICANT (0.5 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO 1/2 HEIGHT OF THE 1ST BAFFLE. PULL THE SKIMMER TO ONE SIDE SUCH THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN. MAKE SURE THE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.

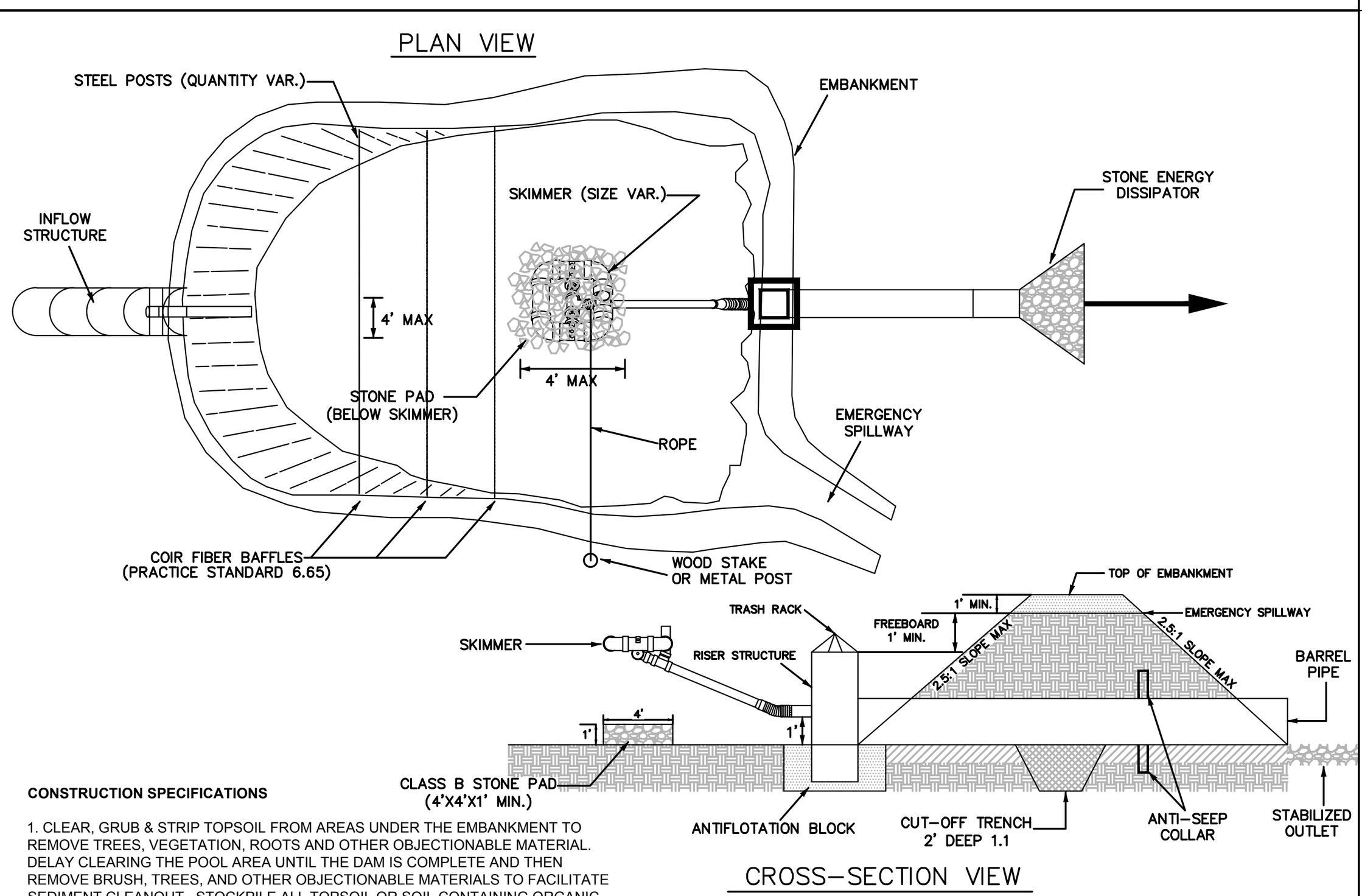
IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVED THE DEBRIS. CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO, REMOVE THE DEBRIS.

IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS.

NTS

7 TEMPORARY SEDIMENT BASIN



CONSTRUCTION SPECIFICATIONS

1. CLEAR, GRUB & STRIP TOPSOIL FROM AREAS UNDER THE EMBANKMENT TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL. DELAY CLEARING THE POOL AREA UNTIL THE DAM IS COMPLETE AND THEN REMOVE BRUSH, TREES, AND OTHER OBJECTIONABLE MATERIALS TO FACILITATE SEDIMENT CLEANOUT. STOCKPILE ALL TOPSOIL OR SOIL CONTAINING ORGANIC MATTER FOR USE ON THE OUTER SHELL OF THE EMBANKMENT TO FACILITATE VEGETATIVE ESTABLISHMENT. PLACE TEMPORARY SEDIMENT CONTROLS BELOW THE BASIN AS NEEDED.

2. EXCAVATE CUT-0FF TRENCH ALONG THE CENTER LINE OF THE EARTH FILL EMBANKMENT. CUT THE TRENCH TO STABLE SOIL MATERIAL, BUT IN NO CASE MAKE IT LESS THAN 2 FEET DEEP. THE CUT-OFF TRENCH MUST EXTEND INTO BOTH ABUTMENTS TO AT LEAST THE ELEVATION OF THE RISER CREST. MAKE THE MINIMUM BOTTOM WIDTH WIDE ENOUGH TO PERMIT OPERATION OF EXCAVATION AND COMPACTION EQUIPMENT, BUT IN NO CASE LESS THAN 2 FEET. MAKE SIDE SLOPES OF THE TRENCH NO STEEPER THAN 1:1. COMPACTION REQUIREMENTS ARE THE SAME AS THOSE FOR THE EMBANKMENT. KEEP THE TRENCH DRY DURING BACKFILLING AND COMPACTION OPERATIONS.

3. EMBANKMENT - TAKE FILL MATERIAL FROM THE APPROVED AREAS SHOWN ON THE PLANS. IT SHOULD BE CLEAN MINERAL SOIL, FREE OF ROOTS, WOODY VEGETATION, ROCKS, AND OTHER OBJECTIONABLE MATERIAL. SCARIFY AREAS ON WHICH FILL IS TO BE PLACED BEFORE PLACING FILL. THE FILL MATERIAL MUST CONTAIN SUFFICIENT MOISTURE SO IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. PLACE FILL MATERIAL IN 6 TO 8 INCH CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF THE FILL AREA AND COMPACT IT. COMPACTION MAY BE OBTAINED BY ROUTING THE CONSTRUCTION HAULING EQUIPMENT OVER THE FILL SO THAT THE ENTIRE SURFACE OF EACH LAYER IS TRAVERSED BY AT LEAST ONE WHEEL OR TREAD TRACK OF HEAVY EQUIPMENT, OR A COMPACTOR MAY BE USED. CONSTRUCT THE EMBANKMENT TO AN ELEVATION 10% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLING.

4. SECURELY ATTACH THE RISER TO THE BARREL OR BARREL STUB TO MAKE A WATERTIGHT STRUCTURAL CONNECTION. SECURE ALL CONNECTIONS BETWEEN BARREL SECTIONS BY APPROVED WATERTIGHT ASSEMBLIES. PLACE THE BARREL AND RISER ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE OR ANTISEEP COLLARS. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4 INCH LAYERS, AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. ANCHOR THE RISER IN PLACE BY CONCRETE OR OTHER SATISFACTORY MEANS TO PREVENT FLOTATION. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.

5. INSTALL THE EMERGENCY SPILLWAY IN UNDISTURBED SOIL. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE EMERGENCY SPILLWAY.

6. DISCHARGE THE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE TRAP EFFICIENCY.

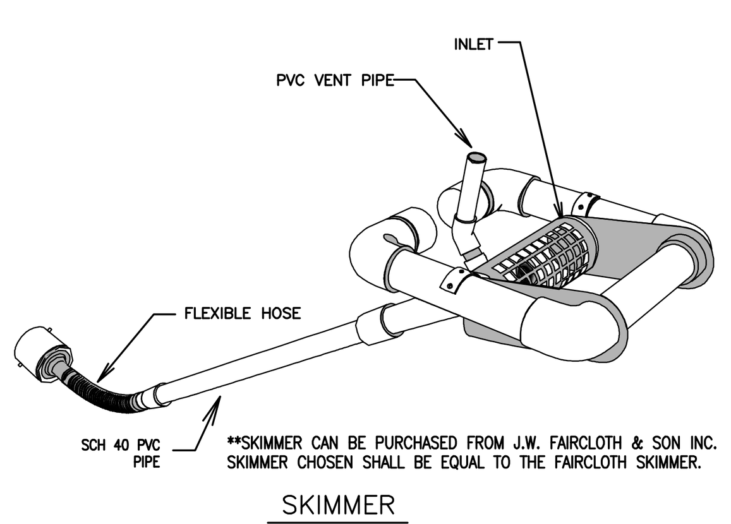
7. CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED.

8. INSTALL POROUS BAFFLES AS SPECIFIED.

9. AVOID STEEP SIDE SLOPES, AND FENCE AND MARK BASINS WITH WARNING SIGNS IF TRESPASSING IS LIKELY. FOLLOW ALL STATE AND LOCAL REQUIREMENTS.

NOTES

1. SEED AND PLACE MATITNG FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. INSTALL A MINIMUM OF 3 COIR FIBER BAFFLES IN ACCORDANCE WITH PRACTICE STANDARD 6.65.
3. INSTALL SKIMMER AND COUPLING TO RISER STRUCTURE OR DIRECTLY INTO EMBANKMENT 1 FT. FROM BOTTOM OF BASIN.
4. THE ARM PIPE SHALL HAVE A MINIMUM LENGTH OF 6 FT. BETWEEN THE SKIMMER AND COUPLING.



SKIMMER

MAINTENANCE

INSPECT TEMPORARY SEDIMENT BASINS WEEKLY AND AFTER EACH PERIOD OF SIGNIFICANT RAINFALL. REMOVE SEDIMENT AND RESTORE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN AN AREA WITH SEDIMENT CONTROLS.

CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA.

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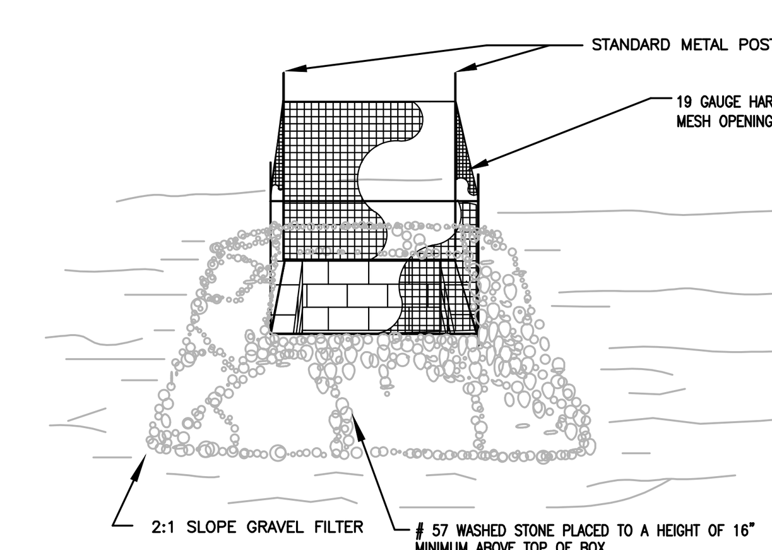
8 HARDWARE CLOTH & GRAVEL INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.

2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACES POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.

3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE AND BOTTOM. PLACING A 2 FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.

4. PLACE CLEAN GRAVEL (NCDOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE AND SMOTH TO AN EVEN GRADE.

5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT AND ESTABLISH FINAL GRADING ELEVATIONS.

6. COMPACT THE AREA PROPERLY AND STABILIZE IT WITH GROUNDCOVER.

MAINTENANCE

INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING THE SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

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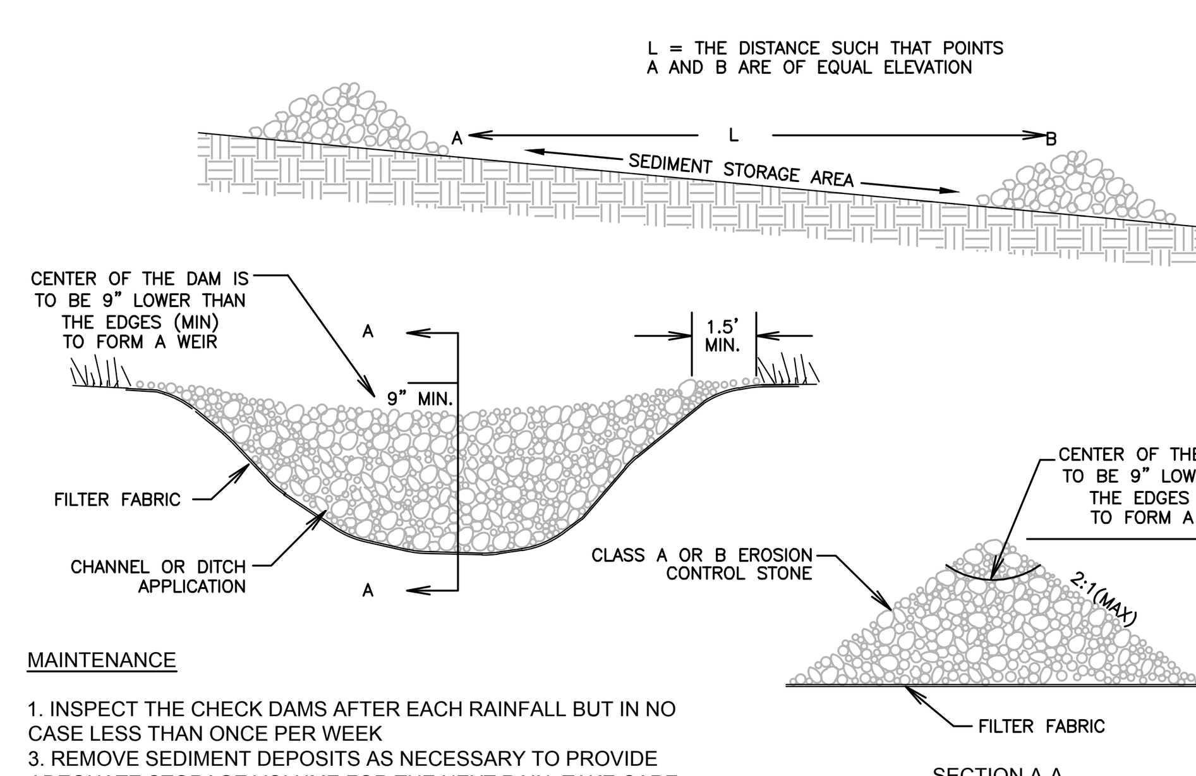
9 CHECK DAM WITH WEIR



MAINTENANCE

1. INSPECT THE CHECK DAMS AFTER EACH RAINFALL BUT IN NO CASE LESS THAN ONCE PER WEEK
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. TAKE CARE TO AVOID UNDERMINING THE DAM DURING CLEANOUT.
3. CLEAN OR REPLACE THE STONE WHEN IT SHOWS SIGNS OF CLOGGING OR OTHERWISE DOES NOT PERFORM CORRECTLY
4. WEIR SECTION MUST BE 9" LOWER THAN ABUTMENTS
5. DOWNSTREAM APRON LENGTH SHOULD BE 3 TIMES THE HEIGHT OF THE WEIR.

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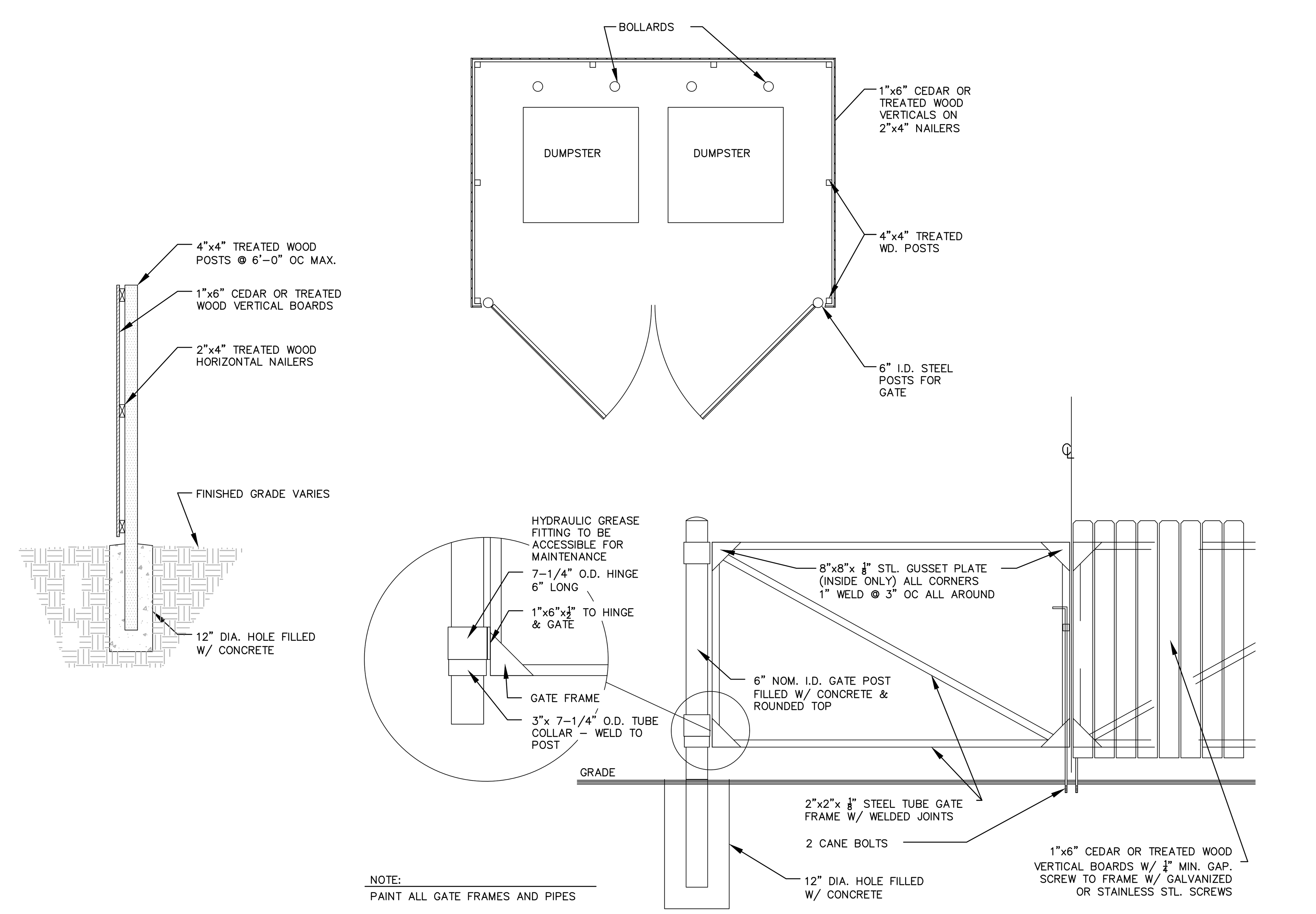
10 DUMPSTER ENCLOSURE



NOTE:
PAINT ALL GATE FRAMES AND PIPES

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NORTH CAROLINA PROFESSIONAL SEAL 027452 ENGINEER C. SCOTT BROWN
04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

SITE & EROSION CONTROL DETAILS

CLIENT

RHETSON COMPANIES, INC

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DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

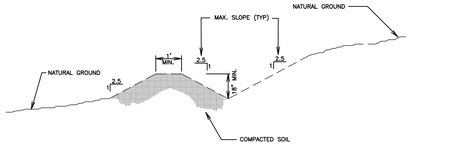
NOT TO SCALE

DATE RELEASED

APRIL 22, 2021

SHEET NUMBER

C-6.1



*** WHEN A GRAVEL DIVERSION BERM IS REQUIRED, THE HEIGHT SHALL BE REDUCED TO 12 INCHES AND THE TOP WIDTH TO 6'. ALL OTHER REQUIREMENTS SHALL REMAIN THE SAME.

TEMPORARY DIVERSION KEY NOTES:

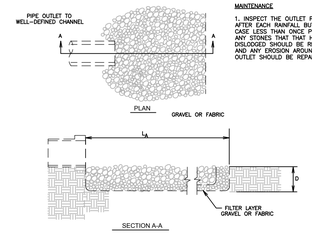
1. CLEAR THE ARE UNDER THE BERM AND STRIP THE ROOTS/OTHER ORGANICS.
2. COMPACT THE SIDE SLOPES, PREFERABLY WITH A TRACKED VEHICLE TO SLOW RUNOFF VELOCITIES
3. VEGITATE THE RIDGE OF THE BERM IMMEDIATELY AFTER CONSTRUCTION UNLESS THE BERM WILL REMAIN IN PLACE FOR LESS THAN 30 DAYS.

MAINTENANCE:

INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.

NTS

1 TEMPORARY DIVERSION BERM



MAINTENANCE

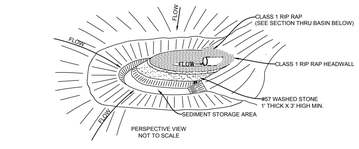
1. INSPECT THE OUTLET PROTECTION AFTER EACH RAINFALL BUT IN NO CASE LESS THAN ONCE PER WEEK. ANY STONES THAT THAT HAVE BEEN DISLODGED SHOULD BE REPLACED AND ANY EROSION AROUND THE OUTLET SHOULD BE REPAIRED.

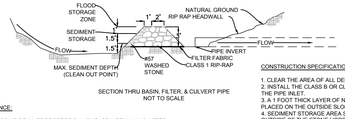
NOTES

1. L_A IS THE LENGTH OF THE RIPRAP APRON.(SEE EC PLAN)
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON THE REQUIRED 4" WIDTH OR UP TO THE TOP OF THE CHANNEL BANKS, WHICHEVER IS LESS.
4. A FILTER FABRIC OR BLANKET SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

NTS

2 TYPICAL RIP RAP APRON





MAINTENANCE:

INSPECT ROCK PIPE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.

CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY.

CONSTRUCTION SPECIFICATIONS:

1. CLEAR THE AREA OF ALL DEBRIS.
2. INSTALL THE CLASS B OR CLASS I RIPRAP IN A SEMI-CIRCLE AROUND THE INLET.
3. A 1 FOOT THICK LAYER OF NCDOT #5 OR #57 STONE SHOULD BE PLACED ON THE OUTSIDE SLOPE OF THE RIPRAP.
4. SEDIMENT STORAGE AREA SHOULD BE EXCAVATED AROUND THE OUTSIDE OF THE STONE HORSESHOE 18" BELOW NATURAL GRADE.
5. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, FILL DEPRESSION AND ESTABLISH FINAL GRADING ELEVATIONS, COMPACT, AND STABILIZE WITH GROUND COVER.

NTS

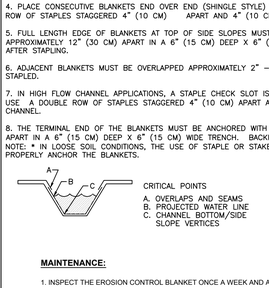
3 ROCK PIPE INLET PROTECTION

GROUND STABILIZATION CHART

SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)

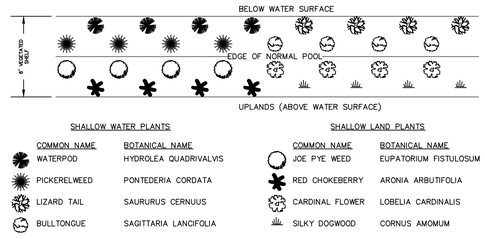
NTS

4 GROUND STABILIZATION CHART



NTS

5 ANTI-SEEP COLLAR



SHALLOW WATER PLANTS

COMMON NAME	BOTANICAL NAME
WATERPOD	HYDROLEA QUADRIVALVIS
PICKERELWEED	PONTEDERIA CORDATA
LIZARD TAIL	SAURURUS CERNUUS
BULLTONGUE	SAGITTARIA LANCIFOLIA
* BLUE FLAG IRIS	IRIS VIRGINICA

SHALLOW LAND PLANTS

COMMON NAME	BOTANICAL NAME
JOE PYE WEED	EUPATORIUM FISTULOSUM
RED CHOKEBERRY	ARONIA ARBUTIFOLIA
CARDINAL FLOWER	LOBELIA CARDINALIS
SILKY DOGWOOD	CORNUS AMOMUM
* SWAMP MILKWEED	ASCLEPIAS INCARNATA

* ALTERNATE PLANTS

NOTES

1. MAXIMUM PLANT SPACING SHALL BE PER THE CHART SHOWN.
2. PLANTS CAN AND SHOULD BE MIXED MATCHED DURING THE PLANTING PROCESS.
3. SHALLOW LAND PLANTS AND SHALLOW WATER PLANTS CANNOT BE MIXED TOGETHER.
4. SOIL SAMPLE SHOULD BE TAKEN PRIOR TO SAMPLING AND FERTILIZE AT RECOMMENDATION FROM SOILS ANALYSIS.
5. ALL SLOPES AND AREAS ADJACENT TO THE WET POND SHALL BE SEEDED WITH BERMUDA GRASS FOR A PERMANENT GROUNDCOVER.
6. ALL INSTALLATIONS SHALL BE FROM A QUALIFIED PROFESSIONAL.

COMMON NAME	SIZE	SPACING
WATERPOD	4 IN CONTAINER	24" O.C. MAXIMUM
PICKERELWEED	4 IN CONTAINER	24" O.C. MAXIMUM
LIZARD TAIL	4 IN CONTAINER	24" O.C. MAXIMUM
BULLTONGUE	4 IN CONTAINER	24" O.C. MAXIMUM
BLUE FLAG IRIS	4 IN CONTAINER	24" O.C. MAXIMUM
JOE PYE WEED	4 IN CONTAINER	18" O.C. MAXIMUM
RED CHOKEBERRY	1 GAL CONTAINER	48" O.C. MAXIMUM
CARDINAL FLOWER	1 GAL CONTAINER	48" O.C. MAXIMUM
SILKY DOGWOOD	1 GAL CONTAINER	48" O.C. MAXIMUM
SWAMP MILKWEED	4 IN CONTAINER	18" O.C. MAXIMUM

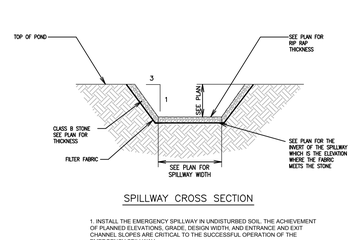
PLANT SUPPLIERS

CAROLINA GREENERY, WEST END, NC 910-947-3150
MELLOW MARSH FARM, PITTSBORO, NC 919-742-1200
PLANT DELIGHTS NURSERY, RALEIGH, NC 919-772-4794
OLL IDE NATIVE PLANT NURSERY, RALEIGH, NC 877-479-2673

**VEGETATED SHELF AND SLOPES ABOVE THE PERMANENT POOL ELEVATION SHALL HAVE A MINIMUM OF 6" TOPSOIL. SUBGRADE SHALL BE ADJUSTED TO ACCOUNT FOR ADDITION OF TOPSOIL IN THESE AREAS SUCH THAT THE ELEVATIONS SHOWN ABOVE ARE TO THE FINISHED GRADE OF THE TOPSOIL.

NTS

6 VEGETATED SHELF PLANTING DETAIL

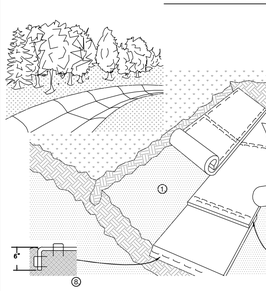


SPILLWAY CROSS SECTION

1. INSTALL THE EMERGENCY SPILLWAY IN UNDISTURBED SOIL. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE EMERGENCY SPILLWAY.
2. ALTERNATIVE MATERIALS MAY BE USED OTHER THAN THE SPECIFIED STONE IF APPROVED BY THE DESIGN ENGINEER.
3. MAX SIDE SLOPES ARE 3:1

NTS

7 EMERGENCY SPILLWAY



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE BLANKET.

3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4" - 6" (10 CM -15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE BLANKETS.

5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (5 CM -12.5 CM) (DEPENDING ON BLANKET TYPE) AND STAPLED.

7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.

8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
NOTE: * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

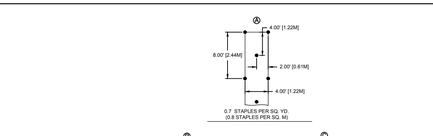
** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

MAINTENANCE:

1. INSPECT THE EROSION CONTROL BLANKET ONCE A WEEK AND AFTER EVERY RAINFALL.
2. IMMEDIATELY REPAIR AND/OR REPLACE ANY DAMAGED BLANKET.
3. IF GROUND COVER IS NOT ESTABLISHED THROUGH THE BLANKET WITHIN 2 WEEKS, THE BLANKET SHOULD BE REMOVED AND THE AREA RESEEDED. AFTER RESEEDING, THE BLANKET SHOULD BE REINSTALLED.

NTS

8 EROSION CONTROL BLANKET INSTALLATION



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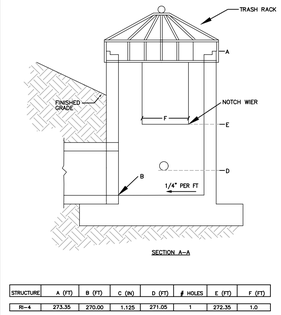
9 STAPLE PATTERN FOR 4' ROLLS



STRUCTURE	A (FT)	B (FT)	C (IN)	D (FT)	# HOLES	E (FT)	F (FT)
R--4	273.35	270.00	1.125	271.05	1	272.35	1.0

NOTES

1. OUTSIDE RISER DIMENSIONS: L=4', W=3'
INSIDE RISER DIMENSIONS: L=3', W=2'

NTS

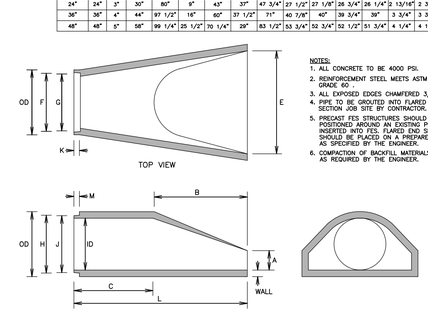
10 STORM BASIN RISER WITH ORIFICE DETAIL

GABION INSPECTION AND MAINTENANCE

GABIONS REQUIRE LITTLE MAINTENANCE. GABIONS CAN REMAIN AS PERMANENT STRUCTURES AFTER CONSTRUCTION PHASES ARE COMPLETE.
- INSPECT REGULARLY AND AFTER STORM EVENTS
- INSPECT FOR UNDERCUTTING AND OTHER SIGNS OF STABILITY
- INSPECT WIRE BASKETS AND MATTRESSES FOR SIGNS OF DEGRADATION, RUST AND BREAKAGE
- REPAIR OR REPLACE IMMEDIATELY TO MAINTAIN ENGINEERED PERFORMANCE STANDARDS.

NTS

11 GABION BAFFLE



NOTES:
1. ALL CONCRETE TO BE 4000 PSI.
2. REINFORCEMENT STEEL MEETS ASTM 615 GRADE 60.
3. ALL EXPOSED EDGES CHAMFERED 3/4"
4. PIPE TO BE GROUTED INTO FLARED END SECTION JOB SITE BY CONTRACTOR.
5. PRECAST FES STRUCTURES SHOULD BE POSITIONED AROUND AN EXISTING PIPE OR PIPE INSERTED INTO FES. FLARED END SECTIONS SHOULD BE PLACED ON A PREPARED FOUNDATION AS SPECIFIED BY THE ENGINEER.
6. COMPACTION OF BACKFILL MATERIALS SHALL BE AS REQUIRED BY THE ENGINEER.

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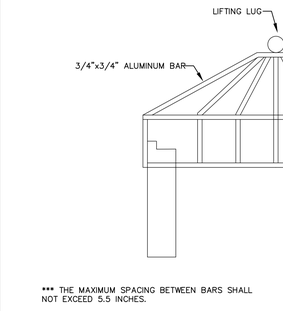
12 FLARED END SECTION



*** THE MAXIMUM SPACING BETWEEN BARS SHALL NOT EXCEED 5.5 INCHES.

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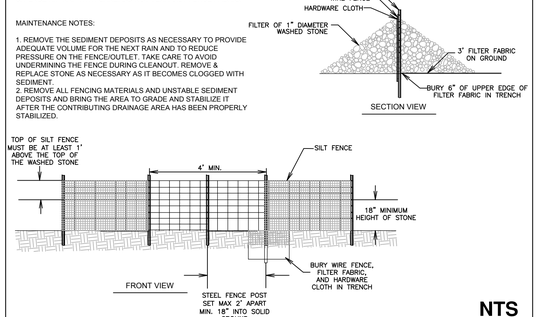
13 TRASH RACK

NOTES:

1. INSTALL SILT FENCE PER STD. SILT FENCE DETAIL.
2. LOCATE REINFORCED OUTLET AT LOW POINTS OF SILT FENCE BARRIER.
3. PLACE RIP RAP WITH CARE. DO NOT TEAR SILT FENCE FABRIC.

MAINTENANCE NOTES:

1. REMOVE THE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE/OUTLET. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE & REPLACE STONE AS NECESSARY AS IT BECOMES CLOGGED WITH SEDIMENT.
2. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



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14 SILT FENCE OUTLET

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 licenses number | C-2354
www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL 027262 ENGINEER SCOTT BROWN
04.22.21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

EROSION CONTROL DETAILS

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

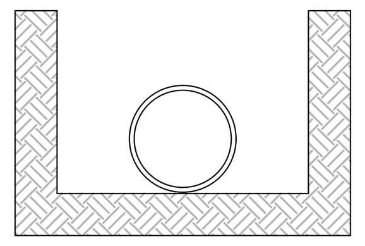
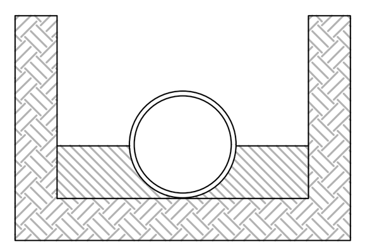
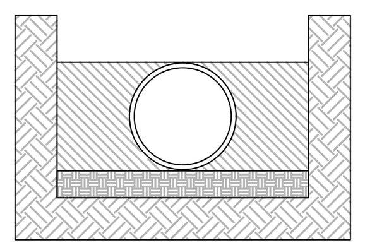
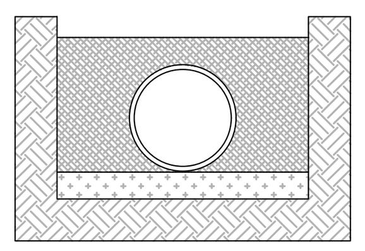
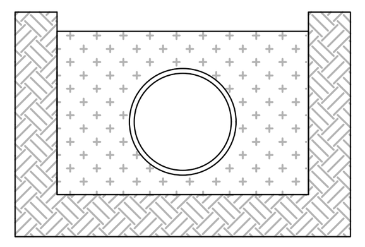
NOT TO SCALE

DATE RELEASED

APRIL 22, 2021

SHEET NUMBER

C-6.2

LAYING CONDITIONS	DESCRIPTION	PROJECT USE
 TYPE 1	FLAT BOTTOM UNDISTURBED EARTH TRENCH, LOOSE BACKFILL	NOT USED.
 TYPE 2	FLAT BOTTOMED UNDISTURBED EARTH TRENCH. BACKFILL LIGHTLY CONSOLIDATED TO CENTERLINE OF PIPE.	NOT USED.
 TYPE 3	PIPE BEDDED IN 4" MININUM JOB EXCAVATED MATERIAL. BACKFILL LIGHTLY CONSOLIDATED TO TOP OF PIPE.	ALL DUCTILE IRON GRAVITY SEWER LINE.
 TYPE 4	PIPE BEDDED IN SAND, GRANULAR MATERIAL OR GRADED GRAVEL TO THE DEPTH OF 1/8 PIPE DIAMETER, 4" MIN. JOB EXCAVATED MATERIAL COMPACTED TO 4" ABOVE TOP OF PIPE. (APPROX. 95% STANDARD PROCTOR, AASHTO T-99)	ALL PVC WATER LINE AND PVC FORCE MAIN.
 TYPE 5	PIPE BEDDED TO ITS CENTERLINE IN COMPACTED GRANULAR MATERIAL 4" MIN. UNDER PIPE. COMPACTED GRANULAR OR SAND MATERIAL TO 4"ABOVE TOP OF PIPE. (APPROX. 95% STANDARD PROCTOR, AASHTO T-99)	ALL PVC GRAVITY SEWER LINE.

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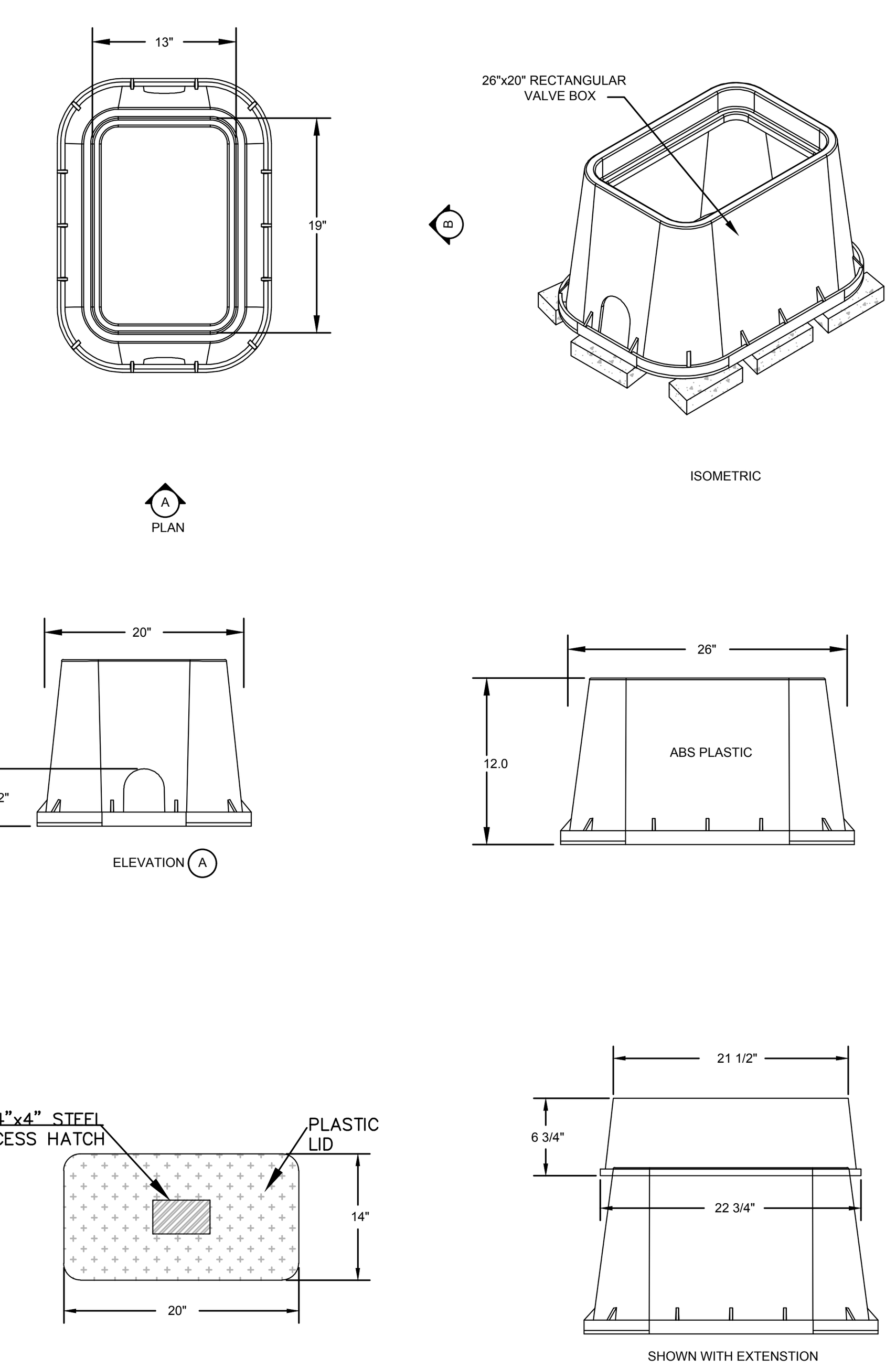
TYPICAL LAYING CONDITIONS



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METER BOX DETAIL FOR 1" SERVICE

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

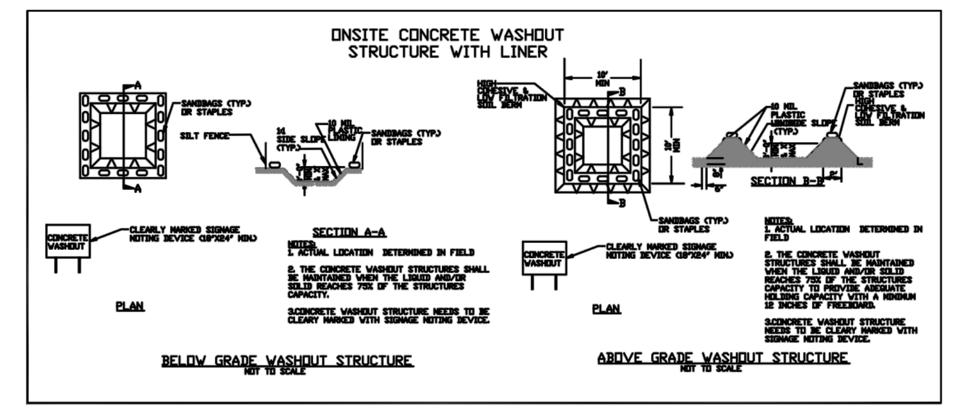
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

NORTH CAROLINA *Environmental Quality*



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(a) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(b) Anticipated bypasses and unanticipated bypasses.

(c) Noncompliance with the conditions of this permit that may endanger health or the environment.

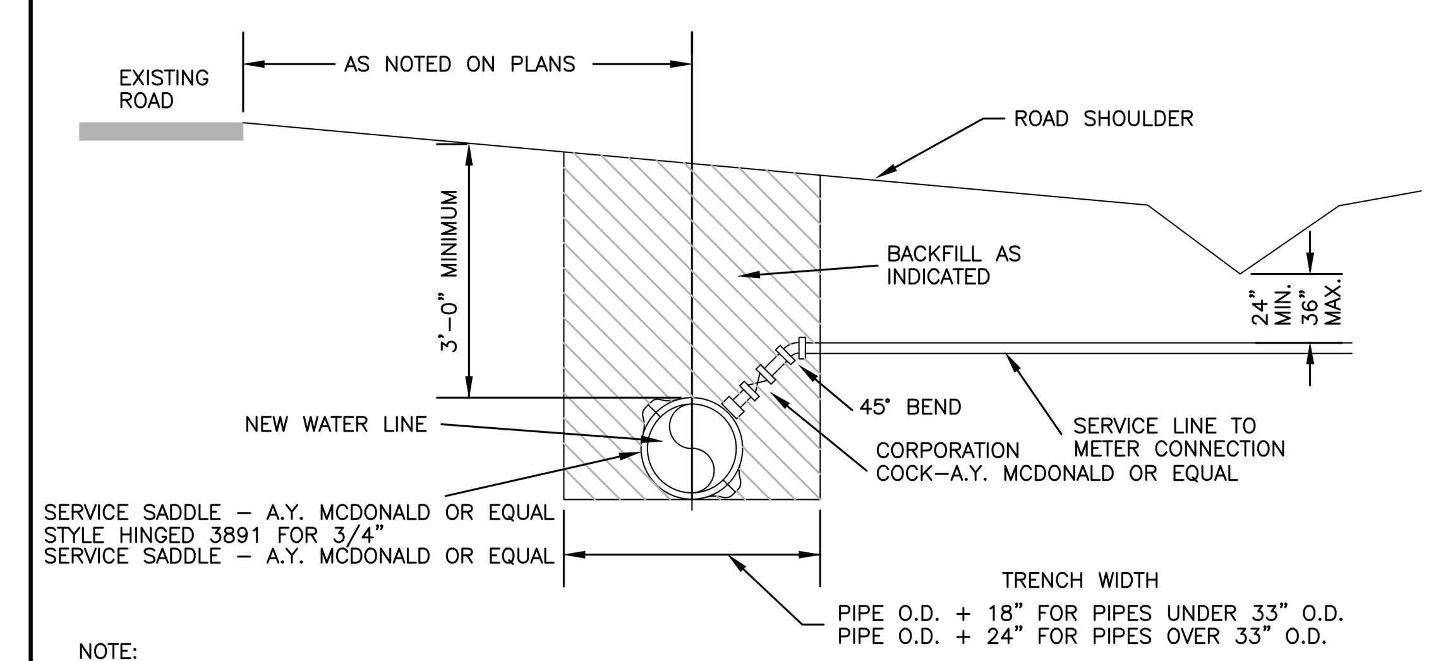
2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NORTH CAROLINA *Environmental Quality*

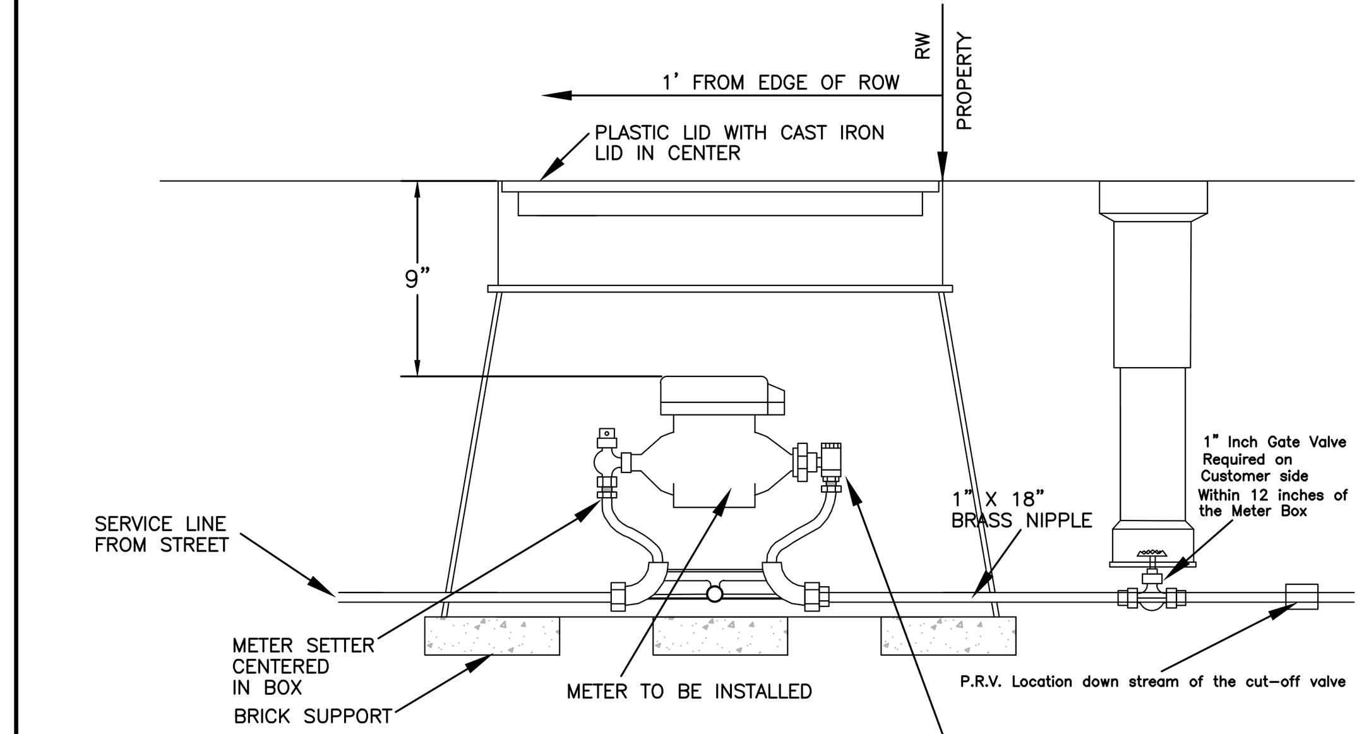
NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19



NOTE:
1. "SERVICE CONNECTION" IN PROPOSAL TO INCLUDE SERVICE SADDLE, 45° BEND, CORPORATION COCK AND ALL LABOR INVOLVED IN MAKING A COMPLETE SERVICE CONNECTION.
2. SERVICE PIPING TO BE 3/4" SDR-9 PE TUBING
3. ALL BRASS FITTINGS SHALL BE COMPRESSION TYPE

NTS

TYPICAL WATER SERVICE CONNECTION



1. METER AND SERVICE LINE NOT IN CONTRACT UNLESS SPECIFIED
2. INCLUDE STONE IN PRICE OF METER BOX.
3. METER SETTER SIZE AS NOTED ON PLANS.
4. ALL BRASS FITTINGS SHALL BE COMPRESSION TYPE.

NTS

TYPICAL 1" METER BOX INSTALLATION

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 license number | C-2354
www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL 027452 ENGINEER C. SCOTT BROWN
[illegible]
04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

WATER & EROSION CONTROL DETAILS

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

NOT TO SCALE

DATE RELEASED

APRIL 22, 2021

SHEET NUMBER

C-6.3

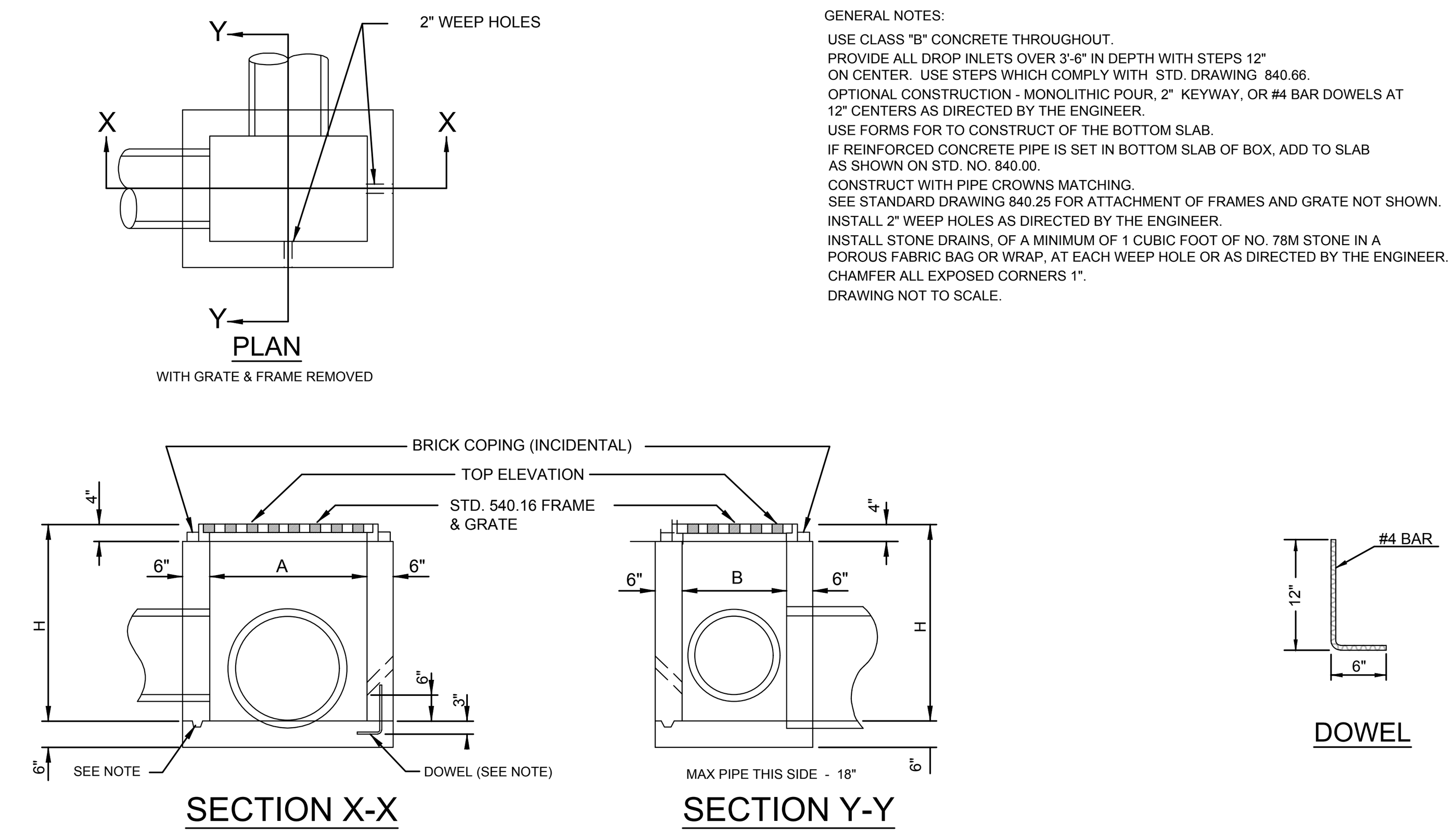
I:\Par5 Development\1644-Spring Lake Ray Rd Dollar General\CIVIL 3D\DWG\1644-DESIGN-SUR.dwg • C6.3 DETAILS • 4.22.2021 12:23:54 PM

CONCRETE DROP INLET — NTS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR CONCRETE DROP INLET 12" THRU 30" PIPE

SHEET 1 OF 1 840.14



GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR TO CONSTRUCT OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
CONSTRUCT WITH PIPE CROWNS MATCHING.
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATE NOT SHOWN.
INSTALL 2" WEEP HOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.

DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)

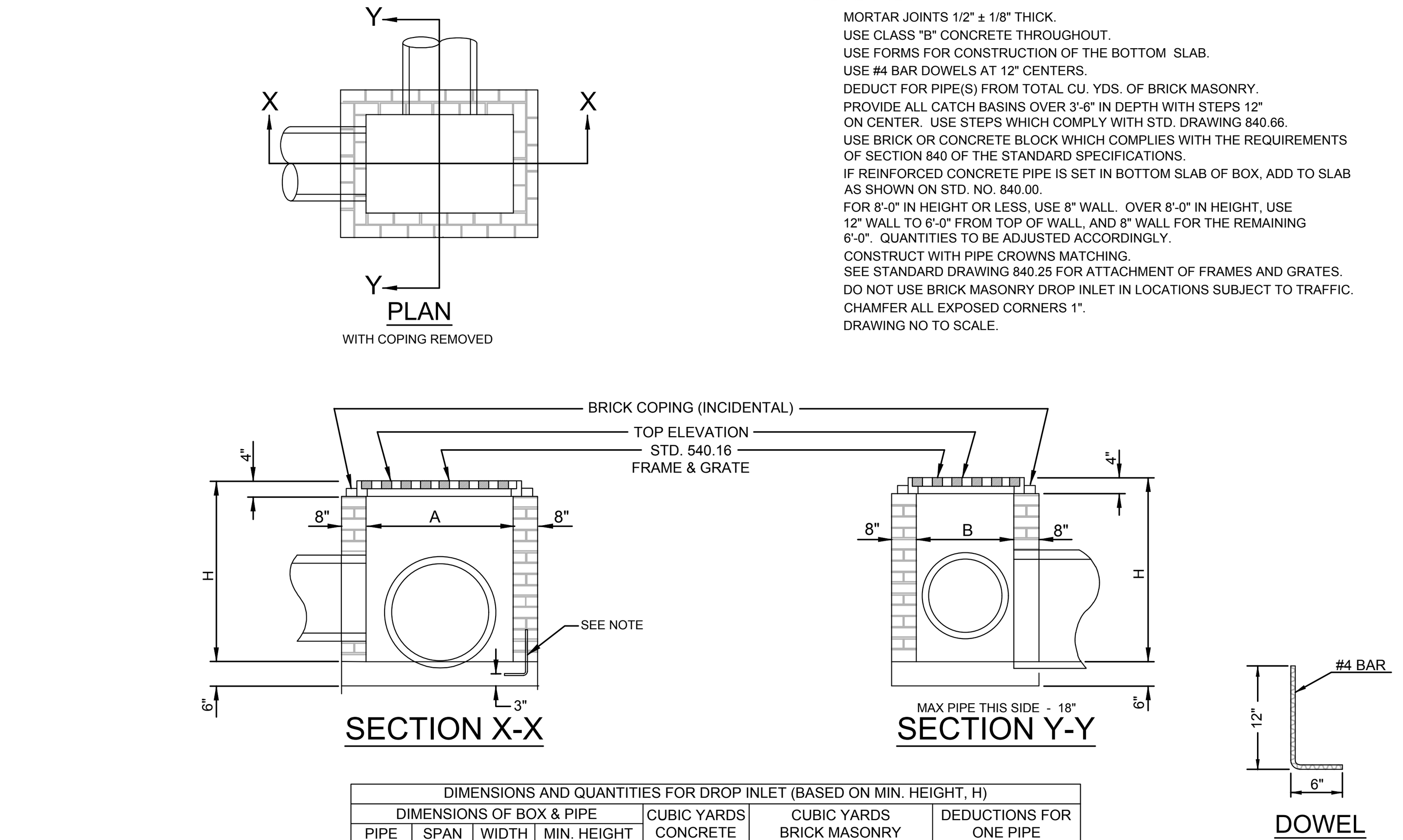
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	MIN. HEIGHT					
D	A	B	H	BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026
15"			2'-3"			0.648	0.023	0.036
18"			2'-6"			0.703	0.033	0.049
24"			3'-0"			0.814	0.059	0.085
30"	3'-0"	2'-0"	2'-6"	0.222	0.222	0.925	0.092	0.127

BRICK DROP INLET — NTS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR BRICK DROP INLET 12" THRU 30" PIPE

SHEET 1 OF 1 840.15



GENERAL NOTES:
MORTAR JOINTS 1/2" ± 1/8" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
USE #4 BAR DOWELS AT 12" CENTERS.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL, AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.
DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NO TO SCALE.

DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)

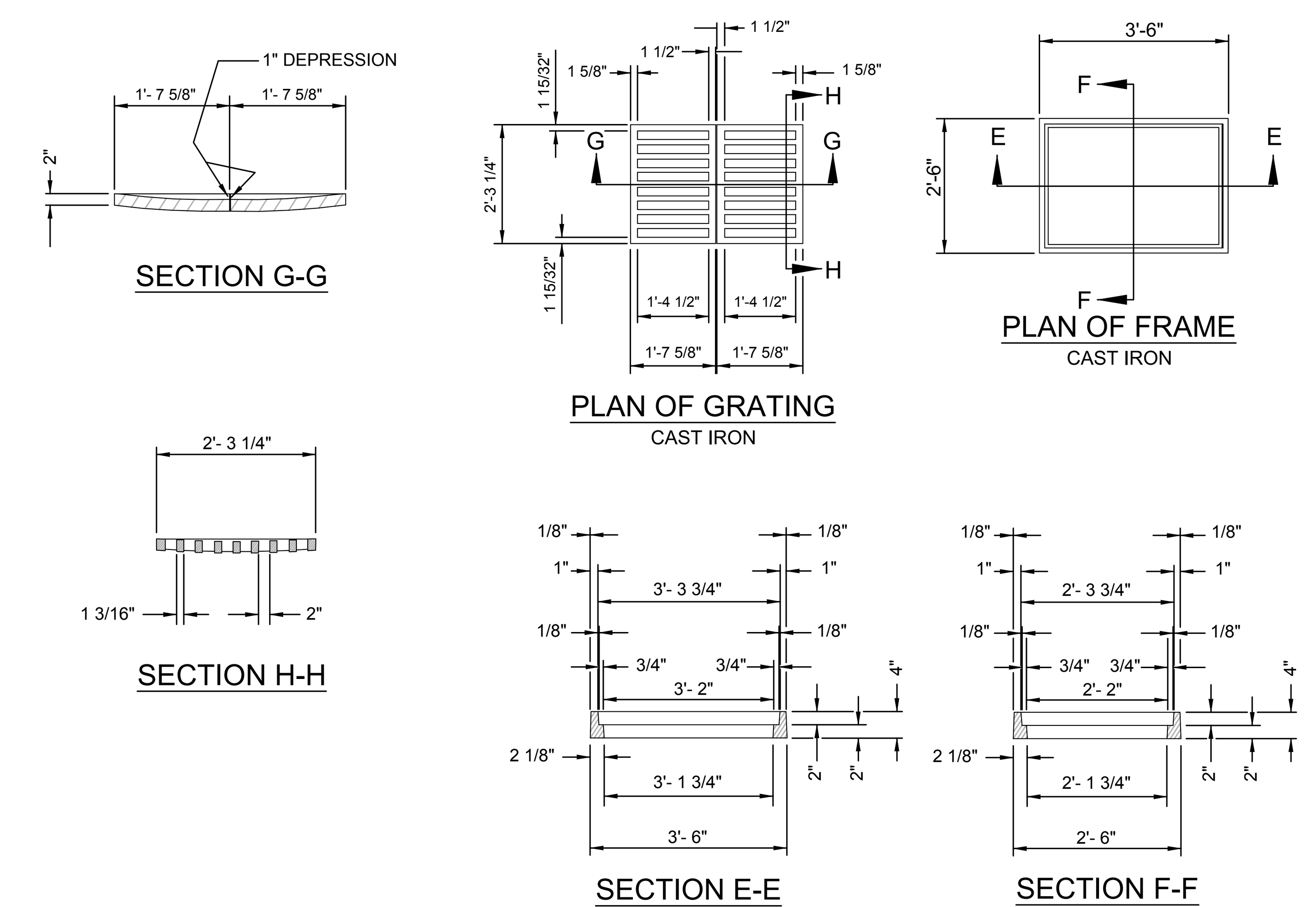
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONCRETE	CUBIC YARDS BRICK MASONRY		DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	MIN. HEIGHT					
D	A	B	H	BOTTOM SLAB	WALL PER FOOT HT.	TOTAL BRICK MASONRY FOR MIN. HEIGHT, H	C.S.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.268	0.313	0.522	0.020	0.032
15"			2'-3"	0.268	0.313	0.600	0.031	0.047
18"			2'-6"	0.268	0.313	0.678	0.044	0.065
24"			3'-0"	0.268	0.313	0.835	0.078	0.113
30"	3'-0"	2'-0"	2'-6"	0.268	0.313	0.991	0.122	0.170

DROP INLET FRAME AND GRATE — NTS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR DROP INLET FRAME AND GRATES FOR USE WITH STD. DWG.S 840.14 AND840.15

SHEET 1 OF 1 840.16



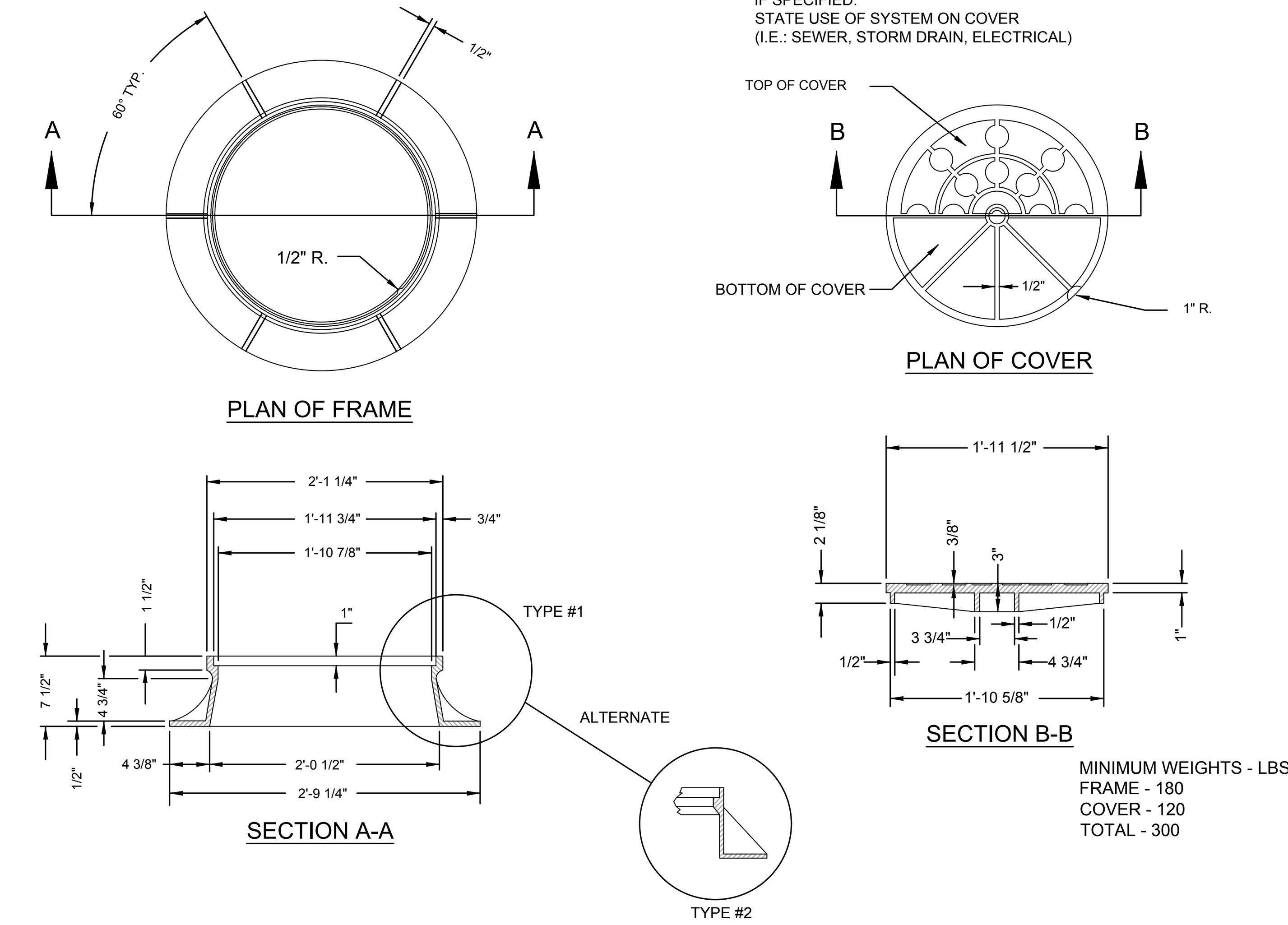
MANHOLE FRAME AND COVER — NTS

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR MANHOLE FRAME AND COVER

SHEET 1 OF 1 840.54

SOLID COVER SHOWN PERFORATED. PERFORATED AVAILABLE IF SPECIFIED.
STATE USE OF SYSTEM ON COVER
(I.E.: SEWER, STORM DRAIN, ELECTRICAL)



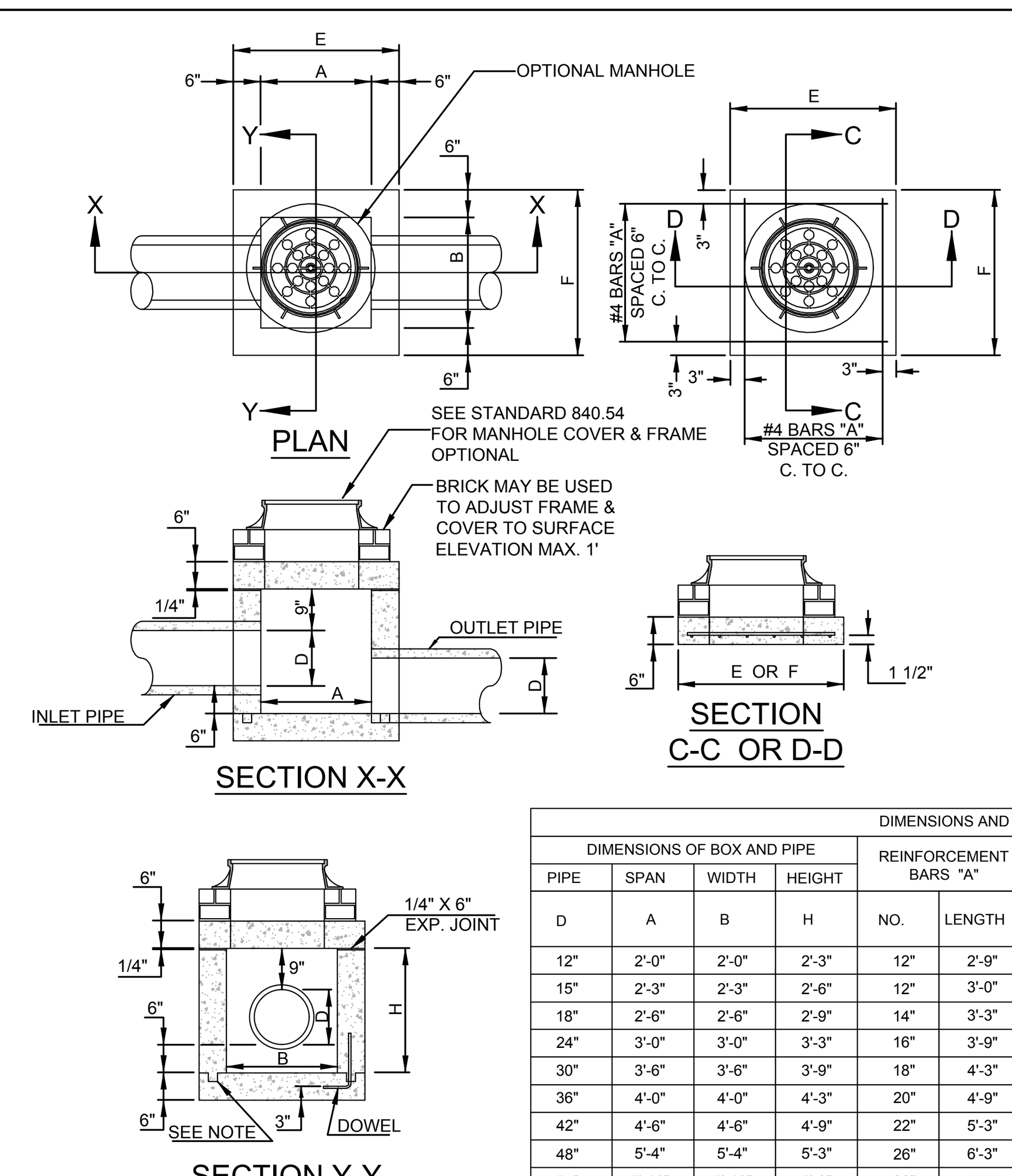
MINIMUM WEIGHTS - LBS.
FRAME - 180
COVER - 120
TOTAL - 300

CONCRETE JUNCTION BOX — NTS

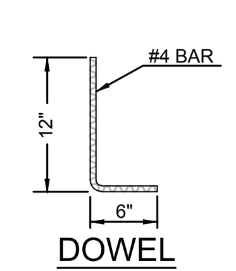
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR CONCRETE JUNCTION BOX (WITH OPTIONAL MANHOLE) 12" THRU 66" PIPE

SHEET 1 OF 1 840.31



GENERAL NOTES:
CHAMFER ALL EXPOSED CORNERS 1".
USE CLASS "B" CONCRETE THROUGHOUT.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.
PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER IN ACCORDANCE WITH STD. NO. 840.66.
ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.



DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES

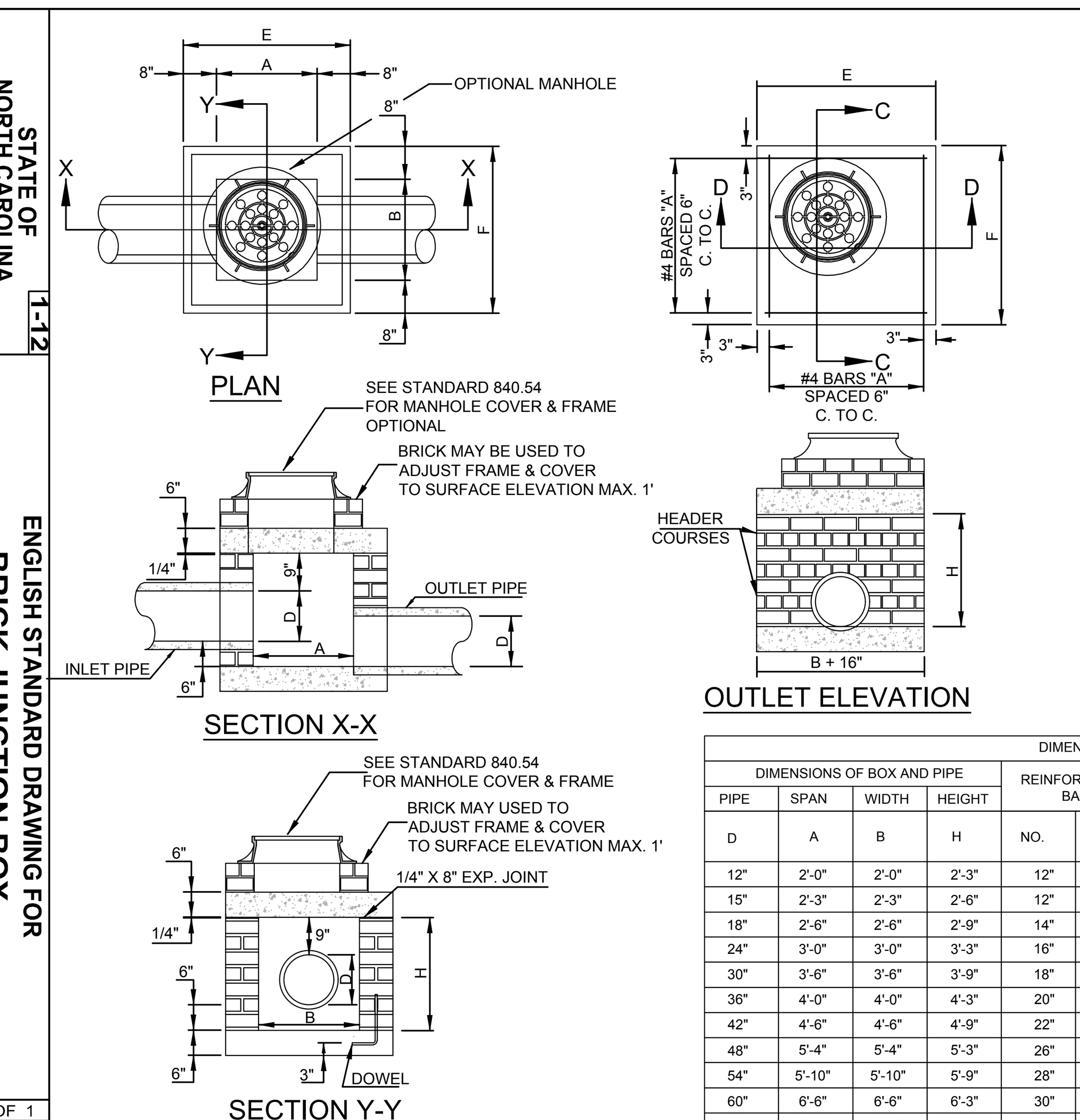
DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS "A"		TOP SLAB DIMENSIONS		CUBIC YARDS IN BOX			TOTAL QUANTITIES BOX AND SLAB		DIMENSIONS FOR ONE PIPE CU. YDS.	
PIPE	SPAN	WIDTH	HEIGHT											
D	A	B	H	NO.	LENGTH	E	F	TOP SLAB	BOTTOM SLAB	WALL/ FT. OF HT.	LBS. REINF	CU. YDS. MIN. "H"	C.S.	R.C.
12"	2'-0"	2'-0"	2'-3"	12"	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024
15"	2'-3"	2'-3"	2'-6"	12"	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.902	0.023	0.036
18"	2'-6"	2'-6"	2'-9"	14"	3'-3"	3'-6"	3'-6"	0.227	0.227	0.222	30	1.065	0.033	0.049
24"	3'-0"	3'-0"	3'-3"	16"	3'-9"	4'-0"	4'-0"	0.296	0.296	0.259	40	1.434	0.059	0.085
30"	3'-6"	3'-6"	3'-9"	18"	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127
36"	4'-0"	4'-0"	4'-3"	20"	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178
42"	4'-6"	4'-6"	4'-9"	22"	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.878	0.180	0.243
48"	5'-4"	5'-4"	5'-3"	26"	6'-3"	6'-4"	6'-4"	0.743	0.743	0.407	111	3.623	0.235	0.317
54"	5'-10"	5'-10"	5'-9"	28"	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.297	0.401
60"	6'-6"	6'-6"	6'-3"	30"	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495
66"	7'-1"	7'-1"	6'-9"	32"	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.589

BRICK JUNCTION BOX — NTS

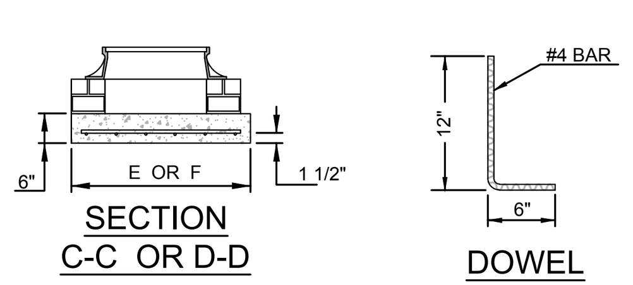
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR BRICK JUNCTION BOX (WITH OPTIONAL MANHOLE) 12" THRU 66" PIPE

SHEET 1 OF 1 840.32



GENERAL NOTES:
CHAMFER ALL EXPOSED CORNERS 1"
USE CLASS "B" CONCRETE THROUGHOUT.
USE #4 BAR DOWELS AT 12" CENTERS.
MORTAR JOINTS 1/2" ± 1/8" THICK.
CONCAVE TOO ALL EXPOSED JOINTS.
USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
JUMBO BRICK WILL BE PERMITTED. CONCRETE BRICK OR 4" SOLID CONCRETE BLOCKS MAY BE USED IN LIEU OF CLAY BRICK.
FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL, AND 8" WALL FOR THE REMAINING 6'-0". ADJUST DIMENSIONS AND QUANTITIES ACCORDINGLY.
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.
PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER IN ACCORDANCE WITH STD. NO. 840.66.
ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.



DIMENSIONS AND QUANTITIES FOR BRICK JUNCTION BOXES

DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS		TOP SLAB DIMENSIONS		CUBIC YARDS			DIMENSIONS FOR ONE PIPE CU. YDS.	
PIPE	SPAN	WIDTH	HEIGHT					CONC.	BRICK MASONRY			
D	A	B	H	NO.	LENGTH	E	F	TOP & BOTTOM CU. YD.	MIN HEIGHT CU. YD.	WALL PER FT. HT. CU. YD.	C.S.	R.C.
12"	2'-0"	2'-0"	2'-3"	12"	3'-1"	3'-4"	3'-4"	0.412	0.591	0.263	0.020	0.032
15"	2'-3"	2'-3"	2'-6"	12"	3'-1"	3'-4"	3'-4"	0.412	0.657	0.263	0.031	0.047
18"	2'-6"	2'-6"	2'-9"	14"	3'-5"	3'-8"	3'-8"	0.498	0.814	0.296	0.044	0.065
24"	3'-0"	3'-0"	3'-3"	16"	4'-1"	4'-4"	4'-4"	0.695	1.176	0.362	0.078	0.113
30"	3'-6"	3'-6"	3'-9"	18"	4'-5"	4'-8"	4'-8"	0.807	1.481	0.395	0.122	0.170
36"	4'-0"	4'-0"	4'-3"	20"	5'-1"	5'-4"	5'-4"	1.053	1.959	0.461	0.176	0.238
42"	4'-6"	4'-6"	4'-9"	22"	5'-9"	6'-0"	6'-0"	1.333	2.503	0.527	0.240	0.323
48"	5'-4"	5'-4"	5'-3"	26"	6'-5"	6'-8"	6'-8"	1.646	2.940	0.560	0.313	0.422
54"	5'-10"	5'-10"	5'-9"	28"	6'-11"	7'-2"	7'-2"	1.902	3.502	0.609	0.396	0.535
60"	6'-6"	6'-6"	6'-3"	30"	7'-7"	7'-10"	7'-10"	2.272	4.113	0.658	0.489	0.660
66"	7'-1"	7'-1"	6'-9"	32"	8'-2"	8'-5"	8'-5"	2.624	4.778	0.708	0.591	0.798

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 license number | C-2354
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NORTH CAROLINA PROFESSIONAL SEAL 027452 ENGINEER C. SCOTT BROWN
[illegible]
04-22-21

REVISIONS

PROJECT NAME

SPRING LAKE RAY ROAD DOLLAR GENERAL

STORM DETAILS

CLIENT

RHETSON COMPANIES, INC

2075 Juniper Lake Road
West End, North Carolina 27376
Phone: (910) 944-0881

PROJECT INFORMATION

DESIGNED BY:	SCOTT
DRAWN BY:	SCOTT
CHECKED BY:	CHRIS
PROJECT NUMBER:	1644

DRAWING SCALE

NOT TO SCALE

DATE RELEASED

APRIL 22, 2021

SHEET NUMBER

C-6.4