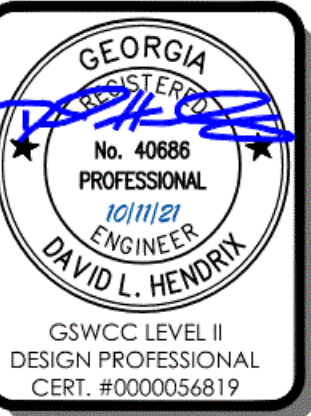


FLETCHER PARK PARKING LOT

FOR BULLOCH COUNTY

707 LAKEVIEW DR. STATESBORO, GA



ENGINEERING &
LAND SURVEYING
40 JOE KENNEDY BLVD
STATESBORO, GA 30458
(912)489-7112 OFFICE
(912)489-7125 FAX
NORTHWINDS III
2500 NORTHWINDS PKWY.
SUITE 300
ALPHARETTA, GA 30009
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NOTE TO CONTRACTOR: IF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS ARISE DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR AND/OR DEVELOPER SHALL NOTIFY THE ENGINEER IMMEDIATELY. THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWLEDGE OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE U.S. ARMY CORPS OF ENGINEERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE U.S. ARMY CORPS OF ENGINEERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE U.S. ARMY CORPS OF ENGINEERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE U.S. ARMY CORPS OF ENGINEERS.

SITE ADDRESS:
707 LAKEVIEW DRIVE
CITY OF STATESBORO
BULLOCH COUNTY, GEORGIA

PROJECT DIRECTORY	
DEVELOPER:	BULLOCH COUNTY 115 NORTH MAIN ST. STATESBORO, GA 30459 PHONE: 912.764.0127
ENGINEER:	MAXWELL-REDDICK AND ASSOCIATES, INC 40 JOE KENNEDY BLVD STATESBORO, GA 30458 PHONE: 912.489.7112

LIST OF ABBREVIATIONS			
ABBR.	DESCRIPTION	ABBR.	DESCRIPTION
BLDG.	BUILDING	NS	NAIL SET
BSL	BUILDING SETBACK LINE	N.T.S.	NOT TO SCALE
BOC	BACK OF CURB	OC	ON CENTER
CMF	CONCRETE MONUMENT FOUND	OHC	OVERHEAD CABLE
CMP	CORRUGATED METAL PIPE	OHP	OVERHEAD POWER
C.O.	CLEAN OUT	OHT	OVERHEAD TELEPHONE
CONC.	CONCRETE	PL	PROPERTY LINE
DI	DUCTILE IRON	R	RADIUS
DIA.	DIAMETER	RBF	REBAR FOUND
D.E.	DRAINAGE EASEMENT	RBS	REBAR SET
D.S.	DOWNSPOUT	RCP	REINFORCED CONCRETE PIPE
EL	ELBOW	REQD	REQUIRED
ELEV	ELEVATION	REV	REVISION
EXT.	EXTERIOR	RW	RIGHT-OF-WAY
EOP	EDGE OF PAVEMENT	RWFM	RIGHT-OF-WAY MONUMENT FOUND
ETP	EXISTING TOP OF PAVEMENT ELEV.	SES	SAFETY END SECTION
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FEET
FES	FLARED END SECTION	SPECS	SPECIFICATIONS
FFE	FINISHED FLOOR ELEVATION	SAN	SANITARY SEWER
FG	FINISHED GRADE	SS	SANITARY SEWER
FM	FORCE MAIN	SSE	SANITARY SEWER EASEMENT
FO	FIBER OPTIC	SSMH	SANITARY SEWER MANHOLE
FOC	FACE OF CURB	STD	STANDARD
FT	FEET	STO	STORM
GAB	GRADED AGGREGATE BASE	TBC	TOP OF BACK OF CURB
HC	HANDICAP	TC	TOP OF CURB
HW	HEADWALL	TEL	TELEPHONE
IE	INVERT ELEVATION	THREL	THROAT ELEVATION
INCL.	INCLUDING	TG	TOP OF GRATE
INT.	INTERIOR	TP	TOP OF PAVEMENT
IPS	IRON PIPE FOUND	TS	TOP OF SIDEWALK
IPF	IRON PIPE SET	TYP	TYPICAL
LF	LINEAR FEET	UGC	UNDERGROUND CABLE
MH	MANHOLE	UGP	UNDERGROUND POWER
NF	NAIL FOUND	UGT	UNDERGROUND TELEPHONE
NS	NAIL SET	WTR	WATER

DATA SOURCE NOTE:
"THE TOPOGRAPHIC AND ELEVATION DATA SHOWN HEREON WAS OBTAINED FROM A COMBINATION OF FIELD RUN TOPO BY MAXWELL-REDDICK & ASSOCIATES ENGINEERS & LAND SURVEYORS AND BULLOCH COUNTY LIDAR AND IS NOT CERTIFIED AS CORRECT BY THIS ENGINEER. USERS OF THIS DATA DO SO AT THEIR OWN RISK"

GEOTECHNICAL NOTE:
1. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE GEOTECHNICAL REPORT PERFORMED FOR THE SITE. IF A GEOTECHNICAL REPORT WAS NOT PREPARED THE CONTRACTOR IS TO PERFORM HIS OR HER OWN ANALYSIS OF THE SOIL CONDITIONS AT THE PROJECT SITE OR LOCATION.
2. MAXWELL-REDDICK AND ASSOCIATES, INC. DOES NOT WARRANT OR IMPLY ANY WARRANTIES AS TO THE SUITABILITY OF THE SOIL CONDITIONS AT THE SUBJECT SITE.
NOTE TO CONTRACTOR:
1. A LAND DISTURBING ACTIVITY PERMIT MUST BE OBTAINED PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES.
2. ALL UTILITIES SHALL BE LOCATED AND A DIGGING TICKET SHALL BE OBTAINED PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES.
3. IF ANY WETLANDS EXIST OR ARE FOUND TO EXIST ON THE SITE, NO DISTURBANCES SHALL OCCUR WITHIN THESE WETLANDS UNTIL THE DEVELOPER HAS OBTAINED ALL NECESSARY PERMITS FROM THE U.S. ARMY CORPS OF ENGINEERS.
4. IF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS ARISE DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR AND/OR DEVELOPER SHALL NOTIFY THE ENGINEER OR SURVEYOR IMMEDIATELY PRIOR TO CONSTRUCTING SAID INCONSISTENT ENTITIES. IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWLEDGE OF AN ERROR, DISCREPANCY OR CONFLICT IN ANY OF THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKES AND FAILS TO REPORT THE SAME, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM, WHICH IS REQUIRED TO BE REDONE OR REINCURRED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT AND WHICH WOULD HAVE BEEN AVOIDED HAD HE PROMPTLY REPORTED SAID ERRORS, DISCREPANCY OR CONFLICT WHEN HE KNEW OR SHOULD HAVE KNOWN OF THE SAME.

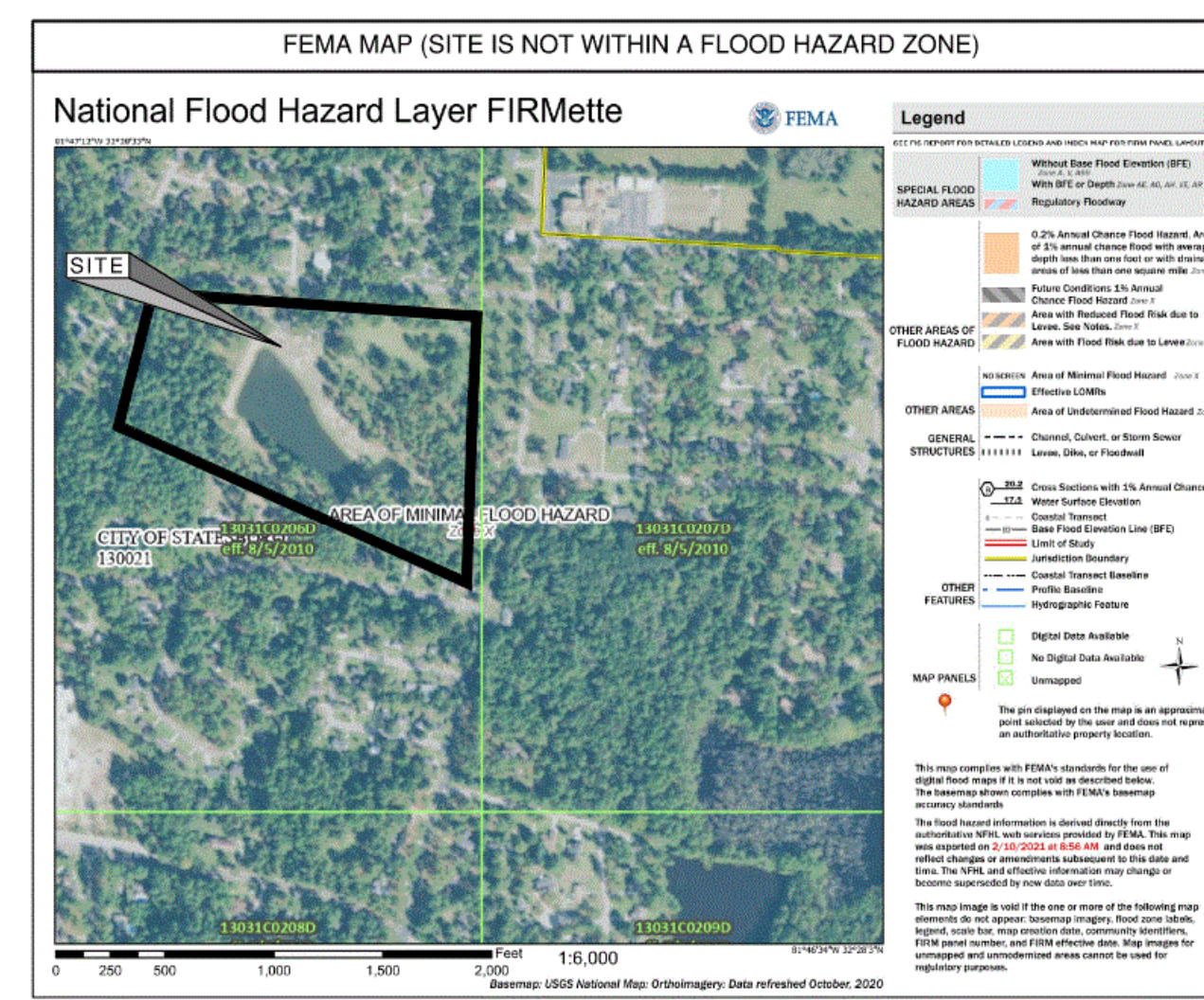
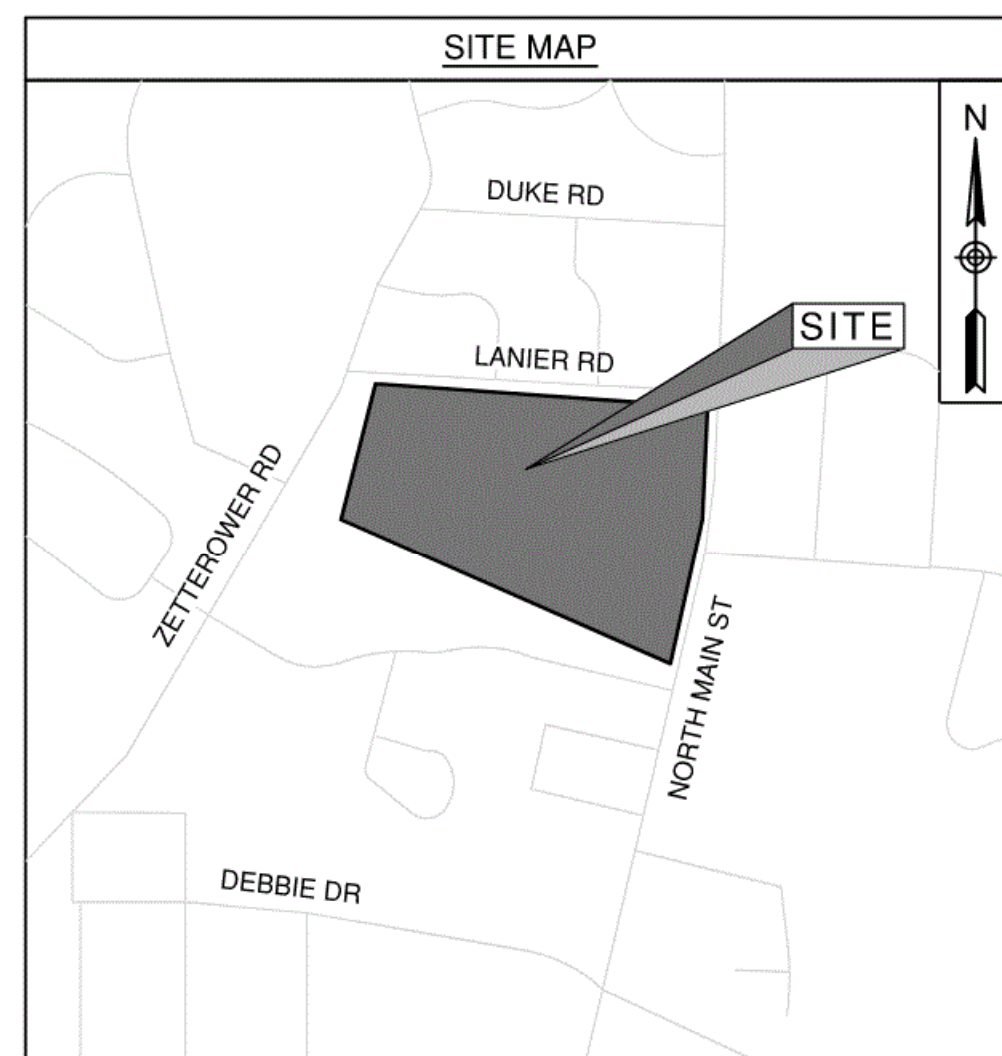
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SCHEDULE OF DRAWINGS		
DWG. NO.	DESCRIPTION	SHT. NO.
C1.0	COVER SHEET	1
C1.1	SPECIFICATIONS - 1	2
C1.2	SPECIFICATIONS - 2	3
C2.0	EXISTING SITE AND DEMOLITION PLAN	4
C3.0	PROPOSED LAYOUT	5
C3.1	TREE PLAN	6
C4.0	INITIAL SOIL EROSION CONTROL PLAN	7
C4.1	INTERMEDIATE SOIL EROSION CONTROL PLAN	8
C4.2	FINAL SOIL EROSION CONTROL PLAN	9
C4.3	SOIL EROSION CONTROL NOTES	10
C4.4	NPDES PLAN	11
C4.5	SOIL EROSION CONTROL DETAILS - 1	12
C4.6	SOIL EROSION CONTROL DETAILS - 2	13
C5.0	PAVING, GRADING, & DRAINAGE PLAN	14
C5.1	STORM PROFILE PLAN	15
C6.0	DETAILS-1	16

FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA
COVER SHEET

DESIGNED: TAL
DRAWN: TAL
CHECKED: DLH
DATE: APR. 12, 2021
JOB NO.: 2020-296
SCALE: AS SHOWN

DRAWING NUMBER
C1.0
SHEET NUMBER 1

STANDARDS AND SPECIFICATIONS

SECTION 02 41 00 - DEMOLITION

PART 1 - GENERAL 1.1

SCOPE: UNDER THIS HEADING SHALL BE INCLUDED ALL OPERATIONS NECESSARY FOR DEMOLITION OF THE EXISTING STRUCTURES, FOUNDATIONS, AND UTILITIES AS SHOWN.

PART 2 PRODUCTS N/A

PART 3 - EXECUTION 3.1

PROCEDURES: THE PROCEDURES PROPOSED FOR THE ACCOMPLISHMENT OF SALVAGE AND DEMOLITION WORK SHALL BE SUBMITTED FOR REVIEW. THE PROCEDURES SHALL PROVIDE FOR SAFE CONDUCT OF THE WORK, CAREFUL REMOVAL AND DISPOSITION OF MATERIALS SPECIFIED TO BE SALVAGED...

3.2 DUST CONTROL: THE AMOUNT OF DUST RESULTING FROM DEMOLITION SHALL BE CONTROLLED TO PREVENT THE SPREAD OF DUST TO OCCUPIED PORTIONS OF THE SITE AND TO AVOID CREATION OF A NUISANCE IN THE SURROUNDING AREA...

3.3 DISCONNECTION OF UTILITY SERVICES (IF APPLICABLE): UTILITIES SHALL BE DISCONNECTED AT THE POINTS INDICATED. WHERE SUCH DISCONNECTION WILL INTERRUPT THE UTILITY SERVICES TO AN AREA NOT INCLUDED IN THE CONTRACT...

3.5 PROTECTION OF EXISTING WORK: EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WORK DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR RESTORED TO ITS ORIGINAL CONDITION OR ACCEPTABLE EQUIVALENT.

3.6 EXISTING UTILITIES: DISCONNECTIONS OF UTILITY SERVICES SHALL BE COORDINATED SO AS NOT TO AFFECT SERVICE TO OTHER AREAS OUTSIDE OF THE PROJECT LIMITS. THE OWNERS OF ALL UTILITIES MUST BE CONTACTED PRIOR TO PROCEEDING WITH WORK...

3.7 DISPOSITION OF MATERIAL: TITLE TO MATERIALS. A) TITLE TO ALL MATERIALS AND EQUIPMENT TO BE DEMOLISHED IS VESTED IN THE CONTRACTOR UPON RECEIPT OF NOTICE TO PROCEED (UNLESS NOTED OTHERWISE ON THE PLANS)...

3.8 CONCRETE, MASONRY, AND OTHER NONCOMBUSTIBLE MATERIALS, OTHER THAN CONCRETE PERMITTED TO REMAIN IN PLACE, SHALL BE DISPOSED OF BY THE CONTRACTOR OR THE PROPERTY. OTHER MATERIALS SUCH AS NON-USEABLE CROSSTIES, LUMBER, ETC., SHALL BE REMOVED FROM THE SITE...

3.9 CLEANUP: REMOVE DEBRIS AND RUBBISH FROM THE SITE AS SOON AS PRACTICABLE. DO NOT ALLOW DEBRIS OR RUBBISH TO ACCUMULATE IN BUILDINGS OR ON SITE. REMOVE AND TRANSPORT DEBRIS, IN A MANNER AS TO PREVENT SPILLAGE ON STREETS OR ADJACENT AREAS...

3.10 MEASUREMENT AND PAYMENT: MEASUREMENT AND PAYMENT FOR WORK UNDER THIS SECTION SHALL BE INCLUDED IN OVERALL PROJECT LUMP SUM AMOUNT UNLESS OTHERWISE SPECIFIED.

SECTION 31 20 00 - EARTH MOVING

PART 1 - GENERAL 1.1

SCOPE: UNDER THIS HEADING SHALL BE INCLUDED THE FOLLOWING:

- A) EXCAVATION REQUIRED FOR STRUCTURES.
B) SURVEY EXCAVATION AS REQUIRED OR DESIGNATED.
C) EXCAVATION AS REQUIRED FOR ROADWAYS.
D) SHORING, SHEETING AND BRACING AS REQUIRED.
E) WASTING AND DISPOSAL OF EXCESS OR UNSUITABLE MATERIALS.
F) FURNISHING AND PLACING BORROW MATERIAL.
G) FURNISHING AND PLACING GRANULAR FOUNDATION MATERIAL.
H) COMPACTION OF ALL MATERIALS.
I) DEWATERING OR UN-WATERING AS NECESSARY TO COMPLETE THE EXCAVATIONS TO THE REQUIRED DEPTHS AND AS NECESSARY TO MAINTAIN THE EXCAVATION SUFFICIENTLY DRY SO THAT ALL WORK CAN BE ACCOMPLISHED.

ALL OTHER WORK SPECIFIED HEREIN.

1.2 GENERAL: THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS EXISTING CONDITION, AND SHALL ASSUME THE RISK OF ENCOUNTERING WHATEVER MATERIALS AS MAY OCCUR.

3.3 MATERIALS: A) EARTH FILL. EARTH FILL INCLUDING PAVEMENT SUB-GRADES, SHALL CONSIST OF ALL SUITABLE MATERIALS FROM REQUIRED EXCAVATIONS. SUITABLE MATERIALS FROM EARTH FILL SHALL GENERALLY BE COMPOSED OF SANDS, CLAYS AND MIXTURES AND SILTS AND MIXTURES. CLAY CAN BE ADDED TO THE MIXTURE...

3.4 EXCAVATION: EXCAVATION SHALL INCLUDE THE LOOSENING, LOADING, REMOVING, TRANSPORTING, STOCKPILING AND DISPOSING OF ALL MATERIALS, WET OR DRY, NECESSARY TO COMPLETE ALL STRUCTURES INCLUDED IN THIS CONTRACT TO THE LINES AND GRADES, AND AT THE LOCATIONS SHOWN ON THE CONTRACT DRAWINGS. EXCAVATION FOR OUTSIDE PIPING, STORM SEWERS AND UTILITIES SYSTEMS IS INCLUDED IN OTHER SECTIONS OF THESE SPECIFICATIONS...

3.5 UNSUITABLE MATERIAL: WHERE MATERIAL ENCOUNTERED IS UNSUITABLE FOR SUBGRADE CONSTRUCTION OF ROADS, BUILDINGS AND WALKS, SUCH MATERIAL SHALL BE EXCAVATED TO THE REQUIRED DEPTH OF COMPACTION (GENERALLY TWO FEET BELOW PAVEMENT BASE COURSE)...

3.8 BACKFILLING: ALL EXCAVATION SHALL BE BACKFILLED TO THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS. BACKFILL ADJACENT TO STRUCTURES SHALL NOT BE PLACED UNTIL FORMS, FORM LUMBER AND ALL DEBRIS FROM CONSTRUCTION HAS BEEN ENTIRELY REMOVED FROM AROUND THE WORK...

3.9 COMPACTION: A) GENERAL. COMPACTION OF EARTH FILL AND ALL PAVEMENT SUBGRADES SHALL BE PERFORMED TO THE PERCENTAGES OF MAXIMUM STANDARD OR MODIFIED DRY DENSITIES AND TO THE DEPTHS AS SHOWN ON THE DRAWING OR AS FOLLOWS: 1. SUBGRADES UNDER PAVED AREAS AND STRUCTURES, 99 PERCENT STANDARD (ASTM TEST D698) 24 INCHES...

3.11 GRADING: UPON COMPLETION OF OTHER CONSTRUCTION OPERATIONS, THE ENTIRE SITE, WITHIN THE LIMITS SHOWN ON THE DRAWINGS, SHALL BE BROUGHT TO THE FINISHED GRADES SHOWN, GRADES INDICATED AND WHICH WILL PROVIDE PROPER DRAINAGE. EARTH MOVING ALL SURFACES SHALL BE SLOPED TO THE ALL SURFACES SHALL BE RAKED SMOOTH AND SHALL BE FREE OF ALL VEGETABLE MATTER, DEBRIS AND STONES LARGER THAN 2 1/2 INCHES...

3.12 MEASUREMENT AND PAYMENT: MEASUREMENT AND PAYMENT FOR WORK UNDER THIS SECTION SHALL BE INCLUDED IN OVERALL PROJECT LUMP SUM AMOUNT. END OF SECTION 31 20 00.

SECTION 33 4000 - STORM DRAINAGE UTILITIES

PART 1 GENERAL 1.1

SCOPE: UNDER THIS HEADING SHALL BE INCLUDED ALL OPERATIONS IN CONNECTION WITH THE INSTALLATION OF THE STORM DRAINAGE SYSTEM.

1.2 EXCAVATION AND BACKFILL: EXCAVATION AND BACKFILLING SHALL BE AS SPECIFIED IN SECTION 312300. EXCAVATION AND FILL.

1.3 DELIVERY, STORAGE, AND HANDLING OF MATERIALS: A) DELIVERY AND STORAGE. MATERIALS DELIVERED TO SITE SHALL BE INSPECTED FOR DAMAGE, UNLOADED, AND STORED WITH THE MINIMUM OF HANDLING, DO NOT STORE MATERIALS DIRECTLY ON THE GROUND...

PART 2 - PRODUCTS

2.1 DRAINAGE STRUCTURES: DRAINAGE STRUCTURES SHALL BE OF THE FOLLOWING TYPES, CONSTRUCTED OF THE MATERIALS SPECIFIED FOR EACH TYPE AND IN ACCORDANCE WITH THE INDICATED DETAILS.

A) MANHOLES AND INLETS. CONSTRUCTION SHALL BE OF REINFORCED CONCRETE, PLAIN CONCRETE, BRICK, PRECAST REINFORCED CONCRETE OR PRECAST CONCRETE SEGMENTAL BLOCKS, COMPLETE WITH FRAMES AND COVERS OR GRATINGS. PRECAST CONCRETE MANHOLES AND INLETS SHALL BE DESIGNED FOR PLASTERING TO THE DEPTH AND TO SUSTAIN THE REQUIRED WEIGHT AND/OR SURFACE PRESSURES...

2.2 MATERIALS FOR DRAINAGE STRUCTURES: A) MORTAR. THE MORTAR FOR CONNECTIONS TO OTHER DRAINAGE STRUCTURES, AND BRICK OR BLOCK CONSTRUCTION SHALL CONFORM TO ASTM C270, TYPE M, EXCEPT THE MAXIMUM PLACEMENT TIME SHALL BE ONE HOUR...

B) CONCRETE. REFER TO DIVISION 03. C) PRECAST REINFORCED CONCRETE MANHOLES. MANHOLES SHALL CONFORM TO ASTM C478 OR AASHTO M197. JOINTS BETWEEN PRECAST CONCRETE RISERS AND TOPS SHALL BE FULLBEDDED IN CEMENT MORTAR...

D) PRECAST CONCRETE SEGMENTAL BLOCKS. BLOCKS SHALL CONFORM TO ASTM C139, NOT MORE THAN 8 INCHES THICK, NOT LESS THAN 8 INCHES LONG, AND OF SUCH SHAPE THAT JOINTS CAN BE SEALED EFFECTIVELY AND BONDED WITH CEMENT MORTAR. E) BRICKS. BRICKS SHALL CONFORM TO ASTM C62, GRADE SW; ASTM C55, GRADE 3 OR 3B; OR ASTM C32, GRADE MS. MORTAR FOR JOINTING AND PLASTERING SHALL CONSIST OF ONE PART PORTLAND CEMENT AND TWO PARTS FINE SAND...

PART 3 - EXECUTION 3.1 BEDDING: SEE SECTION 312300 "EXCAVATION AND FILL" FOR ADDITIONAL REQUIREMENTS. ALL STORM PIPING AND CONNECTIONS SHALL BE BEDDED WITH A MINIMUM OF 6 INCHES OF #57 STONE FOR THE FULL WIDTH OF THE TRENCH FOR PIPING AND A MINIMUM OF 12 INCHES BEYOND THE STRUCTURE BASE.

3.2 PLACING PIPE: EACH PIPE SHALL BE CAREFULLY EXAMINED BEFORE BEING LAID, AND DEFECTIVE OR DAMAGED PIPE SHALL NOT BE USED. PIPE LINES SHALL BE LAID TO THE GRADES AND ALIGNMENT INDICATED. PROPER FACILITIES SHALL BE PROVIDED FOR LOWERING SECTIONS OF PIPE INTO TRENCHES. UNDER NO CIRCUMSTANCES SHALL PIPE BE LAID IN WATER, AND NO PIPE SHALL BE LAID WHEN TRENCH CONDITIONS OR WEATHER ARE UNSUITABLE FOR SUCH WORK...

3.3 BACKFILLING: BACKFILLING SHALL BE DONE IN ACCORDANCE WITH SECTION 312300, "EXCAVATION AND FILL." ALL STORM PIPING SHALL BE BACKFILLED WITH SELECT BACKFILL (GRANULAR SANDY MATERIAL WITH NO MORE THAN 30% PASSING NO. 200 SIEVE) AND FOR THE ENTIRE DEPTH AND TO BE COMPACTED IN ACCORDANCE WITH SPECIFICATION SECTION 312300...

3.5 SUBGRADE DRAINS: SUBGRADE DRAINS WILL BE PROVIDED FROM STORM DRAIN INLETS. SUBGRADE DRAINS SHALL BE INSTALLED 4" OR ABOVE THE SPRING LINE OF THE STORM PIPE WHERE POSSIBLE. BUT IN NO CASE SHALL BE LESS THAN 8 INCHES ABOVE THE INVERT OF THE STORM PIPE AND NO LESS THAN 24 INCHES BELOW FINISHED GRADE OR TOP OF PAVEMENT ELEVATION AT THE INLET...

3.8 MEASUREMENT AND PAYMENT: MEASUREMENT AND PAYMENT FOR WORK UNDER THIS SECTION SHALL BE INCLUDED IN OVERALL PROJECT LUMP SUM AMOUNT. END OF SECTION 334000

SECTION 32 1600 - CURB AND GUTTER (AND CONCRETE SIDEWALKS)

PART 1 - GENERAL

1.1 SCOPE: UNDER THIS HEADING SHALL BE INCLUDED THE CONSTRUCTION OF ALL CONCRETE SIDEWALKS, CURB AND GUTTER.

PART 2 - PRODUCTS

2.1 CONCRETE: CONCRETE SHALL BE COMPOSED OF CEMENT, ADMIXTURES, FINE AGGREGATE, COARSE AGGREGATE, AND WATER PROPORTIONED AND MIXED TO PRODUCE A PLASTIC WORKABLE MIX IN ACCORDANCE WITH THE REQUIREMENTS OF AMERICAN CONCRETE INSTITUTE (ACI) MANUAL OF CONCRETE PRACTICE (MCC) AND THE SPECIFICATION OF ALL ITEMS OF CONTRACT WORK. UPON COMPLETION OF THE VARIOUS CONTRACT ITEMS, THERE SHALL BE A 28-DAY COMPRESSIVE STRENGTH OF NOT LESS THAN 4,000 PSI, AND CONTAIN NOT LESS THAN 540 POUNDS OF CEMENT PER CUBIC YARD OF CONCRETE...

ALL CONCRETE SHALL BE READY MIXED CONCRETE IN ACCORDANCE WITH ASTM C94. ALL REINFORCEMENT SHALL COMPLY WITH ASTM A615.

PART 3 - EXECUTION

3.1 PREPARATION: BEFORE PLACING CONCRETE, ALL DEBRIS AND WATER SHALL BE REMOVED FROM THE PLACES TO BE OCCUPIED BY THE CONCRETE. WOOD FORMS SHALL BE THOROUGHLY WETTED OR OILED, AND THE REINFORCEMENT CLEANED OF COATINGS, FORNWORK AND THE PLACEMENT OF REINFORCEMENT, PIPES, ANCHORS AND OTHER INSERTS SHALL BE INSPECTED BY THE DESIGN PROFESSIONAL BEFORE ANY CONCRETE IS DEPOSITED.

3.2 PLACING: THE PLACING AND DEPOSITING OF ALL CONCRETE SHALL BE DONE IN ACCORDANCE WITH REQUIREMENTS OF THE ACI. CONCRETE SHALL BE RAPIDLY HANDLED FROM MIXER TO FORMS AND DEPOSITED AS NEARLY AS POSSIBLE IN ITS FINAL POSITION TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING. CONCRETE SHALL NOT BE ALLOWED TO DROP FREELY MORE THAN 4 FEET. FOR GREATER DROP A TREMIE OR OTHER MEANS MUST BE USED. CONCRETE SHALL BE SPACED AND WORKED BY HAND AND VIBRATED TO ASSURE CLOSE CONTACT WITH ALL SURFACES OF FORMS AND REINFORCEMENT AND LEVELLED OFF AT PROPER GRADE TO RECEIVE FINISH. NO CONCRETE THAT HAS PARTIALLY HARDENED OR BEEN CONTAMINATED BY FOREIGN MATERIAL SHALL BE DEPOSITED IN THE WORK. CONCRETE SHALL NEVER BE DEPOSITED UPON SOFT MOUD OR DRY POROUS EARTH.

3.3 VIBRATION: CONCRETE SHALL BE PLACED WITH THE AID OF MANUAL VIBRATION. THE INTENSITY OF VIBRATION SHALL BE SUFFICIENT TO CAUSE FLOW OR SETTLEMENT OF THE CONCRETE IN PLACE, BUT SHALL NOT BE LONG ENOUGH TO CAUSE SEGREGATION OF THE MIX. TO SECURE EVEN AND DENSE SURFACES, VIBRATION SHALL BE SUPPLEMENTED BY HAND SPADING IN THE CORNERS AND ANGLES OF FORMS AND ALONG FORM SURFACES WHILE THE CONCRETE IS PLASTIC UNDER THE VIBRATORY ACTION. CAUTION MUST BE EXERCISED TO PREVENT ANY INJURY TO THE INSIDE FACE OF THE FORMS OR ANY MOVEMENT OF THE REINFORCEMENT.

3.4 CONSTRUCTION JOINTS, CONTROL JOINTS AND EXPANSION JOINTS: JOINTS SHALL BE FORMED AND LOCATED AS INDICATED ON THE PLANS, OR AS RECOMMENDED BY APPLICABLE REQUIREMENTS OF MCP. FINAL LOCATIONS ARE SUBJECT TO DESIGN PROFESSIONALS REVIEW. THE RATE AND METHOD OF PLACING CONCRETE AND THE ARRANGEMENT OF CONSTRUCTION JOINT BULKHEADS SHALL BE SUCH THAT THE CONCRETE BETWEEN CONSTRUCTION JOINTS SHALL BE PLACED IN A CONTINUOUS OPERATION. WHENEVER IT IS NECESSARY TO STOP WORK, SUCH STOPS SHALL BE LOCATED AND TEMPORARY BULKHEADS ERECTED. BEFORE CONCRETE IS RESUMED, THE SURFACES OF PREVIOUSLY PLACED CONCRETE SHALL BE ROUGHENED, CLEANED, WETTED AND SLUSHED WITH GROUT IMMEDIATELY BEFORE ADDITIONAL CONCRETE IS PLACED. GROUT SHALL BE ONE PART PORTLAND CEMENT AND TWO PARTS SAND. EXPANSION JOINTS SHALL BE PROVIDED IN WALKS, AND CURB AND GUTTER WHERE

SHOWN AND AT WALLS, INTERSECTING WALKS AND BUILDINGS. EXPANSION JOINTS IN WALKS AND CURB AND GUTTER SHALL BE MADE WITH 1/2 INCH THICK PREMOLDED, NON-EXTRUDING EXPANSION JOINT FILLER, "FLEXCELL," OR "MEADOWS" OR EQUAL, EXTENDING THROUGH THE FULL THICKNESS OF THE CONCRETE AT 50 FOOT INTERVALS. WHEN SEWELK IS ADJACENT TO CURB, THE EXPANSION JOINTS SHALL COINCIDE. THESE SHALL BE SET ACCURATELY IN PLACE TO STRAIGHT LINES AND CONCRETED IN. CONTROL JOINTS IN SIDEWALKS SHALL BE SPACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK AND IN CURB AND GUTTER AT 10 FOOT INTERVALS. EDGES OF GROOVES, EXPANSION JOINTS AND EDGES OF WALKS AND CURB AND GUTTER SHALL BE ROUNDED TO A 1/4 INCH RADIUS WITH SUITABLE GROOVING AND GROUTING TOOLS.

3.6 PROTECTION AND CURING: PROTECT CONCRETE AGAINST FROST, FREEZING TEMPERATURES, RAPID DRYING AND HEAVY RAIN AFTER PLACING. DURING THIS PERIOD, CONCRETE SHALL BE MAINTAINED ABOVE 70 DEGREES F. FOR AT LEAST 3 DAYS OR ABOVE 50 DEGREES F. FOR AT LEAST 5 DAYS. WALKS AND OTHER EXTERIOR CONCRETE SHALL BE CURED BY COVERING FIRST WITH SPRAYED ON CURING COMPOUND APPLIED IMMEDIATELY AFTER FINISHING AND THEN ALSO COMPLETELY COVERED WITH AN IMPERMEABLE FIBER FELT PAPER FOR A PERIOD OF NOT LESS THAN 12 HOURS. MEMBRANE CURING COMPOUND SHALL COMPLY WITH ASTM C309 FOR TYPE I AND PAPER SHALL COMPLY WITH ASTM C171. EXTERIOR CONCRETE WORK CONSTRUCTED DURING HOT WEATHER SHALL BE PROTECTED, IN ADDITION TO THE CURING SPECIFIED ABOVE, WITH SPENCER KELLOGG ANTI-SPALLING COMPOUND, OR OTHER BRANDS OF ANTI-SPALLING COMPOUND AS APPROVED BY THE DESIGN PROFESSIONAL. THE MIXTURE SHALL BE CLEAN AND DRY. THE MIXTURE SHALL BE APPLIED UNIFORMLY IN 2 APPLICATIONS, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE SECOND APPLICATION SHALL NOT BE MADE UNTIL AFTER THE FIRST COAT HAS BEEN COMPLETELY ABSORBED BY THE CONCRETE.

3.7 REMOVAL OF FORMS: CARE SHALL BE TAKEN IN THE REMOVAL OF THE FORMS NOT TO DAMAGE THE SURFACE OF THE CONCRETE. IMMEDIATELY AFTER THE FORMS ARE REMOVED, ALL DAMAGED OR IMPERFECT WORK SHALL BE PATCHED IN A NEAT AND WORKMANLIKE MANNER. OR IF BADLY DAMAGED OR IMPERFECT, THE WORK SHALL BE REBUILT. LEAVE SHORING IN PLACE UNTIL CONTRACTOR MEMBER WILL SUPPORT ITS OWN WEIGHT SAFELY PLUS ANY LOADS THAT MAY BE PLACED UPON IT. FRESHLY STRIPPED SURFACES SHALL NOT BE POINTED UP OR TOUCHED IN ANY MANNER BEFORE HAVING BEEN INSPECTED BY THE DESIGN PROFESSIONAL.

3.8 PATCHING AND FINISHING CONCRETE FORMED SURFACES: IMMEDIATELY AFTER REMOVING FORMS, ALL CONCRETE SURFACES SHALL BE INSPECTED, AND ANY HONEYCOMB, VOIDS, STONE POCKETS, AND THE HOLES SHALL BE PATCHED BEFORE THE CONCRETE IS THOROUGHLY DRY. DEFECTIVE AREAS SHALL BE CHIPPED AWAY TO A DEPTH OF NOT LESS THAN 1 INCH WITH THE EDGES PERPENDICULAR TO THE SURFACE. THE AREA TO BE PATCHED AND A SPACE OF AT LEAST 6 INCHES WIDE ENTIRELY SURROUNDING IT SHALL BE WETTED TO PREVENT ABSORPTION OF WATER FROM THE PATCHING MORTAR. THE PATCH SHALL BE FINISHED IN SUCH A MANNER AS TO MATCH THE ADJOINING SURFACE. IMMEDIATELY UPON REMOVING FORMS FROM FINISHED CONCRETE SURFACES, THEY SHALL BE CLEANED OF ALL CEMENT FILMS AND ANY AIR POCKETS SHALL BE CAREFULLY FILLED WITH CEMENT MORTAR WORKED IN TO INSURE A BOND WITH THE CONCRETE AND FINISHED OFF TO MATCH THE SURROUNDING SURFACE. ALL VERTICAL EXTERIOR SURFACES EXPOSED IN THE FINISHED WORK SHALL BE FINISHED TO A SMOOTH RUBBED FINISH HAVING A UNIFORM APPEARANCE.

3.9 TESTING: A) GENERAL. ALL TESTING FOR QUALITY ASSURANCE WILL BE PERFORMED BY A LABORATORY RETAINED BY OWNER. B) STRENGTH. FLEXURE TESTS SHALL BE PERFORMED IN ACCORDANCE WITH AASHTO T 126 AND T 97. EACH SET FOR FIELD CONTROL SHALL CONSIST OF 3 BEAM SPECIMENS OBTAINED DURING CONCRETE PLACEMENT OPERATIONS AND 4 CYLINDERS FROM THE SAME LOAD OF MATERIAL. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH ASTM 0496. WHERE ADEQUATE CORRELATION IS OBTAINED, THE DESIGN PROFESSIONAL MAY ALLOW USE OF CYLINDERS IN PLACE OF BEAM TESTING.

C) FREQUENCY. THE FOLLOWING TABLE PRESENTS THE MINIMUM TESTING INTERVALS FOR ALL CONCRETE TESTING. THE INTERVALS MAY BE INCREASED DURING THE WORK AT THE DIRECTION OF THE DESIGN PROFESSIONAL.

Table with 2 columns: TEST, FREQUENCY. Rows include FLEXURE, SLUMP, ENHANCED AIR DENSITY, ONE SET PER 800 SQUARE YARDS, ONE PER EACH 3 DELIVERY VEHICLES, ONE PER EACH 3 DELIVERY VEHICLES, ONE PER EACH 5 DELIVERY VEHICLES.

3.10 MEASUREMENT AND PAYMENT: MEASUREMENT AND PAYMENT FOR WORK UNDER THIS SECTION SHALL BE INCLUDED IN OVERALL PROJECT LUMP SUM AMOUNT UNLESS OTHERWISE SPECIFIED IN SECTION 012200. END OF SECTION 321600

BASES, BALLASTS, AND PAVING 32 10 00 - 6

SECTION 32 10 00 - BASES, BALLASTS, & PAVING

1. SCOPE:

UNDER THIS HEADING SHALL BE INCLUDED THE FURNISHING AND INSTALLATION OF BASE COURSE AND PAVEMENT AS SHOWN INCLUDING SUBGRADE PREPARATION, BASE COURSE AND PAVEMENT.

2. GENERAL:

THE SURFACE OF THE BASE COURSE WILL BE INSPECTED BY THE ENGINEER FOR ADEQUATE COMPACTION AND SURFACE TOLERANCES SPECIFIED IN APPLICABLE BASE COURSE OR SUB-BASE COURSE. ANY RUTS OR SOFT YIELDING SPOTS THAT MAY APPEAR IN THE BASE COURSE, ANY AREAS HAVING INADEQUATE COMPACTION, AND ANY DEVIATIONS OF THE SURFACE FROM THE REQUIREMENTS SPECIFIED FOR THE BASE COURSE SHALL BE CORRECTED BY LOOSENING THE AFFECTED AREAS, BY REMOVING UNSATISFACTORY MATERIAL AND ADDING APPROVED MATERIAL WHERE REQUIRED AND BY RESHAPING AND RECOMPACTING TO LINE AND GRADE AND TO THE SPECIFIED DESIGN REQUIREMENTS. COMPACTION OF BASE MATERIAL SHALL BE DONE BY CONVENTIONAL MEANS USING A 30,000 TO 40,000 POUND VIBRATORY ROLLER OR OTHER MEANS OF OBTAINING THE REQUIRED COMPACTION.

3. SUBGRADE PREPARATION:

THE SUBGRADE SHALL BE BROUGHT TO THE LINE AND GRADE NECESSARY TO ACCOMMODATE THE BASE AND PAVEMENT AT THE REQUIRED FINISHED GRADES. ALL SUBGRADE SHALL BE PROOF ROLLED AS SPECIFIED, BEFORE BASE COURSE IS PLACED ON THE SUBGRADE.

4. BASE COURSE:

PREPARATION OF BASE.

THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS FOR EACH PAVEMENT CATEGORY OF THE CONTRACT SHALL BE ESTABLISHED AND MAINTAINED BY MEANS OF LINE AND GRADE STAKES PLACED AT THE SITE OF THE WORK BY THE CONTRACTOR. SOIL/CEMENT CENTRAL PLANT MIX. THE SOIL, CEMENT AND WATER SHALL BE MIXED IN A PUG MILL EITHER OF THE BATCH OR CONTINUOUS FLOW TYPE. THE PLANT SHALL BE EQUIPPED WITH FEEDING AND METERING DEVICES THAT WILL MIX SOIL, CEMENT AND WATER INTO THE MIXER IN THE SPECIFIED QUANTITIES. THE WEIGHT OR RATE OF FEED OF THE CEMENT SHALL BE WITHIN 5 PERCENT OF THE AMOUNT DESIGNATED. MIXING SHALL CONTINUE UNTIL A UNIFORM, HOMOGENEOUS MIXTURE IS OBTAINED.

THE BASE SHALL BE CONSTRUCTED TO PROVIDE A MINIMUM 400 PSI BEARING CAPACITY WITHIN 7 DAYS. THE CONTRACTOR SHALL REFER TO THE PORTLAND CEMENT ASSOCIATION'S HANDBOOK FOR SOIL CEMENT CONSTRUCTION AND THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ADDITIONAL INFORMATION. A DESIGN MIX FOR THE SOIL CEMENT PAVEMENT SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE START OF PAVING OPERATIONS. FIELD CONTROL TESTS SHALL BE MADE PERIODICALLY TO DETERMINE THE MOISTURE CONTENT AND THE EFFECTIVENESS OF THE COMPACTING EQUIPMENT.

THE MIXTURE SHALL BE HAULED TO THE ROADWAY IN TRUCKS WITH PROTECTIVE COVERS. THE MIXTURE SHALL BE PLACED ON A MOST SUBGRADE IN A UNIFORM LAYER BY A SPREADER. THE LAYERS SHALL BE OF SUCH CONTOUR AND THICKNESS THAT THE COMPLETED BASE WILL CONFORM TO THE REQUIRED GRADE AND CROSS SECTION. OUT FOUR OF THE MIXTURE IN PILES OR WINDROWS WILL NOT BE PERMITTED.

NOT MORE THAN 30 MINUTES SHALL ELAPSE BETWEEN THE PLACEMENT OF THE BASE COURSE MIXTURE IN ADJACENT LANES EXCEPT AT LONGITUDINAL CONSTRUCTION JOINTS. NOT MORE THAN 60 MINUTES SHALL ELAPSE BETWEEN THE START OF MOST MIXING AND THE START OF COMPACTION.

COMPACTION, FINISHING AND TESTING SHALL CONFORM TO SECTION 301 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

SOIL/CEMENT MIXED IN PLACE. A 3-INCH THICK LAYER OF SAND, CLAY OR SAND, SHELL MATERIAL SHALL BE SPREAD UNIFORMLY OVER THE ROADBED. THE SAND, CLAY OR SAND, SHELL MATERIAL WILL BE MIXED WITH 3 INCHES OF EXISTING SUBGRADE MATERIAL TO FORM A UNIFORM MIXTURE TO THE DEPTH SHOWN ON THE TYPICAL SECTION ON THE PLANS.

SAND, CLAY BORROW SHALL CONSIST OF SOILS FROM APPROVED SOURCES. AFTER MIXING WITH NATIVE SOIL THE MIXTURE SHALL BE HOMOGENEOUS AND FREE OF OBJECTIONABLE MATERIALS SUCH AS ROOTS AND ORGANIC MATTER. THE MIXTURE SHOULD HAVE 100 PERCENT PASSING A 1 1/2 INCHES SIEVE.

SHELL MATERIAL SHALL BE WASHED BY A SCREEN WASHER WITH MESH NOT SMALLER THAN 1/4 INCH AND ALL MATERIAL SHALL PASS A 2 1/2 INCHES SIEVE. THE SAND SHALL BE NON-PLASTIC AND FREE OF OBJECTIONABLE MATERIAL. THE SAND, SHELL MATERIAL SHALL BE UNIFORMLY MIXED WITH THE NATIVE MATERIAL TO PRODUCE A HOMOGENEOUS MIXTURE.

NOT LESS THAN 50 POUNDS OF PORTLAND CEMENT PER SQUARE YARD SHALL BE UNIFORMLY SPREAD WITH A MECHANICAL SPREADER OVER THE IN PLACE MATERIAL. THE RATE OF APPLICATION SHALL BE SUCH THAT THE POUNDS SPREAD SHALL BE WITHIN 10 PERCENT OF THE AMOUNT SPECIFIED. CEMENT SHALL NOT BE APPLIED IN PUDDLES OF WATER OR TO SOILS THAT ARE MORE THAN 2 PERCENTAGE POINTS ABOVE THE OPTIMUM OR ON WINDY DAYS WHEN LOSS OF CEMENT FROM WIND IS DETRIMENTAL TO THE WORK.

MIXING, COMPACTING, FINISHING AND TESTING SHALL CONFORM TO SECTION 301 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

STABILIZED AGGREGATE BASE COURSE. THE AGGREGATE IN THE BASE COURSE SHALL CONSIST OF A MIXTURE OF EITHER CRUSHED GRAVEL, TOGETHER WITH SAND, SAND, GRAVEL, SOIL OR OTHER MATERIALS HAVING SIMILAR CHARACTERISTICS COMBINED AS NECESSARY TO GIVE A MIXTURE CONFORMING TO THE REQUIREMENTS. DESCRIBED HEREIN. THE MATERIAL AND INSTALLATION SHALL MEET THE REQUIREMENTS OF TYPE 2, SECTION 310 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

CRUSHED CONCRETE BASE COURSE:

CRUSHED CONCRETE SHALL BE DERIVED EXCLUSIVELY FROM PORTLAND CEMENT CONCRETE PAVEMENT OR STRUCTURAL CONCRETE AS A BASE, SUBBASE, OR SHOULDER COURSE AND SHALL BE FREE OF DELETERIOUS MATERIALS SUCH AS ORGANIC MATTER, EPOXY EXPANSION MATERIAL, WOOD, METAL, GLASS, TILES, BRICK, ETC. UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER. THE AGGREGATE IN THE BASE COURSE SHALL CONSIST OF A MIXTURE OF EITHER CRUSHED CONCRETE, TOGETHER WITH SAND, SAND, GRAVEL, SOIL OR OTHER MATERIALS HAVING SIMILAR CHARACTERISTICS COMBINED AS NECESSARY TO GIVE A MIXTURE CONFORMING TO THE REQUIREMENTS OF TYPE 2, SECTION 310 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. THE CRUSHED CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 815 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

LIMEROCK BASE COURSE:

AT THE CONTRACTOR'S OPTION LIMEROCK OF EITHER MIAMI OR OCALA FORMATION MAY BE USED, BUT LIMEROCK OF ONLY ONE FORMATION MAY BE USED ON ANY CONTRACT.

THE MINIMUM PERCENTAGE OF CARBONATES OF CALCIUM AND MAGNESIUM IN THE LIMEROCK MATERIAL SHALL BE 70. THE MAXIMUM PERCENTAGE OF WATER SENSITIVE CLAY MATERIAL SHALL BE 3.

THE LIQUID LIMIT SHALL NOT EXCEED 35 AND THE MATERIAL SHALL BE NON-PLASTIC.

LIMEROCK MATERIAL SHALL NOT CONTAIN CHERTY OR OTHER EXTREMELY HARD PIECES, OR LUMPS, BALLS OR POCKETS OF SAND OR CLAY SIZE MATERIAL IN SUFFICIENT QUANTITY AS TO BE DETRIMENTAL TO THE PROPER BONDING, FINISHING, OR STRENGTH OF THE LIMEROCK BASE.

AT LEAST 97 PERCENT (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1 1/2 INCH SIEVE AND THE MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST. THE FINE MATERIAL SHALL CONSIST ENTIRELY OF DUST OF FRACTURE. ALL CRUSHING OR BREAKING UP WHICH MIGHT BE NECESSARY IN ORDER TO MEET SUCH SIZE REQUIREMENTS SHALL BE DONE BEFORE THE MATERIAL IS PLACED ON THE ROAD.

BITUMINOUS PRIME:

BITUMINOUS PRIME SHALL BE CUTBACK ASPHALT RC 70 APPLIED AT THE RATE OF 0.20 GALLONS PER SQUARE YARDS. THE MATERIAL AND APPLICATION SHALL COMPLY WITH THE APPLICABLE PORTIONS OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND THE MATERIAL AND APPLICATION RATE CAN BE ADJUSTED WHEN THE APPLICABLE SECTION SO RECOMMENDS.

BITUMINOUS TACK COAT:

THE BITUMINOUS TACK COAT SHALL BE AN ASPHALTIC MATERIAL WHICH MEETS THE REQUIREMENTS OF SECTION 413 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. APPLICATION RATE SHALL BE AT THE RATE INDICATED IN THE APPROPRIATE SECTION.

BITUMINOUS PAVEMENT:

THE BITUMINOUS WEARING SURFACE SHALL BE A PLANT MIX CONFORMING TO THE REQUIREMENTS OF SECTION 404 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. THE JOB MIX SHALL MEET THE REQUIREMENTS OF SUPERPAVE ASPHALTIC CONCRETE MIXTURES, SECTION 828 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

A JOB MIX FORMULA INDICATING THE SINGLE DEFINITE PERCENTAGE FOR EACH SIEVE FRACTION OF AGGREGATE AND FOR ASPHALT SHALL BE SUBMITTED PRIOR TO SURFACING OPERATIONS. THE JOB MIX FORMULA SHALL ALSO SHOW THE PERCENT Voids, THE PERCENT Voids FILLED WITH ASPHALT, THE UNIT WEIGHT PER CUBIC FOOT OF COMPACTED MIX, AND OTHER PARAMETERS AS REQUIRED BY SECTION 828.

THE GENERAL COMPOSITION LIMITS ARE EXTREME RANGES OF TOLERANCES TO GOVERN MIXTURES MADE FROM ANY RAW MATERIALS MEETING THE SPECIFICATIONS. THE SUBMISSION OF THE JOB MIX FORMULA SHALL BIND THE CONTRACTOR TO FURNISH PAVING MIXTURE MEETING THE EXACT FORMULA WITHIN ALLOWABLE TOLERANCES.

COMPACTION SHALL BE DONE WITH AN 8 TO 10 TON STEEL, WHEELED ROLLER OR OTHER MEANS APPROVED BY THE ENGINEER. THICKNESS SHALL NOT VARY MORE THAN ONE FOURTH INCH AND SMOOTHNESS SHALL NOT EXCEED ONE EIGHTH INCH FOR A TEN FOOT STRAIGHT EDGE.

REMOVE AND REPLACE PAVEMENT:

PAVEMENT AND BASE COURSE WHICH MUST BE REMOVED FOR CONSTRUCTING SEWERS, MANHOLES, FORCE MAINS, WATER LINES, AND ALL OTHER APPURTENANCES IN STREETS SHALL BE REPLACED WITH THE PAVING SECTION SHOWN ON THE DRAWINGS OR MATCH THE EXISTING PAVEMENT SECTION. THE PAVEMENT SHALL BE REMOVED TO NEAT LINES CUT BY A MASONRY SAW. THE TOP 18 INCHES OF SUBGRADE MATERIAL IMMEDIATELY UNDER THE PAVING BASE AND ALSO ROAD SHOULDER SHALL BE CAREFULLY REMOVED AND KEPT SEPARATE FROM THE REST OF THE EXCAVATED MATERIAL. THIS MATERIAL SHALL BE PLACED IN THE TOP 18 INCHES OF THE BACKFILL. FURTHER COMPACTION SHALL BE ACCOMPLISHED BY LEAVING THE BACKFILLED TRENCH OPEN TO TRAFFIC WHILE MAINTAINING THE SURFACE TO CRUSHED STONE OR GRAVEL. SETBACKS IN TRENCHES SHALL BE REFILLED WITH CRUSHED STONE OR GRAVEL, AND SUCH MAINTENANCE SHALL CONTINUE UNTIL REPLACEMENT OF PAVEMENT.

TESTING:

THE FOLLOWING TESTS WILL BE MADE IN ACCORDANCE WITH THE CURRENT EDITION OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

AT LEAST ONE DENSITY DETERMINATION SHALL BE MADE FOR EACH 3,000 SQUARE YARDS OF BASE. ASPHALT EXTRACTION AND AGGREGATE GRADATION ON THE ASPHALTIC CONCRETE PLANT MIX: ONE FOR EACH 500 TONS OF MATERIAL DELIVERED TO THE JOB SITE.

PROOF ROLLING:

PROOF ROLLING WILL BE DONE WITH A LOADED TANDEM DUMP TRUCK (15 YARDS HEAPED) OR AS SPECIFIED IN THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. TEST ROLLING WILL BE DONE PARALLEL TO THE CENTERLINE AT SPEEDS BETWEEN 2 AND 5 MILES PER HOUR.

PAINTED LINES FOR PARKING AND TRAFFIC AREAS:

PAINTED LINES SHALL BE A 1/2 INCHES WIDE AND BE LOCATED AS SHOWN ON THE PLANS. PAINT AND ALL WORK SHALL BE ACCORDANCE WITH SECTION 452 OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. GLASS BEADS ARE NOT REQUIRED. THE PAINT MANUFACTURER SHALL SUBMIT A STATEMENT WHICH CERTIFIES THAT THE PAINT MEETS THE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS. COLOR SHALL BE SAME AS THAT OF REMOVED STRIPPING.

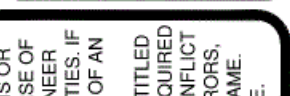
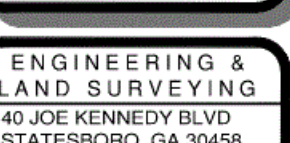
MEASUREMENT AND PAYMENT:

MEASUREMENT AND PAYMENT FOR WORK UNDER THIS SECTION SHALL BE INCLUDED IN OVERALL PROJECT LUMP SUM AMOUNT.

END OF SECTION 32 10 00.



GSWCC LEVEL II DESIGN PROFESSIONAL CERT #000056819



STANDARDS AND SPECIFICATIONS

SECTION 312300 - EXCAVATION AND FILL FOR UNDERGROUND UTILITIES

PART 1 - GENERAL

1.1 SCOPE:

UNDER THIS HEADING SHALL BE INCLUDED THE EXCAVATION, TRENCHING AND BACKFILLING REQUIRED FOR ALL APPLICABLE UNDERGROUND UTILITY SYSTEMS. UTILITY SYSTEMS INCLUDE SANITARY SEWERS, WATER PIPING FORCE MAINS, UNDERGROUND ELECTRICAL SERVICE AND COMMUNICATIONS CONDUIT.

1.2 GENERAL:

UNDERGROUND PIPING AND UTILITY SYSTEMS WHICH ARE TO BE INSTALLED IN TRENCHES WHOSE LOWEST POINT OF EXCAVATION IS BELOW THE EXISTING GROUND LEVEL, AND ARE UNAFFECTED BY AN EXCAVATION FOR STRUCTURES, MAY BE INSTALLED AT ANY TIME DURING THE COURSE OF THE WORK. PIPING AND SYSTEMS TO BE INSTALLED IN OR OVER FILL, BACKFILL OR NEW EMBANKMENTS SHALL NOT BE INSTALLED UNTIL ALL EARTHWORK HAS BEEN COMPLETED TO ROUGH GRADE, NOR UNTIL SETTLEMENT OF THE FILL OR EMBANKMENT HAS TAKEN PLACE. BRACED AND SHEETED TRENCHES AND OPEN TRENCHES SHALL COMPLY WITH ALL STATE LAWS AND REGULATIONS, AND LOCAL ORDINANCES RELATING TO SAFETY, LIFE, HEALTH AND PROPERTY. ALSO, THIS SHALL CONFORM TO THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR EXCAVATIONS, FINAL RULE (29 CFR PART 1926) AS PRINTED IN THE OCTOBER 31, 1989 ISSUE OF THE FEDERAL REGISTER. THE SIDES AND BOTTOMS OF THE TRENCHES SHALL BE PROTECTED AGAINST ANY INSTABILITY WHICH MAY INTERFERE WITH THE PROPER LAYING OF THE PIPE AND AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND OTHERS AND AS MAY BE NECESSARY TO PROTECT ADJACENT STRUCTURES. REFER TO SAFETY REQUIREMENTS OF THE GENERAL CONDITIONS AND SPECIAL CONDITIONS. PROTECTIVE SYSTEMS FOR TRENCHES SHALL BE UTILIZED BY THE CONTRACTOR AND SHALL CONFORM WITH SECTION 1926.652, 29 CFR PART 1926, FINAL RULE.

PART 2 - PRODUCTS

N/A

PART 3 - EXECUTION

3.1 LOCATION AND PROTECTION OF UTILITIES AND STRUCTURES:

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ACQUAINT HIMSELF WITH THE LOCATION OF ALL UTILITIES AND STRUCTURES BOTH PRESENT AND PROPOSED, ALSO ALL EXISTING SURFACE STRUCTURES WHICH MAY BE AFFECTED BY WORK UNDER THE CONTRACT. THE LOCATION OF ANY UNDERGROUND STRUCTURES FURNISHED, SHOWN ON THE PLANS OR GIVEN ON THE SITE ARE BASED UPON THE AVAILABLE RECORDS BUT ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT, AND ARE GIVEN ONLY TO ASSIST THE CONTRACTOR IN MAKING A DETERMINATION OF THE EXISTENCE OF UNDERGROUND STRUCTURES, OVERHEAD UTILITIES, POLES, ETC., SHALL BE PROTECTED AGAINST DAMAGE BY THE CONTRACTOR, AND IF DAMAGED BY THE CONTRACTOR, SHALL BE REPLACED BY HIM. THE CONTRACTOR SHALL NOTIFY THOSE WHO MAINTAIN UTILITIES SUFFICIENTLY IN ADVANCE OF THE PROPOSED CONSTRUCTION SO THAT THEY MAY LOCATE, UNCOVER AND DISCLOSE SUCH WORK. IF THE PROGRESS OF CONSTRUCTION NECESSITATES THE REMOVAL OR RELOCATION OF POLES, OVERHEAD UTILITIES AND OBSTRUCTIONS, THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND ASSUME ALL COSTS OF THE WORK INVOLVED. THE CONTRACTOR SHALL PROVIDE FOR THE CONTINUANCE OF THE FLOW OF ANY SEWERS, DRAINS, WATER PIPES, AND WATER COURSES, AND THE LIKE, WHERE SUCH FACILITIES, WATER COURSES, OR ELECTRIC OVERHEAD WIRES OR CONDUITS ARE INTERFERED WITH BY THE WORK OF THE CONTRACTOR, THE INTERRUPTION SHALL BE A MINIMUM AND SHALL BE SCHEDULED IN ADVANCE WITH THE DESIGN PROFESSIONAL AND THE UTILITY OWNER, THE CONTRACTOR SHALL RESTORE ALL FACILITIES INTERFERED WITH TO THEIR ORIGINAL CONDITION OR ACCEPTABLE EQUIVALENT. THE COST OF SUCH RESTORATION OR DAMAGE CAUSED DIRECTLY BY HIS WORK SHALL BE PAID FOR BY THE CONTRACTOR.

3.2 EXCAVATION AND TRENCHING:

A) EXCAVATION. EXCAVATE ALL MATERIALS ENCOUNTERED. SEE ARTICLE 9 FOR PAYMENT FOR REMOVAL OF UNSUITABLE MATERIALS. B) CAUTION IN EXCAVATION. THE CONTRACTOR SHALL PROCEED WITH CAUTION IN THE EXCAVATION AND PREPARATION OF THE TRENCH SO THAT THE EXACT LOCATION OF UNDERGROUND STRUCTURES IN THE TRENCH ZONE MAY BE DETERMINED BEFORE BEING DAMAGED. HE SHALL BE HELD RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF SUCH STRUCTURES WHEN BROKEN OR OTHERWISE DAMAGED BECAUSE OF HIS OPERATIONS. C) SUBSURFACE EXPLORATIONS. THE CONTRACTOR SHALL MAKE EXPLORATIONS AND EXCAVATIONS AT NO ADDITIONAL CHARGE TO THE OWNER TO DETERMINE THE LOCATION OF EXISTING UNDERGROUND STRUCTURES. D) DEPTH OF TRENCH. UTILITIES AND OTHER PIPING SHALL BE LAID IN OPEN TRENCHES AS SHOWN AND SPECIFIED. TRENCHES SHALL BE EXCAVATED TO THE DESIGNATED LINES AND GRADES, BEGINNING AT THE OUTLET END AND PROGRESSING TOWARD THE UPPER END IN EACH CASE. TRENCHES FOR PIPE SHALL BE SHAPED TO THE LOWER 1/3 OF THE PIPE AND PROVIDE UNIFORM AND CONTINUOUS BEARING. BELL HOLES SHALL BE DUG TO ALLOW AMPLE ROOM FOR WORKING FULLY AROUND EACH JOINT. E) WIDTH OF TRENCH. TRENCHES SHALL BE OF MINIMUM WIDTH TO PROVIDE AMPLE WORKING SPACE FOR MAKING JOINTS AND TAMPING BACKFILL. WIDTH ON EACH SIDE OF BARREL OF PIPE SHALL BE NOT LESS THAN 8 INCHES OR MORE THAN 12 INCHES. SIDES OF TRENCHES SHALL BE CLOSELY VERTICAL TO TOP OF PIPE AND SHALL BE SHEET PILED AND BRACED WHERE SOIL IS OF UNSTABLE NATURE. ABOVE THE TOP OF THE PIPE, TRENCHES MAY BE SLOPED. THE WIDTH OF THE TRENCH ABOVE THIS LEVEL MAY BE WIDER FOR SHEETING AND BRACING AND THE PERFORMANCE OF THE WORK. F) ALIGNMENT AND GRADE. TRENCHES SHALL BE EXCAVATED ON THE ALIGNMENTS SHOWN ON THE PLANS, AND TO THE DEPTH AND GRADE NECESSARY TO ACCOMMODATE THE PIPES AND THE ELEVATIONS SHOWN. WHERE ELEVATIONS OF THE INVERT OR CENTERLINE OF A PIPE ARE SHOWN AT THE ENDS OF A PIPE, THE PIPE SHALL BE INSTALLED AT A CONTINUOUS GRADE BETWEEN THE TWO ELEVATIONS. G) OVER EXCAVATION. EXCAVATION IN EXCESS OF THE DEPTH REQUIRED FOR PROPER SHAPING SHALL BE CORRECTED BY BRINGING TO GRADE THE INVERT OF THE DITCH WITH COMPACTED COARSE, GRANULAR MATERIAL AT NO ADDITIONAL EXPENSE TO THE OWNER. BELL HOLES SHALL BE EXCAVATED TO RELIEVE BELLS OF ALL LOAD, BUT SMALL ENOUGH TO INSURE THAT SUPPORT IS PROVIDED THROUGHOUT THE LENGTH OF THE PIPE BARREL. EXCAVATION IN EXCESS OF THE DEPTHS REQUIRED FOR MANHOLES AND OTHER STRUCTURES SHALL BE CORRECTED BY PLACING A SUB-FOUNDATION OF 1,500 PSI CONCRETE. AT NO ADDITIONAL EXPENSE TO THE OWNER, IF TRENCHES ARE EXCAVATED TO WIDTHS IN EXCESS OF THOSE SPECIFIED, OR IF THE TRENCH WALLS COLLAPSE, THE PIPE SHALL BE LAID IN ACCORDANCE WITH THE NEXT BETTER CLASS OF BEDDING AT THE EXPENSE OF THE CONTRACTOR.

3.3 TRENCHES:

TRENCHES SHALL BE MAINTAINED IN A SAFE CONDITION TO PREVENT HAZARDOUS CONDITIONS TO PERSONS WORKING IN OR AROUND THE TRENCH. BRACED AND SHEETED TRENCHES AND OPEN TRENCHES SHALL COMPLY WITH ALL STATE AND FEDERAL LAWS AND REGULATIONS, AND LOCAL ORDINANCES RELATING TO SAFETY, LIFE, HEALTH AND PROPERTY. THE TOP PORTION OF THE TRENCH MAY BE EXCAVATED WITH SLOPING OR VERTICAL SIDES TO ANY WIDTH WHICH WILL NOT CAUSE DAMAGE TO ADJOINING STRUCTURES, ROADWAYS, UTILITIES, ETC. THE BOTTOM OF THE TRENCHES SHALL BE GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT EACH SECTION OF THE PIPE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH, EXCEPT FOR THE PORTIONS OF THE PIPE SECTIONS EXCAVATED FOR BELL HOLES AND FOR THE SEALING OF PIPE JOINTS. BELL HOLES AND DEPRESSIONS FOR JOINTS SHALL BE DUG AFTER THE TRENCH BOTTOM HAS BEEN GRADED AND IN ORDER THAT THE PIPE RESTS UPON THE TRENCH BOTTOM FOR ITS FULL LENGTH AND SHALL BE ONLY OF SUCH LENGTH, DEPTH AND WIDTH FOR MAKING THE PARTICULAR TYPE OF JOINTS, THE BOTTOM OF THE TRENCH SHALL BE ROUNDED SO THAT AT LEAST THE BOTTOM ONE THIRD OF THE PIPE SHALL REST ON UNDISTURBED EARTH FOR THE FULL LENGTH OF THE BARREL AS JOINTING OPERATIONS WILL PERMIT. THIS PART OF THE EXCAVATION SHALL BE DONE MANUALLY ONLY A FEW FEET IN ADVANCE OF THE PIPE LAYING BY WORKMEN SKILLED IN THIS TYPE OF WORK. THE SIDES OF ALL TRENCHES AND EXCAVATION FOR STRUCTURES SHALL BE HELD BY STAY BRACING, OR BY SKELETON OR SOLID SHEETING AND BRACING ACCORDING TO CONDITIONS ENCOUNTERED, TO PROTECT THE EXCAVATION, ADJOINING PROPERTY AND FOR THE SAFETY OF PERSONNEL. BRACING AND SHORING MAY BE REMOVED WHEN THE LEVEL OF THE BACKFILLING HAS REACHED THE ELEVATION TO PROTECT THE PIPE WORK AND ADJOINING PROPERTY. WHEN SHEETING OR SHORING ABOVE THIS LEVEL CANNOT BE SAFELY REMOVED, IT MAY BE LEFT IN PLACE. TIMBER LEFT IN PLACE SHALL BE CUT OFF AT LEAST 2 FEET BELOW THE SURFACE. NO SHEETING BELOW THE LEVEL OF THE TOP OF THE PIPE MAY BE REMOVED.

3.4 DEWATERING AND PROTECTION AGAINST WATER:

THE CONTRACTOR SHALL REMOVE WATER FROM THE SITE AND SHALL LOWER THE GROUND WATER LEVEL AS NECESSARY TO COMPLETE THE EXCAVATIONS TO THE REQUIRED DEPTHS AND SO THAT ALL REQUIRED WORK CAN BE ACCOMPLISHED UNDER DRY CONDITIONS. THE CONTRACTOR SHALL DO SUCH WELL CONSTRUCTION, WELL POINTING, SHEETING, DITCHING, AND PUMPING, AND SHALL CONSTRUCT NECESSARY DRAINS, CHANNELS AND SUMPS TO KEEP HIS EXCAVATIONS AND NEW STRUCTURES CLEAR OF GROUND WATER, STORM WATER OR SEWAGE AND TO KEEP HIS CONSTRUCTION AREAS DRY DURING THE PROGRESS OF THE WORK. ADEQUATE MEASURES AND PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR TO PROTECT HIS WORK FROM UPLIFT DUE TO GROUND WATER, STORM WATER, OR FLOOD WATER. ANY DAMAGES WHICH MAY RESULT SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL ACCEPT ALL RESPONSIBILITY FOR DAMAGE TO THE WORK OF THIS CONTRACT BECAUSE OF FLOODS AND WATER PRESSURES AND OTHER WATER DAMAGES AND SHALL ACCEPT ALL RISKS OF FLOODS AND OTHER EVENTS WHICH MAY OCCUR. ALL WATER DISCHARGED BY PUMPING OPERATIONS SHALL BE DISCHARGED SO AS NOT TO INTERFERE WITH WORK UNDER THIS CONTRACT OR WITH EXISTING STRUCTURES AND OPERATIONS. WATER FROM DEWATERING OPERATIONS SHALL BE CONVEYED TO THE EXISTING DRAINAGE FEATURES, USING PIPING AND PUMPING FACILITIES PROVIDED BY THE CONTRACTOR. ROUTE OF DEWATERING PIPE SHALL BE SUBJECT TO THE DESIGN PROFESSIONAL'S REVIEW. DISCHARGE FACILITIES AND WATER QUALITY SHALL COMPLY WITH APPLICABLE REGULATIONS OF STATE AND FEDERAL AGENCIES. DEWATERING OPERATIONS SHALL BE UNINTERRUPTED AND CONTINUOUS DURING THE COURSE OF THE WORK SO AS NOT TO ENDANGER ANY CONSTRUCTION IN PLACE OR TO PRESENT A HAZARD TO WORKMEN IN AND AROUND THE SITE. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY INCLUDING, BUT NOT LIMITED TO, STANDBY EQUIPMENT AND CONSTANT ATTENDANCE TO ENSURE THAT THE DEWATERING SYSTEM REMAINS OPERATIONAL AND EFFECTIVE THROUGHOUT THE PERIOD OF TIME THAT IT IS REQUIRED, NO WATER SHALL BE ALLOWED TO RUN OVER ANY UNCOMPLETED PORTIONS OF THE WORK. NO UTILITY OF THE WORK SHALL BE CONSTRUCTED UNDER WATER. THE COST OF DEWATERING SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM OF WORK FOR WHICH IT IS REQUIRED.

3.5 PILING EXCAVATED MATERIALS:

ALL EXCAVATED MATERIAL SHALL BE PILED IN A MANNER THAT WILL NOT ENDANGER THE WORK AND THAT WILL AVOID OBSTRUCTING ROADWAYS.

3.6 LIMIT TO LENGTH OF OPEN TRENCH:

THE ROUTINE OPERATION SHALL BE SO ORGANIZED TO KEEP THE LENGTH OF OPEN TRENCH TO A PRACTICABLE MINIMUM. NO TRENCHES SHALL BE ALLOWED TO REMAIN OPEN OVER NIGHT OR DURING PERIODS WITH NO CONSTRUCTION ACTIVITY. ADDITIONALLY, OPEN TRENCHES SHALL BE PROPERLY SECURED AND PROTECTED DURING TIMES OF CONSTRUCTION ACTIVITIES.

3.7 REMOVAL OF UNSUITABLE MATERIAL:

SHOULD OVERDEPTH EXCAVATION BE NECESSARY TO REMOVE UNSUITABLE MATERIAL AND TO REPLACE WITH SATISFACTORY MATERIAL, THE CONTRACTOR WILL BE PAID FOR THIS WORK FOR REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BASED ON THE FOLLOWING REQUIREMENTS: A) UNSUITABLE MATERIALS FOR FILLING AND BACKFILLING ARE THOSE CLASSIFIED AS MH, CH, OL, OH AND PT IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM. EXCAVATED SOILS THAT ARE TOO WET TO COMPACT SHALL NOT BE CLASSIFIED AS EXCAVATED TO HIGH MOISTURE CONTENT ALONE. B) WHEN THE TRENCH IS EXCAVATED TO THE PLAN DEPTH OR AS REQUIRED BY THESE SPECIFICATIONS, AND SOFT OR OTHER MATERIAL NOT SUITABLE FOR BEDDING PURPOSES IS ENCOUNTERED IN THE TRENCH, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN PROFESSIONAL FOR INSPECTION AND MEASUREMENT OF THE UNSUITABLE MATERIAL TO BE REMOVED. THE CONTRACTOR WILL NOT RECEIVE ADDITIONAL PAY FOR THE NORMAL VOLUME OF BEDDING AGGREGATE THAT IS USED WHILE INSTALLING ANY PIPING AS PER PLANS AND DETAILS. THIS VOLUME SHALL BE SUBTRACTED FROM THE VOLUME OF UNSUITABLE MATERIALS, REMOVED AND REPLACED WITH SUITABLE MATERIAL. C) NO OVERDEPTH EXCAVATION OR BACKFILLING OF THE OVERDEPTH EXCAVATED TRENCH SHALL START UNTIL PROPER MEASUREMENTS OF THE TRENCH HAVE BEEN TAKEN BY THE DESIGN PROFESSIONAL FOR THE DETERMINATION OF THE QUANTITY IN CUBIC YARDS OF UNSUITABLE MATERIAL EXCAVATED, BACKFILL MATERIAL AND BACKFILLING SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN ARTICLE 12 BELOW. D) NO PAYMENT FOR ANY OVERDEPTH EXCAVATION OF SOFT UNSTABLE MATERIAL DUE TO THE FAILURE OF THE CONTRACTOR TO PROVIDE ADEQUATE MEANS TO KEEP THE TRENCH DRY. E) NO PAYMENT WILL BE MADE FOR ANY OVERDEPTH EXCAVATION OF THE UNSUITABLE MATERIAL AND REPLACEMENT NOT INSPECTED AND MEASURED BY THE DESIGN PROFESSIONAL PRIOR TO EXCAVATION.

3.8 BEDDING OF CONCRETE, DUCTILE IRON OR STEEL PIPE:

PIPE SHALL BE LAID ON FOUNDATIONS PREPARED IN ACCORDANCE WITH ASTM C12 AS MODIFIED HEREIN, AND IN ACCORDANCE WITH THE VARIOUS CLASSES OF BEDDING REQUIRED BY THE TRENCH WIDTH AND TRENCH DEPTH FOR THE SIZE OF PIPE TO BE LAID. BEDDING SHALL BE INCLUDED IN THE APPROPRIATE UNIT PRICE BID FOR CONCRETE, DUCTILE IRON OR STEEL PIPE. A) CLASS "A" BEDDING. CLASS "A" BEDDING SHALL BE ACHIEVED BY EITHER OF THE FOLLOWING TWO CONSTRUCTION METHODS:

- 1. CONCRETE CRADLE. THE PIPE SHALL BE BEDDED IN A MONOLITHIC CRADLE OF PLAIN OR REINFORCED CONCRETE HAVING A MINIMUM THICKNESS UNDER THE PIPE BARREL OF ONE-FOURTH THE INSIDE DIAMETER OF THE PIPE BUT IN NO CASE LESS THAN 4 INCHES AND EXTENDING UP THE SIDES TO A HEIGHT OF AT LEAST ONE-FOURTH OF THE PIPE OUTSIDE DIAMETER. THE CRADLE SHALL HAVE A WIDTH EQUAL TO THE FULL WIDTH OF THE TRENCH AS EXCAVATED. THE PIPE SHALL BE LAID TO LINE AND GRADE ON CONCRETE BLOCKING AFTER WHICH THE CONCRETE SHALL BE PLACED TO THE LIMITS DESCRIBED. CONCRETE SHALL BE 3,000 PSI CONCRETE. 2. CONCRETE ARCH. THE PIPE SHALL BE BEDDED IN CRUSHED STONE OR ROUNDED GRAVEL BEDDING MATERIAL HAVING A MINIMUM THICKNESS UNDER THE PIPE BARREL OF ONE-FOURTH THE OUTSIDE DIAMETER OF THE PIPE BUT IN NO CASE LESS THAN 4 INCHES AND SHALL EXTEND UP THE SIDES OF THE PIPE TO THE HORIZONTAL CENTERLINE. THE TOP HALF OF THE PIPE SHALL BE COVERED WITH A MONOLITHIC PLAIN OR REINFORCED CONCRETE ARCH HAVING A THICKNESS OF ONE-FOURTH THE INSIDE DIAMETER OF THE PIPE BUT IN NO CASE LESS THAN 4 INCHES AT THE CROWN OF THE PIPE. THE ARCH SHALL HAVE A WIDTH EQUAL TO THE FULL WIDTH OF THE TRENCH AS EXCAVATED.

B) CLASS "B" BEDDING.

CLASS "B" BEDDING SHALL BE ACHIEVED BY EITHER OF TWO CONSTRUCTION METHODS:

- 1. THE BOTTOM OF THE TRENCH EXCAVATION SHALL BE SHAPED TO CONFORM TO A CYLINDRICAL SURFACE WITH A RADIUS AT LEAST 2 INCHES GREATER THAN THE RADIUS OF THE OUTSIDE OF PIPE WITH A WIDTH SUFFICIENT TO ALLOW 6/10 OF THE WIDTH OF THE PIPE BARREL TO BE BEDDED IN FINE GRANULAR FILL PLACED IN THE SHAPED EXCAVATION, CAREFULLY COMPACTED BACKFILL SHALL BE PLACED AT THE SIDES OF THE PIPE TO A THICKNESS OF AT LEAST 12 INCHES ABOVE THE TOP OF THE PIPE. 2. THE PIPE MAY BE BEDDED IN COMPACTED CRUSHED STONE, PLACED ON A FLAT TRENCH BOTTOM. THE CRUSHED STONE BEDDING SHALL HAVE A MINIMUM THICKNESS OF 1/4 THE OUTSIDE PIPE DIAMETER AND SHALL EXTEND HALFWAY UP THE PIPE BARREL AT THE SIDES. THE REMAINDER OF THE SIDE FILLS AND A MINIMUM DEPTH OF 12 INCHES OVER THE TOP OF THE PIPE SHALL BE FILLED WITH CAREFULLY COMPACTED MATERIAL.

C) CLASS "C" BEDDING.

CLASS "C" BEDDING SHALL BE ACHIEVED BY EITHER OF TWO CONSTRUCTION METHODS:

- 1. THE PIPE SHALL BE BEDDED IN AN EARTH FOUNDATION FORMED IN THE TRENCH BOTTOM BY A SHAPED EXCAVATION WHICH WILL FIT THE PIPE BARREL WITH REASONABLE CLOSENESS FOR A WIDTH OF AT LEAST 50 PERCENT OF THE OUTSIDE PIPE DIAMETER, THE SIDE FILLS AND AREA OVER THE PIPE TO A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE PIPE AND SHALL BE FILLED WITH COMPACTED FILL. 2. THE PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL PLACED ON A FLAT TRENCH BOTTOM. THE GRANULAR BEDDING SHALL HAVE A MINIMUM THICKNESS OF 4 INCHES UNDER THE BARREL AND SHALL EXTEND 1/4 OF THE OUTSIDE DIAMETER UP THE PIPE BARREL AT THE SIDES. REMAINDER OF THE SIDE FILLS AND AREA TO A MINIMUM DEPTH OF 12 INCHES OVER THE TOP OF THE PIPE SHALL BE FILLED WITH COMPACTED BACKFILL. CLASS "C" BEDDING SHALL BE USED EXCEPT WHERE THE USE OF CLASS "A" OR CLASS "B" BEDDING IS SHOWN ON THE PLANS.

D) CLASS "D" BEDDING.

CLASS "D" BEDDING IS ACHIEVED BY SHAPING BELL HOLES ONLY ON A FLAT TRENCH AND NO CARE IS TAKEN TO SECURE COMPACTION AT THE SIDES AND IMMEDIATELY OVER THE PIPE. THIS TYPE BEDDING IS NOT PERMITTED. E) BELL HOLES. BELL HOLES SHALL BE PROVIDED IN ALL CLASSES OF BEDDING TO RELIEVE PIPE BELLS OF ALL LOAD, BUT SMALL ENOUGH TO INSURE THAT SUPPORT IS PROVIDED THROUGHOUT THE LENGTH OF THE PIPE BARREL.

F) COARSE GRANULAR BEDDING. COARSE GRANULAR BEDDING MATERIAL SHALL CONSIST OF CRUSHED STONE OR PEA GRAVEL, CLEAN AND GRADED, 95 TO 100 PERCENT OF WHICH SHALL PASS A 3/4 INCH SIEVE WITH 95 TO 100 PERCENT RETAINED ON A NO. 4 SIEVE. BEDDING MATERIAL SHALL BE PLACED ON A FLAT BOTTOM TRENCH AND THOROUGHLY COMPACTED BY TAMPING OR SLICING WITH A FLAT BLADE SHOVEL. COMPACTED BEDDING MATERIAL SHALL BE EXTENDED UP THE SIDES OF THE PIPE TO THE HEIGHTS SHOWN FOR THE VARIOUS CLASSES OF BEDDING.

G) OVERWIDTH EXCAVATION.

IF TRENCHES ARE EXCAVATED TO WIDTHS IN EXCESS OF THOSE SPECIFIED BELOW, OR IF TRENCH WALLS COLLAPSE, PIPE SHALL BE LAID IN ACCORDANCE WITH THE REQUIREMENTS FOR AT LEAST THE NEXT BETTER CLASS OF BEDDING AT THE EXPENSE OF THE CONTRACTOR.

H) BORROW BACKFILL. BORROW BACKFILL WILL BE REQUIRED IF THERE IS NOT SUFFICIENT SUITABLE MATERIAL AVAILABLE FROM OTHER PARTS OF THE WORK TO BACKFILL THE TRENCHES. BORROW BACKFILL FROM APPROVED BORROW PITS SHALL BE USED, ONLY THOSE SOILS IN THE BORROW PITS THAT MEET THE SPECIFIED REQUIREMENTS FOR SUITABLE MATERIAL SHALL BE USED. I) TRENCH WIDTHS. TRENCH WIDTHS AT THE TOP OF THE PIPE AND DEPTHS FOR CLAY, CONCRETE AND METAL PIPES USING THE VARIOUS BEDDING CLASSES.

3.9 BEDDING OF PVC PIPE AND FRP PIPE:

A) PIPE SHALL BE BEDDED TRUE TO LINE AND GRADE WITH UNIFORM AND CONTINUOUS SUPPORT FROM A FIRM BASE IN ACCORDANCE WITH ASTM D2321 AS MODIFIED HEREIN. BLOCKING SHALL NOT BE USED TO BRING THE PIPE TO GRADE. BEDDING MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE FOR PLASTIC AND FRP PIPES. B) EMBEDMENT MATERIALS LISTED HERE INCLUDE A NUMBER OF PROCESSED MATERIALS PLUS THE SOIL TYPES DEFINED BY THE USCS SOIL CLASSIFICATION SYSTEMS IN ASTM D2487. THESE MATERIALS ARE GROUPED INTO CATEGORIES ACCORDING TO THEIR SUITABILITY FOR THIS APPLICATION:

- 1. CLASS I. ANGULAR 6 TO 40 MM (1/4 TO 1-1/2 INCHES), GRADED STONE INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE, AND CRUSHED SHELLS. 2. CLASS II. COARSE SANDS AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF 40 MM (1-1/2 INCHES), INCLUDING VARIOUSLY GRADED SANDS AND GRAVELS CONTAINING SMALL PERCENTAGES OF FINES, GENERALLY GRANULAR AND NON-COHESIVE, EITHER WET OR DRY. SOIL TYPES GW, GP, SW AND SP ARE INCLUDED IN THIS CLASS. 3. CLASS III. FINE SAND AND CLAYEY GRAVELS, INCLUDING FINE SANDS, SAND-CLAY MIXTURES, AND GRAVEL-CLAY MIXTURES. SOIL TYPES GM, GC, SM AND SC ARE INCLUDED IN THIS CLASS. 4. CLASS IV. SILT, SILTY CLAYS AND CLAYS INCLUDING INORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY AND LIQUID LIMITS. SOIL TYPES MH, ML, CH AND CL ARE INCLUDED IN THIS CLASS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING OR INITIAL BACKFILL.

5. CLASS V.

THIS CLASS INCLUDES THE ORGANIC SOILS OL, OH, AND PT AS WELL AS SOILS CONTAINING FROZEN EARTH, DEBRIS, ROCKS LARGER THAN 40 MM (1-1/2 INCHES) IN DIAMETER, AND OTHER FOREIGN MATERIALS. THESE MATERIALS SHALL NOT BE USED FOR BEDDING, HAUNCHING AND INITIAL BACKFILL.

- C) COMPACTION OF FOUNDATION, BEDDING, HAUNCHING AND INITIAL BACKFILL SHALL EXTEND TO THE TRENCH WALL. D) EMBEDMENT MATERIAL IN THE AREA AROUND THE PIPE SHALL BE INSTALLED WITH CARE. CARE SHALL BE USED TO INSURE THAT SUFFICIENT MATERIAL HAS BEEN WORKED UNDER THE HAUNCH OF THE PIPE TO PROVIDE ADEQUATE SIDE SUPPORT. PRECAUTIONS MUST BE TAKEN TO PREVENT MOVEMENT OF THE PIPE DURING PLACING OF THE MATERIAL THROUGH THE PIPE HAUNCH. PLACE INITIAL BACKFILL MATERIAL IN THREE STAGES: FIRST, TO THE CENTER LINE OF THE PIPE; SECOND, TO THE TOP OF THE PIPE; AND THIRD, TO A POINT 12 INCHES ABOVE THE TOP OF THE PIPE. COMPACT EACH STAGE OF HAUNCHING AND INITIAL BACKFILL BY HAND OR MECHANICAL TAMPING TO A MINIMUM OF 90 PERCENT STANDARD PROCTOR DENSITY. WHERE UNSTABLE TRENCH WALLS EXIST BECAUSE OF MIGRATORY MATERIALS SUCH AS WATERBEARING SILTS OR FINE SANDS, CARE SHALL BE TAKEN TO PREVENT THE LOSS OF SIDE SUPPORT THROUGH THE MIGRATORY ACTION. E) AVOID CONTACT BETWEEN THE PIPE AND COMPACTION EQUIPMENT. COMPACTION OF HAUNCHING, INITIAL BACKFILL AND BACKFILL MATERIAL SHALL BE DONE IN SUCH A WAY SO THAT COMPACTION EQUIPMENT WILL NOT HAVE A DAMAGING EFFECT ON THE PIPE. TRENCH DEPTHS, USING THE VARIOUS BEDDING CLASSES. G) ASTM D2321 "UNDERGROUND INSTALLATION OF FLEXIBLE THERMOPLASTIC SEWER PIPE" SHALL BE USED IN CONJUNCTION WITH THE ABOVE.

3.10 BACKFILLING:

BACKFILLING CONSISTS OF PLACING SUITABLE MATERIALS REMOVED DURING THE EXCAVATION INTO THE EXCAVATED AREAS, PLACING EMBEDMENT MATERIALS AND COMPACTING THE SAME TO A DENSITY EQUAL TO OR GREATER THAN WHAT EXISTS BEFORE EXCAVATION OR AS SPECIFIED HEREIN. UNDER BACKFILLING OPERATIONS IS ALSO INCLUDED REMOVAL OF EXCESS MATERIALS AND DEBRIS FROM THE SITE, LEVELING ALL DEPRESSIONS CAUSED BY OPERATION OF EQUIPMENT AND MAINTAINING THE BACKFILLED AREAS UNTIL ACCEPTED BY THE OWNER. ALL BACKFILL MATERIAL SHALL BE FREE OF STONES, CONCRETE AND CLAY LUMPS LARGER THAN 1/2 CUBIC FOOT. ROOTS, STUMPS AND RUBBISH WHICH WILL DECOMPOSE WILL NOT BE PERMITTED IN THE BACKFILL. BACKFILL MATERIAL SHALL HAVE ITS MOISTURE CONTENT CORRECTED, AS MAY BE NECESSARY BEFORE BEING PLACED IN THE TRENCH TO BRING THE MOISTURE CONTENT TO APPROXIMATELY "OPTIMUM" FOR GOOD COMPACTION. ANY ROCK, STONE, CONCRETE, CLAY LUMPS LARGER THAN 1/3 CUBIC FOOT IN VOLUME, RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR IN A LAWFUL MANNER. BACKFILLING OPERATIONS IN THIS WORK ARE REFERRED TO HEREIN AS BACKFILLING AT THE PIPE ZONE, TYPE "A" AND TYPE "B". BACKFILLING IN THE EXCAVATED AREAS BELOW PARTS OF PROPOSED STRUCTURES SHALL BE REFERRED TO HEREINAFTER AS TYPE "A" BACKFILLING, WHERE TRENCHES CROSS OR EXTEND UNDER STRUCTURES OR INTO PRESENT ROADWAYS, FUTURE ROADWAYS OR PARKING AREAS AS SHOWN ON THE PLANS, THE BACKFILLING SHALL BE REFERRED TO HEREINAFTER AS TYPE "A" BACKFILLING. BACKFILLING IN ALL OTHER AREAS SHALL BE REFERRED TO HEREINAFTER AS TYPE "B" BACKFILLING. A) BACKFILLING AT THE PIPE ZONE: THROUGHOUT THE ENTIRE CONSTRUCTION, BACKFILLING AT THE PIPE ZONE SHALL INCLUDE BEDDING AND SHALL BE AS FOLLOWS: BACKFILL MATERIAL SHALL BE PLACED BELOW, AROUND EACH SIDE, AND OVER THE TOP OF THE PIPE, IN APPROXIMATELY HORIZONTAL LAYERS TO A HEIGHT OF 12 INCHES OVER THE TOP OF THE PIPE. LAYERS SHALL BE OF SUCH THICKNESS TO FACILITATE THE REQUIRED COMPACTION. THIS BACKFILL SHALL BE WELL COMPACTED BY USING MECHANICAL TAMPING EQUIPMENT IN SUCH MANNER AS NOT TO DAMAGE THE PIPE, PIPE JOINTS OR SHIFT THE PIPE ALIGNMENT. WORKMEN SHALL NOT BE PERMITTED TO WALK OVER THE PIPE UNTIL AT LEAST 12 INCHES OF COMPACTED FILL HAS BEEN PLACED OVER THE PIPE. THE CONTRACTOR SHALL NOT USE WATER TO OBTAIN COMPACTION EXCEPT FOR ADDING WATER TO THE BACKFILL MATERIAL BEFORE PLACING IN THE TRENCH TO BRING THE MOISTURE CONTENT TO APPROXIMATELY "OPTIMUM" FOR GOOD COMPACTION. B) TYPE "A" BACKFILLING. TYPE "A" BACKFILLING CONSISTS OF PLACING SAND AND GRAVEL OR OTHER SUITABLE MATERIALS EXCAVATED FROM THE TRENCH IN THE TRENCH IN 6 INCH THICK LAYERS FROM A POINT 12 INCHES ABOVE THE TOP OF THE PIPE AND MECHANICALLY TAMPING OR COMPACTING BY ROLLING UNTIL THE BACKFILL DENSITY AFTER COMPACTION IS EQUAL TO 95 PERCENT OF THE MAXIMUM DENSITY OBTAINABLE AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557). NO WATER SHALL BE USED TO SECURE COMPACTION EXCEPT FOR ADDING WATER TO THE BACKFILL MATERIAL BEFORE PLACING IN THE TRENCH TO BRING MOISTURE CONTENT TO APPROXIMATELY "OPTIMUM" FOR GOOD COMPACTION. EACH 6 INCH THICK LAYER SHALL BE MECHANICALLY TAMPED BEFORE ADDITIONAL BACKFILL MATERIAL IS PLACED IN THE EXCAVATED AREA. C) TYPE "B" BACKFILLING. TYPE "B" BACKFILLING CONSISTS OF PLACING SAND AND GRAVEL OR OTHER SUITABLE MATERIAL EXCAVATED FROM THE TRENCH IN THE TRENCH IN 12 INCH THICK COMPACTED LAYERS FROM A POINT 12 INCHES ABOVE THE TOP OF THE PIPE. EACH 12 INCH THICK LAYER SHALL BE COMPACTED BEFORE ADDITIONAL BACKFILL MATERIAL IS PLACED IN THE EXCAVATION. ONLY MECHANICAL TAMPING, USE OF ROLLER OR SMALL TRACTOR WILL BE ALLOWED. THE DENSITY OF THE BACKFILLED MATERIAL AFTER COMPACTION SHALL BE EQUAL TO 95 PERCENT OF THE MAXIMUM DENSITY OBTAINABLE AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557). EXCEPT IN THE UPPER 12 INCHES, WATER SHALL BE ADDED TO BACKFILL MATERIAL ONLY BEFORE BEING PLACED IN THE TRENCH IN ORDER TO BRING THE MOISTURE CONTENT TO APPROXIMATELY "OPTIMUM" FOR GOOD COMPACTION.

3.11 PROTECTION OF WATER SUPPLY PIPES:

A) HORIZONTAL SEPARATION. SEWERS AND FORCE MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT SEPARATION, SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER OR FORCE MAIN CLOSER TO A WATER MAIN, PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON THE SIDE OF THE SEWER OR FORCE MAIN AND AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER OR FORCE MAIN. B) CROSSINGS. SEWERS AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER OR FORCE MAIN. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER OR FORCE MAIN. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER OR FORCE MAIN JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER OR FORCE MAIN, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER OR FORCE MAIN TO PREVENT DAMAGE TO THE WATER MAIN. C) SPECIAL CONDITIONS. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE SEWER OR FORCE MAIN SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPE, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.

3.12 UTILITY CONSTRUCTION IN OTHER EXCAVATION:

WHERE UTILITIES ARE REQUIRED TO BE CONSTRUCTED IN AREAS ALSO REQUIRING EXCAVATION AND BACKFILL FOR OTHER WORK, COORDINATE THE WORK SO THAT THE PARTS COME TOGETHER PROPERLY AND THE CONSTRUCTION OF THE VARIOUS PARTS CAN BE DONE WITHOUT DAMAGE TO OTHER PARTS. PLACE BEDDING WHICH WILL FORM BEARING FOR PIPES, USING SUITABLE MATERIAL AND SHAPING TO THE LOWER 1/3 OF THE PIPE TO PROVIDE UNIFORM AND CONTINUOUS BEARING. COMPACTION OF BACKFILL MATERIAL WHICH WILL FORM BEARING SHALL BE EQUAL TO THAT SPECIFIED HEREIN BEFORE UNDER TYPE "A" BACKFILLING. AFTER THE PIPE OR OTHER UTILITY IS PLACED, BACKFILLING SHALL PROCEED AS SPECIFIED HEREIN BEFORE FOLLOWING THE REQUIREMENTS SPECIFIED UNDER "BACKFILLING AT THE PIPE ZONE," TYPE "A" BACKFILLING, AND "TYPE "B" BACKFILLING" AS APPLICABLE.

3.13 TESTING:

- A) GENERAL. THE OWNER SHALL SELECT A QUALIFIED INDEPENDENT TESTING LABORATORY FOR THE PURPOSE OF IDENTIFYING SOILS, CHECKING DENSITIES, AND CLASSIFYING SOILS MATERIALS DURING CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE TESTS WITH THE TESTING LABORATORY. COPIES OF ALL TEST RESULTS SHALL BE FURNISHED TO THE DESIGN PROFESSIONAL. B) MOISTURE-DENSITY TESTS. TESTING SHALL BE IN ACCORDANCE WITH ASTM METHODS D698 AND D1557. A TEST SHALL BE PERFORMED ON EACH TYPE OF MATERIAL USED IN THE WORK REGARDLESS OF SOURCE. TESTS WILL BE ACCOMPANIED BY PARTICLE-SIZE ANALYSES OF THE SOILS TESTED (ASTM METHODS D421 AND D422). CHANGES IN COLOR, GRADATION, PLASTICITY OR SOURCE OF FILL MATERIAL WILL REQUIRE THE PERFORMANCE OF ADDITIONAL TESTS. COPIES OF ALL TEST RESULTS SHALL BE FURNISHED TO THE DESIGN PROFESSIONAL. C) FIELD DENSITY TESTS. TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM METHOD D1556. TESTS SHALL BE MADE IN ACCORDANCE WITH THE FOLLOWING MINIMUM SCHEDULE OR AS REQUIRED BY THE SOILS TECHNICIAN OR AS MAY BE DIRECTED BY THE DESIGN PROFESSIONAL: ONE TEST FOR EACH LIFT OF BACKFILL FOR EACH 200 FEET OF TRENCH OR FRACTION THEREOF, AND ONE TEST FOR EACH TRENCH EXCAVATION UNDER A ROADWAY. D) SUBMITTALS. THE SOILS TECHNICIANS WILL SUBMIT FORMAL REPORTS OF ALL COMPACTION TESTS AND RETESTS. THE REPORTS ARE TO BE FURNISHED TO THE OWNER AND THE DESIGN PROFESSIONAL AS SOON AS POSSIBLE UPON COMPLETION OF THE REQUIRED TESTS. THIS REPORT INFORMATION IS TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING: 1. DATE OF THE TEST AND DATE SUBMITTED. 2. LOCATION OF TEST. 3. WET WEIGHT, MOISTURE CONTENT AND DRY WEIGHT OF FIELD SAMPLE. 4. DESCRIPTION OF SOIL. 5. MAXIMUM DRY DENSITY AND MOISTURE CONTENT OF THE LAB SAMPLE WHICH BEST MATCHES THE FIELD SAMPLE IN COLOR, TEXTURE, GRAIN SIZE AND MAXIMUM DRY DENSITY. 6. RATIO OF FIELD DRY DENSITY TO MAXIMUM LAB DRY DENSITY EXPRESSED AS A PERCENTAGE. 7. COMMENTS CONCERNING THE FIELD DENSITY PASSING OR FAILING THE SPECIFIED COMPACTION. 8. COMMENTS ABOUT RE-COMPACTION IF REQUIRED. E) COMPACTION RESULTS. IF ANY COMPACTION TEST REVEALS THAT FILL OR BACKFILL IS NOT COMPACTED AS SPECIFIED, THE CONTRACTOR SHALL SCARIFY AND RECOMPACT AS REQUIRED TO ACHIEVE THE SPECIFIED DENSITY. ADDITIONAL COMPACTION TESTS SHALL BE MADE TO VERIFY PROPER COMPACTION. THESE ADDITIONAL TESTS, REQUIRED DUE TO FAILURE OF THE

ORIGINAL TEST SHALL BE PAID FOR BY THE CONTRACTOR WITHOUT REIMBURSEMENT BY THE OWNER. THE SOILS TECHNICIAN IS TO ADVISE THE DESIGN PROFESSIONAL AND THE CONTRACTOR'S SUPERINTENDENT IMMEDIATELY OF ANY COMPACTION TESTS FAILING TO MEET THE SPECIFIED MINIMUM REQUIREMENTS. NO ADDITIONAL LIFT IS TO BE PLACED ON A LIFT WITH ANY PORTION FAILING.

3.14 CONSTRUCTION ALONG HIGHWAYS, STREETS AND ROADWAYS:

- A) EXCAVATION, TRENCHING AND BACKFILLING OPERATIONS. EXCAVATION, TRENCHING AND BACKFILLING ALONG HIGHWAYS, STREETS AND ROADWAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE REGULATIONS OF THE STATE HIGHWAY DEPARTMENT WITH REFERENCE TO CONSTRUCTION OPERATIONS, SAFETY, TRAFFIC CONTROL, ROAD MAINTENANCE AND REPAIR. B) PROTECTION OF TRAFFIC. PROVIDE SUITABLE SIGNS, BARRICADES AND LIGHTS FOR PROTECTION OF TRAFFIC, IN LOCATIONS WHERE TRAFFIC MAY BE ENDANGERED BY CONSTRUCTION OPERATIONS. ALL SIGNS REMOVED BY REASON OF CONSTRUCTION SHALL BE REPLACED AS SOON AS CONDITION WHICH NECESSITATED SUCH REMOVAL HAS BEEN CLEARED. NO HIGHWAY, STREET OR ROADWAY SHALL BE CLOSED WITHOUT FIRST OBTAINING PERMISSION FROM THE PROPER AUTHORITIES. C) CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL CONSTRUCT ALL WORK ALONG HIGHWAYS, STREETS AND ROADWAYS USING THE FOLLOWING SEQUENCE OF CONSTRUCTION OPERATIONS, SO AS TO AT LEAST INTERFERE WITH TRAFFIC: 1. STRIPPING. WHERE THE PIPE LINE IS LAID ALONG ROAD SHOULDERS, SOD, TOPSOIL AND OTHER MATERIAL SUITABLE FOR SHOULDER RESTORATION SHALL BE STRIPPED AND STOCKPILED FOR REPLACEMENT. 2. TRENCHING, LAYING AND BACKFILLING. EXCAVATE TRENCHES. INSTALL PIPE LINE AND BACKFILL. THE TRENCH SHALL NOT BE OPENED ANY FURTHER AHEAD OF PIPE LAYING OPERATIONS THAN IS NECESSARY FOR PROPER LAYING OPERATIONS. TRENCHES SHALL BE PROGRESSIVELY BACKFILLED AND CONSOLIDATED AND EXCESS MATERIAL REMOVED IMMEDIATELY. 3. SHAPING. IMMEDIATELY AFTER COMPLETING BACKFILLING OPERATION, RE-SHAPE ANY DAMAGE TO CUT AND FILL SLOPES, SIDE DITCH LINES, AND SHALL REPLACE TOP SOIL, SOD AND ANY OTHER MATERIALS REMOVED FROM SHOULDERS.

D) EXCAVATED MATERIAL.

- EXCAVATED MATERIAL SHALL NOT BE PLACED ALONG HIGHWAYS, STREETS, AND ROADWAYS IN SUCH MANNER AS TO OBSTRUCT TRAFFIC. ROADWAYS AND PAVEMENT WILL BE MAINTAINED FREE OF EARTH MATERIAL AND DEBRIS. E) DRAINAGE STRUCTURES. ALL SIDE DITCHES, CULVERTS, CROSS DRAINS AND OTHER DRAINAGE STRUCTURES SHALL BE KEPT CLEAR OF EXCAVATED MATERIAL AND BE FREE TO DRAIN AT ALL TIMES. F) MAINTAINING HIGHWAYS, STREETS, ROADWAYS AND DRIVEWAYS. THE CONTRACTOR SHALL FURNISH A POWER BROOM WHICH SHALL BE AVAILABLE FOR USE AT ALL TIMES FOR MAINTAINING HIGHWAYS, STREETS AND ROADWAYS. ALL SUCH STREETS, HIGHWAYS AND ROADWAYS SHALL BE MAINTAINED IN SUITABLE CONDITION UNTIL COMPLETION AND FINAL ACCEPTANCE OF THE WORK. REPAIR ALL DRIVEWAYS THAT ARE CUT OR DAMAGED, MAINTAIN THEM IN SUITABLE CONDITION UNTIL COMPLETION AND FINAL ACCEPTANCE OF THE WORK.

3.15 REMOVING AND RESETTING FENCES

WHERE EXISTING FENCES MUST BE REMOVED TEMPORARILY TO PERMIT CONSTRUCTION, THE CONTRACTOR SHALL REMOVE SUCH FENCES. AS CONSTRUCTION PROGRESSES, RESET THE FENCES IN THEIR ORIGINAL LOCATION AND TO THEIR ORIGINAL CONDITION. ALL COSTS OF REMOVING AND RESETTING FENCES AND SUCH TEMPORARY WORKS AS MAY BE REQUIRED SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

3.16 PROTECTING TREES, SHRUBBERY AND LAWNS:

TREES AND SHRUBBERY ALONG TRENCH LINES SHALL NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY. TREES AND SHRUBBERY NECESSARY TO BE REMOVED SHALL BE PROPERLY HELED-IN AND RE-PLANTED, HEELING-IN AND RE-PLANTING SHALL BE DONE UNDER THE DIRECTION OF AN EXPERIENCED NURSERYMAN, WHERE UTILITY TRENCHES CROSS ESTABLISHED LAWNS, SOD SHALL BE CUT, REMOVED, STACKED AND MAINTAINED IN SUITABLE CONDITION UNTIL REPLACED. TOPSOIL UNDERLYING LAWN AREAS SHALL LIKEWISE BE REMOVED AND KEPT SEPARATE FROM GENERAL EXCAVATED MATERIALS. REMOVAL AND REPLACEMENT OF SOD SHALL BE DONE UNDER THE DIRECTION OF AN EXPERIENCED NURSERYMAN.

3.17 REMOVE AND REPLACE PAVEMENT:

PAVEMENT AND BASE COURSE WHICH MUST BE REMOVED FOR CONSTRUCTING SEWERS, MANHOLES, FORCE MAINS, WATER LINES, AND ALL OTHER APPURTENANCES IN STREETS SHALL BE REPLACED AS PER CITY OF STATESBORO SPECIFICATIONS. A) THE TOP 18 INCHES OF SUBGRADE MATERIAL IMMEDIATELY UNDER THE PAVING BASE AND ALSO ROAD SHOULDER SHALL BE CAREFULLY REMOVED AND KEPT SEPARATE FROM THE REST OF THE EXCAVATED MATERIAL. THIS MATERIAL SHALL BE PLACED IN THE TOP 18 INCHES OF THE BACKFILL. FURTHER COMPACTION SHALL BE ACCOMPLISHED BY LEAVING THE BACKFILLED TRENCH OPEN TO TRAFFIC WHILE MAINTAINING THE SURFACE WITH CRUSHED STONE OR GRAVEL. SETTLEMENT IN TRENCHES SHALL BE REFILED WITH CRUSHED STONE OR GRAVEL, AND SUCH MAINTENANCE SHALL CONTINUE UNTIL REPLACEMENT OF PAVEMENT. B) WHERE UTILITY LINES ARE CONSTRUCTED ON UNPAVED STREETS, ROADS OR EASEMENTS, THE TOP 18 INCHES OF SOIL SHALL BE STRIPPED AND STOCKPILED SEPARATE FROM THE EXCAVATION FROM TRENCHES. AFTER THE LINE HAS BEEN INSTALLED AND THE BACKFILL COMPLETED WITHIN 18 INCHES OF THE ORIGINAL GRADE, THE SALVAGED SURFACING SHALL BE REPLACED. THIS WORK SHALL BE CONSIDERED AS GENERAL CLEAN UP ALONG WITH THE REMOVAL OF SURPLUS EXCAVATED MATERIALS FROM THE SITE AND THE RESTORING OF THE SURFACE OUTSIDE TRENCH LIMITS TO ITS ORIGINAL CONDITION, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID FOR THE UTILITY LINE.

3.18 WALKS, DRIVES, CONCRETE CURB AND GUTTER:

WALKS AND DRIVES REMOVED OR DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REPLACED WITH CLASS "A" CONCRETE AT THE SAME THICKNESS AS REMOVED. THEY WILL BE CUT TO A NEAT EDGE WITH A MASONRY SAW AFTER BACKFILLING AND COMPACTING TRENCH IN 6 INCH LAYERS TO A DENSITY NOT LESS THAN 95 PERCENT AT + 2 PERCENT OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR TEST. CONCRETE CURB

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 D.B. 1816, PG. 241

EXPLANATION OF UTILITY LOCATIONS

THE UTILITIES ARE SHOWN AS PER THE LOCATION OF POLES, MANHOLES, VALVES, PEDESTALS, ETC., EXISTING DRAWINGS AND INFORMATION PROVIDED BY UTILITY PERSONNEL. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

THE UTILITIES PROTECTION CENTER WAS CONTACTED ON 12-01-2020. TICKET NUMBER 201201-001203 WAS ISSUED FOR THIS SITE.

GENERAL SITE NOTES

- ELEVATION DATUM IS BASED ON NAVD 1988 ESTABLISHED BY USING EGPS SOLUTIONS NETWORK GPS.
- HORIZONTAL DATUM IS BASED ON NAD 1983 ESTABLISHED BY USING EGPS SOLUTIONS NETWORK GPS.
- CONTOUR INTERVAL IS 1'
- OWNERS AND TAX ID NUMBERS WERE TAKEN FROM THE BULLOCH COUNTY TAX ASSESSORS WEB SITE.
- TREE SYMBOLS INDICATE APPROXIMATE DRIP LINE LOCATION. FIELD VERIFY CRITICAL SITUATION.

SURVEY NOTE

THE SURVEYOR'S CERTIFICATION EXTENDS ONLY TO THE TOPOGRAPHIC ASPECTS OF THIS DRAWING. THIS TOPOGRAPHIC SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY AND IS NOT TO BE RECORDED OR USED TO CONVEY PROPERTY.

FLOOD ZONE NOTE

ACCORDING TO F.I.R.M. MAP NO. 13031C0206D AND 13031C0207D, WITH AN EFFECTIVE REVISED DATE OF 08/05/2010, THIS PROPERTY LIES WITHIN ZONE "X" ZONE "X" IS NOT A SPECIAL FLOOD HAZARD ZONE INUNDATED BY THE 100-YR. FLOOD.

WETLANDS NOTE

ALL TIDAL AND NON-TIDAL TRIBUTARIES, MARSH AREAS AND WETLANDS ARE UNDER THE JURISDICTION OF THE CORPUS OF ENGINEERS AND/OR THE STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES. OWNERS ARE SUBJECT TO PENALTY BY LAW FOR DISTURBANCE OF THESE PROTECTED AREAS WITHOUT PROPER PERMIT APPLICATION AND APPROVAL FROM THOSE AGENCIES. NO WETLANDS WERE DELINEATED AT THE TIME OF THIS SURVEY.

EXISTING SANITARY SYSTEM:

CONTRACTOR TO COORDINATE WITH OWNER TO LOCATE AND REMOVE EXISTING SEPTIC SYSTEM AND FILL EXISTING SEPTIC TANK. MAXWELL-REDDICK AND ASSOCIATES DOES NOT TAKE RESPONSIBILITY FOR LOCATING EXISTING SEPTIC SYSTEM.

DEMOLITION NOTES:

- SHOULD UNSUITABLE MATERIALS BE ENCOUNTERED DURING CONSTRUCTION, ALL UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE FILL MATERIAL. BACKFILL AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS OR AT THE DIRECTION OF THE ENGINEER OR GEOTECHNICAL ENGINEER.
- UTILITY RELOCATIONS TO BE PERFORMED BY OTHERS; HOWEVER, THE CONTRACTOR SHALL COORDINATE ALL UTILITY REMOVAL/RELOCATION WITH THE APPROPRIATE UTILITY COMPANY AND SHALL NOTIFY THE EXISTING RESIDENTS OF ANY EXPECTED OUTAGES. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REMOVAL, RELOCATION, AND/OR ABANDONMENT OF EXISTING UTILITIES. THE OWNER/DEVELOPER SHALL NOTIFY AFFECTED RESIDENTS OF ANY PROPOSED UTILITY OUTAGES A MINIMUM OF 24 HOURS IN ADVANCE. COORDINATE WITH THE UTILITY OWNER(S).
- THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AT ALL TIMES UPON COMMENCEMENT OF THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC DURING ALL STAGES OF THE CONSTRUCTION.
- ANY ASPHALT AND CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A CLEAN EDGE FOR THE PROPOSED WORK.



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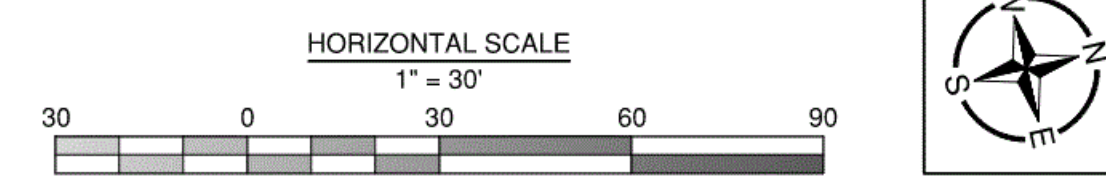
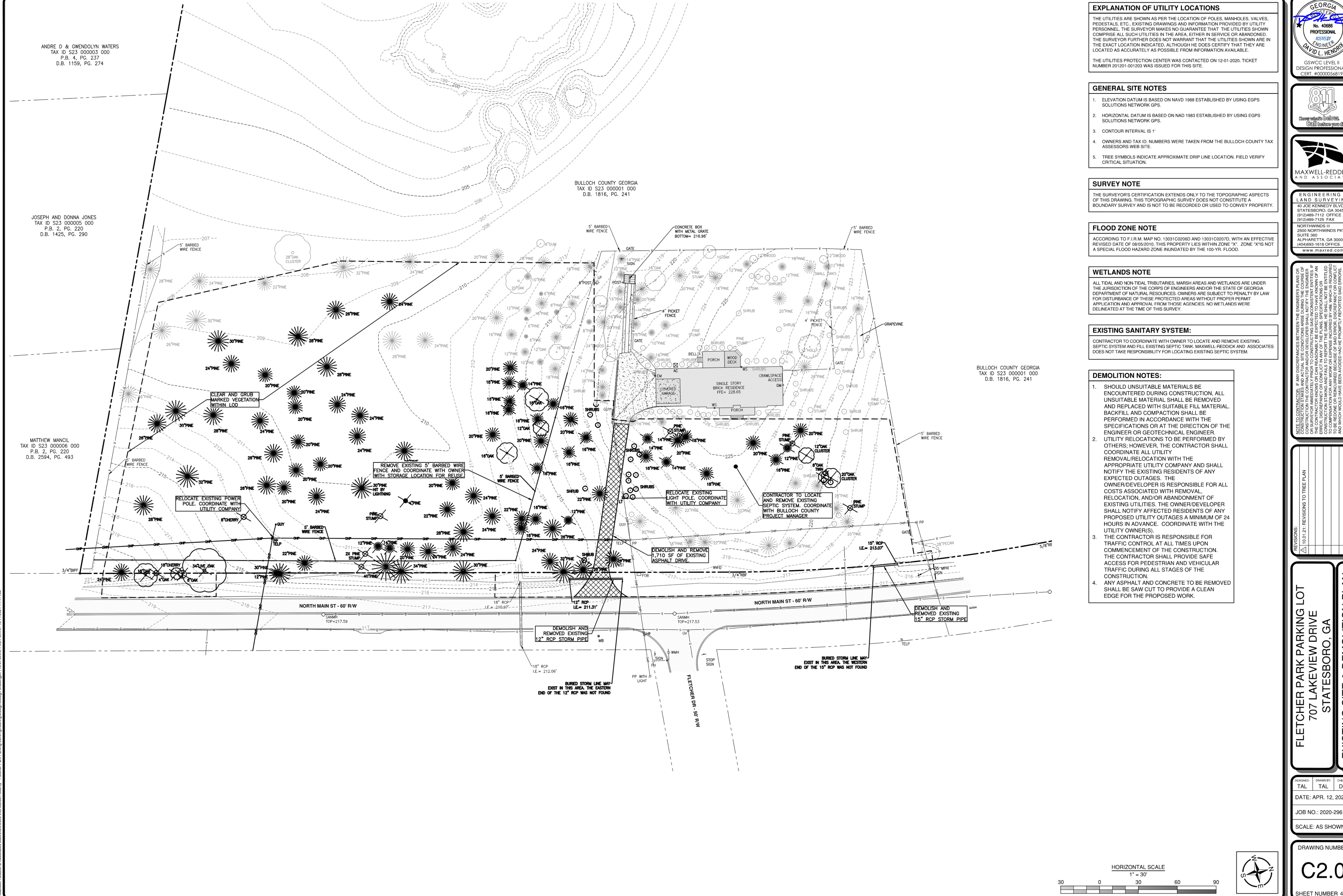
NOTE TO CONTRACTOR: IF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS ARISE DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL NOTIFY THE ENGINEER IMMEDIATELY. THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWLEDGE OF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS AND ACTUAL SITE CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND WHICH WOULD HAVE BEEN AVOIDED HAD HE PROPERLY REPORTED SAID DISCREPANCY OR CONTACTED THE ENGINEER WHEN HE KNEW OR SHOULD HAVE KNOWN OF THE SAME. CONTRACTOR'S USE OF MAXWELL-REDDICK AND ASSOCIATES' LAND SURVEYING INFORMATION IS LIMITED TO THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREON.

REVISIONS:	
10/01/21:	REVISIONS TO TREE PLAN

FLETCHER PARK PARKING LOT
 707 LAKEVIEW DRIVE
 STATESBORO, GA
 EXISTING SITE & DEMOLITION PLAN

DESIGNED: TAL
 DRAWN BY: TAL
 CHECKED: DLH
 DATE: APR. 12, 2021
 JOB NO.: 2020-296
 SCALE: AS SHOWN

DRAWING NUMBER
C2.0
 SHEET NUMBER 4



Z:\Maxwell-Reddick & Associates\labr\2020\2020-296 Bulloch County - Fletcher Park Parking Lot\Engineering\Design\Drawings\FPARK MAIN.PLOT DATE: 10/1/2021 11:17 AM

ANDRE D & GWENDOLYN WATERS
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MATTHEW MANCIL
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BULLOCH COUNTY GEORGIA
TAX ID S23 00001 000
D.B. 1816, PG. 241

BULLOCH COUNTY GEORGIA
TAX ID S23 00001 000
D.B. 1816, PG. 241

NOTES:

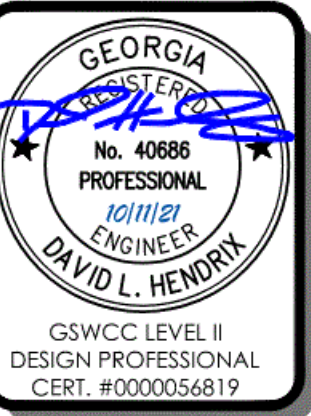
SITE AREA:
TOTAL AREA: ±28.09 ACRES
PROJECT AREA: ±2.81 ACRES

SITE ZONING:
EXISTING ZONING: R-20

PARKING REQUIREMENTS:
1 PARKING SPACE REQUIRED FOR EVERY 5,000 SF OF LAND AREA
2.81 ACRES = 122,404 SF
122,404 SF / 5,000 SF = 24.4 PARKING SPACES
REQUIRED: 25 PARKING SPACES
PROPOSED: 100 PARKING SPACES
(INCLUDING 4 HANDICAP SPACES)

GENERAL NOTES:

1. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY CONSTRUCTION, AND SHALL USE CARE NOT TO DAMAGE ANY EXISTING UTILITIES. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AND ALL SUCH COSTS ASSOCIATED WITH THESE REPAIRS SHALL BE BORNE BY THE CONTRACTOR. UPON REMOVAL OF EXISTING SIDEWALKS AND PAVEMENT, THE CONTRACTOR SHALL TAKE EXTRA PRECAUTION TO PREVENT DAMAGE TO THE EXISTING UTILITIES. ACTUAL DEPTHS ARE UNKNOWN.
2. ONCE EXISTING UTILITIES HAVE BEEN LOCATED AND MARKED BY APPROPRIATE ENTITIES, CONTRACTOR SHALL TRANSFER MARKINGS IN A MANNER THAT WILL PROTECT MARKINGS FOR LENGTH OF PROJECT OR UNTIL UTILITY IS PERMANENTLY COVERED.
3. CONTRACTOR SHALL NOT LEAVE ANY "OPEN" OR "EXPOSED" EXCAVATIONS OVERNIGHT OR DURING TIMES OF DELAYED OR CEASED WORK.
4. CONTRACTOR SHALL PROVIDE PEDESTRIAN CONTROL AROUND ALL WORK AREAS/ZONES FOR THE DURATION OF THE PROJECT. COORDINATE PEDESTRIAN CONTROL WITH THE GOVERNING MUNICIPALITY'S PROJECT MANAGER.
5. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH GDOT (MUTCD) SPECIFICATIONS. COORDINATE TRAFFIC CONTROL WITH THE GOVERNING MUNICIPALITY'S PROJECT MANAGER.
6. COMPLETELY & PROPERLY DISPOSE OF ALL DEMOLISHED MATERIALS OFF THE SITE UNLESS NOTED OTHERWISE.
7. PROVIDE TREE PROTECTION FOR ALL TREES AROUND THE WORK ZONE AND AS SHOWN ON THE PLANS. SEE TREE PROTECTION DETAIL.
8. REMOVE ALL ITEMS THAT ARE TO BE SALVAGED PRIOR TO START OF CONTRACTOR DEMOLITION/ CONSTRUCTION.
9. CONTRACTOR SHALL PROTECT EXISTING FEATURES AND KEEP DISTURBANCES TO PRACTICABLE MINIMUM DURING CONSTRUCTION. CONTRACTOR SHALL RETURN ALL AREAS DISTURBED DURING CONSTRUCTION TO PRE-CONSTRUCTION STANDARDS/ CONDITIONS AT THE CONTRACTORS EXPENSE.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL REMOVED MATERIAL. CONTRACTOR IS ENCOURAGED TO RECYCLE MATERIAL WHERE POSSIBLE. SEE CONSTRUCTION WASTE MANAGEMENT SECTION OF THE SPECIFICATIONS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL REMOVED MATERIAL. CONTRACTOR IS ENCOURAGED TO RECYCLE MATERIAL WHERE POSSIBLE. SEE CONSTRUCTION WASTE MANAGEMENT SECTION OF THE SPECIFICATIONS.



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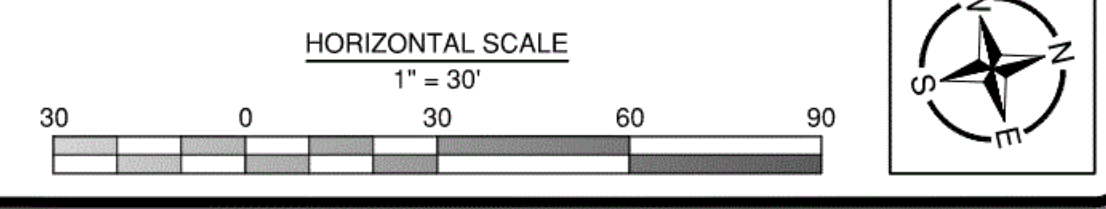
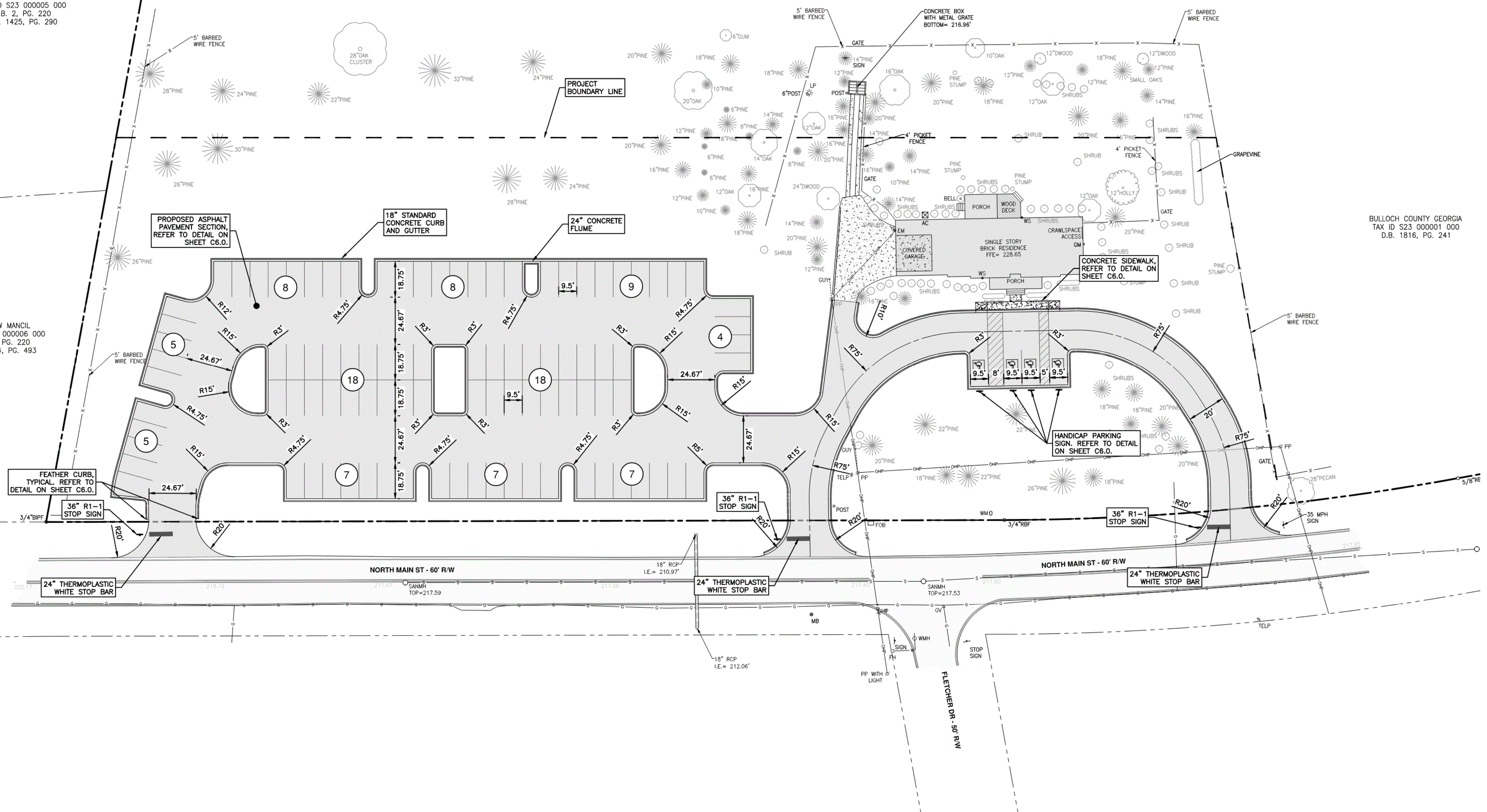
REVISIONS:

NO. 10.01.21	REVISIONS TO TREE PLAN
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FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA
PROPOSED LAYOUT

DESIGNED: TAL	DRAWN BY: TAL	CHECKED: DLH
DATE: APR. 12, 2021		
JOB NO.: 2020-296		
SCALE: AS SHOWN		

DRAWING NUMBER
C3.0
SHEET NUMBER 5



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TREE AND GREENSPACE CALCULATIONS	
ITEM	PROVIDED
TOTAL WORK AREA	122,236 SQFT
REQUIRED GREENSPACE AREA (15%)	18,335 SQFT
PROVIDED GREENSPACE AREA	62,240 SQFT
REQUIRED TREE CANOPY AREA (35%)	42,783 SQFT
PROPOSED TREE CANOPY AREA	24,700 SQFT
PRESERVED TREE CANOPY AREA	40,500 SQFT
TOTAL TREE CANOPY AREA	65,200 SQFT
TOTAL PAVED AREA	47,127 SQFT
REQ'D TREE CANOPY W/ PAVED AREA (50%)	23,564 SQFT
PROVIDED TREE CANOPY W/ PAVED AREA	24,750 SQFT

TREE SCHEDULE				
TYPE	ABBR.	SQFT/SIZE	QUANTITY	CANOPY AREA (SQFT)
LIVE OAK	LO	1,500 SQFT/LARGE	8	12,000 SQFT
NUTTALL OAK	NO	1,500 SQFT/LARGE	7	10,500 SQFT
LITTLE GEM MAGNOLIA	LG	250 SQFT/MED.	9	2,250 SQFT
TOTALS			24	24,750 SQFT

- TREE & LANDSCAPING NOTES**
- ALL TREE PLANTING PRACTICES ARE TO BE IN ACCORDANCE WITH THE CITY OF STATESBORO'S MOST RECENT URBAN FORESTRY BEAUTIFICATION & CONSERVATION ORDINANCE AND BMP MANUAL.
 - ALL DISTURBED AREAS NOT COVERED BY STRUCTURES, PAVING OR LANDSCAPING SHALL BE GRASSED.
 - ALL PLANT BEDS AND TREE RINGS SHALL BE MULCHED WITH 3" OF PINE STRAW, SHREDDED WOOD CHIPS OR PINE BARK. THE FINISHED GRADE SHOTS CALLED OUT ON THE PAVING, GRADING, AND DRAINAGE PLAN (SHEET C5.0) REFER TO THE TOP OF THE MULCH IN ANY PROPOSED PLANT BEDS.
 - NO TREES SHALL BE PLANTED WITHIN 10' OF ANY UNDERGROUND UTILITY. LANDSCAPE CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES PRIOR TO PLANTING ANY PLANTS, SHRUBS OR TREES. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF UTILITIES DAMAGED DURING PLANTING OPERATIONS.
 - A PERMANENT IRRIGATION WATER SOURCE SHALL BE PROVIDED FOR ALL TREES. THE IRRIGATION SOURCE MUST BE IN COMPLIANCE WITH THE CITY OF STATESBORO URBAN FORESTRY BEAUTIFICATION & CONSERVATION ORDINANCE AND BMP MANUAL.
 - ALL SINGLE STEM TREES SHALL HAVE A MINIMUM DBH OF 2" AT TIME OF PLANTING. MULTI-STEM TREES (3 OR MORE) SHALL BE 6' TO 8' TALL AT THE TIME OF PLANTING.

NOTES:

ADDITIONAL NOTES:
MUST COMPLY WITH THE CITY OF STATESBORO URBAN FORESTRY BEAUTIFICATION AND CONSERVATION ORDINANCE AND BMP.

MINIMUM CALIPER, SINGLE STEM 2" MINIMUM CALIPER. MULTI STEM (3 OR MORE STEMS) 6 TO 8 FEET TALL.

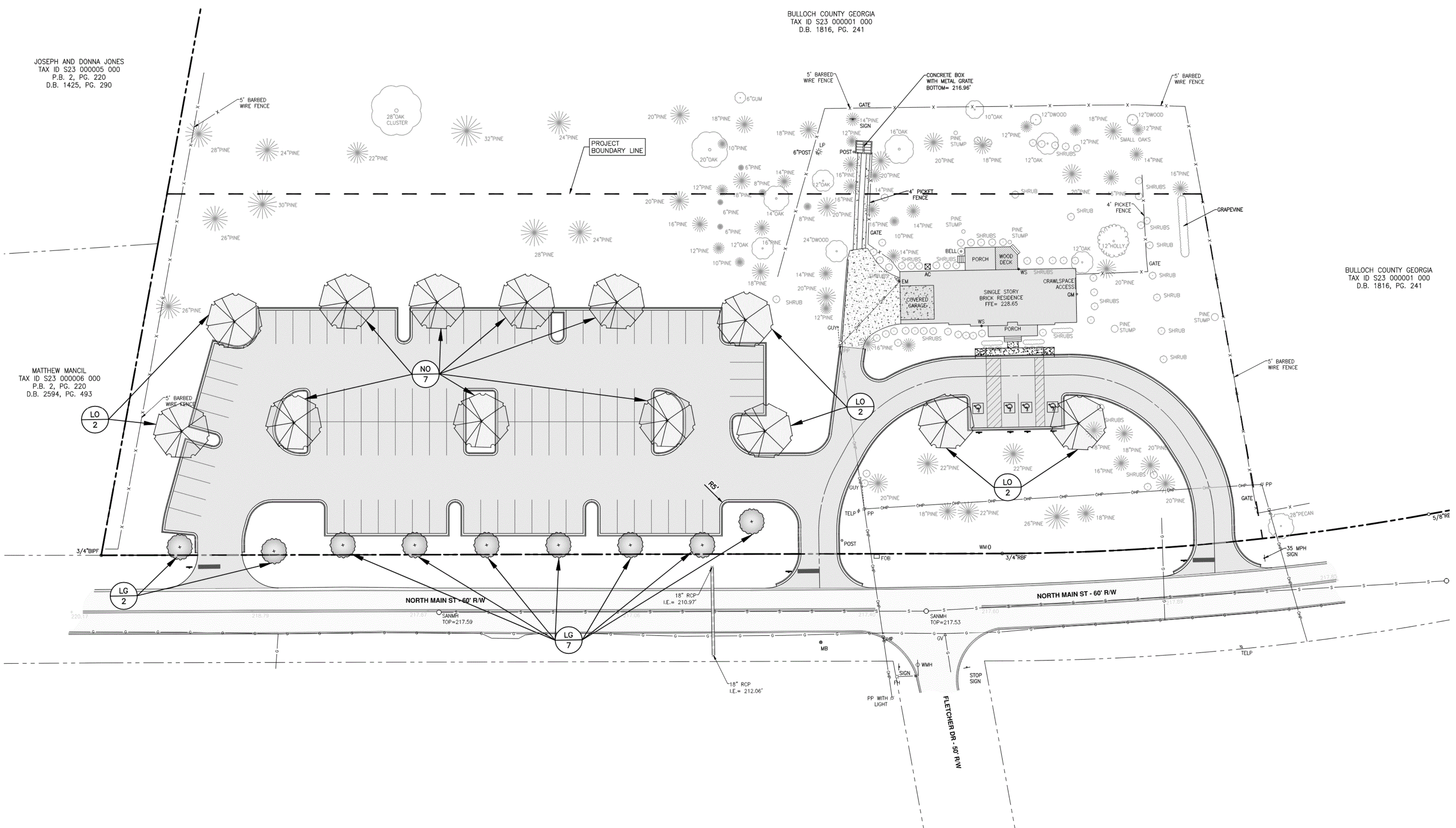
IRRIGATION PROVIDED FOR TREES MUST MEET COS-UFBDO

JOSEPH AND DONNA JONES
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D.B. 1425, PG. 290

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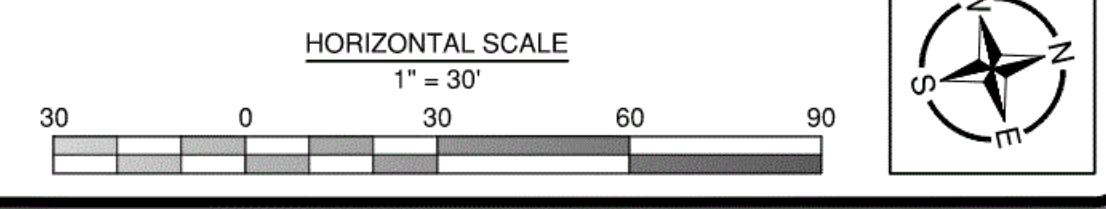
REVISIONS:

NO.	DATE	DESCRIPTION
1	10.01.21	REVISIONS TO TREE PLAN

FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA
TREE PLAN

DESIGNED: TAL
DRAWN BY: TAL
CHECKED: DLH
DATE: APR. 12, 2021
JOB NO.: 2020-296
SCALE: AS SHOWN

DRAWING NUMBER
C3.1
SHEET NUMBER 6



Z:\Maxwell Reddick & Associates\labr\2020\2020-296 Bulloch County - Fletcher Park Parking Lot\Engineering\Design\Drawings\FPARK MAIN_PLOT DATE: 10/1/2021 11:17 AM

24-HOUR EMERGENCY CONTACT BRAD DEAL (912) 764-0127

WETLANDS NOTE

ALL TIDAL AND NON-TIDAL TRIBUTARIES, MARSH AREAS AND WETLANDS ARE UNDER THE JURISDICTION OF THE CORPS OF ENGINEERS AND/OR THE STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES. OWNERS ARE SUBJECT TO PENALTY BY LAW FOR DISTURBANCE OF THESE PROTECTED AREAS WITHOUT PROPER PERMIT APPLICATION AND APPROVAL FROM THOSE AGENCIES. NO WETLANDS WERE DELINEATED AT THE TIME OF THIS SURVEY.

NUMBER CORRESPONDS TO THE GEORGIA

"EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST" (STAND ALONE CONSTRUCTION PROJECT)

SOILS INFORMATION:

- LpB: LAKELAND SAND, 0%-5% SLOPES
- PIA: PELHAM LOAMY SAND, 0%-2% SLOPES

FLOOD ZONE NOTE

ACCORDING TO F.I.R.M. MAP NO. 13031C0206D AND 13031C0207D, WITH AN EFFECTIVE REVISED DATE OF 08/05/2010, THIS PROPERTY LIES WITHIN ZONE "X". ZONE "X" IS NOT A SPECIAL FLOOD HAZARD ZONE INUNDATED BY THE 100-YR. FLOOD.

SEDIMENT STORAGE NOTES:

SEDIMENT STORAGE SHALL BE PROVIDED BY THE PROPOSED TEMPORARY SEDIMENT BASIN IN ALL PHASES. SAID BASIN WILL PROVIDE 331 CY (73.5 CY/AC) OF SEDIMENT STORAGE.

REQUIRED STORAGE = 4.5 AC X 67 CY/AC = 302 CY

PROVIDED STORAGE = 4.5 AC X 73.5 CY/AC = 331 CY

BMP MAINTENANCE/REMOVAL SCHEDULE:

- PRIOR TO ANY OTHER DISTURBANCES, INSTALL Co, Sd1-NS AND Sd1-S.
- PERFORM MINIMAL CLEARING TO ALLOW FOR INSTALLATION OF Sd4.
- INSTALL ALL DI, ST AND Cd-S.
- IMPLEMENT & MAINTAIN ALL Du, Ds1, & Ds2 AS CONSTRUCTION PROCEEDS.

DESIGN PROFESSIONAL'S CERTIFICATION

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001."

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HERE IN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

Signature

SOIL EROSION CONTROL NOTES:

TOTAL ACREAGE = 2.8 ACRES

- TOTAL DISTURBED ACREAGE: 2.8 ACRES
- STATE WATERS THAT REQUIRE A BUFFER ARE NOT LOCATED WITHIN 200 FT OF THE PROJECT SITE.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND FOR AVOIDING CONFLICT WITH THE SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- ALL DISTURBED AREAS FROM NEW CONSTRUCTION ACTIVITIES WILL BE SEEDED, MULCHED, FERTILIZED AND WATERED TO PROMOTE A SUFFICIENT GROUND COVER THAT WILL PREVENT SOIL EROSION. SUFFICIENT COVERAGE SHALL BE AS SPECIFIED IN "THE MANUAL FOR EROSION CONTROL IN GEORGIA".
- DRAINAGE: ALL EXCAVATION SHALL BE PERFORMED SO THAT THE SITE AND THE AREA IMMEDIATELY SURROUNDING THE SITE WHICH EFFECTS THE OPERATIONS WILL BE CONTINUALLY AND EFFECTIVELY DRAINED. SURFACE WATER, GROUNDWATER, OR ANY PERCHED WATER WHICH MIGHT BE ENCOUNTERED DURING EXCAVATIONS SHALL BE REMOVED BY ANY ACCEPTABLE MEANS APPROVED BY THE ENGINEER.
- ALL DISTURBED AREAS SHALL BE GRASSED AND MULCHED AS SPECIFIED ON THE SOIL EROSION CONTROL NOTES SHEET C4.3-4.4.
- NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY

VARIANCES OR PERMITS.

- AS PER NPDES REGULATION CHANGES, SOIL EROSION & SEDIMENTATION CONTROL PLANS SHALL NOW BE BROKEN UP INTO THREE PHASES AS FOLLOWS: AN INITIAL PERIMETER CONTROL PHASE, AN INTERMEDIATE PHASE FOR GRADING & DRAINAGE, & A FINAL PHASE FOR STABILIZATION.
- THE EROSION CONTROL DEVICE INSTALLATION SHALL BE PHASED IN THE FOLLOWING MANNER:
 - ALL PERIMETER CLEARING AND GRUBBING SHALL BE PERFORMED DURING THE INSTALLATION OF PERIMETER EROSION CONTROL DEVICES PRIOR TO ANY OTHER CLEARING AS TO AVOID CONFLICTS DURING CLEARING AND GRUBBING OF THE ENTIRE SITE. THE TEMPORARY SEDIMENT BASIN SHALL BE INSTALLED PRIOR TO BEGINNING THE INTERMEDIATE PHASE.
 - ALL INTERMEDIATE GRADING AND DRAINAGE BMPs SHALL BE INSTALLED DURING THE INSTALLATION OF THE DRAINAGE SYSTEM.
 - ONCE FINAL STABILIZATION HAS BEEN ACHIEVED ON THE SITE, ALL TEMPORARY INTERMEDIATE BMPs SHALL BE REMOVED AND SHALL CONSIST OF AND NOT LIMITED TO REMOVAL OF SILT FENCE, INLET SEDIMENT TRAPS, AND RETROFIT.
- SEE SHEET C4.5-4.6 FOR NOTES AND DETAILS.
- SITE LOCATED IN BULLOCH COUNTY, GA
- PARCEL ID: S23 000001 000.
- DRAINAGE: ON SITE = ±2.8 AC
OFF SITE = ±1.7 AC

DESIGN PROFESSIONAL 7 DAY SITE VISIT CERTIFICATION:

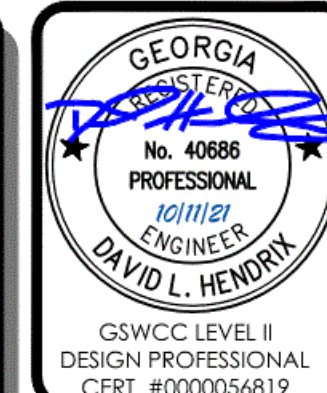
DATE OF INSPECTION: _____

"I CERTIFY THE SITE WAS IN COMPLIANCE WITH THE ES&PC PLAN ON THE DATE OF INSPECTION.

GSWCC LEVEL II DESIGN PROFESSIONAL CERT. # _____

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ES&PC PLAN:

THESE DISCREPANCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.



ENGINEERING & LAND SURVEYING
40 JOE KENNEDY BLVD
STATESBORO, GA 30458
(912)489-7112 OFFICE
(912)489-7125 FAX
NORTHWINDS III
2500 NORTHWINDS PKWY.
SUITE 200
ALPHARETTA, GA 30009
(404)593-1618 OFFICE
www.maxred.com

NOTE TO CONTRACTOR: IF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS ARISE DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR AND/OR DEVELOPER SHALL NOTIFY THE ENGINEER IMMEDIATELY. THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWLEDGE OF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WORK OR EXPENSE INCURRED BY HIM, WHICH IS REQUIRED TO CORRECT SUCH DISCREPANCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DISCREPANCY OR CONFLICT WHEN HE KNEW OR SHOULD HAVE KNOWN OF THE SAME. COPYRIGHT © 2021 BY MAXWELL REDDICK AND ASSOCIATES ALL RIGHTS RESERVED.

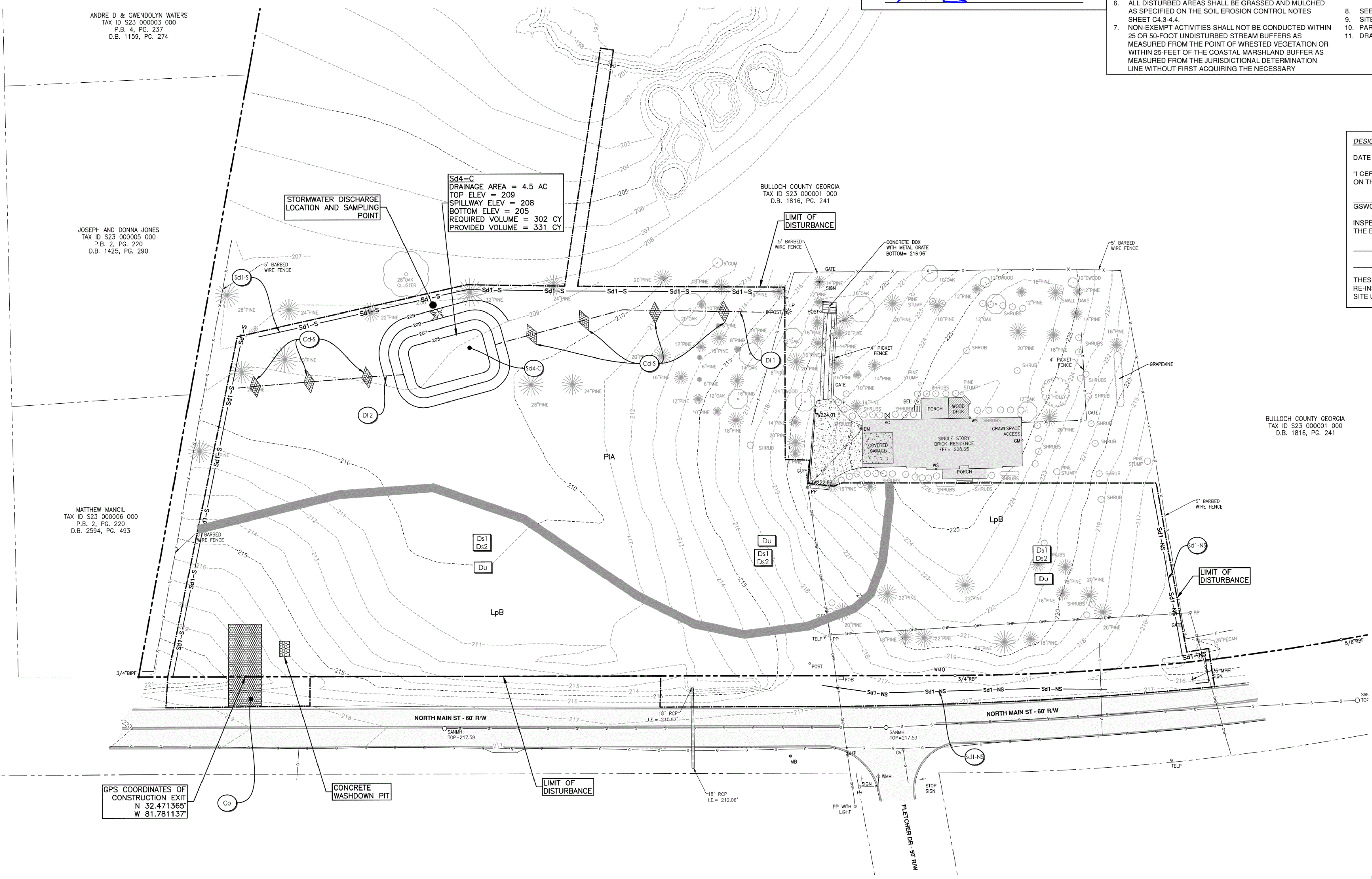
REVISIONS:

10/01/21	REVISIONS TO TREE PLAN
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FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA
INITIAL SOIL EROSION CONTROL PLAN

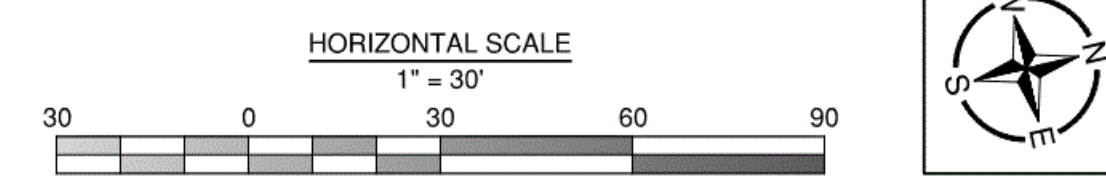
DESIGNED: TAL
DRAWN BY: TAL
CHECKED: DLH
DATE: APR. 12, 2021
JOB NO.: 2020-296
SCALE: AS SHOWN

DRAWING NUMBER
C4.0
SHEET NUMBER 7



SOIL EROSION CONTROL LEGEND:

Cd	CHECKDAM	Sk	FLOATING SURFACE SOMMER
Co	CONSTRUCTION EXIT	St	STORMDRAIN GUTLET PROTECTION
Di	DIVERSION	Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
Fr	FILTER RING	Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)
Rt	RETRO FITTING	Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)
Sd1-NS	SEDIMENT BARRIER (TYPE NS)	Ds4	DISTURBED AREA STABILIZATION (WITH SOD)
Sd1-S	SEDIMENT BARRIER (TYPE S)	Du	DUST CONTROL ON DISTURBED AREAS
Sd2	INLET SEDIMENT TRAP (TYPE S)	Ss	SLOPE STABILIZATION
Sd3	TEMPORARY SEDIMENT BASIN	Re	RETAINING WALL (GABION)
Tr	TREE PROTECTION	Su	SURFACE ROUGHENING



Z:\Maxwell Reddick & Associates\labr\2020-2020-296 Bulloch County - Fletcher Park Parking Lot\Engineering\Design\Drawings\FPARK SEC. PLOT DATE: 01/11/2021 11:17 AM

ANDRE D & GWENDOLYN WATERS
TAX ID S23 000003 000
P.B. 4, PG. 237
D.B. 1159, PG. 274

JOSEPH AND DONNA JONES
TAX ID S23 000005 000
P.B. 2, PG. 220
D.B. 1425, PG. 290

MATTHEW MENCIL
TAX ID S23 000006 000
P.B. 2, PG. 220
D.B. 2594, PG. 493

GPS COORDINATES OF CONSTRUCTION EXIT
N 32.471365°
W 81.781137°

Sd4-C
DRAINAGE AREA = 4.5 AC
TOP ELEV = 209
SPILLWAY ELEV = 208
BOTTOM ELEV = 205
REQUIRED VOLUME = 302 CY
PROVIDED VOLUME = 331 CY

BULLOCH COUNTY GEORGIA
TAX ID S23 000001 000
D.B. 1816, PG. 241

BULLOCH COUNTY GEORGIA
TAX ID S23 000001 000
D.B. 1816, PG. 241

Du
Ds1
Ds2

Du
Ds1
Ds2

Du
Ds1
Ds2

18" RCP
I.E. = 212.06'

18" RCP
I.E. = 210.97'

SANMH
TOP = 217.59

SANMH
TOP = 217.53

FLOOD ZONE NOTE

ACCORDING TO F.I.R.M. MAP NO. 13031C0206D AND 13031C0207D, WITH AN EFFECTIVE REVISED DATE OF 08/05/2010, THIS PROPERTY LIES WITHIN ZONE "X". ZONE "X" IS NOT A SPECIAL FLOOD HAZARD ZONE INUNDATED BY THE 100-YR. FLOOD.

WETLANDS NOTE

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NUMBER CORRESPONDS TO THE GEORGIA "EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST" (STAND ALONE CONSTRUCTION PROJECT)

"EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST" (STAND ALONE CONSTRUCTION PROJECT)

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PROVIDED STORAGE = 4.5 AC X 73.5 CY/AC = 331 CY

BMP MAINTENANCE/REMOVAL SCHEDULE:

1. CONTINUE TO MAINTAIN ALL Co, Sd1-NS, Sd1-S AND Sd4-C.
2. INSTALL Ss ON SLOPES 3:1 (H:V) OR STEEPER.
3. INSTALL Sd2-F AND S1 AS STORM SYSTEM IS INSTALLED.
4. IMPLEMENT & MAINTAIN ALL Du, Ds1, & Ds2 AS CONSTRUCTION PROCEEDS.

DESIGN PROFESSIONAL'S CERTIFICATION

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001."

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HERE IN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

[Signature]

SOIL EROSION CONTROL NOTES:

- TOTAL ACREAGE = 2.8 ACRES
1. TOTAL DISTURBED ACREAGE: 2.8 ACRES
 2. STATE WATERS THAT REQUIRE A BUFFER ARE NOT LOCATED WITHIN 200 FT OF THE PROJECT SITE.
 3. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND FOR AVOIDING CONFLICT WITH THE SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
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 - B. ALL INTERMEDIATE GRADING AND DRAINAGE BMPs SHALL BE INSTALLED DURING THE INSTALLATION OF THE DRAINAGE SYSTEM.
 - C. ONCE FINAL STABILIZATION HAS BEEN ACHIEVED ON THE SITE, ALL TEMPORARY INTERMEDIATE BMPs SHALL BE REMOVED AND SHALL CONSIST OF AND NOT LIMITED TO REMOVAL OF SILT FENCE, INLET SEDIMENT TRAPS, AND RETROFIT.
 8. SEE SHEET C4.5-4.6 FOR NOTES AND DETAILS.
 9. SITE LOCATED IN BULLOCH COUNTY, GA
 10. PARCEL ID: S23 000001 000.
 11. DRAINAGE: ON SITE = ±2.8 AC
OFF SITE = ±1.7 AC

**24-HOUR EMERGENCY CONTACT
BRAD DEAL (912) 764-0127**

GEORGIA
No. 40886
PROFESSIONAL
ENGINEER
DAVID L. HENDON

CSWCC LEVEL II
DESIGN PROFESSIONAL
CERT #0000056819

811
Change what you Dig
Call 811 before you dig

**MAXWELL-REDDICK
& ASSOCIATES**

ENGINEERING &
LAND SURVEYING
40 JOE KENNEDY BLVD
STATESBORO, GA 30458
912/488-7112 OFFICE
912/488-7125 FAX

NORTHWINDS III
2500 NORTHWINDS PKWY.
SUITE 200
ALPHARETTA, GA 30009
404/593-1618 OFFICE
www.maxred.com

NOTE TO CONTRACTOR: IF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS ARISE DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR AND/OR DEVELOPER SHALL NOTIFY THE ENGINEER IMMEDIATELY. THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWLEDGE OF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS AND SHALL BE RESPONSIBLE FOR CORRECTING THEM. THE CONTRACTOR SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM, WHICH IS REQUIRED TO CORRECT SUCH DISCREPANCIES, UNLESS IT CAN BE PROVEN THAT THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS WERE IN DISCREPANCY OR CONFLICT WHEN HE KNEW OR SHOULD HAVE KNOWN OF THE SAME. COPYRIGHT © 2020 BY MAXWELL-REDDICK AND ASSOCIATES. ALL RIGHTS RESERVED.

REVISIONS:

10/01/21	REVISIONS TO TREE PLAN
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**FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA**

INTERMEDIATE SOIL EROSION CONTROL PLAN

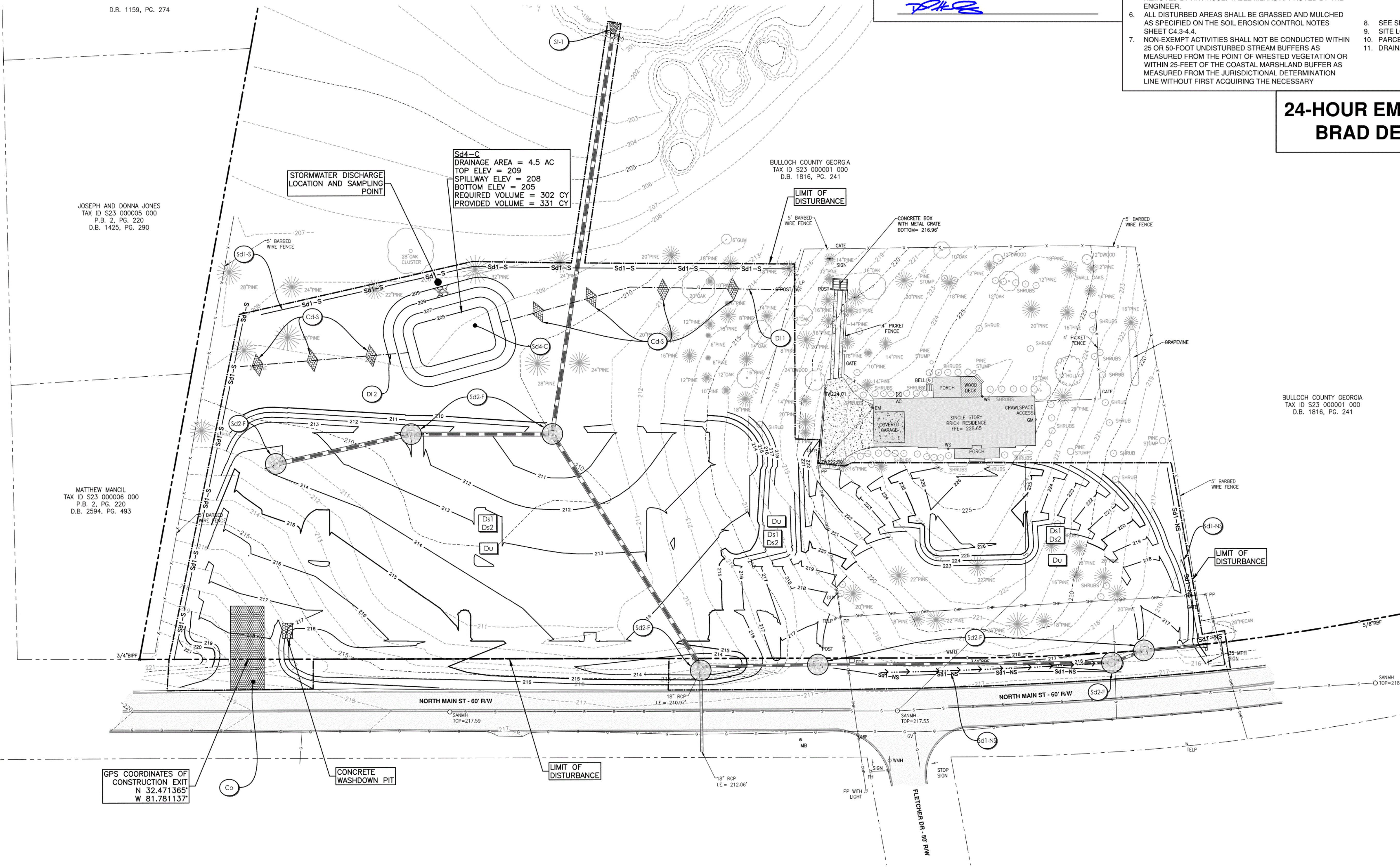
DESIGNED: TAL
DRAWN BY: TAL
CHECKED: DLH

DATE: APR. 12, 2021

JOB NO.: 2020-296

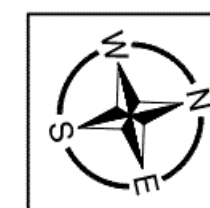
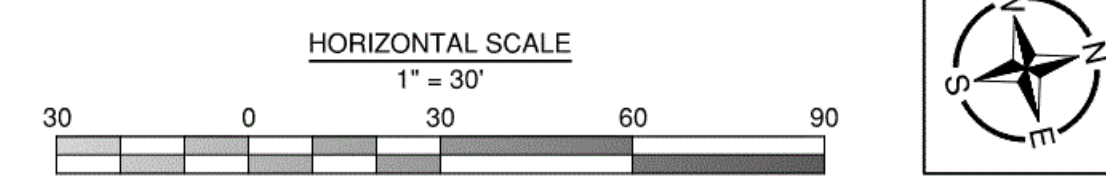
SCALE: AS SHOWN

DRAWING NUMBER
C4.1
SHEET NUMBER 8



SOIL EROSION CONTROL LEGEND:

Cd	CHECKDAM	Sk	FLOATING SURFACE SKIMMER
Co	CONSTRUCTION EXIT	St	STORMDRAIN OUTLET PROTECTION
Di	DIVERSION	Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
Fr	FILTER RING	Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)
Rt	RETRO FITTING	Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)
Sd1-NS	SEDIMENT BARRIER (TYPE NS)	Ds4	DISTURBED AREA STABILIZATION (WITH SOD)
Sd1-S	SEDIMENT BARRIER (TYPE S)	Du	DUST CONTROL ON DISTURBED AREAS
Sd2	INLET SEDIMENT TRAP (TYPE S)	Ss	SLOPE STABILIZATION
Sd3	TEMPORARY SEDIMENT BASIN	Re	RETAINING WALL (GABION)
Tr	TREE PROTECTION	Su	SURFACE ROUGHENING



Z:\Maxwell-Reddick & Associates\labr\2020\2020-296 Bulloch County - Fletcher Park Parking Lot\Engineering\Design\Drawings\FPARK SEC. PLOT DATE: 01/11/2021 11:17 AM

JOSEPH AND DONNA JONES
TAX ID S23 000005 000
P.B. 2, PG. 220
D.B. 1425, PG. 290

MATTHEW MANCILL
TAX ID S23 000006 000
P.B. 2, PG. 220
D.B. 2594, PG. 493

BULLOCH COUNTY GEORGIA
TAX ID S23 000001 000
D.B. 1816, PG. 241

BULLOCH COUNTY GEORGIA
TAX ID S23 000001 000
D.B. 1816, PG. 241

GPS COORDINATES OF
CONSTRUCTION EXIT
N 32.471365°
W 81.781137°

D.B. 1159, PG. 274

NUMBER CORRESPONDS TO THE GEORGIA 'EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST' (STAND ALONE CONSTRUCTION PROJECT)

FLOOD ZONE NOTE

ACCORDING TO F.I.R.M. MAP NO. 13031C0206D AND 13031C0207D, WITH AN EFFECTIVE REVISED DATE OF 08/05/2010, THIS PROPERTY LIES WITHIN ZONE "X". ZONE "X" IS NOT A SPECIAL FLOOD HAZARD ZONE INUNDATED BY THE 100-YR. FLOOD.

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REQUIRED STORAGE = 4.5 AC X 67 CY/AC = 302 CY

PROVIDED STORAGE = 4.5 AC X 73.5 CY/AC = 331 CY

BMP MAINTENANCE/REMOVAL SCHEDULE:

1. CONTINUE TO MAINTAIN ALL Co, Sd1-NS, Sd1-S, Sd2-F, Sd3-C AND S1.
2. REPLACE Sd2-F WITH Sd2-P AS BASE AND PAVING ARE INSTALLED.
3. REMOVE Sd4-C AS BASE AND PAVING ARE INSTALLED.
4. IMPLEMENT & MAINTAIN ALL Du, Ds1, & Ds2 AS CONSTRUCTION PROCEEDS.
5. IMPLEMENT Ds4 IN AREAS THAT ARE AT FINAL GRADE.
6. UPON ACHIEVING FINAL STABILIZATION, REMOVE ALL STRUCTURAL BMP'S, INCLUDING BUT NOT LIMITED TO Sd1, AND Sd2.

DESIGN PROFESSIONAL'S CERTIFICATION

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001."

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HERE IN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

[Signature]

SOIL EROSION CONTROL NOTES:

TOTAL ACREAGE = 2.8 ACRES

1. TOTAL DISTURBED ACREAGE: 2.8 ACRES
2. STATE WATERS THAT REQUIRE A BUFFER ARE NOT LOCATED WITHIN 200 FT OF THE PROJECT SITE.
3. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND FOR AVOIDING CONFLICT WITH THE SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
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6. ALL DISTURBED AREAS SHALL BE GRASSED AND MULCHED AS SPECIFIED ON THE SOIL EROSION CONTROL NOTES SHEET C4.3-4.4.
7. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY

VARIANCES OR PERMITS.

8. AS PER NPDES REGULATION CHANGES, SOIL EROSION & SEDIMENTATION CONTROL PLANS SHALL NOW BE BROKEN UP INTO THREE PHASES AS FOLLOWS: AN INITIAL PERIMETER CONTROL PHASE, AN INTERMEDIATE PHASE FOR GRADING & DRAINAGE, & A FINAL PHASE FOR STABILIZATION.
9. THE EROSION CONTROL DEVICE INSTALLATION SHALL BE PHASED IN THE FOLLOWING MANNER:
 - A. ALL PERIMETER CLEARING AND GRUBBING SHALL BE PERFORMED DURING THE INSTALLATION OF PERIMETER EROSION CONTROL DEVICES PRIOR TO ANY OTHER CLEARING AS TO AVOID CONFLICTS DURING CLEARINGS AND GRUBBING OF THE ENTIRE SITE. THE TEMPORARY SEDIMENT BASIN SHALL BE INSTALLED PRIOR TO BEGINNING THE INTERMEDIATE PHASE.
 - B. ALL INTERMEDIATE GRADING AND DRAINAGE BMP'S SHALL BE INSTALLED DURING THE INSTALLATION OF THE DRAINAGE SYSTEM.
 - C. ONCE FINAL STABILIZATION HAS BEEN ACHIEVED ON THE SITE, ALL TEMPORARY INTERMEDIATE BMP'S SHALL BE REMOVED AND SHALL CONSIST OF AND NOT LIMITED TO REMOVAL OF SILT FENCE, INLET SEDIMENT TRAPS, AND RETROFIT.
8. SEE SHEET C4.5-4.6 FOR NOTES AND DETAILS.
9. SITE LOCATED IN BULLOCH COUNTY, GA
10. PARCEL ID: S23 000001 000.
11. DRAINAGE: ON SITE = ±2.8 AC
OFF SITE = ±1.7 AC

**24-HOUR EMERGENCY CONTACT
BRAD DEAL (912) 764-0127**

GEORGIA PROFESSIONAL ENGINEER
No. 40886
DAVID L. HENDON

CSWCC LEVEL II
DESIGN PROFESSIONAL
CERT #0000056819

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(912)489-7125 FAX

NORTHWINDS III
2500 NORTHWINDS PKWY,
SUITE 200
ALPHARETTA, GA 30009
(404)593-1618 OFFICE
(404)593-1618 FAX
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NOTE TO CONTRACTOR: IF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS ARISE DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL NOTIFY THE ENGINEER IMMEDIATELY. THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWLEDGE OF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS AND ACTUAL SITE CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES.

REVISIONS:
10.01.21: REVISIONS TO TREE PLAN

FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA

FINAL SOIL EROSION CONTROL PLAN

DESIGNED: TAL
DRAWN BY: TAL
CHECKED: DLH

DATE: APR. 12, 2021

JOB NO.: 2020-296

SCALE: AS SHOWN

DRAWING NUMBER
C4.2
SHEET NUMBER 9

ANDRE D & GWENDOLYN WATERS
TAX ID S23 000003 000
P.B. 4, PG. 237
D.B. 1159, PG. 274

JOSEPH AND DONNA JONES
TAX ID S23 000005 000
P.B. 2, PG. 220
D.B. 1425, PG. 290

MATTHEW MANCIL
TAX ID S23 000006 000
P.B. 2, PG. 220
D.B. 2594, PG. 493

BULLOCH COUNTY GEORGIA
TAX ID S23 000001 000
D.B. 1816, PG. 241

BULLOCH COUNTY GEORGIA
TAX ID S23 000001 000
D.B. 1816, PG. 241

GPS COORDINATES OF
CONSTRUCTION EXIT
N 32.471365'
W 81.781137'

CONCRETE
WASHDOWN PIT

LIMIT OF
DISTURBANCE

18" RCP
I.E. = 212.06'

NORTH MAIN ST - 60' R/W

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

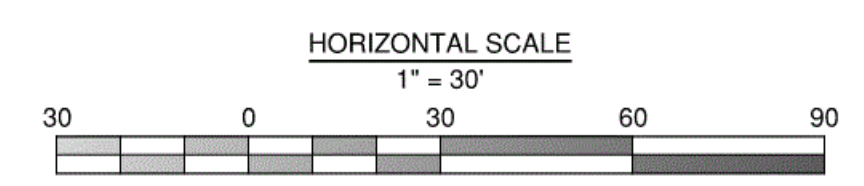
18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

18" RCP
I.E. = 210.97'

SOIL EROSION CONTROL LEGEND:

Cd	CHECKDAM	Sk	FLOATING SURFACE SOMMER
Co	CONSTRUCTION EXIT	St	STORMDRAIN OUTLET PROTECTION
Di	DIVERSION	Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
Fr	FILTER RING	Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)
Rt	RETRO FITTING	Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)
Sd1-NS	SEDIMENT BARRIER (TYPE NS)	Ds4	DISTURBED AREA STABILIZATION (WITH SOD)
Sd1-S	SEDIMENT BARRIER (TYPE S)	Du	DUST CONTROL ON DISTURBED AREAS
Sd2	INLET SEDIMENT TRAP (TYPE S)	Ss	SLOPE STABILIZATION
Sd3	TEMPORARY SEDIMENT BASIN	Re	RETAINING WALL (GABION)
Tr	TREE PROTECTION	Su	SURFACE ROUGHENING



Z:\Maxwell-Reddick & Associates\labr\2020-2021-2026\Buloch County - Fletcher Park Parking Lot\Engineering\Design\Drawings\Final\Soil Erosion Control Plan - Final.dwg
10/11/2021 11:18 AM

SOIL EROSION & SEDIMENTATION CONTROL NOTES:

- TOTAL ACREAGE = 2.8 AC
- GPS LOCATION OF CONSTRUCTION SITE:
 - N 32.471365°
 - W 81.781137°
- NARRATIVE: THE SITE IS AN EXISTING PUBLIC PARK FEATURING A REPURPOSED RESIDENCE, OPEN SPACES, A POND AND A THIN STAND OF TREES. THE PROPOSED DEVELOPMENT WILL CONSIST OF CONSTRUCTING PARKING LOT INCLUDING THE PROPOSED DRIVEWAYS, UTILITIES, AND STORMWATER DRAINAGE INFRASTRUCTURE. THE DEVELOPMENT WILL HAVE GRADING, DRAINAGE, UTILITY, AND PAVING WORK.
- PROJECT RECEIVING WATERS: AN UNNAMED TRIBUTARY OF BELCHER BRANCH
- THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WITHIN 7 DAYS AFTER INSTALLATION. (THE CONTRACTOR SHALL CONTACT THE ENGINEER UPON COMPLETION OF THE INITIAL BMP'S SO THAT THE ENGINEER CAN INSPECT SAID BMP'S WITHIN 7 DAYS OF INSTALLATION.)
- NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.*
- NO BUFFER ENCROACHMENTS OR VARIANCES ARE REQUIRED FOR THIS PROJECT.
- AMENDMENTS/ REVISIONS TO THE SOIL EROSION & SEDIMENTATION CONTROL PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S 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 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.
- APPROPRIATE BMP'S SHALL BE IMPLEMENTED FOR THE REMEDIATION OF ALL PETROLEUM SPILLS AND/OR LEAKS.

SOIL CLEANUP AND CONTROL PRACTICES:

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO BROOMS, DUSTPANS, MAPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

- THE PROPOSED DETENTION POND, WHICH WILL BE UTILIZED TO AID IN TRAPPING SEDIMENT, SHALL BE UTILIZED TO CONTROL POLLUTANTS IN STORM WATER DISCHARGE FROM THE SITE DURING AND AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED. THESE PRACTICES WERE SELECTED TO AID IN ALLOWING STORM WATER DEPOSITION OF ACCUMULATED POLLUTANTS FROM IMPERVIOUS SURFACES, ETC.

- PRACTICES TO PROVIDE COVER FOR BUILDING MATERIALS AND BUILDING PRODUCTS ON SITE:

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES. ALL BUILDING MATERIALS INCLUDING, BUT NOT LIMITED TO CONSTRUCTION WASTE, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, AND SANITARY WASTE MUST BE

- PRACTICES TO REDUCE POLLUTANTS IN STORM WATER DISCHARGES:

A) PRODUCT SPECIFIC:

- 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 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

TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT & MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

- CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.
- FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

*THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ON PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

- ESTIMATED PEAK DISCHARGE FLOW:
 - PRE-DEVELOPMENT = 1.75 CFS (25 YEAR STORM EVENT)
 - POST-DEVELOPMENT = 1.82 (25 YEAR STORM EVENT)

TENTATIVE ACTIVITY SCHEDULE

	2021-2022											
	A	M	J	J	A	S	O	N	D	J	F	M
INSTALLATION OF SEDIMENT CONTROLS												
CLEARING & TREE PROTECTION BARRICADES												
SITE GRADING												
TEMPORARY GRASSING												
UTILITY INSTALLATION												
GENERAL CONSTRUCTION												
PERMANENT GRASSING												
PAVING												
MAINTENANCE OF SEDIMENT CONTROL												
REMOVAL OF SEDIMENT CONTROL												

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST:

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECT
SWCD: Ogeechee

Project Name: FLETCHER PARK
City/County: BULLOCH COUNTY, GA
Name & email of person filling out checklist: Lauren Kirksey, lkirksey@maxred.com

Address: 707 LAKEVIEW ROAD
Date on Plans: 02/09/2021

Page # Y/N
C4.3 Y

TO BE SHOWN ON ES&PC PLAN

1 The Applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.

(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed.)

2 Level I certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed.)

3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist and the GAEPD approval letter. (A copy of the written approval by GAEPD must be attached to the plan for the Plan to be reviewed.)

4 The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.

5 Provide the name, address, email address, and phone number of primary permittee.

6 Note total and disturbed acreages of the project or phase under construction.

7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.

8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.

9 Description of the nature of construction activity and existing site conditions.

10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.

11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.

12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated or Part IV page 19 of the permit.

13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated or Part IV page 19 of the permit.

14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."

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

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

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

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."

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."

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."

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."

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 Biotically 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.

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.

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.

25 Provide BMPs for the remediation of all petroleum spills and leaks.

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.

27 Description of practices to provide cover for building materials and building products on site.

28 Description of the practices that will be used to reduce the pollutants in storm water discharges.

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).

30 Provide complete requirements of Inspections and record keeping by the primary permittee.

31 Provide complete requirements of Sampling Frequency and Reporting of sampling results.

32 Provide complete details for Retention of Records as per Part IV.F. of the permit.

33 Description of analytical methods to be used to collect and analyze the samples from each location.

34 Appendix B rationale for NTU values at all outfall sampling points where applicable.

35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.

36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase.

37 Graphic scale and North arrow.

38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2% Rolling 2 - 8% Steep 8%	0.5 or 1 1 or 2 2.5 or 10

39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gswcc.georgia.gov.

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.

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.

42 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.

43 Delineation and acreage of contributing drainage basins on the project site.

44 Provide hydrology study and maps of drainage basins for both the pre- and post-development conditions.

45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.

46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.

47 Soil series for the project site and their delineation.

48 The limits of disturbance for each phase of construction.

49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.

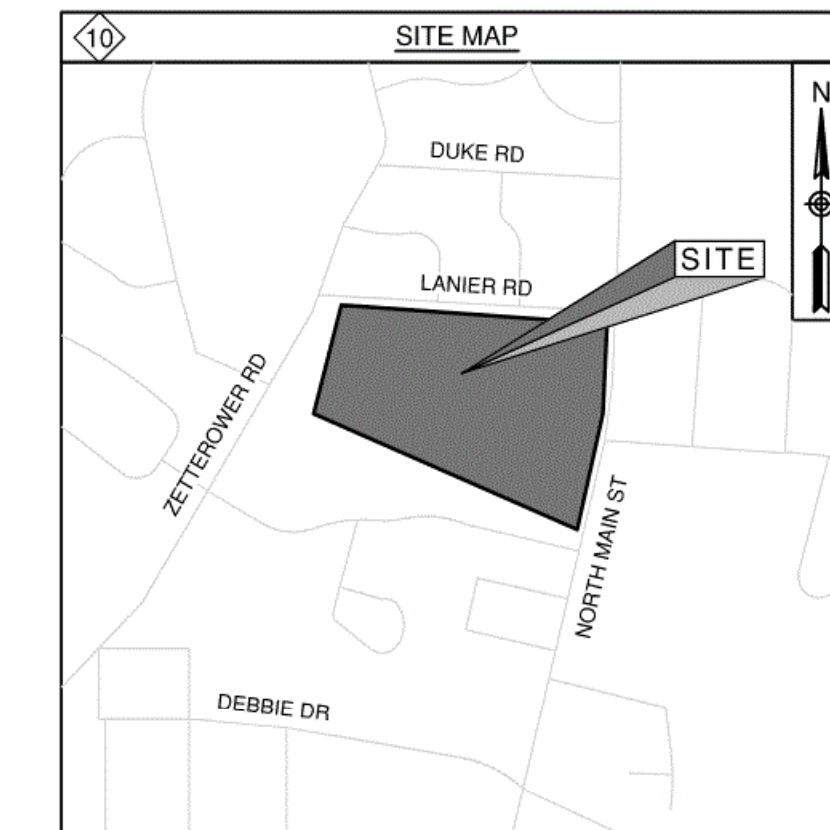
50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.

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.

52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia.

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

Effective January 1, 2021



NUMBER CORRESPONDS TO THE GEORGIA, "EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST" (STAND ALONE CONSTRUCTION PROJECT)

PLAN SET SHEET REVISIONS

REVISION DATE:	REVISED SHEET(S):

DEVELOPMENT REFERENCE:

- 24 HOUR CONTACT: BRAD DEAL 912.764.0127
- PRIMARY PERMITTEE: BULLOCH COUNTY 115 NORTH MAIN ST. STATESBORO, GA 30459 PH: 912.764.0127 EMAIL: BDEAL@BULLOCHCOUNTY.NET
- ENGINEER: MAXWELL-REDDICK AND ASSOCIATES 40 JOE KENNEDY BLVD STATESBORO, GA 30458 PH: 912-489-7112

DESIGN PROFESSIONAL'S CERTIFICATION

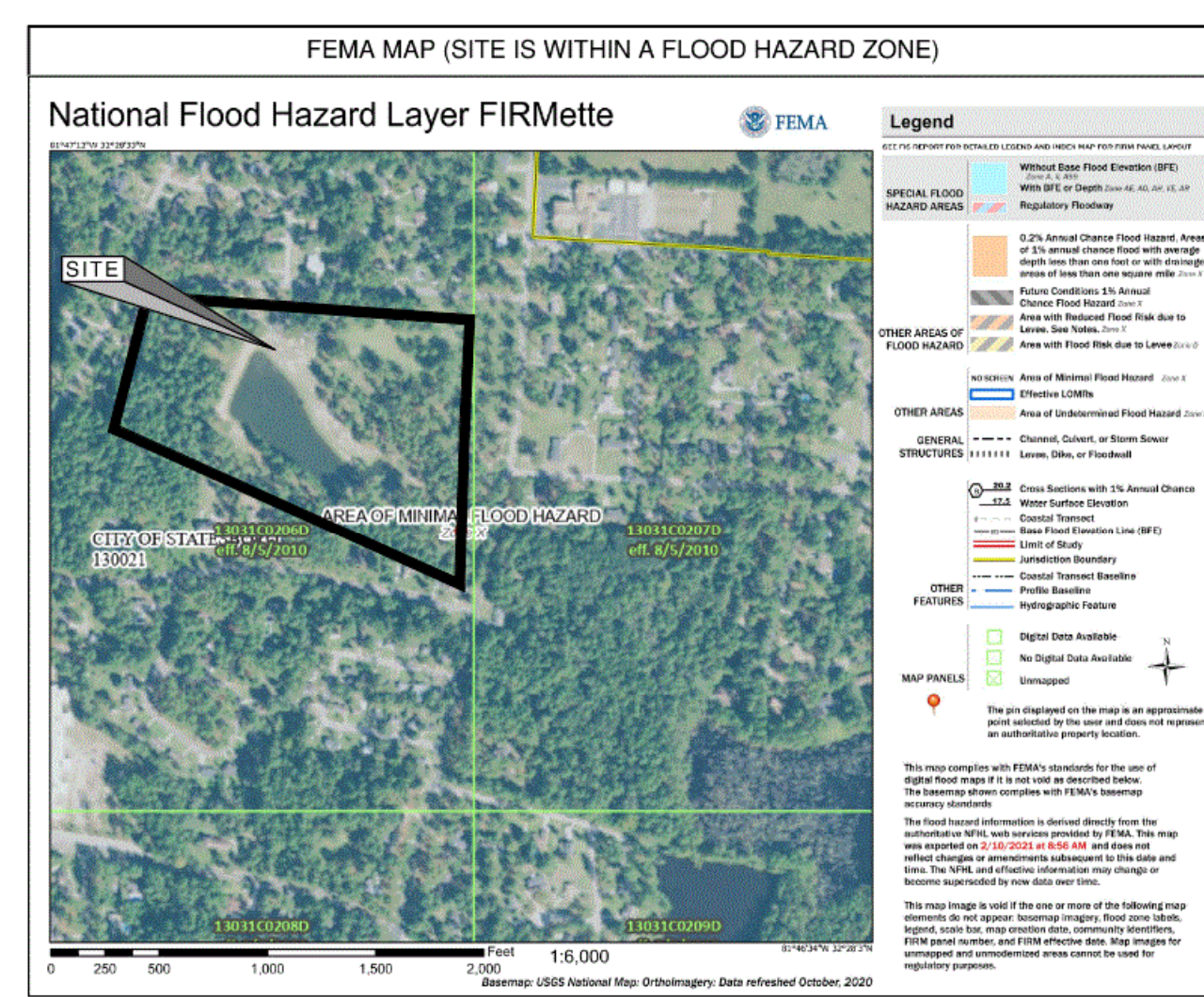
"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBING ACTIVITY WAS PERMITTED. PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001."

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HERE IN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

Signature: *David L. Hendon*

VEGETATIVE COVERS (COASTAL REGION)

MONTH OF PLANTING	TEMPORARY GRASS	RATE	MONTH OF PLANTING	PERMANENT GRASS	RATE
MARCH-JUNE	LOVEGRASS, WEEPING	4 Lbs./Ac	MARCH-JUNE	COMMON BERMUDA (HULLED)	10 Lbs./Ac
APRIL-AUGUST	MILLET PEARL	50 Lbs./Ac	JULY-AUGUST	BAHIA, PENSACOLA	30 Lbs./Ac
SEPTEMBER-FEBRUARY	RYE	3 BU./AC	SEPTEMBER-FEBRUARY	COMMON BERMUDA (UNHULLED) & RYE	10 Lbs./AC



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GEORGIA PROFESSIONAL ENGINEER
No. 40886
DAVID L. HENDON

GSWCC LEVEL II DESIGN PROFESSIONAL CERT #0000506819

801
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NOTE TO CONTRACTOR: IF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS ARISE DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR AND/OR DEVELOPER SHALL NOTIFY THE ENGINEER IMMEDIATELY. THE CONTRACTOR KNOWS AND CAN REASONABLY BE EXPECTED TO HAVE KNOWLEDGE OF ALL CONSTRUCTION STAKES AND PLANS TO BE USED TO REPORT THE SAME. HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM, WHICH IS REQUIRED TO CORRECT ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLANS AND THE ACTUAL SITE CONDITIONS, AND WHICH WOULD HAVE BEEN AVOIDED HAD HE PROPERLY REPORTED SAID DISCREPANCY OR CONTACT WITHIN THE TIME FRAME AND ASSOCIATED WITH HIS PROFESSIONAL DUTY. COPYRIGHT © 2021 BY MAXWELL-REDDICK AND ASSOCIATES. ALL RIGHTS RESERVED.

REVISIONS:
10/01/21: REVISIONS TO TREE PLAN

FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA

SOIL EROSION CONTROL NOTES

DESIGNED: TAL
DRAWN BY: TAL
CHECKED: DLH

DATE: APR. 12, 2021

JOB NO.: 2020-296

SCALE: AS SHOWN

DRAWING NUMBER
C4.3
SHEET NUMBER 10

AUTHORIZATION:

ANY PERSON DESIRING COVERAGE UNDER THIS PERMIT MUST SUBMIT A NOTICE OF INTENT (NOI) TO THE EPD AND THE NOI MUST BE RECEIVED BY THE EPD IN ACCORDANCE WITH THE REQUIREMENTS OF PART II. USING NOI FORMS PROVIDED BY THE EPD (OR EXACT PHOTOCOPY THEREOF), IN ORDER FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITES TO BE AUTHORIZED.

EROSION, SEDIMENT AND POLLUTION CONTROL PLAN (ESPP)

THIS PLAN SHALL INCLUDE, AS A MINIMUM, BEST MANAGEMENT PRACTICES, INCLUDING SOUND CONSERVATION AND ENGINEERING PRACTICES TO PREVENT & MINIMIZE EROSION & RESULTANT SEDIMENTATION, WHICH ARE CONSISTENT WITH THOSE PRACTICES CONTAINED IN THE "MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA" (CURRENT YEAR EDITION), PUBLISHED BY THE STATE SOIL & WATER CONSERVATION COMMISSION, WITH COPIES OBTAINED BY CONTACTING DANA HEIL, EROSION & SEDIMENT CONTROL SPECIALIST (706-542-3065) AS WELL AS THE FOLLOWING:

- 1. STRIPPING OF VEGETATION, REGRADING, AND OTHER DEVELOPMENT ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO MINIMIZE EROSION, MAINTAIN THE ORIGINAL VEGETATIVE COVER, AND DISTURB ONLY THAT PART OF THE SITE ABSOLUTELY NECESSARY AT THE TIME.
2. CUT AND FILL OPERATIONS SHALL BE KEPT TO A MINIMUM.
3. DEVELOPMENT PLANS MUST CONFORM TO TOPOGRAPHY AND SOIL TYPE, SO AS TO CREATE THE LOWEST PRACTICABLE EROSION POTENTIAL.
4. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED & SUPPLEMENTED, INCLUDING PROTECTION OF TREES AND PRESERVATION OF MATURE VEGETATION.
5. THE DISTURBED AREA AND THE DURATION OF EXPOSURE TO EROSION ELEMENTS SHALL BE KEPT TO A PRACTICABLE MINIMUM.
6. DISTURBED SOIL SHALL BE STABILIZED AS QUICKLY AS PRACTICABLE. STABILIZATION MEASURES SHALL BE INITIATED NO MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. EXCEPT WHEN PRECLUDED BY SNOW COVER OR OTHER ADVERSE WEATHER CONDITIONS, WHEN PRECLUDED BY SNOW COVER OR OTHER ADVERSE WEATHER CONDITIONS, THEN STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
7. TEMPORARY SEEDING OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING DEVELOPMENT. OTHER MEASURES MAY INCLUDE GEOTEXTILES, SOIL STABILIZATION, VEGETATIVE BUFFER STRIPS, FILTER STRIPS, PROTECTION OF TREES, PERMANENT SEEDING, AND PRESERVATION OF MATURE VEGETATION.
8. PERMANENT VEGETATION & STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICABLE. STRUCTURAL MEASURES MAY INCLUDE SILT FENCES, EARTH BERMING, DRAINAGE SWALES LINED WITH GRASS, STONE OR TIMBERS, PIPE SLOPE DRAINS, LEVEL FLOW SPREADERS, STORM DRAIN INLET PROTECTION & STORM DRAIN OUTLET ROCK PROTECTION.
8.1. MULCH - USE DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS. DRY STRAW WILL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY WILL BE APPLIED AT THE RATE OF 2-1/2 TONS PER ACRE.
8.2. GRASS - SHOULDER TO HAVE PERMANENT GRASSING HULLED BERMUODA OR BAHIA.
9. TO THE EXTENT NECESSARY, SEDIMENT IN RUN-OFF WATER SHALL BE TRAPPED BY THE USE OF DEBRIS BASINS, SILT TRAPS, SEDIMENT TRAPS, CHECK DAMS, REINFORCED SOIL RETAINING SYSTEMS, GABIONS OR SIMILAR MEASURES UNTIL THE DISTURBED AREA IS STABILIZED.
10. ADEQUATE PROVISIONS SHALL BE PROVIDED TO MINIMIZE DAMAGE FROM SURFACE WATER TO THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACES OF FILLS. SEDIMENT BASINS, SEDIMENT TRAPS, SILT FENCES, OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL SLOPE AND DOWN SLOPE BOUNDARIES.
11. CUTS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTY.
12. FILLS SHALL NOT ENCRUST UPON NATURAL WATER COURSES OR CONSTRUCTED CHANNELS IN A MANNER SO AS TO ADVERSELY AFFECT OTHER PROPERTY OWNERS.
13. GRADING EQUIPMENT SHALL CROSS FLOWING STREAMS BY THE MEANS OF BRIDGES OR CULVERTS, EXCEPT WHEN SUCH METHODS ARE NOT FEASIBLE. PROVIDED IN ANY CASE THAT SUCH CROSSINGS SHALL BE KEPT TO A MINIMUM.
14. PROVISIONS SHALL BE PROVIDED FOR TREATMENT OR CONTROL OF ANY SOURCE OF SEDIMENTS AND ADEQUATE SEDIMENTATION CONTROL FACILITIES TO RETAIN SEDIMENTS ON SITE OR PRECLUDE SEDIMENTATION OF ADJACENT WATERS BEYOND THE LEVELS SPECIFIED IN THE PERMIT.
15. EXCEPT AS PROVIDED IN (16) BELOW, NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A 25 FT BUFFER ALONG THE BANKS OF ANY STATE WATERS, AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION.
16. NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A 50-FOOT BUFFER, AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION, ALONG THE BANKS OF ANY STATE WATERS CLASSIFIED AS "TROUT STREAM".
17. EXCEPT AS PROVIDED ABOVE, FOR BUFFERS REQUIRED PURSUANT TO (15) AND (16), NO CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED WITHIN A BUFFER AND A BUFFER SHALL REMAIN IN ITS NATURAL, UNDISTURBED, STATE OF VEGETATION UNTIL ALL LAND-DISTURBING ACTIVITIES ON THE CONSTRUCTION SITE ARE COMPLETED. BETWEEN THE TIME FINAL STABILIZATION OF THE SITE IS ACHIEVED AND UPON THE SUBMITTAL OF A NOTICE OF TERMINATION, A BUFFER MAY BE THINNED OR TRIMMED OF VEGETATION AS LONG AS A PROTECTIVE VEGETATIVE COVER REMAINS TO PROTECT WATER QUALITY AND AQUATIC HABITAT AND A NATURAL CANOPY IS LEFT IN SUFFICIENT QUANTITY TO KEEP SHADE ON THE STREAM BED.
18. NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO WATERS OF THE STATE.
19. OFF-SITE VEHICLE TRACKING OF DIRT, SOILS, AND SEDIMENTS AND THE GENERATION OF DUST SHALL BE ELIMINATED OR MINIMIZED TO THE MAXIMUM EXTENT PRACTICAL. A BEST MANAGEMENT PRACTICE FOR THIS IS THE USE OF A CONSTRUCTION EXIT, BEING A STONE STABILIZED PAD LOCATED AT ANY POINT WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE TO A PUBLIC RIGHT-OF-WAY. GEOTEXTILE UNDERLINERS ARE REQUIRED TO STABILIZE AND SUPPORT THE PAD AGGREGATES. THE STONE AGGREGATE SIZE IS 1.5 TO 3.5 INCHES AND IS TO BE A MINIMUM PAD THICKNESS OF 6 INCHES. PAD WIDTH SHOULD NOT BE LESS THAN 20 FEET AND SHOULD BE OF SUFFICIENT LENGTH TO PERFORM THE FUNCTION OF REMOVING SEDIMENT, BUT NO LESS THAN 50 FEET. WHEELS MUST BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.

WORKSITE HOUSEKEEPING: MAINTAIN GOOD HOUSEKEEPING PRACTICES AT THE PROJECT JOBSITE AND EQUIPMENT/MATERIAL STORAGE LOCATIONS.

WASTE PICKUP AND DISPOSAL: REGULARLY PICK UP AND DISPOSE OF WASTE, AND RECYCLABLES.

EQUIPMENT MAINTENANCE: ENSURE EQUIPMENT IS WORKING PROPERLY AND FREE FROM LEAKS.

MATERIAL STORAGE: STORE CONTAINERS, DRUMS, AND BAGS AWAY FROM DIRECT TRAFFIC ROUTES, IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, AND IN A MANNER TO PROTECT AGAINST CONTAMINATION OF STORM WATER.

POL SPILLS AND LEAKS: MINOR SPILLS AND LEAKS FROM CONSTRUCTION EQUIPMENT ARE A SOURCE OF POTENTIAL DISCHARGE. DO NOT USE WATER TO CLEAN UP SPILLS AND DIRT FROM PAVEMENTS.

SPILL KITS: HAVE A FULL-SERVICE SPILL KIT ON SITE FOR MINOR LEAKS AND DRIPS. SPILL KITS SHOULD INCLUDE ABSORBENT PADS, SPILL BOOMS, PERSONNEL PROTECTION EQUIPMENT, AND DISPOSAL BAGS.

DRIP PAN USE DURING FUELING: USE DRIP PANS AND ABSORBENT RAGS WHEN FUELING CONSTRUCTION EQUIPMENT AND PROVIDING EMERGENCY MAINTENANCE ON EQUIPMENT. ABSORBENTS ARE TO BE HANDLED IN ACCORDANCE WITH THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) REGULATIONS.

DRIP PAN USE DURING VEHICLE STORAGE: USE DRIP PANS UNDER HEAVY EQUIPMENT LEFT IDLE FOR TWO OR MORE CALENDAR DAYS.

VISUAL INSPECTIONS: VISUALLY INSPECT CONSTRUCTION EQUIPMENT DAILY FOR LEAKS AND SPILLS.

HAZMAT STORAGE: STORE HAZARDOUS MATERIALS (INCLUDING FUEL) ON SITE IN COVERED AREAS WITH SECONDARY CONTAINMENT (FOR EXAMPLE, FLAMMABLE LOCKER), CONTAINERS/TANKS FOR FUEL (MOTOS/DIESEL) SHOULD HAVE SECONDARY CONTAINMENT THAT MEETS REGULATORY REQUIREMENTS.

PROTECTING STORM DRAINS: DO NOT DISPOSE OF WASTE IN A STORM DRAIN (FOR EXAMPLE PAINT, OIL, CONCRETE, ETC.)

VEHICLE OPERATION: DO NOT OPERATE LEAKING EQUIPMENT. PROVIDE EMERGENCY REPAIR TO PREVENT FURTHER LEAKS.

STORM WATER SAMPLING:

1.1 SAMPLING METHODS

ALL SAMPLES WILL BE COLLECTED BY "GRAB METHOD" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001"

1.2 SAMPLING FREQUENCY

- 1. THE PRIMARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE AND TERTIARY PERMITTEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.
2. HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.
3. SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:
a. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION

- b. IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOI, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;
c. AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPs ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;
d. WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PRIMARY PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(8), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED, PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND
e. EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.
*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.
7. NON-STORM WATER DISCHARGES, EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER LISTED IN PART 111.1.A.2. OF THIS PERMIT THAT ARE COMBINED WITH STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IDENTIFIED IN THE PLAN, THE PLAN SHALL IDENTIFY AND ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORM WATER COMPONENT(S) OF THE DISCHARGE.
E. REPORTING.

- 1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART I.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOI IS SUBMITTED IN ACCORDANCE WITH PART VI.
2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
a. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
b. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
c. THE DATE(S) ANALYSES WERE PERFORMED;
d. THE TIME(S) ANALYSES WERE INITIATED;
e. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
f. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
g. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
h. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU"; AND
i. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

- 3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. PERMITTEES SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOI IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED TO THE EPD. A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.

INSPECTION SCHEDULE:

- a. PRIMARY PERMITTEE.
1. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
2. MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING HOLIDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.
3. CERTIFIED PERSONNEL (PROVIDED BY THE SECONDARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE SECONDARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE SECONDARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE SECONDARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY, WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS; FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.B.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES.
4. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S); EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY, WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).
5. BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. THE PRIMARY PERMITTEE MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.D.4.B.(5). WHEN A SECONDARY PERMITTEE NOTIFIES THE PRIMARY PERMITTEE OF ANY PLAN DEFICIENCIES.
6. A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5), OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN, WHERE THE REPORT DOES NOT IDENTIFY AN INCIDENT, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

WHAT IS RETAINED ON SITE:

- 1. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOI IS SUBMITTED IN ACCORDANCE WITH PART VI:
a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
b. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
c. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
d. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
e. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
f. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART 111.D.a. OF THIS PERMIT; AND
g. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2), OF THIS PERMIT.
2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOI IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

RETURN RECEIPT OF NOTICE OF INTENT SUBMITTAL TO GEORGIA ENVIRONMENTAL PROTECTION DIVISION

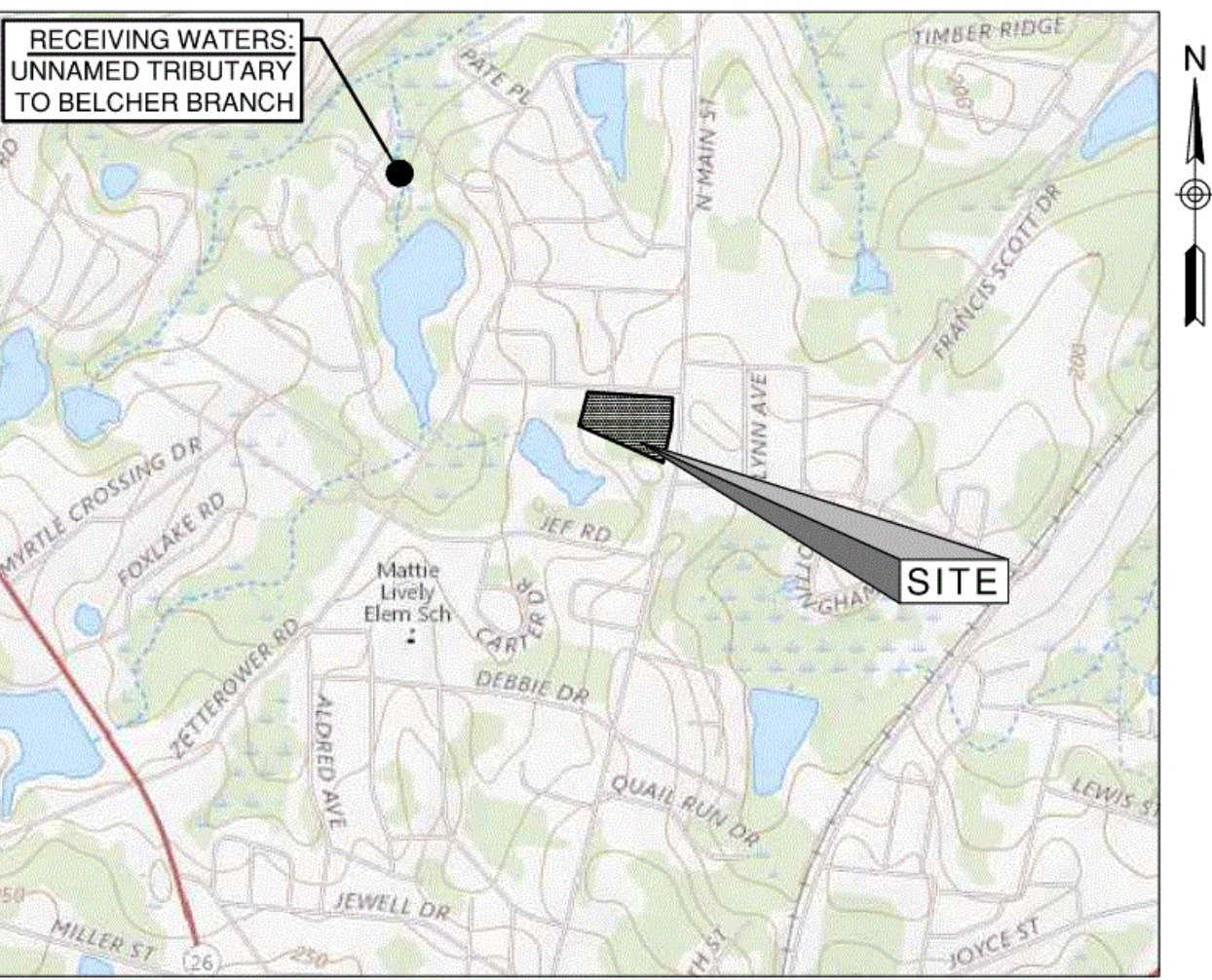
(IT IS THE PRIMARY PERMITTEE'S UNDERSTANDING THAT THE ATTACHED RECEIPT IS VERIFICATION AND APPROVAL FROM GEORGIA EPD TO CONDUCT CONSTRUCTION ACTIVITIES ON THIS PROJECT. IN ACCORDANCE WITH NPDES GAR 100001, AND THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, IN ACCORDANCE WITH PART I.D.2 OF THE GAR 100001 PERMIT, THE PRIMARY PERMITTEE WILL BE AUTHORIZED TO DISCHARGE STORM WATER FROM THIS PROJECT 14 DAYS AFTER THE NOTICE OF INTENT SUBMITTAL IS POSTMARKED UNLESS NOTIFIED BY EPD.)

RATIONALE FOR NTU LIMITS

TOTAL AREA = 2.8 ACRES
SURFACE WATER DRAINAGE AREA = < 4.99 SQUARE MILES
RECEIVING WATER IS SUPPORTING WARM WATER FISHERIES.

NTU LIMIT = 75

Table with 10 columns: NTU Range, 100-10, 100-25, 25-50, 50-100, 100-200, 200-300, 300-500, 500-750, 750-1000, 1000-1500. Rows: 4-9.9, 10-24.99, 25-49.99, 50-99.99, 100-249.99, 250-499.99, 500+.



USGS QUADRANGLE MAP

NOT TO SCALE

DESIGN PROFESSIONAL'S CERTIFICATION

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001."

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HERE IN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

[Signature]



GSWCC LEVEL II DESIGN PROFESSIONAL CERT #0000056819



ENGINEERING & LAND SURVEYING
40 JOE KENNEDY BLVD
STATESBORO, GA 30458
(912)488-7112 OFFICE
(912)488-7125 FAX
NORTHWINDS III
2500 NORTHWINDS PKWY, SUITE 260
ALPHARETTA, GA 30009
(404)593-1616 CELL
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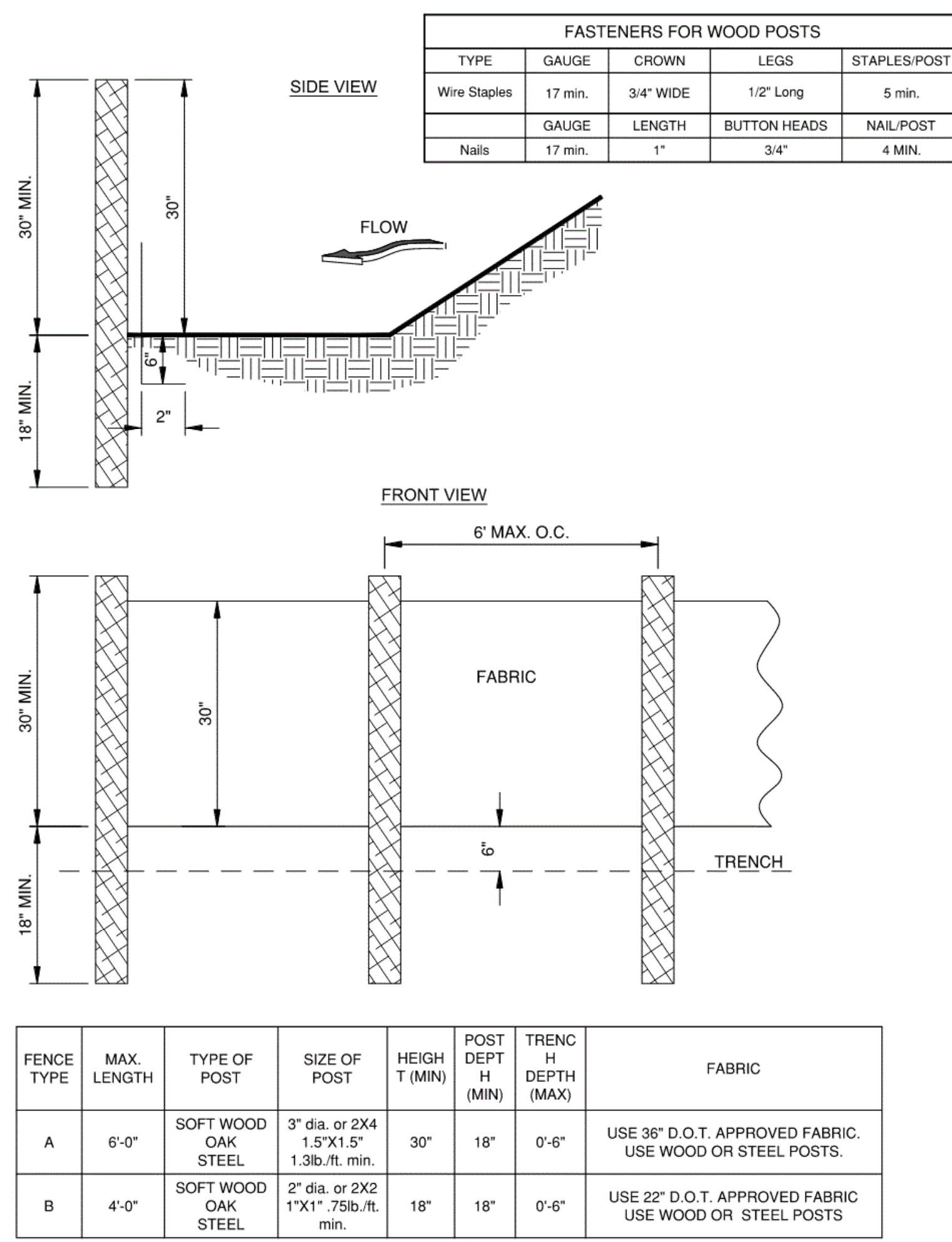
NOTE TO CONTRACTOR: IF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLAN OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS ARISE DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL NOTIFY THE ENGINEER IMMEDIATELY. THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWLEDGE OF ANY DISCREPANCIES BETWEEN THE ENGINEER'S PLAN OR CONSTRUCTION STAKES AND ACTUAL SITE CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WORK OR EXPENSE INCURRED BY HIM, WHICH IS REQUIRED TO CORRECT SUCH DISCREPANCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DISCREPANCY OR CONFLICT WHEN HE KNEW OR SHOULD HAVE KNOWN OF THE SAME. DISCREPANCY OR CONFLICT BETWEEN THE ENGINEER'S PLAN AND ACTUAL SITE CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

REVISIONS:
10.01.21: REVISIONS TO TREE PLAN

FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA
NPDES

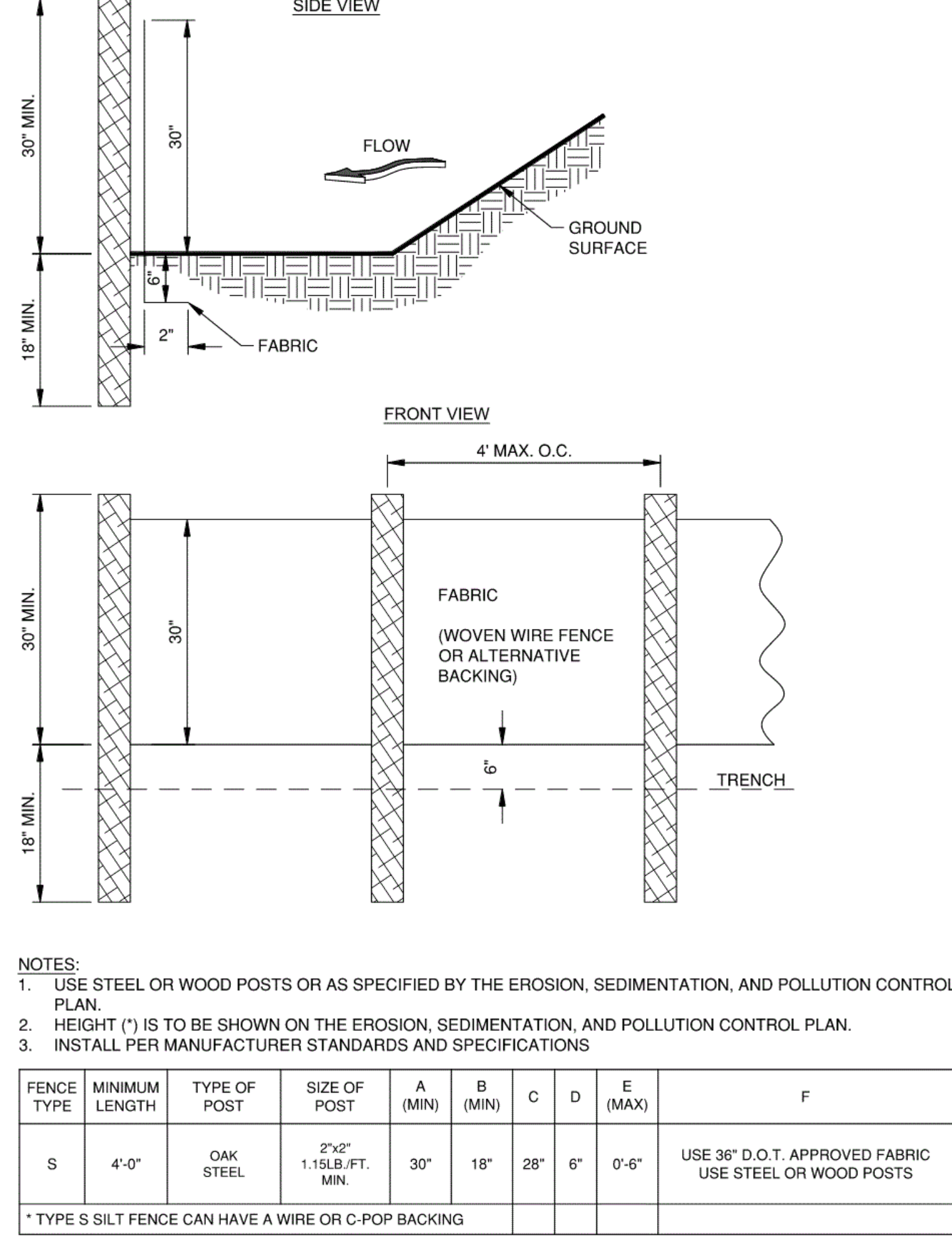
DESIGNED: TAL DRAWN BY: TAL CHECKED: DLH
DATE: APR. 12, 2021
JOB NO.: 2020-296
SCALE: AS SHOWN

DRAWING NUMBER
C4.4
SHEET NUMBER 11

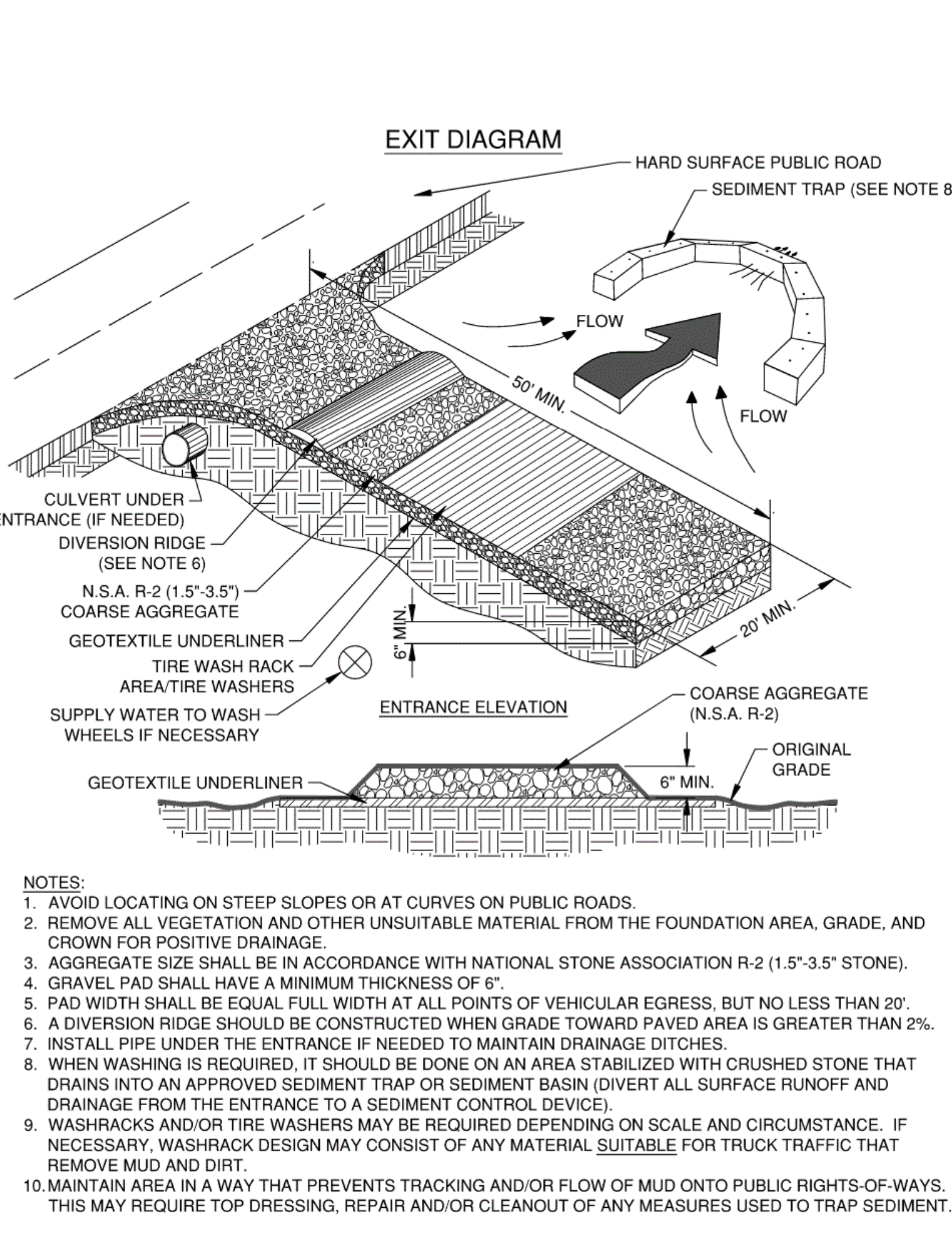


FENCE TYPE	MAX. LENGTH	TYPE OF POST	SIZE OF POST	HEIGHT T (MIN)	POST DEPT H (MIN)	TRENCH DEPTH (MAX)	FABRIC
A	6'-0"	SOFT WOOD OAK STEEL	3" dia. or 2X4 1.5"x1.5" 1.3lb./ft. min.	30"	18"	0'-6"	USE 36" D.O.T. APPROVED FABRIC. USE WOOD OR STEEL POSTS.
B	4'-0"	SOFT WOOD OAK STEEL	2" dia. or 2X2 1"x1" .75lb./ft. min.	18"	18"	0'-6"	USE 22" D.O.T. APPROVED FABRIC. USE WOOD OR STEEL POSTS.

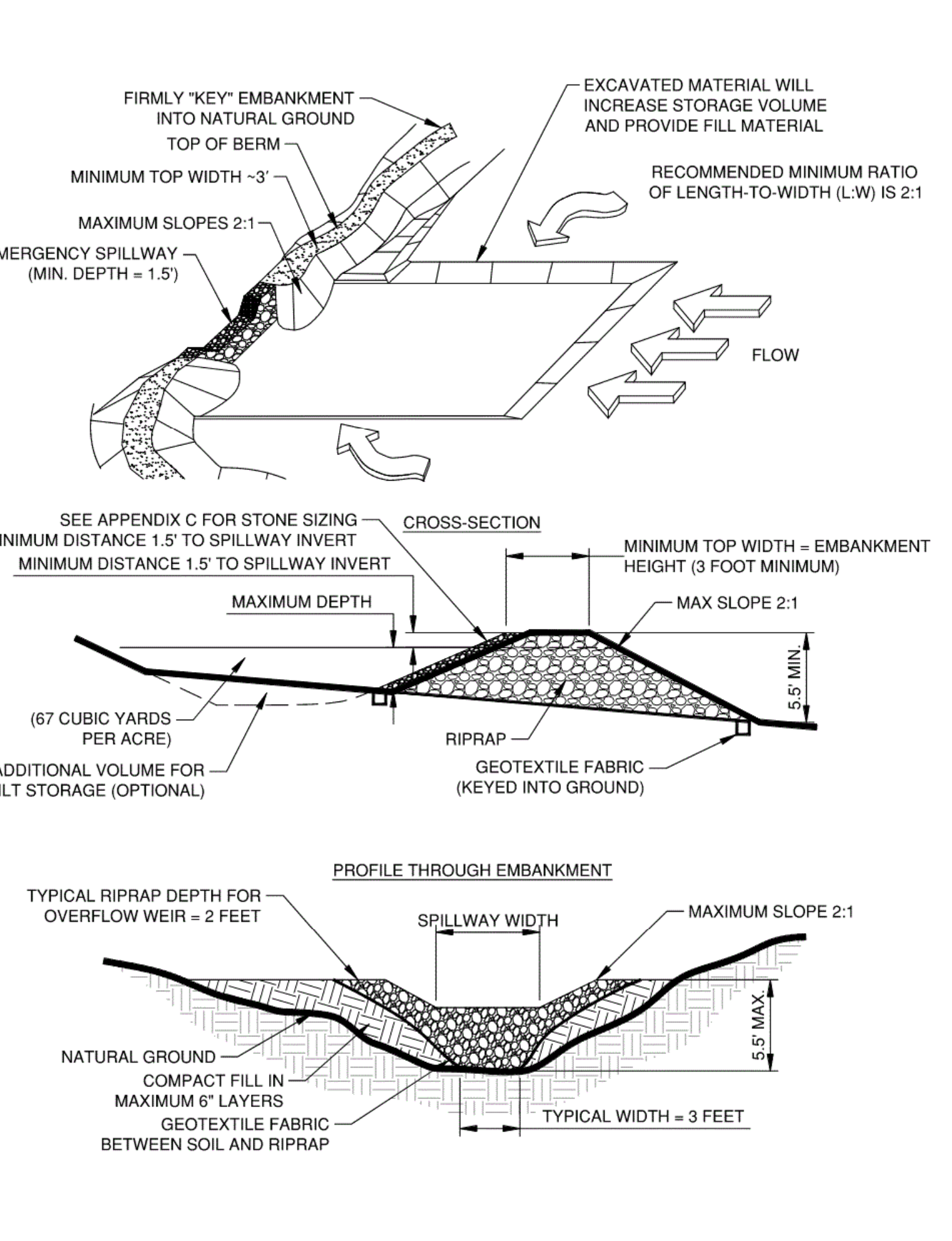
4 SEDIMENT BARRIER | NON-SENSITIVE SCALE: NTS Sd1-NS



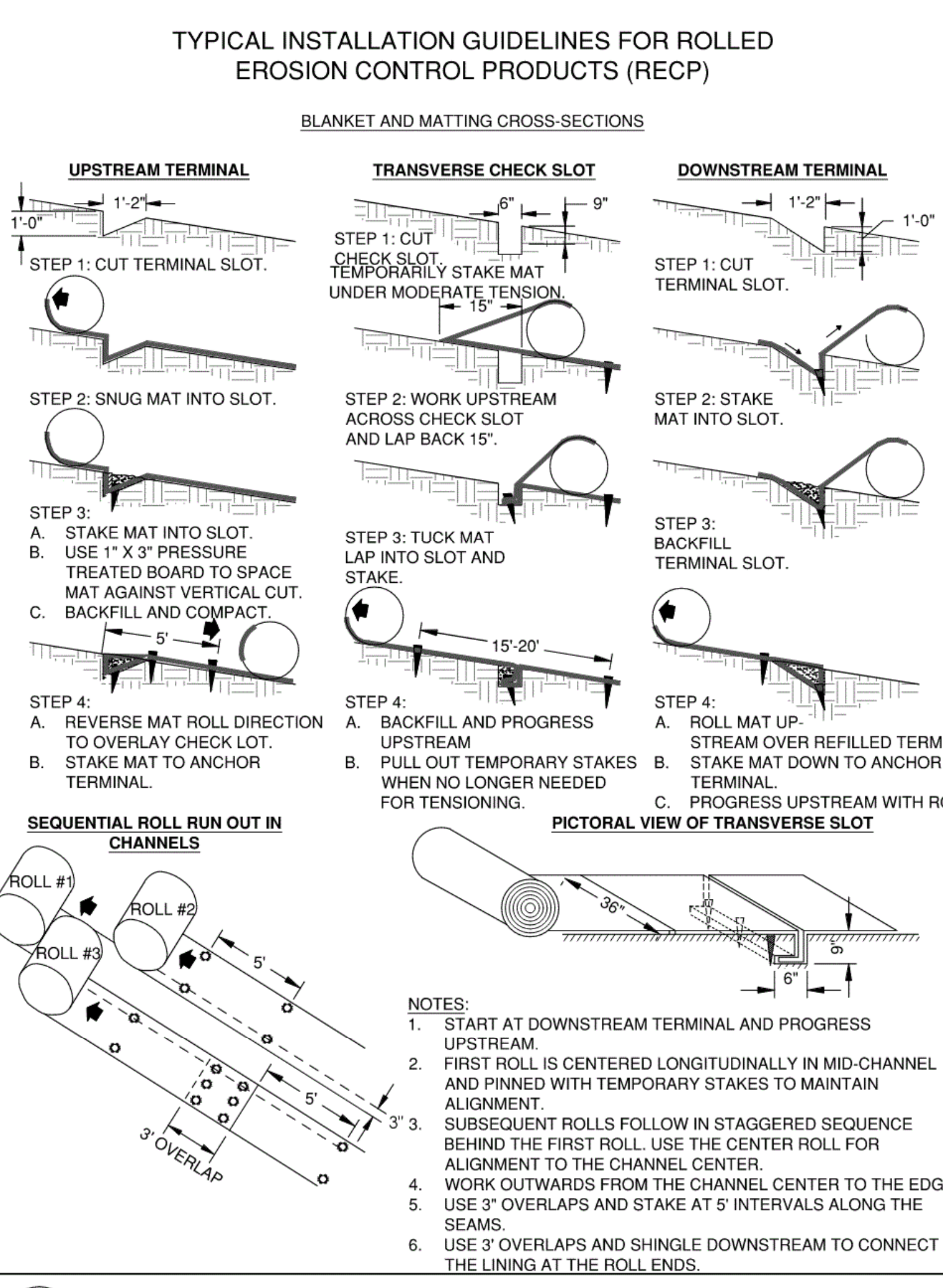
1 SEDIMENT BARRIER | SENSITIVE "C-POP" SCALE: NTS Sd1-S



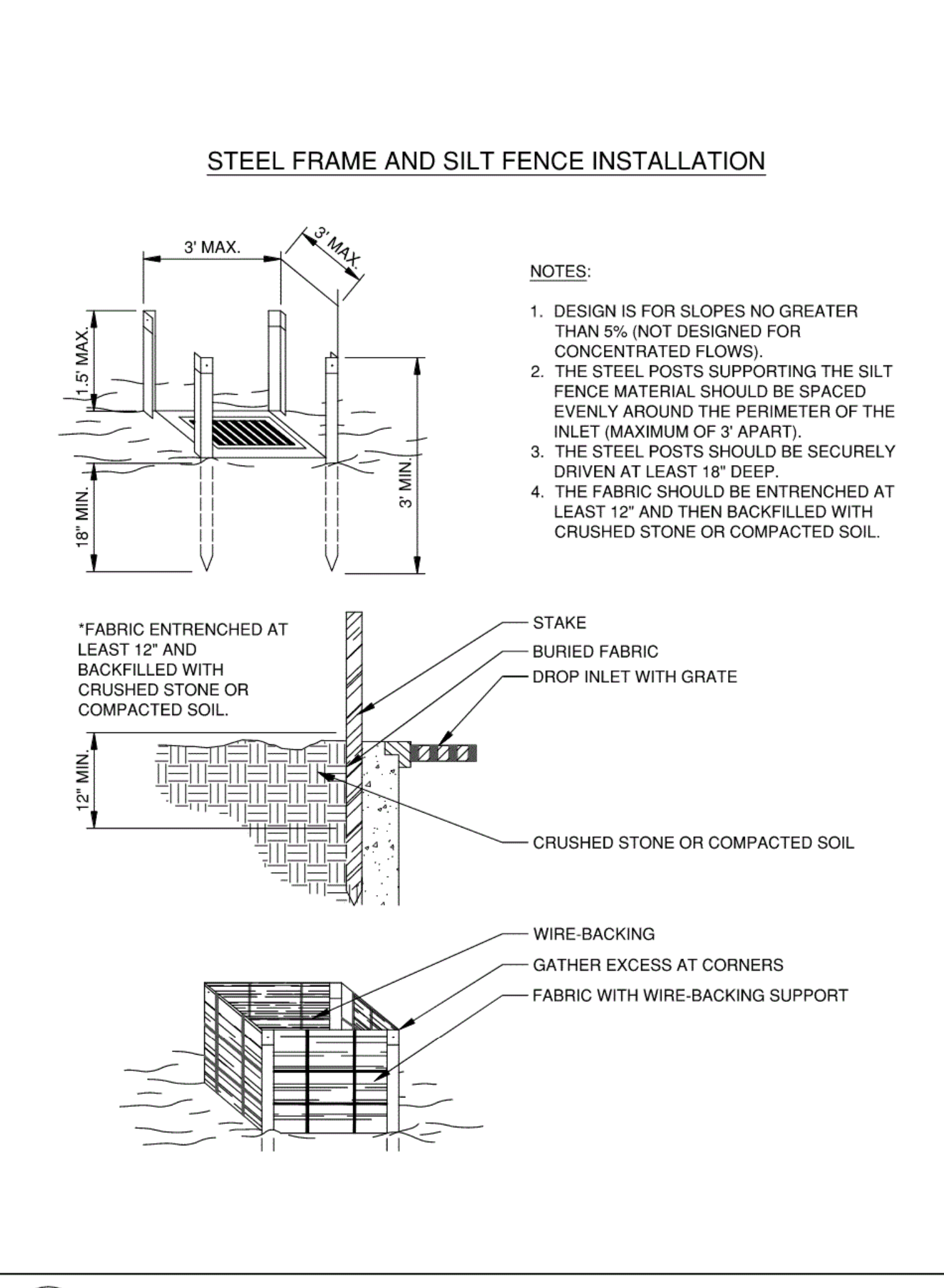
2 CRUSHED STONE CONSTRUCTION EXIT SCALE: NTS Co



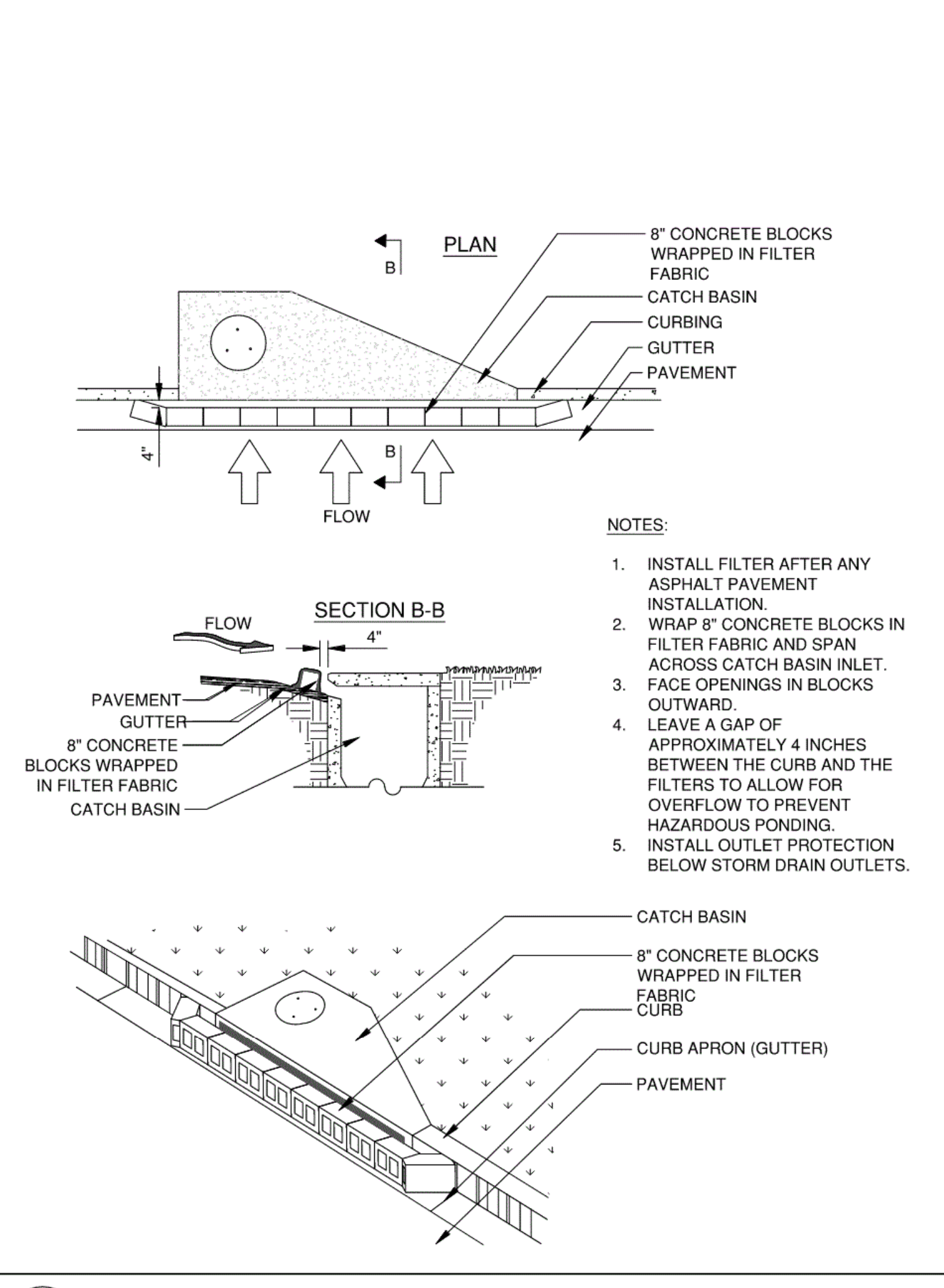
4 TEMPORARY SEDIMENT TRAP - ROCK OUTLET SCALE: NTS Sd4-C



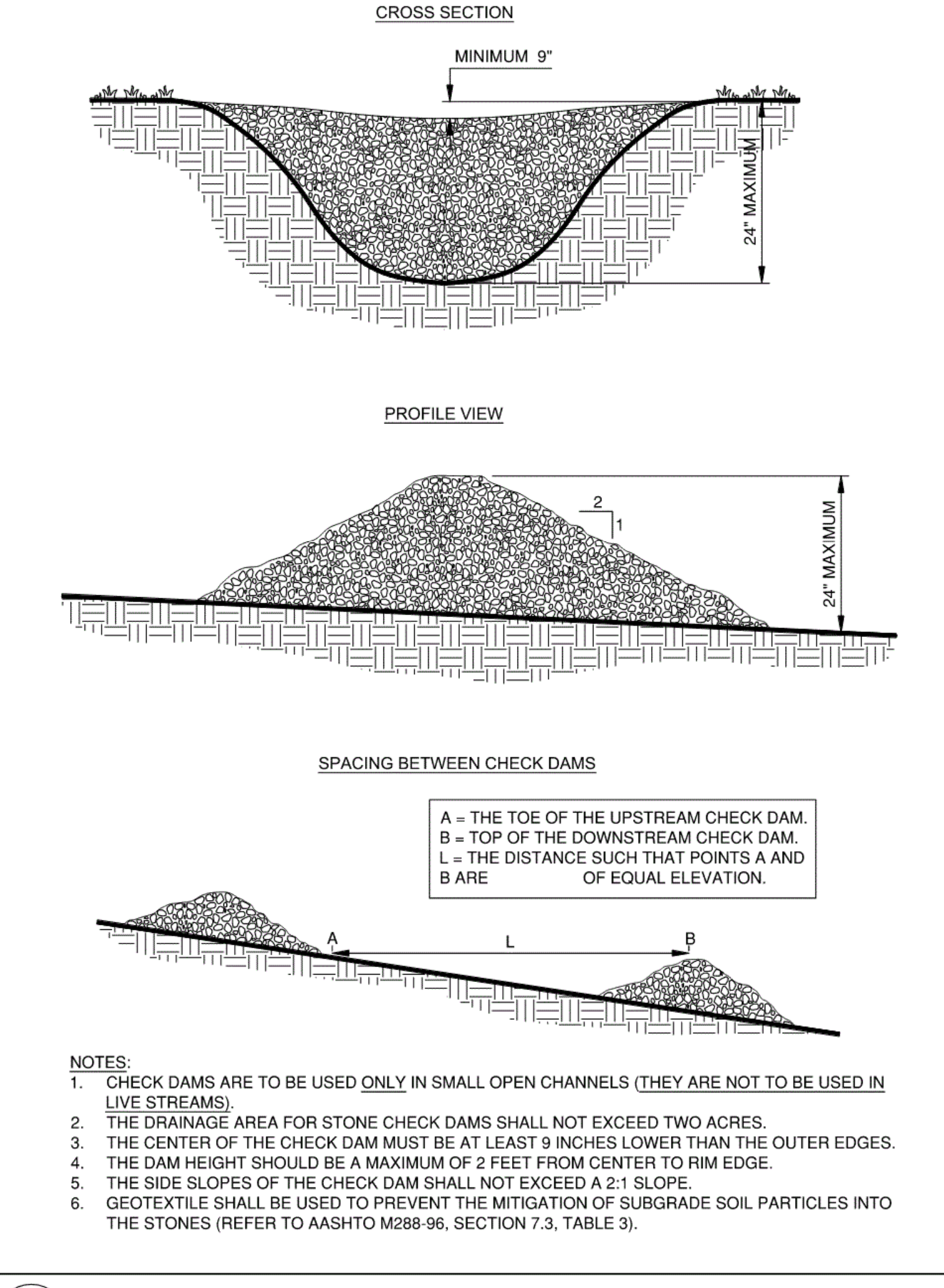
4 EXCELSIOR MATTING OR APPROVED EQUAL SCALE: NTS Ss



1 FABRIC AND SUPPORTING FRAME FOR INLET PROTECTION SCALE: NTS Sd2-F



7 CURB INLET FILTER "PIGS IN BLANKET" SCALE: NTS Sd2-P



3 TYPICAL STONE CHECK DAM SCALE: NTS Cd-S

GEORGIA PROFESSIONAL ENGINEER DAVID L. HENDON

CSWCC LEVEL II DESIGN PROFESSIONAL CERT #000056819

811 CALL BEFORE YOU DIG

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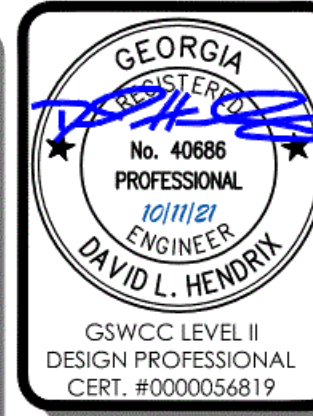
REVISIONS:
10/01/21: REVISIONS TO TREE PLAN

FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA

SOIL EROSION CONTROL DETAILS - 1

DESIGNED: TAL DRAWN BY: TAL CHECKED: DLH
DATE: APR. 12, 2021
JOB NO.: 2020-296
SCALE: AS SHOWN

DRAWING NUMBER
C4.5
SHEET NUMBER 12



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REVISIONS:
 10/12/21: REVISIONS TO TREE PLAN

FLETCHER PARK PARKING LOT
 707 LAKEVIEW DRIVE
 STATESBORO, GA
 PAVING, GRADING, & DRAINAGE PLAN

DESIGNED: TAL DRAWN BY: TAL CHECKED: DLH
 DATE: APR. 12, 2021
 JOB NO.: 2020-296
 SCALE: AS SHOWN

DRAWING NUMBER
C5.0
 SHEET NUMBER 14

PAVING, GRADING, AND DRAINAGE NOTES:

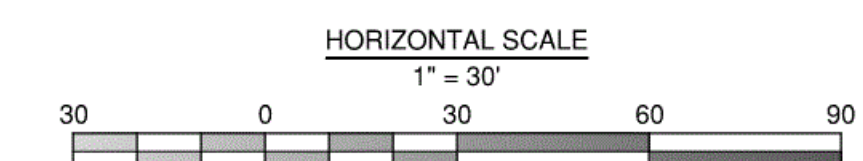
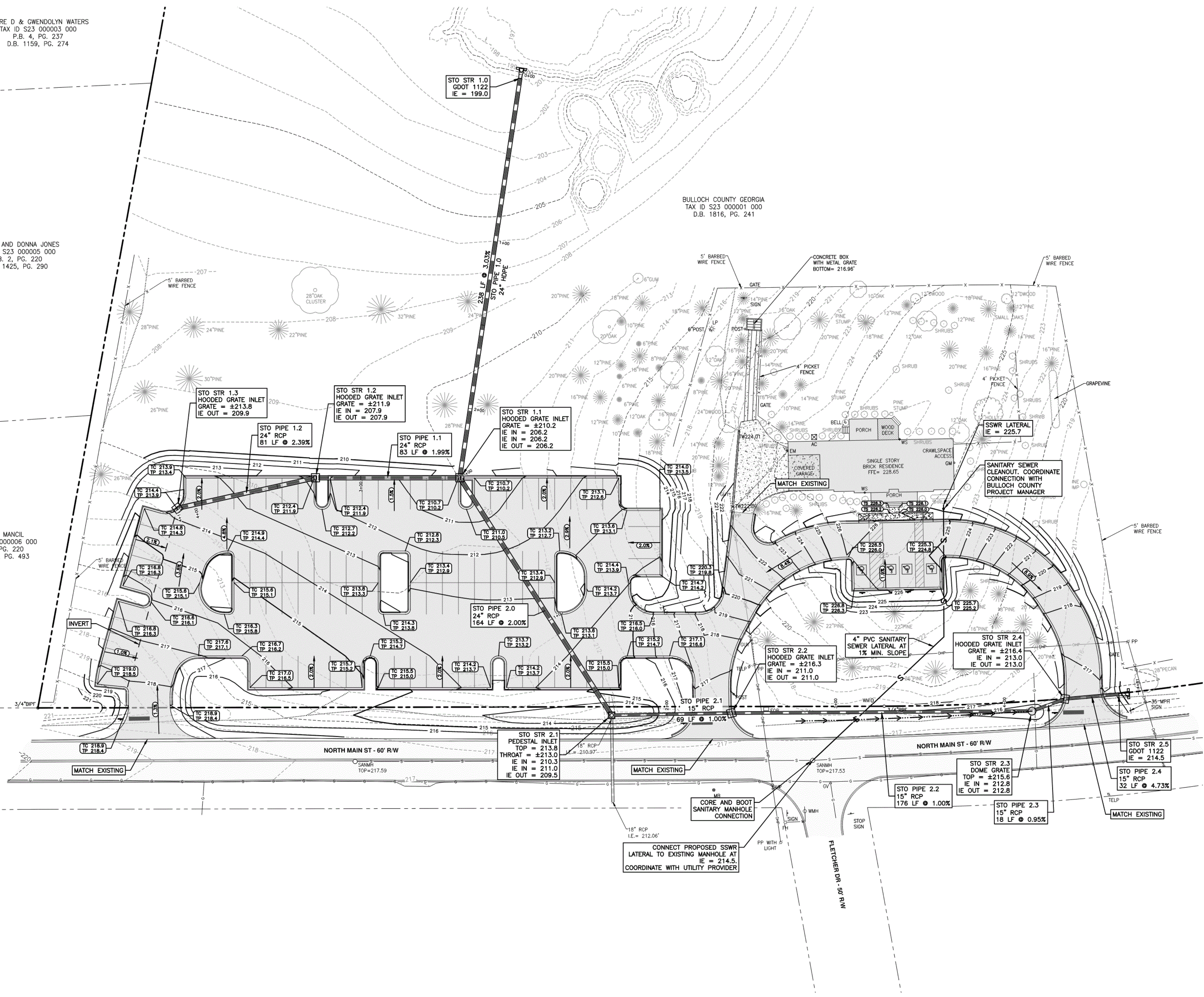
- ABBREVIATIONS:
 TC = TOP OF CURB
 TP = TOP OF PAVEMENT
 TS = TOP OF STEPS/SIDEWALK
 FFE = FINISHED FLOOR ELEVATION
 IE = INVERT ELEVATION
 RCP = REINFORCED CONCRETE PIPE
 PVC = POLYVINYL CHLORIDE PIPE
- ALL PROPOSED CURB AND GUTTER SHALL BE 18" WIDE, 6" TALL, STANDARD CONCRETE CURB AND GUTTER UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY CONSTRUCTION, AND SHALL USE CARE NOT TO DAMAGE ANY EXISTING UTILITIES. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AND ALL SUCH COSTS ASSOCIATED WITH THESE REPAIRS SHALL BE BORNE BY THE CONTRACTOR.
- THE PROPOSED ELEVATIONS ALONG THE EXISTING EDGE OF PAVEMENTS (CONCRETE PAVERS, CONCRETE RAMPS, ASPHALT & CONCRETE PAVEMENTS) ARE ESTIMATED, AND ACTUAL EDGE OF PAVEMENT ELEVATIONS SHALL SUPERSEDE.
- PROPOSED GRADE SHOTS SHALL SUPERCEDE PROPOSED CONTOURS; PROPOSED CONTOURS ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TIE THE PROPOSED GRADES INTO EXISTING IN A SUITABLE MANNER.
- ALL PROPOSED STORM STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH GDOT STANDARDS; HOWEVER, SAID STORM STRUCTURES NEED NOT BE GDOT STAMPED. ALL STORM INLETS LOCATED WITHIN PEDESTRIAN AREAS SHALL HAVE PEDESTRIAN GRATES THAT ARE A.D.A. & BICYCLE COMPATIBLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROCURING THE NECESSARY SIZE STORM BOXES TO HANDLE THE SIZE OF THE PROPOSED STORM PIPES.
- ALL PROPOSED REINFORCED CONCRETE AND PVC STORM PIPE JOINTS, IN ADDITION TO THE REQUIRED RUBBER GASKETS, SHALL BE WRAPPED WITH AN APPROVED GEO-TEXTILE MATERIAL OF SUFFICIENT WIDTH TO BE SECURED TO THE PIPE AND COMPLETELY ENIRCLE THE JOINT WITH A FIFTY PERCENT (50%) OVERLAP.
- THE MAXIMUM GRADE WITHIN THE PROPOSED HANDICAP SPACES AND ACCESS SPACES IS 2%.
- ALL CROSS SLOPES ON THE PROPOSED SIDEWALKS SHALL BE 2% OR LESS UNLESS OTHERWISE NOTED.
- THE MAXIMUM SLOPE ON ANY PROPOSED HANDICAP RAMP SHALL NOT EXCEED 12:1. HANDICAP RAMPS MUST COMPLY WITH THE MOST RECENT STATE AND FEDERAL ADA REGULATIONS.
- ALL PROPOSED STORM PIPES SHALL BE REINFORCED CONCRETE PIPE, HDPE PIPE OR PVC SDR 26 WITH RUBBER GASKETED JOINTS (CONFORMING TO ASTM 3034 FOR PIPES 15" AND SMALLER) AS SPECIFIED ON THE PLANS.
- SUBSURFACE DRAINAGE SHALL BE PLACED ALONG ALL GUTTER LINES AND PAVEMENT INVERTS AS WARRANTED BY PROOF ROLLING AND SITE CONDITIONS.
- THE CONTRACTOR SHALL BE PREPARED TO ADD SUBSURFACE DRAINAGE AND DEWATER ANY AREAS WITHIN OR PERTAINING TO THE PROJECT AS REQUIRED BY SITE CONDITIONS. ALL SUCH COSTS ASSOCIATED WITH SAID SUBSURFACE DRAINAGE AND/OR DEWATERING SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL KEEP THE PROJECT SITE GRADED IN A WAY THAT PROVIDES POSITIVE DRAINAGE AT ALL TIMES. THE CONTRACTOR SHALL USE ANY TEMPORARY DRAINAGE PIPES, SWALES, DITCHES, ETC. AS NEEDED TO PROVIDE POSITIVE DRAINAGE.
- POSITIVE DRAINAGE MUST BE PROVIDED ON THE SITE AT ALL TIMES DURING CONSTRUCTION. ALL EXCAVATION SHALL BE PERFORMED SO THAT THE SITE AND THE AREA IMMEDIATELY SURROUNDING THE SITE WHICH EFFECTS THE OPERATIONS WILL BE CONTINUALLY AND EFFECTIVELY DRAINED. SURFACE WATER, GROUNDWATER, OR ANY PERCHED WATER WHICH MIGHT BE ENCOUNTERED DURING EXCAVATIONS SHALL BE DEWATERED BY THE CONTRACTOR BY ANY ACCEPTABLE MEANS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT (IF AVAILABLE) FOR THIS SITE THOROUGHLY AND FOLLOW ALL RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- ALL STRIPPED TOPSOIL SHALL BE SEPARATED AND STOCKPILED FOR REDISTRIBUTION BY THE CONTRACTOR.
- ALL DISTURBED AREAS NOT TO RECEIVE PAVEMENTS, SIDEWALKS, OR STRUCTURES SHALL BE TOPPED WITH 6 INCHES OF SUITABLE TOPSOIL MATERIAL AND SEEDED WITH PERMANENT GRASS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL TESTING WITH THE TESTING COMPANY CHOSEN BY THE OWNER. ALL TESTING SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
- ALL UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE PROPOSED PARKING AREAS AND REPLACED WITH SUITABLE FILL MATERIAL. BACKFILL AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.

ANDRE D & GWENDOLYN WATERS
 TAX ID S23 000003 000
 P.B. 4, PG. 237
 D.B. 1159, PG. 274

JOSEPH AND DONNA JONES
 TAX ID S23 000005 000
 P.B. 2, PG. 220
 D.B. 1425, PG. 290

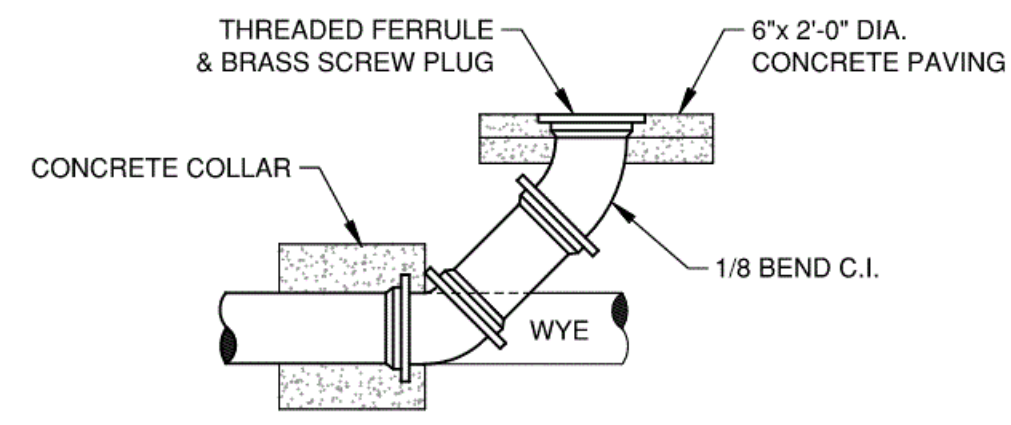
MATTHEW MANCIL
 TAX ID S23 000006 000
 P.B. 2, PG. 220
 D.B. 2594, PG. 493

BULLOCH COUNTY GEORGIA
 TAX ID S23 000001 000
 D.B. 1816, PG. 241

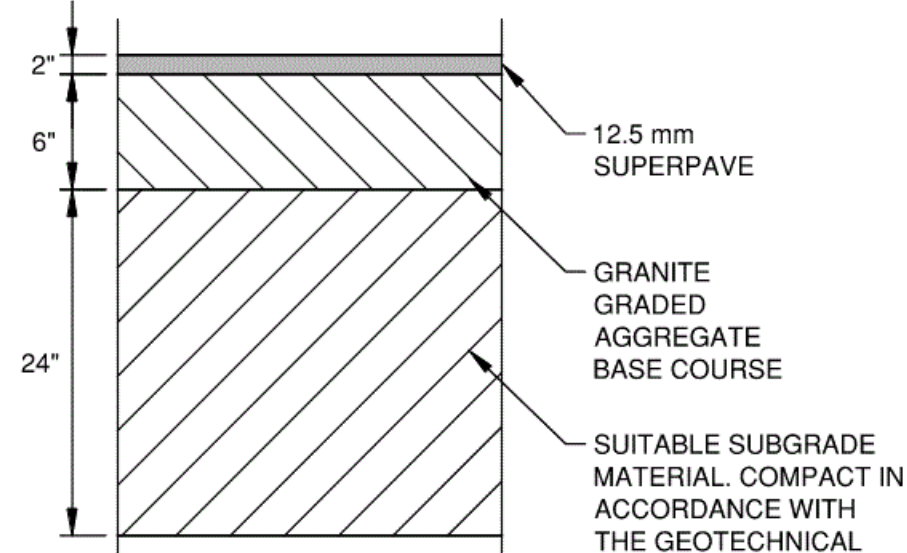


Z:\Maxwell-Reddick & Associates, Inc.\2020-2021\2020-296 Bulloch County - Fletcher Park Parking Lot\Engineering\Design\Drawings\FPARK GRADING_PLOT.DWG DATE: 10/12/2021 11:18 AM

JLF RD - 60' R/W

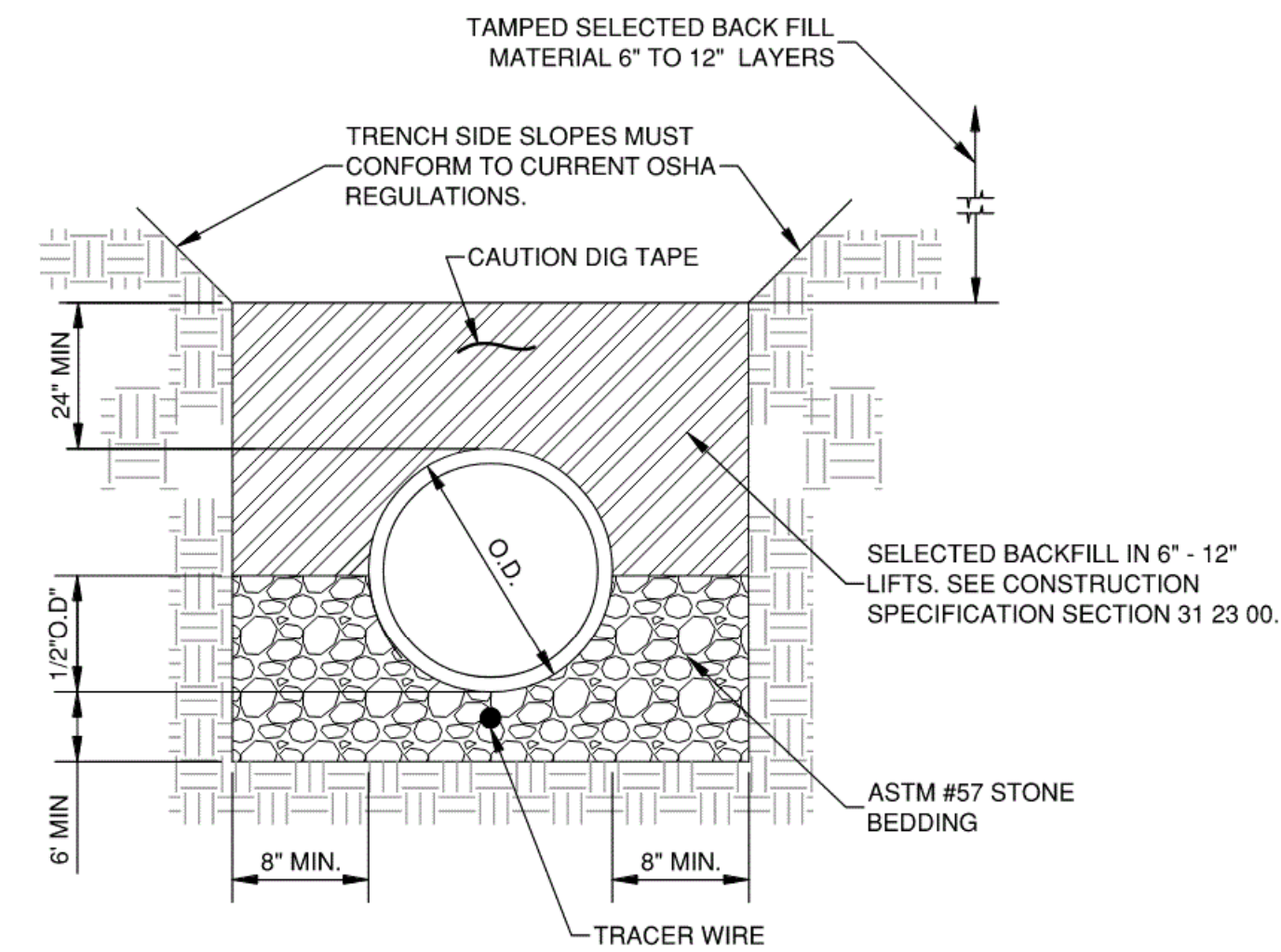


CLEANOUT
NOT TO SCALE

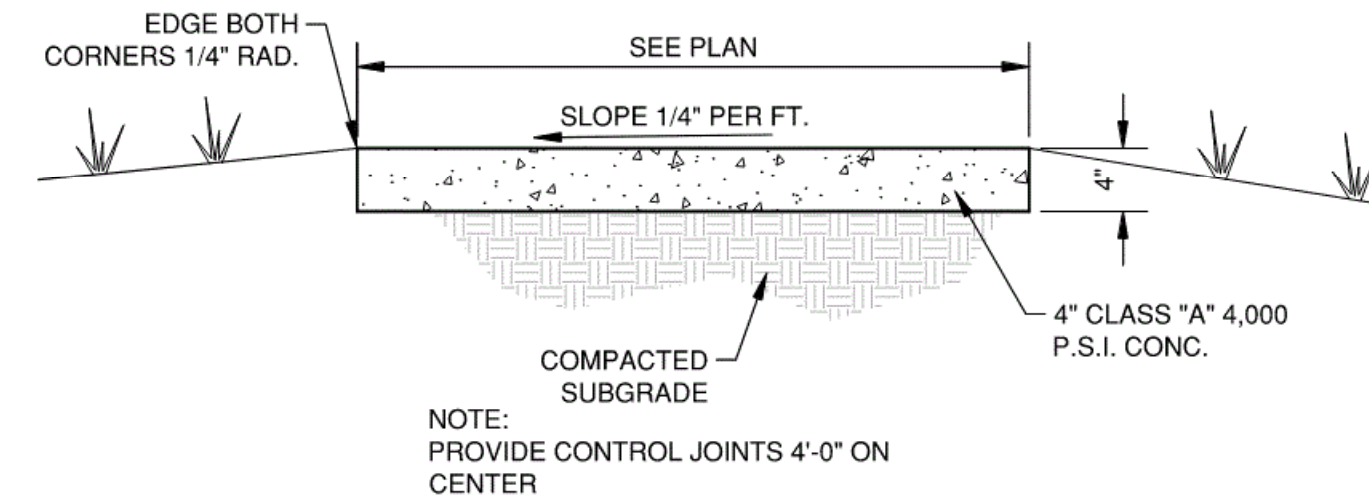


- NOTES:**
- BITUMINOUS PRIME AND TACK COATS WILL BE APPLIED AS LISTED BELOW:
 - PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLON PER SQUARE YARD TO THE SURFACE OF ALL GRANITE BASE COURSES.
 - TACK COAT SHALL BE APPLIED AT A RATE OF 0.1 GALLONS PER SQUARE YARD TO THE SURFACE OF THE BINDER COURSE BEFORE PLACEMENT OF SURFACE COURSE.
 - THIS PAVEMENT SECTION HAS BEEN PREPARED WITHOUT THE BENEFIT OF GEOTECHNICAL REPORT AND IS BASED ON THE CITY OF STATESBORO STANDARD. IT IS RECOMMENDED THAT THE OWNER AND CONTRACTOR OBTAIN THE SERVICES OF A GEOTECHNICAL ENGINEER REGISTERED IN GEORGIA TO DESIGN A PAVEMENT SECTION BASED ON GEOTECHNICAL ANALYSIS.
 - THIS PAVEMENT SECTION SHALL BE UTILIZED ON ALL DESIGNATED AREAS FOR ASPHALT PAVEMENT SHOWN ON THE PLANS.

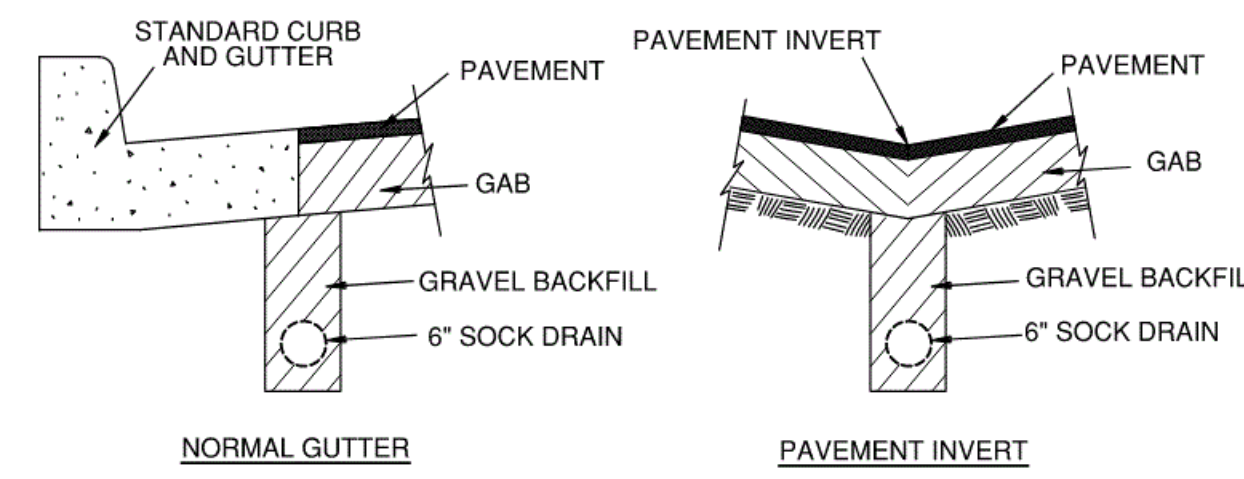
ASPHALT PAVEMENT SECTION
NOT TO SCALE



TYPICAL SEWER LINE BEDDING
NOT TO SCALE

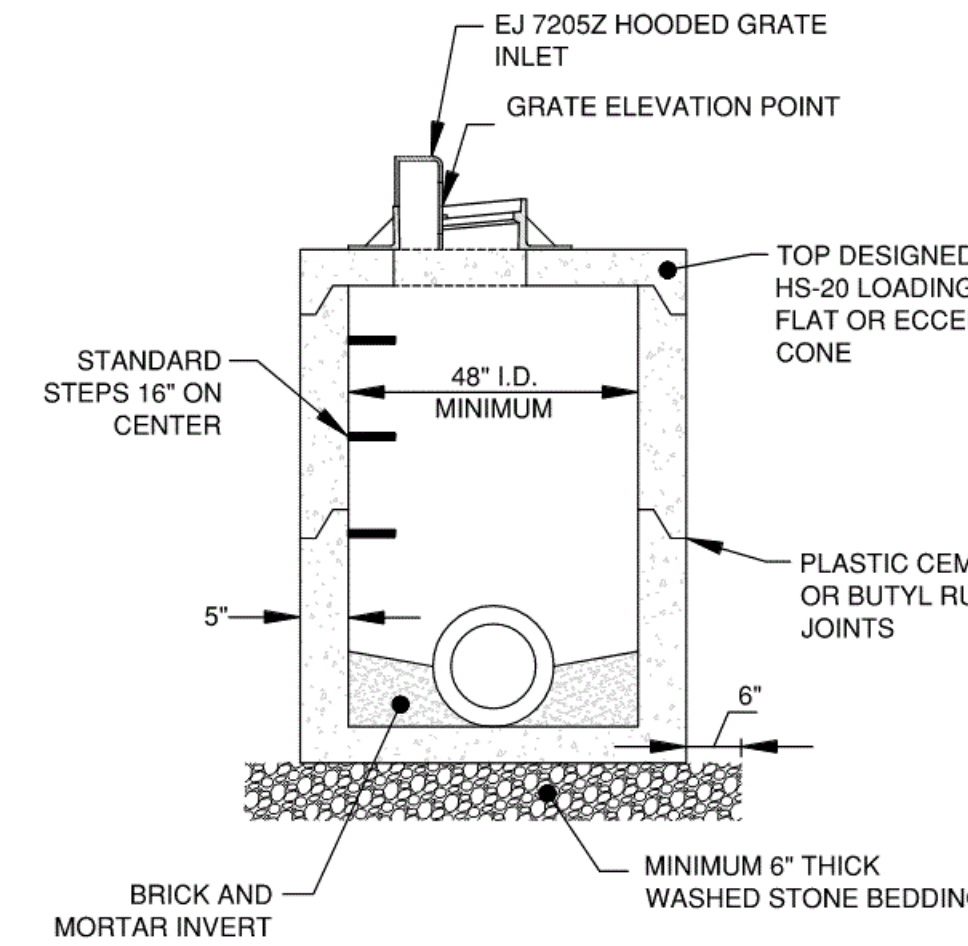


STANDARD CONCRETE SIDEWALK
NOT TO SCALE

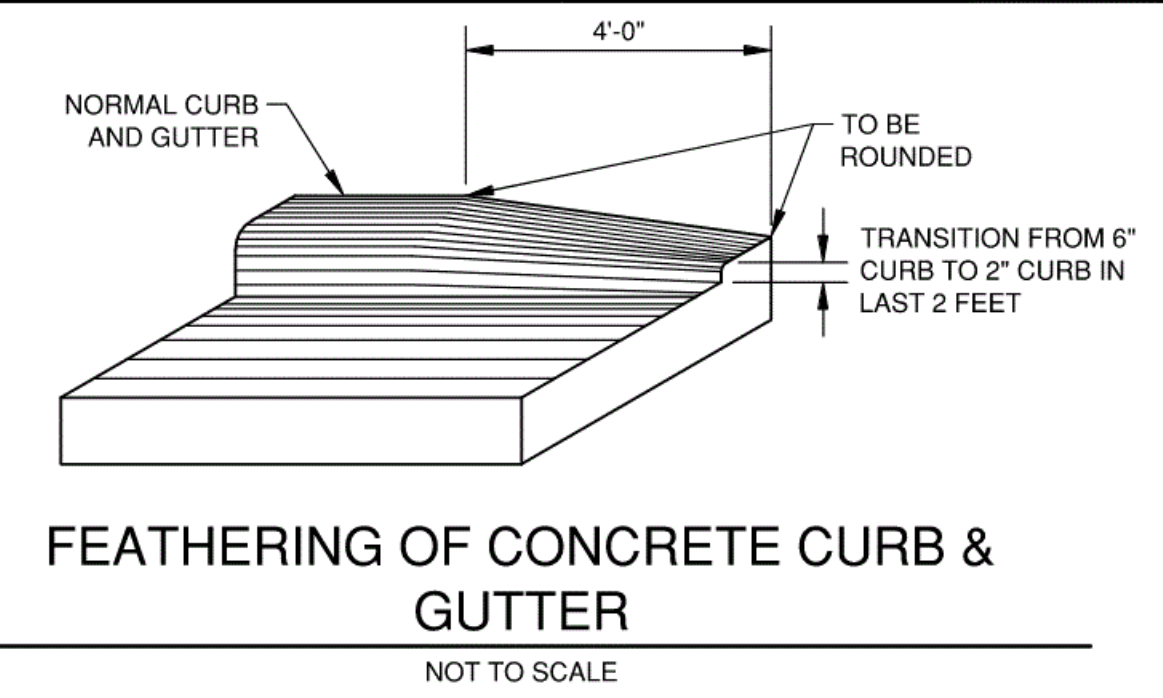


- NOTES:**
- SOCK DRAIN OR EQUIVALENT SUBSURFACE DRAIN SHALL BE PLACED ALONG ALL GUTTER LINES AND PAVEMENT INVERTS AS WARRANTED BY PROOF ROLLING, SITE CONDITIONS, AND/OR THE RECOMMENDATION OF THE CIVIL AND/OR GEOTECHNICAL ENGINEER.
 - SAID SOCK DRAINS OR SUBSURFACE DRAINS SHALL BE BEDDED IN AND BACKFILLED WITH GRAVEL.
 - SAID SOCK DRAINS OR SUBSURFACE DRAINS SHALL OUTFALL TO THE NEAREST DITCH, SWALE, WETLANDS AREA OR STORM BOX; HOWEVER, THE OUTFALL INVERT OF SAID SOCK DRAINS OR SUBSURFACE DRAINS MUST BE ABOVE THE PERMANENT WATER LEVEL OF THE RECEIVING STRUCTURE.

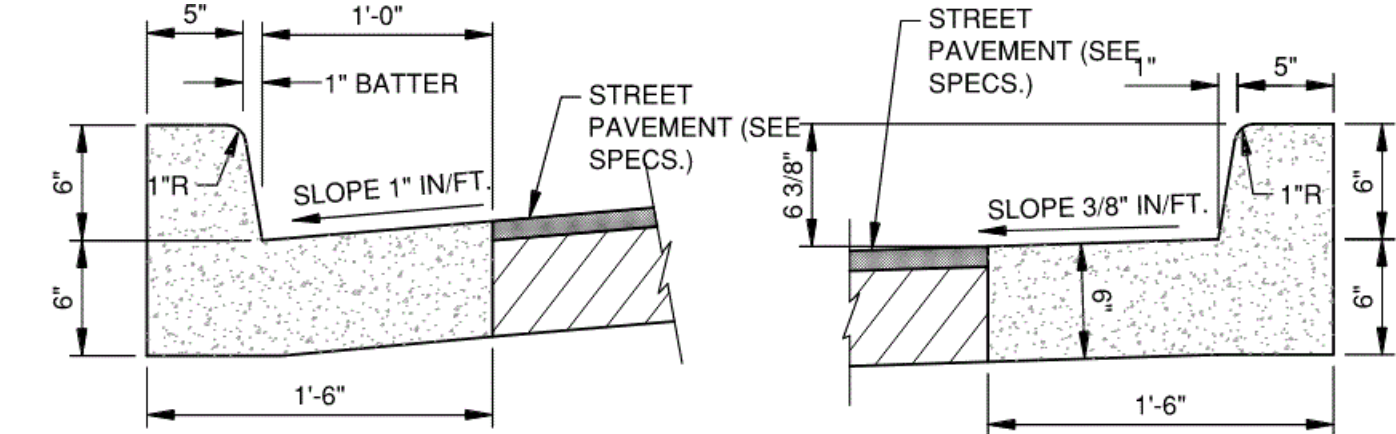
TYPICAL SUBSURFACE DRAINAGE
NTS



HOODED GRATE INLET
NOT TO SCALE



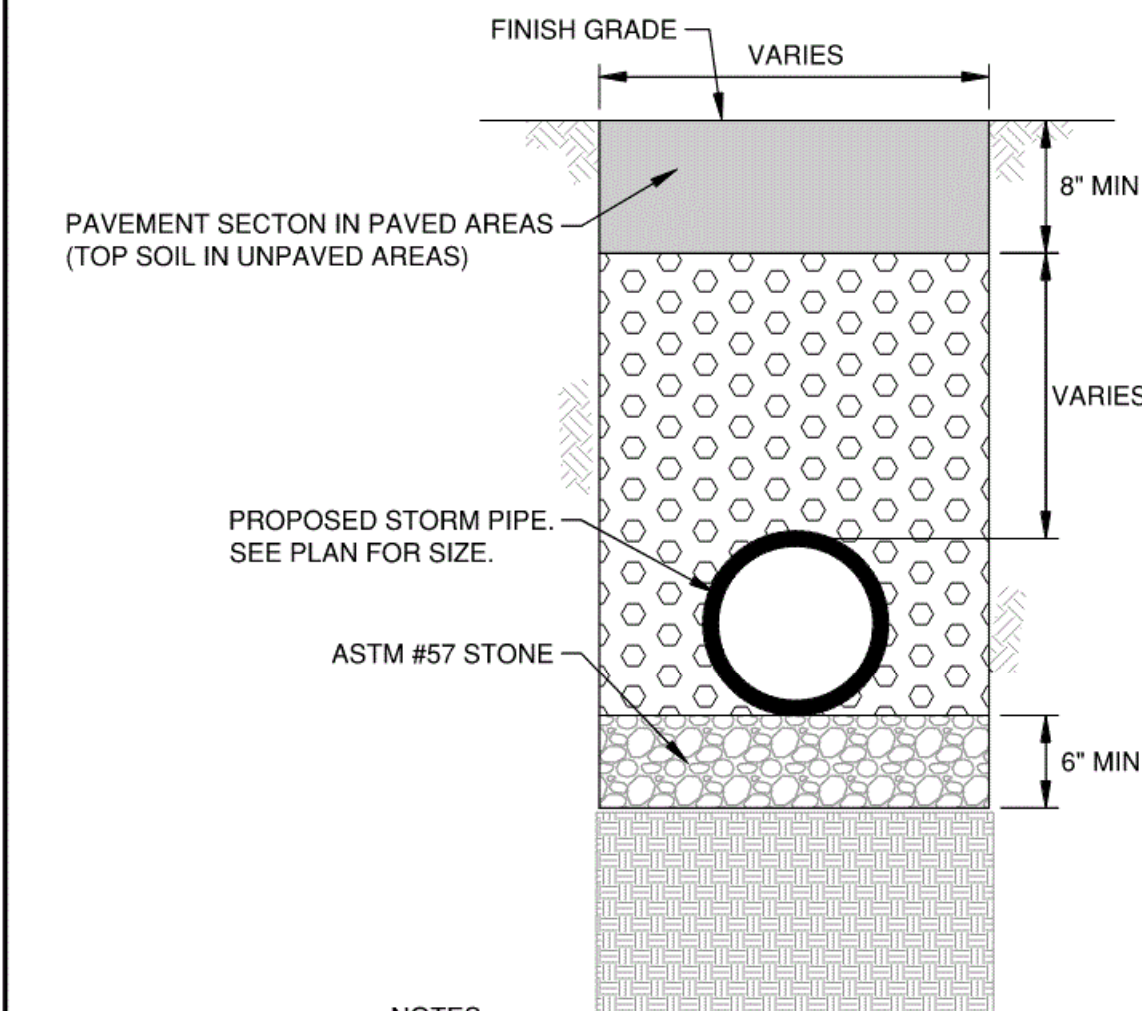
FEATHERING OF CONCRETE CURB & GUTTER
NOT TO SCALE



NORMAL GUTTER SUBGRADE COMPACTION FOR CURB AND GUTTER IS 97% (ASTM D-698) **PITCHED GUTTER**

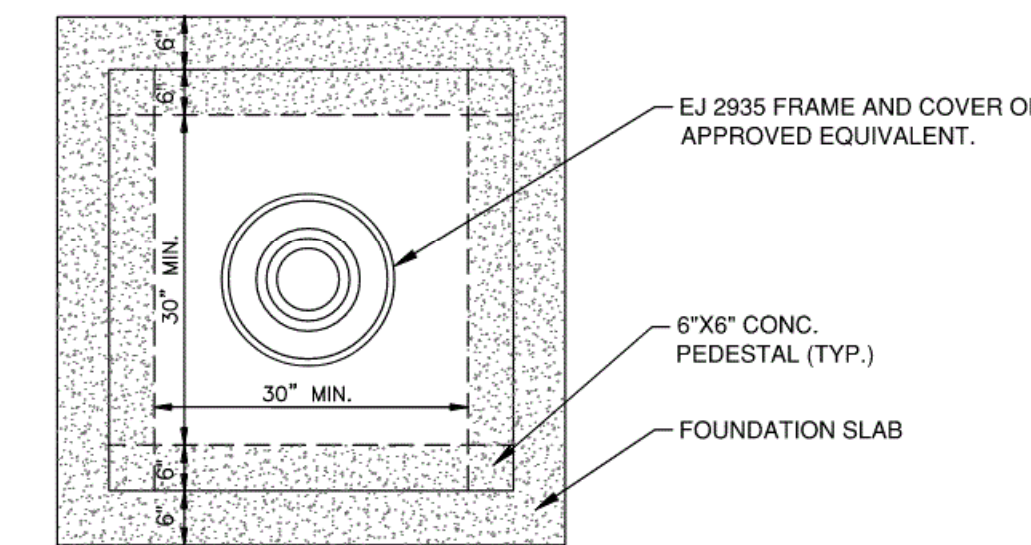
- NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHICH SECTIONS OF GUTTER SHOULD PITCH AND CATCH.

18" CURB AND GUTTER
NOT TO SCALE

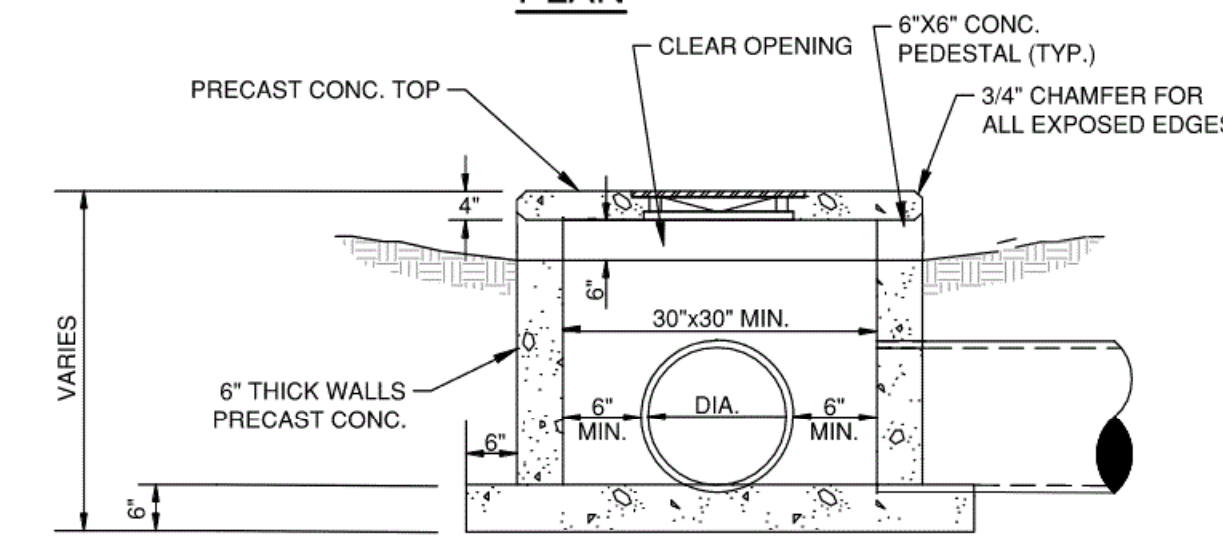


- NOTES:**
- TRENCH WIDTH AND DEPTH WILL VARY BASED ON THE PIPE SIZE AND ELEVATION AS SHOWN ON THE PLANS.
 - COMPACT BEDDING AND BACKFILL IN ACCORDANCE WITH SPECIFICATIONS.

TYPICAL STORM PIPE BEDDING AND BACKFILL
NOT TO SCALE



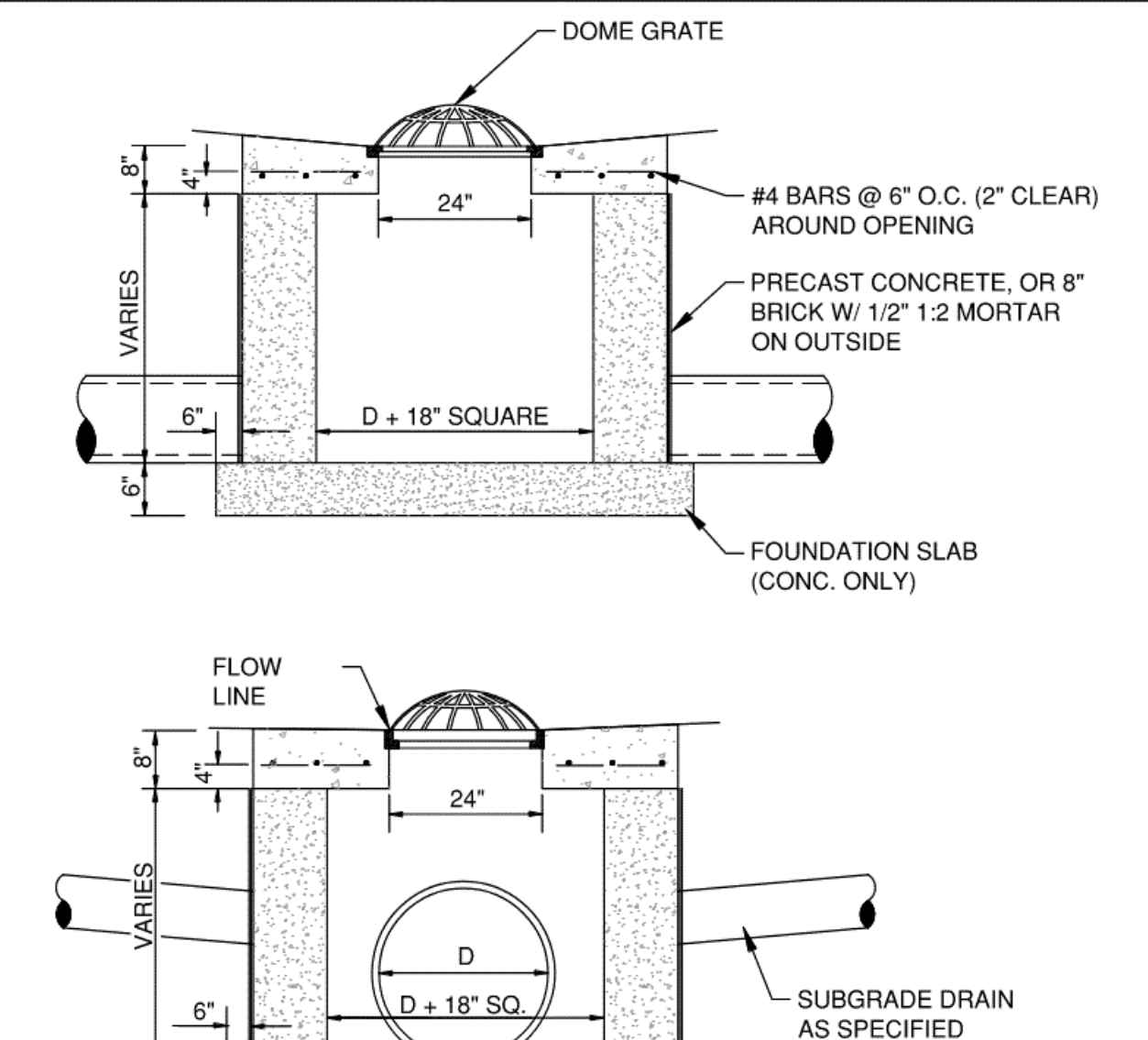
PLAN



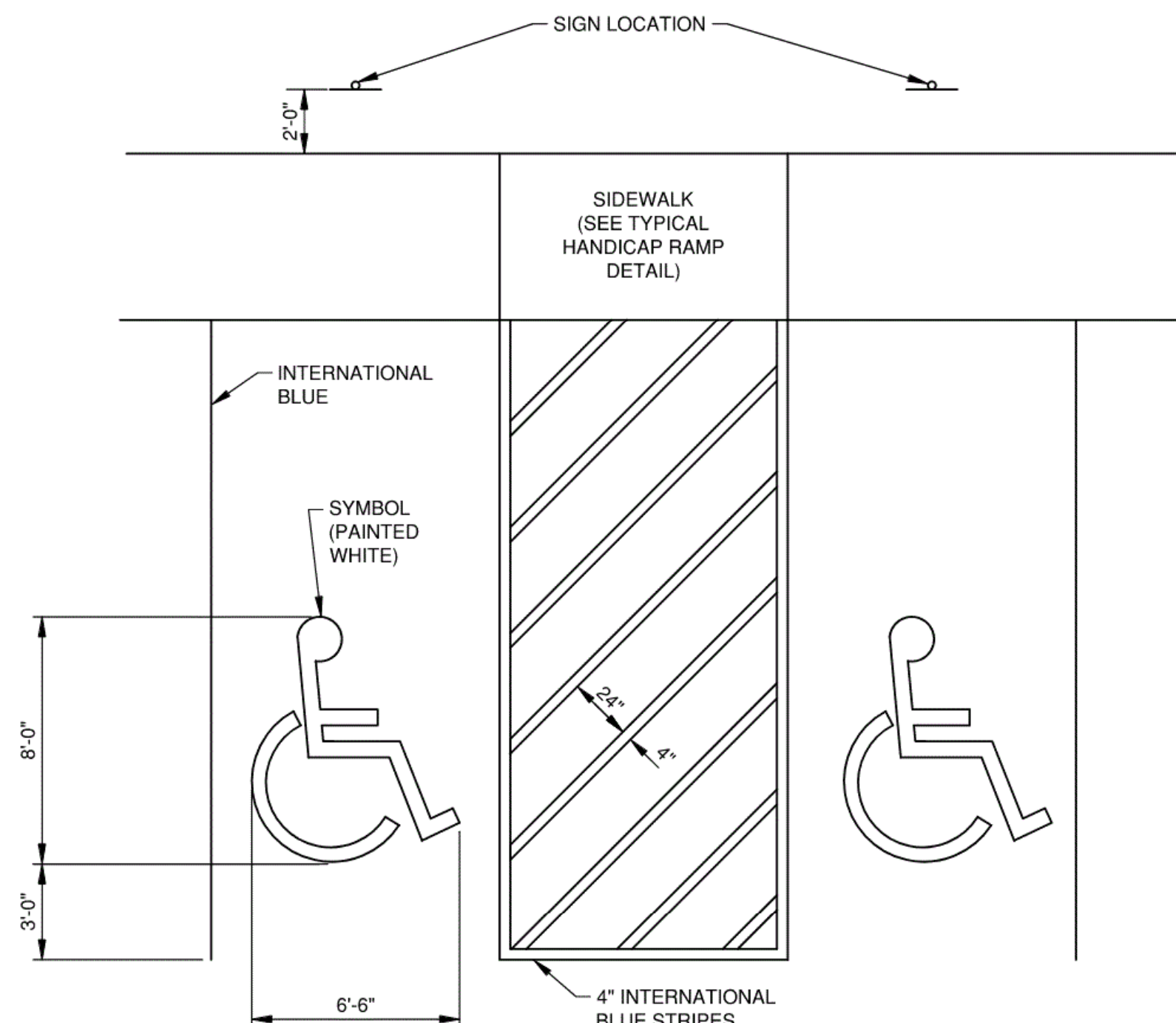
SECTION

- NOTE:**
- CONTRACTOR TO GRADE SUMP AROUND ALL YARD INLETS TO PROMOTE POSITIVE DRAINAGE.

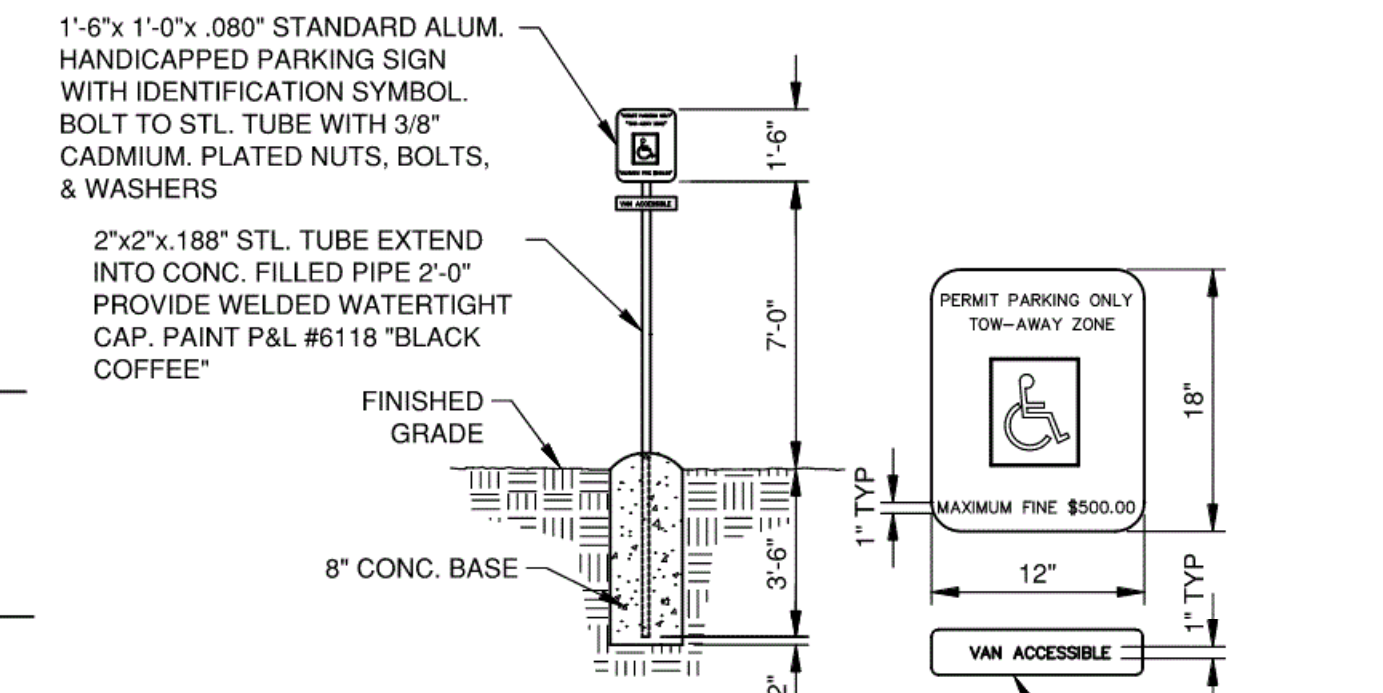
PEDESTAL INLET
NOT TO SCALE



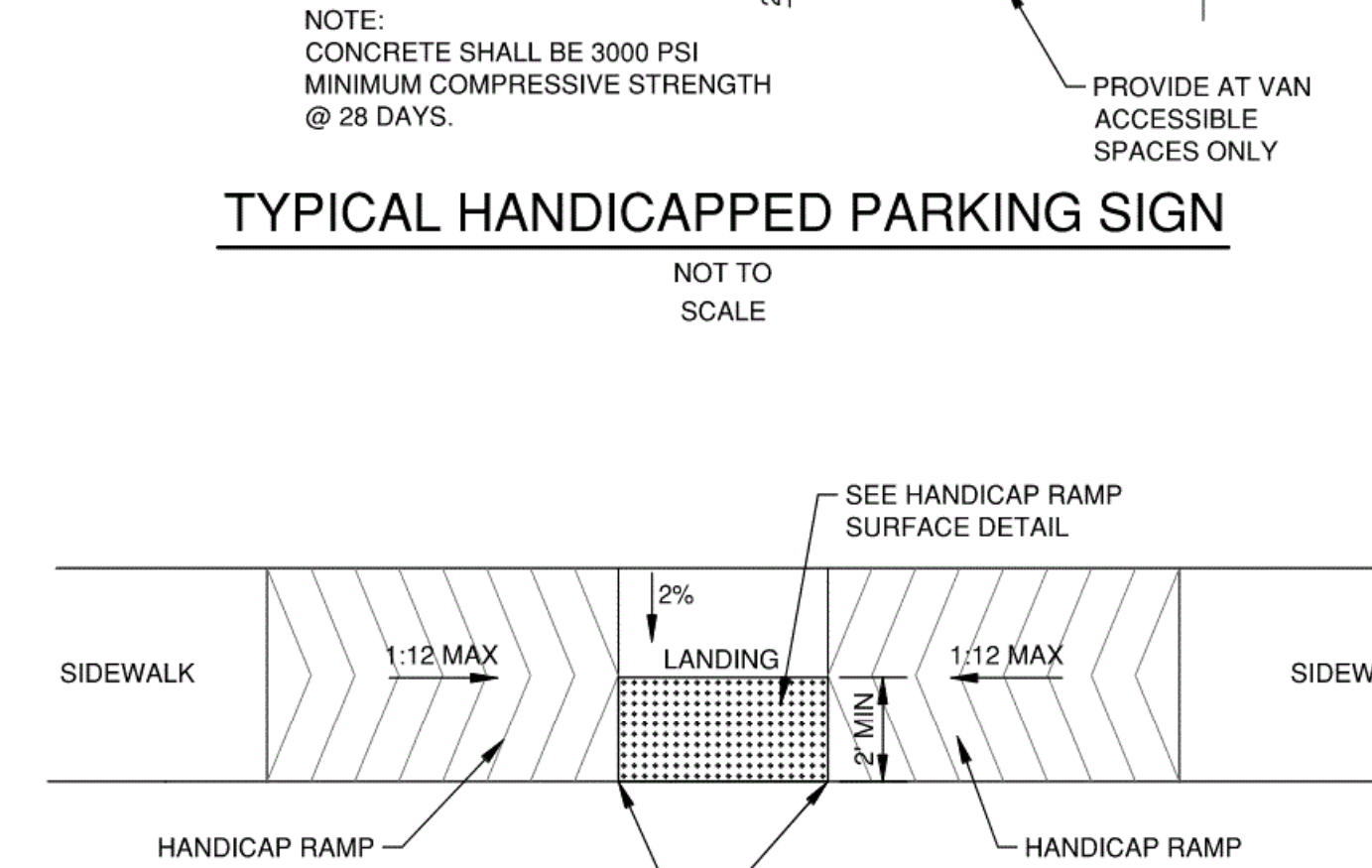
DOMES GRATE
NOT TO SCALE



PAINTED HANDICAP SYMBOL - 9.5' SPACES
NOT TO SCALE



TYPICAL HANDICAPPED PARKING SIGN
NOT TO SCALE



TYPICAL HANDICAPPED RAMP
NOT TO SCALE



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REVISIONS:
10.01.21: REVISIONS TO TREE PLAN

FLETCHER PARK PARKING LOT
707 LAKEVIEW DRIVE
STATESBORO, GA
STANDARD DETAILS - 1

DESIGNED: TAL
DRAWN: TAL
CHECKED: DLH
DATE: APR. 12, 2021
JOB NO.: 2020-296
SCALE: AS SHOWN

DRAWING NUMBER
C6.0
SHEET NUMBER 16

Z:\Maxwell-Reddick & Associates, Inc.\Projects\2020-2021\2020-296 Fletcher Park Parking Lot\Engineering\Design\Drawings\FPARK DETAILS.PLOT DATE: 10/11/2021 11:18 AM