

REVIEWED FOR
CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
PLANNING & DEVELOPMENT

GRAVEL SPRINGS PUMP STATION AND FORCE MAIN

AUTHORIZED FOR
ISSUANCE OF BUILDING PERMIT
(REVISIONS REQUIRE RESUBMISSION)
May 15, 2018
GWINNETT COUNTY
BUILDING PLAN REVIEW

KEEP ON JOB SITE
APPROVED PLAN SET MUST BE
AVAILABLE FOR GWINNETT COUNTY
INSPECTIONS AT ALL TIMES
NO PLANS
NO INSPECTIONS

FOR THE
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

GWINNETT COUNTY DEPARTMENT OF PLANNING AND DEVELOPMENT
STORMWATER
 REVIEWED
 FINAL REVIEW
By Scott Arnett
Date May 15, 2018
Gwinnett County shall not be held liable for documents certified by a registered professional.
THIS PLAN WILL BE NULL AND VOID TWELVE MONTHS FROM THE ABOVE DATE UNLESS A DEVELOPMENT PERMIT HAS BEEN OBTAINED. PRE-CONSTRUCTION CONFERENCE REQUIRED PRIOR TO CONSTRUCTION AND AS-BUILTS REQUIRED PRIOR TO FINAL APPROVAL.
CASE NO: _____

AND ACM SATILLA LN V, LLC
PPI PROJECT NUMBER R17199
LAND LOT 143 DISTRICT 7
BEGINNING OF PROJECT PARCEL #010
ZONED: R-SR, RA-200, OI
GWINNETT CASE CDP2018-00002

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
APPROVAL FOR
PUMP STATION ONLY
Reviewed By: [Signature] Date: 5/15/18
Inspected By: [Signature] Date: 5/15/18
Approved By: [Signature] Date: 5/15/18
Gwinnett County shall not be held liable for documents certified by a registered professional.

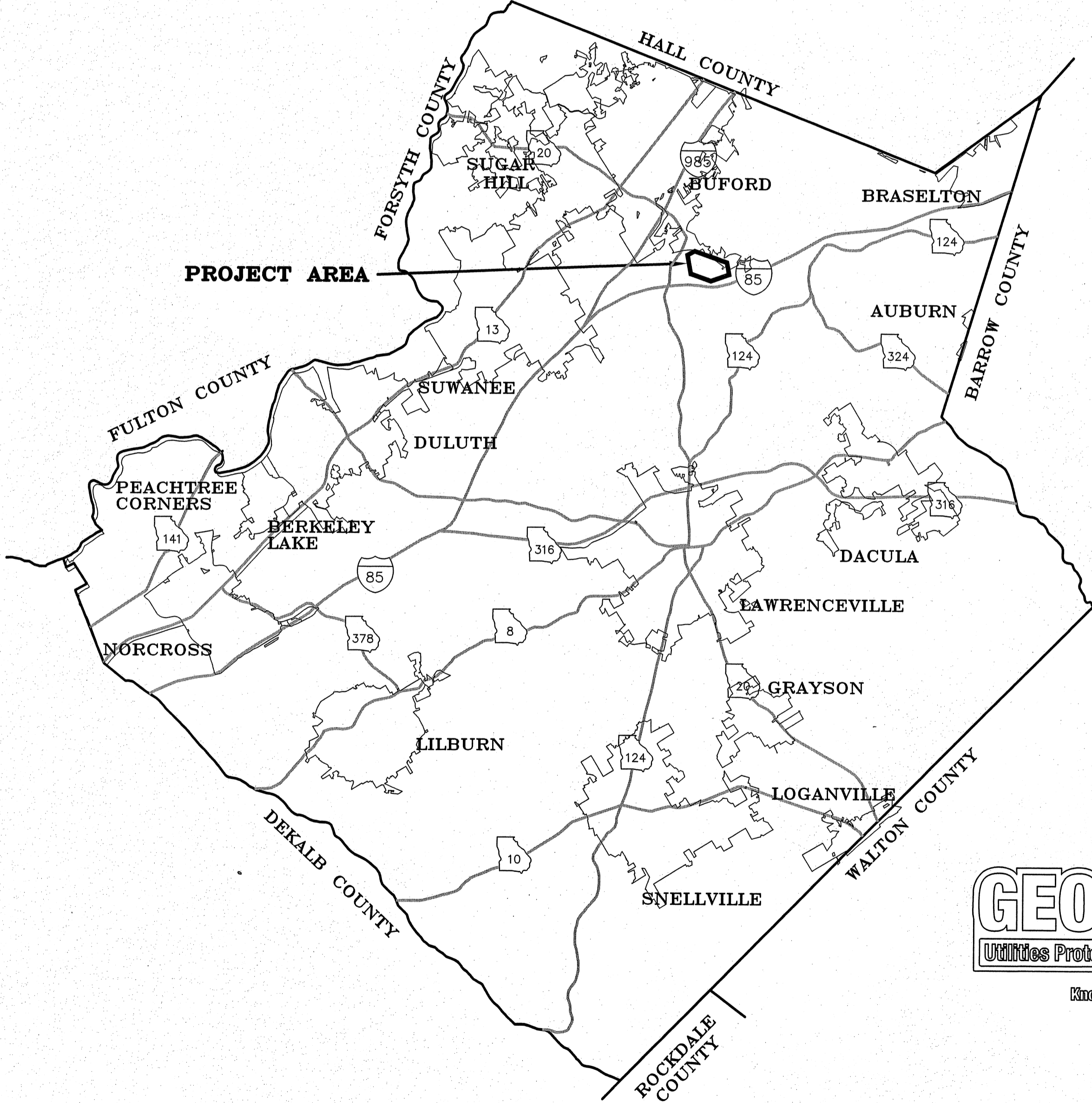
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
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REGISTERED PROFESSIONAL
No. 030433
1/22/18
ENGINEER
KEITH M. MUELLER



GWINNETT COUNTY BOARD OF COMMISSIONERS
Charlotte Nash CHAIRMAN
Jace Brooks DISTRICT 1
Lynette Howard DISTRICT 2
Tommy Hunter DISTRICT 3
John Heard DISTRICT 4

GWINNETT COUNTY WATER & SEWERAGE AUTHORITY
Bryan Kerlin CHAIRMAN
Larry Genn DISTRICT 1
Michael Sullivan DISTRICT 2
James Pirkle DISTRICT 3
Chip Randall DISTRICT 4



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CERTIFICATE OF DEVELOPMENT PLANS APPROVAL
ALL REQUIREMENTS OF THE GWINNETT COUNTY UNIFIED DEVELOPMENT ORDINANCE (UDO) RELATIVE TO THE PREPARATION AND SUBMISSION OF A DEVELOPMENT PERMIT APPLICATION HAVING BEEN FULFILLED, AND SAID APPLICATION AND ALL SUPPORTING PLANS AND DATA HAVING BEEN REVIEWED AND APPROVED BY ALL AFFECTED COUNTY DEPARTMENTS AS REQUIRED UNDER THEIR RESPECTIVE AND APPLICABLE REGULATIONS, APPROVAL OF THIS SITE PLAN IS HEREBY GRANTED AND ALL OTHER DEVELOPMENT PLANS WITH THIS PROJECT SHALL BE SUBJECT TO ALL FURTHER PROVISIONS OF SAID UDO.

Maria Seaborn Designee 05-15-18
DIRECTOR, DEPT. PLANNING & DEVELOPMENT DATE

THIS CERTIFICATE EXPIRES TWELVE MONTHS FROM THE DATE OF APPROVAL UNLESS A DEVELOPMENT PERMIT IS ISSUED.

NO.	REVISION DESCRIPTION	DATE
A	ISSUED FOR APPROVAL	01/08/18
B	REVISED PER GWINNETT COUNTY COMMENTS	02/23/18
C	REVISED PER GWINNETT COUNTY DWR COMMENTS	03/26/18
D	REVISED FOR GWINNETT DWR REVIEW	04/05/18

GWINNETT COUNTY
PROJECT LOCATION
N.T.S.

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

TOTAL SITE AREA	3.10
TOTAL DISTURBED AREA	3.10
TOTAL PIPE LENGTH	2985 LF
COMMISSION DISTRICT	4

PRECISION
Planning Inc.
planners • engineers • architects • surveyors
400 Pike Boulevard, Lawrenceville, Ga 30046
770.338.8000 • www.ppi.us

24-HOUR CONTACT
JAMES RHODEN III
(404) 603-8833

DATE: 4/20/18
CLIENT/PPI NO. R17199
GRAVEL SPRINGS PUMP STATION AND FORCE MAIN
ISSUED FOR APPROVAL

NOTIFICATION REQUIREMENTS/CONTACTS

- 24-HOUR EMERGENCY CONTACT: JAMES RHODEN III
PHONE: 404-603-8833
AFTER HOURS: (678) 376-7000 (GCDWR)
- OWNER: GCM SATELLITE TV LLC
MAY 15, 2018
30309
CONTACT: JAMES RHODEN III
PHONE: 404-603-8833
- ENGINEER: PRECISION PLANNING (PPI)
400 PIKE BLVD
LAWRENCEVILLE, GA 30046
CONTACT: KURT MUELLER, P.E.
PHONE: 770-338-8000
- NOTIFY GCDWR INSPECTIONS OF THE FOLLOWING AT THE INDICATED TIME INTERVAL. INSPECTION POINT OF CONTACT WILL BE PROVIDED AT PRE-CONSTRUCTION MEETING.
 - 24 HOURS BEFORE THE BEGINNING OF EACH PHASE OF CONSTRUCTION.
 - 24 HOURS BEFORE EACH BLAST ROUND.
 - NOTE THAT BLASTING REQUIRES APPROVAL OF A BLASTING PLAN 30 WORKING DAYS PRIOR AND ENGINEER APPROVAL OF A DETAILED BLAST ROUND DESIGN PLAN 24 HOURS PRIOR. ALSO REQUIRES 7 DAYS ADVANCE NOTICE TO ADJACENT PROPERTY OWNERS FOLLOWED BY ANOTHER NOTICE 24 HOURS IN ADVANCE.
 - 72 HOURS IN ADVANCE, A REQUEST MUST BE PLACED TO THE INSPECTOR FOR APPROVAL TO REMOVE OR DISTURB SIGNS, MAILBOXES, FENCING, LANDSCAPING, ETC. APPROVAL OF REQUEST IS REQUIRED BEFORE PERFORMING RELATED WORK.
 - 7 DAYS IN ADVANCE, COORDINATE PLANNED SHUT OFF OF SERVICES AND/OR WET CUT-INS WITH THE INSPECTOR. REQUIRES A FOLLOW UP NOTIFICATION TO INSPECTOR AND AFFECTED CUSTOMERS A MINIMUM OF 24 HOURS PRIOR TO LOSS OF SERVICE.
 - GCDWR INSPECTOR MUST BE PRESENT AT WET CUT-INS AND ANY OTHER ACTIVITY THAT REQUIRES THE SERVICES TO BE SHUT OFF.
- THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND CONTACT THE GEORGIA UTILITY PROTECTION CENTER FOR FIELD MARKING OF UTILITIES 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.
 - UTILITY PROTECTION CENTER PHONE NUMBER: 811
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES 24 HOURS PRIOR TO CONSTRUCTION IN AREAS WHERE THE UTILITIES ARE SHOWN OR SUSPECTED TO BE. THE LIST IS BASED ON BEST INFORMATION AVAILABLE, BUT IS NOT GUARANTEED TO BE COMPLETE.
 - ATLANTA GAS LIGHT COMPANY (770) 325-5000
 - BUFORD GAS (678) 889-4600
 - AT&T BROAD BAND (770) 559-2000
 - CHARTER COMMUNICATIONS (770) 806-7060
 - JACKSON EMC 1-(800) 482-3691
 - GEORGIA POWER COMPANY 1-(888) 660-5890
 - GWINNETT COUNTY TAX COMMISSIONER'S OFFICE (770) 822-7303
- GWINNETT COUNTY DEPARTMENT OF TRANSPORTATION(GDOT) APPROVAL IS REQUIRED PRIOR TO ANY OPEN CUTS OR LANE CLOSURES. CONTRACTOR TO CONTACT:
 - MARK STONECYPHER: (770) 822-7413
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHENEVER ANY STREET IS TO BE PARTIALLY BLOCKED
 - GWINNETT COUNTY POLICE DEPARTMENT (770) 613-5000
 - GWINNETT COUNTY FIRE DEPARTMENT (678) 518-4800
 - GWINNETT COUNTY BOARD OF EDUCATION (770) 338-4800
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING GOVERNMENT AGENCIES AND UTILITIES AT LEAST 48 HOURS BEFORE ENCRoACHING ON THEIR RIGHT-OF-WAY.
 - GEORGIA POWER COMPANY 1-(888) 660-5890
- CONTRACTOR IS TO NOTIFY AFFECTED CUSTOMERS 24 HOURS IN ADVANCE OF BLOCKING ACCESS TO PROPERTY OR TRAFFIC ROADWAYS. FULL ACCESS TO PROPERTY MUST BE RESTORED BY THE END OF THE WORK DAY.

PROJECT SPECIFIC NOTES

- PROPERTY LINES AND BACKGROUND TOPOGRAPHIC FEATURES SHOWN ON THE PLANS ARE BASED ON GWINNETT COUNTY GIS AND TOPOGRAPHIC SURVEY.
- THE SOURCE OF TOPOGRAPHY FOR THIS PROJECT IS FIELD RUN SURVEY BY PRECISION PLANNING, INC. USING HORIZONTAL DATUM NAD83 GEORGIA STATE PLANE WEST AND VERTICAL DATUM NAVD 88.
- FLOODPLAIN NOTE: THERE IS NO FLOODPLAIN ON THIS PROPERTY FROM A WATER COURSE WITH A DRAINAGE AREA EXCEEDING 100 ACRES OR FLOODPLAIN PER FIRM PANEL 13135C0035F, DATED SEPTEMBER 29, 2006. FLOODPLAIN SHOWN IS FROM GWINNETT COUNTY MODEL ID 466, HYDRO ID 23126 (SUWANNEE CREEK).
- HYDROLOGY STUDY NOTE: NO HYDROLOGY IS INCLUDED WITH THIS SEWER PROJECT.
- THE DESIGN PROFESSIONAL, WHOSE SEAL APPEARS HEREON, CERTIFIES THE FOLLOWING:
 - THE NATIONAL WETLAND INVENTORY MAPS HAVE BEEN CONSULTED; AND,
 - THE APPROPRIATE PLAN SHEET [] DOES [X] DOES NOT INDICATE AREAS OF UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS AS SHOWN ON THE MAPS' AND,
 - IF WETLANDS ARE INDICATED, THE LAND OWNER OR DEVELOPER HAS BEEN ADVISED THAT LAND DISTURBANCE OF PROTECTED WETLANDS SHALL NOT OCCUR UNLESS THE APPROPRIATE FEDERAL WETLANDS ALTERATION ("SECTION 404") PERMIT HAS BEEN OBTAINED
- THERE ARE NO WETLANDS BEING DISTURBED ON THIS SITE. A JURISDICTIONAL WATERS DETERMINATION WAS PERFORMED ON THE SITE BY NELSON ENVIRONMENTAL, INC. AND NO WETLANDS WERE IDENTIFIED WITHIN THE PROJECT LIMITS.
- NO STREAM BUFFER VARIANCE IS REQUIRED FOR THIS PROJECT PER THE EROSION AND SEDIMENT ACT 12 - 7 - 6 (B) 15 (D).
- THE 25-FOOT NATURAL, UNDISTURBED STREAM BUFFER, UNDER ARTICLE V, SECTION 15, OF THE SOIL AND EROSION AND SEDIMENT CONTROL ORDINANCE SHALL REMAIN IN FORCE.
- A 50-FOOT UNDISTURBED BUFFER AND 75-FOOT IMPERVIOUS SETBACK SHALL BE MAINTAINED ADJACENT TO ALL STREAMS.
- ALL PUMP STATION AND FORCE MAIN CONSTRUCTION SHALL COMPLY WITH THE GWINNETT COUNTY DWR DEVELOPER PUMP STATION STANDARDS, JANUARY 2014, UNLESS OTHERWISE SPECIFIED.
- ALL WORK TO BE PERFORMED ACCORDING TO GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES-WATER MAIN AND SANITARY SEWER DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS (APRIL 5, 2016). ACTUAL FIELD CONDITIONS COULD DICTATE MORE STRINGENT REQUIREMENTS, IF DEEMED NECESSARY BY INSPECTOR.
- GWINNETT COUNTY FIRE DEPARTMENT SHALL BE NOTIFIED ONE WEEK PRIOR TO ANY CONSTRUCTION ACTIVITIES THAT MAY AFFECT TRAFFIC OPERATIONS OR ACCESS TO/FROM FIRE DEPARTMENT #24, INDIAN CHIEF DRIVE, OR MALL OF GEORGIA BLVD.
- SITE IS LOCATED IN THE MALL OF GEORGIA OVERLAY DISTRICT AND SHALL MEET OVERLAY REQUIREMENTS.
- SITE IS LOCATED IN THE BRASELTON HIGHWAY (S.R.124)GRAVEL SPRINGS RD. (S.R.324)HAMILTON MILL RD. OVERLAY DISTRICT. NO LAND DISTURBANCE ALLOWED PRIOR TO ISSUANCE OF A DEVELOPMENT PERMIT.
- SITE IS LOCATED IN THE MALL OF GEORGIA OVERLAY DISTRICT. NO LAND DISTURBANCE ALLOWED PRIOR TO ISSUANCE OF A DEVELOPMENT PERMIT.
- NO OUTSIDE STORAGE PROPOSED. THIS INCLUDES SUPPLIES, EQUIPMENT, VEHICLES, PRODUCTS, ETC.
- NATURAL VEGETATION SHALL REMAIN ON THE PROPERTY UNTIL ISSUANCE OF A DEVELOPMENT PERMIT. NO INTERIM LAND DISTURBANCE PERMITS SHALL BE ISSUED.
- ALL STORMWATER UTILITIES TO BE INSPECTED BY DEPARTMENT OF WATER RESOURCES.
- STORMWATER MANAGEMENT FOR THIS PROJECT IS PROVIDED ON-SITE.
- GWINNETT COUNTY ASSUMES NO RESPONSIBILITY FOR OVERFLOW OR EROSION OF NATURAL OR ARTIFICIAL DRAINS BEYOND THE EXTENT OF THE STREET RIGHT-OF-WAY, OR FOR THE EXTENSION OF CULVERTS BEYOND THE POINT SHOWN ON THE APPROVED AND RECORDED PLAN. GWINNETT COUNTY DOES NOT ASSUME THE RESPONSIBILITY FOR THE MAINTENANCE OF PIPES IN DRAINAGE EASEMENTS BEYOND THE COUNTY RIGHT-OF-WAY.
- MAXIMUM SLOPE FOR CUT OR FILL IS 2H:1V EXCEPT EARTHEN DAM EMBANKMENTS SHALL BE 3H:1V.
- ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.
- A REVISION TO THE EROSION CONTROL PLAN IS REQUIRED WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, THAT WILL HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT, OR IF THE PLAN PROVES TO BE INEFFECTIVE IN ELIMINATING POLLUTANT DISCHARGE.
- NO FILL IN FLOODPLAIN. ALL GRADES TO BE RETURNED TO PRE-CONSTRUCTION ELEVATIONS.
- AS-BUILT/RECORD DRAWINGS FOR SEWER SYSTEM REQUIRED PRIOR TO REQUESTING FINAL PLAT APPROVAL. TEMPORARY CERTIFICATE OF OCCUPANCY OR ISSUANCE OF CERTIFICATE OF OCCUPANCY. ALLOW MINIMUM 10 BUSINESS DAYS FOR INITIAL REVIEW AND ADDITIONAL TIME FOR RE-REVIEW(S). DRAWINGS TO BE SUBMITTED TO, REVIEWED AND APPROVED BY DEPARTMENT OF WATER RESOURCES.
- PER THE FEE RESOLUTION THERE IS A "PENALTY FEE" OF 100% OF THE PERMIT FEE FOR SITE ACTIVITY PRIOR TO ISSUANCE OF APPROPRIATE PERMITS (LAND DISTURBANCE, DEVELOPMENT, UTILITY CONSTRUCTION, OR GREASE TRAP INSTALLATIONS).

CONSTRUCTION SEQUENCING NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF CONSTRUCTION SEQUENCING AND PHASING.
- A CONSTRUCTION PERMIT IS TO BE ACQUIRED BY A GCDWR APPROVED CONTRACTOR PRIOR TO INSTALLATION. CALL 678-518-6000 FOR INFORMATION ON THE PERMITTING PROCESS AND COSTS. A MANDATORY PRE-CONSTRUCTION CONFERENCE WITH INSPECTOR, BY APPOINTMENT ONLY, IS REQUIRED 48 HOURS PRIOR TO ANY UTILITY CONSTRUCTION. ANY UTILITY DESIGN CHANGES MUST BE APPROVED BY THE WATER AND SEWER REVIEW SECTION OF P&D PRIOR TO INSTALLATION.
- NOTIFY GWINNETT COUNTY INSPECTOR 24 HOURS BEFORE BEGINNING OF EVERY PHASE OF CONSTRUCTION: (678) 518-6000
- CONTRACTOR SHALL CALL DEVELOPMENT INSPECTIONS AT 678-518-6000 TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF ANY CONSTRUCTION.

GENERAL NOTES

- ALL CONSTRUCTION TO COMPLY WITH GWINNETT COUNTY STANDARDS.
- ALL CONSTRUCTION SHALL COMPLY WITH THE CONTRACT PLANS, CONTRACT SPECIFICATIONS, PERMIT REQUIREMENTS, AND ALL APPLICABLE STATE, FEDERAL, AND LOCAL CODES. NO ADDITIONAL PAYMENT WILL BE GIVEN FOR ANY COST INCURRED TO COMPLY WITH REQUIREMENTS SET BY THE AFOREMENTIONED ITEMS.
- I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

NAME: KURT MUELLER, P.E. SIGNATURE:
- APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY GWINNETT COUNTY OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.
- THE CONTRACTOR SHALL IMMEDIATELY INFORM THE OWNER OF ANY DISCREPANCIES OR ERRORS DISCOVERED IN THE CONTRACT DOCUMENTS. ANY DEVIATION FROM THE PLANS WITHOUT PRIOR CONSENT OF OWNER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
- ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE, EXCEPT THE FOLLOWING THAT HAVE BEEN OBTAINED:
 - GWINNETT COUNTY PLANNING AND DEVELOPMENT

- A PRE-CONSTRUCTION MEETING MUST BE HELD WITH GCDWR ENGINEER AND INSPECTOR, DEVELOPER'S ENGINEER AND CONTRACTOR, AND GCDOT (IF APPLICABLE) PRIOR TO COMMENCING WORK.
- ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO PUBLIC RIGHT-OF-WAYS AND ACQUIRED EASEMENTS. WORK IS TO BE PERFORMED IN CONFORMITY WITH ALL APPLICABLE PERMITS, AGREEMENTS, AND EASEMENT STIPULATIONS. CONTRACTOR SHALL NOT ENTER OR OCCUPY ANY EASEMENT WITHOUT FIRST CONFIRMING WITH GCDWR THAT SUCH EASEMENT IS FULLY EXECUTED. CONTRACTOR SHALL NOT ENTER OR OCCUPY ANY LAND OUTSIDE OF THE EASEMENT AND RIGHT-OF-WAY. SHOULD THE CONTRACTOR DESIRE OR REQUIRE ADDITIONAL SPACE, THE CONTRACTOR SHALL ARRANGE FOR SUCH A SPACE WITH THE EASEMENT OWNER AT CONTRACTOR'S EXPENSE.
- LAND DISTURBANCE SHALL BE LIMITED TO THOSE AREAS INDICATED ON THE PLANS FOR ACCESS, STAGING, AND UTILITY CONSTRUCTION.
- ALL BUFFERS AND TREE SAVE AREAS ARE TO BE CLEARLY IDENTIFIED WITH TREE PROTECTIVE FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.
- INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL TAKE PLACE PRIOR TO LAND DISTURBING ACTIVITIES. ALL EROSION AND CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE INSPECTED REGULARLY USING THE EROSION AND SEDIMENT CONTROL CHECKLIST. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY THE OWNER.
- DRAINAGE SYSTEMS SHALL BE MAINTAINED, KEPT FREE OF DEBRIS, AND IN OPERATING CONDITION AT ALL TIMES DURING CONSTRUCTION OF THIS PROJECT. THIS MAY INCLUDE, BUT NOT BE LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED OR REMOVED OR RE-GRADED AS REQUIRED BY THE ENGINEER, EXCEPT FOR THOSE DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS IN THE PLANS AND HAVING SPECIFIC PAY ITEMS IN THE DETAILED ESTIMATE. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.
- MONUMENTS OR LANDMARKS SHALL NOT BE DISTURBED OR REMOVED BY THE CONTRACTOR WITHOUT WRITTEN CONSENT OF THE OWNER. ANY MONUMENT OR LANDMARK REMOVED OR DAMAGED SHALL BE REPLACED BY THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
- ALL SIGNS, MAILBOXES, FENCING, LANDSCAPING, ETC. SHALL BE PROTECTED DURING CONSTRUCTION. SHOULD IT BE REQUIRED TO REMOVE OR DISTURB SUCH ITEMS, THE CONTRACTOR SHALL SEEK APPROVAL FROM THE OWNER FIRST AND IF APPROVED, THE REMOVAL OR DISTURBANCE OF SUCH ITEMS SHALL BE DONE AT NO ADDITIONAL COST TO OWNER. SHOULD THE OWNER DEEM ANY ITEMS AS DAMAGED, THE CONTRACTOR SHALL REPLACE THE ITEM IN LIKE AND KIND AT NO ADDITIONAL COST TO OWNER. TRANSPLANTED AND/OR REPLACED ITEMS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER WORK IS COMPLETED. TRAFFIC CONTROL SIGNS AND MAIL BOXES SHALL BE REPLACED THE DAY OF THEIR REMOVAL.
- ALL TRAFFIC CONTROL SIGNS THAT ARE REMOVED OR DAMAGED MUST BE REINSTALLED OR REPLACED. ALL SIGNS MUST BE REINSTALLED TO THE STANDARDS IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- NO TRENCH SHALL BE OPENED MORE THAN 150 FEET AHEAD OF PIPE LAYING AND NO MORE THAN 500 FEET OF TRENCH MAY BE OPEN AT ANY ONE TIME. CLEANUP AND GRASSING SHALL FOLLOW A MAXIMUM OF 500 FEET BEHIND PIPE INSTALLATION. AT THE END OF EACH WORKDAY, NO TRENCH IS TO BE LEFT OPEN WITHOUT THE APPROVAL OF THE GCDWR INSPECTOR. ALL ACCESS AND OPERABILITY SHALL BE FULLY RESTORED.
- CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FOR THE PROJECT THAT SHALL BE APPROVED BY GCDWR MATERIAL TESTING REPRESENTATIVE PRIOR TO USE. ALL SPOIL MATERIALS, REFUSE, AND DEBRIS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND LEGALLY DISPOSED OF AT AN APPROPRIATE OFFSITE LOCATION. BURNING OF REFUSE, DEBRIS, OR SPOIL MATERIAL AT THE PROJECT SITE IS NOT ALLOWED.
- FILL AREAS UNDER PAVED AREAS SHALL BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR AND FILL AREAS UNDER NON-PAVED AREAS SHALL BE COMPACTED TO A MINIMUM 85% STANDARD PROCTOR, UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS, OR DIRECTED BY THE ENGINEER.
- OWNER'S MATERIAL TESTING FIRM TO PERFORM TESTING OF CONTRACTOR'S WORK WHERE DIRECTED BY GCDWR. CONTRACTOR IS TO ALLOW FULL ACCESS AS NEEDED BY THE MATERIALS TESTING FIRM. ANY FAILED TEST SHALL REQUIRE THE CONTRACTOR TO REDO THE WORK UNTIL THE TEST IS PASSED. ADDITIONAL TESTING DUE TO A FAILED TEST SHALL BE PERFORMED BY COUNTY'S MATERIAL TESTING FIRM AND AT THE EXPENSE OF THE CONTRACTOR.
- ALL PROJECT SITE AREAS DISTURBED BY CONTRACTOR OPERATIONS SHALL BE STABILIZED WITH PERMANENT GRASSING UNLESS OTHERWISE NOTED. PERMANENT GRASSING SHALL BE SOO UNLESS OTHERWISE SPECIFICALLY NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE OWNER. ANY AREAS OUTSIDE THE PROJECT SITE AREA THAT ARE DISTURBED SHALL BE RESTORED AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRAVEL, PAVED, OR CONCRETE ENTRANCES, DRIVEWAYS, AND APRONS TO PRECONSTRUCTION CONDITIONS AND IN ACCORDANCE WITH APPLICABLE GDOT AND GCDOT STANDARDS AND REQUIREMENTS. DRIVEWAYS TO BE REPLACED 10 FEET BACK FROM THE CURB OR TO THE CLOSEST EXPANSION JOINT, UNLESS OTHERWISE DIRECTED BY GCDWR.
- A PAVING PLAN MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER BEFORE EXECUTING ASPHALTIC CONCRETE CONSTRUCTION. MILLING IS REQUIRED PRIOR TO ASPHALT RESURFACING, AND IS TO BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. SURFACE OVERLAY IS TO OCCUR IN ONE OPERATION.
- VEHICULAR AND PEDESTRIAN TRAFFIC ACCESS TO PUBLIC ROADWAYS, DRIVEWAYS, FIRE HYDRANTS, VALVES, ETC. SHALL BE MAINTAINED AT ALL TIMES FOR RESIDENTS, PROPERTY OWNERS, PEDESTRIANS, THE TRAVELING PUBLIC, TRASH PICKUP, MAIL AND PARCEL DELIVERY SERVICES, SCHOOL BUSES, AND EMERGENCY VEHICLES.
- STREET INTERSECTIONS MAY NOT BE BLOCKED EXCEPT FOR 1/2 THE ROADWAY AT ANY GIVEN TIME. IF IT BECOMES NECESSARY TO CLOSE A PORTION OF THE ROAD, THE CONTRACTOR SHALL PROVIDE A TRAFFIC ROUTING (DETOUR) PLAN AND SHALL HAVE IT APPROVED BY GDOT PRIOR TO CLOSING THE ROAD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FLAGS, SIGNAGE, BARRICADES, LIGHTS, AND OTHER TRAFFIC CONTROL DEVICES NECESSARY TO CONTROL THE TRAFFIC AND PROTECT THE PUBLIC. ALL TRAFFIC CONTROL MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS", GCDOT STANDARDS, AND GDOT STANDARDS. TRAFFIC CONTROL TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE PARKING WITHIN THE CONSTRUCTION LIMITS DETAILED AND SHALL PARK VEHICLES AND EQUIPMENT SO THAT THERE IS NO DISRUPTION TO TRAFFIC. NO PARKING ON PRIVATE PROPERTY SHALL BE PERMITTED.
- THE SIZE, TYPE, MATERIALS, AND LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. SUBSURFACE UTILITY DATA SHOWN IS APPROXIMATE ONLY AND NO GUARANTEE IS MADE THAT ALL UTILITIES AND OTHER FEATURES ARE REPRESENTED ON THE PLANS ARE CORRECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION AND SIZE OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

GENERAL NOTES CONTINUED

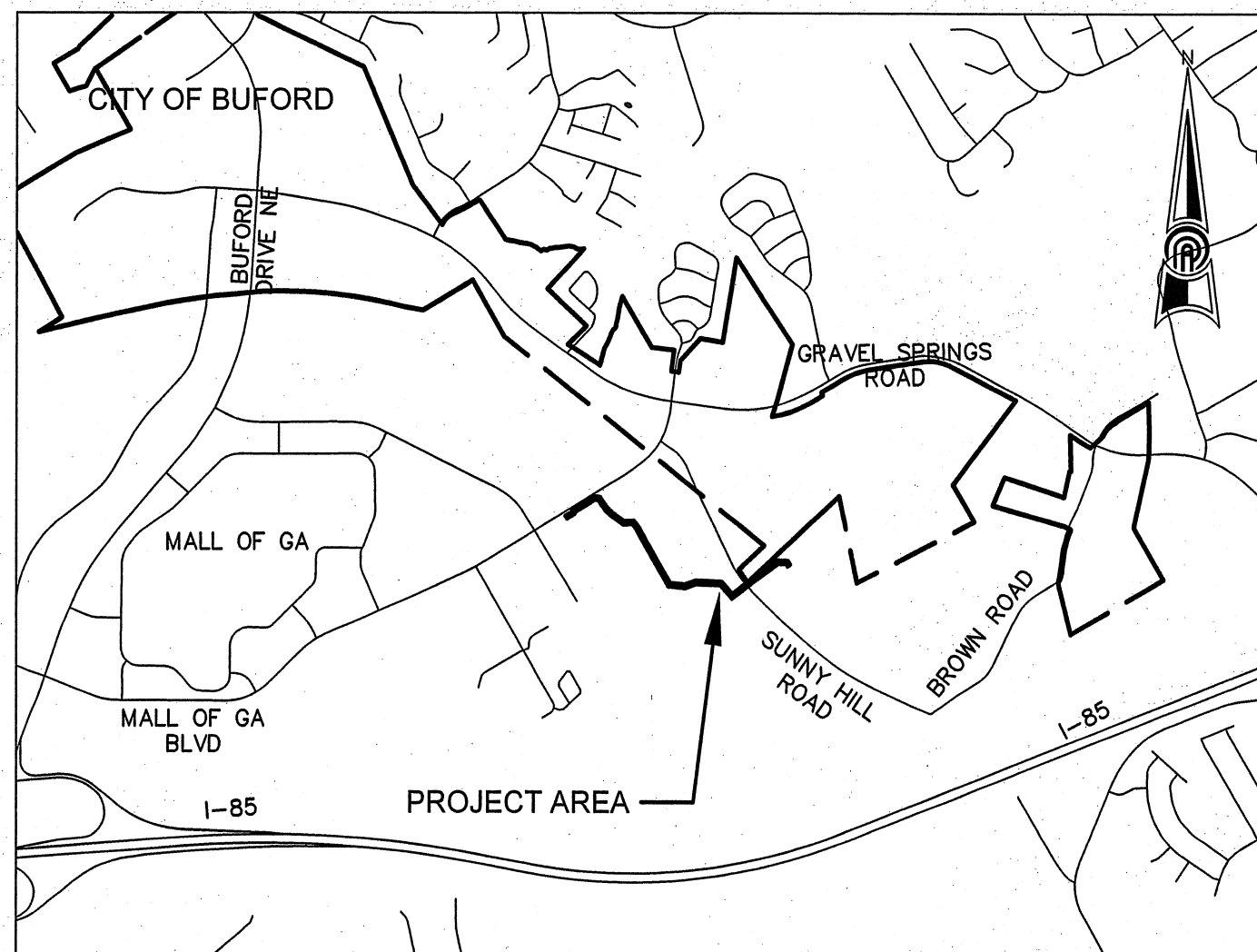
- IF THE CONTRACTOR ENCOUNTERS SUBSURFACE CONDITIONS DIFFERENT FROM THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER. NO EXISTING UTILITY SHALL BE DISTURBED WITHOUT PROPER AUTHORITY AND THEN ONLY IN SUCH A MANNER AS PRESCRIBED AND APPROVED BY THE OWNER OF THE EXISTING UTILITY.
- SHOULD IT BECOME NECESSARY TO DISTURB AN EXISTING UTILITY, THE CONTRACTOR IS TO NOTIFY THE OWNER AND THE OWNER OF THE UTILITY. WHEN NECESSARY, CONTRACTOR IS TO CEASE WORK UNTIL SATISFACTORY ARRANGEMENTS HAVE BEEN MADE WITH THE UTILITY OWNER TO PROPERLY CARE FOR AND RELOCATE THE UTILITY. NO CLAIMS FOR DAMAGES SHALL BE ALLOWED THE CONTRACTOR ON ACCOUNT OF ANY DELAY OCCASIONED THEREBY.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. EITHER THE CONTRACTOR OR UTILITY OWNER WILL PERFORM THE REPAIR AT THE DISCRETION OF THE UTILITY OWNER. NO CLAIMS FOR DAMAGES SHALL BE ALLOWED THE CONTRACTOR ON ACCOUNT OF ANY DELAY OCCASIONED THEREBY.
- THE CONTRACTOR SHALL PROVIDE ALL PIPE FITTINGS AND APPURTENANCES REQUIRED FOR THE COMPLETE INSTALLATION OF THE PROPOSED PIPELINE, WHETHER OR NOT SUCH ITEMS ARE SHOWN OR CALLED OUT ON THE PLANS. THE CONTRACTOR IS ADVISED THAT FIELD ADJUSTMENTS MAY BE REQUIRED BASED ON ACTUAL SUBSURFACE CONDITIONS AND LOCATIONS OF EXISTING BURIED UTILITIES ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOT RECEIVE ANY ADDITIONAL PAYMENT OR TIME EXTENSION FOR ITEMS NOT BEING SHOWN IN PLANS OR FOR FIELD ADJUSTMENTS MADE DUE TO ACTUAL SUBSURFACE CONDITIONS AND UTILITY LOCATION.
- PIPELINE ROUTE STATIONING IS BASED ON PROPOSED PIPE CENTERLINE. PAYMENT FOR PIPELINE WILL BE BASED ON ACTUAL LENGTH OF PIPELINE INSTALLED, IN ACCORDANCE WITH THE SPECIFICATIONS.
- A MINIMUM OF 10 FEET HORIZONTAL AND 1.5 FOOT VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS AND SEWER MAINS. WHEN CROSSING PIPES, PIPE JOINTS ARE TO BE PLACED AS FAR AWAY FROM EACH OTHER AS POSSIBLE. WHENEVER PRACTICAL, WATER MAINS SHALL CROSS ABOVE SEWER MAINS.
- AT COMPLETION OF CONSTRUCTION, ALL VALVE BOXES, METERS, AND APPURTENANCES SHALL BE SET FOR PROPER FINISH GRADE. PRECAST STRUCTURES, MANHOLE FRAMES AND COVERS ARE TO BE SET FLUSH WITH FINISHED GRADE UNLESS OTHERWISE INDICATED IN THE PLANS OR SPECIFICATIONS.
- ANY MATERIAL SALVAGED ON SITE BEARING THE NAME "GWINNETT" SHALL BE RETURNED TO GCDWR.

EXISTING	LEGEND	NEW
W W	WATER	W W
SS SS	SANITARY SEWER	SS SS
FM FM	FORCE MAIN	FM FM
G G	GAS LINE	N.A.
UP UP	UNDERGROUND POWER	N.A.
UT UT	UNDERGROUND TELEPHONE	N.A.
	ROAD CENTERLINE	
	EDGE OF PAVEMENT	
	EDGE OF GRAVEL DRIVE	
	GUARDRAIL	N.A.
X X	FENCE	X X
	TREE LINE	N.A.
	CREEK CENTERLINE	N.A.
	DITCH CENTERLINE	
	STORM DRAIN	
500	CONTOUR	500
	RIGHT-OF-WAY	N.A.
	PERMANENT EASEMENT	
	TEMPORARY CONSTRUCTION EASEMENT	
	PROPERTY LINE	N.A.
	25' STREAM BUFFER	N.A.
	100-YR FLOOD LIMITS	N.A.
	POWER POLE	
	LIGHT POLE	
	GUY WIRE	N.A.
	SEWER MANHOLE	
	WATER VALVE	
N.A.	FM PLUG VALVE	
	FIRE HYDRANT	N.A.
	WATER METER	
	TELEPHONE PEDESTAL	N.A.
N.A.	AIR RELEASE VALVE	
	IRON PIN	N.A.
	SIGN	N.A.
	TREE	N.A.
	RIP RAP	
	WETLANDS	N.A.
	BUILDING	
	GRAVEL PAVING	
	CONCRETE PAVING	
	ASPHALT PAVING	



Know what's Below.
Call before you dig.

GWINNETT COUNTY DOT IS NOT ON THE ONE-CALL SYSTEM. CALL (770) 822-7474 WHEN LOCATING UTILITIES FOR CONSTRUCTION.

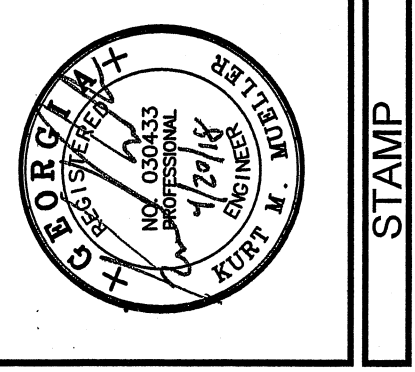


VICINITY MAP
N.T.S.

ABBREVIATIONS

ARV	AIR RELEASE VALVE	GV	GAS VALVE
BOC	BACK OF CURB	HDWL	HEADWALL
BM	BENCHMARK	IE	INVERT ELEVATION
CB	CATCH BASIN	IPF	IRON PIN FOUND
CF	CUBIC FEET	JB	JUNCTION BOX
CL	CENTER LINE	LF	LINEAR FOOT
CLF	CHAIN LINK FENCE	MH	MANHOLE
CMP	CORRUGATED METAL PIPE	N.A.	NOT APPLICABLE
CO	CLEAN OUT	N/F	NOW OR FORMERLY
CY	CUBIC YARD	PERM.	PERMANENT
D.E.	DRAINAGE EASEMENT	PL	PROPERTY LINE
DI	DROP INLET	PP	POWER POLE
DIA	DIAMETER	P.S.	PUMP STATION
DIP	DUCTILE IRON PIPE	PVC	POLYVINYL CHLORIDE PIPE
D/W	DRIVEWAY	RCP	REINFORCED CONCRETE PIPE
ESMT	EASEMENT	R/W	RIGHT-OF-WAY
E.C.	EROSION CONTROL	SSE	SANITARY SEWER EASEMENT
ELEV.	ELEVATION	SSMH	SANITARY SEWER MANHOLE
EOP	EDGE OF PAVEMENT	STA.	STATION
EX	EXISTING	TBM	TEMPORARY BENCHMARK
FES	FLARED END SECTION	TCE	TEMPORARY CONSTRUCTION
FFE	FINISHED FLOOR ELEVATION		EASEMENT
FM	FIRE HYDRANT	TEMP.	TEMPORARY
FM	FORCE MAIN	VCP	VITRIFIED CLAY PIPE
GDOT	GEORGIA DEPARTMENT OF TRANSPORTATION	WL	WATER LINE
G.M.D.	GEORGIA MILITIA DISTRICT	WM	WATER METER
		WV	WATER VALVE

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**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

GENERAL NOTES & LEGEND

SHEET TITLE	DESIGN	DRAWN	CHECKED	KM
	KM	DW	KM	

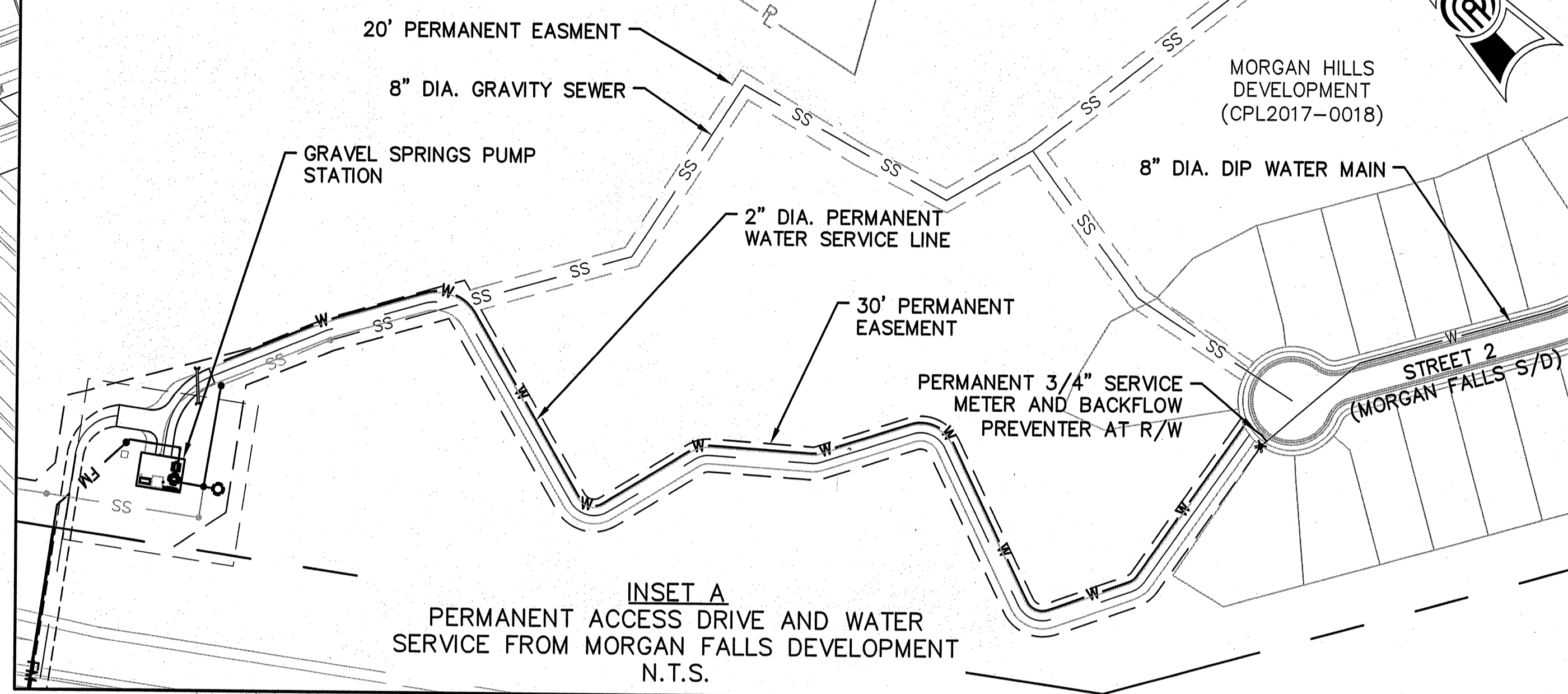
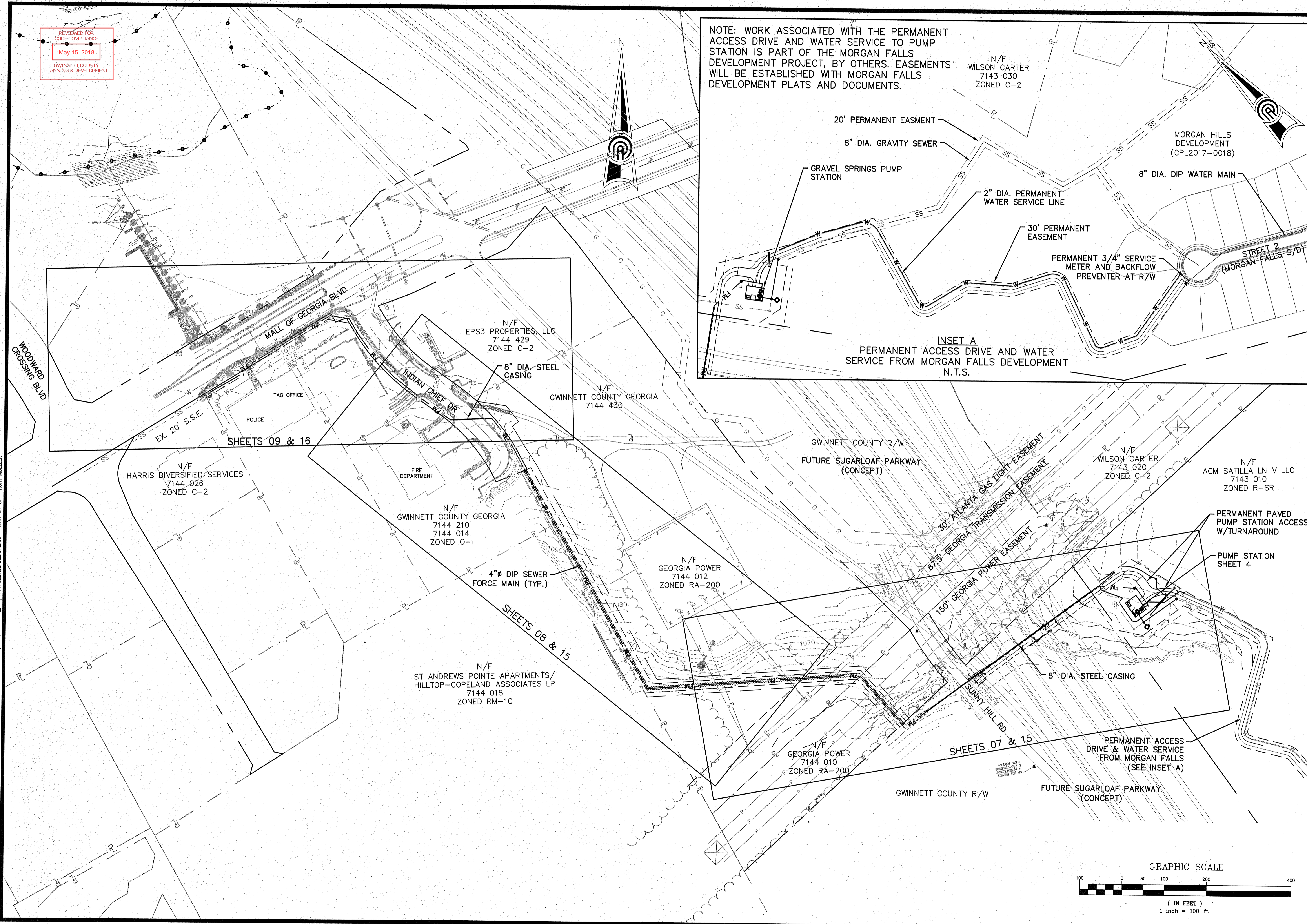
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02/26/2018	B	REVISED PER G.C. COMMENTS	
03/26/2018	C	REVISED PER G.C. DWR COMMENTS	
04/02/2018	D	REVISED FOR G.C. DWR REVIEW	

R17199
PPI PROJECT NO.

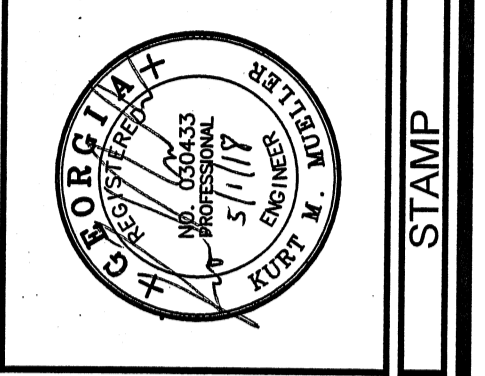
02

REVIEWED FOR
CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
PLANNING & DEVELOPMENT

NOTE: WORK ASSOCIATED WITH THE PERMANENT ACCESS DRIVE AND WATER SERVICE TO PUMP STATION IS PART OF THE MORGAN FALLS DEVELOPMENT PROJECT, BY OTHERS. EASEMENTS WILL BE ESTABLISHED WITH MORGAN FALLS DEVELOPMENT PLATS AND DOCUMENTS.



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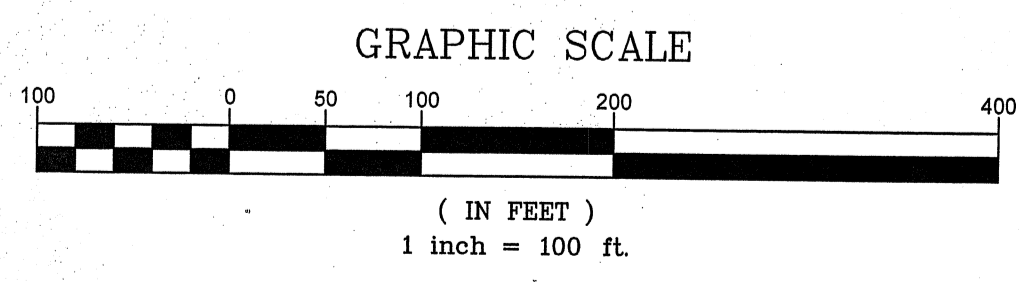
**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

SHEET INDEX		SHEET TITLE	
DESIGN	KM	DRAWN	DW
CHECKED	KM		

DATE	NO.	DESCRIPTION
01/08/2018	A	ISSUED FOR APPROVAL
02/22/2018	B	REVISED PER G.C. COMMENTS
03/26/2018	C	REVISED PER G.C. DWG COMMENTS
04/02/2018	D	REVISED FOR G.C. DWG REVIEW

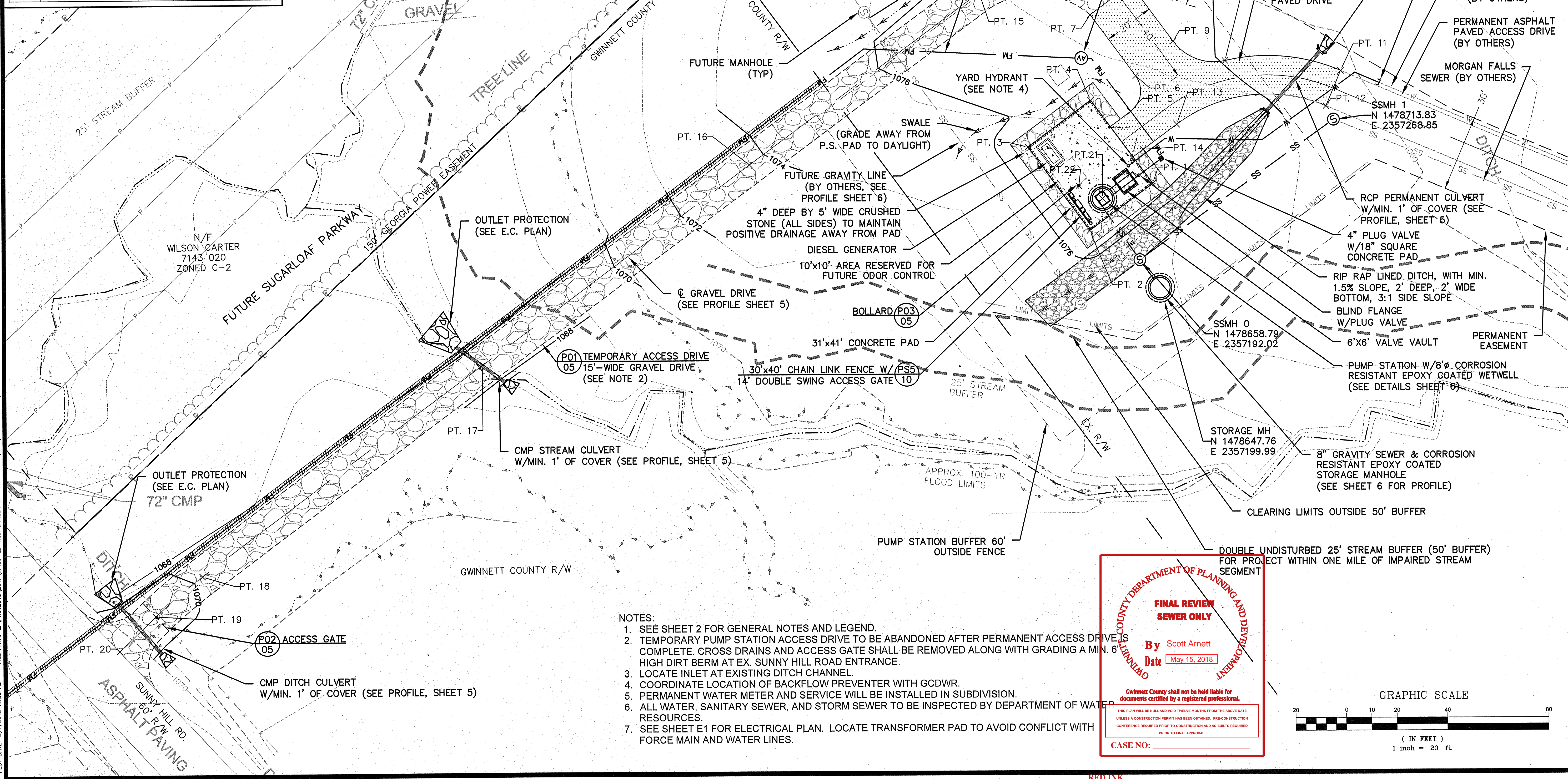
R17199
PPI PROJECT NO.

03



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PLOT DATE: 5/17/2018 11:03 AM

Point #	Row Description	Elevation	Northing	Easting
1	PAD CORNER	1077.65	1478688.77	2357197.22
2	PAD CORNER	1077.65	1478670.33	2357172.31
3	PAD CORNER	1077.60	1478703.28	2357147.91
4	PAD CORNER	1077.60	1478721.72	2357172.82
5	DRIVEWAY SPOT	1077.45	1478717.23	2357188.60
6	DRIVEWAY SPOT	1077.60	1478731.21	2357190.68
7	DRIVEWAY SPOT	1077.70	1478755.32	2357172.83
8	DRIVEWAY SPOT	1078.00	1478767.23	2357188.90
9	DRIVEWAY SPOT	1077.90	1478744.65	2357205.62
10	DRIVEWAY SPOT	1078.10	1478737.04	2357296.09
11	DRIVEWAY SPOT	1079.80	1478732.96	2357271.77
12	DRIVEWAY SPOT	1079.60	1478719.15	2357265.93
13	DRIVEWAY SPOT	1077.65	1478712.10	2357206.87
14	DRIVEWAY SPOT	1077.45	1478702.20	2357193.50
15	TEMP. DRIVE CL/BEG CURVE	1077.60	1478764.23	2357128.90
16	TEMP. DRIVE CL	1073.50	1478696.68	2357037.70
17	TEMP. DRIVE CL	1068.30	1478618.14	2356931.64
18	TEMP. DRIVE CL	1069.90	1478535.94	2356820.66
19	TEMP. DRIVE CL	1070.70	1478520.42	2356802.16
20	TEMP. DRIVE CL	1071.10	1478506.84	2356787.82
21	CENTER WET WELL	1077.70	1478682.86	2357177.34
22	BOLLARD	N/A	1478688.00	2357168.04



- NOTES:
- SEE SHEET 2 FOR GENERAL NOTES AND LEGEND.
 - TEMPORARY PUMP STATION ACCESS DRIVE TO BE ABANDONED AFTER PERMANENT ACCESS DRIVE IS COMPLETE. CROSS DRAINS AND ACCESS GATE SHALL BE REMOVED ALONG WITH GRADING A MIN. 6' HIGH DIRT BERM AT EX. SUNNY HILL ROAD ENTRANCE.
 - LOCATE INLET AT EXISTING DITCH CHANNEL.
 - COORDINATE LOCATION OF BACKFLOW PREVENTER WITH GCDWR.
 - PERMANENT WATER METER AND SERVICE WILL BE INSTALLED IN SUBDIVISION.
 - ALL WATER, SANITARY SEWER, AND STORM SEWER TO BE INSPECTED BY DEPARTMENT OF WATER RESOURCES.
 - SEE SHEET E1 FOR ELECTRICAL PLAN. LOCATE TRANSFORMER PAD TO AVOID CONFLICT WITH FORCE MAIN AND WATER LINES.

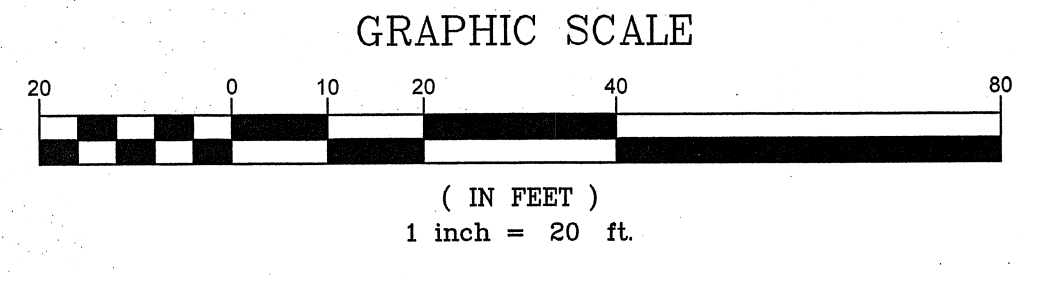
**FINAL REVIEW
SEWER ONLY**

By **Scott Arnett**
Date **May 15, 2018**

Gwinnett County shall not be held liable for documents certified by a registered professional.

THIS PLAN WILL BE NULL AND VOID TWELVE MONTHS FROM THE ABOVE DATE UNLESS A CONSTRUCTION PERMIT HAS BEEN OBTAINED. PRE-CONSTRUCTION CONFERENCE REQUIRED PRIOR TO CONSTRUCTION AND AS-BUILT REQUIRED PRIOR TO FINAL APPROVAL.

CASE NO: _____



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**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

PUMP STATION SITE
PLAN

SHEET TITLE	DESIGN	DRAWN	CHECKED	DATE

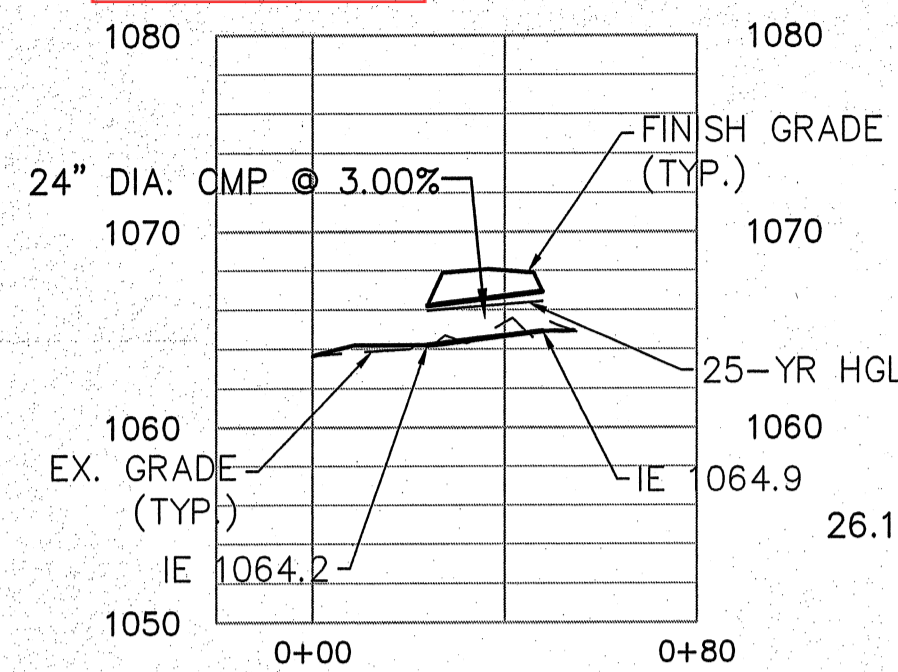
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01/08/2018	A	ISSUED FOR APPROVAL
02/23/2018	B	REVISED PER G.C. COMMENTS
03/26/2018	C	REVISED PER G.C. DWR COMMENTS
04/02/2018	D	REVISED FOR G.C. DWR REVIEW

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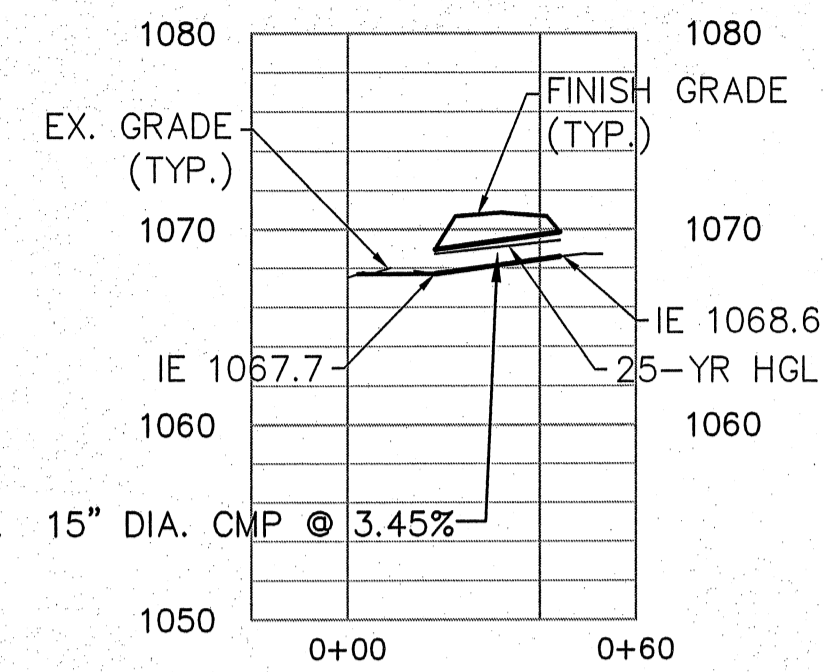
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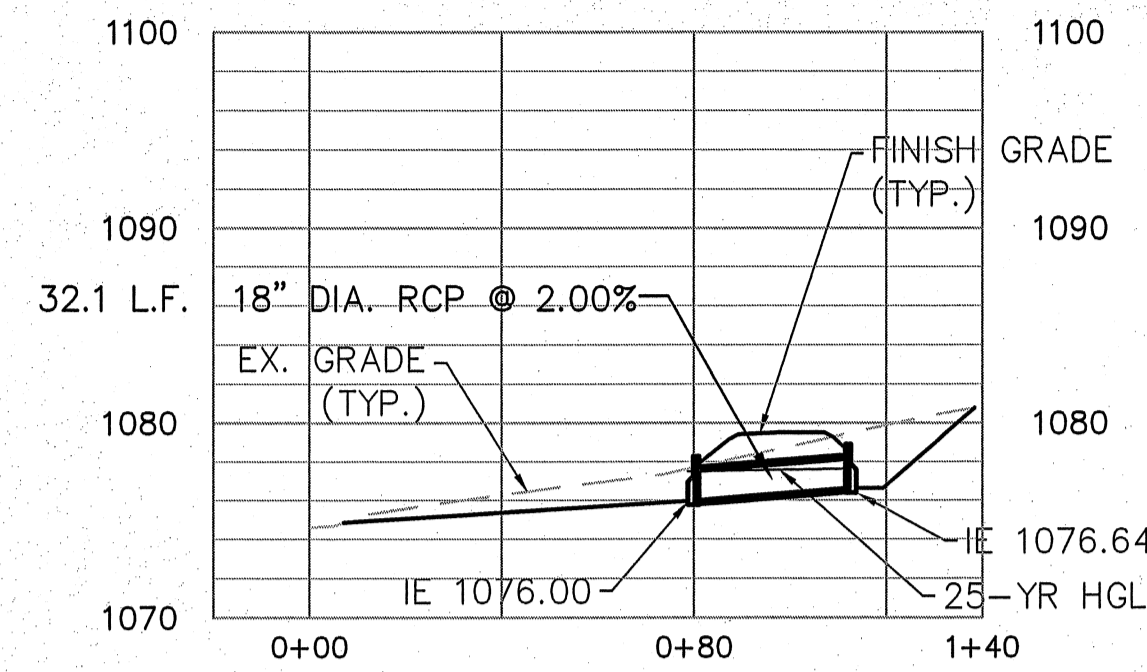
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CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
PLANNING & DEVELOPMENT



STREAM CULVERT PROFILE
SCALE: 1"=40' HOR; 1"=10' VERT

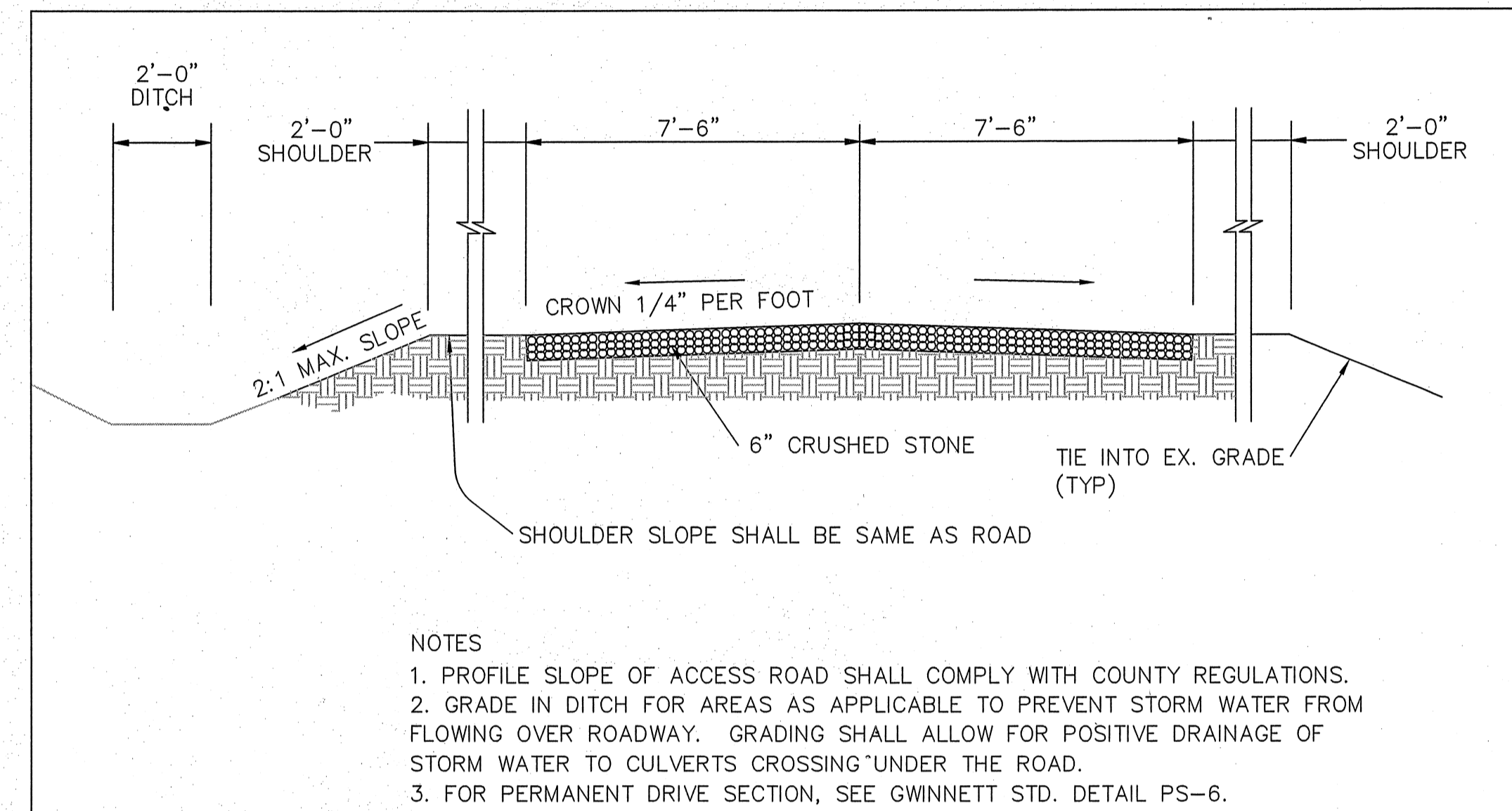


DITCH CULVERT (SUNNY HILL RD) PROFILE
SCALE: 1"=40' HOR; 1"=10' VERT



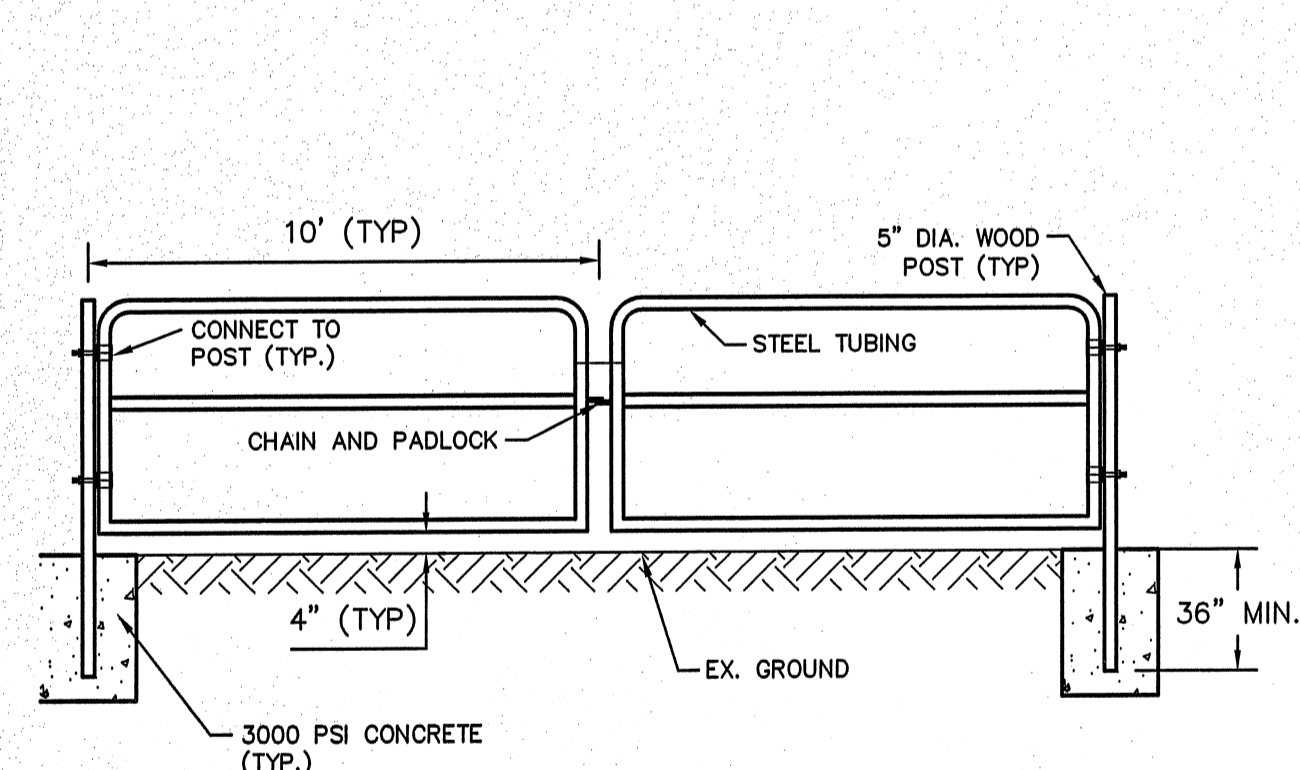
PERMANENT CULVERT PROFILE
SCALE: 1"=40' HOR; 1"=10' VERT

25 YEAR STORM PIPE TABLE													
LineNo.	LineID	LineSize	LineLength	LineSlope	DrainageArea	C	Tc	iSys	FlowRate	TotalRunoff	VelAve	CapacityFull	n-valuePipe
		(in)	(ft)	(%)	(ac)	(C)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(cfs)	
1	STREAM CULVERT	24	24	3	80.00	0.4	651.0	0.53	17.07	17.07	6.59	41.85	CMP
2	DITCH CULVERT	15	26	2.45	2.67	0.4	36.0	3.92	4.19	4.19	4.38	13.02	CMP
3	PERMANENT CULVERT	18	32	2	6.4	0.4	24.2	4.83	12.36	12.36	7.32	14.9	RCP



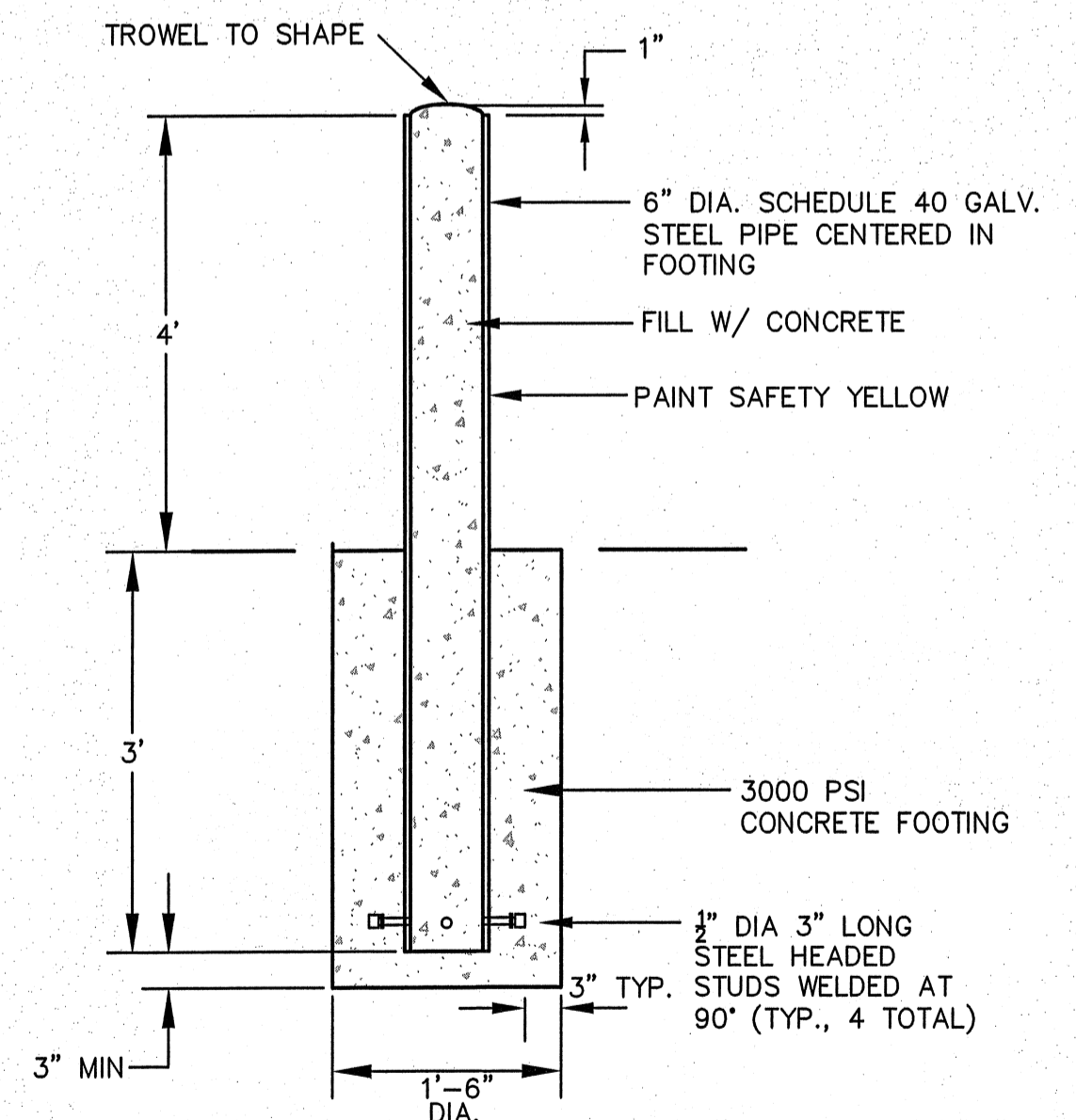
- NOTES
1. PROFILE SLOPE OF ACCESS ROAD SHALL COMPLY WITH COUNTY REGULATIONS.
 2. GRADE IN DITCH FOR AREAS AS APPLICABLE TO PREVENT STORM WATER FROM FLOWING OVER ROADWAY. GRADING SHALL ALLOW FOR POSITIVE DRAINAGE OF STORM WATER TO CULVERTS CROSSING UNDER THE ROAD.
 3. FOR PERMANENT DRIVE SECTION, SEE GWINNETT STD. DETAIL PS-6.

P01 TEMPORARY ACCESS DRIVE SECTION
N.T.S.

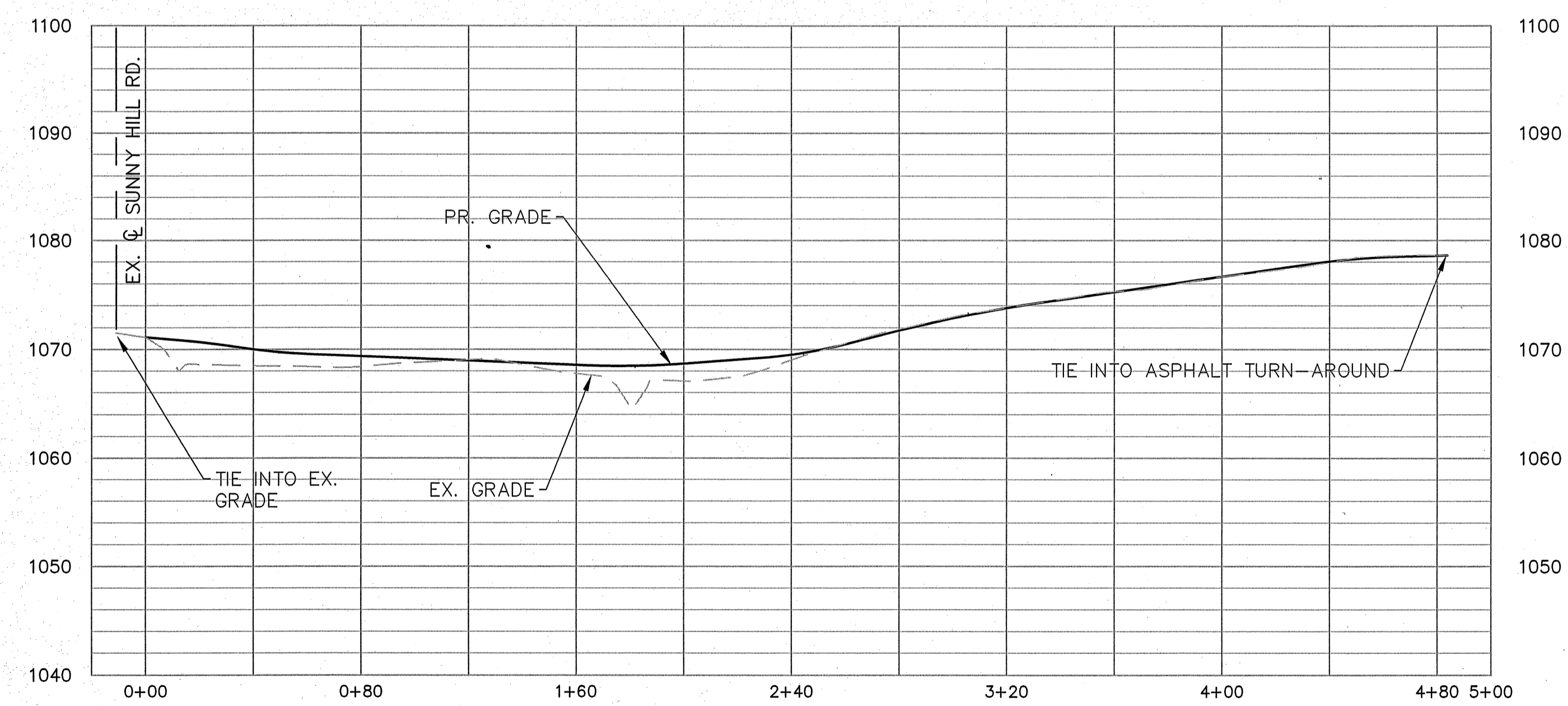


- NOTE:
1. GATE SHALL BE A DOUBLE 10' TUBULAR STEEL GATE, PAINTED RED, TRACTOR SUPPLY CO. SKU # 360310899 OR APPROVED EQUIVALENT
 2. TIMBER POSTS SHALL BE SEASONED AND PRESSURE TREATED.

P02 ACCESS GATE
N.T.S.



P03 CONCRETE BOLLARD
N.T.S.



TEMPORARY ACCESS DRIVE PROFILE
SCALE: 1"=40' HOR; 1"=10' VERT

- NOTES:
1. NEW PROPOSED GRADE PERCENT SLOPE PROVIDED IS APPROXIMATE, TO GENERALLY MATCH GRADE, AND SHALL NOT EXCEED 8%.
 2. RESTORE TO PRE-CONSTRUCTION GRADES FOR ALL AREA INDICATED IN FLOODPLAIN WHEN TEMPORARY DRIVE IS ABANDONED.

FILE PATH: E:\PROJECTS\2017\17199-LD-ACM-SATELLA-GRAVEL-SPRINGS\DWG\PLM-STA_PAV\7199PS_BASE_DESIGNING - 2018-05-01 - KURT MUELLER
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**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

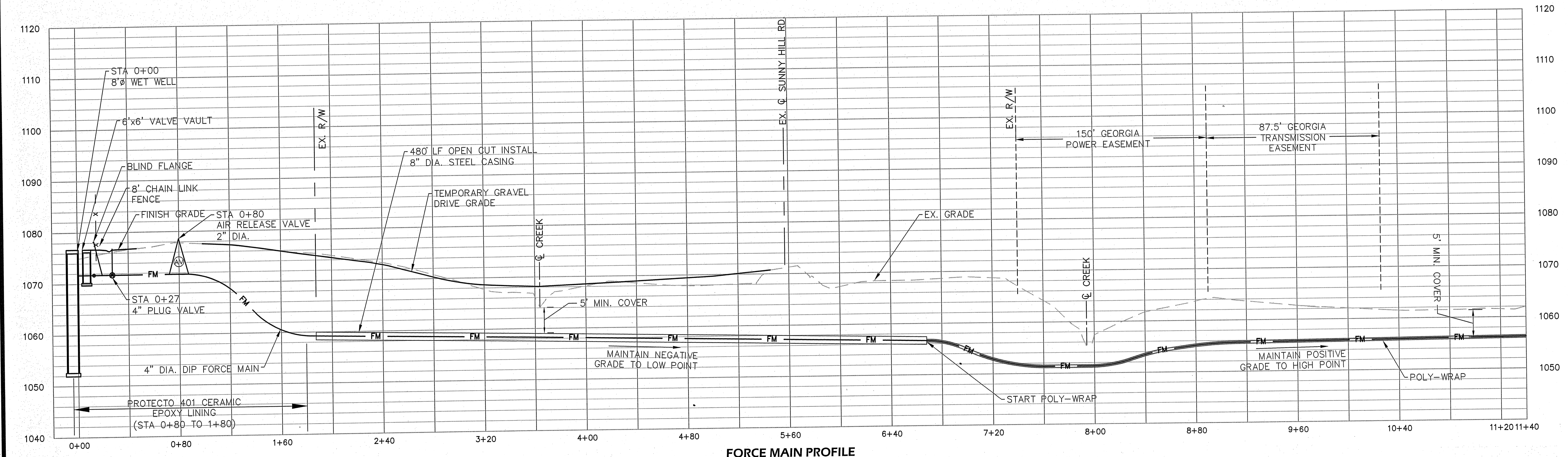
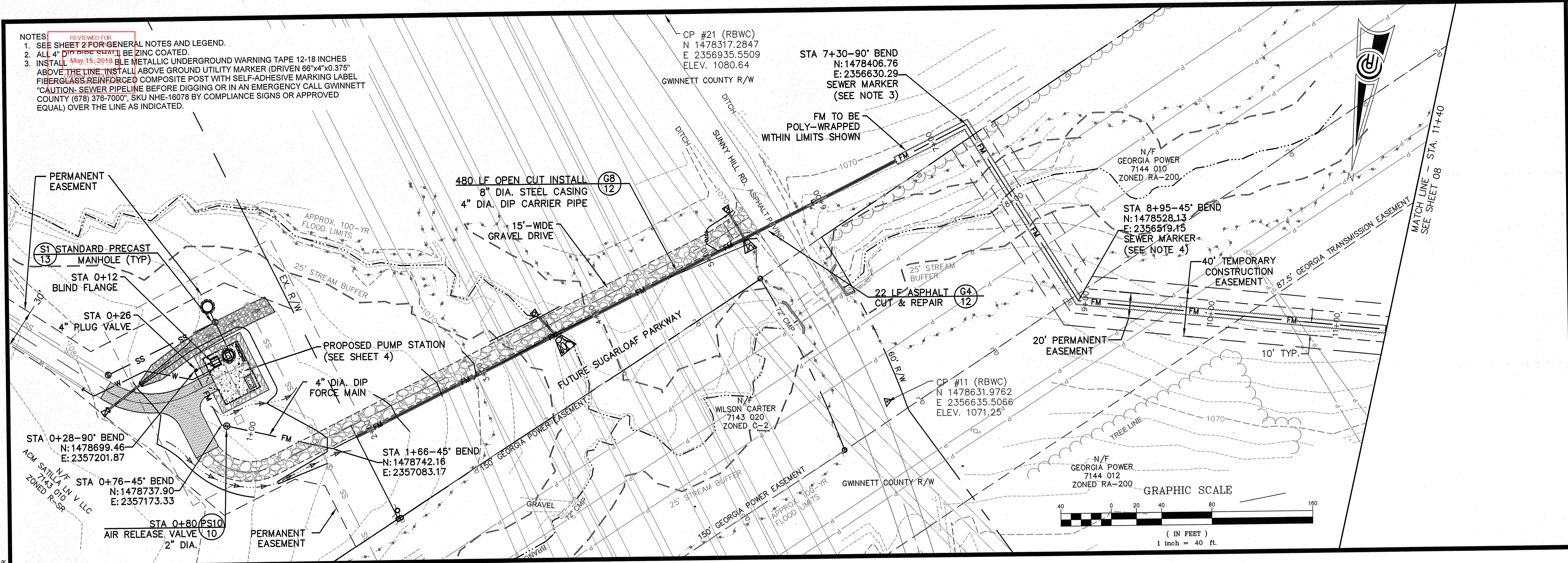
**PUMP STATION
DETAILS**

DATE	NO.	DESCRIPTION	ISSUED FOR APPROVAL	REVISED PER G.C. COMMENTS	REVISED PER G.C. DNR COMMENTS	REVISED FOR G.C. DWR REVIEW	RELEASE
01/08/2018	A						
02/23/2018	B						
03/26/2018	C						
04/02/2018	D						

R17199
PPI PROJECT NO.

05

- NOTES:
- SEE SHEET 2 FOR GENERAL NOTES AND LEGEND.
 - ALL 4" DIP FORCE MAINS SHALL BE ZINC COATED.
 - INSTALL 12-18 INCHES METALLIC UNDERGROUND WARNING TAPE 12-18 INCHES ABOVE THE LINE. INSTALL ABOVE GROUND UTILITY MARKER (DRIVEN 66"x4"x0.375" FIBERGLASS REINFORCED COMPOSITE POST WITH SELF-ADHESIVE MARKING LABEL "CAUTION-SEWER PIPELINE BEFORE DIGGING OR IN AN EMERGENCY CALL GWINNETT COUNTY (678) 376-7000" SKU NHE-18078 BY COMPLIANCE SIGNS OR APPROVED EQUAL) OVER THE LINE AS INDICATED.



FORCE MAIN PROFILE
SCALE: 1"=40' HOR; 1"=10' VERT

PLOT DATE: 5/7/2018 11:04 AM FILE PATH: E:\PROJECTS\2017\17199-1D-ACM SATILLA GRAVEL SPRINGS\DWG\COMP STA_P1A\17199PS_BASE DES\DWG - 2018-05-01 - KURT MUELLER

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STAMP

**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

FORCE MAIN
PLAN & PROFILE

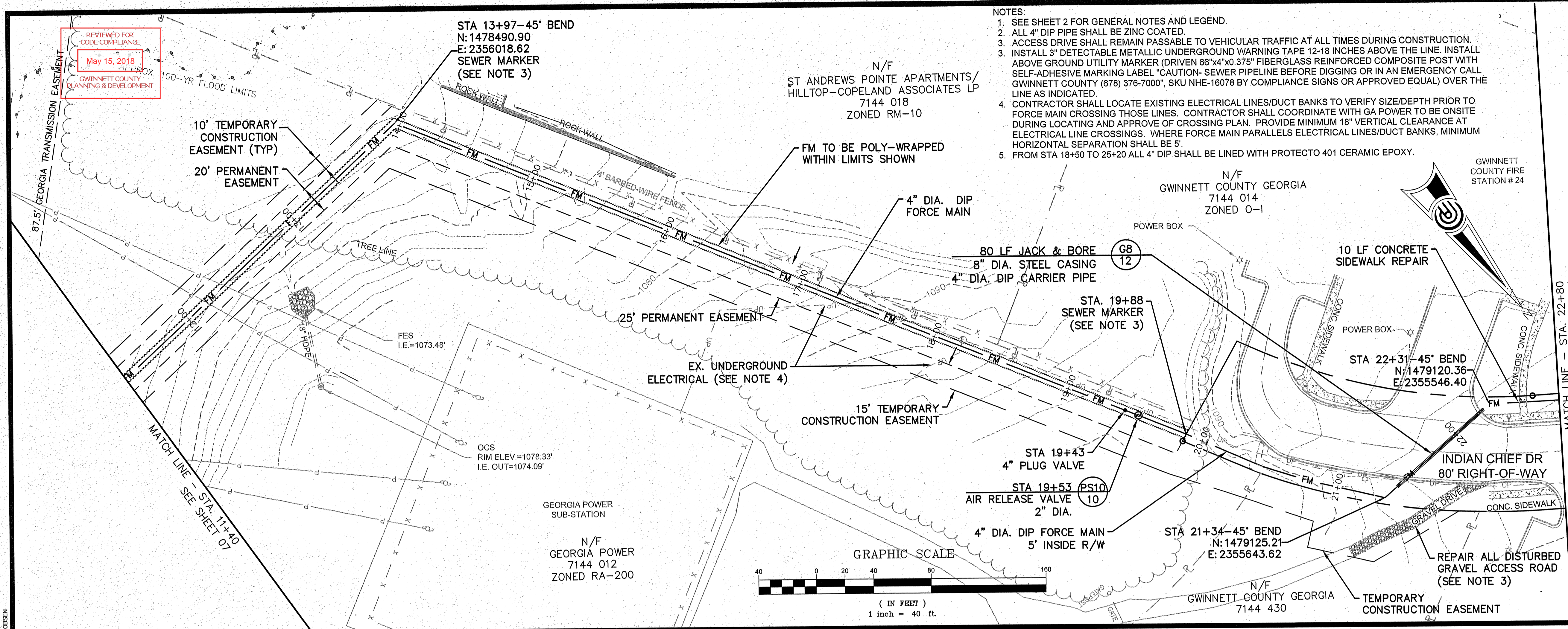
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03/28/2018	C	REVISED PER G.C. DWR COMMENTS	KM	DW	KM
04/05/2018	D	REVISED FOR G.C. DWR REVIEW	KM	DW	KM

RELEASE

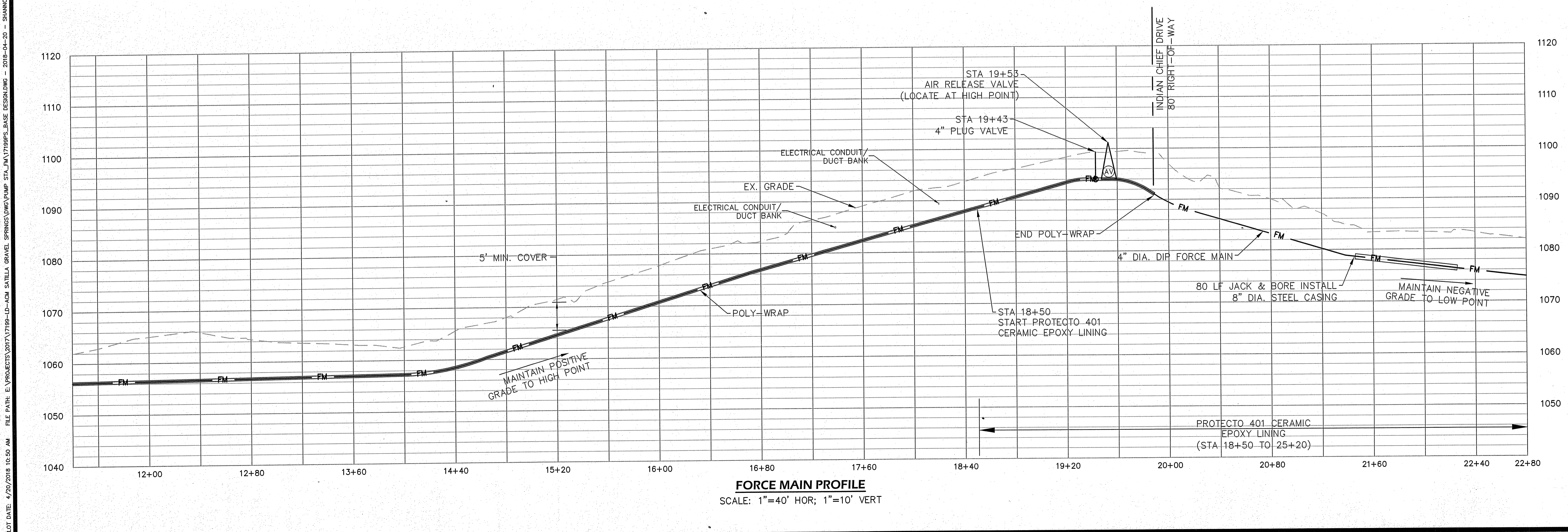
R17199
PPI PROJECT NO.

07

PLOT DATE: 4/20/2018 10:50 AM FILE PATH: E:\PROJECTS\2017\17199-10-ACM SATILLA GRAVEL SPRINGS DWP\PUMP STA_FM\17199PS_BASE DESIGN.DWG - 2018-04-20 - SHANNON JACOBSEN



- NOTES:
- SEE SHEET 2 FOR GENERAL NOTES AND LEGEND.
 - ALL 4" DIP PIPE SHALL BE ZINC COATED.
 - ACCESS DRIVE SHALL REMAIN PASSABLE TO VEHICULAR TRAFFIC AT ALL TIMES DURING CONSTRUCTION. INSTALL 3" DETECTABLE METALLIC UNDERGROUND WARNING TAPE 12-18 INCHES ABOVE THE LINE. INSTALL ABOVE GROUND UTILITY MARKER (DRIVEN 68"x4"x0.375" FIBERGLASS REINFORCED COMPOSITE POST WITH SELF-ADHESIVE MARKING LABEL "CAUTION-SEWER PIPELINE BEFORE DIGGING OR IN AN EMERGENCY CALL GWINNETT COUNTY (678) 376-7000", SKU NHE-16078 BY COMPLIANCE SIGNS OR APPROVED EQUAL) OVER THE LINE AS INDICATED.
 - CONTRACTOR SHALL LOCATE EXISTING ELECTRICAL LINES/DUCT BANKS TO VERIFY SIZE/DEPTH PRIOR TO FORCE MAIN CROSSING THOSE LINES. CONTRACTOR SHALL COORDINATE WITH GA POWER TO BE ONSITE DURING LOCATING AND APPROVE OF CROSSING PLAN. PROVIDE MINIMUM 18" VERTICAL CLEARANCE AT ELECTRICAL LINE CROSSINGS. WHERE FORCE MAIN PARALLELS ELECTRICAL LINES/DUCT BANKS, MINIMUM HORIZONTAL SEPARATION SHALL BE 5'.
 - FROM STA 18+50 TO 25+20 ALL 4" DIP SHALL BE LINED WITH PROTECTO 401 CERAMIC EPOXY.



FORCE MAIN PROFILE
SCALE: 1"=40' HOR; 1"=10' VERT

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GRAVEL SPRINGS PUMP STATION AND FORCE MAIN

DATE	NO.	DESCRIPTION	DESIGN	DRAWN	CHECKED
01/08/2016	A	ISSUED FOR APPROVAL	KM	DW	KM
02/23/2018	B	REVISED PER G.C. COMMENTS	KM	DW	KM
03/26/2018	C	REVISED PER G.C. DWR COMMENTS	KM	DW	KM
04/05/2018	D	REVISED FOR G.C. DWR REVIEW	KM	DW	KM

R17199
PPI PROJECT NO.

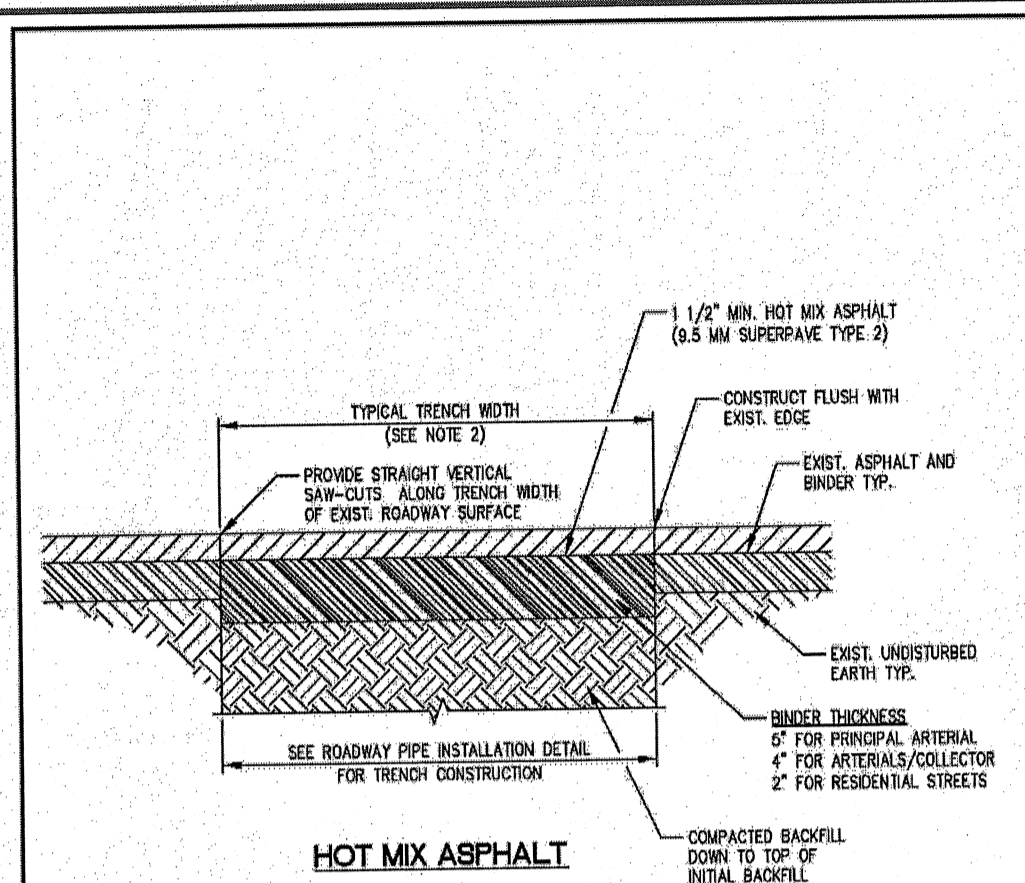
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RELEASE

REVIEWED FOR
CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
PLANNING & DEVELOPMENT

Gwinnett County Department of Water Resources
Developer Pump Station Standards

Appendix Standard Details



HOT MIX ASPHALT

- NOTES:**
1. ALL MATERIALS AND METHODS OF INSTALLATION SHALL COMPLY WITH THE GA DOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST REVISION.
 2. PROVIDE LONGITUDINAL AND CROSS SECTIONAL SLOPE TO MATCH EXISTING ROADWAY DRAINAGE SCHEME.
 3. NEW ROADWAY PAVEMENT SHALL MATCH CROSS SLOPE AND GRADE OF EXISTING ROADWAY.
 4. SEE DETAIL PS-32 FOR NON RESIDENTIAL ROADS.
 5. THIS DETAIL APPLIES ONLY TO CURBS IN GWINNETT COUNTY TOWNSHIP CDD IN HIGHWAYS PER STATE AND OTHER MUNICIPALITIES SHALL BE PER THE STANDARDS FOR THE APPLICABLE JURISDICTION.

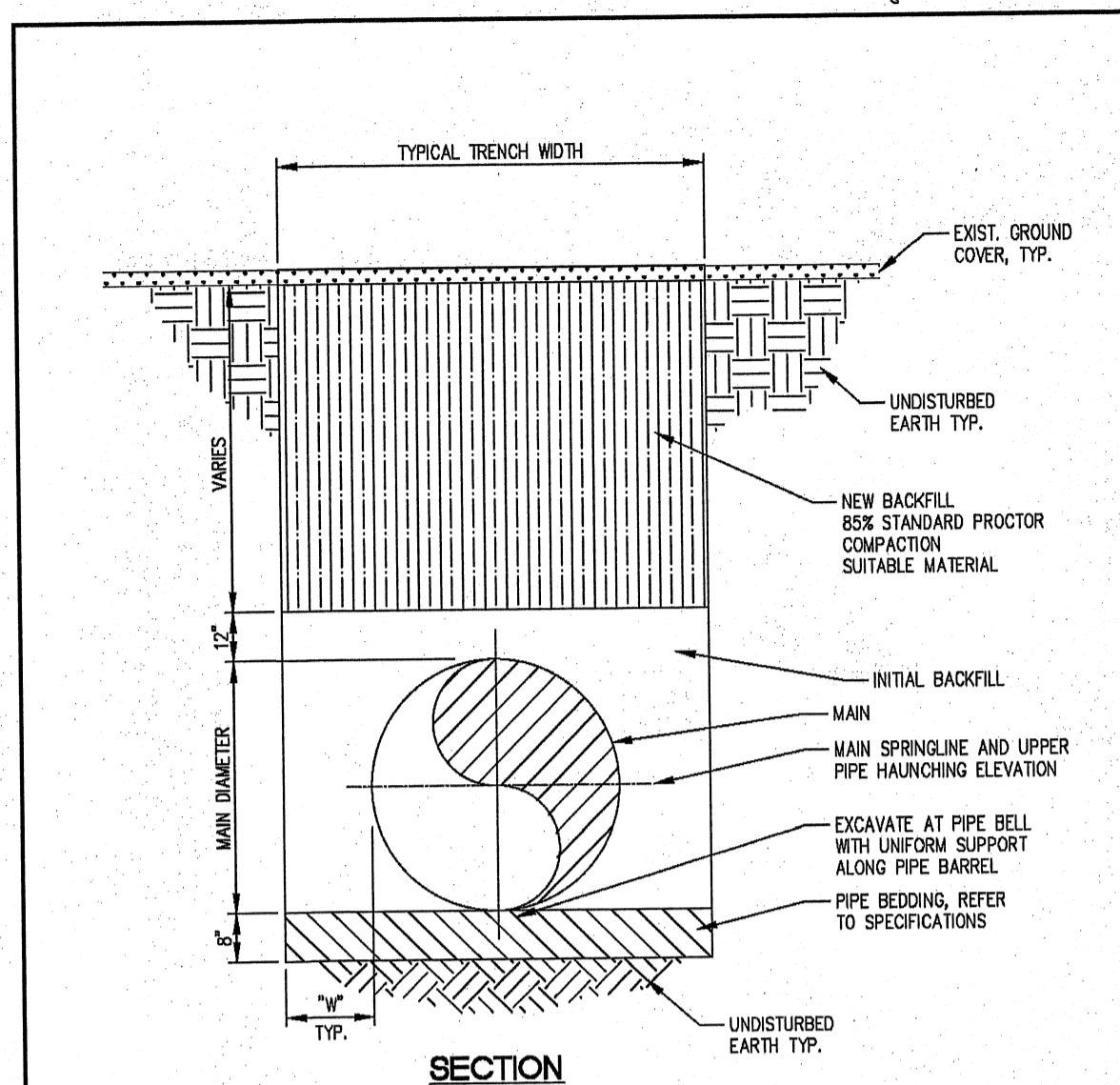
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

JOB TITLE: PUMP STATION STANDARD DRAWING
SHEET TITLE: TYPICAL ROADWAY CUT REPAIRS
DETAIL NO.: PS-33

DRN. BY: GCDWR
CHK. BY: PSB
APPROVED BY: ARS

REV. NO. BY DATE
12/01/11

SCALE: N.T.S.



SECTION

MAIN DIAMETER (INCHES)	4	6	8	10	12	16	24	30	36	42	48
"W" (INCHES)	12	12	13	13	14	18	18	20	24	24	24

- NOTES:**
1. ALL MATERIALS AND METHODS OF INSTALLATION SHALL COMPLY WITH THE GA DOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST REVISION.
 2. NEW GROUND COVER SHALL PROVIDE FOR DRAINAGE TO FOLLOW NATURAL FLOW OF WATER.

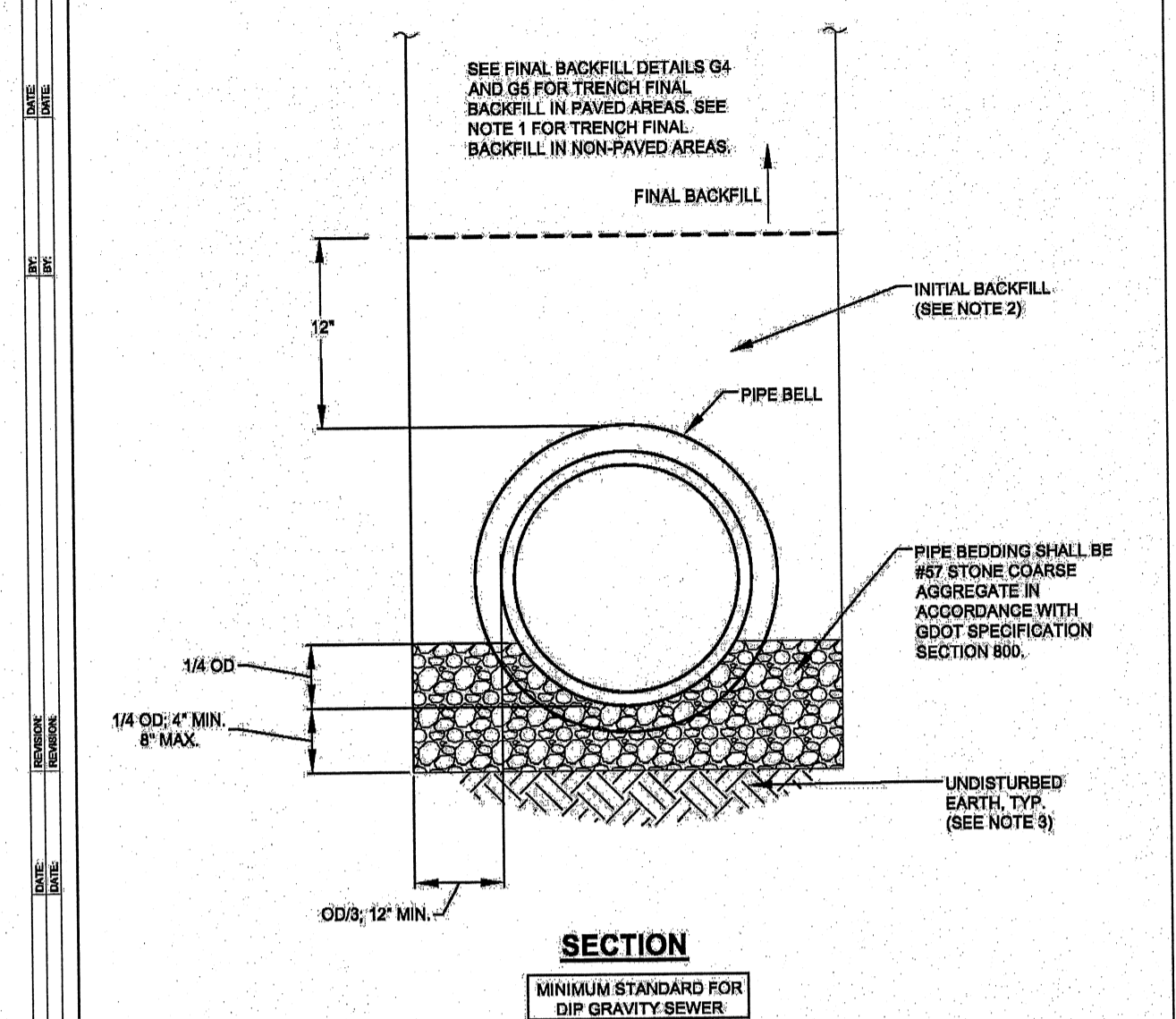
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

JOB TITLE: PUMP STATION STANDARD DRAWING
SHEET TITLE: OUTSIDE OF ROADWAY CUTS BEDDING AND BACKFILL
DETAIL NO.: PS-35

DRN. BY: GCDWR
CHK. BY: PSB
APPROVED BY: ARS

REV. NO. BY DATE
12/01/11

SCALE: N.T.S.



SECTION

- NOTES:**
1. FINAL BACKFILL UNDER NON-PAVED AREAS WITHIN ROAD RIGHT-OF-WAY SHALL BE PLACED IN LAYERS NOT TO EXCEED EIGHT INCHES (8") IN THICKNESS AND COMPACTED TO 90% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 STANDARD PROCTOR.
 2. PLACE INITIAL BACKFILL IN LAYERS NOT EXCEEDING SIX (6) INCHES IN THICKNESS AND CONSOLIDATE BY TAMPING ON BOTH SIDES OF THE PIPE. INITIAL BACKFILL MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF STONES LARGER THAN 4" DIAMETER, CLODS, ORGANIC MATTER, RUBBISH, OR OTHER UNSUITABLE MATERIAL.
 3. WHEN BOTTOM OF TRENCH IS INADVERTENTLY DISTURBED, REMOVE DISTURBED MATERIAL AND REPLACE WITH #67 STONE.

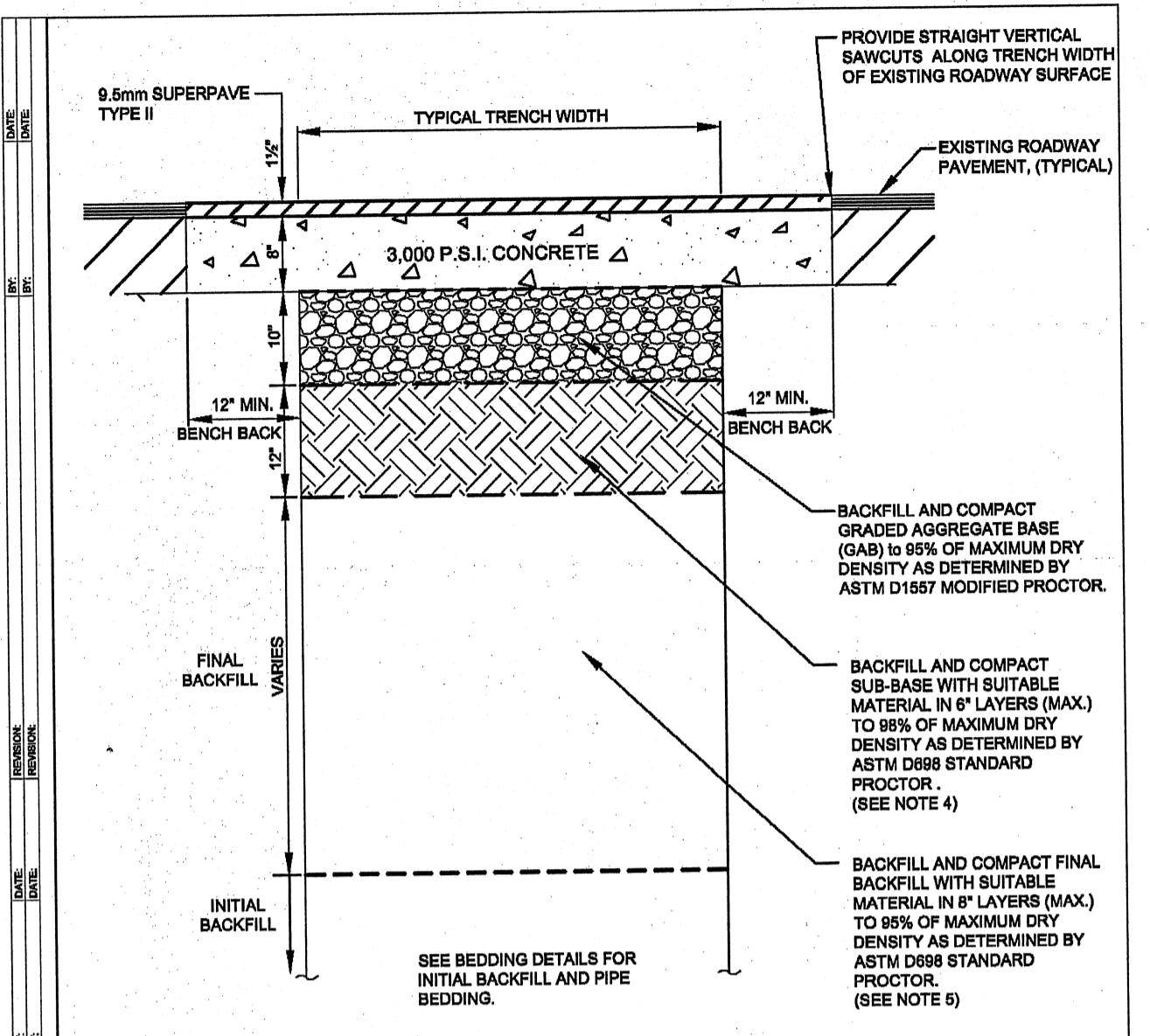
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

CLASS 'C' BEDDING AND INITIAL BACKFILL

DESIGN BY: STD. COMMITTEE
DRAWN BY: GCDWR
CHECKED BY: PSB
APPROVED BY: ARS

SCALE: NONE

DRAWING NO.: G2



SECTION

- NOTES:**
1. ALL MATERIALS AND METHODS OF INSTALLATION SHALL COMPLY WITH THE GA DOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST REVISION.
 2. NEW ROADWAY PAVEMENT SHALL MATCH CROSS SLOPE AND GRADE OF EXISTING ROADWAY.
 3. SEE DETAIL G6 FOR CONCRETE PAVEMENT AND GRAVEL REPAIR.
 4. SUB-BASE MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF CLODS, ORGANIC MATTER, RUBBISH STONES LARGER THAN 4" DIAMETER, OR OTHER UNSUITABLE MATERIAL.
 5. FINAL BACKFILL MATERIAL SHALL BE REUSED OR IMPORTED EARTH FREE OF CLODS, ORGANIC MATTER, RUBBISH, OR OTHER UNSUITABLE MATERIAL. STONES LARGER THAN 4" DIAMETER MUST BE PLACED TO THE SIDES OF THE TRENCH.

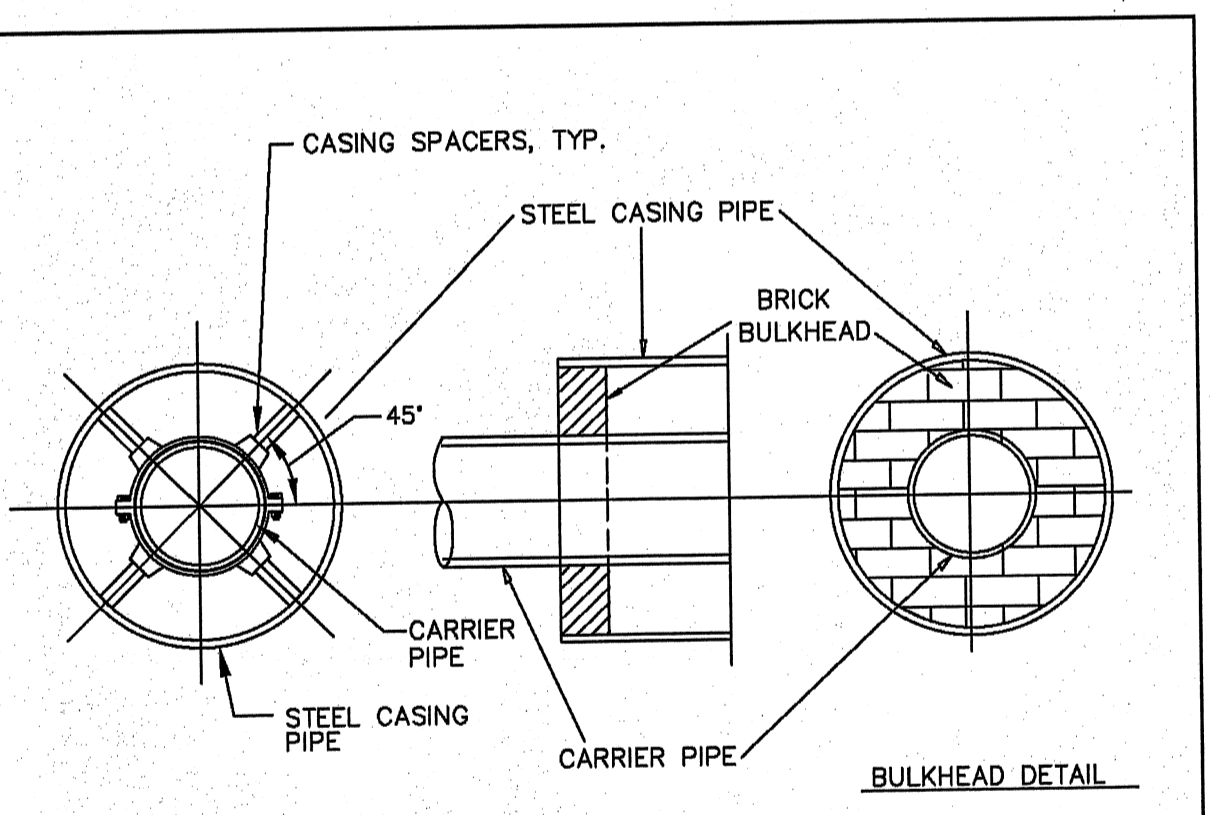
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

PERPENDICULAR ROADWAY CUT-FINAL BACKFILL

DESIGN BY: STD. COMMITTEE
DRAWN BY: GCDWR
CHECKED BY: PSB
APPROVED BY: ARS

SCALE: NONE

DRAWING NO.: G4



AUGERED JACKED CASING

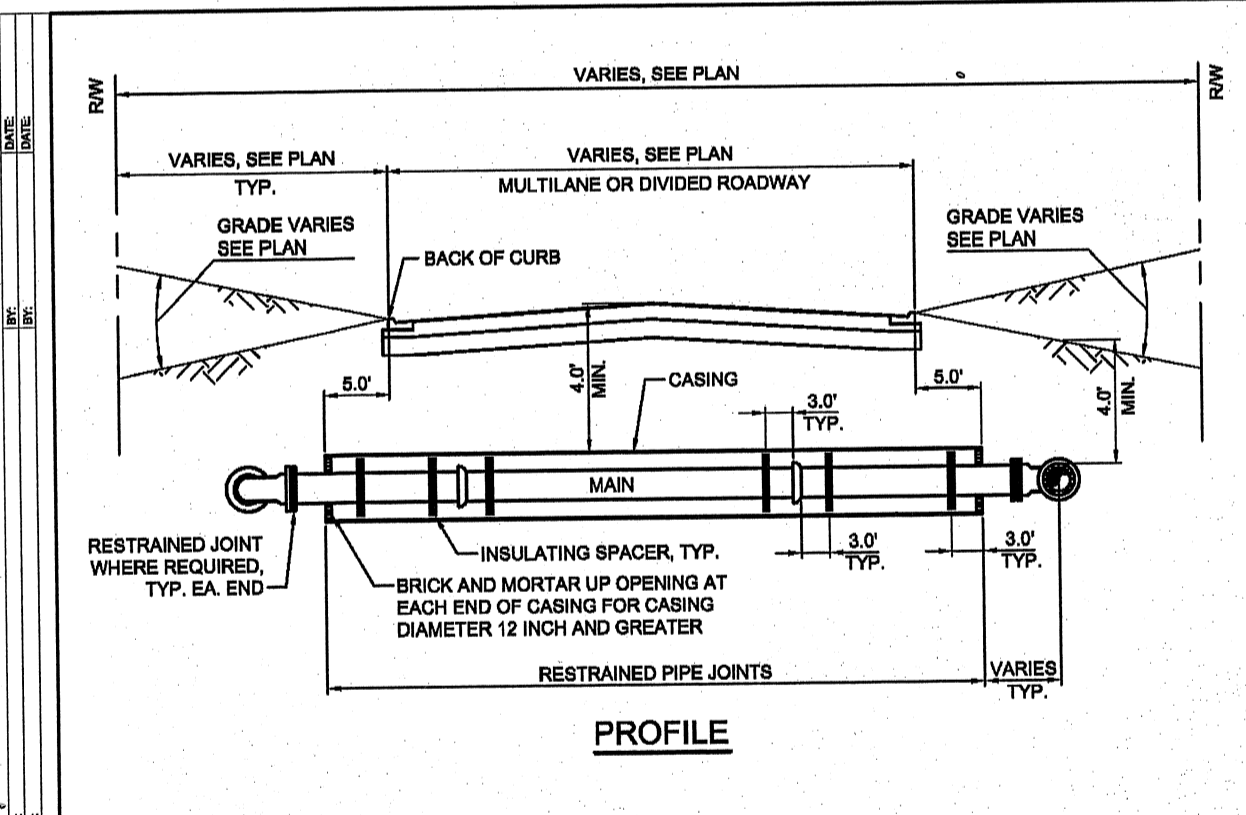
- NOTES:**
1. CASING PIPE UP TO 20" SHALL HAVE A THICKNESS OF .375 INCH.
 2. CASING PIPE OVER 20" SHALL HAVE A THICKNESS OF .5 INCH.
 3. CASING SPACERS SECURED AT BELL END OF EACH JOINT OF CARRIER PIPE, AND IN THE MIDDLE OF EACH JOINT OF PIPE WITH 10' MAXIMUM DISTANCE BETWEEN SPACERS.
 4. TO REDUCE CORROSION POTENTIAL, AT NO TIME SHALL THE CARRIER PIPE TOUCH THE CASING PIPE. INSULATING SPACERS SHALL BE USED.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

DESIGN BY: STD. COMMITTEE
DRAWN BY: GCDWR
CHECKED BY: PSB
APPROVED BY: ARS

SCALE: NONE

DRAWING NO.: G8



TYPICAL JACK AND BORE INSTALLATION

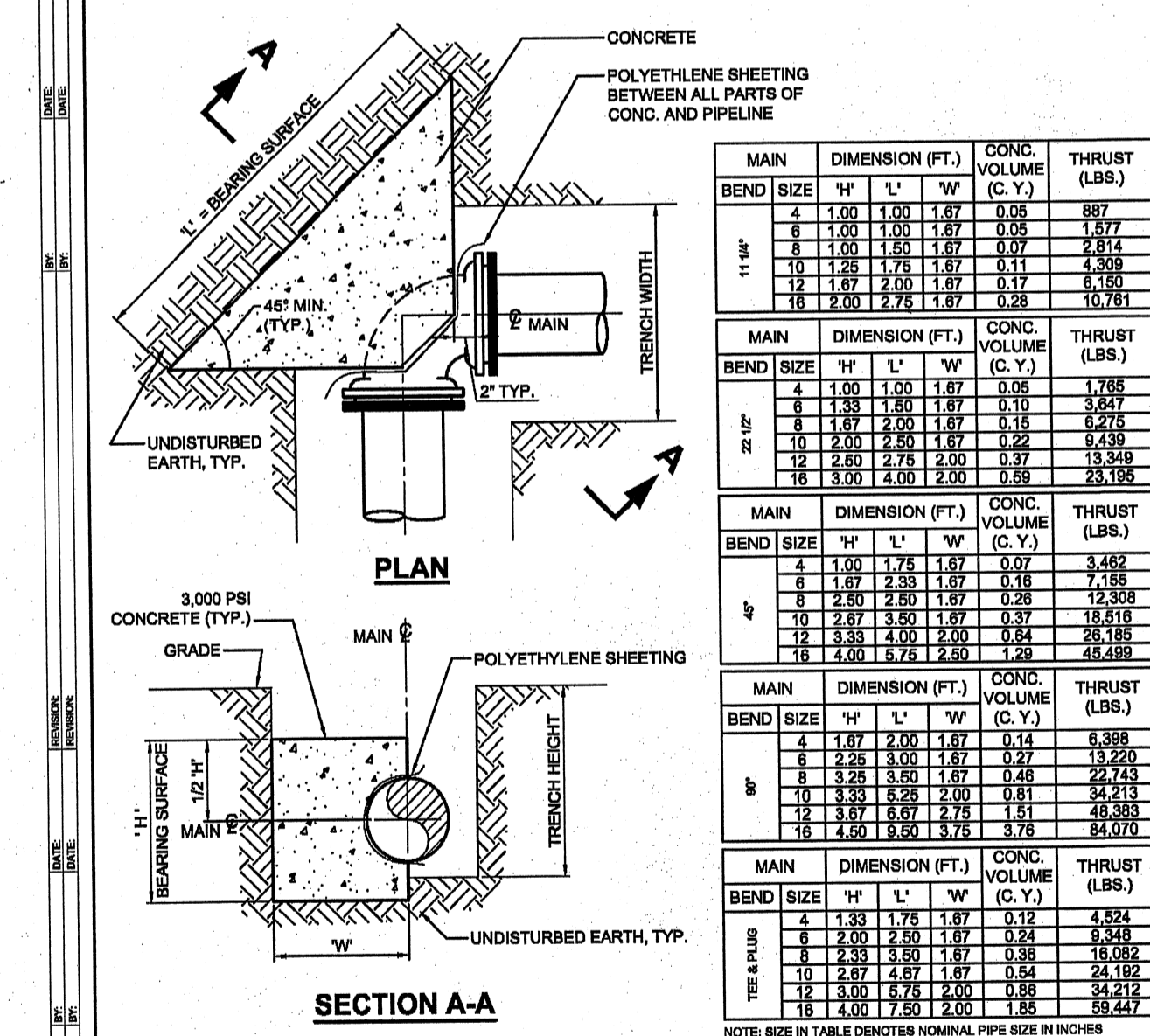
- NOTES:**
1. MAIN SIZES OF 6 INCH OR GREATER SHALL INSTALL INSULATING SPACERS IN CASING, AS INDICATED.
 2. CASING SPACERS MUST BE ATTACHED AT BELL END AT EACH JOINT OF MAIN, AND ENDS OF CASING, AS INDICATED.
 3. CASING SPACERS MUST BE SECURED AS PER MANUFACTURERS SPECIFICATIONS.
 4. CASING PIPE UP TO 20" DIAMETER, SHALL HAVE A THICKNESS OF 0.375".
 5. CASING PIPE OVER 20" DIAMETER, SHALL HAVE A THICKNESS OF 0.50".
 6. CASING, PIPING AND APPURTENANCES UNDER RAILROAD SHALL MEET THE LATEST REQUIREMENTS OF THE RAILROAD OWNER. WHERE THIS DETAIL DIFFERS FROM THE REQUIREMENTS OF THE RAILROAD OWNER, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
 7. REFER TO TYPICAL HORIZONTAL THRUST RESTRAINT DRAWING G12 AND TYPICAL HORIZONTAL THRUST BLOCK DRAWING G11 FOR ADDITIONAL DETAILS.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

DESIGN BY: STD. COMMITTEE
DRAWN BY: GCDWR
CHECKED BY: PSB
APPROVED BY: ARS

SCALE: NONE

DRAWING NO.: G9



SECTION A-A

- NOTES:**
1. SOIL PREPARATION SHALL BE APPROVED BY GCDWR PRIOR TO POURING CONCRETE.
 2. REFER TO TYPICAL HORIZONTAL THRUST RESTRAINT DRAWING G12 FOR ADDITIONAL DETAILS.

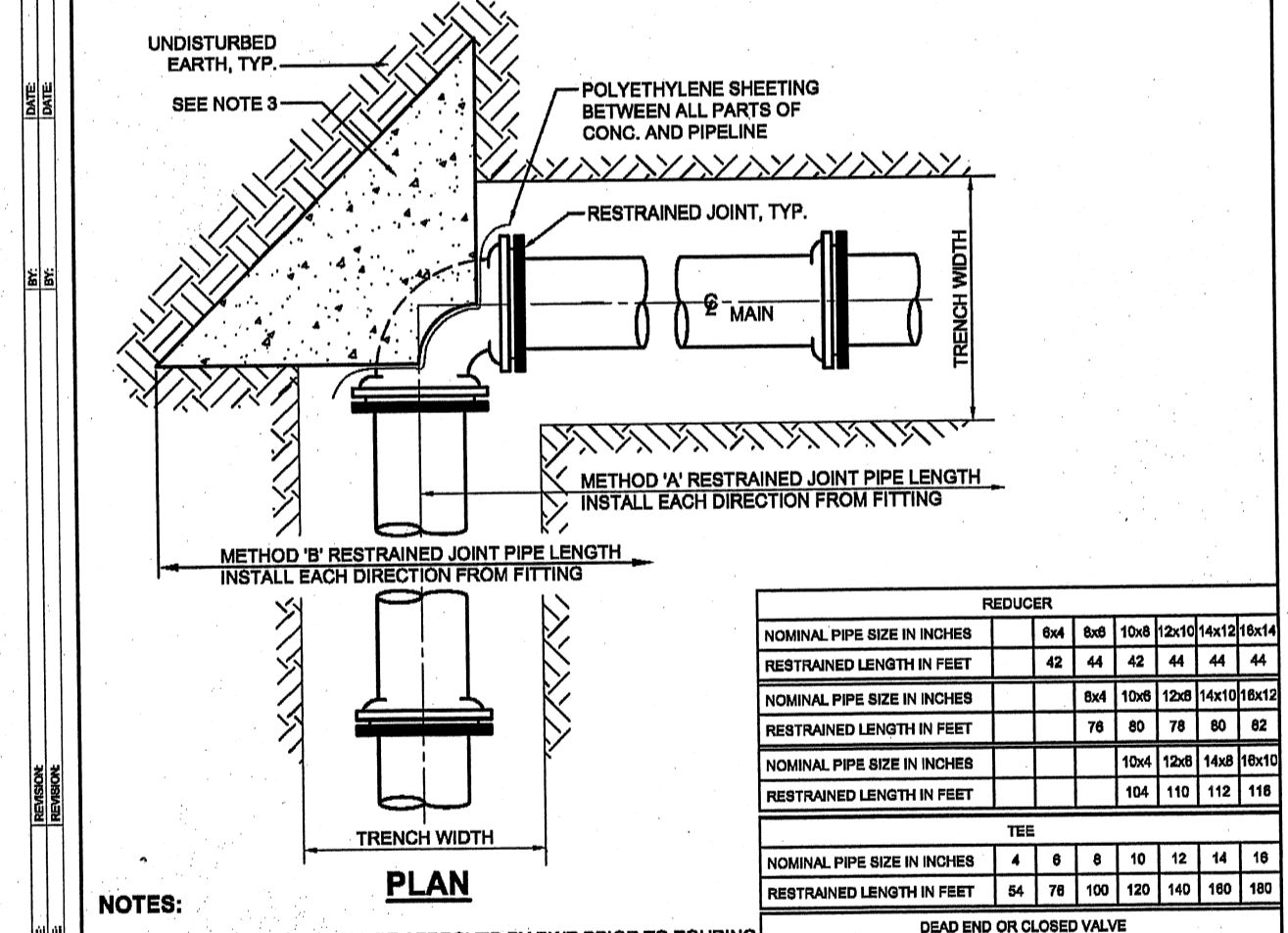
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

TYPICAL HORIZONTAL THRUST BLOCK

DESIGN BY: STD. COMMITTEE
DRAWN BY: GCDWR
CHECKED BY: PSB
APPROVED BY: ARS

SCALE: NONE

DRAWING NO.: G11



PLAN

- NOTES:**
1. SOIL PREPARATION SHALL BE APPROVED BY GCDWR PRIOR TO POURING CONCRETE.
 2. REFER TO TYPICAL HORIZONTAL THRUST BLOCK DRAWING G11 FOR DETAILS.
 3. INSTALL THRUST BLOCK ONLY WHEN METHOD 'B' PIPE RESTRAINT IS UTILIZED.
 4. FOR PIPE SIZES LARGER THAN 18" THE DESIGN ENGINEER SHALL PROVIDE CALCULATIONS FOR RESTRAINED JOINT LENGTHS TO DWG FOR REVIEW PRIOR TO INSTALLATION.
 5. RESTRAINED JOINT METHOD A: RESTRAINED JOINT PIPE AND FITTINGS.
 6. RESTRAINED JOINT METHOD B: ONE (1) OF THE FOLLOWING DUAL (2) INDEPENDENT RESTRAINTS:
A. MEGA-LOBS PLUS THRUST BLOCKING.
B. MEGA-LOBS PLUS FLOODING.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES

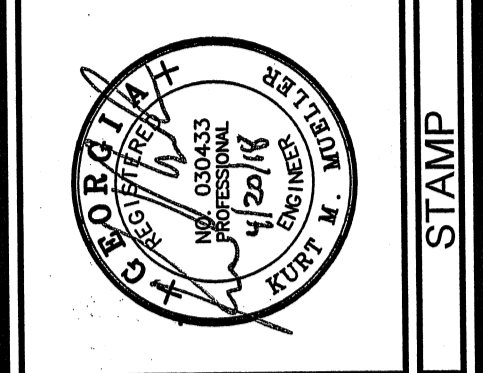
TYPICAL HORIZONTAL THRUST RESTRAINT

DESIGN BY: STD. COMMITTEE
DRAWN BY: GCDWR
CHECKED BY: PSB
APPROVED BY: ARS

SCALE: NONE

DRAWING NO.: G12

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770.338.8000 • www.ppi.us

**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

CONSTRUCTION
DETAILS

SHEET TITLE

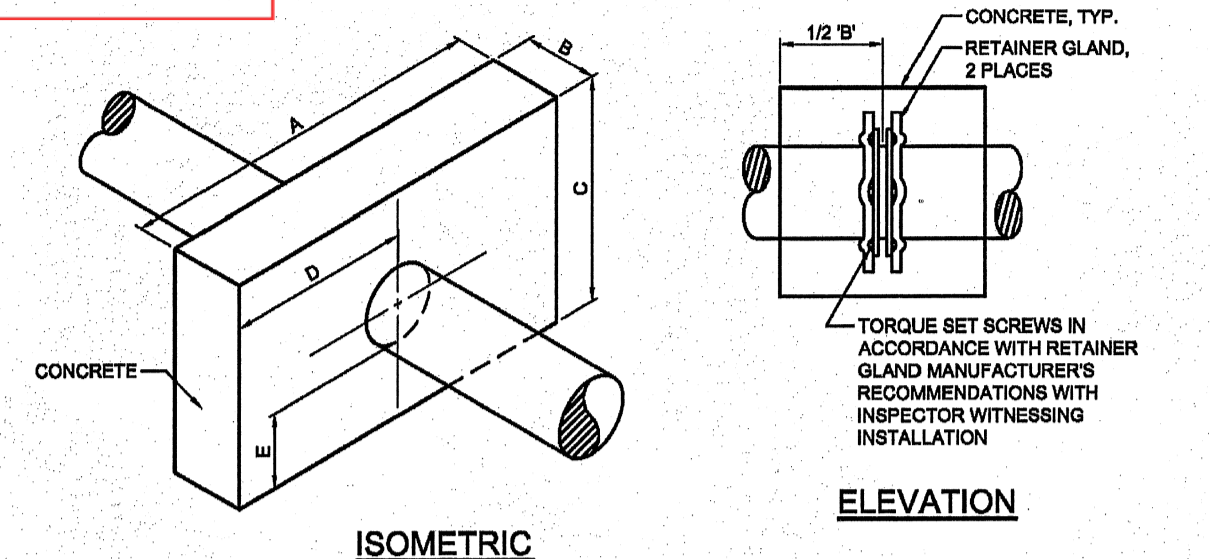
DESIGN: KM
DRAWN: DW
CHECKED: KM

NO. DESCRIPTION
01/08/2018 A ISSUED FOR APPROVAL
02/23/2018 B REVISED PER G.C. COMMENTS
03/26/2018 C REVISED PER G.C. DWR COMMENTS
04/05/2018 D REVISED FOR G.C. DWR REVIEW

RELEASE

R17199
PPI PROJECT NO.

REVIEWED FOR
CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
ENGINEERING & DEVELOPMENT

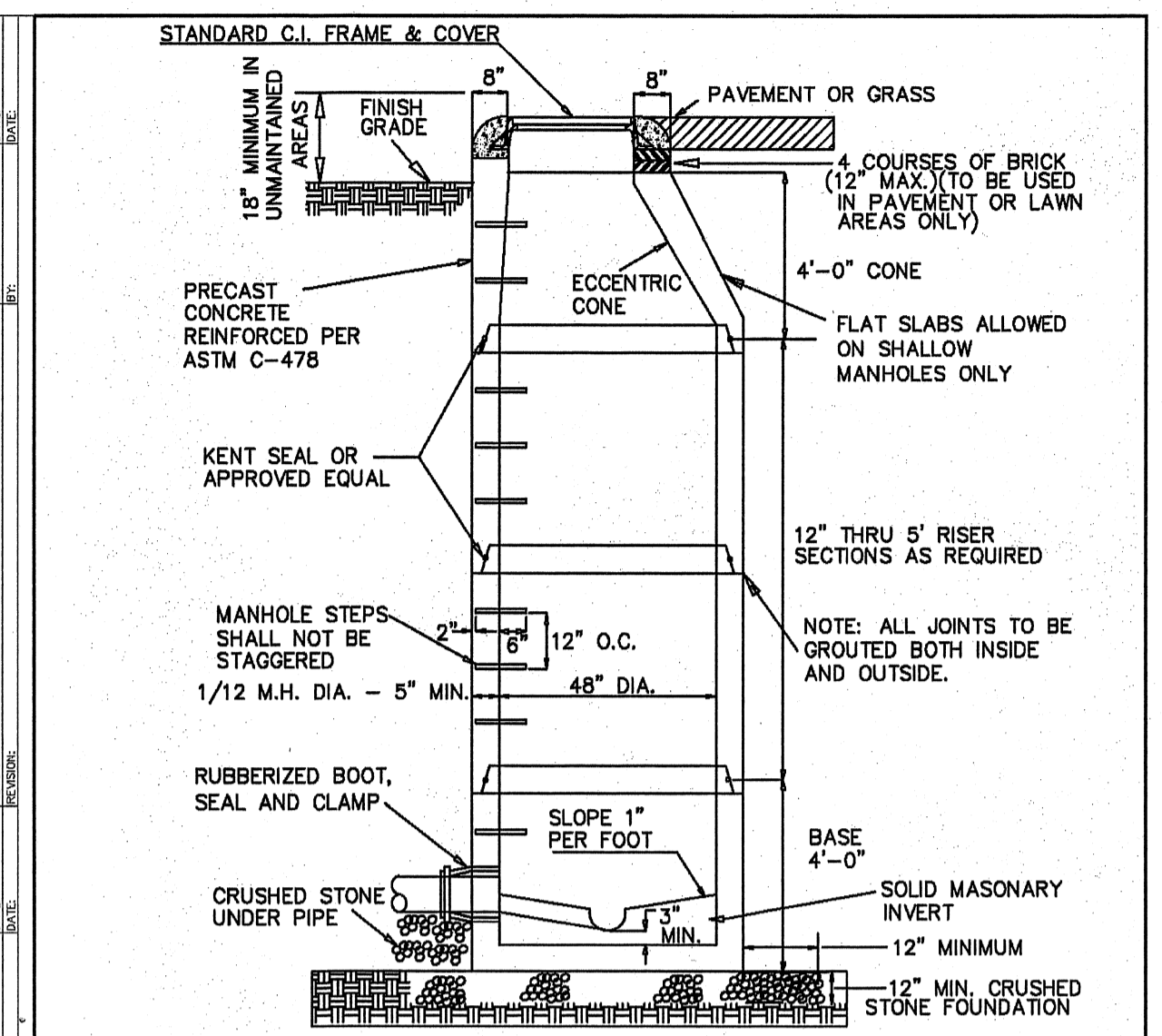


PIPE SIZE	A	B	C	D	E	VOLUME CU. YDS.	CONC. WT. (LB)	THRUST (LB)
4"	2'-6"	12"	2'-6"	1'-3"	1'-0"	0.23	919	4,524
6"	2'-9"	12"	2'-9"	1'-4 1/2"	1'-1"	0.27	1,095	9,348
8"	3'-0"	18"	3'-0"	1'-6"	1'-2"	0.47	1,924	16,082
10"	4'-0"	18"	3'-6"	2'-0"	1'-4"	0.74	2,899	24,192
12"	4'-6"	24"	4'-6"	2'-3"	1'-9"	1.43	5,790	34,212
14"	5'-6"	24"	4'-6"	2'-9"	1'-8"	1.74	7,042	45,963
16"	6'-6"	24"	5'-0"	3'-3"	1'-10"	2.29	9,255	59,447

NOTES:
1. CONCRETE SHALL BE POURED AGAINST UNDISTURBED EARTH EXCEPT WHERE FORMWORK IS A MUST. AFTER CONCRETE IS CURED THE FORMWORK SHALL BE REMOVED.
2. MAINS GREATER THAN 16" DIAMETER SHALL BE INDIVIDUALLY CALCULATED.
3. SOIL CONDITIONS SHALL BE VERIFIED BEFORE THRUST RESTRAINT DESIGN IS IMPLEMENTED.
4. PIPE MUST BE DUCTILE IRON.

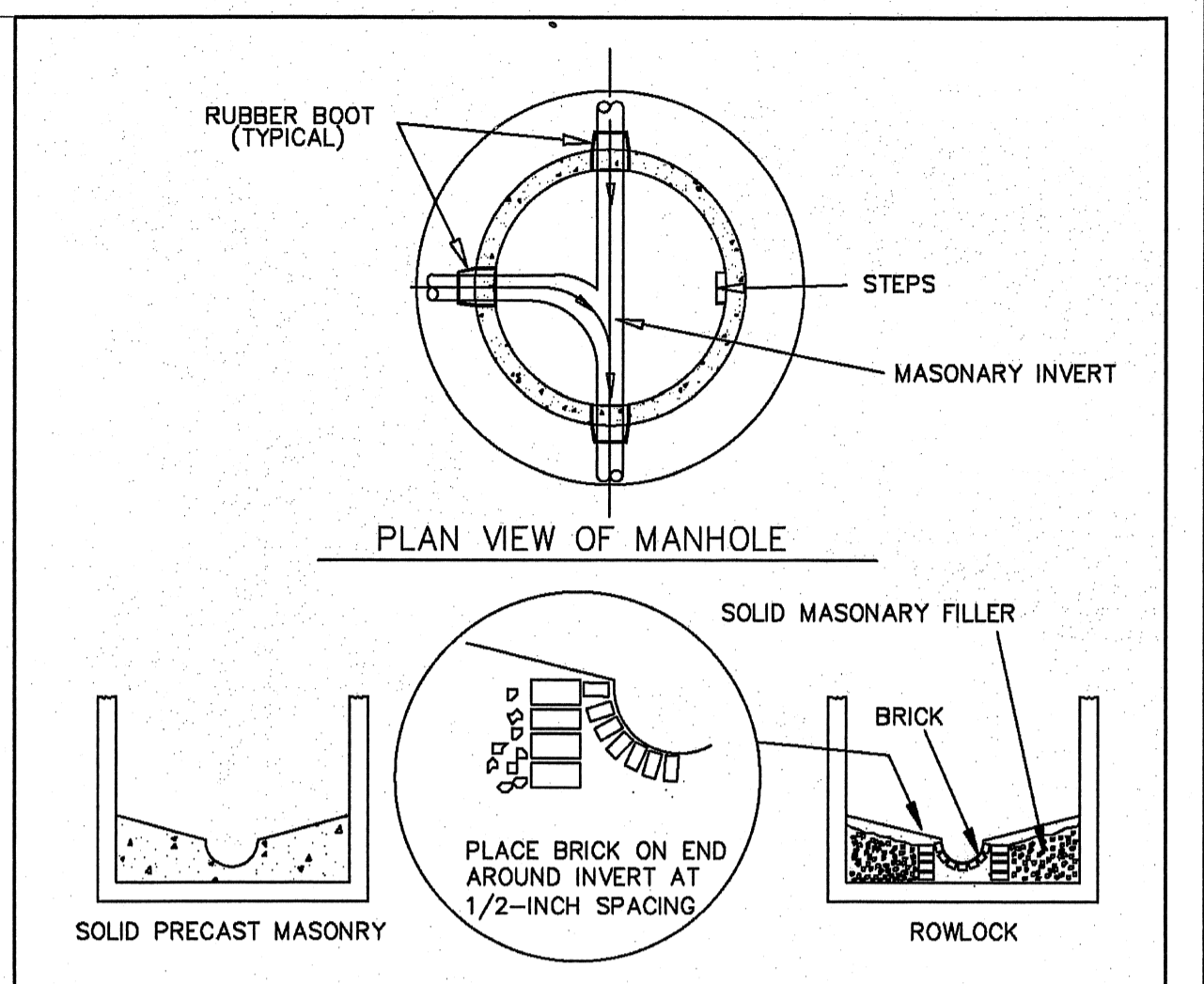
DESIGN CRITERIA:
1. COLLAR DIMENSIONS ARE BASED ON A SOIL BEARING CAPACITY OF 2000 PSF, A RATED TEST PRESSURE OF 250 PSI, AND 3000 PSI CLASS 'A' CONCRETE.
2. UNDER ADVERSE CONSTRUCTION CONDITIONS, CONCRETE SHALL BE HIGH EARLY TYPE.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
DESIGN BY: STD. COMMITTEE
DRAWN BY: GCDWR
CHECKED BY: PSB
APPROVED BY: ARS
SCALE: NONE
THRUST RESTRAINT COLLAR
DRAWING NO. **G13**



NOTES:
1. TABLES ARE TO BE GENTLY SLOPED AND TROWELED SMOOTH FROM M.H. WALL TO INVERT WALL AND CONSTRUCTED OF SOLID MASONRY.
2. BASES LARGER THAN 48" (INCH) MUST USE TRANSITION SLAB AND 48" (INCH) RISER SECTIONS.
3. CONES WITH CAST IN PLACE FRAMES ARE REQUIRED ON OUTFALL SEWERS IN UNMAINTAINED AREAS.
4. BOLT DOWN RING & COVER REQUIRED OUTSIDE OF PAVEMENT.
5. ALL MANHOLES RECEIVING A FORCE MAIN DISCHARGE SHALL BE POLYMER CONCRETE MANHOLES AS MANUFACTURED BY US COMPOSITE PIPE, INC. OR GCDWR APPROVED EQUAL.
6. USE OF T-BASE MANHOLES IS PROHIBITED.

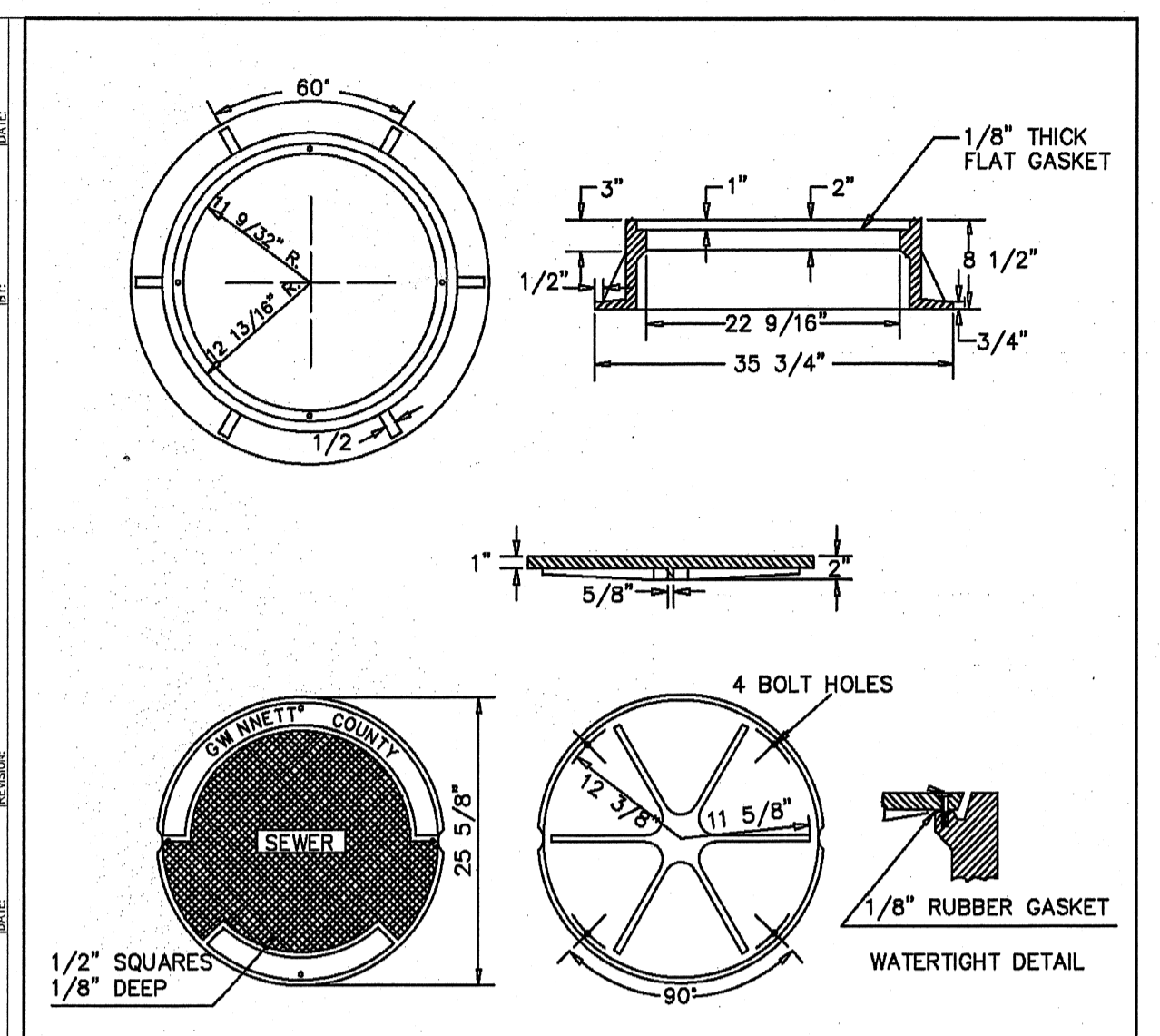
GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
DESIGN BY: STD. COMMITTEE
DRAWN BY: DWR
CHECKED BY: PSB
APPROVED BY: ARS
SCALE: NONE
STANDARD PRECAST MANHOLE (PIPE SIZES LESS THAN 36")
DRAWING NO. **S1**



NOTE:
1. PRECAST INVERTS ARE ACCEPTABLE (NO FIELD MODIFICATIONS ALLOWED).
2. ENSURE A 0.2 FOOT DROP ACROSS INVERT.
3. FIELD INSTALLED INVERTS MUST BE ROWLOCK.
4. INVERTS FOR MANHOLES RECEIVING FORCEMAINS SHALL BE SIMILARLY CONSTRUCTED.
5. NO FIELD-MODIFICATION OF PRE-CAST INVERTS ALLOWED.
6. MAXIMUM GROUT SPACING BETWEEN BRICK SHALL BE 3/8".

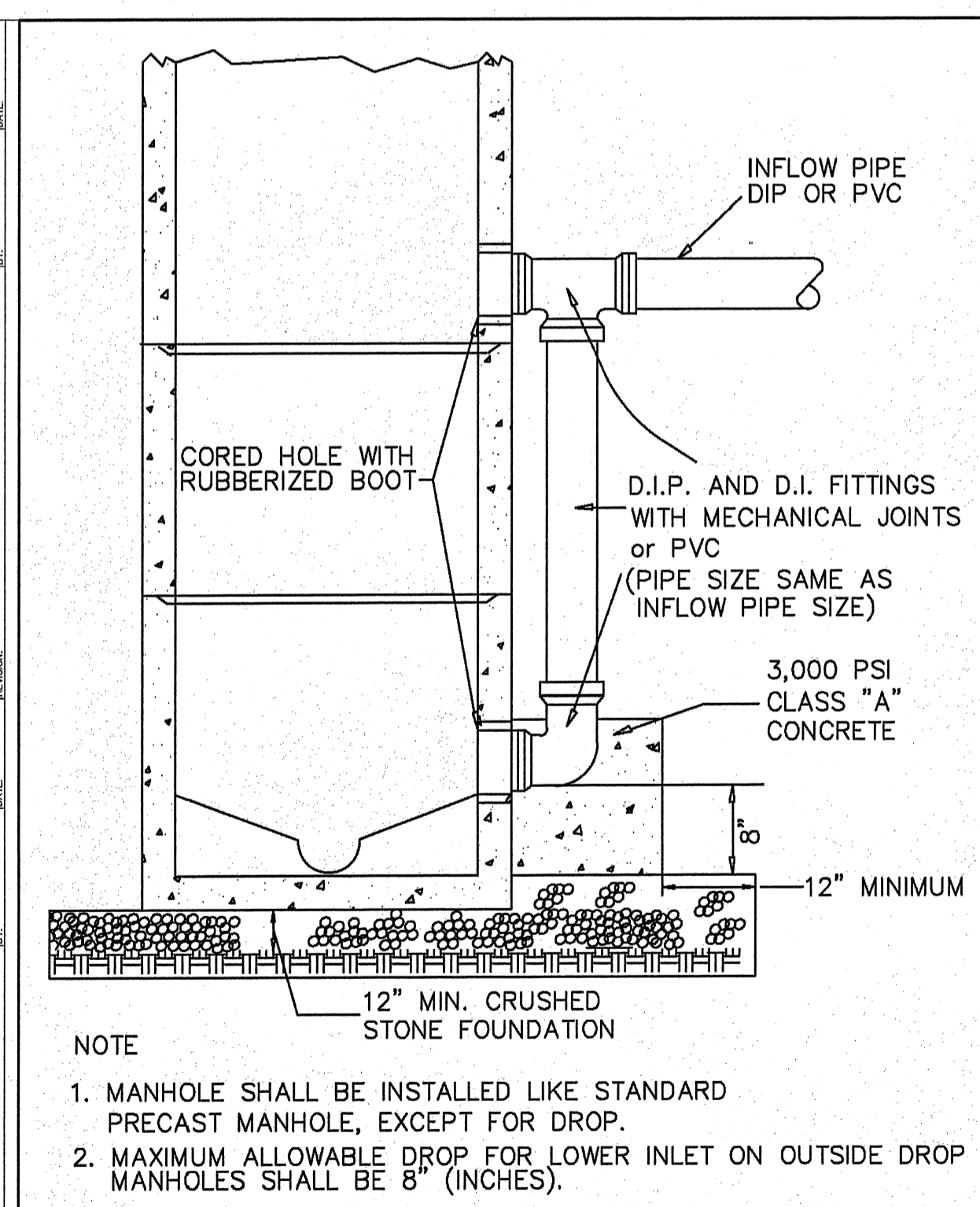
PIPE SIZE	DEFLECTION	MIN. MH DIA.
8" & 15"	0" - 90"	4' - 0"
18"	0" - 60"	4' - 0"
18"	60" - 90"	5' - 0"
21" & 24"	0" - 60"	5' - 0"
21" & 24"	60" - 90"	6' - 0"

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
DESIGN BY: STD. COMMITTEE
DRAWN BY: DWR
CHECKED BY: PSB
APPROVED BY: ARS
SCALE: NONE
STANDARD INVERT
DRAWING NO. **S2**



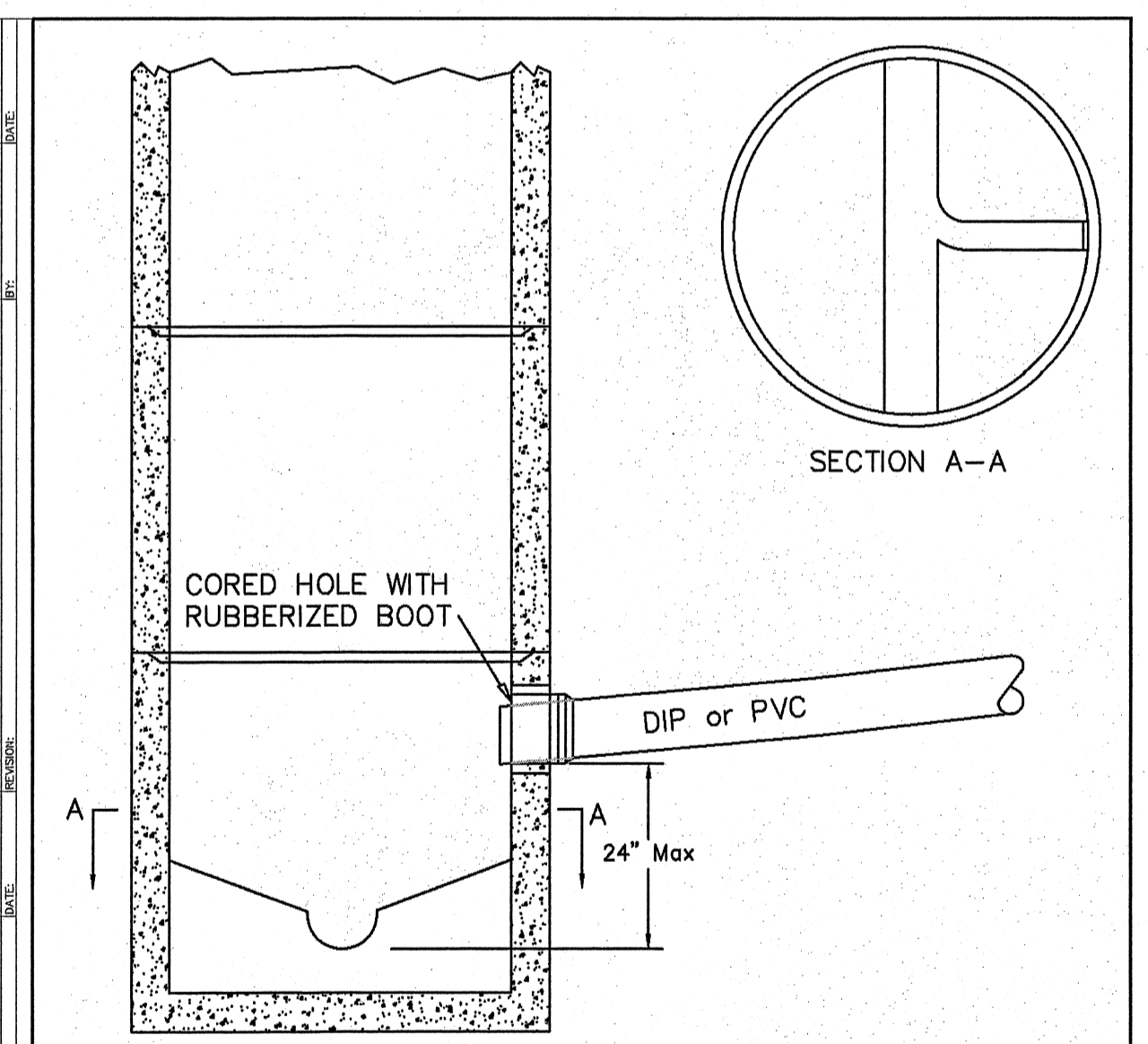
NOTE: EAST JORDAN IRON WORKS V-2358 OR INTERCHANGEABLE

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
DESIGN BY: STD. COMMITTEE
DRAWN BY: DWR
CHECKED BY: PSB
APPROVED BY: ARS
SCALE: NONE
BOLT DOWN FRAME & COVER
DRAWING NO. **S4**



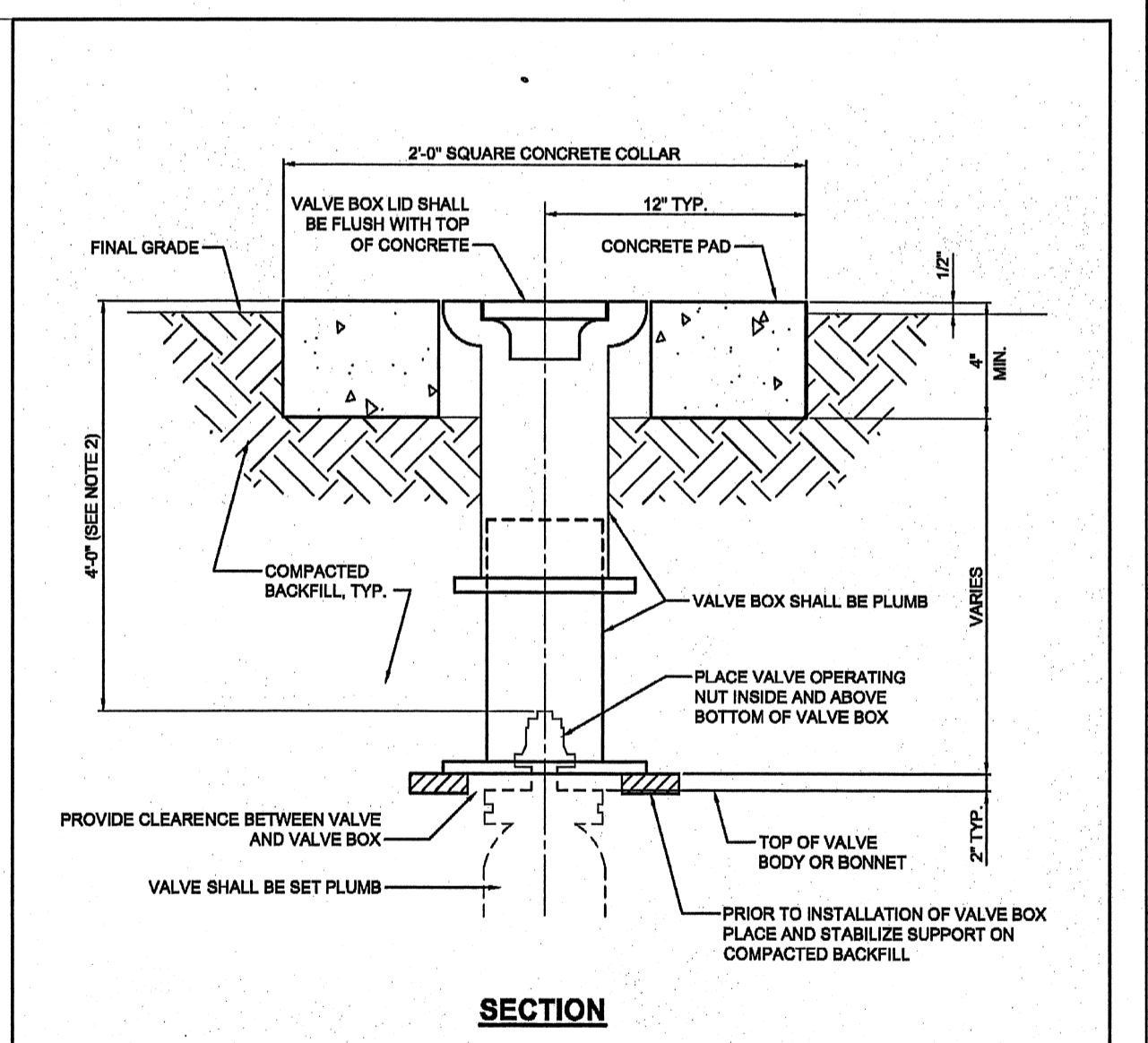
NOTE:
1. MANHOLE SHALL BE INSTALLED LIKE STANDARD PRECAST MANHOLE, EXCEPT FOR DROP.
2. MAXIMUM ALLOWABLE DROP FOR LOWER INLET ON OUTSIDE DROP MANHOLES SHALL BE 8" (INCHES).

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
DESIGN BY: STD. COMMITTEE
DRAWN BY: DWR
CHECKED BY: PSB
APPROVED BY: ARS
SCALE: NONE
OUTSIDE DROP MANHOLE
DRAWING NO. **S8**



NOTE:
1. CORES SHALL BE AWAY FROM BARREL JOINTS.
2. MAXIMUM ALLOWABLE INSIDE DROP MANHOLES SHALL BE 2' (FEET), INCLUDING 6" PIPES.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
DESIGN BY: STD. COMMITTEE
DRAWN BY: DWR
CHECKED BY: PSB
APPROVED BY: ARS
SCALE: NONE
INSIDE DROP MANHOLE
DRAWING NO. **S9**



NOTE:
1. SLIP-TYPE VALVE BOXES ONLY (NO EXCEPTIONS).
2. WHERE DEPTH OF COVER IS MORE THAN 5 FEET, CONTRACTOR SHALL PROVIDE SUITABLE PERMANENTLY INSTALLED VALVE STEM EXTENSION AND GUIDE AT NO EXTRA COST TO GCDWR.
3. USE 6" SDR 35 PVC PIPE FOR DEEP EXTENSIONS.

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES
DESIGN BY: STD. COMMITTEE
DRAWN BY: DWR
CHECKED BY: PSB
APPROVED BY: ARS
SCALE: NONE
TYPICAL VALVE BOX INSTALLATION
DRAWING NO. **W9**

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**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

CONSTRUCTION DETAILS

SHEET TITLE	DESIGN	DRAWN	CHECKED
	KM	DW	KM

DATE	NO.	DESCRIPTION
01/08/2018	A	ISSUED FOR APPROVAL
02/22/2018	B	REVISED PER G.C. COMMENTS
03/26/2018	C	REVISED PER G.C. DWR COMMENTS
04/02/2018	D	REVISED FOR G.C. DWR REVIEW

RELEASE

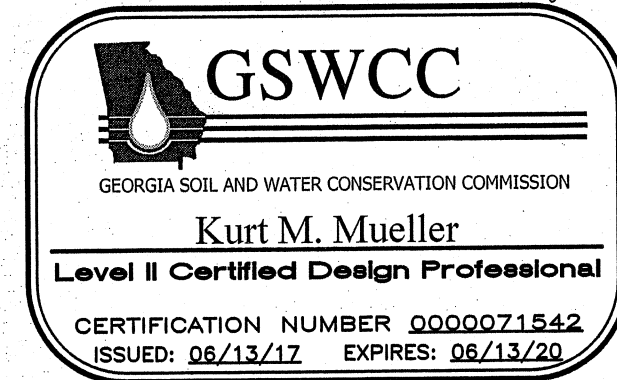
R17199
PPI PROJECT NO.

OWNER/PRIMARY PERMITTEE:
ACM SATILLA LN V LLC
 172 May 15, 2018 TREE ST NW SUITE 405
 ATLANTA, GA 30309
 PH: (404) 603-8833

24-HOUR EMERGENCY CONTACT:
JAMES RHODEN III
 (404) 603-8833



Know what's below.
 Call before you dig.



SOIL EROSION NOTES

1. DISTURBED AREA CALCULATIONS INDICATE MAXIMUM TOTAL AREA DURING CONSTRUCTION AND IS LIMITED TO EASEMENT AREAS SHOWN FOR TRENCHING OPERATIONS WITHIN RIGHTS-OF-WAY, THE AREAS INCLUDE TRENCH, EQUIPMENT TRACK, AND SPOIL HEAP WIDTHS.

TOTAL PROJECT AREA: 3.10 ACRES
 TOTAL DISTURBED AREA: 3.10 ACRES

2. GPS COORDINATES OF THE PROJECT LOCATION ARE:

BEGIN--LATITUDE 34.0647° N AND LONGITUDE 83.9666° W
 END-- LATITUDE 34.0681° N AND LONGITUDE 83.9739° W

3. DESCRIPTION OF THE NATURE OF CONSTRUCTION ACTIVITY: THIS INFRASTRUCTURE PROJECT INCLUDES CONSTRUCTION OF A SANITARY SEWER PUMP STATION WITH A 8'Ø, 25' DEEP WET WELL. THE PUMP STATION SITE WILL CONFORM TO GWINNETT COUNTY STANDARDS. THE PUMP STATION WILL HAVE TEMPORARY ACCESS FROM A 15' WIDE, 485' LONG GRAVEL DRIVE. PERMANENT ACCESS WILL BE THROUGH THE MULTI-USE DEVELOPMENT FOR WHICH THE PUMP STATION WILL SERVE. LINEWORK WILL BE INSTALLED BY TRENCHING AND EXISTING GRADE WILL BE RESTORED OVER THE FORCE MAIN. THE FORCE MAIN WILL BE INSTALLED IN A GEORGIA POWER TRANSMISSION LINE EASEMENT, AS WELL AS GEORGIA POWER PROPERTY. THE FORCE MAIN WILL DISCHARGE INTO AN EXISTING GWINNETT COUNTY SANITARY SEWER MAINHOLE, FACILITY ID: 2271562.

4. THE RECEIVING WATER IS A TRIBUTARY TO LITTLE IVY CREEK. THERE ARE NO WETLANDS OR OTHER SENSITIVE AREAS IDENTIFIED ON OR ADJACENT TO THE SITE.

CERTIFICATION STATEMENTS:

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATION DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT UNDER MY SUPERVISION."

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002."

"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGMENT UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER."

Kurt M. Mueller 7/20/18
 SIGNATURE OF DESIGN PROFESSIONAL

- THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMPs AND SEDIMENT BASINS IN ACCORDANCE WITH PART IV.A.5 WITHIN 7 DAYS AFTER INSTALLATION.
- NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
- NO BUFFER VARIANCE IS REQUIRED. THE WATER/SEWER LINE ENCROACHMENTS ARE EXEMPT FROM VARIANCE REQUIREMENTS.
- AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY A DESIGN PROFESSIONAL.
- WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
- EROSION CONTROL MEASURES SHALL 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.
- CONSTRUCTION ACTIVITY DOES DISCHARGE STORM WATER WITHIN 1 LINEAR MILE UPSTREAM OF A BIOTA-IMPAIRED STREAM SEGMENT. IMPAIRED STREAM IS IVY CREEK. SEE APPENDIX 1 BMP'S REQUIRED.
- CONCRETE WASHDOWN: WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED. USE BMP'S FOR WASHDOWN OF TOOLS, MIXER CHUTES, HOPPERS, AND THE REAR OF VEHICLES.
- REMEDIATION OF PETROLEUM SPILLS AND LEAKS: ANY LEAKS OR SPILLS OF PETROLEUM PRODUCTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTAIN, CONTROL, AND REMEDIATE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL GUIDELINES, ORDINANCES, AND LAWS.

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- PETROLEUM SPILLS SHALL BE IMMEDIATELY CONTAINED. ALL INLETS MUST BE PLUGGED IMMEDIATELY, AND THE PETROLEUM DIRECTED AWAY FROM RECEIVING WATERS OR STORM DRAINAGE SYSTEMS. CLEANUP MAY BE ACCOMPLISHED BY, BUT IS NOT LIMITED TO, SWEEPING, SHOVELING, AND VACUUMING ALONG WITH THE USE OF SORBENTS AND GELS.
- ANY CONTAMINATED SOILS MUST BE REMOVED FROM THE SITE IMMEDIATELY AND REPLACED WITH SOIL OF SIMILAR PROPERTIES.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATIONS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER). THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.
- THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ON-SITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 600 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL AT THE CONTRACTOR'S EXPENSE.

SOIL EROSION NOTES, CONT.

16. DESCRIPTION OF PRACTICES THAT WILL BE USED TO REDUCE AND CONTROL POLLUTANTS IN STORM WATER DISCHARGES: POLLUTANTS OR POTENTIALLY HAZARDOUS MATERIALS, SUCH AS FUELS, LUBRICANTS, LEAD PAINT, CHEMICALS, OR BATTERIES, SHALL BE TRANSPORTED, STORED, AND UTILIZED IN A MANNER TO PREVENT LEAKAGE OR SPILLAGE INTO THE ENVIRONMENT. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROPER AND LEGAL DISPOSAL OF ALL SUCH MATERIALS. EQUIPMENT, ESPECIALLY CONCRETE OR ASPHALT TRUCKS, SHALL NOT BE WASHED OR CLEANED OUT ON THE PROJECT EXCEPT IN AREAS WHERE UNUSED PRODUCT CONTAMINANTS CAN BE PREVENTED FROM ENTERING WATERWAYS.

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

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

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

FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

17. DESCRIPTION OF CONTROLS AND MEASURES FOR SEDIMENT CONTROL: AT A MINIMUM, THE FOLLOWING EROSION CONTROL MEASURES SHALL BE UTILIZED IN THE CONSTRUCTION OF THE PROJECT AS INDICATED ON THE ES&PC PLAN:

- SILT FENCE SHALL BE INSTALLED AT APPROPRIATE LOCATIONS TO PREVENT SEDIMENT FROM BEING WASHED OFF OF THE SITE.
- TEMPORARY AND PERMANENT GRASSING/SODDING AND MULCHING SHALL BE USED TO REESTABLISH VEGETATION ON THE DISTURBED AREAS AS CONSTRUCTION PROCEEDS.
- CONSTRUCTION EXITS SHALL BE USED TO PREVENT THE TRANSPORT OF MUD FROM MATERIAL. EQUIPMENT STORAGE AREAS AND CONSTRUCTION ROAD STABILIZATION WILL BE USED WHERE CONSTRUCTION TRAFFIC IS REQUIRED TO PREVENT EROSION FROM THESE AREAS.
- CHECK DAMS WILL BE INSTALLED IN DITCHES, SWALES, ETC. TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- ADDITIONAL MEASURES ARE SHOWN BELOW FOR STORMWATER DISCHARGE WITHIN 1 MILE OF AN IMPAIRED STREAM.

18. JUSTIFICATION TO USE EQUIVALENT CONTROLS FOR SEDIMENT STORAGE ON LINEAR PORTIONS OF THE PROJECT: SEDIMENT STORAGE REQUIREMENT FOR THE 3.1 ACRE DISTURBED AREA BY SEDIMENT BASIN IS NOT ATTAINABLE. THEREFORE, A MINIMUM OF 67 CY/ACRE SEDIMENT STORAGE IS PROVIDED USING EQUIVALENT CONTROLS. AT 1/3-FULL (0.83' SEDIMENT DEPTH) AND AT MAXIMUM SLOPE OF 5:1, EACH LINEAR FOOT OF Sd1-S SILT FENCE HOLDS 1.74 CF OF SEDIMENT. APPROXIMATELY 4,315 LF OF SILT FENCE IS SHOWN ON THE PLANS FOR THE LINEWORK WHICH CAN PROVIDE 278 CY OF STORAGE. THE REQUIRED STORAGE IS (67 CY/ACRE x 3.1 ACRE) 208 CY TOTAL. AVAILABLE STORAGE EXCEEDS REQUIRED STORAGE.

- IT SHALL BE THE RESPONSIBILITY OF THE PERSON PERFORMING THE CONSTRUCTION OPERATIONS TO INSTALL AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES INDICATED ON THESE DRAWINGS OR TO PROVIDE ADDITIONAL MEASURES AS DEEMED NECESSARY BY SITE CONDITIONS.
- ADDITIONAL MEASURES SHALL BE ADDED IF DETERMINED TO BE NECESSARY BY ON-SITE INSPECTIONS AND/OR BY THE GOVERNING AUTHORITY.
- STANDARDS AND SPECIFICATIONS: ALL DESIGNS WILL CONFORM TO AND ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (LATEST EDITION), PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION.
- REMOVE ACCUMULATED SEDIMENT FROM CHECK DAMS (Cd) WHEN THE STORAGE CAPACITY HAS BEEN REDUCED BY 1/3. REMOVED SEDIMENT SHALL BE RETURNED TO ANY ERODED AREAS UPSTREAM OF THE SEDIMENT TRAPS AND IMMEDIATELY SEEDED.
- SURVEY INFORMATION: TOPOGRAPHIC INFORMATION TAKEN FROM TOPOGRAPHIC SURVEY BY PRECISION PLANNING INC. AND GWINNETT COUNTY GIS.
- SOILS INFORMATION: SOILS INFORMATION TAKEN FROM SOIL SURVEY OF GWINNETT COUNTY, GEORGIA BY USDA SOIL CONSERVATION SERVICE IN COOPERATION WITH UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE AGRICULTURAL EXPERIMENT STATIONS.
- TEMPORARY EROSION MEASURES: TEMPORARY EROSION CONTROL STRUCTURES, MEASURES, AND DEVICES SHALL BE INSTALLED AND OPERATIONAL PRIOR TO ANY LAND DISTURBING ACTIVITY. IF, DURING ANY STAGE OF CONSTRUCTION, ADDITIONAL MEASURES ARE DEEMED NECESSARY THEY SHALL BE INSTALLED AS SOON AS POSSIBLE AFTER NOTIFICATION.
- MAINTENANCE OF TEMPORARY EROSION CONTROL MEASURES SHALL BE REQUIRED THROUGHOUT ALL STAGES OF CONSTRUCTION. MAINTENANCE SHALL BE IN ACCORDANCE WITH THE EROSION CONTROL MANUAL CHAPTER 6 AND THE EROSION CONTROL DETAILS INCLUDED ON THESE DRAWINGS. MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE PERSON PERFORMING THE CONSTRUCTION.
- PERMANENT EROSION MEASURES: PERMANENT EROSION CONTROL STRUCTURES SHALL BE INSTALLED AS CONSTRUCTION PROGRESSES. PERMANENT VEGETATIVE MEASURES SHALL BE PLACED IMMEDIATELY DURING THE VARIOUS STAGES OF CONSTRUCTION.
- ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL LAND DISTURBED DURING CONSTRUCTION HAS STABILIZED AND A STRONG STAND OF PERMANENT VEGETATION HAS BEEN ESTABLISHED. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED UNTIL THE OWNER APPROVES REMOVAL.
- TRENCH BACKFILL AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS. TRENCHES SHALL BE BACKFILLED AND COMPACTED TO MINIMIZE SETTLEMENT AND SCOURING. IT IS THE RESPONSIBILITY OF THE PERSON PERFORMING THE CONSTRUCTION TO CORRECT ANY SETTLED OR SCOURED AREAS THROUGHOUT THE WARRANTY PERIOD.
- WATER AND SEWER LINES ARE EXEMPT FROM 50- AND 75-FOOT BUFFERS. A 25-FOOT BUFFER SHALL BE MAINTAINED FOR ALL UTILITIES INCLUDING PERMANENT AND TEMPORARY CONSTRUCTION EASEMENTS.
- ALL GRASSING/SODDING AND MULCHING SHALL TAKE PLACE AS SOON AS PRACTICAL AFTER BACKFILLING OF TRENCH EXCAVATIONS OR OTHER LAND DISTURBING ACTIVITIES.
- CONSTRUCTION MATERIAL STORAGE AREA WILL REQUIRE THE INSTALLATION OF A CONSTRUCTION EXIT (Co) TO REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE AREA. SILT FENCE SHALL ALSO BE INSTALLED TO PREVENT SEDIMENT FROM LEAVING THE MATERIAL STORAGE AREA. AFTER DEMOBILIZATION, THE MATERIAL STORAGE AREA SHALL BE SEEDED AND MULCHED, AND THE SILT FENCE SHALL REMAIN UNTIL THE AREA IS PERMANENTLY STABILIZED.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- THERE IS NO FLOODPLAIN ON THIS PROPERTY FROM A WATER COURSE WITH A DRAINAGE AREA EXCEEDING 100 ACRES OR FLOODPLAIN PER FIRM MAP NUMBER 13135C0035F DATED SEPTEMBER 29, 2006.
- FLOODPLAIN SHOWN IS FROM GWINNETT COUNTY FLOOD STUDY.
- THE ESTIMATED RUNOFF COEFFICIENT IS 0.40 BEFORE & AFTER CONSTRUCTION SINCE DISTURBED AREAS ARE BEING RETURNED TO THEIR PREVIOUS STATE.

APPENDIX 1 BMP'S REQUIRED DUE TO DISCHARGE TO THE IMPAIRED STREAM SEGMENT

CONSTRUCTION ACTIVITY FOR THIS PROJECT WILL OCCUR WITHIN MILE OF THE BIOTA IMPAIRED STREAM, IVY CREEK, REACH ID: GAR031300010911. THEREFORE ADDITIONAL BMP'S, IN COMPLIANCE WITH PART III.C OF THE GAR100002 PERMIT SHALL BE IMPLEMENTED. THE 4 ADDITIONAL BMP'S ARE LISTED BELOW.

- AN ADDITIONAL 25' BUFFER, ADJACENT TO THE PUMP STATION SITE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- A LARGE SIGN (MINIMUM 4' x 8') MUST BE ON THE SITE ON THE ACTUAL START DATE OF CONSTRUCTION VISIBLE FROM A PUBLIC ROADWAY IDENTIFYING THE CONSTRUCTION SITE, THE PERMITTEE(S), AND THE CONTACT PERSON(S) AND TELEPHONE NUMBER(S), UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED.
- THE CONTRACTOR SHALL USE ANIONIC POLYACRYLAMIDE (PAM) AND/OR MULCH TO STABILIZE ALL AREAS LEFT DISTURBED FOR MORE THAN SEVEN (7) CALENDAR DAYS IN ACCORDANCE WITH PART III.D.1 OF THE GAR100002 PERMIT.
- APPLY THE APPROPRIATE GEORGIA DEPARTMENT OF TRANSPORTATION APPROVED EROSION CONTROL MATTING BLANKETS OR BONDED FIBER MATRIX TO ALL SLOPES STEEPER THAN 3:1 AS SHOWN ON THE PLANS.

SOIL TYPES (FROM USDA SOIL SURVEY)		
SYMBOL	SOIL NAME	DESCRIPTION
AmC2	APPLING	SANDY LOAM, 6 TO 10 PERCENT SLOPES
ApB	APPLING	HARD LABOR, 2 TO 6 PERCENT SLOPES
ARE	ASHLAR/RION/ WATEREE	10 TO 25 PERCENT SLOPES
AsF	ASHLAR/WATEREE	15 TO 45 PERCENT SLOPES
Cfs	CHEWACLA	SILT LOAM, 0 TO 2 PERCENT SLOPES
MIB2	MADISON	SANDY CLAY LOAM, 2 TO 6 PERCENT SLOPES
MIC2	MADISON	SANDY CLAY LOAM, 6 TO 10 PERCENT SLOPES
MIF2	MADISON	SANDY CLAY LOAM, 15 TO 45 PERCENT SLOPES
PIB2	PACOLET	SANDY LOAM, 2 TO 6 PERCENT SLOPES
ToA	TOCCOA	FINE SANDY LOAM, 0 TO 4 PERCENT SLOPES
Wre2	WEDOWEE	SANDY LOAM, 10 TO 25 PERCENT SLOPES

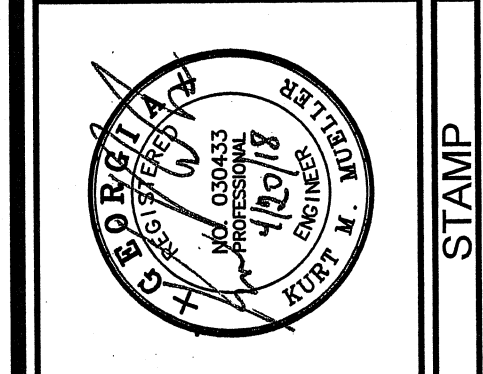
ACTIVITY	MONTH					
	1	2	3	4	5	6
GRAVEL SPRINGS P.S.	1	2	3	4	5	6
INSTALLATION OF EROSION CONTROL	1	2	3	4	5	6
MAINTENANCE OF EROSION CONTROL	1	2	3	4	5	6
CLEARING & GRUBBING	1	2	3	4	5	6
PUMP STATION & FORCE MAIN CONSTRUCTION	1	2	3	4	5	6
FINAL CLEANUP AND GRASSING	1	2	3	4	5	6

EROSION CONTROL LEGEND

DESCRIPTION	SYMBOL
Cd-Hb HAYBALE CHECK DAM	—
St STORM DRAIN OUTLET PROTECTION	▲
Co CONSTRUCTION EXIT	—
Sd1-S SILT FENCE	— xx —
Ss SLOPE STABILIZATION	—
DISTURBED AREA LIMITS	
— LIMITS —	—

Ds1	STABILIZE DISTURBED AREA (WITH MULCHING ONLY) - AS NECESSARY	APPLIES TO DISTURBED AREAS WHERE SEEDING MAY NOT HAVE SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER.	
	SPECIES	RATE	
	STRAW OR HAY	2.5 TONS/AC.	
Ds2	TEMPORARY GRASSING - AS NECESSARY	TEMPORARY GRASSING SHALL CONSIST OF SOWING A QUICK GRASS SUCH AS RYE, BROWN TOP MILLET, OR A GRASS SUITABLE TO THE AREA AND SEASON. LIME AND FERTILIZER SHALL BE OMITTED.	
	SPECIES	RATE	PLANTING DATE
	RYEGRASS, ANNUAL	40#/AC.	AUGUST THRU MARCH
	MILLET, BROWNTOP	40#/AC.	APRIL THRU JULY
Ds3	PERMANENT GRASSING	PERMANENT GRASSING SHALL CONSIST OF GROUND PREPARATION, LIMING AND FERTILIZATION, SEEDING, AND MULCHING.	
	SPECIES	RATE	PLANTING DATE
	TALL FESCUE	30#/AC.	AUGUST THRU OCTOBER
	COMMON BERMUDA (UNHULLED)	10#/AC.	OCTOBER THRU FEBRUARY
	COMMON BERMUDA (HULLED)	10#/AC.	MARCH THRU JUNE
	SERICEA LESPEDEZA	75#/AC.	ALL YEAR
Ds4	SODDING (TO MATCH EXISTING SPECIES):	SODDING SHALL CONSIST OF GROUND PREPARATION, LIMING AND FERTILIZATION, AND CERTIFIED SOD OF A VARIETY MATCHING EXISTING GRASS SPECIES. THE GROUND SHALL BE PREPARED BY CLEARING SURFACE OF TRASH, WOODY DEBRIS, STONES, AND CLODS LARGER THAN 1". APPLY SOD TO SOIL SURFACES ONLY. MIX 10-10-10 FERTILIZER INTO SOIL AT 0.025 LBS./SQ.FT. APPLY AGRICULTURAL LIME AT A RATE OF 0.05 LBS./SQ.FT. IRRIGATE SOD AND SOIL TO A DEPTH OF 4" IMMEDIATELY AFTER INSTALLATION. SOD SHOULD NOT BE CUT OR SPREAD IN EXTREMELY WET OR DRY WEATHER. GRASS SPECIES ARE TO MATCH EXISTING SPECIES WHEN REPLACING GRASS LAWNS OF PROPERTY OWNERS.	

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GRAVEL SPRINGS PUMP STATION AND FORCE MAIN

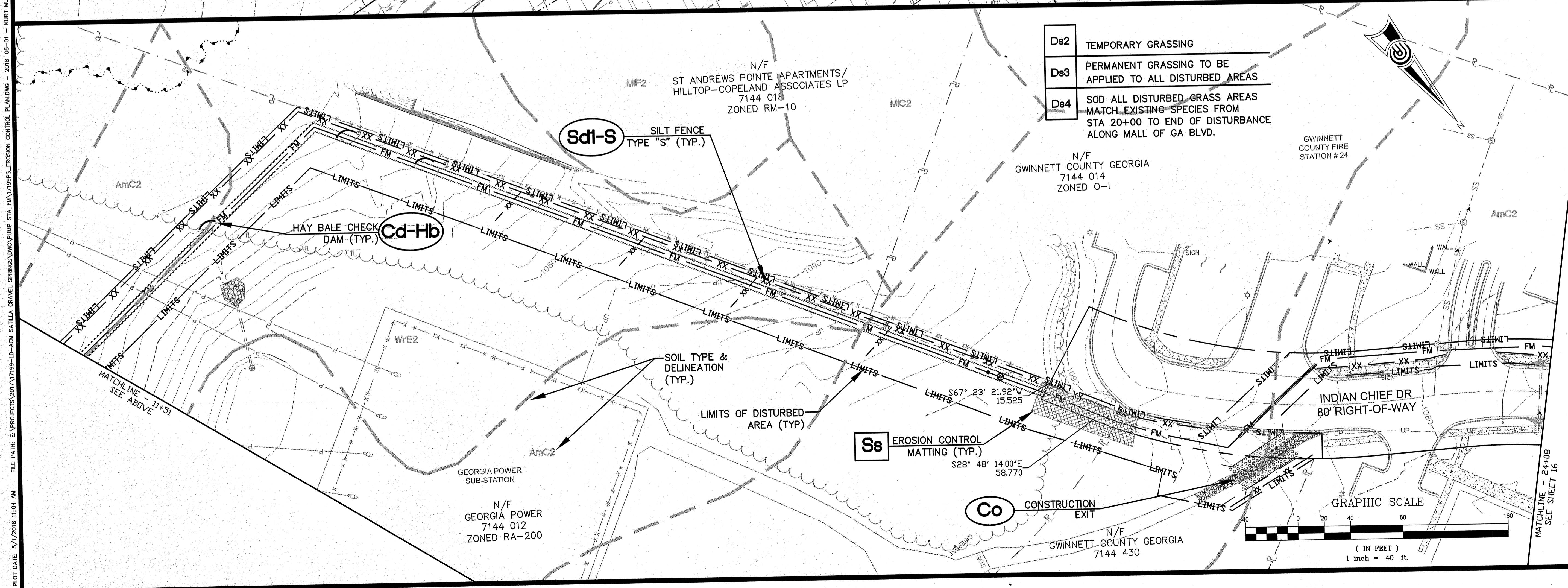
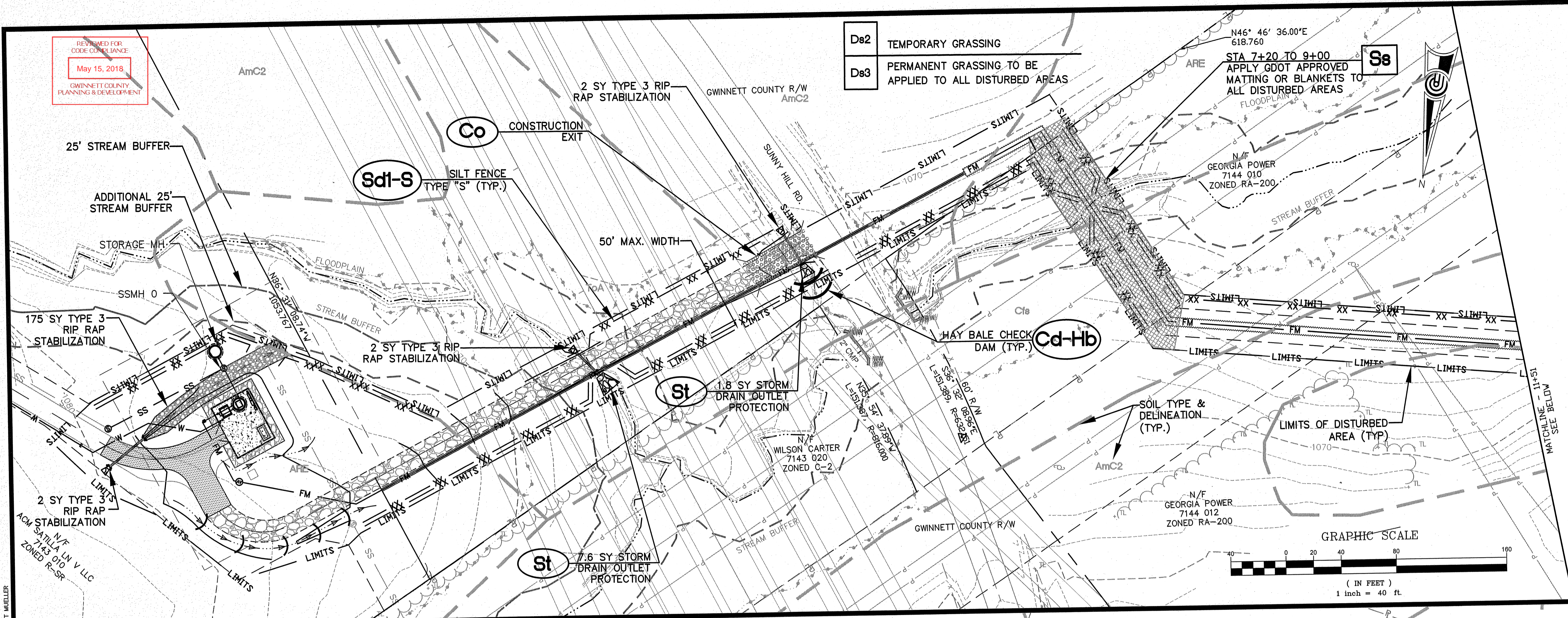
EROSION CONTROL NOTES		SHEET TITLE	
DESIGN	DRAWN	CHECKED	KM
KM	DW	KM	KM

DATE	NO.	DESCRIPTION
01/08/2016	A	ISSUED FOR APPROVAL
02/23/2018	B	REVISED PER G.C. COMMENTS
03/26/2018	C	REVISED PER G.C. DWR COMMENTS
04/05/2018	D	REVISED FOR G.C. DWR REVIEW

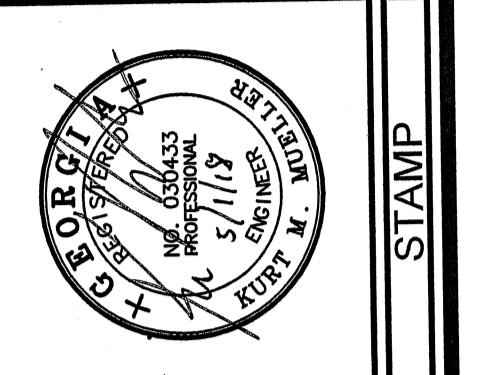
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 PPI PROJECT NO.
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REVISION FOR
CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
PLANNING & DEVELOPMENT

- De2** TEMPORARY GRASSING
- De3** PERMANENT GRASSING TO BE APPLIED TO ALL DISTURBED AREAS



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**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

EROSION CONTROL PLAN		DESIGN	DRAWN	CHECKED
		KM	DW	KM

DATE	NO.	DESCRIPTION
01/09/2018	A	ISSUED FOR APPROVAL
02/22/2018	B	REVISED PER G.C. COMMENTS
02/28/2018	C	REVISED PER G.C. DWR COMMENTS
04/05/2018	D	REVISED FOR G.C. DWR REVIEW

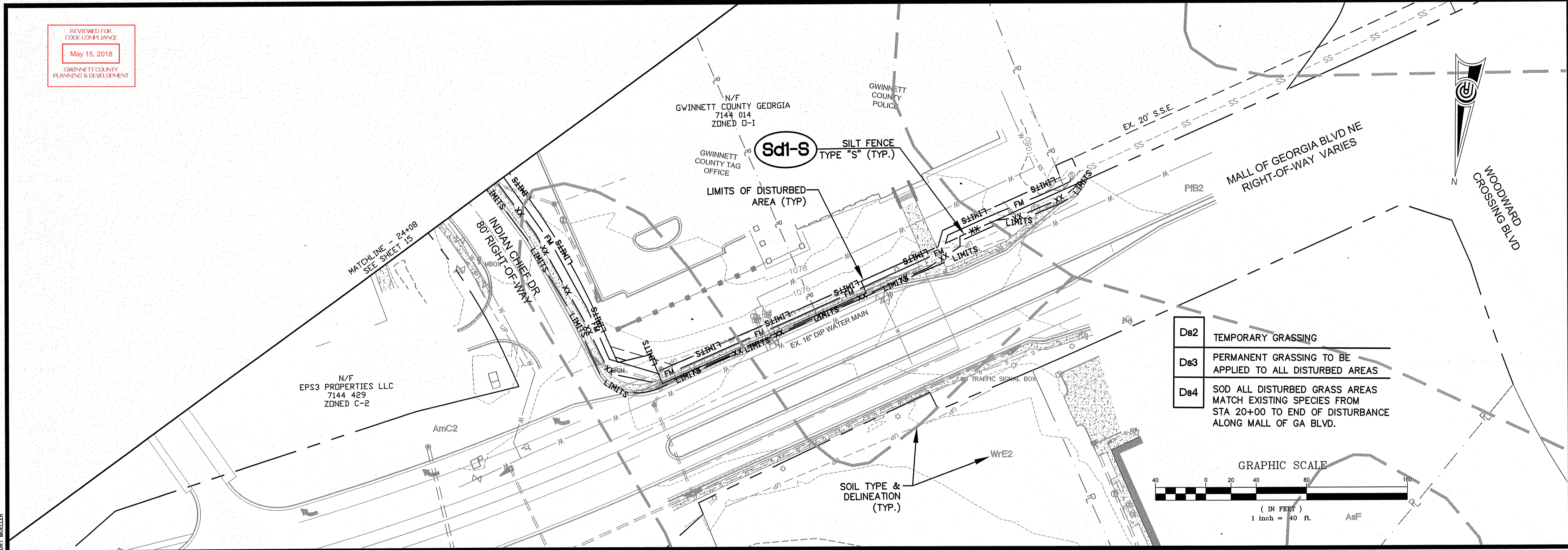
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PPI PROJECT NO.

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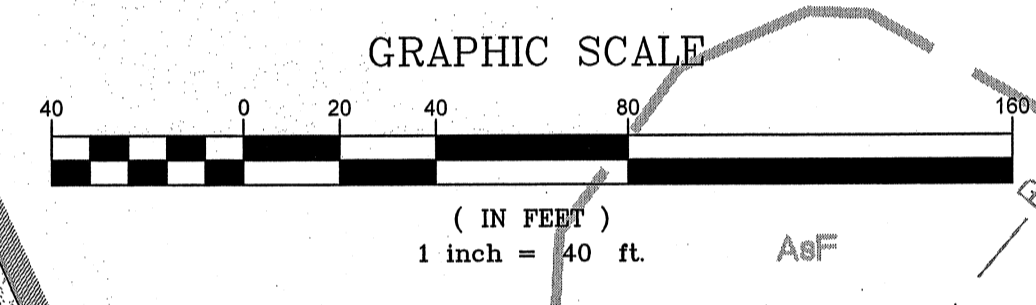
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REVIEWED FOR
CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
PLANNING & DEVELOPMENT

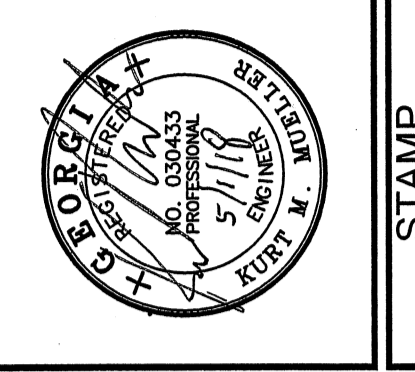
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- D82 TEMPORARY GRASSING
- D83 PERMANENT GRASSING TO BE APPLIED TO ALL DISTURBED AREAS
- D84 SOD ALL DISTURBED GRASS AREAS MATCH EXISTING SPECIES FROM STA 20+00 TO END OF DISTURBANCE ALONG MALL OF GA BLVD.



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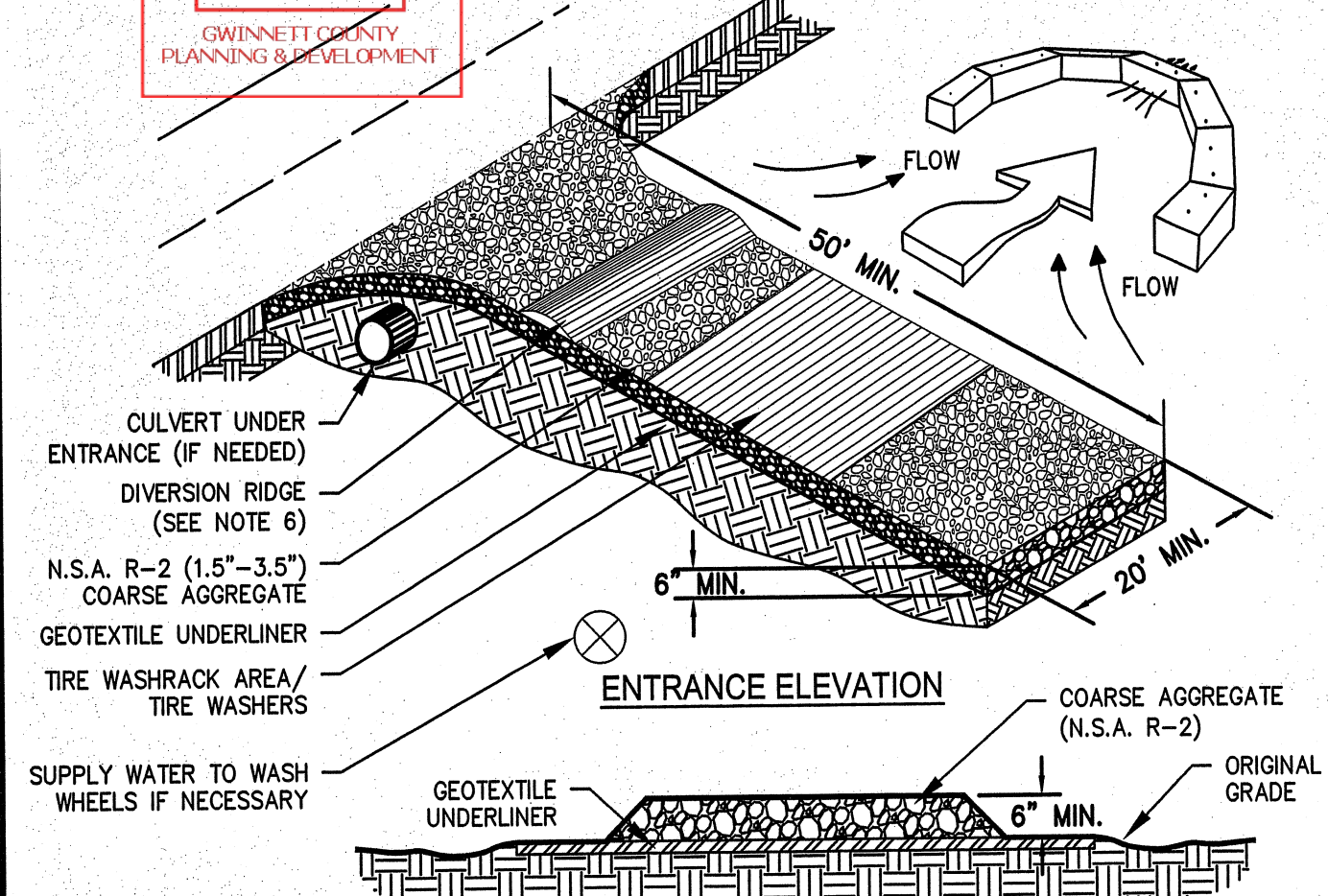
**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

EROSION CONTROL PLAN		CHECKED	KM
SHEET TITLE		DRAWN	DW
DESIGN	KM		

DATE	NO.	DESCRIPTION
01/08/2018	A	ISSUED FOR APPROVAL
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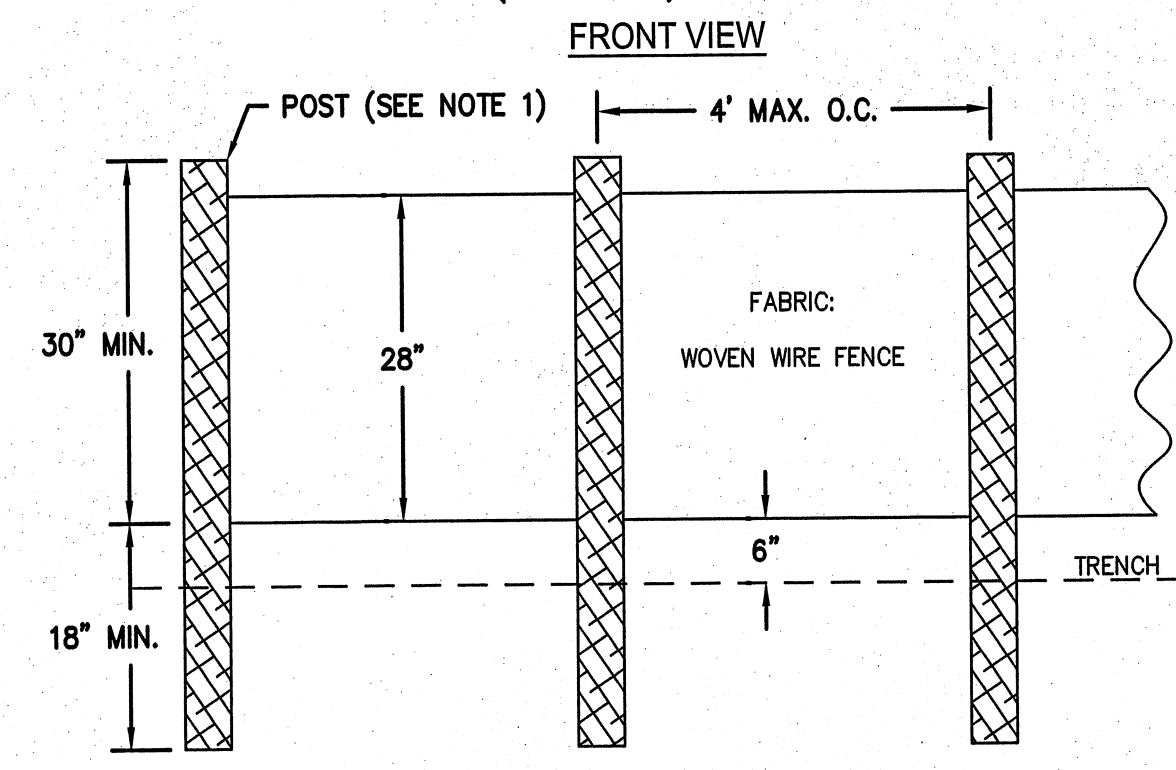
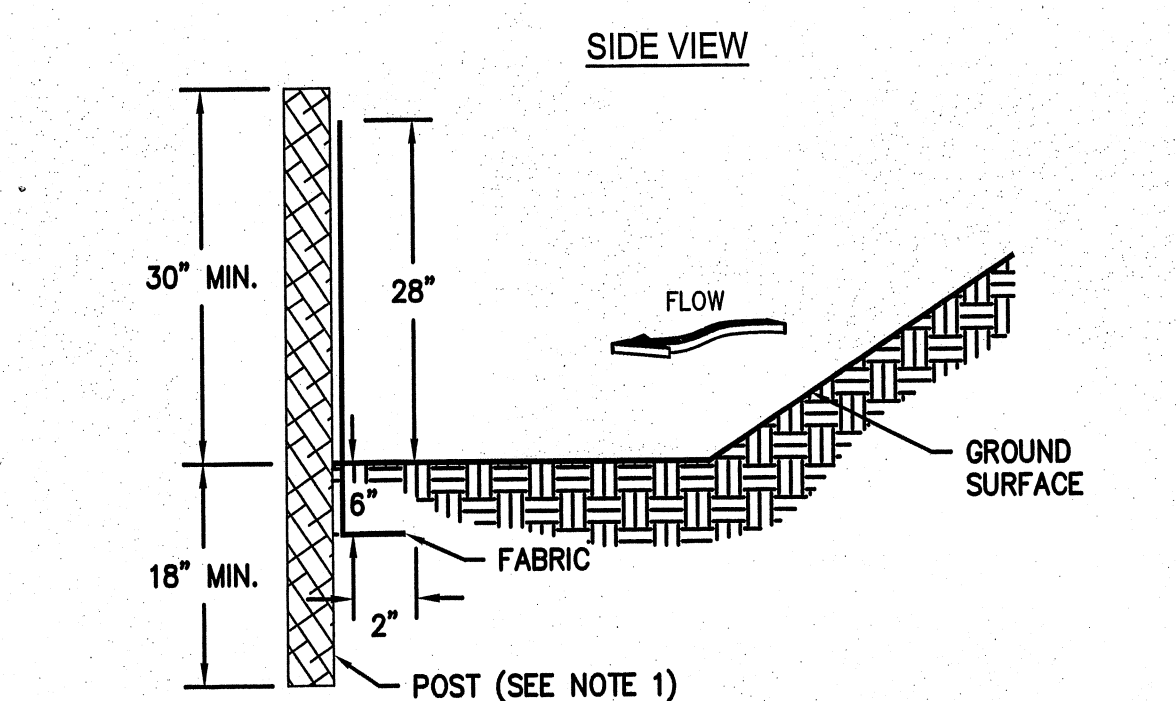
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GWINNETT COUNTY PLANNING & DEVELOPMENT



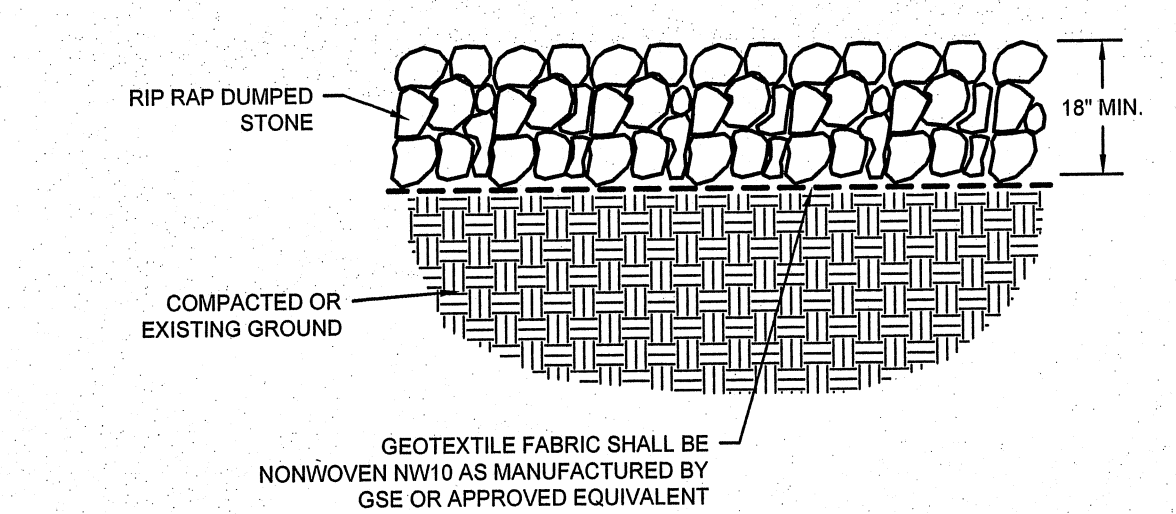
- NOTES:**
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
 4. GRAVEL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

Co CONSTRUCTION EXIT

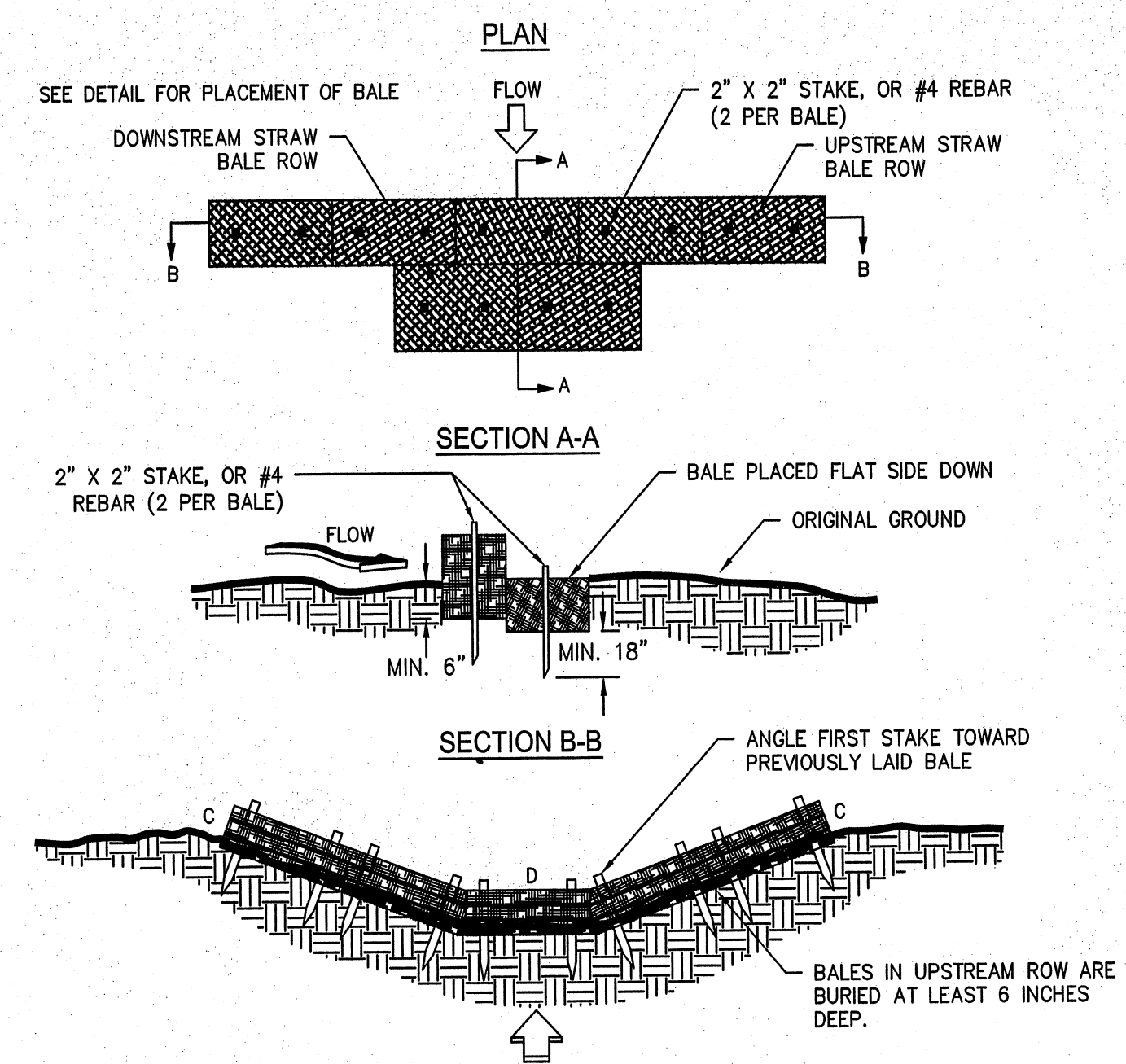


- NOTES:**
1. USE STEEL POSTS AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
 2. SILT FENCE FABRIC SHALL BE APPROVED BY GWINNETT COUNTY AT PRE-CONSTRUCTION MEETING AND BEFORE INSTALLATION.

Sd1-S SEDIMENT BARRIER
TYPE (SENSITIVE)



RIP RAP PLACEMENT
N.T.S.

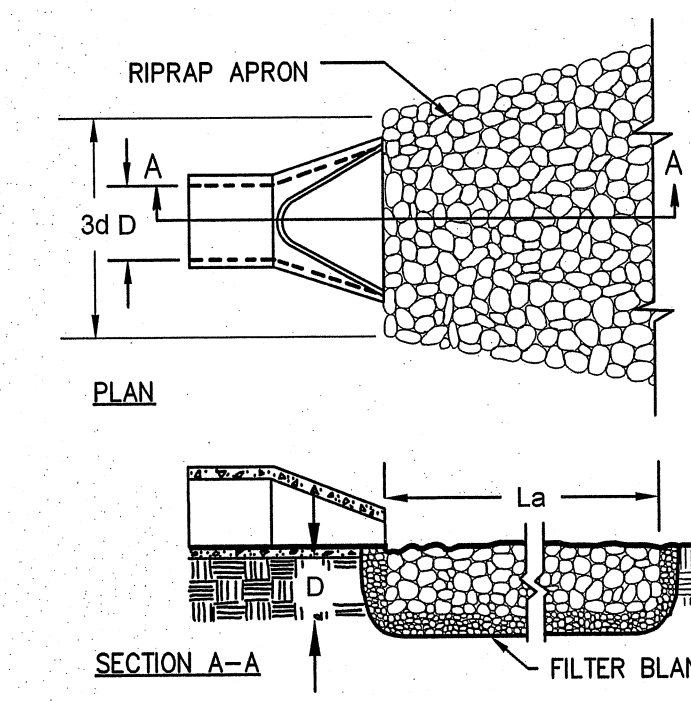


- NOTES:**
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
 2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
 3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

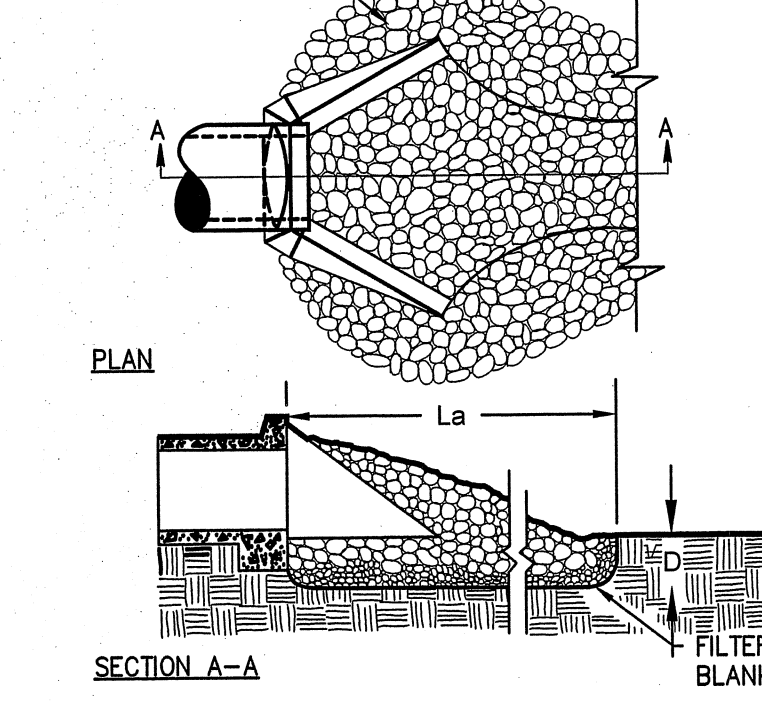
Cd-Hb CHECK DAM
TYPE (HAYBALE)

1. CFS IN CHANNEL/DITCH THAT CHECK DAM IS BEING USED IN: 4.20 (MAXIMUM)
2. ABOVE 2.0 CFS: YES_X NO
3. IF YES, LIST BMP BEING USED IN CONJUNCTION WITH CHECK DAMS: St (OUTLET PROTECTION), Sd1 (SILT FENCE)

PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL



PIPE OUTLET TO WELL DEFINED CHANNEL

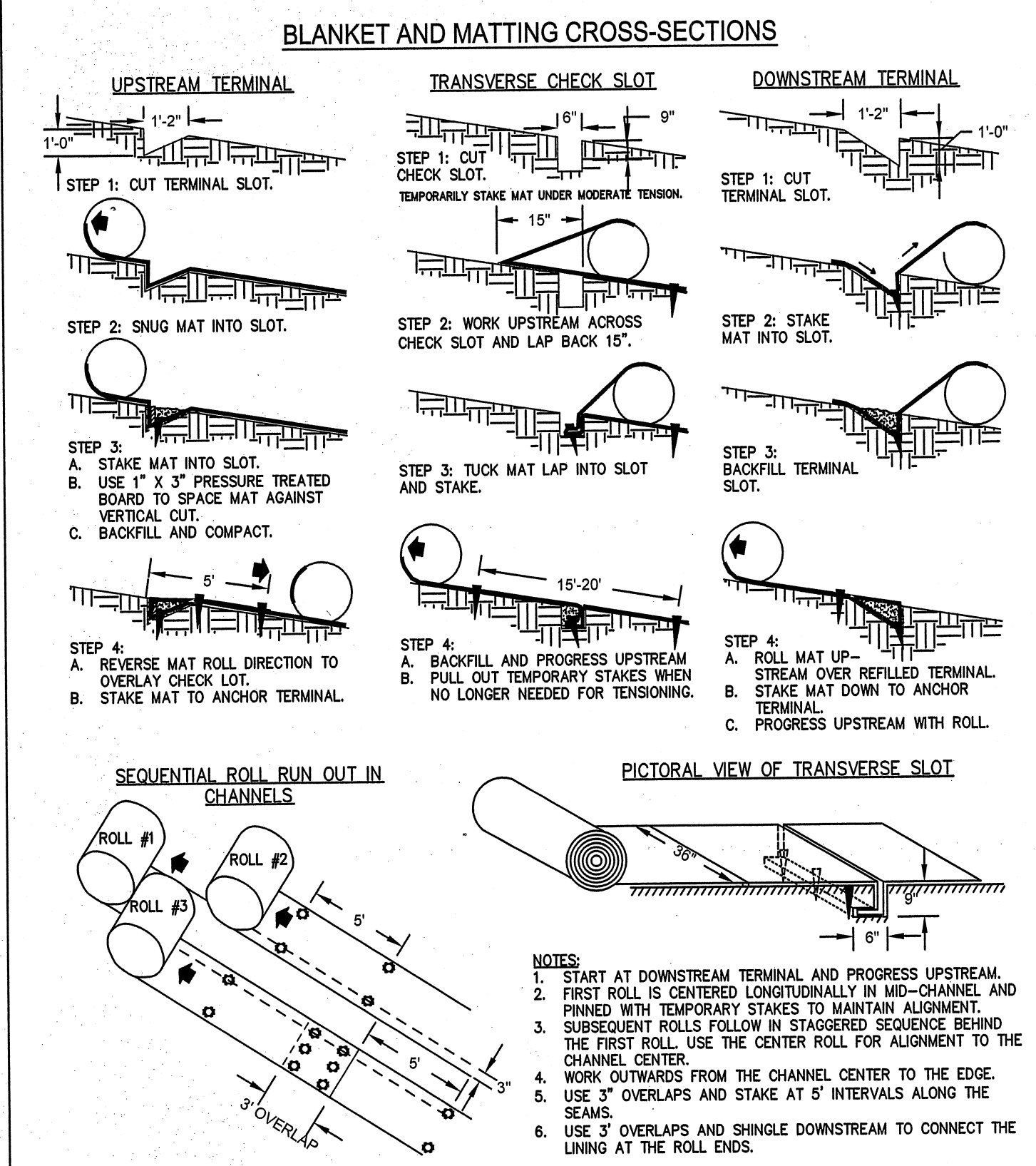


Velocity Dissipation Summary (25 year storm)

Headwall ID	Pipe Diameter (D _p)	Pipe Discharge (cfs)	Pipe Velocity (fps)	Rip-Rap Size d ₅₀	Width of Apron W=30 _s	Apron Length (La)	Width of Apron W=15 _s +La	Filter Bedding Stone	Graded Rip Rap Stone
STREAM CULVERT	24"	18.1	6.6	0.5'	6'	13'	15'	No. 57	TYPE 3
DITCH CULVERT	15"	4.2	4.4	0.25'	3.8'	8'	10.3'	No. 57	TYPE 3
PERMANENT CULVERT	18"	12.4	7.3	0.4'	4.5'	9'	10.5'	No. 57	TYPE 3

St STORM DRAIN OUTLET PROTECTION

TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)



Ss SLOPE STABILIZATION
TYPE (BLANKET AND MATTING)

PRECISION Planning Inc.
planners • engineers • architects • surveyors
400 Pile Boulevard, Lawrenceville, Ga 30046
770.338.8000 • www.ppi.us

GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN

EROSION CONTROL DETAILS

DESIGN	KM
DRAWN	DW
CHECKED	KM

SHEET TITLE

DATE	NO.	DESCRIPTION
01/08/2018	A	ISSUED FOR APPROVAL
02/23/2018	B	REVISED PER G.C. COMMENTS
03/26/2018	C	REVISED PER G.C. DWR COMMENTS
04/05/2018	D	REVISED FOR G.C. DWR REVIEW

R17199
PPI PROJECT NO.

17

PLOT DATE: 5/1/2018 11:04 AM FILE PATH: E:\PROJECTS\2017\17199-01-ADM-SATILLA-GRAVEL-SPRINGS\DWG\17199-01-ADM-SATILLA-GRAVEL-SPRINGS-EROSION-DETAILS-AND-IMPRESSIONS - 2018-05-01 - KURT MUELLER

REVIEWED FOR CODE COMPLIANCE
May 15, 2018

The following documents are referenced from "Authorization to Discharge Under The National Pollutant Discharge Elimination System Storm Water Discharges Associated With Construction Activity for Infrastructure Construction" General Permit No. GAR 100002, Part IV. For the purposes of this plan the term Precision Planning, Inc. (PPI) is the Design Professional of these construction documents.

GAR 100002 PART IV.

4. Inspections.
(a) Permittee requirements.
(1) Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment; (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

(2) Measure rainfall once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal Holiday until a Notice of Termination is submitted. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.

(3) Certified personnel (provided by the primary permittee) shall inspect the following at least once every fourteen (14) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any nonworking Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

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

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

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

5. Maintenance. The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

6. Sampling Requirements. This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. The following procedures constitute EPD's guidelines for sampling turbidity.

a. Sampling Requirements shall include the following:

(1) A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the infrastructure construction; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations for each representative storm water outfall. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;

(2) A written narrative of site specific analytical methods used to collect and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;

(3) When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and

(4) Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

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

- (1) Sample containers should be labeled prior to collecting the samples.
- (2) Samples should be well mixed before transferring to a secondary container.
- (3) Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

(4) Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.

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

c. Sampling Points.

(1) For construction activities the primary permittee must sample all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or all outfalls into such streams and other water bodies, or a combination thereof. However, provided for in and in accordance with Part IV.D.6.c.(2), of this permit, primary permittees on an infrastructure construction project may sample the representative perennial and intermittent streams, other water bodies or outfalls, or a combination thereof. Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the storm water outfalls using the following minimum guidelines:

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

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

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

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

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

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

(g) Permittees do not have to sample sheetflow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, for unpaved areas and areas not covered by permanent structures, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscape areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and a seeding of target crop perennials appropriate for the region). For infrastructure construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use.

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

(2) For infrastructure construction projects, the permittee is not required to sample a perennial or intermittent stream or other water bodies (or the associated outfall, if applicable) if the design professional preparing the Plan certifies that an increase in the turbidity of a specific identified receiving water to be sampled will be representative of the increase in the turbidity of a specific identified un-sampled receiving water. A written justification and detailed analysis shall be prepared by the design professional justifying such proposed sampling. A summary chart of the justification and analysis for the representative sampling must be included on the Plan. The justification and analysis shall include the location and description of the specified sampled and un-sampled receiving water and shall contain a detailed comparison and discussion of each such receiving water in the following areas:

- (a) site land disturbances and characteristics;
- (b) receiving water watershed sizes and characteristics; and

(c) site and watershed runoff characteristics utilizing the methods in Appendix A-1 (United States Department of Agriculture Soil Conservation Service's TR-55, Urban Hydrology for Small Watersheds) of the most recent version of the "Manual for Erosion and Sedimentation Control in Georgia" for the various precipitation events and any other such considerations necessary to show that the increase in the turbidity of a specific identified sampled receiving water will be representative of the increases in the turbidity of a specific identified un-sampled receiving water(s).

(3) For infrastructure construction projects, when the permittee determines that some receiving water(s) will not be sampled due to representative sampling, the design professional making this determination and preparing the Plan must include and sign the following certification in the Plan:

"I certify that the permittee's Erosion, Sedimentation and Pollution Control plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the General NPDES Permit No. GAR 100002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of each specific identified un-sampled receiving water."

(4) For infrastructure construction projects, if at any time during the life of the project a selected receiving water no longer represents another receiving water, then the permittee shall sample the latter receiving water until selection of an alternative representative receiving water.

(5) For infrastructure projects, if at any time during the life of the project a receiving water is determined not to be represented as certified in the Plan, the permittee shall sample that receiving water until a Notice of Termination is submitted or until the applicable phase is stabilized in accordance with this permit.

(6) For infrastructure construction projects, monitoring obligations shall cease for any phase of the project that has been stabilized in accordance with Part IV.D.6.c.(1),(g).

d. Sampling Frequency.

(1) The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitored receiving water and/or from a monitored outfall location within forty-five (45) minutes or as soon as possible.

(2) However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge.

(3) Sampling by the permittee shall occur for the following qualifying events:

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

(b) In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inches with a storm water discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the representative sampling location, whichever comes first;

(c) At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;

(d) Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and

(e) Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b) those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

7. Non-storm water discharges. Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water discharges associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

E. Reporting.

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

(2) All sampling reports shall include the following information:

- a. The rainfall amount, date, exact place, and time of sampling or measurements;
 - b. The name(s) of the certified personnel who performed the sampling and measurements;
 - c. The date(s) analyses were performed;
 - d. The time(s) analyses were initiated;
 - e. The name(s) of the certified personnel who performed the analyses;
 - f. References and written procedures, when available, for the analytical techniques or methods used;
 - g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
 - h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU"; and
- i. Certification statement that sampling was conducted as per the Plan.

(3) All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI. If an electronic submittal is provided by EPD than the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

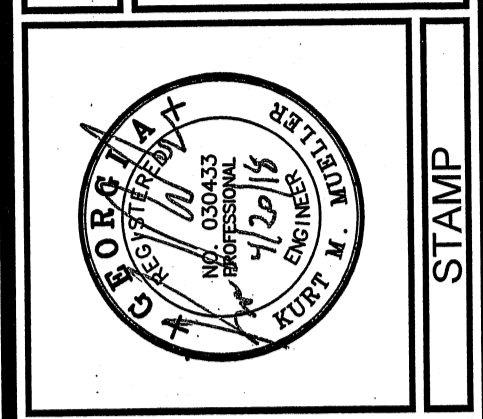
F. Retention of Records.

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

- a. A copy of all Notices of Intent submitted to EPD;
- b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
- c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
- d. A copy of all monitoring information, results, and reports required by this permit;
- e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
- f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
- g. Daily rainfall information collected in accordance with Part IV.D.4.a.(2) of this permit.

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

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**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

NPDES NOTES

SHEET TITLE	
DESIGN	KM
DRAWN	DW
CHECKED	KM

DATE	NO.	DESCRIPTION
01/08/2018	A	ISSUED FOR APPROVAL
02/23/2018	B	REVISED PER G.C. COMMENTS
03/26/2018	C	REVISED PER G.C. DWG COMMENTS
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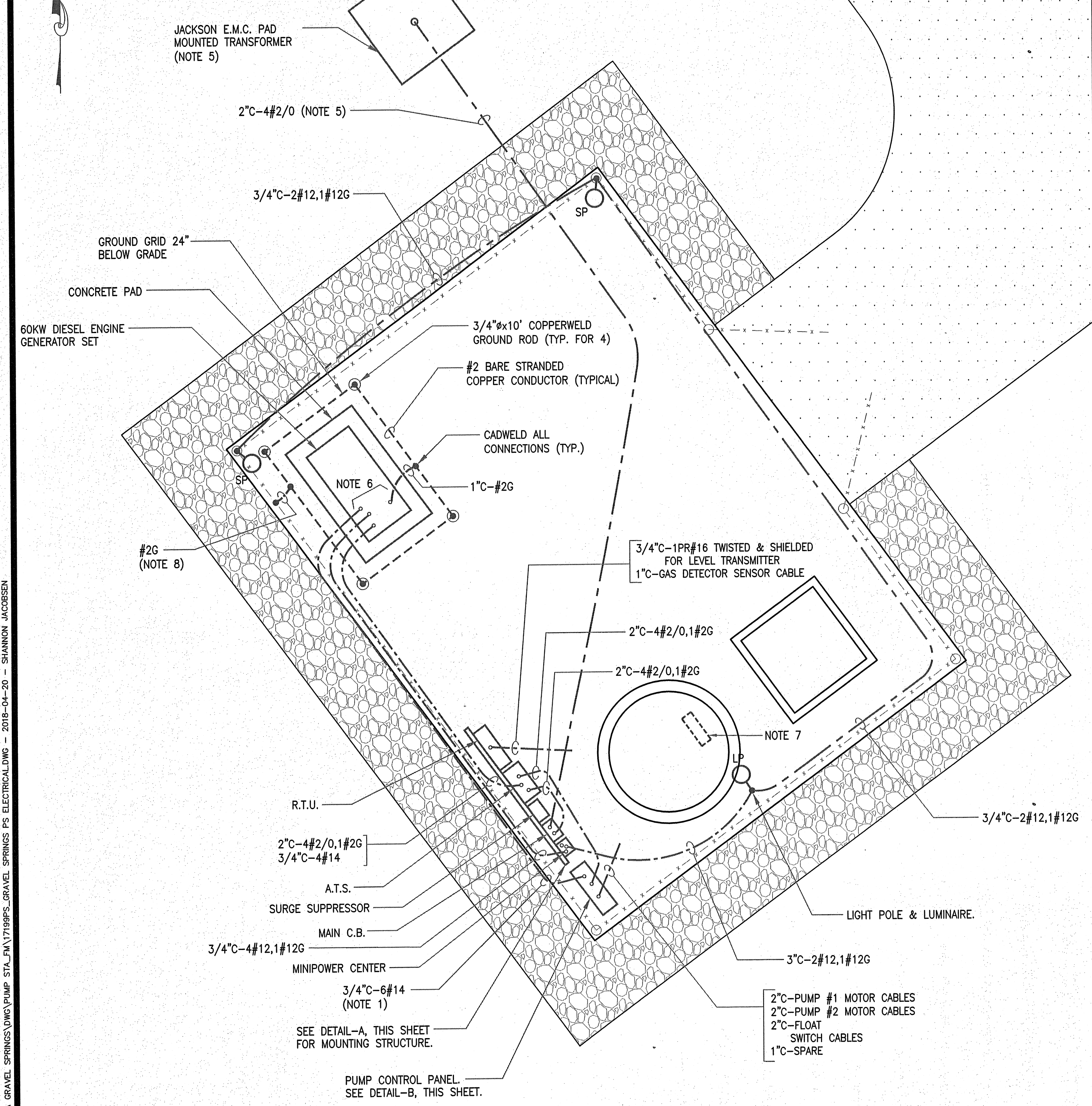
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KURT M. MUELLER, PE - CASWCC CERTIFICATION # 71542

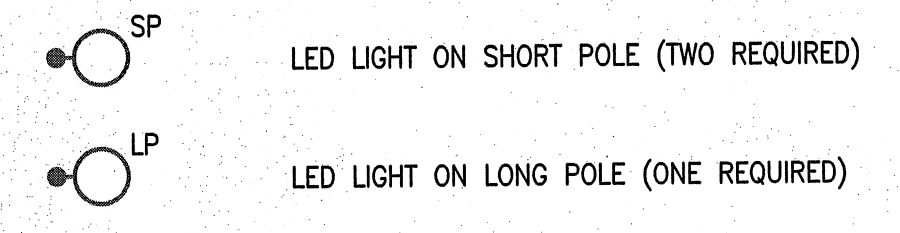
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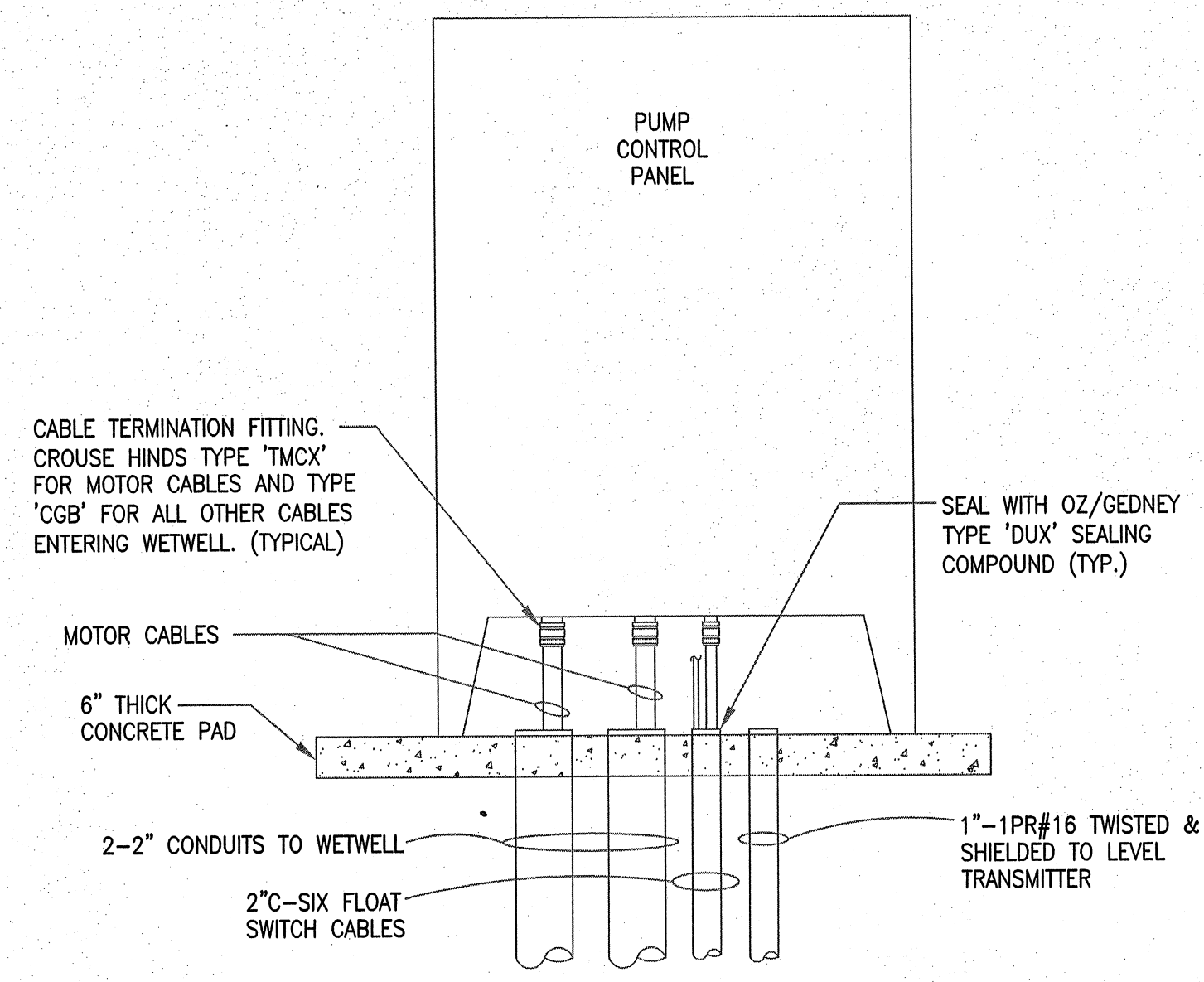
REVIEWED FOR
CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
PLANNING & DEVELOPMENT



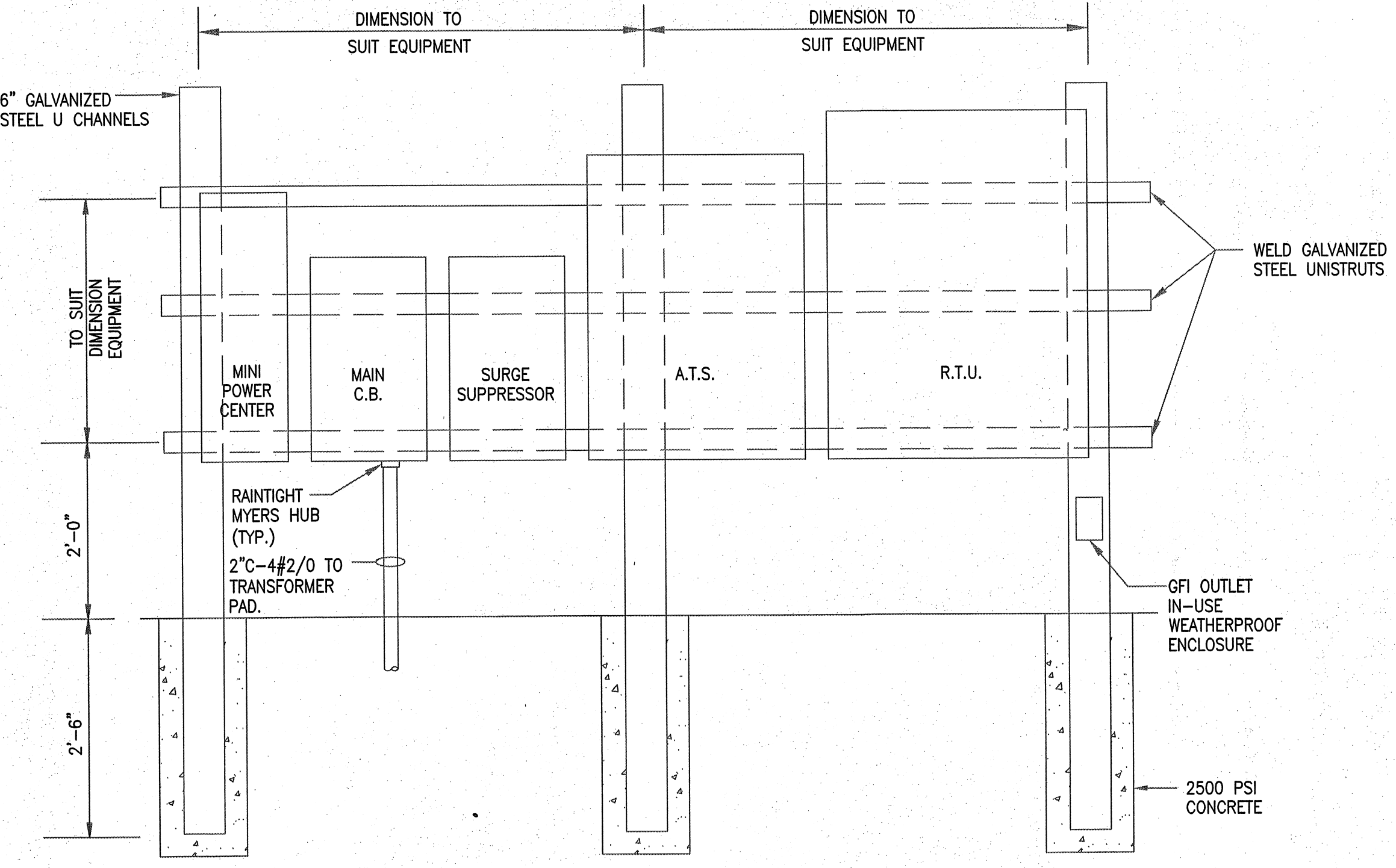
ELECTRICAL LAYOUT
1" = 5'



LED LIGHTS
LIGHT FIXTURE, 60 LEDS, 142W, 67CRI, TYPE IV WIDE FORWARD THROW CUTOFF DISTRIBUTION, 120V, HEAVY GAUGE DIE CAST ALUMINUM HOUSING WITH SINK FINS, ROUND POLE ARM, DARK BRONZE CORROSION-RESISTANT FINISH, S.S. HARDWARE.
LITHONIA #DSX1LED230B 700/40K SR4 MVOLT RPA DDBXD OR APPROVED EQUAL.
POLES - ROUND TAPERED ALUMINUM,
LP- 20 FEET, LITHONIA #RTA20 5C DM19AS DDBXD
SP- 12 FEET, LITHONIA #3RTA12 4C DM19AS DDBXD



DETAIL-B
N.T.S.
(ALL CONDUITS NOT SHOWN)



DETAIL-A
N.T.S.
(ALL CONDUITS NOT SHOWN)

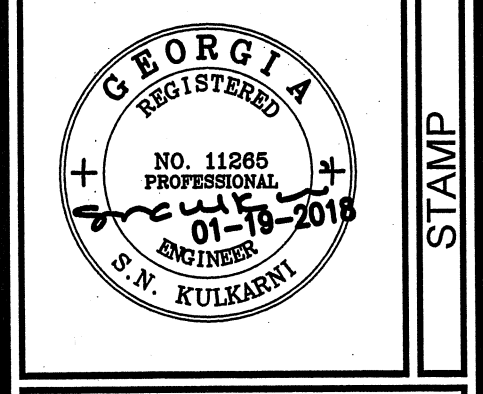
LEGEND

- UNDERGROUND CONDUIT
- CONDUIT RUN EXPOSED
- S SINGLE POLE SWITCH
- ⊕ DUPLEX RECEPTACLE
- GFI DENOTES GROUND FAULT INTERRUPTER TYPE RECEPTACLE
- WP DENOTES WEATHERPROOF 'IN-USE' COVER
- ⊙ 3/4" x 10' LONG COPPERWELD GROUND ROD.
- G — G — CONDUCTOR, #2 AWG UNLESS OTHERWISE NOTED

NOTES:

1. RUN WIRES FROM GENERATOR 'COMMON ALARM', 'LOW FUEL ALARM' AND 'RUN' CONTACT.
2. CONTROL WIRES FOR GENERATOR STARTING.
3. PROVIDE ALL CONDUITS/CABLES SHOWN ON THE SINGLE LINE DIAGRAM. THESE MAY NOT BE REPEATED ON THE ELECTRICAL LAYOUT. PROVIDE EDCO HSP-121 SURGE SUPPRESSORS AT BOTH ENDS OF ALL 120V CONTROL CABLES. PROVIDE EDCO PC-642 SURGE SUPPRESSORS AT BOTH ENDS OF ALL SIGNAL CABLES.
4. MINIPOWER CENTER SHALL BE IN NEMA-3R STAINLESS STEEL ENCLOSURE, U.L. LISTED WITH COPPERWOUND EPOXY ENCAPSULATED TRANSFORMER, 40A, 2P, PRIMARY C.B., 50A/2P SECONDARY C.B. AND THE INDICATED SECONDARY C.B.'S.
5. JACKSON E.M.C. TRANSFORMER PAD. COORDINATE EXACT LOCATION WITH JACKSON E.M.C.
6. COORDINATE EXACT CONDUIT STUBUP LOCATIONS FROM GENERATOR MANUFACTURER'S SHOP DRAWINGS.
7. PROVIDE A STAINLESS STEEL BRACKET ON THE UNDERSIDE OF THE TOP SLAB. SUPPORT ALL THE MOTOR AND LEVEL SENSOR CABLES FROM THIS BRACKET USING STAINLESS STEEL KELLEMS GRIPS. LEAVE SLACK IN THESE CABLES AND ROUTE THEM TO THE PUMP CONTROL PANEL WITHOUT SPLICING.
8. GROUND THE GATE AND FENCE.
9. CONTROL WIRES FOR PHASE LOSS AND A.T.S. IN 'STANDBY POWER' MODE.

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PRECISION
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770.338.8000 • www.ppi.us

**GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN**

PUMP STATION ELECTRICAL SITE LAYOUT & DETAILS		DESIGN	CHECKED
SHEET TITLE	DRAWN	PYB	SNK
DESIGN	SNK		

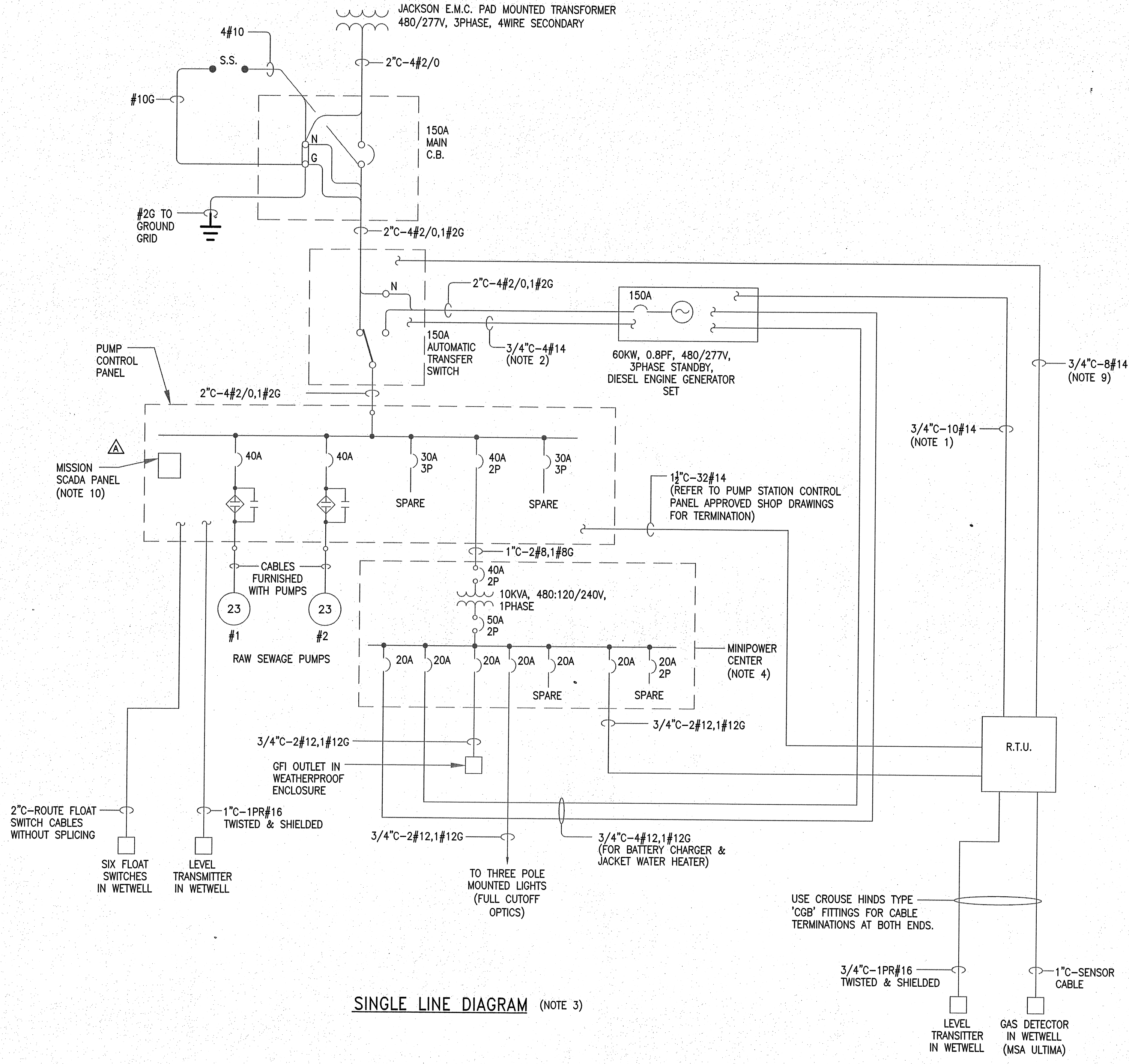
DATE	NO.	DESCRIPTION
04/05/18	A	ADDED STAINLESS STL TO NOTE 4

R17199
PPI PROJECT NO.

E-01

PLOT DATE: 4/20/2018 10:51 AM FILE PATH: E:\PROJECTS\2017\17199-UD-ADM-SATILLA GRAVEL SPRINGS\UNO\PUMP STA.DWG\17199PS-GRVEL SPRINGS PS ELECTRICAL.DWG - 2018-04-20 - SHANNON JACOBSEN

REVIEWED FOR
CODE COMPLIANCE
May 15, 2018
GWINNETT COUNTY
PLANNING & DEVELOPMENT



SINGLE LINE DIAGRAM (NOTE 3)

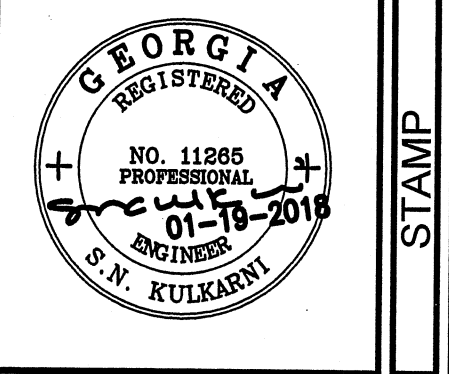
LEGEND

- TRANSFORMER
- POTENTIAL OR CONTROL-POWER TRANSFORMER
- S.S. SURGE SUPPRESSOR
- MOLDED CASE CIRCUIT BREAKER MCP DENOTES MOTOR CIRCUIT PROTECTOR
- SOFT START STARTER WITH BYPASS CONTACTOR
- MOTOR-NUMBER INSIDE INDICATES HORSEPOWER RATING

NOTES:

1. RUN WIRES FROM GENERATOR 'COMMON ALARM', 'LOW FUEL ALARM' AND 'RUN' CONTACT.
2. CONTROL WIRES FOR GENERATOR STARTING.
3. PROVIDE ALL CONDUITS/CABLES SHOWN ON THE SINGLE LINE DIAGRAM. THESE MAY NOT BE REPEATED ON THE ELECTRICAL LAYOUT. PROVIDE EDCO HSP-121 SURGE SUPPRESSORS AT BOTH ENDS OF ALL 120V CONTROL CABLES. PROVIDE EDCO PC-642 SURGE SUPPRESSORS AT BOTH ENDS OF ALL SIGNAL CABLES.
4. MINIPOWER CENTER SHALL BE IN NEMA-3R STAINLESS STEEL ENCLOSURE, U.L. LISTED WITH COPPERWOUND EPOXY ENCAPSULATED TRANSFORMER, 40A, 2P, PRIMARY C.B., 50A/2P SECONDARY C.B. AND THE INDICATED SECONDARY C.B.'S.
5. JACKSON E.M.C. TRANSFORMER PAD. COORDINATE EXACT LOCATION WITH JACKSON E.M.C.
6. COORDINATE EXACT CONDUIT STUBUP LOCATIONS FROM GENERATOR MANUFACTURER'S SHOP DRAWINGS.
7. PROVIDE A STAINLESS STEEL BRACKET ON THE UNDERSIDE OF THE TOP SLAB. SUPPORT ALL THE MOTOR AND LEVEL SENSOR CABLES FROM THIS BRACKET USING STAINLESS STEEL KELLEMS GRIPS. LEAVE SLACK IN THESE CABLES AND ROUTE THEM TO THE PUMP CONTROL PANEL WITHOUT SPLICING.
8. GROUND THE GATE AND FENCE.
9. CONTROL WIRES FOR PHASE LOSS AND A.T.S. IN 'STANDBY POWER' MODE.
10. SUPPLIED AND INTERNALLY WIRED IN THE PUMP CONTROL PANEL. ⚠

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GRAVEL SPRINGS
PUMP STATION AND
FORCE MAIN

SINGLE LINE DIAGRAM		SHEET TITLE	
DESIGN	SNK	DRAWN	PYB
CHECKED	SNK	RELEASE	

DATE	NO.	DESCRIPTION
04/05/18	A	ADDED MISSION PANEL

R17199
PPI PROJECT NO.

E-02

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