SITE DEVELOPMENT PLANS
FOR
NEWTON COUNTY SENIOR ENRICHMENT CENTER

0008-002H
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
ZONING - AR
IN LAND LOTS 20 & 21 OF THE 10TH LAND DISTRICT

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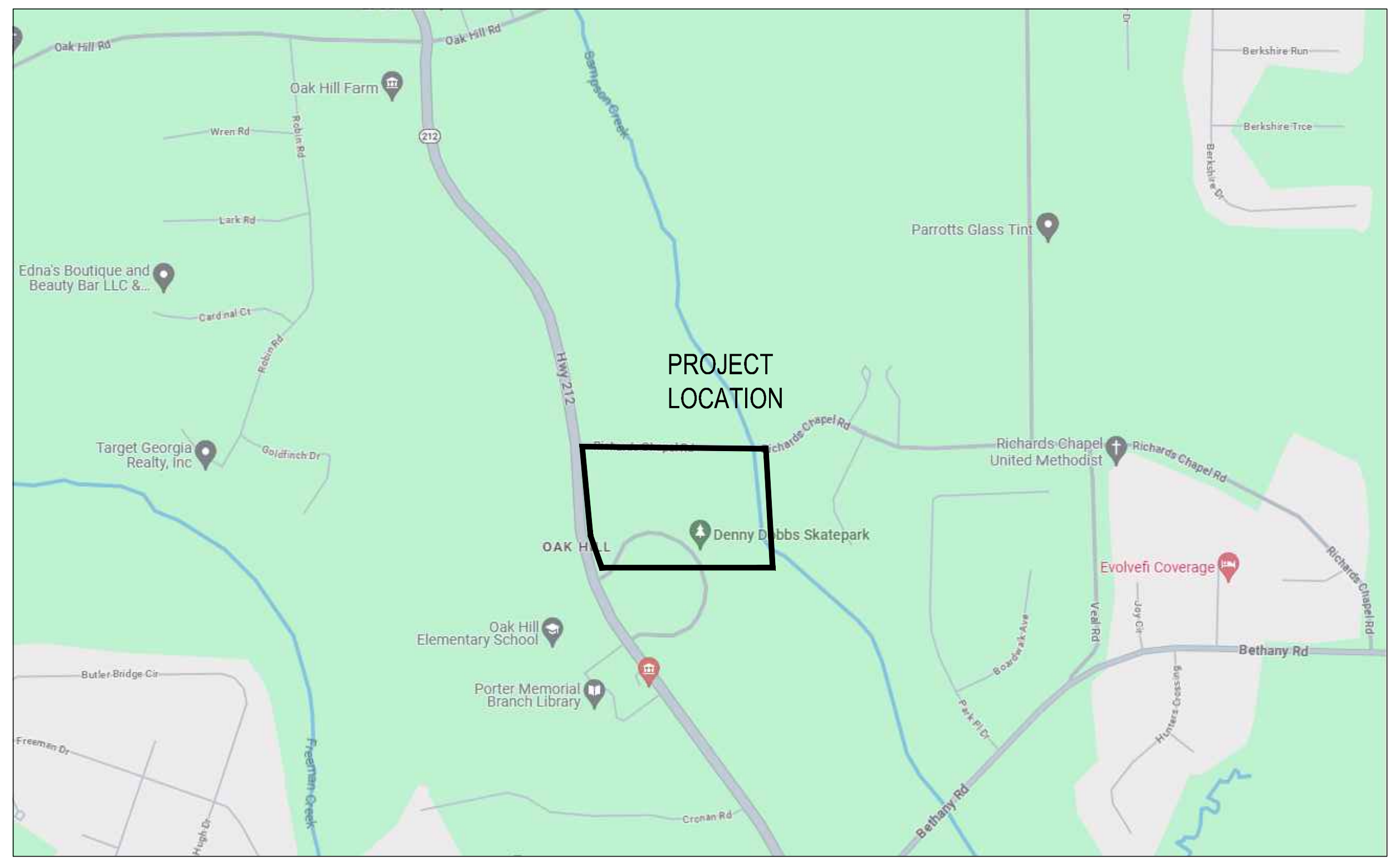
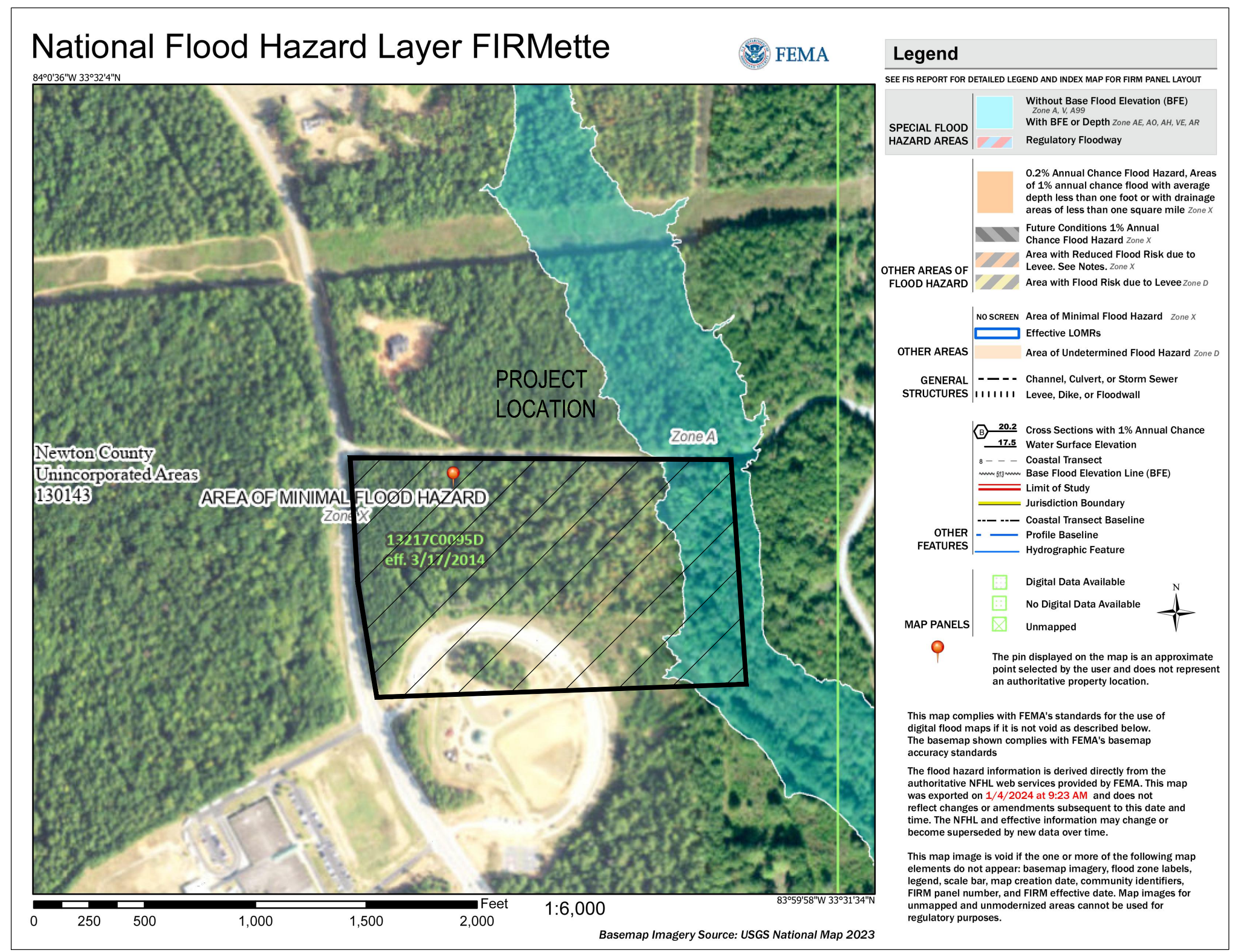
BRAVO SITE SET 09-18-2024



Oak Hill Farms
Edna's Boutique and Beauty Bar LLC
Target Georgia Realty Inc
Parrotts Glass Tint
PROJECT LOCATION
Richards Chapel United Methodist
Denny Dobbs Skatepark
Evolve Coverage
Oak Hill Elementary School
Porter Memorial Branch Library
Bethany Rd

VICINITY MAP
NOT TO SCALE

GPS COORDINATES
N 33°31'50.48"   W -84°0'16.58"
N 33.530691   W -84.004607



National Flood Hazard Layer FIRMette
FEMA
Legend
PROJECT LOCATION
Newton County Unincorporated Areas 130143
AREA OF MINIMAL FLOOD HAZARD
Zone X
Zone A
13217C0095D eff. 3/17/2014
0 250 500 1,000 1,500 2,000 Feet
1:6,000
83°59'58"W 33°31'34"N
Basemap Imagery Source: USGS National Map 2023

FLOOD MAP
NOT TO SCALE

SITE INFORMATION

APPROXIMATELY 2.5 ACRES OF THE TOTAL 27.66 AC SITE WILL BE DEVELOPED FOR A SENIOR ENRICHMENT CENTER INCLUDING ASSOCIATED DRIVES, PARKING, STORMWATER SYSTEM, UTILITIES, AND LANDSCAPING.

ZONING - (AS PER NEWTON COUNTY ZONING)	AR
OVERLAY DISTRICTS	NONE
PROPERTY AREA DISTURBED AREA	27.66 AC 4.70 AC
MINIMUM LOT SIZE	1.0 AC
MINIMUM LOT WIDTH	150'
MINIMUM FRONT SETBACK	60'
MINIMUM SIDE SETBACK	15'
MINIMUM REAR SETBACK	40'
MINIMUM OPEN SPACE	N/A
MAXIMUM IMPERVIOUS %	20%

MISCELLANEOUS INFORMATION

LANDFILLS	NO LANDFILLS EXIST ON THIS SITE
NATURAL & CULTURAL RESOURCES	THERE IS NO CEMETERY, HISTORIC FEATURE, OR ARCHAEOLOGICAL SURVEY ON SITE THE SITE IS NOT LOCATED WITHIN A GROUNDWATER RECHARGE AREA
SIGNAGE	SIGNAGE SHALL BE HANDLED UNDER A SEPARATE PERMIT
SITE LIGHTING	SITE LIGHTING IS NOT A PART OF THE CIVIL PLANS (SITE WORK CONSTRUCTION DRAWINGS). SIGHT LIGHTING PROVIDED BY OTHERS UNDER SEPARATE COVER
SOIL SERIES	AmB- APPLING SANDY LOAM, 2% TO 6% SLOPES AmC- APPLING SANDY LOAM 6% TO 10% SLOPES CCA- CARTECAY AND CHEWACLA SOILS, FREQUENTLY FLOODED CeB- CECIL SANDY LOAM, 2% TO 6% SLOPES PaC- PCOLET SANDY LOAM, 6% TO 10% SLOPES WeD- WEDOWEE SANDY LOAM, 10% TO 15% SLOPES
FLOOD PLAIN	THERE IS A FLOODPLAIN ON THIS PROPERTY AS PER FIRM PANEL 13217C0095D DATED 03/17/2014. NO WORK IS BEING DONE WITHIN A FLOODPLAIN. THE PROPERTY SHOWN HEREON LIES WITHIN ZONE X AND IS WITHIN A SPECIAL FLOOD HAZARD AREA.
STATE WATERS	THERE ARE STATE WATERS PRESENT ON THIS SITE. THERE ARE STATE WATERS PRESENT WITHIN 200' OF THIS SITE THERE ARE STREAM BUFFERS ON THIS PROPERTY
HYDROLOGY	THE PROPOSED SITE DEVELOPMENT CONTAINS (1) OVERALL DETENTION BASIN THAT GENERALLY FLOWS FROM THE NORTHWEST TO SOUTHEAST FROM THE PROPOSED DEVELOPMENT AREA TO AN EXISTING DETENTION POND LOCATED ON THE EAST SIDE OF AN EXISTING SKATE PARK. STORM WATER SYSTEMS AND SWALES WILL CONVEY WATER FROM THE DEVELOPED AREA OF THE SITE TO THE EXISTING POND. THE EXISTING POND IS BEING ENLARGED TO ACCOMMODATE FOR THE ADDITIONAL RUNOFF. A MICROPOOL IS ALSO BEING ADDED TO THE EXISTING POND FOR WATER QUALITY TREATMENT FOR THE NEW DEVELOPMENT IMPERVIOUS AREA. THE POND ADJUSTMENTS WILL REDUCE THE POST DEVELOPMENT PEAK FLOW RATES TO LESS THAN THE PRE DEVELOPMENT PEAK FLOW RATES FOR THE 1-YR THROUGH 100-YR STORM EVENTS FOR THE DELINEATED BASIN. CHANNEL PROTECTION PROVISIONS AND WATER QUALITY PROVISIONS HAVE BEEN PROVIDED WITHIN THE DETENTION BASIN BY MODIFYING THE EXISTING OUTLET CONTROL STRUCTURE.
WETLAND	**THERE ARE NO WETLANDS BEING DISTURBED ON THIS SITE.** THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: 1) THE NATIONAL WETLANDS INVENTORY MAPS HAVE BEEN CONSULTED AND, 2) THE APPROPRIATE PLAN SHEET **DOES NOT** INDICATE WETLANDS AS SHOWN ON THE MAP. AND 3) IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS APPROPRIATE FEDERAL WETLANDS ALTERATION (SECTION 404) PERMIT HAS BEEN OBTAINED. IF WETLANDS ARE IMPACTED BY THIS DEVELOPMENT, A CORPS OF ENGINEERS PERMIT SHALL BE OBTAINED PRIOR TO DISTURBANCE. ONCE ATTAINED, A COPY OF THE WETLAND PERMIT SHALL BE KEPT ON SITE AT ALL TIMES. UPON THE CORPS OF ENGINEERS APPROVAL, A SEPARATE COPY OF THE PERMIT SHALL BE SUBMITTED TO THE LIA.

LEGEND

STANDARD ABBREVIATIONS

APPROX.= APPROXIMATE
BLDG = BUILDING
BM = BENCH MARK
C&G = CURB AND GUTTER
CI = CURB INLET
C.L. = CHAIN LINK
CMP = CORRUGATED METAL PIPE
CO = CLEAN OUT
CPP = CORRUGATED PLASTIC PIPE
CTF = CRIMP TOP FOUND
DB = DEED BOOK
DIA = DIAMETER
DS = DOWNSPOUT
DWCB = DOUBLE WING CATCH BASIN
ES&PC = EROSION, SEDIMENTATION, AND POLLUTION CONTROL
FDC = FIRE DEPARTMENT CONNECTION
FFE = FINISH FLOOR ELEVATION
FH = FIRE HYDRANT
FO = FIBER OPTIC
FT = FEET
GI = GRATE INLET
GM = GAS METER
GP = GUY POLE
GV = GAS VALVE
ICV = IRRIGATION CONTROL VALVE
IE = INVERT ELEVATION
IMP = IMPERVIOUS
IPF = IRON PIN FOUND
JB = JUNCTION BOX
LIA = LOCAL ISSUING AUTHORITY
LP = LIGHT POLE
NTS = NOT TO SCALE
OHE = OVER HEAD POWER
PB = PLAT BOOK
PG = PAGE
℄ = PROPERTY LINE
POB = POINT OF BEGINNING
PP = POWER POLE
PVC = POLYVINYL CHLORIDE PIPE
RBF = REBAR FOUND
RCP = REINFORCED CONCRETE PIPE
R/W = RIGHT OF WAY
SMH = STORM MANHOLE
SS = SANITARY SEWER
SSMH = SANITARY SEWER MANHOLE
SWCB = SINGLE WING CATCH BASIN
TC = TRAFFIC CONTROL BOX
TMP = TAX MAP PARCEL
W = WATER
WM = WATER METER
WV = WATER VALVE

STANDARD SYMBOLS

◐ = BM
Ⓐ = BM IDENTIFICATION
⊡ = CO
⊠ = DS
⊕ = FDC
—X——X— = FENCE
⊙ = FH
-FO—FO- = FO
-GAS—GAS- = GAS LINE
(GM) = GAS METER
⋈ = GAS VALVE
—□—□— = GATE
⊘ = GP
——(= GUY WIRE
♿ = H/C PARKING
⊗ = ICV
● = IPF
(LB) = LIGHT BOX
☼ = LP
-OHE—OHE- = POWER (OVERHEAD)
—P——P— = POWER (UNDERGROUND)
(PB) = POWER BOX
(PM) = POWER METER
⌀ = PP
—o— = SIGN
◎ = SMH
-SS—SS- = SS LINE
Ⓢ = SSMH
(TC) = TC
⊠ = TELECOMM STRUCTURE
(TP) = TELE PEDESTAL
—w——w— = TRAFFIC WIRE
⧓ = TRANSFORMER
—W——W— = WATER LINE
(WM) = WM
⋈ = WV

CONSTRUCTION SEQUENCE SCHEDULE

LAND DISTURBING ACTIVITY SHALL NOT COMMENCE PRIOR TO A PRECONSTRUCTION MEETING WITH THE LOCAL ISSUING AUTHORITY.

MONTH 1 | MONTH 2 | MONTH 3 | MONTH 4 | MONTH 5 | MONTH 6 | MONTH 7

NOTIFY INSPECTOR 24 HOURS PRIOR TO CONSTRUCTION:

SITE WORK WILL BE COMPLETED AND PAVEMENT BINDER INSTALLED
BUILDING CONSTRUCTION CONTINUES, TOP COAT ASPHALT AT END

BMP'S	ACTIVITY
INITIAL	PRECONSTRUCTION MEETING WITH LOCAL ISSUING AUTHORITY
	PERFORM INITIAL MONITORING
	INSTALL CONSTRUCTION EXIT
	INSTALL INITIAL SILT FENCE (PERIMETER SILT FENCE LOCATIONS FIRST)
	PROVIDE ANY INITIAL MULCHING, GRASSING, OR OTHER GROUND COVER
	INSTALL TOPSOIL LOCATION SILT FENCE
	BEGIN CLEARING, GRUBBING, TOPSOILING, AND GRADING OPERATIONS WITHIN LIMITS OF DETENTION POND
	INSTALL EXISTING DETENTION BASIN
	INSTALL APPROPRIATE VEGETATIVE AND STRUCTURAL BMP'S (INLET / OUTLET PROTECTION, Fl-Co, ETC.)
	INSTALL WHEEL WASH AND FUEL STORAGE LOCATION
	COORDINATE SITE REVIEW MEETING WITH ENGINEER AND LOCAL ISSUING AUTHORITY
INTERMEDIATE	INSTALL STORM PIPE SYSTEMS WITH PROTECTED INLETS (SD2'S)
	THROUGHOUT LAND DISTURBANCE PROCESS, MAINTAIN EX. BMP'S (VEGETATIVE AND STRUCTURAL)
	THROUGHOUT LAND DISTURBANCE PROCESS, CONTINUE NPDES MONITORING AND REPORTING
	COORDINATE WITH UTILITY COMPANIES ON UTILITY / SLEEVE LOCATIONS
	BEGIN REMAINING CLEARING, GRUBBING, TOPSOILING, AND GRADING OPERATIONS
	INSTALL TOPSOIL AT STOCKPILE LOCATION, IMMEDIATELY GRASS / MULCH, INSTALL ANY REMAINING TOPSOIL LOCATION SILT FENCE
	PERFORM REMAINING GRADING (ADJUST STORM RISERS WITH GRADE CHANGE(S) AND ADJUST ALL SD2'S)
	AS AREAS ARE BROUGHT TO FINISH GRADE, GRASS / BLANKET ANY AREAS THAT ARE FINISH GRADE OR THAT WILL BE LEFT BARE FOR 7 DAYS
	EACH FILL SLOPE SHALL HAVE A DIVERSION AT THE TOP THAT IS MAINTAINED AND REINSTALLED AS THE SLOPE IS CONSTRUCTED
	CONTINUE FLOCCULANT / COAGULANT APPLICATIONS (EVERY 7 DAYS THROUGHOUT PROJECT)
	INSTALL REMAINING STORM SYSTEM(S) AS GRADES ARE ACHIEVED
	IMMEDIATELY INSTALL EACH STORM STRUCTURE WITH ASSOCIATED SD2'S AND ADD FLOC LOGS TO EACH STORM STRUCTURE
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL SANITARY SEWER MAINS AND SERVICES
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL WATER SYSTEM
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL REMAINING UTILITIES (POWER, PHONE, CABLE, GAS, ETC.) WITH APPROPRIATE BMP'S
	INSTALL GAB THROUGHOUT PARKING AREA UP TO DESIGNATED LINE
	INSTALL REMAINING GAB
	BUILDING CONSTRUCTION
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL CURB AND GUTTER
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL PAVEMENT
	FINISH GRADE SHOULDERS AND STABILIZE DISTURBED AREAS WITH PERMANENT VEGETATION
	CONTINUE TO APPLY FLOCCULENT / COAGULANT APPLICATIONS, MULCHING, AND GRASSING AT EACH STEP TO LIMIT SOIL EXPOSURE
FINAL	THROUGHOUT LAND DISTURBANCE PROCESS, MAINTAIN EX. BMP'S (VEGETATIVE AND STRUCTURAL)
	THROUGHOUT LAND DISTURBANCE PROCESS, CONTINUE NPDES MONITORING AND REPORTING
	COMPLETE PAVING OPERATIONS
	ACHIEVE FINAL SITE STABILIZATION
	COORDINATE SITE REVIEW MEETING WITH ENGINEER AND/OR LOCAL ISSUING AUTHORITY INSPECTOR
	CLEAN SILT FROM ALL STORM SYSTEMS (DISTRIBUTE ON SITE AND STABILIZE)
	REMOVE ANY TEMPORARY BMP PRACTICES ONCE SITE STABILIZATION IS ACHIEVED AND SIGNED OFF BY ENGINEER
	COORDINATE SITE REVIEW MEETING WITH ENGINEER FOR FINAL SITE APPROVAL

OWNER/DEVELOPER
COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

CONTRACTOR
COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA 30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
EMAIL: MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104

JASON P. BROWN
LEVEL II CERTIFIED DESIGN PROFESSIONAL
#53274 - EXP. 05.01.2026

24-HOUR CONTACT
MIKE MCCROREY
404.644.2939

GEORGIA811
www.Georgia811.com
Contact 811 before you dig

Utilities/Services shown are for Contractors' convenience. Items are shown schematically and neither the site design professional nor the owner assumes any responsibility for variances in their actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to secure and use the services of a private utility locator firm during the entire course of work and shall pay for said services. Contractor shall locate utilities prior to any disturbance (including field verifying location and depth of utilities that are to be saved and protected). Contractor shall notify the site design professional of any utility conflicts prior to installation of new utilities, grading, etc. The Contractor, at their expense, shall be responsible to repair, replace and/or relocate, as necessary, any utilities damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

gc
georgia civil
CIVIL ENGINEERING
LAND PLANNING
LAND SURVEYING
311 N. Main St, Ste. 101, Unit C
P.O. Box 896 | Madison, GA 30650
P: 706.342.1104 | F: 706.342.1105
www.georgiacivil.com

Professional Seal

JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR ENRICHMENT CENTER
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

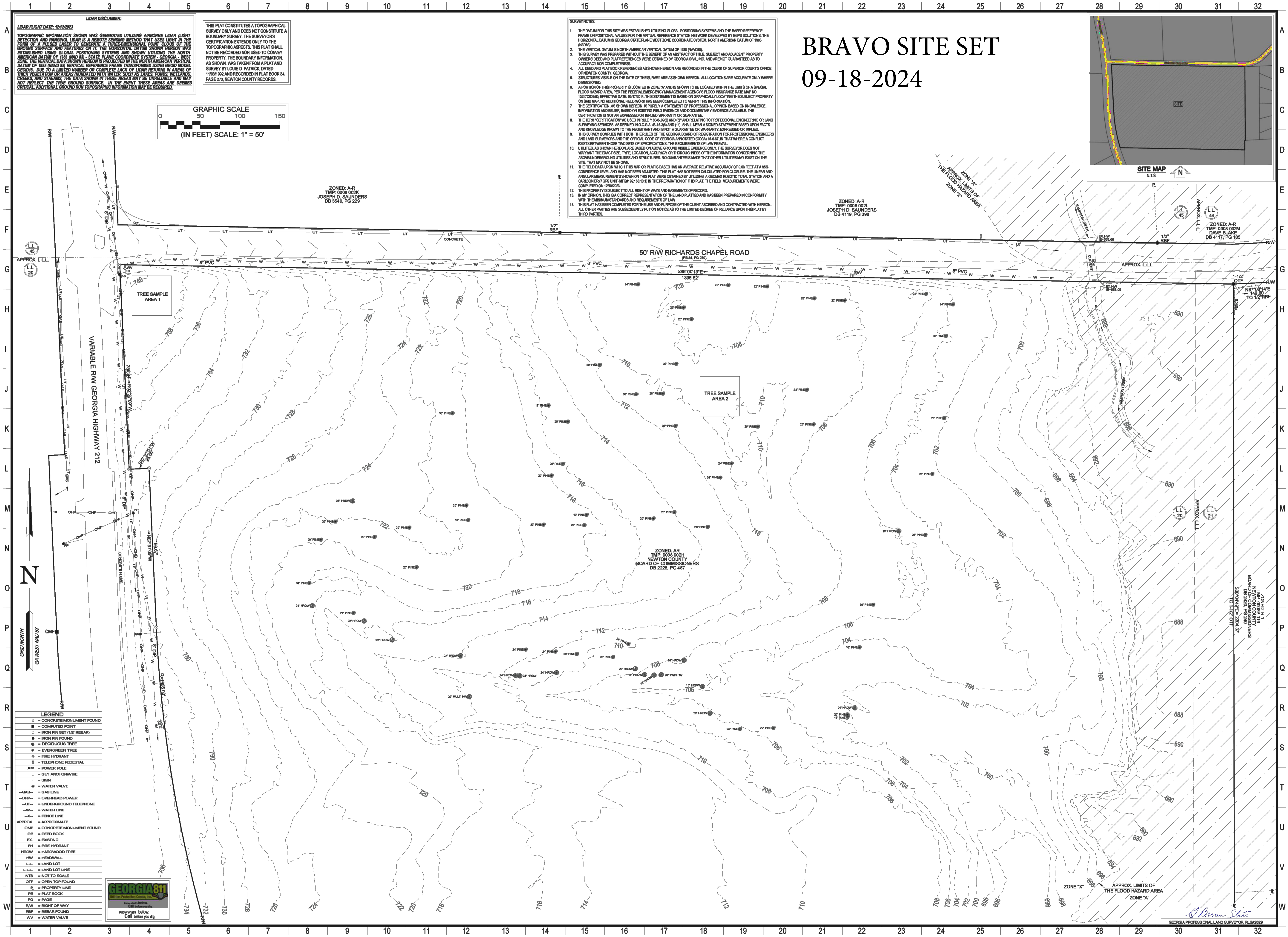
Sheet Title

COVER SHEET

Sheet Number

CV-1.0

BRAVO SITE SET
09-18-2024


SITE MAP
N.T.S.
SITE
N
ZONED: A-R
TMP: 0008 002K
JOSEPH D. SAUNDERS
DB 3540, PG 229
ZONED: A-R
TMP: 0008 002L
JOSEPH D. SAUNDERS
DB 4119, PG 398
ZONED: A-R
TMP: 0008 002M
DAVE BLAKE
DB 4117, PG 105
ZONED: AR
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2228, PG 487
ZONED: R-1
TMP: 0008B 019
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2420, PG 240
50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
VARIABLE R/W GEORGIA HIGHWAY 212
S89°00'13"E 1366.62'
N02°37'09"W 256.94'
S87°22'51"W 25.00'
N02°37'09"W 199.67'
R=1655.00'
N87°08'14"E 149.60' TO 1/2"RBF
S00°04'49"E 2204.37' TO 1-1/2" OTF
1/2" RBF
1-1/2" OTF
CMF
TREE SAMPLE AREA 1
TREE SAMPLE AREA 2
SAMPSON CREEK
BOX CULVERT
EX.HW IE=688.66
EX.HW IE=688.09
CONCRETE
CONCRETE FLUME
8" PVC
8" DIP
APPROX. L.L.L.
L.L. 45
L.L. 20
L.L. 44
L.L. 21
ZONE "A"
APPROX. LIMITS OF THE FLOOD HAZARD AREA
ZONE "X"
FENCE
GRID NORTH
GA WEST NAD 83
N
GEORGIA PROFESSIONAL LAND SURVEYOR, RLS#2629

LIDAR DISCLAIMER:

LIDAR FLIGHT DATE: 12/12/2023

TOPOGRAPHIC INFORMATION SHOWN WAS GENERATED UTILIZING AIRBORNE LIDAR (LIGHT DETECTION AND RANGING). LIDAR IS A REMOTE SENSING METHOD THAT USES LIGHT IN THE FORM OF A PULSED LASER TO GENERATE A THREE-DIMENSIONAL POINT CLOUD OF THE GROUND SURFACE AND FEATURES ON IT. THE HORIZONTAL DATUM SHOWN HEREON WAS ESTABLISHED USING GLOBAL POSITIONING SYSTEMS AND SHOWN UTILIZING THE NORTH AMERICAN DATUM OF 1983 (NAD 83) - STATE PLANE COORDINATE SYSTEM - GEORGIA - WEST ZONE. THE VERTICAL DATA SHOWN HEREON IS PROJECTED IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) VERTICAL REFERENCE FRAME TRANSFORMED USING GEOID MODEL GEOID18. DUE TO A LIMITED NUMBER OR COMPLETE LACK OF LIDAR RETURNS IN AREAS OF THICK VEGETATION OR AREAS INUNDATED WITH WATER, SUCH AS LAKES, PONDS, WETLANDS, CREEKS, AND STREAMS, THE DATA SHOWN IN THESE AREAS MAY BE UNRELIABLE AND MAY NOT REFLECT THE TRUE GROUND SURFACE. IN THE EVENT THESE AREAS ARE DEEMED CRITICAL, ADDITIONAL GROUND RUN TOPOGRAPHIC INFORMATION MAY BE REQUIRED.

THIS PLAT CONSTITUTES A TOPOGRAPHICAL SURVEY ONLY AND DOES NOT CONSTITUTE A BOUNDARY SURVEY. THE SURVEYOR'S CERTIFICATION EXTENDS ONLY TO THE TOPOGRAPHIC ASPECTS. THIS PLAT SHALL NOT BE RECORDED NOR USED TO CONVEY PROPERTY. THE BOUNDARY INFORMATION, AS SHOWN, WAS TAKEN FROM A PLAT AND SURVEY BY LOUIE D. PATRICK, DATED 11/03/1992 AND RECORDED IN PLAT BOOK 34, PAGE 270, NEWTON COUNTY RECORDS.

GRAPHIC SCALE
0 50 100 150
(IN FEET) SCALE: 1" = 50'

SURVEY NOTES:

1. THE DATUM FOR THIS SITE WAS ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEMS AND THE BASED REFERENCE FRAME ON POSITIONAL VALUES FOR THE VIRTUAL REFERENCE STATION NETWORK DEVELOPED BY EGPS SOLUTIONS. THE HORIZONTAL DATUM IS GEORGIA STATE PLANE WEST ZONE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83).
2. THE VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE. SUBJECT AND ADJACENT PROPERTY OWNERS' DEED AND PLAT REFERENCES WERE OBTAINED BY GEORGIA CIVIL, INC. AND ARE NOT GUARANTEED AS TO ACCURACY NOR COMPLETENESS.
4. ALL DEED AND PLAT BOOK REFERENCES AS SHOWN HEREON ARE RECORDED IN THE CLERK OF SUPERIOR COURT'S OFFICE OF NEWTON COUNTY, GEORGIA.
5. STRUCTURES VISIBLE ON THE DATE OF THE SURVEY ARE AS SHOWN HEREON. ALL LOCATIONS ARE ACCURATE ONLY WHERE DIMENSIONED.
6. A PORTION OF THIS PROPERTY IS LOCATED IN ZONE "A" AND IS SHOWN TO BE LOCATED WITHIN THE LIMITS OF A SPECIAL FLOOD HAZARD AREA, PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP NO. 13217C0095D; EFFECTIVE DATE: 03/17/2014. THIS STATEMENT IS BASED ON GRAPHICALLY LOCATING THE SUBJECT PROPERTY ON SAID MAP. NO ADDITIONAL FIELD WORK HAS BEEN COMPLETED TO VERIFY THIS INFORMATION.
7. THE CERTIFICATION, AS SHOWN HEREON, IS PURELY A STATEMENT OF PROFESSIONAL OPINION BASED ON KNOWLEDGE, INFORMATION AND BELIEF, BASED ON EXISTING FIELD EVIDENCE AND DOCUMENTARY EVIDENCE AVAILABLE. THE CERTIFICATION IS NOT AN EXPRESSED OR IMPLIED WARRANTY OR GUARANTEE.
8. THE TERM "CERTIFICATION" AS USED IN RULE "180-6-.09(2) AND (3)" AND RELATING TO PROFESSIONAL ENGINEERING OR LAND SURVEYING SERVICES, AS DEFINED IN O.C.G.A. 43-15-2(6) AND (11), SHALL MEAN A SIGNED STATEMENT BASED UPON FACTS AND KNOWLEDGE KNOWN TO THE REGISTRANT AND IS NOT A GUARANTEE OR WARRANTY, EXPRESSED OR IMPLIED.
9. THIS SURVEY COMPLIES WITH BOTH THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND THE OFFICIAL CODE OF GEORGIA ANNOTATED (OCGA) 15-6-67, IN THAT WHERE A CONFLICT EXISTS BETWEEN THOSE TWO SETS OF SPECIFICATIONS, THE REQUIREMENTS OF LAW PREVAIL.
10. UTILITIES, AS SHOWN HEREON, ARE BASED ON ABOVE GROUND VISIBLE EVIDENCE ONLY. THE SURVEYOR DOES NOT WARRANT THE EXACT SIZE, TYPE, LOCATION, ACCURACY OR THOROUGHNESS OF THE INFORMATION CONCERNING THE ABOVE/UNDERGROUND UTILITIES AND STRUCTURES. NO GUARANTEE IS MADE THAT OTHER UTILITIES MAY EXIST ON THE SITE, THAT MAY NOT BE SHOWN.
11. THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED HAS AN AVERAGE RELATIVE ACCURACY OF 0.03 FEET AT A 95% CONFIDENCE LEVEL AND HAS NOT BEEN ADJUSTED. THIS PLAT HAS NOT BEEN CALCULATED FOR CLOSURE. THE LINEAR AND ANGULAR MEASUREMENTS SHOWN ON THIS PLAT WERE OBTAINED BY UTILIZING A GEOMAX ROBOTIC TOTAL STATION AND A CARLSON BRx7 GPS UNIT (MFG#192.168.10.1) IN THE PREPARATION OF THIS PLAT. THE FIELD MEASUREMENTS WERE COMPLETED ON 12/18/2023.
12. THIS PROPERTY IS SUBJECT TO ALL RIGHT OF WAYS AND EASEMENTS OF RECORD.
13. IN MY OPINION, THIS IS A CORRECT REPRESENTATION OF THE LAND PLATTED AND HAS BEEN PREPARED IN CONFORMITY WITH THE MINIMUM STANDARDS AND REQUIREMENTS OF LAW.
14. THIS PLAT HAS BEEN COMPLETED FOR THE USE AND PURPOSE OF THE CLIENT ASCRIBED AND CONTRACTED WITH HEREON. ALL OTHER PARTIES ARE SUBSEQUENTLY PUT ON NOTICE AS TO THE LIMITED DEGREE OF RELIANCE UPON THIS PLAT BY THIRD PARTIES.

LEGEND

⊗	= CONCRETE MONUMENT FOUND
■	= COMPUTED POINT
⊙	= IRON PIN SET (1/2" REBAR)
●	= IRON PIN FOUND
◉	= DECIDUOUS TREE
✱	= EVERGREEN TREE
◈	= FIRE HYDRANT
▣	= TELEPHONE PEDESTAL
● PP	= POWER POLE
⊥	= GUY ANCHOR/WIRE
⊤	= SIGN
Ⓦ	= WATER VALVE
--GAS--	= GAS LINE
--OHP--	= OVERHEAD POWER
--UT--	= UNDERGROUND TELEPHONE
--W--	= WATER LINE
--X--	= FENCE LINE
APPROX.	= APPROXIMATE
CMF	= CONCRETE MONUMENT FOUND
DB	= DEED BOOK
EX.	= EXISTING
FH	= FIRE HYDRANT
HRDW	= HARDWOOD TREE
HW	= HEADWALL
L.L.	= LAND LOT
L.L.L.	= LAND LOT LINE
NTS	= NOT TO SCALE
OTF	= OPEN TOP FOUND
℄	= PROPERTY LINE
PB	= PLAT BOOK
PG	= PAGE
R/W	= RIGHT OF WAY
RBF	= REBAR FOUND
WV	= WATER VALVE

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GEORGIA PROFESSIONAL LAND SURVEYOR, RLS#2629

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SURVEYED BY:
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"THE SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND THE OFFICIAL CODE OF GEORGIA ANNOTATED (OCGA) 15-6-67, AS AMENDED BY HB1004 (2016)".
CERTIFICATE OF AUTHORIZATION LSF001055

Project Information

SURVEY FOR:
NEWTON COUNTY
BOARD OF COMMISSIONERS
IN LAND LOTS 20 & 21 OF THE 10th LAND DISTRICT
NEWTON COUNTY, GEORGIA

CREW CHIEF:	TG
SURVEYED:	12/18/2023
PROJECT #:	23SBB012
DRAWING DATE:	12/20/2023
DRAWN BY:	MP
CHECKED BY:	GBS

REVISIONS

DATE:	DESCRIPTION:
01/10/2024	TREE SURVEY
SCALE:	1"=50'

Sheet Title

TOPOGRAPHICAL
AND
EXISTING
CONDITIONS
SURVEY

Sheet Number

TS-1

GENERAL NOTES:

1. ALL UTILITY INSTALLATION SHALL BE IN ACCORDANCE WITH NEWTON COUNTY WATER AND SEWER STANDARDS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND REVIEWING SAID STANDARDS AND SPECIFICATIONS.
2. NOTIFY NEWTON COUNTY INSPECTION 24 HRS BEFORE BEGINNING OF CONSTRUCTION.
3. CONTRACTOR SHALL THOROUGHLY REVIEW CONSTRUCTION PLANS AND BE FAMILIAR WITH EXISTING CONDITIONS BY SITE VISITATION, PRIOR TO FORMULATING BID.
4. CONTRACTOR SHALL VERIFY CONDITIONS AND DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCY FOUND IN THIS SET SHALL BE REFERRED TO THE SITE DESIGN PROFESSIONAL BY THE CONTRACTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR DISCREPANCIES WHICH ARE NOT REPORTED.
5. CONSTRUCTION SHALL MEET OR EXCEED NEWTON COUNTY MINIMUM STANDARDS AND SPECIFICATIONS.
6. CONTRACTOR SHALL ADHERE TO NORMAL WORKING HOURS AS PER NEWTON COUNTY ORDINANCES. CONSTRUCTION OUTSIDE OF NORMAL WORKING HOURS, MAY BE ALLOWED UPON PRIOR APPROVAL BY NEWTON COUNTY .
7. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL ADHERE TO FEDERAL, STATE, COUNTY AND LOCAL LAWS, ORDINANCES, AND REGULATIONS WHICH IN ANY MANNER AFFECT THE CONDUCT OF WORK, INCLUDING, BUT NOT LIMITED TO, INITIATING, MAINTAINING, AND SUPERVISING SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK (I.E. THE REQUIREMENTS OF APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)). CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD NEWTON COUNTY AND ITS AGENTS, THE OWNER AND THE SITE DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN THE CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
9. DO NOT BREAK THESE DOCUMENTS INTO PARTS AND SUB-PARTS. THE SITE DESIGN PROFESSIONAL AND OWNER ASSUMES NO RESPONSIBILITY FOR THE SEPARATION OF THESE DOCUMENTS BY ANY ENTITY OF THE CONTRACTING INDUSTRY. EACH CONTRACTING ENTITY SHALL BE RESPONSIBLE FOR ALL OF THE WORK RELATED TO THEIR TRADES WHEREVER IT MAY BE SHOWN WITHIN THE CONTRACT DOCUMENT PACKAGES.
10. NO WORK SHALL BE PERFORMED WITHIN GEORGIA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY (IF APPLICABLE) UNTIL PERMIT(S) (INCLUDING GEORGIA DEPARTMENT OF TRANSPORTATION UTILITY ENCROACHMENT PERMIT) ARE OBTAINED FROM GEORGIA DEPARTMENT OF TRANSPORTATION AND ON SITE.
11. BARRICADES, SUFFICIENT LIGHTS, TRAFFIC SAFETY SIGNS, AND OTHER TRAFFIC CONTROL MEASURES AS DEEMED NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION ON ROADS ACCESSED BY THE GENERAL PUBLIC.
12. SIGNS (LOCATION, NUMBER, AND SIZE) ARE NOT APPROVED UNDER THIS DEVELOPMENT PERMIT. A SEPARATE PERMIT IS REQUIRED FOR EACH SIGN.
13. NO CERTIFICATE OF OCCUPANCY SHALL BE ISSUED UNTIL SITE IMPROVEMENTS ARE COMPLETE.
14. ACCESS TO BUILDINGS DURING CONSTRUCTION SHALL BE MAINTAINED AND OPEN TO EMERGENCY VEHICLES AT ALL TIMES, THROUGH THE USE OF EXISTING OR TEMPORARY ROADS, DRIVES, AND/OR WALKS.
15. SITE LIGHTING SHALL BE FULLY SHIELDED. SITE LIGHTING IS TO BE DESIGNED BY OTHERS.
16. ALL WORK SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY CONTRACTOR.
17. CONTRACTOR IS RESPONSIBLE FOR QUANTITY TAKE OFFS AND ESTIMATING ALL QUANTITIES FOUND WITHIN THE SITE WORK CONSTRUCTION DRAWINGS. ANY QUANTITY TAKE OFFS OR ESTIMATES PROVIDED BY THE SITE DESIGN PROFESSIONAL ON THESE DOCUMENTS OR OTHERWISE SHALL BE VERIFIED BY THE CONTRACTOR BY PERFORMING HIS/HER OWN QUANTITY TAKE OFF AND/OR ESTIMATE. ANY COST FOR ANY DISCREPANCY IN QUANTITY TAKE OFF OR ESTIMATE PROVIDED BY SITE DESIGN PROFESSIONAL AND REQUIRED CONSTRUCTION QUANTITIES SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE SITE DESIGN PROFESSIONAL AND/OR OWNER AND/OR OWNER'S REPRESENTATIVE.

DEMOLITION REQUIREMENTS:

1. THE CONTRACTOR SHALL INSPECT ALL STRUCTURES, FACILITIES, AND AREAS SLATED FOR DEMOLITION TO GAIN A FULL UNDERSTANDING OF THE WORK REQUIRED. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC, HIS/HER EMPLOYEES AND AGENTS DURING THE INSPECTION AND SUBSEQUENT WORK. THE OWNER, CLIENT AND SITE DESIGN PROFESSIONAL ARE NOT RESPONSIBLE FOR THE CONDITION OF THE BUILDINGS, FACILITIES, OR OTHER AREAS SLATED FOR DEMOLITION.
2. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE OWNER TO DEMOLISH ANY STRUCTURE ON THE SITE BEFORE PROCEEDING WITH WORK.
3. ALL WORK PERFORMED ON THE SITE SHALL ADHERE TO ALL (OSHA) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION SAFETY STANDARDS.
4. ALL MATERIALS NOT SLATED FOR REUSE SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER. THE CONTRACTOR MAY SALVAGE ALL MATERIALS NOT DESIGNATED BY THE OWNER TO BE SAVED. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND STORE SAFELY ALL MATERIALS SLATED TO BE SAVED OR REUSED. THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS USING PHOTOGRAPHS PRIOR TO START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE MATERIALS DAMAGED DUE TO HIS WORK OR FAILURE TO PROTECT THROUGHOUT THE DURATION OF HIS CONTRACT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL APPROPRIATE UTILITY OWNERS, OPERATORS AND USERS PRIOR TO DISCONNECTION AND DEMOLITION. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. ALL PLUGS, STOPS, AND CAPS SHALL BE PER AGENCIES REQUIREMENTS AND IF NONE EXIST THEN A 3000 PSI CONCRETE PLUG WITH A THICKNESS EQUAL TO THE DIAMETER OF THE PIPE SHALL BE USED.
6. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY AND STOP ALL WORK IN AREAS WHERE HAZARDOUS MATERIALS ARE DISCOVERED. WHEN REQUIRED, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE ENVIRONMENTAL AND HEALTH AGENCIES. THE CONTRACTOR SHALL FLAG OFF ALL ACCESS WITH SUFFICIENT FLAGGING THAT THERE IS AN APPARENT WARNING OF THE PRESENCE OF HAZARDOUS MATERIALS.
7. NO BURNING, EXPLOSIVES OR OTHER POTENTIALLY DANGEROUS METHODS OF DEMOLITION SHALL BE ALLOWED UNLESS WRITTEN PERMISSION IS GRANTED BY THE OWNER AND ALL APPROPRIATE PERMITS ARE GRANTED.
8. THE CONTRACTOR SHALL PROVIDE WHAT EVER SAFETY EQUIPMENT AND DEVICES ARE NECESSARY TO PROTECT THE ADJACENT PROPERTIES, STRUCTURES AND OTHER AREAS SLATED TO REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE ANY DAMAGE CAUSED BY HIS/HER WORK. THIS SHALL ALSO INCLUDE EROSION CONTROL, DUST CONTROL AND SETTLEMENT.
9. ALL AREAS SHALL BE BROUGHT BACK TO THEIR ORIGINAL GRADE OR THAT OF THE SURROUNDING AREA, WHICH EVER IS CLOSER TO THE FINAL GRADES OF THE PROJECT FOR THAT AREA. ALL TEMPORARY SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL. ALL AREAS REQUIRING FILL SHALL BE COMPACTED TO THE REQUIREMENTS OF THE AREA BUT IN NO CASE LESS THAN 90% OF MODIFIED PROCTOR (ASTM D 1557).
10. THE CONTRACTOR SHALL PROVIDE NECESSARY EROSION CONTROL MEASURES DURING THE DEMOLITION AND REMOVAL OF EXISTING SITE FEATURES.
11. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES.
12. EXISTING BUILDINGS, APPURTENANCES, CANOPIES AND FOUNDATIONS ON THE PROPERTY SHALL BE PROTECTED UNLESS OTHERWISE NOTED.
13. THE CONTRACTOR SHALL MAINTAIN SAFE, CLEARLY MARKED PEDESTRIAN ACCESS ROUTES TO BUILDING ENTRANCES THROUGHOUT ALL PHASES OF CONSTRUCTION. ACCESS TO BUILDINGS SHALL BE MAINTAINED AT ALL TIMES.
14. SERVICES SHOWN ARE TO ASSIST CONTRACTOR IN LOCATING UTILITIES. ITEMS ARE SHOWN SCHEMATICALLY AND NEITHER THE ARCHITECT, SITE DESIGN PROFESSIONAL, NOR THE OWNER ASSUMES ANY RESPONSIBILITY FOR VARIANCES IN THE ACTUAL LOCATION OF THE EXISTING UTILITIES.
15. THE CONTRACTOR SHALL REPAIR OR REPLACE AS NECESSARY ANY UTILITIES DAMAGED, WHETHER SHOWN ON THESE PLANS OR NOT, AT NO ADDITIONAL COST TO THE CONTRACT.
16. EXISTING UTILITY APPURTENANCES (CLEAN OUTS, VALVE/METER BOXES AND/OR COVERS, MANHOLES, ETC.) LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED AS NECESSARY OR ADJUSTED TO FINISHED GRADE AT THE EXPENSE OF THE CONTRACTOR.
17. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY PROVIDER OF DAMAGE TO ANY ACTIVE UTILITY AND PROVIDE CORRECTIVE MEASURES AS DIRECTED BY THE UTILITY PROVIDER AT NO ADDITIONAL COST TO THE CONTRACT.
18. EXISTING ITEMS TO REMAIN WITHIN THE PROJECT LIMITS SHALL BE RETAINED IN PLACE AND PROTECTED FROM DAMAGE DURING CONSTRUCTION, UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
19. ALL DISPOSAL SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES.
20. THERE SHALL BE NO ON SITE BURIAL.
21. WORK DONE AHEAD OF SCHEDULE OR FOR TEMPORARY PROVISIONS SHALL HAVE EXISTING DISTURBED SURFACES PATCHED TO MATCH ORIGINAL CONDITIONS UNTIL NEW CONSTRUCTION REPLACES SUCH REPAIRS OR MODIFICATIONS.
22. PAVEMENT AREAS TO BE SAVED SHALL BE ABRASION SAW CUT PRIOR TO DEMOLITION. FAILURE TO PROVIDE A CLEAN EDGE MAY RESULT IN ADDITIONAL DEMOLITION AND NEW PAVEMENT INSTALLATION PAID FOR AND EXECUTED BY THE CONTRACTOR.
23. LIMITS OF CURB AND GUTTER DEMOLITION ARE SUBJECT TO THE NEAREST CONSTRUCTION JOINT. CURB AND GUTTER AND WALKS SHALL BE REPAIRED TO THE NEAREST CONSTRUCTION JOINT.
24. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE REMOVAL OF EXISTING LANDSCAPE MATERIALS OR SITE FEATURES WHICH THE OWNER ELECTS TO RETAIN.
25. DEMOLITION WITHIN THE DRIP-LINE OF EXISTING SPECIMEN TREES SHALL BE ACCOMPLISHED UTILIZING MANUAL PROCEDURES WITHOUT DAMAGING THE ROOT SYSTEM OF THE TREE(S).
26. THE CONTRACTOR SHALL NOT CONSIDER DEMOLITION DESIGNATIONS AND NOTES TO BE ALL-INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ASSESS EACH AREA AND TO PERFORM THE DEMOLITION AS REQUIRED TO ACCOMMODATE THE SCHEDULED NEW CONSTRUCTION.

STAKING REQUIREMENTS:

1. SURVEYING WORK PERFORMED BY THE CONTRACTOR SHALL BE SUFFICIENT AND ACCURATE TO CONSTRUCT THE WORK IN ACCORDANCE WITH THE SITE WORK CONSTRUCTION DRAWINGS. LAYOUT AND STAKING WORK SHALL BE IN ACCORDANCE WITH GENERAL ACCEPTED SURVEYING PRACTICES AND PROVISIONS OF THE CONTRACT.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS. CONTRACTOR SHALL NOT STAKE BUILDING DIMENSIONS FROM THE BUILDING(S) SHOWN ON THE SITE WORK CONSTRUCTION DRAWINGS. REFERENCES IN THESE DOCUMENTS TO BUILDING SQUARE FOOTAGES ARE FOR OWNER'S PURPOSES ONLY. DO NOT RELY ON THESE NUMBERS FOR ANY OTHER PURPOSE.
3. CONTRACTOR SHALL STAKE BUILDING CORNERS AND HAVE APPROVAL FROM THE ARCHITECT AND/OR SITE DESIGN PROFESSIONAL BEFORE COMMENCING THE CONSTRUCTION OF ANY FOOTINGS.
4. DIMENSIONS SHOWN ARE TO THE FACE OF CURB(S), UNLESS OTHERWISE NOTED. ANGLES ARE 90° (INCLUDING STREET CENTER-LINES) UNLESS NOTED OTHERWISE.
5. CURB AND GUTTER RADII ARE 5.0 FT. UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION AND OR PERPETUATION OF EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS (AS APPLICABLE) WITHIN THE CONTRACTOR'S AREA OF WORK. THE CONTRACTOR SHALL NOT DISTURB OR REMOVE EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS WITHOUT THE PERMISSION OF NEWTON COUNTY , AND CONTRACTOR SHALL BEAR THE EXPENSE OF RESETTING EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS WHICH MAY BE DISTURBED OR REMOVED WITH OR WITHOUT PERMISSION. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 15 WORKING DAYS NOTICE TO TNEWTON COUNTY PRIOR TO DISTURBANCE OR REMOVAL OF EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS. THE CONTRACTOR SHALL UTILIZE THE SERVICES OF A GEORGIA LICENSED LAND SURVEYOR TO RESET DISTURBED OR REMOVED RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS OR PROVIDE WITNESS MONUMENTS, AND FILE THE REQUIRED DOCUMENTATION WITH NEWTON COUNTY .
7. THE CONTRACTOR (UNLESS OTHERWISE INSTRUCTED BY THE OWNER) SHALL PROVIDE STAKING AND LAYOUT SERVICES, INCLUDING BUT NOT LIMITED TO, CENTERLINE STAKES, ADDITIONAL LINES, CONNECTIONS, RAMPS, SLOPE STAKES, GRADE STAKES, CONSTRUCTION BENCHMARKS AND REFERENCE STAKES LOCATING DRAINAGE, ROADWAY, AND UTILITIES NECESSARY FOR THE PROJECT. ALIGNMENT CONTROL ESTABLISHED BY THE CONTRACTOR SHALL BE REFERENCED, AND A COPY OF THE REFERENCES SHALL BE FURNISHED TO THE SITE DESIGN PROFESSIONAL.
8. THE CONTRACTOR SHALL VERIFY ALL INVERTS OF EXISTING STORM AND SANITARY SEWER TIE-INS AND ALL GRADES AT EXISTING PAVEMENT TIE-INS BEFORE PROCEEDING WITH ANY SITE WORK.
9. ALL CONTROL SHALL BE VERIFIED BEFORE PROCEEDING. SURVEYOR SHALL VERIFY INVERTS AT ALL GRAVITY STORM AND SEWER TIE IN POINTS BEFORE PROCEEDING. SURVEYOR SHALL VERIFY TIE POINT ELEVATIONS AT ALL ACCESS POINTS BEFORE PROCEEDING.

CLEAR AND GRUB REQUIREMENTS:

1. THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED. THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVED THROUGH OUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT. THIS INCLUDES NOT PARKING ANY EQUIPMENT OR HAVING ANY STORAGE AREAS WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT.
2. ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
3. THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN.
4. ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
5. NO BURNING SHALL BE ALLOWED ON THE SITE.

COMPACTION FOR UTILITY INSTALLATION:

1. ANALYTICAL COMPACTION RESULTS SHALL BE SUBMITTED TO NEWTON COUNTY ENGINEERING DEPARTMENT (OR SIMILAR DEPARTMENT). THE FOLLOWING APPLIES TO STORMWATER, SANITARY SEWER, AND WATER:
   a. BACKFILL UNDER PERMANENT CONCRETE OR BITUMINOUS PAVEMENT, AND AS ELSEWHERE SPECIFIED OR INDICATED ON THE PLANS, SHALL BE APPROVED BANK-RUN SAND OR GRAVEL OR CRUSHED STONE FREE FROM LARGE STONES AND CONTAINING NOT MORE THAN TEN PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL BE COMPACTED TO ONE HUNDRED PERCENT (100%) AS DETERMINED BY THE MODIFIED PROCTOR TEST FROM PIPE BEDDING TO TWO (2) FEET BELOW TRENCH TOP. MECHANICAL VIBRATING EQUIPMENT SHALL BE USED TO ACHIEVE THE REQUIRED COMPACTION. PAVEMENT SHALL BE REPLACED IMMEDIATELY AFTER THE BACKFILLING IS COMPLETED.
   b. BACKFILL UNDER GRAVEL OR CRUSHED STONE SURFACED ROADWAYS SHALL BE THE APPROVED SUITABLE EXCAVATED MATERIAL PLACED IN SIX (6) INCH LAYERS THOROUGHLY COMPACTED FOR THE FULL DEPTH AND WIDTH OF THE TRENCH, CONFORMING TO THE COMPACTION, DENSITY COMPACTION METHOD AND MATERIALS AS SPECIFIED IN "2" ABOVE.
   c. BACKFILL IN UNPAVED AREAS SHALL BE COMPACTED WITH MECHANICAL VIBRATING EQUIPMENT TO NINETY PERCENT (90%) AS DETERMINED BY THE MODIFIED PROCTOR TEST. BACKFILL MATERIAL FROM PIPE BEDDING TO GROUND SURFACE SHALL BE EXCAVATED FREE FROM LARGE STONES & OTHER DEBRIS.

GRADING / EARTHWORK REQUIREMENTS:

1. PRIOR TO STARTING ANY CUTS OR FILLS, THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRUB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED WITH THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, BORING LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT OVER AND UNDER REMOVAL.
2. UNLESS OTHERWISE NOTED, THE GRADES SHOWN ON THE PLANS ARE FINISHED GRADES. THEREFORE, PAVEMENT, FLOORS, SUBBASE AND OTHER IMPROVEMENTS MUST BE SUBTRACTED TO CALCULATE SUBGRADE ELEVATIONS. THE CONTRACTOR SHALL COORDINATE THE STAKING OF THE SITE GRADING WITH THE SURVEYOR AND ENGINEER OF RECORD BEFORE PROCEEDING WITH CONSTRUCTION STAKING.
3. THE CONTRACTOR SHALL MAINTAIN A SURVEY GRID OF NOT LESS THAN 100' X 100' OR OTHER MEANS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE THAT SHALL INDICATE LOCATION AND AMOUNT OF CUT OR FILLS REMAINING. AT SUBGRADE THIS GRID SHALL BE 50' X 50' WITH LOCATION AND FINAL GRADE MARKED CLEARLY OR SURVEY SHALL BE COMPLETED DEMONSTRATING THAT THE SUBGRADE IS +/- 0.1 FEET OF REQUIRED SUBGRADE.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTION TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. FOR EACH LIFT PLACED, COMPACTION TESTING SHALL BE DONE EVERY 2000 SQUARE FEET. IN TRENCHES, COMPACTION TESTING SHALL BE DONE EVERY OTHER LIFT WITH AT LEAST 1 TEST FOR EVERY 100 LINEAR FEET.
5. COMPACTION REQUIREMENTS SHALL BE THOSE OUTLINED IN THE GEOTECHNICAL EVALUATION. IF THE GEOTECHNICAL EVALUATION IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING SHALL BE USED. UNDER AND TO 20 FEET OUTSIDE THE BUILDING ENVELOPE THE SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE ASTM D 2922 (NUCLEAR METHOD) WITH PROCTORS FOR EACH SOIL TYPE.
6. UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT OR ON THE DRAWINGS, THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE FREE OF ORGANICS, FROZEN MATERIALS, CONTAMINATED MATERIALS, DEBRIS AND ANY ROCKS LARGER THAN 4 INCHES. FOR FILL PLACEMENT WITHIN 1 FOOT OF SUBGRADE, NO ROCK SHALL BE GREATER THAN 2 INCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH DRYING, SEGREGATING OR OTHER REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER REQUIREMENTS.
7. FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES IN ALL AREAS.
8. IF IMPORTED MATERIAL IS REQUIRED, THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. THE TESTING LABORATORY SHALL TEST FOR PERCENT PASSING THE 200 SIEVE THAT DOES NOT EXCEED THE EXISTING ON SITE MATERIAL OR IN NO CASE GREATER THAN 35%. THEY SHALL ALSO VERIFY CONSISTENCY WITH EXISTING ON SITE MATERIALS AND ALL OTHER REQUIREMENTS. WAIVERS TO THESE REQUIREMENTS CAN ONLY BE GIVEN JOINTLY BY OWNER AND THE GEOTECHNICAL ENGINEER THAT PREPARED THE GEOTECHNICAL REPORT.
9. THE TESTING LAB MAY RESTRICT SOME ON SITE MATERIALS FROM BEING USED AS FILL IN BUILDING OR PAVEMENT AREAS WHEN IT IS THEIR OPINION THAT THE MATERIAL WILL NOT MEET REQUIREMENTS STATED HERE OR IN THE GEOTECHNICAL REPORT. IF SUCH CONDITIONS DO EXIST AND OTHER MATERIAL IS NOT AVAILABLE ON SITE, THE OWNER'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE USE OF IMPORT MATERIAL UNLESS THERE WILL BE NO ADDITION COST TO THE CONTRACT.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS FROM WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE, DIVERTING DRAINAGE, DEWATERING AND SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCLEMENT WEATHER.
11. PRIOR PLACEMENT OF FILLS, IN AREAS WHERE THE FINAL DEPTH WILL BE LESS THAN 4 FEET, THE AREA SHALL BE PROOF ROLLED WITH A 10 TON ROLLER OR A LOADED 10 WHEEL DUMP TRUCK. SOFT AREAS SHALL BE SCARIFIED, DRIED AND RE-COMPACTED PRIOR TO FILL BEING PLACED. RETEST BY PROOF ROLL AS NECESSARY.
12. ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR THE IDENTIFICATION OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE TO THE GEOTECHNICAL ENGINEER OR THE GEOTECHNICAL ENGINEER'S TECHNICIAN SHALL BE SCARIFIED, DRIED AND RECOMPACTED. RETEST BY PROOF ROLL AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PROOF ROLLS WITH THE GEOTECHNICAL ENGINEER AND SHALL HAVE THE GEOTECHNICAL ENGINEER OR THE GEOTECHNICAL ENGINEER'S TECHNICIAN ON SITE AT THE TIME OF ALL PROOF ROLLING.
13. TRENCH EXCAVATION REQUIRING SHEETING, SHORING OR OTHER STABILIZING DEVICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET ALL O.S.H.A. REQUIREMENTS. ALL EXCAVATIONS SHALL MAINTAIN SAFE SIDE SLOPES IN ACCORDANCE WITH LOCAL, STATE, AND O.S.H.A. REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE SHALL BE PERMITTED IN AN EFFORT TO PREVENT CAVE-INS.
14. TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AND STRAIGHT TO WIDTHS DETERMINED BY NEWTON COUNTY . IF NO GUIDELINES FROM NEWTON COUNTY EXIST, THE FOLLOWING SHALL BE USED: (FOR PIPES 36 INCHES OR LESS THE TRENCH WIDTH SHALL BE THE DIAMETER PLUS 2 FEET), (FOR PIPES 36 INCHES OR GREATER THE WIDTH SHALL BE THE DIAMETER PLUS 3 FEET). ADDITIONAL WIDTH SHALL ONLY BE ALLOWED WHEN COMPACTION EQUIPMENT LIMITATIONS REQUIRE AND ONLY AFTER APPROVAL OF THE ENGINEER OF RECORD. NO MORE TRENCH SHALL BE OPEN IN ONE DAY THAN CAN BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS. WHEN BACKFILLING AROUND PIPES PROVIDE UNIFORM SUPPORT AT INVERT AND PROPER COMPACTION UNDER, ALONG AND OVER THE PIPE. CARE SHALL BE GIVEN WHILE BACKFILLING AROUND PIPES TO PREVENT DAMAGE TO THE PIPES INCLUDING: PLACING BACKFILL/BEDDING BY HAND, USING HAND OPERATED PLATE TAMPS OR JUMPING JACKS, AND OTHER LOAD RESTRICTIVE TECHNIQUES UNTIL FILLS ARE A MINIMUM OF 2 FEET OR MANUFACTURER'S RECOMMEND DEPTH, WHICH EVER IS GREATER, ABOVE THE TOP OF THE PIPE. COMPACTION REQUIREMENTS ARE NOT RELIEVED IN THESE AREAS AND SHALL REMAIN AS STATED ON THE DRAWINGS OR AS NOTED ABOVE.
15. IF ROCK IS ENCOUNTERED THAT WAS NOT INDICATED ON THE PLANS OR GEOTECHNICAL REPORT, THE AREA FOR REMOVAL SHALL BE MEASURED AND REVIEWED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROCK REMOVAL. ROCK WILL BE DEFINED AS THE NATURAL EARTH MATERIALS THAT CAN NOT BE REMOVED WITH A D9 DOZIER WITH A SINGLE TOOTH RIPPER.
16. WHERE ROCK IS ADJACENT TO A STRUCTURE OR UTILITY, THE ROCK SHALL BE REMOVED TO A MINIMUM OF 6 INCHES BELOW AND 1 TIMES THE DIAMETER, BUT NOT LESS THAN 1 FOOT OR GREATER THAN 3 FEET ON ANY SIDE.
17. NO EXPLOSIVES SHALL BE ALLOWED UNTIL ALL PERMITS ARE GRANTED AND THE OWNER HAS SIGNED OFF. PRE AND POST BLAST REPORTS SHALL BE KEPT AND RECORDED. ALL STRUCTURES WITHIN THE AREA OF THE BLAST SHALL RECEIVE A PRE-BLAST SURVEY. ALL BLASTING SHALL BE PERFORMED BY A LICENSED BLASTER.
18. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CUT MATERIAL OR WASTE MATERIAL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
19. NO FILL SHALL BE PLACED ON EXISTING GROUND WITHIN THE LIMITS OF DISTURBANCE UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL, SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES OR TO A DEPTH RECOMMENDED BY THE GEOTECHNICAL REPORT AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACING OF FILL. DELETERIOUS MATERIALS, I.E., LUMBER, LOGS, BRUSH, OR ANY OTHER ORGANIC MATERIALS OR RUBBISH SHALL BE REMOVED FROM AREAS TO RECEIVE COMPACTED FILL. UNSUITABLE MATERIALS, SUCH AS TOPSOIL, WEATHERED BEDROCK, ETC., SHALL BE REMOVED AS REQUIRED BY GEOTECHNICAL ENGINEER (AND ENGINEERING GEOLOGIST, WHERE EMPLOYED) FROM AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURE(S). CONSTRUCT FILL TO GRADES OR SUBGRADES AS SHOWN WITH SELECT FILL MATERIAL COMPACTED TO 95% STANDARD PROCTOR (UNLESS OTHERWISE NOTED). PLACE AND COMPACT IN 6 INCH LIFTS. ALL SOILS WITHIN 12 INCHES OF PAVEMENT SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF THEIR STANDARD PROCTOR MAXIMUM DRY DENSITY.
20. GRADED AREAS TO BE LANDSCAPED OR GRASSED SHALL BE BROUGHT TO THE ELEVATIONS SHOWN ON THE GRADING PLAN(S).
21. CONTRACTOR SHALL VERIFY DIMENSIONS, GRADES AND BENCHMARK(S) BEFORE BEGINNING ANY WORK.
22. THERE SHALL BE NO DISTURBANCE BEYOND PROPERTY LINES, UNLESS WRITTEN PERMISSION FROM ADJACENT PROPERTY OWNERS IS OBTAINED. EXISTING GRADES ALONG PROPERTY LINES SHALL BE MAINTAINED (UNLESS OTHERWISE NOTED).
23. THE MAX. SLOPES FOR CUT OR FILL SHALL BE 2H:1V, UNLESS OTHERWISE NOTED ON THE PLANS AND EXCEPT EARTHEN DAM EMBANKMENTS SHALL BE 3H:1V AND AS NOTED BELOW. THE SLOPE OF CUT OR FILL SHALL BE UNIFORM THROUGHOUT FOR EACH SECTION OF CUT OR FILL EXCEPT WHEN BENCHING IS APPROVED BY NEWTON COUNTY . WHEN A CUT IS MADE IN ROCK THAT REQUIRES BLASTING, THE SLOPE MAY BE STEEPER IF PRE-SPLITTING IS EMPLOYED AND UPON SUBMISSION OF A GEOTECHNICAL REPORT WHICH SUBSTANTIATES THE INTEGRITY OF THE ROCK IN THE STEEPER CONDITION, SUBJECT TO THE REVIEW AND APPROVAL OF NEWTON COUNTY AND/OR SITE DESIGN PROFESSIONAL. (NOTE: NO BLASTING SHALL OCCUR WITHOUT A VALID PERMIT ISSUED BY NEWTON COUNTY AND THE OWNER HAS SIGNED OFF.)
24. EMBANKMENTS SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED A COMPACTED THICKNESS OF 6 INCHES PER LAYER AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAX. LABORATORY DRY WEIGHT PER CUBIC FOOT AS DETERMINED BY AASHTO METHOD T-99 IN AREAS WHERE STRUCTURES, PARKING LOTS AND DRIVES, STREETS AND UTILITIES ARE TO BE PLACED ABOVE OR BELOW THESE SLOPES.
25. CONTOURS AND SPOT ELEVATIONS SHOWN ARE ONLY CONTROLS AND THE PROFILES THEY FORM SHALL BE SMOOTH AND CONTINUOUS (PARTICULARLY IN PARKING AREAS AND DRIVES).
26. GRADING SHALL BE PERFORMED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER WHO SHALL CERTIFY THAT FILL HAS BEEN PROPERLY PLACED AND WHO SHALL SUBMIT A FINAL COMPACTION REPORT FOR FILLS OVER 1' DEEP.
27. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING(S) AT ALL TIMES.
28. ANALYTICAL COMPACTION RESULTS SHALL BE SUBMITTED TO NEWTON COUNTY ENGINEERING DEPARTMENT (OR SIMILAR DEPARTMENT) AND TO THE GEOTECHNICAL ENGINEER OF RECORD.
29. ALL GRADING AND PIPE BED PREPARATION SHALL BE PERFORMED ACCORDING TO REQUIREMENTS SET FORTH BY THE GEOTECHNICAL ENGINEER OF RECORD.
30. CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND FOLLOW ALL RECOMMENDATIONS OF THE REPORT WHEN PERFORMING SITE WORK.
31. AT A MINIMUM, FOR TRENCH CONSTRUCTION, BACKFILL UNDER PERMANENT CONCRETE OR BITUMINOUS PAVEMENT AND AS ELSEWHERE SPECIFIED OR INDICATED ON THE PLANS, TRENCHES SHALL BE APPROVED BANK-RUN SAND OR GRAVEL OR CRUSHED STONE FREE FROM LARGE STONES AND CONTAINING NOT MORE THAN TEN PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL BE COMPACTED TO ONE HUNDRED PERCENT (100%) AS DETERMINED BY THE MODIFIED PROCTOR TEST FROM PIPE BEDDING TO TWO (2) FEET BELOW TRENCH TOP. MECHANICAL VIBRATING EQUIPMENT SHALL BE USED TO ACHIEVE THE REQUIRED COMPACTION. PAVEMENT SHALL BE REPLACED IMMEDIATELY AFTER THE BACKFILLING IS COMPLETED.
32. BACKFILL UNDER GRAVEL OR CRUSHED STONE SURFACED ROADWAYS SHALL BE THE APPROVED SUITABLE EXCAVATED MATERIAL PLACED IN SIX (6) INCH LAYERS THOROUGHLY COMPACTED FOR THE FULL DEPTH AND WIDTH OF THE TRENCH, CONFORMING TO THE COMPACTION, DENSITY COMPACTION METHOD AND MATERIALS AS SPECIFIED ABOVE.
33. BACKFILL IN UNPAVED AREAS SHALL BE COMPACTED WITH MECHANICAL VIBRATING EQUIPMENT TO NINETY PERCENT (90%) AS DETERMINED BY THE MODIFIED PROCTOR TEST. BACKFILL MATERIAL FROM PIPE BEDDING TO GROUND SURFACE SHALL BE EXCAVATED FREE FROM LARGE STONES & OTHER DEBRIS.

PAVEMENT AND STRUCTURAL BASE REQUIREMENTS:

1. THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS. IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE OF APPROVED FOR USE BY THE GEORGIA DEPARTMENT OF TRANSPORTATION. THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO AASHTO M 147-65 (1980 OR LATEST REVISION), GRADE A. GRAVEL OR OTHER MATERIALS CAN ONLY BE SUBSTITUTED FOR CRUSH STONE WHEN APPROVED IN WRITING BY THE OWNER AND SITE DESIGN PROFESSIONAL. MATERIAL SUPPLIED FOR USE AS SUBBASE SHALL HAVE 100% PASSING THE 2 INCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO.4 SIEVE, 15% TO 40% PASSING THE NO. 40 SIEVE AND 2% TO 10% PASSING THE NO. 200 SIEVE.
2. SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE GEOTECHNICAL REPORT. IF NOT STATED, THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
3. FINAL GRADING OF SUBBASE SHALL BE TO +/- 1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND +/- 1 INCH OF THE REQUIRED THICKNESS OF 8 INCHES OR GREATER AND +/- 1/2 INCH FOR THICKNESS LESS THAN 8 INCHES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTING AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER "GRADING / EARTHWORK REQUIREMENTS".
5. THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER "GRADING / EARTHWORK REQUIREMENTS".
6. IF REQUIRED, STABILIZING FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "MODULUS (LOAD AT 10% ELONGATION) = 115LB PER ASTM D1682-64", "GRAB TENSILE STRENGTH 200LB PER ASTM D 1682-64"," MULLEN BURST STRENGTH = 400PSI PER ASTM D 3786-87","TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 115LB PER ASTM D 1117-80","COEFFICIENT OF PERMEABILITY K (CM/SEC) = 0.015 PER ASTM D 4491-85","WATER FLOW RATE (GPM/SF)= 60 PER ASTM D 4491-85". WHEN STABILIZING FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
7. IF REQUIRED, FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "GRAB TENSILE ELONGATION = 50% PER ASTM D1682-64", "GRAB TENSILE STRENGTH 70LB PER ASTM D 1682-64","MULLEN BURST STRENGTH = 200PSI PER ASTM D 3786-87","TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 35 LB PER ASTM D 1117-80","COEFFICIENT OF PERMEABILITY K (CM/SEC) = 0.2 PER ASTM D 4491-85","WATER FLOW RATE (GPM/SF) = 180 PER ASTM D 4491-85". WHEN FILTER FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

TRAFFIC SIGNAGE AND PAVEMENT MARKINGS:

1. PAVEMENT MARKINGS SHALL BE THE TYPE, COLOR, SIZE AND LOCATIONS SHOWN ON THE PLANS. IF THE INFORMATION ON THE PLANS IS NOT COMPLETE AND AUTHORITY HAVING JURISDICTION DOES NOT HAVE REQUIREMENTS REGARDING THIS, USE THE FOLLOWING. PAINT SHALL BE SUPPLIED IN ACCORDANCE WITH AASHTO: M 248 LATEST ADDITION. COLORS SHALL BE AS FOLLOWS (YELLOW- PARKING STALLS, HANDICAP PARKING AND CHARACTERS, PARKING ISLANDS, TRAFFIC CONTROL LETTERING AND CHARACTERS AND FIRE LANES) (WHITE - STOP BARS, PEDESTRIAN CROSSINGS AND STOP LETTERING).
2. THE PAVEMENT SHALL BE CLEAN AND FREE OF DIRT, DUST, MOISTURE, OILS AND OTHER FOREIGN MATERIALS. ANY OLD PAVEMENT MARKINGS SHALL BE REMOVED UNLESS PAINTS ARE COMPATIBLE AND OVERLAY IDENTICALLY. THE SURFACE OF THE PAVEMENT PRIOR TO APPLICATION SHALL BE 45 DEGREES F AND RISING UNLESS MANUFACTURE'S RECOMMENDATIONS ARE GREATER.
3. THE SIGNAGE SHALL BE THE TYPE AND LOCATED PER THE DRAWINGS. THE SIGNAGE SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL HIGHWAY, COUNTY HIGHWAY AND STATE DEPARTMENT OF TRANSPORTATION. IF LOCAL, COUNTY OR STATE CODES DO NOT EXIST USE AASHTO: M268.
4. POSTS, BRACKETS AND FRAMES SHALL BE STEEL PER ASTM A-36, A-242, A-441, A-572, A588, GRADE 50 AND HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL CUTTING, DRILLING OR OTHER POLE MODIFICATIONS SHALL BE PAINTED WITH GALVANIZING PAINT. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
5. POST HOLES SHALL BE A MINIMUM OF FOUR FEET DEEP AND 12 INCHES IN DIAMETER UNLESS POOR SOILS OR FROST CONDITIONS REQUIRE GREATER DEPTH. SIGN POSTS SHALL BE KEPT PLUMB, 6 INCHES OFF BOTTOM AND CENTERED AS 3000 PSI CONCRETE IS PLACED AROUND THE POST. THE OVERALL SIGN AND POST SYSTEM SHOULD BE ABLE TO WITHSTAND 33 POUNDS PER SQUARE FOOT.
6. CONTRACTORS CAN PLACE SIGNS ON POSTS AFTER CONCRETE HAS CURED FOR SEVEN DAYS OR ¾ STRENGTH IS ACHIEVED.
7. ALL HANDICAP STRIPING AND SIGNAGE SHALL MEET THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. FIRE LANE STRIPING AND SIGNAGE SHALL MEET THE REQUIREMENTS OF THE LOCAL BUILDING INSPECTOR AND FIRE DEPARTMENT.
8. OULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT X5FT.

SITE CONCRETE - INCLUDING CURB, SIDEWALKS & GUTTERS:

1. THE DIMENSIONS SHALL BE THOSE SHOWN ON THE DRAWINGS. THE CONCRETE MIX SHALL BE 4000 PSI AT 28 DAYS MADE WITH TYPE I OR TYPE II CEMENT, PER ASTM C 150, AND AGGREGATES MEETING STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. SLUMP FOR SLIP FORMING SHALL BE 1 INCH +/- ½ INCH AND FOR FORMED CONCRETE THE SLUMP SHALL BE 3 INCH +/- 1 INCH. AIR ENTRAINMENT MIXTURE SHALL MEET THE REQUIREMENTS OF ASTM C 260 4% +/- 1 ½% FOR SLIP FORM WORK AND 6% +/- 1 ½% FOR FORMED AND PLACED CONCRETE. WATER REDUCING AGENT SHALL CONFORM TO ASTM C 494, TYPE A. CURING COMPOUNDS SHALL CONFORM TO ASTM C309, TYPE I, CLASS A MOISTURE LOSS OF NOT MORE THAN .055 GR/SQ CM WHEN APPLIED AT 200 SQ FT PER GALLON.
2. CURBS AND GUTTERS SHALL BE PLACED ON COMPACTED SUBBASE, CONSISTENT WITH THE PAVEMENT SUBBASE, AS SHOWN ON THE DRAWINGS. WHEN SUBBASE DETAILS ARE MISSING AND NO AGENCY HAS JURISDICTION USE THE FOLLOWING: CURBS AND GUTTERS SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF GAB ON 98% STANDARD PROCTOR SUBGRADE.
3. ALL FORMING, PLACEMENT, MATERIALS AND CURING SHALL CONFORM TO THE LATEST ADDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ALL SIMILAR STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS.
4. REINFORCING SHALL BE IN ACCORDANCE WITH THAT SPECIFIED ON THE DRAWINGS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICES". REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60, DEFORMED. WELDED WIRE FABRIC SHALL BE ASTM A 185, WELDED WIRE STEEL FABRIC.
5. SIDEWALKS AND GUTTERS SHALL HAVE A BROOM FINISH PERPENDICULAR TO FLOW WITH A PICTURE FRAME EDGE JOINT ALL THE WAY AROUND. CURBS SHALL HAVE A SMOOTH FINISH OR LIGHT RUB FINISH, BUT CONSISTENT THROUGH OUT THE PROJECT.
6. EXPANSION JOINTS SHALL BE PLACED EVERY 40 FEET AND AT ADJOINING STRUCTURES SUCH AS WALLS, MANHOLES AND VAULTS. EXPANSION JOINT MATERIAL SHALL BE PREMOLDED, ½ INCH MATERIAL WITH ½ INCH CAP IN ACCORDANCE WITH ASTM D1751. AFTER CONCRETE HAS SET, THE CAP SHOULD BE REMOVED AND VOID FILLED WITH WATERPROOF JOINT FILLER. CURB AND GUTTER SHALL BE CUT OR TOOL JOINTED TO 1/3 THE DEPTH EVERY 10 FEET. SIDEWALKS SHOULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT X5FT.

ASPHALT PAVEMENT REQUIREMENTS:

1. ASPHALT SHALL BE THE TYPE(S) SPECIFIED ON THE DRAWINGS. REFER TO PAVING LEGEND AND PAVING DETAILS PROVIDED. ALL ASPHALT SHALL BE PRODUCED IN STATE APPROVED PLANTS WITH STATE APPROVED PRODUCTS.
2. ASPHALT SHALL ONLY BE PLACED WHEN THE OUTSIDE TEMPERATURE IS 45°F AND RISING. ASPHALT SHALL NEVER BE PLACED ON FROZEN MATERIAL, DURING ANY TYPE OF PRECIPITATION OR WHEN PRECEDING PRECIPITATION HAS SATURATED ANY PORTION OF THE SUBBASE AND/OR SUBGRADE.
3. SURFACES ABUTTING THE NEW ASPHALT SHALL BE TACK COATED PRIOR TO PLACEMENT OF ASPHALT INCLUDING CURBS, GUTTER, EXISTING AND NEW STRUCTURES. TACK COAT SHALL BE APPLIED NEATLY TO MATCH THE LINES AND GRADES OF THE PROPOSED ABUTTING ASPHALT AT A RATE OF 0.05 TO 0.15 GALLONS PER SQUARE YARD.
4. ASPHALT SHALL BE PLACED IN LAYERS EQUAL TO THOSE SPECIFIED ON THE PLANS. THE THICKNESS OF EACH LAYER OR THE THICKNESS OF ALL LAYERS COMBINED SHALL NOT VARY MORE THAN 1/4 INCH FOR THICKNESS OF 0 TO 4 INCHES AND 1/2 INCH FOR THICKNESS OF 4 INCHES OR GREATER, FROM THOSE SPECIFIED ON THE DRAWINGS. IF MORE THAN 60% OF TEST CORES SAMPLED FAIL TO EQUAL OR EXCEED THE REQUIRED DEPTH, THE PAVEMENT SHALL BE CONSIDERED FAILED AND BE SUBJECT TO REPAIRS, REPLACEMENT OR REASONABLE COMPENSATION OF WHICH THE CONTRACTOR SHALL BEAR ALL COSTS. THE ASPHALT SHALL ALSO BE TESTED FOR SMOOTHNESS BY LAYING A 16 FOOT STRAIGHT EDGE ON THE PAVEMENT AND VERIFYING THAT THERE ARE NO GAPS GREATER THAN 1/4 INCH IN ANY DIRECTION.
5. PLACEMENT AND COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE SPECIFIED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION. THE ROLLING SHALL BE DONE IN SUCH A MANNER THAT WILL MATCH JOINTS AND LEAVE A SMOOTH UNIFORM SURFACE, WHILE PROVIDING THE PROPER COMPACTION, WHICH SHALL BE 95% OF THE LABORATORY DENSITY.
6. WHEN MATCHING INTO EXISTING PAVEMENT ALL MATCH JOINTS SHALL BE SAW CUT TO PROVIDE A STRAIGHT SMOOTH JOINT. THE ASPHALT DEPTH AT THE MATCH POINT SHALL BE EQUAL TO THAT OF THE PROPOSED OR EXISTING WHICH EVER IS GREATER.
7. PAVING EQUIPMENT SHALL BE OF GOOD CONDITION AND QUALITY. ASPHALT SHALL BE PLACED BY MECHANICAL EQUIPMENT EXCEPT IN SMALL AREAS THAT ARE INACCESSIBLE TO A PAVER. ASPHALT SHALL BE TRANSPORTED IN COVERED TRUCKS AND SCHEDULED IN SUCH A MANNER THAT SHALL MAINTAIN ASPHALT TEMPERATURE. ASPHALT SHALL BE REJECTED WHEN THE TEMPERATURES FALL BELOW 250 DEGREES F OR THE MINIMUM TEMPERATURES SPECIFIED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION, WHICHEVER IS HIGHER.
8. THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS. IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE APPROVED FOR USE BY THE APPLICABLE STATE'S "DEPARTMENT OF TRANSPORTATION". THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO AASHTO M 147-65 (1980 OR LATEST REVISION), GRADE A. GRAVEL OR OTHER MATERIALS CAN ONLY BE SUBSTITUTED FOR CRUSH STONE WHEN APPROVED IN WRITING BY THE OWNER AND ENGINEER. MATERIAL SUPPLIED FOR USE AS SUBBASE SHALL HAVE 100% PASSING THE 2 INCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO. 4 SIEVE, 15% TO 40% PASSING THE NO. 40 SIEVE AND 2% TO 10% PASSING THE NO. 200 SIEVE.
9. SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE SOILS REPORT. IF NOT STATED, THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
10. FINAL GRADING OF SUBBASE SHALL BE TO +/- 1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND +/- 1 INCH OF THE REQUIRED THICKNESS FOR THICKNESS OF 8 INCHES OR GREATER AND +/- ½ INCH FOR THICKNESS LESS THAN 8 INCHES.
11. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTING AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER "EARTHWORK".
12. THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER "EARTHWORK".
13. IF REQUIRED, STABILIZING FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "MODULUS (LOAD AT 10% ELONGATION) =115LB PER ASTM D1682-64", "GRAB TENSILE STRENGTH 200LB PER ASTM D 1682-64", "MULLEN BURST STRENGTH = 400PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 115LB PER ASTM D1117-80", "COEFFICIENT OF PERMEABILITY K CM/SEC = .015 PER ASTM D 4491-85", "WATER FLOW RATE GPM/SF= 60 PER ASTM D 4491-85". WHEN STABILIZATION FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
14. IF REQUIRED, FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "GRAB TENSILE ELONGATION =50% PER ASTM D1682-64", "GRAB TENSILE STRENGTH 70LB PER ASTM D 1682-64", "MULLEN BURST STRENGTH = 200PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 35LB PER ASTM D1117-80", "COEFFICIENT OF PERMEABILITY K CM/SEC = .2 PER ASTM D 4491-85", "WATER FLOW RATE GPM/SF= 180 PER ASTM D 4491-85". WHEN FILTER FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
15. DEBRIS AND OTHER FOREIGN MATTER. THE CONTRACTOR SHALL CLEAN ANY SECTIONS REQUIRING SUCH AT NO ADDITIONAL COST TO THE CONTRACT.

SEEDING & LANDSCAPING:

1. TOPSOIL SHALL BE REMOVED FROM STOCKPILES AND SPREAD IN THE AREAS SHOWN ON THE PLANS. THE DEPTH OF TOPSOIL SHALL BE AS SHOWN ON THE PLANS. IF THE DEPTH OF TOPSOIL IS NOT GIVEN THE FOLLOWING SHALL BE USED: "A MINIMUM OF 4 INCHES IN LAWN AREAS" AND "A MINIMUM OF 12 INCHES IN LANDSCAPE PLANTING AREAS".
2. AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS.
3. THE TOPSOIL SOIL SHALL HAVE A PH OF 5.5 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2" SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE ¼ INCH SIEVE AND 20 TO 80% PASSING THE NO. 200 SIEVE.
4. LIME OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT ACIDIC SOILS.
5. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREAFORM SOURCE.
6. LAWN SEED (WHEN NOT GIVEN ON THE PLANS) SHALL BE "50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNFINE PERENNIAL RYE"; "30% BY WEIGHT, 97% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE"; "20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS".
7. WHEN PLACING BY HYDROSEEDING, APPLICATION FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND SEED AT A MINIMUM OF 220 POUNDS PER ACRE. ALL OVER SPRAY AREAS SHALL BE PROPERLY CLEANED AND RESTORED AT NO EXPENSE TO THE CONTRACT.
8. IF PLACING BY MECHANICAL MEANS, FERTILIZER SHALL BE PLACED AT 25 POUNDS PER 1,000 SQUARE FEET, SEED AT 5 POUNDS PER 1,000 SQUARE FEET, AND STRAW MULCH AT 2 TONS PER ACRE. PLACE FERTILIZER AND SEED, THEN LIGHTLY RAKE AND THE ROLL WITH 200 POUND ROLLER. MULCH THE AREA AND THEN WATER. STRAW MAY NEED TO BE SECURED TO PREVENT IT BLOWING AWAY.
9. WATER LAWN AREAS AS NEEDED TO PROMOTE GROWTH. THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR WORK WHEN NECESSARY TO INSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND BEEN CUT AT LEAST TWICE.
10. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL AREAS NOT RECEIVING STRUCTURES, PAVEMENT, RIP RAP, LANDSCAPING OR OTHER IMPROVEMENTS OR FUTURE IMPROVEMENTS SHALL BE CONSIDERED LAWN AREAS AND RECEIVE TOPSOIL AND SEEDING PER DRAWINGS AND ABOVE STATED REQUIREMENTS.
11. PLANTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH THE PLANS AND ANSI 260.1 "AMERICAN STANDARD FOR NURSERY STOCK" IN GOOD HEALTH, VIGOROUS, AND FREE OF INSECTS, LARVAE, EGGS, DEFECTS AND DISEASE.
12. PLANTING BEDS SHALL BE PREPARED BY LOOSENING THE TOP 1 FOOT OF TOPSOIL. PLANTS SHALL BE LOCATED PER THE PLANS. THE HOLES SHALL BE EXCAVATED (PER THE DETAILS ON THE DRAWINGS) WITH THE CENTER SLIGHTLY HIGHER TO PROMOTE DRAINAGE. USE A TOPSOIL BACKFILL MIX OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, 1/2 PART WELL ROTTED MANURE, AND 10 POUNDS 5-10-5 PLANTING FERTILIZER AND PROPERLY MIXED PER CUBIC YARD. BERM AROUND PLANTS TO FORM A BOWL SHAPE.
13. WEED BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT SHALL BE PLACE UNDER ALL PLANTING BEDS PRIOR MULCHING.
14. ALL TREES AND SHRUBS SHALL BE STAKED AS DETAILED ON THE DRAWINGS. TREE WRAPPING WILL BE PROVIDED AT THE BASE OF ALL TREES AS DETAILED.
15. MULCH SHALL BE 50% SHREDDED BARK AND 50% WOOD CHIPS, ¾ TO 2 INCH IN SIZE, UNIFORMLY MIXED AND FREE OF ELM WOOD. MULCH SHALL BE PLACED UNIFORMLY OVER THE PLANTING BED ALLOWING NO WEED BARRIER TO BE SEEN.
16. ALL LANDSCAPING SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE. ANY PLANTINGS IN NEED OF REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.

UTILITY REQUIREMENTS:

1. ALL REQUIRED R/W ENCROACHMENT PERMITS SHALL BE SECURED, BEFORE PROCEEDING WITH WORK.
2. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS/HER OPERATION PLAN IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THAT THEY PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
3. UNLESS OTHERWISE NOTED, UTILITY OWNERS ARE TO RESET, RELAY OR READJUST PUBLIC AND PRIVATE UTILITIES CONFLICTING WITH PROPOSED IMPROVEMENT. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH THE OWNERS OF LOCAL UTILITIES IN THE ADJUSTMENT OF THEIR FACILITIES WHERE THEY INTERFERE WITH CONSTRUCTION. THE COSTS FOR THE WORK SHALL BE AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING GAS AND WATER METERS, VALVES, LINES, POWER, TELEPHONE, CABLE LINES, ETC. THAT SERVICE THE EXISTING BUILDINGS WITH THE APPROPRIATE UTILITY COMPANIES.
4. UTILITIES SHOWN ARE TO ASSIST THE CONTRACTOR IN LOCATING UTILITIES. ITEMS ARE SHOWN SCHEMATICALLY AND NEITHER THE ARCHITECT, SITE DESIGN PROFESSIONAL, NOR THE OWNER ASSUMES ANY RESPONSIBILITY FOR VARIANCES IN THEIR ACTUAL LOCATION. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF UTILITIES PRIOR TO EXCAVATION OR DEMOLITION. ADDITIONAL UTILITIES MAY NOT BE SHOWN ON THESE PLANS. IF THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES DURING CONSTRUCTION WHETHER SHOWN OR NOT IN THE SITE WORK CONSTRUCTION DRAWINGS, HE/SHE SHALL, AT HIS/HER EXPENSE, IMMEDIATELY REPLACE OR REPAIR THE UTILITIES TO THEIR ORIGINAL CONDITION AND QUALITY, AS APPROVED BY NEWTON COUNTY AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY. CONTRACTOR SHALL NOTIFY UTILITY PROVIDER AND THE SITE DESIGN PROFESSIONAL OF RECORD PRIOR TO PROCEEDING.
5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTACTING APPROPRIATE UTILITY PROVIDERS PRIOR TO SUBMITTING HIS/HER BID IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENT WILL AFFECT THE SCHEDULING OF WORK FOR THE PROJECT. SOME UTILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTORS OPERATIONS, WHILE SOME WORK MAY BE REQUIRED "AROUND" UTILITIES THAT REMAIN IN PLACE. THE CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS OR INCONVENIENCE CAUSED BY THE UTILITY ADJUSTMENTS.
6. MATERIAL AND INSTALLATION SHALL BE IN COMPLIANCE WITH NEWTON COUNTY REQUIREMENTS.
7. REFER TO ARCHITECTURAL AND M.E.P. PLANS FOR LOCATION OF WATER, SEWER AND GAS LINES WITHIN PROPOSED BUILDINGS. CONTRACTOR SHALL COORDINATE TIE-IN OF UTILITIES WITH ARCHITECTURAL PLANS AND M.E.P. REPRESENTATIVE.
8. EARTHWORK OPERATIONS SHALL COMPLY WITH REQUIREMENTS OF O.S.H.A. CONSTRUCTION STANDARDS, PART 1926, SUBPART P, EXCAVATIONS, TRENCHING, AND SHORING AND SUBPART O, MOTOR VEHICLES, MECHANIZED EQUIPMENT, AND MARINE OPERATIONS, AND SHALL BE CONDUCTED IN A MANNER ACCEPTABLE TO THE SITE DESIGN PROFESSIONAL.
9. A MINIMUM HORIZONTAL SEPARATION OF 10' SHALL BE MAINTAINED BETWEEN WATER LINES AND SANITARY SEWERS. AN 18 INCH MINIMUM VERTICAL SEPARATION SHALL BE MAINTAINED AT CROSSINGS. WHEN CROSSING A WATERLINE OR SEWER LINE, PIPE JOINTS SHALL BE PLACED AS FAR AWAY AS POSSIBLE FROM THE OTHER PIPE.
10. PEDESTRIAN AND LOCAL VEHICULAR TRAFFIC SHALL BE MAINTAINED FOR UTILITY WORK WITHIN PUBLIC RIGHT-OF-WAYS. SAFETY DEVICES AND FLAG MEN SHALL BE PROVIDED BY THE CONTRACTOR AT HIS/HER EXPENSE. WRITTEN PERMISSION TO CLOSE THE CONSTRUCTION AREA TO TRAFFIC SHALL BE OBTAINED FROM THE APPROPRIATE GOVERNMENT AGENCY PRIOR TO THE CLOSING.
11. CONTRACTOR SHALL MEET LOCAL UTILITY COMPANY REGULATIONS IN ANY READJUSTMENT OR RELOCATION OF EXISTING SERVICES. WHEN CONSTRUCTION INVOLVES THE REMOVAL OF FENCE, POLES, SIDEWALKS, DRIVE, TEMPORARY OR FIXED STRUCTURES; THE CONTRACTOR AT HIS/HER EXPENSE SHALL PROVIDE FOR TEMPORARY SERVICE OR CONTAINMENT TO THE AFFECTED PROPERTY, AND SHALL REPLACE SUCH ITEMS WITH SIMILAR OR BETTER MATERIALS AS SOON AS PRACTICAL OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE FOLLOWING UTILITY INSTALLATION.
12. USE OF PRECAST INVERT MANHOLES IS ACCEPTABLE PROVIDED INVERTS ARE NOT FIELD MODIFIED.
13. EXISTING PIPE CAN ONLY BE CUT IN THE PRESENCE OF NEWTON COUNTY REPRESENTATIVE(S). CUT-IN MANHOLE IS REQUIRED UNLESS DOGHOUSE MANHOLE IS SPECIFICALLY APPROVED BY NEWTON COUNTY PRIOR TO CONSTRUCTION.
14. NO TREES OR PERMANENT STRUCTURES SHALL BE ALLOWED IN SANITARY SEWER EASEMENT, UNLESS OTHERWISE APPROVED BY NEWTON COUNTY .
15. SEWER MAINS AND LATERAL(S) SHALL HAVE TRACER WIRE INSTALLED TO THE STRUCTURE FOUNDATION, UNLESS OTHERWISE APPROVED BY NEWTON COUNTY .
16. ALL UTILITIES, INCLUDING BUT NOT LIMITED TO WATER AND SANITARY SEWER UTILITIES AND STORM DRAIN FACILITIES SHALL BE INSTALLED AND THE TRENCHES BACKFILLED AND THOROUGHLY COMPACTED BEFORE ANY PAVEMENT OR BASE IS INSTALLED.
17. AUTHORIZED PUBLIC UNDERGROUND UTILITIES SHALL BE LOCATED WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR WITHIN AN EASEMENT DESIGNATED FOR SUCH USE. WITHIN PUBLIC STREET RIGHT-OF-WAY, PLACEMENT OF THE VARIOUS AUTHORIZED UTILITIES (POWER, GAS, CABLE TV, WATER AND SEWER) SHALL CONFORM TO THE SPECIFIC LOCATIONS DESIGNATED FOR SUCH USE BY NEWTON COUNTY .
18. NO OTHER UNDERGROUND UTILITIES, SUCH AS PRIVATE LAWN SPRINKLER SYSTEMS, YARD LIGHTING, ETC., SHALL BE INSTALLED WITHIN A PUBLIC RIGHT-OF-WAY OR EASEMENT EXCEPT BY AUTHORIZATION OF NEWTON COUNTY . SUCH AUTHORIZATION, IF ISSUED, SHALL REQUIRE THE APPLICANT TO ASSUME ALL REPAIR COSTS OF THE APPLICANT'S FACILITIES SHOULD THEY BE DAMAGED DURING THE COURSE OF INSTALLATION, MAINTENANCE OR REPAIR OF ANY OF THE PUBLIC UTILITIES AUTHORIZED TO OCCUPY SAID RIGHT-OF-WAY OR EASEMENT.
19. EXISTING UTILITY APPURTENANCES (CLEAN OUTS, VALVE/METER BOXES AND/OR COVERS, MANHOLES, ETC.) LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED AS NECESSARY OR ADJUSTED TO FINISHED GRADE AT NO ADDITIONAL COST TO THE CONTRACT.
20. IF UNDERGROUND ABANDONED PIPES ARE DISCOVERED DURING CONSTRUCTION, CONTRACTOR SHALL REFER TO NEWTON COUNTY FOR REMOVAL OR ABANDONMENT REQUIREMENTS. AT A MINIMUM, CONTRACTOR SHALL REMOVE OR ADEQUATELY PLUG ABANDONED UNDERGROUND PIPES, OR A COMBINATION OF BOTH, IF THESE MEASURES ARE APPROVED BY NEWTON COUNTY .
21. CONTRACTOR SHALL SAWCUT ASPHALT ONLY IN SITUATIONS THAT DO NOT ALLOW FOR JACK AND BORE (CONTRACTOR SHALL OBTAIN NECESSARY PERMITS TO SAWCUT STREETS). CONTRACTOR MAY BE REQUIRED TO BACK TAP EXISTING WATER MAIN WITH DOMESTIC SERVICE TAP OR FIRE SERVICE TAP, IF SUFFICIENT CLEARANCE IS NOT AVAILABLE (SO THAT CURB AND GUTTER IS NOT DAMAGED). IF CURB AND GUTTER IS DAMAGED, CONTRACTOR SHALL REPLACE IT TO ORIGINAL CONDITION AT NO COST TO THE OWNER.
22. CONTRACTOR SHALL CONTACT NEWTON COUNTY WATER DEPARTMENT AND HAVE NEWTON COUNTY DEPARTMENT INSPECTOR PRESENT DURING TAPS.

SANITARY SEWER SYSTEM REQUIREMENTS:

1. THE SANITARY SEWER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL (HAVING JURISDICTION) REQUIREMENTS.
2. ALL SANITARY SEWER MATERIALS, SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. IF THE PLANS DO NOT LIST ALL INFORMATION OR ARE UNCLEAR, USE THE FOLLOWING:
   - SANITARY PIPE AND FITTINGS SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D 3034, SDR 35, WITH GASKETS PER ASTM D 3212, ELASTOMERIC SEAL. THE PIPE SHALL BE BED 6 INCHES BELOW AND UP HALF ITS DIAMETER WITH CLEAN STONE OF A UNIFORM MIX RANGING IN SIZE OF 1/4 TO 3/4 INCH.
   - FORCEMAIN PIPE SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D 2241, SDR 21 OR LOWER IF PRESSURES ARE HIGH IN SYSTEM WITH GASKETS PER ASTM D 3139, AND ELASTOMERIC SEAL. THE PIPE SHALL BE ENCLOSED IN A RUN OF CRUSH STONE GRAVEL MATERIAL WITH 100% PASSING THE 2" SIEVE AND 2 TO 10% PASSING THE 200 SIEVE.
   - MANHOLES SHALL BE PROVIDED PER ASTM C 478 WITH STEEL CORE POLYETHYLENE STEPS. GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C 443 AND MORTARED WATER TIGHT WITH A WATERPROOF/PLUG MORTAR. THE INVERT SHALL BE MADE WITH CONCRETE OR 1/2 ROUND SECTION OF PIPE. PIPE JOINTS SHALL BE PRESS WEDGE OR CAST IN PLACE BOOT. BOTH SHALL HAVE ADDITIONAL VOIDS FILLED WITH WATERPROOF/PLUG MORTAR. ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE 4000 PSI AND 5 TO 8% AIR ENTRAINMENT. EXTERIOR MANHOLES SHALL BE COATED WITH A SEAL COAT ACCEPTABLE TO NEWTON COUNTY .
   - CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN STONE OF THE SAME TYPE AS THE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT. CLEANOUTS SHALL BE NO MORE THAN 90 FEET APART ON LATERALS.
   - MANHOLE FRAMES AND COVERS SHALL BE PER ASTM A 48, CLASS 30B, FULLY COATED WITH THE LETTERING "SANITARY" CAST INTO IT. THE MINIMUM SIZE SHALL BE A 24 INCH INSIDE OPENING AND DESIGN FOR A MINIMUM OF H-20 LOADING.
3. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.
4. ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.
5. ALL TAPS TO MAIN LINES SHALL BE MADE WITH SADDLES WHEN THE TAP IS 1/2 THE DIAMETER OR LESS OF THE EXISTING PIPE BUT MADE WITH A SLEEVE WHEN THE TAP IS GREATER THAN 1/2 THE DIAMETER OR EQUAL TO THE EXISTING PIPE. IF CONNECTIONS ARE REQUIRED TO EQUAL SIZE PIPES OF 8 INCHES OR GREATER, A MANHOLE SHALL BE INSTALLED OVER THE CONNECTION POINT AND INVERTS FORMED. WHEN CONNECTING TO AN EXISTING MANHOLE, THE CONNECTING PIPE HOLE SHALL BE CORED AND A PRESS WEDGE INSTALLED. THE CONNECTION SHALL BE MORTARED UP WITH WATERPROOF/PLUG MORTAR. INSIDE THE EXISTING MANHOLE, THE EXISTING INVERT SHALL BE BROKE OUT IN A MANNER THAT PROTECTS FROM DEBRIS ENTERING THE LIVE SYSTEM, WHILE A NEW INVERT IS FORMED.
6. SANITARY MANHOLES SHALL BE VISUALLY LAMPED AFTER BACKFILL TO VERIFY ALIGNMENT, CLEANLINESS, AND THERE IS NO DAMAGE TO THE SYSTEM. AFTER THE SYSTEM HAS BEEN BACKFILLED FOR 30 DAYS, THE SYSTEM SHALL BE RELAMPED AND TESTED WITH A MANDREL SIZED AT 95% OF THE INTENDED INSIDE DIAMETER.
7. GRAVITY SYSTEMS SHALL BE AIR TESTED BETWEEN MANHOLES TO 3.5 PSI FOR 5 MINUTES PER ASTM F 1417 FOR PLASTIC PIPES.
8. MANHOLES SHALL BE TESTED SEPARATELY FOR LEAKAGE OR INFILTRATION USING ASTM C 969. THE ALLOWED LEAKAGE = 0.1 GALLONS / {(FEET OF DIAMTER)(FEET OF HEAD)(#OF HOURS)} AND THE TEST SHALL RUN FOR 24 HOURS.
9. WHEN NECESSARY TO VERIFY THE SYSTEM INTEGRITY, THE ENTIRE SYSTEM MAY BE TESTED FOR INFILTRATION AND EXFILTRATION USING ASTM C 969. THE SYSTEM SHALL BE BROKEN UP INTO SECTIONS WHEN NECESSARY TO CONSIDER GROUNDWATER DEPTH, LENGTH AND ELEVATION DIFFERENCES.
10. FAILURE OF ANY TESTING SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACE THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT.
11. AFTER ALL TESTING IS COMPLETE AND BEFORE THE SYSTEM IS TURNED OVER TO NEWTON COUNTY , THE SYSTEM SHALL BE CHECKED TO VERIFY IT IS CLEAN AND FREE OF DIRT, DEBRIS AND OTHER FOREIGN MATTER. THE CONTRACTOR SHALL CLEAN ANY SECTIONS REQUIRING SUCH AT NO ADDITIONAL COST TO THE CONTRACT.

STORM WATER SYSTEM:

1. THE STORM WATER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE LOCAL STORM WATER AUTHORITY FOR THIS PROJECT IS NEWTON COUNTY AND THE EROSION CONTROL AND RUN-OFF AUTHORITY IS NEWTON COUNTY .
2. STORM DESIGN INCLUDES MANY VARIABLES, SUCH AS PIPE ROUGHNESS COEFFICIENT, THAT CAN AFFECT THE ACTUAL FINAL RUN-OFF. IF NO ALTERNATIVE MATERIALS ARE LISTED ON THE UTILITY DRAWINGS NO SUBSTITUTIONS MAY BE MADE BY THE CONTRACTOR UNLESS FIRST REVIEWED AND ACCEPTED BY THE ENGINEER.
3. ALL STORM MATERIAL SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS.
4. WHENEVER CLEAN STONE IS USED FOR BEDDING, BACKFILL OR ENCASEMENT, FILTER FABRIC SHALL BE PLACED BETWEEN THE NATURAL AND BACKFILL SOILS TO PREVENT MIGRATION OF FINES INTO THE VOIDS, AS NECESSARY. ANTI-SEEP COLLARS SHALL ALSO BE INCORPORATED AT THE PROJECT LIMIT AND ALONG THE PIPE TO PREVENT WATER FLOW WITHIN THE STONE BEDDING OR ENCASEMENT. ANTI-SEEP COLLARS MAY NOT BE REQUIRED WHEN USING PERFORATED PIPE. ANTI-SEEP COLLARS SHALL BE INCORPORATED AT POND AND BASIN OUTLETS TO PREVENT WATER MIGRATION ALONG PIPE BEDDING OR ENCASEMENT MATERIAL.
5. END SECTIONS SHALL BE THE SAME MATERIAL AS THE PRECEDING PIPE AND APPROPRIATE COLLAR.
6. MANHOLES SHALL BE PROVIDED PER ASTM C 478 WITH STEEL CORE POLYETHYLENE STEPS. THE MANHOLE SHALL BE SIZED TO A MINIMUM OF 2 FOOT GREATER THAN THE LARGEST DIAMETER PIPE ENTERING OR EXISTING. INCREASE SIZE OF MANHOLE IF, IN THE SAME HORIZONTAL PLANE, THERE ARE TWO AREAS WHERE THE AREA BETWEEN TWO PIPES IS LESS THAN 8 INCHES OR HALVE OR THE CIRCUMFERENCE IS SUPPORTED BY LESS THAN 1/2 OF THE DIAMETER OF THE MANHOLE. INVERTS SHALL BE SMOOTH CAST IN PLACE CONCRETE. UNLESS OTHERWISE INDICATED, COVER 4 INCH WEEPS WITH FILTER FABRIC. 2 INCH STONE SHALL BE PROVIDED AT THE CROWN OF PIPES AND AT SUBGRADE ELEVATION. GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C 443. ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE 4000 PSI AND 5 TO 8% AIR ENTRAINMENT.
7. INLETS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES.
8. GRATES SHALL BE RETICULINE AND GALVANIZED PER ASTM A123. MINIMUM GRATE OPENING SIZE WILL BE 18" X 24" AND DESIGN FOR A MINIMUM OF H-20 LOADING.
9. MANHOLE FRAMES AND COVERS SHALL BE PER ASTM A 48, CLASS 30B, FULLY COATED WITH THE LETTERING "STORM" CAST INTO IT. THE MINIMUM SIZE WILL BE A 24 INCH INSIDE OPENING AND DESIGN FOR A MINIMUM OF H-20 LOADING.
10. CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN STONE OF THE SAME TYPE AS THE PIPE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT.
11. RIP RAP SHALL BE PLACED AT THE END OF ALL OUTFALL STRUCTURES. UNLESS OTHERWISE NOTED, THE RIP RAP SHALL BE A CLEAN DURABLE STONE WITH AVERAGE WEIGHTS OF 100 POUNDS. THE RIP RAP SHALL BE PLACED ON 1 FOOT OF GRAVEL SUBBASE OR STABILIZING FABRIC.
12. DRY WELLS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES WITH THE ADDITION OF OPENINGS OF APPROXIMATELY 15% OF THE RINGS INTERIOR SURFACE. THE OPENINGS SHALL BE 1 X 3 INCH SLOTS OR 1 INCH DIAMETER ON THE INSIDE SURFACE. DRY WELLS SHALL BE BACKFILLED WITH A MINIMUM OF 1 FOOT OF CLEAN STONE SIZED BETWEEN 3 AND 4 INCHES. OUTSIDE THE STONE THE ENTIRE STRUCTURE SHALL BE WRAPPED IN FILTER FABRIC TO PREVENT OUTSIDE SOILS FROM ENTERING THE STONE AND DRY WELL.
13. UNLESS OTHERWISE NOTED, TRENCH DRAINS SHALL BE MADE WITH 4 INCH PERFORATED CORRUGATED POLYETHYLENE PIPE ENCASED IN CLEAN STONE SIZED BETWEEN 2 INCH AND ¼ INCH AND THEN WRAPPED IN FILTER FABRIC. OUTSIDE DIMENSIONS OF THE TRENCH DRAIN WILL NOT BE LESS THAN 1 FOOT.
14. ALL JOINTS BETWEEN PIPES AND PRECAST STRUCTURES SHALL BE MORTARED TIGHT.
15. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATION AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.
16. ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.
17. ANY PIPES FOUND WITH DIAMETER DEFLECTIONS GREATER THAN 5% OF THE SPECIFIED PIPE DIAMETER WILL BE REPAIRED OR REPLACED. ANY ALIGNMENT DIFFERENTIALS GREATER THAN 5% OF THE DIAMETER OF THE PIPE WILL BE CORRECTED OR REPLACED.
18. ANY CLEANING, REPAIRS OR REPLACEMENT REQUIRED, DUE TO FAILURE OF TESTING OR POOR WORKMANSHIP, SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CONTRACT.

WATER SYSTEM AND SERVICES REQUIREMENTS:

1. THE WATER SYSTEMS AND SERVICES SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL (HAVING JURISDICTION) REQUIREMENTS.
2. IF NEWTON COUNTY DOES NOT HAVE SPECIFIC REQUIREMENTS REGARDING MATERIALS AND PLACEMENT, THE FOLLOWING SHALL BE USED:
   - ALL WATER PIPING, FITTINGS AND APPURTENANCES SHALL BE PLACED A MINIMUM OF 6 INCHES BELOW FROST LINE OR 5 FEET WHICH EVER IS GREATER. PIPE SIZES 4 INCHES AND UP SHALL BE DUCTILE IRON OR POLYVINYL CHLORIDE AS INDICATED ON THE DRAWINGS (IF NOT SHOWN USE DUCTILE IRON). PIPE SIZES BELOW 4 INCHES SHALL BE COPPER OR POLYETHYLENE AS INDICATED ON THE DRAWINGS (IF NOT SHOWN USE COPPER).
   - THE MINIMUM SEPARATION BETWEEN WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS SHALL BE 18 INCHES MEASURED VERTICALLY FROM OUTSIDE TO OUTSIDE OF PIPES AT THE CROSSING. A STANDARD LENGTH OF WATER PIPE SHALL BE CENTERED AT THE CROSSING TO MAXIMIZE THE DISTANCE BETWEEN THE CROSSING AND THE NEAREST WATER MAIN OR SERVICE PIPE JOINT. WHEN THE WATER MAIN OR SERVICE RUNS UNDER THE SEWER LINE, A GRAVEL OR CRUSH STONE BACKFILL MEETING THE REQUIREMENTS OF SUBBASE SHALL BE PLACED AND COMPACTED AROUND THE WATER PIPE (UP TO HALF THE DIAMETER OF THE SEWER PIPE) TO PROVIDE ADEQUATE SUPPORT TO THE SEWER LINE. WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS RUNNING PARALLEL SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
   - DUCTILE IRON PIPE SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C151, (6 INCH DIAMETER AND GREATER SHALL BE CLASS 50) AND (SMALLER THAN 6" SHALL BE CLASS 51). DUCTILE IRON PIPE SHALL BE LINED WITH A CEMENT MORTAR AND SEAL COATED IN ACCORDANCE WITH AWWA C104. GASKETS SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C111. FITTINGS SHALL BE DUCTILE IRON IN ACCORDANCE WITH AWWA C153 COMPACT FITTINGS WITH A PRESSURE RATING OF 350 PSI.
   - STANDARD DUCTILE IRON OR CAST IRON FITTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH AWWA C110 WITH A PRESSURE RATING OF 250 PSI. THE LINING AND GASKETS FOR THE FITTING SHALL MEET THE SAME REQUIREMENTS AS THE PIPE. PLASTIC WRAP PIPES IN ACCORDANCE WITH AWWA C105 AND TAR COAT ALL FITTING BOLTS WHEN EVER SOILS ARE PRIMARILY CLAY OR NOT PH BALANCED. SEE GEOTECHNICAL REPORT FOR SOILS TYPE AND RECOMMENDATIONS.
   - PVC (POLYVINYL CHLORIDE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C900 FOR PIPE 4 INCHES OR GREATER AND ASTM D 1785, SCHEDULE 40, GASKETS PER ASTM F 477- ELASTOMERIC SEAL, SOLVENT CEMENT PER ASTM D 2564 FOR PIPES SMALLER THAN 4 INCHES. TEN GAUGE COPPER TRACE WIRE SHALL BE PLACED WITH ALL PIPE.
   - THRUST RESTRAINTS SHALL BE USED AT ALL FITTINGS, PLUGS, AND APPURTENANCES THAT CAUSE A CHANGE IN DIRECTION, FLOW OR ARE SUBJECT TO THRUST OR HAMMERING BY WATER FLOW. THRUST RESTRAINTS INCLUDE CONCRETE THRUST BLOCKS (3000 PSI), ANCHORING JOINTS AND TIE RODS. CONCRETE THRUST BLOCKS SHALL BE USED UNLESS SPACE, ACCESS OR MAINTENANCE PROHIBIT THEIR USE.
   - COPPER WATER PIPE SHALL BE SUPPLIED IN ACCORDANCE WITH ASTM B 88-TYPE K, SEAMLESS WITH FITTINGS PER AWWA C800.
   - PE (POLYETHYLENE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C9010 AND ASTM D2737.
   - GATE VALVES SHALL BE NONRISING STEM, DOUBLE DISC, BRONZE DISC RESILIENT SEATED, CAST IRON OR DUCTILE IRON BODY AND BONNET IN ACCORDANCE WITH AWWA C509 AND PRESSURE RATED FOR 250 PSI. TEN GAUGE COPPER TRACER WIRE SHALL BE PLACED WITH ALL PIPES.
   - VALVE BOX SHALL BE CAST IRON WITH A BASE COMPATIBLE WITH VALVE, 5 INCHES IN DIAMETER, SCREW TYPE EXTENSION AT TOP AND A COVER THAT READS "WATER".
   - CURB STOPS SHALL HAVE A BRONZE BODY, GROUND KEY PLUG OR BALL WITH WIDE TEE HEAD. THE CURB STOP SHALL BE COMPATIBLE WITH ADJOINING PIPES. THE SERVICE BOX SHALL HAVE A TELESCOPING TOP SECTION WITH A LENGTH THAT PLACES THE ADJUSTMENT CENTERED WHEN BURIED TO THE APPROPRIATE DEPTH. THE SERVICE BOX SHALL BE OF A SIZE AND TYPE THAT IS COMPATIBLE WITH THE CURB STOP. THE COVER SHALL HAVE THE LETTERING "WATER".
3. ALL METERS, VAULTS AND BACKFLOW SHALL MEET THE REQUIREMENTS OF NEWTON COUNTY .
4. FIRE HYDRANTS SHALL CONFORM TO THE REQUIREMENTS OF NEWTON COUNTY AND AWWA C502. DRAIN STONE SHALL HAVE 100% PASSING THE 1-1/2 INCH SIEVE, 90-100% PASSING THE 1 INCH SIEVE, 35-95% PASSING THE 1/2 INCH SIEVE AND 0-15% PASSING THE 1/4 INCH SIEVE. ALL HYDRANTS SHALL INCLUDE A GATE VALVE AND BOX LOCATED AT THE HYDRANT BRANCH TO SHUT OFF THE HYDRANT LINE.
5. DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C600 AND BE ENCASED IN SELECT BACKFILL WHICH MEANS NO STONE OR OTHER MATERIAL GREATER THAN 2 INCHES IN ANY DIRECTION.
6. PVC, PE AND COPPER PIPE SHALL BE PLACED PER MANUFACTURERS RECOMMENDATIONS AND EMBEDDED IN A 6 INCH SAND ENCASEMENT MEASURED FROM OUTSIDE SURFACE OF THE PIPE TO THE OUTSIDE OF SAND ENCASEMENT.
7. ALL BEDDING AND ENCASEMENTS SHALL BE COMPACTED WITH CARE TO ACHIEVE PROPER COMPACTION WITHOUT DAMAGING THE PIPE, FITTINGS OR APPURTENANCES.
8. ALL WATER MAIN FITTINGS AND VALVES SHALL BE TESTED FOR PRESSURE AND LEAKAGE IN ACCORDANCE WITH AWWA C600. TEST WATER SHALL BE POTABLE. TEST PRESSURE SHALL NOT BE LESS THAN 1.25 TIMES THE WORKING PRESSURE AT THE HIGHEST POINT AND 1.5 TIMES THE WORKING PRESSURE AT THE TESTING POINT. THE PRESSURE MAY NOT DROP MORE THAN 5 PSI DURING THE 2 HOUR TEST. LEAKAGE SHALL NOT EXCEED MORE THAN (L={SD(P)^0.5}/133,200) WHERE "L= ALLOWABLE LEAKAGE, IN GALLONS PER HOUR" " S= LENGTH OF PIPE TESTED, IN FEET" " D= NOMINAL DIAMETER OF PIPE, IN INCHES" "P=AVERAGE TEST PRESSURE DURING TEST, IN POUNDS PER SQUARE INCH (GAUGE) DURING THE SAME 2 HOUR DURATION.
9. ALL TAP AND/OR CONNECTION MATERIAL AND WORK SHALL BE DONE IN ACCORDANCE WITH AND COORDINATED WITH NEWTON COUNTY . WHEN THE AUTHORITY SO REQUIRES, THE TAPS AND/OR CONNECTIONS SHALL BE DONE BY THE AUTHORITY THEMSELVES AND PAID FOR BY THE CONTRACTOR.
10. OTHER FITTING AND APPURTENANCES NOT PART OF THE MAIN LINE TESTING SHALL BE TESTED BY VISUAL INSPECTION FOR LEAKAGE UNDER NORMAL WORKING PRESSURES.
11. ALL MAIN LINES AND APPROPRIATE APPURTENANCES SHALL BE FLUSHED AND DISINFECTED IN ACCORDANCE WITH AWWA C651 AND THE REQUIREMENTS OF THE APPROPRIATE HEALTH DEPARTMENT.
12. THE CONTRACTOR SHALL COORDINATE ALL TESTING AND DISINFECTING WITH NEWTON COUNTY . IF PROFESSIONAL ENGINEER CERTIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST TEN DAYS PRIOR TO THE START OF WORK.
13. FAILURE OF ANY TESTING SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACED THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT.

BRAVO SITE SET 09-18-2024

ALL UTILITY MATERIALS, INSTALLATION, TESTING, AND PROCEDURES SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE LOCAL AUTHORITY HAVING JURISDICTION. IF THERE IS A DISCREPANCY BETWEEN STATED STANDARDS AND SPECIFICATIONS ON THESE PLANS AND THE STATED STANDARDS AND SPECIFICATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION, THE CONTRACTOR SHALL ADHERE TO THE STANDARDS AND SPECIFICATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, READING, UNDERSTANDING, AND ADHERING TO THE THE MANUAL OF STANDARDS FOR DESIGN AND CONSTRUCTION SPECIFICATIONS IF THIS DOCUMENT IS PROVIDED FOR AT THE AGENCY HAVING JURISDICTION.

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LAND SURVEYING

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P.O. Box 896 | Madison, GA 30650
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www.georgiacivil.com

Professional Seal

JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR
ENRICHMENT CENTER
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

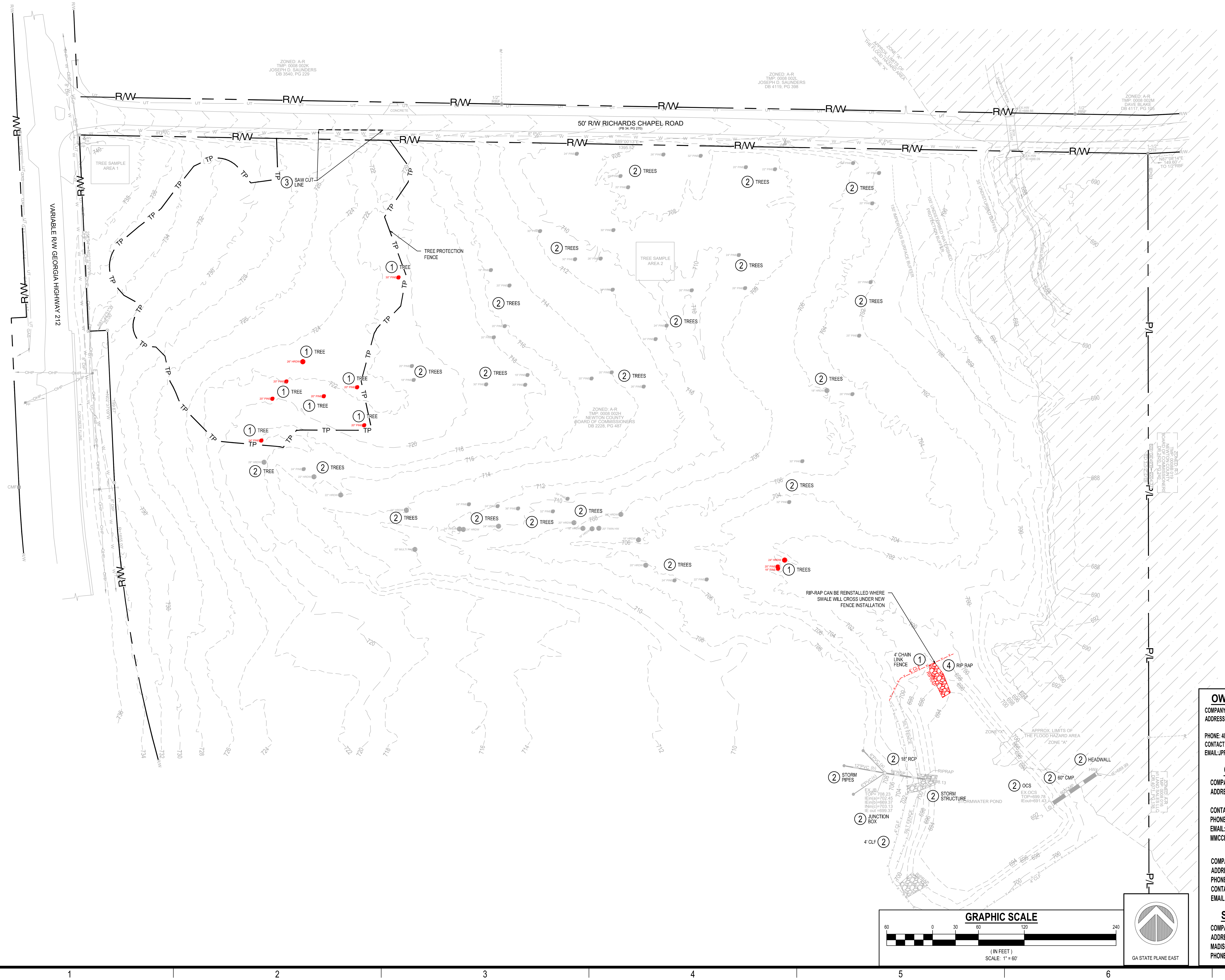
Sheet Title

GENERAL NOTES

Sheet Number

C-1.0

BRAVO SITE SET 09-18-2024


50' R/W RICHARDS CHAPEL ROAD
VARIABLE R/W GEORGIA HIGHWAY 212
R/W
P/L
TP
TREE SAMPLE AREA 1
TREE SAMPLE AREA 2
ZONED: A-R
TMP: 0008 002K
JOSEPH D. SAUNDERS
DB 3540, PG 229
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2228, PG 487
③ SAW CUT LINE
TREE PROTECTION FENCE
① TREE
① TREES
② TREE
② TREES
30" PINE
26" HRDW
24" HRDW
RIP-RAP CAN BE REINSTALLED WHERE SWALE WILL CROSS UNDER NEW FENCE INSTALLATION
4' CHAIN LINK FENCE ①
④ RIP RAP
SILT FENCE
APPROX. LIMITS OF THE FLOOD HAZARD AREA
ZONE "X"
ZONE "A"
② 18" RCP
② STORM PIPES
② JUNCTION BOX
4' CLF ②
② STORM STRUCTURE
STORMWATER POND
② OCS
EX.OCS
TOP=699.78
IEout=691.43
② 60" CMP
② HEADWALL
EX.JB
TOP= 708.23
IEin(a)=702.45
IEin(b)=669.37
INin(c)=703.13
IE out =699.37
GRAPHIC SCALE
60
0
30
60
120
240
(IN FEET)
SCALE: 1" = 60'
GA STATE PLANE EAST

DEMOLITION LEGEND:

① DEMOLISH AND REMOVE	⑤ REMOVE AND TURN OVER TO OWNER
② SAVE AND PROTECT	⑥ TO BE REMOVED BY OWNER
③ SAW CUT LINE	
④ RELOCATE / REMOVE AS NECESSARY	

OWNER/DEVELOPER

COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

CONTRACTOR

COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA 30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
EMAIL:
MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR

COMPANY: GEORGIA CIVIL, INC.
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PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER

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MADISON, GA 30650
PHONE: 706.342.1104

JASON P. BROWN
LEVEL II CERTIFIED
DESIGN PROFESSIONAL
#53274 - EXP. 05.01.2026

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404.644.2939

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Professional Seal

NO. PE031684
JASON P. BROWN

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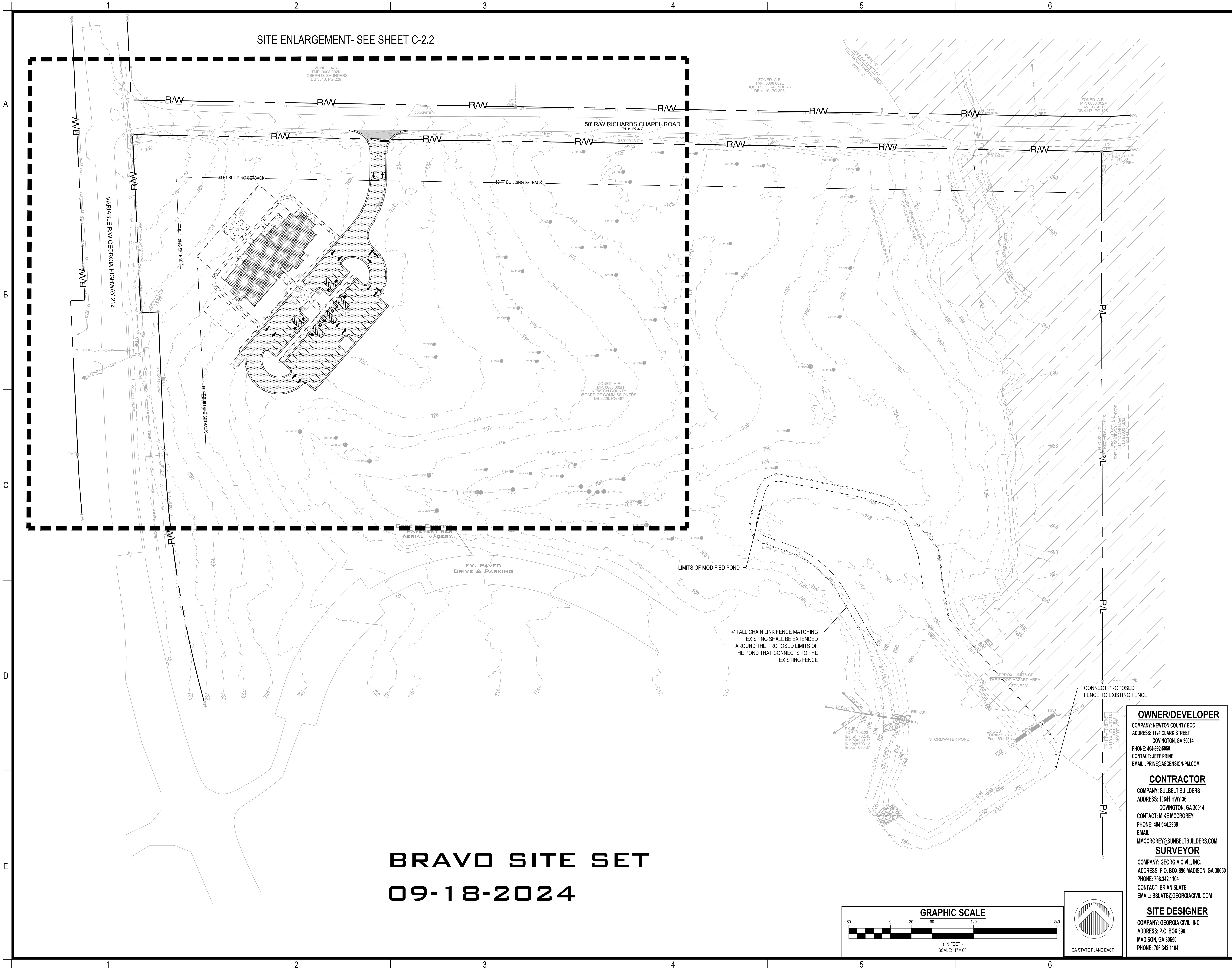
Sheet Title

DEMOLITION AND
REMOVAL PLAN

Sheet Number

C-2.0


SITE ENLARGEMENT- SEE SHEET C-2.2
50' R/W RICHARDS CHAPEL ROAD
VARIABLE R/W GEORGIA HIGHWAY 212
R/W
60 FT BUILDING SETBACK
P/L
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
EX. PAVED DRIVE & PARKING
LIMITS OF MODIFIED POND
4' TALL CHAIN LINK FENCE MATCHING EXISTING SHALL BE EXTENDED AROUND THE PROPOSED LIMITS OF THE POND THAT CONNECTS TO THE EXISTING FENCE
STORMWATER POND
APPROX. LIMITS OF THE FLOOD HAZARD AREA ZONE "A"
CONNECT PROPOSED FENCE TO EXISTING FENCE
GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
SCALE: 1" = 60'
GA STATE PLANE EAST

BRAVO SITE SET

09-18-2024

PAVING LEGEND:

HD = HEAVY DUTY
SD = STANDARD DUTY

▒	ASPHALT PER NEWTON COUNTY STANDARDS AND SPECIFICATIONS
☐	HD CONCRETE PAVING
☐	SD CONCRETE PAVING
☐	SD ASPHALT PAVING

REFER TO DETAILS FOR SECTION REQUIREMENTS.

NOTES:

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2. ALL PAVEMENT MARKINGS SHALL BE INSTALLED PRIOR TO ACCEPTANCE BY THE LIA AND/OR ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
3. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE INITIAL INSTALLATION OF STOP SIGNS.

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SITE DESIGNER

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Professional Seal

JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR ENRICHMENT CENTER

40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
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ZONING: AR

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DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
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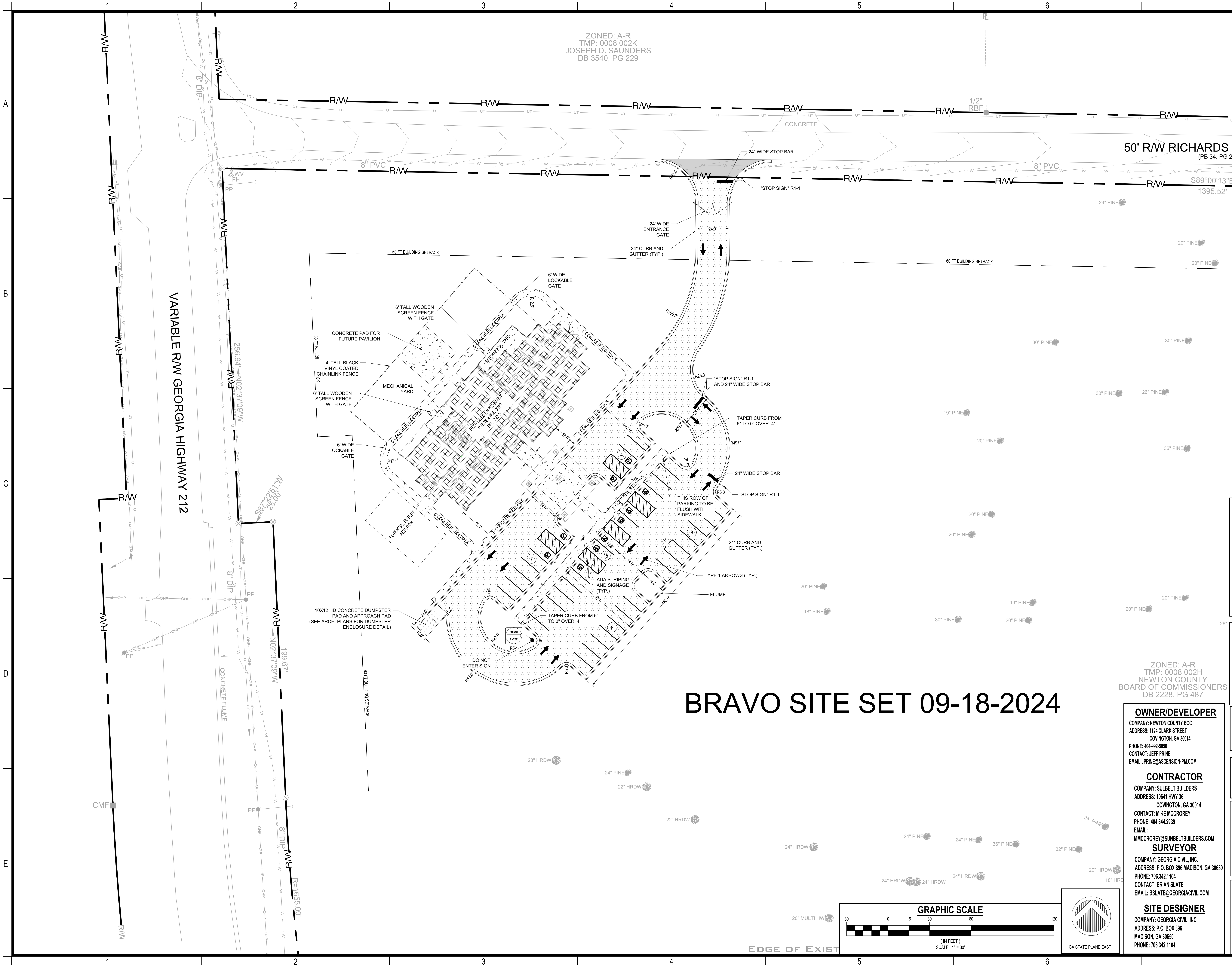
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

LAYOUT & STAKING PLAN OVERVIEW

Sheet Number

C-2.1


ZONED: A-R
TMP: 0008 002K
JOSEPH D. SAUNDERS
DB 3540, PG 229
50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
VARIABLE R/W GEORGIA HIGHWAY 212
R/W
8" DIP
8" PVC
CONCRETE
1/2" RBF
S89°00'13"E
1395.52'
256.94' N02°37'09"W
S87°22'51"W
25.00'
199.67'
N02°37'09"W
R=1655.00'
CONCRETE FLUME
CMF
PP
60 FT BUILDING SETBACK
24" WIDE STOP BAR
"STOP SIGN" R1-1
24' WIDE ENTRANCE GATE
24.0'
24" CURB AND GUTTER (TYP.)
R100.0'
R25.0'
"STOP SIGN" R1-1 AND 24" WIDE STOP BAR
TAPER CURB FROM 6" TO 0" OVER 4'
R49.0'
24" WIDE STOP BAR
"STOP SIGN" R1-1
THIS ROW OF PARKING TO BE FLUSH WITH SIDEWALK
24" CURB AND GUTTER (TYP.)
TYPE 1 ARROWS (TYP.)
FLUME
163.0'
6' WIDE LOCKABLE GATE
6' TALL WOODEN SCREEN FENCE WITH GATE
CONCRETE PAD FOR FUTURE PAVILION
4' TALL BLACK VINYL COATED CHAINLINK FENCE
MECHANICAL YARD
6' TALL WOODEN SCREEN FENCE WITH GATE
6' WIDE LOCKABLE GATE
R12.5'
5' CONCRETE SIDEWALK
6' CONCRETE SIDEWALK
PROPOSED ENRICHMENT CENTER BUILDING FFE: 727.3
18.0'
11.0'
28.7'
24.0'
43.0'
R5.0'
19.0'
62.0'
9.0'
POTENTIAL FUTURE ADDITION
ADA STRIPING AND SIGNAGE (TYP.)
10X12 HD CONCRETE DUMPSTER PAD AND APPROACH PAD (SEE ARCH. PLANS FOR DUMPSTER ENCLOSURE DETAIL)
22.0'
10.0'
R1.0'
TAPER CURB FROM 6" TO 0" OVER 4'
DO NOT ENTER
R5-1
DO NOT ENTER SIGN
R49.0'
4
7
8
15
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2228, PG 487
24" PINE
26" PINE
20" PINE
30" PINE
19" PINE
36" PINE
18" PINE
28" HRDW
22" HRDW
24" HRDW
20" MULTI HRDW
EDGE OF EXIST
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
SCALE: 1" = 30'
GA STATE PLANE EAST

BRAVO SITE SET 09-18-2024

PAVING LEGEND:

HD = HEAVY DUTY
SD = STANDARD DUTY

▆	ASPHALT PER NEWTON COUNTY STANDARDS AND SPECIFICATIONS
⊹	HD CONCRETE PAVING
▒	SD CONCRETE PAVING
░	SD ASPHALT PAVING

REFER TO DETAILS FOR SECTION REQUIREMENTS.

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JASON P. BROWN
LEVEL II CERTIFIED
DESIGN PROFESSIONAL
#53274 - EXP. 05.01.2026

24-HOUR CONTACT
MIKE MCCROREY
404.644.2939

OWNER/DEVELOPER

COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
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CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

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MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR

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PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER

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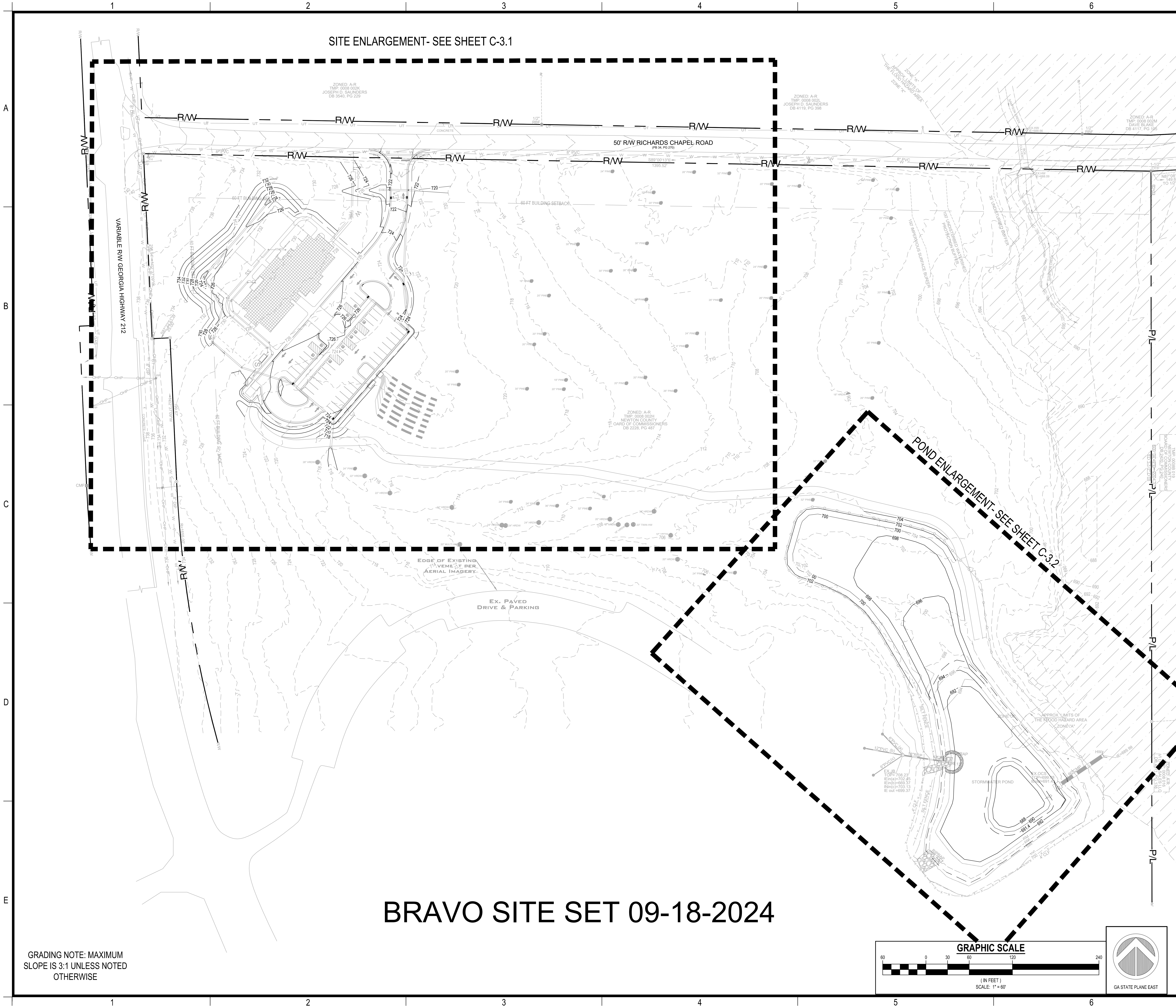
Sheet Title

LAYOUT & STAKING PLAN

Sheet Number

C-2.2


SITE ENLARGEMENT- SEE SHEET C-3.1
POND ENLARGEMENT- SEE SHEET C-3.2
50' R/W RICHARDS CHAPEL ROAD
VARIABLE R/W GEORGIA HIGHWAY 212
R/W
P/L
60 FT BUILDING SETBACK
ZONED: A-R TMP: 0008 002H NEWTON COUNTY BOARD OF COMMISSIONERS DB 2228, PG 487
ZONED: A-R TMP: 0008 002K JOSEPH D. SAUNDERS DB 3540, PG 229
ZONED: A-R TMP: 0008 002L JOSEPH D. SAUNDERS DB 4119, PG 398
ZONED: A-R TMP: 0008 002M DAVE BLAKE DB 4117, PG 120
ZONED: A-R TMP: 0008 016 VILLA SALES LLC DB 4071, PG 138
APPROX. LIMITS OF THE FLOOD HAZARD AREA ZONE "A"
STORMWATER POND
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
EX. PAVED DRIVE & PARKING
GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
SCALE: 1" = 60'
GA STATE PLANE EAST

BRAVO SITE SET 09-18-2024

GRADING NOTE: MAXIMUM
SLOPE IS 3:1 UNLESS NOTED
OTHERWISE

OWNER/DEVELOPER

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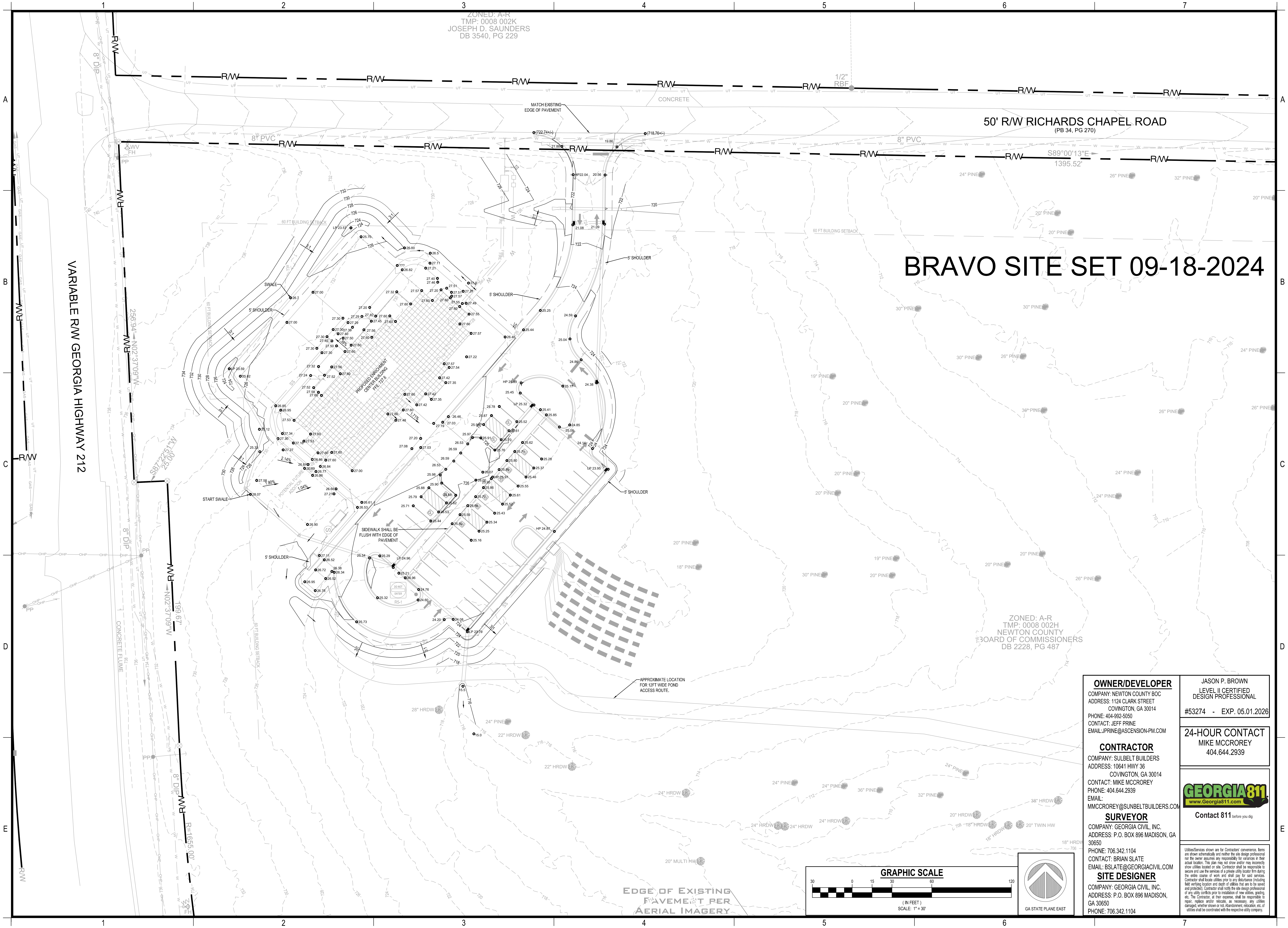
GRADING PLAN OVERVIEW

Sheet Number

C-3.0


ZONED: A-R
TMP: 0008 002K
JOSEPH D. SAUNDERS
DB 3540, PG 229
50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
S89°00'13"E
1395.52'
CONCRETE
1/2" RBF
8" PVC
MATCH EXISTING EDGE OF PAVEMENT
VARIABLE R/W GEORGIA HIGHWAY 212
N02°37'09"W
256.94'
S87°22'51"W
25.00'
N02°37'09"W
199.67'
R=1655.00'
8" DIP
CONCRETE FLUME
60 FT BUILDING SETBACK
PROPOSED ENRICHMENT CENTER BUILDING
FFE=727.8
SWALE
5' SHOULDER
START SWALE
POTENTIAL FUTURE ADDITION
SIDEWALK SHALL BE FLUSH WITH EDGE OF PAVEMENT
DO NOT ENTER
R5-1
APPROXIMATE LOCATION FOR 12FT WIDE POND ACCESS ROUTE
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2228, PG 487
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
SCALE: 1" = 30'
GA STATE PLANE EAST

BRAVO SITE SET 09-18-2024

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LAND PLANNING
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P.O. Box 896 | Madison, GA 30650
P: 706.342.1104 | F: 706.342.1105
www.georgiacivil.com

Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR
ENRICHMENT CENTER
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

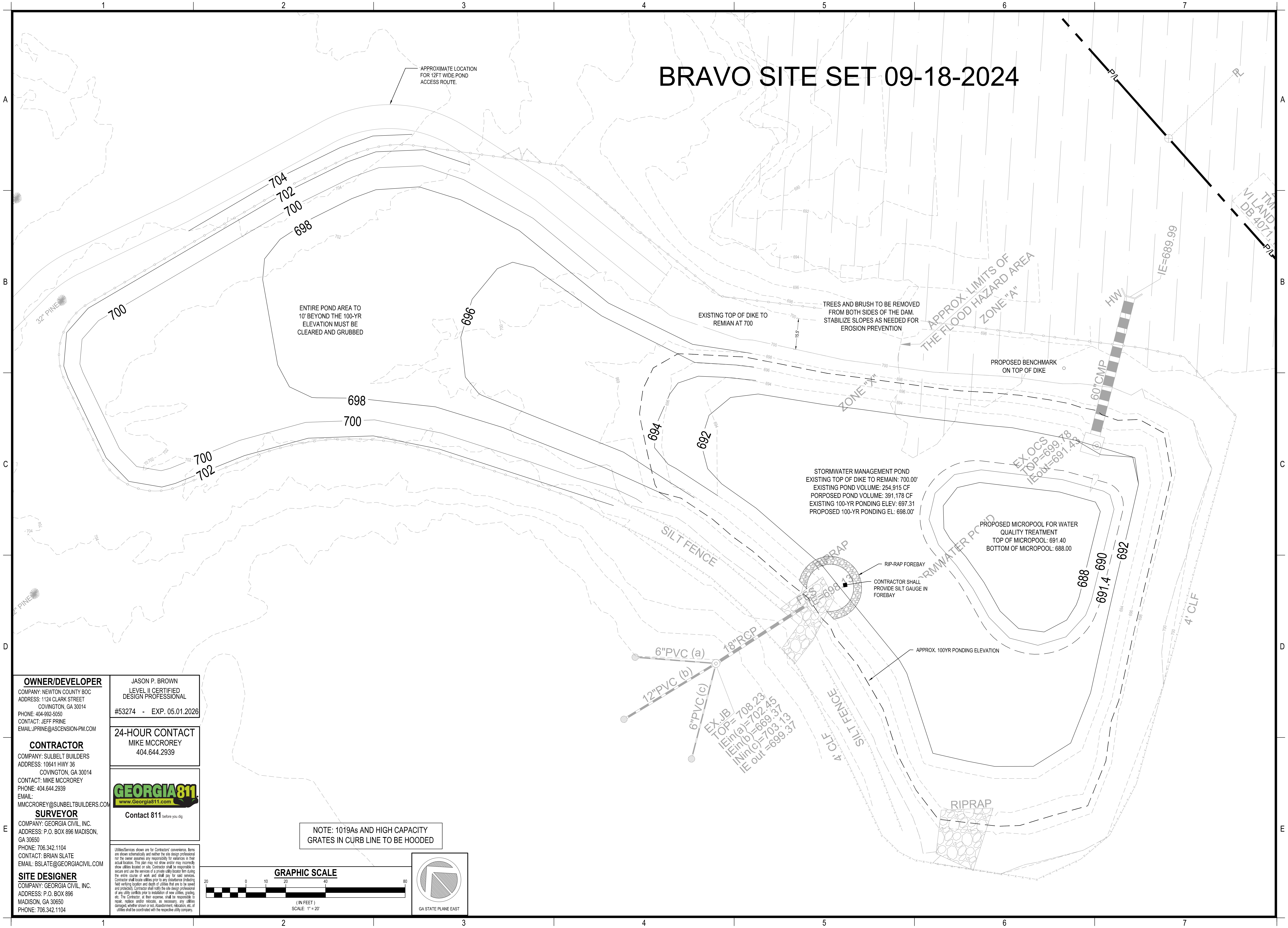
Sheet Title

GRADING PLAN SITE VIEW

Sheet Number

C-3.1

BRAVO SITE SET 09-18-2024


704
702
700
698
696
694
692
700
698
700
702
688
690
691.4
692
32" PINE
PINE
P/L
TMP
VI LAND
DB 4071
IE=689.99
HW
60"CMP
EX.OCS
TOP=699.78
IEout=691.43
ZONE "X"
APPROX. LIMITS OF
THE FLOOD HAZARD AREA
ZONE "A"
15.5'
SILT FENCE
SILT FENCE
RIPRAP
FES
IE=698.13
18"RCP
6"PVC (a)
12"PVC (b)
6"PVC (c)
EX.JB
TOP= 708.23
IEin(a)=702.45
IEin(b)=669.37
INin(c)=703.13
IE out =699.37
4' CLF
4' CLF
STORMWATER POND
RIPRAP
GRAPHIC SCALE
20
0
10
20
40
80
(IN FEET)
SCALE: 1" = 20'
GA STATE PLANE EAST

APPROXIMATE LOCATION
FOR 12FT WIDE POND
ACCESS ROUTE.

ENTIRE POND AREA TO
10' BEYOND THE 100-YR
ELEVATION MUST BE
CLEARED AND GRUBBED

EXISTING TOP OF DIKE TO
REMIAN AT 700

TREES AND BRUSH TO BE REMOVED
FROM BOTH SIDES OF THE DAM.
STABILIZE SLOPES AS NEEDED FOR
EROSION PREVENTION

PROPOSED BENCHMARK
ON TOP OF DIKE

STORMWATER MANAGEMENT POND
EXISTING TOP OF DIKE TO REMAIN: 700.00'
EXISTING POND VOLUME: 254,915 CF
PORPOSED POND VOLUME: 391,178 CF
EXISTING 100-YR PONDING ELEV: 697.31
PROPOSED 100-YR PONDING EL: 698.00'

PROPOSED MICROPOOL FOR WATER
QUALITY TREATMENT
TOP OF MICROPOOL: 691.40
BOTTOM OF MICROPOOL: 688.00

RIP-RAP FOREBAY

CONTRACTOR SHALL
PROVIDE SILT GAUGE IN
FOREBAY

APPROX. 100YR PONDING ELEVATION

NOTE: 1019As AND HIGH CAPACITY
GRATES IN CURB LINE TO BE HOODED

OWNER/DEVELOPER

COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

CONTRACTOR

COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA 30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
EMAIL:
MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR

COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON,
GA 30650
PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER

COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896
MADISON, GA 30650
PHONE: 706.342.1104

JASON P. BROWN
LEVEL II CERTIFIED
DESIGN PROFESSIONAL
#53274 - EXP. 05.01.2026

24-HOUR CONTACT
MIKE MCCROREY
404.644.2939

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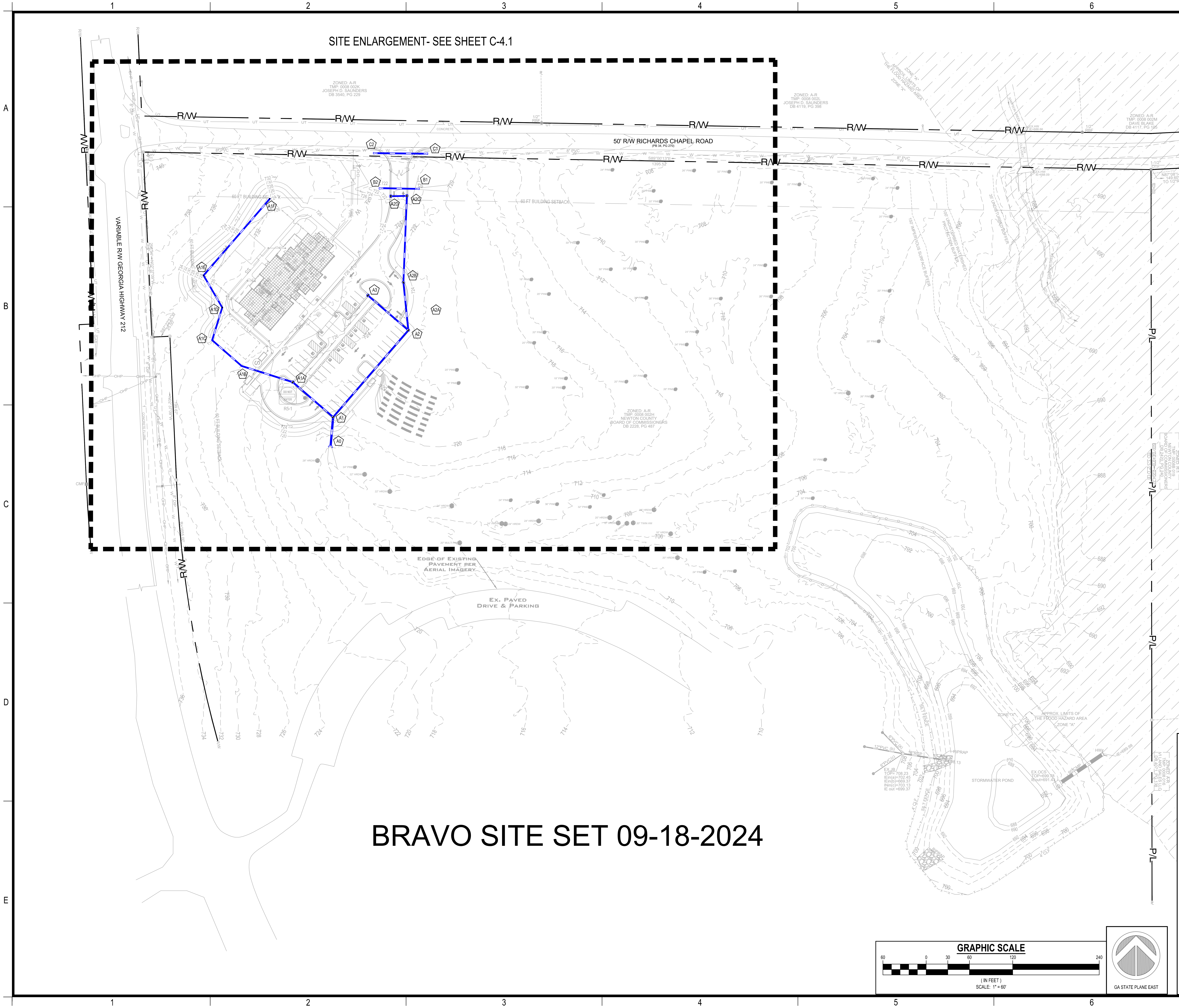
Sheet Title

GRADING PLAN POND VIEW

Sheet Number

C-3.2


SITE ENLARGEMENT- SEE SHEET C-4.1
ZONED: A-R
TMP: 0008 002K
JOSEPH D. SAUNDERS
DB 3540, PG 229
ZONED: A-R
TMP: 0008 002L
JOSEPH D. SAUNDERS
DB 4119, PG 398
50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
S89°00'13"E
1395.52'
R/W
60 FT BUILDING SETBACK
VARIABLE R/W GEORGIA HIGHWAY 212
C1
C2
B1
B2
A2C
A2D
A2B
A2A
A2
A3
A1
A0
A1A
A1B
A1C
A1D
A1E
A1F
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2228, PG 487
EDGE OF EXISTING
PAVEMENT PER
AERIAL IMAGERY
EX. PAVED
DRIVE & PARKING
EX.JB
TOP= 708.23
IEin(a)=702.45
IEin(b)=669.37
INin(c)=703.13
IE out =699.37
6"PVC (a)
12"PVC (b)
6"PVC (c)
18"RCP
RIPRAP
IE=698.13
SILT FENCE
4' CLF
STORMWATER POND
ZONE "X"
APPROX. LIMITS OF
THE FLOOD HAZARD AREA
ZONE "A"
EX.OCS
TOP=699.78
IEout=691.43
60"CMP
HW
IE=689.99
P/L
GRAPHIC SCALE
60
0
30
60
120
240
(IN FEET)
SCALE: 1" = 60'
GA STATE PLANE EAST

BRAVO SITE SET 09-18-2024

OWNER/DEVELOPER

COMPANY: NEWTON COUNTY BOC
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COVINGTON, GA 30014
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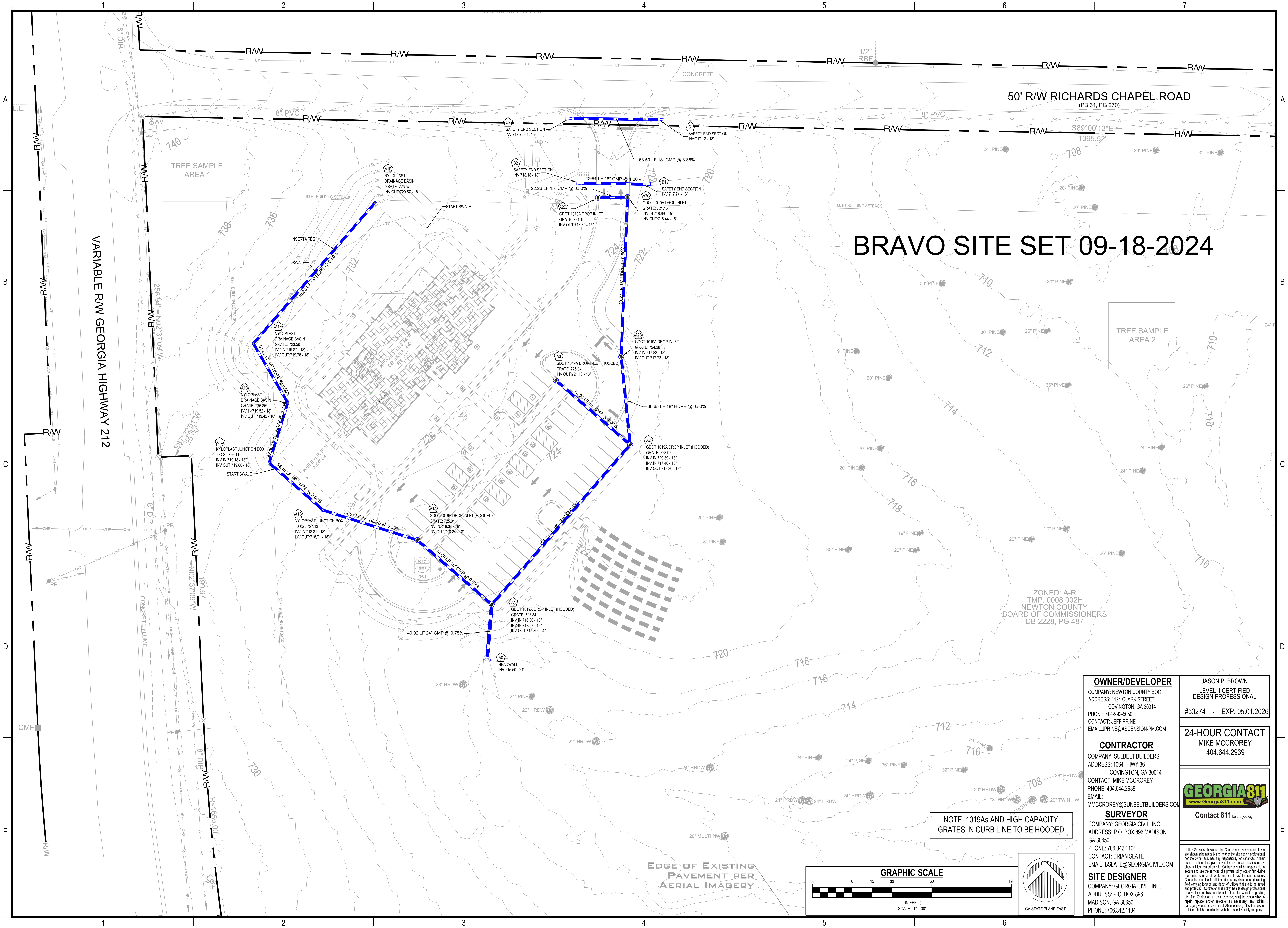
Sheet Title

STORMWATER
MANAGEMENT PLAN
OVERVIEW

Sheet Number

C-4.0

BRAVO SITE SET 09-18-2024


50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
VARIABLE R/W GEORGIA HIGHWAY 212
R/W
8" PVC
8" DIP
CONCRETE
1/2" RBF
S89°00'13"E 1395.52'
N02°37'09"W 256.94'
S87°22'51"W 25.00'
N02°37'09"W 199.67'
R=1655.00'
TREE SAMPLE AREA 1
TREE SAMPLE AREA 2
60 FT BUILDING SETBACK
CONCRETE FLUME
CMF
C2 SAFETY END SECTION INV:719.25 - 18"
C1 SAFETY END SECTION INV:717.13 - 18"
63.50 LF 18" CMP @ 3.35%
B2 SAFETY END SECTION INV:718.18 - 18"
43.81 LF 18" CMP @ 1.00%
B1 SAFETY END SECTION INV:717.74 - 18"
22.26 LF 15" CMP @ 0.50%
A2D GDOT 1019A DROP INLET GRATE: 721.15 INV OUT:718.80 - 15"
A2C GDOT 1019A DROP INLET GRATE: 721.16 INV IN:718.69 - 15" INV OUT:718.44 - 18"
120.27 LF 18" HDPE @ 0.50%
A2B GDOT 1019A DROP INLET GRATE: 724.38 INV IN:717.83 - 18" INV OUT:717.73 - 18"
66.65 LF 18" HDPE @ 0.50%
A3 GDOT 1019A DROP INLET (HOODED) GRATE: 725.34 INV OUT:721.13 - 18"
73.96 LF 18" CMP @ 1.00%
A2 GDOT 1019A DROP INLET (HOODED) GRATE: 723.97 INV IN:720.39 - 18" INV IN:717.40 - 18" INV OUT:717.30 - 18"
159.28 LF 18" CMP @ 0.63%
A1F NYLOPLAST DRAINAGE BASIN GRATE: 723.57 INV OUT:720.57 - 18"
START SWALE
INSERTA TEE
SWALE
140.33 LF 18" HDPE @ 0.50%
A1E NYLOPLAST DRAINAGE BASIN GRATE: 723.59 INV IN:719.87 - 18" INV OUT:719.78 - 18"
51.57 LF 18" HDPE @ 0.50%
A1D NYLOPLAST DRAINAGE BASIN GRATE: 725.85 INV IN:719.52 - 18" INV OUT:719.42 - 18"
47.39 LF 18" HDPE @ 0.50%
A1C NYLOPLAST JUNCTION BOX T.O.S.: 726.11 INV IN:719.18 - 18" INV OUT:719.08 - 18"
START SWALE
54.15 LF 18" HDPE @ 0.50%
A1B NYLOPLAST JUNCTION BOX T.O.S.: 727.13 INV IN:718.81 - 18" INV OUT:718.71 - 18"
74.51 LF 18" HDPE @ 0.50%
A1A GDOT 1019A DROP INLET (HOODED) GRATE: 725.01 INV IN:718.34 - 18" INV OUT:718.24 - 18"
74.08 LF 18" CMP @ 0.50%
A1 GDOT 1019A DROP INLET (HOODED) GRATE: 723.84 INV IN:716.30 - 18" INV IN:717.87 - 18" INV OUT:715.80 - 24"
40.02 LF 24" CMP @ 0.75%
A0 HEADWALL INV:715.50 - 24"
PROPOSED ENRICHMENT CENTER BUILDING FFE: 727.3
POTENTIAL FUTURE ADDITION
DO NOT ENTER
R5-1
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2228, PG 487
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
GA STATE PLANE EAST

NOTE: 1019As AND HIGH CAPACITY GRATES IN CURB LINE TO BE HOODED

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
SCALE: 1" = 30'

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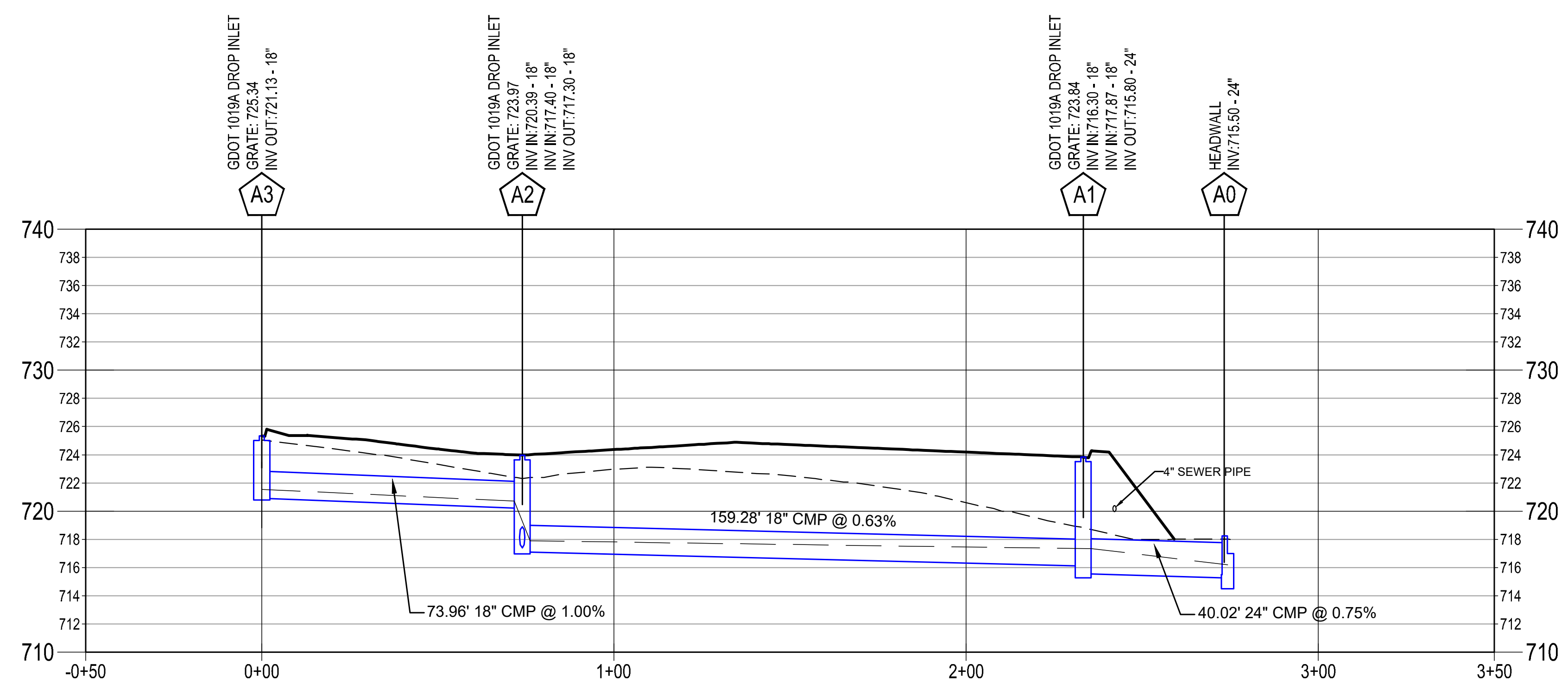
Sheet Title

STORMWATER MANAGEMENT PLAN SITE VIEW

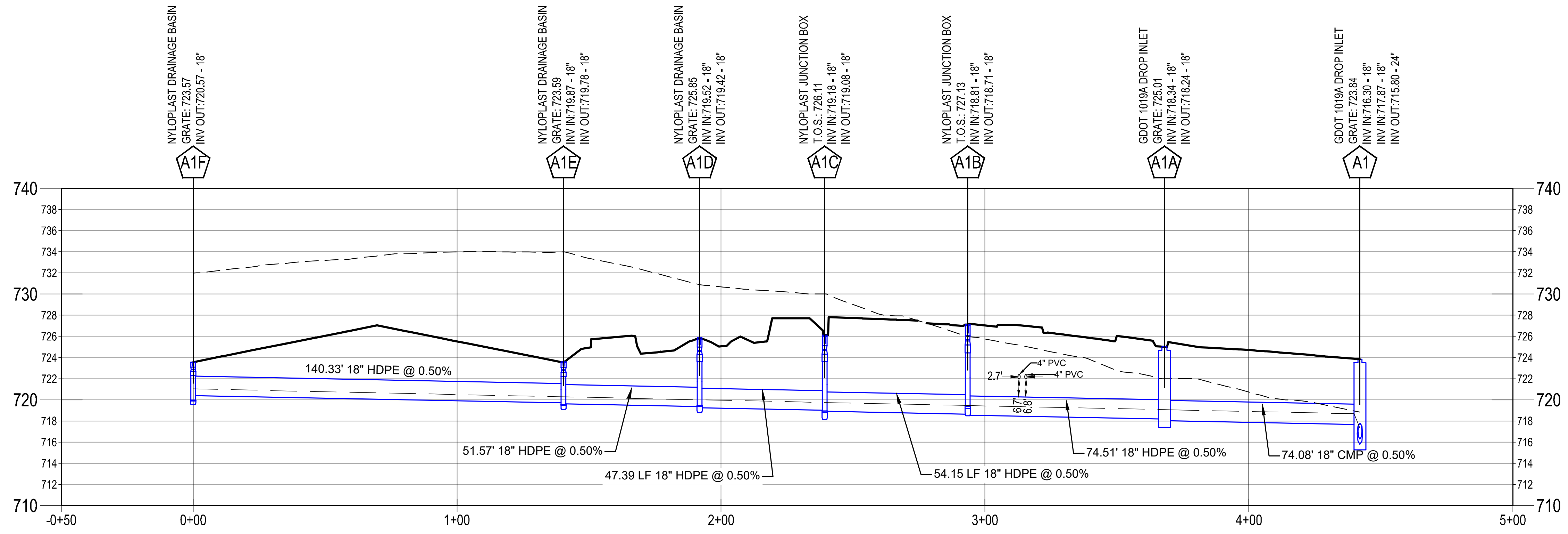
Sheet Number

C-4.1

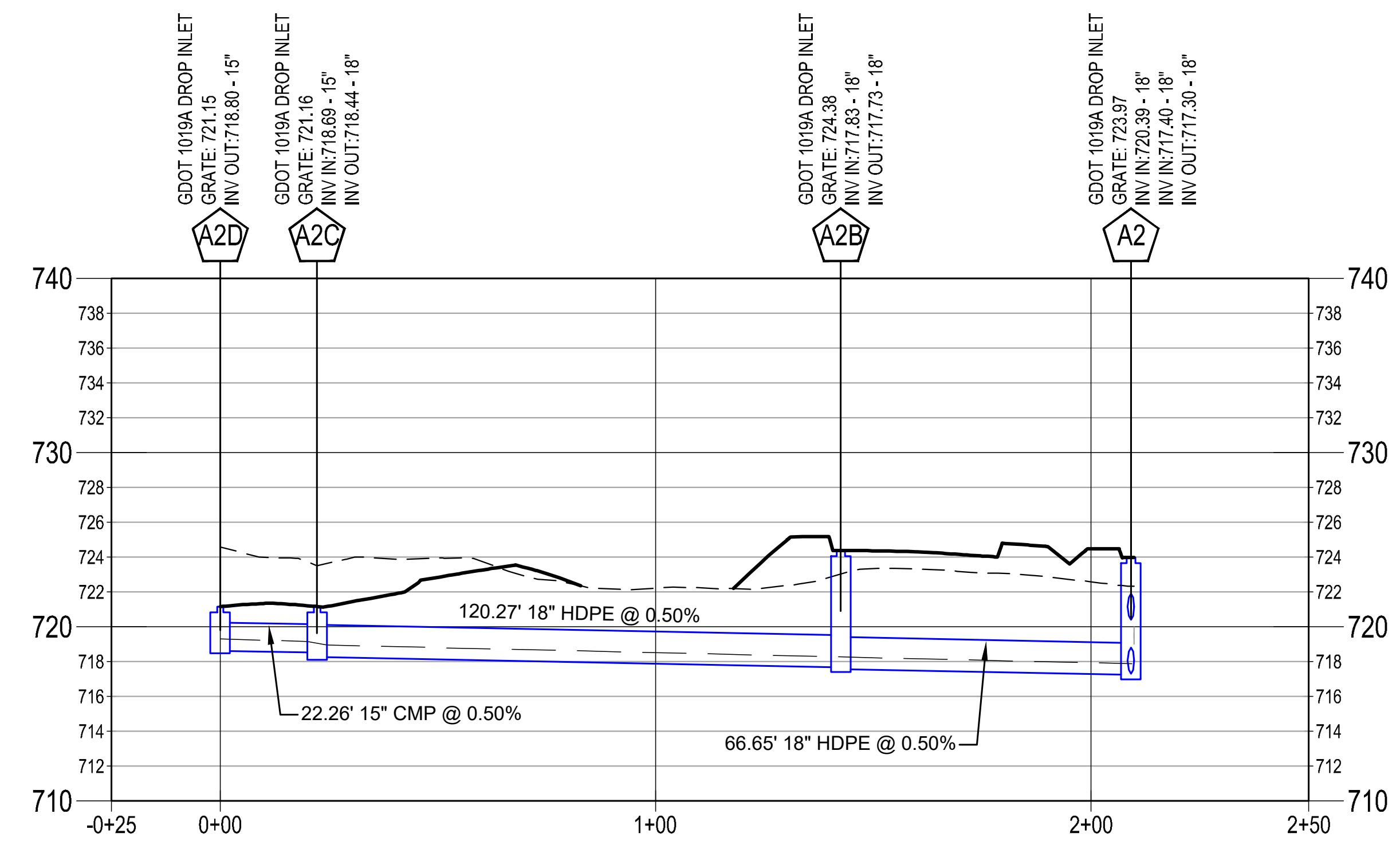
STORM A PROFILE
STA. -0+50 TO STA. 3+50


GDOT 1019A DROP INLET
GRATE: 725.34
INV OUT:721.13 - 18"
A3
GDOT 1019A DROP INLET
GRATE: 723.97
INV IN:720.39 - 18"
INV IN:717.40 - 18"
INV OUT:717.30 - 18"
A2
GDOT 1019A DROP INLET
GRATE: 723.84
INV IN:716.30 - 18"
INV IN:717.87 - 18"
INV OUT:715.80 - 24"
A1
HEADWALL
INV:715.50 - 24"
A0
740
738
736
734
732
730
728
726
724
722
720
718
716
714
712
710
4" SEWER PIPE
159.28' 18" CMP @ 0.63%
73.96' 18" CMP @ 1.00%
40.02' 24" CMP @ 0.75%
-0+50
0+00
1+00
2+00
3+00
3+50

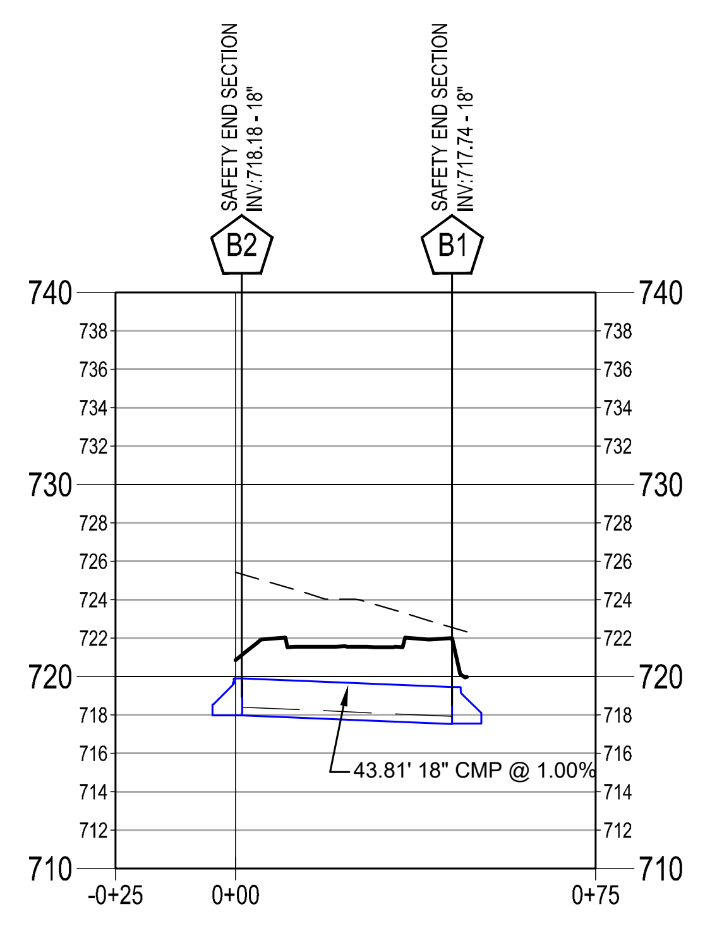
STORM A1 PROFILE
STA. -0+50 TO STA. 5+00


NYLOPLAST DRAINAGE BASIN
GRATE: 723.57
INV OUT:720.57 - 18"
A1F
NYLOPLAST DRAINAGE BASIN
GRATE: 723.59
INV IN:719.87 - 18"
INV OUT:719.78 - 18"
A1E
NYLOPLAST DRAINAGE BASIN
GRATE: 725.85
INV IN:719.52 - 18"
INV OUT:719.42 - 18"
A1D
NYLOPLAST JUNCTION BOX
T.O.S.: 726.11
INV IN:719.18 - 18"
INV OUT:719.08 - 18"
A1C
NYLOPLAST JUNCTION BOX
T.O.S.: 727.13
INV IN:718.81 - 18"
INV OUT:718.71 - 18"
A1B
GDOT 1019A DROP INLET
GRATE: 725.01
INV IN:718.34 - 18"
INV OUT:718.24 - 18"
A1A
GDOT 1019A DROP INLET
GRATE: 723.84
INV IN:716.30 - 18"
INV IN:717.87 - 18"
INV OUT:715.80 - 24"
A1
740
738
736
734
732
730
728
726
724
722
720
718
716
714
712
710
140.33' 18" HDPE @ 0.50%
4" PVC
2.7'
4" PVC
6.7
6.8
51.57' 18" HDPE @ 0.50%
47.39 LF 18" HDPE @ 0.50%
54.15 LF 18" HDPE @ 0.50%
74.51' 18" HDPE @ 0.50%
74.08' 18" CMP @ 0.50%
-0+50
0+00
1+00
2+00
3+00
4+00
5+00

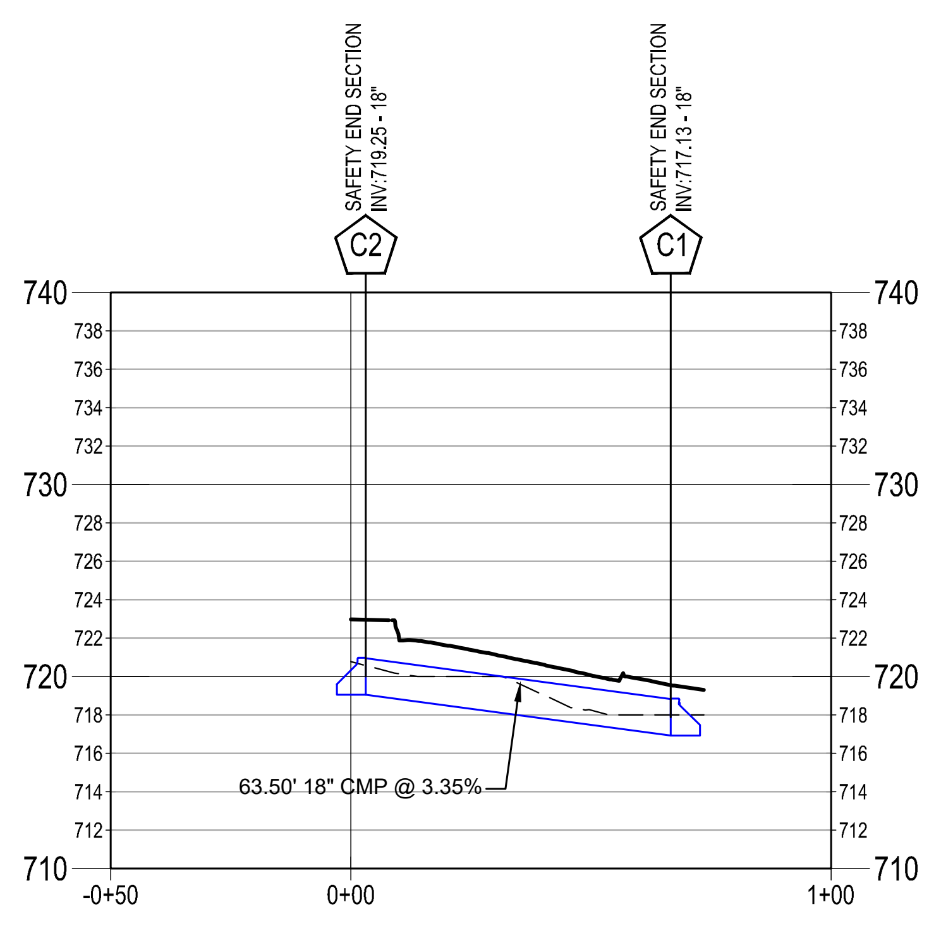
STORM A2 PROFILE
STA. -0+25 TO STA. 2+50


GDOT 1019A DROP INLET
GRATE: 721.15
INV OUT:718.80 - 15"
A2D
GDOT 1019A DROP INLET
GRATE: 721.16
INV IN:718.69 - 15"
INV OUT:718.44 - 18"
A2C
GDOT 1019A DROP INLET
GRATE: 724.38
INV IN:717.83 - 18"
INV OUT:717.73 - 18"
A2B
GDOT 1019A DROP INLET
GRATE: 723.97
INV IN:720.39 - 18"
INV IN:717.40 - 18"
INV OUT:717.30 - 18"
A2
740
738
736
734
732
730
728
726
724
722
720
718
716
714
712
710
120.27' 18" HDPE @ 0.50%
22.26' 15" CMP @ 0.50%
66.65' 18" HDPE @ 0.50%
-0+25
0+00
1+00
2+00
2+50

STORM B PROFILE
STA. -0+25 TO STA. 0+75


SAFETY END SECTION
INV:718.18 - 18"
B2
SAFETY END SECTION
INV:717.74 - 18"
B1
740
738
736
734
732
730
728
726
724
722
720
718
716
714
712
710
43.81' 18" CMP @ 1.00%
-0+25
0+00
0+75

STORM C PROFILE
STA. -0+50 TO STA. 1+00


SAFETY END SECTION
INV:719.25 - 18"
C2
SAFETY END SECTION
INV:717.13 - 18"
C1
740
738
736
734
732
730
728
726
724
722
720
718
716
714
712
710
63.50' 18" CMP @ 3.35%
-0+50
0+00
1+00

BRAVO SITE SET 09-18-2024

NOTE: 1019As AND HIGH CAPACITY GRATES IN CURB LINE TO BE HOODED

LEGEND

EG — — — — — — — —
FG ————————————
HGL — — — — — — — —

STORMWATER MANAGEMENT PROFILES
SCALE: HORIZONTAL: 1"=40'
VERTICAL: 1"=10'

25 YR STORM PIPE CHART

Line	ToLine	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	IncrCxA	TotalCxA	InletTime (min)	TimeConc (min)	RnfallInt (in/hr)	TotalRunoff (cfs)	AdnlFlow (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)	Line ID
1	Outfall	40.023	0.24	2.05	0.95	0.23	1.46	5	10.3	6.9	10.03	0	10.03	32.4	7.28	24	1.75	715.5	716.2	716.26	717.33	718.25	723.79	A1-A0
2	1	159.284	0.14	0.61	0.95	0.13	0.58	5	8.4	7.3	4.23	0	4.23	8.06	3.88	18	0.5	716.3	717.1	717.33	717.89	723.79	723.98	A2-A1
3	2	73.963	0.14	0.14	0.95	0.13	0.13	5	5	8.2	1.1	0	1.1	11.38	3.53	18	1	720.39	721.13	720.7	721.52	723.98	724.63	A3-A2
4	1	74.077	0.3	1.2	0.74	0.22	0.65	5	9.9	7	4.53	0	4.53	8.04	4.65	18	0.5	717.87	718.24	718.68	719.06	723.79	724.71	A1A-A1
5	4	74.508	0	0.9	0	0	0.43	5	9.2	7.1	3.05	0	3.05	8.02	3.85	18	0.5	718.34	718.71	719.06	719.37	724.71	726.31	A1B-A1A
6	5	54.148	0	0.9	0	0	0.43	5	8.7	7.2	3.1	0	3.1	8.03	4.16	18	0.5	718.81	719.08	719.46	719.75	726.31	726.1	A1C-A1B
7	6	47.39	0.13	0.9	0.63	0.08	0.43	5	8.3	7.3	3.14	0	3.14	8.1	4.18	18	0.51	719.18	719.42	719.83	720.09	726.1	725.71	A1D-A1C
8	7	51.568	0.37	0.77	0.45	0.17	0.35	5	7.8	7.5	2.59	0	2.59	8.08	3.95	18	0.5	719.52	719.78	720.1	720.39	725.71	723.6	A1E-A1D
9	8	140.333	0.4	0.4	0.45	0.18	0.18	5	5	8.2	1.48	0	1.48	8.03	3	18	0.5	719.87	720.57	720.39	721.03	723.6	723.57	A1F-A1E
10	2	38.418	0.06	0.33	0.95	0.06	0.31	5	8	7.4	2.32	0	2.32	8	3.33	18	0.49	717.2	717.39	717.89	717.97	723.98	723.27	A2A-A2
11	10	51.984	0.04	0.27	0.95	0.04	0.26	5	7.2	7.6	1.95	0	1.95	8.05	3.64	18	0.5	717.49	717.75	717.99	718.28	723.27	724.53	A2B-A2A
12	11	117.103	0.05	0.23	0.95	0.05	0.22	5	5.3	8.1	1.78	0	1.78	8.08	3.55	18	0.5	717.85	718.44	718.33	718.94	724.53	721.16	A2C-A2B
13	12	22.262	0.18	0.18	0.95	0.17	0.17	5	5	8.2	1.41	0	1.41	4.92	3.4	15	0.49	718.69	718.8	719.15	719.27	721.16	721.15	A2D-A2C
14	Outfall	43.806	0.13	0.13	0.35	0.05	0.05	5	5	8.2	0.38	0	0.38	11.4	2.6	18	1	717.74	718.18	717.93	718.41	719.45	719.89	B0-B1
15	Outfall	63.499	0.36	0.36	0.6	0.22	0.22	5	5	8.2	1.78	0	1.78	20.79	5.31	18	3.34	717.13	719.25	717.43	719.75	718.83	720.96	C2-C1

OWNER/DEVELOPER
COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

CONTRACTOR
COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA 30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
EMAIL:
MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON,
GA 30650
PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896
MADISON, GA 30650
PHONE: 706.342.1104

JASON P. BROWN
LEVEL II CERTIFIED
DESIGN PROFESSIONAL
#53274 - EXP. 05.01.2026

24-HOUR CONTACT
MIKE MCCROREY
404.644.2939

GEORGIA811
www.Georgia811.com
Contact 811 before you dig

Utilities/Services shown are for Contractors' convenience. Items are shown schematically and neither the site design professional nor the owner assumes any responsibility for variances in their actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to secure and use the services of a private utility locator firm during the entire course of work and shall pay for said services. Contractor shall locate utilities prior to any disturbance (including field verifying location and depth of utilities that are to be saved and protected). Contractor shall notify the site design professional of any utility conflicts prior to installation of new utilities, grading, etc. The Contractor, at their expense, shall be responsible to repair, replace and/or relocate, as necessary, any utilities damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

georgia civil
CIVIL ENGINEERING
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LAND SURVEYING
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Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR
ENRICHMENT CENTER
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

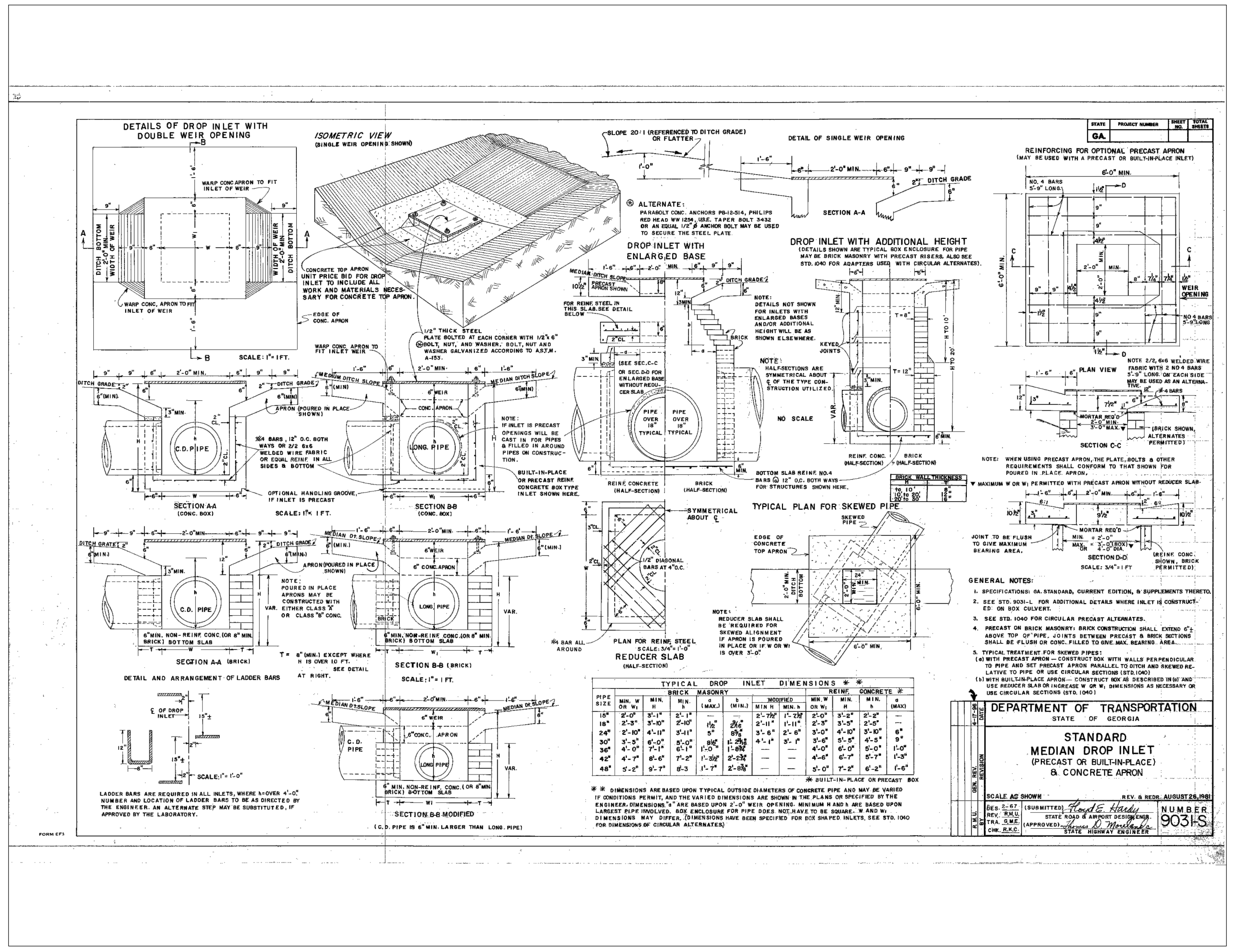
DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

STORMWATER
MANAGEMENT
PROFILES

Sheet Number

C-4.2


DETAILS OF DROP INLET WITH DOUBLE WEIR OPENING
ISOMETRIC VIEW (SINGLE WEIR OPENING SHOWN)
DETAIL OF SINGLE WEIR OPENING
REINFORCING FOR OPTIONAL PRECAST APRON
DROP INLET WITH ENLARGED BASE
DROP INLET WITH ADDITIONAL HEIGHT
SECTION A-A (CONC. BOX)
SECTION B-B (CONC. BOX)
SECTION A-A (BRICK)
SECTION B-B (BRICK)
SECTION B-B MODIFIED
SECTION C-C
SECTION D-D
PLAN VIEW
REDUCER SLAB
TYPICAL PLAN FOR SKEWED PIPE
DETAIL AND ARRANGEMENT OF LADDER BARS
NO SCALE
SCALE: 1" = 1 FT.
FORM EF3

TYPICAL DROP INLET DIMENSIONS * *

PIPE SIZE	BRICK MASONRY MIN. W OR W1	MIN. H	MIN. h	a (MAX.)	b (MIN.)	MODIFIED MIN H	MODIFIED MIN. h	REINF. CONCRETE * MIN. W OR W1	MIN. H	MIN. h	a (MAX)
15"	2'-0"	3'-1"	2'-1"	—	—	2'-7½"	1'-7½"	2'-0"	3'-2"	2'-2"	—
18"	2'-3"	3'-10"	2'-10"	1½"	2⁹⁄₁₆"	2'-11"	1'-11"	2'-3"	3'-5"	2'-5"	—
24"	2'-10"	4'-11"	3'-11"	5"	8⅞"	3'-6"	2'-6"	3'-0"	4'-10"	3'-10"	6"
30"	3'-5"	6'-0"	5'-0"	8½"	1'-2⅞"	4'-1"	3'-1"	3'-6"	5'-5"	4'-5"	9"
36"	4'-0"	7'-1"	6'-1"	1'-0"	1'-8¾"	—	—	4'-0"	6'-0"	5'-0"	1'-0"
42"	4'-7"	8'-6"	7'-2"	1'-3½"	2'-2¾"	—	—	4'-6"	6'-7"	5'-7"	1'-3"
48"	5'-2"	9'-7"	8'-3	1'-7"	2'-8⅝"	—	—	5'-0"	7'-2"	6'-2"	1'-6"

* BUILT-IN-PLACE OR PRECAST BOX

* * DIMENSIONS ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPE AND MAY BE VARIED IF CONDITIONS PERMIT, AND THE VARIED DIMENSIONS ARE SHOWN IN THE PLANS OR SPECIFIED BY THE ENGINEER. DIMENSIONS "a" ARE BASED UPON 2'-0" WEIR OPENING. MINIMUM H AND h ARE BASED UPON LARGEST PIPE INVOLVED. BOX ENCLOSURE FOR PIPE DOES NOT HAVE TO BE SQUARE. W AND W1 DIMENSIONS MAY DIFFER. (DIMENSIONS HAVE BEEN SPECIFIED FOR BOX SHAPED INLETS. SEE STD. 1040 FOR DIMENSIONS OF CIRCULAR ALTERNATES)

GENERAL NOTES:

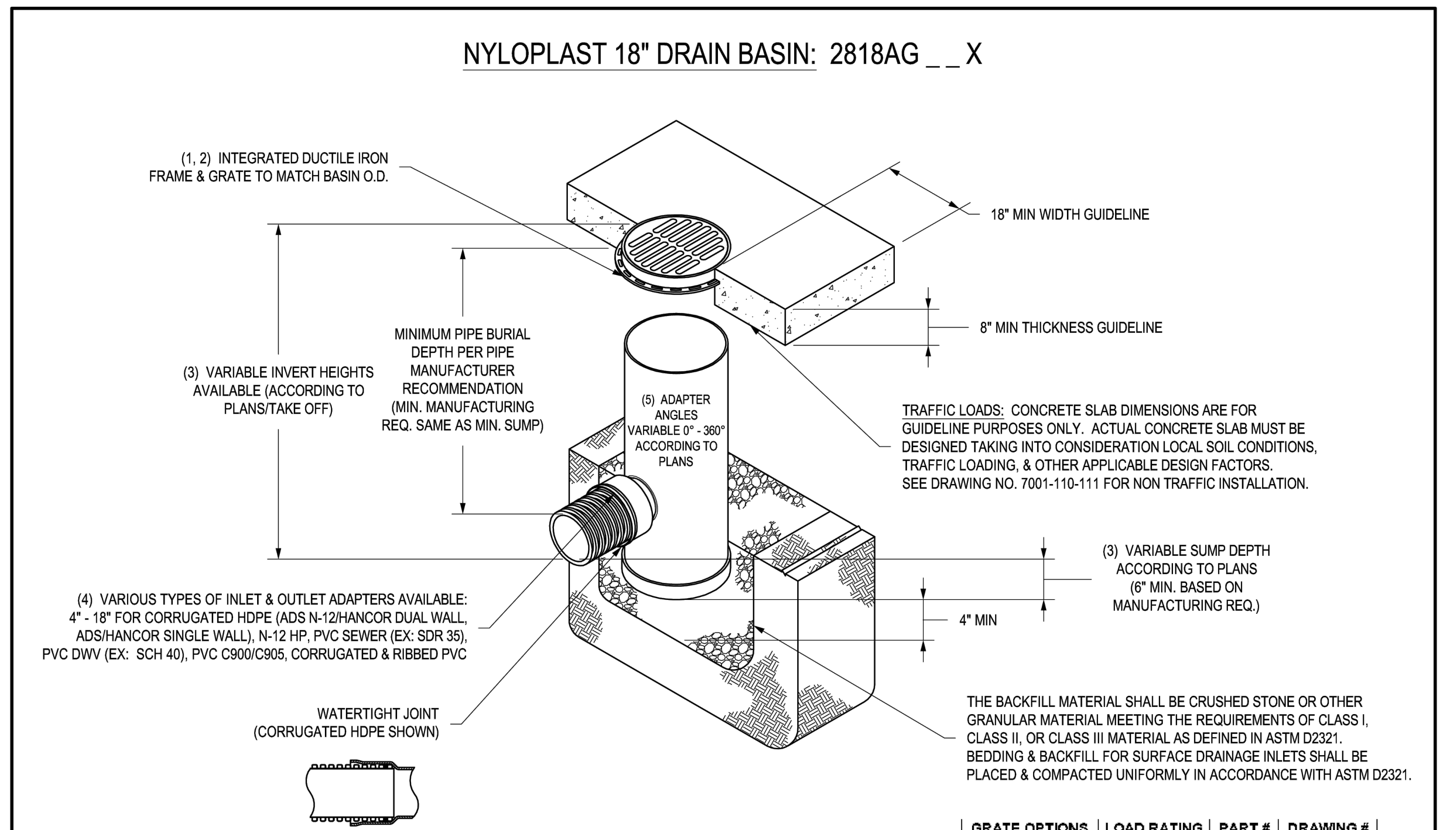
1. SPECIFICATIONS: GA. STANDARD, CURRENT EDITION, & SUPPLEMENTS THERETO.
2. SEE STD. 9031-L FOR ADDITIONAL DETAILS WHERE INLET IS CONSTRUCTED ON BOX CULVERT.
3. SEE STD. 1040 FOR CIRCULAR PRECAST ALTERNATES.
4. PRECAST ON BRICK MASONRY: BRICK CONSTRUCTION SHALL EXTEND 6"± ABOVE TOP OF PIPE. JOINTS BETWEEN PRECAST & BRICK SECTIONS SHALL BE FLUSH OR CONC. FILLED TO GIVE MAX. BEARING AREA.
5. TYPICAL TREATMENT FOR SKEWED PIPES:
   (a) WITH PRECAST APRON — CONSTRUCT BOX WITH WALLS PERPENDICULAR TO PIPE AND SET PRECAST APRON PARALLEL TO DITCH AND SKEWED RELATIVE TO PIPE OR USE CIRCULAR SECTIONS (STD. 1040)
   (b) WITH BUILT-IN-PLACE APRON — CONSTRUCT BOX AS DESCRIBED IN (a) AND USE REDUCER SLAB OR INCREASE W OR W1 DIMENSIONS AS NECESSARY OR USE CIRCULAR SECTIONS (STD. 1040)

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
MEDIAN DROP INLET
(PRECAST OR BUILT-IN-PLACE)
& CONCRETE APRON

SCALE AS SHOWN
REV. & REDR. AUGUST 26, 1981
DES. 2-67 REV. R.M.U. TRA. G.M.E. CHK. R.K.C.
(SUBMITTED) Floyd E. Hardy STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) Thomas D. Moreland STATE HIGHWAY ENGINEER
NUMBER 9031-S

NYLOPLAST 18" DRAIN BASIN: 2818AG _ _ X


(1, 2) INTEGRATED DUCTILE IRON FRAME & GRATE TO MATCH BASIN O.D.
18" MIN WIDTH GUIDELINE
8" MIN THICKNESS GUIDELINE
MINIMUM PIPE BURIAL DEPTH PER PIPE MANUFACTURER RECOMMENDATION (MIN. MANUFACTURING REQ. SAME AS MIN. SUMP)
(3) VARIABLE INVERT HEIGHTS AVAILABLE (ACCORDING TO PLANS/TAKE OFF)
(5) ADAPTER ANGLES VARIABLE 0° - 360° ACCORDING TO PLANS
(3) VARIABLE SUMP DEPTH ACCORDING TO PLANS (6" MIN. BASED ON MANUFACTURING REQ.)
4" MIN
(4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE: 4" - 18" FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL, ADS/HANCOR SINGLE WALL), N-12 HP, PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC
WATERTIGHT JOINT (CORRUGATED HDPE SHOWN)

TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS. SEE DRAWING NO. 7001-110-111 FOR NON TRAFFIC INSTALLATION.

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1899CGP	7001-110-212
STANDARD	MEETS H-20	1899CGS	7001-110-213
SOLID COVER	MEETS H-20	1899CGC	7001-110-214
DOME	N/A	1899CGD	7001-110-215
DROP IN GRATE	LIGHT DUTY	1801DI	7001-110-074

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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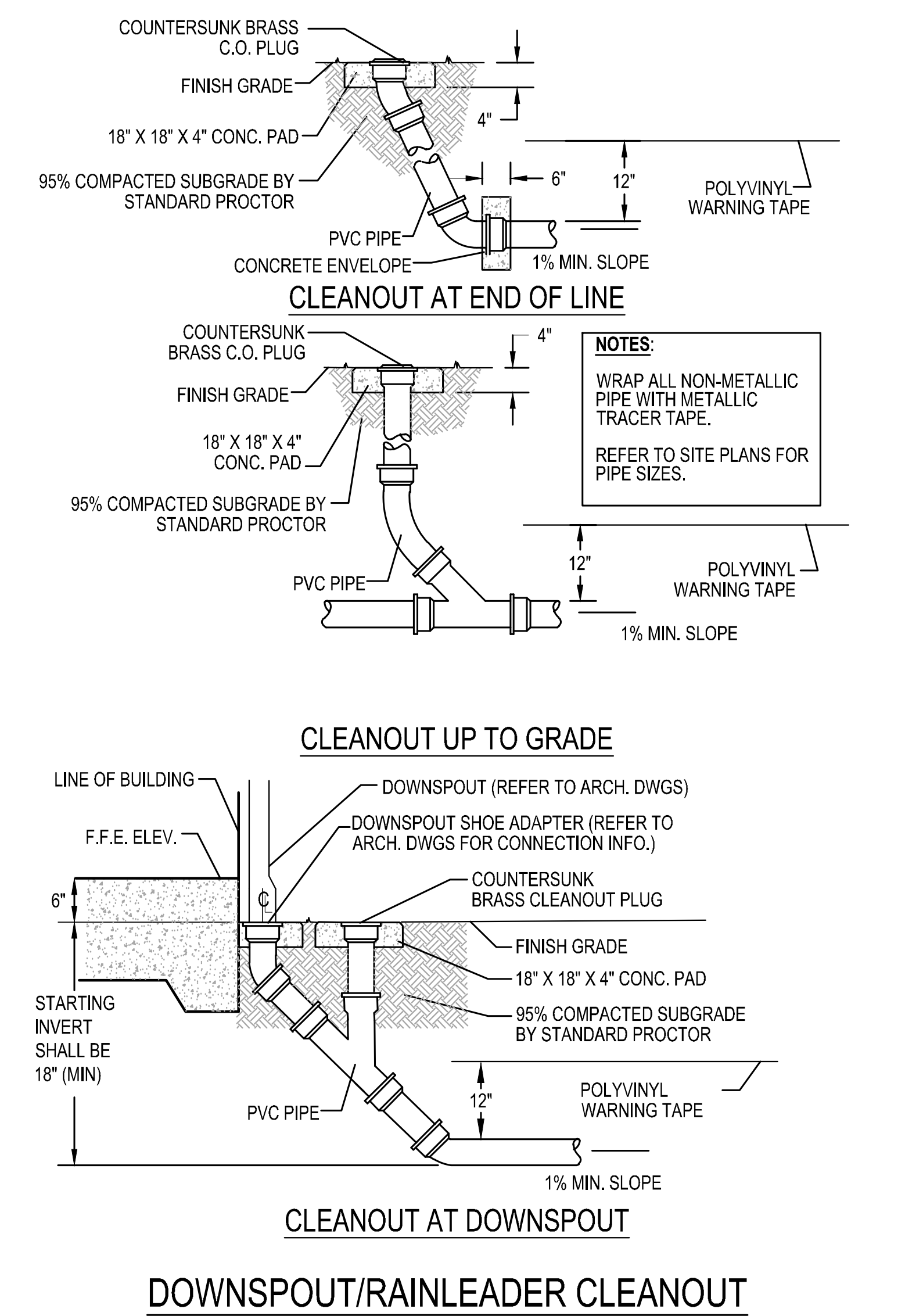
DRAWN BY EBC
DATE 04-03-06
REVISED BY NMH
DATE 03-14-16
DWG SIZE A
MATERIAL
PROJECT NO./NAME
SCALE 1:30 SHEET 1 OF 1
ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com
TITLE
18 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DWG NO. 7001-110-191 REV E


COUNTERSUNK BRASS C.O. PLUG
FINISH GRADE
18" X 18" X 4" CONC. PAD
95% COMPACTED SUBGRADE BY STANDARD PROCTOR
PVC PIPE
CONCRETE ENVELOPE
4"
6"
12"
POLYVINYL WARNING TAPE
1% MIN. SLOPE
CLEANOUT AT END OF LINE
COUNTERSUNK BRASS C.O. PLUG
CLEANOUT UP TO GRADE
LINE OF BUILDING
F.F.E. ELEV.
DOWNSPOUT (REFER TO ARCH. DWGS)
DOWNSPOUT SHOE ADAPTER (REFER TO ARCH. DWGS FOR CONNECTION INFO.)
COUNTERSUNK BRASS CLEANOUT PLUG
STARTING INVERT SHALL BE 18" (MIN)
CLEANOUT AT DOWNSPOUT

NOTES:

WRAP ALL NON-METALLIC PIPE WITH METALLIC TRACER TAPE.

REFER TO SITE PLANS FOR PIPE SIZES.

DOWNSPOUT/RAINLEADER CLEANOUT

N.T.S.

BRAVO SITE SET 09-18-2024

CLASSES OF EMBEDMENT AND BACKFILL MATERIALS

ASTM D2321 (1) (CSA B182.11) CLASS	DESCRIPTION	ASTM D2487 NOTATION	ASTM D2487 DESCRIPTION	AASHTO M43 NOTATION	AASHTO M145 NOTATION	BNQ 2560	PERCENTAGE PASSING SIEVE SIZES 1 1/2 IN. (40mm)	3/8" (9.5mm)	No. 4 (4.75mm)	NO. 200 (0.075mm)	ATTERBERG LIMITS LL	PI	COEFFICIENTS Cu	Cc
I (2)	CRUSHED ROCK, ANGULAR (3)	N/A	ANGULAR CRUSHED STONE OR ROCK, CRUSHED GRAVEL, CRUSHED SLAG; LARGE VOIDS WITH LITTLE OR NO FINES	5, 56, 57 (4), 6, 67 (4)	N/A		100%	<25%	<15%	<12%	NON PLASTIC		N/A	
II	CLEAN, COARSE-GRAINED SOILS	GW	WELL-GRADED GRAVEL, GRAVEL-SAND MIXTURES; LITTLE OR NO FINES	5, 6	A1, A3	CG-14, MG-20	100%		<50% of "COARSE FRACTION"	<5%	NON PLASTIC		>4	1 to 3
		GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES; LITTLE OR NO FINES	56, 57, 67									4	<1 or >3
		SW	WELL-GRADED SANDS, GRAVELLY SANDS; LITTLE OR NO FINES						>50% of "COARSE FRACTION"				>6	1 to 3
		SP (6)	POORLY-GRADED SANDS, GRAVELLY SAND; LITTLE OR NO FINES										<6	<1 or >3
	COARSE-GRAINED SOILS, BODERLINE CLEAN TO W/FINES	GW-GC, SP-SM	SANDS AND GRAVELS WHICH ARE BORDERLINE BETWEEN CLEAN AND WITH FINES	N/A			100%		VARIES	5% TO 12%	NON PLASTIC		SAME AS FOR GW, GP, SW AND SP	
III	COURSE-GRAINED SOILS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	GRAVEL & SAND WITH <10% FINES	A-2-4, A-2-5, A-2-6, OR A-4 OR A-6 SOILS WITH MORE THAN 30% RETAINED ON #200 SIEVE		100%		<50% of "COARSE FRACTION"	12% TO 50%	N/A	<4 OR <"A" LINE	N/A	
		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES									<7 & >"A" LINE		
		SM	SILTY SANDS, SAND-CLAY MIXTURES						>50% of "COARSE FRACTION"			>4 OR <"A" LINE		
		SC	CLAYEY SANDS, SAND-CLAY MIXTURES									>7 & >"A" LINE		
	INORGANIC FINE-GRAINED SOILS	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY						100%	> 30% (RETAINED)	<50	<4 OR <"A" LINE		
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY; GRAVELLY, SANDY, OR SILTY CLAYS; LEAN CLAYS							> 30% (RETAINED)		>7 & >"A" LINE		
IV (5)	INORGANICS FINE-GRAINED SOILS	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY	N/A	A-2-7 OR A-4 OR A-6 SOILS WITH 30% OR LESS RETAINED ON #200 SIEVE		100%		100%	< 30% (Retained)	<50	<4 or <"A" LINE	N/A	
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY; GRAVELLY, SANDY, OR SILTY CLAYS; LEAN CLAYS	N/A								>7 & >"A" LINE		
V (7)	INORGANIC FINE-GRAINED SOILS	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	N/A	A5, A7		100%		100%	>50%	>50	<"A" LINE	N/A	
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	N/A								>"A" LINE		
	ORGANIC SOILS OR HIGHLY ORGANIC SOILS	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	N/A			100%		100%	>50%	<50	<4 OR <"A" LINE	N/A	
		OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	N/A							>50	<"A" LINE		
		PT	PEAT AND OTHER HIGH ORGANIC SOILS	N/A										

NOTES:

1. REFER TO ASTM D2321 / CSA B182.11 / BNQ 2560 FOR MORE COMPLETE SOIL DESCRIPTIONS.
2. CLASS I MATERIALS ALLOW FOR A BROADER RANGE OF FINES THAN PREVIOUS VERSIONS OF D2321 / B182.11. WHEN SPECIFYING CLASS I MATERIAL FOR INFILTRATION SYSTEMS, THE ENGINEERING SHALL INCLUDE A REQUIREMENT FOR AN ACCEPTABLE LEVEL OF FINES.
3. ALL PARTICLE FACES SHALL BE FRACTURED.
4. ASSUMES LESS THAN 25% PASSES THE 3/8" SIEVE.
5. CLASS IV MATERIALS REQUIRE A GEOTECHNICAL EVALUATION PRIOR TO USE AND SHOULD ONLY BE USED AS BACKFILL UNDER THE GUIDANCE OF A QUALIFIED ENGINEER.
6. UNIFORM FINE SANDS (SP) WITH MORE THAN 50% PASSING A 100 SIEVE BEHAVE LIKE SILTS AND SHOULD BE TREATED AS CLASS III SOILS IF ALLOWED.
7. CLASS V MATERIALS SHALL NOT BE PERMITTED AS BEDDING AND BACKFILL MATERIAL.

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
2	REV. DRAWING NAME OR NUMBER	TJR	01/28/16	

NOTE: ALL DIMENSIONS ARE ± 1/2 FOOT.

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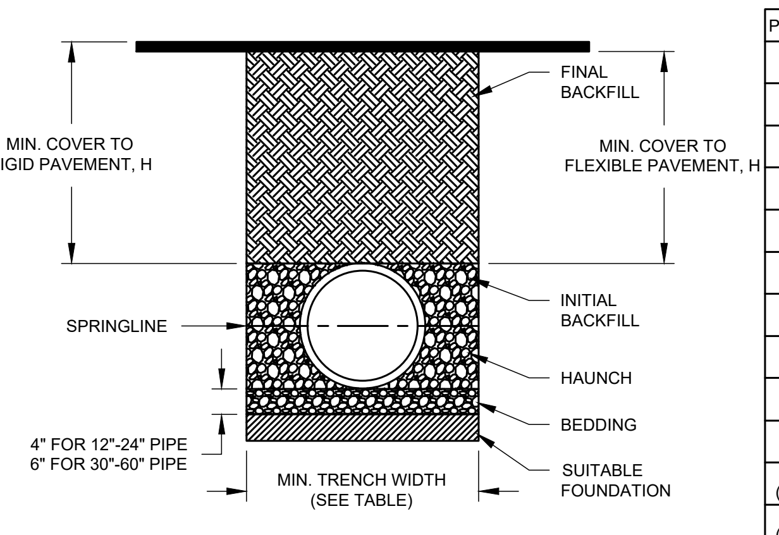
ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

DIA. DET/RET SYSTEM
CLASSES OF EMBEDMENT AND AND BACKFILL MATERIALS
DRAWING NUMBER: STD-109
ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OHIO 43026
DRAWN BY: TJR
DATE: 06/01/15
CK'D BY:
SCALE: NTS
SHEET 1 OF 1

RECOMMENDED MINIMUM TRENCH WIDTHS


MIN. COVER TO RIGID PAVEMENT, H
MIN. COVER TO FLEXIBLE PAVEMENT, H
FINAL BACKFILL
INITIAL BACKFILL
SPRINGLINE
HAUNCH
BEDDING
SUITABLE FOUNDATION
4" FOR 12"-24" PIPE
6" FOR 30"-60" PIPE
MIN. TRENCH WIDTH (SEE TABLE)

PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING TO THE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

PIPE DIAM.	SURFACE LIVE LOADING CONDITION H-25	HEAVY CONSTRUCTION (75T AXLE LAOD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

MAXIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	CLASS I COMPACTED	CLASS I DUMPED	CLASS II 95%	CLASS II 90%	CLASS III 95%
4" (100mm)	37 (11.3m)	18 (5.5m)	25 (7.6m)	18 (5.5m)	18 (5.5m)
6" (150mm)	44 (13.4m)	20 (6.1m)	29 (8.8m)	20 (6.1m)	21 (6.4m)
8" (200mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
10" (250mm)	38 (11.6m)	18 (5.5m)	26 (7.9m)	18 (5.5m)	18 (5.5m)
12" (300mm)	35 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
15" (375mm)	38 (11.6m)	17 (5.2m)	25 (7.6m)	17 (5.2m)	18 (5.5m)
18" (450mm)	36 (11.0m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
24" (600mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
30" (750mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	13 (4.0m)	13 (4.0m)
42" (1050mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
48" (1200mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (Ys) = 120 PCF

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
6	INITIAL BACKFILL	JAB	04/02/20	

NOTE: ALL DIMENSIONS ARE ± 1/2 FOOT.

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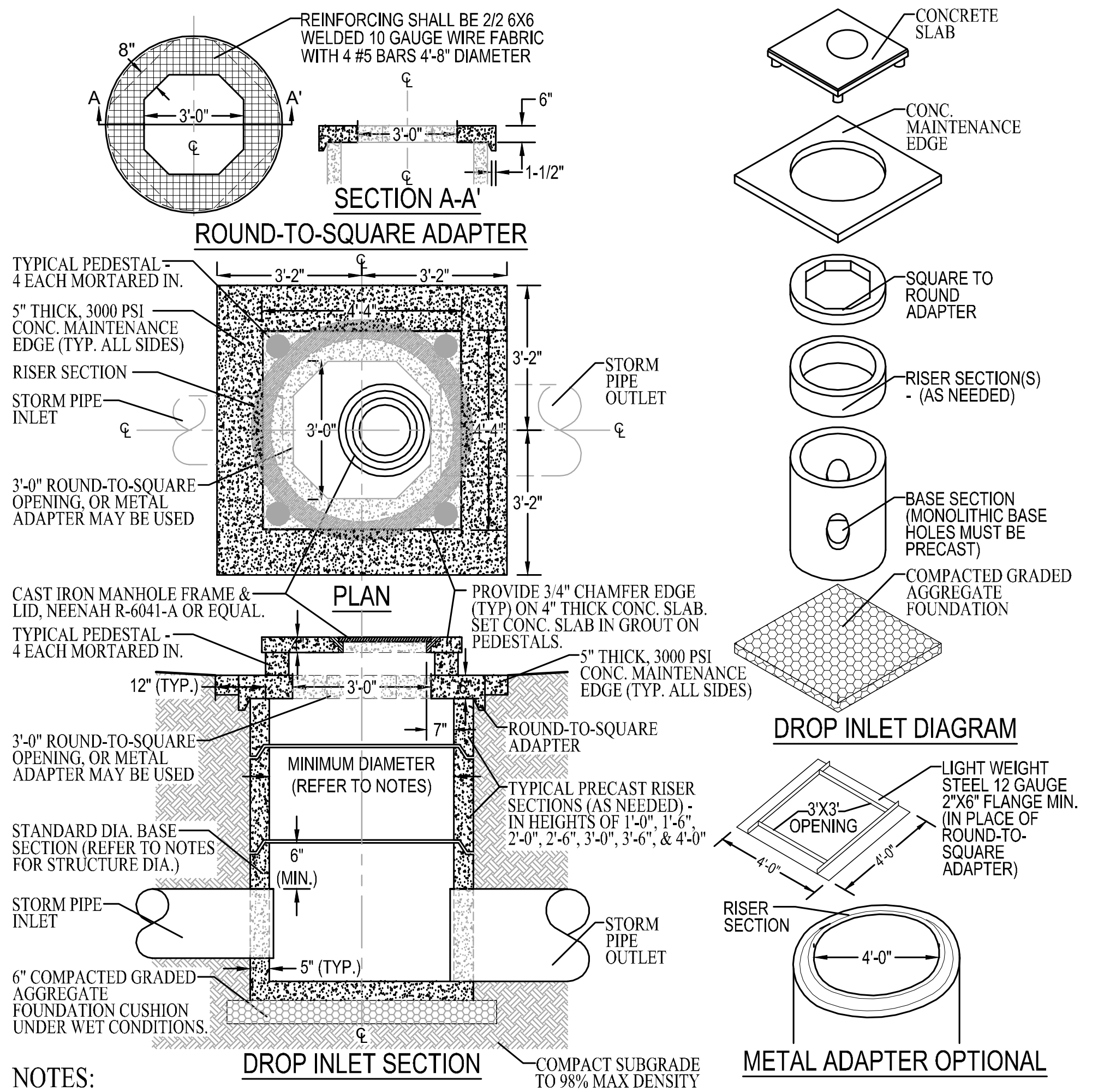
ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

DIA. DET/RET SYSTEM
TRENCH INSTALLATION DETAIL (N-12 PER AASHTO)
DRAWING NUMBER: STD-101
ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OHIO 43026
DRAWN BY: TJR
DATE: 12/29/16
CK'D BY:
SCALE: NTS
SHEET 1 OF 1


REINFORCING SHALL BE 2/2 6X6 WELDED 10 GAUGE WIRE FABRIC WITH 4 #5 BARS 4'-8" DIAMETER
8"
3'-0"
A
A'
6"
1-1/2"
SECTION A-A'
ROUND-TO-SQUARE ADAPTER
TYPICAL PEDESTAL - 4 EACH MORTARED IN.
5" THICK, 3000 PSI CONC. MAINTENANCE EDGE (TYP. ALL SIDES)
RISER SECTION
STORM PIPE INLET
STORM PIPE OUTLET
3'-0" ROUND-TO-SQUARE OPENING, OR METAL ADAPTER MAY BE USED
3'-2"
4'-4"
PLAN
CAST IRON MANHOLE FRAME & LID, NEENAH R-6041-A OR EQUAL.
PROVIDE 3/4" CHAMFER EDGE (TYP) ON 4" THICK CONC. SLAB. SET CONC. SLAB IN GROUT ON PEDESTALS.
12" (TYP.)
7"
ROUND-TO-SQUARE ADAPTER
MINIMUM DIAMETER (REFER TO NOTES)
TYPICAL PRECAST RISER SECTIONS (AS NEEDED) - IN HEIGHTS OF 1'-0", 1'-6", 2'-0", 2'-6", 3'-0", 3'-6", & 4'-0"
STANDARD DIA. BASE SECTION (REFER TO NOTES FOR STRUCTURE DIA.)
6" (MIN.)
5" (TYP.)
6" COMPACTED GRADED AGGREGATE FOUNDATION CUSHION UNDER WET CONDITIONS.
DROP INLET SECTION
COMPACT SUBGRADE TO 98% MAX DENSITY
CONCRETE SLAB
CONC. MAINTENANCE EDGE
SQUARE TO ROUND ADAPTER
RISER SECTION(S) - (AS NEEDED)
BASE SECTION (MONOLITHIC BASE HOLES MUST BE PRECAST)
COMPACTED GRADED AGGREGATE FOUNDATION
DROP INLET DIAGRAM
LIGHT WEIGHT STEEL 12 GAUGE 2"X6" FLANGE MIN. (IN PLACE OF ROUND-TO-SQUARE ADAPTER)
3'X3' OPENING
4'-0"
RISER SECTION
METAL ADAPTER OPTIONAL

NOTES:

1. CONTRACTOR HAS THE OPTION OF USING PRECAST, BRICK, OR POURED-IN-PLACE STORM STRUCTURES.
2. ALL PRECAST CONCRETE SHALL BE 4000 PSI.
3. SUBGRADE SHALL BE COMPACTED TO 98% MAX. DRY DENSITY PER STANDARD PROCTOR.
4. REINFORCEMENT STEEL SHALL BE PLACED TO ALLOW A MIN. OF 1 1/2" COVER, EXCEPT WHERE NOTED.
5. REINFORCEMENT STEEL SHALL BE OF INTERMEDIATE GRADE & SHALL CONSIST OF NO. 4 @ 6" O.C. E.W.
6. WHEN 60" & 72" BASE SECTIONS ARE REQUIRED, AN ADAPTER SECTION SHALL BE USED IN CONJUNCTION WITH THE STANDARD CONE.
7. ALL JOINTS BETWEEN PRECAST BASE, RISERS, AND ROUND-TO-SQUARE ADAPTERS SHALL BE KEYED. ALL JOINTS SHALL BE GROUTED INSIDE AND OUTSIDE.
8. STORM MANHOLE STRUCTURES THAT JOIN REINFORCED CONCRETE PIPE SHALL HAVE A BRICK OR CONCRETE COLLAR WALL.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE DIAMETER OF THE STRUCTURES WITH THE SIZE AND/OR NUMBER OF PIPE PENETRATIONS IN THE STRUCTURE. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR STRUCTURES LOCATED ON PIPE LARGER THAN 72" IN DIAMETER.
10. CONTRACTOR SHALL PROVIDE DRAINAGE STRUCTURE STEPS (CAST IRON) ON STRUCTURES DEEPER THAN 4'-0".
11. CAST IRON DRAINAGE STRUCTURE STEPS SHALL BE NEENAH R-1980-J 0R EQUAL.
12. STEPS TO BE PLACED ON VACANT WALL WHEN POSSIBLE.
13. MANHOLE RING SHALL BE OFFSET TOWARD WALL WITH STEPS AND CENTERED ON CENTERLINE OF STEPS
14. STAGGER STEPS 2" EACH WAY FROM CENTERLINE OF MANHOLE RING.
15. TOP STEP SHALL BE 24" BELOW TOP OF 4" CONCRETE SLAB .
16. STEP SPACING SHALL BE 16", BOTTOM STEP SHALL BE NO HIGHER THAN 16" FROM INVERT.

PRECAST DROP INLET (D.I.) - PEDESTAL TOP

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JASON P. BROWN

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COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

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DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

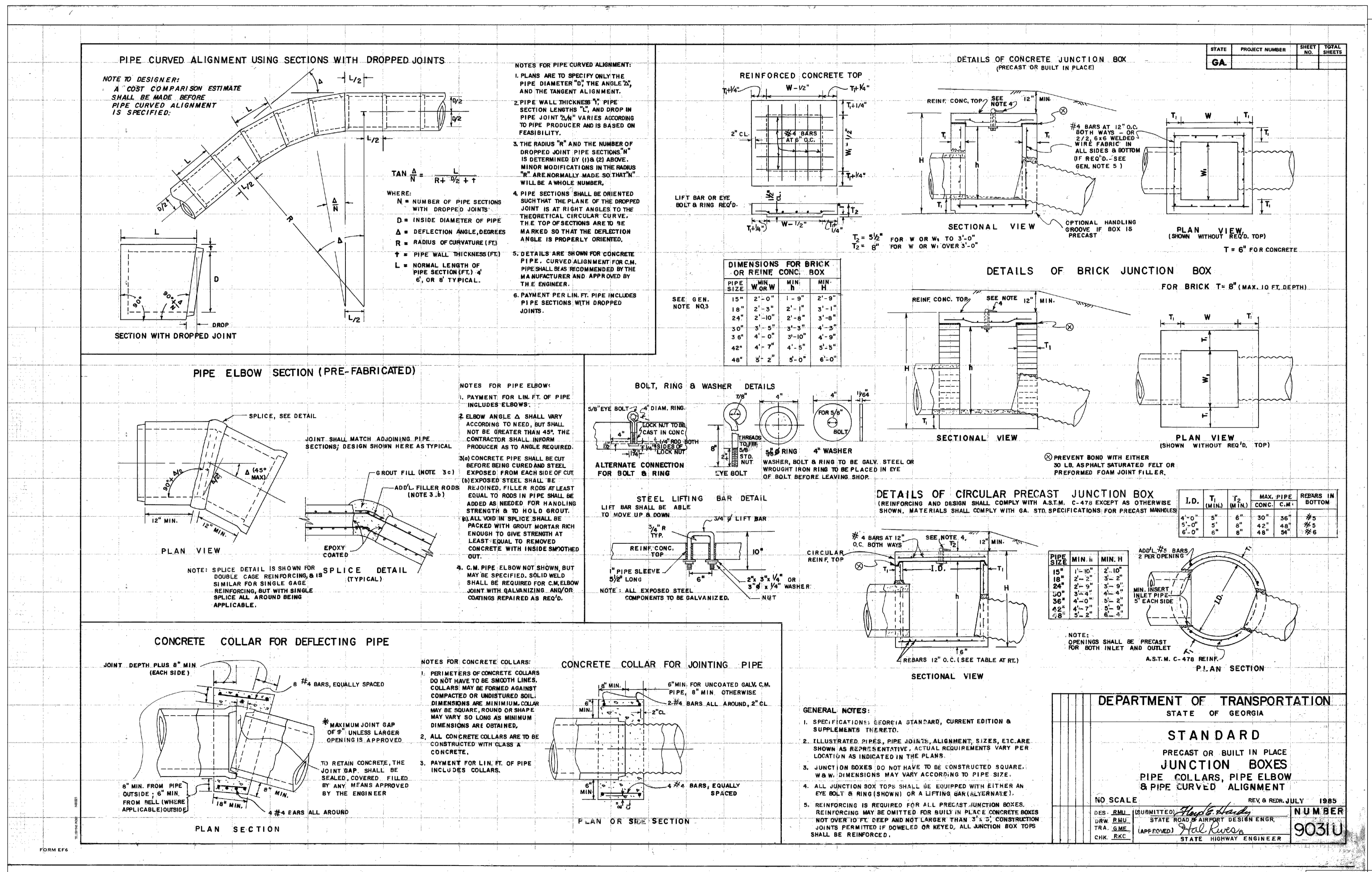
Sheet Title

STORMWATER
MANAGEMENT
DETAILS

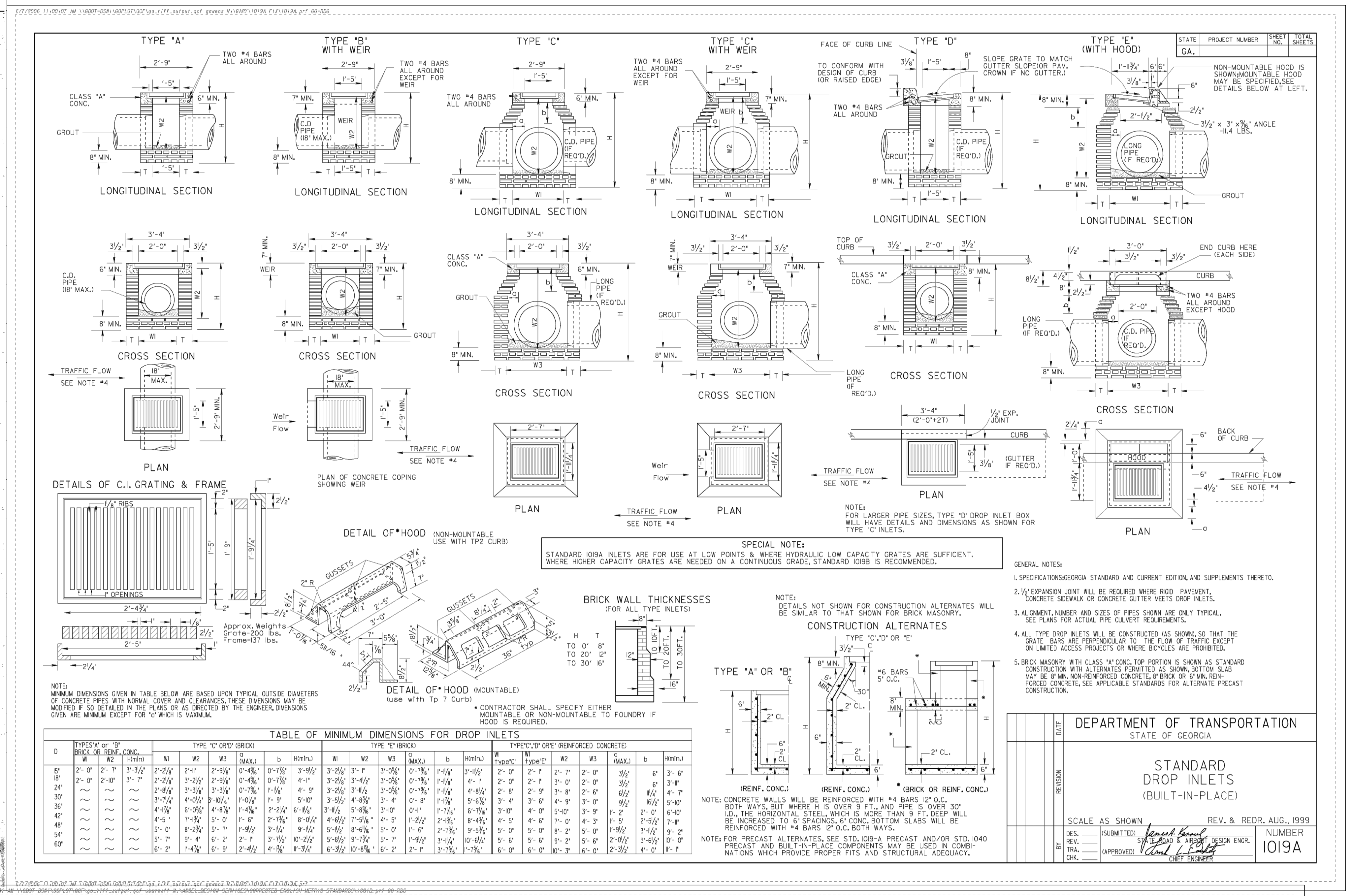
Sheet Number

C-4.3

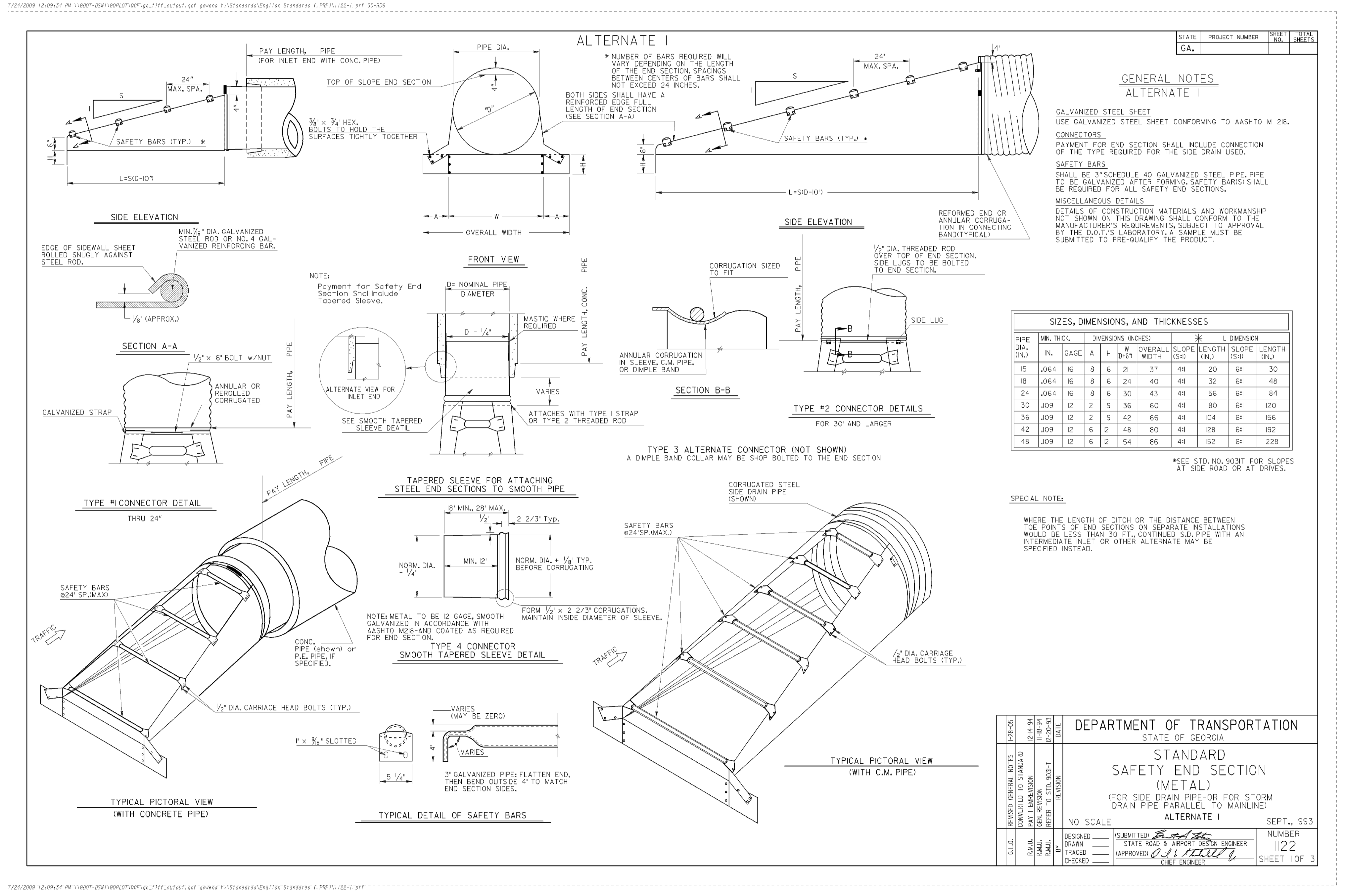
BRAVO SITE SET 09-18-2024



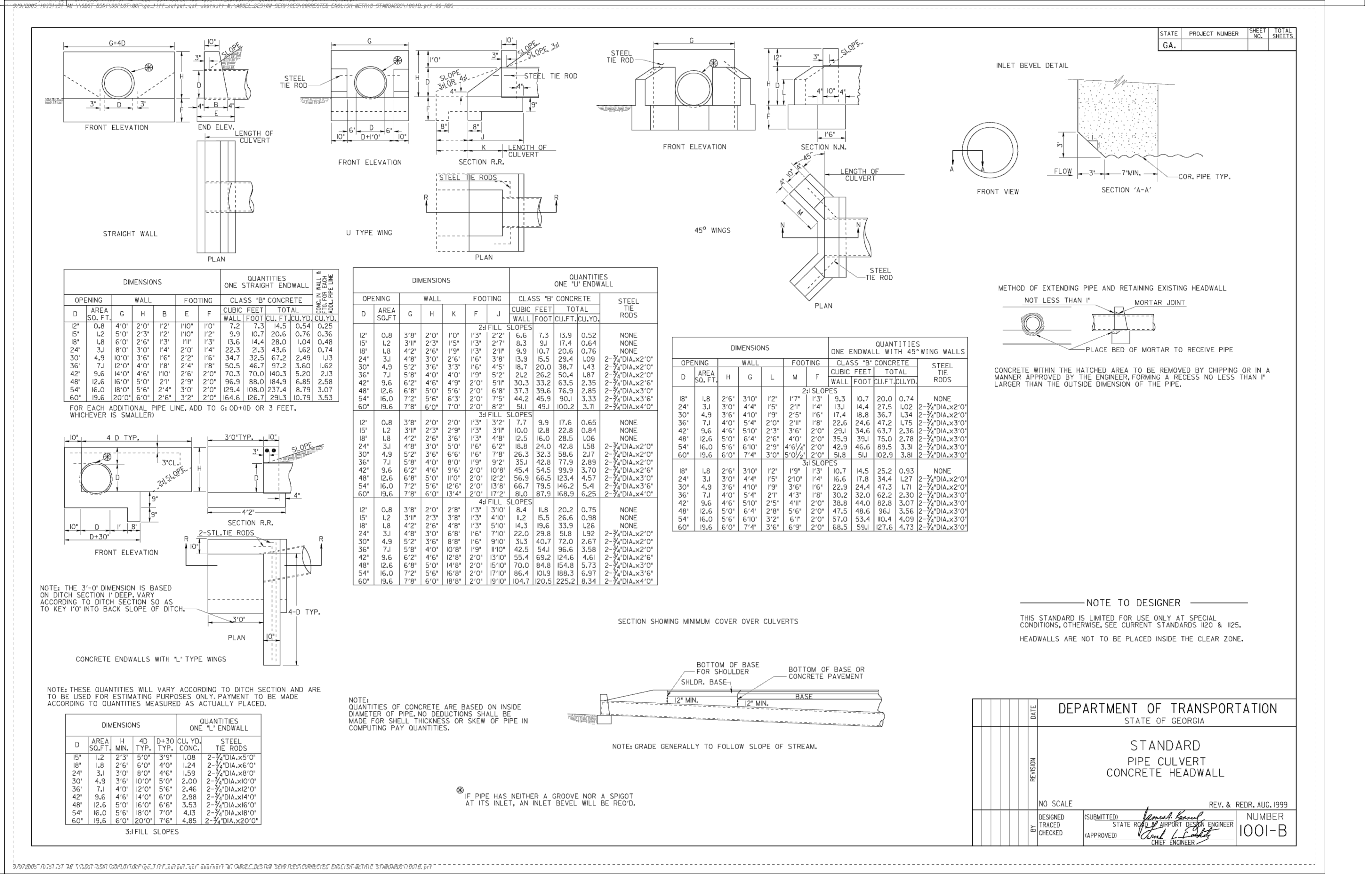
PIPE CURVED ALIGNMENT USING SECTIONS WITH DROPPED JOINTS
PIPE ELBOW SECTION (PRE-FABRICATED)
CONCRETE COLLAR FOR DEFLECTING PIPE
CONCRETE COLLAR FOR JOINTING PIPE
DETAILS OF CONCRETE JUNCTION BOX
DETAILS OF BRICK JUNCTION BOX
DETAILS OF CIRCULAR PRECAST JUNCTION BOX
BOLT, RING & WASHER DETAILS
STEEL LIFTING BAR DETAIL
NOTE: OPENINGS SHALL BE PRECAST FOR BOTH INLET AND OUTLET
A.S.T.M. C-478 REINF.
PLAN SECTION
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
PRECAST OR BUILT IN PLACE
JUNCTION BOXES
PIPE COLLARS, PIPE ELBOW
& PIPE CURVED ALIGNMENT
NO SCALE
REV. & REDR. JULY 1985
DES. RMU
DRW. RMU
TRA. GME
CHK. RKC
(SUBMITTED) Floyd E. Hardy
STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) Hal Rives
STATE HIGHWAY ENGINEER
NUMBER
9031U



TYPE "A"
TYPE "B" WITH WEIR
TYPE "C"
TYPE "C" WITH WEIR
TYPE "D"
TYPE "E" (WITH HOOD)
LONGITUDINAL SECTION
CROSS SECTION
PLAN
DETAILS OF C.I. GRATING & FRAME
DETAIL OF HOOD
BRICK WALL THICKNESSES
CONSTRUCTION ALTERNATES
TABLE OF MINIMUM DIMENSIONS FOR DROP INLETS
GENERAL NOTES:
2. ½" EXPANSION JOINT WILL BE REQUIRED WHERE RIGID PAVEMENT, CONCRETE SIDEWALK OR CONCRETE GUTTER MEETS DROP INLETS.
3. ALIGNMENT, NUMBER AND SIZES OF PIPES SHOWN ARE ONLY TYPICAL, SEE PLANS FOR ACTUAL PIPE CULVERT REQUIREMENTS.
4. ALL TYPE DROP INLETS WILL BE CONSTRUCTED (AS SHOWN), SO THAT THE GRATE BARS ARE PERPENDICULAR TO THE FLOW OF TRAFFIC EXCEPT ON LIMITED ACCESS PROJECTS OR WHERE BICYCLES ARE PROHIBITED.
5. BRICK MASONRY WITH CLASS "A" CONC. TOP PORTION IS SHOWN AS STANDARD CONSTRUCTION WITH ALTERNATES PERMITTED AS SHOWN, BOTTOM SLAB MAY BE 8" MIN. NON-REINFORCED CONCRETE, 8" BRICK OR 6" MIN. REINFORCED CONCRETE, SEE APPLICABLE STANDARDS FOR ALTERNATE PRECAST CONSTRUCTION.
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
DROP INLETS
(BUILT-IN-PLACE)
SCALE AS SHOWN
REV. & REDR. AUG., 1999
DES.
REV.
TRA.
CHK.
(SUBMITTED) James A. Kennedy
STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED)
CHIEF ENGINEER
NUMBER
1019A



ALTERNATE I
SIDE ELEVATION
FRONT VIEW
SECTION A-A
SECTION B-B
GENERAL NOTES
ALTERNATE I
TYPE 1 CONNECTOR DETAIL
TYPE 2 CONNECTOR DETAILS
TYPE 3 ALTERNATE CONNECTOR (NOT SHOWN)
TAPERED SLEEVE FOR ATTACHING STEEL END SECTIONS TO SMOOTH PIPE
TYPE 4 CONNECTOR SMOOTH TAPERED SLEEVE DETAIL
SIZES, DIMENSIONS, AND THICKNESSES
TYPICAL PICTORIAL VIEW (WITH CONCRETE PIPE)
TYPICAL DETAIL OF SAFETY BARS
TYPICAL PICTORIAL VIEW (WITH C.M. PIPE)
1-28-05 REVISED GENERAL NOTES G.L.O.
CONVERTED TO STANDARD
12-14-94 PAY ITEM REVISION R.M.U.
11-18-94 GEN. REVISION R.M.U.
12-20-93 REFER TO STD. 9031-T R.M.U.
DATE
REVISION
BY
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
SAFETY END SECTION
(METAL)
(FOR SIDE DRAIN PIPE-OR FOR STORM DRAIN PIPE PARALLEL TO MAINLINE)
ALTERNATE I
NO SCALE
SEPT., 1993
DESIGNED
DRAWN
TRACED
CHECKED
(SUBMITTED)
STATE ROAD & AIRPORT DESIGN ENGINEER
(APPROVED)
CHIEF ENGINEER
NUMBER
1122
SHEET 1 OF 3



FRONT ELEVATION
END ELEV.
SECTION R.R.
STRAIGHT WALL
U TYPE WING
45° WINGS
PLAN
INLET BEVEL DETAIL
FRONT VIEW
SECTION 'A-A'
METHOD OF EXTENDING PIPE AND RETAINING EXISTING HEADWALL
DIMENSIONS
QUANTITIES
NOTE TO DESIGNER
THIS STANDARD IS LIMITED FOR USE ONLY AT SPECIAL CONDITIONS, OTHERWISE, SEE CURRENT STANDARDS 1120 & 1125.
HEADWALLS ARE NOT TO BE PLACED INSIDE THE CLEAR ZONE.
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
PIPE CULVERT
CONCRETE HEADWALL
NO SCALE
REV. & REDR. AUG. 1999
DESIGNED
TRACED
CHECKED
(SUBMITTED) James A. Kennedy
STATE ROAD & AIRPORT DESIGN ENGINEER
(APPROVED)
CHIEF ENGINEER
NUMBER
1001-B

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COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

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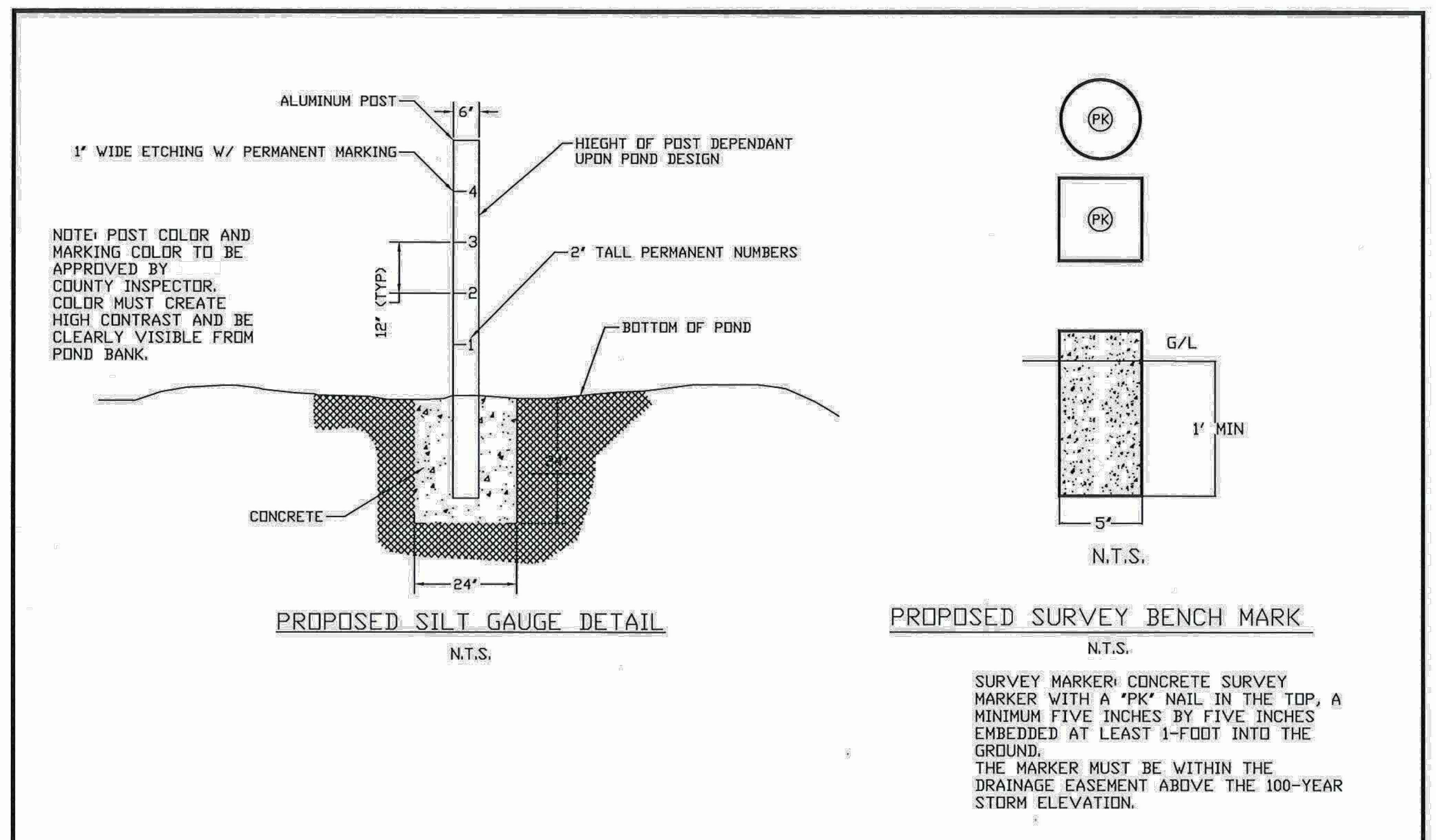
Sheet Title

STORMWATER
MANAGEMENT
DETAILS

Sheet Number

C-4.4


ALUMINUM POST
6'
1' WIDE ETCHING W/ PERMANENT MARKING
HIEGHT OF POST DEPENDANT UPON POND DESIGN
4
3
2
1
12' (TYP)
2' TALL PERMANENT NUMBERS
BOTTOM OF POND
CONCRETE
24'
PK
PK
G/L
1' MIN
5'
N.T.S.

NOTE: POST COLOR AND MARKING COLOR TO BE APPROVED BY COUNTY INSPECTOR. COLOR MUST CREATE HIGH CONTRAST AND BE CLEARLY VISIBLE FROM POND BANK.

PROPOSED SILT GAUGE DETAIL

N.T.S.

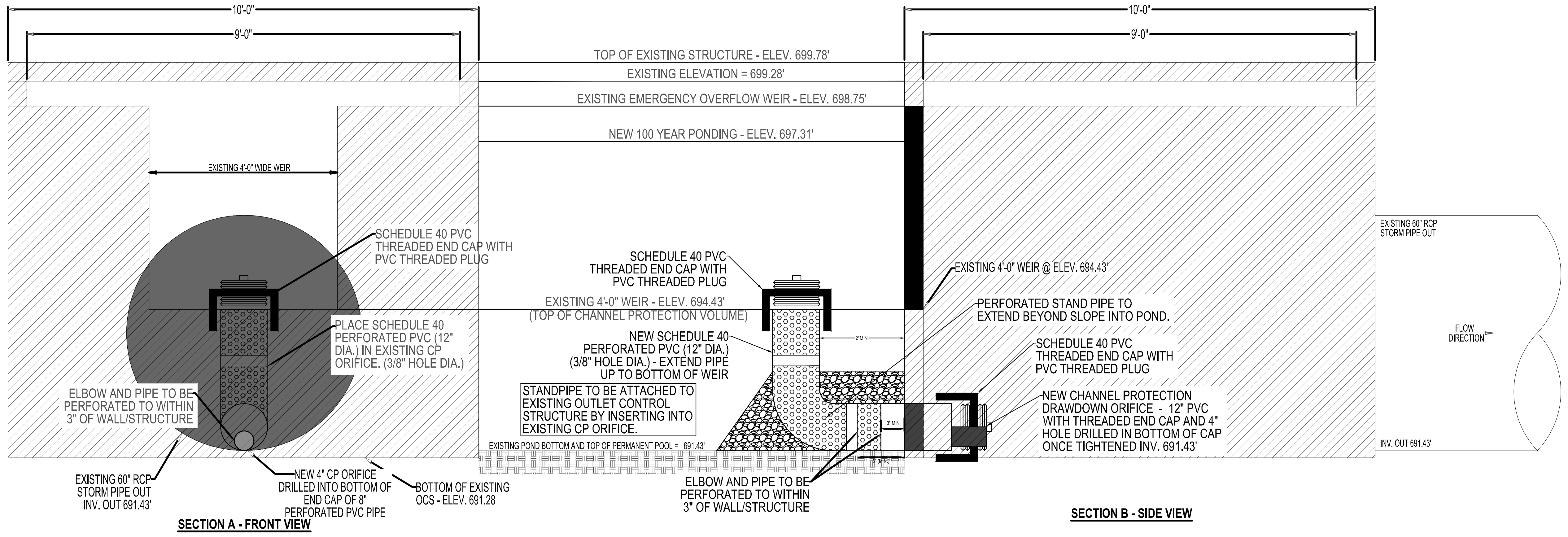
PROPOSED SURVEY BENCH MARK

N.T.S.

SURVEY MARKER: CONCRETE SURVEY MARKER WITH A 'PK' NAIL IN THE TOP, A MINIMUM FIVE INCHES BY FIVE INCHES EMBEDDED AT LEAST 1-FOOT INTO THE GROUND.
THE MARKER MUST BE WITHIN THE DRAINAGE EASEMENT ABOVE THE 100-YEAR STORM ELEVATION.

SILT GAUGE & BENCH MARK

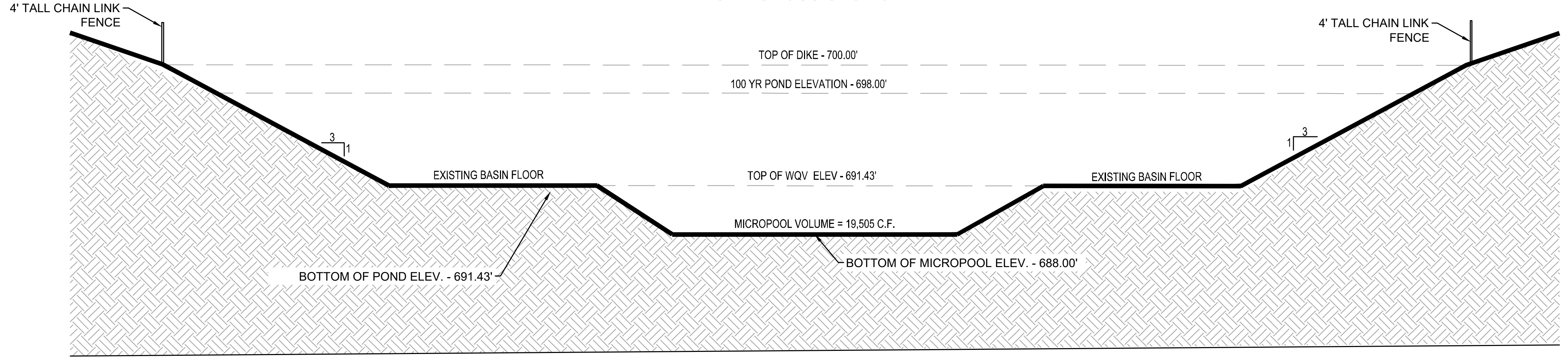
PERFORATED STANDPIPE DETAIL


10'-0"
9'-0"
10'-0"
9'-0"
TOP OF EXISTING STRUCTURE - ELEV. 699.78'
EXISTING ELEVATION = 699.28'
EXISTING EMERGENCY OVERFLOW WEIR - ELEV. 698.75'
NEW 100 YEAR PONDING - ELEV. 697.31'
EXISTING 4'-0" WIDE WEIR
SCHEDULE 40 PVC THREADED END CAP WITH PVC THREADED PLUG
PLACE SCHEDULE 40 PERFORATED PVC (12" DIA.) IN EXISTING CP ORIFICE. (3/8" HOLE DIA.)
ELBOW AND PIPE TO BE PERFORATED TO WITHIN 3" OF WALL/STRUCTURE
EXISTING 60" RCP STORM PIPE OUT INV. OUT 691.43'
NEW 4" CP ORIFICE DRILLED INTO BOTTOM OF END CAP OF 8" PERFORATED PVC PIPE
BOTTOM OF EXISTING OCS - ELEV. 691.28
SECTION A - FRONT VIEW
SCHEDULE 40 PVC THREADED END CAP WITH PVC THREADED PLUG
EXISTING 4'-0" WEIR - ELEV. 694.43' (TOP OF CHANNEL PROTECTION VOLUME)
NEW SCHEDULE 40 PERFORATED PVC (12" DIA.) (3/8" HOLE DIA.) - EXTEND PIPE UP TO BOTTOM OF WEIR
STANDPIPE TO BE ATTACHED TO EXISTING OUTLET CONTROL STRUCTURE BY INSERTING INTO EXISTING CP ORIFICE.
EXISTING POND BOTTOM AND TOP OF PERMANENT POOL = 691.43'
2' MIN.
3" MIN.
6" (MIN.)
ELBOW AND PIPE TO BE PERFORATED TO WITHIN 3" OF WALL/STRUCTURE
EXISTING 4'-0" WEIR @ ELEV. 694.43'
PERFORATED STAND PIPE TO EXTEND BEYOND SLOPE INTO POND.
SCHEDULE 40 PVC THREADED END CAP WITH PVC THREADED PLUG
NEW CHANNEL PROTECTION DRAWDOWN ORIFICE - 12" PVC WITH THREADED END CAP AND 4" HOLE DRILLED IN BOTTOM OF CAP ONCE TIGHTENED INV. 691.43'
EXISTING 60" RCP STORM PIPE OUT
FLOW DIRECTION
INV. OUT 691.43'
SECTION B - SIDE VIEW

EXISTING SQUARE OUTLET CONTROL STRUCTURE TO REMAIN

BRAVO SITE SET 09-18-2024

POND CROSS SECTION


4' TALL CHAIN LINK FENCE
4' TALL CHAIN LINK FENCE
TOP OF DIKE - 700.00'
100 YR POND ELEVATION - 698.00'
3
1
1
3
EXISTING BASIN FLOOR
EXISTING BASIN FLOOR
TOP OF WQV ELEV - 691.43'
MICROPOOL VOLUME = 19,505 C.F.
BOTTOM OF POND ELEV. - 691.43'
BOTTOM OF MICROPOOL ELEV. - 688.00'

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7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

STORMWATER
MANAGEMENT
DETAILS

Sheet Number

C-4.5

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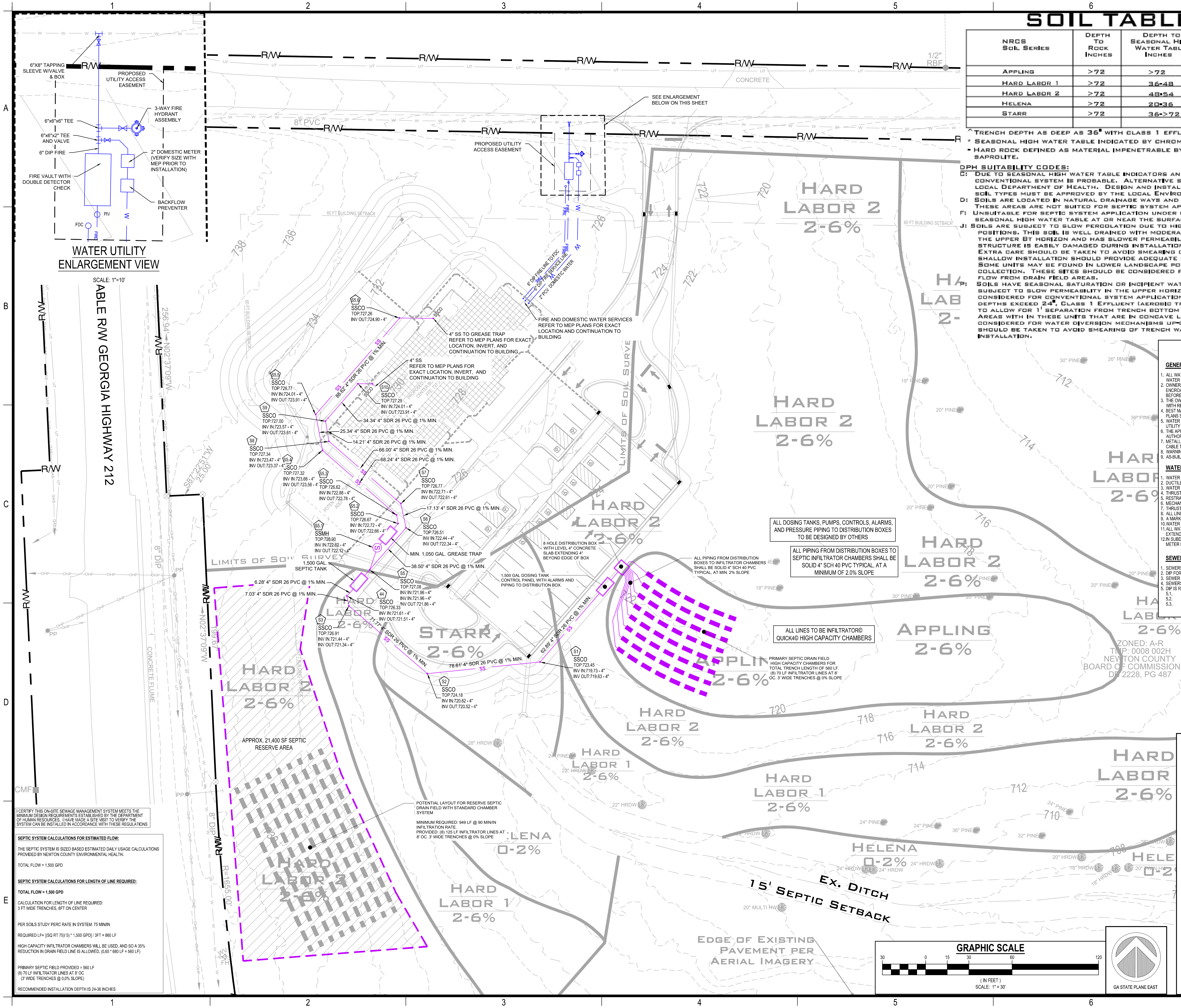
Utilities/Services shown are for Contractors' convenience. Items are shown schematically and neither the site design professional nor the owner assumes any responsibility for variances in their actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to secure and use the services of a private utility locator firm during the entire course of work and shall pay for said services. Contractor shall locate utilities prior to any disturbance (including field verifying location and depth of utilities that are to be saved and protected). Contractor shall notify the site design professional of any utility conflicts prior to installation of new utilities, grading, etc. The Contractor, at their expense, shall be responsible to repair, replace and/or relocate, as necessary, any utilities damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.


6"X8" TAPPING SLEEVE W/VALVE & BOX
PROPOSED UTILITY ACCESS EASEMENT
3-WAY FIRE HYDRANT ASSEMBLY
6"x6"x6" TEE
6"x6"x2" TEE AND VALVE
6" DIP FIRE
2" DOMESTIC METER (VERIFY SIZE WITH MEP PRIOR TO INSTALLATION)
FIRE VAULT WITH DOUBLE DETECTOR CHECK
BACKFLOW PREVENTER
PIV
FDC
FIRE
W
WATER UTILITY ENLARGEMENT VIEW
SCALE: 1"=10'
R/W
8" PVC
1/2" RBF
CONCRETE
SEE ENLARGEMENT BELOW ON THIS SHEET
PROPOSED UTILITY ACCESS EASEMENT
6" DIP FIRE LINE TO FDC
6" DIP FIRE SERVICE LINE
2" PCV DOMESTIC WATER
FIRE AND DOMESTIC WATER SERVICES REFER TO MEP PLANS FOR EXACT LOCATION AND CONTINUATION TO BUILDING
60 FT BUILDING SETBACK
ABLE R/W GEORGIA HIGHWAY 212
256.94' N02°37'09"W
S87°22'51"W 25.00'
N02°37'09"W
199.67'
R=1655.00'
8" DIP
CONCRETE FLUME
CMF
PP
OHP
S5.6 SSCO TOP:727.26 INV OUT:724.90 - 4"
4" SS TO GREASE TRAP REFER TO MEP PLANS FOR EXACT LOCATION, INVERT, AND CONTINUATION TO BUILDING
4" SS REFER TO MEP PLANS FOR EXACT LOCATION, INVERT, AND CONTINUATION TO BUILDING
88.62' 4" SDR 26 PVC @ 1% MIN.
S5.5 SSCO TOP:726.77 INV IN:724.01 - 4" INV OUT:723.91 - 4"
S10 SSCO TOP:727.29 INV IN:724.01 - 4" INV OUT:723.91 - 4"
S9 SSCO TOP:727.00 INV IN:723.57 - 4" INV OUT:723.61 - 4"
34.34' 4" SDR 26 PVC @ 1% MIN.
25.34' 4" SDR 26 PVC @ 1% MIN.
14.21' 4" SDR 26 PVC @ 1% MIN.
66.00' 4" SDR 26 PVC @ 1% MIN.
68.24' 4" SDR 26 PVC @ 1% MIN.
S8 SSCO TOP:727.34 INV IN:723.47 - 4" INV OUT:723.37 - 4"
S5.4 SSCO TOP:727.32 INV IN:723.66 - 4" INV OUT:723.56 - 4"
S5.3 SSCO TOP:726.62 INV IN:722.88 - 4" INV OUT:722.78 - 4"
S7 SSCO TOP:726.77 INV IN:722.71 - 4" INV OUT:722.61 - 4"
17.13' 4" SDR 26 PVC @ 1% MIN.
S5.2 SSCO TOP:726.67 INV IN:722.72 - 4" INV OUT:722.66 - 4"
S6 SSCO TOP:726.51 INV IN:722.44 - 4" INV OUT:722.34 - 4"
S5.1 SSMH TOP:726.90 INV IN:722.62 - 4" INV OUT:722.12 - 4"
MIN. 1,050 GAL. GREASE TRAP
38.50' 4" SDR 26 PVC @ 1% MIN.
1,500 GAL. SEPTIC TANK
6.28' 4" SDR 26 PVC @ 1% MIN.
7.03' 4" SDR 26 PVC @ 1% MIN.
S5 SSCO TOP:727.08 INV IN:721.96 - 4" INV IN:721.96 - 4" INV OUT:721.86 - 4"
44 SSCO TOP:726.33 INV IN:721.61 - 4" INV OUT:721.51 - 4"
S3 SSCO TOP:726.91 INV IN:721.44 - 4" INV OUT:721.34 - 4"
71.77' 4" SDR 26 PVC @ 1% MIN.
78.61' 4" SDR 26 PVC @ 1% MIN.
62.89' 4" SDR 26 PVC @ 1% MIN.
S2 SSCO TOP:724.18 INV IN:720.62 - 4" INV OUT:720.52 - 4"
S1 SSCO TOP:723.45 INV IN:719.73 - 4" INV OUT:719.63 - 4"
SS
8 HOLE DISTRIBUTION BOX WITH LEVEL 4" CONCRETE SLAB EXTENDING 4" BEYOND EDGE OF BOX
1,500 GAL DOSING TANK CONTROL PANEL WITH ALARMS AND PIPING TO DISTRIBUTION BOX.
ALL PIPING FROM DISTRIBUTION BOXES TO INFILTRATOR CHAMBERS SHALL BE SOLID 4" SCH 40 PVC TYPICAL, AT MIN. 2% SLOPE
ALL DOSING TANKS, PUMPS, CONTROLS, ALARMS, AND PRESSURE PIPING TO DISTRIBUTION BOXES TO BE DESIGNED BY OTHERS
ALL PIPING FROM DISTRIBUTION BOXES TO SEPTIC INFILTRATOR CHAMBERS SHALL BE SOLID 4" SCH 40 PVC TYPICAL, AT A MINIMUM OF 2.0% SLOPE
ALL LINES TO BE INFILTRATOR© QUICK4© HIGH CAPACITY CHAMBERS
PRIMARY SEPTIC DRAIN FIELD HIGH CAPACITY CHAMBERS FOR TOTAL TRENCH LENGTH OF 560 LF. (8) 70 LF INFILTRATOR LINES AT 8' OC. 3' WIDE TRENCHES @ 0% SLOPE
APPROX. 21,400 SF SEPTIC RESERVE AREA
POTENTIAL LAYOUT FOR RESERVE SEPTIC DRAIN FIELD WITH STANDARD CHAMBER SYSTEM
MINIMUM REQUIRED: 949 LF @ 90 MIN/IN INFILTRATION RATE.
PROVIDED: (8) 125 LF INFILTRATOR LINES AT 8' OC. 3' WIDE TRENCHES @ 0% SLOPE
LIMITS OF SOIL SURVEY
HARD LABOR 2 2-6%
HARD LABOR 1 2-6%
HARD LABOR 3 2-6%
STARR 2-6%
APPLING 2-6%
HELENA 0-2%
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY BOARD OF COMMISSIONERS
DB 2228, PG 487
EX. DITCH
15' SEPTIC SETBACK
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
738
736
734
732
730
728
726
724
722
720
718
716
714
712
710
30" PINE
26" PINE
19" PINE
20" PINE
36" PINE
18" PINE
24" PINE
32" PINE
28" HRDW
22" HRDW
20" HRDW
24" HRDW
18" HRDW
20" MULTI HWD
GRAPHIC SCALE
30
0
15
30
60
120
(IN FEET)
SCALE: 1" = 30'
GA STATE PLANE EAST

SOIL TABLE & NOTES

NRCS Soil Series	Depth To Rock Inches	Depth to Seasonal High Water Table Inches	Recommended Trench Depth Inches	Estimated Percolation Rate Min/In	DPH Code
Appling	>72	>72	24-36	75	A
Hard Labor 1	>72	36-48	6-12	0.10 gal/d/sf	C
Hard Labor 2	>72	48-54	18-24^	90	P
Helena	>72	20-36	NA	NA	F
Starr	>72	36->72	NA	NA	D

^Trench depth as deep as 36" with class 1 effluent (See P Code).

* Seasonal high water table indicated by chroma 2 or less redox features.

- Hard rock defined as material impenetrable by hand auger, excluding soft saprolite.

DPH SUITABILITY CODES:

C: Due to seasonal high water table indicators and/or drainage problems, failure of a conventional system is probable. Alternative systems may be considered, consult local Department of Health. Design and installation of an alternative system on these soil types must be approved by the local Environmental Health Specialist.

D: Soils are located in natural drainage ways and are subject to inundation during storm events. These areas are not suited for septic system application.

F: Unsuitable for septic system application under most circumstances due to rock and/or seasonal high water table at or near the surface.

J: Soils are subject to slow percolation due to high clay contents and landscape positions. This soil is well drained with moderate permeability due to good structure in the upper Bt horizon and has slower permeability below 4-5' as structure weakens. This structure is easily damaged during installation, especially under wet to moist conditions. Extra care should be taken to avoid smearing of trench walls upon installation. A shallow installation should provide adequate percolation for a conventional drain field. Some units may be found in lower landscape positions that are subject to water collection. These sites should be considered for site alterations to divert storm water flow from drain field areas.

P: Soils have seasonal saturation or incipient water table in lower horizons and are subject to slow permeability in the upper horizons due to fine textures. Soils may be considered for conventional system application with a shallow installation. If trench depths exceed 24", Class 1 Effluent (aerobic treatment or equivalent) will be required to allow for 1' separation from trench bottom to seasonal high water table indicators. Areas with in these units that are in concave landscape positions may be considered for water diversion mechanisms up-gradient of drain field site. Extra care should be taken to avoid smearing of trench walls or damage to soil structure upon installation.

NEWTON COUNTY WATER & SEWERAGE AUTHORITY WATER & SANITARY SEWER SYSTEM GENERAL CONSTRUCTION NOTES

GENERAL:

1. ALL WATER AND SANITARY SEWER SYSTEM DESIGN AND CONSTRUCTION SHALL FOLLOW THE CURRENT WATER OR SEWER SYSTEM STANDARDS AND SPECIFICATIONS.
2. OWNER/ DEVELOPER SHALL OBTAIN AND PRESENT ALL NECESSARY PERMITS, EASEMENTS, AND ENCROACHMENTS (NEWTON COUNTY LAND DISTURBANCE, USACE, GDOT, GEORGIA POWER CO., ETC.) BEFORE CONSTRUCTING WATER MAINS AND SEWERS.
3. THE OWNER/ DEVELOPER SHALL NOTIFY THE NCWSA INSPECTOR BEFORE CONSTRUCTION IN ACCORDANCE WITH REQUIRED INSPECTIONS FOR WATER OR SEWER.
4. BEST MANAGEMENT PRACTICES FROM THE APPROVED EROSION, SEDIMENTATION & POLLUTION CONTROL PLANS SHALL BE INSTALLED BEFORE CONSTRUCTION.
5. WATER MAINS AND SEWERS SHALL BE CONSTRUCTED AT LOCATIONS IN COMPLIANCE WITH NEWTON COUNTY UTILITY PLACEMENT STANDARDS, LATEST REVISION.
6. THE APPROVED CONSTRUCTION PLANS SHALL NOT BE CHANGED EXCEPT BY WRITTEN APPROVAL OF THE AUTHORITY AND THE ENGINEER OF RECORD.
7. METALLIC TRACER WIRE SHALL BE STRUNG ALONG THE TOP OF ALL NON-METALLIC PIPE AND SECURED WITH CABLE TIES.
8. WARNING TAPE SHALL BE PLACED 1 1/2- TO 2-FEET ABOVE ALL PIPE PRIOR TO BACKFILLING TRENCH.
9. AS-BUILT / RECORD DRAWINGS SHALL BE PROVIDED IN ACCORDANCE WITH AS-BUILT SPECIFICATIONS.

WATER:

1. WATER MAINS SHALL BE CONSTRUCTED OF AWWA C151, PC 350, DUCTILE IRON PIPE (DIP).
2. DUCTILE IRON FITTINGS SHALL CONFORM TO AWWA C153.
3. WATER MAINS SHALL BE INSTALLED WITH A MINIMUM COVER OF 4- FEET.
4. THRUST RESTRAINT SHALL BE INCLUDED AT ALL LOCATIONS WHERE HYDRAULIC THRUST MAY OCCUR.
5. RESTRAINED, PUSH-ON JOINT GASKETS SHALL BE THE PRIMARY FORM OF THRUST RESTRAINT.
6. MECHANICAL JOINTS WITH RETAINER GLANDS ARE ACCEPTABLE AT VALVES AND FITTINGS.
7. THRUST BLOCKING OR THRUST COLLARS SHALL BE PROVIDED AT ALL OTHER LOCATIONS.
8. ALL LINE VALVES SHALL BE MARKED BY VALVE MARKERS.
9. A MARKER SHALL BE PLACED AT THE END OF ALL DEAD ENDS.
10. WATER SERVICE LINES SHALL BE CONSTRUCTED WITH TYPE K COPPER TUBING.
11. ALL WATER SERVICE LINES SHALL BE ENCASED WITH PVC PIPE WITHA MINIMUM DIAMETER OF 1 1/2-INCHES, EXTENDEING A MINIMUM OF 3-FEET BEYOND THE PAVEMENT ON EACH SIDE OF THE ROAD.
12. IN SUBDIVISIONS, OWNER/ DEVELOPER SHALL PROVIDE WATER SERVICES UP TO AND INCLUDING THE METER BOXES AND CURB STOPS.

SEWER:

1. SEWERS SHALL BE CONSTRUCTED OF SDR 26 ASTM 3034 PVC, DR 25 AWWA C900 PVC, OR DIP.
2. DIP FOR SDWERS SHALL BE COATED INTERNALLY WITH INTERNAL EPOXY COATING FOR SEWER SERVICE.
3. SEWER FITTINGS SUCH AS WYES, TEES, TRANSITION SLEEVES AND ADAPTORS SHALL MATCH THE PIPE.
4. SEWERS (MAIN LINES) SHALL HAVE A MINIMUM DIAMETER OF 8- INCHES.
5. DIP IS REQUIRED FOR SANITARY SEWER AT THE FOLLOWING LOCATIONS:
   - 5.1. UNDER STREAM CROSSINGS
   - 5.2. AT DEPTHS LESS THAN 4-FEET OF COVER
   - 5.3. AT ALL OTHER LOCATIONS SPECIFIED BY THE ENGINEER OR AUTHORITY

I CERTIFY THIS ON-SITE SEWAGE MANAGEMENT SYSTEM MEETS THE MINIMUM DESIGN REQUIREMENTS ESTABLISHED BY THE DEPARTMENT OF HUMAN RESOURCES. I HAVE MADE A SITE VISIT TO VERIFY THE SYSTEM CAN BE INSTALLED IN ACCORDANCE WITH THESE REGULATIONS

SEPTIC SYSTEM CALCULATIONS FOR ESTIMATED FLOW:

THE SEPTIC SYSTEM IS SIZED BASED ESTIMATED DAILY USAGE CALCULATIONS PROVIDED BY NEWTON COUNTY ENVIRONMENTAL HEALTH.

TOTAL FLOW = 1,500 GPD

SEPTIC SYSTEM CALCULATIONS FOR LENGTH OF LINE REQUIRED:

TOTAL FLOW = 1,500 GPD

CALCULATION FOR LENGTH OF LINE REQUIRED:
3 FT WIDE TRENCHES, 8FT ON CENTER

PER SOILS STUDY PERC RATE IN SYSTEM: 75 MIN/IN

REQUIRED LF= [(SQ RT 75)/ 5) * 1,500 GPD] / 3FT = 860 LF

HIGH CAPACITY INFILTRATOR CHAMBERS WILL BE USED, AND SO A 35% REDUCTION IN DRAIN FIELD LINE IS ALLOWED. (0.65 * 680 LF = 560 LF)

PRIMARY SEPTIC FIELD PROVIDED = 560 LF
(8) 70 LF INFILTRATOR LINES AT 8' OC
(3' WIDE TRENCHES @ 0.0% SLOPE)

RECOMMENDED INSTALLATION DEPTH IS 24-36 INCHES

OWNER/DEVELOPER
COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:jprine@ascension-pm.com

CONTRACTOR
COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA 30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
EMAIL: mmccrorey@sunbeltbuilders.com

SURVEYOR
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104

JASON P. BROWN
LEVEL II CERTIFIED DESIGN PROFESSIONAL
#53274 - EXP. 05.01.2026

24-HOUR CONTACT
MIKE MCCROREY
404.644.2939

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Professional Seal
NO. PE031684
JASON P. BROWN

Project Information

BRAVO
SITE SET
09-18-2024

NEWTON COUNTY SENIOR ENRICHMENT CENTER
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title
UTILITY PLAN

Sheet Number
C-5.0

NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

NPDES PERMIT PART IV.

(I). EXCEPT AS PROVIDED IN PART IV (III), BELOW, NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A 25 FOOT BUFFER ALONG THE BANKS OF ALL STATE WATERS, AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION, EXCEPT WHERE THE DIRECTOR HAS DETERMINED TO ALLOW A VARIANCE THAT IS AT LEAST AS PROTECTIVE OF NATURAL RESOURCES AND THE ENVIRONMENT IN ACCORDANCE WITH THE PROVISIONS OF O.C.G.A. 12-7-6, OR WHERE A DRAINAGE STRUCTURE OR A ROADWAY DRAINAGE STRUCTURE MUST BE CONSTRUCTED, PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED IN THE PROJECT PLANS AND SPECIFICATIONS AND ARE IMPLEMENTED, OR ALONG ANY EPHEMERAL STREAM, OR WHERE BULKHEADS AND SEWALLS MUST BE CONSTRUCTED TO PREVENT THE EROSION OF THE SHORELINE ON LAKE OCONEE AND LAKE SINCLAIR. THE BUFFER SHALL NOT APPLY TO THE FOLLOWING ACTIVITIES PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS AND ARE IMPLEMENTED:

1. PUBLIC DRINKING WATER SYSTEM RESERVOIRS
2. STREAM CROSSINGS FOR WATER LINES AND SEWER LINES, PROVIDED THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER;
3. STREAM CROSSINGS FRO ANY UTILITY LINES OF ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF TH FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION, OR DISTRIBUTION OF POWER, PROVIDED THAT: (A) THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, (B) NATIVE RAPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (C) THE ENTITY IS NO A SECONDARY PERMITTEE FOR A PROJECT WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PREMIT.
4. BUFFER CROSSINGS FOR FENCES, PROVIDED THAT THE CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS WITHIN THE BUFFER;
5. STREAM CROSSINGS FOR AERIAL UTILITY LINES, PROVIDED THAT (A) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 100 LINEAR FEET, (B) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCE TO THE BUFFER, (C) ONLY TREES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E. DISTURBANCE OF UNDERLYING VEGETATION IS MINIMIZED), AND (D) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN SHALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE, ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE, AND JUSTIFICATION.
6. RIGHT-OF-WAY POSTS, GUY WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY UNDERTAKEN OR FINANCE IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION, THE GEORGIA HIGHWAY AUTHORITY OR STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY MUNICIPALITY, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT;
7. RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION , ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTUMENTALITY OF THE UNITED STATED ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT; AND
8. MAINTENANCE (EXCLUDING DREDGING), REPAIR AND/OR UPGRADE OF SOIL AND WATER CONSERVATION DISTRICT WATERSHED DAMS WHEN UNDER THE TECHNICAL SUPERVISION OF USDA NATURAL RESOURCES CONSERVATION SERVICE.

(II). NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A 50 FOOT BUFFER, AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION, ALONG THE BANKS OF ANY STATE WATERS CLASSIFIED AS "TROUT STREAMS" EXCEPT WHEN APPROVAL IS GRANTED BY THE DIRECTOR FOR ALTERNATE BUFFER REQUIREMENTS IN ACCORDANCE WIT THE PROVISIONS OF O.C.G.A. 12-7-6, OR WHERE A ROADWAY DRAINAGE STRUCTURE MUST BE CONSTRUCTED; PROVIDED, HOWEVER, THAT SMALL SPRINGS AND STREAMS CLASSIFIED AS "TROUT STEAMS" WHICH DISCHARGE AN AVERAGE ANNUAL FLOW OF 25 GALLONS PER MINUTE OR LESS SHALL HAVE A 25 FOOT BUFFER OR THEY MAY BE PIPED, AT THE DISCRETION OF THE PERMITTEE, PURSUANT TO THE TERMS OF A RULE PROVIDING FOR A GENERAL VARIANCE PROMULGATED BY THE BOARD OF NATURAL RESOURCES INCLUDING NOTIFICATION OF SUCH TO EPD AND THE LOCAL ISSUING AUTHORITY OF THE LOCATION AND EXTENT OF PIPING AND PRESCRIBED METHODOLOGY FOR MINIMIZING THE IMPACT OF SUCH PIPING AND FOR MEASURING THE VOLUME OF WATER DISCHARGED BY THE STREAM. ANY SUCH PIPE MUST STOP SHORT OF THE DOWNSTREAM PERMITTEE'S PROPERTY, AND THE PERMITTEE MUST COMPLY WITH THE BUFFER REQUIREMENT FOR ANY ADJACENT TROUT STREAMS. THE BUFFER SHALL NOT APPLY TO THE FOLLOWING ACTIVITIES PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS AND ARE IMPLEMENTED:

1. PUBLIC DRINKING WATER SYSTEM RESERVOIRS
2. STREAM CROSSINGS FOR WATER LINES AND SEWER LINES, PROVIDED THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER;
3. STREAM CROSSINGS FRO ANY UTILITY LINES OF ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF TH FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION, OR DISTRIBUTION OF POWER, PROVIDED THAT: (A) THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, (B) NATIVE RAPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (C) THE ENTITY IS NO A SECONDARY PERMITTEE FOR A PROJECT WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PREMIT.
4. BUFFER CROSSINGS FOR FENCES, PROVIDED THAT THE CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS WITHIN THE BUFFER;
5. STREAM CROSSINGS FOR AERIAL UTILITY LINES, PROVIDED THAT (A) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 100 LINEAR FEET, (B) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCE TO THE BUFFER, (C) ONLY TREES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E. DISTURBANCE OF UNDERLYING VEGETATION IS MINIMIZED), AND (D) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN SHALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE, ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE, AND JUSTIFICATION.
6. RIGHT-OF-WAY POSTS, GUY WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY UNDERTAKEN OR FINANCE IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION, THE GEORGIA HIGHWAY AUTHORITY OR STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY MUNICIPALITY, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT;
7. RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION , ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTUMENTALITY OF THE UNITED STATED ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT; AND
8. MAINTENANCE (EXCLUDING DREDGING), REPAIR AND/OR UPGRADE OF SOIL AND WATER CONSERVATION DISTRICT WATERSHED DAMS WHEN UNDER THE TECHNICAL SUPERVISION OF USDA NATURAL RESOURCES CONSERVATION SERVICE.

(III). EXCEPT AS PROVIDED IN PART IV (IV) BELOW, NO CONSTRUCTION ACTIVITY SHALL BE CONDUCTED WITHIN A 25 FOOT BUFFER ALONG COASTAL MARSHLANDS, AS MEASURED HORIZONTALLY FROM THE COASTAL MARSHLAND-UPLAND INTERFACE, AS DETERMINED IN ACCORDANCE WITH PART 4 OF ARTICLE 4 OF CHAPTER 5 OF TITLE 12, THE COASTAL MARSHLANDS PROTECTION ACT OF 1970, AND THE RULES AND REGULATIONS PROMULGATED THEREUNDER, EXCEPT WHERE THE DIRECTOR DETERMINES TO ALLOW A VARIANCE THAT IS AT LEAST AS PROTECTIVE OF NATURAL RESOURCES AND THE ENVIRONMENT IN ACCORDANCE WITH THE PROVISIONS OF O.C.G.A. 12-7-6, OR WHERE OTHERWISE ALLOWED BY THE DIRECTOR PURSUANT TO CODE SECTION 12-2-8, OR WHERE AN ALTERATION WITHIN THE BUFFER AREA HAS BEEN AUTHORIZED PURSUANT TO CODE SECTION 12-5-286, OR FOR MAINTENANCE OF ANY CURRENTLY SERVICEABLE STRUCTURE, LANDSCAPING, OR HARDSCAPING, INCLUDING BRIDGES, ROADS, PARKING LOTS, GOLF COURSES, GOLF CART PATHS, RETAINING WALLS, BULKHEADS, AND PATIOS, PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS AND SUCH MEASURES ARE FULLY IMPLEMENTED, OR WHERE A DRAINAGE STRUCTURE OR ROADWAY STRUCTURE IS CONSTRUCTED OR MAINTAINED, PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS AND SUCH MEASURES ARE FULLY IMPLEMENTED, OR ON THE LANDWARD SIDE OF ANY CURRENTLY SERVICEABLE SHORELINE STABILIZATION STRUCTURE, OR FOR THE MAINTENANCE OF ANY MANMADE STORMWATER DETENTION BASIN, GOLF COURSE POND, OR IMPOUNDMENT THAT IS LOCATED ENTIRELY WITHIN THE PROPERTY OF A SINGLE INDIVIDUAL, PARTNERSHIP, OR CORPORATION, PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS AND SUCH MEASURES ARE FULLY IMPLEMENTED. THE BUFFER SHALL NOT APPLY TO THE FOLLOWING ACTIVITIES PROVIDED THAT ADEQUATE EROSION CONTROL MEASURES ARE INCORPORATED INTO THE PROJECT PLANS AND SPECIFICATIONS AND ARE IMPLEMENTED:

1. PUBLIC DRINKING WATER SYSTEM RESERVOIRS
2. CROSSINGS FOR UTILITY LINES THAT CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER
3. ANY LAND DISTURBING ACTIVITY CONDUCTED PURSUANT TO AND IN COMPLIANCE WITH A VALID AND EFFECTIVE LAND-DISTURBING PERMIT ISSUED SUBSEQUENT TO APRIL 22, 2014 AND PRIOR TO DECEMBER 31,2015.
4. ANY LOT FOR WHICH THE PRELIMINARY PLAT HAS BEEN APPROVED PRIOR TO DECEMBER 31, 2015 IF ROADWAYS, BRIDGES, OR WATER AND SEWER LINES HAVE BEEN EXTENDED TO SUCH LOT PRIOR TO THE EFFECTIVE DATE OF THIS ACT AND IF THE REQUIREMENT TO MAINTAIN A 25 FOOT BUFFER WOULD CONSUME AT LEAST 18 PERCENT OF THE HIGH GROUND OF THE PLATTED LOT OTHERWISE AVAILABLE FOR DEVELOPMENT.
5. BUFFER CROSSINGS FOR FENCES, PROVIDED THAT THE CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS WITHIN THE BUFFER;
6. CROSSINGS FOR AERIAL UTILITY LINES, PROVIDED THAT (A) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 100 LINEAR FEET, (B) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCE TO THE BUFFER, (C) ONLY TREES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E. DISTURBANCE OF UNDERLYING VEGETATION IS MINIMIZED), AND (D) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN SHALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE, ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE, AND JUSTIFICATION.
7. RIGHT-OF-WAY POSTS, GUY WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY UNDERTAKEN OR FINANCE IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION, THE GEORGIA HIGHWAY AUTHORITY OR STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY MUNICIPALITY, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT;
8. RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION , ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTUMENTALITY OF THE UNITED STATED ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1,000 SQUARE FEET PER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT; AND
9. MAINTENANCE (EXCLUDING DREDGING), REPAIR AND/OR UPGRADE OF SOIL AND WATER CONSERVATION DISTRICT WATERSHED DAMS WHEN UNDER THE TECHNICAL SUPERVISION OF USDA NATURAL RESOURCES CONSERVATION SERVICE.

(IV). EXCEPT AS PROVIDED ABOVE, FOR BUFFERS REQUIRED PURSUANT TO PART IV.(I). AND (II) AND (III), NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A BUFFER AND A BUFFER SHALL REMAIN IN ITS NATURAL, UNDISTURBED, STATE OF VEGETATION UNTIL ALL LAND-DISTURBING ACTIVITIES ON THE CONSTRUCTION SITE ARE COMPLETED. DURING COVERAGE UNDER THIS PERMIT, A BUFFER CANNOT BE THINNED OR TRIMMED OF VEGETATION AND A PROTECTIVE VEGETATIVE COVER MUST REMAIN TO PROTECT WATER QUALITY AND AQUATIC HABITAT AND A NATURAL CANOPY MUST BE LEFT IN SUFFICIENT QUANTITY TO KEEP SHADE ON THE STREAM BED OR MARSH.

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN CERTIFICATION:

I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices (BMP's) required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001.

Signed: Date: 3.25.2024

Georgia Civil Inc.
JASON P. BROWN
Level II Certified Design Professional # 52374 EXP. 5-1-2026

I, JASON P. BROWN, certify under penalty of law that this plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my direct supervision.

Signed: Date: 3.25.2024
SIGNATURE OF PLAN PREPARER AND DATE

"The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with Part IV.A.5 page 25 of the permit. *

Signed: Date: 3.25.2024
SIGNATURE OF PLAN PREPARER AND DATE

NOTE: CONTRACTOR SHALL PROVIDE A PHYSICAL BARRIER SUCH AS PLASTIC SHEETING OR TEMPORARY ROOFS ON ALL BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTE, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND ANY SUCH OTHER MATERIALS IN ORDER TO REDUCE EXPOSURE TO PRECIPITATION AND STORMWATER.

GSWCC EROSION CONTROL NOTES:

1. Any amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.
2. Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.
3. The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities.
4. Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.
5. Any disturbance left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.

ADDITIONAL EROSION CONTROL NOTES:

1. Maximum cut slopes are 3:1, 3 horizontal to 1 vertical, unless otherwise noted.
2. Maximum fill slopes are 3:1, 3 horizontal to 1 vertical, unless otherwise noted.
3. All buffers, tree save areas, and/or limits of disturbance shall be clearly marked in the field by the contractor by flagging or fencing and signage, prior to commencement of any land disturbance activities or clearing/grubbing activities. Buffers, tree save areas, and areas beyond limits of disturbance are to be left undisturbed in their natural state.
4. Contractor shall not disturb underground utilities while installing Erosion, Sedimentation and Pollution Control Practices. Contractor shall have all utilities field located before proceeding with any work.
5. Contractor shall notify design professional 48 hours before beginning each phase of construction.
6. Contractor shall notify NEWTON COUNTY inspectors 24 hours before beginning each phase of construction.
7. Construction debris and/or waste shall not be buried or burned on site. All construction debris and/or waste shall be taken to a state approved landfill.
8. All buffers and tree save areas shall be clearly identified by flagging and/or fencing prior to commencement of any land disturbance activities.
9. The installation of erosion and sedimentation control measures and practices shall occur prior to or concurrent with land disturbing activities and construction on the site and shall be maintained until permanent ground cover is established to 90%.
10. All initial phase Erosion, Sedimentation and Pollution Control best management practices shall be installed prior to any grading.
11. All Erosion, Sedimentation and Pollution Control best management practices shall be inspected and repaired of damage daily. Any accumulated silt shall be removed and spread on site and controlled with temporary mulching and/or grassing.
12. Erosion, Sedimentation, and Pollution Control best management practices shall be maintained at all times. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION OR AS REQUIRED BY ENGINEER OR LOCAL JURISDICTION INSPECTOR.
13. Maintenance of all soil erosion and sedimentation control measures and practices whether temporary or permanent shall be the responsibility of the contractor.
14. Any discrepancy within these plans shall be referred to the design professional by the contractor for clarification before proceeding with work.
15. Sediment storage maintenance indicators must be installed in sediment storage structures, indicating the 1/3 full volume.
16. Contractor shall provide temporary diversion berms and down drains on fill slopes to prevent erosion prior to stabilization.
17. Contractor shall remove accumulated sediment from detention basin at end of construction when all disturbed areas have been fully stabilized.

REVISIONS SHOWN ON ES&PC PLAN:

Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.

INTENDED LAND DISTURBANCE CONSTRUCTION ACTIVITY SEQUENCE:

Initial Phase:

1. Preconstruction meeting with NEWTON COUNTY
2. Perform initial monitoring
3. Install construction exit
4. Install initial silt fence (perimeter silt fence locations first)
5. Provide any needed initial mulching, grassing or other ground cover
6. Install topsoil location silt fence
7. Begin clearing, grubbing, topsoiling, and grading operations within limits of detention ponds & install construction road Install appropriate vegetative and structural BMP's (inlet / outlet protection, flocculants / coagulants, mulching / grassing, etc.)
8. Install wheel wash and fuel storage location (if necessary)
9. Coordinate Site Review Meeting with Engineer and/or Local Issuing Authority

Intermediate Phase:

1. Install storm pipe systems with protected inlets (Sd2's)
2. Throughout land disturbance process, maintain existing BMP's (Vegetative and Structural Practices)
3. Throughout land disturbance process, continue NPDES monitoring and reporting
4. Coordinate with utility companies on utility/sleeve locations
5. Begin remaining clearing, grubbing, topsoiling, and grading operations
6. Install topsoil pile at stockpile location and immediately grass/mulch and install any remaining topsoil location silt fence
7. Perform remaining grading (adjust storm risers with grade change(s) and adjust all affected Sd2's)
8. As areas are brought to finish grade, grass and blanket any areas that are finish grade or that will be left bare for 7 days
9. Adjust storm risers with grade change(s) and adjust all Sd2's
10. Each fill slope shall have a diversion at the top that is maintained and reinstalled as the slope is constructed
11. Continue flocculant / coagulant applications and continue every 7 days throughout project
12. Install remaining storm system(s) as grades are achieved
13. Immediately install each storm structure with associated Sd2's and add floc logs to each storm structure
14. Grass / mulch / flocculent / coagulant disturbed areas and install intermediate BMPs
15. Install utilities (water and septic/sewer)
16. 16. Grass / mulch / flocculent / coagulant disturbed areas and install intermediate BMPs
17. Install GAB throughout roadway up to designated line
18. Grass / mulch / flocculent / coagulant disturbed areas and install intermediate BMPs
19. Install curb & gutter
20. Grass / mulch / flocculent / coagulant disturbed areas and install intermediate BMPs
21. Install pavement
22. Finish grade shoulders and stabilize disturbed areas with permanent vegetation
23. Continue to apply flocculent / coagulant applications, mulching, and grassing at each step to limit soil exposure

Final Phase:

1. Throughout land disturbance process, maintain existing BMP's (vegetative and structural practices)
2. Throughout land disturbance process, continue NPDES monitoring and reporting
3. Complete paving operations
4. Achieve Final Site Stabilization
5. Coordinate Site Review Meeting with Engineer and/or Local Issuing Authority Inspector
6. Clean silt from all storm systems (distribute onsite and stabilize)
7. Remove any temporary BMP practices once site stabilization is achieved and signed off by Engineer
8. Coordinate Site Review Meeting with Engineer for final site approval

CONCRETE WASHOUT:

Contractor shall install a concrete washdown. This area is only for the washdown of items such as tools, concrete mixer chutes, hoppers and the rear of the vehicles. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

WASTE DISPOSAL, SANITARY SEWER, SEPTIC TANK REGULATIONS (ES&PC PLAN COMPLIANCE):

Construction Debris shall be recycled to the extent deemed practical by Owner/Contractor. All waste generated from the development of this site,including but not limited to, solid waste, liquid waste, chemical waste, construction waste, sanitary sewer discharge, septic tank and septic systems waste, shall be collected and disposed of in a manner that follows all local, state, and federal laws and regulations for collection and disposal of each type of waste. All required signage, notification, documentation, and training of personnel on correct handling of waste shall be done in a manner that follows all local, state, and federal laws and regulations. Owner/Contractor is responsible for obtaining the services (and facilities) of a licensed Waste Management Company in the state of Georgia to adequately and safely handle waste collection and disposal. Solid materials, including building materials, shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

BMP'S FOR PETROLEUM SPILLS AND LEAKS:

1. Fix any leaks immediately, maintain and clean equipment regularly
2. Designate areas for equipment maintenance and fueling that are located on level ground and away from any water sources.
3. Park and service equipment on top of tarps to insure any spills or leaks do not get into the ground.
4. Store all fluids and containers in a leak-proof, locked container to insure safe storage.
5. Collect and remove all leftover lubricants, containers, and trash, especially tires, batteries, pieces or parts of equipment, and all fluid containers.
6. Maintain a spill-containment and clean up kit. At a minimum, a kit for petroleum products should include:
   a. A leak proof container to catch leaking fluid.
   b. A shovel, rake, and other hand tools to create dirt berms.
   c. Absorbent pads, adsorbent substances such as cat litter or oil drying agents, that will absorb fluids before soaking into ground.
   d. Various hoses, plugs, and clamps to control a hydraulic line break. A variety of locking "vise grips" pliers can be used in emergency.
   e. Large plastic bags to store any contaminated materials for disposal.
7. Temporary fueling areas shall be installed and operated in compliance with Georgia E.P.D. regulations.

CONSTRUCTION MATERIALS:

Contractor shall at all times have all construction materials protected from rainfall. Contractor shall utilize tarps, plastic sheeting, roof cover, trailers or any other method to make sure all construction material is covered at all times during construction.

EROSION CONTROL MEASURES TO CONTROL POLLUTANTS IN STORM WATER POST CONSTRUCTION:

***NOTE THE PERMITTEE IS ONLY RESPOSIBLE FOR INSTALLATION AND MAINTENANCE OF STORMWATER MANAGEMENT DEVISES PRIOR TO FINAL STABILIZATION OF THE SITE AND NOT THE OPERATION AND MAINTENANCE OF SUCH STRUCTURES AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.**

1. RIP RAP OUTFALL/CHANNEL PROTECTION: Shall be inspected and maintained prior to final stabilization. Any dislodged stones and/or other repairs deemed necessary shall be completed according to conditions set forth in GAR100001 permit.

2. WATER QUALITY BASIN: Water quality basin shall be inspected and cleaned out according to Georgia Stormwater Management Manual's recommendations to ensure required water quality guidelines are met.

NATURE OF CONSTRUCTION ACTIVITY:

PROJECT LOCATION:	0008-002H
PROJECT ADDRESS:	40 RICHARDS CHAPEL RD COVINGTON, GA 30014
PROJECT TYPE:	NEW ENRICHMENT CENTER BUILDING
IMPROVEMENTS TO BE MADE:	ASSOCIATED DRIVES, PARKING, STORMWATER SYSTEM, UTILITIES, AND LANDSCAPING
SITE ACREAGE:	27.66 AC
DISTURBED ACREAGE:	4.70 AC
STATE WATERS ON SITE:	YES
EPD BUFFER ENCROACH. PERMIT REQ'D	NO
STATE AND LOCAL BUFFERS ADHERED TO:	YES
WETLANDS OR WATERS OF US ON SITE:	NO
RECEIVING WATERS:	SAMPSON CREEK

ESTIMATE OF RUNOFF COEFFICIENT OR PEAK DISCHARGE FLOW PRE AND POST DEVELOPMENT CONDITIONS:

PRE CN: 62
POST CN: 68
PRE FLOW : 62.23 CFS
POST FLOW : 59.78 CFS

ESTIMATE OF RUNOFF COEFFICIENT OR PEAK DISCHARGE FLOW PRE AND POST DEVELOPMENT CONDITIONS:

PRE CN ROUTED THROUGH EXISTING POND: 62
PRE FLOW ROUTED THROUGH EXISTING POND: 42.55

This plan has been prepared to meet the requirements under the State of Georgia, Department of Natural Resources, Environmental Protection Division (EPD), General Permit No. GAR100001 for authorization to discharge under the National Pollutant Discharge Elimination System (NPDES), Stormwater Discharges Associated with Construction Activity for Stand Alone Construction Projects. Daily, weekly and monthly inspections as required by Permit No. GAR100001 shall be performed by certified personnel provided by the Contractor. Sampling requirements as required by Permit No. GAR100001 shall be performed by certified personnel provided by the Contractor.

Contractor shall make sure construction is in accordance with regulations of the NPDES Permit No. GAR100001. This includes but is not limited to:

- *Site stabilization practices
- *BMP maintenance and inspections
- *Spill control practices
- *Waste control practices
- *Monitoring plans and practices
- *Vegetative and structural erosion control practices
- *Pollution prevention plan and practices
- *Material management practices for spill prevention plans
- *Wetland and state water protection practices
- *Reporting practices

POLLUTION REDUCTION PRACTICES FOR STORM WATER DISCHARGES:

STABILIZATION (VEGETATIVE) MEASURES:

ALL STABILIZATION (VEGETATIVE) MEASURES SHALL BE IMPLEMENTED AS STATED IN THE MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA (LATEST EDITION).

(Bf) Buffer Zone - A strip of undisturbed, original vegetation; enhanced or restored existing vegetation; or re-establishment of vegetation surrounding disturbed areas or bordering streams, ponds, wetlands, lakes, or coastal water to provide a buffer zone for one or more of the following purposes: reduce storm runoff velocities, act as visual screen, reduce construction noise, improve aesthetics on disturbed land, filtering and infiltrating runoff, cooling rivers/streams by creating shade, provide food and cover for wildlife, flood protection, or protect channel banks from scour and erosion.

(Ds1) Disturbed Area Stabilization (with Mulching Only)- Applying plant residues or other suitable materials, produced on site if possible, to the soil surface in order to reduce runoff, conserve moisture, prevent surface compaction or crusting, control undesirable vegetation, modify soil temperature, or increase biological activity in the soil. This practice is applicable where stabilizing disturbed/denuded areas is not practical utilizing seeding or planting.

(Ds2) Disturbed Area Stabilization (with Temporary Seeding)- Establishing temporary vegetative cover with fast growing seedlings for seasonal protection on disturbed/denuded areas in order to reduce runoff and sediment damage of downstream resources, protect the soil surface from erosion, improve wildlife habitat, improve aesthetics, improve tilth, infiltration and aeration as well as organic matter for permanent plantings. This practice is applicable for up to six months or until permanent vegetative cover can be installed. It should be coordinated with permanent measures to assure economical and effective stabilization.

(Ds3) Disturbed Area Stabilization (with Permanent Vegetation)- Planting of perennial vegetation such as trees, shrubs, vines, or legumes on exposed areas for final permanent stabilization in order to protect the soil surface from erosion, reduce damage from sediment and runoff to downstream areas, improve wildlife habitat and visual resources, and improve aesthetics. It will apply on cut and fill slopes, earth spillways, borrow areas, spoil areas and severely eroded or gullied lands.

(Ds4) Disturbed Area Stabilization (with Sodding)- Establishing an immediate and permanent vegetative cover using sods in order to reduce runoff and erosion, improve aesthetics and land value, reduce dust and sediments, stabilize waterways and critical areas, filter sediments, nutrients, reduce downstream complaints, reduce likelihood of legal action, reduce likelihood of work stoppage due to legal action, and increase "good neighbor" benefits.

(Du) Dust Control on Disturbed Areas- Controlling surface and air movement of dust on construction sites, roads, and demolition sites in order to prevent surface and air movement of dust from exposed soil surfaces, reduce the presence of airborne substances which may be harmful or injurious to human health, welfare, or safety, or to animals or plant life. Methods and materials which can be used include mulches, vegetative cover, spray-on adhesives, mechanical manipulation of existing soil surfaces, irrigation, barriers, chemicals, and stone surface covers.

(Fl-Co) Flocculants and Coagulants- Formulated to assist in the solid/liquid separation of suspended particles (which are characteristically very small) in solution. The suspended stability of such particles (colloidal complex) is due to both their small size and the electrical charge between particles.

(Sb) Streambank Stabilization (Using Permanent Vegetation)- Using native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems in order to lessen the impact of rain directly on the soil, trap sediment from adjacent land, form a root mat to stabilize and reinforce the soil on the streambank, provide wildlife habitat, enhance stream appearance, and lower summertime water temps.

(Ss) Slope Stabilization- A protective covering used to prevent erosion and establish vegetation on steep slopes, shore lines, or channels in order to stabilize the soil and act as a rain drop impact dissipater while providing a microclimate which protects young vegetation and promotes its establishment.

(Tac) Tackifiers- Substances used to anchor soil, compost, seed, straw, hay or mulch by causing organic material to bind together and discourage it from drifting downslope. Tackifiers also conserve moisture; prevent surface compaction, increase soil infiltration, soil fertility, enhanced seed germination, increased soil cohesion, enhanced soil stabilization, reduced stormwater runoff turbidity and reduction in loss of topsoil.

STRUCTURAL PRACTICES:

ALL STRUCTURAL PRACTICES SHALL BE IMPLEMENTED AS STATED IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA (LATEST EDITION).

(Cd) Check Dam- A small temporary barrier, grade control structure, or dam constructed across a swale or drainage ditch which drains five (5) acres or less (not to be used in a live stream) in order to reduce erosion by slowing the velocity of concentrated storm water flows.

(Ch) Channel Stabilization- Improving, constructing or stabilizing an open channel for water conveyance. Open channels are to be non-erosive, with no sediment deposition and able to provide adequate capacity for flood water, drainage, other water management practices, or any combination thereof.

(Co) Construction Exit- A stone stabilized pad located where traffic leaves a construction site to a public right-of-way, street, alley, sidewalk, parking, etc. (i.e. bare soil to paved area) in order to reduce/eliminate depositing construction area mud onto public rights-ofway by motor vehicles or by runoff.

(Cr) Construction Road Stabilization- Roads, parking areas, and other on-site transportation routes that are stabilized with coarse aggregate between the time of initial grading and final stabilization in order to provide a fixed route for construction traffic, reduce erosion, reduce subsequent re-grading of permanent roadbeds, and provide a stable base for paving.

(Dc) Stream Diversion Channel- A temporary channel that diverts a live stream and allows work "in the dry" while protecting streambed(s) from erosion. This diversion is used when in-stream work is unavoidable, as with linear projects such as utilities or roads that frequently cross and impact live streams and create a potential for excessive sediment loss by both the disturbance of the approach areas and by the work within the streambed and banks.

(Di) Diversion- An earth channel with a compacted supporting ridge on the lower side; constructed above, across, or below a slope to reduce slope lengths, break-up concentrations of runoff, intercept runoff, and move water to stable outlets at non-erosive velocities.

(Dn1) Temporary Downdrain Structure- A flexible conduit of heavy-duty plastic or other material used as a temporary structure to convey storm water down the face of a cut or fill slope without causing slope erosion and allowing the establishment of vegetation on the slope. Flexible downdrains are removed once the permanent water disposal system is installed.

(Dn2) Permanent Downdrain Structure- A permanent paved chute, pipe or sectional conduit of prefabricated material designed to safely conduct surface runoff from the top to the bottom of a slope thus minimizing erosion. Downdrain structures are to be used where concentrated water will cause excessive erosion of cut and fill slopes.

(Fr) Filter Ring- A temporary stone barrier used in conjunction with other sediment control measures and constructed at storm drain inlets and pond outlets, in order to reduce flow velocities, prevent failure of other sediment control devices, and prevent sediment from leaving the site or entering drainage systems, prior to permanent stabilization of the disturbed areas.

(Ga) Gabion- Large, multi-celled, wire mesh boxes, filled with rocks, which form flexible monolithic building blocks used in channel revetments, retaining walls, abutments, check dams, etc. to prevent erosion and sediment damage to a specific structure. When properly wired together, they can be used to stabilize steep or highly erosive slopes.

(Gr) Grade Stabilization Structure- Structures of concrete, rock masonry, steel, aluminum, treated wood, etc. that are installed to stabilize the grade in natural or artificial channels and to prevent the formation or advance of gullies and to reduce erosion and sediment pollution.

(Lv) Level Spreader- A storm flow outlet device structure constructed at zero grade across a slope where concentrated runoff may be intercepted and diverted at non-erosive sheet flow velocities onto undisturbed areas stabilized by existing vegetation.

(Rd) Rock Filter Dam- A permanent or temporary stone filter dam, which can be used in conjunction with a temporary sediment trap, installed across small streams, drainageways with a drainage area of 50 acres or less and outlets for sediment traps in order to serve as a sediment-filtering device and to reduce storm water flow velocities. This structure is not intended to substantially impound water and may require a US Army Corps of Engineers permit.

(Re) Retaining Wall- A constructed wall of concrete, masonry, reinforced concrete, cribbing, treated timbers, gabions, stone dry wall, rip-rap or other durable material in order to stabilize cut or fill slopes where maximum permissible slopes of earth are not obtainable without the use of the wall.

(Rt) Retrofitting- A device or structure, such as half round corrugated metal pipe or similar, placed in front of a permanent stormwater detention pond outlet or roadway drainage structure to serve as a temporary sediment filter, thus allowing permanent stormwater detention basin structures to function as temporary sediment retention basins for land-disturbing projects, and allow roadway drainage to be used for temporary sediment storage.

(Sd1) Sediment Barrier- A temporary structure constructed of silt fence, straw, hay bales, brush piles, mulch berms, compost filter sock, gravel or other filtering materials (typically supported by steel or wood posts), that are used to minimize and prevent sediment carried by sheet flow from leaving the site until final stabilization. Silt fence shall not be installed across streams, waterways, or other concentrated flow areas.

(Sd2) Inlet Sediment Trap- A temporary protective device formed at or around a storm drain inlet to trap sediment in runoff water from small, disturbed areas and prevent sediment from entering a storm drainage system prior to permanent stabilization of the disturbed area draining to the inlet. Clean out of these facilities is normally required after each heavy rainfall.

(Sd3) Temporary Sediment Basin- A basin created by construction of an embankment, barrier or dam containing a principal spillway pipe and an emergency spillway that are normally situated within natural drainageways and at the lowest point on a construction site. Structure size will vary depending on the size of the drainage area, soil type, volume of sediments to be trapped, rainfall pattern(s), structure location, etc. Permanent sediment basins are designed to fit into the overall plan of the completed development. Sd3's are designed to detain runoff waters and trap sediment from erodible areas in order to protect downstream properties.

(Sd4) Temporary Sediment Trap- A small temporary pond (with no pipe or riser) that drains a disturbed area so that sediment can settle out. Sd4's are designed to collect and store sediment from small tributary areas with no unusual drainage features that have been cleared and/or graded for construction.

(Sk) Floating Surface Skimmer- A buoyant device that drains surface water of sediment ponds, traps or basins and releases it at a controlled rate of flow. It "skims" the water surface where sediment concentrations are at a minimum instead of draining from the bottom where sediment concentrations are higher, and drains to a riser or the backside of a dam.

(SpB) Seep Berm- A linear control device constructed as a diversion (perpendicular to the direction of the runoff) to enhance dissipation and infiltration of runoff while using intermediate dikes to create multiple sedimentation chambers allowing smaller storms to seep out while diverting larger flows to a sediment storage area.

(Sr) Temporary Stream Crossing- A temporary structure installed across a flowing stream or watercourse for use by construction equipment without moving sediment into streams, damaging the streambed or channel, or causing flooding. The structure may consist of a pipe, bridge, or other suitable device permitting vehicular traffic to cross streams or watercourses.

(St) Storm Drain Outlet Protection- A paved or short section of rip-rap channel placed at the outlet of a storm drain system in order to reduce the velocity of water flows below storm drain outlets, and to prevent erosion from concentrated flow.

(Su) Surface Roughening- Providing a rough soil surface with horizontal depressions created by operating a tillage or other suitable implement on the contour, or by having slopes in a roughhead condition by not fine-grading them, in order to aid in establishment of vegetative cover with seed, to reduce runoff velocity and increase infiltration and to reduce erosion and provide for sediment trapping.

(Tc) Turbidity Curtain- A floating or staked barrier installed within the water in order to minimize turbidity and silt migration from work occurring within the water or as a supplement to perimeter control BMPs at the water's edge. Silt or turbidity is confined to the area within the boundary created by the installation, such that suspended particles drop out of the water column over time.

(Tp) Topsoiling- Stripping off the more fertile top soil, storing it, then spreading it over the disturbed area after completion of construction activities, in order to provide a suitable soil medium for vegetative growth on areas where other measures will not produce or maintain a desirable stand.

(Wt) Vegetated Waterway or Stormwater Conveyance Channel- Outlets for diversions, terraces, berms, or other structures. They may be natural or constructed, shaped to required dimensions, and paved or vegetated for disposal of storm water runoff. For waterways to be successful, it is essential that a protective cover of vegetation or other erosion protective measures be implemented.

PRODUCT SPECIFIC PRACTICES:

All pollutants from waste disposal practices, soil additives, remediation of spills and leaks of petroleum products, concrete truck washout, etc., should any of these occur, shall be controlled by the implementation of appropriate best management practices. the site shall be in compliance with all applicable state and local waste disposal, sanitary sewer or septic system regulations.

Petroleum Based Products - Containers for products such as fuels, lubricants, and tars shall be inspected daily for leaks and spills. This includes onsite vehicles and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas shall be located away from State Waters, natural drains, and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oils, fuels, and lubricants is prohibited. Proper disposal methods includes collection in a suitable container and disposal as required by local and State regulations.

Paints/Finishes/Solvents - All products shall be stored in tightly sealed original containers when not in use. Excess product shall not be discharged to the storm water collection system. Excess product, materials used with these products, and product containers shall be disposed of according to manufacturer's specifications and recommendations.

Fertilizer/Herbicides - These products shall be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the GSWCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers.

Building Materials - No building or construction materials shall be buried or disposed of onsite. All such material shall be disposed of in proper waste disposal procedures.

Concrete Truck Washing - NO concrete trucks shall be allowed to wash out or discharge surplus concrete or drum wash water onsite. Concrete wash down of tools, concrete mixer chutes, hoppers and the rear of vehicles will only be allowed in a designated area provided for this purpose, as shown on the drawings. the following best management practices will be followed:

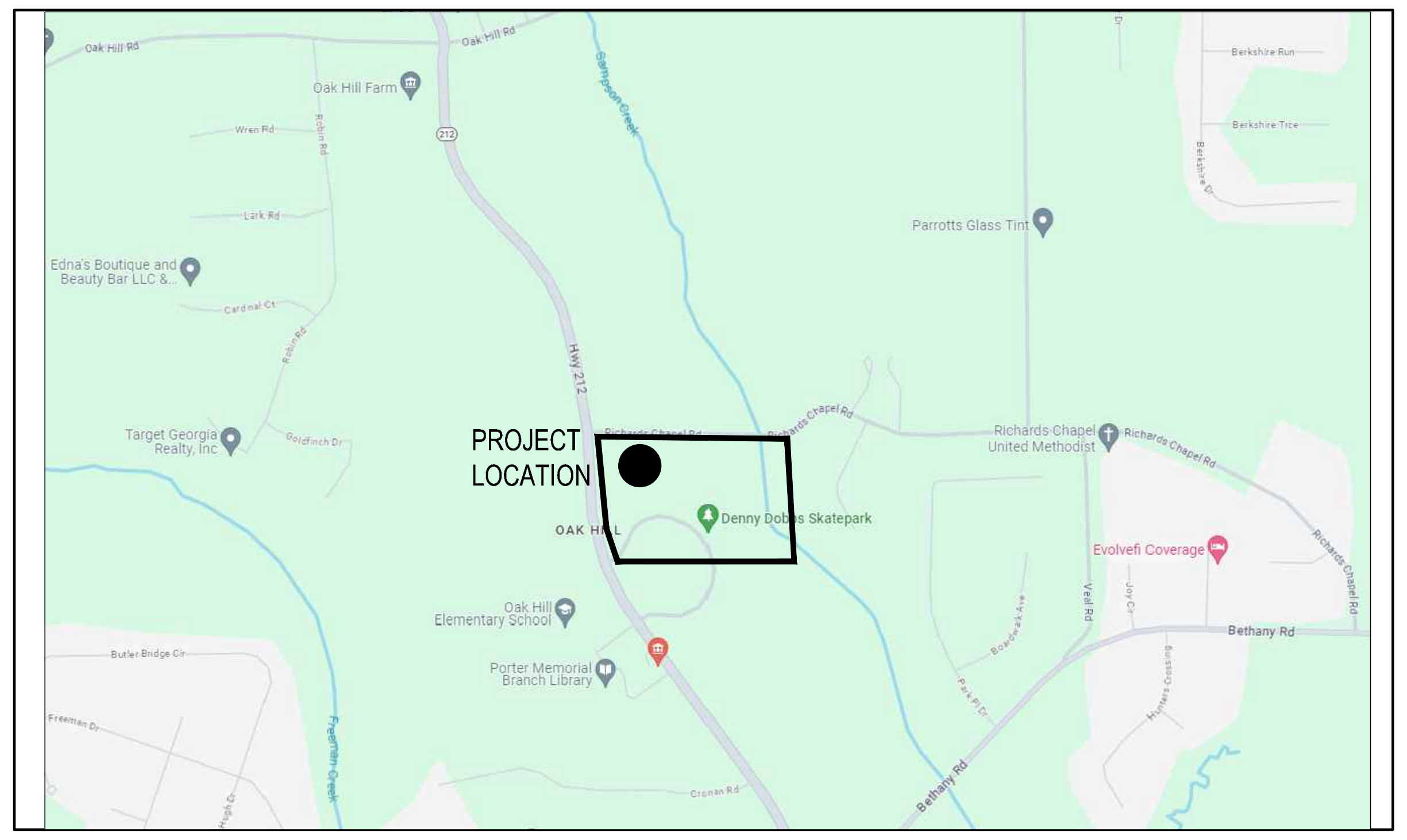
(1) Contain all wash water on soil, in a bowl shaped area created in the designated wash area to prevent the wash water from flowing from the washout area;

(2) Use the minimum amount of water to wash down the tools, concrete mixer chutes, hoppers and the rear of vehicles;

(3) Remove any concrete sediment from the area surrounding the washout area before it hardens; and

(4) Remove all concrete residue from the designated area once it has hardened.

Maintenance of all soil erosion and sedimentation control measures and practices, whether temporary or permanent, shall be at all times the responsibility of the property owner.



VICINITY MAP
NOT TO SCALE

GPS COORDINATES

N 33°31'50.48"	W -84°0'16.58"
N 33.530691	W -84.004607

N

PRIMARY PERMITTEE CONTACT INFORMATION:

NEWTON COUNTY BOC
JEFF PRINE
1124 CLARK STREET
COVINGTON, GA 30014
404-992-5050
JPRINE@ASCENSION-PM.COM

MEASURES INSTALLED DURING CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT MAY REMAIN AFTER CONSTRUCTION IS COMPLETE.:

1. Fl-Co
2. Sb
3. Ds3, Ds4
4. Tac
5. Ch
6. Di
7. Lv
8. Rd
9. St

POSSIBLE POLLUTANT SOURCES FOR THIS PROJECT:

Sediment Loss, Construction Debris, Petroleum Products, Concrete Products, Epoxies and Grouts, Fertilizers (Overuse), Tac applications (Overuse), Paint Products, Asphalt Products. Contractor shall maintain a clean working environment at all times and reduce and contain the pollution generated by these and other pollutants that are to be utilized for the construction of this project. Contractor shall follow all local, state, and federal laws in handling all polluting products.

NON-STORM WATER DISCHARGES ALLOWED UNDER PERMIT:

1. Fire fighting activities
2. Fire hydrant flushing
3. Potable water sources including water line flushing
4. Irrigation drainage
5. Air conditioning condensation
6. Springs
7. Uncontained Ground Water
8. Foundation or footing drains where flows are not contaminated with process materials or pollutants.

Each of these discharges shall be treated for storm water pollutants in BMPs applied on the site. Discharge from each of these shall be routed to a temporary sediment basin within the same drainage area.

HAZARDOUS WASTES:

All hazardous waste materials will be disposed of in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. The job site superintendent, who will also be responsible for seeing that these practices are followed, will instruct site personnel in these practices. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the ESPCP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

The contractor will implement the Spill Prevention Control Countermeasures (SPCC) Plan found within this ESPCP and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous materials or hazardous waste will be allowed to come in contact with the stormwater discharges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater. It shall be the responsibility of the job site superintendent to properly train all personnel in the use of the SPCC plan.

SANITARY WASTES:

A minimum of one portable sanitary unit will be provided for every ten (10) workers on the site. All sanitary waste will be collected from the portable units a minimum of one time per week by a licensed portable facility provider in complete compliance with local and state regulations.

All sanitary waste units will be located in one area where the likelihood of the unit contributing storm water discharge is negligible. Additional containment BMP's must be implemented, such as gravel bags or specially designed plastic skid containers around the base to prevent wastes from contributing to storm water discharges. The location of sanitary waste units must be identified on the ES&PC Plan b the contractor once the locations have been determined.

Sanitary sewer will be provided by Municipal Authority/Septic System at the completion of this Project.

SPILL CLEANUP AND CONTROL PRACTICES:

Local, state and manufacturer's recommended methods for spill clean up will be clearly posted and procedures will be made available to site personnel. Material and equipment necessary for spill cleanup will be kept in the material storage areas. Typical materials and equipment includes, but is not limited to, brooms, dustpans, mops, rags, gloves, goggles, cat litter, sand, sawdust and properly labeled plastic and metal waste containers. Spill prevention practices and procedures will be reviewed after a spill and adjusted as necessary to prevent future spills. All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, state and federal regulations. For spills that impact surface water (leave a sheen on surface water), the National Response Center (NRC) will be contacted within 24 hours at 1-800-424-8802. For spills of an unknown amount, the NRC will be contacted within 24 hours at 1-800-424-8802. For spills greater than 25 gallons and no surface water impacts, the Georgia EPD will be contacted within 24 hours. For spills less than 25 gallons and no surface water impacts, the spill will be cleaned up and local agencies will be contacted as required. The contractor shall notify the licensed professional who prepared this plan if more than 1,320 gallons of petroleum is stored onsite (this includes capacities of equipment) or if any one piece of equipment has capacity greater than 660 gallons. The contractor will need a spill prevention containment and countermeasures plan prepared by that licensed professional.

All pollutants from waste disposal practices, soil additives, remediation of spills and leaks of petroleum products, concrete truck washout, etc., should any of these occur, will be controlled by the implementation of appropriate best management practices. The site will be in compliance with all applicable state and local waste disposal, sanitary sewer or septic system regulations.

NON-EXEMPT ACTIVITIES:

"Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."

SOIL SERIES (PER NRCS MAPS SOILS ARE SHOWN AS):

AmB- APPLING SANDY LOAM, 2% TO 6% SLOPES
AmC- APPLING SANDY LOAM 6% TO 10% SLOPES
CCA- CARTECAY AND CHEWACLA SOILS, FREQUENTLY FLOODED
CeB- CECIL SANDY LOAM, 2% TO 6% SLOPES
PaC- PCOLET SANDY LOAM, 6% TO 10% SLOPES
WeD- WEDOWEE SANDY LOAM, 10% TO 15% SLOPES

REFER TO SHEET C-1.1 FOR CONSTRUCTION REQUIREMENTS AND SPECIFICATIONS

CRITICAL AREAS AND ADDITIONAL MEASURES:

1. Critical Areas: 2:1 and 3:1 slopes, inlet traps, sediment basins, and storm outlets. 2. Locate and flag buffers to prevent disturbance.

"Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit."

The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities.

Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.

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Professional Seal

JASON P. BROWN

Project Information

BRAVO
SITE SET
09-18-2024

NEWTON COUNTY SENIOR ENRICHMENT CENTER
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

ERO SION
SEDIMENTATION AND
POLLUTION CONTROL
NOTES

Sheet Number

C-6.1

REQUIRED INSPECTIONS AND RECORD KEEPING BY THE PRIMARY PERMITTEE:

PERMITTEE REQUIREMENTS.

(1).EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(2).MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

(3). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR

ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST):

(a)DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(4).CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

(5).BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

(6).A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION SITE THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION,

SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

ANALYTICAL METHODS TO BE USED TO COLLECT AND ANALYZE SAMPLES:

1. **SAMPLING REQUIREMENTS.** THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS PARAGRAPH SHALL NOT APPLY TO ANY LAND DISTURBANCE ASSOCIATED WITH THE CONSTRUCTION OF SINGLE-FAMILY HOMES WHICH ARE NOT PART OF A SUBDIVISION OR PLANNED COMMON DEVELOPMENT UNLESS FIVE (5) ACRES OR MORE WILL BE DISTURBED. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.

a.SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

(1). A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24000 MAP SHOWING THE LOCATION OF THE SITE OR THE STAND ALONE CONSTRUCTION; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP, AND ALL OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORMWATER IS DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORMWATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP;

(2). A WRITTEN NARRATIVE OF SITE SPECIFIC ANALYTICAL METHODS USED TO COLLECT, HANDLE AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION;

(3). WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE SAMPLED, A RATIONALE MUST BE INCLUDED ON THE PLAN FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND

(4). ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL.

b.SAMPLE TYPE. ALL SAMPLING SHALL BE COLLECTED BY “GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

(1). SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.

(2). SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

(3). LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

(4). MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.

(5). SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

c.SAMPLING POINTS.

(1). FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S). SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORMWATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:

(A). THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORMWATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.

(B). THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORMWATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.

(C). IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORMWATER OUTFALL CHANNEL(S).

(D). CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORMWATER CHANNEL.

(E). THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

(F). THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.

(G).PERMITTEES DO NOT HAVE TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION).

(H). ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORMWATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS
III.D.3. OR III.D.4., WHICHEVER IS APPLICABLE.

d.SAMPLING FREQUENCY.

(1). THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN IN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.

(2). HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORMWATER DISCHARGE.

(3). SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:

(A). FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;

(B). IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;

(C). AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;

(D). WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND

(E). EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND
(a) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

RETENTION OF RECORDS:

THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:

a.A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
b.A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
c.THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
d.A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
e.A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
f. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
g.DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.

1. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

NPDES Permit Part IV.E. Reporting:

1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

a. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
b. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
c. THE DATE(S) ANALYSES WERE PERFORMED;
d. THE TIME(S) ANALYSES WERE INITIATED;
e. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
f. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
g. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
h. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND
i. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO:

NORTHEAST DISTRICT- ATHENS
GEORGIA ENVIRONMENTAL PROTECTION DIVISION
745 GAINES SCHOOL RD.
ATHENS, GA 30605
(706) 369.6376

THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.

INITIAL INSPECTION AND REPORTING:

For common developments that begin construction activity after the effective date of this permit, the primary permittee must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control Plan, except when the primary permittee has requested in writing and EPD has agreed to an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the design professional designed within seven (7) days after installation. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required.

MINIMUM QUALIFICATIONS OF INSPECTORS:

"Design Professional" means a professional licensed by the state of GA in the field of: engineering, architecture, landscape architecture, forestry, geology, or land surveying; or a person that is a certified professional in erosion and sediment control (CPESC) with a current certification by Envirocert International, Inc. Design professionals shall practice in a manner that complies with applicable GA law governing professional licensure.

"Certified Personnel" means a person who has successfully completed the appropriate certification course approved by the GEORGIA SOIL AND WATER Conservation Commission.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS

SWCD: UPPER OCMULGEE RIVER- REGION 4
Project Name: NC SENIOR ENRICHMENT CENTER **Address:** 40 RICHARDS CHAPEL RD, COVINGTON, GA 30014
City/County: CITY OF COVINGTON/ NEWTON COUNTY **Date on Plans:** 9/18/2024
Name & email of person filling out checklist: JASON@GEORGIACIVIL.COM

TO BE SHOWN ON ES&PC PLAN

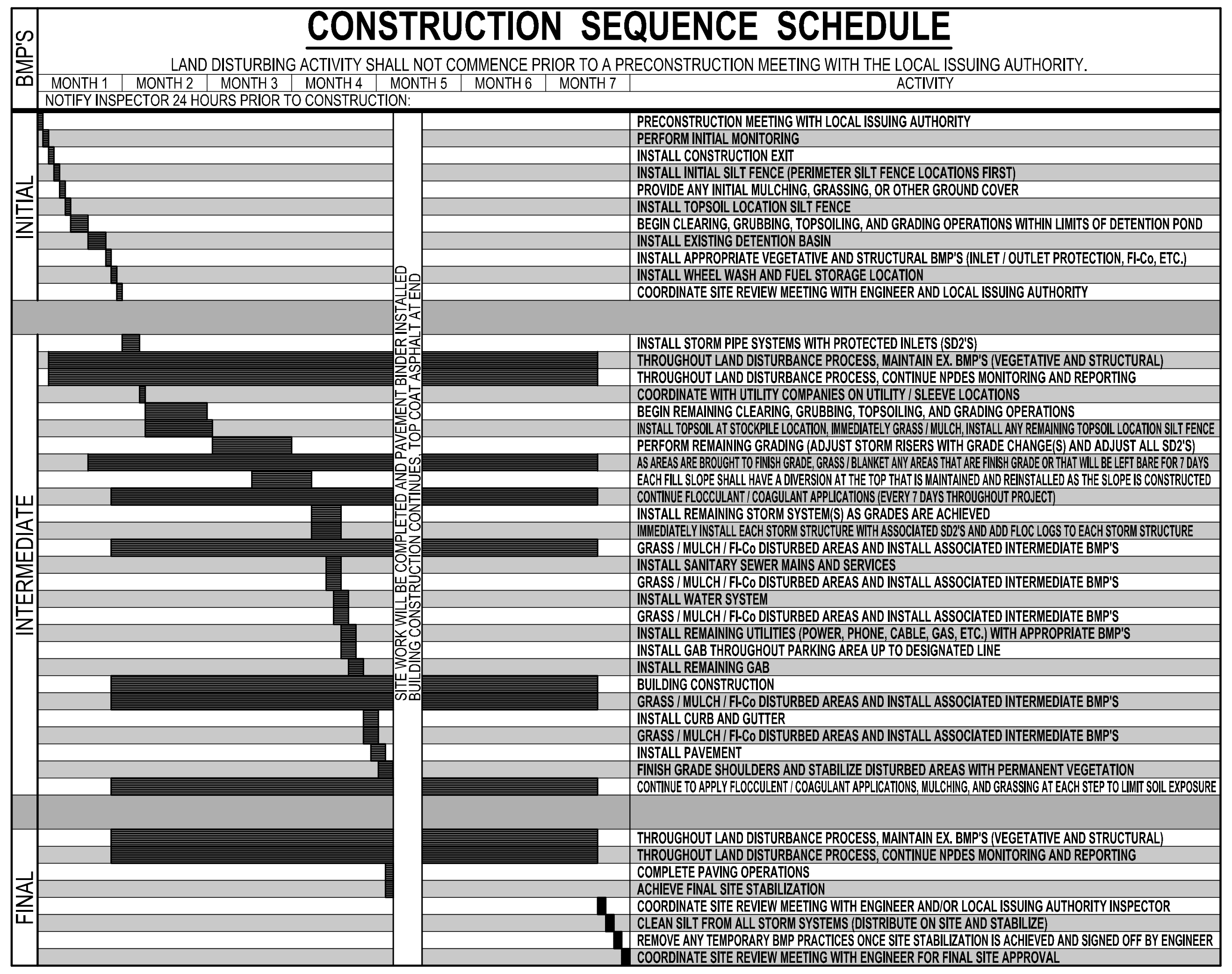
Page #	Y/N	
C-6.2	Y	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
C-6.3 - C-6.11	Y	2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
N/A		3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist and the GAEPD approval letter. * (A copy of the written approval by GAEPD must be attached to the plan for the Plan to be reviewed.)
C-6.3 - C-6.11	Y	4 The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
C-6.1	Y	5 Provide the name, address, email address, and phone number of primary permittee.
C-6.1	Y	6 Note total and disturbed acreages of the project or phase under construction.
C-6.1	Y	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
ALL	Y	8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
C-6.1	Y	9 Description of the nature of construction activity and existing site conditions.
C-6.1	Y	10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
C-6.1	Y	11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
C-6.1	Y	12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 19 of the permit.
C-6.1	Y	13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 19 of the permit. *
C-6.1	Y	14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with Part IV.A.5 page 25 of the permit. *
C-6.1	Y	15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
	N/A	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
C-6.1	Y	17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
C-6.1	Y	18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
C-6.1	Y	19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
C-6.1	Y	20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
C-6.1	Y	21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
	N/A	22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of a Biota Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
	N/A	23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
C-6.1	Y	24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *
C-6.1	Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.
C-6.1	Y	26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
C-6.1	Y	27 Description of practices to provide cover for building materials and building products on site. *
C-6.1	Y	28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *
C-6.2	Y	29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
C-6.2	Y	30 Provide complete requirements of Inspections and record keeping by the primary permittee. *
C-6.2	Y	31 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
C-6.2	Y	32 Provide complete details for Retention of Records as per Part IV.F. of the permit. *
C-6.2	Y	33 Description of analytical methods to be used to collect and analyze the samples from each location. *
C-6.2	Y	34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *
C-6.7	Y	35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *
C-6.1	Y	36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *
C-6.3 - C-6.11	Y	37 Graphic scale and North arrow.
C-6.3 - C-6.11	Y	38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:
	N/A	39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.
	N/A	40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
C-6.3 - C-6.11	Y	41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
C-6.3 - C-6.11	Y	42 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
C-6.7	Y	43 Delineation and acreage of contributing drainage basins on the project site.
ATTACHED	Y	44 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. * SEE ATTACHED
C-6.1	Y	45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
C-6.7	Y	46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
C-6.4	Y	47 Soil series for the project site and their delineation.
C-6.3 - C-6.11	Y	48 The limits of disturbance for each phase of construction.
C-6.7	Y	49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
C-6.3 - C-6.11	Y	50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
C-6.3 - C-6.11	Y	51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
C-6.12	Y	52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia.

Table for item 38:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

* If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the * checklist items would be N/A.

Effective January 1, 2024



CONSTRUCTION SEQUENCE SCHEDULE

LAND DISTURBING ACTIVITY SHALL NOT COMMENCE PRIOR TO A PRECONSTRUCTION MEETING WITH THE LOCAL ISSUING AUTHORITY.

NOTIFY INSPECTOR 24 HOURS PRIOR TO CONSTRUCTION:

BMP'S	ACTIVITY
INITIAL	PRECONSTRUCTION MEETING WITH LOCAL ISSUING AUTHORITY
	PERFORM INITIAL MONITORING
	INSTALL CONSTRUCTION EXIT
	INSTALL INITIAL SILT FENCE (PERIMETER SILT FENCE LOCATIONS FIRST)
	PROVIDE ANY INITIAL MULCHING, GRASSING, OR OTHER GROUND COVER
	INSTALL TOPSOIL LOCATION SILT FENCE
	BEGIN CLEARING, GRUBBING, TOPSOILING, AND GRADING OPERATIONS WITHIN LIMITS OF DETENTION POND
	INSTALL EXISTING DETENTION BASIN
	INSTALL APPROPRIATE VEGETATIVE AND STRUCTURAL BMP'S (INLET / OUTLET PROTECTION, Fl-Co, ETC.)
	INSTALL WHEEL WASH AND FUEL STORAGE LOCATION
	COORDINATE SITE REVIEW MEETING WITH ENGINEER AND LOCAL ISSUING AUTHORITY
INTERMEDIATE	INSTALL STORM PIPE SYSTEMS WITH PROTECTED INLETS (SD2'S)
	THROUGHOUT LAND DISTURBANCE PROCESS, MAINTAIN EX. BMP'S (VEGETATIVE AND STRUCTURAL)
	THROUGHOUT LAND DISTURBANCE PROCESS, CONTINUE NPDES MONITORING AND REPORTING
	COORDINATE WITH UTILITY COMPANIES ON UTILITY / SLEEVE LOCATIONS
	BEGIN REMAINING CLEARING, GRUBBING, TOPSOILING, AND GRADING OPERATIONS
	INSTALL TOPSOIL AT STOCKPILE LOCATION, IMMEDIATELY GRASS / MULCH, INSTALL ANY REMAINING TOPSOIL LOCATION SILT FENCE
	PERFORM REMAINING GRADING (ADJUST STORM RISERS WITH GRADE CHANGE(S) AND ADJUST ALL SD2'S)
	AS AREAS ARE BROUGHT TO FINISH GRADE, GRASS / BLANKET ANY AREAS THAT ARE FINISH GRADE OR THAT WILL BE LEFT BARE FOR 7 DAYS
	EACH FILL SLOPE SHALL HAVE A DIVERSION AT THE TOP THAT IS MAINTAINED AND REINSTALLED AS THE SLOPE IS CONSTRUCTED
	CONTINUE FLOCCULANT / COAGULANT APPLICATIONS (EVERY 7 DAYS THROUGHOUT PROJECT)
	INSTALL REMAINING STORM SYSTEM(S) AS GRADES ARE ACHIEVED
	IMMEDIATELY INSTALL EACH STORM STRUCTURE WITH ASSOCIATED SD2'S AND ADD FLOC LOGS TO EACH STORM STRUCTURE
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL SANITARY SEWER MAINS AND SERVICES
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL WATER SYSTEM
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL REMAINING UTILITIES (POWER, PHONE, CABLE, GAS, ETC.) WITH APPROPRIATE BMP'S
	INSTALL GAB THROUGHOUT PARKING AREA UP TO DESIGNATED LINE
	INSTALL REMAINING GAB
	BUILDING CONSTRUCTION
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL CURB AND GUTTER
	GRASS / MULCH / Fl-Co DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
	INSTALL PAVEMENT
	FINISH GRADE SHOULDERS AND STABILIZE DISTURBED AREAS WITH PERMANENT VEGETATION
	CONTINUE TO APPLY FLOCCULENT / COAGULANT APPLICATIONS, MULCHING, AND GRASSING AT EACH STEP TO LIMIT SOIL EXPOSURE
FINAL	THROUGHOUT LAND DISTURBANCE PROCESS, MAINTAIN EX. BMP'S (VEGETATIVE AND STRUCTURAL)
	THROUGHOUT LAND DISTURBANCE PROCESS, CONTINUE NPDES MONITORING AND REPORTING
	COMPLETE PAVING OPERATIONS
	ACHIEVE FINAL SITE STABILIZATION
	COORDINATE SITE REVIEW MEETING WITH ENGINEER AND/OR LOCAL ISSUING AUTHORITY INSPECTOR
	CLEAN SILT FROM ALL STORM SYSTEMS (DISTRIBUTE ON SITE AND STABILIZE)
	REMOVE ANY TEMPORARY BMP PRACTICES ONCE SITE STABILIZATION IS ACHIEVED AND SIGNED OFF BY ENGINEER
	COORDINATE SITE REVIEW MEETING WITH ENGINEER FOR FINAL SITE APPROVAL

NPDES GENERAL PERMIT NO. GAR100001 - APPENDIX B RATIONALE:

THE DISTURBED ACREAGE ON THE SITE IS 4.70 AC WITH A SURFACE WATER DRAINAGE AREA BETWEEN 0 AND 4.99 SQUARE MILES. THUS AN NTU VALUE OF 75 SHALL BE APPLIED. TWO SAMPLING POINT(S) IS SHOWN ON THE SITE. REFER TO SHEET C-6.1 FOR SAMPLING FREQUENCY AND METHODOLOGY. REFER TO SHEETS C-6.3 TO C-6.11 FOR SAMPLING POINT LOCATIONS.

Nephelometric Turbidity Unit (NTU) TABLE
Warm Water (Supporting Warm Water Fisheries)

Surface Water Drainage Area, square miles

SITE SIZE, ACRES	0 - 4.99	5 - 9.99	10 - 24.99	25 - 49.99	50 - 99.99	100 - 249.99	250 - 499.99	500+
1.00 - 10	75	150	200	400	750	750	750	750
10.01 - 25	50	100	100	200	300	500	750	750
25.01 - 50	50	50	100	100	200	300	750	750
50.01 - 100	50	50	50	100	100	150	300	600

BRAVO SITE SET 09-18-2024

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Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR
ENRICHMENT CENTER
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

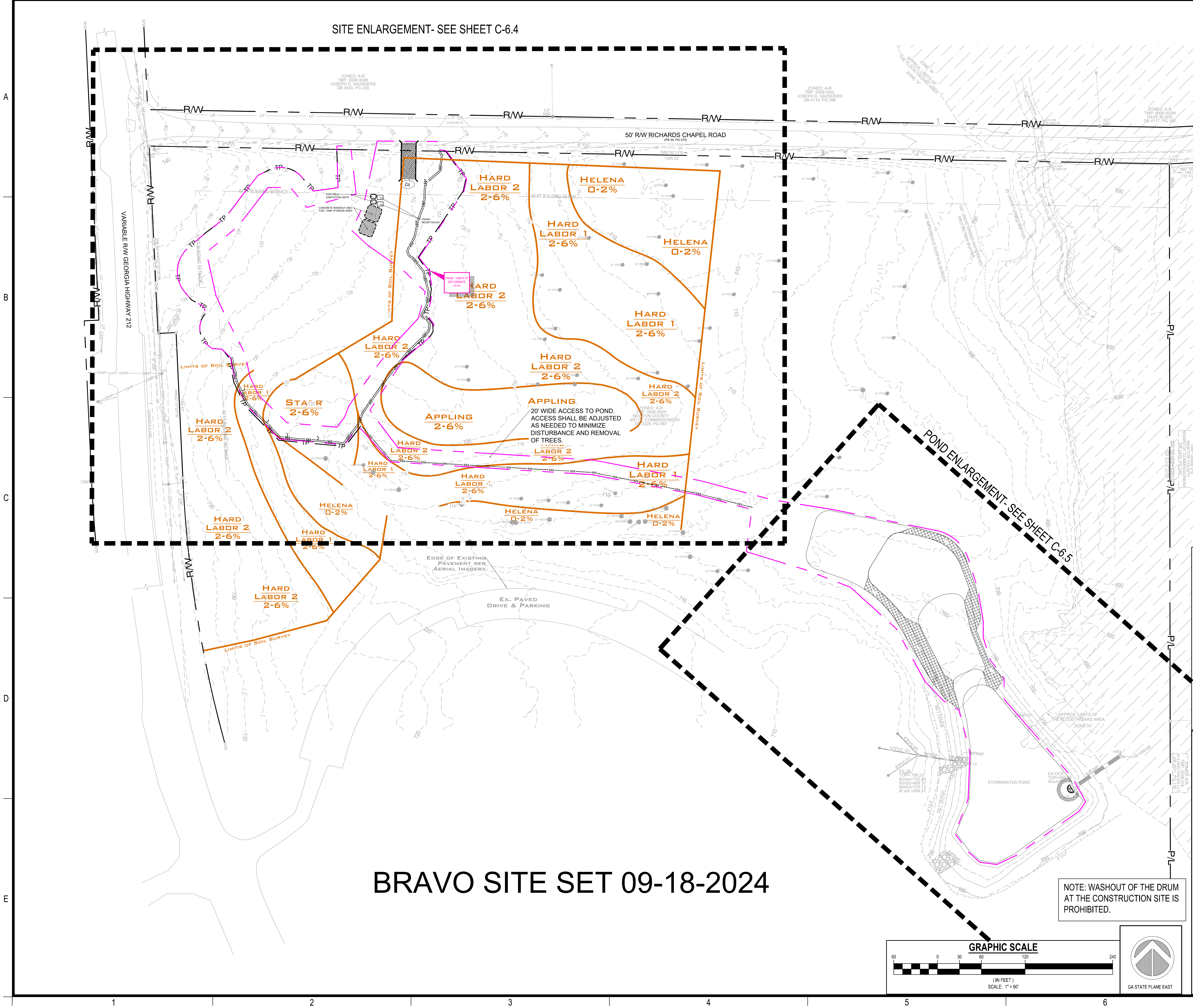
DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

EROSION
SEDIMENTATION AND
POLLUTION CONTROL
NOTES

Sheet Number

C-6.2


1
2
3
4
5
6
7
A
B
C
D
E
SITE ENLARGEMENT- SEE SHEET C-6.4
POND ENLARGEMENT- SEE SHEET C-6.5
50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
S89°00'13"E
1395.52'
VARIABLE R/W GEORGIA HIGHWAY 212
R/W
P/L
ZONED: A-R
TMP: 0008 002K
JOSEPH D. SAUNDERS
DB 3540, PG 229
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2228, PG 487
PORTABLE SANITATION UNITS
CONCRETE WASHOUT AND FUEL TANK STORAGE AREA
TRASH RECEPTACLES
60 FT BUILDING SETBACK
PHASE 1 LIMITS OF DISTURBANCE 2.8 AC
Co
TP
LIMITS OF SOIL SURVEY
HARD LABOR 2 2-6%
HARD LABOR 1 2-6%
HELENA 0-2%
STARR 2-6%
APPLING 2-6%
APPLING
20' WIDE ACCESS TO POND. ACCESS SHALL BE ADJUSTED AS NEEDED TO MINIMIZE DISTURBANCE AND REMOVAL OF TREES.
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
EX. PAVED DRIVE & PARKING
STORMWATER POND
SILT FENCE
RIPRAP
4' CLF
EX.JB
TOP= 708.23
IEin(a)=702.45
IEin(b)=669.37
INin(c)=703.13
IE out =699.37
EX.OCS
HW
IE=689.99
60"CMP
18"RCP
12"PVC (b)
6"PVC (a)
6"PVC(c)
APPROX. LIMITS OF THE FLOOD HAZARD AREA
ZONE "X"
ZONE "A"
GRAPHIC SCALE
60
0
30
60
120
240
(IN FEET)
SCALE: 1" = 60'
GA STATE PLANE EAST

BRAVO SITE SET 09-18-2024

NOTE: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

GEORGIA UNIFORM CODING SYSTEM
SOIL EROSION & SEDIMENT CONTROL

STRUCTURAL PRACTICES

Code	Practice	Symbol
Cd-Fs	Compost Filter Sock	Cd-Fs 12" dia.
Cd-Hb	Straw-Bale Check Dams	Cd-Hb
Cd-S	Stone Check Dams	Cd-S
Ch-1	Channel Stabilization - Category 1 (Vegetated/Sod)	Ch-1
Ch-2	Channel Stabilization - Category 2 (Rip-Rap, TRM)	Rip-Rap* TRM* Ch-2 *type
Ch-3	Channel Stabilization - Category 3 (Concrete)	Ch-3
Co	Construction Exit	Co
Cr	Construction Road Stabilization	Cr
Dc-A	Stream Diversion Channel (Geotextile, Sod, or Polyethylene film)	Dc-A or
Dc-B	Stream Diversion Channel (Geotextile alone)	Dc-B or
Dc-C	Stream Diversion Channel (Class I Rip-Rap and Geotextile)	Dc-C
Di	Diversion	Di
Dn1	Temporary Downdrain Structure	Dn1
Dn2	Permanent Downdrain Structure	Dn2
Fr	Filter Ring	Fr
Ga	Gabion	Ga
Gr	Grade Stabilization Structure	Gr
Lv	Level Spreader	Lv
Rd	Rock Filter Dam	Rd
Re	Retaining Wall	Re
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B
Rt-P	Retrofit (Perforated Half- Round Pipe w/ Stone Filter)	Rt-P
Rt-Sg	Retrofit (Silt Control Gate)	Rt-Sg
Sd1-BB	Sediment Barrier (Type = Brush Barrier)	Sd1-BB
Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"
Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"
Sd1-Cf	Sediment Barrier (Type = Compost Filter Media Sock)	Sd1-Cf 12" dia
Sd2-B	Inlet Sediment Trap (Baffle Box)	Sd2-⧆ ⧆ Indicate type
Sd2-Bg	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)	
Sd2-E	Inlet Sediment Trap (Excavated Inlet Sediment Trap)	
Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)	

Code	Practice	Symbol
Sd2-G	Inlet Sediment Trap (Gravel Drop Inlet Protection)	Sd2-⧆ ⧆Indicate type
Sd2-P	Inlet Sediment Trap (Curb Inlet Protection)	
Sd2-S	Inlet Sediment Trap (Sod Inlet Protection)	
Sd3	Temporary Sediment Basin	Sd3
Sd4	Temporary Sediment Trap	Sd4
Sk	Floating Filter Surface Skimmer	Sk
SpB	Seep Berm	SpB
Sr-B	Temporary Stream Crossing (Bridge)	Sr-B
Sr-C	Temporary Stream Crossing (Culvert)	Sr-C
St	Storm Drain Outlet Protection	St
Su	Surface Roughening	Su
Tc-F	Turbidity Curtain (Floating)	Tc-⧆ ⧆Indicate type
Tc-S	Turbidity Curtain (Staked)	
Tp	Topsoiling	Tp
Wt	Vegetated Waterway or Stormwater Conveyance Channel	Wt

VEGETATIVE MEASURES

Code	Practice	Symbol
Bf	Buffer Zone	Bf
Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs
Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1
Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2
Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3
Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4
Du	Dust Control on Disturbed Areas	Du
Fl-Co	Flocculants Coagulants	Fl-Co
Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb
Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss
Tac-1	Tackifiers: Type I (Synthetic Polymers)	Tac-1
Tac-2	Tackifiers: Type II (Organic Polymers)	Tac-2
Tac-3	Tackifiers: Type III (Synthetic/ Organic Blends)	Tac-3
Tac-4	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	Tac-4
Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5

REFER TO SHEET C-1.1 AND C-6.1 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

Maintenance of all soil erosion and sedimentation control measures and practices, whether temporary or permanent, shall be at all times the responsibility of the property owner.

GSWCC EROSION CONTROL NOTES:

The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities.

Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.

Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.

Any amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.

OWNER/DEVELOPER

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SITE DESIGNER

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JASON P. BROWN
LEVEL II CERTIFIED
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MIKE MCCROREY
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Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

DRAWING DATE:	
DRAWN BY:	
CHECKED BY:	

REVISIONS

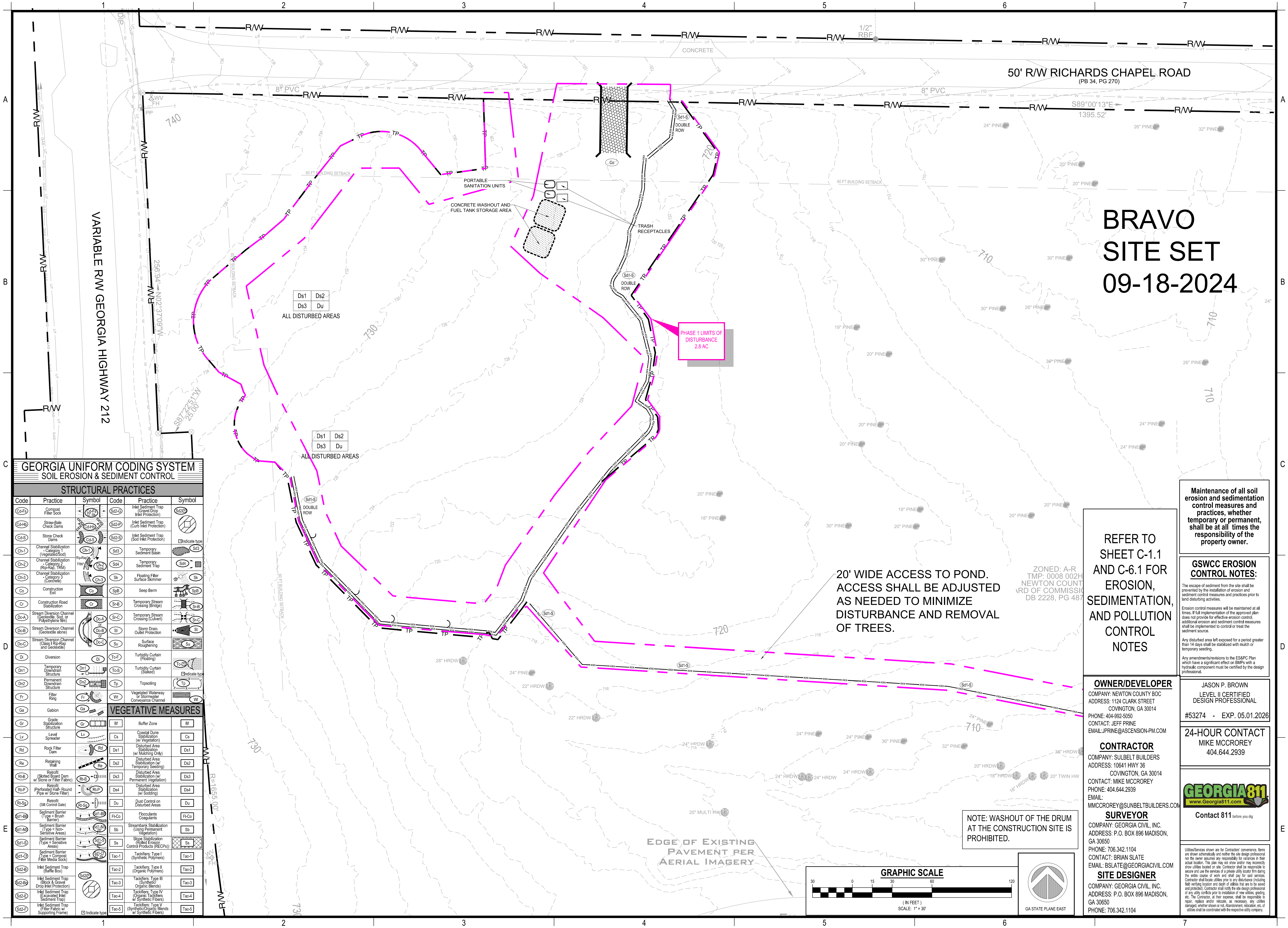
DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

INITIAL EROSION SEDIMENTATION & POLLUTION CONTROL PLAN OVERVIEW

Sheet Number

C-6.3



20' WIDE ACCESS TO POND. ACCESS SHALL BE ADJUSTED AS NEEDED TO MINIMIZE DISTURBANCE AND REMOVAL OF TREES.

NOTE: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

BRAVO SITE SET 09-18-2024

GEORGIA UNIFORM CODING SYSTEM
SOIL EROSION & SEDIMENT CONTROL

STRUCTURAL PRACTICES

Code	Practice	Symbol	Code	Practice	Symbol
Cd-Fs	Compost Filter Sock	Cd-Fs 12" dia	Sd2-G	Inlet Sediment Trap (Gravel Drop Inlet Protection)	Sd2-☒ ☒ Indicate type
Cd-Hb	Straw-Bale Check Dams	Cd-Hb	Sd2-P	Inlet Sediment Trap (Curb Inlet Protection)	
Cd-S	Stone Check Dams	Cd-S	Sd2-S	Inlet Sediment Trap (Sod Inlet Protection)	
Ch-1	Channel Stabilization - Category 1 (Vegetated/Sod)	Ch-1	Sd3	Temporary Sediment Basin	Sd3
Ch-2	Channel Stabilization - Category 2 (Rip-Rap, TRM)	Rip-Rap* TRM* Ch-2 *type	Sd4	Temporary Sediment Trap	Sd4
Ch-3	Channel Stabilization - Category 3 (Concrete)	Ch-3	Sk	Floating Filter Surface Skimmer	Sk
Co	Construction Exit	Co	SpB	Seep Berm	SpB
Cr	Construction Road Stabilization	Cr	Sr-B	Temporary Stream Crossing (Bridge)	Sr-B
Dc-A	Stream Diversion Channel (Geotextile, Sod, or Polyethylene film)	Dc-A or Dc-B or Dc-C	Sr-C	Temporary Stream Crossing (Culvert)	Sr-C
Dc-B	Stream Diversion Channel (Geotextile alone)		St	Storm Drain Outlet Protection	St
Dc-C	Stream Diversion Channel (Class I Rip-Rap and Geotextile)		Su	Surface Roughening	Su
Di	Diversion	Di	Tc-F	Turbidity Curtain (Floating)	Tc-☒ ☒ Indicate type
Dn1	Temporary Downdrain Structure	Dn1	Tc-S	Turbidity Curtain (Staked)	
Dn2	Permanent Downdrain Structure	Dn2	Tp	Topsoiling	Tp
Fr	Filter Ring	Fr	Wt	Vegetated Waterway or Stormwater Conveyance Channel	Wt
Ga	Gabion	Ga	**VEGETATIVE MEASURES**		
Gr	Grade Stabilization Structure	Gr	Bf	Buffer Zone	Bf
Lv	Level Spreader	Lv	Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs
Rd	Rock Filter Dam	Rd	Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1
Re	Retaining Wall	Re	Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B	Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3
Rt-P	Retrofit (Perforated Half- Round Pipe w/ Stone Filter)	Rt-P	Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4
Rt-Sg	Retrofit (Silt Control Gate)	Rt-Sg	Du	Dust Control on Disturbed Areas	Du
Sd1-BB	Sediment Barrier (Type = Brush Barrier)	Sd1-BB	Fl-Co	Flocculants Coagulants	Fl-Co
Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"	Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb
Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"	Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss
Sd1-Cf	Sediment Barrier (Type = Compost Filter Media Sock)	Sd1-Cf 12" dia	Tac-1	Tackifiers: Type I (Synthetic Polymers)	Tac-1
Sd2-B	Inlet Sediment Trap (Baffle Box)	Sd2-☒ ☒ Indicate type	Tac-2	Tackifiers: Type II (Organic Polymers)	Tac-2
Sd2-Bg	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)		Tac-3	Tackifiers: Type III (Synthetic/ Organic Blends)	Tac-3
Sd2-E	Inlet Sediment Trap (Excavated Inlet Sediment Trap)		Tac-4	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	Tac-4
Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)		Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5

REFER TO SHEET C-1.1 AND C-6.1 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

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Sheet Title

INITIAL EROSION SEDIMENTATION & POLLUTION CONTROL PLAN SITE VIEW

Sheet Number

C-6.4

GEORGIA UNIFORM CODING SYSTEM
SOIL EROSION & SEDIMENT CONTROL

STRUCTURAL PRACTICES

Code	Practice	Symbol
Cd-Fs	Compost Filter Sock	Cd-Fs 12" dia
Cd-Hb	Straw-Bale Check Dams	Cd-Hb
Cd-S	Stone Check Dams	Cd-S
Ch-1	Channel Stabilization - Category 1 (Vegetated/Sod)	Ch-1
Ch-2	Channel Stabilization - Category 2 (Rip-Rap, TRM)	Rip-Rap* TRM* Ch-2 *type
Ch-3	Channel Stabilization - Category 3 (Concrete)	Ch-3
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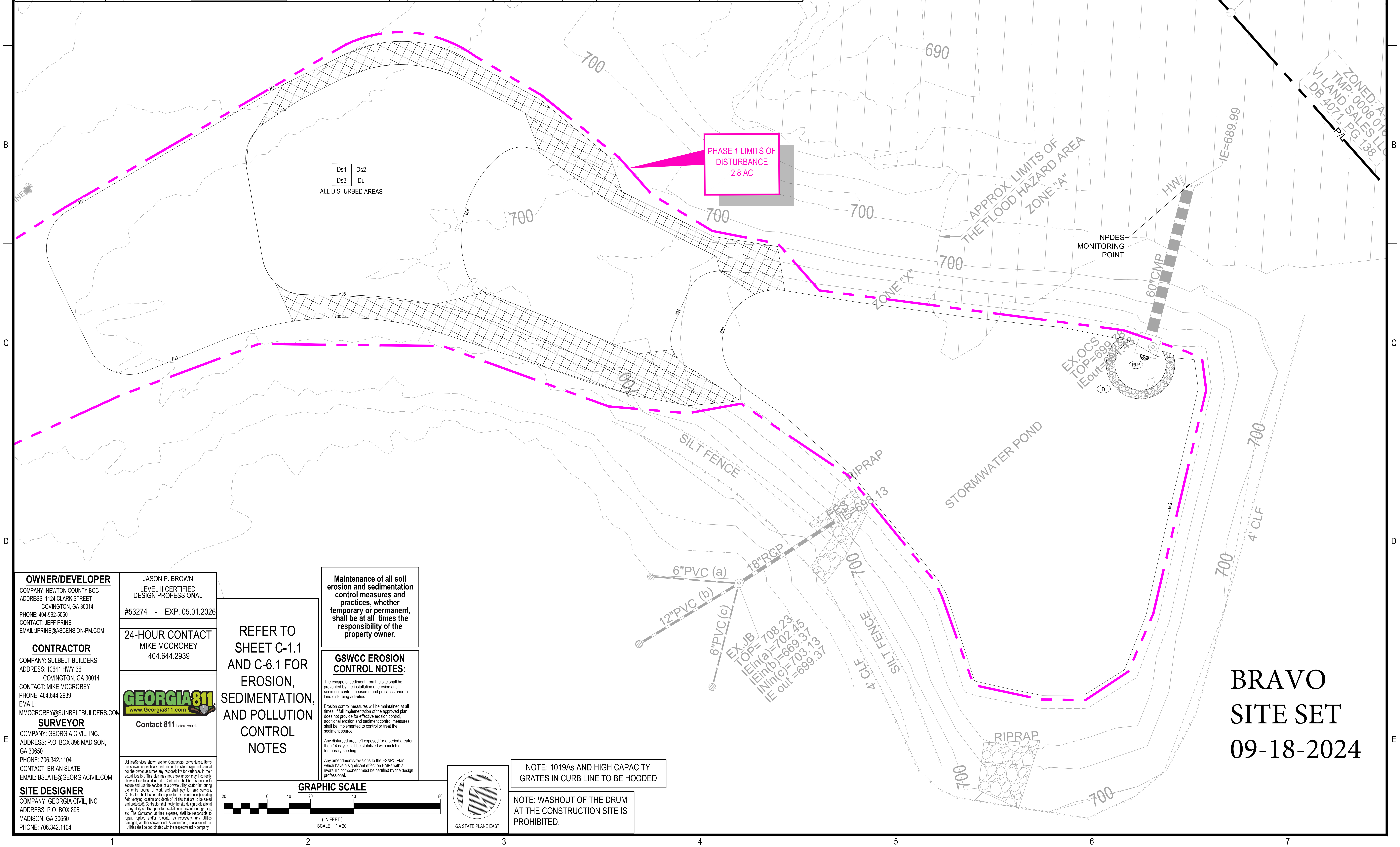
Cr	Construction Road Stabilization	Cr
Di	Diversion	Di
Dc-A	Stream Diversion Channel (Geotextile, Sod, or Polyethylene film)	Dc-A or Dc-B or Dc-C
Dc-B	Stream Diversion Channel (Geotextile alone)	
Dc-C	Stream Diversion Channel (Class I Rip-Rap and Geotextile)	
Dn1	Temporary Downdrain Structure	Dn1
Dn2	Permanent Downdrain Structure	Dn2
Fr	Filter Ring	Fr
Ga	Gabion	Ga
Gr	Grade Stabilization Structure	Gr
Lv	Level Spreader	Lv
Rd	Rock Filter Dam	Rd
Re	Retaining Wall	Re
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B
Rt-P	Retrofit (Perforated Half-Round Pipe w/ Stone Filter)	Rt-P
Rt-Sg	Retrofit (Silt Control Gate)	Rt-Sg
Sd1-BB	Sediment Barrier (Type = Brush Barrier)	Sd1-BB
Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"
Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"
Sd1-Cf	Sediment Barrier (Type = Compost Filter Media Sock)	Sd1-Cf 12" dia
Sd2-B	Inlet Sediment Trap (Baffle Box)	Sd2-☒ ☒ Indicate type
Sd2-Bg	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)	
Sd2-E	Inlet Sediment Trap (Excavated Inlet Sediment Trap)	
Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)	Sd2-☒ ☒ Indicate type
Sd2-G	Inlet Sediment Trap (Gravel Drop Inlet Protection)	
Sd2-P	Inlet Sediment Trap (Curb Inlet Protection)	
Sd2-S	Inlet Sediment Trap (Sod Inlet Protection)	Sd2-☒ ☒ Indicate type
Sd3	Temporary Sediment Basin	Sd3
Sd4	Temporary Sediment Trap	Sd4
Sk	Floating Filter Surface Skimmer	Sk
SpB	Seep Berm	SpB
Sr-B	Temporary Stream Crossing (Bridge)	Sr-B

STRUCTURAL PRACTICES

Code	Practice	Symbol
Sr-C	Temporary Stream Crossing (Culvert)	Sr-C
St	Storm Drain Outlet Protection	St
Su	Surface Roughening	Su
Tc-F	Turbidity Curtain (Floating)	Tc-☒ ☒ Indicate type
Tc-S	Turbidity Curtain (Staked)	
Tp	Topsoiling	Tp
Wt	Vegetated Waterway or Stormwater Conveyance Channel	Wt

VEGETATIVE MEASURES

Code	Practice	Symbol
Bf	Buffer Zone	Bf
Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs
Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1
Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2
Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3
Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4
Du	Dust Control on Disturbed Areas	Du
Fl-Co	Flocculants Coagulants	Fl-Co
Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb
Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss
Tac-1	Tackifiers: Type I (Synthetic Polymers)	Tac-1
Tac-2	Tackifiers: Type II (Organic Polymers)	Tac-2
Tac-3	Tackifiers: Type III (Synthetic/ Organic Blends)	Tac-3
Tac-4	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	Tac-4
Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5



OWNER/DEVELOPER
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COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

CONTRACTOR
COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA 30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
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MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER
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ADDRESS: P.O. BOX 896
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PHONE: 706.342.1104

JASON P. BROWN
LEVEL II CERTIFIED DESIGN PROFESSIONAL
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REFER TO SHEET C-1.1 AND C-6.1 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

Maintenance of all soil erosion and sedimentation control measures and practices, whether temporary or permanent, shall be at all times the responsibility of the property owner.

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GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
SCALE: 1" = 20'

GA STATE PLANE EAST

NOTE: 1019As AND HIGH CAPACITY GRATES IN CURB LINE TO BE HOODED

NOTE: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

BRAVO
SITE SET
09-18-2024

georgia civil
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LAND PLANNING
LAND SURVEYING

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Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR ENRICHMENT CENTER

40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	
DRAWN BY:	
CHECKED BY:	

REVISIONS

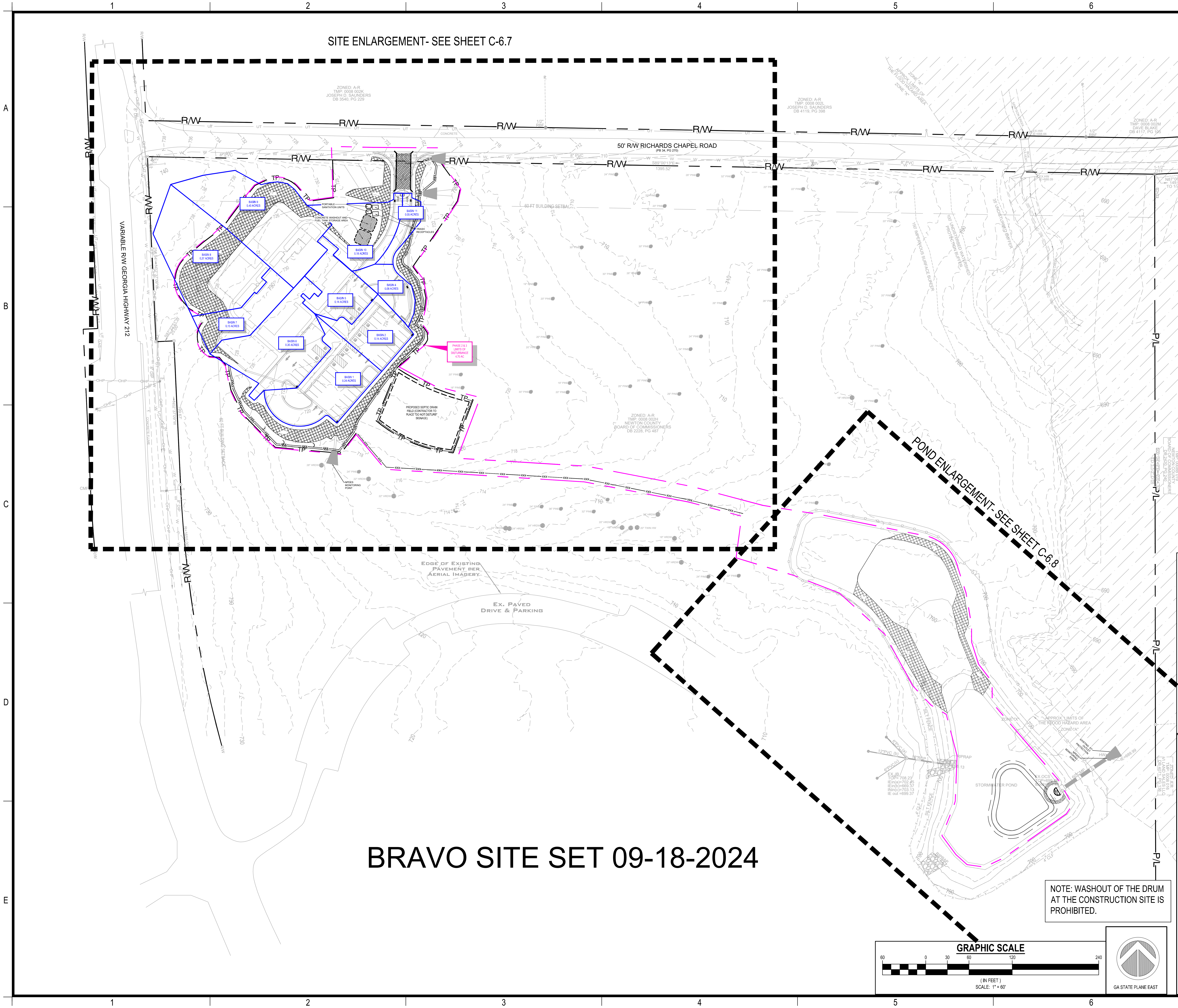
DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

INITIAL EROSION SEDIMENTATION & POLLUTION CONTROL PLAN POND VIEW

Sheet Number

C-6.5


SITE ENLARGEMENT- SEE SHEET C-6.7
POND ENLARGEMENT - SEE SHEET C-6.8
50' R/W RICHARDS CHAPEL ROAD
VARIABLE R/W GEORGIA HIGHWAY 212
R/W
P/L
ZONED: A-R
NEWTON COUNTY BOARD OF COMMISSIONERS
PROPOSED SEPTIC DRAIN FIELD (CONTRACTOR TO PLACE "DO NOT DISTURB" SIGNAGE)
PORTABLE SANITATION UNITS
CONCRETE WASHOUT AND FUEL TANK STORAGE AREA
TRASH RECEPTACLES
BASIN 1
BASIN 2
BASIN 3
BASIN 4
BASIN 5
BASIN 6
BASIN 7
BASIN 8
BASIN 9
BASIN 10
BASIN 11
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
EX. PAVED DRIVE & PARKING
STORMWATER POND
RIPRAP
4' CLF
700
710
720
GRAPHIC SCALE
60
0
30
60
120
240
(IN FEET)
SCALE: 1" = 60'
GA STATE PLANE EAST

BRAVO SITE SET 09-18-2024

NOTE: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

REFER TO SHEET C-1.1 AND C-6.1 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

GEORGIA UNIFORM CODING SYSTEM
SOIL EROSION & SEDIMENT CONTROL

STRUCTURAL PRACTICES

Code	Practice	Symbol
Cd-Fs	Compost Filter Sock	Cd-Fs 12" dia.
Cd-Hb	Straw-Bale Check Dams	Cd-Hb
Cd-S	Stone Check Dams	Cd-S
Ch-1	Channel Stabilization - Category 1 (Vegetated/Sod)	Ch-1
Ch-2	Channel Stabilization - Category 2 (Rip-Rap, TRM)	Rip-Rap* TRM* Ch-2 *type
Ch-3	Channel Stabilization - Category 3 (Concrete)	Ch-3
Co	Construction Exit	Co
Cr	Construction Road Stabilization	Cr
Dc-A	Stream Diversion Channel (Geotextile, Sod, or Polyethylene film)	Dc-A or Dc-B or Dc-C
Dc-B	Stream Diversion Channel (Geotextile alone)	
Dc-C	Stream Diversion Channel (Class I Rip-Rap and Geotextile)	
Di	Diversion	Di
Dn1	Temporary Downdrain Structure	Dn1
Dn2	Permanent Downdrain Structure	Dn2
Fr	Filter Ring	Fr
Ga	Gabion	Ga
Gr	Grade Stabilization Structure	Gr
Lv	Level Spreader	Lv
Rd	Rock Filter Dam	Rd
Re	Retaining Wall	Re
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B
Rt-P	Retrofit (Perforated Half- Round Pipe w/ Stone Filter)	Rt-P
Rt-Sg	Retrofit (Silt Control Gate)	Rt-Sg
Sd1-BB	Sediment Barrier (Type = Brush Barrier)	Sd1-BB
Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"
Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"
Sd1-Cf	Sediment Barrier (Type = Compost Filter Media Sock)	Sd1-Cf 12" dia
Sd2-B	Inlet Sediment Trap (Baffle Box)	Sd2-☒ ☒ Indicate type
Sd2-Bg	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)	
Sd2-E	Inlet Sediment Trap (Excavated Inlet Sediment Trap)	
Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)	
Sd2-G	Inlet Sediment Trap (Gravel Drop Inlet Protection)	Sd2-☒ ☒ Indicate type
Sd2-P	Inlet Sediment Trap (Curb Inlet Protection)	
Sd2-S	Inlet Sediment Trap (Sod Inlet Protection)	
Sd3	Temporary Sediment Basin	Sd3
Sd4	Temporary Sediment Trap	Sd4
Sk	Floating Filter Surface Skimmer	Sk
SpB	Seep Berm	SpB
Sr-B	Temporary Stream Crossing (Bridge)	Sr-B
Sr-C	Temporary Stream Crossing (Culvert)	Sr-C
St	Storm Drain Outlet Protection	St
Su	Surface Roughening	Su
Tc-F	Turbidity Curtain (Floating)	Tc-☒ ☒ Indicate type
Tc-S	Turbidity Curtain (Staked)	
Tp	Topsoiling	Tp
Wt	Vegetated Waterway or Stormwater Conveyance Channel	Wt

VEGETATIVE MEASURES

Code	Practice	Symbol
Bf	Buffer Zone	Bf
Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs
Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1
Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2
Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3
Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4
Du	Dust Control on Disturbed Areas	Du
Fl-Co	Flocculants Coagulants	Fl-Co
Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb
Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss
Tac-1	Tackifiers: Type I (Synthetic Polymers)	Tac-1
Tac-2	Tackifiers: Type II (Organic Polymers)	Tac-2
Tac-3	Tackifiers: Type III (Synthetic/ Organic Blends)	Tac-3
Tac-4	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	Tac-4
Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5

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Professional Seal

NO. PE031684
JASON P. BROWN

Jason P. Brown

Project Information

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DRAWN BY:	
CHECKED BY:	

REVISIONS

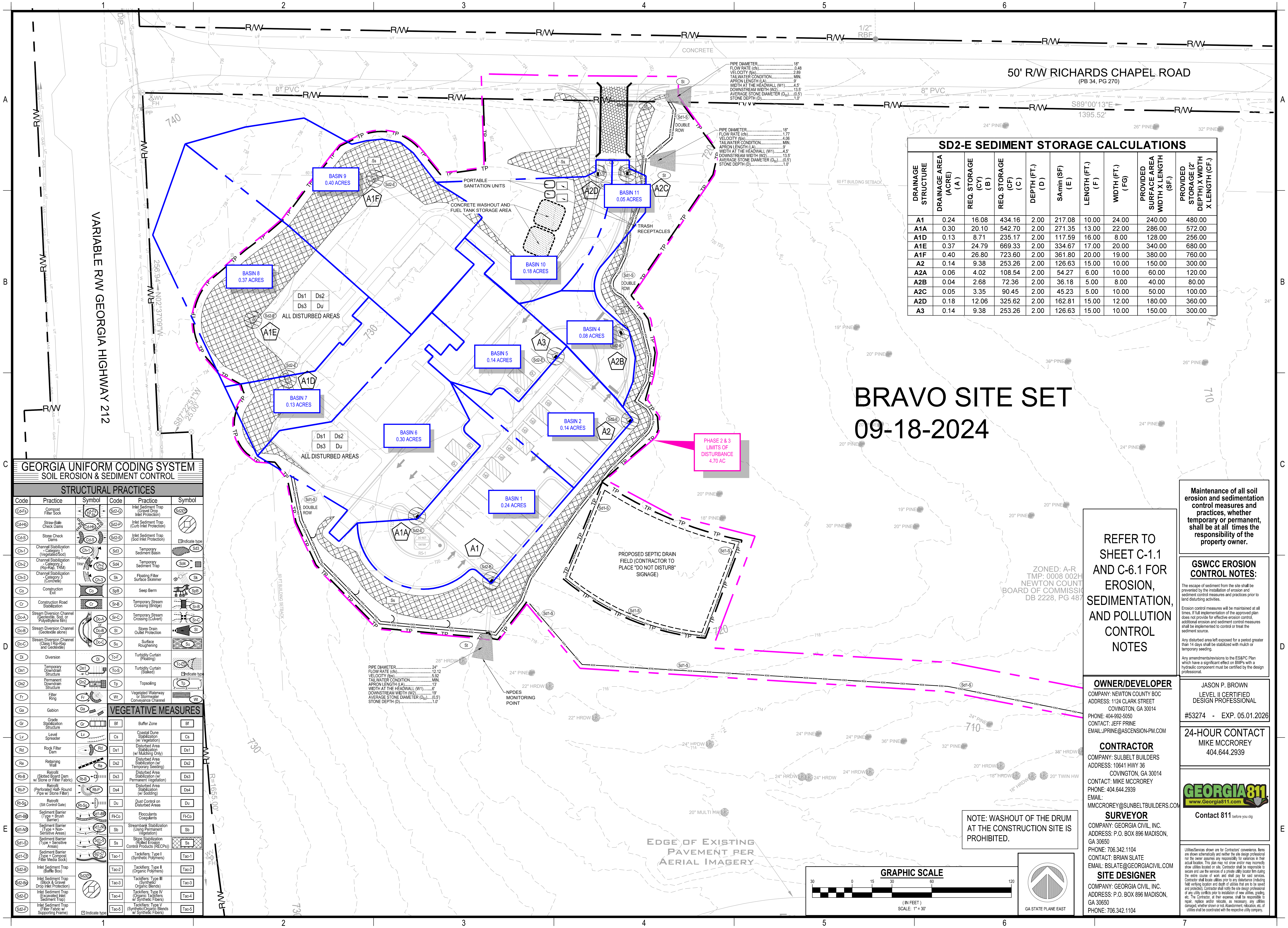
DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

INTERMEDIATE EROSION SEDIMENTATION & POLLUTION CONTROL OVERVIEW

Sheet Number

C-6.6


50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
S89°00'13"E
1395.52'
R/W
CONCRETE
8" PVC
1/2" RBF
VARIABLE R/W GEORGIA HIGHWAY 212
S87°22'51"W
25.00'
256.94' N02°37'09"W
R=1655.00'
740
730
720
710
BASIN 9
0.40 ACRES
BASIN 8
0.37 ACRES
BASIN 10
0.18 ACRES
BASIN 11
0.05 ACRES
BASIN 4
0.08 ACRES
BASIN 5
0.14 ACRES
BASIN 7
0.13 ACRES
BASIN 6
0.30 ACRES
BASIN 2
0.14 ACRES
BASIN 1
0.24 ACRES
A1F
A1E
A1D
A1A
A1
A2D
A2C
A2B
A2
A3
Sd2-E
Sd1-S
DOUBLE ROW
St
Ss
TP
Ds1
Ds2
Ds3
Du
ALL DISTURBED AREAS
PORTABLE SANITATION UNITS
CONCRETE WASHOUT AND FUEL TANK STORAGE AREA
TRASH RECEPTACLES
60 FT BUILDING SETBACK
PHASE 2 & 3
LIMITS OF
DISTURBANCE
4.70 AC
PROPOSED SEPTIC DRAIN FIELD (CONTRACTOR TO PLACE "DO NOT DISTURB" SIGNAGE)
NPDES MONITORING POINT
ZONED: A-R
TMP: 0008 002H
NEWTON COUNT
BOARD OF COMMISSIC
DB 2228, PG 487
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
24" PINE
26" PINE
32" PINE
36" PINE
20" PINE
19" PINE
18" PINE
30" PINE
28" HRDW
22" HRDW
24" HRDW
20" HRDW
38" HRDW
18" HRDW
20" TWIN HW
20" MULTI HW
GA STATE PLANE EAST

PIPE DIAMETER.................18"
FLOW RATE (cfs).................0.48
VELOCITY (fps).................2.89
TAILWATER CONDITION.................MIN.
APRON LENGTH (LA).................9'
WIDTH AT THE HEADWALL (W1).........4.5'
DOWNSTREAM WIDTH (W2).................13.5'
AVERAGE STONE DIAMETER (D_{50}).....(0.5')
STONE DEPTH (D).................1.0'

PIPE DIAMETER.................18"
FLOW RATE (cfs).................1.77
VELOCITY (fps).................4.06
TAILWATER CONDITION.................MIN.
APRON LENGTH (LA).................9'
WIDTH AT THE HEADWALL (W1).........4.5'
DOWNSTREAM WIDTH (W2).................13.5'
AVERAGE STONE DIAMETER (D_{50}).....(0.5')
STONE DEPTH (D).................1.0'

PIPE DIAMETER.................24"
FLOW RATE (cfs).................12.12
VELOCITY (fps).................5.92
TAILWATER CONDITION.................MIN.
APRON LENGTH (LA).................13'
WIDTH AT THE HEADWALL (W1).........6'
DOWNSTREAM WIDTH (W2).................19'
AVERAGE STONE DIAMETER (D_{50}).....(0.5')
STONE DEPTH (D).................1.0'

BRAVO SITE SET
09-18-2024

SD2-E SEDIMENT STORAGE CALCULATIONS

DRAINAGE STRUCTURE	DRAINAGE AREA (ACRE) (A)	REQ. STORAGE (CY) (B)	REQ. STORAGE (CF) (C)	DEPTH (FT.) (D)	SAmin (SF) (E)	LENGTH (FT.) (F)	WIDTH (FT.) (FG)	PROVIDED SURFACE AREA WIDTH X LENGTH (SF.)	PROVIDED STORAGE (2' DEPTH) X WIDTH X LENGTH (CF.)
A1	0.24	16.08	434.16	2.00	217.08	10.00	24.00	240.00	480.00
A1A	0.30	20.10	542.70	2.00	271.35	13.00	22.00	286.00	572.00
A1D	0.13	8.71	235.17	2.00	117.59	16.00	8.00	128.00	256.00
A1E	0.37	24.79	669.33	2.00	334.67	17.00	20.00	340.00	680.00
A1F	0.40	26.80	723.60	2.00	361.80	20.00	19.00	380.00	760.00
A2	0.14	9.38	253.26	2.00	126.63	15.00	10.00	150.00	300.00
A2A	0.06	4.02	108.54	2.00	54.27	6.00	10.00	60.00	120.00
A2B	0.04	2.68	72.36	2.00	36.18	5.00	8.00	40.00	80.00
A2C	0.05	3.35	90.45	2.00	45.23	5.00	10.00	50.00	100.00
A2D	0.18	12.06	325.62	2.00	162.81	15.00	12.00	180.00	360.00
A3	0.14	9.38	253.26	2.00	126.63	15.00	10.00	150.00	300.00

GEORGIA UNIFORM CODING SYSTEM
SOIL EROSION & SEDIMENT CONTROL

STRUCTURAL PRACTICES

Code	Practice	Symbol	Code	Practice	Symbol
Cd-Fs	Compost Filter Sock	Cd-Fs 12" dia	Sd2-G	Inlet Sediment Trap (Gravel Drop Inlet Protection)	Sd2-☒ ☒Indicate type
Cd-Hb	Straw-Bale Check Dams	Cd-Hb	Sd2-P	Inlet Sediment Trap (Curb Inlet Protection)	
Cd-S	Stone Check Dams	Cd-S	Sd2-S	Inlet Sediment Trap (Sod Inlet Protection)	
Ch-1	Channel Stabilization - Category 1 (Vegetated/Sod)	Ch-1 Rip-Rap* TRM* Ch-2 *type Ch-3	Sd3	Temporary Sediment Basin	Sd3
Ch-2	Channel Stabilization - Category 2 (Rip-Rap, TRM)		Sd4	Temporary Sediment Trap	Sd4
Ch-3	Channel Stabilization - Category 3 (Concrete)		Sk	Floating Filter Surface Skimmer	Sk
Co	Construction Exit	Co	SpB	Seep Berm	SpB
Cr	Construction Road Stabilization	Cr	Sr-B	Temporary Stream Crossing (Bridge)	Sr-B
Dc-A	Stream Diversion Channel (Geotextile, Sod, or Polyethylene film)	Dc-A or Dc-B or Dc-C	Sr-C	Temporary Stream Crossing (Culvert)	Sr-C
Dc-B	Stream Diversion Channel (Geotextile alone)		St	Storm Drain Outlet Protection	St
Dc-C	Stream Diversion Channel (Class I Rip-Rap and Geotextile)		Su	Surface Roughening	Su
Di	Diversion	Di	Tc-F	Turbidity Curtain (Floating)	Tc-☒ ☒Indicate type
Dn1	Temporary Downdrain Structure	Dn1	Tc-S	Turbidity Curtain (Staked)	
Dn2	Permanent Downdrain Structure	Dn2	Tp	Topsoiling	Tp
Fr	Filter Ring	Fr	Wt	Vegetated Waterway or Stormwater Conveyance Channel	Wt
Ga	Gabion	Ga	**VEGETATIVE MEASURES**		
Gr	Grade Stabilization Structure	Gr	Bf	Buffer Zone	Bf
Lv	Level Spreader	Lv	Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs
Rd	Rock Filter Dam	Rd	Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1
Re	Retaining Wall	Re	Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B	Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3
Rt-P	Retrofit (Perforated Half- Round Pipe w/ Stone Filter)	Rt-P	Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4
Rt-Sg	Retrofit (Silt Control Gate)	Rt-Sg	Du	Dust Control on Disturbed Areas	Du
Sd1-BB	Sediment Barrier (Type = Brush Barrier)	Sd1-BB	Fl-Co	Flocculants Coagulants	Fl-Co
Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"	Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb
Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"	Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss
Sd1-Cf	Sediment Barrier (Type = Compost Filter Media Sock)	Sd1-Cf 12" dia	Tac-1	Tackifiers: Type I (Synthetic Polymers)	Tac-1
Sd2-B	Inlet Sediment Trap (Baffle Box)	Sd2-☒ ☒ Indicate type	Tac-2	Tackifiers: Type II (Organic Polymers)	Tac-2
Sd2-Bg	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)		Tac-3	Tackifiers: Type III (Synthetic/ Organic Blends)	Tac-3
Sd2-E	Inlet Sediment Trap (Excavated Inlet Sediment Trap)		Tac-4	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	Tac-4
Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)		Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5

NOTE: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
SCALE: 1" = 30'

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Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR ENRICHMENT CENTER

40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	
DRAWN BY:	
CHECKED BY:	

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

INTERMEDIATE EROSION SEDIMENTATION & POLLUTION CONTROL SITE VIEW

Sheet Number

C-6.7

GEORGIA UNIFORM CODING SYSTEM
SOIL EROSION & SEDIMENT CONTROL

STRUCTURAL PRACTICES

Code	Practice	Symbol	Code	Practice	Symbol	Code	Practice	Symbol
Cd-Fs	Compost Filter Sock	Cd-Fs 12" dia	Ch-1	Channel Stabilization - Category 1 (Vegetated/Sod)	Ch-1	Co	Construction Exit	Co
Cd-Hb	Straw-Bale Check Dams	Cd-Hb	Ch-2	Channel Stabilization - Category 2 (Rip-Rap, TRM)	Rip-Rap* TRM* Ch-2 *type	Cr	Construction Road Stabilization	Cr
Cd-S	Stone Check Dams	Cd-S	Ch-3	Channel Stabilization - Category 3 (Concrete)	Ch-3	Di	Diversion	Di

Code	Practice	Symbol	Code	Practice	Symbol	Code	Practice	Symbol
Dc-A	Stream Diversion Channel (Geotextile, Sod, or Polyethylene film)	Dc-A or Dc-B or Dc-C	Dn1	Temporary Downdrain Structure	Dn1	Ga	Gabion	Ga
Dc-B	Stream Diversion Channel (Geotextile alone)		Dn2	Permanent Downdrain Structure	Dn2	Gr	Grade Stabilization Structure	Gr
Dc-C	Stream Diversion Channel (Class I Rip-Rap and Geotextile)		Fr	Filter Ring	Fr	Lv	Level Spreader	Lv

Code	Practice	Symbol	Code	Practice	Symbol	Code	Practice	Symbol
Rd	Rock Filter Dam	Rd	Rt-P	Retrofit (Perforated Half- Round Pipe w/ Stone Filter)	Rt-P	Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"
Re	Retaining Wall	Re	Rt-Sg	Retrofit (Silt Control Gate)	Rt-Sg	Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B	Sd1-BB	Sediment Barrier (Type = Brush Barrier)	Sd1-BB	Sd1-Cf	Sediment Barrier (Type = Compost Filter Media Sock)	Sd1-Cf 12" dia

Code	Practice	Symbol	Code	Practice	Symbol	Code	Practice	Symbol	Code	Practice	Symbol
Sd2-B	Inlet Sediment Trap (Baffle Box)	Sd2-☐ ☐ Indicate type	Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)	Sd2-☐ ☐ Indicate type	Sd2-S	Inlet Sediment Trap (Sod Inlet Protection)	Sd2-☐ ☐ Indicate type	Sk	Floating Filter Surface Skimmer	Sk
Sd2-Bg	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)		Sd2-G	Inlet Sediment Trap (Gravel Drop Inlet Protection)		Sd3	Temporary Sediment Basin	Sd3	SpB	Seep Berm	SpB
Sd2-E	Inlet Sediment Trap (Excavated Inlet Sediment Trap)		Sd2-P	Inlet Sediment Trap (Curb Inlet Protection)		Sd4	Temporary Sediment Trap	Sd4	Sr-B	Temporary Stream Crossing (Bridge)	Sr-B

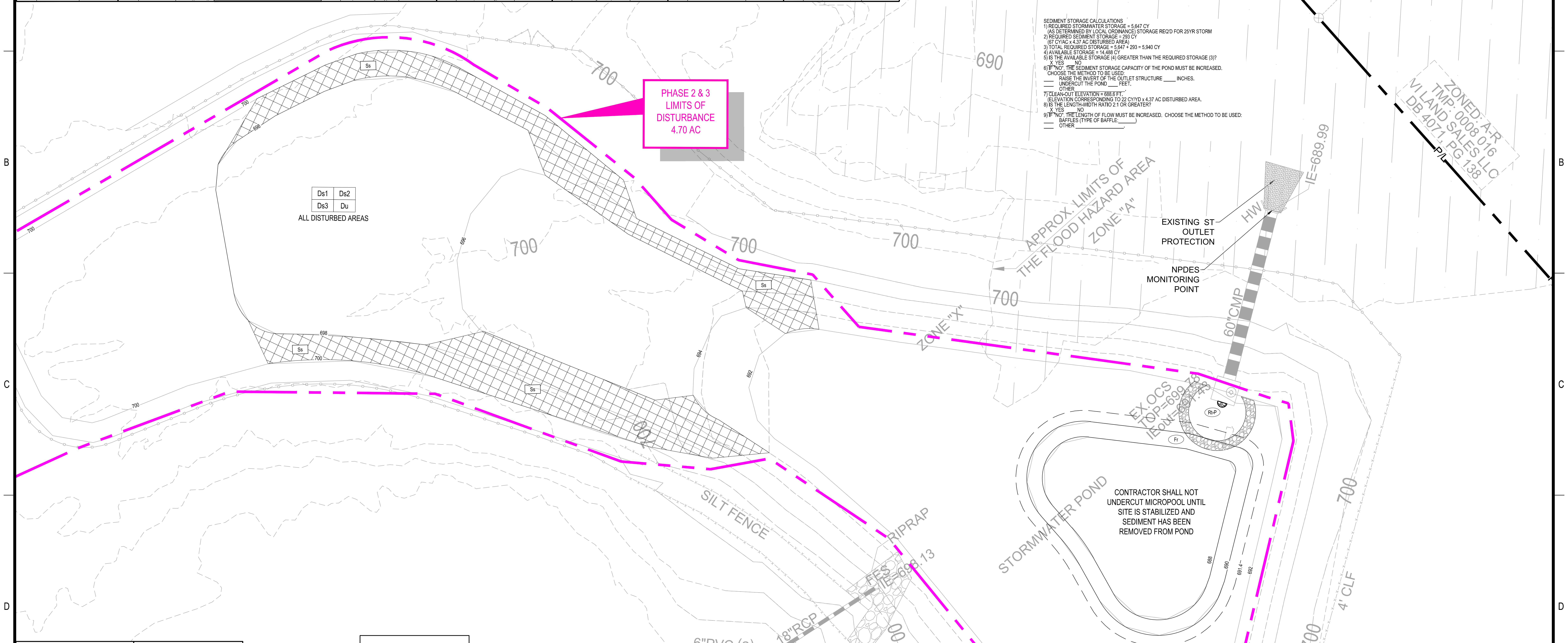
STRUCTURAL PRACTICES

Code	Practice	Symbol	Code	Practice	Symbol	Code	Practice	Symbol
Sr-C	Temporary Stream Crossing (Culvert)	Sr-C	Tc-F	Turbidity Curtain (Floating)	Tc-☐ ☐ Indicate type	Wt	Vegetated Waterway or Stormwater Conveyance Channel	Wt
St	Storm Drain Outlet Protection	St	Tc-S	Turbidity Curtain (Staked)				
Su	Surface Roughening	Su	Tp	Topsoiling	Tp			

VEGETATIVE MEASURES

Code	Practice	Symbol	Code	Practice	Symbol	Code	Practice	Symbol
Bf	Buffer Zone	Bf	Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2	Du	Dust Control on Disturbed Areas	Du
Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs	Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3	Fl-Co	Flocculants Coagulants	Fl-Co
Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1	Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4	Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb

Code	Practice	Symbol	Code	Practice	Symbol
Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss	Tac-3	Tackifiers: Type III (Synthetic/ Organic Blends)	Tac-3
Tac-1	Tackifiers: Type I (Synthetic Polymers)	Tac-1	Tac-4	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	Tac-4
Tac-2	Tackifiers: Type II (Organic Polymers)	Tac-2	Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5



SEDIMENT STORAGE CALCULATIONS
1) REQUIRED STORMWATER STORAGE = 5,647 CY
(AS DETERMINED BY LOCAL ORDINANCE) STORAGE REQ'D FOR 25YR STORM
2) REQUIRED SEDIMENT STORAGE = 293 CY
(67 CY/AC x 4.37 AC DISTURBED AREA)
3) TOTAL REQUIRED STORAGE = 5,647 + 293 = 5,940 CY
4) AVAILABLE STORAGE = 14,488 CY
5) IS THE AVAILABLE STORAGE (4) GREATER THAN THE REQUIRED STORAGE (3)?
_X_YES ___NO
6) IF "NO", THE SEDIMENT STORAGE CAPACITY OF THE POND MUST BE INCREASED.
CHOOSE THE METHOD TO BE USED:
____ RAISE THE INVERT OF THE OUTLET STRUCTURE _____ INCHES.
____ UNDERCUT THE POND ____ FEET.
____ OTHER____________________.
7) CLEAN-OUT ELEVATION = 688.6 FT.
(ELEVATION CORRESPONDING TO 22 CY/YD x 4.37 AC DISTURBED AREA.
8) IS THE LENGTH-WIDTH RATIO 2:1 OR GREATER?
_X_YES ____NO
9) IF "NO", THE LENGTH OF FLOW MUST BE INCREASED. CHOOSE THE METHOD TO BE USED:
____ BAFFLES (TYPE OF BAFFLE:_______)
____ OTHER ____________________.

OWNER/DEVELOPER

COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

CONTRACTOR

COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA 30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
EMAIL:
MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR

COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON,
GA 30650
PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER

COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896
MADISON, GA 30650
PHONE: 706.342.1104

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REFER TO SHEET C-1.1 AND C-6.1 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

Maintenance of all soil erosion and sedimentation control measures and practices, whether temporary or permanent, shall be at all times the responsibility of the property owner.

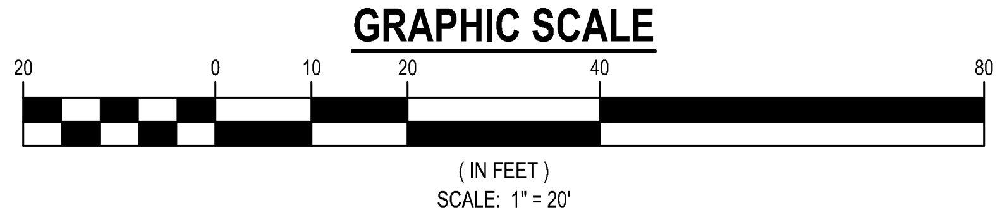
GSWCC EROSION CONTROL NOTES:

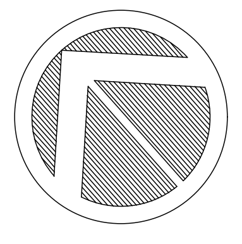
The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities.

Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.

Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.

Any amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.





NOTE: 1019As AND HIGH CAPACITY GRATES IN CURB LINE TO BE HOODED

NOTE: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

BRAVO SITE SET
09-18-2024

georgia civil
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LAND SURVEYING

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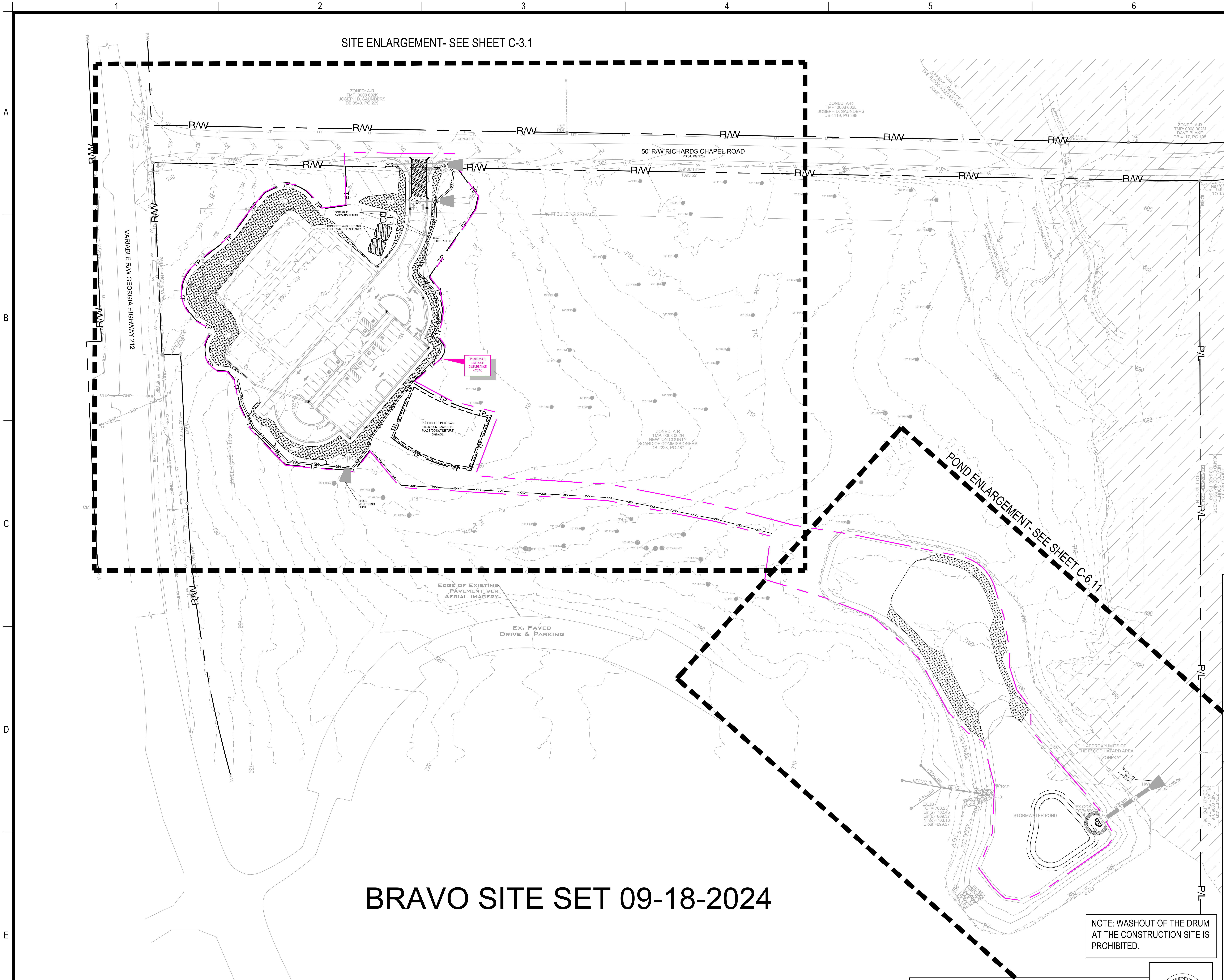
INTERMEDIATE
EROSION
SEDIMENTATION &
POLLUTION CONTROL
POND VIEW

Sheet Number

C-6.8


SITE ENLARGEMENT- SEE SHEET C-3.1
POND ENLARGEMENT - SEE SHEET C-6.11
50' R/W RICHARDS CHAPEL ROAD
VARIABLE R/W GEORGIA HIGHWAY 212
R/W
P/L
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
EX. PAVED DRIVE & PARKING
PROPOSED SEPTIC DRAIN FIELD (CONTRACTOR TO PLACE "DO NOT DISTURB" SIGNAGE)
PORTABLE SANITATION UNITS
CONCRETE WASHOUT AND FUEL TANK STORAGE AREA
TRASH RECEPTACLES
PHASE 2 & 3 LIMITS OF DISTURBANCE
STORMWATER POND
RIPRAP
TP
Co
Sd4

BRAVO SITE SET 09-18-2024

GEORGIA UNIFORM CODING SYSTEM
SOIL EROSION & SEDIMENT CONTROL

STRUCTURAL PRACTICES

Code	Practice	Symbol	Code	Practice	Symbol
Cd-Fs	Compost Filter Sock	Cd-Fs 12" dia.	Sd2-G	Inlet Sediment Trap (Gravel Drop Inlet Protection)	Sd2-☒
Cd-Hb	Straw-Bale Check Dams	Cd-Hb	Sd2-P	Inlet Sediment Trap (Curb Inlet Protection)	
Cd-S	Stone Check Dams	Cd-S	Sd2-S	Inlet Sediment Trap (Sod Inlet Protection)	☒ Indicate type
Ch-1	Channel Stabilization - Category 1 (Vegetated/Sod)	Ch-1	Sd3	Temporary Sediment Basin	Sd3
Ch-2	Channel Stabilization - Category 2 (Rip-Rap, TRM)	Rip-Rap* TRM* Ch-2 *type	Sd4	Temporary Sediment Trap	Sd4
Ch-3	Channel Stabilization - Category 3 (Concrete)	Ch-3	Sk	Floating Filter Surface Skimmer	Sk
Co	Construction Exit	Co	SpB	Seep Berm	SpB
Cr	Construction Road Stabilization	Cr	Sr-B	Temporary Stream Crossing (Bridge)	Sr-B
Dc-A	Stream Diversion Channel (Geotextile, Sod, or Polyethylene film)	Dc-A or	Sr-C	Temporary Stream Crossing (Culvert)	Sr-C
Dc-B	Stream Diversion Channel (Geotextile alone)	Dc-B or	St	Storm Drain Outlet Protection	St
Dc-C	Stream Diversion Channel (Class I Rip-Rap and Geotextile)	Dc-C	Su	Surface Roughening	Su
Di	Diversion	Di	Tc-F	Turbidity Curtain (Floating)	Tc-☒
Dn1	Temporary Downdrain Structure	Dn1	Tc-S	Turbidity Curtain (Staked)	☒ Indicate type
Dn2	Permanent Downdrain Structure	Dn2	Tp	Topsoiling	Tp
Fr	Filter Ring	Fr	Wt	Vegetated Waterway or Stormwater Conveyance Channel	Wt
Ga	Gabion	Ga	VEGETATIVE MEASURES		
Gr	Grade Stabilization Structure	Gr	Bf	Buffer Zone	Bf
Lv	Level Spreader	Lv	Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs
Rd	Rock Filter Dam	Rd	Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1
Re	Retaining Wall	Re	Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B	Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3
Rt-P	Retrofit (Perforated Half- Round Pipe w/ Stone Filter)	Rt-P	Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4
Rt-Sg	Retrofit (Silt Control Gate)	Rt-Sg	Du	Dust Control on Disturbed Areas	Du
Sd1-BB	Sediment Barrier (Type = Brush Barrier)	Sd1-BB	Fl-Co	Flocculants Coagulants	Fl-Co
Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"	Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb
Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"	Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss
Sd1-Cf	Sediment Barrier (Type = Compost Filter Media Sock)	Sd1-Cf 12" dia	Tac-1	Tackifiers: Type I (Synthetic Polymers)	Tac-1
Sd2-B	Inlet Sediment Trap (Baffle Box)		Tac-2	Tackifiers: Type II (Organic Polymers)	Tac-2
Sd2-Bg	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)	Sd2-☒	Tac-3	Tackifiers: Type III (Synthetic/ Organic Blends)	Tac-3
Sd2-E	Inlet Sediment Trap (Excavated Inlet Sediment Trap)		Tac-4	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	Tac-4
Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)	☒ Indicate type	Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5

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NOTE: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

ONCE SITE IS STABILIZED, CONTRACTOR SHALL REMOVE TEMPORARY BMP'S

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
SCALE: 1" = 60'

GA STATE PLANE EAST

georgia civil
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LAND PLANNING
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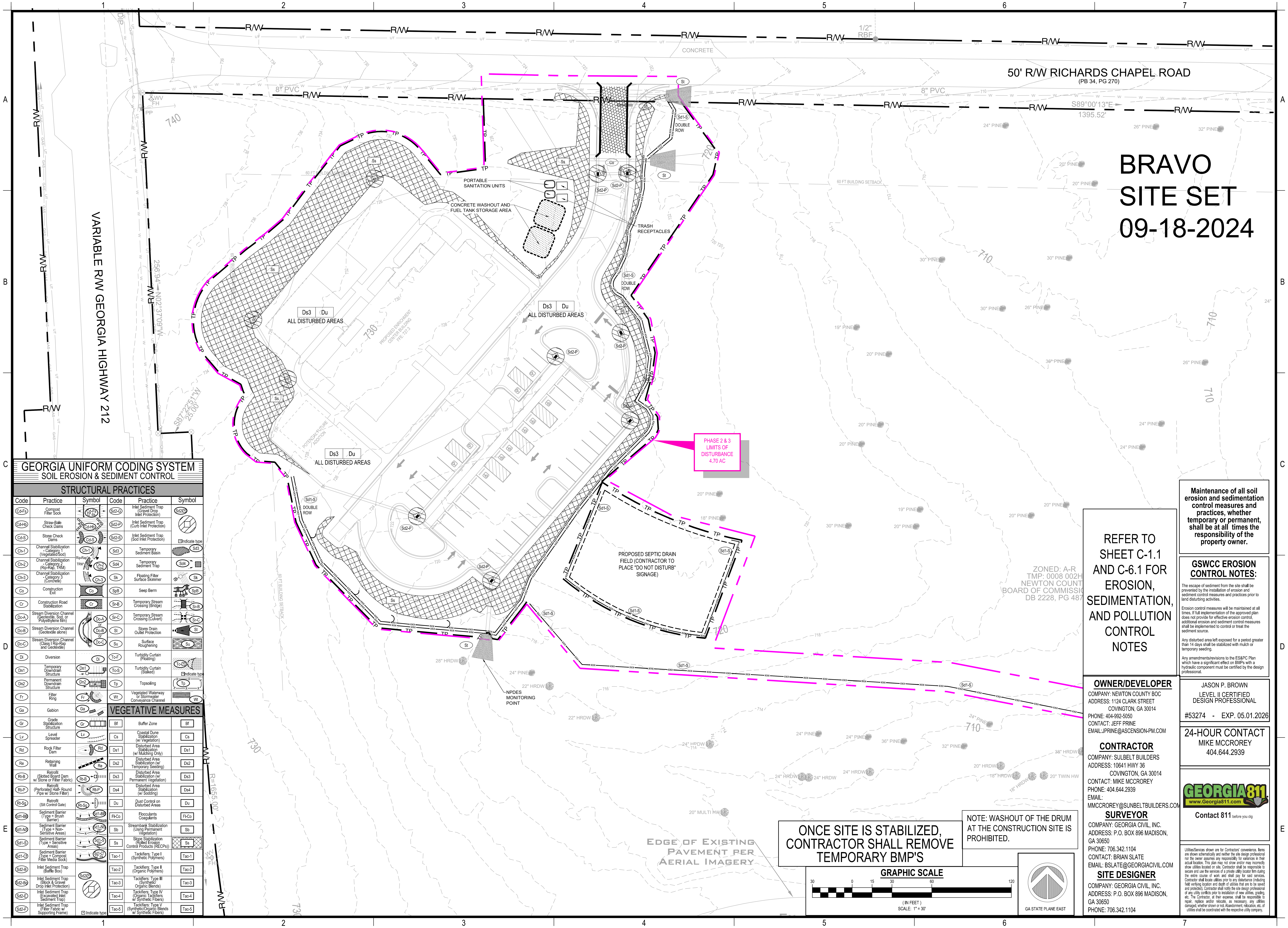
Sheet Title

FINAL EROSION SEDIMENTATION & POLLUTION CONTROL PLAN OVERVIEW

Sheet Number

C-6.9

BRAVO
SITE SET
09-18-2024


50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
S89°00'13"E
1395.52'
R/W
UT
W
8" PVC
CONCRETE
1/2" RBF
VARIABLE R/W GEORGIA HIGHWAY 212
256.94' N02°37'09"W
S87°22'51"W
25.00'
R=1655.00'
60 FT BUILDING SETBACK
PORTABLE SANITATION UNITS
CONCRETE WASHOUT AND FUEL TANK STORAGE AREA
TRASH RECEPTACLES
Ss
St
Co
Sd2-P
Sd1-S
DOUBLE ROW
TP
Ds3
Du
ALL DISTURBED AREAS
PROPOSED ENRICHMENT CENTER BUILDING FFE: 727.3
POTENTIAL FUTURE ADDITION
PHASE 2 & 3 LIMITS OF DISTURBANCE 4.70 AC
PROPOSED SEPTIC DRAIN FIELD (CONTRACTOR TO PLACE "DO NOT DISTURB" SIGNAGE)
NPDES MONITORING POINT
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
BOARD OF COMMISSIONERS
DB 2228, PG 487
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
710
720
730
740
24" PINE
26" PINE
32" PINE
20" PINE
30" PINE
19" PINE
36" PINE
18" PINE
28" HRDW
22" HRDW
24" HRDW
20" HRDW
18" HRDW
38" HRDW
20" TWIN HW
20" MULTI HW

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Dn2	Permanent Downdrain Structure	Dn2	Tp	Topsoiling	Tp
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Lv	Level Spreader	Lv	Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs
Rd	Rock Filter Dam	Rd	Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1
Re	Retaining Wall	Re	Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B	Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3
Rt-P	Retrofit (Perforated Half- Round Pipe w/ Stone Filter)	Rt-P	Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4
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Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"	Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb
Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"	Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss
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Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)		Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5

ONCE SITE IS STABILIZED, CONTRACTOR SHALL REMOVE TEMPORARY BMP'S

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GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
SCALE: 1" = 30'

GA STATE PLANE EAST

REFER TO SHEET C-1.1 AND C-6.1 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

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CONTRACTOR

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CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
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SURVEYOR

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SITE DESIGNER

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JASON P. BROWN
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Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

DRAWING DATE:	
DRAWN BY:	
CHECKED BY:	

REVISIONS	
DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

FINAL EROSION SEDIMENTATION & POLLUTION CONTROL PLAN SITE VIEW

Sheet Number

C-6.10

GEORGIA UNIFORM CODING SYSTEM
SOIL EROSION & SEDIMENT CONTROL

STRUCTURAL PRACTICES

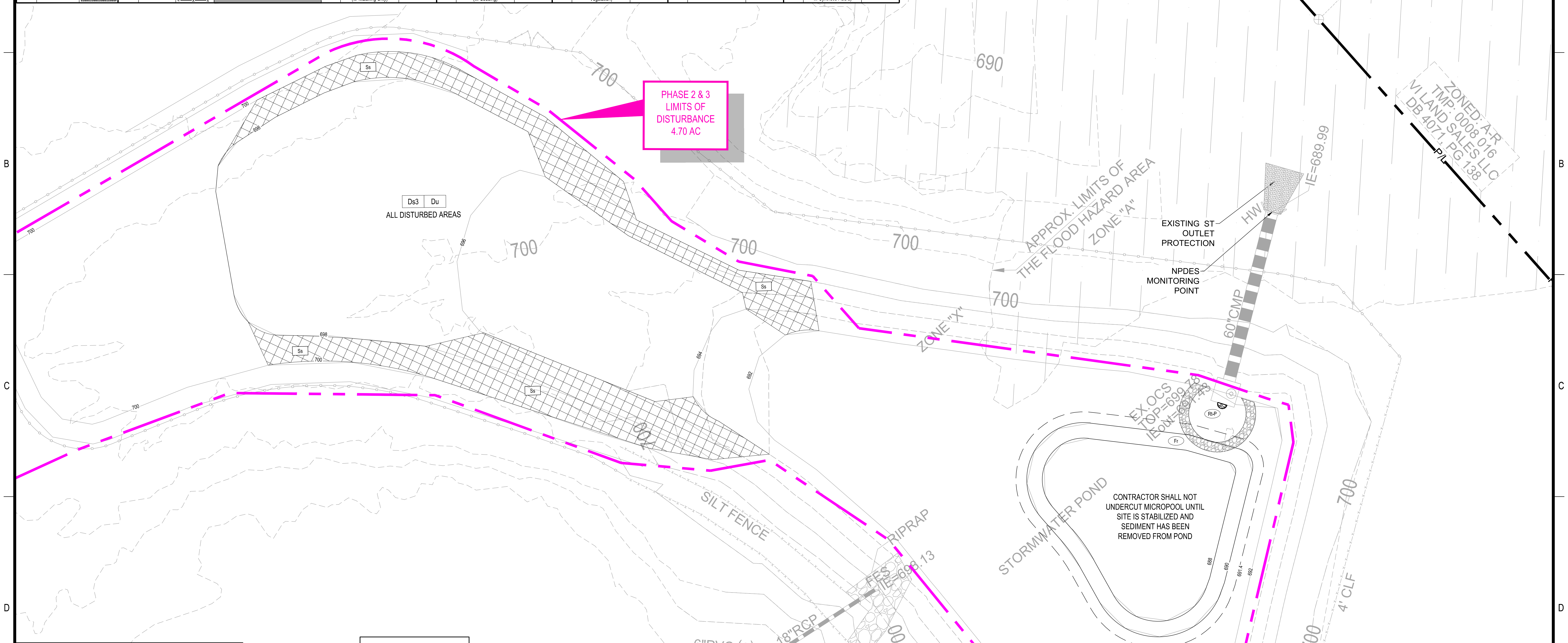
Code	Practice	Symbol
Cd-Fs	Compost Filter Sock	Cd-Fs 12" dia
Cd-Hb	Straw-Bale Check Dams	Cd-Hb
Cd-S	Stone Check Dams	Cd-S
Ch-1	Channel Stabilization - Category 1 (Vegetated/Sod)	Ch-1 Rip-Rap* TRM* Ch-2 *type Ch-3
Ch-2	Channel Stabilization - Category 2 (Rip-Rap, TRM)	
Ch-3	Channel Stabilization - Category 3 (Concrete)	
Co	Construction Exit	Co
Cr	Construction Road Stabilization	Cr
Di	Diversion	Di
Dc-A	Stream Diversion Channel (Geotextile, Sod, or Polyethylene film)	Dc-A or Dc-B or Dc-C
Dc-B	Stream Diversion Channel (Geotextile alone)	
Dc-C	Stream Diversion Channel (Class I Rip-Rap and Geotextile)	
Dn1	Temporary Downdrain Structure	Dn1
Dn2	Permanent Downdrain Structure	Dn2
Fr	Filter Ring	Fr
Ga	Gabion	Ga
Gr	Grade Stabilization Structure	Gr
Lv	Level Spreader	Lv
Rd	Rock Filter Dam	Rd
Re	Retaining Wall	Re
Rt-B	Retrofit (Slotted Board Dam w/ Stone or Filter Fabric)	Rt-B
Rt-P	Retrofit (Perforated Half- Round Pipe w/ Stone Filter)	Rt-P
Rt-Sg	Retrofit (Silt Control Gate)	Rt-Sg
Sd1-BB	Sediment Barrier (Type = Brush Barrier)	Sd1-BB
Sd1-NS	Sediment Barrier (Type = Non-Sensitive Areas)	Sd1-NS 28"
Sd1-S	Sediment Barrier (Type = Sensitive Areas)	Sd1-S 28"
Sd1-Cf	Sediment Barrier (Type = Compost Filter Media Sock)	Sd1-Cf 12" dia
Sd2-B	Inlet Sediment Trap (Baffle Box)	Sd2-☒ ☒ Indicate type
Sd2-Bg	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)	
Sd2-E	Inlet Sediment Trap (Excavated Inlet Sediment Trap)	
Sd2-F	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)	Sd2-☒ ☒ Indicate type
Sd2-G	Inlet Sediment Trap (Gravel Drop Inlet Protection)	
Sd2-P	Inlet Sediment Trap (Curb Inlet Protection)	
Sd2-S	Inlet Sediment Trap (Sod Inlet Protection)	Sd2-☒ ☒ Indicate type
Sd3	Temporary Sediment Basin	Sd3
Sd4	Temporary Sediment Trap	Sd4
Sk	Floating Filter Surface Skimmer	Sk
SpB	Seep Berm	SpB
Sr-B	Temporary Stream Crossing (Bridge)	Sr-B

STRUCTURAL PRACTICES

Code	Practice	Symbol
Sr-C	Temporary Stream Crossing (Culvert)	Sr-C
St	Storm Drain Outlet Protection	St
Su	Surface Roughening	Su
Tc-F	Turbidity Curtain (Floating)	Tc-☒ ☒ Indicate type
Tc-S	Turbidity Curtain (Staked)	
Tp	Topsoiling	Tp
Wt	Vegetated Waterway or Stormwater Conveyance Channel	Wt

VEGETATIVE MEASURES

Code	Practice	Symbol
Bf	Buffer Zone	Bf
Cs	Coastal Dune Stabilization (w/ Vegetation)	Cs
Ds1	Disturbed Area Stabilization (w/ Mulching Only)	Ds1
Ds2	Disturbed Area Stabilization (w/ Temporary Seeding)	Ds2
Ds3	Disturbed Area Stabilization (w/ Permanent Vegetation)	Ds3
Ds4	Disturbed Area Stabilization (w/ Sodding)	Ds4
Du	Dust Control on Disturbed Areas	Du
Fl-Co	Flocculants Coagulants	Fl-Co
Sb	Streambank Stabilization (Using Permanent Vegetation)	Sb
Ss	Slope Stabilization (Rolled Erosion Control Products (RECPs))	Ss
Tac-1	Tackifiers: Type I (Synthetic Polymers)	Tac-1
Tac-2	Tackifiers: Type II (Organic Polymers)	Tac-2
Tac-3	Tackifiers: Type III (Synthetic/ Organic Blends)	Tac-3
Tac-4	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	Tac-4
Tac-5	Tackifiers: Type V (Synthetic/Organic Blends w/ Synthetic Fibers)	Tac-5



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Any amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.

ONCE SITE IS STABILIZED, CONTRACTOR SHALL REMOVE TEMPORARY BMP'S

NOTE: 1019As AND HIGH CAPACITY GRATES IN CURB LINE TO BE HOODED

NOTE: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
SCALE: 1" = 20'

GA STATE PLANE EAST

BRAVO SITE SET
09-18-2024

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Sheet Title

FINAL EROSION SEDIMENTATION & POLLUTION CONTROL PLAN POND VIEW

Sheet Number

C-6.11

Ds1

GSWCC 2016 Edition

REQUIREMENT FOR REGULATORY COMPLIANCE

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to 6 months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than 6 months.

If any area will remain undisturbed for greater than 6 months, permanent vegetative techniques shall be employed. Refer to **Ds2 -Disturbed Area Stabilization (With Temporary Seeding)**, **Ds3 - Disturbed Area Stabilization (With Permanent Seeding)**, and **Ds4 - Disturbed Area Stabilization (With Sodding)**.

SPECIFICATIONS (Mulching Without Seeding)

This standard applies to graded or cleared areas where seedlings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation
1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3".

Mulching Materials (select one of the following materials and apply at the depth indicated):
1. Dry straw or hay shall be applied at a depth of 2" to 4" providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2" to 3". Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch (when mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.)
1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

Anchoring Mulch
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20" or more in diameter and 8" to 12" apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application.

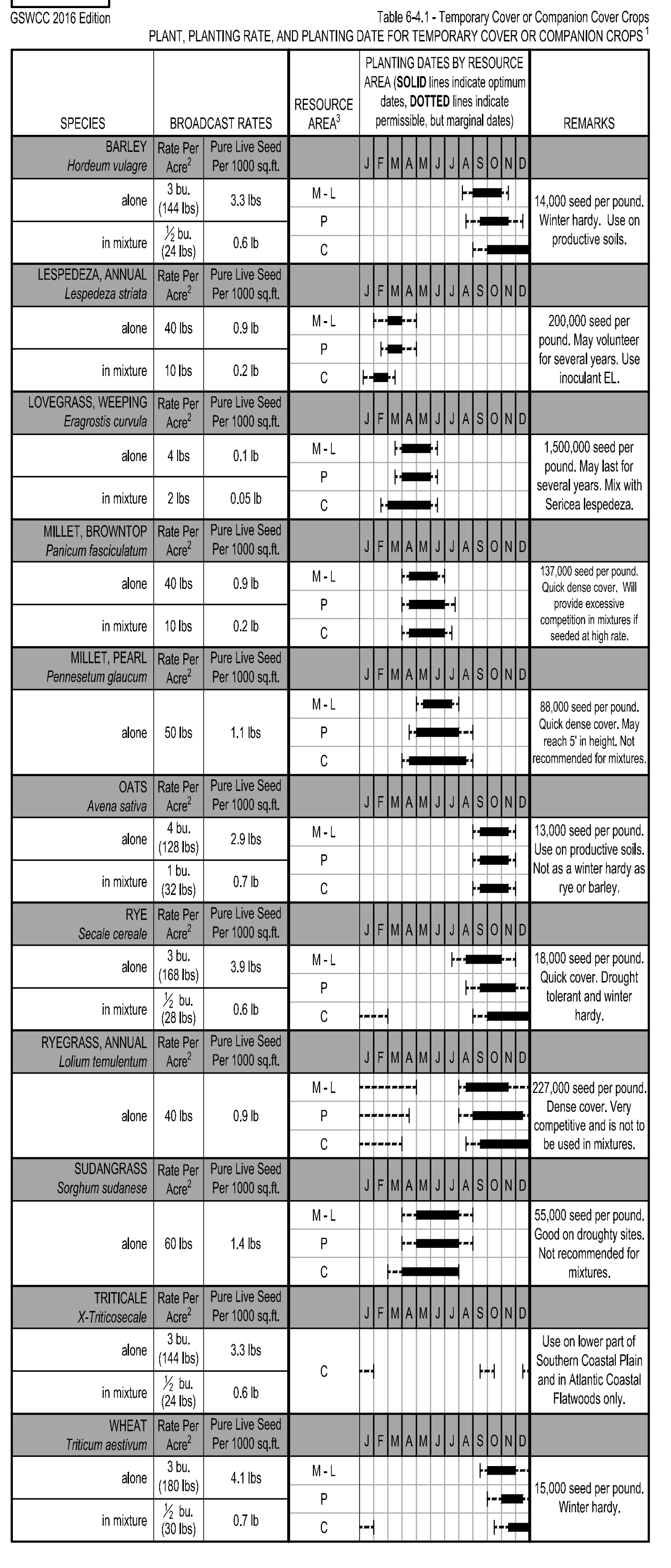
   Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification **Tac - Tackifiers**. Plastic mesh or netting with mesh no larger than 1" by 1" shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) - (Ds1)

Ds2

GSWCC 2016 Edition

Table 6-4.1 - Temporary Cover or Companion Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR TEMPORARY COVER OR COMPANION CROPS [1]



[1] Temporary cover crops are very competitive and will crowd out perennials if seeded too heavily.

[2] Reduce seeding rates by 50% when drilled.

[3] **M-L** represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs*; **P** represents the Southern Piedmont MLRA*
C represents Southern Coastal Plan; Sand Hills; Black Lands; and Atlantic Coastal Flatwoods MLRAs*

* Refer to Georgia Major Land Resource Areas Map

REQUIREMENT FOR REGULATORY COMPLIANCE

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than 6 months. If an area is expected to be undisturbed for longer than 6 months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to 6 months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding)**.

CONDITIONS

Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass).

Contact NRCS or the local SWCD for more information.

SPECIFICATIONS

Grading and Shaping
Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others. No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation
When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall. When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

Seeding
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, culti-packer-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed ¼" to ½" deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand. See **Table 6-4.1 - Temporary Cover or Companion Cover Crops.**

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only)**.

Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

GEORGIA MAJOR LAND RESOURCE AREAS

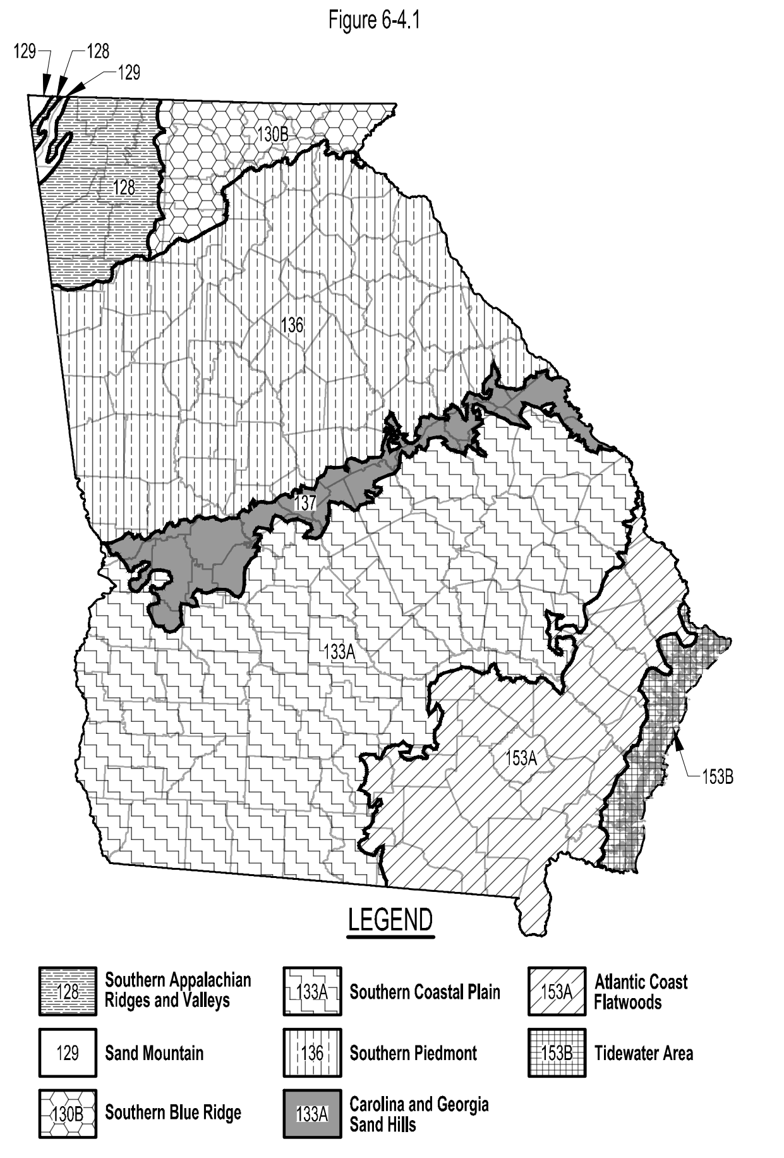

129
128
129
136
133A
153A
153B
LEGEND
129 Southern Appalachian Ridges and Valleys
133A Southern Coastal Plain
153A Atlantic Coast Flatwoods
128 Sand Mountain
136 Southern Piedmont
153B Tidewater Area
130B Southern Blue Ridge
133A Carolina and Georgia Sand Hills

Figure 6-4.1

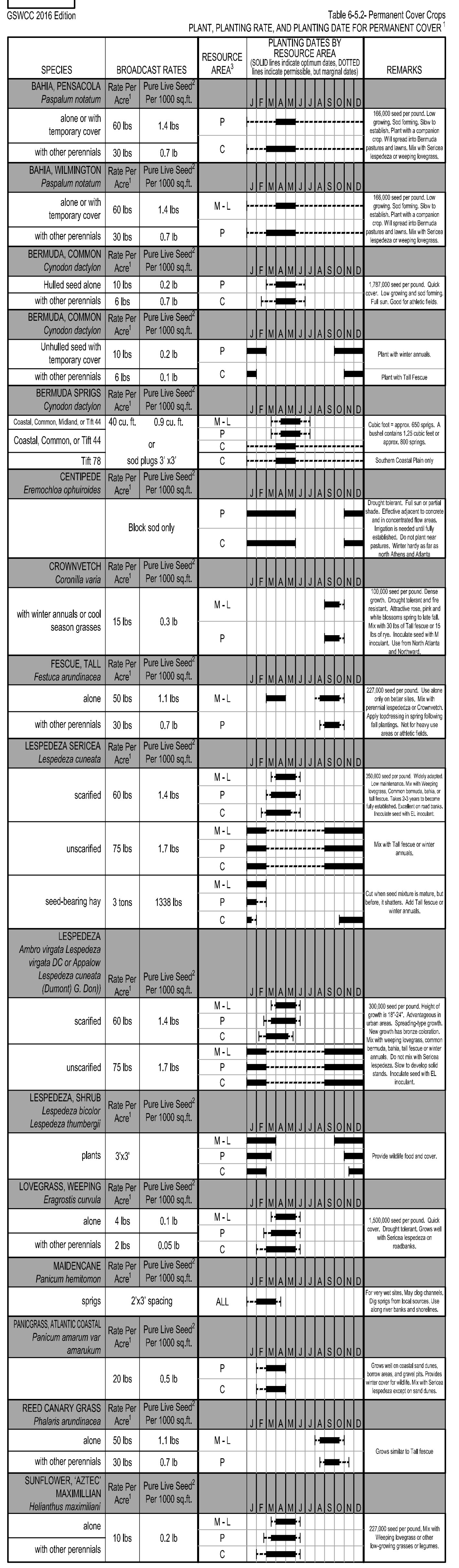
N.T.S.

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING) - (Ds2)

Ds3

GSWCC 2016 Edition

Table 6-5.2 - Permanent Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]



Reduce seeding rates by 50% when drilled.

PLS is an abbreviation for Pure Live Seed. Refer to Section V.E. of these specifications.

M-L represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs*; **P** represents the Southern Piedmont MLRA*
C represents Southern Coastal Plan; Sand Hills; Black Lands; and Atlantic Coastal Flatwoods MLRAs*

* Refer to Georgia Major Land Resource Areas Map

Table 6-5.1. Fertilizer Requirements

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. Cool Season Grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 1/2/
	Second	6-12-12	1000 lbs./ac.	---
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
2. Cool Season Grasses and Legumes	First	6-12-12	1500 lbs./ac.	0-50 lbs./ac. 1/
	Second	0-10-10	1000 lbs./ac.	---
	Maintenance	0-10-10	400 lbs./ac.	---
3. Ground Covers	First	10-10-10	1300 lbs./ac. 3/	---
	Second	10-10-10	1300 lbs./ac. 3/	---
	Maintenance	10-10-10	1100 lbs./ac.	---
4. Pine Seedlings	First	20-10-5	one 21-gram pellet per seedling placed in the closing hole	---
5. Shrub Lespedeza	First	0-10-10	700 lbs./ac.	---
	Maintenance	0-10-10	700 lbs./ac. 4/	---
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. Warm Season Grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 2/6/
	Second	6-12-12	800 lbs./ac.	50-100 lbs./ac. 2/
	Maintenance	10-10-10	400 lbs./ac.	30 lbs./ac.
8. Warm Season Grasses & Legumes	First	6-12-12	1500 lbs./ac.	50 lbs./ac./6/
	Second	0-10-10	1000 lbs./ac.	---
	Maintenance	0-10-10	400 lbs./ac.	---

1/ Apply in spring following seeding.
2/ Apply in split applications when high rates are used.
3/ Apply in 3 split applications.
4/ Apply when plants are pruned.
5/ Apply to grass species only.
6/ Apply when plants grow to a height of 2" to 4".

Table 6-5.3. Durable Shrubs and Ground Covers for Permanent Cover

Ground covers include a wide range of low-growing plants planted together in considerable numbers to cover large areas of the landscape. Ground covers grow slower than grasses. Weeds are likely to compete, especially the first year. Maintenance is needed to insure survival. These ground covers will not be used unless proper maintenance is planned. Maintain mulch at 3" thickness until plants provide adequate cover. Fall planting is encouraged because the need for constant watering is reduced and plants have time to establish new roots before hot weather.

COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT	PLANT SPACING	COMMENT
Abelia	*Abelia grandiflora*	3'-4'	5'	Also a prostrate form 2' high. Sun, semi-shade. Semi evergreen.
Carolina Yellow Jessamine	*Gelsemium sempervirens*	low	3'	Vine. Yellow, trumpet-like flowers. Hardy, one of best vines. Evergreen. Native to GA.
Carpet Blue	*Ajuga reptans*	2"-4"	3'	Needs good drainage, partial shade. Blue or white flowers. Evergreen.
Bearberry Cotoneaster	*Cotoneaster dammeri*	2'-4'	5'	White flowers, red fruit. Sun. Evergreen.
Ground Cover Cotoneaster	*Cotoneaster salicifolius* 'Repens'	1'-2'	5'	White flowers, red fruit. Sun. Evergreen.
Rock Cotoneaster	*Cotoneaster horizontalis*	1'-2'	5'	Semi-Evergreen. Sun.
Virginia Creeper	*Parthenocissue quinquefolia*	low	3'	Red in fall. Vine. Deciduous. Native to GA.
Daylily	*Hemerocallis* spp.	2'-3'	2'	Many flower colors. Full sun. Very hardy.
Compacta Holly	*Ilex crenata* 'Compacta'	3'-4'	5'	Sun. Semi-shade.
Chinese Holly	*Ilex cornuta* 'Rotunda'	3'-4'	5'	Very durable. Sun, Semi-shade.
Dwarf Burford Holly	*Ilex burfordii* 'Nana'	5'-8'	8'	--
Dwarf Yaupon Holly	*Ilex vomitoria* 'Nana'	3'-4'	5'	Very durable. Sun, Semi-shade.
Repandens Holly	*Ilex crenata* 'Repandens'	2'-3'	5'	Sun. Semi-shade.
Andorra Juniper	*Juniperus horizontalis* 'Plumosa'	2'-3'	5'	Excellent for slopes. Sun.
Andorra Compacta Juniper	*Juniperus horizontalis* 'Plumosa compacta'	1'-2'	5'	More compact than Andorra.
Andorra Compacta Juniper	*Juniperus horizontalis* 'Plumosa Compacta'	1'-2'	5'	More compact than Andorra.
Blue Chip Juniper	*Juniperus horizontalis* 'Blue Chip'	8"-10"	4'	--
Blue Rug Juniper	*Juniperus horizontalis* 'Wiltonii'	4"-6"	3'	Very low. Sun.
Parsons Juniper	*Juniperus davurica* 'Expansa' (*Squamata parsoni*)	18"-24"	5'	One of the best, good winter cover.
Pfitzer Juniper	*Juniperus chinensis* 'Pfitzerana'	6'-8'	6'	Needs room.
Prince of Wales Juniper	*Juniperus horizontalis* 'Prince of Wales'	8"-10"	4'	Feathery appearance.
Sargent Juniper	*Juniperus chinensis* 'Sargentii'	1'-2'	5'	Full sun. Needs good drainage. Good winter color.
Shore Juniper	*Juniperus conferta*	2'-3'	5'	Emerald Sea or Blue Pacific cultivars are good.
Liriope	*Liriope muscari*	8"-10"	3'	--
Creeping Liriope	*Liriope spicata*	10"-12"	1'	Spreads by runners.
Big Leaf Periwinkle	*Vinca major*	12"-15"	4'	Lilac flowers in spring. Semi-shade.
Common Periwinkle	*Vinca minor*	5"-6"	4'	Lavender-blue flowers in spring. Semi-shade.
Cherokee Rose	*Rosa laevigata*	2'	5'	Rampant grower. Not for restricted spaces. State flower.
Memoria Rose	*Rosa weuchuriana*	2'	5'	Rampant grower.
St. Johnswort	*Hypericum calycenum*	8"-12"	3'	Semi-shade.
Anthony Waterer Spirea	*Spirea bumalda*	3'-4'	5'	Sun.
Thunberg Spirea	*Spirea thunbergii*	3'-4'	5'	Sun.

Table 6-5.4. Trees for Erosion Control

SITE	SOIL MATERIAL	COMMON SOILS	PLANTING TREE SPECIES[1]	SPACING	PLANTING DATES[3]
Borrow areas, graded areas, and spoil material	Sandy	Lakeland, Troup	Loblolly Pine (*Pinus taeda*) Longleaf Pine (*Pinus palustris*)	2	M - L, P = 12/1 - 3/15 C = 12/1 - 3/1
	Loamy	Orangeburg, Tifton	Loblolly Pine (*Pinus taeda*) Slash Pine (*Pinus elliottii*)	2	M - L, P = 12/1 - 3/15 C = 12/1 - 3/1
	Clay	Cecil, Faceville	Slash Pine (*Pinus elliottii*) Virginia Pine (*Pinus virginiana*)	2	M - L, P = 12/1 - 3/15 C = 12/1 - 3/1
Streambanks	--	--	Willows[4] (*Salix* spp.)	2' x 2'	ALL

[1] Other trees and shrubs listed on Table 6-25.3 may be interplanted with the pines for improved wildlife benefits.

[2]

Type of Planting	Tree Spacing	No. of Trees per Acre
Trees Alone	4' x 4'	2,722
Trees in Combination w/ grasses and/or other plants	6' x 6'	1,210

[3] **M-L** represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs*; **P** represents the Southern Piedmont MLRA*; **C** represents Southern Coastal Plan; Sand Hills; Black Lands; and Atlantic Coast Flatwoods MLRAs*

* Refer to Georgia Major Land Resource Areas Map

[4] Fertilization of companion crop is ample for this species.

REQUIREMENT FOR REGULATORY COMPLIANCE

This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than 6 months. This practice or sodding shall be applied immediately to all areas at final grade. Final Stabilization means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by the GA EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures.

Permanent vegetation shall consist of, planted trees, shrubs, perennial vines; or a crop of perennial vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed.

CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

PLANNING CONSIDERATIONS

1. Use conventional planting methods where possible.
2. When mixed plantings are done during marginal planting periods, companion crops shall be used.
3. No-till planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-till into stands of rye is an excellent procedure.
4. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification **Ds4-Disturbed Area Stabilization (With Sodding).**
5. Irrigation should be used when the soil is dry or when summer plantings are done.
6. Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.
7. Mowing should not be performed during the quail nesting season (May to September).
8. Wildlife plantings should be included in critical area plantings.

Wildlife Plantings
Commercially available plants beneficial to wildlife species include the following:

Mast Bearing Trees
Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and Sweetgum.
- All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear.

Shrubs and Small Trees
Bayberry, Bicolor Lespedeza, Crabapple, Dogwood, Huckleberry or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.
- Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza that produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover
Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grapes.
- Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but they may die out after a few years.

CONSTRUCTION SPECIFICATIONS

Grading and Shaping
Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment. When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation. Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Lime and Fertilizer Rates and Analysis
Agricultural lime is required at the rate of 1-2 tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within 6 months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the GA Department of Agriculture. Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90% of the material will pass through a 10-mesh sieve, not less than 50% will pass through a 50-mesh sieve and not less than 25% will pass through a 100-mesh sieve. Fast-acting lime spread by hydraulic seeding equipment should be "finely ground limestone" spanning from the 180 micron size to the 5 micron size. Finely ground limestone is calcitic or dolomitic limestone ground so that 95% of the material will pass through a 100-mesh sieve. It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See **Figure 6-4.1**) Agricultural lime is generally not required where only trees are planted. Initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in **Table 6-5.1**.

Lime and Fertilizer Application
When hydraulic seeding equipment is used, the initial fertilizer shall be mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder. Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing. When conventional planting is to be done, lime and fertilizer shall be applied uniformly in one of the following ways: 1. Apply before land preparation so that it will be mixed with the soil during seedbed preparation. 2. Mix with the soil used to fill the holes, distribute in furrows. 3. Broadcast after steep surfaces are scarified, pitted or trenched. 4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Seeding
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, culti-packer-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed ¼" to ½" deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand. See **Table 6-4.1 - Temporary Cover or Companion Cover Crops.**

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only).**

Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

Plant Selection
Refer to **Tables 6-4.1**, **6-5.2**, **6-5.3** and **6-5.4** for approved species. Species not listed shall be approved by the State Resource Conservationist of the NRCS before they are used. Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year of planting, method of planting; and needs and desires of the land user. Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass. Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, common seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified). Plant selection may also include annual companion crops. Annual companion crops should be used only when perennial species are not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species. **Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.**

Seed Quality
The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e., (PLS = % germination x % purity). The percent of PLS helps you determine the amount of seed you need. For example, if the seeding rate is 10 pounds PLS and the bulk seed is 56% PLS (i.e. 70% germination, 80% purity), the bulk seeding rate is: 10 lbs. PLS/acre / 56% PLS = 17.9 lbs/acre. You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seedbed Preparation
Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used (but is strongly recommended for any seeding process, when possible). When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings
1. Tillage, at a min., shall adequately loosen soil to a depth of 4" to 6"; alleviate compaction; incorporate lime and fertilizer; smooth and firm the soil; allow for proper placement of seed, sprigs, or plants; and allow for anchoring of straw or hay mulch if a disk is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 6" to 8" apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants
1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36" deep on the contour 4 to 6 months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Inoculants
All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The inoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container. A mixing medium recommended by the manufacturer shall be used to bond the inoculant to the seed. For conventional seeding, use twice the amount of inoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of inoculant recommended by the manufacturer shall be used. All inoculated seed shall be protected from the sun and high temperatures and shall be planted the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Planting

Hydraulic Seeding
Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding
Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a culti-packer-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with ⅛" to ¼" of soil for small seed and ½" to 1" for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding
No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants
Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots. Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface. Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, 2" of soil shall be added and the plant shall be set in the hole.

Mulching
Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% to 100% soil cover. When selecting a mulch, consider the mulch's functional longevity, vegetation establishment enhancement, and erosion control effectiveness. Select the mulching material from the following and apply as indicated:

1. *Dry straw or dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2½ tons per acre.
2. *Wood cellulose mulch* or *wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 lbs per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. 1,000 lbs of *wood cellulose* or *wood pulp fiber*, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
4. *Sericea lespedeza* hay containing mature seed shall be applied at a rate of 3 tons per acre.
5. *Pine straw* or *pine bark* shall be applied at a thickness of 3" for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. *Bituminous treated roving* may be applied on planted areas, slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet GA Department of Transportation specifications.

   Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch
Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface. Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch
Anchor straw or hay mulch immediately after application by one of the following methods:
1. *Hay and straw mulch* shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20" or more in diameter and 8" to 12" apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it in an erect position. Mulch shall not be plowed into the soil.
2. *Synthetic tackifiers, binders or hydraulic mulch specifically designed to tack straw*, shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. All tackifiers, binders or hydraulic mulch specifically designed to tack straw should be verified nontoxic through EPA 2021.0 testing. Refer to **Tackifiers-Tac.**
3. Rye or wheat can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of ¼ to ½ bushel per acre.
4. Plastic mesh or netting with mesh no larger than 1" by 1" may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials shall be installed and anchored according to manufacturer's specifications.

Bedding Material
Mulch is used as bedding material to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns.

Material	Depth
Grain straw	4" to 6"
Grass Hay	4" to 6"
Pine needles	3" to 5"
Wood waste	4" to 6"

Irrigation
Irrigation will be applied at a rate that will not cause runoff.

Topdressing
Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in **Table 6-5.1.**

Second Year and Maintenance Fertilization
Second year fertilizer rates and maintenance fertilizer rates are listed in **Table 6-5.1.**

Lime Maintenance Application
Apply one ton of agricultural lime every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements, if desired.

Use and Management
Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March. Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6" of top growth under any use and management. Moderate use of top growth is beneficial after establishment. Exclude traffic until plants are well established. Because of quail nesting season, mowing should not take place between May and September.

N.T.S.

DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) - (Ds3)

Sd1-S

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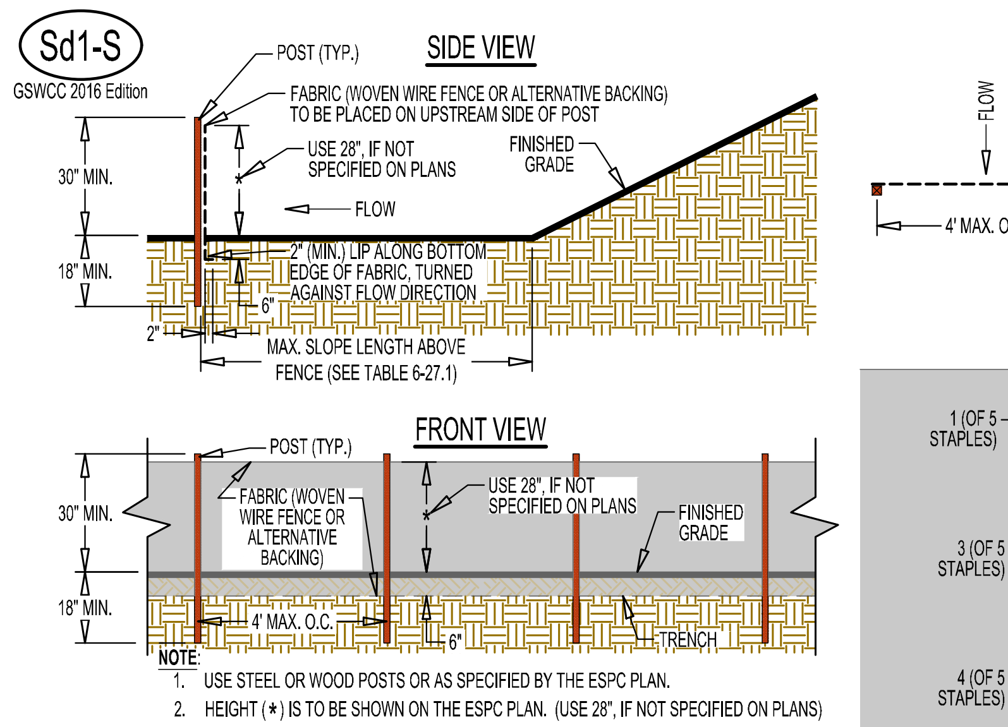

SIDE VIEW
POST (TYP.)
FABRIC (WOVEN WIRE FENCE OR ALTERNATIVE BACKING) TO BE PLACED ON UPSTREAM SIDE OF POST
USE 28" IF NOT SPECIFIED ON PLANS
FINISHED GRADE
FLOW
2" MIN. LIP ALONG BOTTOM EDGE OF FABRIC, TURNED AGAINST FLOW DIRECTION
MAX. SLOPE LENGTH ABOVE FENCE (SEE TABLE 6-27.1)
30" MIN.
18" MIN.
FRONT VIEW
POST (TYP.)
FABRIC (WOVEN WIRE FENCE OR ALTERNATIVE BACKING)
USE 28", IF NOT SPECIFIED ON PLANS
FINISHED GRADE
4' MAX. O.C.
6"
TRENCH

NOTE:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE ESPC PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE ESPC PLAN. (USE 28", IF NOT SPECIFIED ON PLANS)

Figure 6-27.2

PURPOSE

To minimize and prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition and/or filtration of sediment at the structure. The barriers retain the soil on the disturbed land until the activities disturbing the land are completed and vegetation is established.

CONDITIONS

Barriers should be installed where runoff can be stored behind the barrier without damaging the submerged area behind the barrier or the structure itself. Sediment barriers shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

DESIGN CRITERIA

Sediment barriers are designed to retain sediment transported by sheet flow from disturbed areas. It is important for the design professional to take into account the profile of the product for use on the site.

Sediment Barriers should also provide a rip-rap splash pad or other outlet protection device for any point where flow may overtop the sediment barrier. Ensure that the maximum height of the barrier at a protected, reinforced outlet does not exceed 1' and that the support spacing does not exceed 4'.

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage area shall not exceed ¼ acre for every 100' of sediment barrier.

Table 6-27.1 Criteria for Sediment Barrier

Land Slope	Maximum Slope Length Above Fence
Percent	Feet
< 2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20 *	15

*In areas where the slope is greater than 20%, a flat area length of 10' between the toe of slope to the barrier should be provided.

Placement
The type of sediment barrier depends on whether the area is sensitive or non-sensitive. Sensitive areas can be defined as any area that needs additional protection. These areas include, but are not limited to, state waters, wetlands, or any area the design professional designates as sensitive. When using multiple types of sediment barriers on a site in a single run, the barriers must be overlapped 18" or as specified by the design professional. See Figure 6-27.5.

CONSTRUCTION SPECIFICATIONS

Sediment barriers being used as Type S shall have a support spacing of no greater than 4' on center, with each being driven into the ground a minimum of 18".

*As of January 1, 2016, in the existing Georgia Department of Transportation Qualified Products List #36 (QPL- 36), Type C will fall under sensitive applications and be classified as sensitive. Refer to Appendix A-2 and the Equivalent BMP List.

PRACTICE CLASSIFICATIONS

For silt fence Type C, refer to Table 6-27.4.

Type C Silt Fence
Type C fence is 36" wide with wire reinforcement or equivalent. The wire reinforcement is necessary because this fabric allows almost three times the flow rate as Type A silt fence. Type C silt fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10'. **Type C is classified as sensitive application.**

Installation
Sediment barriers should be installed along the contour. Temporary sediment barriers shall be installed according to the following specifications as shown on the plans or as directed by the design professional. For installation of sensitive barriers, see Figure 6-27.2 and 6-27.5.

Post installation shall start at the center of a low point (if applicable) with the remaining posts spaced no greater than 4' apart for Type S sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

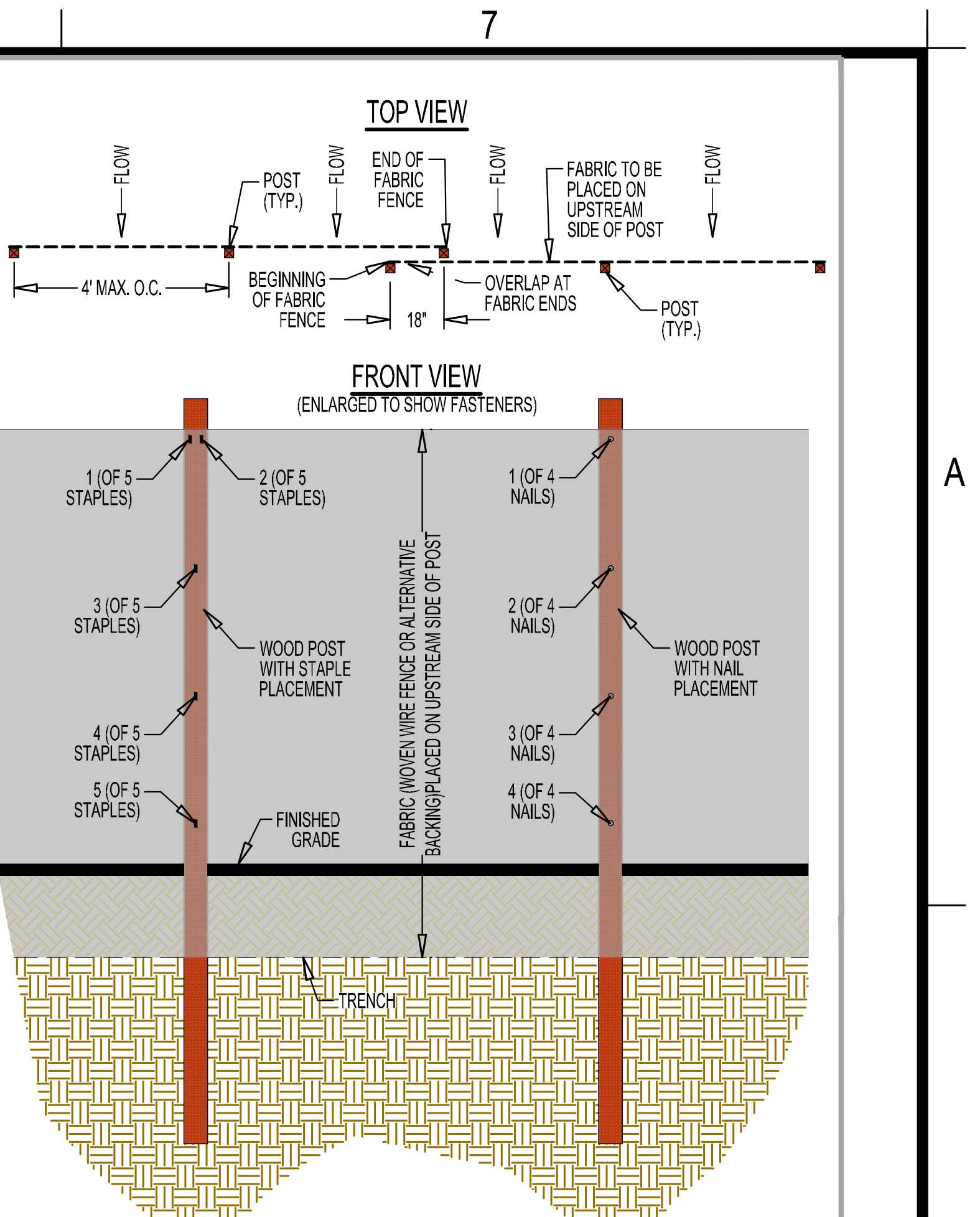
Static Slicing Method
The static slicing machine pulls a narrow blade through the ground to create a slit 12" deep, and simultaneously inserts the silt fence fabric into this slit behind the blade. The blade is designed to slightly disrupt soil upward next to the slit and to minimize horizontal compaction, thereby creating an optimum condition for compacting the soil vertically on both sides of the fabric. Compaction is achieved by rolling a tractor wheel along both sides of the slit in the ground 2 to 4 times to achieve nearly the same or greater compaction as the original undisturbed soil. This vertical compaction reduces the air spaces between soil particles, which minimizes infiltration. Without this compaction, infiltration can saturate the soil, and water may find a pathway under the fence. When a silt fence is holding back several tons of accumulated water and sediment, it needs to be supported by posts that are driven 18" into the soil. Driving in the posts and attaching the fabric to them completes the installation.

Trenching Method
Trenching machines have been used for over 25 years to dig a trench for burying part of the filter fabric underground. Usually the trench is about 2"-6" wide with a 6" excavation. Post setting and fabric installation often precede compaction, which make effective compaction more difficult to achieve. EPA supported an independent technology evaluation (ASCE 2001), which compared 3 progressively better variations of the trenching method with static slicing. The static slicing method performed better than 2 lower performance levels of the trenching method, and was as good as or better than the trenching method's highest performance level. The best trenching method typically required nearly triple the time and effort to achieve results comparable to the static slicing method.

Along all State Waters and other sensitive areas, 2 rows of Sensitive Area(s) Sediment Barrier (Type C Silt Fence) shall be used. The 2 rows of Sensitive Area(s) Sediment Barrier (Type C Silt Fence) shall be placed a minimum of 36" apart.

MAINTENANCE

Sediment shall be removed once it has accumulated to ½ the original height of the barrier. Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately 6 months) or the height of the product is not maintaining 80% of its properly installed level. Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.



NOTE:
1. THE FABRIC AND WIRE SHALL BE SECURELY FASTENED TO POSTS AND FABRIC ENDS.
2. MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST TO PROVIDE CONTINUOUS FABRIC BARRIER.

Figure 6-27.5

Table 6-27.2 Post Size

Type	Min. Length	Type of Post	Size of Post
S	4'	Steel Oak	1.15-1.25 lb./ ft. min 2"x2"

Table 6-27.3 Fasteners for Wood Posts

Type	Gauge	Crown	Legs	Staples per Post
Wire Staples	17 min.	¾" wide	½" long	5 min.
Type	**Gauge**	**Length**	**Button Heads**	**Nails per Post**
Nails	14 min.	1"	¾"	4 min.

Note: Filter Fabric may also be attached to the post by wire, cords, and pockets.

Table 6-27.4

	Type C Fabric Fence
Tensile Strength (Lbs. Min.)[1] (ASTM D-4632)	Warp - 260 Fill - 180
Elongation (% Max.) (ASTM D-4632)	40
AOS (Apparent Opening Size) (Max. Sieve Size) (ASTM D-4751)	#30
Flow Rate (Gal/Min/Sq. Ft.) (GDT-87)	70
Ultraviolet Stability[2] (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphragm Bursting Strength Tester)	175
Minimum Fabric Width (Inches)	36

[1] Minimum roll average of five specimens.

[2] Percent of required initial minimum tensile strength.

N.T.S.

SENSITIVE AREA(S) SEDIMENT BARRIER (TYPE C SILT FENCE) - (Sd1-S)

1. **CLASS 1 RIP-RAP**
   A. NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER GREATER THAN 12"; NO MORE THAN 50% OF THE STONE SHALL HAVE A DIAMETER LESS THAN 10"; AND NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER OF LESS THAN 6". THE THICKNESS OF THE RIP-RAP LINER SHALL BE NO LESS THAN 12".
2. **CLASS 2 RIP-RAP**
   A. NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER GREATER THAN 16"; NO MORE THAN 50% OF THE STONE SHALL HAVE A DIAMETER LESS THAN 12"; AND NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER OF LESS THAN 6". THE THICKNESS OF THE RIP-RAP LINER SHALL BE NO LESS THAN 16".
3. **CLASS 3 RIP-RAP**
   A. NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER GREATER THAN 22"; NO MORE THAN 50% OF THE STONE SHALL HAVE A DIAMETER LESS THAN 16"; AND NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER OF LESS THAN 8". THE THICKNESS OF THE RIP-RAP LINER SHALL BE NO LESS THAN 22".
4. **CLASS 4 RIP-RAP**
   A. NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER GREATER THAN 27"; NO MORE THAN 50% OF THE STONE SHALL HAVE A DIAMETER LESS THAN 22"; AND NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER OF LESS THAN 10". THE THICKNESS OF THE RIP-RAP LINER SHALL BE NO LESS THAN 27".
5. **CLASS 5 RIP-RAP**
   A. NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER GREATER THAN 34"; NO MORE THAN 50% OF THE STONE SHALL HAVE A DIAMETER LESS THAN 27"; AND NO MORE THAN 10% OF THE STONE SHALL HAVE A DIAMETER OF LESS THAN 16". THE THICKNESS OF THE RIP-RAP LINER SHALL BE NO LESS THAN 34".

RIP-RAP CLASSIFICATION SPECIFICATIONS

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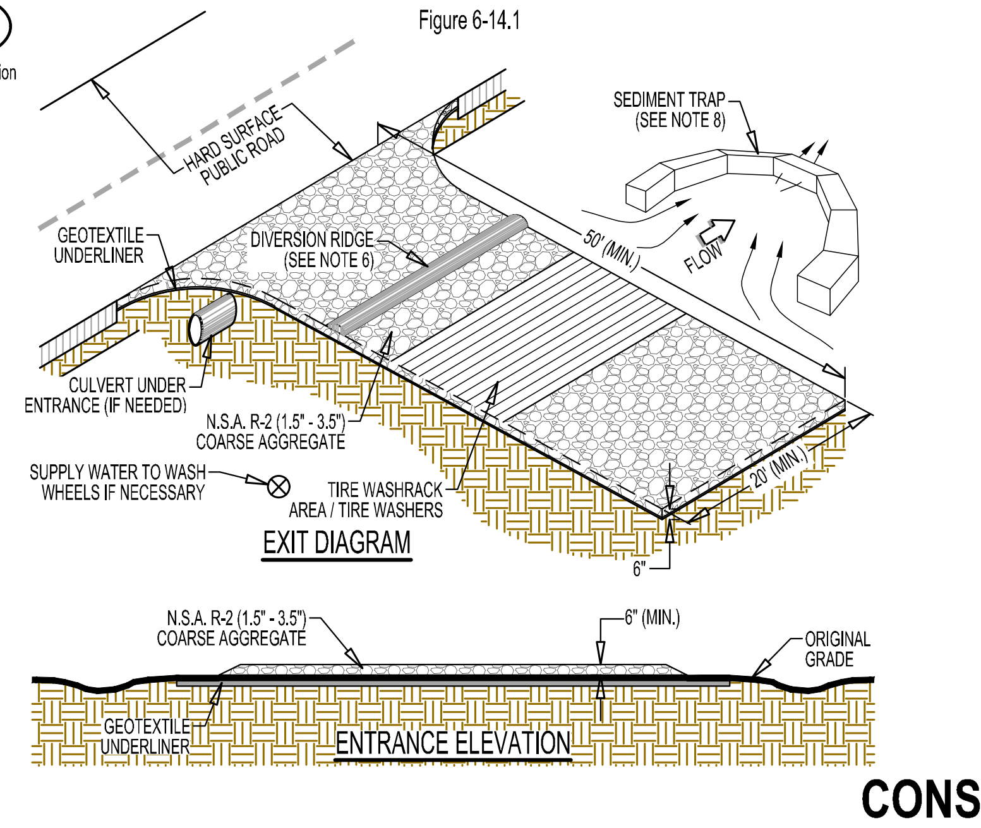
Figure 6-14.1


HARD SURFACE PUBLIC ROAD
SEDIMENT TRAP (SEE NOTE 8)
GEOTEXTILE UNDERLINER
DIVERSION RIDGE (SEE NOTE 6)
50' (MIN.)
FLOW
CULVERT UNDER ENTRANCE (IF NEEDED)
N.S.A. R-2 (1.5" - 3.5") COARSE AGGREGATE
SUPPLY WATER TO WASH WHEELS IF NECESSARY
TIRE WASHRACK AREA / TIRE WASHERS
20' (MIN.)
6"
EXIT DIAGRAM
N.S.A. R-2 (1.5" - 3.5") COARSE AGGREGATE
6" (MIN.)
ORIGINAL GRADE
GEOTEXTILE UNDERLINER
ENTRANCE ELEVATION

N.T.S.

NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES. PIPE SHALL BE SIZED APPROPRIATELY TO HANDLE EXISTING AND/OR PROPOSED FLOWS.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

CONDITIONS
This practice is applied at appropriate points of construction egress. Geotextile underliners are required to stabilize and support the pad aggregates.

DESIGN CRITERIA
Formal design is not required. The following standards shall be used:

Aggregate Size / Pad Thickness / Pad Width - As noted above

Pad Length
The gravel pad shall have a minimum length of 50'. When the construction is less than 50' from the paved access, the length shall be from the edge of existing pavement to the permitted building being constructed.

Washing
If the action of the vehicle traveling over the gravel pad does not sufficiently remove the mud, the tires should be washed prior to entrance onto public rights-of-way. When washing is required, it shall be done as noted above.

Location
The exit shall be located or protected to prevent sediment from leaving the site.

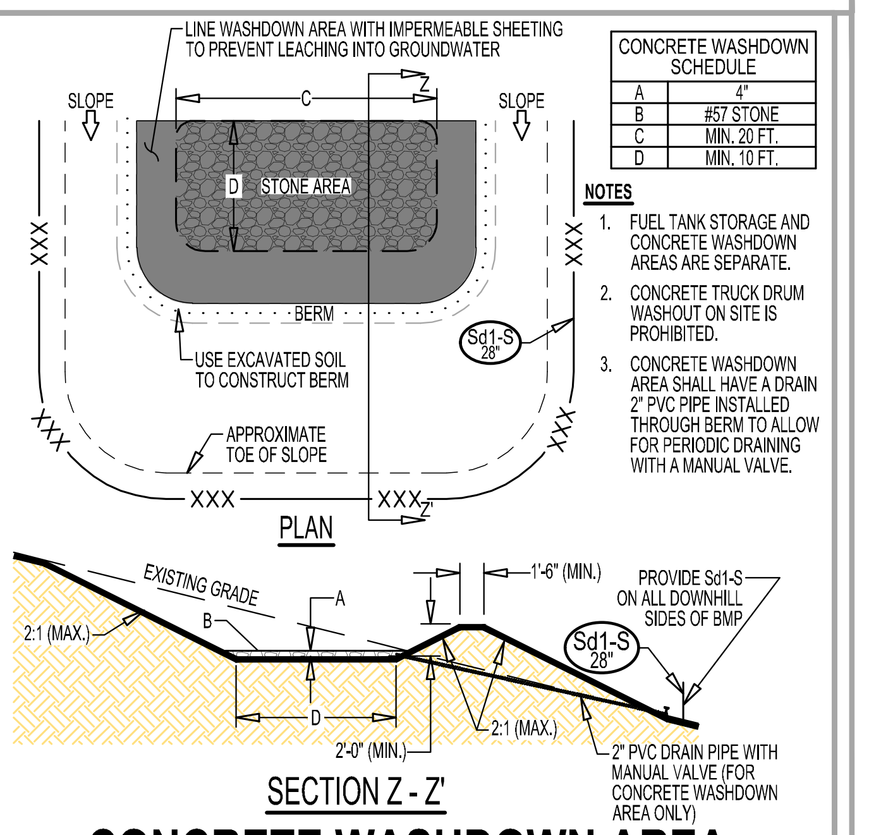
CONSTRUCTION SPECIFICATIONS
It is recommended that the egress area be excavated to a depth of 3" and be cleared of all vegetation and roots.

Diversion Ridge
On sites where the grade toward the paved area is greater than 2%, a diversion ridge 6" to 8" high with 3:1 side slopes shall be constructed across the foundation approximately 15' above the road.

Geotextile
Geotextile underliner must be placed the full length and width of the entrance. Geotextile selection shall be based on AASHTO M288-06 specification:
1. For subgrades with a CBR greater than or equal to 3 or shear strength greater than 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 7.3, Separation Requirements.
2. For subgrades with a CBR between 1 and 3 or sheer strength between 30 and 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 8, Geotextile Property Requirements for Subsurface Drainage, Separation, Stabilization, and Permanent Erosion Control (Geotextile Property Requirements).

MAINTENANCE
The exit shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5"-3.5" stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

CONSTRUCTION EXIT - (Co)


LINE WASHDOWN AREA WITH IMPERMEABLE SHEETING TO PREVENT LEACHING INTO GROUNDWATER
SLOPE
SLOPE
C
Z
D
STONE AREA
XXX
BERM
USE EXCAVATED SOIL TO CONSTRUCT BERM
Sd1-S 28"
APPROXIMATE TOE OF SLOPE
Z'
PLAN
EXISTING GRADE
A
B
2:1 (MAX.)
1'-6" (MIN.)
PROVIDE Sd1-S ON ALL DOWNHILL SIDES OF BMP
Sd1-S 28"
D
2'-0" (MIN.)
2:1 (MAX.)
2" PVC DRAIN PIPE WITH MANUAL VALVE (FOR CONCRETE WASHDOWN AREA ONLY)
SECTION Z - Z'

CONCRETE WASHDOWN SCHEDULE	
A	4"
B	#57 STONE
C	MIN. 20 FT.
D	MIN. 10 FT.

NOTES
1. FUEL TANK STORAGE AND CONCRETE WASHDOWN AREAS ARE SEPARATE.
2. CONCRETE TRUCK DRUM WASHOUT ON SITE IS PROHIBITED.
3. CONCRETE WASHDOWN AREA SHALL HAVE A DRAIN 2" PVC PIPE INSTALLED THROUGH BERM TO ALLOW FOR PERIODIC DRAINING WITH A MANUAL VALVE.

N.T.S.

CONCRETE WASHDOWN AREA

Fr

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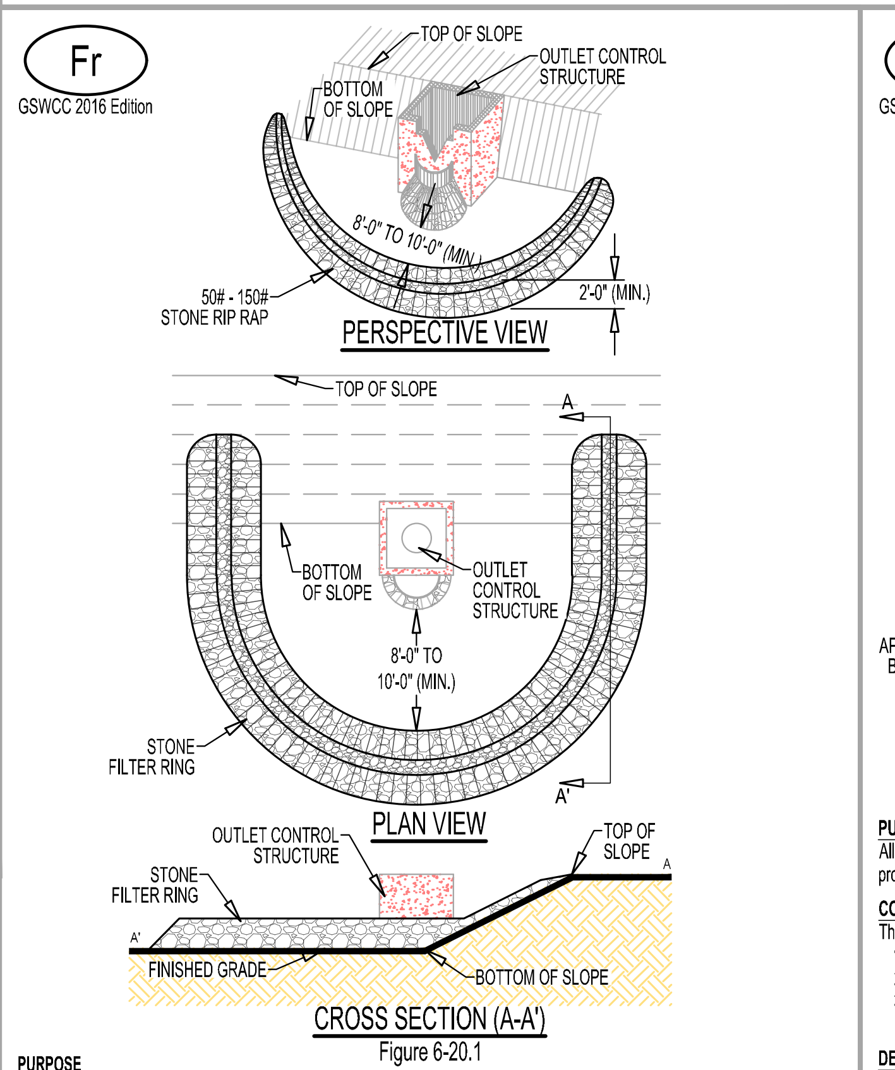

Figure 6-20.1

PURPOSE

This structure reduces flow velocities, preventing the failure of other sediment control devices. It also helps prevent sediment from leaving the site or entering drainage systems, prior to permanent stabilization of the disturbed area.

CONDITIONS

Filter rings shall be used in conjunction with other sediment control measures, except where other practices defined in this Manual are not appropriate (such as inlets to concrete fumes). They can be installed at or around devices such as inlet sediment traps, temporary downdrain inlets, and detention pond retrofits to provide additional sediment filtering capacity.

DESIGN CRITERIA

Formal design is not required. The following standards shall be used:

Location
The filter ring shall surround all sides of the structure receiving runoff from disturbed areas. It should be placed a minimum of 4' from the structure. The ring is not intended to substantially impound water, causing flooding or damage to adjacent areas. The filter ring may also be placed below storm drains discharging into detention ponds, creating a centralized area, or "forebay", for sediment accumulation. This provides for easier, more localized clean-out of the pond. If utilized above a retrofit structure, it should be a min. of 8' to 10' from the retrofit.

Stone Size
When utilized at inlets with diameters less than 12", the filter ring shall be constructed of stone no smaller than 3"-5" (15 - 30 lbs.). When utilized at pipes with diameters greater than 12", the filter ring shall be constructed of stone no smaller than 10"-15" (50 - 100 lbs.). The larger stone can be faced with smaller filter stone on the upstream side for added sediment filtering capabilities. However, the smaller filter stone is more prone to clogging, requiring higher maintenance.

Height
The filter ring shall be constructed at a height no less than 2' from grade.

CONSTRUCTION SPECIFICATIONS

Mechanical or hand placement of stone shall be required to uniformly surround the structure to be supplemented. Refer to Appendix C for rock riprap specifications. The filter ring may be constructed on natural ground surface, on an excavated surface, or on machine compacted fill. A common failure of a filter ring is caused by placing it too close to or too high above the structure it is enhancing. When utilized below a storm drain outlet, it shall be placed such that it does not create a condition causing water to back-up into the storm drain and inhibit the function of the storm drain system.

MAINTENANCE

The filter ring must be kept clear of trash and this will require continuous monitoring and maintenance, which includes sediment removal when one-half full. Structures are temporary and should be removed when the land disturbing project has been stabilized.

N.T.S.

FILTER RING - (Fr)

Rt-P

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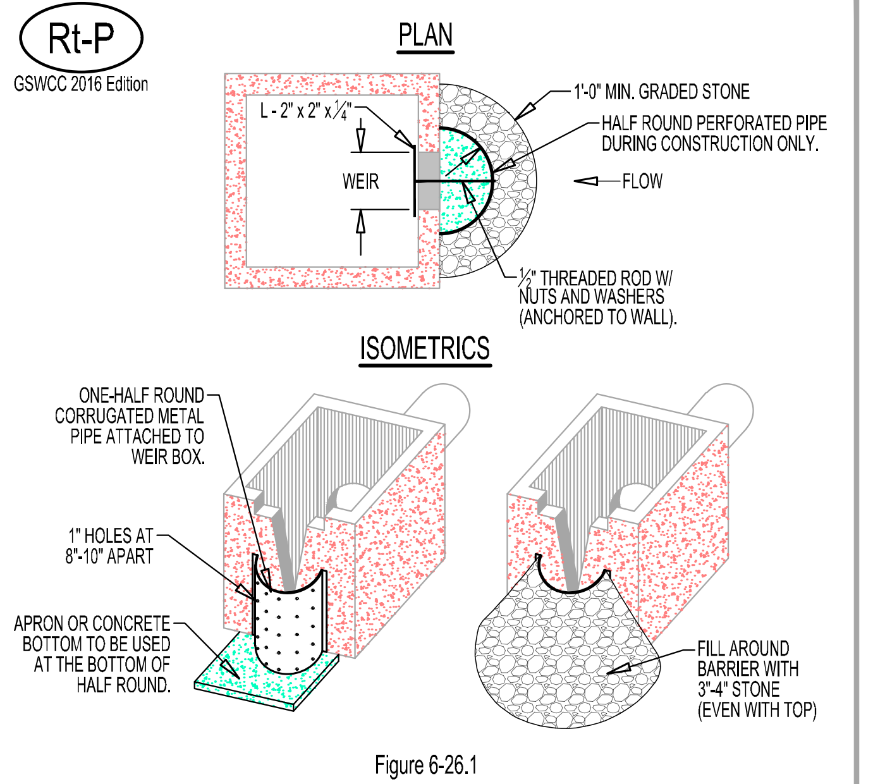
PLAN
L - 2" x 2" x ¼"
WEIR
1'-0" MIN. GRADED STONE
HALF ROUND PERFORATED PIPE DURING CONSTRUCTION ONLY
FLOW
3" THREADED ROD W/ NUTS AND WASHERS (ANCHORED TO WALL)
ISOMETRICS
ONE-HALF ROUND CORRUGATED METAL PIPE ATTACHED TO WEIR BOX
1" HOLES AT 8"-10" APART
APRON OR CONCRETE BOTTOM TO BE USED AT THE BOTTOM OF HALF ROUND.
FILL AROUND BARRIER WITH 3"-4" STONE (EVEN WITH TOP)

Figure 6-26.1

PURPOSE

Allows permanent stormwater detention basin structures to function as temporary sediment retention basins for land-disturbing projects, and allow roadway drainage to be used for temporary sediment storage.

CONDITIONS

This standard applies under the following conditions:
1. **Shall not be used in basins on live streams** or in basins with a total contributing drainage area of 100 acres or more.
2. Shall only be used in basins large enough to store 67 cubic yards of sediment per acre of disturbed area in the project.
3. Shall be considered a temporary structure and will be removed as soon as project is permanently stabilized. All accumulated sediment shall be removed, and the pond or basin shall be brought to final grade (if possible), prior to the removal of the retrofit.

DESIGN CRITERIA

1. The height of the retrofit should be approximately one-half the height of the structure.
2. **A retrofitted detention pond must be capable of storing the required volume of sediment in addition to the required stormwater volume.** The required sediment storage volume shall be achieved by either excavating the basin or raising the outlet structure's invert to achieve 67 cubic yards per acre of sediment storage. Remove sediment when ⅓ of the sediment storage capacity, not total pond capacity, is lost to sediment accumulation. This volume shall be marked on the riser or by setting a marked post near the riser.
3. For effective trapping efficiency, the sediment delivery inlets should be at the upper end of the basin.
4. For effective trapping efficiency, the length width ratio of the basin shall be at least 2:1. If the length-width ratio is not at least 2:1, the flow length shall be increased with the use of baffles installed within the basin.

CONSTRUCTION SPECIFICATIONS

a. Should be used only in detention ponds with less than 30 acre total drainage area.
b. Never to be used on exposed pipe end or winged headwall.
c. Diameter of half-round pipe should be 1.5 times the diameter of the principal pipe outlet or wider than the greatest width of the concrete weir.
d. Perforations and stone sizes are shown in Figure 6-26.1.
e. Shall be affixed by specified means (bolts, etc.) to concrete outlet structure.

All disturbed areas shall be vegetated immediately after construction with permanent vegetation. Refer to **Ds3** and **Ds4 - Disturbed Area Stabilization (With Permanent Vegetation)** and **Disturbed Area Stabilization (With Sodding)** and **Ss - Slope Stabilization.**

MAINTENANCE

Retrofit structures shall be kept clear of trash and debris. This will require continuous monitoring and maintenance, which includes sediment removal when ⅓ of the sediment storage capacity has been lost. *Structures are temporary and shall be removed when disturbed areas have been permanently stabilized.*

N.T.S.

PERFORATED HALF-ROUND PIPE WITH STONE FILTER - (Rt-P)

georgia civil
CIVIL ENGINEERING
LAND PLANNING
LAND SURVEYING

311 N. Main St, Ste. 101, Unit C
P.O. Box 896 | Madison, GA 30650
P: 706.342.1104 | F: 706.342.1105
www.georgiacivil.com

Professional Seal

GEORGIA REGISTERED
NO. PE031684
PROFESSIONAL ENGINEER
JASON P. BROWN

Project Information

BRAVO SITE SET
09-18-2024

NEWTON COUNTY SENIOR ENRICHMENT CENTER

40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

EROSION SEDIMENTATION AND POLLUTION CONTROL DETAILS

Sheet Number

C-6.12

Sd2-E

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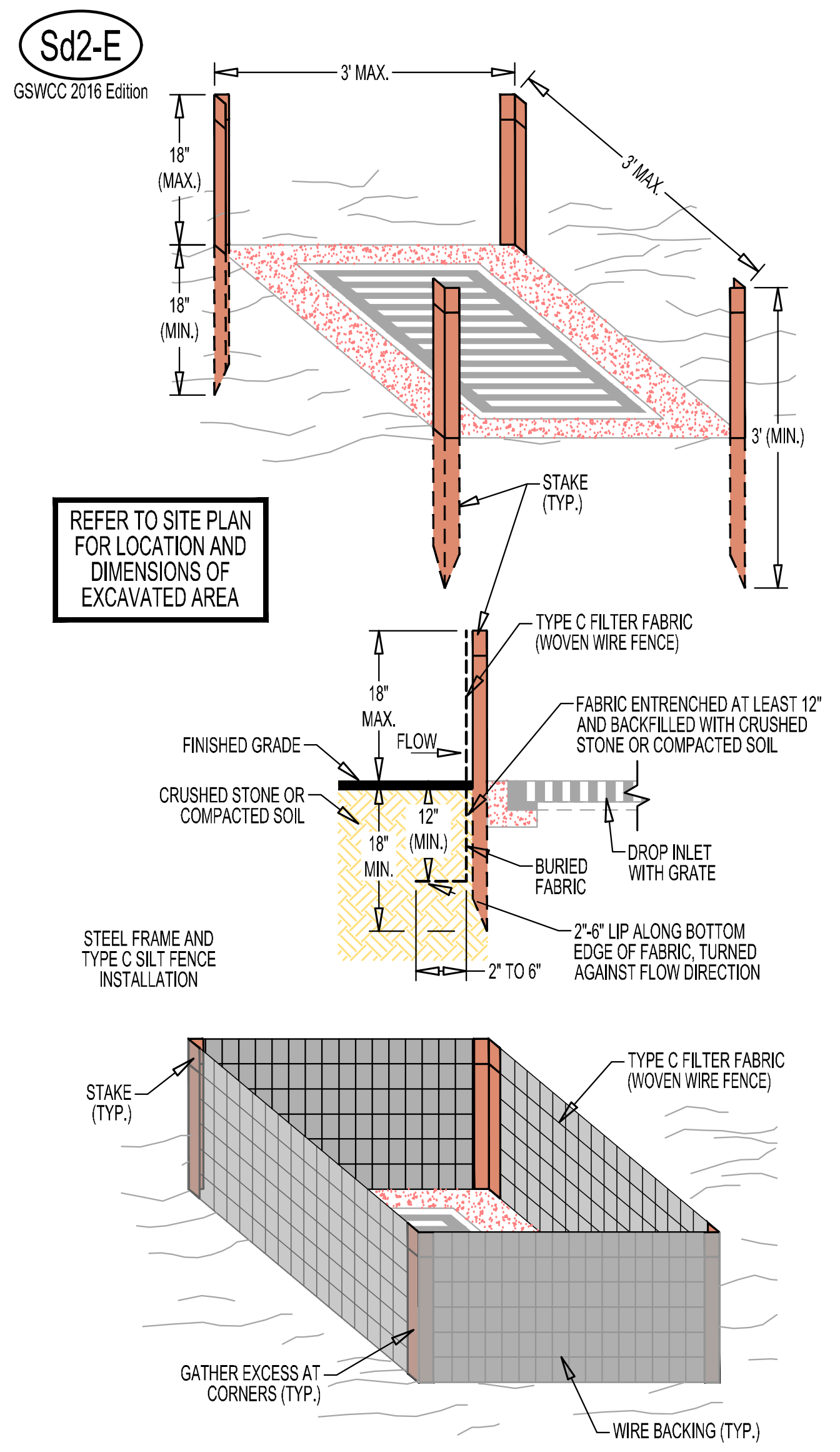
3' MAX.
3' MAX.
18" (MAX.)
18" (MIN.)
3' (MIN.)
STAKE (TYP.)
REFER TO SITE PLAN FOR LOCATION AND DIMENSIONS OF EXCAVATED AREA
TYPE C FILTER FABRIC (WOVEN WIRE FENCE)
FABRIC ENTRENCHED AT LEAST 12" AND BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL
FINISHED GRADE
FLOW
CRUSHED STONE OR COMPACTED SOIL
18" MAX.
12" (MIN.)
18" MIN.
BURIED FABRIC
DROP INLET WITH GRATE
STEEL FRAME AND TYPE C SILT FENCE INSTALLATION
2"-4" LIP ALONG BOTTOM EDGE OF FABRIC, TURNED AGAINST FLOW DIRECTION
2" TO 6"
STAKE (TYP.)
TYPE C FILTER FABRIC (WOVEN WIRE FENCE)
GATHER EXCESS AT CORNERS (TYP.)
WIRE BACKING (TYP.)

NOTE:

1. DESIGN IS FOR SLOPES NO GREATER THAN 5% (NOT DESIGNED FOR CONCENTRATED FLOWS).
2. THE STEEL POSTS SUPPORTING THE SILT FENCE MATERIAL SHOULD BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET (MAX. OF 3' APART).
3. THE STEEL POSTS SHOULD BE SECURELY DRIVEN AT LEAST 18" DEEP.
4. THE FABRIC SHOULD BE ENTRENCHED AT LEAST 12" AND THEN BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL.

Figure 6-28.1 - Fabric and Supporting Frame For Inlet Projection

An excavation may be created around the inlet sediment trap to provide additional sediment storage. The trap shall be sized to provide a minimum storage capacity calculated at the rate of 67 cubic yards per acre of drainage area. A minimum depth of 1.5 feet for sediment storage should be provided. Side slopes shall not be steeper than 2:1

CONSTRUCTION SPECIFICATIONS

Filter Fabric with Supporting Frame

Silt fence material with wire reinforcement and supported by steel posts should be used. The stakes shall be spaced evenly around the perimeter of the inlet a maximum of 3' apart, and securely driven into the ground, approximately 18" deep. The fabric shall be 36" tall and entrenched 12" and backfilled with crushed stone or compacted soil. Fabric and wire shall be securely fastened to the posts, and fabric ends must be overlapped a minimum of 18" or wrapped together around a post to provide a continuous fabric barrier around the inlet.

MAINTENANCE

The trap shall be inspected daily and after each rain, and repairs made as needed. Sediment shall be removed when the sediment has accumulated to one-half the height of the trap. Sediment shall be removed from curb inlet protection immediately. For excavated inlet sediment traps, sediment shall be removed when one-half of the sediment storage capacity has been lost to sediment accumulation. Sod inlet protection shall be maintained as specified in Ds4 - Disturbed Area Stabilization (With Sodding). Sediment shall not be washed into the inlet. It shall be removed from the sediment trap, disposed of and stabilized so that it will not enter the inlet again. When the contributing drainage area has been permanently stabilized, all materials and any sediment shall be removed, and either salvaged or disposed of properly. The disturbed area shall be brought to proper grade, then smoothed and compacted. Appropriately stabilize all disturbed areas around the inlet.

N.T.S.

EXCAVATED INLET SEDIMENT TRAP - (Sd2-E)

Sd2-F

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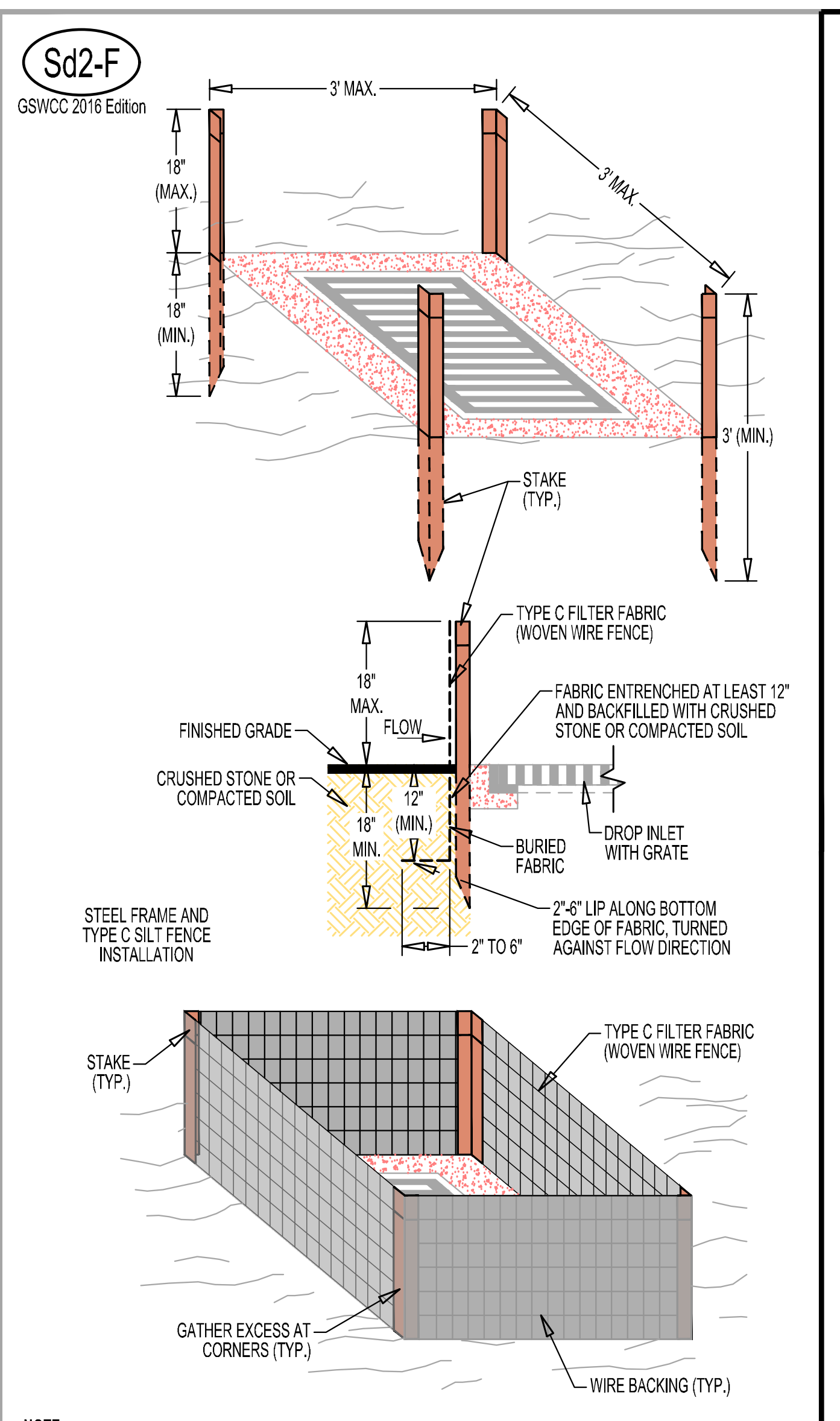
3' MAX.
3' MAX.
18" (MAX.)
18" (MIN.)
3' (MIN.)
STAKE (TYP.)
TYPE C FILTER FABRIC (WOVEN WIRE FENCE)
FABRIC ENTRENCHED AT LEAST 12" AND BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL
FINISHED GRADE
FLOW
CRUSHED STONE OR COMPACTED SOIL
18" MAX.
12" (MIN.)
18" MIN.
BURIED FABRIC
DROP INLET WITH GRATE
STEEL FRAME AND TYPE C SILT FENCE INSTALLATION
2"-4" LIP ALONG BOTTOM EDGE OF FABRIC, TURNED AGAINST FLOW DIRECTION
2" TO 6"
STAKE (TYP.)
TYPE C FILTER FABRIC (WOVEN WIRE FENCE)
GATHER EXCESS AT CORNERS (TYP.)
WIRE BACKING (TYP.)

NOTE:

1. DESIGN IS FOR SLOPES NO GREATER THAN 5% (NOT DESIGNED FOR CONCENTRATED FLOWS).
2. THE STEEL POSTS SUPPORTING THE SILT FENCE MATERIAL SHOULD BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET (MAX. OF 3' APART).
3. THE STEEL POSTS SHOULD BE SECURELY DRIVEN AT LEAST 18" DEEP.
4. THE FABRIC SHOULD BE ENTRENCHED AT LEAST 12" AND THEN BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL.

Figure 6-28.1 - Fabric and Supporting Frame For Inlet Projection

PURPOSE

To prevent sediment from entering a storm drainage systems prior to permanent stabilization of the disturbed area draining to the inlet.

CONDITIONS

All storm drain drop inlets that receive runoff from disturbed areas.

DESIGN CRITERIA

Through testing there are 2 different categories (high retention and high flow) supported. In areas where BMPs are being used on paved surfaces, or safety is a concern, the potentially negative effects of ponding should be taken into account. In such cases, a high flow BMP is preferred. On unpaved areas where ponding will not cause a safety hazard, high retention shall be taken into account. If high retention is not used in this situation a rationale shall be given on the plan and an unpaved application should apply. Sediment traps must be self-draining unless they are otherwise protected in an approved fashion that will not present a safety hazard. The drainage area entering the inlet sediment trap shall be no greater than 1 acre. If runoff may bypass the protected inlet, a temporary dike should be constructed on the down slope side of the structure. Also, a stone filter ring may be used on the up slope side of the inlet to slow runoff and filter larger soil particles. **Refer to Fr-Stone Filter Ring.**

CONSTRUCTION SPECIFICATIONS

Filter Fabric with Supporting Frame

This method of inlet protection is applicable where the inlet drains a relatively fat area (slope no greater than 5%) and shall not apply to inlets receiving concentrated flows, such as in street or highway medians. As shown in Figure 6-28.1, Type S silt fence supported by steel posts should be used. The stakes shall be spaced evenly around the perimeter of the inlet a maximum of 3' apart, and securely driven into the ground, approximately 18" deep. The fabric shall be 36" tall and entrenched 12" and backfilled with crushed stone or compacted soil. Fabric and wire shall be securely fastened to the posts, and fabric ends must be overlapped a minimum of 18" or wrapped together around a post to provide a continuous fabric barrier around the inlet.

MAINTENANCE

The trap shall be inspected daily and after each rain, and repairs made as needed. Sediment shall be removed when the sediment has accumulated to one-half the height of the trap. Sediment shall be removed from curb inlet protection immediately. For excavated inlet sediment traps, sediment shall be removed when one-half of the sediment storage capacity has been lost to sediment accumulation. Sod inlet protection shall be maintained as specified in Ds4 - Disturbed Area Stabilization (With Sodding). Sediment shall not be washed into the inlet. It shall be removed from the sediment trap, disposed of and stabilized so that it will not enter the inlet again. When the contributing drainage area has been permanently stabilized, all materials and any sediment shall be removed, and either salvaged or disposed of properly. The disturbed area shall be brought to proper grade, then smoothed and compacted. Appropriately stabilize all disturbed areas around the inlet.

N.T.S.

INLET SEDIMENT TRAP (FILTER FABRIC W/ SUPPORTING FRAME) - (Sd2-F)

Ss

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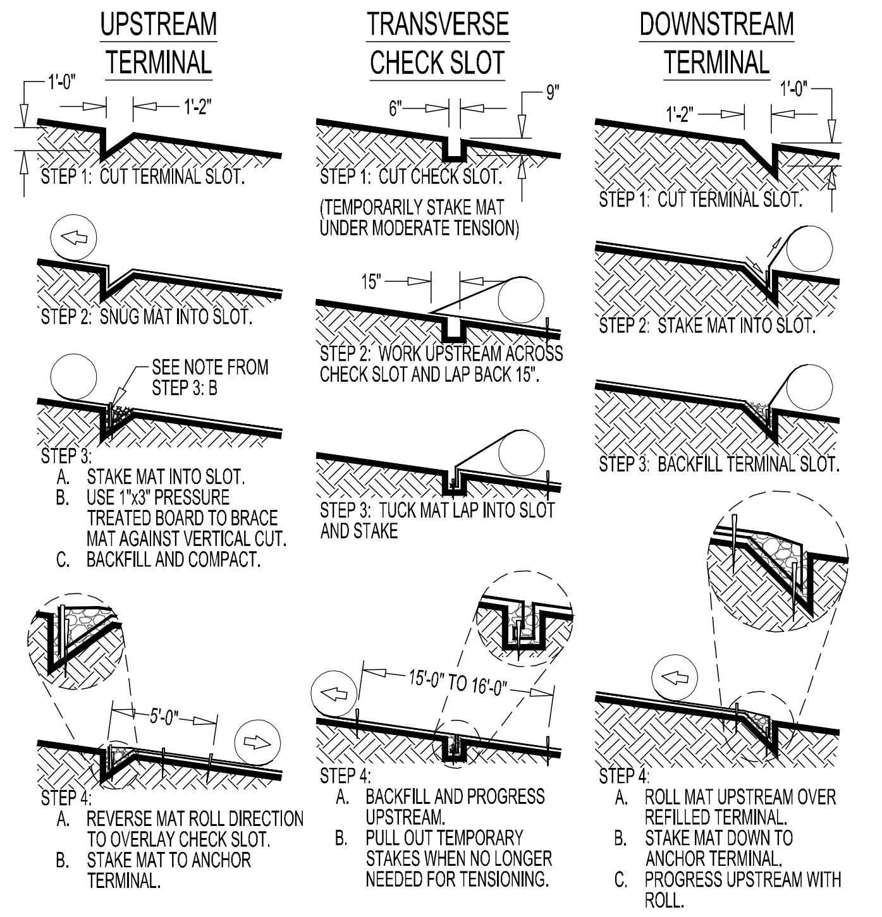
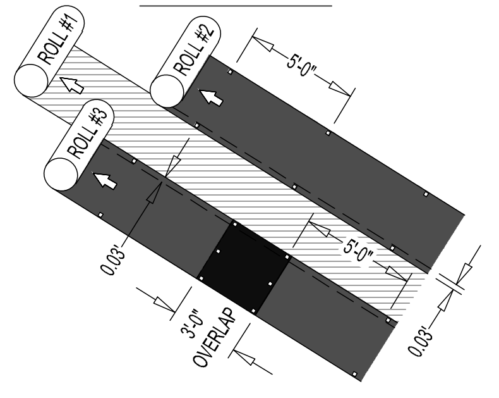
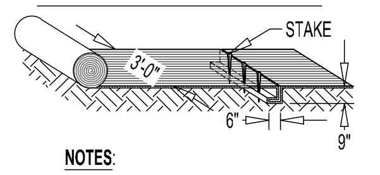
TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)


UPSTREAM TERMINAL
1'-0"
1'-2"
STEP 1: CUT TERMINAL SLOT.
STEP 2: SNUG MAT INTO SLOT.
SEE NOTE FROM STEP 3: B
STEP 3:
A. STAKE MAT INTO SLOT.
B. USE 1"x3" PRESSURE TREATED BOARD TO BRACE MAT AGAINST VERTICAL CUT.
C. BACKFILL AND COMPACT.
5'-0"
STEP 4:
A. REVERSE MAT ROLL DIRECTION TO OVERLAY CHECK SLOT.
B. STAKE MAT TO ANCHOR TERMINAL.
TRANSVERSE CHECK SLOT
6"
9"
STEP 1: CUT CHECK SLOT.
(TEMPORARILY STAKE MAT UNDER MODERATE TENSION)
15"
STEP 2: WORK UPSTREAM ACROSS CHECK SLOT AND LAP BACK 15".
STEP 3: TUCK MAT LAP INTO SLOT AND STAKE
15'-0" TO 16'-0"
STEP 4:
A. BACKFILL AND PROGRESS UPSTREAM.
B. PULL OUT TEMPORARY STAKES WHEN NO LONGER NEEDED FOR TENSIONING.
DOWNSTREAM TERMINAL
1'-0"
1'-2"
STEP 1: CUT TERMINAL SLOT.
STEP 2: STAKE MAT INTO SLOT.
STEP 3: BACKFILL TERMINAL SLOT.
STEP 4:
A. ROLL MAT UPSTREAM OVER REFILLED TERMINAL.
B. STAKE MAT DOWN TO ANCHOR TERMINAL.
C. PROGRESS UPSTREAM WITH ROLL.

SEQUENTIAL ROLL RUN OUT IN CHANNELS


ROLL #1
ROLL #2
ROLL #3
5'-0"
5'-0"
0.03'
0.03'
3" OVERLAP

PICTORIAL VIEW OF TRANSVERSE CHECK SLOT



NOTES:

1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3" OVERLAPS AND STAKE AT 5'-0" INTERVALS ALONG THE SEAMS.
6. USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.

TYPICAL INSTALLATION GUIDELINES FOR MATTING AND BLANKETS
(Figure 6-10.1)

CONDITIONS

Slope stabilization can be applied to flat areas or slopes where the erosion hazard is high and slope protection is needed during the establishment of vegetation.

PLANNING CONSIDERATIONS

Care must be taken to choose the type of slope stabilization product that is most appropriate for the specific needs of a project. Two general types of slope stabilization products are discussed within this specification.

Rolled Erosion Control Products (RECP)

A natural fiber blanket with single or double photodegradable or biodegradable nets.

Hydraulic Erosion Control Products (HECP)

HECP shall utilize straw, cotton, wood or other natural based fibers held together by a soil binding agent that works to stabilize soil particles. Paper mulch should not be used for erosion control.

CRITERIA

Rolled Erosion Control Products (RECPs) and Hydraulic Erosion Control Products (HECPs):

- Installation and stapling of RECPs and application rates for HECPs shall conform to manufacturer's guidelines for application.
- Short-Term RECPs as a minimum shall be used to stabilize concentrated flow areas with a velocity less than 5ft/sec on slopes 3:1 or greater with a height of 10' or greater.

MATERIALS

HECP

Hydraulic erosion control products shall be prepackaged from the manufacturer. Field mixing of performance enhancing additives will not be allowed. Fibrous components should be all natural or biodegradable. Products shall be determined to be non-toxic in accordance with EPA-821-R-02-012.

RECP

Blankets shall be non-toxic to vegetation, seed, or wildlife. Products shall be determined to be non-toxic in accordance with EPA821-R-02-012. At minimum, the plastic or biodegradable netting shall be stitched to the fibrous matrix to maximize strength and provide for ease of handling.

RECPs are categorized as follows:

- a. **Short-Term** (functional longevity 12 mo.)
  - i. Photodegradable
    Straw blankets with a top and bottom side photodegradable net. The maximum size of the mesh should be openings of ½" x ½". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.35" and minimum density should be 0.5 lbs per square yard.
  - ii. Biodegradable
    Straw blanket with a top and bottom side biodegradable jute net. The top side net should consist of machine direction strands that are twisted together and then interwoven with cross direction strands (leno weave). The bottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.
- b. **Extended-Term** (functional longevity 24 mo.)
  - i. Photodegradable
    Blankets that consist of 70% straw and 30% coconut with a top and bottom side photodegradable net. The top net should have ultraviolet additives to delay breakdown. The maximum size of the mesh should be openings of 0.65" x 0.65". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.35" and minimum density should be 0.6 lbs per square yard.
  - ii. Biodegradable
    Blankets that consist of 70% straw and 30% coconut with a top and bottom side biodegradable jute net. The top side net should consist of machine direction strands that are twisted together and then interwoven with cross direction strands (leno weave). The bottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.65 lbs per square yard.
- c. **Long-Term** (functional longevity 36 mo.)
  - i. Photodegradable
    Blankets that consist of 100% coconut with a top and bottom side photodegradable net. Each net should have ultraviolet additives to delay breakdown. The maximum size of the mesh should be openings of 0.65" X 0.65". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.3" and minimum density should be 0.5 lbs per square yard.
  - ii. Biodegradable
    Blankets that consist of 100% coconut with a top and bottom side biodegradable jute net. The top side net should consist of machine direction strands that are twisted together and then interwoven with cross direction strands (leno weave). The bottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.

NOTES

It is the intention of this section to allow interchangeable use of RECPs and HECPs for erosion protection on slopes. The project engineer should select the type of erosion control product that best fits the need of the particular site.

SITE PREPARATION

After the site has been shaped and graded to the approved design, prepare a friable seedbed relatively free from clods and rocks more than 1" in diameter, and any foreign material that will prevent contact of the soil stabilization mat with the soil surface. Surface must be smooth to ensure proper contact of blankets or matting to the soil surface. If necessary, redirect any runoff from the ditch or slope during installation.

MAINTENANCE

All erosion control blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until they become permanently stabilized.

N.T.S.

SLOPE STABILIZATION - (Ss)

St

STORM DRAIN OUTLET PROTECTION (USING RIP-RAP)

PIPE OUTLET TO FLAT AREA – NO WELL DEFINED CHANNEL

PIPE OUTLET TO WELL DEFINED CHANNEL

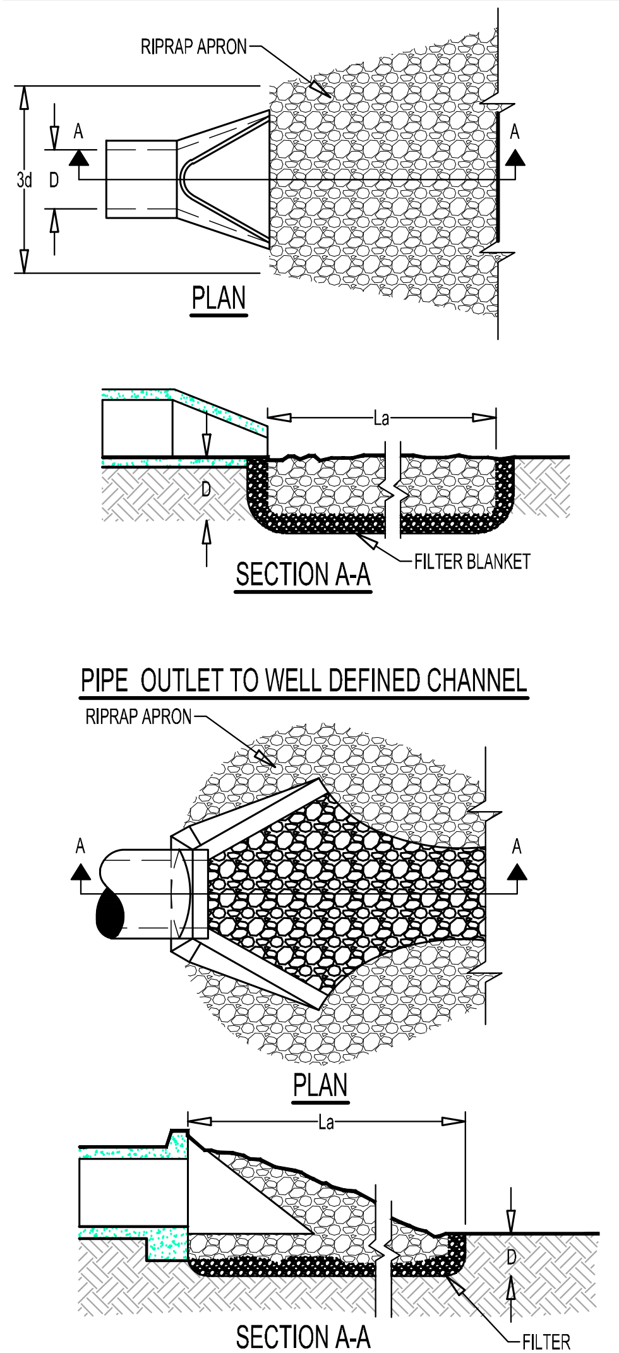

RIPRAP APRON
3d
D
La
A
A
PLAN
SECTION A-A
FILTER BLANKET
RIPRAP APRON
A
A
PLAN
La
D
SECTION A-A
FILTER BLANKET

Figure 6-34.3 - Riprap Outlet Protection

NOTES:

1. La IS THE LENGTH OF THE RIP-RAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

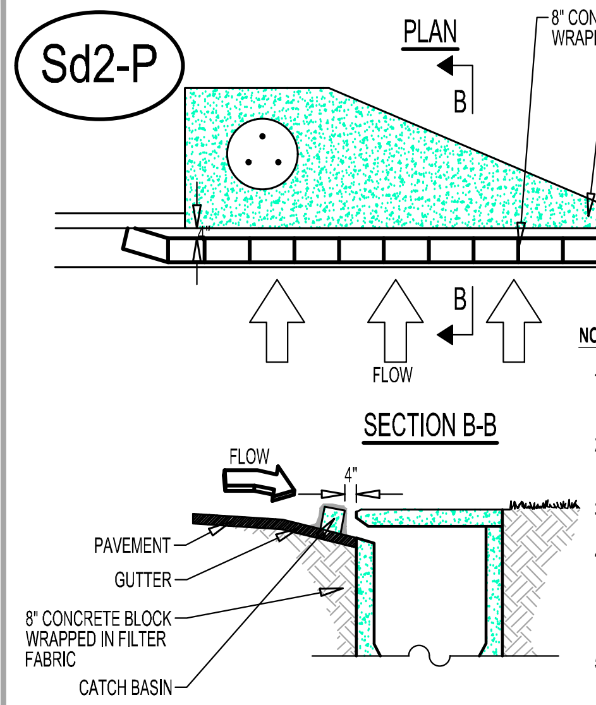
CONSTRUCTION SPECIFICATIONS

1. Ensure that the subgrade for the filter and rip-rap follows the required lines and grades shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the rip-rap thickness.
2. The rip-rap and gravel filter must conform to the specified grading limits shown on the plans.
3. Geotextile must meet design requirements and be properly protected from punching or tearing during installation. Repair any damage by removing the rip-rap and placing another piece of filter fabric over the damaged area. All connecting joints should overlap a minimum of 1 ft. If the damage is extensive, replace the entire filter fabric.
4. Rip-rap may be placed by equipment, but take care to avoid damaging the filter.
5. The minimum thickness of the rip-rap should be 1.5 times the maximum stones diameter.
6. Construct the apron on zero grade with no overfall at the end. Make the top of the rip-rap at the downstream end level with the receiving area or slightly below it.
7. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed to fit site conditions, place it in the upper section of the apron.
8. Immediately after construction, stabilize all disturbed areas with vegetation.
9. Stone quality - Select stone for rip-rap from field stone or quarry stone. The stone should be hard, angular, and highly weather-resistant. The specific Gravity of the individual stones should be at least 2.5.
10. Filter - Install a filter to prevent soil movement through the openings in the rip-rap. The filter should consist of a graded gravel layer or a synthetic filter cloth.

MAINTENANCE

Inspect rip-rap outlet structures after heavy rains to see if any erosion around or below the rip-rap has taken place or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

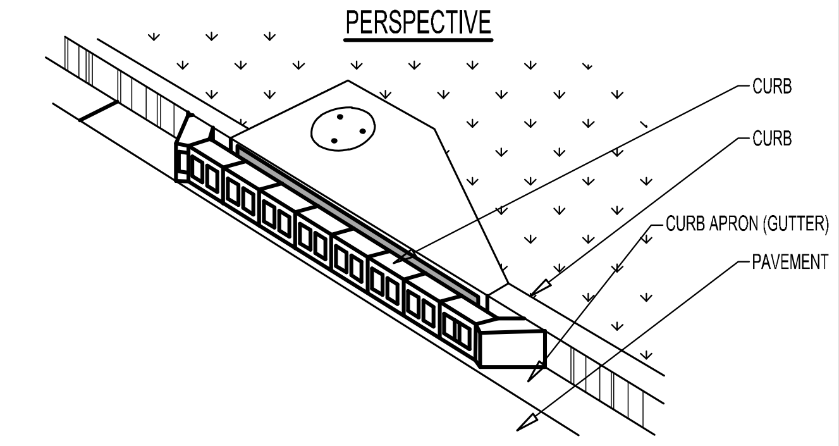
Sd2-P


PLAN
8" CONCRETE BLOCK WRAPPED IN FILTER FABRIC
CATCH BASIN
CURBING
GUTTER
PAVEMENT
B
B
FLOW
SECTION B-B
FLOW
4"
PAVEMENT
GUTTER
8" CONCRETE BLOCK WRAPPED IN FILTER FABRIC
CATCH BASIN

NOTES:

1. INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
2. WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS CATCH BASIN INLET.
3. FACE OPENINGS IN BLOCKS OUTWARD.
4. LEAVE A GAP APPROX. 4" BETWEEN THE CURB AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT HAZARDOUS PONDING.
5. INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.

PERSPECTIVE


CURB
CURB
CURB APRON (GUTTER)
PAVEMENT

CONSTRUCTION SPECIFICATIONS

Once pavement has been installed, a curb inlet filter shall be installed on inlets receiving runoff from disturbed areas. This method of inlet protection shall be removed if a safety hazard is created.

One method of curb inlet protection uses "pigs-in-a-blanket" - 8" concrete blocks wrapped in filter fabric. Another method uses gravel bags constructed by wrapping DOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material.

A gap of approximately 4" shall be left between the inlet filter and the inlet to allow overflow and prevent hazardous ponding in the roadway. Proper installation and maintenance are crucial due to possible ponding in the roadway, resulting in a hazardous condition.

MAINTENANCE

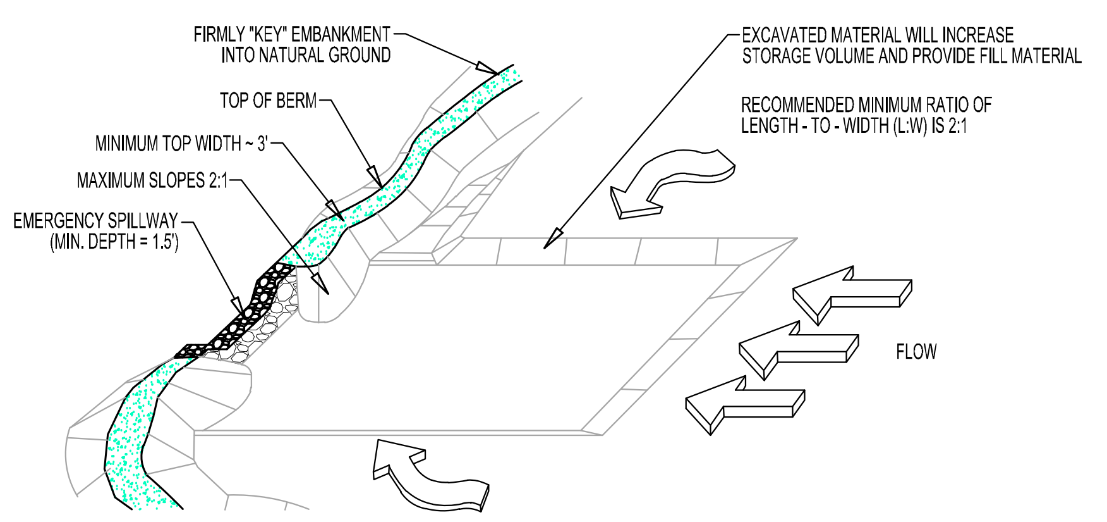
The trap shall be inspected daily and after each rain, and repairs made as needed. Sediment shall be removed when the sediment has accumulated to one-half the height of the trap.

Sediment shall be removed from curb inlet protection immediately. Sediment shall not be washed into the inlet. It shall be removed from the sediment trap, disposed of and stabilized so that it will not enter the inlet again.

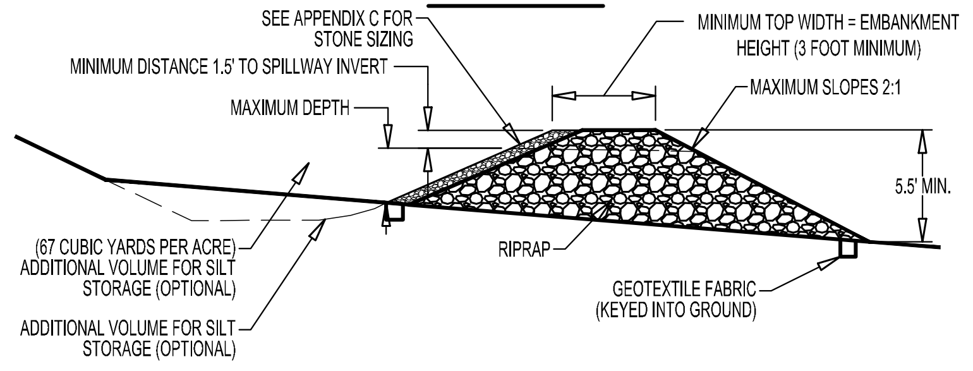
When the contributing drainage area has been permanently stabilized, all materials and any sediment shall be removed, and either salvaged or disposed of properly. The disturbed area shall be brought to proper grade, then smoothed and compacted. Appropriately stabilize all disturbed areas around the inlet.

CURB INLET PROTECTION "Pigs-in-a-Blanket"

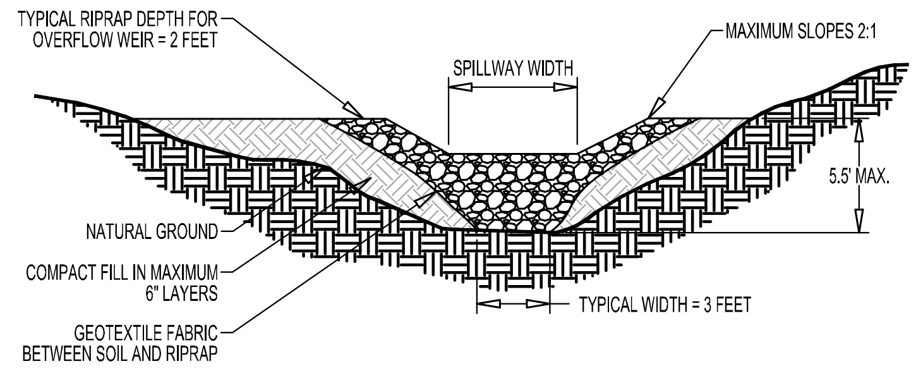
TEMPORARY SEDIMENT TRAP (ROCK OUTLET)
SD4-C


FIRMLY "KEY" EMBANKMENT INTO NATURAL GROUND
TOP OF BERM
MINIMUM TOP WIDTH = 3'
MAXIMUM SLOPES 2:1
EMERGENCY SPILLWAY (MIN. DEPTH = 1.5')
EXCAVATED MATERIAL WILL INCREASE STORAGE VOLUME AND PROVIDE FILL MATERIAL
RECOMMENDED MINIMUM RATIO OF LENGTH - TO - WIDTH (L:W) IS 2:1
FLOW

CROSS SECTION


SEE APPENDIX C FOR STONE SIZING
MINIMUM DISTANCE 1.5' TO SPILLWAY INVERT
MAXIMUM DEPTH
MINIMUM TOP WIDTH = EMBANKMENT HEIGHT (3 FOOT MINIMUM)
MAXIMUM SLOPES 2:1
5.5' MIN.
(67 CUBIC YARDS PER ACRE) ADDITIONAL VOLUME FOR SILT STORAGE (OPTIONAL)
ADDITIONAL VOLUME FOR SILT STORAGE (OPTIONAL)
RIPRAP
GEOTEXTILE FABRIC (KEYED INTO GROUND)

PROFILE THROUGH EMBANKMENT


TYPICAL RIPRAP DEPTH FOR OVERFLOW WEIR = 2 FEET
SPILLWAY WIDTH
MAXIMUM SLOPES 2:1
5.5' MAX.
NATURAL GROUND
COMPACT FILL IN MAXIMUM 6" LAYERS
GEOTEXTILE FABRIC BETWEEN SOIL AND RIPRAP
TYPICAL WIDTH = 3 FEET

N.T.S.

Du

GSWCC 2016 Edition

CONDITIONS

This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. **Temporary Methods**

- **Mulches**. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification **Tac - Tackifiers**. Resins should be used according to manufacturer's recommendations.
- **Vegetative Cover**. See specification **Ds2 - Disturbed Area Stabilization (With Temporary Seeding)**.
- **Spray-on Adhesives**. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification **Tac - Tackifiers.**
- **Tillage**. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12" apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

Irrigation.
This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers.
Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

Calcium Chloride.
Apply at rate that will keep surface moist. May need retreatment.

B. **Permanent Methods**

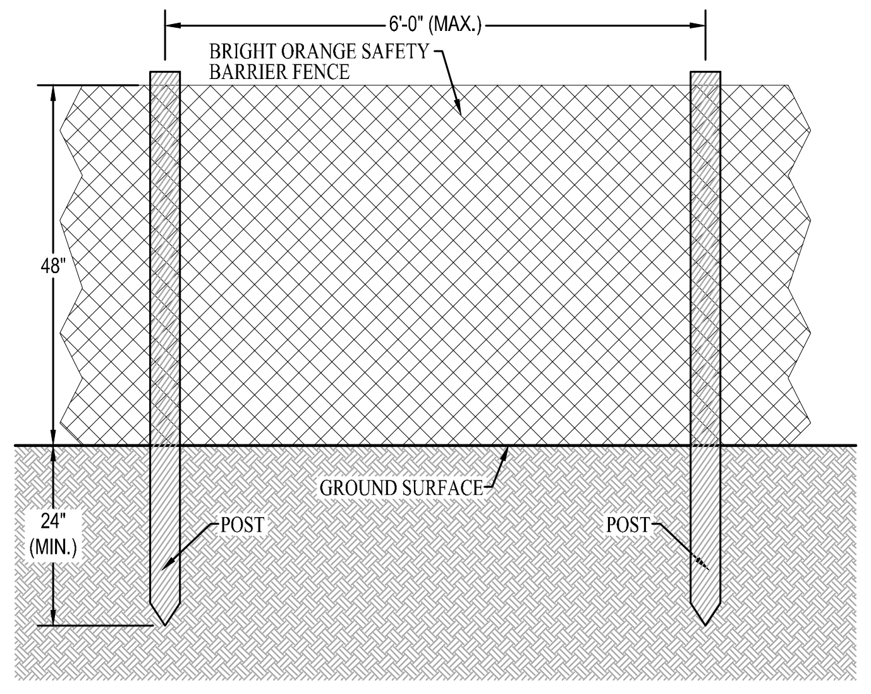
Permanent Vegetation. See specification **Ds3 - Disturbed Area Stabilization (With Permanent Vegetation)**. Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See specification **Tp - Topsoiling**.

Stone. Cover surface with crushed stone or coarse gravel. See specification **Cr - Construction Road Stabilization**.

DUST CONTROL ON DISTURBED AREAS - (Du)

Tr


6'-0" (MAX.)
BRIGHT ORANGE SAFETY BARRIER FENCE
48"
GROUND SURFACE
24" (MIN.)
POST
POST

NOTES:

1. THE FENCE SHALL BE LOCATED AS SHOWN ON THE TREE PROTECTION AND REPLACEMENT PLAN.

2. FENCE POSTS SHALL BE EITHER 2"x4" WOOD POSTS OR STANDARD STEEL POSTS.

3. THE FENCE SHALL BE BRIGHT ORANGE POLYETHYLENE SAFETY BARRIER FENCE - GRAINGER ITEM #5W418 (4 FEET HEIGHT, 50 FEET LENGTH, 1 3/4 IN MESH HEIGHT, 2 1/8 IN MESH LENGTH, DIAMOND SHAPE MESH, 160 POUNDS PER FOOT BREAKING STRENGTH.

BRAND: ALLSAFE SMC

MFR. MODEL: #3010763

CATALOG PAGE NO.: 2773

TREE PROTECTION FENCING

N.T.S.

BRAVO SITE SET 09-18-2024

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Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR ENRICHMENT CENTER

40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
PARCEL ID:0008-002H
ZONING: AR

DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

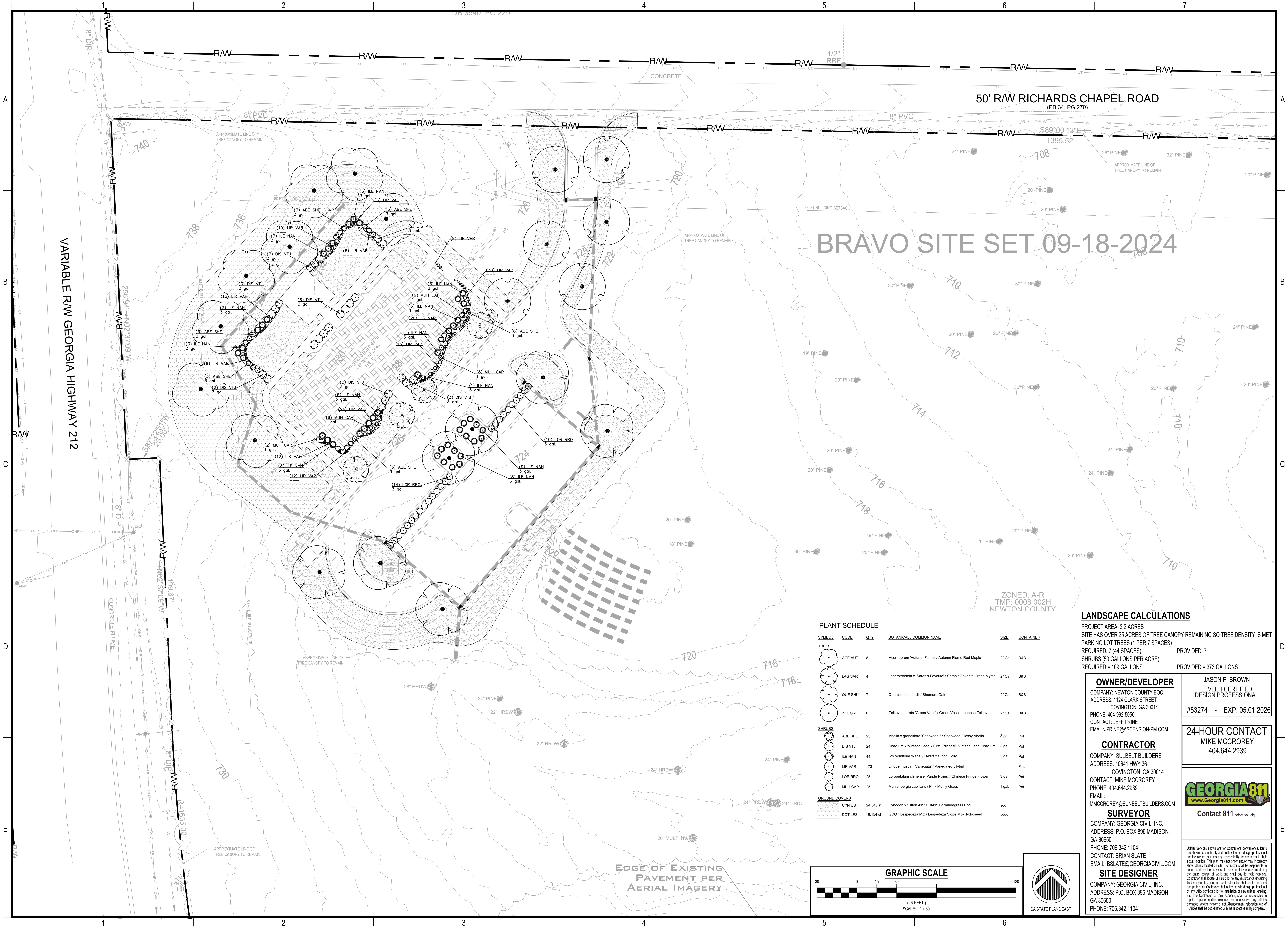
DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

EROSION SEDIMENTATION AND POLLUTION CONTROL DETAILS

Sheet Number

C-6.13


50' R/W RICHARDS CHAPEL ROAD
(PB 34, PG 270)
VARIABLE R/W GEORGIA HIGHWAY 212
BRAVO SITE SET 09-18-2024
R/W
CONCRETE
1/2" RBF
8" PVC
S89°00'13"E 1395.52'
N02°37'09"W 256.94'
S87°22'51"W 25.00'
N02°37'09"W 199.67'
R=1655.00'
8" DIP
CONCRETE FLUME
APPROXIMATE LINE OF TREE CANOPY TO REMAIN
60 FT BUILDING SETBACK
PROPOSED ENRICHMENT CENTER BUILDING FFE: 727.3
(3) ILE NAN 3 gal.
(6) LIR VAR
(3) ABE SHE 3 gal.
(2) DIS VTJ 3 gal.
(19) LIR VAR
(3) DIS VTJ 3 gal.
(6) LIR VAR
(15) LIR VAR
(3) ABE SHE 3 gal.
(9) LIR VAR
(2) DIS VTJ 3 gal.
(8) DIS VTJ 3 gal.
(9) LIR VAR
(38) LIR VAR
(9) MUH CAP 1 gal.
(20) LIR VAR
(1) ILE NAN 3 gal.
(15) LIR VAR
(6) ABE SHE 3 gal.
(8) MUH CAP 1 gal.
(5) ILE NAN 3 gal.
(24) LIR VAR
(6) MUH CAP 1 gal.
(2) MUH CAP 1 gal.
(12) LIR VAR
(5) ABE SHE 3 gal.
(14) LOR RRO 3 gal.
(10) LOR RRO 3 gal.
(9) ILE NAN 3 gal.
(8) ILE NAN 3 gal.
24" PINE
26" PINE
32" PINE
20" PINE
30" PINE
19" PINE
36" PINE
18" PINE
28" HRDW
22" HRDW
24" HRDW
20" MULTI HW
ZONED: A-R
TMP: 0008 002H
NEWTON COUNTY
EDGE OF EXISTING PAVEMENT PER AERIAL IMAGERY
GRAPHIC SCALE
0 15 30 60 120
(IN FEET)
SCALE: 1" = 30'
GA STATE PLANE EAST

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER
TREES					
	ACE AUT	8	Acer rubrum 'Autumn Flame' / Autumn Flame Red Maple	2" Cal.	B&B
	LAG SAR	4	Lagerstroemia x 'Sarah's Favorite' / Sarah's Favorite Crape Myrtle	2" Cal.	B&B
	QUE SHU	7	Quercus shumardii / Shumard Oak	2" Cal.	B&B
	ZEL GRE	6	Zelkova serrata 'Green Vase' / Green Vase Japanese Zelkova	2" Cal.	B&B
SHRUBS					
	ABE SHE	23	Abelia x grandiflora 'Sherwoodii' / Sherwood Glossy Abelia	3 gal.	Pot
	DIS VTJ	24	Distylium x 'Vintage Jade' / First Editions® Vintage Jade Distylium	3 gal.	Pot
	ILE NAN	44	Ilex vomitoria 'Nana' / Dwarf Yaupon Holly	3 gal.	Pot
	LIR VAR	173	Liriope muscari 'Variegata' / Variegated Lilyturf	---	Flat
	LOR RRO	25	Loropetalum chinense 'Purple Pixies' / Chinese Fringe Flower	3 gal.	Pot
	MUH CAP	25	Muhlenbergia capillaris / Pink Muhly Grass	1 gal.	Pot
GROUND COVERS					
▨	CYN UUT	24,546 sf	Cynodon x 'Tifton 419' / Tif419 Bermudagrass Sod	sod	
▨	DOT LES	18,154 sf	GDOT Lespedeza Mix / Lespedeza Slope Mix-Hydroseed	seed	

LANDSCAPE CALCULATIONS

PROJECT AREA: 2.2 ACRES
SITE HAS OVER 25 ACRES OF TREE CANOPY REMAINING SO TREE DENSITY IS MET
PARKING LOT TREES (1 PER 7 SPACES)
REQUIRED: 7 (44 SPACES) PROVIDED: 7
SHRUBS (50 GALLONS PER ACRE)
REQUIRED = 109 GALLONS PROVIDED = 373 GALLONS

OWNER/DEVELOPER

COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

CONTRACTOR

COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA 30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
EMAIL:
MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR

COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER

COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104

JASON P. BROWN
LEVEL II CERTIFIED
DESIGN PROFESSIONAL
#53274 - EXP. 05.01.2026

24-HOUR CONTACT

MIKE MCCROREY
404.644.2939

GEORGIA811
www.Georgia811.com
Contact 811 before you dig

Utilities/Services shown are for Contractors' convenience. Items are shown schematically and neither the site design professional nor the owner assumes any responsibility for variances in their actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to secure and use the services of a private utility locator firm during the entire course of work and shall pay for said services. Contractor shall locate utilities prior to any disturbance (including field verifying location and depth of utilities that are to be saved and protected). Contractor shall notify the site design professional of any utility conflicts prior to installation of new utilities, grading, etc. The Contractor, at their expense, shall be responsible to repair, replace and/or relocate, as necessary, any utilities damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

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Sheet Title

LANDSCAPE PLAN

Sheet Number

GENERAL PLANTING NOTES

1. SELECTION:
   - A. ALL PLANT MATERIALS TO BE (GEORGIA *1) OR BETTER (GEORGIA FANCY) DEFINED AND SPECIFIED ACCORDING TO GRADES AND STANDARDS FOR NURSERY STOCK PUBLISHED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES DIVISION OF PLANT INDUSTRY UTILIZING THE LATEST UPDATED EDITION.
   - B. ALL PLANT MATERIAL SHALL MEET THE MINIMAL SIZE REQUIREMENT AS STATED ON THE PLANT LIST.
   - C. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY LOCATION. LANDSCAPE ARCHITECT WILL DECIDE FINAL APPROVAL OF ALL PLANT MATERIAL DELIVERED TO THE PROJECT SITE.
   - D. THE LANDSCAPE ARCHITECT MAY MAKE SELECTION OF PLANT MATERIAL PROCURED UNDER THIS PROJECT AT THE PLACE OF CULTIVATION BEFORE THE CONTRACTOR PURCHASES AND PREPARES FOR DELIVERY TO PROJECT SITE. THE CONTRACTOR IS TO RETAIN AND SUBMIT CERTIFICATION TAGS VERIFYING TYPE AND PURITY OF LANDSCAPE MATERIAL.
   - E. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY. UNLESS OTHERWISE NOTED, PLANTS SHALL BE EXCEPTIONALLY DENSE WITH A NATURALISTIC BRANCHING CHARACTER AS INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT.
   - F. LANDSCAPE CONTRACTOR SHALL REFER TO PLANTING PLAN AND PLANT LIST FOR MATERIAL PROCUREMENT. QUANTITY ESTIMATES ON THE PLANTING PLAN AND PLANT LIST ARE FOR REFERENCE ONLY.
   - G. CONTRACTOR SHALL FURNISH ALL QUANTITIES NECESSARY TO COMPLETE THE PLANTING AREAS AS SHOWN ON THE DRAWING TO ACCEPTANCE AND SATISFACTION AT THE LANDSCAPE ARCHITECT.
   - H. THE CONTRACTOR SHALL REPORT TO THE LANDSCAPE ARCHITECT SHOULD THERE BE CHANGES IN THE PLANTING AREAS ON SITE RESULTING IN SUBSTANTIAL DIFFERENCE IN QUANTITIES AND SPECIES REQUIRED.
   - I. WARRANTY: ALL PLANTS SHALL BE WARRANTED TO REMAIN ALIVE AND HEALTHY AND IN VIGOROUSLY THRIVING CONDITION FOR PERIOD OF 1 YEAR FROM DATE OF FINAL ACCEPTANCE.

2. EXECUTION:
   - A. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS AND INSTRUCTIONS PROVIDED BY LANDSCAPE ARCHITECT.
   - B. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AS NECESSARY TO EXECUTE AND COMPLETE PROPOSED LANDSCAPE / IRRIGATION INSTALLATION IN A TIMELY MANNER COMPLYING WITH THE SCHEDULED COMPLETION DATE.
   - C. WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE INTENTIONS OF THE SPECIFIED DRAWINGS. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE OF BEST QUALITY AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
   - D. PLANTING PLANS INDICATE DIAGRAMMATIC LOCATION ONLY. SITE ADJUSTMENTS OF PLANTING DESIGN AND RELOCATION OF PLANT MATERIAL INSTALLED PRIOR TO LANDSCAPE ARCHITECT APPROVAL SHALL BE DONE WITHOUT PENALTY OR ADDITIONAL COST TO OWNER.
   - E. LANDSCAPE CONTRACTOR SHALL STAKE AND/OR MARK ALL TREE AND PLANT LOCATIONS AT SITE AND NOTIFY LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PLANT INSTALLATION.
   - F. UTILITIES: THE LANDSCAPE CONTRACTOR SHALL DETERMINE LOCATION OF ALL ABOVE GRADE AND UNDERGROUND UTILITIES PERFORM WORK THAT WILL AVOID DAMAGE TO UTILITIES. THE CONTRACTOR SHALL MAKE GOOD ALL DAMAGED UTILITIES AT NO COST TO OWNER.
   - G. DRAINAGE: CONTRACTOR SHALL CONDUCT PERCOLATION TEST IN AREAS TO BE PLANTED: NOTIFY LANDSCAPE ARCHITECT OF ANY POOR DRAINAGE PROVIDE SUPPLEMENTAL PIT DRAINAGE AS REQUIRED TO ENSURE HEALTHY PLANT MATERIALS (SEE SPECIFICATIONS FOR DETAILS)
     IF DRAINAGE IS NOT SUFFICIENT NOTIFY LANDSCAPE ARCHITECT BEFORE INSTALLING THE PLANTS. OTHERWISE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR THE GUARANTEE AND LIVABILITY OF THE PLANT.

3. GENERAL PLANTING:
   - A. THE CONTRACTOR'S FIELD SUPERVISOR SHALL ACCOMPANY LANDSCAPE ARCHITECT ON ALL PLANT TAGGING AND SITE VISITS.
   - B. CONTRACTOR SHALL PLACE 2" DEPTH OF AGED MUSHROOM COMPOST IN ALL PLANTING BEDS THAT ARE WELL DRAINED. MUSHROOM COMPOST SHALL THEN BE THOROUGHLY TILLED INTO EXISTING SOIL TO A DEPTH OF 10"-12" PRIOR TO PLANTING.
   - C. PLACE PLANTS UPRIGHT AND TURNED SO THAT THE MOST ATTRACTIVE SIDE VIEWED.
   - D. PROVIDE 1" THICK MULCH (MEASURED AFTER WATERING IN) AT ALL PLANTS AND PLANTING BEDS. MULCH SHALL BE DOUBLE SHREDDED OR FINE HARDWOOD UNLESS OTHERWISE NOTED ON THE PLANS OR DETAILS.
   - E. PROVIDE A CLEAN SHARP EDGING OF LANDSCAPE BEDS ADJACENT TO LAWN AREAS UNLESS OTHERWISE NOTED.
   - F. CONTRACTOR SHALL BE RESPONSIBLE FOR "ROLLING" ALL SOD THAT IS INSTALLED (ON THE DAY THE SOD IS INSTALLED). HOWEVER, NO SOD SHALL BE LAID WHERE THE GRADE IS NOT CORRECT.

4. TREE PLANTING:
   - A. REMOVE FIRST 8-10" OF WIRE BASKET FROM ROOTBALLS. IF REMOVAL WILL RESULT IN ROOTBALL INJURY, CUT AND REMOVE WIRES ONCE IN HOLE TO ALLOW FOR ROOT EXPANSION.
   - B. MULCH SAUCERS TO BE 8' (MIN.) DIAMETER FOR ALL TREES NOT INCLUDED W/I A MULCH BED.
   - C. STAKING AND GUYING DETAILS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY, THE CONTRACTOR IS RESPONSIBLE TO ADAPT STAKING AND GUYING METHOD ACCORDING TO SITE CONDITIONS.
   - D. THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE STAKING AND GUYING PERIODICALLY AS NECESSARY OR AS INSTRUCTED BY LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL MAINTAIN PLANT MATERIAL IN AN UPRIGHT POSITION AT ALL TIMES DURING THE CONTRACT PERIOD.
   - E. STAKING AND GUYING OF TREES SHALL BE FOR THE PURPOSE OF ESTABLISHMENT ONLY. STAKING AND GUYING DETAILS ARE NOT DESIGNED OR ENGINEERED TO WITHSTAND STRONG WIND OR WINDSTORM CONDITIONS.
   - F. IF CONTRACTOR SEES ANY SITUATION ON THE SITE WHERE A TREE IS TO BE STAKED WITH ARBORTIES, BUT IT APPEARS TO PRESENT A SAFETY HAZARD TO RESIDENCE OF THE PROPERTY, THEIR CHILDREN OR THEIR GUEST, THE TREE SHALL NOT BE STAKED AND LANDSCAPE ARCHITECT SHALL BE NOTIFIED.
   - G. SPECIMEN TRANSPLANTED TREE PROTECTION IS THE OWNER'S RESPONSIBILITY.
   - H. PROPER DRAINAGE FROM ROOTBALL IS THE RESPONSIBILITY OF THE CONTRACTOR
   - I. USE ARBORGUARD WEBBING TO SECURE PLANT. SPACE STAKES EQUALLY AT 120° ANGLES AROUND TREE
   - J. NYLON WEBBING SHOULD BE SECURED IN SUCH A WAY AS TO ALLOW SOME MOVEMENT OF TREE
   - K. PLANT TREE 2" ABOVE FINISHED GRADE IF MIXING SOIL TYPES, OTHERWISE PLANT AT FINISHED GRADE

5. PRUNING AND MAINTENANCE:
   - A. PRUNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE DEAD OR INJURED TWIGS AND BRANCHES AND TO COMPENSATE FOR THE LOSS OF ROOTS AS A RESULT OF TRANSPLANTING OPERATION AND TO MAINTAIN SAFETY IN VEHICULAR AREAS.
   - B. PRUNING SHALL BE DONE IN SUCH A MANNER AS TO NOT CHANGE THE NATURAL HABIT OR SHAPE OF THE PLANT. ALL CUTS SHALL BE MADE FLUSH, LEAVING NO STUBS ACCORDING TO A.N.A STANDARDS.
   - C. THE LANDSCAPE ARCHITECT SHALL BE THE SOLE PARTY TO APPROVE ALL APPROPRIATE PRUNING.
   - D. MAINTENANCE WORK AS DESCRIBED IN THE SPECIFICATIONS SHALL BE PERFORMED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND UNTIL DATE OF THE FINAL ACCEPTANCE BY OWNER AND LANDSCAPE ARCHITECT.

MEADOW AND STORMWATER PLANTING SEED MIXES

1. SITE PREPARATION:
   - A. PRIOR TO PLANTING, SITE SHALL BE INSPECTED FOR PROPER ELEVATION AND SUITABILITY OF SOILS.
   - B. UNCULTIVATED AND CULTIVATED SITES WITH FEW OR NO NATIVES REQUIRE THE USE OF BROAD-SPECTRUM SYSTEMIC HERBICIDE GLYPHOSATE. THIS SHOULD BE APPLIED AS SOON AS THE SITE IS ACCESSIBLE. THE MOST COMMON GRASS-SPECIFIC HERBICIDES USED IN RESTORATION WORK ARE FLUAZIFOP (FUSILADE), SETHOXYDIM (POAST), AND CLETHODIM (ENVOY, SELECT 2EC, AND SECTION).
   - C. SUGGESTED APPLICATION RATES ARE 2 QUARTS/ACRE IN COOL WEATHER AND I QUART/ACRE IN WARM WEATHER (1-2% GLYPHOSATE SOLUTION). TIMING OF THE APPLICATION IS CRUCIAL. IT IS DESIRABLE TO ELIMINATE WEEDS BEFORE THEY FLOWER.
   - D. HARD TO KILL PERENNIAL FORBS CAN BE TREATED WITH A BROADLEAF HERBICIDE SUCH AS TRICLOPYR (GARLON).
   - E. DISC OR DRAG HARROW THE TOP 1-2" OF SOIL ONLY (DO NOT TILL DEEPLY AS THIS WILL BRING ADDITIONAL WEED SEEDS IN THE SOIL TO THE SURFACE).
   - F. DO NOT ADD LIME. LIME CAN BURN SEEDLINGS OR IMPACT GERMINATION RATES.
   - G. AMENDMENTS ARE GENERALLY NOT NECESSARY, BUT MAY BE USED IF YOUNG PLANTS

2. PLANTING:
   - A. PLANT MATERIAL SHOULD BE LIFTED AS CLOSE TO THE PLANTING DATE AS POSSIBLE. FURTHERMORE, PLANT MATERIALS SHALL NOT BE STORED BEYOND THE TIME LIMITS SPECIFIED BY THE SUPPLIER. PLANTS SHALL BE STORED PER THE SUPPLIER'S SPECIFICATIONS AND IN SUCH A MANNER AS TO PROTECT THEIR INTEGRITY AND VIABILITY. PLANTS LOST DURING STORAGE SHALL BE REPLACED WITH FRESH STOCK UNDER THE RESPONSIBILITY OF THE CONTRACTOR.
   - B. IT IS RECOMMENDED THAT PLANTING COMMENCE IN THE FALL SEASON CONCURRENT WITH OR AFTER PROJECT CONSTRUCTION HAS TAKEN PLACE. FALL PLANTINGS ARE "DORMANT SEEDINGS" IN WHICH THE SEED OVER-WINTERS IN THE SOIL AND GERMINATES THE FOLLOWING SPRING.
   - C. FALL (SEPT. TIL SOIL FREEZE UP)- IN GENERAL, WILDFLOWER SEEDS HAVE INCREASED GERMINATION RATES DURING THE SPRING AFTER A FALL PLANTING THAN WHEN PLANTED IN THE SPRING. FALL PLANTINGS TAKES ADVANTAGE OF COLD, MOIST WINTER CONDITIONS, BREAKING SEED DORMANCIES AND PROMOTING EARLIER GERMINATION AND FASTER SEEDLING ESTABLISHMENT THE FOLLOWING SPRING.
   - D. SPRING (MARCH-MAY) - IN GENERAL, WARM SEASON GRASSES (GRASSES SUCH AS LITTLE BLUESTEM, BIG BLUESTEM, AND INDIANGRASS WHICH DO MOST OF THEIR GROWING DURING THE WARM SUMMER MONTHS) SHOW HIGHER GERMINATION RATES WHEN PLANTED IN LATE SPRING/EARLY SUMMER, COMPARED TO FALL SEEDINGS. SPRING PLANTING IS ALSO GENERALLY RECOMMENDED FOR PRAIRIE WILDFLOWER AND GRASS TRANSPLANTS TO AVOID "FROST HEAVING." TRANSPLANTING IN SPRING ALSO ALLOWS SUBSTANTIAL TIME FOR ROOT ESTABLISHMENT BEFORE THE COLD WINTER MONTHS.
   - E. WHERE BARE SOIL IS A CONCERN AND WHERE THE SITE WILL REMAIN DISTURBED FOR AN EXTENDED PERIOD OF TIME, A SEASONAL COVER CROP IS RECOMMENDED.
   - F. OPTIMAL TIME TO SOW NATIVE GRASS SPECIES IS IN THE FALL (SEPT. - NOV.). THIS WILL ALLOW STRATIFICATION (MOISTURE AND COLD SO SEED WILL IMBIBE WATER AND GERMINATE) REQUIREMENTS TO BE MET. MAY SPECIES OF ANNUALS AND SOME PERENNIALS DO NOT NEED LONG STRATIFICATION.
   - G. BEST TO SEED BEFORE RAIN EVENT OR ENSURE SITE IS WELL IRRIGATED AFTER SEEDING (IRRIGATION GENERALLY NOT NEEDED A/F GERMINATION UNLESS RAIN EVENT HAS NOT OCCURRED W/I 2-3 WKS). WATCH SEEDLINGS TO DETERMINE IF IRRIGATION IS NEEDED. SEED SHOULD HAVE GERMINATED AFTER TWO WEEKS.
   - H. BROADCAST THE SEED AT A RATE OF 1LB./1,000S.F. OR 20LBS./ACRE, CRISS-CROSSING THE AREA IN A NORTH-SOUTH DIRECTION FOLLOWED BY AN EAST-WEST DIRECTION TO DETERMINE EXTENT OF AREA TO BE SEEDED.
   - I. USE ONLY REPUTABLE SEED SOURCES WITH PURE LIVE SEED, WHICH ACCOUNT FOR THE WILDFLOWERS SPECIFIED ARE TO BE NATIVE TO THE UPPER PIEDMONT REGION OF GEORGIA.
   - J. LAY DOWN STRAW AFTER SEEDING. USE WHEAT STRAW ONLY SO AS TO MINIMIZE INTRODUCTION OF FOREIGN OR UNDESIRABLE SPECIES. DO NOT USE HAY AS IT CONTAINS A VARIETY OF PLANT MATTER AND SEEDS THAT CAN POTENTIALLY COMPOUND EFFORTS AT ERADICATING FOREIGN AND UNDESIRABLE SPECIES.

3. SITE MAINTENANCE:
   - A. BEST TO NOT DISTURB SEEDLINGS DURING FIRST GROWING SEASON. IF MOWING IS DESIRED TO MAINTAIN “TIDY” APPEARANCE, MOW AT HEIGHT NO LOWER THAN 6-8” NOTE: HEAVY MACHINERY MAY DISTURB OR DAMAGE YOUNG SEEDLINGS. NATIVE MEADOW SEEDLINGS MAY ONLY GROW 1-2” IN THE FIRST GROWING SEASON AS MOST OF THE ENGERY IS BEING PUT INTO THE ROOT SYSTEM.

4. NURSERY RECOMMENDATIONS:

BAKER ENVIRONMENTAL NURSERY
949 MARSHALL CLARK ROAD
HOSCHTON, GA 30548

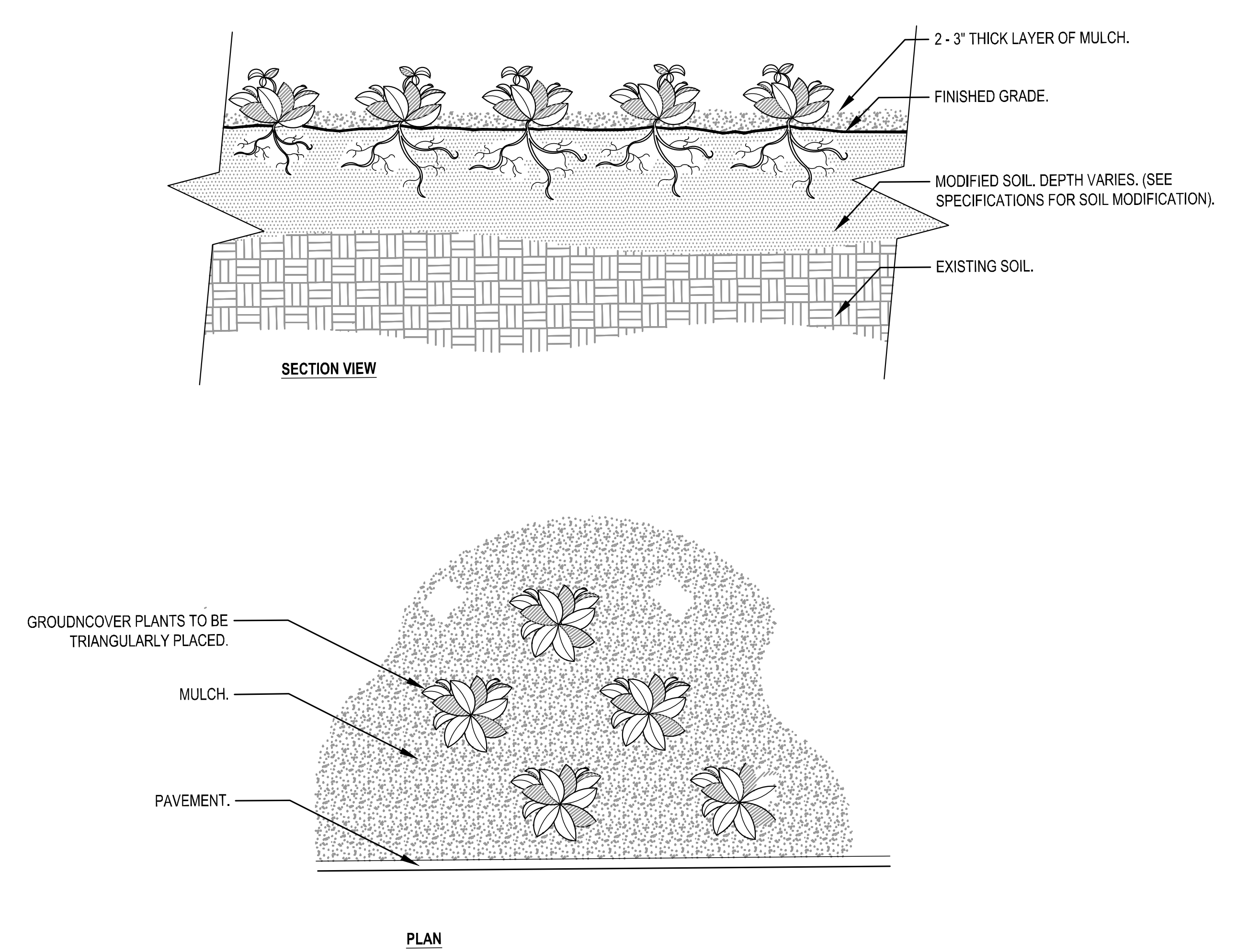
GROWILD, INC.
7190 HILL HUGHES ROAD
FAIRVIEW, TN 37062

HOFFMAN NURSERY
5520 BAHAMA ROAD
ROUGEMONT, NC 27572

NORTH CREEK NURSERIES
388 NORTH CREEK RD
LANDENBERG, PA 19350

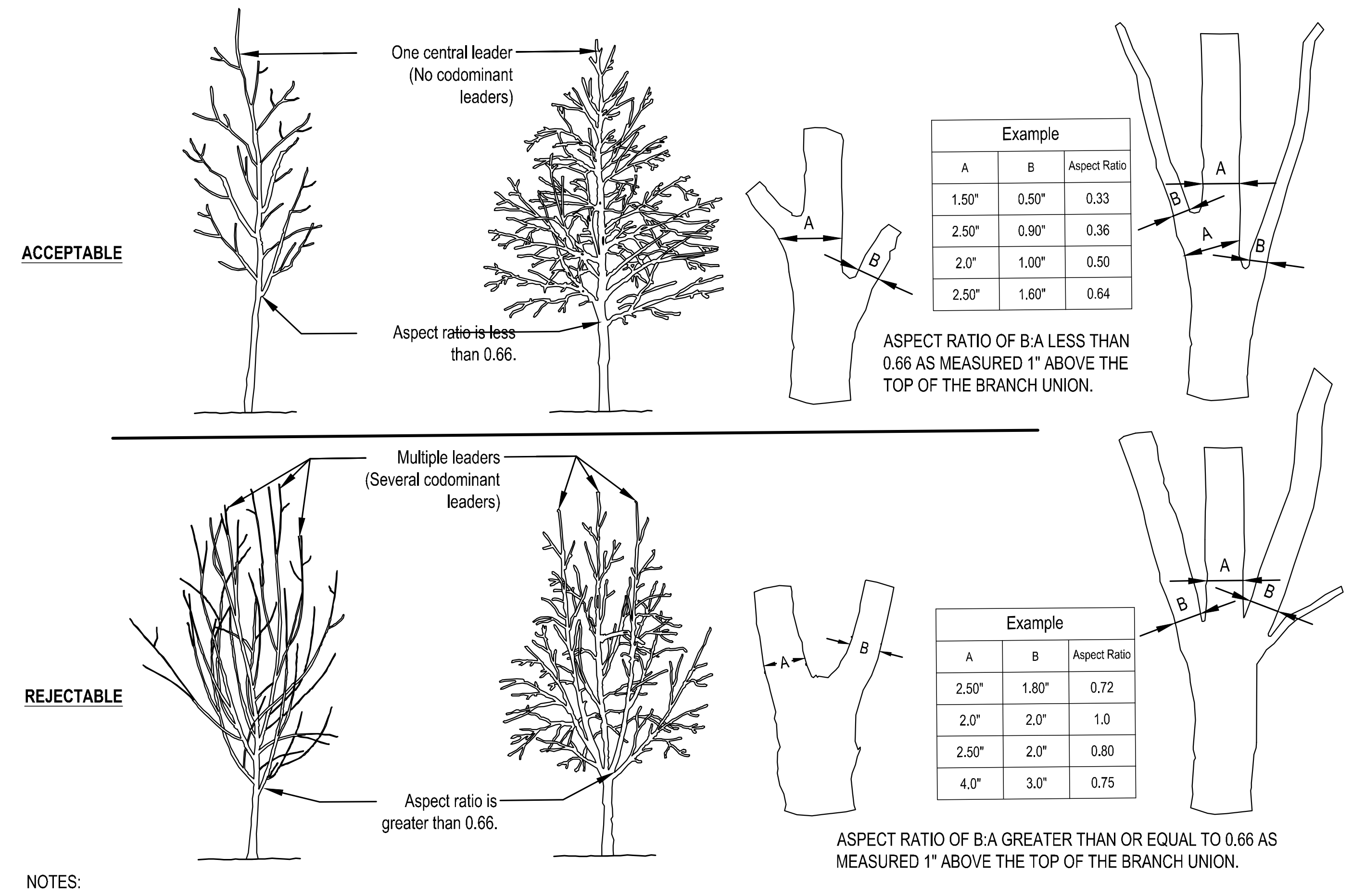
ROCKSPRING RESTORATIONS
12 PACES WEST DRIVE, NW
ATLANTA, GA 30327

WOODLANDERS, INC
1128 COLLETON, AVE, SE
AIKEN, SC 29801


2 - 3" THICK LAYER OF MULCH.
FINISHED GRADE.
MODIFIED SOIL. DEPTH VARIES. (SEE SPECIFICATIONS FOR SOIL MODIFICATION).
EXISTING SOIL.
SECTION VIEW
GROUDNCOVER PLANTS TO BE TRIANGULARLY PLACED.
MULCH.
PAVEMENT.
PLAN

Notes:
1- SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES , SIZE AND SPACING DIMENSION.
2- SMALL ROOTS (¼" OR LESS) THAT GROW AROUND, UP, OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING. ROOTS ON THE PERIPERHY CAN BE REMOVED AT THE TIME OF PLANTING. (SEE ROOT BALL SHAVING CONTAINER DETAIL).
3- SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

1 GROUNDCOVER
C-7.2
SCALE: NTS


ACCEPTABLE
One central leader (No codominant leaders)
Aspect ratio is less than 0.66.
A
B
REJECTABLE
Multiple leaders (Several codominant leaders)
Aspect ratio is greater than 0.66.

Example		
A	B	Aspect Ratio
1.50"	0.50"	0.33
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64

ASPECT RATIO OF B:A LESS THAN 0.66 AS MEASURED 1" ABOVE THE TOP OF THE BRANCH UNION.

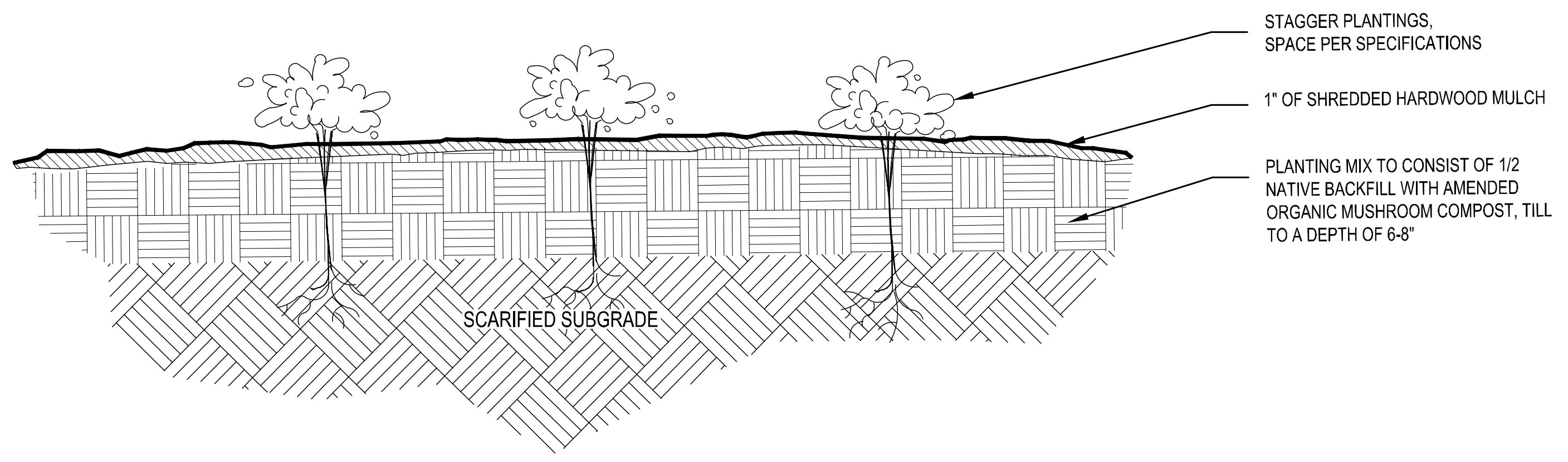
Example		
A	B	Aspect Ratio
2.50"	1.80"	0.72
2.0"	2.0"	1.0
2.50"	2.0"	0.80
4.0"	3.0"	0.75

ASPECT RATIO OF B:A GREATER THAN OR EQUAL TO 0.66 AS MEASURED 1" ABOVE THE TOP OF THE BRANCH UNION.

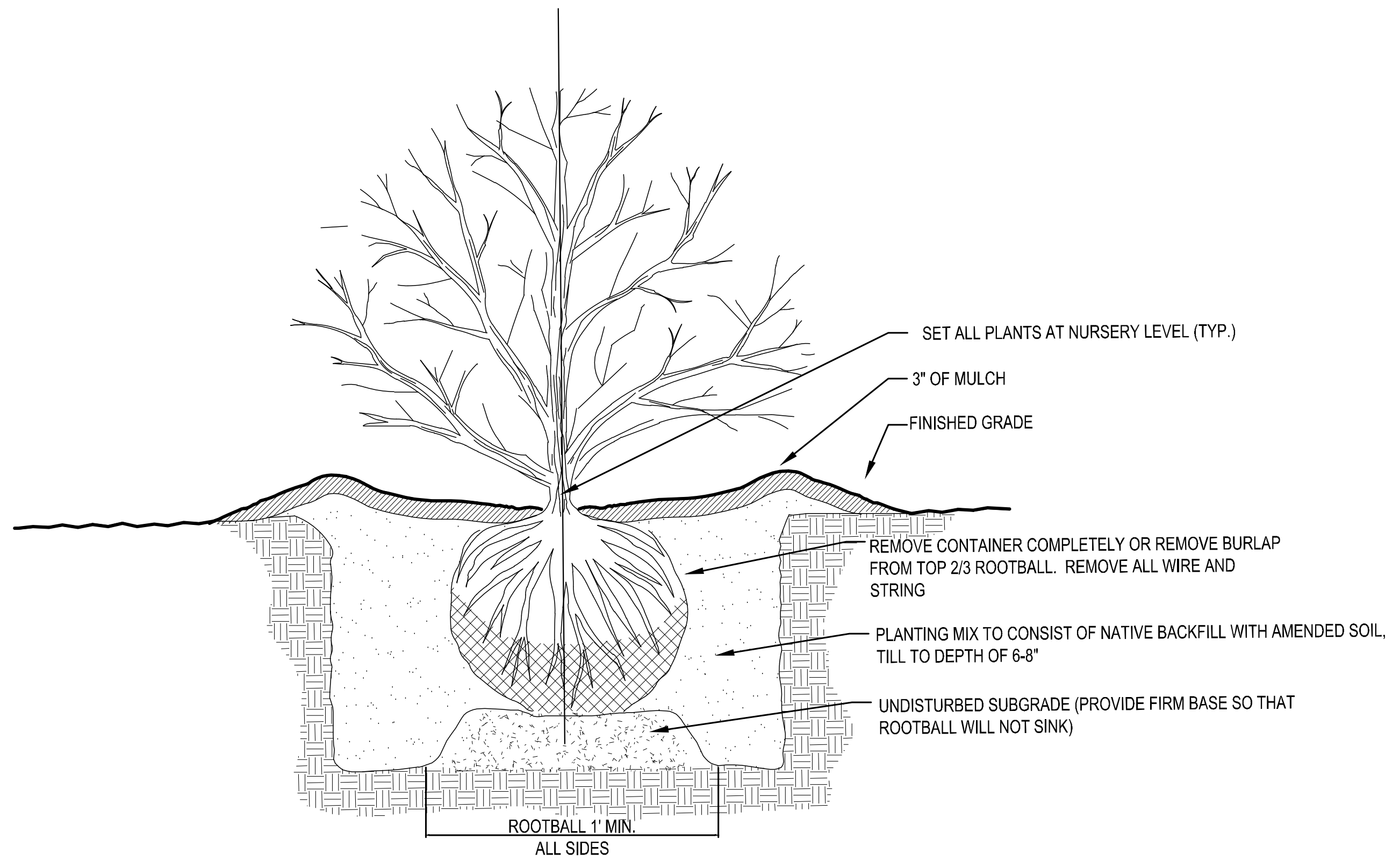
NOTES:
1- ASPECT RATIO SHALL BE LESS THAN 0.66 ON ALL BRANCH UNIONS. ASPECT RATIO IS THE DIAMETER OF BRANCH (B) DIVIDED BY THE DIAMETER OF THE TRUNK (A) AS MEASURED 1" ABOVE THE TOP OF THE BRANCH UNION.
2- ANY TREE NOT MEETING THE CROWN OBSERVATIONS DETAIL MAY BE REJECTED.

2 CROWN OBSERVATIONS - HIGH BRANCHED
C-7.2
SCALE: NTS

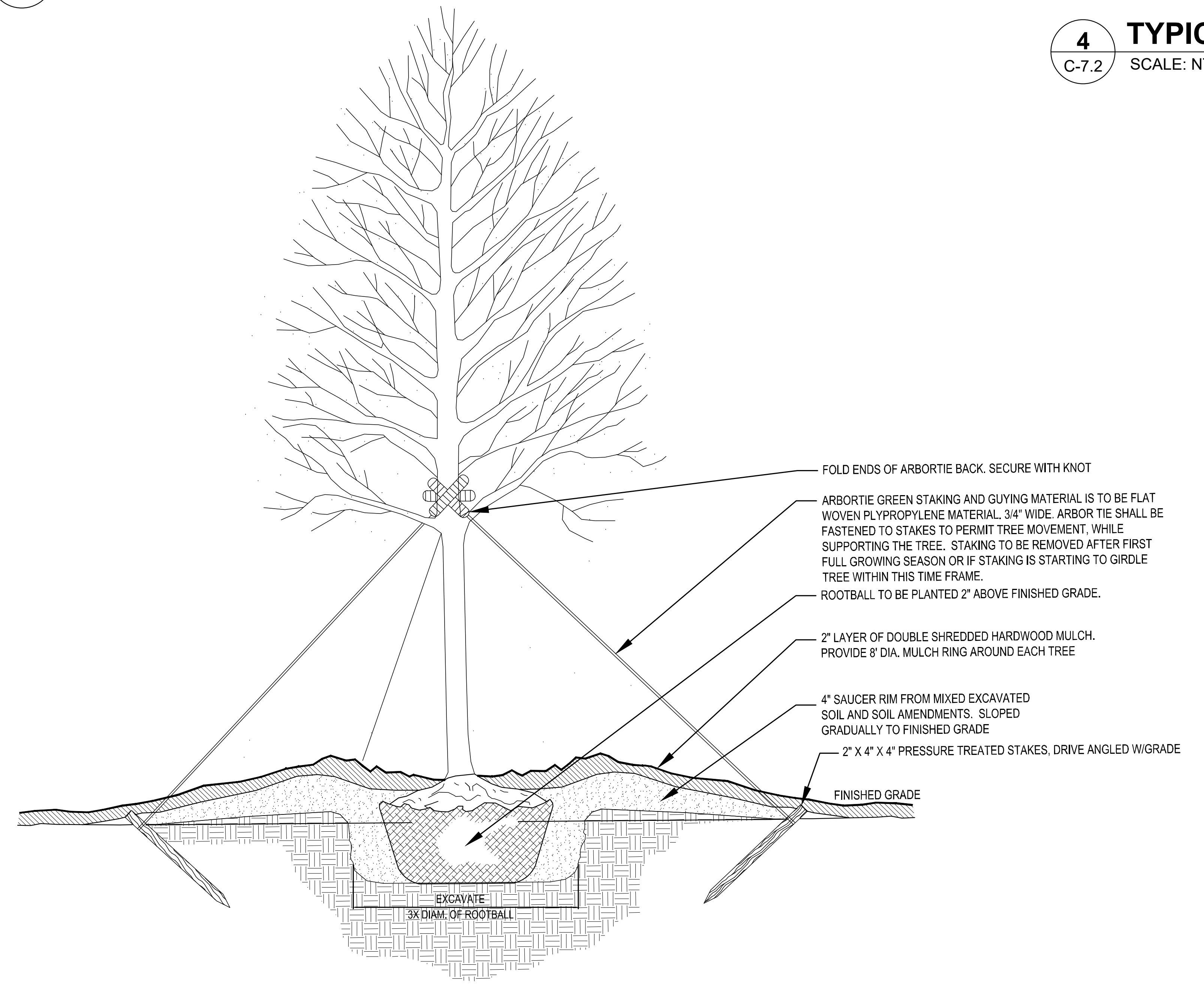
BRAVO SITE SET
09-18-2024


STAGGER PLANTINGS, SPACE PER SPECIFICATIONS
1" OF SHREDDED HARDWOOD MULCH
PLANTING MIX TO CONSIST OF 1/2 NATIVE BACKFILL WITH AMENDED ORGANIC MUSHROOM COMPOST, TILL TO A DEPTH OF 6-8"
SCARIFIED SUBGRADE

3 TYPICAL PLANTING DETAIL - CONTAINER OR PLUG
C-7.2
SCALE: NTS

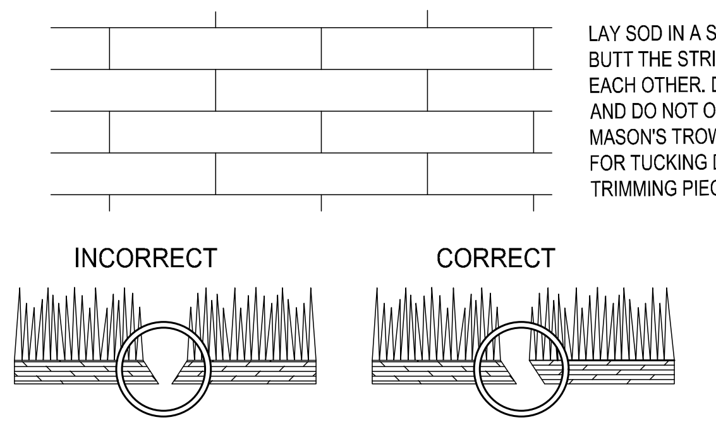

SET ALL PLANTS AT NURSERY LEVEL (TYP.)
3" OF MULCH
FINISHED GRADE
REMOVE CONTAINER COMPLETELY OR REMOVE BURLAP FROM TOP 2/3 ROOTBALL. REMOVE ALL WIRE AND STRING
PLANTING MIX TO CONSIST OF NATIVE BACKFILL WITH AMENDED SOIL, TILL TO DEPTH OF 6-8"
UNDISTURBED SUBGRADE (PROVIDE FIRM BASE SO THAT ROOTBALL WILL NOT SINK)
ROOTBALL 1' MIN. ALL SIDES

4 TYPICAL SHRUB PLANTING DETAIL - BALL AND BURLAP
C-7.2
SCALE: NTS


FOLD ENDS OF ARBORTIE BACK. SECURE WITH KNOT
ARBORTIE GREEN STAKING AND GUYING MATERIAL IS TO BE FLAT WOVEN PLYPROPYLENE MATERIAL. 3/4" WIDE. ARBOR TIE SHALL BE FASTENED TO STAKES TO PERMIT TREE MOVEMENT, WHILE SUPPORTING THE TREE. STAKING TO BE REMOVED AFTER FIRST FULL GROWING SEASON OR IF STAKING IS STARTING TO GIRDLE TREE WITHIN THIS TIME FRAME.
ROOTBALL TO BE PLANTED 2" ABOVE FINISHED GRADE.
2" LAYER OF DOUBLE SHREDDED HARDWOOD MULCH. PROVIDE 8' DIA. MULCH RING AROUND EACH TREE
4" SAUCER RIM FROM MIXED EXCAVATED SOIL AND SOIL AMENDMENTS. SLOPED GRADUALLY TO FINISHED GRADE
2" X 4" X 4" PRESSURE TREATED STAKES, DRIVE ANGLED W/GRADE
FINISHED GRADE
EXCAVATE 3X DIAM. OF ROOTBALL

5 TYPICAL TREE PLANTING DETAIL - BALL AND BURLAP
C-7.2
SCALE: NTS

SOD LAYOUT AND PREPARATION



LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

BUTTING : ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.

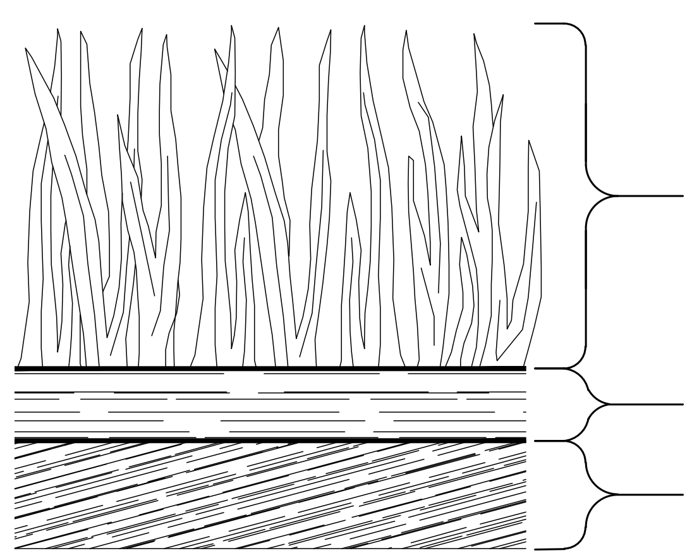
DIRECTIONS FOR INITIAL MAINTENANCE

Step 1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL

Step 2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

Step 3. MOW WHEN THE SOD IS ESTABLISHED -- IN 2-3 WEEKS. SET THE MOWER HIGH (2"-3").

APPEARANCE OF GOOD SOD



SHOOTS OR GRASS BLADES : GRASS SHOULD BE GREEN AND HEALTHY, MOWED AT A 2"-3" CUTTING HEIGHT.

THATCH : GRASS CLIPPINGS AND DEAD LEAVES (UP TO 1/2" THICK).

ROOT ZONE : SOIL AND ROOTS. SHOULD BE 1/2"-3/4" THICK WITH DENSE ROOT MAT FOR STRENGTH.

5 SOD MAINTENANCE AND INSTALLATION
C-7.2
SCALE: NTS

OWNER/DEVELOPER
COMPANY: NEWTON COUNTY BOC
ADDRESS: 1124 CLARK STREET
COVINGTON, GA 30014
PHONE: 404-992-5050
CONTACT: JEFF PRINE
EMAIL:JPRINE@ASCENSION-PM.COM

CONTRACTOR
COMPANY: SULBELT BUILDERS
ADDRESS: 10641 HWY 36
COVINGTON, GA
30014
CONTACT: MIKE MCCROREY
PHONE: 404.644.2939
EMAIL: MMCCROREY@SUNBELTBUILDERS.COM

SURVEYOR
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104
CONTACT: BRIAN SLATE
EMAIL: BSLATE@GEORGIACIVIL.COM

SITE DESIGNER
COMPANY: GEORGIA CIVIL, INC.
ADDRESS: P.O. BOX 896 MADISON, GA 30650
PHONE: 706.342.1104

JASON P. BROWN
LEVEL II CERTIFIED
DESIGN PROFESSIONAL
#53274 - EXP. 05.01.2026

24-HOUR CONTACT
MIKE MCCROREY
404.644.2939

GEORGIA811
www.Georgia811.com
Contact 811 before you dig

Utilities/Services shown are for Contractors' convenience. Items are shown schematically and neither the site design professional nor the owner assumes any responsibility for variances in their actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to secure and use the services of a private utility locator firm during the entire course of work and shall pay for said services. Contractor shall locate utilities prior to any disturbance (including field verifying location and depth of utilities that are to be saved and protected). Contractor shall notify the site design professional of any utility conflicts prior to installation of new utilities, grading, etc. The Contractor, at their expense, shall be responsible to repair, replace and/or relocate, as necessary, any utilities damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

georgia civil
CIVIL ENGINEERING
LAND PLANNING
LAND SURVEYING
311 N. Main St, Ste. 101, Unit C
P.O. Box 896 | Madison, GA 30650
P: 706.342.1104 | F: 706.342.1105
www.georgiacivil.com

Professional Seal

NO. PE031684
JASON P. BROWN

Project Information

NEWTON COUNTY SENIOR
ENRICHMENT CENTER
40 RICHARDS CHAPEL RD
COVINGTON, GA 30014
ZONING: AR

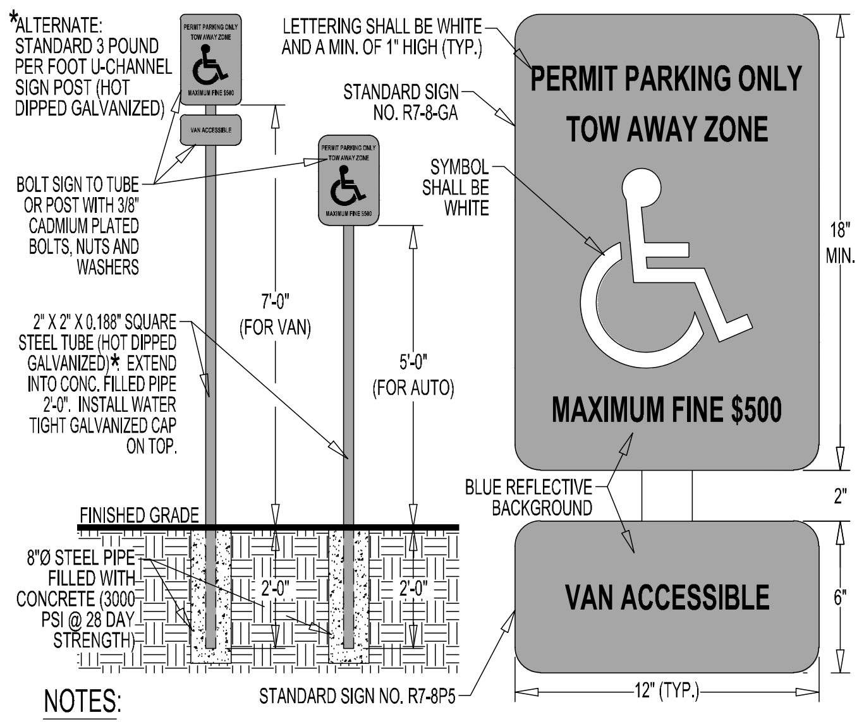
DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title
LANDSCAPE DETAILS

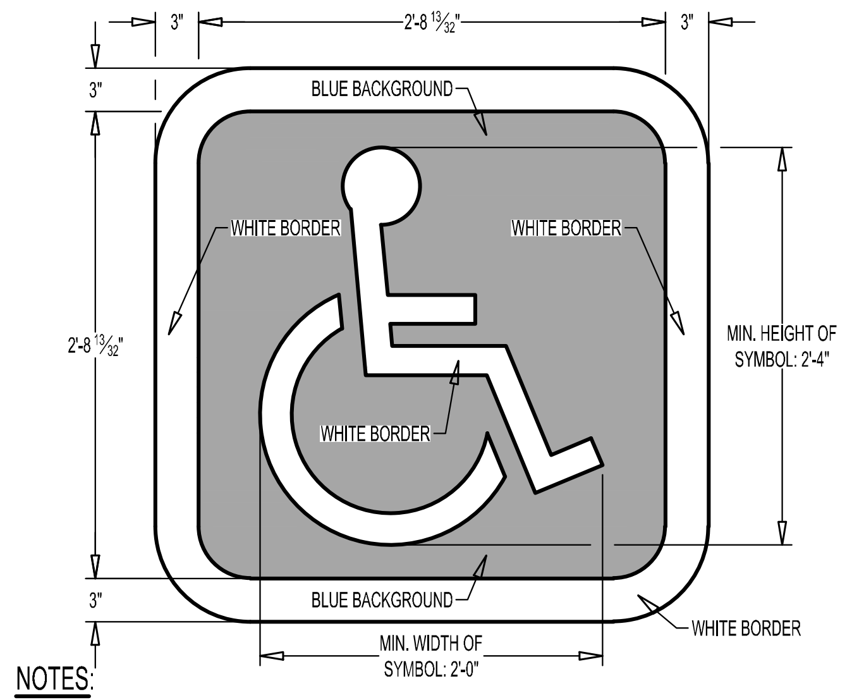
Sheet Number
C-7.1


*ALTERNATE: STANDARD 3 POUND PER FOOT U-CHANNEL SIGN POST (HOT DIPPED GALVANIZED)
PERMIT PARKING ONLY
TOW AWAY ZONE
MAXIMUM FINE $500
VAN ACCESSIBLE
LETTERING SHALL BE WHITE AND A MIN. OF 1" HIGH (TYP.)
STANDARD SIGN NO. R7-8-GA
SYMBOL SHALL BE WHITE
BOLT SIGN TO TUBE OR POST WITH 3/8" CADMIUM PLATED BOLTS, NUTS AND WASHERS
7'-0" (FOR VAN)
5'-0" (FOR AUTO)
18" MIN.
2"
6"
2" X 2" X 0.188" SQUARE STEEL TUBE (HOT DIPPED GALVANIZED)*. EXTEND INTO CONC. FILLED PIPE 2'-0". INSTALL WATER TIGHT GALVANIZED CAP ON TOP.
BLUE REFLECTIVE BACKGROUND
FINISHED GRADE
8"Ø STEEL PIPE FILLED WITH CONCRETE (3000 PSI @ 28 DAY STRENGTH)
2'-0"
2'-0"
STANDARD SIGN NO. R7-8P5
12" (TYP.)

NOTES:
1. ALL SIGNS SHALL BE 0.080" THICK ALUMINUM.
2. SIGNS SHALL CONFORM WITH ALL CURRENT A.D.A. FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS.
3. PLACE "VAN ACCESSIBLE" SIGN IN FRONT OF VAN ACCESSIBLE SPACES ONLY.

N.T.S.

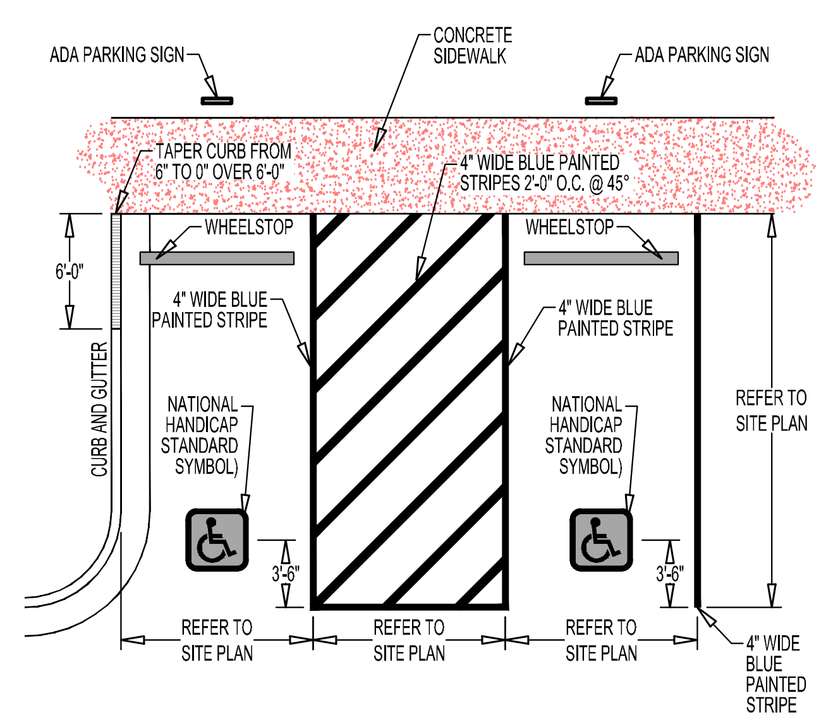
ADA PARKING SIGN


3"
2'-8 13/32"
3"
BLUE BACKGROUND
WHITE BORDER
WHITE BORDER
WHITE BORDER
BLUE BACKGROUND
WHITE BORDER
MIN. HEIGHT OF SYMBOL: 2'-4"
MIN. WIDTH OF SYMBOL: 2'-0"

NOTES:
INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING (FIGURE 3B-19, MUTCD, LATEST EDITION) TO BE CENTERED IN PARKING SPACE APPROX. 3.5' FROM THE ENTRANCE OF THE PARKING SPACE

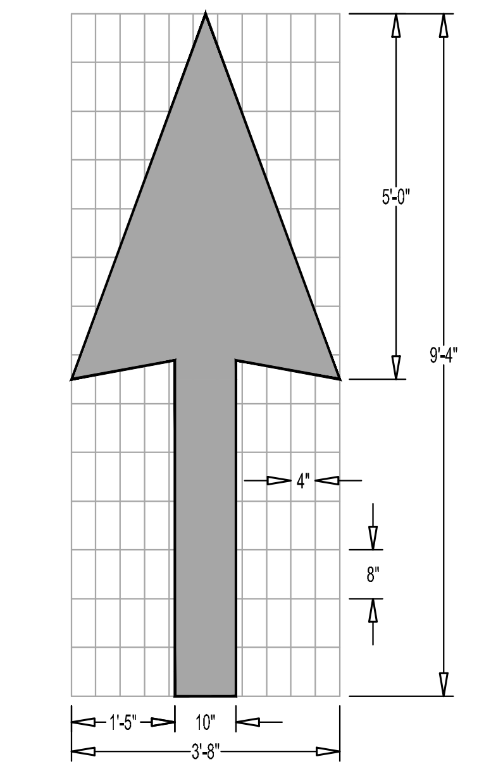
N.T.S.

INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING


ADA PARKING SIGN
CONCRETE SIDEWALK
ADA PARKING SIGN
TAPER CURB FROM 6" TO 0" OVER 6'-0"
4" WIDE BLUE PAINTED STRIPES 2'-0" O.C. @ 45°
6'-0"
WHEELSTOP
WHEELSTOP
4" WIDE BLUE PAINTED STRIPE
4" WIDE BLUE PAINTED STRIPE
CURB AND GUTTER
NATIONAL HANDICAP STANDARD SYMBOL)
NATIONAL HANDICAP STANDARD SYMBOL)
3'-6"
3'-6"
REFER TO SITE PLAN
REFER TO SITE PLAN
REFER TO SITE PLAN
REFER TO SITE PLAN
4" WIDE BLUE PAINTED STRIPE

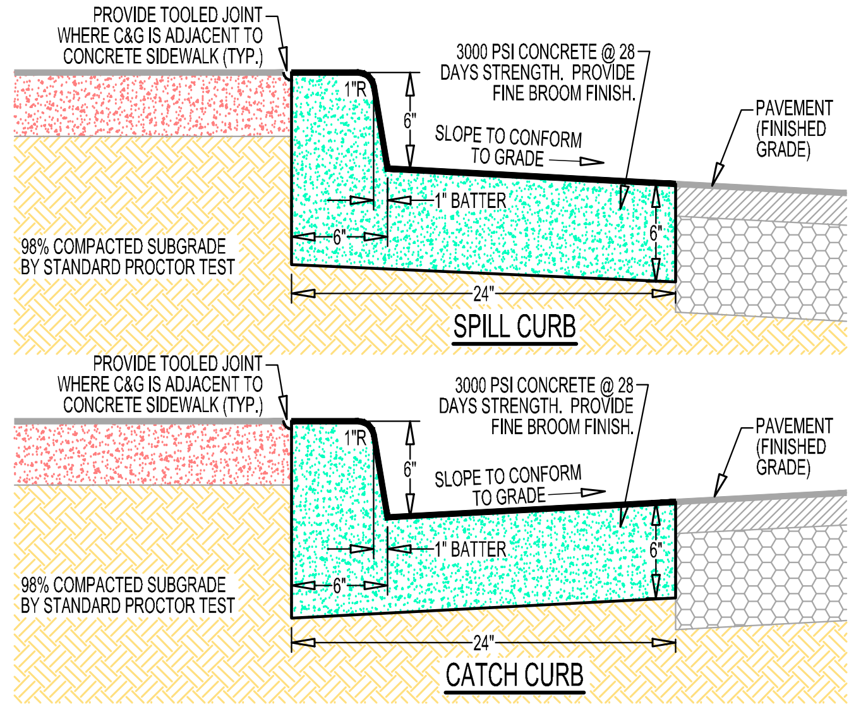
N.T.S.

ADA PARKING STRIPING


5'-0"
9'-4"
4"
8"
1'-5"
10"
3'-8"

N.T.S.

PAVEMENT MARKING ARROW TYPE I, WHITE (12.0 SQ. FT.)

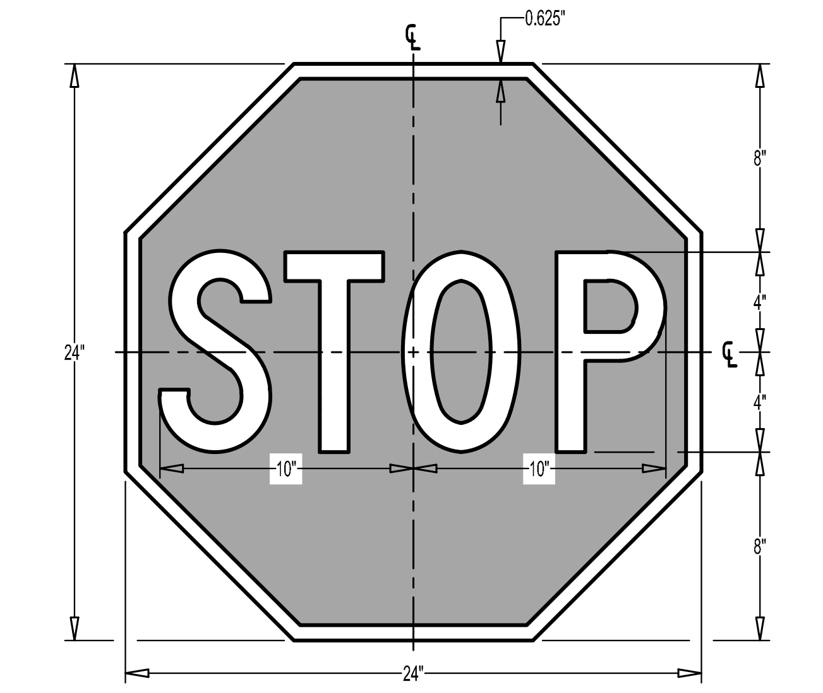

PROVIDE TOOLED JOINT WHERE C&G IS ADJACENT TO CONCRETE SIDEWALK (TYP.)
3000 PSI CONCRETE @ 28 DAYS STRENGTH. PROVIDE FINE BROOM FINISH.
1"R
6"
SLOPE TO CONFORM TO GRADE
PAVEMENT (FINISHED GRADE)
1" BATTER
6"
6"
98% COMPACTED SUBGRADE BY STANDARD PROCTOR TEST
24"
SPILL CURB
PROVIDE TOOLED JOINT WHERE C&G IS ADJACENT TO CONCRETE SIDEWALK (TYP.)
3000 PSI CONCRETE @ 28 DAYS STRENGTH. PROVIDE FINE BROOM FINISH.
1"R
6"
SLOPE TO CONFORM TO GRADE
PAVEMENT (FINISHED GRADE)
1" BATTER
6"
6"
98% COMPACTED SUBGRADE BY STANDARD PROCTOR TEST
24"
CATCH CURB

AT THE CONTRACTOR'S OPTION, GUTTER THICKNESS MAY BE INCREASED AT EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER PARALLEL WITH PAVING OF BASE COURSE, BUT GUTTER THICKNESS SHALL NOT BE LESS THAN 6" AT ANY POINT.

CONTRACTOR SHALL PROVIDE A SCORED CONTROL JOINT AT 10'-0" O.C. (TYP) AND AN EXPANSION JOINT AT 40'-0" O.C. (TYP). CONTRACTOR SHALL PROVIDE AN EXPANSION JOINT AT ALL RADIUS RETURNS AND AT THE MIDPOINT OF THE CURVE. CURB & GUTTER SHALL BE ACCURATELY FORMED TO THE RADIUS AS INDICATED ON THE SITE LAYOUT PLAN.

N.T.S.

24" CONCRETE CURB & GUTTER

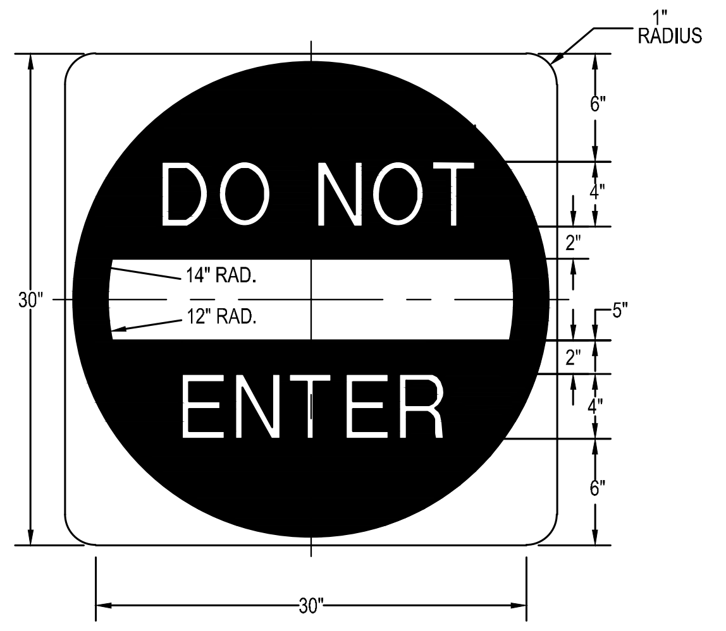

0.625"
℄
STOP
24"
8"
4"
4"
8"
℄
10"
10"
24"

COLORS:
1. LEGEND - WHITE (RETROREFLECTIVE)
2. BACKGROUND - RED (RETROREFLECTIVE)

NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.

N.T.S.

STOP SIGN (STD. R1-1)

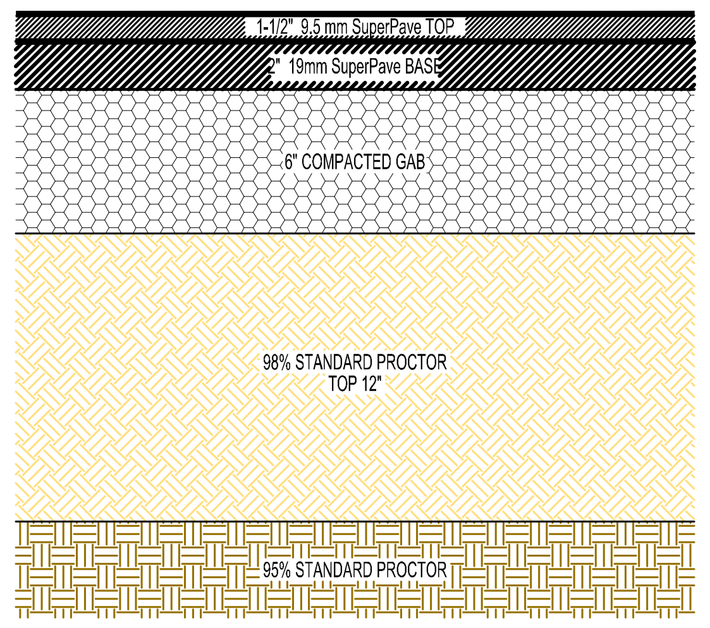

1" RADIUS
DO NOT
ENTER
14" RAD.
12" RAD.
30"
6"
4"
2"
5"
2"
4"
6"
30"

COLORS
SYMBOL - RED (REFLECTIVE)
BACKGROUND - WHITE (REFLECTIVE)

NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.

DO NOT ENTER SIGN

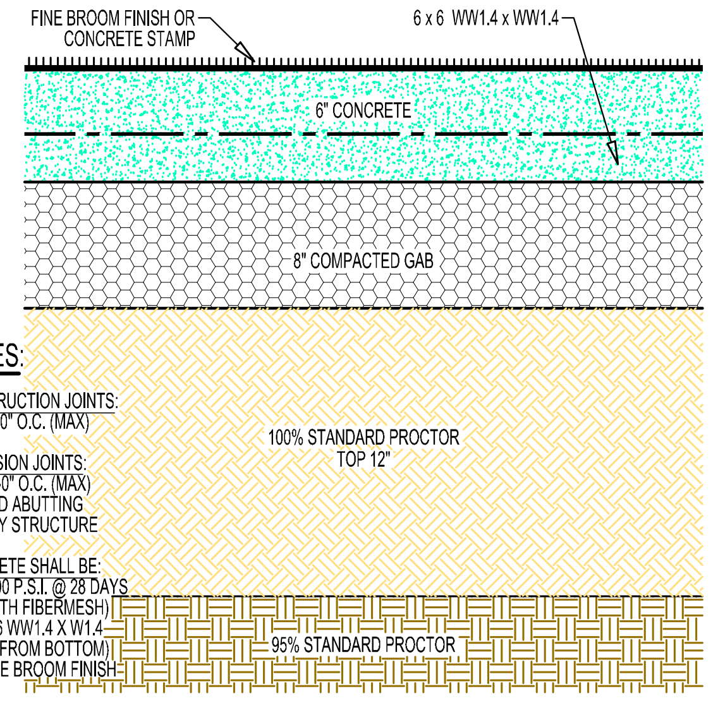
N.T.S.


1-1/2" 9.5 mm SuperPave TOP
2" 19mm SuperPave BASE
6" COMPACTED GAB
98% STANDARD PROCTOR TOP 12"
95% STANDARD PROCTOR

CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR FURTHER DETAILS ON ALL PAVEMENT SECTIONS.

N.T.S.

STANDARD DUTY ASPHALT PAVING SECTION


FINE BROOM FINISH OR CONCRETE STAMP
6 x 6 WW1.4 x WW1.4
6" CONCRETE
8" COMPACTED GAB
100% STANDARD PROCTOR TOP 12"
95% STANDARD PROCTOR

NOTES:

CONSTRUCTION JOINTS:
12'-0" O.C. (MAX)

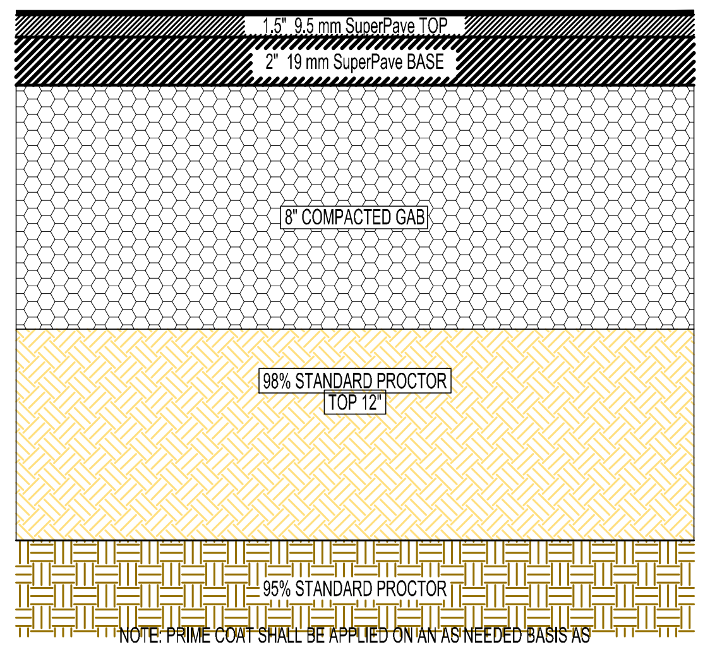
EXPANSION JOINTS:
40'-0" O.C. (MAX)
AND ABUTTING
ANY STRUCTURE

CONCRETE SHALL BE:
4000 P.S.I. @ 28 DAYS
(WITH FIBERMESH)
6X6 WW1.4 X W1.4
(2" FROM BOTTOM)
FINE BROOM FINISH

CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR FURTHER DETAILS ON ALL PAVEMENT SECTIONS.

N.T.S.

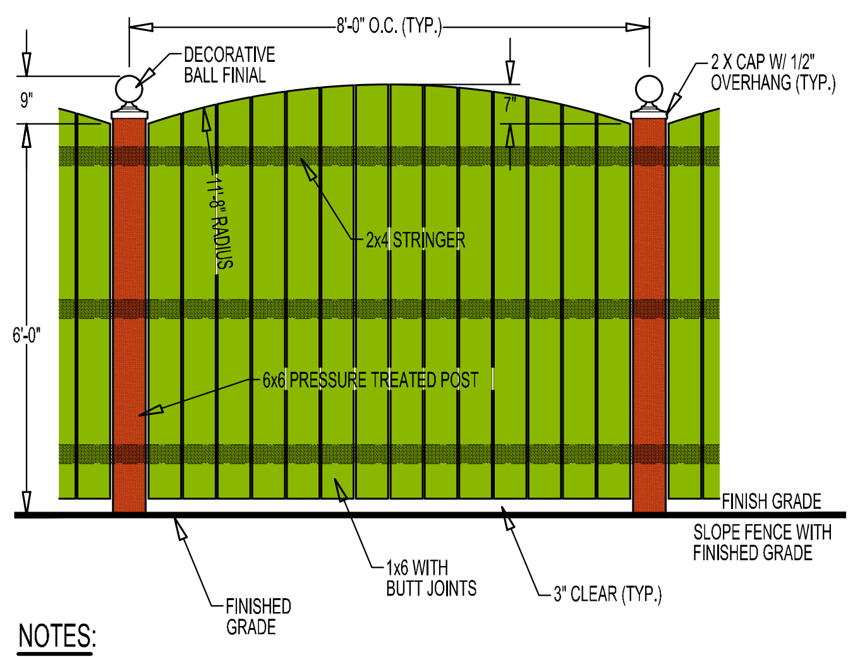
HEAVY DUTY CONCRETE SECTION


1.5" 9.5 mm SuperPave TOP
2" 19 mm SuperPave BASE
8" COMPACTED GAB
98% STANDARD PROCTOR TOP 12"
95% STANDARD PROCTOR

NOTE: PRIME COAT SHALL BE APPLIED ON AN AS NEEDED BASIS AS SPECIFIED BY GEOTECHNICAL ENGINEER. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR FURTHER DETAILS ON ALL PAVEMENT SECTIONS.

N.T.S.

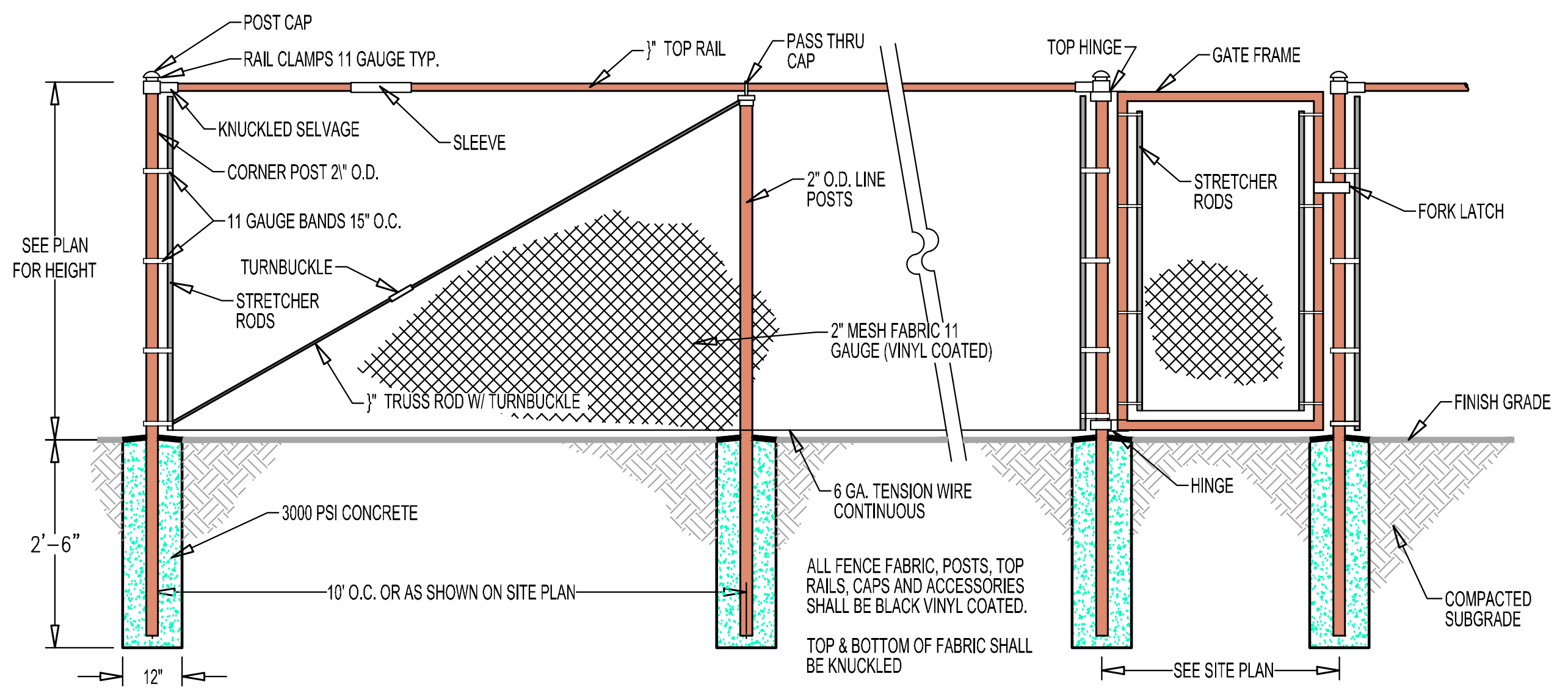
HEAVY DUTY ASPHALT PAVING SECTION


8'-0" O.C. (TYP.)
DECORATIVE BALL FINIAL
2 X CAP W/ 1/2" OVERHANG (TYP.)
9"
7"
11'-8" RADIUS
2x4 STRINGER
6'-0"
6x6 PRESSURE TREATED POST
FINISH GRADE
SLOPE FENCE WITH FINISHED GRADE
FINISHED GRADE
1x6 WITH BUTT JOINTS
3" CLEAR (TYP.)

NOTES:
1. ALL LUMBER IS STANDARD OR BETTER WESTERN RED CEDAR S4S (SURFACED FOUR SIDES).
2. ALL LUMBER SHALL BE BACK-PRIMED PRIOR TO ASSEMBLY, PRIMED AFTER ASSEMBLY, AND COATED WITH 2 COATS SOLID BODY PAINT TO MATCH HOUSE (BUILDING) TRIM. COORDINATE COLORS WITH ARCHITECT.
3. 2 X 4 STRINGERS MUST FACE OWNERS PROPERTY

N.T.S.

6' HIGH WOOD SCREEN FENCE


POST CAP
RAIL CLAMPS 11 GAUGE TYP.
}" TOP RAIL
PASS THRU CAP
TOP HINGE
GATE FRAME
KNUCKLED SELVAGE
SLEEVE
CORNER POST 2\" O.D.
2" O.D. LINE POSTS
STRETCHER RODS
FORK LATCH
11 GAUGE BANDS 15" O.C.
SEE PLAN FOR HEIGHT
TURNBUCKLE
STRETCHER RODS
2" MESH FABRIC 11 GAUGE (VINYL COATED)
}" TRUSS ROD W/ TURNBUCKLE
FINISH GRADE
6 GA. TENSION WIRE CONTINUOUS
HINGE
3000 PSI CONCRETE
2'-6"
10' O.C. OR AS SHOWN ON SITE PLAN
COMPACTED SUBGRADE
12"
SEE SITE PLAN

ALL FENCE FABRIC, POSTS, TOP RAILS, CAPS AND ACCESSORIES SHALL BE BLACK VINYL COATED.

TOP & BOTTOM OF FABRIC SHALL BE KNUCKLED

N.T.S.

VINYL COATED CHAIN LINK FENCE

BRAVO SITE SET 09-18-2024

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NO. PE031684
JASON P. BROWN

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DRAWING DATE:	9/18/2024
DRAWN BY:	MSF
CHECKED BY:	JPB

REVISIONS

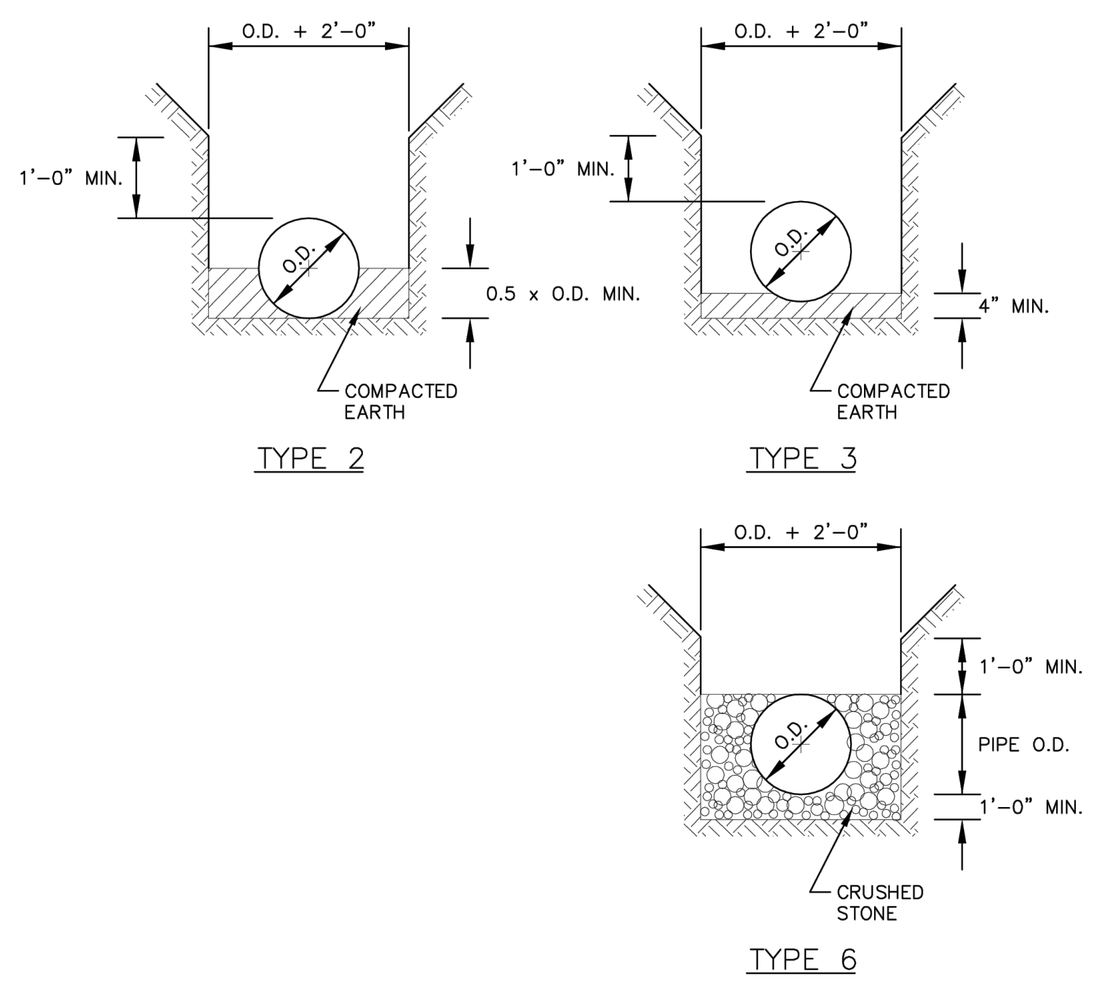
DATE:	DESCRIPTION:
7/16/24	1ST SUBMITTAL COMMENTS
8/29/24	2ND SUBMITTAL COMMENTS
9/18/24	ALL RCP SWAP TO CMP

Sheet Title

SITE DETAILS

Sheet Number

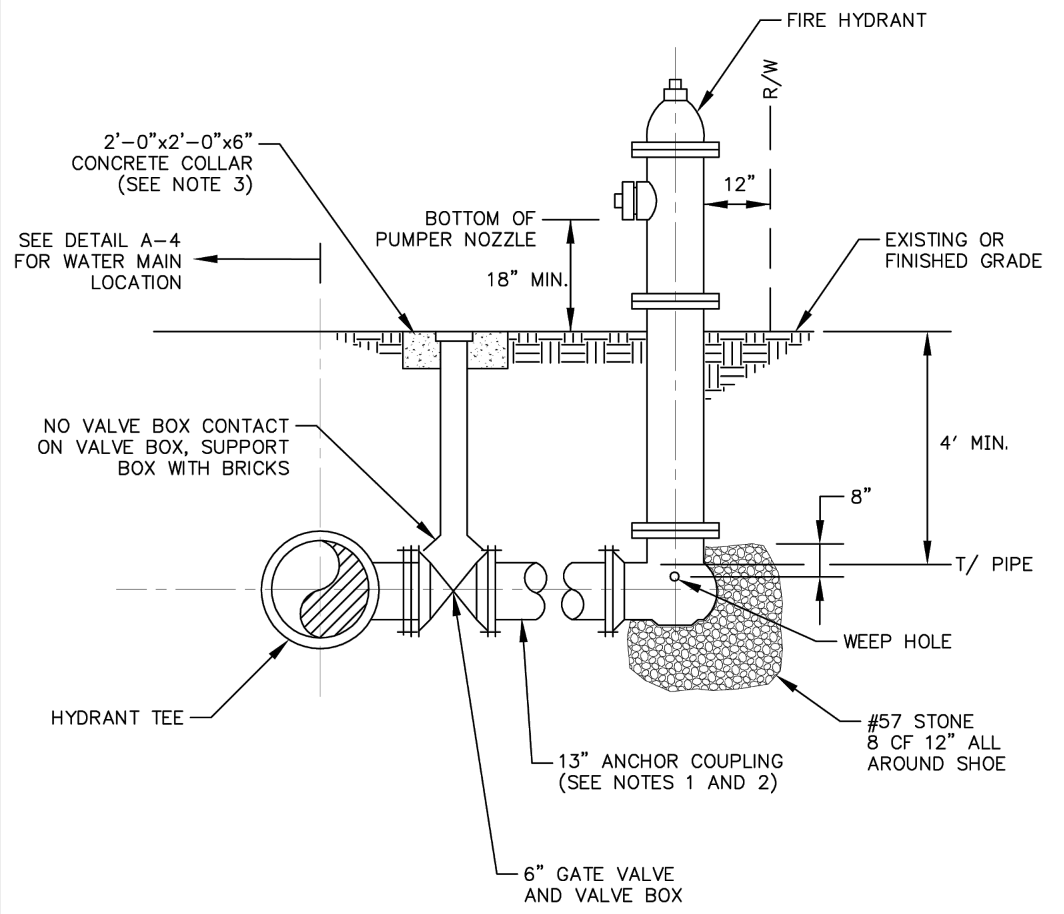
C-8.0


O.D. + 2'–0"
1'–0" MIN.
O.D.
0.5 x O.D. MIN.
COMPACTED EARTH
TYPE 2
O.D. + 2'–0"
1'–0" MIN.
O.D.
4" MIN.
COMPACTED EARTH
TYPE 3
O.D. + 2'–0"
1'–0" MIN.
PIPE O.D.
1'–0" MIN.
O.D.
CRUSHED STONE
TYPE 6

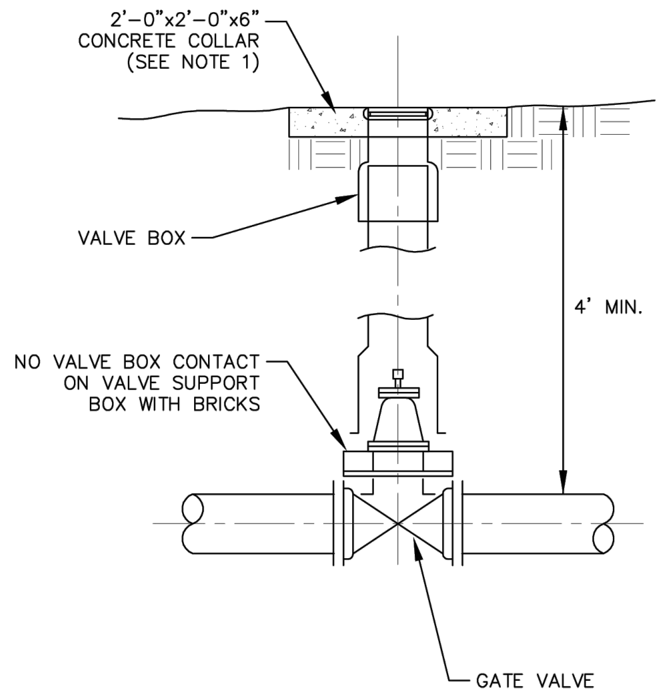
NOTES
1. STONE SHALL BE #57 STONE COARSE AGGREGATE IN ACCORDANCE WITH GDOT SPECIFICATION SECTION 800.
2. PUSH–ON DIP SHALL UTILIZE TYPE 2 BEDDING AT A MINIMUM.
3. RESTRAINED JOINT DIP SHALL UTILIZE TYPE 3 BEDDING AT A MINIMUM.
4. TYPE 6 BEDDING SHALL BE USED IN WET TRENCH CONDITIONS.

WATER MAIN PIPE BEDDING
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. A-5

NOTES
1. PROVIDE LONGER ANCHOR COUPLING, WHERE NEEDED, TO PLACE HYDRANT 12" INSIDE RIGHT–OF–WAY.
2. REPLACE ANCHOR COUPLING WITH GRADELOK HYDRANT CONNECTOR WHERE REQUIRED FOR VERTICAL ADJUSTMENT TO EXISTING OR FINAL GRADE.
3. TYPE II CONCRETE IN ACCORDANCE WITH ASTM C 150 FOR ALL UNPAVED AREAS. CENTER WITH #4 REBAR EA. SIDE, EA. WAY.
4. FOR MAIN SIZES 16–INCH AND LARGER, 6–INCH GATE VALVE MAY BE CONNECTED TO MAIN BY TAPPING SADDLE AND ANCHOR COUPLING INSTEAD OF HYDRANT TEE.

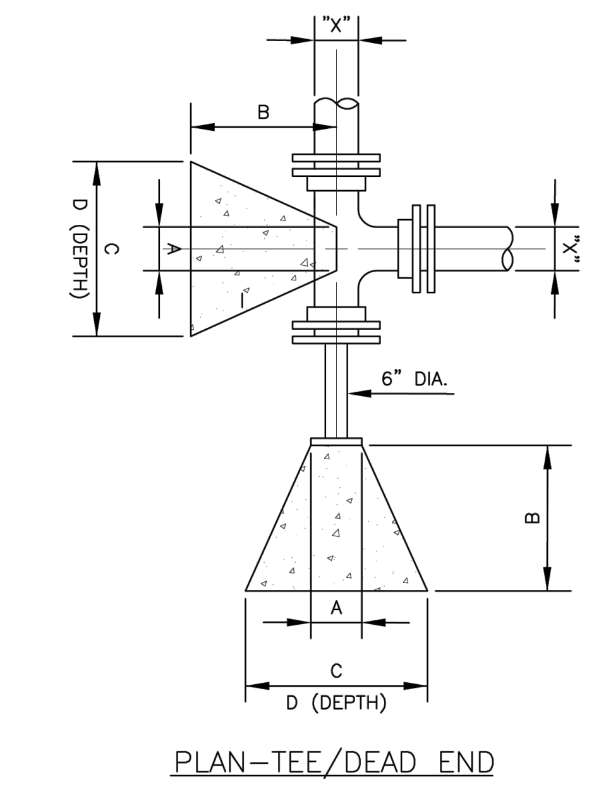

FIRE HYDRANT
R/W
2'–0"x2'–0"x6" CONCRETE COLLAR (SEE NOTE 3)
12"
BOTTOM OF PUMPER NOZZLE
SEE DETAIL A–4 FOR WATER MAIN LOCATION
18" MIN.
EXISTING OR FINISHED GRADE
NO VALVE BOX CONTACT ON VALVE BOX, SUPPORT BOX WITH BRICKS
4' MIN.
8"
T/ PIPE
WEEP HOLE
HYDRANT TEE
#57 STONE 8 CF 12" ALL AROUND SHOE
13" ANCHOR COUPLING (SEE NOTES 1 AND 2)
6" GATE VALVE AND VALVE BOX

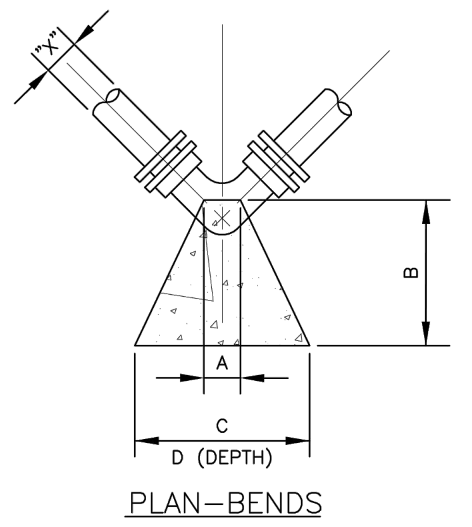
FIRE HYDRANT INSTALLATION ROADS AND HIGHWAYS
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. A-13


2'–0"x2'–0"x6" CONCRETE COLLAR (SEE NOTE 1)
VALVE BOX
4' MIN.
NO VALVE BOX CONTACT ON VALVE SUPPORT BOX WITH BRICKS
GATE VALVE

NOTES
1. TYPE II CONCRETE IN ACCORDANCE WITH ASTM C 150 FOR ALL UNPAVED AREAS. CENTER WITH #4 REBAR EA. SIDE, EA. WAY.
2. WHERE DEPTH TO MAIN REQUIRES, PROVIDE VALVE EXTENSION.

GATE VALVE
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. A-14


"X"
B
D (DEPTH)
C
A
"X"
6" DIA.
B
A
C
D (DEPTH)
PLAN–TEE/DEAD END


"X"
B
A
C
D (DEPTH)
PLAN–BENDS

NOTES
1. "X" = DIAMETER OF THE PIPE TO BE BLOCKED.
2. SEE DETAIL A–17 FOR THRUST BLOCK DIMENSIONS.

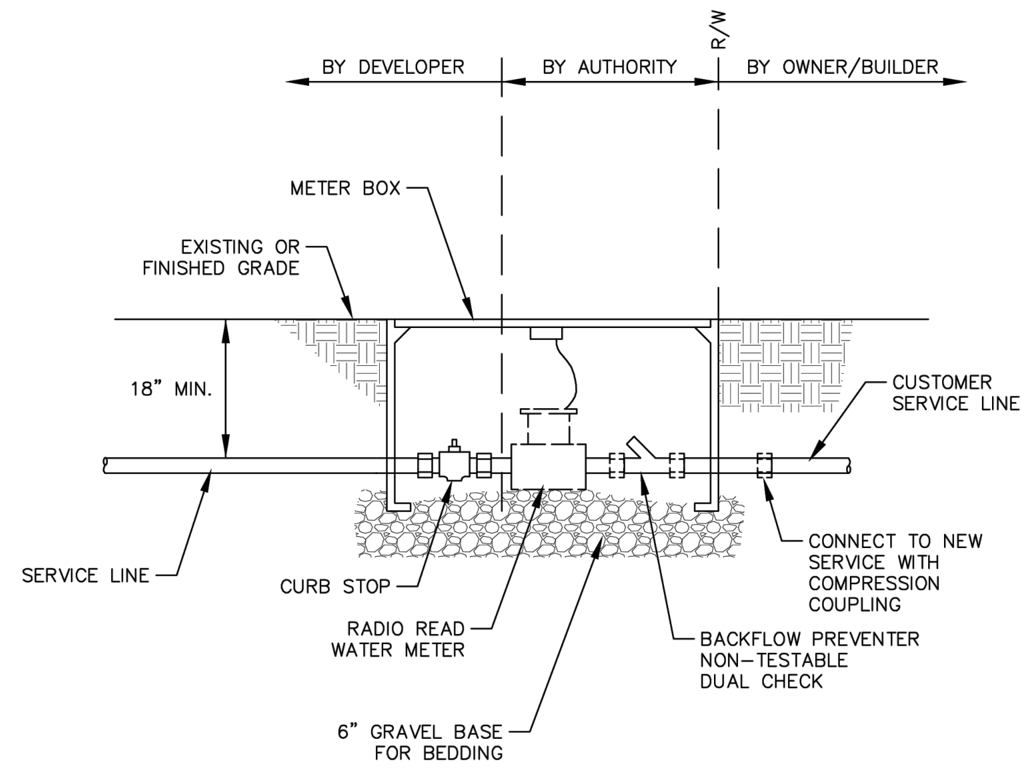
TYPICAL BLOCKING DETAIL
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. A-16

BLOCKING DIMENSIONS

"X"	A	B	C	D
TEES AND DEAD ENDS				
16"	1'–3"	3'–6"	7'–6"	4'–9"
12"	1'–0"	3'–0"	5'–6"	3'–6"
10"	1'–0"	2'–6"	4'–9"	3'–0"
8"	0'–10"	2'–0"	4'–0"	2'–6"
6"	0'–8"	1'–6"	2'–9"	1'–9"
90° BENDS				
16"	1'–3"	5'–6"	9'–0"	5'–6"
12"	1'–0"	4'–0"	6'–9"	4'–3"
10"	1'–0"	3'–0"	5'–9"	3'–6"
8"	0'–10"	2'–6"	4'–9"	3'–0"
6"	0'–8"	1'–6"	3'–6"	2'–9"
45° BENDS				
16"	1'–3"	3'–6"	6'–9"	4'–3"
12"	1'–0"	2'–3"	5'–3"	3'–3"
10"	1'–0"	2'–3"	4'–6"	2'–9"
8"	0'–10"	1'–6"	3'–6"	2'–3"
6"	0'–8"	1'–3"	2'–6"	1'–6"
22 1/2° BENDS				
16"	1'–3"	1'–6"	4'–9"	3'–0"
12"	1'–0"	1'–6"	3'–6"	2'–3"
10"	1'–0"	1'–3"	3'–0"	2'–0"
8"	0'–10"	1'–0"	2'–6"	1'–6"
6"	0'–8"	1'–0"	1'–9"	1'–3"
11 1/4° BENDS				
16"	1'–3"	1'–6"	3'–3"	2'–0"
12"	1'–0"	1'–6"	2'–6"	1'–6"
10"	1'–0"	1'–0"	2'–3"	1'–3"
8"	0'–10"	1'–0"	1'–9"	1'–0"
6"	0'–8"	1'–0"	1'–6"	0'–4"

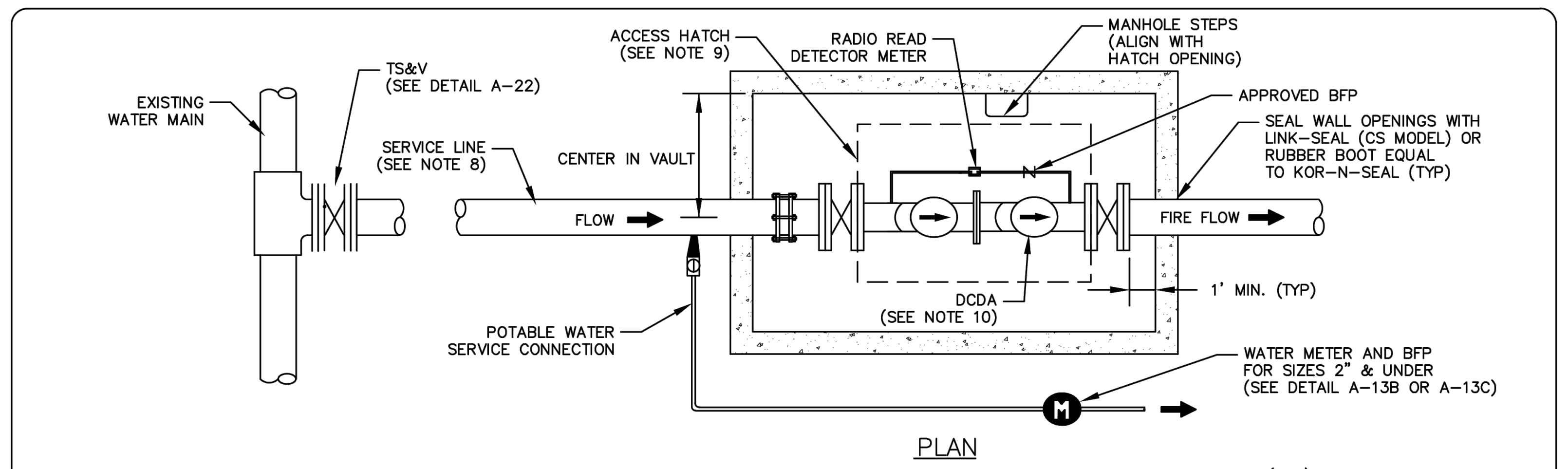
NOTES
1. THRUST BLOCK DIMENSIONS ARE BASED ON THE FOLLOWING CONDITIONS:
   LINE PRESSURE = 250 PSI
   SOIL BEARING CAPACITY = 2,000 PSF
   CONTRACTOR SHALL PROVIDE CALCULATIONS FOR THRUST BLOCK SIZING WHEN CONDITIONS EITHER EXCEED THE MAXIMUM PRESSURE OR SOIL CAPACITY IS BELOW THE MINIMUM BEARING CAPACITY.
2. MECHANICAL JOINT FITTINGS 4" ID AND LESS SHALL BE RESTRAINED WITH RETAINER GLANDS.

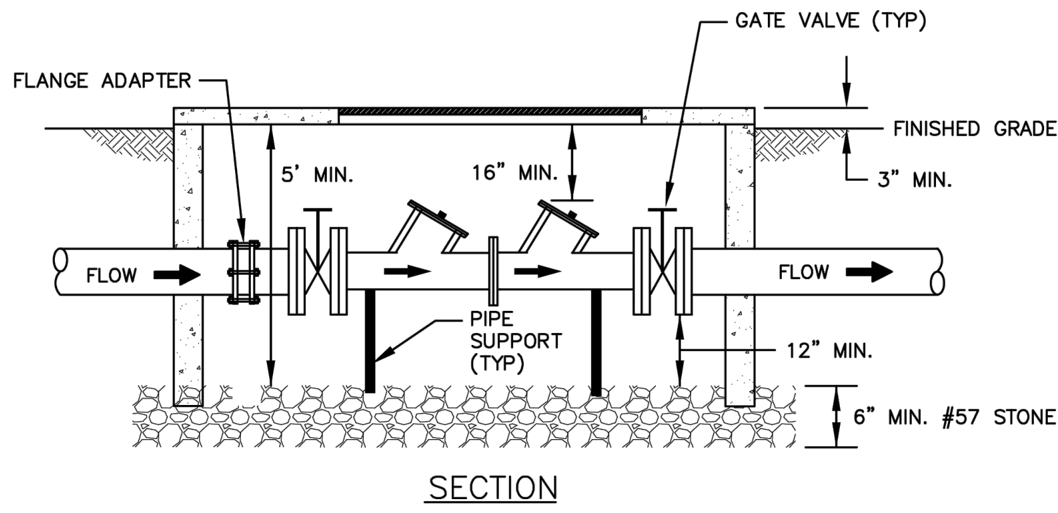
TYPICAL BLOCKING SIZES
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. A-17


R/W
BY DEVELOPER
BY AUTHORITY
BY OWNER/BUILDER
METER BOX
EXISTING OR FINISHED GRADE
18" MIN.
CUSTOMER SERVICE LINE
SERVICE LINE
CURB STOP
RADIO READ WATER METER
CONNECT TO NEW SERVICE WITH COMPRESSION COUPLING
BACKFLOW PREVENTER NON–TESTABLE DUAL CHECK
6" GRAVEL BASE FOR BEDDING

NOTES
1. SEE STANDARD DETAIL A–21 FOR SERVICE LINE CONNECTION DETAILS.
2. METER BOX TO BE FURNISHED AND INSTALLED BY DEVELOPER.
3. WATER METER TO BE FURNISHED AND INSTALLED BY THE AUTHORITY.
4. OWNER OR DEVELOPER SHALL FURNISH AND INSTALL ALL MATERIALS PAST THE AUTHORITY–FURNISHED STUB–OUT.

RESIDENTIAL WATER METER AND BOX
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. A-22


ACCESS HATCH (SEE NOTE 9)
RADIO READ DETECTOR METER
MANHOLE STEPS (ALIGN WITH HATCH OPENING)
TS&V (SEE DETAIL A–22)
EXISTING WATER MAIN
APPROVED BFP
SEAL WALL OPENINGS WITH LINK–SEAL (CS MODEL) OR RUBBER BOOT EQUAL TO KOR–N–SEAL (TYP)
SERVICE LINE (SEE NOTE 8)
CENTER IN VAULT
FLOW
FIRE FLOW
1' MIN. (TYP)
DCDA (SEE NOTE 10)
POTABLE WATER SERVICE CONNECTION
WATER METER AND BFP FOR SIZES 2" & UNDER (SEE DETAIL A–13B OR A–13C)
M
PLAN


GATE VALVE (TYP)
FLANGE ADAPTER
FINISHED GRADE
5' MIN.
16" MIN.
3" MIN.
FLOW
FLOW
PIPE SUPPORT (TYP)
12" MIN.
6" MIN. #57 STONE
SECTION

NOTES
1. VAULT DIMENSIONS SHALL BE SPECIFIED BY THE ENGINEER TO ACCOMMODATE ALL REQUIRED EQUIPMENT. MINIMUM SIZE SHALL BE 6' LONG x 6' WIDE.
2. VAULT SHALL BE PRECAST REINFORCED CONCRETE (MIN. 3,000 PSI) IN ACCORDANCE WITH ASTM C858 AND C913. IN AREAS WITH OCCASIONAL TRAFFIC LOADINGS, THE VAULT SHALL BE DESIGNED FOR HS20–44 WHEEL LOADS SUPPORTED BY SHOP DRAWINGS STAMPED BY A GEORGIA REGISTERED PROFESSIONAL ENGINEER.
3. LOCATE VAULT OUTSIDE OF RIGHT–OF–WAY (EASEMENT REQUIRED).
4. MAINTAIN 1' MINIMUM CLEARANCE BETWEEN ALL PIPING AND VAULT WALLS.
5. ALL INTERIOR PIPE AND FITTINGS 3" AND LARGER SHALL BE FLANGED DIP IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
6. ALL GATE VALVES SHALL BE OS&Y WITH HANDWHEEL OPERATORS.
7. PIPE SUPPORTS SHALL BE 3,000 PSI, MIN. 8"x8" REINFORCED CONCRETE. SUPPORTS SHALL BE LOCATED SO AS TO ALLOW FULL SUPPORT OF EQUIPMENT WHEN DISCONNECTED FOR SERVICING, REPLACEMENT, ETC. A MINIMUM OF ONE SUPPORT SHALL BE SUPPLIED FOR EACH CHECK VALVE ASSEMBLY.
8. RESTRAIN MJ PIPE WITH MEGA–LUGS OR PUSH–ON JOINT PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
9. ACCESS HATCH OPENING SHALL BE GREATER THAN LONGEST EQUIPMENT PIECE AND NO LESS THAN 36"x36". CAST HATCH IN TOP SLAB CENTERED OVER THE WATER METER. HATCH SHALL BE BILCO TYPE J–AL.
10. DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) SHALL BE WATTS MODEL 709DCDA, FEBCO MODEL 856, OR AMES MODEL 3000SS.
11. BACKFLOW PREVENTERS SHALL BE TESTABLE PER AWWA STANDARDS.
12. PRESSURE TEST AND DISINFECT IN ACCORDANCE WITH AWWA.
13. THIS DETAIL IS FOR USE ON SERVICES WITH DEDICATED FIRE SPRINKLER LINES. SEE DETAILS A–27 AND A–28 FOR INSTALLATIONS WHERE THERE ARE FIRE HYDRANTS ON PRIVATE PROPERTY.

FIRE LINE SERVICE CONNECTION AND POTABLE WATER METER 2" AND UNDER
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. A-28

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NO. PE031684
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COVINGTON, GA 30014
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9/18/24	ALL RCP SWAP TO CMP

Sheet Title

SITE DETAILS

Sheet Number

C-8.1