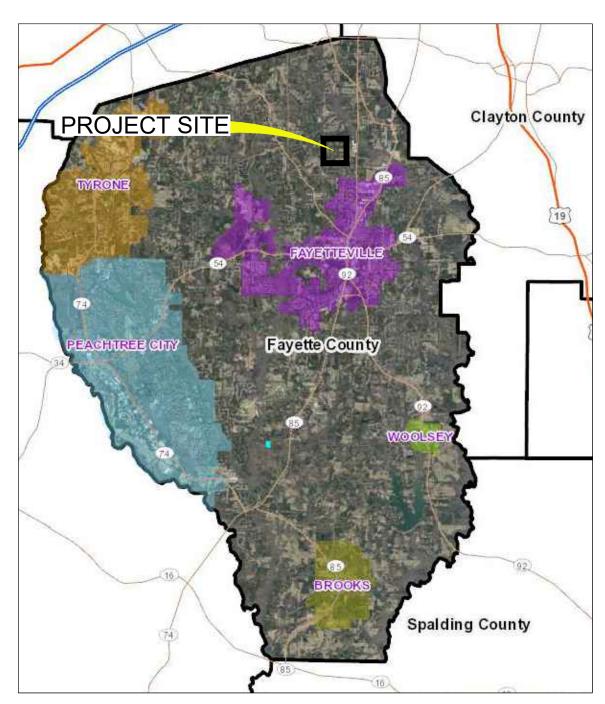
FAYETTE COUNTY MARK LANE- CULVERT REPLACEMENT

LAND LOT 194, 4TH DISTRICT, FAYETTE COUNTY, GA.
OCTOBER 15, 2021
100% SUBMITTAL
FAYETTE COUNTY PROJECT NUMBER:19SBK





VICINITY MAP
SCALE: NTS

CLIENT INFORMATION

OWNER CONTACT (24-HR): PHIL MALLON

PHONE (770) 313-9855

CLIENT INFORMATION: FAYETTE COUNTY ENVIRONMENTAL MANAGEMENT 140 STONEWALL AVE. W.,

publicworks@FayetteCountyGA.GOV

SUITE 203, FAYETTEVILLE, GA. 30214

CIVIL DESIGN TEAM

PROJECT MANAGER: DAVID MORGAN, PE MorganD@pondco.com CIVIL ENGINEER: SUNGTAEK KIM, PE KimS@pondco.com POND AND COMPANY 3500 PARKWAY LANE SUITE 500 PEACHTREE CORNERS, GA 30092 PHONE (678) 336-7740 FAX (678) 336-7744

CE504

E-101

IT IS THE OWNER'S/DEVELOPER'S RESPONSIBILITY TO BE IN COMPLIANCE WITH APPLICABLE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND CLEAN WATER ACT REQUIREMENTS.

PROJECT DESCRIPTION:

THE PROJECT CONSISTS OF THE REMOVAL OF TOTAL 100 LF OF THE EXISTING DETERIORATED 60-INCH PLATED CORRUGATED METAL PIPE CULVERT SPANNING UNDER MARK LANE AND REPLACING WITH TOTAL 65LF OF 6 FT X 6 FT REINFORCED CONCRETE BOX CULVERT.

PROJECT INFORMATION:

DISTURBED AREA: 0.27 ACRES

IMPERVIOUS SURFACE AREA: 0.04 ACRES

REFERENCE DATUM:

NAD 1983 (2011)- STATE PLANE COORDINATE SYSTEM OF GEORGIA - WEST ZONE. VERTICAL IS NAVD 1988.

PROJECT SPECIFICATION:

THE CONTRACTOR SHALL REFER TO AND USE THE SUPPLIED COUNTY PROJECT SPECIFICATIONS. FOR OTHER APPLICABLE STANDARDS OR SPECIFICATIONS, CONTRACTOR TO USE THE CURRENT GDOT APPROVED STANDARD SPECIFICATION CONSTRUCTION OF TRANSPORTATION SYSTEM DOCUMENT FOR THIS PROJECT.

	CIVIL INDEX
Sheet Number	Sheet Title
G-000	CIVIL COVER SHEET
C-001	LEGEND AND ABBREVIATIONS
C-002	CIVIL NOTES
V-001	TOPOGRAPHIC SURVEY (BY OTHERS)
CD101	CIVIL SITE DEMOLITION PLAN
CS100	ENVIRONMENTAL RESOURCES SITE PLAN
CS101	CIVIL SITE PLAN
CG101	CIVIL GRADING AND DRAINAGE PLAN
CG201	GRADING AND DRAINAGE PROFILES
C-501	CONSTRUCTION DETAILS
C-502	CONSTRUCTION DETAILS
C-503	CONSTRUCTION DÉTAILS
CE001	EROSION AND SEDIMENT CONTROL NOTES
CE002	EROSION AND SEDIMENT CONTROL NOTES
CE003	EROSION AND SEDIMENT CONTROL NOTES
CE101	EROSION AND SEDIMENT CONTROL PLAN - INITIAL PHASE
CE201	EROSION AND SEDIMENT CONTROL PLAN - FINAL PHASE
CE501	EROSION AND SEDIMENT CONTROL DETAILS
CE502	EROSION AND SEDIMENT CONTROL DETAILS
CE503	EROSION AND SEDIMENT CONTROL DETAILS
_	

EROSION AND SEDIMENT CONTROL DETAILS

EASEMENT EXHIBIT A

DESIGN PROFESSIONAL:
DAVID MORGAN, P.E.
LEVEL II CERTIFICATION
No.: 0000011643
EXPIRES: 06/03/2024



Know what's below.

Call before you dig.

Dial 811

Or Call 800-282-7411

CEORGIA OR G



1 FAYETTE COUNTY COMMENTS 04-29-2024 MARK DESCRIPTION DATE APPR.

 DESIGNED BY:
 DATE:

 MIA
 OCTOBER 15, 2021

 DWN BY:
 CKD BY:
 SOLICITATION NO.:

 NDA
 MDM

 SUBMITTED BY:
 DM

 FILE NAME:
 G-000

 SIZE:
 PLOT SCALE:
 PLOT DATE:

FAYETTE COUNTY
0 STONEWALL AVE W, SUITE 200
FAYETTEVILLE, GA. 30214
PORD

MARK LANE
CULVERT REPLACEMENT
FAYETTE COUNTY, GA. 30214
CIVIL COVER SHEET

SHEET IDENTIFICATION G-000

SHEET METAL

SPECIFICATION

SANITARY SEWER

STAINLESS STEEL

SOIL PIPE, SPACE(ING)

SUBSTANDARD FFFI UENT

SOLUTION

SUPPORT

SQUARE

STREET

STATION

STAKE

STEEL

STANDARD

STRAIGHT

SURFACE

SFRVICE

SYMBOL

STRUCTURAL

SOLENOID VALVE

SERVICE WATER

SURFACE WASH

SYMMETRICAL

SIDEWALK

SIDEWATER DEPTH

TANGENT TOP OF BEAM

BORING-xx (e.g. TB-1)

TOTAL DYNAMIC HEAD

TOTALLY ENCLOSED

TOTALLY ENCLOSED

NON-VENTILATED

TRENCH DRAIN

TELEPHONE

THREAD(ED)

THICK(NESS

TELEMETRY

TOP OF BANK

TOP OF CURB

TOE OF SLOPE

TELEVISION

UNDERDRAIN

ULTIMATE

UNION

VOLT(S)

VACUUM

VARIES

VELOCITY

VERTICAL

VOLUME

WATT, WEST

CLEAN OUT

WIDE FLANGE

WATER LINE

WATER MAIN

WALL HYDRANT

WORKING PRESSURE

WELDED STEEL PIPE

WELDED WIRE FABRIC

WELDED WIRE MESH

WATER TREATMENT PLANT

WASTEWATER TREATMENT PLANT

WATER SURFACE

WASH WATER

W/O WITHOUT

TRANSFER

YD YARD(S)

YEAR(S)

YARD HYDRANT

VERTICAL CURVE

VITRIFIED CLAY PIPE

VARIABLE FREQUENCY DRIVE

WASTE ACTIVATED SLUDGE WALL

WATER PROOF(ING), WORKING POINT

UNDERGROUND

UNLESS OTHERWISE NOTED

UNDERGROUND TELEPHONE CABLE

UNDERGROUND ELECTRIC

TYPICAL

TELEPHONE POLE

TOP AND BOTTOM

THICKENED SLUDGE

TEMPORARY BENCH MARK TEST

TOTALLY ENCLOSED FAN COOLED

SOUTHWEST

SM

SOLN

SPEC

SPRT

SQ

SS

SSE

SST

STA

STD

STK

STL

STR

STRUCT

SURF

SVCE

SVW

SW

SWD

SYM

SYMM

TAN TB

TBM

TB-xx

TD

TDH

TEFC

TEL

TENV

THD

THK TLM

TOB

TOC

TOS

TOT

TYP

T&B

UG

ULT

UON

UTC

UTIL

VAC

VCP

VEL

VERT

VOL

WCO

WF

WH

WL

WPR

WS

WSP

WT

WTP

WW

WWF

WWM

WWTP

W/O

X XFER

YΗ

UGE

ΤE

S/W

SWSH

SV

APRX

ARCH

ASPH

ASSY

AVE

A/C

BCV

BFV

BHP

BITUM

BLDG

BLK

BM

BOC

BOT

BRG

BSP

BWW

CAP

CAV

CCC

CFM

CFS

CISP

CKT

CLF

CLR

CMU

CND

CNR

CO2

COL

COM

CONC

CONN

CPLG

CSG

CTV

C&G

C/C

DAT

DBL

DET

DIFF

DIM

DIP

DMH

DWG

DWV

DISCH

COAG

A/VV

APPROXIMATE(LY

ARCHITECT(URAL)

AIR CONDITIONING

BALL CHECK VALVE

BUTTERFLY VALVE

BRAKE HORSEPOWER

BITUMINOUS OR BITUMASTIC

BLIND FLANGE

BLACK IRON

BENCH MARK

BASE PLATE

BALL VALVE

BOTH WAYS

CAPACITY

BLACK STEEL PIPE

BACKWASH WATER

COMPRESSED AIR

CATCH BASIN

CHECK VALVE

CAST IRON PIPE

CAST IRON SOIL PIPE

CONSTRUCTION JOINT

CLEAR OR CLEARANCE

CORRUGATED METAL PIPE

CONCRETE MASONRY UNIT

CORRUGATED METAL PIPE ARCH

CAST IRON

CIRCUIT

CULVERT

CONDUIT

CORNER

COLUMN

COMMON

CONCRETE

CONSTRUCT(ION)

COMPANY

COUPLING

CASING

DOUBLE

DEMO DEMOLITION

DEPT DEPARTMENT

DESC DESCRIPTION

DETAIL

DIESEL FUEL

DIAMETER

DIMENSION

DISCHARGE

DIRECTION

DRIVEWAY

DRAWING

DRAIN

DROP MANHOLE

DUCTILE IRON PIPE

DIAPHRAGM VALVE

DRAIN, WASTE, AND VENT

DIFFUSER

DUCTILE IRON

CONCRETE PIPE

CONCRETE PIPE ARCH

CONCENTRIC REDUCER

CHLORINE SOLUTION

CABLE TELEVISION

CURB AND GUTTER

CENTER TO CENTER

DIRECT CURRENT

CUBIC YARD

CYLINDER

CHLORINATED POLYVINYL CHLORIDE

CONT CONTINUOUS

COORD COORDINATE

CONTRACT(OR)

CONNECTION

CLEAN OUT

COAGULANT

CARBON DIOXIDE

CENTER LINE

CHLORINE GAS

CHAIN LINK FENCE

COMBINATION AIR VALVE

CHLORINATED EFFLUENT

CUBIC FEET PER MINUTE

CUBIC FEET PER SECOND

CHLORINE CONTACT CHAMBER

BACK OF CURB

BASELINE

BUILDING

BLOCK

BOTTOM

BEARING

AIR/VACUUM AIR VALVE

ALUM SOLUTION

ASPHALT

AVENUE

ASSEMBLY

EXP

EXST

EXST

EXT

EXTN

FCA

FB

FCV

FD

FDN

FE

FHY

FIG

FIN

FLG

FLL

FLTR

FPM

FPS

FRP

FUT

FV

FW

F/F

GAL

GIP

GJ

GPD

GPH

GPM

GPS

GRTG

GR

GS

GST GT

HD

HDPE

HDR

HFA

HGR

HGT

HOA

HPA

HVAC

HR

HWL

HWY

ΗZ

INTR

INV

KVA

KW

KWH

LAM

LATL

LAV

HNDRL

HORIZ

FWP

FIN/FLR

FIN/GR

EXPANSION

EXISTING GRADE

EXISTING

EXTERIOR

EXTENSION

FABRICATE(D)

FLOOR DRAIN

FOUNDATION

FIRE HYDRANT

FINISH FLOOR

FINISH GRADE

FLAT BAR

FIGURE

FINISH(ED)

FLUORIDE

FLANGE(D)

FLOW LINE

FORCE MAIN

FEET PER MINUTE

FEET PER SECOND

FIBERGLASS REINFORCED

FILTER

PLASTIC

FUTURE

GAUGE

GALLON(S)

GROUND

GRADE

GROUT

GATE VALVE

HOSE BIBB

HEAVY-DUTY

HYDRAULIC

HANGER

HAND RAIL

HAND-OFF-AUTO

HORIZONTAL

HORSEPOWER

CONDITIONING

HIGH PRESSURE AIR

HIGH WATER LEVEL

INSIDE DIAMETER

INTERSECTION

INTERNAL RECYCLE

IRRIGATION WATER

JUNCTION BOX

KIP (1,000 LB)

KICK PLATE

KILOVOLT-AMPERE

KILOWATT-HOUR

LABORATORY

LATERAL

LAVATORY

LAMINATE OR LAMINATION

KILOVOLT

KILOWATT

HEIGHT

HOUR

HIGWAY

HERTZ

INCH(ES)

INFLUENT

INTERIOR

IRON PIPE

INVERT

JOINT

GRATING

GALVANIZED

GROOVE JOINT

GALLONS PER DAY

GALLONS PER HOUR

GALVANIZED STEEL

GALLONS PER MINUTE

GALLONS PER SECOND

GALVANIZED STEEL PIPE

GROUND STORAGE TANK

GROUND STORAGE RESERVOIR

HIGH-DENSITY POLYETHYLENE

HEATING, VENTILATION, AND AIR

INTERNATIONAL PIPE STANDARD

HYDROFLUOSILICIC ACID

FOOT OR FEET

FINISHED WATER

FACTORY WIRED PANEL

GALVANIZED IRON PIPE

FOOT VALVE

FACE TO FACE

FLANGED COUPLING ADAPTER

FLOW-CONTROL VALVE

FILTER(ED) EFFLUENT

MH

MIN

MISC

MO

MPH

MPT

MS

MSP

MTD

MV

MW

MWL

NaOCI

NO

NOM

NPF

NPT

NPW

NRS

NTS

N/A

OC

OD

ODP

OHW

OPT

OR

O&M

PΕ

PNV

POB

POJ

POL

PPM

PRW

PSF

PSI

PSIA

PSIG

PVC

QTY

RAS

RCP

RD

REF

REINF

REM

RM

REQ'D

RCPA

RDCR

PVMT

PREFAB

PRESS

MANHOLE

MINIMUM, MINUTE(S)

MISCELLANEOUS

MIXED LIQUOR

MONUMENT

MOUNTED

MANWAY

NORTHEAST

NUMBER

NOMINAL

NOT IN CONTRACT

MECHANICAL JOINT

MASONRY OPENING

MILES PER HOUR

MALE PIPE THREAD

MOTORIZED VALVE

MEAN WATER LEVEL

MOTOR STARTER PANEL

SODIUM HYPOCHLORITE

NATIONAL PIPE THREAD

NON-POTABLE WATER

NON-RISING SYSTEM

NOT TO SCALE

NOT APPLICABLE

OUTSIDE DIAMETER

OPEN DRIP PROOF

OVER HEAD WIRE

OFFICIAL RECORDS

OUTSIDE SCREW AND YOKE

OPERATION AND MAINTENANCE

PERMANENT CONTROL MONUMENT PLAIN

OUTSIDE FACE

OVER HEAD

OPPOSITE

OPTIONAL

PROCESS AIR

END

PLATE

POINT OF CURVE

PRESSURE GAGE

PROPERTY LINE

PUSH-ON JOINT

POUNDS PER DAY

PREFABRICATED

PROCESS WATER

PARTS PER MILLION

PRESSURE REDUCING VALVE

POUNDS PER SQUARE FOOT

POUNDS PER SQUARE INCH

RETURN ACTIVATED SLUDGE

REINFORCED CONCRETE BOX

REINFORCED CONCRETE PIPE

REBAR REINFORCING STEEL REF

REDUCED PRESSURE BACKFLOW

REINFORCE(D)(ING)(MENT)

REINFORCED CONCRETE PIPE ARCH

REINFORCED CONCRETE

POUNDS PER SQUARE INCH ABSOLUTE

POUNDS PER SQUARE INCH GAGE POINT OF

POLYMER

POWER POLE

PRESSURE

TANGENCY

PLUG VALVE

PAVEMENT

PWR POWER

FLOW

QUANTITY

RADIUS

REDUCER

REFERENCE

REQUIRED

REMOVE(ABLE)

RAISED FACE

PREVENTER

RESTRAINED JOINT

POTABLE WATER

POLYVINYL CHLORIDE

POINT OF BEGINNING

PINCH VALVE

POINT OF INTERSECTION

NORTHWEST

OXYGEN

ON CENTER

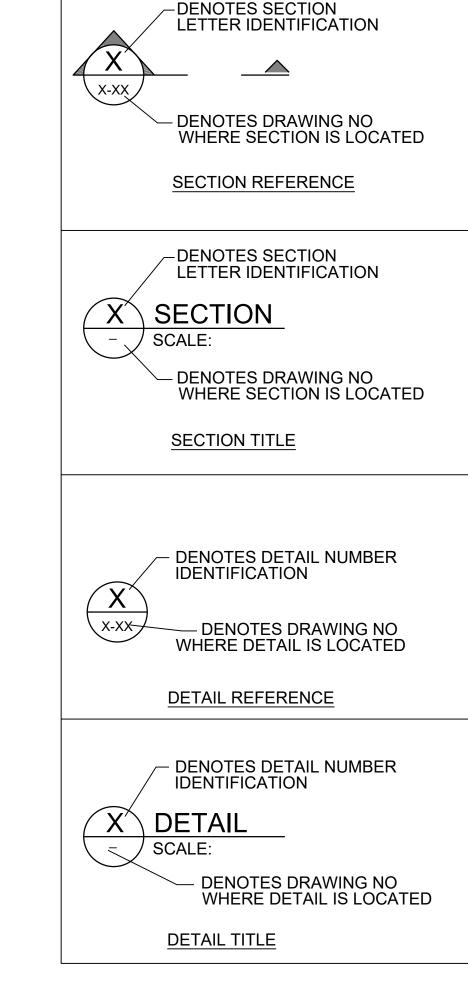
NATIONAL PIPE TAPER (THREAD)

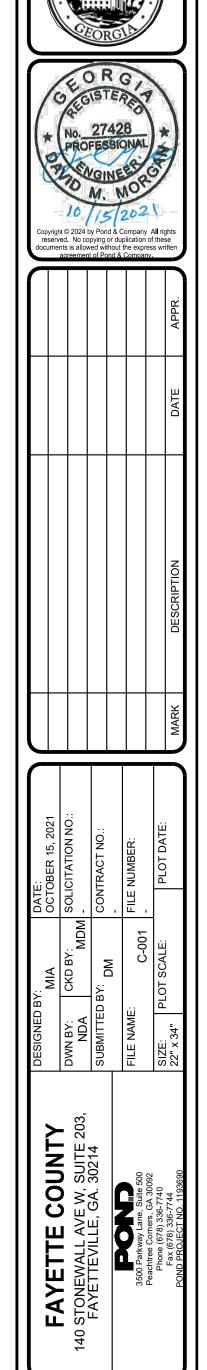
MAXIMUM WORKING PRESSURE

MOTOR STARTER

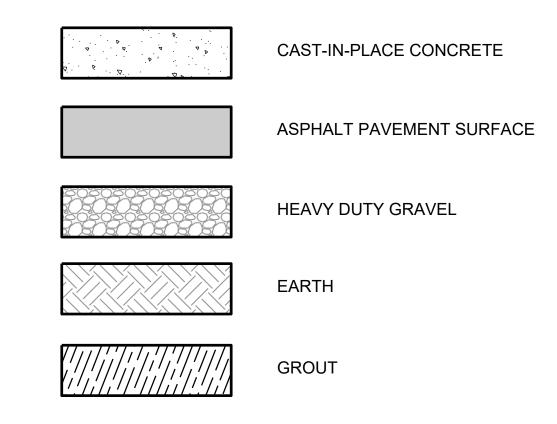
MILE(S)

SANITARY SEWER MANHOLE (co) SANITARY SEWER CLEANOUT STORM DRAIN **DROP INLET HEADWALL FENCE** PROPOSED CONTOUR MAJOR PROPOSED CONTOUR MINOR **NORTH ARROW** TREE PROTECTION FENCE UNKNOWN UTILITY **EXISTING ELECTRICAL OVERHEAD EXISTING COMMUNICATION** LINE OVERHEAD





HATCHING LEGEND



RIP RAP

GUARD RAIL

BENCHMARK

MARK LANE
CULVERT REPLACEME
FAYETTE COUNTY, GA. 30214
LEGEND AND ABBREVIATIC

SHEET IDENTIFICATION C-001

- 2. ALL LABOR, MATERIALS, AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY GEORGIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS AND FAYETTE COUNTY STANDARDS. WHERE CONFLICTS OR OMISSIONS EXIST, FAYETTE COUNTY STANDARDS SHALL DICTATE. SUBSTITUTIONS AND DEVIATION FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.
- 3. SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO
- 4. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE BY GEORGIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS AND FAYETTE COUNTY DEVELOPMENT REGULATIONS, LATEST EDITION, UNLESS OTHERWISE WAIVED.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND BEFORE BEGINNING ANY CONSTRUCTION. NO CONSTRUCTION OR FABRICATION OF ANY ITEM SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED ALL PLANS AND ANY OTHER DOCUMENTATION FROM ALL OF THE PERMITTING AND ANY OTHER REGULATORY AUTHORITIES. ANY PENALTIES, STOP WORK ORDERS OR ADDITIONAL WORK RESULTING FROM THE CONTRACTOR BEING IN VIOLATION OF THE REQUIREMENTS ABOVE, SHALL BE FULLY BORNE BY THE CONTRACTOR.
- THE LOCATION OF ALL EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLAN OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FIRST. ANY FEES ASSOCIATED WITH UTILITY RELOCATIONS SHALL BE BORNE IN ACCORDANCE WITH RESPECTIVE UTILITY COMPANY STANDARDS. IT IS REQUESTED UTILITY COMPANIES MOVE THEIR PARTICULAR UTILITIES. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. DIAL 811 BEFORE DIGGING OR CALL 800-282-7411.
- 7. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING TO BE HELD BETWEEN FAYETTE COUNTY, UTILITIES ENGINEER OF RECORD, CONTRACTOR AND ANY SUBCONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 8. THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND, INCLUDING LANDSCAPE SPRINKLERS, SHALL BE PLACED BENEATH THE PAVEMENT AND ITS EDGES PRIOR TO THE CONSTRUCTION OF THE PAVEMENT. THE PAVEMENT SHALL NOT BE CUT WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- 9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AND AT LEAST 48 HOURS HOURS BEFORE REQUIRED INSPECTION ON EACH AND EVERY PHASE OF WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY SCHEDULED TESTING. NO PRESSURE TESTING, OR FINAL TESTING WILL BE ACCEPTED UNLESS WITNESSED BY THE ENGINEER'S REPRESENTATIVE. THE CONTRACTOR IS REQUIRED TO NOTIFY 48 HOURS TO FAYETTE COUNTY FOR PROOF ROLL, OF GAB PLACEMENT.
- 10. ALL CONTRACTORS, FAYETTE COUNTY REPRESENTATIVES, AND UTILITY COMPANIES ARE RESPONSIBLE FOR THEIR RESPECTIVE SURVEYING AND LAYOUT FROM BENCHMARK PROVIDED ON CONSTRUCTION PLANS. ANY SURVEY MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED UPON COMPLETION OF THE WORK BY A REGISTERED LAND SURVEYOR.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY CONSTRUCTION ACTIVITIES FROM TAKING PLACE OUTSIDE OF THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS. ANY ON-SITE OR OFFSITE AREAS DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER.
- 12. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS AND ALL PERMITS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TWO (2) SETS OF RECORD DRAWINGS TO THE ENGINEER OF RECORD WITHIN TWO (2) WEEKS AFTER CONSTRUCTION HAS BEEN COMPLETED ON EACH PHASE.
- 13. TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS WERE TAKEN FROM SURVEY PROVIDED BY: GEOSURVEY, LTD., DATED: FEBRUARY 19, 2019.
- 14. ANY CONSTRUCTION BEYOND THE RIGHT-OF-WAY AND/OR ESTABLISHED EASEMENT LINES, ONTO ADJACENT PROPERTY REQUIRES ADJACENT PROPERTY OWNER PERMISSION AND NECESSARY EASEMENTS PRIOR TO PERFORMING ANY WORK. THE CONTRACTOR IS TO VERIFY SUCH EASEMENTS AND PERMISSIONS PRIOR TO DISTURBING ANY OFF-SITE PROPERTY.
- 15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXISTING SITE CONDITIONS OF SOIL PRIOR TO N.T.P. CONSTRUCTION TO DETERMINE IF ANY OFF SITE MATERIALS WILL NEED TO BE IMPORTED TO ACHIEVE THE GRADES SPECIFIED ON THE PLANS.
- 16. CLEAR AREAS INDICATED SHALL BE COMPLETELY CLEAR OF ALL TIMBER, BRUSH, STUMPS, ROOTS, GRASS, WEEDS, RUBBISH AND ALL OTHER DEBRIS AND OBSTRUCTIONS RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE GROUND.
- 17. PRIOR TO BID PREPARATION, THE CONTRACTOR MUST BECOME FAMILIAR WITH THE OVERALL SITE CONDITIONS AND PERFORM ADDITIONAL INVESTIGATIONS AS DETERMINED NECESSARY TO UNDERSTAND THE LIMIT AND DEPTH OF EXPECTED ORGANIC SILT PEAT AREAS, PRESENCE OF ROCK, ADEQUACY OF EXISTING MATERIALS AS FILL, DEWATERING REQUIREMENTS, CLEAN FILL REQUIRED FROM OFFSITE, AND MATERIALS TO BE DISPOSED OF OFFSITE, ALL OF WHICH WILL AFFECT THE PRICING. ANY DELAY, INCONVENIENCE, OR EXPENSE CAUSED TO THE CONTRACTOR DUE TO INADEQUATE INVESTIGATION OF EXISTING CONDITIONS SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION WILL BE ALLOWED. THE MATERIALS ANTICIPATED TO BE ENCOUNTERED DURING CONSTRUCTION MAY REQUIRE DRYING PRIOR TO USE AS BACKFILL. AND THE CONTRACTOR MAY HAVE TO IMPORT MATERIALS, AT NO EXTRA COST, FROM OFFSITE TO MEET THE REQUIREMENTS FOR COMPACTION AND PROPER FILL.
- 18. NEITHER OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR ERRORS OR MISINTERPRETATIONS RESULTING FROM USE OF INCOMPLETE SETS OF BIDDING DOCUMENTS.

DEMOLITION NOTES

- THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND LICENSES FOR PERFORMING THE DEMOLITION WORK AND SHALL FURNISH A COPY OF THESE ITEMS TO THE ENGINEER PRIOR TO COMMENCING THE WORK. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE PERMITS.
- 2. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES OR LOCAL AUTHORITIES FURNISHING GAS, WATER, ELECTRICAL, TELEPHONE, OR SEWER SERVICE SO THEY CAN REMOVE, RELOCATE, DISCONNECT, CAP OR PLUG THEIR EQUIPMENT IN ORDER TO FACILITATE DEMOLITION. DIAL 811 BEFORE DIGGING OR CALL 800-282-7411.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL TREES, STRUCTURES, AND UTILITIES NOT MARKED FOR REMOVAL OR DEMOLITION AND SHALL PROMPTLY REPAIR ANY DAMAGE AS DIRECTED BY THE ENGINEER AT NO COST TO THE
- THE CONTRACTOR SHALL REMOVE PAVING MARKED FOR DEMOLITION WHICH INCLUDES ALL ASPHALT, CONCRETE, BASE, AND RETAINING WALLS (INCLUDING THE FOOTERS)
- THE CONTRACTOR SHALL REMOVE TREES MARKED FOR REMOVAL WHICH INCLUDES THE ROOTS ASSOCIATED WITH THE TREE TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED IN ACCORDANCE WITH THE FAYETTE COUNTY REGULATIONS.
- THE CONTRACTOR SHALL REMOVE UNSALVAGEABLE MATERIALS AND YARD WASTE FROM THE SITE IMMEDIATELY AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS
- 7. THE CONTRACTOR SHALL SAW-CUT A SMOOTH STRAIGHT EDGE ON ANY PAVEMENT PROPOSED FOR DEMOLITION PRIOR TO ITS REMOVAL. PRIOR TO CONNECTING PROPOSED PAVEMENT TO EXISTING PAVEMENT, THE CONTRACTOR SHALL ENSURE THAT THE EDGE OF THE EXISTING PAVEMENT IS STRAIGHT AND UNIFORM.
- THE DEMOLITION SHALL BE PHASED TO PROVIDE AT LEAST ONE 12 FOOT LANE OF TRAFFIC AT ALL TIMES.
- 9. CONTRACTOR TO FOLLOW ALL APPLICABLE OSHA STANDARDS FOR ALL EXCAVATIONS.

FAYETTE COUNTY WATER SYSTEM NOTES:

- ALL CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH FAYETTE COUNTY WATER SYSTEM SPECIFICATIONS.
- 2. ALL MATERIALS SHALL CONFORM TO FAYETTE COUNTY DEVELOPMENT SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE FAYETTE COUNTY WATER SYSTEM SUBMITTALS ON ALL PIPE AND MATERIALS USED FOR APPROVAL. ANY WORK DONE BY THE CONTRACTOR SHALL BE AT HIS OWN RISK UNTIL REVIEW AND APPROVAL OF THESE SUBMITTALS ARE COMPLETE.
- 3. THE CONTRACTOR SHALL NOTIFY THE FAYETTE COUNTY WATER SYSTEM 48 HOURS PRIOR TO CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE.
- 4. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE FAYETTE COUNTY WATER SYSTEM BEFORE ANY WORK IS HIDDEN FROM VIEW.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL UTILITIES BEFORE CONSTRUCTION AND VERIFYING THE LOCATION OF ALL UTILITIES SHOWN OR NOT SHOWN.
- 6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY AND COORDINATE HIS WORK WITH EXISTING UTILITIES WHICH CONFLICT WITH HIS WORK. CONTRACTOR SHALL MAINTAIN SUCH UTILITIES SHOWN OR NOT SHOWN ON THIS PLAN.
- 7. ALL VALVE BOXES ARE TO HAVE COLLARS AND MARKERS AS REQUIRED BY THE FAYETTE COUNTY WATER SYSTEM
- 8. WATER LINES SHALL HAVE A MINIMUM COVER OF 4 FEET FROM FINISHED GRADE
- 9. MINIMUM HORIZONTAL DISTANCE BETWEEN WATER LINES AND SEWER SHALL BE 10 FEET AND VERTICAL DISTANCE MINIMUM
- 10. ALL OTHER UNDERGROUND UTILITIES OR STRUCTURES SHALL BE A MINIMUM HORIZONTAL AND VERTICAL DISTANCE OF 2 FEET FROM WATER LINES.
- 11. WATER LINES SHALL BE LOCATED 7'-0" FROM THE BACK OF THE CURB OR PER AS APPROVED UTILITY PLACEMENT DETAIL.
- 12. ALL WATER SERVICES SHALL BE MARKED WITH A SAWED "W" NOTCH PAINTED BLUE ON THE CURB.
- 13. ALL WATER MAIN CROSSING UNDER PAVEMENT SHALL BE DIP IN STEEL CASING AS PER FAYETTE COUNTY WATER SYSTEM SPECIFICATIONS.
- 14. ALL VALVES AND FITTINGS ARE TO BE RESTRAINED WITH APPROPRIATE TYPE AND NUMBER OF EBBA IRON OR UNIFLANGE RESTRAINT SYSTEM APPURTENANCES APPROVED BY THE FAYETTE COUNTY WATER SYSTEM PRIOR TO CONSTRUCTION. ANY CONCRETE BLOCKING THAT IS ALLOWED SHALL BE INSTALLED TO UNDISTURBED EARTH.
- 15. ALL SERVICE LINES CROSSING UNDER PAVEMENT OR IN FRONT OF LOTS SHALL BE ENCASED IN 2" CONDUIT MATERIAL APPROVED BY FAYETTE COUNTY WATER SYSTEM.

ES & PC NOTES

- 1. 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. ALL BUFFERS AND TREE SAVE AREAS SHALL BE CLEARLY IDENTIFIED WITH FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.
- 4. SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE 1/3 FULL VOLUME.
- 5. INSPECT AND DOCUMENT THE CONDITION OF RUNOFF CONTROLS EVERY 7 DAYS, OR EVERY 14 DAYS AND WITHIN 24 HOURS AFTER EACH RAIN OF 0.5 INCH OR MORE.
- 6. PERMITEE SHALL SUBMIT A SIGNED NOTICE OF TERMINATION (NOT) FORM TO THE GEORGIA DIVISION OF WATER AFTER THE SITE HAS BEEN FINALLY STABILIZED.
- 7. 67 CY/AC SEDIMENT STORAGE SUBSTANTIALLY HANDLED BY SILT FENCE. THE LINEAR NATURE OF THIS PROJECT COUPLED WITH LIMITED WORK AREA (ESPECIALLY ADJACENT TO STATE WATER) DOES NOT PROVIDE OPPORTUNITY FOR INSTALLATION OF PERMANENT BMPS TO PREVENT POLLUTANTS FROM DISCHARGING THE SITE WITHOUT FURTHER ENCROACHMENT INTO ADJACENT PRIVATE PROPERTY. DURING CONSTRUCTION, SILT FENCE WILL BE USED TO PREVENT POLLUTANTS FROM DISCHARGING THE SITE. AFTER CONSTRUCTION IS COMPLETE ALL AREAS WILL BE STABILIZED.
- 8. SOIL STOCKPILES MUST BE LOCATED AWAY FROM STREAMS, PONDS, SWALES AND CATCH BASINS. STOCKPILES MUST BE SEEDED, MULCHED, AND ADEQUATELY CONTAINED THROUGH THE USE OF SILT FENCE.
- SEDIMENT-LADEN WATER ENCOUNTERED DURING TRENCHING, BORING, OR OTHER EXCAVATION ACTIVITIES MUST BE PUMPED TO A SEDIMENT TRAPPING OR FILTERING DEVICE AND CLEANED BEFORE BEING DISCHARGED. DISCHARGES TO STORM DRAINS, DITCHES, OR WATER BODIES MUST BE COVERED UNDER A EPD PERMIT.
- 10. ALL BARE SOIL AREAS NOT SUBJECT TO ACTIVE CLEARING, EXCAVATION, GRADING, OR FILL ACTIVITIES MUST BE STABILIZED WITH TEMPORARY OR PERMANENT SEEDING OR MULCHING WITHIN 14 DAYS.
- 11. GOOD HOUSEKEEPING PRACTICES MUST BE APPLIED TO PREVENT CONTAMINATED RUNOFF OR OTHER IMPACTS FROM PAINT OR CONCRETE WASTES, FUELS AND OILS, TRASH AND LITTER, OR OTHER MATERIALS.
- AFTER VEGETATION IN UPGRADIENT AREAS IS ESTABLISHED AND DITCHES ARE STABLE. 13. GOOD HOUSEKEEPING MEASURES FOR MATERIALS STORAGE AND HANDLING, VEHICLE FUELING AND MAINTENANCE, SPILL RESPONSE AND CLEANUP, AND WASTE MANAGEMENT MUST BE FOLLOWED TO ENSURE THAT RUNOFF FROM THE SITE IS FREE

12. SILT FENCES, DITCH CHECKS, NON-PERMANET SEDIMENT TRAPS, AND OTHER TEMPORARY CONTROLS MUST BE REMOVED

- OF CONTAMINANTS. 14. ALL BMPS SELECTED SHALL BE INSTALLED, OPERATED, AND MAINTAINED ACCORDING TO GSWCC FIELD MANUAL, GEORGIA
- DIVISION OF WATER GUIDELINES, MANUFACTURER'S REQUIREMENTS, OR STANDARD INDUSTRY PRACTICE, AS APPROPRIATE.
- 15. APPROVED PLANS AND NPDES DAILY LOG MUST BE ONSITE AT ALL TIMES.

EARTHWORK, GRADING, STABILIZATION, PAVING AND DRAINAGE NOTES

- 1. COMPACT ALL UTILITY TRENCHES WITHIN ROADWAYS TO 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T 180) AND TO 95% WITHIN OTHER AREAS.
- 2. ALL ORGANIC SOILS AS DETERMINED WITHIN UTILITY TRENCHES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL AND COMPACTED TO NO LESS THAN 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T - 180).
- 3. STABILIZED SUBGRADE TO MEET SPECIFIED REQUIREMENTS.
- 4. ASPHALTIC CONCRETE TO GDOT STANDARD SPECIFICATION (LATEST EDITION) SECTION 916.1 AND FAYETTE COUNTY, WHICHEVER IS GREATER.
- 5. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- 6. ALL CONCRETE FLUMES, WALKS, AND CURBS SHALL BE CONSTRUCTED WITH 3000 PSI CONCRETE.
- 7. ALL ON-SITE AREAS DISTURBED BY THE CONSTRUCTION SHALL BE STABILIZED USING MEASURES THAT MATCH THE EXISTING VEGETATIVE CONDITIONS OF THE SITE. CONTRACTOR IS RESPONSIBLE FOR IRRIGATION OF PERMANENT GRASSING.
- 8. THE REINFORCED CONCRETE PIPE SHALL BE CLASS III WITH WALL THICKNESS "B" CONFORMING TO ASTM C 76 OR AWWA 302 -74 AND GASKETS SHALL BE IN ACCORDANCE WITH ASTM C - 443 OR ASTM D - 412.
- 9. ALL PIPE CALL OUTS ARE MEASURED CENTER LINE TO CENTER LINE FOR MANHOLES AND INLETS AND FROM THE END OF THE PIPE FOR MITERED END SECTIONS.
- 10. ALL DEWATERING COSTS ASSOCIATED WITH THE INSTALLATION AND CONSTRUCTION OF THE UNDERGROUND UTILITIES; STORM WATER PIPES AND MANHOLES; SANITARY SEWER MAINS, FORCE MAINS, MANHOLES, AND LIFT STATIONS; AND STORM WATER MANAGEMENT SYSTEMS SHALL BE INCLUDED AS PART OF THE CONSTRUCTION BID COSTS. THE CONTRACTOR SHALL SUBMIT FOR WATER USE PERMITS IF REQUIRED FOR DEWATERING ACTIVITIES.
- 11. ALL PIPES SHALL HAVE 3 FEET MINIMUM COVER UNLESS OTHERWISE SPECIFIED IN PLANS, CONTRACTOR SHALL TAKE CARE TO PROVIDE PROPER GRADE ELEVATIONS AND ALIGNMENTS.
- 12. THE CONTRACTOR MUST INSTALL AND MAINTAIN GRASS OR SOD ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETED FINAL GRADES, AS NOTED ON PLANS, AND AT ANY OTHER TIME AS NECESSARY TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES TO ANY DOWNSTREAM WATER BODY, WETLAND, OR OFF-SITE PROPERTY. SODDING ON SLOPES 3:1 AND STEEPER SHALL BE STAKED.
- 13. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO CONTROL TURBIDITY AND SEDIMENT INCLUDING, BUT NOT LIMITED TO, THE INSTALLATION OF TURBIDITY BARRIERS AND SILT FENCES AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY AND SEDIMENT BARRIERS MUST BE MAINTAINED AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING THE BARRIERS.
- 14. EXISTING RUNOFF COEFFIOCIENT FOR THE PROJECT: 70. PROPOSED RUNOFF COEFFICIENT FOR THE PROJECT: 70.
- 15. ALL CONCRETE STRUCTURES SHOWN ARE PRE-CAST FROM AN APPROVED VENDOR. CAST-IN-PLACE METHODS MAY BE USED FOR STRUCTURE COMPONENTS WHERE APPLICABLE FOR APPROVAL

OTHER UTILITY INFORMATION

- 1. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES WHICH MAY HAVE THEIR UTILITIES WITHIN THE CONSTRUCTION AREAS TO LOCATE THEIR FACILITIES IN THE FIELD FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING CONSTRUCTION. DIAL 811 BEFORE
- 2. DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE TWENTY-FIVE (25) FEET ON EACH SIDE OF ANY PERPENDICULAR CROSSING OF METALLIC GAS MAINS OR ANY OTHER CATHODICALLY PROTECTED PIPELINE AND FOR LOCATIONS PARALLEL TO AND WITHIN TEN FEET OF METALLIC GAS MAINS OR OTHER CATHODICALLY PROTECTED PIPE AND THROUGH THE AREA OF INFLUENCE OF CATHODIC PROTECTION ANODE BED.

SPILL CONTROL NOTES:

- IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS NOTES OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
- a. MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
- b. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
- c. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF SIZE.
- d. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
- e. THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
- PETROLEUM BASED PRODUCTS CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL 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 WILL INCLUDE IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

TRAFFIC CONTROL NOTES

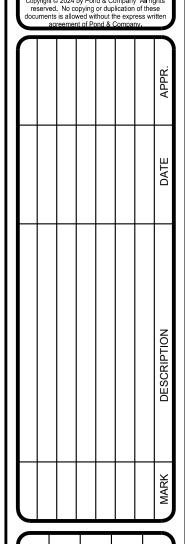
- 1. THE CONTRACTOR SHALL SUBMIT A TEMPORARY TRAFFIC CONTROL PLAN TO THE COUNTY FOR APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- ALL REQUIRED TRAFFIC SIGNAGE MUST MEET MUTCD STANDARDS.
- THERMO-PLASTIC. ALL STRIPING LAYOUTS MUST BE APPROVED BY THE COUNTY TRAFFIC ENGINEER PRIOR TO FINAL APPLICATION.

ALL REQUIRED TRAFFIC STRIPING MUST MEET MUTCD AND GDOT PLAN SPECIFICATIONS AND MUST BE

CONTRACTOR TO COORDINATE LANE CLOSURES WITH FAYETTE COUNTY AND ENGINEER. PROVIDE AT LEAST ONE 12 FOOT LANE FOR TRAFFIC AT ALL TIMES.





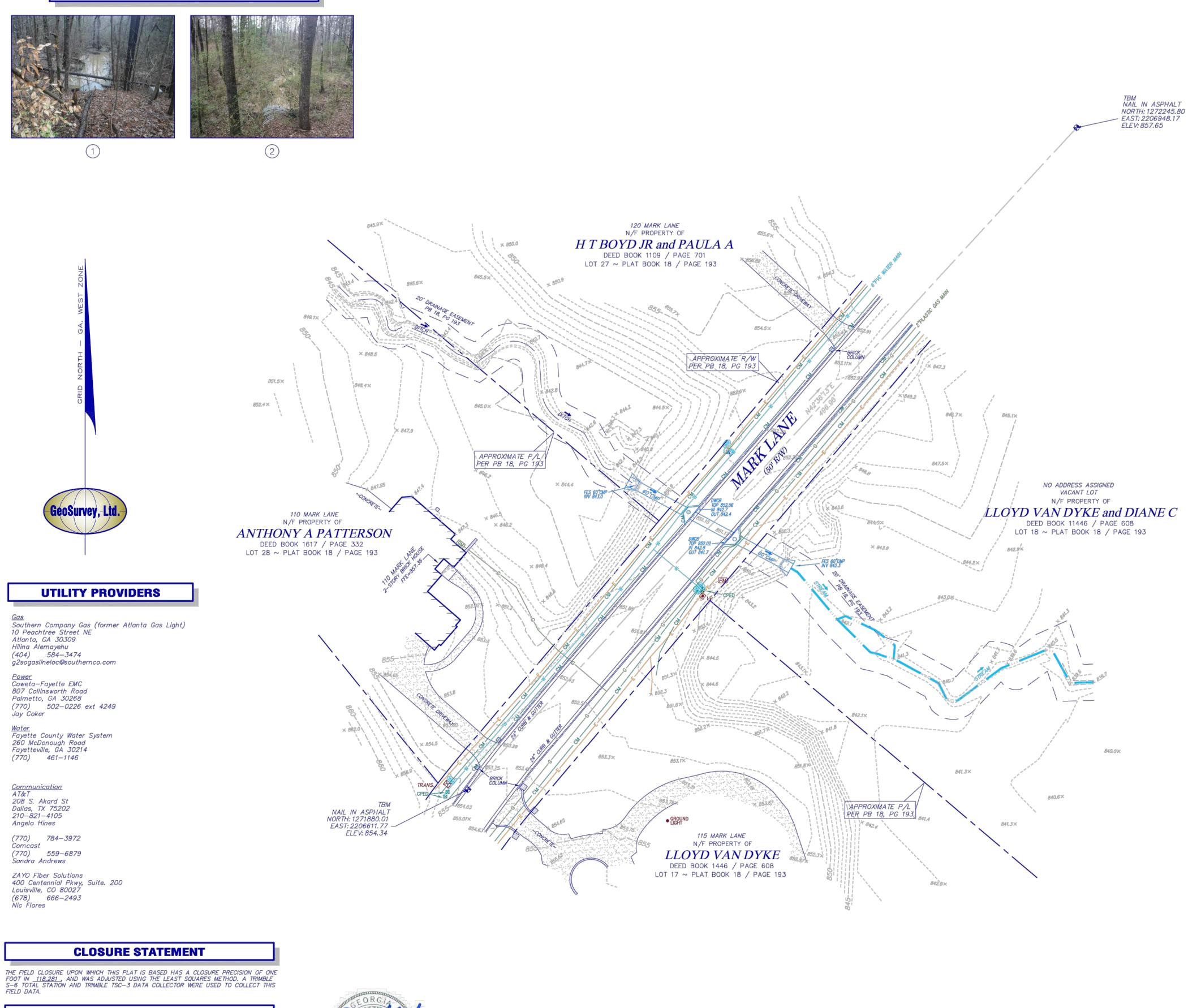


OUNT W, SUITE C **⊥** S

MARK LANE ERT REPLACEN >

SHEET

IDENTIFICATION



AERIAL IMAGE



UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON LOCATION OF MARKINGS PROVIDED BY:

1227 NORTH PEACHTREE PARKWAY, STE 178 PEACHTREE CITY, GA 30269

THE UNDERGROUND UTILITIES (EXCEPT THE LOCATION OF EXISTING DRAINAGE, SEWER AND IRRIGATION UTILITIES AS WELL AS UNDERGROUND STORAGE TANKS) WERE LOCATED BY UTILISURVEY, LLC. UTILIZING RADIO FREQUENCY TECHNIQUE. THIS TECHNIQUE IS CAPABLE OF LOCATING METALLIC UTILITIES AND TRACER WIRES. ANY NON-METALLIC UTILITIES (WITHOUT TRACER WIRE) ARE NOT LOCATED.

THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. UNDERGROUND UTILITIES NOT OBSERVED OR LOCATED UTILIZING THIS TECHNIQUE MAY EXIST ON THIS SITE BUT NOT BE SHOWN AND MAY BE FOUND UPON EXCAVATION. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION

INFORMATION REGARDING MATERIAL AND SIZE OF UTILITIES IS BASED ON RECORDS ACQUIRED FROM THE UTILITY OWNERS.

LIST OF UTILITIES FOUND:

UNDERGROUND POWER ON NORTHWEST AND SOUTHEAST SIDE OF ROAD. UNDERGROUND COMMUNICATION ON NORTHWEST AND SOUTHEAST SIDE OF

UNDERGROUND CABLE TV COMMUNICATION ON NORTHWEST AND SOUTHEAST SIDE OF ROAD.

WATER MAIN ON NORTHWEST SIDE OF ROAD WITH CROSSING AS SHOWN. GAS MAIN ON SOUTHEAST SIDE OF THE ROAD WITH CROSSING AS SHOWN.

VICINITY MAP SITE LOCATION - LATITUDE: 33' 29' 44" LONGITUDE: 84' 27' 41" Wesley Park

GENERAL NOTES

THIS SURVEY HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE PERSON OR ENTITIES NAMED HEREON. NO EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE INFORMATION SHOWN HEREON IS TO BE EXTENDED TO ANY PERSONS OR ENTITIES OTHER THAN THOSE SHOWN HEREON.

THIS SURVEY HAS BEEN PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE INSPECTION REPORT. EASEMENTS OR OTHER ENCUMBRANCES MAY EXIST ON PUBLIC RECORD BUT NOT BE SHOWN HEREON.

PLEASE NOTE: GEOSURVEY, LTD., ASSUMES NO LIABILITY REGARDING THE ACCURACY OR LOCATION OF PROPERTY LINES SHOWN HEREON. PROPERTY LINE INFORMATION IS SHOWN AS APPROXIMATE BASED ON SURVEY REFERENCE 1. NO BOUNDARY SURVEY WAS PERFORMED BY GEOSURVEY, LTD.

THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13113C0102E, AND THE DATE OF SAID MAP IS SEPTEMBER 26, 2008. THIS DETERMINATION WAS MADE BY GRAPHICALLY DETERMINING THE POSITION OF THIS SITE ON SAID FIRM MAPS UNLESS OTHERWISE NOTED.

THE DATUM FOR THIS SITE WAS ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEMS, AND BASED ON POSITIONAL VALUES FOR THE VIRTUAL REFERENCE STATION NETWORK DEVELOPED BY eGPS SOLUTIONS. THE HORIZONTAL REFERENCE FRAME IS NORTH AMERICAN DATUM OF 1983(2011)-STATE PLANE COORDINATE SYSTEM OF GEORGIA-WEST ZONE. THE VERTICAL REFERENCE FRAME IS NORTH AMERICAN VERTICAL DATUM OF 1988. ANY DIRECTIONS OR DIMENSIONS SHOWN ARE A RECTANGULAR, GROUND LEVEL PROJECTION OF THE STATE PLANE COORDINATE SYSTEM.

PLEASE NOTE: ZONING AND SETBACKS SHOULD BE CONFIRMED AND VERIFIED BY PLANNING AND ZONING PRIOR TO DESIGN OR CONSTRUCTION ACTIVITIES.

SURVEY REFERENCES

1> FINAL PLAT OF MARTHA'S VINEYARD, RECORDED IN PLAT BOOK 18, PAGE 193.

LEGEND

STANDARD ABBREVIATIONS STANDARD SYMBOLS AIR CONDITIONER BORE HOLE BUILDING SETBACK LINE CURB INLET CORRUGATED METAL PIPE CONCRETE MONUMENT FND SANITARY CLEANOUT COMMUNICATION PEDESTAL CRIMPED TOP PIPE DROP INLET DUCTILE IRON PIPE DWCB DOUBLE WING CATCH BASIN FENCE FOUND GAS METER INVERT JUNCTION BOX MANHOLE OUTLET CONTROL STRUCTURE POWER METER PK NAIL SET POINT OF BEGINNING POINT OF COMMENCEMENT REINFORCED CONCRETE PIPE IRON REINFORCING BAR 5/8"RBR SET CAPPED LSF 621 SANITARY SEWER SWCB SINGLE WING CATCH BASIN TRANS ELECTRIC TRANSFORMER

OVERHEAD TRAFFIC SIGNAL LIGHT POWER POLE GUY WIRE POWER LINE POWER LINE LIGHT POLE ELECTRIC TRANSFORMER WATER VAULT GAS VALVE GAS METER WATER VALVE WATER METER FIRE HYDRANT --- E --- UNDERGROUND ELECTRIC LINE ---- G ---- UNDERGROUND GAS LINE ──₩ ── UNDERGROUND WATER LINE 1 PHOTO POSITION INDICATOR REGULAR PARKING SPACE COUNT

HANDICAP PARKING SPACE TREE POSITION INDICATOR

GeoSurvey, Ltd.

Land Surveying • 3D Laser Scanning

	arnes Mill Georgia	
Phone: Fax:		95-9900 95-8880

www.geosurvey.com EMAIL: info@geosurvey.com Certificate of Authorization #LSF-000621 TOPOGRAPHIC SURVEY

Mark Lane Stream Crossing

FOR

Fayette County

S JOB NO:	20196043	DRAWING SCALE:	1 "=	<i>30</i> '	SU	RVEY DAT	E:	02-19-2019
IELD WORK:	СМ	CITY: UNINCORPOR	PATED		No.	Date	REVISIONS Description	
ROJ MGR:	BDC	COUNTY: FAYETTE	STATE:	GA	110.	D010	Description	
EVIEWED:	JRC	LAND LOT: 220						
WG FILE: 2019604	43-01.dwg	DISTRICT: 5TH						

IF YOU DIG

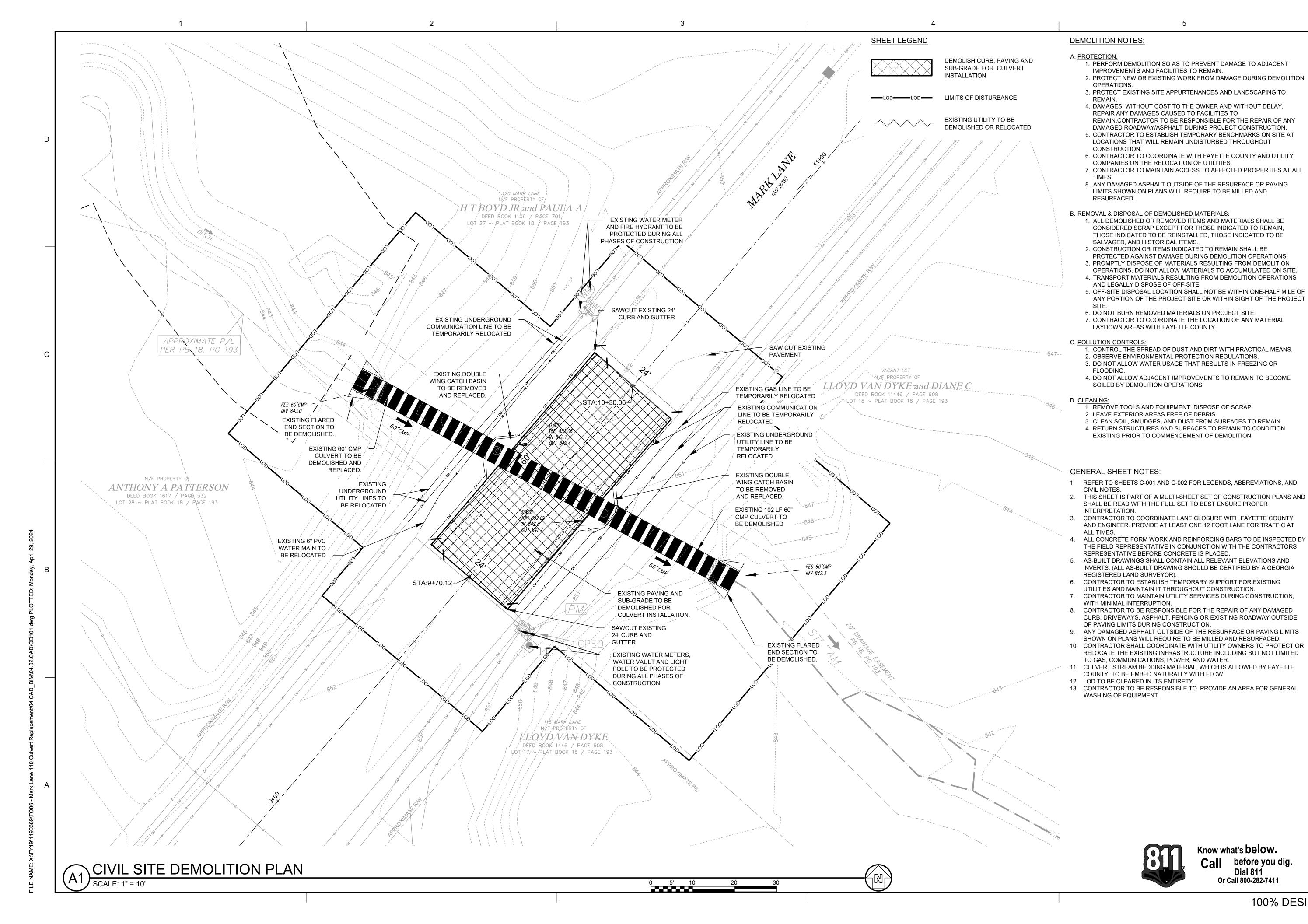


Know what's below. before you dig. **Dial 811** Or Call 800-282-7411

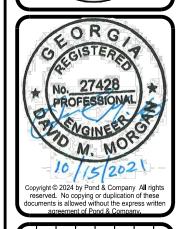
SITE PHOTOGRAPHS



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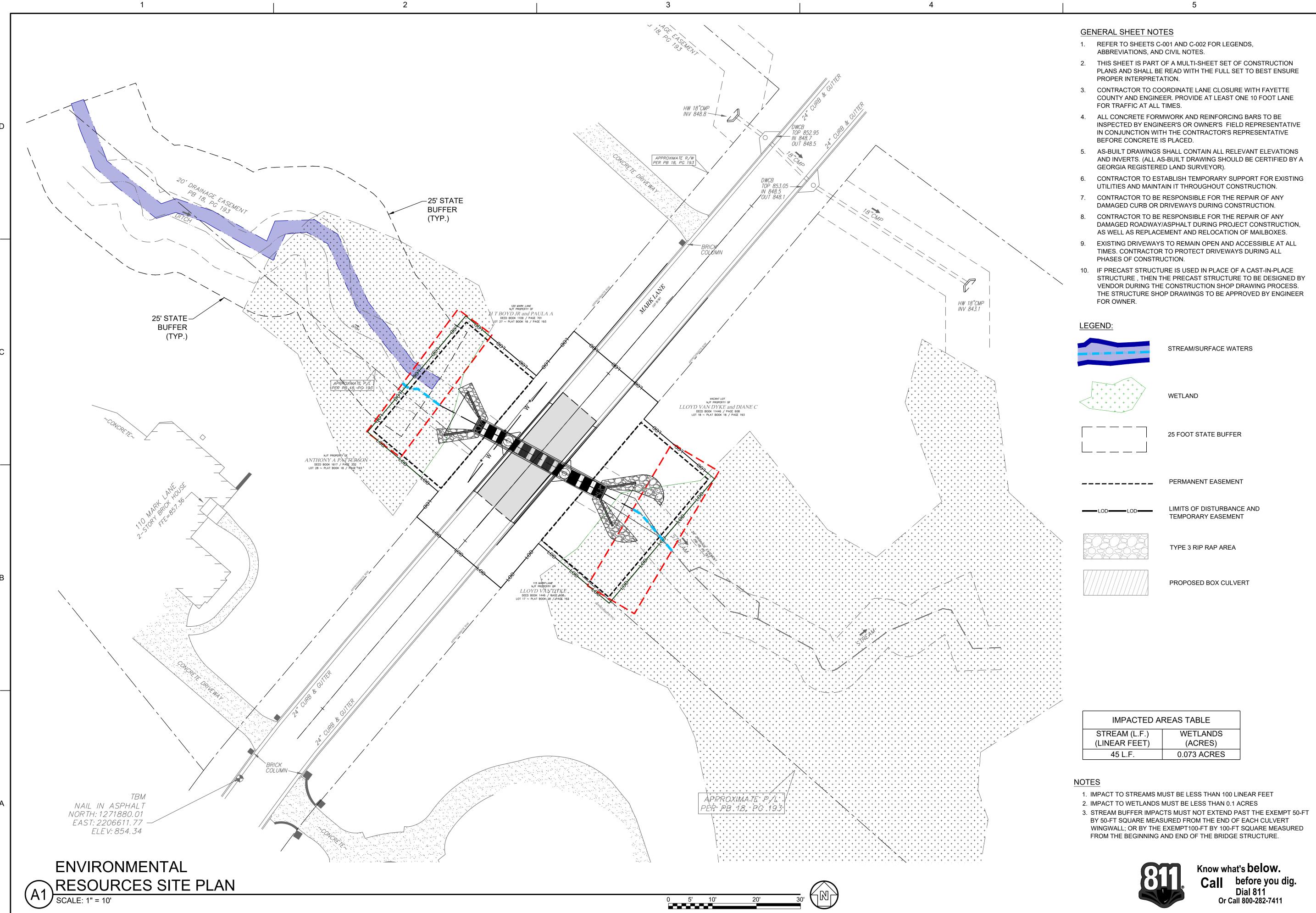


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140 STONEWALL AVE W, SUITE 203,
FAYETTEVILLE, GA. 30214
3500 Parkway Lane, Suite 500
Peachtree Comers, GA 30092
Phone (GTS) 336-7740
Fay (GTS) 346-7740

MARK LANE
CULVERT REPLACEMENT
FAYETTE COUNTY, GA. 30214
CIVIL SITE DEMOLITION PLAN

SHEET IDENTIFICATION CD101







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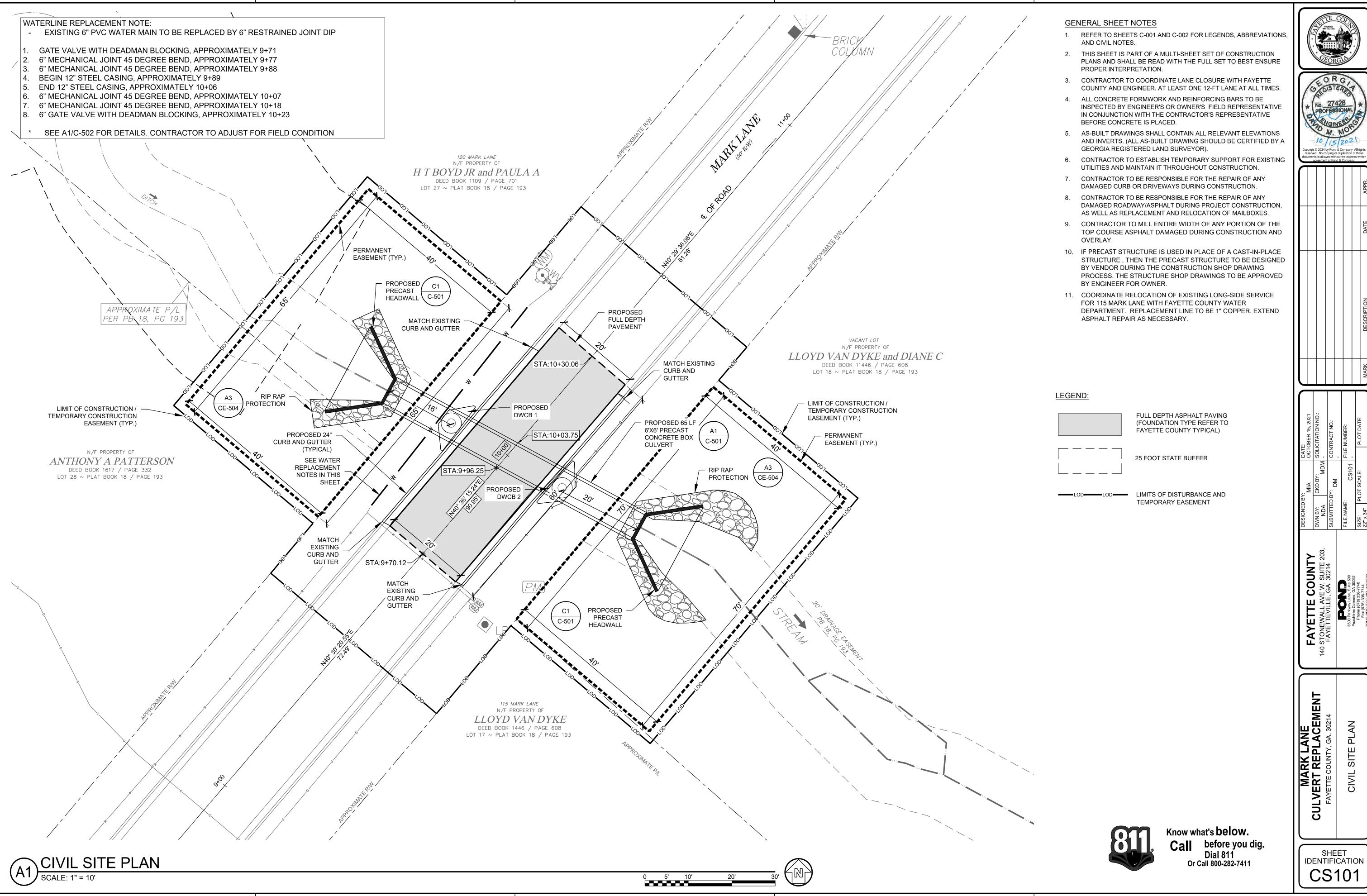
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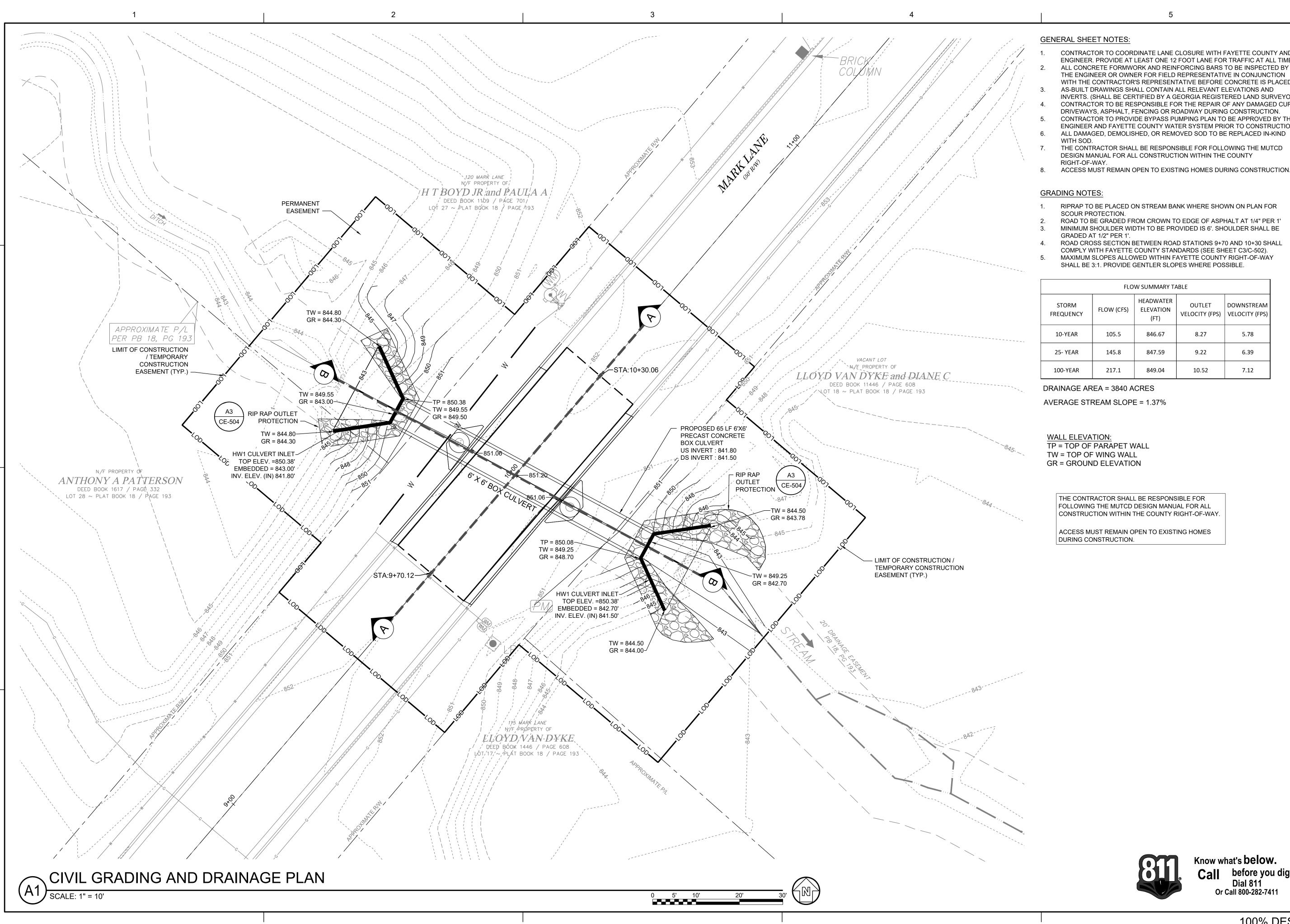
COUNTYVE W, SUITE 203

ENVIRONMENTAL RESOURCES
SITE PLAN MARK LANE
CULVERT REPLACEMENT
FAYETTE COUNTY, GA. 30214

SHEET IDENTIFICATION CS100



CIVIL SITE PLAN



- CONTRACTOR TO COORDINATE LANE CLOSURE WITH FAYETTE COUNTY AND ENGINEER. PROVIDE AT LEAST ONE 12 FOOT LANE FOR TRAFFIC AT ALL TIMES
- ALL CONCRETE FORMWORK AND REINFORCING BARS TO BE INSPECTED BY THE ENGINEER OR OWNER FOR FIELD REPRESENTATIVE IN CONJUNCTION
- WITH THE CONTRACTOR'S REPRESENTATIVE BEFORE CONCRETE IS PLACED. AS-BUILT DRAWINGS SHALL CONTAIN ALL RELEVANT ELEVATIONS AND
- INVERTS. (SHALL BE CERTIFIED BY A GEORGIA REGISTERED LAND SURVEYOR) CONTRACTOR TO BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED CURB, DRIVEWAYS, ASPHALT, FENCING OR ROADWAY DURING CONSTRUCTION.
- CONTRACTOR TO PROVIDE BYPASS PUMPING PLAN TO BE APPROVED BY THE ENGINEER AND FAYETTE COUNTY WATER SYSTEM PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING THE MUTCD DESIGN MANUAL FOR ALL CONSTRUCTION WITHIN THE COUNTY
- ACCESS MUST REMAIN OPEN TO EXISTING HOMES DURING CONSTRUCTION.
- RIPRAP TO BE PLACED ON STREAM BANK WHERE SHOWN ON PLAN FOR
 - ROAD TO BE GRADED FROM CROWN TO EDGE OF ASPHALT AT 1/4" PER 1 MINIMUM SHOULDER WIDTH TO BE PROVIDED IS 6'. SHOULDER SHALL BE
 - GRADED AT 1/2" PER 1'. ROAD CROSS SECTION BETWEEN ROAD STATIONS 9+70 AND 10+30 SHALL
- COMPLY WITH FAYETTE COUNTY STANDARDS (SEE SHEET C3/C-502). MAXIMUM SLOPES ALLOWED WITHIN FAYETTE COUNTY RIGHT-OF-WAY

FLOW SUMMARY TABLE							
STORM FREQUENCY	FLOW (CFS)	HEADWATER ELEVATION (FT)	OUTLET VELOCITY (FPS)	DOWNSTREAM VELOCITY (FPS)			
10-YEAR	105.5	846.67	8.27	5.78			
25- YEAR	145.8	847.59	9.22	6.39			
100-YEAR	217.1	849.04	10.52	7.12			

AVERAGE STREAM SLOPE = 1.37%

TP = TOP OF PARAPET WALL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING THE MUTCD DESIGN MANUAL FOR ALL

ACCESS MUST REMAIN OPEN TO EXISTING HOMES



APP	DATE	DESCRIPTION	MARK

OCTOBER 13, 2021	SOLICITATION NO.: -	CONTRACT NO.:	FILE NUMBER: -	PLOT DATE:
5	- SOL	CON	FILE .	
CIN	CKD BY:	DBY: DM	: CG101	PLOT SCALE:
	DWN BY: NDA	SUBMITTED BY:	FILE NAME:	SIZE: 22" x 34"

FAYETTE COUNTY

0 STONEWALL AVE W, SUITE 203, FAYETTEVILLE GA, 30214

MARK LANE
CULVERT REPLACEMENT

SHEET IDENTIFICATION CG101

Know what's below.

Or Call 800-282-7411

before you dig. Dial 811

1 3

C MARK LANE 7 -PROPOSED _ STA = 10+00.0 ^{_} ROAD PROFILE ELEV = 851.20 ROAD CUT LIMIT 7 STA:9+70.12 EX. GRADE-STA:10+30.06 LROAD CUT LIMIT EX. GRADE EXISTING~ WATER -MAIN _ CREEK DOWNSTREAM CHANNEL PROFILE **~**20% (1.2') - EMBEDMENT -_65 LF 6' X 6' BOX CULVERT @ 0.5% _ US INV. = 841.80 DS INV. = 841.50 10+00 10⁺50 9+50 STATION

OVERALL PROPOSED CULVERT PROFILE (A-A)
HORIZ. SCALE 1" = 20'

VERT. SCALE 1" = 4'

DOWNSTREAM UPSTREAM EXISTING UNDERGROUND UTILITY LINE TO EXISTING UNDERGROUND _ C MARK LANE → — BE TEMPORARILY PROPOSED~ UTILITY LINE TO BE STA = 10+00.0 RELOCATED GRADE _ TEMPORARILY RELOCATED -− ELEV = 851.20 \ PROPOSED PRECAST PROPOSED PRECAST -- HEADWALL AND **HEADWALL AND** ∠WING WALLS WING WALLS~ PROPOSED DWCB. VATION 850 SEE DETAIL 1034D OR 1034DP, SHEET C-503. EXISTING GRADE TPROPOSED DWCB-EMBEDMENT CIRCULAR BASE TOP OUT = AND RISER. SEE /--842.7 DETAIL 1040, 100-YEAR = 844.50' 25-YEAR = 844.12' SHEET C-503. **—**0.5ॄ′%> 20% (1.2') EMBEDMENT -DS INV. OF _ CULVERT = 841.5 US INV. OF CULVERT = 841.80' REPLACEMENT LPROPOSED 65 LF 6' x 6' BOX CULVERT WATERLINE
IN 12" DIP CASING.
SEE DETAIL A1/C-502 STATION PROPOSED MAIN FLOW CULVERT PROFILE (B-B)

NOTE: CONTRACTOR TO MATCH EXISTING GRADE AND PROVIDE CROWN PER FAYETTE COUNTY ROAD SECTION DETAILS SHEET C3/C-502 HORIZ. SCALE 1" = 20' VERT. SCALE 1" = 4'



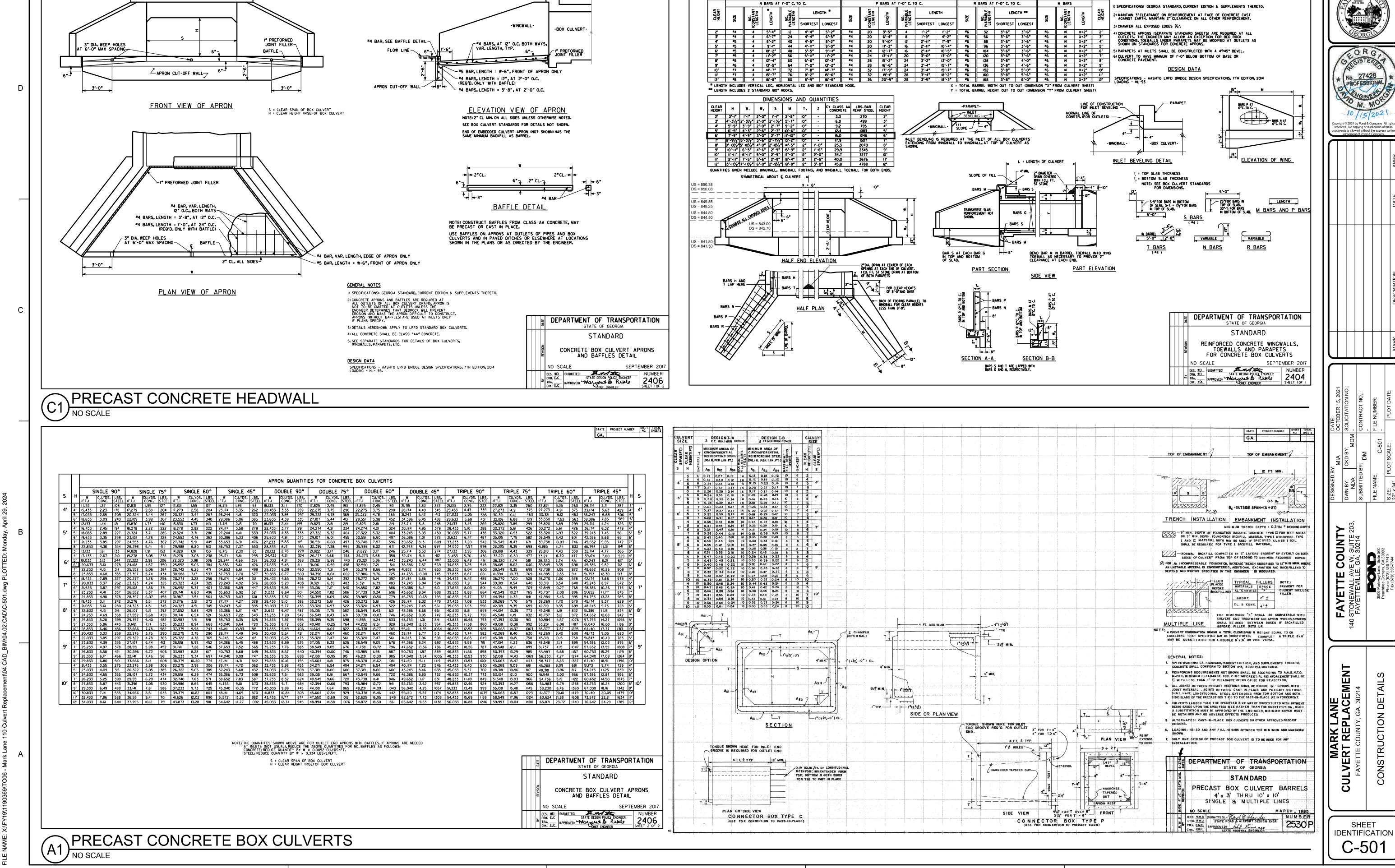


				APPR.
			04-29-2024	DATE
			FAYETTE COUNTY COMMENTS	DESCRIPTION
			1	MARK

140 STONEWALL AVE W, SUITE 203, FAYETTEVILLE, GA. 30214

MARK LANE
ULVERT REPLACEMENT
FAYETTE COUNTY, GA. 30214

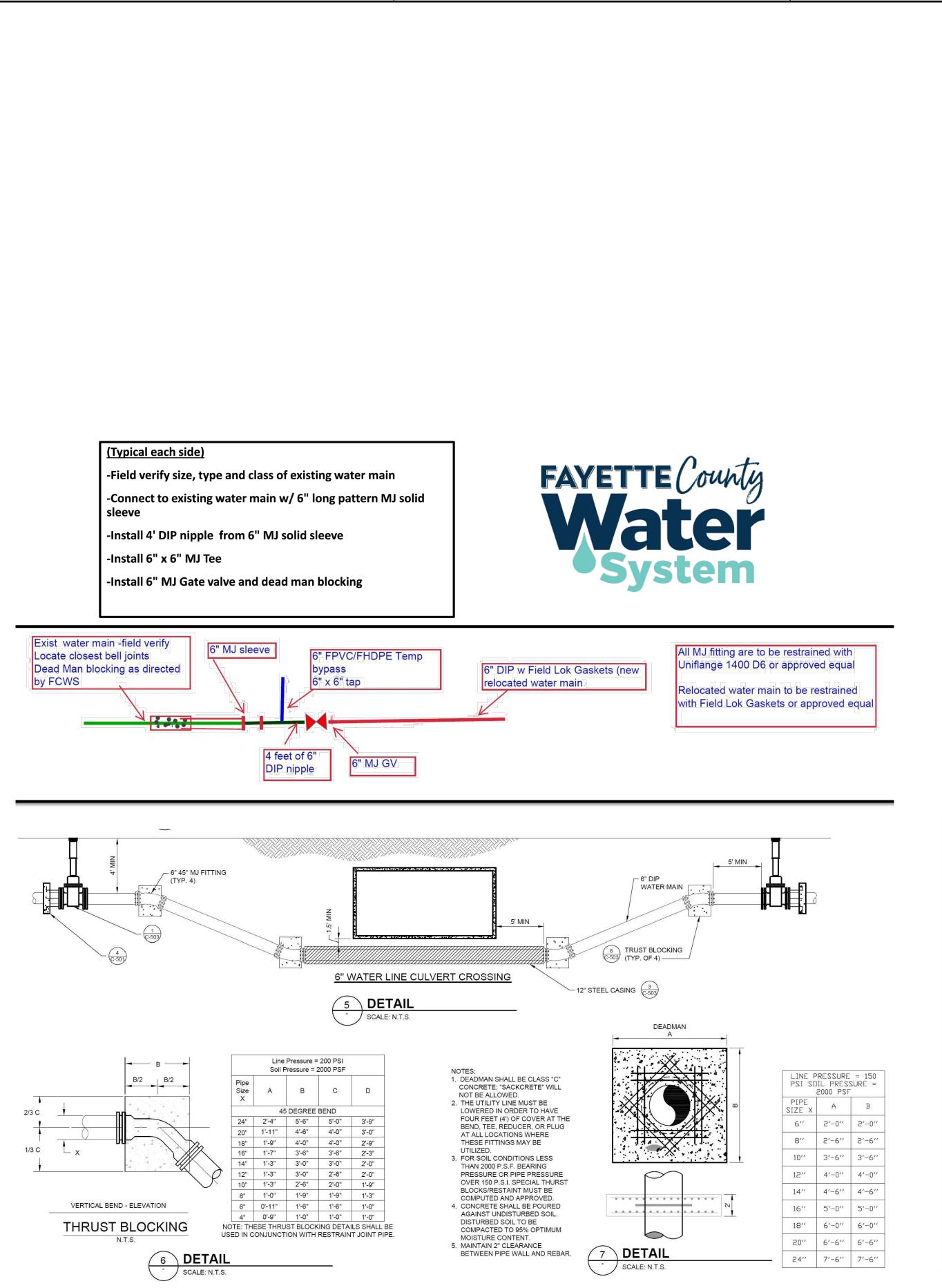
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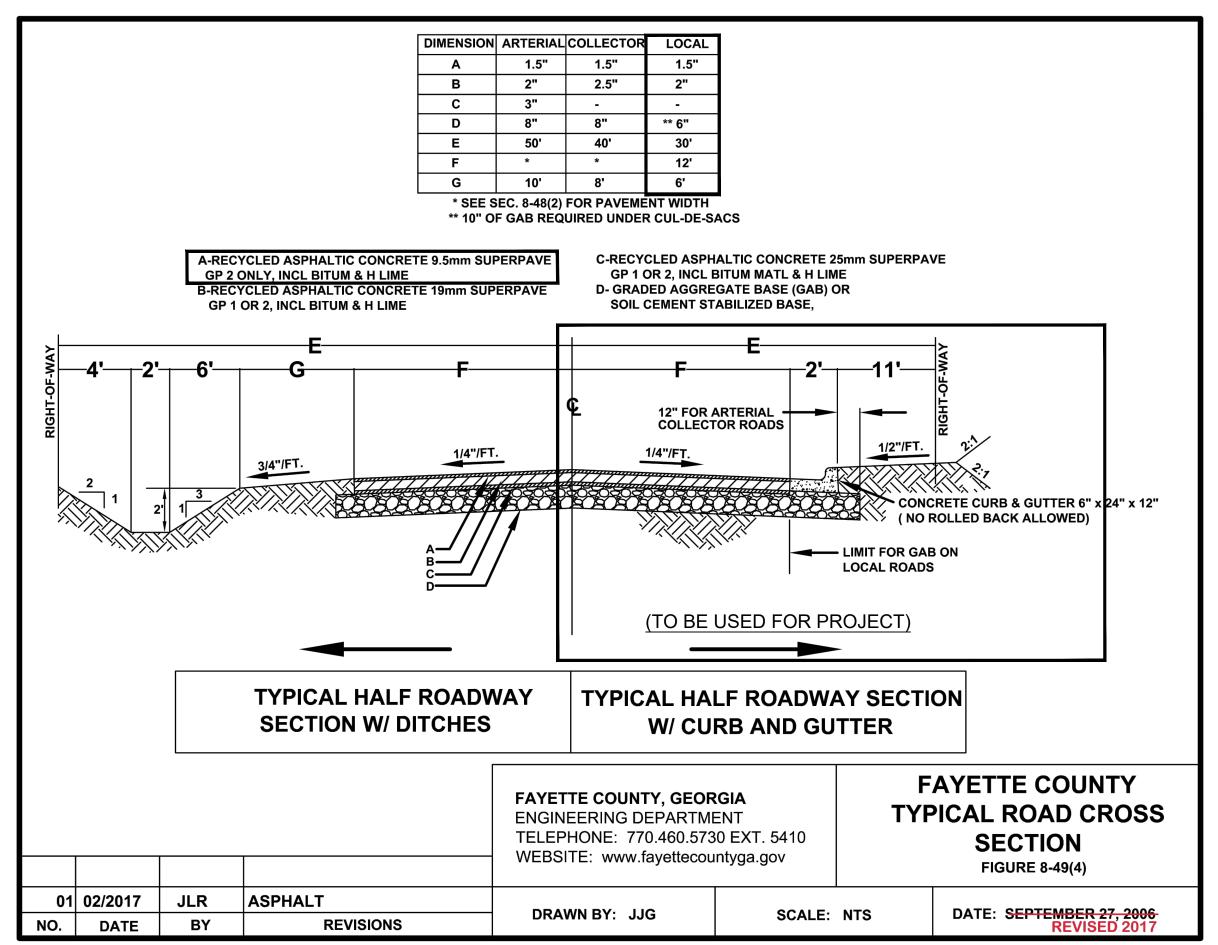
100% DESIGN SUBMITTAL

GENERAL NOTES

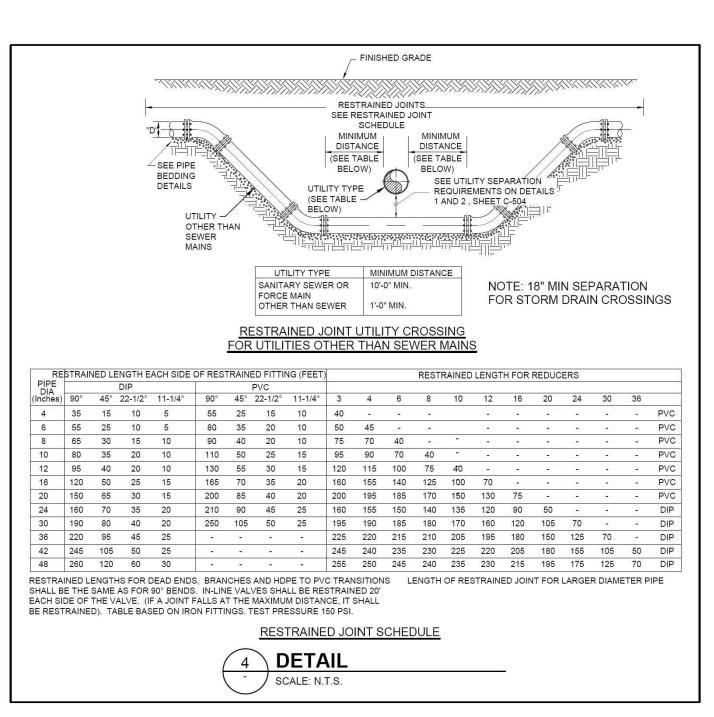
WINGWALLS, TOEWALLS AND PARAPETS

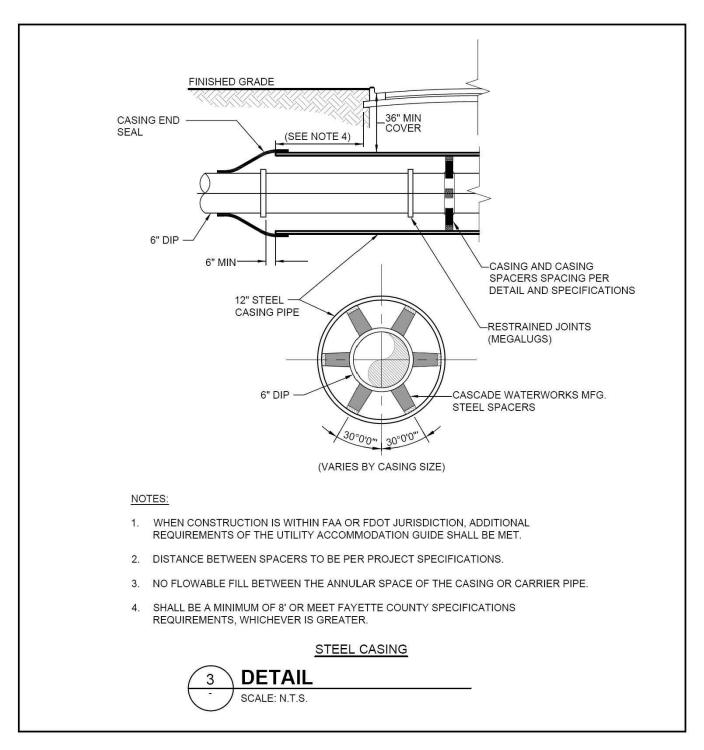


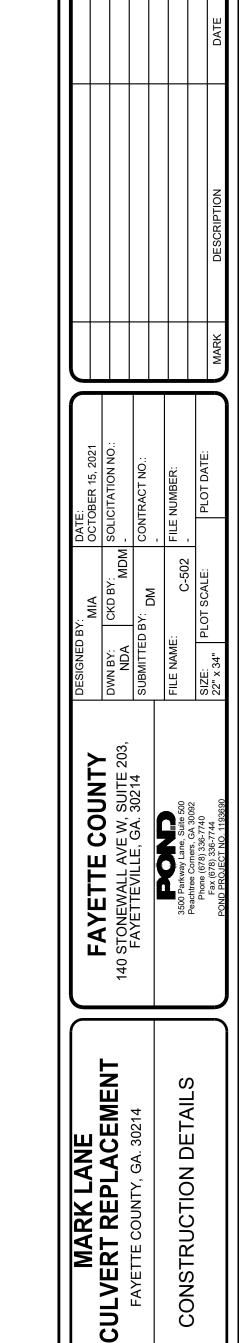
FAYETTE COUNTY WATER LINE CULVERT CROSSING DETAILS



FAYETTE COUNTY TYPICAL ROAD CROSS SECTION & PAVEMENT SCALE: N.T.S.





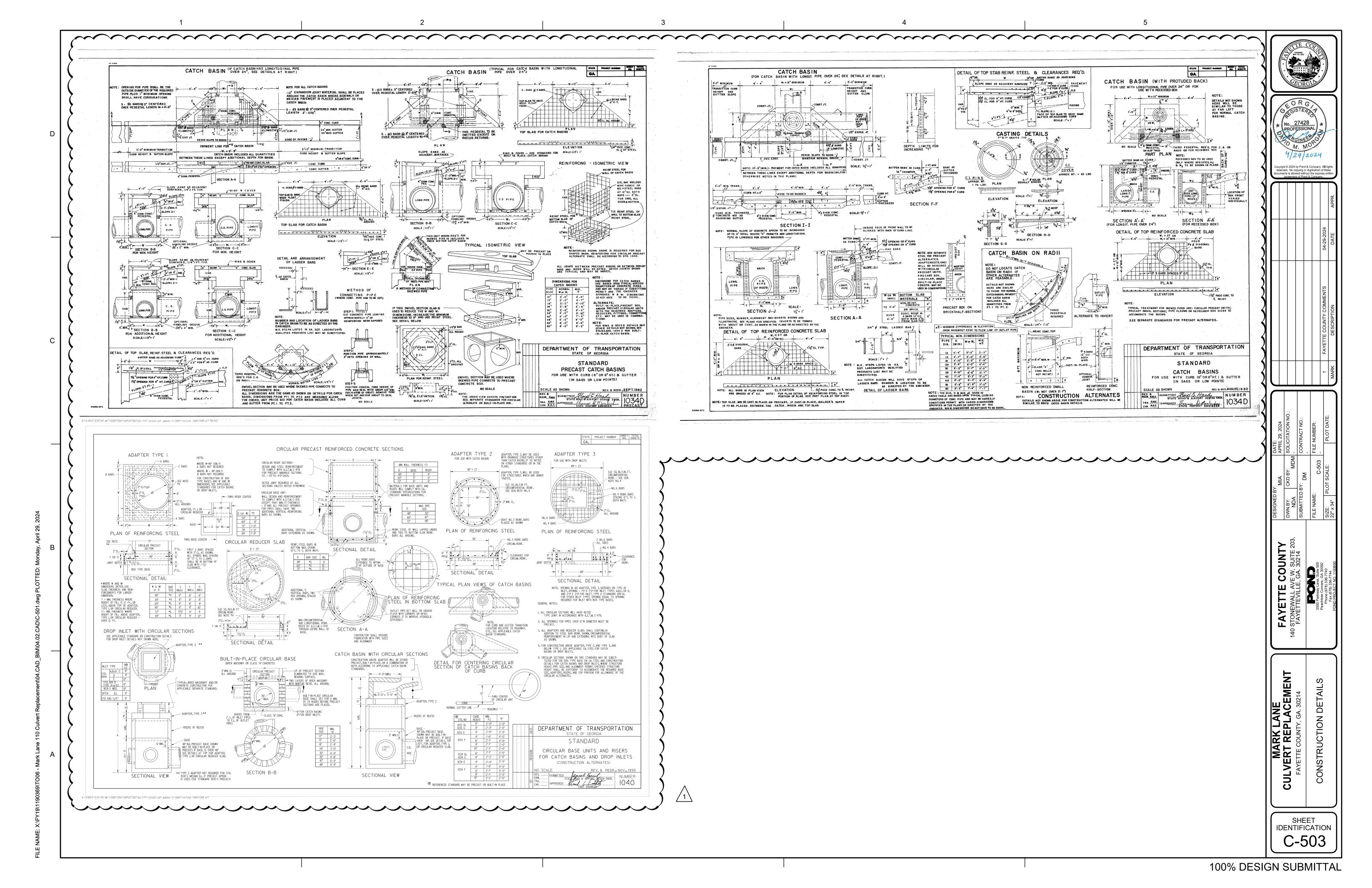


100% DESIGN SUBMITTAL

SHEET

IDENTIFICATION

C-502



I 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

OCTOBER 15, 2021

DAVID MORGAN, P.E.

GSWCC LEVEL II CERTIFICATION # 0000011643 EXPIRES: 02/26/2022

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN GENERAL NOTES (IN CONFORMANCE WITH STATE OF GEORGIA GENERAL NPDES PERMIT NO. GAR 100001.

PRIMARY

FAYETTE COUNTY ENVIRONMENTAL MANAGEMENT

PHIL MALLON PERMITEE: 140 STONEWALL AVE. W.,

SUITE 203, FAYETTEVILLE, GA. 30214 PHONE (770) 313-9855 PUBLICWORKS@FAYETTECOUNTYGA.GOV

ENGINEER: POND & COMPANY

> 3500 PARKWAY LANE, SUITE 500 PEACHTREE CORNERS, GEORGIA 30092

PHONE: (678) 336-7740 FAX: (678) 336-7744

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

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.

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, OR CONCURRENT WITH, 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.

ALL BUFFERS AND TREE SAVE AREAS SHALL BE CLEARLY IDENTIFIED WITH FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.

SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE 1/3 FULL VOLUME.

CONTACT: DAVID MORGAN PE

CONTRACTOR: TO BE DETERMINED

GA. P.E. # 27428, E&S LEVEL II CERTIFICATION # 0000011643

24-HOUR EROSION AND SEDIMENT CONTROL CONTACT: PHIL MALLON (770) 313-9855

TOTAL SITE AREA: 0.27 ACRES DISTURBED AREA: 0.27 ACRES

EXISTING LAND USE:

THE EXISTING LAND USE CONSISTS OF TWO LANE PAVED ROAD

WITH 60" DIAMETER PLATED CMP CULVERT.

PROPOSED LAND USE: THE PROJECT CONSISTS OF THE REMOVAL OF TOTAL 100 LF OF THE EXISTING DETERIORATED 60-INCH PLATED

> CORRUGATED METAL PIPE CULVERT SPANNING UNDER MARK LANE AND REPLACING WITH TOTAL 65LF OF 6 FT X 6

FT REINFORCED CONCRETE BOX CULVERT.

NAME OF RECEIVING WATERS: MORNING CREEK AREA OF ON-SITE WETLANDS: 0 AC

EROSION CONTROL LEGEND

TEMPORARY MULCHING - DETAIL A4/CE-501

SILT FENCING -DETAIL C1/CE-501

TEMPORARY SEEDING - DETAIL A1/CE-502

DUST CONTROL - DETAIL A1/CE-501

PERMANENT SEEDING - DETAIL A1/CE-503

FILTER SOCK -DETAIL C4/CE-502

DETAIL C1/CE-504

DISTURBED AREA STABILIZATION W/ SOODING - DETAIL A3/CE-502

Ss

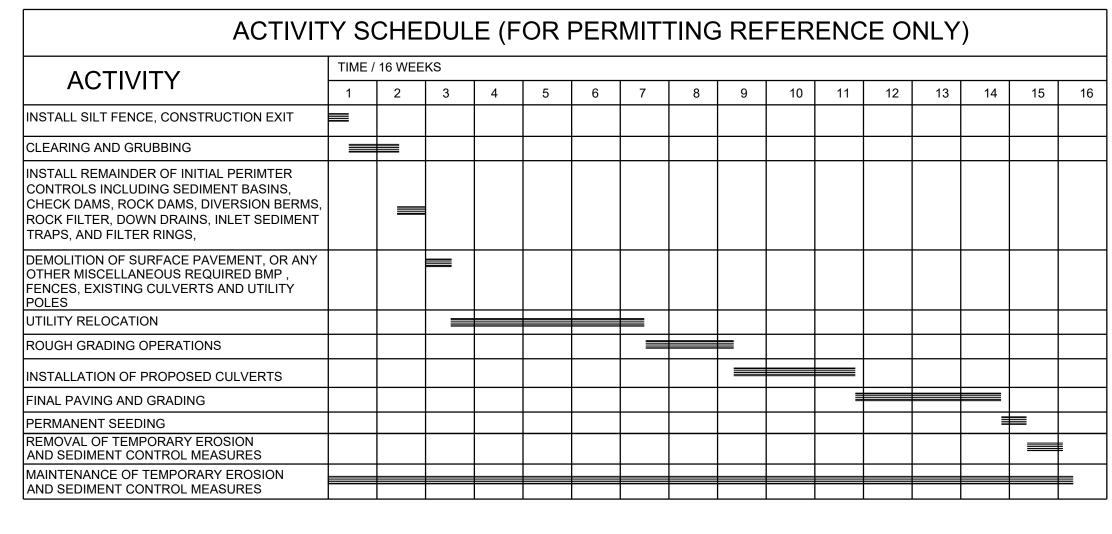
SLOPE STABILIZATION DETAIL A1/CE-504

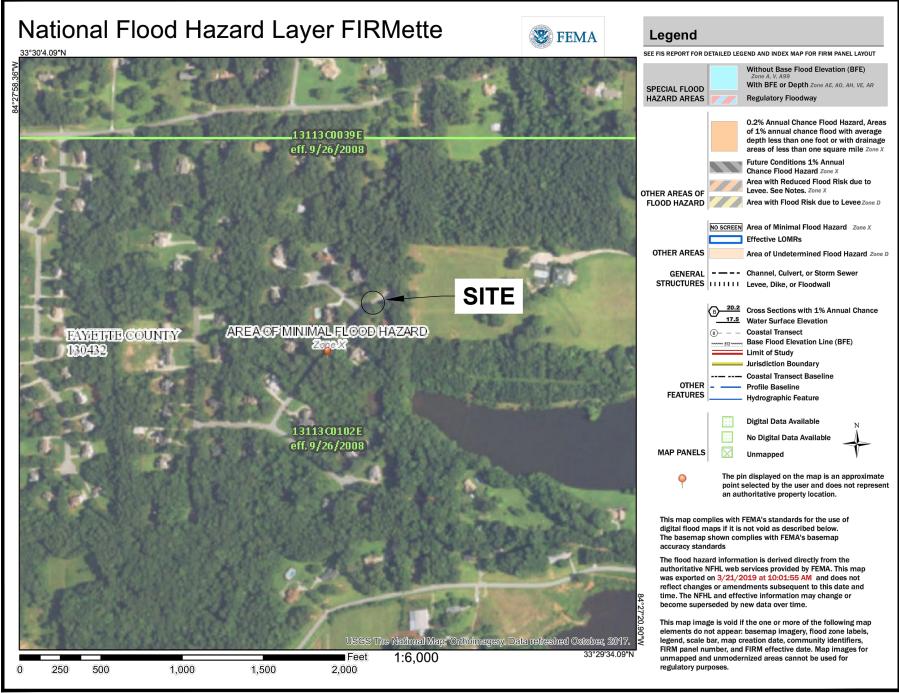
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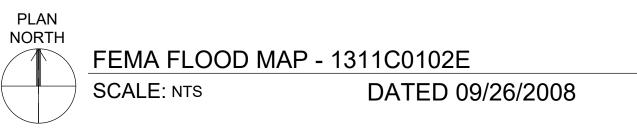
Du

STORM DRAIN OUTLET **PROTECTION**

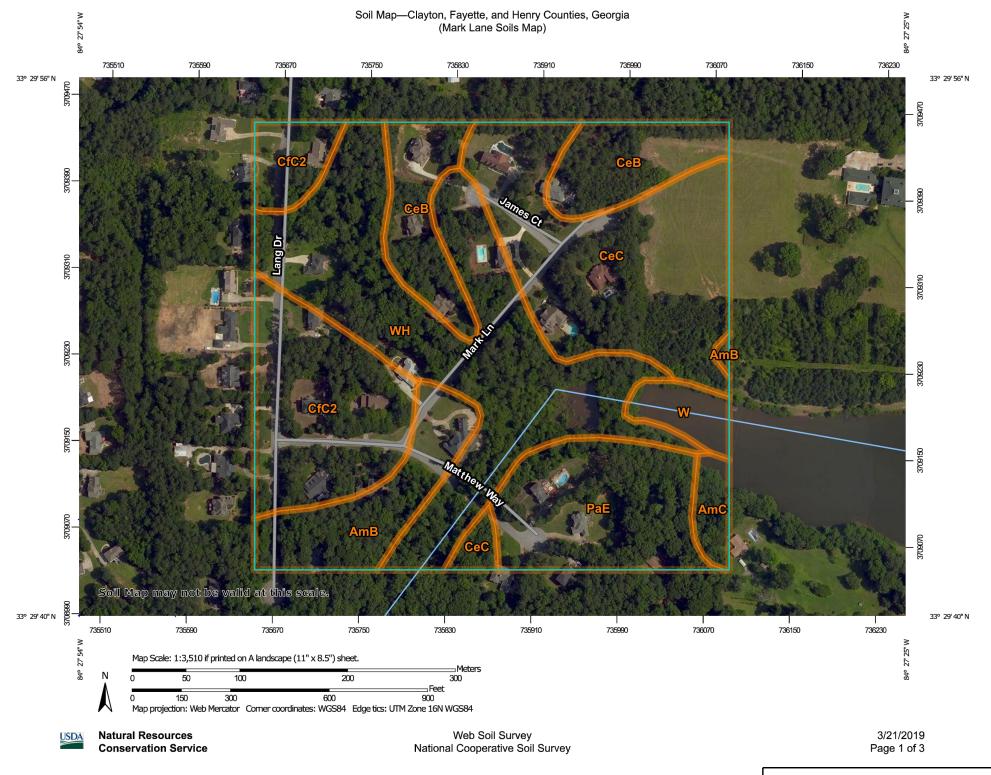
TREE PROTECTION FENCE -







THERE ARE KNOWN WETLANDS LOCATED WITHIN 200 FEET OF PROJECT AREA. STATE WATERS DO EXIST WITHIN 200 FEET OF PROJECT AREA.



SOIL MAP

SYMBOL DESCRIPTION Appling sandy loam, 2 to 6 percent slopes Cecil sandy loam, 2 to 6 percent slopes Cecil sandy loam, 6 to 10 percent slopes Cecil sandy clay loam, 6 to 10 percent slopes, eroded

Wehadkee soils, 0 to 2 percent slopes, frequently flooded

SOILS LEGEND

Know what's **below**. before you dig. Or Call 800-282-7411

DESIGN PROFESSIONAL

DAVID MORGAN, P.E.

LEVEL II CERTIFICATION

No.: 0000011643

EXPIRES: 06/03/2024

IDENTIFICATION CE001

OUNTW, SUITE 2

MARK LANE
CULVERT REPLACEMENT

TO CLEARING AND GRADING OPERATIONS TO KEEP SEDIMENT CONTAINED WITHIN THE SITE AS NECESSARY. DISTURBED AREA STABILIZATION SHALL BE STABILIZED WITH MULCH (Ds1), TEMPORARY SEEDING (Ds2), AND PERMANENT SEEDING (Ds3) AS NECESSARY. INLET SEDIMENT TRAP PROTECTION WILL BE USED TO HELP PREVENT SEDIMENT FROM ENTERING ANY EXISTING INLETS. SEDIMENT STORAGE OF 67 CY PER DISTURBED ACRE IS PROVIDED BY TEMPORARY SEDIMENT BASINS.

D | CRITICAL WORK ZONE:

ALL SLOPES 3:1 OR STEEPER AND HIGHER THAN 5 FEET, AND ALL SLOPES ADJACENT TO BUFFERS SHALL RECEIVE SURFACE ROUGHENING, AND EROSION CONTROL MATTING. SILT FENCING WILL BE USED TO PREVENT SEDIMENT FROM LEAVING THE DISTURBED AREA. INLET PROTECTION WILL BE USED TO PREVENT SEDIMENT FROM ENTERING THE STORM SEWER.

CONSTRUCTION PERIOD STORM WATER POLLUTANT CONTROL

SEDIMENTATION AND FUEL SPILLS ARE POTENTIAL SOURCES OF STORM WATER POLLUTION DURING THE CONSTRUCTION PROCESS. THESE POLLUTANTS WILL BE REMOVED AND/OR REDUCED VIA THE BMP'S CONTAINED WITHIN THIS PLAN

STABILIZATION MEASURES:

THE STABILIZATION MEASURES SHOWN ON THESE PLANS HAVE BEEN DESIGNED TO STABILIZE THE DISTURBED AREAS FOLLOWING THE TEMPORARY OR PERMANENT COMPLETION OF CONSTRUCTION. ALL EXPOSED AREAS SHALL BE STABILIZED WITH TEMPORARY MULCHING (DS1) IMMEDIATELY AFTER TRENCHING IF THEY ARE TO REMAIN INACTIVE FOR 14 DAYS OR MORE. ALL DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY (DS2) OR PERMANENT (DS3) VEGETATION AS INDICATED ON THE PLAN. SLOPES GREATER 3:1 ARE TO BE STABILIZED WITH EROSION CONTROL MATTING (MB). DUST CONTROL (DU) SHALL ALSO BE PROVIDED AS NEEDED DURING GRADING ACTIVITIES. SEE EROSION, SEDIMENTATION, AND POLLUTION CONTROL (ESPCP) DETAIL SHEETS FOR MORE DETAILS REGARDING THESE STABILIZATION MEASURES.

STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, EXCEPT:

WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SNOW COVER OR OTHER ADVERSE WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL

WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.

KEEPING PLANS CURRENT:

THE PRIMARY, SECONDARY OR TERTIARY PERMITTEES, AS APPLICABLE, SHALL AMEND THEIR PLAN WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON BMPS WITH A HYDRAULIC COMPONENT (I.E., THOSE BMPS WHERE THE DESIGN IS BASED UPON RAINFALL INTENSITY, DURATION AND RETURN FREQUENCY STORMS) OR IF THE PLAN PROVES TO BE INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM SOURCES IDENTIFIED UNDER \mid PART IV.D.3. OF THIS PERMIT. AMENDMENTS TO THE PLAN MUST BE CERTIFIED BY A DESIGN PROFESSIONAL AS PROVIDED IN THIS PERMIT. SECONDARY PERMITTEES MUST NOTIFY THE PRIMARY PERMITTEE WITHIN 24-HOURS OF BECOMING AWARE OF ANY SUSPECTED BMP DESIGNED DEFICIENCIES WHICH ARE NOT EFFECTIVE IN CONTROLLING THE DISCHARGE OF POLLUTANTS FROM THE SECONDARY PERMITTEE'S SITE. THE PRIMARY PERMITTEE MUST EVALUATE WHETHER THESE DEFICIENCIES EXIST WITHIN 48-HOURS OF SUCH NOTICE, AND IF THESE DEFICIENCIES ARE FOUND TO EXIST MUST AMEND THE PLAN IN ACCORDANCE WITH THIS PARAGRAPH TO ADDRESS THOSE DEFICIENT BMPS WITHIN SEVEN (7) DAYS OF BEING NOTIFIED BY THE SECONDARY PERMITTEE. WHEN THE PLAN IS AMENDED, THE PRIMARY PERMITTEE MUST NOTIFY AND PROVIDE A COPY OF THE AMENDMENT TO ALL AFFECTED SECONDARY PERMITTEES WITHIN THIS SEVEN (7) DAY PERIOD. THE SECONDARY PERMITTEE(S) MUST IMPLEMENT ANY NEW PLAN REQUIREMENTS AFFECTING THEIR SITE(S) WITHIN 48-HOURS OF NOTIFICATION BY THE PRIMARY PERMITTEE. NOTWITHSTANDING THE FOREGOING, THE PRIMARY OR TERTIARY PERMITTEE REMAINS RESPONSIBLE FOR INSURING THAT THE PLAN, AS APPROPRIATE, MEETS THE REQUIREMENTS OF THIS PERMIT

PROPER OPERATION AND MAINTENANCE

THE PERMITTEE SHALL AT ALL TIMES PROPERLY OPERATE AND MAINTAIN ALL FACILITIES AND SYSTEMS OF TREATMENT AND CONTROL (AND RELATED APPURTENANCES) WHICH ARE INSTALLED OR USED BY THE PERMITTEE TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT AND WITH THE REQUIRED PLANS. PROPER OPERATION AND MAINTENANCE ALSO INCLUDES ADEQUATE LABORATORY CONTROLS AND APPROPRIATE QUALITY ASSURANCE PROCEDURES. PROPER OPERATION AND MAINTENANCE REQUIRES THE OPERATION OF BACKUP OR AUXILIARY FACILITIES OR SIMILAR SYSTEMS, INSTALLED BY AN PERMITTEE ONLY WHEN NECESSARY TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THE PERMIT.

EROSION AND SEDIMENT CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT

REFER TO THE DETAILS CONTAINED WITHIN THIS PLAN SET FOR ADDITIONAL MAINTENANCE INSTRUCTION

NON-STORM WATER DISCHARGES

NON-STORM WATER DISCHARGES (DISCHARGES FROM FIRE FIGHTING ACTIVITIES, FIRE HYDRANT FLUSHING, POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING, IRRIGATION DRAINAGE, AIR CONDITIONING CONDENSATE, SPRINGS, UNCONTAMINATED GROUNDWATER, AND FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS OR POLLUTANTS) THAT ARE COMBINED WITH STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY SHALL BE DISCHARGED TO THE PROPOSED STORM DRAINAGE SYSTEM AND ROUTED THROUGH THE EROSION AND SEDIMENTATION CONTROLS IDENTIFIED WITHIN THIS PLAN. NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF THIS IS NOT POSSIBLE.

WASTE MATERIALS AND DISPOSAL:

ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER OR OTHER APPROPRIATE WASTE MANAGEMENT FACILITY PERMISSIBLE UNDER GAR PERMIT NO. 100001, WASTE MANAGEMENT FACILITIES SHALL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE WASTE MANAGEMENT FACILITIES. WASTE MANAGEMENT FACILITIES SHALL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY AND TRASH SHALL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE SHALL BE BURIED ON-SITE.

ALL PERSONNEL SHALL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL. A NOTICE STATING THESE PRACTICES SHALL BE POSTED AT THE JOB SITE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED

LOCATE WASTE COLLECTION AREAS AWAY FROM STREETS, GUTTERS, WATERCOURSES AND STORM DRAINS. WASTE COLLECTION AREAS, SUCH AS DUMPSTERS, ARE OFTEN BEST LOCATED NEAR CONSTRUCTION SITE ENTRANCES TO MINIMIZE TRAFFIC ON DISTURBED SOILS.

HAZARDOUS WASTES:

ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER AS REQUIRED 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. SHALL 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 SHALL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS SHALL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS SHALL BE MAINTAINED IN THE EROSION SEDIMENTATION AND POLLUTION CONTROL PLAN (ESPCP) FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO HANDLES 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 AND 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 WASTES SHALL BE ALLOWED TO COME IN CONTACT WITH STORM WATER DISCHARGES. IF SUCH CONTACT OCCURS, THE STORM WATER DISCHARGE SHALL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORM WATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

NOTHING IN THIS PERMIT SHALL BE CONSTRUED TO PRECLUDE THE INSTITUTION OF ANY LEGAL ACTION OR RELIEVE THE PERMITTEE FROM ANY RESPONSIBILITIES, LIABILITIES, OR PENALTIES TO WHICH THE PERMITTEE IS OR MAY BE SUBJECT UNDER THE GEORGIA HAZARDOUS WASTE MANAGEMENT ACT, O.C.G.A. § 12-8-60, ET SEQ. OR UNDER CHAPTER 14 OF TITLE 12 OF THE OFFICIAL CODE OF GEORGIA ANNOTATED; NOR IS THE OPERATOR RELIEVED FROM ANY RESPONSIBILITIES, LIABILITIES OR PENALTIES TO WHICH THE PERMITTEE IS OR MAY BE SUBJECT UNDER SECTION 311 OF THE CLEAN WATER ACT OR SECTION 106 OF COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT.

SANITARY WASTES:

ALL PERMITTEES SHALL ENSURE THAT THIS PLAN IS IN COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEM REGULATIONS.

A MINIMUM OF ONE PORTABLE SANITARY UNIT SHALL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH THE LOCAL STATE REGULATIONS.

ALL SANITARY WASTE UNITS SHALL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORM WATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT OF BMP'S SHALL BE IMPLEMENTED AS NECESSARY, SUCH AS GRAVEL BAGS OR SPECIFICALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTE FROM CONTRIBUTING TO STORM WATER DISCHARGES. THE LOCATION OF SANITARY WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

OFFSITE VEHICLE TRACKING / DUST CONTROL

OFF-SITE VEHICLE TRACKING OF DIRT, SOILS, AND SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED OR ELIMINATED TO THE MAXIMUM EXTENT PRACTICAL. A STABILIZED CONSTRUCTION EXIT (CO) SHALL BE PROVIDED TO REDUCE VEHICLE TRACKING OF SEDIMENT. SEE ESPCP PLAN AND DETAIL SHEETS FOR THE CONSTRUCTION EXIT LOCATIONS AND DETAIL. THE PAVED STREET ADJACENT TO THE CONSTRUCTION EXIT SHALL BE INSPECTED DAILY BY A REPRESENTATIVE OF THE SITE CONTRACTOR FOR TRACKING OF MUD, DIRT, OR ROCK. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE SHALL BE COVERED WITH A TARPAULIN. DUST CONTROL (DU) SHALL BE APPLIED AS NECESSARY TO PREVENT SURFACE AND AIR MOVEMENT OF DUST.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE FOLLOWING MATERIALS ARE EXPECTED TO BE ONSITE DURING CONSTRUCTION: CONCRETE PRODUCTS, ASPHALT, PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, TAR, METAL BUILDING MATERIALS, LUMBER, SHEET ROCK, FLOOR COVERINGS, ELECTRICAL WIRE AND FIXTURES, PAINTS/STAINS/FINISHING TREATMENTS, PAINT SOLVENTS, ADDITIVES FOR SOIL STABILIZATION, CLEANING SOLVENTS, PESTICIDES FERTILIZERS, HERBICIDES, CRUSHED STONE, PLASTIC AND METAL PIPES.

SPILL PREVENTION

PRACTICES SUCH AS GOOD HOUSEKEEPING, PROPER HANDLING OF HAZARDOUS PRODUCTS AND PROPER SPILL CONTROL PRACTICES WILL BE FOLLOWED TO REDUCE THE RISK OF SPILLS AND SPILLS FROM DISCHARGING INTO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

QUANTITIES OF PRODUCTS STORED ONSITE WILL BE LIMITED TO THE AMOUNT NEEDED FOR THE JOB

- A. PRODUCTS AND MATERIALS WILL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL, WHERE POSSIBLE.
- B. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER LABELS LEGIBLE AND VISIBLE.
- C. PRODUCT MIXING, PRODUCT DISPOSAL, AND DISPOSAL OF PRODUCT CONTAINERS WILL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- D. THE CONTRACTOR WILL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE AND DISPOSAL.

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN GENERAL NOTES (IN CONFORMANCE WITH STATE OF GEORGIA GENERAL NPDES PERMIT NO. GAR 100001)

PRODUCT SPECIFIC PRACTICES

PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAINMENT. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED INTO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS, AND PRODUCT CONTAINERS WILL BE DISPOSED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

CONCRETE/MASONRY - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON SITE. THE CONCRETE PROVIDER HAS RESPONSIBILITY TO ENSURE APPROPRIATE TRAINING HAS BEEN PROVIDED TO THEIR TRUCK DRIVERS, AND MUST PROVIDE APPROPRIATE DETAILS AND RESOURCES TO ENABLE THEM TO COMPLETE A DELIVERY WITHOUT CAUSING POLLUTION. CHUTES, BARRELS. WHEELBARROWS AND OTHER EQUIPMENT MUST BE RINSED IN THE SITE WASH-DOWN AREA. SWEEP OR SHOVEL ANY SPILLS THAT OCCUR AND ALLOW RESIDUE TO SET BEFORE REMOVING. THE HARDENED RESIDUE MAY THEN BE PLACED IN A DESIGNATED CONCRETE/MASONRY RECYCLING BIN ON SITE. DO NOT WASH CONCRETE/MASONRY INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS. TRUCKS SHOULD NOT TRACK ANY CONCRETE OR MUD AND SEDIMENT OFF SITE.

FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS, THE CROP ESTABLISHMENT GUIDELINES, OR THE SPECIFICATIONS CONTAINED WITHIN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN:

SUBSTANCES OR OIL RESULTING FROM AN ON-SITE SPILL.

- A. LOCAL, STATE, AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND PROCEDURES SHALL BE MADE AVAILABLE TO SITE PERSONNEL
- B. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL 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.
- C. SPILL PREVENTION PRACTICES AND PROCEDURES SHALL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- D. ALL SPILLS WILL BE CLEANED IMMEDIATELY UPON DISCOVERY. ALL SPILLS SHALL BE REPORTED AS REQUIRED BY LOCAL. STATE AND FEDERAL REGULATIONS.
- E. THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL IN THE STORM WATER DISCHARGE(S) FROM A SITE SHALL BE PREVENTED.
- F. WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTING QUANTITY ESTABLISHED UNDER EITHER GEORGIA'S OIL OR HAZARDOUS MATERIAL SPILLS OR RELEASES ACT (O.C.G.A. SEC. 12-14-2, ET SEQ.), 40 CFR 117, OR 40 CFR 302 OCCURS DURING A 24-HOUR PERIOD, THE PERMITTEE IS REQUIRED TO NOTIFY EPD AT (404) 656-4863 OR (800) 241-4113 AND THE NATIONAL RESPONSE CENTER (NRC) AT (800) 424-8802 IN ACCORDANCE WITH THE REQUIREMENTS OF GEORGIA'S OIL OR HAZARDOUS MATERIAL SPILLS OR RELEASES ACT (O.C.G.A. SEC. 12-14-2, ET SEQ.), 40 CFR 117, AND 40 CFR 302 AS SOON AS HE HAS KNOWLEDGE OF THE DISCHARGE.
- G. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER) OR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) SHALL BE CONTACTED WITHIN 24 HOURS AT (800) 424-8802.
- H. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD SHALL BE CONTACTED WITHIN 24 HOURS AT (404) 656-4863 OR (800) 241-4113.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS. THE SPILL SHALL BE CLEANED AND LOCAL AGENCIES SHALL BE CONTACTED AS REQUIRED.

J. GENERAL NPDES PERMIT NO. GAR 100002 DOES NOT AUTHORIZE THE DISCHARGE OF HAZARDOUS

PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY A LICENSED PROFESSIONAL

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 A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL

DESIGN PROFESSIONAL:

DAVID MORGAN, P.E.

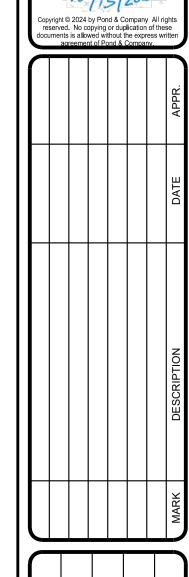
LEVEL II CERTIFICATION

No.: 0000011643

EXPIRES: 06/03/2024







OUNT W, SUITE 23A. 30214 Ö Ш FA STO

RK LANE REPLACEME COUNTY, GA. 30214 SEI NO. MAF CULVERT I

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CE-001 Y

			& POLLUTION CONTROL PLAN CHECKLIST CONSTRUCTION PROJECTS
		SWCD: Fayett	e County Towaliga SWCD
Project	Name:	Mark Lane Culvert Replacement	Address:_ Mark Lane
City/Co	unty:	_Fayette County	Date on Plans: Jul-21
Name &	email of p	erson filling out checklist:	_ Ryan Goldsmith - GoldsmithR@pondco.com
Plan Page #	Included Y/N	TO BE SHO	OWN ON ES&PC PLAN
CE-003	Υ	of the year in which the land-disturbing	and Pollution Control Plan Checklist established by the Commission as of January 1 activity was permitted. Smitted with the ES&PC Plan or the Plan will not be reviewed)
CE-001	Υ	•	the Commission, signature and seal of the certified design professional. nust be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)
N/A	N/A	3 The name and phone number of the 2	24-hour contact responsible for erosion, sedimentation and pollution controls.
CE-001	Υ	4 Provide the name, address, email add	Iress, and phone number of primary permittee.
CE-001	Υ	5 Note total and disturbed acreages of the	e project or phase under construction.
CE-001	Υ	6 Provide the GPS locations of the begin decimal degrees.	ning and end of the Infrastructure project. Give the Latitude and Longitude in
N/A	N/A	7 Initial date of the Plan and the dates of	any revisions made to the Plan including the entity who requested the revisions.
CE-001	Υ	8 Descriptions of the nature of constructi	on activity and existing site conditions.
CE-001	Υ	9 Provide vicinity map showing site's rela	ation to surrounding areas. Include designation of specific phase, if necessary.
CE-001	Υ	10 Identify the project receiving waters and wetlands, marshlands, etc. which may	d describe all sensitive adjacent areas including streams, lakes, residential areas, be affected.
CE-001	Υ	11 Design professional's certification state Plan as stated on Part IV page 21 of the state of the page 21 of	ment and signature that the site was visited prior to development of the ES&PC ne permit.
N/A	N/A		ment and signature that the permittee's ES&PC Plan provides for an appropriate and sampling to meet permit requirements as stated on Part IV page 20 of the permit.
N/A	N/A	• .	n ent and signature that the permittee's ES&PC Plan provides for representative 3) page 37 of the permit as applicable. *
N/A	N/A	•	esign professional who prepared the ES&PC Plan is to inspect the installation of the perimeter control BMPs, and sediment basins within 7 days after installation." 6 of the permit *

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

17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a

from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."

16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.

hydraulic component must be certified by the design professional." *

	N/A	N/A	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." *
	CE-001	Υ	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."
	CE-001	Υ	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."
	CE-001	Υ	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	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	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. *
	N/A	N/A	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. *
	CE-002	Υ	25 Provide BMPs for the remediation of all petroleum spills and leaks.
	N/A	N/A	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. *
	N/A	N/A	27 Description of practices to provide cover for building materials and building products on site. *
	N/A	N/A	28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *
	CE-001	Υ	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).
	N/A	N/A	30 Provide complete requirements of Inspections and record keeping by the primary permittee. *
	N/A	N/A	31 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
	N/A	N/A	32 Provide complete details for Retention of Records as per Part IV.F. of the permit. *
	N/A	N/A	33 Description of analytical methods to be used to collect and analyze the samples from each location. *
	N/A	N/A	34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *
	N/A	N/A	35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged also provide a summary chart of the justification and analysis for the representative sampling as applicable. *
	N/A	N/A	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

CE Plan Y	38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:
	Existing Contours USGS 1": 2000' Topographical Sheets Proposed Contours 1": 400' Centerline Profile
N/A	39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMP
	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. *
n 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.
an Y	42 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
Plan Y	43 Delineation and acreage of contributing drainage basins on the project site.
A N/A	44 Delineate on-site drainage and off-site watersheds using USGS 1" :2000' topographical sheets.
Plan Y	45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
N/A	46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
01 Y	47 Soil series for the project site and their delineation.
an Y	48 The limits of disturbance for each phase of construction.
101 Y 201 301	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 must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage 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.
Plan 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.
00X 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.
12 Y 13	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 year that seeding will take place and for the appropriate geographic region of Georgia.
	* 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.

DESIGN PROFESSIONAL:
DAVID MORGAN, P.E.
LEVEL II CERTIFICATION
No.: 0000011643
EXPIRES: 06/03/2024



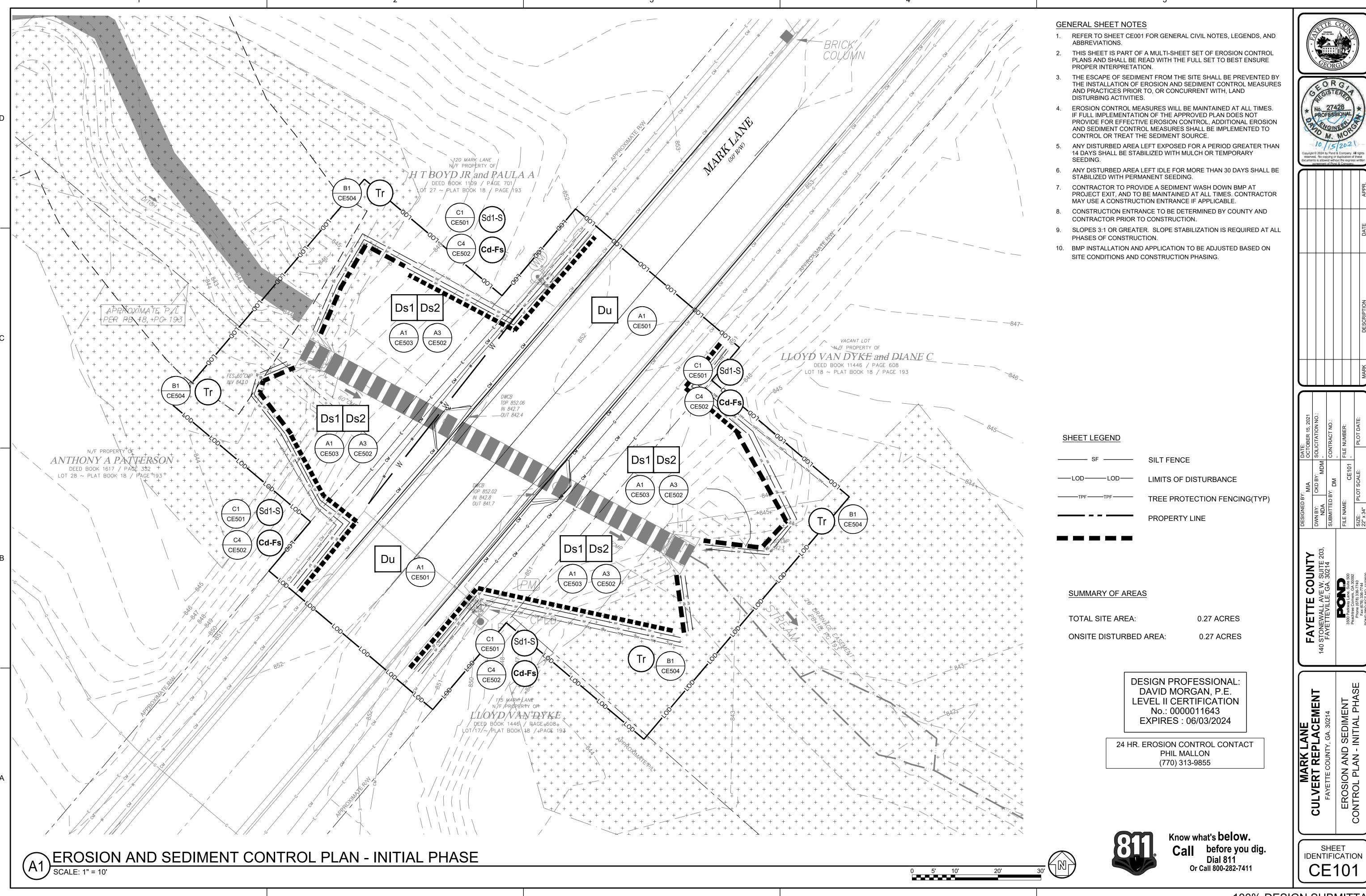
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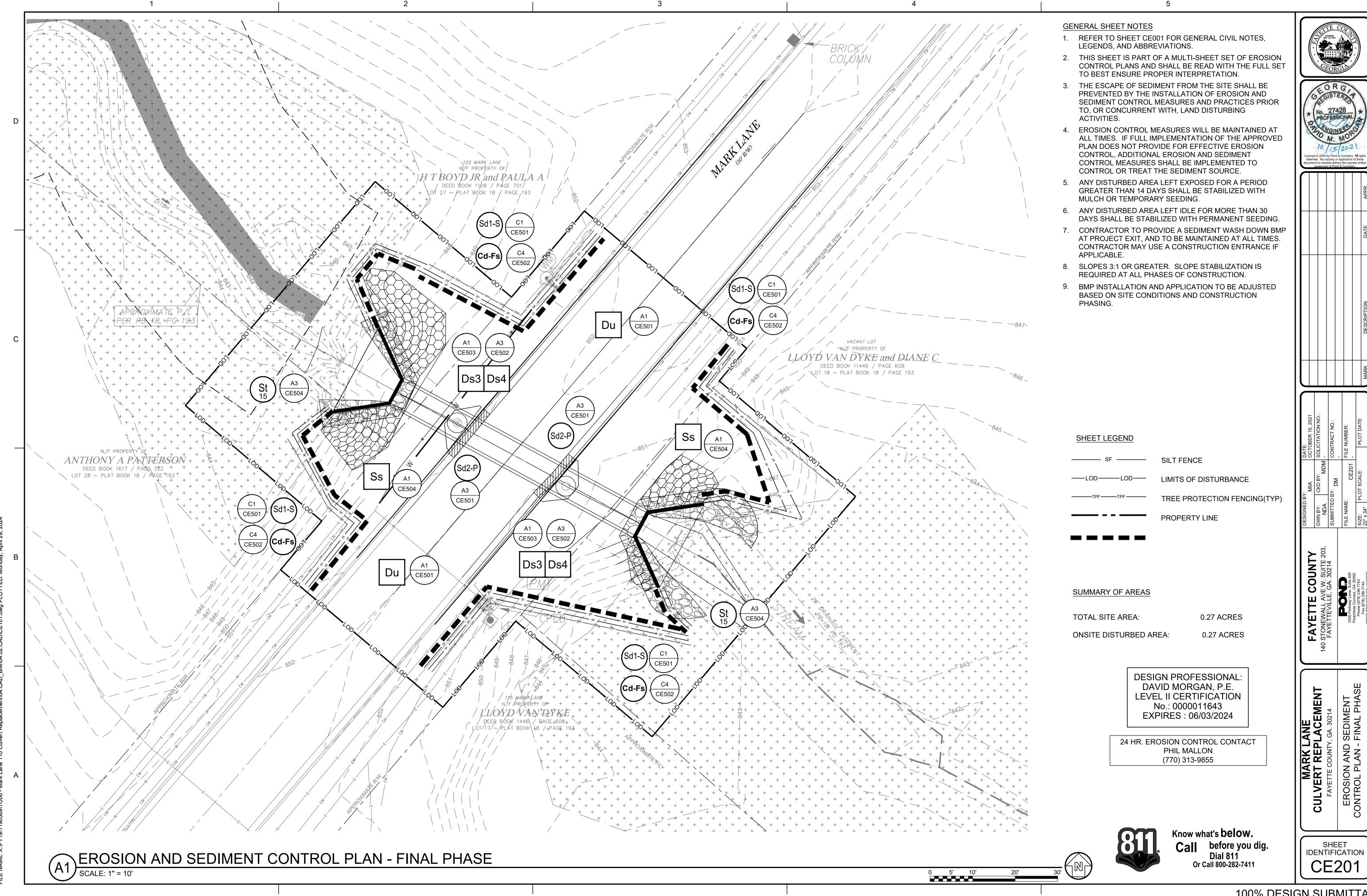
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SHEET IDENTIFICATION CE003

MARK LANE
CULVERT REPLACEMENT
FAYETTE COUNTY, GA. 30214
EROSION AND SEDIMENT
CONTROL NOTES





- 6' MAX. O.C. ——**→** FABRIC (WOVEN WIRE **FENCE BACKING)** TRENCH 18" MIN. **FRONT VIEW**

MAINTENANCE

SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS). 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.

NOTES

1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION. AND POLLUTION CONTROL PLAN.

TYPE 'S' SILT FENCE

Sd1-S

Du

FILTER FABRIC

CATCH BASIN

METHODS AND MATERIALS

A. TEMPORARY METHODS

MULCHES

SEE MULCHING. SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL.

VEGETATIVE COVER SEE TEMPORARY SEEDING.

SPRAY-ON ADHESIVES

THESE ARE USED ON MINERALS SOILS. KEEP TRAFFIC OFF THESE AREAS.

SPRINKLING

THE SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED. THIS METHOD IS ESPECIALLY EFFECTIVE ON HAUL ROADS AND OTHER TRAFFIC ROUTES.

SOLID BOARD FENCES, 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.

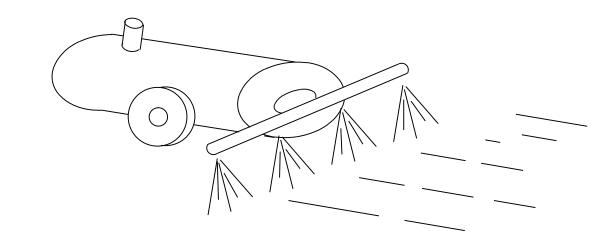
B. PERMANENT METHODS

PERMANENT VEGETATION

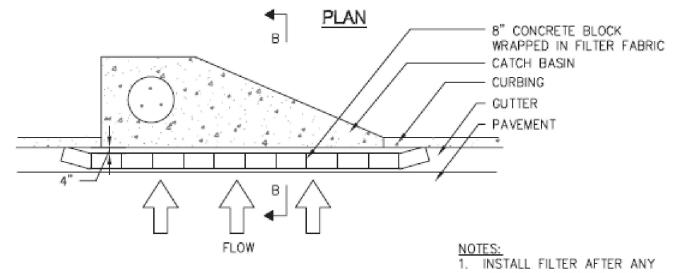
SEE STANDARD FOR PERMANENT SEEDING, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

THIS ENTAILS COVERING THE SURFACE WITH LESS EROSIVE SOIL MATERIAL. SEE TOPSOILING.

STONE COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.



CURB INLET FILTER "PIGS IN BLANKET"



ASPHALT PAVEMENT INSTALLATION. 2. WRAP 8" CONCRETE BLOCKS IN SECTION B-B FILTER FABRIC AND SPAN ACROSS FLOW CATCH BASIN INLET. 3. FACE OPENINGS IN BLOCKS OUTWARD.

4. LEAVE A GAP OF APPROXIMATELY PAVEMENT 4 INCHES BETWEEN THE CURB GUTTER AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT 8" CONCRETE OCK WRAPPED

HAZARDOUS PONDING. 5. INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.

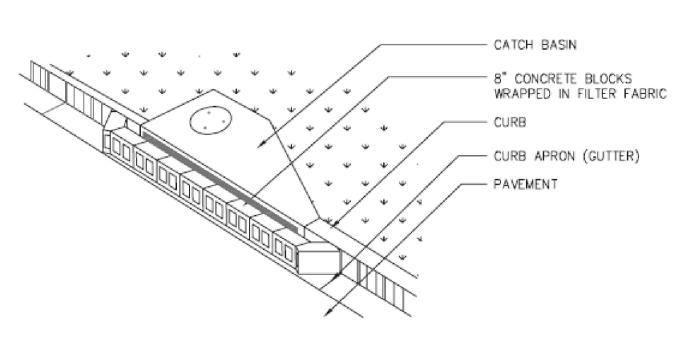


Figure 6-28.6 Curb Inlet Filter "Pigs in Blanket"

GSWCC 2016 Edition

A3 INLET SEDIMENT TRAP FILTER FABRIC NO SCALE

MULCHING MATERIAL

1. DRY STRAW OR HAY SHALL BE APPLIED AT A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE.

2. WOOD WASTE (CHIPS, SAWDUST, OR BARK) SHALL BE APPLIED AT A DEPTH OF 2 TO 3 INCHES. ORGANIC MATERIAL FROM THE CLEARING STAGE OF DEVELOPMENT SHOULD REMAIN ON SITE, BE CHIPPED, AND APPLIED AS MULCH.

3. CUTBACK ASPHALT 9SLOW CURING) SHALL BE APPLIED AT 1200 GALLONS PER ACRE (OR 1/4 GALLON PER SQ.

4. POLYETHYLENE FILM SHALL BE SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION.

APPLYING MULCH

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 DECOMPOSITION OF THE ORGANIC MULCHES.

3. CUTBACK ASPHALT SHALL BE APPLIED UNIFORMLY. CARE SHOULD BE TAKEN IN AREAS OF PEDESTRIAN TRAFFIC DUE TO PROBLEMS OF "TRACKING IN" OR DAMAGE TO SHOES, CLOTHING, ETC.

4. 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 USED SMOOTH OR SERRATED AND SHOULD BE 20 INCHES 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 OF HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION.

STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1). THE ASPHALT EMULSION SHALL BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH. TACKIFERS AND BINDERS CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. PLEASE REFER TO SPECIFICATION Tb -TACKIFERS AND BINDERS. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

2. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENING 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)

DESIGN PROFESSIONAL: DAVID MORGAN, P.E.

LEVEL II CERTIFICATION

No.: 0000011643

EXPIRES: 06/03/2024

TABLE 1. Mulching Application Requirements

MATERIAL	RATE	DEPTH
Straw or hay	-	2" to 4"
Wood waste, chips, sawdust, bark	-	2" to 3"
Cutback asphalt	1200 gal./acre, 1/4 gal./sq. yd./ or see manufacturer's recommendations	-
Polyethylene film	Secure with soil, anchors, weights	-
Geotextiles, jute matting, netting, etc.	See manufacturer's recommendations	-

INSTALLATION NOTES:

- 1. INSTALL ALL OTHER REQUIRED BMPs FIRST. 2. GRADE SITE, IF POSSIBLE, TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
- 3. LOOSEN COMPACTED SOIL, IF POSSIBLE, TO A DEPTH OF 3 INCHES.
- 4. APPLY STRAW OR HAY UNIFORMLY, AS SHOWN IN TABLE 1. BY HAND OR MECHANICAL EQUIPMENT. AND ANCHOR BY PRESSING INTO SOIL OR USING NETTING.
- 5. MULCH ON SLOPES GREATER THAN 3% SHOULD BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE
- AE-5 OR SS-1) OR OTHER SUITABLE TACKIFIER. 6. WOOD WASTE ON SLOPES FLATTER THAN 3:1 DO NOT NEED ANCHORING.
- 7. MULCH SHALL BE APPLIED TO ALL DISTURBED AREAS LEFT INACTIVE FOR FOURTEEN DAYS.

MAINTENANCE NOTES:

1. ADD MULCH AS NEEDED TO MAINTAIN THE SUGGESTED DEPTH.

2. IF ORGANIC MULCH IS TO BE LEFT AND INCORPORATED INTO THE SOIL, APPLY 20-30 POUNDS OF NITROGEN IN ADDITION TO THE FERTILIZER REQUIRED FOR VEGETATION.

COUNT /E.W., SUITE 2

Ds1

MARK LANE
CULVERT REPLACEMENT
FAYETTE COUNTY, GA. 30214

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SHEET **IDENTIFICATION** CE501





SEEDBED PREPARATION: WHEN USING CONVENTIONAL OR HAND-SEEDING, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AMD NOT SEALED BY RAINFALL. WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH UNDISTURBED CUT SLOPES, THE SOIL SHALL HAVE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO

LIME AND FERTILIZER: AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHEWRWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. GRADED AREAS REQUIRE LIME APPLICATION. SOILS CAN BE TESTED TO SEE IF FERTILIZER IS NEEDED. ON REASONABLY FERTILE SOILS OR SOIL MATERIAL, FERTILIZER IS NOT REQUIRED. FOR SOILS WITH VERY LOW FERTILITY, 500 TO 700 POUNDS OF 10-10-10 FERTILIZER OF THE EQUIVALENT PER ACRE (12-16 LBS/1000 SQ. FT.) SHALL BE APPLIED. FERTILIZER SHOULD BE APPLIED BEFORE LAND PREPARATION AND INCORPORATED WITH A DISK, RIPPER OR CHISEL.

<u>SEEDING:</u> REFER TO TEMPORARY SEEDING CHART THIS PAGE.

PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.

APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER-SEEDER, OR HYDRAULIC SEEDER (SLURRY INCLUDING SEED AND FERTILIZER), DRILL OR CULTIPACKER SEEDERS SHOULD NORMALLY PLACE SEED ONE-QUARTER TO ONE-HALF INCH DEEP. APPROXIMATE DEPTH OF PLANTING IS TEN TIMES THE SEED DIAMETER. SOIL SHOULD BE RAKED LIGHTLY TO COVER SEED WITH SOIL IF SEEDING BY HAND.

<u>Species</u>	Broadcast <u>Rates — PLS</u>	Broadcast <u>Rates - PLS</u>	(Solid lines indicate optimu dates, dotted lines indicate									
	Per <u>Acre</u>	Per 1000 sq. ft.	permissible but marginal									
			dotes.)									
DADLEY			J F M A M J J A S O N									
BARLEY (Hordeum vulgare)	, ,											
alone	3 bu. (144 lbs.)	3.3 lb.										
in mixtures	½ bu. (24 lbs.)	0.6 lb.	J F M A M J J A S O N									
LESPEDEZA, ANNUAL												
(lezpedeza striata)	40 lbs.	0.9 lb.										
alone	10 lbs.	0.2 lb.										
in mixtures			J F M A M J J A S O N									
LOVEGRASS, WEEPING (Eragrostis curvula)												
alone	4 lbs.	0.1 lb.										
in mixtures	2 lbs.	0.05 lb.	J F M A M J J A S O N									
MILLET, BROWNTOP												
(Pancium fasciculatum)	40 lbs.	0.9 lb.										
alone	10 lbs.	0.2 lb.										
in mixtures			JFMAMJJASON									
MILLET, PEARL (Pennesetum glaucum)												
alone	50 lbs.	1.1 lb.	JFMAMJJASON									
OATS (Avena sativa)												
alone	4 bu. (128 lbs.)	2.9 lb.										
in mixtures	1 bu. (32 lbs.)	0.7 lb.	J F M A M J J A S O N									
RYE (Secale cereale)												
alone	3 bu. (168 lbs.)	3.9 lb.										
in mixtures	½ bu. (28 lbs.)	0.6 lb.	JFMAMJJASON									
RYEGRASS, ANNUAL (Lolium temulentum)												
alone	40 lbs.	0.9 lb.	J F M A M J J A S O N									
SUDANGRASS (Sarahara and an ana)												
(Sorghum sudanese)	60 lbs.	1.4 lb.										
WHEAT			JFMAMJJASON									
(Triticum aestivum)	7 h (180 lb- \	A 1 1h										
alone	3 bu. (180 lbs.)	4.1 lb.										
in mixtures	½ bu. (30 lbs.)	0.7 lb.										

TABLE 2. FERTILIZER REQUIREMENTS FOR TEMPORARY VEGETATION

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre	N Top Dressing Rate (lbs./acre)
	First	6-12-12	1500	50-100
Cool season grasses	Second	6-12-12	1000	_
	Maintenance	10-10-10	400	30
	First	6-12-12	1500	0-50
Cool season grasses and legumes	Second	0-10-10	1000	_
	Maintenance	0-10-10	400	_
Temporary cover crops seeded alone	First	10-10-10	500	30
	First	6-12-12	1500	50-100
Warm season grasses	Second	6-12-12	800	50-100
	Maintenance	10-10-10	400	30

INSTALLATION NOTES:

- 1. INSTALL ALL E&SC MEASURES PRIOR TO APPLYING TEMPORARY VEGETATION.
- 2. GRADING OR SHAPING ARE NOT REQUIRED IF SLOPES CAN BE PLANTED WITH A HYDROSEEDER OR BY HAND-SEEDING. 3. SEEDBED PREPARATION IS NOT REQUIRED IF SOIL IS LOOSE AND NOT SEALED BY RAIN.
- 4. WHEN THE SOIL IS SEALED OR CRUSTED, IT SHOULD BE PITTED, TRENCHED OR SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE. 5. AGRICULTURAL LIME IS NOT REQUIRED.
- 6. FERTILIZE LOW FERTILITY SOILS PRIOR TO OR DURING PLANTING AT THE RATE OF 500-700 LBS./ACRE OF 10-10-10 FERTILIZER OR EQUIVALENT (12-16 LBS./1000 SQ. FT.)
- 7. IT IS IMPERATIVE THAT YOU CHECK THE TAG ON THE BAG OF SEED TO VERIFY THE TYPE AND GERMINATION OF THE SEED TO 8. APPLY SEED BY HAND, CYCLONE SEEDER, DRILL OR HYDRO-SEEDER. SEED PLANTED WITH A DRILL SHOULD BE PLANTED
- ¼" –½" DFFP 9. APPLY IN ACCORDANCE WITH SPECIFICATIONS ON THE E&SC PLAN. IF INFORMATION IS NOT AVAILABLE, SELECT A TEMPORARY
- 10. TEMPORARY COVER SHALL BE APPLIED TO ALL DISTURBED AREAS LEFT IDLE FOR 14 DAYS. (IF AN AREA IS LEFT IDLE FOR

6 MONTHS, PERMANENT COVER SHALL BE APPLIED.)

MAINTENANCE NOTE:

RE-SEED AREAS WHERE AN ADEQUATE STAND OF TEMPORARY VEGETATION FAILS TO EMERGE OR WHERE A POOR STAND EXISTS.

TABLE 1. SOME TEMPORARY PLANT SPECIES, SEEDING RATES AND PLANTING DATES

Species	Rates per 1,000 sq. ft.	Rates per Acre	Region M—L (Mountain, Blue Ridge, Ridges and Valley)	Region P (Southern Piedmont	Region C (Southern Coastal Plain, Sand Hills, Black Lands, and Atlantic Coastal Flatwoods)
Barley alone	3.3 lbs.	3 bu.			
Barley, in mixtures	0.6 lbs.	0.5 bu.	9 Sept. – 31 Oct.	15 Sept. – 15 Nov.	1 Oct. – 31 Dec.
Lespedeza, Annual	0.9 lbs.	40 lbs.	4 14 74 14	74.14	4.5.1 00.5.1
Lespedeza, in mixtures	0.2 lbs.	10 lbs.	1 Mar. – 31 Mar.	1 Mar. – 31 Mar.	1 Feb. – 28 Feb.
Lovegrass, weeping	0.1 lbs.	4 lbs.			
Lovegrass, in mixtures	0.05 lbs.	2 lbs.	1 Apr. — 31 May	1 Apr. – 31 May	1 Mar. – 31 May
Millet, browntop	0.9 lbs.	40 lbs.			
Millet, in mixtures	0.2 lbs.	10 lbs.	15 Apr. – 15 Jun.	15 Apr. – 30 Jun.	15 Apr. – 30 Jun.
Millet, pearl	1.1 lbs.	50 lbs.	15 May – 15 Jul.	1 May - 31 Jul.	15 Apr. — 15 Aug.
Oats, alone	2.99 lbs.	4 bu.	45.0 45.0	45.0 45.11	45.0 45.4
Oats, in mixtures	0.7 lbs.	1 bu.	15 Sept. – 15 Nov.	15 Sept. – 15 Nov.	15 Sept. – 15 Nov.
Rye (grain), alone	3.9 lbs.	3 bu.			
Rye, in mixtures	0.6 lbs.	0.5 bu.	15 Aug. – 31 Oct.	15 Sept. – 30 Nov.	1 Oct. – 31 Dec.
Ryegrass	0.9 lbs.	40 lbs.	15 Aug. – 15 Nov.	1 Sept 15 Dec.	15 Sept. – 31 Dec.
Sudangrass	1.4 lbs.	60 lbs.	1 May - 31 Jul.	1 May – 31 Jul.	1 Apr. – 31 Jul.
Triticale, alone	3.3 lbs.	3 bu.			
Triticale, in mixtures	0.6 lbs.	0.5 bu.	_	_	15 Oct. – 30 Nov.
Wheat, alone	4.1 lbs.	3 bu.			
Wheat, in mixtures	0.7 lbs.	0.5 bu.	15 Sept. – 30 Nov.	1 Oct. – 15 Dec.	15 Oct 31 Dec.

- 1. UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIEW SEEDING RATES.
- 2. SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND LOCAL CONDITIONS. 3. FOR MAJOR LAND RESOURCE AREAS (MLRAs), SEE "TACKIFIERS AND BINDERS" OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
- 3. SEEDING RATES ARE BASED ON PURE LIVE SEED (PLS).

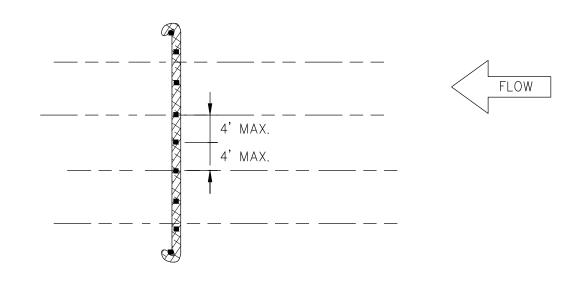
SEEDING SCHEDULE TEMPORARY COVER

DESIGN PROFESSIONAL: DAVID MORGAN, P.E. LEVEL II CERTIFICATION No.: 0000011643 EXPIRES: 06/03/2024



COMPOST SOCKS FOR CHECK DAMS

TYPICAL PLAN



1. ALL MATERIAL TO MEET SPECIFICATIONS.

- 2. PLACE ONE STAKE AT THE CENTER OF THE DITCH/CHANNEL. ALSO PLACE STAKES AT THE BED/BANK JUNCTION AND AT END OF THE
- DEVICE NOT SPACED MORE THAN 4 FEET APART. 3. SEDIMENT SHOULD BE REMOVED FROM BEHIND THE CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED 1/2 THE HEIGHT OF THE
- CHECK DAM. 4. CHECK DAMS CAN BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
- 5. MINIMUM STAKING DEPTH FOR SAND, SILT, AND CLAY SHALL BE 18".

COMPOST SOCKS FOR CHECK DAMS

DEFINITION

A PERMANENT VEGETATIVE COVER USING SODS ON HIGHLY ERODIBLE OR CRITICALLY ERODED LANDS.

THIS APPLICATION IS APPROPRIATE FOR AREAS WHICH REQUIRE IMMEDIATE VEGETATIVE COVERS, DROP INLETS, GRASS SWALES, AND WATERWAYS WITH INTERMITTENT FLOW.

PLANNING CONSIDERATIONS

SODDING CAN INITIALLY BE MORE COSTLY THAN SEEDING, BUT THE ADVANTAGES JUSTIFY THE INCREASED INITIAL COSTS.

IMMEDIATE EROSION CONTROL, GREEN SURFACE, AND QUICK USE. REDUCED FAILURE AS COMPARED TO SEED AS WELL AS THE LACK OF WEEDS 3. CAN BE ESTABLISHED NEARLY YEAR-ROUND.

SODDING IS PREFERABLE TO SEED IN WATERWAYS AND SWALES BECAUSE OF THE IMMEDIATE PROTECTION OF THE CHANNEL AFTER APPLICATION. SODDING MUST BE STAKED IN CONCENTRATED FLOW AREAS (SEE FIGURE 6-6.1) CONSIDER USING SOD FRAMED AROUND DROP INLETS TO REDUCE SEDIMENTS AND MAINTAINING THE GRADE.

CONSTRUCTION SPECIFICATIONS INSTALLATION SOIL PREPARATION

BRING SOIL SURFACE TO FINAL GRADE. CLEAR SURFACE OF TRASH, WOODY DEBRIS, STONES AND CLODS LARGER THAN 1". APPLY SOD TO SOIL SURFACES ONLY AND NOT FROZEN SURFACES, OR GRAVEL TYPE SOILS.TOPSOIL PROPERLY APPLIED WILL HELP GUARANTEE A STAND. DON'T USE TOPSOIL RECENTLY TREATED WITH HERBICIDES OR SOIL STERILANTS. MIX FERTILIZER INTO SOIL SURFACE. FERTILIZE BASED ON SOIL TESTS OR TABLE 6-6.1.

LAY SOD WITH TIGHT JOINTS AND IN STRAIGHT LINES. DON'T OVERLAP JOINTS. STAGGER JOINTS AND DO NOT STRETCH SOD (SEE FIGURE 6-6.2) ON SLOPES STEEPER THAN 3:1, SOD SHOULD BE ANCHORED WITH PINS OR OTHER APPROVED METHODS. INSTALLED SOD SHOULD BE ROLLED OR TAMPED TO PROVIDE GOOD CONTACT BETWEEN SOD AND SOIL. IRRIGATE SOD AND SOIL TO A DEPTH OF 4" IMMEDIATELY AFTER INSTALLATION. SOD SHOULD NOT BE CUT OR SPREAD IN EXTREMELY WET OR DRY WEATHER. IRRIGATION SHOULD BE USED TO SUPPLEMENT RAINFALL FOR A MINIMUM OF 2-3 WEEKS.

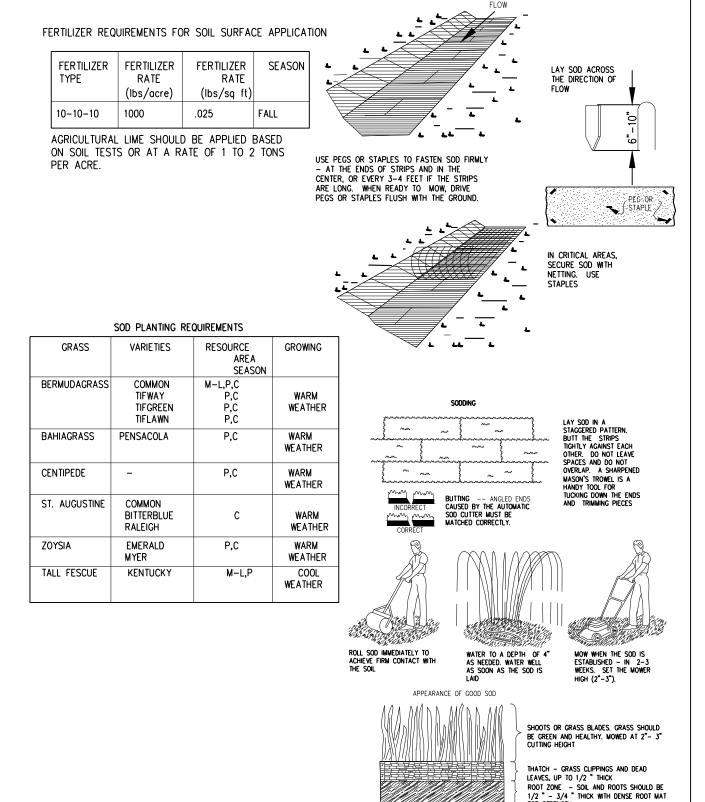
SOD SELECTED SHOULD BE CERTIFIED. SOD GROWN IN THE GENERAL AREA OF THE PROJECT IS

- 1. SOD SHOULD BE MACHINE CUT AND CONTAIN 3/4" (+ OR 1/4") OF SOIL, NOT INCLUDING
- 2. SOD SHOULD BE CUT TO THE DESIRED SIZE WITHIN + OR -5% TORN OR UNEVEN PADS SHOULD BE REJECTED.
- SOD SHOULD BE CUT AND INSTALLED WITHIN 36 HOURS OF DIGGING. 4. AVOID PLANTING WHEN SUBJECT TO FROST HEAVE OR HOT WEATHER IF IRRIGATION IS NOT
- 5. THE SOD TYPE SHOULD BE SHOWN ON THE PLANS OR INSTALLED ACCORDING TO TABLE 6-6.2. SEE FIGURE 6-4.1 FOR YOUR RESOURCE AREA. MAINTENANCE

RE-SOD AREAS WHERE AN ADEQUATE STAND OF SOD IS NOT OBTAINED. NEW SOD SHOULD BE MOWED SPARINGLY. GRASS HEIGHT SHOULD NOT BE CUT LESS THAN 2"-3" OR AS SPECIFIED (SEE FIGURE 6-6.2). APPLY ONE TON OF AGRICULTURAL LIME AS INDICATED BY SOIL TEST OR EVERY 4-6 YEARS. FERTILIZE GRASSES IN ACCORDANCE WITH SOIL TESTS OR TABLE 6-6.3

FERTILIZER REQUIREMENTS FOR SOD

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (lbs./acre)	NITROGEN TOP DRESSING RATE (lbs./acre)
COOL	FIRST	6-12-12	1500	50-100
SEASON	SECOND	6-12-12	1000	
GRASSES	MAINTENANCE	10-10-10	400	30
WARM	FIRST	6-12-12	1500	50-100
SEASON	SECOND	6-12-12	800	50-100
GRASSES	MAINTENANCE	10-10-10	400	30



\DISTURBED AREA STABILIZATION W/ SODDING

DISTURBED AREA STABILIZATION W/ SODDING

IDENTIFICATION CE502

MARK LANE
CULVERT REPLACEME

100% DESIGN SUBMITTAL

THIS PRACTICE SHALL BE APPLIED IMMEDIATELY TO ROUGH GRADED AREAS THAT WILL BE UNDISTURBED FOR LONGER THAN SIX 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. AT LEAST 70% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION OR FOUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS THE USE OF RIP RAP GABIONS, PERMANENT MULCHES OR GEOTEXTILES) HAVE BEEN EMPLOYED, PERMANENT VEGETATION SHALL CONSIST OF: PLANTED TREES. SHRUBS, PERENNIAL VINES: 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

PLANNING CONSIDERATIONS USE CONVENTIONAL PLANTING METHODS WHERE POSSIBLE

CONTROL MEASURES SHALL NOT BE REMOVED.

INTERIM STABILIZATION MEASURES AND TEMPORARY EROSION AND SEDIMENTATION

- WHEN MIXED PLANTINGS ARE DONE DURING MARGINAL PLANTING PERIODS, COMPANION CROPS SHALL BE USED. NO-TILL PLANTING IS EFFECTIVE WHEN PLANTING IS DONE FOLLOWING A SUMMER
- OR WINTER ANNUAL COVER CROP. BLOCK SOD PROVIDES IMMEDIATE COVER. IT IS ESPECIALLY EFFECTIVE IN
- CONTROLLING EROSION ADJACENT TO CONCRETE FLUMES AND OTHER STRUCTURES. REFER TO Ds-4 DISTURBED AREA STABILIZATION (WITH SODDING). IRRIGATION SHOULD BE USED WHEN THE SOIL IS DRY OR WHEN SUMMER PLANTINGS
- LOW MAINTENANCE PLANTS, AS WELL AS NATIVES, SHOULD BE USED TO ENSURE
- LONG LASTING EROSION CONTROL. MOWING SHOULD NOT BE PERFORMED DURING THE QUAIL NESTING SEASON (MAY TO SEPT.) WILDLIFE PLANTINGS SHOULD BE INCLUDED IN CRITICAL AREA PLANTINGS. SEE MANUAL FOR PLANT LIST

GRADING & 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 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 WILL BE MIXED WITH WATER AND APPLIED IMMEDIATELY AFTER MULCHING IS COMPLETED 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.

- APPLY BEFORE LAND PREPARATION SO THAT IT WILL BE MIXED WITH THE SOIL
- DURING SEEDBED PREPARATION. MIX WITH THE SOIL USED TO FILL THE HOLES, DISTRIBUTE IN FURROWS.
- BROADCAST AFTER STEEP SURFACES ARE SCARIFIED, PITTED OR TRENCHED. A FERTILIZER PELLET SHALL BE PLACED AT ROOT DEPTH IN THE CLOSING HOLE BESIDE EACH TREE SEEDLING

LIME AND FERTILIZER RATES AND ANALYSIS

AGRICULTURAL LIME IS REQUIRED AT A RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE, GRADED AREAS REQUIRE LIME APPLICATION, IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION. ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA 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 PERCENT WILL PASS THROUGH A

AGRICULTURAL LIME SPREAD BY HYDRAULIC SEEDING EQUIPMENT SHALL BE "FINELY GROUND LIMESTONE." FINELY GROUND LIMESTONE IS CALCITIC OR DOLOMITIC LIMESTONE GROUND SO THAT 98% OF THE MATERIAL WILL PASS THROUGH A 20-MESH SIEVE AND NOT LESS THAN 70% 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 MLRA'S. (SEE MANUAL). 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.

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 NATURAL RESOURCE CONSERVATION SERVICE 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 THE 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 INCLUDE: WEEPING LOVEGRASS WITH SERICEA LESPEDEZA (SCARIFIED) AND TALL FESCUE WITH SERICEA LESPEDEZA (UNSCARIFIED)

PLANT SELECTION MAY ALSO INCLUDE ANNUAL COMPANION CROPS. ANNUAL COMPANION CROPS SHOULD BE USED ONLY WHEN THE 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 THE 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.

THE BULK SEEDING RATE IS: 10 LBS. OF PLS / ACRE = 17.9 LBS / ACRE YOU WOULD NEED TO PLANT 17.9 LBS/ACRE TO PROVIDE 10 LBS/ACRE OF PURE LIVE

SEEDBED PREPARATION

SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. WHEN CONVENTIONAL SEEDING IS TO BE USED, SEEDBED PREPARATION WILL BE DONE AS FOLLOWS

BROADCAST PLANTINGS:

1. TILLAGE AT A MINIMUM, SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 6 IN. ALLEVIATE COMPACTION; INCORPORATE LIME AND FERTILIZER; SMOOTH AND FIRM THE SOIL; ALLOW FOR THE PROPER PLACEMENT OF SEED, SPRIGS, OR PLANTS; AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A DISK IS

TILLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT.

TILLAGE SHOULD BE DONE ON THE CONTOUR, WHERE FEASIBLE. 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 IN. 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 INCHES DEEP ON THE CONTOUR FOUR TO SIX MONTHS PRIOR TO PLANTING. SUBSOILING SHOULD BE DONE WHEN THE SOIL IS DRY. PREFERABLY IN AUGUST OR SEPTEMBER.

ALL LEGUME SEED SHALL BE INOCULATED WITH APPROPRIATE NITROGEN-FIXING BACTERIA. THE INNOCULANT 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 INNOCULANT TO THE SEED FOR CONVENTIONAL SEEDING USE TWICE THE AMOUNT OF INNOCULANT RECOMMENDED BY THE MANUFACTURER, FOR HYDRAULIC SEEDING, FOUR TIMES THE AMOUNT OF INNOCULANT 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.

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 CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER, OTHER MECHANICAL SEEDER, OR HAND SEEDING TO DISTRIBUTE THE SEED LINIFORMLY OVER THE AREA TO BE TREATED. COVER THE SEED LIGHTLY WITH 1/8 TO 1/4 INCH OF SOIL FOR SMALL SEED AND 1/2 TO 1 INCH 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 TOPS 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 HOE, TWO INCHES OF SOIL SHALL BE ADDED AND THE PLANT SHALL BE SET IN THE HOLE.

MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED

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 2 1/2 TONES PER ACRE. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER THE HYDRAULIC

ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 4:1 OR STEEPER SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.

PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES 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. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCH IS NOT REQUIRED. BITUMINOUS TREATED ROVING MAY BE APPLIED ON PLANTED AREAS ON 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 GEORGIA 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.

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

ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE OF THE

FOLLOWING METHODS: EMULSIFIED ASPHALT CAN BE (A) SPRAYED UNIFORMLY ONTO THE MULCH AS IT IS EJECTED FROM THE BLOWER MACHINE OR (B) SPRAYED ON THE MULCH IMMEDIATELY FOLLOWING MULCH APPLICATION WHEN STRAW OR HAY IS SPREAD BY METHODS OTHER THAN SPECIAL BLOWER EQUIPMENT. THE COMBINATION OF ASPHALT EMULSION AND WATER SHALL CONSIST OF A HOMOGENEOUS MIXTURE SATISFACTORY FOR SPRAYING. THE MIXTURE SHALL CONSIST OF 100 GALLONS OF WATER PER TON OF MULCH. CARE SHALL BE TAKEN AT ALL TIMES TO PROTECT STATE WATERS, THE PUBLIC, ADJACENT PROPERTY, PAVEMENTS, CURBS, SIDEWALKS AND OTHER STRUCTURES FROM ASPHALT DISCOLORATION. 2. 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 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES 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 3 SYNTHETIC TACKIFIERS OR BINDERS APPROVED BY GDOT 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 REFER TO Th - TACKIFIERS AND BINDERS 4 RYF OR WHEAT CAN BE INCLUDED WITH FALL AND WINTER PLANTINGS TO STABILIZE THE MULCH. THEY SHALL BE APPLIED AT A RATE OF ONE-QUARTER TO ONE-HALF BUSHEL PER ACRE. 5 PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH 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 USED AS A BEDDING MATERIAL TO CONSERVE MOISTURE AND CONTROL WEEDS IN NURSERIES. ORNAMENTAL BEDS. AROUND SHRUBS. AND ON BARE AREAS ON LAWNS.

GRAIN STRAW 4" TO 6" **GRASS HAY** PINE NEEDLES 3" TO 5'

WOOD WASTE 4" TO 6"

IRRIGATION: IRRIGATION WILL BE APPLIED AT A RATE THAT WILL NOT CAUSE RUNOFF.

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.

			ANALYSIS OR EQUIVALENT N-P-K		N TOP DRESSING RATE
1.	COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	50-100 LBS./AC. 1/ 2/ 30
2.	COOL SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	0-50 LBS./AC. 1/
3.	GROUND COVERS	FIRST SECOND MAINTENANCE	10-10-10 10-10-10 10-10-10	1300 LBS./AC. 3/ 1300 LBS./AC. 3/ 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 MAINTENANCE	0-10-10 0-10-10	700 LBS./AC. 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 SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 LBS./AC. 800 LBS./AC. 400 LBS./AC.	50-100 LBS./AC. 2/ 6/ 50-100 LBS./AC. 2/ 30 LBS./AC.
8.	WARM SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	50 LBS./AC. 6/

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 INCHES.

USE AND MANAGEMENT: MOW SERICEA LESPEDEZA ONLY AFTER FROST TO ENSURE THAT THE EEDS ARE MATURE. MOW BETWEEN NOVEMBER AND MARCH. BERMUDAGRASS, BAHIAGRASS AND TALL FESCUE MAY BE MOWED AS DESIRED. MAINTAIN AT LEAST 6 INCHES OF TOP GROWTH UNDER ANY USE AND MANAGEMENT. MODERATE USE OF TOP GROWTH IS BENEFICIAL AFTER ESTABLISHMENT. EXCLUDE TRAFFIC UNTIL THE PLANTS ARE WELL ESTABLISHED. BECAUSE OF THE QUAIL NESTING SEASON, MOWING SHOULD NOT TAKE PLACE BETWEEN MAY AND SEPTEMBER.

PLANTS, PLANTING RATES, AND PLANTING DATES

<u>SPECIES</u>	BROAD RATES 1/ PER ACRE		RESOURCE AREA 3/	ĎC	OLIE	PLA D LIN ED L INAL	IES I	PLA NDIO	ANTI CATE	REMARKS						
	TOTAL	sq. ft.		J	F	М	Α	М	J	J	Α	s	0	N	D	
BAHIA, PENSACOLA (PASPALUM NOTATUM)			P C													166,000 SEED PER POUND. LOW GROWING. SOD FORMING. SLOW TO ESTABLISH. PLANT
ALONE OR WITH TEMPORARY COVER	60 LBS	1.4 LB														WITH A COMPANION CROP. WILL SPREAD INTO BERMUDA PASTURES AND LAWNS. MIX
WITH OTHER PERENNIALS	30 LBS	0.7 LB														WITH SERICEA LESPEDEZA OR WEEPING LOVEGRASS.
BAHIA, WILMINGTON (PASPALUM NOTATUM)			M-L P													
ALONE OR WITH TEMPORARY COVER	60 LBS	1.4 LB														SAME AS ABOVE
WITH OTHER PERENNIALS	30 LBS	0.7 LB														
BERMUDA, COMMON (CYNODON DACTYLON)			P C													1,787,000 SEED PER POUND. QUICK COVER. LOW GROWING AND SOD FORMING. FULL SUN.
ALONE	10 LBS	0.2 LB			_											GOOD FOR ATHLETIC FIELDS.
WITH OTHER PERENNIALS	6 LBS	0.1 LB														
BERMUDA, COMMON (CYNODON DACTYLON)			P C													
UNHULLED SEED				-	_											PLANT WITH WINTER ANNUALS.
WITH TEMPORARY COVER	10 LBS	0.2 LB														PLANT WITH TALL FESCUE.
WITH OTHER PERENNIALS	6 LBS	0.1 LB														
BERMUDA SPRIGS (CYNODON DACTYLON)	40 CU. FT Ol		M-L													A CUBIC FOOT CONTAINS APPROXIMATELY 650 SPRIGS.
COASTAL, COMMON, MIDLAND, OR TIFT 44	SOD PLU	GS 3' X 3'														A BUSHEL CONTAINS 1.25 CUBIC FEET OR APPROXIMATELY 800 SPRIGS.
COASTAL, COMMON, OR TIFT 44			P C													SAME AS ABOVE
TIFT 78			С	-												SOUTHERN COASTAL PLAIN ONLY.
CENTIPEDE (ERMOCHLOA OPHIUROIDES)	BLOCK S	SOD ONLY	P C													DROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE ADJACENT TO CONCRETE AND IN CONCENTRATED FLOW AREAS. IRRIGATION IS NEEDED UNTIL FULLY ESTABLISHED. DO NOT PLANT NEAR PASTURES.
				J	F	М	Α	М	J	J	A	S	0	N	D	WINTERHARDY AS FAR NORTH AS ATHENS AND ATLANTA.

PLANTS, PLANTING RATES, AND PLANTING DATES

SPECIES		PER 1000	RESOURCE AREA 3/	ĎΟ)LID	LINE D LII NAL	ES II NES	PL NDIC IND	ANT CATE	ING OP	DAT TIMU	<u>ES</u> JM D	ATE	S,		<u>REMARKS</u>
		sq. ft.		J	F	М	Α	М	J	J	Α	S	0	N	D	400 000 0FFD DED DOUND DENDE
CROWNVETCH (CORONILLA VARIA) WITH WINTER ANNUALS OR COOL SEASON GRASSES	15 LBS	0.3 LB	M-L P													100,000 SEED PER POUND. DENSE GROWTH. DROUGHT TOLERANT AND FIRE RESISTANT. ATTRACTIVE ROSE, PINK, AND WHITE BLOSSOMS SPRING TO LATE FALL. MIX WITH 30 POUNDS OF TALL FESCUE OR 15 POUNDS OF RYE. INOCULATE SEED WITH M INNOCULANT. USE FROM NORTH ATLANTA AND NORTHWARD.
FESCUE, TALL (FESTUCA ARUNDINACEA) ALONE WITH OTHER PERENNIALS	50 LBS. 30 LBS.	1.1 LB. 0.7 LB.	M-L P								_					227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZAS OR CROWNVETCH. APPLY TOPDRESSING IN SPRING FOLLOWING FALL PLANTINGS. NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.
KUDZU (PUERARIA THUMBERGIANA) PLANTS OR CROWNS	3' - 7'- A	PART	ALL													RAPID AND VIGOROUS GROWTH. EXCELLENT IN GULLY EROSION CONTROL. WILL CLIMB. GOOD LIVESTOCK FORAGE.
LESPEDEZA SERICEA (LESPEDEZA CUNEATA) SCARIFIED	60 LBS.	1.4 LB.	M-L P C		_	_										350,000 SEED PER POUND. WIDELY ADAPTED. LOW MAINTENANCE. MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA, OR TALL FESCUE. TAKES 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED. EXCELLENT ON ROADBANKS. INOCULATE SEED WITH EL INNOCULANT.
UNSCARIFIED	75 LBS.	1.7 LB.	M-L P C													MIX WITH TALL FESCUE OR WINTER ANNUALS.
SEED-BEARING HAY	3 TONS	138 LBS.	M-L P C	J	F	M	A	м	J	J	A	s	ō	N	D	CUT WHEN SEED IS MATURE, BUT BEFORE IT SHATTERS. ADD TALL FESCUE OR WINTER ANNUALS.

PLANTS, PLANTING RATES, AND PLANTING DATES

	BRO	DADCAST	RESOURCE			<u>P</u>	LAN	TING	DA	TES	BY F	RESC	DUR	CE A	AREA	.S
SPECIES		/ - PLS 2/	AREA 3/					Р	LAN	TING	DA	ΓES				REMARKS
	PER	PER						IDIC.								
	ACRE	1000 SQ. FT.		MAI J	RGII F		DAT A	ES.) M	J	J	Α	s	0	N	D	
LESPEDEZA AMBRO VIRGATA (LESPEDEZA VIRGATA DC) OR APPALOW (LESPEDEZA CUNEATA [DUMONT] G. DON)																300,000 SEED PER POUND. HEIGHT OF GROWTH IS 18 TO 24 INCHES. ADVANTAGEOUS IN URBAN AREAS. SPREADING-TYPE GROWTH. NEW GROWTH HAS BRONZE COLORATION. MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA, TALL FESCUE OR WINTER
SCARIFIED	60 LBS	1.4 LB	M-L P C		_				_							ANNUALS. DO NOT MIX WITH SERICEA LESPEDEZA. SLOW TO DEVELOP SOLID STANDS.
																INNOCULATE SEED WITH EL INNOCULANT.
UNSCARIFIED	75 LBS	1.7 LB	M-L P C													
LESPEDEZA, SHRUB			M-L													
(LESPEDEZA BICOLOR) (LESPEDEZA THUMBERGII)			P C			-								_		PROVIDE WILDLIFE FOOD AND COVER
PLANTS		3' X 3'														
OVEGRASS, WEEPING ERAGROSTIS CURVULA)	4 LBS	0.1 LB	M-L P			_			_							1,500,000 SEED PER POUND. QUICK COVER. DROUGHT
ALONE VITH OTHER PERENNIALS	2 LBS		C													TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS
MAIDENCANE (PANICUM HERMITOMON) SPRIGS	2' X 3	' SPACING	ALL													FOR VERY WET SITES. MAY CLOG CHANNELS. DIG SPRIGS FROM LOCAL SOURCES. USE ALONG RIVER BANKS AND SHORELINES.
PANICGRASS,	20 5	S 0.5 LB	P													GROWS WELL ON COASTAL SAND
ATLANTIC COASTAL (PANICUM AMARUM VAR. AMARULUM)	20 LL	O. O. E. E.	C													DUNES, BORROW AREAS, AND GRAVEI PITS. PROVIDES WINTER COVER FOR WILDLIFE. MIX WITH SERICEA
REED CANARY GRASS PHALARIS ARUNDINACEA)																GROWS SIMILAR TO
ALONE WITH OTHER PERENNIALS	50 LBS 30 LBS	1.1 LB 0.7 LB	M-L P													TALL FESCUE
SUNFLOWER 'AZTEC' MAXIMILLIAN HELIANTHUS	10 LBS	0.2 LB	M-L P C													227,000 SEED PER POUND. MIX WITH WEEPING LOVEGRASS OR OTHER

DESIGN PROFESSIONAL DAVID MORGAN, P.E. LEVEL II CERTIFICATION No.: 0000011643 EXPIRES: 06/03/2024

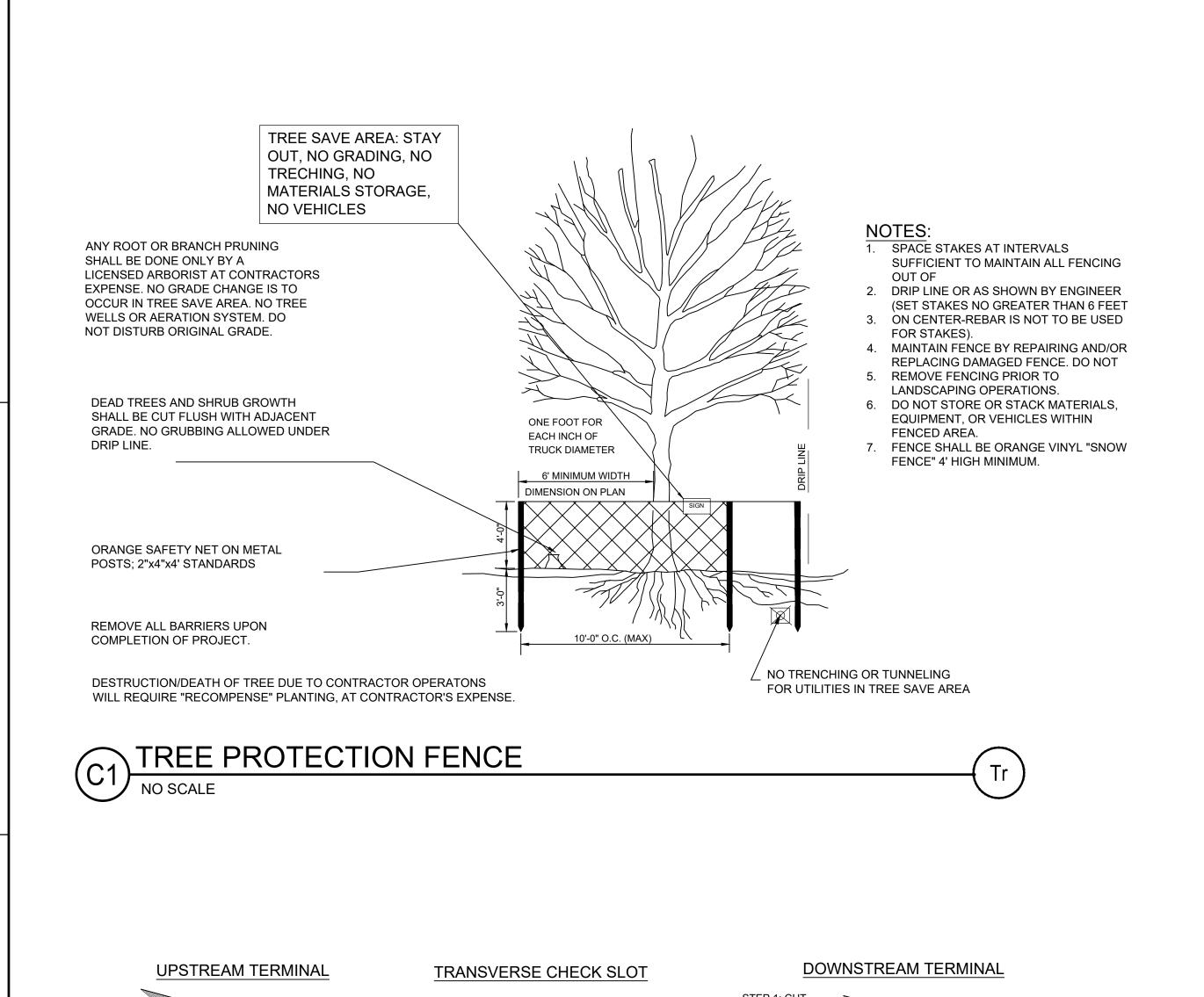
SEEDING SCHEDULE PERMANENT COVER

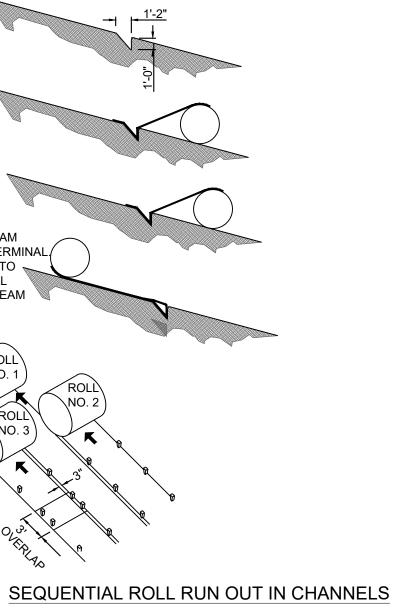
Know what's below. before you dig. Or Call 800-282-7411

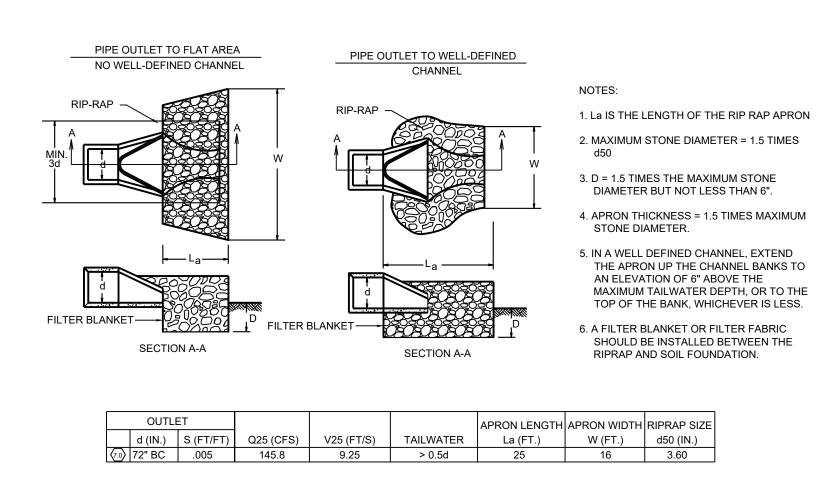
IDENTIFICATION CE503

100% DESIGN SUBMITTAL

MARK LANE
CULVERT REPLACEMENT







STORM DRAIN OUTLET PROTECTION
NO SCALE

STEP 2: STAKE

MAT INTO SLOT

STEP 3: BACKFILL

A. ROLL MAT UPSTREAM
OVER REFILLED TERMINAL

B. STAKE MAT DOWN TO

ANCHOR TERMINAL C. PROGRESS UPSTREAM

TERMINAL SLOT

WITH ROLL.

STEP 4:

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IDENTIFICATION CE504

MARK LANE
CULVERT REPLACEMENT
FAYETTE COUNTY, GA. 30214

COUNTY VE W, SUITE 2

TERMINAL SLOT

STEP 2: SNUG MAT INTO SLOT

B. USE 1"x3"

A. STAKE MAT INTO SLOT

PRESSURE-TREATED

BOARD TO BRACE MAT

AGAINST VERTICAL CUT

C. BACKFILL AND COMPACT

A. REVERSE MAT DIRECTION TO OVERLAY CHECK SLOT

B. STAKE MAT TO ANCHOR

TERMINAL

TYPICAL INSTALLATION GUIDELINES FOR SLOPE STABILIZATION WITH MATTING AND BALNKETS
NO SCALE

STEP 1: CUT CHECK SLOT

TENSION

TEMPORARILY STAKE MAT

STEP 2: WORK UPSTREAM

STEP 3: TUCK MAT INTO SLOT & STAKE

STEP 4: BACKFILL AND

PROGRESS UPSTREAM

PULL OUT TEMPORARY STAKES WHEN NO LONGER NEEDED FOR TENSIONING

1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.

TEMPORARY STAKES TO MAINTAIN ALIGNMENT.

CENTER ROLL FOR ALIGNMENT TO CHANNEL CENTER. 4. WORK OUTWARDS FROM CHANNEL CENTER TO EDGE. 5. USE 3' OVERLAP AND STAKE AT 5' INTERVAL ALONG SEAMS.

2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID CHANNEL AND PINNED WITH

3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND FIRST ROLL. USE

6. USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT LINING AT ROLL ENDS.

ACROSS CHECK SLOT. LAP

UNDER MODERATE

