RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

100 PRISCILLA D. THOMAS WAY
GARDEN CITY, GEORGIA

PREPARED FOR:

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

208 BULL STREET
SAVANNAH, GEORGIA 31401
(912) 231-0044

M&N JOB# 10797

Know what's below. Call before you dig.

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SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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CLH DESIGN, P.A.

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STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

COVER

C-000

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797C-GENERAL.DWG

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

100 PRISCILLA D. THOMAS WAY
SAVANNAH, GA 31408

BID SET
05/12/2023
5201-192070

SHEET INDEX SET Á

VOLUME 1

GENERAL

SHEET NO.	SHEET NAME	SHT REV NO.	SHT REV DATE	REVISION DESCRIPTION
G-001A	INDEX SHEET	6	2/10/21	

CIVIL

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	SHEET NAME	SHT REV NO	SHT REV DATE	REVISION DESCRIPTION
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CU107	UTILITY PLAN - PHASE 1 (NOT ISSUED)	6	2/10/2021	
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CU109	UTILITY PLAN - PHASE 1 (NOT ISSUED)	6	2/10/2021	
CU110	UTILITY PLAN - PHASE 1 (NOT ISSUED)	6	2/10/2021	
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CM101	MARKING	6	2/10/2021	

CIVIL

	SHEET NAME	SHT REV NO	SHT REV DATE	REVISION DESCRIPTION
CM102	MARKING & SIGNAGE - PHASE 1 (NOT ISSUED)	6	2/10/2021	
CM103	MARKING & SIGNAGE - PHASE 1 (NOT ISSUED)	6	2/10/2021	
CM104	MARKING & SIGNAGE - PHASE 1 (NOT ISSUED)	6	2/10/2021	
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CM106	MARKING & SIGNAGE - PHASE 1 (NOT ISSUED)	6	2/10/2021	
CM107	MARKING & SIGNAGE - PHASE 1 (NOT ISSUED)	6	2/10/2021	
CM109	MARKING & SIGNAGE - PHASE 1 (NOT ISSUED)	6	2/10/2021	
CM110	MARKING & SIGNAGE - PHASE 1 (NOT ISSUED)	6	2/10/2021	
CM114	MARKING & SIGNAGE PLAN - PHASE 1 (NOT ISSUED)	6	2/10/2021	
CM109-2	MARKING & SIGNAGE PLAN PHASE 2 - PHASE 1 (NOT ISSUED)	6	2/10/2021	
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CM502	MARKING DETAILS	6	2/10/2021	
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TS501	SIGNAL DETAILS - PHASE 1 (NOT ISSUED)	6	2/10/2021	

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SHEET NO.	SHEET NAME	SHT REV NO.	SHT REV DATE	REVISION DESCRIPTION
L101	LANDSCAPE PLAN	6	2/10/21	
L102	LANDSCAPE PLAN - PHASE 1 (NOT ISSUED)	6	2/10/21	
L103	LANDSCAPE PLAN - PHASE 1 (NOT ISSUED)	6	2/10/21	
L104	LANDSCAPE PLAN	6	2/10/21	
L105	LANDSCAPE PLAN - PHASE 1 (NOT ISSUED)	6	2/10/21	
L106	LANDSCAPE PLAN - PHASE 1 (NOT ISSUED)	6	2/10/21	
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L112	LANDSCAPE PLAN	6	2/10/21	
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DRAWING SET LEGEND

SET A2 - CIVIL/LANDSCAPE
SET B - K-12 BUILDING (NIC-PREVIOUS PHASE)
SET C - MULTI-MEDIA BUILDING (NIC-PREVIOUS PHASE)
SET D2 - FIELDHOUSE/STADIUM
SET E2 - ATHLETICS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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STATE OF GEORGIA
APRIL W. MUNDY
CERTIFICATE NO. 013000
REGISTERED ARCHITECT
5/12/2023

MEMBERS OF THE AMERICAN INSTITUTE OF ARCHITECTS

REVISIONS:

No.	Description	Date
1	Addendum 3	10/30/20
5	Addendum 7	11/13/20
6	Post Bid Addendum 1	2/10/21

PROJECT: 5201-192070
DATE: 05/12/2023
DRAWN BY: KAS
CHECKED BY: AWM

INDEX SHEET

G-001

BID SET

GENERAL NOTES

1. NOTES BELOW ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES.

2. ALL WORK SHALL CONFORM WITH THESE DRAWINGS, PROJECT SPECIFICATIONS AND WITH ALL CURRENT APPLICABLE CODES AND THE LATEST REVISIONS OF THE FOLLOWING REFERENCE DOCUMENTS:

   A. MOFFATT & NICHOL SPECIFICATIONS
   B. GEORGIA DEPARTMENT OF TRANSPORTATION (GDOT) ROAD AND BRIDGE SPECIFICATIONS
   C. GDOT ROAD AND BRIDGE STANDARDS & DETAILS
   D. MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA (GREEN BOOK)
   E. GARDEN CITY ORDINANCE

   IN CASE OF DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS, THE PLANS SHALL GOVERN.

3. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE LICENSES AND KEEP COPIES OF THE SAME ON SITE DURING CONSTRUCTION.

4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON THE PLANS WITH THE EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING DEMOLITION, FABRICATION, AND CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS.

5. ALL INFORMATION SHOWN ON THESE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL REPORT IMMEDIATELY TO THE OWNER ANY CONDITIONS CONFLICTING WITH THE DRAWINGS. FIELD MODIFICATIONS TO THE DRAWINGS SHALL NOT BE MADE WITHOUT THE CONSENT OF THE OWNER.

6. THE CONTRACTOR SHALL ENSURE THAT ALL PIPES, CATCH BASINS, MANHOLES, SWALES, ETC., WITHIN AND NEAR THE AREA OF WORK ARE KEPT FREE FROM MATERIAL THAT WOULD HAMPER THE PERFORMANCE OF THE DRAINAGE SYSTEMS. UPON COMPLETION OF CONSTRUCTION, REMOVE ACCUMULATED SEDIMENT, DISPOSE OF ALL UNSUITABLE OR EXCESS EXCAVATED MATERIALS AWAY FROM OWNER'S PROPERTY. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS WORK.

7. CONTRACTOR SHALL DOUBLE WRAP PIPE JOINTS WITH A NON-WOVEN GEOTEXTILE OF MINIMUM 6 OZ./SY BY PLACING TWO OF FILTER FABRIC AROUND THE JOINT A MINIMUM WIDTH OF FOUR FEET CENTERED ON JOINT.

8. WHERE CROSSING ANY EXISTING SUBSTRUCTURES WITH NEW SUBSURFACE IMPROVEMENTS, THE CONTRACTOR SHALL TRENCH CAREFULLY TO LOCATE ALL ACTIVE AND IDLE SUBSTRUCTURES AT THESE CROSSINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL SUBSTRUCTURES DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

9. ALL AREAS OUTSIDE THE "PROJECT LIMITS" WHICH ARE DAMAGED BY THE CONTRACTOR, INCLUDING OFF-SITE STAGING AREAS AND HAUL ROADS, SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION. THE RESTORATION SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.

10. SAFE CONSTRUCTION EXCAVATION SLOPES AND SHORING ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD COMPLY WITH ALL OSHA AND OTHER APPLICABLE SAFETY REGULATIONS.

11. ALL EXCAVATED ASPHALT, CONCRETE, AND OTHER DELETERIOUS MATERIAL SHALL BE DISPOSED OF OFF OWNER PROPERTY, EXCEPT AS SPECIFICALLY APPROVED FOR RE-USE AS RECYCLED MATERIAL FOR THE WORK. ALL MATERIAL SHALL BE DISPOSED OF AS PER LOCAL REGULATIONS.

12. OTHER THAN FOR EXCAVATED ASPHALT AND CONCRETE AS NOTED ABOVE, EXCAVATED SOIL MAY BE USED FOR BACK FILLING AND BORROW PROVIDED IT MEETS THE SPECIFICATIONS AND THE FOLLOWING REQUIREMENTS:

   A. MATERIAL DOES NOT CONTAIN DELETERIOUS AMOUNTS OF:
      - ORGANIC CLAYS, SILTS OR PEATS
      - MISCELLANEOUS DEBRIS, SUCH AS BUT NOT LIMITED TO, TIMBER, METAL PLASTICS, GLASS OR REFUSE.
      - STONES OR CONCRETE PIECES LARGER THAT THREE (3) INCHES IN SIZE, EXCEPT WHERE ALLOWED BY THE PLANS/SPECIFICATIONS
   B. THE MATERIAL IS NOT FROZEN OR CONTAIN ICE.
   C. THE MATERIAL IS NOT OIL STAINED OR HAVE A NOTICEABLE "OIL ODOR".
   D. CAN BE COMPACTED IN ACCORDANCE WITH SPECIFICATIONS.
   E. AS REQUIRED BY THE SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM QUALITY CONTROL TESTING OF BACK FILL AND BORROW MATERIAL. THE CONTRACTOR SHALL SUBMIT THE QUALIFICATIONS OF THE SOIL TESTING COMPANY WHICH WILL PERFORM THE QUALITY CONTROL TESTS. THE SOIL TESTING COMPANY SHALL HAVE A MINIMUM OF FIVE YEARS EXPERIENCE DOING RELATED WORK.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE CONSTRUCTION SITE AND THE AREAS OF WORK WHILE PERFORMING THE WORK OF THIS CONTRACT. CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE CONSTRUCTION SITE ON A DAILY BASIS. NO BURNING OF DEBRIS SHALL BE PERMITTED, EXCEPT AS ALLOWED BY STATE AND/OR LOCAL REGULATIONS

13. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE LOCAL, STATE AND FEDERAL ENVIRONMENTAL PROTECTION STANDARDS, LAWS AND REGULATIONS.

14. ITEMS INDICATED TO BE REMOVED AND REINSTALLED SHALL BE REMOVED BY THE CONTRACTOR, STORED AND REINSTALLED WITHOUT DAMAGE. DAMAGED ITEMS SHALL BE REPLACED AT NO COST TO THE OWNER.

15. ALL APPLICABLE SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED. METHODS OF DEMOLITION, CONSTRUCTION, AND ERECTION OF STRUCTURAL MATERIAL ARE THE CONTRACTOR'S RESPONSIBILITY.

16. ALL INGRESS AND EGRESS TO THE CONSTRUCTION SITE SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES. CONSTRUCTION EQUIPMENT WILL NOT BE PERMITTED TO OBSTRUCT ROADWAYS AND/OR PASSAGEWAYS. ANY DEBRIS FALLING ON ROADWAYS AS A RESULT OF CONTRACTOR HAULING MATERIAL OR MOVING EQUIPMENT SHALL BE IMMEDIATELY CLEANED UP. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL LOAD LIMITS ON HAUL ROUTES.

17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL OF TEMPORARY CONSTRUCTION STRUCTURES AND SUPPORT AS REQUIRED, SUCH AS SHEETING FOR TRENCH EXCAVATIONS. SHOP DRAWINGS SHALL INCLUDE DESIGN CALCULATIONS AND ASSUMPTIONS, AND DRAWINGS SHOWING LOCATION, EXTENT AND CONSTRUCTION DETAILS OF SAID TEMPORARY STRUCTURES AND SUPPORTS PROPOSED BY THE CONTRACTOR. ALL TEMPORARY STRUCTURES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF GEORGIA.

18. ALL PRECAUTIONS SHALL BE TAKEN AS NECESSARY OR MAY BE REQUIRED, TO PERMANENTLY PREVENT CONTAMINATED WATER, GASOLINE OR ANY OTHER CONTAMINANT FROM ENTERING EXCAVATIONS MADE DURING THE CONTRACT WORK.

19. DISPOSAL OF HAZARDOUS OR CONTAMINATED MATERIALS, GROUNDWATER OR SOIL ENCOUNTERED SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PERFORMANCE OF ALL WORK ON THE CONTRACT DOCUMENTS INCLUDING DEMOLITION AND REMOVALS AND INSTALLATION OF ALL MATERIALS IN COMPLIANCE WITH CODES, RULES AND REGULATIONS GOVERNING SAID WORK.

21. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND GOVERNING STATE BUILDING CODE.

22. THE CONTRACTOR SHALL KEEP AND MAINTAIN A SET OF PROJECT PLANS AND SPECIFICATIONS APPROVED FOR CONSTRUCTION ON THE SITE AT ALL TIMES.

23. TREE PROTECTION IS REQUIRED FOR SPECIMEN TREES LOCATED WITIN THE PROJECT. CONTRACTOR SHALL INSTALL TREE PROTECTION PER CONSTRUCTION PLANS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORK IN THE VICINITY OF PROTECTED TREES.

COORDINATION

1. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH OWNER.

2. THE CONTRACTOR SHALL SUBMIT A SCHEDULE FOR CONSTRUCTION TO OWNER, IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

3. SEE THE SPECIFICATIONS FOR COORDINATION REQUIREMENTS.

UTILITIES

1. PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF LOCATING ANY AND ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST OR CROSS THROUGH THE AREA OF CONSTRUCTION WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS.

2. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE, NONEXISTENCE, SIZE, TYPE, LOCATION, ALIGNMENT OR DEPTH OF ANY OR ALL UNDERGROUND UTILITIES OR OTHER FACILITIES. WHERE SURFACE FEATURES (MANHOLES, CATCH BASINS, VALVES, ETC.) ARE UNAVAILABLE OR INCONCLUSIVE, INFORMATION SHOWN MAY BE FROM UTILITY OWNER'S RECORDS AND/OR ELECTRONIC LINE TRACING, THE RELIABILITY OF WHICH IS UNCERTAIN. THE CONTRACTOR SHALL PERFORM WHATEVER TEST EXCAVATION OR OTHER REINVESTIGATION IS NECESSARY TO VERIFY LOCATIONS AND CLEARANCES.

3. STATE LAW MANDATES THE NOTIFICATION OF UTILITY OWNERS 48 HOURS IN ADVANCE OF EXCAVATION. FOR LOCATION OF UTILITIES CALL THE "UTILITY PROTECTION CENTER" AT 1-800-282-7411, 48 HOURS PRIOR TO LAND DISTURBANCE ACTIVITY.

4. CONTRACTOR SHALL CONFORM TO THE "GEORGIA HIGH VOLTAGE SAFETY ACT" AND SHALL CONTACT THE NECESSARY AUTHORITIES PRIOR TO START OF CONSTRUCTION.

5. THE CONTRACTOR SHALL PROVIDE 3 BUSINESS DAYS ADVANCE WRITTEN NOTICE TO THE OWNER AND GARDEN CITY PRIOR TO ANY WATER, ELECTRICAL, OR OTHER UTILITY SYSTEM SHUTDOWNS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT THEIR SOLE EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

7. CONTRACTOR SHALL PURCHASE ALL PROPOSED ITEMS SHOWN INCLUDING THE WATER METERS.

DEMOLITION

1. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE, INCLUDING THOSE WITHIN THE GDOT RIGHT OF WAY.

2. ALL MATERIALS REMOVED UNDER DEMOLITION, NOT TO BE RELOCATED OR TO BE TURNED OVER TO THE OWNER, SHALL BE REMOVED FROM THE SITE.

CONSTRUCTION

1. CONTRACTOR SHALL NOT INITIATE ANY LAND DISTURBING ACTIVITY UNTIL AUTHORIZED TO PROCEED BY OWNER.

2. SUBMITTALS ON MATERIALS FOR THIS PROJECT SHALL BE PROVIDED TO THE OWNER FOR APPROVAL PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

3. EXISTING VEGETATION SURROUNDING THE CONSTRUCTION AREA SHALL REMAIN IN A NATURAL STATE.

4. THE CONTRACTOR SHALL STRIP TOPSOIL AND ANY ORGANIC LADEN SOIL AND STORE FOR USE IN BACKFILLING AND LANDSCAPING FOR SITE RESTORATION. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ANY EXCESS SOIL AFTER RESTORATION OF THE SITE. NO ADDITIONAL PAYMENT FOR STORAGE OR REMOVAL OF TOPSOIL SHALL BE MADE.

5. ALL STRUCTURAL FILLS SHALL BE PLACED IN 6-INCH LIFTS AND COMPACTED TO A MINIMUM 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557). SUB-GRADE SHALL BE PROOF-ROLLED PER THE DIRECTION OF THE OWNER. AREAS WHICH RUT EXCESSIVELY SHALL BE UNDERCUT AND REPLACED WITH SELECT GRANULAR MATERIAL.

6. GROUNDWATER FLOWING TOWARD OR INTO EXCAVATIONS SHALL BE CONTROLLED TO PREVENT SLOUGHING OF EXCAVATION SLOPES AND WALLS, BOILS, UPLIFT AND HEAVE IN THE EXCAVATION AND TO ELIMINATE INTERFERENCE WITH THE ORDERLY PROGRESS OF CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE FOR DEWATERING.

7. FINISHED SLOPES SHALL BE GRADED TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL PAVEMENTS AND TO EXISTING DITCHES AND BASINS.

8. NO SEPARATE PAYMENT SHALL BE MADE FOR REPAIR OF RILLS AND RE-ESTABLISHMENT OF FINAL GRASSING OF REPAIRED AREAS, AS REQUIRED BY THE OWNER.

9. THE CONTRACTOR IS REQUIRED TO HAVE A WATER TRUCK AVAILABLE AT ALL TIMES TO CONTROL DUST. NO ADDITIONAL PAYMENT SHALL BE MADE.

10. THE ASPHALT INDEX CONTAINED IN THE GDOT SPECIAL PROVISIONS DOES NOT APPLY TO THIS PROJECT.

11. PROVIDE EXPANSION JOINTS BETWEEN CONCRETE PAVEMENT AND ALL FIXED STRUCTURES. (I.E. MANHOLES, CLEANOUTS, SIDEWALKS, ETC.)

12. ALL LOCATIONS WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO EXISTING PAVEMENT, A JOINT SHALL BE ESTABLISHED BY THE ENGINEER TO ENSURE PAVEMENT REMOVAL TO A NEAT LINE.

MAINTENANCE OF TRAFFIC

1. ANY MAINTENANCE OF TRAFFIC ACTIVITIES SHALL BE IN ACCORDANCE WITH GDOT SPECIAL PROVISION SECTION 150 AND GENERAL NOTES PER GDOT STANDARD NO. 9100, AND CHATHAM COUNTY REQUIREMENTS AS APPLICABLE. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY COORDINATION.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE SIGNING AND ANY OTHER TRAFFIC CONTROL DEVICES, SUCH AS "TRUCKS ENTERING HIGHWAY" SIGNS, NECESSARY TO PERFORM THE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL SUCH TEMPORARY DEVICES. SIGNAGE AND OTHER MAINTENANCE OF TRAFFIC DEVICES SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. NO ADDITIONAL PAVEMENT SHALL BE MADE FOR TRAFFIC CONTROL, REVISIONS TO TRAFFIC CONTROL, ETC.

3. THE CONTRACTOR SHALL PROTECT ALL POST-MOUNTED STREET NAME SIGNS WITHIN THE PROJECT LIMITS. IF A STREET NAME SIGN MUST BE MOVED DURING THE COURSE OF CONSTRUCTION, IT MUST BE RESET AT THE END OF EACH WORK DAY. STREET NAME SIGNS SHALL BE RELOCATED TO THE FINAL LOCATION OF THE STOP SIGN ON EACH DAY WHEN CONSTRUCTION IS COMPLETE. IF DAMAGED DURING CONSTRUCTION, STREET NAME SIGNS SHALL BE REPLACED IN KIND. ALL LABOR AND MATERIALS REQUIRED TO SATISFY THIS REQUIREMENT.

4. DRAINAGE STRUCTURES REQUIRING TEMPORARY COVERS TO ACCOMMODATE MAINTENANCE OF TRAFFIC DURING CONSTRUCTION STAGING SHALL BE CAPPED WITH A REINFORCED CONCRETE TOP AS PER GDOT STANDARD 9031U. A MINIMUM OF 18 INCHES OF CLEARANCE SHALL BE MAINTAINED BETWEEN THE TOP ELEVATION OF THE CAPPED STRUCTURES AND THE STAGING SUBGRADE. AS STAGED CONSTRUCTION PROGRESSES THE TEMPORARY REINFORCED CONCRETE TOPS SHALL BE REMOVED AND DISCARDED, AND THE STRUCTURES SHALL BE COMPLETED AS PER THE CONSTRUCTION PLANS. NO SEPARATE PAYMENT SHALL BE MADE FOR REINFORCED CONCRETE TOPS, REMOVAL OR DISPOSAL.

5. ALL STANDARD HIGHWAY SIGNS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS. THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". CURRENT EDITION, AND THE GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND/OR SPECIAL PROVISIONS.

6. SIGN ERECTION STATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD LOCATIONS WHERE NECESSARY, BUT SHALL BE WITHIN THE LIMITATIONS SET FORTH IN THE "THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", CURRENT EDITION. NO SIGN SHALL BE CHANGED BY THE CONTRACTOR OR BY THE PROJECT ENGINEER WITHOUT PRIOR APPROVAL FROM THE OFFICE OF TRAFFIC SAFETY AND DESIGN.

7. ALL STANDARD HIGHWAY SIGNS SHALL BE ERECTED AT A HEIGHT OF 7 FEET ABOVE THE NORMAL EDGE OF PAVEMENT TO THE BOTTOM OF THE SIGN OR ASSEMBLY.

8A. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON INTERSTATE HIGHWAYS SHALL BE 32 FEET FROM NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), UNLESS SPECIFIED OTHERWISE IN THE HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON RAMPS SHALL BE 2 FEET FROM THE NORMAL EDGE OF PAVED SHOULDER, OR EDGE OF GRADED SHOULDER WHEN PRESENT.

8B. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON ALL OTHER ROADWAYS SHALL BE 6 FEET FROM THE EDGE OF THE PAVED SHOULDER OR 12 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), WHICHEVER IS GREATER. THE HORIZONTAL CLEARANCE IN NON-MOUNTABLE CURB SECTIONS SHALL BE AT LEAST 2 FEET FROM THE CURB FACE TO THE NEARER EDGE OF THE SIGN(S).

8C. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS MOUNTED BEHIND GUARD RAIL SHALL BE 6 FEET FROM THE FACE OF THE GUARD RAIL TO THE NEARER EDGE OF THE SIGN(S).

9. SINGLE PLATE, HORIZONTAL RECTANGULAR SIGNS OVER 48 INCHES IN WIDTH SHALL BE MOUNTED ON TWO POSTS WITH 2 EACH 2 INCH X 1/2 INCH X (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAPS. THE STRAPS SHALL BE FLUSH WITH THE BACK OF THE SIGN WITH ONE EACH ACROSS THE TOP AND BOTTOM OF THE SIGN. THE CENTERLINE OF EACH POST SHALL BE INSET 1/6TH OF THE SIGN WIDTH FROM THE EDGE OF THE SIGN. SIGN PLATE BOLT HOLES SHALL BE 3/8 INCH DIAMETER, DRILLED OR PUNCHED, AS SHOWN ON THE SIGN PLATE DETAILS.

10. EACH 42 OR 48 INCH WIDE X 18 OR 24 INCH HIGH SIGN REQUIRES ONE 2 INCH X 1/2 INCH X (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAP LOCATED IN THE CENTER OF THE SIGN AND FLUSH WITH THE BACK OF THE SIGN.

11. SIGN ASSEMBLIES SHALL BE MOUNTED ON ALUMINUM OR GALVANIZED STEEL STRAP FRAMES. FOR DETAILS AND STRAP SPECIFICATIONS REFER TO SIGN ASSEMBLY-TYPICAL FRAMING DETAILS.

12. TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL STANDARD HIGHWAY SIGNS REQUIRING REFLECTORIZED BACKGROUNDS EXCEPT AS SPECIFIED BELOW OR SPECIFIED OTHERWISE IN THE SIGN. EITHER CLASS 1 OR CLASS 2 ADHESIVE BACKING IS PERMISSIBLE.

13. TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL RED SERIES SIGNS (R1-1, R1-2, R1-3P, R5-1, R5-1A, R5-1B).

14. TYPE 11 (VERY HIGH INTENSITY) FLUORESCENT YELLOW REFLECTIVE SHEETING SHALL BE USED FOR ALL WARNING SIGNS.

15. TYPE 11 (VERY HIGH INTENSITY) FLUORESCENT YELLOW REFLECTIVE SHEETING SHALL BE USED FOR SCHOOL ZONE (S1-1, S2-1, S3-1, S4-3, AND THE TOP PORTION OF THE S5-1) SIGNS. ALL REGULATORY SIGNS WITHIN THE SCHOOL ZONE SHALL HAVE TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING.

16. A 1/2 INCH MINIMUM AIR SPACE SHALL BE REQUIRED BETWEEN ALL SIGN PLATES WITHIN AN ASSEMBLY. WHERE SIGNS WITHIN AN ASSEMBLY EXTEND BELOW THE STANDARD MOUNTING HOLES ON THE POST(S), ADDITIONAL 3/8 INCH DIAMETER HOLE(S), DRILLED OR PUNCHED, SHALL BE REQUIRED TO PROPERLY MOUNT THE ASSEMBLY.

17. THE CONTRACTOR WILL, AS REQUESTED BY THE GDOT DISTRICT TRAFFIC OPERATIONS ENGINEER, BE REQUIRED TO REMOVE ANY EXISTING SIGNS THAT ARE DUPLICATED OR ARE CONTRARY TO THESE SIGN PLANS.

SURVEY NOTES

1. VERTICAL DATUM - ELEVATIONS SHOWN ARE IN FEET AND ARE BASED ON NAVD 88 DATUM.

2. HORIZONTAL DATUM - GEORGIA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83.

3. THESE DRAWINGS ARE BASED ON A FIELD SURVEY PREPARED BY WOLVERTON AUGUST 2017, AND THE COLEMAN COMPANY INC. JULY 2020.

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

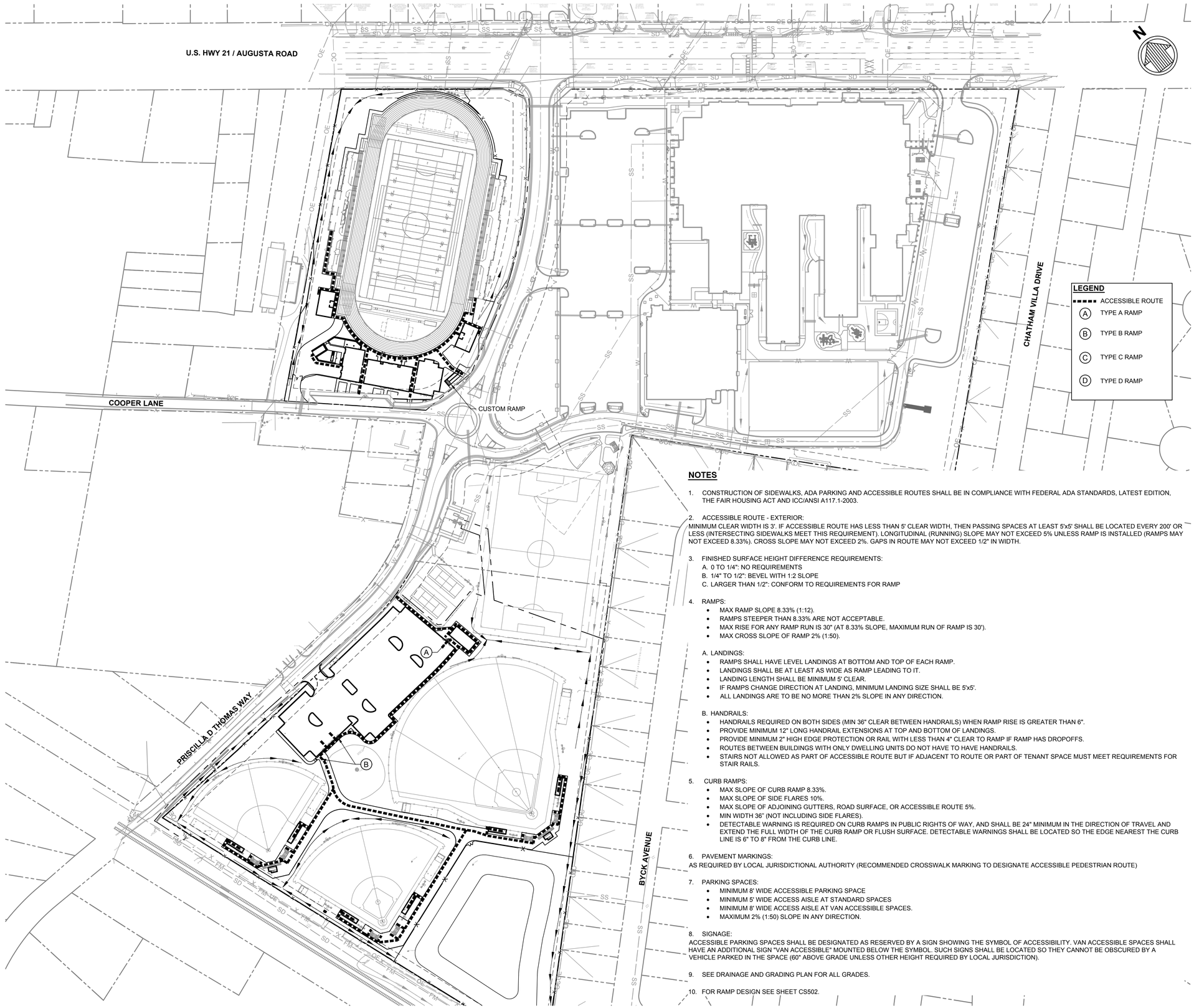
PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

GENERAL NOTES

C-002

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797C-GENERAL.DWG



LEGEND

- ACCESSIBLE ROUTE
- (A) TYPE A RAMP
- (B) TYPE B RAMP
- (C) TYPE C RAMP
- (D) TYPE D RAMP

NOTES

1. CONSTRUCTION OF SIDEWALKS, ADA PARKING AND ACCESSIBLE ROUTES SHALL BE IN COMPLIANCE WITH FEDERAL ADA STANDARDS, LATEST EDITION, THE FAIR HOUSING ACT AND ICC/ANSI A117.1-2003.

2. ACCESSIBLE ROUTE - EXTERIOR:
MINIMUM CLEAR WIDTH IS 3'. IF ACCESSIBLE ROUTE HAS LESS THAN 5' CLEAR WIDTH, THEN PASSING SPACES AT LEAST 5'x5' SHALL BE LOCATED EVERY 200' OR LESS (INTERSECTING SIDEWALKS MEET THIS REQUIREMENT). LONGITUDINAL (RUNNING) SLOPE MAY NOT EXCEED 5% UNLESS RAMP IS INSTALLED (RAMPS MAY NOT EXCEED 8.33%). CROSS SLOPE MAY NOT EXCEED 2%. GAPS IN ROUTE MAY NOT EXCEED 1/2" IN WIDTH.

3. FINISHED SURFACE HEIGHT DIFFERENCE REQUIREMENTS:
   A. 0 TO 1/4": NO REQUIREMENTS
   B. 1/4" TO 1/2": BEVEL WITH 1:2 SLOPE
   C. LARGER THAN 1/2": CONFORM TO REQUIREMENTS FOR RAMP

4. RAMPS:
   - MAX RAMP SLOPE 8.33% (1:12).
   - RAMPS STEEPER THAN 8.33% ARE NOT ACCEPTABLE.
   - MAX RISE FOR ANY RAMP RUN IS 30" (AT 8.33% SLOPE, MAXIMUM RUN OF RAMP IS 30').
   - MAX CROSS SLOPE OF RAMP 2% (1:50).

   A. LANDINGS:
   - RAMPS SHALL HAVE LEVEL LANDINGS AT BOTTOM AND TOP OF EACH RAMP.
   - LANDINGS SHALL BE AT LEAST AS WIDE AS RAMP LEADING TO IT.
   - LANDING LENGTH SHALL BE MINIMUM 5' CLEAR.
   - IF RAMPS CHANGE DIRECTION AT LANDING, MINIMUM LANDING SIZE SHALL BE 5'x5'.
   - ALL LANDINGS ARE TO BE NO MORE THAN 2% SLOPE IN ANY DIRECTION.

   B. HANDRAILS:
   - HANDRAILS REQUIRED ON BOTH SIDES (MIN 36" CLEAR BETWEEN HANDRAILS) WHEN RAMP RISE IS GREATER THAN 6".
   - PROVIDE MINIMUM 12" LONG HANDRAIL EXTENSIONS AT TOP AND BOTTOM OF LANDINGS.
   - PROVIDE MINIMUM 2" HIGH EDGE PROTECTION OR RAIL WITH LESS THAN 4" CLEAR TO RAMP IF RAMP HAS DROPOFFS.
   - ROUTES BETWEEN BUILDINGS WITH ONLY DWELLING UNITS DO NOT HAVE TO HAVE HANDRAILS.
   - STAIRS NOT ALLOWED AS PART OF ACCESSIBLE ROUTE BUT IF ADJACENT TO ROUTE OR PART OF TENANT SPACE MUST MEET REQUIREMENTS FOR STAIR RAILS.

5. CURB RAMPS:
   - MAX SLOPE OF CURB RAMP 8.33%.
   - MAX SLOPE OF SIDE FLARES 10%.
   - MAX SLOPE OF ADJOINING GUTTERS, ROAD SURFACE, OR ACCESSIBLE ROUTE 5%.
   - MIN WIDTH 36" (NOT INCLUDING SIDE FLARES).
   - DETECTABLE WARNING IS REQUIRED ON CURB RAMPS IN PUBLIC RIGHTS OF WAY, AND SHALL BE 24" MINIMUM IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. DETECTABLE WARNINGS SHALL BE LOCATED SO THE EDGE NEAREST THE CURB LINE IS 6" TO 8" FROM THE CURB LINE.

6. PAVEMENT MARKINGS:
AS REQUIRED BY LOCAL JURISDICTIONAL AUTHORITY (RECOMMENDED CROSSWALK MARKING TO DESIGNATE ACCESSIBLE PEDESTRIAN ROUTE)

7. PARKING SPACES:
   - MINIMUM 8' WIDE ACCESSIBLE PARKING SPACE
   - MINIMUM 5' WIDE ACCESS AISLE AT STANDARD SPACES
   - MINIMUM 8' WIDE ACCESS AISLE AT VAN ACCESSIBLE SPACES.
   - MAXIMUM 2% (1:50) SLOPE IN ANY DIRECTION.

8. SIGNAGE:
ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED BY A SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. VAN ACCESSIBLE SPACES SHALL HAVE AN ADDITIONAL SIGN "VAN ACCESSIBLE" MOUNTED BELOW THE SYMBOL. SUCH SIGNS SHALL BE LOCATED SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE (60" ABOVE GRADE UNLESS OTHER HEIGHT REQUIRED BY LOCAL JURISDICTION).

9. SEE DRAINAGE AND GRADING PLAN FOR ALL GRADES.

10. FOR RAMP DESIGN SEE SHEET CS502.

120' 0' 100' 200'

SCALE: 1"=100'

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797C-GENERAL.DWG

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date
6	POST BID ADDENDUM 1	02/10/21

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ACCESSIBLE ROUTE PLAN

C-101

BID SET

ABBREVIATIONS LIST

ABBREVIATIONS	DESCRIPTIONS
A	
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABBR	ABBREVIATION
ABV	ABOVE
AC	ACRE
ACI	AMERICAN CONFERENCE INSTITUTE
A.D.	GRADE CHANGE
ADA	AMERICANS WITH DISABILITIES ACT
ADMIN	ADMINISTRATION
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALNMT	ALIGNMENT
APPROX	APPROXIMATE
AREMA	AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASOCIATION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
AWS	AMERICAN WELDING SOCIETY
B	
B/L	BREAKLINE/BASELINE
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BOT	BOTTOM
BP	BEGINNING POINT
C	
C	CONDUIT
CB	CATCH BASIN
CF	CUBIC FEET
CJ	CONSTRUCTION JOINT
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CN	CURVE NUMBER
CO	CLEANOUT
COF	CORNER OF FENCE
COL	COLUMN
COMM	COMMUNICATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
COORD	COORDINATES
CSP	CORRUGATED STEEL PIPE
CTR	CENTER
CY	CUBIC YARD
C/L	CENTERLINE
D	
DC	DEGREE OF CURVATURE
DDCV	DOUBLE DETECTOR CHECK VALVE
DEG	DEGREE
DIA	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DOM	DOMESTIC
DWG	DRAWING
E	
E	EXTERNAL DISTANCE
EA	EACH
EC	END CURVE
EG	EXISTING GRADE / EXISTING GROUND
EJ	EXPANSION JOINT
EL OR ELEV	ELEVATION
ELEC	ELECTRICAL
EMH	ELECTRIC MANHOLE
ENTR	ENTRANCE
EP	ENDING POINT
EOG	EDGE OF GRAVEL
EOP	EDGE OF PAVEMENT
EOW	EDGE OF WALKING
EPA	ENVIRONMENTAL PROTECTION ACT
EPD	ENVIRONMENTAL PROTECTION DIVISION
EQ	EQUAL
EQUIP	EQUIPMENT
ES&PC	EROSION SEDIMENT & POLLUTION CONTROL
ETC.	ETCETERA
EW	EACH WAY
EX OR EXIST	EXISTING
F	
FDN	FOUNDATION
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GROUND
FH	FIRE HYDRANT
FT	FOOT OR FEET
FR	FRAME

ABBREVIATIONS LIST

ABBREVIATIONS	DESCRIPTIONS
FUT	FUTURE
G	
GABC	GRADED AGGREGATE BASE COURSE
GALV	GALVANIZED
GDOT	GEORGIA DEPARTMENT OF TRANSPORTATION
GI	GRATE INLET
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GR	GRADE
GSWCC	GEORGIA SOIL & WATER CONSERVATION COMMISSION
GV	NATURAL GAS VALVE
GW	GUY WIRE
H	
HDPE	HIGH-DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HVAC	HEATING VENTILATION AND AIR CONDITIONING
HWY	HIGHWAY
HYD	HYDRANT
I	
INC	INCORPORATE
IE	INVERT ELEVATION
INV	INVERT
IT	INFORMATION TECHNOLOGY
J	
JT	JOINT
K	
KSI	KIPS PER SQUARE INCH
L	
L	LENGTH
LAT	LATITUDE / LATERAL
LB	POUND
LF	LINEAR FEET
LG	LONG
LH	LEFT HAND
LLC	LIMITED LIABILITY COMPANY
LONG	LONGITUDE
LP	LIGHT POLE
LT	LEFT
M	
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MJ	MULTI JOINT
ML	MAIN LINE
MM	MILLIMETER
MP	MILE POST
N	
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/F	NOW OR FORMELY
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NRC	NATIONAL RESPONSE CENTER
NTS	NOT TO SCALE
O	
OC	ON CENTER COMMUNICATION
OD	OUTER DIAMETER
OE	OVERHEAD ELECTRICAL
OFF	OFFSET
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
OUTBD	OUTBOUND
P	
P	PROPOSED
PKWY	PARKWAY
PHDPE	PERFORATED HIGH-DENSITY POLYETHYLENE PIPE
PC	POINT OF CURVATURE
PCF	POUNDS PER CUBIC FOOT
PI	POINT OF INTERSECTION
PIN	PROPERTY IDENTIFICATION NUMBER
PIV	POST INDICATOR VALVE
PL	PLATE
PNL	PANEL
PP	POWER POLE
P/S	PRESTRESSED
PROP	PROPOSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENT

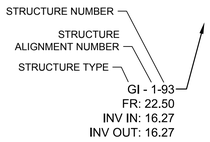
ABBREVIATIONS LIST

ABBREVIATIONS	DESCRIPTIONS
PVC	POLYVINYL CHLORIDE/POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL INTERSECTION
R	
R	RATE OF GRADIENT CHANGE
R OR RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REINF	REINFORCING
REQD	REQUIRED
RH	RIGHT HAND
RT	RIGHT
ROW OR R/W	RIGHT-OF-WAY
S	
SCH	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SPCC	SPILL PREVENTION, CONTROL, & COUNTERMEASURE
SPECS	SPECIFICATIONS
SQ	SQUARE
SR	STATE ROAD
SS	STAINLESS STEEL OR SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
STL	STEEL
STRUC	STRUCTURE OR STRUCTURAL
SGD	SUBGRADE DRAIN
SY	SQUARE YARDS
T	
T/	TOP OF
T	TANGENT
T&B	TOP & BOTTOM
TBD	TO BE DETERMINED
TBM	TEMPORARY BENCH MARK
TEL	TELEPHONE
TEMP	TEMPORARY
TFR	TRANSFORMER
TOB	TOP OF BANK
TOS	TOP OF STEEL
TRAVS	TRAVERSE
TYP	TYPICAL
TP OR T/P	TOP OF PAVEMENT
TW	TOP OF WALK
U	
UC	UNDERGROUND CONDUIT
UE	UNDERGROUND ELECTRICAL
UNG	UNDERGROUND NATURAL GAS
UON	UNLESS OTHERWISE NOTED
U.S.	UNITED STATES
V	
VERT	VERTICAL
VS	VERSUS
W	
W	WATER
W/	WITH
WM	WATER METER
WT	WATER TIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
X	
XFMR	TRANSFORMER
Y	
YI	NYOPLAST YARD INLET

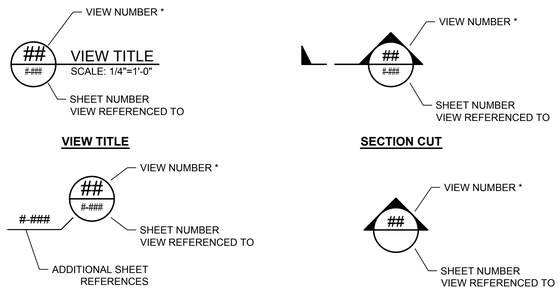
SYMBOLS LIST

SYMBOLS	DESCRIPTION
&	AND
%	PERCENT
"	SECONDS OR INCH
Ø	DIAMETER

TYPICAL STRUCTURE IDENTIFICATION



TYPICAL CALLOUTS



*VIEW NUMBER IS BASED ON THE (DACS) LOCATION OF THE LOWER-LEFT EXTENTS OF THE VIEW ON THE REFERENCED SHEET. WHEN REFERENCING DRAWING INFORMATION BETWEEN SHEETS, BOTH THE VIEW AND SHEET NUMBERS MUST BE QUOTED TOGETHER - EITHER IN A CALLOUT FORMAT AS SHOWN ABOVE OR IN THE FORM;"VIEW NO./SHEET NO." (EG. A1/G-101).

LEGEND

EXISTING SIGN	PROPOSED JUNCTION BOX
POWER POLE	PROPOSED GRATE INLET
EXISTING ELECTRICAL BOX/TRANSFORMER/VAULT	PROPOSED FIRE HYDRANT
EXISTING SPOT ELEVATION	PROPOSED SEWER MANHOLE
EXISTING CONTOURS	PROPOSED STORM MANHOLE
EXISTING DROP INLET	PROPOSED CURB INLETS
EXISTING FIRE HYDRANT	PROPOSED WATER METER/VAULT
EXISTING SEWER MANHOLE	PROPOSED WATER FDC
EXISTING STORM MANHOLE	PROPOSED SEWER CLEANOUT
EXISTING WATER METER	GREASE SEPARATOR
EXISTING WATER/GAS/SEWER VALVE	WATER/GAS/SEWER VALVE
EXISTING BENCHMARK	PROPOSED CONTOURS
EXISTING PAVEMENT EDGE	PROPOSED STORM DRAINAGE PIPE
EXISTING FENCE	PROPOSED SANITARY SEWER PIPE
EXISTING RAIL	PROPOSED CHAIN LINK FENCE
	PROPOSED DECORATIVE FENCE
EXISTING UNDERGROUND COMMUNICATIONS	PROPOSED SILT FENCE
EXISTING DUCT BANK	PROPOSED WATER LINE
EXISTING UNDERGROUND ELECTRICAL	PROPOSED DUCTILE IRON PIPE
EXISTING OVERHEAD ELECTRICAL	PROPOSED SIGN
EXISTING WATER LINE	PROPOSED DITCH CENTERLINE
EXISTING STORM DRAINAGE PIPE	PROPOSED HIGH MAST LIGHT POLE
EXISTING SANITARY SEWER PIPE	
EXISTING NATURAL GAS	
EXISTING OVERHEAD CONDUIT	
EXISTING LIGHTPOLE	
EXISTING TREE	

Know what's below. Call before you dig.

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

LS3P

321 WEST CONGRESS STREET SUITE 301
SAVANNAH, GEORGIA 31401
TEL. 912.695.2111 FAX 912.298.0206
WWW.LS3P.COM

moffatt & nichol
2 EAST BRYAN ST., STE 501
SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

MEMBERS OF THE AMERICAN INSTITUTE OF ARCHITECTS

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ABBREVIATIONS, LEGEND & SYMBOLS

C-003

BID SET

U.S. HWY 21 / AUGUSTA ROAD

RUSSELL AVE

CHATHAM VILLA DRIVE

COOPER LANE

ATLANTIC COASTLINE RAILROAD

PRISCILLA D THOMAS WAY

BYCK AVENUE

101

102

103

104

105

106

107

PROJECT LIMITS, TYP

PROPERTY LINE, TYP

T.B.M. "X" ON HEADWALL
ELEV = 22.20
NAVD 88 DATUM
N: 7677871.55
E: 968200.61

T.B.M. MAG NAIL IN ASPHALT
ELEV = 21.90
NAVD 88 DATUM
N: 767847.03
E: 968180.67

N

120' 0' 120' 240'

SCALE: 1"=120'

Q:\SV\110797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\110797C-GENERAL.DWG

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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GEORGIA
REGISTERED
No. 031068
PROFESSIONAL
ENGINEER
CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

KEY PLAN

C-100

BID SET

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS
SWCD: COASTAL DISTRICT

Project Name: New K-12 Multi-School **Address:** 100 Priscilla D. Thomas Way
City/County: Garden City / Chatham County **Date on Plans:** May 2020
Name & email of person filling out checklist: Craig R. Zuck (czuck@moffattnichol.com)

Plan Page #	Included Y/N	TO BE SHOWN ON ES&PC PLAN
CE001	Y	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
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	N	3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist. * (A copy of the written approval by EPD must be attached to the plan for the Plan to be reviewed.)
CE003	Y	4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
CE003	Y	5 Provide the name, address, email address, and phone number of primary permittee.
CE002	Y	6 Note total and disturbed acreage of the project or phase under construction.
CE002	Y	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
ALL	Y	8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
CE004	Y	9 Description of the nature of construction activity.
CE005	Y	10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
CE004	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.
CE002	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.
CE002	Y	13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 19 of the permit. *
CE005	Y	14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with Part IV.A.5 page 25 of the permit. *
CE002	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	N	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
CE002	Y	17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
CE004	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." *
CE002	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."
CE002	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."
CE002	Y	21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
N/A	N	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 an Biota Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
N/A	N	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. *
CE004	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. *
CE004	Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.
CE004	Y	26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
CE004	Y	27 Description of practices to provide cover for building materials and building products on site. *
CE004	Y	28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *

Plan Page #	Included Y/N	TO BE SHOWN ON ES&PC PLAN
CE002	Y	29 Description and chart or timeline of the intended sequence of major activites 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).
CE003	Y	30 Provide complete requirements of inspections and record keeping by the primary permittee. *
CE003	Y	31 Provide complete requirements of sampling frequency and reporting of sampling results. *
CE003	Y	32 Provide complete details for retention of records as per Part IV.F. of the permit. *
CE003	Y	33 Description of analytical methods to be used to collect and analyze the samples from each location. *
CE003	Y	34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *
ALL	Y	35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *
CE002	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. *
ALL	Y	37 Graphic scale and North arrow.
ALL	Y	38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

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

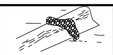
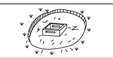
N/A	N	39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
N/A	N	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	N	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	N	42 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
REPORT	Y	43 Delineation and acreage of contributing drainage basins on the project site.
REPORT	Y	44 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
CE004	Y	45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
CE501	Y	46 Storm drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
REPORT	Y	47 Soil series for the project site and their delineation.
ALL	Y	48 The limits of disturbance for each phase of construction.
CE003	Y	49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
CE001	Y	50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
CE501-4	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.
CE002	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.

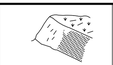
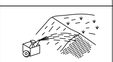
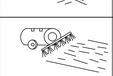
Effective January 1, 2020

GEORGIA
UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.

THERE ARE NO WETLANDS ON THE SITE.

THERE ARE NO STATE WATERS ON OR WITHIN 200' OF THE SITE.

PROJECT REFERENCE

CRAIG R. ZUCK, PE
MOFFATT & NICHOL
2 EAST BRYAN STREET, SUITE 501
SAVANNAH, GA 31401
PHONE: (912) 231-0044

GSWCC CERTIFICATION NO. 0000012478
GSWCC LEVEL II DESIGNER: CRAIG R. ZUCK

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC GENERAL NOTES

CE001

BID SET

C:\Users\aprilmundy\OneDrive - LS3P\Groves K-12\SCCPSS_K-12 Multi-School_awm.rvt
1/27/2020 1:19:16 PM

EROSION AND SEDIMENT CONTROL NOTES

DESIGN PROFESSIONAL'S CERTIFICATION

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

(2) **"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION."**

(3) "I CERTIFY UNDER THE PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

(4) "I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (a) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (b) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STEAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, i HAVE DETERMINED IN MY PROFESSIONAL; JUDGMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 1000001, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER."

GSWCC LEVEL II DESIGN PROFESSIONAL: CRAIG R. ZUCK, P.E.
GSWCC CERTIFICATION NO. 0000012478

GENERAL EROSION CONTROL NOTES

1. ANY AMENDMENT TO THE EROSION CONTROL PLANS WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
2. AFTER CONSTRUCTION, EROSION AND SEDIMENTATION WILL BE MANAGED BY PAVEMENT AND GRASSING.
3. MINIMIZING WIND EROSION AND CONTROLLING DUST WILL BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING METHODS:
   A. COVERING 30% OR MORE OF THE SOIL SURFACE WITH NON-ERODIBLE MATERIAL.
   B. ROUGHENING THE SOIL TO PRODUCE RIDGES PERPENDICULAR TO THE PREVAILING WIND.
   C. FREQUENT WATERING OF EXCAVATION AND FILL AREAS.
   D. PROVIDING GRAVEL OR PAVING AT ENTRANCE / EXIT DRIVES.

THIS PROJECT CONSISTS OF PAVED, AND GRASSED AREAS.
THE TOTAL SITE AREA : 48.0 ACRES
THE TOTAL DISTURBED AREA: 44.9 ACRES

THE CONSTRUCTION EXIT IS LOCATED AT LATITUDE: N32.1067; LONGITUDE: W81.1594. THE CONSTRUCTION EXIT IS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.

CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.

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 AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.

FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.

THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES DUE TO ANY CONSTRUCTION ACTIVITY BY OTHERS.

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND-DISTURBING ACTIVITIES.

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

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

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.

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.

INITIAL PHASE EROSION CONTROL NOTES

PRIOR TO THE LAND DISTURBING CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE OWNER.

THE CONTRACTOR SHALL OBSERVE THE PROJECT SEQUENCE SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL COVER IS EXPOSED ONLY IN SMALL QUANTITIES.

A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.

PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.

PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE OR ONTO ANY PUBLIC ROADWAY.

THE FOLLOWING INITIAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.

1. THE CONSTRUCTION EXIT, CONSISTING OF A MINIMUM PAD SIZE OF 20 FT BY 50 FT WITH A MINIMUM OF 6" THICK STONE, SHALL BE PLACED AS SHOWN ON THE PLAN. THE STONE SIZE SHOULD CONSIST OF COURSE AGGREGATE BETWEEN 1-1/2" & 3-1/2" IN DIAMETER AND OVERLAID ON A GEOTEXTILE UNDERLINER. THE GEOTEXTILE UNDERLINER SHALL MEET THE REQUIREMENTS OF AASHTO M288-96, SECTION 7.3 SEPARATION REQUIREMENTS. (ROCK INSTALLATION TO COINCIDE WITH DEMOLITION)
2. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE/EXITS, ALL PERIMETER EROSION CONTROL AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE INITIAL EROSION CONTROL PLAN.
3. TYPE "NS" & "S" SILT FENCE SHOULD BE INSTALLED AT THE PERIMETER OF THE DISTURBED AREA IF CONDITIONS WARRANT INSTALLATION. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE MANUAL FOR EROSION CONTROL IN GEORGIA, TABLE 6-20.2. THE SILT FENCE SHOULD BE KEPT ERECT AT ALL TIMES AND REPAIRED WHEN REQUESTED BY THE SITE INSPECTOR OR THE PROJECT DESIGN PROFESSIONAL OF RECORD. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF THE BARRIER. THE PERIMETER SILT FENCE SHOULD BE INSPECTED DAILY FOR ANY FAILURES. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.

AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT DESIGN PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORESEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE SITE INSPECTION.

AFTER APPROVAL OF THE INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CONSTRUCTION, CLEARING AND GRUBBING ACTIVITIES.

THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMPs, AND SEDIMENT BASINS IN ACCORDANCE WITH PART IV.A.5. WITHIN 7 DAYS AFTER INSTALLATION.

NO BURN OR BURY PITS SHALL BE PERMITTED ON THE CONSTRUCTION SITE.

ALL SILT FENCE MUST MEET THE REQUIREMENTS OF SECTION 171-TEMPORARY SILT FENCE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA, STANDARD SPECIFICATIONS, 1983 EDITION.

ALL ITEMS IN THIS SECTION OF THE SPECIFICATIONS SHALL MEET THE REQUIREMENTS AS SET FORTH IN SECTION 161, 162, 163, AND 164 OF THE GDOT STANDARD SPECIFICATIONS, FOR ROADS AND BRIDGES.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF LAND DISTURBANCE.

ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.

SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF OF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

GRADING/INTERMEDIATE PHASE EROSION CONTROL NOTES

DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED.

SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.

EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES WHILE ROADWAY IMPROVEMENTS ARE BEING MADE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING BARRIERS AT THE TOE OF SLOPES UNDER CONSTRUCTION. THESE BARRIERS SHALL BE AS SHOWN IN THE PLANS. THESE BARRIERS MAY BE RELOCATED AND REUSED AFTER PERMANENT SLOPE STABILIZATION BECOMES FULLY ESTABLISHED. AS THEY ARE RELOCATED, ANY DEFECTIVE MATERIALS IN THE BARRIER SHALL BE REPLACED. IN ADDITION, ALL DEBRIS AND SILT AT THE PREVIOUS LOCATION SHALL BE REMOVED.

CUT AND FILL SLOPES ARE NOT TO EXCEED "2H:1V"

THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE PRELIMINARY GRADING PHASE OF CONSTRUCTION.

1. TYPE "S" SILT FENCE SHALL BE PLACED AT THE TOE OF ALL DIRT STOCK PILE AREAS. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
2. INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL STORM STRUCTURES AS THEY ARE CONSTRUCTED/MODIFIED. SEE PLAN VIEW FOR SPECIFIC TYPE AND SEPARATE DETAILS FOR ADDITIONAL INFORMATION ON TYPE OF INLET PROTECTION SPECIFIED.
3. ALL DRAINAGE SWALES SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
4. ALL GRADED AREAS SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF LAND DISTURBANCE.

ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.

FINAL PHASE EROSION CONTROL NOTES

THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE FINAL EROSION CONTROL PHASE OF CONSTRUCTION.

SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.

THE CONSTRUCTION EXIT SHALL BE REMOVED TO BEGIN WORK ON THE PAVEMENT SECTION. AFTER GRADED AGGREGATE BASE, AND PAVEMENT HAS BEEN INSTALLED, ALL INLET SEDIMENT TRAPS SHALL BE REMOVED.

ALL ROADWAY SHOULDERS SHOULD BE APPLIED WITH VEGETATIVE COVER, OR GRAVEL COVER, AS SOON AS FINAL GRADE IS ACHIEVED BEYOND THE EDGE OF PAVEMENT.

SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

UPON COMPLETION OF THE PROJECT AND RECEIPT OF CERTIFICATE OF OCCUPANCY, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED ON PLANS.

CONSTRUCTION SCHEDULE

ACTIVITY	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
CLEARING AND GRUBBING	■					
CONSTRUCTION EXIT	■					
SEDIMENT BARRIER	■					
DUST CONTROL MULCHING	■	■	■	■	■	■
INLET SEDIMENT TRAPS	■	■				
CHECK DAM	■					
RETROFIT		■				
OUTLET PROTECTION		■				
MAINTENANCE OF EROSION, SEDIMENTATION & POLLUTION CONTROL (ES&PC) BMPs'	■	■	■	■	■	■
DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)		■	■	■	■	
DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)						■
GRADING		■	■	■	■	
PAVING					■	■
BUILDING CONSTRUCTION		■	■	■	■	■
REMOVE TEMPORARY ES&PC BMPs'						■

SEEDING RATES FOR TEMPORARY & PERMANENT COVER

MONTH	TEMPORARY COVER	RATE PER ACRE		PERMANENT COVER	RATE PER ACRE	
		SEEDED ALONE	ADDED TO MIX		SEEDED ALONE	ADDED TO MIX
JANUARY	RYEGRASS	40 LBS	-	UNHULLED BERMUDA	10 LBS	6 LBS
	RYE	3 BU	0.5 BU	SERLCEA LESPEDEZA (1)	75 LBS	-
FEBRUARY	ANNUAL LESPEDEZA	40 LBS	10 LBS	UNHULLED BERMUDA	10 LBS	6 LBS
	RYEGRASS	40 LBS	-	SERLCEA LESPEDEZA (1)	75 LBS	-
	RYE	3 BU	0.5 BU			
MARCH	WEEPING LOVEGRASS	4 LBS	2 LBS	PENSACOLA BAHIA	60 LBS	30 LBS
	ANNUAL LESPEDEZA	40 LBS	10 LBS	HULLED BERMUDA	10 LBS	6 LBS
				SERLCEA LESPEDEZA (2)	60 LBS	-
APRIL	WEEPING LOVEGRASS	4 LBS	2 LBS	PENSACOLA BAHIA	60 LBS	30 LBS
	SUDON GRASS	60 LBS	-	WEEPING LOVEGRASS	6 LBS	6 LBS
	BROWN TOP MILLET	40 LBS	10 LBS	HULLED BERMUDA	10 LBS	6 LBS
MAY	WEEPING LOVEGRASS	4LBS	2 LBS	PENSACOLA BAHIA	60 LBS	30 LBS
	SUDON GRASS	60 LBS	-	WEEPING LOVEGRASS	6 LBS	6 LBS
	BROWN TOP MILLET	40 LBS	10 LBS	HULLED BERMUDA	10 LBS	6 LBS
	PEARL MILLET	50 LBS	-	SERLCEA LESPEDEZA (2)	60 LBS	-
JUNE	PEARL MILLET	50 LBS	-	PENSACOLA BAHIA	60 LBS	30 LBS
	SUDON GRASS	60 LBS	-	HULLED BERMUDA	10 LBS	6 LBS
	BROWN TOP MILLET	40 LBS	10 LBS			
JULY	PEARL MILLET	50 LBS	-	PENSACOLA BAHIA	60 LBS	30 LBS
	SUDON GRASS	60 LBS	-			
	BROWN TOP MILLET	40 LBS	10 LBS			
AUGUST	PEARL MILLET	50 LBS	-	PENSACOLA BAHIA	60 LBS	30 LBS
	RYE	3 BU	0.5 BU			
SEPTEMBER	RYEGRASS	40 LBS	-	SERLCEA LESPEDEZA (1)	75 LBS	-
	OATS	4 BU	1 BU			
	WHEAT	3 BU	0.5 BU			
OCTOBER	WHEAT	3 BU	0.5 BU	SERLCEA LESPEDEZA (1)	75 LBS	-
	RYEGRASS	40 LBS	-			
	RYE	3 BU	0.5 BU			
	BARLEY	3 BU	0.5 BU			
	OATS	4 BU	1 BU			
NOVEMBER	SAME AS OCTOBER			UNHULLED BERMUDA	10 LBS	6 LBS
DECEMBER	SAME AS OCTOBER			UNHULLED BERMUDA	10 LBS	6 LBS

PROJECT REFERENCE

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SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

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05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC GENERAL NOTES

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PERMIT COVERAGE

THIS PLAN HAS BEEN PREPARED TO MEET THE REQUIREMENTS UNDER THE STATE OF GEORGIA, DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION DIVISION (EPD), GENERAL NPDES PERMIT NO. GAR 100001 FOR AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FOR INFRASTRUCTURE.

AUTHORIZED DISCHARGES:

1. ALL DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT WILL RESULT IN LAND DISTURBANCE EQUAL TO OR GREATER THAN ONE ACRE PART I.C.1.4.c

2. ALL DISCHARGES COVERED BY THIS PERMIT SHALL BE COMPOSED ENTIRELY OF STORMWATER EXCEPT AS PROVIDED IN PART I.C.2 AND PART III.A.2 OF THE PERMIT. PART III.A.1

3. AUTHORIZED MIXED STORMWATER DISCHARGES: PART I.C.2

   A. THE INDUSTRIAL SOURCE OR ACTIVITY OTHER THAN CONSTRUCTION IS LOCATED ON THE SAME SITE AS THE CONSTRUCTION ACTIVITY AND IS AN INTEGRAL PART OF THE CONSTRUCTION ACTIVITY.

   B. THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES ARE OCCURRING ARE IN COMPLIANCE WITH THE TERMS OF THIS PERMIT.

   C. STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION ARE OCCURRING ARE COVERED BY A DIFFERENT NPDES GENERAL PERMIT OR INDIVIDUAL PERMIT AUTHORIZING SUCH DISCHARGES AND THE DISCHARGES ARE IN COMPLIANCE WITH A DIFFERENT NPDES PERMIT.

4. AUTHORIZED NON-STORMWATER DISCHARGES: PART III.A.2

   A. FIRE FIGHTING ACTIVITIES
   B. FIRE HYDRANT FLUSHING
   C. POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING
   D. IRRIGATION DRAINAGE
   E. AIR CONDITIONING CONDENSATE
   F. SPRINGS
   G. UNCONTAMINATED GROUND WATER
   H. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS OR POLLUTANTS

LIMITATIONS ON COVERAGE: PART I.C.3

1. THE FOLLOWING STORMWATER DISCHARGES FROM CONSTRUCTION SITES ARE NOT AUTHORIZED BY THIS PERMIT:

   A. STORMWATER DISCHARGES ASSOCIATED WITH AN INDUSTRIAL ACTIVITY THAT ORIGINATES FROM THE SITE AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION.

   B. DISCHARGES THAT ARE MIXED WITH SOURCES OF NON-STORMWATER OTHER THAN DISCHARGES WHICH ARE IDENTIFIED IN PART III.A.2 OF THIS PERMIT AND WHICH ARE IN COMPLIANCE WITH PART IV.D.T (NON-STORMWATER DISCHARGES) OF THIS PERMIT.

   C. STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY THAT ARE SUBJECT TO AN EXISTING NPDES INDIVIDUAL OR GENERAL PERMIT. SUCH DISCHARGES MAY BE AUTHORIZED UNDER THIS PERMIT AFTER AN EXISTING PERMIT EXPIRES PROVIDED THE EXISTING PERMIT DID NOT ESTABLISH NUMERIC LIMITATION FOR SUCH DISCHARGES.

   D. STORMWATER DISCHARGES FROM CONSTRUCTION SITES THAT THE DIRECTOR (EPD) HAS DETERMINED TO BE OR MAY REASONABLY BE EXPECTED TO BE CONTRIBUTING TO A VIOLATION OF A WATER QUALITY STANDARD.

WATER QUALITY COMPLIANCE: PART I.C.4

NO DISCHARGES AUTHORIZED BY THIS PERMIT SHALL CAUSE VIOLATIONS OF GEORGIA'S IN STREAM WATER QUALITY STANDARDS AS PROVIDED BY THE RULES AND REGULATIONS FOR WATER QUALITY CONTROL, CHAPTER 391-3-6-03.

SAMPLING METHODOLOGY: PART IV.D.4

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

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

2. LARGE MOUTH, CLEAN AND RINSED GLASS OR PLASTIC JARS WITH A MINIMUM SAMPLE SIZE OF 200 MILLILITERS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

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

4. SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

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

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

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

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

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

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

11. THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

12. THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.

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

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

SAMPLING FREQUENCY: PART IV.D.6.d

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

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

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

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

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

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

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

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

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

NTU TABLE APPENDIX B:

SITE SIZE, ACRES	SURFACE WATER DRAINAGE AREA, SQUARE MILES							
	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
100.01+	50	50	50	50	50	100	200	100

REPORTING: PART IV.E

1. THE APPLICABLE PERMITEES 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 PERMITEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A **NOT** IS SUBMITTED IN ACCORDANCE WITH PART VI.

2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

   A. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
   B. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
   C. THE DATE(S) ANALYSES WERE PERFORMED;
   D. THE TIME(S) ANALYSES WERE INITIATED;
   E. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
   F. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
   G. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC. USED TO DETERMINE RESULTS;
   H. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU"; AND
   I. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY THE RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT, THE PERMITEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AR A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A **NOT** IS SUBMITTED IN ACCORDANCE WITH PART VI.

RETENTION OF RECORDS: PART IV.F

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

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

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

PROJECT REFERENCE/24 HOUR CONTACT INFORMATION:

DEVELOPER/PRIMARY PERMITTEE/OWNER	CIVIL SITE WORK DESIGN PROFESSIONAL	24 HOUR CONTACT
SAVANNAH CHATHAM COUNTY PUBLIC SCHOOL SYSTEM ATTN: SLADE HELMLY 3609 HOPKINS STREET SAVANNAH, GA 31405 PHONE: (912) 395-1032 EMAIL: slade.helmly@sccpss.com	CRAIG R. ZUCK MOFFATT & NICHOL 2 EAST BRYAN STREET, SUITE 501 SAVANNAH, GA 31401 PHONE: (912) 231-0044 EMAIL: CZUCK@MOFFATTNICHOL.COM	CRAIG R. ZUCK MOFFATT & NICHOL (912) 231-0044

SEDIMENT STORAGE:

THE SITE HAS A TOTAL DISTURBED AREA OF 44.9 ACRES. THE FOLLOWING CALCULATIONS SUMMARIZE THE REQUIRED AND AVAILABLE SEDIMENT STORAGE PROVIDED FOR THIS PROJECT. SEDIMENT STORAGE - THE PERMIT REQUIRES A MINIMUM OF 67 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE.

BASIN #1 POND ADJACENT TO FOOTBALL STADIUM (14.31 AC)
1. TOTAL DRAINAGE AREA = 13.11 AC
   NUMBER OF INLETS = 10
2. REQUIRED SEDIMENT STORAGE = 67 CY / AC X DRAINAGE AREA
   = 67 CY / AC X 13.11 AC
   = 878 CY = 23,716 CF
3. EXCAVATION DEPTH (MINIMUM OF 1.5 FT) = 2.5 FT
4. SLOPE SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2:1
5. REQUIRED SURFACE AREA / EXCAVATED SEDIMENT TRAP
   SAmin = SEDIMENT STORAGE / SEDIMENT DEPTH
   SAmin = 360 CF / 2.5 FT
   SAmin = 144 SF min
6. SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS
   (A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATIO IS RECOMMENDED).
   SHAPE: SQUARE
   DIMENSIONS: L = 12 FT ; W = 12 FT ; DIAMETER = N/A FT
7. TOTAL SEDIMENT STORED BY SEDIMENT TRAPS = 3,600 CF

   REMAINING REQUIRED SEDIMENT STORAGE = 23,716 CF - 3,600 CF
   = 20,116 CF

   NOTE: THE REMAINING REQUIRED SEDIMENT STORAGE WILL BE ACHIEVED BY OVER EXCAVATING THE TWO PONDS BY THE STADIUM
   EXCAVATED DEPTH REQUIRED = 20,116 CF / 20,710 SF
   = 0.97 FT
   THEREFORE OVER EXCAVATE PONDS 1 FT

BASIN #2 POND ON EAST SIDE OF CAMPUS BY BUS DRIVE
1. TOTAL DRAINAGE AREA = 7.49 AC
   NUMBER OF INLETS = 12
2. REQUIRED SEDIMENT STORAGE = 67 CY / AC X DRAINAGE AREA
   = 67 CY / AC X 7.49 AC
   = 501.83 CY = 13,549 CF
3. EXCAVATION DEPTH (MINIMUM OF 1.5 FT) = 2.5 FT
4. SLOPE SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2:1
5. REQUIRED SURFACE AREA / EXCAVATED SEDIMENT TRAP
   SAmin = SEDIMENT STORAGE / SEDIMENT DEPTH
   SAmin = 360 CF / 2.5 FT
   SAmin = 144 SF min
6. SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS
   (A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATIO IS RECOMMENDED).
   SHAPE: SQUARE
   DIMENSIONS: L = 12 FT ; W = 12 FT ; DIAMETER = N/A FT
7. TOTAL SEDIMENT STORED BY SEDIMENT TRAPS = 360 CF X 12 INLETS = 4,320 CF

   REMAINING REQUIRED SEDIMENT STORAGE = 13,549 CF - 4,320 CF
   = 9,229 CF

   NOTE: THE REMAINING REQUIRED SEDIMENT STORAGE WILL BE ACHIEVED BY OVER EXCAVATING THE POND BY THE BUS DRIVE.
   EXCAVATED DEPTH REQUIRED = 9,229 CF / 19,310 SF
   = 0.48 FT
   THEREFORE OVER EXCAVATE PONDS 0.5 FT

BASIN #3 LARGE POND BY BASEBALL FIELDS
1. TOTAL DRAINAGE AREA = 20.60 AC
   NUMBER OF INLETS = 38
2. REQUIRED SEDIMENT STORAGE = 67 CY / AC X DRAINAGE AREA
   = 67 CY / AC X 20.60 AC
   = 1,380 CY = 37,265 CF
3. EXCAVATION DEPTH (MINIMUM OF 1.5 FT) = 2.5 FT
4. SLOPE SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2:1
5. REQUIRED SURFACE AREA / EXCAVATED SEDIMENT TRAP
   SAmin = SEDIMENT STORAGE / SEDIMENT DEPTH
   SAmin = 360 CF / 2.5 FT
   SAmin = 144 SF min
6. SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS
   (A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATIO IS RECOMMENDED).
   SHAPE: SQUARE
   DIMENSIONS: L = 12 FT ; W = 12 FT ; DIAMETER = N/A FT
7. TOTAL SEDIMENT STORED BY SEDIMENT TRAPS = 360 CF X 38 INLETS = 13,680 CF

   REMAINING REQUIRED SEDIMENT STORAGE = 37,265 CF - 13,680 CF
   = 23,585 CF

   NOTE: THE REMAINING REQUIRED SEDIMENT STORAGE WILL BE ACHIEVED BY OVER EXCAVATING THE POND BY THE BASEBALL FIELDS.
   EXCAVATED DEPTH REQUIRED = 23,585 CF / 37,660 SF
   = 0.63 FT
   THEREFORE OVER EXCAVATE PONDS 1 FT

DESIGN VALUES DETERMINED BY THIS SHEET REPRESENT THE MINIMUM REQUIREMENTS FOR A TEMPORARY SEDIMENT BASIN.

PROJECT REFERENCE

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SAVANNAH, GA 31401
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GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER:
CRAIG R. ZUCK

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC GENERAL NOTES

CE003

BID SET

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EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN (ES&PC)

THIS PLAN WAS PREPARED AS REQUIRED BY NPDES GENERAL PERMIT NO. GAR 100001. THESE PLAN SHEETS AND ALL REQUIREMENTS OF THE GENERAL PERMIT AS WELL AS LOCAL, STATE, AND FEDERAL REGULATIONS OR LAWS APPLY REGARDLESS OF SPECIFIC INCLUSION IN THIS PLAN.

SITE DESCRIPTION

THIS PROJECT INCLUDES EARTHWORK, UTILITY INSTALLATION, AND PAVING TO SERVE AN APPROXIMATELY **48 ACRE** AREA AT THE NEW K-12 MULTI-SCHOOL IN SAVANNAH, GA.

SAVANNAH CHATHAM, AS PRIMARY PERMITTEE, WILL OVERSEE SITE CONSTRUCTION LOCATED IN SAVANNAH, GEORGIA.
THE SITE IS LOCATED IN CHATHAM COUNTY, GA.
THE PROJECT LIMITS CONTAIN APPROXIMATELY 48 ACRES.
ACREAGE OF THE DISTURBANCE WITHIN THE PROJECT AREA: 44.9 ACRES.

CURRENTLY THE SOUTHERN END OF THE SITE CONSISTS OF A COUPLE PAVED PARKING LOTS, A FOOTBALL FIELD AND A FEW SUPPORT BUILDINGS. THE NORTHERN END OF THE SITE CURRENTLY CONSISTS OF SEVERAL BUILDINGS, A TRACK, AND BASEBALL FIELD. THE SITE WILL BE GRADED AND STABILIZED. THE DRAINAGE ON THE SITE FLOWS ACROSS THE SITE AND INTO EXISTING DITCHES, INLETS AND INTO THE DETENTION POND BEFORE OUTFALLING INTO AN OFFSITE DITCH WHICH DISCHARGES INTO PIPE MAKERS'S AND DUNDEE CANAL. PERMANENT GRASSING WILL BE INSTALLED TO PROTECT EARTHEN AREAS FROM EROSION ONCE CONSTRUCTION IS COMPLETE.

CONSTRUCTION WILL BEGIN WITH INSTALLATION OF A CONSTRUCTION EXIT, PLACEMENT OF PERIMETER SILT FENCE ALONG APPLICABLE PORTIONS OF THE PROJECT LIMITS TO LIMIT THE AMOUNT OF SILT RUNOFF. AFTER THESE EROSION CONTROL BMPs HAVE BEEN INSTALLED, EARTHWORK ACTIVITIES WILL BEGIN. CONSTRUCTION OF DRAINAGE PROVISIONS WILL START. THE SITE WILL THEN BE GRADED AND STABILIZED WITH GRAVEL, VEGETATION, OR MULCH.

FOR ES&PC PLAN SEE SHEETS CE101 - CE106.

ZONING: C2 HEAVY COMMERCIAL

NAME OF RECEIVING WATERS: GARDEN CITY DRAINAGE SYSTEM, THEN PIPE MAKERS'S AND DUNDEE CANAL

BUFFER VARIANCE: A STREAM BUFFER VARIANCE IS NOT REQUIRED FOR CONSTRUCTION ACTIVITIES FOR THIS PROJECT.

STATE WATERS: STATE WATERS ARE NOT LOCATED WITHIN 200 FEET OF THE PROJECT SITE.

SURVEY INFORMATION

ADJACENT PROPERTIES: FAIR LAWN BAPTIST CHURCH, CHATHAM VILLA RESIDENTIAL NEIGHBORHOOD.

VERTICAL DATUM - ELEVATIONS SHOWN ARE IN FEET AND ARE BASED ON NAVD88.

HORIZONTAL DATUM - COORDINATES ARE IN U.S. SURVEY FEET REFERRED TO THE GEORGIA STATE PLANE ZONE 1001 EAST, NAD83.

THE SITE LIES WITHIN AN EFFECTIVE FEMA SPECIAL FLOOD HAZARD AREA ZONE X, AREA OF MINIMAL FLOOD HAZARD, AS DOCUMENTED ON FEMA FIRM PANEL 13051C0135H, EFFECTIVE AUGUST 16, 2018 AND 13051C0132G, EFFECTIVE AUGUST 16, 2018.

THE WEIGHTED CURVE NUMBER FOR THE TOTAL WATERSHED IS 85.

RUNOFF COEFFICIENT (PROJECT SITE):

- WEIGHTED PRE CONSTRUCTION CURVE NUMBER (CN): 87
- WEIGHTED POST CONSTRUCTION CURVE NUMBER (CN): 85

SOIL PROPERTIES/WATERSHEDS

(SEE APPENDIX A IN THE ACCOMPANYING STORMWATER REPORT FOR SOILS MAP FOR TYPES AND LOCATIONS)

SOIL DISTURBING ACTIVITIES INCLUDE:

- INSTALLING PERIMETER AND OTHER SEDIMENT CONTROLS.
- INSTALLING A STABILIZED CONSTRUCTION EXIT.
- GRADING AND EXCAVATION FOR UTILITIES.
- PREPARATION FOR FINAL SEEDING.
- COMPLETION OF ON-SITE STABILIZATION.

CONTROLS

EROSION AND SEDIMENT CONTROLS

ALL PERIMETER SILT FENCES AND CONSTRUCTION EXITS SHALL BE IN PLACE PRIOR TO ANY LAND DISTURBING ACTIVITIES. (CONSTRUCTION EXIT SHOULD BE DEFINED - INSTALLATION MAY WAIT UNTIL DEMOLITION HAS OCCURRED)

WHEN CONSTRUCTION ACTIVITIES HAVE CEASED IN AN AREA, THAT AREA SHALL BE STABILIZED WITHIN 14 DAYS. IF THE AREA IS NOT YET TO FINAL GRADE, IT SHALL BE MULCHED. IF THE AREA IS TO FINAL GRADE AND WILL EVENTUALLY CONTAIN SITE IMPROVEMENTS, IT SHALL BE TEMPORARY SEEDED. AREAS BROUGHT TO FINAL GRADE THAT WILL REMAIN PERVIOUS ARE TO BE PERMANENTLY SEEDED. ALLOWABLE EXCEPTIONS FROM THE NPDES GENERAL NPDES PERMIT NO. GAR 100001, ARE NOTED BELOW.

"WHERE THE INITIAL OF STABILIZATION MEASURE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARY OR PERMANENTLY CEASE IS PRECLUDED BY SNOW COVER OR OTHER ADVERSE WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE."

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

PLEASE REFER TO DETAIL SHEETS FOR THE LAND DISTURBANCE CONSTRUCTION SCHEDULE AND TEMPORARY AND PERMANENT GRASSING SCHEDULES.

STORMWATER FROM THIS SITE WILL BE ROUTED THROUGH THE PIPES AND DITCHES BEFORE ENTERING THE PONDS. THE PONDS DISCHARGES INTO AN EXISTING DRAINAGE DITCH AND DRAINAGE SYSTEM ON SR21, AND EVENTUALLY INTO PIPEMAKER'S AND DUNDEE CANALS.

NON-STORMWATER DISCHARGES

ALL NON-STORMWATER DISCHARGES WILL BE ROUTED THROUGH ON-SITE BMPs WHERE POSSIBLE. THESE DISCHARGES INCLUDE FLUSHING OF WATER AND FIRE LINES, IRRIGATION WATER, GROUND WATER, DEWATERING OF PITS OR DEPRESSIONS WITHIN THE CONSTRUCTION SITE AND RINSE OFF WATER OF NON-TOXIC MATERIALS.

OTHER CONTROLS

NO WASTE WILL BE DISPOSED OF INTO STORMWATER INLETS OR WATERS OF THE STATE EXCEPT AS AUTHORIZED BY A SECTION 404 PET.

WASTE MATERIALS

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE WILL BE BURIED ON-SITE.

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

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE ESPCP FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN IN THE ESPCP AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH 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 SANITARY 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 AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMPs MUST BE IMPLEMENTED, SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES FROM CONTRIBUTING TO STORMWATER DISCHARGES. THE LOCATION OF THE SANITARY WASTES UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN

GRADING PHASE BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION EXIT HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENT. SEE SHEETS CE101 - CE106 & CE501 FOR CONSTRUCTION EXIT LOCATION AND DETAILS. THE PAVED STREET ADJACENT TO THE SITE EXIT WILL BE INSPECTED DAILY FOR TRACKING OF MUD, DIRT OR ROCK. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE FOLLOWING MATERIALS ARE EXPECTED ON-SITE DURING CONSTRUCTION: CONCRETE PRODUCTS, ASPHALT, PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, TAR, METAL REINFORCING, LUMBER, PESTICIDES, FERTILIZERS, HERBICIDES, CRUSHED STONE, PLASTIC, METAL, AND CONCRETE PIPES.

SPILL PREVENTION

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

GOOD HOUSEKEEPING

1. QUANTITIES OF PRODUCTS STORED ON-SITE WILL BE LIMITED TO THE AMOUNT NEEDED FOR THE JOB.
2. PRODUCTS AND MATERIALS WILL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL, WHERE POSSIBLE.
3. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER LABELS LEGIBLE AND VISIBLE.
4. PRODUCTS MIXING, DISPOSAL AND DISPOSAL OF PRODUCT CONTAINERS WILL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
5. THE CONTRACTOR WILL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE AND DISPOSAL.

PRODUCT SPECIFIC PRACTICES

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

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

CONCRETE TRUCK WASHING - **NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.**

FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THAT 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/FORMWORK - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ON-SITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES. CONTRACTOR IS TO PROVIDE COVER FOR BUILDING MATERIALS AND BUILDING PRODUCTS WHEN APPROPRIATE.

CONSTRUCTION AND BUILDING MATERIALS SHALL BE STORED IN APPROPRIATE CONTAINERS AND PROTECTED FROM EXPOSURE TO PRECIPITATION AND STORMWATER WHERE APPLICABLE. CHEMICAL PRODUCTS SHALL BE STORED IN ORIGINAL CONTAINERS WITH ALL MANUFACTURER'S LABELS OPENLY DISPLACE. USE AND DISPOSAL OF CHEMICALS SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS

SPILL CLEANUP AND CONTROL PRACTICES

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

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1,320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

PROJECT REFERENCE

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NO. 0000012478
GSWCC LEVEL II DESIGNER
CRAIG R. ZUCK

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
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CLH DESIGN, P.A.

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC GENERAL NOTES

CE004

BID SET

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN (ESPC)

INSPECTIONS

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

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

(3) CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENTATION CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITEE MUST COMPLY WITH PART IV.D.4.A(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

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

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

(6) A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E. INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5) OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF THE BEST MANAGEMENT PRACTICES TAHT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION,SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

MAINTENANCE & INSPECTION OF EROSION & SEDIMENT CONTROLS

MAINTENANCE

THE FOLLOWING BEST MANAGEMENT PRACTICE MAINTENANCE CRITERIA ARE TAKEN FROM THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", FIFTH EDITION.

CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5 -3.5 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

RETROFIT STRUCTURES SHALL BE KEPT CLEAR OR TRASH AND DEBRIS. THIS WILL REQUIRE CONTINUOUS MONITORING AND MAINTENANCE, WHICH INCLUDES SEDIMENT REMOVAL WHEN ONE-THIRD OF THE SEDIMENT STORAGE CAPACITY HAS BEEN LOST.

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

SEDIMENT SHALL BE REMOVED FROM SEDIMENT TRAPS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE HEIGHT OF THE TRAP.

SEDIMENT SHALL NOT BE WASHED INTO THE INLET. IT SHALL BE REMOVED FROM THE SEDIMENT TRAP AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLET, AGAIN.

WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, ALL MATERIALS AND ANY SEDIMENT SHALL BE REMOVED, AND EITHER SALVAGED OR DISPOSED OF PROPERLY. THE DISTURBED AREA SHALL BE BROUGHT TO PROPER GRADE, THEN SMOOTHED AND COMPACTED. APPROPRIATELY STABILIZE ALL DISTURBED AREA AROUND THE INLET.

REPAIR ALL DAMAGES CAUSED TO TEMPORARY SEDIMENT BASINS BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORKING DAY. SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHED THE SPECIFIED DISTANCE BELOW THE TOP OF THE RISE. SEDIMENT SHALL NOT ENTER ADJACENT STREAMS OR DRAINAGE WAYS DURING SEDIMENT REMOVAL OR DISPOSAL. THE SEDIMENT SHALL NOT BE DEPOSITED DOWNSTREAM FROM THE EMBANKMENT, ADJACENT TO A STREAM OR FLOODPLAIN.

ROUGHENED AREAS SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO OBTAIN OPTIMUM SEED GERMINATION AND SEEDING GROWTH.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS., BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATIVE TECHNIQUES SHALL BE EMPLOYED.

PERMANENT VEGETATION SHALL BE APPLIED IMMEDIATELY TO ROUGH GRADED AREA THAT WILL BE UNDISTURBED FOR LONGER THAN SIX MONTHS. THIS PRACTICE OF SODDING SHALL BE APPLIED IMMEDIATELY TO ALL AREAS AT FINAL GRADE. FINAL STABILIZATION MEANS THAT ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND THAT FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, AT LEAST 70% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION OR EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS THE USE OF RIP-RAP, GABIONS, PERMANENT MULCHES OR GEOTEXTILES) HAVE BEEN EMPLOYED.

PERMANENT VEGETATION SHALL CONSIST OF: PLANTED TREES, SHRUBS, PERENNIAL VINES, A CROP OF PERENNIAL VEGETATION APPROPRIATE FOR THE REGION, SUCH THAT WITHIN THE GROWING SEASON A 70% COVERAGE BY PERENNIAL VEGETATION SHALL BE ACHIEVED. FINAL STABILIZATION APPLIES TO EACH PHASE OF CONSTRUCTION. UNTIL THIS STANDARD IS SATISFIED AND PERMANENT CONTROL MEASURES AND FACILITIES ARE OPERATIONAL, INTERIM STABILIZATION MEASURES AND TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL NOT BE REMOVED.

STORMWATER SAMPLING

SAMPLE ANALYSIS

STORMWATER SAMPLES ARE TO BE ANALYZED WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORMWATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001."

STORMWATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORMWATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 50, THE VALUE THAT WAS SELECTED FROM APPENDIX B IN GENERAL PERMIT NO. GAR 100001. THE NTU IS BASED UPON THE DISTURBED ACREAGE OF 44.9 ACRES FOR THE PROJECT SITE, THE SURFACE WATER DRAINAGE AREA LESS THAN 0.05 SQUARE MILES, AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

SAMPLE TYPE

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

PER NPDES PERMIT, GAR 100001, "SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES. SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER. LARGE MOUTH, WELL-CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANSED THOROUGHLY TO AVOID CONTAMINATION. MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED.

SAMPLING POINTS

THERE WILL BE 3 STORMWATER SAMPLING LOCATIONS.

STORMWATER SAMPLING

25-YR PRE DEVELOPMENT STORMWATER RUNOFF (cfs):	25-YR POST DEVELOPMENT STORMWATER RUNOFF (cfs):
BASIN I = 47.06	STADIUM POND OUTFALL = 28.05
BASIN II = 23.54	BUS POND OUTFALL = 18.38
BASIN III = 51.95	BASEBALL POND OUTFALL = 33.47

APPENDIX B WAS USED TO DETERMINE THE NTU UNITS ALLOWABLE AND UPSTREAM AND DOWNSTREAM SAMPLING WILL BE PERFORMED FOR THIS PROJECT.

- CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORMWATER CHANNEL.
- THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.
- THE SAMPLINGS SHOULD BE KEPT FREE FROM FLOATING DEBRIS.
- THE PRIMARY PERMITTEE DOES NOT HAVE TO SAMPLE SHEET FLOW ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZE BY THE PROJECT.

REPORTING

1. THE APPLICABLE PERMITEES 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 PERMITEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A **NOT** IS SUBMITTED IN ACCORDANCE WITH PART VI.

2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

   A. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
   B. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
   C. THE DATE(S) ANALYSES WERE PERFORMED;
   D. THE TIME(S) ANALYSES WERE INITIATED;
   E. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
   F. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
   G. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC. USED TO DETERMINE RESULTS;
   H. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU"; AND
   I. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY THE RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT, THE PERMITEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AR A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A **NOT** IS SUBMITTED IN ACCORDANCE WITH PART VI.

COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

THE CONTRACTOR WILL OBTAIN COPIES OF ANY AND ALL LOCAL AND STATE REGULATIONS THAT ARE APPLICABLE TO STORMWATER MANAGEMENT, EROSION CONTROL, AND POLLUTION MINIMIZATION AT THIS JOB SITE AND WILL COMPLY FULLY WITH SUCH REGULATIONS. THE CONTRACTOR WILL SUBMIT WRITTEN EVIDENCE OF SUCH COMPLIANCE IF REQUESTED BY THE OWNER OR ANY AGENT OF A REGULATORY BODY. THE CONTRACTOR WILL COMPLY WITH ALL CONDITIONS OF ANY AND ALL LOCAL, STATE AND FEDERAL AGENCIES HAVE GOVERNING AUTHORITY, INCLUDING THE CONDITIONS RELATED TO MAINTAINING THE ES&PC AND EVIDENCE OF COMPLIANCE WITH THE ES&PC AT THE JOB SITE AND ALLOWING REGULATORY PERSONNEL ACCESS TO THE JOB SITE AND TO RECORDS IN ORDER TO DETERMINE COMPLIANCE.

CERTIFICATION

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION 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-DISTRUBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORMWATER OUTFALLS THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES MEETS THE DESIGN REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001."

GSWCC LEVEL II DESIGN PROFESSIONAL: CRAIG R. ZUCK, P.E.
GSWCC CERTIFICATION NO. 0000012478

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

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.

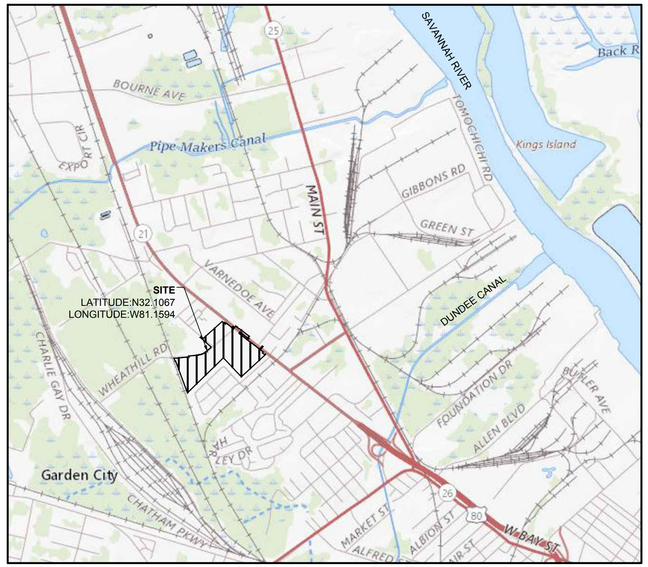
DATE OF INSPECTION _____

"I CERTIFY THE SITE WAS IN COMPLIANCE WITH THE ESPC PLAN ON THE DATE OF INSPECTION."

GSWCC LEVEL II DESIGN PROFESSIONAL: CRAIG R ZUCK, P.E.
GSWCC CERTIFICATION NO. 0000012478

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ESPC PLAN.

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



VICINITY MAP
SCALE: 1" = 2000'

PROJECT REFERENCE

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GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER
CRAIG R. ZUCK

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

MEMBERS OF THE AMERICAN INSTITUTE OF ARCHITECTS

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC GENERAL NOTES

CE005

BID SET

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U.S. HWY 21 / AUGUSTA ROAD

RUSSELL AVE

CHATHAM VILLA DRIVE

101

COOPER LANE

LIMITS OF DISTURBANCE

LIMITS OF DISTURBANCE

102

ATLANTIC COASTLINE RAILROAD

PRISCILLA D THOMAS WAY

BYCK AVENUE

N

120' 0' 120' 240'

SCALE: 1"=120'

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CE-ES&PC KEY PLAN.DWG

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

LS3P

321 WEST CONGRESS STREET SUITE 301
SAVANNAH, GEORGIA 31401
TEL. 912.695.2111 FAX 912.298.0206
WWW.LS3P.COM

moffatt & nichol
2 EAST BRYAN ST., STE 501
SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

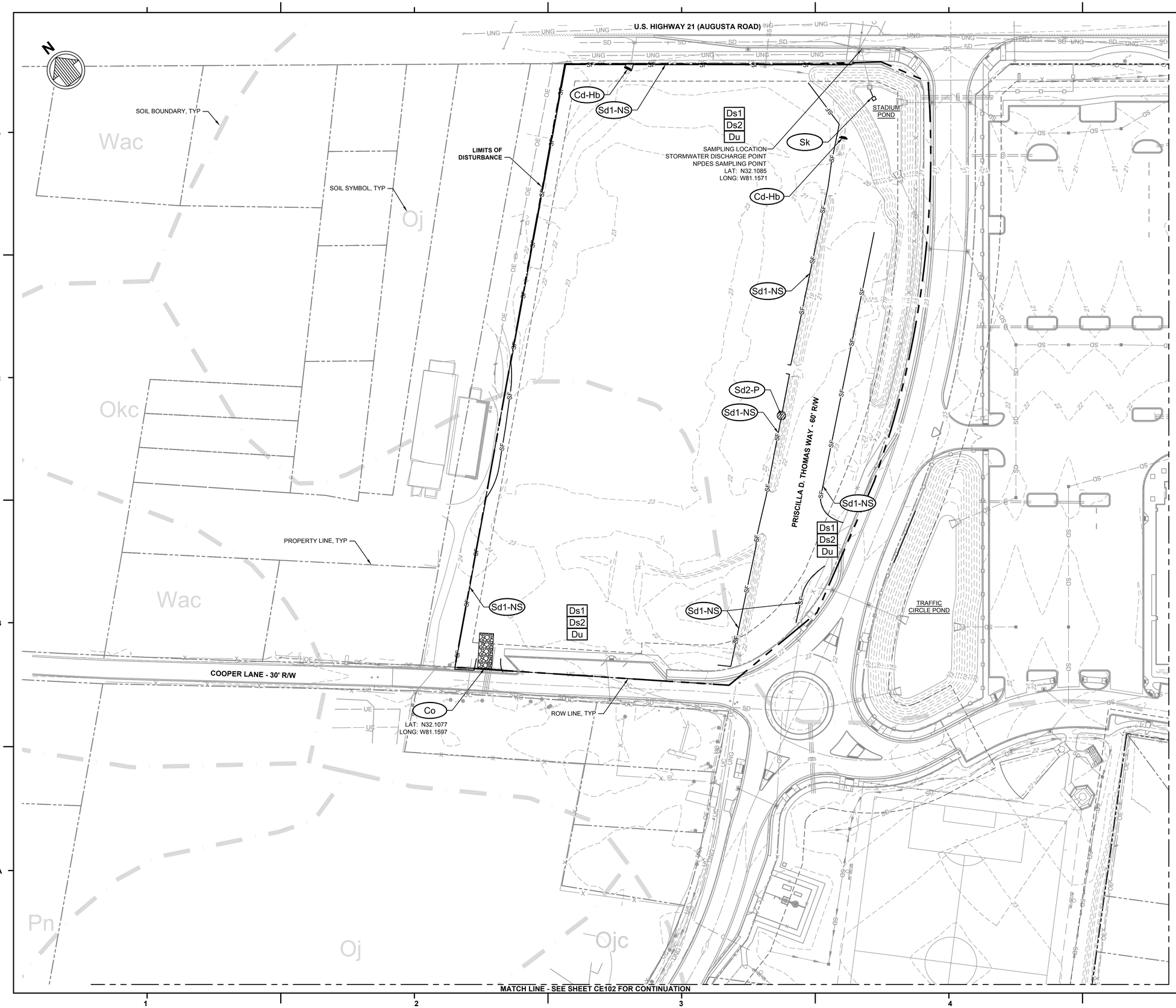
No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC - KEY PLAN

CE100

BID SET



NOTES

1. INITIAL PHASE INCLUDES THE DEMOLITION OF THE EXISTING BUILDINGS, PAVEMENT, AND UTILITIES.
2. EROSION CONTROL PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
3. THERE ARE NO WETLANDS ON THE SITE.
4. THERE ARE NO STATE WATERS ON OR WITHIN 200' OF THE SITE.
5. REFER TO STORMWATER REPORT FOR PRE AND POST DEVELOPMENT DRAINAGE BASIN DELINEATION.
6. ALL SILT FENCE FOR THIS PROJECT SHALL BE SD1-NS.

INITIAL PHASE NOTES

1. INSTALL CONSTRUCTION EXIT (Co)
2. INSTALL SILT FENCE (Sd1-NS)
3. INSTALL MULCHING & GRASSING AT NECESSARY LOCATIONS (Ds1 & Ds2)
4. INSTALL STRAW-BALE CHECK DAMS (Cd-Hb)
5. INSTALL CURB INLET PROTECTION (Sd2-P)
6. PROVIDE DUST CONTROL (Du)
7. EXCAVATE DETENTION PONDS
8. INSTALL FLOATING SURFACE SKIMMERS (Sk)

SOILS CHART

Cc:	CAPE FEAR SOILS - TYPE C/D
Oj:	OCILLA COMPLEX - TYPE B/D
Ojc:	OCILLA-URBAN LAND COMPLEX - TYPE B/D
Okc:	OGEECHEE-URBAN LAND COMPLEX - TYPE B/D
Pn:	POOLER FINE SANDY LOAM - TYPE C/D
Wac:	WAHEE-URBAN LAND COMPLEX - TYPE C/D

LEGEND

- Co — CONSTRUCTION EXIT — SEE DETAIL C1 SHEET CE501
- Ds1 — DISTURBED AREA STABILIZATION (MULCHING ONLY) — SEE DETAIL C4 SHEET CE502
- Ds2 — DISTURBED AREA STABILIZATION (TEMPORARY SEEDING) — SEE DETAIL C5 SHEET CE502
- Du — DUST CONTROL — SEE DETAIL C3 SHEET CE502
- Sd1-NS — SEDIMENT BARRIER - NON-SENSITIVE — SEE DETAIL C2 SHEET CE502
- Sd2-P — CURB INLET PROTECTION — SEE DETAIL A2 SHEET CE502
- Sk — FLOATING SURFACE SKIMMER — SEE DETAIL A1 SHEET CE504
- St — STORM DRAIN OUTLET PROTECTION — SEE DETAIL A2 SHEET CE501
- Tr — TREE PROTECTION — SEE DETAIL A1 SHEET CE502
- Cd-Hb — STRAW-BALE CHECK DAM — SEE DETAIL C3 SHEET CE501

PROJECT REFERENCE

CRAIG R. ZUCK, PE
MOFFATT & NICHOL
2 EAST BRYAN STREET, SUITE 501
SAVANNAH, GA 31401
PHONE: (912) 231-0044

GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER:
CRAIG R. ZUCK

50' 0' 50' 100'
SCALE: 1"=50'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
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CIVIL ENGINEERS:
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STRUCTURAL ENGINEER:
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GEORGIA
REGISTERED
No. 031068
PROFESSIONAL
ENGINEER
CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC - INITIAL PHASE

CE101

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CE-ES&PC INITIAL PHASE.DWG

MATCH LINE - SEE SHEET CE101 FOR CONTINUATION

SOIL BOUNDARY, TYP

SOIL SYMBOL, TYP

ROW LINE, TYP

LIMITS OF DISTURBANCE

PRISCILLA D. THOMAS WAY - 60' R/W

Co
LAT: N32.1063
LONG: W81.1611

Sd1-NS

Ds1
Ds2
Du

LIMITS OF DISTURBANCE

PROPERTY LINE, TYP

Tr SEE NOTE 6

Cd-Hb

SAMPLING LOCATION
STORMWATER DISCHARGE POINT
NPDES SAMPLING POINT
LAT: N32.1048
LONG: W81.1597

BASEBALL FIELD POND

Sk

St # 17A

SAMPLING LOCATION
STORMWATER DISCHARGE POINT
NPDES SAMPLING POINT
LAT: N32.1036
LONG: W81.1612

Oj Ojc Okc Cc

N

50' 0' 50' 100'

SCALE: 1"=50'

NOTES

1. INITIAL PHASE INCLUDES THE DEMOLITION OF THE EXISTING BUILDINGS, PAVEMENT, AND UTILITIES.
2. EROSION CONTROL PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
3. THERE ARE NO WETLANDS ON THE SITE.
4. THERE ARE NO STATE WATERS ON OR WITHIN 200' OF THE SITE.
5. REFER TO STORMWATER REPORT FOR PRE AND POST DEVELOPMENT DRAINAGE BASIN DELINEATION.
6. CONTRACTOR TO USE CAUTION WHILE REMOVING CURB AND PAVEMENT AROUND OAK TREE. AS SOON AS PAVEMENT IS REMOVED, CONTRACTOR TO ERECT TREE PROTECTION FENCING.
6. ALL SILT FENCE FOR THIS PROJECT SHALL BE SD1-NS.

INITIAL PHASE NOTES

1. INSTALL CONSTRUCTION EXIT (Co)
2. INSTALL SILT FENCE (Sd1-NS)
3. INSTALL MULCHING & GRASSING AT NECESSARY LOCATIONS (Ds1 & Ds2)
4. INSTALL STRAW-BALE CHECK DAMS (Cd-Hb)
5. INSTALL CURB INLET PROTECTION (Sd2-P)
6. PROVIDE DUST CONTROL (Du)
7. EXCAVATE DETENTION PONDS
8. INSTALL FLOATING SURFACE SKIMMERS (Sk)

SOILS CHART

Cc: CAPE FEAR SOILS - TYPE C/D
Oj: OCILLA COMPLEX - TYPE B/D
Ojc: OCILLA-URBAN LAND COMPLEX - TYPE B/D
Okc: OGEECHEE-URBAN LAND COMPLEX - TYPE B/D
Pn: POOLER FINE SANDY LOAM - TYPE C/D
Wac: WAHEE-URBAN LAND COMPLEX - TYPE C/D

LEGEND

- Co — CONSTRUCTION EXIT SEE DETAIL C1 SHEET CE501
- Ds1 — DISTURBED AREA STABILIZATION (MULCHING ONLY) SEE DETAIL C4 SHEET CE502
- Ds2 — DISTURBED AREA STABILIZATION (TEMPORARY SEEDING) SEE DETAIL C5 SHEET CE502
- Du — DUST CONTROL SEE DETAIL C3 SHEET CE502
- Sd1-NS — SEDIMENT BARRIER - NON-SENSITIVE SEE DETAIL C2 SHEET CE502
- Sd2-P — CURB INLET PROTECTION SEE DETAIL A2 SHEET CE502
- Sk — FLOATING SURFACE SKIMMER SEE DETAIL A1 SHEET CE504
- St — STORM DRAIN OUTLET PROTECTION SEE DETAIL A2 SHEET CE501
- Tr — TREE PROTECTION SEE DETAIL A1 SHEET CE502
- Cd-Hb — STRAW-BALE CHECK DAM SEE DETAIL C3 SHEET CE501

PROJECT REFERENCE

CRAIG R. ZUCK, PE
MOFFATT & NICHOL
2 EAST BRYAN STREET, SUITE 501
SAVANNAH, GA 31401
PHONE: (912) 231-0044

GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER:
CRAIG R. ZUCK

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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CLH DESIGN, P.A.

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MECHANICAL & PLUMBING:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

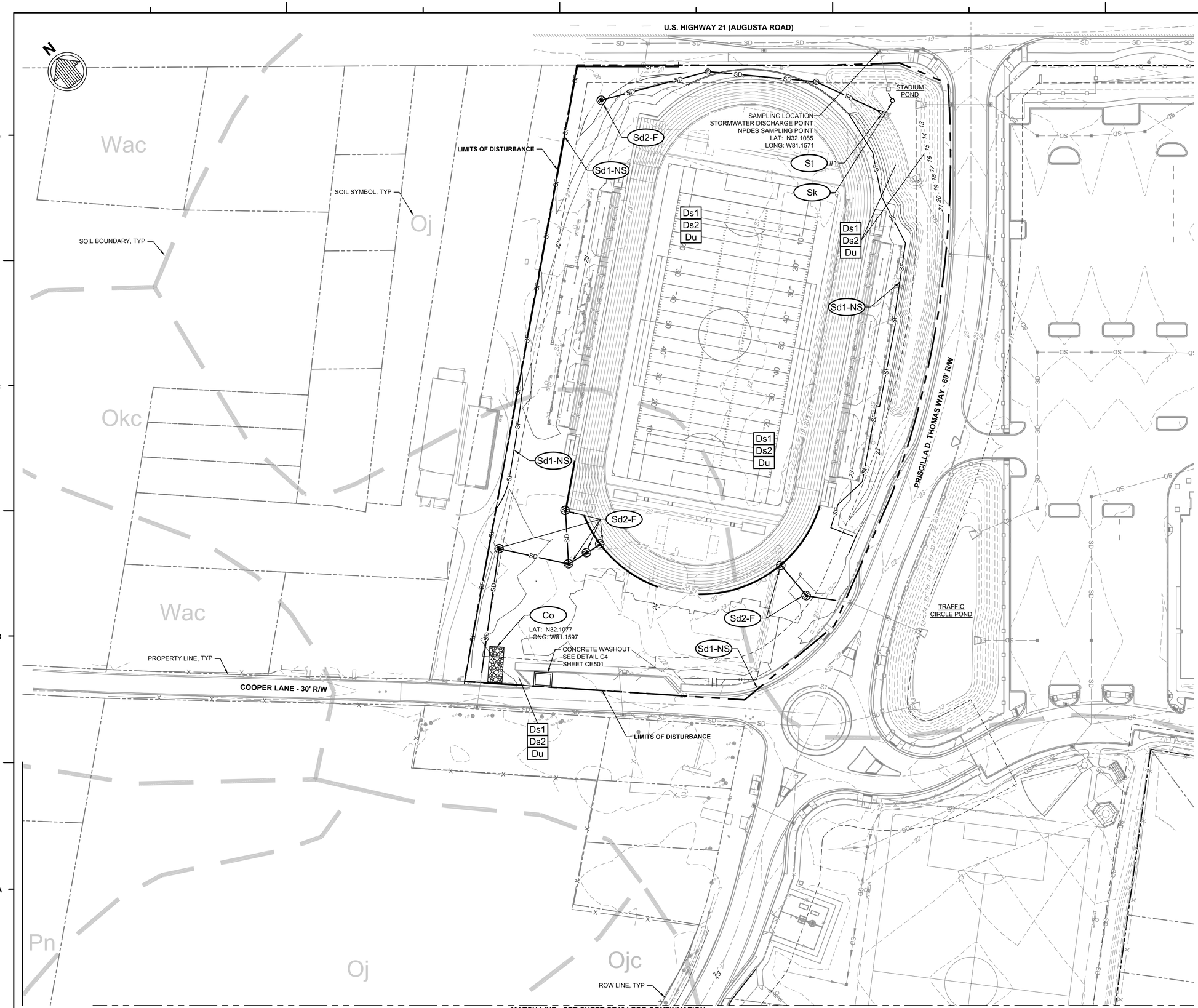
PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC - INITIAL PHASE

CE102

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CE-ES&PC INITIAL PHASE.DWG



NOTES

1. EROSION CONTROL PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
2. THERE ARE NO WETLANDS ON THE SITE.
3. THERE ARE NO STATE WATERS ON OR WITHIN 200' OF THE SITE.
4. REFER TO STORMWATER REPORT FOR PRE AND POST DEVELOPMENT DRAINAGE BASIN DELINEATION.
5. ALL SILT FENCE FOR THIS PROJECT SHALL BE SD1-NS.

INTERMEDIATE PHASE NOTES

1. INSTALL CONSTRUCTION EXITS (Co)
2. INSTALL AND MAINTAIN SILT FENCE (Sd1-NS)
3. MAINTAIN MULCHING & GRASSING AT NECESSARY LOCATIONS (Ds1 & Ds2)
4. MAINTAIN DUST CONTROL (Du)
5. ADJUST TREE PROTECTION (Tr)
6. INSTALL STORM DRAIN OUTLET PROTECTION (St)
7. INSTALL STRAW-BALE CHECK DAMS (Cd-Hb)
8. INSTALL INLET PROTECTION (Sd2-F & Sd2-P)
9. INSTALL CONCRETE WASHOUTS
10. MAINTAIN FLOATING SURFACE SKIMMERS (Sk)

SOILS CHART

Cc:	CAPE FEAR SOILS - TYPE C/D
Oj:	OCILLA COMPLEX - TYPE B/D
Ojc:	OCILLA-URBAN LAND COMPLEX - TYPE B/D
Okc:	OGEECHEE-URBAN LAND COMPLEX - TYPE B/D
Pn:	POOLER FINE SANDY LOAM - TYPE C/D
Wac:	WAHEE-URBAN LAND COMPLEX - TYPE C/D

LEGEND

Co	CONSTRUCTION EXIT SEE DETAIL C1 SHEET CE501
Ds1	DISTURBED AREA STABILIZATION (MULCHING ONLY) SEE DETAIL C4 SHEET CE502
Ds2	DISTURBED AREA STABILIZATION (TEMPORARY SEEDING) SEE DETAIL C5 SHEET CE502
Du	DUST CONTROL SEE DETAIL C3 SHEET CE502
Cd-Hb	STRAW-BALE CHECK DAM SEE DETAIL C3 SHEET CE501
Sd1-NS	SEDIMENT BARRIER - NON-SENSITIVE SEE DETAIL C2 SHEET CE502
Sd2-F	INLET SEDIMENT TRAP SEE DETAIL A2 SHEET CE502
Sd2-P	CURB INLET PROTECTION SEE DETAIL A2 SHEET CE502
Sk	FLOATING SURFACE SKIMMER SEE DETAIL A1 SHEET CE504
St	STORM DRAIN OUTLET PROTECTION SEE DETAIL A2 SHEET CE501
Tr	TREE PROTECTION SEE DETAIL A1 SHEET CE502

PROJECT REFERENCE

CRAIG R. ZUCK, PE
MOFFATT & NICHOL
2 EAST BRYAN STREET, SUITE 501
SAVANNAH, GA 31401
PHONE: (912) 231-0044

GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER:
CRAIG R. ZUCK

50' 0' 50' 100'
SCALE: 1"=50'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
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GEORGIA
REGISTERED
No. 031068
PROFESSIONAL
ENGINEER
CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC - INTERMEDIATE PHASE

CE103

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797\CE-ES&PC INTER PHASE.DWG

MATCH LINE - SEE SHEET CE103 FOR CONTINUATION

SOIL BOUNDARY, TYP

SOIL SYMBOL, TYP

LIMITS OF DISTURBANCE

Co
LAT: N32.1063
LONG: W81.1608

Sd1-NS

Sd2-F

Ds1
Ds2
Du

Tr

St #13

St #12A

St #14

St #15A

Cd-Hb

Sk

PRISCILLA D. THOMAS WAY - 60' R/W

PROPERTY LINE, TYP

MAINTENANCE EQUIPMENT ACCESS POINT

BASEBALL FIELD POND

EMERGENCY SPILLWAY

SAMPLING LOCATION
STORMWATER DISCHARGE POINT
NPDES SAMPLING POINT
LAT: N32.1036
LONG: W81.1612

Oj

Ojc

Okc

Cc

NOTES

1. EROSION CONTROL PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
2. THERE ARE NO WETLANDS ON THE SITE.
3. THERE ARE NO STATE WATERS ON OR WITHIN 200' OF THE SITE.
4. REFER TO STORMWATER REPORT FOR PRE AND POST DEVELOPMENT DRAINAGE BASIN DELINEATION.
5. ALL SILT FENCE FOR THIS PROJECT SHALL BE SD1-NS.

INTERMEDIATE PHASE NOTES

1. INSTALL CONSTRUCTION EXITS (Co)
2. INSTALL AND MAINTAIN SILT FENCE (Sd1-NS)
3. MAINTAIN MULCHING & GRASSING AT NECESSARY LOCATIONS (Ds1 & Ds2)
4. MAINTAIN DUST CONTROL (Du)
5. ADJUST TREE PROTECTION (Tr)
6. INSTALL STORM DRAIN OUTLET PROTECTION (St)
7. INSTALL STRAW-BALE CHECK DAMS (Cd-Hb)
8. INSTALL INLET PROTECTION (Sd2-F & Sd2-P)
9. INSTALL CONCRETE WASHOUTS
10. MAINTAIN FLOATING SURFACE SKIMMERS (Sk)

SOILS CHART

Cc:	CAPE FEAR SOILS - TYPE C/D
Oj:	OCILLA COMPLEX - TYPE B/D
Ojc:	OCILLA-URBAN LAND COMPLEX - TYPE B/D
Okc:	OGEECHEE-URBAN LAND COMPLEX - TYPE B/D
Pn:	POOLER FINE SANDY LOAM - TYPE C/D
Wac:	WAHEE-URBAN LAND COMPLEX - TYPE C/D

LEGEND

Co	CONSTRUCTION EXIT SEE DETAIL C1 SHEET CE501
Ds1	DISTURBED AREA STABILIZATION (MULCHING ONLY) SEE DETAIL C4 SHEET CE502
Ds2	DISTURBED AREA STABILIZATION (TEMPORARY SEEDING) SEE DETAIL C5 SHEET CE502
Du	DUST CONTROL SEE DETAIL C3 SHEET CE502
Cd-Hb	STRAW-BALE CHECK DAM SEE DETAIL C3 SHEET CE501
Sd1-NS	SEDIMENT BARRIER - NON-SENSITIVE SEE DETAIL C2 SHEET CE502
Sd2-F	INLET SEDIMENT TRAP SEE DETAIL A2 SHEET CE502
Sd2-P	CURB INLET PROTECTION SEE DETAIL A2 SHEET CE502
Sk	FLOATING SURFACE SKIMMER SEE DETAIL A1 SHEET CE504
St	STORM DRAIN OUTLET PROTECTION SEE DETAIL A2 SHEET CE501
Tr	TREE PROTECTION SEE DETAIL A1 SHEET CE502

PROJECT REFERENCE

CRAIG R. ZUCK, PE
MOFFATT & NICHOL
2 EAST BRYAN STREET, SUITE 501
SAVANNAH, GA 31401
PHONE: (912) 231-0044

GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER:
CRAIG R. ZUCK

50' 0' 50' 100'
SCALE: 1"=50'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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CLH DESIGN, P.A.

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GEORGIA
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No. 031068
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ENGINEER
CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

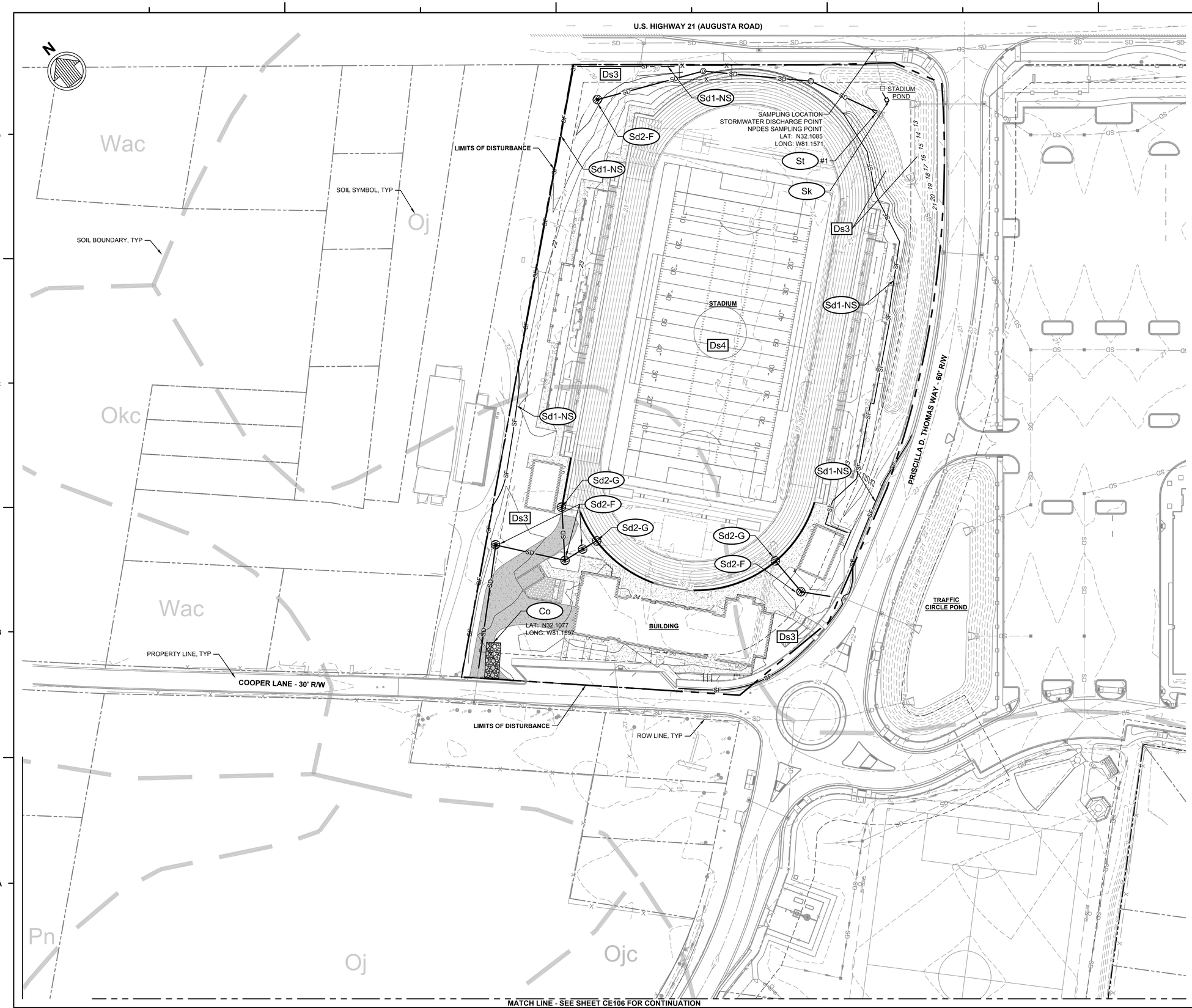
PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC - INTERMEDIATE PHASE

CE104

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797/CE-ES&PC INTER PHASE.DWG



NOTES

1. EROSION CONTROL PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
2. THERE ARE NO WETLANDS ON THE SITE.
3. THERE ARE NO STATE WATERS ON OR WITHIN 200' OF THE SITE.
4. REFER TO STORMWATER REPORT FOR PRE AND POST DEVELOPMENT DRAINAGE BASIN DELINEATION.
5. ALL SILT FENCE FOR THIS PROJECT SHALL BE SD1-NS.

FINAL PHASE NOTES

1. MAINTAIN CONSTRUCTION EXIT (Co)
2. MAINTAIN SILT FENCE (Sd1-NS)
3. INSTALL GRASSING AND SODDING AT NECESSARY LOCATIONS (Ds3 & Ds4)
4. MAINTAIN TREE PROTECTION (Tr)
5. MAINTAIN STORM DRAIN OUTLET PROTECTION (St)
6. MAINTAIN STRAW-BALE CHECK DAMS (Cd-Hb)
7. INSTALL AND MAINTAIN INLET PROTECTION (Sd2-F, Sd2-G & Sd2-P)
8. MAINTAIN CONCRETE WASHOUT
9. MAINTAIN FLOATING SURFACE SKIMMER (Sk)

SOILS CHART

Cc:	CAPE FEAR SOILS - TYPE C/D
Oj:	OCILLA COMPLEX - TYPE B/D
Ojc:	OCILLA-URBAN LAND COMPLEX - TYPE B/D
Okc:	OGEECHEE-URBAN LAND COMPLEX - TYPE B/D
Pn:	POOLER FINE SANDY LOAM - TYPE C/D
Wac:	WAHEE-URBAN LAND COMPLEX - TYPE C/D

LEGEND

Co	CONSTRUCTION EXIT SEE DETAIL C1 SHEET CE501
Ds3	DISTURBED AREA STABILIZATION (PERMANENT VEGETATION) SEE DETAIL C1 SHEET CE503
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING) SEE DETAIL A4 SHEET CE502
Cd-Hb	STRAW-BALE CHECK DAM SEE DETAIL C3 SHEET CE501
Sd1-NS	SEDIMENT BARRIER - NON-SENSITIVE SEE DETAIL C2 SHEET CE502
Sd2-F	INLET SEDIMENT TRAP SEE DETAIL A2 SHEET CE502
Sd2-G	INLET SEDIMENT TRAP SEE DETAIL A2 SHEET CE502
Sd2-P	CURB INLET PROTECTION SEE DETAIL A2 SHEET CE502
Sk	FLOATING SURFACE SKIMMER SEE DETAIL A1 SHEET CE504
St	STORM DRAIN OUTLET PROTECTION SEE DETAIL A2 SHEET CE501
Tr	TREE PROTECTION SEE DETAIL A1 SHEET CE502

PROJECT REFERENCE

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MOFFATT & NICHOL
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50' 0' 50' 100'
SCALE: 1"=50'

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REVISIONS:

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CHECKED BY: CRZ

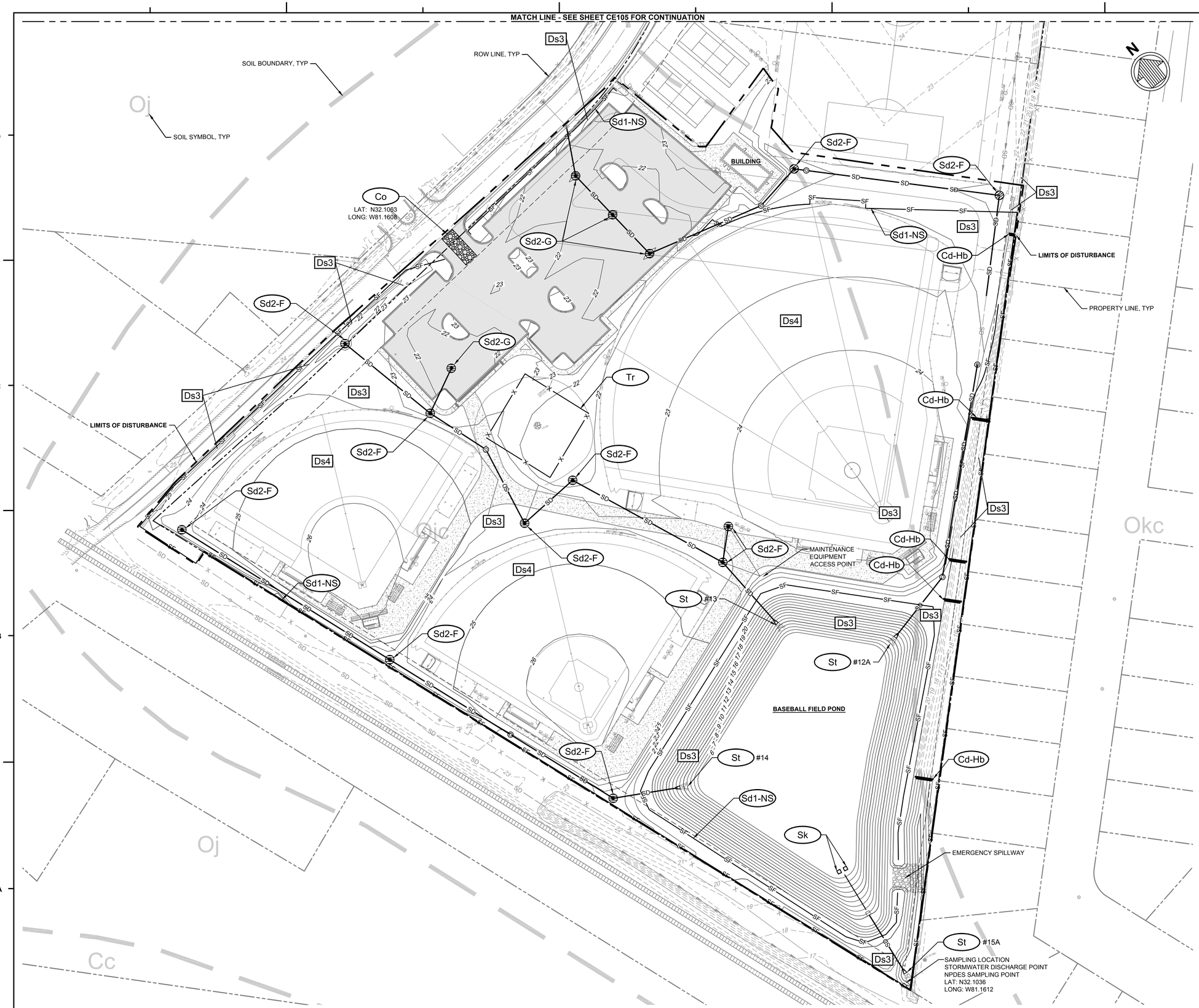
ES&PC - FINAL PHASE

CE105

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CE-ES&PC FINAL PHASE.DWG

MATCH LINE - SEE SHEET CE105 FOR CONTINUATION



NOTES

1. EROSION CONTROL PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
2. THERE ARE NO WETLANDS ON THE SITE.
3. THERE ARE NO STATE WATERS ON OR WITHIN 200' OF THE SITE.
4. REFER TO STORMWATER REPORT FOR PRE AND POST DEVELOPMENT DRAINAGE BASIN DELINEATION.
5. ALL SILT FENCE FOR THIS PROJECT SHALL BE SD1-NS.

FINAL PHASE NOTES

1. MAINTAIN CONSTRUCTION EXIT (Co)
2. MAINTAIN SILT FENCE (Sd1-NS)
3. INSTALL GRASSING AND SODDING AT NECESSARY LOCATIONS (Ds3 & Ds4)
4. MAINTAIN TREE PROTECTION (Tr)
5. MAINTAIN STORM DRAIN OUTLET PROTECTION (St)
6. MAINTAIN STRAW-BALE CHECK DAMS (Cd-Hb)
7. INSTALL AND MAINTAIN INLET PROTECTION (Sd2-F, Sd2-G & Sd2-P)
8. MAINTAIN CONCRETE WASHOUT
9. MAINTAIN FLOATING SURFACE SKIMMER (Sk)

SOILS CHART

Cc:	CAPE FEAR SOILS - TYPE C/D
Oj:	OCILLA COMPLEX - TYPE B/D
Ojc:	OCILLA-URBAN LAND COMPLEX - TYPE B/D
Okc:	OGEECHEE-URBAN LAND COMPLEX - TYPE B/D
Pn:	POOLER FINE SANDY LOAM - TYPE C/D
Wac:	WAHEE-URBAN LAND COMPLEX - TYPE C/D

LEGEND

Co	CONSTRUCTION EXIT SEE DETAIL C1 SHEET CE501
Ds3	DISTURBED AREA STABILIZATION (PERMANENT VEGETATION) SEE DETAIL C1 SHEET CE503
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING) SEE DETAIL A4 SHEET CE502
Cd-Hb	STRAW-BALE CHECK DAM SEE DETAIL C3 SHEET CE501
Sd1-NS	SEDIMENT BARRIER - NON-SENSITIVE SEE DETAIL C2 SHEET CE502
Sd2-F	INLET SEDIMENT TRAP SEE DETAIL A2 SHEET CE502
Sd2-G	INLET SEDIMENT TRAP SEE DETAIL A2 SHEET CE502
Sd2-P	CURB INLET PROTECTION SEE DETAIL A2 SHEET CE502
Sk	FLOATING SURFACE SKIMMER SEE DETAIL A1 SHEET CE504
St	STORM DRAIN OUTLET PROTECTION SEE DETAIL A2 SHEET CE501
Tr	TREE PROTECTION SEE DETAIL A1 SHEET CE502

PROJECT REFERENCE

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GSWCC CERTIFICATION NO. 0000012478
GSWCC LEVEL II DESIGNER: CRAIG R. ZUCK

50' 0' 50' 100'
SCALE: 1"=50'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC - FINAL PHASE

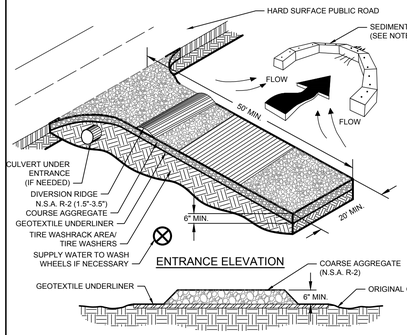
CE106

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797-CE-ES&PC FINAL PHASE.DWG

CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM



ENTRANCE ELEVATION

NOTES:

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

CONSTRUCTION EXIT (Co)

DEFINITION

A temporary grade control structure, or dam constructed across a swale, drainage ditch, or area of concentrated flow.

CONDITIONS

This practice is applicable for use in small open channels and is not to be used in a live stream.
Specific applications include:

1. Temporary or permanent swales or ditches in need of protection during establishment of grass linings.
2. Temporary or permanent swales or ditches that, due to their short length of service or other reasons, cannot receive a permanent non-erodible lining for an extended period of time.
3. Other locations where small localized erosion and resulting sedimentation problems exist.

CONSTRUCTION SPECIFICATIONS
Straw-bale Check Dams

Staked and embedded straw-bales may be used as temporary check dams in concentrated flow areas while vegetation is becoming established. They shall not be used where the drainage area exceeds one acre. Straw-bales should be installed per Figure 6-12.3.

Installation

Bales should be bound with wire or nylon string. Twine bound bales are less durable. The bales should be placed in rows with bale ends tightly abutting the adjacent bales.

Downstream Row (Refer to Figure 6-12.3)

Dig a trench across the small channel, wide enough and deep enough so that the top of the row of bales placed on their long, wide side is level with the ground. The tops of bales across the center of the channel should all be level and set at the same elevation. Place the bales in position and stake them according to the instructions below.

Upstream Row

Dig another trench across the small channel, upstream and immediately adjacent to the first row of bales. The trench should be wide enough to accommodate a row of bales set vertically on their long edge. The trench should be deep enough so that at least 6 inches of each bale is below ground starting with the bale in the channel bottom.

The trench should be as level as possible so that the tops of the bales across the center of the channel are level and water can flow evenly across them. Continue this trench up the side slopes of the small channel to a point

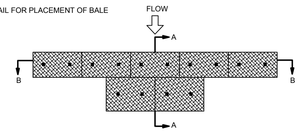
where the unburied bottom line of the highest bale (Point "C", Figure 6-12.3) is higher than the top of the bales that are in the center of the channel (Point "D", Figure 6-12.3).

Anchorage

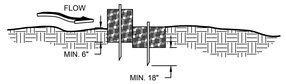
Drive standard 2 x 2 stakes or #4 rebar through the bales and into the ground 1 1/2 to 2 feet for anchorage. The first stake in each bale should be driven toward a previously laid bale to force the bales together (See Figure 6-12.3).
Reference: Colorado NRCS Straw Bale Check Dam

TYPICAL STRAW BALE CHECK DAM

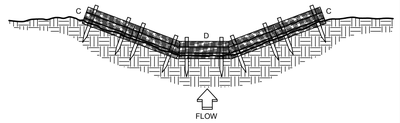
PLAN



SECTION A-A



SECTION B-B

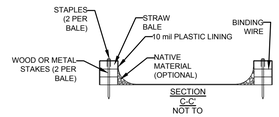


NOTES:

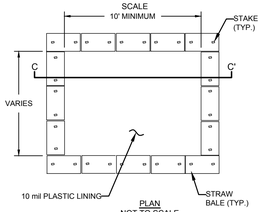
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

CHECK DAM - STRAW BALES (Cd-Hb)

CONCRETE WASHOUT

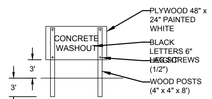


SECTION C-C
NOT TO SCALE

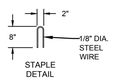


PLAN
NOT TO SCALE

TYPE "ABOVE GRADE" WITH STRAW BALES



CONCRETE WASHOUT SIGN DETAIL
(OR EQUIVALENT)



STAPLE DETAIL

NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

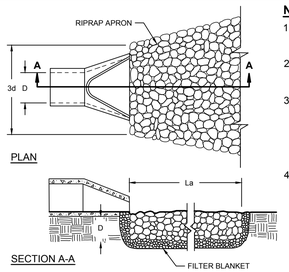
MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.

HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CONCRETE WASHOUT

RIPRAP OUTLET PROTECTION

PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL



NOTES

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

PIPE OUTLET TO WELL DEFINED CHANNEL

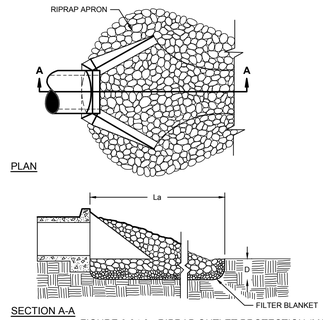


FIGURE 6-34.3 - RIPRAP OUTLET PROTECTION (MODIFIED FROM VA SWCC)

OUTLET PROTECTION DESIGN CRITERIA (St #1)

OUTLET OPENING :	18"
FLOW RATE (CFS):	5.29 CFS
TAILWATER CONDITION: (MIN. or MAX.)	>0.50 Ø
d50 RIPRAP SIZE:	3"
dmax RIPRAP SIZE:	4.5"
MIN. RIPRAP THICKNESS(D):	7"
La:	10'
W1:	4.5'
W2:	5.5'

OUTLET PROTECTION DESIGN CRITERIA (St #15A)

OUTLET OPENING :	36"
FLOW RATE (CFS):	33.47 CFS
TAILWATER CONDITION: (MIN. or MAX.)	>0.50 Ø
d50 RIPRAP SIZE:	5"
dmax RIPRAP SIZE:	7.5"
MIN. RIPRAP THICKNESS(D):	11.25"
La:	14'
W1:	9'
W2:	9'

OUTLET PROTECTION DESIGN CRITERIA (St #12A)

OUTLET OPENING :	48"
FLOW RATE (CFS):	55.44 CFS
TAILWATER CONDITION: (MIN. or MAX.)	>0.50 Ø
d50 RIPRAP SIZE:	5"
dmax RIPRAP SIZE:	7.5"
MIN. RIPRAP THICKNESS(D):	11.25"
La:	18'
W1:	12'
W2:	12'

OUTLET PROTECTION DESIGN CRITERIA (St #13)

OUTLET OPENING :	24"
FLOW RATE (CFS):	18.64 CFS
TAILWATER CONDITION: (MIN. or MAX.)	>0.50 Ø
d50 RIPRAP SIZE:	4"
dmax RIPRAP SIZE:	6"
MIN. RIPRAP THICKNESS(D):	9"
La:	10'
W1:	6'
W2:	6'

OUTLET PROTECTION DESIGN CRITERIA (St #14)

OUTLET OPENING :	18"
FLOW RATE (CFS):	6.71 CFS
TAILWATER CONDITION: (MIN. or MAX.)	>0.50 Ø
d50 RIPRAP SIZE:	3"
dmax RIPRAP SIZE:	4.5"
MIN. RIPRAP THICKNESS(D):	7"
La:	10'
W1:	4.5'
W2:	5.5'

STORM DRAIN OUTLET PROTECTION (St)

PROJECT REFERENCE

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GSWCC CERTIFICATION NO. 0000012478
GSWCC LEVEL II DESIGNER: CRAIG R. ZUCK

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

MEMBERS OF THE AMERICAN INSTITUTE OF ARCHITECTS

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC DETAILS

CE501

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CE-ES&PC DETAILS.DWG

TREE PROTECTION

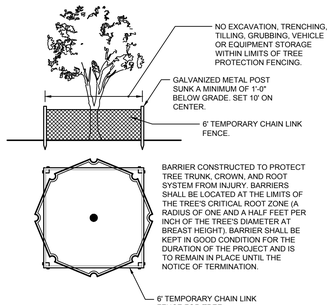
CHAIN LINK FENCE DETAIL

DEFINITION
To protect desirable trees from injury during construction activity.

Tree Protection Zone Fencing:
Tree protection zone fencing may be one of
the following:

1. For areas of large remnant forest to be protected use 4 feet high orange plastic fabric fencing stapled in three locations to treated wood 2x4 stakes. Set stakes 6 feet on center. Rebar is not to be used for trees Figure 6-38.1
2. For single family homes use a treated wood fencing as shown on detail. It may have orange fabric attached to it.
3. For all other developments use 6 feet high chain link fencing attached to galvanized metal post as shown on detail. Figure 6-38.2

For more information about standards for adequate tree protection, refer to guidance by the American National Standard (ANSI) or the International Society of Arboriculture.



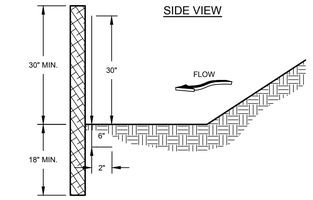
FOR ADDED PROTECTION

-PROVIDE 4" DEEP ORGANIC MULCH OVER ANY UNPROTECTED ROOT ZONE.
-PROVIDE TEMPORARY IRRIGATION WHERE PRACTICAL AND FEASIBLE.

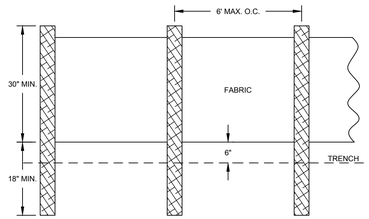
TREE PROTECTION (Tr)

SILT FENCE - TYPE NON-SENSITIVE

SIDE VIEW



FRONT VIEW



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN .
2. HEIGHT (") IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Figure 6-27.1

SILT FENCE - TYPE NON-SENSITIVE (Sd1-NS)

DEFINITION
Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

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

METHOD AND MATERIALS
A. Temporary Methods
Mulches. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification Tac - Tackifiers. Resins should be used according to manufacturer's recommendations.

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

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

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion Starts. Begin plowing on windward side of Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

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

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

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

B. Permanent Methods

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

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

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

DUST CONTROL ON DISTURBED AREAS (Du)

DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

SPECIFICATIONS
Mulching Without Seeding
This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation

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

Mulching Materials
Select one of the following materials and apply at the depth indicated:

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

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

Anchoring Mulch

1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk" Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application. Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification Tac- Tackifers. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

DISTURBED AREA STABILIZATION (WITH MULCHING) (Ds1)

DEFINITION
The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

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

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

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

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

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

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

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

SEEDING RATES FOR TEMPORARY SEEDING

SPECIES	RATE Per 1,000 sq.ft.	RATE Per Acre *	PLANTING DATES **
Rye	3.5 pounds	3 bu.	9/1-3/1
Ryegrass	0.9 pound	40 lbs.	9/15-4/1
Annual Lespedeza	0.9 pound	40 lbs.	1/15-3/15
Weeping Lovegrass	0.1 pound	4 lbs.	2/15-6/15
Sudangrass	1.4 pounds	60 lbs.	**3/1-6/1**
Browntop Millet	0.9 pound	40 lbs.	**4/1-7/15**
Wheat	4.1 pounds	3 bu.	10/15-2/1

* Unusual site conditions may require heavier seeding rates
** Seeding dates may need to be altered to fit temperture variations and conditions.

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING) (Ds2)

DEFINITION
A temporary protective device formed at or around an inlet to a storm drain to trap sediment.

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

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

Sediment traps may be constructed on natural ground surface, on an excavated surface, or on machine compacted fill, provided they have a non-erodible outlet.

Filter Fabric with Supporting Frame (Sd2-F)

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

Gravel drop Inlet Protection (Sd2-G)

This method of inlet protection is applicable where heavy concentrated flows are expected. As shown in Figure 6-28.4, stone and gravel are used to trap sediment. The slope toward the inlet shall be no steeper than 3:1. A minimum 1 foot wide level stone area shall be left between the structure and around the inlet to prevent gravel from entering the inlet. On the slope toward the inlet, stone 3 inches in diameter and larger should be used. On the slope away from the inlet, 1/2 to 3/4 inch gravel (#57 washed stone) should be used at a minimum thickness of 1 foot.

Curb Inlet Protection (Sd2-P)

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

One method of curb inlet protection uses "pigs-in-a-blanket"- 8-inch concrete blocks wrapped in filter fabric. See Figure 6-28.6. Another method uses gravel bags constructed by wrapping DOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material.

A gap of approximately 4 inches shall be left between the inlet filter and the inlet to allow for overflow and prevent hazardous ponding in the roadway. Proper installation and maintenance are crucial due to possible ponding in the roadway, resulting in a hazardous condition. Several other methods are available to prevent the entry of sediment into storm drain inlets.

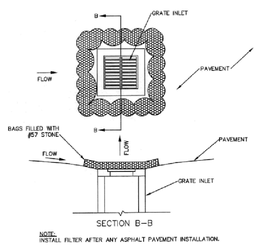
Figure 6-28.7 shows one of these alternative methods.

MAINTENANCE
The trap shall be inspected daily and after each rain, and repairs made as needed. Sediment shall be removed when the sediment has accumulated to one-half the height of the trap. Sediment shall be removed from curb inlet protection immediately. For excavated inlet sediment traps, sediment shall be removed when one-half of the sediment storage capacity has been lost to sediment accumulation. Sod inlet protection shall be maintained as specified in **Ds4 - Disturbed Area Stabilization (With Sodding)**.

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

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

GRAVEL DROP INLET PROTECTION



NOTE:
INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.

CURB INLET PROTECTION

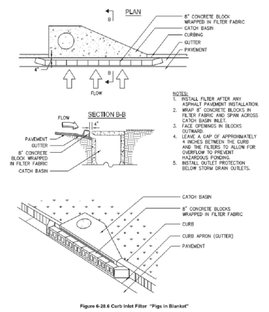


Figure 6-28.6 Curb Inlet Filter "Pigs in Blanket"

8-154 GSWCC 2016 Edition

FILTER FABRIC WITH SUPPORTING FRAME

STEEL FRAME AND TYPE C SILT FENCE INSTALLATION

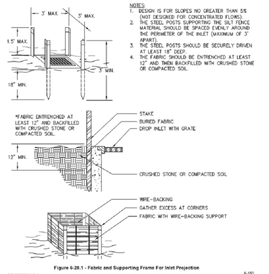


Figure 6-28.1 - Fabric and Supporting Frame For Inlet Projection

GSWCC 2016 Edition 8-150

INLET SEDIMENT TRAP (Sd2)

DEFINITION
A permanent vegetation using sods on highly erodible or critically eroded lands.

CONDITIONS
This application is appropriate for areas which require immediate vegetative covers, drop inlets, grass swales, and waterways with intermittent flow .

CONSTRUCTION SPECIFICATIONS INSTALLATION

Soil Preparation

- Bring soil surface to final grade. Clear surface of trash, woody debris, stones and clods larger than 1". Apply sod to soil surfaces only and not frozen surfaces, or gravel type soils.
- Topsoil properly applied will help guarantee stand. Don't use topsoil recently treated with herbicides or soil sterilants.
- Mix fertilizer into soil surface. Fertilize based on soil tests or Table 6-6.1. For fall planting of warm season species, hall the fertilizer should be applied at planting and the other hall in the spring.

Table 6-6.1 Fertilizer Requirements for Soil Surface Application

Fertilizer Type (lbs./acre)	Fertilizer Rate (lbs./acre)	Fertilizer Rate	Season
10-10-10	1000	.025	Fall

- Agricultural lime should be applied based on soil tests or at a rate of 1 to 2 tons per acre.

Installation

- Lay sod with tight joints and in straight lines. Don't overlap joints. Stagger joints and do not stretch sod.
- On slopes steeper than 3:1, sod should be anchored with wooden or biodegradable pins or other approved methods.
- Installed and should be rolled or tamped to provide good contact between sod and soil.
- Irrigate sod and soil to a depth of 4" immediately after installation.
- Sod should not be cut or spread in extremely wet or dry weather.
- Irrigation should be used to supplement rainfall for a minimum of 2-3 weeks.

MATERIALS

- Sod selected should be certified. Sod grown in the general area of the project is desirable.
- Sod should be machine cut and contain 3/4" ± 1/4" of soil, not including shoots or thatch.
- Sod should be cut to the desired size within ± 5%. Torn or uneven pads should be rejected.
- Sod should be cut and installed within 36 hours of digging.
- Avoid planting when subject to frost heave or hot weather if irrigation is not available.
- The sod type should be shown on the plans or installed according to Table 6-6.2. See Figure 6-4.1 for your Resource Area.

Table 6-6.2. Sod Planting Requirements

Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tifdwarf	M-L,P,C P,C P,C P,C	Warm Weather
Bahiagrass	Pensacola	P,C	Warm Weather
Centipede	-	P,C	Warm Weather
St. Augustine	Common Bitterblue Raleigh	C	Warm Weather
Zoysia	Emerald Myer	P,C	Warm Weather
Tall Fescue	Kentucky	M-L,P	Cool Weather

MAINTENANCE

- Re-sod areas where an adequate stand of sod is not obtained.
- New sod should be mowed sparingly. Grass height should not be cut less than 2" 3" or as specified.
- Apply one ton of agricultural lime as indicated by soil test or every 4-6 years.
- Fertilize grasses in accordance with soil tests or Table 6-6.3.

Table 6-6.3. Fertilizer Requirements for Sod

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	Nitrogen Top Dressing Rate (lbs./acre)
Cool Season Grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 - 30
Warm Season Grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

DISTURBED AREA STABILIZATION (WITH SODDING) (Ds4)

PROJECT REFERENCE

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GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER:
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SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

MEMBERS OF THE AMERICAN INSTITUTE OF ARCHITECTS

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC DETAILS

CE502

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CE-ES&PC DETAILS.DWG

DEFINITION
The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

CONSTRUCTION SPECIFICATIONS
Grading and Shaping
Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Lime and Fertilizer Rates and Analysis
Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Fast-acting lime spread by hydraulic seeding equipment should be "finely ground limestone" spanning from the 180 micron size to the 5 micron. Finely ground limestone is calcitic or dolomitic limestone ground so that 95 percent of the material will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)

Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in Table 6-5.1.

Lime and Fertilizer Application
When hydraulic seeding equipment is used, the initial fertilizer shall be mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic size. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder.

Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing.

When conventional planting is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

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

Plant Selection
Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year of planting, method of planting; and the needs and desires of the land user.

Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.

Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified).

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Seed Quality
The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e.,

(PLS = % germination x % purity)

EXAMPLE:
Common Bermuda seed
70% germination, 80% purity
PLS = 70% germination x 80% purity
PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS, the bulk seeding rate is:

$$\frac{\text{10 lbs. PLS/acre}}{\text{56\% PLS}} = \text{17.9 lbs/acre}$$

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

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

Broadcast plantings

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

Individual Plants

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

Innoculants
All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The innoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manufacturer shall be used to bond the innoculant to the seed. For conventional seeding, use twice the amount of innoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of innoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperatures and shall be planted the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

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

Conventional Seeding
Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a culti-packer-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

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

Individual Plants
Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots.

Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The 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, two inches of soil shall be added and the plant shall be set in the hole.

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

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

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

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

Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch
Anchor straw or hay mulch immediately after application by one of the following methods:

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

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

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

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

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

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

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

Use and Management
Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March.

Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after establishment.

Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between May and September.

Table 6-5.1. Fertilizer Requirements

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

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

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

Species	Broadcast Rates: Rate Per Acre[2]	Pure Live Seed (PLS) Per 1000 sqft	Resource Area[3]	Planting Dates by Resource Area (J F M A M J J A S O N D)	Remarks
MAIDENCANE *Panicum hemitomon*					
sprigs	2' x 3' spacing	ALL			For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
PANICGRASS, ATLANTIC COASTAL *Panicum amarum var amarukum*					
	20 lbs	0.5 lb	P C		Grows well on coastal sand dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.
REED CANARY GRASS *Phalaris arundinacea*					
alone	50 lbs	1.1 lb	M-L		
with other perrenials	30 lbs	0.7 lb	P		Grows similar to Tall fescue
SUNFLOWER, 'AZTEC' MAXIMILLIAN *Helianthus maximiliani*					
	10 lbs	0.2 lb	M-L P C		227,000 seed per pound. Mix with Weeping lovegrass or other low-grwoing grasses or legumes.

1 Reduce seeding rates by 50% when drilled
2 PLS is an abbreviation for Pure Live Seed. Refer to Section V.E. of these specifications.
3 M-L represents to Mountain; Blue Ridge; and Ridges and Valleys MLRAs
P represents the Southern Piedmont MLRA
C represents the Souther Coastal Plain;Sand Hills;Black Lands;and Atlantic Coast Flatwoods MLRAs. See Figure 6-4.1

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

Species	Broadcast Rates: Rate Per Acre[2]	Pure Live Seed (PLS) Per 1000 sqft	Resource Area[3]	Planting Dates by Resource Area (J F M A M J J A S O N D)	Remarks
BAHIA, PENSACOLA *Paspalum notatum*					
alone or with temporary cover	60 lbs	1.4 lbs	P		166,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread nto bermuda pastures and awns. Mix with Sericea lespedeza or weeping lovegrass.
with other perennials	30 lbs	0.7 lb	C		
BAHIA, WILMINGTON *Paspalum notatum*					
alone or with temporary cover	60 lbs	1.4 lb	M-L		
with other perennials	30 lbs	0.7 lb	P		Same as above.
BERMUDA, COMMON *Cynodon dactylon*					
Hulled seed			P		
alone	10 lbs	0.2 lb	C		1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fileds.
with other perennials	6 lbs	0.7 lb			
BERMUDA, COMMON *Cynodon dactylon*					
Unhulled seed					
with temporary cover	10 lbs	0.2 lb	P		Plant with winter annuals.
with other perennials	6 lbs	0.1 lb	C		Plant with Tall Fescue

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

Species	Broadcast Rates: Rate Per Acre[2]	Pure Live Seed (PLS) Per 1000 sqft	Resource Area[3]	Planting Dates by Resource Area (J F M A M J J A S O N D)	Remarks
BERMUDA SPRIGS *Cynodon dactylon*					
Coastal, Common, Midland, or Tift 44	40 cu ft or sod plugs 3' x3'	0.9 cu ft	M-L		A cubic foot contains approximately 650 sprigs. A bushel contains 1.25 cubic feet or approximately 800 springs.
Coastal, Common, of Tift 44			P C		Same as above.
Tift 78			C		Southern Coastal Plain only
CENTIPEDE *Eremochloa ophuiroides*					
	Block sod only		P C		Drought tolerant. Full sun or partial shade. Effective adjacent to concrete and in concentrated flow areas. Irrigation is needed until fully established. Do not plant near pastures. Winterhardy as far as north Athens and Atlanta
CROWNVETECH Coronilla varia					
with winter annuals or cool season grasses	15 lbs	0.3 lb	M-L P		100,000 seed per pound. Dense growth. Drought tolerant and fire resistant. Attractive rose, pink and white blossoms spring to late fall. Mix with 30 pounds of Tall fescue or 15 pounds of rye. Inoculate see with M inoculant. Use from North Atlanta and Northward.

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

Species	Broadcast Rates: Rate Per Acre[2]	Pure Live Seed (PLS) Per 1000 sqft	Resource Area[3]	Planting Dates by Resource Area (J F M A M J J A S O N D)	Remarks
FESCUE, TALL *Festuca arundinacea*					
alone	50 lbs	1.1 lb	M-L		227,000 seed per pound. Use alone only on better sites. Mix with perennial lespededza or Crownvetch. Apply topdressing in spring following fall plantings. Not for heavy use areas or athletic fields.
with other perennials	30 lbs	0.7 lb	P		
KUDZU *Pueraria thumbergiana*					
Plants or crowns	3' - 7' apart		ALL		Rapid and vigorous growth. Excellent in gully erosion control. Will climb. Good livestock forage.
LESPEDEZA SERICEA *Lespedeza cuneata*					
scarified	60 lbs	1.4 lb	M-L P C		350,000 seed per pound. Widely adapted. Low maintenace. Mix with Weeping lovegrass, Common bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on roadbanks. Inoculate seed with EL inoculant.
unscarified	75 lbs	1.7 lb	M-L P C		Mix with Tall fesue or winter annuals.
seed- bearing hay	3 tons	1338 lbs	M-L P C		Cut when seed mixture is mature, but before, it shatters. Add Tall fescue or winter annuals.

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

Species	Broadcast Rates: Rate Per Acre[2]	Pure Live Seed (PLS) Per 1000 sqft	Resource Area[3]	Planting Dates by Resource Area (J F M A M J J A S O N D)	Remarks
LESPEDEZA Ambro virgata *Lespedeza virgata DC* or Appalow *Lespedeza cuneata (Dumont) G. Don)*					
scarified	60 lbs	1.4 lb	M-L P C		300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreading-type growth. New growth has bronze coloration. Mix with weeping lovegrass, common bermuda, bahia, tall fescue or winter annuals. Do not mix with Sericea lespedeza. Slow to develop solid stands. Inoculate seed with EL inoculant.
unscarified	75 lbs	1.7 lb	M-L P C		
LESPEDEZA, SHRUB *Lespedeza bicolor* *Lespedeza thumbergii*					
plants	3' x3'		M-L P C		Provide wildlife food and cover.
LOVEGRASS, WEEPING *Eragrostis curvula*					
alone	4 lbs	0.1 lb	M-L P C		1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
with other perennials	2 lbs	0.05 lb			

DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) Ds3

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM
SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

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SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 031068 CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC DETAILS

CE503

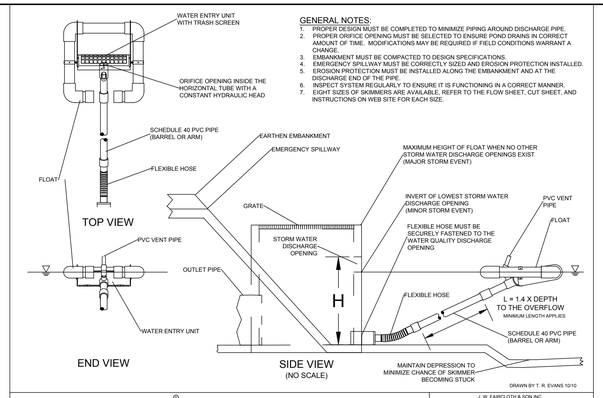
BID SET

PROJECT REFERENCE

CRAIG R. ZUCK, PE
MOFFATT & NICHOL
2 EAST BRYAN STREET, SUITE 501
SAVANNAH, GA 31401
PHONE: (912) 231-0044

GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER:
CRAIG R. ZUCK

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CE-ES&PC DETAILS.DWG



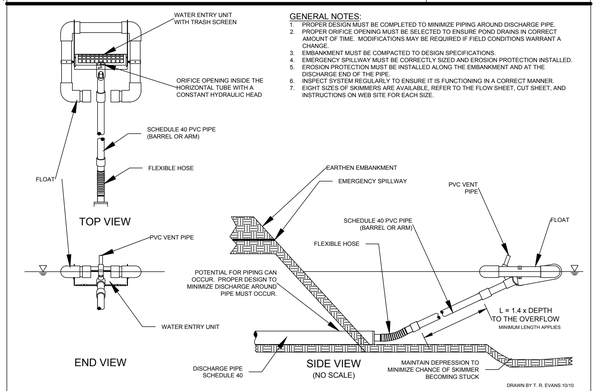
GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

DRAWN BY T. R. EVANS 10/10

FAIRCLOTH SKIMMER DISCHARGE SYSTEM WITH OUTLET STRUCTURE

J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
TELEPHONE: (919) 732-1244
FAX: (919) 732-1266
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM



GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
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5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

DRAWN BY T. R. EVANS 10/10

FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH EMBANKMENT

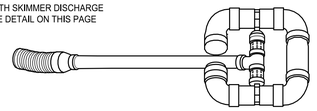
J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
TELEPHONE: (919) 732-1244
FAX: (919) 732-1266
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

STADIUM POND SKIMMER (Sk)

NOTES

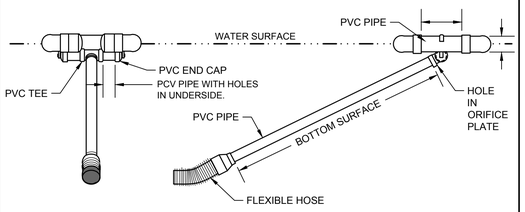
1. SKIMMER CONFIGURATION SHOWN IS TYPICAL, THE DESIGNER/ENGINEER MAY SUBMIT AN ALTERNATE SKIMMER DETAIL FOR REVIEW.
2. FOR INSTALLATION REFER TO FAIRCLOTH SKIMMER DISCHARGE SYSTEM WITH OUTLET STRUCTURE SEE DETAIL ON THIS PAGE

SKIMMER PERSPECTIVE



SKIMMER FRONTAL SECTION VIEW

SKIMMER SIDE SECTION VIEW



FLOATING SURFACE SKIMMER (Sk) SIZING INFORMATION

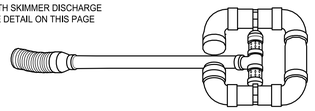
1. SEDIMENT POND / Rt / TRAP DIMENSIONS
   TOP LENGTH = 198'
   BOTTOM LENGTH = 119'
   TOP WIDTH = 87'
   BOTTOM WIDTH = 34'
   DEPTH = 6'
2. TIME TO DRAIN (hrs) = 72 hrs
3. SKIMMER DIMENSIONS (HEAD SIZE & ORIFICE) (INCHES) = 5" SKIMMER WITH 4"Ø ORIFICE
   MANUFACTURER'S NAME = "FAIRCLOTH SKIMMER®"

BASEBALL FIELD / POND SKIMMER #1 (Sk)

NOTES

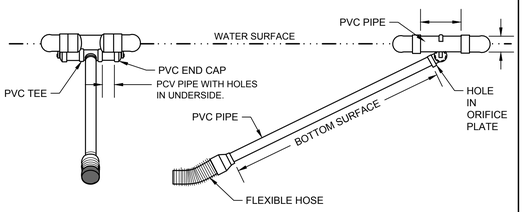
1. SKIMMER CONFIGURATION SHOWN IS TYPICAL, THE DESIGNER/ENGINEER MAY SUBMIT AN ALTERNATE SKIMMER DETAIL FOR REVIEW.
2. FOR INSTALLATION REFER TO FAIRCLOTH SKIMMER DISCHARGE SYSTEM WITH OUTLET STRUCTURE SEE DETAIL ON THIS PAGE

SKIMMER PERSPECTIVE



SKIMMER FRONTAL SECTION VIEW

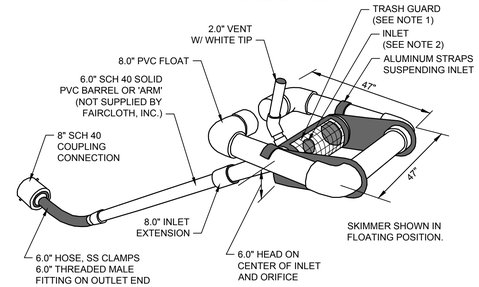
SKIMMER SIDE SECTION VIEW



FLOATING SURFACE SKIMMER (Sk) SIZING INFORMATION

1. SEDIMENT POND / Rt / TRAP DIMENSIONS
   TOP LENGTH = 154'
   BOTTOM LENGTH = 118'
   TOP WIDTH = 115'
   BOTTOM WIDTH = 77'
   DEPTH = 6'
2. TIME TO DRAIN (hrs) = 72 hrs
3. SKIMMER DIMENSIONS (HEAD SIZE & ORIFICE) (INCHES) = 6" SKIMMER WITH 5.3"Ø ORIFICE
   MANUFACTURER'S NAME = "FAIRCLOTH SKIMMER®"

8.0" FAIRCLOTH SKIMMER SURFACE DRAIN CUT SHEET
J.W. FAIRCLOTH & SON, INC.
www.FairclothSkimmer.com



NOTES

1. SKIMMER(S) SHALL INCLUDE A TRASH GUARD AND FLOATABLE MAINTENANCE ROPE
2. THE INLET ORIFICE IS SHIPPED WITH THE MINIMUM ORIFICE SIZE OPENING. USE THE SUPPLIED CUTTING TOOL TO CUT THE ORIFICE TO A DIAMETER OF **8.0** INCHES.
3. HOSE CAN BE ATTACHED TO OUTLET USING THE THREADED 6" NIPPLE. TYPICAL METHODS USED: ON A METAL STRUCTURE A STEEL STUBOUT WELDED ON THE SIDE AT THE BOTTOM WITH A 6" THREADED COUPLING OR REDUCERS; ON A CONCRETE STRUCTURE WITH A HOLE OR ORIFICE AT THE BOTTOM, USE A STEEL PLATE WITH A HOLE AND COUPLING WELDED TO IT THAT WILL FIT OVER THE HOLE IN THE CONCRETE AND BOLTED TO THE STRUCTURE WITH SEALANT.
4. DIMENSIONS ARE APPROXIMATE, NOT INTENDED AS PLANS FOR CONSTRUCTION.
5. BARREL (SOLID, NOT FOAM CORE PIPE) SHOULD BE 1.4 TIMES THE DEPTH OF WATER WITH A MINIMUM LENGTH OF 8' SO THE INLET CAN BE PULLED TO THE SIDE FOR MAINTENANCE. IF MORE THAN 12' LONG WEIGHT MAY HAVE TO BE ADDED TO INLET TO COUNTER THE INCREASED BUOYANCY.
6. INLET TAPERS DOWN FROM 8" MAXIMUM INLET TO A 6" BARREL AND HOSE. BARREL IS SMALLER TO REDUCE BUOYANCY AND TENDENCY TO LIFT INLET BUT IS SUFFICIENT FOR FLOW THROUGH INLET BECAUSE OF SLOPE. THE INLET ORIFICE CAN BE REDUCED USING THE PLUG AND CUTTER PROVIDED TO CONTROL THE OUTFLOW RATE.
7. INLET IS 12" PIPE BETWEEN THE STRAPS WITH SLOTS CUT IN THE INLET AND ALUMINUM SCREEN DOOR (SMALLER THAN SHOWN IN ILLUSTRATION) FOR ACCESS TO THE 6" INLET AND ORIFICE INSIDE.
8. SHIPPED ASSEMBLED. USER GLUES INLET EXTENSION AND BARREL, INSTALLS VENT, CUTS ORIFICE IN PLUG AND ATTACHES TO OUTLET PIPE OR STRUCTURE. INCLUDES FLEXIBLE HOSE, ROPE, ORIFICE CUTTER, ETC.
9. SHIPPED IN CARDBOARD BOX ON PALLET. SHIPPING WEIGHT IS 365 LBS, DIMENSIONS 61"X44"X57"

FLOATING SURFACE SKIMMER (Sk)

PROJECT REFERENCE

CRAIG R. ZUCK, PE
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2 EAST BRYAN STREET, SUITE 501
SAVANNAH, GA 31401
PHONE: (912) 231-0044

GSWCC CERTIFICATION
NO. 0000012478
GSWCC LEVEL II DESIGNER
CRAIG R. ZUCK

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:

LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

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SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

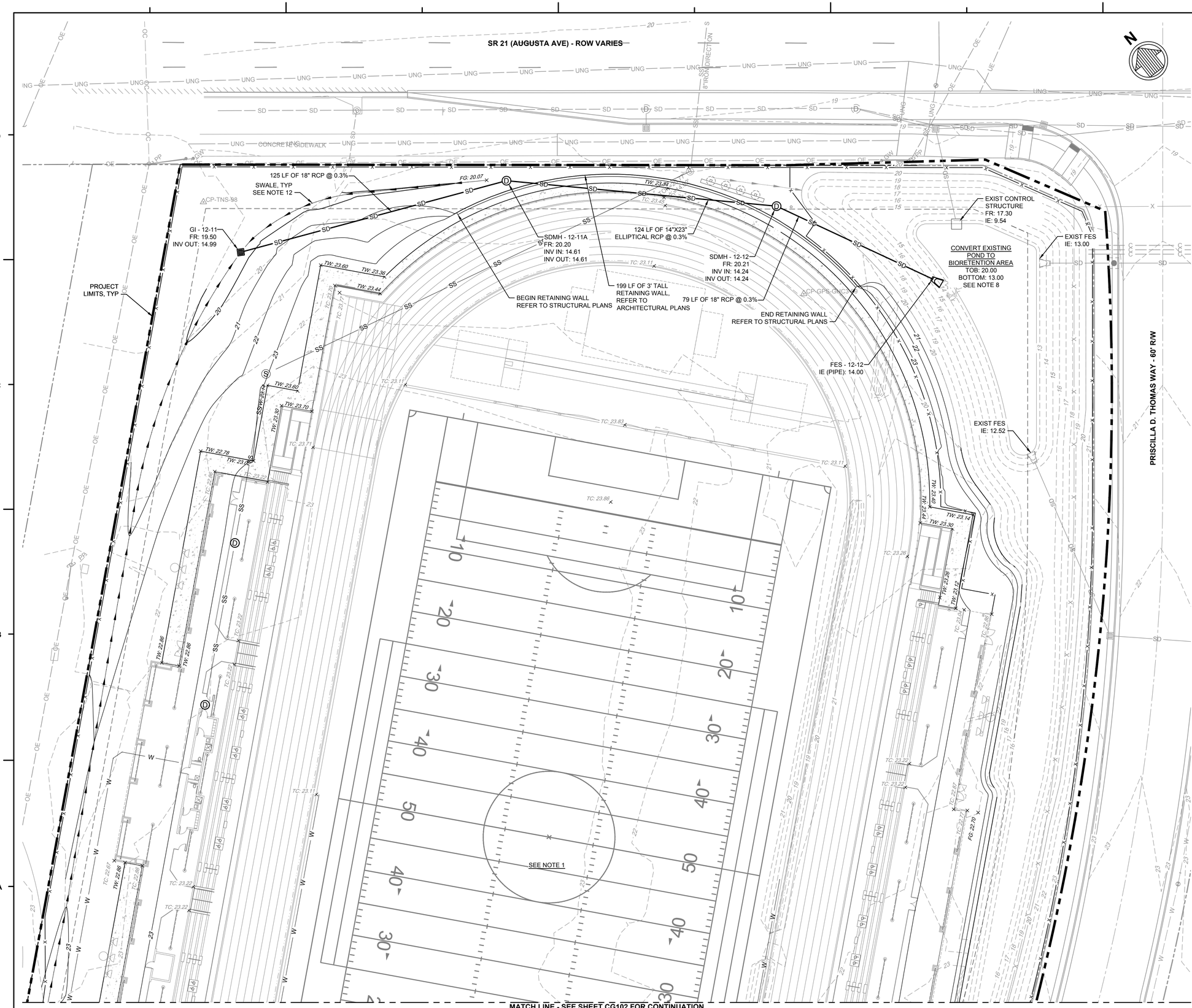
PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

ES&PC DETAILS

CE504

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CE-ES&PC DETAILS.DWG



NOTES

1. STADIUM AND TRACK DESIGN BY OTHERS. REFER TO CHA STADIUM AND TRACK PAVING, GRADING AND DRAINAGE PLAN DESIGN.
2. STORM DRAINAGE OUTLET PROTECTION. SEE SHEET CE501 FOR SIZE AND DIMENSIONS.
3. FOR CONCRETE FLARED END SECTIONS (FES), SEE DETAIL C1 ON SHEET CG501.
4. FOR STANDARD PRECAST CONCRETE MANHOLE (SDMH), SEE DETAIL C2 ON SHEET CG501.
5. FOR GRATE INLET (GI), SEE DETAIL C3 ON SHEET CG501.
6. ALL CURB AND GRATE INLETS IN OR ADJACENT TO PAVEMENT SHALL HAVE 50 LF OF 6" SUBGRADE DRAIN WITH SOCK IN TWO DIRECTIONS. SEE A4 ON SHEET CG503.
7. FOR BIORETENTION DETAIL SEE A1 ON SHEET CG503.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- TC: 23.32 GRADES BY M&N
- TC: 23.32 GRADES BY CHA
- EG: 23.32 EXISTING GRADES FROM SURVEY

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
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912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING PLAN

CG101

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CG-DRAINAGE & GRADING PLAN.DWG

MATCH LINE - SEE SHEET CG101 FOR CONTINUATION

MATCH LINE - SEE SHEET CG103 FOR CONTINUATION

EXISTING CHURCH BUILDING

SWALE, TYP SEE NOTE 13

FFE: 23.84

PROJECT LIMITS, TYP

GI - 2-38
FR: 22.00
INV IN: 15.02
INV OUT: 15.02

81' OF 18" RCP @ 0.4%

TRENCH DRAIN
FR EL: 23.70
IE: 22.87
SLOPE @ 0.2%

YI - 39B
FR: 23.70
INV IN: 22.76
INV OUT: 15.50

TRENCH DRAIN
FR EL: 23.44
IE: 22.61
SLOPE @ 0.2%

61 LF OF 12" ADS @ 0.3%

YI - 39D
FR: 23.00
INV IN: 15.39
INV OUT: 15.39

18 LF OF 12" ADS @ 0.3%

YI - 39A
FR: 23.44
INV IN: 22.53
INV IN: 22.45
INV OUT: 15.44

TRENCH DRAIN
FR EL: 23.44
IE: 22.61
SLOPE @ 0.2%

TRENCH DRAIN
FR EL: 23.44
IE: 22.61
SLOPE @ 0.2%

SEE NOTE 1

50 LF OF 15" RCP @ 0.3%

CONCRETE FLUME

YI - 14-12
FR: 22.75
INV IN: 16.73
INV OUT: 16.73

46 LF OF 12" ADS @ 0.3%

YI - 12A
FR: 23.44
INV IN: 22.41
INV IN: 22.45
INV OUT: 16.87

83 LF OF 12" ADS @ 1.0%

TRENCH DRAIN
FR EL: 23.44
IE: 22.61
SLOPE @ 0.2%

SWALE, TYP SEE NOTE 13

RETAINING WALL

FFE: 23.60

PRISCILLA D. THOMAS WAY - 60' R/W

EXIST CURB INLET
FR: 21.47
IE IN: 16.58
IE OUT: 16.58

CONNECT TO EXISTING 15" RCP @ IE: 16.63

41 LF OF 12" ADS @ 1.0%, TYP

24 LF OF 12" ADS @ 0.3%

YI - 2-39
FR: 23.00
INV IN: 15.32
INV IN: 15.32
INV OUT: 15.32

CLEANOUT FOR DOWNSPOUTS, TYP

CONNECT TO SDMH
FR: 23.72
INV: 14.49

FFE: 24.20

142' LF OF 24" RCP @ 0.3%

CONNECT TO EXISTING 24" RCP @ IE: 14.60

23 LF OF 12" ADS @ 1.0%, TYP

SCUPPER THROUGH WALL, SEE ARCHITECTURAL PLANS

CLEANOUT FOR DOWNSPOUTS, TYP

FOR ENLARGED VIEW OF ADA HANDICAP RAMP, SEE A2 / CG401

MATCH EXIST GROUND, TYP

COOPER LANE

EXIST CI
FR: 22.08
IE IN: 14.48
IE OUT: 14.48

NOTES

1. STADIUM AND TRACK DESIGN BY OTHERS. REFER TO CHA STADIUM AND TRACK PAVING, GRADING AND DRAINAGE PLAN DESIGN.
2. STORM DRAINAGE OUTLET PROTECTION. SEE SHEET CE501 FOR SIZE AND DIMENSIONS.
3. FOR CONCRETE FLARED END SECTIONS (FES), SEE DETAIL C1 ON SHEET CG501.
4. FOR STANDARD PRECAST CONCRETE MANHOLE (SDMH), SEE DETAIL C2 ON SHEET CG501.
5. FOR GRATE INLET (GI), SEE DETAIL C3 ON SHEET CG501.
6. FOR YARD INLETS (YI), SEE DETAIL A4 ON SHEET CG501.
7. FOR ROOF DRAINAGE CONNECTION, SEE DETAIL A4 ON SHEET CG502.
8. FOR TRENCH DRAIN, SEE DETAIL A3 ON SHEET CG503.
9. DOWNSPOUT LEADERS SHALL BE 12" ADS HPP PIPE THAT CONNECT TO 6" x 6" DOWNSPOUT ADAPTER. SEE DETAIL B3 ON SHEET CG501.
10. ALL CURB AND GRATE INLETS IN OR ADJACENT TO PAVEMENT SHALL HAVE 50 LF OF 6" SUBGRADE DRAIN WITH SOCK IN TWO DIRECTIONS. SEE A4 ON SHEET CG503.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- TC: 23.32 GRADES BY M&N
- TC: 23.32 GRADES BY CHA
- EG: 23.32 EXISTING GRADES FROM SURVEY

YARD INLET NUMBER	SIZE OF TOP	LOCKING LID
YI - 14-12	12" TOP	YES
YI - 12A	12" TOP	YES
YI - 2-39	12" TOP	YES
YI - 39A	12" TOP	YES
YI - 39B	12" TOP	YES
YI - 39D	12" TOP	YES

20' 0' 20' 40'

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

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SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAWING: DRAINAGE & GRADING PLAN

CG102

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CG-DRAINAGE & GRADING PLAN.DWG

MATCH LINE - SEE SHEET CG102 FOR CONTINUATION

MATCH LINE - SEE SHEET CG104 FOR CONTINUATION

MATCH LINE - SEE SHEET CG105 FOR CONTINUATION

SWALE, TYP.

FOR ENLARGED VIEW OF PARKING LOT GRADING, SEE B1 / CG401

CONFLICT MH - 4-84
FR: 20.65
INV IN: 14.47
INV OUT: 14.47

GI - 4-83
FR: 20.50
INV IN: 14.52
INV OUT: 14.52

221' OF 30" RCP @ 0.3%

CONNECT TO EXISTING STRUCTURE
FR: 21.80
INV OUT: 13.80

CP-TNS-90
CP-TNS-3
CP-MNWS-89

CENTERLINE OF FIELD

SCALE: 1"=20'

NOTES

1. ATHLETIC FIELD DESIGN BY OTHERS. REFER TO CHA PLAN AND DETAIL SHEETS.
2. FOR STANDARD PRECAST CONCRETE MANHOLE (SDMH), SEE DETAIL C2 ON SHEET CG501.
3. FOR GRATE INLET (GI), SEE DETAIL C3 ON SHEET CG501.
4. FOR CONFLICT MANHOLE, SEE DETAIL C3 ON SHEET CG501.
5. ALL CURB AND GRATE INLETS IN OR ADJACENT TO PAVEMENT SHALL HAVE 50 LF OF 6" SUBGRADE DRAIN WITH SOCK IN TWO DIRECTIONS. SEE A4 ON SHEET CG503.
6. CONSTRUCT BASEBALL POND AND DRAINAGE SYSTEM BEFORE FILLING IN EXISTING POND.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- TC: 23.32 — GRADES BY M&N
- TC: 23.32 — GRADES BY CHA
- EG: 23.32 — EXISTING GRADES FROM SURVEY

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

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SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING PLAN

CG103

BID SET

C:\Users\aprilmundy\OneDrive - LS3P\Groves K-12\SCCPSS_K-12 Multi-School_awm.rvt
1/27/2020 1:19:16 PM LETICS\10797\CG-DRAINAGE & GRADING PLAN.DWG

NOTES

1. ATHLETIC FIELD DESIGN BY OTHERS. REFER TO CHA PLAN AND DETAIL SHEETS.
2. FOR STANDARD PRECAST CONCRETE MANHOLE (SDMH), SEE DETAIL C2 ON SHEET CG501.
3. FOR GRATE INLET (GI), SEE DETAIL C3 ON SHEET CG501.
4. ALL CURB AND GRATE INLETS IN OR ADJACENT TO PAVEMENT SHALL HAVE 50 LF OF 6" SUBGRADE DRAIN WITH SOCK IN TWO DIRECTIONS. SEE A4 ON SHEET CG503.
5. CONSTRUCT BASEBALL POND AND DRAINAGE SYSTEM BEFORE FILLING IN EXISTING POND.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- TC: 23.32 GRADES BY M&N
- TC: 23.32 GRADES BY CHA
- EG: 23.32 EXISTING GRADES FROM SURVEY

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING PLAN

CG104

BID SET

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1/27/2020 1:19:16 PM LETICS\10797CG-DRAINAGE & GRADING PLAN.DWG

MATCH LINE - SEE SHEET CG103 FOR CONTINUATION

MATCH LINE - SEE SHEET CG104 FOR CONTINUATION

MATCH LINE - SEE SHEET CG106 FOR CONTINUATION

MATCH LINE - SEE SHEET CG107 FOR CONTINUATION

GI - 4-81
FR: 20.90
INV IN: 15.28
INV OUT: 15.28

GI - 4-82
FR: 20.90
INV IN: 15.10
INV OUT: 15.10

MH - 4-76
FR: 21.82
INV IN: 14.69
INV OUT: 14.69

FILL EXIST POND
SEE NOTE 5

FOR ENLARGED VIEW OF PARKING LOT GRADING, SEE B1 / CG401

REMOVE 67 LF OF 48" RCP

REMOVE FES

115' OF 48" RCP @ 0.3%

REMOVE EXIST CONTROL STRUCTURE

REMOVE (2) 62 LF OF 18" RCP

REMOVE 6' X 4' DRAINAGE STRUCTURE

NEW IE: 13.46

SDMH - 1-84A
FR: 22.30
IE: 13.22

RELAY 79' OF EXIST 48" RCP @ 0.3%

REMOVE 40 LF OF 36" RCP

REMOVE FES

PROJECT LIMITS, TYP

245 LF OF 48" RCP @ 0.3%

SDMH - 3-95
FR: 20.34
INV IN: 12.49
INV OUT: 12.49

FFE: 25.00

194' OF 24" RCP @ 0.3%

GI - 89
FR: 23.00
INV OUT: 18.00

41 LF OF 12" RCP @ 0.3%

GI - 2-94
FR: 23.00
INV IN: 14.87
INV IN: 17.88
INV OUT: 14.87

89 LF OF 24" RCP @ 4.4%

SWALE, TYP
SEE NOTE 5

SEE NOTE 1

SEE NOTE 1

NOTES

1. ATHLETIC FIELD DESIGN BY OTHERS. REFER TO CHA PLAN AND DETAIL SHEETS.
2. FOR STANDARD PRECAST CONCRETE MANHOLE (SDMH), SEE DETAIL C2 ON SHEET CG501.
3. FOR GRATE INLET (GI), SEE DETAIL C3 ON SHEET CG501.
4. ALL CURB AND GRATE INLETS IN OR ADJACENT TO PAVEMENT SHALL HAVE 50 LF OF 6" SUBGRADE DRAIN WITH SOCK IN TWO DIRECTIONS. SEE A4 ON SHEET CG503.
5. CONSTRUCT BASEBALL POND AND DRAINAGE SYSTEM BEFORE FILLING IN EXISTING POND.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- TC: 23.32 GRADES BY M&N
- TC: 23.32 GRADES BY CHA
- EG: 23.32 EXISTING GRADES FROM SURVEY

20' 0' 20' 40'

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

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PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING PLAN

CG105

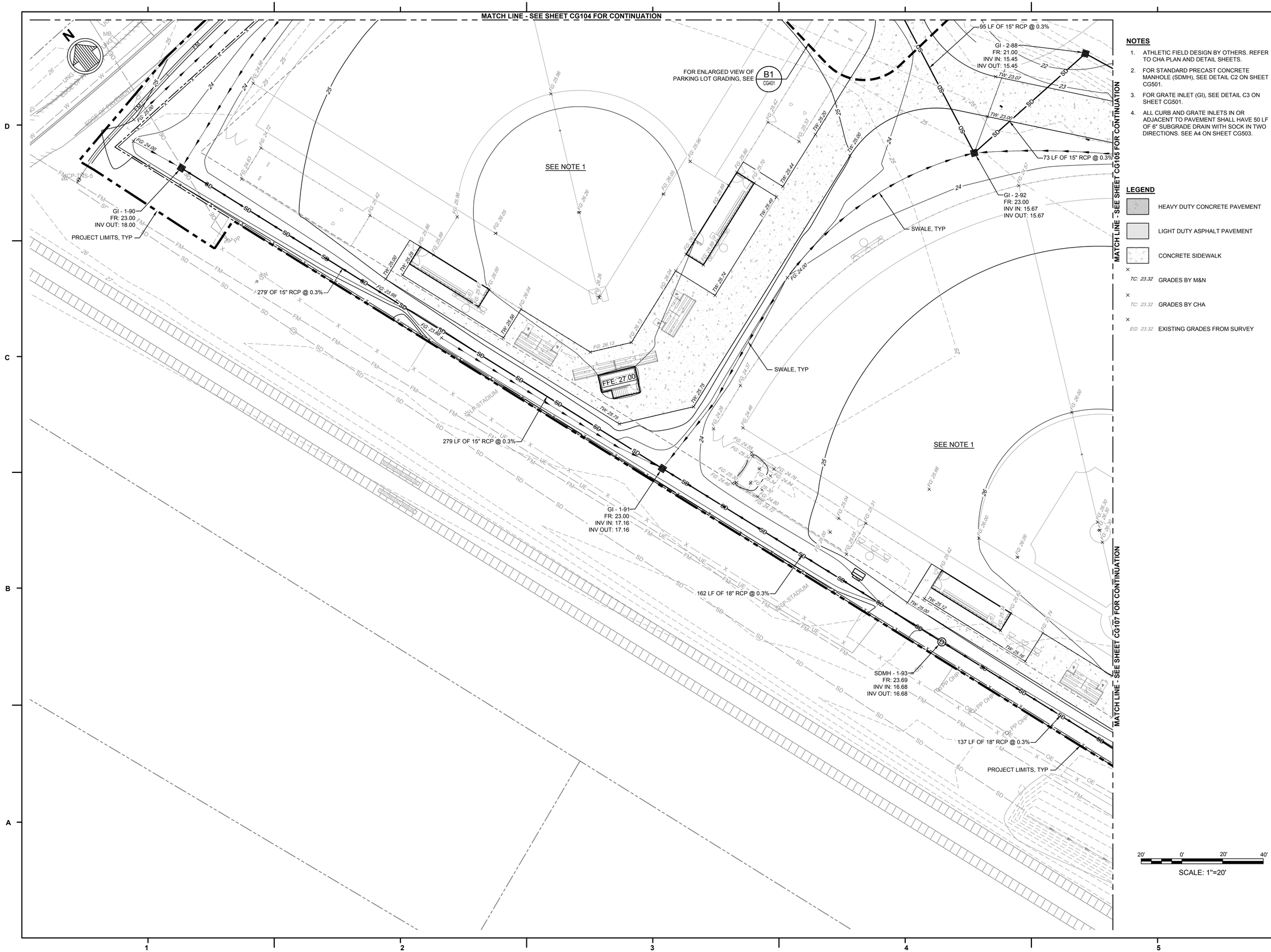
BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CG-DRAINAGE & GRADING PLAN.DWG

MATCH LINE - SEE SHEET CG104 FOR CONTINUATION

MATCH LINE - SEE SHEET CG105 FOR CONTINUATION

MATCH LINE - SEE SHEET CG107 FOR CONTINUATION



NOTES

1. ATHLETIC FIELD DESIGN BY OTHERS. REFER TO CHA PLAN AND DETAIL SHEETS.
2. FOR STANDARD PRECAST CONCRETE MANHOLE (SDMH), SEE DETAIL C2 ON SHEET CG501.
3. FOR GRATE INLET (GI), SEE DETAIL C3 ON SHEET CG501.
4. ALL CURB AND GRATE INLETS IN OR ADJACENT TO PAVEMENT SHALL HAVE 50 LF OF 6" SUBGRADE DRAIN WITH SOCK IN TWO DIRECTIONS. SEE A4 ON SHEET CG503.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- TC: 23.32 GRADES BY M&N
- TC: 23.32 GRADES BY CHA
- EG: 23.32 EXISTING GRADES FROM SURVEY

20' 0' 20' 40'

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING PLAN

CG106

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CG-DRAINAGE & GRADING PLAN.DWG

MATCH LINE - SEE SHEET CG105 FOR CONTINUATION

MATCH LINE - SEE SHEET CG105 FOR CONTINUATION

SEE NOTE 1

83 LF OF 48" RCP @ 1.8%

FES - 2-95A
IE (PIPE): 11.00

6" SCH 40 PVC
IE: 9.00

FES - 3-95B
IE (PIPE): 11.00

SEE NOTE 2, TYP

BASEBALL FIELD POND
TOB: 20.0
TOW: 14.2
BOTTOM: 6.0
SEE NOTE 8

FES - 1-95
IE (PIPE): 11.00

GI - 1-93
FR: 22.50
INV IN: 16.27
INV OUT: 16.27

72 LF OF 18" RCP @ 7.3%

CS - 3-2
FR: 18.50
BOTTOM: 13.00
INV OUT: 14.20

76 LF OF 36" RCP @ 0.3%

FES - 4-96
IE (PIPE): 14.00

PROJECT LIMITS, TYP

OVERFLOW WEIR FOR
BASEBALL FIELD POND
ELEVATION: 19.00

CENTERLINE OF DITCH

TOP OF BANK

TOE OF BANK

SCALE: 1"=20'

NOTES

1. ATHLETIC FIELD DESIGN BY OTHERS. REFER TO CHA PLAN AND DETAIL SHEETS.
2. STORM DRAINAGE OUTLET PROTECTION. SEE SHEET CE501 FOR SIZE AND DIMENSIONS.
3. FOR CONCRETE FLARED END SECTIONS (FES), SEE DETAIL C1 ON SHEET CG501.
4. FOR GRATE INLET (GI), SEE DETAIL C3 ON SHEET CG501.
5. FOR CONTROL STRUCTURE #3 (CS - 3), SEE DETAIL A1 ON SHEET CG502.
6. FOR THE OVERFLOW WEIR AT THE BASEBALL POND, SEE DETAIL A2 ON SHEET CG502.
7. ALL CURB AND GRATE INLETS IN OR ADJACENT TO PAVEMENT SHALL HAVE 50 LF OF 6" SUBGRADE DRAIN WITH SOCK IN TWO DIRECTIONS. SEE A4 ON SHEET CG503.
8. CONSTRUCT BASEBALL POND AND DRAINAGE SYSTEM BEFORE FILLING IN EXISTING POND.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- TC: 23.32 GRADES BY M&N
- TC: 23.32 GRADES BY CHA
- EG: 23.32 EXISTING GRADES FROM SURVEY

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

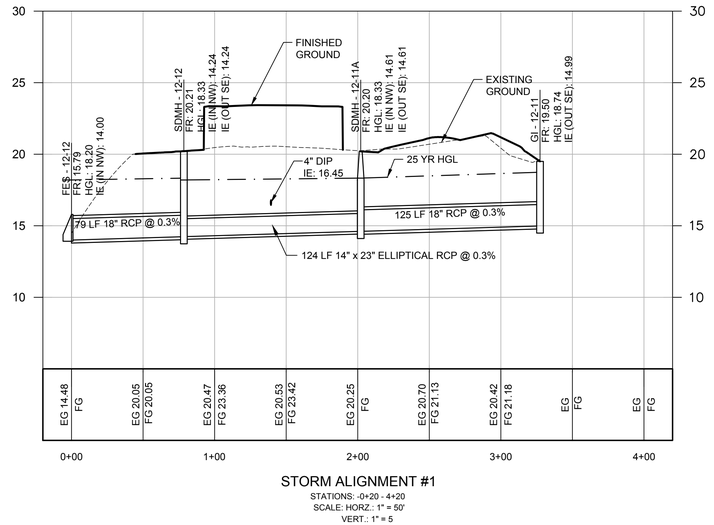
PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING PLAN

CG107

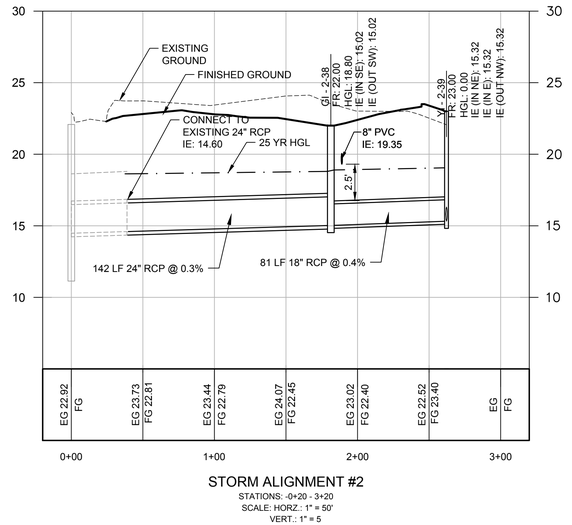
BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CG-DRAINAGE & GRADING PLAN.DWG



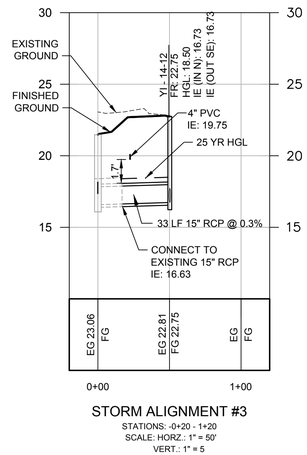
STORM ALIGNMENT #1

STATIONS: -0+20 - 4+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



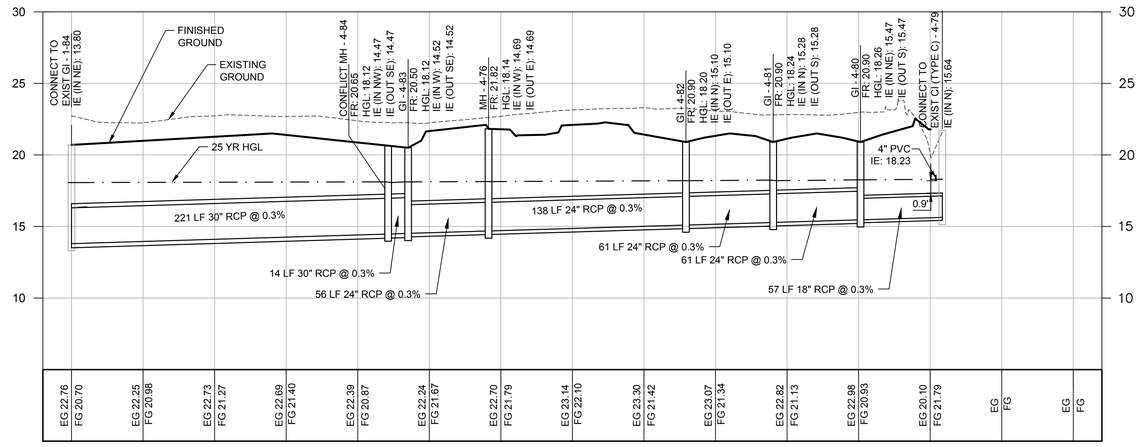
STORM ALIGNMENT #2

STATIONS: -0+20 - 3+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



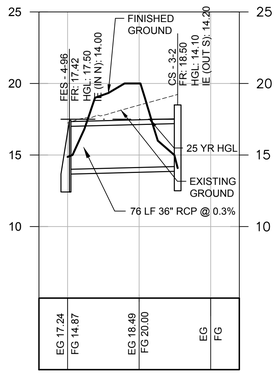
STORM ALIGNMENT #3

STATIONS: -0+20 - 1+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



STORM ALIGNMENT #4

STATIONS: -0+20 - 7+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



STORM ALIGNMENT #5

STATIONS: -0+20 - 1+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5

NOTE

ALL HPP PIPE SHALL BE ADS HP STORM - DUAL WALL - PP PIPE

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

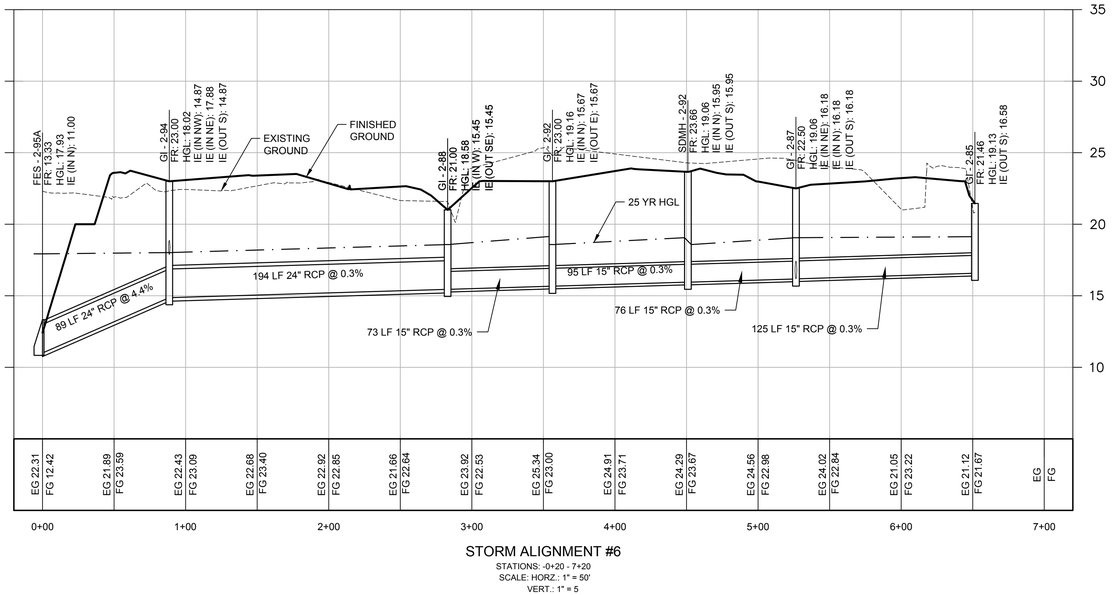
PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE PROFILES

CG201

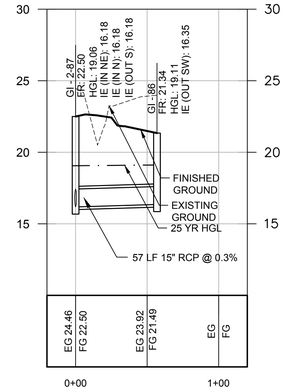
BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CG-DRAINAGE PROFILES.DWG



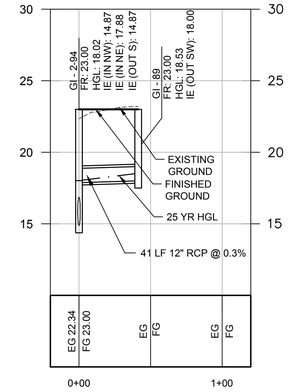
STORM ALIGNMENT #6

STATIONS: -0+20 - 7+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



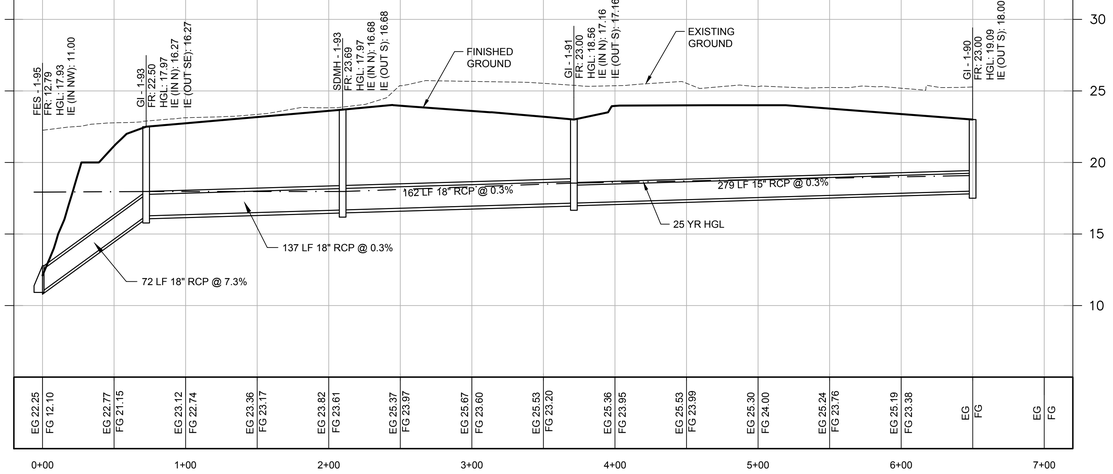
STORM ALIGNMENT #7

STATIONS: -0+20 - 1+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



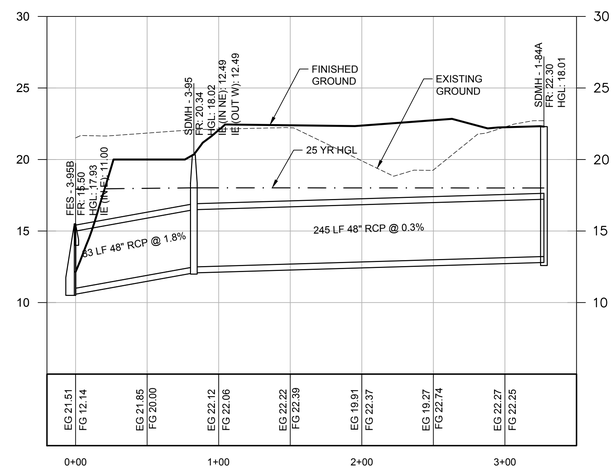
STORM ALIGNMENT #8

STATIONS: -0+20 - 1+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



STORM ALIGNMENT #9

STATIONS: -0+20 - 7+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



STORM ALIGNMENT #10

STATIONS: -0+20 - 3+50
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5

NOTE

ALL HPPP PIPE SHALL BE ADS HP STORM - DUAL WALL - PP PIPE

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
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CLH DESIGN, P.A.

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAWING TITLE: DRAINAGE PROFILES

DRAWING NUMBER: CG202

BID SET

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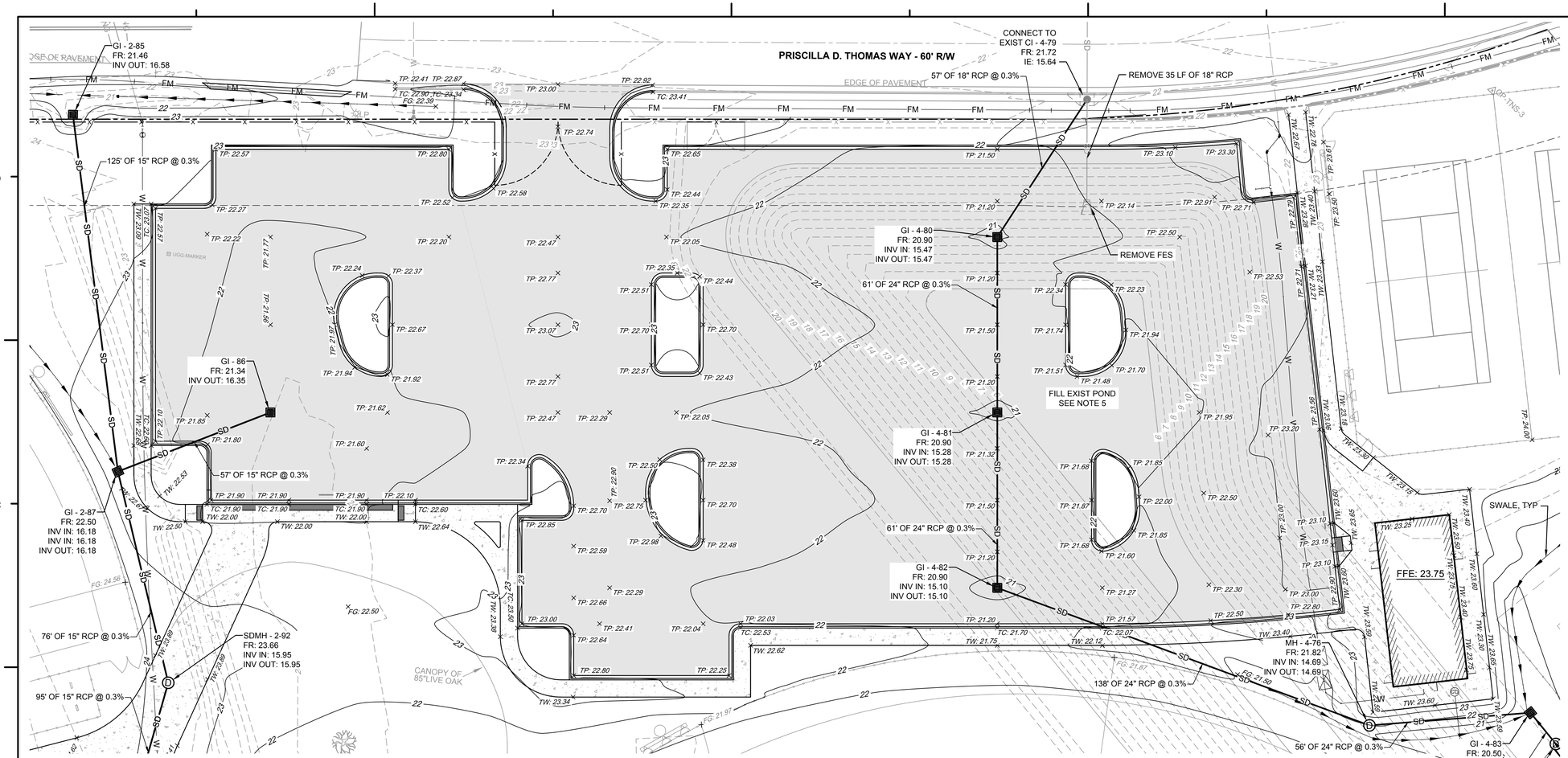
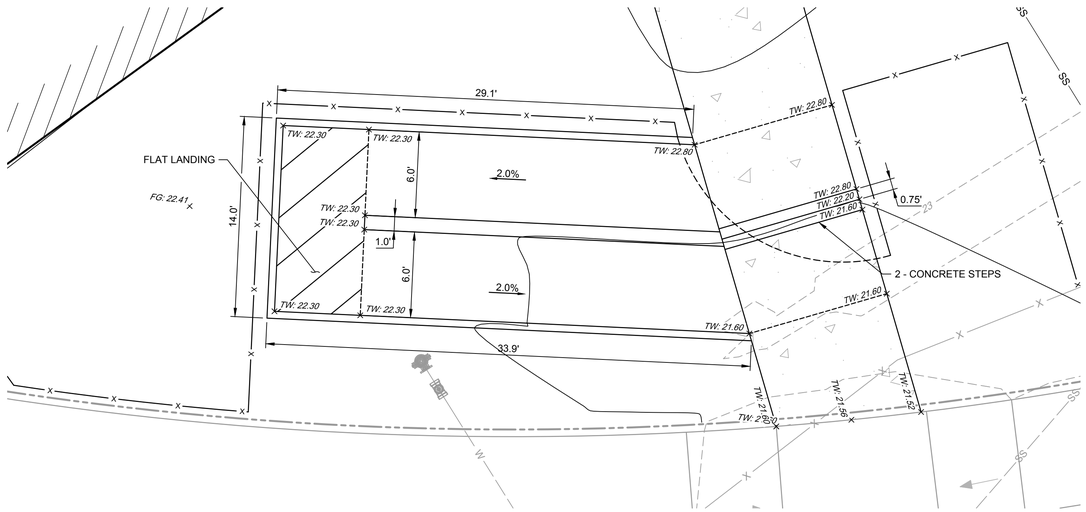


B1 CG103 — ENLARGED VIEW - PARKING LOT GRADING
SCALE: 1" = 20'
CG104 - CG106



A2 CG102 — ENLARGED VIEW - ADA HANDICAP RAMP
SCALE: 1" = 5'
CS102

NOTES

1. ATHLETIC FIELD DESIGN BY OTHERS. REFER TO CHA PLAN AND DETAIL SHEETS.
2. FOR STANDARD PRECAST CONCRETE MANHOLE (SDMH), SEE DETAIL C2 ON SHEET CG501.
3. FOR GRATE INLET (GI), SEE DETAIL C3 ON SHEET CG501.
4. ALL CURB AND GRATE INLETS IN OR ADJACENT TO PAVEMENT SHALL HAVE 50 LF OF 6" SUBGRADE DRAIN WITH SOCK IN TWO DIRECTIONS. SEE A4 ON SHEET CG503.
5. CONSTRUCT BASEBALL POND AND DRAINAGE SYSTEM BEFORE FILLING IN EXISTING POND.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- TC: 23.32 GRADES BY M&N
- TC: 23.32 GRADES BY CHA
- EG: 23.32 EXISTING GRADES FROM SURVEY

N

5' 0' 5' 10'
SCALE: 1"=5'

20' 0' 20' 40'
SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
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CLH DESIGN, P.A.

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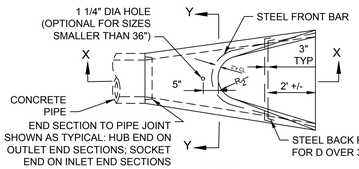
DRAINAGE & GRADING ENLARGED VIEWS

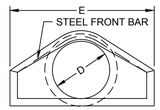
CG401

BID SET

C:\Users\aprilmundy\OneDrive - LS3P\Groves K-12\SCCPSS_K-12 Multi-School_awm.rvt
1/27/2020 1:19:16 PM LETICS\10797\CG-DRAINAGE & GRADING PLAN - ENLARGED VIEW.DWG

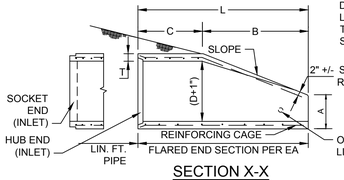


PLAN

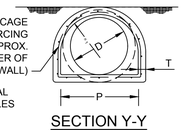


FRONT

NOTE:
DO NOT CUT CONCRETE PIPE. USE FULL LENGTH END SECTIONS ONLY. WARP SLOPE TO CONFORM WITH PIPE LENGTH AND END SECTION.



SECTION X-X



SECTION Y-Y

DIMENSIONS AND REINFORCING FOR CONCRETE FLARED END SECTIONS (± 1" TOLERANCE)											
PIPE DIA.	FRONT BAR	BACK RODS	SLOPE	A	B	C	L	E	P	R	R
12"	1-#3x5'-4"	NOT REQ'D.	2.2:1	4"	2'-0"	4'-1"	6'-1"	2'-0"	1'-8"	10"	9"
15"	1-#3x6'-0"	NOT REQ'D.	2.2:1	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0"	1'-0"	11"
18"	1-#3x7'-2"	NOT REQ'D.	2.2:1	9"	2'-3"	3'-10"	6'-1"	3'-0"	2'-6"	1'-4"	1'-0"
24"	1-#3x9'-10"	NOT REQ'D.	2.4:1	10"	3'-8"	2'-6"	6'-2"	4'-0"	2'-9"	1'-5"	1'-2"
30"	1-#4x11'-8"	NOT REQ'D.	2.4:1	12"	4'-6"	1'-8"	6'-2"	5'-0"	3'-1"	1'-6"	1'-3"
36"	1-#4x13'-10"	2"#4x6'-3"	2.4:1	15"	5'-3"	2'-11"	8'-2"	6'-0"	4'-0"	2'-0"	1'-8"
42"	1-#4x13'-10"	2-#4x7'-4"	2.4:1	21"	5'-3"	2'-11"	8'-2"	6'-6"	4'-6"	2'-4"	1'-10"

NOTE:
SPECIFIED REINFORCING IS MINIMAL AND MAY BE INCREASED AT PRODUCERS OPTION TO AID CASTING & HANDLING. ALTERNATE REINFORCEMENT PERMITTED IF ACCEPTABLE TO ENGINEER.

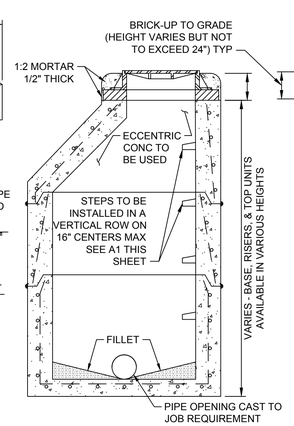
REINFORCING CAGE:
1. WIRE FABRIC HAVING SAME STEEL AREA AS INNER CAGE FOR CL. III PIPE, AASHTO M-170, BUT PLACED IN CENTER OF WALL.

2. ALTERNATE: #3 BARS SPACED 12"± LONGITUDINALLY WITH #2 BARS TRANSVERSELY AT 6" O.C. MAX. SPACING, SPOT WELDED OR TIED TO FORM CAGE.

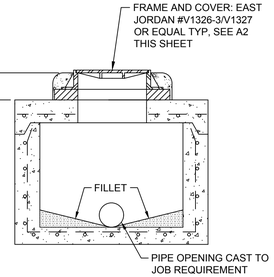
NOTES:
1. CONTRACTOR WILL INFORM PRODUCER IF CONCRETE FLARED END SECTION IS FOR INLET OR FOR OUTLET END. SOCKET (TONGUE OR SPIGOT) END IS REQUIRED FOR INLETS. HUB (GROOVE OR BELL) END IS REQUIRED FOR OUTLETS. SOCKET TO SOCKET OR HUB TO HUB JOINT WILL NOT BE ACCEPTED UNLESS A REINFORCED CONCRETE COLLAR IS BUILT AROUND THE JOINT WITH NO PAYMENT BEING MADE FOR THE COLLAR. FLARED END SECTIONS SHALL BE JOINTED TO PIPE WITH ALL SPACE IN THE JOINT FILLED WITH PREFORMED PLASTIC GASKET (SEC.848). WALL THICKNESS (T) IS SHOWN AS NOMINAL AND MAY BE INCREASED AT PRODUCERS OPTION FOR DESIRED JOINT DESIGN OR TO ALLOW A FLAT OUTSIDE BOTTOM ON THE FLARE, WITH INSIDE DIMENSIONS OF FLARE RETAINED AS SHOWN.T = PIPE WALL THICKNESS (0.08330+1"± TYPICAL).

2. REFER TO GSWCC "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", LATEST EDITION, STORM DRAIN OUTLET PROTECTION FOR REQUIRED RIP-RAP APRON FOR DIMENSIONS, SEE SHEET CE501.

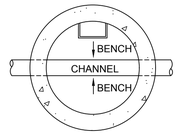
C1 CG101 — CONCRETE FLARED END SECTION
SCALE: NTS
CG103, CG107



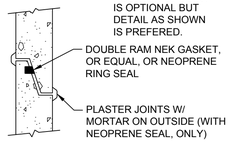
DEEP MANHOLE



SHALLOW MANHOLE



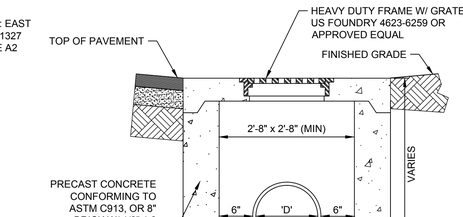
PLAN



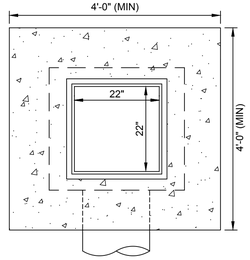
JOINT DETAIL

NOTE:
REFER TO GDOT DETAIL #1011-AP "STANDARD PRECAST REINFORCED CONCRETE MANHOLE" FOR CONSTRUCTION SPECIFICATIONS AND DIMENSIONS.

C2 CG101 — STANDARD PRECAST CONCRETE MANHOLE
SCALE: NTS
CG104, CG105, CG401

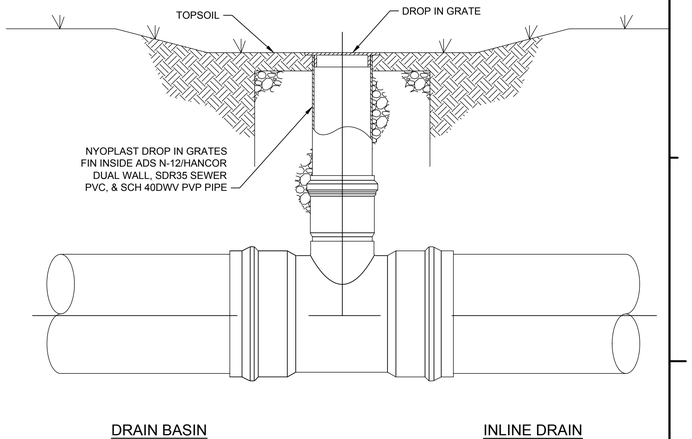


SECTION



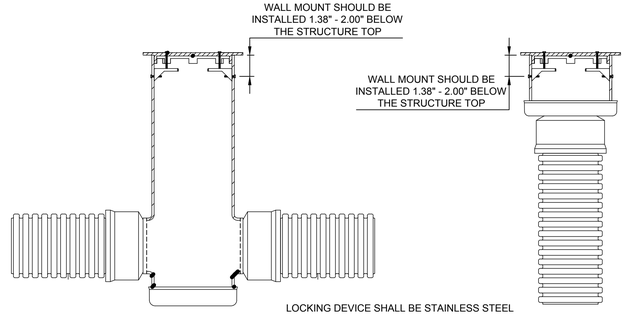
PLAN

C3 CG101 — GRATE INLET DETAIL
SCALE: NTS
CG102 - CG107, CG401

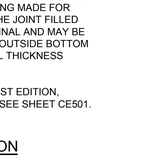


DRAIN BASIN — INLINE DRAIN

6 IN - 24 IN DROP IN GRATE INSTALLATION

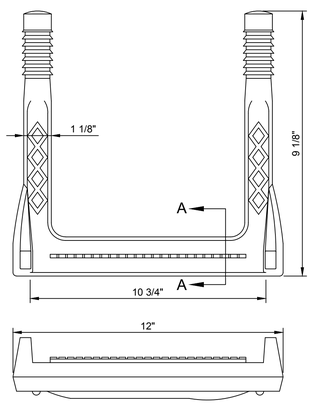


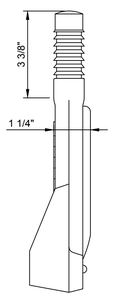
10 IN - 24 IN DROP-IN LOCKING KIT - P/N 1024DROPLOCK



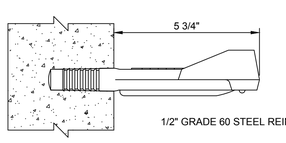
NOTES:
1. DIMENSIONS ARE FOR REFERENCE ONLY ACTUAL DIMENSIONS MAY VARY.
2. DIMENSIONS ARE IN INCHES.

B2 CG102 — 6 x 6 x 6 DOWNSPOUT ADAPTER
SCALE: NTS

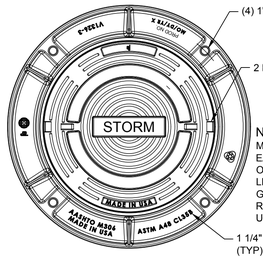




COPOLYMER POLYPROPYLENE PLASTIC

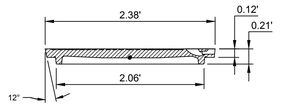


A1 CG501 — MANHOLE STEP-POLYPROPYLENE
SCALE: NTS

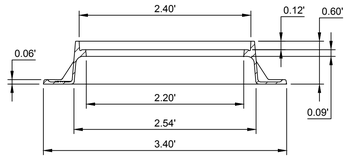


NOTE:
MANHOLE FRAME AND COVER: EAST JORDAN #V1326-3/V1327 OR EQUAL. WEIGHT = 254LBS. LID TO BE LETTERED "CITY OF GARDEN CITY, "DRAINS TO RIVER", "STORM", "MADE IN USA", AND FOUNDRY STAMP

PLAN VIEW



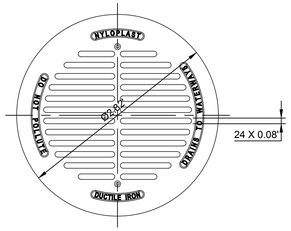
COVER SECTION

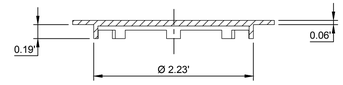


FRAME SECTION

A2 CG501 — MANHOLE COVER & FRAME DETAIL
SCALE: NTS

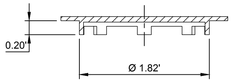
1501DI
APPROX. DRAIN AREA = 62.03 SQ IN
APPROX. WEIGHT = 26.42 LBS





15 IN DROP IN

1201DI
APPROX. DRAIN AREA = 39.75 SQ IN
APPROX. WEIGHT = 15 LBS



12 IN DROP IN

NOTE
DIMENSIONS ARE FOR REFERENCE ONLY, ACTUAL DIMENSIONS MAY VARY. DIMENSIONS ARE IN INCHES, GRATE HAS LIGHT DUTY RATING QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT. SIZE OF OPENING MEETS REQUIREMENTS OF AMERICAN DISABILITY ACT AS STATED IN FEDERAL REGISTER PART III, DEPARTMENT OF JUSTICE, 28 CFR PART 36.

A4 CG102 — YARD INLET
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

LS3P

321 WEST CONGRESS STREET SUITE 301
SAVANNAH, GEORGIA 31401
TEL. 912.695.2111 FAX 912.298.0206
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moffatt & nichol
2 EAST BRYAN ST., STE 501
SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date
6	POST BID ADDENDUM 1	02/10/21

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING DETAILS

CG501

BID SET

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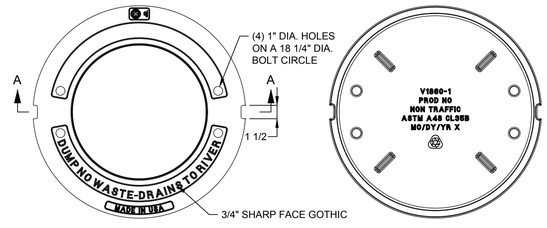
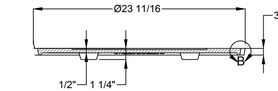
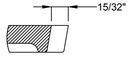


PLAN

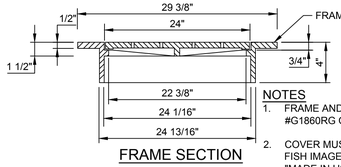
BOTTOM VIEW



COVER SECTION
A-A



DETAIL B
SCALE 1 : 2

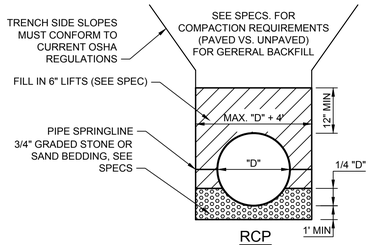


FRAME SECTION

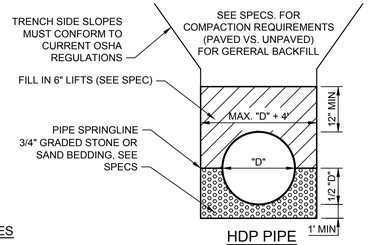
NOTES

1. FRAME AND COVER TO BE EAST JORDAN CATALOG #G1860RG OR EQUIVALENT (WEIGHT 120 LBS.)
2. COVER MUST PROVIDE "GARDEN CITY" LOGO WITH FISH IMAGE, "DUMP NO WASTE-DRAINS TO RIVER", "MADE IN USA", AND FOUNDRY STAMP

C1 / CG502 — INLET FRAME & COVER
SCALE: NTS



RCP

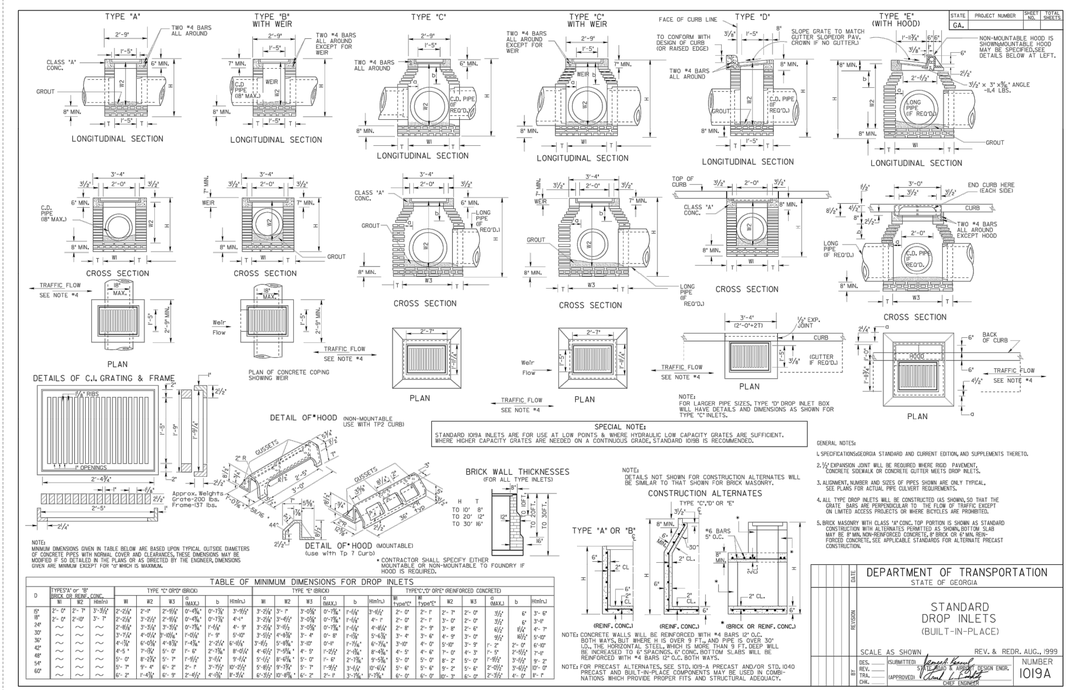


HDP PIPE

NOTES

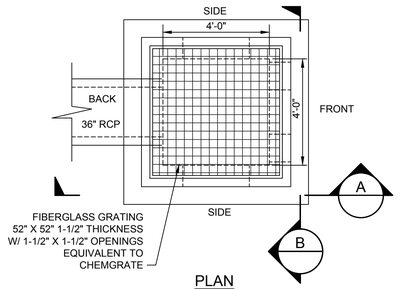
1. THIS DETAIL SHALL ONLY APPLY WHEN IN PLACE MATERIALS ARE UNSUITABLE FOR PIPE BEDDING. SEE THE SPECIFICATIONS FOR BEDDING REQUIREMENTS.
2. FOR PIPE UNDER 48" DIA THE MINIMUM BEDDING DEPTH BELOW THE PIPE IS 1'. FOR 48" DIA AND LARGER, 2' OF BEDDING SHALL BE USED UNDER PIPE. (ONLY APPLIES TO THIS DETAIL WHERE EXISTING MATERIALS ARE UNSUITABLE FOR BEDDING).
3. WHERE THE ENGINEER DETERMINES ADDITIONAL UNDERCUTTING AND STONE BEDDING IS REQUIRED BEYOND THAT SHOWN ON THE DETAILS TO PROVIDE A STABLE SUBGRADE, IT SHALL BE PAID FOR AT THE COST OF REMOVING THE ADDITIONAL UNSUITABLE MATERIAL BEYOND THAT SHOWN ON THE DETAILS, AND FURNISHING AND INSTALLING ADDITIONAL STONE BEDDING. NO PAYMENT FOR ADDITIONAL STONE OR SAND BEDDING BEYOND THE QUANTITY SHOWN ON THE DETAILS SHALL BE PAID WITHOUT PRIOR WRITTEN APPROVAL OF LOCATION, QUANTITY, AND OVERALL PRICE BY ENGINEER.
4. ALL STORM PIPE JOINTS SHOULD BE WRAPPED IN FILTER FABRIC.
5. FOR ADS, HPPP TRENCHING, SEE DETAIL A1, SHEET CG504.

C2 / CG502 — CUSTOM PIPE BEDDING
SCALE: NTS

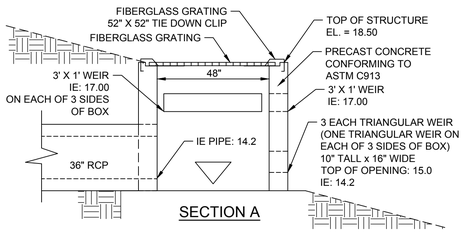


C4 / CG502 — GDOT STD 1019A DROP INLET (CAST IN PLACE)
SCALE: NTS

SECTION B



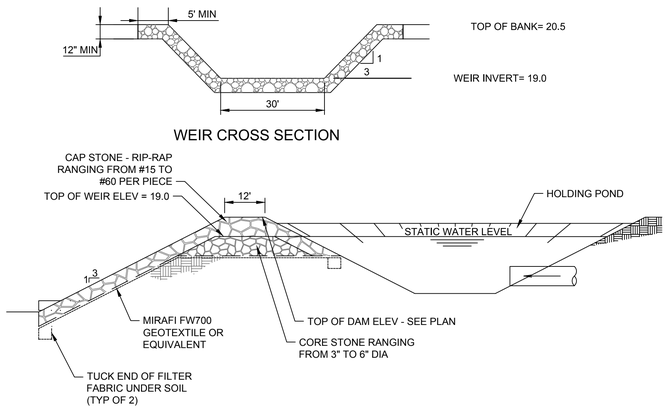
PLAN



SECTION A

NOTE
STRUCTURE, GRATE, & FRAME SHALL BE APPROVED BY ENGINEER PRIOR TO ORDERING.

A1 / CG107 — CONTROL STRUCTURE#3-2 (BASEBALL FIELD)
SCALE: NTS

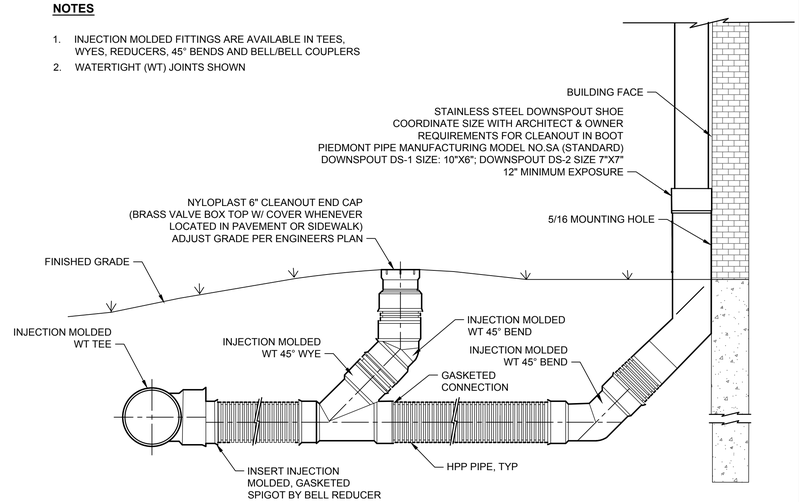


WEIR CROSS SECTION

A2 / CG107 — OVERFLOW WEIR & OUTFALL DRAINAGE FILTER DETAIL
SCALE: NTS

NOTES

1. INJECTION MOLDED FITTINGS ARE AVAILABLE IN TEES, WYES, REDUCERS, 45° BENDS AND BELL/BELL COUPLERS
2. WATERTIGHT (WT) JOINTS SHOWN



A4 / CG102 — ROOF DRAIN WITH 45 DEGREE WYE CLEANOUT
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
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STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

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SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING DETAILS

CG502

BID SET

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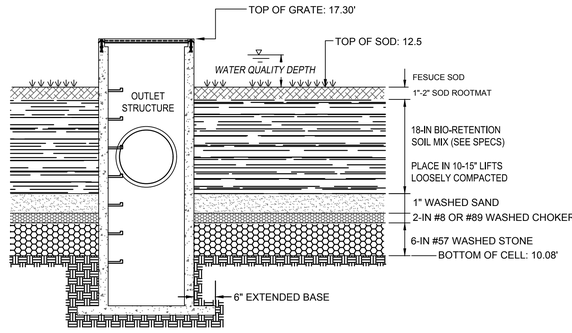
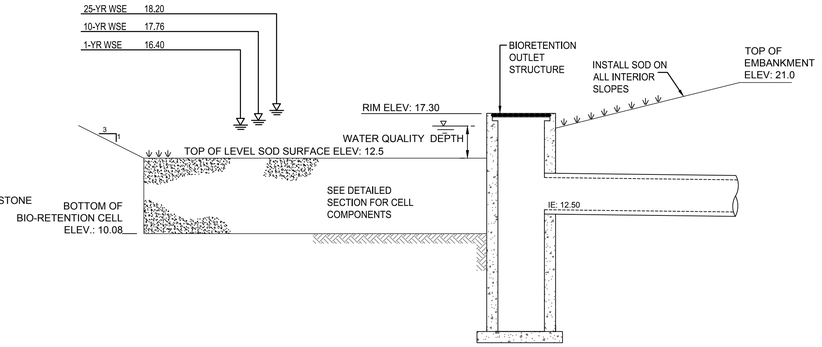
A1 CG101 BIORETENTION DETAIL
SCALE: 1" = 20'



DETAILED SECTION
N.T.S.



BIO-RETENTION CELL CROSS SECTION
N.T.S.

GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE UNTIL SUBSTANTIAL COMPLETION AT WHICH TIME OWNER WILL ASSUME MAINTENANCE RESPONSIBILITY.
2. LANDSCAPE WARRANTIES SHALL APPLY TO BIO-RETENTION AREA SOD.
3. EXTREME CARE SHALL BE TAKEN DURING CONSTRUCTION TO PREVENT SEDIMENTATION OF INSTALLED SOIL MIXTURE. THE SOIL MIXTURE SHALL NOT BE INSTALLED UNTIL THE ENTIRE DRAINAGE AREA TO THE BIO-RETENTION CELL IS COMPLETELY STABILIZED WITH PAVEMENT AND PERMANENT VEGETATION.
4. FILTER FABRIC SHALL BE NON-WOVEN GEOTEXTILE.
5. SOD BEING INSTALLED SHALL COME FROM SANDY SOIL REGIONS.

AS-BUILT REQUIREMENTS:

1. CONTRACTOR SHALL PROVIDE AS-BUILT TOPOGRAPHIC SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR CERTIFYING EACH BIO-RETENTION AREA DIMENSIONS, ELEVATIONS, OUTLET STRUCTURE INVERTS, ORIFICE DIAMETER, PIPE SIZES AND CLEANOUT LOCATIONS. TOPOGRAPHY SHALL EXTEND 20 FEET OUTSIDE LIMITS OF THE CELL AREA. THE PROJECT ENGINEER WILL PROVIDE CERTIFICATION OF COMPLETION.

BIORETENTION MEDIA MIXTURE:

SOIL MIX SHALL BE UNIFORM AND FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR MATERIAL GREATER THAN 2-INCHES. ANALYSIS REPORTS SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACEMENT OF SOIL MIXTURE IN THE BIORETENTION CELL.

SOIL COMPONENTS BY DRY WEIGHT:

MEDIUM TO COARSE WASHED SAND:	75%-85%.
FINES (SILT AND CLAY):	8%-10%.
ORGANIC MATTER (SUCH AS PINE BARK FINES):	5%-10%.

PHOSPHOROUS INDEX (P-INDEX): 30 MAXIMUM IN NSW WATERS
50 MAXIMUM ELSEWHERE

pH RANGE: 5.2-7.0.

PERMEABILITY: 2-IN/HR PREFERRED.

COMPACTION: CONTRACTOR SHALL DETERMINE, THROUGH FIELD TESTING, THE REQUIRED COMPACTIVE EFFORT TO OBTAIN THE SPECIFIED PERMEABILITY RATES OF INSTALLED SOIL MIXTURE. PERMEABILITY OF INSTALLED SOIL MIXTURE SHALL BE TESTED PRIOR TO PLACEMENT OF SOD. SOIL MIXTURE SHALL BE LOOSENED OR COMPACTED AS NECESSARY TO OBTAIN REQUIRED PERMEABILITY RATES WITHIN THE RANGE SPECIFIED ABOVE.

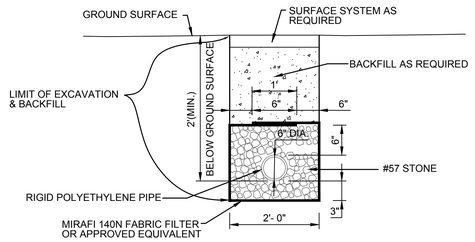
PERMEABILITY SHALL BE TESTED BY OWNER'S INDEPENDENT TESTING AGENCY.

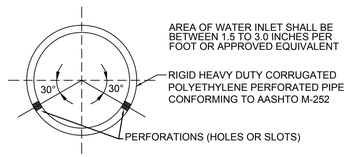
INITIAL CONSTRUCTION SEQUENCE:

1. INSTALL OUTLET PIPE, CONTROL STRUCTURE, AND EMBANKMENT.
2. CALL FOR SITE INSPECTION PRIOR TO BACKFILLING BARREL.

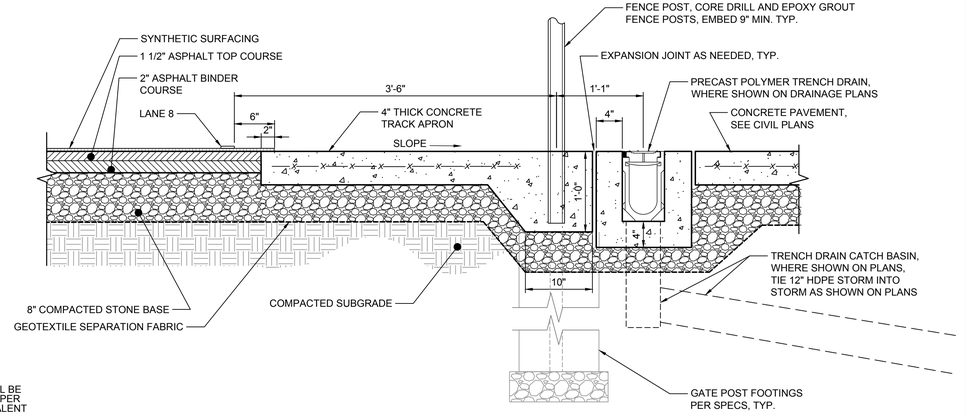
PERMANENT CONSTRUCTION SEQUENCE:

1. BIO-RETENTION CELL SHALL BE UTILIZED AS A TEMPORARY EXCAVATED INLET PROTECTION DURING CONSTRUCTION.
2. FOLLOWING COMPLETION OF CONSTRUCTION AND STABILIZATION OF THE BIO-RETENTION DRAINAGE BASIN, PERFORM THE FOLLOWING:
   - 2.1. SCHEDULE THE FOLLOWING WORK TO COINCIDE WITH AN EXTENDED FORECAST OF NO PRECIPITATION SUCH THAT ALL WORK CAN BE COMPLETED DURING A PERIOD OF DRY WEATHER.
   - 2.2. REMOVE ALL ACCUMULATED SEDIMENT AND GRADE TO FINAL CELL SUBGRADE ELEVATIONS.
   - 2.3. IF ADDITIONAL DE-WATERING IS NEEDED, UTILIZE A MUD PUMP WITH FLOATING SUCTION INLET AND DISCHARGE REMAINING WATER THROUGH A SEDIMENT FILTER BAG LOCATED OUTSIDE OF THE BASIN. MONITOR PUMPING TO ENSURE FLOW DOES NOT EXCEED THE CAPACITY OF FILTER BAG.
   - 2.4. REMOVE TEMPORARY EXCAVATED INLET GRAVEL AND HARDWARE CLOTH.
   - 2.5. INSTALL WASHED STONE DRAINAGE LAYER.
   - 2.6. INSTALL CHOKER STONE LAYER.
   - 2.7. INSTALL BIO-RETENTION SOIL MIXTURE. DO NOT MECHANICALLY COMPACT SOIL MIXTURE. WATER OR WALK ON MIXTURE AS IT IS BEING PLACED.
   - 2.8. INSTALL MULCH AND/OR VEGETATION OVER ALL SURFACE OF THE CELL, ON INTERIOR SLOPES AND TOP OF EMBANKMENT. SOD MUST BE INSTALLED BEFORE ANY RAINFALL EVENT TO AVOID SEDIMENTATION OF THE SOIL MIXTURE.





A4 CG101 6 INCH UNDERDRAIN PIPE
SCALE: NTS
CG102-CG107, CG401



A3 CG102 TRENCH DRAIN
SCALE: 3/32" = 1'-0"

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
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STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

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912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING DETAILS

CG503

BID SET

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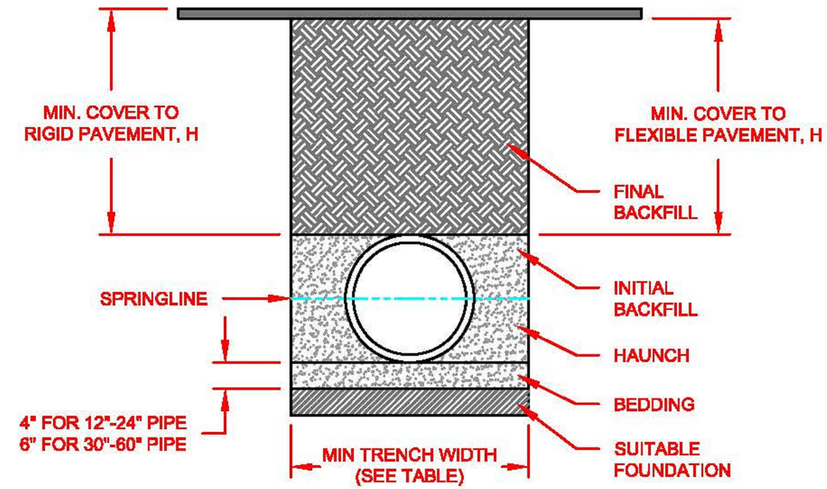
HP STORM TRENCH INSTALLATION DETAIL



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.

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

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

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE; 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS; CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

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

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

	CLASS I		CLASS II			CLASS III		CLASS IV
PIPE DIA	COMPACTED	DUMPED	95%	90%	85%	95%	90%	95%
12" (300mm)	41 (12.5m)	21 (6.4m)	28 (8.5m)	21 (6.4m)	16 (4.9m)	20 (6.1m)	16 (4.9m)	16 (4.9m)
15" (375mm)	42 (12.8m)	21 (6.4m)	29 (8.8m)	21 (6.4m)	16 (4.9m)	21 (6.4m)	16 (4.9m)	16 (4.9m)
18" (450mm)	44 (13.4m)	21 (6.4m)	30 (9.1m)	21 (6.4m)	16 (4.9m)	18 (5.5m)	14 (4.3m)	14 (4.3m)
24" (600mm)	30 (9.1m)	15 (4.6m)	21 (6.4m)	15 (4.6m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
30" (750mm)	39 (11.9m)	19 (5.8m)	27 (8.2m)	19 (5.8m)	14 (4.3m)	19 (5.8m)	15 (4.6m)	14 (4.3m)
36" (900mm)	28 (8.5m)	28 (8.5m)	20 (6.1m)	14 (4.3m)	10 (3.0m)	14 (4.3m)	11 (3.4m)	10 (3.0m)
42" (1050mm)	30 (9.1m)	14 (4.3m)	21 (6.4m)	14 (4.3m)	10 (3.0m)	15 (4.6m)	11 (3.4m)	10 (3.0m)
48" (1200mm)	29 (8.8m)	14 (4.3m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	14 (4.3m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	9 (2.7m)

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

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
7	REV. MAXIMUM COVER HEIGHTS	RWD	04/01/19	

TRENCH INSTALLATION DETAIL (HP STORM)

DRAWING NUMBER: STD-101D(EP)

ADS. ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OHIO 43026

DRAWN BY: JAB
DATE: 01/29/09
CHK'D BY:
SCALE: NTS
SHEET: 1 OF 1

A1 / CG504 HP STORM TRENCH INSTALLATION DETAIL
SCALE: NTS

NOTE
SEE SHEET CG505 FOR HP STORM INSTALLATION GUIDE

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM
SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING DETAILS

CG504

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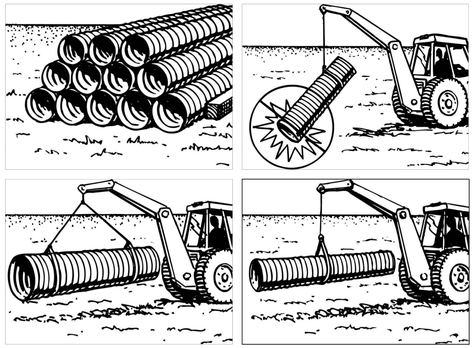
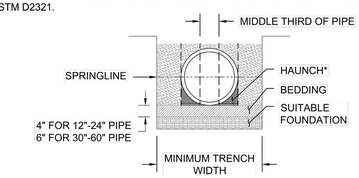


- STACK PIPE ON LEVEL GROUND TO PREVENT WARPING OF PRODUCT.
- DO NOT LIFT PIPE BY INSERTING FORKLIFT INTO THE END OF THE PIPE.
- TO PREVENT DAMAGE TO THE BELL OR SPIGOT WHEN MOVING PIPE SECTIONS, DO NOT DRAG OR STRIKE PIPE ENDS AGAINST ANYTHING
- PIPE CAN BE MOVED WITH A BACKHOE AND A NYLON SLING. LIFT 36" AND LARGER DIAMETER PIPE WITH A SLING AT TWO POINTS, SPACED APPROXIMATELY 10 FEET APART. SMALLER DIAMETERS CAN USE ONE LIFT POINT.

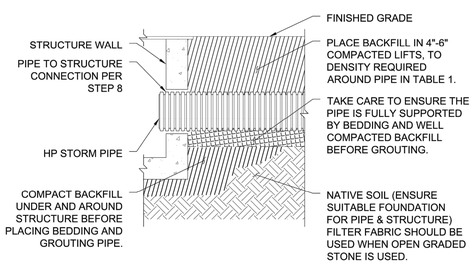
STEP 1 : PIPE HANDLING AND STORAGE

TRACKHOE OPERATOR SHALL UNIFORMLY PLACE A SHALLOW LIFT (NOT TO EXCEED 8"), OVER THE PIPE SO WORKERS CAN DIAGONALLY KNIFE OR BOOT PRESS SOIL UNDER PIPE HAUNCHES. PLACING BACKFILL UNDER THE PIPE HAUNCHES HELPS PREVENT THE PIPE FROM SHIFTING DURING BACKFILL COMPACTION. FOR ADDITIONAL GUIDANCE SEE ASTM D2321.

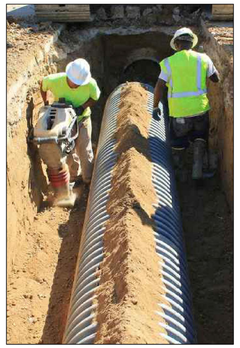


* HAUNCH BACKFILL PROVIDES SUPPORT FOR SOIL & TRAFFIC LOADS. BACKFILL SHOULD BE WORKED INTO HAUNCH AREA IN 4-6" LIFTS

STEP 5 : PLACING MATERIAL INTO HAUNCH AREA



STEP 9 : COMPACT BACKFILL AROUND STRUCTURE



TRENCH MUST BE WIDE ENOUGH TO FIT PIPE, WORKERS, AND COMPACTION EQUIPMENT.

PIPE DIAMETER	MINIMUM BETWEEN PIPES	MINIMUM TRENCH WIDTH
12"	12"	30"
15"	12"	34"
18"	12"	39"
24"	12"	48"
30"	15"	56"
36"	18"	64"
42"	21"	72"
48"	24"	80"
60"	30"	96"

RECOMMENDED MINIMUM TRENCH WIDTHS, WHEN TRENCH WALLS AND FOUNDATION ARE STABLE. FOR ADDITIONAL TRENCH WIDTH OPTIONS REFER TO ADS INSTALLATION STANDARDS AND ASTM D2321.

STEP 2 : TRENCH WIDTH RECOMMENDATIONS

PLACE BACKFILL AROUND PIPE IN 4"-6" COMPACTED LIFTS OR AS DIRECTED BY THE ONSITE GEOTECHNICAL ENGINEER (LOOSE LIFTS SHALL NOT EXCEED 8"). COMPACT BEDDING AND BACKFILL WITH SMALL TO MEDIUM COMPACTION EQUIPMENT TO SPECIFIED DENSITY. VISUALLY INSPECT THE PIPE TO ENSURE THE APPROPRIATE SHAPE IS MAINTAINED. BACKFILL SHOULD BE NEAR OPTIMUM MOISTURE WHEN COMPACTED. FOR ADDITIONAL GUIDANCE SEE ASTM D2321.

STEP 6 : COMPACT BACKFILL IN LIFTS

	MAXIMUM COVER FOR ADS HP STORM PIPE (FT)				
	CLASS I	CLASS II		CLASS III	
PIPE DIA	COMPACTED	95% SPD	90% SPD	95% SPD	90% SPD
12"	41	28	21	20	16
15"	42	29	21	21	16
18"	44	30	21	22	17
24"	37	26	18	19	14
30"	39	27	19	19	15
36"	28	20	14	14	11
42"	30	21	14	15	11
48"	29	20	14	14	10
60"	29	20	14	14	10

FILL HEIGHTS BASED ON CALCULATIONS SHOWN IN THE STRUCTURES SECTION OF THE ADS DRAINAGE HANDBOOK (V20.7). CALCULATIONS ASSUME NO HYDROSTATIC PRESSURE AND A DENSITY OF 120 PCF FOR OVER BURDEN MATERIAL. INSTALLATION IN ACCORDANCE WITH ASTM D2321, WITH FILL HEIGHTS AS SHOWN. SEE TABLE 3 FOR SOIL DATA. STANDARD PROCTOR DENSITY USED FOR COMPACTION. INCREASE SOIL CLASS AND/OR COMPACTION EFFORT AS NEEDED TO MEET REQUIRED FILL HEIGHTS ON PROJECT PLANS

MINIMUM COVER FOR ADS HP STORM PIPE (IN)			
PIPE DIA	H20 AXLE LOAD (lbs)	CLASS II @ 90% SPD	CLASS III @ 90% SPD
12" - 48"	32000	12	12
60"	32000	24	24

FOR TRAFFIC APPLICATIONS MINIMUM COVER IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE; MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT (ASPHALT) OR TO TOP OF RIGID PAVEMENT (CONCRETE).

MINIMUM COVER VALUES DO NOT ACCOUNT FOR RUTTING OR UNSTABLE SOIL OVER THE PIPE. ADDITIONAL COVER MAY BE REQUIRED TO MAINTAIN THE PIPE'S STRUCTURAL INTEGRITY.

TABLE 1 : MAXIMUM & MINIMUM COVER

ENSURE BEDDING IS UNIFORM AND TRUE TO LINE AND GRADE. MIDDLE THIRD SHOULD BE LOOSE TO CRADLE PIPE.

EXTEND BEDDING AT LEAST 2 FEET BEYOND THE END OF THE PIPE BEING INSTALLED.

TRENCH SHOULD BE DRY OR PROPERLY DEWATERED BEFORE PLACING BEDDING AND BACKFILL.

IF STONE OR ANY OPEN GRADED BEDDING MATERIAL IS USED, WRAP THE STONE WITH A MIN. 6 OUNCE NON-WOVEN GEOTEXTILE.

STEP 3 : PREPARATION OF BEDDING MATERIAL

WHEN COMPACTING OVER THE PIPE WITH LIGHT WEIGHT COMPACTION EQUIPMENT, ENSURE THERE IS 6" MINIMUM COVER.

MEDIUM SIZED COMPACTORS MAY BE USED TO COMPACT BACKFILL IN LIFTS UP SIDES OF PIPE.

MEDIUM SIZED COMPACTORS MUST HAVE 12" MINIMUM COVER BEFORE COMPACTING OVER THE PIPE.

SEE TABLE 2 FOR MINIMUM COVER REQUIREMENTS FOR TYPICAL CONSTRUCTION EQUIPMENT.

STEP 7 : COMPACT OVER TOP OF PIPE

MINIMUM COVER FOR CONSTRUCTION VEHICLES										
					TEMPORARY MINIMUM COVER HEIGHTS (in)					
CONSTRUCTION VEHICLE	VEHICLE DESCRIPTION	MINIMUM TIRE	AXLE LOAD (lbs)	PIPE DIAMETER	CLASS I COMPACTED	CLASS II @ 95% SPD	CLASS II @ 90% SPD	CLASS III @ 95% SPD	CLASS III @ 90% SPD
CAT CT660	DUMP TRUCK	22.5-R11	46000	12"-60"	9	9	12	12	18
CAT 16M3	GRADER	23.5-R25	58753	12"-21"	12	12	15	15	21
				24"-60"					24
CAT 730C	ARTICULATED DUMP TRUCK	23.5-R25	74538	12"-15"	15	15	18	18	24
				18"-60"					27
CAT CS78B[1]	ROLLER	84-IN DRUM	74600	12"-21"	15	15	21	21	24
				24"-60"					27
KOMATSU WA800-3	WHEEL LOADER	45/65-45	158270	12"-30"	15	15	21	21	30
				36"-60"					36

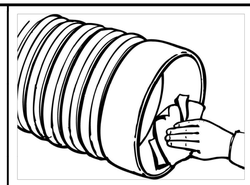
[1]ACCELERATOR (VIBRATOR) TURNED ON

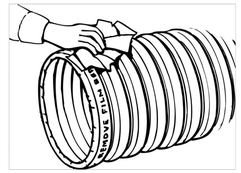
MINIMUM COVER VALUES DO NOT ACCOUNT FOR RUTTING OR UNSTABLE SOIL OVER THE PIPE. ADDITIONAL COVER MAY BE REQUIRED TO MAINTAIN THE PIPE'S STRUCTURAL INTEGRITY.

MINIMUM COVER TO PREVENT PIPE FLOTATION	
NOMINAL DIAMETER (in)	MINIMUM COVER (in)
12	9
15	11
18	13
24	17
30	22
36	25
42	29
48	33
60	40

FLOTATION NOTES:
THE PIPE IS ASSUMED TO BE EMPTY WITH GROUNDWATER TO THE GRADE SURFACE AND SATURATED SOIL DENSITY OF 130 PCF. IF THE PIPE IS FULL OF WATER THESE VALUES MAY BE ADJUSTED BY THE SITE DESIGN ENGINEER. FOR MORE INFORMATION ON FLOTATION, REFER TO ADS TECH NOTE TN 5.05.

TABLE 2 : MIN. COVER FOR CONSTRUCTION VEHICLES & FLOTATION



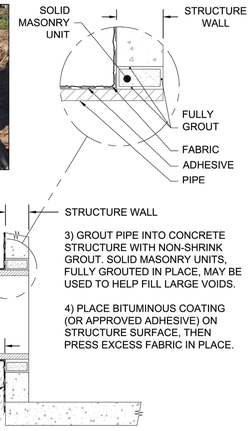


- USE A CLEAN RAG OR BRUSH TO LIGHTLY LUBRICATE INSIDE THE BELL. CLEAN SPIGOT END OF PIPE. REMOVE PLASTIC WRAP FROM GASKET. DO NOT ALLOW LUBRICATED SECTION TO TOUCH DIRT OR BACKFILL.
- ALIGN PIPE AND PLACE SPIGOT INTO BELL. USING STRAP OR PUSH PIECE, FULLY INSERT SPIGOT INTO BELL. WHEN LEADING BELL EDGE TOUCHES "HOME" MARK JOINT IS FULLY INSERTED. INSIDE JOINT GAPS SHOULD BE TIGHT ON ALL SIDES. SEE MANUFACTURER FOR JOINT TOLERANCE.

STEP 4 : PIPE JOINT ASSEMBLY

1) PLACE BITUMINOUS COATING (OR APPROVED ADHESIVE) AROUND PIPE, WRAP AND SECURE FABRIC AROUND PIPE, LEAVING EXCESS FABRIC TO PRESS AGAINST STRUCTURE

2) INSERT PIPE INTO STRUCTURE, WITH PIPE RESTING ON BEDDING. THE PIPE SHOULD BE IN THE APPROXIMATE CENTER OF THE OPENING.



3) GROUT PIPE INTO CONCRETE STRUCTURE WITH NON-SHRINK GROUT. SOLID MASONRY UNITS, FULLY GROUTED IN PLACE, MAY BE USED TO HELP FILL LARGE VOIDS.

4) PLACE BITUMINOUS COATING (OR APPROVED ADHESIVE) ON STRUCTURE SURFACE, THEN PRESS EXCESS FABRIC IN PLACE.

STEP 8 : FABRIC & GROUT CONNECTION TO STRUCTURE

ASTM D2321 SOIL CLASS[1]	ASTM D2487 SOIL GROUP[1,2]	AASHTO M145 SOIL GROUPS[1]
STONE BACKFILL		
CLASS I[2]	ANGULAR CRUSHED ROCK, WITH 100% PASSING 1-1/2 IN. SIEVE ≤15% PASSING #4 SIEVE ≤25% PASSING 3/8 IN. SIEVE ≤12% PASSING #200 SIEVE ALL PARTICLE SURFACES SHALL BE FRACTURED.	-
GRAVEL AND SAND BACKFILL		
CLASS II	CLEAN, COUARSE GRAINED SOILS; "SW", "SP", "GW", "GP", OR ANY SOIL BEGINNING WITH ONE OF THESE SYMPOLS WITH ≤12% PASSING #200 SIEVE.	A1, A3
COARSE GRAINED SOILS WITH FINES		
CLASS III	COARSE GRAINED SOILS WITH FINES: "GM", "GC", "SM", "SC", OR ANY SOIL BEGINNING WITH ONE OF THESE SYMBOLS, CONTAINING >12% PASSING #200 SIEVE; "CL", "ML", OR ANY SOIL BEGINNING WITH ONE OF THESE SYMBOLS, WITH ≥30% RETAINED ON #200 SIEVE	A-2-4, A-2-5, A-2-6, OR A-4 OR A-6 SOILS WITH MORE THAN 30% RETAINED ON #200 SIEVE

[1]SEE ASTM D2321 FOR ADDITIONAL GUIDANCE REGARDING THE USE OF LISTED SOIL AS BACKFILL AROUND THERMOPLASTIC PIPE

[2]IT IS HIGHLY RECOMMENDED TO WRAP THIS MATERIAL WITH A GEOTEXTILE TO PREVENT MIGRATION OF FINES INTO AND THROUGH VOIDS IN THE BACKFILL.

BACKFILL AROUND PIPE SHALL MEET ASTM D2321 CLASS I, II, OR III UNLESS SPECFICALLY APPROVED IN WRITING BY THE PROJECT DESIGN ENGINEER AND MAXIMUM COVER DATA IS PROVIDED.

TABLE 3 : BACKFILL CLASSIFICATIONS

HP STORM INSTALLATION GUIDE

DRAWN: JLM | DATE: 08/20/17
REVISION: 1 | DWG NO: STD-1301B
NOT TO SCALE

PIPE MUST BE INSTALLED IN ACCORDANCE WITH ASTM D2321, IN ADDITION TO ALL SITE CONDITIONS REQUIRED BY STATE AND LOCAL CODES, INDUSTRY STANDARDS AND GUIDELINES, MANUFACTURER'S INSTALLATION RECOMMENDATIONS, OSHA, AND ALL APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS.

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON REFERENCED STANDARDS. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT. NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. UNLESS THE PLANS ARE SIGNED AND SEALED BY THE SITE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION AND SEALING THE DOCUMENT. IT IS THE SITE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OH 43026

SHEET
1 OF 1

A1
CG505
HP STORM INSTALLATION GUIDE
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

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912-231-044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

No.	Description	Date

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DRAWN BY: FAP
CHECKED BY: CRZ

DRAINAGE & GRADING DETAILS

CG505

BID SET

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U.S. HIGHWAY 21 (AUGUSTA ROAD) - R/W VARIES

PRISCILLA D. THOMAS WAY - R/W VARIES

CP-TNS-98

CP-GPS-GHCS-99

STADIUM
POND

SEE NOTE 4

MATCH LINE - SEE SHEET CS102 FOR CONTINUATION

NOTES

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3. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING.
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LEGEND

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- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK

KEY NOTE

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2. ORNAMENTAL DOUBLE SWING GATE, SEE ARCHITECTURAL SITE PLAN
3. SIDEWALK, SEE DETAIL C1 SHEET CS502
4. 18" CURB & GUTTER, SEE DETAIL A2 SHEET CS501
5. BOLLARD SEE DETAIL A5 SHEET CS501
6. CURB CUT RAMP, SEE DETAIL A1 SHEET CS502
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12. CONCRETE FLUME SEE DETAIL A1 SHEET CS501
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14. DOUBLE SWING GATE WITH KNOX PADLOCK SEE DETAIL D4 SHEET CS502
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PARKING PASSES	100
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20' 0' 20' 40'

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

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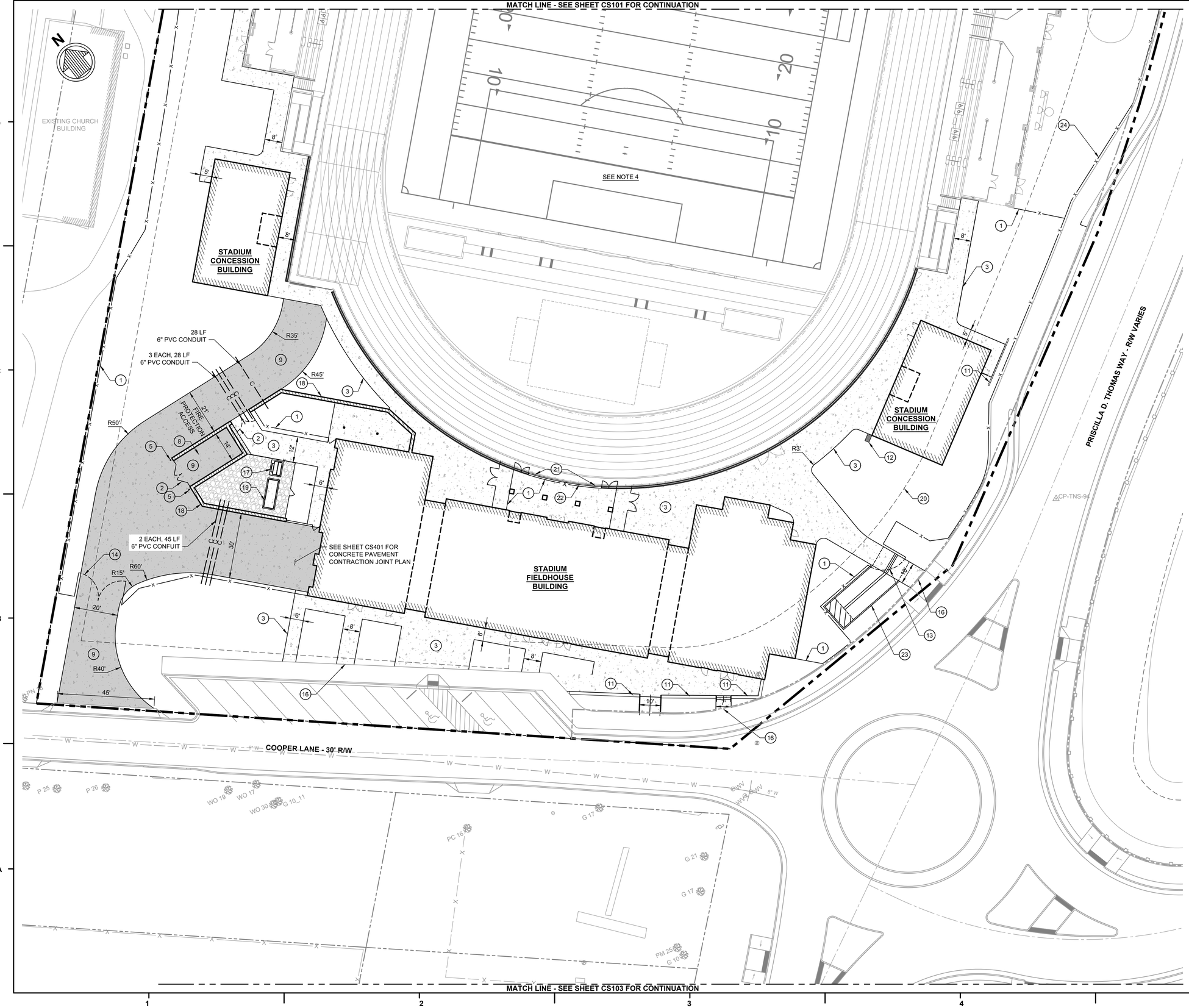
SITE PLAN

CS101

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CS-SITE PLAN.DWG

MATCH LINE - SEE SHEET CS101 FOR CONTINUATION



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SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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SITE PLAN

CS102

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CS-SITE PLAN.DWG

MATCH LINE - SEE SHEET CS102 FOR CONTINUATION

MATCH LINE - SEE SHEET CS104 FOR CONTINUATION

MATCH LINE - SEE SHEET CS105 FOR CONTINUATION

SEE NOTE 4

FIELD CONCESSION BUILDING

CP-TNS-90

CP-TNS-3

CP-MNWS-89

CENTERLINE OF DITCH

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SITE PLAN

CS103

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Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CS-SITE PLAN.DWG

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SITE PLAN

CS104

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MATCH LINE - SEE SHEET CS103 FOR CONTINUATION

MATCH LINE - SEE SHEET CS104 FOR CONTINUATION

MATCH LINE - SEE SHEET CS106 FOR CONTINUATION

MATCH LINE - SEE SHEET CS107 FOR CONTINUATION

SEE NOTE 4

SEE NOTE 4

PRESS BOX

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

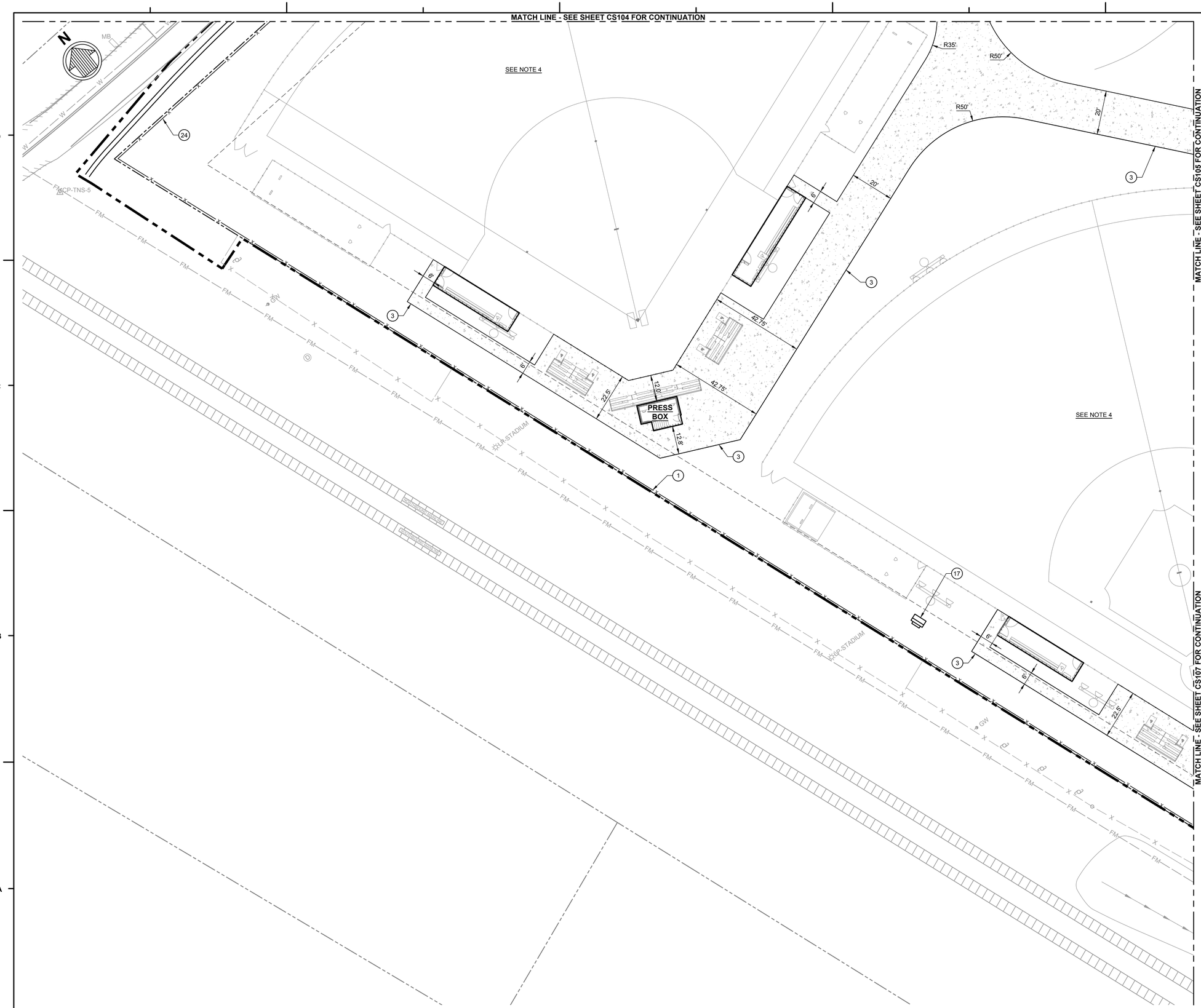
SITE PLAN

CS105

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CS-SITE PLAN.DWG

MATCH LINE - SEE SHEET CS104 FOR CONTINUATION



NOTES

1. ALL PAVEMENT DIMENSIONS TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO VERIFY BUILDING FOOTPRINT EXIT PORCHES, TRUCK DOCKS, PLAYGROUNDS, ATHLETIC FIELDS & STRUCTURES WITH ARCHITECTURAL PLAN.
3. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING.
4. STADIUM, TRACK & FIELD DESIGN BY OTHERS. REFER TO CHA STADIUM, TRACK & FIELD SITE PLAN DESIGN.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK

KEY NOTE

1. 6' CHAIN LINK FENCE, SEE DETAIL C4 SHEET CS502
2. ORNAMENTAL DOUBLE SWING GATE, SEE ARCHITECTURAL SITE PLAN
3. SIDEWALK, SEE DETAIL C1 SHEET CS502
4. 18" CURB & GUTTER, SEE DETAIL A2 SHEET CS501
5. BOLLARD SEE DETAIL A5 SHEET CS501
6. CURB CUT RAMP, SEE DETAIL A1 SHEET CS502
7. LIGHT DUTY ASPHALT PAVEMENT SEE DETAIL C5 SHEET CS501
8. DUMPSTER LOCATION
9. HEAVY DUTY CONCRETE PAVEMENT SEE DETAIL B5 SHEET CS501
10. WHEEL STOP SEE DETAIL B2 SHEET CS501
11. RETAINING WALL WITH HANDRAIL, SEE ARCHITECTURAL SITE PLAN
12. CONCRETE FLUME SEE DETAIL A1 SHEET CS501
13. SWING GATE, CHAIN LINK/DECORATIVE, SEE ARCHITECTURAL SITE PLAN
14. DOUBLE SWING GATE WITH KNOX PADLOCK SEE DETAIL D4 SHEET CS502
15. TRANSITION FROM 18" CURB & GUTTER TO 30" CURB & GUTTER
16. MATCH EXIST CURB / PAVEMENT / SIDEWALK
17. TRANSFORMER PAD
18. SCREEN WALL SEE ARCHITECTURAL PLANS FOR DETAILS
19. GENERATOR PAD
20. BUILDING SETBACK PER GOVERNING AUTHORITY CODE.
21. FEATHERING OF CURB, SEE DETAIL B4 SHEET CS501
22. GDOT STD 9032B, TYPE 2 CONCRETE HEADER CURB, SEE DETAIL C1 ON SHEET CS501
23. ADA HANDICAP RAMP, SEE DETAIL A2 ON CG401
24. ORNAMENTAL FENCE, SEE ARCHITECTURAL PLANS

PARKING SUMMARY	
EMPLOYEE PARKING (150 EMPLOYEES @ 1 PER 2 EMPLOYEES)	75
PARKING PASSES	100
TOTAL SPACES REQUIRED	175
STANDARD SPACES PROVIDED	507
ADA SPACES PROVIDED	17
TOTAL SPACES PROVIDED	524

20' 0' 20' 40'

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:

LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

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SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

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SITE PLAN

CS106

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CS-SITE PLAN.DWG

MATCH LINE - SEE SHEET CS105 FOR CONTINUATION

SEE NOTE 4

BASEBALL FIELD POND

MATCH LINE - SEE SHEET CS106 FOR CONTINUATION

20'

6'

42.75'

37.7'

TOP OF BANK

CENTERLINE OF DITCH

TOP OF BANK

CENTERLINE OF DITCH

TOP OF BANK

TOP OF BANK

LO 24 DBL

NOTES

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3. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING.
4. STADIUM, TRACK & FIELD DESIGN BY OTHERS. REFER TO CHA STADIUM, TRACK & FIELD SITE PLAN DESIGN.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK

KEY NOTE

1. 6' CHAIN LINK FENCE, SEE DETAIL C4 SHEET CS502
2. ORNAMENTAL DOUBLE SWING GATE, SEE ARCHITECTURAL SITE PLAN
3. SIDEWALK, SEE DETAIL C1 SHEET CS502
4. 18" CURB & GUTTER, SEE DETAIL A2 SHEET CS501
5. BOLLARD SEE DETAIL A5 SHEET CS501
6. CURB CUT RAMP, SEE DETAIL A1 SHEET CS502
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23. ADA HANDICAP RAMP, SEE DETAIL A2 ON CG401
24. ORNAMENTAL FENCE, SEE ARCHITECTURAL PLANS

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ADA SPACES PROVIDED	17
TOTAL SPACES PROVIDED	524

20' 0' 20' 40'

SCALE: 1"=20'

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SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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SITE PLAN

CS107

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CS-SITE PLAN.DWG

N

CONCESSIONS

FIELDHOUSE

A1 CS503 (ISO JT)

A1 CS503 (TRANS JT, TYP)

A1 CS503 (ISO JT)

A1 CS503 (ISO JT)

A1 CS503 (ISO JT)

A1 CS503 (ISO JT)

A1 CS503

6 EQUAL SPACES THIS SIDE

4 EQUAL SPACES

54'-9 1/4"

14'-0" TYP

15'-0"

15'-0"

PN 6

25

P 26

COOPER LANE - 30' R/W

NOTE

ALL PAVEMENT DIMENSIONS TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

LEGEND

- HEAVY DUTY CONCRETE PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- CONCRETE PANELS TO BE REINFORCED W/ #4 BARS @ 12" OC EW
- CONTROL JOINT
- EXPANSION JOINT

ABBREVIATIONS

ISO JT	ISOLATION JOINT
TRANS JT	TRANSVERSE JOINT
LONG JT	LONGITUDINAL JOINT

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

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GEORGIA
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No. 031068
PROFESSIONAL
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CRAIG RONALD ZUCK

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CONCRETE PAVEMENT CONTRACTION JOINT PLAN

CS401

BID SET

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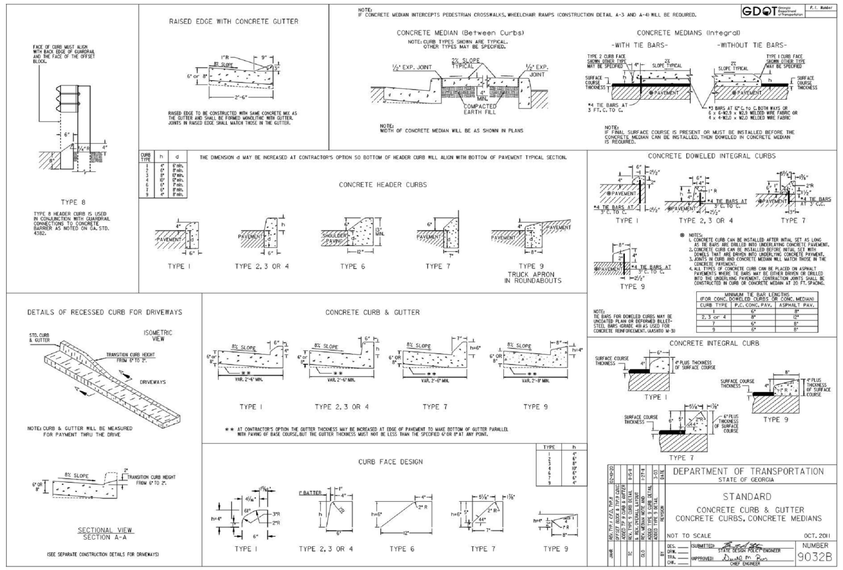
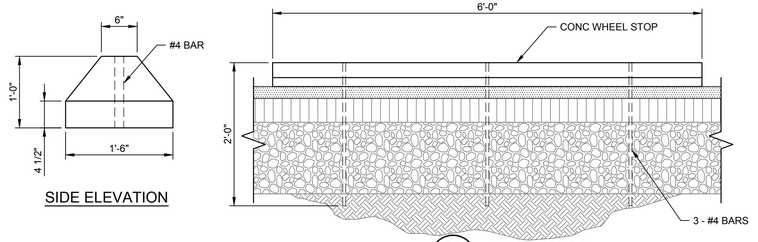
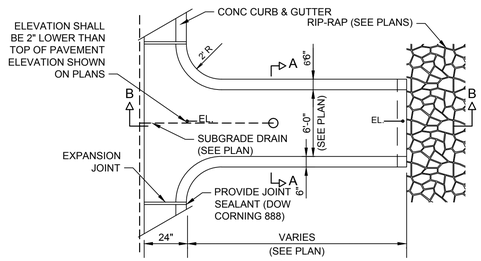
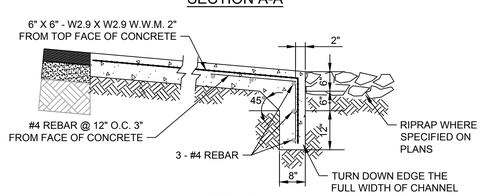


C1 CS102 — 30" CONCRETE CURB AND GUTTER DETAILS
SCALE: NTS

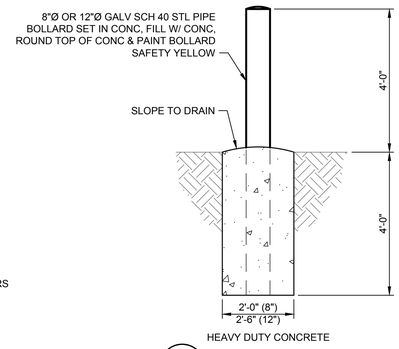


B2 CS103 — WHEEL STOP
SCALE: NTS
CS104

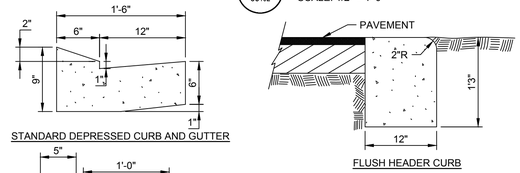




A1 CS102 — 6" CONCRETE FLUME
SCALE: NTS

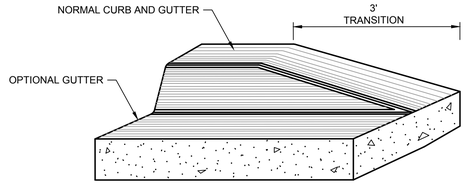


A5 CS102 — BOLLARD DETAIL
SCALE: 1/2" = 1'-0"

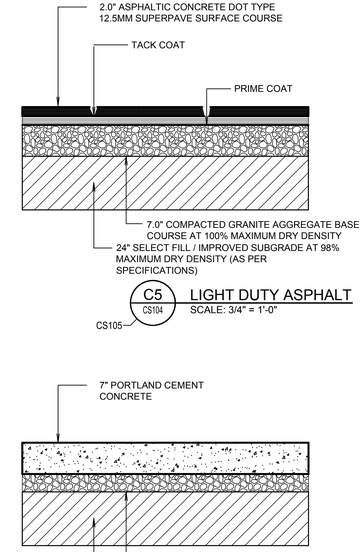


NOTES
1. ALL CONSTRUCTION SHALL CONFORM TO THE GARDEN CITY TECHNICAL SPECIFICATIONS.
2. BASE COMPACTION UNDER CURB TO BE 98% (ASTM D698).
3. CONTRACTION JOINTS TO BE SAW CUT NO LATER THAN 24 HOURS AFTER THE POUR.

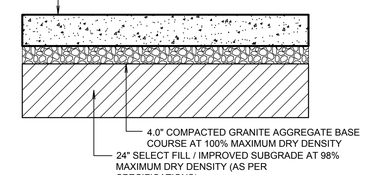
A2 CS103 — 18" CURB AND GUTTER DETAILS
SCALE: NTS
CS104, CS105



B4 CS102 — FEATHERING OF CURB AND GUTTER
SCALE: NTS
CS104



C5 CS104 — LIGHT DUTY ASPHALT
SCALE: 3/4" = 1'-0"
CS105



B5 CS102 — HEAVY DUTY CONCRETE
SCALE: 3/4"= 1'-0"

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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CIVIL ENGINEERS:
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SITE DETAILS

CS501

BID SET

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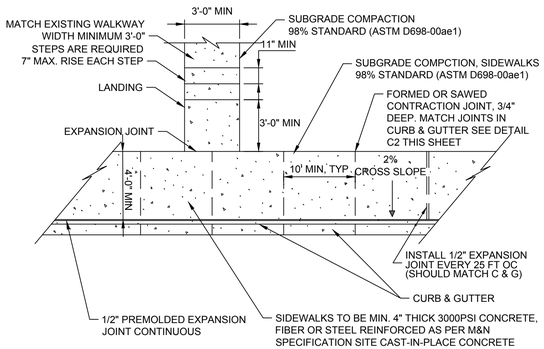
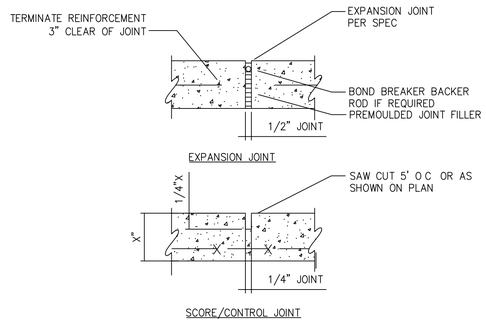


NOTES

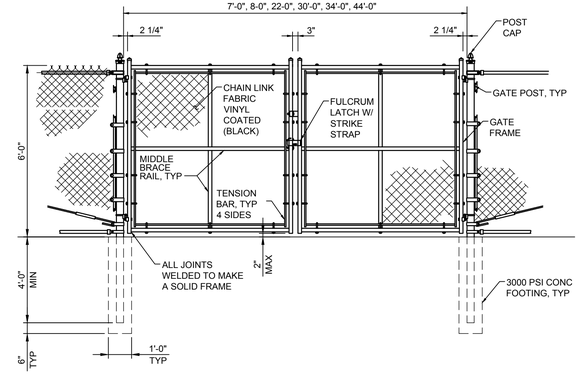
1. ALL CONSTRUCTION SHALL CONFORM TO MOFFATT & NICHOL TECHNICAL SPECIFICATIONS INCLUDING, BUT NOT LIMITED TO, EARTHWORK SPECIFICATION 31 00 00 AND SITE CAST-IN-PLACE CONCRETE SPECIFICATION 03 30 00.13.
2. CONTRACTION JOINTS SHOULD BE FORMED OR SAWED COINCIDENT WITH THE 10' JOINTS IN THE CURB SEE DETAIL C2
4. ADA COMPLIANT WHEELCHAIR RAMPS SHALL BE INSTALLED AT EACH INTERSECTION OR DESIGNATED CROSSWALK LOCATION AND MUST MEET THE MOST CURRENT ADA STANDARDS AND GDOT SPECIFICATIONS AT THE TIME OF CONSTRUCTION.

C1 / CS101 — SIDEWALK AND WALKWAY
SCALE: NTS
CS102 - CS107

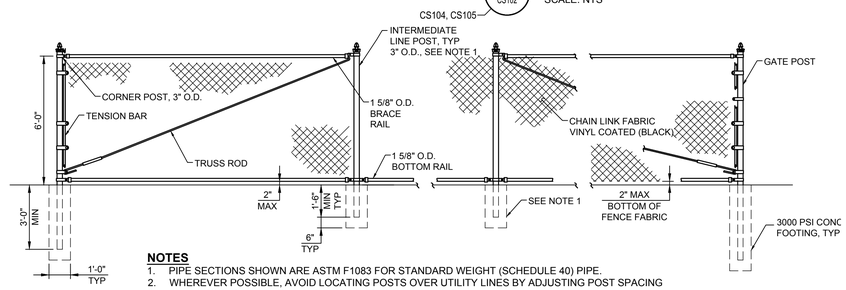
EXPANSION JOINTS TO OCCUR 25' O C MAX & AT ALL CURBS, WALLS, & VERT ELEMENTS



C2 / CS502 — EXPANSION AND CONTROL JOINT DETAIL
SCALE: NTS

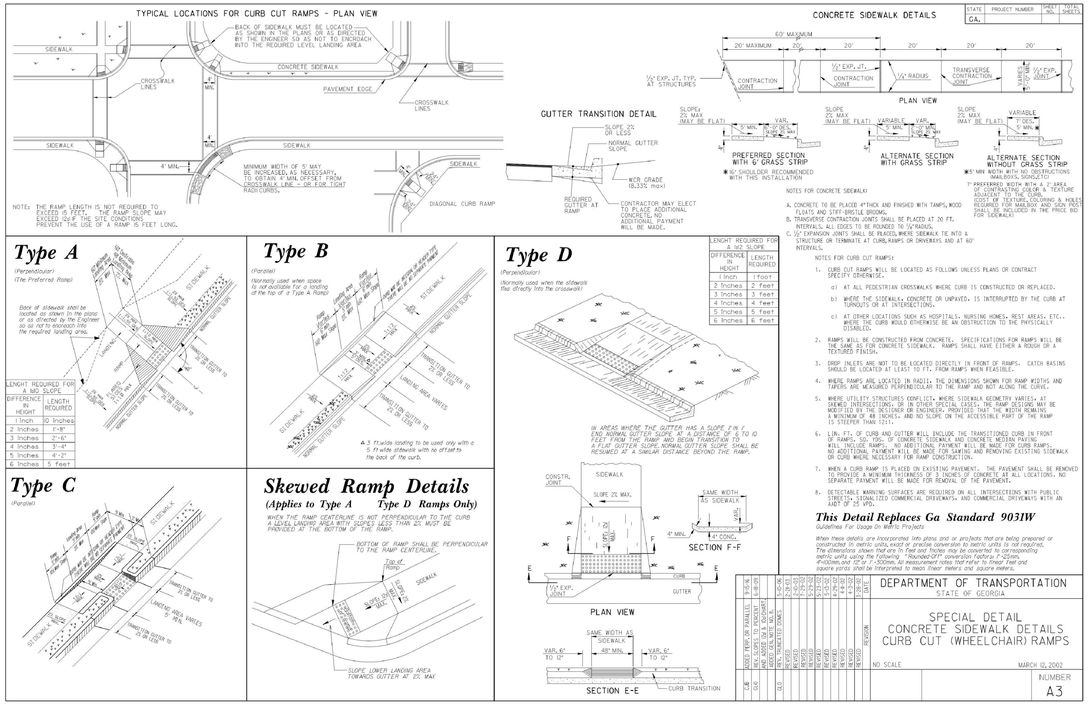


D4 / CS102 — DOUBLE SWING GATE
SCALE: NTS



NOTES
1. PIPE SECTIONS SHOWN ARE ASTM F1083 FOR STANDARD WEIGHT (SCHEDULE 40) PIPE.
2. WHEREVER POSSIBLE, AVOID LOCATING POSTS OVER UTILITY LINES BY ADJUSTING POST SPACING
3. ALL EXPOSED METAL SHALL BE HOT DIPPED GALVANIZED
4. GROUND FENCE AS RECOMMENDED BY MANUFACTURER
5. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR LARGER SWING GATES, WITH WHEEL SUPPORTS FOR APPROVAL.

C4 / CS101 — 6 FOOT CHAIN LINK FENCE
SCALE: NTS
CS102 - CS107



A1 / CS103 — CURB CUT RAMPS
SCALE: NTS
CS104

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM
SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

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SITE DETAILS

CS502

BID SET

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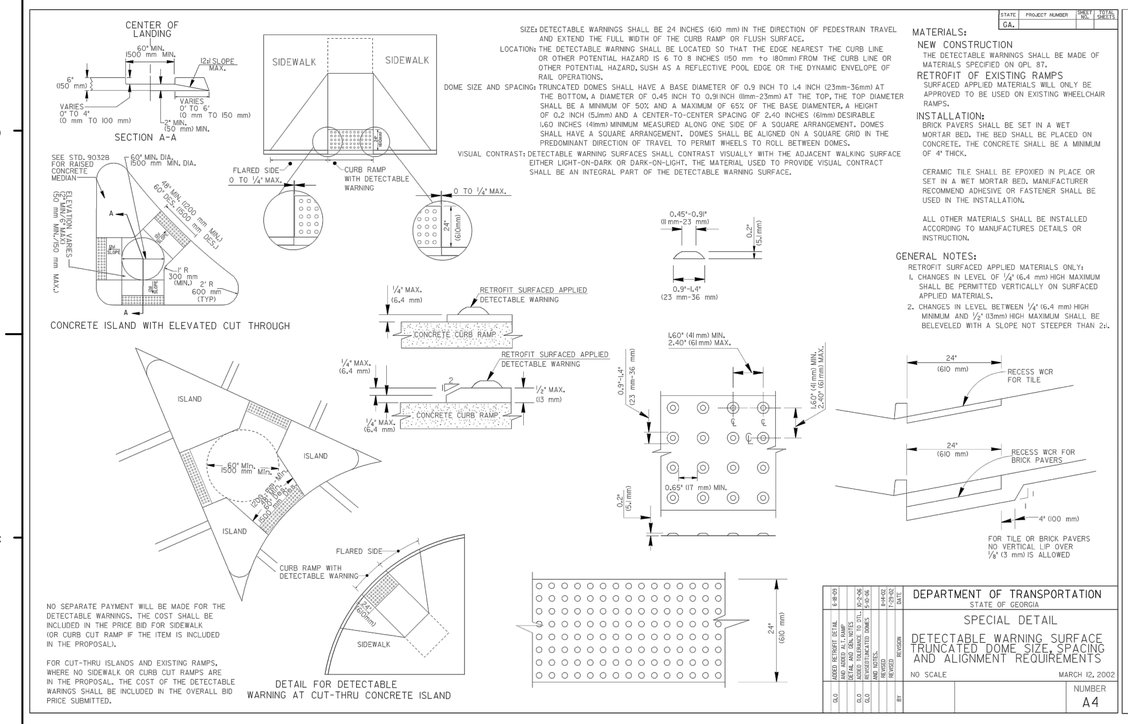
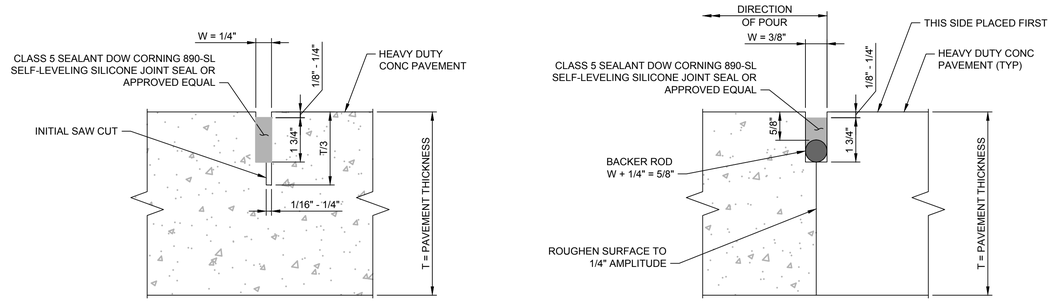


C1 CM101 DETECTABLE WARNING SURFACE
SCALE: NTS



NOTES

1. THE LOCATION OF JOINTS SHALL BE AS SHOWN ELSEWHERE IN THE DRAWINGS.
2. THE JOINT RESERVOIR FOR SEALANT SHALL BE SAWED UNLESS OTHERWISE SHOWN ON THE PLANS FOR THE LONGITUDINAL AND TRANSVERSE CONSTRUCTION AND THE TWO SAWED JOINTS.
3. THE JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE SEALANT MANUFACTURE'S RECOMMENDATION. PRIOR TO BEGINNING OPERATIONS, THE CONTRACTOR SHALL SUBMIT A STATEMENT FROM THE SEALANT MANUFACTURER SHOWING THE RECOMMENDED EQUIPMENT AND INSTALLATION PROCEDURES TO BE USED.
4. THE SAW CUT FOR THE LONGITUDINAL JOINT SHALL BE ONE FOURTH THE SLAB THICKNESS WHEN CRUSHED LIMESTONE IS USED AS THE COARSE AGGREGATE.

A1 CS401 CONCRETE PAVEMENT JOINT DETAILS
SCALE: NTS

C4 CS503 PAVEMENT PATCHING
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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MEMBERS OF THE AMERICAN INSTITUTE OF ARCHITECTS

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SITE DETAILS

CS503

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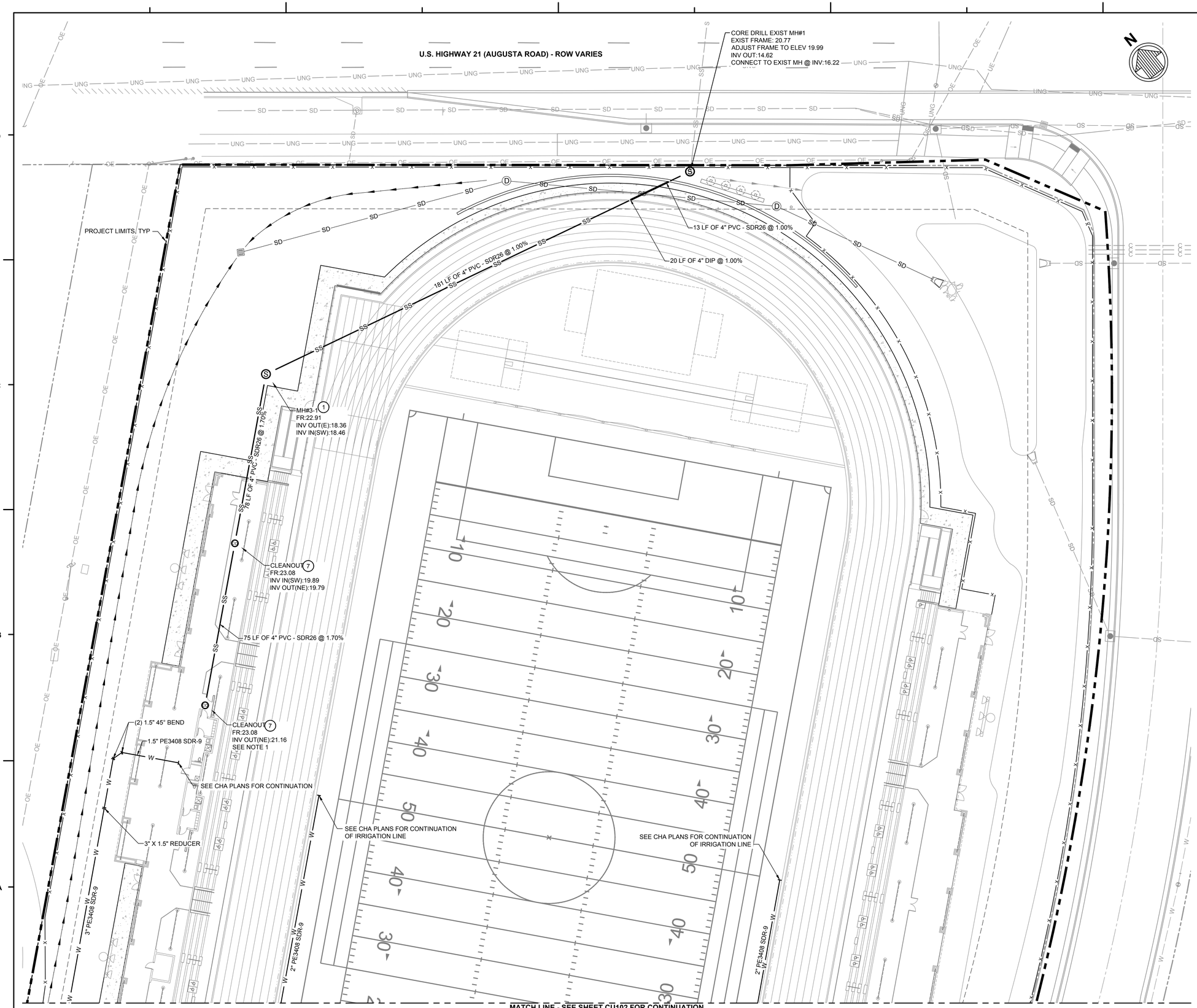

NOTES

1. CONTRACTOR SHALL REFER TO THE M.E.P. PLANS FOR THE EXACT LOCATION OF BUILDING UTILITY CONNECTIONS.
2. FOR PIPE BEDDING REQUIREMENTS SEE DETAIL C1, SHEET CU502
3. FOR JOINT RESTRAINTS SEE SHEET CU504
4. FOR MINIMUM WATER & SEWER PIPE SEPARATION REQUIREMENTS SEE DETAIL C5, SHEET CU505.
5. FOR SANITARY SEWER GENERAL NOTES SEE DETAIL C2, SHEET CU502.
6. FOR DOMESTIC WATER GENERAL NOTES SEE DETAIL C3, SHEET CU505.
7. FOR ALL DOMESTIC WATER FITTINGS, VALVES, WATER METERS, & OTHER ACCESSORIES GENERAL NOTES SEE C3, SHEET CU505.
8. ALL PROPOSED DOMESTIC & FIRE PROTECTION LINES SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICE.
9. AN ACCEPTED WATER SUPPLY FOR FIRE PROTECTION SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON SITE.
10. ALL PVC GRAVITY SEWER SHALL BE ASTM 2241, SDR-26, GREEN IN COLOR.
11. ALL WATER MAINS SHALL BE AWWA C-900, DR-18 PRESSURE CLASS 235 PVC.
12. ALL WATER LATERALS SHALL BE POLYETHYLENE PE3408 SDR-9 CONFORMING TO ALL REQUIREMENTS OF AWWA C-901 & ASTM D-2737 LATEST REVISIONS.
13. ALL WATER MAIN THRUST RESTRAINT SHALL BE HANDLED BY USE OF JOINT RESTRAINT/MECHANICAL JOINTS EQUIVALENT TO EBAA IRON MEGA LUG OR PUSH-ON JOINT TYPE RESTRAINED JOINTS EQUAL TO "LOK-RING", "TR FLEX", OR "SUPER LOCK".
14. ALL VALVES 4" OR LARGER WILL BE IN MANHOLES.
15. ALL FITTINGS 2" OR LARGER SHALL BE DUCTILE IRON RESTRAINED JOINTS.
16. CONTRACTOR SHALL ACQUIRE UTILITY ROW ENCROACHMENT FOR WORK IN U.S. HWY 21.

KEY NOTES

1. STANDARD PRECAST CONCRETE MANHOLE, SEE DETAIL C1 SHEET CU501
2. CONTRACTOR SHALL COORDINATE WITH SCCPSS PRIOR TO COMMENCING WORK ON THE DEEP WELL IRRIGATION SYSTEM AND PRIOR TO COMMENCING WORK ON THE WATER HARVESTING SYSTEM.
3. RAIN HARVESTING SYSTEM, SEE DETAILS A4 & B1 SHEET CU505
4. FIRE SERVICE SYSTEM FOR BUILDINGS, SEE DETAIL C3 SHEET CU503
5. FIRE HYDRANT, SEE DETAIL A5 SHEET CU504
6. DOUBLE CHECK VALVE ASSEMBLY (FOR 3" AND LARGER) DOMESTIC SYSTEMS, SEE DETAIL C5 SHEET CU503
7. SANITARY SEWER CLEANOUT, SEE DETAIL A5 SHEET CU502
8. VALVE MANHOLE FOR 4"-8" GATE VALVE, SEE DETAIL A3 SHEET CU503
9. WATER METER INSTALLATION 3" AND LARGER, SEE DETAIL C2 SHEET CU503
10. CONFLICT MANHOLE. SEE DETAIL C3 SHEET CU501

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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STRUCTURAL ENGINEER:
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912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

SEWER & WATER PLAN

CU101

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CU-SEWER & WATER PLAN.DWG

MATCH LINE - SEE SHEET CU101 FOR CONTINUATION

PROJECT LIMITS, TYP
3" PE3408 SDR-9
41 LF OF 4" PVC - SDR26 @ 1.00% MIN
(7) CLEANOUT FR:23.23 INV OUT(S):20.38 SEE NOTE 1
3" GATE VALVE
3" X 3" TEE
(6) 2.5" WATTS 757 DCV WITH BFP IN VAULT
3" SENSUS / XYLEM OMNI COMPOUND C2 DWM (9)
8" X 3" REDUCER
3" GATE VALVE
(1) MH#2-4 FR:23.43 INV IN(N):19.97 INV OUT(SE):19.87
3" X 3" TEE
3" X 2" REDUCER
STADIUM CONCESSION BUILDING
SEE NOTE 1, TYP
3" 90° BEND
2" 45° BEND
250 LF OF 4" PVC - SDR26 @ 1.00%
(1) MH#2-3 FR:23.61 INV IN (NW):17.37 INV OUT(SE):17.27
2" PE3408 SDR-9
4" X 3" REDUCER
(9) 3" SENSUS / XYLEM OMNI COMPOUND C2 DWM
(6) 2.5" DOUBLE CHECK VALVE BACK FLOW PREVENTOR IN VAULT
3" PE3408 SDR-9
3" 22.5° BEND
2" 45° BEND
2" PE3408 SDR-9
3" X 2" REDUCER
3" X 3" TEE
3" 22.5° BEND
3" 45° BEND
SEE NOTE 1, TYP
STADIUM CONCESSION BUILDING
4" PVC - C900 DR18
PRISCILLA D. THOMAS WAY - R/W VARIES
(7) CLEANOUT FR:23.20 INV OUT(SW):20.06 SEE NOTE 1
28 LF OF 4" PVC - SDR26 @ 2.00% MIN
78 LF OF 4" PVC - SDR26 @ 1.00%
CORE DRILL EXIST MH#2-2 FR:22.08 INV IN(NE):19.50 INV IN(NW):16.49 EXIST INV OUT(SW):16.39
4" PVC - C900 DR18
(8) 4" GATE VALVE
6" PVC - C900 DR18
8" 11.25° BEND
8" X 4" TEE
8" X 6" TEE
3" SENSUS / XYLEM OMNI COMPOUND C2 DWM (9)
(6) 2.5" WATTS 757 DCV WITH BFP IN VAULT SEE DETAIL W14B
STADIUM FIELDHOUSE BUILDING
4" 11° BEND
6" 11° BEND
(7) CLEANOUT FR:24.15 INV OUT(SW):18.72 SEE NOTE 1
4" PVC - C900 DR18
6" PVC - C900 DR18
PIV
(8) 6" GATE VALVE
6" WATTS 857 RPZ BFP WITH FDC IN VAULT (4) SEE DETAIL W12
4" 90° BEND
47 LF OF 4" PVC - SDR26 @ 1.00% MIN
(7) CLEANOUT FR:24.11 INV OUT(SW):18.42
41 LF OF 4" PVC - SDR26 @ 2.00% MIN
6" 90° BEND
113 LF OF EXIST 6" PVC - SDR26
SHUT OFF WATER AT VALVE. REMOVE 8" CAP. CONNECT NEW 8" PVC C900 DR18 WATERMAIN TO EXISTING 8" LINE.
PROJECT LIMITS, TYP
COOPER LANE - 30' ROW
EXIST MH#2-1 FR:24.19 INV IN(NE):15.26 INV IN(NW):16.12 INV OUT(S):10.90

MATCH LINE - SEE SHEET CU103 FOR CONTINUATION

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CU-SEWER & WATER PLAN.DWG

NOTES

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20' 0' 20' 40'
SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM
SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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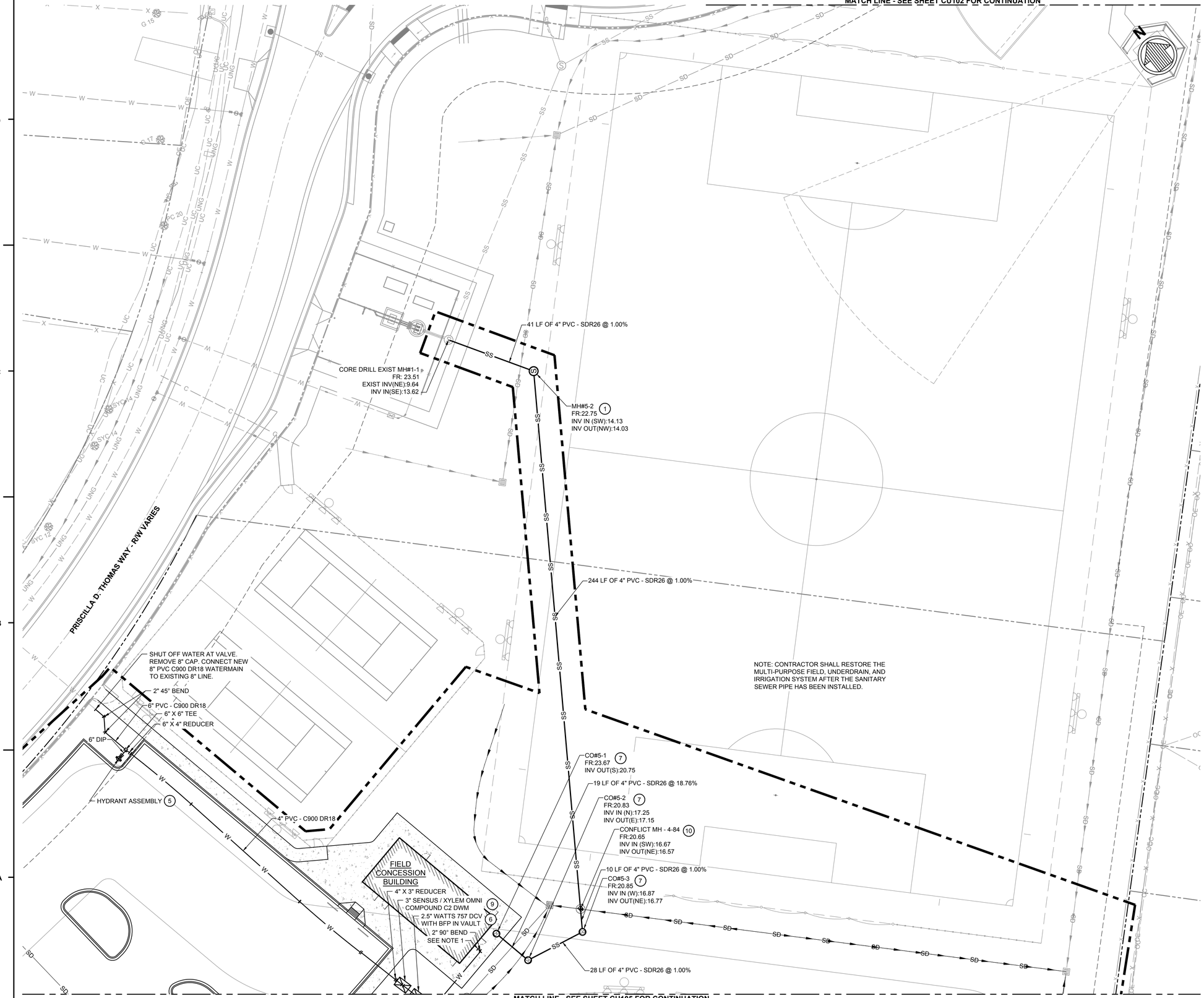
SEWER & WATER PLAN

CU102

BID SET

MATCH LINE - SEE SHEET CU102 FOR CONTINUATION



MATCH LINE - SEE SHEET CU105 FOR CONTINUATION

NOTES

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9. WATER METER INSTALLATION 3" AND LARGER, SEE DETAIL C2 SHEET CU503
10. CONFLICT MANHOLE. SEE DETAIL C3 SHEET CU501

20' 0' 20' 40'

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
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CHECKED BY: CRZ

SEWER & WATER PLAN

CU103

BID SET

Q:\SV\10797 GROVES K-12\600 CADD_ACTIVE_CIVIL\PHASE 2 FIELDHOUSE-ATHLETICS\10797CU-SEWER & WATER PLAN.DWG

MATCH LINE - SEE SHEET CU103 FOR CONTINUATION

2" 45° BEND

2.5" WATTS 757 DCV WITH BFP IN VAULT (6)

DEEP IRRIGATION WELL (BY OTHERS)

DEEP IRRIGATION WATER LINE (BY OTHERS)
REFER TO IRRIGATION PLANS

IRRIGATION SYSTEM CONNECTION TO BASEBALL FIELDS
SEE IRRIGATION PLANS FOR CONTINUATION

RAIN HARVEST SYSTEM CONTROL PANEL COORDINATE MOUNTING LOCATION WITH OWNER

RAINFLO SUBMERSIBLE PUMP SYSTEM WITH PUMP IN 4' PRECAST CONCRETE WELL
RAIN HARVESTING SYSTEM SHALL PROVIDE IRRIGATION TO BASEBALL FIELDS ONLY

6" SCH 40 PVC

IRRIGATION SYSTEM CONNECTION TO K-12 SCHOOL AND FOOTBALL STADIUM
SEE IRRIGATION PLANS FOR CONTINUATION

MATCH LINE - SEE THIS SHEET

NOTES

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KEY NOTES

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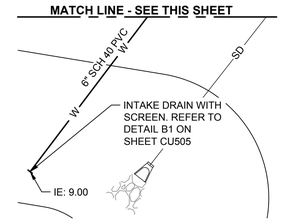
MATCH LINE - SEE THIS SHEET



20' 0' 20' 40'

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

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SEWER & WATER PLAN

CU105

BID SET

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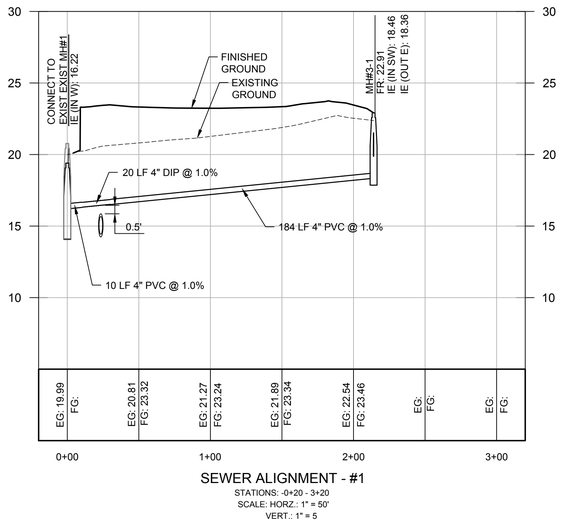
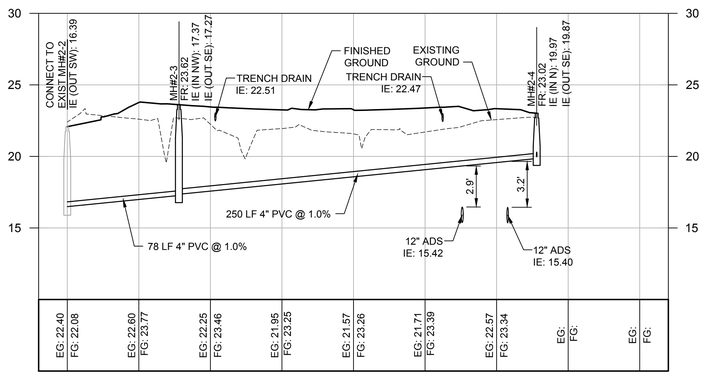


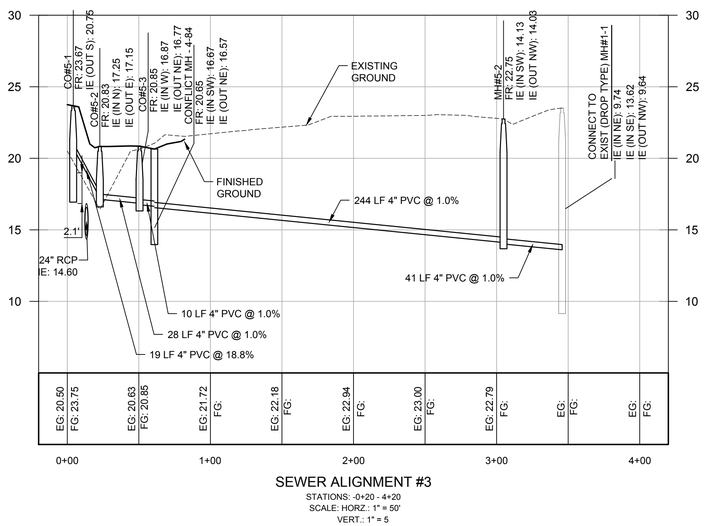
SEWER ALIGNMENT - #1

STATIONS: -0+20 - 3+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



SEWER ALIGNMENT - #2

STATIONS: -0+20 - 4+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5



SEWER ALIGNMENT #3

STATIONS: -0+20 - 4+20
SCALE: HORZ.: 1" = 50'
VERT.: 1" = 5

NOTES

1. ALL PVC GRAVITY SEWER SHALL BE ASTM 2241, SDR-26, GREEN IN COLOR.
2. ALL PROPOSED MANHOLES ARE ABOVE THE 100 YEAR FLOOD ELEVATION.
3. DUCTILE IRON SANITARY SEWER PIPE (DIP) SHALL BE LINED WITH PROTECTO 401 CERAMIC EPOXY WITH 25 MILS DFT MINIMUM EXTERIOR COAL TAR EPOXY.
4. PROPOSED 16 STEEL CASING SHALL BE SCHEDULE 30 STEEL CASING, 0.375 THICKNESS.
5. CASING SPACERS ARE REQUIRED 2 PER PIPE JOINT.

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

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SEWER PROFILES

CU201

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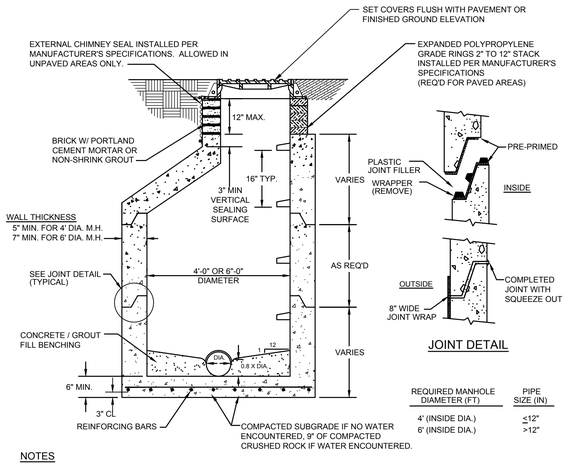
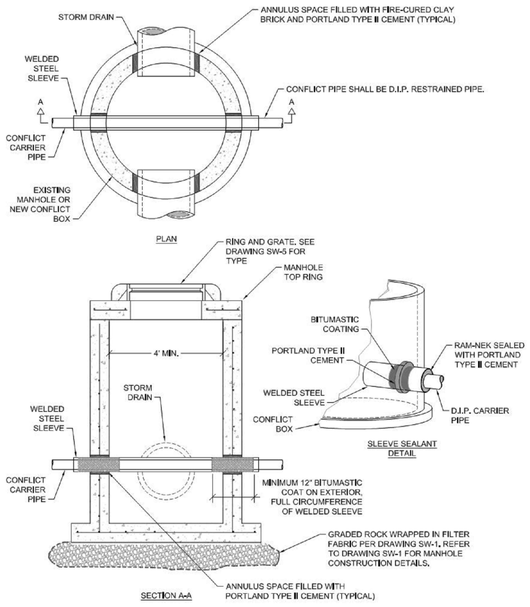


REQUIRED MANHOLE DIAMETER (FT)	PIPE SIZE (IN)
4' (INSIDE DIA.)	≤12"
6' (INSIDE DIA.)	>12"

NOTES

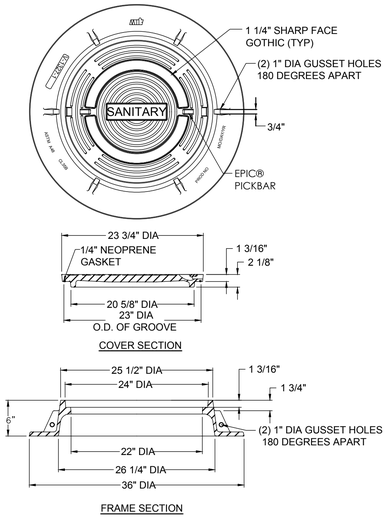
1. PRECAST REINFORCED CONCRETE TOPS, RISERS, BASES AND REBARS SHALL CONFORM TO LATEST ASTM C-478 STD. SPECIFICATIONS.
2. INTERIOR AND EXTERIOR OF MANHOLE SHALL BE COATED IN ACCORDANCE WITH GARDEN CITY DEPARTMENT OF WATER OPERATIONS SPECIFICATIONS.
3. MANUFACTURER CERTIFICATION THAT MANHOLE MEETS ASTM SPECIFICATION SHALL BE SUBMITTED TO GARDEN CITY DEPARTMENT OF WATER OPERATIONS.
4. FOR MANHOLE RING AND COVER, SEE DETAIL C5.
5. FOR MANHOLE STEPS SEE DETAIL A5. STEPS TO BE INSTALLED IN A VERTICAL ROW ON 16" CENTERS.
6. CHECK FOR BUOYANCY.
7. ALL PIPE PENETRATIONS SHALL HAVE A BOOT CONNECTION IN ACCORDANCE WITH DETAIL A2.

C1 / CU101 — STANDARD PRECAST CONCRETE MANHOLE
SCALE: NTS
CU102, CU103



NOTE:
INSTALLATION OF ALL PIPE AND STRUCTURES MUST MEET THE BEDDING, INSTALLATION AND BACKFILL REQUIREMENTS FOR NEW STRUCTURES AND PIPE ON DETAIL SW-5.

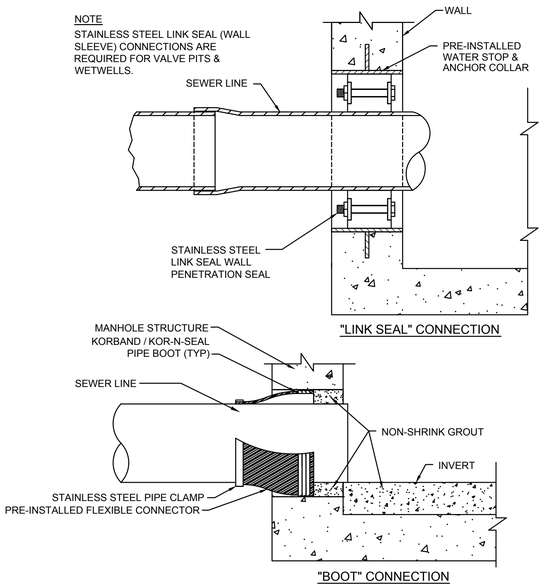
C3 / CG103 — CONFLICT MANHOLE
SCALE: NTS
CU103



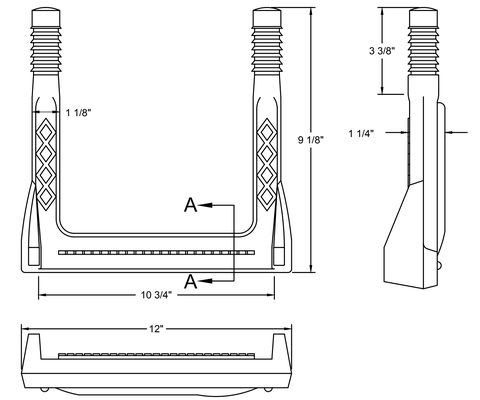
NOTE

MANHOLE RING AND COVER SHALL BE IN COMPLIANCE TO GARDEN CITY DEPARTMENT OF WATER OPERATIONS SPECIFICATIONS.

C5 / CU501 — SANITARY MANHOLE RING AND COVER
SCALE: NTS



A2 / CU501 — PRECAST STRUCTURE PIPE CONNECTIONS
SCALE: NTS



A5 / CU501 — POLYPROPYLENE MANHOLE STEP
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM
SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.
CIVIL ENGINEERS:
MOFFATT & NICHOL
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STRUCTURAL ENGINEER:
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912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

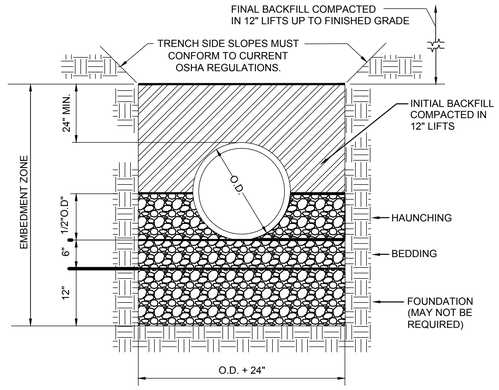
No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

SEWER DETAILS

CU501

BID SET



NOTES

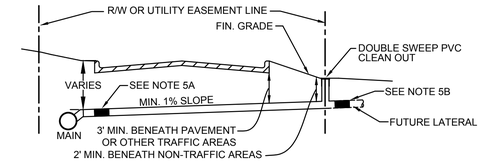
1. FOUNDATION, BEDDING AND HAUNCHING SHALL BE #57 STONE.
2. INITIAL BACKFILL FOR GRAVITY SEWER SHALL BE CLASS II OR BETTER SELECT COMMON FILL.
3. INITIAL BACKFILL FOR SANITARY FORCEMAIN SHALL BE CLASS III OR BETTER SELECT COMMON FILL.
4. FINAL BACKFILL SHALL BE CLASS III OR BETTER COMMON FILL.

C1 / CU101 — CU102 - CU105
STANDARD PIPE BEDDING
SCALE: NTS

NOTES

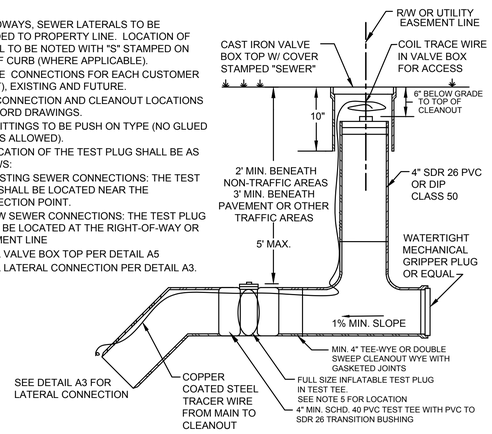
1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE GARDEN CITY DEPARTMENT OF WATER OPERATIONS LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS. THE SYSTEM SHALL BE DESIGNED AND TESTED PER THE SPECIFICATIONS AND REQUIREMENTS MAINTAINED BY THE CITY ENGINEER.
2. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.
3. ALL WATER USED FOR CONSTRUCTION SHALL BE METERED THROUGH AN APPROVED BACKFLOW-PREVENTION DEVICE AND FIRE HYDRANT METER OBTAINED FROM THE CONVEYANCE AND DISTRIBUTION DEPARTMENT.
4. ALL ABANDONED SANITARY SEWER LINES SHALL BE PLUGGED.
5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE SEWER LINES ARE PLACED WITHIN THE EASEMENTS WITH A MINIMUM 7'-6" AVAILABLE FROM PIPE CENTERLINE TO EASEMENT LINE.
6. CONTACT THE UTILITIES PROTECTION CENTER (811 IN GEORGIA OR 1-800-282-7411) FOR LOCATION OF CITY SEWER LINES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO DIGGING.
7. CONTRACTOR SHALL NOTIFY RESIDENTS A MINIMUM OF 24 HOURS IN ADVANCE OF ANY WORK THAT MAY IMPACT THEM, INCLUDING BUT NOT LIMITED TO: PARKING STALL IMPACT, LOSS OF SERVICE, DRIVEWAY CUTS, REMOVAL/RELOCATION OF FENCES AND MAIL BOXES, SIDEWALK IMPACTS, ETC.
8. PVC GRAVITY SEWER SHALL BE ASTM 2241, SDR-26, GREEN COLOR.

C2 / CU101 — CU102 - CU105
SANITARY SEWER GENERAL NOTES
SCALE: NTS

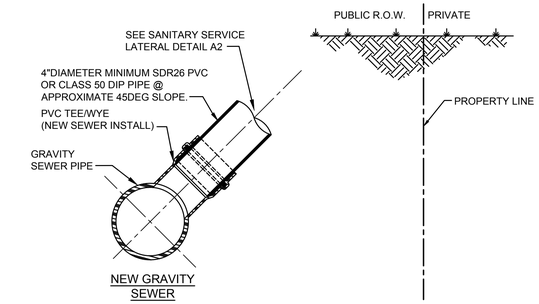


NOTES

1. IN ROADWAYS, SEWER LATERALS TO BE EXTENDED TO PROPERTY LINE. LOCATION OF LATERAL TO BE NOTED WITH "S" STAMPED ON FACE OF CURB (WHERE APPLICABLE).
2. PROVIDE CONNECTIONS FOR EACH CUSTOMER (OR LOT), EXISTING AND FUTURE.
3. SHOW CONNECTION AND CLEANOUT LOCATIONS ON RECORD DRAWINGS.
4. ALL 4" FITTINGS TO BE PUSH ON TYPE (NO GLUED FITTINGS ALLOWED).
5. THE LOCATION OF THE TEST PLUG SHALL BE AS FOLLOWS:
   A: EXISTING SEWER CONNECTIONS: THE TEST PLUG SHALL BE LOCATED NEAR THE CONNECTION POINT.
   B: NEW SEWER CONNECTIONS: THE TEST PLUG SHALL BE LOCATED AT THE RIGHT-OF-WAY OR EASEMENT LINE
6. INSTALL VALVE BOX TOP PER DETAIL A5
7. INSTALL LATERAL CONNECTION PER DETAIL A3.



A2 / CU502
SANITARY SERVICE LATERAL
SCALE: NTS



NOTES

1. THE TEE-WYE SHALL BE SET AT THE PROPER DEPTH TO ACCOMMODATE THE PROPOSED OR EXISTING HOUSE LATERAL.
2. CONNECT TRACER WIRE ON LATERAL TO TRACER WIRE ON MAIN WITH SPLICE CONNECTOR.
3. CONTRACTOR SHALL NOTIFY GARDEN CITY DEPARTMENT OF WATER OPERATIONS (912-629-2296) 24 HOURS PRIOR TO CONNECTION TO EXISTING GRAVITY SEWER PIPE. ALL CONNECTIONS TO THE EXISTING GRAVITY SEWER PIPE MUST BE INSPECTED BY THE CONVEYANCE DEPARTMENT PRIOR TO BACK FILLING.

A3 / CU502
SANITARY SERVICE LATERAL CONNECTION
SCALE: NTS

NOTE: IF CLEANOUT IS LOCATED UNDER PAVEMENT, THE CONCRETE PAD SHALL ALSO BE REQUIRED. CAP AND BOX SHALL BE RATED FOR H20 TRAFFIC LOADINGS

A5 / CU101 — CU102, CU103
CLEANOUT DETAIL
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

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05-30-2023

REVISIONS:

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PROJECT: 5201-192070
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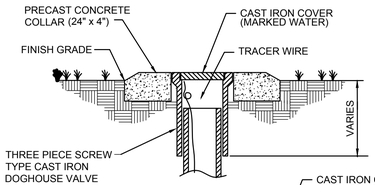
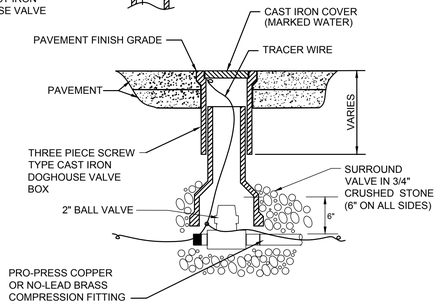
SEWER DETAILS

CU502

BID SET

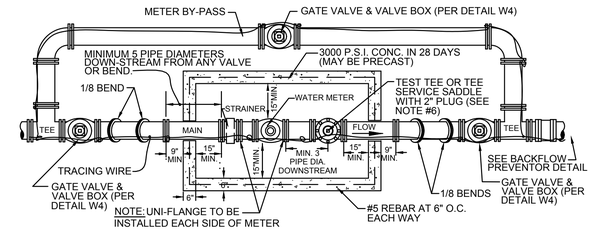




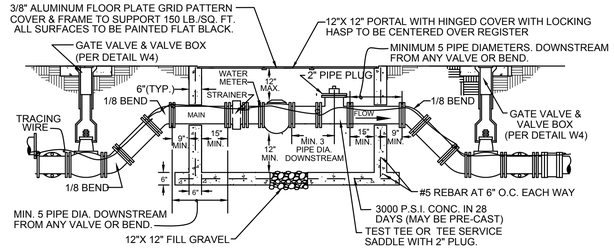
NOTES

1. THIS DETAIL APPLIES TO 2" VALVES IN WATER MAINS AND LATERALS.
2. IN UNPAVED AREAS, PROPERLY BED AND SET EDGE OF PRECAST CONCRETE COLLAR FLUSH WITH FINISHED GRADE. NO COLLAR REQUIRED IN PAVED AREAS, SET VALVE BOX FLUSH WITH PAVEMENT.
3. VALVE BOX SHALL NOT REST ON THE VALVE OR ON THE LINE.
4. CONNECT THE TRACER WIRE ON THE VALVE TO THE TRACER WIRE ON THE LINE WITH SPLICE CONNECTOR.

C1 / CU503 — 2 " WATER VALVE AND VALVE BOX
SCALE: NTS



PLAN

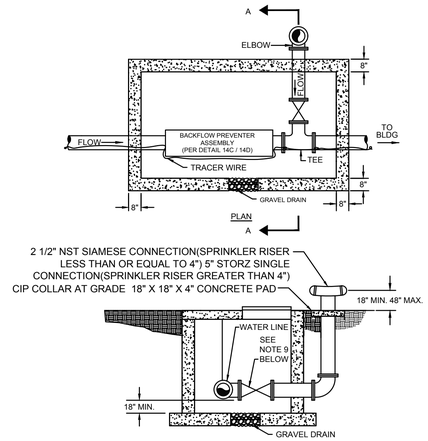


SECTION

NOTES

1. METER (CLASS II) SHALL HAVE U.L. APPROVED STRAINERS.
2. COMPLETE BY-PASS ASSEMBLY IS REQUIRED ON ALL METERS.
3. VALVES SHALL BE MECHANICAL JOINT OR FLANGED GATE VALVES.
4. ALL JOINTS FROM TEE TO TEE SHALL BE RESTRAINED.
5. INSPECTION LID SHALL BE INSTALLED SUCH THAT ALL METER REGISTERS CAN BE READ WITHOUT REMOVING THE ENTIRE METER PIT LID.
6. THE TEST TEE OR TEE SERVICE SADDLE SHALL NOT BE REQUIRED IF THE METER IS EQUIPPED WITH A TEST PORT.
7. THE METER PIT SHALL BE SIZED AS REQUIRED TO HOUSE THE EQUIPMENT.
8. OPTIONAL QUAZITE OR CDR VAULT CAN BE USED.

C2 / CU102 — WATER METER INSTALLATION 3 " AND LARGER
CU103
SCALE: NTS

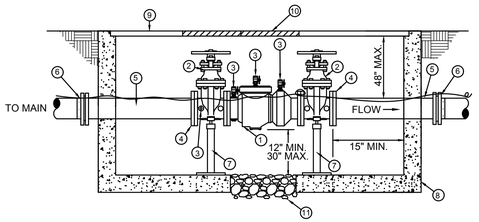


SECTION A-A

NOTES

1. THE VALVE PIT SHALL BE SIZED TO ACCOMMODATE ALL PROPOSED EQUIPMENT.
2. THERE SHALL BE NO SHUTOFF VALVE IN THE FIRE DEPT. CONNECTION PIPING (PER NFPA 13).
3. ALL FITTINGS SHALL BE FLANGED.
4. ALL PIPING SHALL BE STEEL OR DUCTILE IRON.
5. SEE SITE PLANS FOR SIZES OF PIPES AND FITTINGS. SIAMESE CONNECTION TO BE IN ACCORDANCE WITH NFPA 13.
6. PROVIDE DRAINAGE AWAY FROM STRUCTURE.
7. A 2" MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE VAULT LID AND THE RISING STEM OF THE OS&Y VALVE IN THE FULLY OPEN POSITION.
8. KNOX LOCKING PLUG SHALL BE PROVIDED ON THE FIRE DEPARTMENT CONNECTION INLET.
9. APPROVED WAFER CHECK OR SWING CHECK VALVE WITH HORIZONTAL MOUNTED BALL DRIP VALVE.

C3 / CU102 — FIRE SERVICE SYSTEM FOR BUILDINGS
SCALE: NTS



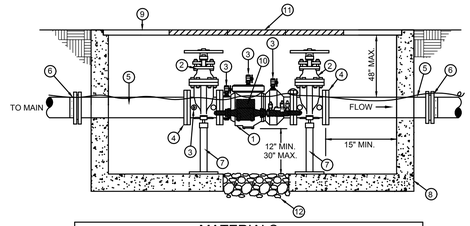
MATERIALS		
ITEM	QUAN	DESCRIPTION
1	1	DOUBLE DETECTOR CHECK VALVE ASSEMBLY
2	2	OS&Y RESILIENT SEAT GATE VALVES
3	4	TEST COCKS W/ NO-LEAD BRASS PLUGS
4	2	RESTRAINED FLANGE ADAPTERS W/ MEGALUG (OR EQUIVALENT)
5		DUCTILE IRON PIPE, CUT TO FIT
6	2	MECHANICAL JOINT W/ MEGALUG (OR EQUIVALENT)
7	2	2" SCH. 40 GALV. PIPE STAND & BASE BOLTED TO FLANGE
8	1	PIT-CEMENT BLOCK, POURED CONCRETE, OR PREFABRICATED BOX PER CITY SPECS.
9	1	3/8 ALUMINUM FLOOR PLATE / HATCH COVER
10	1	2' X 2' MIN. HATCH W/ LOCKING HASP
11	1	#57 STONE GRAVEL DRAIN

NOTES

1. FOR FINAL APPROVAL, ASSEMBLY MUST BE CENTERED IN ENCLOSURE (IF APPLICABLE). UNDER NO CONDITION WILL ANY CONNECTION BE ALLOWED BETWEEN THE SERVICE METER AND BACKFLOW PREVENTER USED FOR SYSTEM CONTAINMENT. BACKFLOW PREVENTER SHALL ALWAYS BE INSTALLED DOWNSTREAM OF METER.
2. IF A PRESSURE MONITOR IS TO BE INSTALLED, ADD A TEE, VALVE, FITTINGS, AND MOUNT ON SUPPLY SIDE PRIOR TO BACKFLOW PREVENTER; UNDER NO CIRCUMSTANCE SHALL TEST PORTS BE MODIFIED OR UTILIZED FOR THIS OR OTHER APPLICATION, OTHER THAN BACKFLOW-DEVICE TESTING.

TYPICAL BELOW GRADE INSTALLATION
(3", 4", 6", 8", 10" & 12" SIZES)

C5 / CU102 — DOUBLE CHECK VALVE ASSEMBLY FOR DOMESTIC SYSTEM (3 INCHES AND LARGER)
CU103
SCALE: NTS



MATERIALS		
ITEM	QUAN	DESCRIPTION
1	1	DOUBLE DETECTOR CHECK VALVE ASSEMBLY
2	2	OS&Y RESILIENT SEAT GATE VALVES
3	4	TEST COCKS W/ NO-LEAD BRASS PLUGS
4	2	RESTRAINED FLANGE ADAPTER, MEGALUG (OR EQUIVALENT)
5		DUCTILE IRON PIPE, CUT TO FIT
6	2	MECHANICAL JOINT W/ MEGALUG (OR EQUIVALENT)
7	2	2" SCH. 40 GALV. PIPE STAND & BASE BOLTED TO FLANGE
8	1	PIT-CEMENT BLOCK, POURED CONCRETE, OR PREFABRICATED BOX PER CITY SPECS.
9	1	3/8 ALUMINUM FLOOR PLATE / HATCH COVER
10	1	2' X 2' MIN. HATCH W/ LOCKING HASP
11	1	2' X 2' MIN. HATCH W/ LOCKING HASP
12	1	#57 STONE GRAVEL DRAIN

NOTES

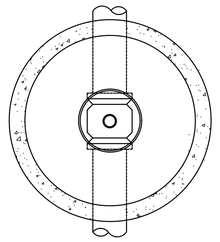
1. FOR FINAL APPROVAL, ASSEMBLY MUST BE CENTERED IN ENCLOSURE (IF APPLICABLE). UNDER NO CONDITION WILL ANY CONNECTION BE ALLOWED BETWEEN THE SERVICE METER AND BACKFLOW PREVENTER USED FOR SYSTEM CONTAINMENT. BACKFLOW PREVENTER SHALL ALWAYS BE INSTALLED DOWNSTREAM OF METER.
2. IF A PRESSURE MONITOR IS TO BE INSTALLED, ADD A TEE, VALVE, FITTINGS, AND MOUNT ON SUPPLY SIDE PRIOR TO BACKFLOW PREVENTER; UNDER NO CIRCUMSTANCE SHALL TEST PORTS BE MODIFIED OR UTILIZED FOR THIS OR OTHER APPLICATION, OTHER THAN BACKFLOW DEVICE TESTING.
3. IF ADDITIONAL SIAMESE CONNECTION IS REQUIRED FOR FIRE SERVICE SEE DETAIL W12.

TYPICAL BELOW GRADE INSTALLATION
(3", 4", 6", 8", 10" & 12" SIZES)

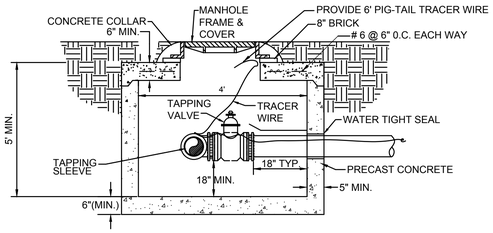
A1 / CU503 — DOUBLE DETECTOR CHECK VALVE ASSEMBLY FOR FIRE SYSTEM (3 INCHES AND LARGER)
SCALE: NTS

NOTES

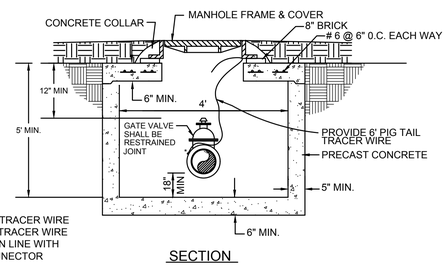
1. MANHOLE FRAME AND COVER PER DETAIL C1 -WATER MANHOLE RING & COVER, SHEET CU504.
2. THE BOTTOM OF THE MANHOLE FRAME SHALL NOT BE MORE THAN 12" ABOVE THE TOP OF THE MANHOLE STRUCTURE.
3. PRECAST CONCENTRIC CONE RISERS MAY BE USED WHERE REQUIRED FOR DEPTH.
4. THE MANHOLE FRAME AND COVER MUST BE CENTERED OVER THE VALVE OPERATING NUT. POLYPROPYLENE MANHOLE STEPS
5. SHALL BE PROVIDED AT 12" O.C. FOR MANHOLES GREATER THAN 5 FEET DEEP.



PLAN



SECTION



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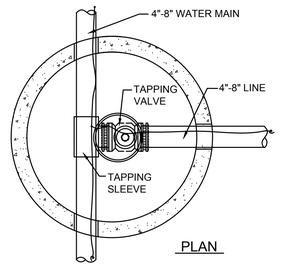

PLAN

NOTES

1. MANHOLE FRAME AND COVER PER DETAIL C1 - WATER MANHOLE RING & COVER, SHEET CU504.
2. THE BOTTOM OF THE MANHOLE FRAME SHALL NOT BE MORE THAN 12" ABOVE THE TOP OF THE MANHOLE STRUCTURE.
3. PRECAST CONCENTRIC CONE RISERS MAY BE USED WHERE REQUIRED FOR DEPTH.
4. THE MANHOLE FRAME AND COVER MUST BE CENTERED OVER THE VALVE OPERATING NUT.
5. POLYPROPYLENE MANHOLE STEPS SHALL BE PROVIDED AT 12" O.C. FOR MANHOLES GREATER THAN 5 FEET DEEP.
6. CONNECT TO EXISTING TRACER WIRE WITH SPLICE CONNECTION.
7. TAPPING SLEEVE AND VALVE PER DETAIL A2 - TYPICAL TAPPING SLEEVES & TAPPING VALVE, SHEET CU503.

A3 / CU102 — VALVE MANHOLE FOR 4-8 " GATE VALVES
CU103
SCALE: NTS

A4 / CU503 — VALVE MANHOLE FOR 4-8 " TAPPING SLEEVES & VALVES
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

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05-30-2023

REVISIONS:

No.	Description	Date

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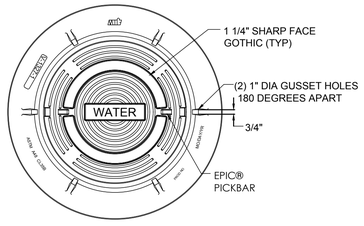
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

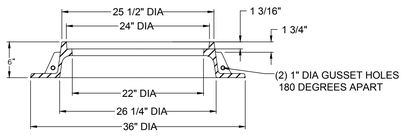
WATER DETAILS

CU503

BID SET



COVER SECTION

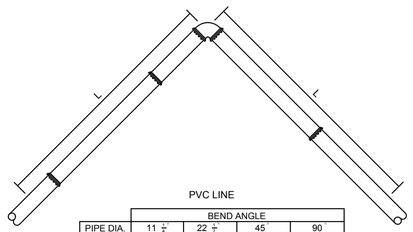


FRAME SECTION

NOTE

MANHOLE RING AND COVER SHALL BE IN COMPLIANCE TO GARDEN CITY DEPARTMENT OF WATER OPERATIONS SPECIFICATIONS.

C1 / CU504 — WATER MANHOLE RING & COVER
SCALE: NTS



PVC LINE

PVC DESIGN:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3' ≤12" DIA.
4' >12" DIA.
TEST PRESSURE: 150 PSI

PIPE DIA.	BEND ANGLE 11 1/4°	22 1/2°	45°	90°
4	2	4	8	18
6	3	5	11	25
8	4	7	14	33
10	4	8	16	39
12	5	9	19	45
16	5	9	19	45
20	6	11	23	54
24	8	16	26	62

POLYETHYLENE WRAPPED DUCTILE IRON LINE

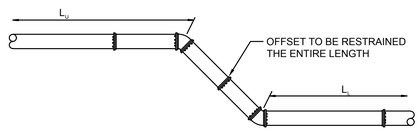
PE WRAPPED DIP:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3'
TEST PRESSURE: 150 PSI

PIPE DIA.	BEND ANGLE 11 1/4°	22 1/2°	45	90
4	3	5	9	20
6	3	6	12	28
8	4	8	16	36
10	5	9	19	43
12	6	11	22	51
16	7	14	28	65
20	8	16	33	79
24	9	19	38	92

MINIMUM RESTRAINED LENGTH (L)

NOTES
1. LENGTH OF RESTRAINT SHOWN IS IN FEET. PIPE DIAMETERS ARE IN INCHES.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. INFORMATION IN THE TABLES ABOVE ARE BASED ON THE DESIGN INFORMATION SHOWN. THE ENGINEER SHALL PROVIDE AMENDED RESTRAINT LENGTHS IF SITE CONDITIONS DIFFER

C2 / CU101 — HORIZONTAL BEND RESTRAINT
CU102 - CU104
SCALE: NTS



PVC LINE

PVC DESIGN:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3' ≤12" DIA.
4' >12" DIA.
TEST PRESSURE: 150 PSI

PIPE DIA.	BEND ANGLE 11 1/4° L_U	L_L	22 1/2° L_U	L_L	45° L_U	L_L
4	4	1	8	2	17	3
6	6	1	11	2	23	4
8	8	2	15	3	30	6
10	9	2	18	4	36	7
12	11	2	21	4	43	8
16	10	3	21	5	42	10
20	13	3	25	6	51	12
24	15	4	29	7	60	15

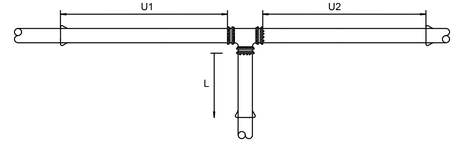
POLYETHELYNE WRAPPED DUCTILE IRON LINE

PE WRAPPED DIP:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3'
TEST PRESSURE: 150 PSI

PIPE DIA.	BEND ANGLE 11 1/4° L_U	L_L	22 1/2° L_U	L_L	45° L_U	L_L
4	6	1	12	2	24	4
6	9	2	17	3	34	5
8	11	2	22	3	45	7
10	13	2	26	4	53	8
12	15	3	30	5	63	9
16	19	3	39	6	80	12
20	23	4	47	7	97	15
24	27	4	55	8	113	17

NOTES
1. LENGTH OF RESTRAINT SHOWN IS IN FEET. PIPE DIAMETERS ARE IN INCHES.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. INFORMATION IN THE TABLES ABOVE ARE BASED ON THE DESIGN INFORMATION SHOWN. THE ENGINEER SHALL PROVIDE AMENDED RESTRAINT LENGTHS IF SITE CONDITIONS DIFFER

C4 / CU504 — VERTICAL BEND RESTRAINT
SCALE: NTS



PVC

PVC DESIGN:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3' ≤12" DIA.
4' >12" DIA.
TEST PRESSURE: 150 PSI

Ur \ U²	10'	20'
4X4	3	*
6X4	*	*
6X6	5	*
8X4	*	*
8X6	*	*
8X8	18	*
10X4	*	*
10X6	*	*
10X8	8	*
10X10	28	11
12X4	*	*
12X6	*	*
12X8	*	*
12X10	20	*
12X12	39	3
16X8	*	*
16X8	*	*

Ur \ U²	10'	20'
16X10	4	*
16X12	25	*
16X16	61	24
20X6	*	*
20X8	*	*
20X10	*	*
20X12	10	*
20X16	48	2
20X20	81	44
24X6	*	*
24X8	*	*
24X10	*	*
24X12	*	*
24X16	35	*
24X20	69	25
24X24	101	63

* RESTRAIN AT TEE ONLY.

MINIMUM RESTRAINED LENGTH (L)

NOTES
1. LENGTH OF RESTRAINT SHOWN IS IN FEET. FITTING DIAMETERS ARE IN INCHES.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. U1 AND U2 = UNINTERUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION
4. Ur = THE SMALLER OF U1 OR U2.
5. L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.
6. WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90°. HORIZONTAL BEND.
7. INFORMATION IN THE TABLES ABOVE ARE BASED ON THE DESIGN INFORMATION SHOWN . THE ENGINEER SHALL PROVIDE AMENDED RESTRAINT LENGTHS IF SITE CONDITIONS DIFFER.

C5 / CU102 — TEE RESTRAINT (PVC PIPE)
CU103
SCALE: NTS

POLYETHYLENE WRAPPED DUCTILE IRON PIPE

PE WRAPPED DIP:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3'
TEST PRESSURE: 150 PSI

Ur \ U²	10'	20'
4X4	4	*
6X4	*	*
6X6	27	*
8X4	*	*
8X6	9	*
8X8	52	*
10X4	*	*
10X6	*	*
10X8	35	*
10X10	72	16
12X4	*	*
12X6	*	*
12X8	20	*
12X10	58	*
12X12	94	38
16X8	*	*
16X8	*	*

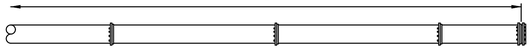
Ur \ U²	10'	20'
16X10	30	*
16X12	68	*
16X16	135	78
20X6	*	*
20X8	*	*
20X10	5	*
20X12	42	*
20X16	111	40
20X20	175	116
24X6	*	*
24X8	*	*
24X10	*	*
24X12	19	*
24X16	87	5
24X20	151	82
24X24	212	152

*RESTRAIN AT TEE ONLY.

MINIMUM RESTRAINED LENGTH (L)

NOTES
1. LENGTH OF RESTRAINT SHOWN IS IN FEET. FITTING DIAMETERS ARE IN INCHES.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. U1 AND U2 = UNINTERUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION
4. Ur = THE SMALLER OF U1 OR U2. (E.G., U1, IN THE ABOVE DIAGRAM).
5. L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.
6. WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90°. HORIZONTAL BEND.
7. INFORMATION IN THE TABLES ABOVE ARE BASED ON THE DESIGN INFORMATION SHOWN . THE ENGINEER SHALL PROVIDE AMENDED RESTRAINT LENGTHS IF SITE CONDITIONS DIFFER.

A1 / CU102 — TEE RESTRAINT (DUCTILE IRON PIPE)
CU103
SCALE: NTS



POLYETHYLENE WRAPPED DUCTILE IRON LINE

PIPE DIA.	L
4	58
6	82
8	107
10	128
12	151
16	193
20	234
24	273

PVC LINE

PIPE DIA.	L
4	39
6	55
8	72
10	87
12	102
16	131
20	159
24	185

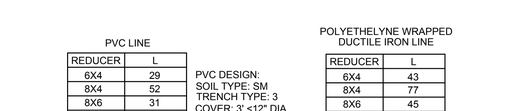
MINIMUM RESTRAINED LENGTH (L)

PE WRAPPED DIP:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3'
TEST PRESSURE: 150 PSI

PVC DESIGN:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3' ≤12" DIA.
4' >12" DIA.
TEST PRESSURE: 150 PSI

NOTES
1. LENGTH OF RESTRAINT SHOWN IS IN FEET. FITTING DIAMETERS ARE IN INCHES.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. FOR LINE STUBS (SEE DETAIL W34), THE LENGTH OF RESTRAINT (L) SHALL BE FROM THE VALVE AND NOT THE CAP.
4. INFORMATION IN THE TABLES ABOVE ARE BASED ON THE DESIGN INFORMATION SHOWN . THE ENGINEER SHALL PROVIDE AMENDED RESTRAINT LENGTHS IF SITE CONDITIONS DIFFER.

A2 / CU504 — DEAD END RESTRAINT
SCALE: NTS



PVC LINE

REDUCER	L
6X4	29
8X4	52
8X6	31
10X4	71
10X6	53
10X8	29
12X4	89
12X6	74
12X8	54
12X10	30
16X6	111
16X8	96
16X10	78
16X12	56
20X10	117
20X12	100
20X16	56
24X12	137
24X16	101
24X20	56

POLYETHELYNE WRAPPED DUCTILE IRON LINE

REDUCER	L
6X4	43
8X4	77
8X6	45
10X4	104
10X6	79
10X8	43
12X4	131
12X6	110
12X8	80
12X10	45
16X6	163
16X8	141
16X10	115
16X12	82
20X10	172
20X12	147
20X16	82
24X12	201
24X16	149
24X20	82

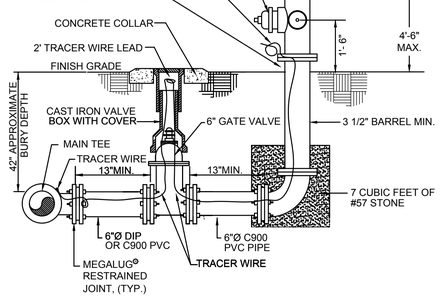
PVC DESIGN:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3' ≤12" DIA.
4' >12" DIA.
TEST PRESSURE: 150 PSI

PE WRAPPED DIP:
SOIL TYPE: SM
TRENCH TYPE: 3
COVER: 3'
TEST PRESSURE: 150 PSI

U = MINIMUM UNINTERUPTED STRAIGHT RUN OF PIPE ON SMALL SIDE OF REDUCER.
L = MINIMUM RESTRAINED LENGTH.
* WHERE MINIMUM "U" IS NOT MET, PIPE ON LARGE SIDE OF REDUCER SHALL BE RESTRAINED FOR A MINIMUM OF "L" FEET.

NOTES
1. LENGTH OF RESTRAINT SHOWN IS IN FEET. FITTING DIAMETERS ARE IN INCHES.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. INFORMATION IN THE TABLES ABOVE ARE BASED ON THE DESIGN INFORMATION SHOWN. THE ENGINEER SHALL PROVIDE AMENDED RESTRAINT LENGTHS IF SITE CONDITIONS DIFFER.

A4 / CU101 — REDUCER RESTRAINT
CU102, CU104
SCALE: NTS



NOTES
1. ALL JOINTS FROM MAIN TO HYDRANT SHALL BE RESTRAINED.
2. VALVE BOX AND COLLAR INSTALLED PER DETAIL C1 SHEET CU503.
3. REMOVE CHAINS AFTER INSTALLATION OF NEW HYDRANT.
4. CONNECT TRACER WIRE TO WIRE ON MAIN W/ SPLICE CONNECTOR.

A5 / CU103 — FIRE HYDRANT FOR STANDARD BURY MAINS
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
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STRUCTURAL ENGINEER:
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912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK
05-30-2023

REVISIONS:

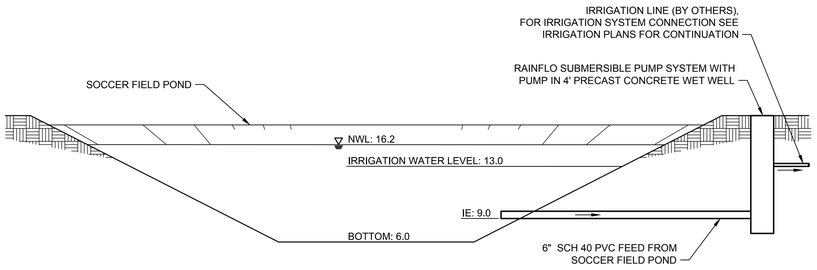
No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

WATER DETAILS

CU504

BID SET

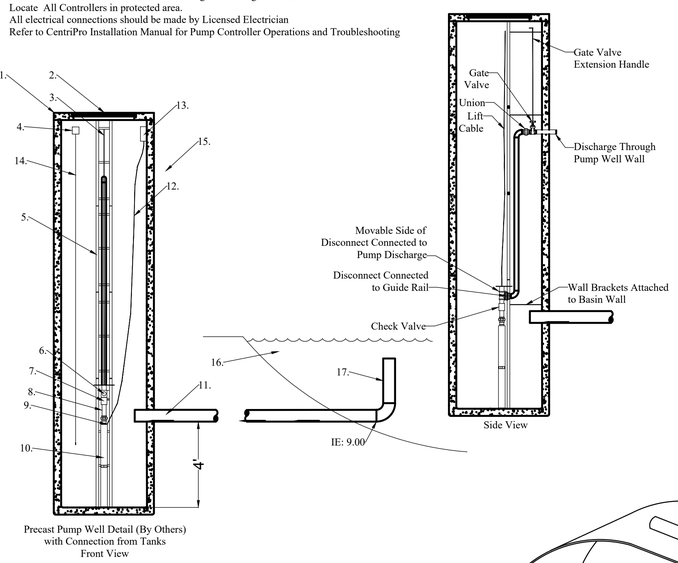


D1 CU505 POND IRRIGATION DISCHARGE DETAIL
SCALE: NTS

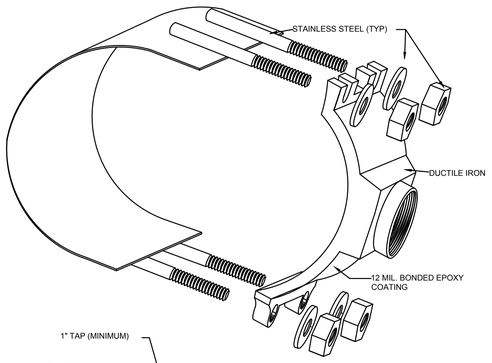
General Notes:

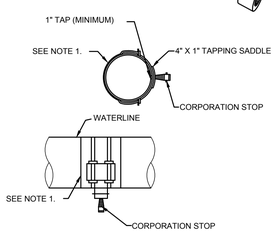
- Use Waterproof Splice Kit When Connecting to Pump Leads.
- See CentriPro Manual for Correct Wire Sizing if wire lengths exceed 200 ft.
- Locate All Controllers in protected area.
- All electrical connections should be made by Licensed Electrician
- Refer to CentriPro Installation Manual for Pump Controller Operations and Troubleshooting

Legend A	
1.	48" Diameter Precast Pump Well Height TBD
2.	Cast Iron Access Lid
3.	Pump Lift Out Cable
4.	Electrical Connection Box
5.	Submersible Pump Guide System
6.	2" Pit less Type Connector
7.	2" Brass Check Valve
8.	2" Stainless Steel Pump Manifold
9.	Pump Power Cable (See Splicing Notes)
10.	Submersible Pump and Motor: Goulds 160L07 Pump and Centripro M75434 460 volt Motor, Controller Aquavar SPD
11.	6" Feed From Pond
12.	Pump Power Cable
13.	Junction Box and Conduit for Pump Power Connection *(Important Keep Separate from any Low Voltage Wiring)
14.	Water Level Sensor
15.	Pump Output Line (By Others)
16.	Pond or Lake
17.	Inlet Drain with Screen and Minimum 2' Below Surface



B1 CU105 RAINFLO FLOW INDUCER AND BACKUP SUPPLY CONFIGURATION
SCALE: NTS





NOTES:

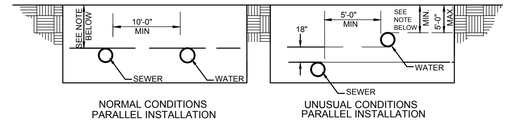
1. TAPPING SADDLE TO BE DUCTILE IRON WITH TYPE 304 STAINLESS STEEL FORGED DOUBLE STRAPS, STAINLESS STEEL BOLTS, NUTS, AND WASHERS. FINISH IS FUSION BONDED EPOXY TO AVERAGE THICKNESS OF 12-MILS.
2. ONE INCH (1") TAPS ON WATER LINES SMALLER THAN SIX INCHES (6"). REQUIRE A TAPPING SADDLE. TWO INCH (2") TAPS REQUIRE A TAPPING SADDLE, REGARDLESS OF WATER MAIN SIZE.
3. A VALVE BOX SHALL BE USED FOR 2" CORPORATION STOPS. SEE DETAIL C1, SHEET CU503

A3 CU505 2 " TAPPING SADDLE
SCALE: NTS

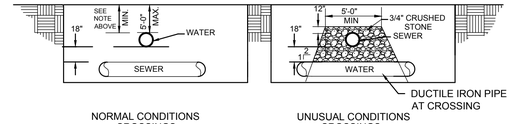
NOTES

1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE GARDEN CITY DEPARTMENT OF WATER OPERATIONS LATEST CONSTRUCTION SPECIFICATIONS AND DETAILS. THE SYSTEM SHALL BE DESIGNED AND TESTED PER THE SPECIFICATIONS AND REQUIREMENTS MAINTAINED BY THE CITY ENGINEER.
2. THE WATER SERVICE LATERAL SERVING THE FACILITY SHALL BE INSTALLED BY THE DEVELOPER/CONTRACTOR FROM THE WATER MAIN TO THE METERS. THE GARDEN CITY DEPARTMENT OF WATER OPERATIONS WILL ONLY MAKE THE WET TAP. THE CITY WILL NOT INSTALL THE WATER SERVICE LATERAL.
3. ALL MATERIALS USED AND COMING INTO CONTACT WITH DRINKING WATER DURING ITS DISTRIBUTION SHALL NOT ADVERSELY AFFECT DRINKING WATER QUALITY AND PUBLIC HEALTH AND MUST BE CERTIFIED FOR CONFORMANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION STANDARD 61 (ANSI/NSF STANDARD 61).
4. IN ALL WATER LINE PROJECTS, CARE WILL BE TAKEN TO KEEP THE INTERIOR OF THE WATER PIPE CLEAN PRIOR TO CONNECTION TO THE CITY SYSTEM.
   A. PIPE, FITTINGS, VALVES AND OTHER ACCESSORIES SHALL, UNLESS OTHERWISE DIRECTED, BE UNLOADED AT THE POINT OF DELIVERY, AND STORED WHERE THEY WILL BE PROTECTED AND WILL NOT BE A HAZARD TO TRAFFIC. THEY SHALL AT ALL TIMES BE HANDLED WITH CARE TO AVOID DAMAGE. THE INTERIOR OF ALL PIPES, FITTINGS AND OTHER ACCESSORIES SHALL BE KEPT FREE FROM DIRT AND FOREIGN MATTER AT ALL TIMES.
   B. ANY DEFECTIVE, DAMAGED, OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM THE INSIDE OF THE PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND SHALL BE KEPT CLEAN BY APPROVED MEANS DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE. DURING INSTALLATION, WHEN PIPE LAYING IS NOT IN PROGRESS, A MECHANICAL JOINT PLUG OR CAP, OR APPROVED EQUAL, WILL BE USED TO FORM A WATER TIGHT SEAL AT BOTH ENDS OF THE LINE BEING LAID. NO TRENCH WATER SHALL BE PERMITTED TO ENTER THE PIPE.
   C. CLEAN THE INTERIORS OF ALL PIPES BY BRUSHING, SWABBING OR WASHING OUT OF ALL DIRT BEFORE LAYING.
   D. FLUSH THE NEW PIPE LINES UNTIL THE WATER RUNS CLEAR AT THE END OF ALL MAINS AND LATERALS. THIS SHOULD BE DONE AFTER THE PRESSURE TEST AND BEFORE DISINFECTION. FLUSH NEW LINES WITH SUFFICIENT FLOW TO OBTAIN A FLUSHING VELOCITY OF 2.5FT/SEC. FLUSH LINES UNTIL WATER RUNS FREE OF DEBRIS. COORDINATE FLUSHING ACTIVITIES WITH CITY PERSONNEL.
5. ANY METER OR HYDRANT REMOVED FROM THE SITE SHALL BE RETURNED TO THE CONVEYANCE AND DISTRIBUTION DEPARTMENT.
6. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.
7. ALL WATER USED FOR CONSTRUCTION SHALL BE METERED THROUGH AN APPROVED BACKFLOW PREVENTION DEVICE AND FIRE HYDRANT METER OBTAINED FROM THE CONVEYANCE AND DISTRIBUTION DEPARTMENT.
8. ALL ABANDONED WATER LINES SHALL BE CAPPED AT THE MAIN AND THE PIPES PLUGGED.
9. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE WATER LINES ARE PLACED WITHIN THE EASEMENTS WITH A MINIMUM 7'-6" AVAILABLE FROM PIPE CENTERLINE TO EASEMENT LINE.
10. CONTACT THE UTILITIES PROTECTION CENTER (811 IN GEORGIA OR 1-800-282-7411) FOR LOCATION OF CITY WATER LINES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO DIGGING.
11. CONTRACTOR SHALL NOTIFY RESIDENTS A MINIMUM OF 24 HOURS IN ADVANCE OF ANY WORK THAT MAY IMPACT THEM, INCLUDING BUT NOT LIMITED TO: PARKING STALL IMPACT, LOSS OF SERVICE, DRIVEWAY CUTS, REMOVAL/RELOCATION OF FENCES AND MAIL BOXES, SIDEWALK IMPACTS, ETC.
12. ALL WATER MAINS SHALL BE AWWA C-900, DR-18 PRESSURE CLASS 235 PVC.
13. ALL WATER LATERALS SHALL BE POLYETHYLENE PE 3408 SDR-9 CONFORMING TO ALL REQUIREMENTS OF AWWA C-901 AND ASTM D-2737 LATEST REVISIONS.
14. ALL WATER MAIN THRUST RESTRAINT SHALL BE HANDLED BY USE OF JOINT RESTRAINT/MECHANICAL JOINTS EQUIVALENT TO EBAA IRON MEGALUG OR PUSH-ON JOINT TYPE RESTRAINED JOINTS EQUIVALENT TO "LOK-RING", "TR FLEX", OR "SUPER LOCK".
15. ALL VALVES 4" OR LARGER SHALL BE IN MANHOLES.
16. ALL FITTINGS 2" OR LARGER SHALL BE DUCTILE IRON RESTRAINED JOINTS

C3 CU101 WATER GENERAL NOTES
SCALE: NTS
CU102 - CU105



*MINIMUM PIPE COVER REQUIREMENTS:
12" AND SMALLER PIPE: 3' MIN. COVER
PIPES LARGER THAN 12": 4' MIN. COVER

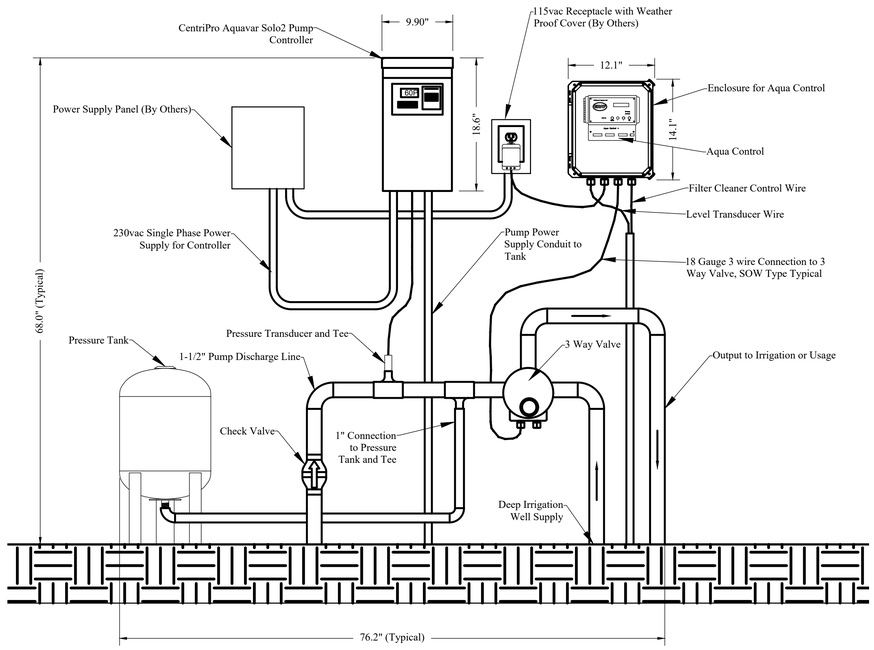


NOTES:
THE SEPARATION OF WATER MAINS AND SEWERS SHALL COMPLY WITH THE GEORGIA ENVIRONMENTAL PROTECTION DIVISION MINIMUM STANDARDS FOR PUBLIC WATER SYSTEMS, WHICH ARE GENERALLY AS FOLLOWS:

A. PARALLEL INSTALLATION:
1. NORMAL CONDITIONS: THE INSIDE EDGE OF A WATER LINE SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM THE INSIDE EDGE OF ANY SANITARY SEWER, STORM SEWER OR SEWER MANHOLE.
2. UNUSUAL CONDITIONS: WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, AND WHEN APPROVED BY THE ENGINEER, THE INSIDE EDGE OF A WATER MAIN MAY BE LAID A MINIMUM OF 5 FEET FROM THE INSIDE EDGE OF A SEWER PROVIDED THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER (SEE DETAIL), AND THE WATER MAIN IS LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF.

B. CROSSINGS:
1. NORMAL CONDITIONS: WHENEVER POSSIBLE, THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER.
2. UNUSUAL CONDITIONS: IF A WATER MAIN MUST CROSS UNDER A SEWER, THE TOP OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES LOWER THAN THE BOTTOM OF THE SEWER, THE WATER MAIN PIPE SHALL BE DUCTILE IRON PIPE CENTERED AT THE CROSSING SO THAT THE JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, AND ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF THE SEWER AT THE CROSSING. ADEQUATE STRUCTURAL SUPPORT SHALL INCLUDE BACKFILLING THE ENTIRE UTILITY CROSSING AREA WITH 3/4" CRUSHED STONE AS SHOWN IN THE DETAIL.

C5 CU101 MINIMUM WATER & SEWER PIPE SEPARATION REQUIREMENTS
SCALE: NTS
CU102 - CU105



A4 CU505 RAINFLO SIMPEX PUMP DISCHARGE DETAIL WITH PUMP WELL
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

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STRUCTURAL ENGINEER:
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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

WATER DETAILS

CU505

BID SET

C:\Users\aprilmundy\OneDrive - LS3P\Groves K-12\SCCPSS_K-12 Multi-School_awm.rvt
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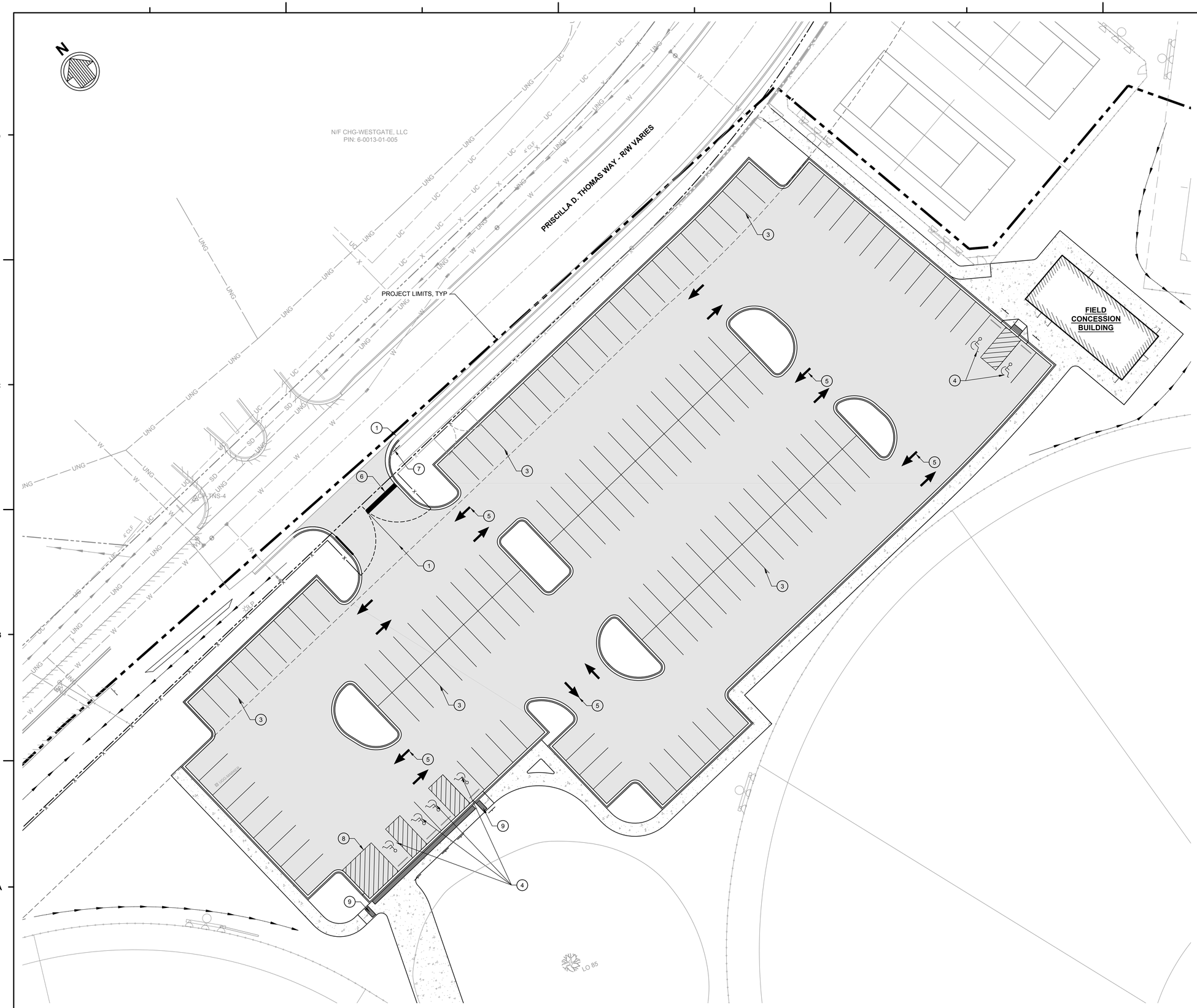

NOTES

1. ALL PAVEMENT MARKING LOCATED WITHIN GDOT OR GARDEN CITY RIGHT OF WAY SHALL BE THERMOPLASTIC.
2. ALL PAVEMENT MARKING LOCATED WITHIN SCHOOL PROPERTY LIMITS SHALL BE PAINTED (ACRYLIC) UNLESS OTHERWISE NOTED.

KEY NOTES

1. 5" SOLID WHITE STRIPING, PER GDOT DETAIL T-11A
2. 5" DOUBLE SOLID YELLOW STRIPING, PER GDOT DETAIL T-11A
3. PARKING LOT STRIPING, SEE DETAILC1 SHEET CM501
4. ACCESSIBLE PARKING SPACE WITH SIGN, SEE DETAIL A1 & A4 SHEET CM501
5. PAVEMENT MARKING ARROW, TYPE AS INDICATED ON PLANS, PER GDOT DETAIL T-12B
6. 24" WHITE STOP BAR, SEE DETAIL C3 SHEET CM501
7. MUTCD 30" R1-1 STOP SIGN
8. FIRE LANE - ALL CURB IN THE DESIGNATED AREA TO BE PAINTED WITH RED REFLECTIVE PAINT
9. DETECTABLE WARNING, PER GDOT DETAIL A4

20' 0' 20' 40'

SCALE: 1"=20'

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:

LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

LS3P

321 WEST CONGRESS STREET SUITE 301
SAVANNAH, GEORGIA 31401
TEL. 912.695.2111 FAX 912.298.0206
WWW.LS3P.COM

moffatt & nichol
2 EAST BRYAN ST., STE 501
SAVANNAH, GA 31401
912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

MARKING PLAN

CM101

BID SET

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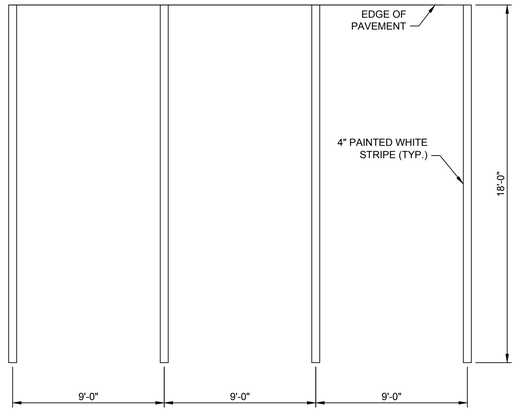
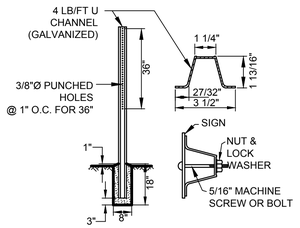
1/27/2020 1:19:16 PM



NOTES:

1. STRIPING AND CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND CITY CODES AND SPECIFICATIONS.
2. ALL PAVEMENT MARKINGS AND STRIPING IN THE RIGHT-OF-WAY SHALL BE THERMOPLASTIC.

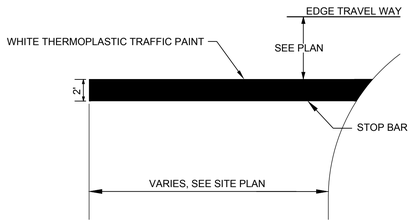
C1 / CM101 — STANDARD PARKING SPACE STRIPING DETAIL
SCALE: NTS



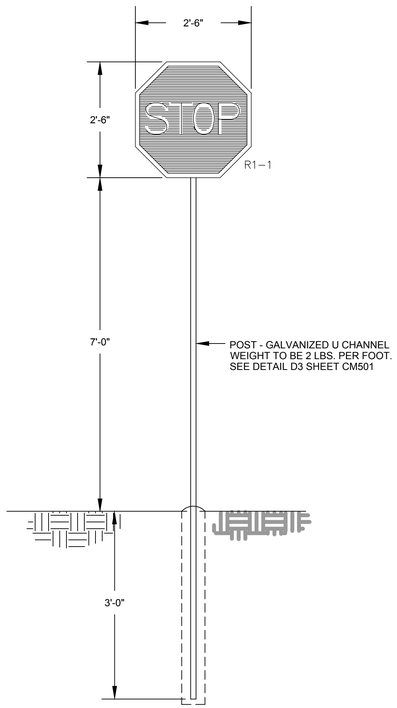
NOTE

POST SHALL BE CAREFULLY CLEANED AND PHOSPHATED. IMMEDIATELY AFTER PHOSPHATING POST SHALL BE COATED WITH A MODIFIED POLYESTER PAINT BY ELECTRODEPOSITION AND THEN THOROUGHLY BAKED. COLOR IS PERMA-GREEN PER FED. STANDARD 595-A COLOR #14109 (DARK LIMIT V-)

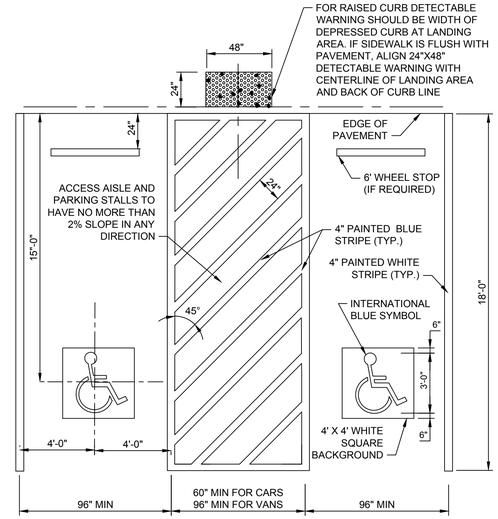
D3 / CM501 — SIGN POST DETAIL
SCALE: NTS



C3 / CM101 — TYPICAL STOP BAR PAVEMENT MARKING DETAIL
SCALE: NTS



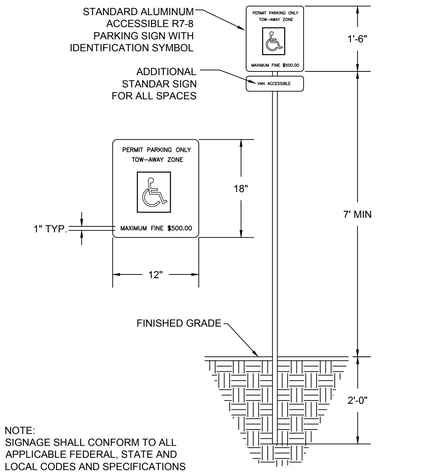
C4 / CM101 — STOP SIGN DETAIL
SCALE: NTS



NOTE

1. STRIPING AND CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND CITY CODES AND SPECIFICATIONS.
2. ALL PAVEMENT MARKINGS AND STRIPING IN THE RIGHT-OF-WAY SHALL BE THERMOPLASTIC.
3. 2% MAXIMUM SLOPE IN ALL DIRECTIONS WITHIN ACCESSIBLE PARKING SPACE AND ACCESS AISLE.
4. ALL ACCESSIBLE PARKING SPACES SHALL BE ACCOMPANIED BY AN ACCESSIBLE PARKING SIGN. SEE DETAIL A4, SHEET CM501.

A1 / CM101 — ACCESSIBLE PARKING SPACE STRIPING DETAIL
SCALE: NTS



NOTE:
SIGNAGE SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND SPECIFICATIONS

A4 / CM101 — ACCESSIBLE PARKING SIGN DETAIL
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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912-231-0044

GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

MARKING DETAILS

CM501

BID SET

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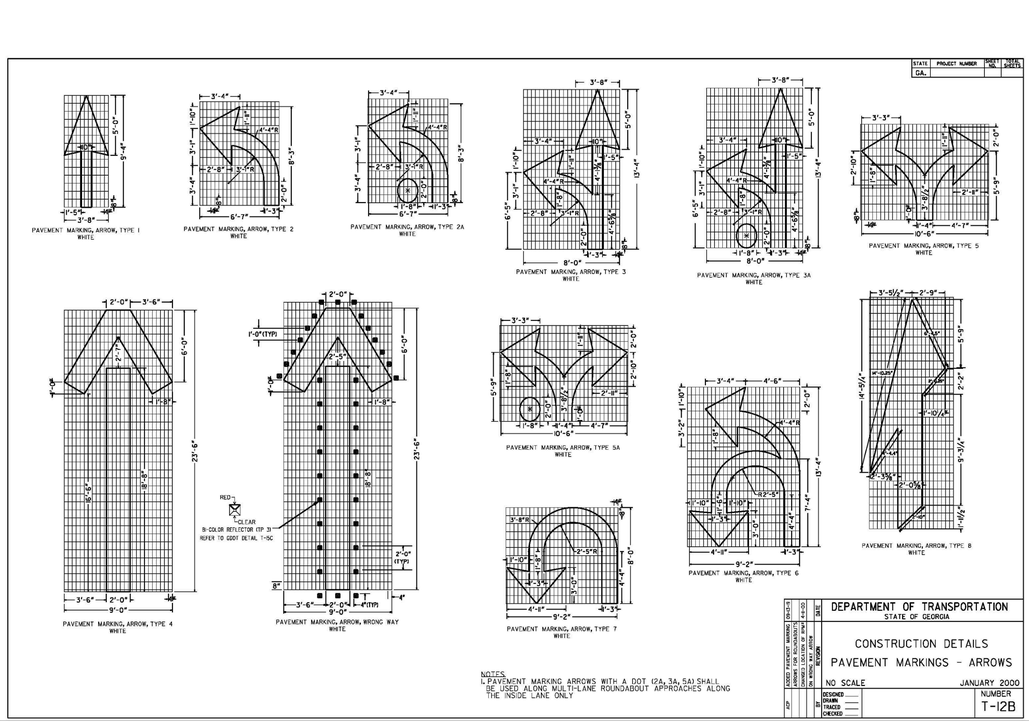
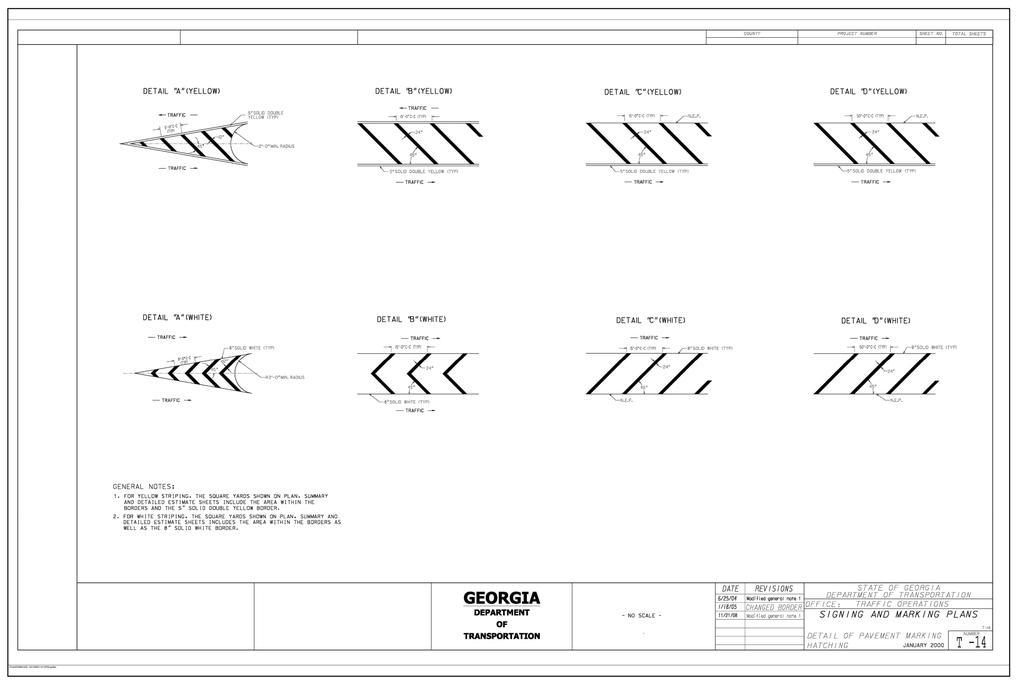


A1 CM502 PAVEMENT MARKINGS ARROWS
SCALE: NTS



A3 CM502 PAVEMENT MARKINGS HATCHING
SCALE: NTS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

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GEORGIA REGISTERED No. 031068 PROFESSIONAL ENGINEER CRAIG RONALD ZUCK

05-30-2023

REVISIONS:

No.	Description	Date

PROJECT: 5201-192070
DATE: 05/30/2023
DRAWN BY: FAP
CHECKED BY: CRZ

MARKING DETAILS

CM502

BID SET

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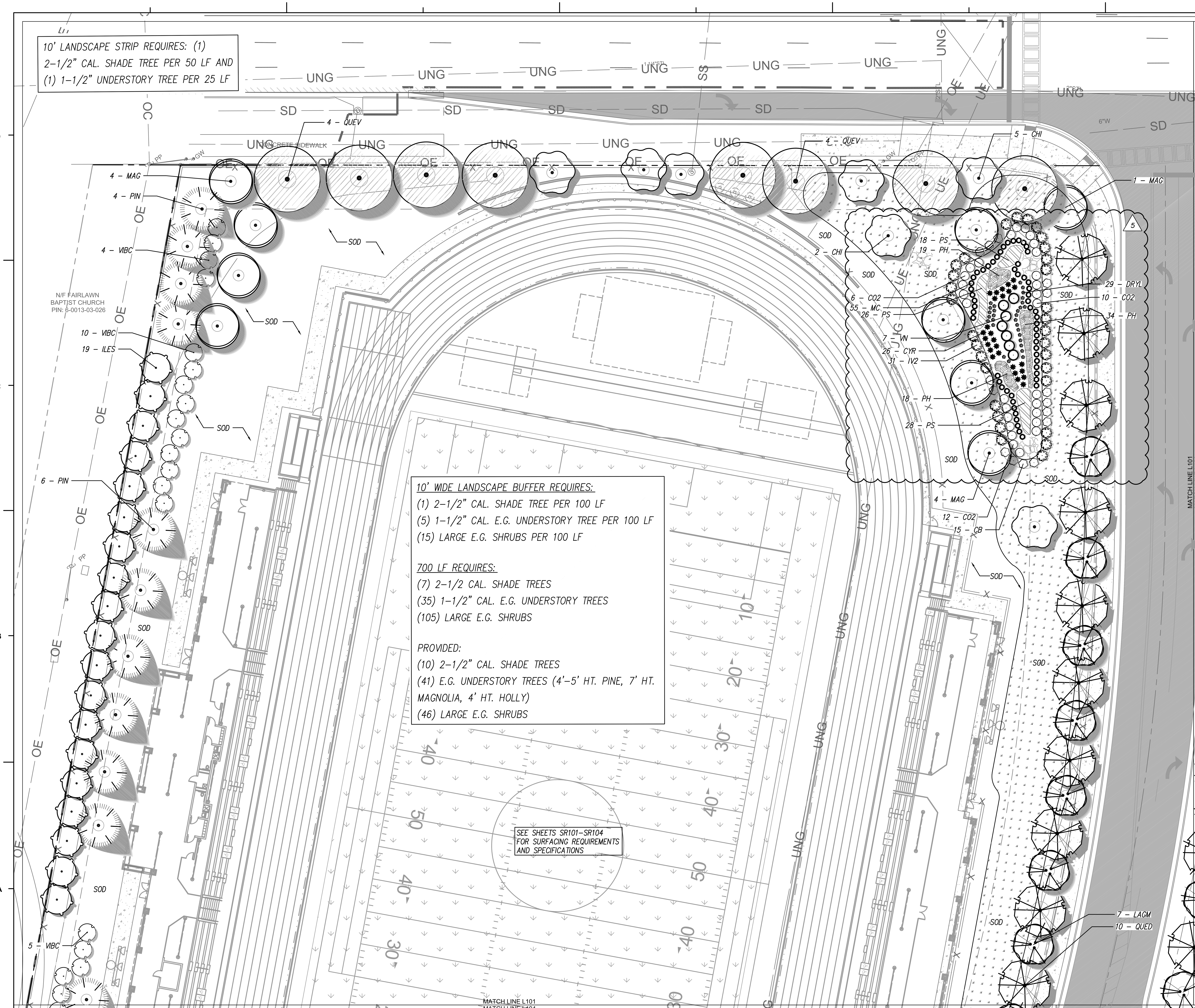
1/27/2020 1:19:16 PM


10' LANDSCAPE STRIP REQUIRES: (1)
2-1/2" CAL. SHADE TREE PER 50 LF AND
(1) 1-1/2" UNDERSTORY TREE PER 25 LF
10' WIDE LANDSCAPE BUFFER REQUIRES:
(1) 2-1/2" CAL. SHADE TREE PER 100 LF
(5) 1-1/2" CAL. E.G. UNDERSTORY TREE PER 100 LF
(15) LARGE E.G. SHRUBS PER 100 LF
700 LF REQUIRES:
(7) 2-1/2 CAL. SHADE TREES
(35) 1-1/2" CAL. E.G. UNDERSTORY TREES
(105) LARGE E.G. SHRUBS
PROVIDED:
(10) 2-1/2" CAL. SHADE TREES
(41) E.G. UNDERSTORY TREES (4'-5' HT. PINE, 7' HT. MAGNOLIA, 4' HT. HOLLY)
(46) LARGE E.G. SHRUBS
SEE SHEETS SR101-SR104 FOR SURFACING REQUIREMENTS AND SPECIFICATIONS
N/F FAIRLAWN BAPTIST CHURCH PIN: 6-0013-03-026
4 - QUEV
4 - MAG
4 - PIN
4 - VIBC
10 - VIBC
19 - ILES
6 - PIN
5 - VIBC
5 - CHI
1 - MAG
2 - CHI
18 - PS
19 - PH
29 - DRYL
10 - CO2
34 - PH
6 - CO2
55 - MC
26 - PS
7 - IVN
26 - CYR
31 - IV2
18 - PH
28 - PS
4 - MAG
12 - CO2
15 - CB
7 - LAGM
10 - QUED
SOD
CONCRETE SIDEWALK
MATCH LINE L101
MATCH LINE L102
MATCH LINE L101
MATCH LINE L104

SEE SHEET L114 FOR PLANT LIST AND ADDITIONAL NOTES.

SEE SHEET L115 FOR PLANTING DETAILS.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
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SAVANNAH, GEORGIA 31401
TEL. 912.695.2111 FAX 912.298.0206
WWW.LS3P.COM

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
Temporary Landscape Architect

REVISIONS:

No.	Description	Date
5	Addendum 7	11/13/20
6	Post Bid Addendum 1	2/10/21

PROJECT: 5201-192070 (CLH:19-177)
DATE: 10/09/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

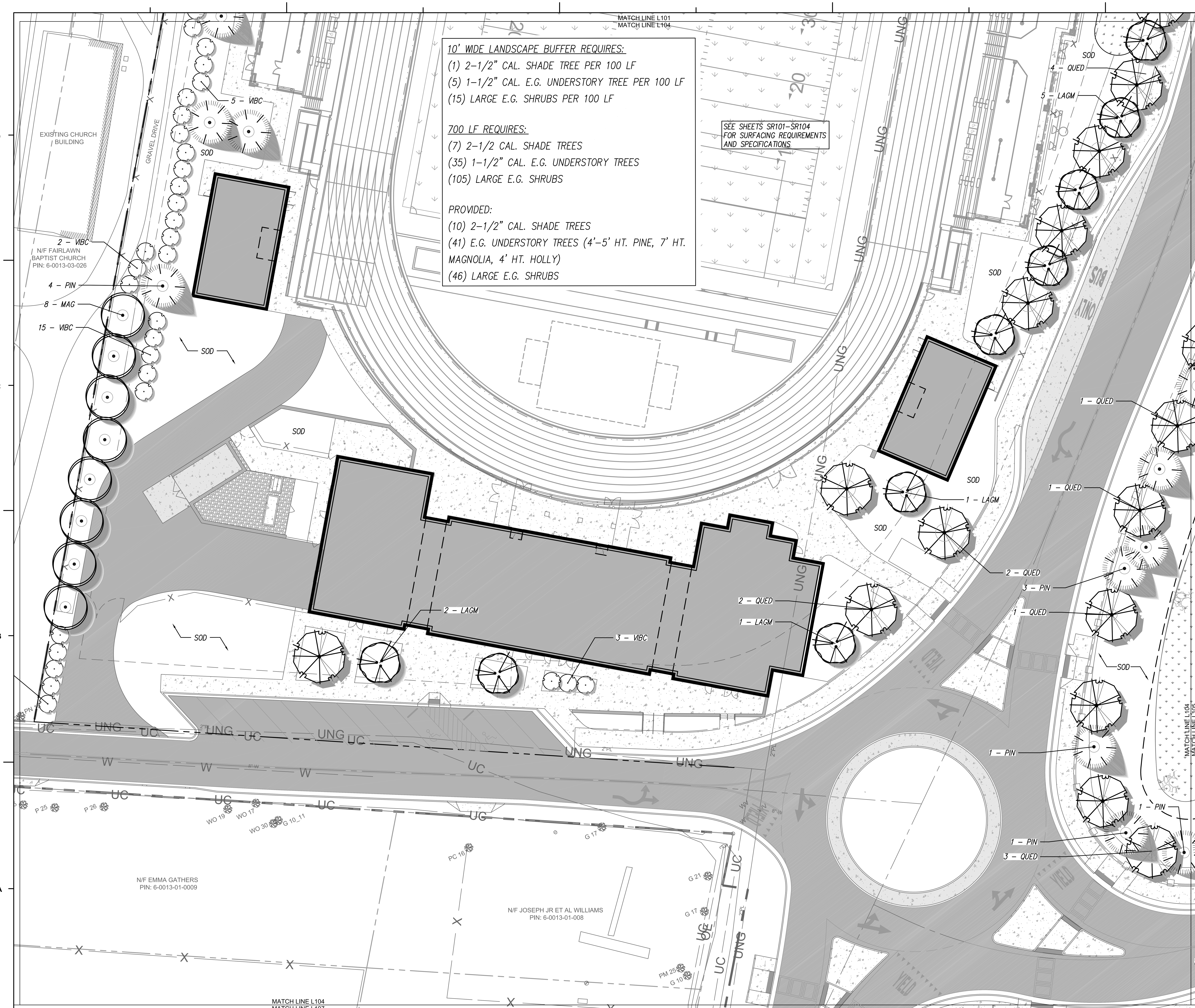
LANDSCAPE PLAN

L101

ISSUED: 2021-02-10

DRAWING SCALES SHOWN BASED ON 24"x36" DRAWING

CONSTRUCTION SET



SEE SHEET L114 FOR PLANT LIST AND ADDITIONAL NOTES.

SEE SHEET L115 FOR PLANTING DETAILS.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
License No. LA-T000074
Christine Lockwood Gill
400 Regency Forest Drive Suite 120
Cary NC 27518
Temporary Landscape Architect
EXP DATE - 07/14/2021 Status: Active
Issue Date: 07/14/2020

ISSUED: 2021-02-10

DRAWING SCALES SHOWN BASED ON 24"x36" DRAWING

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
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SAVANNAH, GEORGIA 31401
TEL. 912.695.2111 FAX 912.298.0206
WWW.LS3P.COM

GEORGIA REGISTERED LANDSCAPE ARCHITECT No. CHRISTINE LOCKWOOD 2-10-21

REVISIONS:

No.	Description	Date
5	Addendum 7	11/13/20
6	Post Bid Addendum 1	2/10/21

PROJECT: 5201-192070 (CLH:19-177)
DATE: 10/09/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

LANDSCAPE PLAN

L104

CONSTRUCTION SET

MATCH LINE L104
MATCH LINE L107

N/F ANNIE BELL EDWARDS
PIN: 6-0013-01-007

N/F JESTINE EDWARDS KNIGHT
PIN: 6-0013-01-006

N/F CHG-WESTGATE, LLC
PIN: 6-0013-01-005

EDGE OF PAVEMENT

ONLY BUS

MATCH LINE L108

MATCH LINE L107
MATCH LINE L109

SEE SHEET L114 FOR PLANT LIST AND ADDITIONAL NOTES.

SEE SHEET L115 FOR PLANTING DETAILS.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
License No. 001074 / LA-1000074
Christine Lockwood Gill
400 Regency Forest Drive Suite 120
Cary NC 27518
Temporary Landscape Architect
EXP DATE - 07/14/2021 Status: Active
Issue Date: 07/14/2020

ISSUED: 2021-02-10

DRAWING SCALES SHOWN BASED ON 24"x36" DRAWING

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & CAGLIANO, INC.

LS3P

321 WEST CONGRESS STREET SUITE 301
SAVANNAH, GEORGIA 31401
TEL. 912.695.2111 FAX 912.298.0206
WWW.LS3P.COM

GEORGIA REGISTERED CHRISTINE LOCKWOOD GILL No. 001074 LANDSCAPE ARCHITECT 11-10-21

REVISIONS:

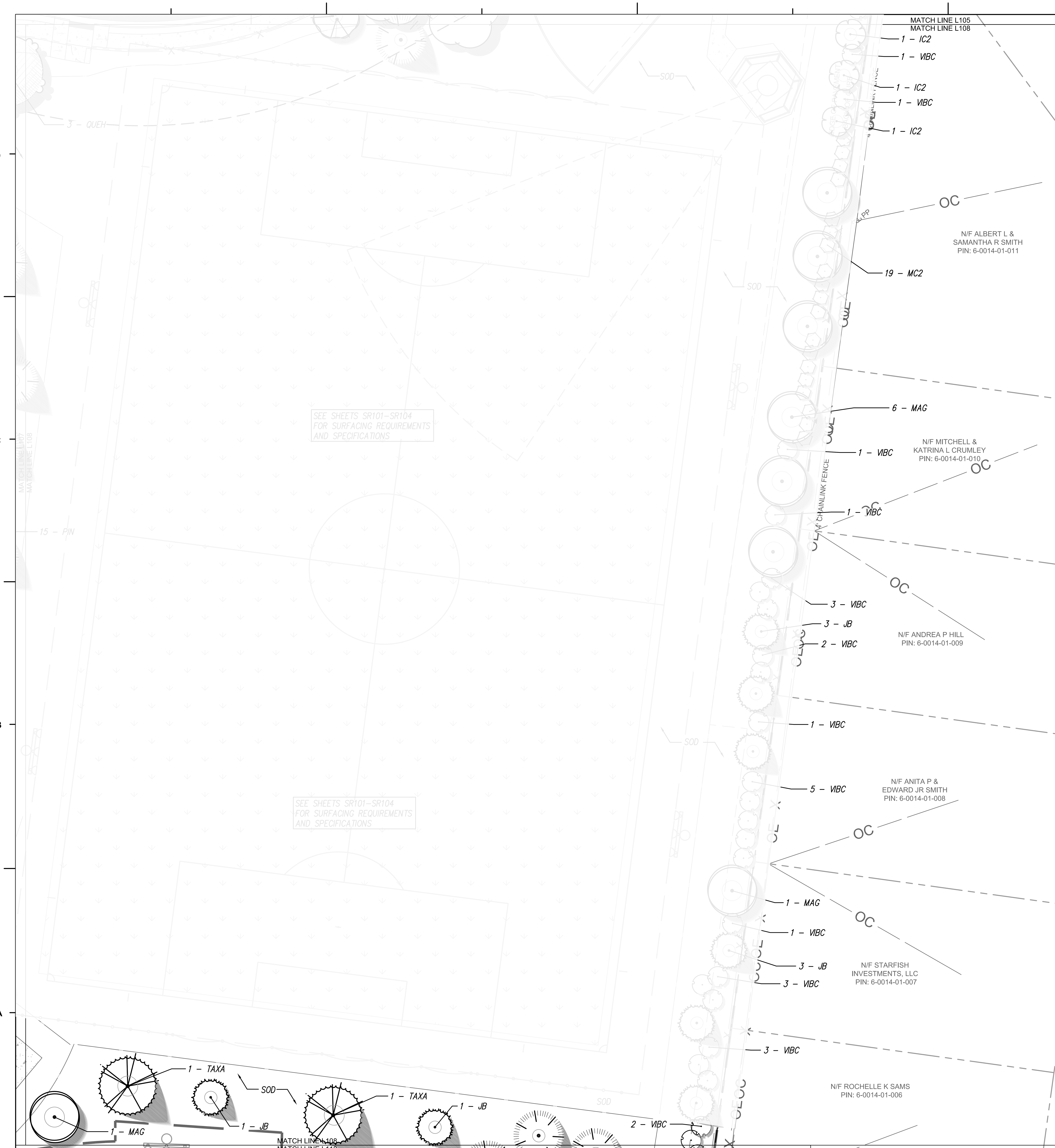
No.	Description	Date
5	Addendum 7	11/13/20
6	Post Bid Addendum 1	2/10/21

PROJECT: 5201-192070 (CLH:19-177)
DATE: 10/09/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

LANDSCAPE PLAN

L107

CONSTRUCTION SET



SEE SHEET L114 FOR PLANT LIST AND ADDITIONAL NOTES.

SEE SHEET L115 FOR PLANTING DETAILS.

10' WIDE LANDSCAPE BUFFER REQUIRES:
(1) 2-1/2" CAL. SHADE TREE PER 100 LF
(5) 1-1/2" CAL. E.G. UNDERSTORY TREE PER 100 LF
(15) LARGE E.G. SHRUBS PER 100 LF

1,406 LF REQUIRES:
(14) 2-1/2 CAL. SHADE TREES
(70) 1-1/2" CAL. E.G. UNDERSTORY TREES
(211) LARGE E.G. SHRUBS

PROVIDED:
(2) 2-1/2" CAL. SHADE TREES
(40) E.G. UNDERSTORY TREES (7' MAGNOLIA, 4' CEDAR & 4' HOLLY)
(141) LARGE E.G. SHRUBS

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
Christine Lockwood Gill
Temporary Landscape Architect

ISSUED: 2021-02-10

DRAWING SCALES SHOWN BASED ON 24"x36" DRAWING

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

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GEORGIA REGISTERED LANDSCAPE ARCHITECT CHRISTINE LOCKWOOD 2-10-21

REVISIONS:

No.	Description	Date
5	Addendum 7	11/13/20
6	Post Bid Addendum 1	2/10/21

PROJECT: 5201-192070 (CLH:19-177)
DATE: 10/09/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

LANDSCAPE PLAN

L108

CONSTRUCTION SET

MATCH LINE L107
MATCH LINE L109

N/F SDR INDUSTRIES, LLC
PIN: 6-0013-01-004

N/F RAWLS-ROYAL
INVESTMENTS, LLC
PIN: 6-0013-01-003

N/F FRANCIS EDWARDS
PIN: 6-0013-01-002

N/F
SOLOMON
WILSON
PIN: 6-0013-01-001

7 – DIS
1 – QUEH
8 – ILEV
2 – QUEV
1 – QUEH
8 – RU
1 – QUEH
11 – RU
8 – DIS
2 – ZEL
1 – QN
8 – ILEV
2 – ZEL
2 – MAG
3 – QUEH
SOD
SOD
4 – PIN
3 – LAGN
3 – QUEV
1 – QN
SOD
SOD
3 – PIN
SOD
1 – QUEV
1 – LAGN
3 – PIN
1 – LAGN

SEE SHEETS SR101–SR104
FOR SURFACING REQUIREMENTS
AND SPECIFICATIONS

SEE SHEETS SR101–SR104
FOR SURFACING REQUIREMENTS
AND SPECIFICATIONS

SEE SHEETS SR101–SR104
FOR SURFACING REQUIREMENTS
AND SPECIFICATIONS

SEE SHEET L114 FOR PLANT LIST AND ADDITIONAL NOTES.

SEE SHEET L115 FOR PLANTING DETAILS.

MATCH LINE L109
MATCH LINE L111

MATCH LINE L109
MATCH LINE L110

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
License No: LA-1000074
Christine Lockwood Hill
400 Regency Forest Drive Suite 120
Cary NC 27518
Temporary Landscape Architect
EXP DATE - 07/14/2021 Status: Active
Issue Date: 07/14/2020

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DRAWING SCALES SHOWN BASED ON 24"x36" DRAWING

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
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MECHANICAL & PLUMBING:
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SAVANNAH, GEORGIA 31401
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GEORGIA REGISTERED No. 1000074 LANDSCAPE ARCHITECT CHRISTINE LOCKWOOD HILL 2-10-21

REVISIONS:

No.	Description	Date
5	Addendum 7	11/13/20
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PROJECT: 5201-192070 (CLH:19-177)
DATE: 10/09/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

LANDSCAPE PLAN

L109

CONSTRUCTION SET

MATCH LINE L108
MATCH LINE L110

1 – LAGM
1 – MAG
SOD
4 – DIS
2 – ZEL
SOD
1 – VIBC
1 – MAG
1 – VIBC
1 – MAG
6 – PIN
N/F MONASHA S & WALTER B FRANCIS PIN: 6-0014-01-005
1 – VIBC
1 – MAG
3 – VIBC
SOD
1 – MAG
1 – MAG
N/F ASA & STEPHANIE NAILS PIN: 6-0014-01-004
3 – PIN
15 – MC2
1 – MAG
1 – MAG
N/F VERONICA WARD PIN: 6-0014-01-003
2 – MC2
1 – MAG
SOD
1 – MAG
3 – JB
N/F SALT POND PROPERTY, LLC PIN: 6-0014-01-002
13 – MC2
N/F CHRISTOPHER M POWERS PIN: 6-0014-01-001
SOD
14 – VIBC
1 – QUEV
4 – MC2
2 – JB
N/F EARL L STRIPLING PIN: 6-0017-01-033
1 – LAGM

SEE SHEETS SR101–SR104 FOR SURFACING REQUIREMENTS AND SPECIFICATIONS

10' WIDE LANDSCAPE BUFFER REQUIRES:
(1) 2–1/2" CAL. SHADE TREE PER 100 LF
(5) 1–1/2" CAL. E.G. UNDERSTORY TREE PER 100 LF
(15) LARGE E.G. SHRUBS PER 100 LF

1,406 LF REQUIRES:
(14) 2–1/2 CAL. SHADE TREES
(70) 1–1/2" CAL. E.G. UNDERSTORY TREES
(211) LARGE E.G. SHRUBS

PROVIDED:
(2) 2–1/2" CAL. SHADE TREES
(40) E.G. UNDERSTORY TREES (7' MAGNOLIA, 4' CEDAR & 4' HOLLY)
(141) LARGE E.G. SHRUBS

CRITICAL ROOT ZONE(TYP)

SEE SHEETS SR101–SR104 FOR SURFACING REQUIREMENTS AND SPECIFICATIONS

SOD
SOD
SOD

SEE SHEETS SR101–SR104 FOR SURFACING REQUIREMENTS AND SPECIFICATIONS

MATCH LINE L109
MATCH LINE L110

MATCH LINE L110
MATCH LINE L112

SEE SHEET L114 FOR PLANT LIST AND ADDITIONAL NOTES.

SEE SHEET L115 FOR PLANTING DETAILS.

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
License No: 001274 LA-1000074
Christine Lockwood Hall
400 Regency Forest Drive Suite 120
Cary NC 27518
Temporary Landscape Architect
EXP DATE - 07/14/2021 Status: Active
Issue Date: 07/14/2020

ISSUED: 2021-02-10

DRAWING SCALES SHOWN BASED ON 24"x36" DRAWING

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

LS3P

321 WEST CONGRESS STREET SUITE 301
SAVANNAH, GEORGIA 31401
TEL. 912.695.2111 FAX 912.298.0206
WWW.LS3P.COM

GEORGIA REGISTERED LANDSCAPE ARCHITECT CHRISTINE LOCKWOOD HALL
2-10-21

REVISIONS:

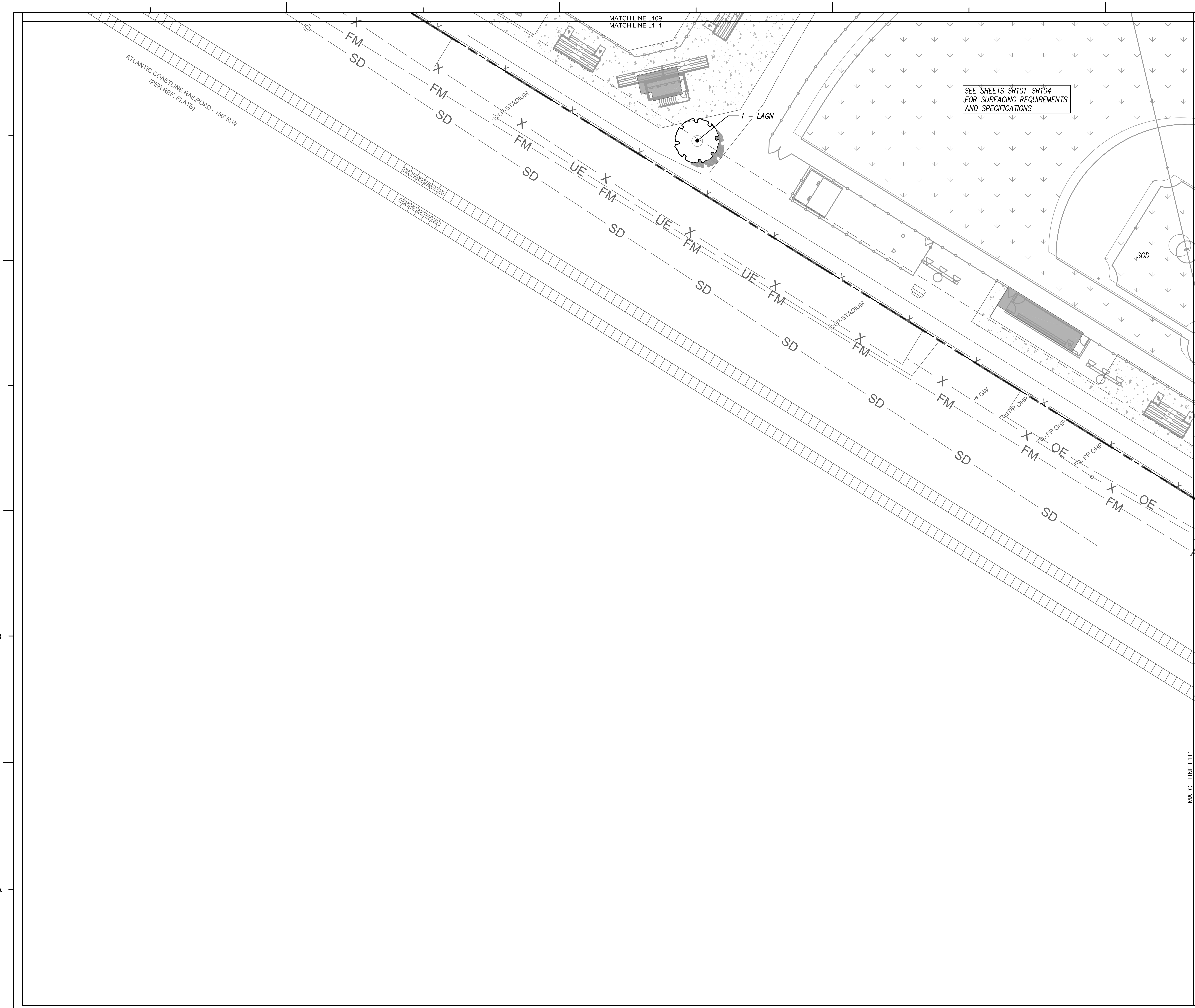
No.	Description	Date
5	Addendum 7	11/13/20
6	Post Bid Addendum 1	2/10/21

PROJECT: 5201-192070 (CLH:19-177)
DATE: 10/09/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

LANDSCAPE PLAN

L110

CONSTRUCTION SET



SEE SHEET L114 FOR PLANT LIST AND ADDITIONAL NOTES.

SEE SHEET L115 FOR PLANTING DETAILS.

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
License No. LA-T000074
Christine Lockwood Hof
Temporary Landscape Architect
EXP DATE - 07/14/2021 Status: Active
Issue Date: 07/14/2020

ISSUED: 2021-02-10

DRAWING SCALES SHOWN BASED ON 24"x36" DRAWING

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

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GEORGIA REGISTERED LANDSCAPE ARCHITECT CHRISTINE LOCKWOOD HOF
2-10-21

REVISIONS:

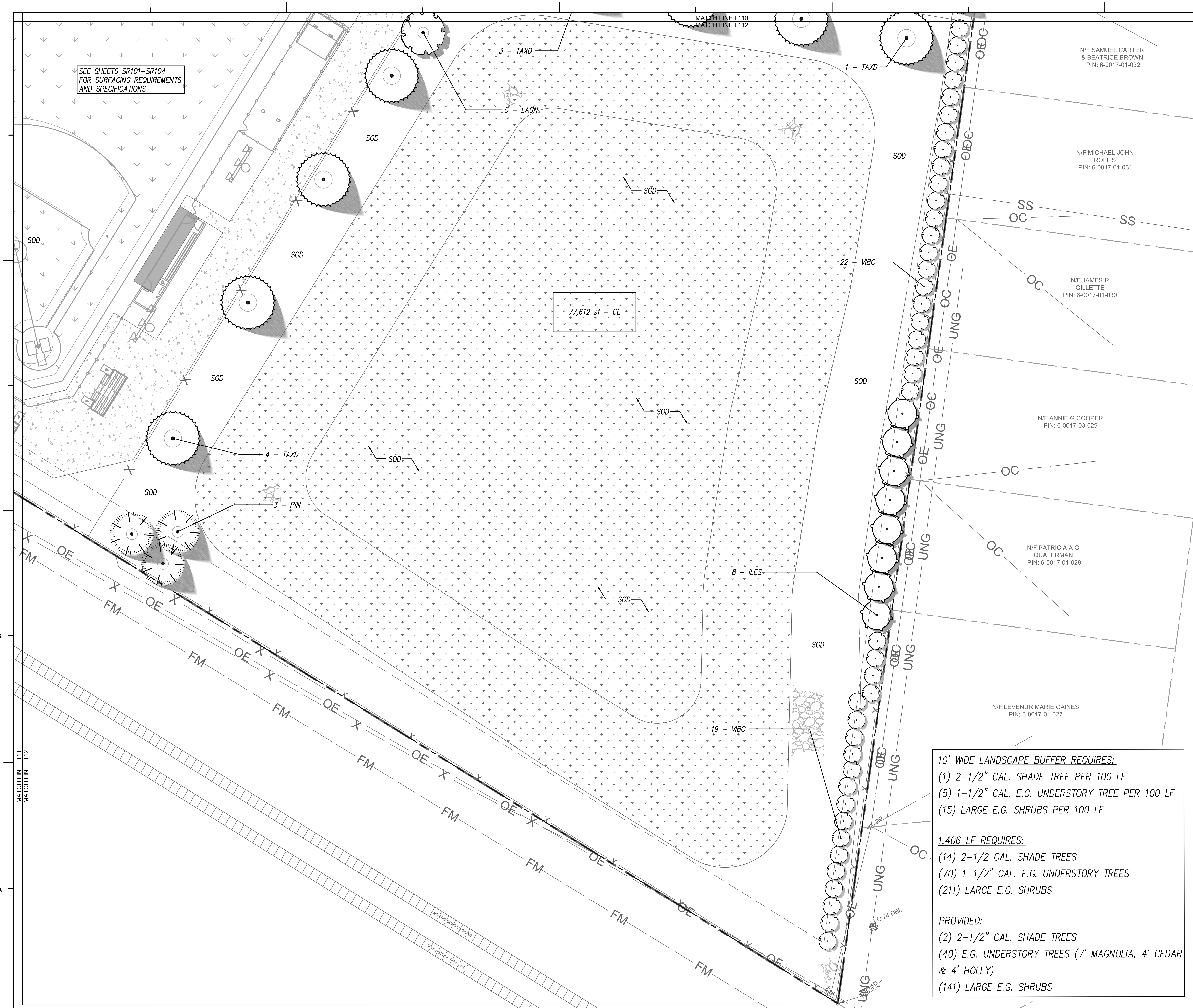
No.	Description	Date
5	Addendum 7	11/13/20
6	Post Bid Addendum 1	2/10/21

PROJECT: 5201-192070 (CLH:19-177)
DATE: 10/09/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

LANDSCAPE PLAN

L111

CONSTRUCTION SET



10' WIDE LANDSCAPE BUFFER REQUIRES:
(1) 2-1/2" CAL. SHADE TREE PER 100 LF
(5) 1-1/2" CAL. E.G. UNDERSTORY TREE PER 100 LF
(15) LARGE E.G. SHRUBS PER 100 LF

1,406 LF REQUIRES:
(14) 2-1/2 CAL. SHADE TREES
(70) 1-1/2" CAL. E.G. UNDERSTORY TREES
(211) LARGE E.G. SHRUBS

PROVIDED:
(2) 2-1/2" CAL. SHADE TREES
(40) E.G. UNDERSTORY TREES (7' MAGNOLIA, 4' CEDAR & 4' HOLLY)
(141) LARGE E.G. SHRUBS

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01 GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
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STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

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GEORGIA REGISTERED LANDSCAPE ARCHITECT CHRISTINE LOCKWOOD 2-10-21

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
Christine Lockwood Gill
Temporary Landscape Architect

REVISIONS:

No.	Description	Date
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PROJECT: 5201-192070 (CLH:19-177)
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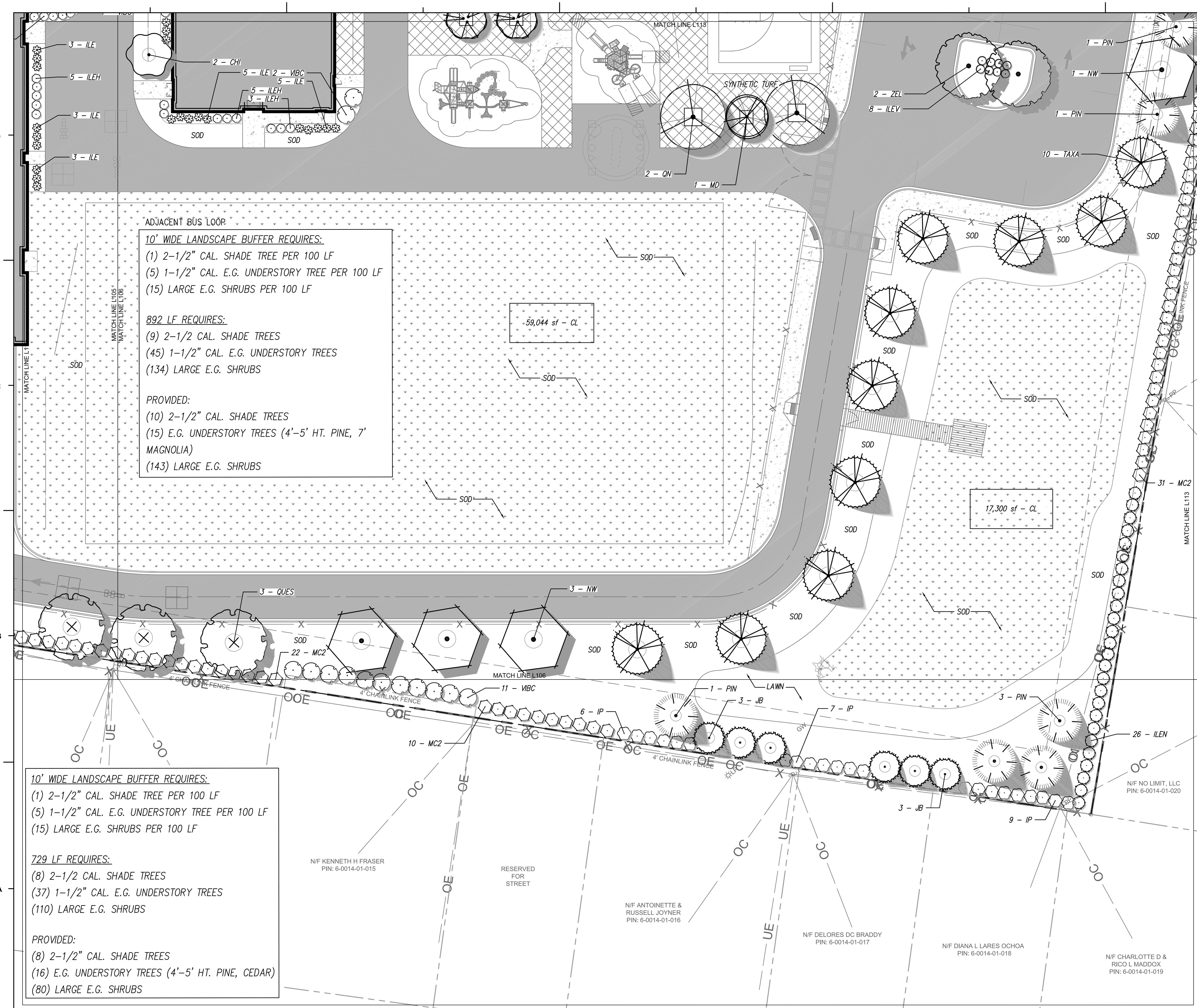
LANDSCAPE PLAN

L112

ISSUED: 2021-02-10
DRAWING SCALES SHOWN BASED ON 24"x36" DRAWING

CONSTRUCTION SET



ADJACENT BUS LOOP

10' WIDE LANDSCAPE BUFFER REQUIRES:
(1) 2-1/2" CAL. SHADE TREE PER 100 LF
(5) 1-1/2" CAL. E.G. UNDERSTORY TREE PER 100 LF
(15) LARGE E.G. SHRUBS PER 100 LF

892 LF REQUIRES:
(9) 2-1/2 CAL. SHADE TREES
(45) 1-1/2" CAL. E.G. UNDERSTORY TREES
(134) LARGE E.G. SHRUBS

PROVIDED:
(10) 2-1/2" CAL. SHADE TREES
(15) E.G. UNDERSTORY TREES (4'-5' HT. PINE, 7' MAGNOLIA)
(143) LARGE E.G. SHRUBS

10' WIDE LANDSCAPE BUFFER REQUIRES:
(1) 2-1/2" CAL. SHADE TREE PER 100 LF
(5) 1-1/2" CAL. E.G. UNDERSTORY TREE PER 100 LF
(15) LARGE E.G. SHRUBS PER 100 LF

729 LF REQUIRES:
(8) 2-1/2 CAL. SHADE TREES
(37) 1-1/2" CAL. E.G. UNDERSTORY TREES
(110) LARGE E.G. SHRUBS

PROVIDED:
(8) 2-1/2" CAL. SHADE TREES
(16) E.G. UNDERSTORY TREES (4'-5' HT. PINE, CEDAR)
(80) LARGE E.G. SHRUBS

SEE SHEET L114 FOR PLANT LIST AND ADDITIONAL NOTES.

SEE SHEET L115 FOR PLANTING DETAILS.

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
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ISSUED: 2021-02-10
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SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM
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GEORGIA REGISTERED LANDSCAPE ARCHITECT
CHRISTINE LOCKWOOD
2-10-21

REVISIONS:

No.	Description	Date
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PROJECT: 5201-192070 (CLH:19-177)
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DRAWN BY: GSH, ST
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LANDSCAPE PLAN

L113

CONSTRUCTION SET

GENERAL NOTES–LANDSCAPING

1. LOCATE ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF PLANT MATERIAL. NOTIFY OWNER OF ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THOSE SHOWN ON THE PLAN.
2. VERIFICATION OF TOTAL QUANTITIES AS SHOWN ON THE PLANT LIST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE TOTAL QUANTITIES SHALL BE AS SHOWN ON THE PLAN.
3. ALL PLANT MATERIAL SHALL CONFORM WITH THE STANDARDS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND THE WRITTEN SPECIFICATIONS.
4. ALL PLANT MATERIAL (SHRUBS/TREES) SHALL BE A MINIMUM DISTANCE OF 4 1/2 FEET FROM BACK OF CURB, EXCEPT ALONG ANY NEW WALLS ADJACENT TO PARKING WHERE CURB STOPS WILL BE USED.
5. ALL PLANT GROUPINGS SHALL BE MULCHED AS ONE BED. 3" OF TRIPLE SHREDDED HARDWOOD MULCH SHALL BE USED AROUND ALL PLANTINGS.
6. APPLY PRE–EMERGENT HERBICIDE TO ALL NEW PLANTING BEDS AT MANUFACTURER'S RECOMMENDED RATE PRIOR TO INSTALLATION OF MULCH.
7. ESTABLISH POSITIVE DRAINAGE IN ALL PLANTING BEDS AND AWAY FROM BUILDINGS.
8. DO NOT INSTALL PLANT MATERIAL IN IMPERVIOUS SOILS, (i.e. HOLES WHICH, WHEN FILLED WITH WATER, DO NOT COMPLETELY DRAIN WITHIN TWO HOURS.) SEE SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.
9. LAWN AREAS SHALL BE SEEDED WITH SUNSTAR BERMUDA GRASS 95% COVERAGE (BASED ON A PER SQUARE YARD SAMPLE) SHALL BE ATTAINED PRIOR TO FINAL INSPECTION. SEE DETAIL SHEET FOR RATES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. CONTACT THE LANDSCAPE ARCHITECT FOR INSPECTION 48 HOURS IN ADVANCE OF THE SCHEDULED SITE VISIT AND AT THE FOLLOWING INTERVALS:
    - 10.1. REVIEW OF GRADING PRIOR TO PLANT AND LAWN INSTALLATION
    - 10.2. REVIEW OF PLANT MATERIAL PRIOR TO INSTALLATION.
    - 10.3. ONE SUBSTANTIAL COMPLETION MEETING FOR PLANT INSTALLATION.
    - 10.4. ONE FINAL INSPECTION FOR ALL SEEDING/PLANTING OPERATIONS.
11. THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION PRIOR TO THE CERTIFICATE OF OCCUPANCY (CO) IS SCHEDULED. THE FENCING SHALL BE REMOVED PRIOR TO FINAL SITE INSPECTION FOR THE CO.
12. LANDSCAPE SUB–CONTRACTOR (UNDER GC CONTRACT) SHALL BE RESPONSIBLE FOR WATERING ALL PLANTS AND LAWN AREAS AT HIS COST FROM HIS OWN WATER SOURCE INCLUDING DURING PERIODS OF DROUGHT UNTIL THE PLANTS AND LAWN MEET FINAL COMPLETION. PLANT MATERIALS OR AREAS OF GRASS WHICH PERISH SHALL BE RE–ESTABLISHED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
13. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL EQUIPMENT & SUBCONTRACTORS AWAY FROM SEEDED AREAS. IF DAMAGE OCCURS, THROUGH NO FAULT OF THE OWNER, AREAS SHALL BE REGRADED AND RESEEDED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL WATER AND MAINTAIN THOSE AREAS UNTIL THEY ARE AT 95% COVERAGE AT FINAL COMPLETION.
14. SUBSTITUTIONS OF PLANT MATERIAL SHALL ONLY BE ACCEPTED 60 DAYS PRIOR TO COMMENCEMENT OF PLANTING OPERATIONS. SUBSTITUTION REQUESTS MUST BE IN WRITING AND WILL ONLY BE ACCEPTED FOR LACK OF AVAILABILITY REASONS WHICH CAN BE SUBSTANTIATED OR FOR SUPERIOR STOCK SUBSTITUTIONS.
15. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT TO REVIEW GRADING ONE WEEK PRIOR TO SEEDING, IF THE LANDSCAPE CONTRACTOR AND LANDSCAPE ARCHITECT FIND GRADING UNACCEPTABLE FOR FINAL SEEDING, LANDSCAPE CONTRACTOR SHALL BRING IT TO THE ATTENTION OF THE GENERAL CONTRACTOR. LANDSCAPE CONTRACTOR SHALL NOT PROCEED WITHOUT APPROVAL BY LANDSCAPE ARCHITECT.
16. IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.
17. INSTALL PERMANENT SEEDING WITHIN CONSTRUCTION LIMITS OF PROJECT. SEE SHEET L115 FOR ADDITIONAL INFORMATION.
18. ALL AREAS LABELED AS SOD SHALL BE TIFWAY 419 BERMUDAGRASS SOD.

SYNTHETIC TURF, SEE SHEET L115 FOR DETAILS AND ADDITIONAL INFORMATION.

SEE SHEET L115 FOR DETAILS AND ADDITIONAL INFORMATION.

GRAPHIC SYMBOLS SUPERSEDE WRITTEN QUANTITIES WHERE DISCREPANCIES OCCUR.

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE		REMARKS	
CHI	37	Chionanthus retusus Chinese Fringe Tree	B&B	MULTI–TRUNK	7'–8' HT.		MULTI–TRUNK, MATCHED	
GIN	13	Ginkgo biloba 'Golden Globe' Golden Globe Ginkgo	B&B	2.5"	12'–14' HT.		STRAIGHT TRUNK, MATCHED	
IC2	5	Ilex x 'Conaf' Oak Leaf Holly	Container		4–5' HT		MATCHED SPECIMENS	
ILES	27	Ilex x attenuata 'Savannah' Savannah Holly	CONT.	–	4–5' HT		MATCHED	
JB	25	Juniperus virginiana 'Burkii' Burk Red Cedar	Container		4–5' HT		MATCHED SPECIMENS	
LAGM	40	Lagerstroemia x 'Muskogee' Lavender Crape Myrtle Multi–Trunk	CONT./B&B	MULTI–TRUNK	7'–8' HT.		3–5 TRUNKS, MATCHED	
LAGN	22	Lagerstroemia x 'Natchez' White Crape Myrtle Multi–Trunk	CONT./B&B	MULTI–TRUNK	7'–8' HT.		3–5 TRUNKS, MATCHED	
MAG	44	Magnolia grandiflora 'Little Gem' Dwarf Southern Magnolia	CONT./B&B		7'–8' HT.		MATCHED SPECIMENS	
MD	9	Magnolia x loebneri 'Dr. Merrill' Magnolia	B&B	1 1/2"	7'–8' HT.		STRAIGHT TRUNK, MATCHED	
NW	9	Nyssa sylvatica 'Wildfire' Black Gum	B&B	2.0"	10–12' HT.		STRAIGHT TRUNK, MATCHED	
PIN	90	Pinus taeda Loblolly Pine	CONT./B&B	–	6–7' HT		Loosely staked	
QUEH	14	Quercus hemisphaerica Darlington Oak	B&B	2.5"	10–12' HT.		STRAIGHT TRUNK, MATCHED	
QUED	37	Quercus laurifolia 'Darlingtonia' Darlington Oak	B&B	2.5"	12'–14' HT.		MATCHED	
QN	14	Quercus nuttallii Nuttall Oak	B&B	2.5"	12'–14' HT.		STRAIGHT TRUNK, MATCHED	
QUES	9	Quercus shumardii Shumard Red Oak	B&B	2.5"	12'–14' HT.		STRAIGHT TRUNK, MATCHED	
QUEV	40	Quercus virginiana Southern Live Oak	B&B	2.5"	12'–14' HT.		STRAIGHT TRUNK, MATCHED	
TAXA	15	Taxodium ascendens Pond Cypress	B&B	2.0"	10–12' HT.		STRAIGHT TRUNK, MATCHED	
TAXD	8	Taxodium distichum Bald Cypress	B&B	2.0"	10–12' HT.		STRAIGHT TRUNK, MATCHED	
UE	20	Ulmus parvifolia 'Emer II' 'Emer II' Allee Elm	B&B	2.0"	10–12' HT.		STRAIGHT TRUNK, MATCHED	
ZEL	14	Zelkova serrata 'Village Green' Village Green Zelkova	B&B	2.5"	12'–14' HT.		STRAIGHT TRUNK, MATCHED	

5 SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	–	SIZE		REMARKS	
CB	15	Callicarpa americana American Beautyberry	B&B					
CO2	28	Cephalanthus occidentalis Buttonbush	CONT.		15–18" HT.			
DIS	120	Distylium x 'Vintage Jade' Vintage Jade Distylium	CONT.	–	12–15" HT.		SPACED 4' O.C.	
GR	19	Gardenia jasminoides 'Radicans' Cape Gardenia	CONT.	–	15–18" SPD		SPACED 4' O.C.	
ILE	118	Ilex cornuta 'Carissa' Carissa Holly	CONT.	–	15–18" SPD		SPACED 4' O.C.	
ILEN	63	Ilex cornuta 'Needlepoint' Needlepoint Holly	CONT.	–	18–24" HT.		SPACED 6' O.C.	
ILEH	50	Ilex crenata 'Hoogendorn' Hoogendorn Japanese Holly	CONT.	–	15–18" HT.		FULL PLANTS	
ILEV	120	Ilex vomitoria 'Stokes Dwarf' Dwarf Yaupon	CONT.	–	12–15" SPD		SPACED 4' O.C.	
IP	22	Illicium parviflorum 'Florida Sunshine' Florida Sunshine Illiciem	CONT.	–	18–24" HT.		SPACED 6' O.C.	
IV2	31	Itea virginica Virginia Sweetspire	CONT.	3 GAL.	8"–12" HT.			
JUNP	67	Juniperus chinensis 'Expansa' Parson's Juniper	CONT.	–	15–18" SPD		FULL PLANTS	
MC2	175	Myrica cerifera Wax Myrtle	CONT.	–	24–30" HT.		SPACED 6' O.C.	
RU	62	Rhaphiolepis umbellata 'Snow White' Yedda Hawthorn	CONT.	–	12–15" HT.		SPACED 3.5' O.C.	
SPI	59	Spiraea japonica 'Goldmound' Goldmound Spirea	CONT.	–	15–18" HT.		SPACED 3' O.C.	
VBC	193	Viburnum awabuki 'Chindo' Chindo Viburnum	CONT.	–	24–30" HT.		SPACED 8' O.C.	

5 FERNS	QTY	BOTANICAL / COMMON NAME	CONT	–	SIZE		REMARKS	
CYR	26	Cyrtomium falcatum Holly Fern	CONT.	1 GAL.	FULL			
DRYL	29	Dryopteris ludoviciana Southern Shield Fern	CONT.	1 GAL.	FULL		18" O.C.	

GRASSES	QTY	BOTANICAL / COMMON NAME	CONT	–	SIZE		REMARKS	
MC	55	Muhlenbergia capillaris Pink Muhly	CONT.	#1	15–18" HT.			

PERENNIAL	QTY	BOTANICAL / COMMON NAME	CONT	–	SIZE		REMARKS	
VN	7	Vernonia noveboracensis Coman Ironweed	CONT.	1 GAL.	FULL			

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	–	SIZE	SPACING	REMARKS
	CL	166,092 sf	Cynodon dactylon 'Tifway 419' Tifway 419 Bermuda Grass	Sod				
	LIR	216	Liriope muscari 'Ingwersen' Ingwersen Classic Blue Liriope	CONT.	–	3–5 BIBS	15" o.c.	SPACED 15" O.C.

5 GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	–	SIZE	SPACING	REMARKS
	PS	72	Panicum virgatum 'Shenandoah' Shenandoah Switch Grass	CONT.	1 GAL.		24" o.c.	
	PH	71	Pennisetum alopecuroides 'Hameln' Hameln Fountain Grass	CONT.	1 GAL.		24" o.c.	

10' LANDSCAPE STRIPS ALONG RIGHTS OF WAYS:

AUGUSTA AVENUE: SECTION IN FRONT OF STADIUM
397 LF
REQUIRES:
(8) 2–1/2" CAL. SHADE TREES
(16) 1–1/2" CAL. UNDERSTORY TREES

PROVIDED:
(8) 2–1/2" CAL. SHADE TREES
(13) 7'–8' HT. UNDERSTORY TREES

AUGUSTA AVENUE: SECTION IN FRONT OF SCHOOL
991 LF (EXCLUDING DRIVE)
REQUIRES:
(20) 2–1/2" CAL. SHADE TREES
(40) 1–1/2" CAL. UNDERSTORY TREES

PROVIDED:
(21) 2–1/2" CAL. SHADE TREES
(18) 7'–8' HT. UNDERSTORY TREES

PRISCILLA D. THOMAS WAY: SECTION IN FRONT OF STADIUM
810 LF (EXCLUDING DRIVE)
REQUIRES:
(17) 2–1/2" CAL. SHADE TREES
(35) 1–1/2" CAL. UNDERSTORY TREES

PROVIDED:
(18) 2–1/2" CAL. SHADE TREES
(15) 7'–8' HT. UNDERSTORY TREES

COOPER LANE: SECTION IN FRONT OF STADIUM
281 LF
REQUIRES:
(6) 2–1/2" CAL. SHADE TREES
(12) 1–1/2" CAL. UNDERSTORY TREES

PROVIDED:
(0) 2–1/2" CAL. SHADE TREES
(0) 7'–8' HT. UNDERSTORY TREES

PRISCILLA D. THOMAS WAY: SECTION IN FRONT OF SCHOOL
830 LF (EXCLUDING DRIVE)
REQUIRES:
(17) 2–1/2" CAL. SHADE TREES
(34) 1–1/2" CAL. UNDERSTORY TREES

PROVIDED:
(19) 2–1/2" CAL. SHADE TREES
(7) 7'–8' HT. UNDERSTORY TREES– (10) 6'–7' HT. PINES

PRISCILLA D. THOMAS WAY: SECTION IN FRONT OF BALL FIELDS
1,220 LF (EXCLUDING DRIVE)
REQUIRES:
(25) 2–1/2" CAL. SHADE TREES
(49) 1–1/2" CAL. UNDERSTORY TREES

PROVIDED:
(18) 2–1/2" CAL. SHADE TREES
(7) 7'–8' HT. UNDERSTORY TREES– (4) 6'–7' HT. PINES

SPECIMEN TREE REPLACEMENT

NUMBER OF SPECIMEN TREES REMOVED: PINES 30" OR LARGER

4– 30" PINE
1– 40" PINE
HARDWOODS 27" OR LARGER
1– 48" GUM
1– 28" LA
2– 28" GUM
1– 26" WILLOW OAK
1– 38" WILLOW OAK
1– 30" GUM
1– 28" WILLOW OAK
1– 36" GUM
1– 60" LAUREL OAK

REQUIRED SPECIMEN TREE REPLACEMENT:
510 TOTAL INCHES / 3" PER TREE = (170) 3" CAL. TREES

SPECIMEN TREE REPLACEMENT: (0) 3" CAL. TREES

TREE SITE DENSITY

REQUIRED: 16 UNITS PER ACRE= 680 UNITS
TOTAL ACRES: =43.35 ACRES
–AREA OF BUFFERS (3,750 LFx 10' WIDTH)=0.86 ACRES
NET AREA: =42.44 ACRES

PROVIDED: 389.4 UNITS PER ACRE
EXISTING TREE UNITS:
85" OAK 39.4
NEW TREES:
2–1/2" CAL. TREES (0.5 x 186 TREES) =186
1–1/2" CAL. TREES (0.4 x 164 TREES) =164
TOTAL =389.4 UNITS

LANDSCAPE CALCULATIONS INFORMATION

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
License No: 001074 LA-1000074
Christine Lockwood Gill
400 Regency Forest Drive Suite 120
Cary NC 27518
Temporary Landscape Architect
EXP DATE - 07/14/2021 Status: Active
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ISSUED: 2020-11-13

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

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NORTH CAROLINA 1699 REGISTERED LANDSCAPE ARCHITECT GARY R. PIERCE 11-13-20

REVISIONS:

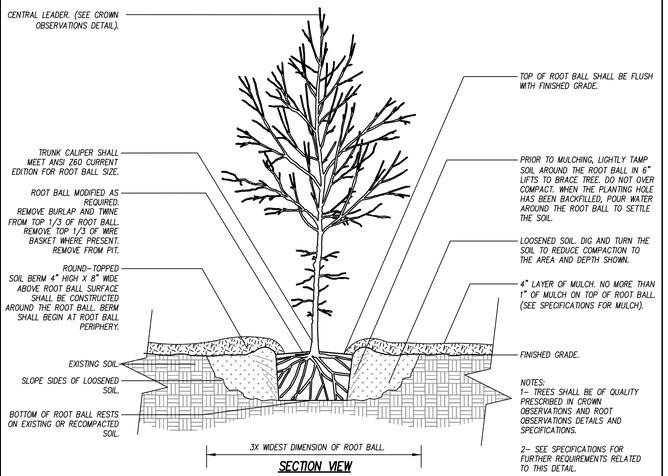
No.	Description	Date
5	Addendum 7	11/13/20

PROJECT: 5201-192070 (CLH:19-177)
DATE: 11/13/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

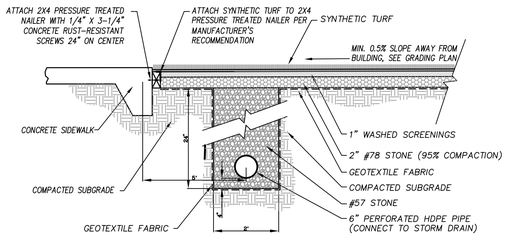
LANDSCAPE PLAN

L114

CONSTRUCTION SET



TREE W/BERM (EXISTING SOIL NOT MODIFIED) N.T.S.



NOTES:
1. STYLE NAME: ET68 BY LAZY GRASS LLC
2. TWO YARN SYSTEM:
YARN #1 – MATTEX MN RELAX OMEGA
COLOR: FIELD GREEN/OLIVE
YARN #2 – MATTEX TEXTURIZED THATCH
COLOR: FIELD GREEN/JUTE
3. TOTAL YARN FACE WT: 68 OZ./SQ YD
4. TOTAL PRODUCT WT: 95 OZ./SQ YD
5. ROLL WIDTHS: 15'
6. INSTALLATION: PER MANUFACTURER'S RECOMMENDATION

SYNTHETIC TURF N.T.S.

SEEDBED PREPARATION

1. CHISEL ALL CUT GRADED OR COMPACTED AREAS TO A MINIMUM DEPTH OF 8".
2. DISC ALL AREAS TO RECEIVE GRASS TO A MINIMUM OF 8 INCHES, MIX AND AMEND WITH 3 INCHES OF WELL SCREENED TOPSOIL. ON-SITE TOPSOIL MAY BE USED IN PLACE OF IMPORTED TOPSOIL, IF WELL-SCREENED AND DRY PRIOR TO APPLICATION IN ACCORDANCE WITH SPECIFICATION SECTION 329000.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND PHOSPHATE UNIFORMLY AS PER SPECIFICATIONS AND MIX WELL WITH SOIL.
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED TO A 6 INCHES DEPTH.
6. SEED AT RATE SPECIFIED OR AS NEEDED TO ACHIEVE AND MAINTAIN A THICK HEALTHY GROUND COVERAGE.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH. BEGIN THOROUGH WATERING OF GRASSED AREAS IMMEDIATELY UPON INSTALLATION. DO NOT ALLOW GRASSED AREAS TO BECOME EXCESSIVELY DRY.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS AS NEEDED.
9. IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

LIME & FERTILIZATION SCHEDULE

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY A MINIMUM 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND A MINIMUM 500 LB/ACRE 10-10-10 FERTILIZER, AS NEEDED TO ESTABLISH 95% COVERAGE (AS DETERMINED ON A PER SQUARE YARD BASIS) PRIOR TO SUBSTANTIAL COMPLETION. CONTRACTOR TO SUBMIT A COPY OF ALL SOIL REPORTS TO OWNER UPON RECEIPT.

SURFACE STABILIZATION REQUIREMENTS

1. PERMANENT OR TEMPORARY GROUND COVER SHALL BE PROVIDED OVER ALL DISTURBED AREAS OF THE SITE AS SOON AS POSSIBLE, HOWEVER, NO LATER 21 DAYS AFTER CONSTRUCTION ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED DURING ANY PHASE OF WORK.
2. USE EXCELSIOR MATTING OR OTHER APPROVED CHANNEL LINING MATERIAL TO COVER THE BOTTOM OF CHANNELS.
3. APPLY 4000 LB/ACRE(2 TONS LB/AC) GRAIN STRAW OVER SEEDED AREAS AND ANCHOR STRAW CRIMPING WITH HAND OR MECHANICAL CRIMPER 8" MAX. SPACING, ASPHALT TACKING OR OTHER APPROVED METHOD. ASPHALT TACKING SHALL BE 400 GAL/ACRE (9 GAL/1000 SF).
4. MULCH AND ANCHORING MATERIALS MUST NOT BE ALLOWED TO WASH DOWN SLOPES AND CLOG DRAINAGE DEVICES.

PERMANENT SEEDING SCHEDULE– BERMUDA SEED

LAWN AREAS AND ALL DISTURBED AREAS

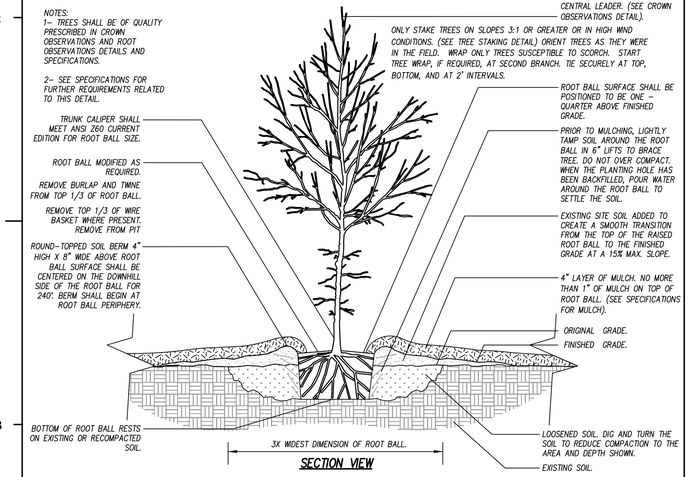
DATE	TYPE	PLANTING RATE
APR 15– AUG 15**	HULLED SUNSTAR BERMUDA AND GERMAN MILLET (NURSE CROP)	85 LBS./ACRE* 25 LBS./ACRE*
AUG 15 – APR 15	TEMPORARY SEEDING APPLIES**	

* OR AS REQUIRED TO ACHIEVE 95% COVERAGE AS DETERMINED ON A PER SQUARE YARD BASIS PRIOR TO SUBSTANTIAL COMPLETION.

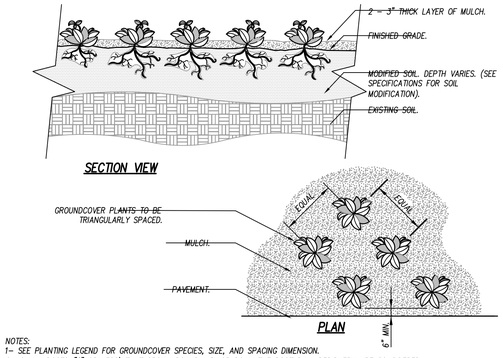
** WHEN SEEDING MUST TAKE PLACE OUT-OF-SEASON FOR PERMANENT GRASS, APPROPRIATE TEMPORARY SEEDING SHALL BE DONE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERMANENT SEEDING AS SPECIFIED IN SEASON AT NO ADDITIONAL COST TO OWNER.

LAWN MAINTENANCE:
1. SEE SPEC SECTION 329000 FOR LAWN MAINTENANCE REQUIREMENTS.
2. LAWN MUST BE AT 95% COVERAGE AT SUBSTANTIAL COMPLETION REVIEW TO BE ACCEPTED.
3. IF NOT AT 95%, SUBSTANTIAL COMPLETION WILL BE DELAYED UNTIL THE FOLLOWING GROWING SEASON.
4. DO NOT ALLOW NURSE CROP TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE THE PERMANENT SEEDING MAY BE SHADED OUT.

SEEDING INFORMATION N.T.S.

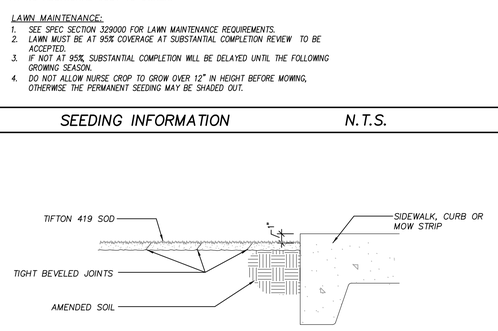


TREE IN POORLY DRAINED SOIL N.T.S.

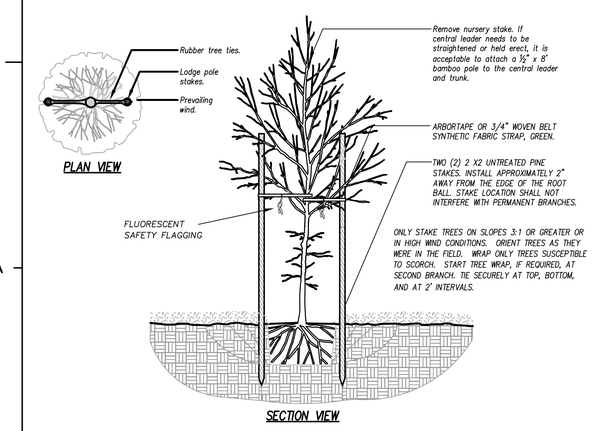


NOTES:
1- SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES, SIZE, AND SPACING DIMENSION.
2- SMALL ROOTS (¼" OR LESS) THAT GROW AROUND, UP, OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING.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

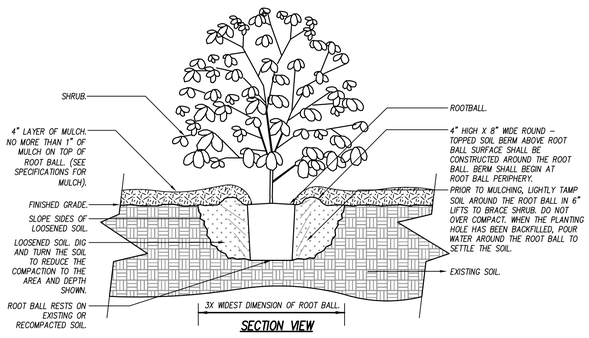
GROUNDCOVER N.T.S.



SOD INSTALLATION N.T.S.

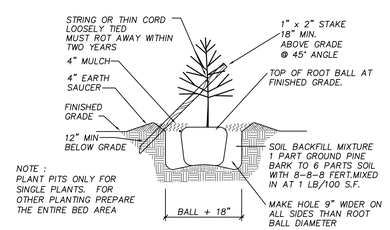


TREE STAKING DETAIL N.T.S.



NOTES:
1– SHRUBS SHALL BE OF QUALITY PRESCRIBED IN THE ROOT OBSERVATIONS DETAIL AND SPECIFICATIONS.
2–SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

SHRUB – UNMODIFIED SOIL N.T.S.



NOTE :
PLANT PITS ONLY FOR SINGLE PLANTS. FOR OTHER PLANTING PREPARE THE ENTIRE BED AREA

TYPICAL PINE PLANTING N.T.S.

SAVANNAH-CHATHAM COUNTY PUBLIC SCHOOL SYSTEM

SCCPSS

RFP C24-01
GROVES ATHLETIC FIELD & FIELDHOUSE

PROJECT CONSULTANTS:
LANDSCAPE ARCHITECT:
CLH DESIGN, P.A.

CIVIL ENGINEERS:
MOFFATT & NICHOL
CHA CONSULTING, INC.

STRUCTURAL ENGINEER:
THARPE ENGINEERING GROUP, LLC

MECHANICAL & PLUMBING:
DULOHERY, WEEKS & GAGLIANO, INC.

LS3P

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SAVANNAH, GEORGIA 31401
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REVISIONS:

No.	Description	Date
5	Addendum 7	11/13/20

PROJECT: 5201-192070 (CLH:19-177)
DATE: 11/13/2020
DRAWN BY: GSH, ST
CHECKED BY: CLH, ZRP

STATE OF GEORGIA
BRAD RAFFENSPERGER, Secretary of State
Georgia Board of Landscape Architects
License No: 001474 PLA-1000074
Christine Lockwood Gill
400 Regency Forest Drive Suite 420
Cary NC 27518
Temporary Landscape Architect
EXP DATE - 07/14/2021 Status: Active
Issue Date: 07/14/2020

ISSUED: 2020-11-13

LANDSCAPE DETAILS

L115

CONSTRUCTION SET