

WILLIAM J. GRIGGS CENTER PHASE II POOL AND PAVILION ROUGH GRADING - PACKAGE NO.1

FOR
TROUP COUNTY PARKS AND RECREATION

716 GLENN ROBERTSON DRIVE LAGRANGE, GEORGIA

(ARCHITECTURAL AND CIVIL)

PROJECT NUMBER 2312-A

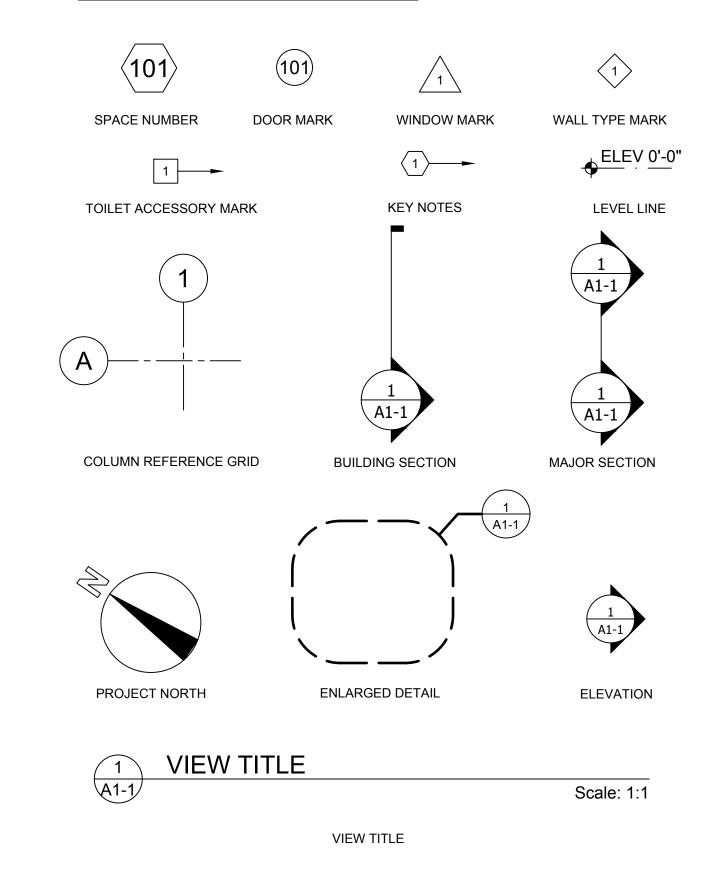
FOR PERMIT AND BIDDING

03 AUGUST 2023

ABBREVIATIONS:

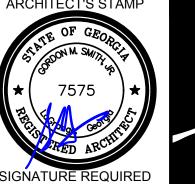
@	At	JAN.	Janitor
A.B.	Anchor Bolt	J.B.	Joist Bearing
A.C.	Air Conditioner	JST.	Joist
ACOUST.	Acoustical	J.T.	Joist
ALUM.	Aluminum		
ARCH.	Architectural		
A.T.	Acoustical Tile	LAV.	Lavatory
		LLV.	Long Leg Vertical
B.C.	Bottom of Curb		
BLK.	Block	MAS.; MSRY	Masonry
BOTT.	Bottom	MCS	Modular Cabinet System
		MECH.	Mechanical
		MIN.	Minimum
CER.	Ceramic		
CHM.	Custom Hollow Metal		
C.I.	Curb Inlet	N	North
CLO.	Centerline Closet	NA N.I.C.	Not Applicable Not In Contract
CMU.	Concrete Masonry Unit	N.I.C. NTS	Not to Scale
C.O.	Clean Out	1410	Not to ocule
COL.	Column		
CONC.	Concrete	O.C.	On Center
CONST.	Construction	OPP.	Opposite
CONT.	Continuous		
C.T.	Ceramic Tile	D.	D
CHR.	Coat & Hat Rack	PL	Plate
C.J.	Control Joint	PT PEJ	Pressure Treated
		PLAST	Premolded Expansion Plaster
D: DIAM.	Diameter	PSF	Pounds Per Square Foot
DF	Drink Fountain	PSI	Pounds Per Square Inch
DI	Drain Inlet		•
DN	Down		
DRIV.	Driver	R	Radius
DS	Downspout	REF	Refrigerator
DWGS. DWLS.	Drawings Dowels	REQ'D	Required
DWLS. DR	Dowels Drawer	RL RM	Roof Level Room
DIX	Diawei	RT	Resilient Tile
		RW	Regular Weight
E.J.; EXP. JT.	Expansion Joint		Round
EL.; ELEV	Elevation		
EQ	Equal		_
EQUIP.	Equipment	SQ.	Square
E.F.I.S.	Exterior Finish Insulation System	SIM SLV	Similar Short Leg Vertical
	insulation System	SLV S.M.	Sheet Metal
		STL	Steel
F.E.	Fire Extinguisher	STO.; STOR	Storage
F.H.	Fire Hose	STRUCT.	Structural
FES	Fire Extinguisher Sign	SH	Shelves
FIN.	Finish		
FLEX.	Flexible	TO	Tanahan Cabinat
FLR. FT.	Floor Foot	TC T.C.	Teacher Cabinet Top of Curb
FTG.	Footing	T.C.	Turn Down
110.	roomig	TFF	Top of Finished Floor
		TFS	Top of Finished Slab
GA	Gauge	T & G	Tongue and Groove
G.C.	General Contractor	T.M.	Transitional Material
GYP. BRD.	Gypsum Wallboard	TP	Top of Pavement
		T/S	Top of Steel
Н	Hoight	TYP.	Typical
HC	Height Handicapped	U.N.O.	Unless Noted Otherwise
HCM	Hollow Concrete Masonry	0.11.0.	Critical Noted Curer Wide
HORIZ.	Horizontal		
HW	Hand Wash	V.C.J.	Veneer Control Joint
		VERT.	Vertical
LD	la side Die	VRS	Varies
I.D.	Inside Diameter	VWC	Vinyl Wall Covering
IND. INV.	Industrial Invert		
11 V .	myort	W	Width
		W/	With
		W.C.	Water Cooler
		WD	Wood
		WWF	Welded Wire Fabric

INDEX OF SYMBOLS:



INDEX OF SHEETS

	GENERAL
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SP-1	SITE UNDERSTANDING
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SP-4	SITE PLAN - PHASE 2
SP-5	SITE SECTIONS - PHASE 2
SD-1	PHASE 2 - SITE PLAN EXISTING
SD-2	PHASE 2 - SITE PLAN
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SD-14	PHASE 2 - STANDARD SPECIFICATIONS SHEET 3
SD-15	PHASE 2 -STANDARD DETAILS EROSION CONTROL
SD-16	PHASE 2 - EROSION CONTROL MONITORING PLAN





SMITH DESIGN GROUP, INC.

206 WEST HARALSON STREET LAGRANGE, GEORGIA 30240

706-882-5511

REVISIONS						
\triangle	DATE	DESCRIPTION				

PROJECT:

WILLIAM J GRIGGS CENTER PHASE II POOL AND PAVILION ROUGH GRADING - PACKAGE NO.1

TROUP COUNTY PARKS AND RECREATION 716 GLENN ROBERTSON DRIVE LAGRANGE, GEORGIA

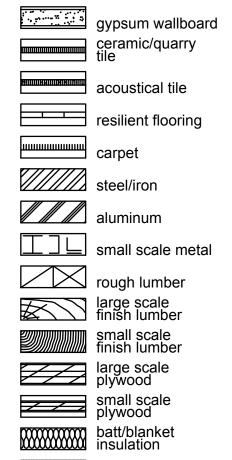
INDEX OF SHEETS

ABBREVIATIONS LEGENDS

DIFIED DATE:	JOB NO:
	2312-A
SUED DATE:	
D DIDDING AND DEDMIT	SHEET:

G-2

03 AUG 2023



laminated plastic

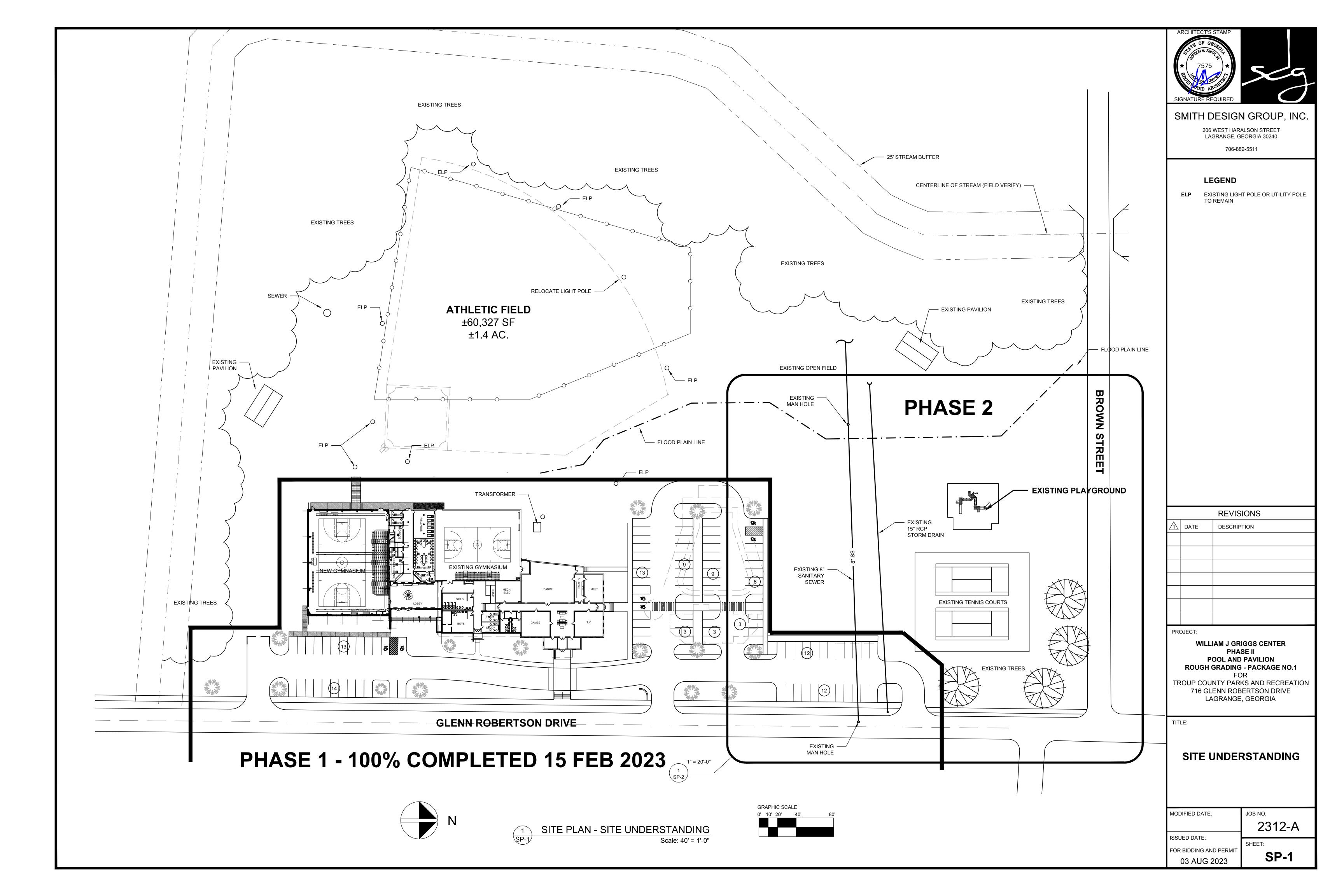
CONSTRUCTION

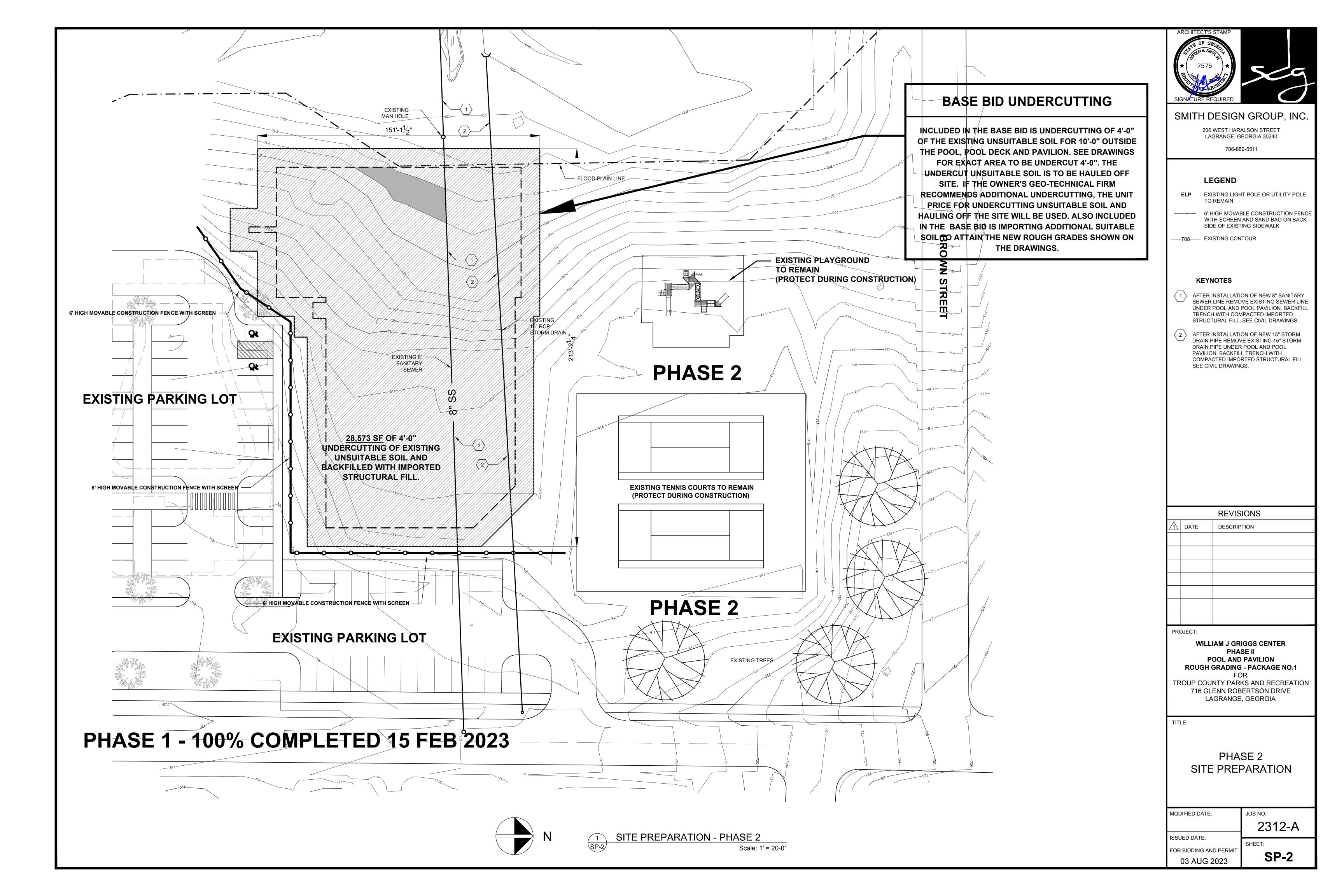
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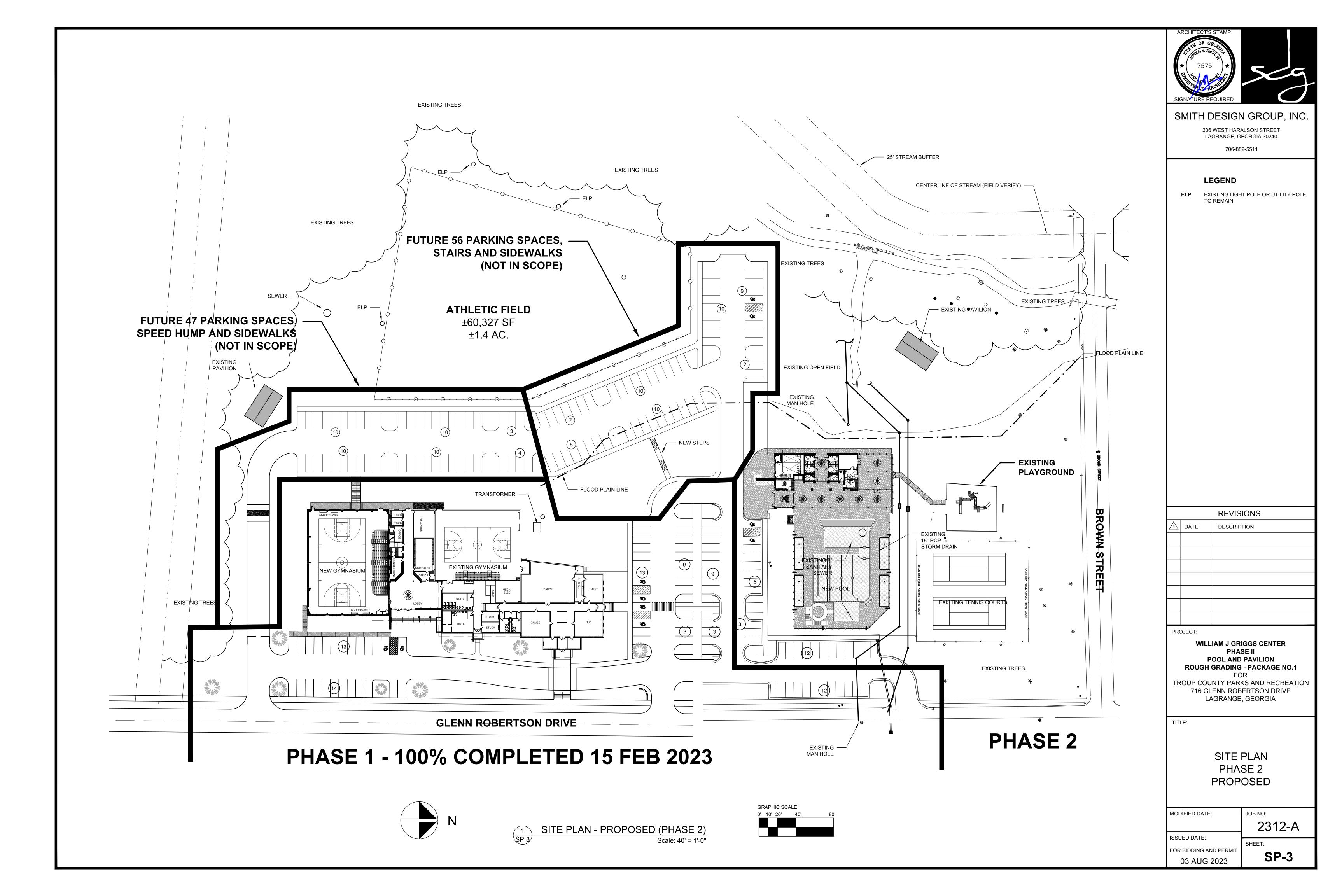
PLAN / SECTION

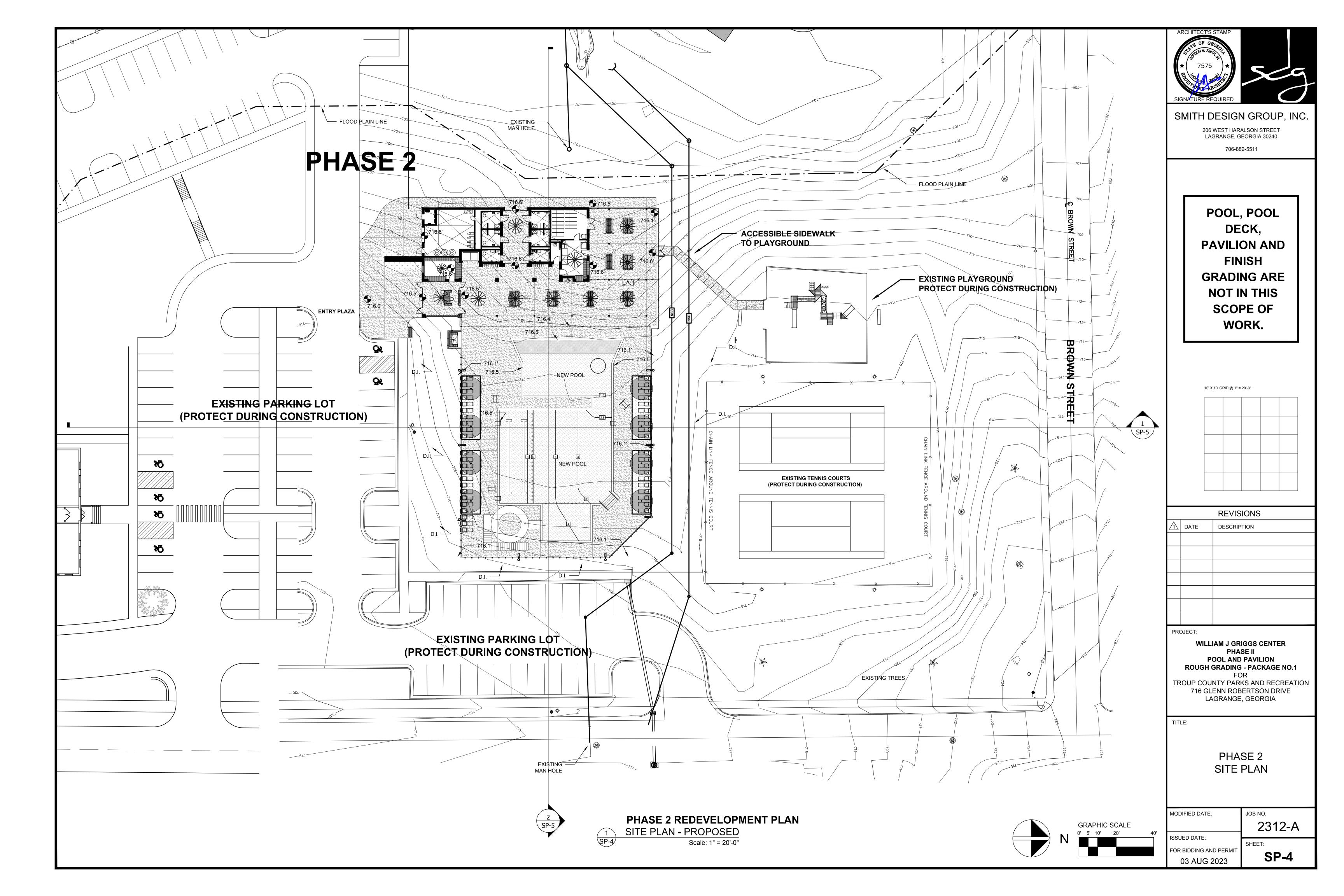
face brick

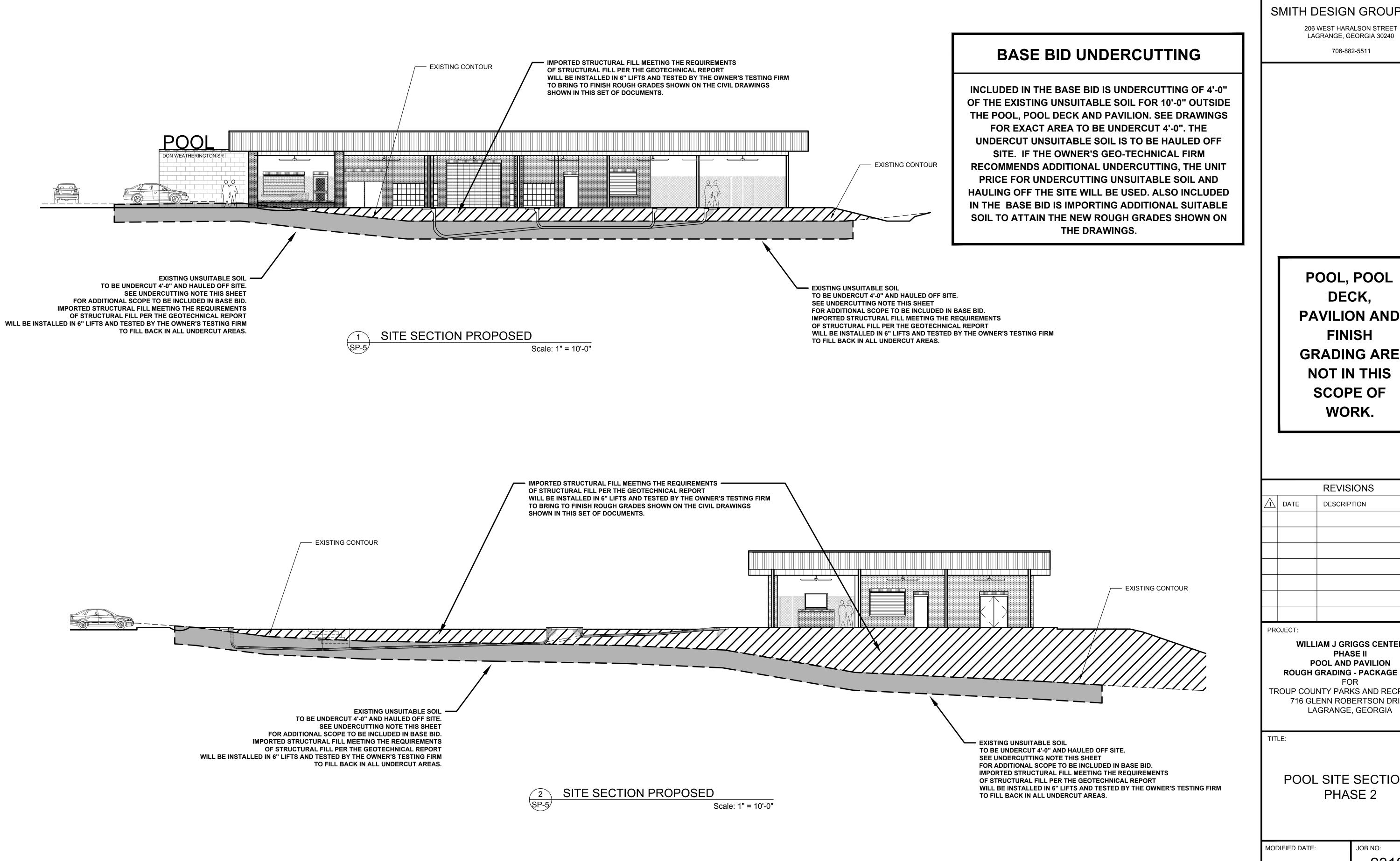
hollow concrete masonry











SMITH DESIGN GROUP, INC.

LAGRANGE, GEORGIA 30240

POOL, POOL DECK, **PAVILION AND FINISH GRADING ARE NOT IN THIS SCOPE OF**

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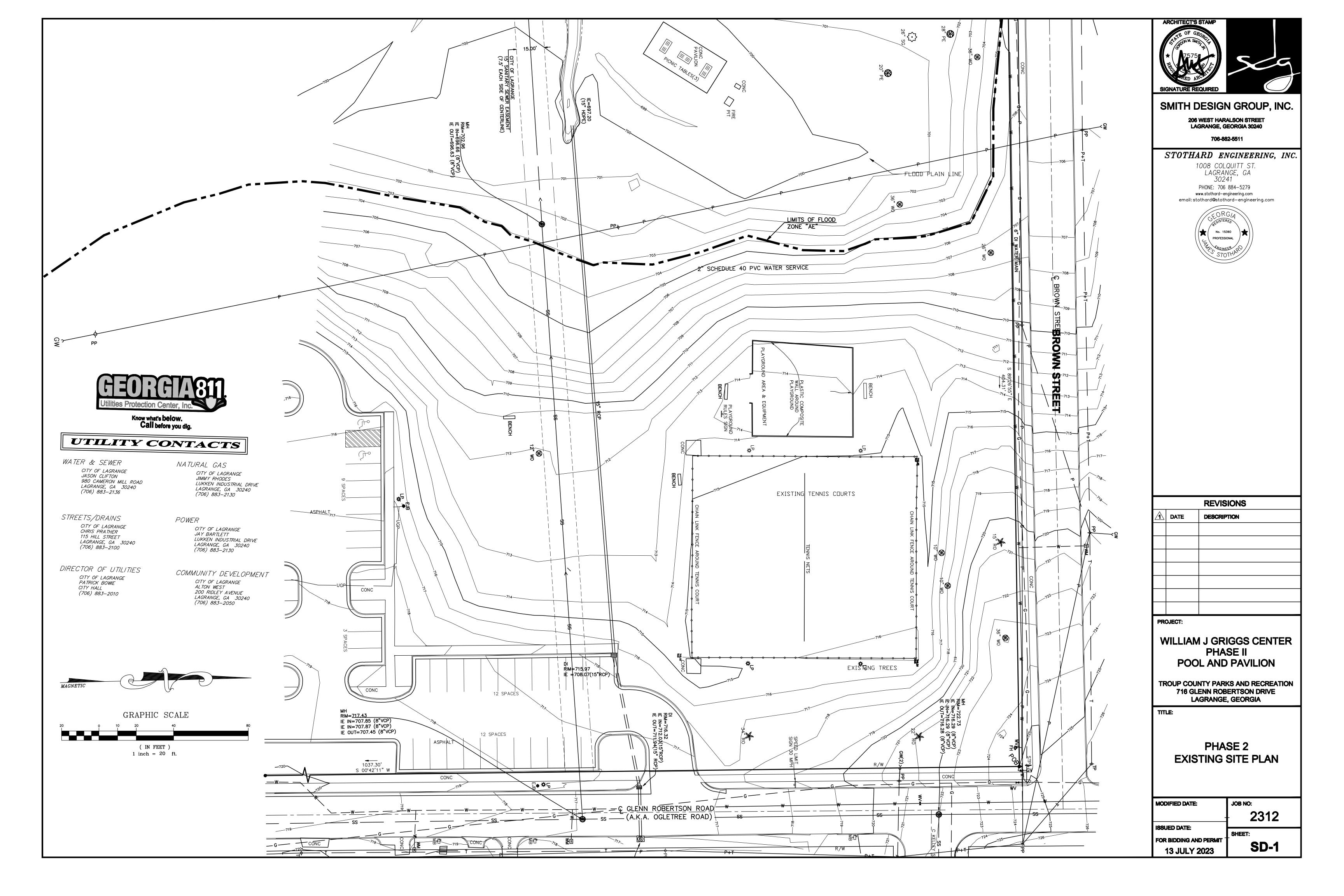
POOL SITE SECTIONS PHASE 2

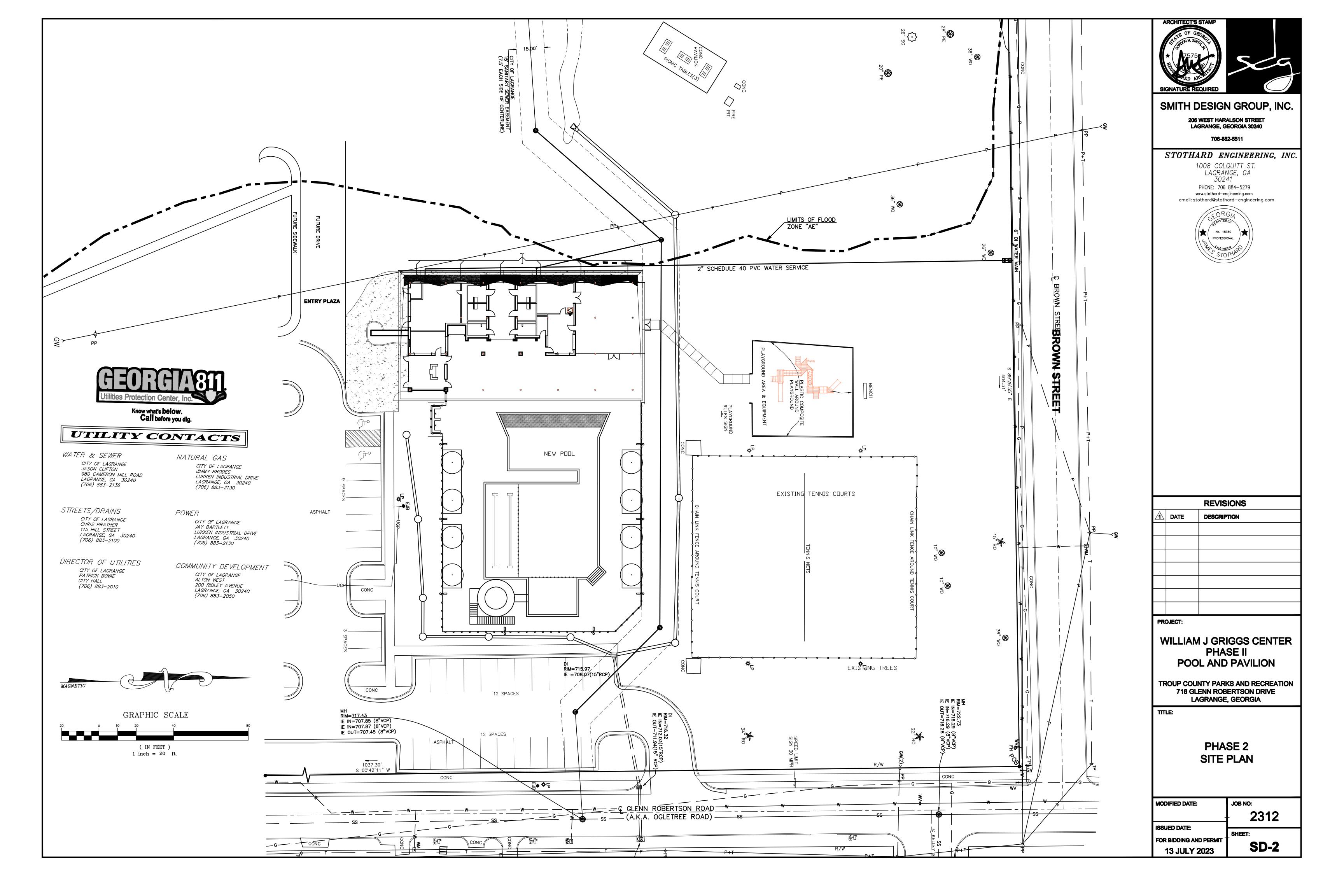
JOB NO: 2312-A ISSUED DATE: SHEET:

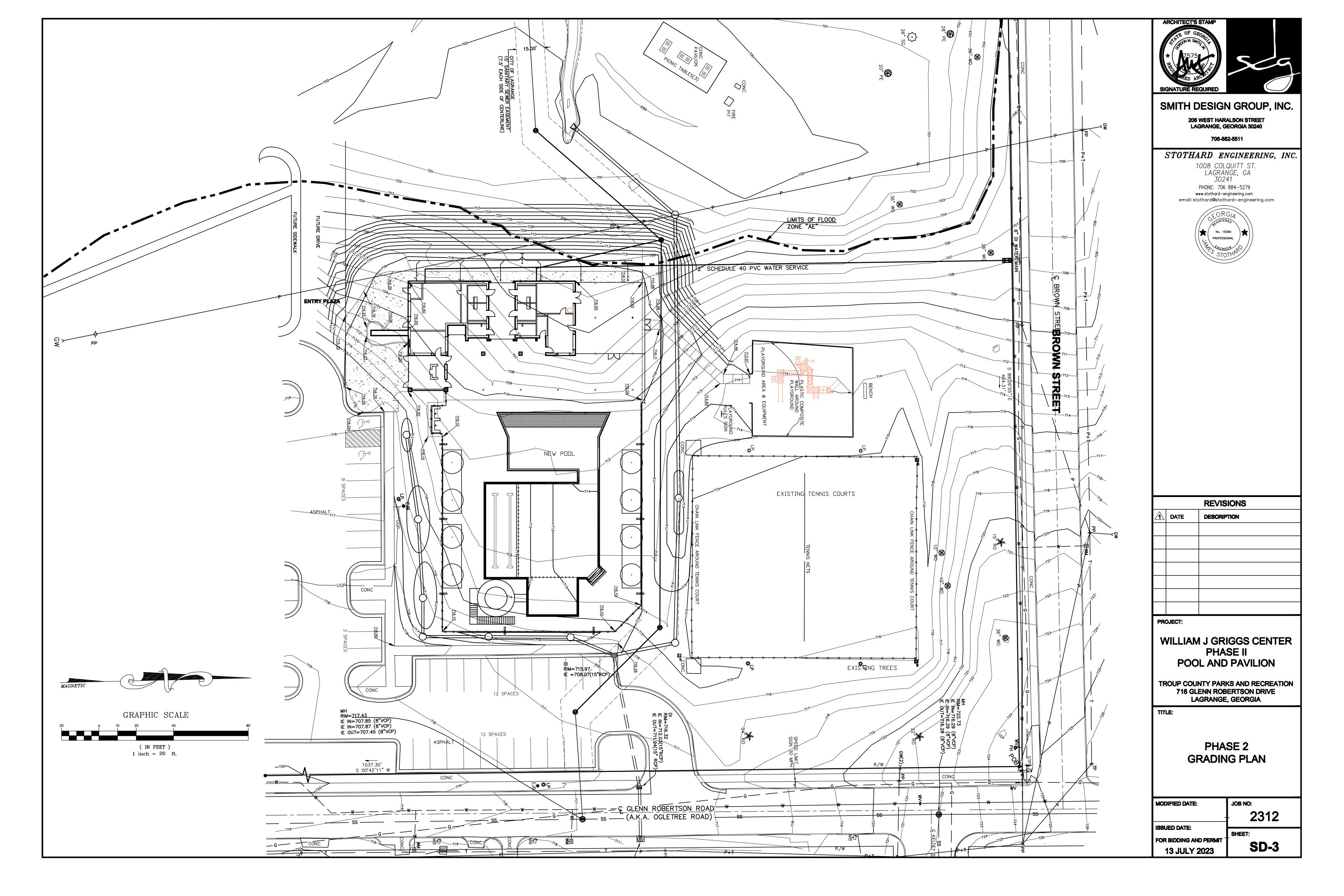
SP-5

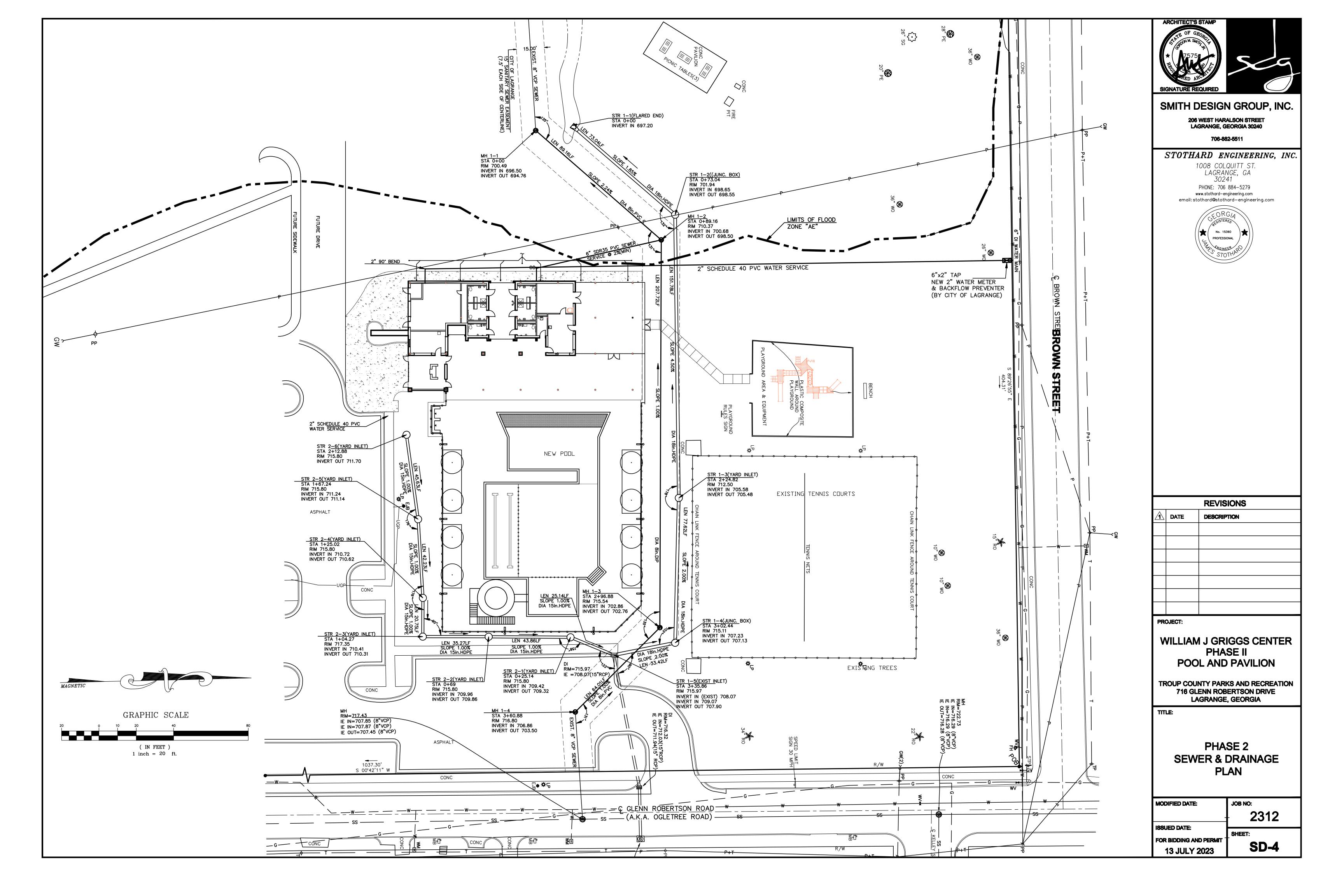
FOR BIDDING AND PERMIT

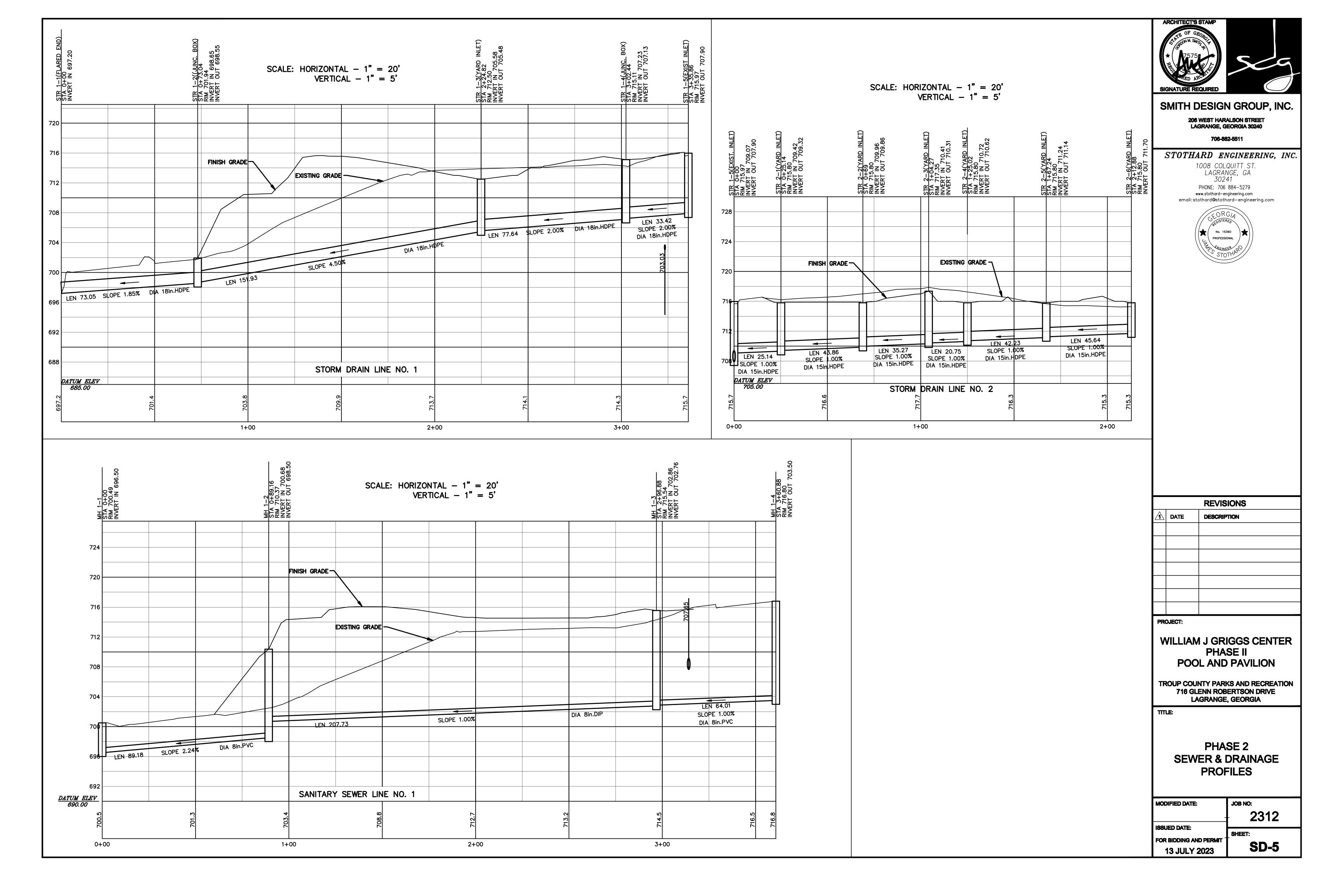
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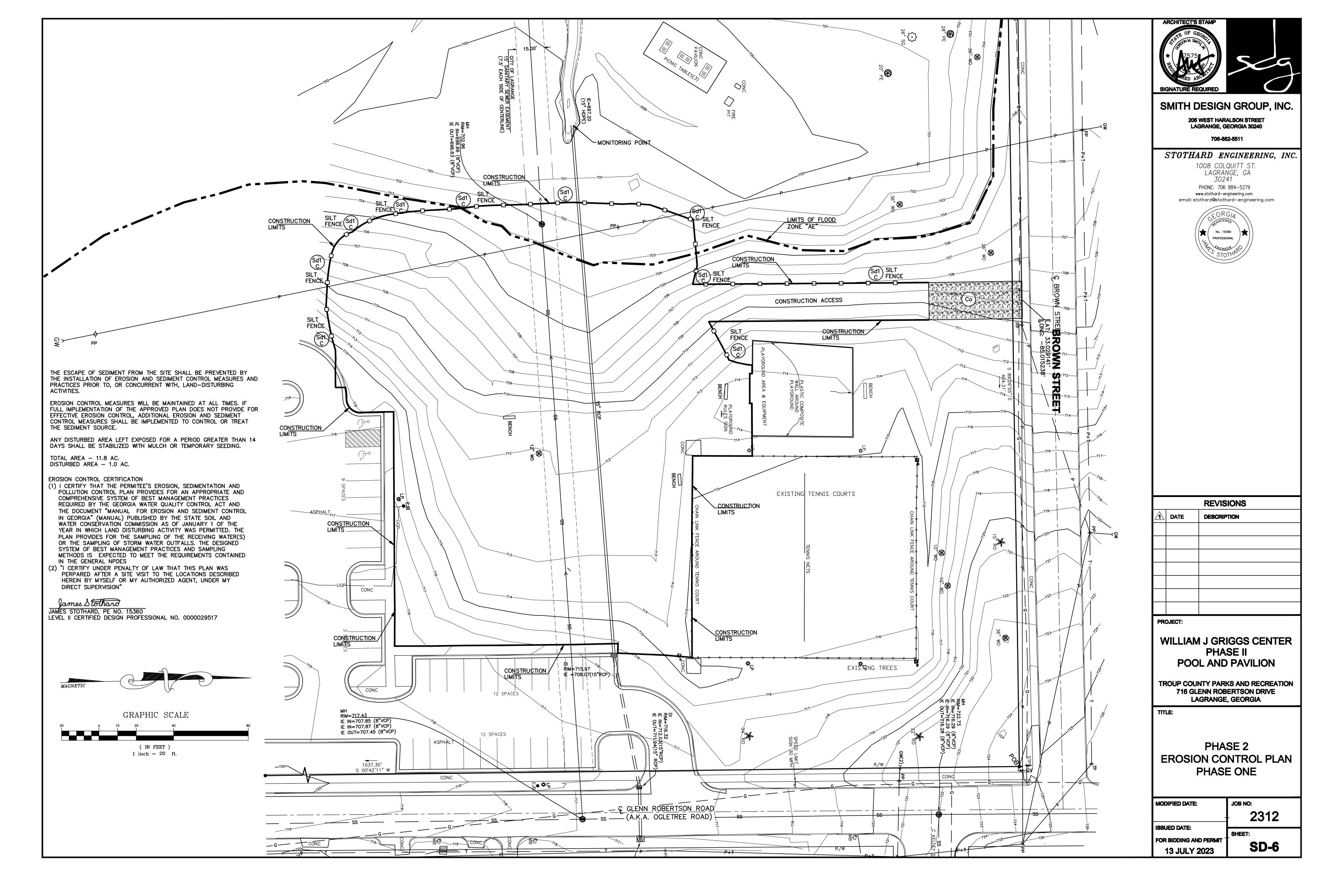


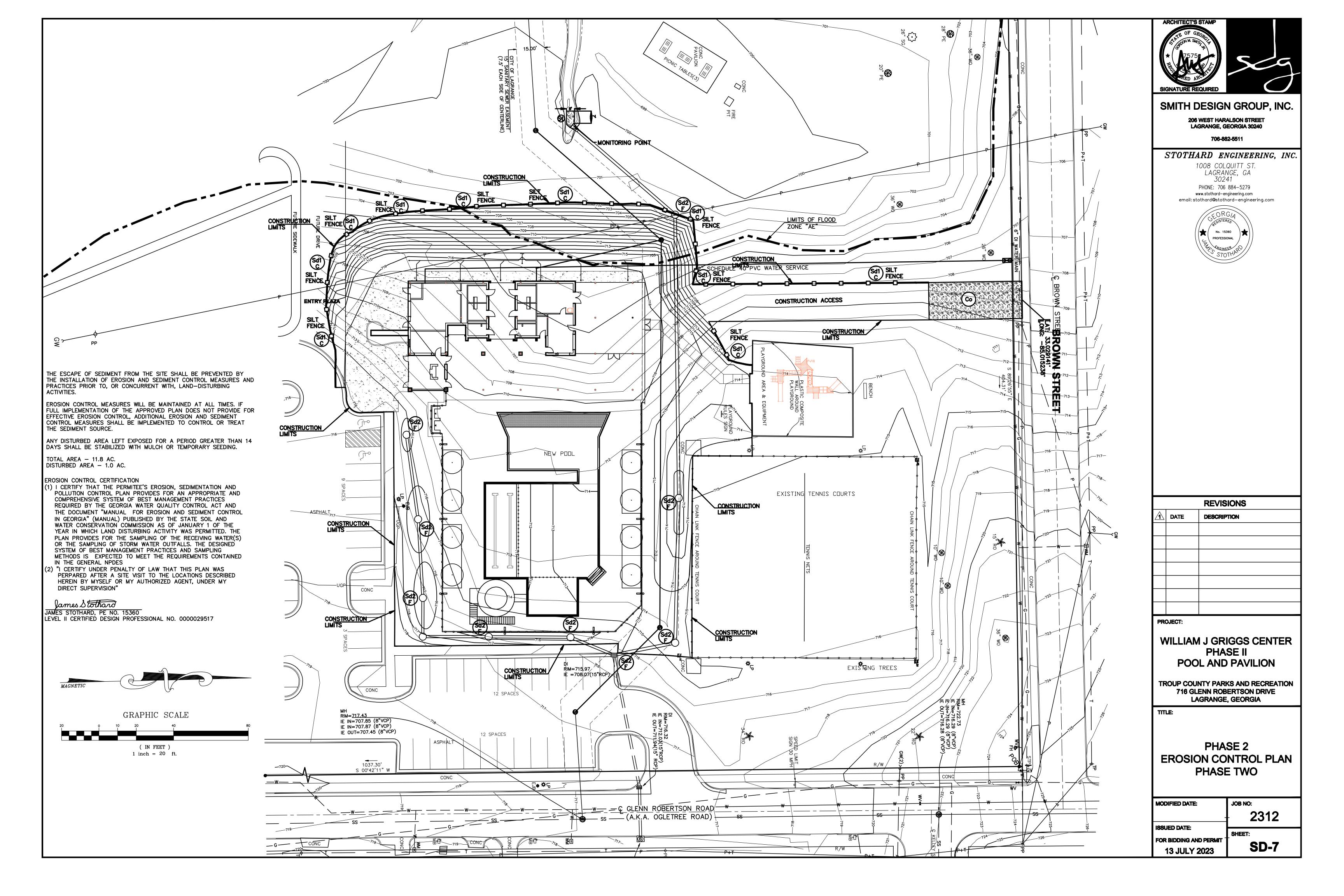


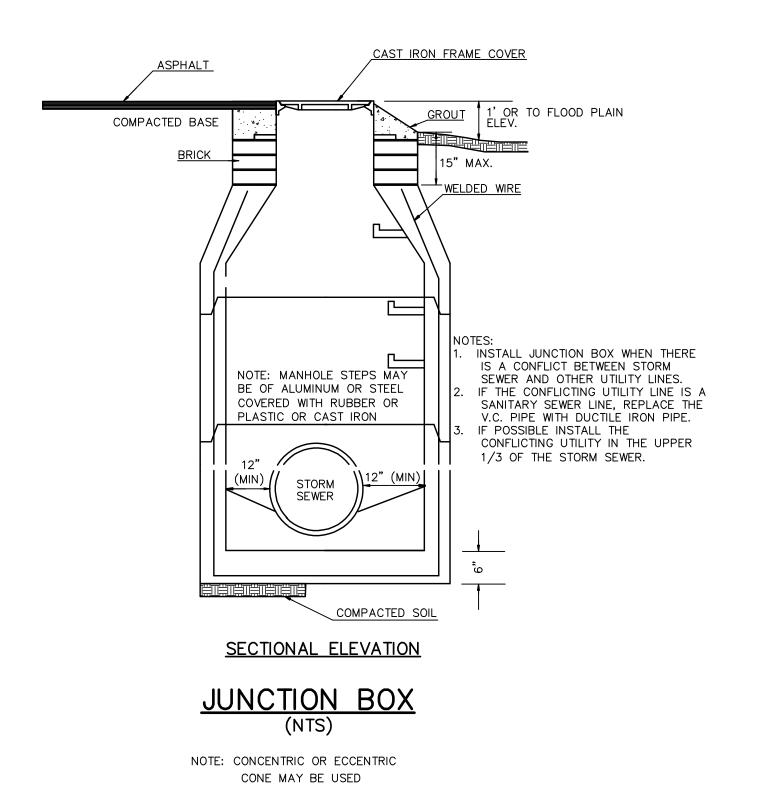


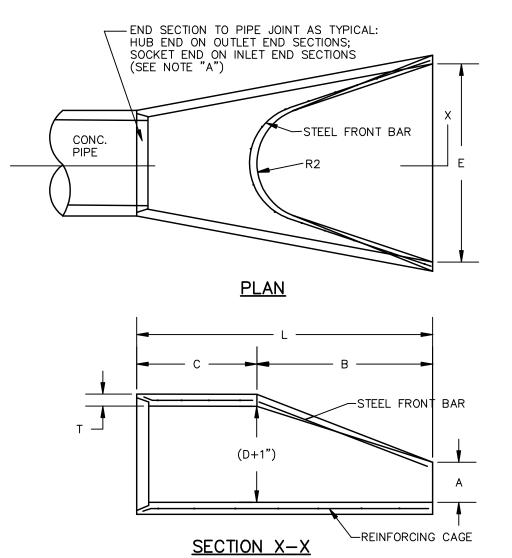








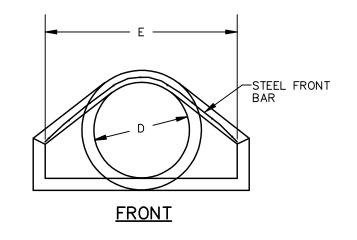




REINFORCING CAGE:

FORM CAGE.

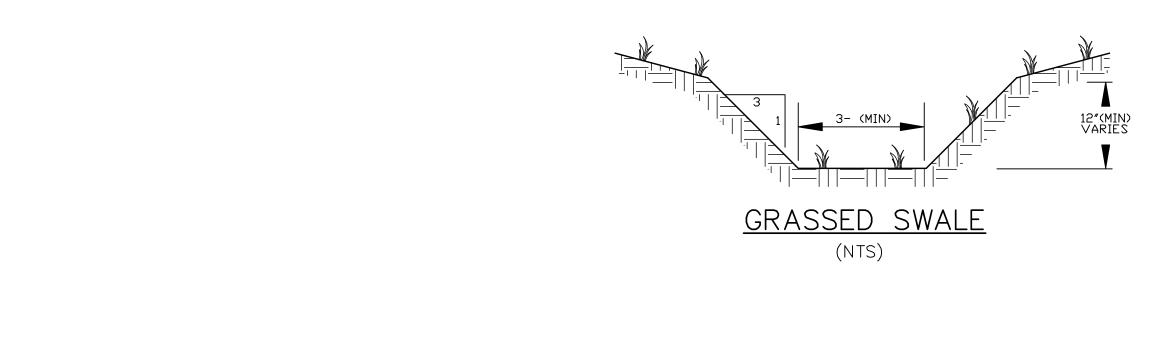
NOTE: DO NOT CUT CONCRETE PIPE. USE ONLY FULL LENGTH SECTIONS ONLY. WARP SLOPE TO CONFORM WITH PIPE LENGTH AND END SECTION.

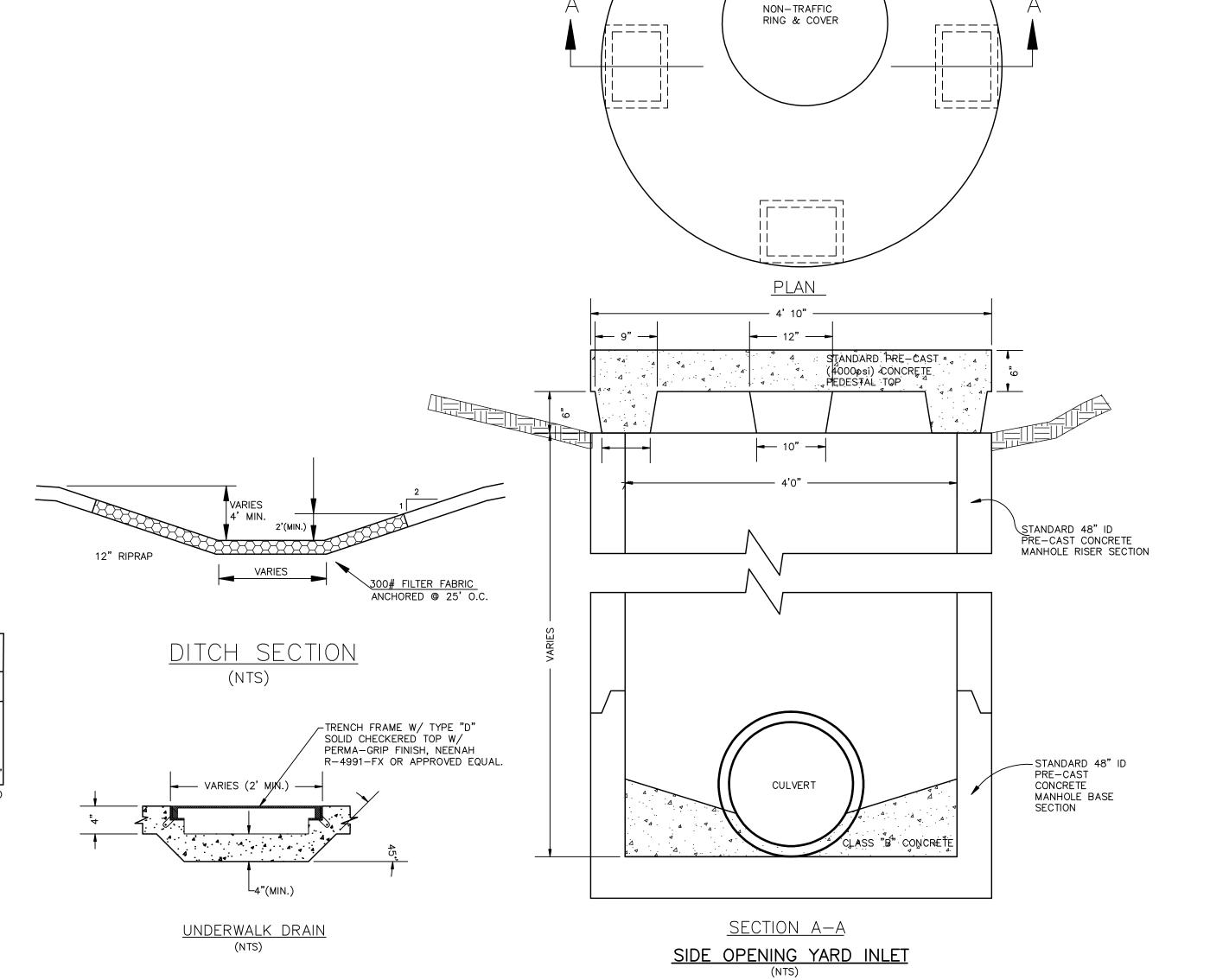


DIMENSIONS AND REINFORCING FOR CONCRETE FLARED END SECTIONS (+/- 1" TOLERANCE)											
PIPE DIA.	FRONT BAR	BACK RODS	SLOPE	Α	В	О	Г	E	Р	R1	R2
12" 15" 18" 24" 30" 36" 42"	1-#3 x 5' 4" 1-#3 x 6' 0" 1-#3 x 7' 2" 1-#3 x 9' 10" 1-#4 x 11' 8" 1-#4 x 13' 10" 1-#4 x 13' 10"	NOT REQ'D NOT REQ'D NOT REQ'D NOT REQ'D NOT REQ'D 2-#4 x 6' 3" 2-#4 x 7' 4"	2.2:1 2.2:1 2.2:1 2.4:1 2.4:1 2.4:1 2.4:1	4" 6" 9" 10" 15" 21"	2'-0" 2'-3" 2'-8" 4'-6" 5'-3"	2'-11"	6'-1" 6'-1" 6'-2" 6'-2" 8'-2"	2'-0" 2'-6" 3'-0" 4'-0" 5'-0" 6'-6"	2'-0" 2'-5" 2'-9" 3'-1"	1'-0" 1'-4" 1'-5" 1'-6" 2'-0"	9" 11" 1'-0" 1'-2" 1'-3" 1'-8" 1'-10"
NOTE: SPECIFIED REINFORCING IS MINIMAL AND MAY BE INCREASED AT PRODUCER'S OPTION TO AID CASTING & HANDLING. ALTERNATE REINFORCEMENT PERMITTED IF APPROVED.											

NOTE "A":
CONTRACTOR WILL INFORM PRODUCER IF CONCRETE FLARED END SECTION IS FOR INLET OR FOR OUTLET END. SOCKET (TONGUE OR SPIGOT) 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. FLARED END SECTIONS SHALL BE JOINTED TO PIPE WITH ALL SPACE IN THE JOINT FILLED WITH EITHER BITUMINOUS PLASTIC CEMENT OR PREFORMED PLASTIC GASKET. WIRE FABRIC HAVING SAME STEEL AREA AS INNER CAGE FOR CL III
PIPE, AASHTO M-170, BUT PLACED IN CENTER OF WALL.
 ALTERNATE #3 BARS SPACED 12" LONGITUDINALLY WITH #2 BARS
TRANSVERSELY AT 6" O.C. MAX SPACING, SPOT WELDED OR TIED TO

CONCRETE FLARED END SECTION









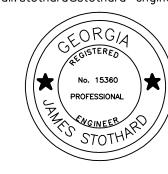
SMITH DESIGN GROUP, INC.

206 WEST HARALSON STREET LAGRANGE, GEORGIA 30240

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	REVISIONS				
1	DATE	DESCRIPTION			

PROJECT:

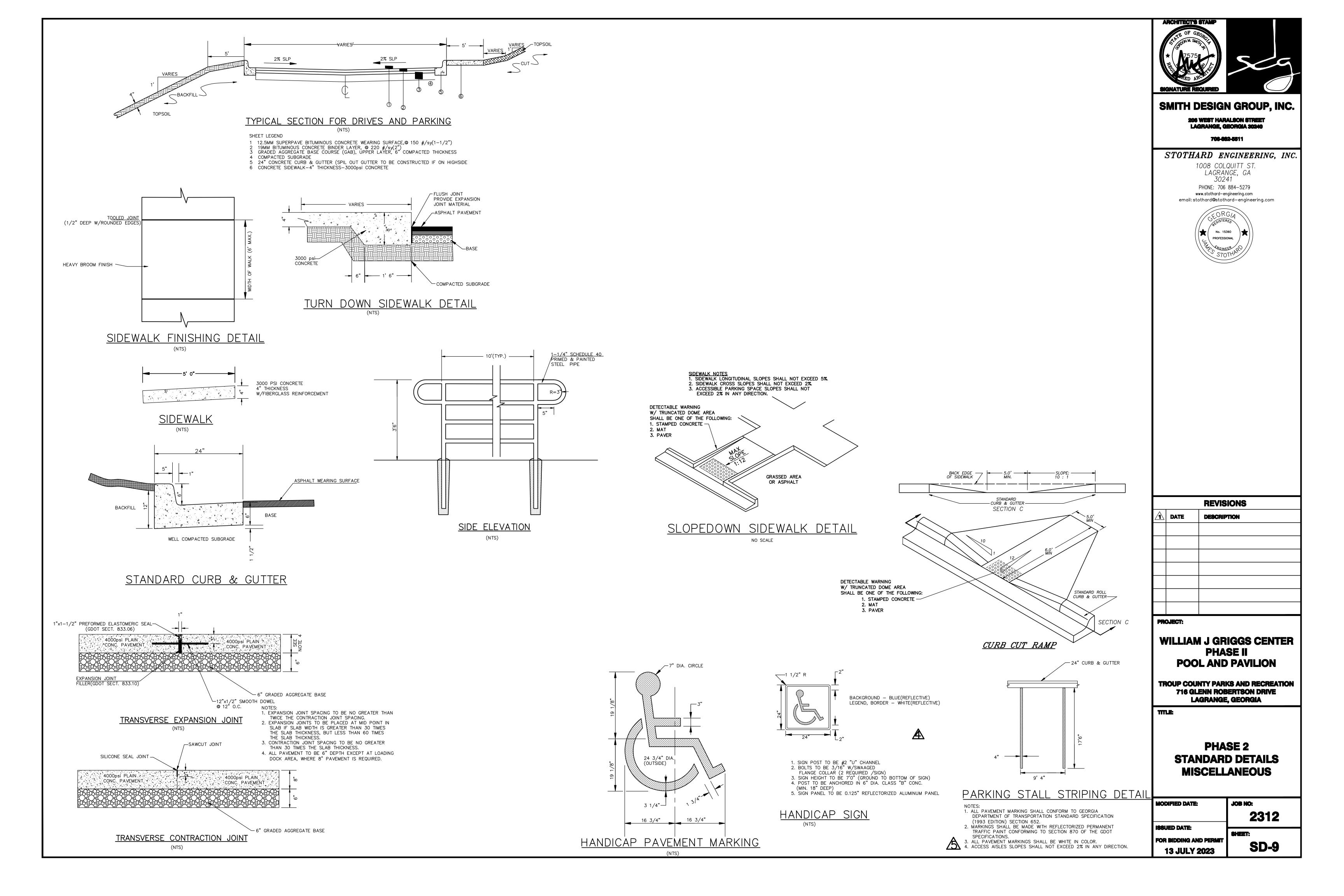
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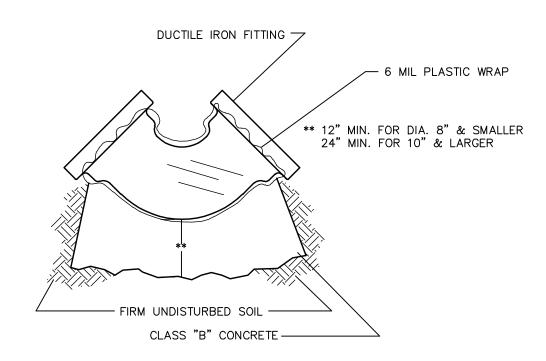
TROUP COUNTY PARKS AND RECREATION 716 GLENN ROBERTSON DRIVE LAGRANGE, GEORGIA

TITLE:

PHASE 2 STANDARD DETAIL **DRAINAGE**

D DATE:	JOB NO:	
	2312	
DATE:		
	SHEET:	
IA DNY BNK		
JULY 202	23 30-6	
	SHEET:	



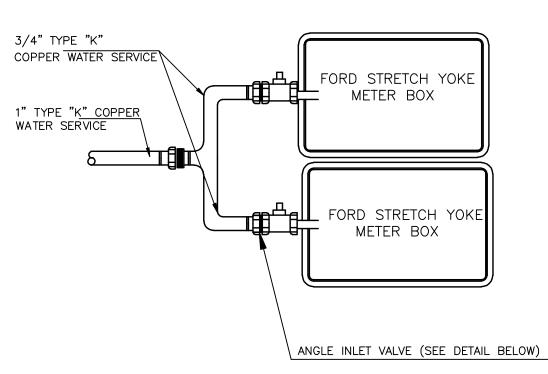


TYPICAL THRUST BLOCK

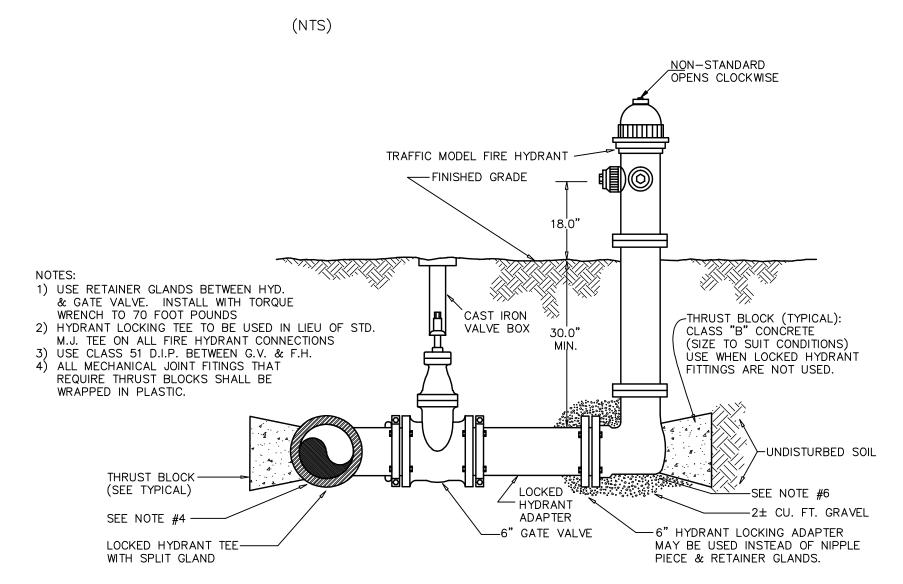
NOTES:

(NTS)

- 1. FOR ALL PIPE DEFLECTIONS SEE CHART ON PAGE 2 OF THIS DETAIL.
- 2. ALL MATERIALS WILL BE AMERICAN MADE ONLY!!
- 3. ALL FIRE HYDRANTS: NATIONAL STANDARD THREADS; 4-1/2" STREAMER & 2-1/2" HOSE NOZZLE; M & H STYLE129 MUELLAR CENTURION, AMERICAN DARLING B-62 B APPROVED; BRONZE TO BRONZE SEATED, EPOXY COATED SHOES, WEATHER CAPS SHALL NOT BE MADE OF RUBBER!!!
- 4. ALL FITTINGS SHALL HAVE MECHANICAL JOINTS.
- 5. ALL BRASS FITTINGS SHALL BE FLARED COPPER ONLY! MUELLAR OR FORD OR APPROVED EQUAL.
- 6. ALL MECHANICAL JOINT FITINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC.
- 7. ALL FITTINGS 10" AND LARGER WILL BE FULL BODY ONLY. NO COMPACT FITTINGS.
- 8. ALL COPPER LINES SHALL BE TYPE "K" ONLY.
- 9. FOR ALL PIPES UNDER ROADS: TRENCH BACKFILL, SHALL BE MECHANICALLY TAMPED FOR THE ENTIRE DEPTH OF TRENCH TO 95% STANDARD PROCTER, WITH THE TOP 12" TAMPED TO 98% MINIMUM. WITHIN SIX(6) FEET BEHIND CURBS, MECHANICALLY TAMP TO RREVENT SETTLEMENT. NO SPECIFIC DENSITY REQUIRED.
- 10. ALL BENDS TO BE INSTALLED WITH RETAINER GLANDS.
- 11. ALL M.J. BOLTS AND BOLTS ON RETAINER GLANDS ARE TO BE TIGHTENED WITH TORQUE WRENCH; 75-90 FT/LBS. RECOMMENDED.
- 12. CHLORINE WILL BE INSTALLED ONLY IN LIQUID FORM THROUGH A TAP PLACED AT A POINT DETERMINED BY WATER BOARD INSPECTORS.
- 13. ALL MAINLINE VALVES WILL BE RESILIENT SEAT G.V.



TYPICAL MULTIPLE METER BOX INSTALLATION



FIRE HYDRANT INSTALLATION

AS SHOWN W/ LOCKED HYDRANT FITTINGS



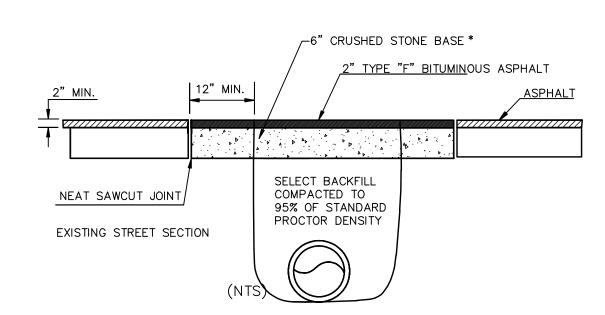
NOTES:

- BASED ON 2500#/FT. SOIL BEARING CAPACITY
 CONCRETE TO BE CLASS "B" 2,500PSI COMPRESSIVE STRENGTH
- CONCRETE TO BE POURED AGAINST UNDISTURBED EARTH ON BEARING SURFACE.
 ALL PIPE JOINTS TO BE MECHANICAL.

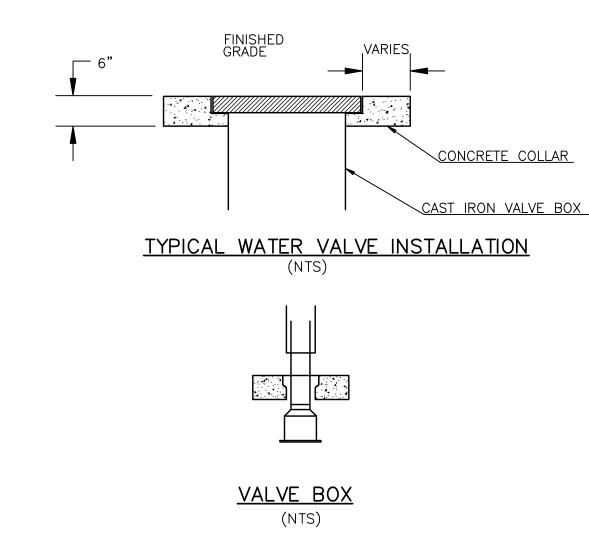
5. ALL FITTINGS TO WRAPPED IN PLASTIC TO PREVENT ADHERENCE OF CONCRETE TO METAL.

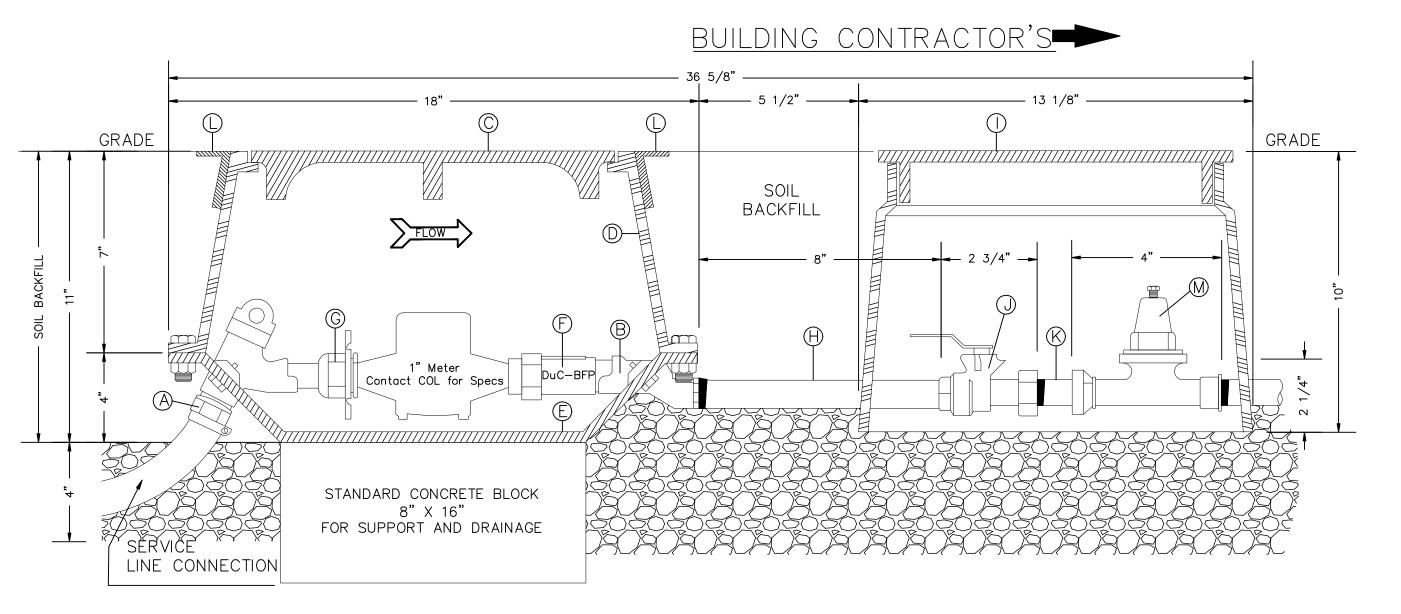
REQUIRED BEARING AREA (SQ. FT.)
STATIC 100 P.S.I. OR LOWER

6. NO CONCRETE TO BE PLACED UNDER PIPE OR AROUND JOINT BOLTS.



TYPICAL UTILITY PATCH





CITY OF LAGRANGE RESPONSIBILTY UNLESS NEW DEVELOPMENT

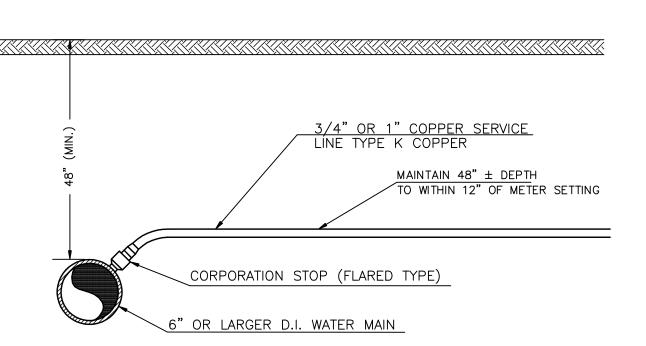
FORD LYLB-141-232-T STRETCH YOKEBOX

- A) ANGLE INLET VALVE: 1" cts COMPRESSION JOINT
- B) STRAIGHT OUTLET: 1" FEMALE PIPE THREAD
- C) LID: CAST IRON / TOUCH PAD "TOUCH READ" NOTE: USE SOLID LID IF "RADIO READ"
- D) UPPER BODY: PLASTIC
- E) BASE: CAST IRON
- F) BACKFLOW PREVENTER: FORD HBC-31 VALVE
- G) INSTALLATION ACCESSORIES: EXPANSION CONNECTION AND 2 YOKE END GASKETS

DEVELOPER RESPONSIBILITY

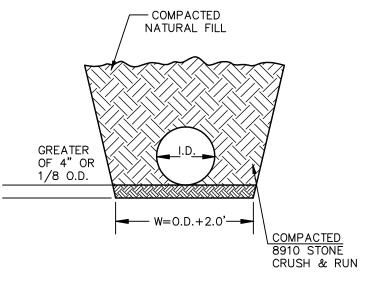
- H) 1" x 8" BRASS OR COPPER TUBE NIPPLE
- I) DFP PLASTIC, INC. 6" PLASTIC VALVE BOX
- J) 1" FORD B11-233 WITH HB2 BALL VALVE WITH HANDLE
- (K) CUSTOMER SERVICE CONNECTION
 (L) RECTANGULAR ANCHOR FLANGE
- M) PRESSURE REDUCING VALVE (NOT REQUIRED)

TYPICAL METER INSTALLATION



3/4" OR 1" SERVICE CONNECTION FOR DUCTILE IRON WATER MAIN

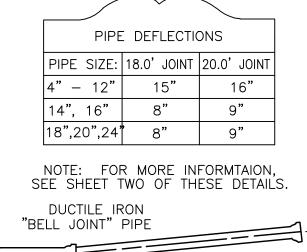
(NTS)



BEDDING FOR D.I. PIPE

NON-ROADWAY TRENCHES

(NTS)



*SEE PIPE DEFLECTIONS CHART FOR INFO:





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DATE DESCRIPTION

PROJECT:

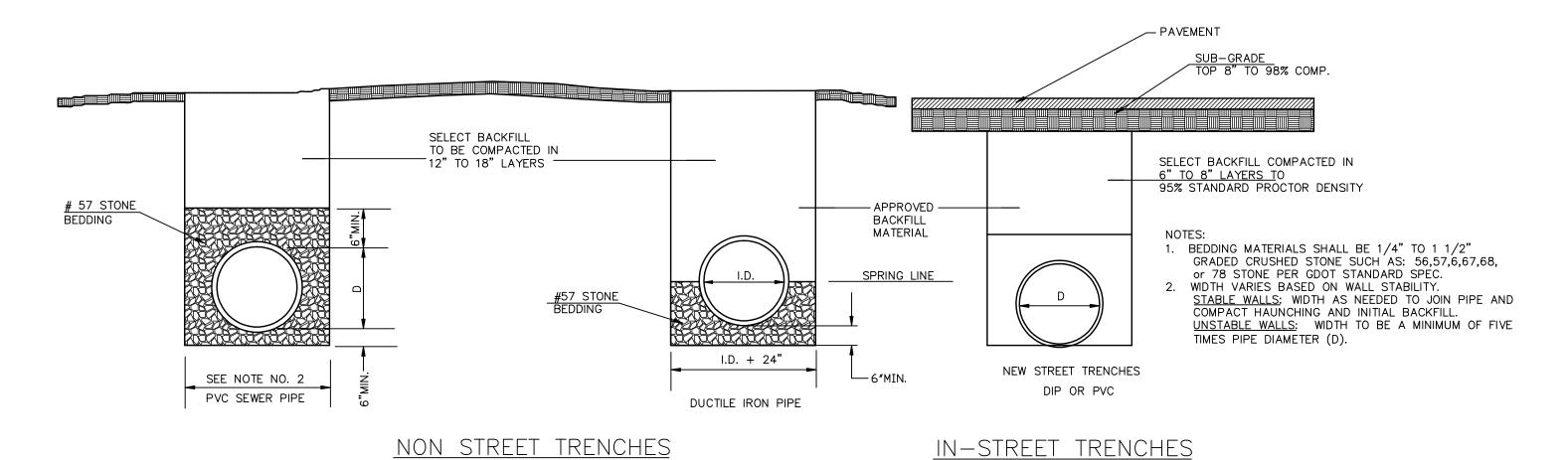
WILLIAM J GRIGGS CENTER PHASE II POOL AND PAVILION

TROUP COUNTY PARKS AND RECREATION 716 GLENN ROBERTSON DRIVE LAGRANGE, GEORGIA

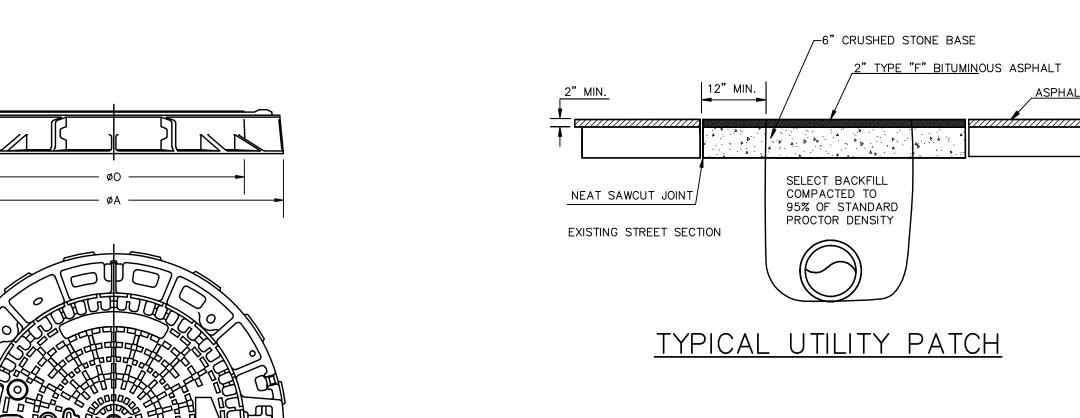
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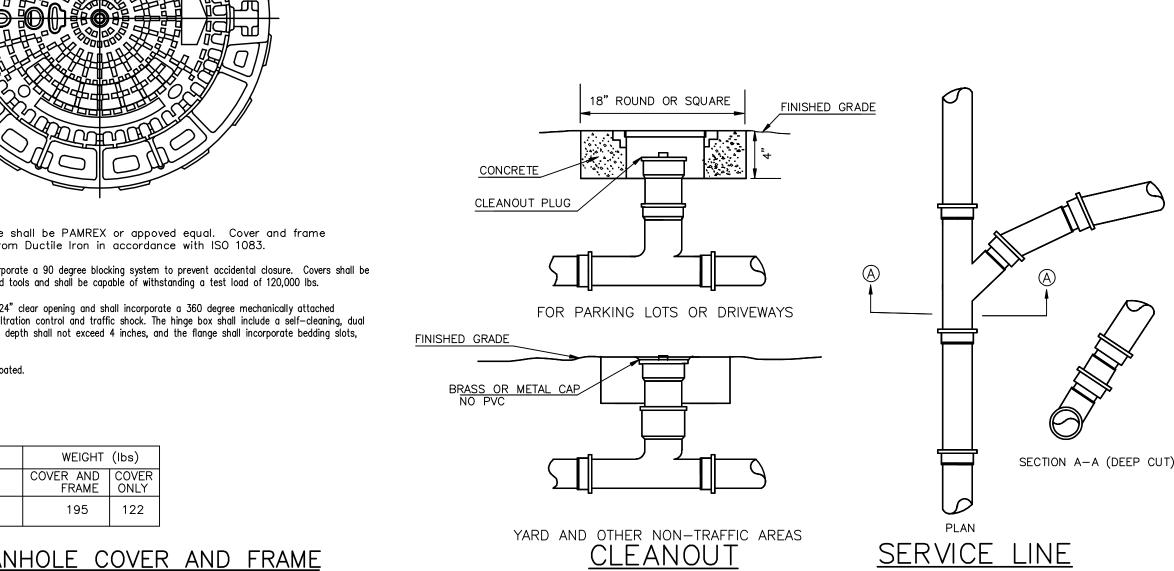
PHASE 2
STANDARD DETAILS
WATER SYSTEM

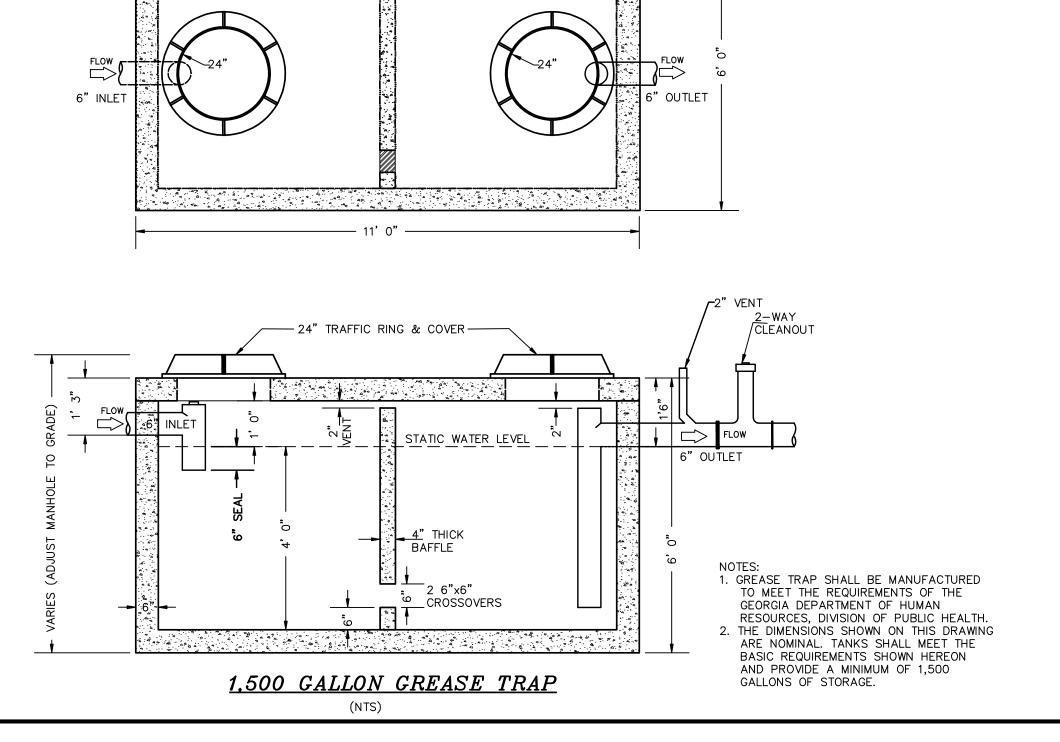
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	2312
ISSUED DATE:	_
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FOR BIDDING AND PERMIT	OD 40
13 JULY 2023	SD-10
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BEDDING REQUIREMENTS FOR P.V.C. AND DUCTILE IRON GRAVITY SEWER PIPE









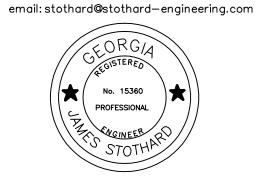
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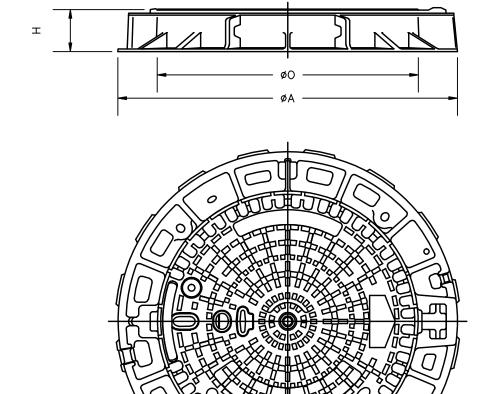
WILLIAM J GRIGGS CENTER PHASE II **POOL AND PAVILION**

TROUP COUNTY PARKS AND RECREATION 716 GLENN ROBERTSON DRIVE LAGRANGE, GEORGIA

TITLE:

PHASE 2 **STANDARD DETAILS SANITARY SEWER**

MODIFIED DATE:	JOB NO:
	2312
ISSUED DATE:	
	SHEET:
FOR BIDDING AND PERMIT	SD-11
13 JULY 2023	9D-11



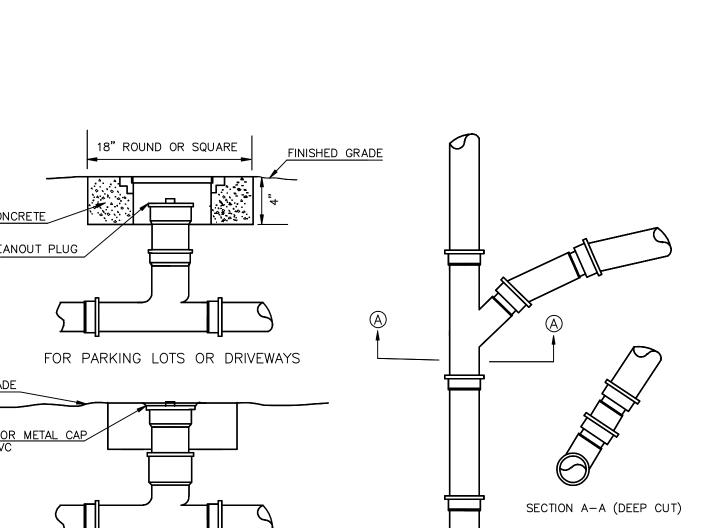
Manhole cover and frame shall be PAMREX or appoved equal. Cover and frame shall be manufactured from Ductile Iron in accordance with ISO 1083. Covers shall be hinged and incorporate a 90 degree blocking system to prevent accidental closure. Covers shall be one man operable using standard tools and shall be capable of withstanding a test load of 120,000 lbs. Frames shall be circular with a 24" clear opening and shall incorporate a 360 degree mechanically attached elastomer seating gasket for infiltration control and traffic shock. The hinge box shall include a self-cleaning, dual wiper infiltration plug. The frame depth shall not exceed 4 inches, and the flange shall incorporate bedding slots, bolt holes, and lifting eyes.

All components shall be black coated. Frame weight: 73 lbs.

Cover weight: 122 lbs.
Total weight: 195 lbs.

DIMENS	SIONS (IN	WEIGHT	(lbs)	
А	0	Н	COVER AND FRAME	COVER ONLY
33 1/2"	24	4	195	122

24 INCH MANHOLE COVER AND FRAME



SECTION 02100 Site Preparation and Demolition SECTION 02200 SECTION 02510 Site Concrete SECTION 02512 Asphaltic Concrete Paving SECTION 02580 Pavement Markings SECTION 02660 Water Distribution SECTION 02700 Sewage and Drainage

SECTION 02100 SITE PREPARATION AND DEMOLITION:

PART 1 - GENERAL

SUMMARY

- Obtain and pay for necessary local permits and licenses to accomplish work.
 - B. Locate existing utilities.
 - C. Inspect and accept existing site conditions.
 - D. Install and maintain protective measures (i.e., install warning fence, tape, signs, or other means as designated on plans for the following items) including, but not limited to:
 - 1. Existing pavement, driveways, sidewalks, utilities onsite & along frontage roads. All existing storm sewer pipes & inlets.
 - All existing utilities stubbed out to site or extending thru site. 4. Property corners & benchmarks.
 - E. Install and maintain all necessary measures to control and erosion and sedimentation.
 - F. Clear and grub site for new construction within construction limits, protecting items designated above.
 - G. Remove and stockpile topsoil if any was placed by Owner's site preparation
 - Related work specified in other sections 1. Drawings and general provisions of Contract, including General Conditions and other Division 1 Specification sections apply to
 - work of this section. 2. Topsoil shall comply with Section 02200 Earthwork.
- 1.02 QUALITY ASSURANCE
 - A. Industry Reference Standards: Section Cross-Reference: Refer to Division 01 Reference Standards Section. 2. American Society for Testing and Materials (ASTM): D 448-86 Classification for sizes of
- 1.03 PROJECT CONDITIONS
 - A. Permits: a copy of the approved City of LaGrange Site Construction/Land Disturbance Permit shall be present on the site during construction.
 - B. Any penalties enforced by City of LaGrange, OSHA, EPA, or other agency for violations of regulations set forth by these agencies are the responsibility of the contractor.

aggregate for road and bridge construction.

- Nuisances: Keep dirt, dust, noise and other objectionable nuisances to a minimum. Use temporary enclosures, coverings and sprinkling, or combinations thereof, as necessary to limit dust to lowest practicable level, except do not use water to extent to cause flooding, contaminate runoff or icing.
- Traffic: Conduct work to ensure minimum interference with the normal traffic operations, roads, alleys, streets, driveways, sidewalks, accesses on-site, and to adjacent sites occupied or used as traffic facilities. 1. Do not close or obstruct streets, sidewalks, alleys or
 - other public passageways without permission from authorities having jurisdiction. 2. Parking by construction crews will be allowed at locations designated by the Owner.
- E. Protection:
- 1. Prevent movement and settlement of adjacent structures. Install temporary barriers, fences, guard rails, enclosures, shorina, bracina, plankina, a barricades around utilities, landscaping and other items that are to remain in place.
- Protect bench marks from displacement Restore damaged improvements to their original condition as acceptable to Project Engineer and local
- authorities having jurisdiction, at no cost to Owner.
- F. Contractor is responsible for damage to State roads and public rights—of—way due to his construction activity.
- 1.04 SUBMITTAL
 - A. Field Quality Control Reports: Weekly maintain a copy of the Soil Erosion and Sediment Control Inspection Log.

PART 2 - PRODUCTS

- SEDIMENT DRAINAGE/SILT FABRIC
 - A. Non-biodegradable, sunlight stabilized, woven polypropylene fabric, type which will retain sediment and reduce water runoff velocity, one of the following by listed manufacturer or approved equal meeting Georgia DOT
 - 1. Mirafi 700XG Sedimentation Control Fabric by Mirafi, Inc. Amoco CEF-1198, CEF-1199, CEF-1380, CEF-2122.
 - Exxon GT 400. 4. Beltech 755, Beltech 756, Belton Industries.
- 2.02 CONSTRUCTION ENTRANCE/EXIT TREATMENT
- A. Stone size ASTM D448, size no. 1 (1.5"-3.5" diameter). Minimum pad thickness — 6 inches. Length and width as shown on plans (minimum 20 feet wide by 50 feet in length).
- DRAINAGE FILL
- A. Selected stone or gravel, graded to pass a 3—inch sieve and retained on a 1" sieve.
- 2.04 TOPSOIL
- A. Section cross-reference: Refer to Section 02200 Earthwork, Part 2, Topsoil.

PART 3 - EXECUTION

- EROSION AND SEDIMENT CONTROL
 - A. Install erosion and sediment control devices as shown on drawing and details.
 - B. Contractor shall inspect erosion control measures at the end of each working day to ensure measures are functioning properly. In addition, erosion and sediment control measures shall be inspected within 24 hours of every rainfall. A log of signed inspections shall be maintained at the site and updated on a weekly basis.
 - C. Maintain erosion control during construction until permanent pavement, plantings, and restoration of natural areas is effective in controlling erosion at site. Employ additional erosion control measures where determined necessary by Project Engineer or City of LaGrange for actual site conditions and sequencing of project.
 - D. Plan and execute construction by methods to control surface drainage from cut, fill, borrow and grading areas. Minimize amount of bare soil exposed at any one time. 2. Schedule operations so ground surface will be disturbed
 - for shortest possible time. 3. Maintain large areas as flat as possible to minimize soil transportation through surface flow.

- 4. Where steep slopes or abrupt grade changes occur, install temporary diversion berm or dike at top of slope to direct water flow to a control point to be transported downslope in a slope drain. In all cases, do not allow water to flow uncontrolled down slope.
- E. Construction Entrance/Exit Treatment: Prior to any other construction, a stabilized construction entrance treatment as shown in plans shall be constructed at each point of entry to or exit from the site. This is to be located as shown on drawings or as necessary as deemed by Project Engineer.
- 2. The construction exit shall be maintained in a condition which will prevent tracking or flow of mud onto public right-of-way. This may require periodic top dressing f exit with additional stone, as conditions demand. 3. All materials spilled, dropped, washed, or tracked from vehicle or site onto public roadway or into storm drainage system must be removed immediately.
- F. Storm Drainage System:
- Repair and/or clean any structures used to trap sediment including inlet sediment traps and silt fencing.
- G. Ground Cover: Protect all exposed sloping soils until construction of permanent surface begins. 1. Use straw or other mulches, temporary seeding, plastic sheets, fiber mats, or other effective erosion treatments
- acceptable to City of LaGrange. 2. Install permanent grass and other landscape plantings and materials, including mulching or hydroseeding for use as stabilization; maintain until ground cover planting is effective for erosion control.
- H. Sediment Barriers/Inlet Sediment Traps: Install at all locations as shown on plans and where water flows from construction areas in accordance
- with Erosion Control Plan. Maintain ground drainage structures until end of construction activities.
- 2. Arrange to create ponding behind barriers; remove accumulated sediments and maintain ponding capacity during construction.
- 3. Place silt barriers as access is obtained during clearing. No grading shall be done until silt barrier installation is completed.
- 4. The contractor shall remove accumulated silt when the silt is within 12" of the top if the silt fence. 5. Silt barriers to be placed as shown on the plans
- and at downstream toe of all cut and fill slopes. 6. After permanent grass cover and landscaping have been established, remove silt fence and appurtenances and dispose of properly.
- Temporary Grassing:
- 1. All disturbed areas shall be stabilized with temporary seeding as soon as possible within construction period Graded slopes on which no construction activity is scheduled shall be seeded as soon as grading operations are complete on an area by area basis. 2. Grassing limits shall be extended to existing
- arassed areas. J. Repair washed and eroded areas; reestablish grades to
- required density, elevations, profiles, and contours. K. Contractor is responsible for monitoring downstream conditions throughout the construction period and clearing

any debris and sediment resulting from the construction.

3.02 SITE CLEARING

- A. General: Remove any trees, shrubs, stumps, bushes, vines, undergrowth, dead wood, grass and other vegetation, improvements, or obstruction from the construction area except as otherwise designated on the drawings to remain. Relocate or store vegetation in accordance with landscape requirements. Remove such items elsewhere on site or premises as specifically indicated. Removal includes digging out stumps and roots.
- B. Topsoil Activity: Strip topsoil to whatever depths encountered in a manner to prevent intermingling of subsoil or other objectionable
 - a. Remove heavy growths of grass from areas Where trees are indicated to be left staking, stop topsoil stripping no closer than the drip line of the tree to
- prevent damage to main root system. 2. Stockpile topsoil in storage piles at location approved by Project Engineer and Landscape Architect. Construct storage piles to freely drain surface water. Cover storage piles if required to prevent wind blown dust. Do not stockpile to depth exceeding eight feet. Install silt fence at toe of slope of perimeter of topsoil storage pile.
- 3. Dispose of unsuitable or excess topsoil same as waste material, herein specified. 4. Screen topsoil before reuse on site.

3.03 UTILITIES

- A. Contact local utility companies 72 hours minimum prior to start of demolition and/or excavation work. Confirm verbal notices and written notices. Verify locations of all utilities entering construction area and their locations on site.
- B. Coordinate and cooperate with the City of LaGrange utility departments and other utility companies, adjacent property owners, and other building trades in maintaining, protecting, rerouting or extending of utilities passing through work areas which serve structures located on project site or adjacent properties. Pay all fees associated with service taps. service extensions or relocations.

3.04 DEMOLITION

- A. General:
- 1. If departures from drawing requirements are deemed necessary by Contractor, submit detain and reasons therefore to Project Engineer for action. Make no departures without prior written approval of Project Engineer.
- 2. Repair and replace all demolition work performed in excess to that required, at no cost to Owner. Repair or replacement shall match and equal construction, condition, and finish existing at time of award of contract.
- B. Backfill and compact areas excavated and open pits and holes resulting from demolition operations. Comply with requirements specified in Section 02200, Earthwork for backfill materials, compaction, and installation methods.
- C. Rough grade site, within demolition areas, to meet idjacent existing contours and to provide positive drainage Leave site in clean condition acceptable for performance of subsequent construction operations.
- D. Demolish any and all remaining buildings and other aboveground structures and remove debris.

3.05 CLEAN-UP AND DISPOSAL

- A. Transport trash, rubbish and debris daily from site and dispose of legally. 1. Remove and promptly dispose of contaminated, vermin
- infested, or dangerous materials encountered. 2. Do not burn or bury materials on site, unless otherwise approved by Project Engineer and local authorities havina iurisdiction
- B. Remove tools, equipment and protection when work is complete and when authorized to do so by local authorities having
- Remove and dispose of erosion control devices after landscaping is in place and ground cover is established at completion of project.

END OF SECTION

other objectionable material.

PART 1 - GENERAL

SECTION 02200

EARTHWORK

1.01 SUMMARY

- A. Excavation, placement and compaction of material on the
- site to obtain the lines and grades shown on the drawings. B. Related work specified in other sections: 1. Drawings and general provisions of Contract, including
- General Conditions and other Division 1 Specification sections apply to work of this section. 2. The verification, location, and removal of any utilities
 - necessary but not shown on the drawing shall comply with Section 02100, Site Preparation and Demolition. 3. Topsoil shall be stripped and stockpiled in accordance with Section 02100. Site Preparation and Demolition.

QUALITY ASSURANCE

- A. All work shall comply with City of LaGrange development
- B. Field Quality Control: Testing and Inspection: Contractor will obtain and

pay for the services of an independent commercial testing

- laboratory for performing field quality control testing of soils during construction. 2. Refer to Part 3 — Execution section, entitled "Field Quality Control"
- C. Industry Reference Standards: 1. Standard Specifications for Construction of Roads and Bridges; State of Georgia Department of Transportation, 1993 Edition, Division 200, Earthwork.

1.03 SUBMITTAL

- A. Test Reports: Field density (compaction) test reports of each
- 2. Optimum moisture-maximum density curves for each

1.04 PROJECT CONDITIONS

- 1. Examine drawings or survey and site for discrepancies between actual site grades and contours and those shown on survey, before starting work. Report all
- discrepancies in writing to Project Engineer. 2. No extra compensation will be allowed for discrepancies between conditions shown on drawings and actual conditions existing at project site.
- B. Excavation Classification: . Excavation is unclassified and includes: Excavation to extent of subgrade elevations and bottom of utility trenches shown on drawings or specified. regardless of character of materials and obstructions
- encountered. 2. Unsuitable Material Excavation: a. Excavation and disposal of unsuitable material
- below subgrade elevation. All costs incurred for removal, off-site disposal and replacement of unsuitable soil materials below design subgrade elevations will be included in a unit price for unclassified excavation. c. Contractor to estimate and include a quantity for unsuitable material in bid. State price
- separate from total contract amount. C. A cut and fill balance has not been made. Contractor is responsible for establishing quantity of additional fill required or excess that must be hauled away. No additional compensation will be made for importation of additional
- material or for disposal of surplus material off site. D. Existing Utilities:
 - 1. Locations indicated are approximate and provided for contractor's information only. There may be additional utilities not shown on the plans. The Owner assumes no responsibility for locations shown and it shall be the responsibility of the Contractor to verify the locations of all utilities within the limits of work. All damage made to existing utilities shall be the sole responsibility of the
- 2. Perform exploratory tests for verification if exact location of existing utilities are not known. Owner will assume no responsibility for hazardous conditions, losses, and accidents arising out of failure to perform tests for verification.
- Protect from damage and displacement; if disturbed or destroyed, replace at no additional cost to Owner.

E. Benchmarks, Monuments, and Other Reference Points:

. Keep dirt , dust, noise, and other objectionable

nuisances to a minimum

- G. Barricades: 1. Furnish and maintain barricades, signs and markings for work in public right-of-way in accordance with Georgia Department of Transportation specifications City of LaGrange requirements, and as shown on the drawings.
- Maintain barricades in good condition. Mount flashing yellow lights and maintain same.
- 3. Install wood fence adjacent to open excavations and post with warning lights. 4. Prior to commencing land disturbance activity, mark
- the limits of the current phase of work clearly and accurately with silt fence, tree protection fence, ribbons, or other appropriate means. The limits shall conform to the limits specified in Section 02100, Site Preparation and Demolition. 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 limits indicated on the drawings or as approved by the Project Engineer.

PART 2 - PRODUCTS 2.01 SOIL MATERIALS

- A. Suitable Soil Material: Provide soil material free from roots, debris, trash, organic materials, and other deleterious materials, frozen materials, material softer than adjoining soil, rock or stone larger than 3" maximum dimension. Materials shall meet the requirements of Section 810, Class I, Il or III of "Standard Specifications for Highway Construction,"
- B. Unsuitable Soil Materials: USC Groups, CH, PT, OH, OL, and MH generally described as and including following Peat, mulch and/or other highly organic swamp solid. Organic and inorganic clays of medium to high plasticity.

State of Georgia Department of Transportation, 1993 Edition.

- Fine sand and silty soils. 4. Elastic silts.
- C. Structural "Controlled Fill": 1. On—Site Excavated Material: Suitable soil material not exeeding 3" maximum dimension. 2. On—Site Excavated Material Blended with Imported
- Material: Material to be blended into uniform mixture meeting or exceeding the following imported material requirements. 3. Imported Materials: Unified Soil Classification (USC) System Groups ML, SM, SC-SM, SW, SP, or CL; Atterberg Liquid Limit (LL) less than 50; a maximum dry unit density greater than 90 PCF; Plastic Index (PI) less than 30; if granular, minimum of 20% must pass No. 200 sieve. Imported materials shall be certified as being free of hazardous waste material. Contractor must notify Project Engineer of the exact
- location of Barrow Pits prior to importing said material from pit. 4. Approval of material by Project Engineer required.
- D. Nonstructural "Controlled Fill": 1. Same as structural "Controlled Fill".
- E. Filter Aggregate: Provide clean gravel or crushed stone graded from coarse to fine with 100% passing 1/2" sieve, 15% passing 20 sieve, and not more than 2% passing No. 100 sieve.

F. Topsoil: Topsoil is defined as friable clay loam surface soil found in a depth of not less than 4". Satisfactory topsoil is reasonably free of subsoil clay lumps, stones and other objects over 2" diameter, and without weeds, roots, and

2.02 EQUIPMENT

- A. Provide type acceptable to Project Engineer suitable for use intended with proven capability to perform work in an acceptable manner. Consult Project Engineer prior to use of equipment and document Project Engineer recommendations in
- 1. Use steel sheepsfoot roller or similar type equipment for compaction operations, except compact small and inaccessible areas with vibra plates, vibrator impact rammers, vibratory rollers, or similar type equipment.
- 2. Use rubber-tired pneumatic compaction equipment for sealing off compacted greas.
- 3. Use rubber-tired compactor or similar type approved equipment with minimum 15 tons static weight for proofrolling.
- PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Testing and Inspection Services: Contractor will retain the services of a Geotechnical Engineering Service (GES) to perform observations, inspections and testing during execution of site work. Geotechnical Engineering Services include, but are
- not limited to: 1. Visual Observation by GES: After stripping the site of topsoil, organics, large root system, trash, and demolition debris, the site is to be observed by GES, and any localized pockets of organic, large root systems or remnants or previous construction identified should be undercut and discarded off-site or stockpiled for future use in landscaped areas.
- 2. Proofrolling: In the presence of GES, at-grade areas and other areas should be proofrolled with a heavily loaded dump truck, scraper, or similar piece of rubber—tired equipment. 3. In-Place Density Test by GES: Field density tests will be performed for each parking bay and driveway by the GES. Fests shall be performed at vertical increments of 2 feet or less for each 2.500-5.000 square feet of surface area. Test every 150

LF per 2-foot vertical increment of utility trench backfill.

B. Contractor shall cooperate with GES Inspectors and Technicians to facilitate the execution of GES duties.

3.02 PREPARATION

- A. Conform to dimensions and elevations indicated on the plans. Do not exceed plus or minus five—hundredths of one—foot variation from design grade elevations shown.
- Prevent ground and subsurface water from flowing into excavations, from flooding project site and surrounding properties, and from collecting and ponding unless such ponding is in connection with required erosion control; provide and
 - maintain all temporary drainage and dewatering sysems. 2. Install pumps, sumps and suction and discharge lines, as necessary to comply with requirements specified herein.
- 3. Install temporary deviations from grades indicated to channel water away from excavations.
- 4. Leave no sumps or pockets at completion of each day's grading operations. 5. If water is encountered during footing and foundation excavation, install pumps of suitable capacity to remove water while excavations are being made and continue
- pumping for 24 hours following placing of concrete footings and construction of permanent drainage is completed. 6. Contractor to be responsible for design, installation and maintenance of dewatering specified herein.
- C. Do not place fill or backfill material in water, on substances which are frozen or contain frost, or during
- unfavorable weather conditions. During periods of anticipated inclement weather, grade and seal surface of fill as required to limit percolation of surface water.
- 2. When work is interrupted by rains, do not resume operations until moisture content and field density tests of upper 6" of in-place materials have been made by GES and approved
- by Project Engineer. D. Establish and identify required lines, levels, contours and datum.

E. Proofrolling:

- Perform proofrolling over entire areas prior to receiving fill material, but after topsoil is removed, in presence of Geotechnical Engineering Service.
- Make the number of passes as requested by GES over each area. Use minimum 15 tons static weight rubber—tired compactor or similar type equipment for proofrolling acceptable to Project Engineer and/or GES. a. Soils which are observed to rut or deflect excessively under to moving load should be undercut and replaced with properly compacted

fill. Undercutting of three to five feet or

more may be required. All proof-rolling and undercutting activities should be witnessed by representative of the geotechnical engineer and should be performed during a period of dry b. After stripping, excavating where required, and proof-rolling, but prior to placing fill or payement base, the exposed soils should be scarified and then processed to a moisture content between two percentage points below and three percentage points above the standard

Proctor optimum. The subgrade soils should be

recompacted to a dry density for a depth of at

least 98 percent of the standard Proctor maximum dry density for a depth of at least 6 inches below the surface. c. After subgrade preparation and inspection have been completed, fill placement may begin. Fill materials should be free of organic or other deleterious materials, have a maximum particle size of 3 inches, and have a liquid limit less than 50 and plasticity index less than 30. If a fine-grained (silt or clay) soil is used for fill, very close moisture content control will be required to achieve the recommended degree of compaction. Fine—grained structural

fill should be compacted to at least 98 percent

determined by ASTM Designation D 698. Granular

of standard Proctor maximum dry density as

soils should be compacted to at least 100

- percent of the standard Proctor density. d. Fill placement is expected to replace any undercut soils, and/or to raise site grades (if needed). Fill should be placed in loose lifts not exceeding 8 inches in thickness. The fill should be compacted to a minimum of 98% of the soil's standard Proctor maximum dry density (per ASTM D-698). The moisture content at the time of placement and compaction should be within +/- 3 percent points of the soil's optimum moisture content as determined by the standard Proctor testing procedures. If water must be added, it should be uniformly applied and thoroughly mixed into the soil by disking or scarifying. Each lift of compacted engineered fill should be tested by the Geotechnical Engineer or his representative prior to placement of subsequent lifts. construction operations soften or otherwise disturb previously proofrolled areas to an extent that they become soft and unstable or are rendered unsuitable, perform additional proofrolling before starting filling operations if necessary, remove unsuitable materials to depth and extent required and replace with approved compacted fill as specified above.
- of high ground water. F. Following topsoil stripping and proofrolling operations, but before making cuts or placing of fill and backfill, ground surfaces shall be free of all trash; debris; loose, frozen, wet or soft soil, and other undesirable surface materials.

Unsuitability to be determined by Project

e. Proofrolling should not be performed in areas

Engineer. Remedial work to be at Contractor's

3.03 GRADING

- A. Remove excess topsoil from site and stockpile only the amount necessary to complete work. Specification cross reference: Refer to Section 02 100, Site Preparation and Demolition, Site Clearing Section.
- B. Rough grade to required profiles, contours, elevations and subgrade levels as shown on drawing, with allowances made for depths required for placement of topsoil and construction of paving, walks, and equipment and building slabs or pads.
- C. Control grading on site; slope ground to prevent water from running into excavated areas of building or damaging other structures; and so entire project is well-drained and free from water pockets.
- D. Provide uniform levels and slopes between elevations shown on drawings, and between elevations shown and existing finished grades shown to be maintained. Round abrupt changes in
- E. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Project Engineer. Unguthorized excavation, as well as remedial work directed by Project Engineer, shall be at no additional cost to Owner. Under footings, or retaining walls, fill unauthorized excavation by extending indicated bottom elevation of footing base to excavation bottom, without altering required top elevation. Lear concrete fill may be used to bring elevations to proper position, when acceptable to Project Engineer. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavation of same classification, unless otherwise directed by Project Engineer.
- F. After cuts are made, scarify cut areas a minimum of 12" in depth and compact to specified density for each area.

3.04 FILL

- A. General: 1. GES is sole judge as to when specified compaction densities have been obtained; however, the Contractor is recommended to obtain and maintain a copy of the Subsurface Exploration performed for
- 2. Contractor is responsible for correcting, at his expense, including costs if testing, all areas with insufficient compaction. Remove and replace, or scarify, aerate or sprinkle (as needed), and recompact and retest deficient compacted fill. Density tests should be performed a recommended minimum of one test per 10,000 SF, per fill lift.
- 3. Place acceptable material in horizontal lifts not exceeding 8" in loose depth, with each lift extending for entire length and width of each area being filled. Do not place material on surfaces that are muddy, frozen or contain frost.
- drying or uniform sprinkling with water to achieve moisture content required for specified degree of compaction for each lift. 5. Disk each layer of fill to break down oversize

4. Reduce or increase moisture content of fill by

clods, to thoroughly mix to uniform density and

achieve proper compaction. 6. Maintain positive surface slope to allow runoff and to prevent ponding of surface water. If surface water ponds, dewater. Remove all saturated or disturbed soil before placing additional fill material.

Overlap rolling passes to completely cover areas of fill.

3.05 COMPACTION AND FILL MATERIAL LOCATION: A. Under building, Driveway Areas, Sidewalks, Paving, and Curb and Gutter Areas: Structural "Controlled Fill", 98% of Standard Proctor Maximum Dry Density (ASTM D698) for upper 12 inches. A depth greater than 12 inches, at least 95 percent of Standard Proctor Maximum Dry Density. Granular soils should be

7. Number of compaction equipment passes required is

dependent upon degree of compaction specified.

- compacted to at least 100 percent of the Standard Proctor Density. B. Under Lawn and Unpaved Areas: Nonstructural "Controlled Fill", minimum 3' in depth shall be 95% of Standard Proctor
- C. Utility Trenches: Structural "Controlled Fill" 98% of Standard Proctor Maximum Dry Density.
- D. Others not specified: Nonstructural "Controlled Fill", 95% of Standard Proctor Maximum Dry Density.

Maximum Dry Density.

3.06 TRENCHING, BACKFILLING, AND COMPACTION FOR UTILITIES

- A. Trench Excavation: 1. Provide open cut excavation except short sections which may be tunneled if approve by Project Engineer and demonstrated by Contractor that pipe, cable, or duct can be properly installed, backfilled, and compacted. 2. Excavate to necessary width, depth, and alignment for proper material installation. Cut trench banks as nearly
- vertical as practicable, but to safety standards of governing authorities and/or OSHA's "Construction Standards for Excavations." Stockpile material suitable for backfilling a sufficient distance from banks to avoid overloading and cave—ins 3. Side slopes of excavations to comply with local
- codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of soil.

6. Trench bottoms shall be accurately graded to

7. Remove rock, wet or otherwise unstable or

of the pipe laying operation.

- 4. Maintain sides and slopes of excavation is safe condition until completion of backfilling. 5. Excavate to the line and grade shown. The excavations shall not be carried closer than to within two inches of final grade until the pipe is ready to be installed. The remaining two inches shall be removed by fine graders just ahead
- provide uniform bearing and support for each pipe section on undisturbed soil along full pipe length, except for areas where necessary to excavate for bell holes and for sealing pipe joints. Dig holes and depressions for joints after trench bottom has been graded so pipe rests on prepared bottom for full length. Remove all stones to avoid point bearing.
- unacceptable material encountered 6" below depths indicated and replace with sand, gravel, or concrete. B. Excavation for Appurtenances: Excavate for manholes and similar structures to leave 12" minimum clearance between structure and outer surfaces of embankment or timber used to hold
- and protect banks. Fill over excavation with sand, gravel or concrete. C. Shoring and Bracing: 1. Provide materials for shoring and bracing, such as
- serviceable condition 2. Establish requirements for trench shoring and bracing to comply with local codes an authorities having iurisdiction 3. Maintain shoring and bracing in excavations

sheet piling, uprights, stringers, and cross-braces in good

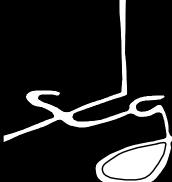
regardless of time period excavations will be open. Carry down

shoring and bracing as excavation progresses. D. Backfilling: 1. Do not backfill until utilities systems have been installed, inspected, tested, and accepted by City

of LaGrange inspectors.

- 2. Backfilling from bottom of trench to a point at least one foot over the top of pipe barrel shall be placed by hand in four-inch layers and thoroughly tamped into place around the pipe. Extreme care shall be exercised to the level one foot above pipe barrel to insure that no damage is caused to the pipe or that its alignment or grade is not disturbed in any way. Backfilling shall be completed in lifts not exceeding four inches. No rock greater than three inches in diameter shall be placed within one foot of any utility. Compaction
- requirements shall comply with Section 3.05. 3. Restore ground surface, pavements, base courses, and compacted subgrade disturbed by utility systems trenching and backfilling work to their original condition, construction, and finishes.





SMITH DESIGN GROUP, INC.

206 WEST HARALSON STREET LAGRANGE. GEORGIA 30240

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STOTHARD ENGINEERING, INC. 1008 COLQUITT ST.

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DATE **DESCRIPTION**

REVISIONS

WILLIAM J GRIGGS CENTER PHASE II **POOL AND PAVILION**

TROUP COUNTY PARKS AND RECREATION 716 GLENN ROBERTSON DRIVE LAGRANGE, GEORGIA

TITLE:

PROJECT:

PHASE 2 **STANDARD SPECIFICATIONS SHEET 1**

MODIFIED DATE:	JOB NO:				
	2312				
ISSUED DATE:					
FOR BIDDING AND PERMIT					
13 JULY 2023	SD-12				

- A. Excavate bottom of foundations to exact grade called for on structural drawings. Fill overexcavated areas with
- B. Excavate sufficient distance beyond footing and foundations to allow for inspection, placing and removal of forms and for installing of dampproofing, waterproofing and drain tile, except where concrete is authorized to be deposited directly against excavated surfaces. Leave excavations open until work has been inspected and approved by GES.
- C. Contractor to backfill excavation after testing is complete. Final grade to the elevations shown on drawings. Ensure that no drainage pockets or drainage towards building is

3.08 FOUNDATION BACKFILL

- A. Acceptable Structural "Controlled Fill" material.
- B. Meet all requirements of Subsection 3.04, FILL.
- C. Remove surface debris and debris in excavation before placina backfill.
- D. Allow footing and foundation walls to attain full design strength before placing backfill.
- E. Exercise care during placing and compacting equipment within 4' of walls. 1. Use hand operated compaction equipment within 4' of
- walls. 2. Where fill is placed along both sides of foundation walls, place and compact simultaneously on both sides of walls.
- 3. Repair, or remove and replace, all damage to foundation walls or structure occurring during placement and compaction operations at no additional cost to Owner.
- F. Coordinate placing compaction with other trades. Do not backfill until dampproofing, waterproofing and foundation drainage system material has been installed, inspected and approved by GES and/or Architect.

3.09 MAINTENANCE

- A. Protection of Graded Areas: 1. Protect newly graded areas from traffic and erosion. Keep free of trash and debris. 2. Repair and re-establish grades in settled, eroded,
- and rutted areas to specified tolerances. B. Reconditioning Compacted Areas: Where completed areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.
- C. Setting: Where setting is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and restoration to greatest extent possible.

3.10 DISPOSAL OF EXCESS AND WASTE MATERIALS

A. Removal from Owner's Property: Remove waste material, including unacceptable excavated material, trash and debris, and dispose of it off owner's property in a legal manner.

END OF SECTION

SITE CONCRETE

SECTION 02510

PART 1 - GENERAL

- 1.01 SUMMARY
 - A. Furnish and install all site concrete items as shown on the drawings. Typical items of work including, but not limited to, dumpster area concrete pad, sidewalks, and curb and gutter, concrete sidewalk ramps, concrete steps, etc.
 - B. Related work specified in other sections 1. Drawings and general provisions of Contract, including General Conditions and other Division 1 Specification sections apply to work of this
 - section. 2. Compaction of the subgrade shall conform to the requirements specified in Section 02 200 Earthwork. thereof shall meet the requirements of Section 02 200 Earthwork.

1.02 QUALITY ASSURANCE

- A. Industry Reference Standards:
- State of Georgia Department of Transportation Standard Specifications for Construction of Roads and Bridges," 1993 Edition.
- American Society for Testing and Materials (ASTM) C39-86 Test Method for Compressive Strength of Cylindrical Concrete Specimens. C173-78 Test Method for Air Content of Freshly-Mixed Concrete by the Volumetric Method C231-91 Test Method for Air Content of Freshly-Mixed Concrete by the Pressure Method C150-92 Portland Cement
- D1751-83(1991) Performed Expansion Joint Fillers for Concrete Paving and Structural Construction
- D3405-78 Joint Sealants, hot-poured for concrete and asphalt pavements D3406-89(1991) Joint Sealants, hot-poured, Elastometric-Type, for Portland Cement concrete pavements

1.03 TESTS

- A. Contractor will obtain and pay for the services of an independent commercial testing laboratory for performing field
- B. Testing Agency will make one soil density test at subgrade for each 1,000 linear feet or fraction thereof, of curb and gutter, AASHTO T180, modified Proctor. One test minimum.

quality control testing during construction.

C. Testing Agency will take three compression test samples and one entrained air content sample from first 50 cubic yards of concrete placed each day and each 100 cubic yards thereafter; in conformance with ASTM C39, and ASTM C173 or C231.0.

1.04 SUBMITTALS

- A. Concrete mix design shall be submitted for approval. Fully document proposed materials and mix designs. Submit documentation 28 days, minimum, prior to use
- B. Product cut sheets for the curing membrane shall be submitted. Alternate curing methods must also be submitted for
- C. Shop drawings for any metal forms shall be submitted.

PART 2 - PRODUCTS

2.01 FORMWORK

A. Steel or wood of heights equal to the full depth of the finished work so as to obtain a smooth form finish.

6" x 6" WWM.1.2 x1.2.

2.02 CONCRETE

- A. Qualities: 1. Concrete Curb and Gutter: Per Section 441 of "Standard Specifications for Construction of Roads and Bridges," State of Georgia Department of
- Transportation, 1993 Edition. 2. Dumpster Area Pad: 28—day flexural strength of 650 psi, reinforced with 6" X 6" wire mesh, 1.4 x 1.4. 3. Sidewalks: 4" thick, 3,000 psi reinforced with

Specifications for Construction of Roads and Bridges" 2. Sidewalk: Stiff broom finish.

2.03 ACCESSORY PRODUCTS

A. Forms: Steel or wood, staked in place, of strength sufficient to resist pressure of wet concrete without losing shape or deflecting more than 1/4 inch at any point. 1. Key way shaped forms: Steel, only.

Curb and Gutter: per Section 441, "Standard

- B. Expansion Joints: Preformed, non-extruding resilient asphalt/fiber type, 1/2 inch thick; ASTM D1751.
- C. Joint Sealer: Hot poured elastomeric type; ATSM D3405 or D3406.

2.04 CURING MATERIALS

A. Impervious sheet membrane-curing or other Architect approved method.

PART 3 - EXECUTION

3.01 INSPECTION

A. Examine the areas and conditions under which concrete is to be installed. Conditions detrimental to the proper and timely completion of the work shall be corrected before proceeding with the work.

3.02 SUBGRADE PREPARATION

- A. Subgrade: Conform to the requirements specified in Division Two - Farthwork Section. 1. The subgrade shall be thoroughly wetted and then compacted with two passed of a 500 pound roller.
- Yielding material deflecting more than 1/2" under the specified roller shall be removed to a depth of not less than 4" below subgrade elevation and replaced with an approved granular material which shall then be compacted as described above.
- The subgrade shall be in a moist condition when the concrete is placed. The subgrade shall be free from frost or mud when the concrete is placed.

3.03 FORM CONSTRUCTION

- A. Install sufficient quantity of forms to allow continuous progress of the work and so that forms can remain in place at least 24 hours after concrete placement. Forms are to be oiled prior to each use.
- B. Check completed formwork for grade and alignment to the following tolerances: Top of form: Not more than 1/8" in 10 feet. Vertical face: Longitudinal axis not more than 1/4" in 10 feet.

3.04 CONCRETE PLACEMENT AND FINISHING

- A. Concrete placement and finishing shall be as specified in Section 441 of "Standard Specifications for Construction of Roads and Bridges." Finishes as specified in 2.02B of these specifications.
- B. Tamp and consolidate concrete with a suitable wood or metal tamping bar and the surface shall be finished to grade with a wood float
- C. The finished surfaces shall not vary more than 3/16 inch from the testing edge of a 10 foot straight edge.

3.05 CONTRACTION JOINTS

- A. Divide the surface of paving, walks and terraces into rectangular areas by means of contraction joints not to exceed 10'-0" centers. Where sidewalks abut curb and gutter, alternate ioints shall coincide.
- B. The depth of the joint shall not be less than 1/5 nor more than 1/4 the depth of the concrete.
- C. With the exception of sawed joints, all joints shall be finished with a 1/4 inch edging tool.
- D. Membrane-curved surfaces damaged during the sawing operations shall be resprayed as soon as the surface becomes dry.
- E. Sidewalk tool joint pattern as per Architect's

3.06 EXPANSION JOINTS

- A. Install transverse expansion joints at returns and a maximum interval of 40 feet on center.
- B. Install longitudinal expansion joints where curbs and paved areas, building, other concrete slabs or pads or vertical restraints abut each other.
- C. Place joint filler with top edge 1/4" below the surface and hold in place with steel pins or other devices to prevent warping of the filler during floating and finishing.
- D. Immediately after the finishing operations are completed, round joint edges with edging tool having a radius of 1/8". Remove concrete over the joint filler.
- E. At the end of the curing period, clean and fill expansion joints with joint sealer. Fill joints flush with concrete surface. Dummy groove joints shall not be sealed.

3.07 CURING AND BACKFILLING

- A. Curing: Immediately after the finishing operations, the exposed concrete surface shall be cured for 7 days by an impervious sheet membrane or other approved method.
- B. Backfilling: After curing, debris shall be removed and the areas adjoining shall be backfilled, graded and compacted to conform to the surrounding areas in accordance with the lines and grades indicated. Compaction shall conform to the requirements of Section 02200 Earthwork.

3.08 PROTECTION

- A. Protect the completed work from damage until accepted. Repair damaged concrete and clean concrete discolored during reconstruction. Work that is damaged shall be removed and reconstructed to the entire length between regularly scheduled joints. Refinishing the damaged portion will not be acceptable.
- B. Cars, trucks, and heavy equipment shall be excluded from concrete areas for a minimum of 14 days following placement.

END OF SECTION

SECTION 02512 ASPHALTIC CONCRETE PAVING

PART 1 - GENERAL

1.01 SUMMARY

- A. Furnish and install all graded aggregate base material, and one or more courses of bituminous plant mixture constructed on the prepayed foundation or on an existing surface in reasonably close conformity with the lines, grades, thickness and typical cross sections shown on the drawings.
- B. Related work specified in other sections 1. Drawings and general provisions of Contract, including General Conditions and other Division-1 Specification sections apply to work of this
- 2. Compaction of subgrade shall comply with the requirements of Section 02200 Earthwork.

A. State of Georgia Department of Transportation "Standard Specifications for Construction of Roads and Bridges." 1993 Edition, Section 400.

- B. Contractor will engage professional testing and inspection service for quality control testing during placement of asphaltic concrete.
- C. Paving Coring: 1. Owner reserves the right to make corings of the
 - bituminous paving to establish the depth of the paving layers.
- 2. The location and timing of the coring shall be at the discretion of the Project Engineer and at the Owner's expense. 3. The indicated depths are minimum; if a core
- indicates undersize, the Project Engineer may require additional corinas (at Contractor's expense) to establish the extent of the undersizing 4. If undersizing is indicated, methods of corrections shall be submitted for Project Engineer's approval.
- Correction shall be at Contractor's expense. 5. Fill boring holes with bituminous material and seal properly.

- A. Testing agency will make compaction tests of the asphaltic concrete utilizing nuclear density testing on a random basis with approximately one test per 500 tons of production, with a minimum of one test.
- B. In lieu of digital printouts of liquid asphalt weights supplied by the asphalt plant the contractor will be required to perform extraction tests to verify the asphalt cement content is within 0.50 percent of the approved job mix asphalt content for Asphaltic Concrete Mix A binder course and within 0.40 percent of the approved job mix asphalt content for Asphaltic Concrete Mix A surface course.
- C. Testing agency will make compaction tests of the graded aggregate material.

SUBMITTALS

- A. Certification that all asphalt paving material is being produced by a Georgia DOT approved plant.
- B. Job mix formula shall be submitted and approved by the Engineer. Once approved, no alterations to the job mix formula will be permitted without prior approval of the Engineer.
- C. Digital printouts or extraction test results verifying he asphalt content of the mix shall be submitted
- D. Certification from supplier that the tack coat incorporated into the work complies with the requirements of DOT's "Standard Specifications for Construction of Roads and Bridges", Section 413.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Light Duty Flexible Pavement: Graded Aggregate Base Course, 6" thick minimum,
- 2. Asphaltic Concrete Surface Course, 2" thick, GDOT Section 400, Type F.
- B. Heavy Duty Flexible Pavement: Graded Aggregate Base Course, 8" thick minimum,
- 2. Asphaltic Binder Course, 2" thick, GDOT Section 400. Type B.
- 3. Asphaltic Surface Course, 1.5" thick, GDOT Section 400, Type F.

PART 3 - EXECUTION 3.01 SUBGRADE PREPARATION

- A. Subgrade shall be compacted in accordance with densities specified in Division Two - Section 02200, Earthwork.
- 1. Subgrade and shoulders shall be final graded, trimmed and finished within the limits and as required by the elevations shown on the Drawings. Grading operations shall be so conducted that the required limits. The finished surfaces shall
- be left in smooth and uniform planes. 2. The Contractor shall be solely responsible for all lines, levels and measurements for this work. He shall provide his own instruments and survey crew to maintain this control throughout the duration of his work.
- C. At the locations shown on the drawings and where required to obtain a neat edge, the existing pavement will be saw cut to provide a neat edge. Upon removal of the existing pavement and base material adjacent to a state roadway, the requirements of Georgia Department of Transportation "Standard Specifications for Construction of Roads and Bridges," 1993 Edition shall be adhered to strictly.
- D. Material for spot subgrade reinforcement shall be

graded aggregate base.

- E. Subgrade and Embankment Protection:
- During construction, embankments and excavations in the areas of the paving shall be kept shaped and 2. Ditches and drains along the subgrade shall be
- maintained to drain effectively at all times. 3. Repair ruts or depressions of 1" or more in

3.02 GRADED AGGREGATE BASE

- A. Graded aggregate base material shall be constructed in accordance with Section 310 of GDOT's "Standard Specifications for Construction of Roads and Bridges." Aggregate materials containing frost or frozen particles shall not be placed.
- B. Maximum thickness of lifts shall be 4".

above shall apply.

- C. The material placed shall be shaped to line, grade, and cross—section and rolled until uniformly compacted to at least 100 percent of the maximum dry density as determined by the Modified AASHTO Compaction Test (T—180). The compacted base shall have sufficient stability to support construction equipment without pumping. If the basematerial becomes unstable as a result of too much moisture, the base material, and the underlying subgrade of necessary, shall be dried and reworked to a moisture content that will provide stability and compaction. At all locations not accessible to a roller the required compaction shall be provided by means of mechanized tampers. The same density requirements as stated
- D. Those areas found to be deficient in thickness by more than 1/2 inch shall have additional measurements taken to determine the extent of the deficient area. Deficient areas shall be corrected adding additional material and rebuilding to the design thickness.
- E. The finished surface of the graded aggregate base material shall conform to the lines, grades, and cross slopes as shown on the drawings.

3.03 PAVING

- A. The binder and surface courses shall be constructed in conformity with the provisions of the specifications of Section 400 of GDOT's "Standard Specifications for Construction of Roads and Bridges", 1993 Edition.
- B. The Target Density shall be 94 percent of the calculated voidless mixture based on the effective specific gravity of the aggregate used in the mix. Contractor shall be responsible for conducting sufficient testing to assure that the specified density is being obtained.

debris prior to paving operations.

- D. Placing operations shall not be performed where the existing surface is wet or frozen. Minimum temperature requirements shall be in accordance with Section 400 of DOT's "Standard Specifications."
- E. All potholes and broken areas of the existing pavement shall be repaired prior to the placement of any leveling course.
- F. Bituminous tack coat shall be applied in accordance with Section 413 at the application rate specified . Tack shall be required between subsequent courses of asphaltic concrete. Proper care shall be taken to ensure the tack is distributed in a controlled manner with no spillage onto other portions of completed work.
- G. Spreading and rolling operations shall be in accordance with an approved plan. The maximum compacted layer thickness of the various courses will be determined by the type mix being used in accordance with GDOT's "Standard Specifications for Construction of Roads and Bridges," 1993 Edition.
- H. Care shall be taken to protect previously completed items of work, including but not limited to curb and autter. islands and drainage structures from damage or discoloration All damaged sections of work shall be repaired or replaced, as determined by the Owner, and at no cost to the Owner.

3.04 FINISH

- A. After final rolling, no traffic shall be permitted on paving until it has cooled and hardened and in no case less than
- B. Each course of paving shall be constructed in conformance with the lines, grades, and cross slopes as shown on the drawings. No bumps or "bird baths" will be accepted.

END OF SECTION

SECTION 02575 REMOVING AND REPLACING PAVEMENT:

PART 1 - GENERAL 1.01 QUALITY ASSURANCE

All paved streets or other paved areas cut by these operations shall be repayed in a workmanlike manner as shown or specified. All work shall be in accordance with the Georgia Department of Transportation, Standard Specification, Construction of Roads and Bridges, 1993 Edition. Prior to excavation in paved streets or other paved areas, the pavement shall be cut along straight and perpendicular lines parallel to the centerline of the pipe. Upon completion of pipe laying, backfill shall be placed and compacted to 95% of maximum density as determined by AASHTO T99. Just prior to repaving, jagged edges shall be squared and cut to a string line so that the patch will represent a neat appearance. Centerline stripes or other pavement markings which existed prior to start of construction shall be replaced. The term "pavement" shall be construed to mean either concrete, bituminous, cobblestone, or brick placed as a slope surface in streets, driveways, sidewalks, or placed as slope protection for ditches or drains, Slag surfacing, sand—clay surfacing, gravel surfacing, and other such types of surfacing will not be considered paving. The various types of pavement replacement shall be as hereinafter specified. Specific type or types of pavement replacement will be as indicated on the drawings or in the proposal.

2.01 Pavement Replacement Type "A", Flexible Pavement

After the pipe has been installed the pipe trench shall be backfilled and compacted as otherwise specified in the Specification to within 12 inches of the existing roadway surface. The a 12-inch thickness of crushed limestone (crusher run) base course shall be placed the full width of the trench and compacted to 100% maximum density. The surface shall be allowed to "weather" for at least one month, but not more than two months. The aggregate lost during the weathering period due to subsidence or other causes shall be replaced at the Contractor's expense. The Contractor shall add to and maintain the limestone layer as required to keep the surface smooth and even with the adjacent existing pavement. After weathering, the existing pavement shall be cut back a minimum of 9 inches from both edges of the trench, and the top $4\frac{1}{2}$ " inches of material shall be removed to conform to the required contours and placed in condition for paving. If the pavement patch is to receive the Type "E" or "F" plant mix surfacina overlayment, then a $4\frac{1}{2}$ inch (500 lbs. per S.Y.) layer of hot compacted plant mix bituminous Type "B" base material shall be placed full width, flush with the existing pavement, to the shape of the original payement. The 4 % inch layer shall be placed and compacte in two (2) or more approximately equal layers, with no layer exceeding 2 $\frac{1}{2}$ inches in thickness. If the pavement patch is not to receive the Type "E" or "F" plant mix surfacing overlayment, the the top 1 inch layer of the 4 % inch layer of bituminous material shall be a wearing layer of hot bituminous pavement (Type "E" or "F")

2.02 Pavement Replacement Type "A" Plant Mix Surfacing

Following an acceptable installation of Pavement Replacement, Type "A", Flexible Pavement, a wearing layer of hot mix asphaltic concrete pavement, Type "E" or "F" as specified in Section 828 of the Georgia Department of Transportation, Standard Specification, Construction of Roads and Bridges, 1993 Edition, shall be applied over the Type "A" Flexible Pavement, at a rate of 100 pounds per square yard, and overlapping the adjacent existing pavement on all sides, The width of the wearing layer will be determined by the Engineer. The entire area to be convered by the wearing layer shall receive a tack coat in accordance with 820 of the GDOT Specifications just prior to its placement. The tack coat shall also extend one foot past the finish edges of the wearing layer. The edges of the wearing layer shall be feathered into existing pavement on all sides and care shall be taken

to assure a smooth transition at each edge of pavement. 2.03 Pavement Placement Replacement Type "B", Concrete Paving

Where concrete pavement in streets, sidewalks, paved ditches or other areas is removed, it shall be replaced with the same type and thickness as that removed, including finish. A 6 inch compacted thickness soil aggregate base course shall be provided under new concrete paving subject to vehicular traffic. Existing pavement shall be

replacement limits, to the finish elevation of the replacement patch or

cut back a minimum of 9 inches from edge of trench.

The Contractor shall adjust the top elevation of all valve boxes manhole rims, etc., located partially or fully within the paving

2.04 Valve Boxes, Manhole Rims, etc

overlayment.

SECTION 02580 PAVEMENT MARKINGS

PART 1 - GENERAL 1.01 SUMMARY

- A. This work shall consist of furnishing and applying reflectorized Traffic Line Paint and in accordance with plan requirements and these specifications. Painted Stripes shall consist of either solid or broken (skip) lines of the color and
- B. Skip Traffic Stripes consist of painted segments between unpainted gaps in a designated sequence with a ratio of 1:3 (10 foot segment and 30 foot gap). The location and color will be as designated on the Drawings.

words and symbols in accordance with the Drawing details, the

provisions of the Specifications, and the requirements of the

current Manual on Uniform Traffic Control Devices (MUTCD), latest

edition. D. Related work specified elsewhere: 1. Drawings and general provisions of Contract, including General Conditions and other Division-1 Specification sections apply to work of this

at the location designated on the Drawings.

C. This section shall also include the application of

1.02 QUALITY ASSURANCE

A. Manual on Uniform Traffic Control Devices, current edition.

A. Certification: The manufacturer of each brand of paint submitted for acceptance under these Specifications, shall furnish the Owner a certificate of analysis and manufacturer's auarantee.

- The certificate shall show the trade name of the paint to be furnished including a facsimile of the label, (if paint is ready mixed) and an analysis showing the percentage of each of the
- chemical elements and compounds in the pigment and vehicle. The the analysis shown on the certificate filed, and to the statement of the percentages of ingredients shown on the labels required to be on each container. The augrantee shall be sworn to by a person having authority to bind the manufacturer by his acts.
- B. The proposed method of application shall be submitted for approval.

1.04 PROJECT CONDITIONS

- 1. Examine areas for conditions under which work is to be performed. Report in writing to Project Engineer all conditions contrary to those shown on the drawings or specified herein and all other conditions that will affect satisfactory execution of work such as improperly constructed substrates or adjoining work. Do not proceed with work until unsatisfactory conditions have been corrected.
- 2. Starting work constitutes acceptance of the conditions under which work is to be performed. After such acceptance, Contractor shall at his expense, be responsible for correcting all unsatisfactory and defective work resulting from such unsatisfactory conditions.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Color: White, blue and yellow colors conforming to GDOT's Standard Specifications for Constructions of Roads and Bridges," 1993 Edition, Sections 870.03.
- B. Paint Types: Composition and performance characteristics of Traffic Line Paint shall comply with State of Georgia specifications.

C. Glass Beads: Shall comply with the requirements of Section 913.02.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Remove all dirt, oil, grease, and other foreign material from areas of pavement to be marked.
- B. Apply paint only on thoroughly dry surfaces, when atmospheric temperature is above 50 degrees fahrenheit.

3.02 INSTALLATION

A. Apply markings in colors indicated and at locations as shown on the drawings.

C. Glass beads shall be applied uniformly immediately

- B. Installation shall comply with the requirements of "Standard Specifications for Construction of Roads and Bridges," Section 652.
- following application of the paint a minimum rate of 6 pounds of beads to each gallon of paint. D. Protective Measures: When painting is done under traffic, the contractor shall furnish and place all warning and directional signs necessary to direct, control and protect the traffic during the stripping operations. Warning signs shall be set up before the beginning of each operation and extra signs
- shall be kept well ahead of the painting equipment. When necessary, a pilot car shall be used to protect both the traffic and the painting operation. The freshly painted stripe shall be protected by cones or other satisfactory devices. All stripes damaged by traffic, or

pavement marked by traffic crossing wet paint, shall be repaired

END OF SECTION

SECTION 02660 WATER DISTRIBUTION

PART 1 - GENERAL

or corrected.

- 1.01 DESCRIPTION OF WORK A. This work consists of furnishing and installing water distribution pipes, valves, wyes, backflow preventers, tees, crosses, thrust blocks, and other appurtenances complete with
 - fittings and connections to existing water system. B. Contractor shall arrange for, coordinate the installation of, and pay all fees associated with the installation of the water meter, backflow preventer, water line

and all appurtenances. 1.02 QUALITY ASSURANCE

- A. Industry Reference Standards:
- 1. City of LaGrange Water Department's water connection details. 2012 International Plumbing Code (IPC) 2012 International Building Code (IBC) 4. American Water Works Association (AWWA). AWWA C601— American National Standard for Disinfecting Water Mains.
- Chloride (PVC) Pressure pipe, 4" through 12" for B88-92- Seamless Copper Water Tube. 5. Manufacturer's Qualifications: Firms regularly engaged in manufacture of potable water system materials and products, of types and sizes required

AWWA C900- American National Standard for Polyvinyl

whose products have been in satisfactory use in

specifications data for all materials listed in Part 2-Products.

installation of service connection and coordinate installations

1.03 SUBMITTALS

A. Product Data: Submit manufacturer's catalog cuts and

similar service for not less than 5 years.

B. Record Drawings: At project closeout, submit record drawings of installed water system piping and products, in accordance with requirements of Division 1.

of meter, vaults, reduced pressure assemblies and Detector/Backflow prevention devices.

PART 2 - PRODUCTS 2.01 MATERIALS

1.04 PROJECT CONDITIONS

A. General: Provide materials and products complying with

2. Fittings: Ductile-Iron complying with AWWA C110,

cement lined, with rubber gaskets conforming to

- B. General compliance with the City of LaGrange Water Departments list of acceptable products. C. Ductile Iron Pipe (DIP): 1. Pipe: ANSI/AWWA A 21.50 and A 21.51
- D. Copper tubing:

AWWA C111.

A. Notify City of LaGrange Water Department for

. Pipe: ASTM B88, Type K, soft—annealed temper. 2. Fittings: Wrought-copper solder-joint fittings, ANSI B16.22.

ARCHITECT'S STAMP



SMITH DESIGN GROUP, INC.

206 WEST HARALSON STREET LAGRANGE, GEORGIA 30240

706-882-5511

STOTHARD ENGINEERING, INC.

1008 COLQUITT ST. LAGRANGE, GA 30241 PHONE: 706 884-5279



REVISIONS DATE **DESCRIPTION**

WILLIAM J GRIGGS CENTER PHASE II **POOL AND PAVILION**

TROUP COUNTY PARKS AND RECREATION

716 GLENN ROBERTSON DRIVE

LAGRANGE, GEORGIA

TITLE:

PROJECT:

PHASE 2 **STANDARD SPECIFICATIONS** SHEET 2

MODIFIED DATE:	JOB NO:
	2312
ISSUED DATE:	
FOR BIDDING AND PERMIT	SHEET:
13 JULY 2023	SD-13

2. Gate Valves 2 1/2 inch and smaller: shall be all bronze valves and shall conform to the Fed. Spec. WW-V-54C, Class A, Type 1, and rated at 200 psi for water. Valves shall be handwheel operated with a union bonnet, solid wedge disc, threaded ends and a non-rising stem. The minimum weight of the valves shall be as follows:

> Valve Size (inches) Valve Weight (pounds)

1/2	1.
3/4	1.
1	2.
1 1/4	3.
1 1/2	5.
2	9.
2 1/2	13

- 3. Valve Joints: All gate valve joints shall have mechanical joint ends, flanged ends, or threaded ends to fit the pipe run in which they are to be used, except valve joints installed on slip joint pipe shall have mechanical joint ends unless otherwise specified.
- F. Curb Stops: Curb Stops 3/4" and 1" in size shall be Mueller H-15200, Hays 5045, or Ford B21. Curb Stops 1 1/2" or 2" in size shall be Mueller H-15174, Hays 4005, or Ford B21.
- G. Corporation Stops: Shall be Mueller H-15000 or Ford

1. Anchorages: Provide anchorages for tees, wyes, crosses, plugs, caps, bends, valves and hydrants. After installation, apply full coat of asphalt or other acceptable corrosion—retarding material to surfaces of ferrous anchorages. . Clamps, Straps, and Washers: Steel, ASTM A 197. Rods: Steel, ASTM A 575. Rod Couplings: Malleable-iron, ASTM A 197. Bolts: Steel, ASTM A 307.

e. Cast-Iron Washers: Gray-iron, ASTM A 126.

PART 3 - EXECUTION

3.01 TRENCHING, BACKFILLING AND COMPACTION

A. Trenching, backfilling and compacting: In accordance with applicable requirements of Division Two Section 02200 -

3.02 INSTALLATION

- A. The Contractor will tap existing lines and install meters.
- B. Contractor to arrange and pay for Item A above.
- C. Vertical clearance between sewer and water lines: Eighteen (18) inches minimum.
- D. Installation of Valves:

1. Prior to installation, valves shall be inspected for direction of opening, freedom of operation, tightness of pressure containing bolting, cleanliness of valve ports and especially seating surfaces, handling damage, and cracks. Defective valves shall be replaced. 2. Valves, fittings and plugs shall comply with AWWA

- 3. Install valves as indicated with stems pointing up.
- 4. Provide valve box over underground valves.
- F. Thrust Blocks: Concrete, 3,000 psi. Provide on all tees, wyes and bends.
- G. Valve Boxes: Provide as indicated, constructed of poured—in—place concrete, precast concrete, or Gray cast iron meeting the requirements of ASTM A48 for class 30 iron.
- H. Flush and disinfect water system in accordance with

3.03 TESTING

A. Upon completion of waterline construction, notify City of LaGrange Water Department and arrange for testing the system. The maximum allowable leakage shall be ten(10) gallons per inch of pipe diameter per mile of pipe per day.

B. Contractor to apply and pay for all fees and testing associated with installation.

END OF SECTION

SECTION 02700 SEWERAGE & DRAINAGE SYSTEM

1.01 RELATED DOCUMENTS

PART 1 - GENERAL

A. General Conditions and Supplementary Conditions apply to this Section.

1.02 WORK INCLUDED

B. Storm Sewer System. C. Payment of all fees for service.

A. Sanitary Sewerage System.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Erosion Control: Section 02100.

B. Trenching for Utility Systems: Section 02200.

1.04 QUALITY ASSURANCE

A. Applicable requirements of the following standards and codes apply: Standard Plumbing Code with local amendments. 2. GDOT's "Standard Specifications for Construction of Roads and Bridges", Section 550 and 668.

3. American Society for Testing and Materials (ASTM). C 828—80Low Air Pressure Testing for Wastewater Piping Systems D 2321 Installation of Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings D 3034—89 Type PSM Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings D 1248-84 (1989) Specification for Polyethylene Plastics Molding and Extrusion Materials. D 2729-89 Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings

F 405-89 Corrugated Polyethylene (PE) Tubing and Fittings

1.05 SUBMITTALS

A. Contractor or Applicator qualifications.

1.06 JOB CONDITIONS

A. Coordinate installation of sanitary service with City of LaGrange.

PART 2 - MATERIALS

2.01

A. General: Ells, tees, reducing tees, wyes, couplings, increasers, crosses, transitions and endcaps of same type and class of material as piping unless otherwise indicated.

B. PVC Plastic Pipe: ASTM 2241, SDR 26; with elastomeric sealed

joints in accordance with ASTM D3139

pipe to bell and spigot wye at connection to main.

C. Sanitary Sewer Pipe: Shall be PVC with bedding type C as specified above. 1. Sanitary sewer services shall be PVC, Schedule 40 solvent welded pipe. All bends shall be long radius bends. 2. Suitable adaptors shall be provided to connect solvent welded

 a. Reinforced Concrete Pipe shall be Class III, complying with the requirements of Georgia DOT. Class of pipe shall be in accordance with Standard Specifications," Section 843 and determined by the proposed height of fill above the pipe as shown on the drawings. b. High Density Polyethylene Pipe (HDPE) shall be smooth lined, outside corrugated pipe conforming to the requirements of AASHTO M-294 TYPE '

with molded bell/bell couplers. E. Concrete Pipe Joints: Concrete pipe joints may be sealed through the use of O-Ring gaskets or preform plastic gaskets. Gaskets shall be installed in accordance with the manufacturer's recommendation.

F. Miscellaneous Drainage Structures: Miscellaneous drainage structures shall include, but not be limited to sanitary sewer manholes, storm sewer manholes, catch basins, drop inlets, yard inlets, and junction boxes. These structures may be precast concrete, poured—in—place or brick masonry. Precast Concrete: All precast structures shall be cast at an Georgia DOT approved casting yard. Each unit shall bear the name or trademark of the manufacturer and the date it was cast, stenciled or otherwise placed thereon in such a manner as to be clearly legible at time of delivery. Each precast unit shall bear the stamp of an approved testing laboratory, or the Georgia DOT, as manufacturer. Precast units shall comply with the requirements

of Georgia DOT. Poured-In-Place: Poured-in-place structures shall comply with the requirements of Georgia DOT

Brick: Brick shall comply with the requirements of Georgia DOT. 4. All covers, frames, grates, and steps shall be furnished in accordance with the details shown on the drawings.

5. Sanitary sewer invert channels shall be shaped to lines and grades shown on drawings, and the channel shall be smooth.

G. Mortar and Grout: Mortar and grout shall comply with the requirements of GDOT's "Standard Specifications," Section 834.03, except that where used with sanitary sewer manholes the mortar shall consist of one part cement to two parts mortar sand and the use of hydrated lime shall not be permitted.

H. Pipe Bedding: GDOT, "Standard Specifications," Section 207.

PART 3 - EXECUTION

3.01 TRENCHING, BACKFILLING, AND COMPACTION

A. Generally, excavate to the line and grade shown. The excavations shall not be carried closer than to within two inches of final grade until the pipe is ready to be installed. The remaining two inches shall be removed by fine graders just ahead of the pipe laying operation.

B. Backfilling from bottom of trench to a point at least one foot over the top of pipe barrel shall be placed by hand in six inch layers and thoroughly tamped into place around the pipe. Extreme care shall be exercised to the level one foot above pipe barrel to insure that no damage is caused to the pipe or that its alignment or grade is not disturbed in any way. Only clean materials may be used in this operation, clean earth (no rocks) sand or rock dust.

3.02 LAYING PIPE

A. Reinforced Concrete Pipe:

. Reinforced concrete pipe shall be installed in accordance with the requirements of GDOT's "Standard Specifications," Sections 550. All pipe shall be laid to the line and grade called for on the plans. Each pipe shall be checked by the Contractor to insure that this result is obtained. The finished work shall be straight and shall be sighted through between

2. Each pipe shall be inspected for defect prior to being lowered into the trench and inside of pipe and outside of spigot shall be cleaned of any dirt or foreign matter.

3. Construction shall begin at the outlet end and proceed with spigot ends pointing in the direction of flow.

4. Completion of the pipe bedding and backfilling the remainder of the trench shall follow closely behind the laying of the pipe.

3.03 CONSTRUCTION OF DRAINAGE STRUCTURES

A. Construction of Drainage Structures: Drainage structures shall be constructed in accordance with the requirements of GDÖT's "Standard Specifications," Sections 668 for precast or pour—in—place structures. Brick masonry structures shall comply with the requirements of Section 668. Structures shall be constructed to the sizes and shapes as shown on the Drawings. Frames and tops shall be set to the elevations as indicated on the Drawings.

3.04 INSTALLATION OF SEWERS

A. Install sewer lines in straight line and on uniform rate of grade between points where changes in alignment or grade are shown. Bed barrel of pipe firmly at required line and grade. Keep stopper in mouth of pipe when pipe-laying is not in progress. Set bell of pipe upstream. Support barrels of pipe continuously and scoop out space for proper clearance of bell.

B. After installed piping has been tested and inspected, backfill excavations with approved material tamped compactly in place per City of LaGrange requirements. Tamp carefully around pipe and above top of pipe in layers not exceeding six inches. Take care in backfilling not to disturb pipe.

C. Provide granular bedding on all PVC pipe. Provide granular bedding and deterring materials and methods necessary to facilitate installation.

3.05 CLEANING PIPES AND STRUCTURES

A. Clear interior of piping and structures of dirt and other superfluous material as job progresses. Maintain swab or drag in line and pull past each joint as it is

B. In large, accessible piping, brushes and brooms may be used for cleaning.

C. Flush lines between manholes, if required, to remove collected debris.

3.06 TESTING

A. All sanitary sewer shall be tested by the Contractor and at his expense for diametric deflection using a GO-NO-GO type mandrel or other approved method. The mandrel shall have an outside diameter of not less than 95% of the pipe inside diameter. The maximum allowable deflection shall be 5%. Pipes with a deflection greater than 5% shall be replaced at the Contractor's expense.

B. All PVC sanitary sewers and services shall be marked with a continuous tracer tape consisting of 6 plies of Copolymer Film bonded without adhesives, bearing a continuous message "Caution Sewer Line Buried Below". The tape shall be laid 6 inches above the installed pipe to facilitate location of the C. Air Testing

1) General: On all Sanitary sewer mains and services, the

Contractor shall conduct a line acceptance test using low pressure air. The air test shall be conducted after the pipe has been backfilled and the cost of air testing shall be included in other items of work. Equipment to be used in making the test shall be specifically designed for this purpose and shall be Cherne Air—Loc Equipment or approved equal. The Engineer shall be advised at least 48 hours before tests are conducted.

2) Procedure: All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plug to be checked. Air shall be introduced into the plug to 25 psig. The sealed pipe shall be pressurized to 5 psig. The plugs shall hold against the pressure without bracing and without movement of the plugs out of the pipe.

After a manhole to manhole reach of pipe has been backfilled and cleaned, the plugs shall be placed in the line at each manhole and inflated to 25 psig. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 psig greater than the average back pressure of any groundwater that may be over the pipe. At least two minutes shall be allowed for the air pressure to stabilize. After the air pressure has stabilized to a minimum of 3.5 psig greater than the average back pressure from any groundwater over the pipe, the air hose from the control panel to the air supply shall be disconnected. The test shall be deemed "Acceptable" if the time required in minutes for the pressure to decrease from 3.5 to 2.5 psig (greater than the average back pressure of any groundwater over the pipe) shall not be less than the time shown for the given diameters in the following table:

10.0

Pipe Diameter in Inches Minimum Time in Minutes In areas where groundwater is known to exist, the Contractor shall install a one—half inch diameter capped pipe nipple, approximately 10—inches long through the manhole wall on top of one of the sewer lines entering the manhole. This shall be done at the time the line is installed. Immediately prior to the performance of the Line Acceptance Test, the groundwater shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear it, and then connecting a clear plastic tube to the nipple. The tube shall be held vertically and a measurement of the height in feet of water over the invert of the sewer pipe shall be taken after the water has stopped rising in the tube. The measurement in feet shall be converted to psig by dividing it by 2.30. For example, if the height of water is 11.5 feet, then the added pressure will be 11.5/2.3=5 psig. This increases the test pressure from 3.5 psig to 8.5 psig and the minimum allowable residual pressure from 2.5 psig to 7.5 psig.

Should the line fail the pressure test, the Contractor shall, at his own expense, determine the source of leakage and make repairs as necessary. After repairs are made, the line shall be re-tested until deemed "Acceptable".

D. All PVC sanitary sewer services shall be installed in such a manner as to permit the passage of a television camera from the termination of the service to its connection with the sewer main. The contractor shall televise and record all sewer lines and services prior to acceptance.

END OF SECTION





SMITH DESIGN GROUP, INC.

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www.stothard-engineering.com email: stothard@stothard-engineering.com



REVISIONS DATE **DESCRIPTION**

PROJECT:

WILLIAM J GRIGGS CENTER PHASE II **POOL AND PAVILION**

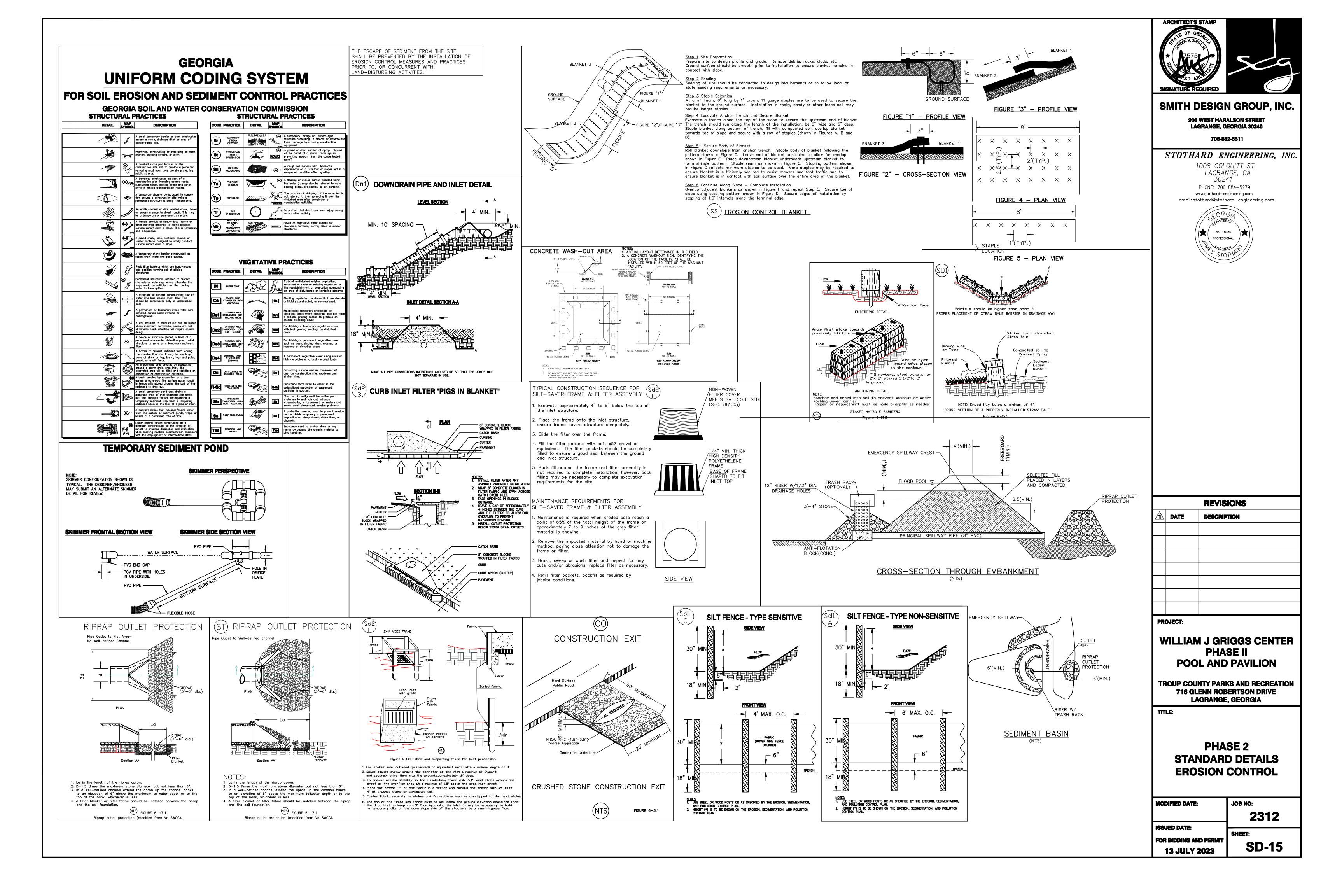
716 GLENN ROBERTSON DRIVE LAGRANGE, GEORGIA

TROUP COUNTY PARKS AND RECREATION

TITLE:

PHASE 2 **STANDARD SPECIFICATIONS SHEET 3**

MODIFIED DATE:	JOB NO:				
	2312				
ISSUED DATE:					
	SHEET:				
FOR BIDDING AND PERMIT	SD-14				
13 JULY 2023	3D-14				



COMPREHENSIVE MONITORING PLAN

The project consists of the contruction of a swimming pool and pool house at the existing William Griggs Center on the west side of Glen Robertson Dr. on a 11.772 acre tract.. The site drains overland vis sheet drainage to Blue John Creek which forms the west boundary of the property The pre-development runoff coefficient (CN) is 78 and the post-development CN is 85. The USGS 7.5 minute topographic map (Exhibit No. 1) showing the property is attached.

SPILL—PREVENTION PLAN
Petroleum products shall be stored in an adequate and impervious containment area and daily inspections should be made for possible leaks. All spills shall be properly and promptly cleaned up and disposed of. Contractors shall maintain pigs and other measures to control spills on site. Storage of these products are not to be located in buffer or permanent natural

areas, near swales or draws, or within 300 feet of any state waters. The monitoring plan requires that samples be taken at the upstream headwall of the curlvert crossing Glenn Robertson

Drive. The target turbidity for the basin is 75 NTUs (Drainage Area=15 acres; Site Area=3.1 acres) as defined in Appendix

B of Permit No. GAR 100001. The location of the sampling points in shown on the attached drawing, Sheet C-4 and C-5.

- 1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any stormwater discharge to a monitored receiving water and/or from a monitored outfall location within in forty—five (45) minutes or as soon
- (2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the stormwater discharge.
- (3). Sampling by the permittee shall occur for the following qualifying events:
- (a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location;
- (b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;
- (c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post—storm event inspections determine that BMPs are properly designed, installed and maintained;
- (d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and
- (e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above. *Note that the permittee may choose to meet the requirements of (a) and (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.

SITE INSPECTIONS

The Primary Permitee or his qualified representative shall make inspections and keep records of construction activities as required by the permit, including: . Within one week after initial construction begins, the licensed professional who prepared the Erosion, Sedimentation and Pollution Control Plan (PLAN) shall inspect the installation of Best Management Practices (BMPs) and determine if they

- have been installed and maintained as designed, and shall notify the permittee of any problems. Any deficiencies noted must be corrected within 2 business days. 2. All construction entrances and exits and all places where petroleum is stored, used or handled shall be inspected daily.
- 3. All BMPs shall be inspected weekly.
- 4. All BMPs shall be inspected within 24 hours of the end of a rainfall of 0.5 inches or greater.
- 5. Daily rainfall gauge readings. Inspectors shall be gualified personnel, i.e. persons who have successfully completed an erosion and sediment control short course eligible for continuing education units, or an equivalent course approved by the Georgia Environmental Protection Division (EPD) or the State Soil and Water Conservation

RECORD KEEPING AND REPORTING REQUIREMENTS

The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any stormwater discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with

- All sampling reports shall include the following information:
- a. The rainfall amount, date, exact place and time of sampling or measurements; b. The name(s) of the certified personnel who performed the sampling and measurements;
- c. The date(s) analyses were performed; d. The time(s) analyses were initiated;
- e. The name(s) of the certified personnel who performed the analyses;
- f. References and written procedures, when available, for the analytical techniques or methods used; g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or
- tapes, etc., used to determine these results;

construction until such time as a NOT is submitted in accordance with Part VI.

- h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
- i. Certification statement that sampling was conducted as per the Plan. . All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of

MAINTAINENCE OF BMPs AND CORRECTION OF DEFICIENCIES

All Best Management Practices shall be inspected as required above or more often if construction activities, rainfall events or other circumstances warrant. Installation and maintenance of BMPs shall be in accordance with the approved Erosion, Sediment and Pollution Control Plan and with "The Manual for Erosion and Sediment Control in Georgia", Latest Edition.

August 1, 2023

WILLIAM GRIGGS CENTER, CITY OF LAGRANGE, TROUP COUNTY, GEORGIA

(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" published by the state 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 receiving water(s) or the sampling of storm water outfalls. The designed system of best management practices and sampling methods is expected to meet the requirements contained in the general NPDES. (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 and that I will inspect the site within 7 days after construction begins.

James Stothard, Georgia PE No. 15360

Level II Certified Design Professional, No. 0000029517

WILLIAM GRIGGS CENTER, CITY OF LAGRANGE, TROUP, GEORGIA

I certify that the permittee's Comprehensive Monitoring Program provides for the monitoring of the receiving waters or the monitoring of storm water outfalls and is expected to meet the monitoring requirements contained in General NPDES Permit No. GAR 100001.

James Stothard, Georgia PE No. 15360 Level II Certified Design Professional, No. 0000029517

August 1, 2023 WILLIAM GRIGGS CENTER, CITY OF LAGRANGE, TROUP COUNTY, GEORGIA

I certify that I have consulted Georgia's 2008 305(b)/303(d) List Documents (Final) and have determined that the construction does not discharge storm water to an impaired stream segment but does discharge storm water within 1 mile upstream and within the same watershed as, Long Cane Creek, a Biota Impaired Stream.

lames & tothard

ames Stothard, Georgia PE No. 15360 Level II Certified Design Professional, No. 0000029517

					2023						
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	νον	DEC
									A,B,C D,E,F	A,B,C D,E,F	B,C,I E,F,0
					2024						
B,C,D E,F,G											

CONSTRUCTION SCHEDULE A. CLEARING & GRUBBING

- B. SEDIMENT CONTROL MEASURES AND INSTALLATION OF SILT FENCE
- C. ROUGH GRADING OF SITE
 D. TEMPORARY & PERMANENT VEGETATION OUTSIDE BUILDING AREA E. INSTALLATION OF STORM SEWER & EROSION CONTROL STRUCTURES
- . BUILDING CONSTRUCTION
- G. FINISH GRADING & PAVING. H. FINAL VEGETATION & LANDSCAPING.

		INSTITUTIONAL INSTITUTIONAL
PRIMARY	PERMITTEE: ADDRESS	TROUP COUNTY PARKS AND RECREATION 1220 LAFAYETTE PARKWAY
CITY		LAGRANGE, GA 30241 706-883-1650
	NTACT RESP CONTROL M	PONSIBLE FOR 24 HR EROSION & EASURES JAY ANDERSON

GENERAL NOTES FOR SOIL EROSION AND SEDIMENT CONTROL

- 1. The area to be disturbed on this project is ______1.0 AC
- 2. 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.
- 3. Failure to properly install and maintain erosion control practices may result in construction being halted.
- 4. Erosion control measures will be inspected at least weekly and following rainfall and repaired by contractor.
- 5. All silt fences shall comply with Georgia Department of Transportation standards and specifications. Contractor shall provide a letter of warranty that materials meet these specifications and that the fabric is on the DOT qualified list (OPL) #36.
- 6. Temporary or permanent vegetative stabilization shall be provided within 14 days of any land disturbance activity.
- 7. Storm drain systems shall be maintained clean and free of silt and debris.
- 8. A response to a notification of Non-Compliance or inadequate measures shall be made within 3 working days after receiving such notification.
- 9. Soil series for this project ___CuC_____
- 10. K-Factor___<u>.28</u>___, T-Factor___<u>3</u>___, Hydrologic Group__B_____
- 11. The site is located on Soil Survey Sheet No. ___74___
- 12. Construction begin date is OCTOBER 2023
- 13. Construction completion date is SEPTEMBER 2024

without first acquiring the necessary variances and permits.

hydraulic component mut be certified by the design professional

- 14. IMPLEMENTATION AND MAINTENANCE: A. IMPLEMENTATION: Notify the Department of Engineering 24 hours prior to commencing work. PHONE: 706-637-8629
- 1.) No clearing, grading, filling or other land disturbing activities shall be permitted until approved erosion and sediment control measures have been installed, except those operations needed to
- 2.) These erosion and sediment control measures shall apply to all features of the construction site, including, but not limited to, street and utility installations as well as to the protection of
- B. MAINTENANCE: All erosion and sediment control measures shall be continuously maintained by the contractor or owner during the construction phase of the development and until permanent stabilization of ditches, shoulders, slopes and all disturbed areas is accomplished to eliminate the
- need for the temporary control measures which shall then be removed by same. The control of the streets and improvements prior to establishment of such permanent stabilization, a specific bond in the amount of a specific for the cost of maintaining the temporary control measures, including temporary grassing and establishing the permanent stabilization within a reasonable time relative to the growing season shall be provided with the request for acceptance.
- D. If full implementation of the approved plan does not provide for effective erosion control, additional erosion control measures shall be implemented to control or treat the sediment source. 15. 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
- 16. Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a
- 17. Waste materials shall not be discharged in waters of the State, except as authorized by a

install such measures.

FUEL SPILL/CONTAINMENT NOTES:
SECONDARY CONTAINMENT UNITS SHALL BE UTILIZED ANYWHERE PRIMARY FUEL CONTAINERS ARE LOCATED. SECONDARY CONTAINMENT UNITS SHALL BE CONSTRUCTED OF MATERIALS THAT ARE CAPABLE OF ADEQUATELY CONTAINING THOSE FUELS STORED WITHIN, PROVIDE 110% OF THE TOTAL VOLUME CAPACITY OF THE LARGEST PRIMARY CONTAINER STORED WITHIN, AND PREVENT THE INGRESS OF RAINWATER INTO THE SECONDARY CONTAINER (WITH A COVER). ANY DRAINAGE VALVES IN THE SECONDARY CONTAINER MUST BE LIQUID TIGHT AND ABLE TO BE LOCKED IN THE FULLY CLOSED POSITION. TOTAL CAPACITY OF PRIMARY AND SECONDARY

CONTAINERS SHALL BE CLEARLY MARKED ON ALL CONTAINERS. IN THE EVEN THAT A FUEL SPILL OCCURS APPROPRIATE ACTION MUST IMMEDIATELY BE TAKEN TO REDUCE THE POSSIBILITY OF LAND OR WATER CONTAMINATION. THE GEORGIA OIL AND HAZARDOUS MATERIAL SPILL OR RELEASES ACT (O.C.G.A. 12-14-1 ET SEQ.) REQUIRES THAT ALL REPORTABLE SPILLS IN THE STATE OF GEORGIA ARE IMMEDIATELY REPORTED TO THE STATE OPERATIONS CENTER AT 404-656-4300 AND TO THE FEDERAL NATIONAL RESPONSE CENTER (NRC) AT 1-800-424-8802. A FUEL SPILL IS CONSIDERED REPORTABLE IF IT REACHES THE WATERS OF THE STATE AND CAUSES A SHEEN. APPROPRIATE SPILL RESPONSE EQUIPEMENT MUST BE AVAILABLE ON—SITE AT ALL TIMES. CLEAN UP AND REMEDIATION OF ANY CONTAMINATION RESULTING FROM A SPILL IS THE RESPONSIBILITY OF THE GENERATOR OF THE WASTE. IN THE EVENT OF A SPILL ONTO UNPAVED GROUND, THE CONTAMINATED SOIL SHALL BE IMMEDIATELY EXCAVATED TO A DEPTH WHERE THE SOIL APPEARS VISUALLY CLEAN. CONTAMINATED SOIL SHOULD THEN BE PLACED INTO AN ADEQUATELY SEALED AND SECURED CONTAINER. IN THE EVENT OF A SPILL ONTO A PAVED SURFACE, IMMEDIATELY CONTAIN THE SPILL. AFTER CONTAINED, ANY CONTAMINATED BULK MATERIAL SHALL BE COLLECTED AND PLACED IN A SECURE CONTAINER FOR LATER DISPOSAL. POWER WASHING MAY BE NEEDED TO REMOVE RESIDUES FROM PAVED OR OTHER HARD SURFACES. IT IS ILLEGAL TO DISPOSE OF ANY WASTE OF POLLUTANTS IN THE STORM SEWER

EROSION CONTROL 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 STATE 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 RECEIVING WATER(S) OR THE SAMPLING OF STORM WATER OUTFALLS. THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED

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

JAMES STOTHARD, PE NO. 15360 LEVEL II CERTIFIED DESIGN PROFESSIONAL NO. 0000029517 1/ APPLY IN SPRING FOLLOWING SEEDING

2/ APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED 3/ APPLY IN THREE 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

PERMANENT GRASSING SPECIFICATIONS MARCH 1 TO JUNE 30

BERMUDA, COMMON (HULLED) - 10 LBS/AC

APRIL 1 TO JUNE 30 CENTIPEDE - BLOCK SOD ONLY

TEMPORARY SEEDING SPECIFICATIONS AUGUST 1 TO APRIL 15 RYEGRASS, ANNUAL - 40 LBS/AC

AUGUST 15 TO DECEMBER 30 RYE — 3 BU/AC

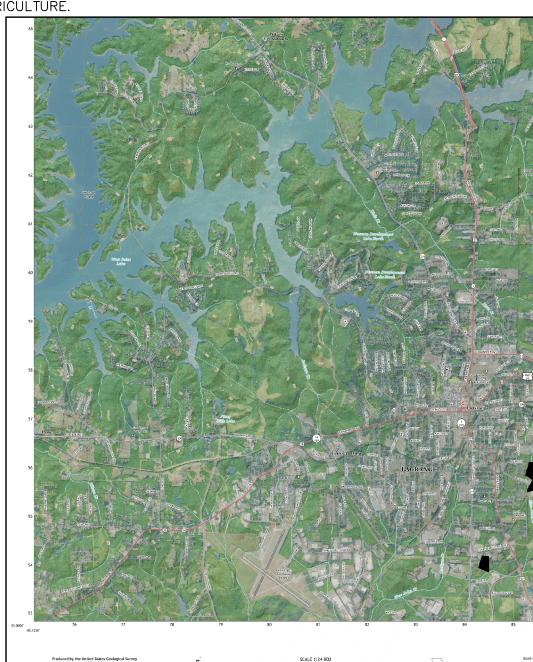
APRIL 15 TO AUGUST 31 MILLET, PEARL - 50 LBS/AC

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST

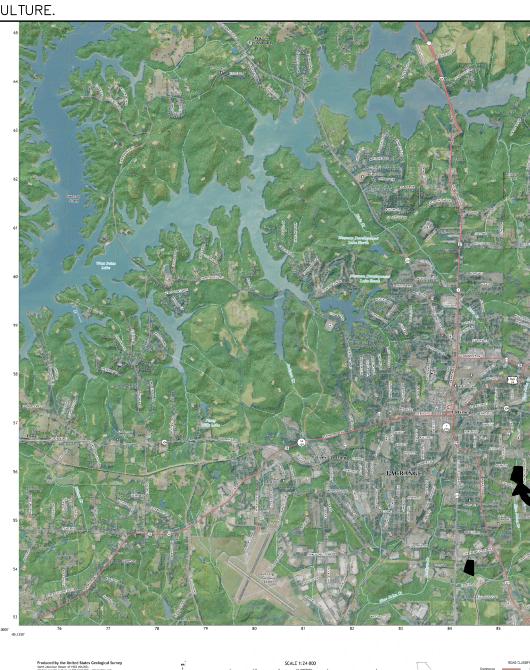
SPECIES YEAR ANALYSIS OR EQUIVALENT RATE TOP DRESSING 50-100 LBS/AC 1/2 . COOL SEASON SECOND MAINT 6-12-12 10-10-10 1000 lbs/AC GRASSES 30 LBS/AC 400 lbs/AC 6-12-12 0-10-10 1500 lbs/AC 1000 lbs/AC 2. COOL SEASON FIRST 0-50 LBS/AC 1/ SECOND 400 lbs/AC LEGUMES MAINT 10-10-10 1300 lbs/AC S. GROUND SECOND MAINT 10-10-10 10-10-10 1300 lbs/AC COVERS 1100 lbs/AC one 21 gram pellet per seedling placed in the closing hole FIRST 20-10-15 SEEDLINGS 700 lbs/AC 700 lbs/AC 5. SHRUB FIRST MAINT LEEPEDEZA . TEMP COVER 30 LBS/AC 5/ FIRST 10-10-10 500 lbs/AC CROP SEEDED 50-100 LBS/AC 2/6/ WARM SEASON 6-12-12 10-10-10 800 lbs/AC 400 lbs/AC SECOND 50-100 LBS/AC 2/ GRASSES 30 LBS/AC B. WARM SEASON SECOND MAINT 1000 lbs/AC 400 lbs/AC 50 LBS/AC 6/ GRASSES AND LEGUMES

LIME RATES

UNLESS SOIL TESTS INDICATE OTHERWISE. ALL 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.



AGRICULTURAL LIME IS REQUIRED AT THE RATE OF ONE TO TWO TONS PER ACRE



0 100C 2000 2000 4000 500C 6000 7000 8000 9000 10000



SMITH DESIGN GROUP, INC.

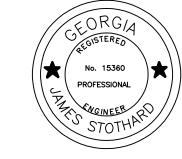
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706-882-5511

STOTHARD ENGINEERING, INC. 1008 COLQUITT ST.

LAGRANGE, GA 30241

PHONE: 706 884-5279 www.stothard-engineering.com email: stothard@stothard-engineering.com



REVISIONS

		STAND ALONE CONSTRUCTION PROJECTS		16	Ÿ	26 Description of the measures t			ocess to control pollutants in storm		DAIE DE	SCHIPII	ON
		SWCD:		1.~	'	water that will occur after con							
Project N	lame:		DN DRIVE	16	V	27 Description of practices to pro							
		LAGFRANGE, TROUP CO, GEORGIA Date on Plans: 8/1/20		16	+								
-			rd@stothard-engineering.com)	16	1/	28 Description of the practices th		•					
Plan	Included			10	T			•	es which disturb soils for the major				
Page#	Y/N	TO BE SHOWN ON ES&PC PLAN				portions of the site (i.e., initial			ing and grupping activities,				
16	Υ	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by	by the Commission			excavation activities, utility ac		-					
		as of January 1 of the year in which the land-disturbing activity was permitted.	,	16	Υ	30 Provide complete requiremen	nts of inspections and record	keeping by the p	orimary permittee. *				
16	Υ	2 Level II certification number issued by the Commission, signature and seal of the certified	l design professional.	16	Υ	31 Provide complete requirement	nts of sampling frequency and	d reporting of sai	rrpling results. *				
N/A		3 Limits of disturbance shall be no greater than 50 acres at any one time without prior writte		16	Υ	32 Provide complete details for r	etention of records as per Pa	art IV.F. of the pe	ermit.*				
		the EPD District Office. If EPD approves the request to disturb 50 acres or more at any o		16	Υ	33 Description of analytical metho	ods to be used to collect and	analyze the san	rples from each location. *				
		include at least 4 of the BMPs listed in Appendix 1 of this checklist. *		16	Υ	34 Appendix B rationale for NTU	J values at all outfall sampling	points where a	pplicable. *				
16	Υ	4 The name and phone number of the 24-hour local contact responsible for erosion, sedim	nentation and pollution controls.	6-7	Υ	35 Delineate all sampling location	ns, perennial and intermittent	streams and oth	er water bodies into which				
16	Υ	5 Provide the name, address, email address, and phone number of primary permittee.				stormwater is discharged. *							
6-7&16	Υ	6 Note total and disturbed acreage of the project or phase under construction.		16	Υ	36 A description of appropriate of	ontrols and measures that wi	ill be implemente	d at the construction site including:				
6-7&16	Υ	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longit	itude in decimal degrees.						intermediate grading and drainage				
6-7&16	Υ	8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity	<u> </u>						rass grading and the initial perimeter				
16	Υ	9 Description of the nature of construction activity.				control BMPs, intermediate g	rading and drainage BMPs,	and final BMPs	are the same, the Plan may combine	PRO	JECT:		
16	Υ	10 Provide vicinity map showing site's relation to surrounding areas. Include designation of	f specific phase, if necessary.			all of the BMPs into a single p	ohase. *						
16	Υ	11 Identify the project receiving waters and describe all sensitive adjacent areas including st		1-7	Υ	37 Graphicscale and North arro	IW.						
		residential areas, wetlands, marshlands, etc. which may be affected.		6-7	Υ	38 Existing and proposed contou	ur lines with contour lines dra	wn at an interva	al in accordance with the following:	l W	/	GRIG	GGS CENTER
16	Υ	12 Design professionals certification statement and signature that the site was visited prior to	development of the			Map Scale	Ground Slope	Contour l	Intervals, ft.	44			
		ES&PC Plan as stated on Part IV page 19 of the permit.				1 inch = 100ft or	Flat0 - 2%	0.5	or 1		P	HAS	E II
16	Υ	13 Design professionals certification statement and signature that the permittee's ES&PC Plan	an provides for an appropriate			larger scale	Rolling 2 - 8%	10			_	-	
		and comprehensive system of BMPs and sampling to meet permit requirements as stated		11/0			Steep 8% +		or 10		POOL A	ND I	PAVILION
16	Υ	14 Clearly note the statement that "The design professional who prepared the ES&PC Plan		— N/A		39 Use of atternative BIVPs who:							AVILION
est=	1	initial sediment storage requirements and perimeter control BMPs within 7 days after insta	· .						oved by EPD or the Georgia Soil				
		in accordance with Part IV.A.5 page 25 of the permit. *	masoli.				rmssion). Please refer to the	e Alternative BM	P Guidance Document found at	 _	011D 061	D. D. C.	
16	İγ	15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25	5 or 50 foot	NI/A		www.gaswoc.org.		40111 21		TR	OUP COUNTY	PARKS	S AND RECREATION
	<u>'</u>	undisturbed stream buffers as measured from the point of wrested vegetation or within 25		N/A				vi⊢List. Please r ⊭	efer to Appendix A-2 of the Manual		716 GLENN	ROBE	RTSON DRIVE
		undsturbed streambullers as measured from the point of wrested vegetation or within 25 marshland buffer as measured from the Jurisdictional Determination Line without first acqu		NICA	V	for Erosion & Sediment Contr	-						
		variances and permits."	aning are Hecessally	_N/A	Υ				nt to state waters and any additional		LAGRA	MGE,	GEORGIA
N/A		16 Provide a description of any buffer encroachments and indicate whether a buffer variance	pe is required	NI/A		buffers required by the Local				<u> </u>	_		
6-7&16	Υ	17 Clearly note the statement that "Arrendments/revisions to the ES&PC Plan which have a	· · · · · · · · · · · · · · · · · · ·	16	\	42 Delineation of on-site wetland				TITL	E:		
		BMPs with a hydraulic component must be certified by the design professional." *		6.7	\	43 Delineation and acreage of c							
6-7&16	İΥ	18 Clearly note the statement that "Waste materials shall not be discharged to waters of the S	State excent as	16	T V	44 Provide hydrology study and	<u>-</u>	•					
	<u> </u>	authorized by a Section 404 permit." *	ome, occupi do	10	Ĭ		cient or peak discharge flow	or the site prior t	o and after construction activities are				
6-7&16	İγ		the installation of	6.7	V	completed.	Josifica Wille annua with a 11	d prote dia 1-	populario di observa co u Alle e 4				
5 r 0x 10	<u> '</u>	19 Clearly note statement that "The escape of sediment from the site shall be prevented by the erosion and sediment control measures and practices prior to land disturbing activities."	ure moldification of	1 or 1	1	46 Storm-drain pipe and weir vie			zonnibotate discriarges Without				T O
6-7&16	ly		Il implementation of the	6-7	V	erosion. I dentify / Delineate al		Б.			P	HAS	こと
∪ r0x10	'	20 Clearly note statement that "Erosion control measures will be maintained at all times. If full		6-7	 	47 Soil series for the project site							
		approved Plan does not provide for effective erosion control, additional erosion and sedit shall be implemented to control or treat the sediment source."	minera comporme asures	7	 	48 The limits of disturbance for e		nor acro draino:	d using a temporary sediment basin,		EROSIC	JN C	ONTROL
6-7&16	İγ	21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14	days shall he	+	'	81 PORT 25 ST C			o using a temporary sediment basin, common drainage location. Sediment			_	_
- 1 - 10	,	stabilized with mulch or temporary seeding."	auy 3 sitali DC					•	activities until final stabilization of the		MONIT	ORII	NG PLAN
N/A		22 Any construction activity which discharges storm water into an Impaired Stream Segment,	t or within 1 linear mile	+					e equivalent controls when a		141	— 1 111	
13(()		upstream of and within the same watershed as, any portion of an Biota Impaired Stream S		1					mon drainage location in which a				
		with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that v							ards of storage is not attainable must				
		areas of the site which discharge to the Impaired Stream Segment. *	7777 NO 4004 IOI 81030						and all calculations used by the				
N/A		23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream St	Seament (identified in			storage design professional to	o obtain the required sedimer	ntwhen using ed	quivalent controls. When discharging				100 110
1.464.3		tern 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must addres				from sediment basins and imp	oundments, permittees are re	equired to utilize	outlet structures that withdraw water		IFIED DATE:	I •	JOB NO:
		conditions or requirements included in the TMDL Implementation Plan. *	as any site-specific			from the surface, unless infea	sible. If outlet structures that v	vithdraw water fr	om the surface are not feasible,				0010
6-7&16			ho v shicles . Washout			a written justification explainin							2312
0-7 0x 10		24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the	ne menioles. Washout	6-7	Υ	50 Location of Best Managerren							
		of the drum at the construction site is prohibited. *		-			ol in Georgia. Use uniformo:	oding symbols fr	om the Manual, Chapter 6, with	ISSU	ED DATE:	-	
				45	V	legend.	<u> </u>					[;	SHEET:
				15	Υ				at a minimum, meet the guidelines set	FOR	BIDDING AND PE		
				6 7046	V	forth in the Manual for Erosion		_					SD-16
				6-7&16	ĭ				ractices. Include species, planting	1	3 JULY 2023	3 I	3D-10
						dates and seeding, fertilizer, I	<u>rne and mulching rates. Veg</u>	<u>retative plan sha</u>	Il be site specific for appropriate time				