SITE DEVELOPMENT PLANS

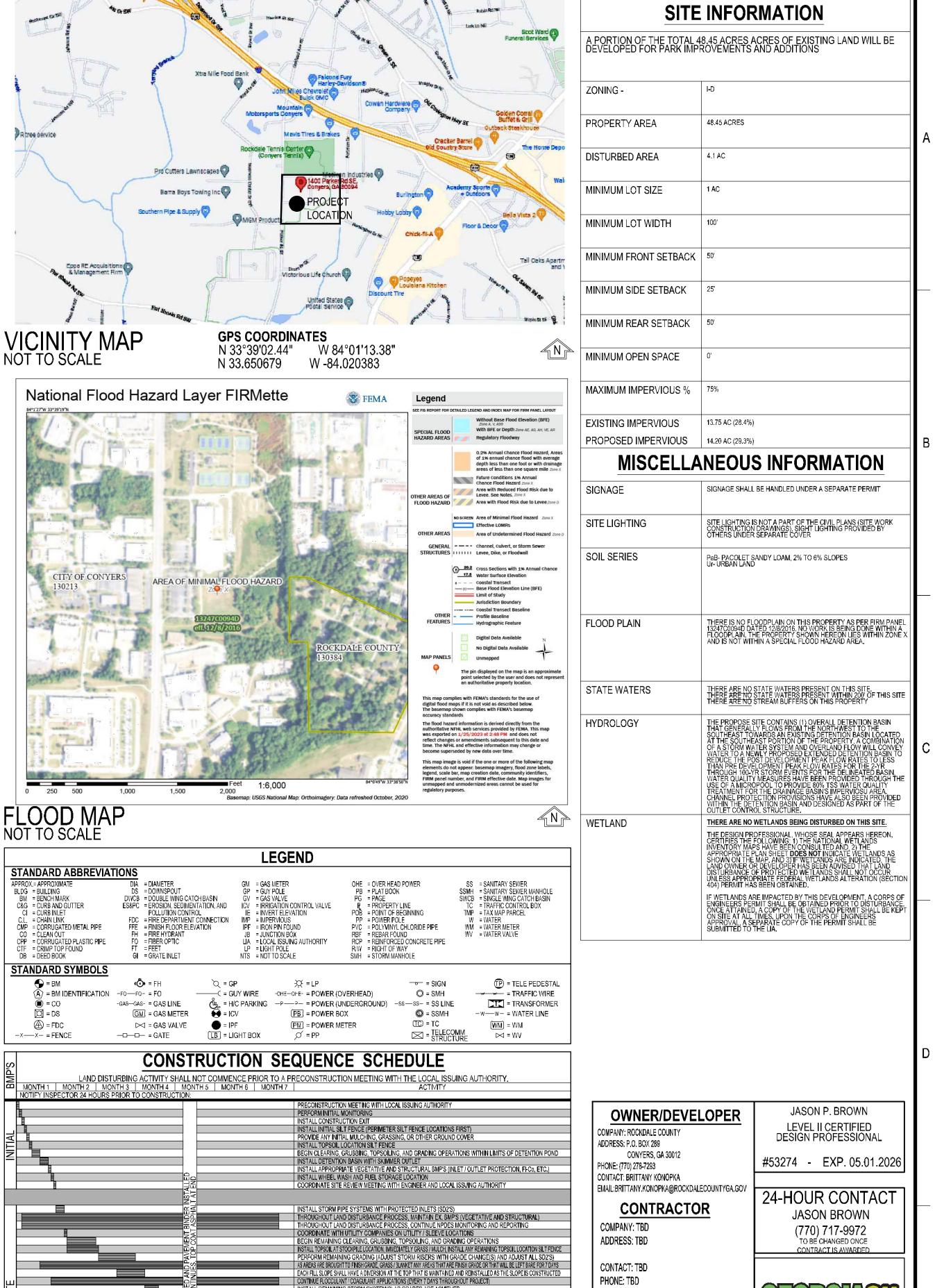
WHEELER PARK ADDITIONS

1400 SE PARKER RD CONYERS, GA 30094 ZONING - I-D'

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SITE DETAILS



INSTALL REMAINING STORM SYSTEM(S) AS GRADES ARE ACHIEVED
IMMEDIATELY INSTALL EACH STORM STRUCTURE WITH ASSOCIATED SD2'S AND ADD FLOC LOGS TO EACH STORM STRUCTURE

INSTALL SIDEWALK
FINISH GRADE SHOULDERS AND STABILIZE DISTURBED AREAS WITH PERMANENT VEGETATION
CONTINUE TO APPLY FLOCCULENT/COAGULANT APPLICATIONS, MULCHING, AND GRASSING AT EACH STEP TO LIMIT SOIL EXPOSURE

THROUGHOUT LAND DISTURBANCE PROCESS, MAINTAIN EX. BMP'S (VEGETATIVE AND STRUCTURAL)
THROUGHOUT LAND DISTURBANCE PROCESS, CONTINUE NPDES MONITORING AND REPORTING

COORDINATE SITE REVIEW MEETING WITH ENGINEER AND/OR LOCAL ISSUING AUTHORITY INSPECTOR CLEAN SILT FROM ALL STORM SYSTEMS (DISTRIBUTE ON SITE AND STABILIZE)

REMOVE ANY TEMPORARY BMP PRACTICES ONCE SITE STABILIZATION IS ACHIEVED AND SIGNED OFF BY ENGINEER

COORDINATE SITE REVIEW MEETING WITH ENGINEER FOR FINAL SITE APPROVAL

GRASS / MULCH / FICO DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S INSTALL SANITARY SEWER MAINS AND SERVICES

GRASS / MULCH / FI-CO DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
INSTALL WATER SYSTEM
GRASS / MULCH / FI-CO DISTURBED AREAS AND INSTALL ASSOCIATED INTERMEDIATE BMP'S
INSTALL REMAINING UTILITIES (POWER, PHONE, CABLE, GAS, ETC.) WITH APPROPRIATE BMP'S
INSTALL GAB THROUGHOUT PARKING AREA UP TO DESIGNATED LINE
INSTALL REMAINING GAB
INSTALL SDEJMALY

PHONE: TBD

EMAIL: TBD

SURVEYOR

COMPANY: PATRICK & ASSOCIATE

ADDRESS: 928 BLACKLAWN RD SW,

SITE DESIGNER

CONYERS, GA 30094 PHONE: 770-483-9745

CONTACT: JAMES S. HULL

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COMPANY: GEORGIA CIVIL, INC.

ADDRESS: P.O. BOX 896

MADISON, GA 30650 PHONE: 706.342.1104 georgia civil

CIVIL ENGINEERING LANDSCAPE ARCHITECTURE LAND SURVEYING

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ARK WHEE

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COVER SHEET

Contact 811 before you dig

Utilities Services shown are for Contractors' convenience. Items are shown schematically and neither the site design professional

actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to

secure and use the services of a private utility locator firm during the entire course of work and shall pay for said services.

Contractor shall locate utilities prior to any disturbance (including field verifying location and depth of utilities that are to be saved

and protected). Contractor shall notify the site design professional of any utility conflicts prior to installation of new utilities, grading etc. The Contractor, at their expense, shall be responsible to

damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

- NOTIFY ROCKDALE COUNTY INSPECTION 24 HRS BEFORE BEGINNING OF CONSTRUCTION.
- CONTRACTOR SHALL THOROUGHLY REVIEW CONSTRUCTION PLANS AND BE FAMILIAR WITH EXISTING CONDITIONS BY SITE VISITATION, PRIOR TO FORMULATING BID
- CONTRACTOR SHALL VERIFY CONDITIONS AND DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCY FOUND IN THIS SET SHALL BE REFERRED TO THE SITE DESIGN PROFESSIONAL BY THE CONTRACTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR DISCREPANCIES WHICH ARE NOT
- CONSTRUCTION SHALL MEET OR EXCEED ROCKDALE COUNTY MINIMUM STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL ADHERE TO NORMAL WORKING HOURS AS PER ROCKDALE COUNTY ORDINANCES. CONSTRUCTION OUTSIDE OF NORMAL WORKING HOURS, MAY BE ALLOWED UPON PRIOR
- THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL ADHERE TO FEDERAL, STATE, COUNTY AND LOCAL LAWS, ORDINANCES, AND REGULATIONS WHICH IN ANY MANNER AFFECT THE CONDUCT OF WORK, INCLUDING, BUT NOT LIMITED TO, INITIATING, MAINTAINING, AND SUPERVISING SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK (I.E. THE REQUIREMENTS OF APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)). CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB. SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. INCI LIDING SAFFTY OF PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD ROCKDALE COUNTY, AND ITS AGENTS, THE OWNER AND THE SITE DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN THE CONNECTION WITH THE
- THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS
- DO NOT BREAK THESE DOCUMENTS INTO PARTS AND SUB-PARTS. THE SITE DESIGN PROFESSIONAL AND OWNER ASSUMES NO RESPONSIBILITY FOR THE SEPARATION OF THESE DOCUMENTS BY ANY ENTITY OF THE CONTRACTING INDUSTRY. EACH CONTRACTING ENTITY SHALL BE RESPONSIBLE FOR ALL OF THE WORK RELATED TO THEIR TRADES WHEREVER IT MAY BE SHOWN
- NO WORK SHALL BE PERFORMED WITHIN GEORGIA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY (IF APPLICABLE) UNTIL PERMIT(S) (INCLUDING GEORGIA DEPARTMENT OF
- BARRICADES, SUFFICIENT LIGHTS, TRAFFIC SAFETY SIGNS, AND OTHER TRAFFIC CONTROL MEASURES AS DEEMED NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC SHALL BE
- SIGNS (LOCATION, NUMBER, AND SIZE) ARE NOT APPROVED UNDER THIS DEVELOPMENT PERMIT. A SEPARATE PERMIT IS REQUIRED FOR EACH SIGN.

TRANSPORTATION UTILITY ENCROACHMENT PERMIT) ARE OBTAINED FROM GEORGIA DEPARTMENT OF TRANSPORTATION AND ON SITE

- NO CERTIFICATE OF OCCUPANCY SHALL BE ISSUED UNTIL SITE IMPROVEMENTS ARE COMPLETE
- 14. ACCESS TO BUILDINGS DURING CONSTRUCTION SHALL BE MAINTAINED AND OPEN TO EMERGENCY VEHICLES AT ALL TIMES, THROUGH THE USE OF EXISTING OR TEMPORARY ROADS, DRIVES,
- 15. SITE LIGHTING SHALL BE FULLY SHIELDED. SITE LIGHTING IS TO BE DESIGNED BY OTHERS.
- 16. ALL WORK SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR QUANTITY TAKE OFFS AND ESTIMATING ALL QUANTITIES FOUND WITHIN THE SITE WORK CONSTRUCTION DRAWINGS. ANY QUANTITY TAKE OFFS OR ESTIMATES PROVIDED BY THE SITE DESIGN PROFESSIONAL ON THESE DOCUMENTS OR OTHERWISE SHALL BE VERIFIED BY THE CONTRACTOR BY PERFORMING HIS/HER OWN QUANTITY TAKE OFF AND/OR ESTIMATE. ANY COST FOR ANY DISCREPANCY IN QUANTITY TAKE OFF OR ESTIMATE PROVIDED BY SITE DESIGN PROFESSIONAL AND REQUIRED CONSTRUCTION QUANTITIES SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE SITE DESIGN PROFESSIONAL AND/OR OWNER AND/OR OWNER'S REPRESENTATIVE.

DEMOLITION REQUIREMENTS:

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

STAKING REQUIREMENTS:

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

ALL CONTROL SHALL BE VERIFIED BEFORE PROCEEDING, SURVEYOR SHALL VERIFY INVERTS AT ALL GRAVITY STORM AND SEWER TIE IN POINTS BEFORE PROCEEDING, SURVEYOR SHALL VERIFY TIE POINT ELEVATIONS AT ALL ACCESS POINTS BEFORE PROCEEDING. **CLEAR AND GRUB REQUIREMENTS**

- THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED, THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVED THROUGH OUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITEC THIS INCLUDES NOT PARKING ANY EQUIPMENT OR HAVING ANY STORAGE AREAS WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT.
- ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
- THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN. ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.

USED TO ACHIEVE THE REQUIRED COMPACTION. PAVEMENT SHALL BE REPLACED IMMEDIATELY AFTER THE BACKFILLING IS COMPLETED.

COMPACTION FOR UTILITY INSTALLATION:

ANALYTICAL COMPACTION RESULTS SHALL BE SUBMITTED TO ROCKDALE COUNTY ENGINEERING DEPARTMENT (OR SIMILAR DEPARTMENT). THE FOLLOWING APPLIES TO STORMWATER,

- BACKFILL UNDER PERMANENT CONCRETE OR BITUMINOUS PAVEMENT, AND AS ELSEWHERE SPECIFIED OR INDICATED ON THE PLANS. SHALL BE APPROVED BANK-RUN SAND OR GRAVEL OR CRUSHED STONE FREE FROM LARGE STONES AND CONTAINING NOT MORE THAN TEN PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL BE COMPACTED TO ONE HUNDRED PERCENT (100%) AS DETERMINED BY THE MODIFIED PROCTOR TEST FROM PIPE BEDDING TO TWO (2) FEET BELOW TRENCH TOP. MECHANICAL VIBRATING EQUIPMENT SHALL BE
- BACKFILL UNDER GRAVEL OR CRUSHED STONE SURFACED ROADWAYS SHALL BE THE APPROVED SUITABLE EXCAVATED MATERIAL PLACED IN SIX (6) INCH LAYERS THOROUGHLY COMPACTED FOR THE FULL DEPTH AND WIDTH OF THE TRENCH, CONFORMING TO THE COMPACTION, DENSITY COMPACTION METHOD AND MATERIALS AS SPECIFIED IN "2" ABOVE.
- BACKFILL IN UNPAYED AREAS SHALL BE COMPACTED WITH MECHANICAL VIBRATING EQUIPMENT TO NINETY PERCENT (90%) AS DETERMINED BY THE MODIFIED PROCTOR TEST. BACKFILL MATERIAL FROM PIPE BEDDING TO GROUND SURFACE SHALL BE EXCAVATED FREE FROM LARGE STONES & OTHER DEBRIS.

GRADING / EARTHWORK REQUIREMENTS:

- PRIOR TO STARTING ANY CUTS OR FILLS, THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRUB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED WITH THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, BORING LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO
- UNLESS OTHERWISE NOTED, THE GRADES SHOWN ON THE PLANS ARE FINISHED GRADES. THEREFORE, PAVEMENT, FLOORS, SUBBASE AND OTHER IMPROVEMENTS MUST BE SUBTRACTED TO CALCULATE SUBGRADE ELEVATIONS. THE CONTRACTOR SHALL COORDINATE THE STAKING OF THE SITE GRADING WITH THE SURVEYOR AND ENGINEER OF RECORD BEFORE PROCEEDING WITH CONSTRUCTION
- THE CONTRACTOR SHALL MAINTAIN A SURVEY GRID OF NOT LESS THAN 100' X 100' OR OTHER MEANS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE THAT SHALL INDICATE LOCATION AND AMOUNT OF CUT OR FILLS REMAINING. AT SUBGRADE THIS GRID SHALL BE 50' X 50' WITH LOCATION AND FINAL GRADE MARKED CLEARLY OR SURVEY SHALL BE COMPLETED DEMONSTRATING THAT THE SUBGRADE IS
- UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTION TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. FOR EACH LIFT PLACED, COMPACTION TESTING SHALL BE DONE EVERY 2000 SQUARE FEET. IN TRENCHES, COMPACTION TESTING SHALL BE DONE EVERY OTHER LIFT WITH AT LEAST 1 TEST FOR EVERY 100 LINEAR FEET.
- COMPACTION REQUIREMENTS SHALL BE THOSE QUILINED IN THE GEOTECHNICAL EVALUATION. IF THE GEOTECHNICAL EVALUATION IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING SHALL BE USED. UNDER AND TO 20 FEET OUTSIDE THE BUILDING ENVELOPE THE SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE ASTM D 2922
- UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT OR ON THE DRAWINGS, THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE FREE OF ORGANICS, FROZEN MATERIALS, CONTAMINATED MATERIALS, DEBRIS AND ANY ROCKS LARGER THAN 4 INCHES, FOR FILL PLACEMENT WITHIN 1 FOOT OF SUBGRADE, NO ROCK SHALL BE GREATER THAN 2 INCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH DRYING, SEGREGATING OR OTHER REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER
- FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES IN ALL AREAS.

MAINTAINED (UNLESS OTHERWISE NOTED).

- IF IMPORTED MATERIAL IS REQUIRED, THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. THE TESTING LABORATORY SHALL TEST FOR PERCENT PASSING THE 200 SIEVE THAT DOES NOT EXCEED THE EXISTING ON SITE MATERIAL OR IN NO CASE GREATER THAN 35%. THEY SHALL ALSO VERIFY CONSISTENCY WITH EXISTING ON SITE MATERIALS AND ALL OTHER REQUIREMENTS, WAIVERS TO THESE REQUIREMENTS CAN ONLY BE GIVEN JOINTLY BY OWNER AND THE GEOTECHNICAL ENGINEER THAT PREPARED THE CENTRAL BLOOK FOR THE SECONT.
- THE TESTING LAB MAY RESTRICT SOME ON SITE MATERIALS FROM BEING USED AS FILL IN BUILDING OR PAVEMENT AREAS WHEN IT IS THEIR OPINION THAT THE MATERIAL WILL NOT MEET REQUIREMENTS STATED HERE OR IN THE GEOTECHNICAL REPORT. IF SUCH CONDITIONS DO EXIST AND OTHER MATERIAL IS NOT AVAILABLE ON SITE, THE OWNER'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE USE OF IMPORT MATERIAL UNLESS THERE WILL BE NO ADDITION COST TO THE CONTRACT.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS FROM WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE, DIVERTING DRAINAGE, DEWATERING AND SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCLEMENT WEATHER.

11. PRIOR PLACEMENT OF FILLS, IN AREAS WHERE THE FINAL DEPTH WILL BE LESS THAN 4 FEET, THE AREA SHALL BE PROOF ROLLED WITH A 10 TON ROLLER OR A LOADED 10 WHEEL DUMP TRUCK, SOFT

- AREAS SHALL BE SCARIFIED, DRIED AND RE-COMPACTED PRIOR TO FILL BEING PLACED. RETEST BY PROOF ROLL AS NECESSARY. 12. ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR THE IDENTIFICATION OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE TO THE GEOTECHNICAL ENGINEER OR THE GEOTECHNICAL ENGINEER'S TECHNICIAN SHALL BE SCARIFIED. DRIED AND RECOMPACTED. RETEST BY PROOF ROLL AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PROOF ROLLS WITH THE GEOTECHNICAL ENGINEER AND SHALL HAVE THE GEOTECHNICAL ENGINEER OR THE GEOTECHNICAL ENGINEER'S
- TRENCH EXCAVATION REQUIRING SHEETING. SHORING OR OTHER STABLIZING DEVICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET ALL O.S.H.A. REQUIREMENTS. ALL EXCAVATIONS SHALL MAINTAIN SAFE SIDE SLOPES IN ACCORDANCE WITH LOCAL, STATE, AND O.S.H.A. REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE SHALL BE PERMITTED IN
- TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AND STRAIGHT TO WIDTHS DETERMINED BY ROCKDALE COUNTY. IF NO GUIDELINES FROM ROCKDALE COUNTY EXIST, THE FOLLOWING SHALL BE USED: (FOR PIPES 36 INCHES OR LESS THE TRENCH WIDTH SHALL BE THE DIAMETER PLUS 2 FEET), FOR PIPES 36 INCHES OR GREATER THE WIDTH SHALL BE THE DIAMETER PLUS 3 FEET), ADDITIONAL WIDTH SHALL ONLY BE ALLOWED WHEN COMPACTION EQUIPMENT LIMITATIONS REQUIRE AND ONLY AFTER APPROVAL OF THE ENGINEER OF RECORD. NO MORE TRENCH SHALL BE OPEN IN ONE DAY THAN CA BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS, WHEN BACKFILLING AROUND PIPES PROVIDE UNIFORM SUPPORT AT INVERT AND PROPER COMPACTION UNDER, ALONG AND OVER THE PIPE. CARE SHALL BE GIVEN WHILE BACKFILLING AROUND PIPES TO PREVENT DAMAGE TO THE PIPES INCLUDING: PLACING BACKFILLIBEDDING BY HAND, USING HAND OPERATED PLATE TAMPS OR JUMPING JACKS, AND OTHER LOAD RESTRICTIVE TECHNIQUES UNTIL FILLS ARE A MINIMUM OF 2 FEET OR MANUFACTURER'S RECOMMEND DEPTH, WHICH EVER IS GREATER, ABOVE THE TOP OF THE PIPE. COMPACTION REQUIREMENTS ARE NOT RELIEVED IN THESE AREAS AND SHALL REMAIN AS STATED ON THE DRAWINGS OR AS NOTED ABOVE.
- 15. IF ROCK IS ENCOUNTERED THAT WAS NOT INDICATED ON THE PLANS OR GEOTECHNICAL REPORT, THE AREA FOR REMOVAL SHALL BE MEASURED AND REVIEWED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROCK REMOVAL, ROCK WILL BE DEFINED AS THE NATURAL EARTH MATERIALS THAT CAN NOT BE REMOVED WITH A D9 DOZIER WITH A SINGLE TOOTH RIPPER.
- 16. WHERE ROCK IS ADJACENT TO A STRUCTURE OR UTILITY. THE ROCK SHALL BE REMOVED TO A MINIMUM OF 6 INCHES BELOW AND 1 TIMES THE DIAMETER, BUT NOT LESS THAN 1 FOOT OR GREATER THAN
- 17. NO EXPLOSIVES SHALL BE ALLOWED UNTIL ALL PERMITS ARE GRANTED AND THE OWNER HAS SIGNED OFF. PRE AND POST BLAST REPORTS SHALL BE KEPT AND RECORDED. ALL STRUCTURES WITHIN THE 18. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CUT MATERIAL OR WASTE MATERIAL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
- 19. NO FILL SHALL BE PLACED ON EXISTING GROUND WITHIN THE LIMITS OF DISTURBANCE UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATER SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES OR TO A DEPTH RECOMMENDED BY THE GEOTECHNICAL REPORT AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACING OF FILL DELETERIOUS MATERIALS. I.E., LUMBER, LOGS, BRUSH, OR ANY OTHER ORGANIC MATERIALS OR RUBBISH SHALL BE REMOVED FROM AREAS TO RECEIVE COMPACTED FILL. UNSUITABLE MATERIALS AS TOPSOIL, WEATHERED BEDROCK, ETC., SHALL BE REMOVED AS REQUIRED BY GEOTECHNICAL ENGINEER (AND ENGINEERING GEOLOGIST, WHERE EMPLOYED) FROM AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURE(S). CONSTRUCT FILL TO GRADES OR SUBGRADES AS SHOWN WITH SELECT FILL MATERIAL COMPACTED TO 95% STANDARD PROCTOR (UNLESS OTHERWISE NOTED). PLACE AND COMPACT IN 6 INCH LIFTS. ALL SOILS WITHIN 12 INCHES OF PAVEMENT SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF THEIR STANDARD PROCTOR MAXIMUM DRY DENSITY.
- 20. GRADED AREAS TO BE LANDSCAPED OR GRASSED SHALL BE BROUGHT TO THE ELEVATIONS SHOWN ON THE GRADING PLAN(S).
- 21. CONTRACTOR SHALL VERIFY DIMENSIONS, GRADES AND BENCHMARK(S) BEFORE BEGINNING ANY WORK. THERE SHALL BE NO DISTURBANCE BEYOND PROPERTY LINES, UNLESS WRITTEN PERMISSION FROM ADJACENT PROPERTY OWNERS IS OBTAINED. EXISTING GRADES ALONG PROPERTY LINES SHALL BE
- THE MAX. SLOPES FOR CUT OR FILL SHALL BE 2H:1V, UNLESS OTHERWISE NOTED ON THE PLANS AND EXCEPT EARTHEN DAM EMBANKMENTS SHALL BE 3H:1V AND AS NOTED BELOW. THE SLOPE OF CUT OR FILL SHALL BE UNIFORM THROUGHOUT FOR EACH SECTION OF CUT OR FILL EXCEPT WHEN BENCHING IS APPROVED BY ROCKDALE COUNTY. WHEN A CUT IS MADE IN ROCK THAT REQUIRES BLASTING, THE SLOPE MAY BE STEEPER IF PRE-SPLITTING IS EMPLOYED AND UPON SUBMISSION OF A GEOTECHNICAL REPORT WHICH SUBSTANTIATES THE INTEGRITY OF THE ROCK IN THE STEEPER CONDITION, O THE REVIEW AND APPROVAL OF ROCKDALE COUNTY AND/OR SITE DESIGN PROFESSIONAL. (NOTE: NO BLASTING SHALL OCCUR WITHOUT A VALID PERMIT ISSUED BY ROCKDALE COUNTY
- 24. EMBANKMENTS SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED A COMPACTED THICKNESS OF 6 INCHES PER LAYER AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAX. LABORATORY DRY WEIGHT PER CUBIC FOOT AS DETERMINED BY AASHTO METHOD T-99 IN AREAS WHERE STRUCTURES, PARKING LOTS AND DRIVES, STREETS AND UTILITIES ARE TO BE PLACED ABOVE OR BELOW
- 25. CONTOURS AND SPOT ELEVATIONS SHOWN ARE ONLY CONTROLS AND THE PROFILES THEY FORM SHALL BE SMOOTH AND CONTINUOUS (PARTICULARLY IN PARKING AREAS AND DRIVES).
- 26. GRADING SHALL BE PERFORMED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER WHO SHALL CERTIFY THAT FILL HAS BEEN PROPERLY PLACED AND WHO SHALL SUBMIT A FINAL COMPACTION
- 27. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING(S) AT ALL TIMES. 28. ANALYTICAL COMPACTION RESULTS SHALL BE SUBMITTED TO ROCKDALE COUNTY ENGINEERING DEPARTMENT (OR SIMILAR DEPARTMENT) AND TO THE GEOTECHNICAL ENGINEER OF RECORD.
- 29. ALL GRADING AND PIPE BED PREPARATION SHALL BE PERFORMED ACCORDING TO REQUIREMENTS SET FORTH BY THE GEOTECHNICAL ENGINEER OF RECURL
- 30. CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND FOLLOW ALL RECOMMENDATIONS OF THE REPORT WHEN PERFORMING SITE WORK AT A MINIMUM. FOR TRENCH CONSTRUCTION, BACKFILL UNDER PERMANENT CONCRETE OR BITUMINOUS PAVEMENT AND AS ELSEWHERE SPECIFIED OR INDICATED ON THE PLANS. TRENCHES SHALL BE APPROVED BANK-RUN SAND OR GRAVEL OR CRUSHED STONE FREE FROM LARGE STONES AND CONTAINING NOT MORE THAN TEN PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL COMPACTED TO ONE HUNDRED PERCENT (10%) AS DETERMINED BY THE MODIFIED PROCTOR TEST FROM PIPE BEDDING TO TWO (2) FEET BELOW TRENCH TOP. MECHANICAL VIBRATING EQUIPMENT
- SHALL BE USED TO ACHIEVE THE REQUIRED COMPACTION. PAVEMENT SHALL BE REPLACED IMMEDIATELY AFTER THE BACKFILLING IS COMPLETED.
- 32. BACKFILL UNDER GRAVEL OR CRUSHED STONE SURFACED ROADWAYS SHALL BE THE APPROVED SUITABLE EXCAVATED MATERIAL PLACED IN SIX (6) INCH LAYERS THOROUGHLY COMPACTED FOR THE FULL DEPTH AND WIDTH OF THE TRENCH, CONFORMING TO THE COMPACTION, DENSITY COMPACTION METHOD AND MATERIALS AS SPECIFIED ABOVE. 33. BACKFILL IN UNPAVED AREAS SHALL BE COMPACTED WITH MECHANICAL VIBRATING EQUIPMENT TO NINETY PERCENT (90%) AS DETERMINED BY THE MODIFIED PROCTOR TEST. BACKFILL MATERIAL FROM PIPE BEDDING TO GROUND SURFACE SHALL BE EXCAVATED FREE FROM LARGE STONES & OTHER DEBRIS.

PAVEMENT AND STRUCTURAL BASE REQUIREMENTS:

- THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS. IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE OF APPROVED FOR USE BY THE GEORGÍA DEPARTMENT OF TRANSPORTATION. THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO AASHTO M 147-65 (1980 OR LATEST REVISION), GRADE A. GRAVEL OR OTHER MATERIALS CAN ONLY BE SUBSTITUTED FOR CRUSH STONE WHEN APPROVED IN WRITING BY THE OWNER ND SITE DESIGN PROFESSIONAL. MATERIAL SUPPLIED FOR USE AS SUBBASE SHALL HAVE 103% PASSING THE 2 INCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO.4
- 2. SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE GEOTECHNICAL REPORT. IF NOT STATED, THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
- 3. FINAL GRADING OF SUBBASE SHALL BE TO +/- 1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND +/- 1 INCH OF THE REQUIRED THICKNESS OF 8 INCHES OR GREATER AND +/- 1/2 INCH FOR THICKNESS
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTING AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER "GRADING / EARTHWORK REQUIREMENTS". 5. THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER "GRADING / EARTHWORK REQUIREMENTS".
- IF REQUIRED, STABILIZING FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "MODULUS (LOAD AT 10% ELONGATION) = 115LB PER ASTM D 1882-64", "GRAB TENSILE STRENGTH 200LB PER ASTM D 1682-64", "MULLEN BURST STRENGTH = 400PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 115LB PER ASTM D 1117-80", "COEFFICIENT OF PERMEABILITY K (CM/SEC) = 0.015 PER ASTM D 4491-85", WATER FLOW RATE (GPM/SF)= 69 PER ASTM D 4491-85". WHEN STABILIZING FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- IF REQUIRED, FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "GRAB TENSILE ELONGATION = 50% PER ASTM D1882-64", "GRAB TENSILE STRENGTH 70LB PER ASTM D 682-64","MULLEN BURST STRENGTH = 200PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 35 LB PER ASTM D 1117-80", "COEFFICIENT OF PERMEABILITY K (CM/SEC) = 0.2 PER ASTM D 4491-85", "WATER FLOW RATE (CPM/SF) = 180 PER ASTM D 4491-85", WHEN FILTER FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURERS

TRAFFIC SIGNAGE AND PAVEMENT MARKINGS:

- PAVEMENT MARKINGS SHALL BE THE TYPE, COLOR, SIZE AND LOCATIONS SHOWN ON THE PLANS. IF THE INFORMATION ON THE PLANS IS NOT COMPLETE AND AUTHORITY HAVING JURISDICTION DOES NOT HAVE REQUIREMENTS REGARDING THIS, USE THE FOLLOWING. PAINT SHALL BE SUPPLIED IN ACCORDANCE WITH AASHTO: M 248 LATEST ADDITION. COLORS SHALL BE AS FOLLOWS (YELLOW-PARKING STALLS, HANDICAP PARKING AND CHARACTERS, PARKING ISLANDS, TRAFFIC CONTROL LETTERING AND CHARACTERS AND FIRE LANES) (WHITE - STOP BARS, PEDESTRIAN CROSSINGS AND STOP
- THE PAVEMENT SHALL BE CLEAN AND FREE OF DIRT, DUST, MOISTURE, OILS AND OTHER FOREIGN MATERIALS. ANY OLD PAVEMENT MARKINGS SHALL BE REMOVED UNLESS PAINTS ARE COMPATIBLE AND OVERLAY IDENTICALLY. THE SURFACE OF THE PAVEMENT PRIOR TO APPLICATION SHALL BE 45 DEGREES F AND RISING UNLESS MANUFACTURE'S RECOMMENDATIONS ARE GREATER.
- THE SIGNAGE SHALL BE THE TYPE AND LOCATED PER THE DRAWINGS. THE SIGNAGE SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL HIGHWAY, COUNTY HIGHWAY AND STATE DEPARTMENT OF TRANSPORTATION. IF LOCAL, COUNTY OR STATE CODES DO NOT EXIST USE AASHTO: M268.
- 4. POSTS, BRACKETS AND FRAMES SHALL BE STEEL PER ASTM A-36, A-242, A-441, A-572, A588, GRADE 50 AND HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL CUTTING, DRILLING OR OTHER POLE MODIFICATIONS SHALL BE PAINTED WITH GALVANIZING PAINT. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
- 5. POST HOLES SHALL BE A MINIMUM OF FOUR FEET DEEP AND 12 INCHES IN DIAMETER UNLESS POOR SOILS OR FROST CONDITIONS REQUIRE GREATER DEPTH. SIGN POSTS SHALL BE KEPT PLUMB, 6 INCHES OFF BOTTOM AND CENTERED AS 3000 PSI CONCRETE IS PLACED AROUND THE POST. THE OVERALL SIGN AND POST SYSTEM SHOULD BE ABLE TO WITHSTAND 33 POUNDS PER SQUARE FOOT. 6. CONTRACTORS CAN PLACE SIGNS ON POSTS AFTER CONCRETE HAS CURED FOR SEVEN DAYS OR ½ STRENGTH IS ACHIEVED.
- 7. ALL HANDICAP STRIPING AND SIGNAGE SHALL MEET THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. FIRE LANE STRIPING AND SIGNAGE SHALL MEET THE REQUIREMENTS OF THE LOCAL
- 8. OULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT X5FT.

SITE CONCRETE - INCLUDING CURB, SIDEWALKS & GUTTERS:

- THE DIMENSIONS SHALL BE THOSE SHOWN ON THE DRAWINGS. THE CONCRETE MIX SHALL BE 4000 PSI AT 28 DAYS MADE WITH TYPE I OR TYPE II CEMENT, PER ASTM C 150, AND AGGREGATES MEETING STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. SLUMP FOR SUP FORMING SHALL BE 1 INCH 4/- ½ INCH AND FOR FORMED CONCRETE THE SLUMP SHALL BE 3 INCH 4/- 1 INCH. AIR ENTRAINMENT MIXTURE SHALL MEET THE REQUIREMENTS OF ASTM C 260 4% +/- 1 ½% FOR SLIP FORM WORK AND 6% +/- 1 ½% FOR FORMED AND PLACED CONCRETE. WATER REDUCING AGENT SHALL CONFORM TO ASTM C 494, TYPE A. CURING COMPOUNDS SHALL CONFORM TO ASTM C 309, TYPE I, CLASS A MOISTURE LOSS OF NOT MORE THAN .055 GR/SQ CM WHEN APPLIED AT 200 SQ FT PER GALLON.
- ALL FORMING, PLACEMENT, MATERIALS AND CURING SHALL CONFORM TO THE LATEST ADDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ALL SIMILAR STATE

HAS JURISDICTION USE THE FOLLOWING: CURBS AND GUTTERS SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF GAB ON 98% STANDARD PROCTOR SUBGRADE.

2. CURRS AND GUTTERS SHALL BE PLACED ON COMPACTED SUBBASE, CONSISTENT WITH THE PAVEMENT SUBBASE, AS SHOWN ON THE DRAWINGS. WHEN SUBBASE DETAILS ARE MISSING AND NO AGENCY

- REINFORCING SHALL BE IN ACCORDANCE WITH THAT SPECIFIED ON THE DRAWINGS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICES". REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60, DEFORMED. WELDED WIRE FABRIC SHALL BE ASTM A 185, WELDED WIRE STEEL FABRIC.
- SIDEWALKS AND GUTTERS SHALL HAVE A BROOM FINISH PERPENDICULAR TO FLOW WITH A PICTURE FRAME EDGE JOINT ALL THE WAY AROUND. CURBS SHALL HAVE A SMOOTH FINISH OR LIGHT RUB INISH, BUT CONSISTENT THROUGH OUT THE PROJECT
- 6. EXPANSION JOINTS SHALL BE PLACED EVERY 40 FEET AND AT ADJOINING STRUCTURES SUCH AS WALLS, MANHOLES AND VAULTS. EXPANSION JOINT MATERIAL SHALL BE PREMOLDED. 13 INCH MATERIAL WITH 1/3 INCH CAP IN ACCORDANCE WITH ASTM D1751. AFTER CONCRETE HAS SET, THE CAP SHOULD BE REMOVED AND VOID FILLED WITH WATERPROOF JOINT FILLER. CURB AND GUTTER SHALL BE CU OR TOOL JOINTED TO 1/3 THE DEPTH EVERY 10 FEET. SIDEWALKS SHOULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT

ASPHALT PAVEMENT REQUIREMENTS:

- ASPHALT SHALL BE THE TYPE(S) SPECIFIED ON THE DRAWINGS. REFER TO PAVING LEGEND AND PAVING DETAILS PROVIDED. ALL ASPHALT SHALL BE PRODUCED IN STATE APPROVED PLANTS WITH STATE APPROVED PRODUCTS.
- ASPHALT SHALL ONLY BE PLACED WHEN THE OUTSIDE TEMPERATURE IS 45°F AND RISING. ASPHALT SHALL NEVER BE PLACED ON FROZEN MATERIAL, DURING ANY TYPE OF PRECIPITATION OR WHEN PRECEDING PRECIPITATION HAS SATURATED ANY PORTION OF THE SUBBASE AND/OR SUBGRADE. SURFACES ABUTTING THE NEW ASPHALT SHALL BE TACK COATED PRIOR TO PLACEMENT OF ASPHALT INCLUDING CURBS, GUTTER, EXISTING AND NEW STRUCTURES, TACK COAT SHALL BE APPLIED NEATLY TO MATCH THE LINES AND GRADES OF THE PROPOSED ABUTTING ASPHALT AT A RATE OF 0.05 TO 0.15 GALLONS PER SQUARE YARD.
- ASPHALT SHALL BE PLACED IN LAYERS EQUAL TO THOSE SPECIFIED ON THE PLANS. THE THICKNESS OF EACH LAYER OR THE THICKNESS OF ALL LAYERS COMBINED SHALL NOT VARY MORE THAN 1/4 IN FOR THICKNESS OF 0 TO 4 INCHES AND 1/2 INCH FOR THICKNESS OF 4 INCHES OR GREATER, FROM THOSE SPECIFIED ON THE DRAWINGS. IF MORE THAN 60% OF TEST CORES SAMPLED FAIL TO EQUAL 0 EXCEED THE REQUIRED DEPTH, THE PAVEMENT SHALL BE CONSIDERED FAILED AND BE SUBJECT TO REPAIRS, REPLACEMENT OR REASONABLE COMPENSATION OF WHICH THE CONTRACTOR SHALL BEAR ALL COSTS. THE ASPHALT SHALL ALSO BE TESTED FOR SMOOTHNESS BY LAYING A 16 FOOT STRAIGHT EDGE ON THE PAVEMENT AND VERIFYING THAT THERE ARE NO GAPS GREATER THAN 1/4 INCH IN ANY DIRECTION.
- PLACEMENT AND COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE SPECIFIED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION. THE ROLLING SHALL BE DONE IN SUCH A MANNER THAT WILL MATCH JOINTS AND LEAVE A SMOOTH UNIFORM SURFACE, WHILE PROVIDING THE PROPER COMPACTION, WHICH SHALL BE 95% OF THE LABORATORY DENSITY. WHEN MATCHING INTO EXISTING PAVEMENT ALL MATCH JOINTS SHALL BE SAW OUT TO PROVIDE A STRAIGHT SMOOTH JOINT. THE ASPHALT DEPTH AT THE MATCH POINT SHALL BE EQUAL TO THAT OF THE PROPOSED OR EXISTING WHICH EVER IS GREATER.
- THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS. IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE APPROVED FOR USE BY THE APPLICABLE STATE'S "DEPARTMENT OF TRANSPORTATION". THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO ASSITUTED FOR CRUSH STONE WHEN APPROVED IN WRITING BY THE OWNER AND ENGINEER. MATERIAL SUPPLIED FOR USE AS SUBBASE SHALL HAVE 100% PASSING THE 21NCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO. 4 SIEVE, 15% TO 40% PASSING THE NO. 40 SIEVE AND 2% TO 10% PASSING THE NO. 200 SIEVE.
- 9. SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE SOILS REPORT. IF NOT STATED, THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR). FINAL GRADING OF SUBBASE SHALL BE TO +/- 1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND +/- 1 INCH OF THE REQUIRED THICKNESS FOR THICKNESS OF 8 INCHES OR GREATER AND +/- ½ INCH FOR THICKNESS LESS THAN 8 INCHES.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTING AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER "EARTHWORK".
- 12. THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER "EARTHWORK" IF REQUIRED. STABILIZING FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "MODULUS (LOAD AT 10% ELONGATION) = 115LB PER ASTM D1682-64", "GRAB TENSILE STRENGTH 200LB PER ASTM D 1682-64", "MULLEN BURST STRENGTH = 400PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 115LB PER ASTM D 117-80", "COEFFICIENT OF PERMEABILITY K CM/SEC = .015 PER ASTM D 4491-85", "WATER FLOW RATE GPM/SF-80 PER ASTM D 4491-85", WHEN STABILIZATION FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
- 14. IF REQUIRED, FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "GRAB TENSILE ELONGATION =50% PER ASTM D1682-64", "GRAB TENSILE STRENGTH 70LB PER ASTM D 1682-64", "MULLEN BURST STRENGTH = 200PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 35LB PER ASTM D 1117-80", "COEFFICIENT OF PERMEABILITY K CM/SEC = .2 PER ASTM D 4491-85", "WATER FLOW RATE GPM/SF= 180 PER ASTM D 4491-85", WHEN FILTER FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
- DEBRIS AND OTHER FOREIGN MATTER. THE CONTRACTOR SHALL CLEAN ANY SECTIONS REQUIRING SUCH AT NO ADDITIONAL COST TO THE CONTRACT.

SEEDING & LANDSCAPING:

- TOPSOIL SHALL BE REMOVED FROM STOCKPILES AND SPREAD IN THE AREAS SHOWN ON THE PLANS. THE DEPTH OF TOPSOIL SHALL BE AS SHOWN ON THE PLANS. IF THE DEPTH OF TOPSOIL IS NOT GIVEN THE FOLLOWING SHALL BE USED: "A MINIMUM OF 4 INCHES IN LAWN AREAS" AND "A MINIMUM OF 12 INCHES IN LANDSCAPE PLANTING AREAS". AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND CRADES SHOWN ON THE PLANS THE TOPSOIL SOIL SHALL HAVE A PH OF 5.5 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2" SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE 1/4 INCH SIEVE AND 20 TO 80% PASSING THE NO. 200 SIEVE.
- 4. LIME OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT ACIDIC SOILS. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREAFORM SOURCE.
- 6. LAWN SEED (WHEN NOT GIVEN ON THE PLANS) SHALL BE "50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNFINE PERENNIAL RYE"; "30% BY WEIGHT, 97% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE"; "20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS". WHEN PLACING BY HYDROSEEDING, APPLICATION FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND SEED AT A MINIMUM OF 220 POUNDS PER ACRE. ALL OVER SPRAY AREAS SHALL BE PROPERLY CLEANED AND RESTORED AT NO EXPENSE TO THE CONTRACT.
- IF PLACING BY MECHANICAL MEANS, FERTILIZER SHALL BE PLACED AT 25 POUNDS PER 1.000 SQUARE FEET, SEED AT 5 POUNDS PER 1.000 SQUARE FEET. AND STRAW MULCH AT 2 TONS PER ACRE. PLACE FERTILIZER AND SEED, THEN LIGHTLY RAKE AND THE ROLL WITH 200 POUND ROLLER. MULCH THE AREA AND THEN WATER. STRAW MAY NEED TO BE SECURED TO PREVENT IT BLOWING AWAY.
- WATER LAWN AREAS AS NEEDED TO PROMOTE GROWTH. THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR WORK WHEN NECESSARY TO INSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND BEEN CUT AT LEAST TWICE. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL AREAS NOT RECEIVING STRUCTURES, PAVEMENT, RIP RAP, LANDSCAPING OR OTHER IMPROVEMENTS OR FUTURE IMPROVEMENTS SHALL BE CONSIDERED LAWN AREAS AND RECEIVE TOPSOIL AND SEEDING PER DRAWINGS AND ABOVE STATED REQUIREMENTS.
- PLANTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH THE PLANS AND ANSI 260.1 "AMERICAN STANDARD FOR NURSERY STOCK" IN GOOD HEALTH, VIGOROUS, AND FREE OF INSECTS, LARVAE, EGGS, DEFECTS AND DISEASE PLANTING BEDS SHALL BE PREPARED BY LOOSENING THE TOP 1 FOOT OF TOPSOIL, PLANTS SHALL BE LOCATED PER THE PLANS. THE HOLES SHALL BE EXCAVATED (PER THE DETAILS ON THE DRAWINGS WITH THE CENTER SLIGHTLY HIGHER TO PROMOTE DRAINAGE. USE A TOPSOIL BACKFILL MIX OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, 1/2 PART WELL ROTTED MANURE, AND 10 POUNDS 5-10-5 PLANTING
- FERTILIZER AND PROPERLY MIXED PER CUBIC YARD. BERM AROUND PLANTS TO FORM A BOWL SHAPE. 13. WEED BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT SHALL BE PLACE UNDER ALL PLANTING BEDS PRIOR MULCHING.
- 14. ALL TREES AND SHRUBS SHALL BE STAKED AS DETAILED ON THE DRAWINGS. TREE WRAPPING WILL BE PROVIDED AT THE BASE OF ALL TREES AS DETAILED.
- MULCH SHALL BE 50% SHREDDED BARK AND 50% WOOD CHIPS, 34 TO 2 INCH IN SIZE, UNIFORMLY MIXED AND FREE OF ELM WOOD. MULCH SHALL BE PLACED UNIFORMLY OVER THE PLANTING BED ALLOWING NO WEED BARRIER TO BE SEEN. ALL LANDSCAPING SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE. ANY PLANTINGS IN NEED OF REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.

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

ALL UTILITY MATERIALS, INSTALLATION, TESTING, AND

PROCEDURES SHALL CONFORM TO THE STANDARDS AND

SPECIFICATIONS SET FORTH BY THE LOCAL AUTHORITY

HAVING JURISDICTION. IF THERE IS A DISCREPANCY

BETWEEN STATED STANDARDS AND SPECIFICATIONS ON

THESE PLANS AND THE STATED STANDARDS AND

JURISDICTION, THE CONTRACTOR SHALL ADHERE TO THE

STANDARDS AND SPECIFICATIONS OF THE LOCAL

AUTHORITY HAVING JURISDICTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING

READING, UNDERSTANDING, AND ADHERING TO THE THE

MANUAL OF STANDARDS FOR DESIGN AND CONSTRUCTION

SPECIFICATIONS IF THIS DOCUMENT IS PROVIDED FOR AT

THE AGENCY HAVING JURISDICTION.

SPECIFICATIONS OF THE LOCAL AUTHORITY HAVING

22. CONTRACTOR SHALL CONTACT ROCKDALE COUNTY WATER DEPARTMENT AND HAVE ROCKDALE COUNTY DEPARTMENT INSPECTOR PRESENT DURING TAPS.

SANITARY SEWER SYSTEM REQUIREMENTS:

- THE SANITARY SEWER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL (HAVING JURISDICTION) REQUIREMENTS. ALL SANITARY SEWER MATERIALS, SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. IF THE PLANS DO NOT LIST ALL INFORMATION OR ARE UNCLEAR, USE THE FOLLOWING.
- SANITARY PIPE AND FITTINGS SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D 3034, SDR 35, WITH GASKETS PER ASTM D 3212, ELASTOMERIC SEAL. THE PIPE SHALL BE BED 6 INCHES BELOW AND UP HALF ITS DIAMETER WITH CLEAN STONE OF A UNIFORM MIX RANGING IN SIZE OF 1/4 TO 3/4 INCH.

- MANHOLES SHALL BE PROVIDED PER ASTM C 478 WITH STEEL CORE POLYETHYLENE STEPS, GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C 443 AND MORTARED WATER TIGHT WITH A WATERPROOF/PLUG MORTAR. THE INVERT SHALL BE MADE WITH CONCRETE OR 1/2 ROUND SECTION OF PIPE. PIPE JOINTS SHALL BE PRESS WEDGE OR CAST IN PLACE BOOT. BOTH SHALL HAVE ADDITIONAL VOIDS FILLED WITH WATERPROOF/PLUG MORTAR. ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE 4000 PSI AND 5 TO 8% AIR ENTRAINMENT EXTERIOR MANHOLES SHALL BE COATED WITH A SEAL COAT ACCEPTABLE TO ROCKDALE COUNTY.
- CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE, A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN STONE OF THE SAME TYPE AS THE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT, CLEANOUTS SHALL BE NO MORE THAN 90 FEET APART ON LATERALS.
- MANHOLE FRAMES AND COVERS SHALL BE PER ASTM A 48, CLASS 30B, FULLY COATED WITH THE LETTERING "SANITARY" CAST INTO IT. THE MINIMUM SIZE SHALL BE A 24 INCH INSIDE OPENING AND DESIGN FOR A MINIMUM OF H-20 LOADING.
- ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.
- ALL TAPS TO MAIN LINES SHALL BE MADE WITH SADDLES WHEN THE TAP IS 1/2 THE DIAMETER OR LESS OF THE EXISTING PIPE BUT MADE WITH A SLEEVE WHEN THE TAP IS GREATER THAN 1/2 THE DIAMETER OR EQUAL TO THE EXISTING PIPE. IF CONNECTIONS ARE REQUIRED TO EQUAL SIZE PIPES OF 8 INCHES OR GREATER, A MANHOLE SHALL BE INSTALLED. THE CONNECTION POINT AND INVERTS FORMED, WHEN CONNECTING TO AN EXISTING MANHOLE, THE CONNECTING PIPE HOLE SHALL BE CORED AND A PRESS WEDGE INSTALLED. THE CONNECTION SHALL BE MORTARED UP WITH WATERPROOF/PLUG MORTAR. INSIDE THE EXISTING MANHOLE, THE EXISTING INVERT SHALL BE BROKE OUT IN A MANNER THAT PROTECTS FROM DEBRIS ENTERING THE LIVE SYSTEM, WHILE A NEW INVERT IS FORMED. SANITARY MANHOLES SHALL BE VISUALLY LAMPED AFTER BACKFILL TO VERIFY ALIGNMENT, CLEANLINESS, AND THERE IS NO DAMAGE TO THE SYSTEM. AFTER THE SYSTEM HAS BEEN BACKFILLED FOR 30 DAYS, THE SYSTEM SHALL BE RELAMPED AND TESTED WITH A MANDREL SIZED AT 95% OF THE INTENDED INSIDE DIAMETER.
- GRAVITY SYSTEMS SHALL BE AIR TESTED BETWEEN MANHOLES TO 3.5 PSI FOR 5 MINUTES PER ASTM F 1417 FOR PLASTIC PIPES. MANHOLES SHALL BE TESTED SEPARATELY FOR LEAKAGE OR INFILTRATION USING ASTM C 969. THE ALLOWED LEAKAGE = 0.1 GALLONS / {FEET OF DIAMTER; FEET OF HEAD}(#OF HOURS); AND THE TEST SHALL RUN FOR 24 HOURS.
- WHEN NECESSARY TO VERIFY THE SYSTEM INTEGRITY, THE ENTIRE SYSTEM MAY BE TESTED FOR INFILTRATION AND EXFILTRATION USING ASTM C 969. THE SYSTEM SHALL BE BROKEN UP INTO SECTIONS WHEN NECESSARY TO CONSIDER GROUNDWATER DEPTH, LENGTH AND ELEVATION DIFFERENCES. FAILURE OF ANY TESTING SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACE THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT.

AFTER ALL TESTING IS COMPLETE AND BEFORE THE SYSTEM IS TURNED OVER TO ROCKDALE COUNTY, THE SYSTEM SHALL BE CHECKED TO VERIFY IT IS CLEAN AND FREE OF DIRT, DEBRIS AND OTHER FOREIGN MATTER. THE CONTRACTOR SHALL CLEAN ANY SECTIONS REQUIRING SUCH AT NO ADDITIONAL COST TO THE CONTRACT.

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

18. ANY CLEANING, REPAIRS OR REPLACEMENT REQUIRED, DUE TO FAILURE OF TESTING OR POOR WORKMANSHIP, SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CONTRACT.

- WATER SYSTEM AND SERVICES REQUIREMENTS: THE WATER SYSTEMS AND SERVICES SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL (HAVING JURISDICTION) REQUIREMENTS.
- IF ROCKDALE COUNTY DOES NOT HAVE SPECIFIC REQUIREMENTS REGARDING MATERIALS AND PLACEMENT, THE FOLLOWING SHALL BE USED: • ALL WATER PIPING FITTINGS AND APPLIRTENANCES SHALL BE PLACED A MINIMUM OF 6 INCHES BELOW FROST LINE OR 5 FEET WHICH EVER IS GREATER, PIPE SIZES 4 INCHES AND LIP SHALL BE DUCTILE IRON OR POLYVINYL CHLORIDE AS INDICATED ON THE DRAWINGS (IF NOT SHOWN USE DUCTILE IRON). PIPE SIZES BELOW 4 INCHES SHALL BE COPPER OR POLYETHYLENE AS INDICATED ON THE DRAWINGS (IF NOT SHOWN USE COPPER).
- THE MINIMUM SEPARATION BETWEEN WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS SHALL BE 18 INCHES MEASURED VERTICALLY FROM OUTSIDE TO OUTSIDE OF PIPES AT THE CROSSING, A STANDARD LENGTH OF WATER PIPE SHALL BE CENTERED AT THE CROSSING TO MAXMIZE THE DISTANCE BETWEEN THE CROSSING AND THE NEAREST WATER MAIN OR SERVICE PIPE JOINT, WHEN THE WATER MAIN OR SERVICE RUNS UNDER THE SEWER LINE, A GRAVEL OR CRUSH STONE BACKFILL MEETING THE REQUIREMENTS OF SUBBASE SHALL BE PLACED AND COMPACTED AROUND THE WATER PIPE (UP TO HALF THE DIAMETER OF THE SEWER PIPE) TO PROVIDE ADEQUATE SUPPORT TO THE SEVER LINE, WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS RUNNING PARALLEL SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
- DUCTILE IRON PIPE SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C151, (6 INCH DIAMETER AND GREATER SHALL BE CLASS 50) AND (SMALLER THAN 6" SHALL BE CLASS 51), DUCTILE IRON PIPE SHALL BE LINED WITH A CEMENT MORTAR AND SEAL COATED IN ACCORDANCE WITH AWWA C104, GASKETS SHALL BE PROVIDED IN ACCORDANCE WITH AWWA C111. FITTINGS SHALL BE DUCTILE IRON IN ACCORDANCE WITH AWWA C153 COMPACT FITTINGS WITH A PRESSURE RATING OF 350 PSI. STANDARD DUCTILE IRON OR CAST IRON FITTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH AWWA C110 WITH A PRESSURE RATING OF 250 PSI. THE LINING AND GASKETS FOR THE
 FITTING SHALL MEET THE SAME REQUIREMENTS AS THE PIPE. PLASTIC WRAP PIPES IN ACCORDANCE WITH AWWA C105 AND TAR COAT ALL FITTING BOLTS WHEN EVER SOILS ARE
- PRIMARILY CLAY OR NOT PH BALANCED. SEE GEOTECHNICAL REPORT FOR SOILS TYPE AND RECOMMENDATIONS. PVC (POLYVINYL CHLORIDE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C900 FOR PIPE 4 INCHES OR GREATER AND ASTM D 1785, SCHEDULE 40, GASKETS PER ASTM F 477-ELASTOMERIC SEAL, SOLVENT CEMENT PER ASTM D 2564 FOR PIPES SMALLER THAN 4 INCHES. TEN GAUGE COPPER TRACE WIRE SHALL BE PLACED WITH ALL PIPE.
- THRUST RESTRAINTS SHALL BE USED AT ALL FITTINGS, PLUGS, AND APPURTENANCES THAT CAUSE A CHANGE IN DIRECTION, FLOW OR ARE SUBJECT TO THRUST OR HAMMERING BY WATER FLOW, THRUST RESTRAINTS INCLUDE CONCRETE THRUST BLOCKS (3000 PSI), ANCHORING JOINTS AND TIE RODS. CONCRETE THRUST BLOCKS SHALL BE USED UNLESS SPACE,

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- COPPER WATER PIPE SHALL BE SUPPLIED IN ACCORDANCE WITH ASTM B 88-TYPE K, SEAMLESS WITH FITTINGS PER AWWA C800. ◆ PE (POLYETHYLENE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C9010 AND ASTM D2737.
- GATE VALVES SHALL BE NONRISING STEM, DOUBLE DISC, BRONZE DISC RESILIENT SEATED, CAST IRON OR DUCTILE IRON BODY AND BONNET IN ACCORDANCE WITH AWWA C509 AND PRESSURE RATED FOR 250 PSI, TEN GAUGE COPPER TRACER WIRE SHALL BE PLACED WITH ALL PIPES. VALVE BOX SHALL BE CAST IRON WITH A BASE COMPATIBLE WITH VALVE, 5 INCHES IN DIAMETER, SCREW TYPE EXTENSION AT TOP AND A COVER THAT READS "WATER".
- CURB STOPS SHALL HAVE A BRONZE BODY, GROUND KEY PLUG OR BALL WITH WIDE TEE HEAD. THE CURB STOP SHALL BE COMPATIBLE WITH ADJOINING PIPES. THE SERVICE BOX SHALL HAVE A TELESCOPING TOP SECTION WITH A LENGTH THAT PLACES THE ADJUSTMENT CENTERED WHEN BURIED TO THE APPROPRIATE DEPTH, THE SERVICE BOX SHALL BE OF A SIZE AND TYPE THAT IS COMPATIBLE WITH THE CURB STOP. THE COVER SHALL HAVE THE LETTERING "WATER". ALL METERS, VAULTS AND BACKFLOW SHALL MEET THE REQUIREMENTS OF ROCKDALE COUNTY
- FIRE HYDRANTS SHALL CONFORM TO THE REQUIREMENTS OF ROCKDALE COUNTY AND AWWA C502. DRAIN STONE SHALL HAVE 100% PASSING THE 1-1/2 INCH SIEVE. 90-100% PASSING THE 1 INCH SIEVE, 35-95% PASSING THE 1/2 INCH SIEVE AND 0-15% PASSING THE 1/4 INCH SIEVE. ALL HYDRANTS SHALL INCLUDE A GATE VALVE AND BOX LOCATED AT THE HYDRANT BRANCH TO SHUT OFF THE HYDRANT LINE. DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C600 AND BE ENCASED IN SELECT BACKFILL WHICH MEANS NO STONE OR OTHER MATERIAL GREATER THAN 2 INCHES IN ANY DIRECTION.
- PVC, PE AND COPPER PIPE SHALL BE PLACED PER MANUFACTURERS RECOMMENDATIONS AND EMBEDDED IN A 6 INCH SAND ENCASEMENT MEASURED FROM OUTSIDE SURFACE OF THE PIPE TO THE OUTSIDE OF SAND ENCASEMENT. ALL BEDDING AND ENCASEMENTS SHALL BE COMPACTED WITH CARE TO ACHIEVE PROPER COMPACTION WITHOUT DAMAGING THE PIPE, FITTINGS OR APPURTENANCES.
- ALL WATER MAIN FITTINGS AND VALVES SHALL BE TESTED FOR PRESSURE AND LEAKAGE IN ACCORDANCE WITH AWWA C600. TEST WATER SHALL BE POTABLE. TEST PRESSURE SHALL NOT BE LESS THAN 1,25 TIMES THE WORKING PRESSURE AT THE HIGHEST POINT AND 1,5 TIMES THE WORKING PRESSURE AT THE TESTING POINT, THE PRESSURE MAY NOT DROP MORE THAN 5 PSI DURING THE 2 HOUR TEST. LEAKAGE SHALL NOT EXCEED MORE THAN (L=(SD;P)*0.5)/133, 200) WHERE "L= ALLOWABLE LEAKAGE, IN GALLONS PER HOUR." S= LENGTH OF PIPE TESTED, IN FEET "D= NOMINAL DIAMETER OF PIPE, IN INCHES" "P=AVERAGE TEST PRESSURE DURING TEST, IN POUNDS PER SQUARE INCH (GAUGE) DURING THE SAME 2 HOUR DURATION. 9. ALL TAP AND/OR CONNECTION MATERIAL AND WORK SHALL BE DONE IN ACCORDANCE WITH AND COORDINATED WITH ROCKDALE COUNTY. WHEN THE AUTHORITY SO REQUIRES, THE TAPS AND/OR CONNECTIONS SHALL BE DONE BY THE AUTHORITY THEMSELVES AND PAID FOR BY THE CONTRACTOR.

10. OTHER FITTING AND APPURTENANCES NOT PART OF THE MAIN LINE TESTING SHALL BE TESTED BY VISUAL INSPECTION FOR LEAKAGE UNDER NORMAL WORKING PRESSURES.

13. FAILURE OF ANY TESTING SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACED THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT.

11. ALL MAIN LINES AND APPROPRIATE APPURTENANCES SHALL BE FLUSHED AND DISINFECTED IN ACCORDANCE WITH AWWA C651 AND THE REQUIREMENTS OF THE APPROPRIATE HEALTH

12. THE CONTRACTOR SHALL COORDINATE ALL TESTING AND DISINFECTING WITH ROCKDALE COUNTY. IF PROFESSIONAL ENGINEER CERTIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST TEN DAYS PRIOR TO THE START OF WORK.



JASON P. BROWN

#53274 - EXP 05.01.2026 JASON BROWN (770) 717-9972

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are shown schematically and neither the site design professional actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to the entire course of work and shall pay for said services field verifying location and denth of utilities that are to be save and protected). Contractor shall notify the site design professiona of any utility conflicts prior to installation of new utilities, grading etc. The Contractor, at their expense, shall be responsible to damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

Utilities Services shown are for Contractors' convenience. Items

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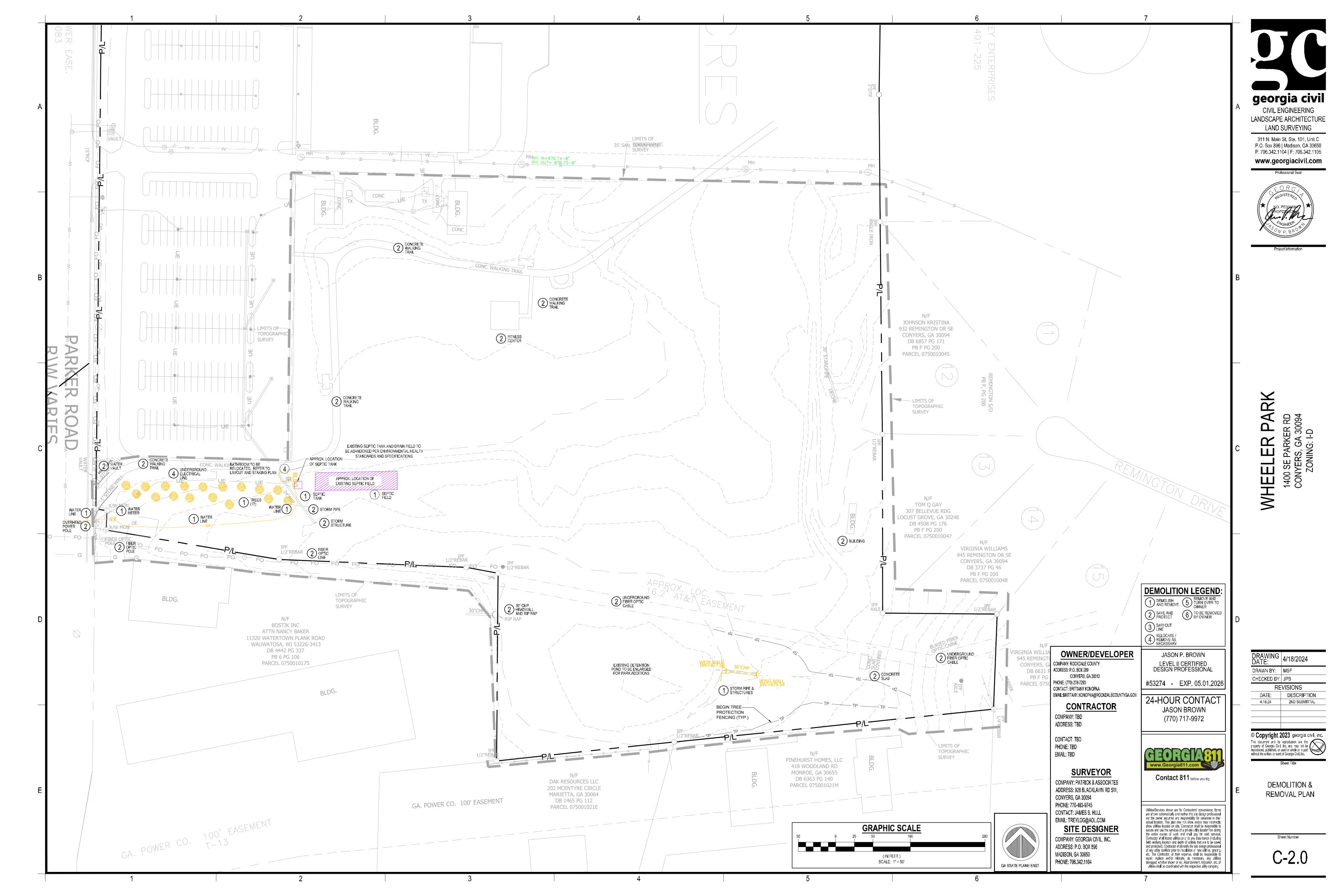
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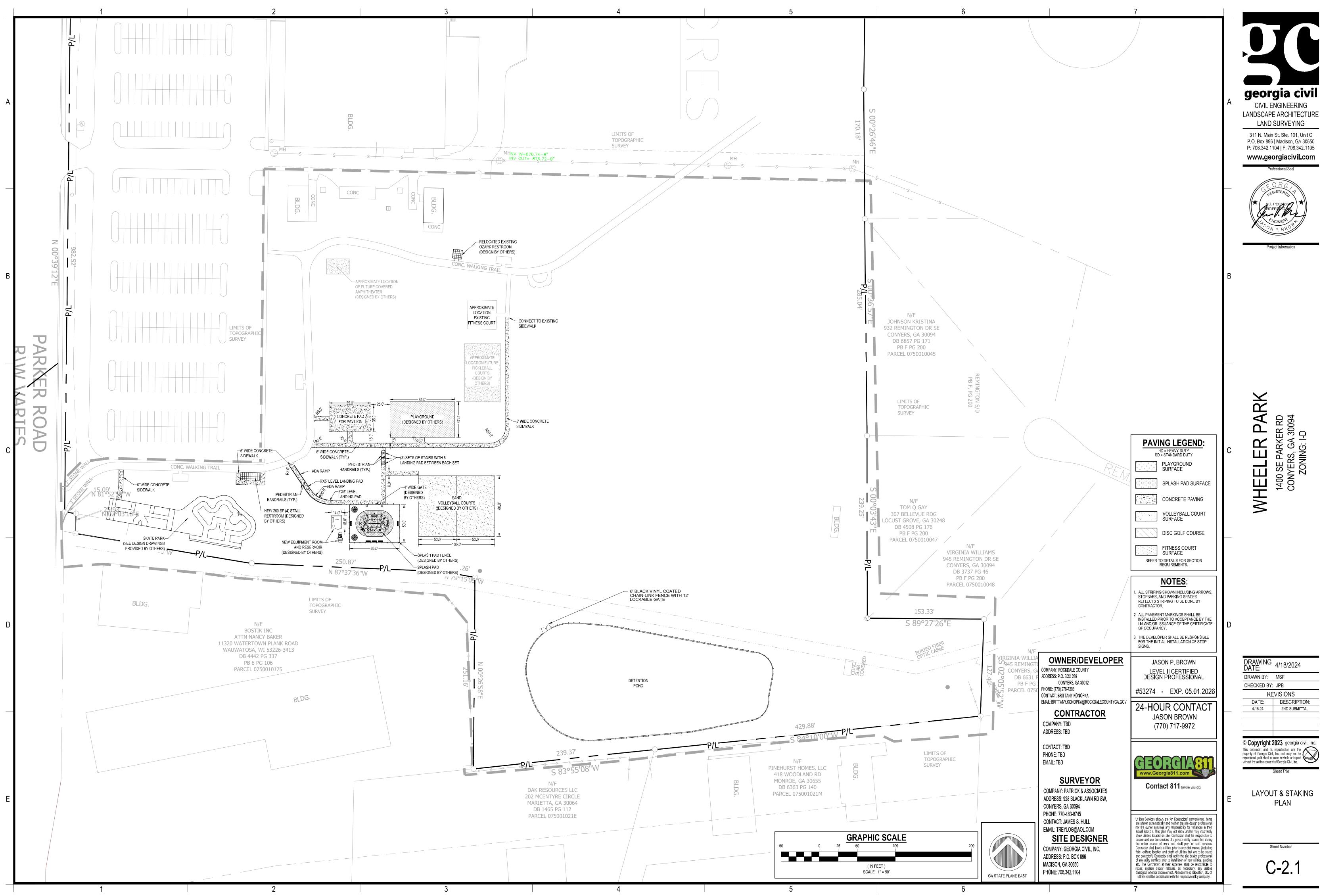
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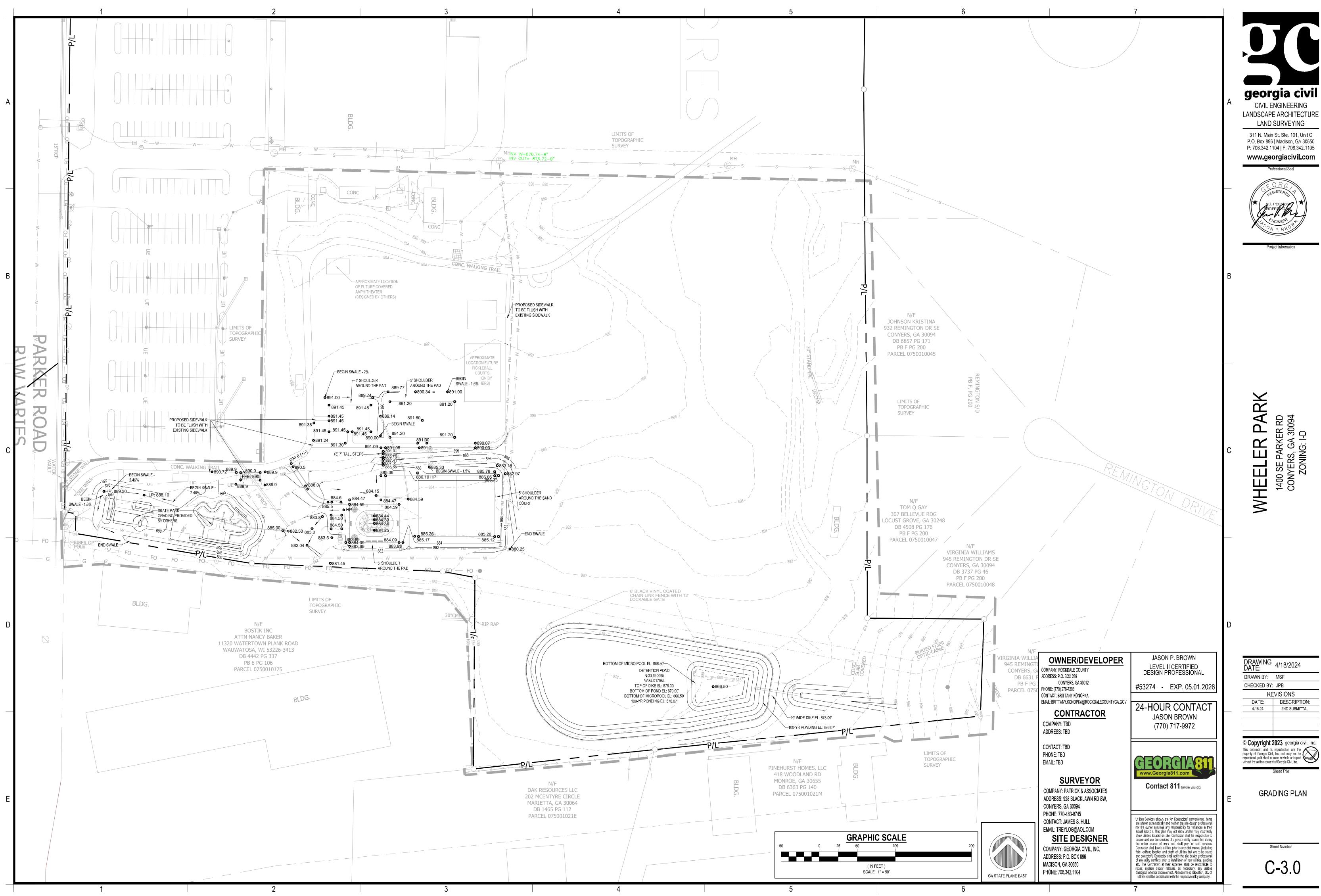
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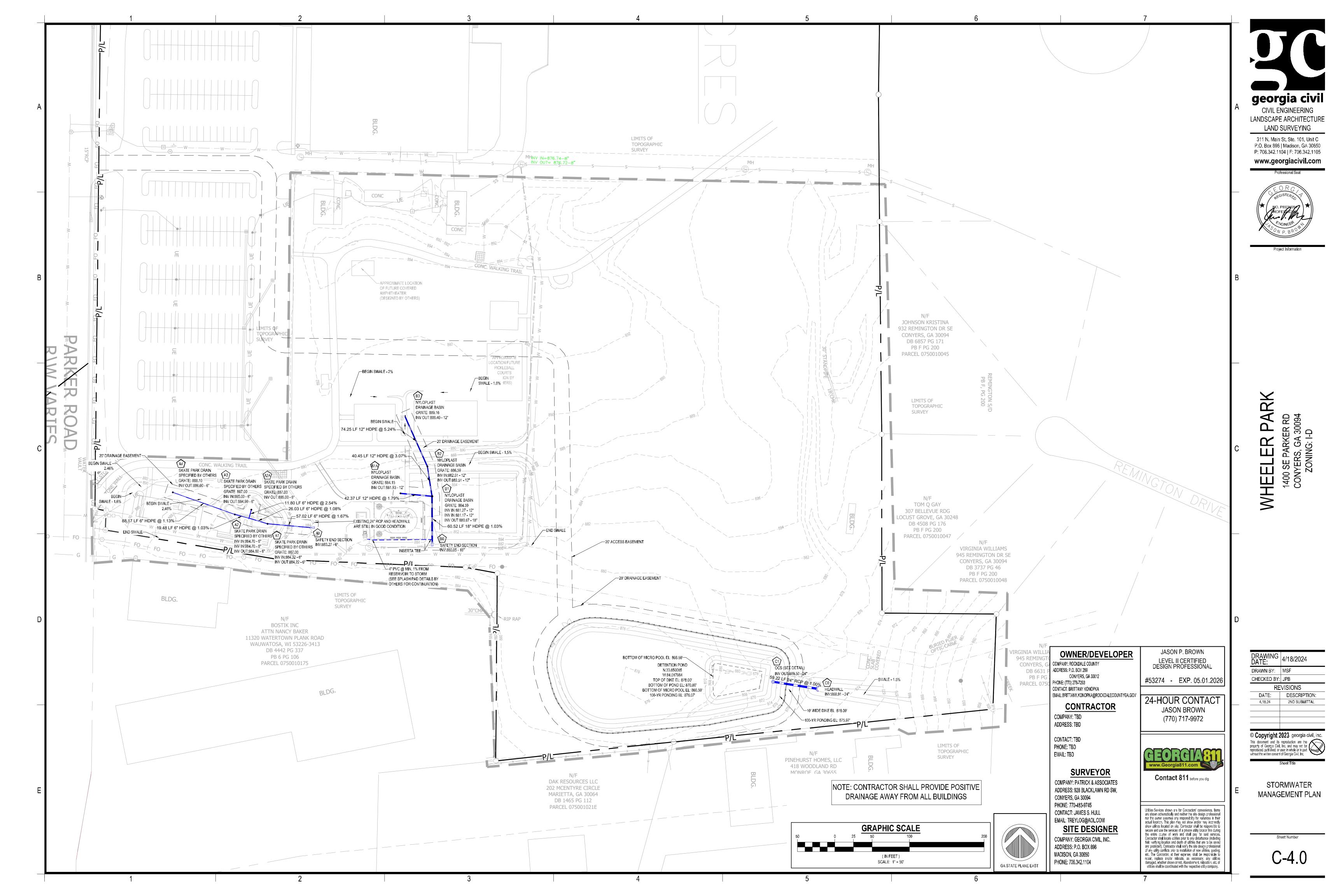
GENERAL NOTES

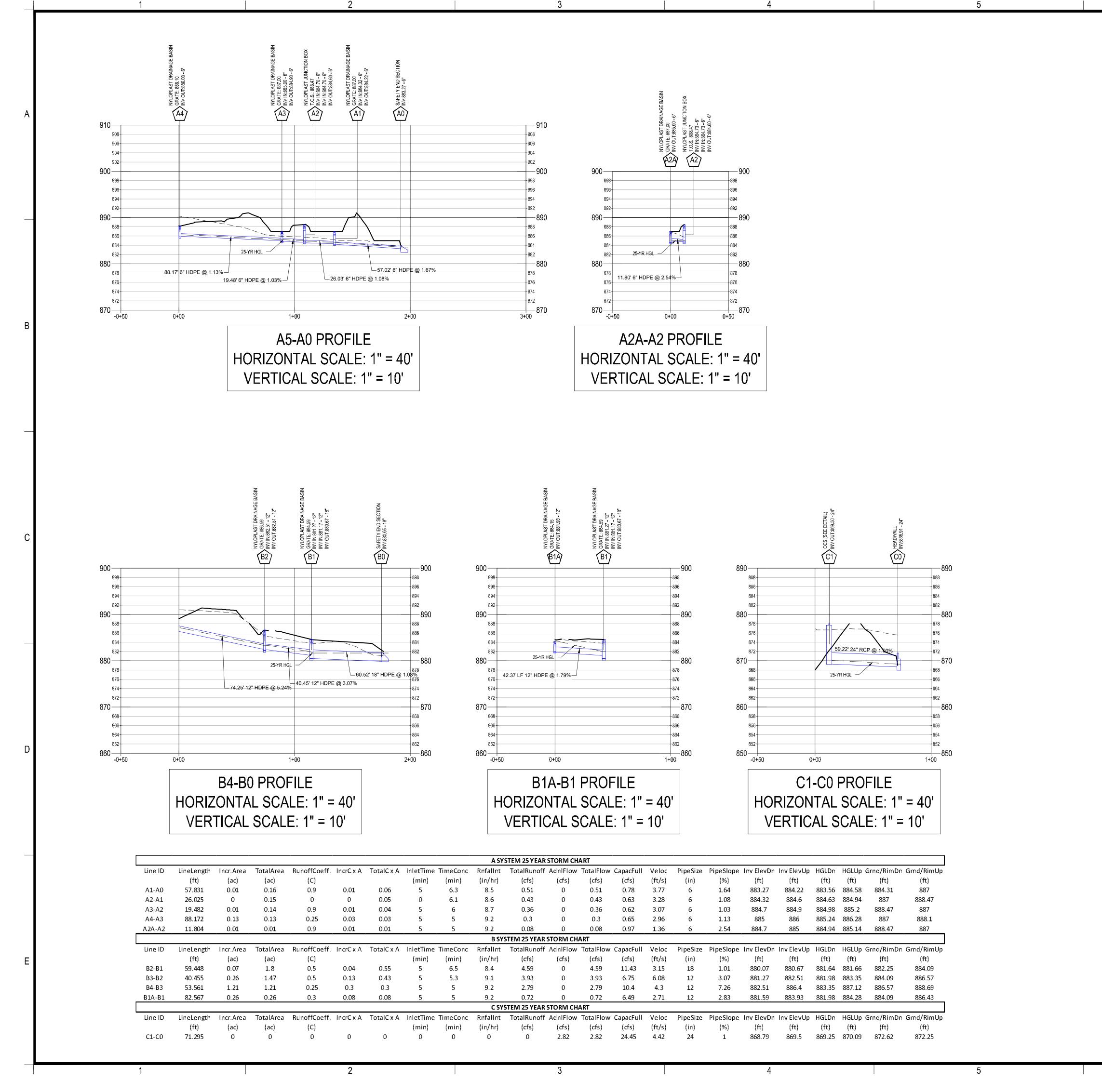
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WHEEI

PROFILE LEGEND: PROPOSED GRADE --- EXISTING GRADE HYDRAULIC GRADE LINE SCALE: VER: 1"=40' HOR: 1"=10'

OWNER/DEVELOPER

COMPANY: ROCKDALE COUNTY ADDRESS: P.O. BOX 289 CONYERS, GA 30012 PHONE: (770) 278-7293 CONTACT: BRITTANY KONOPKA

CONTRACTOR

COMPANY: TBD ADDRESS: TBD

CONTACT: TBD PHONE: TBD EMAIL: TBD

SURVEYOR

COMPANY: PATRICK & ASSOCIATE ADDRESS: 928 BLACKLAWN RD SW, CONYERS, GA 30094 PHONE: 770-483-9745 CONTACT: JAMES S. HULL EMAIL: TREYLOG@AOL.COM

SITE DESIGNER COMPANY: GEORGIA CIVIL, INC. ADDRESS: P.O. BOX 896

MADISON, GA 30650 PHONE: 706.342.1104

JASON P. BROWN

LEVEL II CERTIFIED DESIGN PROFESSIONAL

#53274 - EXP. 05.01.2026

24-HOUR CONTACT

JASON BROWN

(770) 717-9972

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damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

STORMWATER MANAGEMENT **PROFILE**

DRAWING DATE: 4/18/2024

REVISIONS

DATE: DESCRIPTION:

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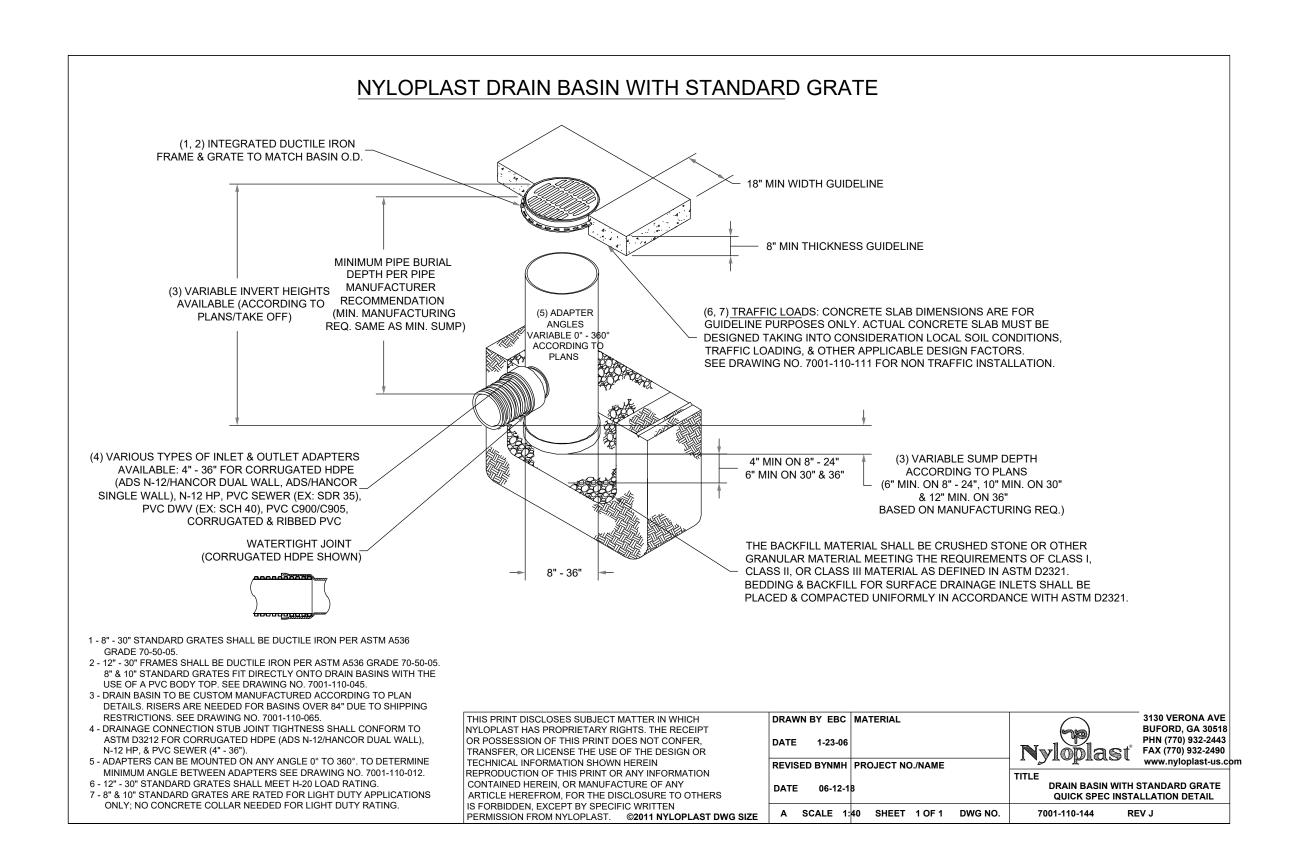
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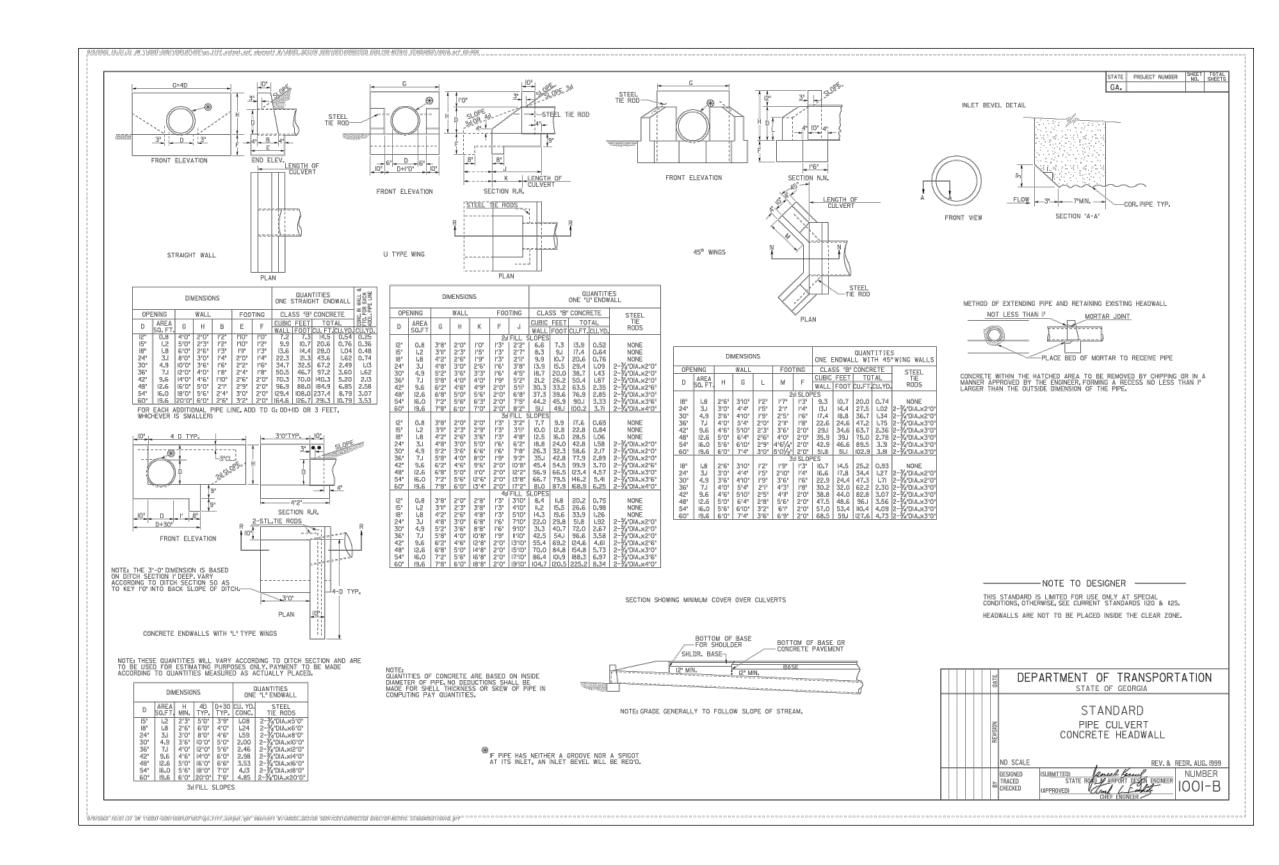
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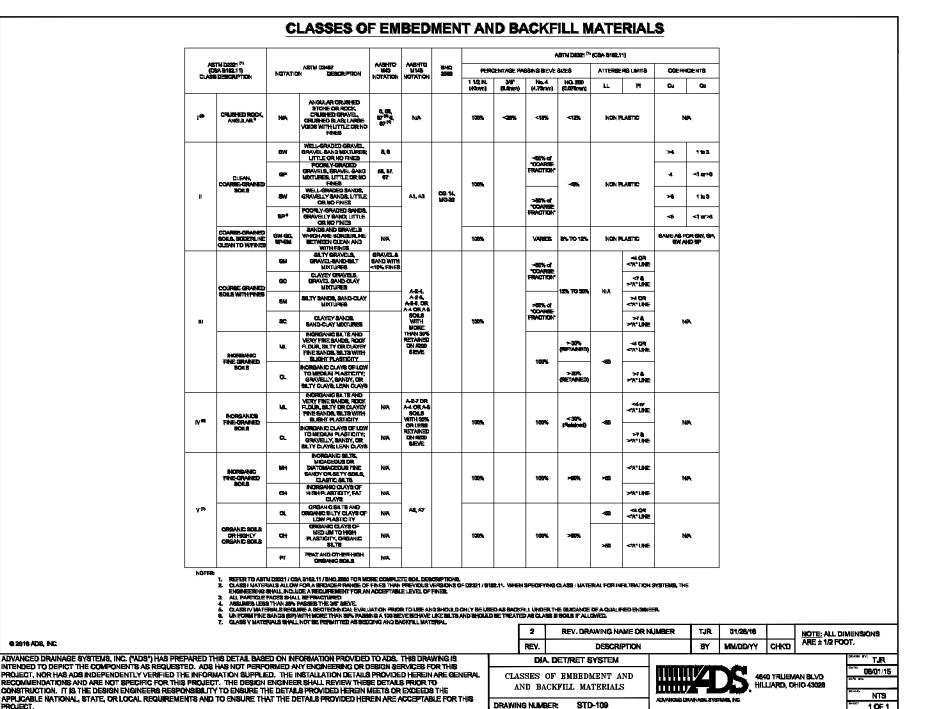
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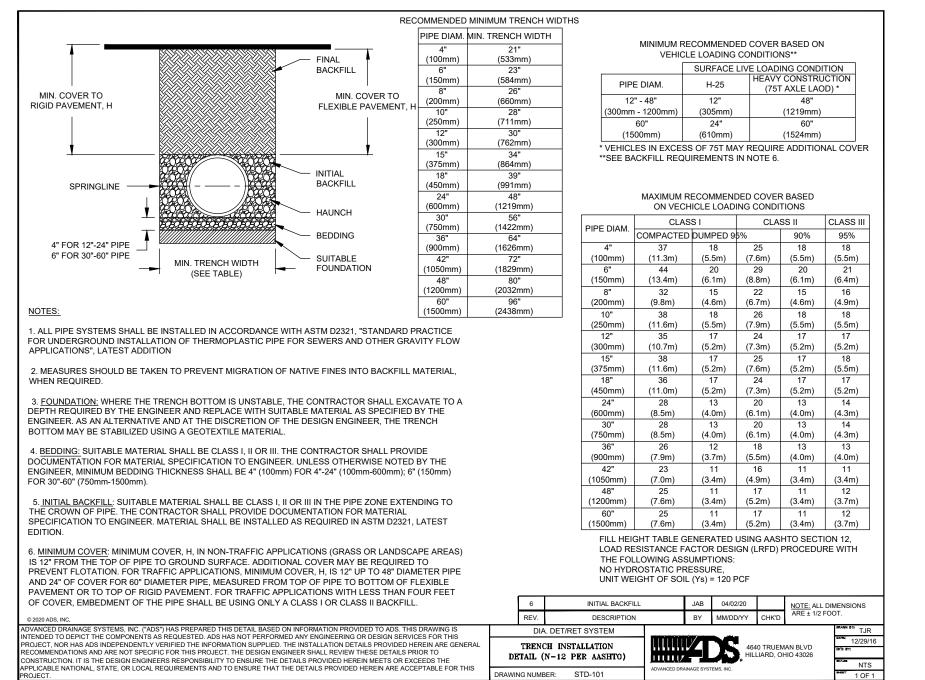
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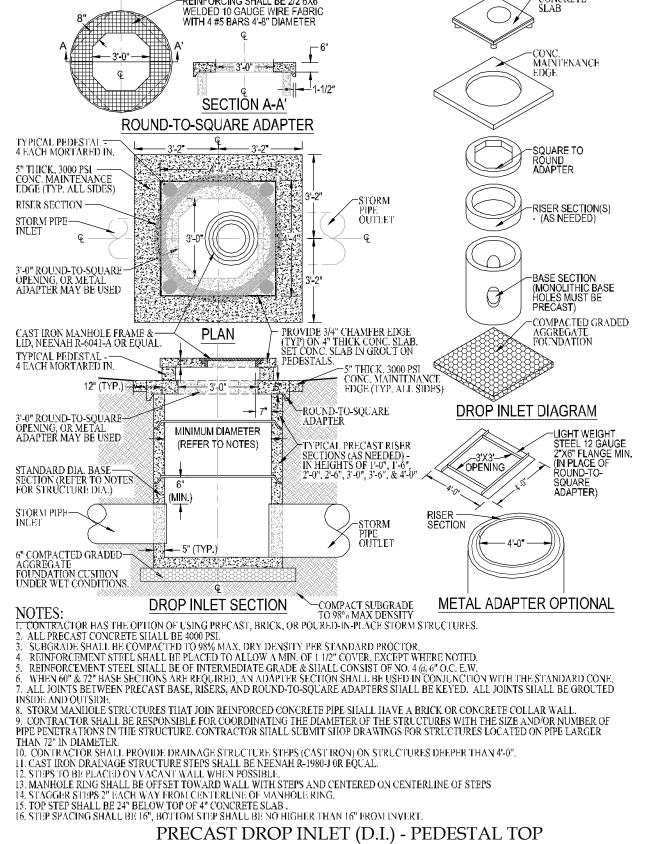






WING NUMBER: STD-109





OWNER/DEVELOPER COMPANY: ROCKDALE COUNTY ADDRESS: P.O. BOX 289 CONYERS, GA 30012 PHONE: (770) 278-7293 CONTACT: BRITTANY KONOPKA EMAIL:BRITTANY.KONOPKA@ROCKDALECOUNTYGA.GOV

CONTRACTOR COMPANY: TBD

ADDRESS: TBD CONTACT: TBD PHONE: TBD

PHONE: 706.342.1104

EMAIL: TBD

SURVEYOR COMPANY: PATRICK & ASSOCIATE ADDRESS: 928 BLACKLAWN RD SW,

CONYERS, GA 30094 PHONE: 770-483-9745 CONTACT: JAMES S. HULL EMAIL: TREYLOG@AOL.COM SITE DESIGNER COMPANY: GEORGIA CIVIL, INC.

ADDRESS: P.O. BOX 896 MADISON, GA 30650

JASON P. BROWN LEVEL II CERTIFIED DESIGN PROFESSIONAL

#53274 - EXP. 05.01.202

24-HOUR CONTACT **JASON BROWN** (770) 717-9972

Contact 811 before you dig STORMWATER MANAGMENT DETAILS

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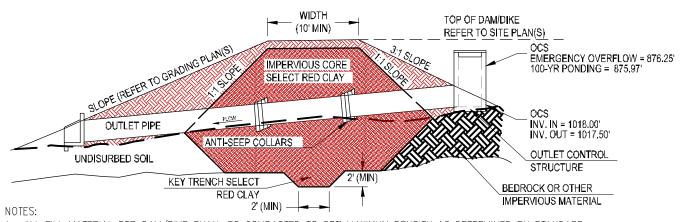
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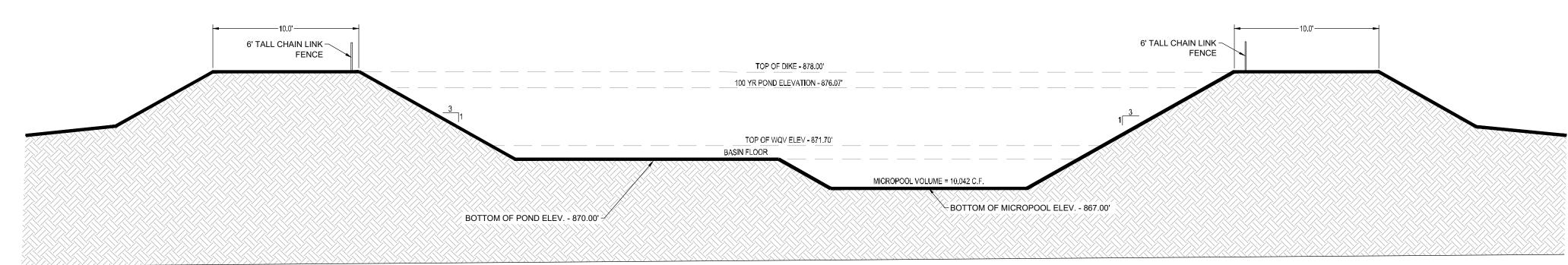
DETENTION BASIN DAM/DIKE



1. ALL FILL MATERIAL FOR DAM/DIKE SHALL BE COMPACTED TO 98% MAXIMUM DENSITY AS DETERMINED BY STANDARD 2. SELECT CORE MATERIAL SHALL BE OBTAINED FROM ON-SITE SOURCE AS IDENTIFIED AND DIRECTED BY GEOTECHNICAL

3. ANTI-SEEP COLLARS/BRICK COLLAR WALLS SHALL BE INSTALLED AT ALL PIPE JOINTS WITHIN LIMITS OF DAM/DIKE.

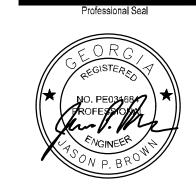
POND CROSS SECTION



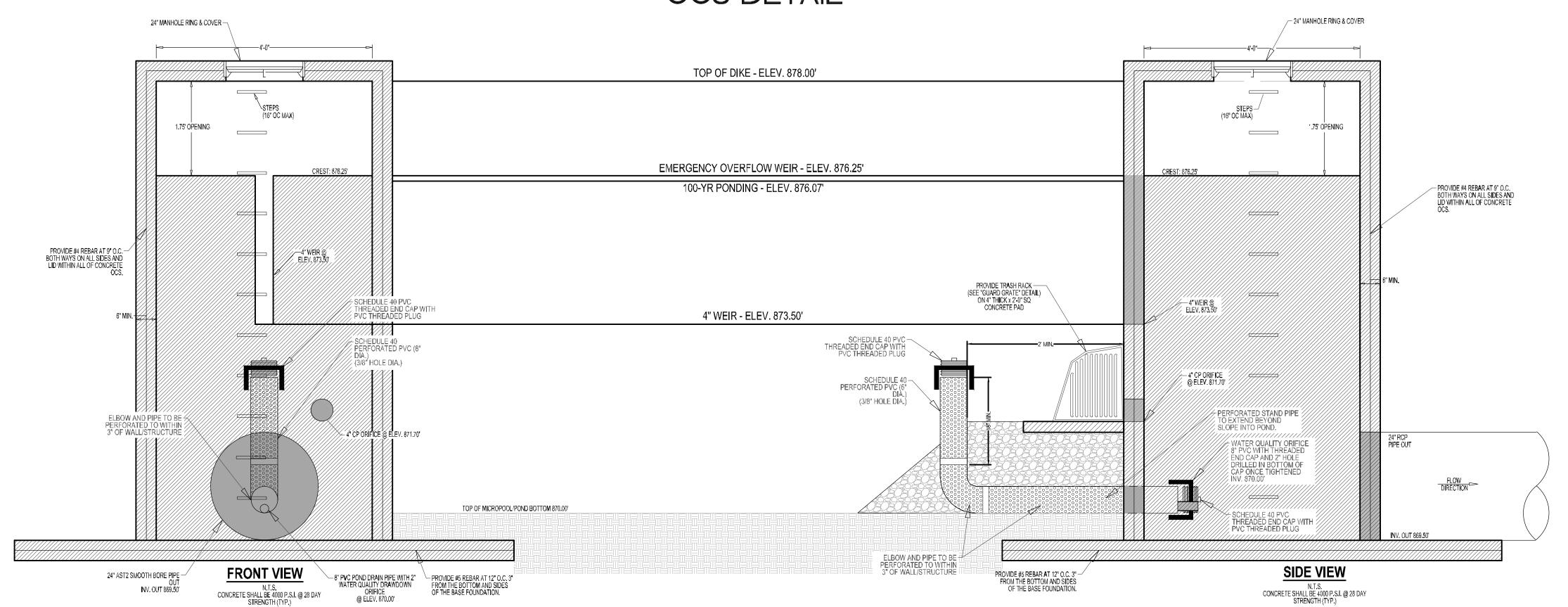
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OCS DETAIL



CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW & APPROVAL PRIOR TO FABRICATION

O.C.S. SHALL BE CONSTRUCTED ON COMPACTED SUBGRADE. MIN. 6" #57 STONE BENEATH WANHOLE AND 24' COMPACTION TO 98% STANDARD PROCTOR BELOW. COMPACTION BELOW SHALL BE APPROVED BY ONSITE GEOTECHNICAL ENGINEER. ALL PIPE \$.0PES & LENGTHS ARE CALCULATED FROM CENTER OF STORM STRUCTURE TO CENTER OF STORM STRUCTURE. CN CRETE SHALL BE 4000 P.S.J. @ 25 DAY STRENGTH (TYP

- I. STONE FILTER SHALL BE #4 STONE. A__ CONCRETE TO BE 6" MIN. THICKNESS.
- OCS MANHOLE SHALL BE OFFSET TO PROVIDE DIRECT ACCESS TO STRUCTURE ACCESS STEP THE GCS WEIR SHALL BE PLACED IN THE STRUCTURE WALL.

ROUND OUTLET CONTROL STRUCTURE

WHEN DELIVERED TO SITE, AND SHALL BE SET INTO CONCRETE WHEN BASE FOUNDATION IS POURED IN PLACE. SIX INCHES BELOW THE LOWEST INVERT, #5 REBAR SHALL EXTEND THROUGH DRILLED HOLES, ONE FOOT ON CENTER, ON ALL FOUR SIDES. CONTINUOUS SECTIONS OF #5 REBAR SHALL EXTEND THROUGH THE HOLES FORM ONE SIDE OF THE STRUCTURE, ACROSS THE INSIDE OF THE STRUCTURE AND THROUGH THE MATCHING HOLE ON THE OTHER SIDE OF THE STRUCTURE. THE REBAR SHALL EXTEND A MINIMUM OF 10" BEYOND EACH OUTSIDE FACE OF THE STRUCTURE AND BE WIRED TO THE REBAR SET IN THE CONCRETE BASE FOUNDATION. CONCRETE SHALL BE POURED AND FINISHED UP TO THE ELEVATION OF THE LOWEST INVERT ON THE INSIDE AND OUTSIDE OF THE OUTLET CONTROL STRUCTURE.

Buoyancy Calculations For OCS:

HEIGHT OF OCS= 9 FT TOP OF STRUCTURE (EMER. OVRFLW) = 876.25' BOTTOM OF MANHOLE= 869.50' 100YR STAGE= 875.97' DEPTH OF WATER TOP-BOTTOM= 6.47 FT VOLUME WATER DISPLACED= (4)(3.14)(6.47)= 81.26 CF Fb displaced water:

Fb dw= (62.4 lb/cf) * 81.26 cf= 5,070.62 lbs Concrete Volume of Manhole With 6" Walls= (5)(3.14)(6.47) - (4)(3.14)(6.47) = 20.32 cfSpecific weight concrete= 150 lb/cf Weight of Manhole= 20.32*150 lb/f= 3,048 lbs

Required weight of concrete footing and manhole= = 5,070.62 lbs Required Weight of Footing=5,070.62 - 3,048 = 2,022.62 lbs

Volume Req= 2,022.62/150= 12.48 cf Dimensions of footing= 5' X 5' X 1.00'= 25 cf

OWNER/DEVELOPER COMPANY: ROCKDALE COUNTY

ADDRESS: TBD

CONTACT: TBD

COMPANY: PATRICK & ASSOCIATES

ADDRESS: 928 BLACKLAWN RD SW,

SITE DESIGNER

CONYERS, GA 30094

PHONE: 770-483-9745

MADISON, GA 30650

PHONE: 706.342.1104

CONTACT: JAMES S. HULL

EMAIL: TREYLOG@AOL.COM

COMPANY: GEORGIA CIVIL, INC. ADDRESS: P.O. BOX 896

PHONE: TBD

EMAIL: TBD

LEVEL II CERTIFIED DESIGN PROFESSIONAL ADDRESS: P.O. BOX 289 CONYERS, GA 30012 #53274 - EXP. 05.01.2020 PHONE: (770) 278-7293 CONTACT: BRITTANY KONOPKA

EMAIL:BRITTANY.KONOPKA@ROCKDALECOUNTYGA.GOV 24-HOUR CONTACT CONTRACTOR COMPANY: TBD

JASON BROWN (770) 717-9972

SURVEYOR

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JASON P. BROWN

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STORMWATER MANAGMENT DETAILS

DRAWING DATE: 4/18/2024

REVISIONS

DATE: DESCRIPTION:

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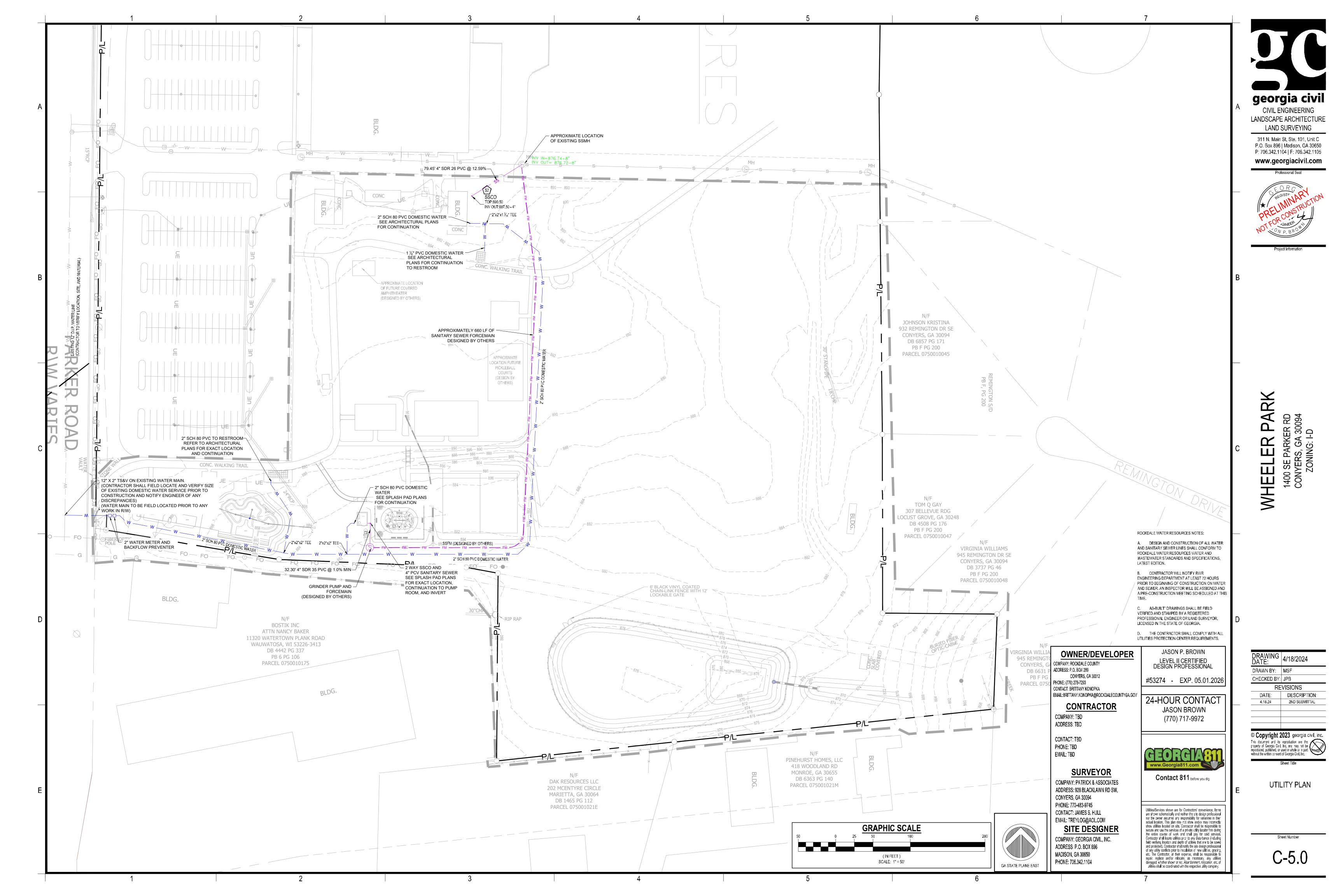
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CHECKED BY: JPB

4.18.24



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

PUBLIC DRINKING WATER SYSTEM RESERVOIRS STREAM CROSSINGS FOR WATER LINES AND SEWER LINES, PROVIDED THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF ROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER; STREAM CROSSINGS FRO ANY UTILITY LINES OF ANY FLECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL FLECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION. ANY UTILITY UNDER THE REGULATORY JURISDICTION OF TH FEDERAL Y REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTRUMENTALITY OF THE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION, OR DISTRIBUTION OF POWER, PROVIDED THAT: (A) THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF ISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER. (B) NATIVE RAPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (C) THE ENTITY IS NO A SECONDÀRY PERMITTEE FOR A PROJECT WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS

BUFFER CROSSINGS FOR FENCES, PROVIDED THAT THE CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS WITHIN THE BUFFER; STREAM CROSSINGS FOR AERIAL UTILITY LINES, PROVIDED THAT (A) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 100 LINEAR FEET, (B) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCE TO THE BUFFER, (C) ONLY

REES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E. DISTURBANCE OF UNDERLYING VEGETATION IS MINIMIZED), AND (D) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN HALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE, ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE, AND JUSTIFICATION. RIGHT-OF-WAY POSTS, GUY WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN HE CURRENT RIGHT-OF-WAY UNDERTAKEN OR FINANCE IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION. THE GEORGIA HIGHWAY AUTHORITY OR STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY MUNICIPALITY, PROVIDED THAT (Å) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE. (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT

HE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN HE CURRENT RIGHT-OF-WAY BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION. ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTUMENTALITY OF THE UNITED TATED ENGAGED IN THE GENERATION. TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT ED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1.000 SQUARE FEE ER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT: AND

MAINTENANCE (EXCLUDING DREDGING), REPAIR AND/OR UPGRADE OF SOIL AND WATER CONSERVATION DISTRICT WATERSHED DAMS WHEN UNDER THE

XCEED 1,000 SQUARE FEET PER STRUCTURE, {C} NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS OR DISTURBED AREAS WITHIN

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

ECHNICAL SUPERVISION OF USDA NATURAL RESOURCES CONSERVATION SERVICE

STREAM CROSSINGS FOR WATER LINES AND SEWER LINES, PROVIDED THE STREAM CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE IUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER; STREAM CROSSINGS FRO ANY UTILITY LINES OF ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF TH FEDERAL BY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTRUMENTALITY OF HE UNITED STATES ENGAGED IN THE GENERATION, TRANSMISSION, OR DISTRIBUTION OF POWER, PROVIDED THAT: (A) THE STREAM CROSSINGS OCCUR AT AN ANGLE AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, (B) NATIVE RAPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED REAS WITHIN THE BUFFER AND (C) THE ENTITY IS NO A SECONDARY PERMITTEE FOR A PROJECT WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS

BUFFER CROSSINGS FOR FENCES, PROVIDED THAT THE CROSSINGS OCCUR AT AN ANGLE, AS MEASURED FROM THE POINT OF CROSSING, WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE IPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS WITHIN THE BUFFER; STREAM CROSSINGS FOR AERIAL UTILITY LINES, PROVIDED THAT (A) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 100 LINEAR FEET, (B) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCE TO THE BUFFER. (C) ONLY REES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E. DISTURBANCE OF UNDERLYING

VEGETATION IS MINIMIZED), AND (D) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN HALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE AND JUSTIFICATION. RIGHT-OF-WAY POSTS, GUY WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN E CURRENT RIGHT-OF-WAY UNDERTAKEN OR FINANCE IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION, THE GEORGIA HIGHWAY LUTHORITY OR STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY MUNICIPALITY, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE. (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT D 1,000 SQUARE FEET PER STRUCTURE. (C) NATIVE RIPARIAN VÉĞÉTATION IS RE-ESTABLISHED IN ANY BARE AREAS OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS

HE CURRENT RIGHT-OF-WAY BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE TORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY EGULATORY COMMISSION , ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTUMENTALITY OF THE UNITED STATED ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE, (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRÜBBED) DOES NOT EXCEED 1,000 SQUARE FEET ER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS NOT A SECONDARÝ PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT; AND MAINTENANCE (EXCLUDING DREDGING), REPAIR AND/OR UPGRADE OF SOIL AND WATER CONSERVATION DISTRICT WATERSHED DAMS WHEN UNDER THE TECHNICAL SUPERVISION OF USDA NATURAL RESOURCES CONSERVATION SERVICE.

RIGHT-ÓF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN

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

PUBLIC DRINKING WATER SYSTEM RESERVOIRS CROSSINGS FOR UTILITY LINES THAT CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER ANY LAND DISTURBING ACTIVITY CONDUCTED PURSUANT TO AND IN COMPLIANCE WITH A VALID AND EFFECTIVE LAND-DISTURBING PERMIT ISSUED SUBSEQUENT TO APRIL 22, 2014 AND PRIOR TO DECEMBER 31,2015 ANY LOT FOR WHICH THE PRELIMINARY PLAT HAS BEEN APPROVED PRIOR TO DECEMBER 31, 2015 IF ROADWAYS, BRIDGES, OR WATER AND SEWER LINES HAVE BEEN EXTENDED TO SUCH LOT PRIOR TO THE EFFECTIVE DATE OF THIS ACT AND IF THE REQUIREMENT TO MAINTAIN A 25 FOOT BUFFER WOULD CONSUME AT LEAST 18 PERCENT OF THE HIGH GROUND OF THE PLATTED LOT OTHERWISE AVAILABLE FOR DEVELOPMENT BUFFER CROSSINGS FOR FENCES, PROVIDED THAT THE CROSSINGS OCCUR AT AN ANGLE. AS MEASURED FROM THE POINT OF CROSSING. WITHIN 25 DEGREES OF PERPENDICULAR TO THE STREAM AND CAUSE A WIDTH OF DISTURBANCE OF NOT MORE THAN 50 FEET WITHIN THE BUFFER, AND NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE AREAS WITHIN THE BUFFER:

CROSSINGS FOR AERIAL UTILITY LINES, PROVIDED THAT (A) THE NEW UTILITY LINE RIGHT-OF-WAY WIDTH DOES NOT EXCEED 100 LINEAR FEET, (B) UTILITY LINES ARE ROUTED AND CONSTRUCTED SO AS TO MINIMIZE THE NUMBER OF STREAM CROSSINGS AND DISTURBANCE TO THE BUFFER, (C) ONLY TREES AND TREE DEBRIS ARE REMOVED FROM WITHIN THE BUFFER RESULTING IN ONLY MINOR SOIL EROSION (I.E. DISTURBANCE OF UNDERLYING VEGETATION IS MINIMIZED), AND (D) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER. THE PLAN SHALL INCLUDE A DESCRIPTION OF THE STREAM CROSSINGS WITH DETAILS OF THE BUFFER DISTURBANCE INCLUDING AREA AND LENGTH OF BUFFER DISTURBANCE, ESTIMATED LENGTH OF TIME OF BUFFER DISTURBANCE, AND JUSTIFICATION.

RIGHT-OF-WAY POSTS, GUY WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY UNDERTAKEN OR FINANCE IN WHOLE OR IN PART BY THE DEPARTMENT OF TRANSPORTATION, THE GEORGIA HIGHWAY THORITY OR STATE ROAD AND TOLLWAY AUTHORITY OR UNDERTAKEN BY ANY COUNTY MUNICIPALITY, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE. (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT XCEED 1 000 SQUARE FEET PER STRUCTURE. (C) NATIVE RIPARIAN VEĜETATION IS RE-ESTABLISHED IN ANY BARE AREAS OR DISTURBED AREAS WITHIN HE BUFFER AND (D) THE ENTITY IS NOT A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS

RIGHT-OF-WAY POSTS, GUY-WIRES, ANCHORS, SURVEY MARKERS, AND THE REPLACEMENT OR MAINTENANCE OF EXISTING UTILITY STRUCTURES WITHIN THE CURRENT RIGHT-OF-WAY BY ANY ELECTRIC MEMBERSHIP CORPORATION OR MUNICIPAL ELECTRICAL SYSTEM OR ANY PUBLIC UTILITY UNDER THE REGULATORY JURISDICTION OF THE PUBLIC SERVICE COMMISSION, ANY UTILITY UNDER THE REGULATORY JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION, ANY CABLE TELEVISION SYSTEM AS DEFINED IN CODE SECTION 36-18-1, OR ANY AGENCY OR INSTUMENTALITY OF THE UNITED STATED ENGAGED IN THE GENERATION, TRANSMISSION OR DISTRIBUTION OF POWER, PROVIDED THAT (A) THE AREA OF LAND DISTURBANCE DOES NOT EXCEED 100 SQUARE FEET PER STRUCTURE. (B) THE AREA OF BUFFER VEGETATION TO BE CUT (NOT GRUBBED) DOES NOT EXCEED 1.000 SQUARE FEE PER STRUCTURE, (C) NATIVE RIPARIAN VEGETATION IS RE-ESTABLISHED IN ANY BARE OR DISTURBED AREAS WITHIN THE BUFFER AND (D) THE ENTITY IS T A SECONDARY PERMITTEE FOR A PROJECT LOCATED WITHIN A COMMON DEVELOPMENT OR SALE UNDER THIS PERMIT; AN MAINTENANCE (EXCLUDING DREDGING). REPAIR AND/OR UPGRADE OF SOIL AND WATER CONSERVATION DISTRICT WATERSHED DAMS WHEN UNDER THE TECHNICAL SUPERVISION OF USDA NATURAL RESOURCES CONSERVATION SERVICE

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

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN CERTIFICATION

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

JASON P. BROWN ... certify under penalty of law that this plan was prepared after 1 site visit to the locations described herein by myself or my authorized agent, under my lirect supervision.

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

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

GSWCC EROSION CONTROL NOTES:

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

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

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

The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities 4. Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and

sediment control measures shall be implemented to control or treat the sediment source

ADDITIONAL EROSION CONTROL NOTES:

Maximum cut slopes are 3:1, 3 horizontal to 1 vertical, unless otherwise Maximum fill slopes are 3:1, 3 horizontal to 1 vertical, unless otherwise noted

All buffers, tree save areas, and/or limits of disturbance shall be clearly marked in the field by the contractor by flagging or fencing and signage, prior to commencement of any land disturbance activities or clearing/grubbing activities. Buffers, tree save areas, and areas beyond limits of disturbance are to be left undisturbed in their natural state Contractor shall not disturb underground utilities while installing Erosion, Sedimentation and Pollution Control Practices. Contractor shall have all utilities field located before

Contractor shall notify design professional 48 hours before beginning each phase of construction.

6. Contractor shall notify CITY OF CONYERS inspectors 24 hours before beginning each phase of construction.

Construction debris and/or waste shall not be buried or burned on site. All construction debris and/or waste shall be taken to a state approved landfill. All buffers and tree save areas shall be clearly identified by flagging and/or fencing prior to commencement of any land disturbance activities.

All initial phase Erosion, Sedimentation and Pollution Control best management practices shall be installed prior to any grading.

The installation of erosion and sedimentation control measures and practices shall occur prior to or concurrent with land disturbing activities and construction on the site and shall be maintained until permanent ground cover is established to 90%.

All Erosion, Sedimentation and Pollution Control best management practices shall be inspected and repaired of damage daily. Any accumulated silt shall be removed and spread on site and controlled with temporary mulching and/or grassing.

Erosion, Sedimentation, and Pollution Control best management practices shall be maintained at all times. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION OR AS REQUIRED BY ENGINEER OR LOCAL JURISDICTION INSPECTOR.

3. Maintenance of all soil erosion and sedimentation control measures and practices whether temporary or permanent shall be the responsibility of the contractor.

14. Any discrepancy within these plans shall be referred to the design professional by the contractor for clarification before proceeding with work.

15. Sediment storage maintenance indicators must be installed in sediment storage structures, indicating the 1/3 full volume.

Contractor shall provide temporary diversion berms and down drains on fill slopes to prevent erosion prior to stabilization.

. Contractor shall remove accumulated sediment from detention basin at end of construction when all disturbed areas have been fully stabilized.

REVISIONS SHOWN ON ES&PC PLAN:

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

Initial Phase:

Preconstruction meeting with CITY OF CONYERS Perform initial monitoring

4. Install initial silt fence (perimeter silt fence locations first)

5. Provide any needed initial mulching, grassing or other ground cover Install topsoil location silt fence Begin clearing, grubbing, topsoiling, and grading operations within limits of detention ponds & install construction road Install appropriate vegetative and structural BMP's (inlet / outlet protection, flocculants / coagulants, mulching /

grassing, etc.) B. Install wheel wash and fuel storage location (if necessary) L. Coordinate Site Review Meeting with Engineer and/or Local Issuing

ntermediate Phase:

intermediate BMPs

ensure required water quality guidelines are met.

EPD BUFFER ENCROACH, PERMIT REQ'D

WETLANDS OR WATERS OF US ON SITE:

RECEIVING WATERS:

STATE AND LOCAL BUFFERS ADHERED TO: N/A

Install storm pipe systems with protected inlets (Sd2's) Throughout land disturbance process, maintain existing BMP's (Vegetative and Structural Practices)

3. Throughout land disturbance process, continue NPDES monitoring and

. Coordinate with utility companies on utility/sleeve locations 5. Begin remaining clearing, grubbing, topsoiling, and grading operations

install any remaining topsoil location silt fence 7. Perform remaining grading (adjust storm risers with grade change(s) and adjust all affected Sd2's

8. As areas are brought to finish grade, grass and blanket any areas that are inish grade or that will be lef Adjust storm risers with grade change(s) and adjust all Sd2's

10. Each fill slope shall have a diversion at the top that is maintained and reinstalled as the slope is constructed

11. Continue flocculant / coagulant applications and continue every 7 days throughout project 12. Install remaining storm system(s) as grades are achieved

13. Immediately install each storm structure with associated Sd2's and add floc logs to each storm structure 14. Grass / mulch / flocculent / coagulant disturbed areas and install

INTENDED LAND DISTURBANCE CONSTRUCTION ACTIVITY SEQUENCE: 15. Install utilities (water and septic/sewer) 16. 16. Grass / mulch / flocculent / coagulant disturbed areas and instal intermediate BMPs

18. Grass / mulch / flocculent / coagulant disturbed areas and install intermediate BMPs 19. Install curb & autter 20. Grass / mulch / flocculent / coagulant disturbed areas and install

intermediate BMPs 1. Install pavement 22. Finish grade shoulders and stabilize disturbed areas with permanent

17. Install GAB throughout roadway up to designated line

23. Continue to apply flocculent / coagulant applications, mulching, and grassing at each step to limit soil exposure

1. Throughout land disturbance process, maintain existing BMP's (vegetative and structural practices) 2. Throughout land disturbance process, continue NPDES monitoring and reporting

Complete paving operations Achieve Final Site Stabilization 5. Coordinate Site Review Meeting with Engineer and/or Local Issuing

Authority Inspector Clean silt from all storm systems (distribute onsite and stabilize) Remove any temporary BMP practices once site stabilization is achieved

and signed off by Engineer 8. Coordinate Site Review Meeting with Engineer for final site approval

CONCRETE WASHOUT: such as tools, concrete mixer chutes, hoppers and the rear of the vehicles. Contractor shall install a concrete washdown. This area is only for the was

WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

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

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

BMP'S FOR PETROLEUM SPILLS AND LEAKS:

Fix any leaks immediately, maintain and clean equipment regularly Designate areas for equipment maintenance and fueling that are located on level ground and away from any water sources. Park and service equipment on top of tarps to insure any spills or leaks do not get into the ground.

Store all fluids and containers in a leak-proof, locked container to insure safe storage. Collect and remove all leftover lubricants, containers, and trash, especially tires, batteries, pieces or parts of equipment, and all fluid containers. Maintain a spill-containment and clean up kit. At a minimum, a kit for petroleum products should include: a. A leak proof container to catch leaking fluid.

. A shovel, rake, and other hand tools to create dirt berms. . Absorbent pads, adsorbent substances such as cat litter or oil drying agents, that will absorb fluids before soaking into ground.

d. Various hoses, plugs, and clamps to control a hydraulic line break. A variety of locking "vise grips" pliers can be used in emergency.

e. Large plastic bags to store any contaminated materials for disposal. Temporary fueling areas shall be installed and operated in compliance with Georgia E.P.D. regulations.

CONSTRUCTION MATERIALS:

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

EROSION CONTROL MEASURES TO CONTROL POLLUTANTS IN STORM WATER POST CONSTRUCTION: *NOTE THE PERMITTEE IS ONLY RESPOSIBLE FOR INSTALLATION AND MAINTENANCE OF STORMWATER MANAGEMENT DEVISES PRIOR TO FINAL STABILIZATION OF THE SITE AND NOT THE OPERATION AND MAINTENANCE

OF SUCH STRUCTURES AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.

1. RIP RAP OUTFALL/CHANNEL PROTECTION: Shall be inspected and maintained prior to final stabilization. Any dislodged stones and/or other repairs deemed necessary shall be completed according to conditions set forth in GAR100001 permit. 2. WATER QUALITY BASIN: Water quality basin shall be inspected and cleaned out according to Georgia Stormwater Management Manual's recommendations to

NATURE OF CONSTRUCTION ACTIVITY:

PROJECT LOCATION: 1400 SE PARKER RD CONYERS, GA 30094 PROJECT ADDRESS: ADDITIONS TO EXISTING PARK PROJECT TYPE: IMPROVEMENTS TO BE MADE SITE ACREAGE 48.45 ACRES ISTURBED ACREAGE: 4.1 AC STATE WATERS ON SITE:

LITTLE CEDAR CREEK

CONSTRUCTION OF NEW PARK AMENITIES INCLUDING SKATE PARK. SPLASH PAD. PAVILION, PLAYGROUND, AND VOLLEYBALL COURTS

AND POST DEVELOPMENT CONDITIONS: PRE CN: 70 POST CN: 81 PRE FLOW: 16.92 CFS POST FLOW: 3.20 CFS

ESTIMATE OF RUNOFF

COEFFICIENT OR PEA DISCHARGE FLOW PR

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

*Reporting practices

*Wetland and state water protection practices

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

*Site stabilization practices *Vegetative and structural erosion control practices *Pollution prevention plan and practices *BMP maintenance and inspections *Spill control practices *Material management practices for spill prevention plans

POLLUTION REDUCTION PRACTICES FOR STORM WATER DISCHARGES:

STABILIZATION (VEGETATIVE) MEASURES:

*Waste control practices

*Monitoring plans and practices

ALL STABILIZATION (VEGETATIVE) MEASURES SHALL BE IMPLEMENTED AS STATED IN THE MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA (LATEST FOITION) (Bf) Buffer Zone - A strip of undisturbed, original vegetation; enhanced or restored existing vegetation; or re-establishment of vegetation surrounding disturbed areas or bordering streams, ponds, wetlands, lakes, or coastal water to provide a buffer zone for one or more of the following purposes: reduce storm runoff velocities, act as visual screen, reduce construction noise, improve aesthetics on disturbed land, filtering and infiltrating runoff, cooling rivers/streams by creating shade, provide food and cover for wildlife, flood protection, or protect channel banks from scour and (DS1) Disturbed Area Stabilization (with Mulching Only)- Applying plant residues or other suitable materials, produced on site if possible, to the soil surface in order to reduce runoff, conserve moisture, prevent surface compaction or crusting, control undesirable vegetation, modify soil temperature, or increase biological activity in the soil. This practice is applicable where stabilizing disturbed/denuded areas is not practical utilizing seeding or planting. (DS2) Disturbed Area Stabilization (with Temporary Seeding)- Establishing temporary vegetative cover with fast growing seedlings for seasonal protection on disturbed/denuded areas in order to reduce runoff and sediment damage of downstream resources, protect the soil surface from erosion, improve wildlife habitat, improve aesthetics, improve tilth, infiltration and aeration as well as organic matter for permanent plantings. This practice is applicable for up to six months or until permanent vegetative cover can be installed. It should be coordinated with permanent measures to assure economical and effective stabilization. (DS3) Disturbed Area Stabilization (with Permanent Vegetation)- Planting of perennial vegetation such as trees, shrubs, vines, or legumes on exposed areas for final permanent stabilization in order to protect the soil surface from erosion, reduce damage from sediment and runoff to downstream areas, improve wildlife habitat and visual resources, and improve aesthetics. It will apply on cut and fill slopes, earth spillways, borrow areas, spoil areas and severely eroded or gullied lands.

(DS4) Disturbed Area Stabilization (with Sodding). Establishing an immediate and permanent vegetative cover using sods in order to reduce runoff and erosion, improve aesthetics and land value, reduce dust and sediments, stabilize waterways and critical areas, filter sediments, nutrients, reduce downstream complaints, reduce likelihood of legal action, reduce likelihood of work (DU) Dust Control on Disturbed Areas- Controlling surface and air movement of dust on construction sites, roads, and demolition sites in order to prevent surface and air movement of dust from exposed soil surfaces, reduce the presence of airborne substances which may be harmful or injurious to human health, welfare, or safety, or to animals or plant life. Methods and materials which can be used include mulches, vegetative cover, spray-on adhesives, mechanical manipulation of existing soil surfaces, irrigation, barriers, chemicals, and stone surface covers. (FI-Co) Flocculants and Coagulants- Formulated to assist in the solid/liquid separation of suspended particles (which are characteristically very small) in solution. The suspended stability of uch particles (colloidal complex) is due to both their small size and the electrical charge between particle (Sb) Streambank Stabilization (Using Permanent Vegetation). Using native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems in order to lessen the impact of rain directly on the soil, trap sediment from adjacent land, form a root mat to stabilize and reinforce the soil on the streambank, provide wildlife habitat, enhance stream appearance, and lower summertime water temps. (Ss) Slope Stabilization- A protective covering used to prevent erosion and establish vegetation on steep slopes, shore lines, or channels in order to stabilize the soil and act as a rain drop impact dissipater while providing a microclimate which protects young vegetation and promotes its establishment. (Tac) Tackifiers- Substances used to anchor soil, compost, seed, straw, hay or mulch by causing organic material to bind together and discourage it from drifting downslope. Tackifiers also conserve moisture; prevent surface compaction, increase soil infiltration, soil fertility, enhanced seed germination, increased soil cohesion, enhanced soil stabilization, reduced stormwater runo turbidity and reduction in loss of topsoil.

STRUCTURAL PRACTICES:

ALL STRUCTURAL PRACTICES SHALL BE IMPLEMENTED AS STATED IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA (LATEST EDITION). (Cd) Check Dam- A small temporary barrier, grade control structure, or dam constructed across a swale or drainage ditch which drains five (5) acres or less (not to be used in a live stream) in order to reduce erosion by slowing the velocity of concentrated storm water flows. (Ch) Channel Stabilization- Improving, constructing or stabilizing an open channel for water conveyance. Open channels are to be non-erosive, with no sediment deposition and able to provide adequate capacity for flood water, drainage, other water management practices, or any combination thereof. (CO) Construction Exit- A stone stabilized pad located where traffic leaves a construction site to a public right-of-way, street, alley, sidewalk, parking, etc. (i.e. bare soil to paved area) in order to reduce/eliminate depositing construction area mud onto public rights-ofway by motor vehicles or by runoff. (Cr) Construction Road Stabilization- Roads, parking areas, and other on-site transportation routes that are stabilized with coarse aggregate between the time of initial grading and final stabilization in order to provide a fixed route for construction traffic, reduce erosion, reduce subsequent re-grading of permanent roadbeds, and provide a stable base for paving. (DC) Stream Diversion Channel- A temporary channel that diverts a live stream and allows work "in the dry" while protecting streambed(s) from erosion. This diversion is used when in-stream work is unavoidable, as with linear projects such as utilities or roads that frequently cross and impact live streams and create a potential for excessive sediment loss by both the disturbance of the approach areas and by the work within the streambed and banks. (Di) Diversion- An earth channel with a compacted supporting ridge on the lower side; constructed above, across, or below a slope to reduce slope lengths, break-up concentrations of runoff, intercept runoff, and move water to stable outlets at non-erosive velocities (Dn1) Temporary Downdrain Structure- A flexible conduit of heavy-duty plastic or other material used as a temporary structure to convey storm water down the face of a cut or fill slope vithout causing slope erosion and allowing the establishment of vegetation on the slope. Flexible downdrains are removed once the permanent water disposal system is installed (Dn2) Permanent Downdrain Structure- A permanent paved chute, pipe or sectional conduit of prefabricated material designed to safely conduct surface runoff from the top to the bottom of a slope thus minimizing erosion. Downdrain structures are to be used where concentrated water will cause excessive erosion of cut and fill slopes. (Fr) Filter Ring- A temporary stone barrier used in conjunction with other sediment control measures and constructed at storm drain inlets and pond outlets, in order to reduce flow velocities, event failure of other sediment control devices, and prevent sediment from leaving the site or entering drainage systems, prior to permanent stabilization of the disturbed are (Ga) Gabion- Large, multi-celled, wire mesh boxes, filled with rocks, which form flexible monolithic building blocks used in channel revetments, retaining walls, abutments, check dams, etc. to prevent erosion and sediment damage to a specific structure. When properly wired together, they can be used to stabilize steep or highly erosive slopes (Gr) Grade Stabilization Structure- Structures of concrete, rock masonry, steel, aluminum, treated wood, etc. that are installed to stabilize the grade in natural or artificial channels and to revent the formation or advance of gullies and to reduce erosion and sediment pollution.

(LV) Level Spreader- A storm flow outlet device structure constructed at zero grade across a slope where concentrated runoff may be intercepted and diverted at non-erosive sheet flow (Rd) Rock Filter Dam- A permanent or temporary stone filter dam, which can be used in conjunction with a temporary sediment trap, installed across small streams, drainageways with a drainage area of 50 acres or less and outlets for sediment traps in order to serve as a sediment-filtering device and to reduce storm water flow velocities. This structure is not intended to substantially impound water and may require a US Army Corps of Engineers permit. (Re) Retaining Wall- A constructed wall of concrete, masonry, reinforced concrete, cribbing, treated timbers, gabions, stone dry wall, rip-rap or other durable material in order to stabilize cut or fill slopes where maximum permissible slopes of earth are not obtainable without the use of the wall. (Rt) Retrofitting- A device or structure, such as half round corrugated metal pipe or similar, placed in front of a permanent stormwater detention pond outlet or roadway drainage structure to serve as a temporary sediment filter, thus allowing permanent stormwater detention basin structures to function as temporary sediment retention basins for land-disturbing projects, and allow roadway drainage to be used for temporary sediment storage. (Sd1) Sediment Barrier- A temporary structure constructed of silt fence, straw, hay bales, brush piles, mulch berms, compost filter sock, gravel or other filtering materials (typically supported by steel or wood posts), that are used to minimize and prevent sediment carried by sheet flow from leaving the site until final stabilization. Silt fence shall not be installed across streams,

vater**w**ays, or other concentrated flow areas. (Sd2) Inlet Sediment Trap- A temporary protective device formed at or around a storm drain inlet to trap sediment in runoff water from small, disturbed areas and prevent sediment from entering a storm drainage system prior to permanent stabilization of the disturbed area draining to the inlet. Clean out of these facilities is normally required after each heavy rainfall. (Sd3) Temporary Sediment Basin- A basin created by construction of an embankment, barrier or dam containing a principal spillway pipe and an emergency spillway that are normally situated within natural drainageways and at the lowest point on a construction site. Structure size will vary depending on the size of the drainage area, soil type, volume of sediments to be trapped, rainfall pattern(s), structure location, etc. Permanent sediment basins are designed to fit into the overall plan of the completed development. Sd3's are designed to detain runoff waters

(Sd4) Temporary Sediment Trap- A small temporary pond (with no pipe or riser) that drains a disturbed area so that sediment can settle out. Sd4's are designed to collect and store sediment (Sk) Floating Surface Skimmer- A buoyant device that drains surface water of sediment ponds, traps or basins and releases it at a controlled rate of flow. It "skims" the water surface where strations are at a minimum instead of draining from the bottom where sediment concentrations are higher, and drains to a riser or the ba (SpB) Seep Berm-A linear control device constructed as a diversion (perpendicular to the direction of the runoff) to enhance dissipation and infiltration of runoff while using intermediate dikes to create multiple sedimentation chambers allowing smaller storms to seep out while diverting larger flows to a sediment storage area. (Sr) Temporary Stream Crossing- A temporary structure installed across a flowing stream or watercourse for use by construction equipment without moving sediment into streams, damaging the streambed or channel, or causing flooding. The structure may consist of a pipe, bridge, or other suitable device permitting vehicular traffic to cross streams or watercourses. (St) Storm Drain Outlet Protection- A paved or short section of rip-rap channel placed at the outlet of a storm drain system in order to reduce the velocity of water flows below storm drain

(Su) Surface Roughening- Providing a rough soil surface with horizontal depressions created by operating a tillage or other suitable implement on the contour, or by having slopes in a roughhead condition by not fine-grading them, in order to aid in establishment of vegetative cover with seed, to reduce runoff velocity and increase infiltration and to reduce erosion and provide for sediment trapping. (TC) Turbidity Curtain- A floating or staked barrier installed within the water in order to minimize turbidity and silt migration from work occurring within the water or as a supplement to perimeter control BMPs at the water's edge. Silt or turbidity is confined to the area within the boundary created by the installation, such that suspended particles drop out of the water column over time. (Tp) Topsoiling- Stripping off the more fertile top soil, storing it, then spreading it over the disturbed area after completion of construction activities, in order to provide a suitable soil medium for vegetative growth on areas where other measures will not produce or maintain a desirable stand.

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

PRODUCT SPECIFIC PRACTICES

All pollutants from waste disposal practices, soil additives, remediation of spills and leaks of petroleum products, concrete truck washout, etc., should any of these occur, shall be controlled by the implementation of appropriate best management practices, the site shall be in compliance with all applicable state and local waste disposal, sanitary sewer or septic Petroleum Based Products - Containers for products such as fuels, lubricants, and tars shall be inspected daily for leaks and spills. This includes onsite vehicles and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas shall be located away from State Waters, natural drains, and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oils, fuels, and lubricants is prohibited. Proper

Paints/Finishes/Solvents - All products shall be stored in tightly sealed original containers when not in use. Excess product shall not be discharged to the storm water collection system. Excess product, materials used with these products, and product containers shall be disposed of according to manufacturer's specifications and recommendations. Fertilizer/Herbicides - These products shall be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the GSWCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers Building Materials - No building or construction materials shall be buried or disposed of onsite. All such material shall be disposed of in proper waste disposal procedures.

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

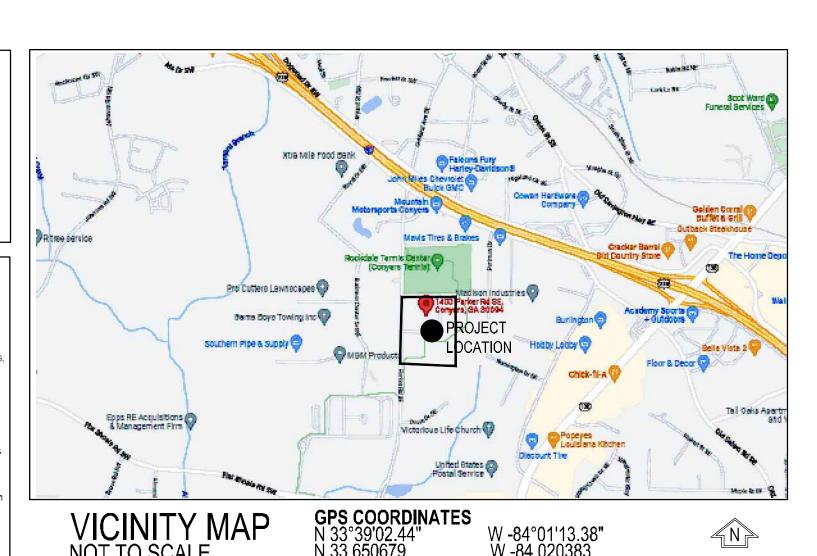
(1) Contain all wash water on soil, in a bowl shaped area created in the designated wash area to prevent the wash water from flowing from the washout area; (2) Use the minimum amount of water to wash down the tools, concrete mixer chutes, hoppers and the rear of vehicles

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

disposal methods includes collection in a suitable container and disposal as required by local and State regulations.

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

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



PRIMARY PERMITTEE CONTACT INFORMATION:

ROCKDALE COUNTY BRITTANY KONOPKA CONYERS, GA 30012 (770) 278-7293

BRITTANY KONOPKA@ROCKDALECOUNTYGA.GOV

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

2. Sb 3. Ds3. Ds4

POSSIBLE POLLUTANT SOURCES FOR THIS PROJECT

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

NON-STORM WATER DISCHARGES ALLOWED UNDER PERMIT:

Fire fighting activities Air conditioning condensation Fire hydrant flushing Potable water sources including Uncontained Ground Wate

. Foundation or footing drains where flows are not contaminated with process materials or pollutants. Irrigation drainage

HAZARDOUS WASTES:

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

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

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

SANITARY WASTES:

A minimum of one portable sanitary unit will be provided for every ten (10) workers on the site. All sanitary waste will be collected from the portable units a minimum of one time per week by a licensed portable facility provider in complete compliance with local and state regulations. All sanitary waste units will be located in one area where the likelihood of the unit contributing storm water discharge is negligible. Additional containment BMP's must be implemented, such as gravel bags or specially designed plastic skid containers around the base to prevent wastes from contributing to storm water discharges. The location of sanitary waste units must be identified on the ES&PC Plan b the contractor once the locations have been determined. Sanitary sewer will be provided by Municipal Authority/Septic System at the completion of this Project.

SPILL CLEANUP AND CONTROL PRACTICES:

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

NON-EXEMPT ACTIVITIES:

implementation of appropriate best management practices. The site will be in compliance with all applicable state and local waste disposal, sanitary sewer or septic system regulations.

All pollutants from waste disposal practices, soil additives, remediation of spills and leaks of petroleum products, concrete truck washout, etc., should any of these occur, will be controlled by the

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

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

PaB- PACOLET SANDY LOAM, 2% TO 6% SLOPES Ur- URBAN LAND

REFER TO SHEET C-1.1 FOR CONSTRUCTION REQUIREMENTS AND SPECIFICATIONS

CRITICAL AREAS AND ADDITIONAL MEASURES:

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

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

and practices prior to land disturbing activities.

The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures

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

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CHECKED BY: JPB

REVISIONS DATE: DESCRIPTION: 4.18.24 2ND SUBMITTAL

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EROSION SEDIMENTATION & POLLUTION CONTROL

BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED B

REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

NPDES Permit Part IV.E. Reporting: 1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. E. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS; THE NAME(S) OF THE CERTIFIEDPERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS; S. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES; REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED; THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS; N. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU," AND I. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO: THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE **INITIAL INSPECTION AND REPORTING:**

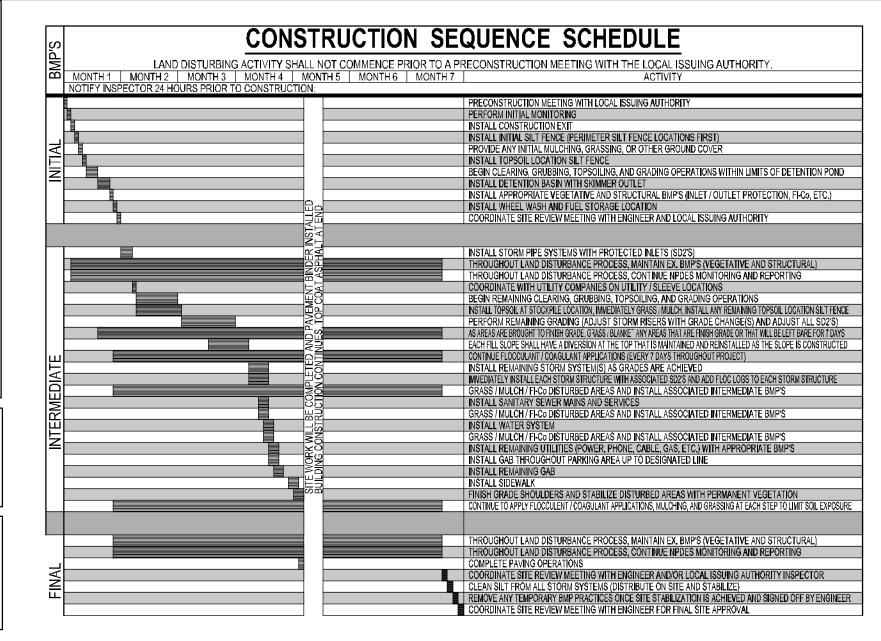
r common developments that begin construction activity after the effective date of this permit, the primary permittee must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control Plan, except when the primary permittee has requested in writing and EPD has agreed to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

MINIMUM QUALIFICATIONS OF INSPECTORS:

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

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST

Project Name:	WHEELER PARK Address: 1400 SE PARKER RD, CONYERS, GA 30094
City/County:_	CITY OF CONYERS/ ROCKDALE COUNTY Date on Plans: 4/18/2024
Name & email	of person filling out checklist: JASON@GEORGIACIVIL.COM
Plan Included	TO BE SHOWN ON ES&PC PLAN
Page # Y/N	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission
C-0.2	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)
ALL Y	2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
N/A	3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan minclude at least 4 of the BMPs listed in Appendix 1 of this checklist and the GAEPD approval letter. * (A copy of the written approval by GAEPD must be attached to the plan for the Plan to be reviewed.)
C-6.1-C-6.7	4 The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
C-6.1 Y	5 Provide the name, address, email address, and phone number of primary permittee.
C-6.1 Y	6 Note total and disturbed acreages of the project or phase under construction.
	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
ALL Y	8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions
C-6.1 Y	9 Description of the nature of construction activity and existing site conditions.
C-6.1 Y	10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessa
C-6.1 Y	11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
C-6.1 Y	12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 19 of the permit.
C-6.1 Y	13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appro
C-6.1 Y	and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 19 of the 14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation initial sediment storage requirements and perimeter control BMPs within 7 days after installation."
	in accordance with Part IV.A.5 page 25 of the permit. *
C-6.1 Y	15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
N/A	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
	17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
C-6.1 Y	18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
C-6.1 Y	19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
C-6.1 Y	20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
C-6.1 Y	21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
C-6.1 N/A	22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of a Biota Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
C-6.1 N/A	23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
C-6.1 Y	24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *
C-6.1 Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.
	26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
C-6.1 Y	27 Description of practices to provide cover for building materials and building products on site. *
	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).
C-6.2 Y	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. *
C-6.2 Y	
C-6.2 Y	32 Provide complete details for Retention of Records as per Part IV.F. of the permit. *
C-6.2 Y	33 Description of analytical methods to be used to collect and analyze the samples from each location. *
C-6.6 Y	34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *



NPDES GENERAL PERMIT NO. GAR100001 - APPENDIX B RATIONALE THE DISTURBED ACREAGE ON THE SITE IS 48.45 ACRES WITH A SURFACE WATER DRAINAGE AREA BETWEEN 0 AND 4.99 SQUARE MILES. THUS AN NTU VALUE OF 75SHALL BE APPLIED. ONE SAMPLING POINT(S) IS SHOWN ON THE SITE. REFER TO SHEET C-6.1 FOR SAMPLING FREQUENCY AND METHODOLOGY. REFER TO SHEETS C-6.3 TO C-6.5 FOR SAMPLING POINT LOCATIONS. Nephelometric Turbidity Unit (NTU) TABLE

Warm Water (Supporting Warm Water Fisheries) Surface Water Drainage Area, square miles.

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

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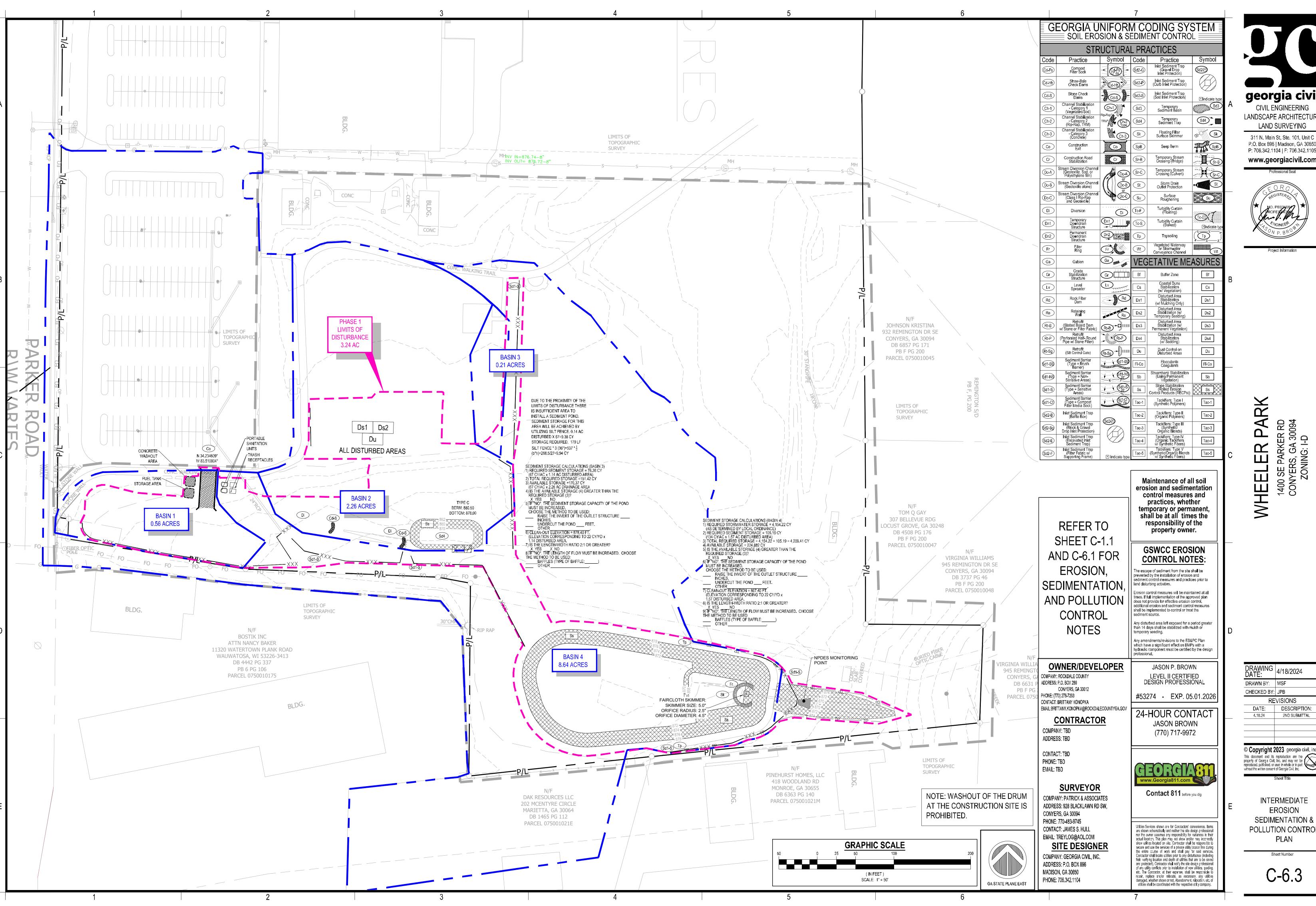
EROSION SEDIMENTATION & POLLUTION CONTROL

- 🍪 Y 🕴 36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. * Y 37 Graphic scale and North arrow. 38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following: Ground Slope Contour Intervals, ft. Map Scale Flat 0 - 2% 1 inch = 100ft or Rolling 2 - 8% 1 or 2 larger scale Steep 8% + 2,5 or 10 N/A 39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov. N/A 40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. * N/A 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. N/A 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-developed conditions. * $Y \mid 45$ An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed Y 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. 📞 - Cossill Y | 50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with Y 51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia. C-6.6 Y 52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia. * 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, 2023

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CIVIL ENGINEERING LANDSCAPE ARCHITECTURE LAND SURVEYING

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



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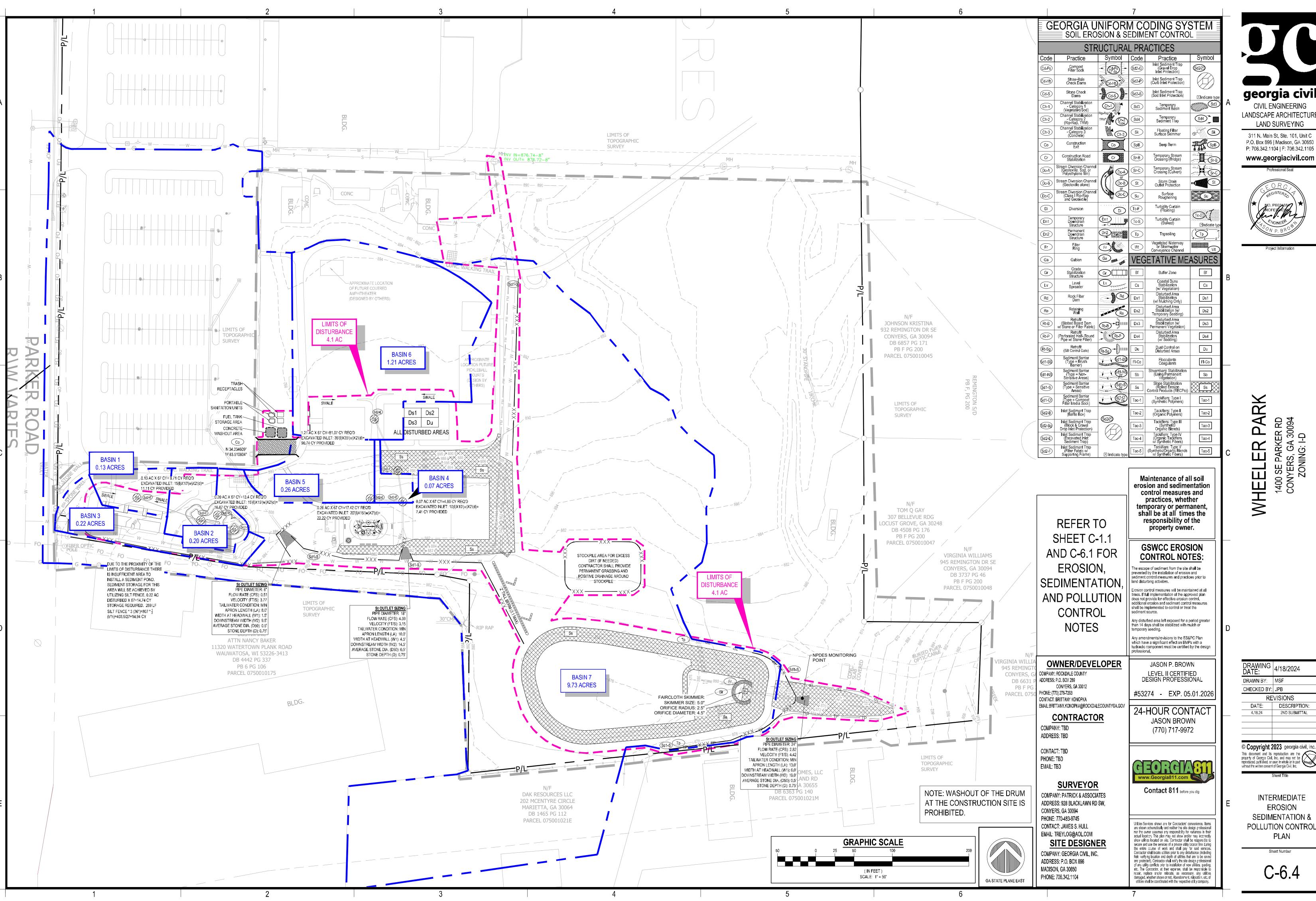
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INTERMEDIATE EROSION SEDIMENTATION & POLLUTION CONTROL PLAN

Sheet Number



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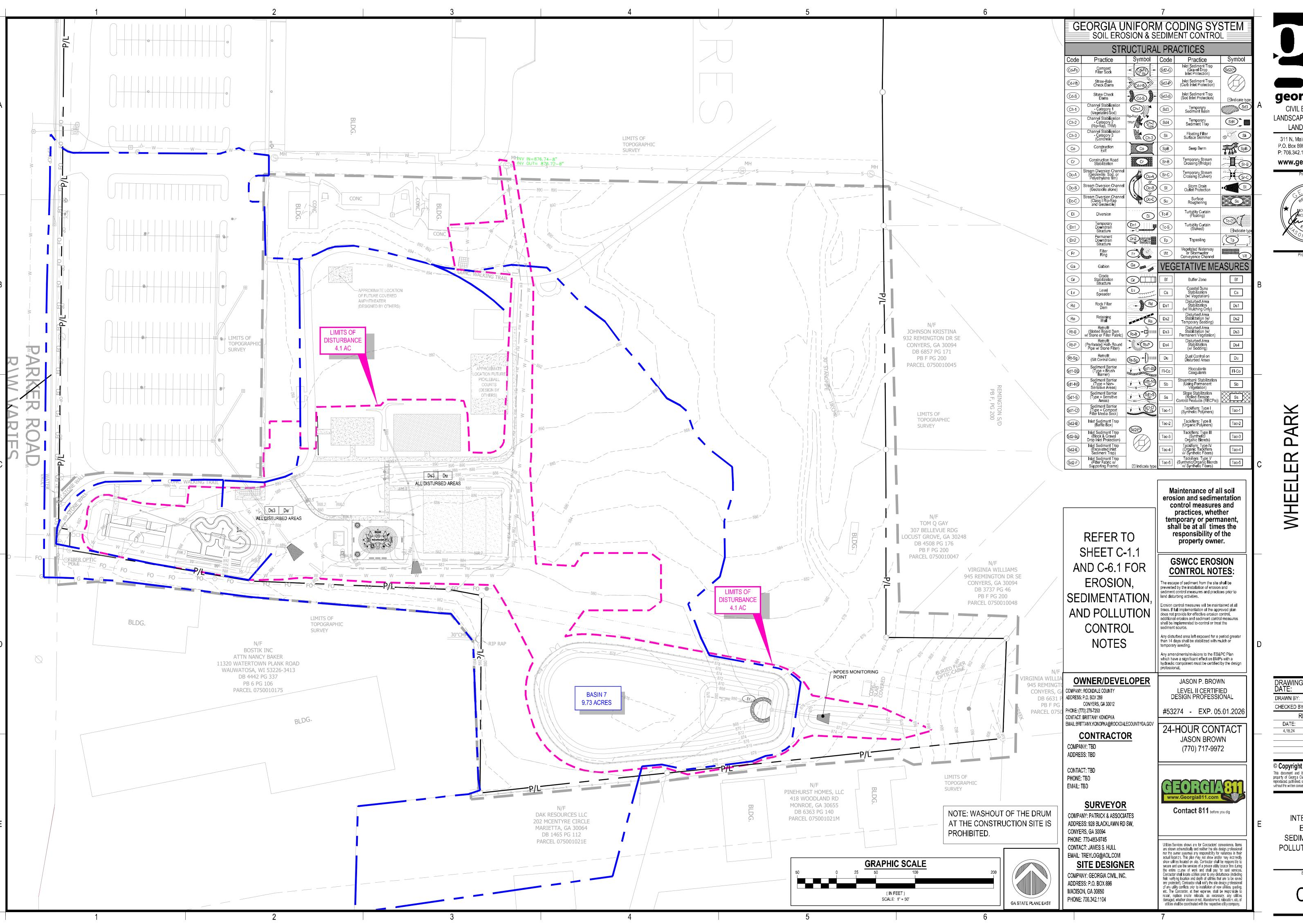
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INTERMEDIATE EROSION **SEDIMENTATION &** POLLUTION CONTROL PLAN



CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
LAND SURVEYING

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Project Information

HEELER PARK
1400 SE PARKER RD
CONYERS, GA 30094
ZONING: I-D

DRAWING DATE: 4/18/2024

DRAWN BY: MSF
CHECKED BY: JPB

REVISIONS
DATE: DESCRIPTION:

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Sheet Title

INTERMEDIATE

EROSION

INTERMEDIATE
EROSION
SEDIMENTATION &
POLLUTION CONTROL
PLAN

Sheet Number

C-6.5

Ds3 CC 2016 Edition Mulch or temporary grassing shall be applied to all exposed greas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to 6 months, but it shall be applied at the appropriate death, depending on the material used, anchored and have Maintenance shall be required to maintain appropriate cepth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than 6 months, If any area will remain und sturbed for greater than 6 months, permanent vecetative techniques shall be employed, Refer to Ds2 - Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed BAHIA, PENSACOLA Rate Per Pure Live See Paspalum notatum | Acre¹ | Per 1000 sq.f This standard applies to graded or cleared areas where seedlings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover. alone or with temporary cover 60 lbs with other perennials | 30 lbs | 0.7 lb BAHIA. WILMINGTON Rate Per Pure Live Se Paspalum notatum | Acre1 | Per 1000 sq Dry straw or hay shall be applied at a depth of 2" to 4" providing complete soil coverage. One advantage of this material is easy application.

Wood waste (chips, sawdust or bark) shall be applied at a depth of 2" to 4" providing complete soil coverage. One advantage of this material is easy application.

Wood waste (chips, sawdust or bark) shall be applied at a depth of 2" to 4". Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.

Palyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used. temporary cover 60 lbs 1.4 lbs with other perennials | 30 lbs | 0.7 lb Dry straw or hay mulch and wood chips shall be applied un formly by hand or by mechanical equipment.

If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches. BERMUDA, COMMON Rate Per Pure Live See Cynodon dactylon | Acre¹ | Per 1000 sq 1. Straw or hay mulch can be pressed into the soil with a disk narrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20" or more in diameter and 6" to 12" apart. The edges of the disk should be dull enough Hulled seed alone 10 lbs 0.2 lb with other perennials 6 lbs 0.7 lb Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification Taci-Tackifiers. BERMUDA, COMMON Rate Per Pure Live Se Cynodon dactylon | Acre¹ | Per 1000 sq.f Unhulled seed with temporary cover 10 lbs 0.2 lb **DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) - (Ds1)** with other perennials 6 lbs 0.1 lb BERMUDA SPRIGS | Rate Per | Pure Live See Cynodon dactylon | Acre¹ | Per 1000 sq. Coastal Common. Midland, or Tif 4440 cu. ft. 0.9 cu. ft. Coastal, Common, or Tift 44 Tift 78 | sod plugs 3' x3 CENTIPEDE Rate Per Pure Live Se REQUIREMENT FOR REGULATORY COMPLIANCE
Julich or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead *ochloa ophuiroides* | **A**cre¹ | Per 1000 sq of mulch, can be abolised to rough graded areas that will be exposed for less than 6 months. If an area is expected to be undisturbed for longer than 6 months, permanent perennial vegetation shall be used. If optimum planting conditions for temoorary grassing is lacking, mulch can be used as a singular erosion control device for up to 6 months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification s1-Disturbed Area Stabilization (With Temporary Seeding). CROWNVETCH | Rate Per | Pure Live Se vegetative measures should be coordinated with permanent measures to assure economical and effective Coronilla varia Acre¹ Per 1000 sq. stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: Some species of femporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). with winter annuals or cool 15 lbs Contact NRCS or the local SWCD for more information. season grasses cessive water run-off shall be reduced by properly designed and installed eros on control practices such as closed drains, FESCUE, TALL Rate Per Pure ditches, dikes, diversions, sediment barrie's and others. No shaping or grading is required if slopes can be stabilized by Festuca arundinacea | Acre¹ | Per 1000 so and-seeded vegetation or if hydraulic seeding equipment is to be used." Second Preparation
When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seecing, seedbed preparation is not required if the soil material is loose and not sealed by rainfall. When soil has been sealed by rainfall or consists. with other perennials | 30 lbs | 0.7 lb of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provice a place for seed to lodge and germinate ESPEDEZA SERICEA | Rate Per | Pure Live Se r cultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Lespedeza cuneata | Acre¹ | Per 1000 s Quick acting lime should be incorporated to mocify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fert lizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, retilizer shall be hydraulically applied, preferably n the first pass with seed and some hydraulic mulch, then topped with the remaining required application rati Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, culti-packer-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders unscarified | 75 lbs should normally place seed 1/1 to 1/2" deep. Appropriate depth of planting is ten times the seed diameter. So I should be 'raked" I shifly to cover seed with soil if seeded by hand. See Table 6-4.1 - Temporary Cover or Companion Cover Crops. Lichting
emporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding rhould be considered for short term protection. Refer to **Ds1 - Disturbed** Area Stabilization (With Mulching Only). LESPEDEZA Inglatori During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a Imbro virgata Lespedeza depth that will insure germination of the seed. Subsequent applications should be made when needed. virgata DC or Appalow Lespedeza cuneata | Rate Per | Pure Live See (Dumont) G. Don)) Acre¹ Per 1000 so GEORGIA MAJOR LAND scarified 60 lbs RESOURCE AREAS unscarified | 75 lbs LESPEDEZA, SHRUB

Lespedeza bicolor

Rate Per
Pure Live Seed²

Por 1000 pg ft OVEGRASS, WEEPING | Rate Per | Pure Live Se Eragrostis curvula Acre¹ Per 1000 sq with other perennials 2 lbs MAIDENCANE | Rate Per | Pure Live Se Panicum hemitomon | Acre1 | Per 1000 sq sprigs 2'x3' spacing ANICGRASS, AT LANTIC COASTAL Rate Per Pure Live Ser Panicum amarum var Acre¹ Per 1000 sq REED CANARY GRASS | Rate Per | Pure Live Se Phalaris arundinacea Acre¹ Per 1000 sq.t alone 50 lbs 1.1 lbs with other perennials | 30 lbs | 0.7 lb SUNFLOWER, 'AZTEC'
MAXIMILLIAN
Helianthus maximiliani

Rale Per Acre¹
Pure Live Seec alone LEGEND with other perennials Reduce seeding rates by 50% when drilled PLS is an abbreviation for Pure Live Seed. Refer to Section V.E. of these specifications. M-L represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs*; P represents the Southern Piedmont MLRA* C represents Southern Coastal Plan; Sand Hills; Black Lands; and Atlantic Coast Flatwoods MLRAs* * Refer to Georgia Major Land Resource Areas Map DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING) - (Ds2) Figure 6-14.1

Fertilization of companion crop is ample for this species.

DIVERSION RIDGE

AREA / TIRE WASHERS

LENTRANCE ELEVATION

£XIT DIA<u>Gran</u>

COARSE AGGREGAT

DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) - (Ds3) NOTES: 1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.

INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES. PIPE SHALL BE SIZED APPROPRIATELY TO HANDLE EXISTING AND/OR PROPOSED FLOWS.

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

For subgrades with a CBR greater than or equal to 3 or shear strength greater than 90 kPa, geotextile must meet requirements of section AASHTO M288-36 Section 7.3, Separation Requirements. For subgrades with a CBR between 1 and 3 or shear strength between 30 and 90 kPa, geotextile must meet requirements of section AASHTO M288-06 Section 8, Geotextile Property Requirements for Subsurface Drainage, Separation, Stabilization, and Permanent Erosion Control (Geotextile Property Requirements).

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

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

REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE AND CROWN FOR POSITIVE DRAINAGE.

AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).

PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.

A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.

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

Geotextile underliner must be placed the full length and width of the entrance. Geotextile selection shall be based on AASHTO M288-06 specification:

GRAVEL PAD SHALL HAVE A MINIVUM THICKNESS OF 6".

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

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

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

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

CONSTRUCTION EXIT - (Co)

f Seriocalespoceza : roadoanks.

very wet sites. May clogion:

Table 6-5.2- Permanent Cover Crops

REMARKS

ving, Bod forming, Slow to

cc. Willispread into Bermuda

Flant with winter annuals

Plant with Tall Fesque

ic feet = approx, 850 sprigs hal contains 1,25 aubic fee

southern Coastal Plain on

Table 6-5.1. Fertilizer Requirements

Grasses and Second

Second

Apply in split abolications when high rates are used.

Legumes Maintenance 0-10-10 400 lbs./ac.

Table 8-5.3. Durable Shrubs and Ground Covers for Permanent Cover

COMMON NAME | SCIENTIFIC NAME | MATURE | FLANT

sempervirens

salicifolius 'Repens'

auinauefolia

Owar' Burford Holly | *Hex burfordii* 'Nana' | 5'-8' | 8' |

Dwarf Yaupon Holly | Ilex vomitoria 'Nana' | 3'-4' | 5'

Juniperus horizontalis

Compacta Juniper | Plumosa compacta' |

Blue Chip Juniper

| Juniperus horizontalis | 'Blue Chip'

Table 6-5.4. Trees for Erosion Contro

orrow areas.

graded areas,

Streambanks

Trees in Combination w/ grasses and/or other plants

* Refer to Georgia Major Land Resource Areas Map

Parsons Juniper

Pfitzer Juniper

Hemerocallis spp. | 2'-3' | 2'

ompacta Holly | Ilex crenata Compacter | 3'-4' | 5' | Sun. Semi-shade.

Chinese Holly //ex cornuta 'Rotunda' 3'-4' 5' Very durable. Sun, Semi-shade.

Ancorra Juniper Juniperus | 1/2-3' | 5' | Excellent for slopes. Sun.

Ancorra Juniperus horizontalis 11-2' 5' More compact than Andorra

Blue Rug Juniper Juniperus horizontalis 4'-6" 3' Very low. Sun.

| Liriope muscari | 8"-10" | 3" |

Vinca minor 5"-6" 4'

cəlycenum 8"-12" 3'

Spirea burnalda 3'-4' 5'

Thunberg Spirea Spirea thunbergii 3'-4' 5' Sun.

| SOIL | COMMON | PLANTING TREE

Lakeland Loblolly P ne (Pinus taeda)

Orangeburg Loblolly Pine (Pinus taeda)

Titon Slash Pine (Pinus elliottii)

Longleaf Pine (*Pinus*

nalustris)

Slash Pine (Pinus elliottii)

Virginia Pine (*Pinus*

Willows² (*Salix* spp.)

6' x 6'

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

1 Other trees and shrubs listed on Table 6-25.3 may be interplanted with the pines for improved by the pines for improved with the pines for improved Grain Strew Grass Hay Type of Planting Tree Spacing 4' x 4' No. of Trees per Acre Wood waste

| WATERIAL | SOILS | SPECIES¹

Faceville

Creeping Liriope Liriope spicata 10"-12" 1' Spreads by runners.

Big Leaf Periwinkle Vinca major 12"-15" 4' Lilac flowers in spring. Semi-shade.

Juniperus chinensis 6'-8' 6' Needs room.

8"-10" 4'

Unicerus davunica Expansal 18"-24" 5'

'Pfitzerana'

Juniperus horizontalis

'Sargentii'

Shore Juniper | Juniperus conferta | 2'-3' | 5'

'Prince of Wales'

Cotoneaster dammeri

Abelia grandiflora 3'-4'

Ajuga reptans 2"-4"

, 1'-2' 5'

Ground covers include a wide range of low-growing plants planted together in considerable

numbers to cover large areas of the landscape. Ground covers grow slower than grasses. Weeds

are likely to compete, especially the first year, Maintenance is needed to insure survival. These

ground covers wil not be used unless proper mainterance is planned. Maintain mulch at 3" thickness until plants provide adecuate cover. Fall planting is encouraged because the need for constant watering is reduced and plants have time to establish new roots before hot weather.

Cool Season

Season

Apoly in spring following seeding.

/ Apply in 3 split applications.

Carolina Yellow

Rock Cotoneaster

Virginia Creeper

Jessamine

Carpet Blue

YEAR | EQUIVALENT | RATE | TOP DRESSING

First 20-10-5 seedling placed in the

Maintenance 0-10-10 700 lbs./ac. 4/

1000 lbs./ac.

10-10-10 500 lbs./ac. 30 lbs./ac. 5/

400 lbs./ac.

4/ Apply when plants are pruned.

6 Apply when plants grow to a height of Z" to 4".

COMMENT

Also a prostrate form 2' high. Su

semi-shace. Sem evergreen.

flowers. Hardy, one of best

vines. Evergreen. Native to GA.

Needs good drainage, partial

I White flowers, red fruit. Sun. I

Evergreen.

Many flower colors. Full sun.

Very durable. Sun,

One of the best, good winte

Feathery appearance.

cultivars are good.

Rampant grower. Not for restricted

spaces. State flower.

Semi-shade.

Sun.

SPACING PLANTING

drainage. Good winter color. one hour after the mixture is made.

1'-2' 5' More compact than Andorra.

Evergreen.

Vine. Yellow, trumpet-like

First 6-12-12 1500 lbs./ac. 50 lbs./ac./6/

Second 0-10-10 1000 lbs./ac. --

PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER 1

J|F|M|A|M|J|J|A

....

....

--

-

-

1.4 lbs

Block sad only

0.3 lb

1.4 lbs

1.7 lbs

1338 lbs

1.4 lbs

alone 4 lbs 0.1 lb

20 lbs

0.05 lb

0.5 b

0.2 lb

alone 50 lbs 1.1 lbs

WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE). WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MIJD AND DRT. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP Pad Length
The gravel pad snall have a min mum length of 50°. When the construction is less than 50° from the paved access, the length shall be from the edge of existing pavement to the permitted building being constructed.

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

Second Year and Maintenance Ferili zation Second year fertilizer rates and maintenance entilizer rates are listed in Table 6-5.1.

D STONE AREA NOTES FUEL TANK STORAGE AND CONCRETE WASHDOWN AREAS ARE SEPARATE. CONCRETE TRUCK DRU WASHOUT ON SITE IS PROHIBITED. USE EXCAVATED SOIL CONCRETE WASHDOWN O CONSTRUCT BERF AREA SHALL HAVE A DRAIN 2' PVC PIPE INSTALLED THROUGH BERM TO ALLOW FOR PERIODIC DRAINING TOE OF SLOPE WITH A MANUAL VALVE. PROVIDE Sd1-S-

SECTION Z - .

CONCRETE WASHDOWN AREA

INE WASHDOWN AREA WITH IMPERMEABLE SHEETING TO PREVENT LEACHING INTO GROUNDWATER

SCHEDULE

- 2" PVC DRAIN PIPE WITH

MANUAL VALVE (FOR CONCRETE WASHDOWN

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

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

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

rry, 8 solor Lespedeza, Crabapple, Dogwood, Huckleberry or Native Blueberry. Mountain Laurel. Native Holly. Red Cedar, Red Mulberry, Sumac, Wax Myrtle. Wild Plum

Grasses, Legumes, Vines and Temporary Cover
Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Brownton Millet (for temporary cover), and Native

Provides nerbaceous cover in clearings for a game bird brooc rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but

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

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

Internot Fernitzer Application. When the state of Fernitzer shall be mixed with seed, innoculant fir needed), and wood cellulose or wood publibler mulch and applied in a stury. The innoculant, if needed, and wood cellulose or wood publibler mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ngredients thoroughly mixed. The intuitive will be spread uniformly over the area within one hour after being placed in the hydroseeder. Firely ground linestone can be applied in the mulch slurry or in combination with the top dressing. When conventional planting is to be done, line and fertilizer shall be applied uniformly in one of the following ways:

Apply before land preparation so that it will be in xed with the soil during seedbed preparation. 2. Mix with the soil used to fit the holes, distribution furrows. 3. Broadcast after steep surfaces are scarified, pitted or trenched. 4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

secong Select a crass or grass-legume mixture su table to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, culti-packer-seeder, or

nvdraulic seeder sumy including seed and fertilizer. Drill or cultipacker seeders should normally glace seed \(\frac{1}{2} \) to \(\frac{1}{2} \) deep. Appropriate death of planting is ten times the seed diameter. Soil should be "aked" lightly to cover seed with soil if seeded by hand. See Table 5.4.1 - Temporary Cover or Companion Cover Crops.

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

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

Seec Quality
The term "pure I ve seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of seeds that are pure and will

germinate. Information on sercent germ nation and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination.

e., (P.S.= % germ nation x % purity). The percent of PLS nelps you determine the amount of seed you need. For example, if the seeding rate is 10 sounds PLS and the bulk seed is 56% PLS = 17.9 lbs/acre. You would need to plant 17.9 lbs/acre to provide 1-

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

pages plantings

1. Tillage, at a min., shall adequately loosen soil to a depth of 4" to 6"; alleviate compaction; incorporate time and fertilizer; smooth and firm the soil; allow for proper placement of seed, sprips, or plants; and allow for anothering of straw or hay mulch if a disk is to be used.

2. Tillage may be done with any suitable equipment.

3. Tillage should be done on the contour where reasible.

4. On slobes too steep for the safe operation of tillage equipment, the soil surface shall be bitted or trenched across the slope with appropriate hand tools to provide two places 6" to 8" apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

For nursery stock plants, holes shall be large enough to accommodate roots without crowding.

Where gine seedlings are to be planted, subsoil under the row 36° deep on the contour 4 to 6 months prior to planting. Subsoiling should be done when the soil is dry.

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

Hydraulic Seeding
Vix the seed finoculated if neededly, 'ertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply with n

Conventional Seeding
Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a culti-packer-seeder, drill, rotary seeder, other mechanical seeder, or hand

No-Till Seeding

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

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

Vulching

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

1. Divistraw or dn. nsr of good quality and free of weed seeds can be used. Divistraw shall be applied at the rate of 2 bins per acre. Divistraw shall be applied at a rate of 2.// tons per acre. 2. Wood cellulose much for wood pulp fiber shall be used with hydraulic seeding. 1. 1,000 lbs of mood cellulose or wood pulp fiber, which induces a tack fer, shall be used with hydraulic seeding on slopes 3.4:1 or steeper. 3. 1,000 lbs of mood cellulose or wood pulp fiber, which induces a tack fer, shall be used with hydraulic seeding on slopes 3.4:1 or steeper. 4. Sericas lespecaze hay containing mature seed shall be applied at a rate of 3 tons per acre. 5. Pine straw or pine baths and to applied at intickness of 3 for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas. 6. When using temporary grossion control blankets or block sod, mulch is not required.

A strumings treated roving may be applied on planned areas, sloses, in ditches or dry waterways to prevent erosion. Bituming is reated roving shall be applied within 24 hours after an area has been blanted. Application rates and materials must meet GA Department of Transportation specifications.

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

Applying Mulch
STAN OF TAY THE CAN WILL BE Spread un formly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment of the spreading equipment equip

Archering Mulch
Archering
Archerin

3. Eve or wheat can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of ½ to ½ bushel per acre.
4. Plastic mesh or netting with mesh no larger than 1" by 1" may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials

1904 responsibility applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

Jise and Management

**Now Ser ceal_asspected conty after frost to ensure that the seeds are mature. Mow between November and March. Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired.

**Via ratin at least 6" of top growth under any use and management. Moderate use of top growth is benefic at after establishment. Exclude traffic until plants are well established. Because of qualinesting season, mowing should not take place between May and September.

ime Maintenance Application.
Apply one ton at agriculturat time every 4 to 6 years or as inclosed by soil tests. Soil tests can be conducted to determine more accurate requirements, if desired.

Becding Material Wilch is used as bedding material to conserve moisture and control weeds in nurseries, consmental beds, around shrubs, and on bare areas on lawns

shade. Blue or white flowers.

Evergreen.

White flowers red fruit. Sun.

White flowers red fruit. Sun.

White flowers red fruit. Sun.

Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.

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

Mast Bearing Trees
Seech, Black Cherry. Blackgum, Chestnut, Chinkapin, Hackberry, Hickory. Honey Locust, Native Oak. Persimmon. Sawtooth Oak and Sweetgum.

- All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and pear.

6-12-12 1500 bs./ac. 50-100 bs./ac. 2/51 6-12-12 800 bs./ac. 50-100 bs./ac. 2/51 50-100 bs./ac. 2/51 6-12-12 800 bs./ac. 50-100 bs./ac. 2/51 6-12-12 800 bs./ac. 50-100 bs./ac. 2/51 6-12-12 800 bs.

PLANNING CONSIDERATIONS

CONSTRUCTION SPECIFICATIONS

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

AREAS ARE SEPARATE. · · BERM · -USE EXCAVATED SOIL THE VOLUME OF FUEL STORED. TO CONSTRUCT BERN TOE OF SLOPE FABRIC (FUEL TANK) STORAGE ONLY) 2'-0" (MIN.)-PROVIDE Sd1-S ON ALL: SECTION Z - Z

FUEL TANK STORAGE AREA

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

 Mulches, See stancard Ds1 - Disturbed Area Stabilization (With Mulching Only), Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification Tac - Tackifiers. Res ns should be used according to

pring-toothed harrows, and s milar plows are examples of equipment that may produce the desired effect

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

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

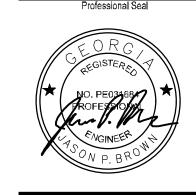
Permanent Vegetation. See specification Ds3 - Disturbed Area Stabilization (With Permanent Vegetation). Existing trees and large shrubs may afford valuable protection if left in place. Topsoiling. This entails covering the surface with less erosive soil material. See specification Tp - Topsoiling.

DISTURBED AREAS - (Du)

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LAND SURVEYING



sediment has accumulated to one-half the height of the trap. Sediment shall be removed from curb inlet protection immediately. Sediment shall not be washed into the inlet. It shall be removed from the sediment trap, disposed of and stabilized so that it will not enter the inlet again. When the contributing drainage area has been permanently stabilized, all materials and any sed ment shall be removed.

Once pavement has been installed, a curb inlet filter shall be installed on inlets receiving runoff from disturbed areas. This

One method of curh inlet protection uses "nics-in-a-blanket" - 8" concrete blocks wrapped in filter fabric. Another method

ponding in the roadway. Proper installation and mainteriance are crucial due to possible ponding in the roadway, resulting

The trap shall be inspected daily and after each rain, and repairs made as needed. Sediment shall be removed when the

uses gravel bags constructed by wrapping DOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material.

A gap of approximately 4" shall be left between the inlet filter and the inlet to allow overflow and prevent hazardous

" CONCRETE BLOCK

PAVEMENT -

GUTTER →

VRAPPED IN FILTER

CATCH BASIN-

CONSTRUCTION SPECIFICATIONS

method of inlet protection shall be removed if a safety hazard is created

WRAPPED IN FILTER FABRIC

CATCH BASIN ∠CURBING

/-- PAVEMEN

INSTALL FILTER AFTER ANY

WRAP 8" CONCRETE BLOCKS IN

CROSS CATCH BASIN INLE CE OPENINGS IN BLOCKS

FILTER FABRIC AND SPAN

LEAVE A GAP APPROX. 4"

IVERFLOW TO PREVENT

BELOW STORM DRAIN OUTLE

- CURB APRON (GUTTER)

HAZARDOUS PONDING.

BETWEEN THE CURB AND THE

ASPHALT PAVEMENT

compacted. Appropriately stabilize all disturbed areas around the inlet. **CURB INLET PROTECTION** "Pigs-in-a-Blanket"

and either salvaged or disposed of properly. The disturbed area shall be brought to proper grade, then smoothed and

Slope stabilization can be applied to flat areas or slopes where the erosion hazard is high and slope protection is needed during PLANNING CONSIDERATIONS Care must be taken to choose the type of slope stabilization product that is most appropriate for the specific needs of a project. Two general types of slope stabilization products are discussed within this specification Rolled Erosion Control Products (RECP) A natural fiber blanket with single or double photodegradable or biodegradable nets. Hydraulic Erosion Control Products (HECP)

HECP shall utilize straw, cotton, wood or other natural based fibers held together by a soil binding agent that works to stab lize soil particles. Paper mulch should not be used for erosion control. Rolled Erosion Control Products (RECPs) and Hydraulic Erosion Control Products (HECPs):

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

Hydraulic erosion control products shall be prepackaged from the manufacturer. Field mixing of performance enhancing additives will not be allowed. Fibrous components should be all natural or biodegradable. Products shall be determined to be

ankets shall be non-toxic to vegetation, seed, or wildlife. Products shall be determined to be non-toxic in accordance with and provide for ease of handling. RECPs are categorized as follows: a. Short-Term (functional longevity 12 mo.)

braw blankets with a top and bottom side photodegradable net. The maximum size of the mesh should be openings of ½" x½". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.35" and minimum density should be 0.5 lbs per square yard. Straw blanket with a top and bottom side biodegradable jute net. The top side net should consist of machine

direction strands that are :wisted together and then interwoven with cross direction strands (leno weave). The bottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5" centers with degracable thread. Minimum nickness should be 0.25" and minimum density should be 0.5 lbs per square yard. Extended-Term (functional longevity 24 mo.) Photodegradable Blankets that consist of 70% straw and 30% coconut with a top and bottom side photodegradable net. The top net

should have ultraviolet additives to delay breakdown. The maximum size of the mesh should be openings of 0.65° x 0.65°. The blanket should be sewn together on 1.5° centers with degradable thread. Minimum thickness should be . Biodegradable Blankets that consist of 70% straw and 30% coconut with a top and bottom side biodegradable lute net. The top side net should consist of machine direction strands that are twisted together and then interwoven with cross direct on

strands (leno weave). The bottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanke; should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.65 lbs per square yard Long-Term (functional longevity 36 mo.) Photodegradable Blankets that consist of 100% coconut with a top and bottom side photodegradable net. Each net should have

ultraviolet additives to delay breakdown. The maximum size of the mesh should be openings of 0.65° X 0.65°. The blanket should be sewn together on 1.5' centers with degradable thread. Minimum thickness should be 0.3" and minimum density should be 0.5 lbs per square yard.

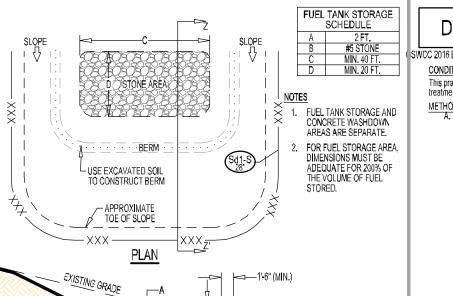
Blankets that consist of 100% coconut with a top and bottom side biodegradable jute net. The top side net should consist of machine direction strands that are twisted together and then interwoven with cross direction strands (leno veave). The bottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.25" and minimum density should be 0.5 lbs per square yard.

It is the intention of this section to allow interchangeable use of RECPs and HECPs for erosion protection on slopes. The project engineer should select the type of erosion control product that best fits the need of the particular site. After the site has been shaped and graded to the approved design, prepare a friable seedbed relatively free from clods and rocks

more than 1" in diameter, and any foreign material that will prevent contact of the soil stabilization mat with the soil surface. furface must be smooth to ensure proper contact of blankets or matting to the soil surface. If necessary, redirect any runoff from the ditch or slope during installation.

All erosion control blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired mmed ately. If washouts or breakage occurs, reinstall

LINING AT THE ROLL ENDS. the material after repairing damage to the slope or ditch. Continue to monitor these areas until they become permanently stabilized **SLOPE STABILIZATION - (Ss)**



TYPICAL INSTALLATION GUIDELINES FOR ROLLED

FROSION CONTROL PRODUCTS (RECP)

[ERMINAL

STEP 1: CUT TERMINAL SLOT.

STEP 2: STAKE MAT INTO SLOT.

A. ROLL WAT UPSTREAM OVER

PICTORIAL VIEW OF

RANSVERSE CHECK SLOT

 START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM. FIRST ROLL IS CENTERED LONGITUDINALLY IN VID-CHANNEL

AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT SUBSEQUENT ROLLS FOLLOW IN

TAGGERED SEQUENCE BEHIND

ROLL FOR ALIGNMENT TO THE

CHANNEL CENTER TO THE EDGE USE 3" OVERLAPS AND STAKE AT

6 USE 3" OVERLAPS AND SHINGLE

4 WORK OUTWARDS FROM THE

REFILLED TERMINAL. STAKE MAT DOWN TO ANCHOR TERMINAL. PROGRESS UPSTREAM WITH

CHECK SLO

STEP 1: CUT CHECK SLOT.

TEMPORARILY STAKE MAT

JNDER MODERATE TENSION)

STEP 2: WORK UPSTREAM ACROSS

BACKFILL AND PROGRESS

PULL OUT TEMPORARY STAKES WHEN NO LONGER NEEDED FOR TENSIONING

CHECK SLOT AND LAP BACK 15".

SWCC 2016 Editio

UPSTREAM

TERMINAL

CUT TERMINAL SLOT.

─ ├ 1'-2"

STEP 2: SNUG MAT INTO SLOT.

STEP 3: B

TREATED BOARD TO BRACE MAT AGAINST VERTICAL CUT

REVERSE MAT ROLL DIRECTION

SEQUENTIAL ROLL RUN

OUT IN CHANNELS

TYPICAL INSTALLATION GUIDELINES

FOR MATTING AND BLANKETS

B. STAKE MAT TO ANCHOR

C. BACKFILL AND COMPACT.

Instead of aspirant to prior fluction thaterial. Refer to specification 1 ac - rackiners. These is should be used according to manufacture's recommendations.

- Vegetative Cover. See specification Ds2 - Disturbed Area Stabilization (With Temporary Seeding).

- Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic of these areas. Refer to specification Tac - Tackfilers.

- Tillage. This practice is designed to roughen and bring closes to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windwards side of site. Chisel-type plows spaced about 12* apart, and the property of the property

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

B. Permanent Methods

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

ARK **MHE**

DRAWING 4/18/2024 DRAWN BY: MSF CHECKED BY: JPB REVISIONS

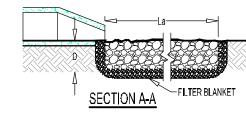
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4.18.24

DATE: DESCRIPTION:

2ND SUBMITTAL

EROSION SEDIMENTATION & POLLUTION CONTROL DETAILS



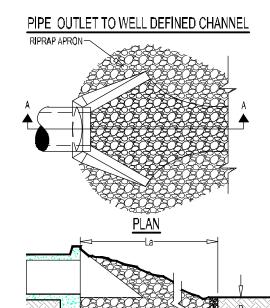


Figure 6-34.3 - Riprap Outlet Protection

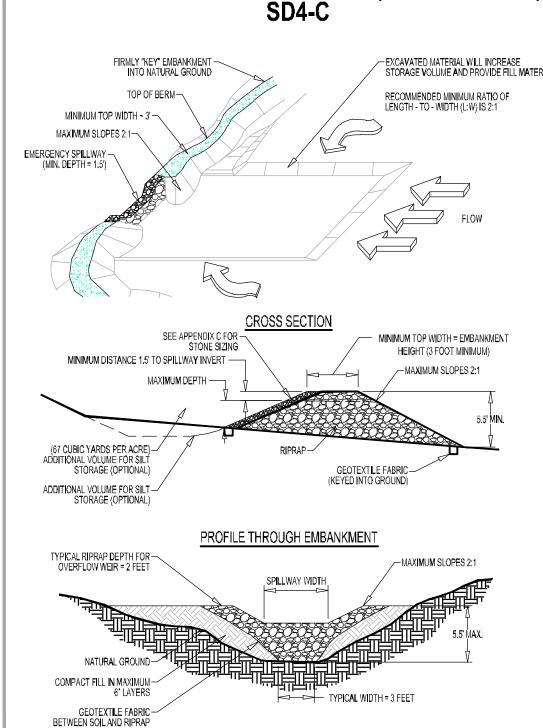
CONSTRUCTION SPECIFICATIONS Ensure that the subgrade for the filter and rip-rap follows the required lines and graces shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbe soil may also be filled by increasing the rip-rap thickness.

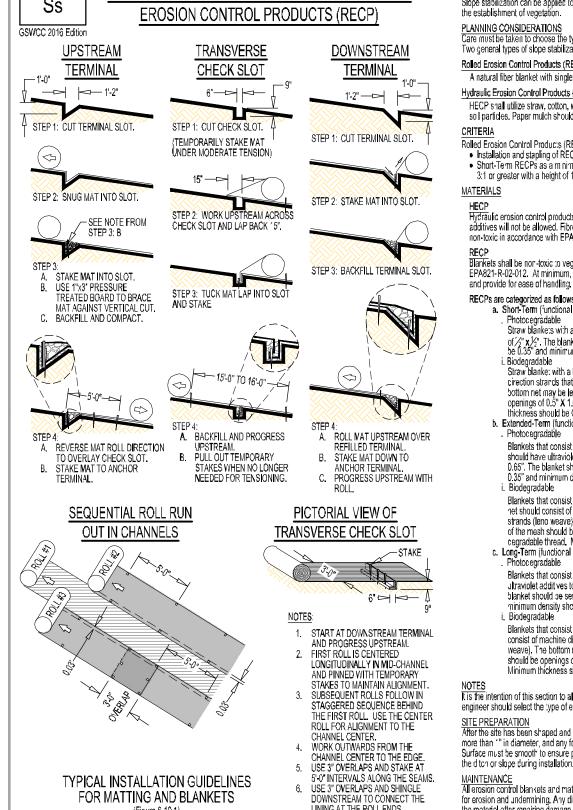
The rip-rap and gravel filter must conform to the specified grading limits shown on the plans. Geotextile mus; meet design requirements and be properly. protected from punching or tearing during installation. Repair any damage by removing the rip-rap and placing another piece of filter fabric over the damaged area, All connecting joints should overlap

a minimum of 1 ft. If the damage is extensive, replace the entire

- 4. Rip-rap may be placed by equipment, but take care to avoid damaging the filter.
- The minimum thickness of the rip-rap should be 1.5 times the maximum stones diameter.
- Construct the apron on zero grade with no overfall at the end. Make the top of the rip-rap at the downstream end level with the receiving
- Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed to B. Immediately after construction, stabilize all disturbed areas with
- Stone quality Select stone for rip-rap from field stone or quarry. stone. The stone should be hard, angular, and highly weather-resistant. The specific Gravity of the individual stones
- Filter Install a filter to prevent soil movement through the openings in the rip-rap. The filter should consist of a graded gravel layer or a

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





RECPs are categorized as follows:

a. Short-Term (functional longevity 12 mo.) Straw blankers with a top and bottom side photodegradable net. The maximum size of the mesh should be openings of // x //2". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.35" and minimum density should be 0.5 lbs per square yard. Straw blanke: with a top and bottom side biodegradable jute net. The top side net should consist of machine cirection strands that are twisted together and then interwoven with cross direction strands (leno weave). The pottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be poenings of 0.5" X 1.0". The blanket should be sewn together on 1.5" centers with degradable thread. Min mumkness should be 0.25" and minimum density should be 0.5 los per square yard. Extended-Term (functional longevity 24 mo.) Blankets that consist of 70% straw and 30% coconut with a top and bottom side photodegradable net. The top net rould have ultraviolet additives to delay breakdown. The maximum size of the mesh should be openings of 0.65 $^{\circ}$ $^{\circ}$ 0.65". The blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.35" and minimum density should be 0.6 lbs per square yard. Blankets that consist of 70% straw and 30% coconut with a top and bottom side biodegradable jute net. The top side net should consist of machine direction strands that are twisted together and then interwoven with cross direction strands (leno weave). The bottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5" certers with cegradable thread. Minimum thickness should be 0.25" and minimum density should be 0.65 lbs per square yard. Long-Term (functional longevity 36 mo.) Blankets that consist of 100% coconut with a top and bottom side photodegradable net. Each net should have ultraviolet additives to delay breakdown. The maximum size of the mesh should be openings of 0.65" X 0.65". The

blanket should be sewn together on 1.5" centers with degradable thread. Minimum thickness should be 0.3" and minimum density should be 0.5 lbs per square yard.

Blankets that consist of 100% coconut with a top and bottom side biodegradable jute net. The top side net should consist of machine direction strands that are twisted logether and then interwoven with cross direction strands (leno weave). The bottom net may be leno weave or otherwise to meet requirements. The approximate size of the mesh should be openings of 0.5" X 1.0". The blanket should be sewn together on 1.5" centers with degradable thread.

Minimum thickness should be 0.25" and minimum censity should be 0.5 lbs per square yard.

tis the intention of this section to allow interchangeable use of RECPs and HECPs for erosion protection on slopes. The project engineer should select the type of erosion control product that best fits the need of the particular site. After the site has been shaped and graded to the approved design, prepare a friable seedbed relatively free from clods and rocks more than "" in diameter, and any foreign material that will prevent contact of the soil stabilization mat with the soil surface. Surface must be smooth to ensure proper contact of blankets or matting to the soil surface. If necessary, redirect any runoff from

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

SLOPE STABILIZATION - (Ss)

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CIVIL ENGINEERING shall be removed when it reaches a dep of one-half of the original height of the da LANDSCAPE ARCHITECTURE LAND SURVEYING

CONSTRUCTION SPECIFICATIONS

lechanical or hand placement will be

extends completely across the channel

securely ties into both channel banks. T

center of the dam must be no less than

lower than the lowest side, to serve as a

erve as rock filter dams, but should follo

type of weir. Gabions can be installed to

recommended sizing and installation pecifications. Refer to specification **Ga** -

Rock dams should be removed once

disturbed areas have been stabilized.

naintenance must be provided. Sedim

Periodic inspection and required

Gabion. See Figure 6-24.1

MAINTENANCE

TOP OF EXISTING BANK —

PROFILE VIEW EXTEND GEOTEXTILE 5' BEYOND THE DOWNSTREAM TO SET THE

*FEET,**INCHES

required to insure that the rock dam

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ARK

CHECKED BY: JPB REVISIONS DATE: DESCRIPTION: 4.18.24 2ND SUBMITTAL

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> **EROSION SEDIMENTATION &** POLLUTION CONTROL DETAILS

TYPICAL LOCATIONS FOR CURB CUT RAMPS - PLAN VIEW CONCRETE SIDEWALK DETAILS GUTTER TRANSITION DETAIL

SLOPE 2%

SLOPE:
2% MAX
(MAY BE FLAT)

S' MIN. S-0 DES.
SLOPE 28 MAX
SLOPE 28 MAX NORMAL GUTTER SLOPE PREFERRED SECTION WITH 6'GRASS STRIP ALTERNATE SECTION
WITHOUT GRASS STRIP
#5' MIN WIDTH WITH NO OBSTRUCTIONS
(MAILBOXS, SIGNS,ETC) * 16' SHOULDER RECOMMENDED WITH THIS INSTALLATION NOTES FOR CONCRETE SIDEWALKS A. CONCRETE TO BE PLACED 4"THICK AND FINSHED WITH TAMPS, WOOD
FLOATS AND STIFF-BRISTLE BROOMS.
B. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED AT 20 FT.
INTERVALS. ALL EDGES TO BE ROUNDED TO 1/4"RADIUS.
C. 1/2" EXPANSION JOINTS SHALL BE PLACED, WHERE SIDEWALK TIE INTO A
STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS AND AT 60"
INTERVALS. Type B Type A Type D CURB CUT RAMPS WILL BE LOCATED AS FOLLOWS UNLESS PLANS OR CONTRACT
SPECIFY OTHERWISE. q) AT ALL PEDESTRIAN CROSSWALKS WHERE CURB IS CONSTRUCTED OR REPLACED. b) WHERE THE SIDEWALK, CONCRETE OR UNPAVED, IS INTERRUPTED BY THE CURB AT TURNOUTS OR AT INTERSECTIONS. c) AT OTHER LOCATIONS SUCH AS HOSPITALS, NURSING HOMES, REST AREAS, ETC.. WHERE THE CURB WOULD OTHERWISE BE AN OBSTRUCTION TO THE PHYSICALLY DISABLED. RAMPS WILL BE CONSTRUCTED FROM CONCRETE. SPECIFICATIONS FOR RAMPS WILL BE THE SAME AS FOR CONCRETE SIDEWALK. RAMPS SHALL HAVE EITHER A ROUGH OR A TEXTURED ELBISSIS. DROP INLETS ARE NOT TO BE LOCATED DIRECTLY IN FRONT OF RAMPS. CATCH BASINS SHOULD BE LOCATED AT LEAST 10 FT. FROM RAMPS WHEN FEASIBLE. WHERE RAMPS ARE LOCATED IN RADII. THE DIMENSIONS SHOWN FOR RAMP WIDTHS AND TAPERS ARE MEASURED PERPENDICULAR TO THE RAMP AND NOT ALONG THE CURVE. 5. WHERE UTILITY STRUCTURES CONFLICT, WHERE SIDEWALK GEOWETRY VARIES, AT SKEWED INTERSECTIONS, OR IN OTHER SPECIAL CASES, THE RAWP DESIGNS MAY BE MODIFIED BY THE DESIGNER OR ENGINEER, PROVIDED THAT THE WIDTH REMAINS A MINIMUM OF 48 INCHES, AND NO SLOPE ON THE ACCESSIBLE PART OF THE RAMP IS STEEPER THAN 12:1. WHEN A CURB RAMP IS PLACED ON EXISTING PAVEMENT. THE PAVEMENT SHALL BE REMOV TO PROVIDE A MINIMUM HICKNESS OF 3 INCHES OF CONCRETE AT ALL LOCATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVAL OF THE PAVEMENT. Type C Skewed Ramp Details DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL INTERSECTIONS WITH PUBLIC STREETS, SIGNALIZED COMMERCIAL DRIVEWAYS, AND COMMERCIAL DRIVEWAYS WITH AN AADT OF 25 VPD. (Applies to Type A Type D Ramps Only) This Detail Replaces Ga Standard 9031W Guldelines For Usage On Metric Projects WHEN THE RAMP CENTERLINE IS NOT PERPENDICULAR TO THE CURB A LEVEL LANDING AREA WITH SLOPES LESS THAN 2% MUST BE PROVIDED AT THE BOTTOM OF THE RAMP. PLAN VIEW SPECIAL DETAIL
CONCRETE SIDEWALK DETAILS
CURB CUT (WHEELCHAIR) RAMPS VAR. 6" 48" MIN. VAR. 6" TO 12" SECTION E-E CURB TRANSITION SLOPE LOWER LANDING AREA TOWARDS GUTTER AT 2% MAX NUMBER Α3

FINE BROOM FINISH— OR CONCRETE STAMP 6 x 6 WW1.4 x WW1.4 — 4" CONCRETE 98% STANDARD PROCTOR TOP 12" 95% STANDARD PROCTOR CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR FURTHER DETAILS ON ALL PAVEMENT SECTIONS. CONSTRUCTION JOINTS: 12'-0" O.C. (MAX) CONCRETE SHALL BE: EXPANSION JOINTS: 40-0" O.C. [MAX] 4000 P.S.I. @ 28 DAYS
AND ABUTTING ANY 5TRUCTURE 4000 P.S.I. @ 28 DAYS
6X6 WW1.4 X W1.4 (2" FROM BOTTOM)
FINE BROOM FINISH STANDARD DUTY (PEDESTRIAN)
CONCRETE SECTION

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CONTRACTOR

COMPANY: TBD ADDRESS: TBD

CONTACT: TBD PHONE: TBD EMAIL: TBD

SURVEYOR

COMPANY: PATRICK & ASSOCIATES ADDRESS: 928 BLACKLAWN RD SW, CONYERS, GA 30094 PHONE: 770-483-9745 CONTACT: JAMES S. HULL EMAIL: TREYLOG@AOL.COM SITE DESIGNER

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

JASON P. BROWN LEVEL II CERTIFIED DESIGN PROFESSIONAL

#53274 - EXP. 05.01.2026

24-HOUR CONTACT JASON BROWN (770) 717-9972

Contact 811 before you dig

SITE DETAILS

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

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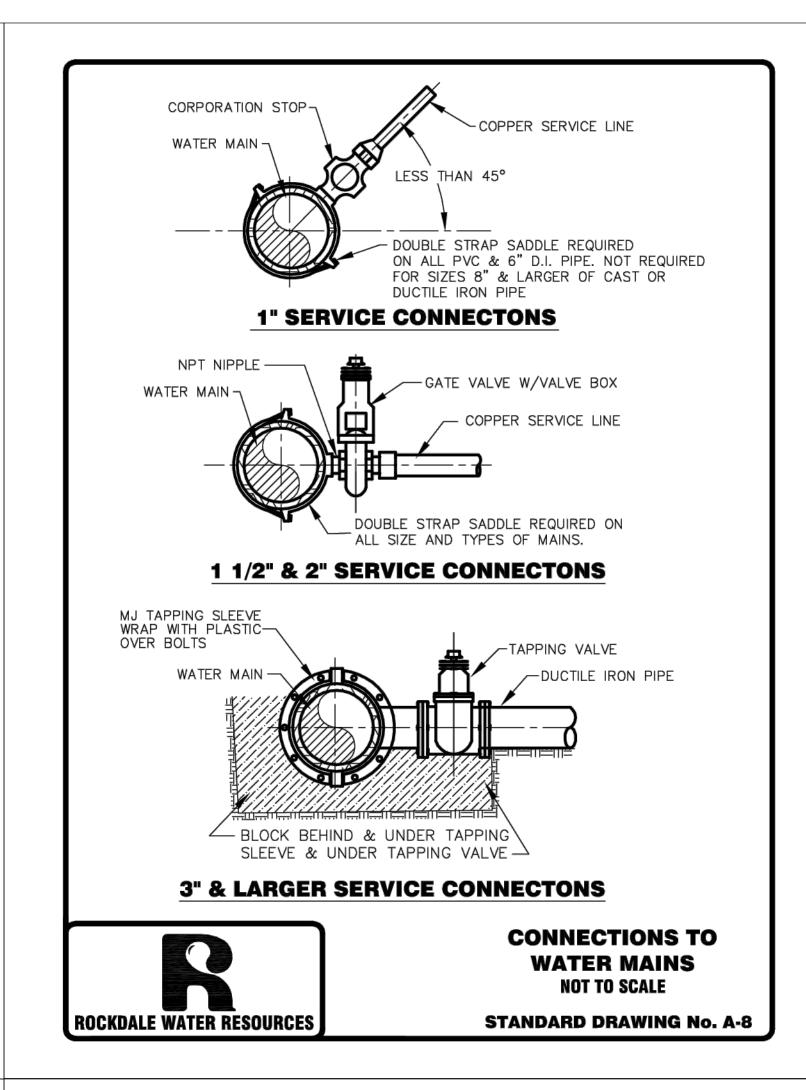
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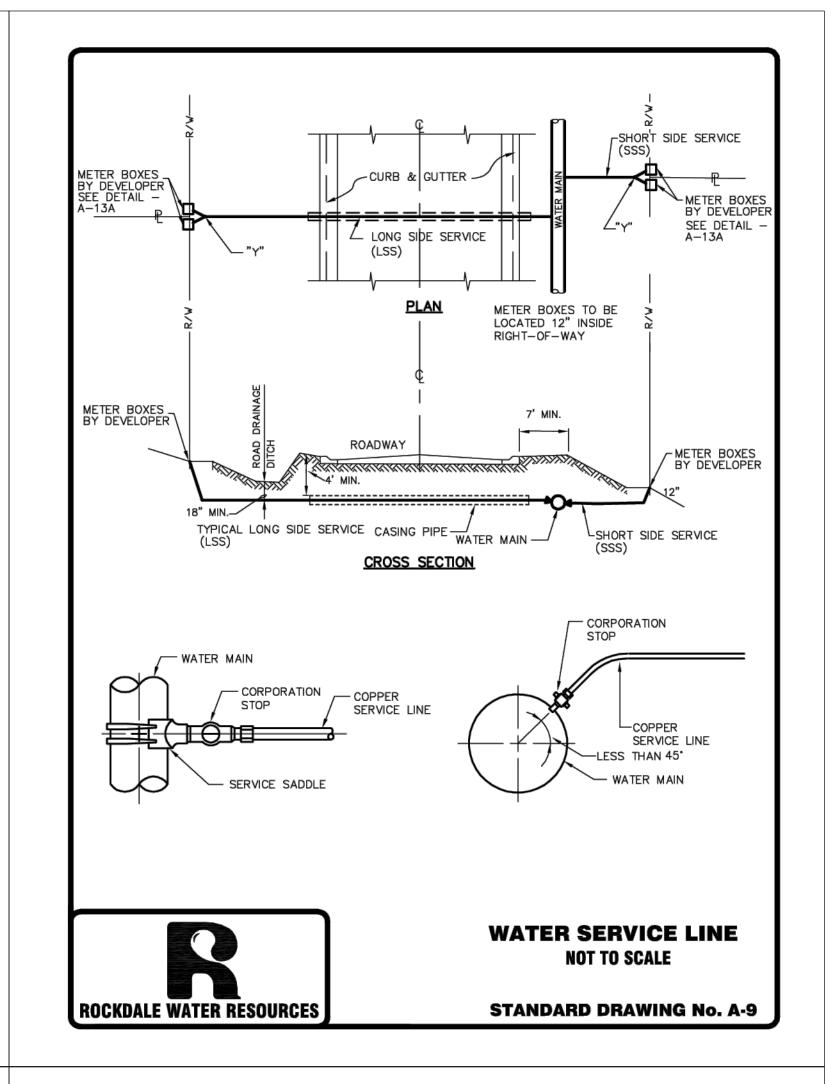
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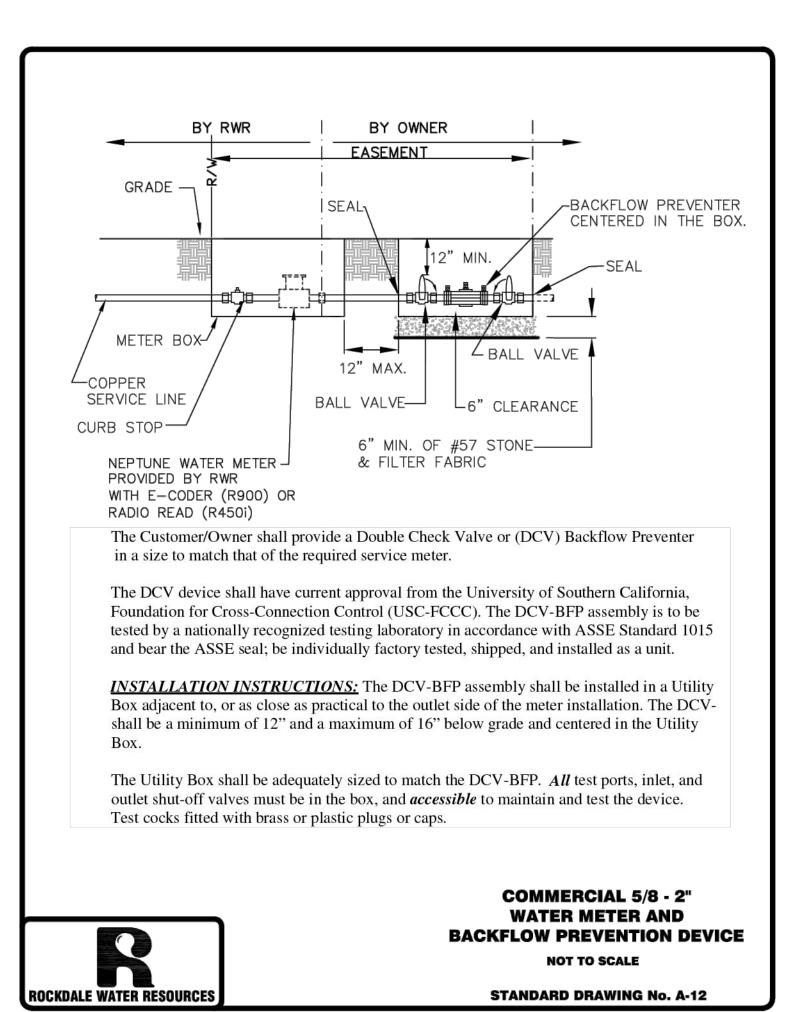
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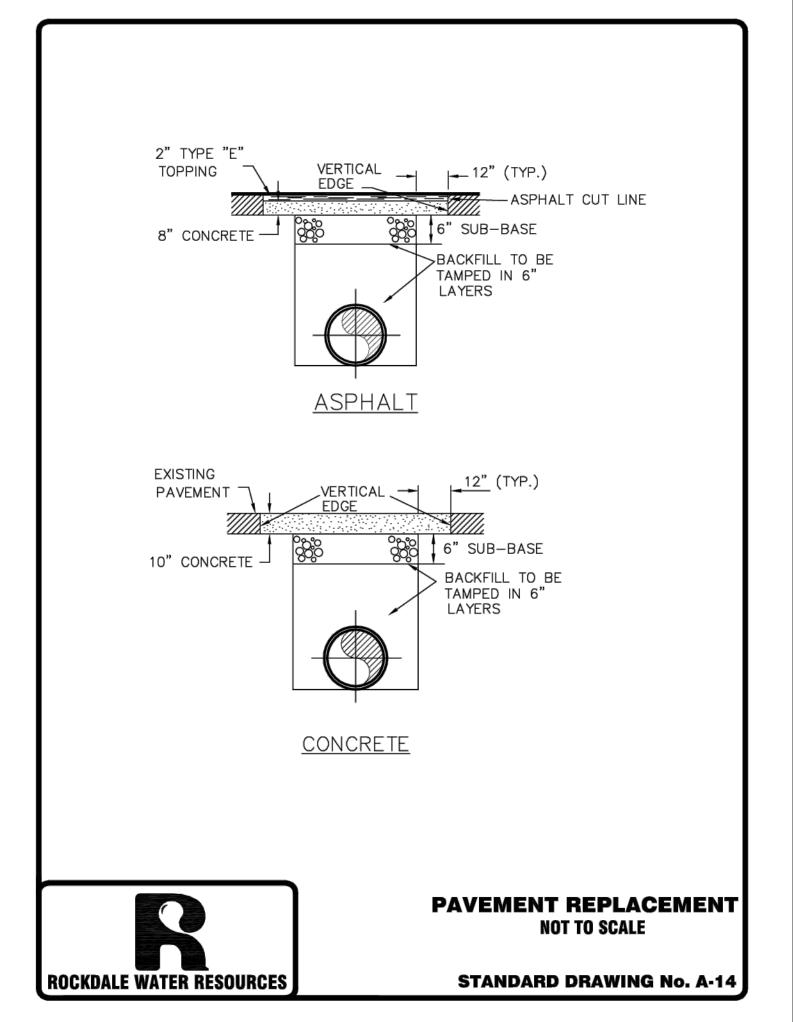
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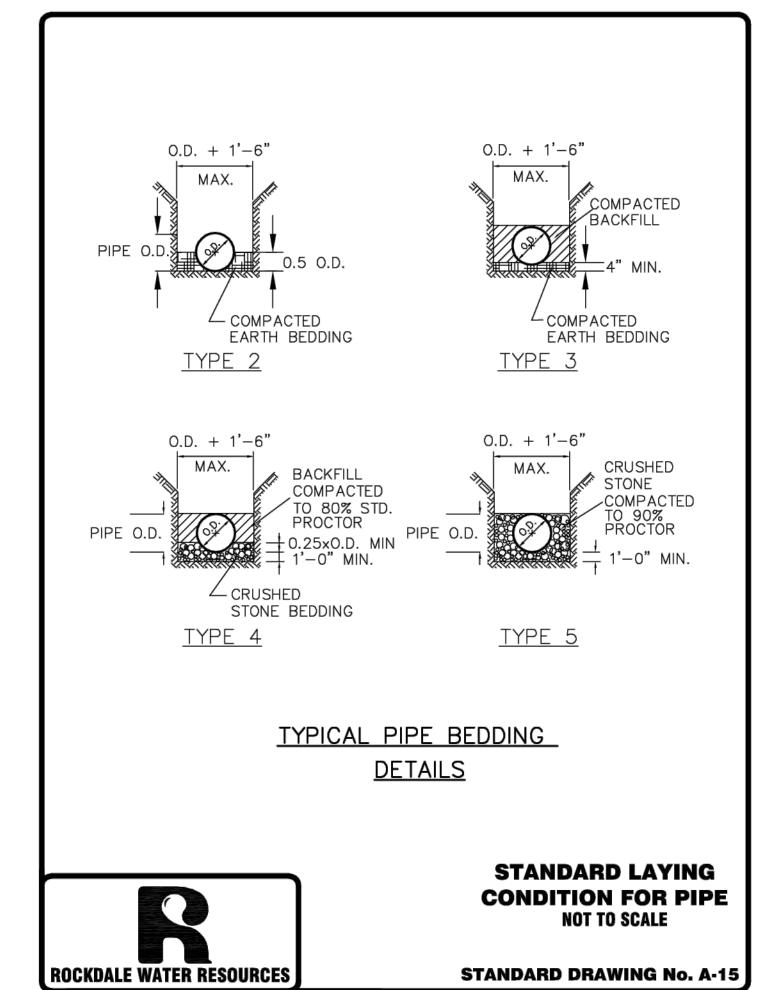
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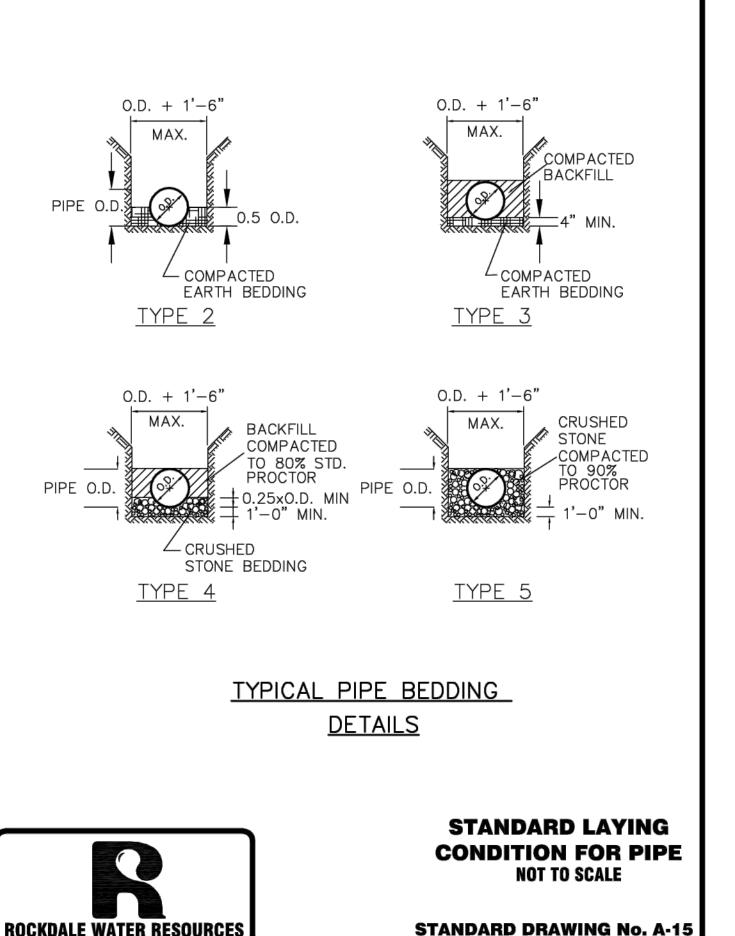












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CIVIL ENGINEERING

PARK

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