FRIENDSHIP FOREST WILDLIFE SANCTUARY

NO.	DESCRIPTION	DATE
1	BID SET	09-15-1
-	-	-
-	-	-
-	-	-
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-	-	-
-	-	-
-	-	-

4380 E. PONCE DE LEON AVE. CLARKSTON, GA 30021 LAND LOT 119 / 18 DISTRICT / PARCEL ID 1811901 005, 018, 040 & 042 CITY OF CLARKSTON, DEKALB COUNTY

PARK RENOVATIONS

DEVELOPER

CITY OF CLARKSTON 1055 ROWLAND STREET

CLARKSTON, GA 30021 CONTACT: KEITH BARKER; CITY MANAGER (404) 296-6489

CITY PROJECT ENGINEER
COLLABORATIVE INFRASTRUCTURE SERVICES, INC
LAWRENCE KAISER, P.E.
404-909-5619

24 HOUR CONTACT FOR EROSION CONTROL

LAWRENCE KAISER, P.E. (404) 909-5619

Mechanical:

BAA Engineers
500 Bishop Street
Suite F-3

Atlanta, Ga. 30318

Jeff Powell

Tel. 404-355-0050

Civil Engineer:

Hayes, James & Associates, Inc. 4145 Shackleford Road, Suite 300

Norcross, Ga. 30393 Stephen Mark Bond, P.E. Tel. 770-923-1600 **Electrical:**

Roberds Engineering 455 East Paces Ferry Rd. N.E. Atlanta, Ga. 30305

Atlanta, Ga. 30305 Gerald Roberds P.E. Tel. 404-237-8632

Structural:

Browder Leguizamon Associates 174 West Wieuca Rd. N.E. Atlanta, Ga. 30342 Simon Ryskin Tel. 404-851-9580 **Architect:**

Sutton Architectural Services Inc.

601 A.J. Land Road Canton, Ga. 30115 Peter C. Sutton R.A. Tel. 770-442-8682 Wetland:

Environs Design Studio
1104 Monticello Street
Covington, Ga. 30014
Kent Campbell, Jr., RLA, PWS
Tel. 706-342-1104



Know what's below.
Call before you dig.

4145 SHACKLEFORD ROAD, SUITE 300, NORCROSS, GEORGIA 30093 TEL: (770) 923-1600, FAX: (770) 923-4202

CONTACT:

CONTACT: KÉITH E. HIGHTOWER
HJA PROJECT NO.: 17-030-PR

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EXP. 05/25/18

HAYES, JAMES & ASSOCIATES, INC.

SCHEDULE OF VALUES FRIENDSHIP FOREST WILDLIFE SANCTUARY - HARDSCAPE PLAN 9/15/2017

Hayes|James Project No: 17-030-PR

NO	ITEM	UNITS	QUANTITY	UNIT COST	TOTA
	SITE WORK			т т	
1	MOBILIZATION	LS	1		
2	SITE DEMOLITION	LS	1		
3	EARTHWORK	CY	1276		
4	DIRT HAUL OFF	CY	1020		
5	LIGHT DUTY ASPHALT (PARKING LOT & NEW 10' TRAIL)	SY	1,316		
6	PARKING LOT STRIPING	LS	1		
7	PARKING LOT & PAVILION CONCRETE SIDEWALKS/PICNIC TABLE PAD/	SY	250		
^	BIKE RACK PAD	0)/	500		
8	EX. CONC. SIDEWALK WIDENING - EXCAVATION OF 2.5' SECTION &	SY	500		
0	INSTALLATION OF 4" ASPHALT BASE	01/	1000	3 3 4 A S S S	
9	EX. CONC. SIDEWALK WIDENING - TACK COAT	SY	1000		
10	EX. CONC. SIDEWALK WIDENING - 2" ASPHALT TOPPING	SY	1000		
11	WHEEL STOP	EA SF	800		
12	6' MULCH PATH	1003000	\$1500.500.50		
13	CLEARING AND GRUBBING DRAINAGE	AC	4.5		
4.4	18" CMP	LF	420		
14	POACA (2013/08/17)	EA	139		
15	JUNCTION BOX		1	<u> </u>	
16 17	CLEANOUT SLOTTED PIPE SECTION	EA LF	35		
18	GRATE INLET	EA	1	 	
19	4' CONCRETE FLUME	SY	65	-	
19	WATER	31	03	9	
20	1 1/2" PVC WATER LINE	LF	145	1	
21	1 1/2" GATE VALVES	EA	3	-	
22	DCV/BFP VAULT	EA	1	-	
23	EX. CONNECTION AT PAVILION	LS	1		
24	MISC. APPURTENANCES	LS	1	+	
24	SANITARY SEWER	LO			
25	CLEANOUT	EA	5	2 7	
26	SEWER LATERAL RECONNECTION	EA	1		
	4" PVC PIPE	LF	125	+	
28	MIC. APPURTENANCES	LS	1		
	SEPTIC SYSTEM			15 713	
29	SEPTIC TANK	LS	1		
30	SEPTIC FIELD	LS	1		
	LANDSCAPING	1770000			
31	TREES & SHRUBS	LS	1		
32	SOD	LS	1		
	EROSION CONTROL		•		
33	CONSTRUCTION ENTRANCE	EA	2		
34	SD-1 SILT FENCE TYPE 'S'	LF	2925		
35	PIGS IN A BLANKET	EA	1		
36	TEMPORARY GRASSING	AC	1.5		
37	PERMANENT GRASSING	AC	0.5		
	SITE ELEMENTS				
38	PARKING LOT RESTROOM BLDG	LS	1		
39	PAVILION W/ RESTROOM & AMPHITHEATER	LS	1		
40	PARKING LOT LIGHTING	LS	1	34 S S S	
41	PEDESTRIAN TRAIL LIGHTING	LS	1		
42	WOODEN BRIDGE	LS	1	F 5.00	
43	VIEWING PLATFORMS	SF	800	3	
44	BOARDWALKS	SF	2000		
45	WOODEN RAILINGS	LF	525		
46	BIKE RACK ONLY (EXCLUDE CONC. PAD)	EA	1	3 2	
47	PICNIC TABLE ONLY (EXCLUDE CONCRETE PAD)	EA	1		
48	INTERPRETIVE SIGNAGE WITH FRAME/STANDS	EA	10	20 20 20 20 20 20 20 20 20 20 20 20 20 2	
49	ENTRANCE SIGN	EA	1		
50	INFORMATIONAL KIOSK (INCLUDE 12" REINFORCED CONC. PAD)	EA	1		
51	SCALLOPED WOODEN PICKET FENCE	LF	180	e s	
52	6' CHAINLINK FENCE	LF	390		
53	ENTRANCE GATE	EA	1		
54	GRANITE VENEER SEAT WALL	SFF	180	- / N	
55	GRANITE VENEER SITE WALL	SFF	700		
56	EX. GRANITE CURB RELOCATION/PLACEMENT/INSTALLATION	SY	25		
				TOTAL	

regardless of what it listed within the schedule of values.

Schedule of Bid Items FRIENDSHIP FOREST WETLAND ENHANCEMENT - City of Clarkston Spec. Ref. Quanity <u>Units</u> <u>Unit Cost</u> Pay Item Description Extended Cost Erosion and Sediment Control and 1 NPDES Monitoring 31 25 00 Lump Sum 2 Temporary Silt Fence 0.00 31 25 00 3 Rock Filter Dam 31 25 00 0.00 4 Rock Outlet Control Structure 35 42 50 5 Mass Earthwork 31 00 00 0.00 6 Finished Wetland Grading 31 00 00 0.00 7 Rock Cross Vane 35 42 40 0.00 Soil Preparation and Permanent 32 92 00 0.00 8 Grass/Forb Seed and Sod 0.00 9 Tree/Shrub Planting 32 92 23 Surveying Control (construction staking & as-built): 01 32 33 Lump Sum 11 Mobilization LS Lump Sum Performance Bond Not to Exceed 2% of Bid Subtotal Amount) Lump Sum **Bid Subtotal** Herbaceous Planting (Plugs and 9-b Containers) Spring 2018 32 92 24 Lump Sum

Bid Total

Bid No.

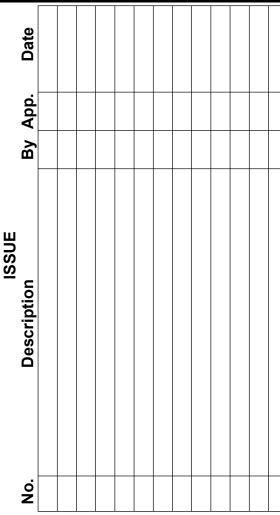
Sheet List Table Sheet Number Sheet Title C-000 BID COVER C-000.1 BID SET - SHEET INDEX & SCHEDULE OF VALUES C-00 **COVER SHEET** CIVIL C-01 **GENERAL NOTES & LEGEND** C-02 PARKING LOT - EXISTING CONDITIONS C-03 PAVILION AREA - EXISTING CONDITIONS C-04 PARKING LOT - DEMOLITION PLAN PAVILION AREA - DEMOLITION PLAN C-06 OVERALL SITE PLAN PARKING LOT - SITE PLAN C-08 PAVILION AREA - SITE PLAN C-09 PARKING LOT - GRADING PLAN PAVILION AREA - GRADING PLAN PARKING LOT - UTILITY PLAN PAVILION - UTILITY PLAN PIPE PROFILES C-14 PARKING LOT - LANDSCAPE PLAN **EROSION CONTROL NOTES EROSION CONTROL PLAN - PHASE 1 EROSION CONTROL PLAN - PHASE 2 EROSION CONTROL PLAN - PHASE 3** EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES **EROSION CONTROL DETAILS EROSION CONTROL DETAILS** C-22 **EROSION CONTROL DETAILS** TREE SAVE & PLANTING DETAILS SITE DETAILS SITE FURNISHINGS DETAILS STORM DETAILS **SEWER DETAILS** WATER DETAILS C-29 SEPTIC DETAILS ARCHITECTURAL A1.1 TOILET BUILDING PLANS & ELEVATIONS A1.2 TOILET BUILDING ROOF PLAN & R C PLAN A2.1 PAVILION BUILDING PLANS & ELEVATIONS PAVILION BUILDING ELEVATIONS PAVILION BUILDING ROOF & R C PLAN A3.1 A3.1 ENTRANCE MONUMENT SIGN A4.1 MISC. STRUCTURES A4.2 MISC. STRUCTURES MECHANICAL M1.1 TOILET HVAC PLANS & SCHEDULES ELECTRICAL E0.1 SITE PLAN - ELECTRICAL E1.0 ELECTRICAL RISER DIAGRAM & SCHEDULES E1.1 PAVILION & RESTROOM FLOOR PLAN - ELECTRICAL PLUMBING **SCHEDULE LEGEND & DETAILS** P1.0 S W & V PIPING PLANS H & CW PIPING PLANS STRUCTURAL S0.1 **GENERAL NOTES** S0.2 **GENERAL NOTES** S1.1 TOILET BUILDING SLAB & FOUNDATION, ROOF FRAMING PLANS S1.2 PAVILION BUILDING SLAB & FOUNDATION PLAN PAVILION BUILDING ROOF FRAMING PLAN S1.4 SIGN SECTIONS & DETAILS BRIDGE TYPICAL PLAN PROFILE & SECTIONS BRIDGE SECTIONS & DETAILS S2.1 FOUNDATION SECTIONS & DETAILS S3.1 ROOF FRAMING SECTIONS & DETIALS ROOF FRAMING SECTIONS & DETIALS WETLAND CV-1.0 **COVER SHEET** L-1.0 **GENERAL NOTES** L-2.0 **GRADING PLAN** L-3.0 LAYOUT AND STAKING LANDSCAPE PLAN - TREE AND SHRUB L-4.0 L-4.1 LANDSCAPE PLAN - FORBS AND SEEDING L-5.0 **EROSION CONTROL NOTES** CLEARING PHASE ES & PC PLAN L-5.2 GRADING PHASE ES & PC PLAN L-5.3 FINAL PHASE ES & PC PLAN SITE WORK DETAILS LANDSCAPE DETAILS LANDSCAPE NOTES L-7.1 EROSION CONTROL DETAILS

CITY OF CLARKSTON

1055 ROWLAND STREET CLARKSTON, GA 30021 Phone: (404) 296-6489

Contact: Lawrence Kaiser (404) 909-5619

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GSWCC #11367

EXP. 05/25/18

Project Title

Friendship Forest Wildlife Sanctuary

Project Location 4380 E. PONCE DE LEON AVE. Address City, State Zip CLARKSTON, GA 30021 Land Lot

District-Section 18 County DEKALB

17-030-pr Project No. Drawn By: Checked By:

Sheet Title

Initial Issue Date:

BID SET - SHEET INDEX & SCHEDULE OF VALUES

Sheet Number

C-000.1

09-15-17

WETLAND NOTE

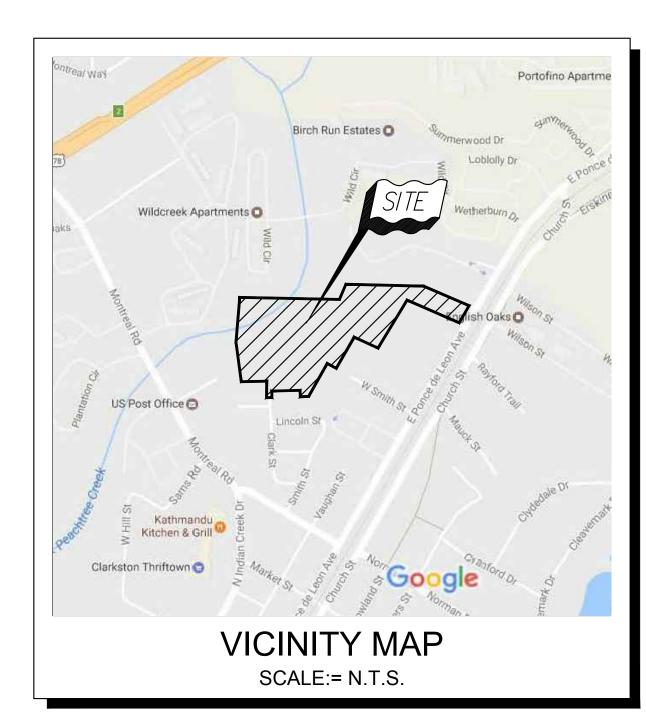
THERE ARE NO WETLANDS ON THIS SITE.

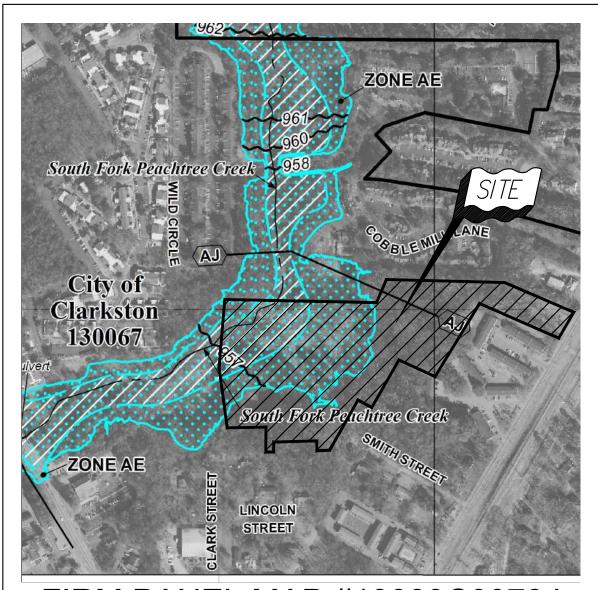
STORM WATER MANAGEMENT NOTE STORM WATER MANAGEMENT FOR THIS PROJECT IS PROVIDED ON-SITE.

> STATE WATERS BUFFER NOTE THERE ARE STATE WATERS BUFFERS ON OR WITHIN 200

WETLAND CERTIFICATION: THE DESIGN PROFESSIONAL WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS THE APPROPRIATE FEDERAL WETLANDS

THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE





FIRM PANEL MAP #13089C0078J DATED: MAY 16, 2013 SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR

FRIENDSHIP FOREST WILDLIFE SANCTUARY

4380 E. PONCE DE LEON AVE. CLARKSTON, GA 30021 LAND LOT 119 / 18 DISTRICT / PARCEL ID 1811901 005, 018, 040 & 042 CITY OF CLARKSTON, DEKALB COUNTY

PARK RENOVATIONS

OWNER CITY OF CLARKSTON 1055 ROWLAND STREET CLARKSTON, GA 30021 CONTACT: KEITH BARKER **CITY MANAGER** 404-296-6489

SITE VISIT CERTIFICATION

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE

PREVENTED BY THE INSTALLATION OF EROSION AND

SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED

PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD **GREATER THAN 14 DAYS SHALL BE STABILIZED WITH**

CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO

CONTROL OR TREAT THE SEDIMENT SOURCE.

I CERTIFY THAT PRIOR TO THE DESIGN OF EROSION

SUPERVISION VISITED THE SITE.

TO LAND DISTURBING ACTIVITIES.

MULCH OR TEMPORARY SEEDING.

GA #23275 LEVEL II CERTIFIED DESIGN PROFESSIONAL

CONTROL PLANS I OR A REPRESENTATIVE UNDER MY

CITY PROJECT ENGINEER **CONTACT: LAWRENCE KAISER** (404) 909-5619

24 HOUR CONTACT FOR EROSION CONTROL

LAWRENCE KAISER, P.E. (404) 909-5619

TOTAL AREA = 18.34 ACRESDISTURBED AREA = 6.0 ACRES (INCLUDES WETLAND DESIGN, BY OTHERS, DIST. AREA = 3.15 AC)

ZONING - NR-CD & NR-1

PROJECT DESCRIPTION

THE EXISTING PROPERTY IS AN EXISTING PARK CONSISTING OF: A GRAVEL PARKING LOT, ASPHALT DRIVEWAY, A PAVILION/RESTROOM BUILDING AND SEVERAL CONCRETE TRAILS AND BRIDGES. THE EXISTING SITE IS SURROUNDED BY RESIDENTIAL AND MULT-FAMILY

THE PROPOSED PROJECT WILL BE A RENOVATION OF THE EXISTING PARK, CONSISTING OF: AN ASPHALT PARKING LOT AND RESTROOM BUILDING NEAR E. PONCE DE LEON, REDUCING THE WIDTH OF TH EXISTING ASPHALT DRIVEWAY WIDTH, REMOVING THE ASPHALT CUL-DE-SAC, REPLACING THE EXISTING PAVILION/RESTROOM BUILDING WITH A NEW PAVILION/RESTROOM BUILDING, REPLACING SEVERAL BRIDGES, AND ADDING MULCH WALKING TRAILS, BOARDWALKS AND OBSERVATION PLATFORMS.

EXP. 05/25/18

Hayes James

ENGINEERS, PLANNERS & SURVEYORS



4145 SHACKLEFORD ROAD, SUITE 300, NORCROSS, GEORGIA 30093 TEL: (770) 923-1600, FAX: (770) 923-4202

> CONTACT: KEITH E. HIGHTOWER HJA PROJECT NO.: 17-030-PR

C-06	OVERALL SITE PLAN
C-07	PARKING LOT - SITE PLAN
C-08	PAVILION AREA - SITE PLAN
C-09	PARKING LOT - GRADING PLAN
C-10	PAVILION AREA - GRADING PLAN
C-11	PARKING LOT - UTILITY PLAN
C-12	PAVILION - UTILITY PLAN
C-13	PIPE PROFILES
C-14	PARKING LOT - LANDSCAPE PLAN
C-15	EROSION CONTROL NOTES
C-16	EROSION CONTROL PLAN - PHASE 1
C-17	EROSION CONTROL PLAN - PHASE 2
C-18	EROSION CONTROL PLAN - PHASE 3
C-19	EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES
C-20	EROSION CONTROL DETAILS
C-21	EROSION CONTROL DETAILS
C-22	EROSION CONTROL DETAILS
C-23	TREE SAVE & PLANTING DETAILS
C-24	SITE DETAILS
C-25	STORM DETAILS
C-26	SEWER DETAILS
C-27	WATER DETAILS
C-28	SEPTIC DETAILS
A1.1	TOILET BUILDING PLANS & ELEVATIONS
A1.2	TOILET BUILDING ROOF PLAN & R C PLAN
A2.1	PAVILION BUILDING PLANS & ELEVATIONS
A2.2	PAVILION BUILDING ELEVATIONS
A2.3	PAVILION BUILDING ROOF & R C PLAN
A3.1	A3.1 ENTRANCE MONUMENT SIGN
44.1	MISC. STRUCTURES
A4.2	MISC. STRUCTURES
M1.1	TOILET HVAC PLANS & SCHEDULES
±0.1	SITE PLAN - ELECTRICAL
=3 =1.0	ELECTRICAL RISER DIAGRAM & SCHEDULES
= ··· · ≣1.1	PAVILION & RESTROOM FLOOR PLAN - ELECTRICAL
P1.0	SCHEDULE LEGEND & DETAILS
P1.1	S W & V PIPING PLANS
P1.2	H & CW PIPING PLANS
S0.1	GENERAL NOTES
S0.2	GENERAL NOTES
S1.1	TOILET BUILDING SLAB & FOUNDATION, ROOF FRAMING PLANS
S1.2	PAVILION BUILDING SLAB & FOUNDATION PLAN
S1.3	PAVILION BUILDING ROOF FRAMING PLAN
S1.4	SIGN SECTIONS & DETAILS
S1. 4 S1.5	BRIDGE TYPICAL PLAN PROFILE & SECTIONS
S1.6	BRIDGE SECTIONS & DETAILS
S2.1	FOUNDATION SECTIONS & DETAILS
S3.1	ROOF FRAMING SECTIONS & DETIALS
OO. I	ROOF FRAMING SECTIONS & DETIALS ROOF FRAMING SECTIONS & DETIALS

REVISIONS

DESCRIPTION

BID SET

Sheet List Table

Sheet Number Sheet Title

COVER SHEET

GENERAL NOTES & LEGEND

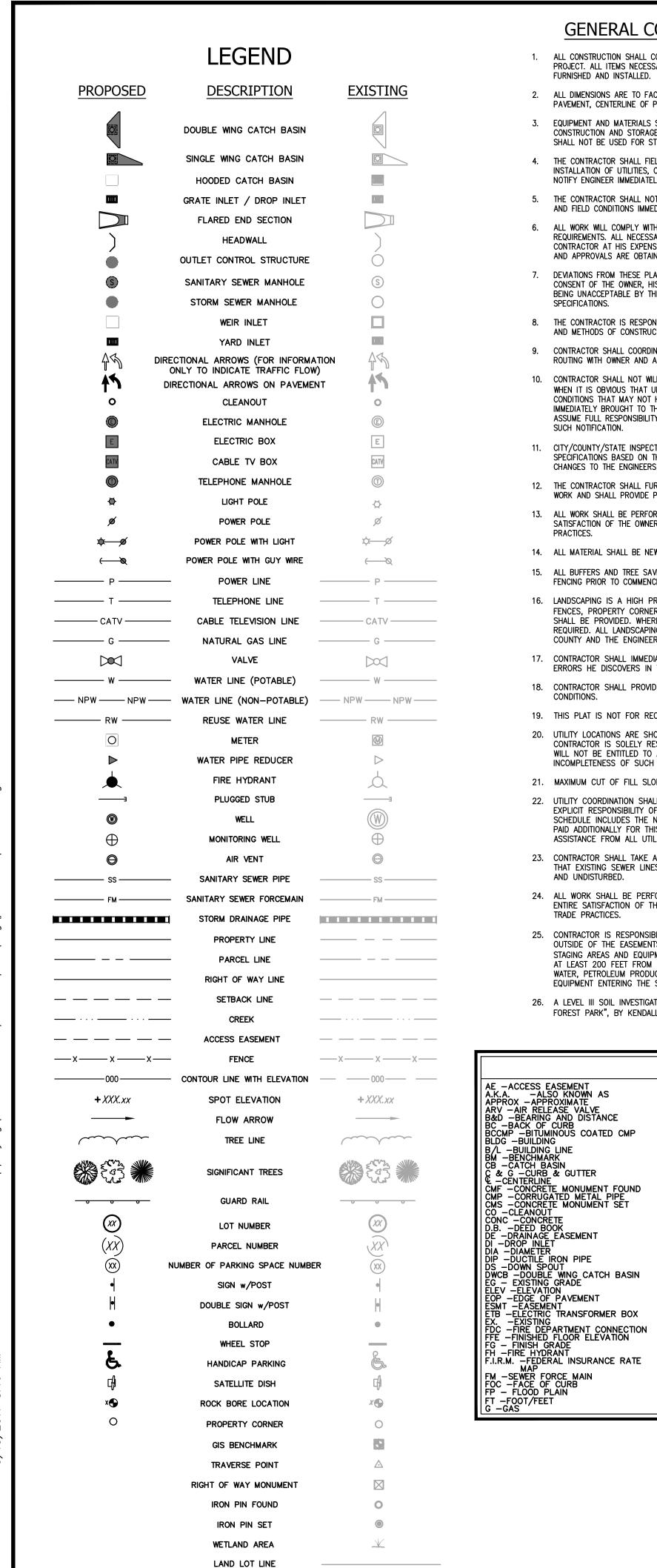
PARKING LOT - EXISTING CONDITIONS

PARKING LOT - DEMOLITION PLAN

PAVILION AREA - DEMOLITION PLAN

PAVILION AREA - EXISTING CONDITIONS

DATE



LAND LOT NUMBER

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL CONFORM TO BOTH PLANS AND SPECIFICATIONS FOR THIS PROJECT. ALL ITEMS NECESSARY FOR A COMPLETE AND WORKABLE JOB SHALL BE
- ALL DIMENSIONS ARE TO FACE OF CURB, FACE OF BUILDING, CENTER OF COLUMN, EDGE OF PAVEMENT, CENTERLINE OF PIPE, OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
- EQUIPMENT AND MATERIALS SHALL BE STORED IN AREAS DESIGNATED BY THE OWNER. CONSTRUCTION AND STORAGE AREAS SHALL BE KEPT NEAT AND CLEAN. TREE SAVE AREAS SHALL NOT BE USED FOR STORAGE OR PARKING.
- THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF ALL TIE-IN POINTS FOR THE INSTALLATION OF UTILITIES, CURB & GUTTER, AND PAVEMENT PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF DIFFERENT THAN AS SHOWN ON PLANS.
- 5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS IMMEDIATELY UPON DISCOVERY.
- ALL WORK WILL COMPLY WITH APPLICABLE STATE AND LOCAL CODES, SPECIFICATIONS AND REQUIREMENTS. ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE. CONTRACTOR SHALL VERIFY THAT ALL NECESSARY PERMITS AND APPROVALS ARE OBTAINED PRIOR TO CONSTRUCTION.
- 7. DEVIATIONS FROM THESE PLANS, NOTES AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE OWNER, HIS REPRESENTATIVE OR THE ENGINEER MAY RESULT IN THE WORK BEING UNACCEPTABLE BY THE OWNER, AND REDONE TO MEET THE PLANS, NOTES AND
- 8. THE CONTRACTOR IS RESPONSIBLE FOR ALL SITE SAFETY AS WELL AS THE WAYS, MEANS AND METHODS OF CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE CONSTRUCTION TRAFFIC AND GENERAL PUBLIC TRAFFIC ROUTING WITH OWNER AND APPROPRIATE REGULATING AGENCY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT WILLINGLY PROCEED WITH CONSTRUCTION IN A PARTICULAR AREA WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTION AND/OR DIFFERENCES FROM EXISTING CONDITIONS THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
- 11. CITY/COUNTY/STATE INSPECTORS MAY REQUIRE CHANGES TO THE DRAWINGS AND/OR SPECIFICATIONS BASED ON THEIR INSPECTION. CONTRACTOR SHALL BRING ANY REQUIRED CHANGES TO THE ENGINEERS ATTENTION IMMEDIATELY.
- 12. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES AROUND THE WORK AND SHALL PROVIDE PROTECTION AGAINST WATER DAMAGE AND SOIL EROSION.
- 13. ALL WORK SHALL BE PERFORMED AND FINISHED IN A WORKMANLIKE MANNER TO THE ENTIRE SATISFACTION OF THE OWNER, AND IN ACCORDANCE WITH THE BEST RECOGNIZED TRADE
- 14. ALL MATERIAL SHALL BE NEW- NO USED OR SALVAGED MATERIALS.
- 15. ALL BUFFERS AND TREE SAVE AREAS SHALL BE CLEARLY IDENTIFIED WITH FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE ACTIVITIES.
- 16. LANDSCAPING IS A HIGH PRIORITY. PROPER PROTECTION OF EXISTING LANDSCAPING, FENCES, PROPERTY CORNERS AND/OR D.O.T. CONCRETE RIGHT-OF-WAY MONUMENTS SHALL BE PROVIDED. WHERE DAMAGE OCCURS, REPLACEMENT TO EXISTING CONDITION IS REQUIRED. ALL LANDSCAPING REPLACEMENT IS SUBJECT TO APPROVAL FROM FORSYTH
- 17. CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER OF ANY DISCREPANCIES OR ERRORS HE DISCOVERS IN THE PLANS.
- 18. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS AS REQUIRED IN THE GENERAL
- 19. THIS PLAT IS NOT FOR RECORDING.

.B. -DEED BOOK E -DRAINAGE EASEMENT I -DROP INLET

- 20. UTILITY LOCATIONS ARE SHOWN TO THE BEST KNOWLEDGE OF THE ENGINEER. CONTRACTOR IS SOLELY RESPONSIBLY FOR FIELD VERIFICATION OF ALL UTILITIES AND WILL NOT BE ENTITLED TO ANY EXTRA COMPENSATION ON ACCOUNT OF INACCURACY OR INCOMPLETENESS OF SUCH INFORMATION.
- 21. MAXIMUM CUT OF FILL SLOPES ARE 2 HORIZONTAL TO 1 VERTICAL.
- 22. UTILITY COORDINATION SHALL BE INCLUDED IN THE PROJECT SCHEDULE AND IS THE EXPLICIT RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE PROJECT SCHEDULE INCLUDES THE NECESSARY RELOCATIONS. THE CONTRACTOR WILL NOT BE PAID ADDITIONALLY FOR THIS COORDINATION. THE CONTRACTOR SHOULD SEEK ASSISTANCE FROM ALL UTILITY COMPANIES TO LOCATE AND PROTECT THEIR FACILITIES.
- 23. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND PRECAUTIONS TO ASSURE THAT EXISTING SEWER LINES, FORCE MAIN LINES, AND WATER LINES REMAIN FUNCTIONAL
- 24. ALL WORK SHALL BE PERFORMED AND FINISHED IN A WORKMANLIKE MANNER TO THE ENTIRE SATISFACTION OF THE OWNER AND IN ACCORDANCE WITH THE BEST RECOGNIZED
- 25. CONTRACTOR IS RESPONSIBLE FOR ADDITIONAL STAGING AND/OR STORAGE REQUIRED OUTSIDE OF THE EASEMENTS PROVIDED BY OWNER. CONTRACTOR TO ALSO LOCATE STAGING AREAS AND EQUIPMENT MAINTENANCE AREAS (PARTICULARLY FOR OIL CHANGES) AT LEAST 200 FEET FROM STREAM BANKS TO MINIMIZE THE POTENTIAL FOR WASH WATER, PETROLEUM PRODUCTS, OR OTHER CONTAMINANTS FROM CONSTRUCTION EQUIPMENT ENTERING THE STREAMS.
- 26. A LEVEL III SOIL INVESTIGATION REPORT ENTITLED SOIL REPORT FINAL, FRIENDSHIP FOREST PARK", BY KENDALL & ASSOCIATES, DATED 05-30-17.

ABBREVIATIONS

GM —GAS METER GMD —GEORGIA MILITIA DISTRICT G.P.S. —GLOBAL POSITIONING SYSTEM GV —GATE VALVE HC —HANDICAP HDPE —HIGH DENSITY POLYETHYLENE HGL —HYDRAULIC GRADE LINE H.L.P. —HOUSE LOCATION PLAN REQUIRED HP —HIGH POINT HW —HEADWALL ID —INSIDE DIAMETER IE —INVERT ELEVATION IN —INCH IPF —IRON PIN FOUND IPS —IRON PIN SET IRR —IRRIGATION LINE JB —JUNCTION BOX

LF -LINEAR FOOT/FEET
LLL -LAND LOT LINE
LOD -LIMITS OF DISTURBANCE
L.P. -LIGHT POLE
MAX -MAXIMUM
MAX -MAXIMUM

MH -MANHOLE

MH -MANHOLE
MIN -MINIMUM
MISC -MISCELLANEOUS
MON -MONUMENT
MSL -MEAN SEA LEVEL
MT -MARKED TREE
N/F - NOW OR FORMERLY
NTS -NOT TO SCALE
NO. -NUMBER
NPW - NON-POTABALE WATER
OCS -OUTLET CONTROL STRUCTURE
OD -OUTSIDE DIAMETER
P.B. -PLAT BOOK
PC -POINT OF CURVATURE
PG. -PAGE
P.O.B. -POINT OF BEGINNING

P.O.C —POINT OF COMMENCEMENT PROP —PROPOSED PT —POINT OF TANGENCY

PVMT —PAVEMENT PVC —POLYVINYL CHLORIDE PIPE

PVC —POLYVINYL CHLORIDE PIPE R —RADIUS RCP —REINFORCED CONCRETE PIPE R.D.P. —RESIDENTIAL DRAINAGE PLAN REQUIRED REV —REVISED OR REVISION RW — REUSE WATER

R/W -RIGHT OF WAY
SD -STORM DRAIN
SS -SANITARY SEWER
SSE -SANITARY SEWER EASEMENT
ST - STORM SEWER LINE
STA - STATION NUMBER
SW -SIDEWALK

STA — STATION NUMBER
SW —SIDEWALK
SWCB—SINGLE WINGED CATCH BASIN
T —TELEPHONE
TC —TOP OF CURB ELEVATION
TOB —TOP OF BANK
TPF —TREE PROTECTION FENCING
T.P.O.B. —TRUE POINT OF BEGINNING
U —UNDERGROUND
VCP —VITRIFIED CLAY PIPE
W —WATER
M —WEIR INLET
WM —WATER METER
WV —WATER VALVE
YI — YARD INLET

SITE CLEARING & SITE DEMOLITION NOTES

- CONTRACTOR SHALL CLEARLY MARK AND MAINTAIN PROPERTY CORNER MONUMENTS AND BENCHMARKS AND WILL BE RESPONSIBLE FOR THE COST OF REPLACING THEM IF DISTURBED OR DESTROYED.
- THE CONTRACTOR SHALL HAVE THE LIMITS OF CLEARING AND DEMOLITION AND ALL BUFFERS STAKED WITH FLAGGING STRUNG BETWEEN ANGLE POINTS TO ENSURE THE PROPER LOCATION OF THE TREE SAVE FENCE AND PROPOSED IMPROVEMENTS PRIOR TO CLEARING AND DEMOLITION.
- CONTRACTOR SHALL PROTECT ALL ADJACENT LANDS FROM DAMAGE DURING CLEARING & DEMOLITION WORK. ANY OFF-SITE AREAS DISTURBED SHALL BE RETURNED TO A CONDITION
- EQUAL TO OR BETTER THAN THE EXISTING CONDITION AT NO ADDITIONAL COST TO THE
- NO CLEARING OR DEMOLITION MATERIALS SHALL BE DISPOSED OF ON-SITE. ALL DEBRIS SHALL BE HAULED OFF-SITE TO DISPOSAL AREAS APPROVED BY THE STATE OF GEORGIA FOR THE HANDLING OF CLEARING & DEMOLITION MATERIALS.
- 5. ALL VEGETATION (UNLESS OTHERWISE NOTED), ROOT SYSTEMS, TOPSOIL, REFUSE, OTHER DELETERIOUS MATERIAL, EXISTING PAVEMENTS, CURBS, ORGANICS AND UNSUITABLE BEARING SOILS SHALL BE STRIPPED FROM THE SURFACE WITHIN THE CONSTRUCTION LIMITS AND DISPOSED OF OFFSITE TO A DISPOSAL AREA APPROVED BY THE STATE OF GEORGIA FOR THE HANDLING OF CLEARING & DEMOLITION MATERIALS.
- CLEAN TOP SOIL MAY BE STOCKPILED IN AN AREA APPROVED BY THE ENGINEER AND REUSED LATER IN THE TOP 4" OF LANDSCAPED AREAS ONLY. EXCESS TOPSOIL SHALL BE
- 7. ALL STRUCTURES NOT IDENTIFIED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE DURING ALL PHASES OF CONSTRUCTION. ANY STRUCTURES THAT ARE TO REMAIN THAT ARE DAMAGED SHALL BE REPAIRED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- CONSTRUCTION ENTRANCE, SILT FENCE AND ANY OTHER REQUIRED EROSION CONTROL DEVICE SHALL BE IN PLACE PRIOR TO CLEARING & DEMOLITION OPERATIONS.
- DISCONNECT AND SEAL OFF ABANDONED UTILITIES AND UTILITIES TO BE REMOVED PRIOR TO START OF DEMOLITION, UTILITIES SHALL BE DISCONNECTED BELOW EXISTING GRADE OR OUTSIDE OF CONTRACT LIMITS BY THE APPLICABLE UTILITY OWNER. ALL COSTS FOR THIS WORK SHALL BE BORNE BY THE CONTRACTOR.
- 10. ALL STRUCTURES TO BE DEMOLISHED SHALL BE COMPLETELY REMOVED ABOVE AND BELOW GRADE. ABANDONED SERVICE LINES TO THE STRUCTURES SHALL ALSO BE REMOVED.
- CONTRACTOR TO PROVIDE ALL NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL MEASURES AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC THROUGHOUT CLEARING, DEMOLITION AND CONSTRUCTION IN COMPLIANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION, THE GEORGIA D.O.T. SPECIFICATIONS SECTION 150 AND ANY RULES AND REGULATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION OVER THIS PROJECT.
- 12. THE EXISTING TREES SHOWN ON THESE PLANS MAY ONLY BE THE MINIMAL AMOUNT SURVEYED AS REQUIRED FOR PERMITTING. THE SITE MAY HAVE ADDITIONAL TREES BEYOND THAT WHICH IS SHOWN. THE CONTRACTOR SHALL VISIT THE SITE BEFORE MAKING HIS BID TO INVESTIGATE THE AMOUNT OF EXISTING TREES THAT WILL NEED TO BE REMOVED WITHIN THE LIMITS OF CLEARING.

UTILITY NOTES

- 1. ALL IMPROVEMENTS TO CONFORM WITH CITY OF CLARKSTON/DEKALB COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS (LATEST EDITION). THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPLICABLE UTILITY AND OBTAINING THE APPLICABLE
- 2. CONTRACTOR TO NOTIFY CITY OF CLARKSTON/DEKALB COUNTY INSPECTOR DEPARTMENT 24 HOURS PRIOR TO BEGINNING EVERY PHASE OF CONSTRUCTION.
- 3. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER.
- 4. ALL WORK PERFORMED ON CITY/COUNTY RIGHT-OF-WAYS SHALL BE IN STRICT CONFORMANCE WITH APPLICABLE CITY OF CLARKSTON/DEKALB COUNTY STANDARDS & SPECIFICATIONS.
- ANY WORK IMPACTING TRAFFIC FLOW OR SAFETY SHALL BE DONE IN ACCORDANCE WITH AND APPROVED BY CITY OF CLARKSTON/DEKALB COUNTY ENGINEERING DEPARTMENT AND
- GEORGIA D.O.T. 6. ALL MATERIAL SHALL BE NEW UNLESS USED OR SALVAGED MATERIALS ARE APPROVED BY
- 7. RIP-RAP SHALL BE PLACED AT ALL STORM DRAIN HEADWALLS AND CONSIST OF 50

THE OWNER IN WRITING.

- 8. ALL DISTURBED AREAS TO BE RETURNED TO EXISTING GRADE AS SOON AS CONSTRUCTION
- 9. THERE WILL BE NO DISPOSAL OF DEBRIS ONSITE, ALL CONSTRUCTION DEBRIS SHALL BE REMOVED AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
- 10. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL INFRASTRUCTURE FOR A ONE YEAR PERIOD FOLLOWING FINAL ACCEPTANCE OF THE PROJECT BY CITY OF CLARKSTON/DEKALB COUNTY.
- 11. CONTRACTOR TO NOTIFY UTILITY PROTECTION AGENCY 72 HOURS PRIOR TO START OF WORK. PHONE: 811
- 12. ALL PERMANENT SANITARY SEWER EASEMENTS SHOULD BE DRIVABLE WITH NO CROSS SLOPES OVER 14%.
- 13. CONSTRUCTION DEBRIS, LIQUID CONCRETE, OLD RIP-RAP, OLD SUPPORT MATERIALS, AND OTHER LITTER IN STREAMS OR IN AREAS OF POTENTIAL MIGRATION INTO THE STREAM IS
- 14. NO BURY PITS ALLOWED WITHIN SANITARY SEWER EASEMENTS.
- 15. NO FENCES, STRUCTURES, OR OTHER OBSTRUCTIONS ALLOWED WITHIN SANITARY SEWER EASEMENTS UNLESS OTHERWISE SHOWN IN DRAWINGS
- 16. LIMITS OF CLEARING SHALL BE WITHIN THE TEMPORARY CONSTRUCTION EASEMENTS DELINEATED ON THESE PLANS.
- 17. ALL MANHOLES SHALL USE CAST IN BOLT DOWN RING, COVER AND GASKET.
- 18. ALL PIPE BEDDING SHALL BE TYPE III UNLESS OTHERWISE NOTED IN THE DRAWING.
- 19. THE CITY OF CLARKSTON/DEKALB COUNTY MAY HAVE AN APPROVED CONTRACTOR LIST FOR INSTALLATION AND/OR MANUFACTURER OF UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE COUNTY TO OBTAIN THE APPLICABLE LIST.
- 20. THE FRIENDSHIP FOREST WILDLIFE SANCTUARY WILL BE CLODED TO THE PUBLIC DURING CONSTRUCTION. THE CONTRACTOR WILL BE REQUIRED TO POST "PARK CLOSED" SIGNS AT BOTH ENTRANCES INTO THE PARK; TWO SIGNS POSTED AT THE EAST PONCE DE LEON ENTRANCE AND ONE SIGN POSTED AT THE CLARK STREET ENTRANCE

REFERENCES

- 1. TOPOGRAPHIC INFORMATION BASED ON A TOPOGRAPHIC SURVEY FOR THE CITY OF CLARKSTON. DATED 04-17-17 AND PREPARED BY HAYES, JAMES & ASSOCIATES, 4145 SHACKLEFORD ROAD, SUITE 300, NORCROSS, GA 30093, (770) 923-1600.
- HAYES JAMES & ASSOCIATES WAS REQUESTED, BY THE CITY OF CLARKSTON, TO FIND FIELD LOCATE A LIMITED NUMBER OF PINS. BOUNDARY INFORMATION IS APPROXIMATE AND BASED ON FIELD LOCATION OF SEVERAL PROPERTY PINS BY HAYES, JAMES & ASSOCIATES, IN ORDER TO TIE INTO SITE HORIZONTALLY. NO CERTIFIED BOUNDARY SURVEY WAS REQUESTED.
- THIS PROPERTY DOES LIE WITHIN A FLOOD HAZARD ZONE AE AS IDENTIFIED ON A F.I.R.M. COMMUNITY PANEL NO. 13089C0078 J DATED 05-16-13 AS PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY - FEDERAL HAZARD INSURANCE ADMINISTRATION.
- 4. THIS SITE DOES NOT CONTAIN WETLANDS PER NATIONAL INVENTORY MAPPING.
- 5. A 50' UNDISTURBED VEGETATIVE BUFFER AND 75' IMPERVIOUS SETBACK WILL BE MAINTAINED ADJACENT TO STATE WATERS, INCLUDING WETLANDS (FROM TOP OF BANK TO OR EDGE OF WATER).
- SITE CONTAINS STATE WATERS WHICH ARE SUBJECT TO A 25-FOOT STATE WATERS BUFFER AND A 50-FOOT UNDISTURBED COUNTY BUFFER FROM TOP OF BANK OR EDGE OF WATER.

ENGINEERS, PLANNERS & SURVEYORS

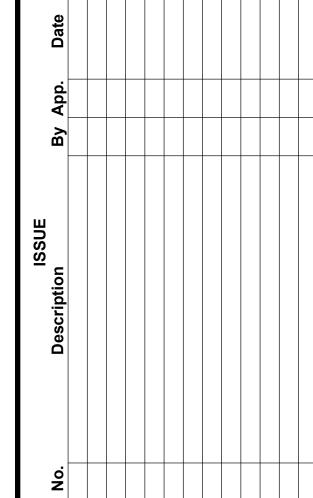
4145 SHACKLEFORD ROAD SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

CITY OF CLARKSTON

1055 ROWLAND STREET CLARKSTON, GA 30021 Phone: (404) 296-6489

Contact: Lawrence Kaiser (404) 909-5619

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GSWCC #11367 EXP. 05/25/18

Project Title

Friendship Forest Wildlife Sanctuary

Project Location 4380 E. PONCE DE LEON AVE. Address

City, State Zip CLARKSTON, GA 30021 Land Lot District-Section 18

DEKALB County Project No.

Drawn By: Checked By: Initial Issue Date:

Sheet Title

GENERAL NOTES & LEGEND

Sheet Number

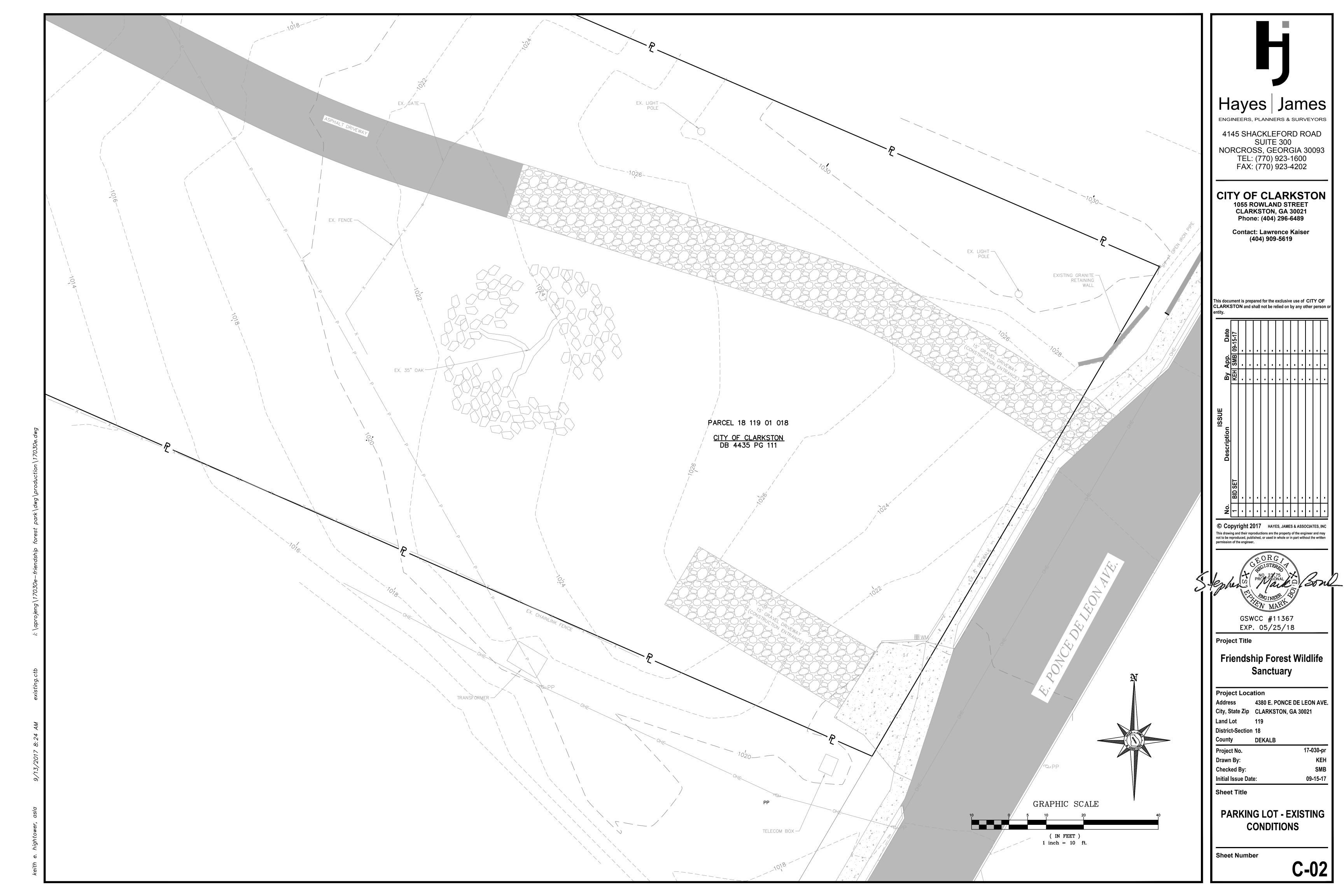
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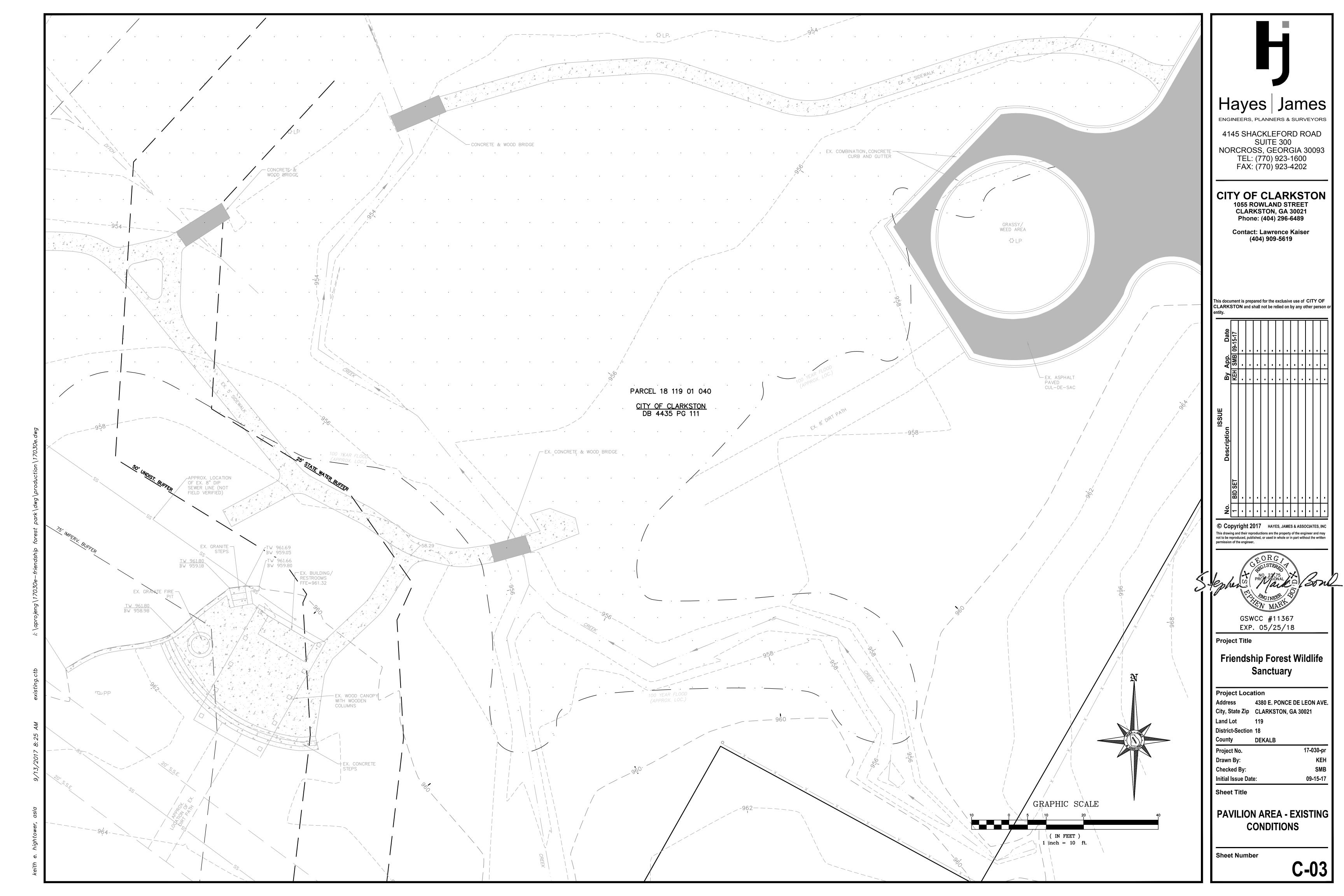
17-030-pr

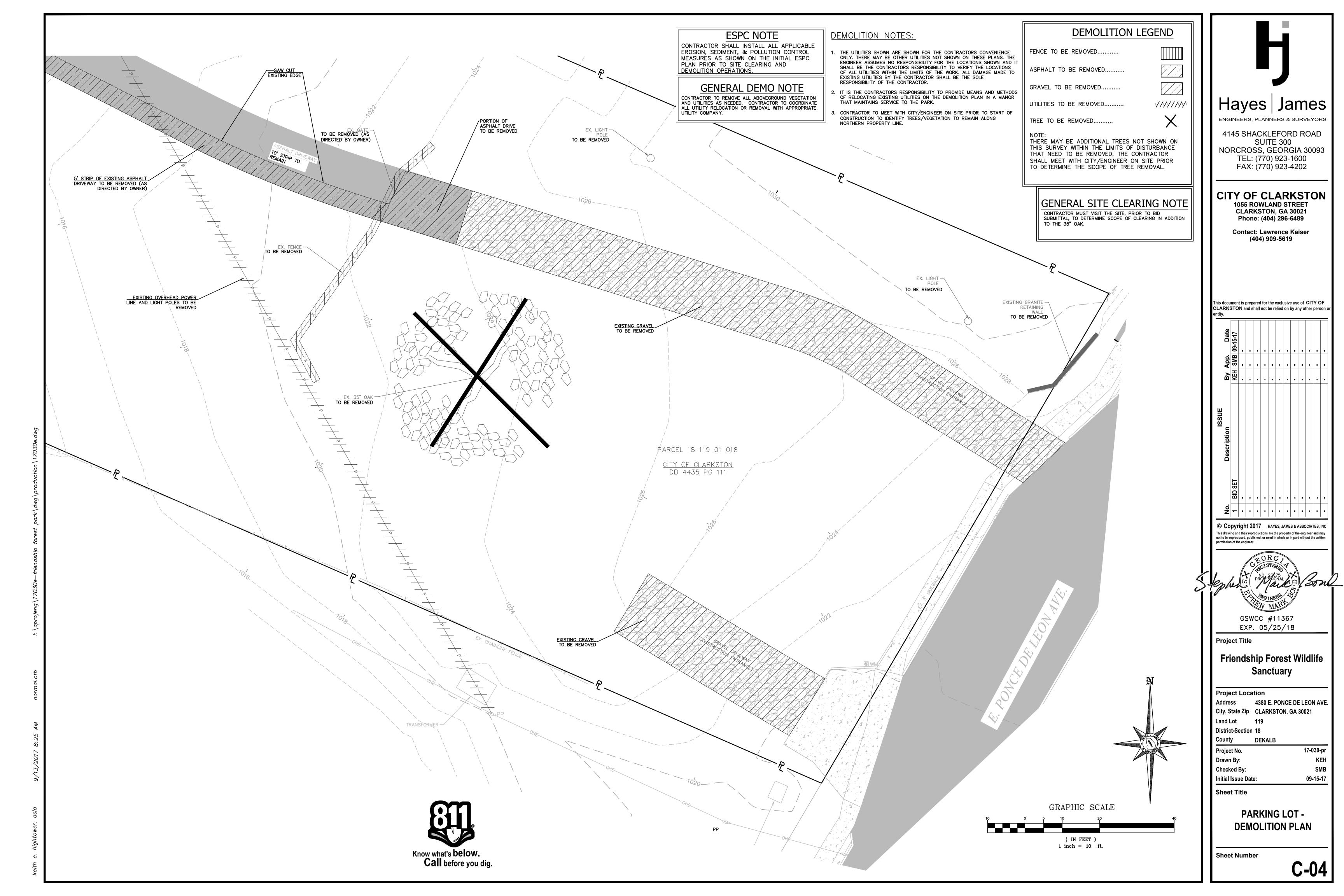
09-15-17

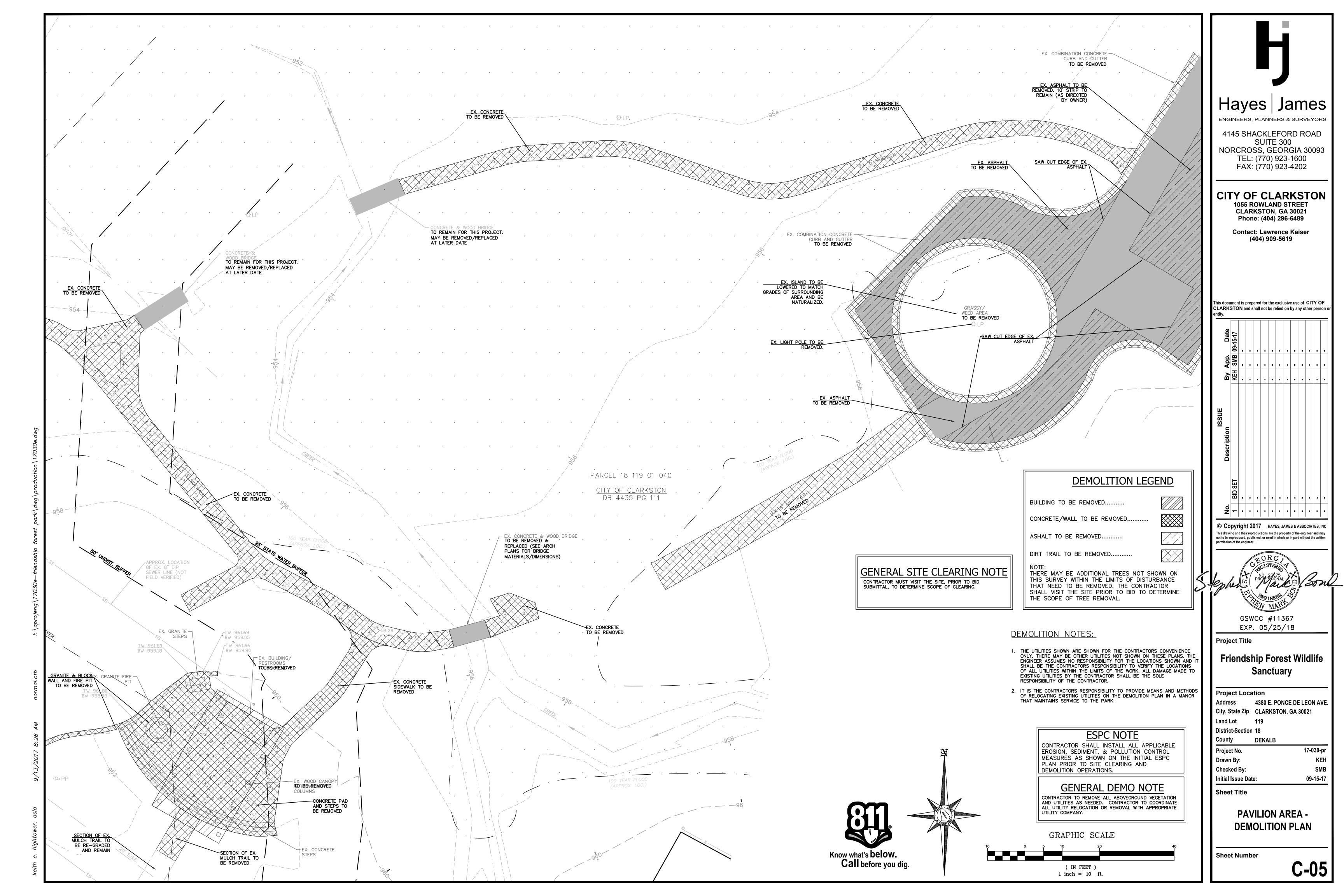
Know what's below. Call before you dig.

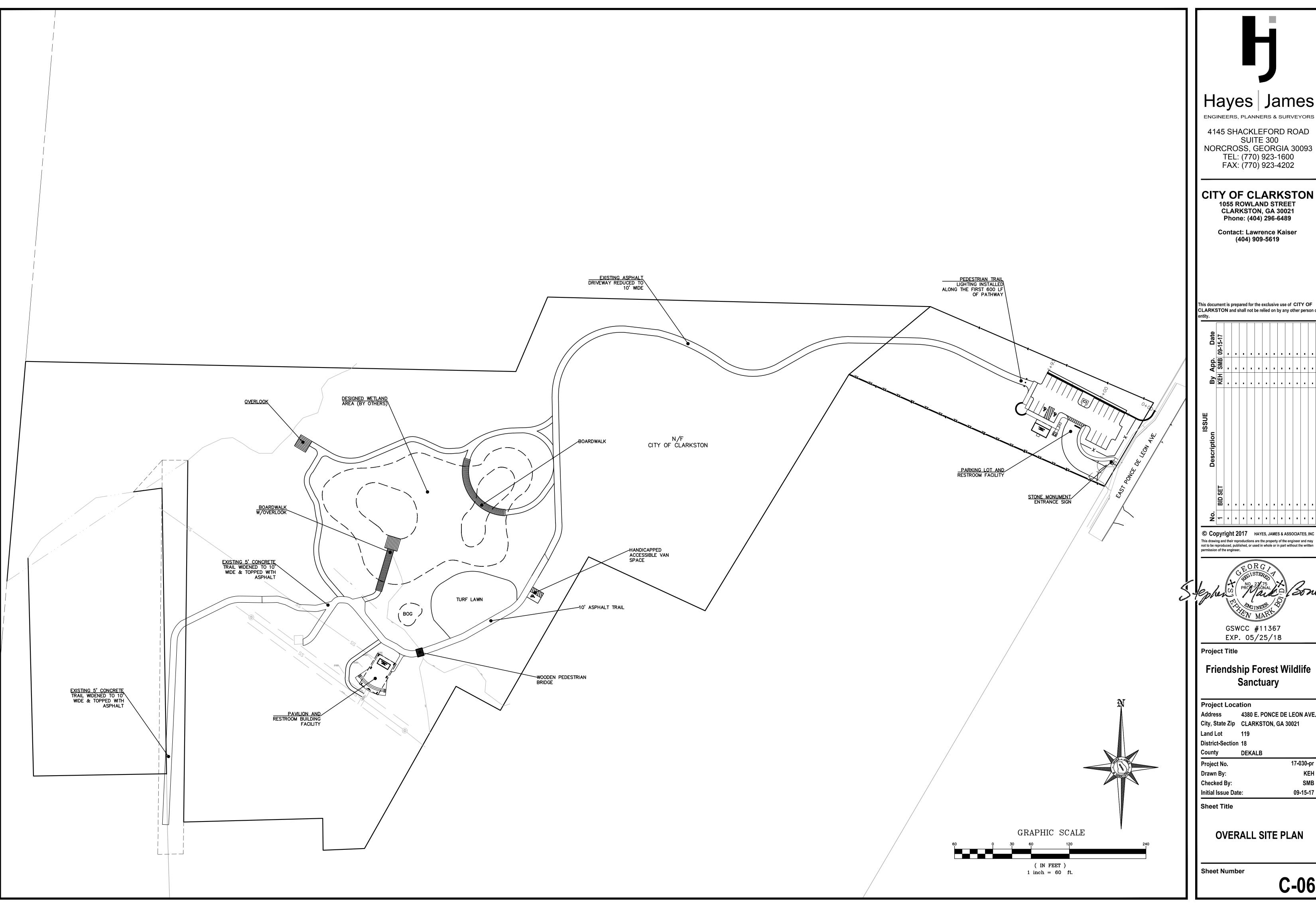
1. NOTIFY CITY OF CLARKSTON/DEKALB COUNTY INSPECTOR 24 HOURS BEFORE THE BEGINNING PHASE OF CONSTRUCTION.











| Hayes | James |

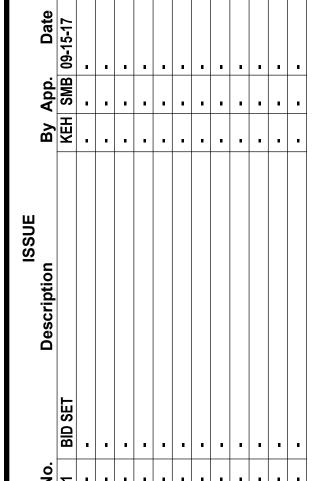
4145 SHACKLEFORD ROAD SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600

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Friendship Forest Wildlife Sanctuary

Project Location 4380 E. PONCE DE LEON AVE. City, State Zip CLARKSTON, GA 30021

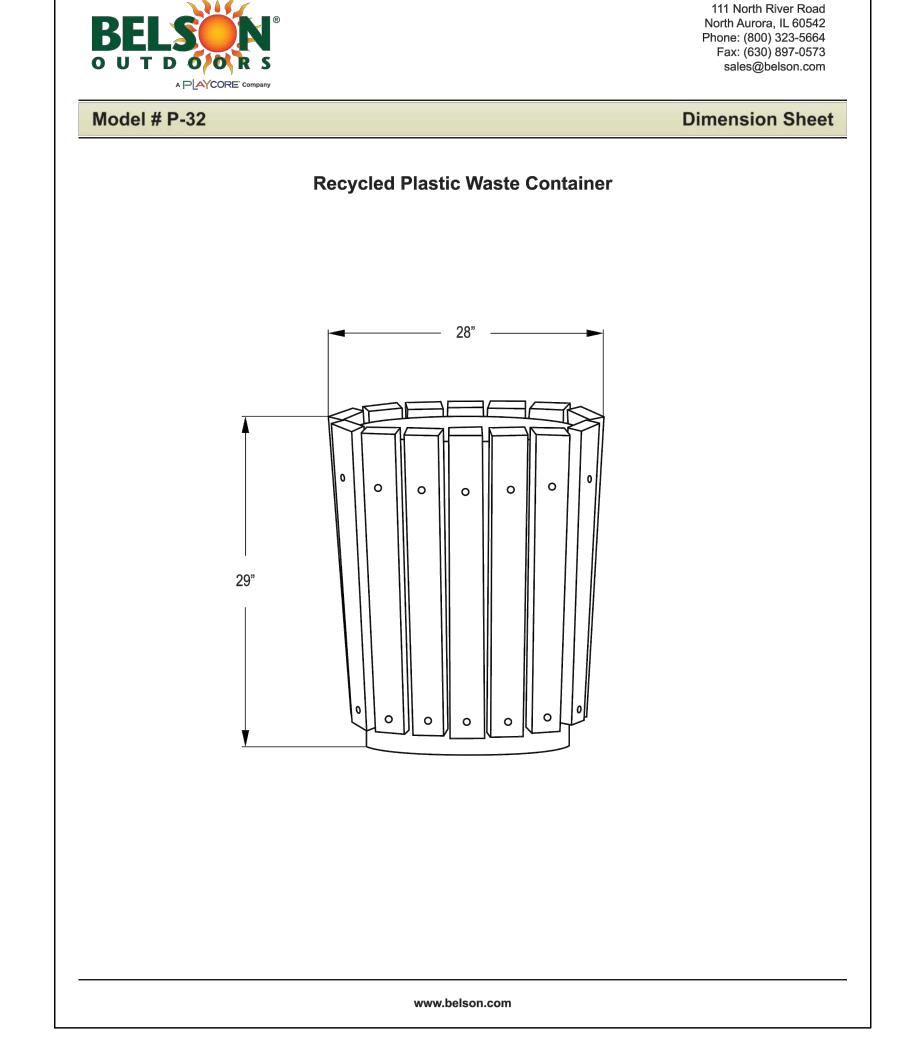
DEKALB

17-030-pr 09-15-17

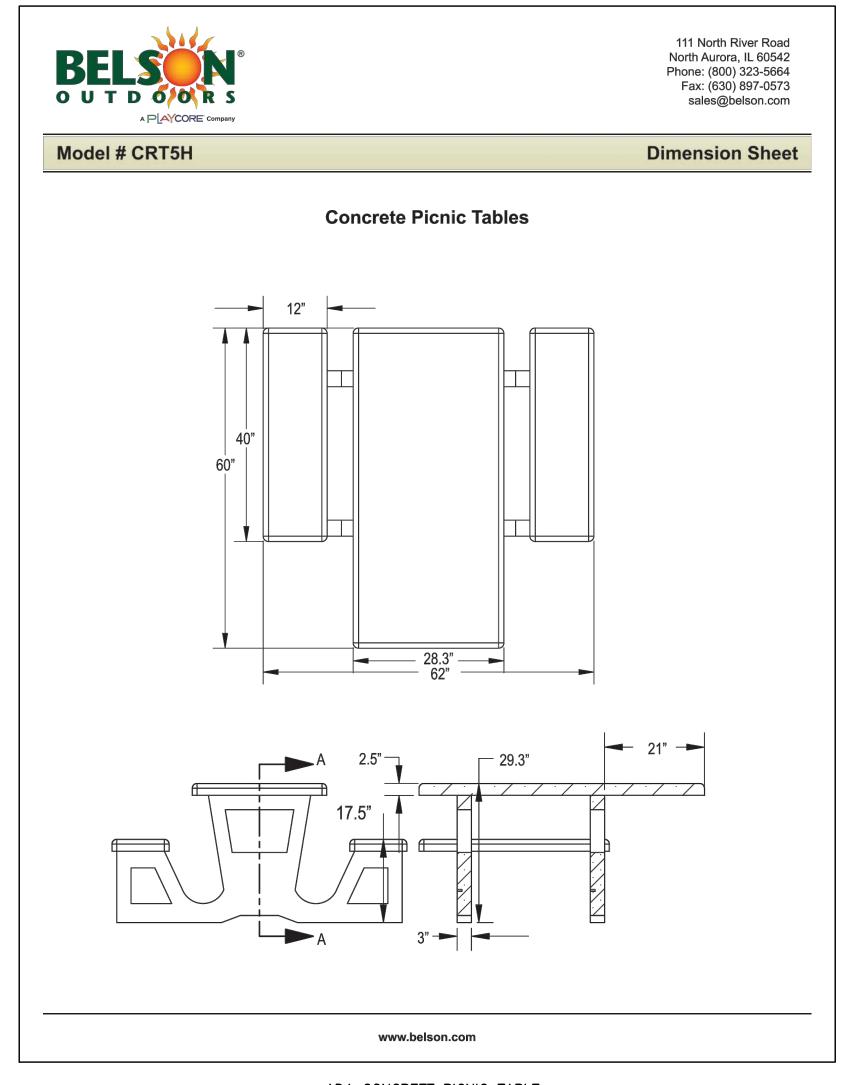
OVERALL SITE PLAN



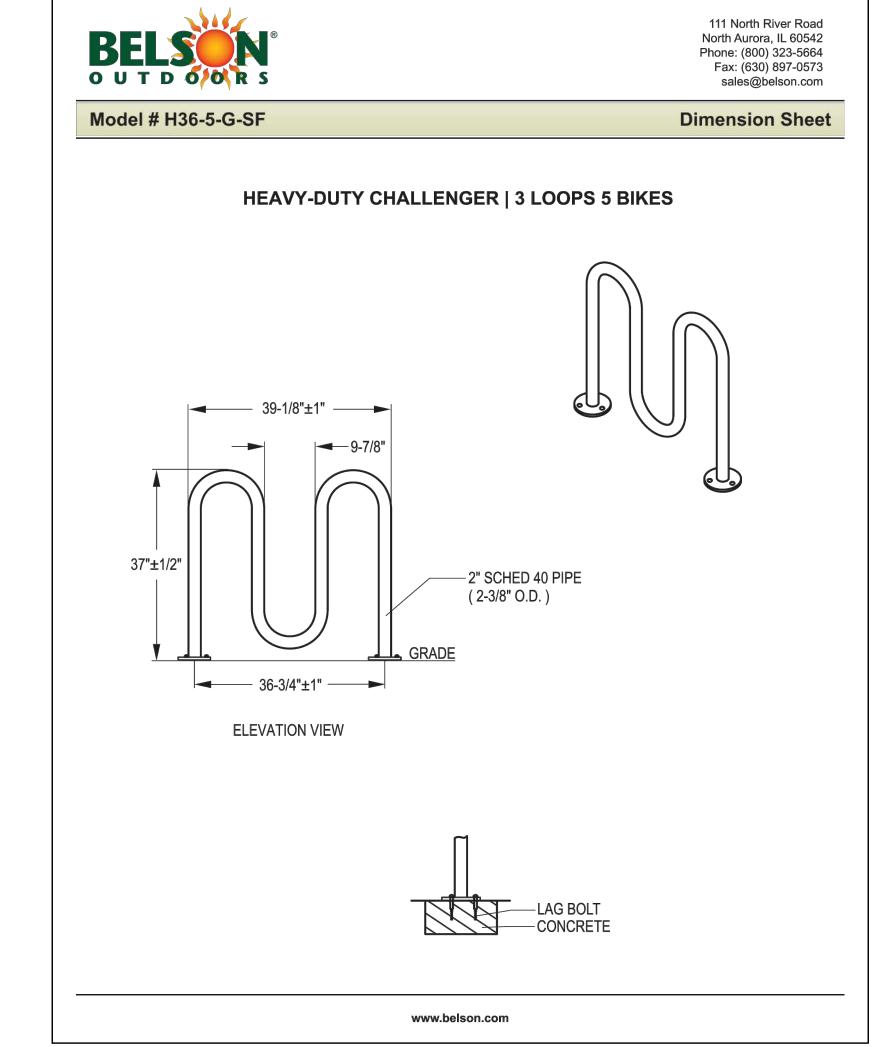
TRASH RECEPTACLE WITH DOME LID COLOR - GRAY, WITH PLASTIC LINER AND PERMANENT MOUNT KIT



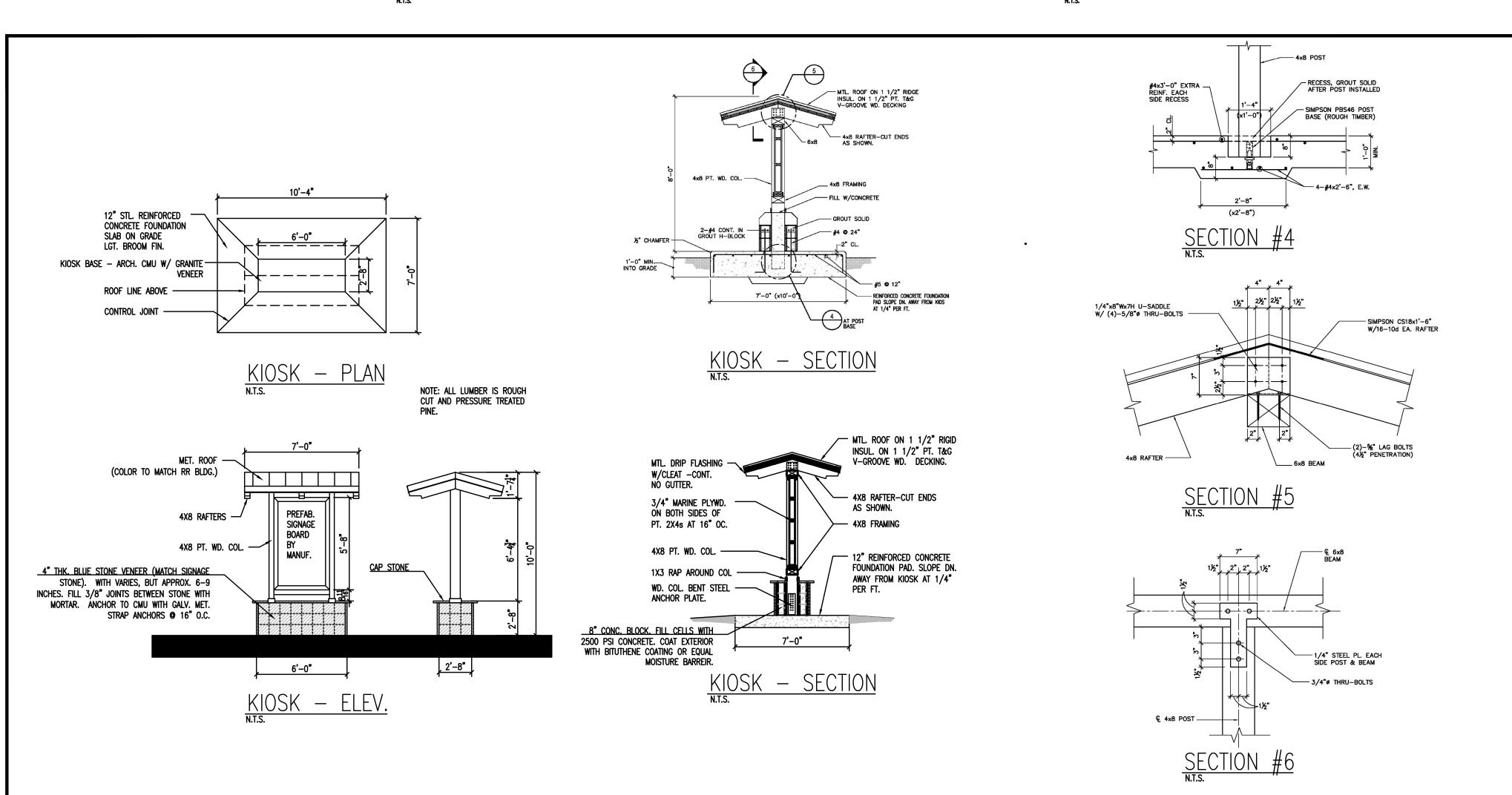
TRASH RECEPTACLE DIMENSIONS

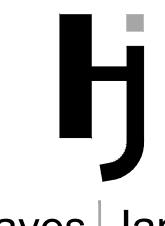


ADA CONCRETE PICNIC TABLE COLOR/FINISH - SMOOTH DOVE GRAY N.T.S.



METAL LOOP BIKE RACK COLOR/FINISH - SMOOTH DOVE GRAY





James Hayes **ENGINEERS, PLANNERS & SURVEYORS**

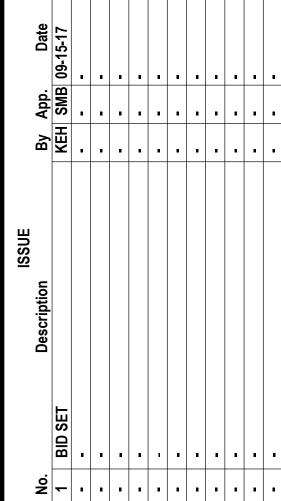
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Project Title

Friendship Forest Wildlife Sanctuary

Project Location 4380 E. PONCE DE LEON AVE. City, State Zip CLARKSTON, GA 30021

Land Lot **District-Section 18**

DEKALB County Project No. Drawn By:

17-030-pr Checked By: Initial Issue Date: 09-15-17

Sheet Title

SITE FURNISHINGS **DETAILS**

Sheet Number

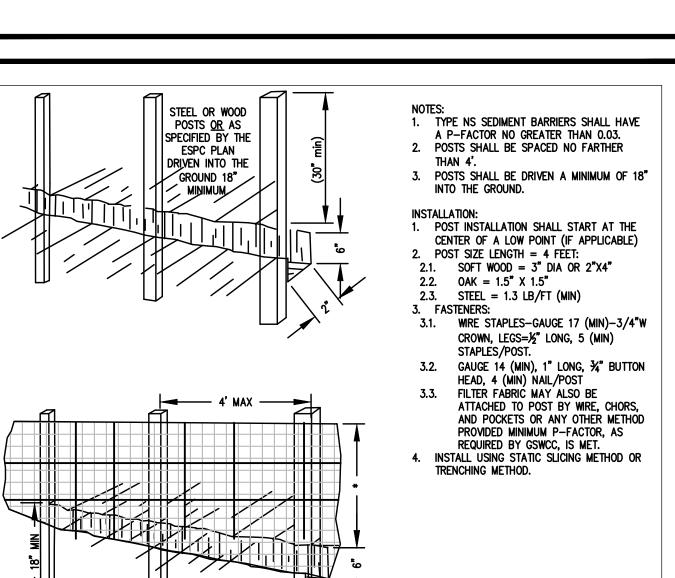
DEFINITION

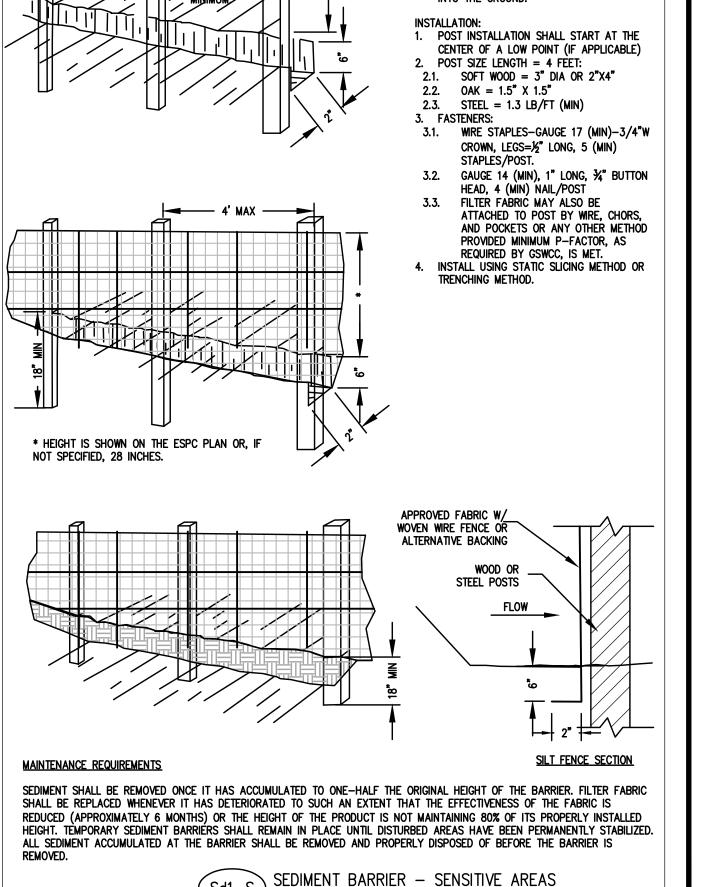
SOIL PREPARATION

<u>INSTALLATION</u>

MATERIALS

MAINTENANCE





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

THIS APPLICATION IS APPROPRIATE FOR AREAS WHICH REQUIRE IMMEDIATE VEGETATIVE COVERS, DROP

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

SODDING IS PREFERABLE TO SEED IN WATERWAYS AND SWALES BECAUSE OF THE IMMEDIATE PROTECTION OF

THE CHANNEL AFTER APPLICATION. SODDING MUST BE STAKED IN CONCENTRATED FLOW AREAS (SEE FIGURE

6-6.1) CONSIDER USING SOD FRAMED AROUND DROP INLETS TO REDUCE SEDIMENTS AND MAINTAINING THE

BRING SOIL SURFACE TO FINAL GRADE. CLEAR SURFACE OF TRASH, WOODY DEBRIS, STONES AND CLODS

LARGER THAN 1". APPLY SOD TO SOIL SURFACES ONLY AND NOT FROZEN SURFACES, OR GRAVEL TYPE

SOILS.TOPSOIL PROPERLY APPLIED WILL HELP GUARANTEE A STAND. DON'T USE TOPSOIL RECENTLY TREATED

WITH HERBICIDES OR SOIL STERILANTS. MIX FERTILIZER INTO SOIL SURFACE. FERTILIZE BASED ON SOIL TESTS

LAY SOD WITH TIGHT JOINTS AND IN STRAIGHT LINES. DON'T OVERLAP JOINTS. STAGGER JOINTS AND DO

INLETS, GRASS SWALES, AND WATERWAYS WITH INTERMITTENT FLOW.

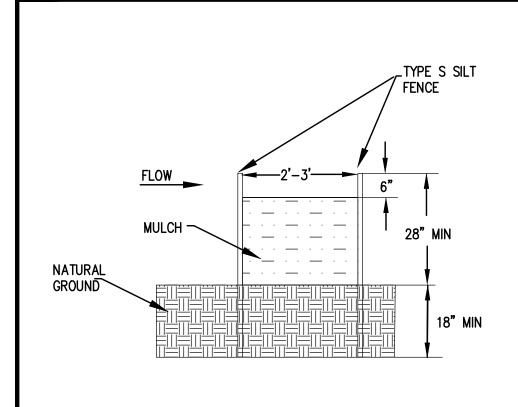
CONSTRUCTION SPECIFICATIONS INSTALLATION

IMMEDIATE EROSION CONTROL. GREEN SURFACE. AND QUICK USE.

REDUCED FAILURE AS COMPARED TO SEED AS WELL AS THE LACK OF WEEDS

PLANNING CONSIDERATIONS

CAN BE ESTABLISHED NEARLY YEAR-ROUND.



FILTER BERM ALONG PERIMETER FENCING AND SLOTTED PIPE **OUTFALL FROM PARKING LOT**

DESIGN CRITERIA

FERTILIZER REQUIREMENTS FOR SOIL SURFACE APPLICATION

AGRICULTURAL LIME SHOULD BE APPLIED BASED ON

SOIL TESTS OR AT A RATE OF 1 TO 2 TONS PER ACRE.

SOD PLANTING REQUIREMENTS

RESOURCE

VARIETIES

FERTILIZER

RATE

(lbs/sq ft)

.025

SEASON

Fertilizer | Fertilizer |

10-10-10

RATE

(lbs/acre)

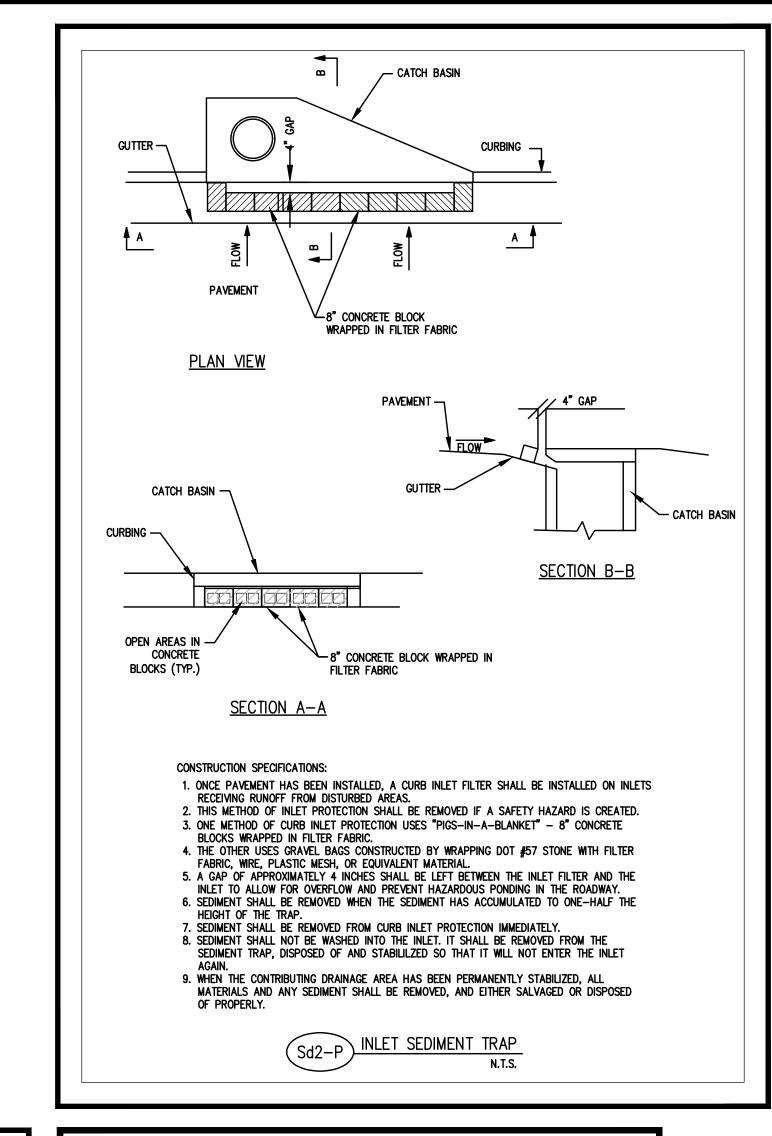
1000

MULCH-100% WOOD CHIPS

CONSTRUCTION—CONSTRUCT 1 2 HIGH X 3 WIDE BERM AT THE LOCATIONS SHOWN ON THE PLANS.

MAINTENANCE-ROUTINELY INSPECT AND MAINTAIN FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES. CORRECT DEFICIENCIES IMMEDIATELY. INSTALL ADDITIONAL FILTER BERM MATERIAL AS DIRECTED. REMOVE SEDIMENT AFTER IT HAS REACHED \(\frac{1}{3} \) OF THE HEIGHT OF THE BERM. DISPERSE FILTER BERM PRIOR TO SUBMITTING N.O.T

AT THE ENDS OF STRIPS AND IN THE CENTER, OR EVERY 3-4 FEET IF THE STRIPS ARE LONG. WHEN READY TO MOW, DRIVE PEGS OR STAPLES FLUSH WITH THE GROUND.





CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES.

-TO PREVENT SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES -TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE, OR SAFETY, OR TO ANIMALS OR PLANT LIFE.

CONDITIONS

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT.

METHODS AND MATERIALS

PERMANENT METHODS:

PERMANENT VEGETATION SEE STANDARD Ds3 — DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

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

STONE COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. SEE STANDARD Cr-CONSTRUCTION ROAD STABILIZATION.

TEMPORARY METHODS:

<u>MULCHES</u> SEE STANDARD Ds1 — DISTURBED AREA STABILIZATION (WITH MULCHING ONLY). SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL. REFER TO STANDARD Tac-TACKIFIERS. RESINS SUCH AS CURASOL OR TERRATACK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

<u>VEGETATIVE COVER</u> SEE STANDARD Ds2 - DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING).

<u>SPRAY-ON ADHESIVES</u> THESE ARE USED ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. REFER TO STANDARD Tac.

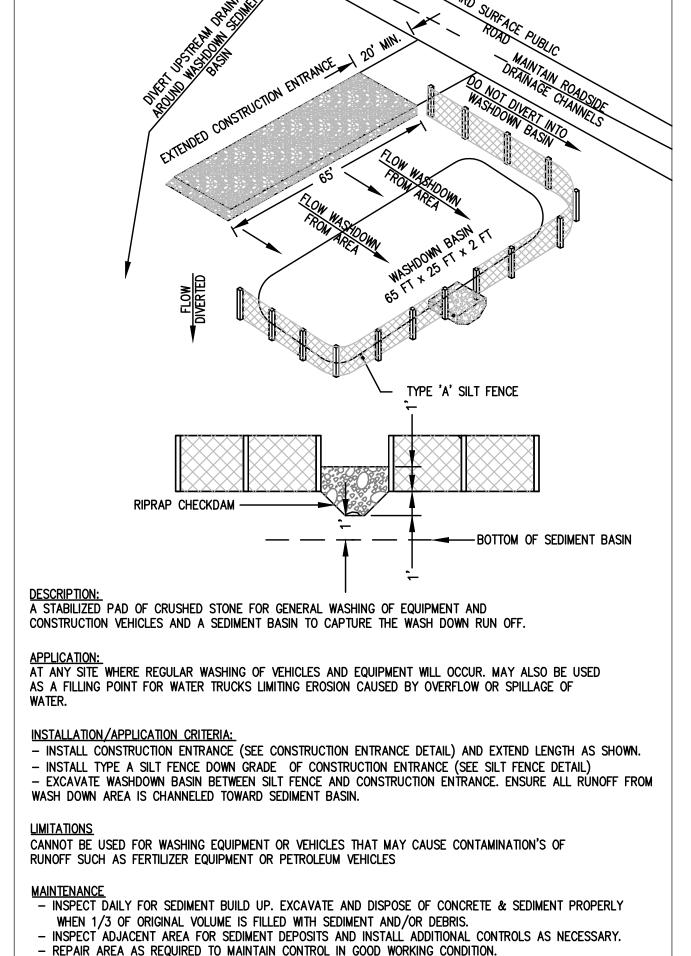
TILLAGE THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS. BEGIN PLOWING ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

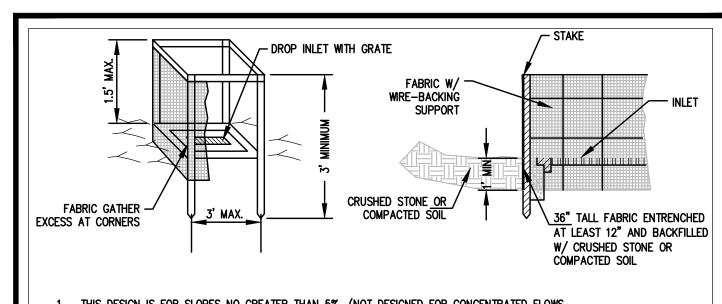
<u>IRRIGATION</u> THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.

BARRIERS SOLID BOARD FENCES, SNOWFENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.

CALCIUM CHLORIDE APPLY AT A RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT. ROAD STABILIZATION.







- REMOVE TEMPORARY WASHDOWN AREA AND BRING AREA TO FINAL GRADE AS SHOWN ON THE GRADING PLAN WHEN CEMENT TRUCK AND VEHICLE WASHDOWN AREA IS NO LONGER NECESSARY.

TEMPORARY CEMENT TRUCK AND VEHICLE WASH DOWN AREA

- EXPAND STABILIZED AREA AS REQUIRED TO ACCOMMODATE ACTIVITIES.

- MAINTAIN SILT FENCE AS OUTLINED IN SILT FENCE SPECIFICATIONS AND DETAILS. - DIVERT UPSTREAM DRAINAGE AREA AROUND TEMPORARY WASHDOWN AREA.

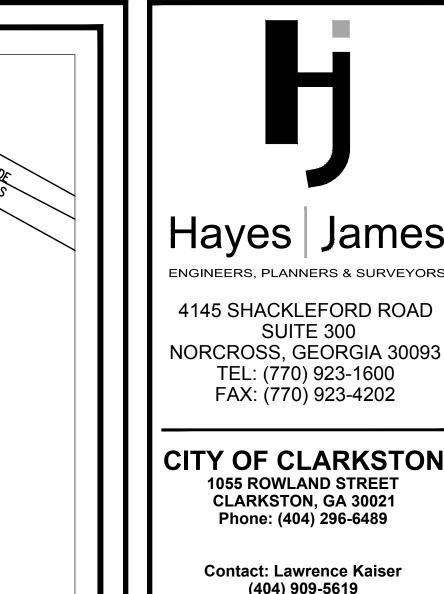
THIS DESIGN IS FOR SLOPES NO GREATER THAN 5% (NOT DESIGNED FOR CONCENTRATED FLOWS. 2. THE STEEL POSTS SUPPORTING THE SILT FENCE MATERIAL SHOULD BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET (MAX OF 3' APART)

3. THE STEEL POSTS SHOULD BE SECURELY DRIVEN AT LEAST 18" DEEP. 4. THE FABRIC SHALL BE ENTRENCHED 12 INCHES AND BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL.

MAINTENANCE

THE TRAP SHALL BE INSPECTED DAILY AND AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE HEIGHT OF THE TRAP. SEDIMENT SHALL NOT BE WASHED INTO THE INLET. IT SHALL BE REMOVED FROM THE SEDIMENT TRAP AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLET, AGAIN. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, ALL MATERIALS AND ANY SEDIMENT SHALL BE REMOVED, AND EITHER SALVAGED OR DISPOSED OF PROPERLY. THE DISTURBED AREA SHALL BE BROUGHT TO PROPER GRADE, THEN SMOOTHED AND COMPACTED. APPROPRIATELY STABILIZE ALL DISTURBED AREAS AROUND THE INLET.

FABRIC AND SUPPORTING FRAME FOR INLET PROTECTION



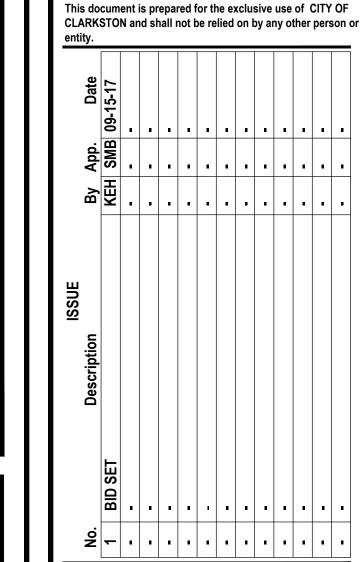
CITY OF CLARKSTON 1055 ROWLAND STREET CLARKSTON, GA 30021 Phone: (404) 296-6489

SUITE 300

TEL: (770) 923-1600

FAX: (770) 923-4202

Contact: Lawrence Kaiser (404) 909-5619



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GSWCC #11367 EXP. 05/25/18

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Friendship Forest Wildlife Sanctuary

Project Location 4380 E. PONCE DE LEON AVE. Address City, State Zip CLARKSTON, GA 30021

Land Lot District-Section 18

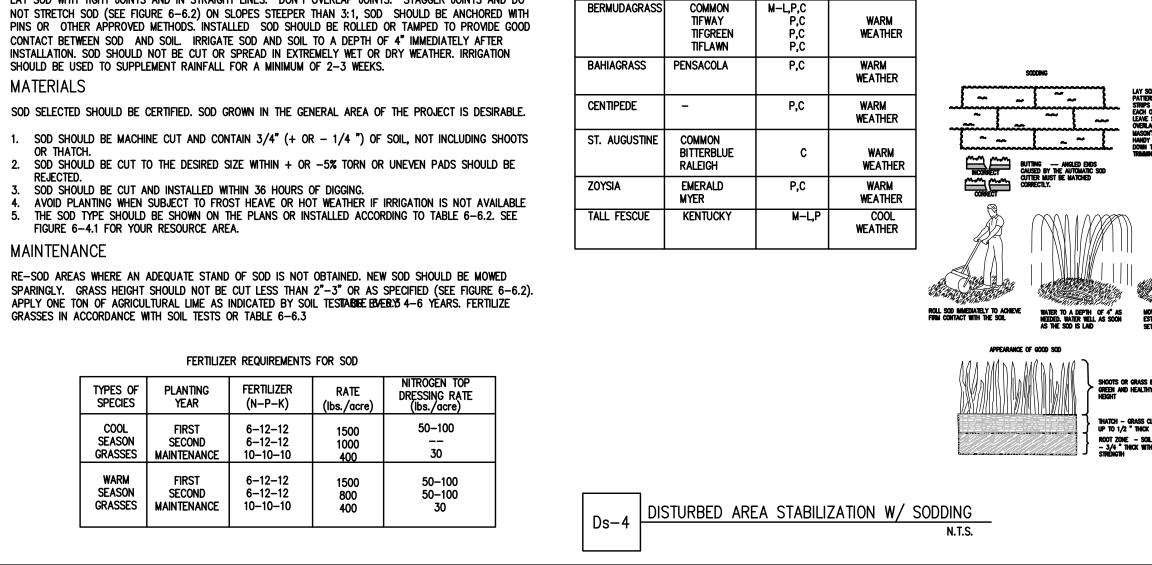
DEKALB County 17-030-pr Project No. Drawn By: Checked By:

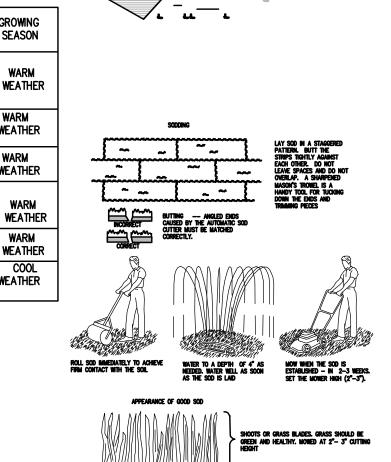
Initial Issue Date: Sheet Title

> **EROSION CONTROL DETAILS**

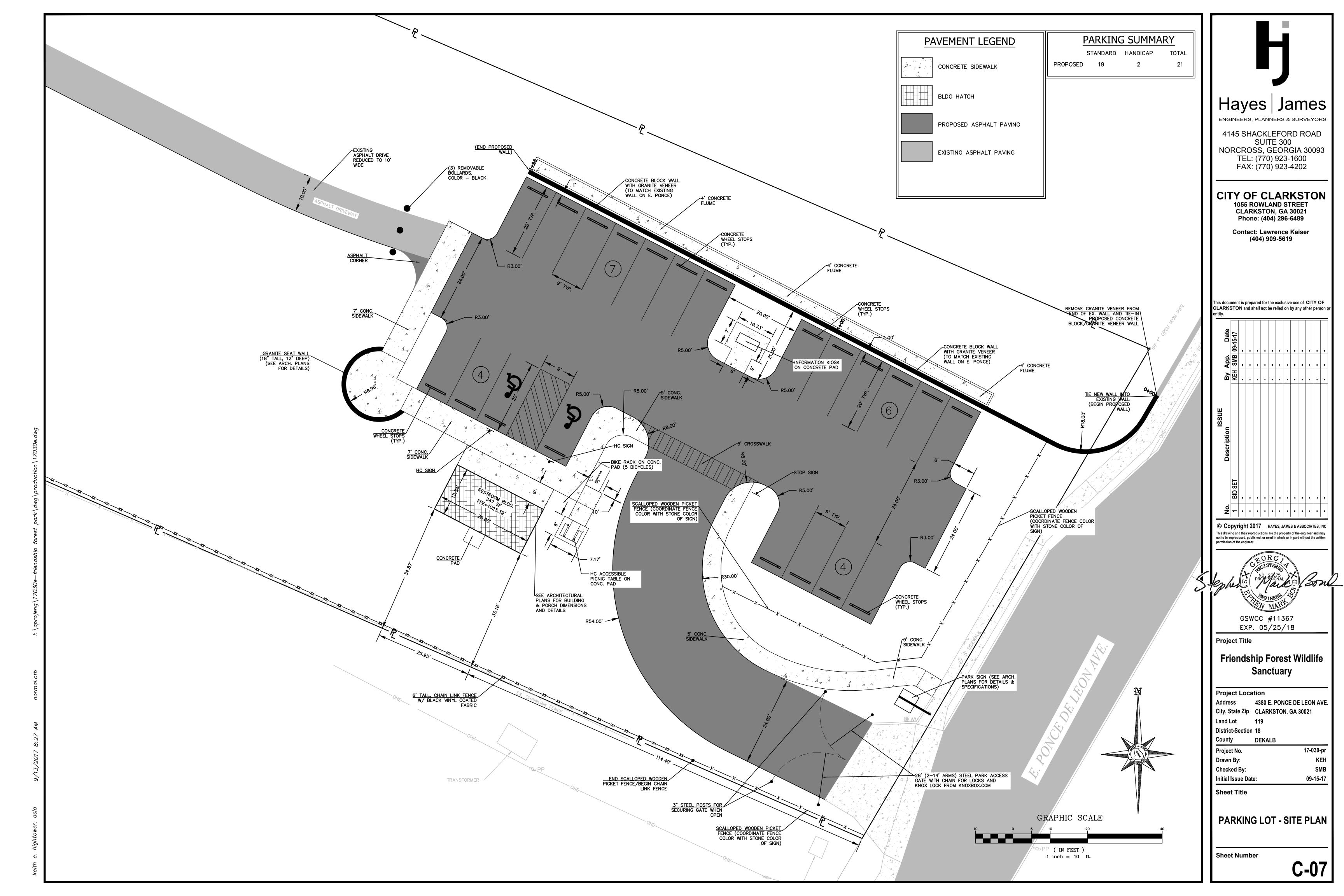
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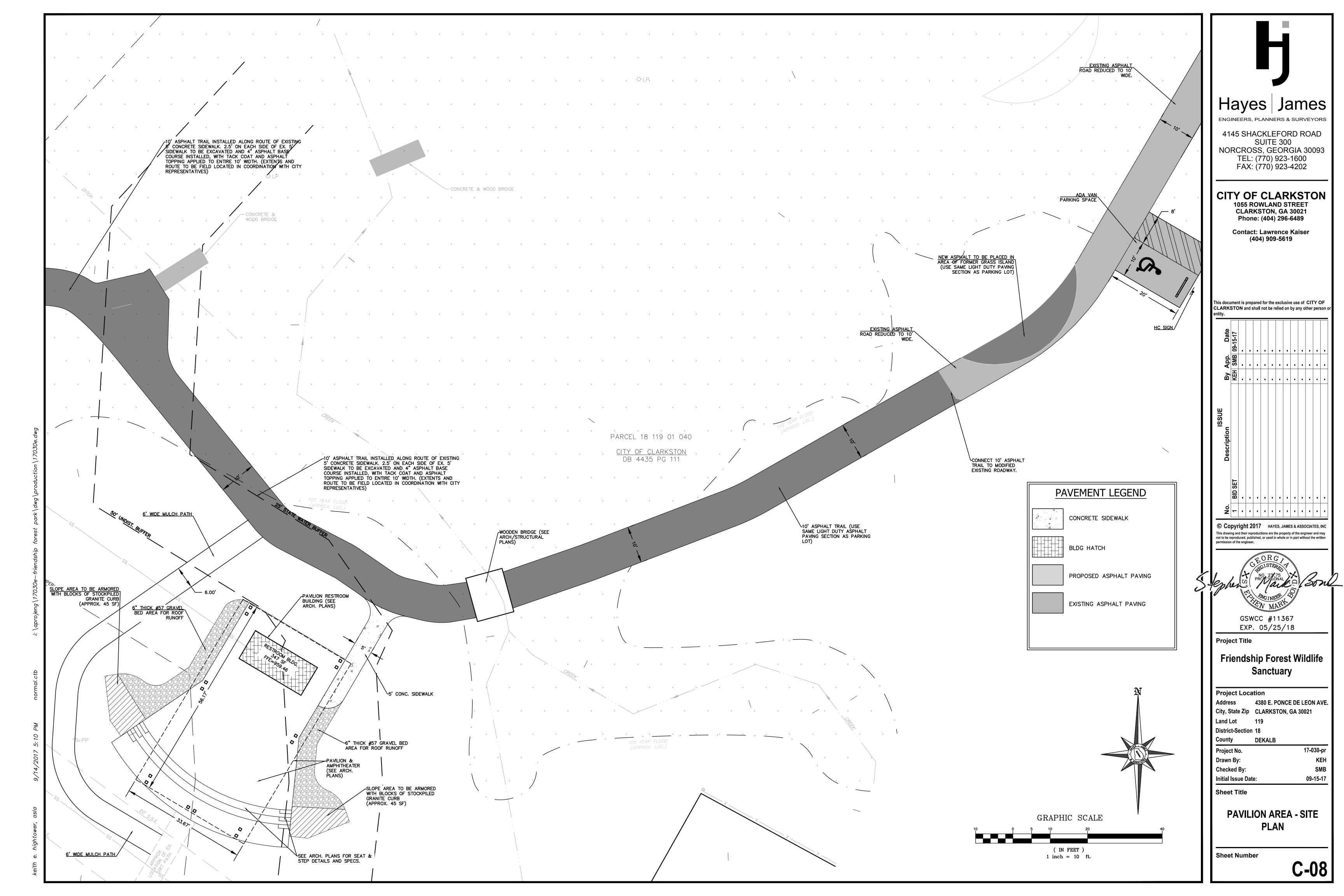
09-15-17

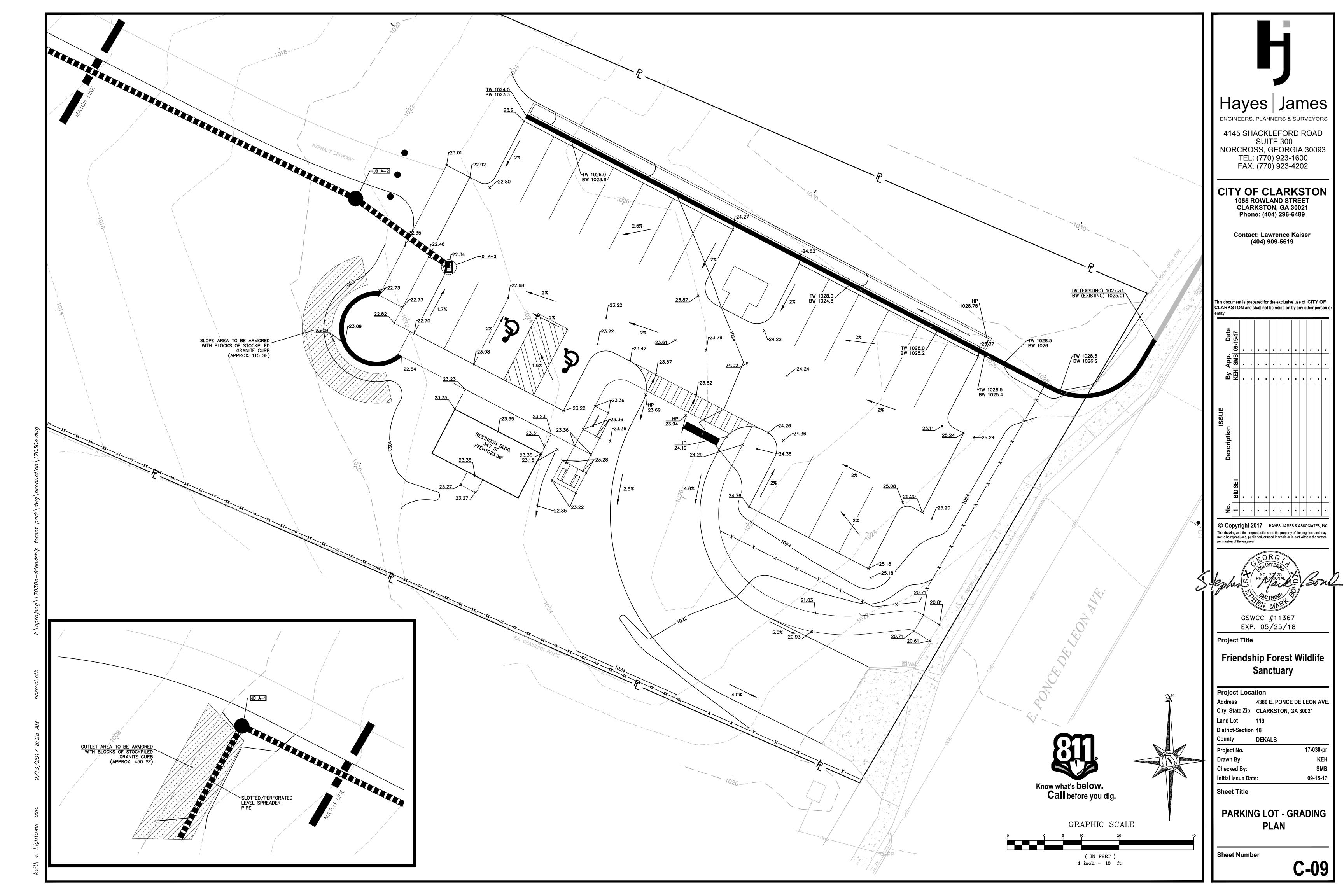


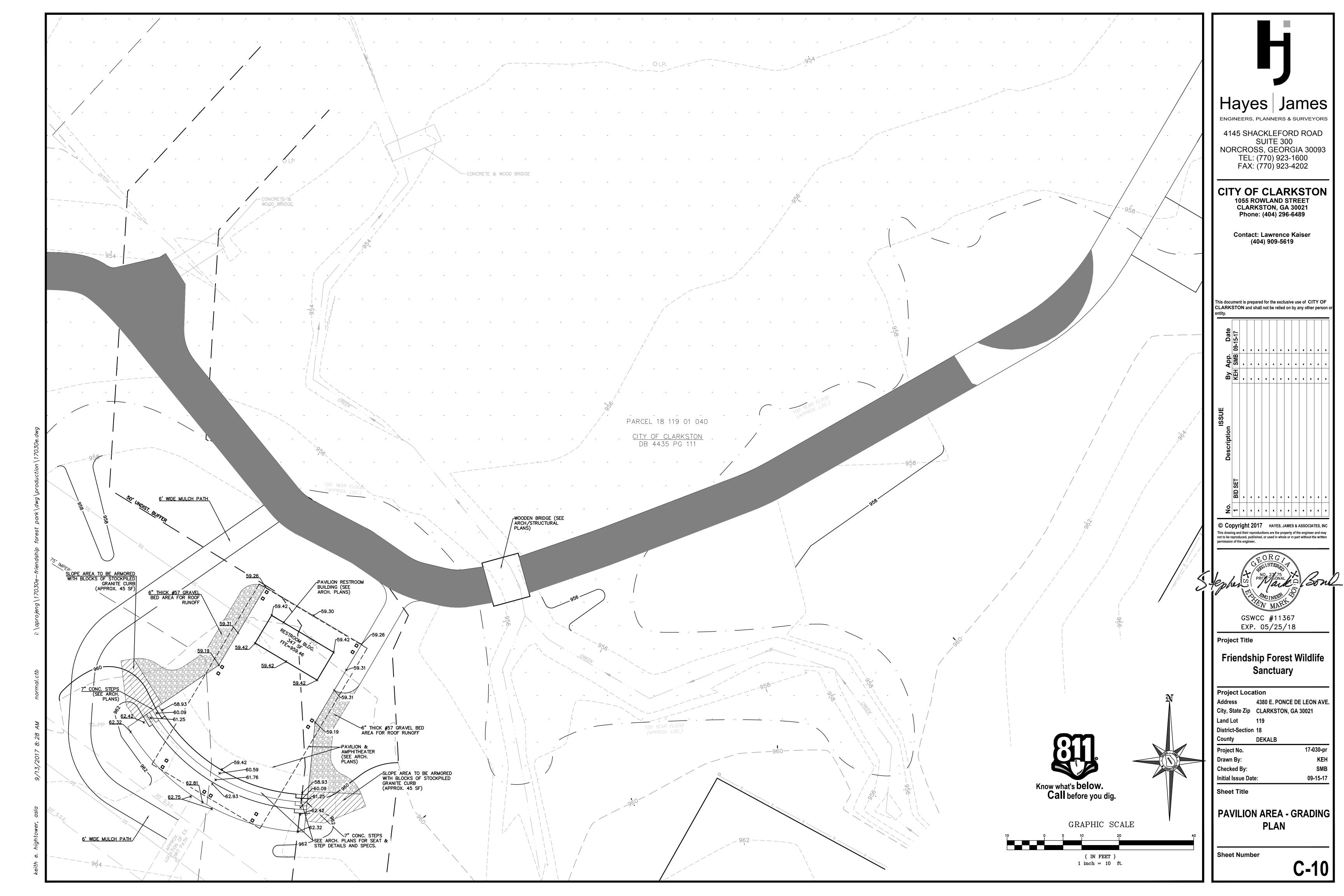


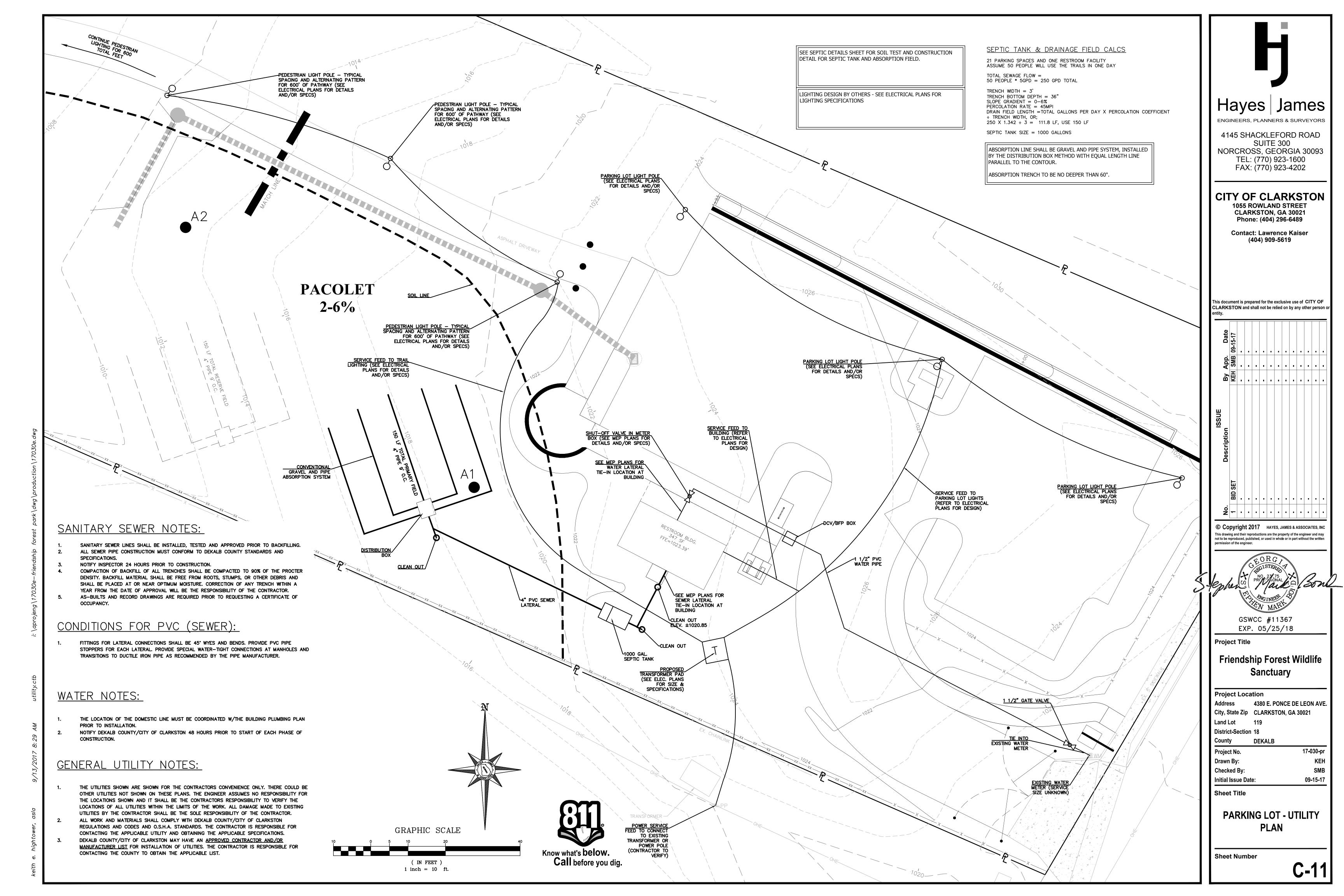
PEG OR STAPLE

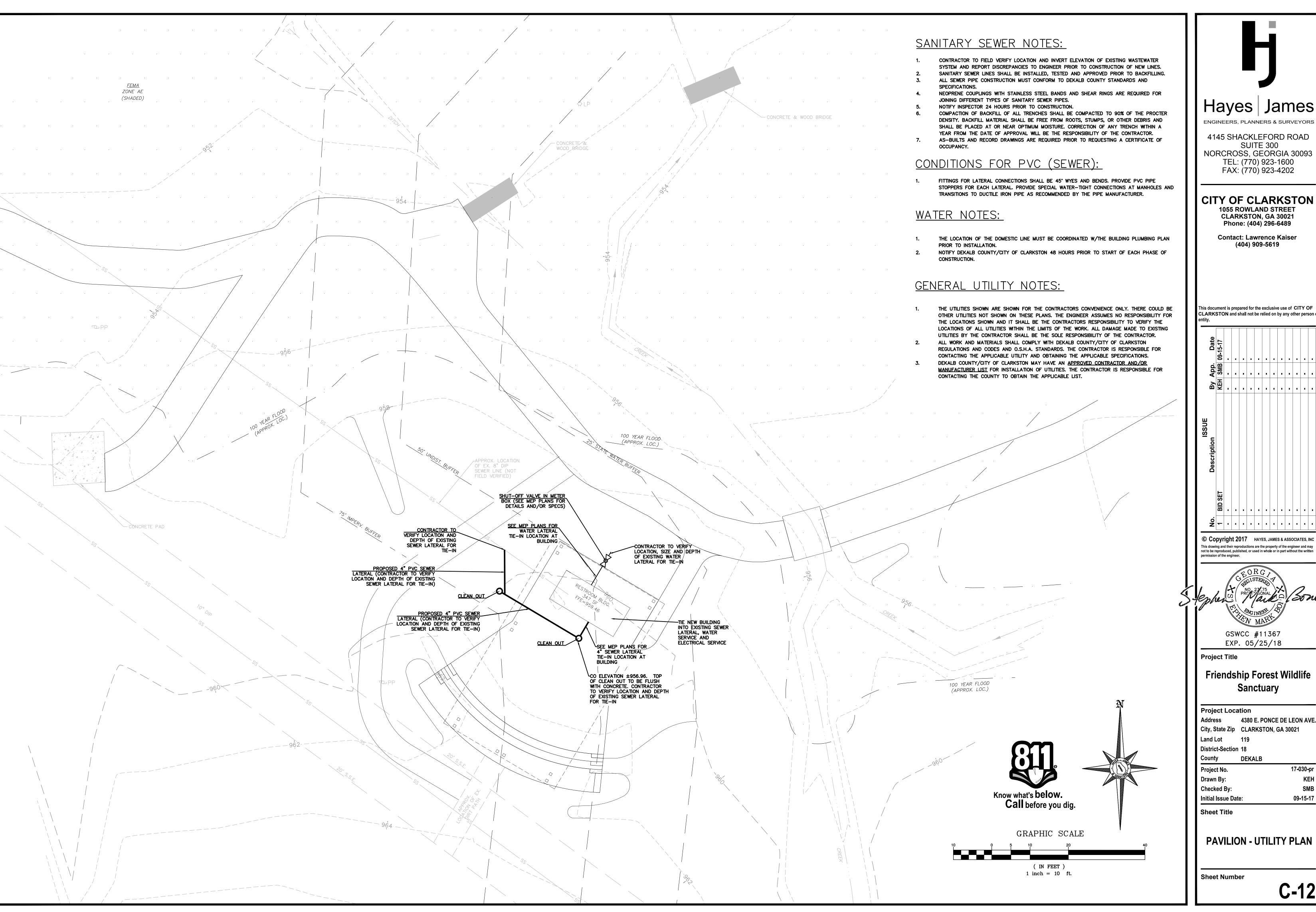


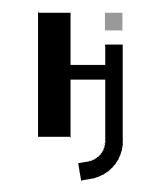












Hayes | James

4145 SHACKLEFORD ROAD SUITE 300

NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

CITY OF CLARKSTON

1055 ROWLAND STREET **CLARKSTON, GA 30021** Phone: (404) 296-6489

Contact: Lawrence Kaiser (404) 909-5619

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GSWCC #11367 EXP. 05/25/18

Project Title

Friendship Forest Wildlife Sanctuary

Project Location 4380 E. PONCE DE LEON AVE. Address City, State Zip CLARKSTON, GA 30021 Land Lot **District-Section 18**

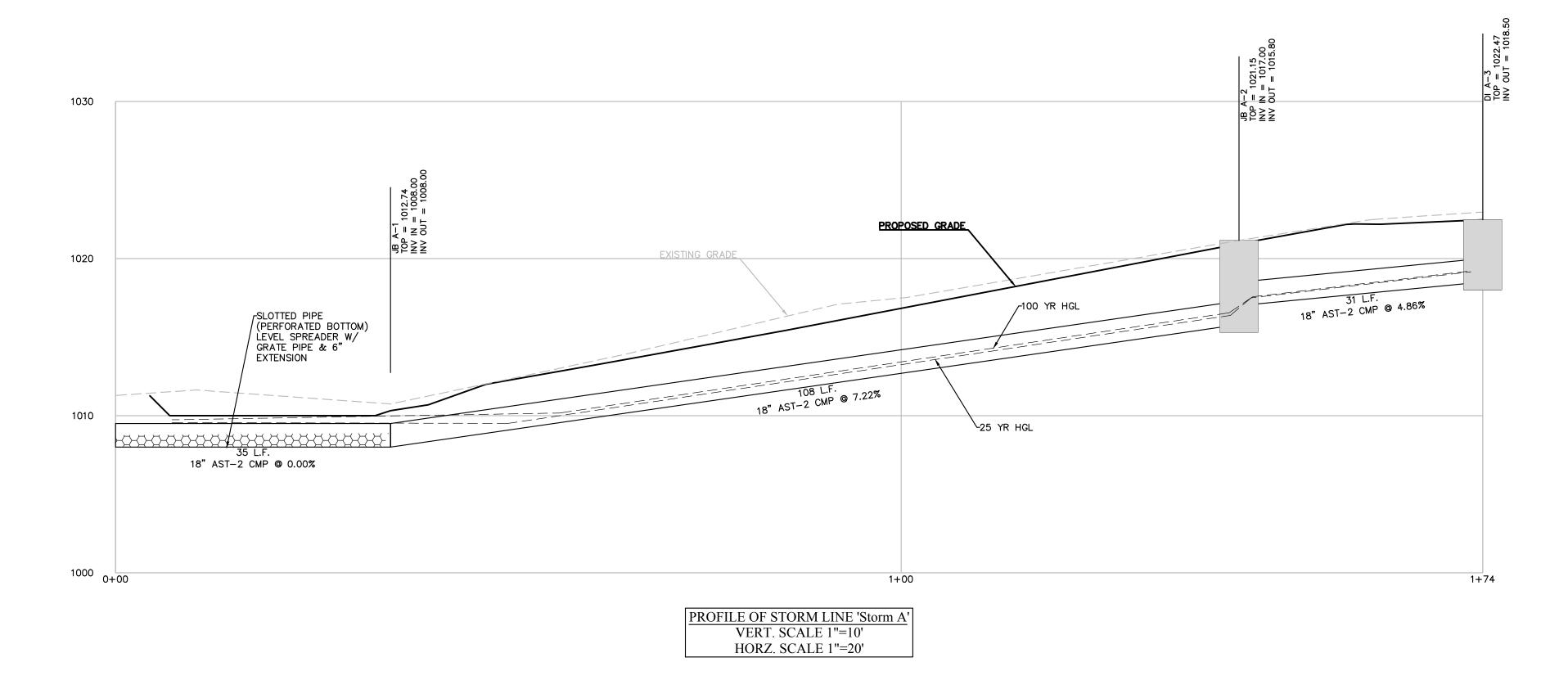
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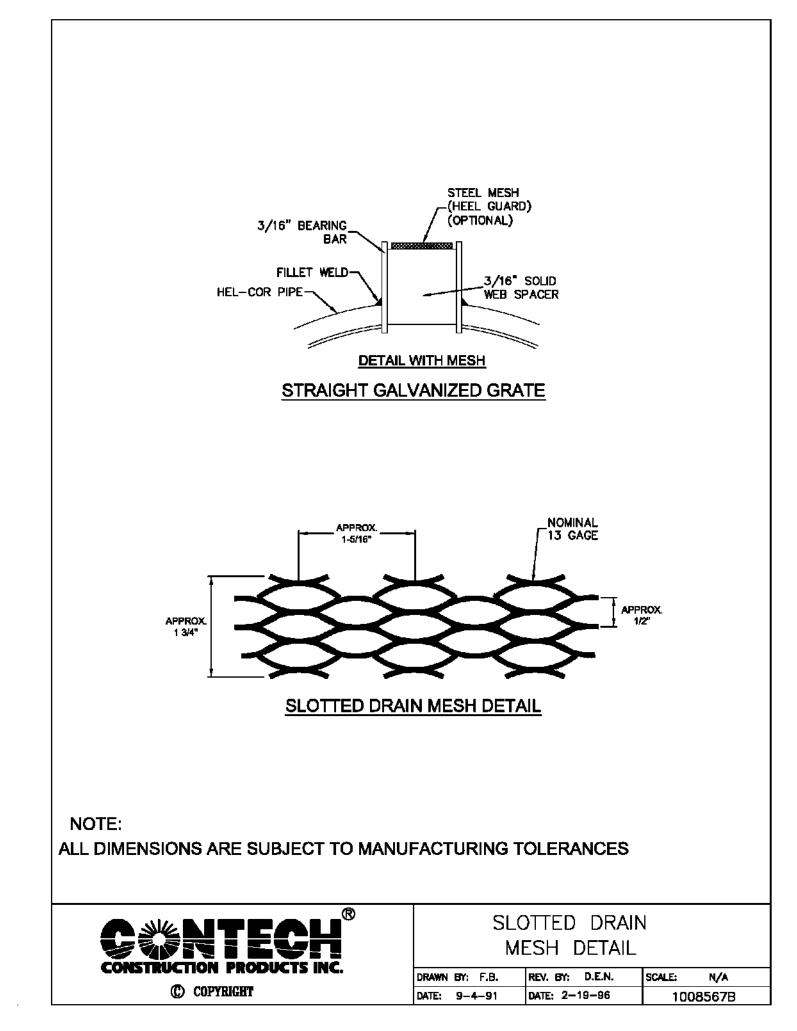
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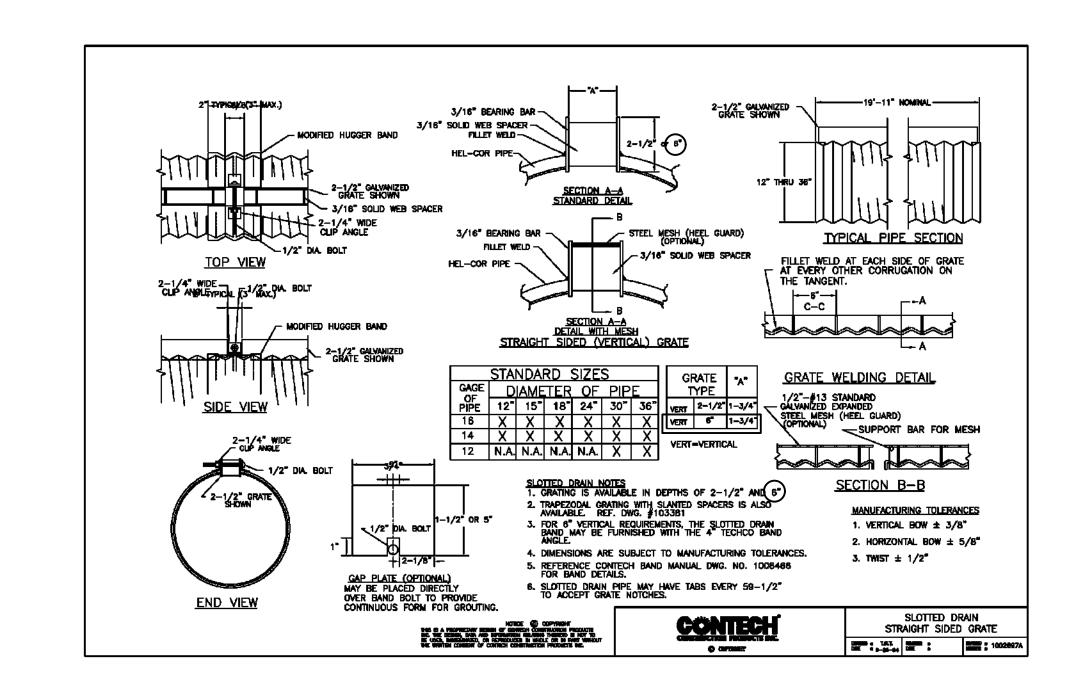
Sheet Title

PAVILION - UTILITY PLAN

Sheet Number







* RCP OR HDPE MAY BE SUBSTITUTED FOR CMP EXCEPT FOR THE SLOTTED DRAIN

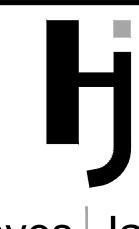
1.96

1.96

4.86

18 4.35 30.851 8.27 CMP

NOTE: SEE SHEET 'STORM DETAILS' FOR REMAINING STORM WATER-RELATED DETAILS



James

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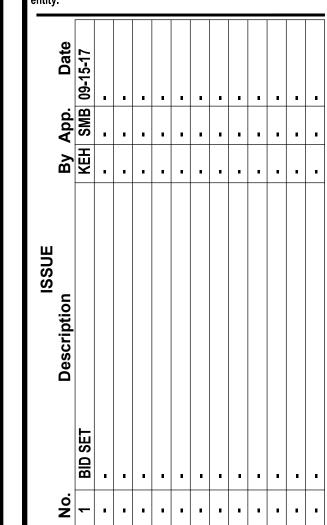
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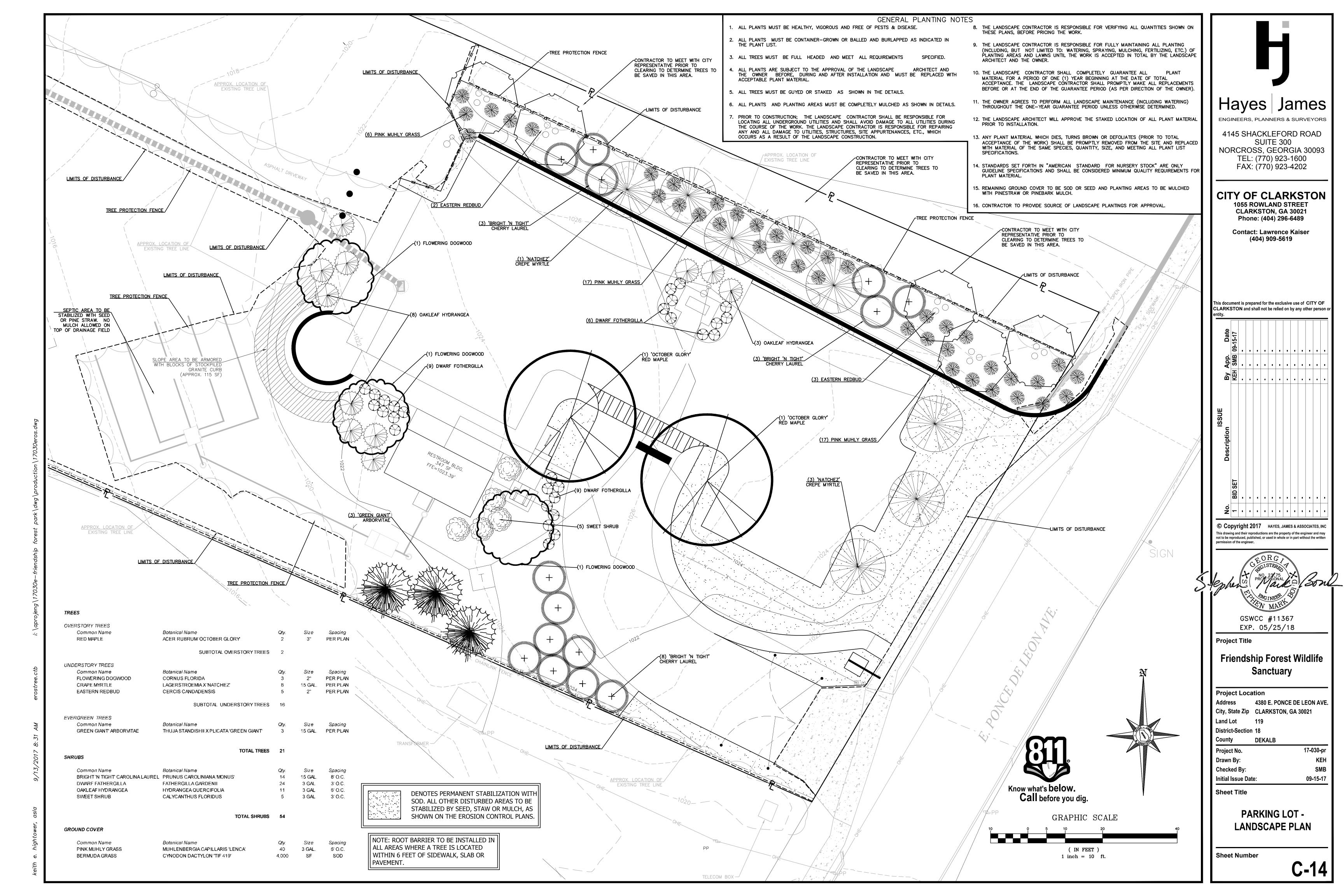
Land Lot District-Section 18 County DEKALB

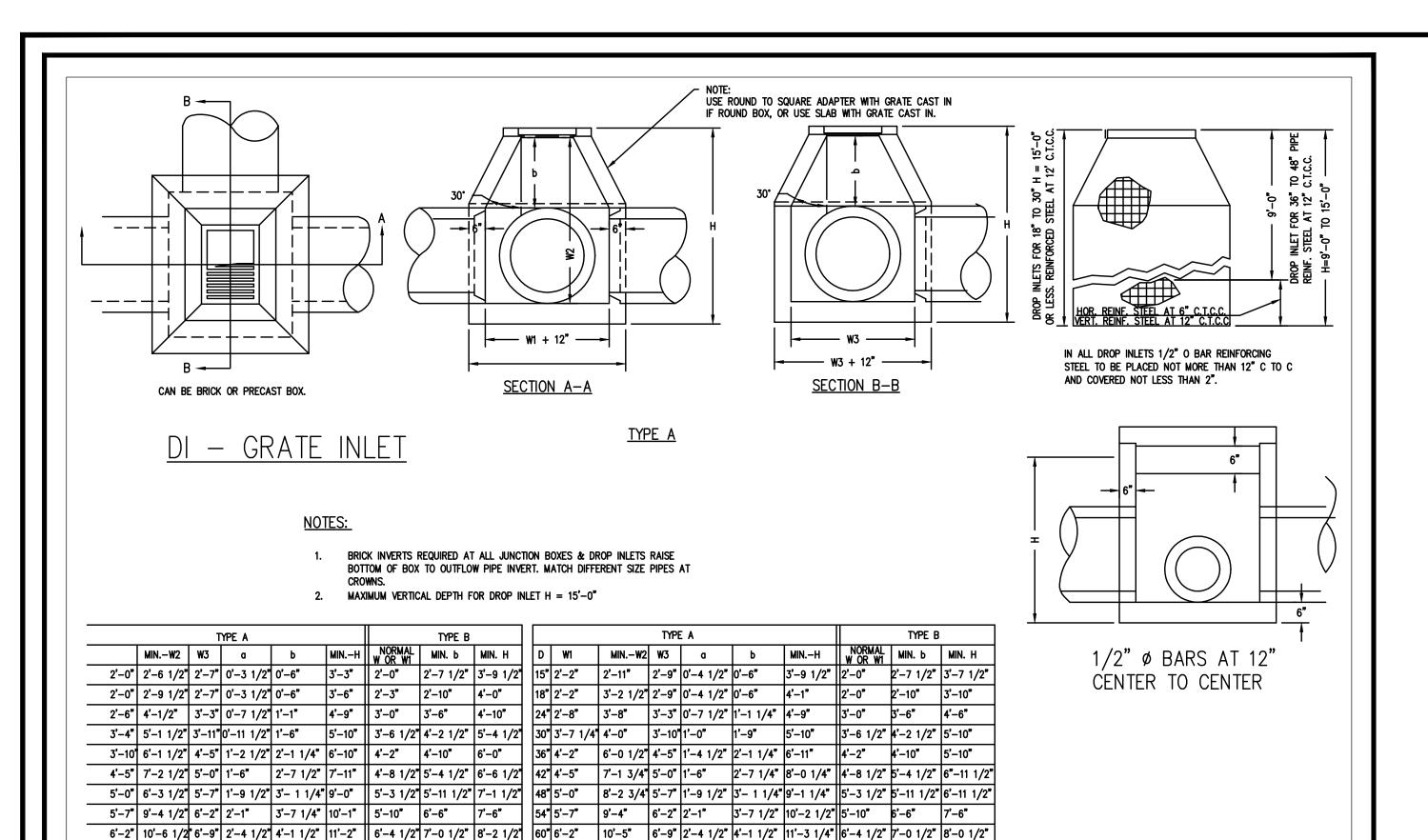
17-030-pr Project No. Drawn By: Checked By: Initial Issue Date: 09-15-17

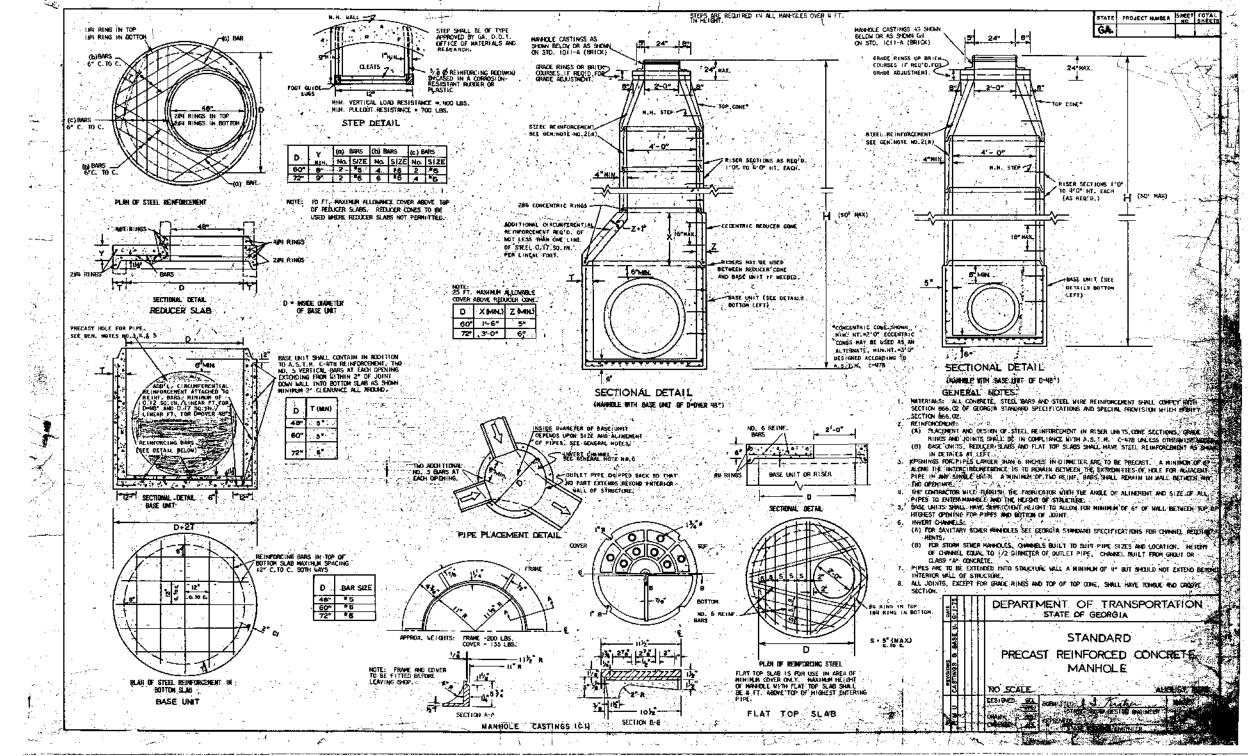
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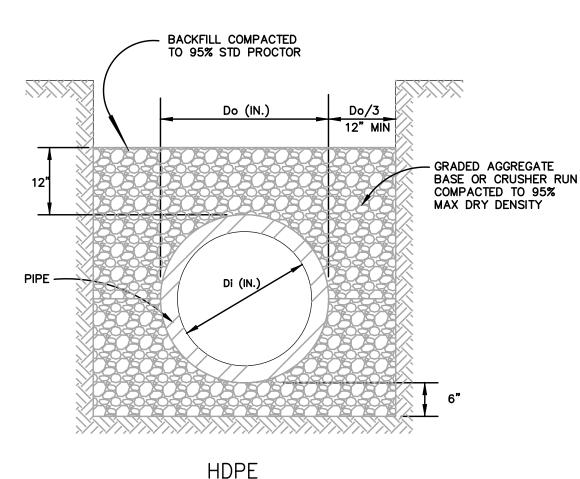
PIPE PROFILES

Sheet Number









6'-9" 11'-6 1/2" 7'-4" 2'-6" 4'-7 1/2" 12'-3" 6'-11" 7'-7" 8'-9" 66" 6'-9" 11'-6" 7'-4" 2'-6" 4'-7 1/2" 12'-4 1/2" 6'-11" 7'-7" 8'-7" 7'-4" 12'-7 1/2" 7'-11" 2'-11 1/2" 5'-1 1/4" 13'-4" 7'-6 1/2" 8'-1 1/2" 9'-3" 72" 7'-4" 12'-7" 7'-11" 2'-11 1/2" 5'-2" 13'-6 1/2" 7'-6 1/2" 8'-1 1/2" 9'-1 1/2""

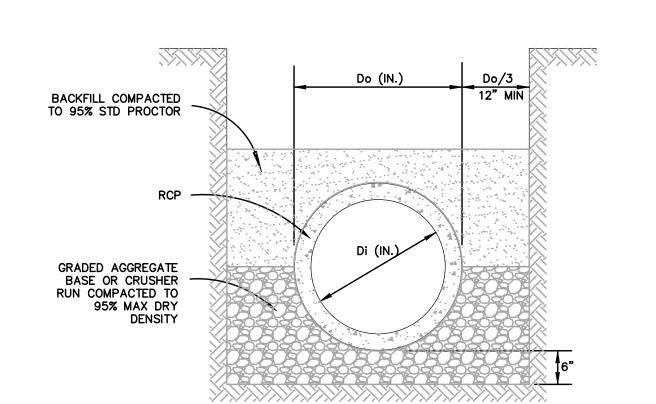
CONCRETE D.I.

INSTALLATION:

RCP, CORRUGATED ALUM. ALLOY PIPE, CORRUGATED ALUMINUM COATED STEEL PIPE AND SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 550 OF THE GDOT STANDARD SPECIFICATIONS, CONSTRUCTION OF ROADS AND BRIDGES. PRIOR TO APPROVAL THE COUNTY MAY REQUIRE THE SUBMITTAL OF CERTIFICATION FROM A MANDREL TESTING AGENCY INDICATING THAT ALL INSTALLED PIPE DOES NOT EXCEED 5% DEFLECTION. IF VIDEO SURVEILLANCE INDICATES PROBLEMS, THE PIPE SHALL BE REMOVED AND REPLACED BEFORE APPROVAL.

BEDDING:

ALL PIPE SHALL BE PLACED ON STABLE EARTH OR FINE GRANULAR FOUNDATION, THE CHARACTERISTICS OF WHICH WOULD BE EXPECTED TO PROVIDE LONG-TERM STABILITY. IN ALL LIVE STREAM PIPE INSTALLATIONS, IN AREAS OF LOW BEARING SOLID OR NON-UNIFORM FOUNDATIONS, WHERE ROCK IS ENCOUNTERED OR OTHER LOCATIONS WHERE CONDITIONS WARRANT, A MINIMUM OF 6" OF CRUSHED STONE BEDDING IS REQUIRED (MAXIMUM SIZE STON SHALL BE 3/4") GEOTEXTILES OR GEOGRIDS MAY ALSO BE REQUIRED BY THE COUNTY IN PROBLEM AREAS.



REINFORCED CONCRETE & CORRUGATED ALUMINIZED PIPE

BACKFILL:

BACKFILL ON ALL PIPE INSTALLATIONS SHALL BE TYPE I OR TYPE II AS SPECIFIED IN SECTION 812.01 AND 812.02 RESPECTIVELY IN GDOT STANDARD SPECIFICATIONS. THESE MATERIALS SHALL BE PLACED IN LAYERS OF NOT MORE THAN 6" LOOSE. COMPACTION OF THESE MATERIALS SHALL BE ACCOMPLISHED BY HAND TAMPING OR MACHINE TAMPING. REQUIRED LEVELS ARE AS FOLLOWS:

BACKFILL WITHIN ALL STREET RIGHT-OF-WAYS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY USING THE AASHTO METHOD T-99. THE TOP 12" SHALL BE COMPACTED TO 98% MAXIMUM DENSITY.

BACKFILL IN OTHER AREAS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY USING THE AASHTO METHOD T-99.

PRIOR TO THE COMPLETION OF GRADING, A MINIMUM OF 4 FEET OF FILL SHOULD BE PROVIDED WHERE NEEDED TO ADEQUATELY PROTECT THE DRAINAGE STRUCTURE DURING THE LAND DEVELOPMENT PHASE.

REFER TO STANDARD CONSTRUCTION SPECIFICATIONS & SUBDIVISION REGULATIONS ROSWELL, GA REV 2012 FOR ADDITIONAL INFORMATION

STANDARD PIPE BEDDING DETAILS

NOTE: SEE SHEET 'PIPE PROFILES' FOR SLOTTED PIPE OUTFALL DETAILS

ENGINEERS, PLANNERS & SURVEYORS

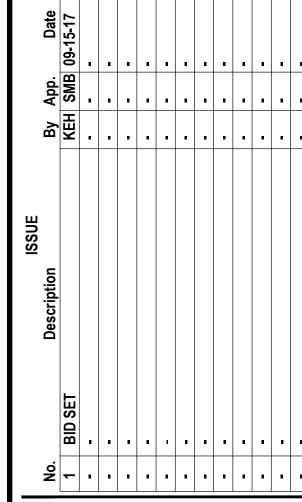
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CITY OF CLARKSTON 1055 ROWLAND STREET

CLARKSTON, GA 30021 Phone: (404) 296-6489

Contact: Lawrence Kaiser (404) 909-5619

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GSWCC #11367 EXP. 05/25/18

Project Title

Friendship Forest Wildlife Sanctuary

Project Location Address 4380 E. PONCE DE LEON AVE. City, State Zip CLARKSTON, GA 30021

Land Lot District-Section 18 County DEKALB

17-030-pr Project No. Drawn By: Checked By: Initial Issue Date: 09-15-17

Sheet Title

STORM DETAILS

Sheet Number

N/A

39 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual

for Erosion & Sediment Control in Georgia 2016 Edition.*

PHASE 3 EROSION CONTROL CONSISTS OF MAINTENANCE OF BMPS INSTALLED IN PHASES 1 & 2 AND FINAL STABILIZATION OF THE SITE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES

ONCE THE SITE IS STABILIZED.

40 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. 41 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. 42 Delineation and acreage of contributing drainage basins on the project site. N/A N/A 43 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.* 44 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are 45 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points. 46 Soil series for the project site and their delineation. 47 The limits of disturbance for each phase of construction. 48 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permitees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasable, a written justification explaining this decision must be included in the plan. 16-18 Y 49 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with 50 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia. 51 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia. *If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.

Portofino Apartme

Birch Run Estates

VICINITY MAP

SCALE:= N.T.S.

Wildcreek Apartments

US Post Office

Kathmand

Kitchen & Grill

Clarkston Thriftown

WARM WATER (SUPPORTING WARM WATER FISHERIES) 0-4.99 5.0-9.99 10-24.99 25-49,99 75 150 200 400 NOTE: NTU CHART TO BE USED IS WARM WATER ALL OUTLETS ON THIS SITE FALL UNDER THE SAME NTU VALUE. SITE SIZE IS 18± ACRES, SURFACE WATER DRAINAGE AREA IS 0-4.99 SMI. SEE NTU VALUE CIRCLED ABOVE STUDY PT #1 - WHERE S. FORK PEACHTREE CREEK ENTERS PROPERTY STUDY PT #2 - WHERE S. FORK PEACHTREE CREEK LEAVES PROPERTY

SOIL CLASSIFICATION TABLE AkA-ALTAVISTA FINE SANDY LOAM, 0-2% SLOPES CuC-CECIL-URBAN LAND COMPLEX, 2-10% SLOPES PfC-PACOLET SANDY LOAM, 2-6% SLOPES PfD-PACOLET SANDY CLAY LOAM, 10-15% SLOPES

> 24 HOUR EMERGENCY CONTACT: MR. LAWRENCE KAISER (404) 909-5619

THIS SHEET IS FOR EROSION, SEDIMENT & POLLUTION CONTROL PURPOSES ONLY.

THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WITHIN 7 DAYS AFTER INSTALLATION.

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

AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL

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

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

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

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

|ADDITIONAL EROSION & SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION

NOTE: CONTRACTOR SHALL REFERENCE THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR THE CONSTRUCTION, MAINTENANCE AND DISPOSAL OF ALL EROSION AND SEDIMENT CONTROL MEASURES.

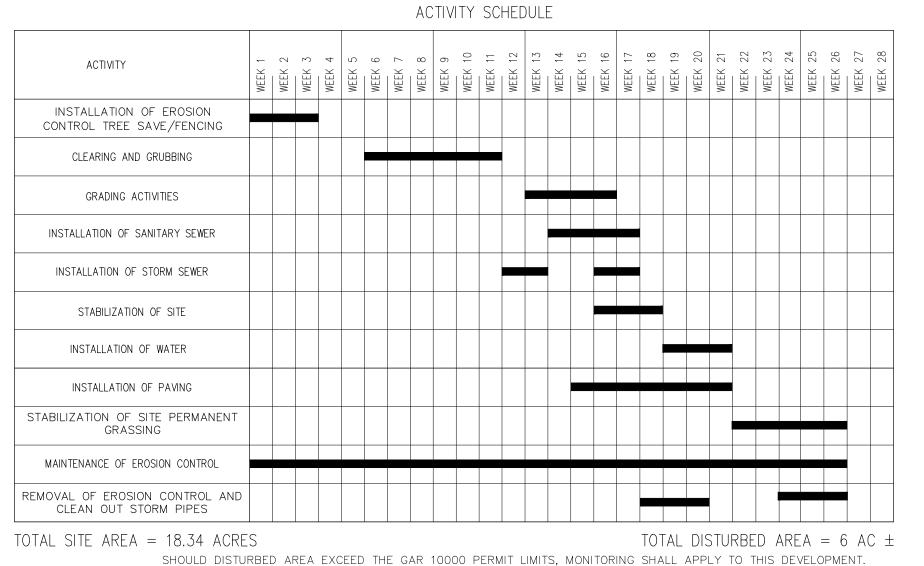
REFER TO SHEETS C-20 TO C-23 FOR DETAILS AND

UPON NOTIFICATION AND AUTHORIZATION OF THE OWNER, THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS RESPONSIBLE FOR INSPECTING THE INSTALLATION OF THE BMP'S WITHIN 7 DAYS AFTER INITIAL CONSTRUCTION ACTIVITIES BEGINS. THE FAILURE TO OBTAIN THE INSPECTION IS A VIOLATION OF THE NPDES PERMIT.

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

I CERTIFY THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

I CERTIFY THAT THE GEORGIA'S 2008 GIS IMPAIRED STREAMS DATA HAS BEEN CONSULTED AND THE SITE DOES NOT LIE WITHIN 1 LINEAR MILE UPSTREAM OF AN IMPAIRED STREAM OR WITHIN THE SAME WATERSHED AS ANY PORTION OF AN BIOTA IMPAIRED STREAM SEGMENT.



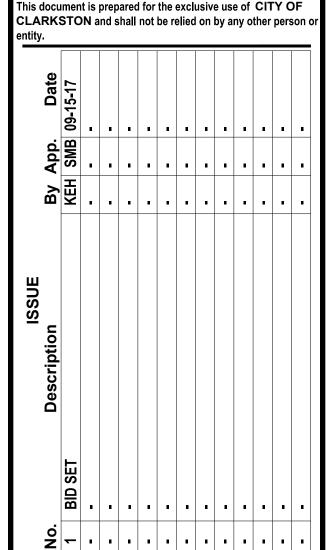
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ENGINEERS, PLANNERS & SURVEYORS

CITY OF CLARKSTON

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Contact: Lawrence Kaiser (404) 909-5619



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GSWCC #11367 EXP. 05/25/18

Project Title

Friendship Forest Wildlife Sanctuary

Project Location 4380 E. PONCE DE LEON AVE. Address

City, State Zip CLARKSTON, GA 30021

Land Lot District-Section 18 DEKALB County

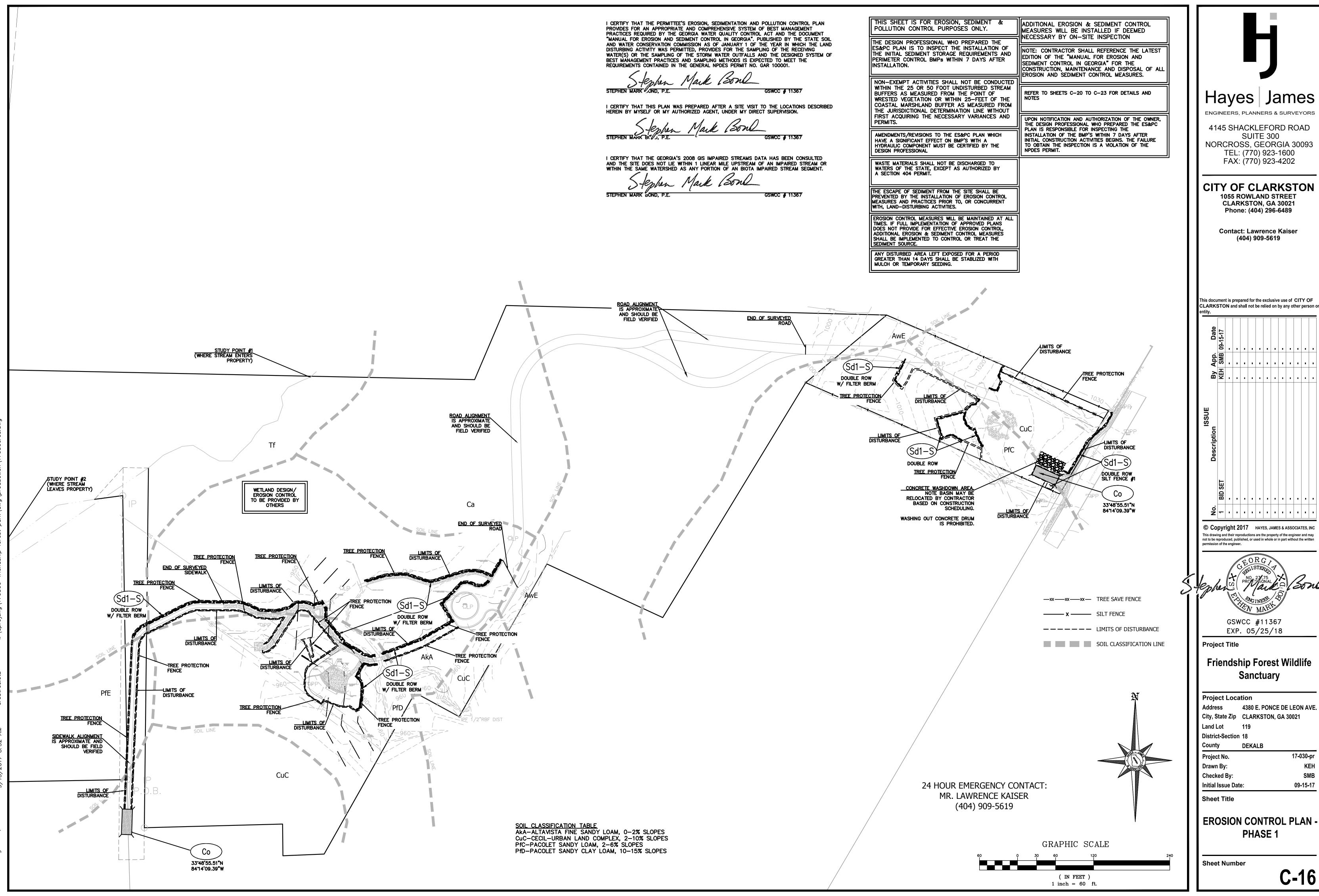
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EROSION CONTROL NOTES

Sheet Number

09-15-17



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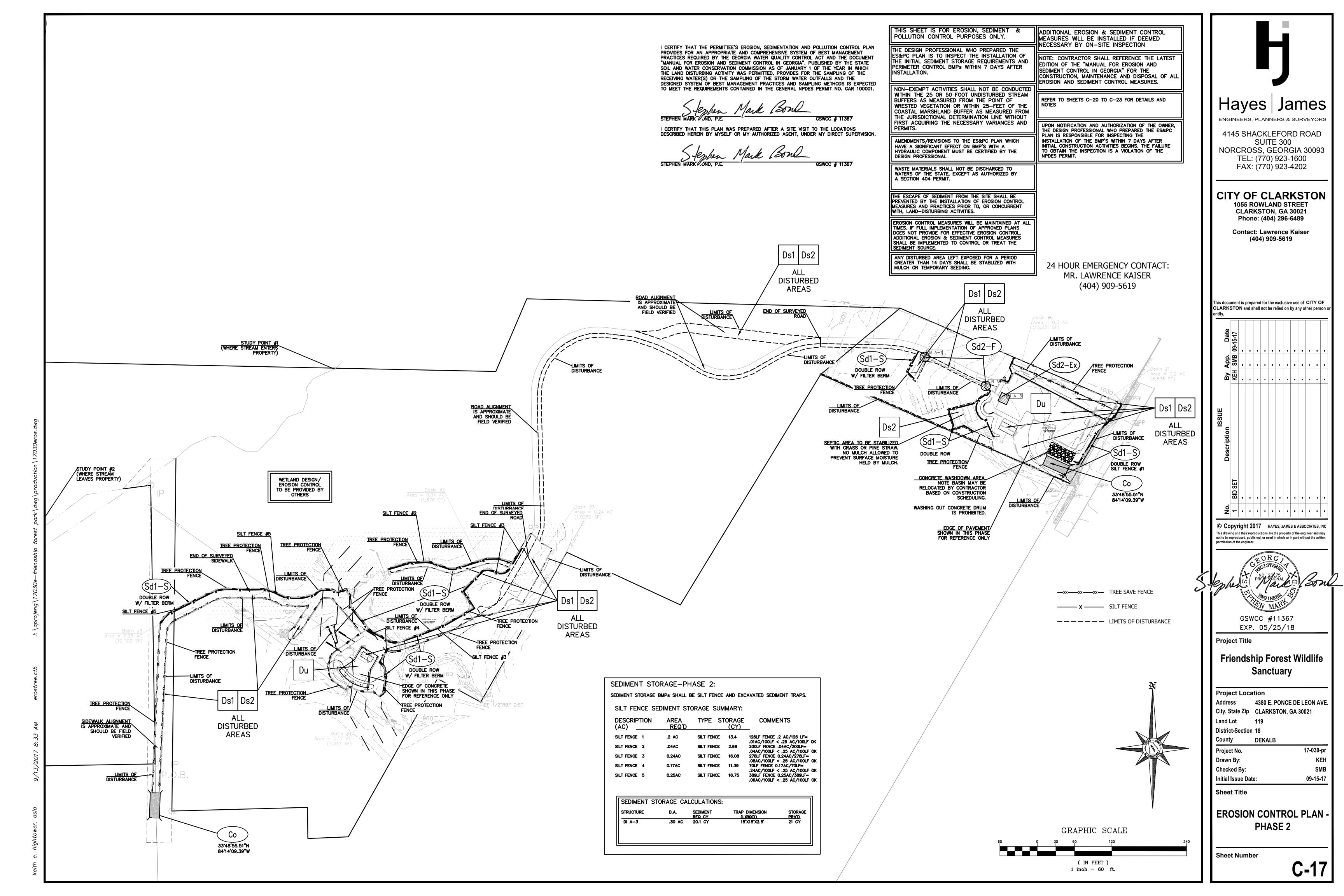
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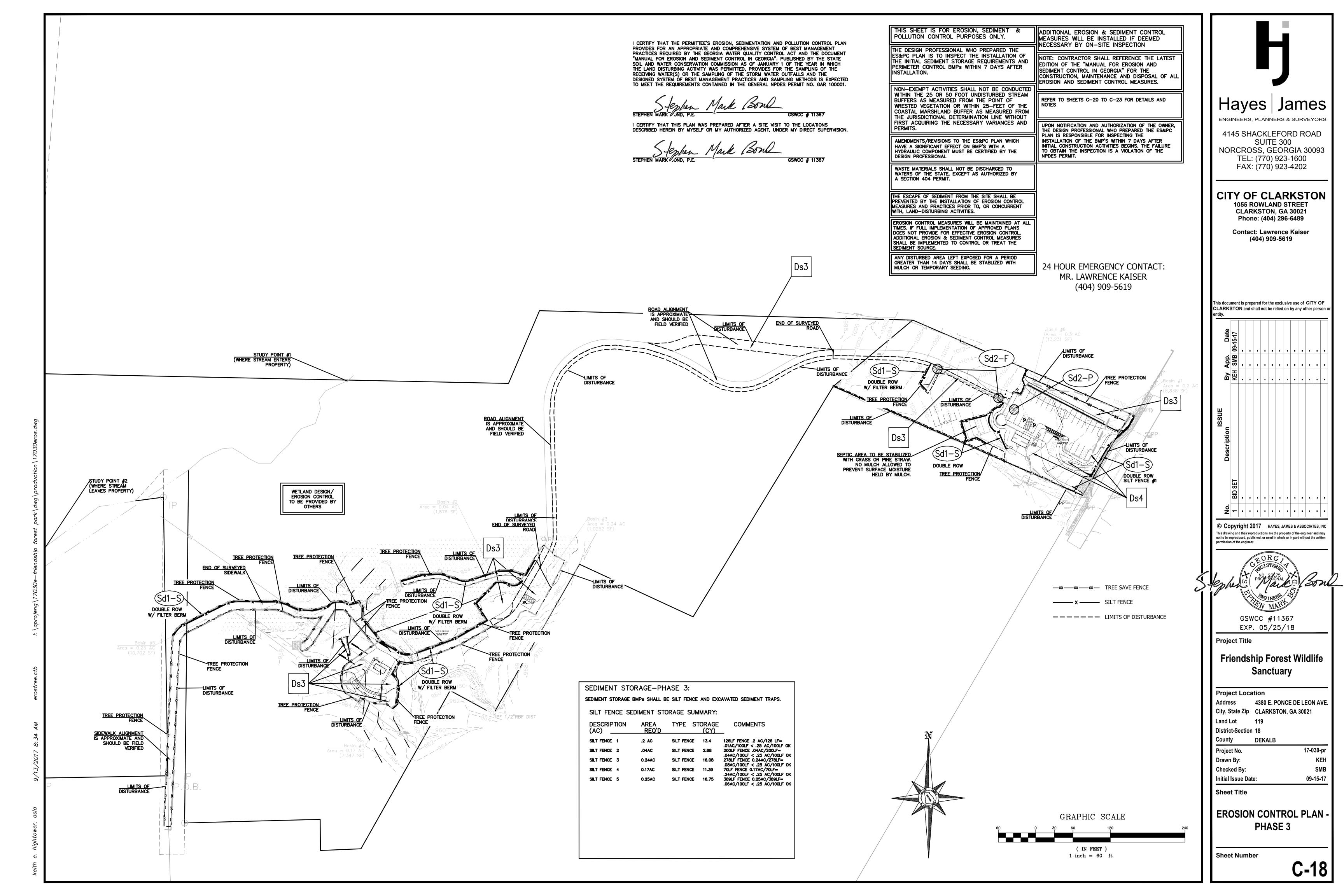
Friendship Forest Wildlife Sanctuary

4380 E. PONCE DE LEON AVE. City, State Zip CLARKSTON, GA 30021

17-030-pr

EROSION CONTROL PLAN -PHASE 1





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EXP. 05/25/18

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Friendship Forest Wildlife

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4380 E. PONCE DE LEON AVE. Address City, State Zip CLARKSTON, GA 30021

District-Section 18

Project No. Drawn By: Checked By:

Initial Issue Date:

Sheet Title

EROSION, SEDIMENTATION & POLLUTION CONTROL

EACH SECONDARY SHALL SIGN THE PLAN OR THE PORTION OF THE PLAN THAT IS APPLICABLE TO THEIR SITE.

09-15-17

ENGINEERS, PLANNERS & SURVEYORS

CLARKSTON, GA 30021

Contact: Lawrence Kaiser

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THIS PRACTICE SHALL BE APPLIED IMMEDIATELY TO ROUGH GRADED AREAS THAT WILL BE UNDISTURBED FOR LONGER THAN SIX MONTHS. THIS PRACTICE OR SODDING SHALL BE APPLIED IMMEDIATELY TO ALL AREAS AT FINAL GRADE. <u>FINAL STABILIZATION MEANS THAT ALL SOIL</u> DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND THAT FOR UNPAYED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN. (UNIFORMLY COVERED WITH LAND SCAPING MATERIALS IN A PLANNED LANDSCAPED AREAS). OR EQUIVALENT PERMANENT STABILIZATION MEASURES.

PERMANENT VEGETATION SHALL CONSIST OF: PLANTED TREES, SHRUBS, PERENNIAL VINES; A CROP OF PERENNIAL VEGETATION APPROPRIATE FOR THE REGION, SUCH THAT WITHIN THE GROWING SEASON A 70% COVERAGE BY PERENNIAL VEGETATION SHALL BE ACHIEVED. FINAL STABILIZATION APPLIES TO EACH PHASE OF CONSTRUCTION. FOR LINEAR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL OR SILVICULTURAL PURPOSES. FINAL STABILIZATION MAY BE ACCOMPLISHED BY STABILIZING THE DISTURBED LAND FOR ITS AGRICULTURAL OR SILVICULTURAL USE. UNTIL THIS STANDARD IS SATISFIED AND PERMANENT CONTROL MEASURES AND FACILITIES ARE OPERATIONAL, INTERIM STABILIZATION MEASURES AND TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL NOT BE REMOVED.

PLANNING CONSIDERATIONS

- USE CONVENTIONAL PLANTING METHODS WHERE POSSIBLE. WHEN MIXED PLANTINGS ARE DONE DURING MARGINAL PLANTING PERIODS, COMPANION CROPS
- 3. NO-TILL PLANTING IS EFFECTIVE WHEN PLANTING IS DONE FOLLOWING A SUMMER OR WINTER ANNUAL COVER CROP. SERICEA LESPEDEZA PLANTED NO-TILL INTO STRANDS OF RYE IS AN
- FXCFLLENT PROCEDURE 4. BLOCK SOD PROVIDES IMMEDIATE COVER. IT IS ESPECIALLY EFFECTIVE IN CONTROLLING EROSION
- ADJACENT TO CONCRETE FLUMES AND OTHER STRUCTURES. REFER TO Ds-4 DISTURBED AREA STABILIZATION (WITH SODDING). IRRIGATION SHOULD BE USED WHEN THE SOIL IS DRY OR WHEN SUMMER PLANTINGS ARE DONE.
- LOW MAINTENANCE PLANTS, AS WELL AS NATIVES, SHOULD BE USED TO ENSURE LONG LASTING
- MOWING SHOULD NOT BE PERFORMED DURING THE QUAIL NESTING SEASON (MAY TO SEPT.) WILDLIFE PLANTINGS SHOULD BE INCLUDED IN CRITICAL AREA PLANTINGS. SÉE MANUAL FOR
- 8. WILDLIFE PLANTINGS SHOULD BE INCLUDED IN CRITICAL AREA PLANTINGS.

GRADING AND SHAPING MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT. WHEN CONVENTIONAL SEEDING AND FERTILIZING ARE TO BE DONE, GRADE AND SHAPE WHERE FEASIBLE AND PRACTICAL SO THAT EQUIPMENT CAN BE USED SAFELY AND EFFICIENTLY DURING SEEDBED PREPARATION, SEEDING, MULCHING AND MAINTENANCE OF THE VEGETATION. CONCENTRATIONS OF WATER THAT WILL CAUSE EXCESSIVE SOIL EROSION SHALL BE DIVERTED TO A SAFE OUTLET. DIVERSIONS AND OTHER TREATMENT PRACTICES SHALL CONFORM WITH THE APPROPRIATE STANDARDS AND SPECIFICATIONS.

LIME AND FERTILIZER APPLICATION

WHEN HYDRAULIC SEEDING EQUIPMENT IS USED, THE INITIAL FERTILIZER SHALL BE MIXED WITH SEED, INNOCULANT (IF NEEDED), AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH AND APPLIED IN A SLURRY. THE INNOCULANT, IF NEEDED, SHALL BE MIXED WITH THE SEED PRIOR TO BEING PLACED INTO THE HYDRAULIC SEEDER. THE SLURRY MIXTURE WILL BE AGITATED DURING APPLICATION TO KEEP THE INGREDIENTS THOROUGHLY MIXED. THE MIXTURE WILL BE SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER BEING PLACED IN THE HYDROSEEDER.

FINELY GROUND LIMESTONE CAN BE APPLIED IN THE MULCH SLURRY OR IN COMBINATION WITH THE

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

LIME AND FERTILIZER RATES AND ANALYSIS

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

LIME SPREAD BY CONVENTIONAL EQUIPMENT SHALL BE "GROUND LIMESTONE." GROUND LIMESTONE IS CALCITIC OR DOLOMITIC LIMESTONE GROUND SO THAT 90% OF THE MATERIAL WILL PASS THROUGH A 10-MESH SIEVE, NOT LESS THAN 50% WILL PASS THROUGH A 50-MESH SIEVE AND NOT LESS THAN 25 PERCENT WILL PASS THROUGH A 100-MESH SIEVE.

AGRICULTURAL LIME SPREAD BY HYDRAULIC SEEDING EQUIPMENT SHALL BE "FINELY GROUND LIMESTONE." FINELY GROUND LIMESTONE IS CALCITIC OR DOLOMITIC LIMESTONE GROUND SO THAT 98% OF THE MATERIAL WILL PASS THROUGH A 20-MESH SIEVE AND NOT LESS THAN 70% WILL PASS THROUGH A 100-MESH SIEVE.

IT IS DESIRABLE TO USE DOLOMITIC LIMESTONE IN THE SAND HILLS. SOUTHERN COASTAL PLAIN AND ATLANTIC COAST FLATWOODS MLRA'S. (SEE MANUAL). AGRICULTURAL LIME IS GENERALLY NOT REQUIRED WHERE ONLY TREES ARE PLANTED. INITIAL FERTILIZATION, NITROGEN, TOPDRESSING, AND MAINTENANCE FERTILIZER REQUIREMENTS FOR EACH SPECIES OR COMBINATION OF SPECIES ARE

LISTED IN TABLE 6-5.1.

REFER TO TABLES 6-4.1, 6-5.2, 6-5.3 AND 6-5.4 FOR APPROVED SPECIES. SPECIES NOT LISTED SHALL BE APPROVED BY THE STATE RESOURCE CONSERVATIONIST OF THE NATURAL RESOURCE CONSERVATION SERVICE BEFORE THEY ARE USED. PLANTS SHALL BE SELECTED ON THE BASIS OF SPECIES CHARACTERISTICS, SITE AND SOIL CONDITIONS, PLANNED USE AND MAINTENANCE OF THE AREA: TIME OF YEAR OF PLANTING, METHOD OF PLANTING: AND THE NEEDS AND DESIRES OF THE LAND USER. SOME PERENNIAL SPECIES ARE EASILY ESTABLISHED AND CAN BE PLANTED ALONE. EXAMPLES OF THESE ARE COMMON BERMUDA, TALL FESCUE AND WEEPING LOVEGRASS. OTHER PERENNIALS SUCH AS BAHIA GRASS AND SERICEA LESPEDEZA ARE SLOW TO BECOME ESTABLISHED AND SHOULD BE PLANTED WITH ANOTHER PERENNIAL SPECIES. THE ADDITIONAL SPECIES WILL PROVIDE QUICK COVER AND AMPLE SOIL PROTECTION UNTIL THE TARGET PERENNIAL SPECIES BECOME ESTABLISHED. FOR EXAMPLE COMMON SEEDING COMBINATIONS INCLUDE: WEEPING LOVEGRASS WITH SERICEA LESPEDEZA (SCARIFIED) AND TALL FESCUE WITH SERICEA LESPEDEZA

PLANT SELECTION MAY ALSO INCLUDE ANNUAL COMPANION CROPS. ANNUAL COMPANION CROPS SHOULD BE USED ONLY WHEN THE PERENNIAL SPECIES ARE NOT PLANTED DURING THEIR OPTIMUM PLANTING PERIOD. A COMMON MIXTURE IS BROWN TOP MILLET WITH COMMON BERMUDA IN MID-SUMMER. CARE SHOULD BE TAKEN IN SELECTING COMPANION CROP SPECIES AND SEEDING RATES BECAUSE ANNUAL CROPS WILL COMPETE WITH PERENNIAL SPECIES FOR WATER, NUTRIENTS AND GROWING SPACE. A HIGH SEEDING RATE OF THE COMPANION CROP MAY PREVENT THE ESTABLISHMENT OF PERENNIAL SPECIES. RYEGRASS SHALL NOT BE USED IN ANY SEEDING MIXTURES CONTAINING PERENNIAL SPECIES DUE TO ITS ABILITY TO OUT-COMPETE DESIRED SPECIES CHOSEN FOR PERMANENT PERENNIAL COVER.

SEED QUALITY

THE TERM "PURE LIVE SEED" IS USED TO EXPRESS THE QUALITY OF SEED AND IS NOT SHOWN ON THE LABEL. PURE LIVE SEED, PLS, IS EXPRESSED AS A PERCENTAGE OF THE SEEDS THAT ARE PURE AND WILL GERMINATE. INFORMATION ON PERCENT GERMINATION AND PURITY CAN BE FOUND ON SEED TAGS. PLS IS DETERMINED BY MULTIPLYING THE PERCENT OF PURE SEED WITH THE PERCENT OF GERMINATION; I.E., PLS = % GERMINATION x % PURITY

THE PERCENT OF PLS HELPS YOU DETERMINE THE AMOUNT OF SEED YOU NEED. FOR EXAMPLE IF THE SEEDING RATE IS 10 POUNDS PLS AND THE BULK SEED IS 56% PLS,

THE BULK SEEDING RATE IS: 10 LBS. OF PLS / ACRE = 17.9 LBS / ACRE

YOU WOULD NEED TO PLANT 17.9 LBS/ACRE TO PROVIDE 10 LBS/ACRE OF PURE LIVE SEED. SEEDBED PREPARATION

PASTURES. WINTERHARDY AS FAR

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

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

TILLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT. TILLAGE SHOULD BE DONE ON THE CONTOUR, WHERE FEASIBLE

4. ON SLOPES TOO STEEP FOR THE SAFE OPERATION OF TILLAGE EQUIPMENT, THE SOIL SURFACE SHALL BE PITTED OR TRENCHED ACROSS THE SLOPE WITH APPROPRIATE HAND TOOLS TO PROVIDE TWO PLACES 6 TO 8 IN. APART IN WHICH SEED MAY LODGE AND GERMINATE.

HYDRAULIC SEEDING MAY ALSO BE USED. <u>INDIVIDUAL PLANTS</u>

TONS PER ACRE.

- 1. WHERE INDIVIDUAL PLANTS ARE TO BE SET, THE SOIL SHALL BE PREPARED BY EXCAVATING
- HOLES, OPENING FURROWS, OR DIBBLE PLANTING. 2. FOR NURSERY STOCK PLANTS, HOLES SHALL BE LARGE ENOUGH TO ACCOMMODATE ROOTS
- WITHOUT CROWDING. 3. WHERE PINE SEEDLINGS ARE TO BE PLANTED, SUBSOIL UNDER THE ROW 36 INCHES DEEP ON THE CONTOUR FOUR TO SIX MONTHS PRIOR TO PLANTING. SUBSOILING SHOULD BE DONE WHEN

THE SOIL IS DRY, PREFERABLY IN AUGUST OR SEPTEMBER.

ALL LEGUME SEED SHALL BE INOCULATED WITH APPROPRIATE NITROGEN-FIXING BACTERIA. THE INNOCULANT SHALL BE A PURE CULTURE PREPARED SPECIFICALLY FOR THE SEED SPECIES AND USED WITHIN THE DATES ON THE CONTAINER. A MIXING MEDIUM RECOMMENDED BY THE MANUFACTURER SHALL BE USED TO BOND THE INNOCULANT TO THE SEED. FOR CONVENTIONAL SEEDING, USE TWICE THE AMOUNT OF INNOCULANT RECOMMENDED BY THE MANUFACTURER. FOR HYDRAULIC SEEDING, FOUR TIMES THE AMOUNT OF INNOCULANT RECOMMENDED BY THE MANUFACTURER SHALL BE USED. ALL INOCULATED SEED SHALL BE PROTECTED FROM THE SUN AND HIGH TEMPERATURES AND SHALL BE PLANTED THE SAME DAY INOCULATED. NO INOCULATED SEED SHALL REMAIN IN THE HYDROSEEDER LONGER THAN ONE HOUR.

HYDRAULIC SEEDING: MIX THE SEED (INOCULATED IF NEEDED), FERTILIZER, AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH WITH WATER AND APPLY IN A SLURRY UNIFORMLY OVER THE AREA TO BE TREATED. APPLY WITHIN ONE HOUR AFTER THE MIXTURE IS MADE. CONVENTIONAL SEEDING: SEEDING WILL BE DONE ON A FRESHLY PREPARED AND FIRMED SEEDBED. FOR BROADCAST PLANTING, USE A CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER, OTHER MECHANICAL SEEDER, OR HAND SEEDING TO DISTRIBUTE THE SEED UNIFORMLY OVER THE AREA TO BE TREATED. COVER THE SEED LIGHTLY WITH 1/8 TO 1/4 INCH OF SOIL FOR SMALL SEED AND 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment. NO-TILL SEEDING: NO-TILL SEEDING IS PERMISSIBLE INTO ANNUAL COVER CROPS WHEN PLANTING IS DONE FOLLOWING MATURITY OF THE COVER CROP OR IF THE TEMPORARY COVER STAND IS SPARSE ENOUGH TO ALLOW ADEQUATE GROWTH OF THE PERMANENT (PERENNIAL) SPECIES. NO TILL SEEDING SHALL BE DONE WITH APPROPRIATE NO-TILL SEEDING EQUIPMENT. THE SEED MUST BE UNIFORMLY DISTRIBUTED AND PLANTED AT THE PROPER DEPTH.

INDIVIDUAL PLANTS: SHRUBS, VINES AND SPRIGS MAY BE PLANTED WITH APPROPRIATE PLANTERS OR HAND TOOLS. PINE TREES SHALL BE PLANTED MANUALLY IN THE SUBSOIL FURROW. EACH PLANT SHALL BE SET IN A MANNER THAT WILL AVOID CROWDING THE ROOTS. NURSERY STOCK PLANTS SHALL BE PLANTED AT THE SAME DEPTH OR SLIGHTLY DEEPER THAN THEY GREW AT THE NURSERY. THE TOPS OF VINES AND SPRIGS MUST BE AT OR SLIGHTLY ABOVE THE GROUND SURFACE. WHERE INDIVIDUAL HOLES ARE DUG, FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE HOE, TWO INCHES OF SOIL SHALL BE ADDED AND THE PLANT SHALL BE SET IN THE HOLE.

MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% TO 100% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED.

- 1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED
- AT A RATE OF 2 1/2 TONES PER ACRE. 2. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL
- BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER THE HYDRAULIC SEEDING. 3. ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 0.75.1 OR STEEPER

4. SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE

- 5. PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
- 6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCH IS NOT REQUIRED.
- 7. BITUMINOUS TREATED ROVING MAY BE APPLIED ON PLANTED AREAS ON SLOPES, IN DITCHES OR DRY WATERWAYS TO PREVENT EROSION. BITUMINOUS TREATED ROVING SHALL BE APPLIED WITHIN 24 HOURS AFTER AN AREA HAS BEEN PLANTED. APPLICATION RATES AND MATERIALS MUST MEET GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN GERMINATION OR GROWTH INHIBITING FACTORS. THEY SHALL BE EVENLY DISPERSED WHEN AGITATED IN WATER. THE FIBERS SHALL CONTAIN A DYE TO ALLOW VISUAL METERING AND AID IN UNIFORM APPLICATION DURING SEEDING.

APPLYING MULCH

STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING AND/OR PLANTING. THE MULCH MAY BE SPREAD BY BLOWER TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT OR BY HAND. MULCH SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE.

WOOD CELLULOSE OR WOOD FIBER MULCH SHALL BE APPLIED UNIFORMLY WITH HYDRAULIC SEEDING EQUIPMENT.

- ANCHORING MULCH
 ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE OF THE FOLLOWING METHODS.: 1. HAY AND STRAW MULCH SHALL BE PRESSED INTO THE SOIL IMMEDIATELY AFTER THE MULCH IS SPREAD. A SPECIAL "PACKER DISK" OR DISK HARROW WITH THE DISKS SET STRAIGHT MAY BE USED. THE DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISKS SHALL BE DULL ENOUGH TO PRESS THE MULCH INTO THE GROUND WITHOUT CUTTING IT, LEAVING MUCH OF IT IN AN ERECT POSITION. MULCH SHALL NOT BE
- PLOWED INTO THE SOIL. 2. SYNTHETIC TACKIFIERS, BINDERS OR HYDRAULIC MULCH SPECIFICALLY DESIGNED TO TACK STRAW, SHALL BE APPLIED IN CONJUNCTION OR IMMEDIATELY AFTER THE MULCH IS SPREAD. SYNTHETIC TACKIFIERS SHALL BE MIXED AND APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. ALL TACKIFIERS, BINDERS OR HYDRAULIC MULCH SPECIFICALLY DESIGNED TO TACK STRAW WHOULD BE VERIFIED
- NONTOXIC THROUGH EPA 2021.0 TESTING. REFER TO TACKIFIERS TAC 3. RYE OR WHEAT CAN BE INCLUDED WITH FALL AND WINTER PLANTINGS TO STABILIZE THE MULCH. THEY
- SHALL BE APPLIED AT A RATE OF ONE-QUARTER TO ONE-HALF BUSHEL PER ACRE. 4. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH MAY BE NEEDED TO ANCHOR STRAW OR HAY MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS. THESE MATERIALS SHALL BE INSTALLED AND ANCHORED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

BEDDING MATERIAL: MULCH USED AS A BEDDING MATERIAL TO CONSERVE MOISTURE AND CONTROL WEEDS IN NURSERIES, ORNAMENTAL BEDS, AROUND SHRUBS, AND ON BARE AREAS ON LAWNS.

4" TO 6" GRAIN STRAW GRASS HAY 4" TO 6"

PINE NEEDLES

WOOD WASTE 4" TO 6" IRRIGATION: IRRIGATION WILL BE APPLIED AT A RATE THAT WILL NOT CAUSE RUNOFF.

3" TO 5"

TOPDRESSING: WILL BE APPLIED ON ALL TEMPORARY AND PERMANENT (PERENNIAL) SPECIES PLANTED ALONE OR IN MIXTURES WITH OTHER SPECIES. RECOMMENDED RATES OF APPLICATION ARE

SECOND YEAR AND MAINTENANCE FERTILIZATION: SECOND YEAR FERTILIZER RATES AND MAINTENANCE FERTILIZER RATES ARE LISTED IN TABLE 6-5.1

LIME MAINTENANCE APPLICATION: APPLY ONE TON OF AGRICULTURAL LIME EVERY 4 TO 6 YEARS OR AS INDICATED BY SOIL TESTS. SOIL TESTS CAN BE CONDUCTED TO DETERMINE MORE ACCURATE

			ANALYSIS OR EQUIVALENT N-P-K		N TOP DRESSING RATE
1.	COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	50-100 LBS./AC. 1/ 2/ 30
2.	COOL SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	0-50 LBS./AC. 1/
3.	GROUND COVERS	FIRST SECOND MAINTENANCE	10-10-10 10-10-10 10-10-10	1300 LBS./AC. 3/ 1300 LBS./AC. 3/ 1100 LBS./AC.	
4.	PINE SEEDLINGS	FIRST	20-10-5	ONE 21-GRAM PELLET PER SEEDLING PLACED IN THE CLOSING HOLE	
5.	SHRUB LESPEDEZA	FIRST MAINTENANCE	0-10-10 0-10-10	700 LBS./AC. 700 LBS./AC. 4/	
6.	TEMPORARY COVER CROPS SEEDED ALONE	FIRST	10–10–10	500 LBS./AC.	30 LBS./AC. 5/
7.	WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 LBS./AC. 800 LBS./AC. 400 LBS./AC.	50-100 LBS./AC. 2/ 6/ 50-100 LBS./AC. 2/ 30 LBS./AC.
8.	WARM SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 LBS./AC. 1000 LBS./AC. 400 LBS./AC.	50 LBS./AC. 6/

- 1/ APPLY IN SPRING FOLLOWING SEEDING. APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED.
- APPLY IN 3 SPLIT APPLICATIONS. 4/ APPLY WHEN PLANTS ARE PRUNED.
- APPLY TO GRASS SPECIES ONLY. 6/ APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.

USE AND MANAGEMENT:

MOW SERICEA LESPEDEZA ONLY AFTER FROST TO ENSURE THAT THE SEEDS ARE MATURE. MOW BETWEEN NOVEMBER AND MARCH.

BERMUDAGRASS, BAHIAGRASS AND TALL FESCUE MAY BE MOWED AS DESIRED. MAINTAIN AT LEAST 6 INCHES OF TOP GROWTH UNDER ANY USE AND MANAGEMENT. MODERATE USE OF TOP GROWTH IS BENEFICIAL AFTER ESTABLISHMENT.

EXCLUDE TRAFFIC UNTIL THE PLANTS ARE WELL ESTABLISHED. BECAUSE OF THE QUAIL NESTING SEASON, MOWING SHOULD NOT TAKE PLACE BETWEEN MAY AND SEPTEMBER.

PLANTS, PLANTING RATES, AND PLANTING DATES

			1														
SDECIES	BROADCAST RESOURCE PLANTING DATES BY RESOURCE AREAS SPECIES RATES 1/ - PLS 2/ AREA 3/ PLANTING DATES									DEMARKS							
<u>SPECIES</u>	<u>/ - PLS 2/</u>	AREA 3/	<u>Planting dates</u> (Solid lines indicate optimum dates dotted											REMARKS			
	PER	PER 1000		LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.)												i.)	
	ACRE	SQ. FT.		J	F	М	Α	М	J	J	Α	,	s c) 1	1		
LESPEDEZA AMBRO VIRGATA (LESPEDEZA VIRGATA DC) OR APPALOW (LESPEDEZA CUNEATA [DUMONT] G. DON) SCARIFIED	60 LBS	1.4 LB	M-L P C		_				11.111								300,000 SEED PER POUND. HEIGHT OF GROWTH IS 18 TO 24 INCHES. ADVANTAGEOUS IN URBAN AREAS. SPREADING—TYPE GROWTH. NEW GROWTH HAS BRONZE COLORATION. MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA, TALL FESCUE OR WINTER ANNUALS. DO NOT MIX WITH SERICEA LESPEDEZA. SLOW TO DEVELOP SOLID STANDS. INNOCULATE SEED WITH EL INNOCULANT.
UNSCARIFIED	75 LBS	1.7 LB	P C														
LESPEDEZA, SHRUB (LESPEDEZA BICOLOR) (LESPEDEZA THUMBERGI)		M-L P C												Ŧ		PROVIDE WILDLIFE FOOD AND COVER
PLANTS		3' X 3'															OUVER
LOVEGRASS, WEEPING (ERAGROSTIS CURVULA) ALONE WITH OTHER PERENNIALS	4 LBS 2 LBS		M-L P C						111								1,500,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS
MAIDENCANE (PANICUM HERMITOMON) SPRIGS	2' X	3' SPACING	ALL														FOR VERY WET SITES. MAY CLOG CHANNELS. DIG SPRIGS FROM LOCAL SOURCES. USE ALONG RIVER BANKS AND SHORELINES.
PANICGRASS, ATLANTIC COASTAL (PANICUM AMARUM VAR. AMARULUM)	20 LE	BS 0.5 LB	P C														GROWS WELL ON COASTAL SAND DUNES, BORROW AREAS, AND GRAVEL PITS. PROVIDES WINTER COVER FOR WILDLIFE. MIX WITH SERICEA LESPEDEZA EXCEPT ON SAND DUNES
REED CANARY GRASS (PHALARIS ARUNDINACEA)																	GROWS SIMILAR TO
ALONE	50 LBS	1.1 LB	M-L P										\perp				TALL FESCUE
WITH OTHER PERENNIALS	30 LBS	0.7 LB	<u> </u>								<u> </u>	$ar{\bot}$	\bot	_ _			
SUNFLOWER 'AZTEC' MAXIMILLIAN (HELIANTHUS MAXIMILIANI)	10 LBS	0.2 LB	M-L P C	J	F	м		M	J	J	A	S	s 0	N			227,000 SEED PER POUND. MIX WITH WEEPING LOVEGRASS OR OTHER LOW-GROWING GRASSES OR LEGUMES.

PLANTS, PLANTING RATES, AND PLANTING DATES

	BROAD	CAST	RESOURCE PLANTING DATES BY RESOURCE AREAS													
<u>SPECIES</u>	RATES 1/	<u>– PLS 2/</u>	AREA 3/ PLANTING DATES							<u>REMARKS</u>						
	PER ACRE	PER 1000	(SOLID LINES INDICATE OPTIMUM DATES, DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.)													
	7.0	sq. ft.		J	F	М	A	М	J	J	Α	S	0	N	D	
BAHIA, PENSACOLA (PASPALUM NOTATUM)			P C	-	<u> </u>	<u> </u>			<u> </u>	_	-	_	<u> </u>			166,000 SEED PER POUND. LOW GROWING. SOD FORMING. SLOW TO ESTABLISH. PLANT WITH A
ALONE OR WITH TEMPORARY COVER	60 LBS	1.4 LB							_		-	_	<u> </u>			COMPANION CROP. WILL SPREAD INTO BERMUDA PASTURES AND LAWNS. MIX WITH SERICEA
WITH OTHER PERENNIALS	30 LBS	0.7 LB														LESPEDEZA OR WEEPING LOVEGRASS.
BAHIA, WILMINGTON (PASPALUM NOTATUM)			M-L P		<u> </u>	-			ļ .		-	_	<u> </u>			
ALONE OR WITH TEMPORARY COVER	60 LBS	1.4 LB							† -	-	-	-	<u> </u>	- -	_	SAME AS ABOVE
WITH OTHER PERENNIALS	30 LBS	0.7 LB														
BERMUDA, COMMON (CYNODON DACTYLON)			P C			. ,										1,787,000 SEED PER POUND. QUICK COVER. LOW GROWING AND SOD FORMING. FULL SUN. GOOD
ALONE	10 LBS	0.2 LB			-	-			1	•						FOR ATHLETIC FIELDS.
WITH OTHER PERENNIALS	6 LBS	0.1 LB														
BERMUDA, COMMON (CYNODON DACTYLON)			P C													
UNHULLED SEED				-	-										\dashv	PLANT WITH WINTER ANNUALS.
WITH TEMPORARY COVER	10 LBS	0.2 LB														PLANT WITH TALL FESCUE.
WITH OTHER PERENNIALS	6 LBS	0.1 LB														
BERMUDA SPRIGS (CYNODON DACTYLON)	40 CU. FT		M-L						_	_						A CUBIC FOOT CONTAINS APPROXIMATELY 650 SPRIGS.
COASTAL, COMMON, MIDLAND, OR TIFT 44	SOD PLUGS	3 3 X 3														A BUSHEL CONTAINS 1.25 CUBIC FEET OR APPROXIMATELY 800 SPRIGS.
COASTAL, COMMON, OR TIFT 44			P C					<u> </u>	<u> </u>		<u> </u>	<u> </u>	<u> </u>	_	_	SAME AS ABOVE
TIFT 78			С	_	_	_	igwdapprox	\dashv		_	<u> </u>	<u> </u>	<u> </u>	_	$ _ $	SOUTHERN COASTAL PLAIN ONLY.
CENTIPEDE (ERMOCHLOA OPHIUROIDES)	BLOCK SO	OD ONLY	P C										-		_	DROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE ADJACENT TO CONCRETE AND IN CONCENTRATED FLOW AREAS.
							$ \ $									IRRIGATION IS NEEDED UNTIL FULLY ESTABLISHED. DO NOT PLANT NEAR

PLANTS, PLANTING RATES, AND PLANTING DATES

SPECIES		DCAST - PLS 2/ PER 1000 sq. ft.	RESOURCE AREA 3/	PLANTING DATES (SOLID LINES INDICATE OPTIMUM DATES, DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.)						<u>ates</u> Jm d	REMARKS					
CROWNVETCH (CORONILLA VARIA) WITH WINTER ANNUALS OR COOL SEASON GRASSES	15 LBS	0.3 LB	M-L P										-	:	3	100,000 SEED PER POUND. DENSE GROWTH. DROUGHT TOLERANT AND FIRE RESISTANT. ATTRACTIVE ROSE, PINK, AND WHITE BLOSSOMS SPRING TO LATE FALL. MIX WITH 30 POUNDS OF TALL FESCUE OR 15 POUNDS OF RYE. INOCULATE SEED WITH M INNOCULANT. USE FROM NORTH ATLANTA AND NORTHWARD.
FESCUE, TALL (FESTUCA ARUNDINACEA) ALONE WITH OTHER PERENNIALS	50 LBS. 30 LBS.	1.1 LB. 0.7 LB.	M-L P				_									227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZAS OR CROWNVETCH. APPLY TOPDRESSING IN SPRING FOLLOWING FALL PLANTINGS. NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.
LESPEDEZA SERICEA (LESPEDEZA CUNEATA) SCARIFIED	60 LBS.	1.4 LB.	M-L P C		_											350,000 SEED PER POUND. WIDELY ADAPTED. LOW MAINTENANCE. MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA, OR TALL FESCUE. TAKES 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED. EXCELLENT ON ROADBANKS. INOCULATE SEED WITH EL INNOCULANT.
UNSCARIFIED	75 LBS.	1.7 LB.	M-L P C				 	-			 					MIX WITH TALL FESCUE OR WINTER ANNUALS.
SEED—BEARING HAY	3 TONS	138 LBS.	M-L P C	J	F	м	A	м	7	J	A	S	- 0	z	D	CUT WHEN SEED IS MATURE, BUT BEFORE IT SHATTERS. ADD TALL FESCUE OR WINTER ANNUALS.

ISTURBED AREA STABILIZATION w/ PERMANENT VEGETATION

ENGINEERS, PLANNERS & SURVEYORS

4145 SHACKLEFORD ROAD SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

CITY OF CLARKSTON 1055 ROWLAND STREET

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EXP. 05/25/18

Friendship Forest Wildlife

Project Location 4380 E. PONCE DE LEON AVE.

City, State Zip CLARKSTON, GA 30021 Land Lot **District-Section 18**

County Project No. Drawn By: Checked By

Initial Issue Date:

Sheet Title EROSION CONTROL

DETAILS

Sheet Number

17-030-pr

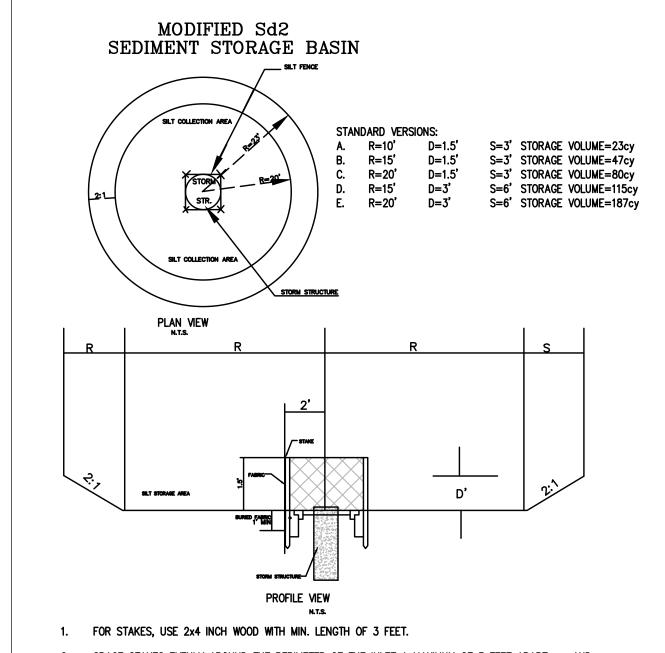
09-15-17

- ABOVE GROUND FUEL TANK NOTES:

 VOLUME OF BERM CONTAINMENT SHALL BE 110% OF THE LARGEST CONTAINER – Line the storage area with a double layer of plastic sheeting or similar material
- CLEARLY LABEL ALL PRODUCTS - KEEP TANKS OFF GROUND - PROVIDE SHELTER OVER THE AREA
- PROVIDE FIRE EXTINGUISHER BETWEEN 40 FT. TO 50 FT. FROM TANK AND CLEARLY LABELED. PROPERLY AND SAFELY CLEAN UP AND DISPOSE OF FLAMMABLE OR COMBUSTIBLE LIQUIDS THAT HAVE BEEN LEAKED OR
- SPILLED IN ACCORDANCE WITH THE SPILL RESPONSE PLAN. - FUEL TANKS MUST BE GREATER THAN 50 FEET AWAY FROM STORM DRAINS AND SURFACE WATER BODIES; 75 FEET FROM
- PRIVATE WELLS; AND, OUTSIDE SANITARY RADIUS OF PUBLIC WELLS (150 TO 400 FEET). - SPILL RESPONSÉ INFORMATION POSTERS MUST BE POSTED IN CLEARLY VISIBLE LOCATIONS AT ALL OUTDOOR STORAGE AREAS.
- CONTRACTOR SHALL UTILIZE THE FOLLOWING BEST MANAGEMENT PRACTICES:

 KEEP FLAMMABLE LIQUIDS IN CLOSED CONTAINERS WHEN NOT IN USE.
- ALL CONTAINERS IN OUTDOOR STORAGE AREAS MUST CLEARLY LABELED WITH THEIR CONTENTS. ALL CONTAINERS MUST BE KEPT OFF THE GROUND AND HAVE SECURELY FASTENED LIDS. DRIP PLAN MUST BE PLACED UNDER ALL SPIGOTS, VALVES, FILTERS AND PUMPS TO CATCH LEAKS.
- ALL LIQUID PETROLEUM PRODUCTS CONTAINERS THAT ARE 5 GALLONS OR LARGER IN CAPACITY MUST BE STORED INSIDE A BUILDING OR WITHIN A PROPER OUTDOOR STORAGE AREA. MINIMIZE THE USE OF ALL PETROLEUM PRODUCTS.
- WHENEVER POSSIBLE, KEEP SEPARATE AND RECYCLE DISCARDED OILS, DEGREASERS, SOLVENTS, ANTIFREEZE, AND BRAKE FLUIDS. MANY COMMUNITIES HAVE OIL RECYCLING CENTERS.
- USE PROPER RECEPTACLES TO DISPOSE OF CONTAMINATED WASTES THAT CANNOT BE RECYCLED IN CONFORMANCE WITH FEDERAL, STATE, AND/OR LOCAL REGULATIONS
- DO NOT DUMP PETROLEUM PRODUCT WASTE, PESTICIDES, FERTILIZERS, OR OTHER CHEMICALS INTO SEWERS, STORM DRAINS, OR OTHER DRAINAGE CHANNELS. THIS IS ILLEGAL AND COULD RESULT IN FINES OR JOB SHUTDOWN. PREVENT SPILLS OF PETROLEUM PRODUCTS FROM OCCURRING BY TAKING SPECIAL CARE WHEN HANDLING THESE PRODUCTS,
- KEEPING FACILITIES AND EQUIPMENT WELL MAINTAINED. SPILL PROOF CONTAINERS AND FUNNELS MUST BE USED WHEN MANUALLY TRANSFERRING FLUIDS FROM ONE CONTAINER TO
- DEVELOP A SPILL RESPONSE PLAN IN CONFORMANCE WITH FEDERAL, STATE, AND/OR LOCAL REGULATIONS - Make sure that someone trained in spill response is present on site on call at all times. - KEEP MATERIALS FOR CLEANING UP SPILLS ON SITE EASILY AVAILABLE.
- PERFORM MAINTENANCE OF VEHICLES OFFSITE WHENEVER POSSIBLE. - LOCATE ON-SITE FUEL AND VEHICLE MAINTENANCE STAGING AREAS AWAY FROM ALL DRAINAGE COURSES.
- KEEP EQUIPMENT PROPERLY MAINTAINED TO PREVENT LEAKS. - EDUCATE CONSTRUCTION WORKERS ABOUT PROPER MATERIALS HANDLING AND SPILL RESPONSE PROCEDURES. DISTRIBUTE OR
- POST INFORMATIONAL MATERIALS REGARDING CHEMICAL CONTROL. - TO THE EXTENT THAT IT DOESN'T COMPROMISE CLEAN UP ACTIVITIES, SPILLS SHALL BE COVERED AND PROTECTED FROM
- STORM WATER RUN OFF DURING RAINFALL. SPILLS SHALL NOT BE BURIED OR WASHED WITH WATER.
- USED CLEAN UP MATERIALS, CONTAMINATED MATERIALS, AND RECOVERED SPILL MATERIALS THAT IS NO LONGER SUITABLE
- FOR INTENDED PURPOSES SHALL BE STORED AND DISPOSED OF IN CONFORMANCE WITH FEDERAL, STATE AND/OR LOCAL WATER USED FOR CLEANING AND DECONTAMINATION SHALL NOT BE ALLOWED TO ENTER STORM DRAINS OR WATERCOURSES
- AND SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND/OR LOCAL REGULATIONS. WHERE USED FOR CLEANING AND DECONTAMINATION, WATER OVERFLOW OR MINOR WATER SPILLAGE SHALL BE CONTAINED AND SHALL NOT BE ALLOWED TO DISCHARGE INTO DRAINAGE FACILITIES OR WATER COURSES.

ABOVE GROUND FUEL TANK STORAGE AREA



- 2. SPACE STAKES EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART, AND DRIVE SECURELY INTO THE GROUND, APPROXIMATELY 18 INCHES DEEP.
- TO PROVIDE LATERAL STABILITY, FRAME 2x4 INCH WOOD STRIPS AROUND THE CREST OF THE OVERFLOW AREA AT A MAXIMUM OF 1.5 FEET ABOVE DROP INLET CREST.
- 4. PLACE THE BOTTOM 12 INCHES OF THE FABRIC IN A TRENCH AND BACKFILL WITH AT LEAST 4 INCHES OF CRUSHED STONE OR 12 INCHES COMPACTED SOIL.
- FASTEN FABRIC SECURELY TO THE STAKES AND FRAME. JOINTS MUST BE OVERLAPPED TO THE NEXT
- THE TOP OF THE FRAME AND FABRIC MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE FROM THE DROP INLET TO KEEP RUNOFF FROM BYPASSING THE INLET. IT MAY BE NECESSARY TO BUILD A

TEMPORARY DIKE ON THE DOWN SLOPE SIDE OF THE STRUCTURE TO PREVENT BYPASS FLOW. 6 UNDER

CONTRACTOR TO REMOVE ACCUMULATED SILT & MAINTAIN SILT FENCE IN ACCORDANCE TO BEST MANAGEMENT PRACTICES. SILT TO BE REMOVED WHEN STORAGE CAPACITY IS 1/3 FULL

CUT Sd2 1.5' x 10' dia. ON 2 SIDES & 1.5' x 15' ON UPSTREAM SIDE.

EXCAVATED INLET SEDIMENT TRAP W/ TEMPORARY SILT STORAGE

Surround Style Planting with Deeproot Universal Barriers

have the greatest success by following these simple steps as illustrated below:

the soft, safe and economical alternative to traditional wire and hose, ArborTie (see www.deeproot.com for details)

based upon the combination of desired barrier diameter and depth. Consider if drainage devices or amendments are needed to correct any adverse soil or planting conditions in the backfill area.

B. Assemble the appropriate number of DeepRoot Universal Barrier panels. The vertical root deflecting ribs on the panel must face inward, toward the root ball. (This is very important, otherwise the roots will become girdled by traveling around the smooth walled surface)

C. Next place the barrier in the center of the planting hole, keeping in mind that the double top edge of the barrier should be positioned approximately 1/2" (13mm) above grade. This helps retard potential root overgrowth. Failing to position the top edge above grade can allow root overgrowth which can lead to uprooted hardscapes.

D. Backfill and compact with soil inside the barrier to the level where the bottom of the root ball will be when positioned correctly with the crown of the root ball approximately 1" (26mm) above grade.

E. Remove the tree from its container, or cut away the top portion of burlap and position in the center of the barrier. Complete the backfill of the soil. Distribute evenly to maintain the shape of the barrier and compact the backfill every 4"-6" (10cm-15cm). Roots will die quickly if left exposed to the elements so keep exposure of the roots to a minimum.

When selecting the Surround style planting application you will F. If staking or guying is required we recommend using

A. Prepare the initial planting hole as illustrated below. This is G. If the tree(s) will be subject to maintenance work such as lawn mowing or weed trimming we strongly recommend the installation of ArborGard+ Tree Trunk Protectors which are placed around the base of young trees to protect them from damage by weed trimmers, lawn mowers and

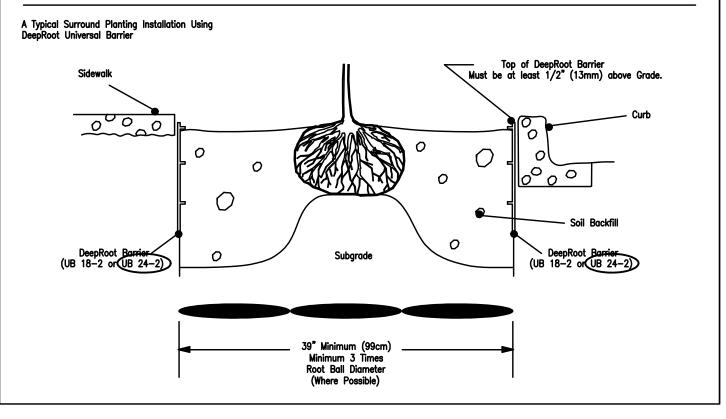
small rodents. (See www.deeproot.com)

H. Water and follow proper tree maintenance practices.

Trees do require care and nurturing after planting. Consult with your local supplier for proper care procedures for the species you are planting. The planting instructions given here are by no means a comprehensive guide. Rather they are general guidelines to planting with DeepRoot Barriers and a survey of current planting methods. Conditions will vary however and it is recommended that an Arborist be consulted before planting.

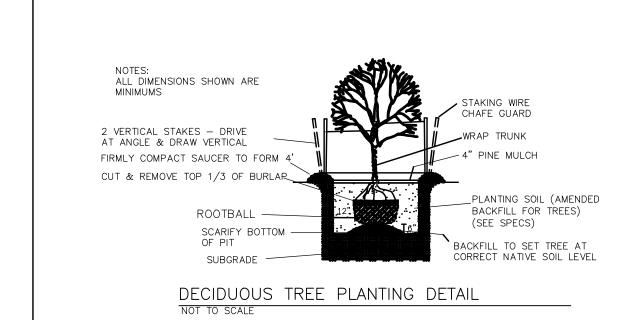
For additional information please visit our website at www.deeproot.com

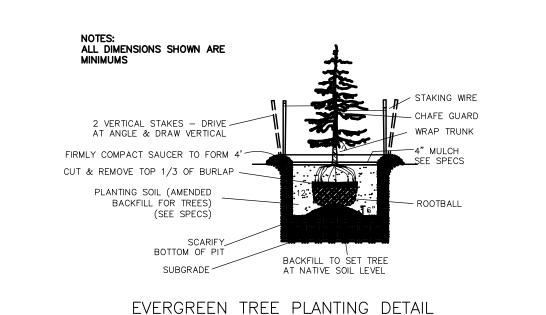
For information regarding distributors please call: 1 800 ILV ROOT (458.7668). For help with drainage or other difficult installation questions please call DeepRoot Technical Support at: 1 800 ROOT TEK (766.8835).

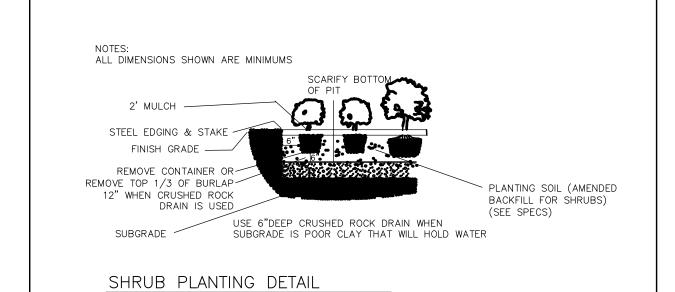


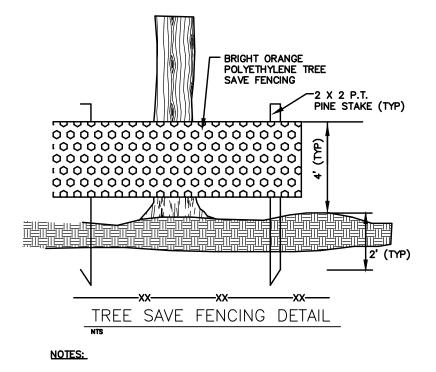
ROOT BARRIER DETAIL

NOT TO SCALE

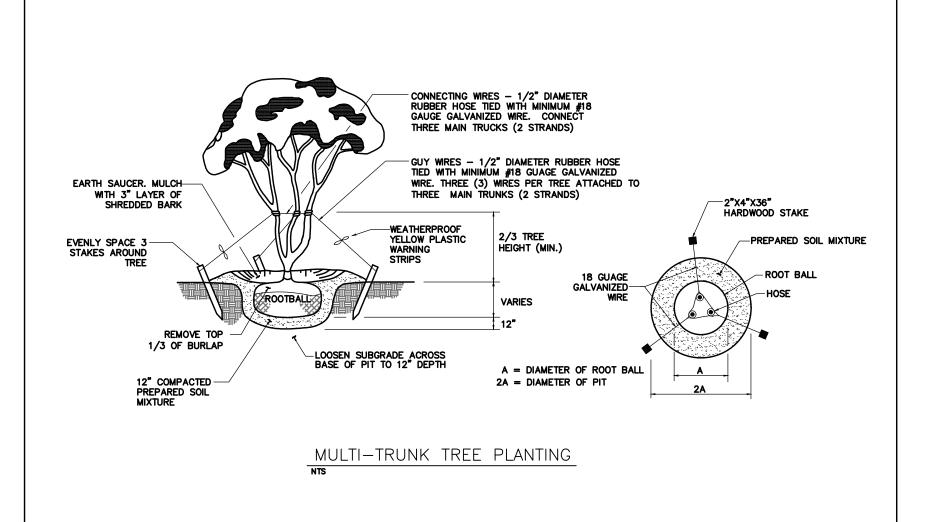








1. FOR LOCATION OF TREE PROTECTION FENCE SEE CIVIL PLANS 2. FENCE TO BE LOCATED • OR BEYOND DRIPLINE OF EXISTING TREES TO BE SAVED



Friendship Forest Wildlife Sanctuary

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SUITE 300

NORCROSS, GEORGIA 30093

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CITY OF CLARKSTON

1055 ROWLAND STREET

CLARKSTON, GA 30021

Phone: (404) 296-6489

Contact: Lawrence Kaiser

(404) 909-5619

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Project Location Address 4380 E. PONCE DE LEON AVE.

City, State Zip CLARKSTON, GA 30021 Land Lot District-Section 18

County DEKALB 17-030-pr Project No. Drawn By: Checked By

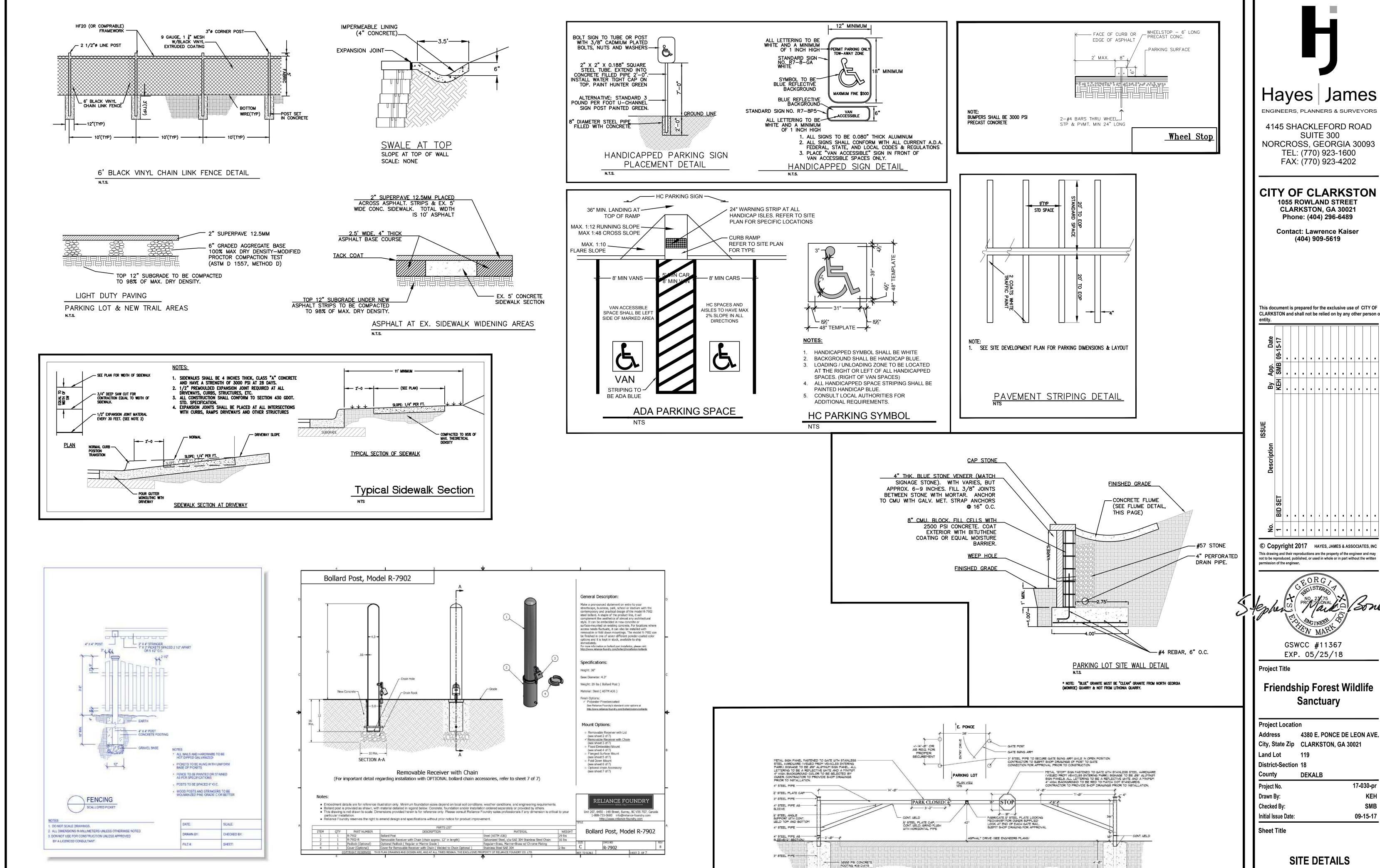
Sheet Title

Initial Issue Date:

TREE SAVE & PLANTING **DETAILS**

Sheet Number

09-15-17



REMOVABLE BOLLARD DETAIL

OR APPROVED EQUAL

SCALLOPED WOODEN PICKET FENCE DETAIL

NOTE:

1. CONTRACTOR TO PROVIDE 3" STEEL PIPE TO SECURE EACH SIDE OF GATE WHEN IN OPEN POSITION.

2. ALL GATE MATERIALS AND HARDWARE TO BE POUDER COATED BLACK

3. SUBMIT SHOP DRAWINGS FOR APPROVAL BY OWNER, PRIOR TO CONSTRUCTION.

PARK ENTRANCE GATE

SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600

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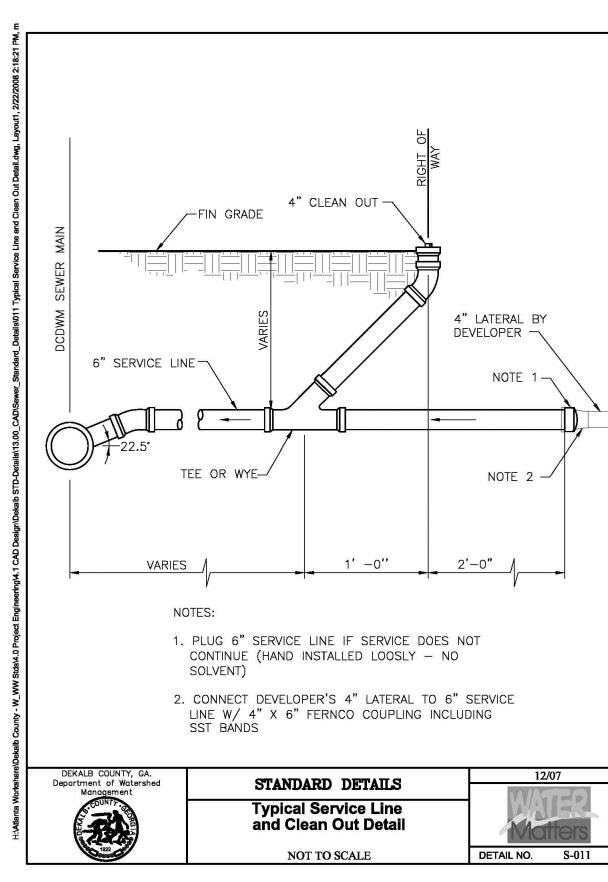
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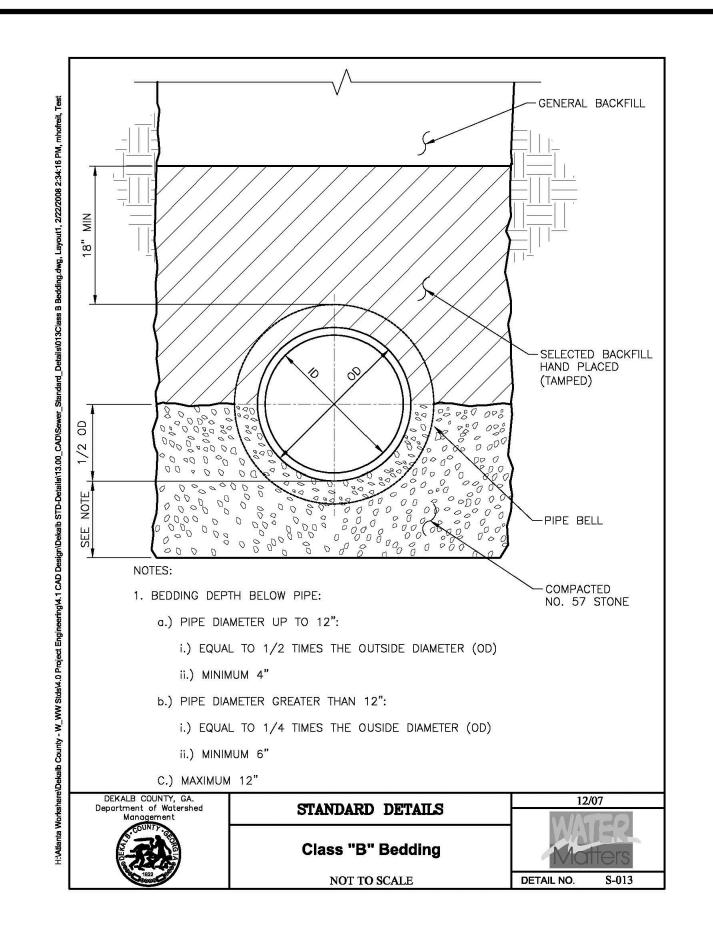
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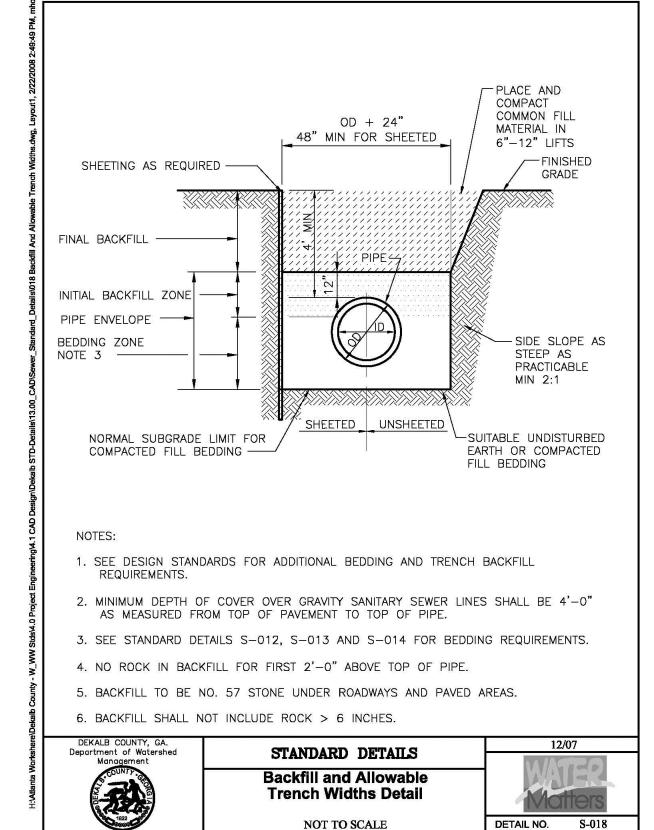
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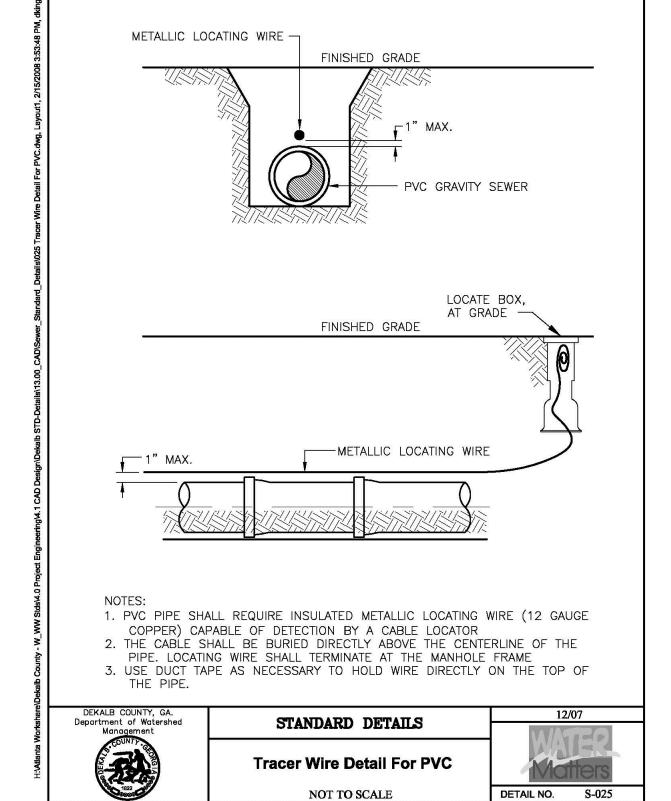
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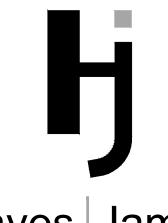
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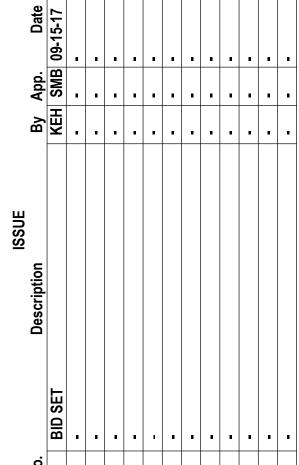
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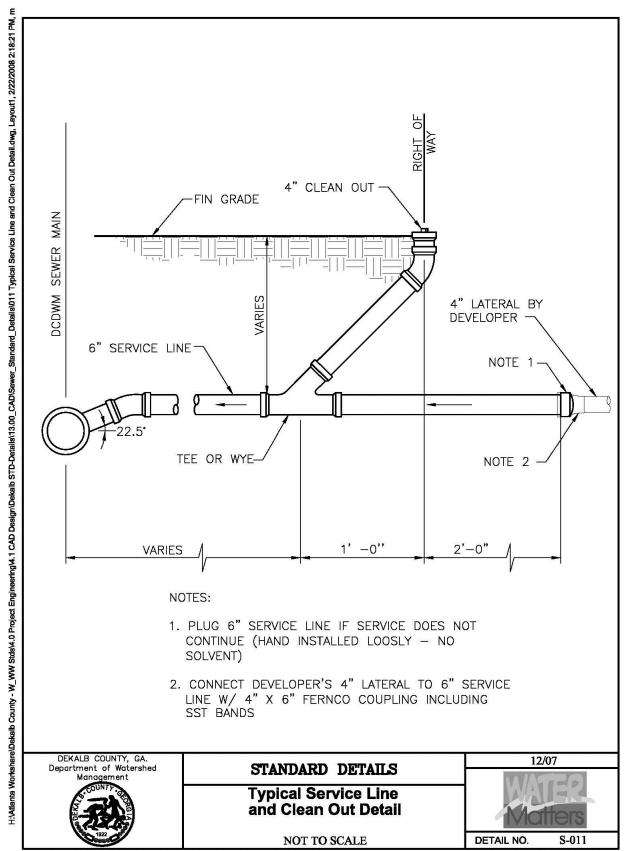
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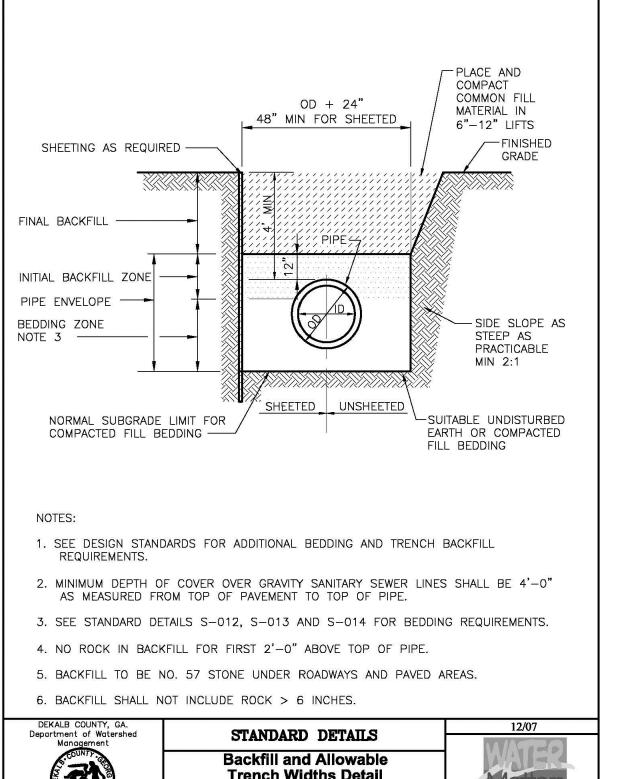
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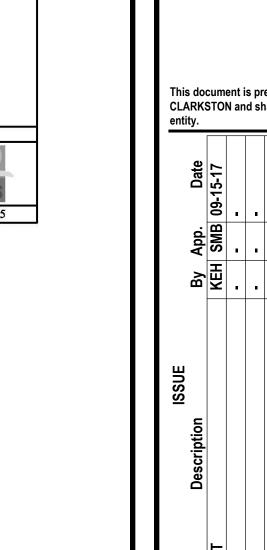
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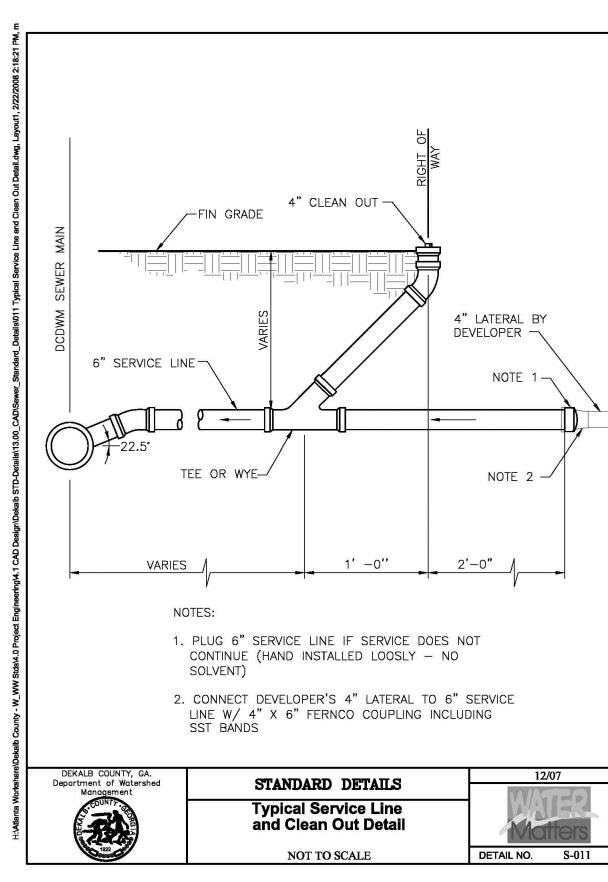
SEWER DETAILS

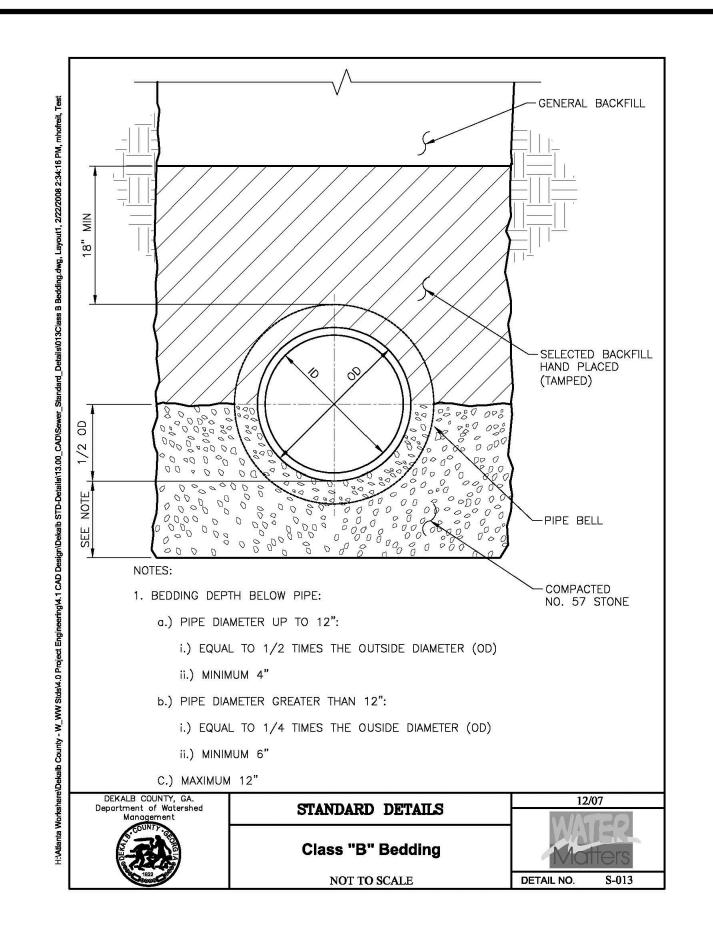
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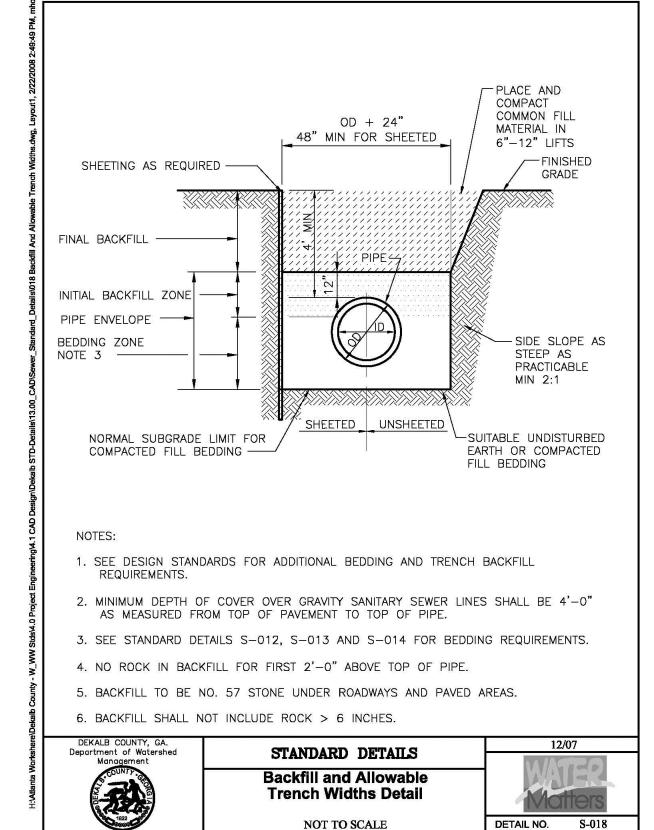


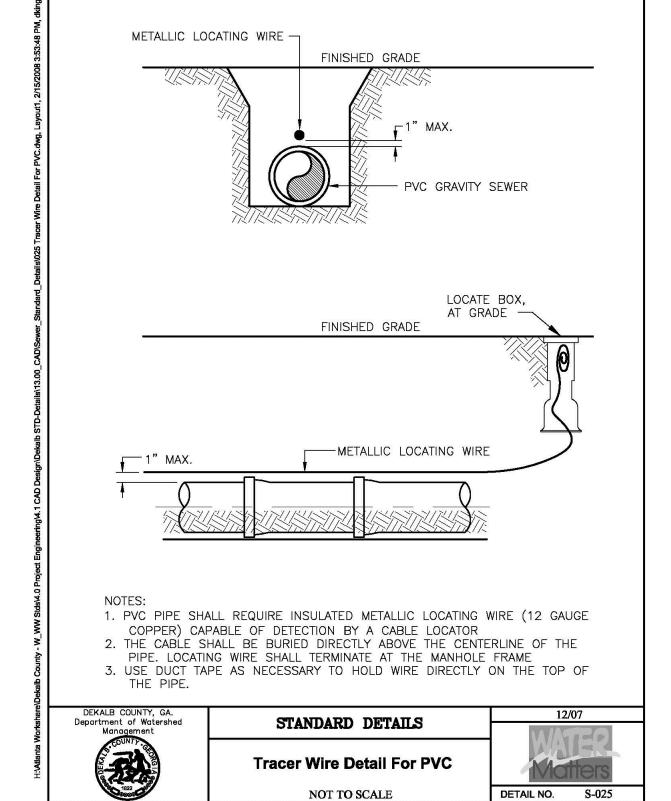


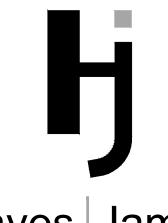












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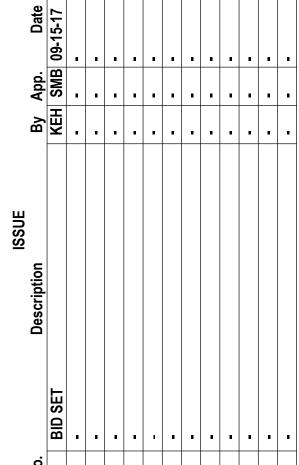
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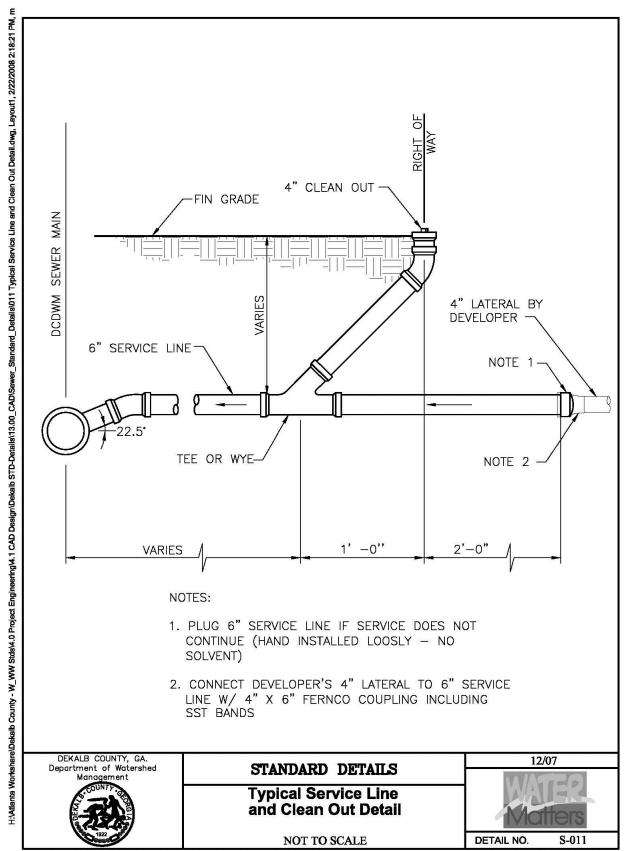
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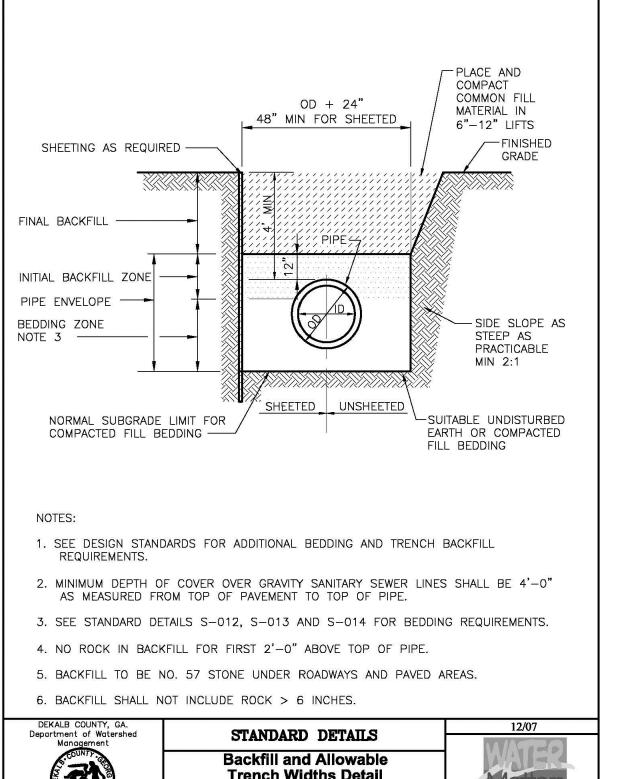
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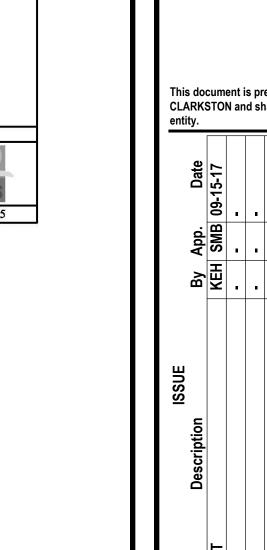
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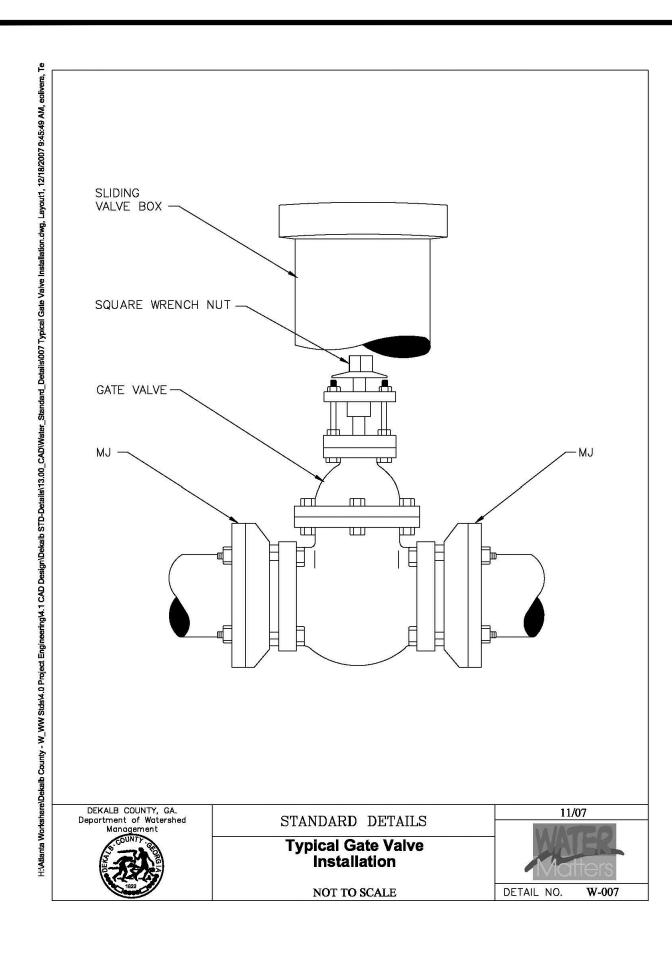
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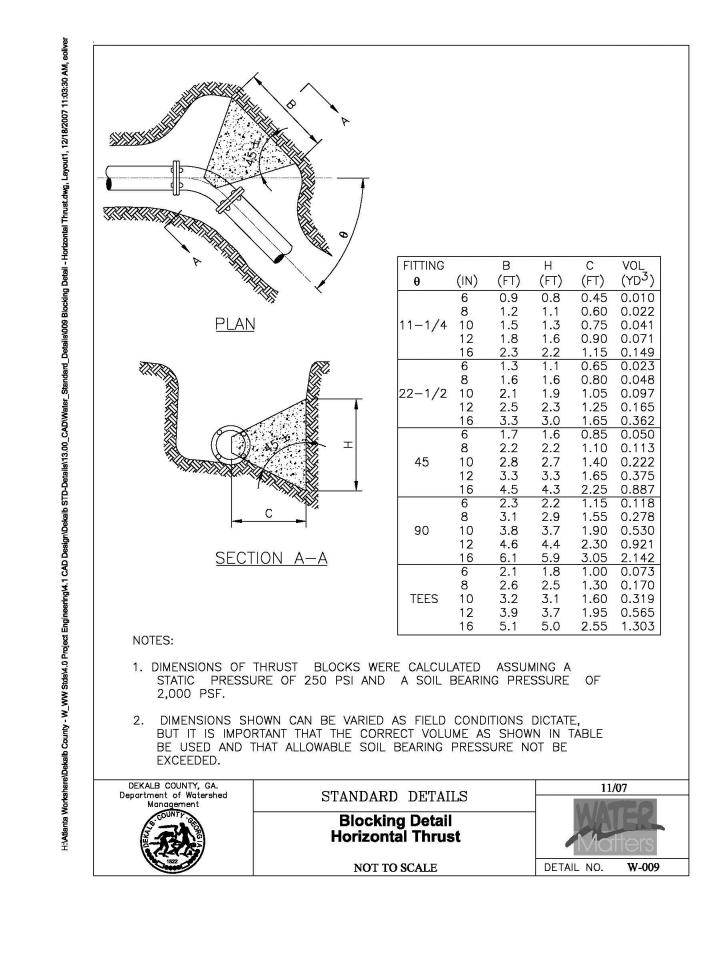
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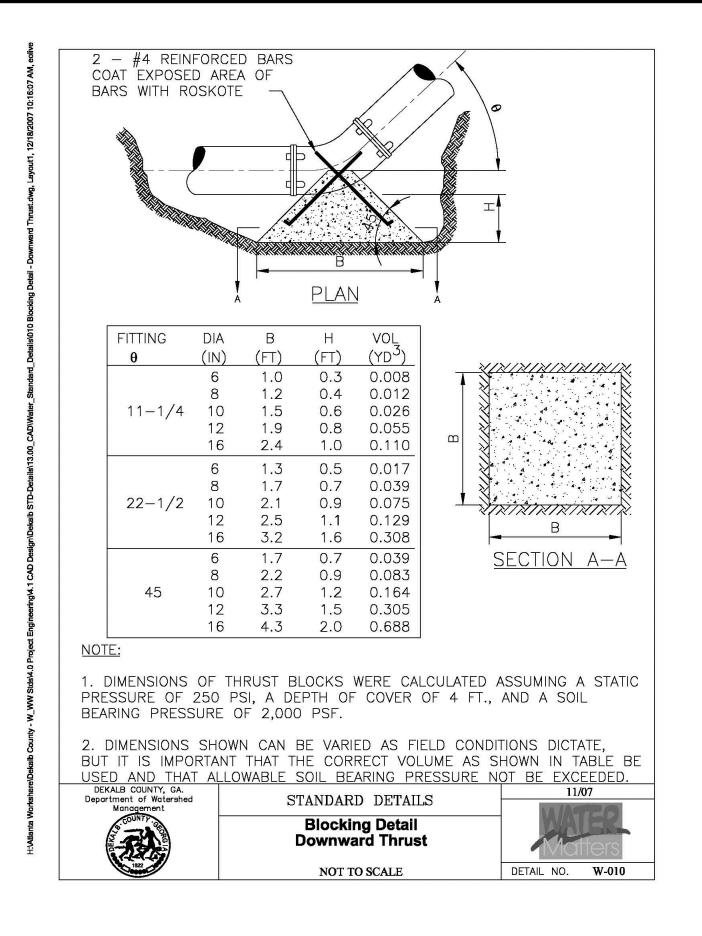


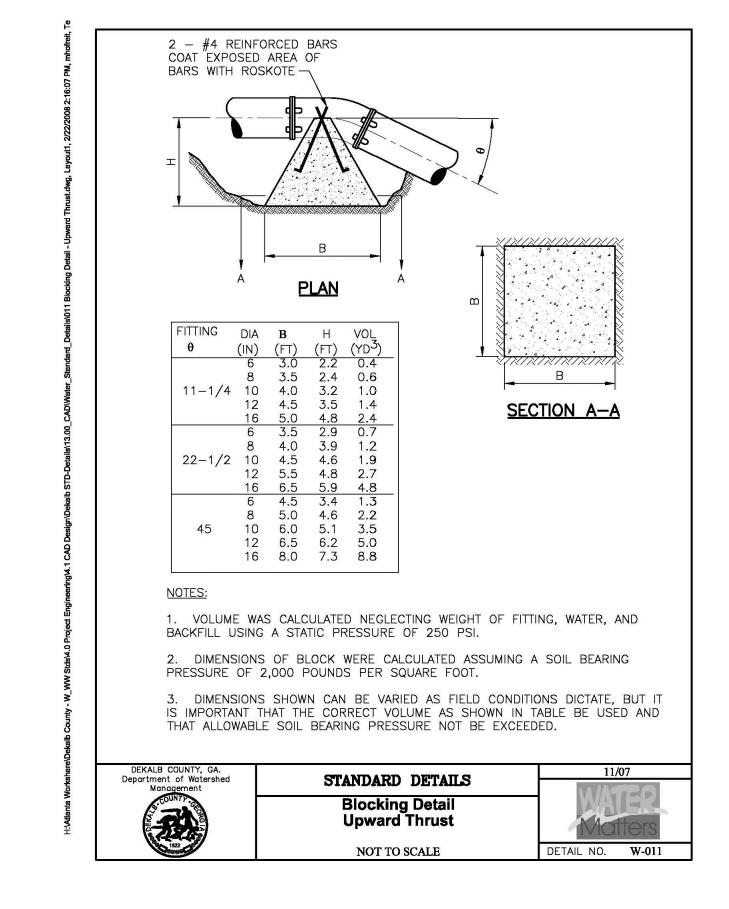


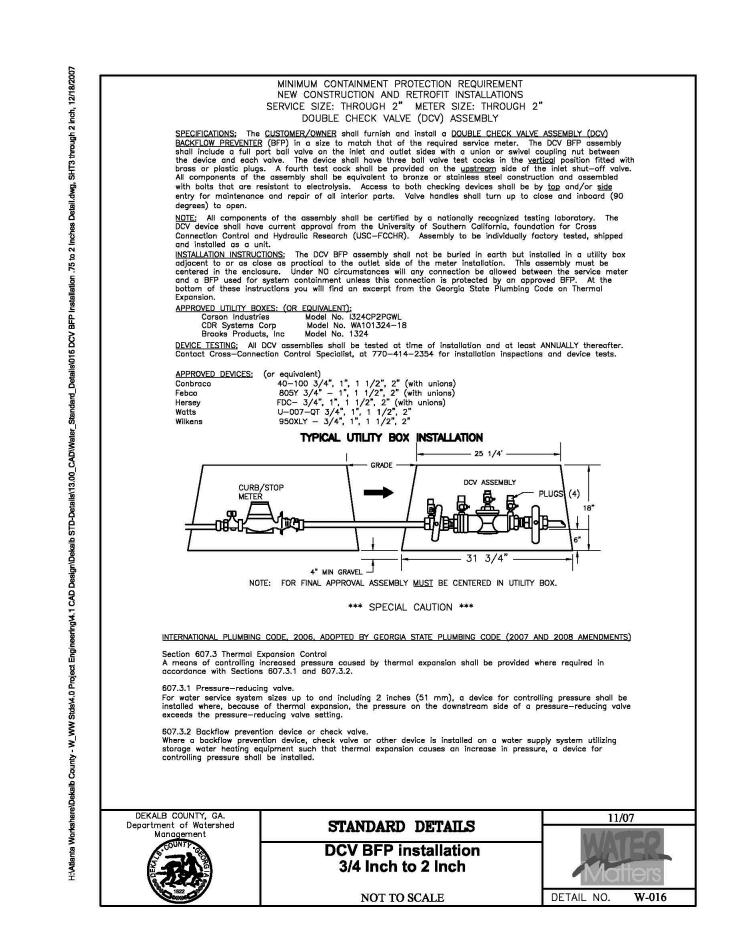


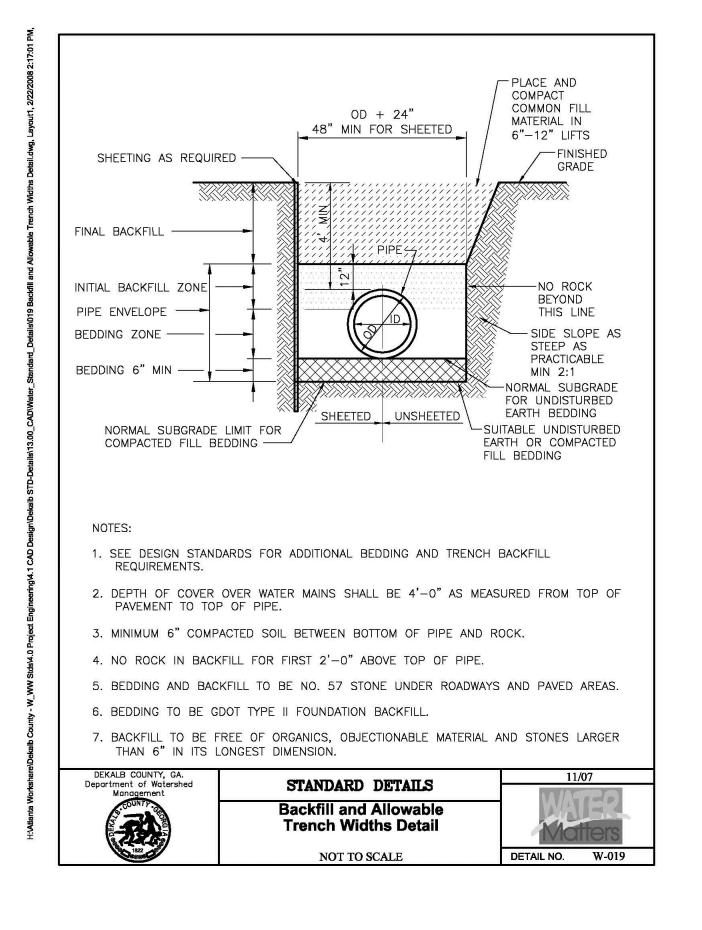


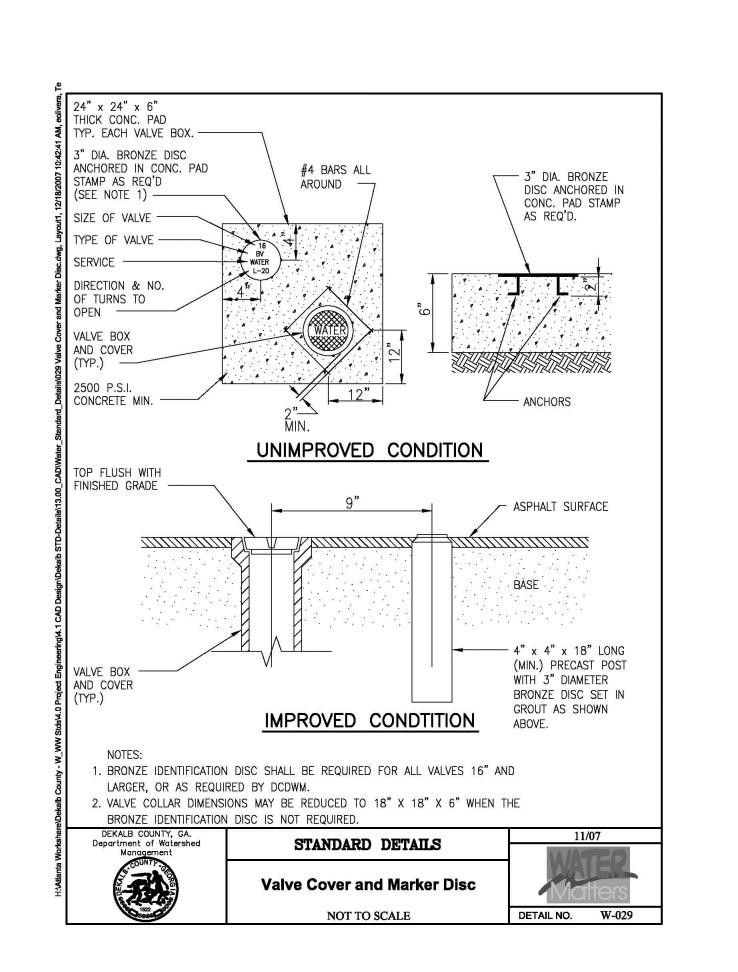


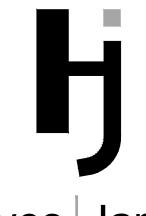












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SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

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GSWCC #11367 EXP. 05/25/18

Project Title

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Friendship Forest Wildlife Sanctuary

Project Location

Address 4380 E. PONCE DE LEON AVE. City, State Zip CLARKSTON, GA 30021 Land Lot

District-Section 18

County DEKALB 17-030-pr Project No. Drawn By: Checked By:

Initial Issue Date:

Sheet Title

WATER DETAILS

09-15-17

Sheet Number

Soil and Ecological Consultants SOIL INVESTIGATION REPORT

Report Date: 5/30/17 Inspection Date: 5/26/17 Level of Study: 3
Site Location: Friendship Forest Park, East Ponce de Leon Ave Job No. 17131.1
Client: Keith Hightower, Hayes, James & Associates Phone: 770-923-1600
County: Dekalb Land Lot: 119 District: 18th
Field Inspection By: Robert L. Kendall, DPH CSC

Boring Location Method: Spectra Precision Mobile Mapper 120 GPS from GIS-located reference point

Certified By: Robert L. Kendall, DPH CSC

SOIL INTERPRETIVE DATA

Soil Units	Slope (%)	Depth to Bedrock (in)	Depth to SHVVT* (in)	Estimated Perc. (min/in)	Depth of Estimated Perc/(in)	Optimum Trench Depth (in)	Soil Suit. Code
Pascolet	2-6	>72**	>72	45	24-60	36-48	Α

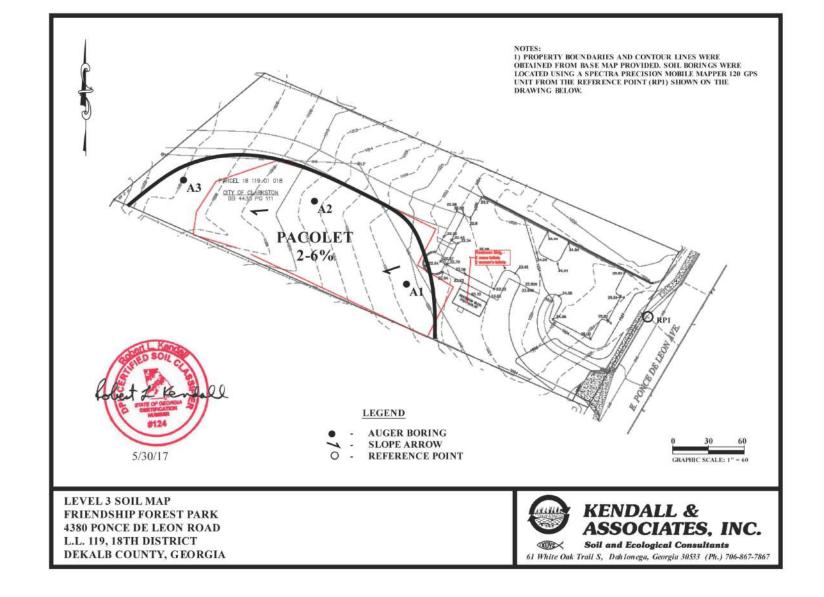
** Auger refusal on rock fragments, not bedrock

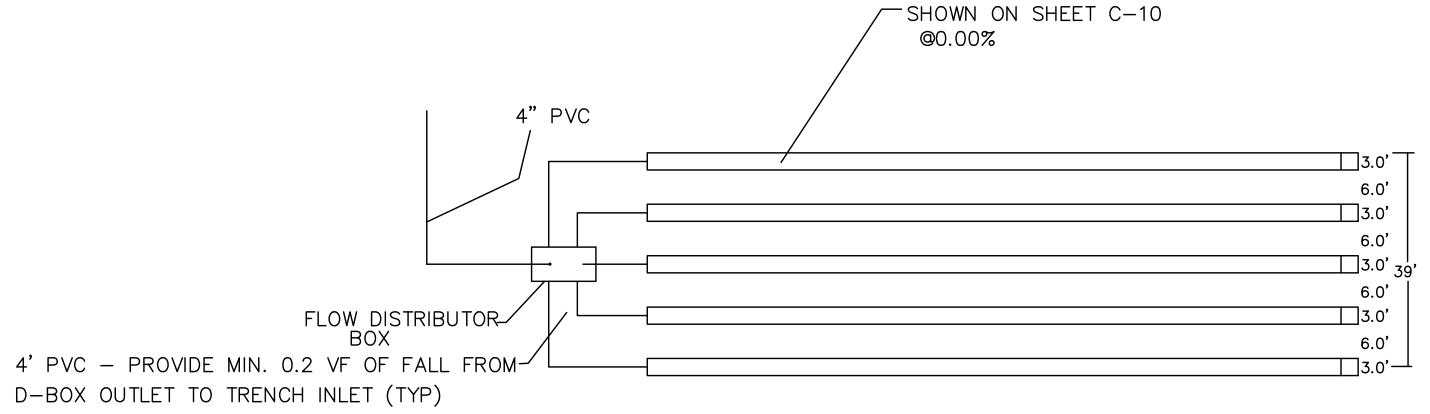
Note: Water seeped into Boring A1 but there was no evidence of a seasonal high water table based on soil colors. Storm water drainage from preceding rainfall event combined with thick mulch layer covering ground surface likely caused this condition. Storm water must be diverted from drain field area for proper function. Mulch contributes to rainfall infiltration and soil moisture retention which may negatively impact absorption field performance.

SOIL SUITABILITY LEGEND

A Soils are typically suitable for conventional absorption field with proper design, installation and maintenance.

61 White Oak Trail South Dahlonega, Georgia, 30533 (770) 439-8824 (706) 867-7867



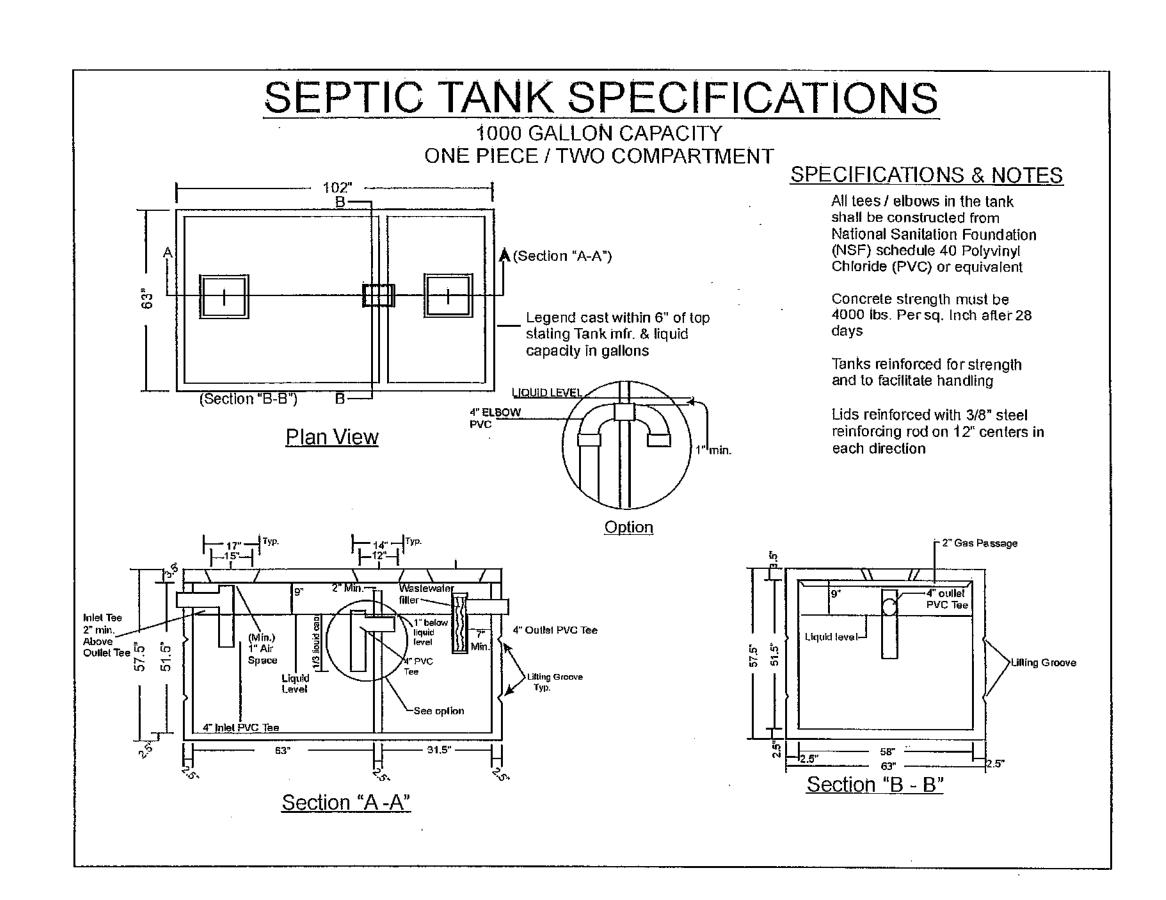


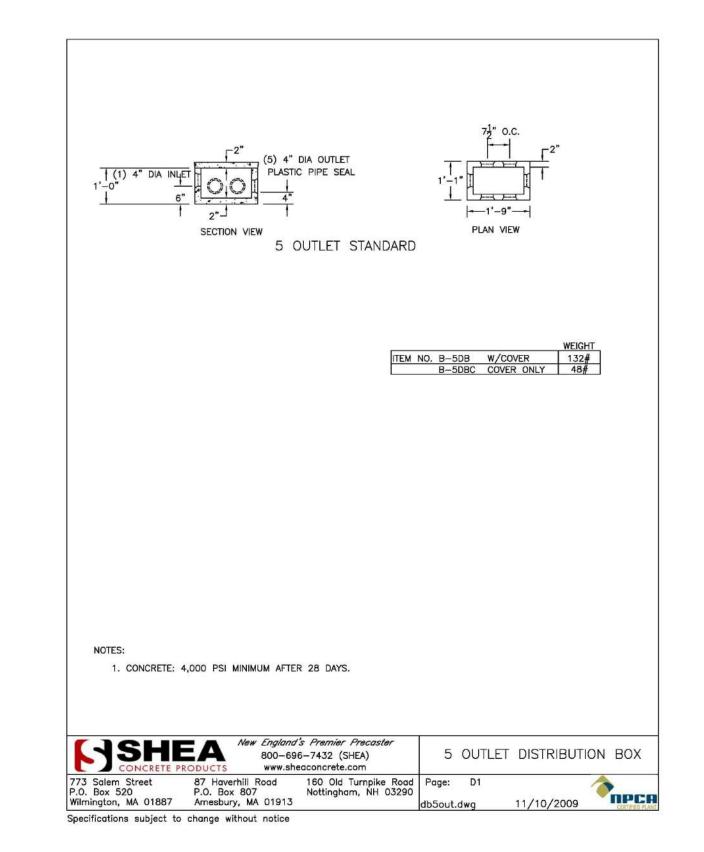
TYPICAL DRAINFIELD LAYOUT

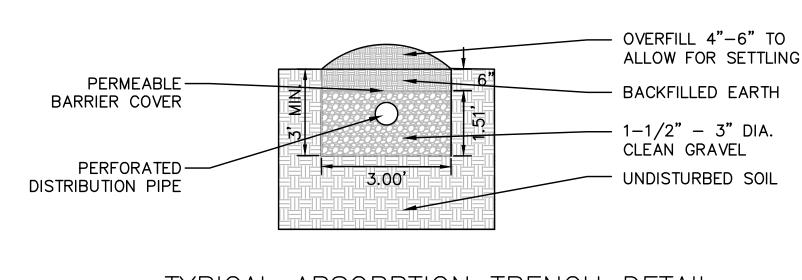
NTS

INSTALLATION SPECIFICATIONS

- 1. ALL PIPE SHALL BE SCHEDULE 40 UNLESS OTHERWISE NOTED.
- 2. SYSTEM SHALL BE FLUSHED AFTER INSTALLATION OF DISPOSAL FIELDS.
- 3. OWNER SHALL BE SUPPLIED WITH AN OWNER'S MANUAL.
- 4. NON-DOMESTIC WASTEWATER (E.G., RESTAURANT, FAST FOOD, ETC.) SHALL NOT BE COMMINGLED WITH DOMESTIC WATER (RESIDENTIAL HOUSEHOLD WASTEWATER) WITHOUT PRETREATMENT.
- 5. SEWAGE WATER AND POTABLE WATER SHALL BE SEPARATED BY A DOUBLE—CHECK BACKFLOW PREVENTER WHERE NECESSARY.
- 6. SEPTIC TANK SHALL HAVE A CAST IN 24' PVC RISER, TUF-TITE OR APPROVED EQUAL.
- 7. THE SITE PLAN AND DESIGN DATE ARE BASED UPON THE SOURCES LISTED BELOW:
 GEORGIA DEPARTMENT OF HUMAN RESOURCES, ENVIRONMENTAL HEALTH SECTION, MANUAL
 FOR ON—SITE SEWAGE MANAGEMENT SYSTEMS
 - SOIL SURVEY INFORMATION PREPARED BY KENDALL AND ASSOCIATES, INC.
 TOPOGRAPHICAL AND LAYOUT INFORMATION PROVIDED BY HAYES, JAMES & ASSOCIATES.
 ON—SITE SEWAGE MANAGEMENT DETAILS AND CALCULATIONS PROVIDED BY HAYES, JAMES & ASSOCIATES.
- 8. ALL SEPTIC SYSTEM PRODUCTS AND MATERIALS MUST BE SUBMITTED AS SHOP DRAWINGS AND APPROVED PRIOR TO CONSTRUCTION.
- 9. RECOMMENDED TRENCH DEPTH IS 36-48 INCHES, PER KENDALL & ASSOCIATES, INC.







TYPICAL ABSORPTION TRENCH DETAIL

NOT TO SCALE

Hayes James

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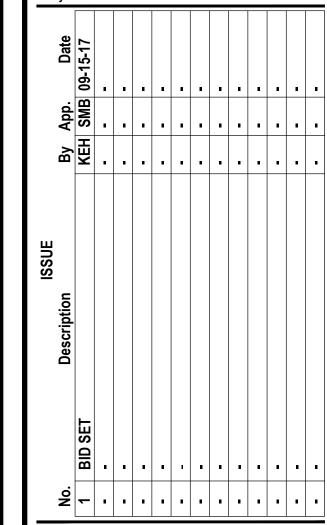
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Project Title

Friendship Forest Wildlife Sanctuary

Project Location

Address 4380 E. PONCE DE LEON AVE.

City, State Zip CLARKSTON, GA 30021

Land Lot 119

District-Section 18
County DEKALB
Project No. 17-030-pr
Drawn By: KEH

Drawn By: KEH
Checked By: SMB
Initial Issue Date: 09-15-17

Sheet Title

SEPTIC DETAILS

Sheet Number

——— STANDING SEAM MET. ROOF SYS. SEE ELEC. DWGS. ---- MET. FASCIA W/ DRIP EDGE-MATCH ROOF COLOR. (TYP.) ----- PT WOOD BEAM-STAINED FINISH. —— DBL. RAFTER-EXPOSED TAIL-STAINED FINISH. —— PT. WD. BRACE—45 DEGREE. STAINED FIN. — PT. WD. 1X8" TRIM-STAINED FIN. MITRE CORNERS —— PT. 6X6" WD. COL-STAINED FIN. — WATER FOUNTAIN—CENTER IN WALL. - HM DOOR AND FRAME-PRIME AND USE SMOOTH FINISH BLOCK PAINT-TYP. COLOR TO MATCH ROOF AROUND WATER FOUNTAIN IN SIZES COLOR. SUBMIT CUSTOM COLOR SHOWN. HGT. 33" TO SPOUT. SAMPLE FOR APPROVAL.

SUTTON ARCHITECTURAL SERVICES, INC. SAS

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4145 SHACKLEFORD ROAD

SUITE 300

NORCROSS, GEORGIA 30093

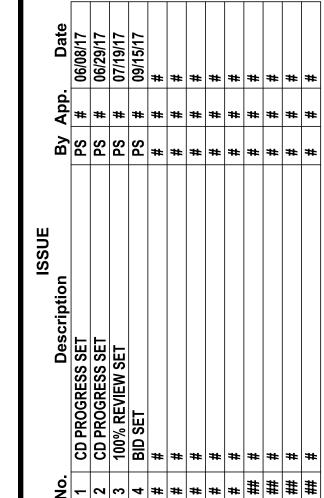
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NOT TO BE RELEASED FOR CONSTRUCTION

Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location

Address 4380 E. PONCE DE LEON AVE

City, State Zip CLARKSTON, GA. 30021 Land Lot

District-Section 18 County DEKALB

Project No. Drawn By:

Checked By: Initial Issue Date:

Sheet Title

TOILET BUILDING PLANS AND ELEVATIONS

17030pr

Sheet Number

RESTROOM BUILDING PLAN (AT PARKING LOT) SCALE: 1/4'' = 1'

INTE	ERIOR FINISH SCH	EDULE (for both building	gs)	
ROOM	DESCRIPTION	FLOORS	WALLS	CEILING
101	ENTRANCE TOILET BUILDING: PORCH	LHT. BROOM FINISH CONCRETE	N.A.	STAINED WOOD DECKING
102	WOMEN'S ROOM	KEY RESIN COMPANY KEY QUARTZ B-125 (COLOR -SABLE)	ARCH. CMU—APPLY GRAFFITTI SEALER—Prosoco Block Guard and graffitti control—test first.	STAINED WOOD DECKING
103	MEN'S ROOM	KEY RESIN COMPANY KEY QUARTZ B-125 (COLOR -SABLE)	ARCH. CMU—APPLY GRAFFITTI SEALER—Prosoco Block Guard and graffitti control—test first.	STAINED WOOD DECKING
104	JANITOR/PLUMBING CHASE	CONCRETE— APPLY CLEAR SEALER	N.A.	STAINED WOOD DECKING
201	PAVILION TOILET BUILDING: MEN'S ROOM	KEY RESIN COMPANY KEY QUARTZ B-125 (COLOR -SABLE)	ARCH. CMU—APPLY GRAFFITTI SEALER—Prosoco Block Guard and graffitti control—test first.	STAINED WOOD DECKING
202	WOMEN'S ROOM	KEY RESIN COMPANY KEY QUARTZ B-125 (COLOR -SABLE)	ARCH. CMU—APPLY GRAFFITTI SEALER—Prosoco Block Guard and graffitti control—test first.	STAINED WOOD DECKING
203	JANITOR/PLUMBING CHASE	CONCRETE – APPLY CLEAR SEALER	N.A.	STAINED WOOD DECKING

1. TOILET PARTIONS ARE FLOOR MOUNTED OVERHEAD BRACED SOLID PLASTIC TYPE BY "ACCURATE". COLORS: MEN'S RM.=BLACK 9205 AND WOMEN'S RM.=MOSS 9233 2. FOR ANY ITEMS A COLOR HAS NOT BEEN DESIGNATED; CONSULT ARCHITECT FOR COLOR SELECTION. EQUIVALENT PRODUCTS MAY BE SUBMITTED FOR APPROVAL.

SCALE: 1/4'' = 1'

EXTERIOR MATERIALS-FINISHES-NOTES:

- **MASONRY:** 1. ALL STIPPLED AREAS ON THE ELEVATIONS INDICATE 8"X16"X8" SPLIT FACE CMU W/ INTEGRAL WATER REPELLANT MANUF. BY ADAMS: COLOR=4303.
- 2. ALL NON STIPPLED AREAS ON THE ELEVATIONS INDICATE STANDARD SMOOTH FACE ARCH. CMU WITH INTEGRAL WATER REPELLANT MANUF. BY ADAMS: COLOR 4306. THERE ARE BOTH 4" HIGH BY 16X8 CMU AS WELL AS 8X16X8 SMOOTH FACE. ALSO, ALL LINTEL BLOCK WHICH CAN BE CUT 8X8X8 OR 8X8X16 SLOTTED IS THIS COLOR AS WELL.
- 3. ALL HORIZONTAL MORTAR JOINTS ARE RECESSED ¼" ON BOTH SIDES OF ALL WALLS. ALL VERTICAL LINTEL BLOCK JOINTS ARE ALSO RECESSED.
- 4. PROVIDE CUSTOM MORTAR COLOR MATCHING CMU COLOR NO. 4303.
- ALL CMU WALLS EXTEND UP TO ROOF STRUCTURE. SEAL TO ROOF STRUCTURE. CAULK COLOR TO MATCH MORTAR COLOR.
- CONSTRUCT MOCK UP OF CMU WALL OF AREA APPROVED BY ARCHITECT FOR REVIEW AND APPROVAL OF CMU COLORS, FINISHES, MORTAR AND WORKMANSHIP. THIS MUST BE APPROVED PRIOR TO PROCEEDING WITH ALL MASONRY WORK.
- NEATLY CUT BLOCK AT SLOPING WALLS AND AROUND RAFTER TAILS TO ENSURE ALIGNMENT OF JOINTS, PROPER SIZE OF JOINTS AND PROPER INSTALLATION.
- 8. DISCARD AND DO NOT USE ANY DEFECTIVE, CRACKED OR CHIPPED CMU UNITS. 9. FIRST COURSE OF CMU BELOW BUILDING FFE SHALL BE SPLIT FACE CMU MATCHING UNIT ABOVE. MOST OF THIS COURSE WILL BE BELOW GRADE. BLOCK COMPLETELY BELOW GRADE CAN BE SMOOTH FIN. ARCH BLOCK. NO STANDARD CMU.
- 10. COAT ALL CMU SURFACES INSIDE AND OUT WITH "PROSOCO" "SURE KLEAN BLOK-GUARD AND GRAFFITI CONTROL". 11. SUBMIT SAMPLES OF GLASS BLOCK FOR APPROVAL. DO NOT COAT GLASS BLOCK WITH PROSOCO. PROTECT ALL GLASS BLOCK. ALL GLASS BLOCK SHALL BE 4" HIGH BY 8" WIDE BY 4" DEEP. OBSCURE NON VISIBLE PATTERNS ONLY.
- 1. STANDING SEAM METAL ROOFING SYSTEM IS MANUF. BY BERRIDGE; USE "CEE LOK" SYSTEM.

12. DO NOT USE SCORED BLOCK OF ANY KIND. CUT TO 8X8X8 SIZE IF NECESSARY.

FRONT ENTRY ELEVATION

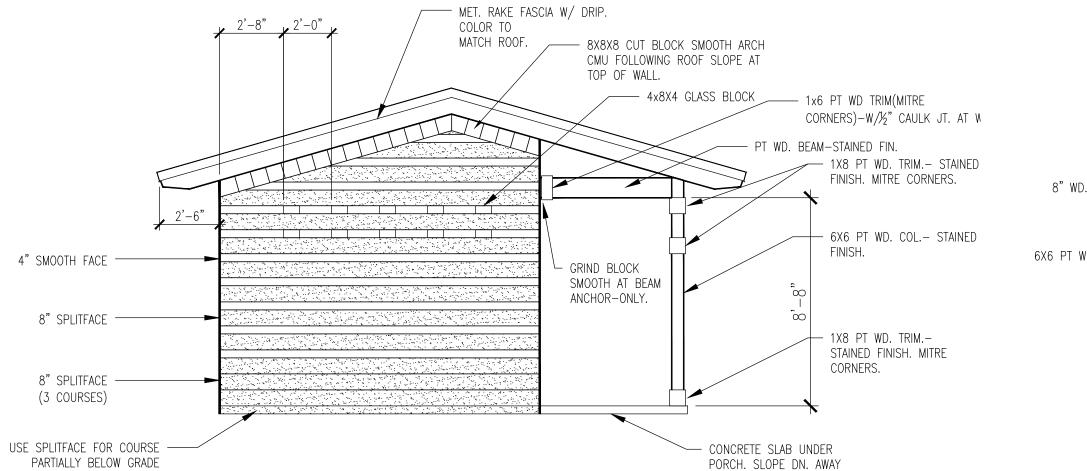
- 2. ALL ROOF PENETRATIONS ARE TO BE PROPERLY FLASHED AND SEALED. ALL ITEMS, SEALANTS ETC. TO MATCH ROOF COLOR.
- . PROVIDE ALL MISC. METAL COPINGS, RIDGE CAPS, RAKE EAVE METAL, METAL DRIPS AND FASCIAS FOR COMPLETE ROOFING SYSTEM. ALL ITEMS TO MATCH ROOF COLOR.
- 4. GUTTERS AND DOWNSPOUTS ARE NOT INCLUDED. 5. ROOF COLOR IS: BERRIDGE "HEMLOCK GREEN"

WOOD TIMBER FRAMING:

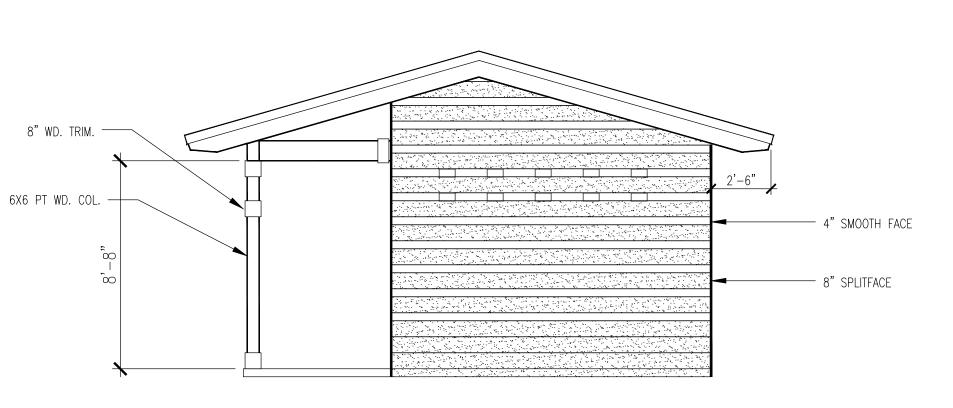
- 1. ALL BLDG. WOOD MEMBERS & MESSAGE SIGNS ARE STAINED. USE SOLID STAIN COLOR. PROVIDE 2-COLOR SAMPLES ON SIM. PT. WOOD TO OWNER FOR FINAL SELECTION. COLORS ARE: SHERWIN WILLIAMS SW3004 SUMMERHOUSE BEIGE &
- 2. SEE STRUCTURAL DWGS FOR SIZING AND CONNECTIONS. ALL EXPOSED STEEL CONNECTORS WILL BE PRIMED AND PAINTED. COLOR IS: "BLACK". 3. EXPOSED WD. RAFTER TAILS TO BE CUT, BEVELED AND TRIMMED AS SHOWN. SAND ALL ROOF EDGES AND CORNERS AS REQUIRED TO SMOOTH CONDITION.

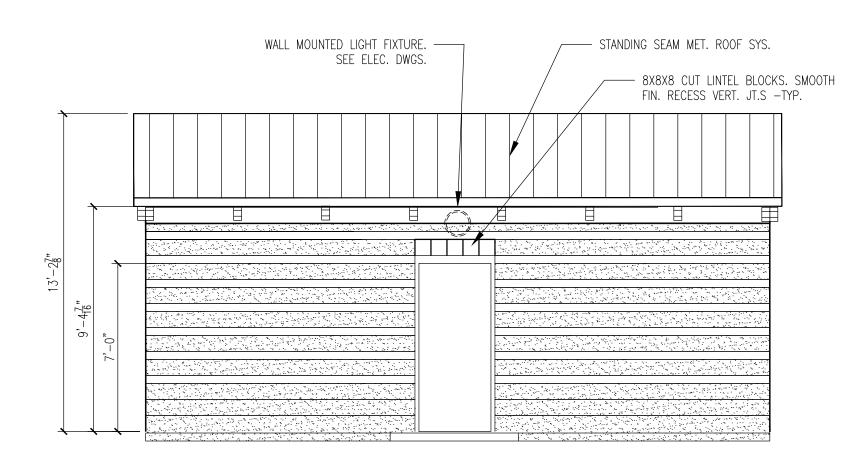
- 1. ALL DOORS ARE INSUL. HOLLOW METAL DOORS AND FRAMES. PRIME AND PAINT COLOR TO MATCH ROOF COLOR. SUBMIT SAMPLE FOR APPROVAL. SEAL AROUND ALL DOORS. USE CAULK MATCHING CMU CAULK COLOR AND DO NOT APPLY TO

2. METAL ROOF VENTS ETC. - MATCH ROOF COLOR. SEAL AROUND PERIMETER. SEALANT COLOR TO MATCH ROOF COLOR.



FROM BLDG. WALL 1/4" PER FT.





LEFT SIDE ELEVATION SCALE: 1/4'' = 1'

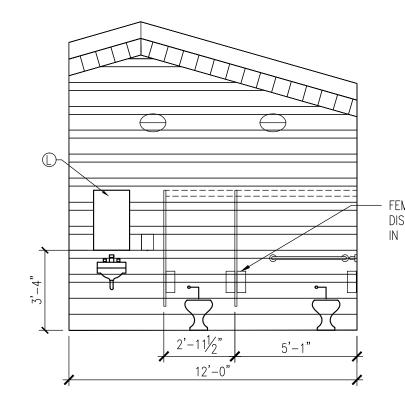
RIGHT SIDE ELEVATION

' SCALE: 1/4'' = 1'

REAR ELEVATION $\int SCALE: 1/4'' = 1$

NOTES:

- STAINED RAFTER BEAMS ON TOP OF WALL. WALL MOUNTED LIGHT — FIXTURE-BLACK TRIM. SEE ELECTRICAL DWGS. 8X8X8 SMOOTH BLOCK AT TOP OF WALLS. CMU WALLS: APPLY GRAFFITTI SEALER OVERHEAD BRACED SOLID PLASTIC PARTITIONS. INSTALL ADA SS — SOAP DISP. PROVIDED BY GRAB BARS ON OWNERS VENDOR. BACK AND SIDE CMU WALLS: APPLY GRAFFITTI SEALER 4" INTEGRAL EXPOXY FLOOR SYSTEM BASE. TYP. ALL TOILET ROOMS.





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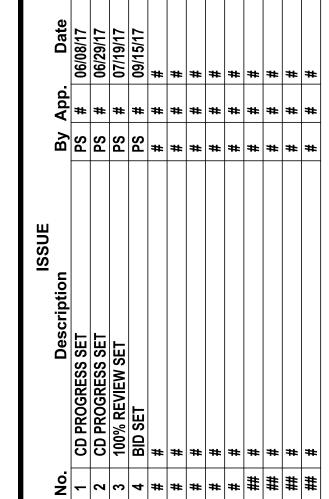
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Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location

Address 4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot 119 District-Section 18

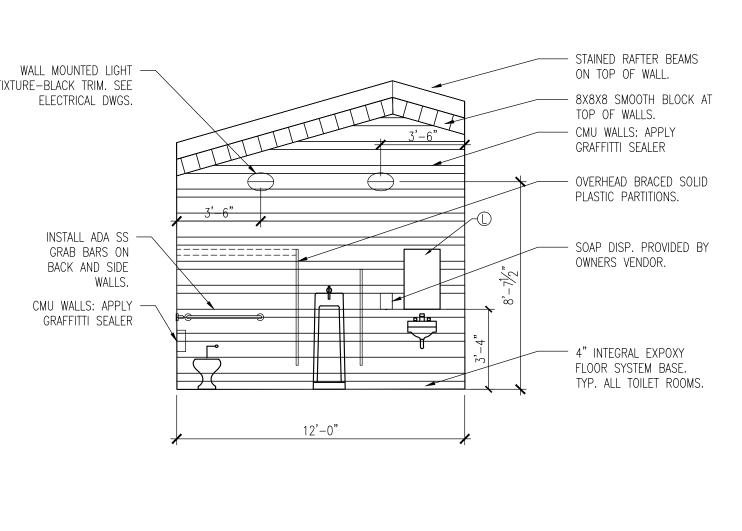
County DEKALB Project No.

17030pr Drawn By: Checked By: Initial Issue Date: ##########

Sheet Title

TOILET BUILDING ROOF PLAN & R.C. PLAN

Sheet Number



FEM. NAPKIN DISPOSAL IN EA. STALL.

INTERIOR ELEVATIONS- MEN'S RM. SCALE: 1/4'' = 1'

INTERIOR ELEVATIONS- WOMEN'S RM. SCALE: 1/4'' = 1

RESTROOM BUILDING ROOF PLAN

SCALE: 1/4'' = 1'

----- RAFTER ON TOP OF SLOPED CMU BEARING WALLS CMU BEARING WALLS - DBL. RAFTGER ON TOP OF SLOPING WALL AT BOTH BUILIDNG ENDS. - WD. TIMBER RAFTERS-STAINED FINISH. EXPOSED T&G WD. ROOF DECKING. STAIN UNDERSIDE OF DECKING. RIDGE BEAM XXXXX PORCH: EXPOSED T&G WD. ROOF DECKING. STAIN UNDERSIDE OF — PORCH: WD. TIMBER RAFTERS—STAINED 3'-4¹/₁₆"

TOILET ACCESSORY SCHEDULE MOUNTING HEIGHT MANUFACTURER SURFACE MOUNTED STAINLESS STL. ONE PER TOILET COMPARTMENT JUMBO TOILET TISSUE DISPENSER PROVIDED BY VENDOR-NIC SEE SECTION DWG. GRAB BARS- 36" AND 42" LONG ONE 36" LONG BEHIND H/C TOILETS 34" AFF TO CENTERLINE BOBRICK B-6806 ONE 42" LONG TO SIDE OF H/C TOILETS 44" TO CONTROL. EXCEL DRYER INC. ELECTRIC HAND DRYER ONE PER TOILET ROOM. STAINLESS STL. FIN. 54" AFF TO CENTERLINE HAND SOAP DISPENSOR- 800 ML. | WALL MOUNTED -ONE PER RESTROOM PROVIDED BY VENDOR-NIC BABY CHANGING STATION ONE PER TOILET ROOM (WHITE COLOR) 33" AFF TO TOP LIP OF SHELF | KOALA BEAR KB100-05 ONE PER STALL-CENTER ON INSIDE OF DOOR 60" AFF TO CENTERLINE DOUBLE COAT HOOKS BOBRICK B-7672 SURFACE MOUNTED FEMININE NAPKIN DISPOSAL CABINET ONE IN EACH WOMEN'S TOILET COMPARTMENT BOBRICK B-270 19" AFF TO CENTERLINE BOBRICK B-1556 STAINLESS STL. MIRROR 18X30 OVER ALL SINKS IN BOTH BUILDINGS SEE ELEVATION DWG. (FRAMELESS)

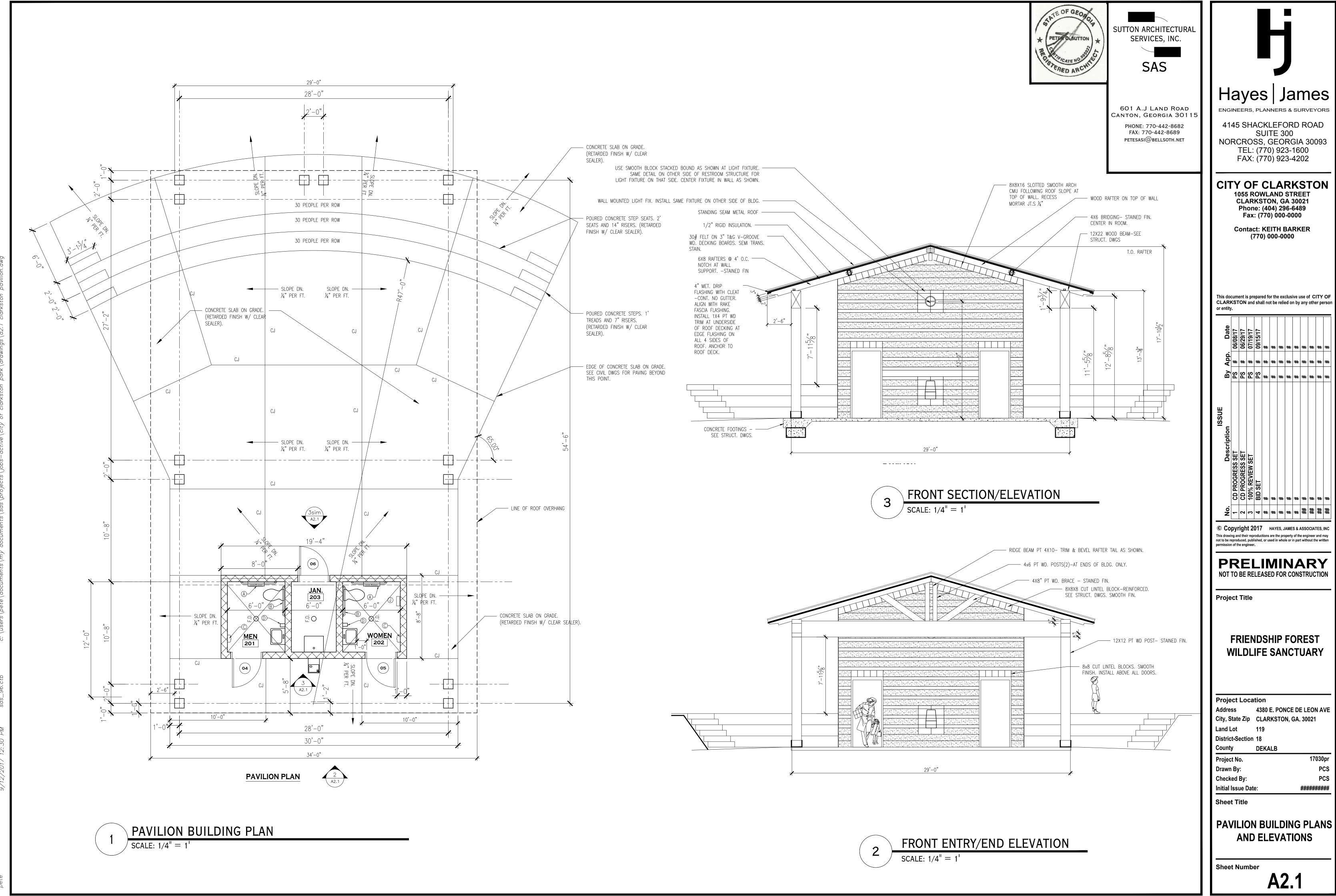
NOTE: SEE FLOOR PLANS AND TOILET ELEVATIONS FOR LOCATION OF ACCESSORIES. THIS SCHEDULE IS APPLICABLE TO BOTH BUILDINGS.

GENERAL NOTES:

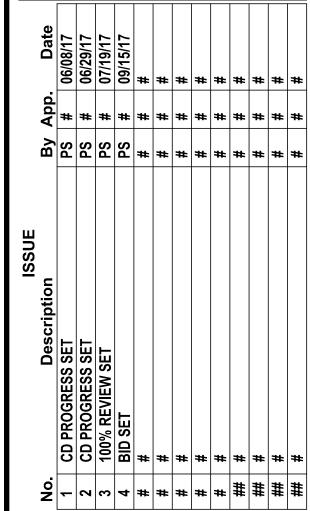
- 1. SEE SHEET A1.1 FOR ROOF SYSTEM NOTES AND INTERIOR FINISHES.
- 2. USE ROOF SYSTEM MANUFACTURER DETAILS FOR ALL ROOF PENETRATIONS. ALL PENETRATING ITEMS TO BE PAINTED TO MATCH THE ROOF COLOR. SUBMIT CUSTOM MATCHING PAINT SAMPLES FOR APPROVAL. 3. ROOF ANCHORS SHOULD NOT PENETRATE TO WOOD ROOF DECK.
- 4. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 5. SEE STRUCTURAL DRAWINGS FOR CMU WALL REINFORCING DETAILS, ROOF FRAMING CONNECTION DETAILS ETC.
- 6. SEAL ALL GAPS AND PENETRATIONS.

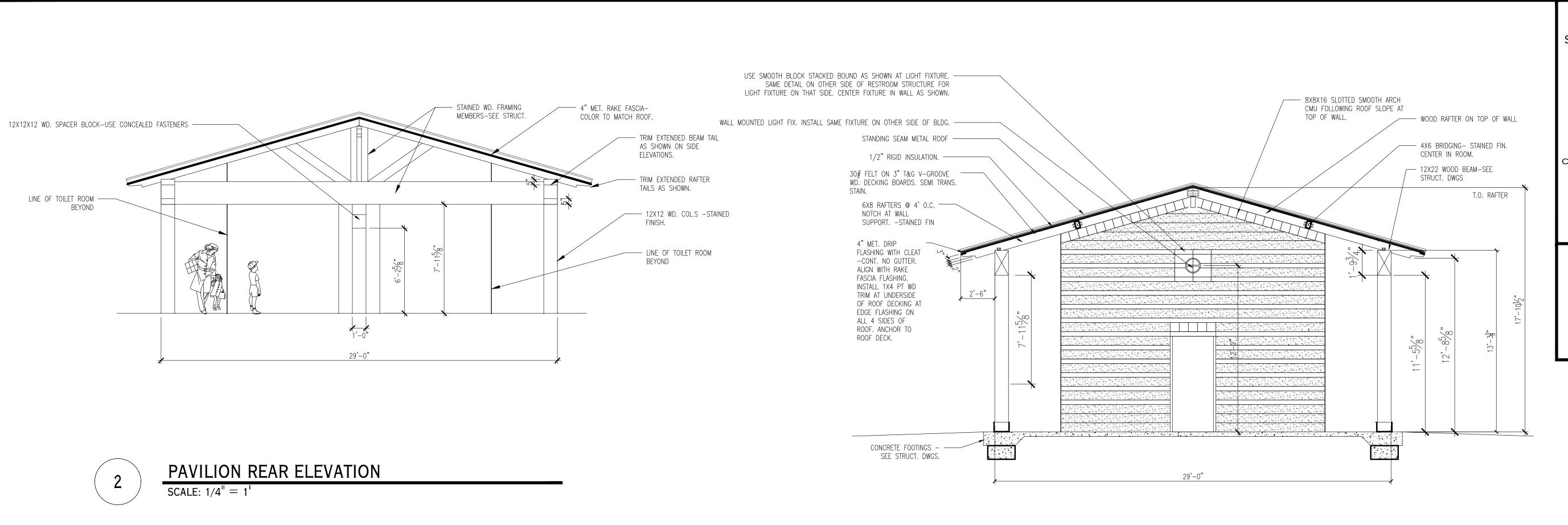
RESTROOM BUILDING REFLECTED CEILING PLAN SCALE: 1/4'' = 1'

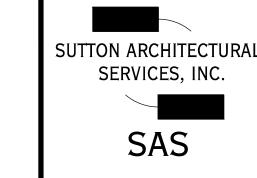
5'-41/16"



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CITY OF CLARKSTON, **GEORGIA**

| Hayes | James

ENGINEERS, PLANNERS & SURVEYORS

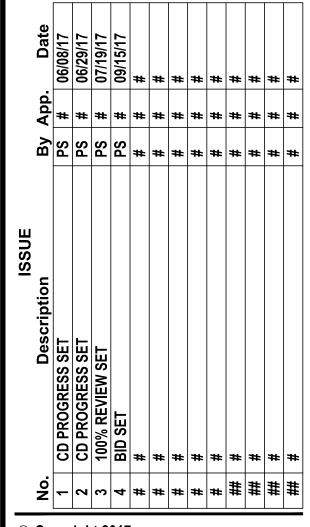
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Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location Address # City, State Zip # Land Lot #

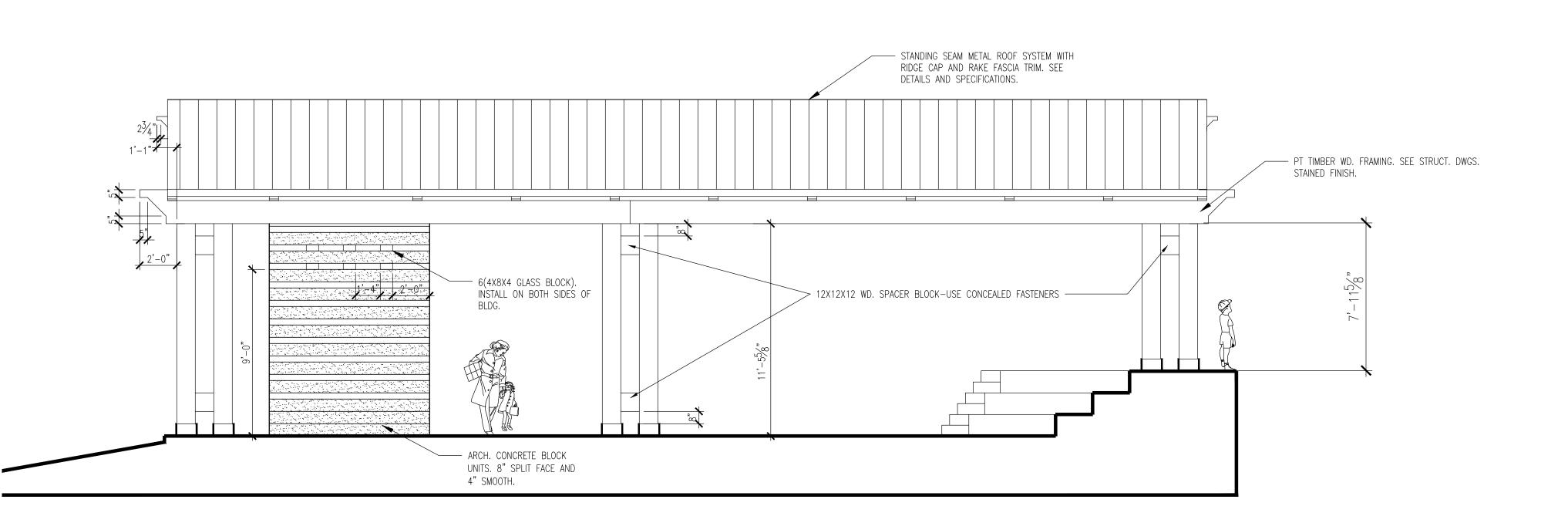
District-Section # County

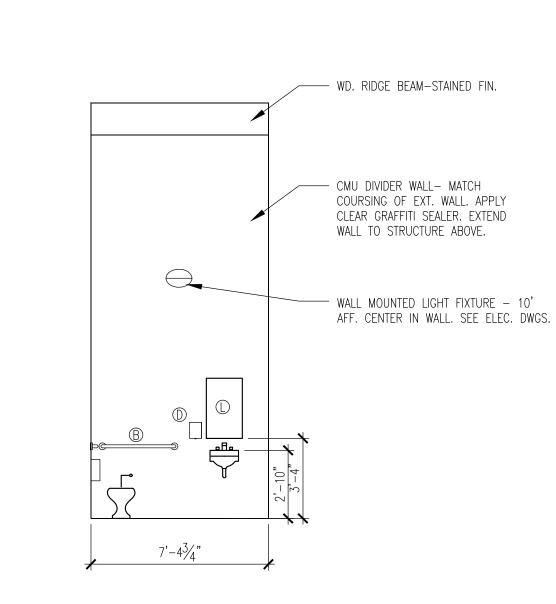
Project No. Drawn By: Checked By: Initial Issue Date:

Sheet Title

PAVILION BUILDING ELEVATIONS

Sheet Number





 $\sqrt{\text{SCALE: 1/4"} = 1'}$

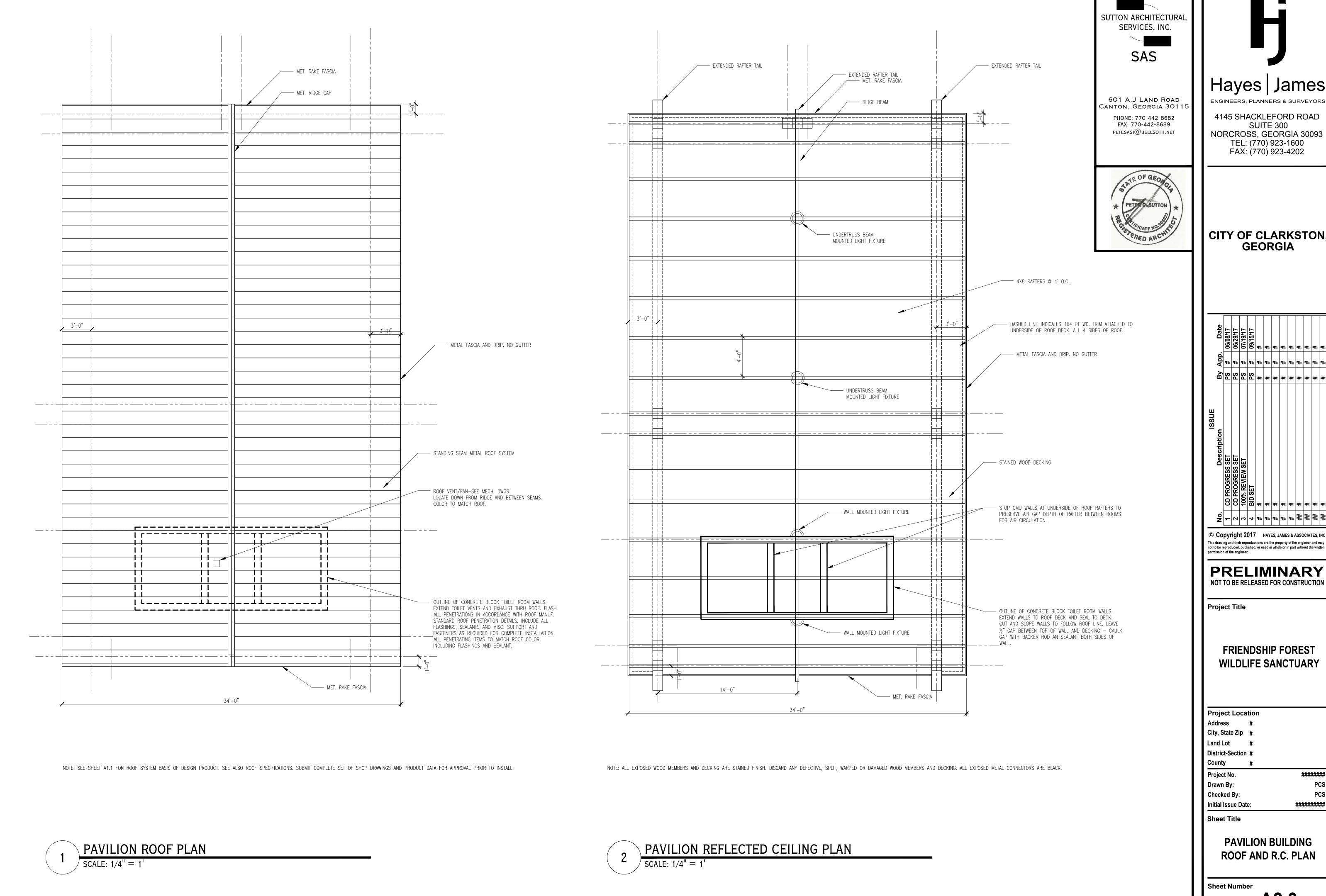
TOILET RM. INT. ELEVATION-MEN AND WOMEN'S

PAVILION RESTROOM REAR ELEVATION

SCALE: 1/4'' = 1'

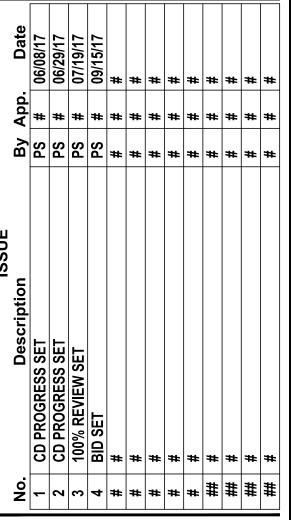
PAVILION RIGHT SIDE ELEVATION- (LEFT SIDE SIMILIAR)

SCALE: 1/4'' = 1'



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CITY OF CLARKSTON, GEORGIA

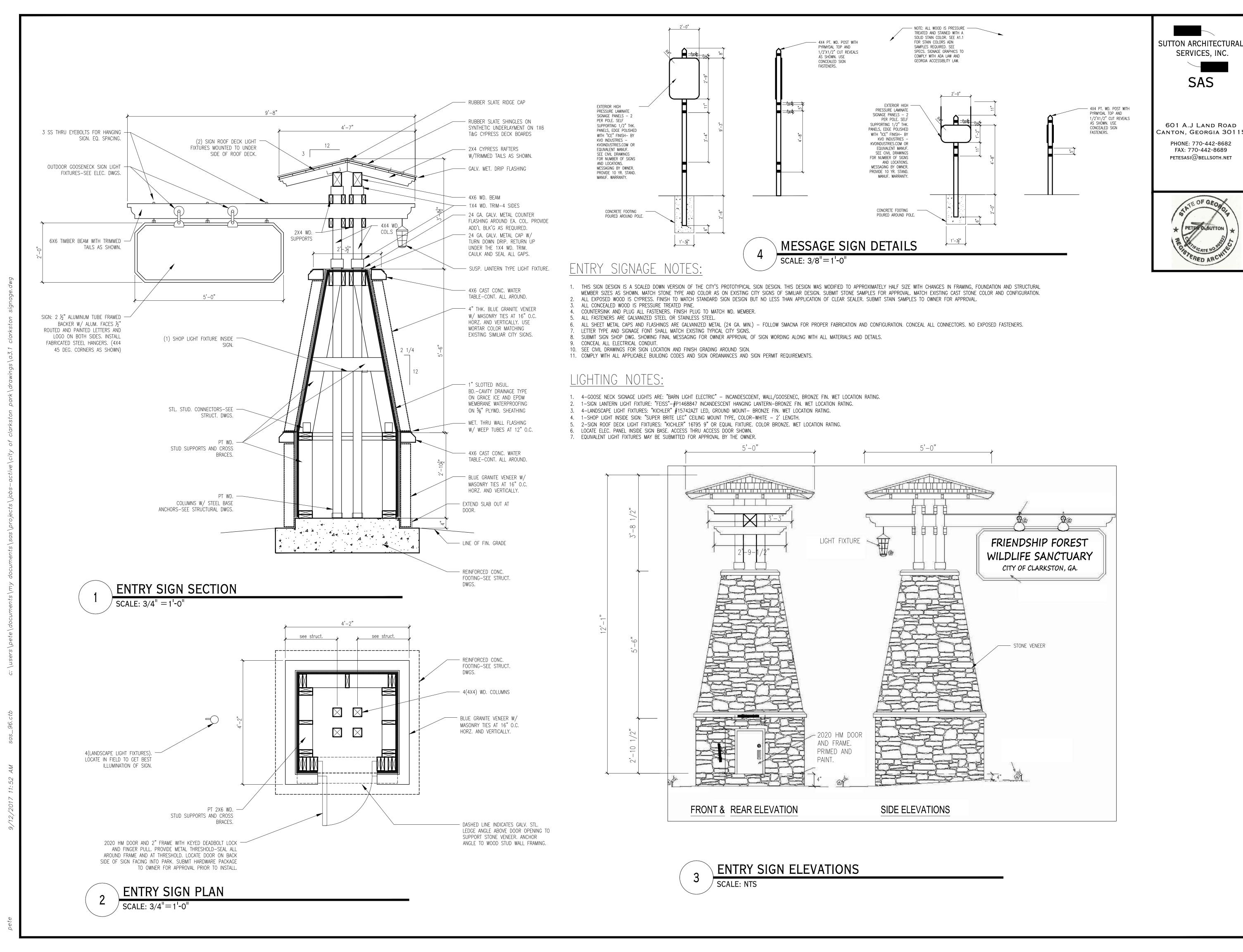


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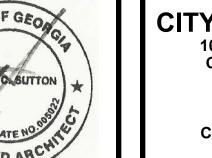
FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

PAVILION BUILDING ROOF AND R.C. PLAN



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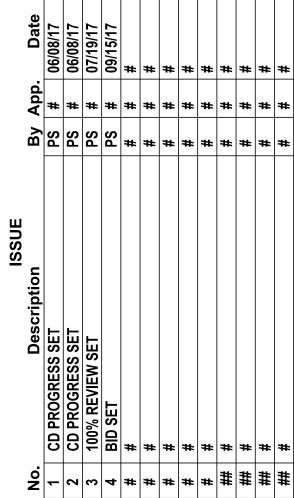


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Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

Project Location
Address 4380 E

Address 4380 E. PONCE DE LEON AVE
City, State Zip CLARKSTON, GA. 30021
Land Lot 119

District-Section 18
County DEKALB

Project No.
Drawn By:
Checked By:
Initial Issue Date:

Sheet Title

ENTRANCE MONUMENT SIGN

Sheet Number

A3.1

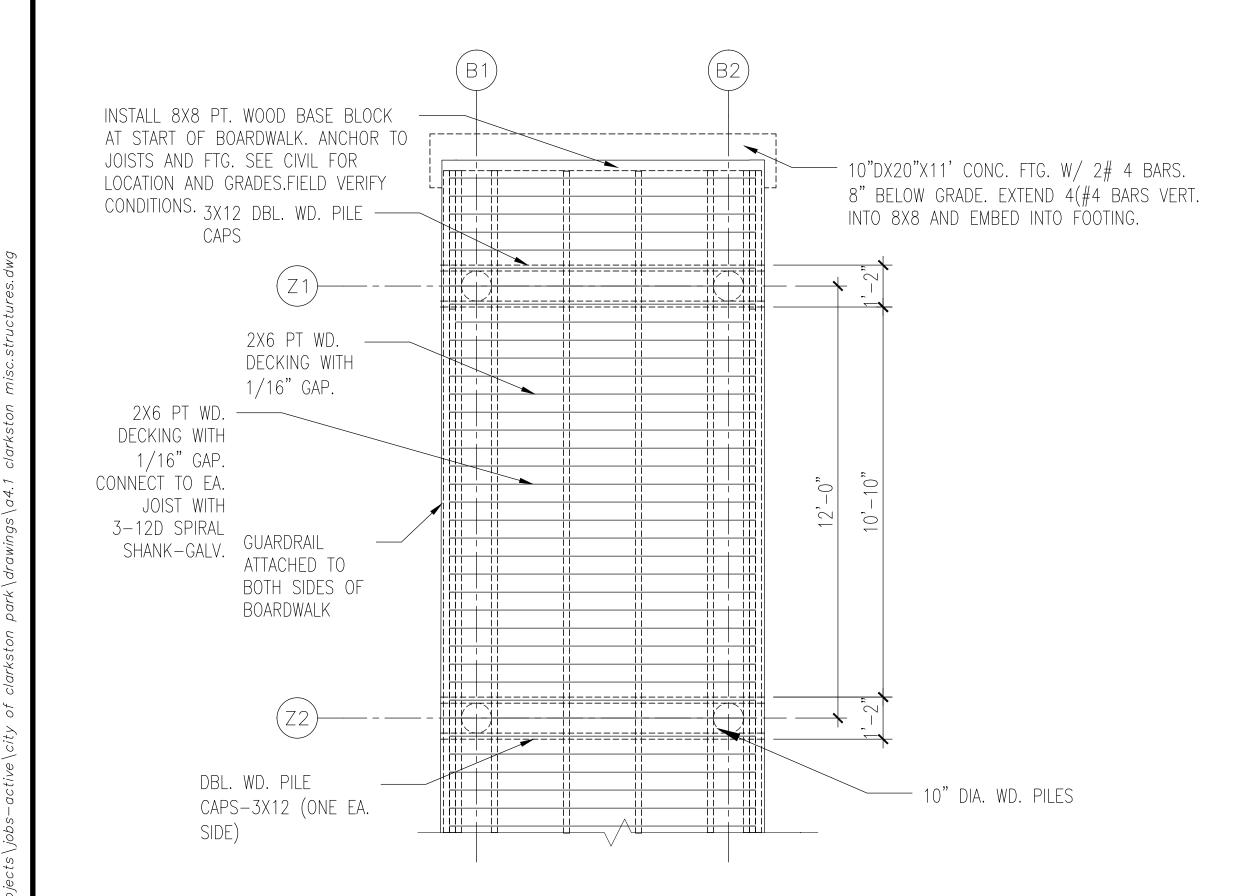
17030pr

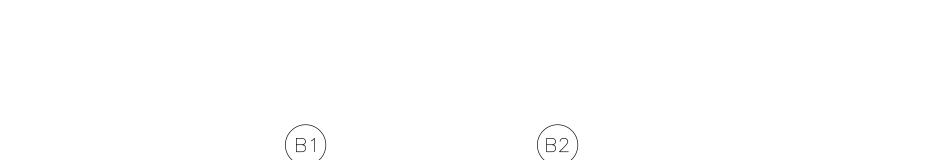
DO NOT EXCEED SPANS SHOWN ON DRAWINGS. THESE ARE MAXIMUM SPANS. CONSULT WITH OWNERS GEOTECH ENGINEER FOR ONSITE CONDITIONS.

4. ALL WOOD IS PRESSURE TREATED AND STAINED.

USE ONLY NON CORROSIVE METAL CONNECTORS.

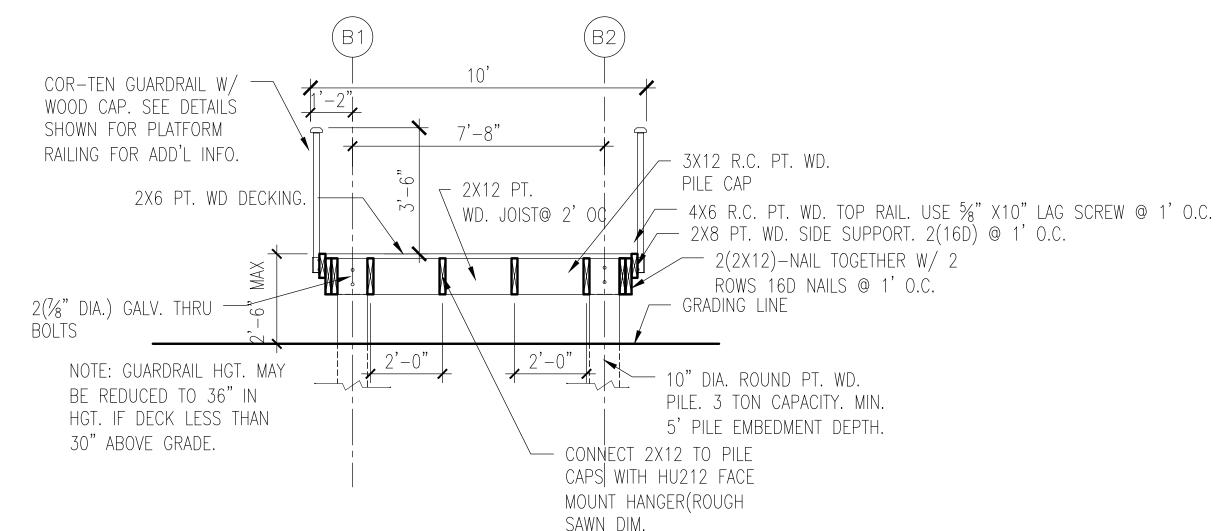
COUNTERSINK ALL WALKING SURFACE AND TOP RAIL MOUNTED SCREWS AND CONNECTORS 7. SEE SHEET A4.2 AND ALTERNATES SECTION IN THE SPECIFICATIONS FOR ALTERNATE WOOD RAILING. THIS IS A REQUIRED BID ALTERNATE.





TYP. BOARDWALK PLAN

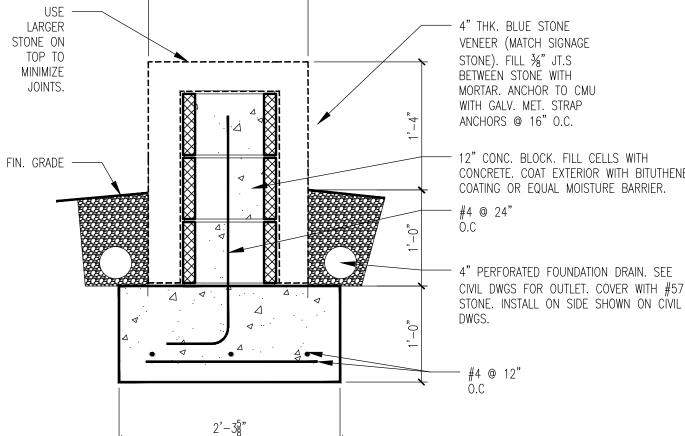
SCALE: 3/8'' = 1'-0''





STONE SEAT NOTES:

- 1. CONSULT WITH OWNERS GEOTECH ENGINEER FOR ONSITE CONDITIONS. USE STANDARD GREY CMU.
- USE ONLY NON CORROSIVE METAL ANCHORS.
- 4. SEE CIVIL DRAWINGS FOR LOCATION AND LENGTH OF BENCH.
- 5. SEE CIVIL DRAWINGS FOR FINISH GRADES AT BENCH. 6. SEE CIVIL DRAWINGS FOR FOUNDATION DRAIN LOCATIONS AND OUTLETS.



SUTTON ARCHITECTURAL SERVICES, INC. SAS

CONCRETE. COAT EXTERIOR WITH BITUTHENE

CIVIL DWGS FOR OUTLET. COVER WITH #57 STONE. INSTALL ON SIDE SHOWN ON CÏVIL

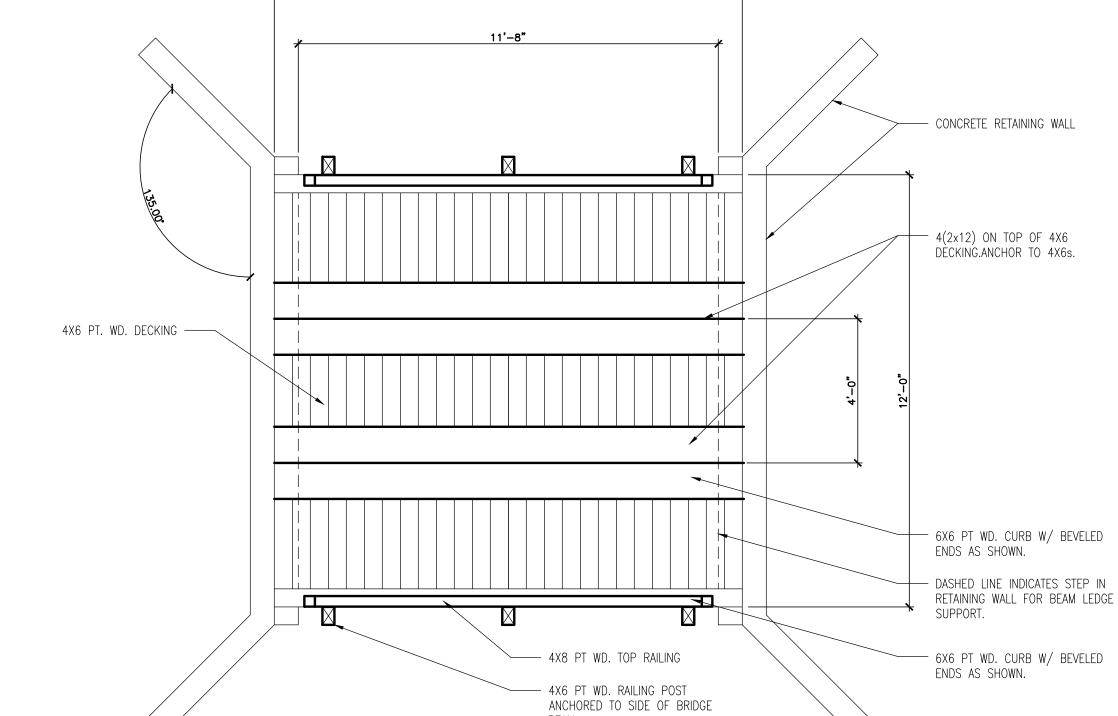
Canton, Georgia 30115 PHONE: 770-442-8682 FAX: 770-442-8689 PETESASI@BELLSOTH.NET



601 A.J LAND ROAD

TYP. STONE SEAT SECTION

 $\int SCALE: 3/8'' = 1'-0''$

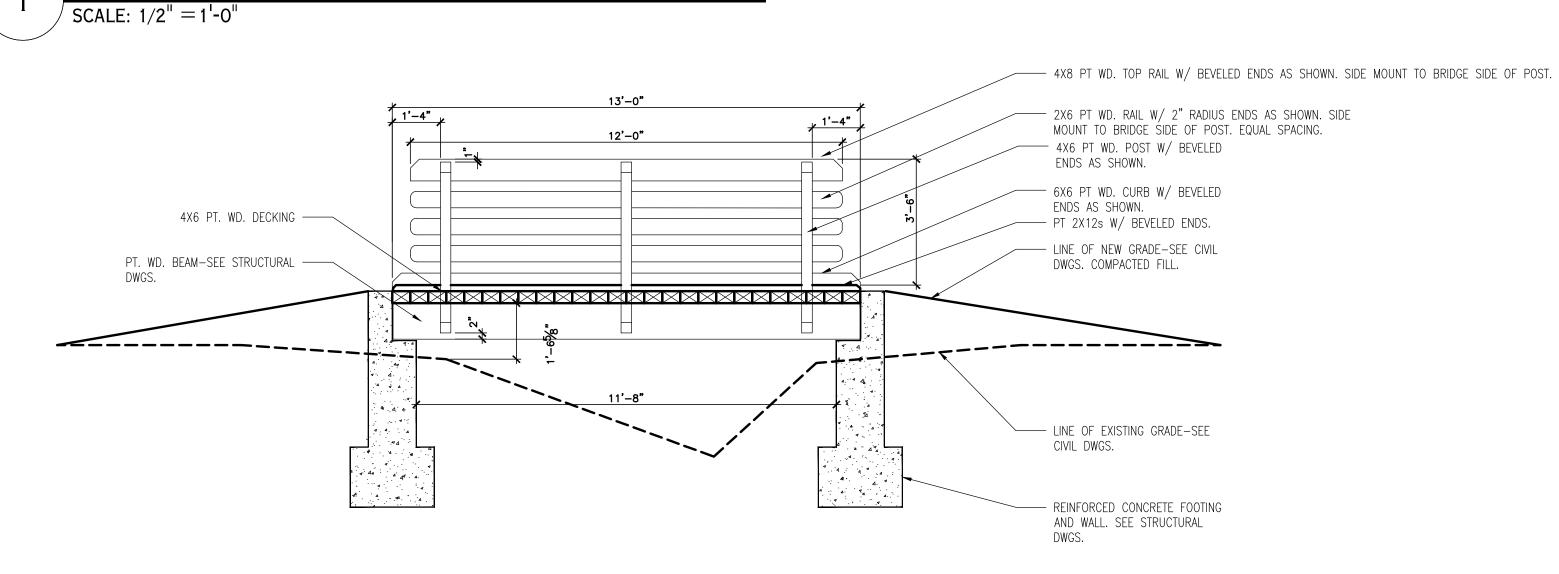


BRIDGE NOTES:

- 1. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS. 2. SEE CIVIL DRAWINGS FOR BRIDGE LOCATION ON SITE AND ELEVATIONS AND OHTER SITE IMPROVEMENTS AROUND THE
- 3. ALL WOOD IS PRESSURE TREATED.
- 4. USE ONLY NON CORROSIVE METAL CONNECTORS. SEE STRUCT. 5. FIELD VERIFY CONDITIONS AND SPAN. CONSULT WITH

ENGINEERS IF DIFFERENCES IN FIELD PRIOR TO PROCEEDING.





PAVILION BRIDGE SECTION SCALE: 1/2'' = 1'-0''

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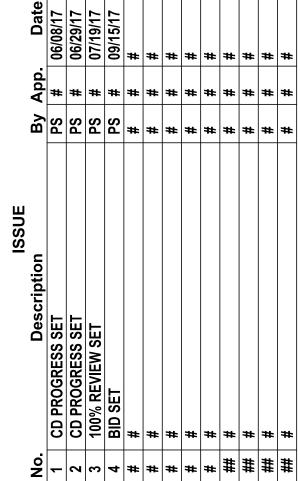
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Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location Address 4380 E. PONCE DE LEON AVE

City, State Zip CLARKSTON, GA. 30021 Land Lot 119

District-Section 18 County DEKALB

Project No. Drawn By: Checked By: Initial Issue Date: ##########

Sheet Title

MISC. STRUCTURES

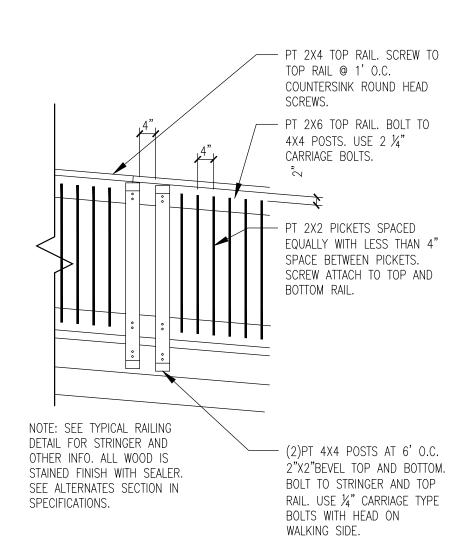
Sheet Number

A4.1

17030pr



- 1. SEE STRUCTURAL DRAWINGS FOR GENERAL REQUIREMENTS. 2. SEE CIVIL DRAWINGS FOR PLATFORM/DECK LOCATIONS AND NUMBER
- 3. ALL WOOD IS PRESSURE TREATED. 4. USE ONLY NON CORROSIVE METAL CONNECTORS. SEE STRUCT.



ALTERNATE RAILING

NOTE: STEEL RAILINGS AND HANDRAILS

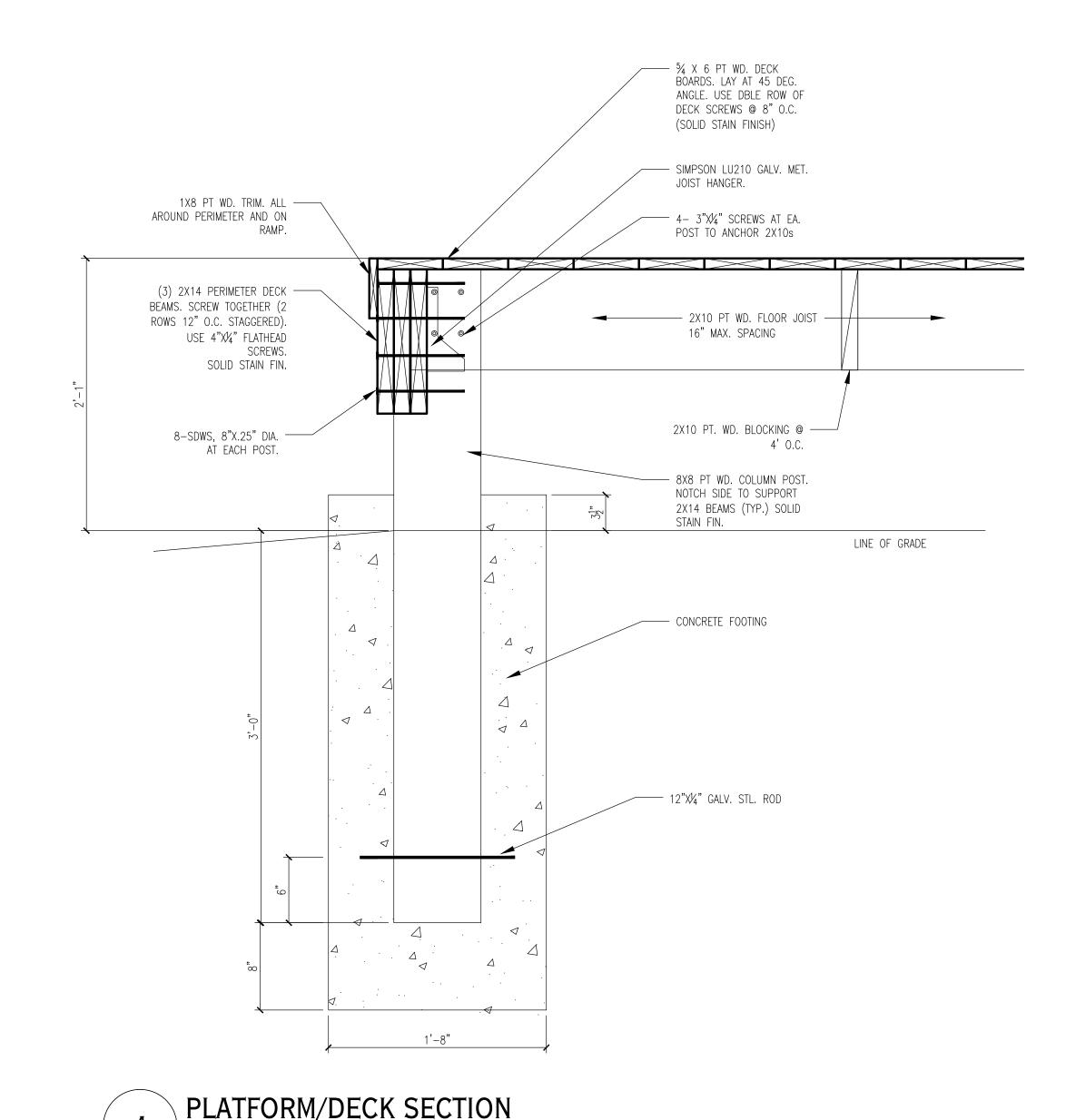
DWGS ON ALL RAILINGS FOR APPROVAL

ARE COR-TEN STEEL. SUBMIT SHOP

PRIOR TO FABRICATION AND INSTALL.

RAMP ELEVATION

 $^{'}$ SCALE: 1/4" = 1'-0"



SCALE: 1/4" = 1'-0"

AND BOTTOM RAIL.

— 2X14 DBL. RAMP STRINGER. BEVEL

AS SHOWN TO KEEP ABOVE SOIL

NOTE: FIELD VERIFY LENGTH OF RAMP.

CONSISTENT SLOPE ENTIRE LENGTH OF RAMP. EXTEND GUARDRAILS ON RAMP THE FULL LENGTH OF THE RAMP.

SLOPE OF RAMP SHALL NOT EXCEED

1:12 SLOPE AND SHALL BE

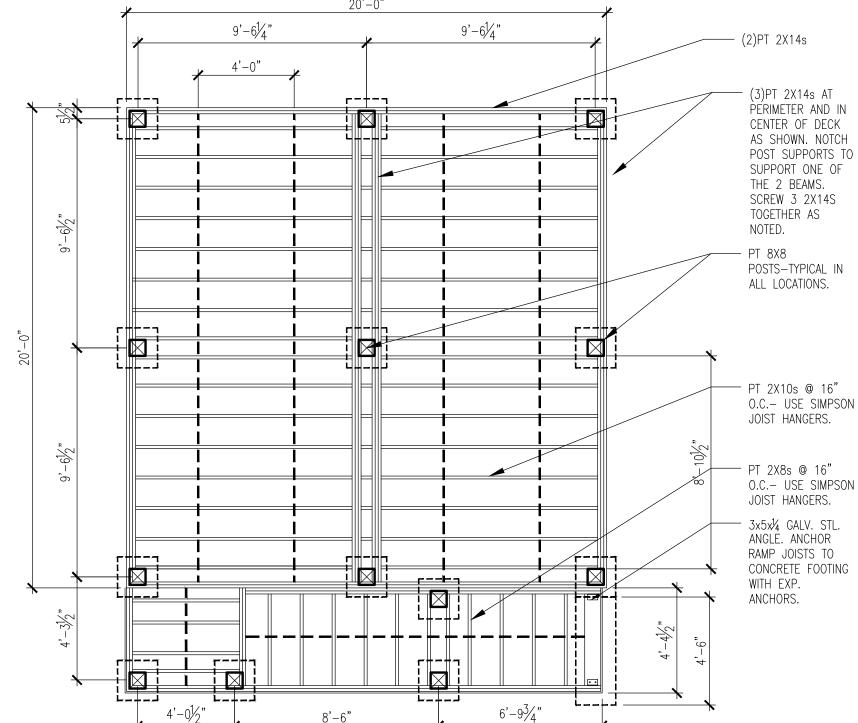
CUT AS REQUIRED AT END OF RAMP

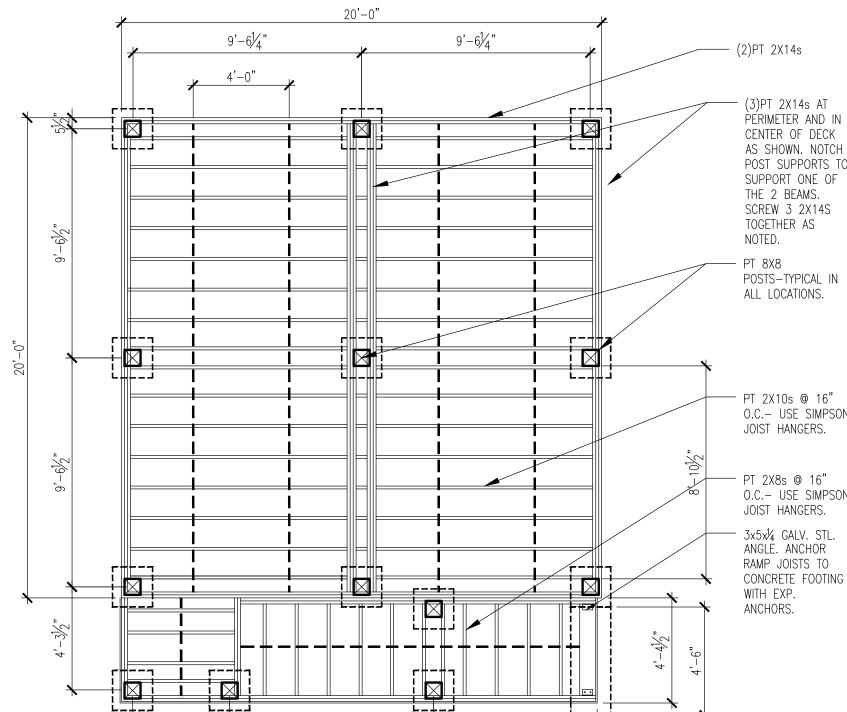
LEVEL. ANCHOR TO POSTS AND WOOD

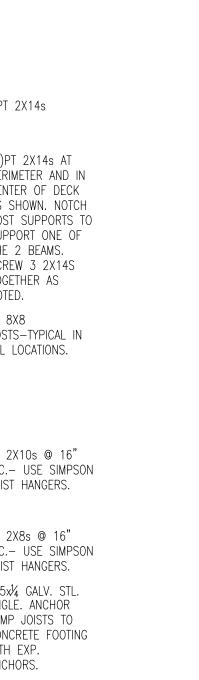
TERMINATION BLOCK AT END OF RAMP.

1/2" STEEL PICKETS WELDED TO TOP

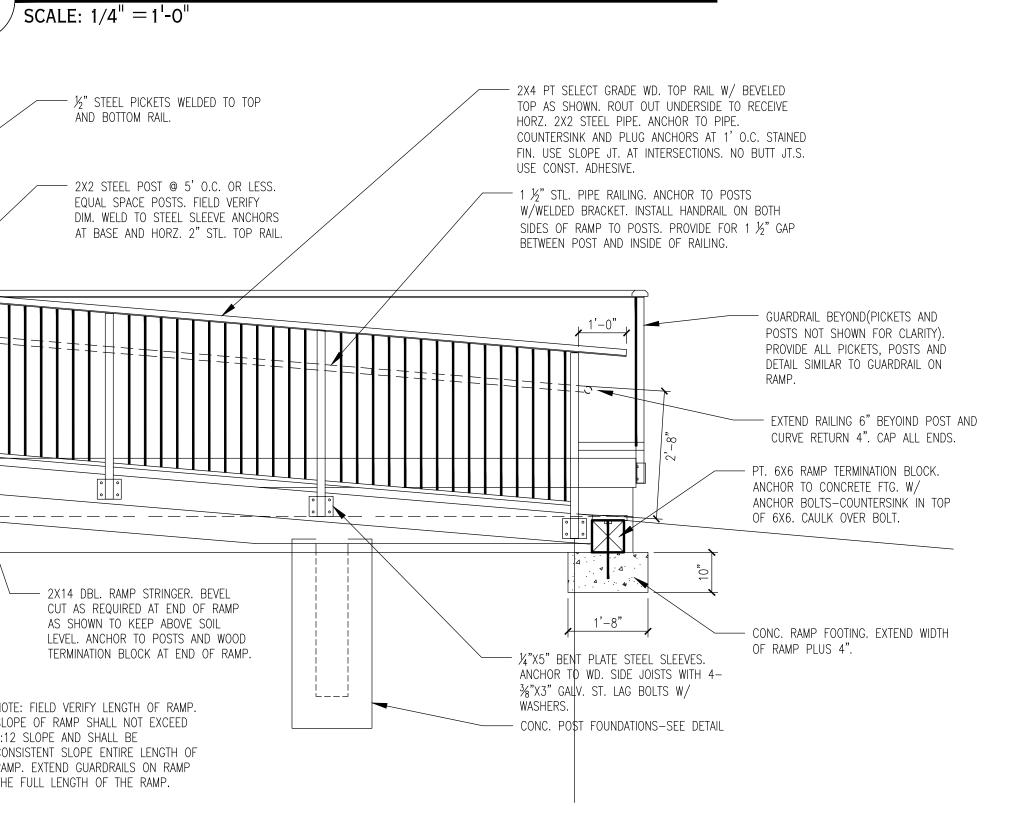
EQUAL SPACE POSTS. FIELD VERIFY

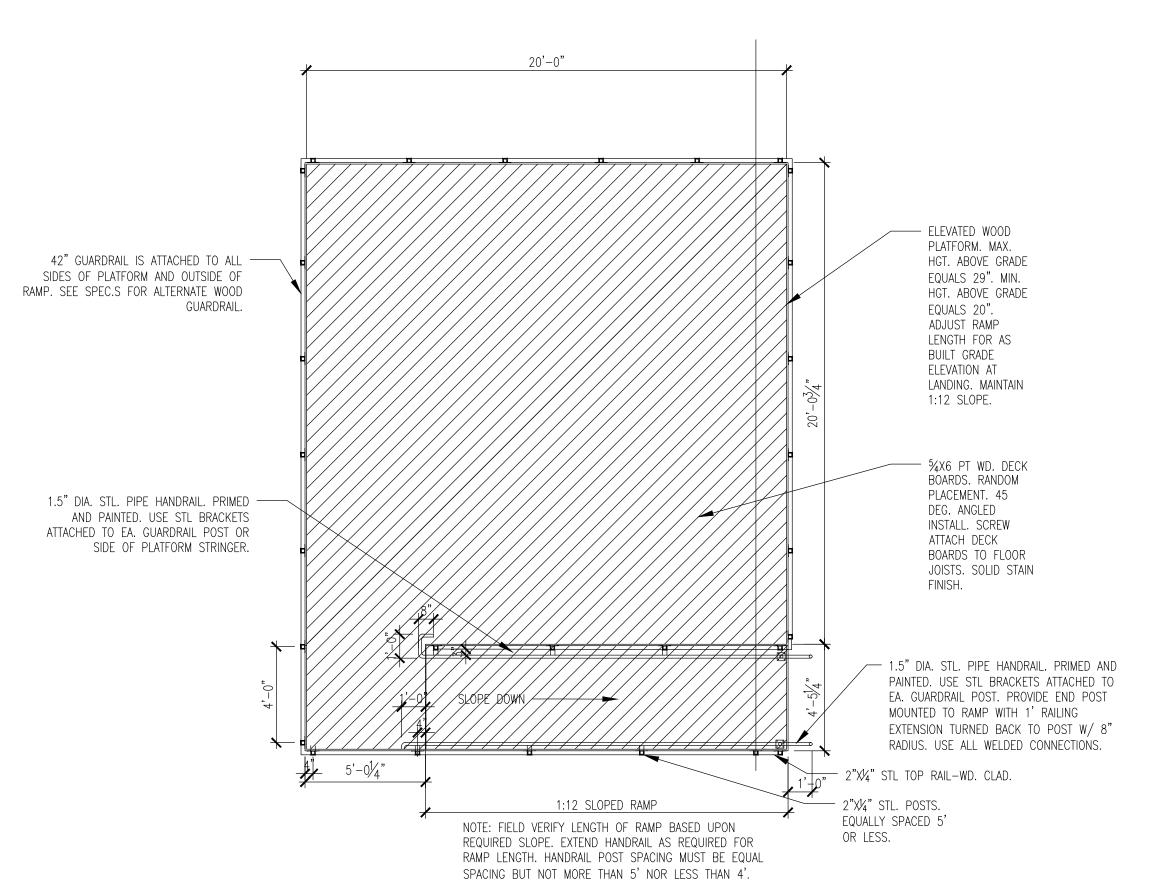


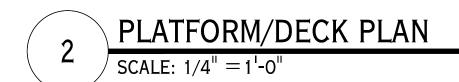












Hayes | James

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SUTTON ARCHITECTURAL SERVICES, INC.

SAS

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FAX: 770-442-8689

PETESASI@BELLSOTH.NET

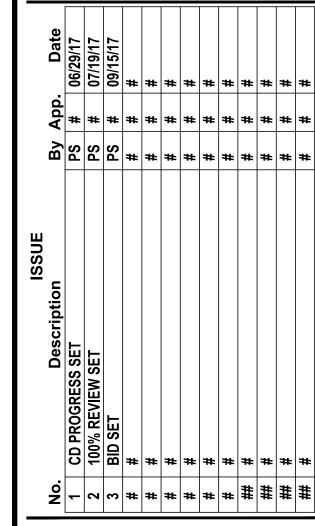
4145 SHACKLEFORD ROAD SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

CITY OF CLARKSTON 1055 ROWLAND STREET

CLARKSTON, GA 30021 Phone: (404) 296-6489 Fax: (770) 000-0000

Contact: KEITH BARKER (770) 000-0000

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Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location Address 4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot District-Section 18 DEKALB County

Project No. Drawn By: Checked By:

Initial Issue Date:

Sheet Title

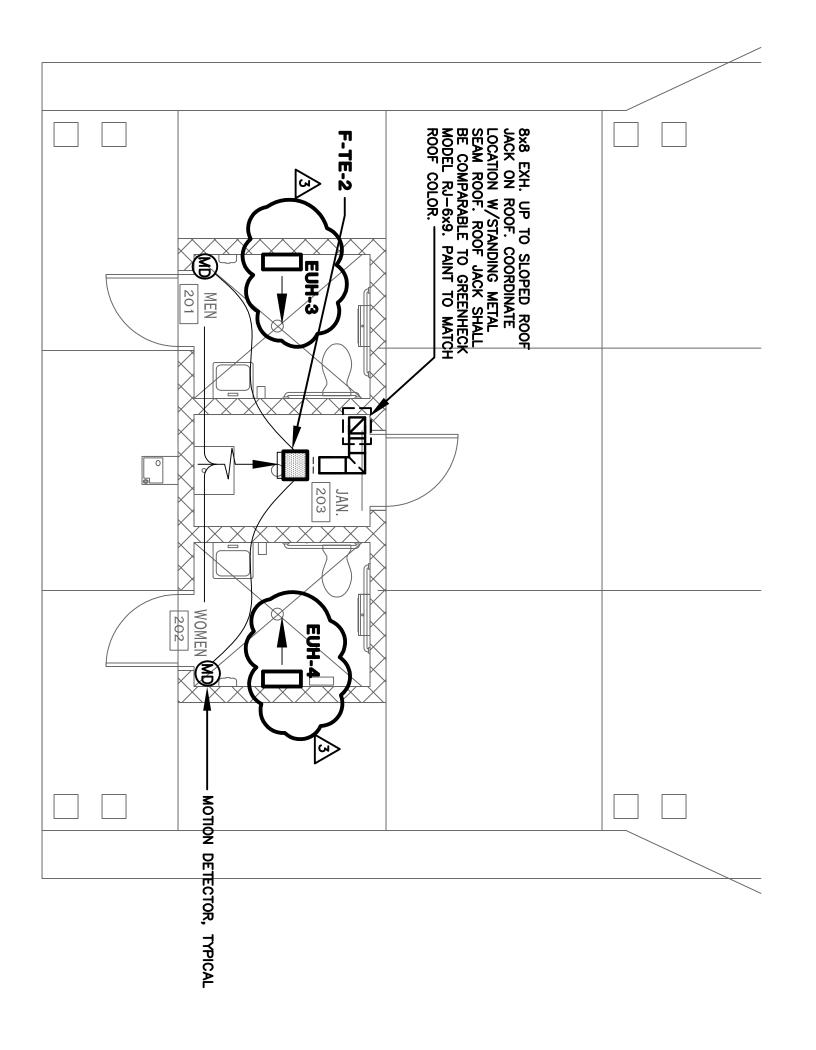
MISC. STRUCTURES

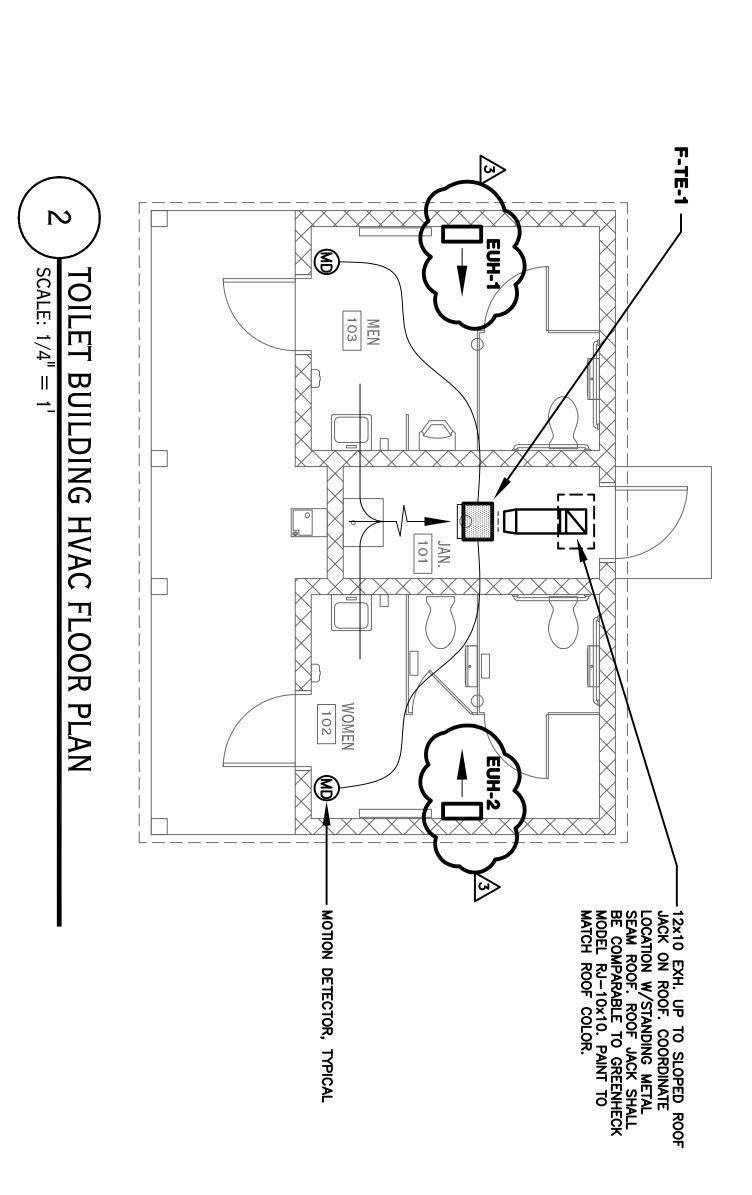
Sheet Number

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SETTON ARCHITECTURAL SERVICES, INC.

SAS

1 PAVILION BUILDING HVAC FLOOR PLAN

						F/	FAN SCHE	CHEDULE		
			FA	FAN DATA						
MARK	CFM	E.S.P.	MAX	STTAW/4H	RPM	DRIVE	SERVES	FAN TYPE	CONTROL	BASIS OF DESIGN
F—TE—1	600	0.2"	2.5	267 WATTS	1043	DIRECT	TOILETS	CABINET EXHAUST FAN	①	GREENHECK CSP-A710 (2)
F-TE-2	225	0.2"	1.4	65 WATTS	931	DIRECT	TOILETS	CABINET EXHAUST FAN	\odot	GREENHECK CSP-A290 (2)
① PROVI	DE TWO (2)	R WILL A	HECK MOI	PROVIDE TWO (2) GREENHECK MODEL MDW WALL MOUTED MOTION DETECTORS, EITHER DETECTOR WILL ACTIVATE THE FAN. TIMER SHALL BE ADJUSTABLE.	MOUTEI	BE ADJUS		ONE FOR EACH TOILET ROOM. WIRE SO THAT	O THAT	
② PROVI	DE VIBRATI CONTROL	ON ISOL	ATION, GA	PROVIDE VIBRATION ISOLATION, GALVANIZED HANGER RODS, FLEXIBLE CONNECSPEED CONTROL MOUNTED ON THE FAN.	NGER ROI	DS, FLEXIBI	E CONNECTION A	TION AT FAN DISCHARGE AND ELECTRONIC	NIC	
					ELE	ELECTRIC	HEATER	SCHEDULE		

① PROVIDE

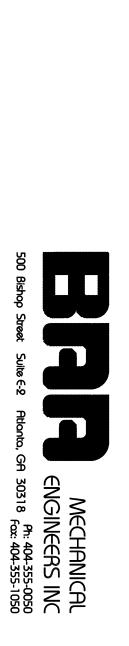
WALL MOUNT BRACKET AND INTEGRAL

EUH-1,2 EUH-2,3

ELECTRIC UNIT HEATER

MARK

DESIGN



ISSUE
No. Description
By App. Date
1 100% Review Set
2 Bid Set
3 9-15-17
3 Addendum #3
9-28-17

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Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

Project Location

Address 4380 E. PONCE DE LEON AVE
City, State Zip CLARKSTON, GA. 30021
Land Lot 119
District-Section 18
County DEKALB

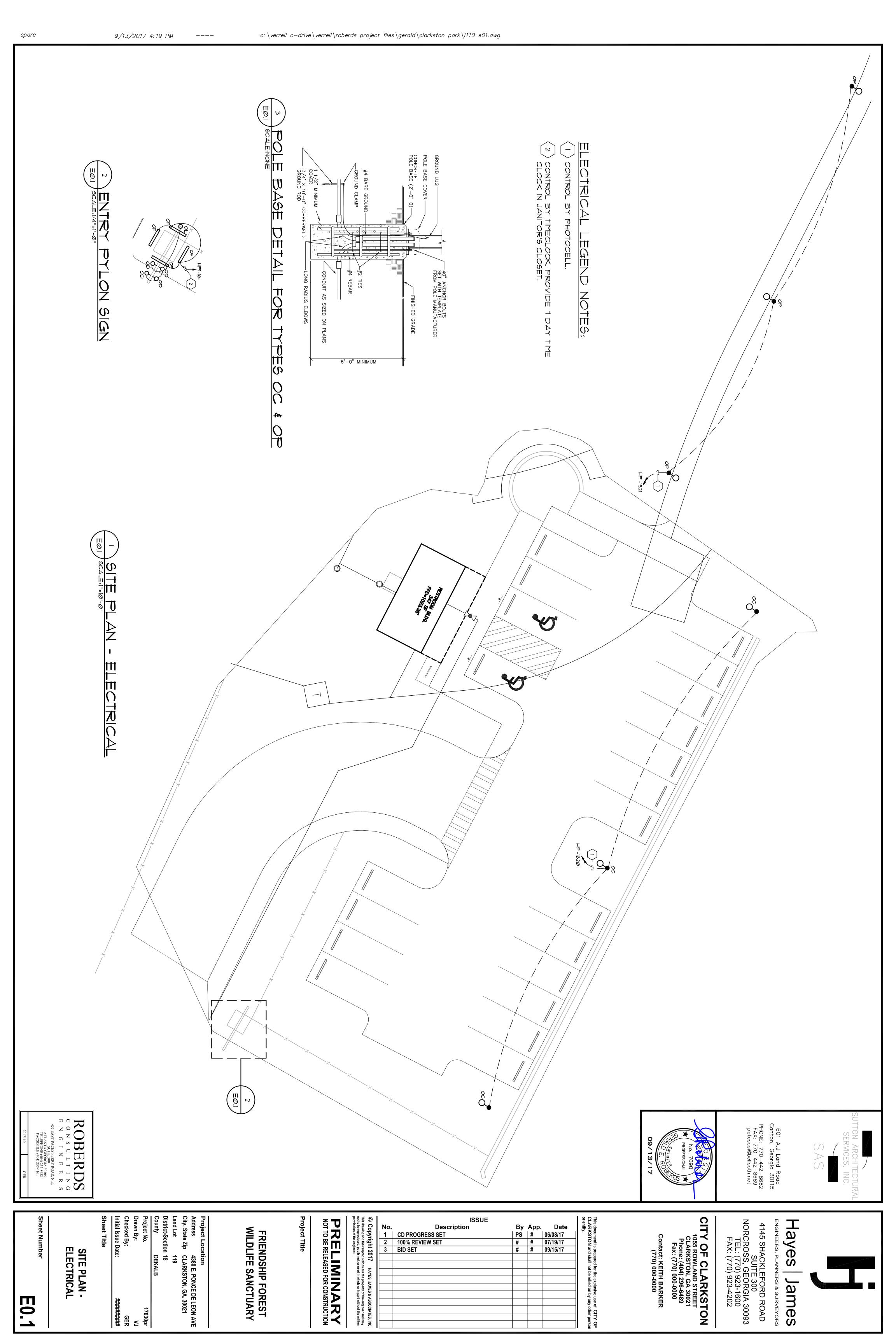
TOILET HVAC PLANS AND SCHEDULES

Project No. Drawn By: Checked By: Initial Issue Date:

17030pr ASM JEM 7-19-17

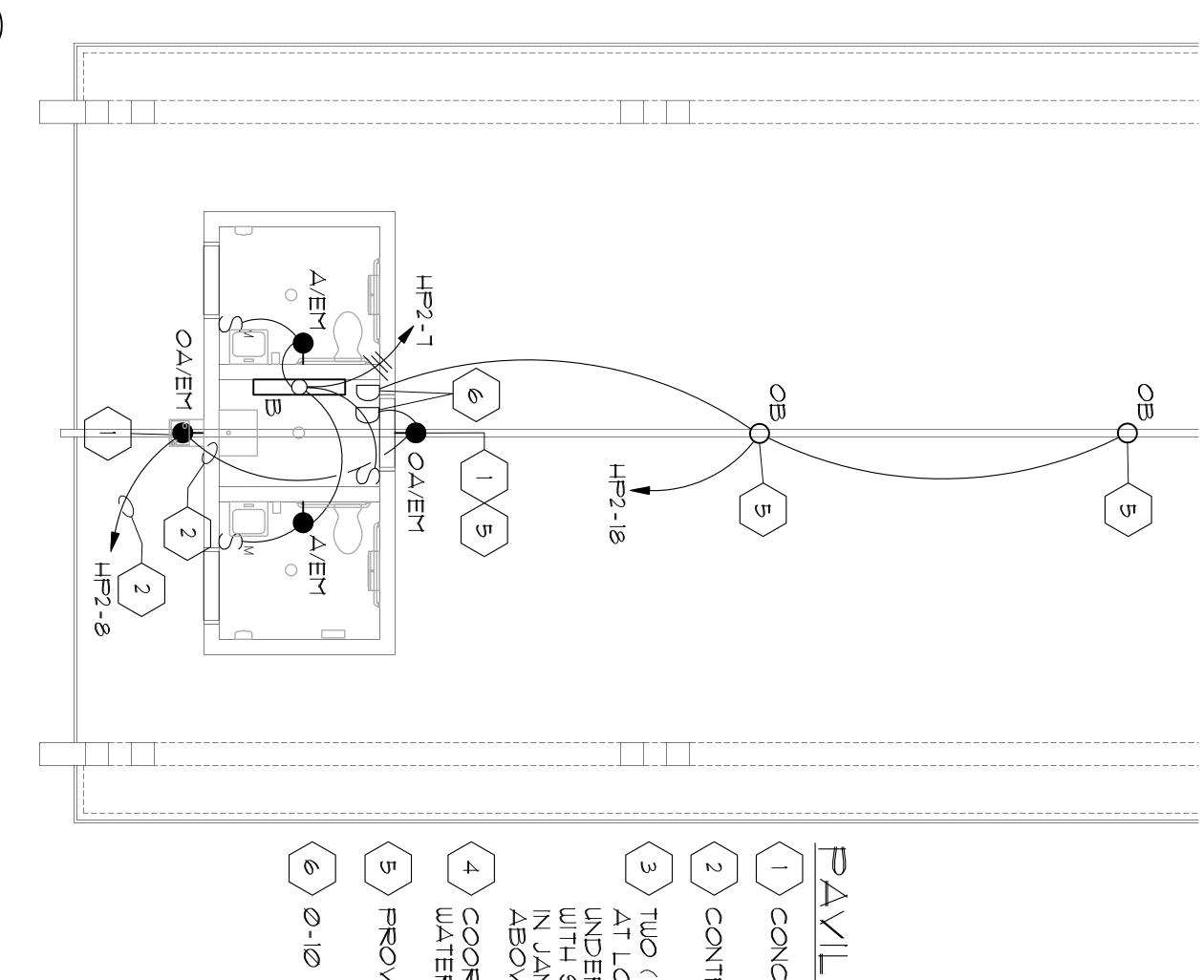
Sheet Title

Sheet Number



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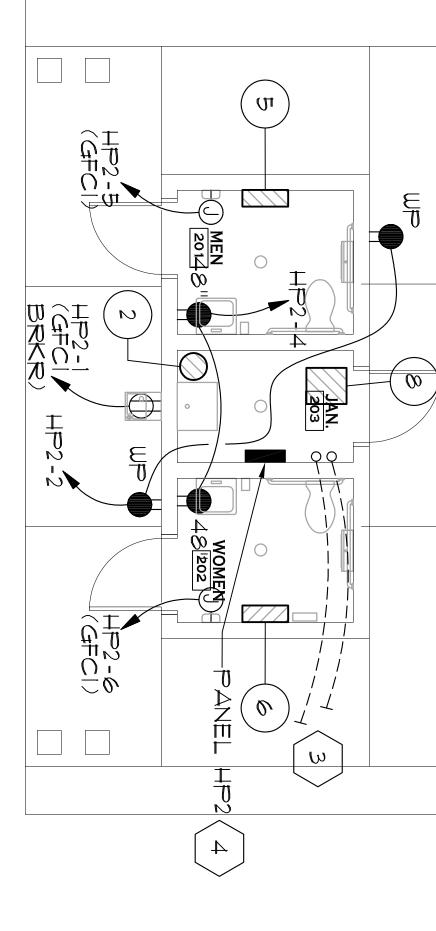
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601 A.J Land Road Canton, Georgia 30115

Hayes

James

- Ħ } CONDUITS AND RECESS BOXES
- JONTROL OUTSIDE FIXTURES WITH PHOTOCELL.
- 1 (2) 2" EMPTY CONDUITS FOR FUTURE USE, TERMINATE LOCATION DIRECTED BY OWNER, CAP CONDUIT DERORROUND 30" BELOW FINISHED GRADE AND MARK 4 STEEL REBAR BURIED 6" BELOW GRADE STUB UP JANITOR'S CLOSET WITH RIGID CONDUIT AND CAP 12" OVE FLOOR.
- ORDINATE EXACT LOCATION OF TER/SANITARY PIPING. $\frac{Q}{4}$



ISSUE

Description

CD PROGRESS SET 100% REVIEW SET BID SET

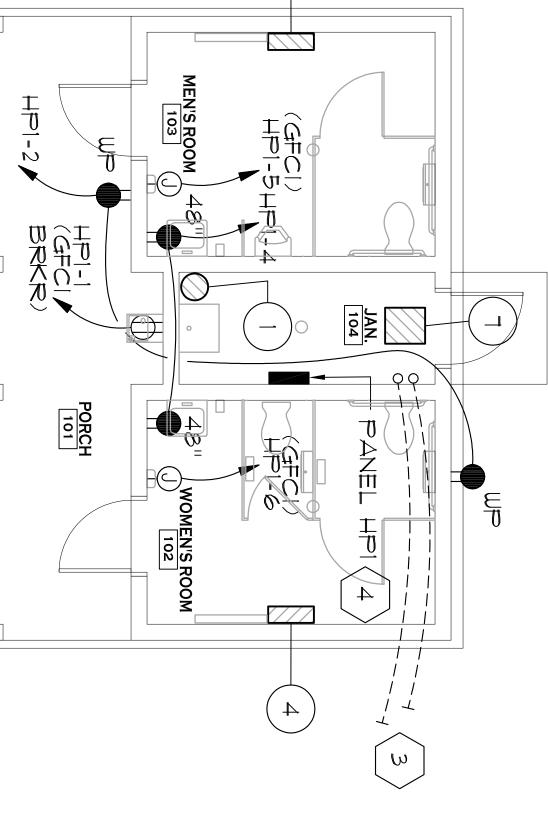
By App.
PS #

#

06/08/17 07/19/17 09/15/17

 $|\mathcal{H}_{J}|$

- CONCEAL CONDUITS AND RECESS BOXES.
- CONTROL OUTOIDE FIXTURES WITH PHOTOCELL
- 2) 2" EMPTY CONDUITS FOR FUTURE USE, TERMINATE CATION DIRECTED BY OWNER, CAP CONDUIT REQUIND 30" BELOW FINISHED GRADE AND MARK THEL REBAR BURIED 6" BELOW GRADE STUB UP ITOR'S CLOSET WITH RIGID CONDUIT AND CAP 12" E FLOOR.
- NOTION TO THE TEXACT LOCATION Q



TATISTROOM FL N Z

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RESTROOM FLOOR PLAN - ELECTRICAL **PAVILLION AND** Drawn By: Checked By: Initial Issue Date:

GER

Sheet Title

Project No.

17030pr

Project Location
Address 4380 |
City, State Zip CLAR

4380 E. PONCE DE LEON AVE CLARKSTON, GA. 30021

Land Lot

119

District-Section 18

Sheet Number

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N N 70 Ż HCTRICAL

Project Title

FRIENDSHIP FOREST WILDLIFE SANCTURARY

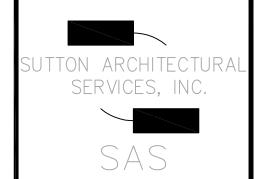
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E:200 A TOTAL SERVES	. LO4	AD: 12.51	KVA <3	1							
SERVES]	FAI	JLT	DUTY: 16	0,000 A			
	NOTE	LOAD	BREAK	ER	PHASE	BF	EAKER	LOAD	NOTE	SERVES	NO
		(kVA)	TRIP	P	AB	P	TRIP	(KVA)	1.0.12	OLIV LO	
DF	1	1.2	20	1	 † 	1	20	0.4		EXTERIOR RCPT.	2
GFCI BREAKER)					 	1	20	0.4		MEN RCPT.	4
LEC. HAND DRYER	1	1.2	20	1	 † 	1	20	1.2		ELEC. HAND DRYER	6
ANITOR CLOSET LTG		02	200	<u>_</u>			20	02		EXTEDIOD I TO	e
:UH		1.0	20	1	 	1	20	1.0		EUH	10
PARE			20	1		1	20		\sqcup	SPARE	12
lwH-1		1.60	25	2	Ť		20	Ø.4		F-1E-1	14
		1.0			 	1	20	0.4		EXTERIOR SIGN	16
TG CNTRL PNL "LCP"		Ø.Ø1	20	1	 • 	2	20	0.2		EXTERIOR POLE LIGHTS	18
XTERIOR POLE LIGHTS		Ø.2	2Ø	2	 			Ø.2			20
		Ø.2			 • 	2	3Ø	0.0		T∨SS	22
PARE			20	1	 			0.0			24
PARE			20	1	 • 	1				SPACE	26
PARE			2Ø	1	 	1				SPACE	28
PARE			2Ø	1	 • 	1				SPACE	3Ø
	LEC. HAND DRYER ANITOR CLOSET TO UH PARE WH-1 TG CNTRL PNL "LCP" XTERIOR POLE LIGHTS PARE PARE PARE	LEC. HAND DRYER ANITOR CLOSET LTG UH PARE WH-1 TG CNTRL PNL "LCP" XTERIOR POLE LIGHTS PARE PARE PARE PARE	LEC. HAND DRYER 1 1.2 ANITOR CLOSET I TO 0.3 UH 1.0 PARE WH-1 1.0 TG CNTRL PNL "LCP" 0.0 XTERIOR POLE LIGHTS 0.2 PARE PARE PARE PARE	LEC. HAND DRYER 1 1.2 20 ANITOR CLOSET LTG 0.3 20 UH 1.0 20 PARE 20 WH-1 1.0 25 TG CNTRL PNL "LCP" 0.01 20 XTERIOR POLE LIGHTS 0.2 20 PARE 20 PARE 20 PARE 20 PARE 20 PARE 20 PARE 20	LEC. HAND DRYER 1 1.2 20 1 ANITOR CLOSET TG	LEC. HAND DRYER 12 20 1 ANITOR CLOSET TC	LEC. HAND DRYER 1 12 20 1 ANITOP CLOSET LTG 02 20 1 UH 10 20 1 PARE 20 1 ID 25 2 ID 25 2 ID 20 1 ITG CNTRL PNL "LCP" 001 20 1 EXTERIOR POLE LIGHTS 02 20 2 PARE 20 1 PARE 20 1	LEC. HAND DRYER 1 12 20 1 1 20 ANITOR CLOSET TC 02 20 1 1 20 UH 10 20 1 1 20 WH-1 10 25 2 1 20 TG CNTRL PNL "LCP" 0.01 20 1 2 20 XTERIOR POLE LIGHTS 02 20 2 2 30 PARE 20 1 1 IMMARY	LEC. HAND DRYER 1 12 20 1 1 20 12 ANITOR CLOSET TC 02 20 1 1 20 10 PARE 20 1 1 20 10 WH-1 10 25 2 1 20 0.4 TG CNTRL PNL "LCP" 0.01 20 1 2 20 0.2 XTERIOR POLE LIGHTS 0.2 20 2 0.0 PARE 20 1 1 IMMARY	LEC. HAND DRYER 1 12 20 1 1 20 12 1 ANITOR CLOSET TC 03 20 1 1 20 10 PARE 20 1 1 20 10 WH-1 10 25 2 1 20 0.4 TG CNTRL PNL "LCP" 0.01 20 1 2 20 0.2 XTERIOR POLE LIGHTS 02 20 2 2 2 2 PARE 20 1 1 20 0.4 PARE 20 1 1 20 0.4 PARE 20 1 1 1 1 PARE 20 1 1 1 PARE 20 1 1 1 PARE 20 1	LEC. HAND DRYER 1 1.2 20 1 1 20 1.2 1 ELEC. HAND DRYER ANITOP CLOSET TG

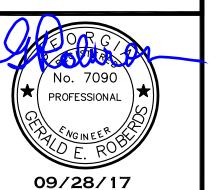
VO	LTA	AGE: 24Ø/12Ø ∨	MAINS	: 2Ø	00A/2P M	IAIN BRE	AKE	R	MC	DUNT	ING: SL	IRFACE		REMARKS:	
Bus	3 5	NZE:200 A	TOTAL	_ LO	17.8 : CA	KVA 3			FA	uLT	DUTY: 16	0,000 A			
NC	,	SERVES		NOTE	LOAD (kya)	BREAK TRIP	ER P	+	HASE 4 B	BF	REAKER TRIP	LOAD (kya)	NOTE	SERVES	NO
1		EDF		1	1.2	2Ø	1	\vdash	•	1	20	Ø.4		EXTERIOR RCPT.	2
3		(GFCI BREAKER)						1	┝┿╌	1	20	0.4		MEN RCPT.	4
5		ELEC. HAND DRY	ER	1	1.2	20	1	\vdash	┿┼	1	20	1.2	1	ELEC. HAND DRYER	6
7		JANITOR CLOSET	1 TG		02	20	1				20	02		EXTEDIOD I TO	a
9		EUH-3			1.0	2Ø	1	lacksquare	<u> </u>	1	20	1.0		EUH-4	10
11		SPARE				20	1	}_	 •	1	20			SPARE	12
13		HWH-1			1.0	25	2				200	Ø.4		F-TE	14
15					1.0			_	╀┿╌	1	20	1.2		EXTERIOR SIGN	16
17		LTG CNTRL PNL '	'LCP"		Ø.Ø1	20	1	\vdash	┡┼	1	2Ø	Ø.2		EXTERIOR LTG.	18
19		SPARE				2Ø	1	┢	│ 	2	3Ø	0.0		TVSS	2Ø
21		SPARE				2Ø	1	\vdash	┡┼			0.0			22
23		SPARE				2Ø	1	_	┝┿╌	1				SPACE	24
25		SPARE				2Ø	1	\vdash	┡┼	1				SPACE	26
27		SPACE					1	\vdash	 ♦ -	1				SPACE	28
29		SPACE					1	\vdash		1				SPACE	3Ø
LOA	4D	SPACE SUMMARY EN1 36.29 A. 3					1	F	IGHT RECEI	PTA	1.7 K CLE 2.0 0.4			SPACE A/C HEATING MISC SPACE 0.0 KV 4.4 KV	/A A 3

	MOUNTING HEIGHT IS FROM FINISHED FLOOR TO CENTERLINE OF DEVICE OR OU HEIGHT MAY YARY TO COINCIDE WITH BUILDING CONSTRUCTION	∤1L⊑1.
SYMBOL	DESCRIPTION	MOUN HEIC
AFF	ABOVE FINISHED FLOOR	
WP	WEATHER PROOF	
GFI	GROUND FAULT CIRCUIT INTERRUPTER	
#	CROSS HATCHING REPRESENTS GROUND, NEUTRAL AND HOT RESPECTIVELY, ARROW REPRESENTS HOME RUN	
	CONDUIT CONCEALED IN WALL OR ABOVE CEILING	
	CONDUIT CONCEALED IN SLAB-IN GROUND OR UNDERFLOOR	
	CONDUIT EXPOSED	
S D	CEILING MOUNTED SMOKE DETECTOR	
-0	WALL MOUNTED LIGHTING FIXTURE SEE SCHEDULE	AS NO1
-	DUPLEX RECEPTACLE OUTLET	IS" A.F.F
=	GROUND FAULT CURRENT INTERRUPTER TYPE RECEPTACLE	
-①	JUNCTION BOX WITH COVERPLATE WALL MOUNTED	
	PANELBOARD 240V/I20V	
Ç	DISCONNECT SWITCH - 30/3/30 SWITCH SIZE/ POLES/ FUSE SIZES	
S	S.P.S.T. LIGHTING SWITCH	48" A.F
S,	LIGHTING CONTROL - SWITCH / MOTION SENSOR	48" A.F



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ENGINEERS, PLANNERS & SURVEYORS

4145 SHACKLEFORD ROAD

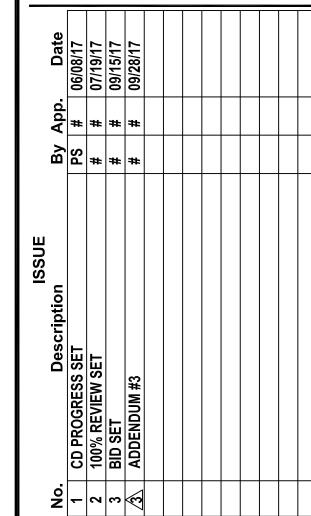
NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

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Project Title

FRIENDSHIP FOREST
WILDLIFE SANCTUARY

Project Location

Address 4380 E. PONCE DE LEON AVE
City, State Zip CLARKSTON, GA. 30021

Land Lot 119
District-Section 18

County DEKALB
Project No.

Drawn By: Checked By:

Initial Issue Date:

Sheet Title

ELECTRICAL RISER
DIAGRAM AND
SCHEDULES

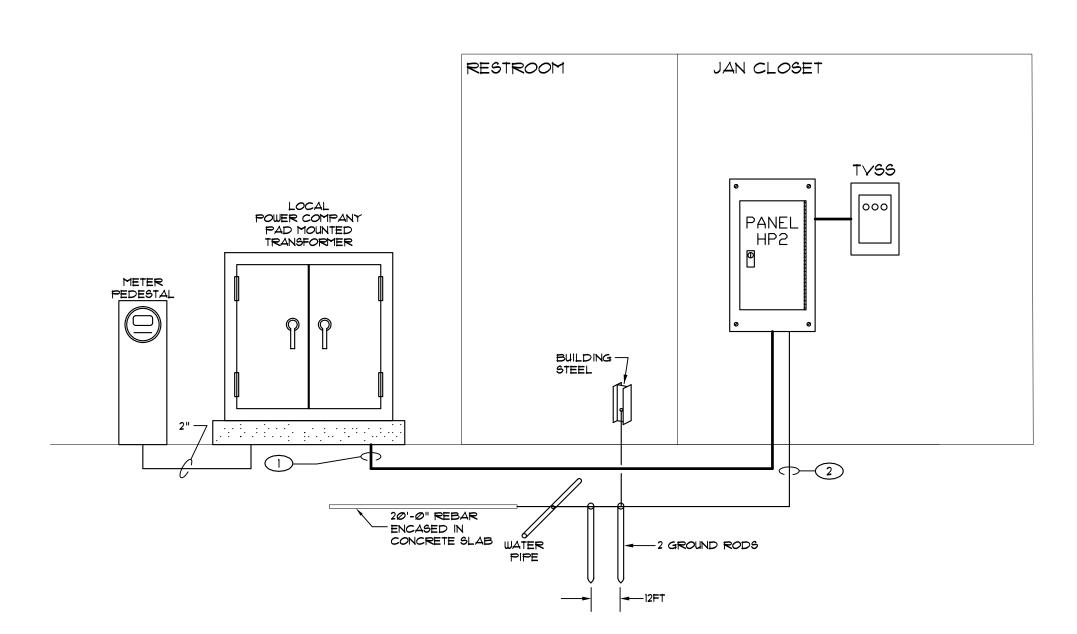
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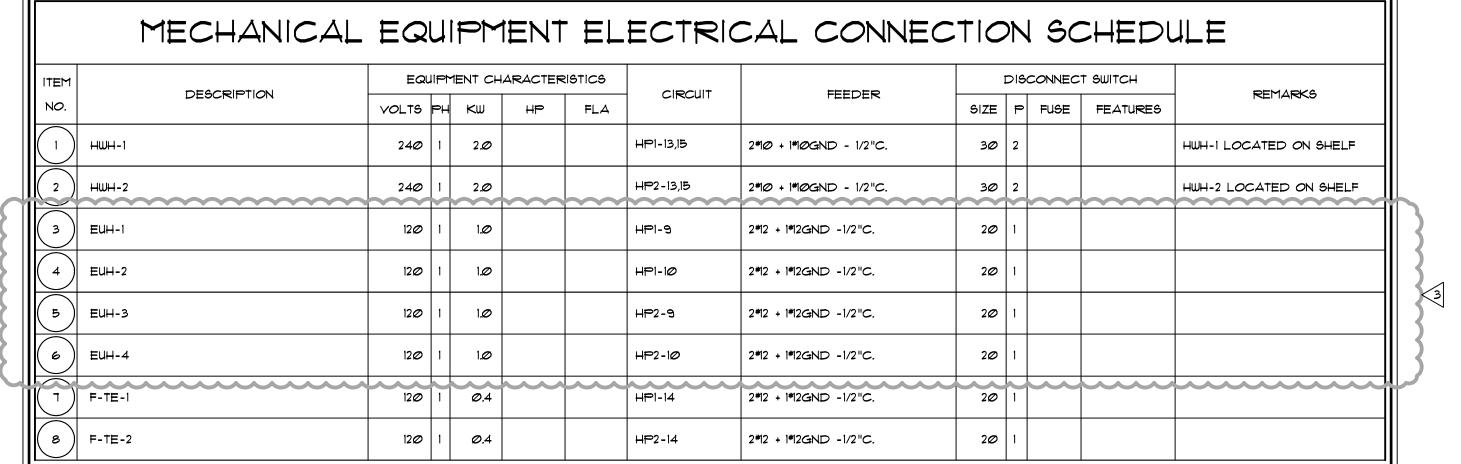
	LIG	HTING FIX	KTURE SCH	HEDULE	
	TO ELECTRICAL SPECIFICATIONS FOR ADDITION CHEDULE. MATCH VOLTAGE OF FIXTURES TO CIF		AY NOT NECESSARILY BE REFL	ECTED IN CATALOG	NUMBER AND/OR DESCRIPTION IN
MARK	DESCRIPTION	MOUNTING	LAMP5	VOLTAGE	REMARKS
/EM	PROVIDE BATTERY BACKUP				
A	WALL MOUNTED INTERIOR LIGHT KENAALL *MOI3HBL-PP-MB-20L35K-120	COORDINATE MOUNTING WITH ARCHITECT	1 - 35W LED	120	SEE SHEET A2.1 ELEVATIONS FOR EXACT LOCATION
В	WALL MOUNTED STRIP LIGHT COLUMBIA *LCS435MLEUELL14	COORDINATE MOUNTING WITH ARCHITECT	1 - 53W LED	12Ø	
OA	WALL MOUNTED EXTERIOR LIGHT KENAALL *MRI3BL-PP-MB-20L35K-120	COORDINATE MOUNTING WITH ARCHITECT	1 - 20W LED	12Ø	SEE SHEET A2.1 ELEVATIONS FOR EXACT LOCATION
0B	CEILING MOUNTED EXTERIOR LIGHT KENAALL *MRI3BL-PP-MB-20L35K-120	CEILING MOUNTED	1 - 20W LED	120	COORDINATE LOCATION WITH ARCHITECT
oc	LED POLE MOUNTED LUMINAIRE LUMEC *DM650-9G-LM-1A-135W80LED-4K-R- LE4F-22FT POLE	MOUNT ON 22'-Ø" POLE	1 - 135W LED	24Ø	COLOR TO BE SELECTED BY ARCHITECT
OD	LED RLM SIGN LUMINAIRE TROY #3RAI2LEDI8-+-3-L9A23	MOUNT ON SIGN	1 - ISW LED	120	
⊘ F	LED LINEAR FLOOD KIM *4348PØ-32L3KUV-DB-FH48	GROUND MOUNTED	1 - 74W LED	12Ø	PROVIDE 8" × 8" × 30" CONCRETE SLAB FOR MOUNTING
OL	LED HANGING LANTERN TIMELESS DESIGN #TD4T-W/LED LAMP	HUNG FROM SIGN	1 - 13W LED	120	
0P	POST TOP LED LUMINAIRE LUMEC *DMS50-SG-LM-IA-II0W64LED-4K-R- LE55-AM8412	MOUNT ON 12'-0" POLE	1 - 135W LED	240	COLOR TO BE SELECTED BY ARCHITECT

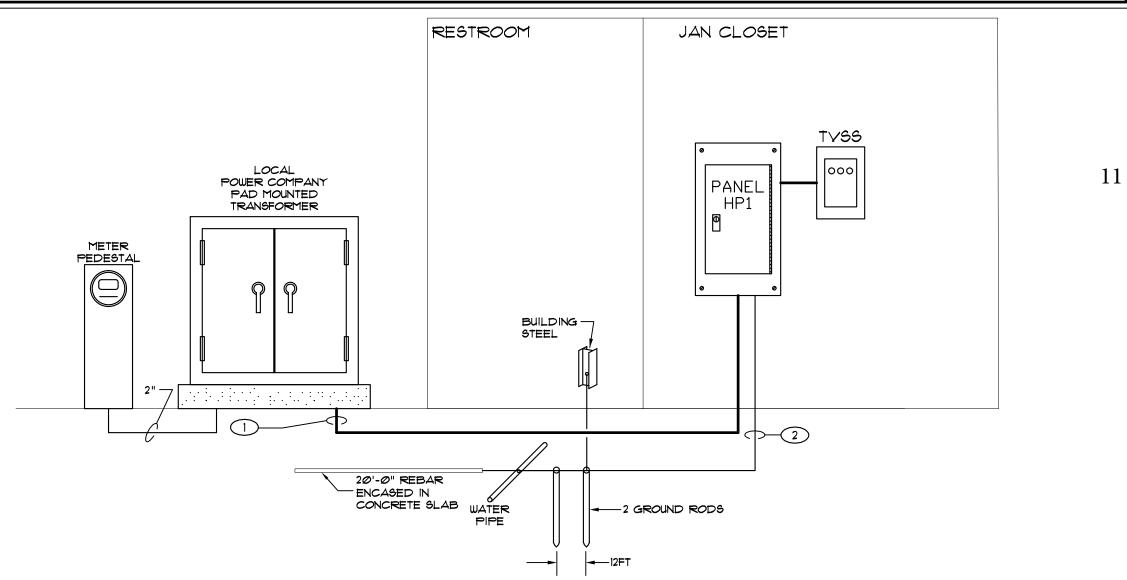




PAVILLION ELECTRICAL RISER NOTES:

- 3*3/Ø 2"C.
- 2 1#1/Ø GND 1"C.





RESTROOM ELECTRICAL RISER DIAGRAM
EI.O SCALE:NONE

RESTROOM ELECTRICAL RISER NOTES:

- 1 3#3/Ø 2"C.
- 2 1*1/Ø GND 1"C.

ROBERDS
C O N S U L T I N G
E N G I N E E R S

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SUITE 300
ATLANTA GEORGIA 30305
TELEPHONE (404) 237-8632
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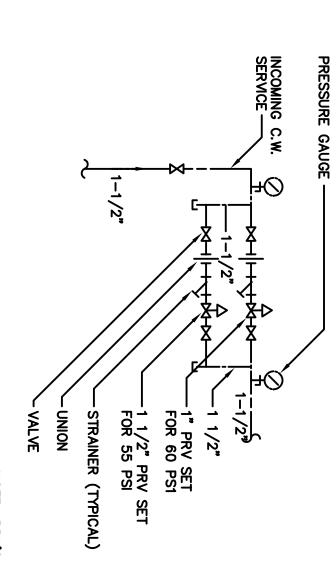
FAUCET 48" AFF	8" MINIMUM	બુ	1/2"	1/2" 1/2" 3"	MOP RECEPTOR— FLOOR MOUNTED	MS
	36" MAX SPOUT HEIGHT 27" TO BOT. OF APRON	— l-1/4"	-	1/2"	DRINKING FOUNTAIN WALL HUNG-HANDICAPPED	HEDF
	34"	1/2" 1/2" 1-1/4"	1/2"	1/2*	LAVATORY-HANDICAPPED WALL HUNG	HLAV
	FLOOR OUTLET	2"		3/4"	URINAL-HANDICAPPED REGULAR FLUSH VALVE	HUR
19" TO TOP OF SEAT	18"	4"		1"	WATER CLOSET-HANDICAPPED REGULAR FLUSH VALVE	HWC
	15"	4"		1"	WATER CLOSET- REGULAR FLUSH VALVE	WC
REMARKS	RIM HEIGHT	HW S/W	МH	CW	DESCRIP HON	MAKK
		ONS	CONNECTIONS	CON		
	PLUMBING FIXIURE SCHEDULE	\r \(\(\) \(\)	XIU	1G FI	TLOWIN	

SOIL OR WASTE ABOVE FLOOR OR CEILING (S OR W)

SOIL OR WASTE BELOW FLOOR (S OR W)

VENT (V)

RAIN WATER LEADER (DS)
OR STORM



R CLEANOUT R DRAIN R SINK

JEF VALVE
)WER DRAIN
)WER HEAD
?VICE SINK
IPERATURE & PRESSURE

VATORY
NHOLE
MORY STOP
NDICAPPED LAVATORY
ESSURE REDUCING VALVE
OF DRAIN

R HEATER PED URINAL

E VALVE EL FLOOR DRAIN CONTROL VALVE

NT THRU ROOF

TER CLOSET

INDICAPPED WATER CLOSET

ILL HYDRANT (WATER)

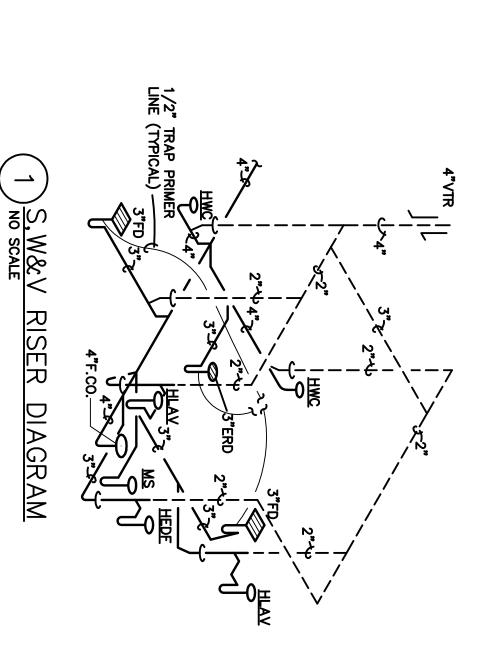
RD HYDRANT (WATER)

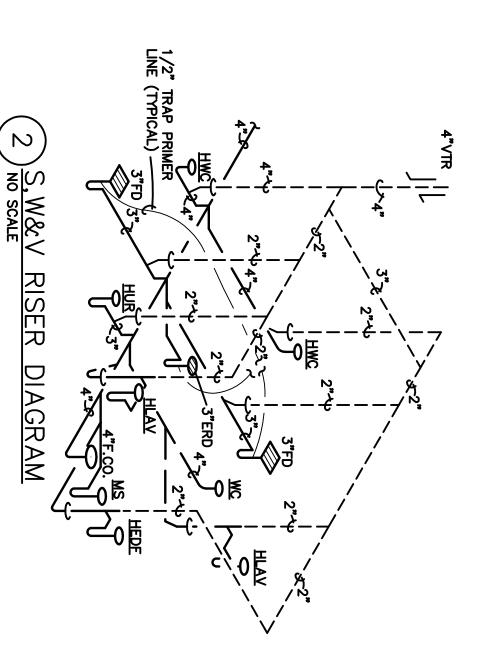
TER HAMMER ARRESTOR

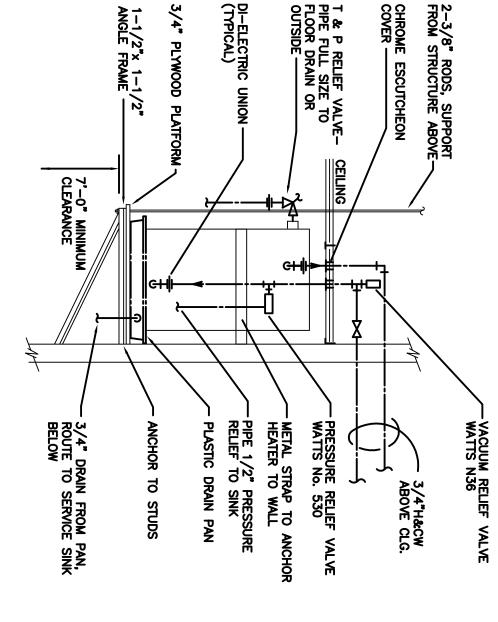
RD CLEANOUT

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TRAP NO SCALE

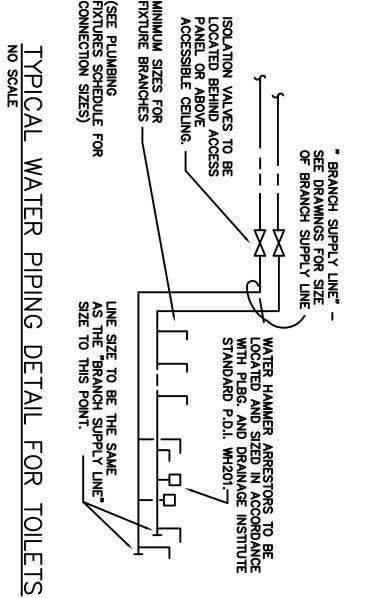
PRIMER

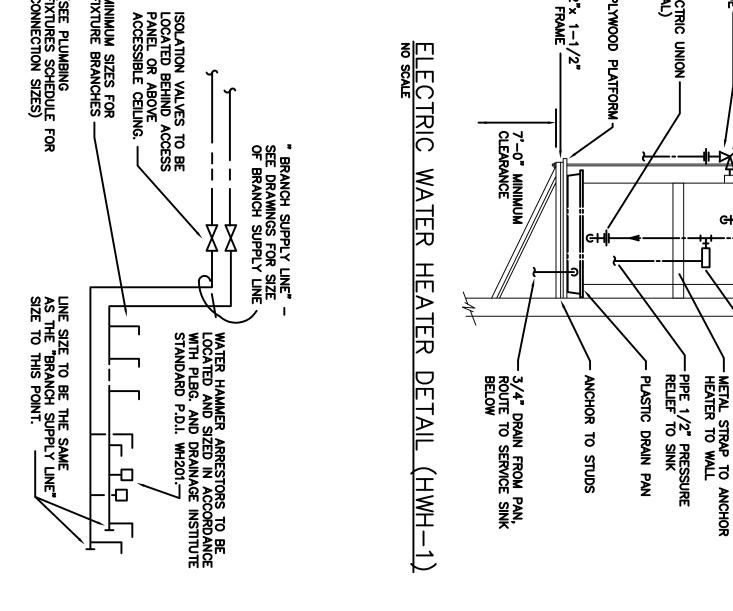
PIPING DIAGRAM

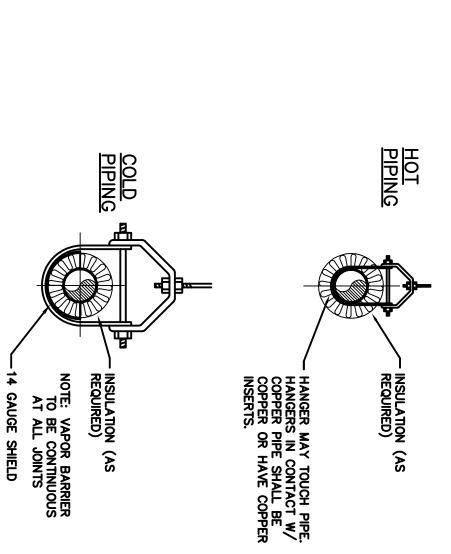
1/2" TYPE "K" COPPER LINES BELOW SLAB TO FLOOR DRAINS. NO JOINTS BELOW SLAB. PITCH LINE TO DRAINS (TYPICAL)

1/2" TYPICAL

TRAP PRIMER DISTRIBUTION BOX. (PPP Inc MODEL DU-4)







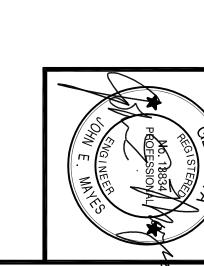




SYMBOL

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8



SAS

SERVICES, INC.

601 A.J LAND ROAD CANTON, GEORGIA 30115 PHONE: 770-442-8682 FAX: 770-442-8689 PETESASI@BELLSOTH.NET

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TRAP PRIMER VALVE (PPP Inc MODEL PR-500)

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Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

INSULATED PIPING PROTECTION DETAILS NO SCALE

Drawn By: Checked By: Initial Issue Date: Project Location
Address 4380 I
City, State Zip CLAR Project No. Land Lot District-Section 18 4380 E. PONCE DE LEON AVE CLARKSTON, GA. 30021 DEKALB 17030pr

Sheet Title PLUMBING LEGEND

7-19-17

Sheet Number **SCHEDULE DETAILS**

P1.0



SETTON ARCHITECTURAL SERVICES, INC. SAS

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 By
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 Date

 7-19-17
 9-15-17
 No. Description 100% Review Set 2 Bid Set

PRELIMINARY
NOT TO BE RELEASED FOR CONSTRUCTION

Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

Project Location

Address 4380 E. PONCE DE LEON AVE
City, State Zip CLARKSTON, GA. 30021

Land Lot 119

District-Section 18

County DEKALB

Project No. Drawn By: Checked By: Initial Issue Date: 17030pr MR JP 7-19-17

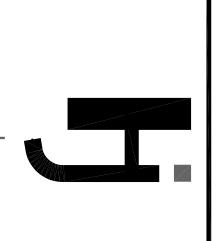
S,W&V PIPING **PLANS**

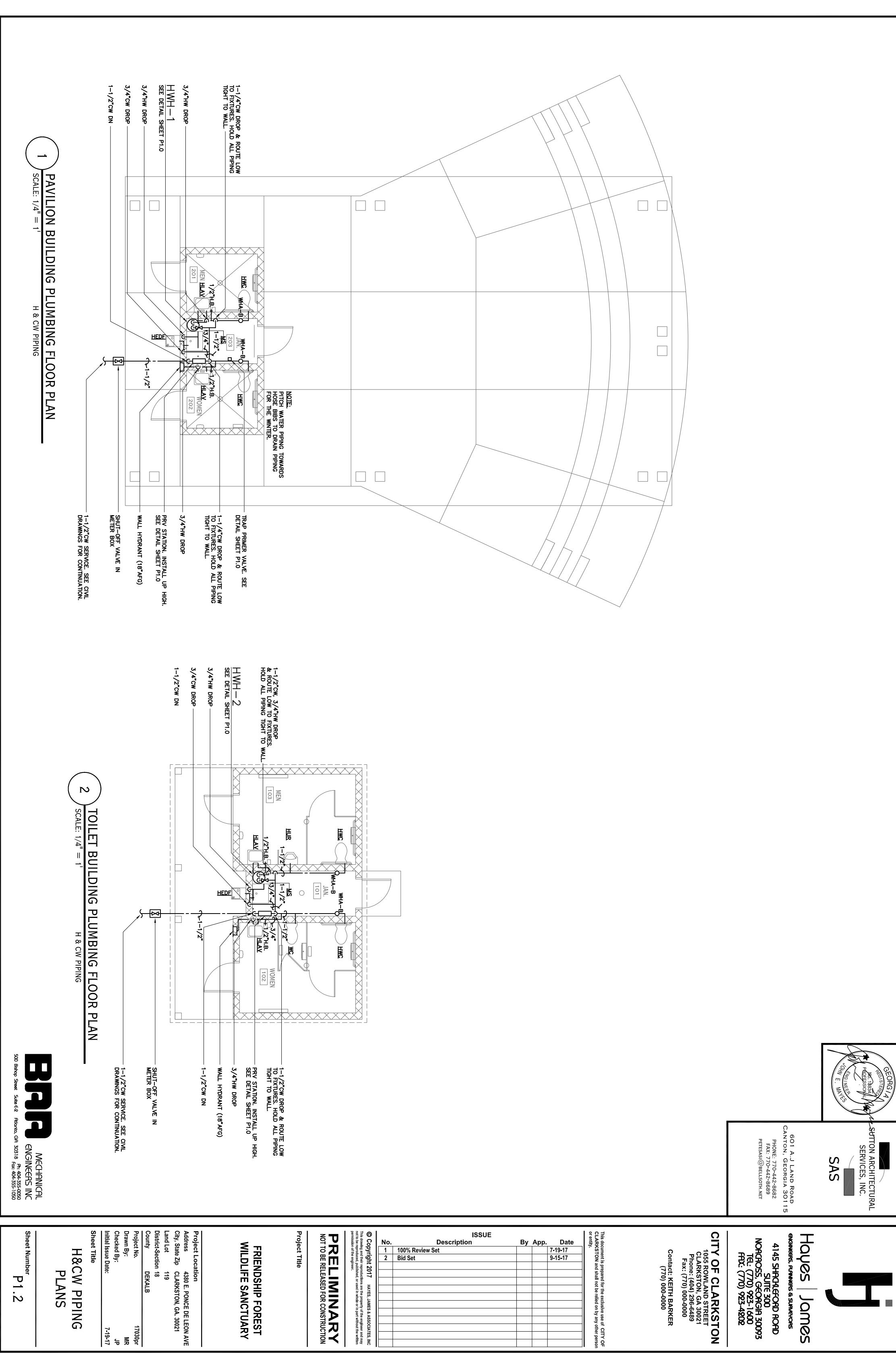
Sheet Title

PAVILION BUILDING PLUMBING FLOOR PLAN SCALE: 1/4" = 1' S, W&V PIPING

Sheet Number P1.1

MECHANICAL ENGINEERS INC Ph: 404-355-0050 ch. GA 30318 fox: 404-355-1050





17030pr

MR JP 7-19-17

James

A. "INTERNATIONAL BUILDING CODE", 2012 EDITION AND "GEORGIA STATE

AMENDMENTS TO THE INTERNATIONAL BUILDING CODE".

B. "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-11).

C. "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-11/ASCE 5-11/TMS 402-11). SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1-11/ASCE 6-11/TMS 602-11).

II. DESIGN LOADS

A. ROOF DEAD LOAD. . 5 PSF B. GROUND SNOW LOAD, Pg.... C. ROOF LIVE LOAD.. 20 PSF D. WOOD BRIDGE LIVE LOAD.. 100 PSF

E. WIND LOAD ACCORDING TO THE SECTION 1609 (IBC 2012), WIND LOADS DETERMINED WITH CHAPTERS 26 THROUGH 30 OF ASCE STANDARD (ASCE/SEI 7-10).

WIND LOADS PARAMETERS PER IBC 2012 & ASCE 7-10:

. 115 mph (FIG.1609A - IBC 2012) ULTIMATE WIND SPEED NOMINAL WIND SPEED 89 mph (T.1609.3.1 - IBC 2012) RISK CATEGORY.. .. II (TABLE 1604.5 - IBC 2012) . B (SECT. 1609.4.3 - IBC 2012) WIND EXPOSURE..

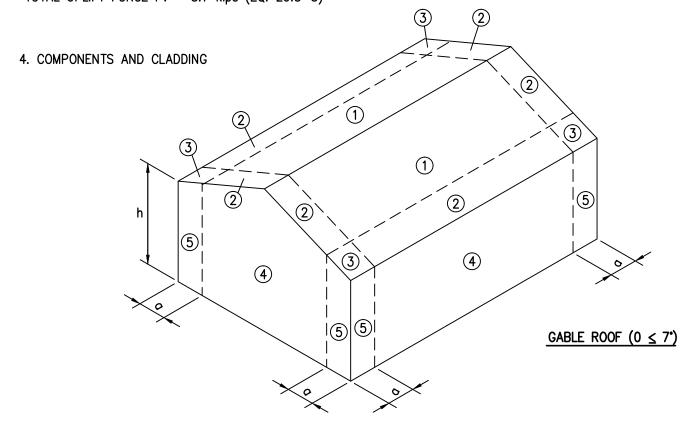
ANALYSIS PROCEDURE FOR WIND LOADS ON ENCLOSED AND PARTIALLY ENCLOSED BUILDINGS WITH ALL HEIGHTS METHOD PER CHAPTER 27 ASCE/SEI 7-10: ...0.85 (TABLE 26.6-1 ASCE)

WIND DIRECTIONALITY FACTOR, Kd ...

2. TOPOGRAPHIC FACTOR, Kzt1.00 (FIG. 26.8-1 ASCE) . 0.85 (OR SECTION 26.9 ASCE GUST-EFFECT FACTOR, G. - SEE TABLE BELOW)

BUILDINGS	INTERNAL PRESSURE COEFFICIENT, GCpi (TABLE 26.11-1	GUST-EFFECT FACTOR PER SECTION 26.9 ASCE	VELOCITY COEFFICE (TABLE 27		COEFFICIE PRESS	
	ASCE)	730L	Kh	Kz	Qh	Qz
TOILET BUILDING	0.18 ±	0.871	0.61	0.61	17.42	17.42
PAVILION BUILDING	0.18 ±	0.871	0.61	0.61	17.42	17.42
PAVILION CANOPY	0.55 ±	0.871	0.6	0.61	20.09	20.09

* TOTAL FORCE F = 9.6 kips (EQ. 29.5-1) TOTAL LATERAL FORCE Fh = 4.7 kips (EQ. 29.5-2)TOTAL UPLIFT FORCE Fv = 3.7 kips (EQ. 29.5-3)



COMPONENTS & CLADDING CECTION TO E ACCE 7 40

PART OF BUILDING			NET DES	SIGN WIND PRESSURI	E (psf)
불림	ZONE	EFFECTIVE AREA, SF	TOILET BUILDING	PAVILION BUIL	
<u> </u>)Z	51		BUILDING PART	CANOPY PART
		10	+21.8/-23.8	+21.8/-23.8	LOAD CASE "A"
	1	20	+21.2/-22.6	+21.2/-22.6	-24.4/-27.3
	'	50	+20.4/-21.0	+20.4/-21.0	LOAD CASE "B"
		100	+19.8/-19.8	+19.8/-19.8	+24.4/+27.3
ROOF		10	+21.8/-23.8	+21.8/-23.8	LOAD CASE "A"
	2	20	+21.2/-22.6	+21.2/-22.6	-24.4/-27.3
	2	50	+20.4/-21.0	+20.4/-21.0	LOAD CASE "B"
		100	+19.8/-19.8	+19.8/-19.8	+24.4/+27.3
		10	+21.8/-23.8	+21.8/-23.8	LOAD CASE "A"
	3	20	+21.2/-22.6	+21.2/-22.6	-24.4/-27.3
	٥	50	+20.4/-21.0	+20.4/-21.0	LOAD CASE "B"
		100	+19.8/-19.8	+19.8/-19.8	+24.4/+27.3
		10	+23.8/-25.8	+23.8/-25.8	N/A
		20	+22.7/-24.7	+22.7/-24.7	N/A
	4	50	+21.3/-23.3	+21.3/-23.3	N/A
ا بـ		100	+20.2/-22.2	+20.2/-22.2	N/A N/A
WALL		10	+23.8/-31.9	+23.8/-31.9	
	_	20	+22.7/-29.7	+22.7/-29.7	N/A
	5	50	+21.3/-26.9	+21.3/-26.9	N/A
		100	+20.2/-24.7	+20.2/-24.7	N/A
		10	-40.3	-40.3	
		20	-39.1	-39.1	
NG	2	50	-37.5	-37.5	-47.6
ERH/		100	-36.3	-36.3	
ROOF OVERHANG		10	-40.3	-40.3	
90F	,	20	-39.1	-39.1	
<u>م</u>	3	50	-37.5	-37.5	-51.2
		100	-36.3	-36.3	
С	ORNER	ZONE a, ft	3.6	3.0	

5. AS THE BUILDING HAS BEEN DESIGN AS AN ENCLOSED STRUCTURE, COMPONENTS AND CLADDING DETAILED BY OTHERS, INCLUDING WALL COVERINGS, ROOF COVERINGS, EXTERIOR WINDOWS (FIXED AND OPERABLE), DOORS, OVERHEAD DOORS, ETC., AS APPLICABLE, SHALL BE DESIGNED BY OTHERS TO RESIST DESIGN WIND PRESSURES FOR THE BUILDING.

- E. SEISMIC DESIGN DATA BY ZIP CODE 30021
- 1. OCCUPANCY CATEGORY II (I= 1.0) 2. MAPPED SPECTRAL RESPONSE ACCELERATIONS a.) Ss = 0.1864 g
- b.) S1 = 0.09013. DESIGN SPECTRAL RESPONSE ACCELERATIONS
- a.) SDS = 0.199b.) SD1 = 0.144
- 4. SITE CLASS D 5. SEISMIC DESIGN CATEGORY C

SEISMIC ANALYSIS PROCEDURE - EQUIVALENT LATERAL FORCE PROCEDURE - ASCE 7-10 SECTION 12.8

		7,002 7 10	SECTION 12.0		
		BAS	SIC SEISMIC FORCE	PROCEDURE RESIST	TING SYSTEM
BUILDINGS		LONGITUDINAL DIR	ECTION AND TRANS	SVERSE DIRECTION	BASE SHEAR
		R	Cd	Cs	٧
TOILET BUILDING	*	2.0	1.75	0.0994	10.4 kips
PAVILION BUILDING	*	2.0	1.75	0.0994	14.6 kips

* - ORDINARY REINFORCED MASONRY SHEAR WALL

III. FOUNDATIONS

A. DESIGN WITH A SOIL BEARING CAPACITY OF 3.000 PSF (MIN.) IN ACCORDANCE WITH RECOMMENDATIONS OF SUBSURFACE EXPLORATION REPORT BY GEO-HIDRO ENGINEERS GROUP, INC. DATED MARCH 6, 2015.

RETAINING WALL (AS OCCURS) DESIGN PARAMETERS:		
ACTIVE EARTH PRESSURE	.33.0 PSF/F	-7
PASSIVE EARTH PRESSURE	•	
AT REST EARTH PRESSURE (WALLS SUPPORTED AT TOP)	.50.0 PSF/F	-7
COEFFICIENT OF SLIDING FRICTION BETWEEN FOUNDATION & SOIL	0.40	
SOIL WEIGHT	115125 PCF	

B. ANY FILL BELOW INTERIOR CONCRETE SLABS ON GRADE AND ANY FILL WITHIN 5'-0" OF THE BUILDING LIMIT SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE UPPER 12 INCHES SHALL BE COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.

C. ALL FOOTING EXCAVATIONS AND SLAB SUBGRADE SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY THAT THE REQUIRED BEARING CAPACITY AND/OR COMPACTION IS AVAILABLE. IF ANY PORTION OF THE FOOTING OR SLAB ON GRADE IS FOUND TO OCCUR IN AN UNSTABLE OR UNSUITABLE SOIL, THE ENGINEER SHALL BE NOTIFIED.

D. NO BACKFILL SHALL BE PLACED AGAINST CONCRETE WALLS UNTIL CONCRETE HAS ATTAINED FULL STRENGTH.

E. CONCRETE WALLS SHALL HAVE VERTICAL KEYED CONSTRUCTION OR TOOLED CONTROL JOINTS AT 20'-0" O.C. MAXIMUM. UNLESS NOTED OTHERWISE ON THE DRAWINGS. STOP HORIZONTAL REINFORCEMENT 2" CLEAR OF EACH SIDE OF CONSTRUCTION JOINTS. ALLOW ONLY 50% OF HORIZONTAL WALL REINFORCEMENT TO PASS THROUGH CONTROL JOINTS. CONTROL JOINTS ARE REQUIRED IN THE WALLS BUT NOT IN THE FOOTINGS SUPPORTING THE WALLS.

IV. MATERIALS

A. CONCRETE

1. CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE NORMAL WEIGHT, WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH, I'c= 3,000 PSI. THE PROPOSED MATERIALS AND CONCRETE MIX DESIGN SHALL BE DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH. RESULTS OF CONCRETE TESTING SHALL BE AVAILABLE AT THE SITE.

2. USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT ACCEPTABLE.

- 3. DO NOT PLACE PIPES OR DUCTS EXCEEDING ONE-THIRD THE CONCRETE SLAB OR WALL THICKNESS WITHIN THE SLAB OR WALL, UNLESS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.
- 4. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES, ACCESSORIES, ETC. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR GROUNDS REQUIRED TO BE ENCASED IN CONCRETE AND FOR LOCATION OF FLOOR FINISHES, SLOPES AND SLAB DEPRESSIONS.
- 5. CONCRETE WORK SHALL CONFORM TO ACI 318 AND CRSI STANDARDS.
- 6. DEFECTIVE AREAS IN CONCRETE INCLUDING, BUT NOT LIMITED TO, HONEY-COMBING, SPALLS, AND CRACKS WITH WIDTHS EXCEEDING 0.01 INCH SHALL BE REPAIRED. EXTENT OF DEFECTIVE AREA TO BE DETERMINED BY THE STRUCTURAL ENGINEER.

B. BAR REINFORCING STEEL

- 1. ALL BAR REINFORCING STEEL IN CONCRETE SHALL CONFORM TO ASTM A615, GRADE 60.
- 2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND HAVE MINIMUM SIDE AND END LAPS OF 8". PROVIDE IN FLAT SHEETS (ROLLS NOT PERMITTED).
- 3. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315-05, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT". SUBMIT SHOP DRAWINGS FOR APPROVAL SHOWING ALL FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS ELEVATIONS AND DETAILS IS NOT ACCEPTABLE. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND REVIEWED.
- 4. HORIZONTAL REINFORCEMENT IN FOOTINGS, TURNDOWN SLABS AND WALLS SHALL BE CONTINUOUS AROUND CORNERS.
- 5. TIE ALL REINFORCING STEEL AND EMBEDMENTS IN CONCRETE OR MASONRY SECURELY INTO PLACE PRIOR TO PLACING CONCRETE OR GROUT. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES.
- 6. PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE. STAGGER SPLICES WHERE POSSIBLE. ALL LAP SPLICE LENGTHS NOT SHOWN ON THE PLANS SHALL BE A CLASS B TENSION SPLICE, IN CONFORMANCE WITH ACI 318-05.

C. TIMBER

- 1 TIMBER DIMENSIONED LUMBER TO BE MINIMUM #2 SOUTHERN PINE EXCEPT MARKED SS (SELECT STRUCTURE), KD, 19% MAXIMUM MOISTURE CONTENT. SEE DRAWINGS FOR STUD AND PLATE
- 2 ALL DIMENSIONED LUMBER SHALL BE PRESSURE TREATED FOR WATER PROOF PROTECTION.
- 3 ALL SILL PLATES TO BE #3 SOUTHERN PINE PRESSURE TREATED, MINIMUM AND PLATES ABOVE GROUND LEVEL SHALL BE #2 SOUTHERN PINE PT, MINIMUM.
- 4 PRESSURE TREATED (PT) TIMBER SHALL BE PRESSURE TREATED WITH ONE OF THE FOLLOWING: a. ACQ-D (CARBONATE) WITHOUT AMMONIA WITH ACTUAL RETENTION LEVELS LESS THAN
 - LESS THAN 0.21 PCF. c. MICRONIZED COPPER QUAT (MCQ) WITH ACTUAL RETENTION LEVELS LESS THAN 0.40 PCF.

b. COPPER AZOLE (CA-B OR CBA-A) WITHOUT AMMONIA WITH ACTUAL RETENTION LEVELS

- 5 ALL METAL CONNECTORS, STRAPS, CLIPS, ANCHORS AND FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE COMPOSED OF STAINLESS STEEL (TYPE 303, 304, 305 OR 316) OR SHALL BE FINISHED AS FOLLOWS:
- a. SIMPSON ZMAX (G185 PER ASTM A653)
- b. HOT-DIPPED GALVANIZED PER ASTM A123 FOR CONNECTORS AND ASTM A153 FOR ANCHORS AND FASTENERS
- c. MECHANICALLY GALVANIZED ANCHORS AND FASTENERS PER ASTM B695 CLASS 55 OR GREATER
- d. SDS SCREWS TO HAVE DOUBLE BARRIER COATING

MANUFACTURER'S RECOMMENDATIONS. SEE GENERAL NOTE 5.

- e. WHEN USING STAINLESS STEEL CONNECTORS, USE STAINLESS STEEL FASTENERS
- f. WHEN USING ZMAX OR HOT DIP GALVANIZED CONNECTORS, USE FASTENERS GALVANIZED PER ASTM A153.
- a. ALL ANCHOR BOLTS, INCLUDING THOSE 1/2" Ø AND LARGER, IN CONTACT WITH PRESSURE TREATED LUMBER, ARE REQUIRED TO MEET THE REQUIREMENTS OF THIS NOTE.
- 6 ALL TIMBER FRAMING CONNECTIONS SHALL BE MADE WITH JOIST HANGERS, TIE DOWNS, FRAMING ANCHORS, POST CAPS, POST BASES, ETC., AND SHALL BE SIZED AND ATTACHED PER
- 7 ALL TIMBER POST BASES SHALL BE ATTACHED TO THE SLAB AND FOUNDATION PER SIMPSON TITHEN HD-ANCHOR OR EQUAL.
- 8 MULTIPLE-PLY TIMBER AND BEAMS SHALL BE FASTENED TOGETHER AS FOLLOWS: a. (2) & (3)-2x AND (2) & (3)-2x + 1/2" PLYWOOD PLATE(S) BEAMS SHALL BE NAILED TOGETHER WITH 12d COMMON @ 8" O.C. AT TOP AND BOTTOM OF THE BEAM. PLYWOOD PLATES, WHERE REQUIRED, SHALL HAVE A DEPTH EQUAL TO THE DEPTH OF THE 2x BEAM.
 - b. (2)-LVL BEAMS SHALL BE NAILED TOGETHER WITH 3 ROWS OF 16d COMMON @ 8" O.C. c. (4)-2x AND WIDER BEAMS AND (3)-LVL BEAMS SHALL BE BOLTED TOGETHER WITH 2 ROWS OF 1/2"Ø THROUGH BOLTS OR LAG BOLTS @ 12" O.C., 2" FROM THE TOP AND BOTTOM EDGES OF THE BEAMS. IF LAG BOLTS ARE USED. 5/16"Ø PILOT HOLES ARE REQUIRED.
- d. THE OTHER TYPES OF ASSEMBLIES LVL AND PSL BEAMS SEE 15/S0-05. 9. MULTIPLE STUD OR SOLID WOOD COLUMNS SHALL BE CONTINUOUS FROM THE FRAMING LEVEL WHERE SHOWN TO THE FOUNDATION OR ELEVATED POST-TENSIONED SLAB. ADD BLOCKING IN ZONE OF FLOOR TRUSS EQUAL TO STUDS OR COLUMNS AS REQUIRED. EACH LAYER OF MULTIPLE STUDS SHALL BE NAILED TOGETHER WITH 2-10d COMMON @ 8" O.C. STAGGERED.
- a) MATERIALS FOR MICROLLAM LAMINATED BEAMS (LVL) SHALL CONFORM TO THE FOLLOWING

MINIMUM ALLOWABLE STRESSES AND MATERIAL PROPERTIES: Fb* = 2600 psi $E = 1.9 \times 10^6$ Ft = 1555 psiFc-parallel = 2510 psi Fv = 285 psiFc-perpendicular = 750 psi *FOR 12-INCH DEPTH: FOR ALL OTHER DEPTHS MULTIPLY BY (12/d)^(0.136)

b) MATERIALS FOR WOLMANIZED PARALLAM BEAMS (PSL - SERVICE LEVEL 2) SHALL CONFORM TO THE FOLLOWING MINIMUM ALLOWABLE STRESSES AND MATERIAL PROPERTIES:

 $E = 1.46 \times 10^6$ Fb* = 1827 psiFt = 1397 psiFc-parallel = 2510 psi Fv = 197 psiFc-perpendicular = 750 psi *FOR 12-INCH DEPTH: FOR ALL OTHER DEPTHS MULTIPLY BY (12/d)^(0.111)

c) MATERIALS FOR PARALLAM LAMINATED BEAMS (PSL) SHALL CONFORM TO THE FOLLOWING MINIMUM ALLOWABLE STRESSES AND MATERIAL PROPERTIES

Fb* = 2900 psi $E = 2.0 \times 10^6$ psi Ft = 2025 psiFc-parallel = 2900 psi Fc-perpendicular = 750 psi *FOR 12-INCH DEPTH: FOR ALL OTHER DEPTHS MULTIPLY BY (12/d)^(0.111)

d) MATERIALS FOR TIMBERSTRAND AND RIM BOARD (LSL 1.3E) SHALL CONFORM TO THE FOLLOWING MINIMUM ALLOWABLE STRESSES AND MATERIAL PROPERTIES:

 $E = 1.3 \times 10^6 \text{ psi}$ Fb* = 1700 psiFt = 1075 psi Fc-parallel = 1400 psi Fv = 400 psiFc-perpendicular = 680 psi

- *FOR 12-INCH DEPTH: FOR ALL OTHER DEPTHS MULTIPLY BY (12/d)^(0.092) 11 IF WALL PANELS ARE USED, LET-IN WOOD OR METAL BRACES ARE NOT ALLOWED. ADJACENT EXTERIOR PANELS AND SHEAR WALL PANELS SHALL BE ATTACHED ALONG VERTICAL EDGES WITH 12d COMMON @ 6" O.C. MAXIMUM FROM ONE PANEL TO THE ADJACENT PANEL.
- 12 NAILING IS PER FASTENER SCHEDULE ON DRAWING SO.2, U.N.O.

D. MASONRY

 \dots f'm = 1,500 PSI, FOR DESIGN 1. HOLLOW UNITS.....

MORTAR... ...ASTM C270, TYPE M OR S

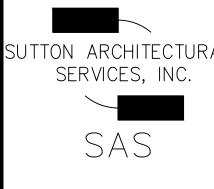
CORNERS, INTERSECTIONS, ETC.

- 3. CONCRETE MASONRY WORK SHALL CONFORM TO ACI 530, BUILDING CODE REQUIREMENTS FOR
- MASONRY STRUCTURES AND ACI 530.1, SPECIFICATION FOR MASONRY STRUCTURES. 4. MASONRY WALLS SHALL HAVE HORIZONTAL JOINT REINFORCING CONFORMING TO ASTM A82, WITH (2)-9 GAGE OR HEAVIER WIRES, ZINC COATED, PLACED AT 16 INCHES ON CENTER (8 INCHES ON

CENTER AT PARAPETS), UNLESS NOTED OTHERWISE. PROVIDE SPECIAL ACCESSORIES FOR

- 5. MASONRY SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION C90 FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS.
- 6. WALLS SHALL BE CONSTRUCTED USING A FULL BED OF MORTAR. VERTICAL REINFORCING SHALL BE GROUTED IN PLACE WITH 2000 PSI FINE GROUT CONFORMING TO ASTM C476 (GROUT SLUMP SHALL FALL BETWEEN 8 AND 11 INCHES). LAY BLOCK UP A MAXIMUM OF 4'-0" PRIOR TO FILLING CELLS WITH GROUT.
- 7. VERTICAL WALL REINFORCING SHALL BE LOCATED IN ALL WALL CORNERS, AT EACH SIDE OF MASONRY CONTROL AND EXPANSION JOINTS, AT SIDES OF WALL OPENINGS AND AT THE ENDS OF WALLS. MASONRY REINFORCING STEEL SHALL BE PLACED IN THE CENTER OF CMU CELLS, UNLESS
- 8. VERTICAL REINFORCING BARS IN MASONRY SHALL BE LAP SPLICED MINIMUM 48 BAR DIAMETERS.
- E. COLD FORMED METAL FRAMING FOR JOISTS AND BEAMS SHALL BE "CSJ" TYPE, WITH 1 5/8 INCH WIDE FLANGES AND 1/2 INCH MINIMUM FLANGE RETURNS.
- F. POST INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCES AND/OR SPACINGS INDICATED IN THE MANUFACTURER'S LITERATURE. UNLESS SPECIFIED OTHERWISE, ANCHORS SHALL BE EMBEDDED IN THE APPROPRIATE SUBSTRATE WITH A MINIMUM EMBEDMENT OF 8 TIMES THE NOMINAL ANCHOR DIAMETER OR THE EMBEDMENT REQUIRED TO SUPPORT THE INTENDED LOAD.





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V. MISCELLANEOUS

- A. NO PROVISION OF ANY REFERENCED STANDARD SPECIFICATION, MANUAL OR CODE (WHETHER OR NOT SPECIFICALLY INCORPORATED BY REFERENCE IN THE CONTRACT DOCUMENTS) SHALL BE EFFECTIVE TO CHANGE THE DUTIES AND RESPONSIBILITIES OF THE OWNER, CONTRACTOR, ENGINEER, SUPPLIER OR ANY OF THEIR CONSULTANTS, AGENTS OR EMPLOYEES FROM THOSE SET FORTH IN THE CONTRACT DOCUMENTS. NOR SHALL IT BE EFFECTIVE TO ASSIGN TO THE STRUCTURAL ENGINEER OF RECORD ANY DUTY OR AUTHORITY TO SUPERVISE OR DIRECT THE FURNISHING OR PERFORMANCE OF THE WORK OR ANY DUTY OR AUTHORITY TO UNDERTAKE RESPONSIBILITIES CONTRARY TO THE PROVISIONS OF THE CONTRACT DOCUMENTS.
- B. THE CONSTRUCTION DOCUMENTS CONSIST OF THE ENTIRE SET OF DRAWINGS AND SPECIFICATIONS OF ALL DISCIPLINES. STRUCTURAL CONTRACT DOCUMENTS INCLUDE, BUT ARE NOT LIMITED TO, THE STRUCTURAL DOCUMENTS (DRAWINGS AND SPECIFICATIONS), BUT DO NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS OR MATÉRIAL PREPARED AND SUBMITTED BY THE CONTRACTOR.
- C. CONTRACT DOCUMENTS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE CODE OF PRACTICE OR OTHER STANDARDS. WHERE A CONFLICT OCCURS WITHIN THE CONTRACT DOCUMENTS, THE STRICTEST REQUIREMENT SHALL GOVERN.
- D. IT IS EXPECTED THAT THE GENERAL CONTRACTOR BE EXPERIENCED IN THE TYPE CONSTRUCTION REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL DOCUMENTS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS PRIOR TO ORDERING AND/OR FABRICATION OF ANY MATERIALS AND/OR THE CONSTRUCTION OF ANY ELEMENT. ARCHITECT/STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY OR OMISSION. FOR DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE THE ARCHITECTURAL DRAWINGS.
- E. CONTRACTOR HAS SOLE RESPONSIBILITY TO COMPLY WITH ALL OSHA REGULATIONS.
- F. CONTRACTOR SHALL VERIFY THE TYPE, SIZE, LOCATION AND NUMBER OF OPENINGS, SLEEVES, CONDUITS, EMBEDDED ITEMS, PIPES, ETC., BEFORE POURING CONCRETE OR STARTING WALL
- G. UNLESS SHOWN ON THE PLANS, THE LOCATION OF CONSTRUCTION JOINTS ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED BY MECHANICAL MEANS AND CLEANED.
- H. THE STRUCTURAL DESIGN OF THE BUILDING IS BASED UPON THE FULL INTERACTION OF ALL ITS COMPONENT PARTS, WITH NO PROVISION MADE FOR CONDITIONS OCCURRING DURING CONSTRUCTION. THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING DURING CONSTRUCTION.
- I. ALL CMU MASONRY AND CAVITIES BELOW SLAB ON GRADE SHALL BE FULLY GROUTED WITH CONCRETE. BACKFILL BOTH SIDES OF MASONRY WALLS AND REINFORCED CONCRETE WALLS IN 8 INCH LIFTS TO THE ELEVATION OF THE LOWER FINISHED GRADE BEFORE BACKFILLING TO THE HIGHER
- J. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS, ABOVE AND BELOW GROUND, PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY
- K. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF MECHANICAL UNITS. ELECTRICAL FIXTURES. MECHANICAL DUCTS. CEILING HANGER ASSEMBLIES. PLUMBING EQUIPMENT. ETC.. WITH ALL TRADES EFFECTED AND EQUIPMENT PURCHASED BEFORE PROCEEDING WITH STRUCTURAL WORK. CONTRACTOR SHALL VERIFY THE STRUCTURALLY SUPPORTED MECHANICAL EQUIPMENT WEIGHTS, OPENING SIZES AND LOCATIONS IDENTIFIED ON THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. NOTIFY STRUCTURAL ENGINEER OF ANY CONFLICT AND/OR OMISSION. MODIFICATIONS OR CHANGES AS A RESULT OF THIS COORDINATION SHALL BE DETAILED, NOTED AND SUBMITTED IN SHOP DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR ANGLES, CLIPS, PLATES, ETC., AND OTHER
- L. CONCRETE PROTECTION FOR REINFORCEMENT THE FOLLOWING COVER SHALL BE PROVIDED FOR
- 1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH....3"
- 2. CONCRETE EXPOSED TO EARTH OR WEATHER: a.) #6 THROUGH #18 BARS.....
- b.) #5 BAR, W31 OR D31 WIRE AND SMALLER....... 3. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: a.) SLABS, WALLS AND JOISTS, #11 BARS AND SMALLER......3/4" b.) BEAMS AND COLUMNS, PRIMARY REINFORCING, TIES,

STIRRUPS AND SPIRALS...... 1/2"

- M. REINFORCING SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS, AND ANY COMMENT SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK THE SHOP DRAWINGS BEFORE SUBMITTAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE SHOP DRAWINGS. THE RESPONSIBILITY FOR DIMENSIONS, QUANTITIES, COORDINATION AND COMPLIANCE WITH THE CONTRACT DOCUMENTS REMAINS WITH THE CONTRACTOR.
- N. WHERE A SECTION OR DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS EVEN THOUGH NOT SPECIFICALLY MARKED ON THE PLANS.
- O. ROOF SHEATHING SHALL CONSIST OF 19/32 (5/8) INCH THICK APA RATED TONGUE AND GROOVE WOOD STRUCTURAL PANELS WITH SPAN RATING OF 40/20 OR BETTER. PLY-CLIPS MAY BE UTILIZED BETWEEN ADJACENT WOOD STRUCTURAL PANELS AT EACH JOIST SPACING IN LIEU OF TONGUE AND GROOVE. ROOF SHEATHING SHALL BE APPLIED IN ACCORDANCE WITH IBC TABLE 2306.3.1 TO THE WOOD MEMBERS OF THE ROOF AND SHALL BE USED AS THE HORIZONTAL DIAPHRAGM TO RESIST LATERAL LOADINGS. ATTACH THE PANELS WITH 8d NAILS AT 6 INCHES ON CENTER AT THE PANEL EDGES AND WITH 8d NAILS AT 12 INCHES ON CENTER AT THE INTERIOR SUPPORTS OF THE PANEL. ORIENT THE LONG DIMENSION OF THE PANELS ACROSS THREE OR MORE

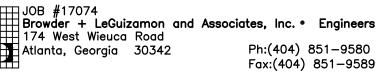
SUPPORTS. EDGES NEED NOT BE BLOCKED, UNLESS NOTED OTHERWISE. ATTACH WOOD PANELS WITH 8d AT 6 INCHES ON CENTER AT BLOCKING ABOVE EXTERIOR WALLS AND AT THE FASCIA PIECE.

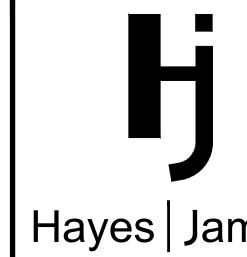
P. SHOP DRAWING SCOPE:

1. PREPARATION OF REQUIRED SHOP DRAWINGS. 2. CHECKING OF THE SHOP DRAWINGS BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO THE

A/E, WITH PROPER SHOP DRAWING STAMP AFFIXED. 3. SUBMITTAL TO THE A/E FOR REVIEW, ALLOWING A MINIMUM OF FIVE (5) FULL WORKING DAYS IN THE ENGINEERS OFFICE FOR THIS REVIEW. LARGE SUBMITTALS WILL REQUIRE MORE THAN FIVE (5)

- 4. REVISION TO SHOP DRAWINGS, AS NECESSARY, FOLLOWING A/E REVIEW. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
- 5. RECHECKING OF REVISED SHOP DRAWINGS BY THE GENERAL CONTRACTOR. 6. RESUBMITTAL TO THE A/E, IF INDICATED ON THE ARCHITECT OR ENGINEER SHOP DRAWING STAMP. 7. REVIEW OF SHOP DRAWING SUBMITTALS SHALL NOT BE CONSTRUED AS AUTHORIZING ANY CHANGE IN THE CONTRACT SUM OR CONTRACT TIME. ANY COST FOR RE-DETAILING DUE TO SHOP
- DRAWING REVIEW COMMENTS SHALL BE BORNE BY THE CONTRACTOR. 8. COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF EACH BUILDING COMPONENT NOT DESIGNED BY THE DESIGN TEAM-OF-RECORD AND NOT SPECIFIED ON THE PROJECT CONSTRUCTION DOCUMENTS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIME OF INSPECTION.





ENGINEERS, PLANNERS & SURVEYORS

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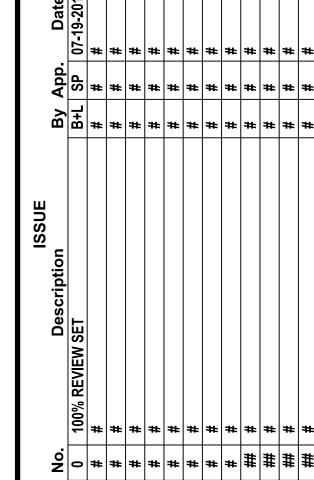
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BID SET NOT TO BE RELEASED FOR CONSTRUCTION

Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location 4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot District-Section 18

Checked By:

DEKALB Project No. Drawn By:

09-15-2017 Initial Issue Date: Sheet Title

GENERAL NOTES

Sheet Number

AND 1704.7 AND AS I OLLOWS.		
		ENCY
1. SOILS	CONTINUOUS	PERIODIO
A. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		Х
B. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		Х
C. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		Х
D. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	Х	
E. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		Х

2. SPREAD FOOTINGS AND CONTINUOUS FOOTINGS		
A. INSPECT PLAN DIMENSIONS AND DEPTH		Х
B. INSPECT QUANTITY AND SPACING OF BARS		х
C. INSPECT PROPER CLEARANCE TO BARS AT TOP AND BOTTOM IS PROVIDED		Х
D. VERIFY PROPER LAPS ARE PROVIDED		Х
E. INSPECT FOR PROPER DOWEL EMBEDMENT INTO FOOTING AND EXTENSION ABOVE FOOTING	Х	
F. INSPECT FOR CORNER BARS, STEP BARS, DOWELS, ANCHOR BOLTS, OR EMBEDDED MATERIAL		х
G. VERIFY SOILS ENGINEER HAS APPROVED DESIGN BEARING CAPACITY	Х	
H. VERIFY THAT ALL LOOSE MATERIAL IS REMOVED FROM BOTTOM OF FOOTING. NO SIDE FORMING IS PERMITTED		х
I. INSPECT BOLTS TO BE INSTALLED IN FOOTINGS PRIOR TO AND DURING CONCRETE PLACEMENT		Х
J. CHECK EMBEDDED ITEMS		Х
	-	

3. CONCRETE VERIFICATION AND INSPECTION		
A. INSPECTION OF REINFORCING STEEL AND PLACEMENT		Х
B. VERIFYING USE OF REQUIRED DESIGN MIX		Х
C. SAMPLING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS	X	
D. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	Х	
E. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		Х
F. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS AS APPLICABLE		Х
4. MASONRY CONSTRUCTION - LEVEL 1		
A. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: 1. PROPORTIONS OF SITE PREPARED MORTAR. 2. CONSTRUCTION OF MORTAR JOINTS. 3. LOCATION OF REINFORCEMENT AND CONNECTORS.		X

4.	MASONRY CONSTRUCTION - LEVEL 1		
A.	AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: 1. PROPORTIONS OF SITE PREPARED MORTAR. 2. CONSTRUCTION OF MORTAR JOINTS. 3. LOCATION OF REINFORCEMENT AND CONNECTORS.		>
B.	THE INSPECTION PROGRAM SHALL VERIFY: 1. SIZE AND LOCATION OF STRUCTURAL ELEMENTS. SPECIFIED SIZE, GRADE, & TYPE OF REINFORCEMENT. 2. TYPE SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION. 3. PROTECTION OF MASONRY DURING COLD WEATHER (BELOW 40°F) OR HOT WEATHER (ABOVE 90°F).		>
C.	PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: 1. GROUT SPACE IS CLEAN. 2. PLACEMENT OF REINFORCEMENT AND CONNECTORS. 3. PROPORTIONS OF SITE—PREPARED GROUT. 4. CONSTRUCTION OF MORTAR JOINTS.)
D.	GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS	Х	
E.	PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS SHALL BE OBSERVED	Х	
F.	COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED		

F. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED		Х
5. TIMBER AND WOOD FRAMING		
A. INSPECT SIZE AND SPACING OF MEMBERS		Х
B. INSPECT ADEQUATE BEARING OF JOISTS AND LINTELS		Х
C. INSPECT HARDWARE USED IN MEMBER CONNECTIONS		Х
D. INSPECT WALL AND ROOF DIAPHRAGMS FOR REQUIRED BLOCKING AND NAILING PATTERNS	Х	
6. SPECIAL CASES - EPOXY ANCHORS AND EXPANSION BOLTS		
A. INSPECT FOR ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE DIMENSION, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCES, ANCHOR EMBEDMENT AND TIGHTENING TORQUE.		x
B. VERIFY INITIAL INSTALLATION OF EACH ANCHOR TYPE AND SIZE BY CONSTRUCTION PERSONNEL ON SITE. SUBSEQUENT INSTALLATION OF THE SAME ANCHOR TYPE AND SIZE BY THE SAME CONSTRUCTION PERSONNEL SHALL BE PERMITTED TO BE PERFORMED IN THE ABCENCE OF THE SPECIAL INSPECTOR. ANY CHANGES IN THE ANCHOR PRODUCT BEING INSTALLED OR THE PERSONNEL PERFORMING THE INSPECTION SHALL REQUIRED AN INITIAL INSPECTION. FOR ONGOING INSTALLATIONS OVER AN EXTENDED PERIOD OF TIME, THE SPECIAL INSPECTOR SHALL MAKE REGULAR INSPECTIONS TO CONFIRM CORRECT HANDLING AND INSTALLATION.		х

- 1. REPORTS OF INSPECTIONS, VERIFICATIONS, AND/OR TESTINGS SHALL BE SUBMITTED EVERY TWO WEEKS OR LESS AS REQUIRED TO ALLOW FOR TIMELY REVIEW AND FIELD MODIFICATIONS IF ANY
- ARE REQUIRED. 2. INSPECTIONS DESIGNATED AS CONTINUOUS REQUIRE FULL TIME MONITORING OF THE WORK BY SPECIAL
- 3. INSPECTIONS DESIGNATED AS PERIODIC REQUIRE INTERMITTENT OBSERVATION DURING THE PERFORMANCE OF THE WORK AND A FINAL OBSERVATION UPON THE COMPLETION OF THE WORK BY A SPECIAL INSPECTOR.

A STATE OF THE STA	FASTENING SCHEDULE	
CONNECTION	FASTENING ^{a, m}	LOCATION
1. Joist to sill or girder	3 - 8d common $(2^{1}/_{2}" \times 0.131")$ 3 - 3" × 0.131" nails 3 - 3" 14 gage staples	toenail
2. Bridging to joist	2 - 8d common (2 ¹ / ₂ " × 0.131") 2 - 3" × 0.131" nails 2 - 3" 14 gage staples	toenail each end
3. 1" × 6" subfloor or less to each joist	$2 - 8d \text{ common } (2^{1}/_{2}" \times 0.131")$	face nail
4. Wider than 1" × 6" subfloor to each joist	$3 - 8d \text{ common } (2^{1}/_{2}" \times 0.131")$	face nail
5. 2" subfloor to joist or girder	$2 - 16d \text{ common } (3^{1}/_{2}" \times 0.162")$	blind and face nail
6. Sole plate to joist or blocking	16d (3 ¹ / ₂ " × 0.135") at 16" o.c. 3" × 0.131" nails at 8" o.c. 3" 14 gage staples at 12" o.c.	typical face nail
Sole plate to joist or blocking at braced wall panel	3 - 16d (3 ¹ / ₂ " × 0.135") at 16" o.c. 4 - 3" × 0.131" nails at 16" o.c. 4 - 3" 14 gage staples at 16" o.c.	braced wall panels
7. Top plate to stud	2 - 16d common (3 ¹ / ₂ " × 0.162") 3 - 3" × 0.131" nails 3 - 3" 14 gage staples	end nail
O. Challes and a plate	4 - 8d common (2 ¹ / ₂ " × 0.131") 4 - 3" × 0.131" nails 3 - 3" 14 gage staples	toenail
8. Stud to sole plate	2 - 16d common (3 ¹ / ₂ " × 0.162") 3 - 3" × 0.131" nails 3 - 3" 14 gage staples	end nail
9. Double studs	16d (3 ¹ / ₂ " × 0.135") at 24" o.c. 3" × 0.131" nail at 8" o.c. 3" 14 gage staple at 8" o.c.	face nail
0. Double top plates	16d (3 ¹ / ₂ " × 0.135") at 16" o.c. 3" × 0.131" nail at 12" o.c. 3" 14 gage staple at 12" o.c.	typical face nail
Double top plates	8 - 16d common (3 ¹ / ₂ " × 0.162") 12 - 3" × 0.131" nails 12 - 3" 14 gage staples	lap splice
1. Blocking between joists or rafters to top plate	3 - 8d common (2 ¹ / ₂ " × 0.131") 3 - 3" × 0.131" nails 3 - 3" 14 gage staples	toenail
2. Rim joist to top plate	8d (2 ¹ / ₂ " × 0.131") at 6" o.c. 3" × 0.131" nail at 6" o.c. 3" 14 gage staple at 6" o.c.	toenail
3. Top plates, laps and intersections	2 - 16d common (3 ¹ / ₂ " × 0.162") 3 - 3" × 0.131" nails 3 - 3" 14 gage staples	face nail
14. Continuous header, two pieces	16d common $(3^{1}/_{2}" \times 0.162")$	16" o.c. along edge
15. Ceiling joists to plate	3 - 8d common (2 ¹ / ₂ " × 0.131") 5 - 3" × 0.131" nails 5 - 3" 14 gage staples	toenail
16 Continuous bandon to stud	4 04 (01/11 0.12111)	4

(continued)

4 - 8d common $(2^{1}/_{2}" \times 0.131")$

toenail

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16. Continuous header to stud

TABLE 2304.9.1—continued FASTENING SCHEDULE						
CONNECTION	F	ASTENING ^{2, m}	LOCATION			
30. Ledger strip	3 - 16d common (3 ¹ / ₂ " × 0.162") 4 - 3" × 0.131" nails 4 - 3" 14 gage staples		face nail at each jois			
31. Wood structural panels and particleboard ^b Subfloor, roof and wall sheathing (to framing)	¹ / ₂ " and less ¹⁹ / ₃₂ " to ³ / ₄ " ⁷ / ₈ " to 1" 1 ¹ / ₈ " to 1 ¹ / ₄ "	$6d^{c,1}$ $2^{3}/_{8}$ " × 0.113" nail ⁿ $1^{3}/_{4}$ "16 gage ^o $8d^{d}$ or $6d^{e}$ $2^{3}/_{8}$ " × 0.113" nail ^p 2 " 16 gage ^p $8d^{e}$ $10d^{d}$ or $8d^{e}$				
Single floor (combination subfloor-underlayment to framing)	3/ ₄ " and less 7/ ₈ " to 1" 1 ¹ / ₈ " to 1 ¹ / ₄ "	6d° 8d° 10d ^d or 8d°				
32. Panel siding (to framing)	1/2" or less 5/8"	6d ^f 8d ^f				
33. Fiberboard sheathing ^g	¹ / ₂ " ²⁵ / ₃₂ "	No. 11 gage roofing nail ^h 6d common nail (2" × 0.113") No. 16 gage staple ⁱ No. 11 gage roofing nail ^h 8d common nail (2 ¹ / ₂ " × 0.131") No. 16 gage staple ⁱ				
34. Interior paneling	1/4" 3/8"	4d ^j 6d ^k				

For SI: 1 inch = 25.4 mm.

- a. Common or box nails are permitted to be used except where otherwise stated. b. Nails spaced at 6 inches on center at edges, 12 inches at intermediate supports except 6 inches at supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or
- c. Common or deformed shank (6d 2" \times 0.113"; 8d $2^{1}/_{2}$ " \times 0.131"; 10d 3" \times 0.148").
- d. Common (6d 2" × 0.113"; 8d $2^{1}/_{2}$ " × 0.131"; 10d 3" × 0.148").
- e. Deformed shank (6d 2" × 0.113"; 8d $2^{1}/_{2}$ " × 0.131"; 10d 3" × 0.148").
- f. Corrosion-resistant siding $(6d 1^{7}/_{8}" \times 0.106"; 8d 2^{3}/_{8}" \times 0.128")$ or casing $(6d 2" \times 0.099"; 8d 2^{1}/_{2}" \times 0.113")$ nail.
- g. Fasteners spaced 3 inches on center at exterior edges and 6 inches on center at intermediate supports, when used as structural sheathing. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications.
- h. Corrosion-resistant roofing nails with $\frac{7}{16}$ -inch-diameter head and $\frac{1}{2}$ -inch length for $\frac{1}{2}$ -inch sheathing and $\frac{1}{4}$ -inch length for $\frac{25}{32}$ -inch sheathing.
- i. Corrosion-resistant staples with nominal $\frac{1}{1_{16}}$ -inch crown or 1-inch crown and $\frac{1}{1_{4}}$ -inch length for $\frac{1}{1_{2}}$ -inch sheathing and $\frac{1}{1_{2}}$ -inch length for $\frac{25}{1_{32}}$ -inch sheathing. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
- j. Casing $(1^{1}/_{2}" \times 0.080")$ or finish $(1^{1}/_{2}" \times 0.072")$ nails spaced 6 inches on panel edges, 12 inches at intermediate supports. k. Panel supports at 24 inches. Casing or finish nails spaced 6 inches on panel edges, 12 inches at intermediate supports.
- 1. For roof sheathing applications, 8d nails $(2^{1}/2^{n} \times 0.113^{n})$ are the minimum required for wood structural panels. m. Staples shall have a minimum crown width of 7/16 inch.
- n. For roof sheathing applications, fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports.
- o. Fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports for subfloor and wall sheathing and 3 inches on center at edges, 6 inches at intermediate supports for roof sheathing. p. Fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports.





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TABLE 2304.9.1—continued FASTENING SCHEDULE LOCATION FASTENING^{a, m} CONNECTION 3 - 16d common $(3^{1}/_{2}" \times 0.162")$ minimum, Table 2308.10.4.1 17. Ceiling joists, laps over partitions (see Section 2308.10.4.1, Table 2308.10.4.1) face nail $4 - 3" \times 0.131"$ nails 4 - 3" 14 gage staples 3 - 16d common $(3^{1}/_{2}" \times 0.162")$ minimum, Table 2308.10.4.1 18. Ceiling joists to parallel rafters face nail (see Section 2308.10.4.1, Table 2308.10.4.1) $4 - 3" \times 0.131$ " nails 4 - 3" 14 gage staples 3 - 8d common $(2^{1}/_{2}" \times 0.131")$ 19. Rafter to plate $3 - 3" \times 0.131$ " nails (see Section 2308.10.1, Table 2308.10.1) 3 - 3" 14 gage staples 2 - 8d common $(2^{1}/_{2}" \times 0.131")$ face nail $2 - 3" \times 0.131$ " nails 20. 1" diagonal brace to each stud and plate 3 - 3" 14 gage staples face nail $3 - 8d \text{ common } (2^{1}/_{2}" \times 0.131")$ 21. $1" \times 8"$ sheathing to each bearing face nail 3 - 8d common $(2^{1}/_{2}" \times 0.131")$ 22. Wider than 1" × 8" sheathing to each bearing 24" o.c. 16d common $(3^{1}/_{2}" \times 0.162")$ 16" o.c. $3" \times 0.131"$ nails 23. Built-up corner studs 16" o.c. 3" 14 gage staples 20d common (4" \times 0.192") 32" o.c. face nail at top and bottom stag- $3" \times 0.131"$ nail at 24" o.c. gered on opposite sides 3" 14 gage staple at 24" o.c. 24. Built-up girder and beams 2 - 20d common (4" \times 0.192") face nail at ends and at each $3 - 3" \times 0.131"$ nails 3 - 3" 14 gage staples at each bearing 16d common $(3^1/_2" \times 0.162")$ 25. 2" planks $3 - 10d \text{ common } (3" \times 0.148")$ face nail $4 - 3" \times 0.131$ " nails 26. Collar tie to rafter 4 - 3" 14 gage staples $3 - 10d \text{ common } (3" \times 0.148")$ $4 - 3" \times 0.131$ " nails toenail 4 - 3" 14 gage staples 27. Jack rafter to hip 2 - 16d common $(3^1/_2" \times 0.162")$ face nail $3 - 3" \times 0.131$ " nails 3 - 3" 14 gage staples 2 - 16d common $(3^{1}/_{3}" \times 0.162")$ $3 - 3" \times 0.131$ " nails toenail 3 - 3" 14 gage staples 28. Roof rafter to 2-by ridge beam 2-16d common $(3^{1}/_{2}" \times 0.162")$ face nail $3 - 3" \times 0.131"$ nails 3 - 3" 14 gage staples 3 - 16d common $(3^{1}/_{2}" \times 0.162")$ 29. Joist to band joist $|4 - 3" \times 0.131"$ nails 4 - 3" 14 gage staples

(continued)

TYPICAL WOOD FRAMING FASTENERS, U.N.O.

ABBREVIATIONS

Headed Stud

		ADDITEVIATIONS						
Α	ADD'L ALT ARCH	Additional Alternate Architectural, Architect	1	I.F. INT.	Inside Face Interior	S	ST'L STRUCT SUB	Steel STR Straight Structural Subcontractor
			J	JT	Joint		SYM	Symmetric
В	BM BT BOTT	Beam Bent Bottom	K	K	Kips	Т	TEMP. T	Temperature Top
	B.O. BLDG	Bottom Of Building	L	LVL L.W. LONGIT	Level Long Way Longitudinal		T.O. T/O TYP.	Top Of Typical
С	C.I.P. CTR	Cast-In-Place Center		LLH LSH	Long Leg Horizontal Long Side Horizontal	U	U.N.O.	Unless Noted Otherwise
	CL CONC	Clear Concrete		LSV	Long Side Vertical	٧	V.	VERT Vertical
	CMU COL CONN CONSTR CONT C.J.	Concrete Masonry Units Column Connection Construction Continuous Control Joint	М	MK MAS MAX MECH MIN MISC	Mark Masonry Maximum Mechanical Minimum Miscellaneous	W	W.W.F.	Welded Wire Fabric
D	DBA DET DWL	Deformed Bar Anchor Detail Dowel	N N.S	N.F. S.Near Side	Near Face			
	DWG	Drawing	0	OPG	Opening			
Ε	EA E.F.	Each Each Face		O.F.	Outside Face			
E.W	I. Each Way	Electrical	Р	P.E.B. PL	Pre-Engineered Building Plate			
	EL. ENGR EXP	Elevation Engineer Expansion		P.T. P.C.	Post-tensioned Precast			
	E.J. EXT	Expansion Joint Exterior	R	REINF	Reinforcement, Reinforce			
F	F.F. FL FTG	Far Face Floor Footing		SCHED SHT S.W.	Schedule Sheet Short Way			
	FND	Foundation		SIM.	Similar			
G	G.C. GR	General Contractor Ground, Grade		SL SMRF	Slab Special Moment— Resistance Frame			
Н	HK HORIZ	Hook Horizontal		S.O.G. STD	Slab on Grade Standard			

Stirrup

STIR

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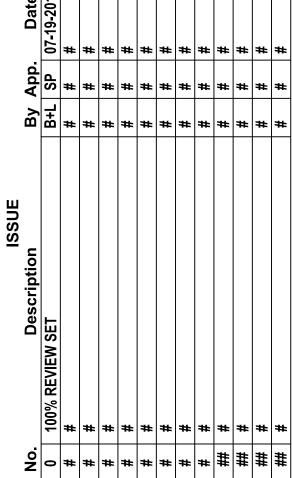
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Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

Project Location 4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot 119 District-Section 18 County DEKALB

Project No. Drawn By: Checked By: 09-15-2017 Initial Issue Date:

Sheet Title

GENERAL NOTES





601 A.J Land Road Canton, Georgia 30115 PHONE: 770-442-8682 FAX: 770-442-8689 petesasi@bellsoth.net

CMU LINTEL 2-2x10 RIDGE BEAM | RIDGE BEAM | RIDGE BEAM CMU LINTEL 4x10 PT (HORIZ.) CONT.

SLAB & FOUNDATION PLAN - TOILET BUILDING

SCALE: 1/4"=1'-0"

10'-8"

_____/

L______

10'-0"

4'-8"

10'-8"

WELDED WIRE FABRIC.

L______

10**'**-0"

└─ POST 6x6 PT TYPICAL 4 PLACES

- STOOP PAD OUTSIDE OF BUILDING FOOTPRINT IS 4" CONCRETE REINFORCED WITH 6x6-W1.4xW1.4

FOUNDATION NOTES:

- 1. ALL SLABS ARE 4" SLAB-ON-GRADE WITH 6x6-W2.1xW2.1 W.W.F. REINFORCEMENT W/ CONCRETE STRENGTH OF 3,000 psi. SLAB BASED ON THE 10 MIL, CLASS "B" (ASTM E1745), UNDER-SLAB VAPOR RETARDER ON
- 2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CMU WALLS (HATCHED ON STRUCTURAL PLANS).
- 3. FOR FOUNDATION SECTIONS AND DETAILS SEE DRAWING S2.1.

TYP S2.1

5'-4"

- 4. C.J. :INDICATES CONTROL OR CONSTRUCTION JOINT IN SLAB ON GRADE SEE DETAILS 5 & 6/S2.1.
- 5. NOR OR OR = : DENOTES 2#4 x 3'-0" @ 4" O.C. AT SLAB MID-DEPTH, TYP. AT RE-ENTRANT CORNERS SEE DETAIL 3/S2.1.
- 6. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND CIVIL DWGS. REPORT ALL DISCREPANCIES TO
- 7. CXXXXXX :INDICATES INTERIOR AND EXTERIOR CMU WALL.
- : INDICATES THICKENED FOOTING SEE 11/S2.1 FOR ADDITIONAL INFORMATION.
 - : INDICATES THICKENED FOOTING $4'-6" \times 3'-0" \times 12" SEE 4/S3.2$ FOR ADDITIONAL

ROOF FRAMING PLAN -TOILET BUILDING

ROOF NOTES:

- 1. PROVIDE 2x8 PT (CONT.) ON TOP OF CMU WALL. COORDINATE ELEVATION FOR T/CMU WALL WITH ARCH. DRAWINGS.
- 2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CMU WALLS (HATCHED ON STRUCTURAL PLANS).
- 3. SEE DRAWING S3.1 FOR ROOF FRAMING SECTIONS.
- 4. XXXXXXXX :INDICATES CMU WALL.



:INDICATES 2x6 PT TONGUE & GROOVE ROOF DECKING WITH 4'-6" MAX ON SINGLE SPAN AND 5'-6" MAX. FOR CONTINUOUS SPAN (3 AT LEAST) 4'-0" MAX. FOR PAVILION BUILDING ACCORDING TO THE ROOF FRAMING CAPACITY.

| Hayes | James

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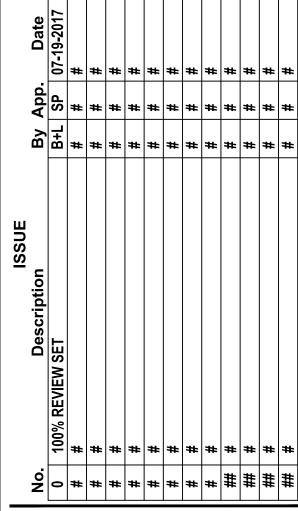
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Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location

Address 4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot 119 District-Section 18

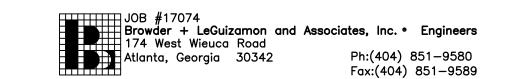
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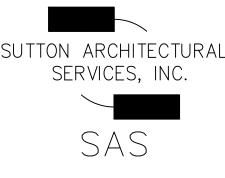
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Sheet Title **TOILET** BUILDING. SLAB & FOUNDATION,

ROOF FRAMING PLANS

Sheet Number





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Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

Project Location 4380 E. PONCE DE LEON AVE Address

City, State Zip CLARKSTON, GA. 30021 Land Lot 119

District-Section 18 County DEKALB

17030pr Project No. Drawn By: Checked By: Initial Issue Date: 09-15-2017

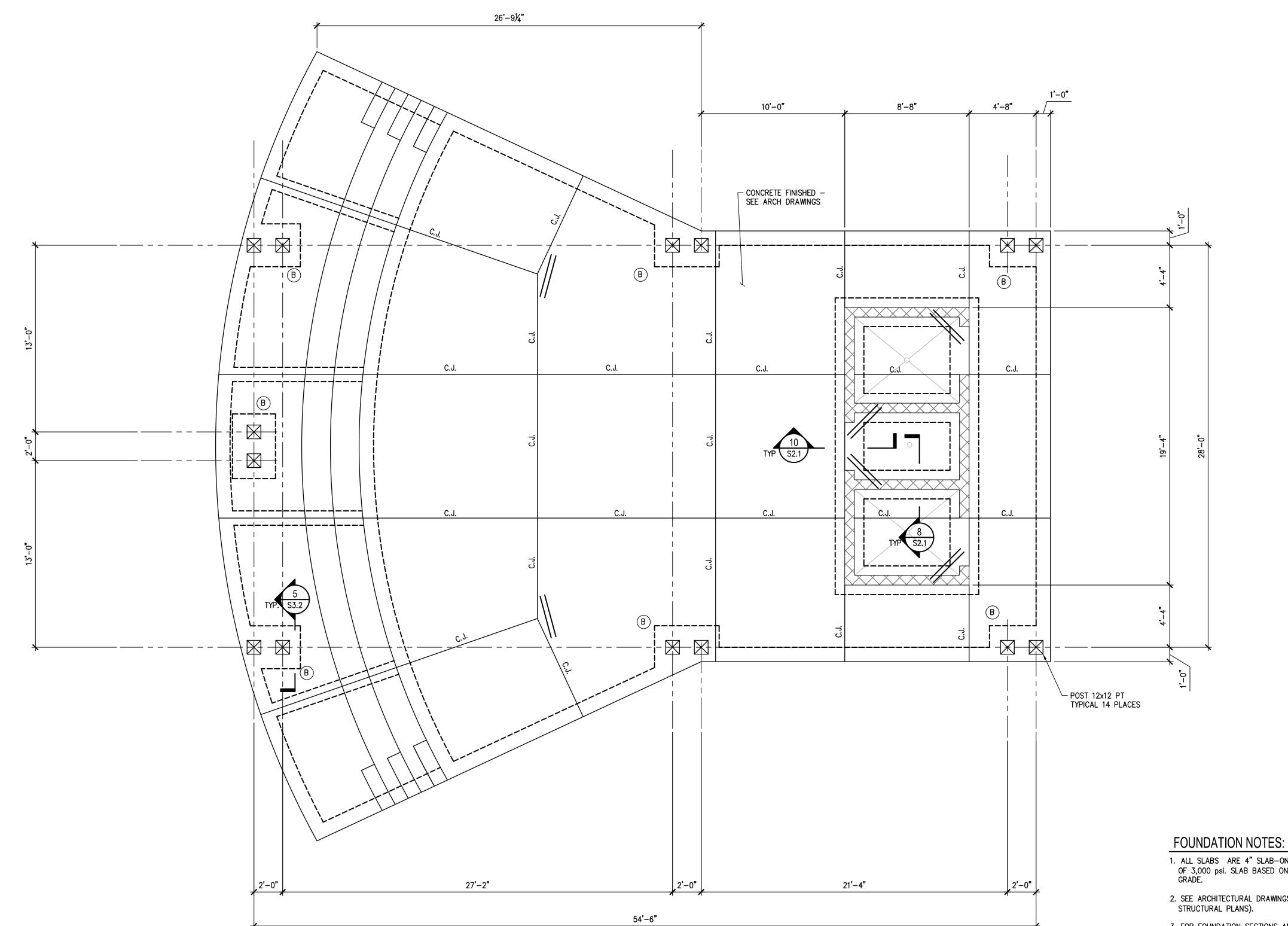
Sheet Title

PAVILION BUILDING.

SLAB & FOUNDATION PLAN

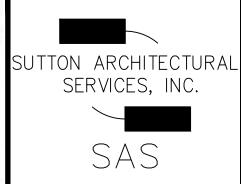
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S1.2



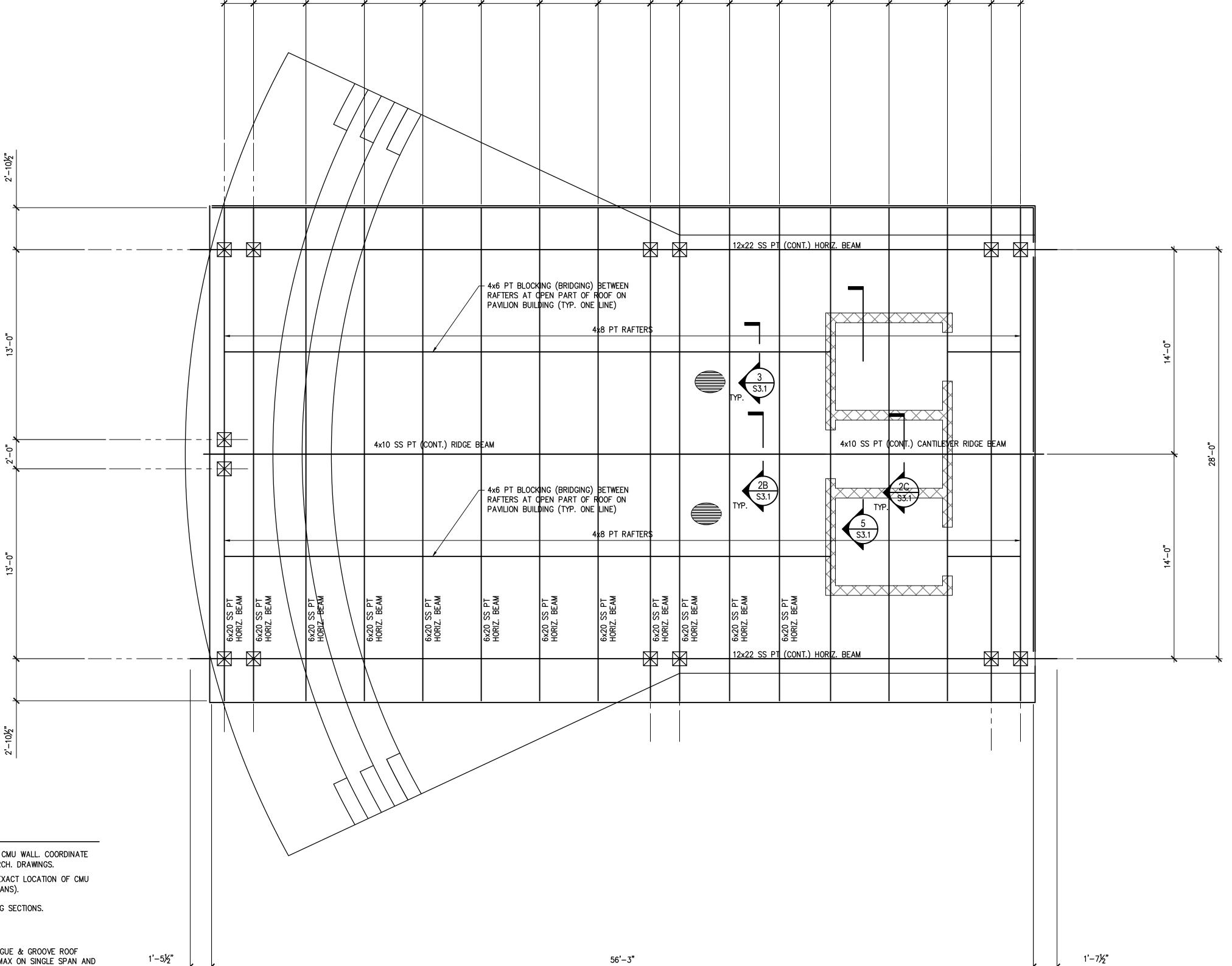
SLAB & FOUNDATION PLAN - PAVILION BUILDING SCALE: 3/16"=1'-0"

- 1. ALL SLABS ARE 4" SLAB-ON-GRADE WITH 6x6-W2.1xW2.1 W.W.F. REINFORCEMENT W/ CONCRETE STRENGTH OF 3,000 psi. SLAB BASED ON THE 10 MIL, CLASS "B" (ASTM E1745), UNDER-SLAB VAPOR RETARDER ON GRADE.
- 2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CMU WALLS (HATCHED ON
- 3. FOR FOUNDATION SECTIONS AND DETAILS SEE DRAWING S2.1.
- 4. C.J. :INDICATES CONTROL OR CONSTRUCTION JOINT IN SLAB ON GRADE SEE DETAILS 5 & 6/S2.1.
- 5. OR OR = :DENOTES 2#4 x 3'-0" @ 4" O.C. AT SLAB MID-DEPTH, TYP. AT RE-ENTRANT CORNERS SEE DETAIL 3/S2.1.
- 6. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND CIVIL DWGS. REPORT ALL DISCREPANCIES TO
- 7. XXXXXXX :INDICATES INTERIOR AND EXTERIOR CMU WALL.
- : INDICATES THICKENED FOOTING SEE 11/S2.1 FOR ADDITIONAL INFORMATION.
- lacksquare: INDICATES THICKENED FOOTING 4'-6" x 3'-0"x 12" - SEE 4/S3.2 FOR ADDITIONAL INFORMATION.



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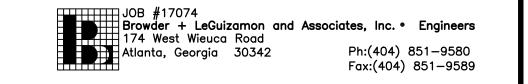


ROOF NOTES:

- 1. PROVIDE 2x8 PT (CONT.) ON TOP OF CMU WALL. COORDINATE ELEVATION FOR T/CMU WALL WITH ARCH. DRAWINGS.
- 2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CMU
- WALLS (HATCHED ON STRUCTURAL PLANS).
- 3. SEE DRAWING S3.1 FOR ROOF FRAMING SECTIONS.

:INDICATES 2x6 PT TONGUE & GROOVE ROOF DECKING WITH 4'-6" MAX ON SINGLE SPAN AND 5'-6" MAX. FOR CONTINUOUS SPAN (3 AT LEAST) 4'-0" MAX. FOR PAVILION BUILDING ACCORDING TO THE ROOF FRAMING CAPACITY.

ROOF FRAMING PLAN - PAVILION BUILDING



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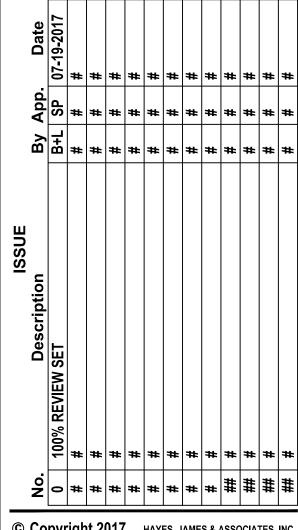
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Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

Project Location

4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot 119

District-Section 18 County DEKALB

Project No. Drawn By: Checked By:

Initial Issue Date:

Sheet Title **PAVILION** BUILDING.

ROOF FRAMING PLAN

Sheet Number

S1.3

17030pr

09-15-2017

CANTILEVER BÉAM 6x6 PT

SIGN. PLAN - SECTION AT CANTILEVER BEAM

- 2x4 PT RAFTERS (TYP.)

- LSTA18 STRAP

(TYP.)

4'-7"

TTON ARCHITECTURA SERVICES, INC.

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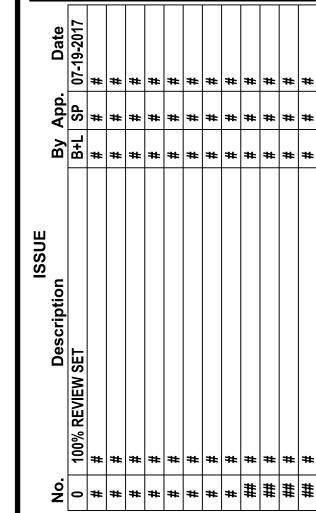
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Land Lot District-Section 18

County DEKALB Project No.

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Sheet Title

SIGN. **SECTIONS AND DETAILS**

Sheet Number

S1.4

17030pr

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TTON ARCHITECTURAL SERVICES, INC.

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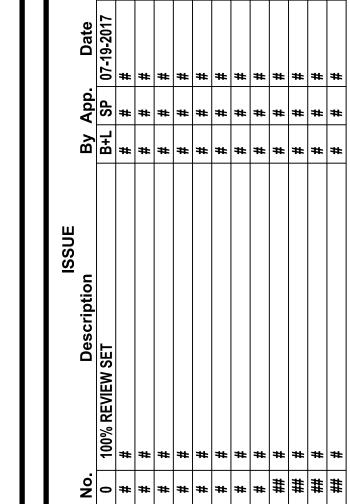
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Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location

Address 4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot District-Section 18

County Project No. Drawn By:

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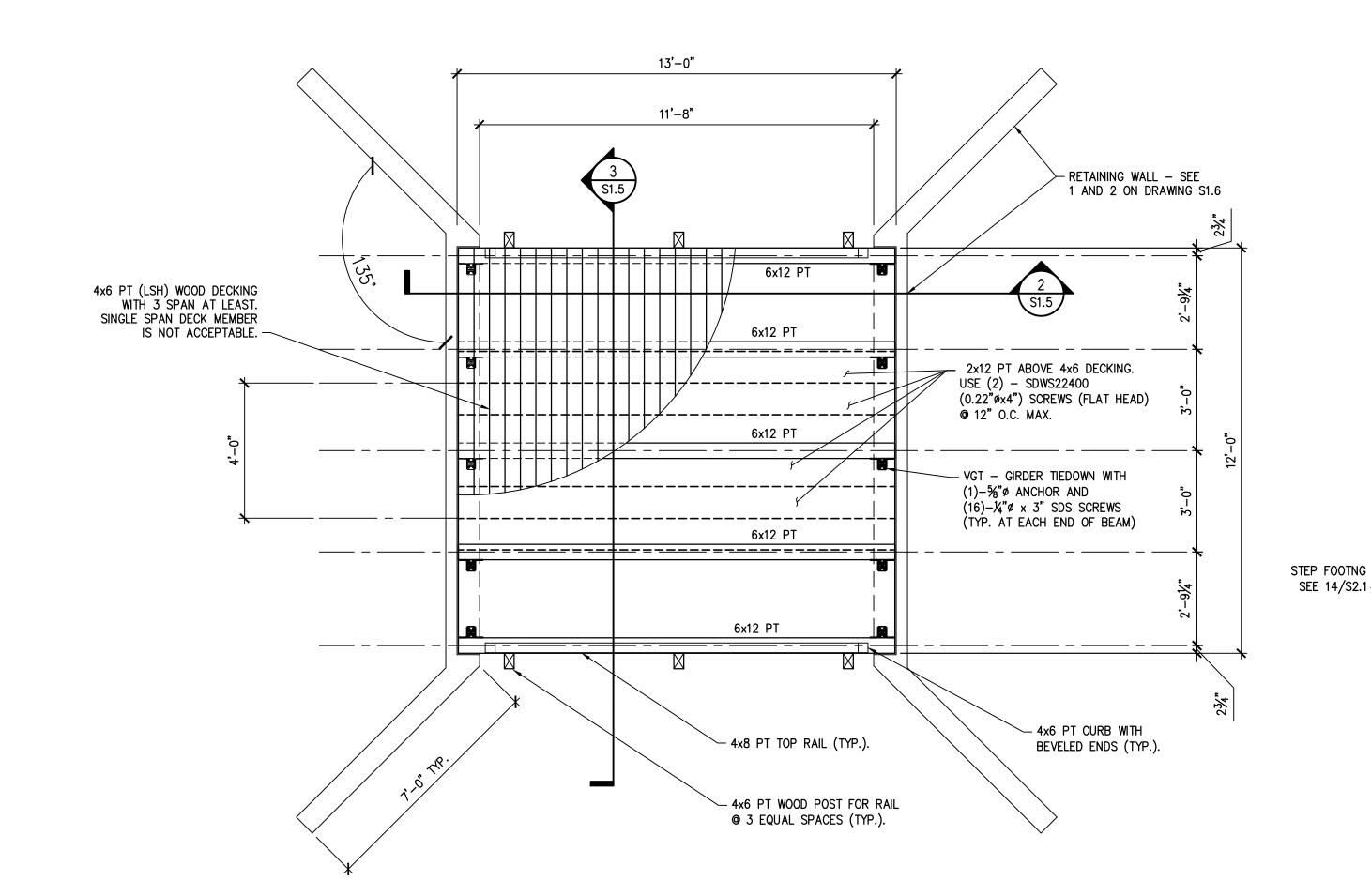
BRIDGE TYPICAL PLAN. PROFILE AND SECTIONS

Sheet Number

S1.5

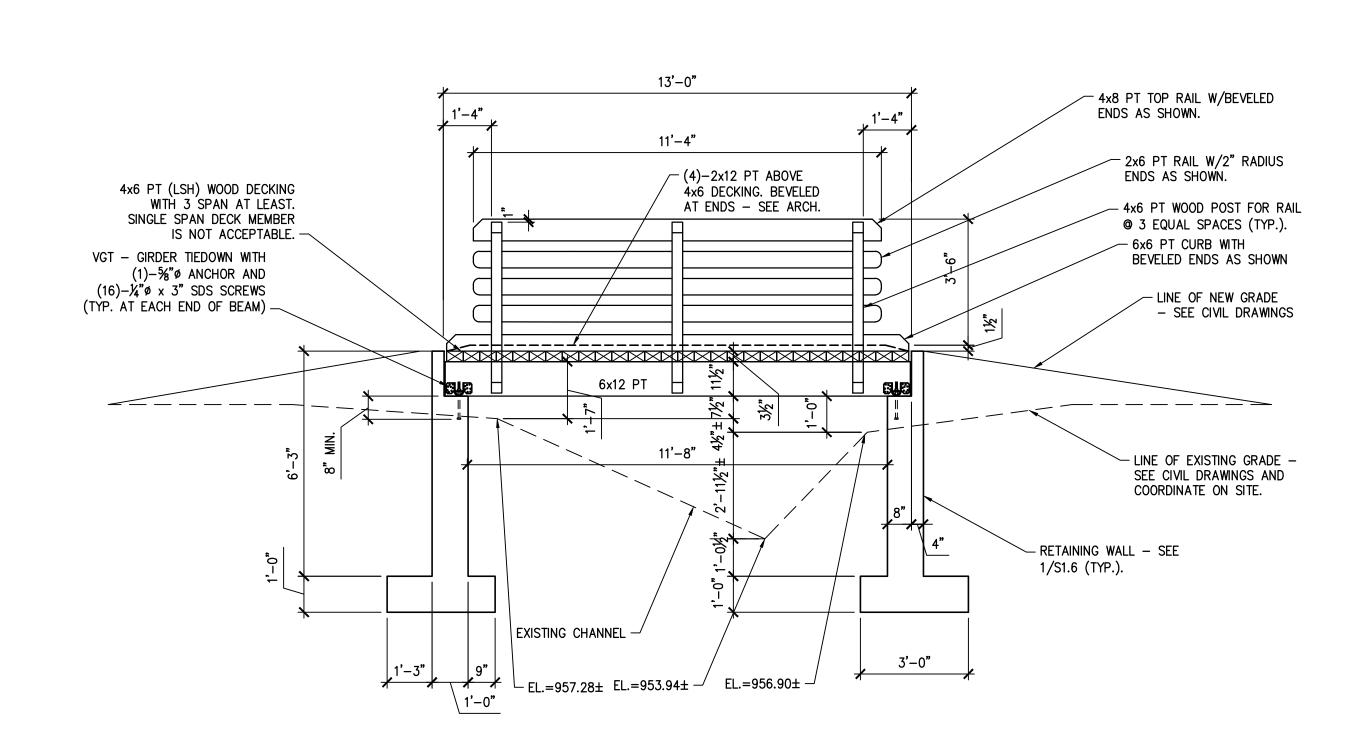
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3**'**-0" 3**'**-0" 4x6 PT (LSH) WOOD DECKING WITH 3 SPAN AT LEAST. - VGT - GIRDER TIEDOWN WITH SINGLE SPAN DECK MEMBER (1)−%"ø ANCHOR AND IS NOT ACCEPTABLE. $(16)-\frac{1}{4}$ "ø x 3" SDS SCREWS (TYP. AT EACH END OF BEAM) ______ _ 6x12 PT -(4)-2x12 PT ABOVE (TYP.) 4x6 DECKING. SEE 4/S1.6 — - 6x6 PT CURB WITH BEVELED ENDS (TYP.) 3'-0" 3'-0" 7**'**-0" STONE 6" MIN. AT FOOTING PROTECTION PROVIDE DEEP L------0", BUT NO RIP RAP OR FILL TO BE PLACED BELOW THE ORDINARY HIGH WATER MARK. -SEE 14/S2.1 — — RETAINING WALL — SEE 1 AND 2 ON DRAWING S1.6 2'-01/4" 2'-01/4" 1'-0" 1'-0"

PEDESTRIAN/UTILITY VEHICLE BRIDGE. PLAN $\int SCALE: 3/8"=1'-0"$



SCALE: 3/8"=1'-0"

PEDESTRIAN/UTILITY VEHICLE BRIDGE. SECTION

PEDESTRIAN/UTILITY VEHICLE BRIDGE. SECTION SCALE: 3/8"=1'-0"

BRIDGE NOTES:

TABLE BELOW.

1. ALL WOOD MEMBERS ARE HEAVY PRESSURE-TREATED MATERIAL - SEE

2. ALL HARDWARE, NAIL AND SCREWS ARE PER SIMPSON STRONG-TIE CO. PRODUCT GALVANIZED OR STAINLESS STEEL.

3. ALL CARRIAGE BOLTS ARE GALVANIZED OR STAINLESS STEEL.

4. ALL FASTENERS AT PUBLIC AREAS AND SURFACES ARE NOT STICK OUT FROM BRIDGE MEMBERS.

5. ALL WOOD AT PUBLIC AREA MUST HAVE A SMOOTH SURFACE.

6. LIVE LOAD FOR BRIDGE AT RECREATION AREA IS 100 psf

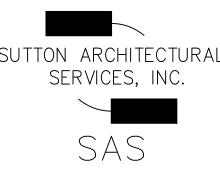
7. BRIDGE DESIGN FOR UTILITY VEHICLE WITH WEIGHT 3,300 lbs.

	MATERI	AL MINIMU	JM REQUII	REMENTS		BRIDGE:			
SPECIES AND COMERCIAL GRADE	BENDING	TENSION PARALLEL TO GRAIN	SHEAR PERPENDICULAR TO GRAIN	SHEAR PARALLEL TO GRAIN	COMPRESSION PERPENDICULAR TO GRAIN	COMPRESSION PARALLEL TO GRAIN	MODUI ELAST	LUS OF ICITY	STANDARD/GRADING RULES AGENCY
	Fb, psi	Ft, psi	Fv_,psi	Fv _{II} ,psi	Fc_,psi	Fc _{II} ,psi	E, ksi	Emin,ksi	STA RUL
SOUTHERN PINE No.1 SR: 6x12 TREATED END BRIDGE BEAMS	1,350	900	165	N/A	375	825	1,500	550	SPIB
SOUTHERN PINE No. 2 DENSE SR: 6x12 TREATED INTERMEDIATE BEAMS *.	975	650	165	N/A	440	625	1,300	470	SPIB
SOUTHERN PINE PIECES: CONSTRUCTION GRADE, TREATED-4x4,4x6 & 4x8	875	500	N/A	175	565	1,600	1,400	510	SPIB
SOUTHERN PINE No. 2: TREATED DECK AND ALL OTHER 2x MEMBERS	1,100	675	N/A	175	565	1,450	1,400	510	SPIB

NOTE *: TO AVOID A CONSTRUCTION MISTAKE USE ALL BEAMS 6x12 PT AS SHOWN FOR END BEAMS. DIFFERENT MATERIAL FOR BRIDGE BEAMS SHOWN FOR COST REDUCTION, IF APPLIED.

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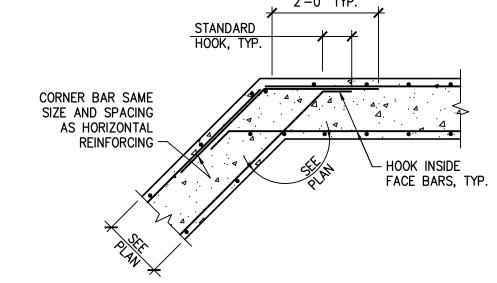


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"U" BARS TO MATCH HORIZONTAL REINFORCING

A - AT END OF WALL



B-AT ANGLE OF WALL

SECTION FOR WALL AT BRIDGE SUPPORT

1'-3"

1'-0"

3**'**-0"

#4 @ 12" CONT.

4 #4 CONT. -

SCALE: 3/4"=1'-0"

- #3 **@** 24**"**

- KEY 2x4 CONT. (CTR † D.)

3" CLR. TYP.

MATCH WITH DOWELS -

SECTION FOR WALL AT BRIDGE WINGS

2'-6"

1. RETAINING WALLS WERE DESIGNED FOR SOIL BEARING CAPACITY 2,000 psf.

2. PROVIDE WATERPROOFING AT BOTH FACES OF STEM WALL. COORDINATE

- #4 @ 12" DOWELS

- KEY 2x4 CONT. (CTR'D.)

3" CLR. TYP.

#4 @ 12" CONT. MATCH WITH DOWELS —

#4 @ 12" CONT. —

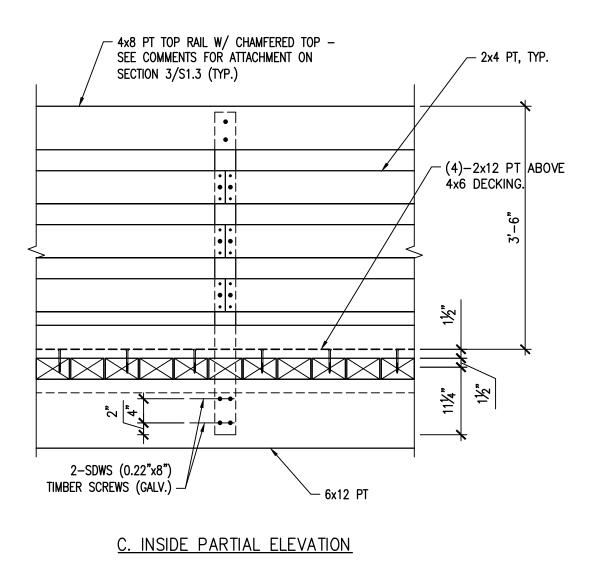
3 #4 CONT. -

NOTES FOR SECTIONS 1, 2 AND 2A ON THIS SHEET:

WITH ARCHITECT FOR ADDITIONAL INFORMATION.

TYPICAL DETAILS FOR ADDITIONAL REINFORCEMENT ON C.I.P. WALLS SCALE: NONE

— 4x8 PT (CONT.) TOP RAIL WITH - 4x6 PT INTERMEDIATE POST - 4x8 PT TOP RAIL W/ - 4x8 PT TOP RAIL W/ CHAMFERED TOP -CHAMFERED TOP — SEE COMMENTS FOR CHAMFERED TOP - SEE COMMENTS FOR SEE COMMENTS FOR ATTACHMENT ON 2x4 PT, TYP. ATTACHMENT ON SECTION 3/S1.3 (TYP.) ATTACHMENT, ON SECTION 3/S1.3 (TYP.) SECTION 3/S1.3 (TYP.) AND 2-SDWS (0.22"x6") AT EACH POST — 2−8dx2½" NALES, TYP. INTERMEDIATE - 1-SDWS (0.22"øx3") POST -TIMBER SCREWS (GALVANIZED), TYP. 2x4 PT, TYP. SDWS (0.22"x3") AT ' EACH 2x6 (CTR'D), TYP. -2x12 PT BETWEEN - 2x6 PT (CONT.) W/ 2-SDWS (0.22"ø) POSTS (TYP.) -SDWS (0.22"x3") AT ONE 3", ONE 4" @ 16" O.C. EACH 2x6 (CTR'D), TYP. -STAGGERED TIMBER SCREWS (GALV.) SDWS (0.22"x8") - 6x6 PT CURB (CONT.) TIMBER SCREWŚ (GALV.), 4 TOTAL -- SDWS (0.22"x10") @ 6" TIMBER SCREWS (GALV.) SDWS (0.22"x3") — 2-SDWS (0.22"x8") TIMBER SCREWS (GALV.) 4-SDWS (0.22"x8") <u></u> 2x12 PT (TYP.) & 3-SDS (0.22"x3") TIMBER SCREWŚ (GALV.), 7 TOTAL B. SECTION A. OUTSIDE PARTIAL ELEVATION

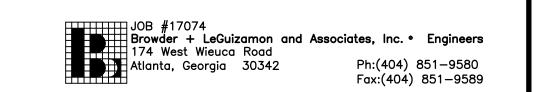


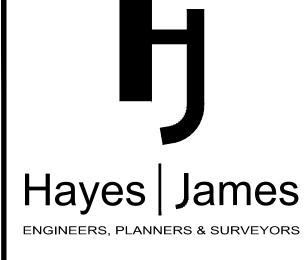
— COVER HOLE W/ OUTDOOR WOOD FILLER. MATCH COLOR W/ Bridge Member ¹¾6"ø MIN. SDWS (0.22"ø) TIMBER %"ø MAX. SCREWS (GALVANIZED) -

HANDRAIL ELEVATION AND POST ATTACHMENT SCALE: 3/4"=1'-0"

SCREWS AT PUBLIC AREAS AND SURFACES

SCALE: NONE





4145 SHACKLEFORD ROAD SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

CITY OF CLARKSTON

1055 ROWLAND STREET **CLARKSTON, GA 30021** Phone: (404) 296-6489 Fax: (770) 000-0000

Contact: KEITH BARKER (770) 000-0000

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Š	Description	By	By App.	Date
0	100% REVIEW SET	BH	SP	07-19-201
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BID SET NOT TO BE RELEASED FOR CONSTRUCTION

Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

Project Location

4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot District-Section 18

DEKALB County Project No.

Drawn By: Checked By:

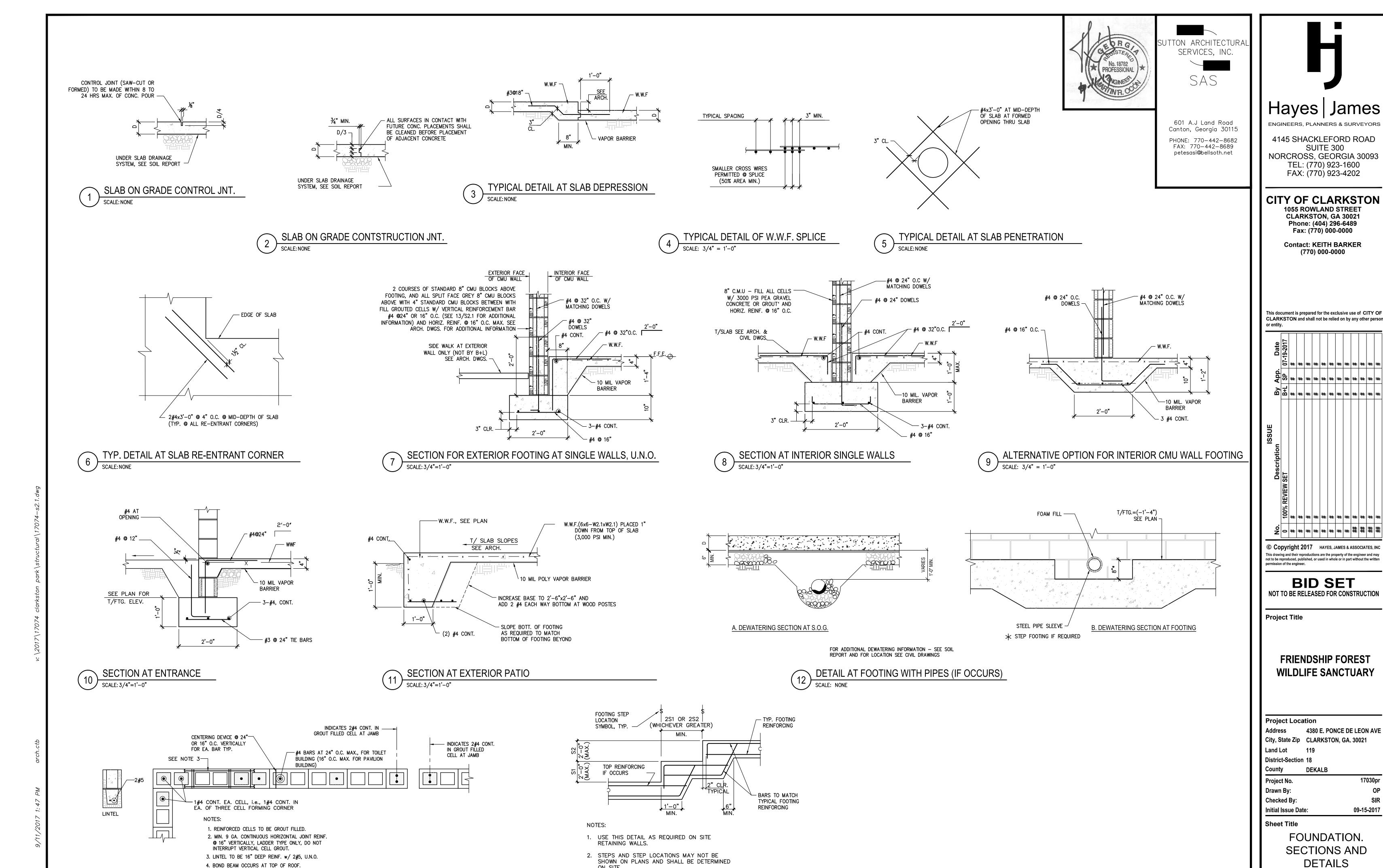
Initial Issue Date: Sheet Title

SECTIONS AND DETAILS

Sheet Number

17030pr

09-15-2017



STEP FOOTING DETAIL

SCALE: 3/4"=1'-0"

TYP. REINFORCEMENT FOR CMU WALLS AS SHOWN ON PLANS

17030pr

09-15-2017

James

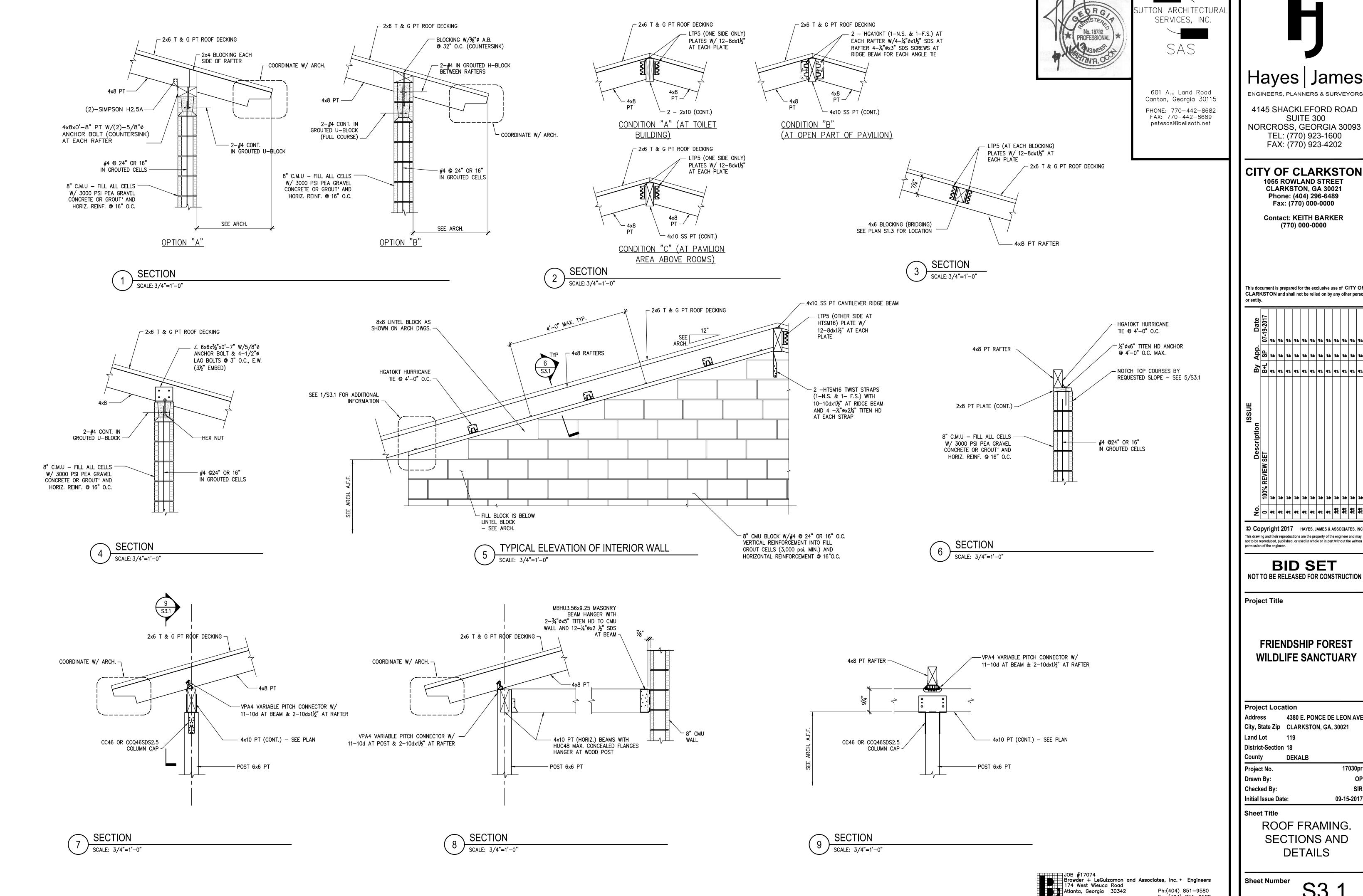
Sheet Number

Ph:(404) 851-9580

Fax:(404) 851-9589

74 West Wieuca Road

Atlanta, Georgia 30342



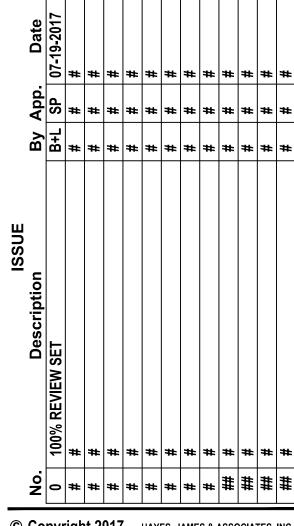
4145 SHACKLEFORD ROAD SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

CITY OF CLARKSTON **1055 ROWLAND STREET**

CLARKSTON, GA 30021 Phone: (404) 296-6489 Fax: (770) 000-0000

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BID SET NOT TO BE RELEASED FOR CONSTRUCTION

Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location 4380 E. PONCE DE LEON AVE City, State Zip CLARKSTON, GA. 30021

Land Lot District-Section 18 County DEKALB

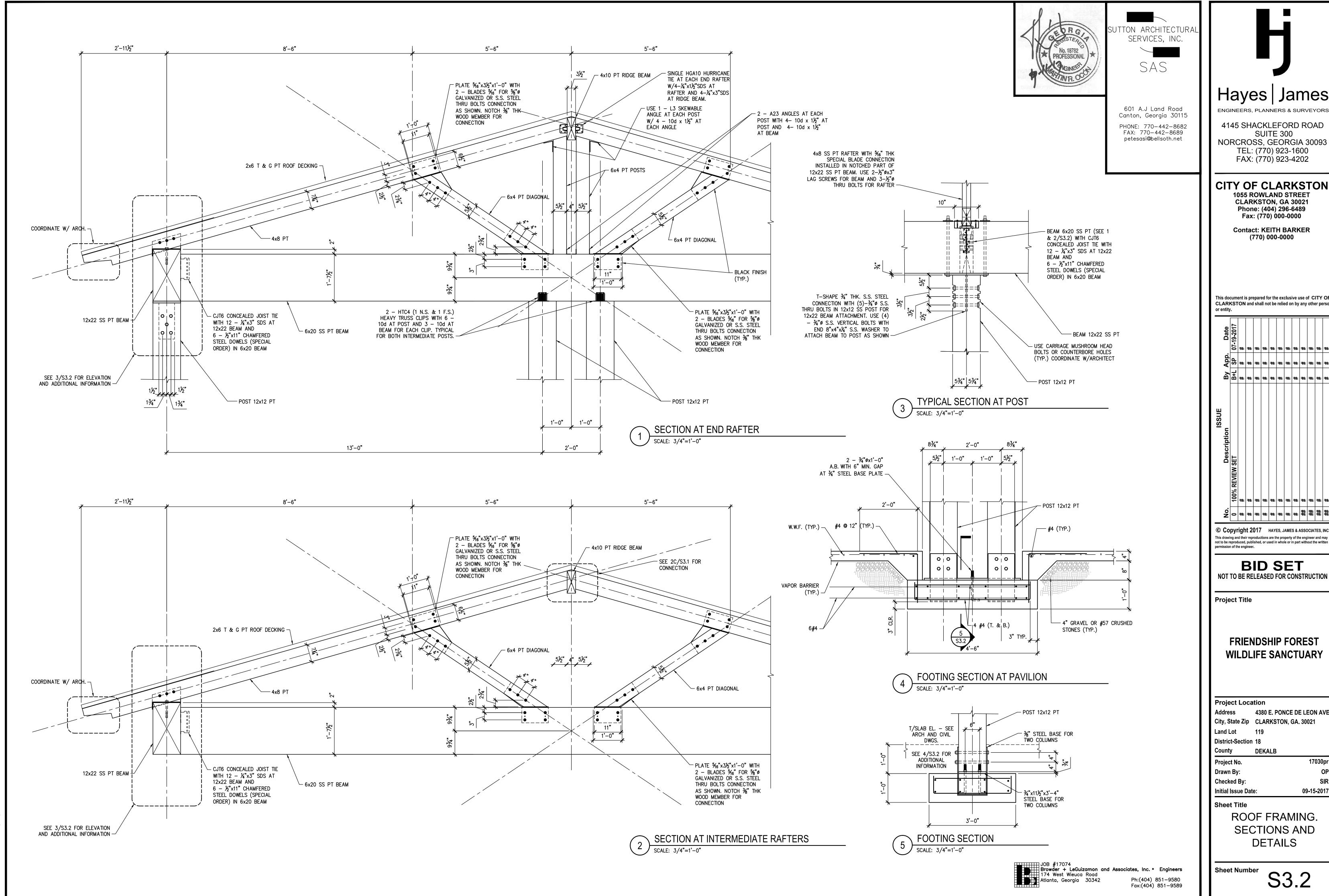
17030pr Project No. Drawn By: Checked By: Initial Issue Date: 09-15-2017

Sheet Title ROOF FRAMING.

SECTIONS AND DETAILS

Sheet Number

Fax:(404) 851-9589



Hayes | James

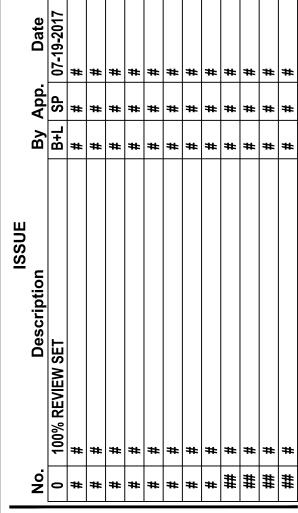
4145 SHACKLEFORD ROAD SUITE 300 NORCROSS, GEORGIA 30093 TEL: (770) 923-1600 FAX: (770) 923-4202

CITY OF CLARKSTON **1055 ROWLAND STREET**

CLARKSTON, GA 30021 Phone: (404) 296-6489 Fax: (770) 000-0000

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BID SET NOT TO BE RELEASED FOR CONSTRUCTION

Project Title

FRIENDSHIP FOREST **WILDLIFE SANCTUARY**

Project Location 4380 E. PONCE DE LEON AVE

City, State Zip CLARKSTON, GA. 30021

District-Section 18 DEKALB

17030pr Drawn By: Checked By:

09-15-2017 Initial Issue Date:

> ROOF FRAMING. **SECTIONS AND**

> > **DETAILS**

Sheet Number

SITE WORK CONSTRUCTION DRAWINGS FOR

FRIENDSHIP FOREST PARK WETLAND AND TRAIL ENHANCEMENT PLAN

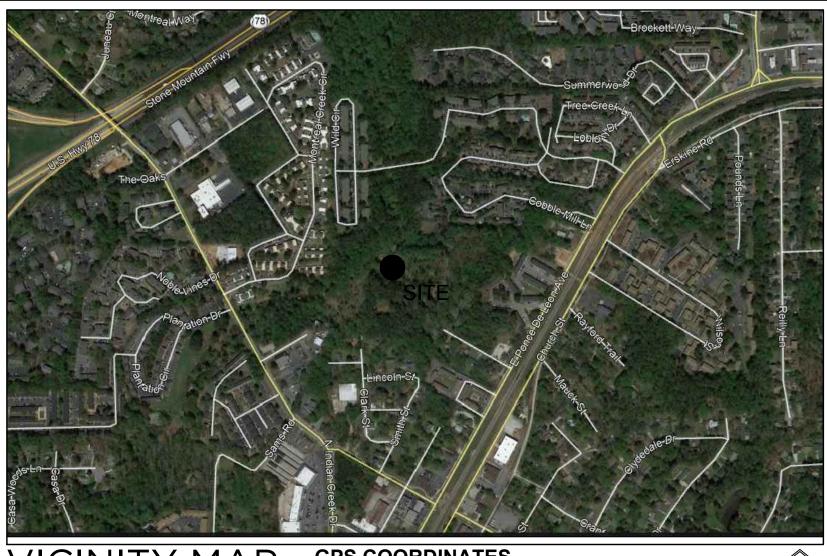
CITY OF CLARKSTON 4399 E PONCE DE LEON AVE CLARKSTON, GEORGIA 30021 DEKALB COUNTY:

SHEET INDEX

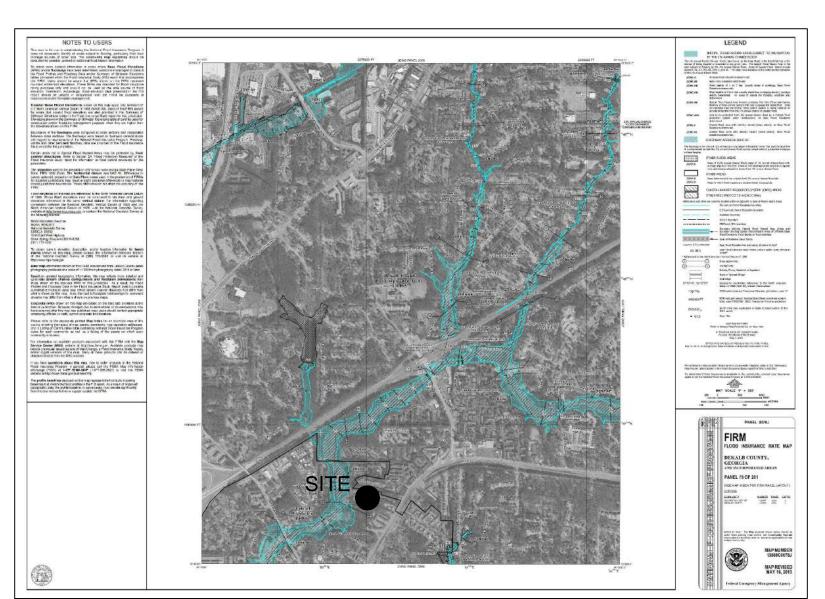
CV-1.0 L-1.0	COVER SHEET GENERAL NOTES
L-2.0	GRADING PLAN
L-3.0	LAYOUT AND STAKING
L-4.0	EROSION CONTROL NOTES
L-4.1	CLEARING PHASE ES & PC PLAN
L-4.2	GRADING PHASE ES & PC PLAN
L-4.3	FINAL PHASE ES & PC PLAN
L-5.0	LANDSCAPE PLAN - TREE AND SHRUB
L-5.1	LANDSCAPE PLAN - FORBS AND SEEDING
L-6.0	SITE WORK DETAILS
L-7.0	LANDSCAPE DETAILS
L-7.1	LANDSCAPE NOTES
L-8.0	EROSION CONTROL DETAILS

2,100,011,0			N & POLLUTION CONTROL PLAN CHECKLIST STAN CONSTRUCTION PROJECTS	ID ALONE				
			SWCD: Upper Chattahoochee					
Project Name: Frie	ndship Fo	rest V	/etland Enhancement Address: 4399 E Ponce De Leon Avenue					
City/County: Clarks			Date on Plans: September 15, 2017					
Plan	Included			1				
Page #	Y/N		TO BE SHOWN ON ES&PC PLAN					
CV-1.0	Y	1)	The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by as of January 1 of the year in which the land-disturbing activity was permitted.	the Commission				
CV-1.0; L-1.0 thru 8.0	Y	2)	Level II certification number issued by the Commission, signature and seal of the certified	design profession				
n/a	n/a	3)	Limits of disturbance shall be no greater than 50 acres at any one time without prior writte from the EPD District Office. If EPD approves the request to disturb 50 acres or more at plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist.*	n authorization any one time, the				
CV-1.0; L-1.0 thru 8.0	Y	4)	The name and phone number of the 24-hour local contact responsible for erosion, sedime pollution controls.	ntation and				
CV-1.0; L-1.0 thru 8.0	Y	5)	Provide the name, address and phone number of primary permittee.					
CV-1.0; L-5.0; L-8.0	Y		Note total and disturbed acreage of the project or phase under construction.					
CV-1.0; L-5.0	Y		Provide GPS location of the construction exit for the site. Give the Latitude and Longitude	in decimal degree				
all	Y	-	Initial date of Plan and dates of any revisions made to Plan including the entity who reques					
CV-1.0; L-5.0	Y			ted the revisions.				
A SCHOOL STATE OF THE STATE OF STATE			Description of the nature of construction activity.	Company Service and Towns and Towns				
CV-1.0; L-5.0	Y	10)	Provide vicinity map showing site's relation to surrounding areas. Include designation of s necessary.	pecific phase, if				
CV-1.0; L-5.0	Y	11)	Identify the project receiving waters and describe all sensitive adjacent areas including stresidential areas, wetlands, marshlands, etc. which may be affected.	eams, lakes,				
L-5.0 thru L-5.3	Y		Design professional's certification statement and signature that the site was visited prior to the ES&PC Plan as stated on page 15 of the permit.	development of				
L-5.0 thru L-5.3	Y	13)	Design professional's certification statement and signature that the permittee's ES&PC Pl appropriate and comprehensive system of BMPs and sampling to meet permit requirement page 15 of the permit.*					
L-5.0 thru L-5.3	Y	14)	Clearly note the statement that "The design professional who prepared the ES&PC Plan is installation of the initial sediment storage requirements and perimeter control BMPs within installation."*					
L-5.0	Y		Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 undisturbed stream buffers as measured from the point of wrested vegetation or within 25 coastal marshland buffer as measured from the Jurisdictional Determination Line without necessary variances and permits."	feet of the				
n/a	n/a	16)	Provide a description of any buffer encroachments and indicate whether a buffer variance	is required.				
L-5.0	Y	17)	Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a on BMPs with a hydraulic component must be certified by the design professional."*	significant effect				
L-5.0	Y		Clearly note the statement that "Waste materials shall not be discharged to waters of the authorized by a section 404 permit."*	State, except as				
L-1.0; L-5.0	Y	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."	e installation of				
L-1.0; L-5.0	Y	20)	Clearly note statement that "Erosion control measures will be maintained at all times. If further of the approved plan does not provide for effective erosion control, additional erosion and semeasures shall be implemented to control or treat the sediment source."					
L-1.0; L-5.0	Y		Clearly note the statement "Any disturbed area left exposed for a period greater than 14 dastabilized with mulch or temporary seeding."	statement "Any disturbed area left exposed for a period greater than 14 days shall be				
L-5.0	Y/n/a		Any construction activity which discharges storm water into an Impaired Stream Segment mile upstream of and within the same watershed as, any portion of an Biota Impaired Stremust comply with Part III. C. of the Permit. Include the completed Appendix 1 listing all the used for those areas of the site which discharge to the Impaired Stream Segment.*	am Segment				
L-5.0	Y/n/a		If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Se in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must addrespecific conditions or requirements included in the TMDL Implementation Plan.*					
L-5.0; L-8.0	Y	24)	BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the Washout of the drum at the construction site is prohibited.*	vehicles.				

		26) Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.*					
L-5.0	Y	27) Description of the practices that will be used to reduce the pollutants in storm water discharges.*					
L-5.0	Y	Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities excavation activities, utility activities, temporary and final stabilization).					
L-5.0	Y	29) Provide complete requirements of inspections and record keeping by the primary permittee.*					
L-5.0	Y)) Provide complete requirements of sampling frequency and reporting of sampling results.*					
L-5.0	Y	31) Provide complete details for retention of records as per Part IV.F. of the permit.*					
L-5.0	Y	32) Description of analytical methods to be used to collect and analyze the samples from each location.*					
L-8.0	Y						
L-5.0 thru L-5.3	Y	Appendix B rationale for NTU values at all outfall sampling points where applicable.* Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.*					
L-5.0	Y	A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase.*					
all plan sheets	Y	36) Graphic scale and North arrow.					
L-1.0 thru L-5.3	Y	37) Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following					
		Map Scale Ground Slope Contour Intervals, ft					
		1 inch = 100ft or Rolling 2 - 8%					
		Steep 8% + 2, 5, or 10					
n/a	n/a	38) Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.					
n/a	n/a	39) Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manufor Erosion & Sediment Control in Georgia 2016 Edition.*					
L-1.0 thru L-5.3	Y/n/a	40) Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.					
L-1.0 thru L-5.3 L-1.0 thru L-5.3	Y/n/a Y/n/a						
		additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.					
L-1.0 thru L-5.3	Y / n/a	additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. 41) Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.					
L-1.0 thru L-5.3 L-2.0	Y/n/a Y	additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. 41) Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. 42) Delineation and acreage of contributing drainage basins on the project site.					
L-1.0 thru L-5.3 L-2.0 n/a	Y / n/a Y n/a	additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. 41) Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. 42) Delineation and acreage of contributing drainage basins on the project site. 43) Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.* 44) An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction					
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L-1.0 thru L-5.3 L-2.0 n/a n/a n/a L-1.0 thru L-5.3	Y/n/a Y n/a n/a n/a Y	additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. 41) Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. 42) Delineation and acreage of contributing drainage basins on the project site. 43) Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.* 44) An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. 45) Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points. 46) Soil series for the project site and their delineation. 47) The limits of disturbance for each phase of construction. 48) Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permitees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface, unless infeasible. If outlet structures t					
L-1.0 thru L-5.3 L-2.0 n/a n/a n/a L-1.0 thru L-5.3 L-1.0 thru L-5.3	Y/n/a Y n/a n/a n/a Y Y	additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. 41) Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. 42) Delineation and acreage of contributing drainage basins on the project site. 43) Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.* 44) An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. 45) Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points. 46) Soil series for the project site and their delineation. 47) The limits of disturbance for each phase of construction. 48) Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permitees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasable, a written justification explaining this decision must be included in the plan. 49) Location of Best M					
L-1.0 thru L-5.3 L-2.0 n/a n/a n/a L-1.0 thru L-5.3 L-1.0 thru L-5.3 n/a	Y/n/a Y n/a n/a n/a Y Y	 additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact. Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. Delineation and acreage of contributing drainage basins on the project site. Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.* An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points. Soil series for the project site and their delineation. The limits of disturbance for each phase of construction. Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storagi is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permitees are required to utilize outlet structures that withdraw water from the surface are not feasable, a written justification explaining this decision must be included in the plan. Location of Best Management Practices that are cons					



VICINITY MAP NOT TO SCALE



FLOOD MAP NOT TO SCALE

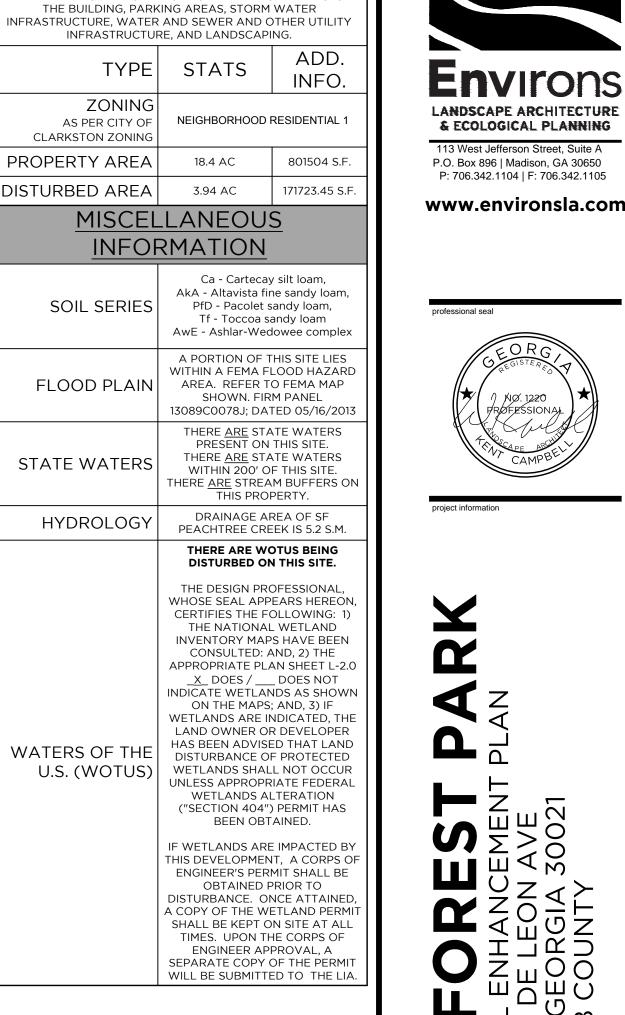
		LEGEND		
STANDARD ABBR	EVIATIONS			
APPROX.= APPROXIMATE BLDG= BUILDING BM = BENCH MARK C&G = CURB AND GUTTER CI = CURB INLET CL. = CHAIN LINK CMP = CORRUGATED METAL PIPE CO = CLEAN OUT CPP = CORRUGATED PLASTIC PIPE CTF = CRIMP TOP FOUND DB = DEED BOOK	DIA = DIAMETER DS = DOWNSPOUT DWCB = DOUBLE WING CATCH BASIN ES&PC = EROSION, SEDIMENTATION, AND POLLUTION CONTROL FDC = FIRE DEPARTMENT CONNECTION FFE = FINISH FLOOR ELEVATION FH = FIRE HYDRANT FO = FIBER OPTIC	FT = FEET GI = GRATE INLET GM = GAS METER GP = GUY POLE GV = GAS VALVE ICV = IRRIGATION CONTRO VALVE IE = INVERT ELEVATION IMP = IMPERVIOUS IPF = IRON PIN FOUND JB = JUNCTION BOX LIA = LOCAL ISSUING AUTHORITY	LP = LIGHT POLE NTS = NOT TO SCALE OHE = OVER HEAD POWER PB = PLAT BOOK PGL = PAGE L P = PROPERTY LINE POB = POINT OF BEGINNING PP = POWER POLE PVC = POLYVINYL CHLORIDE PIPE RBF = REBAR FOUND RCP = REINFORCED CONCRETE PIPE	R/W = RIGHT OF WAY SMH = STORM MANHOLE SS = SANITARY SEWER SSMH = SANITARY SEWER MANHOLE SWCB = SINGLE WING CATCH BASIN TC = TRAFFIC CONTROL BOX TMP = TAX MAP PARCEL W = WATER WM = WATER WV = WATER VALVE
STANDARD SYMB	<u>OLS</u>			
● = BM	⊚ = FH	= GP → = LP	─o─ = SIGN	(T) = TELE PEDESTA
A = BM IDENTIFICATION	NFO-FO- = FO	= GUY WIRE -OHE-OHE- = POWE	R (OVERHEAD)	= TRAFFIC WIRE
<u> </u>	-GAS-GAS- = GAS LINE GM = GAS METER \bullet =	= H/C PARKING-P-P- = POWE	R (UNDERGROUNDS) ss- = SS LIN	NE TRANSFORMER
🔯 = DS	GM = GAS METER 🔂 =	= ICV PB = POWE	R BOX 🔘 = SSMH	-W-W- = WATER LINE
= FDC		= IPF POWE		$\boxed{WM} = WM$
-X-X- = FENCE	—□—□— = GATE (LB) =	= LIGHT BOX Ø = PP	□ = TELECT STRUCT	COMM \bowtie = WV

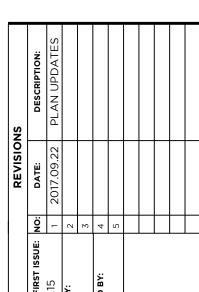
-		NOIC	:OMN	IENCE F			PRECONSTRUCTION MEETING WITH THE ENGINEERING DEPARTMENT.	COMPANY: City of Clarkston
<u>-</u>	OCT 2017 NOV DEC JAN	FE	В	MAR	.	APR 2018	ACTIVITY	ADDRESS: 1055 Rowland Street
	NOTIFY INSPECTOR 24 HOURS PRIOR TO	CONS	rruc	TION:				Clarkston, Georgia 30021
I							PERFORM INITIAL MONITORING	CONTACT: Keith Barker, City Manager
L							INSTALL CONSTRUCTION EXIT	PHONE: (404) 296-6489
ıL							INSTALL PERIMETER SILT FENCE	FAX: N/A
L							INSTALL ANY INITIAL INTERIOR SILT FENCE	EMAIL: kbarker@cityofclarkston.com
L							INSTALL TOP SOIL PILE LOCATION SILT FENCE	CONTRACTOR
		NST.			·		INSTALL WHEEL WASH AND FUEL STORAGE LOCATION	
							COORDINATE SITE REVIEW MEETING WITH ENGINEER AND LOCAL ISSUING AUTHORITY	COMPANY: TO BE DETERMINED
		S S S S S S S S S S S S S S S S S S S					CLEAR AND REMOVE EXISTING VEGETATION	ADDRESS:
ſ		NT E					REMOVE AND STOCKPILE TOP SOIL] courtest
I		EME						CONTACT: PHONE:
l								FAX:
		ND P					PERFORM WETLAND EXCAVATION	EMAIL:
		A DI					INSTALL ROCK VANES	
							FINALIZE WETLAND GRADES	SURVEYOR
		Id WO					PROVIDE ANY MULCHING, OR OTHER GROUND COVER	COMPANY: Georgia Civil, Inc.
							INSTALL GRASSING ON ALL EXPOSED SOILS	ADDRESS: P.O. Box 186
		L B						Madison, Georgia 30650
								CONTACT: Brian Slate, PLS
		ORK Son						PHONE: (706) 342-1104
								FAX: (706) 342-1105
		SITE						EMAIL: brian@georgiacivil.com
							MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES AND GRASSING	SITE DESIGNER
ĺ								COMPANY: ENVIRONS DESIGN STUDIO
t								ADDRESS: 1104 MONTICELLO STREET
ŀ							INSTALL PERMANENT VEGETATION (SOD AND LANDSCAPING)	COVINGTON, GA 30014
l							SITE INSPECTION FOR STABILIZATION	PHONE: 706-342-1104
ŀ		\dashv					REMOVAL OF TEMPORARY EROSION CONTROL MEASURES	1 I

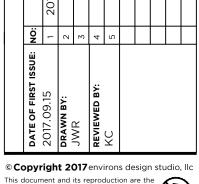
CLARKSTON ZONING PROPERTY AREA 801504 S.F. DISTURBED AREA 3.94 AC 171723.45 S.F. MISCELLANEOUS INFORMATION Ca - Cartecay silt loam, AkA - Altavista fine sandy loam, SOIL SERIES PfD - Pacolet sandy loam, Tf - Toccoa sandy loam AwE - Ashlar-Wedowee complex A PORTION OF THIS SITE LIES WITHIN A FEMA FLOOD HAZARD FLOOD PLAIN AREA. REFER TO FEMA MAP SHOWN. FIRM PANEL 13089C0078J; DATED 05/16/2013 THERE ARE STATE WATERS PRESENT ON THIS SITE. THERE ARE STATE WATERS STATE WATERS WITHIN 200' OF THIS SITE. HERE ARE STREAM BUFFERS ON THIS PROPERTY. DRAINAGE AREA OF SF HYDROLOGY PEACHTREE CREEK IS 5.2 S.M. THERE ARE WOTUS BEING DISTURBED ON THIS SITE. THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING: 1) THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED: AND, 2) THE APPROPRIATE PLAN SHEET L-2.0 _X_ DOES / ___ DOES NOT INDICATE WETLANDS AS SHOWN ON THE MAPS; AND, 3) IF WETLANDS ARE INDICATED, THE

SITE INFORMATION

THE x.xx ACRES (AC) OF (DESCRIBE EXISTING SITE FEATURES) WILL BE DEVELOPED FOR A PUBLIC PARK. THIS WILL INCLUDE







William K. Campbell

LEVEL II CERTIFIED

DESIGN PROFESSIONAL

1855 - EXP. 08/01/2018

24-HOUR CONTACT

Larry Kaiser, PE

(404) 909-5619

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

COVER SHEET

GENERAL NOTES:

- ALL UTILITY INSTALLATION SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION WATER AND SEWER STANDARDS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND REVIEWING SAID STANDARDS AND SPECIFICATIONS.
- 2. NOTIFY THE LOCAL AUTHORITY HAVING JURISDICTION INSPECTION 24 HRS BEFORE BEGINNING OF CONSTRUCTION.
- 3. CONTRACTOR SHALL THOROUGHLY REVIEW CONSTRUCTION PLANS AND BE FAMILIAR WITH EXISTING CONDITIONS BY SITE VISITATION, PRIOR TO FORMULATING BID.
- 4. CONTRACTOR SHALL VERIFY CONDITIONS AND DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCY FOUND IN THIS SET SHALL BE REFERRED TO THE SITE DESIGN PROFESSIONAL BY THE CONTRACTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR DISCREPANCIES WHICH ARE NOT REPORTED.
- CONSTRUCTION SHALL MEET OR EXCEED LOCAL AUTHORITY HAVING JURISDICTION MINIMUM STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL ADHERE TO NORMAL WORKING HOURS AS PER THE LOCAL AUTHORITY HAVING JURISDICTION ORDINANCES. CONSTRUCTION OUTSIDE OF NORMAL WORKING HOURS, MAY BE ALLOWED UPON PRIOR APPROVAL BY THE LOCAL AUTHORITY HAVING JURISDICTION .
- 7. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL ADHERE TO FEDERAL, STATE, COUNTY AND LOCAL LAWS, ORDINANCES, AND REGULATIONS WHICH IN ANY MANNER AFFECT THE CONDUCT OF WORK, INCLUDING, BUT NOT LIMITED TO, INITIATING, MAINTAINING, AND SUPERVISING SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK (I.E. THE REQUIREMENTS OF SUPERVISING SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK (I.E. THE REQUIREMENTS OF APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)). CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE LOCAL AUTHORITY HAVING JURISDICTION AND ITS AGENTS, THE OWNER AND THE SITE DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN THE CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
- 9. DO NOT BREAK THESE DOCUMENTS INTO PARTS AND SUB-PARTS. THE SITE DESIGN PROFESSIONAL AND OWNER ASSUMES NO RESPONSIBILITY FOR THE SEPARATION OF THESE DOCUMENTS BY ANY ENTITY OF THE CONTRACTING INDUSTRY. EACH CONTRACTING ENTITY SHALL BE RESPONSIBLE FOR ALL OF THE WORK RELATED TO THEIR TRADES WHEREVER IT MAY BE SHOWN WITHIN THE CONTRACT DOCUMENT PACKAGES.
- 10. NO WORK SHALL BE PERFORMED WITHIN GEORGIA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY (IF APPLICABLE) UNTIL PERMIT(S) (INCLUDING GEORGIA DEPARTMENT OF TRANSPORTATION UTILITY ENCROACHMENT PERMIT) ARE OBTAINED FROM GEORGIA DEPARTMENT OF TRANSPORTATION AND ON SITE.
- 11. BARRICADES, SUFFICIENT LIGHTS, TRAFFIC SAFETY SIGNS, AND OTHER TRAFFIC CONTROL MEASURES AS DEEMED NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION ON ROADS ACCESSED BY THE GENERAL PUBLIC.
- 12. SIGNS (LOCATION, NUMBER, AND SIZE) ARE NOT APPROVED UNDER THIS DEVELOPMENT PERMIT. A SEPARATE PERMIT
- 13. NO CERTIFICATE OF OCCUPANCY SHALL BE ISSUED UNTIL SITE IMPROVEMENTS ARE COMPLETE.
- 14. ACCESS TO BUILDINGS DURING CONSTRUCTION SHALL BE MAINTAINED AND OPEN TO EMERGENCY VEHICLES AT ALL TIMES, THROUGH THE USE OF EXISTING OR TEMPORARY ROADS, DRIVES, AND/OR WALKS.
- 15. SITE LIGHTING SHALL BE FULLY SHIELDED. SITE LIGHTING IS TO BE DESIGNED BY OTHERS.
- 16. ALL WORK SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY CONTRACTOR.
- 17. CONTRACTOR IS RESPONSIBLE FOR QUANTITY TAKE OFFS AND ESTIMATING ALL QUANTITIES FOUND WITHIN THE SITE WORK CONSTRUCTION DRAWINGS. ANY QUANTITY TAKE OFFS OR ESTIMATES PROVIDED BY THE SITE DESIGN PROFESSIONAL ON THESE DOCUMENTS OR OTHERWISE SHALL BE VERIFIED BY THE CONTRACTOR BY PERFORMING HIS/HER OWN QUANTITY TAKE OFF AND/OR ESTIMATE. ANY COST FOR ANY DISCREPANCY IN QUANTITY TAKE OFF OR ESTIMATE PROVIDED BY SITE DESIGN PROFESSIONAL AND REQUIRED CONSTRUCTION QUANTITIES SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE SITE DESIGN PROFESSIONAL AND/OR OWNER AND/OR OWNER'S REPRESENTATIVE.

DEMOLITION REQUIREMENTS:

- THE CONTRACTOR SHALL INSPECT ALL STRUCTURES, FACILITIES, AND AREAS SLATED FOR DEMOLITION TO GAIN A FULL UNDERSTANDING OF THE WORK REQUIRED. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC, HIS/HER EMPLOYEES AND AGENTS DURING THE INSPECTION AND SUBSEQUENT WORK. THE OWNER, CLIENT AND SITE DESIGN PROFESSIONAL ARE NOT RESPONSIBLE FOR THE CONDITION OF THE BUILDINGS, FÁCILITIES, OR OTHER AREAS SLATED FOR DEMOLITION.
- 2. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE OWNER TO DEMOLISH ANY STRUCTURE ON THE SITE BEFORE PROCEEDING WITH WORK.
- 3. ALL WORK PERFORMED ON THE SITE SHALL ADHERE TO ALL (OSHA) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION SAFETY STANDARDS.
- 4. ALL MATERIALS NOT SLATED FOR REUSE SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER. THE CONTRACTOR MAY SALVAGE ALL MATERIALS NOT DESIGNATED BY THE OWNER TO BE SAVED. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND STORE SAFELY ALL MATERIALS SLATED TO BE SAVED OR REUSED. THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS USING PHOTOGRAPHS PRIOR TO START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE MATERIALS DAMAGED DUE TO HIS WORK OR FAILURE TO PROTECT THROUGHOUT THE DURATION OF HIS CONTRACT.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL APPROPRIATE UTILITY OWNERS OPERATORS AND USERS PRIOR TO DISCONNECTION AND DEMOLITION. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. ALL PLUGS, STOPS, AND CAPS SHALL BE PER AGENCIES REQUIREMENTS AND IF NONE EXIST THEN A 3000 PSI CONCRETE PLUG WITH A THICKNESS EQUAL TO THE DIAMETER OF THE PIPE
- 6. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY AND STOP ALL WORK IN AREAS WHERE HAZARDOUS MATERIALS ARE DISCOVERED. WHEN REQUIRED, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE ENVIRONMENTAL AND HEALTH AGENCIES. THE CONTRACTOR SHALL FLAG OFF ALL ACCESS WITH SUFFICIENT FLAGGING THAT THERE IS AN APPARENT WARNING OF THE PRESENCE OF HAZARDOUS MATERIALS
- 7. NO BURNING, EXPLOSIVES OR OTHER POTENTIALLY DANGEROUS METHODS OF DEMOLITION SHALL BE ALLOWED UNLESS WRITTEN PERMISSION IS GRANTED BY THE OWNER AND ALL APPROPRIATE PERMITS ARE GRANTED.
- . THE CONTRACTOR SHALL PROVIDE WHAT EVER SAFETY EQUIPMENT AND DEVICES ARE NECESSARY TO PROTECT THE DJACENT PROPERTIES, STRUCTURES AND OTHER AREAS SLATED TO REMAIN. THE CONTRACTOR SHALI RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE ANY DAMAGE CAUSED BY HIS/HER WORK. THIS SHALL ALSO INCLUDE EROSION CONTROL, DUST CONTROL AND SETTLEMENT.
- 9. ALL AREAS SHALL BE BROUGHT BACK TO THEIR ORIGINAL GRADE OR THAT OF THE SURROUNDING AREA, WHICH EVER IS CLOSER TO THE FINAL GRADES OF THE PROJECT FOR THAT AREA. ALL TEMPORARY SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL. ALL AREAS REQUIRING FILL SHALL BE COMPACTED TO THE REQUIREMENTS OF THE AREA BUT IN NO CASE LESS THAN 90% OF MODIFIED PROCTOR (ASTM D 1557).
- 10. THE CONTRACTOR SHALL PROVIDE NECESSARY EROSION CONTROL MEASURES DURING THE DEMOLITION AND REMOVAL OF EXISTING SITE FEATURES
- 11. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES.
- 12. EXISTING BUILDINGS, APPURTENANCES, CANOPIES AND FOUNDATIONS ON THE PROPERTY SHALL BE PROTECTED
- 13. THE CONTRACTOR SHALL MAINTAIN SAFE, CLEARLY MARKED PEDESTRIAN ACCESS ROUTES TO BUILDING ENTRANCES THROUGHOUT ALL PHASES OF CONSTRUCTION. ACCESS TO BUILDINGS SHALL BE MAINTAINED AT ALL TIMES.
- 14. SERVICES SHOWN ARE TO ASSIST CONTRACTOR IN LOCATING UTILITIES. ITEMS ARE SHOWN SCHEMATICALLY AND NEITHER THE ARCHITECT, SITE DESIGN PROFESSIONAL, NOR THE OWNER ASSUMES ANY RESPONSIBILITY FOR VARIANCES IN THE ACTUAL LOCATION OF THE EXISTING UTILITIES.
- 15. THE CONTRACTOR SHALL REPAIR OR REPLACE AS NECESSARY ANY UTILITIES DAMAGED, WHETHER SHOWN ON THESE PLANS OR NOT, AT NO ADDITIONAL COST TO THE CONTRACT.
- 16. EXISTING UTILITY APPURTENANCES (CLEAN OUTS, VALVE/METER BOXES AND/OR COVERS, MANHOLES, ETC.)
 LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED AS NECESSARY OR ADJUSTED TO FINISHED GRADE AT THE EXPENSE OF THE CONTRACTOR.

17. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY PROVIDER OF DAMAGE TO ANY ACTIVE UTILITY AND

- PROVIDE CORRECTIVE MEASURES AS DIRECTED BY THE UTILITY PROVIDER AT NO ADDITIONAL COST TO THE
- 18. EXISTING ITEMS TO REMAIN WITHIN THE PROJECT LIMITS SHALL BE RETAINED IN PLACE AND PROTECTED FROM DAMAGE DURING CONSTRUCTION, UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER AND/OR THE OWNER'S
- 19. ALL DISPOSAL SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES.
- 20. THERE SHALL BE NO ON SITE BURIAL
- 21. WORK DONE AHEAD OF SCHEDULE OR FOR TEMPORARY PROVISIONS SHALL HAVE EXISTING DISTURBED SURFACES PATCHED TO MATCH ORIGINAL CONDITIONS UNTIL NEW CONSTRUCTION REPLACES SUCH REPAIRS OR 22. PAVEMENT AREAS TO BE SAVED SHALL BE ABRASION SAW CUT PRIOR TO DEMOLITION. FAILURE TO PROVIDE A
- EAN EDGE MAY RESULT IN ADDITIONAL DEMOLITION AND NEW PAVEMENT INSTALLATION PAID FOR AND EXECUTED BY THE CONTRACTOR.
- 23. LIMITS OF CURB AND GUTTER DEMOLITION ARE SUBJECT TO THE NEAREST CONSTRUCTION JOINT. CURB AND GUTTER AND WALKS SHALL BE REPAIRED TO THE NEAREST CONSTRUCTION JOINT.
- 24. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE REMOVAL OF EXISTING LANDSCAPE MATERIALS OR SITE FEATURES WHICH THE OWNER ELECTS TO RETAIN.
- 25. DEMOLITION WITHIN THE DRIP-LINE OF EXISTING SPECIMEN TREES SHALL BE ACCOMPLISHED UTILIZING MANUAL PROCEDURES WITHOUT DAMAGING THE ROOT SYSTEM OF THE TREE(S).
- 26. THE CONTRACTOR SHALL NOT CONSIDER DEMOLITION DESIGNATIONS AND NOTES TO BE ALL-INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ASSESS EACH AREA AND TO PERFORM THE DEMOLITION AS REQUIRED TO ACCOMMODATE THE SCHEDULED NEW CONSTRUCTION.

CLEAR AND GRUB REQUIREMENTS:

- THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED. THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVED THROUGH OUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT. THIS INCLUDES NOT PARKING ANY EQUIPMENT OR HAVING ANY STORAGE AREAS WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT.
- . ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
- . THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN.
- 4. ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
- 5. NO BURNING SHALL BE ALLOWED ON THE SITE.

GRADING / EARTHWORK REQUIREMENTS:

- PRIOR TO STARTING ANY CUTS OR FILLS, THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRUB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED WITH THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, BORING LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT OVER AND UNDER REMOVAL.
- UNLESS OTHERWISE NOTED, THE GRADES SHOWN ON THE PLANS ARE FINISHED GRADES. THEREFORE, PAVEMENT, FLOORS, SUBBASE AND OTHER IMPROVEMENTS MUST BE SUBTRACTED TO CALCULATE SUBGRADE ELEVATIONS. THE CONTRACTOR SHALL COORDINATE THE STAKING OF THE SITE GRADING WITH THE SURVEYOR AND ENGINEER OF RECORD BEFORE PROCEEDING WITH CONSTRUCTION STAKING.
- THE CONTRACTOR SHALL MAINTAIN A SURVEY GRID OF NOT LESS THAN 100' X 100' OR OTHER MEANS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE THAT SHALL INDICATE LOCATION AND AMOUNT OF CUT OR FILLS REMAINING. AT SUBGRADE THIS GRID SHALL BE 50' X 50' WITH LOCATION AND FINAL GRADE MARKED CLEARLY OR SURVEY SHALL BE COMPLETED DEMONSTRATING THAT THE SUBGRADE IS +/- 0.1 FEET OF REQUIRED SUBGRADE.
- UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTION TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. FOR EACH LIFT PLACED, COMPACTION TESTING SHALL BE DONE EVERY 2000 SQUARE FEET. IN TRENCHES, COMPACTION TESTING SHALL BE DONE EVERY OTHER LIFT WITH AT LEAST 1 TEST FOR EVERY 100 LINEAR FEET.
- COMPACTION REQUIREMENTS SHALL BE THOSE OUTLINED IN THE GEOTECHNICAL EVALUATION. IF THE GEOTECHNICAL EVALUATION IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING SHALL BE USED. UNDER AND TO 20 FEET OUTSIDE THE BUILDING ENVELOPE THE SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE ASTM D 2922 (NUCLEAR METHOD) WITH PROCTORS FOR EACH SOIL TYPE.
- UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT OR ON THE DRAWINGS, THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE FREE OF ORGANICS, FROZEN MATERIALS, CONTAMINATED MATERIALS, DEBRIS AND ANY ROCKS LARGER THAN 4 INCHES. FOR FILL PLACEMENT WITHIN 1 FOOT OF SUBGRADE, NO ROCK SHALL BE GREATER THAN 2 INCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH DRYING, SEGREGATING OR OTHER REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER REQUIREMENTS.
- 7. FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES IN ALL AREAS.
- IF IMPORTED MATERIAL IS REQUIRED, THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. THE TESTING LABORATORY SHALL TEST FOR PERCENT PASSING THE 200 SIEVE THAT DOES NOT EXCEED THE EXISTING ON SITE MATERIAL OR IN NO CASE GREATER THAN 35%. THEY SHALL ALSO VERIFY CONSISTENCY WITH EXISTING ON SITE MATERIALS AND ALL OTHER REQUIREMENTS. WAIVERS TO THESE REQUIREMENTS CAN ONLY BE GIVEN JOINTLY BY OWNER AND THE GEOTECHNICAL ENGINEER THAT PREPARED THE GEOTECHNICAL REPORT.
- THE TESTING LAB MAY RESTRICT SOME ON SITE MATERIALS FROM BEING USED AS FILL IN BUILDING OR PAVEMENT AREAS WHEN IT IS THEIR OPINION THAT THE MATERIAL WILL NOT MEET REQUIREMENTS STATED HERE OR IN THE GEOTECHNICAL REPORT. IF SUCH CONDITIONS DO EXIST AND OTHER MATERIAL IS NOT AVAILABLE ON SITE, THE OWNER'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE USE OF IMPORT MATERIAL UNLESS THERE WILL BE NO ADDITION COST TO THE CONTRACT.
- 10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS FROM WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE, DIVERTING DRAINAGE, DEWATERING AND SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCLEMENT WEATHER.
- PRIOR PLACEMENT OF FILLS, IN AREAS WHERE THE FINAL DEPTH WILL BE LESS THAN 4 FEET, THE AREA SHALL BE PROOF ROLLED WITH A 10 TON ROLLER OR A LOADED 10 WHEEL DUMP TRUCK. SOFT AREAS SHALL BE SCARIFIED, DRIED AND RE-COMPACTED PRIOR TO FILL BEING PLACED. RETEST BY PROOF ROLL AS NECESSARY.
- 12. ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR THE IDENTIFICATION OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE TO THE GEOTECHNICAL ENGINEER OR THE GEOTECHNICAL ENGINEER'S TECHNICIAN SHALL BE SCARIFIED, DRIED AND RECOMPACTED. RETEST BY PROOF ROLL AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PROOF ROLLS WITH THE GEOTECHNICAL ENGINEER AND SHALL HAVE THE GEOTECHNICAL ENGINEER OR THE GEOTECHNICAL ENGINEER'S TECHNICIAN ON SITE AT THE TIME OF ALL PROOF ROLLING.
- 3. TRENCH EXCAVATION REQUIRING SHEETING, SHORING OR OTHER STABILIZING DEVICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET ALL O.S.H.A. REQUIREMENTS. ALL EXCAVATIONS SHALL MAINTAIN SAFE SIDE SLOPES IN ACCORDANCE WITH LOCAL, STATE, AND O.S.H.A. REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE SHALL BE PERMITTED IN AN EFFORT TO PREVENT CAVE-INS.
- 14. TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AND STRAIGHT TO WIDTHS DETERMINED BY THE LOCAL AUTHORITY HAVING JURISDICTION. IF NO GUIDELINES FROM THE LOCAL AUTHORITY HAVING JURISDICTION EXIST, THE FOLLOWING SHALL BE USED: (FOR PIPES 36 INCHES OR LESS THE TRENCH WIDTH SHALL BE THE DIAMETER PLUS 2 FEET), (FOR PIPES 36 INCHES OR GREATER THE WIDTH SHALL BE THE DIAMETER PLUS 3 FEET). ADDITIONAL WIDTH SHALL ONLY BE ALLOWED WHEN COMPACTION EQUIPMENT LIMITATIONS REQUIRE AND ONLY AFTER APPROVAL OF THE ENGINEER OF RECORD. NO MORE TRENCH SHALL BE OPEN IN ONE DAY THAN CAN BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS. WHEN BACKFILLING AROUND PIPES PROVIDE UNIFORM SUPPORT AT INVERT AND PROPER COMPACTION UNDER, ALONG AND OVER THE PIPE. CARE SHALL BE GIVEN WHILE BACKFILLING AROUND PIPES TO PREVENT DAMAGE TO THE PIPES INCLUDING: PLACING BACKFILL/BEDDING BY HAND. USING HAND OPERATED PLATE TAMPS OR JUMPING JACKS. AND OTHER LOAD BACKFILL/BEDDING BY HAND, USING HAND OPERATED PLATE TAMPS OR JUMPING JACKS, AND OTHER LOAD RESTRICTIVE TECHNIQUES UNTIL FILLS ARE A MINIMUM OF 2 FEET OR MANUFACTURER'S RECOMMEND DEPTH, WHICH EVER IS GREATER, ABOVE THE TOP OF THE PIPE. COMPACTION REQUIREMENTS ARE NOT RELIEVED IN THESE AREAS AND SHALL REMAIN AS STATED ON THE DRAWINGS OR AS NOTED ABOVE.
- 15. IE ROCK IS ENCOLINTERED THAT WAS NOT INDICATED ON THE PLANS OR GEOTECHNICAL REPORT. THE AREA FOR ROCK WILL BE DEFINED AS THE NATURAL EARTH MATERIALS THAT CAN NOT BE REMOVED WITH A D9 DOZIER WITH A
- 16. WHERE ROCK IS ADJACENT TO A STRUCTURE OR UTILITY, THE ROCK SHALL BE REMOVED TO A MINIMUM OF 6 INCHES BELOW AND 1 TIMES THE DIAMETER, BUT NOT LESS THAN 1 FOOT OR GREATER THAN 3 FEET ON ANY SIDE.
- 17. NO EXPLOSIVES SHALL BE ALLOWED UNTIL ALL PERMITS ARE GRANTED AND THE OWNER HAS SIGNED OFF. PRE AND POST BLAST REPORTS SHALL BE KEPT AND RECORDED. ALL STRUCTURES WITHIN THE AREA OF THE BLAST SHALL RECEIVE A PRE-BLAST SURVEY. ALL BLASTING SHALL BE PERFORMED BY A LICENSED BLASTER.
- 18. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CUT MATERIAL OR WASTE MATERIAL FROM SITE AND DISPOSE OF IN A LEGAL MANNER
- 19. NO FILL SHALL BE PLACED ON EXISTING GROUND WITHIN THE LIMITS OF DISTURBANCE UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL, SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES OR TO A DEPTH RECOMMENDED BY THE GEOTECHNICAL REPORT AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACING OF FILL. DELETERIOUS MATERIALS, I.E., LUMBER, LOGS, BRUSH, OR ANY OTHER ORGANIC MATERIALS OR RUBBISH SHALL BE REMOVED FROM AREAS TO RECEIVE COMPACTED FILL. UNSUITABLE MATERIALS, SUCH AS TOPSOIL, WEATHERED BEDROCK, ETC., SHALL BE REMOVED AS REQUIRED BY GEOTECHNICAL ENGINEER (AND ENGINEERING GEOLOGIST, WHERE EMPLOYED) FROM AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURE(S). CONSTRUCT FILL TO GRADES OR SUBGRADES AS SHOWN WITH SELECT FILL MATERIAL COMPACTED TO 95% STANDARD PROCTOR (UNLESS OTHERWISE NOTED). PLACE AND COMPACT IN 6 INCH LIFTS. ALL SOILS WITHIN 12 INCHES OF PAVEMENT SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF THEIR STANDARD
- 20. GRADED AREAS TO BE LANDSCAPED OR GRASSED SHALL BE BROUGHT TO THE ELEVATIONS SHOWN ON THE GRADING PLAN(S).
- 21. CONTRACTOR SHALL VERIFY DIMENSIONS, GRADES AND BENCHMARK(S) BEFORE BEGINNING ANY WORK.
- 22. THERE SHALL BE NO DISTURBANCE BEYOND PROPERTY LINES, UNLESS WRITTEN PERMISSION FROM ADJACENT PROPERTY OWNERS IS OBTAINED. EXISTING GRADES ALONG PROPERTY LINES SHALL BE MAINTAINED (UNLESS
- 23. THE MAX. SLOPES FOR CUT OR FILL SHALL BE 2H:1V, UNLESS OTHERWISE NOTED ON THE PLANS AND EXCEPT EARTHEN DAM EMBANKMENTS SHALL BE 3H:1V AND AS NOTED BELOW. THE SLOPE OF CUT OR FILL SHALL BE UNIFORM THROUGHOUT FOR EACH SECTION OF CUT OR FILL EXCEPT WHEN BENCHING IS APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION. WHEN A CUT IS MADE IN ROCK THAT REQUIRES BLASTING, THE SLOPE MAY BE STEEPER IF PRE-SPLITTING IS EMPLOYED AND UPON SUBMISSION OF A GEOTECHNICAL REPORT WHICH SUBSTANTIATES THE INTEGRITY OF THE ROCK IN THE STEEPER CONDITION, SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL AUTHORITY HAVING JURISDICTION AND/OR SITE DESIGN PROFESSIONAL. (NOTE: NO BLASTING SHALL OCCUR WITHOUT A VALID PERMIT ISSUED BY THE LOCAL AUTHORITY HAVING JURISDICTION AND THE OWNER HAS
- 24. EMBANKMENTS SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED A COMPACTED THICKNESS OF 6 INCHES PER LAYER AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAX. LABORATORY DRY WEIGHT PER CUBIC FOOT AS DETERMINED BY ASSITO METHOD T-99 IN AREAS WHERE STRUCTURES, PARKING LOTS AND DRIVES, STREETS AND UTILITIES ARE TO BE PLACED ABOVE OR BELOW THESE SLOPES.
- 25. CONTOURS AND SPOT ELEVATIONS SHOWN ARE ONLY CONTROLS AND THE PROFILES THEY FORM SHALL BE SMOOTH AND CONTINUOUS (PARTICULARLY IN PARKING AREAS AND DRIVES).
- 26. GRADING SHALL BE PERFORMED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER WHO SHALL CERTIFY THAT FILL HAS BEEN PROPERLY PLACED AND WHO SHALL SUBMIT A FINAL COMPACTION REPORT FOR FILLS OVER 1'
- 27. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING(S) AT ALL TIMES. 28. ANALYTICAL COMPACTION RESULTS SHALL BE SUBMITTED TO THE LOCAL AUTHORITY HAVING JURISDICTION
- ENGINEERING DEPARTMENT (OR SIMILAR DEPARTMENT) AND TO THE GEOTECHNICAL ENGINEER OF RECORD. 29. ALL GRADING AND PIPE BED PREPARATION SHALL BE PERFORMED ACCORDING TO REQUIREMENTS SET FORTH BY THE GEOTECHNICAL ENGINEER OF RECORD.
- 30. CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND FOLLOW ALL RECOMMENDATIONS OF THE REPORT WHEN PERFORMING SITE WORK.
- 31. AT A MINIMUM, FOR TRENCH CONSTRUCTION, BACKFILL UNDER PERMANENT CONCRETE OR BITUMINOUS PAVEMENT AND AS ELSEWHERE SPECIFIED OR INDICATED ON THE PLANS, TRENCHES SHALL BE APPROVED BANK-RUN SAND OR GRAVEL OR CRUSHED STONE FREE FROM LARGE STONES AND CONTAINING NOT MORE THAN TEN PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL BE COMPACTED TO ONE HUNDRED PERCENT (100%) AS DETERMINED BY THE MODIFIED PROCTOR TEST FROM PIPE BEDDING TO TWO (2) FEET BELOW TRENCH TOP.

 MECHANICAL VIBRATING EQUIPMENT SHALL BE USED TO ACHIEVE THE REQUIRED COMPACTION. PAVEMENT SHALL BE DEDITED. REPLACED IMMEDIATELY AFTER THE BACKFILLING IS COMPLETED.
- 32. BACKFILL UNDER GRAVEL OR CRUSHED STONE SURFACED ROADWAYS SHALL BE THE APPROVED SUITABLE EXCAVATED MATERIAL PLACED IN SIX (6) INCH LAYERS THOROUGHLY COMPACTED FOR THE FULL DEPTH AND WIDTH OF THE TRENCH, CONFORMING TO THE COMPACTION, DENSITY COMPACTION METHOD AND MATERIALS AS SPECIFIED
- 33. BACKFILL IN UNPAVED AREAS SHALL BE COMPACTED WITH MECHANICAL VIBRATING EQUIPMENT TO NINETY PERCENT (90%) AS DETERMINED BY THE MODIFIED PROCTOR TEST. BACKFILL MATERIAL FROM PIPE BEDDING TO GROUND SURFACE SHALL BE EXCAVATED FREE FROM LARGE STONES & OTHER DEBRIS.

SEEDING & LANDSCAPING:

- AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS.
- THE TOPSOIL SOIL SHALL HAVE A PH OF 5.5 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2" SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE 1 INCH SIEVE AND 20 TO 80% PASSING THE NO. 200 SIEVE.
- 4. LIME OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT ACIDIC SOILS.
- 5. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREAFORM SOURCE.
- LAWN SEED (WHEN NOT GIVEN ON THE PLANS) SHALL BE "50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNFINE PERENNIAL RYE"; "30% BY WEIGHT, 97% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE"; "20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS".
- WHEN PLACING BY HYDROSEEDING, APPLICATION FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND SEED AT A MINIMUM OF 220 POUNDS PER ACRE. ALL OVER SPRAY AREAS SHALL BE PROPERLY CLEANED AND RESTORED AT NO EXPENSE TO THE CONTRACT.
- WATER LAWN AREAS AS NEEDED TO PROMOTE GROWTH. THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR WORK WHEN NECESSARY TO INSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND BEEN CUT AT LEAST TWICE.
- 11. PLANTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH THE PLANS AND ANSI 260.1 "AMERICAN STANDARD FOR NURSERY STOCK" IN GOOD HEALTH, VIGOROUS, AND FREE OF INSECTS, LARVAE, EGGS, DEFECTS AND DISEASE
- PLANTING BEDS SHALL BE PREPARED BY LOOSENING THE TOP 1 FOOT OF TOPSOIL. PLANTS SHALL BE LOCATED PER THE PLANS. THE HOLES SHALL BE EXCAVATED (PER THE DETAILS ON THE DRAWINGS) WITH THE CENTER SLIGHTLY HIGHER TO PROMOTE DRAINAGE. USE A TOPSOIL BACKFILL MIX OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, 1/2 PART WELL ROTTED MANURE, AND 10 POUNDS 5-10-5 PLANTING FERTILIZER AND PROPERLY MIXED PER CUBIC YARD. BERM AROUND PLANTS TO FORM A BOWL SHAPE.
- 13. WEED BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT SHALL BE PLACE UNDER ALL PLANTING BEDS PRIOR MULCHING.
- 14. ALL TREES AND SHRUBS SHALL BE STAKED AS DETAILED ON THE DRAWINGS. TREE WRAPPING WILL BE PROVIDED AT THE BASE OF ALL TREES AS DETAILED. 15. MULCH SHALL BE 50% SHREDDED BARK AND 50% WOOD CHIPS, ¾ TO 2 INCH IN SIZE, UNIFORMLY MIXED AND FREE OF ELM WOOD. MULCH SHALL BE PLACED UNIFORMLY OVER THE PLANTING BED ALLOWING NO WEED BARRIER TO BE SEEN.

COMPACTION:

- BACKFILL UNDER PERMANENT CONCRETE OR BITUMINOUS PAVEMENT, AND AS ELSEWHERE SPECIFIED OR INDICATED ON THE PLANS, SHALL BE APPROVED BANK-RUN SAND OR GRAVEL OR CRUSHED STONE FREE FROM LARGE STONES AND CONTAINING NOT MORE THAN TEN PERCENT (10%) BY WEIGHT OF LOAM OR CLAY. THIS BACKFILL SHALL BE COMPACTED TO ONE HUNDRED PERCENT (100%) AS DETERMINED BY THE MODIFIED PROCTOR TEST FROM PIPE BEDDING TO TWO (2) FEET BELOW TRENCH TOP. MECHANICAL VIBRATING EQUIPMENT SHALL BE USED TO ACHIEVE THE REQUIRED COMPACTION. PAVEMENT SHALL BE REPLACED IMMEDIATELY AFTER THE BACKFILLING IS COMPLETED.
- BACKFILL IN UNPAVED AREAS SHALL BE COMPACTED WITH MECHANICAL VIBRATING EQUIPMENT TO NINETY PERCENT (90%) AS DETERMINED BY THE MODIFIED PROCTOR TEST. BACKFILL MATERIAL FROM PIPE BEDDING TO GROUND SURFACE SHALL BE EXCAVATED FREE FROM LARGE STONES & OTHER DEBRIS.

STAKING REQUIREMENTS:

5. CURB AND GUTTER RADII ARE 5.0 FT. UNLESS OTHERWISE NOTED.

- SURVEYING WORK PERFORMED BY THE CONTRACTOR SHALL BE SUFFICIENT AND ACCURATE TO CONSTRUCT THE WORK IN ACCORDANCE WITH THE SITE WORK CONSTRUCTION DRAWINGS. LAYOUT AND STAKING WORK SHALL BE IN ACCORDANCE WITH GENERAL ACCEPTED SURVEYING PRACTICES AND PROVISIONS OF THE CONTRACT.
- CONTRACTOR SHALL STAKE BUILDING CORNERS AND HAVE APPROVAL FROM THE ARCHITECT AND/OR SITE DESIGN PROFESSIONAL BEFORE COMMENCING THE CONSTRUCTION OF ANY FOOTINGS.
- DIMENSIONS SHOWN ARE TO THE FACE OF CURB(S), UNLESS OTHERWISE NOTED. ANGLES ARE 90° (INCLUDING STREET CENTER-LINES) UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION AND OR PERPETUATION OF EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS (AS APPLICABLE) WITHIN THE CONTRACTOR'S AREA OF WORK. THE CONTRACTOR SHALL NOT DISTURB OR REMOVE EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS WITHOUT THE PERMISSION OF THE LOCAL AUTHORITY HAVING JURISDICTION, AND CONTRACTOR SHALL BEAR THE EXPENSE OF RESETTING EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS WHICH MAY BE DISTURBED OR REMOVED WITH OR WITHOUT PERMISSION. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 15 WORKING DAYS NOTICE TO THE LOCAL AUTHORITY HAVING JURISDICTION PRIOR TO DISTURBANCE OR REMOVAL OF EXISTING RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS. THE CONTRACTOR SHALL UTILIZE THE SERVICES OF A GEORGIA LICENSED LAND SURVEYOR TO RESET DISTURBED OR REMOVED RIGHT-OF-WAY MONUMENTS, BENCHMARKS CONTROL POINTS AND REFERENCE MARKS OR PROVIDE WITNESS MONUMENTS, AND FILE THE REQUIRED DOCUMENTATION WITH THE LOCAL AUTHORITY HAVING JURISDICTION.
- THE CONTRACTOR (UNLESS OTHERWISE INSTRUCTED BY THE OWNER) SHALL PROVIDE STAKING AND LAYOUT SERVICES, INCLUDING BUT NOT LIMITED TO, CENTERLINE STAKES, ADDITIONAL LINES, CONNECTIONS, RAMPS, SLOPE STAKES, GRADE STAKES, CONSTRUCTION BENCHMARKS AND REFERENCE STAKES LOCATING DRAINAGE, ROADWAY, AND UTILITIES NECESSARY FOR THE PROJECT, ALIGNMENT CONTROL ESTABLISHED BY THE CONTRACTOR SHALL BE REFERENCED, AND A COPY OF THE REFERENCES SHALL BE FURNISHED TO THE SITE DESIGN PROFESSIONAL.
- 8. THE CONTRACTOR SHALL VERIFY ALL INVERTS OF EXISTING STORM AND SANITARY SEWER TIE-INS AND ALL GRADES AT EXISTING PAVEMENT TIE-INS BEFORE PROCEEDING WITH ANY SITE WORK.
- ALL CONTROL SHALL BE VERIFIED BEFORE PROCEEDING. SURVEYOR SHALL VERIFY INVERTS AT ALL GRAVITY STORM AND SEWER TIE IN POINTS BEFORE PROCEEDING. SURVEYOR SHALL VERIFY TIE POINT ELEVATIONS AT ALL ACCESS POINTS BEFORE PROCEEDING.

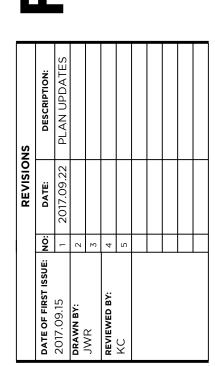


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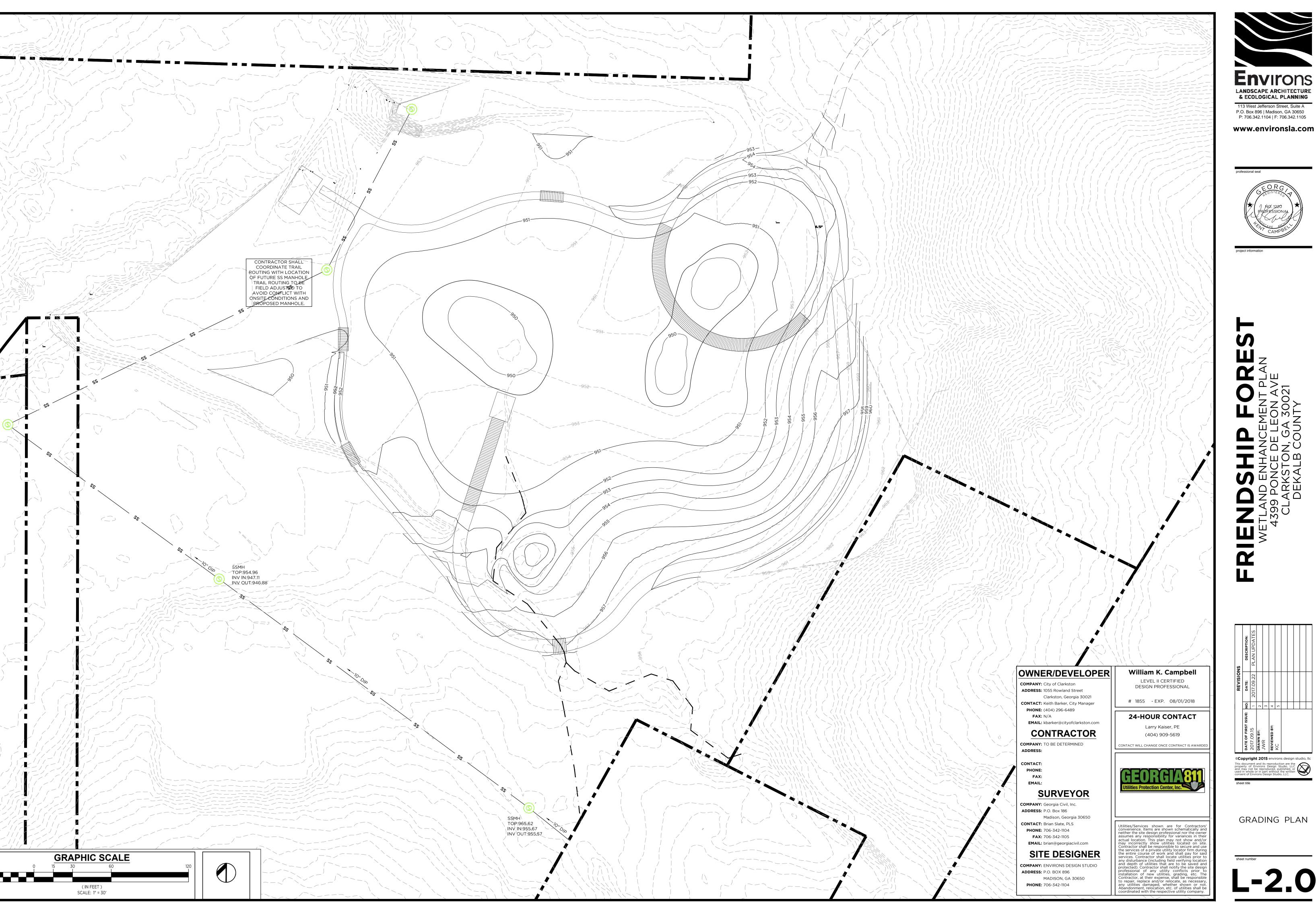
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GENERAL

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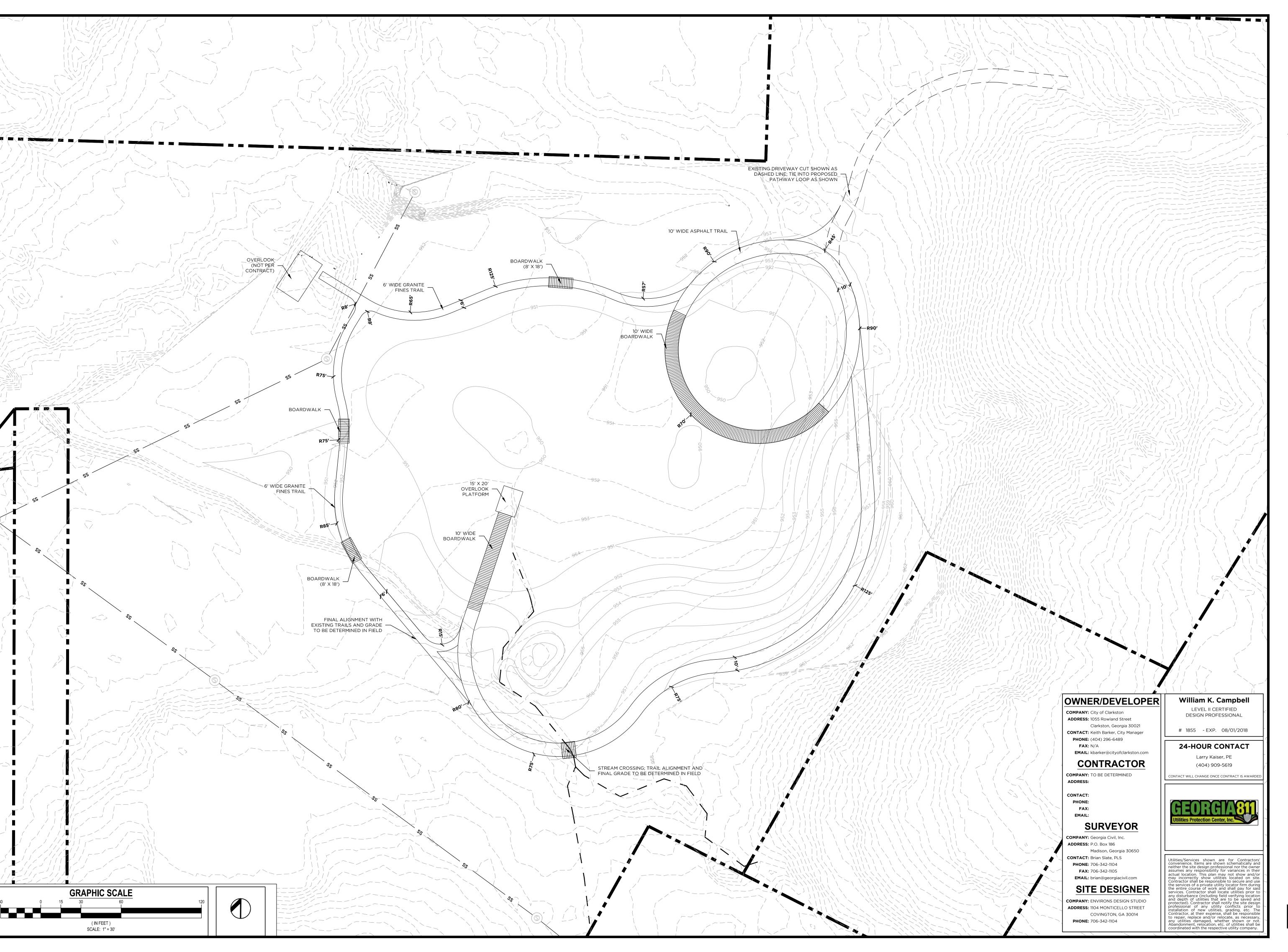






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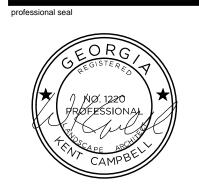
GRADING PLAN





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LAYOUT AND

STAKING

NPDES Permit Part IV

(i). Except as provided in Part IV. (iii). below, no construction activities shall be conducted within a 25 foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director nined to allow a variance that is at least as protective of natural resources and the environment in accordance with the provisions of O.C.G.A. 12-7or where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented, or along any ephemeral stream. The buffer shall not apply to the following land disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; cause a width of listurbance of not more than 50 feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications are implemented: (1) stream crossings for water lines or (2) stream crossings for sewer lines;

No construction activities shall be conducted within a 50 foot buffer, as measured horizontally from the point where vegetation has bee wrested by normal stream flow or wave action, along the banks of any state waters classified as 'trout streams' except when approval is granted by the Director for alternate buffer requirements in accordance with the provisions of O.C.G.A. 12-7-6, or where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as 'trout streams' which discharge an average annual flow of 25 gallons per minute or less shall have a 25 foot buffer or they may be piped, at the discretion of the permittee, pursuant to the terms of a rule providing for a general variance promulgated by the Board of Natural Resources including notification of such to EPD and the local issuing authority to the location and extent of the piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the downstream permittee's property, and the permittee must comply with the buffer requirement for any adjacent trout streams. The buffer shall not apply to the following land disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the buffer; and adequate erosion control neasures are incorporated into the project plans and specifications and are implemented: (1) stream crossings for water lines or (2) stream crossings fo

Except as provided above, for buffers required pursuant to Part IV. (i) and (ii), no construction activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed, state of vegetation until all land disturbing activities on the construction site are completed. During coverage under this permit, a buffer cannot be thinned or trimmed of vegetation and a protective vegetative cover must remain to protect water quality and aquatic habitat and a natural canopy must be left in sufficient quantity to keep shade on the stream bed.

POLLUTION REDUCTION PRACTICES FOR STORM WATER DISCHARGES:

STABILIZATION (VEGETATIVE) MEASURES:

ALL STABILIZATION (VEGETATIVE) MEASURES SHALL BE IMPLEMENTED AS STATED IN THE MANUAL FOR EROSION AND SEDIMENTATION CONTROL I GEORGIA (LATEST EDITION). (Bf) Buffer Zone - A strip of undisturbed, original vegetation; enhanced or restored existing vegetation; or re-establishment of vegetation surrounding disturbed areas or bordering streams, ponds, wetlands, lakes, or coastal water to provide a buffer zone for one or more of the following purposes: red storm runoff velocities, act as visual screen, reduce construction noise, improve aesthetics on disturbed land, filtering and infiltrating runoff, cooling rivers/streams by creating shade, provide food and cover for wildlife, flood protection, or protect channel banks from scour and erosion. Ds1) Disturbed Area Stabilization (with Mulching Only)- Applying plant residues or other suitable materials, produced on site if possible, to the soil surface in Ds2) Disturbed Area Stabilization (with Temporary Seeding)- Establishing temporary vegetative cover with fast growing seedlings for seasonal protection

(Ds3) Disturbed Area Stabilization (with Permanent Vegetation)- Planting of perennial vegetation such as trees, shrubs, vines, or legumes on exposed areas for final permanent stabilization in order to protect the soil surface from erosion, reduce damage from sediment and runoff to downstream areas, improve wildlife habitat and visual resources, and improve aesthetics. It will apply on cut and fill slopes, earth spillways, borrow areas, spoil areas and severely eroded

disturbed/denuded areas in order to reduce runoff and sediment damage of downstream resources, protect the soil surface from erosion, improve wildlife habitat, improve aesthetics, improve tilth, infiltration and aeration as well as organic matter for permanent plantings. This practice is applicable for up to six months or until permanent vegetative cover can be installed. It should be coordinated with permanent measures to assure economical and effective

(Ds4) Disturbed Area Stabilization (with Sodding)- Establishing an immediate and permanent vegetative cover using sods in order to reduce runoff and rosion, improve aesthetics and land value, reduce dust and sediments, stabilize waterways and critical areas, filter sediments, nutrients, re omplaints, reduce likelihood of legal action, reduce likelihood of work stoppage due to legal action, and increase "good neighbor" benefii (Du) Dust Control on Disturbed Areas- Controlling surface and air movement of dust on construction sites, roads, and demolition sites in order to prevent surface and air movement of dust from exposed soil surfaces, reduce the presence of airborne substances which may be harmful or injurious to human healt welfare, or safety, or to animals or plant life. Methods and materials which can be used include mulches, vegetative cover, spray-on adhesives, mechanical materials which the province of nanipulation of existing soil surfaces, irrigation, barriers, chemicals, and stone surface covers.

FI-Co) Flocculants and Coagulants- Formulated to assist in the solid/liquid separation of suspended particles (which are characteristically very small) in olution. The suspended stability of such particles (colloidal complex) is due to both their small size and the electrical charge between particles (Sb) Streambank Stabilization (Using Permanent Vegetation)- Using native plant materials to maintain and enhance streambanks, or to prevent, or restore an repair small streambank erosion problems in order to lessen the impact of rain directly on the soil, trap sediment from adjacent land, form a root mat to stabilize and reinforce the soil on the streambank, provide wildlife habitat, enhance stream appearance, and lower summertime water temps. Ss) Slope Stabilization- A protective covering used to prevent erosion and establish vegetation on steep slopes, shore lines, or channels in order to stabilize the soil and act as a rain drop impact dissipater while providing a microclimate which protects young vegetation and promotes its establis (Tac) Tackifiers- Substances used to anchor soil, compost, seed, straw, hay or mulch by causing organic material to bind together and discourage it from drifting downslope. Tackifiers also conserve moisture; prevent surface compaction, increase soil infiltration, soil fertility, enhanced seed germination, increased soil cohesion, enhanced soil stabilization, reduced stormwater runoff turbidity and reduction in loss of topsoil.

STRUCTURAL PRACTICES:

ALL STRUCTURAL PRACTICES SHALL BE IMPLEMENTED AS STATED IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA (LATEST (Cd) Check Dam- A small temporary barrier, grade control structure, or dam constructed across a swale or drainage ditch which drains five (5) acres or less not to be used in a live stream) in order to reduce erosion by slowing the velocity of concentrated storm water flows

(Ch) Channel Stabilization- Improving, constructing or stabilizing an open channel for water conveyance. Open channels are to be non-erosive, with r sediment deposition and able to provide adequate capacity for flood water, drainage, other water management practices, or any combination thereof Co) Construction Exit- A stone stabilized pad located where traffic leaves a construction site to a public right-of-way, street, alley, sidewalk, parking, etc. (i. bare soil to paved area) in order to reduce/eliminate depositing construction area mud onto public rights-ofway by motor vehicles or by runoff (Cr) Construction Road Stabilization- Roads, parking areas, and other on-site transportation routes that are stabilized with coarse aggregate between the tim of initial grading and final stabilization in order to provide a fixed route for construction traffic, reduce erosion, reduce subsequent re-grading of permanent roadbeds, and provide a stable base for paving.

ersion is used when in-stream work is unavoidable, as with linear projects such as utilities or roads that frequently cross and impact live streams and create a potential for excessive sediment loss by both the disturbance of the approach areas and by the work within the streambed and banks. Di) Diversion- An earth channel with a compacted supporting ridge on the lower side; constructed above, across, or below a slope to reduce slope lengths break-up concentrations of runoff, intercept runoff, and move water to stable outlets at non-erosive velocities

(Dn1) Temporary Downdrain Structure- A flexible conduit of heavy-duty plastic or other material used as a temporary structure to convey storm water down the face of a cut or fill slope without causing slope erosion and allowing the establishment of vegetation on the slope. Flexible downdrains are removed once the permanent water disposal system is installed. Permanent Downdrain Structure- A permanent paved chute, pipe or sectional conduit of prefabricated material designed to safely conduct surface runoff from the top to the bottom of a slope thus minimizing erosion. Downdrain structures are to be used where concentrated water will cause excessive (Fr) Filter Ring- A temporary stone barrier used in conjunction with other sediment control measures and constructed at storm drain inlets and pond outlets in order to reduce flow velocities, prevent failure of other sediment control devices, and prevent sediment from leaving the site or entering drainage systems prior to permanent stabilization of the disturbed areas. outments, check dams, etc. to prevent erosion and sediment damage to a specific structure. When properly wired together, they can be used to stabilize

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

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

(Sd4) Temporary Sediment Trap- A small temporary pond (with no pipe or riser) that drains a disturbed area so that sediment can settle out. Sd4's are (Sk) Floating Surface Skimmer- A buoyant device that drains surface water of sediment ponds, traps or basins and releases it at a controlled rate of flow. It "skims" the water surface where sediment concentrations are at a minimum instead of draining from the bottom where sediment concentrations are higher, and drains to a riser or the backside of a dam.

runoff while using intermediate dikes to create multiple sedimentation chambers allowing smaller storms to seep out while diverting larger flows to a (Sr) Temporary Stream Crossing- A temporary structure installed across a flowing stream or watercourse for use by construction equipment without n sediment into streams, damaging the streambed or channel, or causing flooding. The structure may consist of a pipe, bridge, or other suitable device ermitting vehicular traffic to cross streams or watercourses.

SpB) Seep Berm- A linear control device constructed as a diversion (perpendicular to the direction of the runoff) to enhance dissipation and infiltration of

(St) Storm Drain Outlet Protection- A paved or short section of rip-rap channel placed at the outlet of a storm drain system in order to reduce the velocity o Su) Surface Roughening- Providing a rough soil surface with horizontal depressions created by operating a tillage or other suitable implement on the

contour, or by having slopes in a roughhead condition by not fine-grading them, in order to aid in establishment of vegetative cover with seed, to reduce runoff velocity and increase infiltration and to reduce erosion and provide for sediment trapping. c) Turbidity Curtain- A floating or staked barrier installed within the water in order to minimize turbidity and silt migration from work occurring within the water or as a supplement to perimeter control BMPs at the water's edge. Silt or turbidity is confined to the area within the boundary created by the installation, such that suspended particles drop out of the water column over time. Ta) Tapsailing-Stripping off the more fertile top sail, storing it, then spreading it over the disturbed area after completion of construction activities, in orde

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

GSWCC EROSION CONTROL NOTES:

Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion

- The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior
- control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.
- Any amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.

MEASURES INSTALLED DURING CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT MAY REMAIN

AFTER CONSTRUCTION IS COMPLETE.:

11. Rd 12. Re 3. Ds3, Ds4

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

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

BMP'S FOR PETROLEUM SPILLS AND LEAKS:

Fix any leaks immediately, maintain and clean equipment regularly signate areas for equipment maintenance and fueling that are located on level ground and away from any water sources. Park and service equipment on top of tarps to insure any spills or leaks do not get into the ground. Store all fluids and containers in a leak-proof, locked containers to insure safe storage.

Collect and remove all leftover lubricants, containers, and trash, especially tires, batteries, pieces or parts of equipment, and all fluid containers.

aintain a spill-containment and clean up kit. At a minimum, a kit for petroleum products should include

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

Various hoses, plugs, and clamps to control a hydraulic line break. A variety of locking "vise grips" pliers can be used in emergency. e. Large plastic bags to store any contaminated materials for disposal.

Temporary fueling areas shall be installed and operated in compliance with Georgia E.P.D. regulations.

POSSIBLE POLLUTANT SOURCES FOR THIS PROJECT:

Paint Products, Asphalt Products. Contractor shall maintain a clean working environment at all times and reduce and contain the pollution generated by hese and other pollutants that are to be utilized for the construction of this project. Contractor shall follow all local, state, and federal laws in handling

NON-STORM WATER DISCHARGES ALLOWED UNDER PERMIT:

Potable water sources including 7. Uncontained Ground Water 8. Foundation or footing drains where flows are not contaminated with process materials or pollutants

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

PRODUCT SPECIFIC PRACTICES:

lutants from waste disposal practices, soil additives, remediation of spills and leaks of petroleum products, concrete truck washout, etc., should any of these occ shall be controlled by the implementation of appropriate best management practices, the site shall be in compliance with all applicable state and local waste disposi nitary sewer or septic system regulations. pleum Based Products - Containers for products such as fuels, lubricants, and tars shall be inspected daily for leaks and spills. This includes onsite vehicles and achinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas shall be located away from State Waters, naturais, and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. ischarge of oils, fuels, and lubricants is prohibited. Proper disposal methods includes collection in a suitable container and disposal as required by local and State

aints/Finishes/Solvents - All products shall be stored in tightly sealed original containers when not in use. Excess product shall not be discharged to the storm water llection system. Excess product, materials used with these products, and product containers shall be disposed of according to manufacturer's specifications and

rtilizer/Herbicides - These products shall be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop tablishment or in the GSWCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers. Building Materials - No building or construction materials shall be buried or disposed of onsite. All such material shall be disposed of in proper waste disposal

encrete Truck Washing - NO concrete trucks shall be allowed to wash out or discharge surplus concrete or drum wash water onsite. Concrete wash down of tools, ncrete mixer chutes, hoppers and the rear of vehicles will only be allowed in a designated area provided for this purpose, as shown on the drawings. the following (1) Contain all wash water on soil, in a bowl shaped area created in the designated wash area to prevent the wash water from flowing from the washout area:

(2) Use the minimum amount of water to wash down the tools, concrete mixer chutes, hoppers and the rear of vehicles: (3) Remove any concrete sediment from the area surrounding the washout area before it hardens; and (4) Remove all concrete residue from the designated area once it has hardened

NON-EXEMPT ACTIVITIES:

Where applicable, non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits.

ANY REFERENCE TO PERMIT IS REFERRING TO NPDES PERMIT NO. GAR10000 ANY REFERENCE TO ANY PART IS REFERRING TO A PART OF NPDES PERMIT NO. GAR100001.

plan has been prepared to meet the requirements under the State of Georgia, Department of Natural Resources, Environmental Protection Division EPD), General Permit No. GAR100001 for authorization to discharge under the National Pollutant Discharge Elimination System (NPDES), Stormwater Discharges Associated with Construction Activity for Stand Alone Construction Projects. Daily, weekly and monthly inspections as required by Permit No. GAR100001 shall be performed by certified personnel provided by the Contractor. Sampling requirements as required by Permit No. GAR100001 shall be erformed by certified personnel provided by the Contractor. Contractor shall make sure construction is in accordance with regulations of the NPDES Permit No. GAR100001. This includes but is not limited to:

*Site stabilization practices *Vegetative and structural erosion control practices *BMP maintenance and inspections *Pollution prevention plan and practices

*Spill control practices *Material management practices for spill prevention plans *Waste control practices *Wetland and state water protection practices

REQUIRED INSPECTIONS AND RECORD KEEPING BY THE PRIMARY PERMITTEE

NPDES Permit Part IV.D.4. Inspections

Monitoring plans and practices

Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect (these inspections must be conducted until a Notice of Termination is submitted): (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment

> (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking Measure rainfall once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday until Notice of Termination is submitted. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region

Certified personnel (provided by primary permittee) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday, any non-working Saturda non-working Sunday or any non-working Federal holiday, in which case inspections shall be completed by the end of the next business day and/or

(a) disturbed areas of the primary permittee's construction site (that have not undergone final stabilization); (b) areas used by the primary permittee for storage of materials that are exposed to precipitation (that have not undergone final

site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final abilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Par V.D. 4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., unt a Notice of Termination is received by EPD) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are perating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are

effective in preventing significant impacts to receiving water(s). (5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the rosion. Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each nspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Po ontrol Plan, and actions taken in accordance with Part IV.D.4.a.(5), of the permit shall be made and retained at the site or be readily available at a ated alternate location until the entire site or that portion of a construction project that has been phased has undergone final stab Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identi all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a certification that the best management practices are in compliance with the Erosion, edimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit

ADDITIONAL EROSION CONTROL NOTES:

Maximum cut slopes are 2:1, 2 horizontal to 1 vertical, unless otherwise noted

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

All buffers tree save areas, and/or limits of disturbance shall be clearly marked in the field by the contractor by flagging or fencing and signage, prior encement of any land disturbance activities or clearing/grubbing activities. Buffers, tree save areas, and areas beyond limits of disturbance are to be left undisturbed in their natural state.

Contractor shall not disturb underground utilities while installing Erosion, Sedimentation and Pollution Control Practices. Contractor shall have all

Contractor shall notify design professional 48 hours before beginning each phase of construction. Contractor shall notify City of Clarkston inspectors 24 hours before beginning each phase of construction

Construction debris and/or waste shall not be buried or burned on site. All construction debris and/or waste shall be taken to a state approved

All buffers and tree save areas shall be clearly identified by flagging and/or fencing prior to commencement of any land disturbance activities

The installation of erosion and sedimentation control measures and practices shall occur prior to or concurrent with land disturbing activities and construction on the site and shall be maintained until permanent ground cover is established to 90%. . All initial phase Erosion, Sedimentation and Pollution Control best management practices shall be installed prior to any grading

All Erosion. Sedimentation and Pollution Control best management practices shall be inspected and repaired of damage daily. Any accumulated silt shall be removed and spread on site and controlled with temporary mulching and/or grassing. Erosion, Sedimentation, and Pollution Control best management practices shall be maintained at all times. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION OR AS REQUIRED BY ENGINEER OR LOCAL JURISDICTION INSPECTOR.

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

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

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

. Contractor shall provide temporary diversion berms and down drains on fill slopes to prevent erosion prior to stabilization. Contractor shall remove accumulated sediment from detention basin at end of construction when all disturbed areas have been fully stabilized

INITIAL INSPECTION AND REPORTING:

For stand alone projects that begin construction activity after the effective date of this permit, the primary permittee must retain the design profes who prepared the Erosion, Sedimentation and Pollution Control Plan, except when the primary permittee has requested in writing and EPD has agreed an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the design professional designed within seven (7) days after installation. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required.

ANALYTICAL METHODS TO BE USED TO COLLECT AND ANALYZE SAMPLES:

NPDES Permit Part IV.D.6. Sampling Requirement a. Sampling Requirements shall include the following:

A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the site or the stand alone construction

(a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not

shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the stormwater(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map; A written narrative of site specific analytical methods used to collect, handle and analyze the samples including quality control/quality assurance procedures.

When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and (4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and he time line for sub

b. Sample Type. All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test cedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(1). Sample containers should be labeled prior to collecting the samples.

(2). Samples should be well mixed before transferring to a secondary container

(3). Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination (4). Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hour after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.

(5). Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part c. Sampling Points

For construction activities the primary permittee must sample all receiving water(s), or all outfall(s), or a combination of receiving water(s) and outfall(s amples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s

The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first storm water discharge from the rmitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other storm water discharges not associated with the permitted activity. When appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstreat turbidity value. (b). The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last storm water discharge from the permit activity (i.e., the discharge farthest downstream at the site) but upstream of any other storm water discharge not associated with the permitted activity. Where appropriate, seve downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity

(c). Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the storm water outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water channel.

(e). The sampling container should be held so that the opening faces upstream

(f). The samples should be kept free from floating debris.

(g). Permittees do not have to sample sheetflow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section stabilized shall mean, for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniform overed with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation

All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) a to accurately reflect whether storm water runoff from the construction site is in compliance with the standard set forth in Parts 111.D.3. or 111.D.4, whichever is applicable.

(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitored receiving water and/or from a monitored outfall location within in forty-five (45) minutes or as soon a (2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge. (3). Sampling by the permittee shall occur for the 'ollowing qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location

(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a 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

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 allow for sampling at any time of the day or week.

(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

SANITARY WASTES:

A minimum of one portable sanitary unit will be provided for every ten (10) workers on the site. All sanitary waste will be collected from the portable units a minimum of one time per week by a licensed portable facility provider in complete compliance with local and state regulations. All sanitary waste units will be located in one area where the likelihood of the unit contributing storm water discharge is negligible. Additional containment BMP's discharges. The location of sanitary waste units must be identified on the ES&PC Plan b the contractor once the locations have been determined.

SPILL CLEANUP AND CONTROL PRACTICES:

mended methods for spill clean up will be clearly posted and procedures will be made available to site personnel. Material and equipme necessary for spill cleanup will be kept in the material storage areas. Typical materials and equipment includes, but is not limited to, brooms, dustpans, mops, rags, gloves, goggl cat litter, sand, sawdust and properly labeled plastic and metal waste containers. Spill prevention practices and procedures will be reviewed after a spill and adjusted as necess or prevent future spills. All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, state and federal regulations. For spills that impact surface water (leave a sheen on surface water), the National Response Center (NRC) will be contacted within 24 hours at 1-800-424-8802. For spills of an unknown amount, the NRC will be contacted within 24 hours at 1-800-424-8802. For spills greater than 25 gallons and no surface water impacts, the Georgia EPD will be contacted within 24 hours. For spills greater than 25 gallons and no surface water impacts, the Georgia EPD will be contacted within 24 hours. spills less than 25 gallons and no surface water impacts, the spill will be cleaned up and local agencies will be contacted as required. The contractor shall notify the licensed professional who prepared this plan if more than 1,320 gallons of petroleum is stored onsite (this includes capacities of equipment) or if any one piece of equipment has capacity greater than 660 gallons. The contractor will need a spill prevention containment and countermeasures plan prepared by that licensed professional. All pollutants from waste disposal practices, soil additives, remediation of spills and leaks of petroleum products, concrete truck washout, etc., should any of these occur, will be controlled by the implementation of appropriate best management practices. The site will be in compliance with all applicable state and local waste disposal, sanitary sewer or septic system regulations.

RETENTION OF RECORDS:

The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from encement of construction until such time as a NOT is submitted in accordance with Part VI

b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;

Sanitary sewer will be provided by Municipal Authority/Septic System at the completion of this Project

c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;

d. A copy of all monitoring information, results, and reports required by this permit;

a. A copy of all Notices of Intent submitted to EPD

e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit; f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and

g. Daily rainfall information collected in accordance with Part IV.D.4.a.(1)(c) of this permit

Copies of all Notices of Intent, Notices of Termination, reports, plans, monitoring reports, monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notic of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon

N 33°48′55.43″ W 84°14′20.05″ N 33.815310 W -84.238926

NPDES Permit Part IV.E. Reporting:

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any storm water 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 until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:

a. The rainfall amount, date, exact place and time of sampling or measurements

b. The name(s) of the certified personnel who performed the sampling and measurements;

c. The date(s) analyses were performed

d. The time(s) analyses were initiated; e. The name(s) of the certified personnel who performed the analyses:

f. References and written procedures, when available, for the analytical techniques or methods used

g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these result h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU:" and

i. Certification statement that sampling was conducted as per the Plan

3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to:

Mountain District- Atlanta Satellite 1244 International Parkway, Suite 114 Atlanta, GA 30354-3906

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 designat location from commencement of construction until such time as a NOT is submitted in accordance with Part VI. If an electronic submittal is provided by EPD then the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

CRITICAL AREAS AND ADDITIONAL MEASURES:

1. Critical Area: Install silt fence as shown to prevent sediment runoff

PRIMARY PERMITTEE CONTACT INFORMATION: City of Clarkston

055 Rowland Stree Clarkston, Georgia 30021 PH: (404) 296-6489 FAX: N/A

. Achieve Final Site Stabilization

TATE WATERS ON SITE

PD BUFFER ENCROACH. PERMIT REQ'D Y TATE AND LOCAL BUFFERS ADHERED TO:Y VETLANDS OR WATERS OF US ON SITE: Y

INTENDED LAND DISTURBANCE CONSTRUCTION ACTIVITY SEQUENCE:

Initial Phase:

1. Install Initial Perimeter Silt Fence, and Construction Entrance. 2. Coordinate Site Review Meeting with Engineer and/or Local Issuing Authority

<u>Intermediate Phase:</u>
1. Throughout Land Disturbance Process Maintain Existing BMP's (Vegetative and Structural Practices) 2. Throughout Land Disturbance Process Continue NPDES Monitoring and Reporting 3. Coordinate with Utility Companies on Utility/Sleeve Locations l. Begin Clearing, Grubbing, Topsoiling, and Grading Operations i. Install Topsoil pile and immediately grass/mulch and install surrounding silt fence. As areas are brought to finish grade, grass and blanket any areas that are finish grade or that will be left bare for 14 days.

. Immediately install each storm structure with associated Sd2's. Add floc logs to each storm structure.

Throughout Land Disturbance Process Maintain Existing BMP's (Vegetative and Structural Practices)

Remove any temporary BMP practices once site stabilization is achieved and signed off by Engineer.

Throughout Land Disturbance Process Continue NPDES Monitoring and Reporting

. Coordinate Site Review Meeting with Engineer and/or Local Issuing Authority Inspector

9. Grass / mulch disturbed areas and install associated Intermediate BMPs. 10. Grass / mulch disturbed areas and install associated Intermediate BMPs. Grass / mulch disturbed areas and install intermediate BMPs. 12. Grass / mulch disturbed areas and install intermediate BMPs 13. Finish Grade and stabilize disturbed areas with permanent vegetation

6. Coordinate Site Review Meeting with Engineer for final site approval.

B. Grass / mulch disturbed areas and install intermediate BMPs.

NATURE OF CONSTRUCTION ACTIVITY: 399 E PONCE DE LEON AVENUE; CLARKSTON, GA 30021 WETLAND ENHANCEMENT WITH STREAM BANK IMPROVEMENTS VETLAND ENHANCEMENT WITH STREAM BANK IMPROVEMENTS

SOUTH FORK PEACHTREE CREEK

FLOW PRE AND POST
DEVELOPMENT
CONDITIONS: RE C VALUE: POST C VALUE:

PRF Q 100YR (CFS): 447.7

OST Q 100YR (CES): 447.7

ESTIMATE OF RUNOFF COEFFICIENT OR

PEAK DISCHARGE

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN CERTIFICATION:

ertify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices (BMP's) required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Contro Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activi was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of st management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR Environs Design Studio, LLC WILLIAM K. CAMPBELL Date:09/15/2017 Level II Certified Design Professional # 1855 - Exp. 08/01/2018

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signed: Date:09/15/2017 SIGNATURE OF OWNER AND DATE

WILLIAM K. CAMPBELL, certify under penalty of law that his plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under m direct supervision.

Signed: Signed: Date:09/15
SIGNATURE OF PLAN PREPARER AND DATE

certify that I, as the professional who prepared the ES&PC Plan, will inspect the installation of the initial phase of Erosio Sedimentation, and/Pøllution Control approved BMP's shown of the plan within 7 days after initial construction activity begins.

Sign of Date: 09/15/2017

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

Ca - Cartecay silt loam, AkA - Altavista fine sandy loam PfD - Pacolet sandy loam, Tf - Toccoa sandy loam AwE - Ashlar-Wedowee complex

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

REFER TO SHEETS L-1.0 AND L-8.0 FOR CONSTRUCTION REQUIREMENTS AND SPECIFICATIONS

MINIMUM QUALIFICATIONS OF INSPECTORS:

Design Professional" means a professional licensed by the state of GA in the field of: engineering, architecture, landscape architecture, forestr geology, or land surveying; or a person that is a certified professional in erosion and sediment control (CPESC) with a current certification by

REVISIONS SHOWN ON ES&PC PLAN:

Certified Personnel" means a person who has successfully completed the appropriate certification course approved by the State Soil and

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

HAZARDOUS WASTES:

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

anup and handling of spilled materials. No spilled hazardous materials or hazardous waste will be allowed to come in contact with the stormwater charges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal gulations are taken to dispose of such contaminated stormwater. It shall be the responsibility of the job site superintendent to properly train all personnel in the contaminated stormwater.

contractor will implement the Spill Prevention Control Countermeasures (SPCC) Plan found within this ESPCP and will train all personnel in the proper

& ECOLOGICAL PLANNING 113 West Jefferson Street, Suite A

www.environsla.com

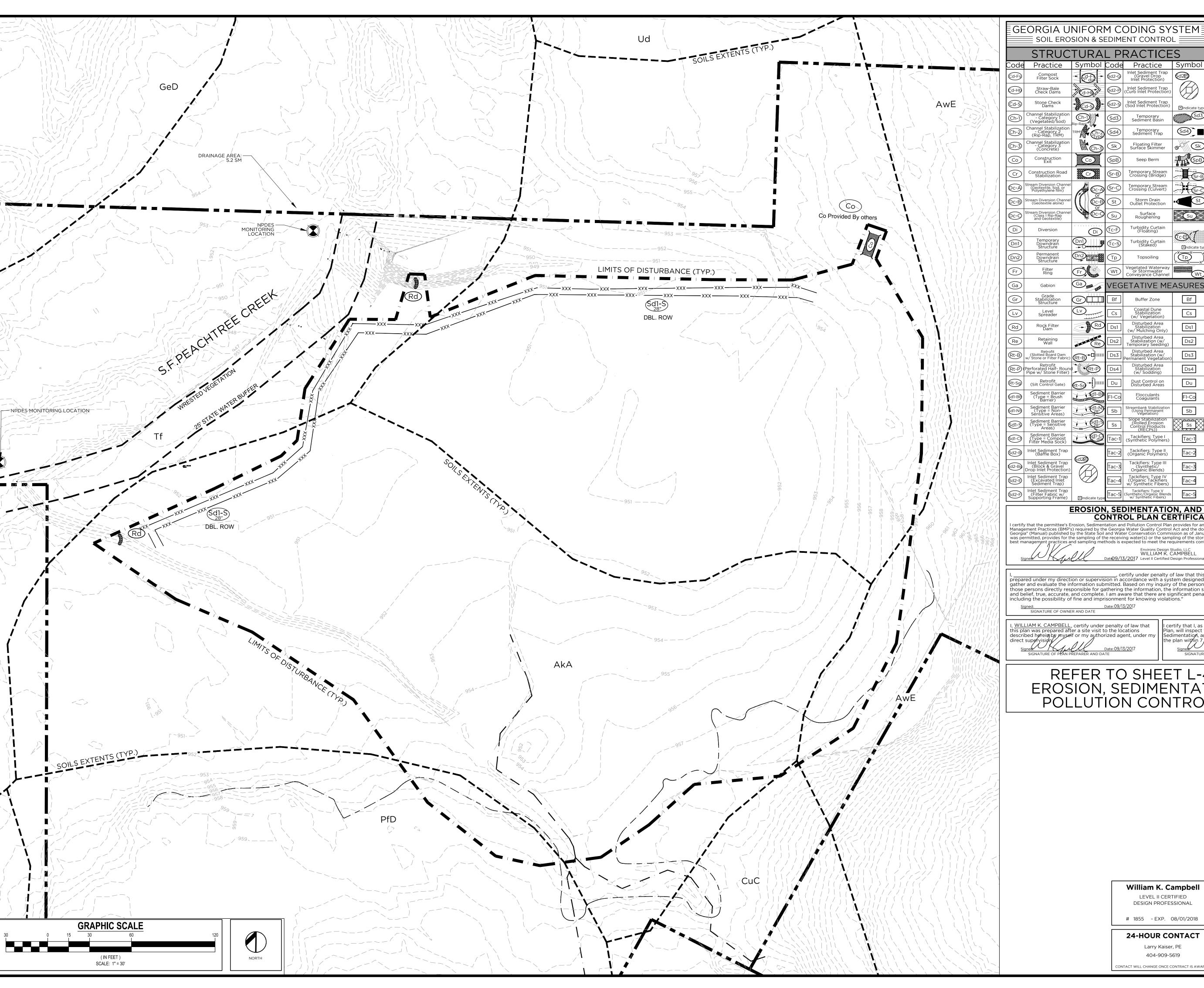
P: 706.342.1104 | F: 706.342.1105

P.O. Box 896 | Madison, GA 30650



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EROSION CONTROL



OWNER/DEVELOPER

COMPANY: City of Clarkston ADDRESS: 1055 Rowland Street

Clarkston, Georgia 30021 CONTACT: Mr. Keith Barker

PHONE: 770-296-6489 **FAX:** 770-296-6480

CONTRACTOR

ADDRESS LINE 2 CONTACT: CONTACT NAME PHONE: PH: NUMBER

EMAIL: CONTACT EMAIL **SURVEYOR**

COMPANY: Georgia Civil, Inc. ADDRESS: P.O. Box 186

Madison, Georgia 30650 CONTACT: Brian Slate, PLS **PHONE:** 706-342-1104

FAX: 706-342-1105

EMAIL: brian@georgiacivil.com SITE DESIGNER

ADDRESS: 1104 MONTICELLO STREET COVINGTON, GA 30014 **PHONE:** 706-342-1104

GSWCC EROSION CONTROL NOTES:

he escape of sediment from the site shall e prevented by the installation of erosion nd sediment control measures and ractices prior to, concurrent with, land

at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosio and sediment control measures shall be lemented to control or treat the

ny disturbed area left exposed for a eriod greater than 14 days shall be an which have a significant effect on MPs with a hydraulic component must be ertified by the design professional.

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

LIMITS OF DISTURBANCE: **3.94 ACRES**

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN CERTIFICATION:

I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices (BMP's) required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activit was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of t practices and sampling methods is expected to meet the requirements contained in the <u>General NPDES Permit No. GAR 1000</u>1

Floating Filter Surface Skimmer

Buffer Zone

Dust Control on Disturbed Areas

FI-Co

Tac-1

Tac-3

Tac-4

prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I, WILLIAM K. CAMPBELL, certify under penalty of law that this plan was prepared after a site visit to the locations

Plan, will inspect the installation of the initial phase of Erosio

REFER TO SHEET L-4.0 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

William K. Campbell

LEVEL II CERTIFIED

DESIGN PROFESSIONAL

1855 - EXP. 08/01/2018

24-HOUR CONTACT

404-909-5619



Call before you dig.

Itilities/Services shown are fo Contractors' convenience. Items are shown schematically and neither the owner assumes any responsibility fo variances in their actual location. This plan may not show and/or n incorrectly show utilities located on site. Contractor shall be responsible to secure and use the services of a private utility locator firm during the entire course of work and shall pay

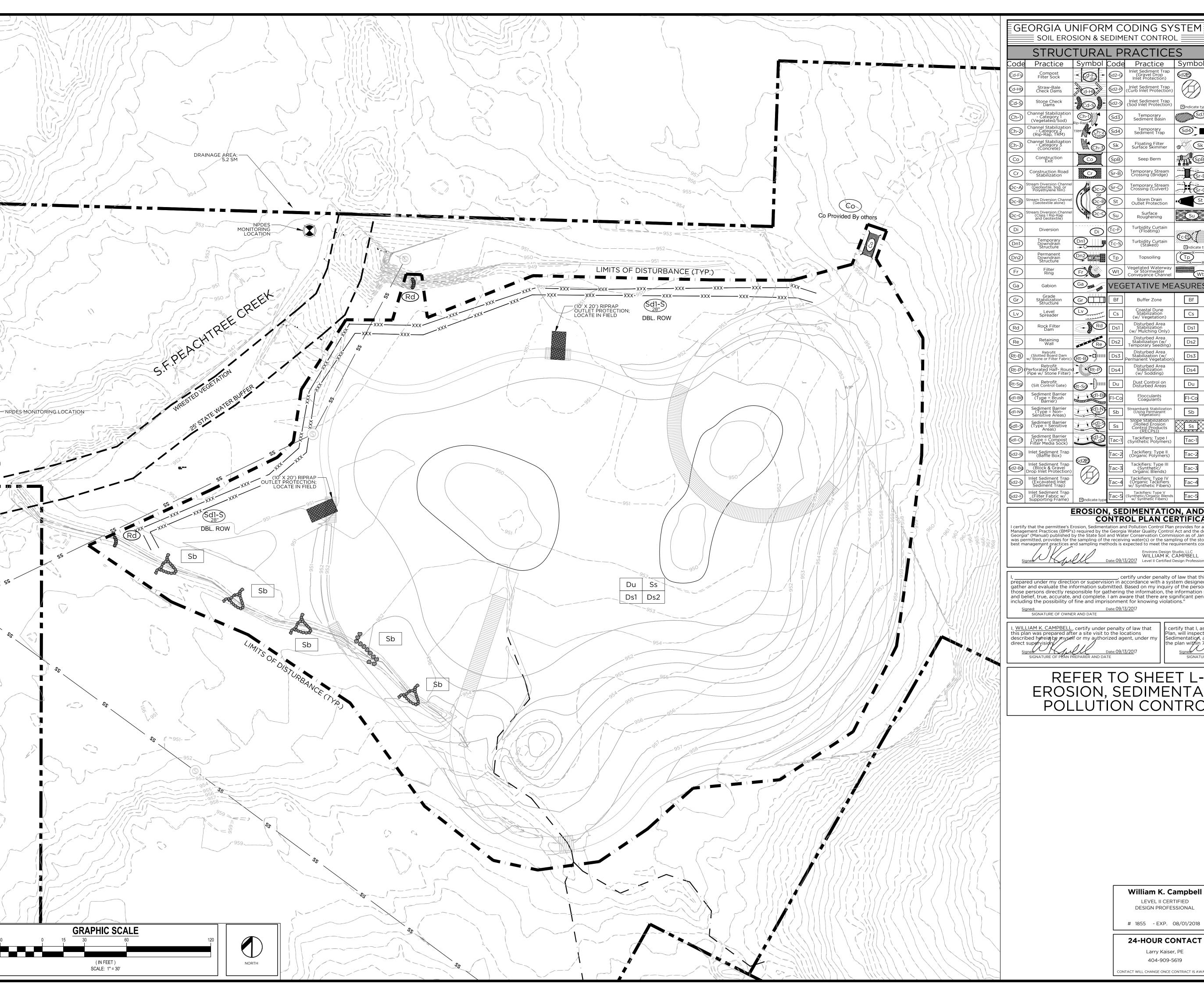
for said services. Contractor shall locate utilities prior to any disturbance (including field verifying location and depth of utilities that are to be saved and protected). Contractor shall notify the site design professional of any utility conflicts. rofessional of any utility conflict grading, etc. The Contractor, at their expense, shall be responsible to repair, replace and/or relocate, as necessary, any utilities damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the

respective utility company.

& ECOLOGICAL PLANNING 113 West Jefferson Street, Suite A P.O. Box 896 | Madison, GA 30650 P: 706.342.1104 | F: 706.342.1105

www.environsla.com

CLEARING PHASE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN



OWNER/DEVELOPER

COMPANY: City of Covington

ADDRESS: 1055 Rowland Street Clarkston, Georgia 30021

CONTACT: Mr. Keith Barker

PHONE: 770-296-6489 **FAX:** 770-296-6480

EMAIL: kbarker@cityofclarkston.com

CONTRACTOR

ADDRESS LINE 2 CONTACT: CONTACT NAME

EMAIL: CONTACT EMAIL

SURVEYOR

COMPANY: Georgia Civil, Inc. ADDRESS: P.O. Box 186

Madison, Georgia 30650 CONTACT: Brian Slate, PLS **PHONE:** 706-342-1104

FAX: 706-342-1105

PHONE: 706-342-1104

EMAIL: brian@georgiacivil.com SITE DESIGNER

COMPANY: ENVIRONS DESIGN STUDIO ADDRESS: 1104 MONTICELLO STREET COVINGTON, GA 30014

GSWCC EROSION CONTROL NOTES:

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at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosio and sediment control measures shall be lemented to control or treat the

ny disturbed area left exposed for a eriod greater than 14 days shall be an which have a significant effect on MPs with a hydraulic component must be ertified by the design professional.

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

property owner.

LIMITS OF **DISTURBANCE: 3.94 ACRES**

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN CERTIFICATION:

I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices (BMP's) required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001

Floating Filter Surface Skimmer

VEGETATIVE MEASURES

Buffer Zone

Dust Control on Disturbed Areas

Environs Design Studio, LLC WILLIAM K. CAMPBELL

FI-Co

Tac-1

Tac-3

Tac-4

. certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I, <u>WILLIAM K. CAMPBELL</u>, certify under penalty of law that this plan was prepared after a site visit to the locations

ertify that I, as the professional who prepared the ES&PC Plan, will inspect the installation of the initial phase of Erosio

REFER TO SHEET L-4.0 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

William K. Campbell

LEVEL II CERTIFIED

404-909-5619



Call before you dig.

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DESIGN PROFESSIONAL # 1855 - EXP. 08/01/2018 24-HOUR CONTACT

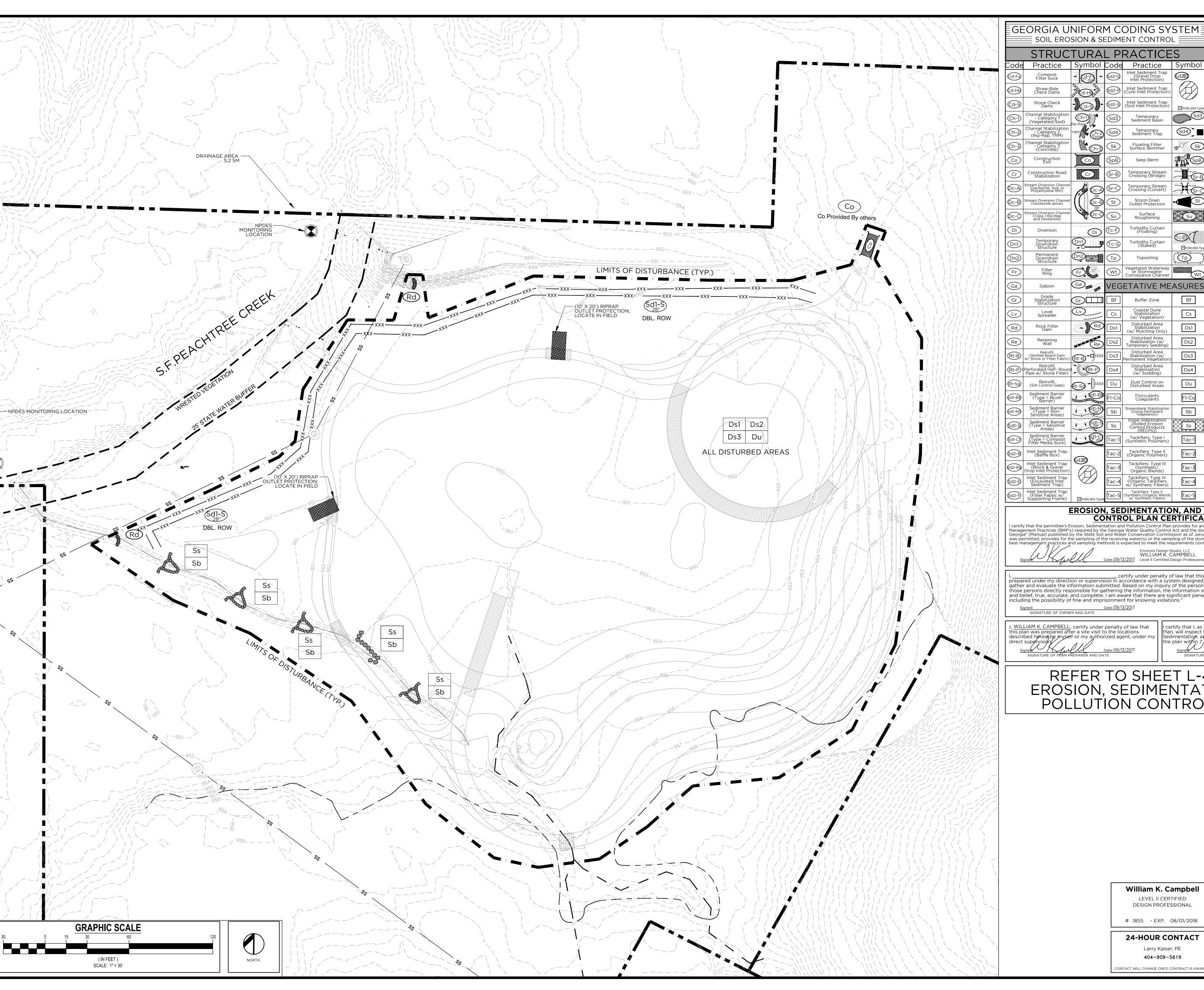
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www.environsla.com



GRADING PHASE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN



OWNER/DEVELOPER

COMPANY: City of Covington ADDRESS: 1055 Rowland Street Clarkston, Georgia 30021

CONTACT: Mr. Keith Barker

PHONE: 770-296-6489 **FAX:** 770-296-6480

CONTRACTOR

ADDRESS LINE 2 CONTACT: CONTACT NAME PHONE: PH: NUMBER

EMAIL: CONTACT EMAIL **SURVEYOR**

COMPANY: Georgia Civil, Inc. ADDRESS: P.O. Box 186

Madison, Georgia 30650 CONTACT: Brian Slate, PLS **PHONE:** 706-342-1104

FAX: 706-342-1105

EMAIL: brian@georgiacivil.com SITE DESIGNER

ADDRESS: 1104 MONTICELLO STREET COVINGTON, GA 30014 **PHONE:** 706-342-1104

GSWCC EROSION CONTROL NOTES:

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Floating Filter Surface Skimmer

Buffer Zone

Dust Control on Disturbed Areas

Environs Design Studio, LLC WILLIAM K. CAMPBELL

FI-Co

Tac-1

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prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

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REFER TO SHEET L-4.0 FOR EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

William K. Campbell

LEVEL II CERTIFIED

DESIGN PROFESSIONAL

1855 - EXP. 08/01/2018

24-HOUR CONTACT

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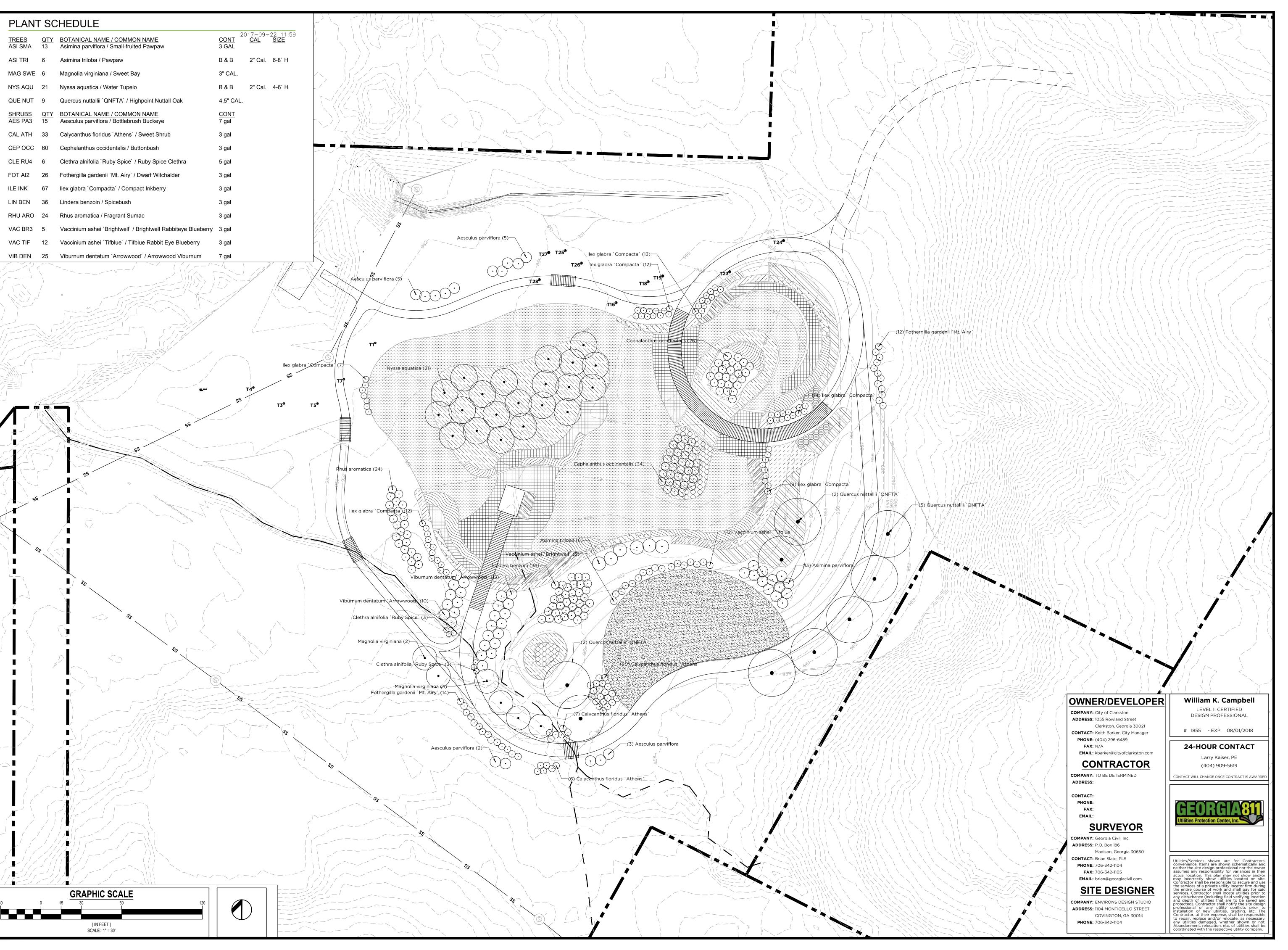
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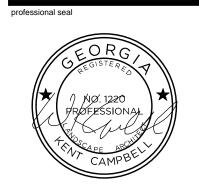
FINAL PHASE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN





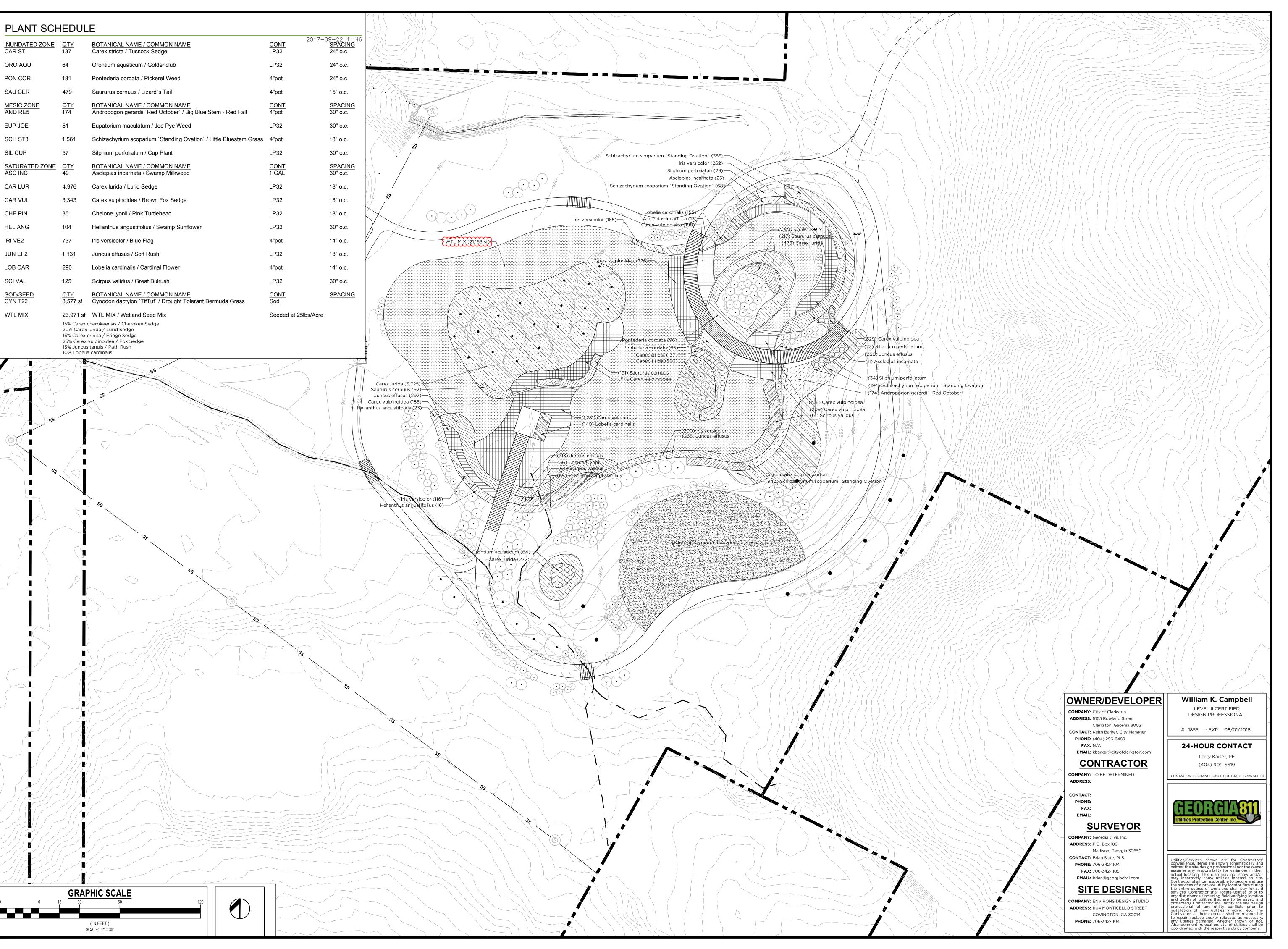
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LANDSCAPE PLAN:

TREE AND SHRUB





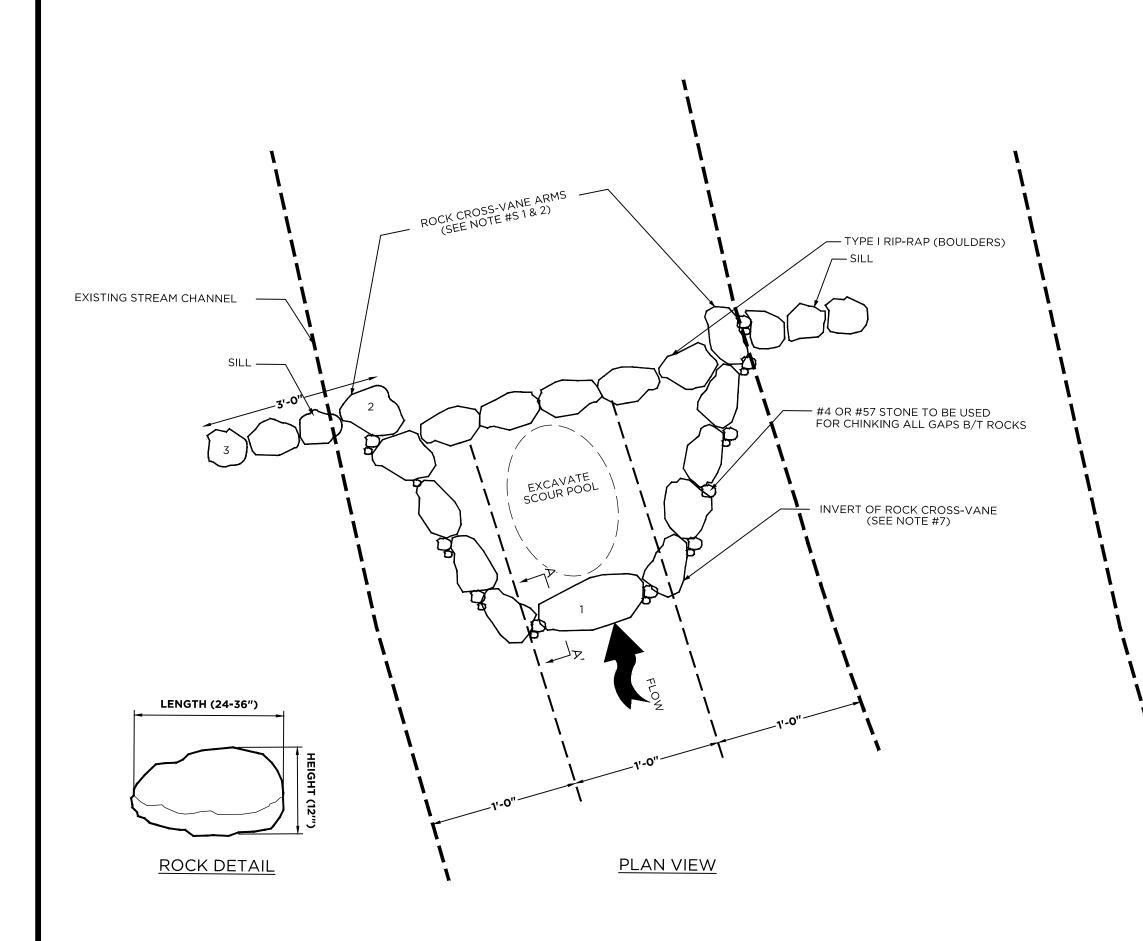
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www.environsla.com



LANDSCAPE PLAN:

FORBS AND SEEDING



ROCK CROSS-VANE AND SINGLE-VANE NOTES:

1) IMPORTED ROCK MEETING THE DIMENSIONS SPECIFIED IN THE DRAWING SHALL BE USED TO CONSTRUCT

2) ONE ROW OF ROCK SHALL BE INSTALLED IN A TRENCH EXCAVATED IN THE STREAMBED. CROSS-VANE AND SINGLE-VANE SHALL BE CONSTRUCTED SUCH THAT NO SPACE EXISTS BETWEEN ROCKS.

ABOVE AND SLIGHTLY UPSTREAM OF THE FOOTER ROCK AS INDICATED IN THE DRAWING. TYPE I RIP-RAP MAY BE USED TO LEVEL THE UPPER ROW OF LARGE ROCK.

4) BOTH VANE ARMS SHALL BE ORIENTED 20 TO 30 DEGREES FROM STREAM BANK AS MEASURED UPSTREAM FROM THE TANGENT LINE WHERE THE VANE INTERCEPTS THE BANK. REFER TO PLAN VIEW ON

CHANNEL. REFER TO THE PLAN VIEW ON THIS DRAWING FOR A SCHEMATIC DIAGRAM.

EXCEED 7 PERCENT. REFER TO THE PROFILE VIEW ON THIS DRAWING FOR A SCHEMATIC DIAGRAM. 7) THE INVERT OF ROW OF SURFACE ROCKS SHALL BE SET AT THE EXISTING BED ELEVATION.

9) ONCE THE ROCK HAS BEEN INSTALLED, THE UPSTREAM SIDE OF THE TRENCH SHOULD BE FILLED WITH CLASS A RIPRAP AS SPECIFIED IN THE DRAWINGS. BACKFILL WITH ALLUVIAL SEDIMENTSS TO FILL IN THE REMAINDER OF THE TRENCH.

10) A SMALL POOL SHALL BE EXCAVATED DIRECTLY DOWNSTREAM OF THE VANE ARMS, THE DEEPEST PORTION OF WHICH EXISTS JUST DOWNSTREAM OF WHERE THE VANE ARMS ARE KEYED INTO BANKS.

OWNER/DEVELOPER **COMPANY:** Clty of Clarkston

CONTRACTOR

SURVEYOR

Madison, Georgia 30650

COMPANY: TO BE DETERMINED

FAX: N/A

CONTACT:

PHONE:

FAX: EMAIL:

COMPANY: Georgia Civil, Inc. ADDRESS: P.O. Box 186

CONTACT: Brian Slate, PLS

PHONE: 706-342-1104

PHONE: (706) 342-1104

FAX: (706) 342-1105

EMAIL: brian@georgiacivil.com

COMPANY: ENVIRONS DESIGN STUDIO

ADDRESS: 1104 MONTICELLO STREET

SITE DESIGNER

COVINGTON, GA 30014

William K. Campbell LEVEL II CERTIFIED DESIGN PROFESSIONAL

ADDRESS: 1055 Rowland Street Clarkston, Georgia 30021 CONTACT: Keith Barker, City Manager **PHONE:** (404) 296-6489

24-HOUR CONTACT **EMAIL:** kbarker@cityofclarkston.com

Larry Kaiser, PE

(404) 909-5619 CONTACT WILL CHANGE ONCE CONTRACT IS AWARD



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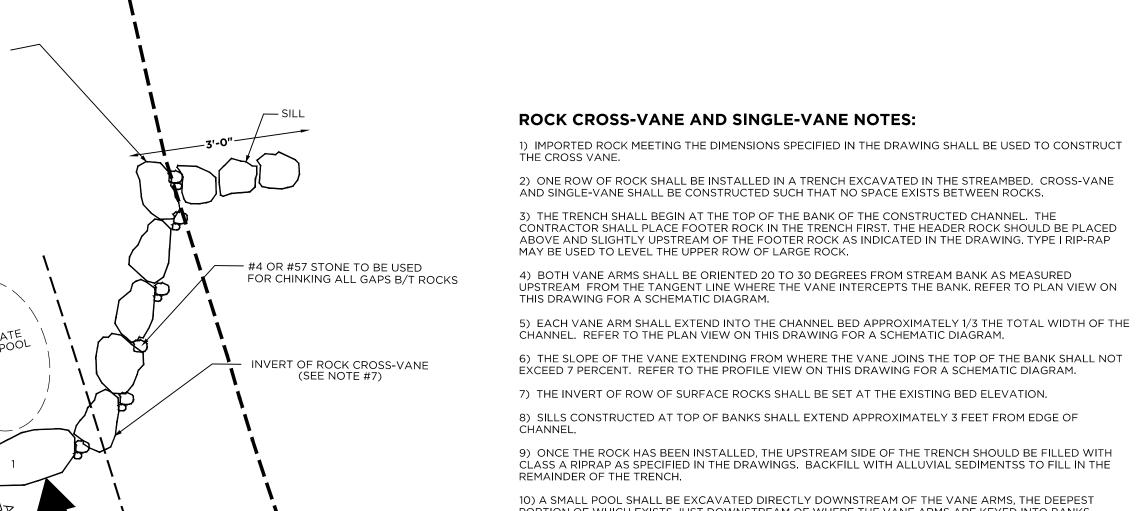
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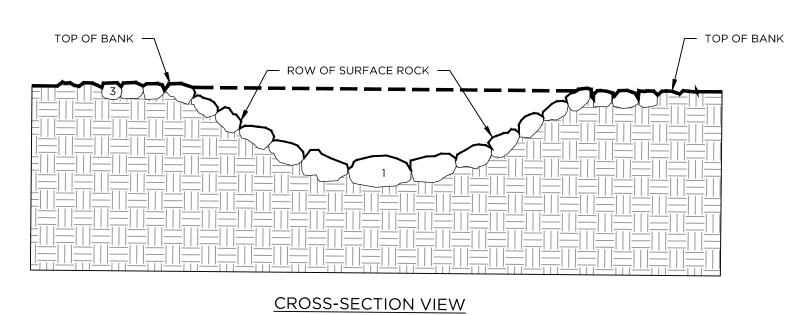
SITE WORK **DETAILS**

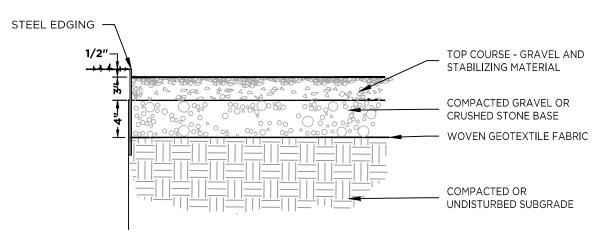


5 TYPICAL SINGLE-VANE DETAIL L-7.0 | SCALE: NTS

PLAN VIEW

—TYPE I RIPRAP AND #57 STONE TO FILL GAPS —HEADER ROCK SECTION A-A'



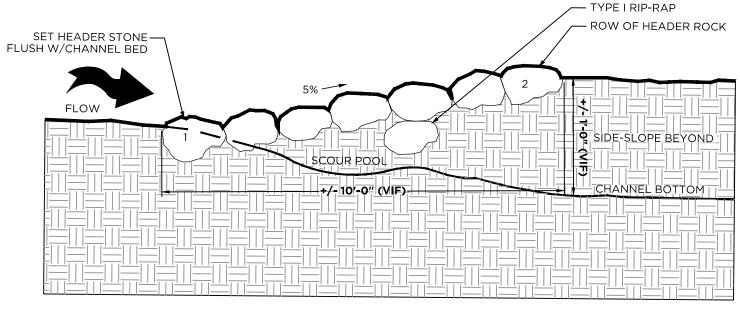


L-7.0 SCALE: NTS

6 CRUSHED GRANITE FINES TRAIL (TYP.)

TYPICAL CROSS-VANE DETAIL - CROSS-SECTION

SCALE: NTS

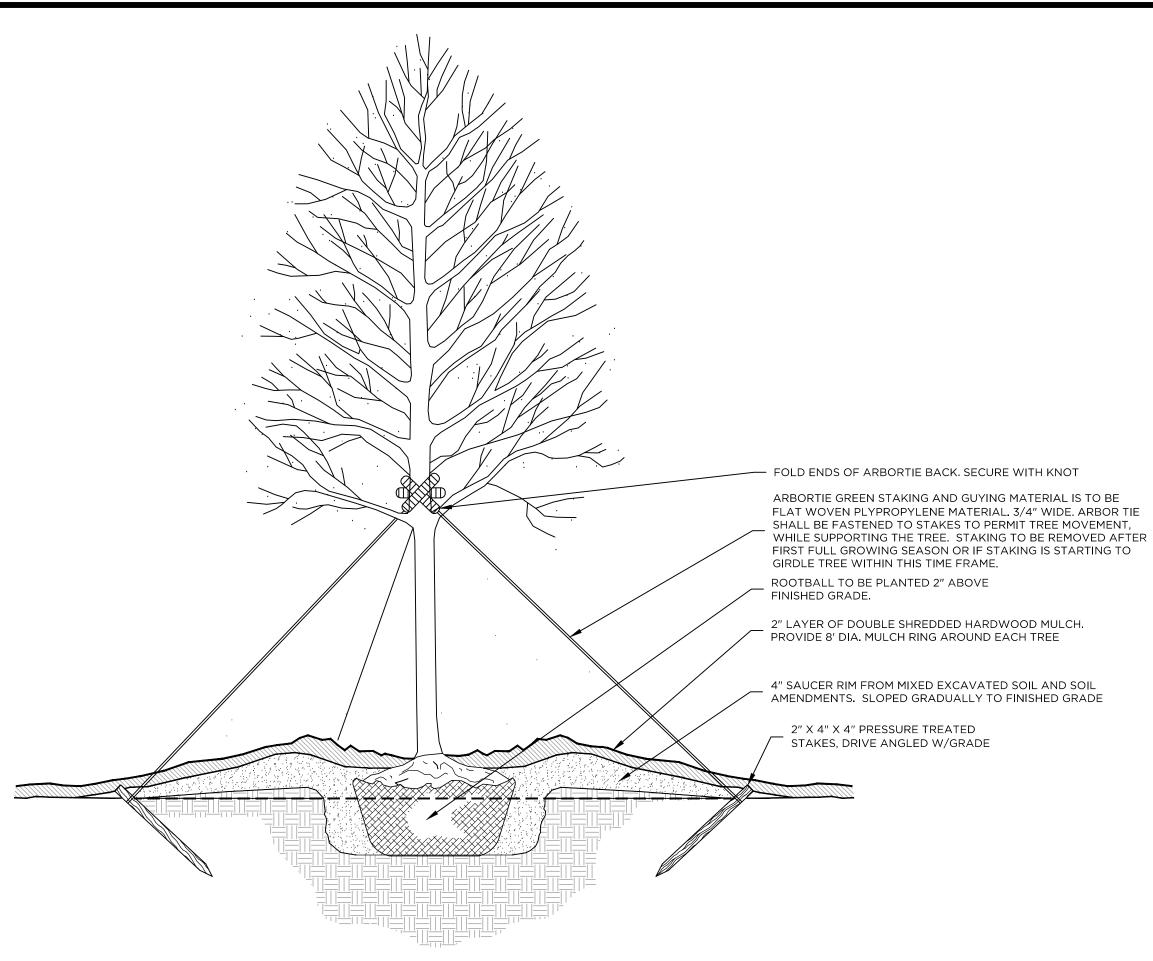


4 TYPICAL CROSS-VANE DETAIL

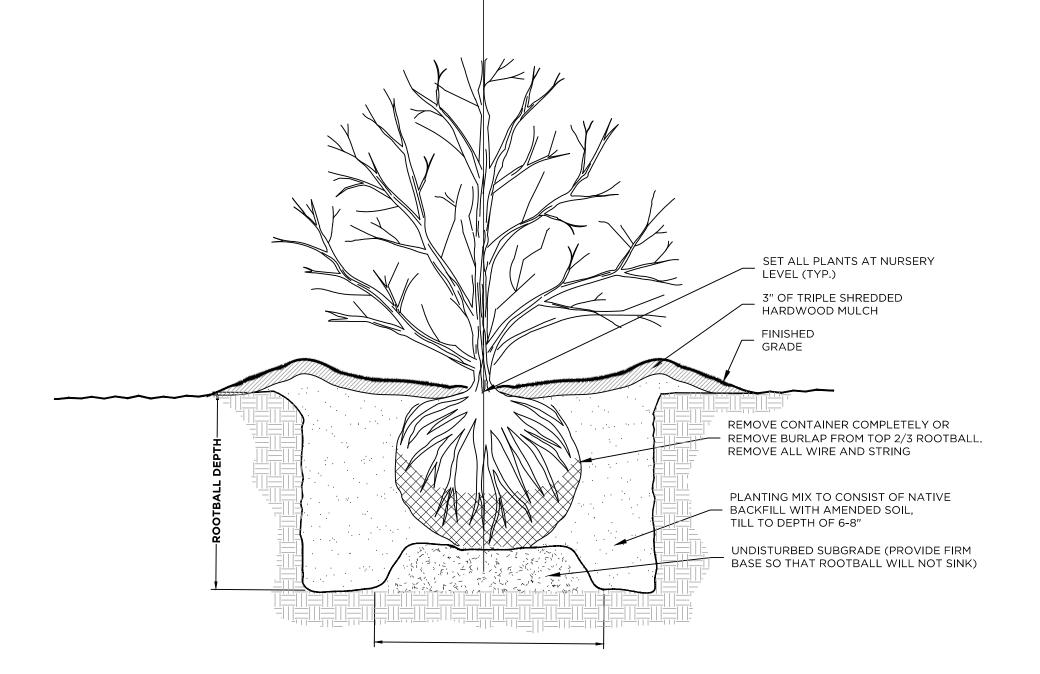
L-7.0 SCALE: NTS

PROFILE VIEW

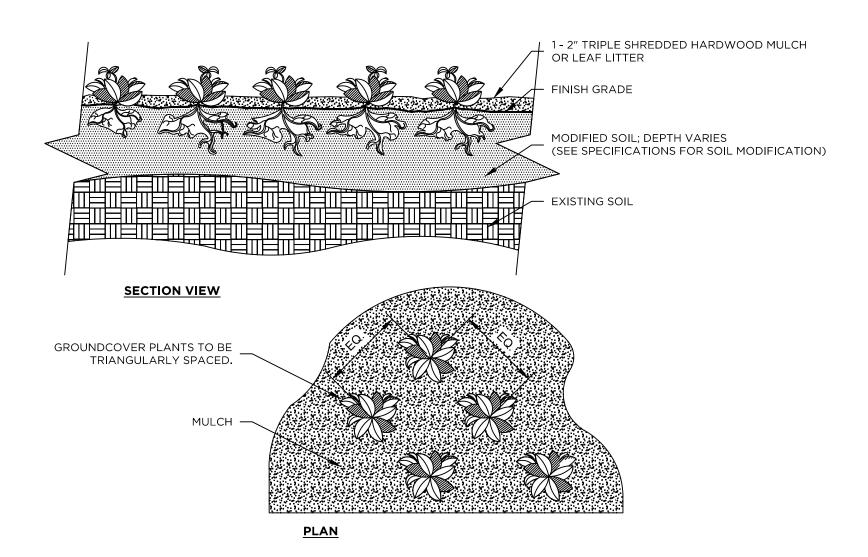
1 TYPICAL CROSS-VANE DETAIL - PROFILE VIEW L-7.0 SCALE: NTS



TYPICAL TREE PLANTING DETAIL - BALL AND BURLAP L-8.0 SCALE: 3/4" = 1'-0"

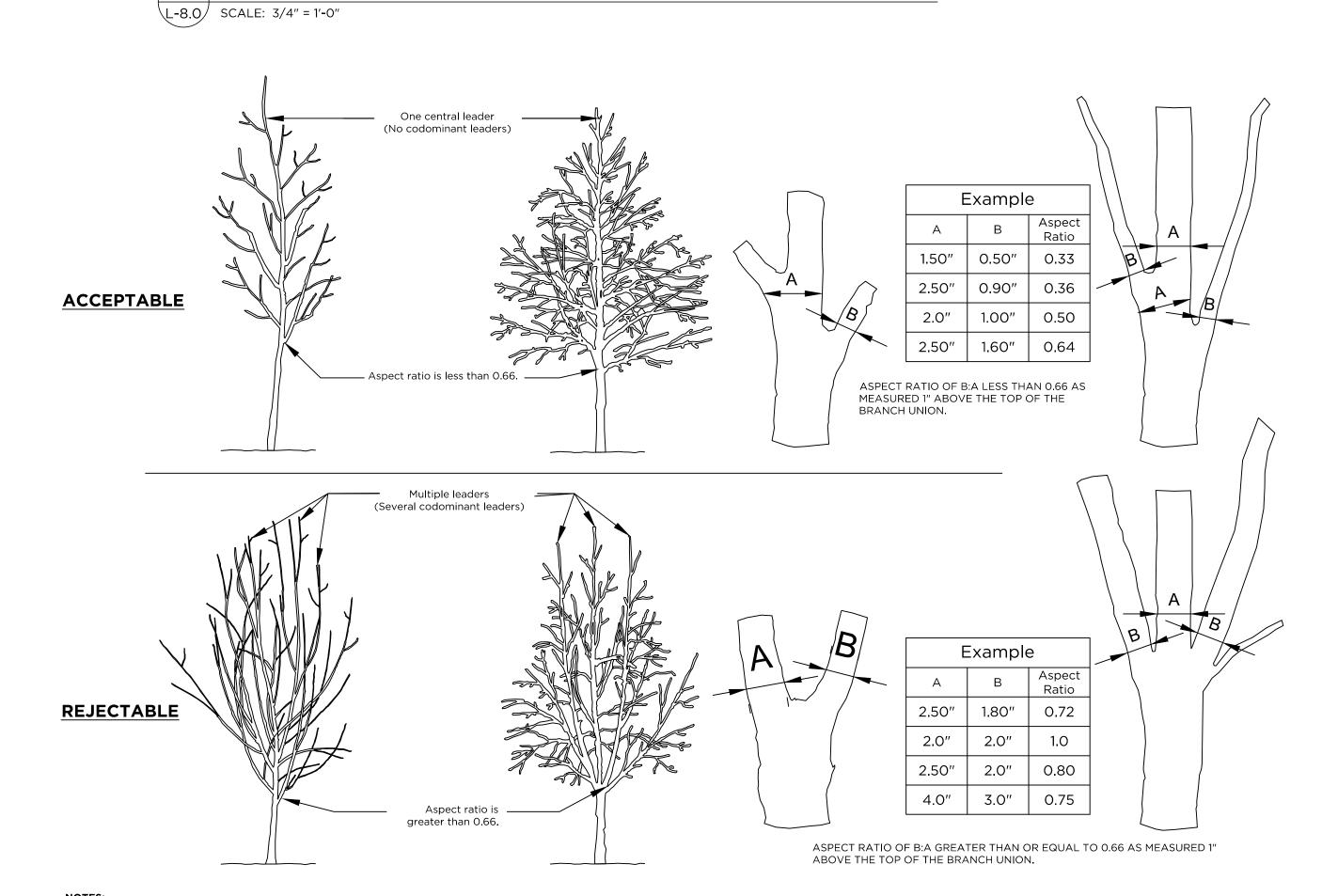


TYPICAL SHRUB PLANTING DETAIL - BALL AND BURLAP L-8.0 SCALE: 3/4" = 1'-0"



1- SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES, SIZE, AND SPACING DIMENSION. 2- SMALL ROOTS (¼" OR LESS) THAT GROW AROUND, UP, OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING. ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING. 3- SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

TYPICAL PLANTING DETAIL - GROUNDCOVER AND PLUG



1- ASPECT RATIO SHALL BE LESS THAN 0.66 ON ALL BRANCH UNIONS. ASPECT RATIO IS THE DIAMETER OF BRANCH (B) DIVIDED BY THE DIAMETER OF THE TRUNK (A) AS MEASURED 1" ABOVE THE TOP OF THE BRANCH UNION.

2- ANY TREE NOT MEETING THE CROWN OBSERVATIONS DETAIL MAY BE REJECTED.



OWNER/DEVELOPER

COMPANY: City of Clarkston ADDRESS: 1055 Rowland Street

Clarkston, Georgia 30021 **CONTACT:** Keith Barker, City Manager **PHONE:** (404) 296-6489

FAX: N/A **EMAIL:** kbarker@cityofclarkston.com

CONTRACTOR

COMPANY: TO BE DETERMINED

CONTACT: PHONE: FAX:

SURVEYOR

COMPANY: Georgia Civil, Inc. ADDRESS: P.O. Box 186 Madison, Georgia 30650

CONTACT: Brian Slate, PLS **PHONE:** (706) 342-1104 FAX: (706) 342-1105 EMAIL: brian@georgiacivil.com

SITE DESIGNER COMPANY: ENVIRONS DESIGN STUDIO

ADDRESS: 1104 MONTICELLO STREET COVINGTON, GA 30014 PHONE: 706-342-1104

William K. Campbell

LEVEL II CERTIFIED DESIGN PROFESSIONAL

1855 - EXP. 08/01/2018

24-HOUR CONTACT

Larry Kaiser, PE (404) 909-5619

CONTACT WILL CHANGE ONCE CONTRACT IS AWARDS



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LANDSCAPE **DETAILS**

GENERAL PLANTING NOTES

REFERENCE ONLY.

A. CONTRACTORS SHALL COORDINATE PLANTING WORK WITH OTHER CONTRACTORS BEFORE PERFORMING WORK ON THE SITE.

B. CONTRACTOR SHALL VERIFY GRADES, DIMENSIONS, AND EXISTING CONDITIONS PRIOR TO WORK AND REPORT ANY DISCREPANCIES TO THE SITE DESIGN PROFESSIONAL. THE CONTRACTOR IS ADVISED OF THE UNDERGROUND UTILITIES AND SHALL LOCATE AND VERIFY EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO WORK AND SHALL IMMEDIATELY REPORT CONFLICTS TO THE SITE DESIGN PROFESSIONAL C. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN TAKEOFF QUANTITIES AND REPORT ANY DISCREPANCIES TO THE SITE DESIGN PROFESSIONAL. THE CONTRACTOR SHALL SUPPLY PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWING. QUANTITIES IN PLANT SCHEDULE ARE FOR

A. ALL PLANT MATERIALS TO BE (GEORGIA *1) OR BETTER (GEORGIA FANCY) DEFINED AND SPECIFIED ACCORDING TO GRADES AND STANDARDS FOR NURSERY STOCK PUBLISHED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES DIVISION OF PLANT INDUSTRY UTILIZING THE LATEST UPDATED EDITION.

- B. ALL PLANT MATERIAL SHALL MEET THE MINIMAL SIZE REQUIREMENT AS STATED ON THE PLANT LIST. C. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY LOCATION. LANDSCAPE ARCHITECT WILL DECIDE FINAL APPROVAL
- OF ALL PLANT MATERIAL DELIVERED TO THE PROJECT SITE D. THE LANDSCAPE ARCHITECT MAY MAKE SELECTION OF PLANT MATERIAL PROCURED UNDER THIS PROJECT AT THE PLACE OF CULTIVATION BEFORE THE CONTRACTOR PURCHASES AND PREPARES FOR DELIVERY TO PROJECT SITE. THE CONTRACTOR IS TO RETAIN AND SUBMIT CERTIFICATION TAGS VERIFYING TYPE AND PURITY OF LANDSCAPE
- E. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY. UNLESS OTHERWISE NOTED, PLANTS SHALL BE EXCEPTIONALLY DENSE WITH A NATURALISTIC BRANCHING CHARACTER AS INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT
- F. LANDSCAPE CONTRACTOR SHALL REFER TO PLANTING PLAN AND PLANT LIST FOR MATERIAL PROCUREMENT. QUANTITY ESTIMATES ON THE PLANTING PLAN AND PLANT LIST ARE FOR REFERENCE ONLY.
- G. CONTRACTOR SHALL FURNISH ALL QUANTITIES NECESSARY TO COMPLETE THE PLANTING AREAS AS SHOWN ON THE DRAWING TO ACCEPTANCE AND SATISFACTION AT THE LANDSCAPE ARCHITECT. H. THE CONTRACTOR SHALL REPORT TO THE LANDSCAPE ARCHITECT SHOULD THERE BE CHANGES IN THE PLANTING AREAS ON SITE RESULTING IN SUBSTANTIAL DIFFERENCE IN
- QUANTITIES AND SPECIES REQUIRED. I. WARRANTY: ALL PLANTS SHALL BE WARRANTED TO REMAIN ALIVE AND HEALTHY AND IN VIGOROUSLY THRIVING CONDITION FOR PERIOD OF 1 YEAR FROM DATE OF FINAL ACCEPTANCE.

2. NURSERY RECOMMENDATIONS: BAKER ENVIRONMENTAL NURSERY

949 MARSHALL CLARK ROAD HOSCHTON, GA 30548

GROWILD. INC 7190 HILL HUGHES ROAD FAIRVIEW. TN 37062

5520 BAHAMA ROAD ROUGEMONT, NC 27572

NORTH CREEK NURSERIES 388 NORTH CREEK RD LANDENBERG, PA 19350

ROCKSPRING RESTORATIONS 12 PACES WEST DRIVE, NW

ATLANTA, GA 30327 WOODLANDERS, INC

1128 COLLETON, AVE, SE AIKEN, SC 29801

A. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS AND INSTRUCTIONS PROVIDED BY LANDSCAPE ARCHITECT.

- B. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AS NECESSARY TO EXECUTE AND COMPLETE PROPOSED LANDSCAPE / IRRIGATION INSTALLATION IN A TIMELY MANNER COMPLYING WITH THE SCHEDULED COMPLETION DATE.
- C. WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE INTENTIONS OF THE SPECIFIED DRAWINGS. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE OF BEST QUALITY AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
- D. PLANTING PLANS INDICATE DIAGRAMMATIC LOCATION ONLY. SITE ADJUSTMENTS OF PLANTING DESIGN AND RELOCATION OF PLANT MATERIAL INSTALLED PRIOR TO LANDSCAPE ARCHITECT APPROVAL SHALL BE DONE WITHOUT PENALTY OR ADDITIONAL
- E. LANDSCAPE CONTRACTOR SHALL STAKE AND/OR MARK ALL TREE AND PLANT LOCATIONS AT SITE AND NOTIFY LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PLANT
- F. UTILITIES: THE LANDSCAPE CONTRACTOR SHALL DETERMINE LOCATION OF ALL ABOVE GRADE AND UNDERGROUND UTILITIES PERFORM WORK THAT WILL AVOID DAMAGE TO UTILITIES. THE CONTRACTOR SHALL MAKE GOOD ALL DAMAGED UTILITIES AT NO COST TO G. DRAINAGE: CONTRACTOR SHALL CONDUCT PERCOLATION TEST IN AREAS TO BE PLANTED: NOTIFY LANDSCAPE ARCHITECT OF ANY POOR DRAINAGE PROVIDE SUPPLEMENTAL PIT DRAINAGE AS REQUIRED TO ENSURE HEALTHY PLANT MATERIALS (SEE SPECIFICATIONS

FOR DETAILS) IF DRAINAGE IS NOT SUFFICIENT NOTIFY LANDSCAPE ARCHITECT BEFORE INSTALLING THE PLANTS. OTHERWISE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR THE GUARANTEE AND LIVABILITY OF THE PLANT.

3. GENERAL PLANTING:

- A. THE CONTRACTOR'S FIELD SUPERVISOR SHALL ACCOMPANY LANDSCAPE ARCHITECT ON ALL PLANT TAGGING AND SITE VISITS. B. PLACE PLANTS UPRIGHT AND TURNED SO THAT THE MOST ATTRACTIVE SIDE VIEWED. PROVIDE 1" THICK LONG-FIBER MULCH SUCH AS WINTER HAY OR MARSH STRAW (MEASURED AFTER WATERING IN) AT ALL PLANTS AND PLANTING BEDS. DO NOT USE HAY
- AS IT CONTAINS A VARIETY OF PLANT MATTER AND SEEDS THAT CAN POTENTIALLY COMPOUND EFFORTS AT ERADICATING FOREIGN AND UNDESIRABLE SPECIES. C. ASSURE THAT SOIL MOISTURE IS WITHIN THE REQUIRED LEVELS PRIOR TO PLANTING. IRRIGATION, IF REQUIRED, SHALL BE APPLIED AT LEAST 12 HOURS PRIOR TO PLANTING TO AVOID PLANTING IN MUDDY SOILS.
-). ASSURE THAT SOIL GRADES IN THE BEDS ARE SMOOTH AND AS SHOWN ON THE PLANS. PLANTS SHALL BE PLANTED IN EVEN, TRIANGULARLY SPACED ROWS, AT THE INTERVALS CALLED OUT FOR ON THE DRAWINGS, UNLESS OTHERWISE NOTED. THE FIRST ROW OF
- ANNUAL FLOWER PLANTS SHALL BE 6 INCHES FROM THE BED EDGE UNLESS OTHERWISE F. DIG PLANTING HOLES SUFFICIENTLY LARGE ENOUGH TO INSERT THE ROOT SYSTEM
- WITHOUT DEFORMING THE SET THE TOP OF THE ROOT SYSTEM AT THE GRADE OF THE G. SCHEDULE THE PLANTING TO OCCUR PRIOR TO APPLICATION OF THE MULCH. IF THE BED IS ALREADY MULCHED, PULL THE MULCH FROM AROUND THE HOLE AND PLANT INTO THE

SOIL PULL MULCH BACK SO IT IS NOT ON THE ROOT BALL SURFACE

- H. PRESS SOIL TO BRING THE ROOT SYSTEM IN CONTACT WITH THE SOIL SPREAD ANY EXCESS SOIL AROUND IN THE SPACES BETWEEN PLANTS. J. APPLY MULCH TO THE BED BEING SURE NOT TO COVER THE TOPS OF THE PLANTS WITH OR
- THE TOPS OF THE ROOT BALL WITH MULCH. K. WATER EACH PLANTING AREA AS SOON AS THE PLANTING IS COMPLETED. APPLY ADDITIONAL WATER TO KEEP THE SOIL MOISTURE AT THE REQUIRED LEVELS. DO NOT
- TOPSOIL SHALL BE REMOVED FROM STOCKPILES AND SPREAD IN THE AREAS SHOWN ON THE PLANS. THE DEPTH OF TOPSOIL SHALL BE AS SHOWN ON THE PLANS. IF THE DEPTH OF THE TOPSOIL IS NOT GIVEN THE FOLLOWING SHALL BE USED: "A MINIMUM OF 4 INCHES IN LAWN AREAS" AND "A MINIMUM OF 12 INCHES IN LANDSCAPE PLANTING
- M. AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL
- SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS. N. THE TOPSOIL SHALL HAVE A PH OF 5.5 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2 INCH SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE 1/4 INCH SIEVE AND 20 TO 80%
- PASSING THE NO. 200 SIEVE O. EXISTING PLANTS THAT ARE TO REMAIN AND BE PROTECTED (IF ANY), WHICH ARE INJURED OR DESTROYED DURING CONSTRUCTION. SHALL BE REPLACED BY THE CONTRACTOR WITH PLANTS OF FOUAL SIZE AND SPECIES AT NO COST TO THE OWNER.
- P. FXISTING PLANT MATERIAL OR GRASSING WITHIN OR ADJACENT TO PROPOSED PLANT MATERIALS SHALL BE PRUNED, RELOCATED OR GRUBBED IN ORDER TO ACCOMMODATE PROPOSED PLANTINGS.
- Q. PLANT MATERIALS TO BE RELOCATED/GRUBBED OUT SHALL BE LEGALLY DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

4. TREE PLANTING A. REMOVE FIRST 8-10" OF WIRE BASKET FROM ROOTBALLS. IF REMOVAL WILL RESULT IN ROOTBALL INJURY, CUT AND REMOVE WIRES ONCE IN HOLE TO ALLOW FOR ROOT

- B. MULCH SAUCERS TO BE 8' (MIN.) DIAMETER FOR ALL TREES NOT INCLUDED W/I A MULCH C. STAKING AND GUYING DETAILS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY, THE CONTRACTOR IS RESPONSIBLE TO ADAPT STAKING AND GUYING METHOD ACCORDING TO
- D. THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE STAKING AND GUYING PERIODICALLY AS NECESSARY OR AS INSTRUCTED BY LANDSCAPE ARCHITECT. THE
- CONTRACTOR SHALL MAINTAIN PLANT MATERIAL IN AN UPRIGHT POSITION AT ALL TIMES DURING THE CONTRACT PERIOD.
- E. STAKING AND GUYING OF TREES SHALL BE FOR THE PURPOSE OF ESTABLISHMENT ONLY. STAKING AND GUYING DETAILS ARE NOT DESIGNED OR ENGINEERED TO WITHSTAND STRONG WIND OR WINDSTORM CONDITIONS.
- F. IF CONTRACTOR SEES ANY SITUATION ON THE SITE WHERE A TREE IS TO BE STAKED WITH ARBORTIES, BUT IT APPEARS TO PRESENT A SAFETY HAZARD TO RESIDENCE OF THE PROPERTY, THEIR CHILDREN OR THEIR GUEST, THE TREE SHALL NOT BE STAKED AND LANDSCAPE ARCHITECT SHALL BE NOTIFIED.
- G. SPECIMEN TRANSPLANTED TREE PROTECTION IS THE OWNER'S RESPONSIBILITY. H. PROPER DRAINAGE FROM ROOTBALL IS THE RESPONSIBILITY OF THE CONTRACTOR USE ARBORGUARD WEBBING TO SECURE PLANT. SPACE STAKES EQUALLY AT 120° ANGLES
- J. NYLON WEBBING SHOULD BE SECURED IN SUCH A WAY AS TO ALLOW SOME MOVEMENT
- K. PLANT TREE 2" ABOVE FINISHED GRADE IF MIXING SOIL TYPES, OTHERWISE PLANT AT FINISHED GRADE

5. PRUNING AND MAINTENANCE:

- A. PRUNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE DEAD OR INJURED. TWIGS AND BRANCHES AND TO COMPENSATE FOR THE LOSS OF ROOTS AS A RESULT OF TRANSPLANTING OPERATION AND TO MAINTAIN SAFETY IN VEHICLILAR AREAS
- B. PRUNING SHALL BE DONE IN SUCH A MANNER AS TO NOT CHANGE THE NATURAL HARIT OR SHAPE OF THE PLANT. ALL CUTS SHALL BE MADE FLUSH, LEAVING NO STUBS ACCORDING TO A.N.A STANDARDS.
- C. THE LANDSCAPE ARCHITECT SHALL BE THE SOLE PARTY TO APPROVE ALL APPROPRIATE D. MAINTENANCE WORK AS DESCRIBED IN THE SPECIFICATIONS SHALL BE PERFORMED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND UNTIL DATE OF THE FINAL ACCEPTANCE BY OWNER AND LANDSCAPE ARCHITECT.

6. FERTILIZATION, IRRIGATION, AND MAINTENANCE: A. LIME OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT

B. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHOROUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM THE UREAFORM SOURCE. WHEN PLACING BY HYDROSEEDING APPLICATION, FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND SEED AT A MINIMUM OF 220 POUNDS PER ACRE. ALL OVER SPRAY AREAS RIPARIAN RESTORATION AND PRESERVATION SHALL BE PROPERLY CLEANED AND RESTORED AT NO EXPENSE TO THE CONTRACT. D. IF PLACING BY MECHANICAL MEANS, FERTILIZER SHALL BE PLACED AT 25 POUNDS PER 1.000 SQUARE FEET, SEED AT 5 POUNDS PER 1.000 SQUARE FEET, AND STRAW MULCH AT 2 TONS PER ACRE, PLACE FERTILIZER AND SEED, THEN LIGHTLY RAKE AND ROLL WITH

200 POUND ROLLER. MULCH THE AREA AND THEN WATER. STRAW MAY NEED TO BE

- SECURED TO PREVENT IT FROM BLOWING AWAY. E. WATER LAWN AREAS AS NEEDED TO PROMOTE GROWTH, THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR WORK WHEN NECESSARY TO INSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND REEN CUT AT LEAST TWICE F. CONTRACTOR IS FULLY RESPONSIBLE FOR MAINTENANCE, INCLUDING WATERING.
- WEEDING, SETTLING, PRUNING OF THIS WORK UNTIL THE DATE OF SUBSTANTIAL G. IRRIGATION SHALL BE PROVIDED FOR NEW PLANT MATERIAL. IRRIGATION SHALL BE DESIGN BUILD AND AND PROVIDED BY THE CONTRACTOR.

MEADOW SITE PREPARATION AND PLANTING

32. SITE PREPARATION:

A. PRIOR TO PLANTING, SITE SHALL BE INSPECTED FOR PROPER ELEVATION AND SUITABILITY OF SOILS. B. UNCULTIVATED AND CULTIVATED SITES WITH FEW OR NO NATIVES REQUIRE THE USE OF BROAD-SPECTRUM SYSTEMIC HERBICIDE GLYPHOSATE. THIS SHOULD BE APPLIED AS SOON AS THE SITE IS ACCESSIBLE. THE MOST COMMON GRASS-SPECIFIC HERBICIDES USED IN RESTORATION WORK ARE FLUAZIFOP (FUSILADE), SETHOXYDIM (POAST), AND CLETHODIM 2. (ENVOY, SELECT 2EC, AND SECTION).

SUGGESTED APPLICATION RATES ARE 2 QUARTS/ACRE IN COOL WEATHER AND I QUART/ACRE IN WARM WEATHER (1-2% GLYPHOSATE SOLUTION). TIMING OF THE APPI ICATION IS CRUCIAL. IT IS DESIRABLE TO ELIMINATE WEEDS BEFORE THEY FLOWER. D. HARD TO KILL PERENNIAL FORBS CAN BE TREATED WITH A BROADLEAF HERBICIDE SUCH AS TRICLOPYR (GARLON).

HIGHLY ADAPTIVE. FURTHERMORE, THESE SPECIES ARE USED TO GROWING IN DEPLETED

- E. DISC OR DRAG HARROW THE TOP 1-2" OF SOIL ONLY (DO NOT TILL DEEPLY AS THIS WILL BRING ADDITIONAL WEFD SEEDS IN THE SOIL TO THE SURFACE). DO NOT ADD LIME. LIME CAN BURN SEEDLINGS OR IMPACT GERMINATION RATES.
 MOST MEADOW SPECIES ARE ACCUSTOMED TO PH RANGES FROM 4.5 TO 8, AND ARE
- G. AMENDMENTS ARE GENERALLY NOT NECESSARY, BUT MAY BE USED IF YOUNG PLANTS SHOW SIGNS OF STRESS (I.E. YELLOWING). IF FERTILIZER IS TO BE USED, STICK WITH ORGANIC MIXES ONLY AND AT A RATE NO GREATER THAN 5-5-5 OR 10-10-10.

- A. PLANT MATERIAL SHOULD BE LIFTED AS CLOSE TO THE PLANTING DATE AS POSSIBLE FURTHERMORE, PLANT MATERIALS SHALL NOT BE STORED BEYOND THE TIME LIMITS SPECIFIED BY THE SUPPLIER. PLANTS SHALL BE STORED PER THE SUPPLIER'S SPECIFICATIONS AND IN SUCH A MANNER AS TO PROTECT THEIR INTEGRITY AND VIABILITY. PLANTS LOST DURING STORAGE SHALL BE REPLACED WITH FRESH STOCK UNDER THE RESPONSIBILITY OF THE CONTRACTOR.
- OR AFTER PROJECT CONSTRUCTION HAS TAKEN PLACE. FALL PLANTINGS ARE "DORMANT SEEDINGS" IN WHICH THE SEED OVER-WINTERS IN THE SOIL AND GERMINATES THE FOLLOWING SPRING C. <u>FALL</u> (SEPT. TIL SOIL FREEZE UP)- IN GENERAL, WILDFLOWER SEEDS HAVE INCREASED GERMINATION RATES DURING THE SPRING AFTER A FALL PLANTING THAN WHEN PLANTED

B. IT IS RECOMMENDED THAT PLANTING COMMENCE IN THE FALL SEASON CONCURRENT WITH

- IN THE SPRING. FALL PLANTINGS TAKES ADVANTAGE OF COLD, MOIST WINTER CONDITIONS, BREAKING SEED DORMANCIES AND PROMOTING EARLIER GERMINATION AND FASTER SEEDLING ESTABLISHMENT THE FOLLOWING SPRING. <u>SPRING</u> (MARCH-MAY) - IN GENERAL, WARM SEASON GRASSES (GRASSES SUCH AS LITTLE
- BLUESTEM, BIG BLUESTEM, AND INDIANGRASS WHICH DO MOST OF THEIR GROWING DURING THE WARM SUMMER MONTHS) SHOW HIGHER GERMINATION RATES WHEN PLANTED IN LATE SPRING/EARLY SUMMER, COMPARED TO FALL SEFDINGS. SPRING PLANTING IS ALSO GENERALLY RECOMMENDED FOR PRAIRIE WILDELOWER AND GRASS TRANSPLANTS TO AVOID "FROST HEAVING." TRANSPLANTING IN SPRING ALSO ALLOWS
- . WHERE BARE SOIL IS A CONCERN AND WHERE THE SITE WILL REMAIN DISTURBED FOR AN EXTENDED PERIOD OF TIME, A SEASONAL COVER CROP IS RECOMMENDED. F. OPTIMAL TIME TO SOW NATIVE GRASS SPECIES IS IN THE FALL (SEPT. - NOV.). THIS WILL ALLOW STRATIFICATION (MOISTURE AND COLD SO SEED WILL IMBIBE WATER AND

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3. SITE MAINTENANCE: A REST TO NOT DISTURB SEEDLINGS DURING FIRST GROWING SEASON, IF MOWING IS DESIRED TO MAINTAIN "TIDY" APPEARANCE, MOW AT HEIGHT NO LOWER THAN 6-8." NOTE: HEAVY MACHINERY MAY DISTURB OR DAMAGE YOUNG SEEDLINGS. NATIVE MEADOW SEEDLINGS MAY ONLY GROW 1-2" IN THE FIRST GROWING SEASON AS MOST OF THE ENERGY IS BEING PUT INTO THE ROOT SYSTEM.

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OWNER/DEVELOPER COMPANY: City of Clarkston

ADDRESS: 1055 Rowland Street Clarkston, Georgia 30021 # 1855 - EXP. 08/01/2018

CONTACT: Keith Barker, City Manager **PHONE:** (404) 296-6489

FAX: N/A **EMAIL:** kbarker@cityofclarkston.com

CONTRACTOR

COMPANY: TO BE DETERMINED

CONTACT: PHONE:

FAX:

SURVEYOR

COMPANY: Georgia Civil, Inc ADDRESS: P.O. Box 186

Madison, Georgia 30650 **CONTACT:** Brian Slate, PLS **PHONE:** (706) 342-1104 **FAX:** (706) 342-1105

SITE DESIGNER

COMPANY: ENVIRONS DESIGN STUDIO ADDRESS: 1104 MONTICELLO STREET COVINGTON, GA 30014 **PHONE:** 706-342-1104

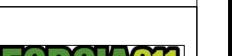
EMAIL: brian@georgiacivil.com

William K. Campbell

LEVEL II CERTIFIED **DESIGN PROFESSIONAL**

24-HOUR CONTACT

Larry Kaiser, PE (404) 909-5619





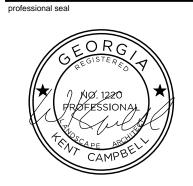
ONTACT WILL CHANGE ONCE CONTRACT IS AWARD

Utilities/Services shown are for Contractors convenience. Items are shown schematically an neither the site design professional nor the owne assumes any responsibility for variances in the assumes any responsibility for variances in their actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to secure and use the services of a private utility locator firm during the entire course of work and shall pay for said services. Contractor shall locate utilities prior to any disturbance (including field verifying location and depth of utilities that are to be saved and professional of any utility conflicts prior to professional of any utility conflicts prior t installation of new utilities, grading, etc. Th Contractor, at their expense, shall be responsibl to repair, replace and/or relocate, as necessary

any utilities damaged, whether shown or no Abandonment, relocation, etc. of utilities shall b coordinated with the respective utility company.

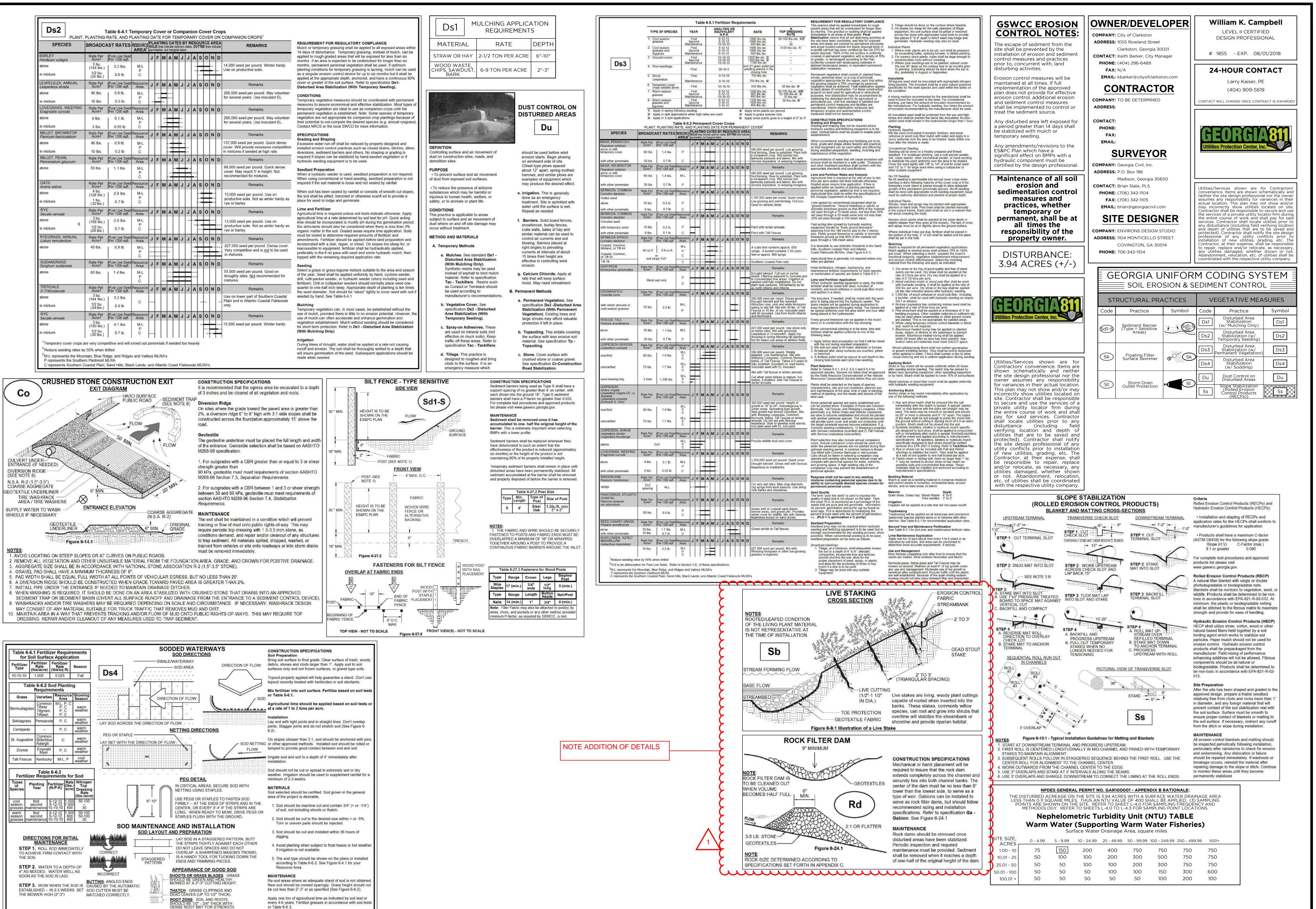
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LANDSCAPE NOTES



or Table 6-6.3.

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