





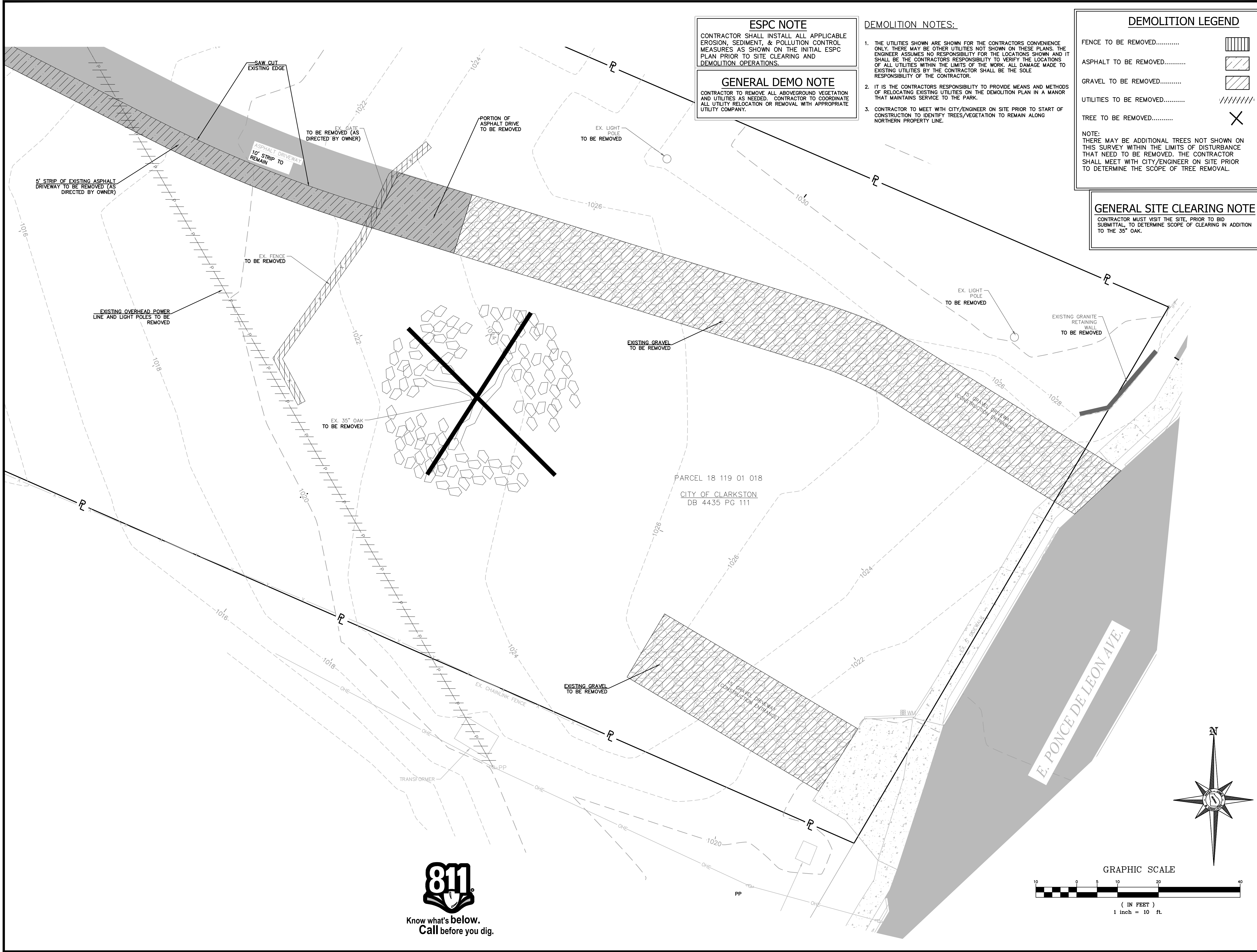








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**ESPC NOTE**  
 CONTRACTOR SHALL INSTALL ALL APPLICABLE EROSION, SEDIMENT, & POLLUTION CONTROL MEASURES AS SHOWN ON THE INITIAL ESPC PLAN PRIOR TO SITE CLEARING AND DEMOLITION OPERATIONS.

**GENERAL DEMO NOTE**  
 CONTRACTOR TO REMOVE ALL ABOVEGROUND VEGETATION AND UTILITIES AS NEEDED. CONTRACTOR TO COORDINATE ALL UTILITY RELOCATION OR REMOVAL WITH APPROPRIATE UTILITY COMPANY.

- DEMOLITION NOTES:**
1. THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTORS CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
  2. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE MEANS AND METHODS OF RELOCATING EXISTING UTILITIES ON THE DEMOLITION PLAN IN A MANNER THAT MAINTAINS SERVICE TO THE PARK.
  3. CONTRACTOR TO MEET WITH CITY/ENGINEER ON SITE PRIOR TO START OF CONSTRUCTION TO IDENTIFY TREES/VEGETATION TO REMAIN ALONG NORTHERN PROPERTY LINE.

**DEMOLITION LEGEND**

FENCE TO BE REMOVED..... [Hatched pattern]

ASPHALT TO BE REMOVED..... [Diagonal hatched pattern]

GRAVEL TO BE REMOVED..... [Cross-hatched pattern]

UTILITIES TO BE REMOVED..... [Dashed line]

TREE TO BE REMOVED..... [Large X]

**NOTE:**  
 THERE MAY BE ADDITIONAL TREES NOT SHOWN ON THIS SURVEY WITHIN THE LIMITS OF DISTURBANCE THAT NEED TO BE REMOVED. THE CONTRACTOR SHALL MEET WITH CITY/ENGINEER ON SITE PRIOR TO DETERMINE THE SCOPE OF TREE REMOVAL.

**GENERAL SITE CLEARING NOTE**  
 CONTRACTOR MUST VISIT THE SITE, PRIOR TO BID SUBMITTAL, TO DETERMINE SCOPE OF CLEARING IN ADDITION TO THE 35' OAK.

**Hayes James**  
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 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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No.	Description	By	App.	Date
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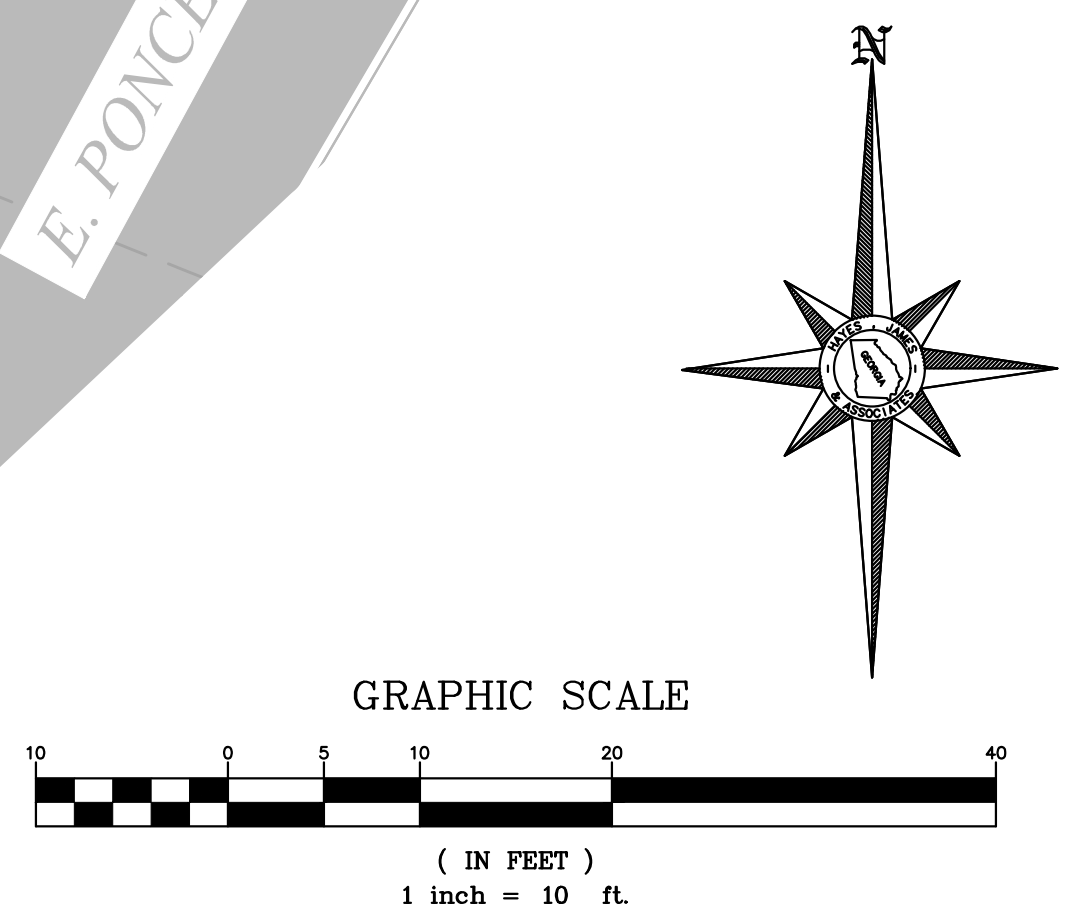
**Project Title**  
 Friendship Forest Wildlife Sanctuary

**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  
**Checked By:** SMB  
**Initial Issue Date:** 09-15-17

**Sheet Title**  
 PARKING LOT - DEMOLITION PLAN

**Sheet Number**  
 C-04









**BELSON OUTDOORS** Your Outdoor Superstore 1-800-323-5664  
M-F 8:00am - 4:30pm CT

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### Recycled Plastic Waste Container

This heavyweight open top waste container can withstand hard use and is perfect for recreation areas, businesses, and public use. Made with 100% recycled plastic. The molding never requires painting and is virtually maintenance-free.

Color Options: cedar, brown, gray, green

Please Note: Plastic liner and dome top lid are sold separately.

Gray Dome Top Lid  
Gray Liner | Gray Housing

Item Specific Details Available on Linked Model Numbers Below

Model #	Description	Color	Weight	Price
P-32	32 Gallon Housing	Choose Color	(117 lbs)	\$255.00
P-32L	Plastic Liner with Standard Lid	Gray	(7 lbs)	\$52.00
P-32D	Dome Top Lid for the Plastic Liner	Gray	(7 lbs)	\$94.00
P-32M	Permanent Mount Kit	Galvanized	(3 lbs)	\$46.00

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

**BELSON OUTDOORS** A PLAYCORE Company

111 North River Road  
North Aurora, IL 60542  
Phone: (800) 323-5664  
Fax: (630) 897-0573  
sales@belson.com

### Model # P-32 Dimension Sheet

#### Recycled Plastic Waste Container

www.belson.com

TRASH RECEPTACLE DIMENSIONS  
N.T.S.

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### Model # CRT5H Dimension Sheet

#### Concrete Picnic Tables

www.belson.com

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

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111 North River Road  
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### Model # H36-5-G-SF Dimension Sheet

#### HEAVY-DUTY CHALLENGER | 3 LOOPS 5 BIKES

www.belson.com

METAL LOOP BIKE RACK  
COLOR/FINISH - SMOOTH DOVE GRAY  
N.T.S.

**KIOSK - PLAN**  
N.T.S.

**KIOSK - ELEV.**  
N.T.S.

**KIOSK - SECTION**  
N.T.S.

**SECTION #4**  
N.T.S.

**SECTION #5**  
N.T.S.

**SECTION #6**  
N.T.S.

NOTE: ALL LUMBER IS ROUGH CUT AND PRESSURE TREATED FINE.

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Project Title  
**Friendship Forest Wildlife Sanctuary**

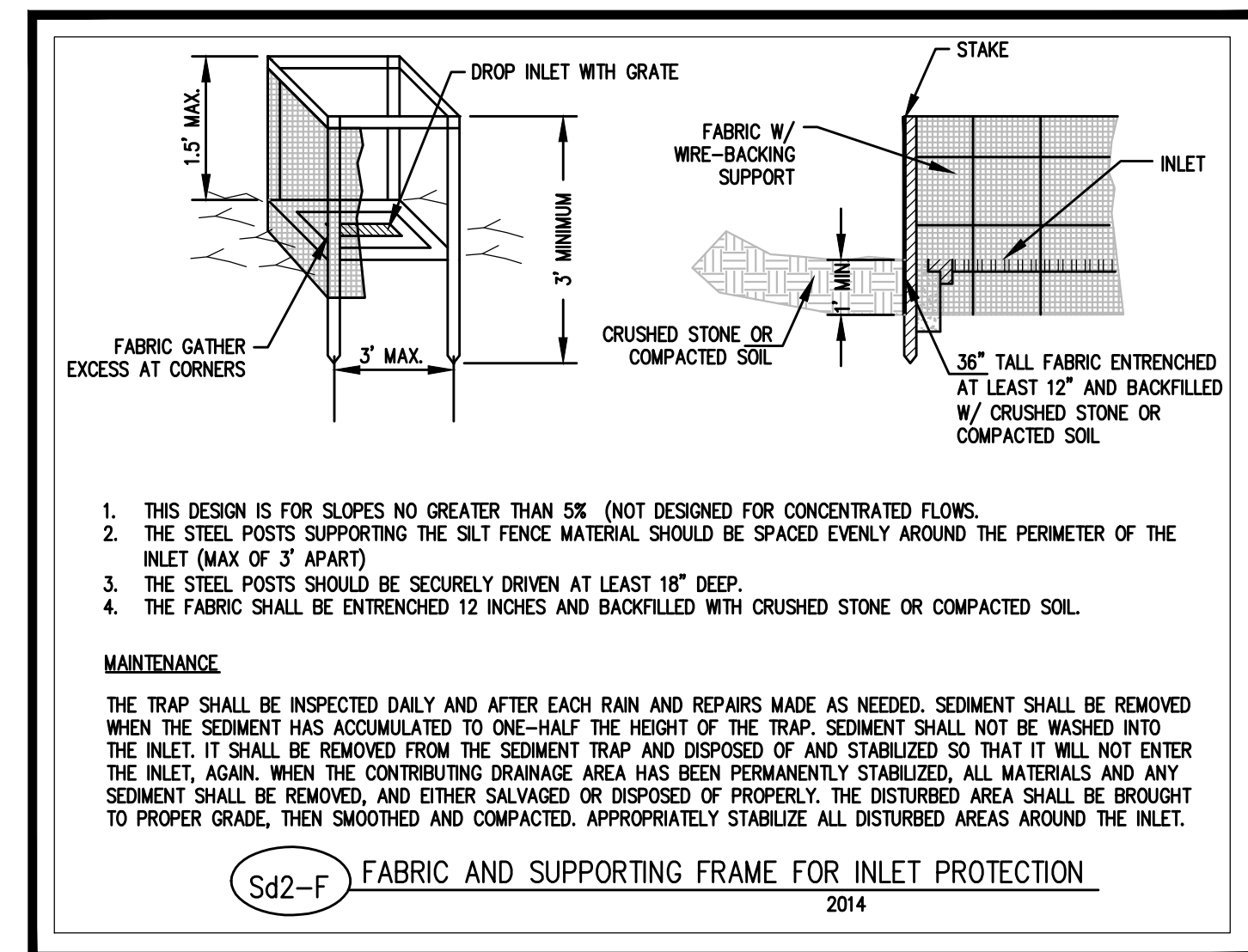
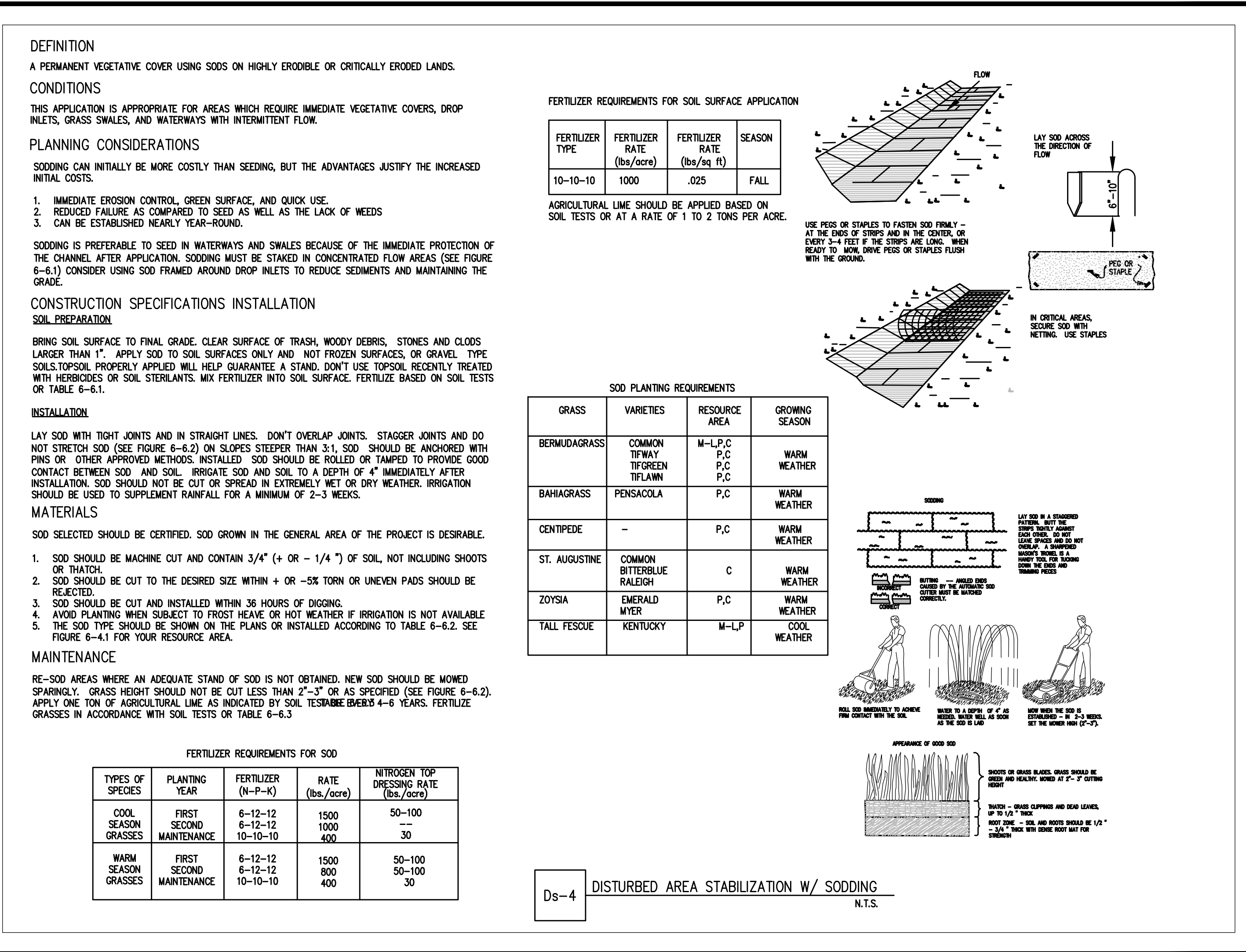
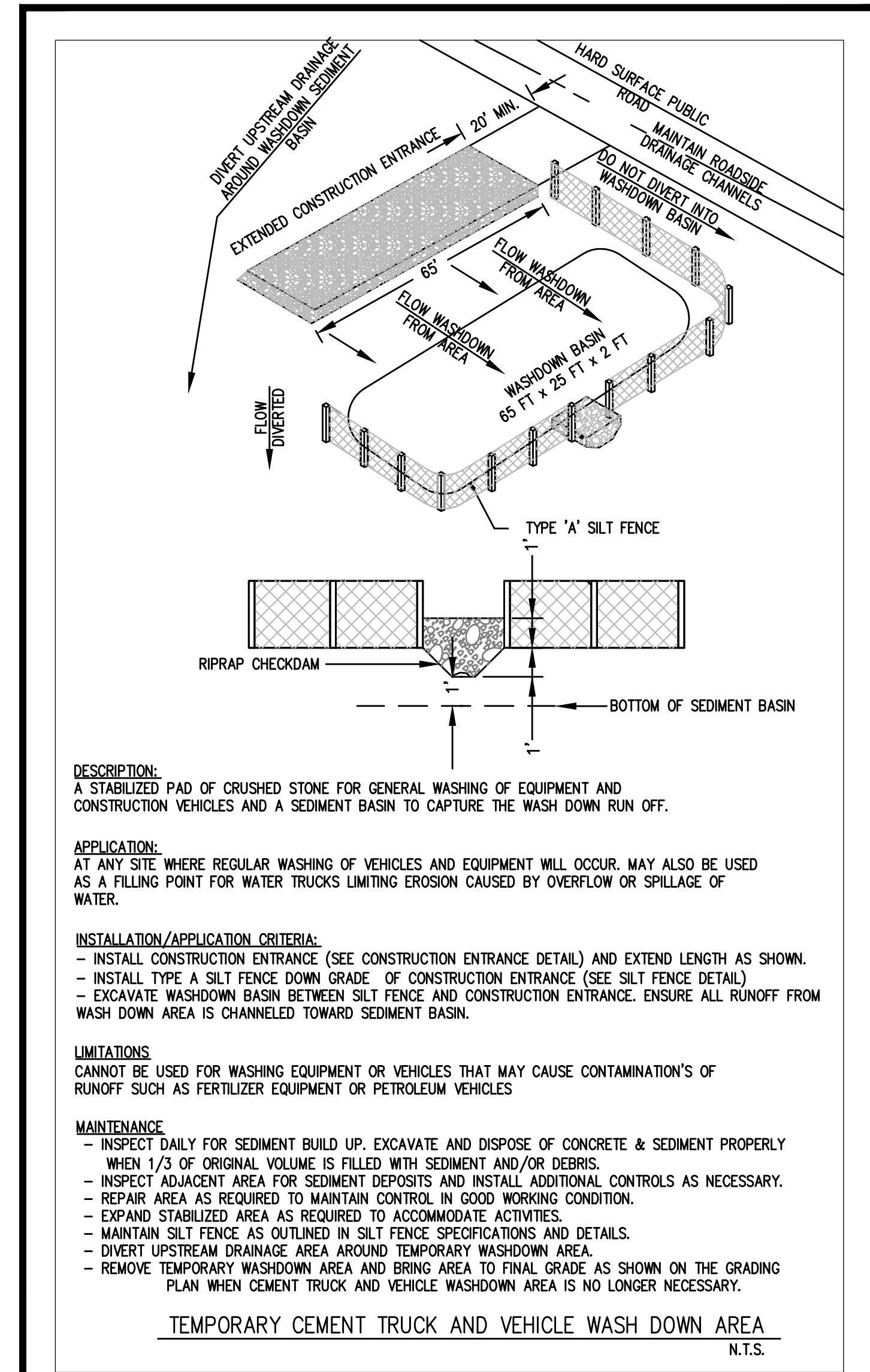
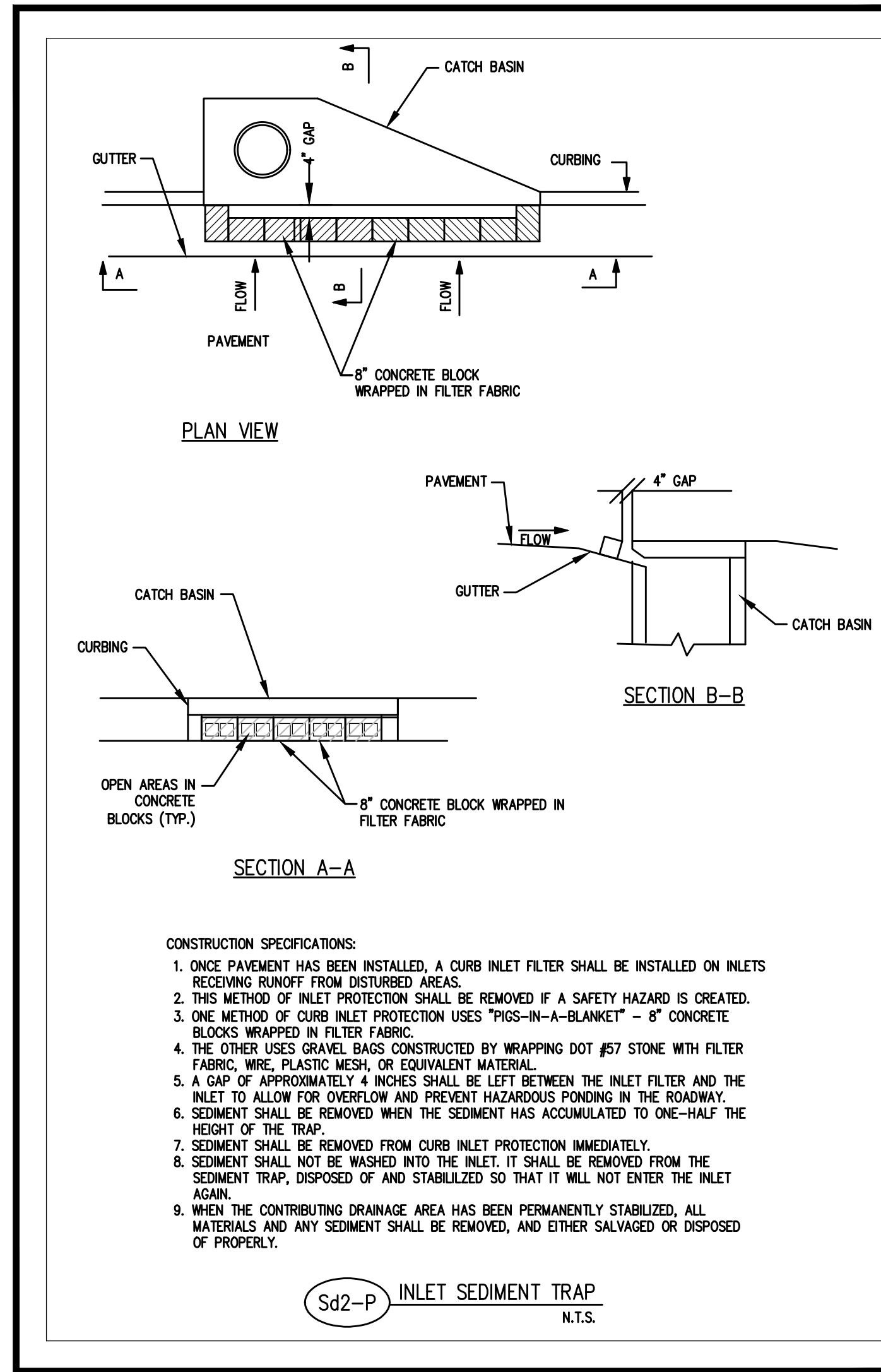
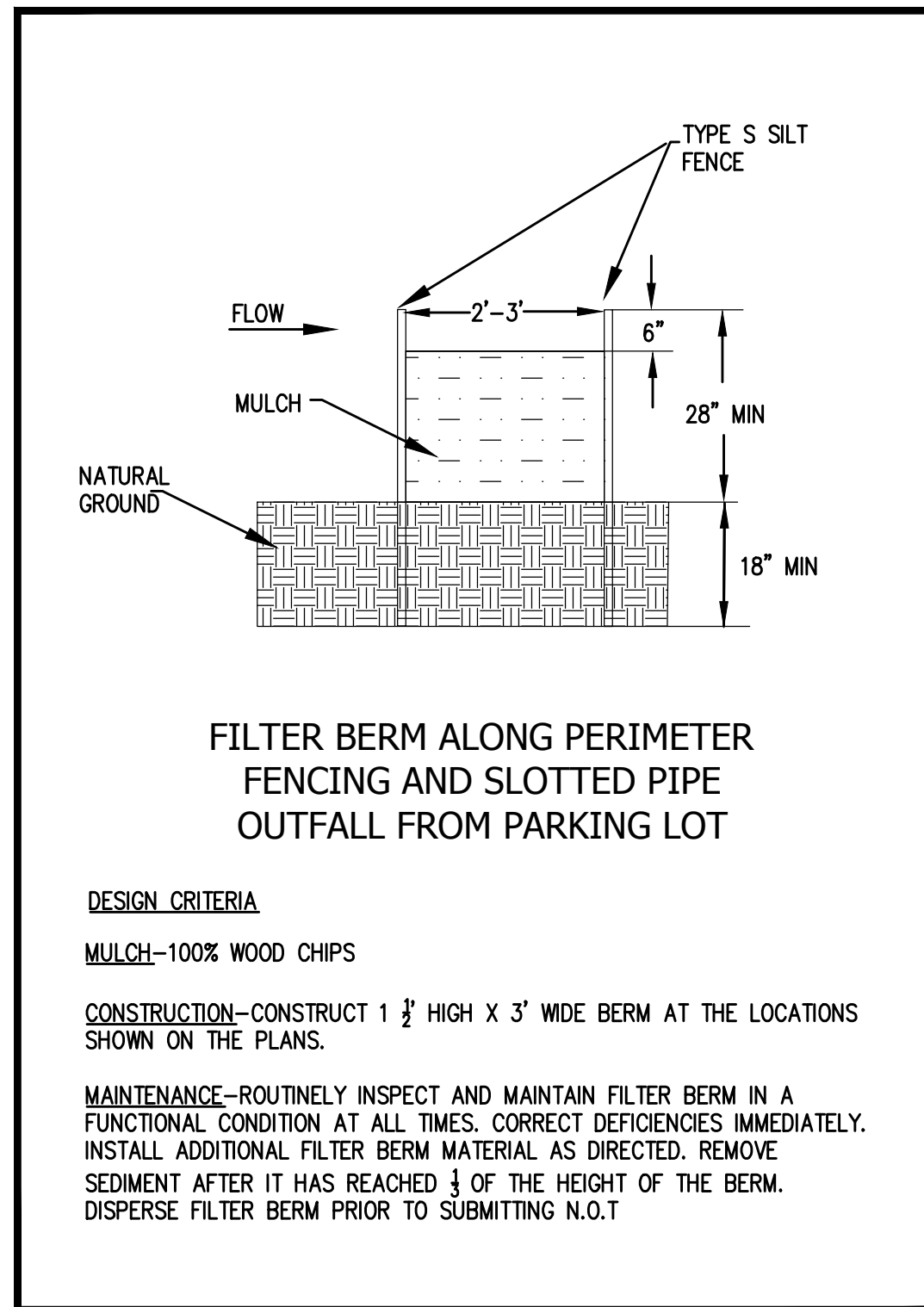
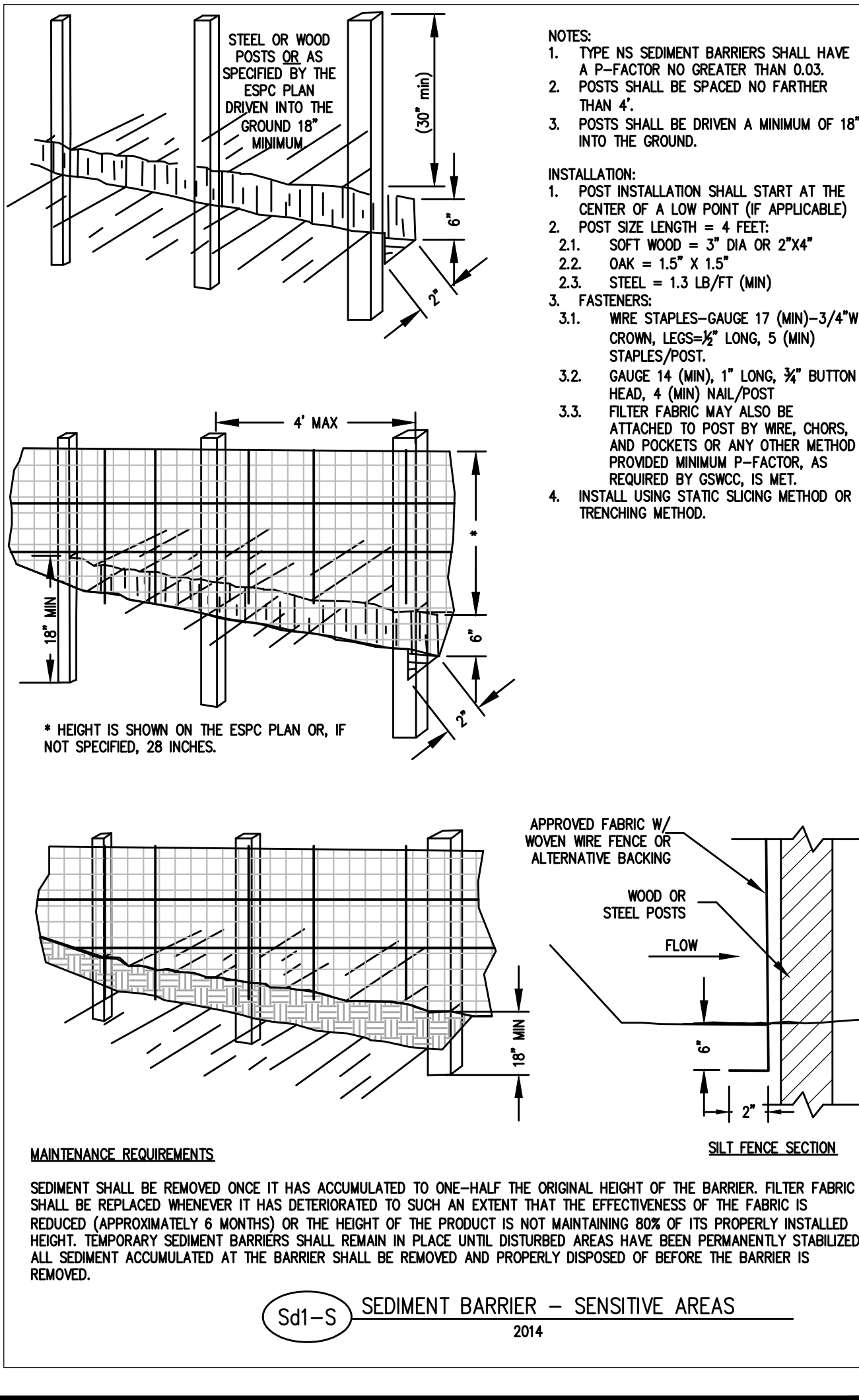
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**SITE FURNISHINGS  
DETAILS**

Sheet Number  
**C-25**

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**Sheet Title**

**EROSION CONTROL DETAILS**

**Sheet Number**

**C-22**

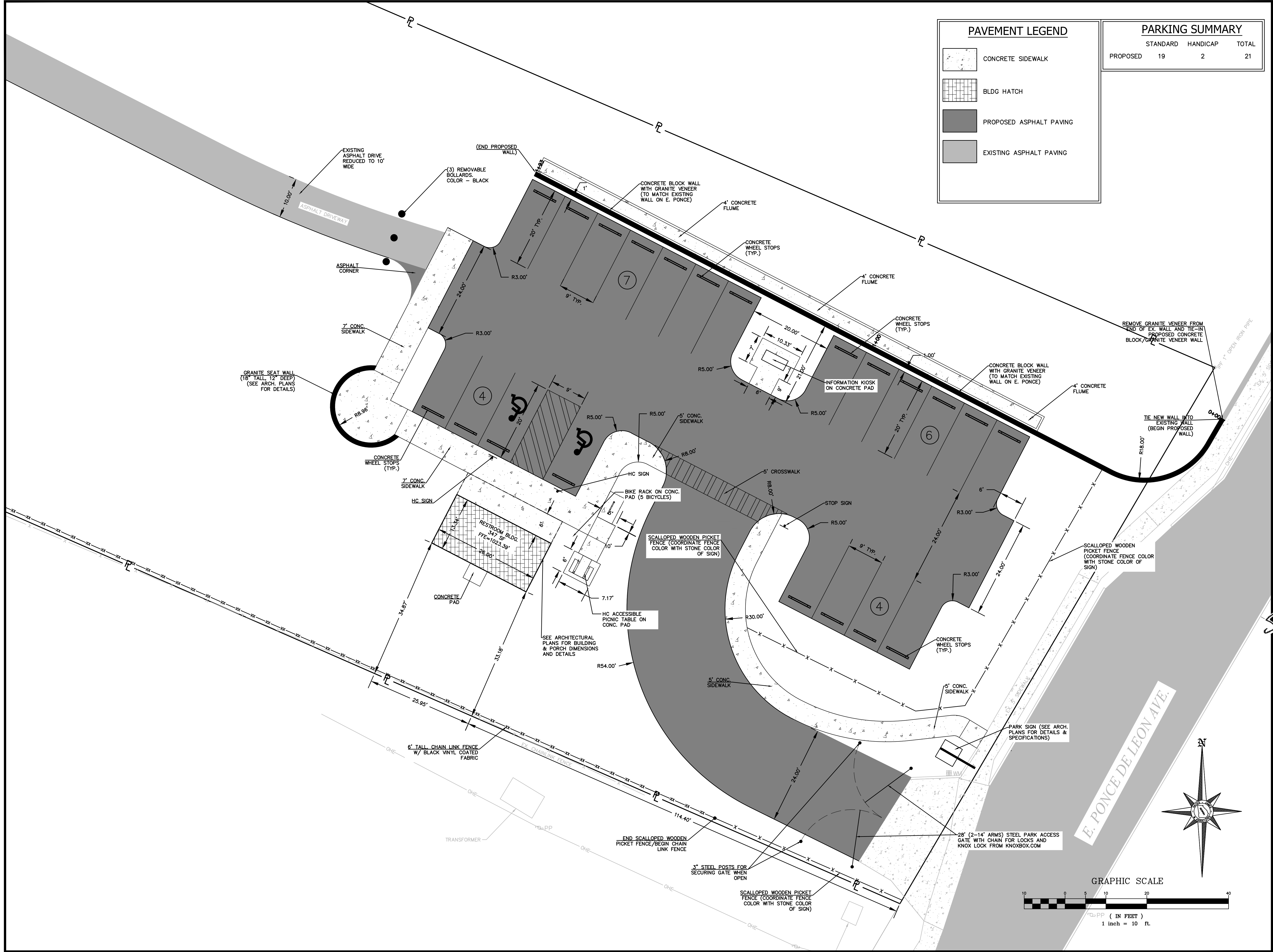
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**PAVEMENT LEGEND**

	CONCRETE SIDEWALK
	BLDG HATCH
	PROPOSED ASPHALT PAVING
	EXISTING ASPHALT PAVING

**PARKING SUMMARY**

	STANDARD	HANDICAP	TOTAL
PROPOSED	19	2	21

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**Sheet Title**  
 PARKING LOT - SITE PLAN

**Sheet Number**  
 C-07





Hayes James

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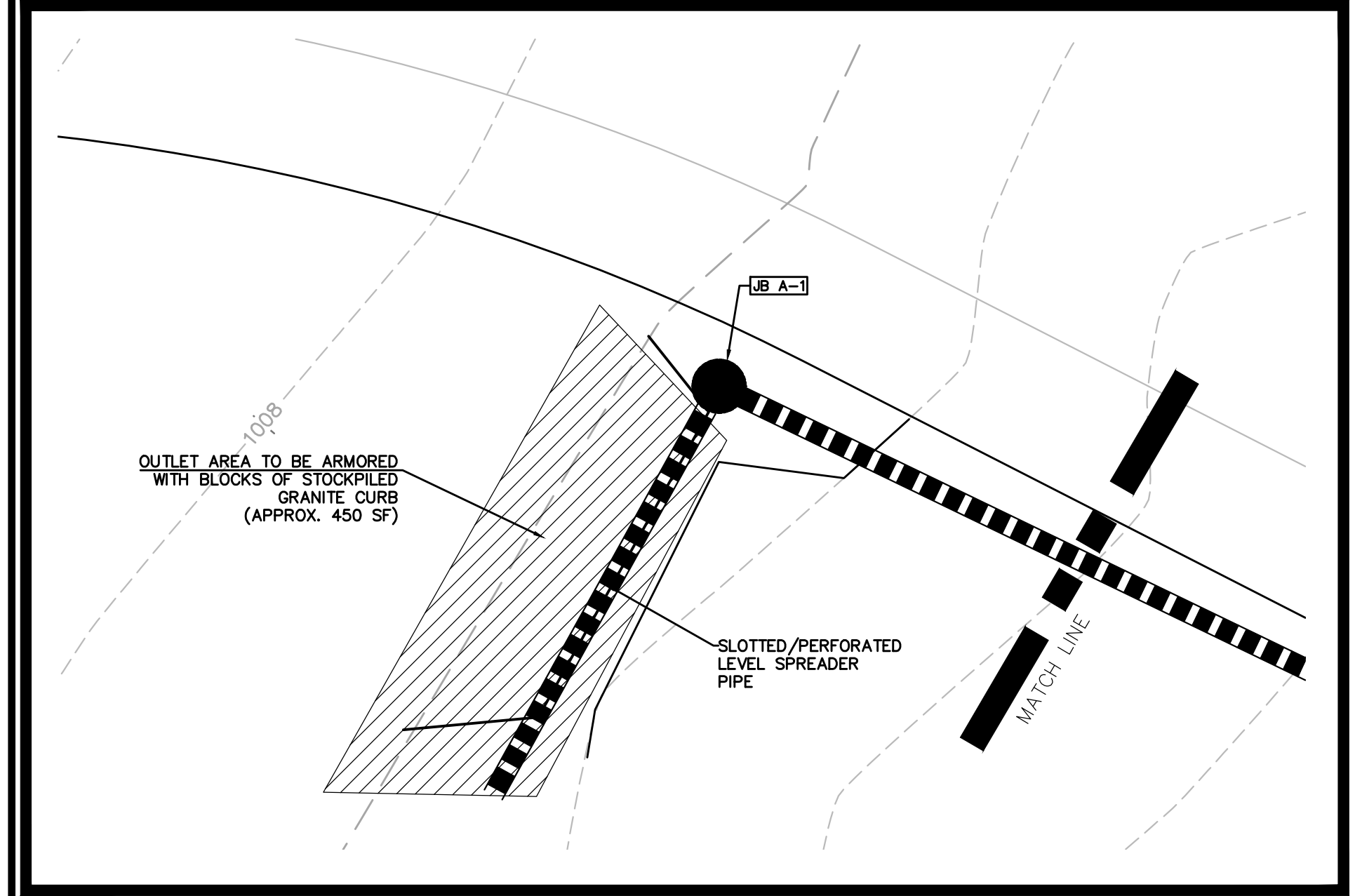
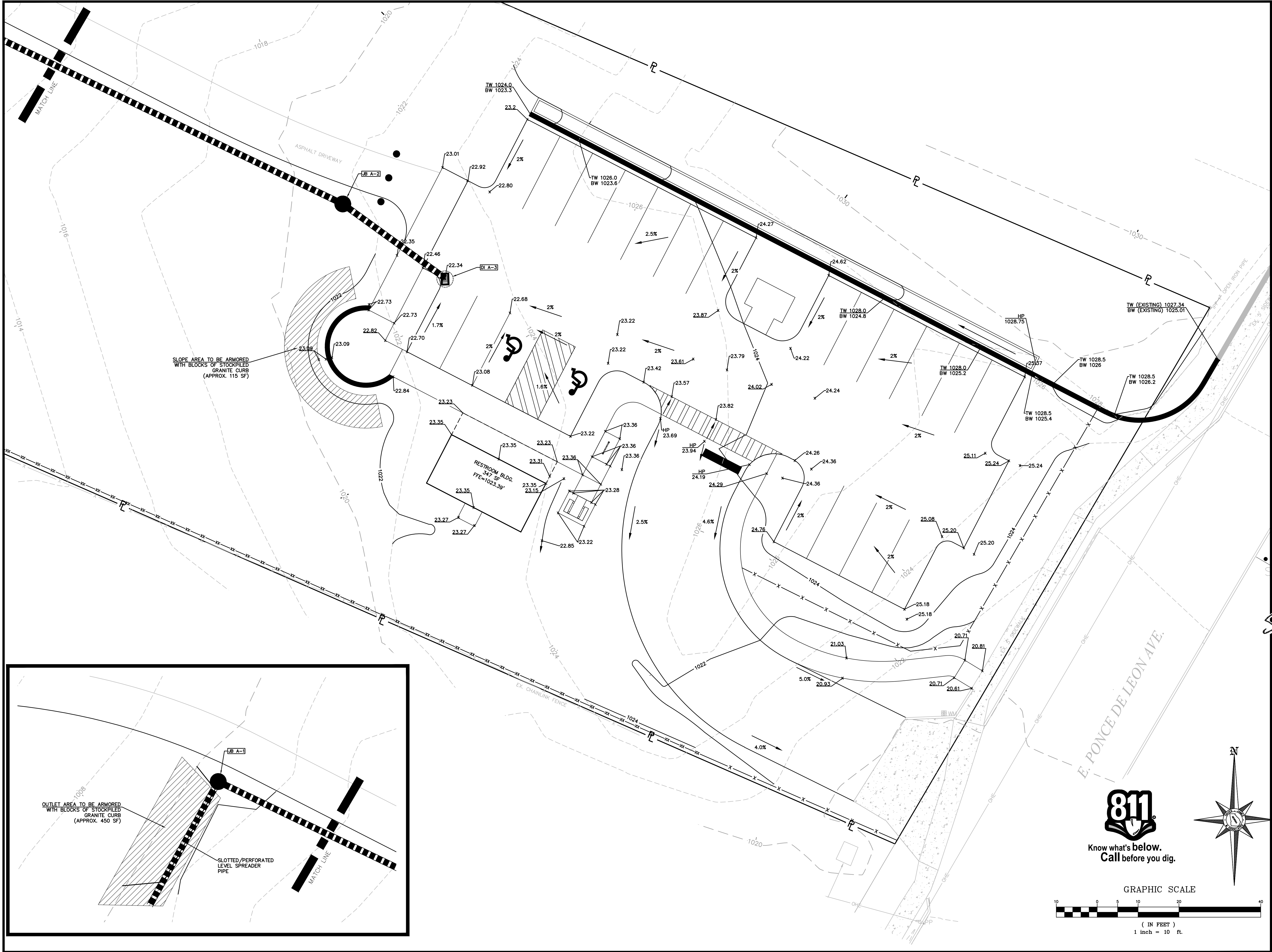
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Drawn By: KEH  
Checked By: SMB  
Initial Issue Date: 09-15-17

Sheet Title  
**PARKING LOT - GRADING PLAN**

Sheet Number  
**C-09**



GRAPHIC SCALE  
1 inch = 10 ft.

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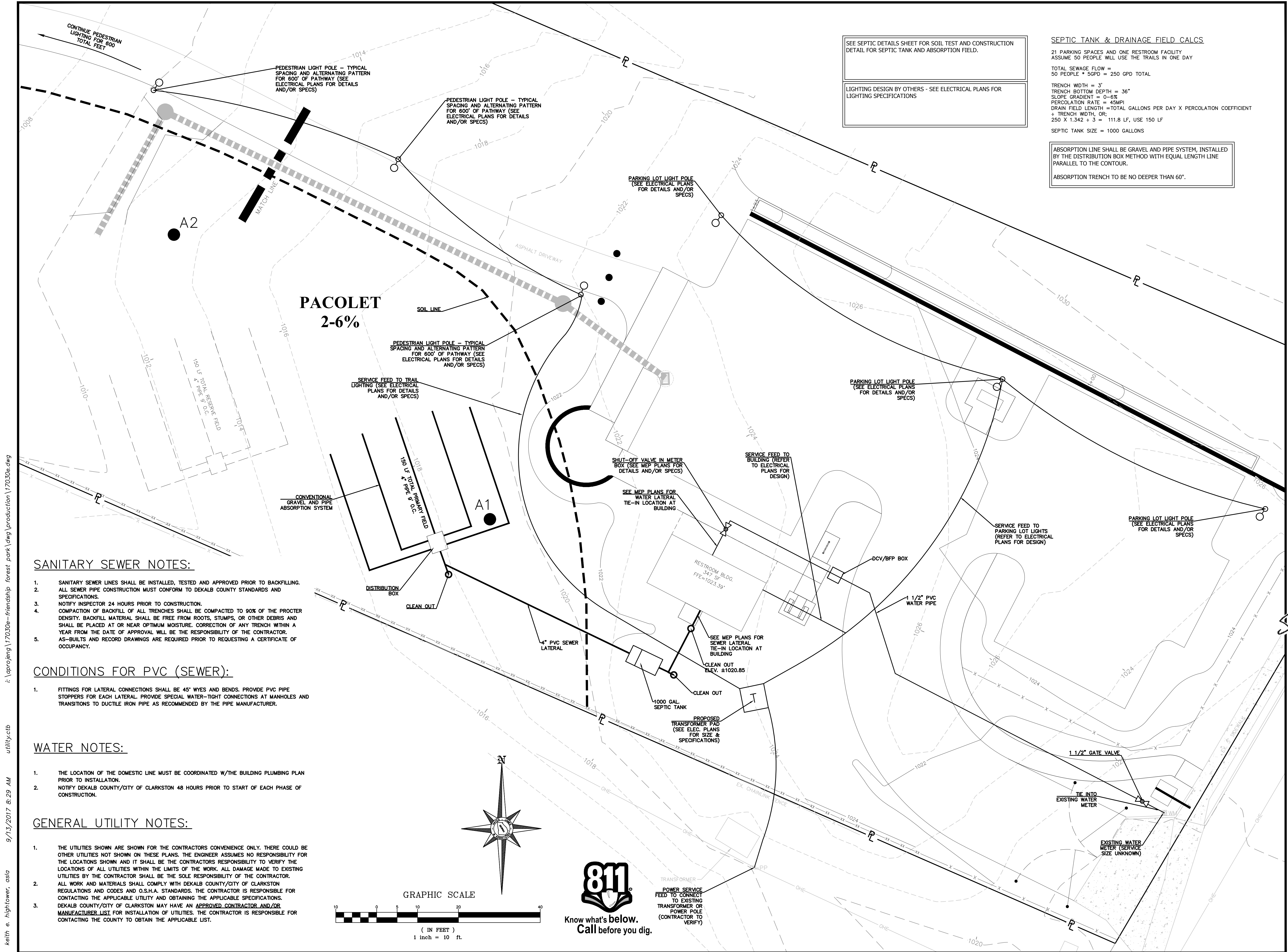
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Sheet Title  
**PARKING LOT - UTILITY PLAN**

Sheet Number  
**C-11**



SEE SEPTIC DETAILS SHEET FOR SOIL TEST AND CONSTRUCTION DETAIL FOR SEPTIC TANK AND ABSORPTION FIELD.

LIGHTING DESIGN BY OTHERS - SEE ELECTRICAL PLANS FOR LIGHTING SPECIFICATIONS

**SEPTIC TANK & DRAINAGE FIELD CALCS**

21 PARKING SPACES AND ONE RESTROOM FACILITY  
ASSUME 50 PEOPLE WILL USE THE TRAILS IN ONE DAY

TOTAL SEWAGE FLOW =  
50 PEOPLE \* 5GPD = 250 GPD TOTAL

TRENCH WIDTH = 3'  
TRENCH BOTTOM DEPTH = 36"  
SLOPE GRADIENT = 0-6%  
PERCOLATION RATE = 45MPI  
DRAIN FIELD LENGTH = TOTAL GALLONS PER DAY X PERCOLATION COEFFICIENT  
+ TRENCH WIDTH, OR;  
250 X 1.342 + 3 = 111.8 LF, USE 150 LF

SEPTIC TANK SIZE = 1000 GALLONS

ABSORPTION LINE SHALL BE GRAVEL AND PIPE SYSTEM, INSTALLED BY THE DISTRIBUTION BOX METHOD WITH EQUAL LENGTH LINE PARALLEL TO THE CONTOUR.

ABSORPTION TRENCH TO BE NO DEEPER THAN 60".

**SANITARY SEWER NOTES:**

- SANITARY SEWER LINES SHALL BE INSTALLED, TESTED AND APPROVED PRIOR TO BACKFILLING.
- ALL SEWER PIPE CONSTRUCTION MUST CONFORM TO DEKALB COUNTY STANDARDS AND SPECIFICATIONS.
- NOTIFY INSPECTOR 24 HOURS PRIOR TO CONSTRUCTION.
- COMPACTION OF BACKFILL OF ALL TRENCHES SHALL BE COMPACTED TO 90% OF THE PROCTER DENSITY. BACKFILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, OR OTHER DEBRIS AND SHALL BE PLACED AT OR NEAR OPTIMUM MOISTURE. CORRECTION OF ANY TRENCH WITHIN A YEAR FROM THE DATE OF APPROVAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- AS-BUILTS AND RECORD DRAWINGS ARE REQUIRED PRIOR TO REQUESTING A CERTIFICATE OF OCCUPANCY.

**CONDITIONS FOR PVC (SEWER):**

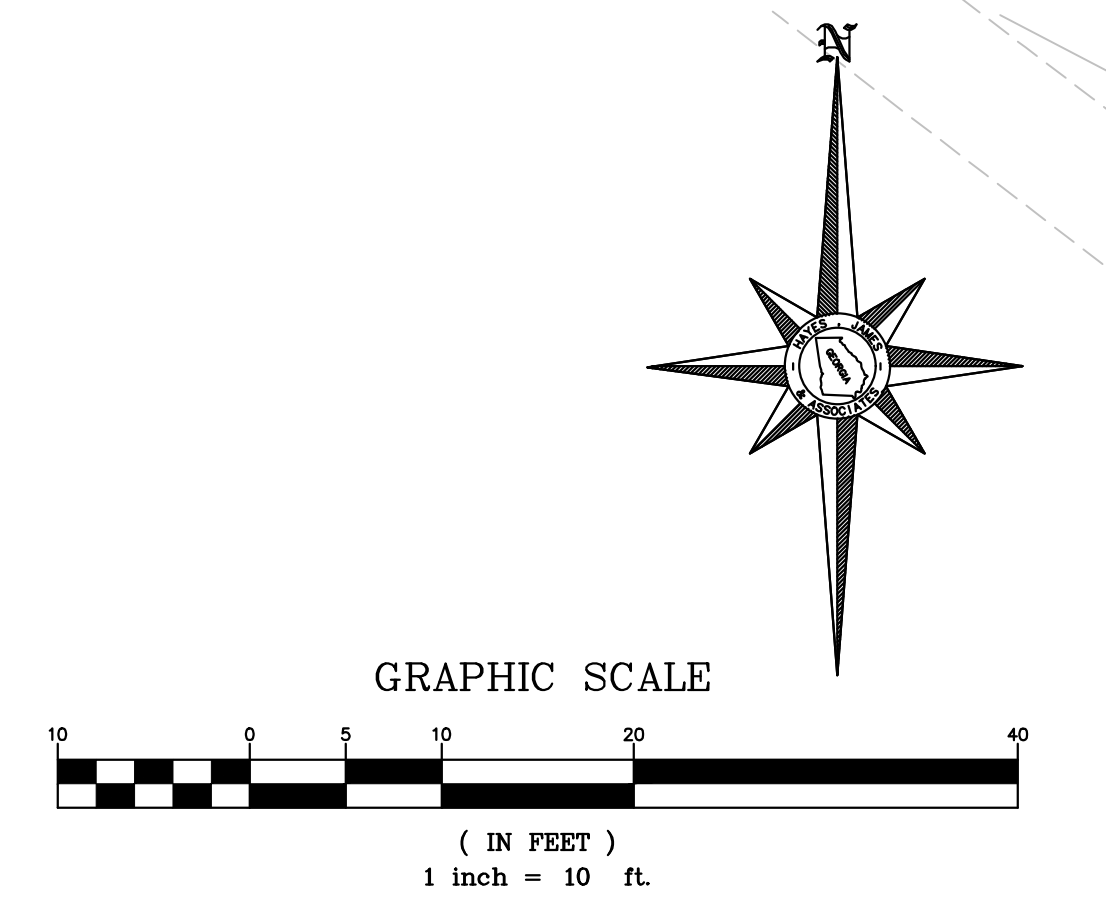
- FITTINGS FOR LATERAL CONNECTIONS SHALL BE 45° WYES AND BENDS. PROVIDE PVC PIPE STOPPERS FOR EACH LATERAL. PROVIDE SPECIAL WATER-TIGHT CONNECTIONS AT MANHOLES AND TRANSITIONS TO DUCTILE IRON PIPE AS RECOMMENDED BY THE PIPE MANUFACTURER.

**WATER NOTES:**

- THE LOCATION OF THE DOMESTIC LINE MUST BE COORDINATED W/THE BUILDING PLUMBING PLAN PRIOR TO INSTALLATION.
- NOTIFY DEKALB COUNTY/CITY OF CLARKSTON 48 HOURS PRIOR TO START OF EACH PHASE OF CONSTRUCTION.

**GENERAL UTILITY NOTES:**

- THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTORS CONVENIENCE ONLY. THERE COULD BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- ALL WORK AND MATERIALS SHALL COMPLY WITH DEKALB COUNTY/CITY OF CLARKSTON REGULATIONS AND CODES AND O.S.H.A. STANDARDS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPLICABLE UTILITY AND OBTAINING THE APPLICABLE SPECIFICATIONS.
- DEKALB COUNTY/CITY OF CLARKSTON MAY HAVE AN APPROVED CONTRACTOR AND/OR MANUFACTURER LIST FOR INSTALLATION OF UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE COUNTY TO OBTAIN THE APPLICABLE LIST.

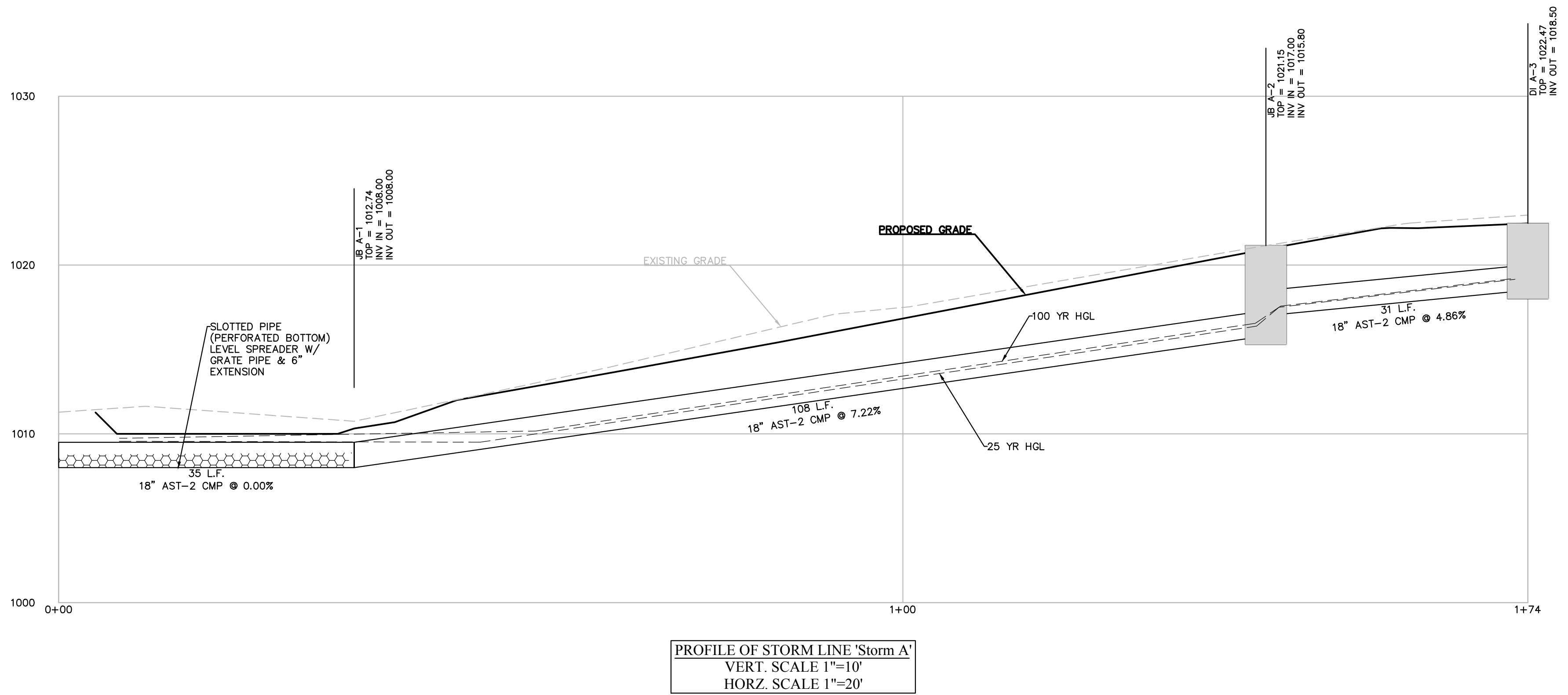


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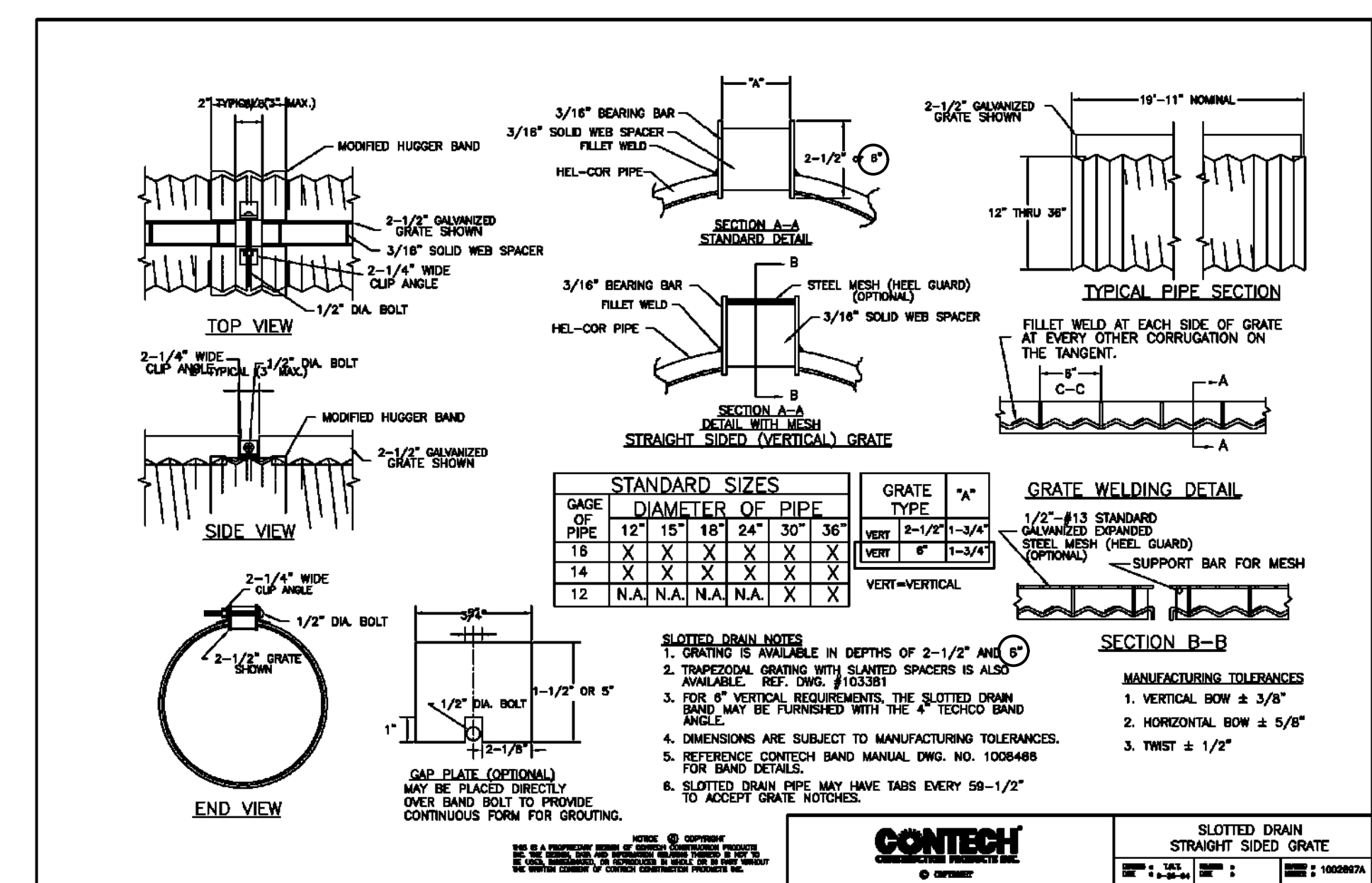
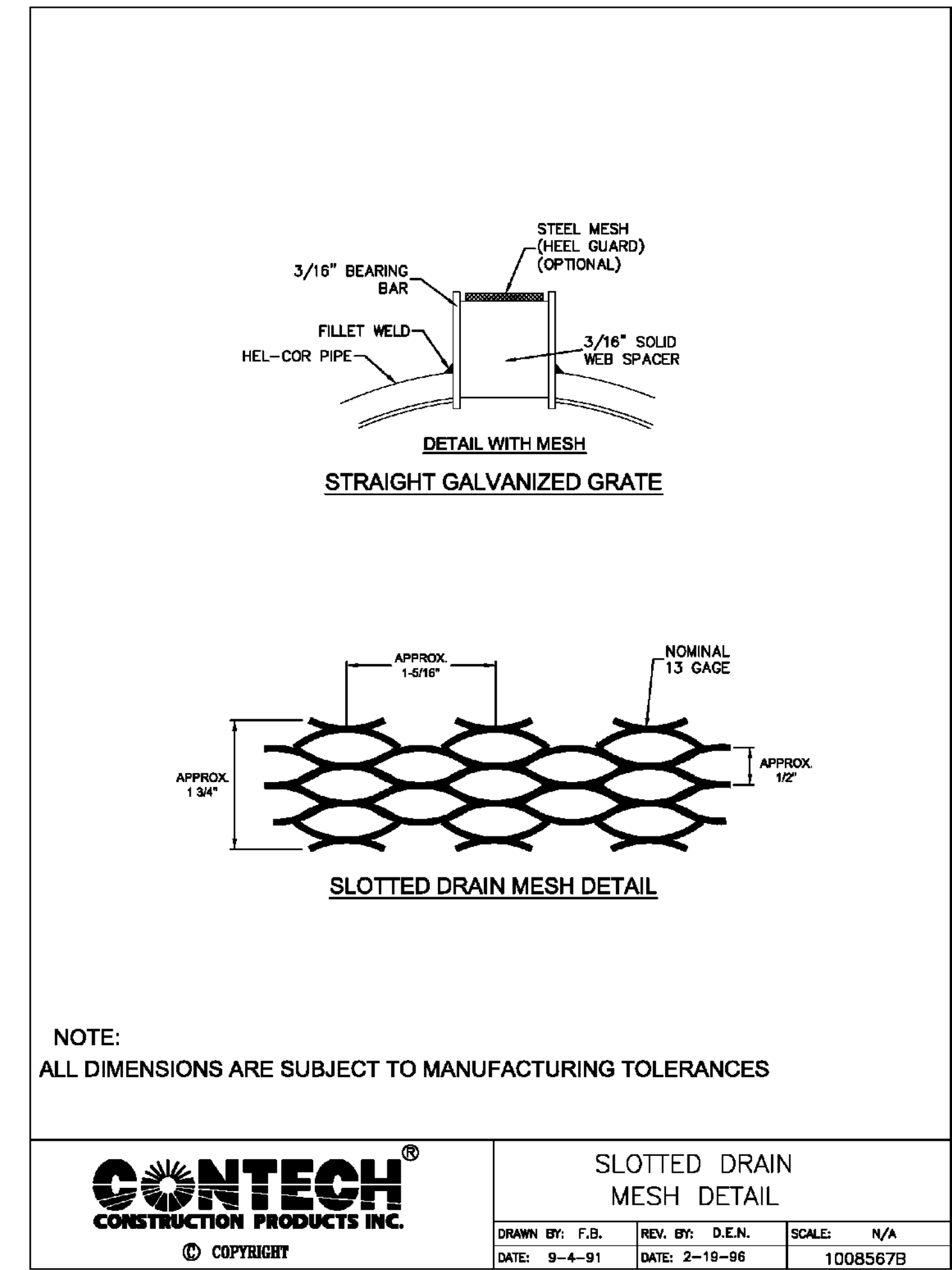


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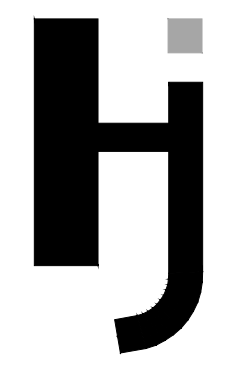


LineNo.	InletID	C	Inlet Area	Total Area	IncrQ	Q25	Slope	Size	V25	Length	iSys	TYPE
		(C)	(ac)	(ac)	(cfs)	(cfs)	(%)	(in)	(ft/s)	(ft)	(in/hr)	
1	A-1	0	0	0.3	0	1.96	0	18	1.02	35	8.27	CMP
2	A-2	0	0	0.3	0	1.96	7.22	18	2.3	108.006	8.27	CMP
3	A-3	0.79	0.3	0.3	1.96	1.96	4.86	18	4.35	30.851	8.27	CMP

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



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



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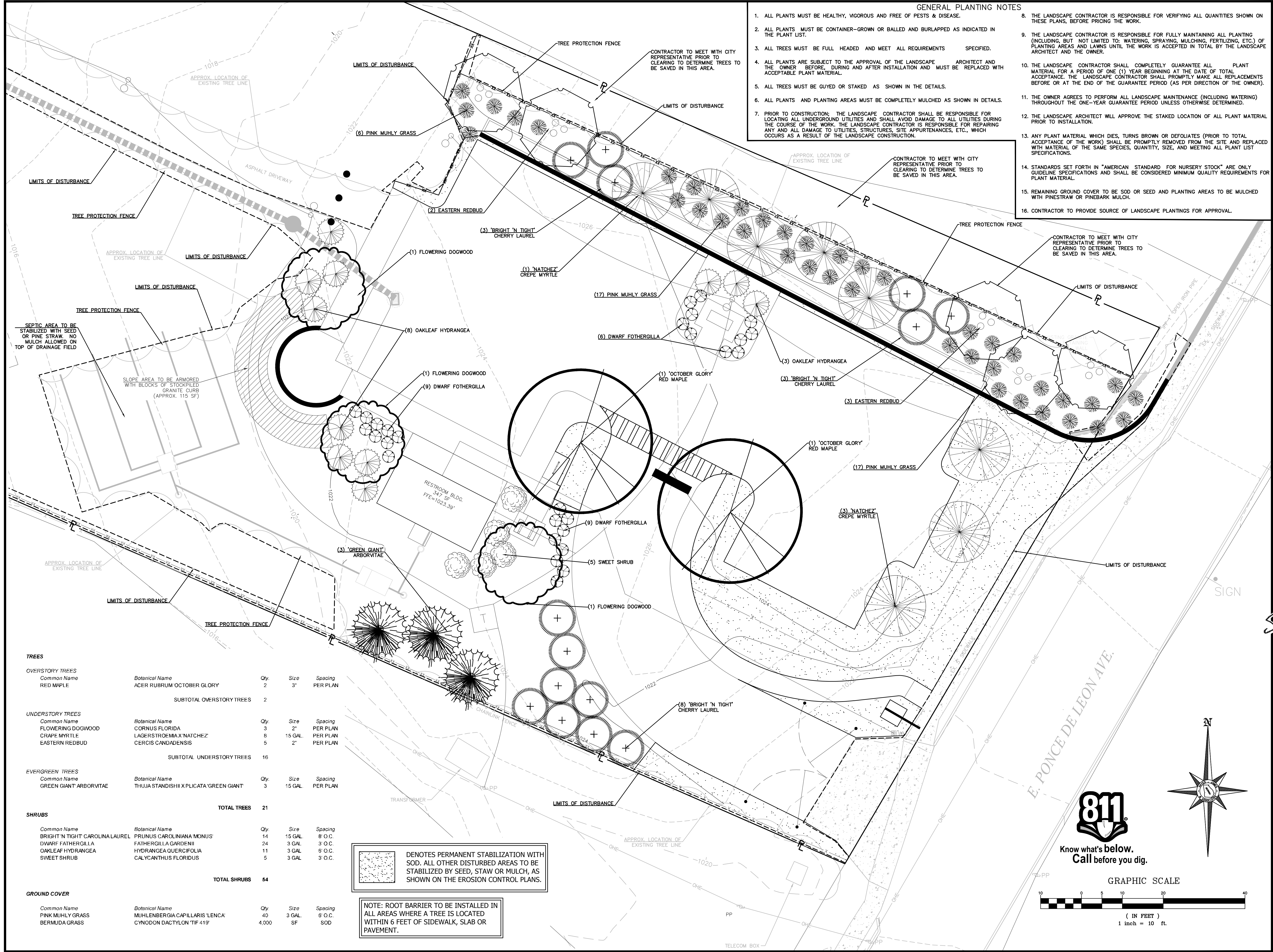
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Sheet Title

**PIPE PROFILES**

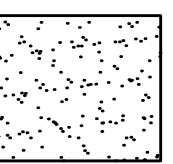
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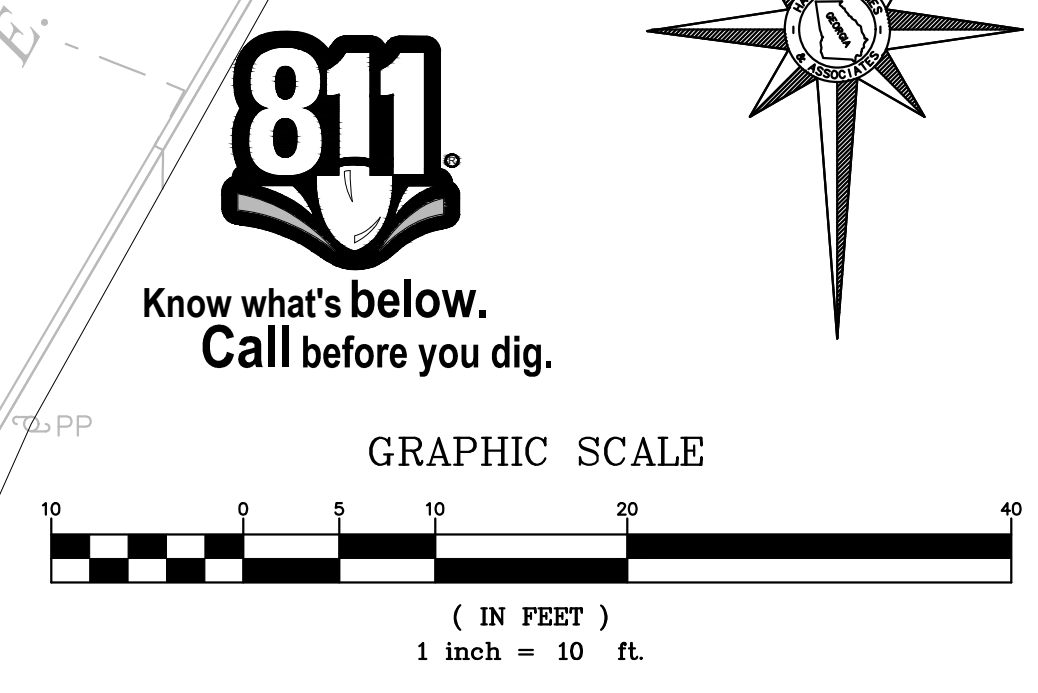


- ### GENERAL PLANTING NOTES
1. ALL PLANTS MUST BE HEALTHY, VIGOROUS AND FREE OF PESTS & DISEASE.
  2. ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
  3. ALL TREES MUST BE FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
  4. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND THE OWNER BEFORE, DURING AND AFTER INSTALLATION AND MUST BE REPLACED WITH ACCEPTABLE PLANT MATERIAL.
  5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
  6. ALL PLANTS AND PLANTING AREAS MUST BE COMPLETELY MULCHED AS SHOWN IN DETAILS.
  7. PRIOR TO CONSTRUCTION: THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC., WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
  8. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS, BEFORE PRICING THE WORK.
  9. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) OF PLANTING AREAS AND LAWNS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE LANDSCAPE ARCHITECT AND THE OWNER.
  10. THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF TOTAL ACCEPTANCE. THE LANDSCAPE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD (AS PER DIRECTION OF THE OWNER).
  11. THE OWNER AGREES TO PERFORM ALL LANDSCAPE MAINTENANCE (INCLUDING WATERING) THROUGHOUT THE ONE-YEAR GUARANTEE PERIOD UNLESS OTHERWISE DETERMINED.
  12. THE LANDSCAPE ARCHITECT WILL APPROVE THE STAKED LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.
  13. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE, AND MEETING ALL PLANT LIST SPECIFICATIONS.
  14. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" ARE ONLY GUIDELINE SPECIFICATIONS AND SHALL BE CONSIDERED MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
  15. REMAINING GROUND COVER TO BE SOD OR SEED AND PLANTING AREAS TO BE MULCHED WITH PINESTRAW OR PINEBARK MULCH.
  16. CONTRACTOR TO PROVIDE SOURCE OF LANDSCAPE PLANTINGS FOR APPROVAL.

TREES				
Common Name	Botanical Name	Qty.	Size	Spacing
OVERSTORY TREES				
RED MAPLE	ACER RUBRUM 'OCTOBER GLORY'	2	3"	PER PLAN
SUBTOTAL OVERSTORY TREES		2		
UNDERSTORY TREES				
FLOWERING DOGWOOD	CORNUS FLORIDA	3	2"	PER PLAN
CRAPE MYRTLE	LAGERSTROEMIA 'NATCHEZ'	8	15 GAL	PER PLAN
EASTERN REDBUD	CERCIS CANDIDENSIS	5	2"	PER PLAN
SUBTOTAL UNDERSTORY TREES		16		
EVERGREEN TREES				
GREEN GIANT ARBORVITAE	THUJA STANDISHII X PPLICATA 'GREEN GIANT'	3	15 GAL	PER PLAN
TOTAL TREES		21		
SHRUBS				
Common Name	Botanical Name	Qty.	Size	Spacing
BRIGHT 'N TIGHT' CAROLINA LAUREL	PRUNUS CAROLINIANA MONUS'	14	15 GAL	8' O.C.
DWARF FATHERGILLA	FATHERGILLA GARDENII	24	3 GAL	3' O.C.
OAKLEAF HYDRANGEA	HYDRANGEA QUERCIFOLIA	11	3 GAL	8' O.C.
SWEET SHRUB	CALYCANTHUS FLORIDUS	5	3 GAL	3' O.C.
TOTAL SHRUBS		54		
GROUND COVER				
Common Name	Botanical Name	Qty.	Size	Spacing
PINK MUHLY GRASS	MUHLENBERGIA CAPILLARIS 'LENCA'	40	3 GAL	8' O.C.
BERMUDA GRASS	CYNODON DACTYLON 'TIF 419'	4,000	SF	SOD

 DENOTES PERMANENT STABILIZATION WITH SOD. ALL OTHER DISTURBED AREAS TO BE STABILIZED BY SEED, STAW OR MULCH, AS SHOWN ON THE EROSION CONTROL PLANS.

**NOTE: ROOT BARRIER TO BE INSTALLED IN ALL AREAS WHERE A TREE IS LOCATED WITHIN 6 FEET OF SIDEWALK, SLAB OR PAVEMENT.**



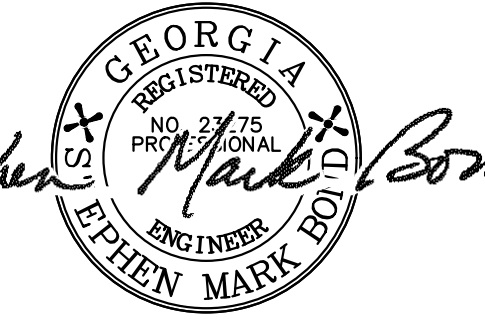
  
**Hayes James**  
 ENGINEERS, PLANNERS & SURVEYORS  
 4145 SHACKLEFORD ROAD  
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**CITY OF CLARKSTON**  
 1055 ROWLAND STREET  
 CLARKSTON, GA 30021  
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 Contact: Lawrence Kaiser  
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No.	Issue	Description	By	Date
1	BID SET		KEH	09-15-17

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 GSWCC #11367  
 EXP. 05/25/18

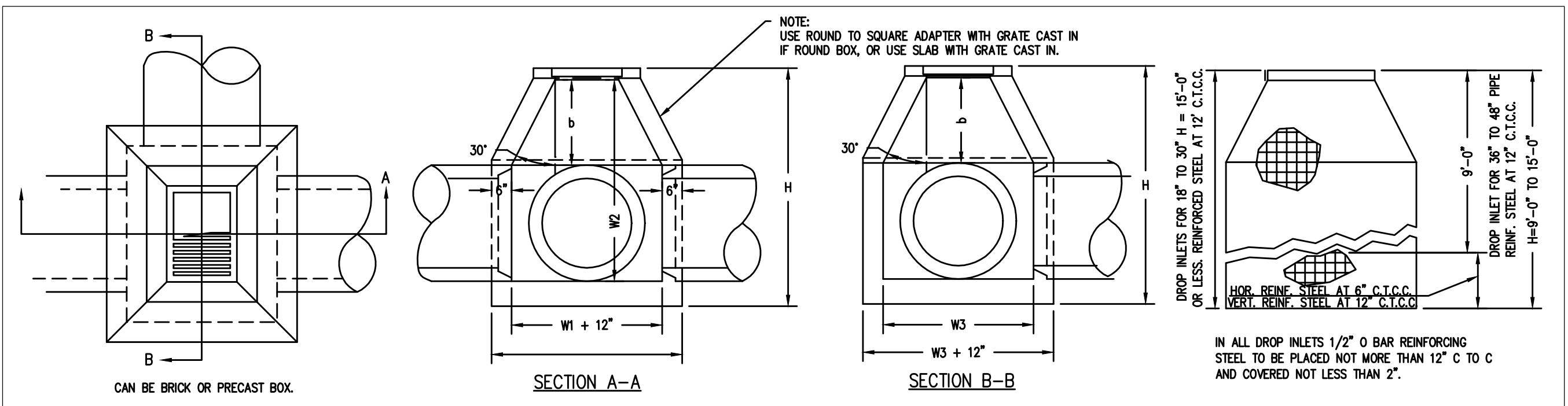
**Project Title**  
 Friendship Forest Wildlife Sanctuary

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

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

**Sheet Title**  
 PARKING LOT - LANDSCAPE PLAN

**Sheet Number**  
 C-14



DI - GRATE INLET

TYPE A

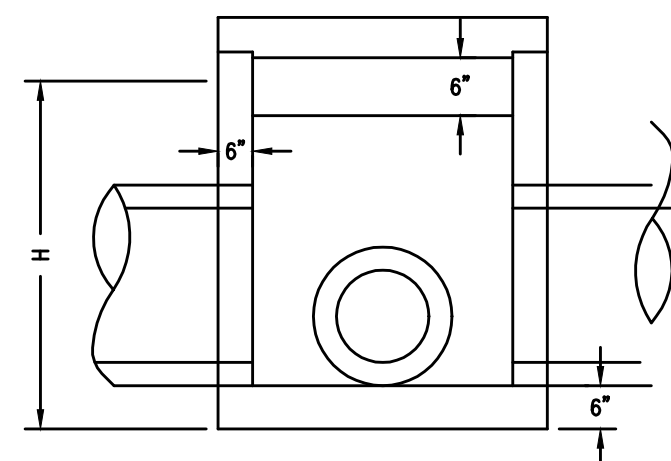
NOTES:

- BRICK INVERTS REQUIRED AT ALL JUNCTION BOXES & DROP INLETS RAISE BOTTOM OF BOX TO OUTFLOW PIPE INVERT. MATCH DIFFERENT SIZE PIPES AT CROSSINGS.
- MAXIMUM VERTICAL DEPTH FOR DROP INLET H = 15'-0"

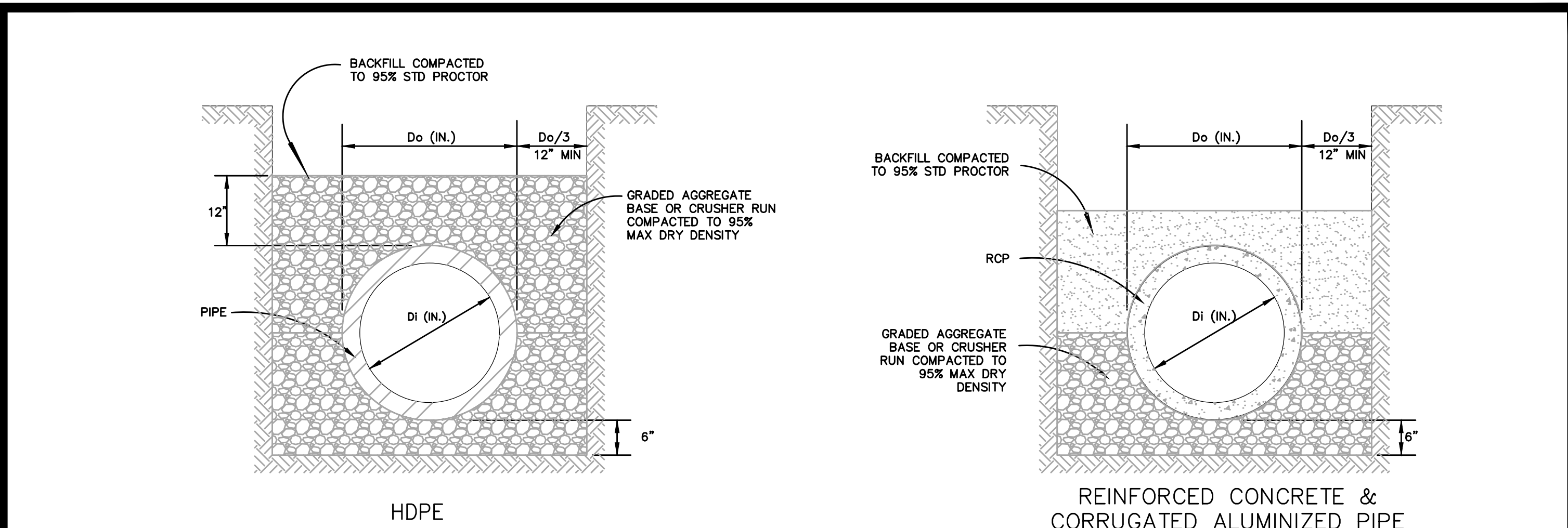
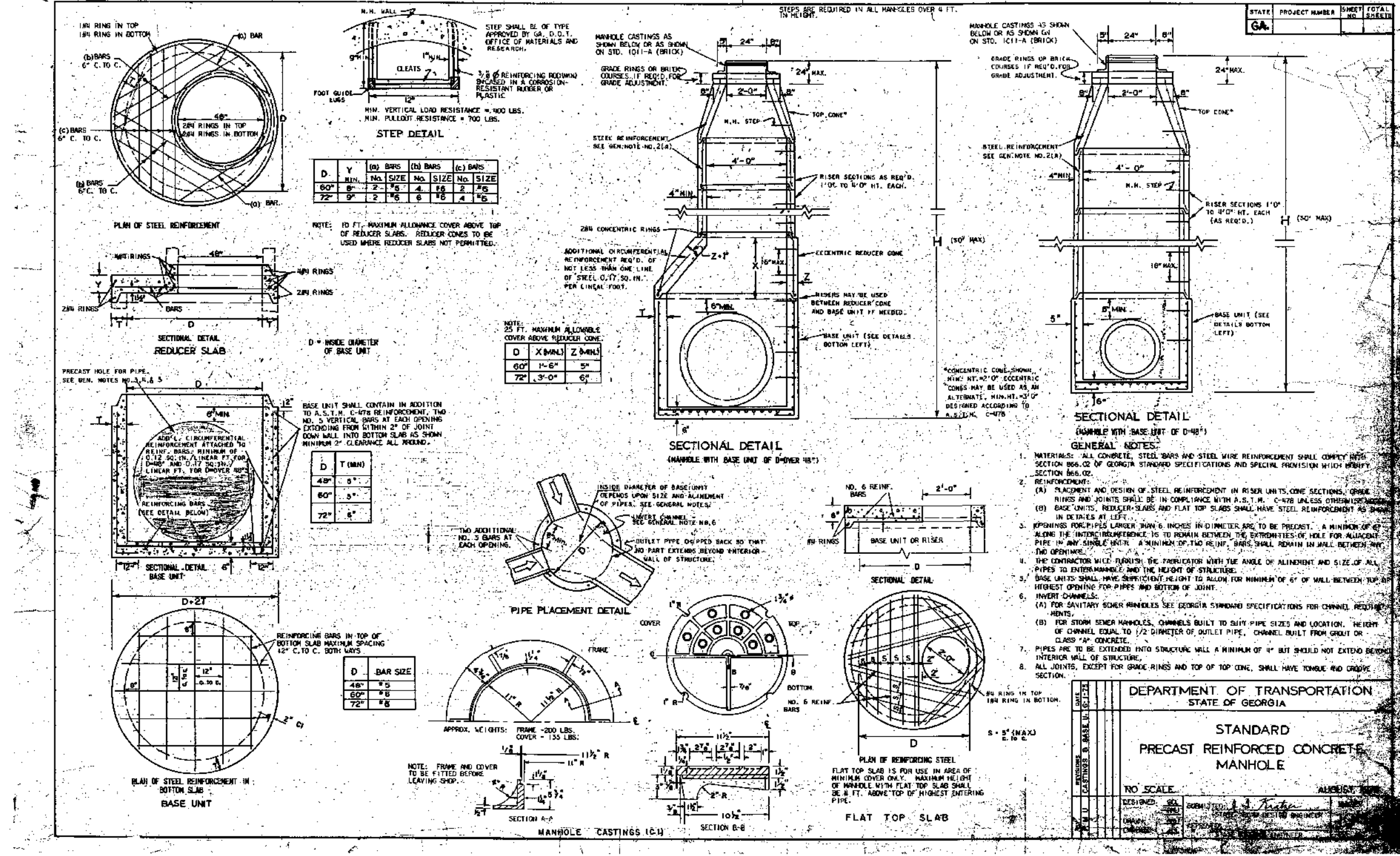
TYPE A					TYPE B			TYPE A					TYPE B				
MIN.-W2	W3	a	b	MIN.-H	NORMAL W OR WT	MIN. b	MIN. H	D	WT	MIN.-W2	a	b	MIN.-H	NORMAL W OR WT	MIN. b	MIN. H	
2'-0"	2'-6 1/2"	2'-7"	0'-3 1/2"	0'-6"	3'-3"	2'-0"	2'-7 1/2"	3'-9 1/2"	15"	2'-2"	2'-11"	2'-9"	0'-4 1/2"	0'-6"	3'-9 1/2"	2'-0"	2'-7 1/2"
2'-0"	2'-9 1/2"	2'-7"	0'-3 1/2"	0'-6"	3'-6"	2'-3"	2'-10"	4'-0"	18"	2'-2"	2'-11"	2'-9"	0'-4 1/2"	0'-6"	4'-1"	2'-0"	2'-10"
2'-6"	4'-1 1/2"	3'-3"	0'-7 1/2"	1'-1"	4'-9"	3'-0"	3'-6"	4'-10"	24"	2'-8"	3'-8"	3'-3"	0'-7 1/2"	1'-1 1/4"	4'-9"	3'-0"	3'-6"
3'-4"	5'-1 1/2"	3'-11"	0'-11 1/2"	1'-6"	5'-10"	3'-6 1/2"	4'-2 1/2"	5'-4 1/2"	30"	3'-7 1/4"	4'-0"	3'-10"	1'-0"	1'-9"	5'-10"	3'-6 1/2"	4'-2 1/2"
3'-10"	6'-1 1/2"	4'-5"	1'-2 1/2"	2'-1 1/4"	6'-10"	4'-2"	4'-10"	6'-0"	36"	4'-2"	6'-0 1/2"	4'-5"	1'-4 1/2"	2'-1 1/4"	6'-11"	4'-2"	4'-10"
4'-5"	7'-2 1/2"	5'-0"	1'-6"	2'-7 1/2"	7'-11"	4'-8 1/2"	5'-4 1/2"	6'-6 1/2"	42"	4'-5"	7'-1 3/4"	5'-0"	1'-6"	2'-7 1/4"	8'-0 1/4"	4'-8 1/2"	5'-4 1/2"
5'-0"	8'-3 1/2"	5'-7"	1'-9 1/2"	3'-1 1/4"	9'-0"	5'-3 1/2"	5'-11 1/2"	7'-1 1/2"	48"	5'-0"	8'-2 3/4"	5'-7"	1'-9 1/2"	3'-1 1/4"	9'-1 1/4"	5'-3 1/2"	5'-11 1/2"
5'-7"	9'-4 1/2"	6'-2"	2'-1"	3'-7 1/4"	10'-1"	5'-10"	6'-6"	7'-6"	54"	5'-7"	9'-4"	6'-2"	2'-1"	3'-7 1/2"	10'-2 1/2"	5'-10"	6'-6"
6'-2"	10'-6 1/2"	6'-9"	2'-4 1/2"	4'-1 1/2"	11'-2"	6'-4 1/2"	7'-0 1/2"	8'-2 1/2"	60"	6'-2"	10'-5"	6'-9"	2'-4 1/2"	4'-1 1/2"	11'-3 1/4"	6'-4 1/2"	7'-0 1/2"
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"
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"

CONCRETE D.I.

BRICK D.I.



1/2" Ø BARS AT 12" CENTER TO CENTER



NOTES:

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.

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



Hayes James

ENGINEERS, PLANNERS & SURVEYORS

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CITY OF CLARKSTON

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

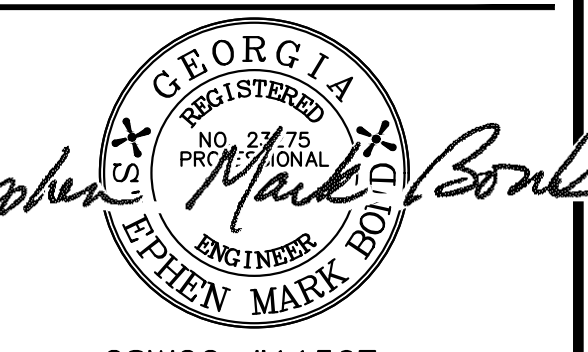
Contact: Lawrence Kaiser  
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No.	Description	By	App.	Date
1	BID SET	KEH	SMB	09-15-17

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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 119  
District-Section 18  
County DEKALB

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

Sheet Title

STORM DETAILS

Sheet Number

C-26

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**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: 18<sup>th</sup>  
 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 (ft)	Depth to SHWT* (ft)	Estimated Perc (min)	Depth of Estimated Perc (ft)	Optimum Trench Depth (in)	Soil Suit. Code
Pascolet	2-6	>12"	>12"	45	24-60	36-48	A

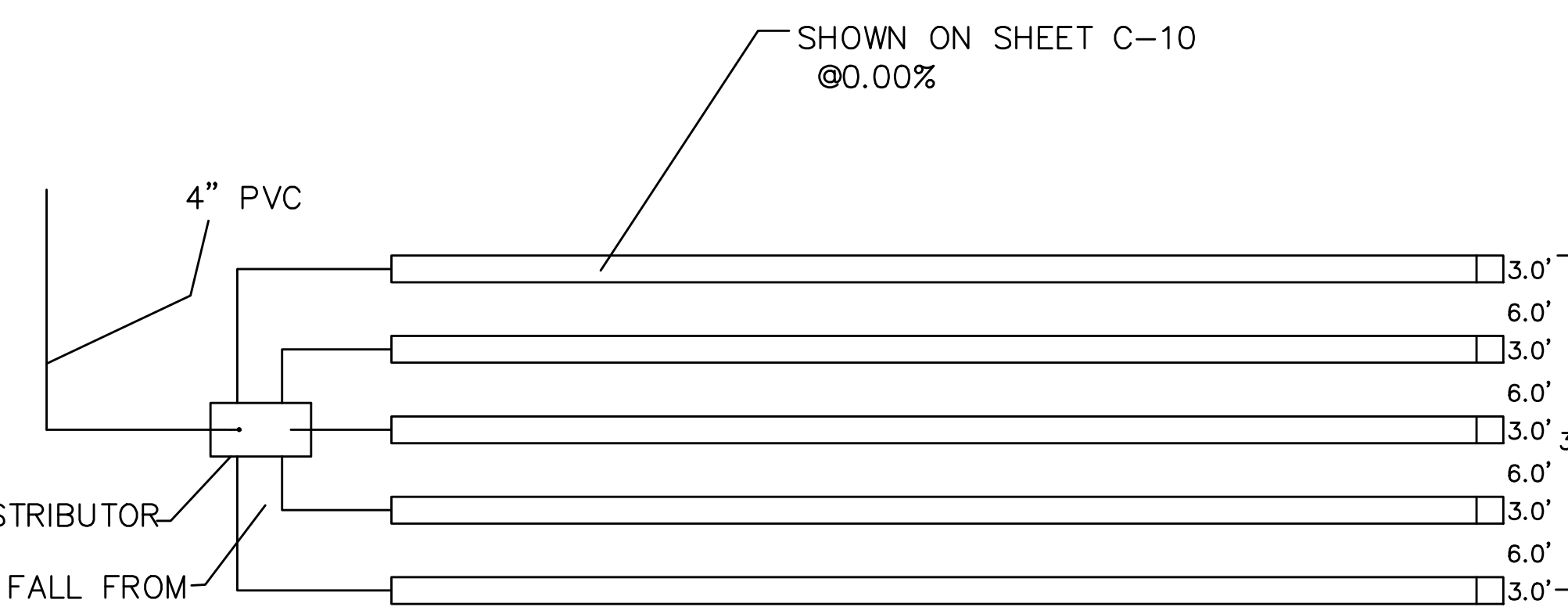
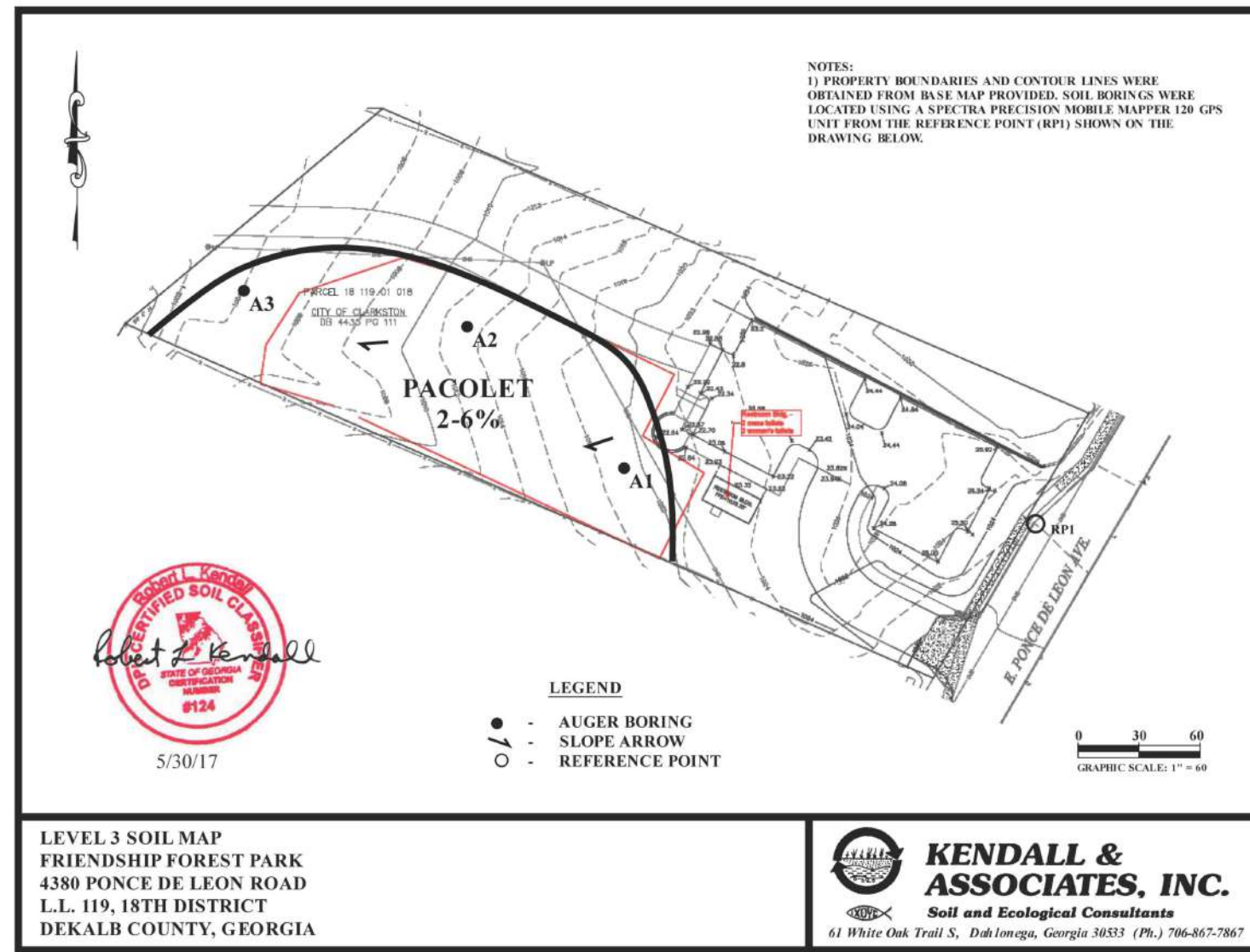
\* Seasonal High Water Table  
 \*\* Auger refusal on rock fragments, not bedrock

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 SUTABILITY 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



4" PVC - PROVIDE MIN. 0.2 VF OF FALL FROM D-BOX OUTLET TO TRENCH INLET (TYP)

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.

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

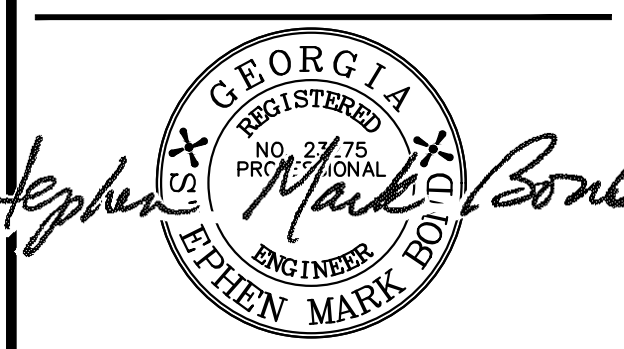
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GSWCC #11367  
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Land Lot 119  
District-Section 18  
County DEKALB

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

Sheet Title

**SEPTIC DETAILS**

Sheet Number

**SEPTIC TANK SPECIFICATIONS**

1000 GALLON CAPACITY  
ONE PIECE / TWO COMPARTMENT

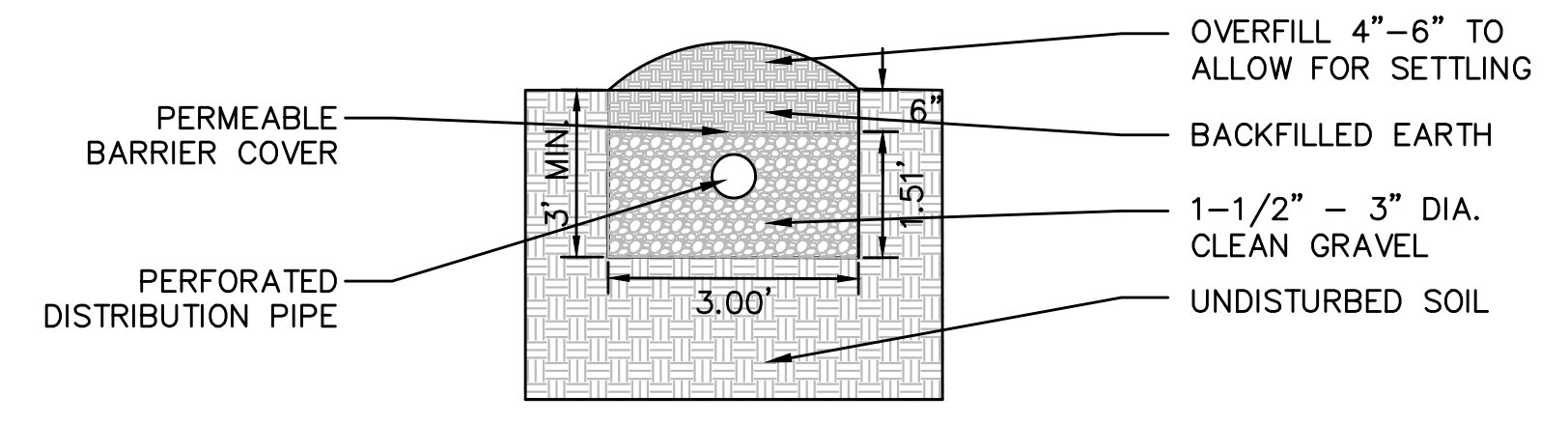
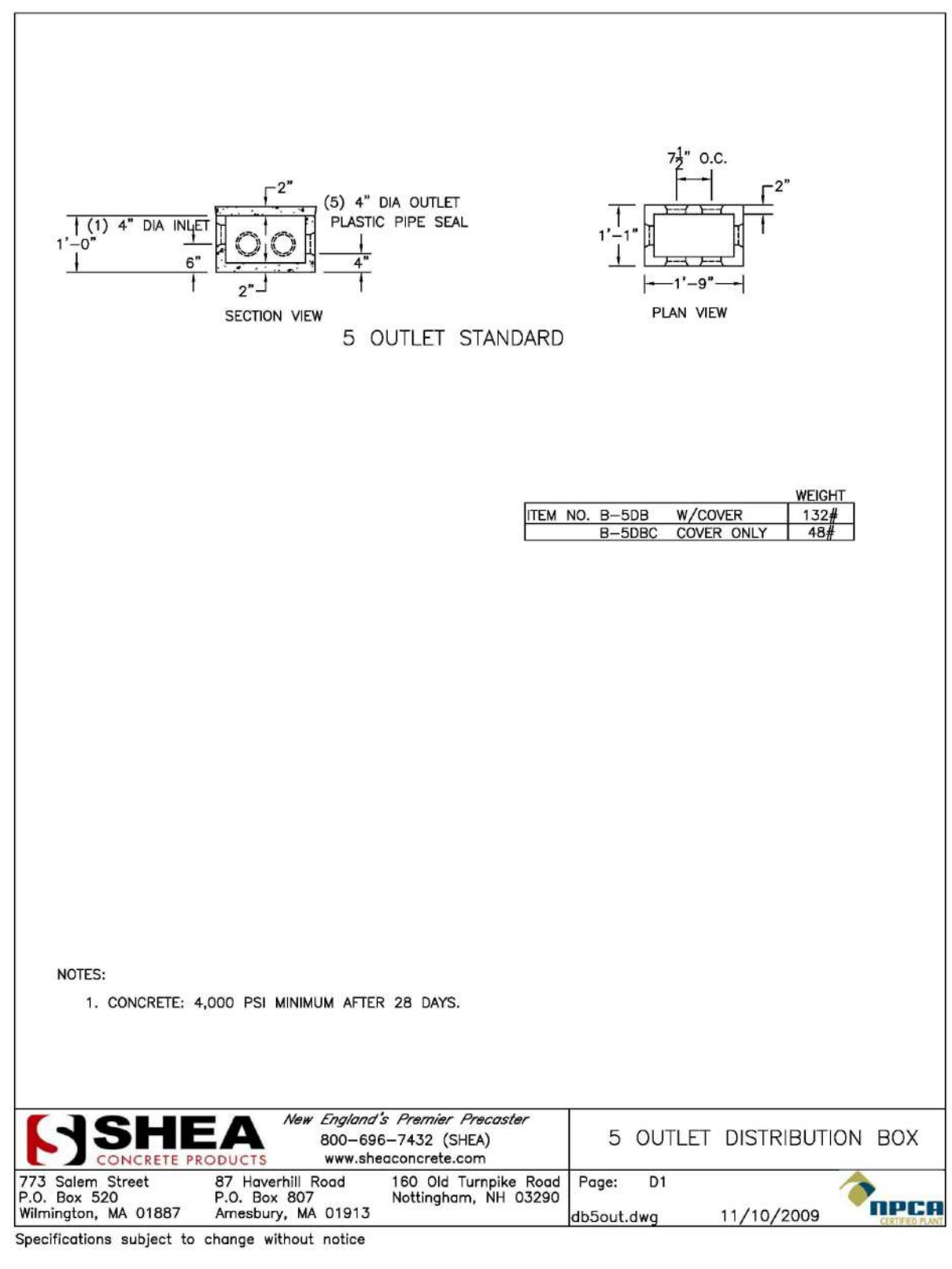
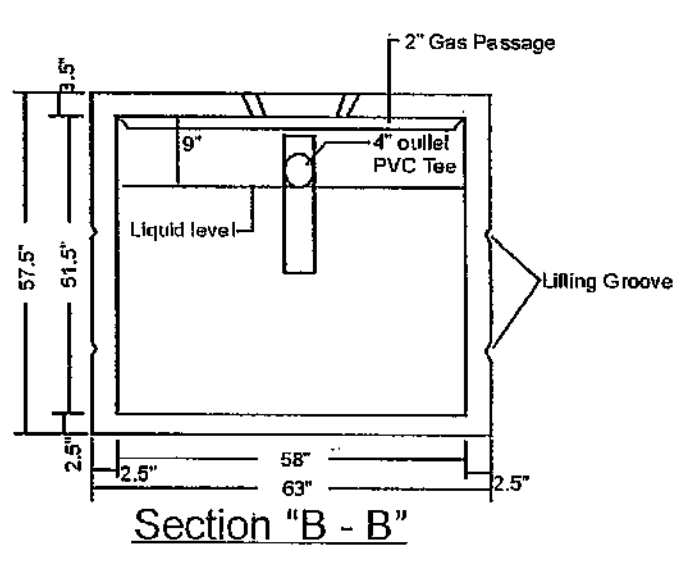
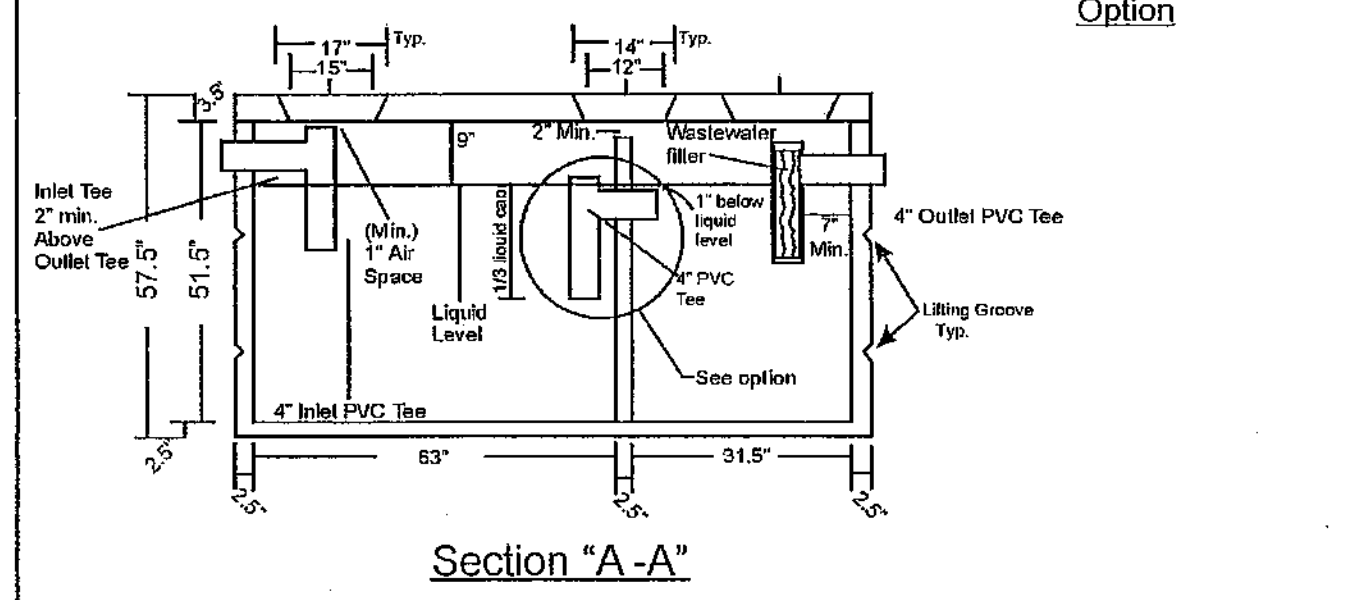
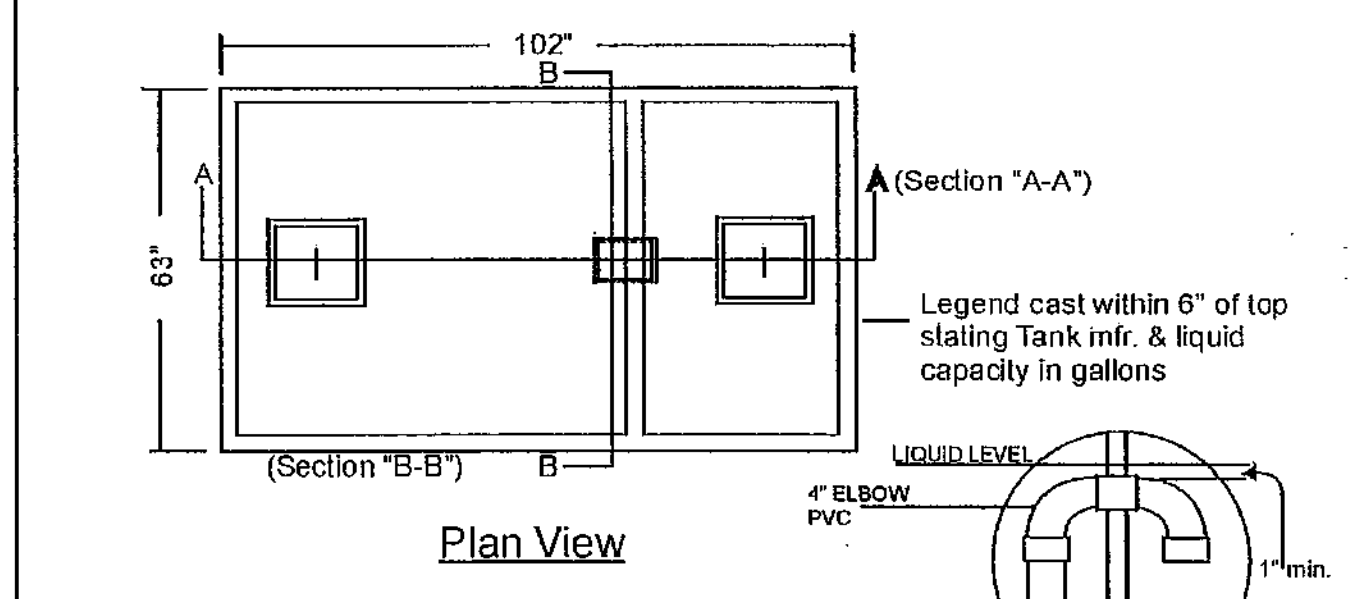
**SPECIFICATIONS & NOTES**

All tees / elbows in the tank shall be constructed from National Sanitation Foundation (NSF) schedule 40 Polyvinyl Chloride (PVC) or equivalent

Concrete strength must be 4000 lbs. Per sq. Inch after 28 days

Tanks reinforced for strength and to facilitate handling

Lids reinforced with 3/8" steel reinforcing rod on 12" centers in each direction



TYPICAL ABSORPTION TRENCH DETAIL  
NOT TO SCALE

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keith.e.hightower, asa



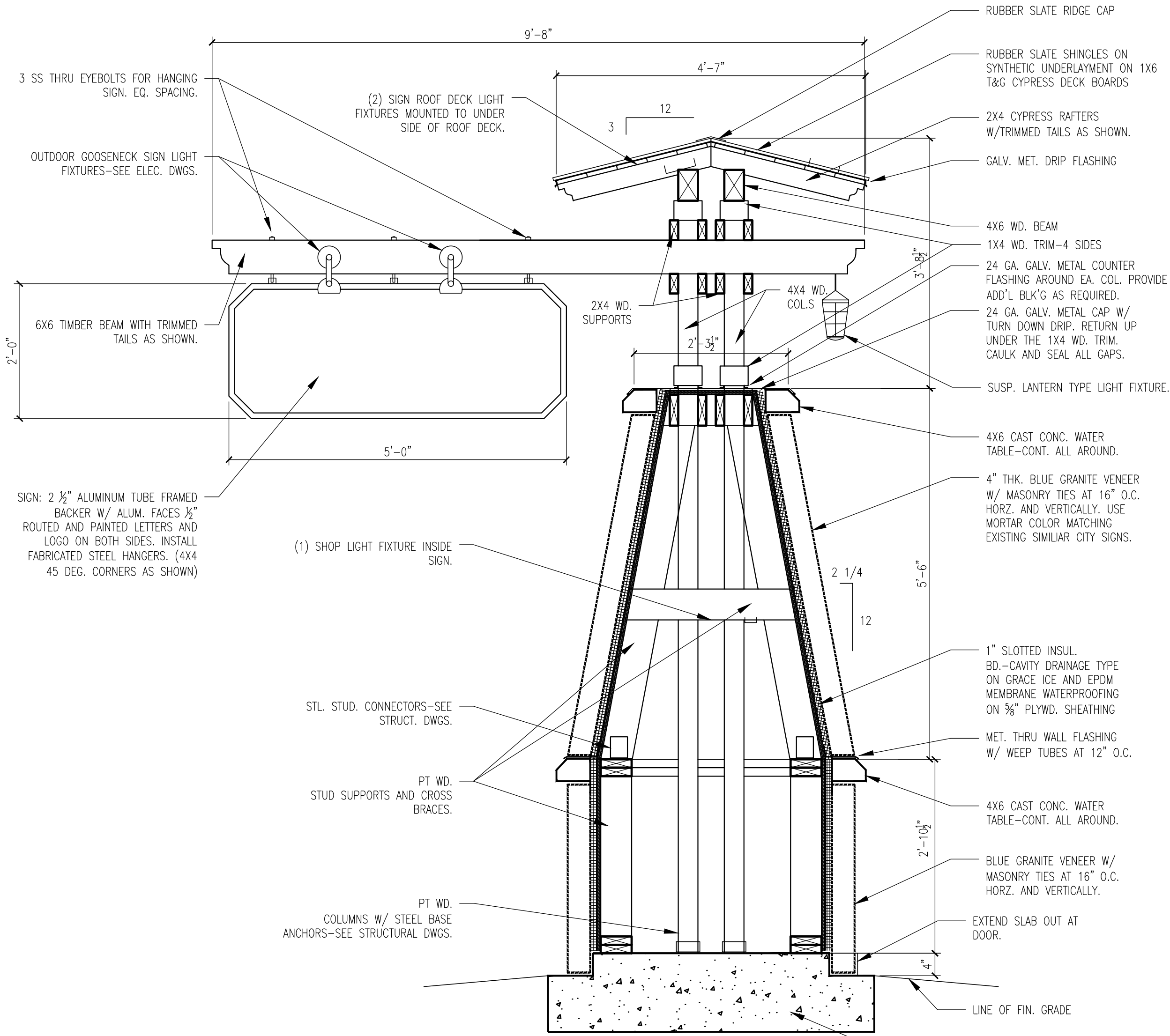




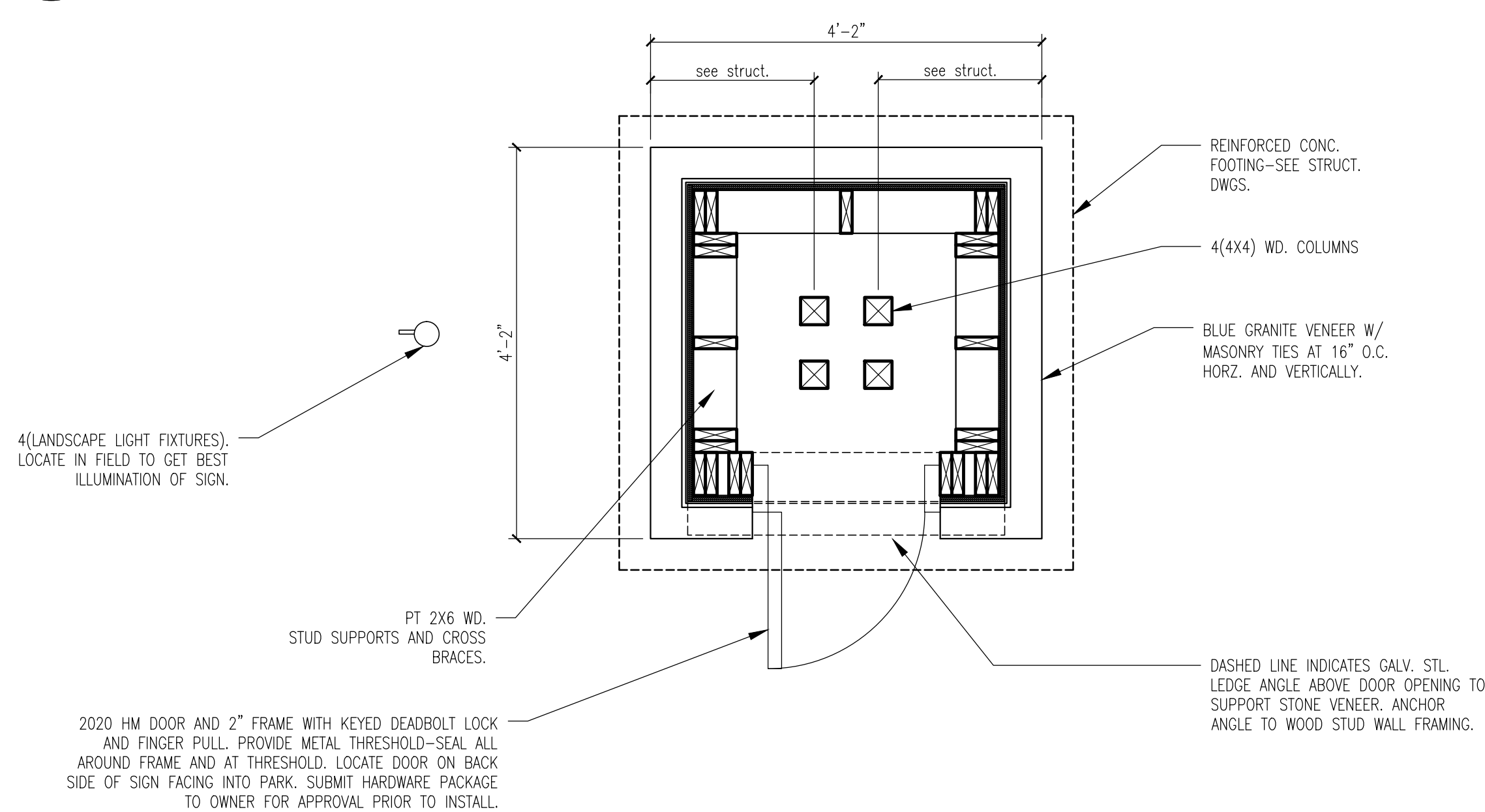




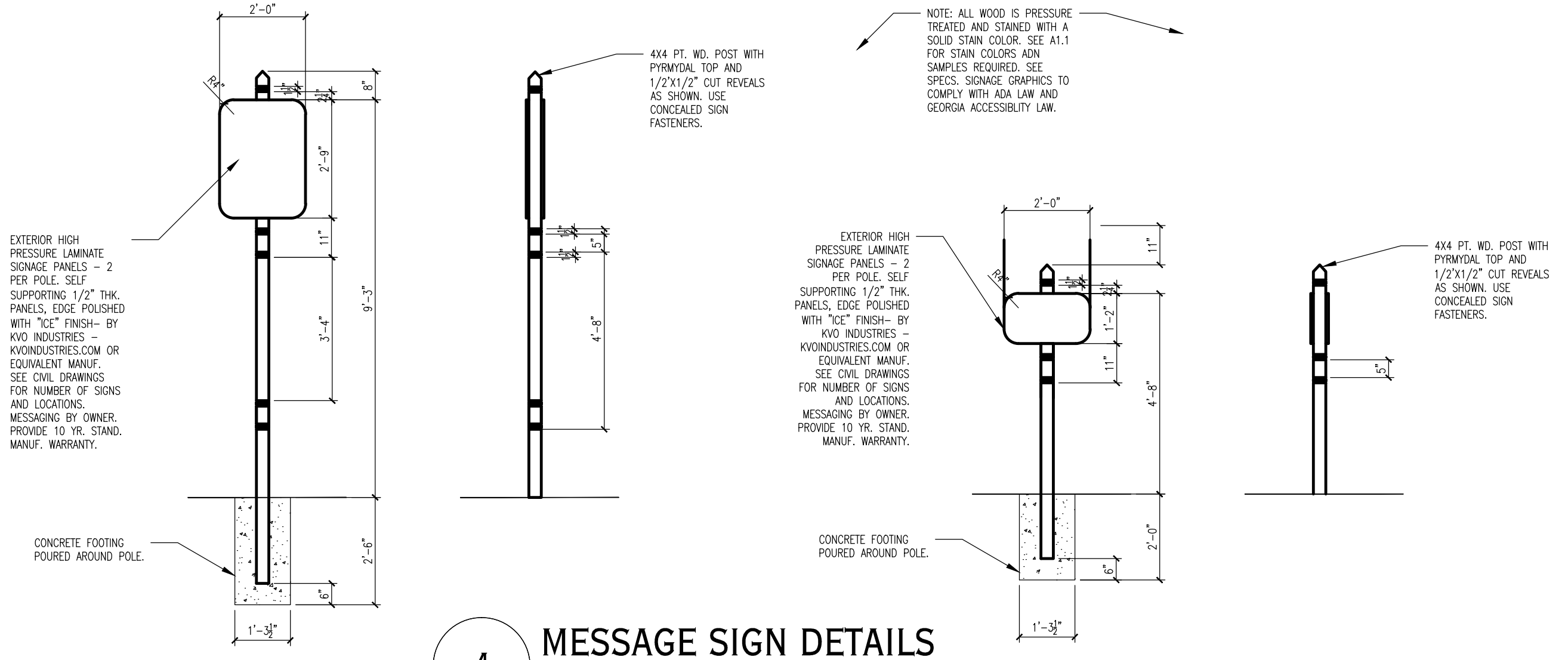




**1 ENTRY SIGN SECTION**  
SCALE: 3/4" = 1'-0"



**2 ENTRY SIGN PLAN**  
SCALE: 3/4" = 1'-0"



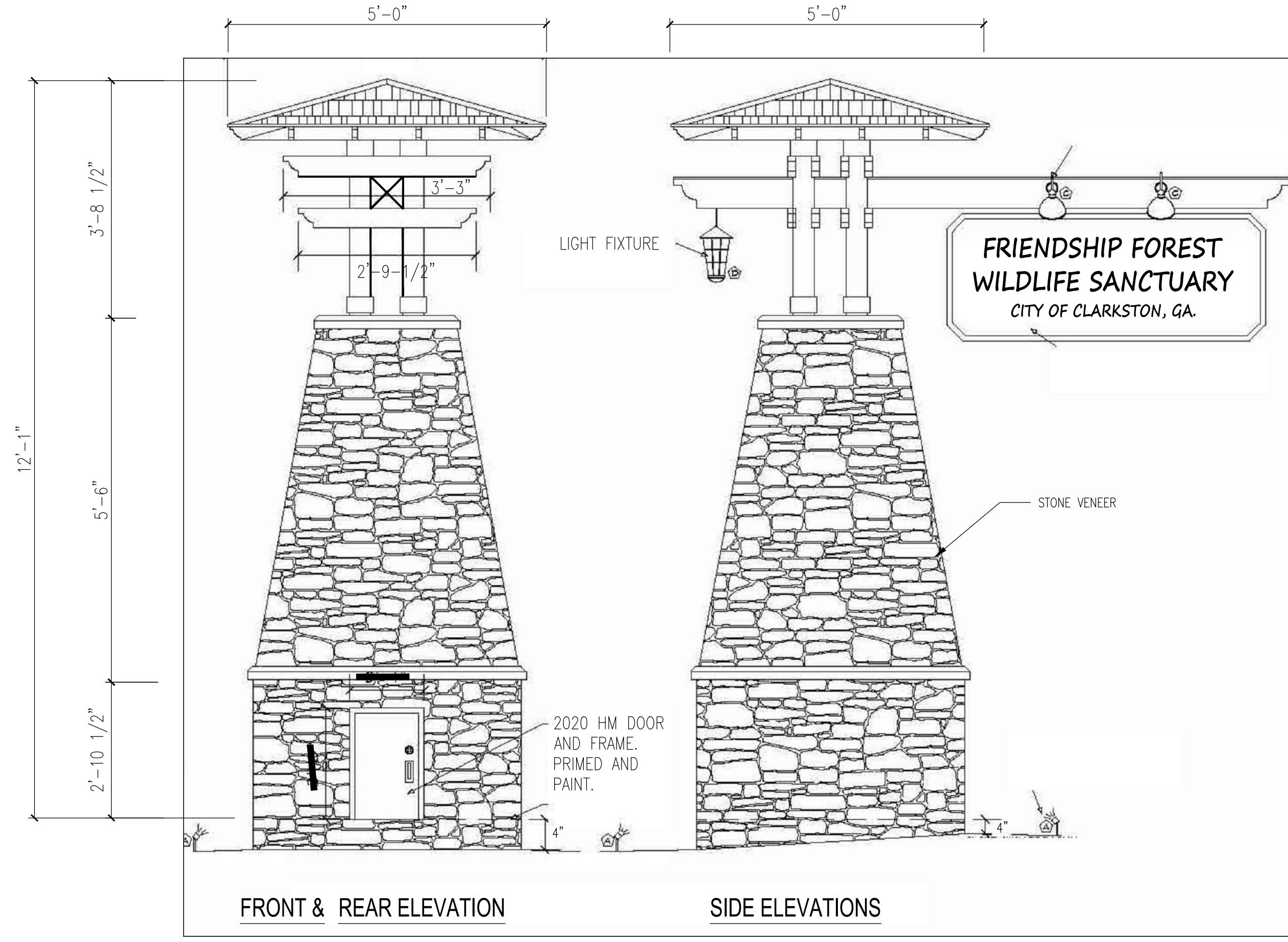
**4 MESSAGE SIGN DETAILS**  
SCALE: 3/8" = 1'-0"

**ENTRY SIGNAGE NOTES:**

- THIS SIGN DESIGN IS A SCALED DOWN VERSION OF THE CITY'S PROTOTYPICAL SIGN DESIGN. THIS DESIGN WAS MODIFIED TO APPROXIMATELY HALF SIZE WITH CHANGES IN FRAMING, FOUNDATION AND STRUCTURAL MEMBER SIZES AS SHOWN. MATCH STONE TYPE AND COLOR AS ON EXISTING CITY SIGNS OF SIMILAR DESIGN. SUBMIT STONE SAMPLES FOR APPROVAL. MATCH EXISTING CAST STONE COLOR AND CONFIGURATION.
- ALL EXPOSED WOOD IS CYPRESS. FINISH TO MATCH STANDARD SIGN DESIGN BUT NO LESS THAN APPLICATION OF CLEAR SEALER. SUBMIT STAIN SAMPLES TO OWNER FOR APPROVAL.
- ALL CONCEALED WOOD IS PRESSURE TREATED PINE.
- COUNTERSINK AND PLUG ALL FASTENERS. FINISH PLUG TO MATCH WD. MEMBER.
- ALL FASTENERS ARE GALVANIZED STEEL OR STAINLESS STEEL.
- ALL SHEET METAL CAPS AND FLASHINGS ARE GALVANIZED METAL (24 GA. MIN.) - FOLLOW SMACNA FOR PROPER FABRICATION AND CONFIGURATION. CONCEAL ALL CONNECTORS. NO EXPOSED FASTENERS.
- LETTER TYPE AND SIGNAGE FONT SHALL MATCH EXISTING TYPICAL CITY SIGNS.
- SUBMIT SIGN SHOP DWG. SHOWING FINAL MESSAGING FOR OWNER APPROVAL OF SIGN WORDING ALONG WITH ALL MATERIALS AND DETAILS.
- CONCEAL ALL ELECTRICAL CONDUIT.
- SEE CIVIL DRAWINGS FOR SIGN LOCATION AND FINISH GRADING AROUND SIGN.
- COMPLY WITH ALL APPLICABLE BUILDING CODES AND SIGN ORDINANCES AND SIGN PERMIT REQUIREMENTS.

**LIGHTING NOTES:**

- 4-GOOSE NECK SIGNAGE LIGHTS ARE: "BARN LIGHT ELECTRIC" - INCANDESCENT, WALL/GOOSENECK, BRONZE FIN. WET LOCATION RATING.
- 1-SIGN LANTERN LIGHT FIXTURE: "FEISS" - #P1468847 INCANDESCENT HANGING LANTERN-BRONZE FIN. WET LOCATION RATING.
- 4-LANDSCAPE LIGHT FIXTURES: "KICHLER" #15742AZ2 LED, GROUND MOUNT-BRONZE FIN. WET LOCATION RATING.
- 1-SHOP LIGHT INSIDE SIGN: "SUPER BRITE LEC" CEILING MOUNT TYPE, COLOR-WHITE - 2' LENGTH.
- 2-SIGN ROOF DECK LIGHT FIXTURES: "KICHLER" 16795 9" OR EQUAL FIXTURE. COLOR-BRONZE. WET LOCATION RATING.
- LOCATE ELEC. PANEL INSIDE SIGN BASE. ACCESS THRU ACCESS DOOR SHOWN.
- EQUIVALENT LIGHT FIXTURES MAY BE SUBMITTED FOR APPROVAL BY THE OWNER.



**3 ENTRY SIGN ELEVATIONS**  
SCALE: NTS

DASHED LINE INDICATES GALV. STL. LEDGE ANGLE ABOVE DOOR OPENING TO SUPPORT STONE VENEER. ANCHOR ANGLE TO WOOD STUD WALL FRAMING.

4(LANDSCAPE LIGHT FIXTURES). LOCATE IN FIELD TO GET BEST ILLUMINATION OF SIGN.

PT 2X6 WD. STUD SUPPORTS AND CROSS BRACES.

2020 HM DOOR AND 2" FRAME WITH KEYED DEADBOLT LOCK AND FINGER PULL. PROVIDE METAL THRESHOLD-SEAL ALL AROUND FRAME AND AT THRESHOLD. LOCATE DOOR ON BACK SIDE OF SIGN FACING INTO PARK. SUBMIT HARDWARE PACKAGE TO OWNER FOR APPROVAL PRIOR TO INSTALL.

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Contact: KEITH BARKER  
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**PRELIMINARY**  
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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

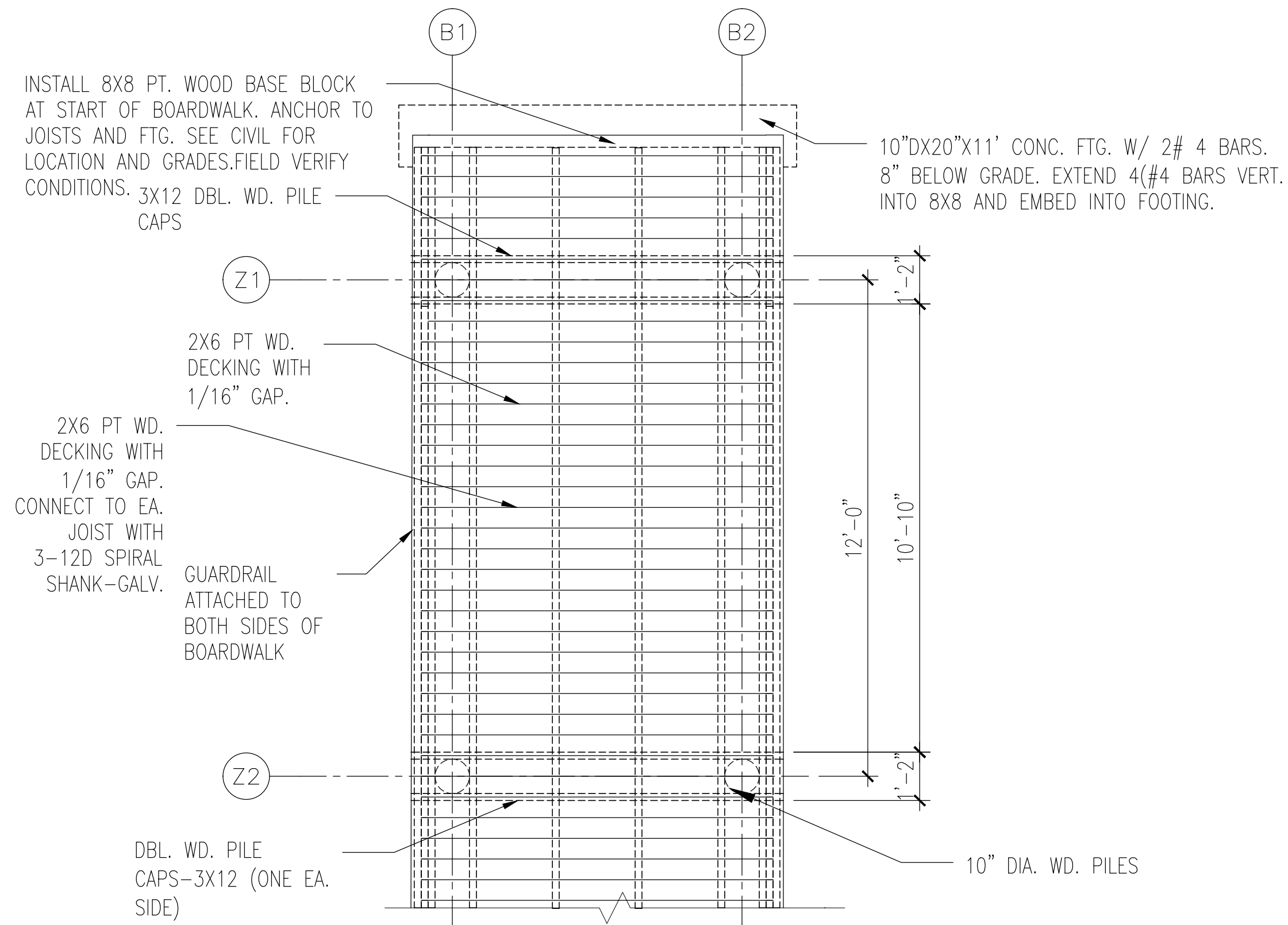
Project No. 17030pr  
Drawn By: PCS  
Checked By: PCS  
Initial Issue Date: #####

Sheet Title  
**ENTRANCE MONUMENT SIGN**

Sheet Number  
**A3.1**

**BOARDWALK NOTES:**

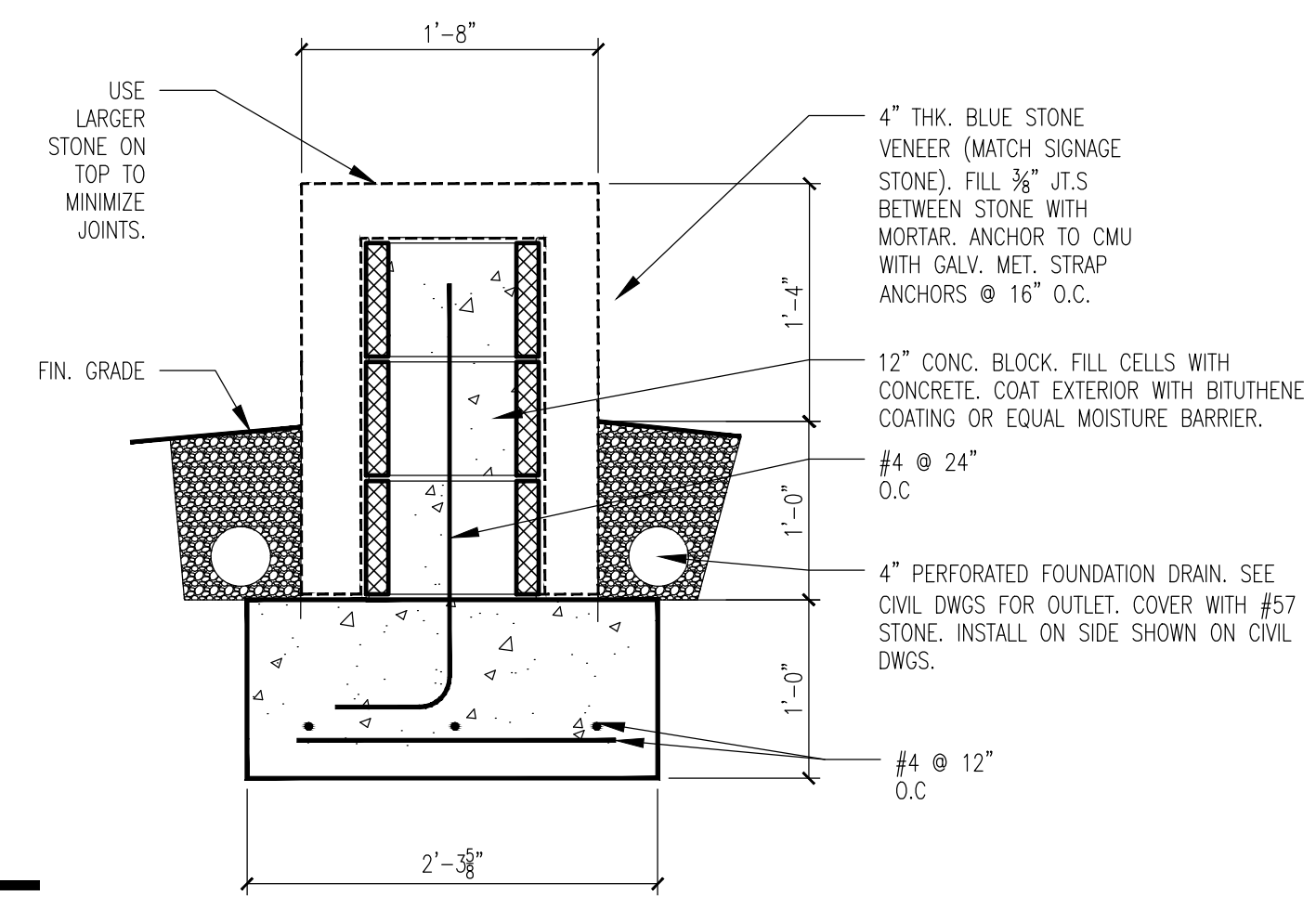
- SEE CIVIL DRAWINGS FOR BOARDWALK LOCATION ON SITE, LENGTH AND GRADING. ALSO GRADE ELEVATIONS AND OTHER SITE IMPROVEMENTS AROUND THE BOARDWALK.
- DO NOT EXCEED SPANS SHOWN ON DRAWINGS. THESE ARE MAXIMUM SPANS.
- CONSULT WITH OWNERS GEOTECH ENGINEER FOR ONSITE CONDITIONS.
- ALL WOOD IS PRESSURE TREATED AND STAINED.
- USE ONLY NON CORROSIVE METAL CONNECTORS.
- COUNTERSINK ALL WALKING SURFACE AND TOP RAIL MOUNTED SCREENS AND CONNECTORS.
- SEE SHEET #4.2 AND ALTERNATES SECTION IN THE SPECIFICATIONS FOR ALTERNATE WOOD RAILING. THIS IS A REQUIRED BID ALTERNATE.



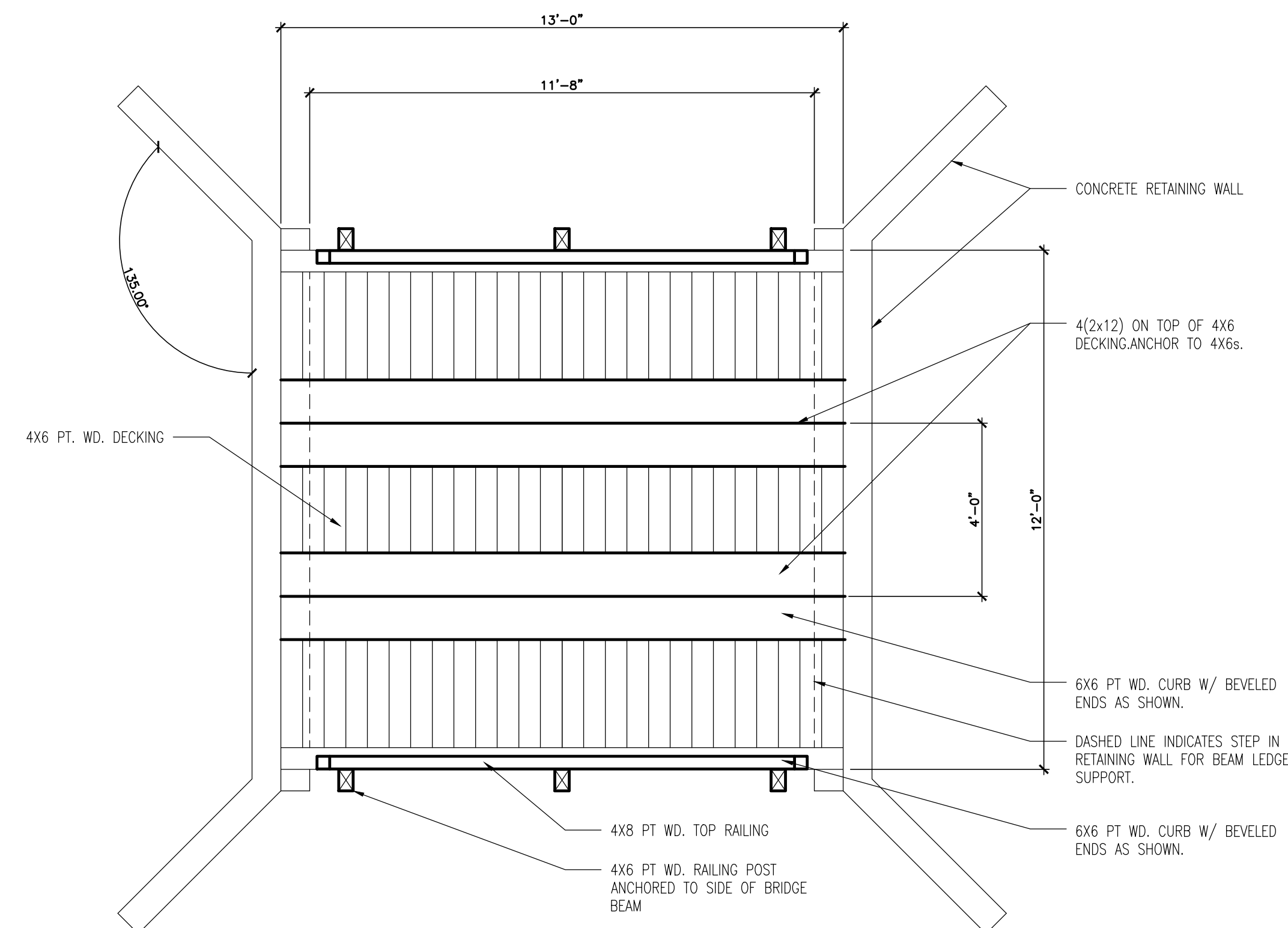
**3 TYP. BOARDWALK PLAN**  
SCALE: 3/8" = 1'-0"

**STONE SEAT NOTES:**

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



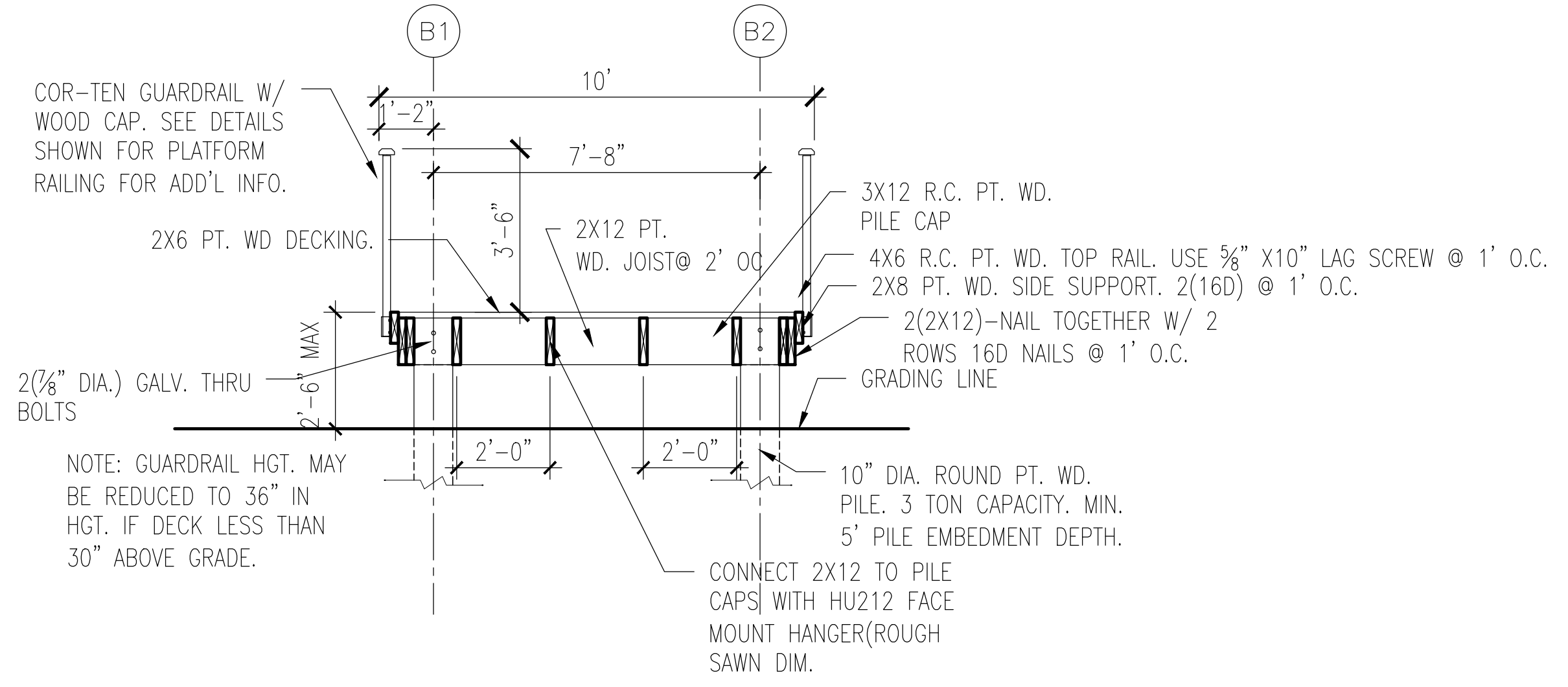
**5 TYP. STONE SEAT SECTION**  
SCALE: 3/8" = 1'-0"



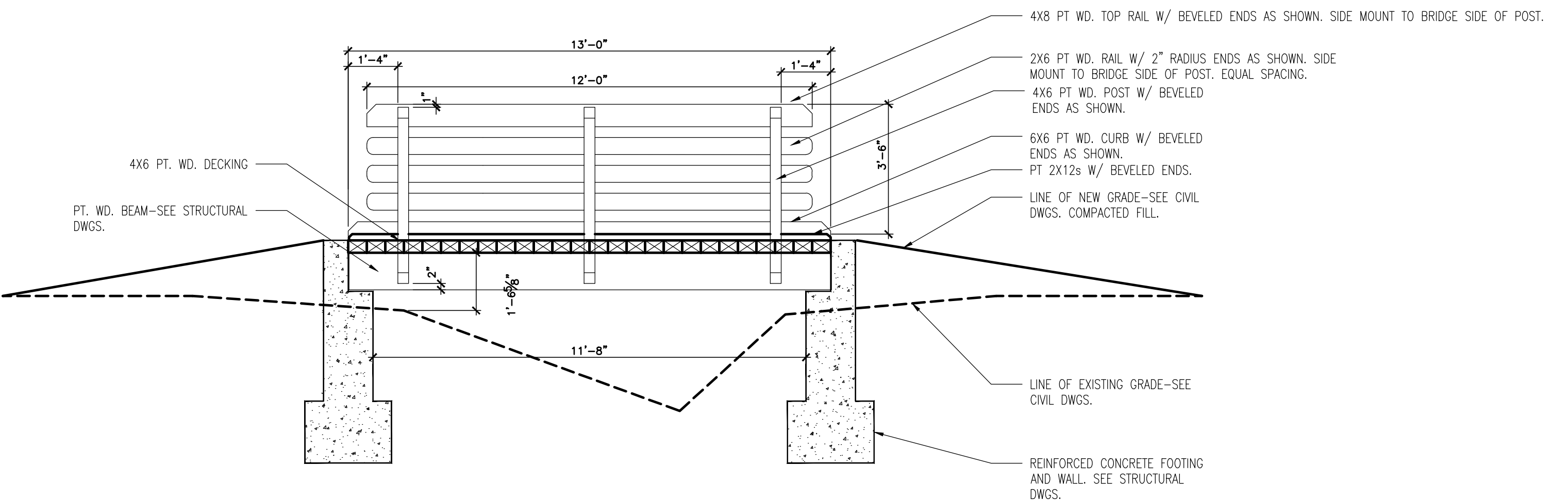
**1 PAVILION BRIDGE PLAN-UTV VEHICLES ONLY**  
SCALE: 1/2" = 1'-0"

**BRIDGE NOTES:**

- SEE STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- SEE CIVIL DRAWINGS FOR BRIDGE LOCATION ON SITE AND GRADING ELEVATIONS AND OTHER SITE IMPROVEMENTS AROUND THE BRIDGE.
- ALL WOOD IS PRESSURE TREATED. SEE STRUCT.
- USE ONLY NON CORROSIVE METAL CONNECTORS. SEE STRUCT.
- FIELD VERIFY CONDITIONS AND SPAN. CONSULT WITH ENGINEERS IF DIFFERENCES IN FIELD PRIOR TO PROCEEDING.



**4 TYP. BOARDWALK SECTION**  
SCALE: 3/8" = 1'-0"



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

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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: PCS  
Checked By: PCS  
Initial Issue Date: #####

Sheet Title

**MISC. STRUCTURES**

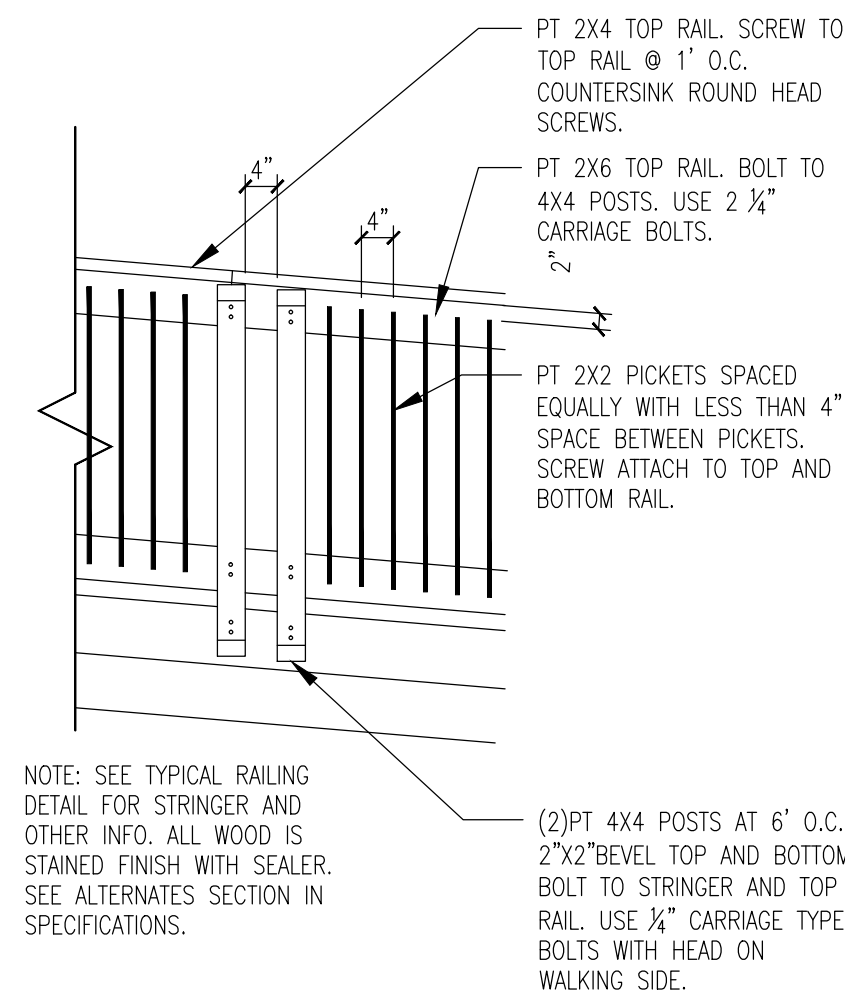
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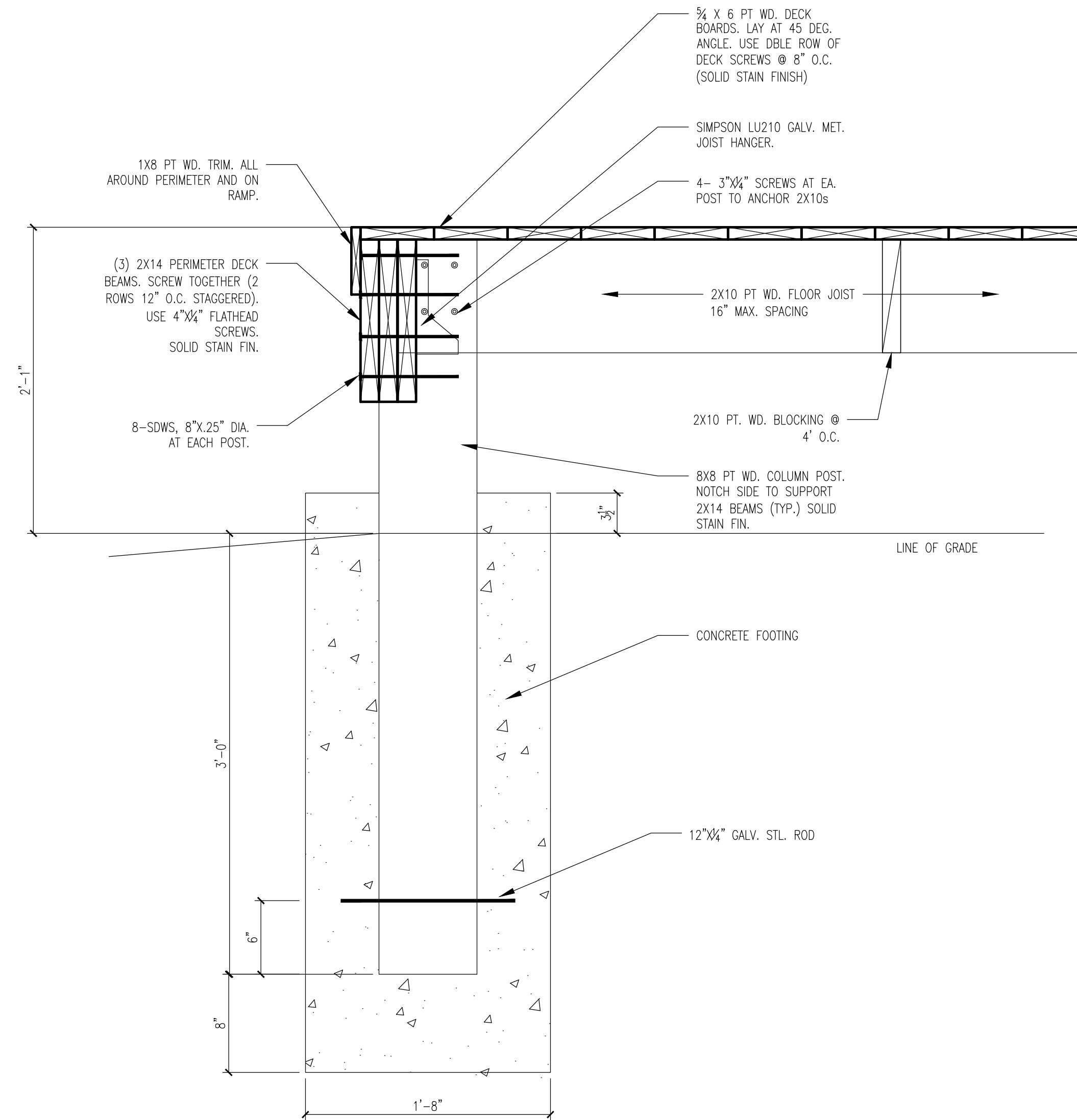
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PLATFORM/DECK NOTES:

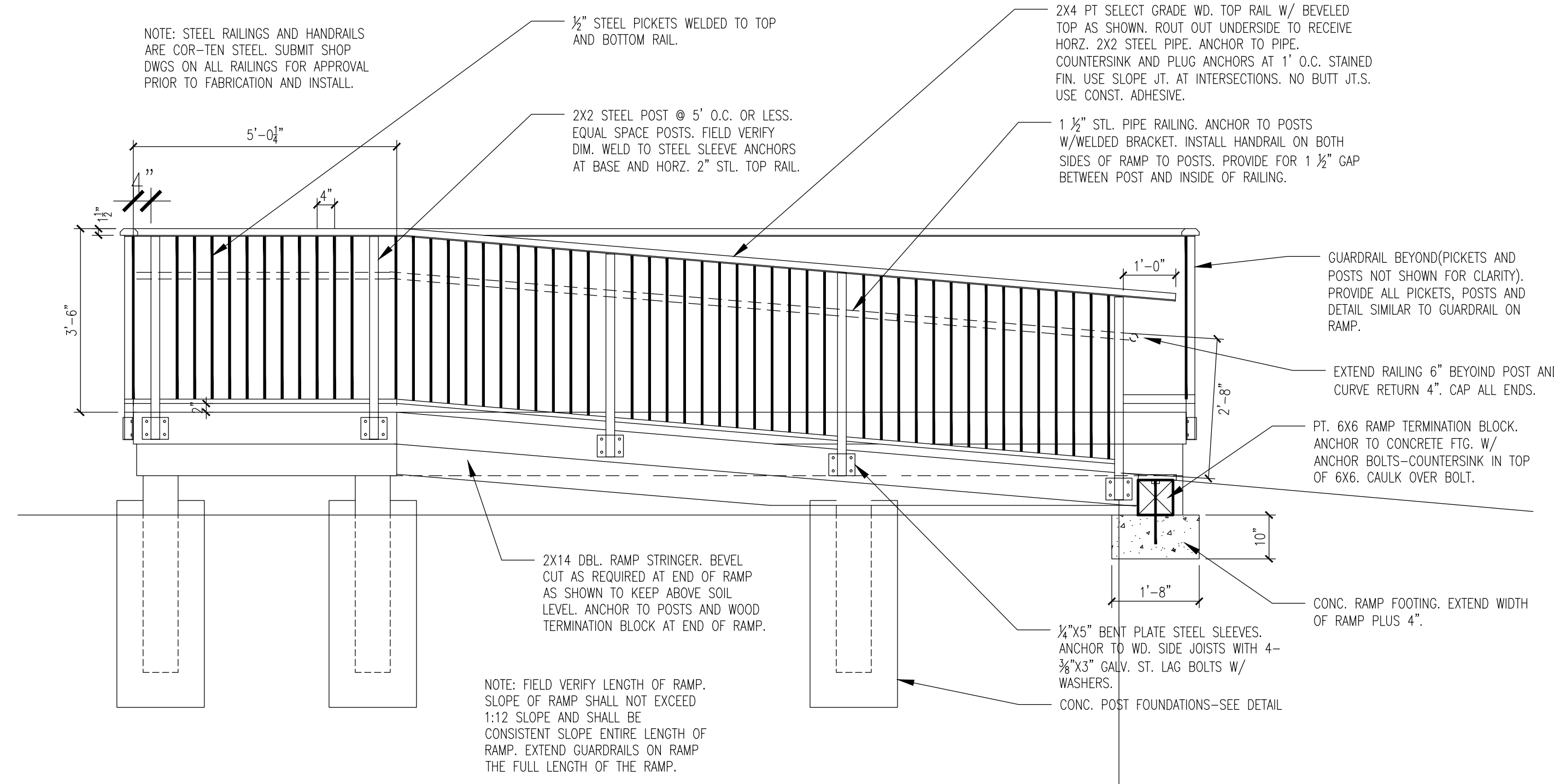
- SEE STRUCTURAL DRAWINGS FOR GENERAL REQUIREMENTS.
- SEE CIVIL DRAWINGS FOR PLATFORM/DECK LOCATIONS AND NUMBER OF.
- ALL WOOD IS PRESSURE TREATED.
- USE ONLY NON CORROSIVE METAL CONNECTORS. SEE STRUCT.



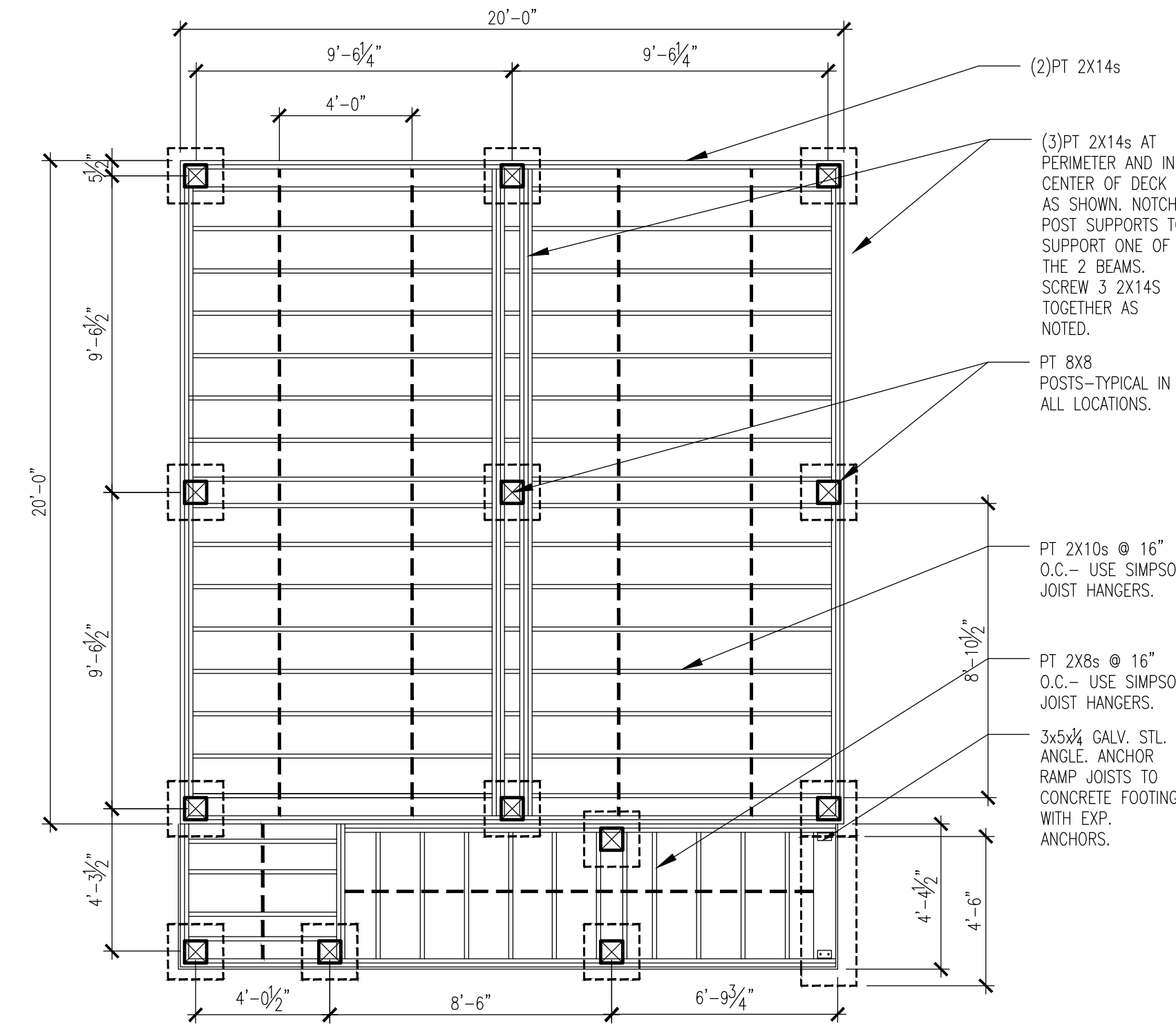
5 ALTERNATE RAILING  
SCALE: 1/2" = 1'-0"



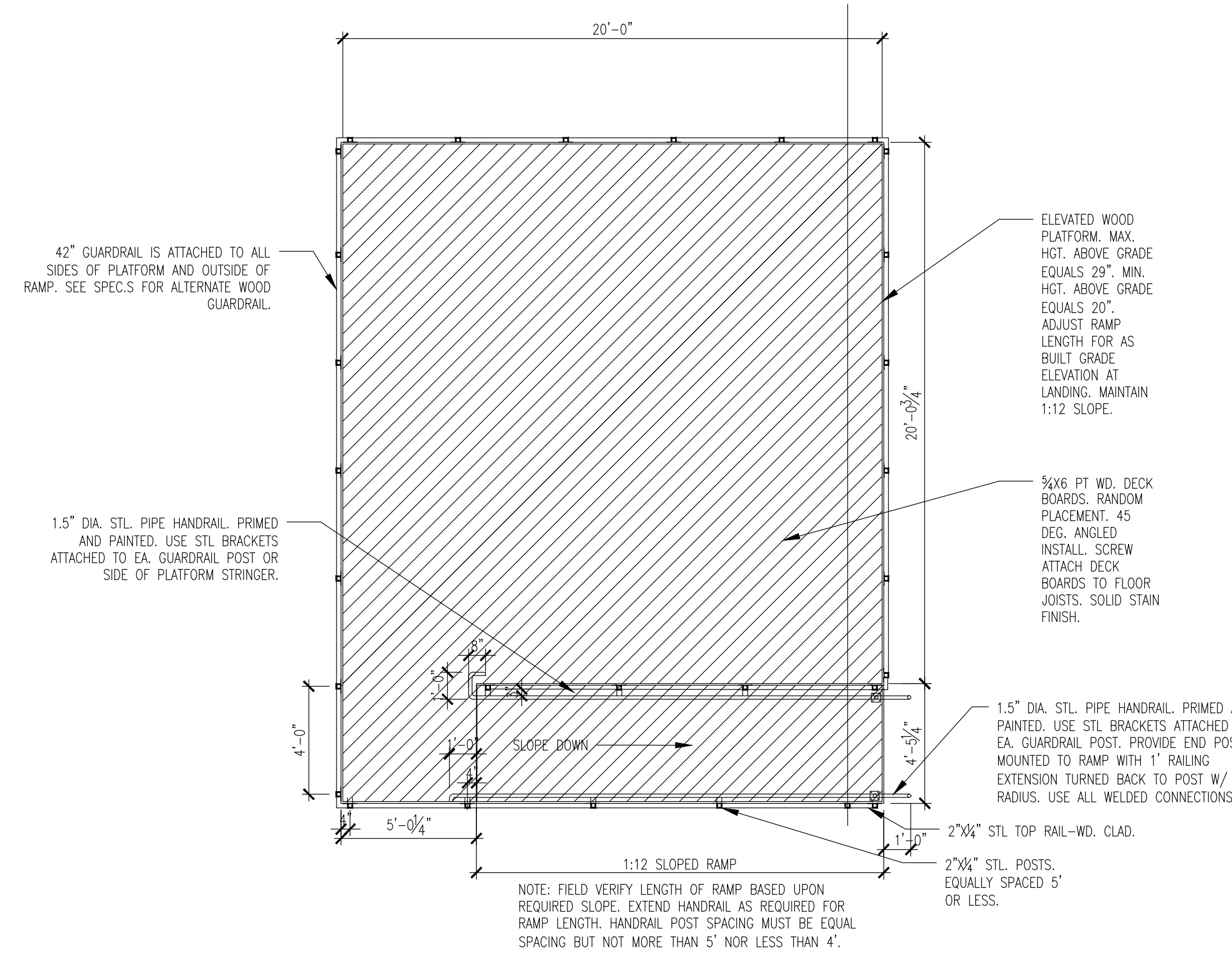
4 PLATFORM/DECK SECTION  
SCALE: 1/4" = 1'-0"



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



1 PLATFORM/DECK FRAMING PLAN  
SCALE: 1/4" = 1'-0"



2 PLATFORM/DECK PLAN  
SCALE: 1/4" = 1'-0"

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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

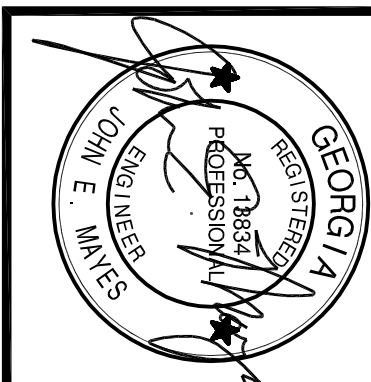
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Drawn By: PCS  
Checked By: PCS  
Initial Issue Date: #####

Sheet Title

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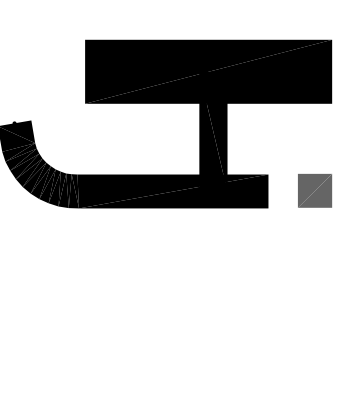
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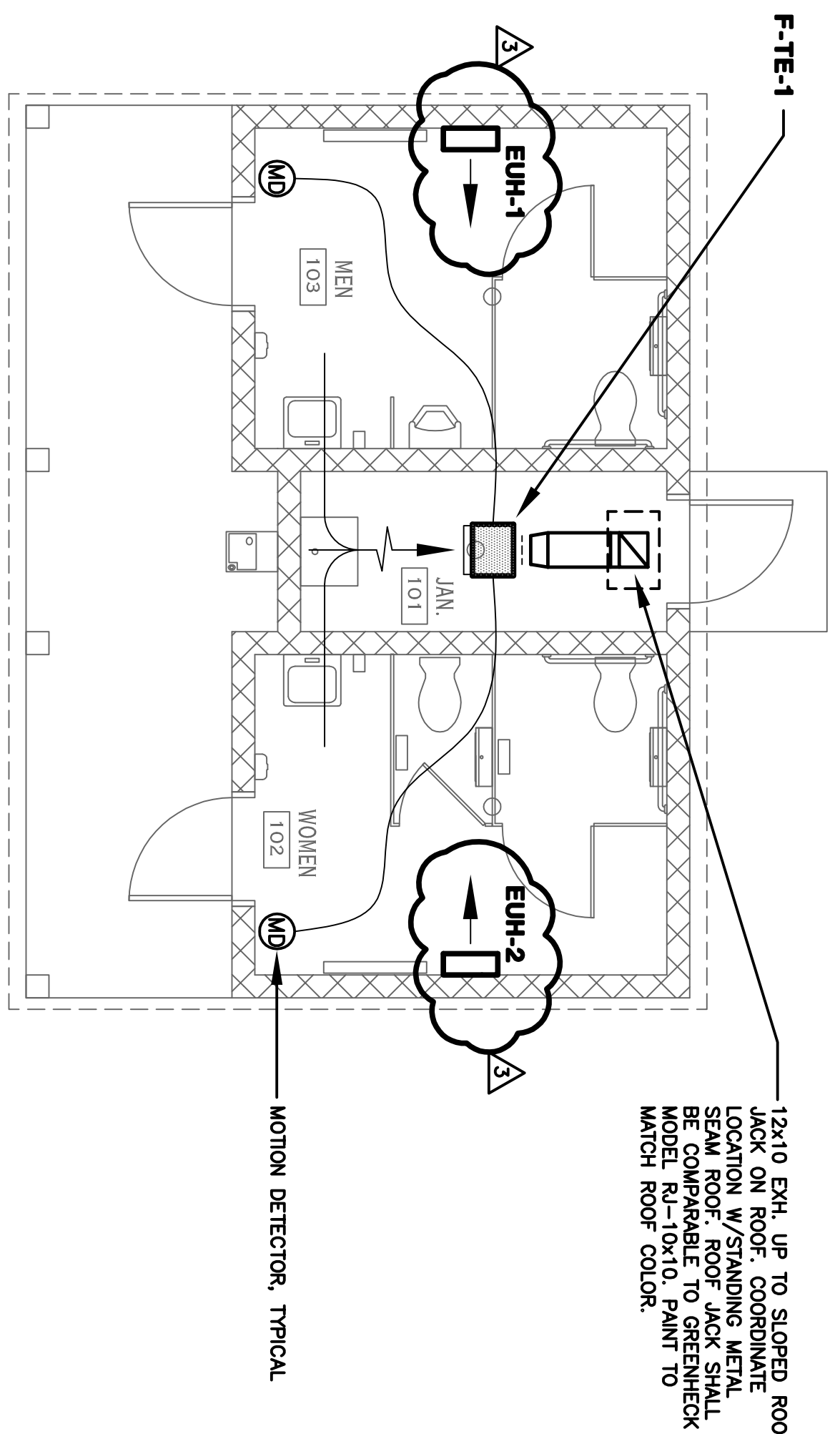
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3	Addendum #3			9-28-17

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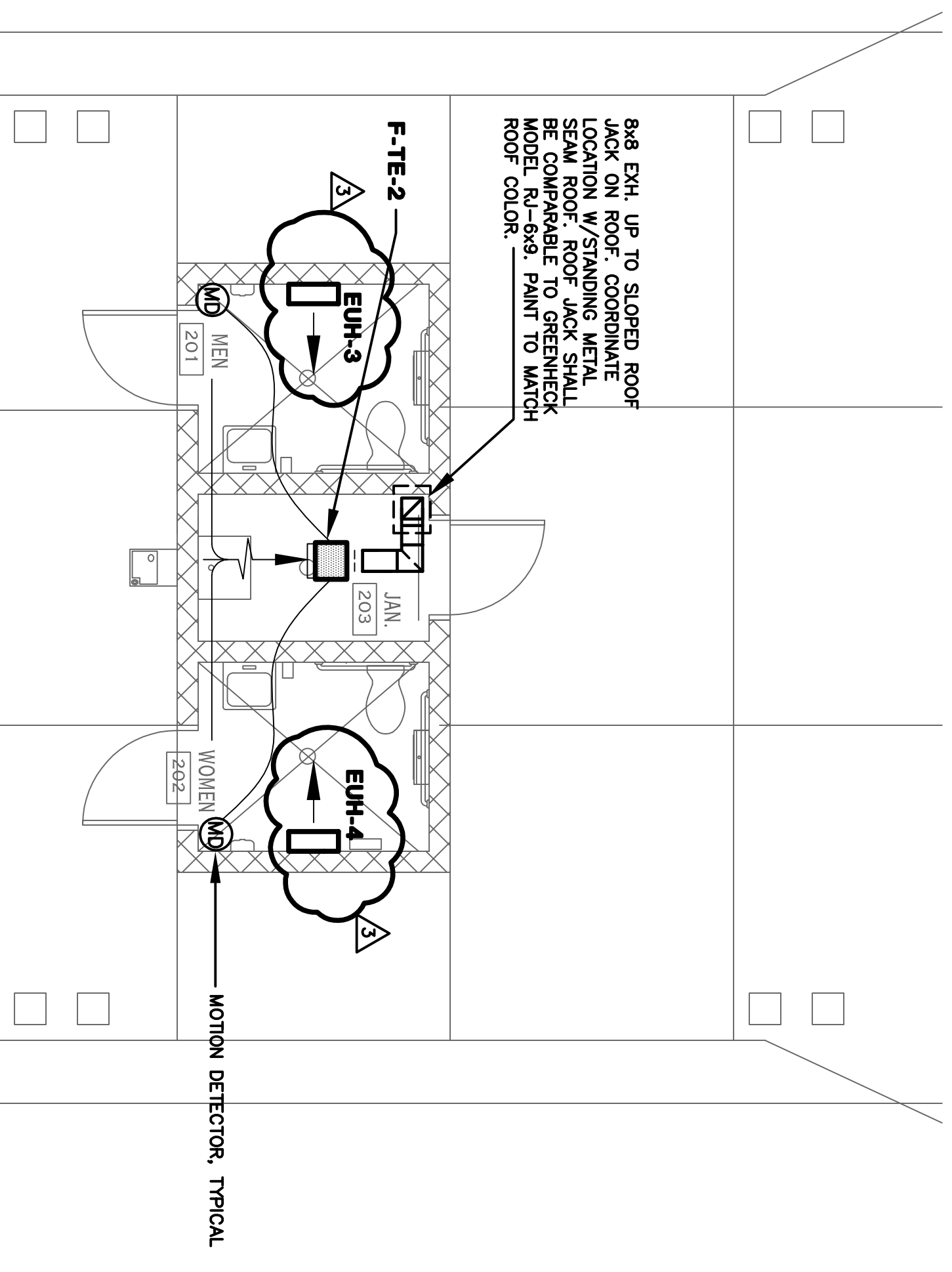
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Project Title  
**FRIENDSHIP FOREST WILDLIFE SANCTUARY**

Project Location  
4380 E. PONCE DE LEON AVE  
CLARKSTON, GA. 30021  
City, State Zip  
Land Lot 119  
District-Section 18  
County DEKALB  
Project No. 17030P  
Drawn By: ASM  
Checked By: JEM  
Initial Issue Date: 7-19-17  
Sheet Title  
**TOILET HVAC PLANS AND SCHEDULES**  
Sheet Number  
**M1.1**



**2 TOILET BUILDING HVAC FLOOR PLAN**  
SCALE: 1/4" = 1'



**1 PAVILION BUILDING HVAC FLOOR PLAN**  
SCALE: 1/4" = 1'

**FAN SCHEDULE**

MARK	FAN DATA				SERVICES	FAN TYPE	CONTROL	BASIS OF DESIGN
	CFM	E.S.P. IN.W.C.	MAX SONES	HP/WATTS				
F-TE-1	600	0.2"	2.5	267 WATTS	1043 DIRECT	TOILETS	1	GREENHECK CSP-A710
F-TE-2	225	0.2"	1.4	85 WATTS	931 DIRECT	TOILETS	1	GREENHECK CSP-A290

- 1 PROVIDE TWO (2) GREENHECK MODEL 1043 WALL MOUNTED MOTION DETECTORS, ONE FOR EACH TOILET ROOM, WIRE SO THAT EITHER DETECTOR WILL ACTIVATE THE FAN. TINES SHALL BE ADJUSTABLE.
- 2 PROVIDE VIBRATION ISOLATION, GALVANIZED HANGER RODS, FLEXIBLE CONNECTION AT FAN DISCHARGE AND ELECTRONIC SPEED CONTROL MOUNTED ON THE FAN.

**ELECTRIC HEATER SCHEDULE**

MARK	TYPE	KW	CFM		NOTES	MOUNTING HEIGHT	BASIS OF DESIGN
			100	100			
EUH-1,2	ELECTRIC UNIT HEATER	1.0	100	100	1	8'-0" AFF	MARKEL F30522DWB
EUH-2,3	ELECTRIC UNIT HEATER	1.0	100	100	1	8'-0" AFF	MARKEL F30522DWB

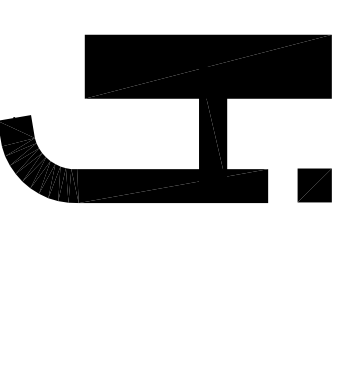
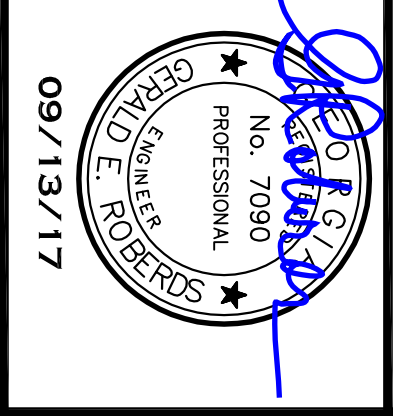
- 1 PROVIDE WALL MOUNT BRACKET AND INTEGRAL ADJUSTABLE THERMOSTAT.



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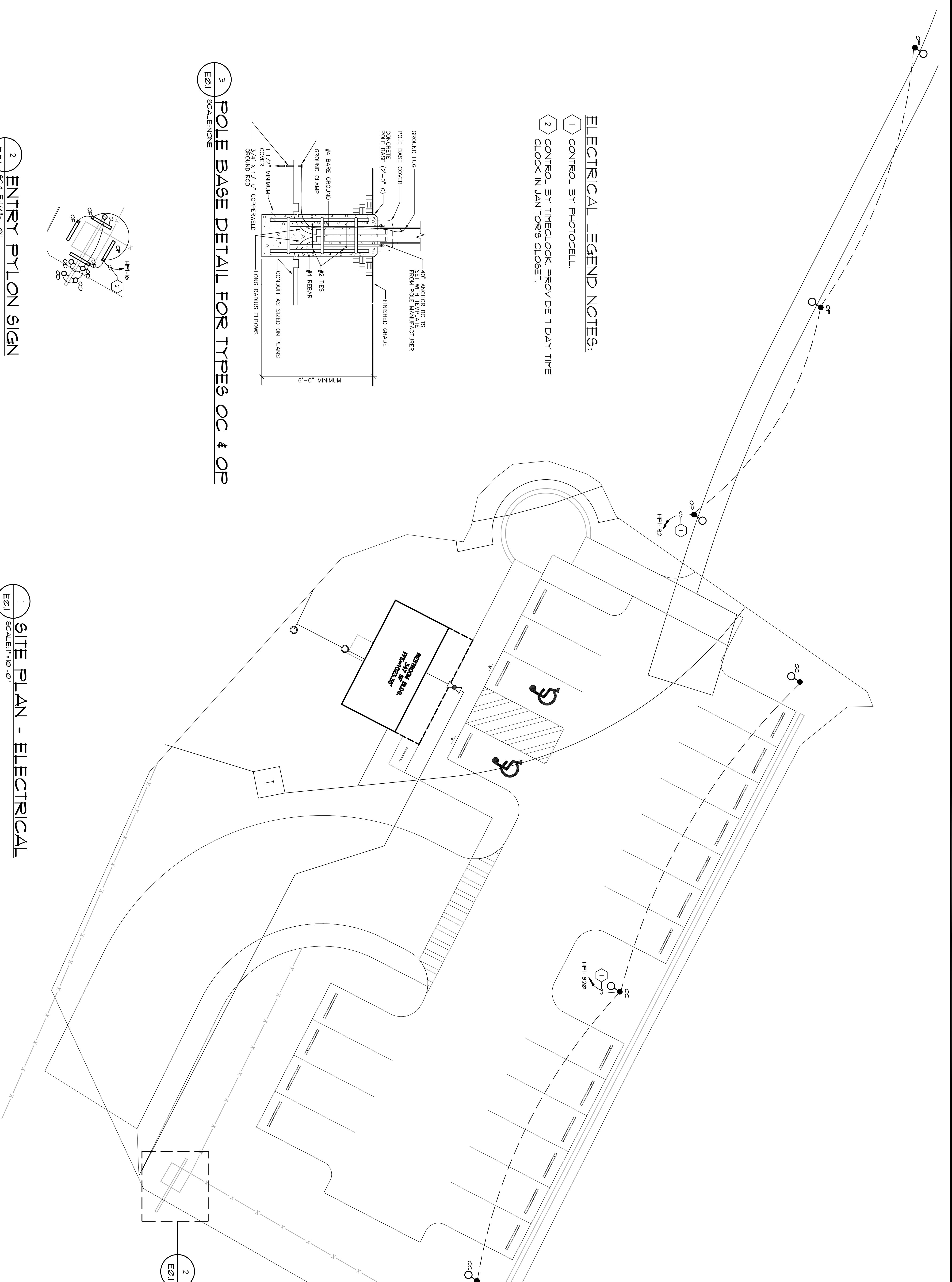
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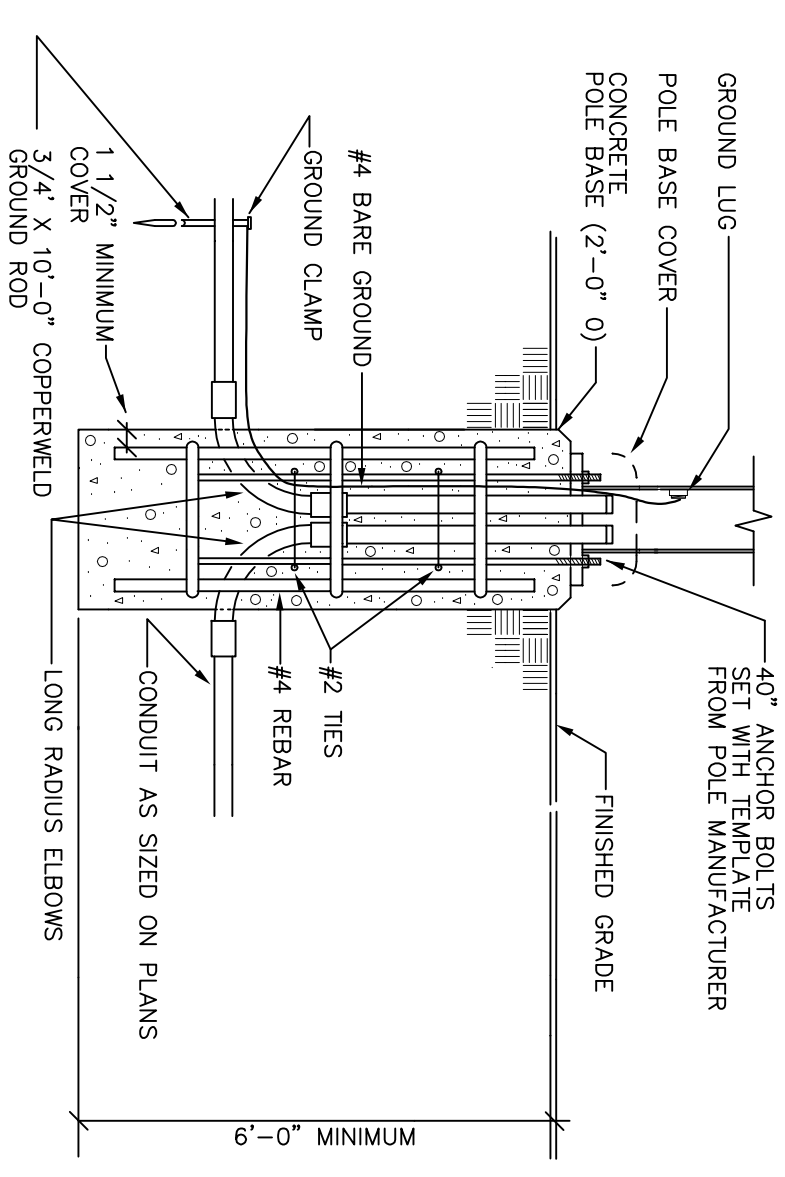
Project Location  
 Address 4380 E. PONCE DE LEON AVE  
 City, State Zip CLARKSTON, GA, 30021  
 Land Lot 119  
 District-Section 18  
 County DEKALB  
 Project No. 17030pr  
 Drawn By: V/J  
 Checked By: GER  
 Initial Issue Date: #####

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 2017110 GER  
 Sheet Number  
**E0.1**

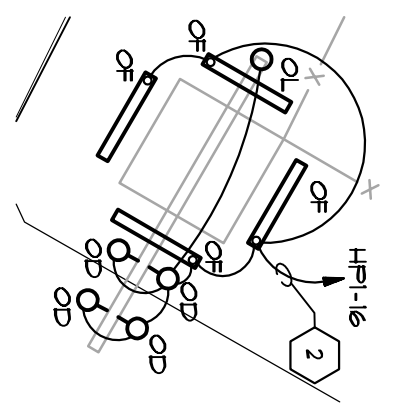


**ELECTRICAL LEGEND NOTES:**

- 1 CONTROL BY PHOTOCELL.
- 2 CONTROL BY TIMECLOCK PROVIDE 1 DAY TIME CLOCK IN JANITOR'S CLOSET.

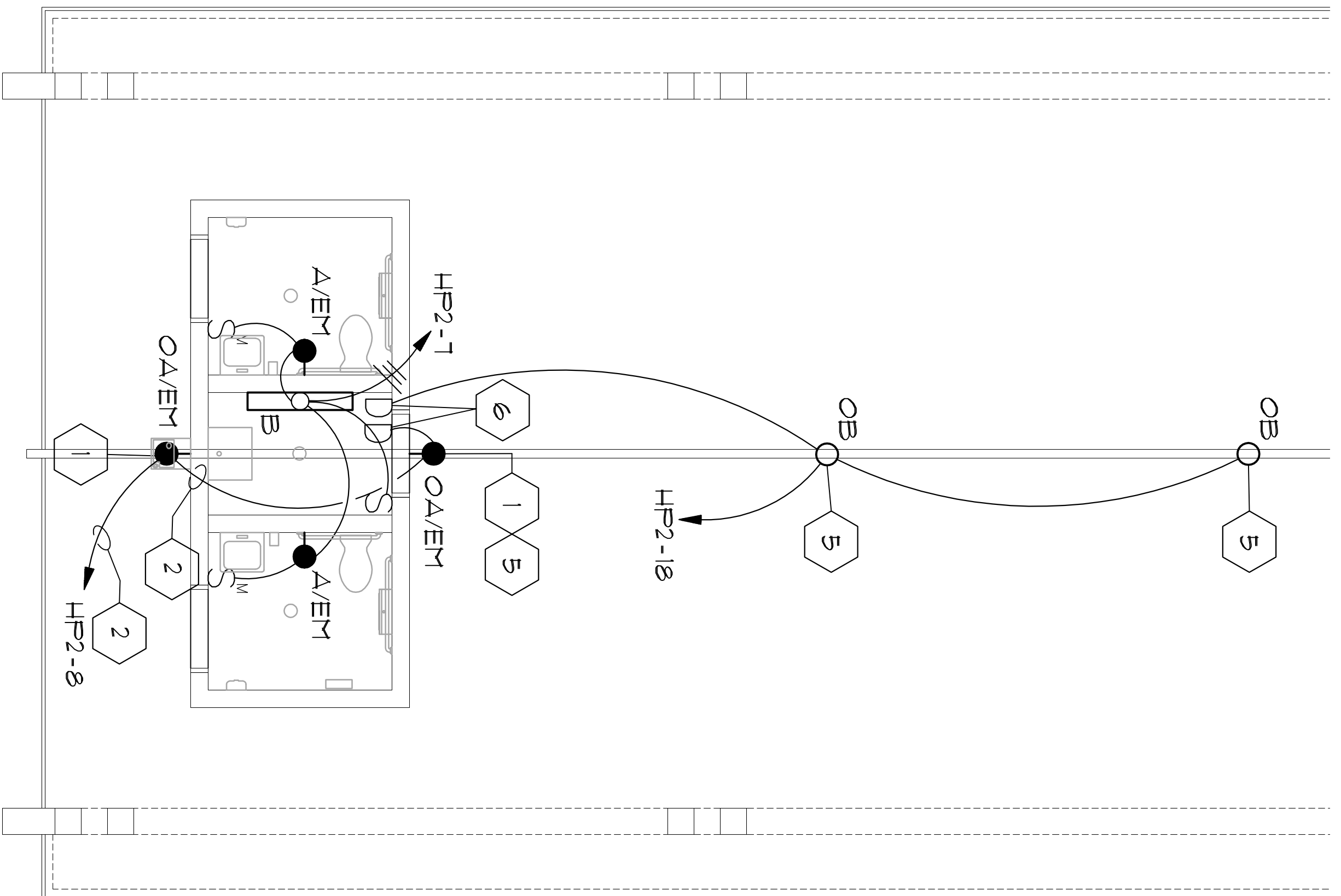


3 POLE BASE DETAIL FOR TYPES OC & OP  
 SCALE: NONE



2 ENTRY PYLON SIGN  
 SCALE: 1/4" = 1'-0"

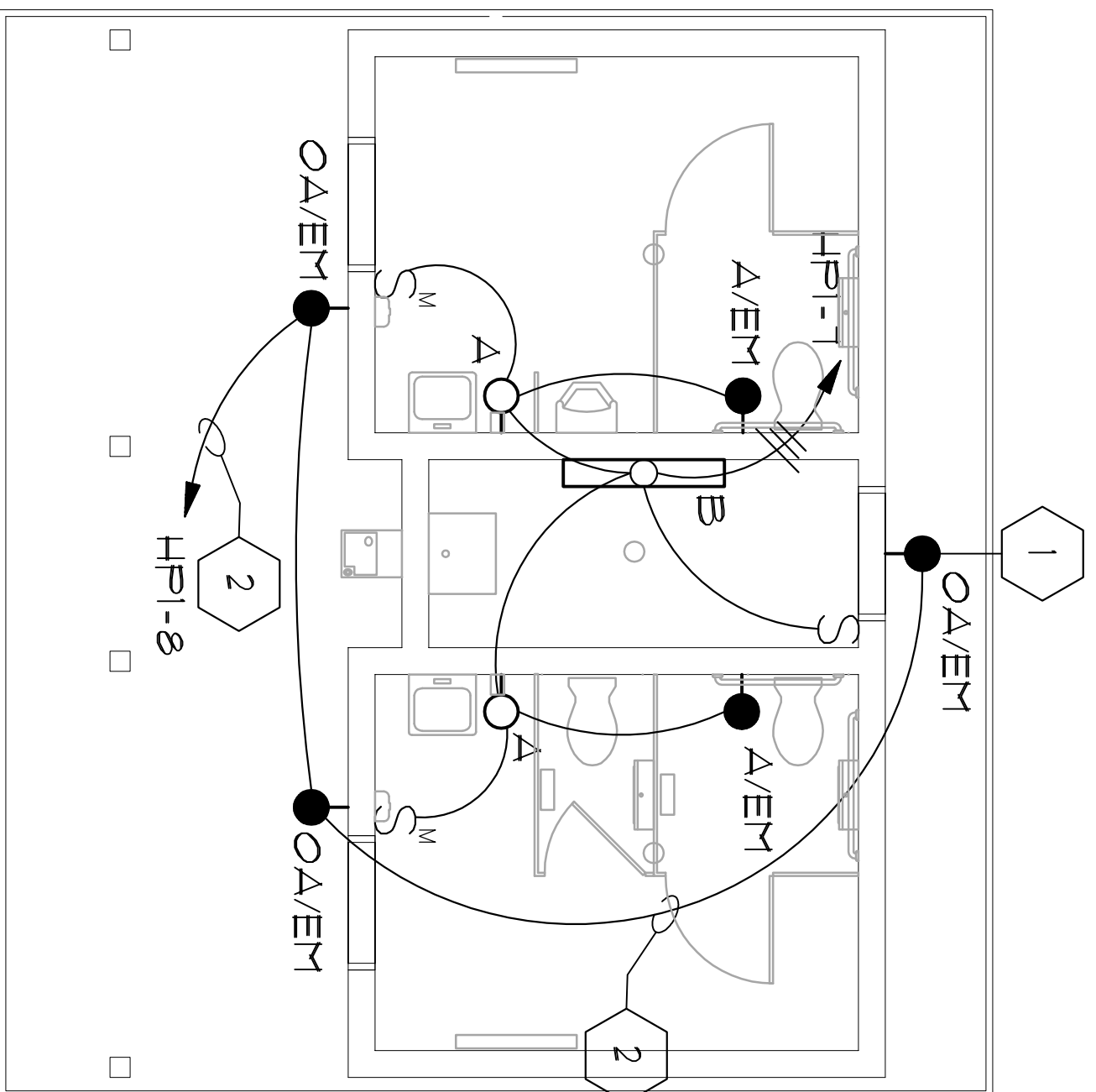
1 SITE PLAN - ELECTRICAL  
 SCALE: 1" = 10'-0"



**PAVILLION ELECTRICAL LEGEND NOTES:**

- 1 CONCEAL ALL CONDUITS AND RECESS BOXES.
- 2 CONTROL OUTSIDE FIXTURES WITH PHOTOCELL.
- 3 TWO (2) 2" EMPTY CONDUITS FOR FUTURE USE. TERMINATE AT LOCATION DIRECTED BY OWNER. CAP CONDUIT UNDERGROUND 30" BELOW FINISHED GRADE AND MARK WITH STEEL REBAR BURIED 6" BELOW GRADE STUB UP IN JANITORS CLOSET WITH RIGID CONDUIT AND CAP 12" ABOVE FLOOR.
- 4 COORDINATE EXACT LOCATION OF PANELBOARD TO AVOID WATER/SANITARY PIPING.
- 5 PROVIDE 0-10 V DIMMING DRIVER FOR THIS FIXTURE.
- 6 0-10 V DIMMER

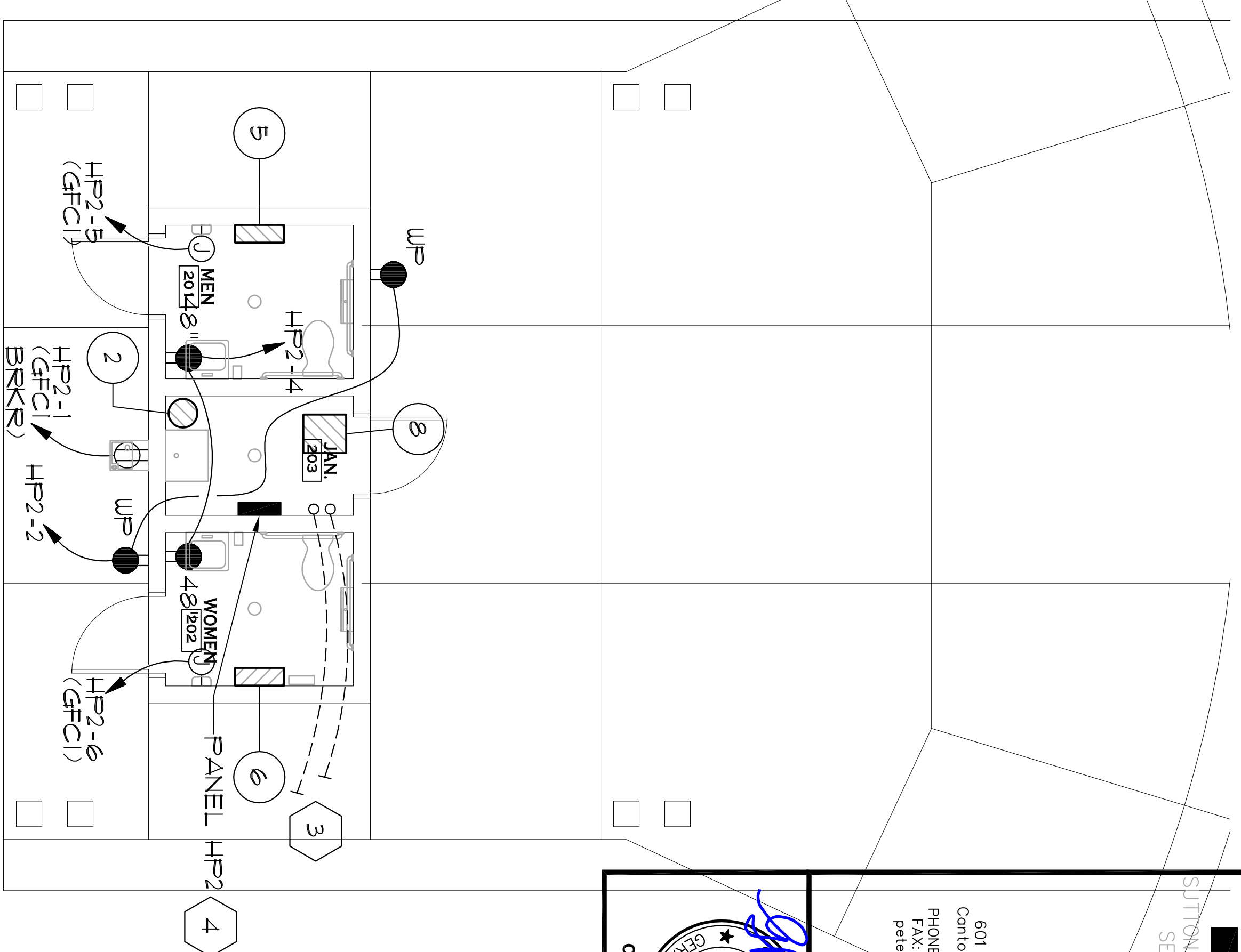
2 PAVILLION REFLECTED CEILING PLAN - LIGHTING  
SCALE: 1/4" = 1'-0"



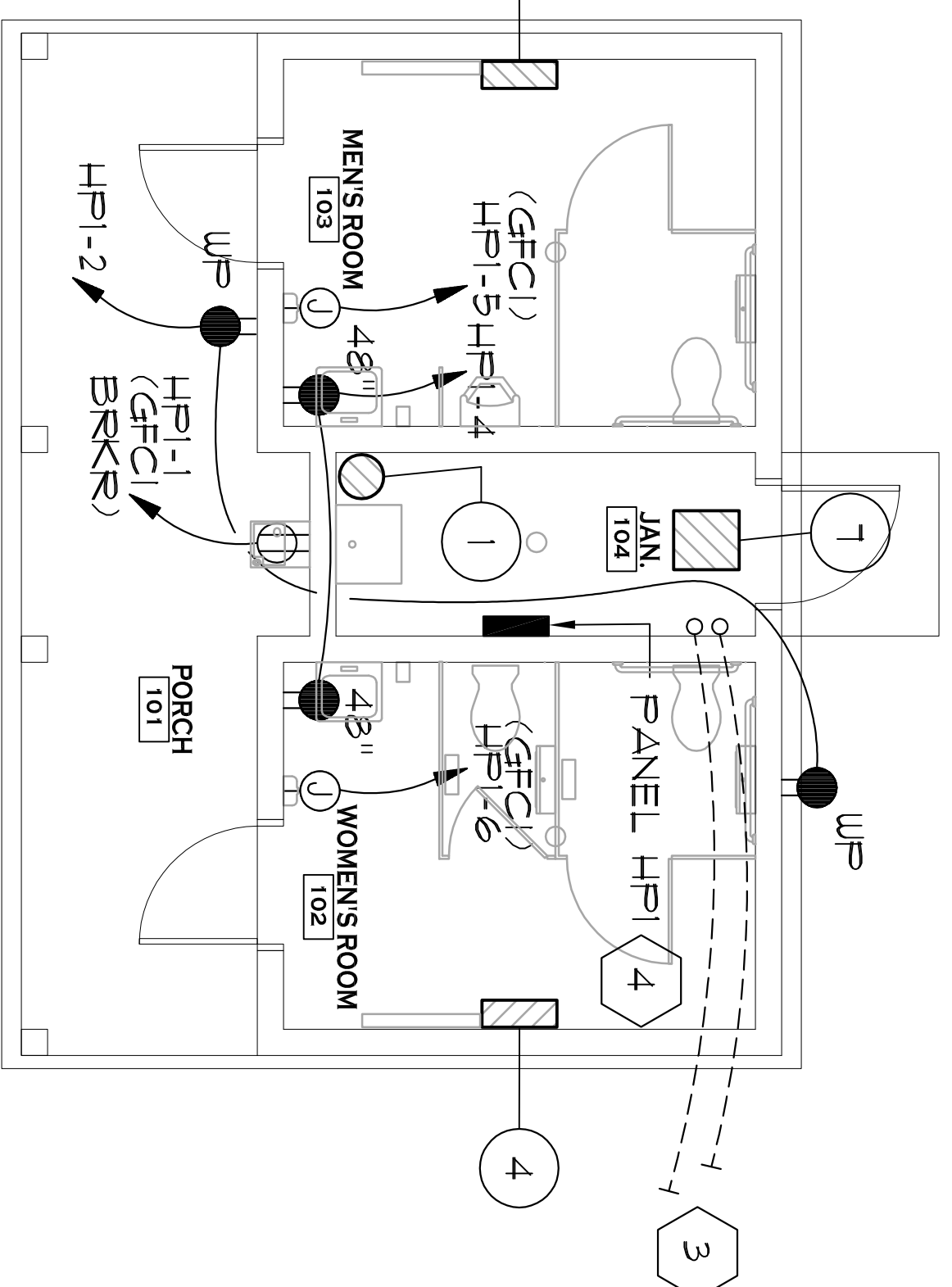
**RESTROOM ELECTRICAL LEGEND NOTES:**

- 1 CONCEAL ALL CONDUITS AND RECESS BOXES.
- 2 CONTROL OUTSIDE FIXTURES WITH PHOTOCELL.
- 3 TWO (2) 2" EMPTY CONDUITS FOR FUTURE USE. TERMINATE AT LOCATION DIRECTED BY OWNER. CAP CONDUIT UNDERGROUND 30" BELOW FINISHED GRADE AND MARK WITH STEEL REBAR BURIED 6" BELOW GRADE STUB UP IN JANITORS CLOSET WITH RIGID CONDUIT AND CAP 12" ABOVE FLOOR.
- 4 COORDINATE EXACT LOCATION OF PANELBOARD TO AVOID WATER/SANITARY PIPING.

4 RESTROOM REFLECTED CEILING PLAN - LIGHTING  
SCALE: 1/4" = 1'-0"



1 PAVILLION FLOOR PLAN - ELECTRICAL  
SCALE: 1/4" = 1'-0"



3 RESTROOM FLOOR PLAN - ELECTRICAL  
SCALE: 1/4" = 1'-0"

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Professional Engineer  
No. 7090  
Gerald E. Roberds  
09/13/17

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Initial Issue Date: #####

Sheet Title  
**PAVILLION AND  
RESTROOM FLOOR  
PLAN - ELECTRICAL**

Sheet Number  
**E1.1**

**ROBERDS**  
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2017110 GER

No.	Date	By	App.	Description
1	06/08/17			CD PROGRESS SET
2	07/19/17			100% REVIEW SET
3	09/15/17			BID SET
4	09/28/17			ADDENDUM #3

### SYMBOL LEGEND

MOUNTING HEIGHT IS FROM FINISHED FLOOR TO CENTERLINE OF DEVICE OR OUTLET. HEIGHT MAY VARY TO COINCIDE WITH BUILDING CONSTRUCTION

SYMBOL	DESCRIPTION	MOUNTING HEIGHT
AFF	ABOVE FINISHED FLOOR	
WF	WEATHER PROOF	
GFI	GROUND FAULT CIRCUIT INTERRUPTER	
(Symbol)	CROSS HATCHING REPRESENTS GROUND, NEUTRAL AND HOT RESPECTIVELY, ARROW REPRESENTS HOME RUN	
(Symbol)	CONDUIT CONCEALED IN WALL OR ABOVE CEILING	
(Symbol)	CONDUIT CONCEALED IN SLAB-IN GROUND OR UNDERFLOOR	
(Symbol)	CONDUIT EXPOSED	
(Symbol)	CEILING MOUNTED SMOKE DETECTOR	
(Symbol)	WALL MOUNTED LIGHTING FIXTURE SEE SCHEDULE	48" NOTED
(Symbol)	DUPLEX RECEPTACLE OUTLET	18" AFF.
(Symbol)	GROUND FAULT CURRENT INTERRUPTER TYPE RECEPTACLE	
(Symbol)	JUNCTION BOX WITH COVERPLATE WALL MOUNTED	
(Symbol)	PANELBOARD 240V/120V	
(Symbol)	DISCONNECT SWITCH - 30/3/30 SWITCH SIZE/ POLES/ FUSE SIZES	
S	S.P.S.T. LIGHTING SWITCH	48" AFF.
(Symbol)	LIGHTING CONTROL - SWITCH / MOTION SENSOR	48" AFF.
D	0-10V DIMMER	48" AFF.

### PANELBOARD HP2 SCHEDULE

VOLTAGE: 240/120 V MAINS: 200A/2P MAIN BREAKER MOUNTING: SURFACE REMARKS:

NO	SERVES	LOAD (kVA)	BREAKER TRIP	PHASE	BREAKER TRIP	LOAD (kVA)	SERVES	NO
1	EDF	1.12	20	1	1	20	0.4	2
3	(GFCI BREAKER)	--	--	--	1	20	0.4	4
5	ELEC. HAND DRYER	1.12	20	1	1	20	12	6
7	JANITOR CLOSET LTG.	0.3	20	1	1	20	0.2	8
9	EUH-3	1.0	20	1	1	20	1.0	10
11	SPARE				1	20		12
13	HUH-1	1.0	20	2	1	20	0.4	14
15	---	1.0	--	--	1	20	0.4	16
17	LTG CNTRL FNL "LCP"	0.01	20	1	2	20	0.2	18
19	EXTERIOR POLE LIGHTS	0.2	20	2	--	--	0.2	20
21	---	0.2	--	--	2	30	0.0	22
23	SPARE				--	--	0.0	24
25	SPARE				1			26
27	SPARE				1			28
29	SPARE				1			30

LOAD SUMMARY: LIGHTING 1.1 KVA, RECEPTACLE 2.0 KVA, MOTOR 0.4 KVA, A/C HEATING 6.4 KVA, MISC 0.01 KVA  
CURRENT 36.25 A

NOTES: 1. GFCI BREAKER

### PANELBOARD HP1 SCHEDULE

VOLTAGE: 240/120 V MAINS: 200A/2P MAIN BREAKER MOUNTING: SURFACE REMARKS:

NO	SERVES	LOAD (kVA)	BREAKER TRIP	PHASE	BREAKER TRIP	LOAD (kVA)	SERVES	NO
1	EDF	1.12	20	1	1	20	0.4	2
3	(GFCI BREAKER)	--	--	--	1	20	0.4	4
5	ELEC. HAND DRYER	1.12	20	1	1	20	12	6
7	JANITOR CLOSET LTG.	0.3	20	1	1	20	0.2	8
9	EUH	1.0	20	1	1	20	1.0	10
11	SPARE				1	20		12
13	HUH-1	1.0	20	2	1	20	0.4	14
15	---	1.0	--	--	1	20	0.4	16
17	LTG CNTRL FNL "LCP"	0.01	20	1	2	20	0.2	18
19	EXTERIOR POLE LIGHTS	0.2	20	2	--	--	0.2	20
21	---	0.2	--	--	2	30	0.0	22
23	SPARE				--	--	0.0	24
25	SPARE				1			26
27	SPARE				1			28
29	SPARE				1			30

LOAD SUMMARY: LIGHTING 1.1 KVA, RECEPTACLE 2.0 KVA, MOTOR 0.4 KVA, A/C HEATING 6.4 KVA, MISC 0.01 KVA  
CURRENT 43.75 A

NOTES: 1. GFCI BREAKER

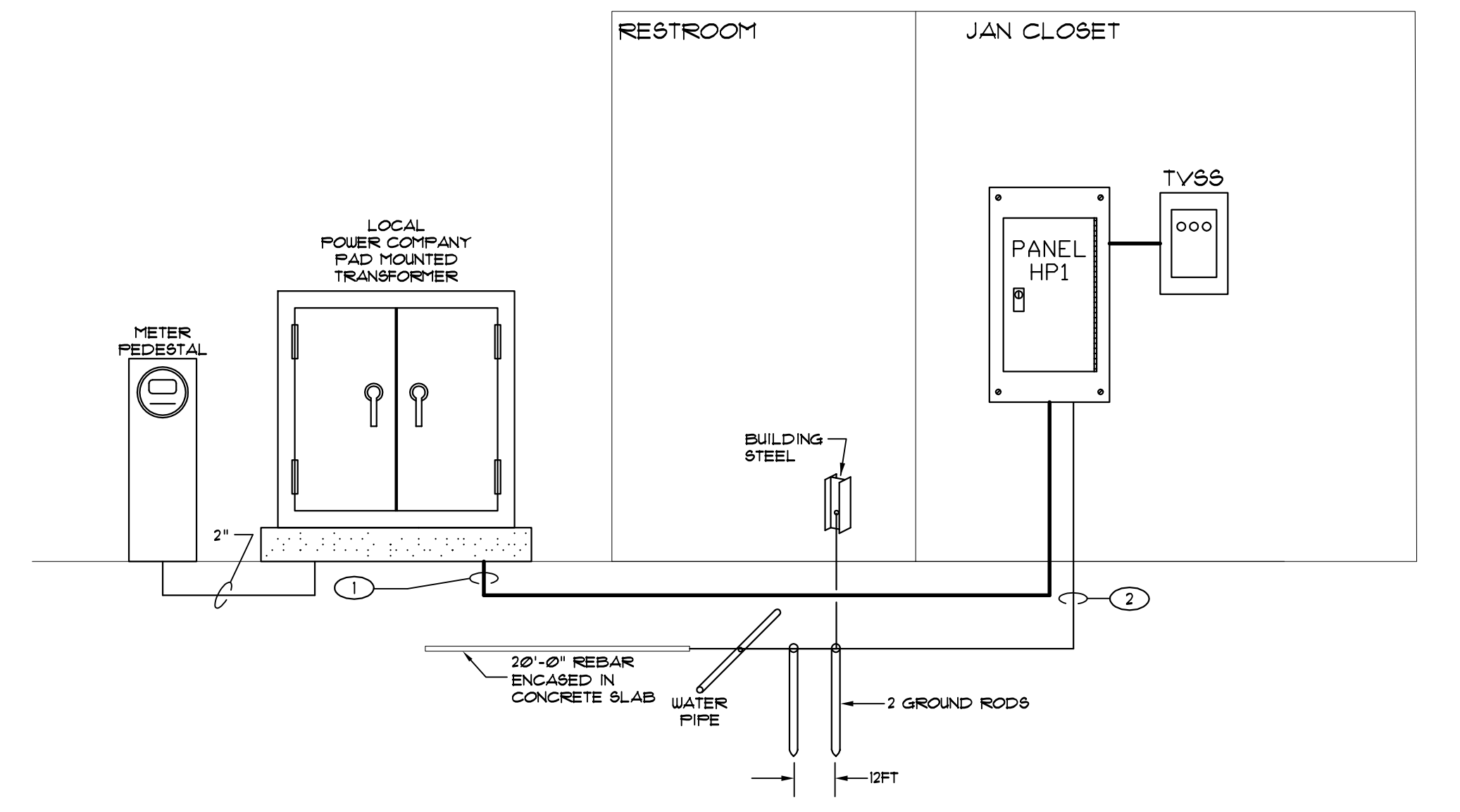
### MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

ITEM NO.	DESCRIPTION	EQUIPMENT CHARACTERISTICS				CIRCUIT	FEEDER	DISCONNECT SWITCH			REMARKS	
		VOLTS	FL	KW	HP			FLA	SIZE	F		FUSE
1	HUH-1	240	1	2.0		HP1-13,15	2"10 x 1"10GND -1/2"C.	30	2			HUH-1 LOCATED ON SHELF
2	HUH-2	240	1	2.0		HP2-13,15	2"10 x 1"10GND -1/2"C.	30	2			HUH-2 LOCATED ON SHELF
3	EUH-1	120	1	1.0		HP1-9	2"12 x 1"12GND -1/2"C.	20	1			
4	EUH-2	120	1	1.0		HP1-10	2"12 x 1"12GND -1/2"C.	20	1			
5	EUH-3	120	1	1.0		HP2-9	2"12 x 1"12GND -1/2"C.	20	1			
6	EUH-4	120	1	1.0		HP2-10	2"12 x 1"12GND -1/2"C.	20	1			
7	F-TE-1	120	1	0.4		HP1-14	2"12 x 1"12GND -1/2"C.	20	1			
8	F-TE-2	120	1	0.4		HP2-14	2"12 x 1"12GND -1/2"C.	20	1			

### LIGHTING FIXTURE SCHEDULE

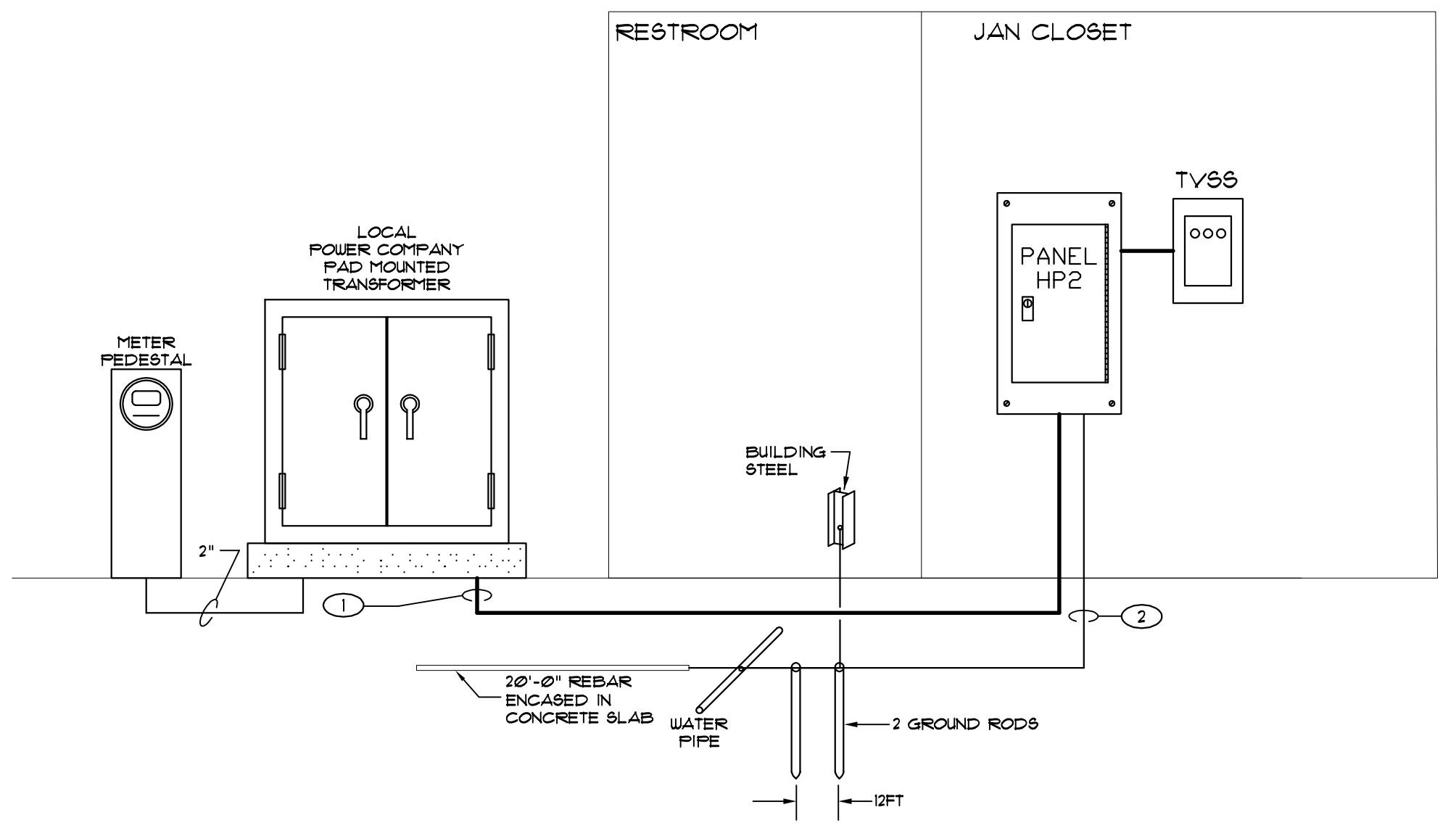
REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT NECESSARILY BE REFLECTED IN CATALOG NUMBER AND/OR DESCRIPTION IN THIS SCHEDULE. MATCH VOLTAGE OF FIXTURES TO CIRCUIT SERVING SAME.

MARK	DESCRIPTION	MOUNTING	LAMPS	VOLTAGE	REMARKS
/EM	PROVIDE BATTERY BACKUP				
A	WALL MOUNTED INTERIOR LIGHT KENAALL #1013HBL-PP-MB-20L35K-120	COORDINATE MOUNTING WITH ARCHITECT	1 - 35W LED	120	SEE SHEET A21 ELEVATIONS FOR EXACT LOCATION
B	WALL MOUNTED STRIP LIGHT COLUMBIA #C8435MLEULL14	COORDINATE MOUNTING WITH ARCHITECT	1 - 53W LED	120	
OA	WALL MOUNTED EXTERIOR LIGHT KENAALL #1R13BL-PP-MB-20L35K-120	COORDINATE MOUNTING WITH ARCHITECT	1 - 20W LED	120	SEE SHEET A21 ELEVATIONS FOR EXACT LOCATION
OB	CEILING MOUNTED EXTERIOR LIGHT KENAALL #1R13BL-PP-MB-20L35K-120	CEILING MOUNTED	1 - 20W LED	120	COORDINATE LOCATION WITH ARCHITECT
OC	LED POLE MOUNTED LUMINAIRE LUMEC #D1550-SG-LM-1A-135W0LED-4K-R-LE4F-22FT POLE	MOUNT ON 22"-0" POLE	1 - 135W LED	240	COLOR TO BE SELECTED BY ARCHITECT
OD	LED RLM SIGN LUMINAIRE TROY #3RA12LED18-1-3-L5A23	MOUNT ON SIGN	1 - 18W LED	120	
OF	LED LINEAR FLOOD KIM #4348F0-32L3KJUV-DB-FH48	GROUND MOUNTED	1 - 14W LED	120	PROVIDE 8" x 8" x 30" CONCRETE SLAB FOR MOUNTING
OL	LED HANGING LANTERN TIMELESS DESIGN #1D4T-WLED LAMP	HUNG FROM SIGN	1 - 13W LED	120	
OP	POST TOP LED LUMINAIRE LUMEC #D1550-SG-LM-1A-110W0LED-4K-R-LE55-AM0412	MOUNT ON 12"-0" POLE	1 - 135W LED	240	COLOR TO BE SELECTED BY ARCHITECT



**1 RESTROOM ELECTRICAL RISER DIAGRAM**  
E1.0 SCALE: NONE

RESTROOM ELECTRICAL RISER NOTES:  
1 3/8" - 2"C.  
2 1"10 GND - 1"C.



**2 PAVILLION ELECTRICAL RISER DIAGRAM**  
E1.0 SCALE: NONE

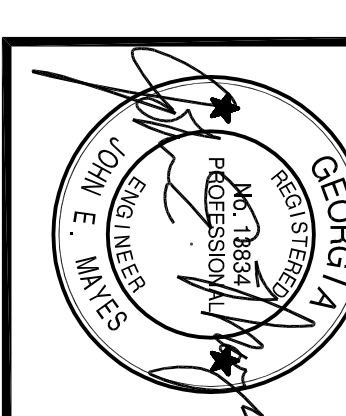
PAVILLION ELECTRICAL RISER NOTES:  
1 3/8" - 2"C.  
2 1"10 GND - 1"C.

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9/28/2017 12:25 PM

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ISSUE	Description	By	App.	Date
1	100% Review Set			7-19-17
2	Bid Set			9-15-17

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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.: 17030P  
 Drawn By: MR  
 Checked By: JP  
 Initial Issue Date: 7-19-17

Sheet Title  
**PLUMBING LEGEND,  
 SCHEDULE &  
 DETAILS**  
 Sheet Number P.1.0

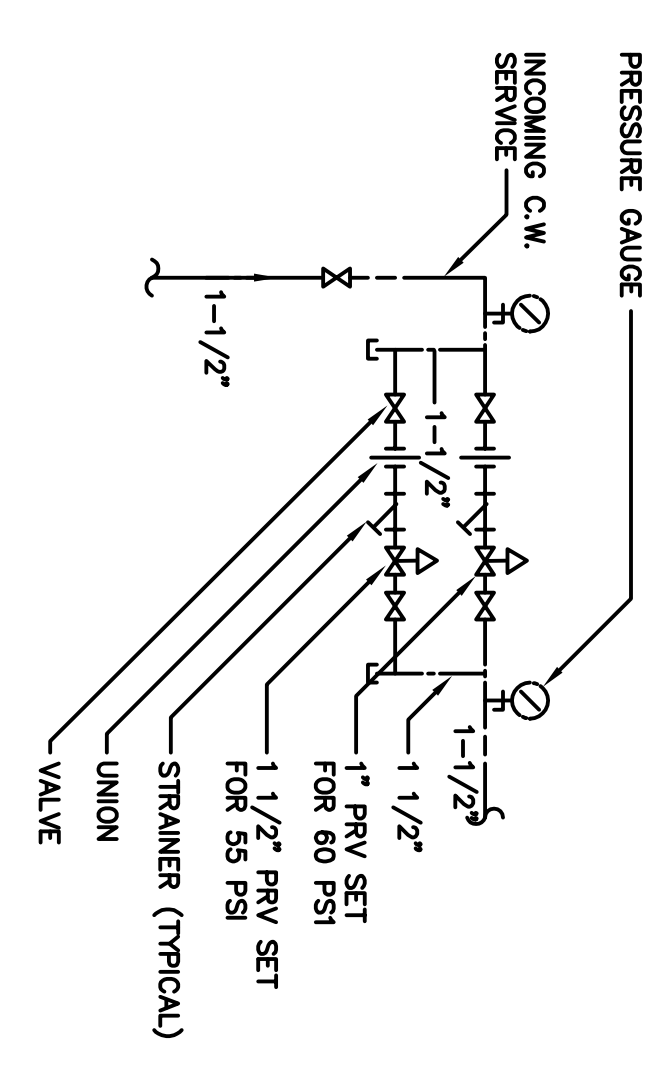
### SYMBOLS & ABBREVIATIONS

---	RAIN WATER LEADER (WS)	----	HOT WATER (HW)
- - - -	OR STORM	- - - -	COLD WATER (CW)
- - - -	SOIL OR WASTE ABOVE FLOOR OR CEILING (S OR W)	- - - -	CIRCULATING HOT WATER (CHW)
- - - -	SOIL OR WASTE BELOW FLOOR (S OR W)	---	GAS (G)
- - - -	VENT (V)		

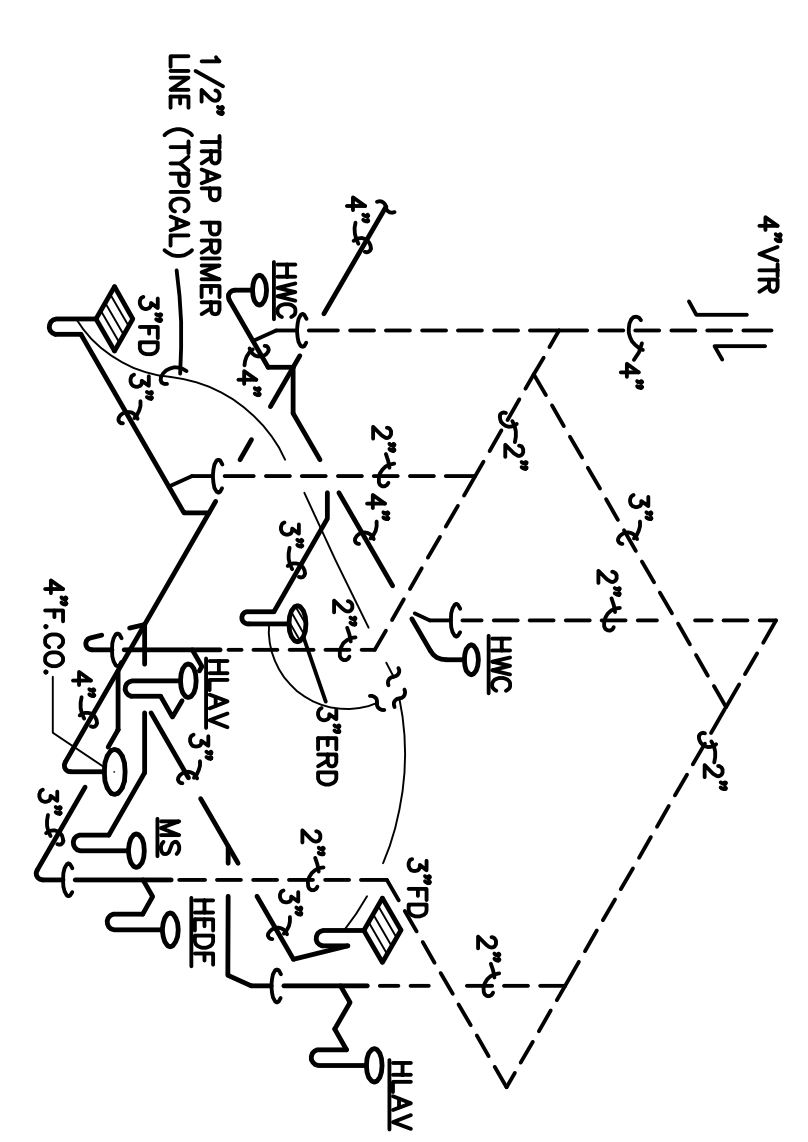
- |        |                               |      |                               |
|--------|-------------------------------|------|-------------------------------|
| AD     | AREA DRAIN                    | HB   | HOSE BIBB                     |
| ADP    | AREA ABOVE FINISHED FLOOR     | HD   | HUB DRAIN                     |
| AFG    | ACCESS PANEL                  | HWH  | HOT WATER HEATER              |
| ARV    | ADD RESISTANT WASTE           | HUR  | HANDICAPPED URINAL            |
| ARW    | ADD RESISTANT WASTE           | INV  | INVERT                        |
| BV     | BALL VALVE                    | LAV  | LAVATORY                      |
| CHK.V. | CHECK VALVE                   | LAV  | LAVATORY                      |
| CI     | CAST IRON                     | MS   | MANHOLE STOP                  |
| CLG.   | CEILING                       | HLAV | HANDICAPPED LAVATORY          |
| CO     | CLEANOUT                      | PRV  | PRESSURE REDUCING VALVE       |
| CT     | COUNTER TOP                   | RD   | ROOF DRAIN                    |
| DN     | DOWN                          | RV   | RELIEF VALVE                  |
| F.C.O. | FLOOR CLEANOUT                | SD   | SHOWER DRAIN                  |
| FD     | FLOOR DRAIN                   | SH   | SHOWER HEAD                   |
| FS     | FLOOR SINK                    | SS   | SERVICE SINK                  |
| FD     | FLOOR DRAIN                   | TAP  | TEMPERATURE & PRESSURE URINAL |
| DD     | DECK DRAIN                    | UR   | URINAL                        |
| HEDF   | HANDICAPPED DRINKING FOUNTAIN | VR   | VENT THRU ROOF                |
| EDF    | ELECTRIC DRINKING FOUNTAIN    | WC   | WATER CLOSET                  |
| ERD    | EQUIPMENT ROOM DRAIN          | HWC  | HANDICAPPED WATER CLOSET      |
| FA     | FRESH AIR                     | WH   | WALL HYDRANT (WATER)          |
| FD     | FLOOR DRAIN                   | YH   | YARD HYDRANT (WATER)          |
| GI     | GLYCOL                        | YHA  | YARD HAMMER ARRESTOR          |
| G.V.   | GLOBE VALVE                   | YCD  | YARD CLEANOUT                 |
| FD     | FLOOR DRAIN                   |      |                               |
| FCV    | FLOW CONTROL VALVE            |      |                               |

### PLUMBING FIXTURE SCHEDULE

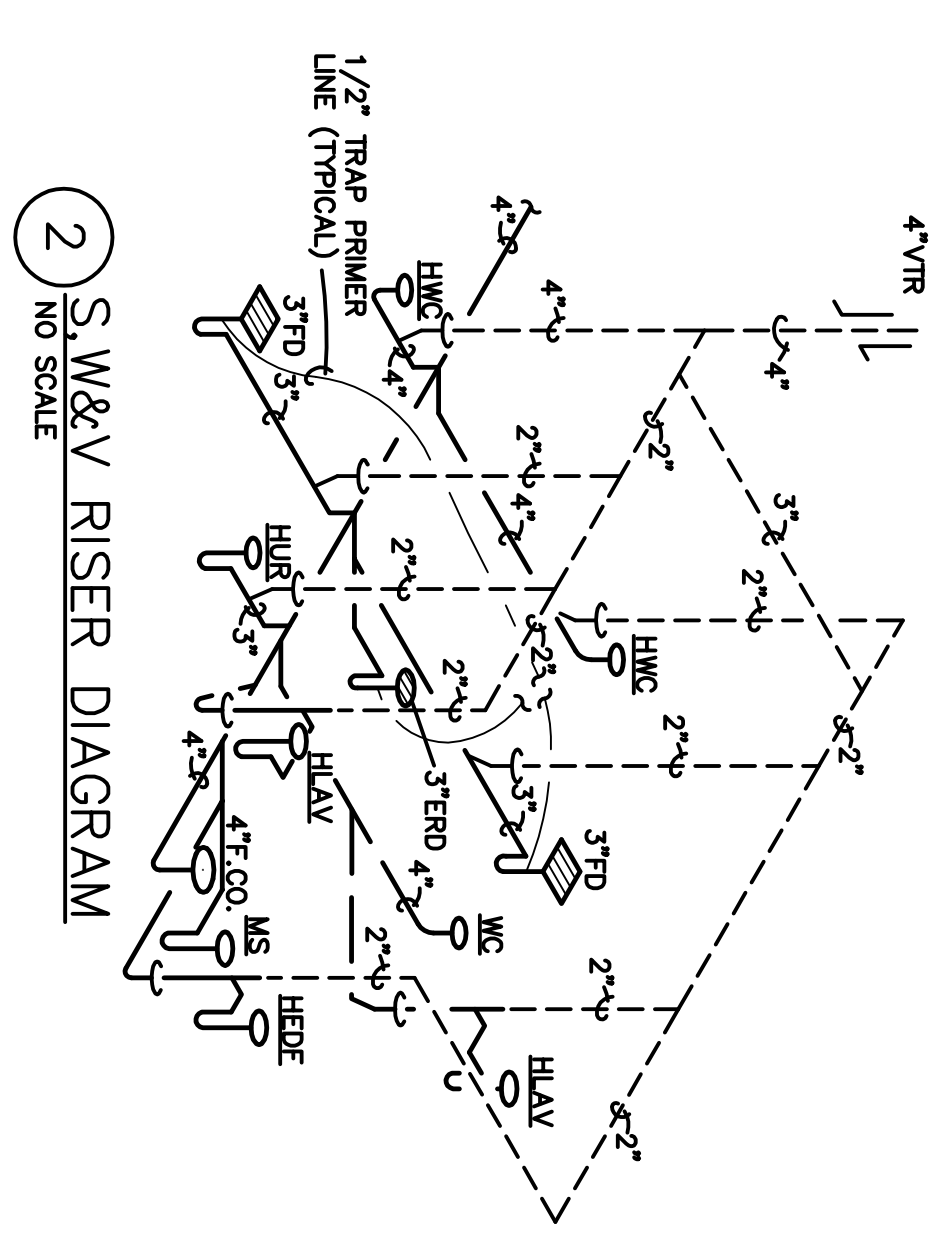
MARK	DESCRIPTION	CONNECTIONS			RIM HEIGHT	REMARKS
		CW	HW	S/W		
WC	WATER CLOSET - REGULAR FLUSH VALVE	-	-	4"	15"	
HWC	WATER CLOSET - HANDICAPPED REGULAR FLUSH VALVE	1"	-	4"	18"	18" TO TOP OF SLAB
HUR	HANDICAPPED URINAL - REGULAR FLUSH VALVE	3/4"	-	2"	FLOOR OUTLET	
HLAV	HANDICAPPED LAVATORY - HANDICAPPED WALL HUNG	1/2"	1/2"	1-1/4"	34"	
HEDF	HANDICAPPED DRINKING FOUNTAIN - WALL HUNG - HANDICAPPED	1/2"	-	1-1/4"	36" MAX SPOUT HEIGHT 27" TO BOT. OF APRON	
MS	MOP RECEPTOR - FLOOR MOUNTED	1/2"	1/2"	3"	8" MINIMUM	FAUCET 48" AFF



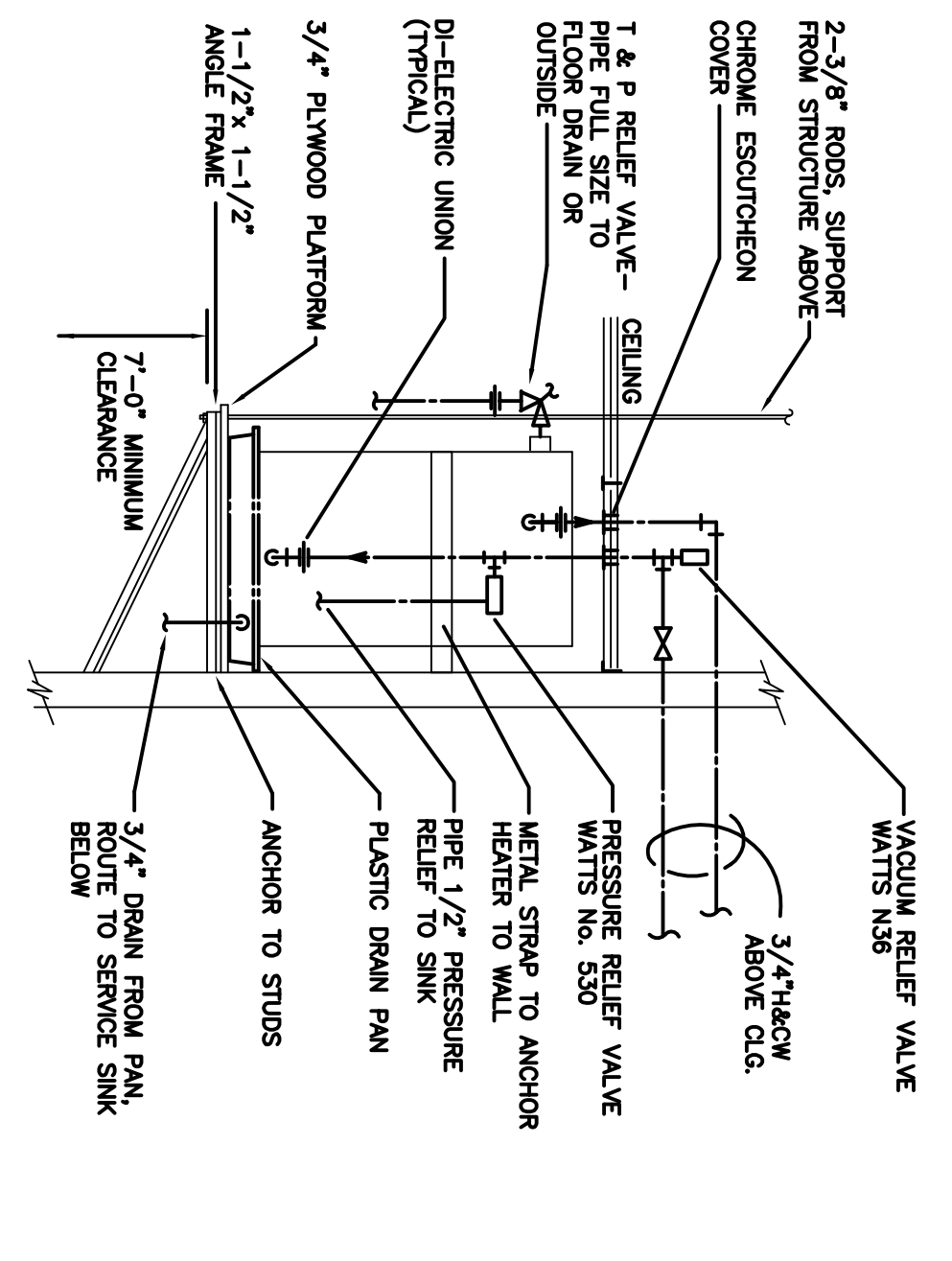
P.R.V. STATION  
 NO SCALE  
 NOTE: PRV'S TO BE WATTS 2235B OR APPROVED EQUAL.



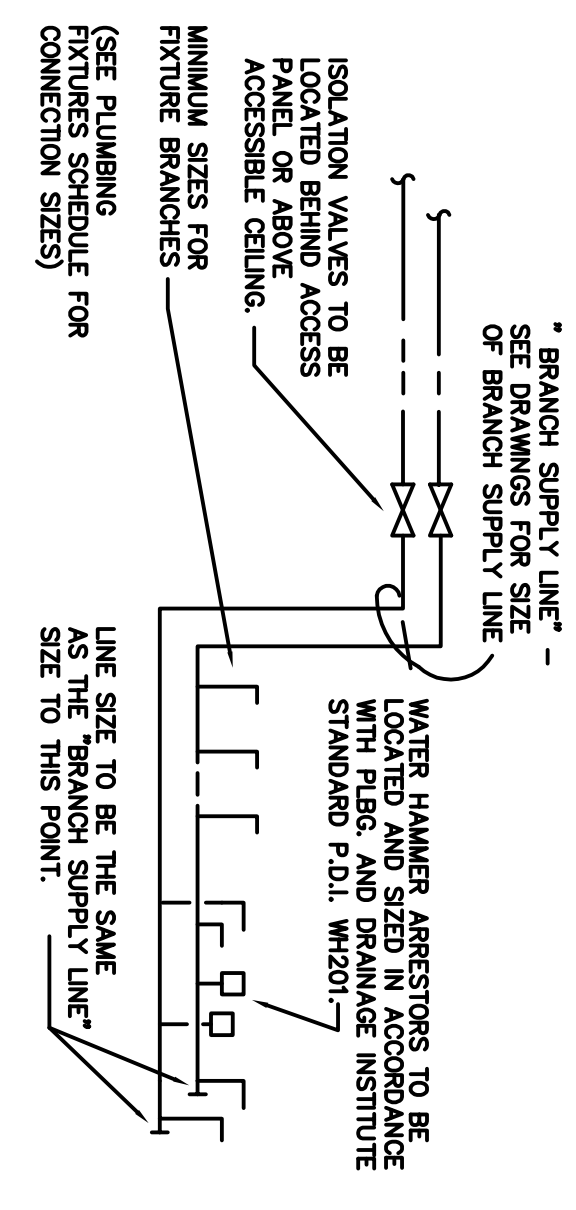
S.W.&V RISER DIAGRAM  
 (1)  
 NO SCALE



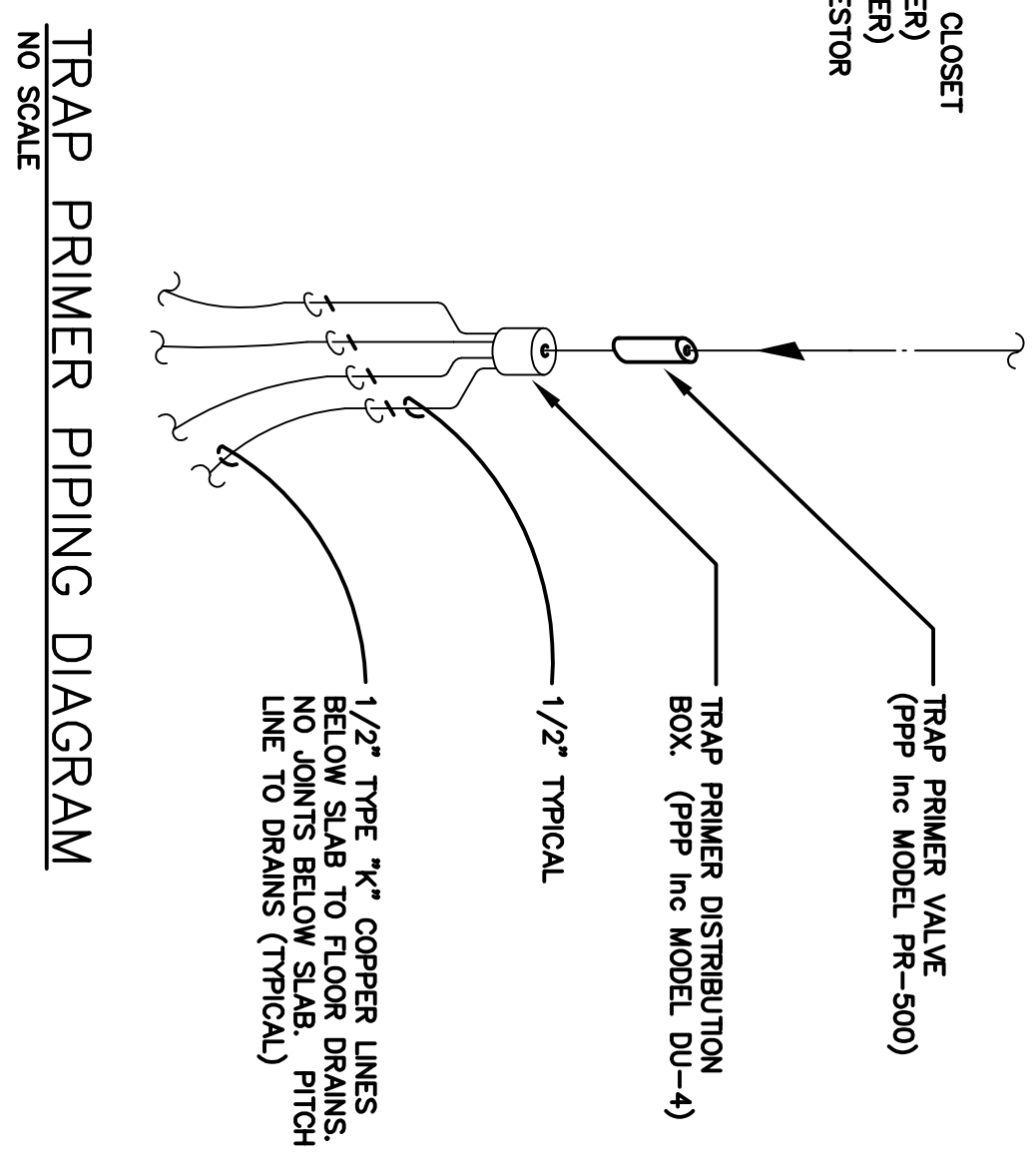
S.W.&V RISER DIAGRAM  
 (2)  
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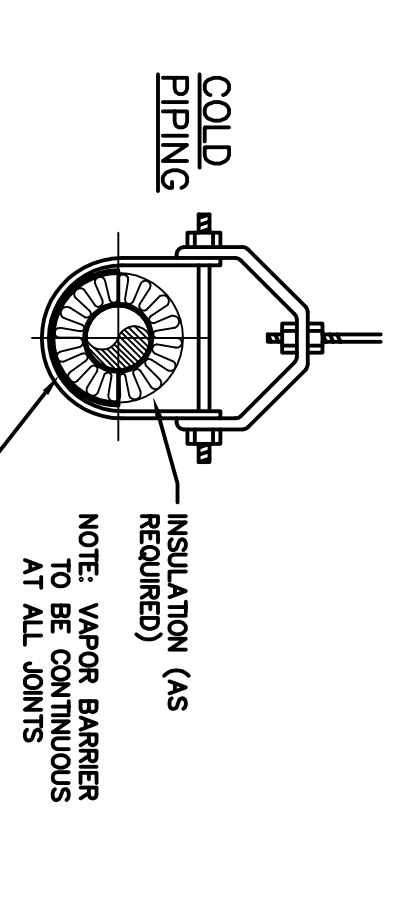
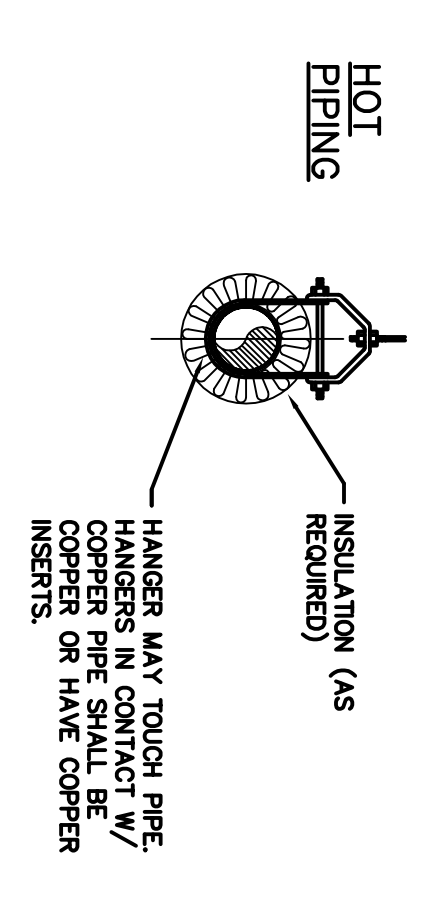
ELECTRIC WATER HEATER DETAIL (HWH-1)  
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TYPICAL WATER PIPING DETAIL FOR TOILETS  
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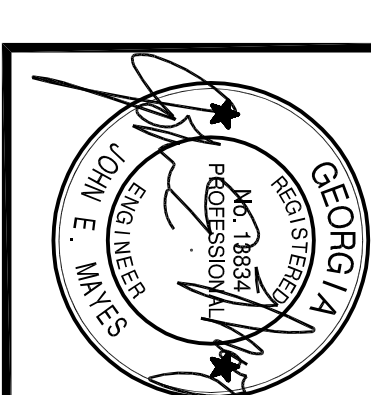


TRAP PRIMER PIPING DIAGRAM  
 NO SCALE



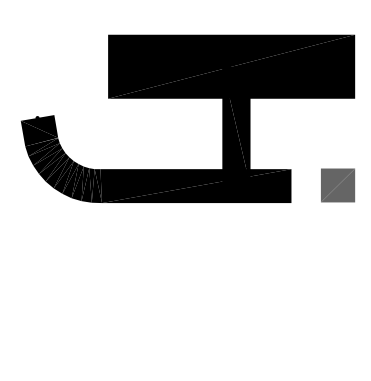
INSULATED PIPING PROTECTION DETAILS  
 NO SCALE

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1	100% Review Set		7-19-17
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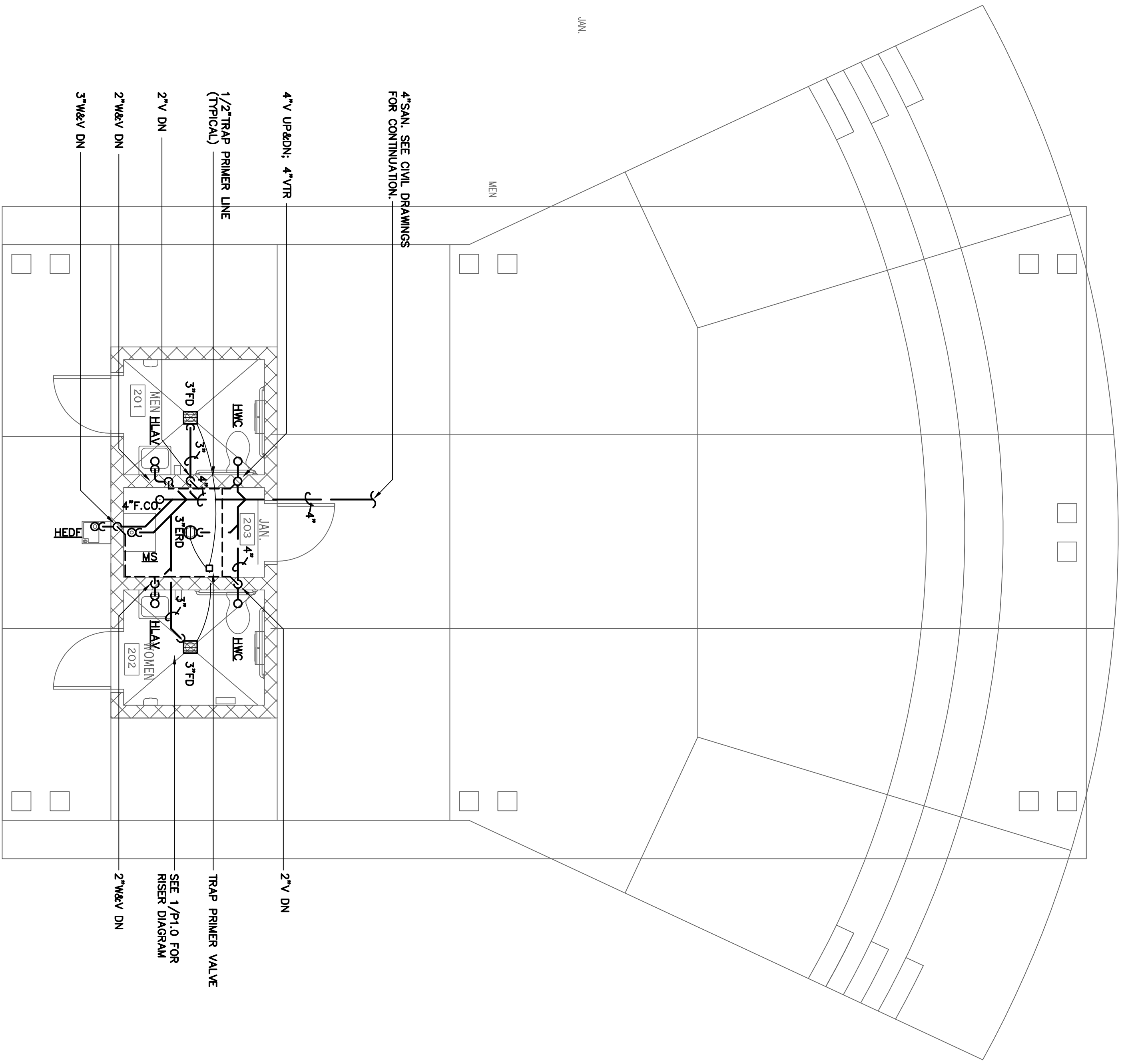
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Project Title  
**FRIENDSHIP FOREST  
 WILDLIFE SANCTUARY**

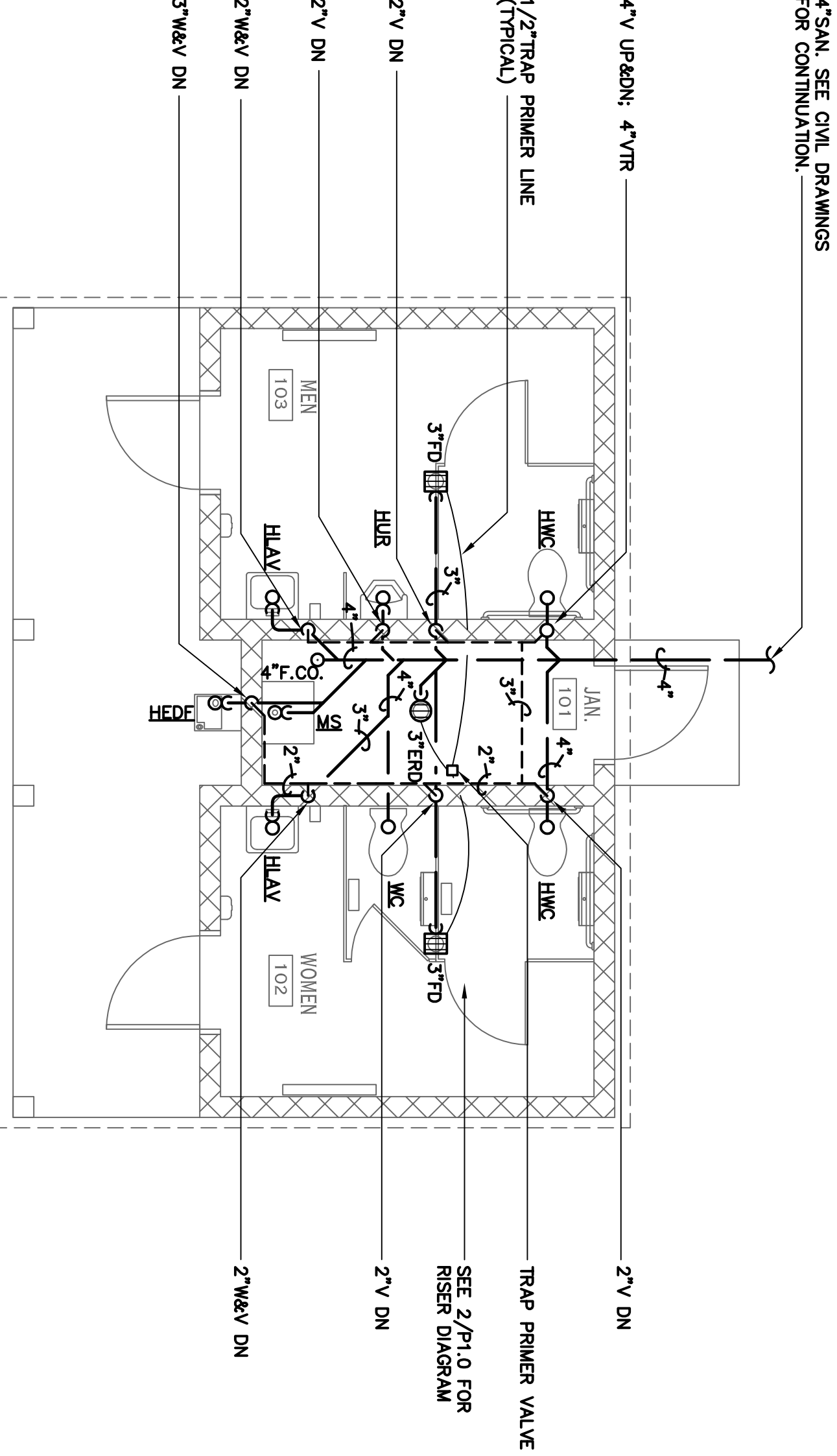
Project Location  
 Address: 4380 E. PONCE DE LEON AVE  
 City, State Zip: CLARKSTON, GA, 30021  
 Land Lot: 119  
 District/Section: 18  
 County: DEKALB

Project No.: 17030P  
 Drawn By: MR  
 Checked By: JP  
 Initial Issue Date: 7-19-17  
 Sheet Title  
**S, W&V PIPING PLANS**

Sheet Number  
**P1.1**



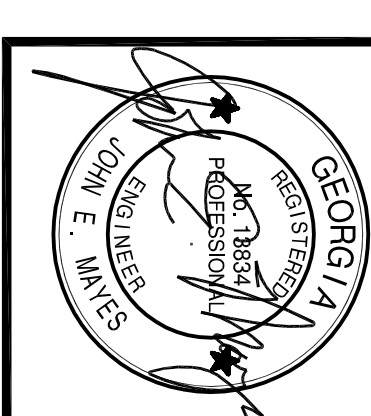
**1 PAVILION BUILDING PLUMBING FLOOR PLAN**  
 SCALE: 1/4" = 1' S, W&V PIPING



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

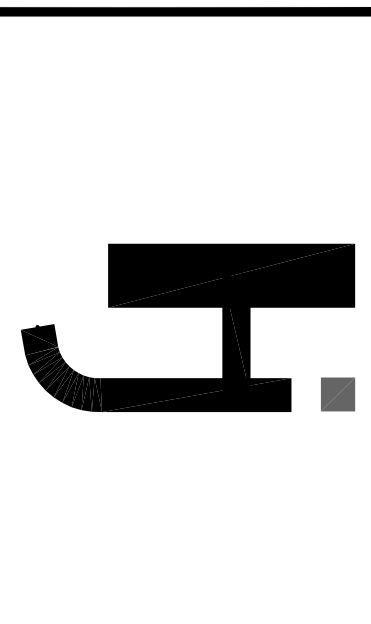


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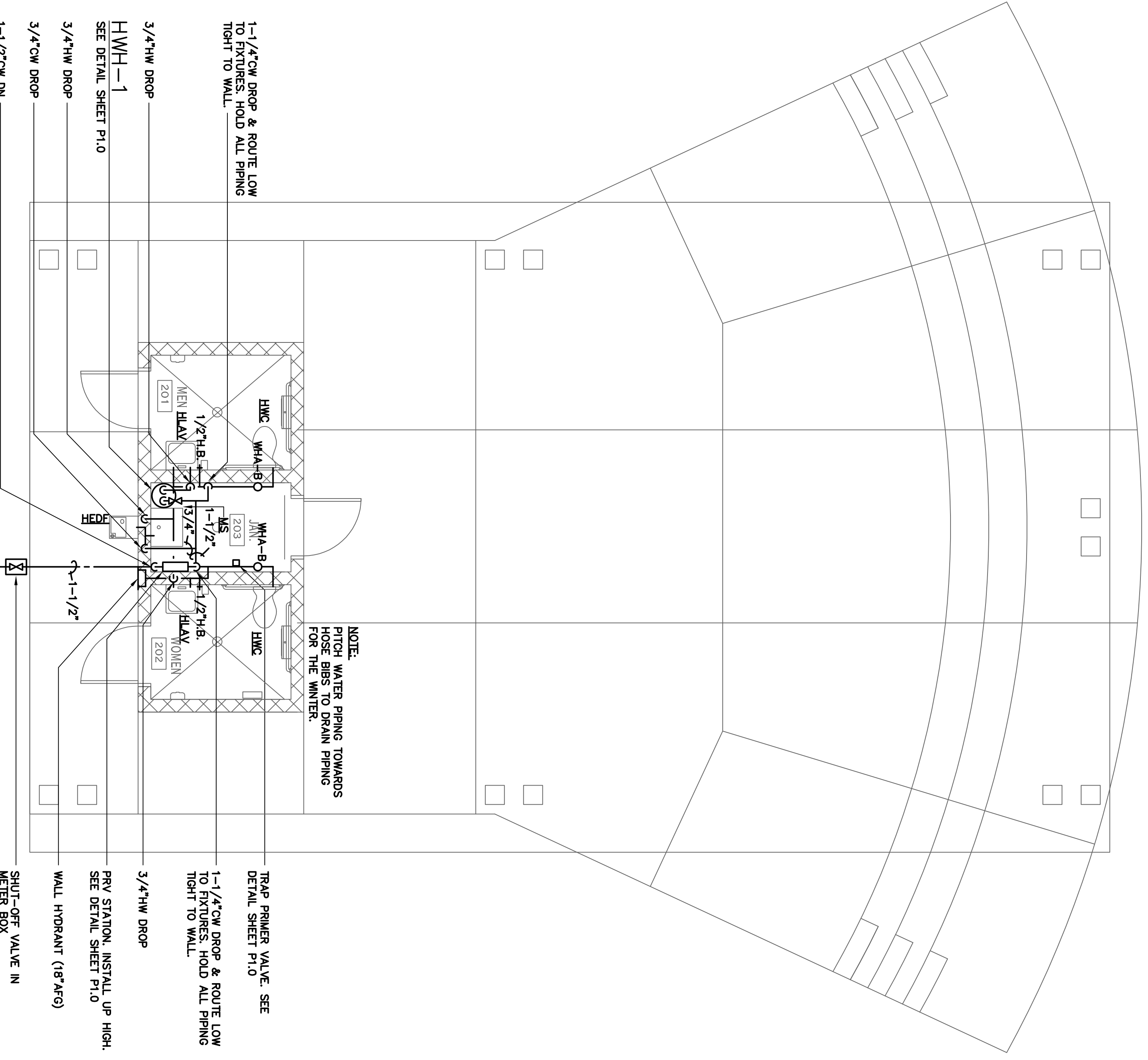
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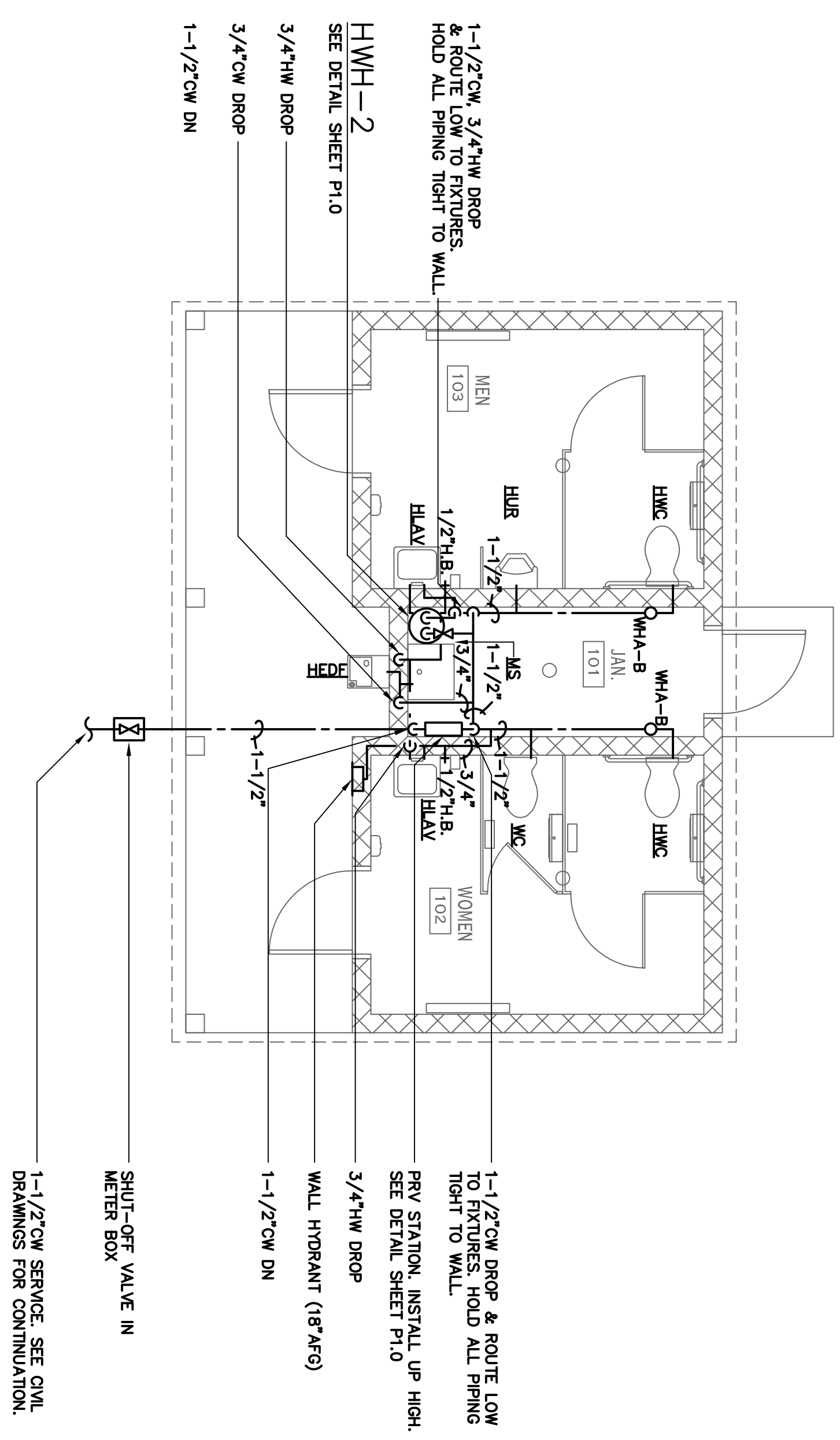
Project Title  
**FRIENDSHIP FOREST  
WILDLIFE SANCTUARY**

Project Location  
Address 4880 E. PONCE DE LEON AVE  
City, State Zip CLARKSTON, GA, 30021  
Land Lot 119  
District/Section 18  
County DEKALB

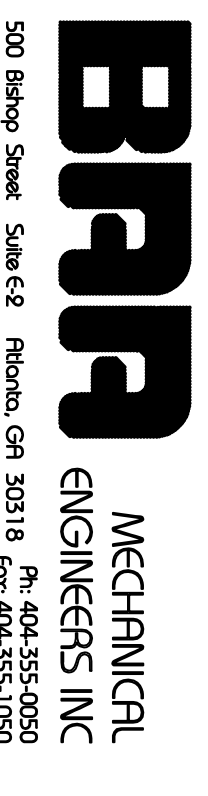
Project No. 170300P  
Drawn By: MR  
Checked By: JP  
Initial Issue Date: 7-19-17  
Sheet Title  
**H&CW PIPING  
PLANS**  
Sheet Number  
**P1.2**



**1 PAVILION BUILDING PLUMBING FLOOR PLAN**  
SCALE: 1/4" = 1'  
H & CW PIPING



**2 TOILET BUILDING PLUMBING FLOOR PLAN**  
SCALE: 1/4" = 1'  
H & CW PIPING



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I. DESIGN

- 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).

II. DESIGN LOADS

- A. ROOF DEAD LOAD..... 15 PSF
B. GROUND SNOW LOAD, Pg..... 5 PSF
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:

Table with 2 columns: Parameter and Value. Includes Ultimate Wind Speed (115 mph), Nominal Wind Speed (89 mph), Risk Category (II), and Wind Exposure (B).

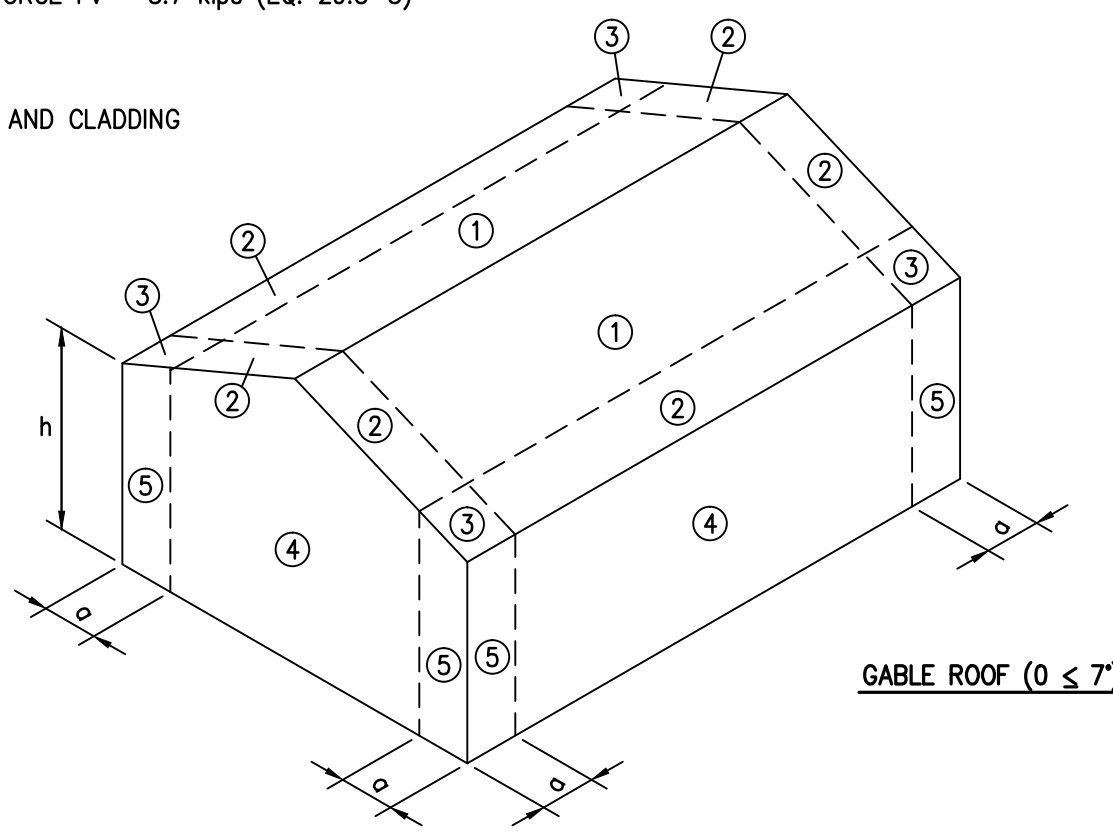
ANALYSIS PROCEDURE FOR WIND LOADS ON ENCLOSED AND PARTIALLY ENCLOSED BUILDINGS WITH ALL HEIGHTS METHOD PER CHAPTER 27 ASCE/SEI 7-10:

- 1. WIND DIRECTIONALITY FACTOR, Kd.....0.85 (TABLE 26.6-1 ASCE)
2. TOPOGRAPHIC FACTOR, Kzt.....1.00 (FIG. 26.8-1 ASCE)
3. GUST-EFFECT FACTOR, G.....0.85 (OR SECTION 26.9 ASCE - SEE TABLE BELOW)

Table with 6 columns: BUILDINGS, INTERNAL PRESSURE COEFFICIENT, GUST-EFFECT FACTOR, VELOCITY PRESSURE COEFFICIENTS (Kh, Kz), and COEFFICIENTS AND PRESSURES (Qh, Qz).

- \* 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)

4. COMPONENTS AND CLADDING



COMPONENTS & CLADDING (LOW-RISE BUILDINGS - SIMPLIFIED METHOD - SECTION 30.5 ASCE 7-10)

Table with 4 main columns: PART OF BUILDING, ZONE, EFFECTIVE AREA, and NET DESIGN WIND PRESSURE (psf). It details wind pressure for Roof, Wall, and Roof Overhang across various zones and areas.

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 (= 1.0)
2. MAPPED SPECTRAL RESPONSE ACCELERATIONS
a.) Ss = 0.1864 g
b.) S1 = 0.0901 g
3. DESIGN SPECTRAL RESPONSE ACCELERATIONS
a.) SDS = 0.199
b.) 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

Table with 5 columns: BUILDINGS, LONGITUDINAL DIRECTION, TRANSVERSE DIRECTION, BASE SHEAR (R, Cd, Cs, V).

\* - 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/FT
PASSIVE EARTH PRESSURE ..... 300 PSF/FT
AT REST EARTH PRESSURE (WALLS SUPPORTED AT TOP) ..... 50.0 PSF/FT
COEFFICIENT OF SLIDING FRICTION BETWEEN FOUNDATION & SOIL.....0.40
SOIL WEIGHT .....115..125 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.
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.
D. NO BACKFILL SHALL BE PLACED AGAINST CONCRETE WALLS UNTIL CONCRETE HAS ATTAINED FULL STRENGTH.
E. CONCRETE WALLS SHALL HAVE VERTICAL KEYS OR TOOLED CONTROL JOINTS AT 20'-0" O.C. MAXIMUM.

IV. MATERIALS

A. CONCRETE

- 1. CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE NORMAL WEIGHT, WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH, fc = 3,000 PSI.
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.

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".
3. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315-05, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT".

C. TIMBER

- 1. TIMBER DIMENSIONED LUMBER TO BE MINIMUM #2 SOUTHERN PINE EXCEPT MARKED SS (SELECT STRUCTURE), KD, 19% MAXIMUM MOISTURE CONTENT.
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 0.40 PCF.
b. COPPER AZOLE (CA-B OR CBA-A) WITHOUT AMMONIA WITH ACTUAL RETENTION LEVELS LESS THAN 0.21 PCF.
c. MICRONIZED COPPER QUAT (MCO) WITH ACTUAL RETENTION LEVELS LESS THAN 0.40 PCF.

5 ALL METAL CONNECTORS, STRAPS, CLIPS, ANCHORS AND FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE COMPOSED OF STAINLESS STEEL (TYPE 303, 304, 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
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.

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.
B. THE CONSTRUCTION DOCUMENTS CONSIST OF THE ENTIRE SET OF DRAWINGS AND SPECIFICATIONS OF ALL DISCIPLINES.
C. CONTRACT DOCUMENTS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE CODE OF PRACTICE OR OTHER STANDARDS.
D. IT IS EXPECTED THAT THE GENERAL CONTRACTOR BE EXPERIENCED IN THE TYPE CONSTRUCTION REQUIRED FOR THIS PROJECT.

D. MASONRY

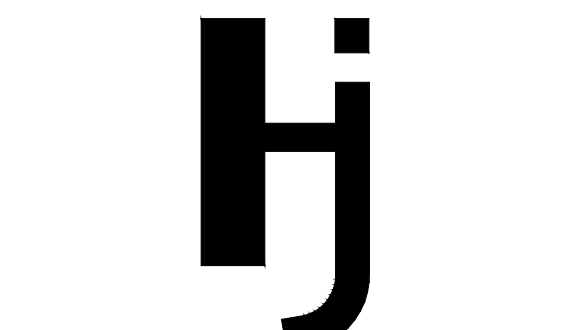
- 1. HOLLOW UNITS.....fm = 1,500 PSI, FOR DESIGN
2. MORTAR.....ASTM C270, TYPE M OR S
3. CONCRETE MASONRY WORK SHALL CONFORM TO ACI 530, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND ACI 530.1, SPECIFICATION FOR MASONRY STRUCTURES.
4. MASONRY WALLS SHALL HAVE HORIZONTAL JOINT REINFORCING CONFORMING 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.
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.
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.
8. VERTICAL REINFORCING BARS IN MASONRY SHALL BE LAP SPICED 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.



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BID SET 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. 17030pr

Drawn By: OP Checked By: SIR Initial Issue Date: 09-15-2017

Sheet Title

GENERAL NOTES

Sheet Number S0.1

JOB #17074 Browder + LeCuzon and Associates, Inc. Engineers 174 West Wieuka Road Atlanta, Georgia 30342 Ph:(404) 851-9580 Fax:(404) 851-9589

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simon ryshin



REQUIRED STRUCTURAL SPECIAL INSPECTIONS

ALL INSPECTIONS, TESTINGS AND VERIFICATIONS SHALL BE IN ACCORDANCE WITH IBC SECTION 1704.1704.4, 1708.5.1 AND 1704.7 AND AS FOLLOWS:

Table with 2 columns: Inspection Item and Frequency (Continuous/Periodic). Rows include SOILS, FOOTINGS, CONCRETE VERIFICATION, and MASONRY CONSTRUCTION.

Table with 2 columns: Inspection Item and Frequency (Continuous/Periodic). Rows include SPREAD FOOTINGS AND CONTINUOUS FOOTINGS, and CONCRETE VERIFICATION AND INSPECTION.

Table with 2 columns: Inspection Item and Frequency (Continuous/Periodic). Rows include CONCRETE VERIFICATION AND INSPECTION (continued) and MASONRY CONSTRUCTION - LEVEL 1.

Table with 2 columns: Inspection Item and Frequency (Continuous/Periodic). Rows include MASONRY CONSTRUCTION - LEVEL 1 (continued) and TIMBER AND WOOD FRAMING.

Table with 2 columns: Inspection Item and Frequency (Continuous/Periodic). Rows include TIMBER AND WOOD FRAMING (continued) and SPECIAL CASES - EPOXY ANCHORS AND EXPANSION BOLTS.

Table with 2 columns: Inspection Item and Frequency (Continuous/Periodic). Rows include SPECIAL CASES - EPOXY ANCHORS AND EXPANSION BOLTS (continued) and NOTES.

- NOTES: 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.

Vertical text on the left edge: v:\2017\17074 clarkston park\structure\17074-s0.1-0.2.dwg, arch.ctb, 9/11/2017 1:55 PM, simon\_ryskin

TABLE 2304.9.1 FASTENING SCHEDULE

Table with 3 columns: CONNECTION, FASTENING, LOCATION. Rows include Joist to sill or girder, Bridging to joist, subfloor, Wider than 1" x 6" subfloor, Sole plate, Top plate to stud, Stud to sole plate, Double studs, Double top plates, Blocking between joists or rafters to top plate, Rim joist to top plate, Top plates, lags and intersections, Continuous header, Ceiling joists to plate, Continuous header to stud.

2012 INTERNATIONAL BUILDING CODE®

TABLE 2304.9.1-continued FASTENING SCHEDULE

Table with 3 columns: CONNECTION, FASTENING, LOCATION. Rows include Ledger strip, Wood structural panels and particleboard, Panel siding (to framing), Fiberboard sheathing, Interior paneling.

- 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.

TABLE 2304.9.1-continued FASTENING SCHEDULE

Table with 3 columns: CONNECTION, FASTENING, LOCATION. Rows include Ceiling joists, lags over partitions, Ceiling joists to parallel rafters, Rafter to plate, 1" diagonal brace to each stud and plate, 1" x 8" sheathing to each bearing, Wider than 1" x 8" sheathing to each bearing, Built-up corner studs, Built-up girder and beams, 2" planks, Collar tie to rafter, Rafter jack to hip, Roof rafter to 2-by ridge beam, Joist to band joist.

(continued)

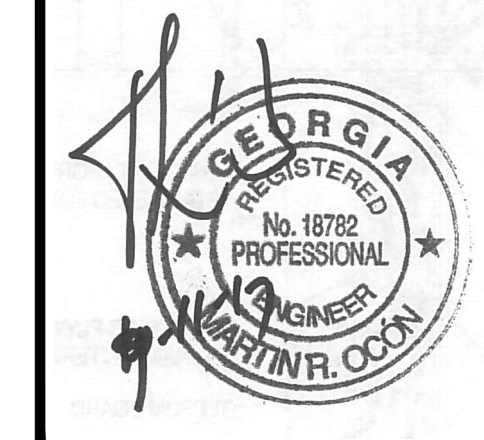
1 TYPICAL WOOD FRAMING FASTENERS, U.N.O.

SCALE: NONE

ABBREVIATIONS

Table of abbreviations for wood framing fasteners, including terms like ADD'L, ALT, ARCH, BM, BT, BOTT, B.O., BLDG, C.I.P., CTR, CL, CONC, CMU, COL, CONN, CONSTR, CONT, C.J., DBA, DET, DWL, DWG, EA, EF, E.W., ELEC, EL, ENGR, EXP, E.J., EXT, F.F., FL, FTG, FND, G.C., GR, H, HK, HORIZ, HS, I.F., INT., J, JT, K, K, LVL, L.W., LONGIT, LLH, LSH, LSV, M, MK, MAS, MAX, MECH, MIN, MISC, N, N.F., N.S., O, OPG, O.F., P, P.E.B., PL, P.T., P.C., R, REINF, S, SCHED, SHT, S.W., SIM, SL, SMRF, S.O.G., STD, STIR.

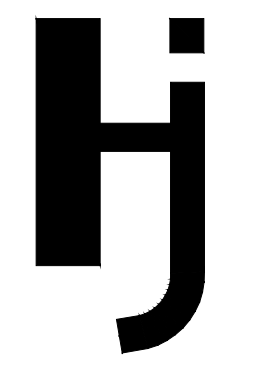
Logo for Leuzemann and Associates, Inc. - Engineers, Atlanta, Georgia 30342. Phone: (404) 851-9580, Fax: (404) 851-9589.



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BID SET 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. 17030pr. Drawn By: OP. Checked By: SIR. Initial Issue Date: 09-15-2017.

SHEET GENERAL NOTES

Sheet Number S0.2



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### BID SET

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Project Title

### FRIENDSHIP FOREST WILDLIFE SANCTUARY

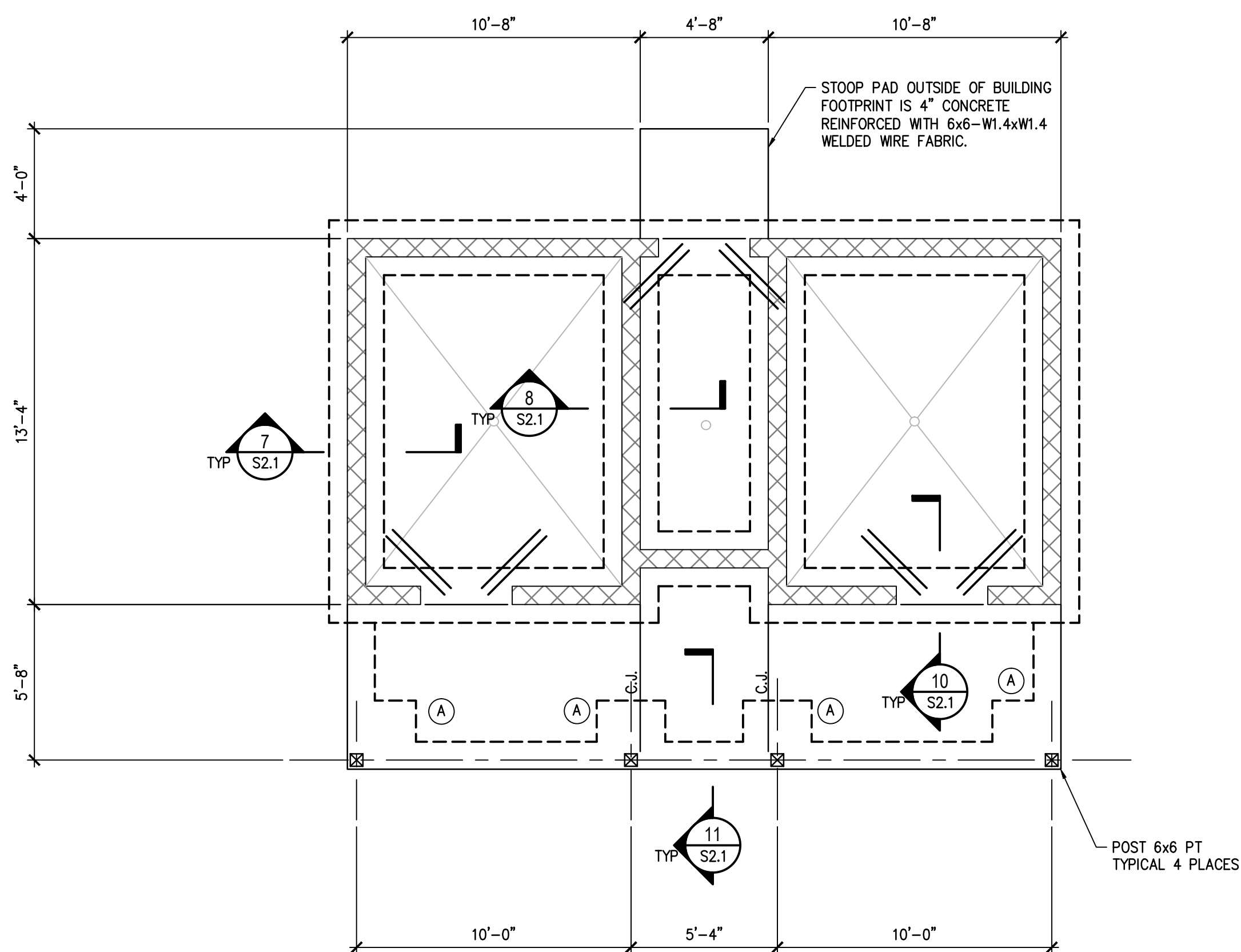
Project Location

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: OP  
Checked By: SIR  
Initial Issue Date: 09-15-2017

Sheet Title TOILET BUILDING,  
SLAB & FOUNDATION,  
ROOF FRAMING PLANS

Sheet Number S1.1

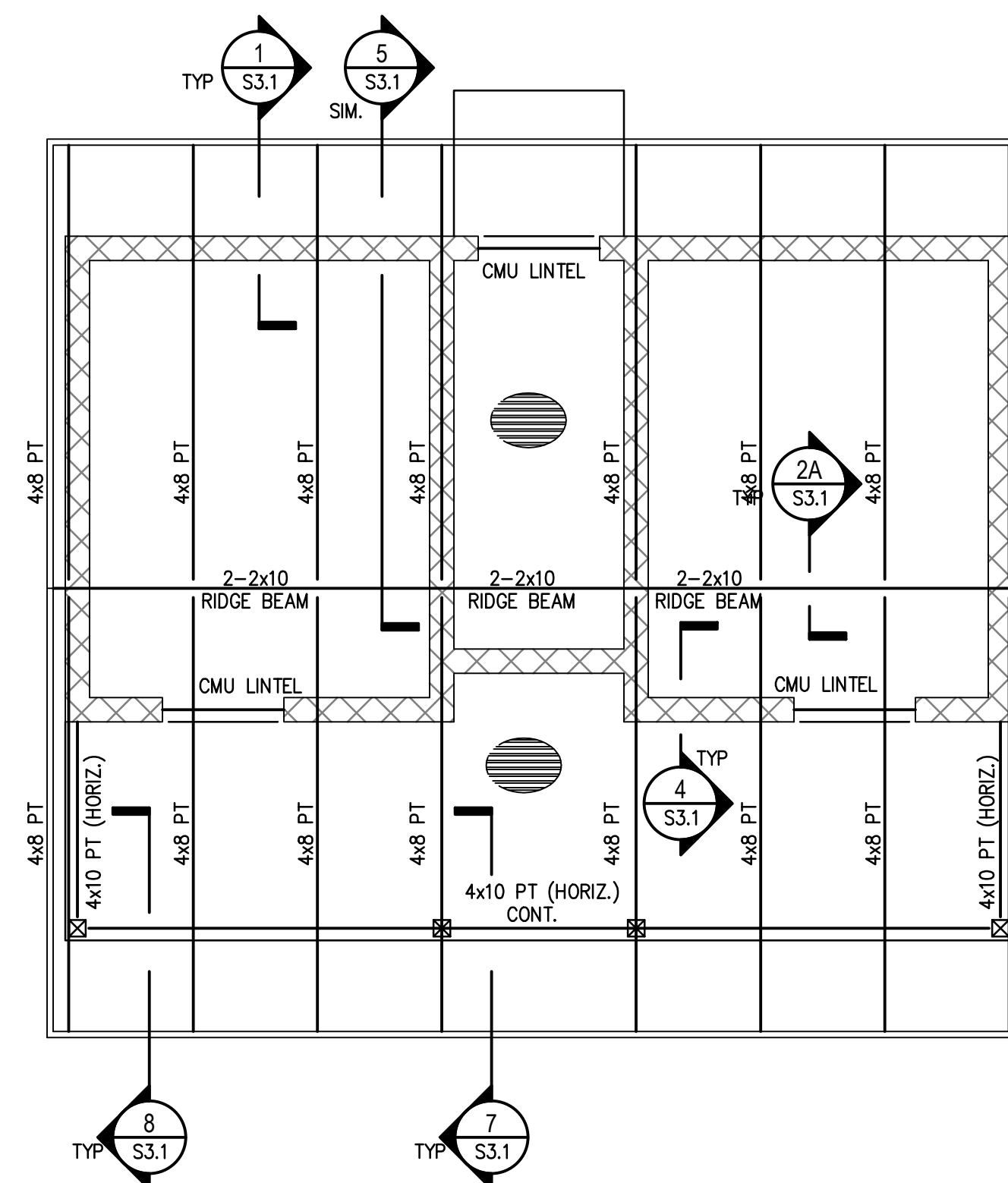


### 1 SLAB & FOUNDATION PLAN - TOILET BUILDING

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

#### 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 GRADE.
2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CMU WALLS (HATCHED ON STRUCTURAL PLANS).
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.  $\text{---}$  OR  $\text{---}$  : 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 ARCHITECT.
7.  $\text{XXXXXXXX}$  :INDICATES INTERIOR AND EXTERIOR CMU WALL.
8. (A) : INDICATES THICKENED FOOTING - SEE 11/S2.1 FOR ADDITIONAL INFORMATION.  
(B) : INDICATES THICKENED FOOTING 4'-6" x 3'-0" x 12" - SEE 4/S3.2 FOR ADDITIONAL INFORMATION.



### 2 ROOF FRAMING PLAN - TOILET BUILDING

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

#### ROOF NOTES:

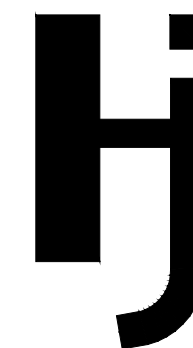
1. PROVIDE 2x8 PT (CONT.) ON TOP OF CMU WALL. COORDINATE ELEVATION FOR T/CMU WALL WITH ARCH. DRAWINGS.
2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CMU WALLS (HATCHED ON STRUCTURAL PLANS).
3. SEE DRAWING S3.1 FOR ROOF FRAMING SECTIONS.
4.  $\text{XXXXXXXX}$  :INDICATES CMU WALL.
5.  $\text{---}$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

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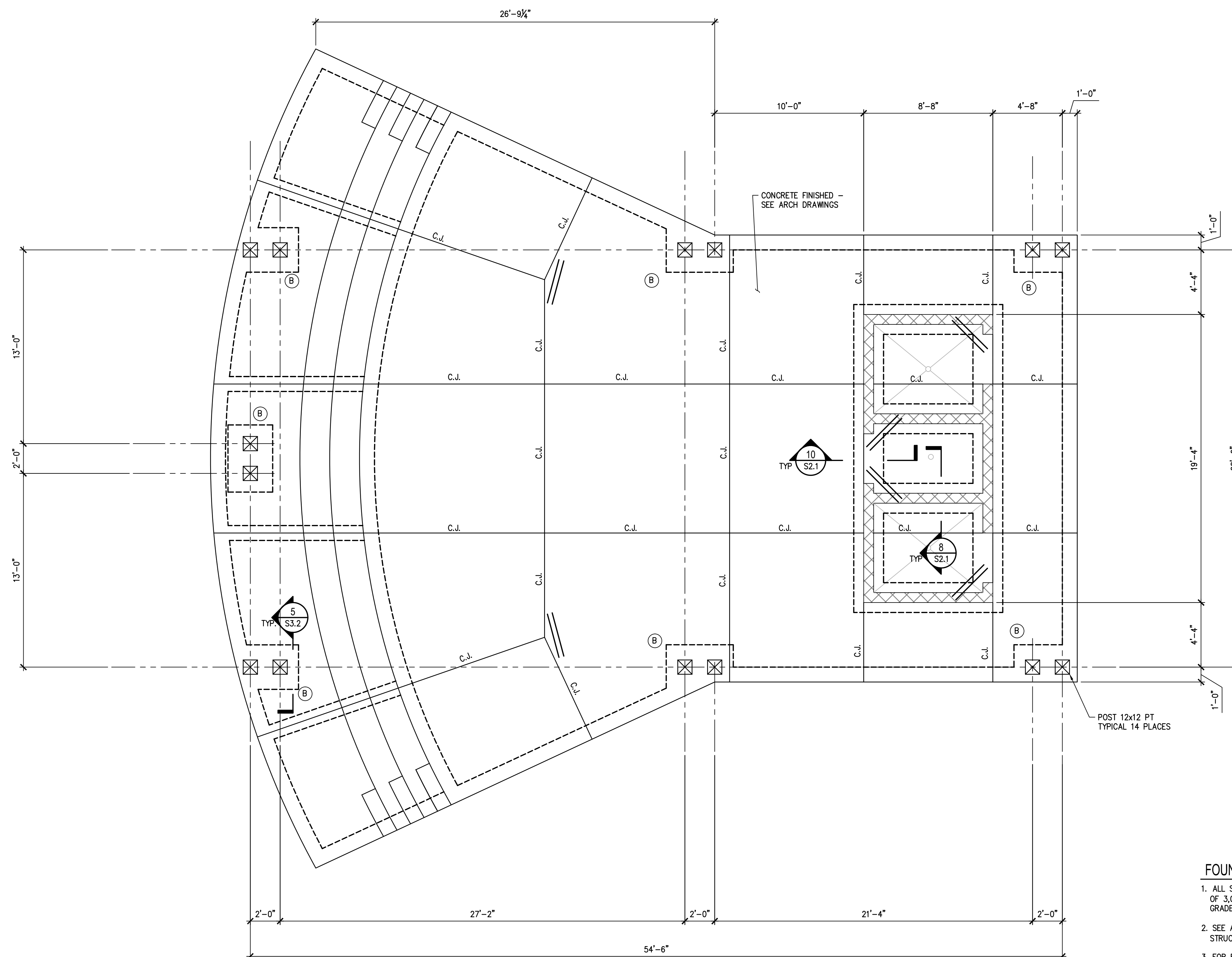
Project Title

FRIENDSHIP FOREST WILDLIFE SANCTUARY

Project Location: 4380 E. PONCE DE LEON AVE, CLARKSTON, GA, 30021. Project No. 17030pr, Drawn By: OP, Checked By: SIR, Initial Issue Date: 09-15-2017.

Sheet Title: PAVILION BUILDING, SLAB & FOUNDATION PLAN

Sheet Number S1.2



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 GRADE.
2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CMU WALLS (HATCHED ON STRUCTURAL PLANS).
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 ARCHITECT.
7. XXXXXXXX : INDICATES INTERIOR AND EXTERIOR CMU WALL.
8. (A) : INDICATES THICKENED FOOTING - SEE 11/S2.1 FOR ADDITIONAL INFORMATION.
(B) : INDICATES THICKENED FOOTING 4'-6" x 3'-0" x 12" - SEE 4/S3.2 FOR ADDITIONAL INFORMATION.

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



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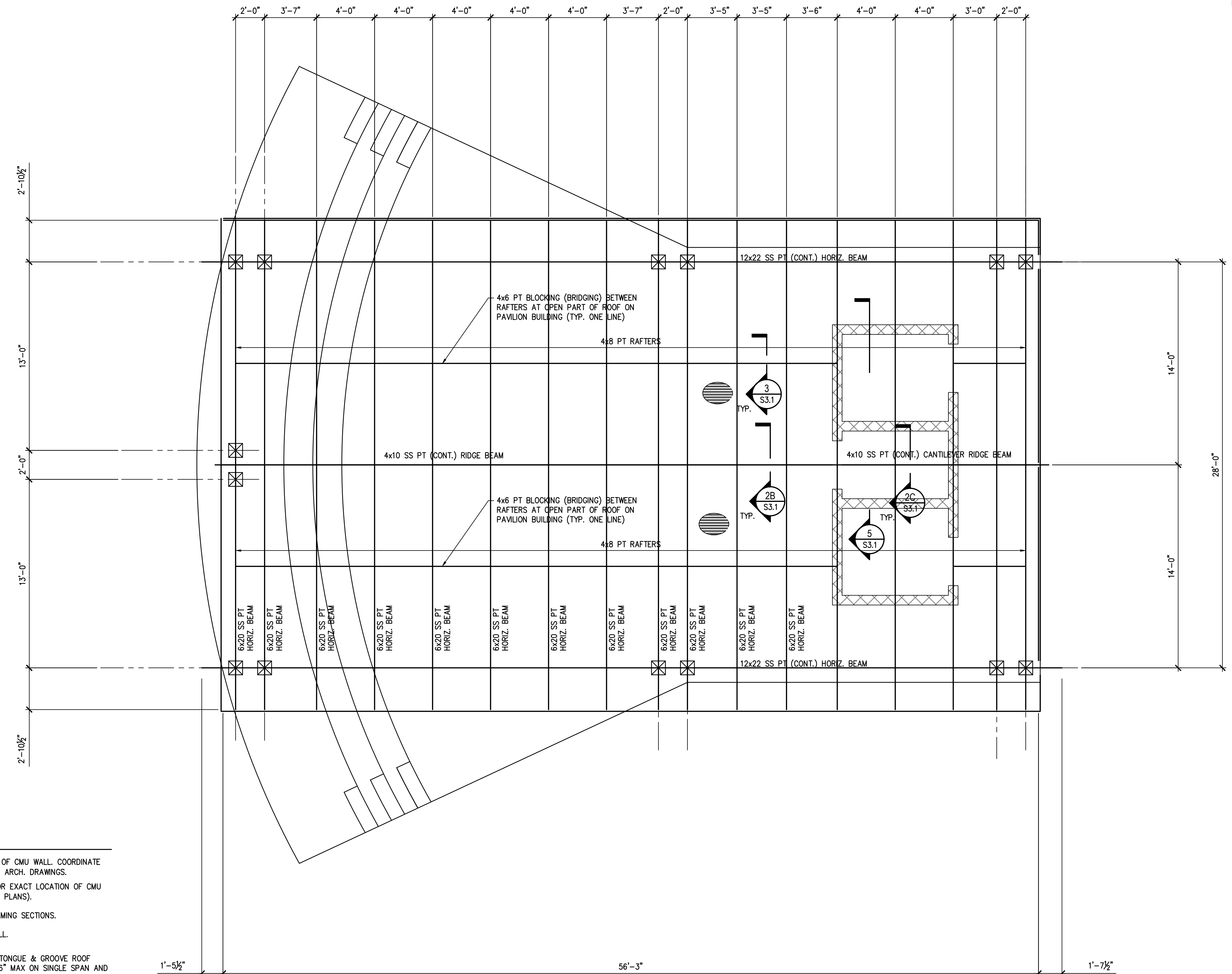
Project Title

**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: OP  
Checked By: SIR  
Initial Issue Date: 09-15-2017

**Sheet Title**  
PAVILION BUILDING.  
ROOF FRAMING PLAN

Sheet Number **S1.3**



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

**1 ROOF FRAMING PLAN - PAVILION BUILDING**  
SCALE: 1/4"=1'-0"



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Project Location

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County DEKALB

Project No. 17030pr

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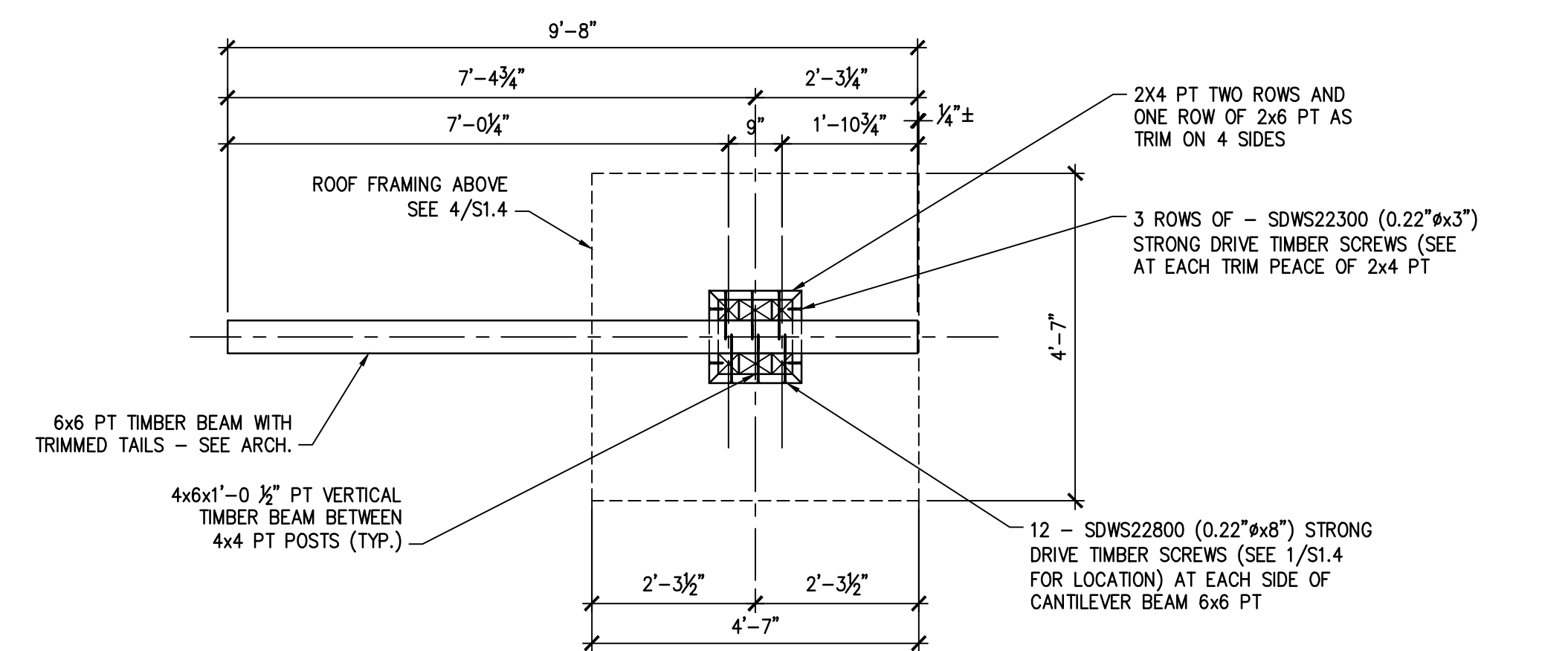
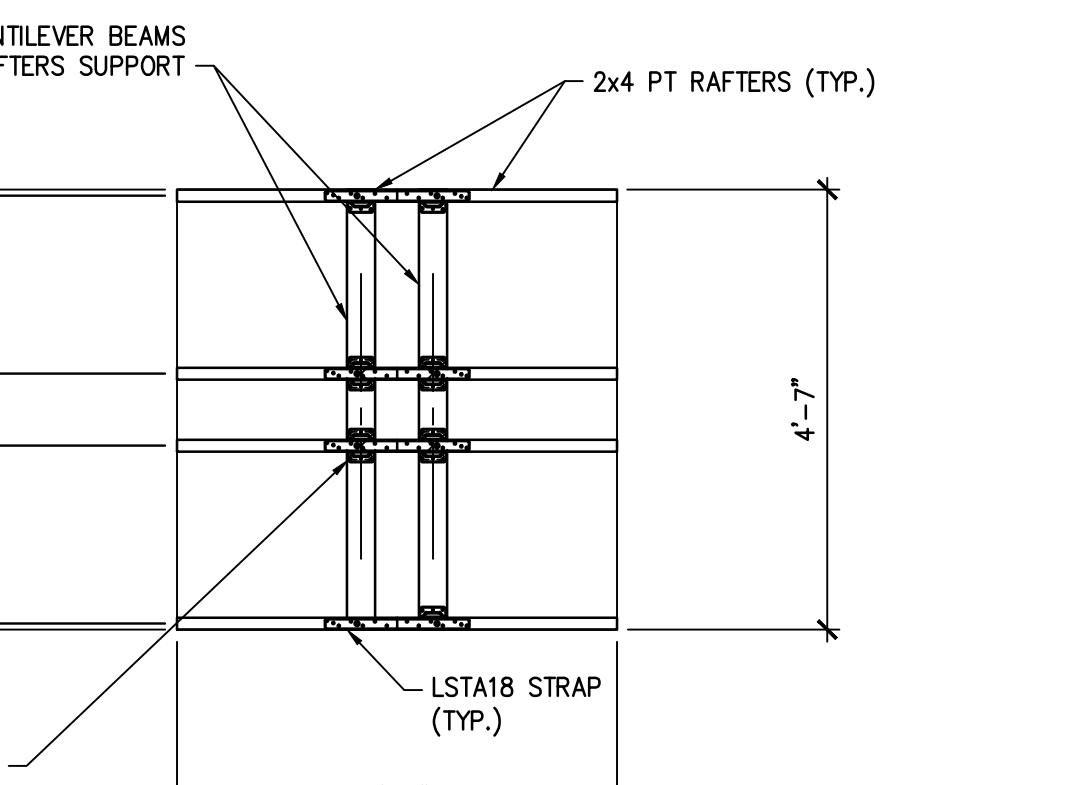
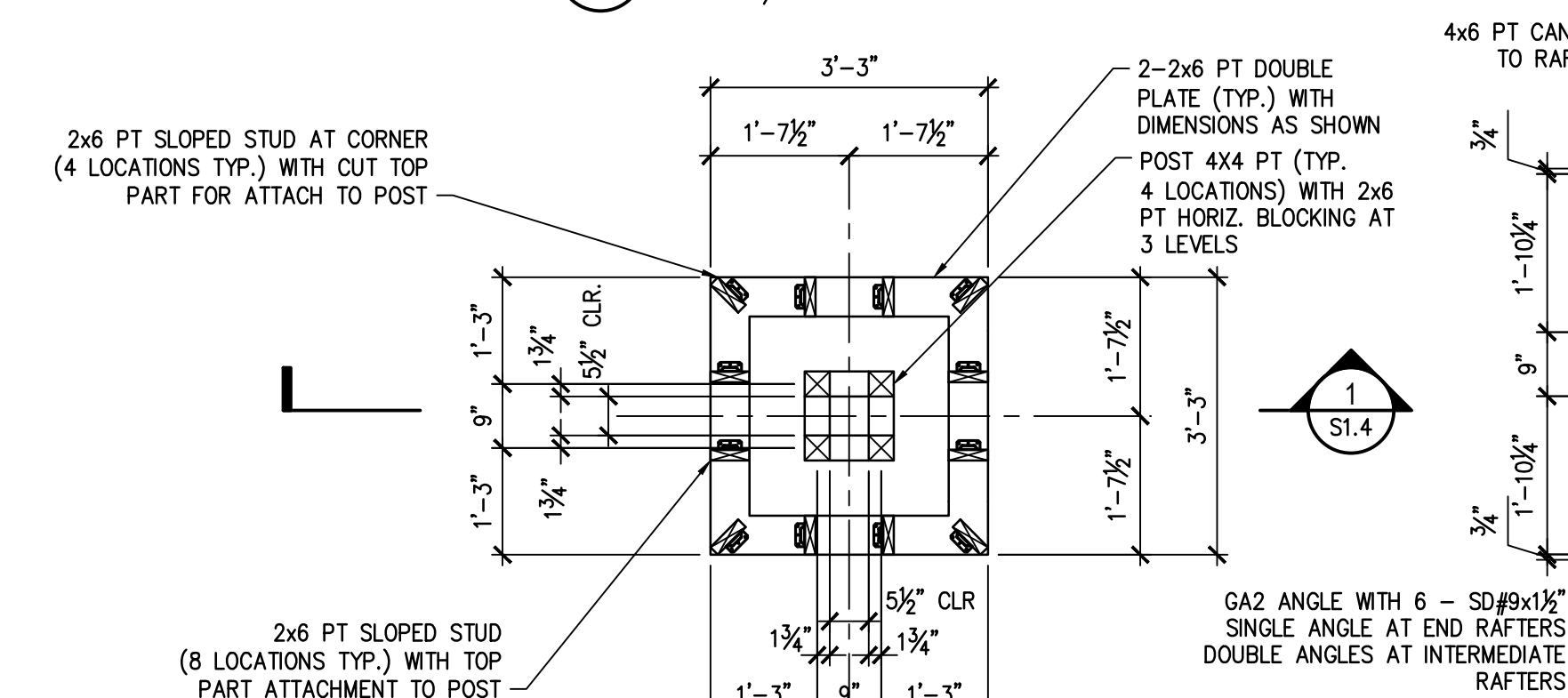
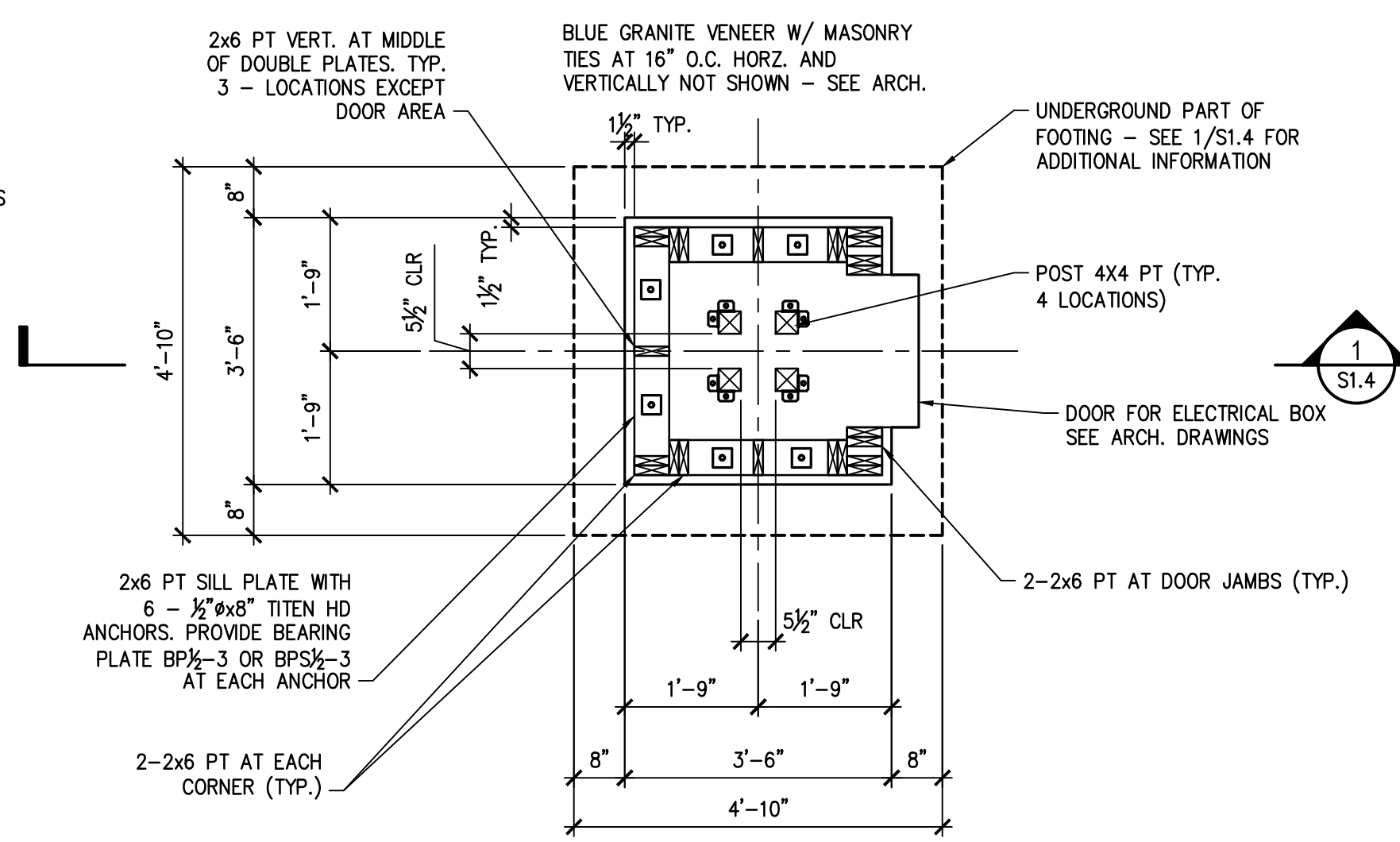
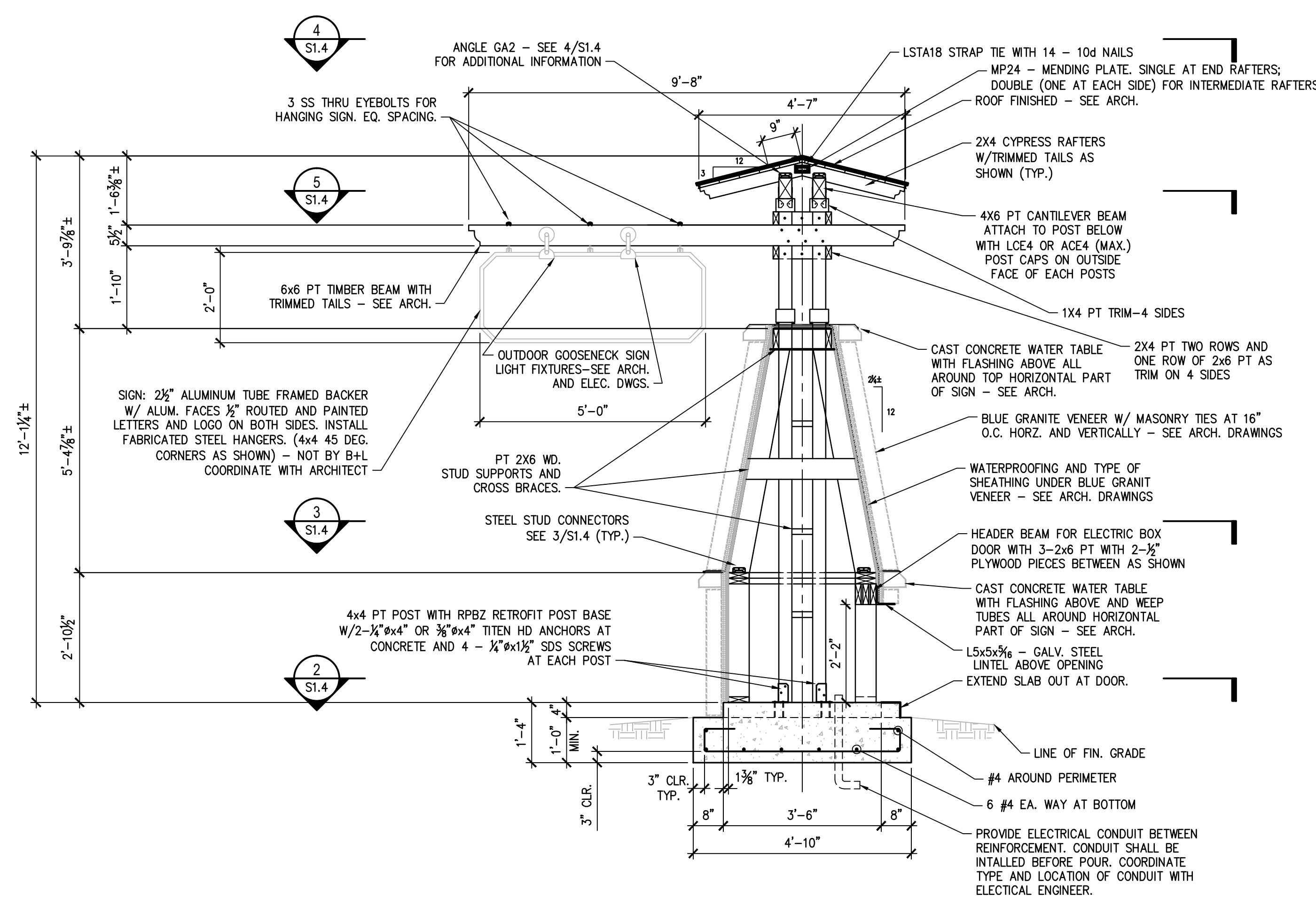
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Sheet Title

SIGN.  
SECTIONS AND DETAILS

Sheet Number  
**S1.4**

JOB #17074  
Browder + LeQuizon and Associates, Inc. • Engineers  
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Fax:(404) 851-9589



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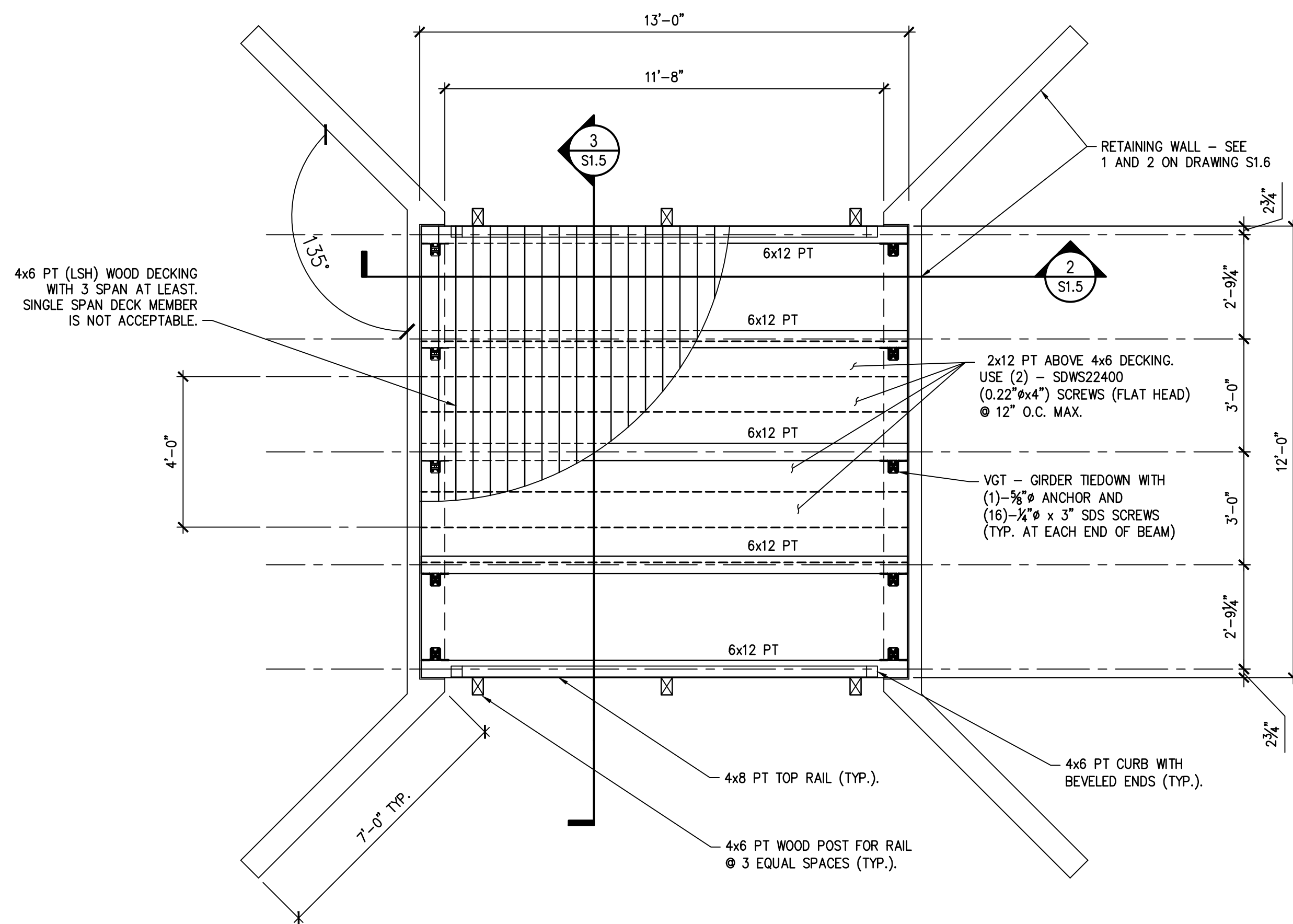
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**FRIENDSHIP FOREST WILDLIFE SANCTUARY**

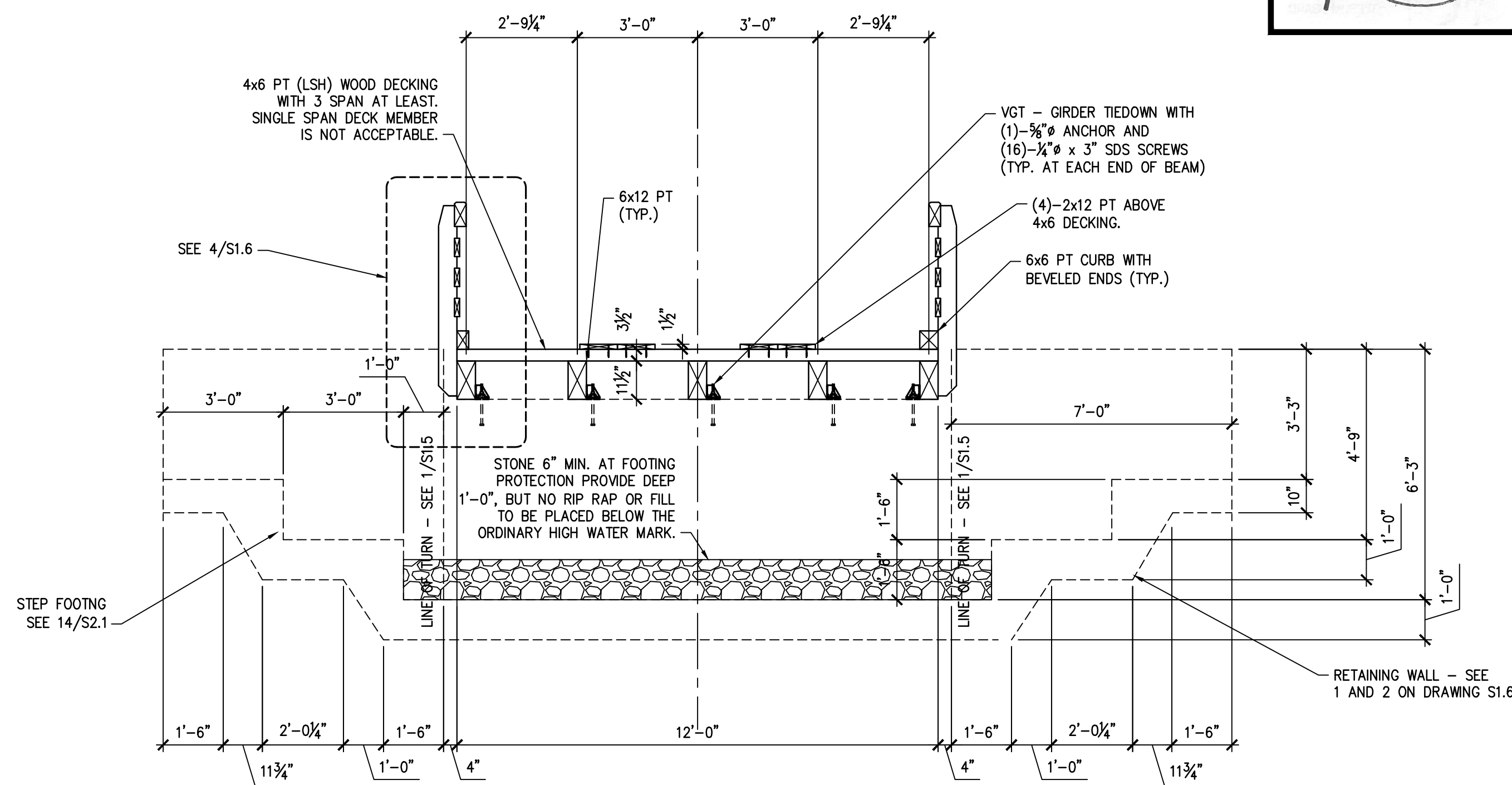
**Project Location**  
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Project No. 17030pr  
Drawn By: OP  
Checked By: SIR  
Initial Issue Date: 09-15-2017

Sheet Title  
**BRIDGE**  
TYPICAL PLAN, PROFILE AND SECTIONS

Sheet Number  
**S1.5**



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



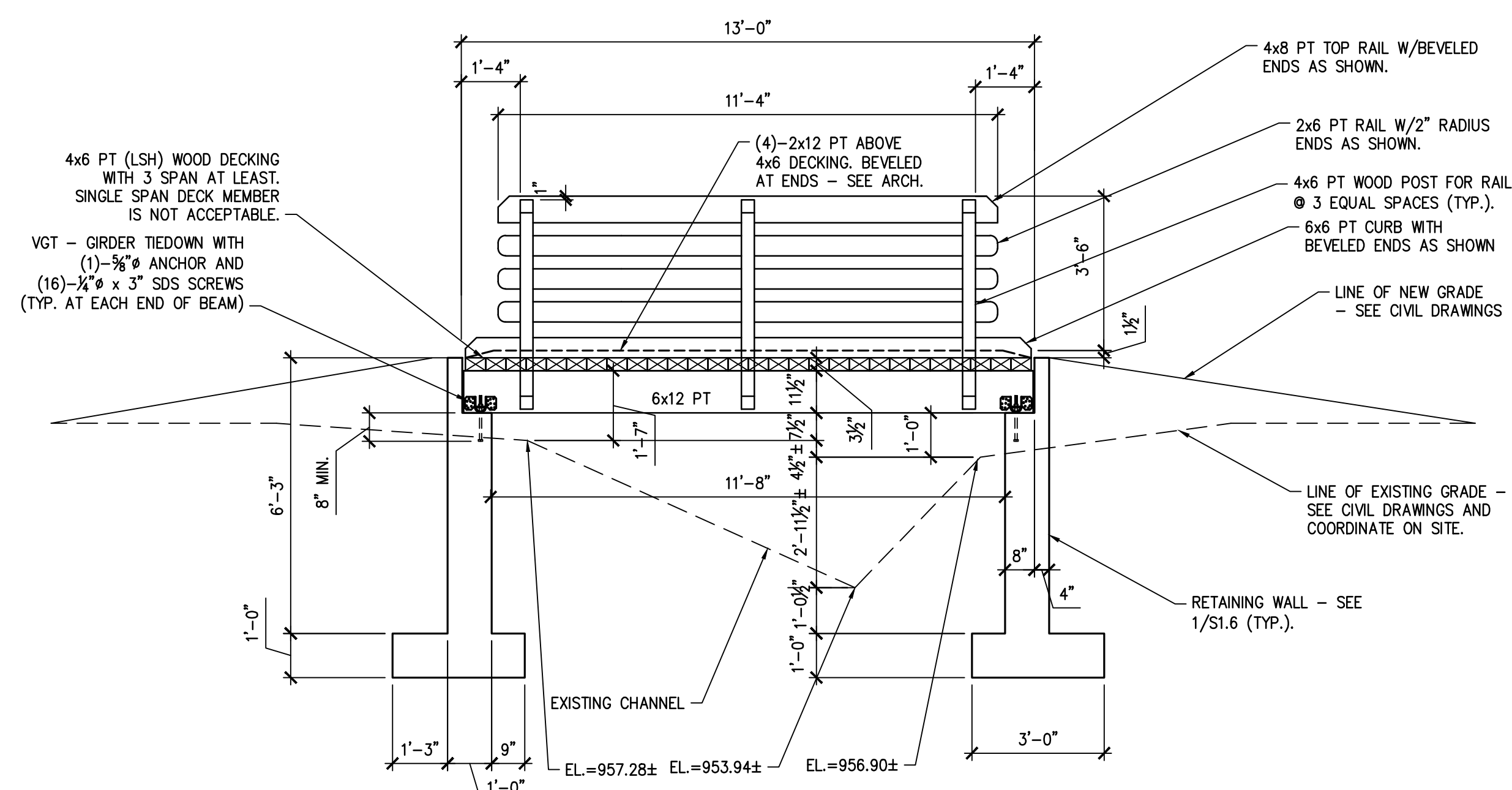
**3 PEDESTRIAN/UTILITY VEHICLE BRIDGE. SECTION**  
SCALE: 3/8"=1'-0"

**BRIDGE NOTES:**

- ALL WOOD MEMBERS ARE HEAVY PRESSURE-TREATED MATERIAL - SEE TABLE BELOW.
- ALL HARDWARE, NAIL AND SCREWS ARE PER SIMPSON STRONG-TIE CO. PRODUCT GALVANIZED OR STAINLESS STEEL.
- ALL CARRIAGE BOLTS ARE GALVANIZED OR STAINLESS STEEL.
- ALL FASTENERS AT PUBLIC AREAS AND SURFACES ARE NOT STICK OUT FROM BRIDGE MEMBERS.
- ALL WOOD AT PUBLIC AREA MUST HAVE A SMOOTH SURFACE.
- LIVE LOAD FOR BRIDGE AT RECREATION AREA IS 100 psf
- BRIDGE DESIGN FOR UTILITY VEHICLE WITH WEIGHT 3,300 lbs.

SPECIES AND COMMERCIAL GRADE	MATERIAL MINIMUM REQUIREMENTS FOR WOOD BRIDGE:							STANDARD/GRADE	AGENCY
	BENDING	TENSION PARALLEL TO GRAIN	SHEAR PERPENDICULAR TO GRAIN	SHEAR PARALLEL TO GRAIN	COMPRESSION PERPENDICULAR TO GRAIN	COMPRESSION PARALLEL TO GRAIN	MODULUS OF ELASTICITY		
	F <sub>b</sub> , psi	F <sub>t</sub> , psi	F <sub>v</sub> , psi	F <sub>v</sub> , psi	F <sub>c</sub> , psi	F <sub>c</sub> , psi	E, ksi	E <sub>min</sub> , ksi	
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.



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

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**FRIENDSHIP FOREST  
WILDLIFE SANCTUARY**

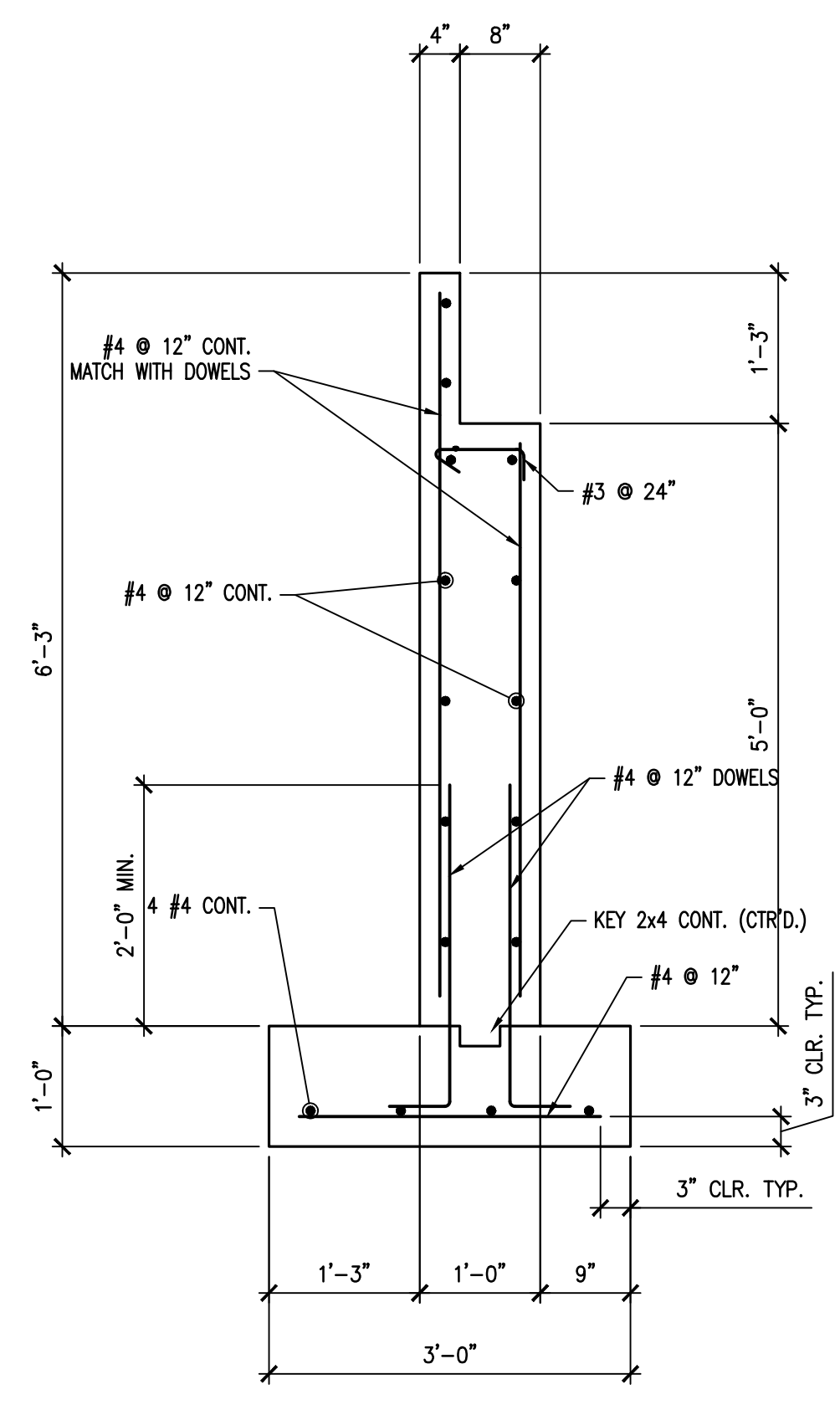
Project Location  
Address 4380 E. PONCE DE LEON AVE  
City, State Zip CLARKSTON, GA. 30021  
Land Lot 119  
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County DEKALB

Project No. 17030pr  
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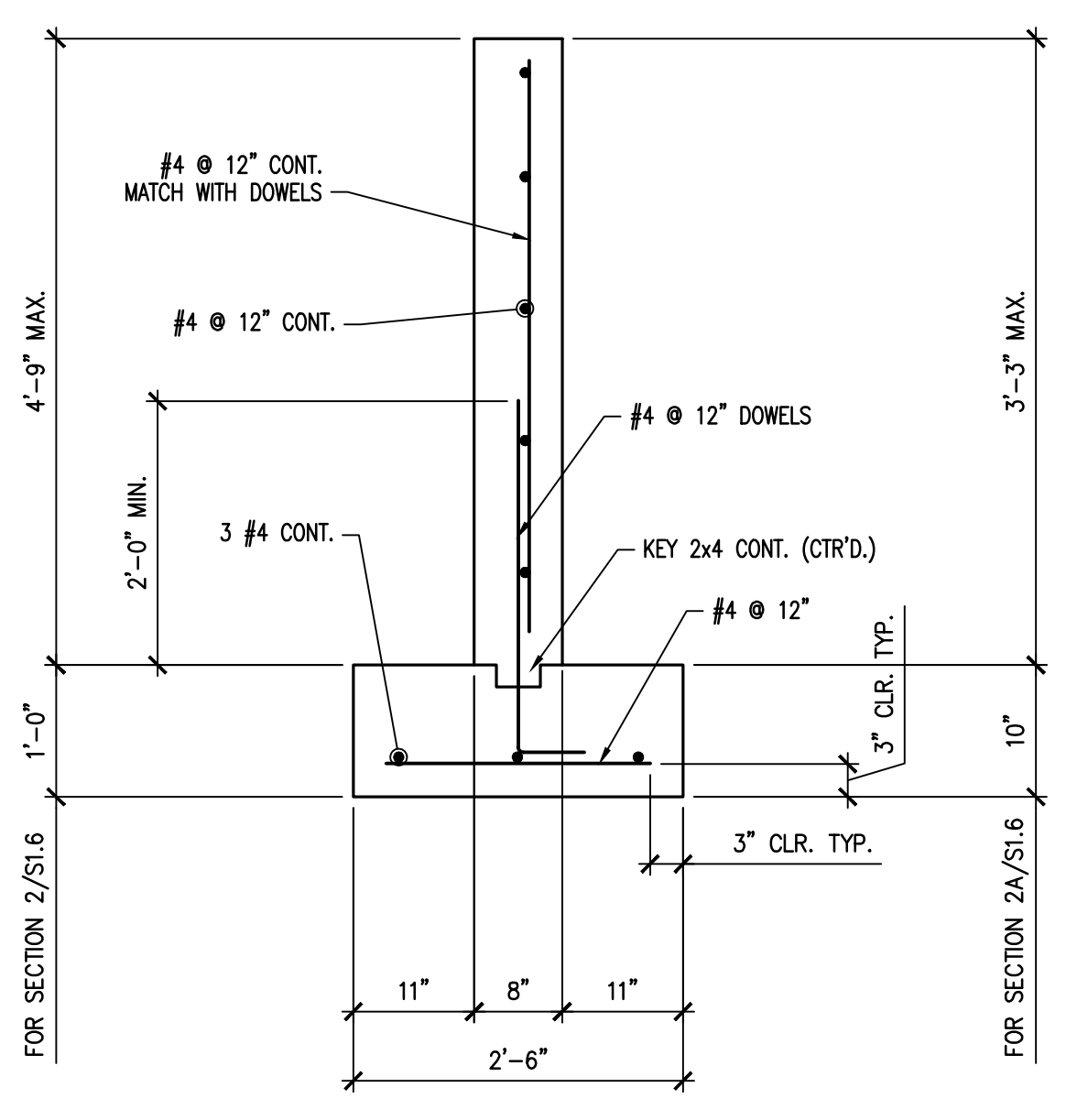
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BRIDGE  
SECTIONS AND DETAILS

Sheet Number **S1.6**

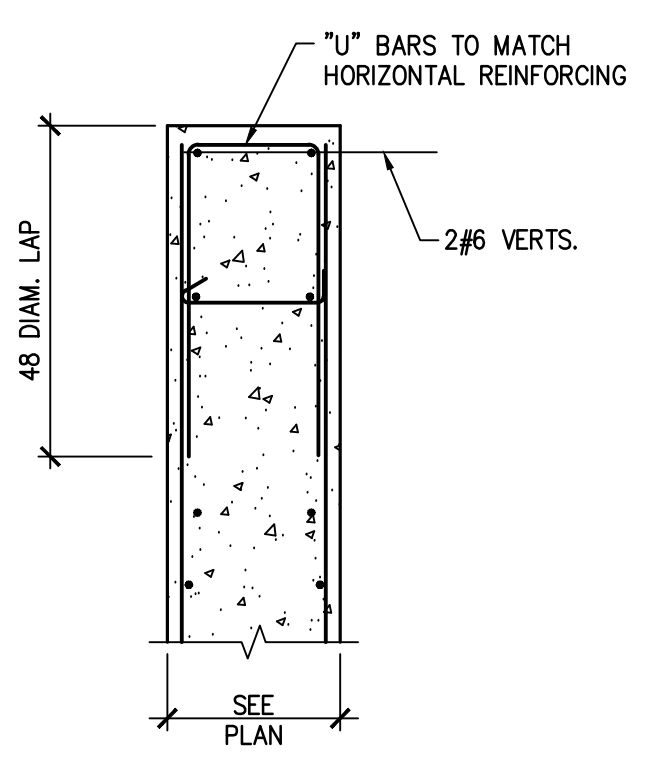


1 SECTION FOR WALL AT BRIDGE SUPPORT  
SCALE: 3/4"=1'-0"

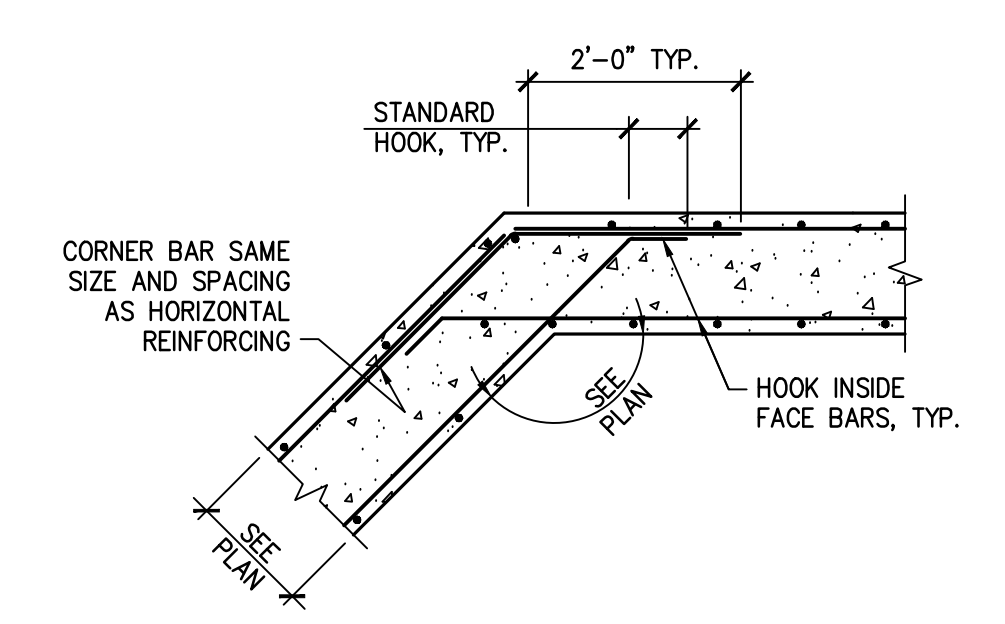


- NOTES FOR SECTIONS 1, 2 AND 2A ON THIS SHEET:
- RETAINING WALLS WERE DESIGNED FOR SOIL BEARING CAPACITY 2,000 psf.
  - PROVIDE WATERPROOFING AT BOTH FACES OF STEM WALL. COORDINATE WITH ARCHITECT FOR ADDITIONAL INFORMATION.

2 2A SECTION FOR WALL AT BRIDGE WINGS  
SCALE: 3/4"=1'-0"

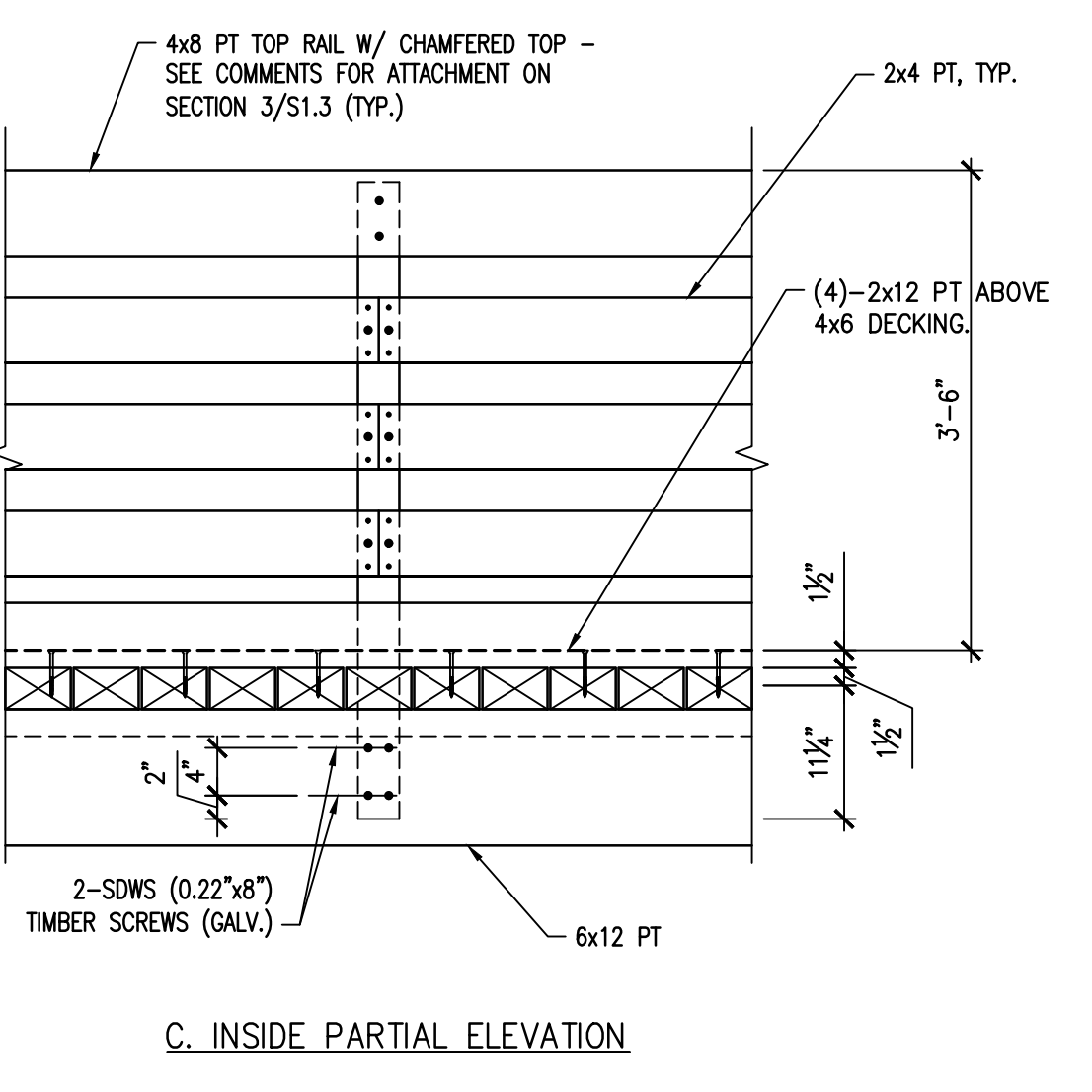
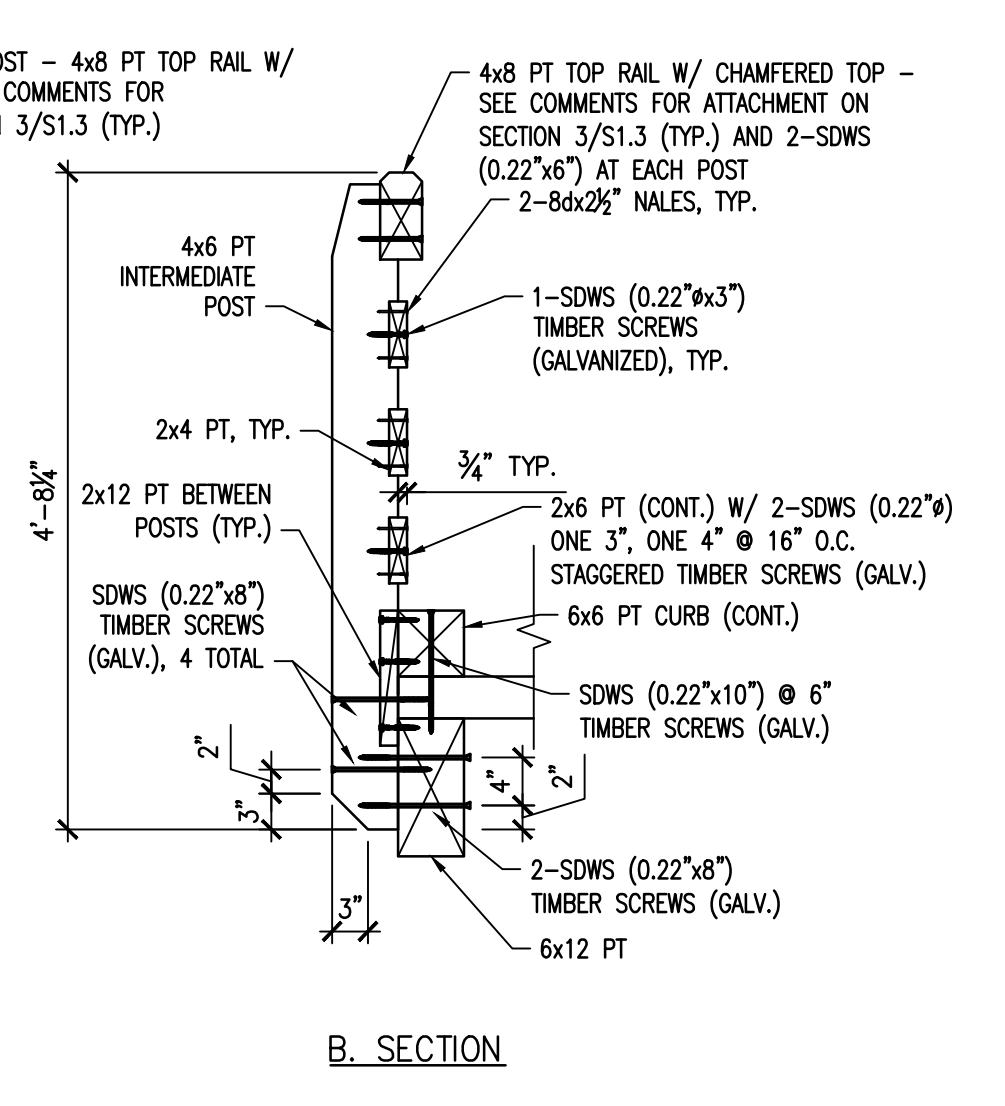
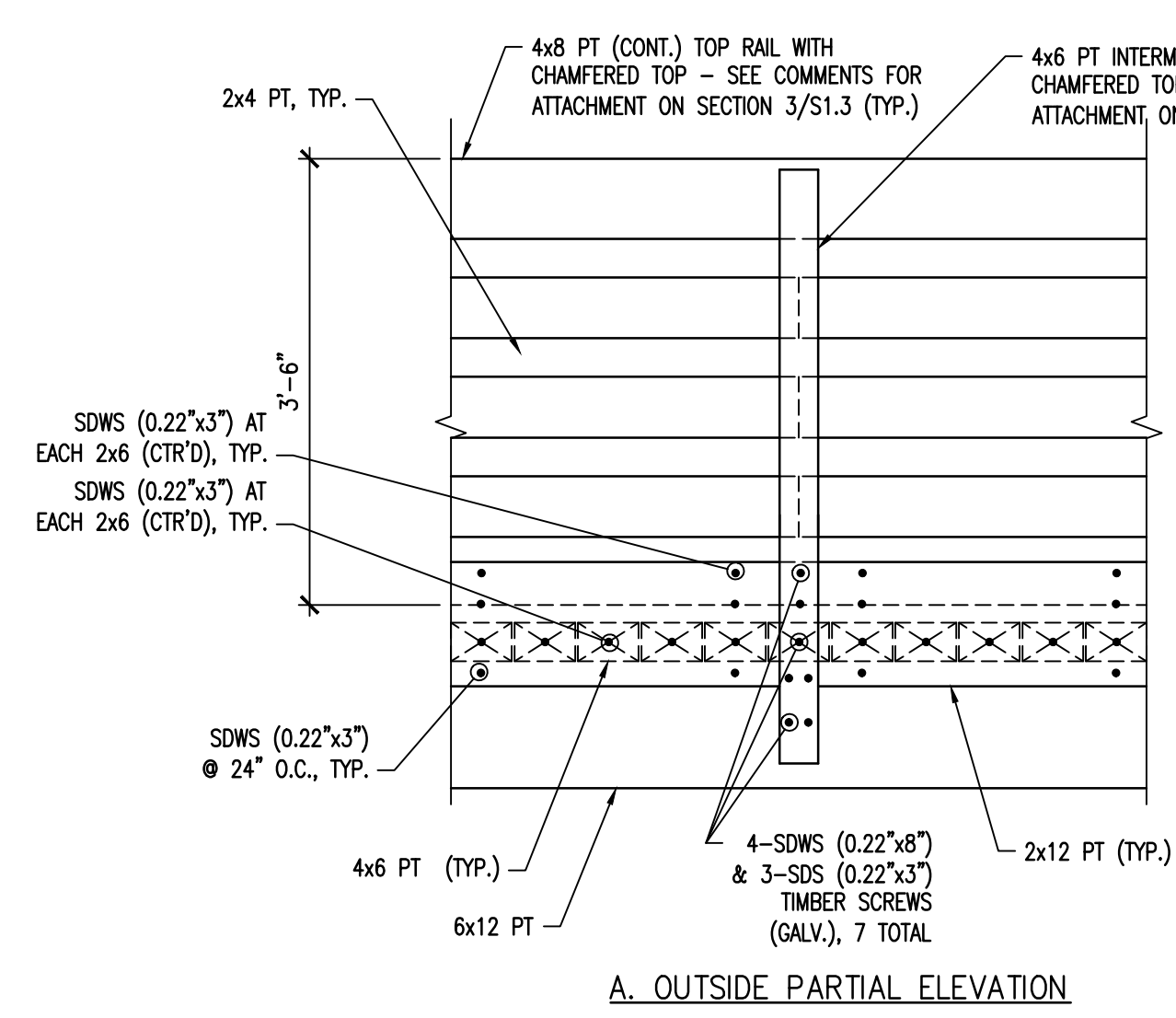


A - AT END OF WALL

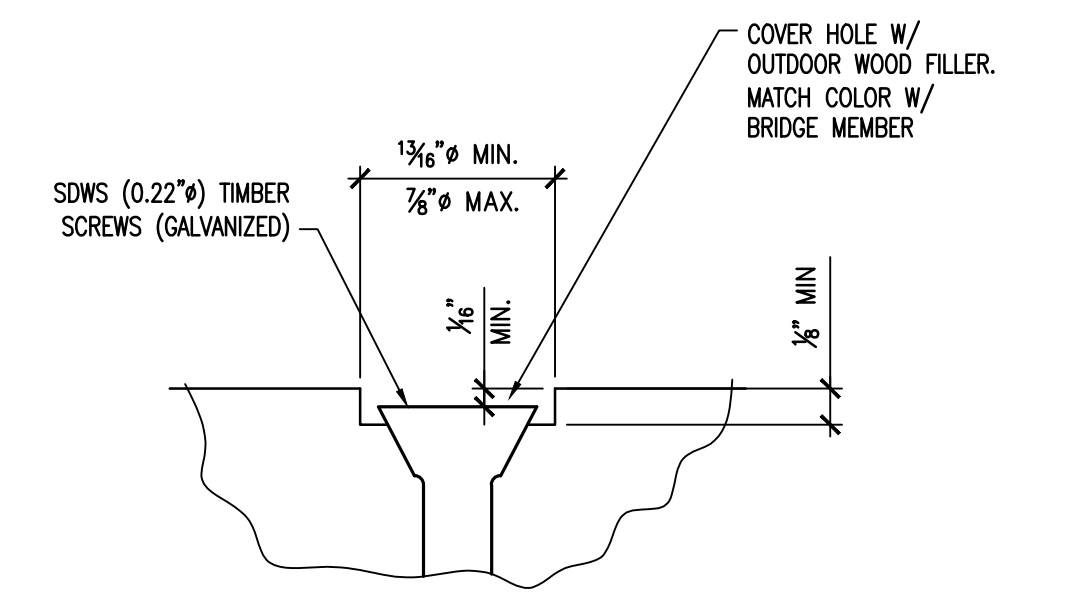


B - AT ANGLE OF WALL

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



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



5 SCREWS AT PUBLIC AREAS AND SURFACES  
SCALE: NONE

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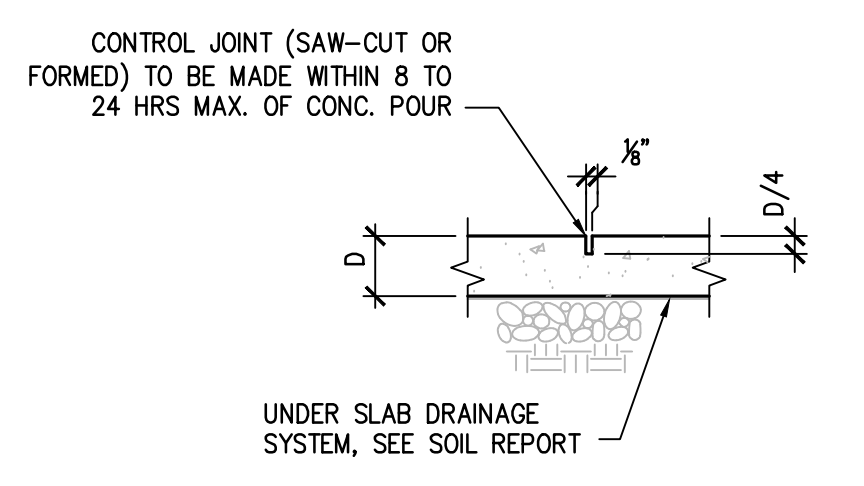
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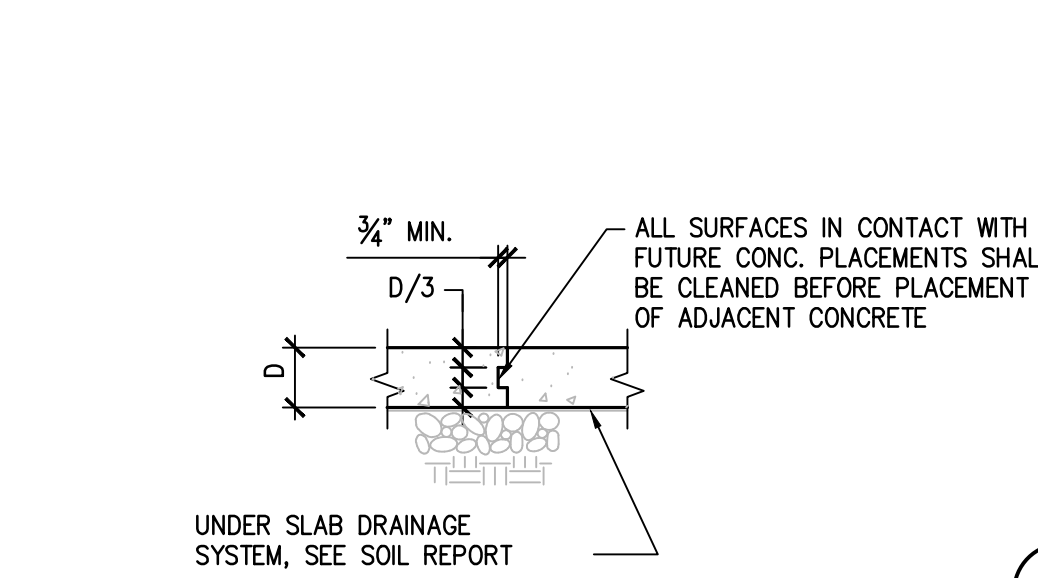
Project No. 17030pr  
Drawn By: OP  
Checked By: SIR  
Initial Issue Date: 09-15-2017

Sheet Title  
**FOUNDATION,  
SECTIONS AND  
DETAILS**

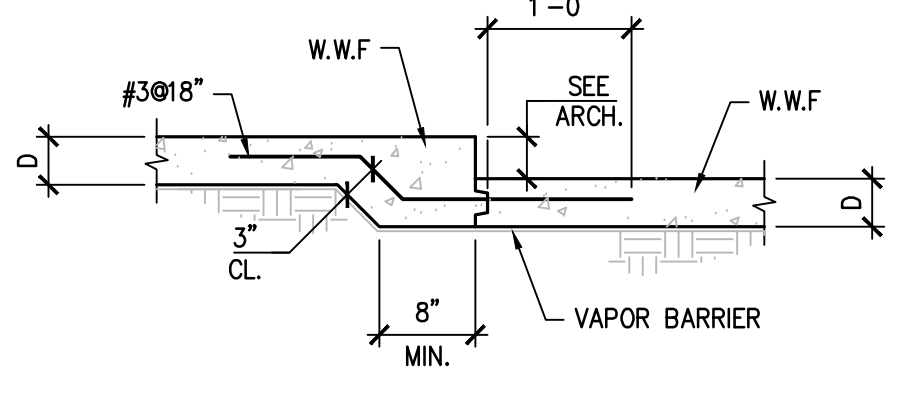
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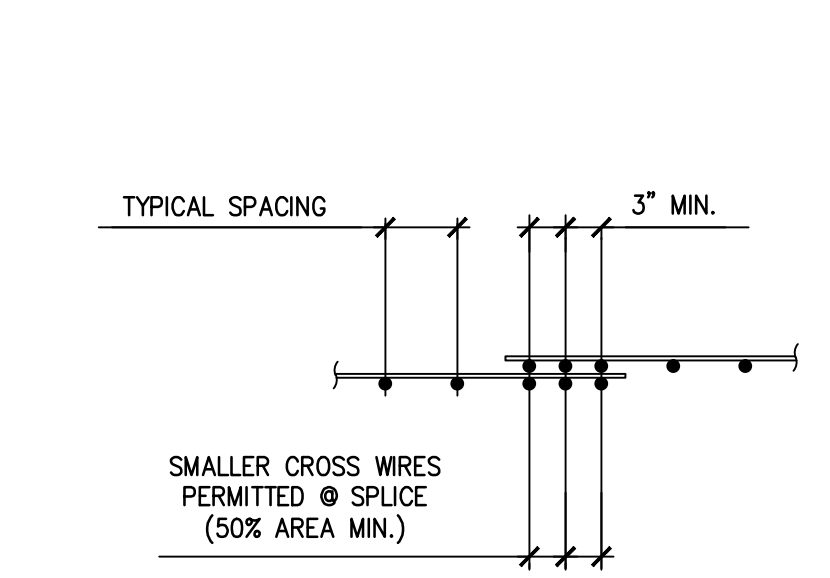
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SCALE: NONE



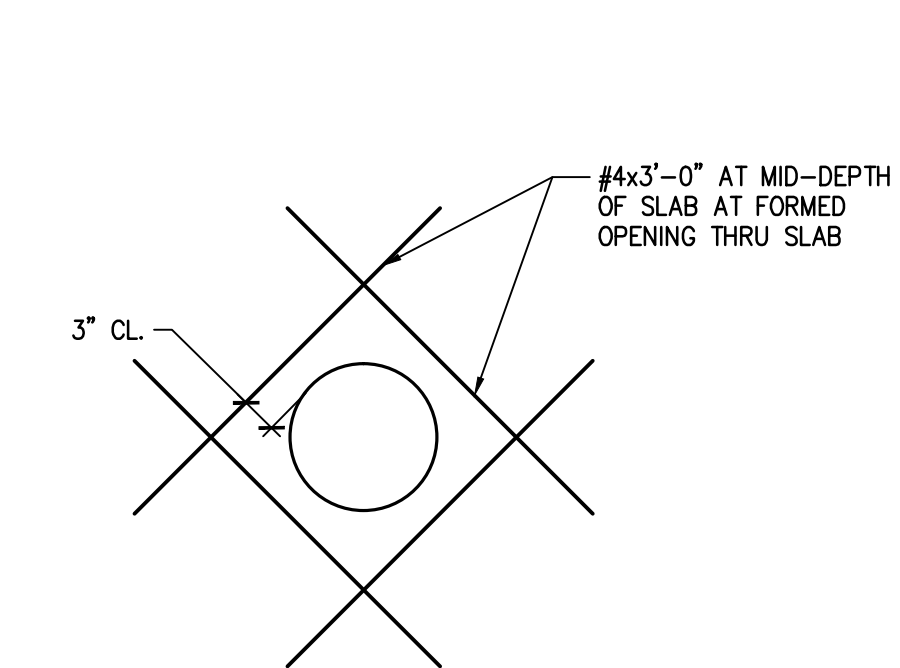
2 SLAB ON GRADE CONTSTRUCTION JNT.  
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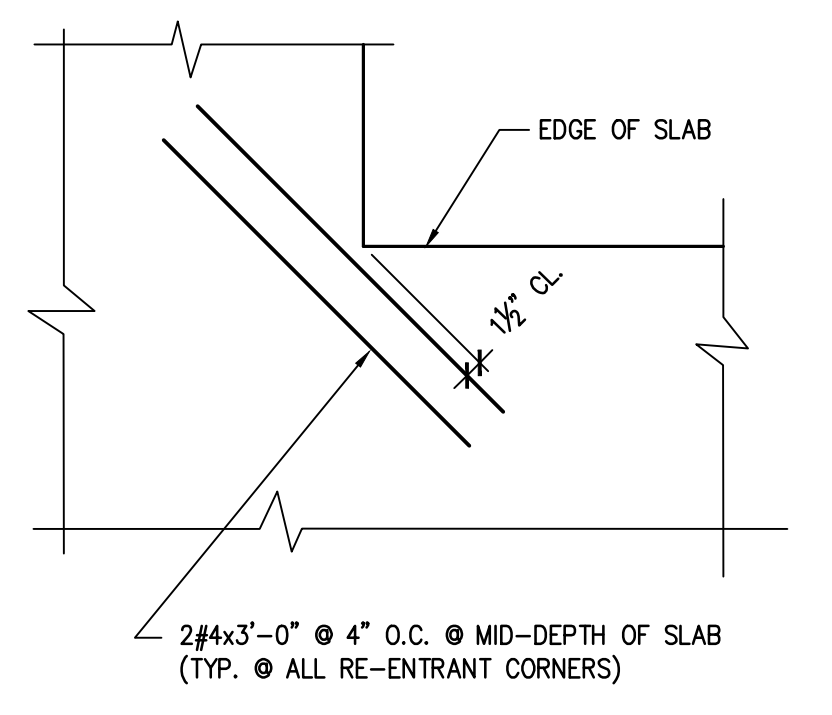
3 TYPICAL DETAIL AT SLAB DEPRESSION  
SCALE: NONE



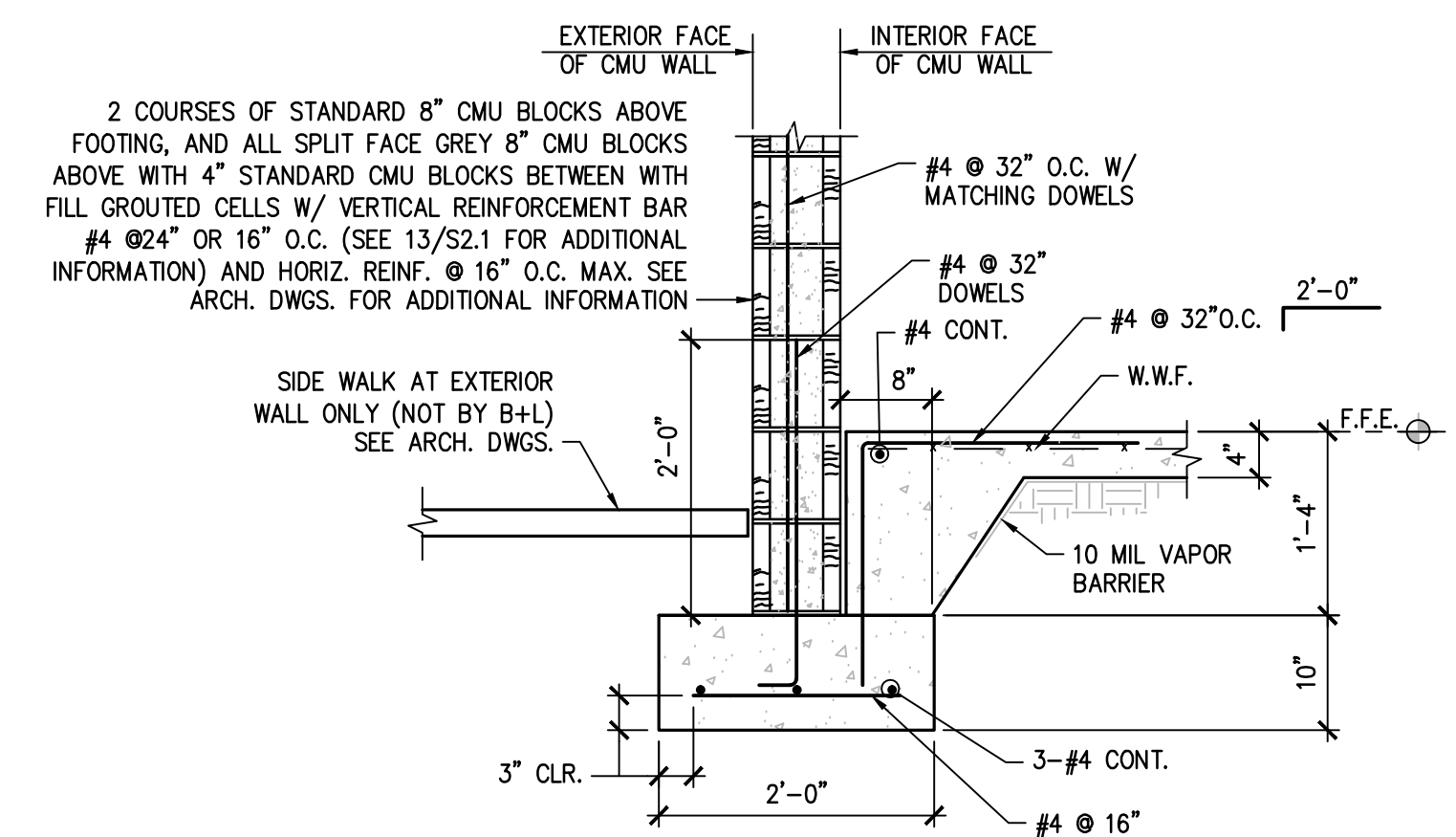
4 TYPICAL DETAIL OF W.W.F. SPLICE  
SCALE: 3/4" = 1'-0"



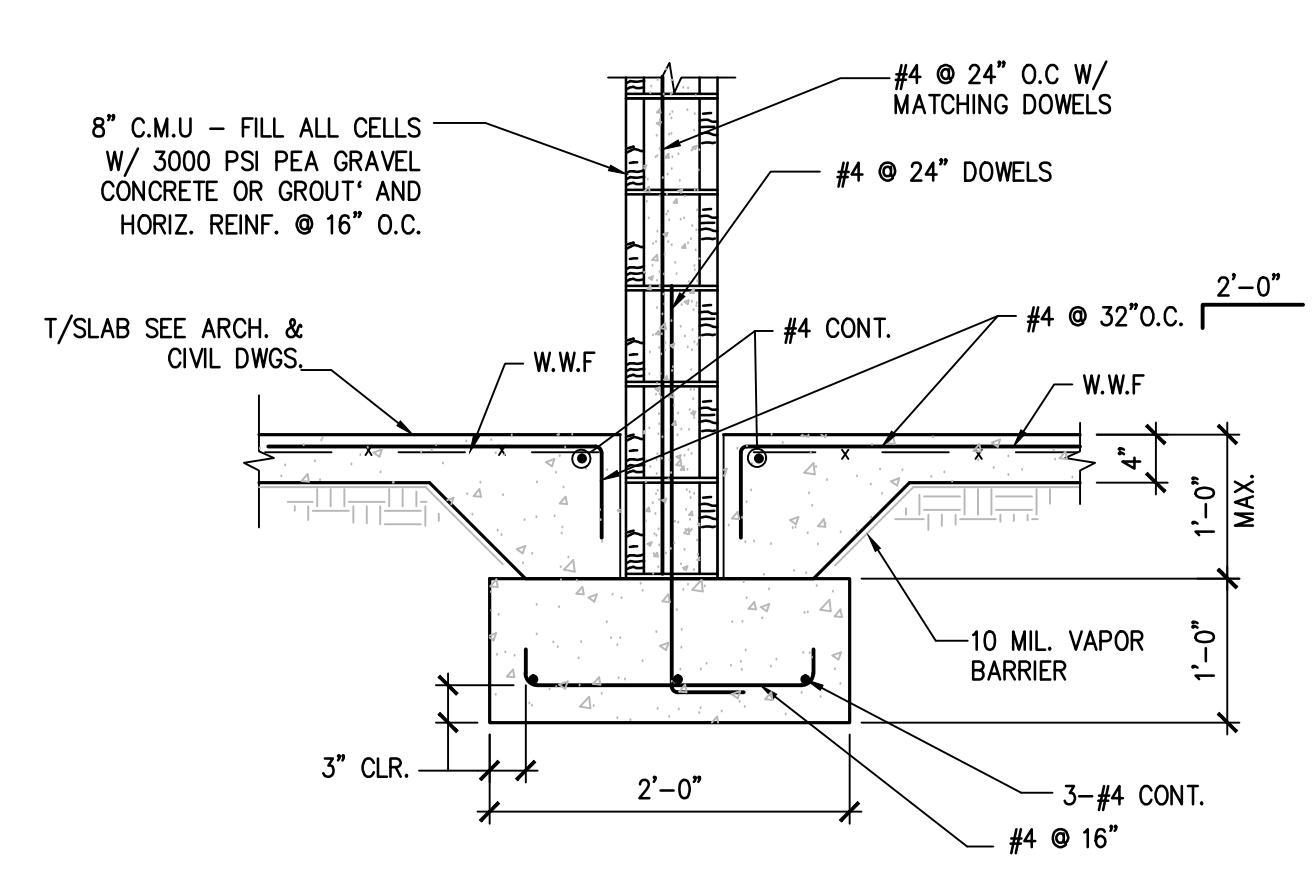
5 TYPICAL DETAIL AT SLAB PENETRATION  
SCALE: NONE



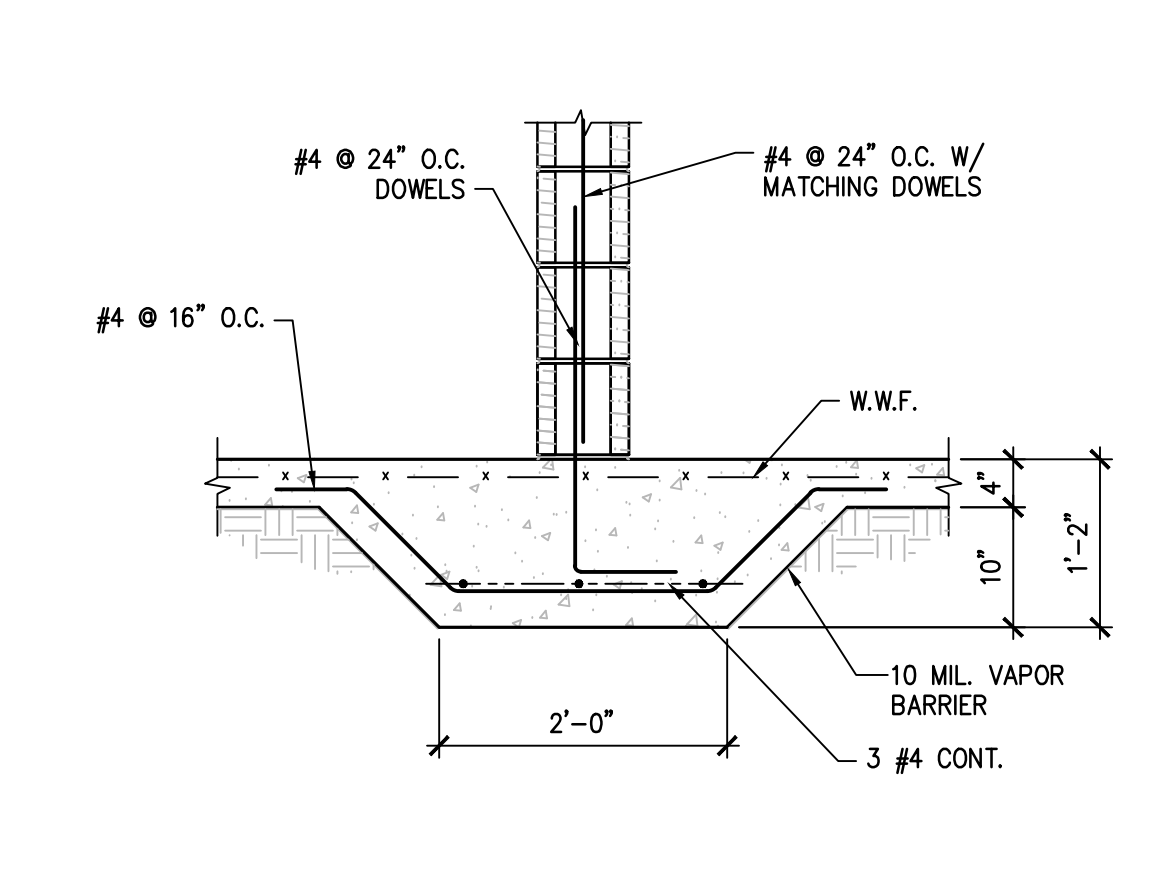
6 TYP. DETAIL AT SLAB RE-ENTRANT CORNER  
SCALE: NONE



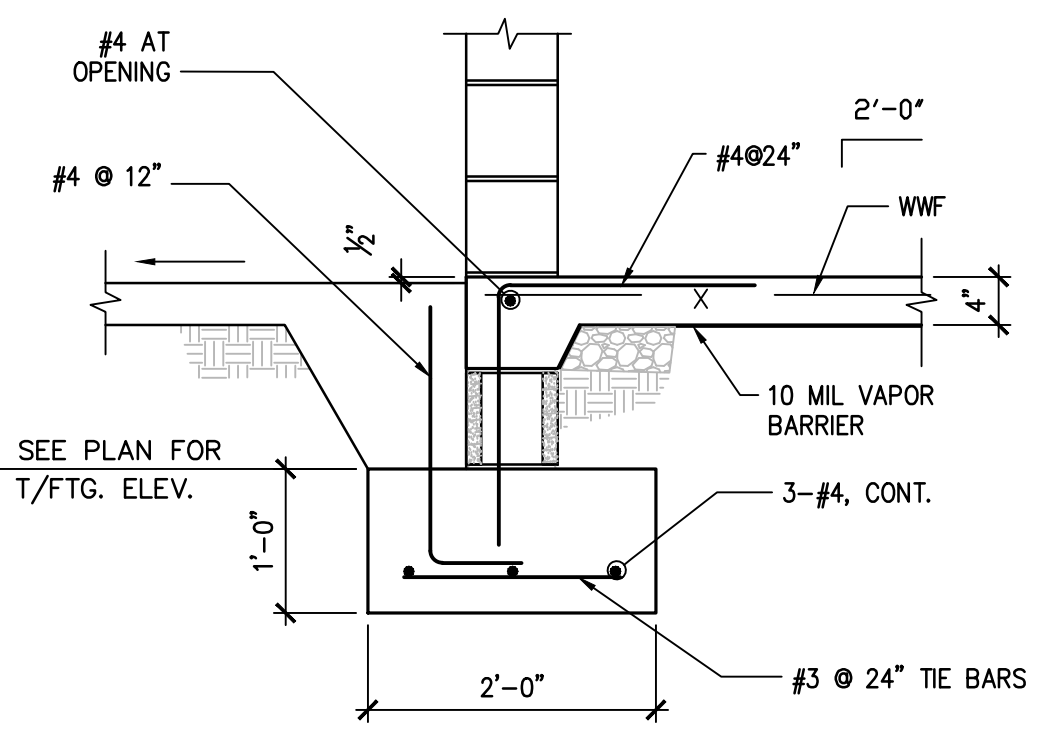
7 SECTION FOR EXTERIOR FOOTING AT SINGLE WALLS, U.N.O.  
SCALE: 3/4" = 1'-0"



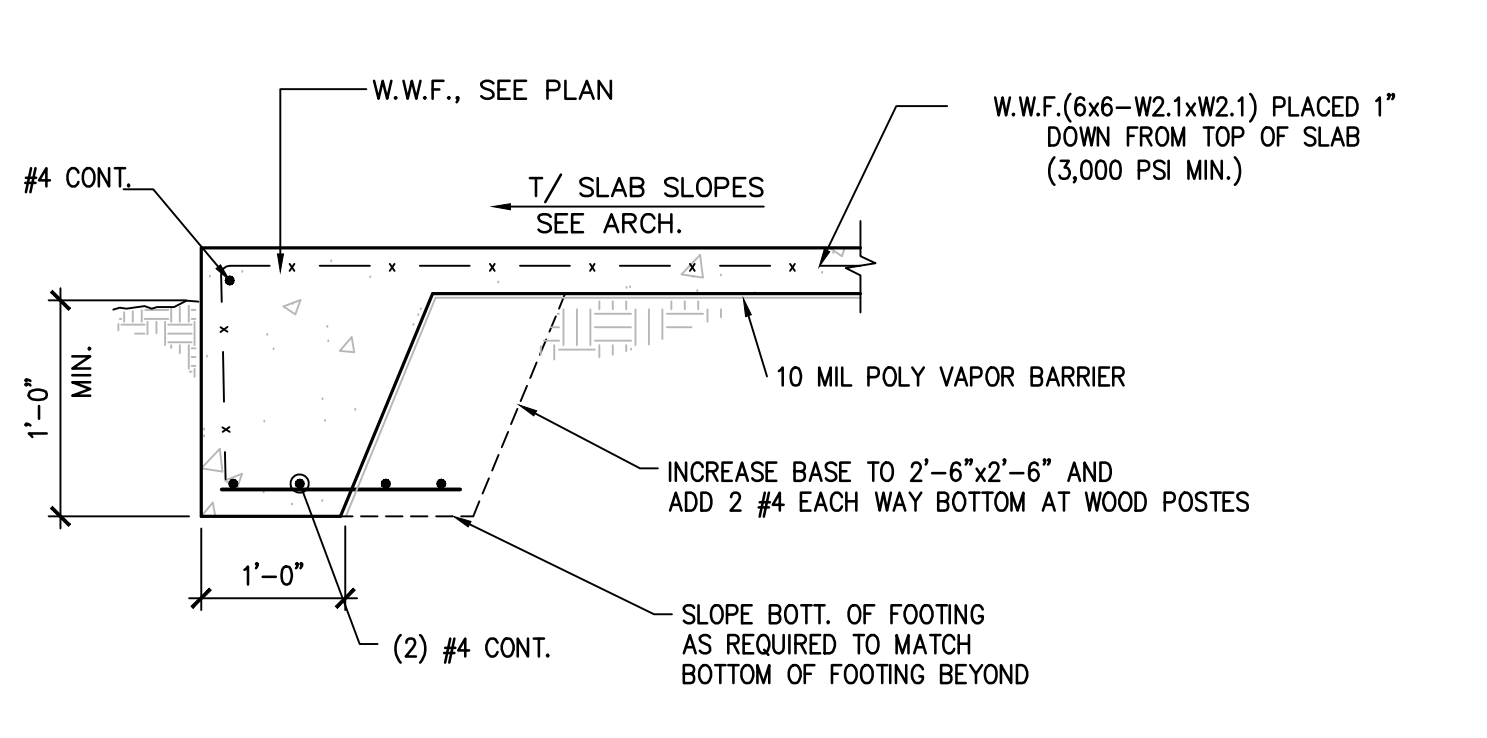
8 SECTION AT INTERIOR SINGLE WALLS  
SCALE: 3/4" = 1'-0"



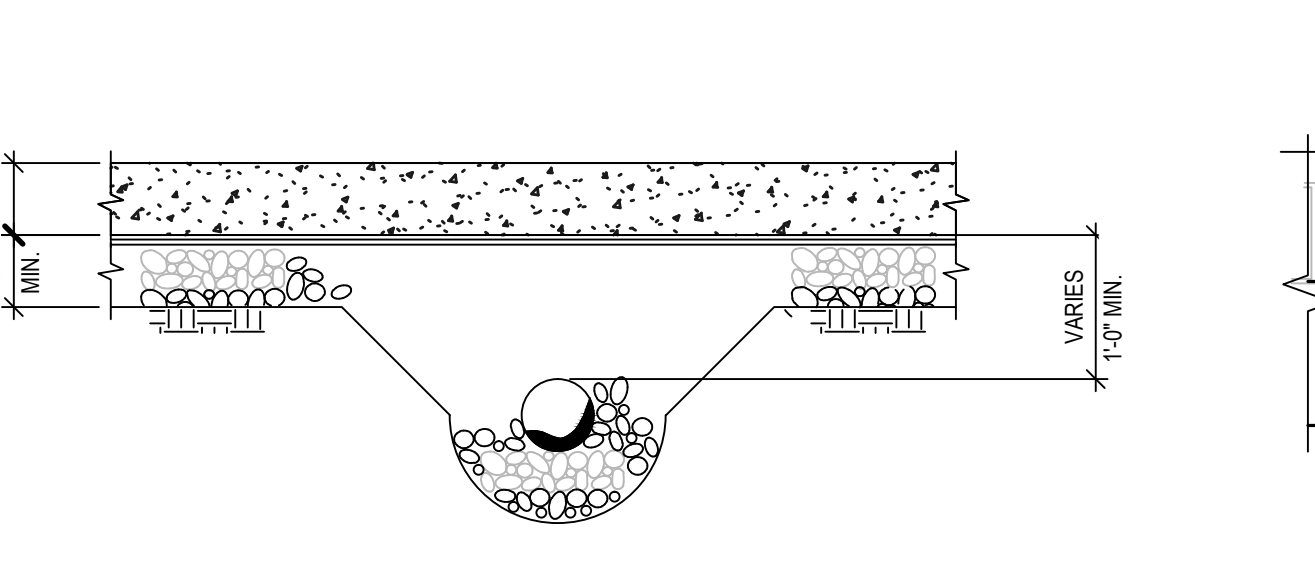
9 ALTERNATIVE OPTION FOR INTERIOR CMU WALL FOOTING  
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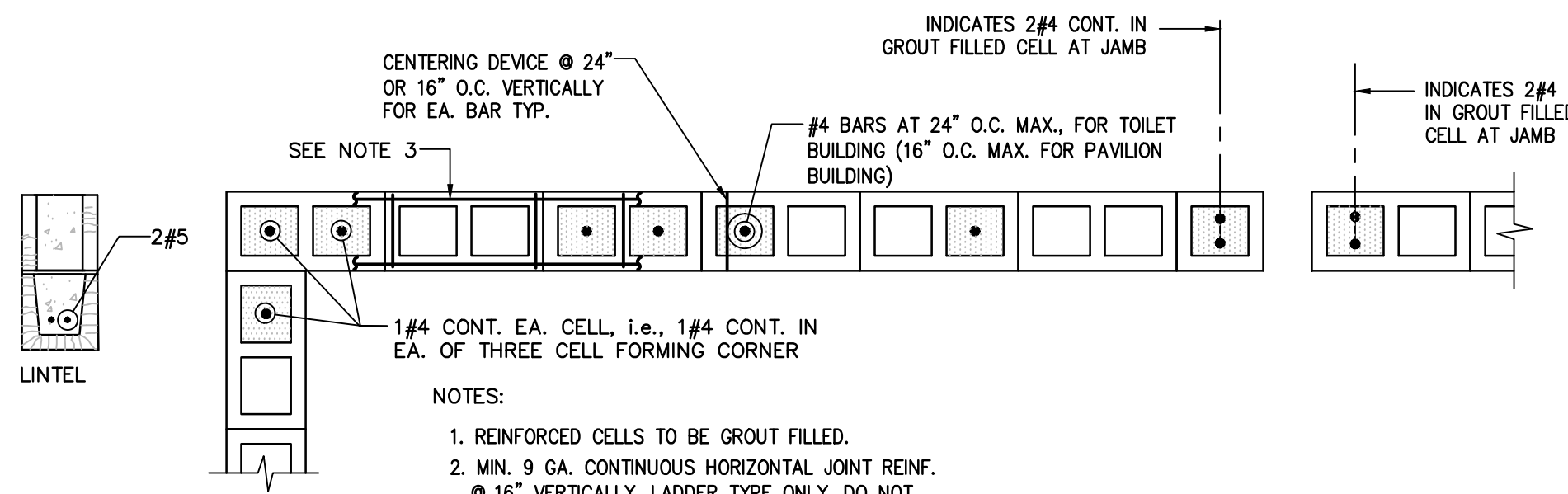
10 SECTION AT ENTRANCE  
SCALE: 3/4" = 1'-0"



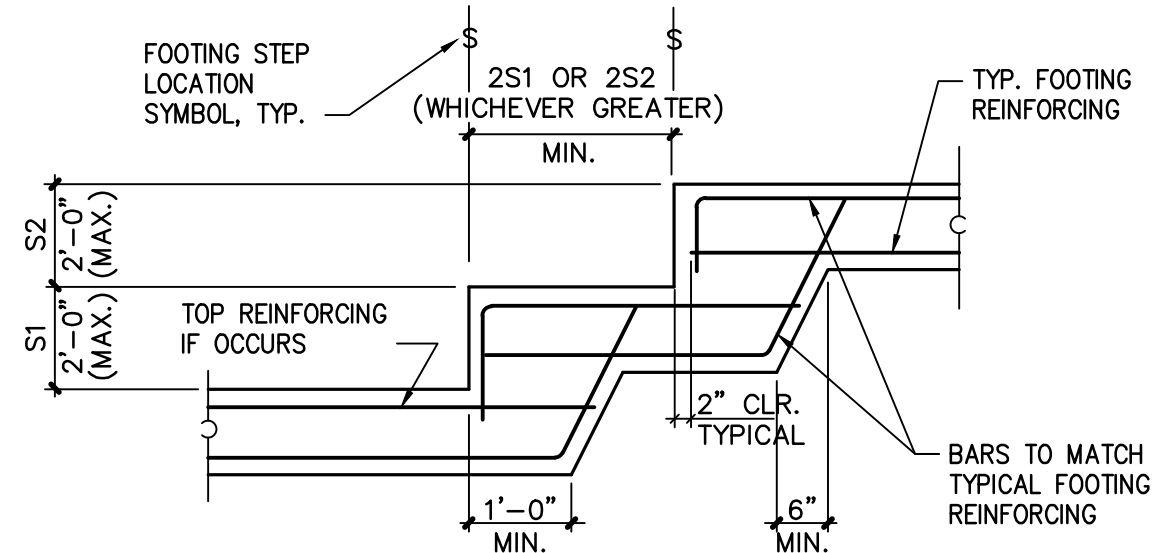
11 SECTION AT EXTERIOR PATIO  
SCALE: 3/4" = 1'-0"



12 DETAIL AT FOOTING WITH PIPES (IF OCCURS)  
SCALE: NONE



13 TYP. REINFORCEMENT FOR CMU WALLS AS SHOWN ON PLANS  
SCALE: NONE



14 STEP FOOTING DETAIL  
SCALE: 3/4" = 1'-0"

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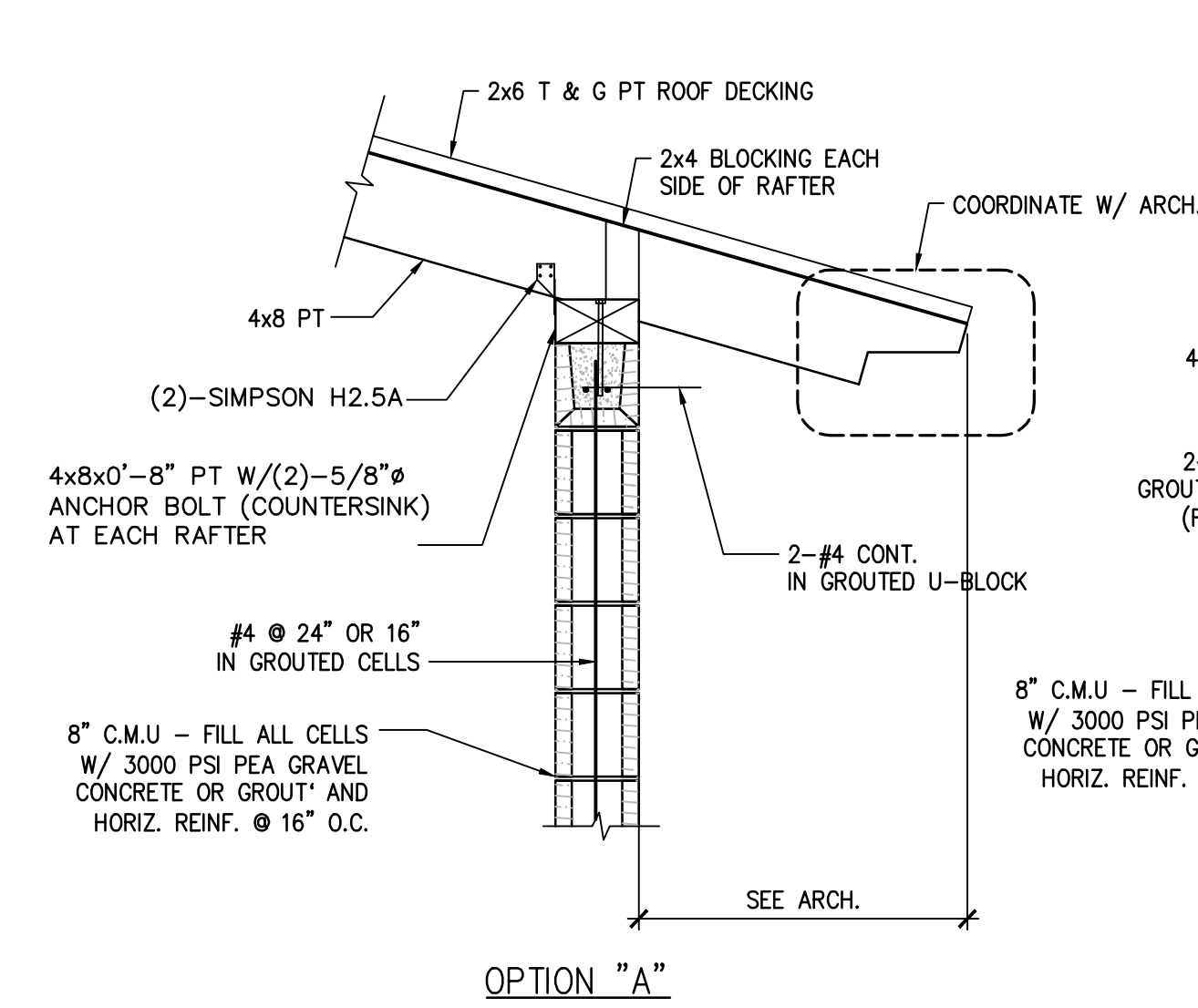
Project Title

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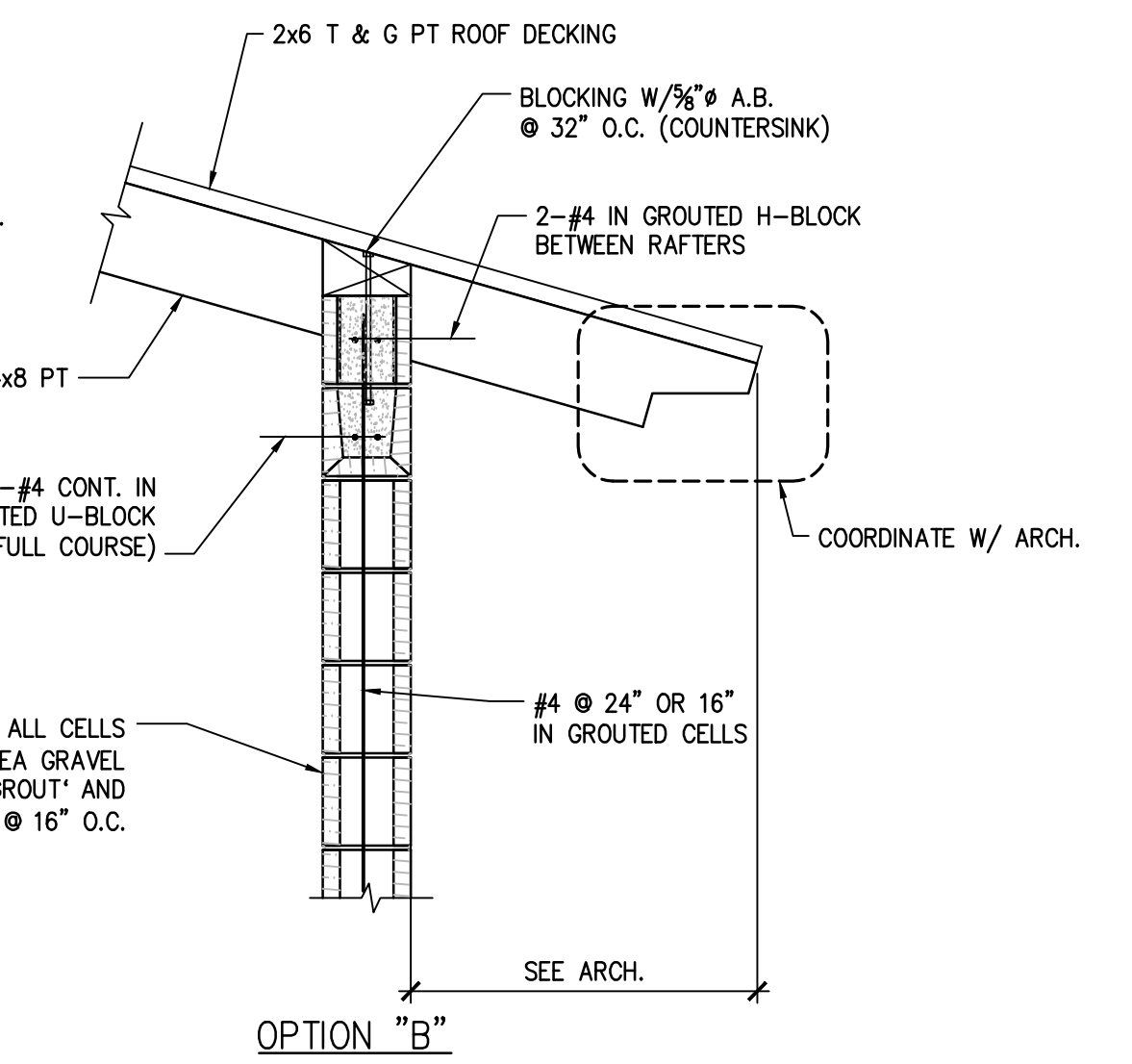
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**ROOF FRAMING.  
SECTIONS AND  
DETAILS**

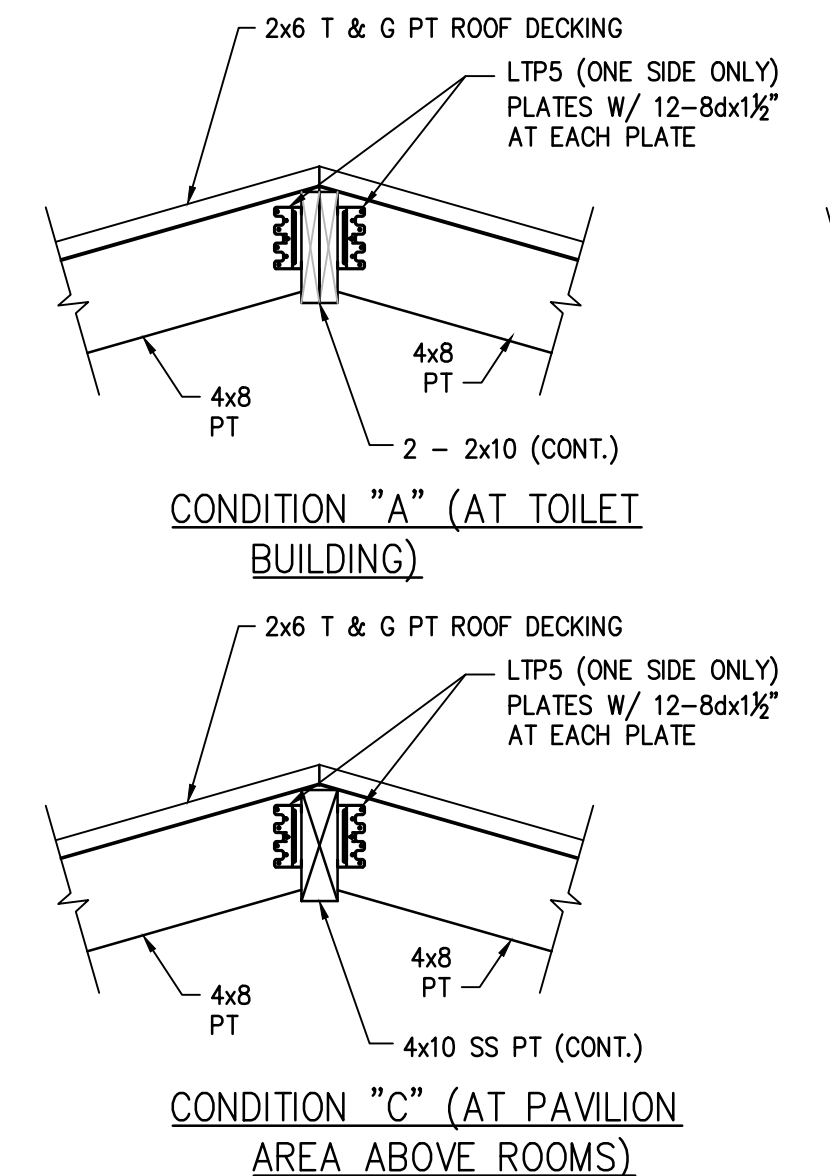
Sheet Number  
**S3.1**



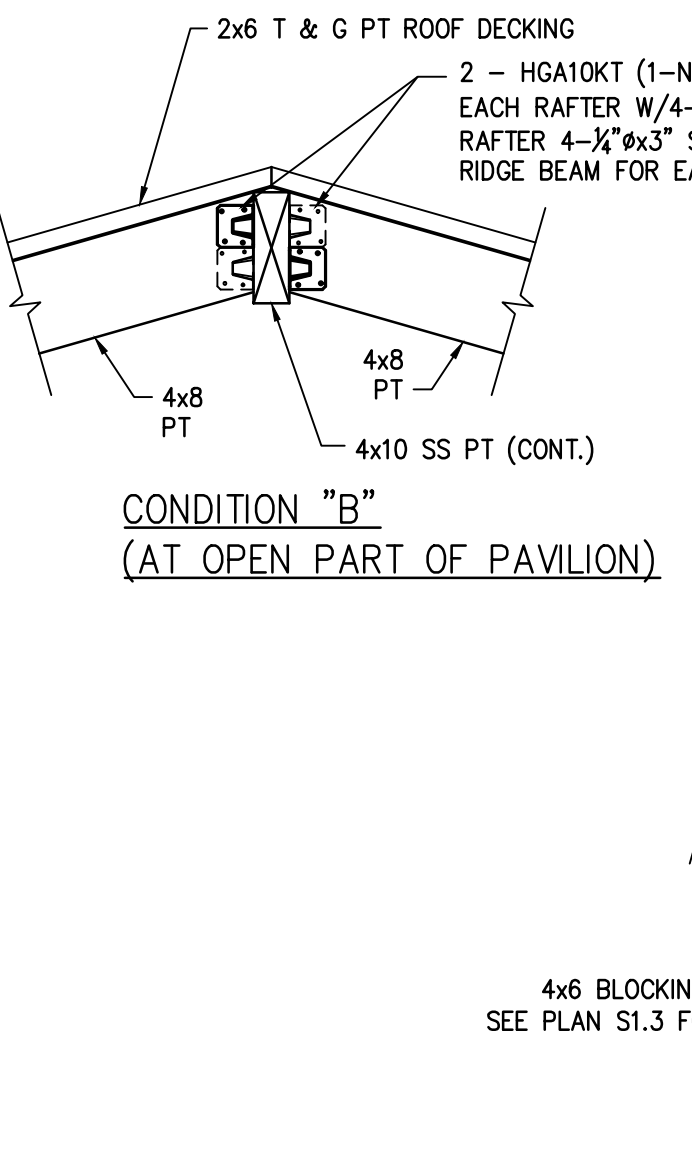
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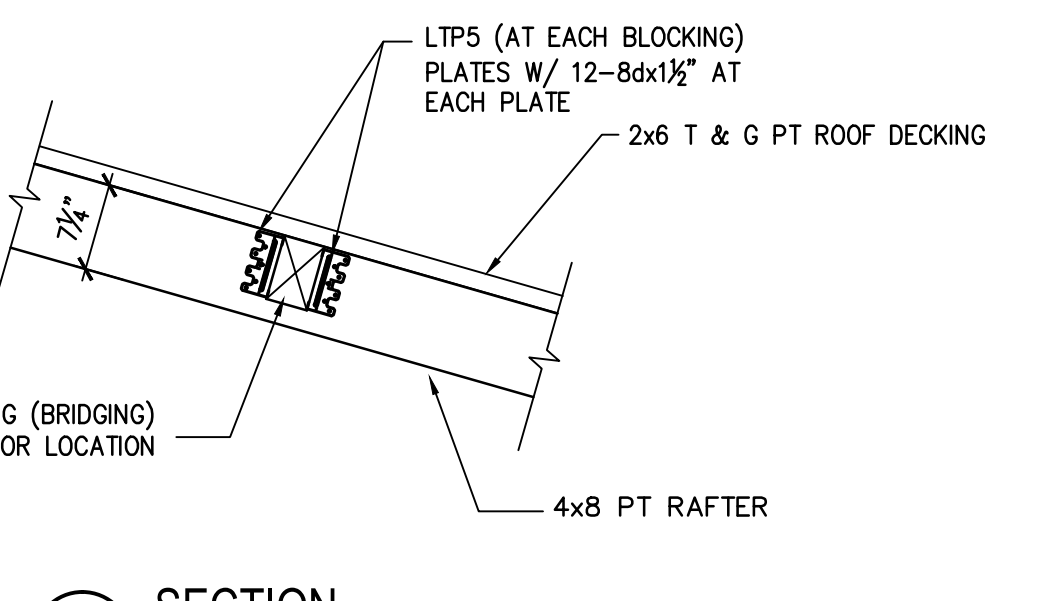
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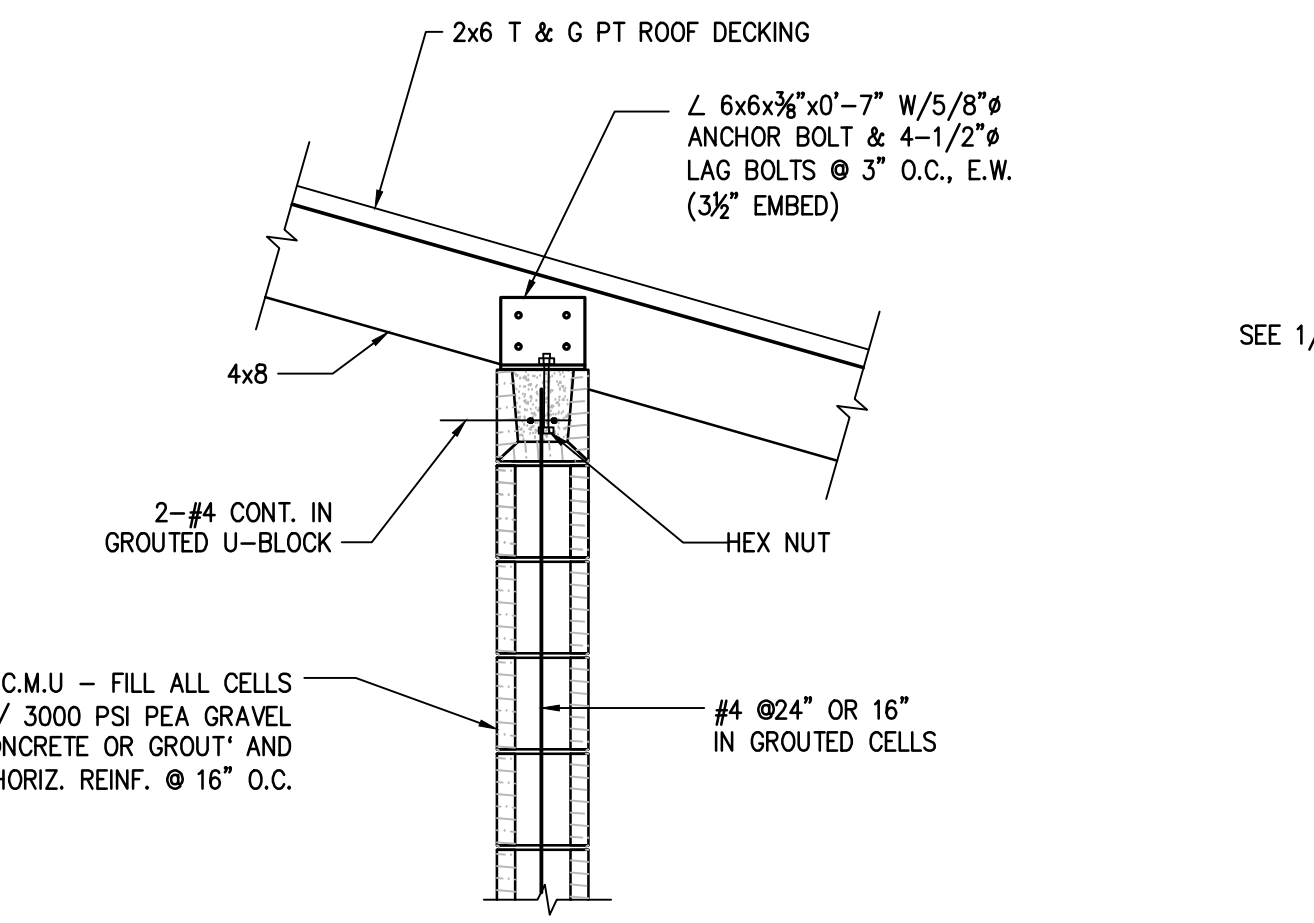
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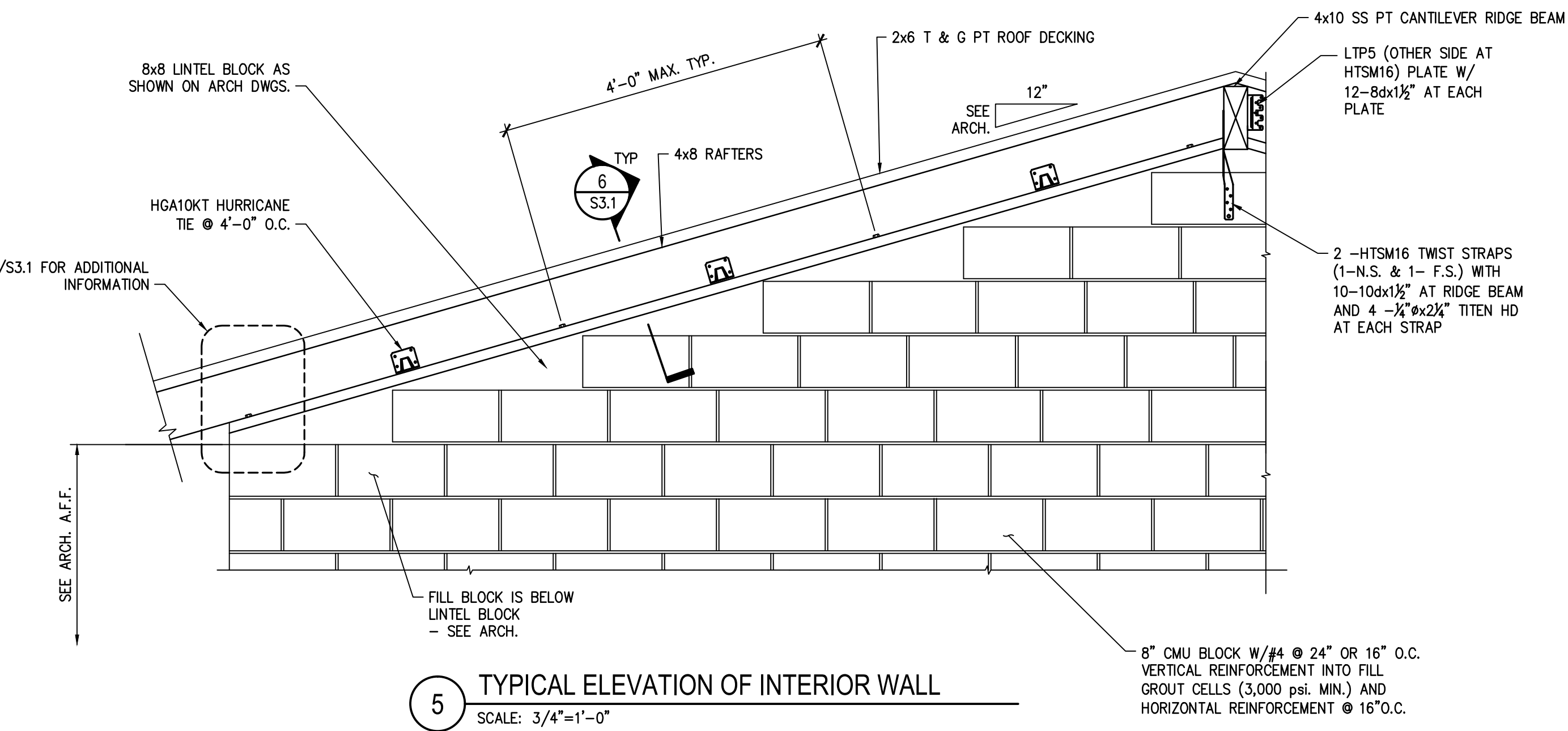
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SCALE: 3/4"=1'-0"



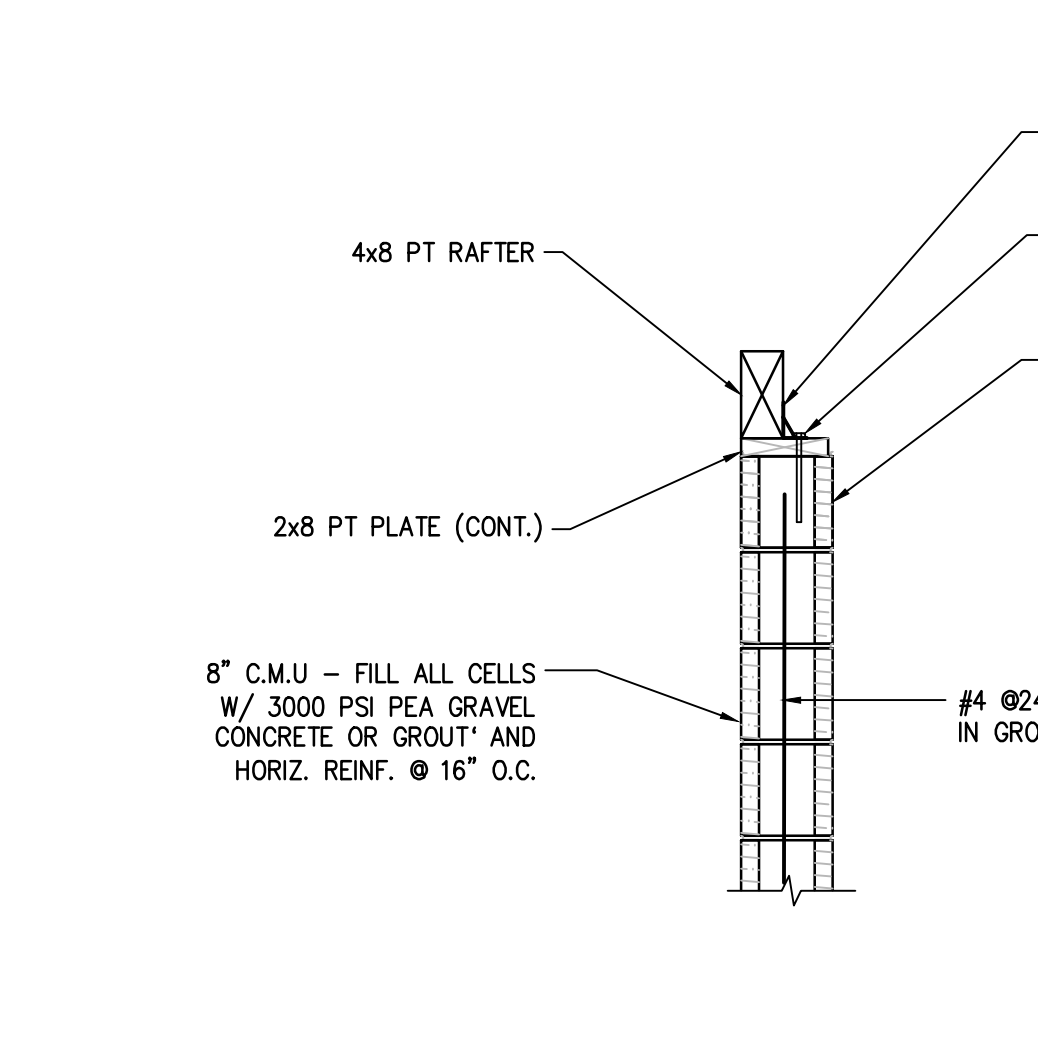
5 SECTION  
SCALE: 3/4"=1'-0"



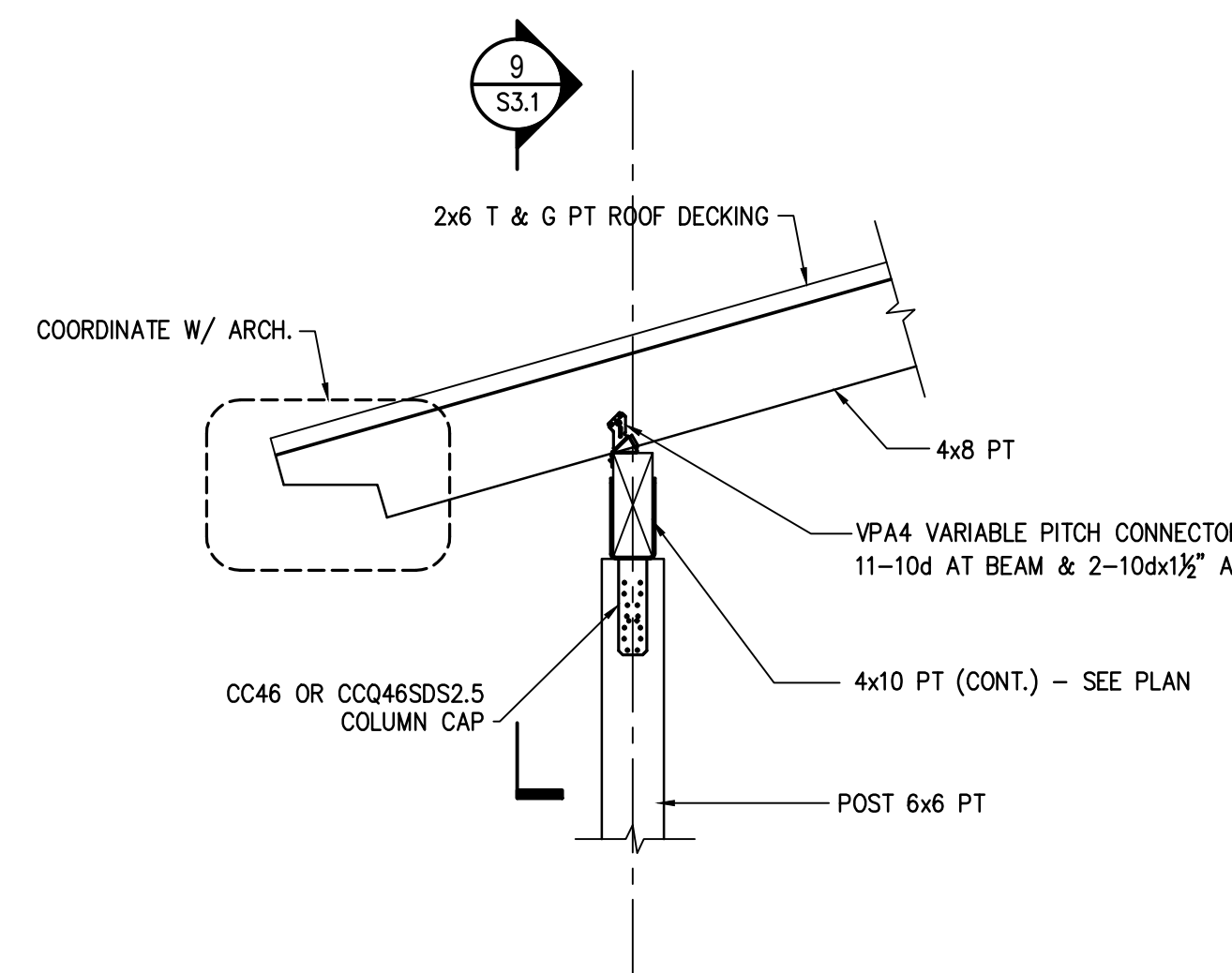
6 SECTION  
SCALE: 3/4"=1'-0"



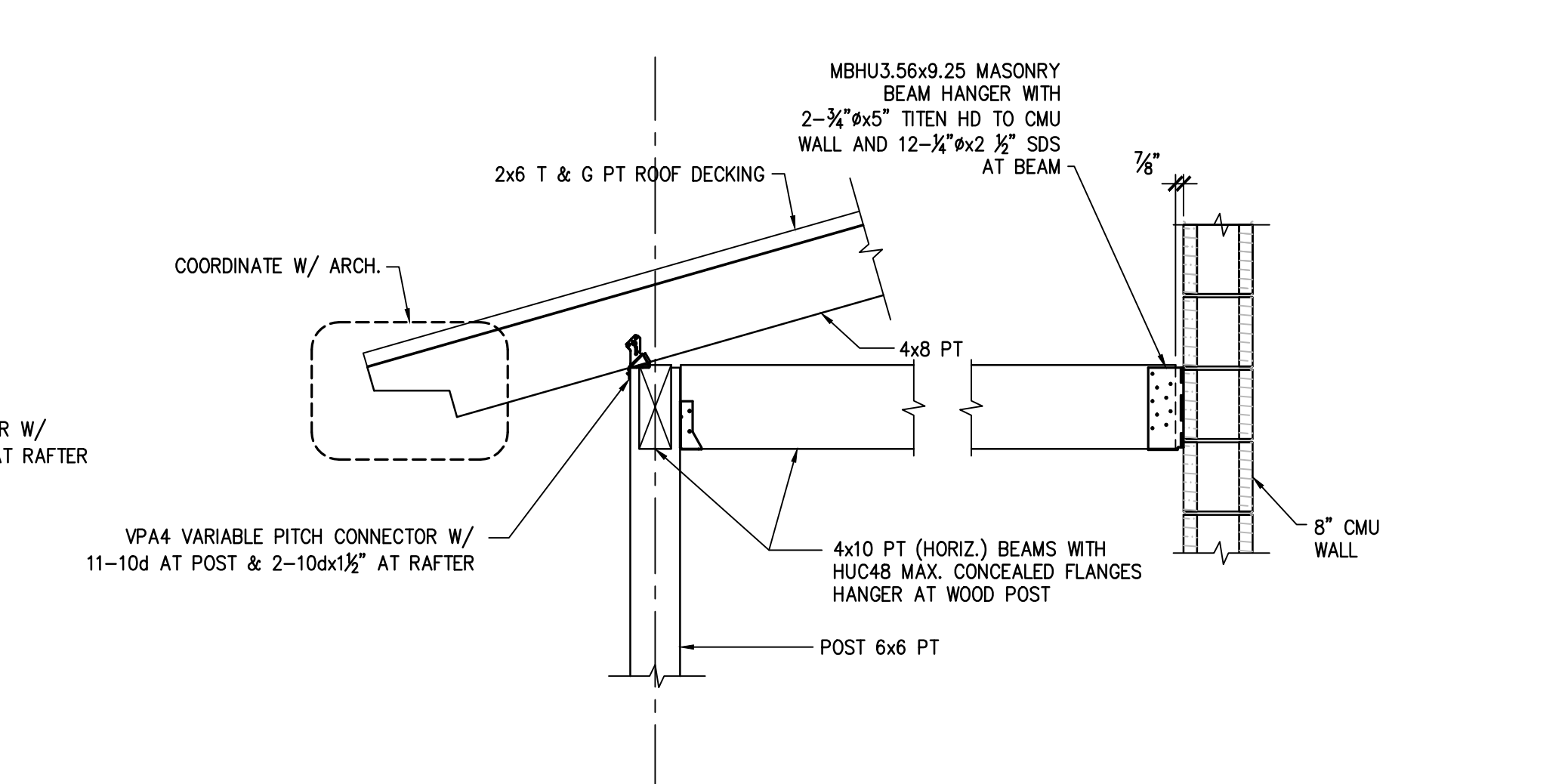
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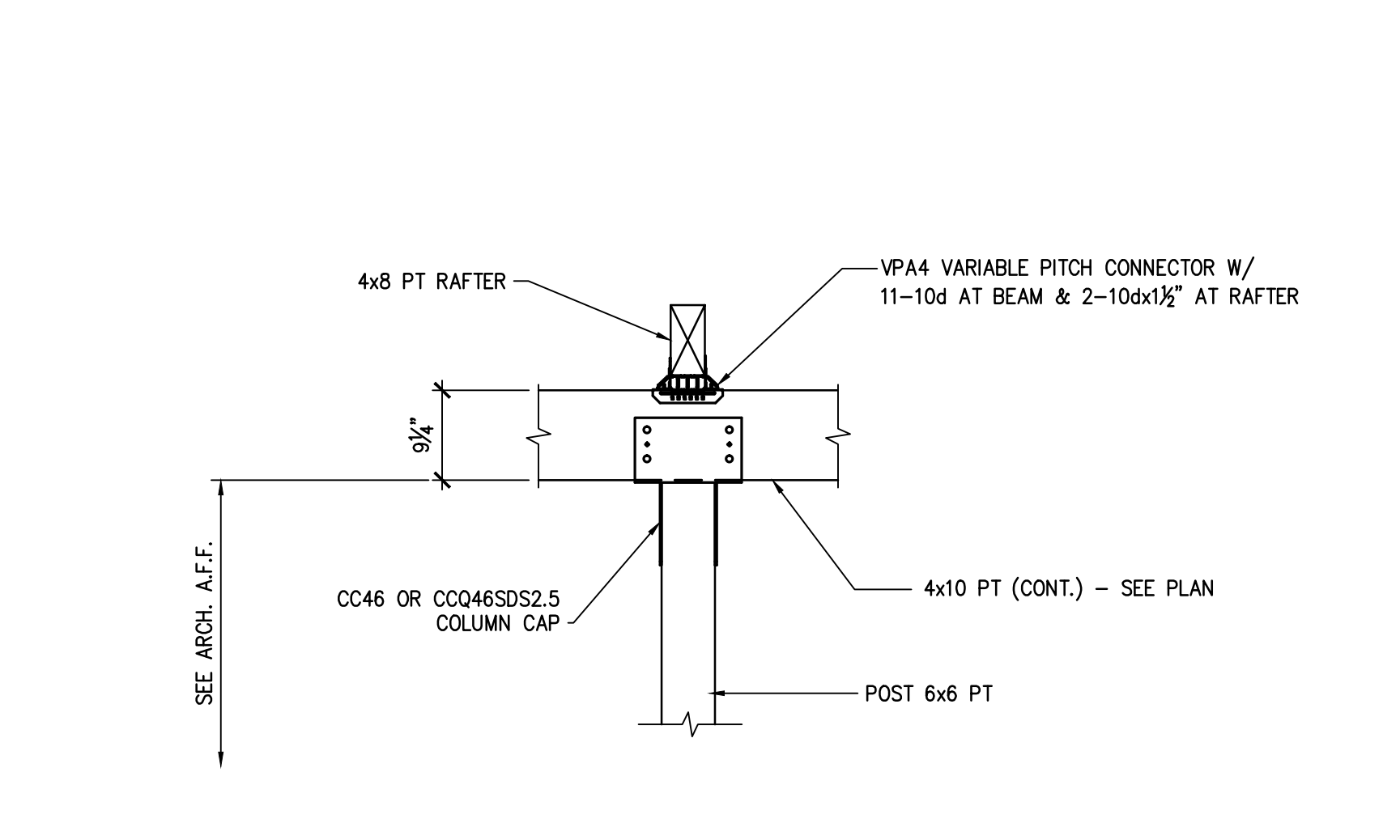
8 SECTION  
SCALE: 3/4"=1'-0"



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



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



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

v:\2017\17074 clarkston park\structures\17074-s3.1.dwg  
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9/11/2017 1:45 PM  
simon ryskin



SUTTON ARCHITECTURAL SERVICES, INC.  
SAS

601 A.J. Land Road  
Canton, Georgia 30115  
PHONE: 770-442-8682  
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petesosi@bellsouth.net

Hayes James

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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

This document is prepared for the exclusive use of CITY OF CLARKSTON and shall not be relied on by any other person or entity.

No.	Description	Date	By App.		Date	
			By	App.	By	App.
0	100% REVIEW SET	07-19-2017				

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**BID SET**  
NOT TO BE RELEASED FOR CONSTRUCTION

Project Title

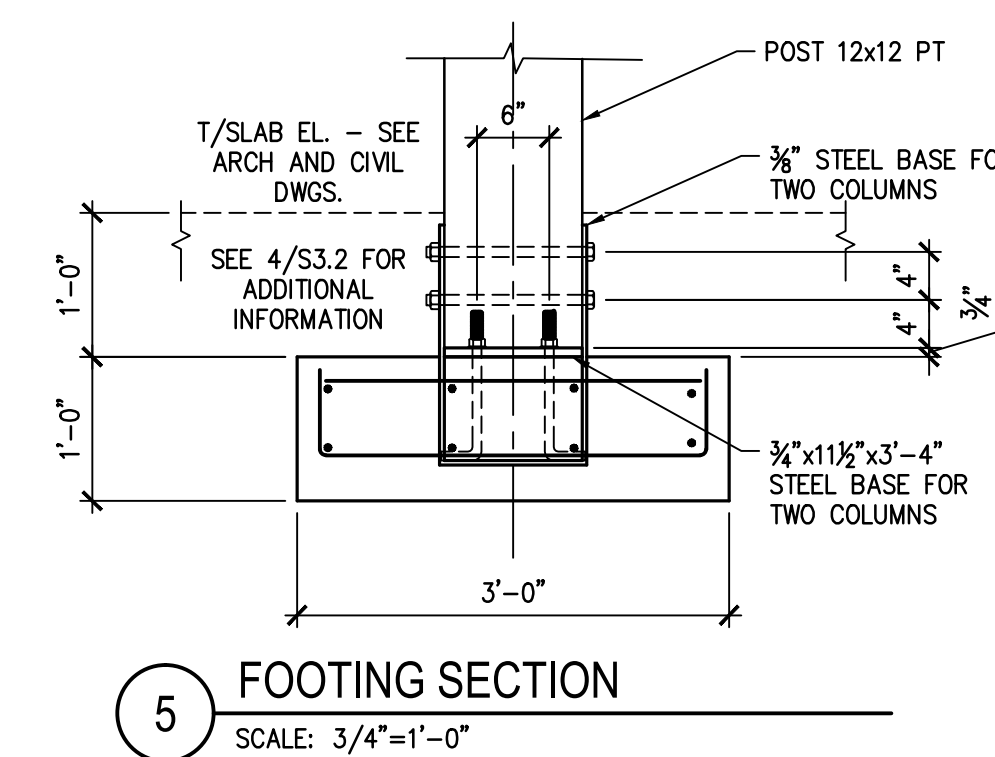
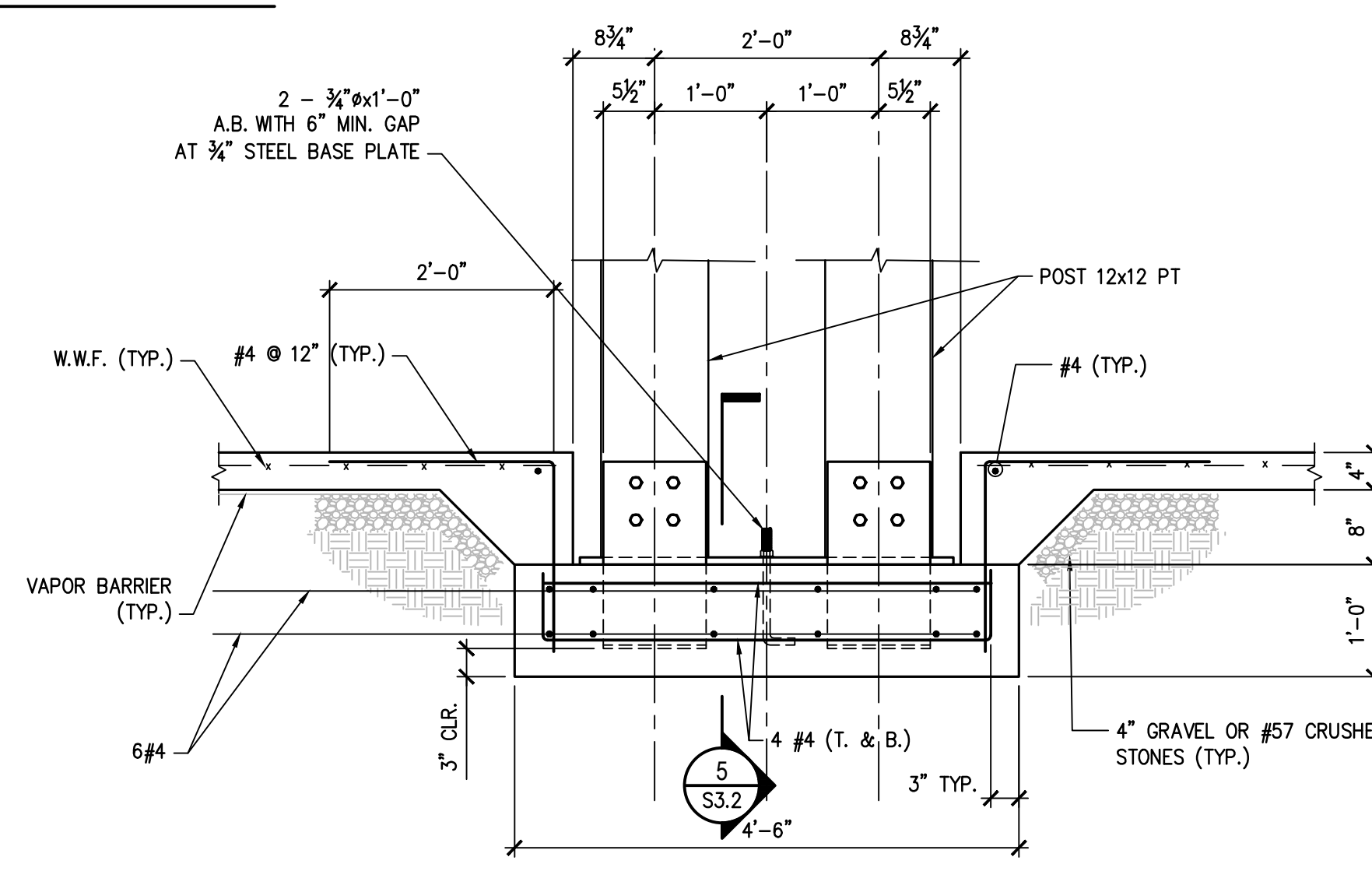
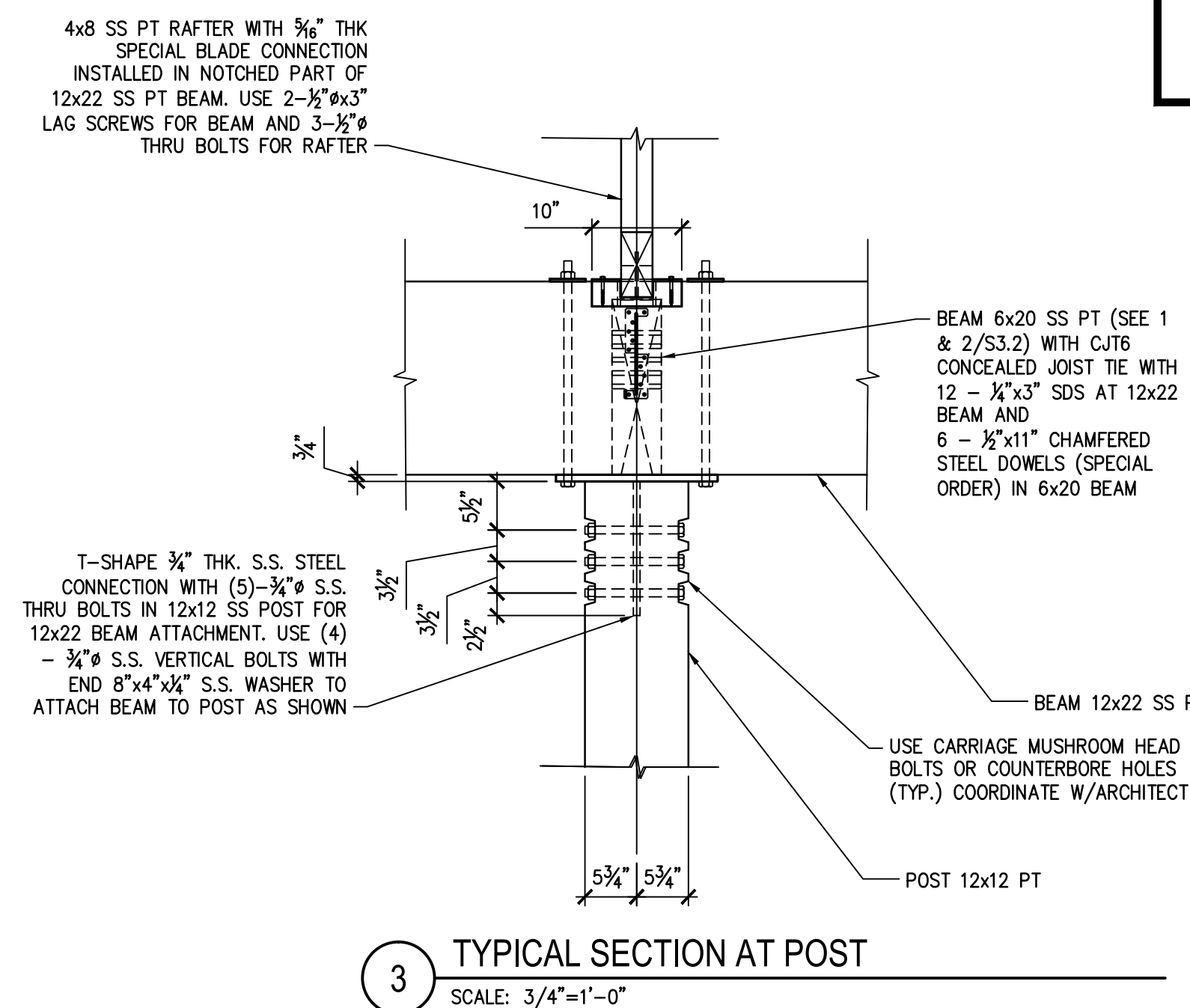
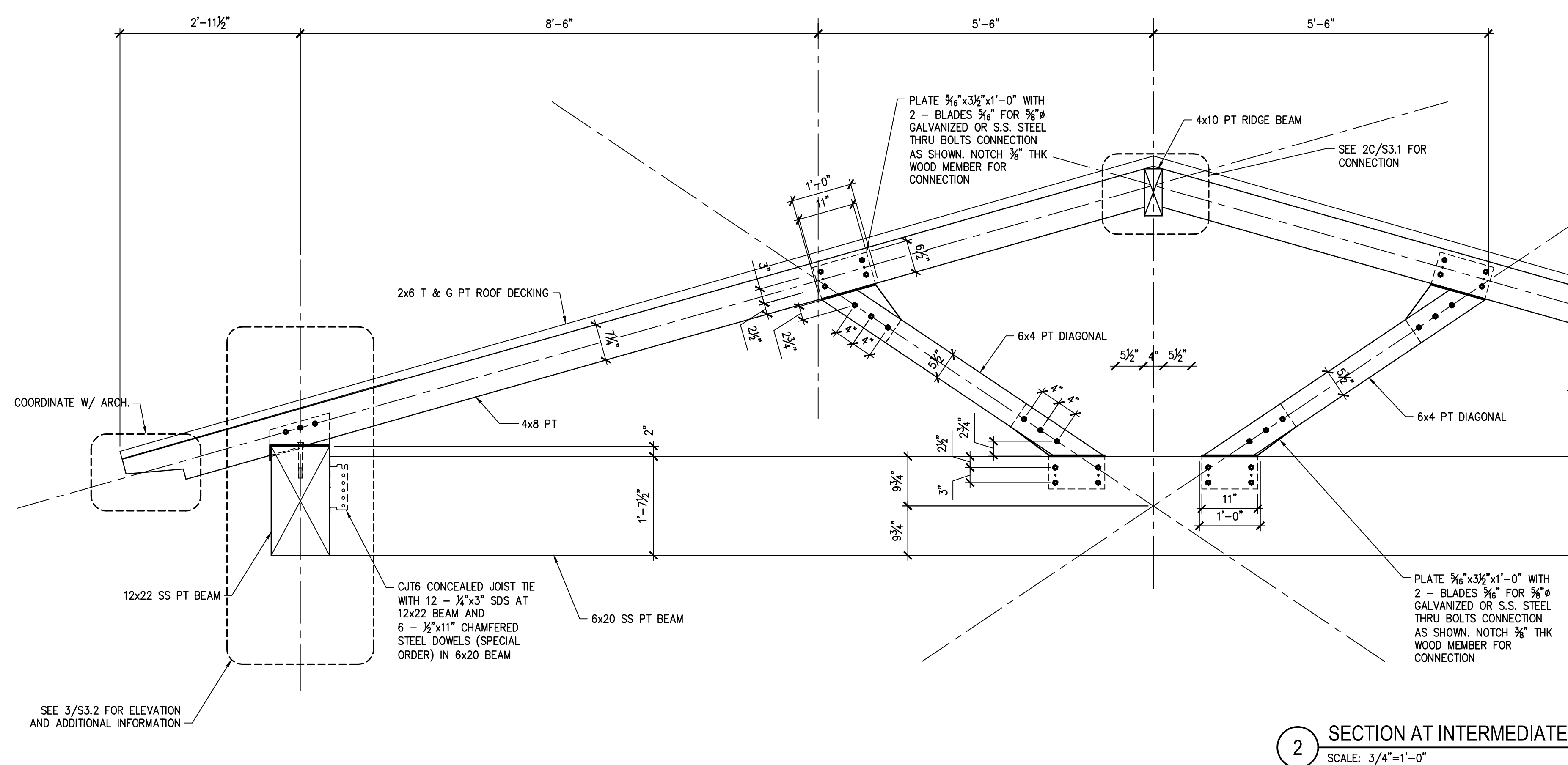
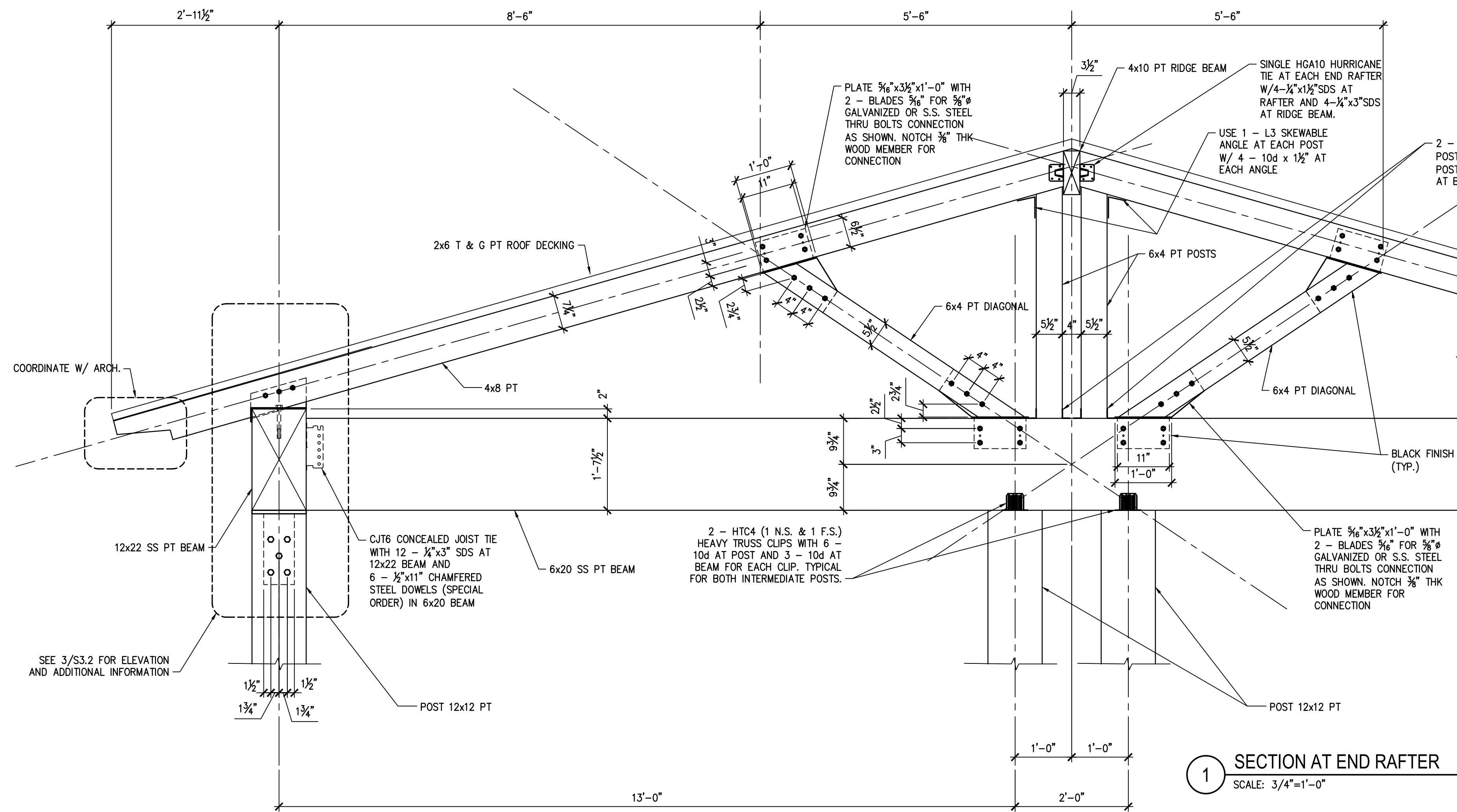
**FRIENDSHIP FOREST  
WILDLIFE SANCTUARY**

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. 17030pr  
Drawn By: OP  
Checked By: SIR  
Initial Issue Date: 09-15-2017

Sheet Title  
**ROOF FRAMING.  
SECTIONS AND  
DETAILS**

Sheet Number **S3.2**





**Environs**  
LANDSCAPE ARCHITECTURE & ECOLOGICAL PLANNING  
113 West Jefferson Street, Suite A  
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www.environsla.com

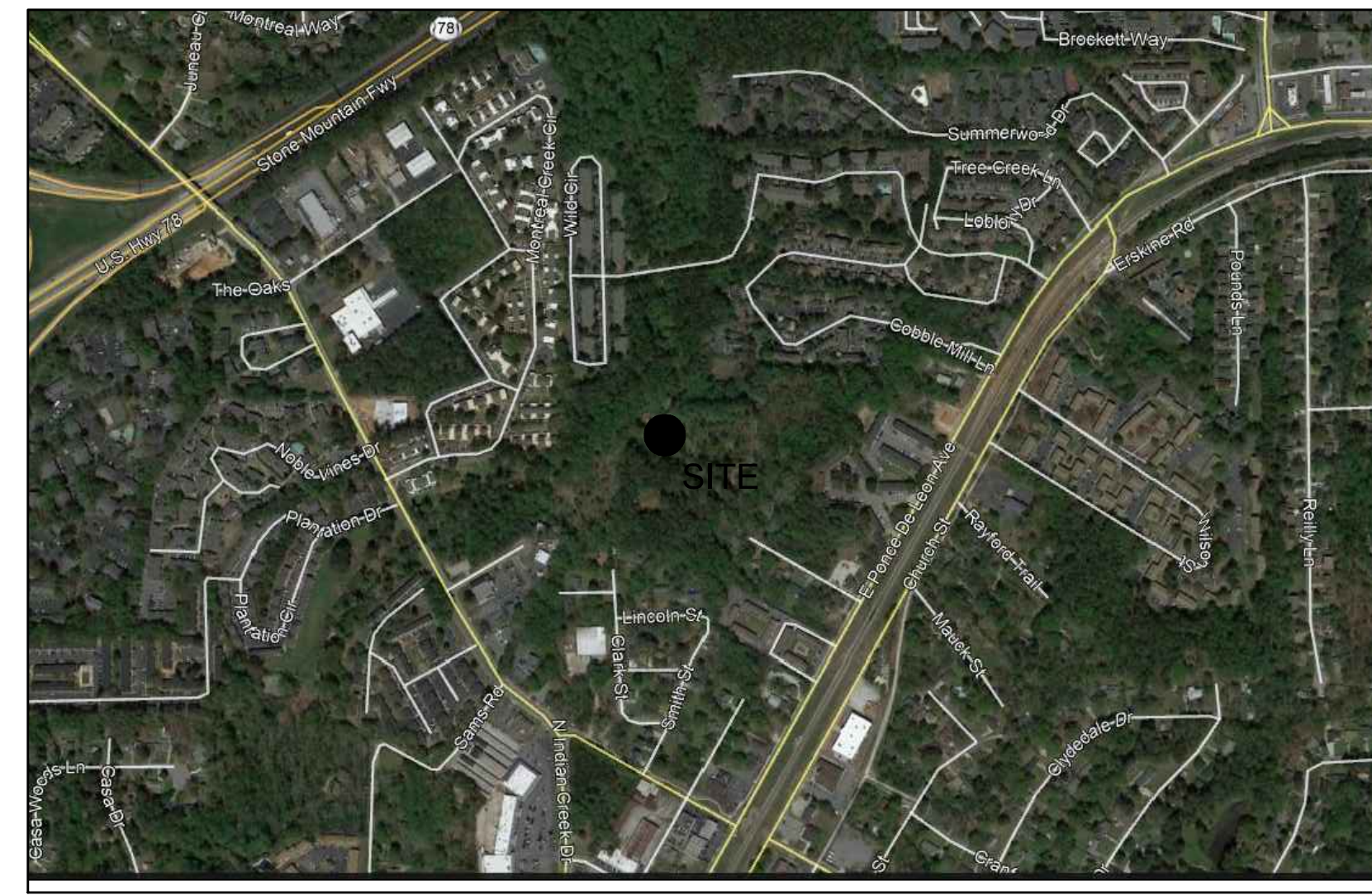
# SITE WORK CONSTRUCTION DRAWINGS

## FOR FRIENDSHIP FOREST PARK WETLAND AND TRAIL ENHANCEMENT PLAN

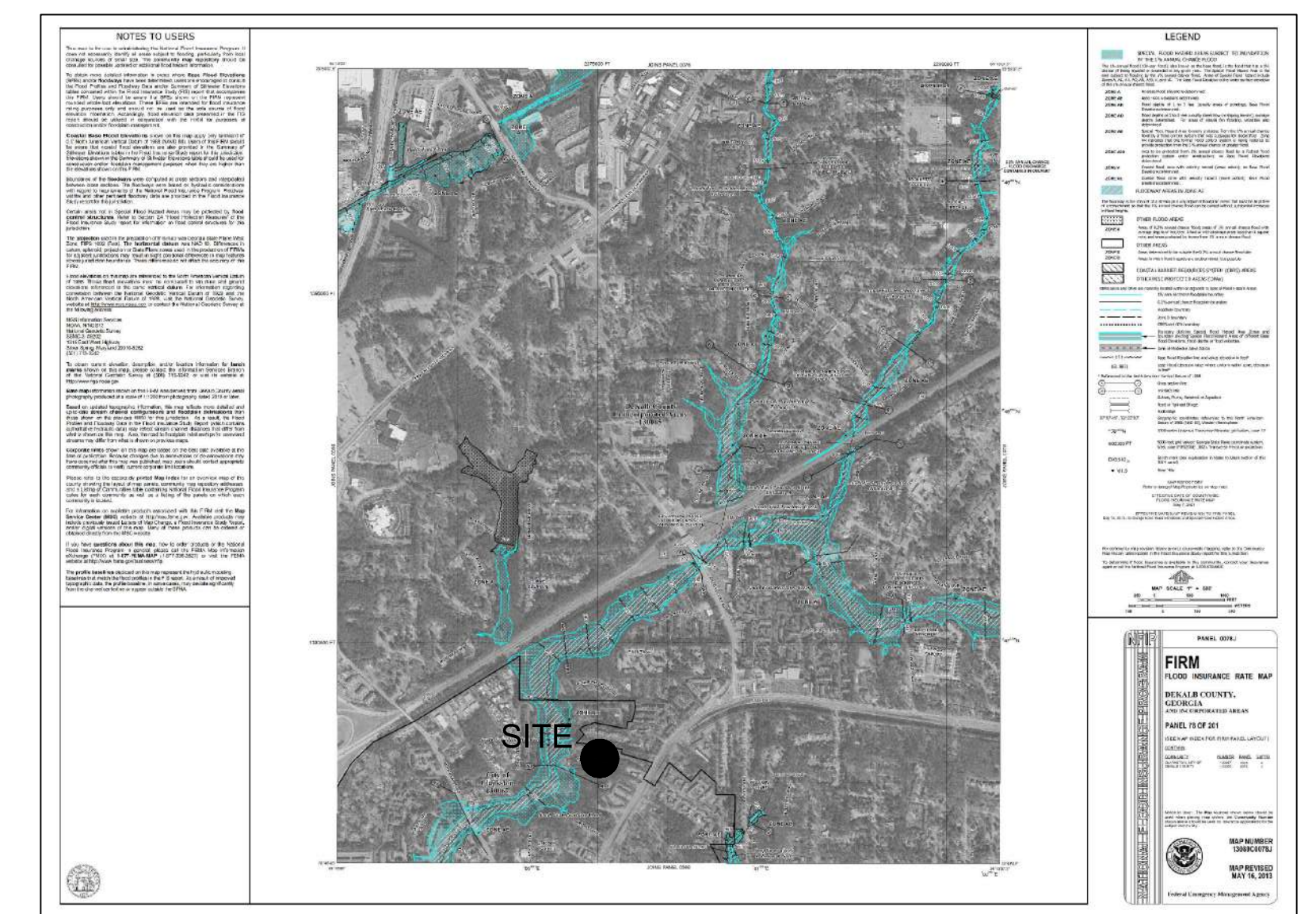
CITY OF CLARKSTON  
4399 E PONCE DE LEON AVE  
CLARKSTON, GEORGIA 30021  
DEKALB COUNTY:

## SHEET INDEX

- CV-1.0 COVER SHEET
- L-1.0 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

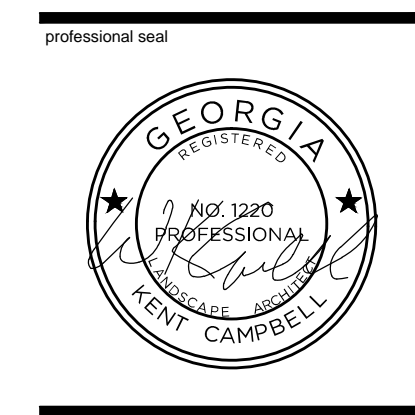


VICINITY MAP NOT TO SCALE  
GPS COORDINATES  
N 33°48'55.43" W 84°14'20.05"  
N 33.815310 W -84.238926



### FLOOD MAP NOT TO SCALE

SITE INFORMATION		
THE x.xx ACRES (AC) OF (DESCRIBE EXISTING SITE FEATURES) WILL BE DEVELOPED FOR A PUBLIC PARK. THIS WILL INCLUDE THE BUILDING, PARKING AREAS, STORM WATER INFRASTRUCTURE, WATER AND SEWER AND OTHER UTILITY INFRASTRUCTURE, AND LANDSCAPING.		
TYPE	STATS	ADD. INFO.
ZONING AS PER CITY OF CLARKSTON ZONING	NEIGHBORHOOD RESIDENTIAL 1	
PROPERTY AREA	18.4 AC	801504 S.F.
DISTURBED AREA	3.94 AC	171723.45 S.F.
MISCELLANEOUS INFORMATION		
SOIL SERIES	Ca - Cartecay silt loam, Aka - Altavista fine sandy loam, PD - Pacolet sandy loam, Tf - Toccoa sandy loam, AwE - Ashlar-Wedowee complex	
FLOOD PLAIN	A PORTION OF THIS SITE LIES WITHIN A FEMA FLOOD HAZARD AREA. REFER TO FEMA MAP SHOWN. FIRM PANEL 13089C0078J, DATED 05/16/2013	
STATE WATERS	THERE ARE STATE WATERS PRESENT ON THIS SITE. THERE ARE STATE WATERS WITHIN 200' OF THIS SITE. THERE ARE STREAM BUFFERS ON THIS PROPERTY.	
HYDROLOGY	DRAINAGE AREA OF SF PEACHTREE CREEK IS 5.2 S.M.	
WATERS OF THE U.S. (WOTUS)	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 LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS APPROPRIATE FEDERAL WETLANDS ALTERATION ("SECTION 404") PERMIT HAS BEEN OBTAINED. IF WETLANDS ARE IMPACTED BY THIS DEVELOPMENT, A CORPUS OF ENGINEER'S PERMIT SHALL BE OBTAINED PRIOR TO DISTURBANCE. ONCE OBTAINED, A COPY OF THE WETLAND PERMIT SHALL BE KEPT ON SITE AT ALL TIMES. UPON THE CORPUS OF ENGINEER APPROVAL, A SEPARATE COPY OF THE PERMIT WILL BE SUBMITTED TO THE LIA.	



project information

# FRIENDSHIP FOREST PARK

## WETLAND AND TRAIL ENHANCEMENT PLAN

4399 PONCE DE LEON AVE  
CLARKSTON, GEORGIA 30021  
DEKALB COUNTY

Project Name:	SWCD:	Address:	Date on Plans:
Friendship Forest Wetland Enhancement	Upper Chattahoochee	4399 E Ponce De Leon Avenue	September 15, 2017
City/County:	Clarkston / DeKalb		

Plan Page #	Included Y/N	TO BE SHOWN ON ES&PC PLAN	STAND ALONE
CV-1.0	Y	1) The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.	
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 professional.	
na	na	3) Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the plan must include at least 4 of the BMP's listed in Appendix 1 of this checklist.	
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, sedimentation and pollution controls.	
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-6.0	Y	6) Note total and disturbed acreage of the project or phase under construction.	
CV-1.0, L-5.0	Y	7) Provide GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.	
all	Y	8) Initial date of Plan and dates of any revisions made to Plan including the entity who requested the revisions.	
CV-1.0, L-5.0	Y	9) Description of the nature of construction activity.	
CV-1.0, L-5.0	Y	10) Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.	
CV-1.0, L-5.0	Y	11) Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.	
L-5.0 thru L-5.3	Y	12) Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.	
L-5.0 thru L-5.3	Y	13) Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on 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 to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."	
L-5.0	Y	15) Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrenched 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."	
na	na	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 significant effect on BMPs with a hydraulic component must be certified by the design professional."	
L-5.0	Y	18) Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."	
L-1.0, L-5.0	Y	19) Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."	
L-1.0, L-5.0	Y	20) Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."	
L-1.0, L-5.0	Y	21) Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."	
L-5.0	Y/na	22) Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment must comply with Part III, C, of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment."	
L-5.0	Y/na	23) If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan."	
L-5.0, L-6.0	Y	24) BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited."	
L-5.0	Y	25) Provide BMPs for the remediation of all petroleum spills and leaks.	

L-5.0	Y	25) 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	28) 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	30) 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 I.V.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	33) Appendix B rationale for NTU values at all outfall sampling points where applicable."
L-5.0 thru L-5.3	Y	34) Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged."
L-5.0	Y	35) 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 intervals drawn at an interval in accordance with the following:
na	na	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.
na	na	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."
L-1.0 thru L-5.3	Y/na	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	Y/na	41) Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
L-2.0	Y	42) Delineation and acreage of contributing drainage basins on the project site.
na	na	43) Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions."
na	na	44) An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
L-1.0 thru L-5.3	Y	45) Storm-drain pipe and vent velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
L-1.0 thru L-5.3	Y	46) Soil series for the project site and their delineation.
L-1.0 thru L-5.3	Y	47) The limits of disturbance for each phase of construction.
L-1.0 thru L-5.3	Y	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, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the plan.
L-5.0 thru L-5.3	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 legend.
L-5.0 thru L-5.3, L-6.0	Y	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.
L-5.0 thru L-5.3	Y	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.  
Effective January 1, 2017

STANDARD ABBREVIATIONS	LEGEND
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 CTE = CRIMP TOP FOUND DS = DEED BOOK	DIA = DIAMETER DS = DOWNSPOUT DWBC = DOUBLE WING CATCH BASIN ESPIC = EROSION, SEDIMENTATION, AND POLLUTION CONTROL FDC = FIRE DEPARTMENT CONNECTION FFL = FINISH FLOOR ELEVATION FH = FIRE HYDRANT FO = FIBER OPTIC GP = GUY WIRE H/C = H/C PARKING H/O = H/O (OVERHEAD) H/U = H/U (UNDERGROUND) SS = SS LINE SMH = STORM MANHOLE SS = SANITARY SEWER SSM = SANITARY SEWER MANHOLE SWBC = SINGLE WING CATCH BASIN TC = TRAFFIC CONTROL TAX = TAX MAP PARCEL WM = WATER WM = WATER METER RW = RIGHT OF WAY R/W = RIGHT OF WAY SMH = STORM MANHOLE SS = SANITARY SEWER SSM = SANITARY SEWER MANHOLE SWBC = SINGLE WING CATCH BASIN TC = TRAFFIC CONTROL TAX = TAX MAP PARCEL WM = WATER WM = WATER METER RW = RIGHT OF WAY
STANDARD SYMBOLS	
BM = IDENTIFICATION CO = CO DS = DS FDC = FDC GAS = GAS VALVE GATE = GATE	GP = GUY WIRE H/C = H/C PARKING H/O = H/O (OVERHEAD) H/U = H/U (UNDERGROUND) SS = SS LINE SMH = STORM MANHOLE SS = SANITARY SEWER SSM = SANITARY SEWER MANHOLE SWBC = SINGLE WING CATCH BASIN TC = TRAFFIC CONTROL TAX = TAX MAP PARCEL WM = WATER WM = WATER METER RW = RIGHT OF WAY

CONSTRUCTION SEQUENCE SCHEDULE					
LAND DISTURBING ACTIVITY SHALL NOT COMMENCE PRIOR TO A PRECONSTRUCTION MEETING WITH THE ENGINEERING DEPARTMENT.					
BMPs	ACTIVITY				
	INITIAL	NOV	DEC	JAN	FEB
INTERMEDIATE					
FINAL					
NOTIFY INSPECTOR 24 HOURS PRIOR TO CONSTRUCTION:					
PERFORM INITIAL MONITORING					
INSTALL CONSTRUCTION EXIT					
INSTALL PERIMETER SILT FENCE					
INSTALL ANY INITIAL INTERIOR SILT FENCE					
INSTALL TOP SOIL PILE LOCATION SILT FENCE					
INSTALL WHEEL WASH AND FUEL STORAGE LOCATION					
COORDINATE SITE REVIEW MEETING WITH ENGINEER AND LOCAL ISSUING AUTHORITY					
CLEAR AND REMOVE EXISTING VEGETATION					
REMOVE AND STOCKPILE TOP SOIL					
PERFORM WETLAND EXCAVATION					
INSTALL ROCK VANES					
FINALIZE WETLAND GRADES					
PROVIDE ANY MULCHING, OR OTHER GROUND COVER					
INSTALL GRASSING ON ALL EXPOSED SOILS					
MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES AND GRASSING					
INSTALL PERMANENT VEGETATION (SOD AND LANDSCAPING)					
SITE INSPECTION FOR STABILIZATION					
REMOVAL OF TEMPORARY EROSION CONTROL MEASURES					

OWNER/DEVELOPER	William K. Campbell
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	LEVEL II CERTIFIED DESIGN PROFESSIONAL # 1855 - EXP. 08/01/2018
CONTRACTOR	Larry Kaiser, PE (404) 909-5619
CONTACT: TO BE DETERMINED	CONTACT WILL CHANGE ONCE CONTRACT IS AWARDED
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
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 any disturbance (including field verification 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 locate, relocate 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.	

REVISIONS	DATE	DESCRIPTION
1	2017/09/22	PLAN UPDATES
2		
3		
4		
5		
6		
7		
8		
9		
10		

COVER SHEET  
sheet number

# CV-1.0



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www.environsla.com

professional seal



project information

FRIENDSHIP FOREST PARK  
WETLAND AND TRAIL ENHANCEMENT PLAN  
4399 PONCE DE LEON AVE  
CLARKSTON, GEORGIA 30021  
DEKALB COUNTY

Table with columns: REVISIONS, No, DATE, DESCRIPTION, PLAN UPDATES

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sheet title

GENERAL NOTES

sheet number

L-1.0

GENERAL NOTES:

- 1. 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.
...
17. CONTRACTOR IS RESPONSIBLE FOR QUANTITY TAKE OFFS AND ESTIMATING ALL QUANTITIES FOUND WITHIN THE SITE WORK CONSTRUCTION DRAWINGS...

DEMOLITION REQUIREMENTS:

- 1. 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 WHAT NECESSARY PRECAUTIONS NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC, HIS/HER EMPLOYEES AND AGENTS DURING THE INSPECTION AND SUBSEQUENT WORK.
2. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE OWNER TO DEMOLISH ANY STRUCTURE ON THE SITE BEFORE PROCEEDING WITH WORK.
...
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:

- 1. 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 THROUGHOUT THE CONTRACT.
2. ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
...
5. NO BURNING SHALL BE ALLOWED ON THE SITE.

GRADING / EARTHWORK REQUIREMENTS:

- 1. 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.
2. 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.
...
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' DEEP.

SEEDING & LANDSCAPING:

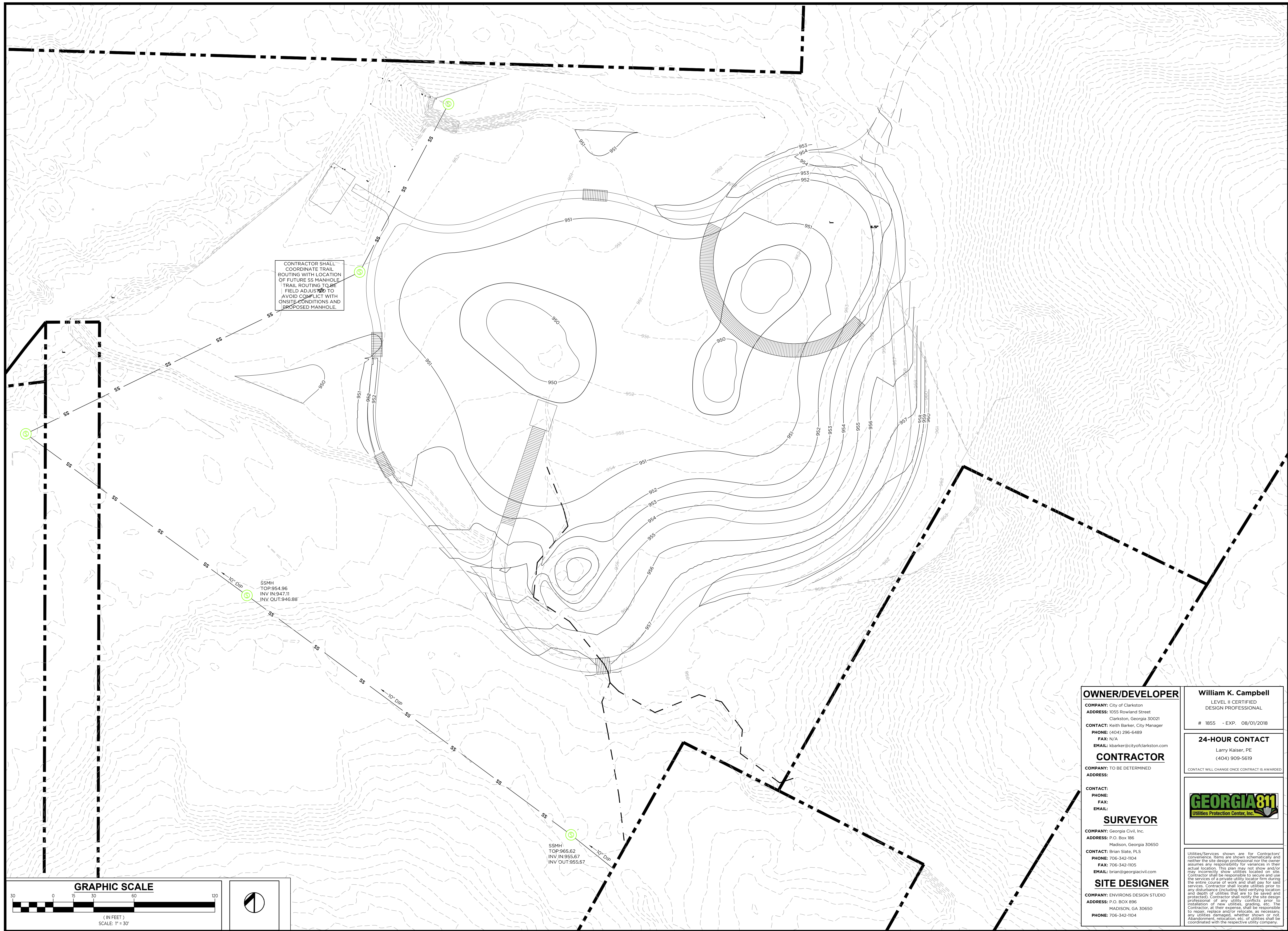
- 1. TOPSOIL SHALL BE REMOVED FROM STOCKPILES AND SPREAD IN THE AREAS SHOWN ON THE PLANS. THE DEPTH OF TOPSOIL SHALL BE AS SHOWN ON THE PLANS. IF THE DEPTH OF TOPSOIL IS NOT GIVEN THE FOLLOWING SHALL BE USED: A MINIMUM OF 4 INCHES IN LAWNS, PLANTING BEDS AND AREAS WITHIN THE DRIP LINE OF THE TREE; 6 INCHES IN LANDSCAPING AREAS; 8 INCHES IN PLANTING BEDS.
2. 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.
...
17. WEED BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT SHALL BE PLACED UNDER ALL PLANTING BEDS PRIOR TO MULCHING.

COMPACTION:

- 1. ANALYTICAL COMPACTION RESULTS SHALL BE SUBMITTED TO THE LOCAL AUTHORITY HAVING JURISDICTION ENGINEERING DEPARTMENT (OR SIMILAR DEPARTMENT). THE FOLLOWING APPLIES TO STORMWATER, SANITARY SEWER AND WATER:
a. 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 NO 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.
...
11. 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.

STAKING REQUIREMENTS:

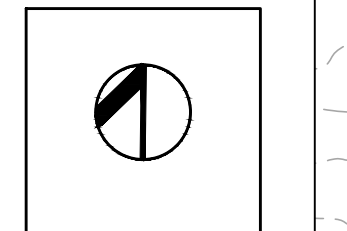
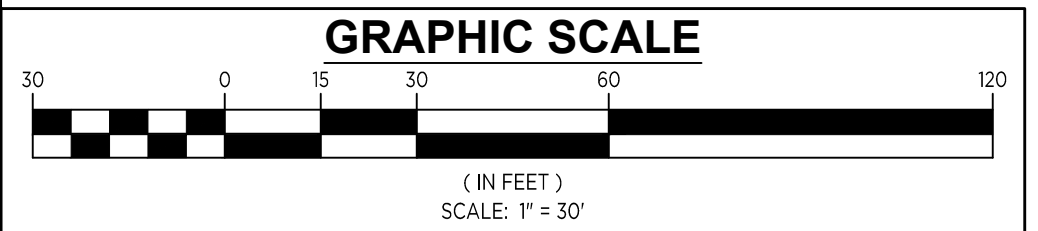
- 1. SURVEYING WORK PERFORMED BY THE CONTRACTOR SHALL BE SUFFICIENT AND ACCURATE TO CONSTRUCT THE WORK IN ACCORDANCE WITH THE SITE WORK CONSTRUCTION DRAWINGS, LAYOUT AND STAKING WORK SHALL BE IN ACCORDANCE WITH GENERAL ACCEPTED SURVEYING PRACTICES AND PROVISIONS OF THE CONTRACT.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING DIMENSIONS FROM THE BUILDING DIMENSION DRAWINGS. CONTRACTOR SHALL RELY ON THESE DIMENSIONS FOR THE TOTAL SQUARE FOOTAGES ARE FOR OWNER'S PURPOSES ONLY.
...
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' DEEP.



CONTRACTOR SHALL COORDINATE TRAIL ROUTING WITH LOCATION OF FUTURE SS MANHOLE. TRAIL ROUTING TO BE FIELD ADJUSTED TO AVOID CONFLICT WITH ON-SITE CONDITIONS AND PROPOSED MANHOLE.

SSMH  
TOP:954.96  
INV IN:947.11  
INV OUT:946.88

SSMH  
TOP:965.62  
INV IN:955.67  
INV OUT:955.57



**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  
**ADDRESS:**  
**CONTACT:**  
**PHONE:**  
**FAX:**  
**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**  
**COMPANY:** ENVIRONS DESIGN STUDIO  
**ADDRESS:** P.O. BOX 896  
 MADISON, GA 30650  
**PHONE:** 706-342-1104

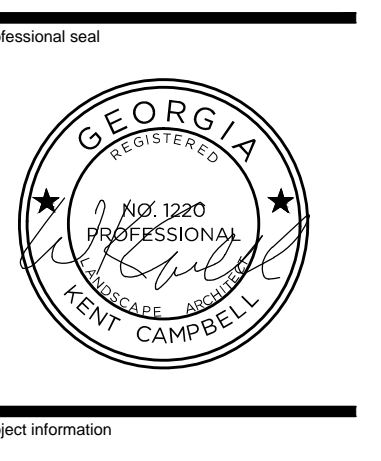
**William K. Campbell**  
 LEVEL II CERTIFIED  
 DESIGN PROFESSIONAL  
 # 1855 - EXP. 08/01/2018

**24-HOUR CONTACT**  
 Larry Kaiser, PE  
 (404) 909-5619

CONTRACT WILL CHANGE ONCE CONTRACT IS AWARDED



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 such 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 shall be responsible for any necessary to repair, replace and/or relocate, as necessary, any utilities damaged, removed, or not abandoned, relocation, etc. of utilities shall be coordinated with the respective utility company.



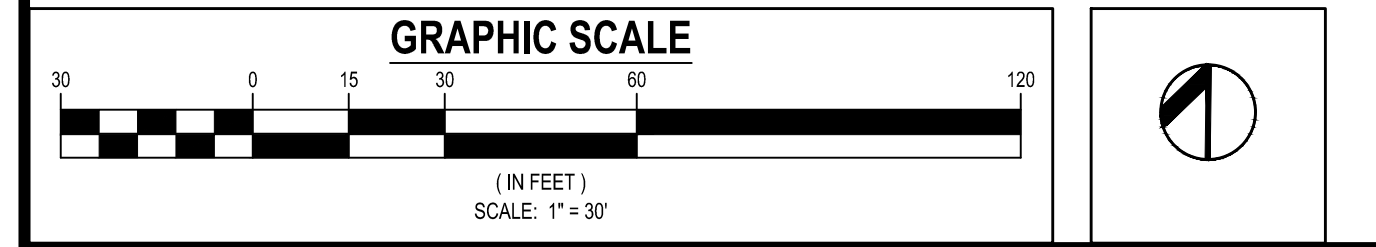
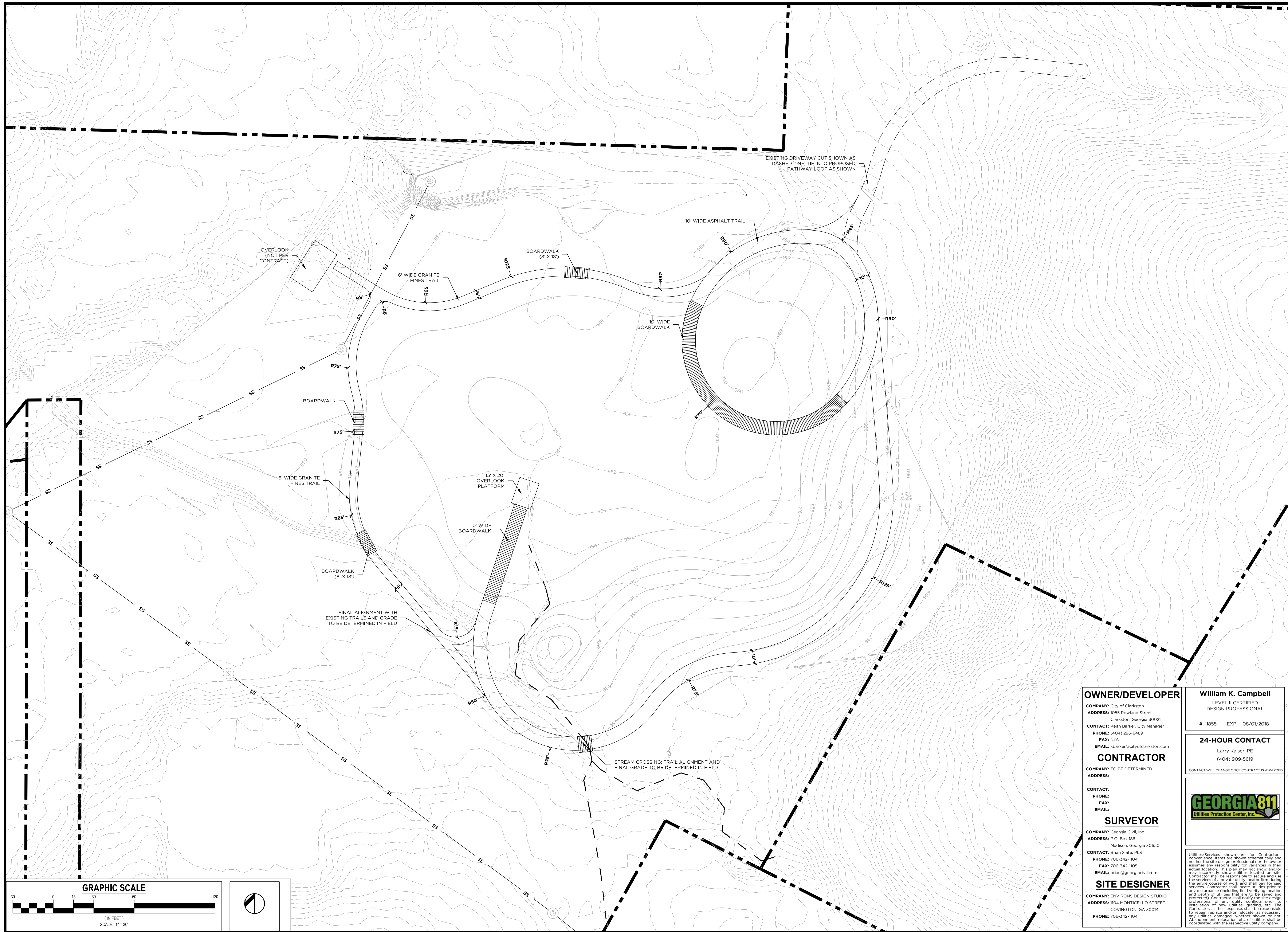
**FRIENDSHIP FOREST**  
 WETLAND ENHANCEMENT PLAN  
 4399 PONCE DE LEON AVE  
 CLARKSTON, GA 30021  
 DEKALB COUNTY

REVISIONS	DATE	DESCRIPTION
1	2017/09/22	PLAN UPDATES
2		
3		
4		
5		

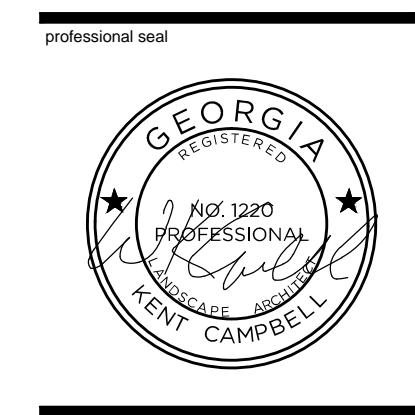
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GRADING PLAN

sheet number  
**L-2.0**



<b>OWNER/DEVELOPER</b>		<b>William K. Campbell</b>	
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		LEVEL II CERTIFIED DESIGN PROFESSIONAL # 1855 - EXP. 08/01/2018	
<b>CONTRACTOR</b>		<b>24-HOUR CONTACT</b>	
COMPANY: TO BE DETERMINED ADDRESS: CONTACT: PHONE: FAX: EMAIL:		Larry Kaiser, PE (404) 909-5619 CONTACT WILL CHANGE ONCE CONTRACT IS AWARDED	
<b>SURVEYOR</b>			
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			
<b>SITE DESIGNER</b>		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 such 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 of any utilities 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.	
COMPANY: ENVIRONS DESIGN STUDIO ADDRESS: 1104 MONTICELLO STREET COVINGTON, GA 30014 PHONE: 706-342-1104			



**FRIENDSHIP FOREST PARK**  
WETLAND AND TRAIL ENHANCEMENT PLAN  
4399 PONCE DE LEON AVE  
CLARKSTON, GEORGIA 30021  
DEKALB COUNTY

REVISIONS	DATE	DESCRIPTION
NO.		
1		
2		
3		
4		
5		

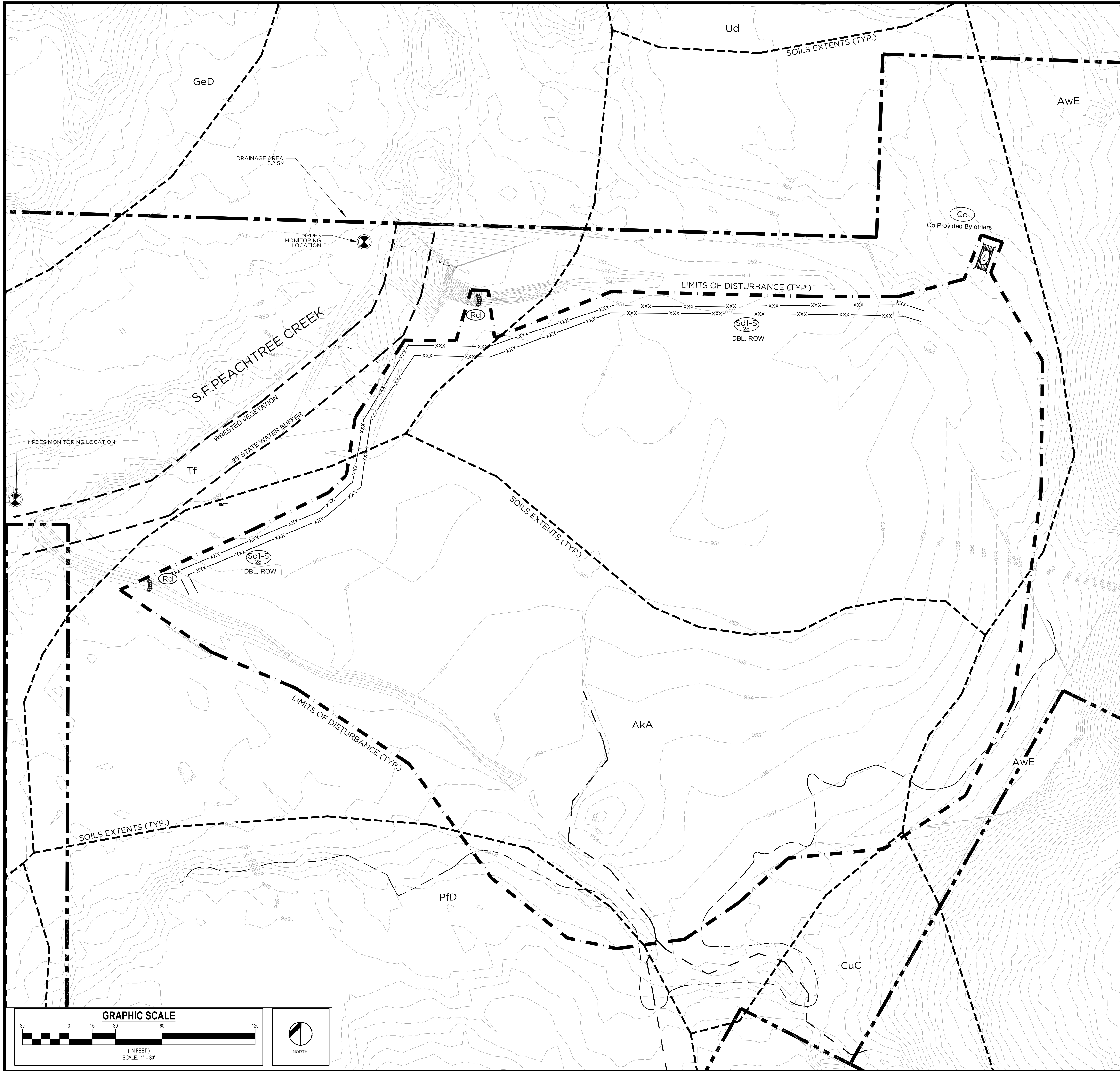
DATE OF FIRST ISSUE: 2/27/2017  
DRAWN BY: JWR  
REVIEWED BY: KC

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LAYOUT AND STAKING

sheet number  
**L-3.0**





GEORGIA UNIFORM CODING SYSTEM					
SOIL EROSION & SEDIMENT CONTROL					
STRUCTURAL PRACTICES					
Code	Practice	Symbol	Code	Practice	Symbol
(Cd-F)	Compost Filter Sock	[Symbol]	(Cd-G)	Inlet Sediment Trap (Gravel Drop Inlet Protection)	[Symbol]
(Cd-H)	Straw-Bale Check Dams	[Symbol]	(Cd-I)	Inlet Sediment Trap (Curb Inlet Protection)	[Symbol]
(Cd-S)	Stone Check Dams	[Symbol]	(Cd-T)	Inlet Sediment Trap (Sod Inlet Protection)	[Symbol]
(Ch-1)	Channel Stabilization (Vegetated/Sod)	[Symbol]	(Sd-1)	Temporary Sediment Basin	[Symbol]
(Ch-2)	Channel Stabilization (Vegetated/Sod)	[Symbol]	(Sd-2)	Temporary Sediment Trap	[Symbol]
(Ch-3)	Channel Stabilization (Category 3)	[Symbol]	(Sk)	Floating Filter Surface Summer	[Symbol]
(Co)	Construction Exit	[Symbol]	(SpB)	Seep Berm	[Symbol]
(C)	Construction Road Stabilization	[Symbol]	(Sr-B)	Temporary Stream Crossing (Bridge)	[Symbol]
(DC-A)	Stream Diversion Channel (Geotextile Filter)	[Symbol]	(Sr-C)	Temporary Stream Crossing (Culvert)	[Symbol]
(DC-B)	Stream Diversion Channel (Geotextile Filter)	[Symbol]	(ST)	Storm Drain Outlet Protection	[Symbol]
(DC-C)	Stream Diversion Channel (Class 1 Rip-Rap)	[Symbol]	(Su)	Surface Roughening	[Symbol]
(D)	Diversions	[Symbol]	(TC-F)	Turbidity Curtain (Floating)	[Symbol]
(Dn1)	Temporary Structure	[Symbol]	(TC-S)	Turbidity Curtain (Staked)	[Symbol]
(Dn2)	Permanent Structure	[Symbol]	(Tp)	Topsoiling	[Symbol]
(Fr)	Filter Ring	[Symbol]	(Wt)	Vegetated Waterway or Stormwater Conveyance Channel	[Symbol]
(Ga)	Gabion	[Symbol]	VEGETATIVE MEASURES		
(G)	Grade Stabilization Structure	[Symbol]	(Bf)	Buffer Zone	[Symbol]
(Lv)	Level Spreader	[Symbol]	(Cs)	Coastal Dune Stabilization (w/ Vegetation)	[Symbol]
(Rd)	Rock Filter	[Symbol]	(Ds1)	Disturbed Area Stabilization (w/ Mulch/Gravel)	[Symbol]
(Re)	Retaining Wall	[Symbol]	(Ds2)	Disturbed Area Stabilization (w/ Temporary Seeding)	[Symbol]
(Rt-B)	Retrofit (Stabilization Dam w/ Stone or Filter Fabric)	[Symbol]	(Ds3)	Disturbed Area Stabilization (Permanent Vegetation)	[Symbol]
(Rt-P)	Retrofit (Perforated Half-Round Pipe w/ Stone Filter)	[Symbol]	(Ds4)	Disturbed Area Stabilization (w/ Sodding)	[Symbol]
(Rt-Sg)	Retrofit (Silt Control Gate)	[Symbol]	(Du)	Dust Control on Disturbed Areas	[Symbol]
(Sd-B)	Sediment Barrier (Type - Brush)	[Symbol]	(Fl-Co)	Flocculants Coagulants	[Symbol]
(Sd-NS)	Sediment Barrier (Type - Non-Sensitive Areas)	[Symbol]	(Sb)	Streambank Stabilization (Permanent Vegetation)	[Symbol]
(Sd-S)	Sediment Barrier (Type - Sensitive Areas)	[Symbol]	(Ss)	Slope Stabilization (Erosion Control Products)	[Symbol]
(Sd-T)	Sediment Barrier (Type - Turf)	[Symbol]	(TAC-1)	Tackifiers: Type I (Synthetic Polymers)	[Symbol]
(Sd-TB)	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)	[Symbol]	(TAC-2)	Tackifiers: Type II (Synthetic Polymers)	[Symbol]
(Sd-TS)	Inlet Sediment Trap (Escalated Inlet Sediment Trap)	[Symbol]	(TAC-3)	Tackifiers: Type III (Organic Fibers)	[Symbol]
(Sd-TS)	Inlet Sediment Trap (Escalated Inlet Sediment Trap)	[Symbol]	(TAC-4)	Tackifiers: Type IV (Organic Fibers w/ Synthetic Fibers)	[Symbol]
(Sd-TS)	Inlet Sediment Trap (Escalated Inlet Sediment Trap)	[Symbol]	(TAC-5)	Tackifiers: Type V (Synthetic Fibers w/ Synthetic Fibers)	[Symbol]

**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  
 EMAIL: kbarker@cityofclarkston.com

**CONTRACTOR**  
 COMPANY: TO BE DETERMINED  
 ADDRESS: ADDRESS LINE 1  
 ADDRESS LINE 2  
 CONTACT: CONTACT NAME  
 PHONE: PH NUMBER  
 FAX: FAX  
 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**  
 COMPANY: ENVIRONS DESIGN STUDIO  
 ADDRESS: 1104 MONTICELLO STREET  
 COWINGTON, GA 30014  
 PHONE: 706-342-1104

**GSWCC EROSION CONTROL NOTES:**  
 The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, concurrent with, and disturbing activities.  
 Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.  
 Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.  
 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.

**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 (BMPs) required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which 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. GA06100001.

*W. Campbell*  
 Signature: *W. Campbell* Date: 09/13/2017  
 Enviro Design Studio, LLC  
 WILLIAM K. CAMPBELL  
 Level II Certified Design Professional # 1855 - Exp. 08/01/2018

I, \_\_\_\_\_, 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.

Signature: \_\_\_\_\_ Date: 09/13/2017

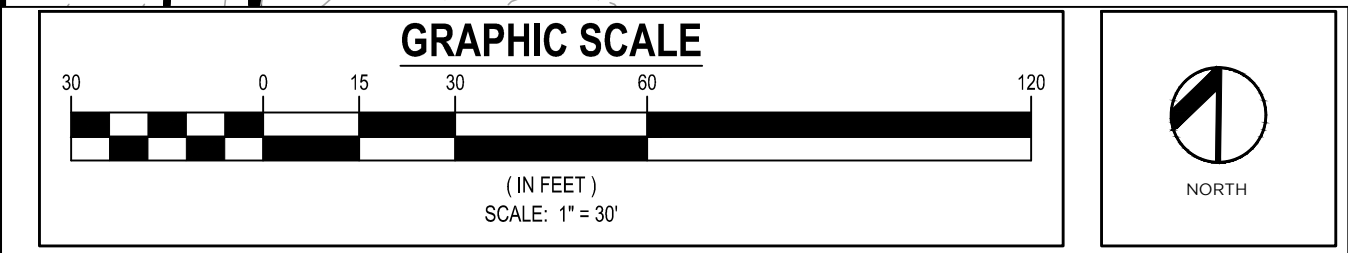
I, WILLIAM K. CAMPBELL, certify under penalty of law that this plan was prepared after a site visit to the locations described hereon by myself or my authorized agent, under my direct supervision.

Signature: *W. Campbell* Date: 09/13/2017

I certify that I, as the professional who prepared the ES&PC Plan, will inspect the installation of the initial phase of Erosion, Sedimentation, and Pollution Control approved BMPs shown on the plan within 7 days after initial construction activity begins.

Signature: *W. Campbell* Date: 09/13/2017

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



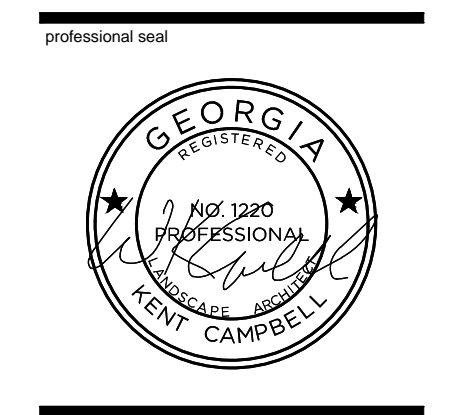
**William K. Campbell**  
 LEVEL II CERTIFIED  
 DESIGN PROFESSIONAL  
 # 1855 - EXP. 08/01/2018

**24-HOUR CONTACT**  
 Larry Kaiser, PE  
 404-909-5619  
 CONTACT WILL CHANGE ONCE CONTRACT IS AWARDED

**GEORGIA811**  
 Utilities Protection Center, Inc.  
 Know what's below. Call before you dig.

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. 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.

**Environs**  
 LANDSCAPE ARCHITECTURE & 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



**FRIENDSHIP FOREST PARK**  
 WETLAND AND TRAIL ENHANCEMENT PLAN  
 4399 PONCE DE LEON AVE  
 CLARKSTON, GEORGIA 30021  
 DEKALB COUNTY

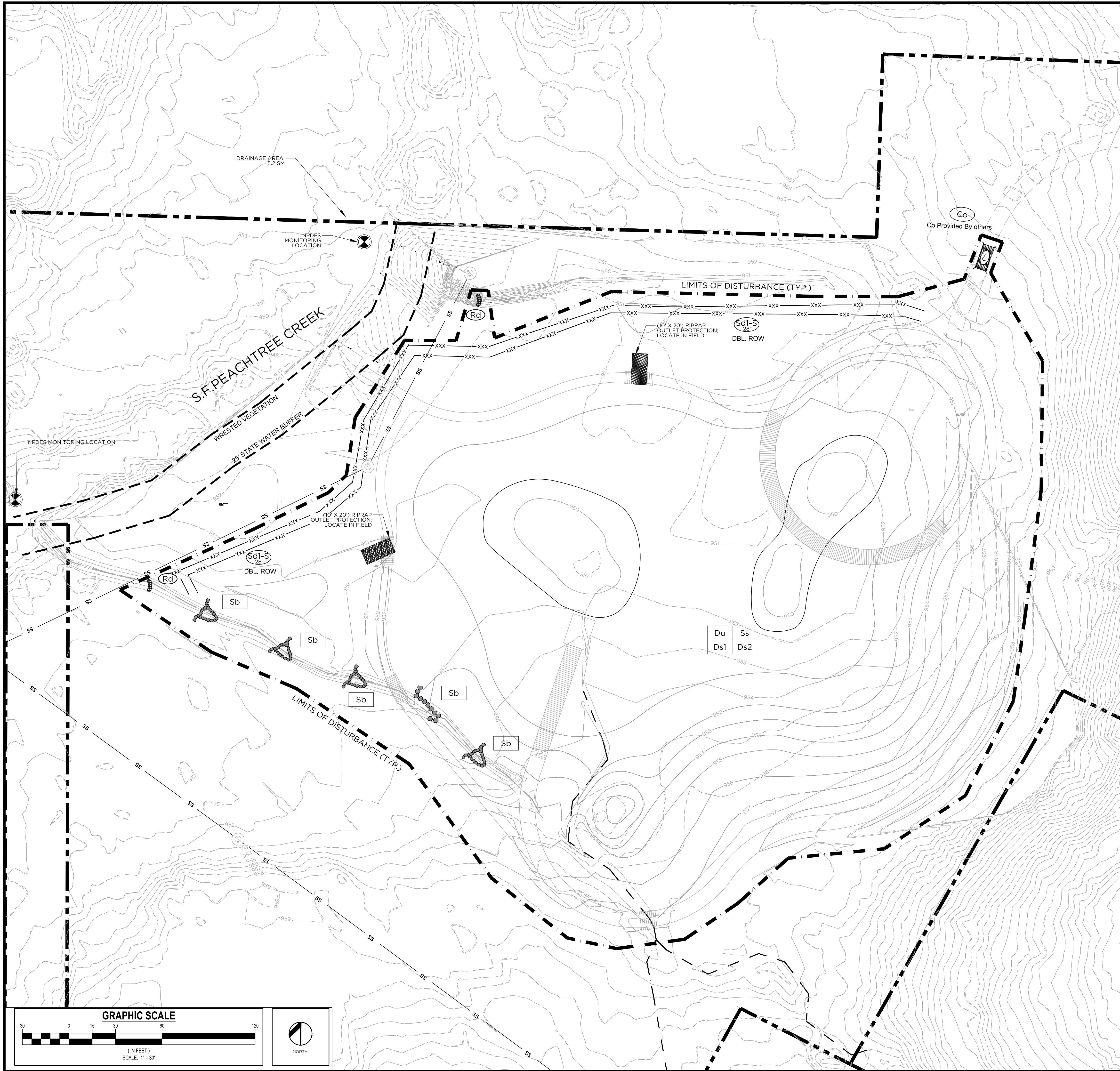
NO.	DATE	DESCRIPTION
1	2017/09/22	PLAN UPDATES
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DATE OF FIRST ISSUE: 2017/09/15  
 DRAWN BY: JWR  
 REVIEWED BY: KCC

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sheet title  
 CLEARING PHASE  
 EROSION,  
 SEDIMENTATION,  
 AND POLLUTION  
 CONTROL PLAN  
 sheet number  
**L-4.1**





GEORGIA UNIFORM CODING SYSTEM					
SOIL EROSION & SEDIMENT CONTROL					
STRUCTURAL PRACTICES					
Code	Practice	Symbol	Code	Practice	Symbol
(d-f)	Compost Filter Sock	[Symbol]	(d-2)	Inlet Sediment Trap (Gravel Drop)	[Symbol]
(d-h)	Straw-Bale Check Dams	[Symbol]	(d-3)	Inlet Sediment Trap (Curb Inlet Protection)	[Symbol]
(d-i)	Stone Check Dams	[Symbol]	(d-4)	Inlet Sediment Trap (Sod Inlet Protection)	[Symbol]
(Ch-1)	Channel Stabilization (Vegetated/Sod)	[Symbol]	(Sd-1)	Temporary Sediment Basin	[Symbol]
(Ch-2)	Channel Stabilization (Vegetated/Sod)	[Symbol]	(Sd-2)	Temporary Sediment Trap	[Symbol]
(Ch-3)	Channel Stabilization (Concrete)	[Symbol]	(Sk)	Floating Filter Surface Sump	[Symbol]
(Co)	Construction Exit	[Symbol]	(SpB)	Seep Berm	[Symbol]
(Cr)	Construction Road Stabilization	[Symbol]	(Sr-B)	Temporary Stream Crossing (Bridge)	[Symbol]
(DC-A)	Stream Diversion Channel (Geotextile Filter)	[Symbol]	(Sr-C)	Temporary Stream Crossing (Culvert)	[Symbol]
(DC-B)	Stream Diversion Channel (Geotextile Filter)	[Symbol]	(ST)	Storm Drain Outlet Protection	[Symbol]
(DC-C)	Stream Diversion Channel (Class Rip-rap)	[Symbol]	(Su)	Surface Roughening	[Symbol]
(D)	Diversions	[Symbol]	(TC-F)	Turbidity Curtain (Floating)	[Symbol]
(Dn1)	Temporary Structure	[Symbol]	(TC-S)	Turbidity Curtain (Staked)	[Symbol]
(Dn2)	Permanent Structure	[Symbol]	(Tp)	Topsoiling	[Symbol]
(Fr)	File Ring	[Symbol]	(Wt)	Vegetated Waterway or Stormwater Conveyance Channel	[Symbol]
(Ga)	Gabion	[Symbol]	VEGETATIVE MEASURES		
(G)	Grade Stabilization Structure	[Symbol]	(Bf)	Buffer Zone	[Symbol]
(Lv)	Level Spreader	[Symbol]	(Cs)	Coastal Dune Stabilization (w/ Vegetation)	[Symbol]
(Rd)	Rock Filter	[Symbol]	(Ds1)	Disturbed Area Stabilization (w/ Mulch/Temporary Seeding)	[Symbol]
(Re)	Retaining Wall	[Symbol]	(Ds2)	Disturbed Area Stabilization (w/ Temporary Seeding)	[Symbol]
(RT-B)	Retrofit (Stabilized Dam w/ Stone or Filter Fabric)	[Symbol]	(Ds3)	Disturbed Area Stabilization (w/ Permanent Vegetation)	[Symbol]
(RT-P)	Retrofit (Perforated Half-Round Pipe w/ Stone Filter)	[Symbol]	(Ds4)	Disturbed Area Stabilization (w/ Sodding)	[Symbol]
(RT-Sg)	Retrofit (Silt Control Gate)	[Symbol]	(Du)	Dust Control on Disturbed Areas	[Symbol]
(Sb-1)	Sediment Barrier (Type I - Brush)	[Symbol]	(Fl-Co)	Flocculants Coagulants	[Symbol]
(Sb-2)	Sediment Barrier (Type II - Non-Sensitive Areas)	[Symbol]	(Sb)	Streambank Stabilization (w/ Permanent Vegetation)	[Symbol]
(Sb-3)	Sediment Barrier (Type III - Sensitive Areas)	[Symbol]	(Ss)	Slope Stabilization (Erosion Control Products)	[Symbol]
(Sd-1)	Sediment Barrier (Type I - Synthetic)	[Symbol]	(TAc-1)	Tackifiers: Type I (Synthetic Polymers)	[Symbol]
(Sd-2)	Inlet Sediment Trap (Graffle Box)	[Symbol]	(TAc-2)	Tackifiers: Type II (Synthetic Polymers)	[Symbol]
(Sd-3)	Inlet Sediment Trap (Block & Gravel)	[Symbol]	(TAc-3)	Tackifiers: Type III (Synthetic Polymers)	[Symbol]
(Sd-4)	Inlet Sediment Trap (Gravel Drop)	[Symbol]	(TAc-4)	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	[Symbol]
(Sd-5)	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)	[Symbol]	(TAc-5)	Tackifiers: Type V (Synthetic Polymers w/ Synthetic Fibers)	[Symbol]

**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**  
 COMPANY: TO BE DETERMINED  
 ADDRESS: ADDRESS LINE 1  
 ADDRESS LINE 2  
 CONTACT: CONTACT NAME  
 PHONE: PH NUMBER  
 FAX: FAX  
 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**  
 COMPANY: ENVIRONS DESIGN STUDIO  
 ADDRESS: 104 MONTICELLO STREET  
 COWINGTON, GA 30014  
 PHONE: 706-342-1104

**GSWCC EROSION CONTROL NOTES:**  
 The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, concurrent with, and disturbing activities.  
 Erosion control measures will be maintained at all times. Full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.  
 Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.  
 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.

**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 (BMPs) required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which 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. GA06100001.

Signature: *W. Campbell* Date: 09/13/2017  
 Enviro Design Studio, LLC  
 WILLIAM K. CAMPBELL  
 Level II Certified Design Professional # 1855 - Exp. 08/01/2018

I, \_\_\_\_\_, 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.

Signature: \_\_\_\_\_ Date: 09/13/2017

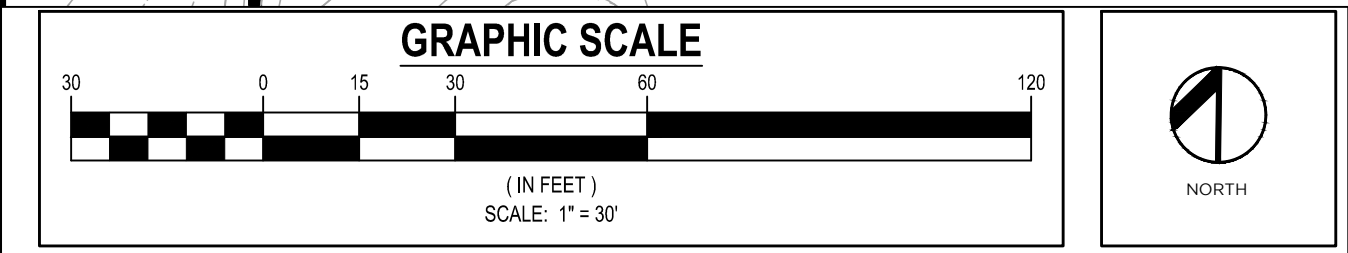
I, WILLIAM K. CAMPBELL, certify under penalty of law that this plan was prepared after a site visit to the locations described hereon by me or my authorized agent, under my direct supervision.

Signature: *W. Campbell* Date: 09/13/2017

I certify that I, as the professional who prepared the ES&PC Plan, will inspect the installation of the initial phase of Erosion, Sedimentation, and Pollution Control approved BMPs shown on the plan within 7 days after initial construction activity begins.

Signature: *W. Campbell* Date: 09/13/2017

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

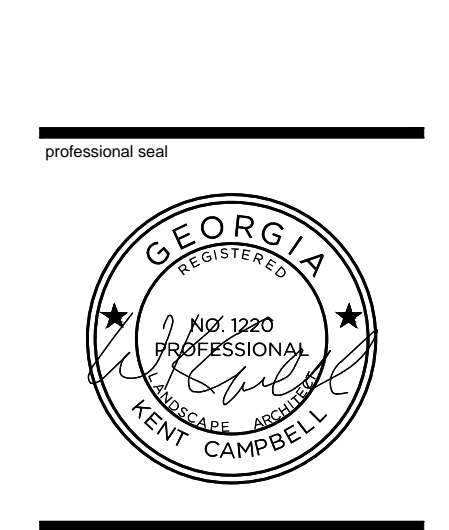


**William K. Campbell**  
 LEVEL II CERTIFIED  
 DESIGN PROFESSIONAL  
 # 1855 - EXP. 08/01/2018

**24-HOUR CONTACT**  
 Larry Kaiser, PE  
 404-909-5619  
 CONTACT WILL CHANGE ONCE CONTRACT IS AWARDED



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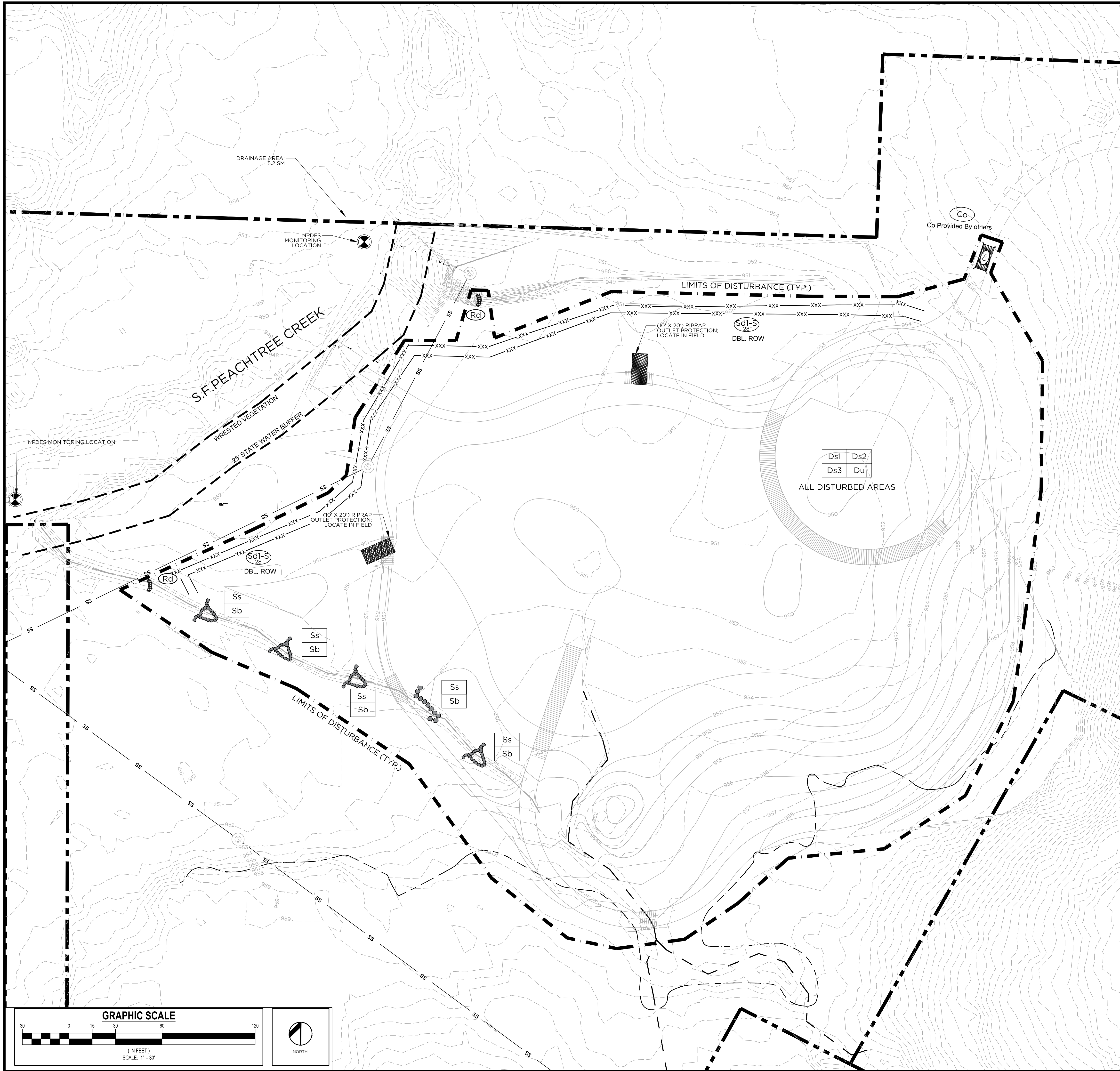
**FRIENDSHIP FOREST PARK**  
 WETLAND AND TRAIL ENHANCEMENT PLAN  
 4399 PONCE DE LEON AVE  
 CLARKSTON, GEORGIA 30021  
 DEKALB COUNTY

NO.	DATE	DESCRIPTION
1	2017/09/22	PLAN UPDATES
2		
3		
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DATE OF FIRST ISSUE: 2017/09/15  
 DRAWN BY: JWR  
 REVIEWED BY: KCC

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sheet title: GRADING PHASE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN  
 sheet number: L-4.2



GEORGIA UNIFORM CODING SYSTEM					
SOIL EROSION & SEDIMENT CONTROL					
STRUCTURAL PRACTICES					
Code	Practice	Symbol	Code	Practice	Symbol
(d-f)	Compost Filter Sock	[Symbol]	(d-2)	Inlet Sediment Trap (Gravel Drop Inlet Protection)	[Symbol]
(d-h)	Straw-Bale Check Dams	[Symbol]	(d-1)	Inlet Sediment Trap (Curb Inlet Protection)	[Symbol]
(d-s)	Stone Check Dams	[Symbol]	(d-3)	Inlet Sediment Trap (Sod Inlet Protection)	[Symbol]
(Ch-1)	Channel Stabilization (Vegetated/Sod)	[Symbol]	(Sd-1)	Temporary Sediment Basin	[Symbol]
(Ch-2)	Channel Stabilization (Category 1)	[Symbol]	(Sd-2)	Temporary Sediment Trap	[Symbol]
(Ch-3)	Channel Stabilization (Category 2)	[Symbol]	(Sk)	Floating Filter Surface Summer	[Symbol]
(Co)	Construction Exit	[Symbol]	(SpB)	Seep Berm	[Symbol]
(C)	Construction Road Stabilization	[Symbol]	(Sr-B)	Temporary Stream Crossing (Bridge)	[Symbol]
(DC-A)	Stream Diversion Channel (Geotextile Liner)	[Symbol]	(Sr-C)	Temporary Stream Crossing (Culvert)	[Symbol]
(DC-B)	Stream Diversion Channel (Geotextile Liner)	[Symbol]	(ST)	Storm Drain Outlet Protection	[Symbol]
(DC-C)	Stream Diversion Channel (Class 1 Rip-rap)	[Symbol]	(Su)	Surface Roughening	[Symbol]
(D)	Diversions	[Symbol]	(TC-F)	Turbidity Curtain (Floating)	[Symbol]
(Dn1)	Temporary Structure	[Symbol]	(TC-S)	Turbidity Curtain (Staked)	[Symbol]
(Dn2)	Permanent Structure	[Symbol]	(Tp)	Topsoiling	[Symbol]
(Fr)	Filter Ring	[Symbol]	(Wt)	Vegetated Waterway or Stormwater Conveyance Channel	[Symbol]
(Ga)	Gabion	[Symbol]	VEGETATIVE MEASURES		
(G)	Grade Stabilization Structure	[Symbol]	(BF)	Buffer Zone	[Symbol]
(Lv)	Level Spreader	[Symbol]	(Cs)	Coastal Dune Stabilization (w/ Vegetation)	[Symbol]
(Rd)	Rock Filter	[Symbol]	(Ds1)	Disturbed Area Stabilization (w/ Mulch/Seeding)	[Symbol]
(Re)	Retaining Wall	[Symbol]	(Ds2)	Disturbed Area Stabilization (w/ Temporary Seeding)	[Symbol]
(RT-B)	Retrofit (Stabilization Dam w/ Stone or Filter Fabric)	[Symbol]	(Ds3)	Disturbed Area Stabilization (w/ Permanent Vegetation)	[Symbol]
(RT-P)	Retrofit (Perforated Round Pipe w/ Stone Filter)	[Symbol]	(Ds4)	Disturbed Area Stabilization (w/ Sodding)	[Symbol]
(RT-Sp)	Retrofit (Silt Control Gate)	[Symbol]	(Du)	Dust Control on Disturbed Areas	[Symbol]
(Sb-1)	Sediment Barrier (Type I - Brush)	[Symbol]	(Fl-Co)	Flocculants Coagulants	[Symbol]
(Sb-2)	Sediment Barrier (Type II - Non-Sensitive Areas)	[Symbol]	(Sb)	Streambank Stabilization (w/ Permanent Vegetation)	[Symbol]
(Sb-3)	Sediment Barrier (Type III - Sensitive Areas)	[Symbol]	(Ss)	Slope Stabilization (Erosion Control Products)	[Symbol]
(Sd-1)	Sediment Barrier (Type I - Geotextile Filter Media Sock)	[Symbol]	(TAc-1)	Tackifiers: Type I (Synthetic Polymers)	[Symbol]
(Sd-2)	Inlet Sediment Trap (Graffle Box)	[Symbol]	(TAc-2)	Tackifiers: Type II (Synthetic Polymers)	[Symbol]
(Sd-3)	Inlet Sediment Trap (Block & Gravel Drop Inlet Protection)	[Symbol]	(TAc-3)	Tackifiers: Type III (Synthetic Polymers)	[Symbol]
(Sd-4)	Inlet Sediment Trap (Elevated Inlet Sediment Trap)	[Symbol]	(TAc-4)	Tackifiers: Type IV (Organic Tackifiers w/ Synthetic Fibers)	[Symbol]
(Sd-5)	Inlet Sediment Trap (Filter Fabric w/ Supporting Frame)	[Symbol]	(TAc-5)	Tackifiers: Type V (Synthetic Polymers w/ Synthetic Fibers)	[Symbol]

**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**  
 COMPANY: TO BE DETERMINED  
 ADDRESS: ADDRESS LINE 1  
 ADDRESS LINE 2  
 CONTACT: CONTACT NAME  
 PHONE: PH NUMBER  
 FAX: FAX  
 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**  
 COMPANY: ENVIRONS DESIGN STUDIO  
 ADDRESS: 1104 MONTICELLO STREET  
 COWINGTON, GA 30014  
 PHONE: 706-342-1104

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 WILLIAM K. CAMPBELL  
 Level II Certified Design Professional # 1855 - Exp. 08/01/2018

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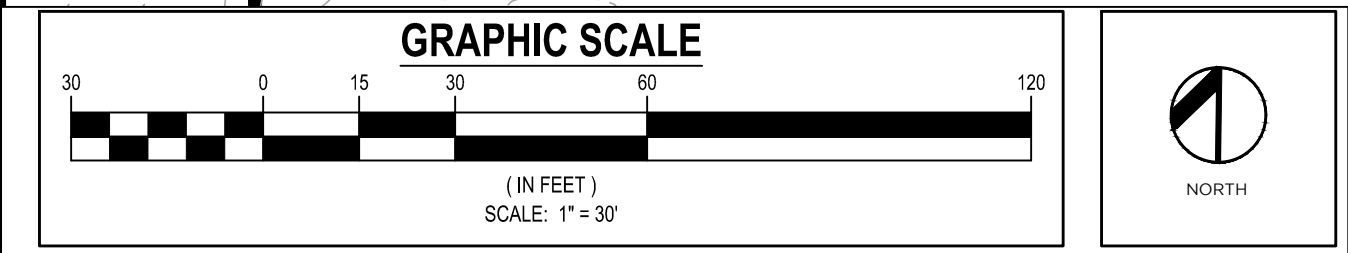
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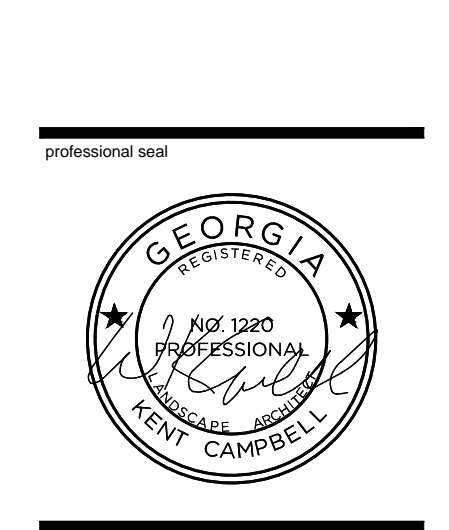


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**24-HOUR CONTACT**  
 Larry Kaiser, PE  
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DATE OF FIRST ISSUE: 2017/09/15  
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 REVIEWED BY: KCC

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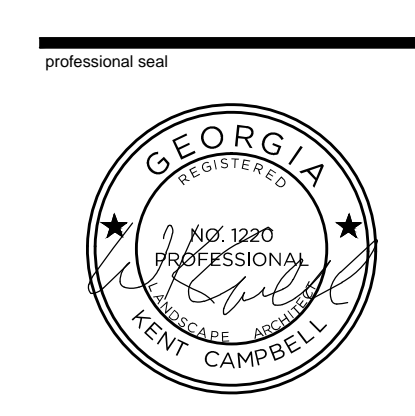
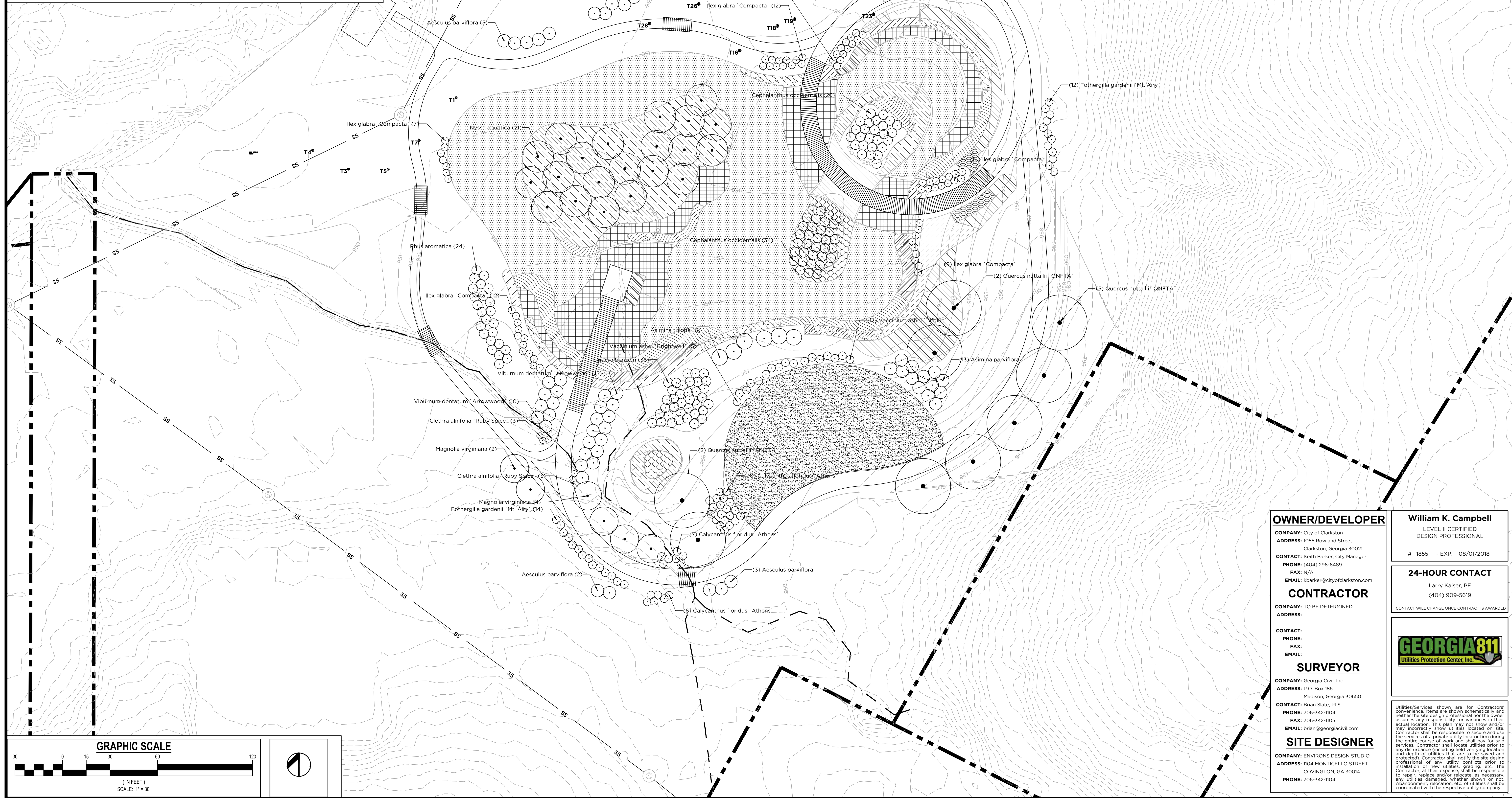
FINAL PHASE  
 EROSION,  
 SEDIMENTATION,  
 AND POLLUTION  
 CONTROL PLAN

sheet number

**L-4.3**

**PLANT SCHEDULE**

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	2017-09-22 11:59
ASI SMA	13	Asimina triloba / Small-ruited Pawpaw	3 GAL	CAL SIZE
ASI TRI	6	Asimina triloba / Pawpaw	B & B	2" Cal. 6-8' H
MAG SWE	6	Magnolia fraseri / Sweet Bay	3" CAL.	
NYS AQU	21	Nyssa aquatica / Water Tupelo	B & B	2" Cal. 4-6' H
QUE NUT	9	Quercus nuttallii / Nuttall Oak	4.5" CAL.	
SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONT	
AES PA3	15	Aesculus parviflora / Bittersweet	7" cal	
CAL ATH	33	Calycathus floridus / Sweet Shrub	3" cal	
CEP OCC	60	Cephalanthus occidentalis / Butterfly bush	3" cal	
CLE RU4	6	Clethra alnifolia / Ruby Spice / Ruby Spice Clethra	5" cal	
FOT AI2	26	Fothergilla gardenii / Mt. Airy / Dwarf Winterhalder	3" cal	
ILE INK	67	Ilex glabra 'Compacta' / Inkberry	3" cal	
LIN BEN	36	Lindera benzoin / Spicebush	3" cal	
RHU ARO	24	Rhus aromatica / Fragrant Sumac	3" cal	
VAC BR3	5	Vaccinium ashei / Brightwell / Brightwell Rabbiteye Blueberry	3" cal	
VAC TIF	12	Vaccinium ashei / Tibblue / Tibblue Rabbiteye Blueberry	3" cal	
VIB DEN	25	Viburnum dentatum / Arrowwood / Arrowwood Viburnum	7" cal	



project information

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REVISIONS	DATE	DESCRIPTION
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**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

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 ADDRESS:

**SURVEYOR**  
 COMPANY: Georgia Civil, Inc.  
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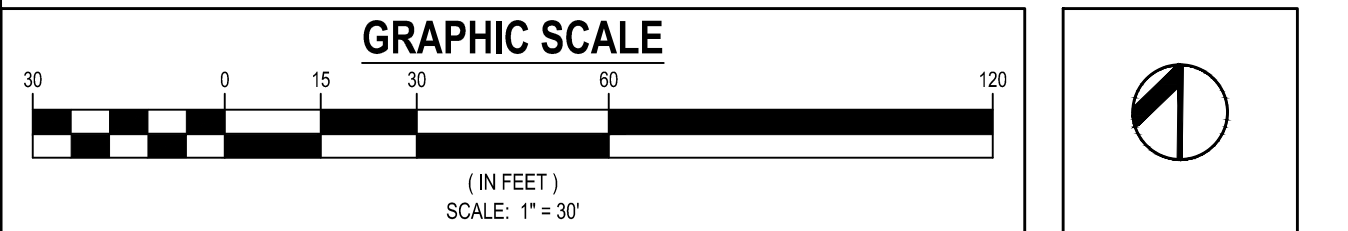
**SITE DESIGNER**  
 COMPANY: ENVIRONS DESIGN STUDIO  
 ADDRESS: 1104 MONTICELLO STREET  
 COVINGTON, GA 30014  
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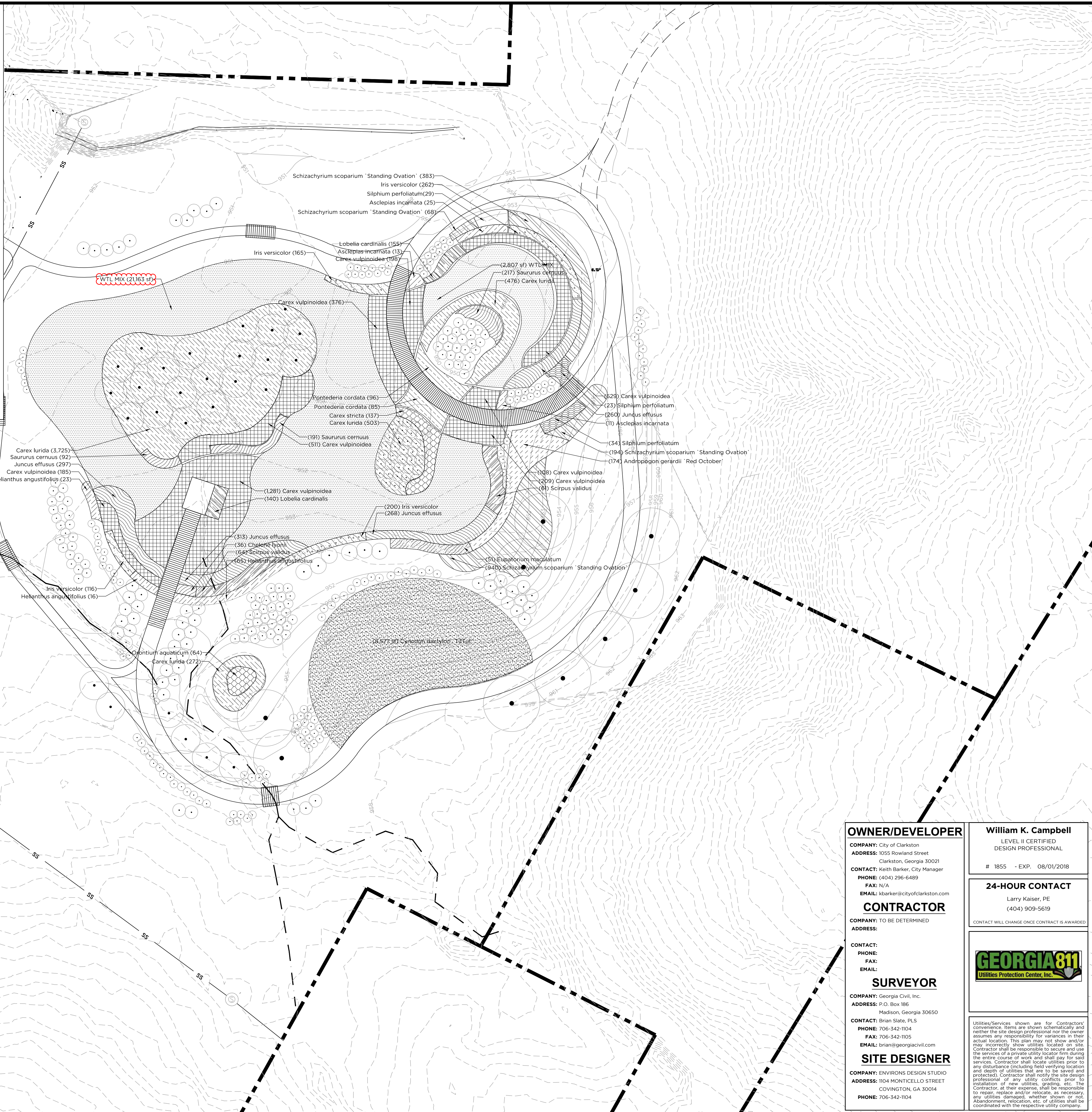
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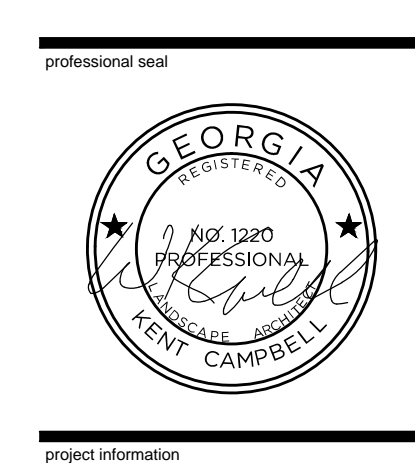


**PLANT SCHEDULE**

INUNDATED ZONE	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING
CAR ST	137	Carex stricta / Tussock Sedge	LP32	24" □□
ORO AQU	64	Oreochloa aquatica / Goldenrod	LP32	24" □□
PON COR	181	Pontederia cordata / Pickerel Weed	4" □□	24" □□
SAU CER	479	Saururus cernuus / Lords Tail	4" □□	15" □□
MESIC ZONE	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING
AND RE5	174	Andropogon gerardii / Red Oatgrass / Blue Stem - Red Fall	4" □□	4" □□
EUP JOE	51	Eupatorium maculatum / Joe Pye Weed	LP32	30" □□
SCH ST3	1,561	Schizachyrium scoparium / Standing Ovation / Little Bluestem Grass	4" □□	18" □□
SIL CUP	57	Silphium perfoliatum / Cow Plant	LP32	30" □□
SATURATED ZONE	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING
ASC INC	49	Asclepias incarnata / Butterfly Milkweed	1 GAL	30" □□
CAR LUR	4,976	Carex lurida / Lurid Sedge	LP32	18" □□
CAR VUL	3,343	Carex vulpinoidea / Broadleaf Sedge	LP32	18" □□
CHE PIN	35	Chelidonium majus / Poppy / Turtlehead	LP32	18" □□
HEL ANG	104	Helianthus angustifolius / Slim Sunflower	LP32	30" □□
IRI VE2	737	Iris versicolor / Blue Flag	4" □□	14" □□
JUN EF2	1,131	Juncus effusus / Sitka Rush	LP32	18" □□
LOB CAR	290	Lobelia cardinalis / Cardinal Flower	4" □□	14" □□
SCI VAL	125	Scirpus validus / Great Bulrush	LP32	30" □□
SOD/SEED	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING
CYN T22	8,577 sq	Cynodon dactylon / Bermuda Grass	Seed	Seed
WTL MIX	23,971 sq	WTL MIX / Wetland Seed Mix 15% Carex chorokeensis / Cherokee Sedge 20% Carex lurida / Lurid Sedge 15% Carex crinita / Fringe Sedge 25% Carex vulpinoidea / Fox Sedge 15% Juncus tenuis / Path Rush 10% Lobelia cardinalis	Seeded at 25lbs/A re	



**Environs**  
 LANDSCAPE ARCHITECTURE  
 & 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



project information

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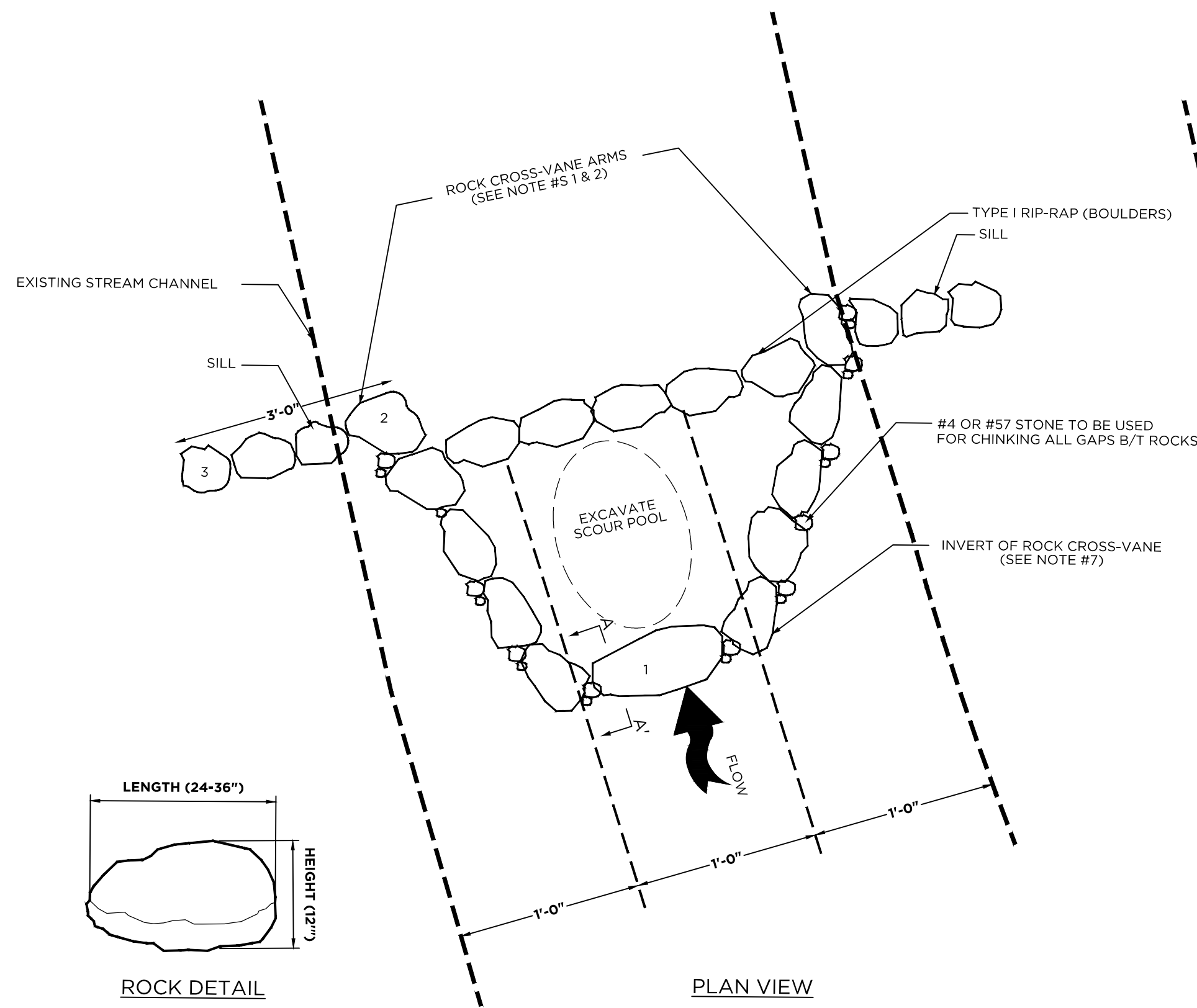
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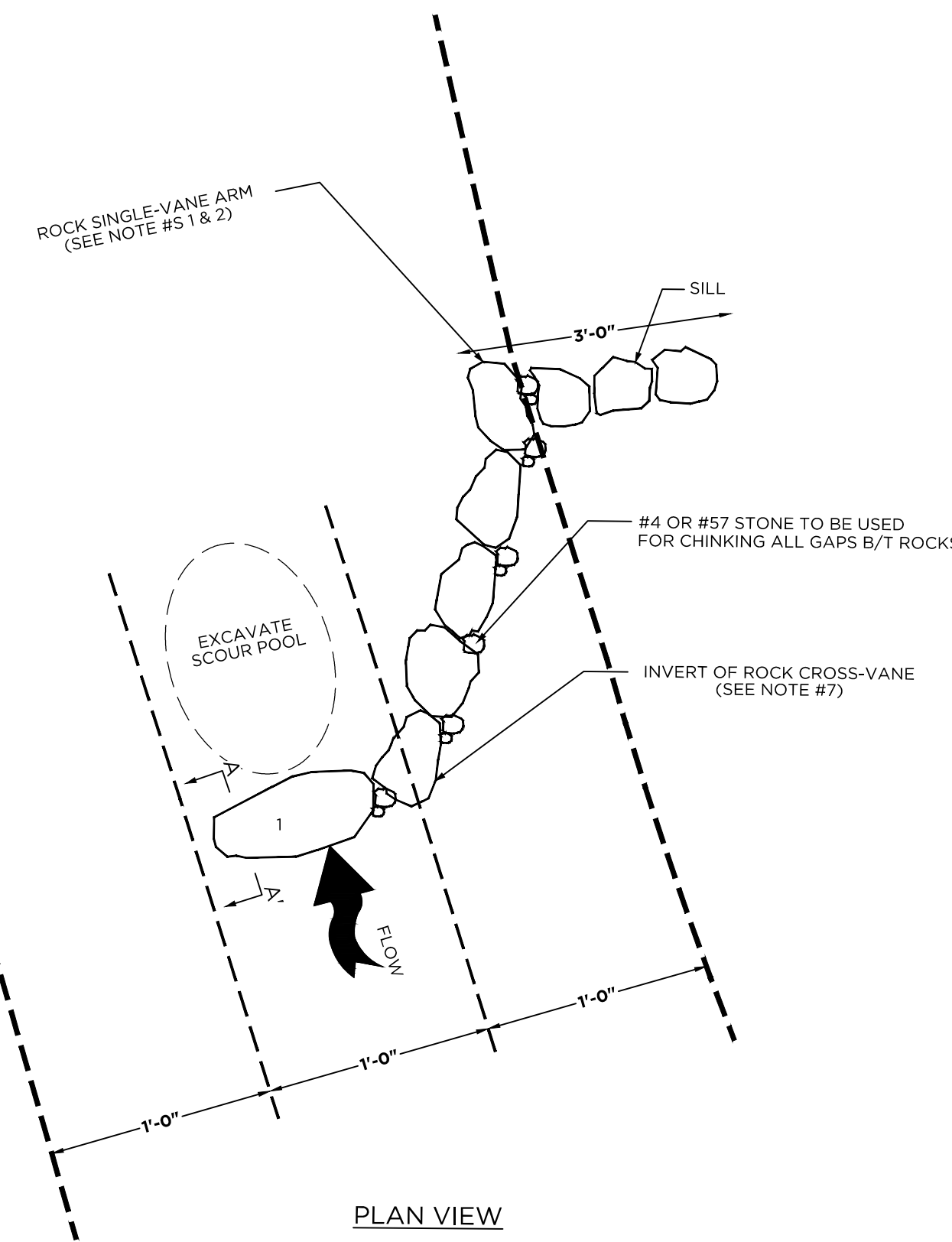
**GEORGIA811**  
 Utilities Protection Center, Inc.

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LANDSCAPE PLAN:  
 FORBS AND SEEDING  
 sheet number  
**L-5.1**



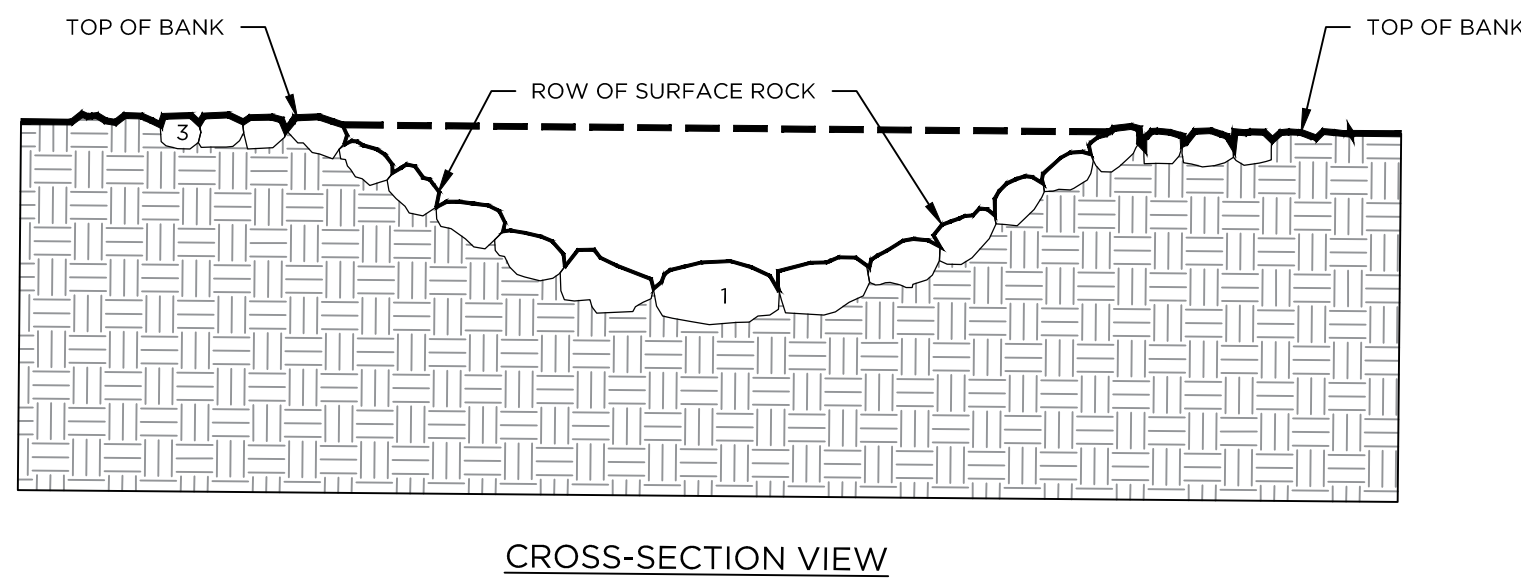
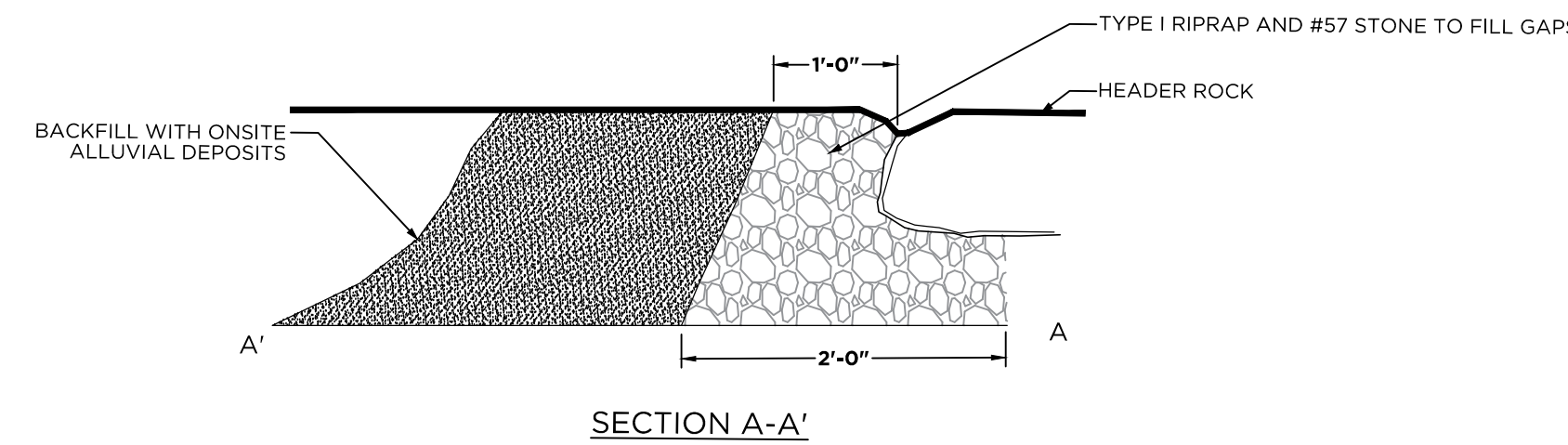
**4** TYPICAL CROSS-VANE DETAIL  
L-7.0 SCALE: NTS



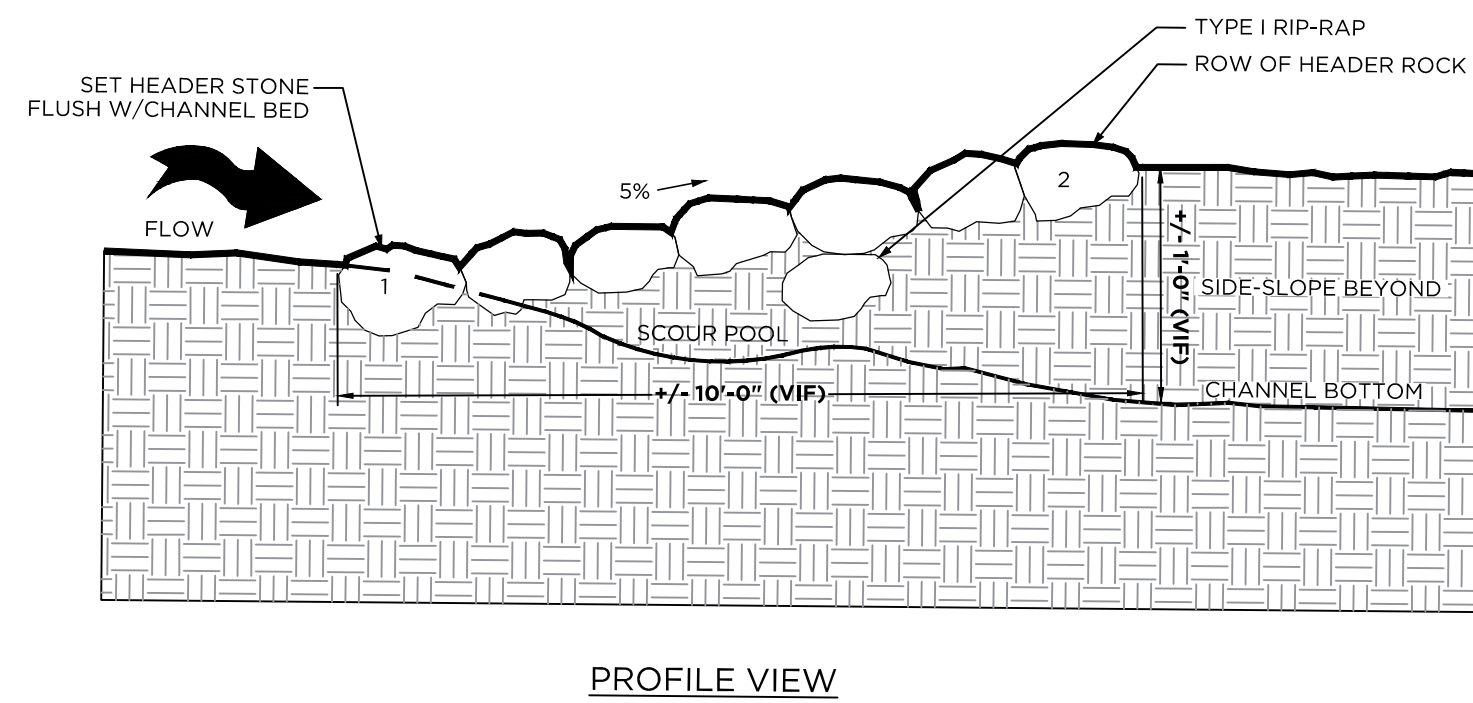
**5** TYPICAL SINGLE-VANE DETAIL  
L-7.0 SCALE: NTS

**ROCK CROSS-VANE AND SINGLE-VANE NOTES:**

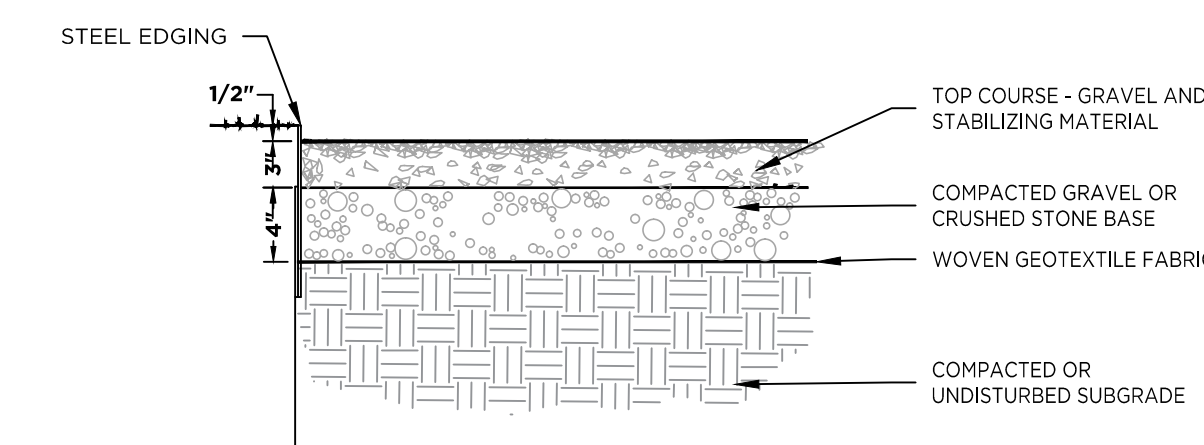
- 1) IMPORTED ROCK MEETING THE DIMENSIONS SPECIFIED IN THE DRAWING SHALL BE USED TO CONSTRUCT THE CROSS VANE.
- 2) ONE ROW OF ROCK SHALL BE INSTALLED IN A TRENCH EXCAVATED IN THE STREAMBED. CROSS-VANE AND SINGLE-VANE SHALL BE CONSTRUCTED SUCH THAT NO SPACE EXISTS BETWEEN ROCKS.
- 3) THE TRENCH SHALL BEGIN AT THE TOP OF THE BANK OF THE CONSTRUCTED CHANNEL. THE CONTRACTOR SHALL PLACE FOOTER ROCK IN THE TRENCH FIRST. THE HEADER ROCK SHOULD BE PLACED 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 THIS DRAWING FOR A SCHEMATIC DIAGRAM.
- 5) EACH VANE ARM SHALL EXTEND INTO THE CHANNEL BED APPROXIMATELY 1/3 THE TOTAL WIDTH OF THE CHANNEL. REFER TO THE PLAN VIEW ON THIS DRAWING FOR A SCHEMATIC DIAGRAM.
- 6) THE SLOPE OF THE VANE EXTENDING FROM WHERE THE VANE JOINS THE TOP OF THE BANK SHALL NOT 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.
- 8) SILLS CONSTRUCTED AT TOP OF BANKS SHALL EXTEND APPROXIMATELY 3 FEET FROM EDGE OF CHANNEL.
- 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 KEYS INTO BANKS.



**2** TYPICAL CROSS-VANE DETAIL - CROSS-SECTION  
L-7.0 SCALE: NTS



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



**6** CRUSHED GRANITE FINES TRAIL (TYP.)  
L-7.0 SCALE: NTS

<b>OWNER/DEVELOPER</b>	<b>William K. Campbell</b> LEVEL II CERTIFIED DESIGN PROFESSIONAL # 1855 - EXP. 08/01/2018
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<b>CONTRACTOR</b>	
<b>COMPANY:</b> TO BE DETERMINED <b>ADDRESS:</b>	
<b>CONTACT:</b>	
<b>PHONE:</b>	
<b>FAX:</b>	
<b>EMAIL:</b>	
<b>SURVEYOR</b>	
<b>COMPANY:</b> Georgia Civil, Inc. <b>ADDRESS:</b> P.O. Box 186 Madison, Georgia 30650	
<b>CONTACT:</b> Brian Slate, PLS <b>PHONE:</b> (706) 342-1104 <b>FAX:</b> (706) 342-1105 <b>EMAIL:</b> brian@georgiacivil.com	
<b>SITE DESIGNER</b>	
<b>COMPANY:</b> ENVIRONS DESIGN STUDIO <b>ADDRESS:</b> 1104 MONTICELLO STREET COVINGTON, GA 30014 <b>PHONE:</b> 706-342-1104	Utilities/Services shown are for Contractor's 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, grout, 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.

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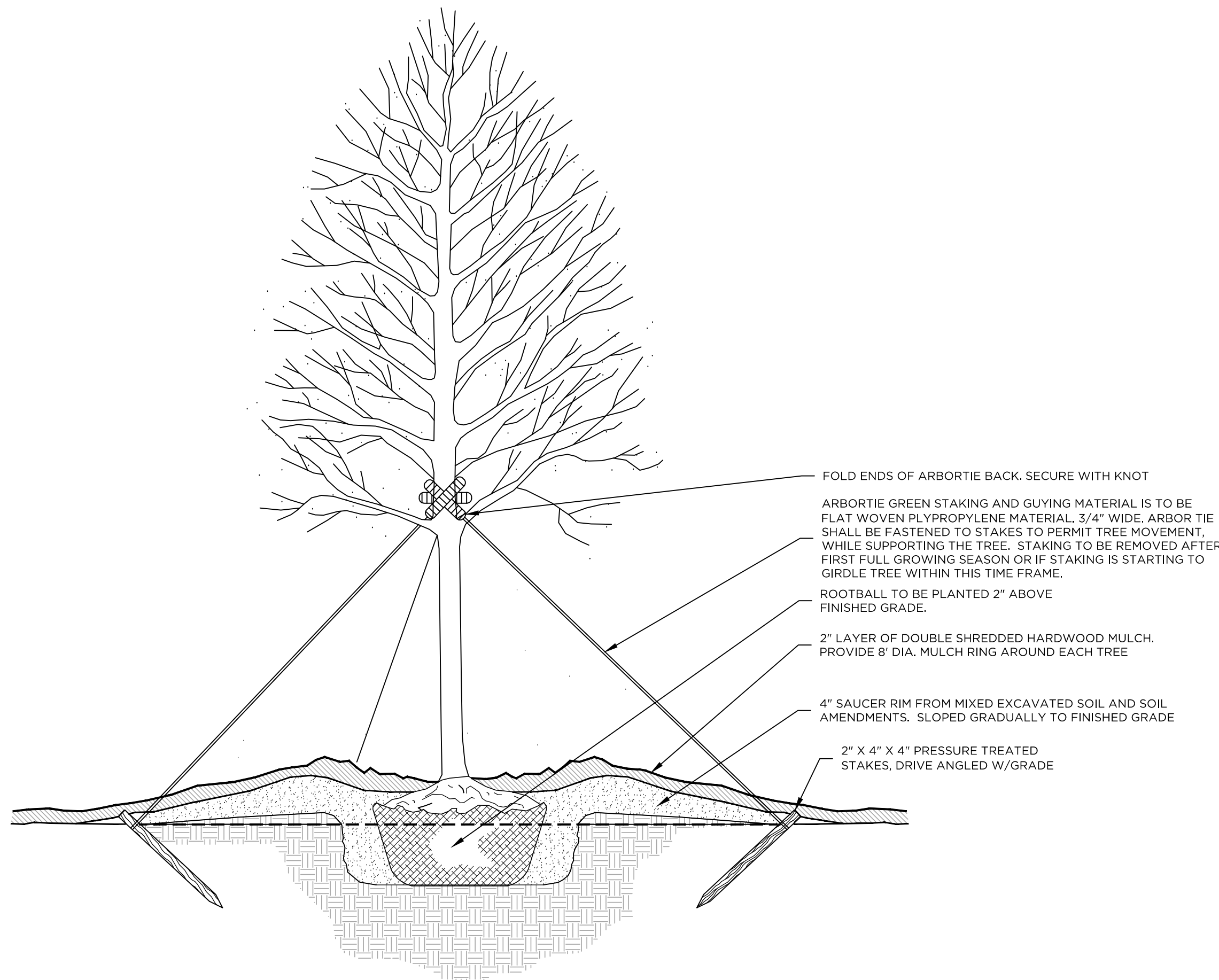
project information

**FRIENDSHIP FOREST PARK**  
WETLAND AND TRAIL ENHANCEMENT PLAN  
4399 PONCE DE LEON AVE  
CLARKSTON, GEORGIA 30021  
DEKALB COUNTY

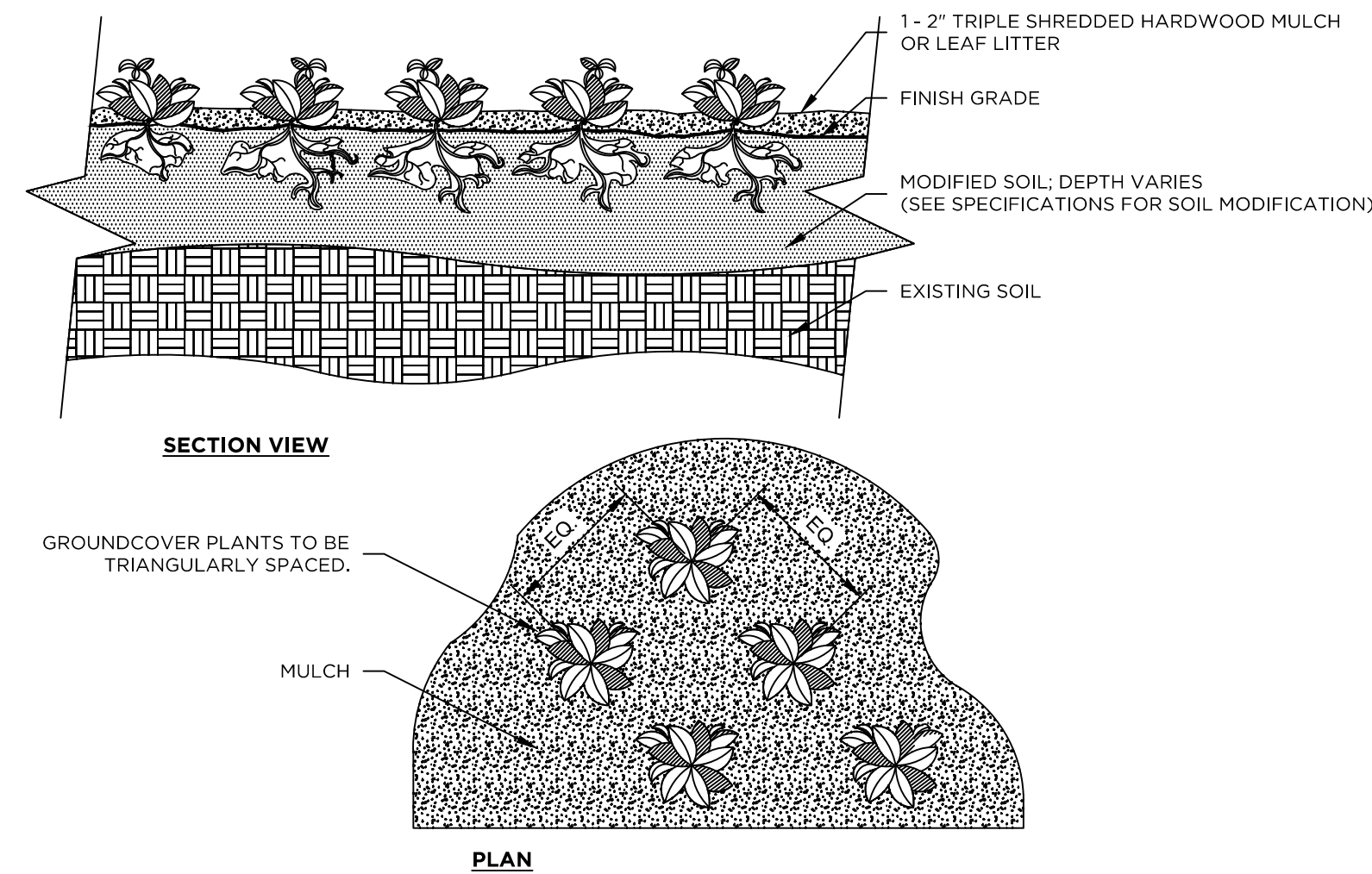
REVISIONS	NO.	DATE	DESCRIPTION
	1	2017.09.22	PLAN UPDATES
	2		
	3		
	4		
	5		

DATE OF FIRST ISSUE: 2017/09/15  
DRAWN BY: LJK  
CHECKED BY: JWC  
REVIEWED BY: KCC

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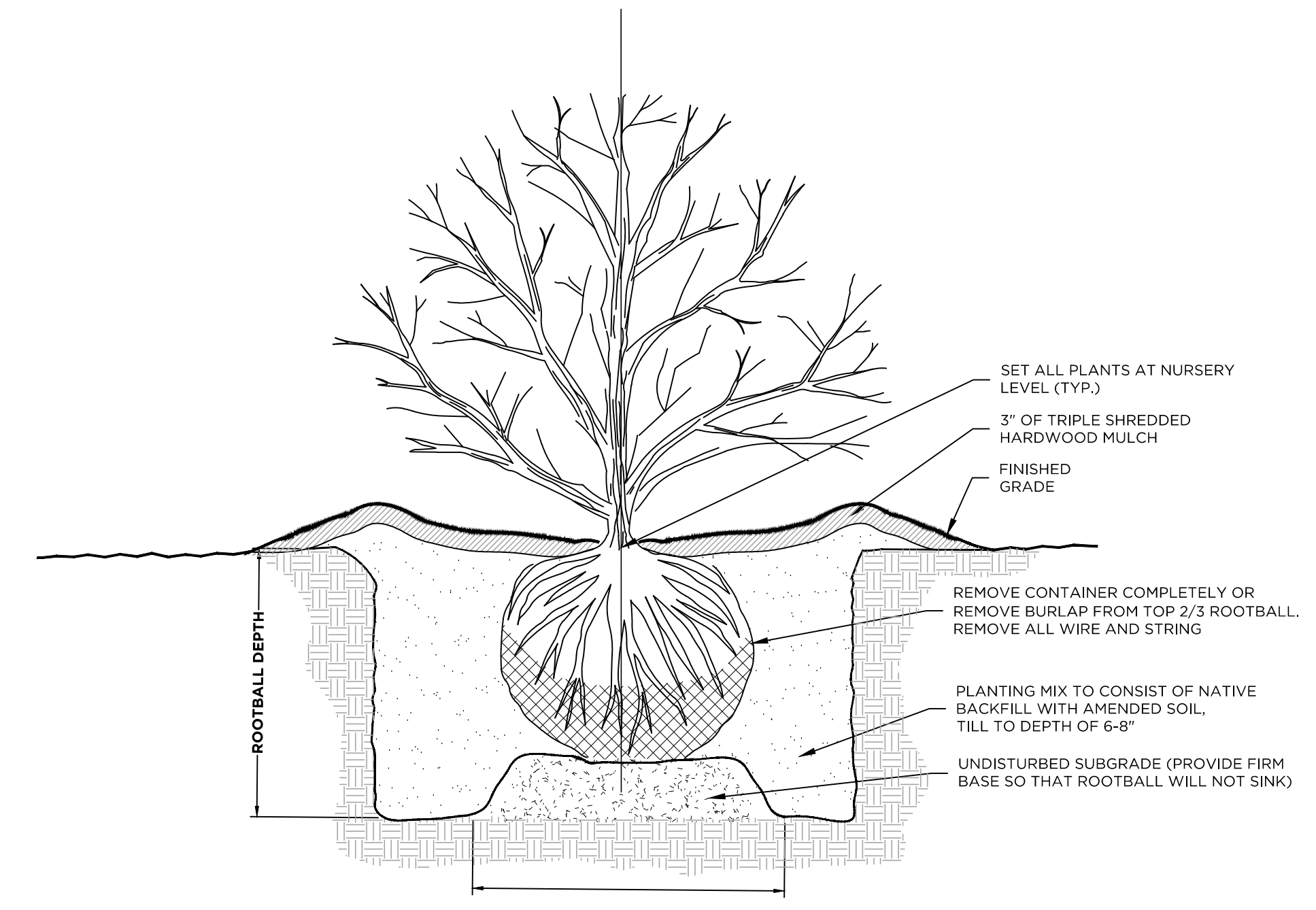


**4** TYPICAL TREE PLANTING DETAIL - BALL AND BURLAP  
L-8.0 SCALE: 3/4" = 1'-0"

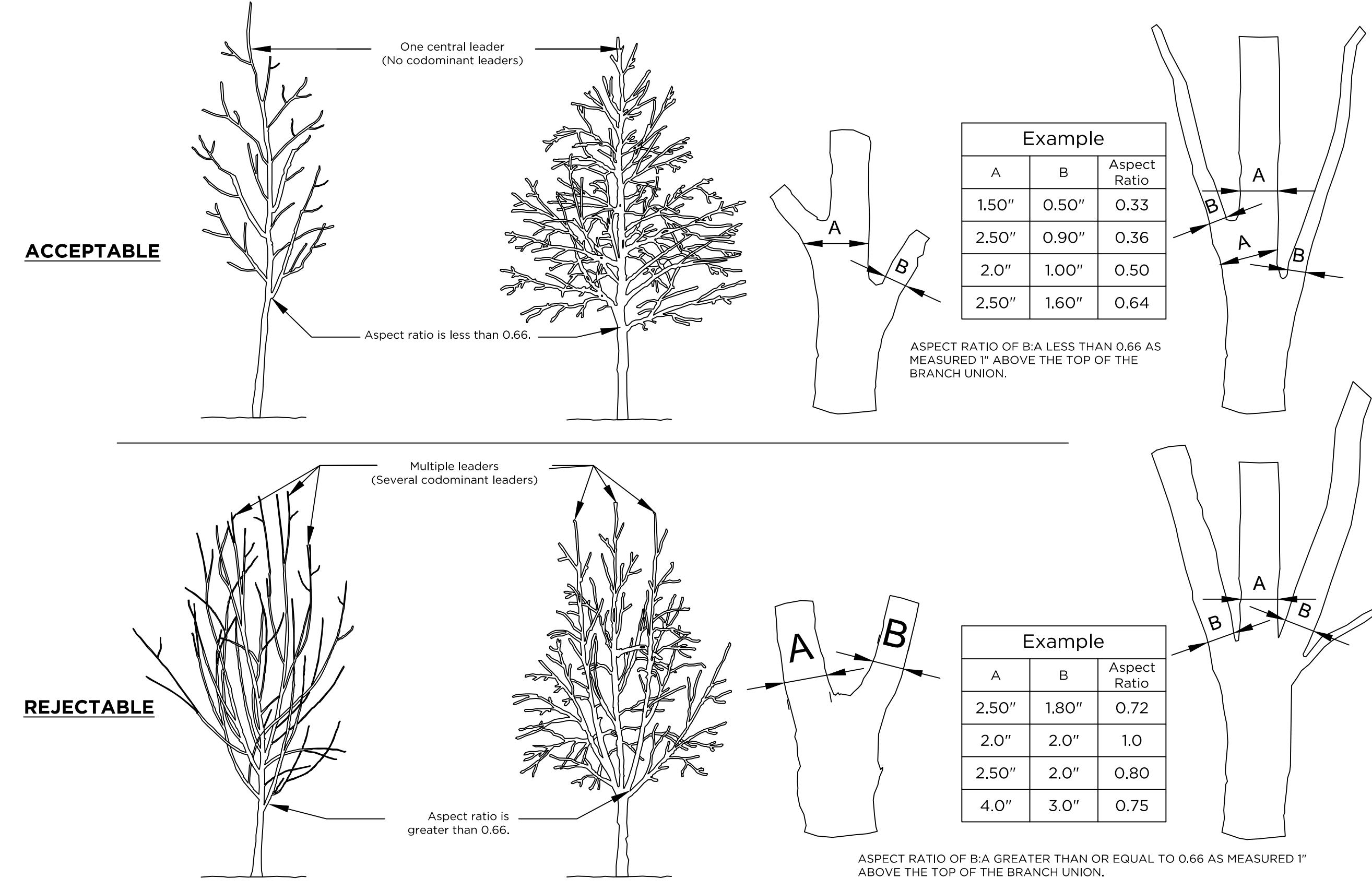


**NOTES:**  
1- SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES, SIZE, AND SPACING DIMENSION.  
2- SMALL ROOTS (1/4" OR LESS) THAT GROW AROUND, UP, OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF 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.

**4** TYPICAL PLANTING DETAIL - GROUNDCOVER AND PLUG  
L-8.0 SCALE: 3/4" = 1'-0"



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



**NOTES:**  
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.

**4** TYPICAL BRANCHING STRUCTURE GUIDELINES  
L-8.0 SCALE: NTS

**OWNER/DEVELOPER**  
**William K. Campbell**  
 LEVEL II CERTIFIED DESIGN PROFESSIONAL  
 # 1855 - EXP. 08/01/2018

**24-HOUR CONTACT**  
 Larry Kaiser, PE  
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**CONTRACTOR**  
 COMPANY: TO BE DETERMINED  
 ADDRESS:  
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REVISIONS	NO.	DATE	DESCRIPTION
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DRAWN BY:	2		
LJKR	3		
REVIEWED BY:	4		
KCC	5		

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LANDSCAPE DETAILS

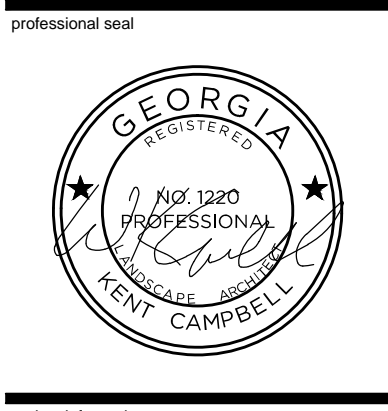
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Table with columns: REVISIONS, NO, DATE, DESCRIPTION, PLAN UPDATES

DATE OF FIRST ISSUE 2/27/09 BY: JWR REVIEWED BY: KCC

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sheet title

LANDSCAPE NOTES

sheet number

L-7.1

GENERAL PLANTING NOTES

- 1. GENERAL 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... 2. SELECTION: 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... 3. EXECUTION: 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...

- FOR DETAILS) IF DRAINAGE IS NOT SUFFICIENT NOTIFY LANDSCAPE ARCHITECT BEFORE INSTALLING THE PLANTS. OTHERWISE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR THE DRAINAGE 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. D. ASSURE THAT SOIL GRADES IN THE BEDS ARE SMOOTH AND AS SHOWN ON THE PLANS. E. PLANTS SHALL BE PLANTED 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 DIRECTED. 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 SOIL. 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. I. 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 OVER WATER. L. 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 AREAS. 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 3/4 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 EQUAL SIZE AND SPECIES AT NO COST TO THE OWNER. P. EXISTING 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 EXPANSION. B. MULCH SAUCERS TO BE 6" (MIN.) DIAMETER FOR ALL TREES NOT INCLUDED W/ A MULCH BED. 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 SITE CONDITIONS. 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 STRONGS WIND OR WINDSTORM CONDITIONS. F. IF CONTRACTOR SEES ANY SITUATION ON THE SITE WHERE A TREE IS TO BE STAKED WITH ABORTIVES, 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. I. USE ARBORETOUR WEBBING TO SECURE PLANT. SPACE STAKES EQUALLY AT 120° ANGLES AROUND TREE. J. NYLON WEBBING SHOULD BE SECURED IN SUCH A WAY AS TO ALLOW SOME MOVEMENT OF TREE. 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 VEHICULAR AREAS. B. PRUNING SHALL BE DONE IN SUCH A MANNER AS TO NOT CHANGE THE NATURAL HABIT 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 PRUNING. 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 ACIDIC SOILS. B. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHOROUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM THE UREA/FORM SOURCE. C. 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 CONTRACTOR. 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, RESIRED 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. F. CONTRACTOR IS FULLY RESPONSIBLE FOR MAINTENANCE, INCLUDING WATERING, WEEDING, SETTLING, PRUNING OF THIS WORK UNTIL THE DATE OF SUBSTANTIAL COMPLETION. 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 (ENVOY, SELECT ZEC, AND SECTION). C. SUGGESTED APPLICATION RATES ARE 2 QUARTS/ACRE IN COOL WEATHER AND 1 QUART/ACRE IN WARM WEATHER (1-2% GLYPHOSATE SOLUTION). TIMING OF THE APPLICATION IS CRUCIAL. IT IS DESIRABLE TO ELIMINATE WEEDS BEFORE THEY FLOWER. HARD TO KILL PERENNIAL FORBS CAN BE TREATED WITH A BROADLEAF HERBICIDE SUCH AS TRICLOPYR (GARLON). D. DISC OR DRAG HARROW THE TOP 1-2" OF SOIL ONLY (DO NOT TILL DEEPLY AS THIS WILL BRING ADDITIONAL WEED SEEDS IN THE SOIL TO THE SURFACE). F. 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 HIGHLY ADAPTIVE. FURTHERMORE, THESE SPECIES ARE USED TO GROWING IN DEPLETED SOILS. 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.

- 3. PLANTING: 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. B. IT IS RECOMMENDED THAT PLANTING COMMENCE IN THE FALL SEASON CONCURRENT WITH 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. FALL (SEPT. TIL SOIL FREEZE UP) - IN GENERAL, WILDFLOWER SEEDS HAVE INCREASED GERMINATION RATES DURING THE SPRING AFTER A FALL PLANTING THAN WHEN PLANTED 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. D. SPRING (MARCH-MAY) - IN GENERAL, WARM SEASON GRASSES (GRASSES SUCH AS LITTLE BLUESTEM, BIG BLUESTEM, AND INDIAN GRASS 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 SEEDINGS. SPRING PLANTING IS ALSO GENERALLY RECOMMENDED FOR PRAIRIE WILDFLOWER AND GRASS TRANSPLANTS TO AVOID "FROST HEAVING". TRANSPLANTING IN SPRING ALSO ALLOWS SUBSTANTIAL TIME FOR ROOT ESTABLISHMENT BEFORE THE COLD WINTER MONTHS. E. 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 GERMINATE) REQUIREMENTS TO BE MET. MAY SPECIES OF ANNUALS AND SOME PERENNIALS DO NOT NEED LONG STRATIFICATION. G. BEST TO SEED BEFORE RAIN EVENT OR ENSURE SITE IS WELL IRRIGATED AFTER SEEDING (IRRIGATION GENERALLY NOT NEEDED A/F GERMINATION UNLESS RAIN EVENT HAS NOT OCCURRED W/1-2-3WKS). WATCH SEEDLINGS TO DETERMINE IF IRRIGATION IS NEEDED. SEED SHOULD HAVE GERMINATED AFTER TWO WEEKS. H. BROADCAST THE SEED AT A RATE OF 1LB./1,000S.F. OR 20LBS./ACRE, CRISS-CROSSING THE AREA IN A NORTH-SOUTH DIRECTION FOLLOWED BY AN EAST-WEST DIRECTION TO ENSURE A MORE EVEN DISTRIBUTION OF SEED. STAKING MAY BE NECESSARY TO DETERMINE EXTENT OF AREA TO BE SEEDED. I. USE ONLY REPUTABLE SEED SOURCES WITH PURE LIVE SEED, WHICH ACCOUNT FOR THE GERMINATION RATE OF INDIVIDUAL SPECIES. ADDITIONALLY, ALL GRASSES AND WILDFLOWERS SPECIFIED ARE TO BE NATIVE TO THE UPPER PIEDMONT REGION OF GEORGIA. J. LAY DOWN STRAW AFTER SEEDING. USE WHEAT STRAW ONLY SO AS TO MINIMIZE INTRODUCTION OF FOREIGN OR UNDESIRABLE SPECIES. 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.

- 3. SITE MAINTENANCE: A. BEST TO NOT DISTURB SEEDLINGS DURING FIRST GROWING SEASON. IF MOWING IS DESIRED TO MAINTAIN "TIDY" APPEARANCE, MOW AT HEIGHT NO LOWER THAN 6-8". 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. RIPARIAN RESTORATION AND PRESERVATION 1. 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 (ENVOY, SELECT ZEC, AND SECTION). C. SUGGESTED APPLICATION RATES ARE 2 QUARTS/ACRE IN COOL WEATHER AND 1 QUART/ACRE IN WARM WEATHER (1-2% GLYPHOSATE SOLUTION). TIMING OF THE APPLICATION IS CRUCIAL. IT IS DESIRABLE TO ELIMINATE WEEDS BEFORE THEY FLOWER. HARD TO KILL PERENNIAL FORBS CAN BE TREATED WITH A BROADLEAF HERBICIDE SUCH AS TRICLOPYR (GARLON). D. DISC OR DRAG HARROW THE TOP 1-2" OF SOIL ONLY (DO NOT TILL DEEPLY AS THIS WILL BRING ADDITIONAL WEED SEEDS IN THE SOIL TO THE SURFACE). F. 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 HIGHLY ADAPTIVE. FURTHERMORE, THESE SPECIES ARE USED TO GROWING IN DEPLETED SOILS. 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. 2. PLANTING: 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. B. IT IS RECOMMENDED THAT PLANTING COMMENCE IN THE FALL SEASON CONCURRENT WITH 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. FALL (SEPT. TIL SOIL FREEZE UP) - IN GENERAL, WILDFLOWER SEEDS HAVE INCREASED GERMINATION RATES DURING THE SPRING AFTER A FALL PLANTING THAN WHEN PLANTED 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. D. SPRING (MARCH-MAY) - IN GENERAL, WARM SEASON GRASSES (GRASSES SUCH AS LITTLE BLUESTEM, BIG BLUESTEM, AND INDIAN GRASS 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 SEEDINGS. SPRING PLANTING IS ALSO GENERALLY RECOMMENDED FOR PRAIRIE WILDFLOWER AND GRASS TRANSPLANTS TO AVOID "FROST HEAVING". TRANSPLANTING IN SPRING ALSO ALLOWS SUBSTANTIAL TIME FOR ROOT ESTABLISHMENT BEFORE THE COLD WINTER MONTHS. E. 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 GERMINATE) REQUIREMENTS TO BE MET. MAY SPECIES OF ANNUALS AND SOME PERENNIALS DO NOT NEED LONG STRATIFICATION. G. BEST TO SEED BEFORE RAIN EVENT OR ENSURE SITE IS WELL IRRIGATED AFTER SEEDING (IRRIGATION GENERALLY NOT NEEDED A/F GERMINATION UNLESS RAIN EVENT HAS NOT OCCURRED W/1-2-3WKS). WATCH SEEDLINGS TO DETERMINE IF IRRIGATION IS NEEDED. SEED SHOULD HAVE GERMINATED AFTER TWO WEEKS. H. BROADCAST THE SEED AT A RATE OF 1LB./1,000S.F. OR 20LBS./ACRE, CRISS-CROSSING THE AREA IN A NORTH-SOUTH DIRECTION FOLLOWED BY AN EAST-WEST DIRECTION TO ENSURE A MORE EVEN DISTRIBUTION OF SEED. STAKING MAY BE NECESSARY TO DETERMINE EXTENT OF AREA TO BE SEEDED. I. USE ONLY REPUTABLE SEED SOURCES WITH PURE LIVE SEED, WHICH ACCOUNT FOR THE GERMINATION RATE OF INDIVIDUAL SPECIES. ADDITIONALLY, ALL GRASSES AND WILDFLOWERS SPECIFIED ARE TO BE NATIVE TO THE UPPER PIEDMONT REGION OF GEORGIA. J. LAY DOWN STRAW AFTER SEEDING. USE WHEAT STRAW ONLY SO AS TO MINIMIZE INTRODUCTION OF FOREIGN OR UNDESIRABLE SPECIES. 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.

OWNER/DEVELOPER

William K. Campbell LEVEL I CERTIFIED DESIGN PROFESSIONAL # 1855 - EXP. 08/01/2018 CONTACT: Keith Barker, City Manager Clarkston, Georgia 30021 PHONE: (404) 296-6489 FAX: N/A EMAIL: kbarker@cityofclarkston.com

CONTRACTOR

COMPANY: TO BE DETERMINED ADDRESS:

24-HOUR CONTACT

Larry Kaiser, PE (404) 909-5619 CONTACT WILL CHANGE ONCE CONTRACT IS AWARDED

SURVEYOR

COMPANY: Georgia Civil, Inc. ADDRESS: P.O. Box 186 Madison, Georgia 30650 CONTACT: Brian Slate, PLS PHONE: (706) 342-1044 FAX: (706) 342-1105 EMAIL: brian@georgiacivil.com

SITE DESIGNER

COMPANY: ENVIRONS DESIGN STUDIO ADDRESS: 1104 MONTICELLO STREET COVINGTON, GA 30014 PHONE: 706-342-1014

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Utilities/Services shown are for Contractors convenience. Items shown schematically and neither the site design professional nor the owner assumes any responsibility for variance in the 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 shown and/or professional of any utility conflicts prior to installation of new utilities, grading, etc. Contractor, at their expense, shall be responsible to repair, replace and/or protect, as necessary, any utilities damaged, whether shown or not. Abandonment, relocation, etc of utilities shall be coordinated with the respective utility company.

project information

