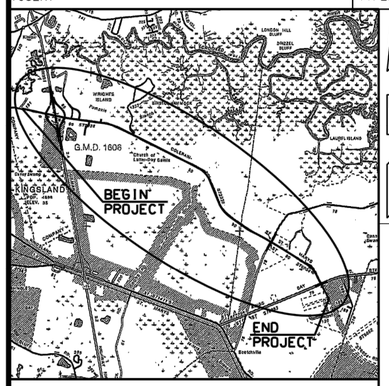
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

WATER AND SEWER FORCE MAIN RELOCATION OF PROPOSED WIDENING COLERAIN ROAD FROM I-95 TO KINGS BAY ROAD

FEDERAL AID PROJECT

GA. DOT PI NO. 0007414
CSSTP-0007-00(414) CAMDEN COUNTY
CONTROLLED ACCESS
FEDERAL ROUTE:
STATE ROUTE:
COUNTY ROAD: 140 & 90



LOCATION SKETCH

NOTE: THE CO-ORDINATES LISTED ARE EAST ZONE GRID CO-ORDINATES BASED ON THE GA. STATE PLANE CO-ORDINATE SYSTEM OF
HORIZONTAL DATUM : NAD 83(94)
VERTICAL DATUM : NAVD 88

MIDPOINT COORDINATE
STATION 170+25.00
N 296414.4843
E 824984.7126

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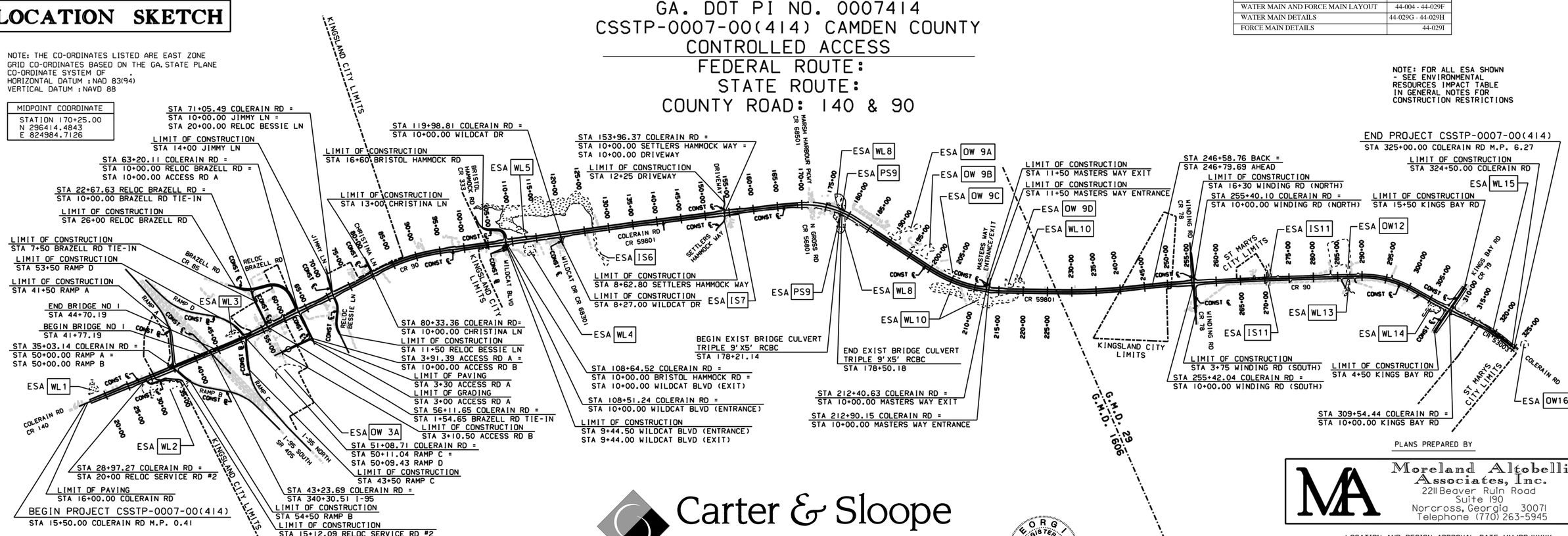
NOTE: FOR ALL ESA SHOWN - SEE ENVIRONMENTAL RESOURCES IMPACT TABLE IN GENERAL NOTES FOR CONSTRUCTION RESTRICTIONS



PROJECT DESIGNATION : FULL OVERSIGHT
PDP CLASSIFICATION : MAJOR PROJECT ON EXISTING LOCATION
FUNCTIONAL CLASSIFICATION : COLERAIN ROAD - URBAN MINOR ARTERIAL STREET

G.M.D. # 29 & 1606
LAND LOTS: N/A
PROJECT IS LOCATED 100% IN CAMDEN COUNTY
PROJECT IS LOCATED 100% IN CONGRESSIONAL DISTRICT 1

NOTE:
ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS DRAWINGS, OF PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO "STATE HIGHWAY DEPARTMENT OF GEORGIA", "STATE HIGHWAY DEPARTMENT", "GEORGIA STATE HIGHWAY DEPARTMENT", "HIGHWAY DEPARTMENT", OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA MEAN, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS, OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF THE BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

Carter & Sloope
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PLANS PREPARED BY

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Telephone (770) 263-5945

LOCATION AND DESIGN APPROVAL DATE: MM/DD/YYYY
SUBMITTED BY: _____
DATE: _____

PLANS COMPLETION DATE: _____

DATE STATE PROGRAM DELIVERY ENGINEER

DATE CHIEF ENGINEER

DESIGN DATA:		
TRAFFIC A.D.T.:	16900	(2017)
TRAFFIC A.D.T.:	28200	(2037)
TRAFFIC D.H.V.:	2530	
DIRECTIONAL DIST.:	56 /44	
% TRUCKS:	6.4%	
% 24 HR. TRUCKS:	7.5%	
SPEED DESIGN:	45 MPH	

LENGTH OF PROJECT	CAMDEN COUNTY NO 039
	MILES
NET LENGTH OF ROADWAY	5.800
NET LENGTH OF BRIDGES/ BRIDGE CULVERTS	0.061
NET LENGTH OF PROJECT	5.861
NET LENGTH OF EXCEPTIONS	0
GROSS LENGTH OF PROJECT	5.861

SCALE IN FEET
0 1000 2000 4000

REVISION DATES:

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

DRAWING No.
44-001

CSSTP-0007-00(414) CAMDEN COUNTY

p:\07104\HWY\DGN\07104cv01.dgn 1/6/2014 5:20:24 PM

WATER AND SEWER FORCE MAIN GENERAL NOTES:

1. ALL FACILITIES SMALLER THAN 6" THAT WILL NO LONGER BE IN SERVICE SHALL BE CAPPED. ALL FACILITIES WITH AN INSIDE DIAMETER LARGER THAN 6" SHALL BE GROUT FILLED PER THE STATION LIMITS NOTED ON THE PLAN SHEETS.
2. CONTRACTOR SHALL NOTIFY BILL COLEMAN WITH CITY OF KINGSLAND PUBLIC WORKS AT 912-729-5613 24 HOURS PRIOR TO EACH PHASE OF UTILITY CONSTRUCTION.
3. ALL MATERIALS SHALL MEET THE DEPARTMENTS SPECIAL PROVISIONS AND CITY OF KINGSLAND PUBLIC WORKS STANDARDS. STANDARDS ARE ON FILE WITH THE CITY OF KINGSLAND PUBLIC WORKS FOR REFERENCE. ALL MATERIALS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION OF WATER LINES AND SEWER FORCE MAINS. SUBMITTALS SHALL BE SUBMITTED TO BILL COLEMAN WITH THE CITY OF KINGSLAND PUBLIC WORKS AT 912-729-5613.
4. WATER MAINS SHALL BE A MINIMUM OF FOUR (4) FEET BELOW THE EXISTING GROUND LINE OR THE PROPOSED GRADE TO THE TOP OF PIPE.
5. ALL ABANDONED WATER VALVES SHALL REMAIN IN PLACE. THE ABANDONED VALVE BOXES SHALL BE REMOVED, THE VALVE CLOSED, AND THE ABANDONED VALVE BURIED IN PLACE. PRICE TO BE COVERED IN COSTS TO INSTALL WATER MAINS.
6. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL WATER METERS AND WATER VALVES FOR THE LIFE OF THE PROJECT.
7. ANY DAMAGES TO EXISTING UTILITIES DURING CONSTRUCTION BY CONTRACTOR SHALL BE REPLACED OR REPAIRED TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.
8. CONCRETE THRUST BLOCKING IS REQUIRED BEHIND ALL BENDS, TEES, FITTINGS, AND PLUGS. CONTRACTOR SHALL REFERENCE BLOCKING DETAIL FOR DIMENSIONS AND ORIENTATION. ADDITIONAL RODDING, LOCKING GASKETS, AND RESTRAINING GLANDS SHALL BE USED WHERE SHOWN OR AS NECESSARY TO RESTRAIN CONNECTIONS, BUT WILL NOT BE CONSIDERED A SUBSTITUTE FOR BLOCKING. THRUST BLOCKING TO BE INCLUDED IN OVERALL BID PRICE FOR WATER AND SEWAGE ITEMS. NO SEPARATE PAYMENT WILL BE MADE FOR THRUST BLOCKING.
9. SERVICE TRANSFERS SHALL NOT BE MADE UNTIL THE NEW LINE HAS BEEN PRESSURE TESTED, DISINFECTED, AND ACCEPTED AND PLACED IN SERVICE.
10. ALL FIRE HYDRANTS MUST BE INSTALLED WITHIN THE REQUIRED RIGHT-OF-WAY OR PERMANENT EASEMENT. FIRE HYDRANT SYMBOLS, AS SHOWN ON THE PLANS, ARE SHOWN LARGE FOR CLARITY. BUT UNDER NO CIRCUMSTANCES SHALL HYDRANTS BE PLACED OUTSIDE OF THE REQUIRED RIGHT-OF-WAY OR PERMANENT EASEMENT.
11. NO ADDITIONAL PAYMENT WILL BE MADE FOR ROCK REMOVAL DURING WATER LINE AND SEWER FORCE MAIN CONSTRUCTION AS IT WILL BE INCLUDED WITH THE OVERALL PRICE FOR WATER AND SEWER FORCE MAIN RELOCATIONS.
12. ALL RELOCATED AND/OR NEW WATER METERS SHALL BE TIED INTO EXISTING SERVICE LINE AT THE LOCATION THE SERVICE LINE ENTERS THE EXISTING/REQUIRED RIGHT-OF-WAY OR PERMANENT EASEMENT.
13. CONTRACTOR TO REMOVE ABANDONED WATER MAINS AS NEEDED TO ACCOMMODATE INSTALLATION OF NEW STORM DRAINS. PRICE FOR REMOVAL OF EXISTING WATER MAINS TO BE PAID UNDER GRADING COMPLETE.
14. FIRE HYDRANTS DESIGNATED FOR REMOVAL IN THE PLANS SHOULD BE STOCKPILED ON SITE BY THE CONTRACTOR FOR RETRIEVAL BY CITY OF KINGSLAND PUBLIC WORKS. COORDINATE RETRIEVAL WITH BILL COLEMAN AT 912-729-5613.
15. ALL WORK REQUIRED TO CAP EXISTING WATER MAINS TO BE PAID FOR IN THE UNIT PRICE PER LINEAR FOOT TO INSTALL THE WATER MAIN.
16. ALL WORK REQUIRED TO TIE TO EXISTING WATER MAINS TO BE PAID FOR IN THE UNIT PRICE PER LINEAR FOOT TO INSTALL THE WATER MAIN.
17. ALL 1" AND SMALLER HDPE SERVICE LINE INSTALLED ON LONGSIDE SERVICES SHALL BE PULLED THRU A 2" HDPE CASING. WORK REQUIRED TO INSTALL THE 2" HDPE CASING TO BE PAID UNDER ITEM 670-5010. 2" HDPE CASING TO BE INSTALLED BY DIRECTIONAL DRILL.
18. ALL 2" HDPE SERVICE LINE INSTALLED ON LONGSIDE SERVICES SHALL BE PULLED THRU A 4" HDPE CASING. WORK REQUIRED TO INSTALL THE 4" HDPE CASING TO BE PAID UNDER ITEM 670-5020. 4" HDPE SERVICE CASING TO BE INSTALLED BY DIRECTIONAL DRILL.
19. DOUBLE STRAP SADDLES USED TO CONNECT WATER SERVICES TO 6", 8" AND 12" WATER MAIN SHALL BE INCLUDED IN THE OVERALL PRICE FOR THE WATER MAIN TO WHICH IT PERTAINS.
20. BEDDING IS TO BE INCLUDED IN THE OVERALL PRICE FOR WATER AND SEWER ITEMS. NO SEPARATE PAY ITEM FOR BEDDING.
21. NO SEPARATE PAYMENT WILL BE MADE FOR JOINT RESTRAINTS, DUCTILE IRON FITTINGS AND PIPE ADAPTERS. THESE ITEMS SHALL BE COVERED IN THE WATER OR SEWER FORCE MAIN PIPING.
22. NO SEPARATE PAYMENT WILL BE MADE FOR METERED SERVICE LINES 2" DIAMETER AND LESS. COSTS FOR THE SERVICE LINES SHALL BE INCLUDED IN THE WATER METER PRICING.

LEGEND

ALL VAULTS SHOWN ARE BASED UPON SURFACE INFORMATION OR UTILITY RECORDS. THE SIZE, LOCATION AND ORIENTATION HAS BEEN DEPICTED TO QUALITY LEVEL "D" (QL-D) UNLESS OTHERWISE NOTED.

ABBREVIATIONS:

(QL-C)	EXISTING UTILITY STRUCTURES HAVE BEEN FIELD LOCATED AND SURVEYED TO ASSIST IN DEPICTING THE UTILITIES SHOWN ON RECORDS. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.
(QL-D)	DEPICTED ACCORDING TO UTILITY RECORD INFORMATION. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.
(DATFI)	DEPICTED ACCORDING TO FIELD INSPECTION
(FO)	FIBER OPTIC
(AATUR)	ABANDONED ACCORDING TO UTILITY RECORDS
(AATFI)	ABANDONED ACCORDING TO FIELD INSPECTION
(EATFI)	EMPTY ACCORDING TO FIELD INSPECTION
OUTSIDE DROP	SANITARY LATERAL THAT DROPS VERTICALLY JUST OUTSIDE A SANITARY MANHOLE AND ENTERS BOTH THE TOP AND BOTTOM OF THE MANHOLE. SO-DEEP SHOWS ONLY THE INVERT ELEVATION FOR THE TOP LATERAL.
(A)	UTILITY ATTACHED TO BRIDGE
EOI	END OF ELECTRONIC DESIGNATING INFORMATION
(NAP)	NO ASSOCIATED PIPING FOUND FROM UTILITY STRUCTURE
(NAC)	NO ASSOCIATED CABLES FOUND FROM UTILITY STRUCTURE
E——	UTILITY ENDPOINT
COMM	COMMUNICATIONS
UNK	UNKNOWN UTILITY OWNER OR MATERIAL TYPE OF UTILITY
COND.	CONDUIT
PLAS.	PLASTIC
STL.	STEEL
WRPD.	WRAPPED
TR	TRANSITE
C.I.	CAST IRON
D.I.	DUCTILE IRON
T.C.	TERRA COTTA
RCP	REINFORCED CONCRETE PIPE
SB	PEDESTRIAN TRAFFIC SIGNAL BUTTON
E-HV	HIGH VOLTAGE ELECTRIC TRANSMISSION LINE
MET.	METALLIC
F.L.	FLOW LINE
CWD	CREOSOTE WOOD DUCT
MTD	MULTIPLE TILE DUCT
MCD	MULTIPLE CONCRETE DUCT
PR	PAIR
PVC	POLYVINYL CHLORIDE
PVT	PRIVATE
LP	LIGHT POLE
LT	LIGHT
SL	STREET LIGHT
GA	GUY ANCHOR
UGS	UNDERGROUND SPLICE
O.D.	OUTSIDE DIAMETER
M.I.D.	MEASURED INTERIOR DEPTH
ABD.	ABANDONED
SMH	SANITARY MANHOLE
CO	CLEANOUT
GV	GAS VALVE
GTS	GAS TEST STATION
STR	STRAND
WM	WATER METER
SVC	SERVICE, UNKNOWN SIZE/TYPE
HH	HAND HOLE
TS	TEST STATION

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CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

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REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN ROAD

DRAWING No. 44-002

GADOT PROJECT NAME: WIDENING COLERAIN ROAD FROM I-95 TO KINGS BAY ROAD
COST ESTIMATE: WATER AND SEWER FORCE MAIN RELOCATION
CAMDEN COUNTY
FEDERAL AID PROJECT
P.I. NO.: 0007414

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
600-0001	FLOWABLE FILL	CY	505
610-6575	REM HYDRANT	EA	14
610-6625	REMOVE MANHOLE	EA	1
611-8140	ADJUST WATER VALVE BOX TO GRADE	EA	1
615-1000	JACK OR BORE PIPE, 0.250 IN THK, 12 IN DIA	LF	1060
615-1000	JACK OR BORE PIPE, 0.250 IN THK, 18 IN DIA	LF	1015
615-1100	DIRECTIONAL BORE PIPE, 6 IN HDPE	LF	300
615-1100	DIRECTIONAL BORE PIPE, 10 IN HDPE	LF	265
615-1100	DIRECTIONAL BORE PIPE, 12 IN HDPE	LF	350
660-1150	CUT & PLUG EXISTING SEWER MAIN	EA	7
660-1215	SEWER FORCE MAIN, 4 IN, PVC	LF	715
660-1220	SEWER FORCE MAIN, 6 IN, PVC	LF	10157
660-2405	AIR RELEASE VALVE ASSEMBLY, 2 IN	EA	4
668-3300	SAN SEWER MANHOLE, TP 1	EA	4
670-0800	WATER METER, 3/4 IN	EA	4
670-0805	WATER METER, 2 IN	EA	2
670-1060	WATER MAIN, 6 IN, PVC	LF	80
670-1060	WATER MAIN, 6 IN, DUCTILE IRON	LF	175
670-1100	WATER MAIN, 10 IN, PVC	LF	3453
670-1120	WATER MAIN, 12 IN, PVC	LF	12258
670-1600	CUT & PLUG EXISTING WATER MAIN	EA	20
670-2060	GATE VALVE, 6 IN	EA	29
670-2100	GATE VALVE, 10 IN	EA	1
670-2120	GATE VALVE, 12 IN	EA	6
670-3066	TAPPING SLEEVE & VALVE ASSEMBLY, 6 IN X 6 IN	EA	3
670-3087	TAPPING SLEEVE & VALVE ASSEMBLY, 8 IN X 8 IN	EA	4
670-3108	TAPPING SLEEVE & VALVE ASSEMBLY, 10 IN X 10 IN	EA	1
670-3127	TAPPING SLEEVE & VALVE ASSEMBLY, 12 IN X 8 IN	EA	1
670-3129	TAPPING SLEEVE & VALVE ASSEMBLY, 12 IN X 12 IN	EA	10
670-4000	FIRE HYDRANT	EA	27
670-5000	WATER SERVICE LINE, 3/4IN	LF	52
670-5020	WATER SERVICE LINE, 2IN	LF	292

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REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN ROAD

DRAWING No.

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

UTILITY LINECODES

	EXISTING	TO BE REMOVED	PROPOSED	TYPE OF UTILITY
OVERHEAD	E	E	E	ELECTRIC
	E-T	E-T	E-T	ELECTRIC/TELECOMMUNICATIONS
	E-TV	E-TV	E-TV	ELECTRIC/CABLE TV
	E-TC	E-TC	E-TC	ELECTRIC/TRAFFIC CONTROL
	E-T-TV	E-T-TV	E-T-TV	ELECTRIC/TELECOMMUNICATIONS/CABLE TV
	E-T-TV-TC	E-T-TV-TC	E-T-TV-TC	ELECTRIC/TELECOMMUNICATIONS/CABLE TV/TRAFFIC CONTROL
	E-TV-TC	E-TV-TC	E-TV-TC	ELECTRIC/CABLE TV/TRAFFIC CONTROL
	E-T-TC	E-T-TC	E-T-TC	ELECTRIC/TELECOMMUNICATIONS/TRAFFIC CONTROL
	GW	GW	GW	GUY WIRE
	T	T	T	TELECOMMUNICATIONS
	T-TC	T-TC	T-TC	TELECOMMUNICATIONS/TRAFFIC CONTROL
	T-TV-TC	T-TV-TC	T-TV-TC	TELECOMMUNICATIONS/CABLE TV/TRAFFIC CONTROL
	T-TV	T-TV	T-TV	TELECOMMUNICATIONS/CABLE TV
	TV	TV	TV	CABLE TV
	TV-TC	TV-TC	TV-TC	CABLE TV/TRAFFIC CONTROL
	TC	TC	TC	TRAFFIC CONTROL
UNDERGROUND	E	E	E	ELECTRIC (QL-D)
	E(C)	E(C)		ELECTRIC (QL-C)
	E(B)	E(B)		ELECTRIC (QL-B)
	T	T	T	TELECOMMUNICATIONS (QL-D)
	T(C)	T(C)		TELECOMMUNICATIONS (QL-C)
	T(B)	T(B)		TELECOMMUNICATIONS (QL-B)
	TV	TV	TV	CABLE TV (QL-D)
	TV(C)	TV(C)		CABLE TV (QL-C)
	TV(B)	TV(B)		CABLE TV (QL-B)
	W	W	W	WATER (QL-D)
	W(C)	W(C)		WATER (QL-C)
	W(B)	W(B)		WATER (QL-B)
	**W	**W	**W	WATER FOR LABELED PIPE SIZES (QL-D)
	**W(C)	**W(C)		WATER FOR LABELED PIPE SIZES (QL-C)
	**W(B)	**W(B)		WATER FOR LABELED PIPE SIZES (QL-B)
	NW	NW	NW	NON-POTABLE WATER (QL-D)
	NW(C)	NW(C)		NON-POTABLE WATER (QL-C)
	NW(B)	NW(B)		NON-POTABLE WATER (QL-B)
	**NW	**NW	**NW	NON-POTABLE WATER FOR LABELED PIPE SIZES (QL-D)
	**NW(C)	**NW(C)		NON-POTABLE WATER FOR LABELED PIPE SIZES (QL-C)
	**NW(B)	**NW(B)		NON-POTABLE WATER FOR LABELED PIPE SIZES (QL-B)
	STM	STM	STM	STEAM (QL-D)
	STM(C)	STM(C)		STEAM (QL-C)
	STM(B)	STM(B)		STEAM (QL-B)
	**STM	**STM	**STM	STEAM FOR LABELED PIPE SIZES (QL-D)
	**STM(C)	**STM(C)		STEAM FOR LABELED PIPE SIZES (QL-C)
	**STM(B)	**STM(B)		STEAM FOR LABELED PIPE SIZES (QL-B)
	SS	SS	SS	SANITARY SEWER WITH FLOW DIRECTION (QL-D)
	SS(C)	SS(C)		SANITARY SEWER WITH FLOW DIRECTION (QL-C)
	SS(B)	SS(B)		SANITARY SEWER WITH FLOW DIRECTION (QL-B)
	Σ**SS	Σ**SS	Σ**SS	SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (QL-D)
	Σ**SS(C)	Σ**SS(C)		SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (QL-C)
	Σ**SS(B)	Σ**SS(B)		SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (QL-B)
	SFM	SFM	SFM	SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (QL-D)
	SFM(C)	SFM(C)		SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (QL-C)
	SFM(B)	SFM(B)		SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (QL-B)
	G	G	G	GAS (QL-D)
	G(C)	G(C)		GAS (QL-C)
	G(B)	G(B)		GAS (QL-B)
	**G	**G	**G	GAS FOR LABELED PIPE SIZES (QL-D)
	**G(C)	**G(C)		GAS FOR LABELED PIPE SIZES (QL-C)
	**G(B)	**G(B)		GAS FOR LABELED PIPE SIZES (QL-B)
	P	P	P	PETROLEUM (QL-D)
	P(C)	P(C)		PETROLEUM (QL-C)
	P(B)	P(B)		PETROLEUM (QL-B)
	**P	**P	**P	PETROLEUM FOR LABELED PIPE SIZES (QL-D)
	**P(C)	**P(C)		PETROLEUM FOR LABELED PIPE SIZES (QL-C)
	**P(B)	**P(B)		PETROLEUM FOR LABELED PIPE SIZES (QL-B)
	TC	FOR PROPOSED/TEMPORARY TRAFFIC CONTROL INFORMATION REFER TO TRAFFIC SIGNAL PLANS		TRAFFIC CONTROL (QL-D)
	TC(C)			TRAFFIC CONTROL (QL-C)
	TC(B)			TRAFFIC CONTROL (QL-B)
	UNK(B)	UNK(B)		UNKNOWN UTILITY FOUND IN SUE INVESTIGATION (QL-B)

UTILITY SYMBOLS

EXISTING	PROPOSED	TEMPORARY	
			UTILITY POLE/GUY POLE
			LIGHT POLE
			GUY ANCHOR
			MARKER
			SPLICE BOX
			CABINET
			VENT
			ELECTRIC MANHOLE
			HAND HOLE
			TRANSFORMER
			ELECTRIC METER
			ELECTRIC BOX
			TELECOMMUNICATIONS MANHOLE
			TELECOMMUNICATIONS PEDESTAL
SLC	SLC	SLC	SUBCRIBER LOOP CARRIER (aka "SLICK")
			PHONE BOOTH
			CABLE TV PEDESTAL
TV	TV	TV	CABLE TV MANHOLE
W	W	W	WATER VALVE
W	W	W	WATER METER
W	W	W	WATER MANHOLE
			FIRE HYDRANT ASSEMBLY (INCLUDES ASSOCIATED VALVE)
BFP	BFP	BFP	BACKFLOW PREVENTER
PIV	PIV	PIV	PRESSURE INDICATOR VALVE
ARV	ARV	ARV	AIR RELEASE VALVE
W	W	W	WELL
W	W	W	WATER VAULT
W	W	W	WATER VALVE MARKER
			STAND PIPE

EXISTING	PROPOSED	TEMPORARY	
CO	CO	CO	CLEANOUT
SS	SS	SS	SANITARY SEWER MANHOLE
ARV	ARV	ARV	AIR RELEASE VALVE
GT	GT	GT	GREASE TRAP
S	S	S	SANITARY SEWER FORCE MAIN VALVE
G	G	G	GAS VALVE
G	G	G	GAS METER
G	G	G	GAS MANHOLE
GPR	GPR	GPR	GAS PRESSURE REGULATOR
G	G	G	GAS VAULT
GTS	GTS	GTS	GAS TEST STATION
P	P	P	PETROLEUM VALVE
TC	FOR PROPOSED/TEMPORARY TRAFFIC CONTROL INFORMATION REFER TO TRAFFIC SIGNAL PLANS		TRAFFIC CONTROL MANHOLE/ ELECTRIC COMMUNICATIONS BOX
			TRAFFIC CONTROL PEDESTRIAN SIGNAL/BUTTON POST

MISCELLANEOUS

LOS	LIMITS OF OVERHEAD AND SUBSURFACE UTILITY INVESTIGATION
TH	TEST HOLE (QL-A ONLY)
EOI	END OF INFORMATION
	QUALITY LEVEL (QL) DELINEATION
123	POLE ID
A01	SANITARY SEWER MANHOLE (SSMH) ID
CI23	CONFLICT LOCATION (UTILITY IMPACT ANALYSIS (UIA) ONLY)
	ELEVATION POINT

QUALITY LEVELS AND DEFINITIONS

QL-D DEPICTED ACCORDING TO UTILITY RECORD INFORMATION AND IN-FIELD VISUAL INSPECTION. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.

QL-C EXISTING UTILITY STRUCTURES HAVE BEEN FIELD LOCATED AND SURVEYED TO ASSIST IN DEPICTING THE UTILITIES SHOWN ON RECORDS. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.

QL-B INFORMATION WAS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROPRIATE HORIZONTAL POSITION OF THE SUBSURFACE UTILITIES. QL-B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.

QL-A OBTAIN PRECISE HORIZONTAL AND VERTICAL POSITION OF THE UTILITY LINE BY EXCAVATING A TEST HOLE. THE TEST HOLE SHALL BE DONE USING VACUUM EXCAVATION OR COMPARABLE NONDESTRUCTIVE EQUIPMENT IN A MANNER AS TO CAUSE NO DAMAGE TO THE UTILITY LINE. AFTER EXCAVATING A TEST HOLE, A FIELD SURVEY SHALL BE PERFORMED TO DETERMINE THE EXACT LOCATION AND POSITION OF THE UTILITY LINE.

TELEPHONE PAIR SIZE TABLE

TELEPHONE PAIR SIZE	TELEPHONE CABLE DIAMETER
5 - 100	0.50 TO 2.00 IN
101 - 2400	UP TO 3.50 IN

GEORGIA REGISTERED No. 15685 PROFESSIONAL ENGINEER MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

Moreland Altobelli Associates, Inc.
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Norcross, Georgia 30071
Telephone (770) 263-5945

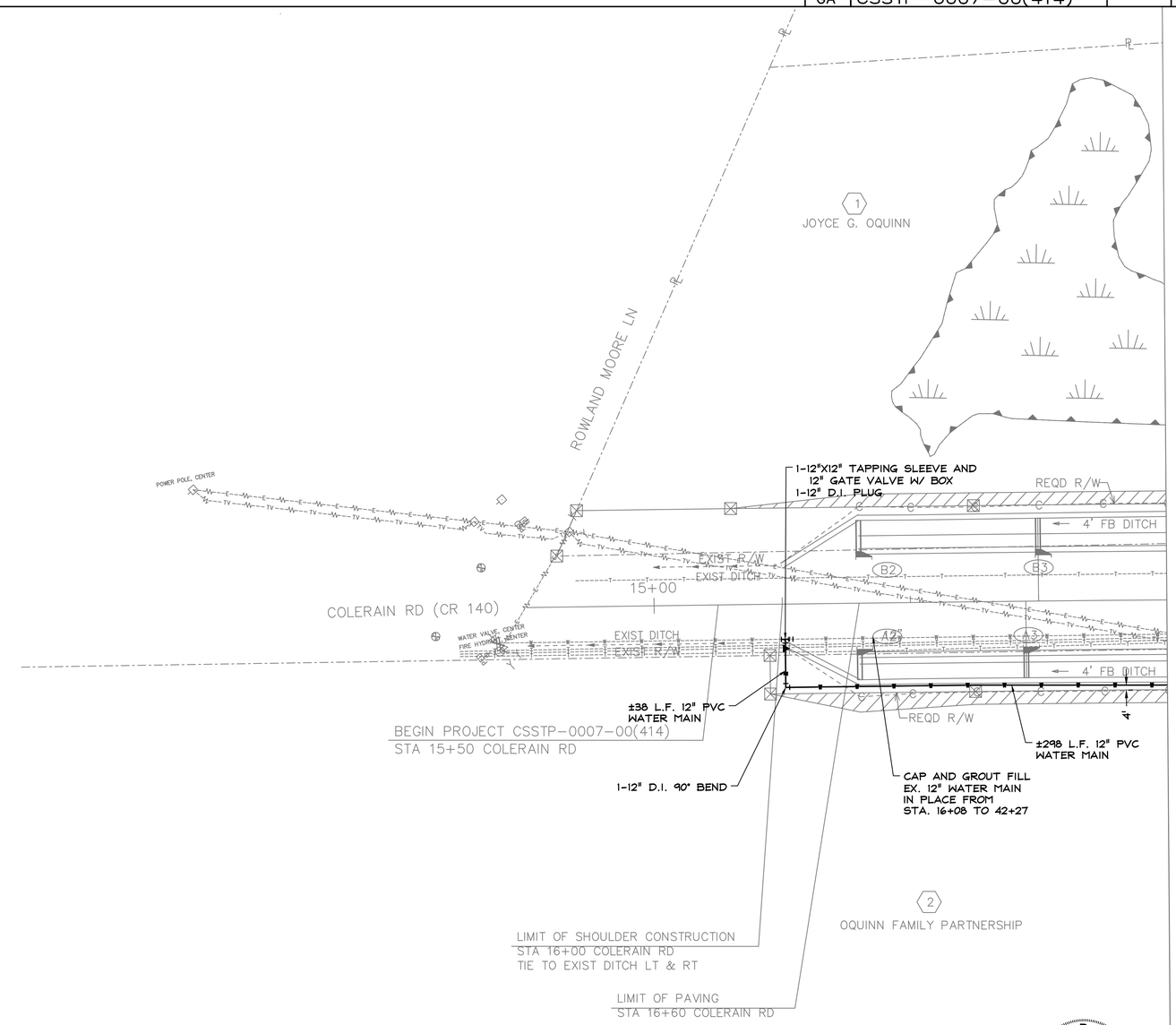
Carter & Sloope
CONSULTING ENGINEERS
MACON ◇ ALBANY ◇ ATHENS ◇ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
WATER AND SEWER FORCE MAIN RELOCATION PLANS
COLERAIN ROAD
DRAWING No. 44-003

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



GEORGIA REGISTERED No. 16882 PROFESSIONAL ENGINEER MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

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DEPARTMENT OF TRANSPORTATION

OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD – WATER IMPROVEMENTS
STA 15+50 TO STA 19+00

DRAWING No.
44-004

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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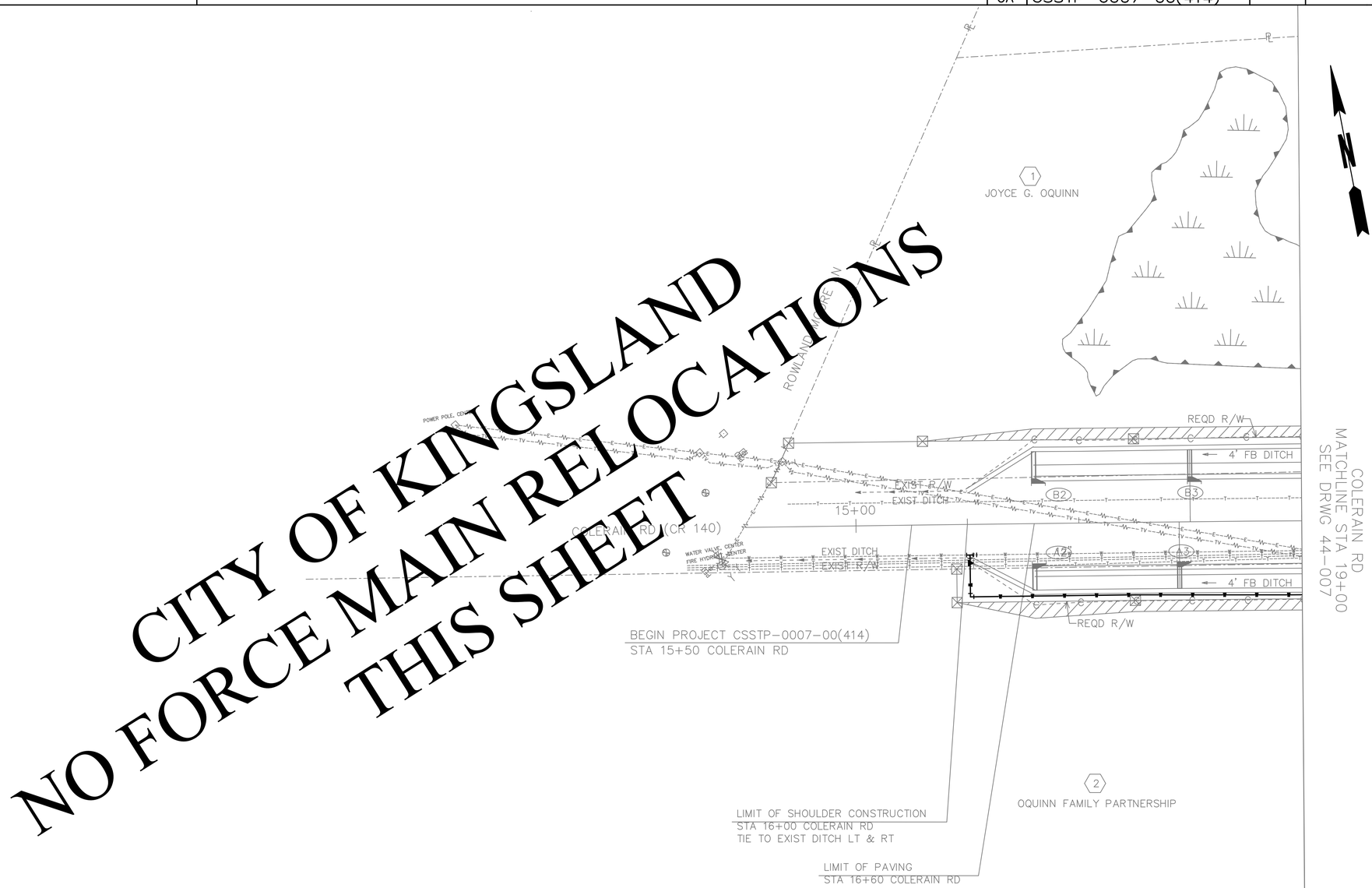

CITY OF KINGSLAND
NO FORCE MAIN RELOCATIONS
THIS SHEET

GEORGIA REGISTERED No. 16662 PROFESSIONAL ENGINEER MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-SEWER IMPROVEMENTS
STA 15+50 TO STA 19+00

DRAWING No.
44-005

3/1/2007 GPLN

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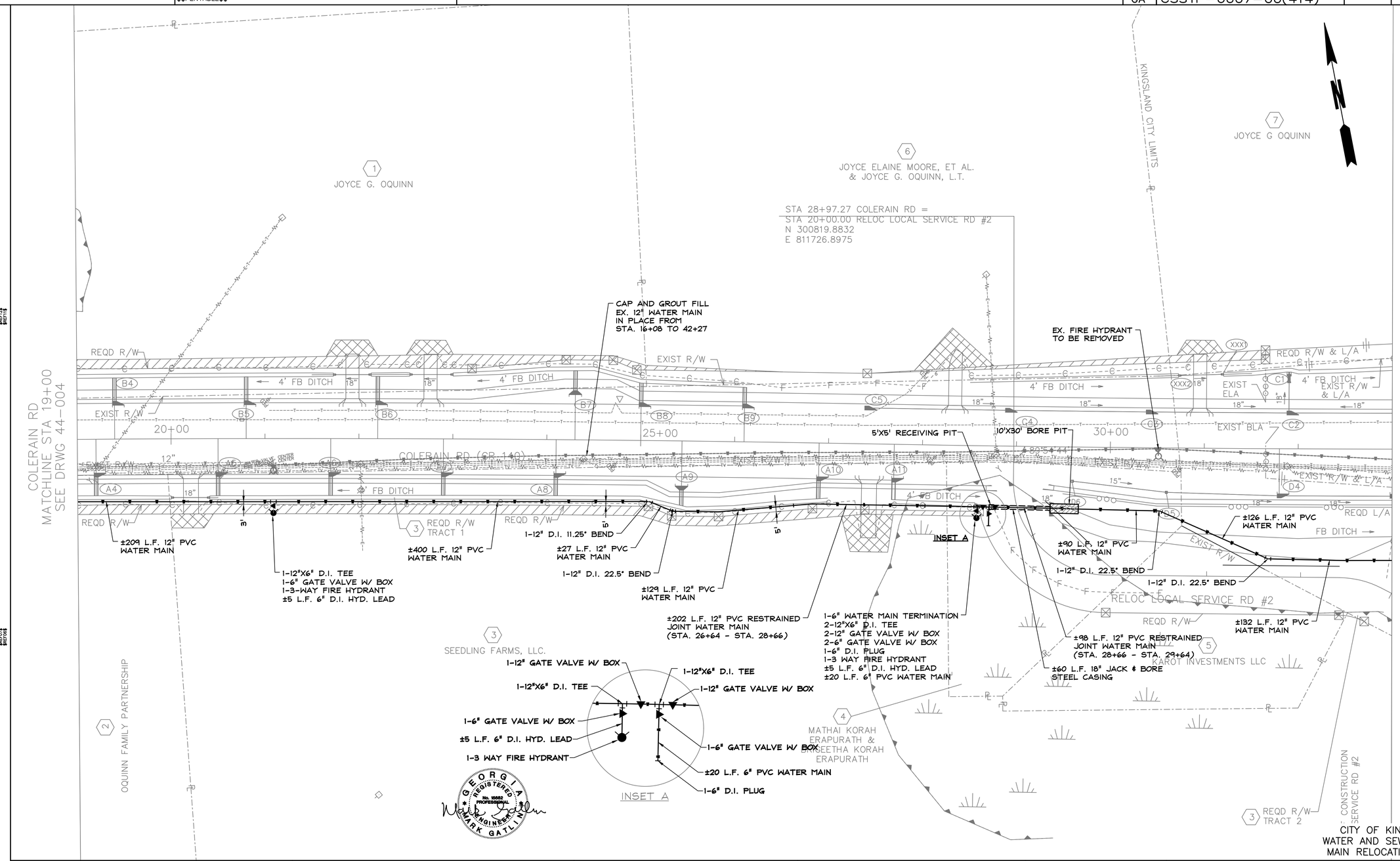

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
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WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD – WATER IMPROVEMENTS
STA 19+00 TO STA 33+00

DRAWING No. 44-006

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

CITY OF KINGSLAND
NO FORCE MAIN RELOCATIONS
THIS SHEET

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
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OFFICE: PROGRAM DELIVERY

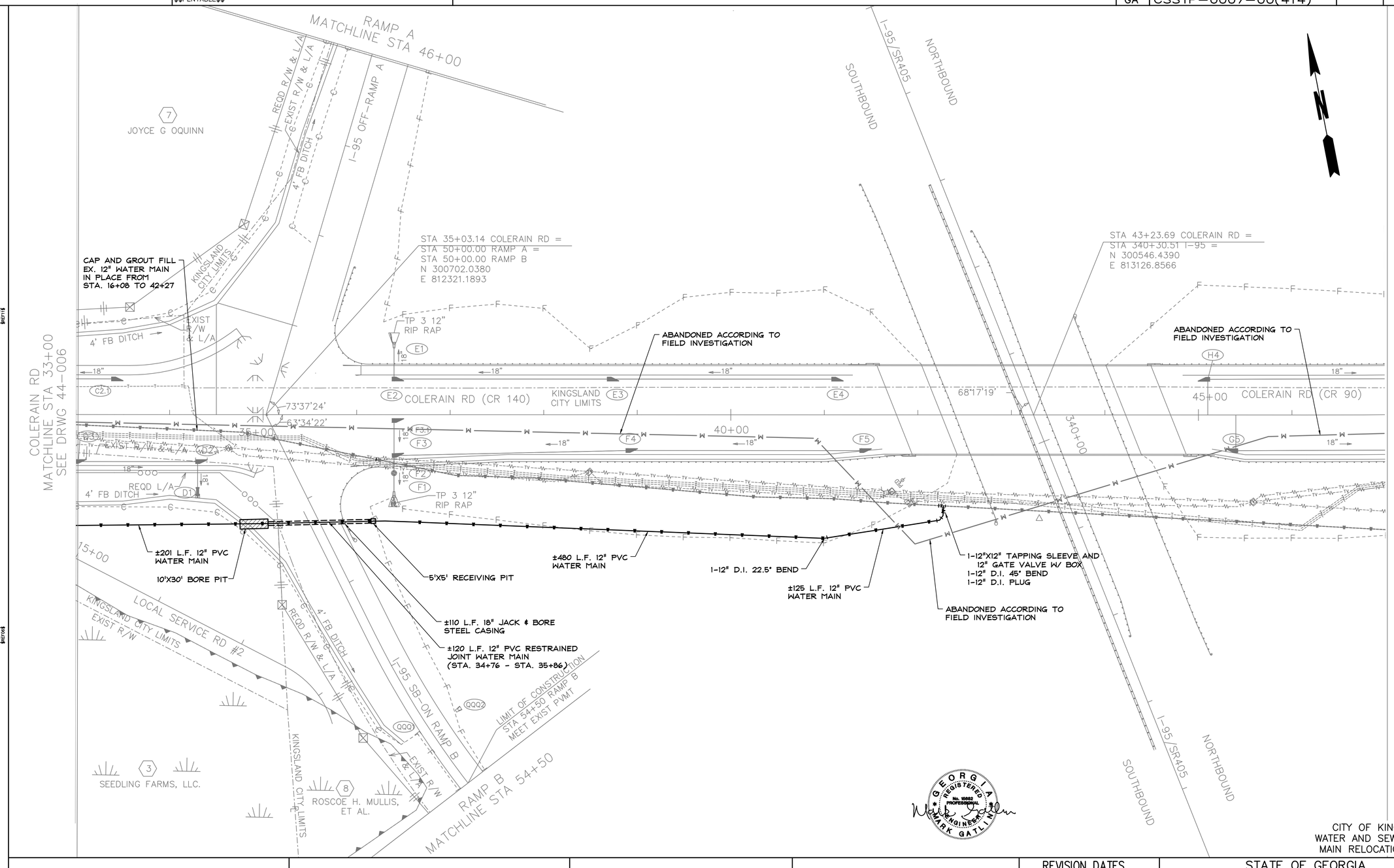
WATER AND SEWER FORCE MAIN
RELOCATION PLANS

COLERAIN RD-SEWER IMPROVEMENTS
STA 19+00 TO STA 33+00

DRAWING No.
44-007

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
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WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 33+00 TO STA 47+00

DRAWING No. 44-008

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

CITY OF KINGSLAND
NO FORCE MAIN RELOCATIONS
THIS SHEET

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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STATE OF GEORGIA
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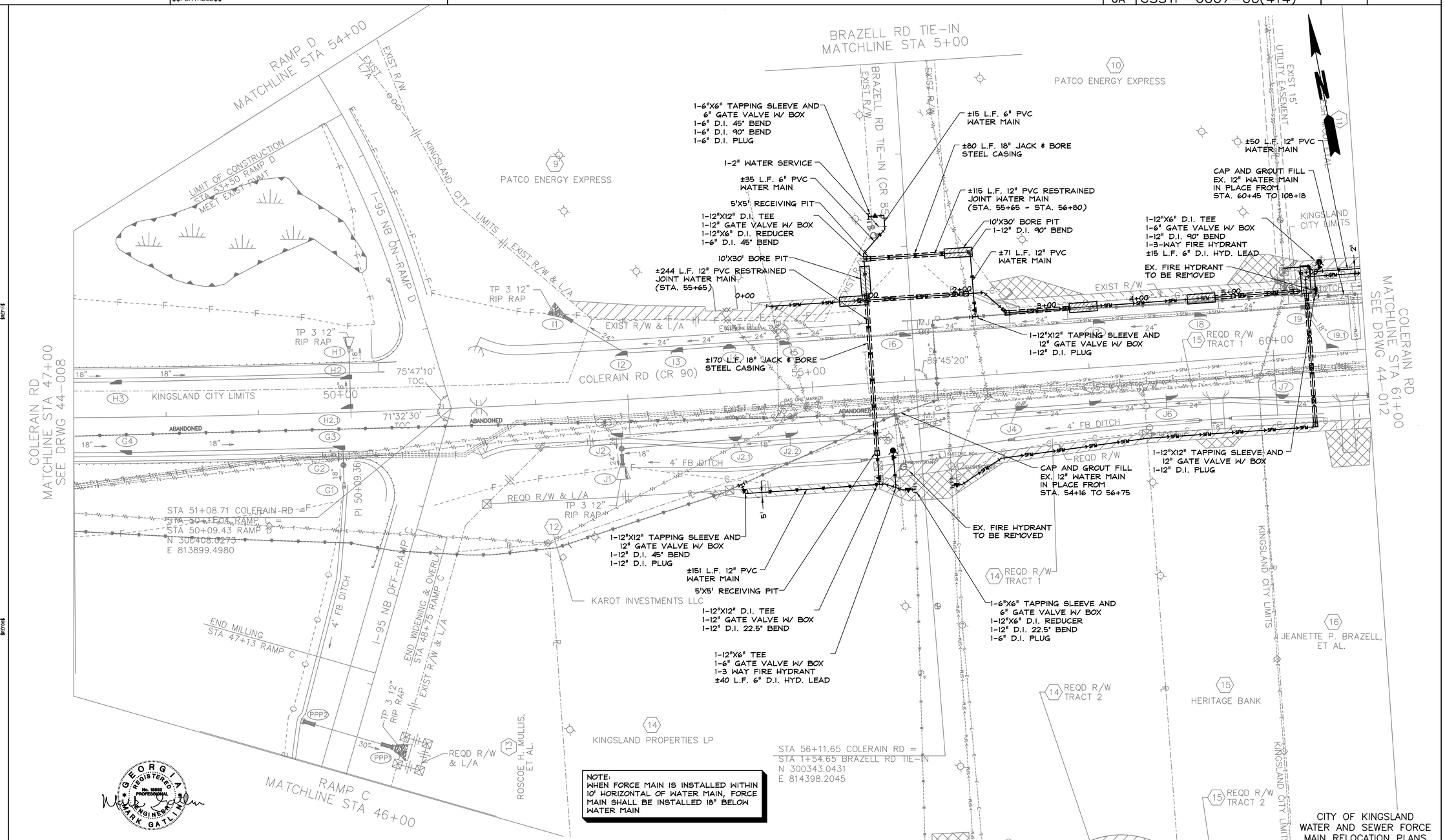
OFFICE: PROGRAM DELIVERY
WATER AND SEWER FORCE MAIN RELOCATION PLANS
COLERAIN RD-SEWER IMPROVEMENTS
STA 33+00 TO STA 47+00
DRAWING No. 44-009

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
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REVISION DATES		

STATE OF GEORGIA
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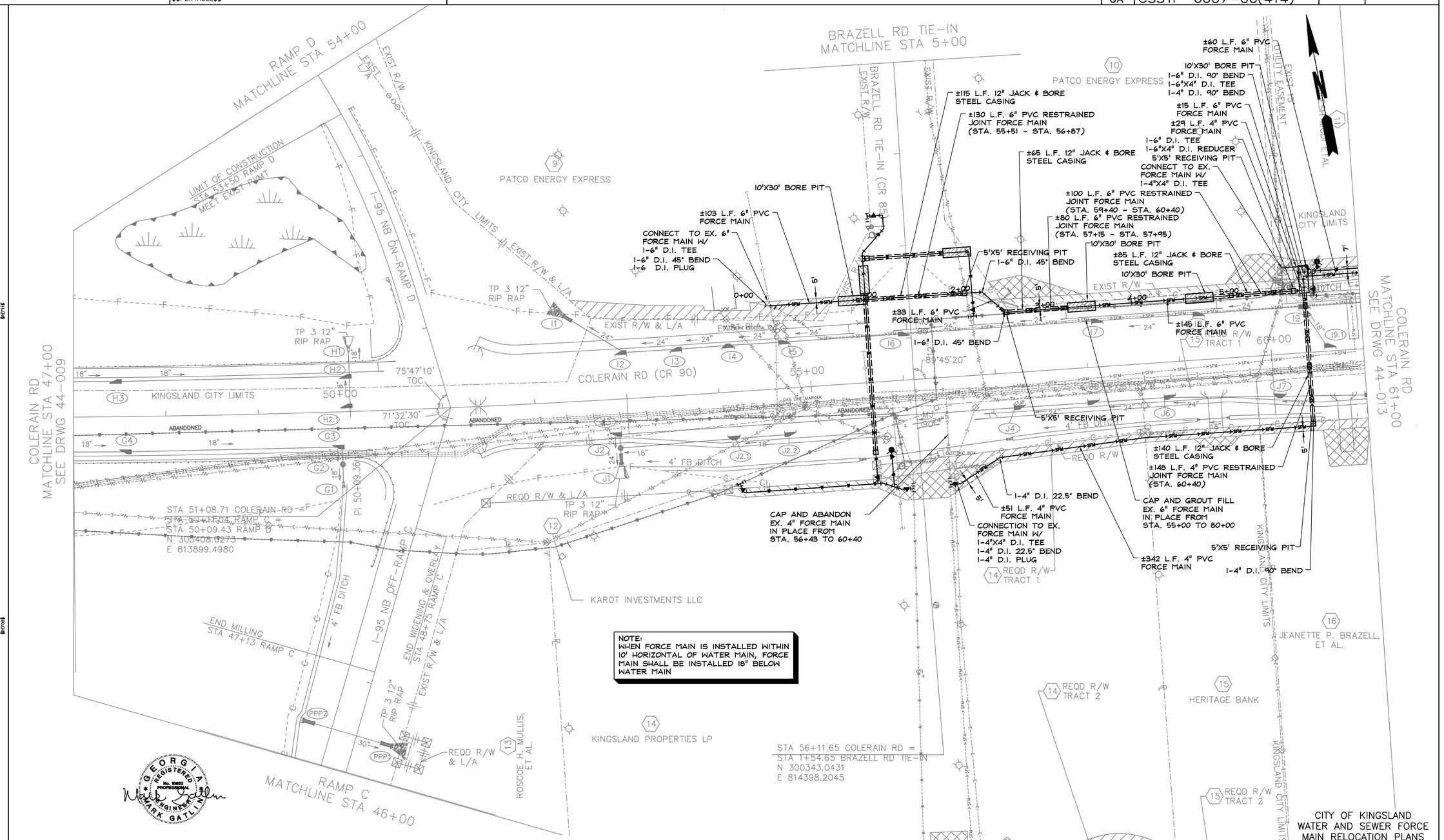
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 47+00 TO STA 61+00

DRAWING No. 44-010

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



SCALE IN FEET
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STATE OF GEORGIA
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WATER AND SEWER FORCE MAIN RELOCATION PLANS

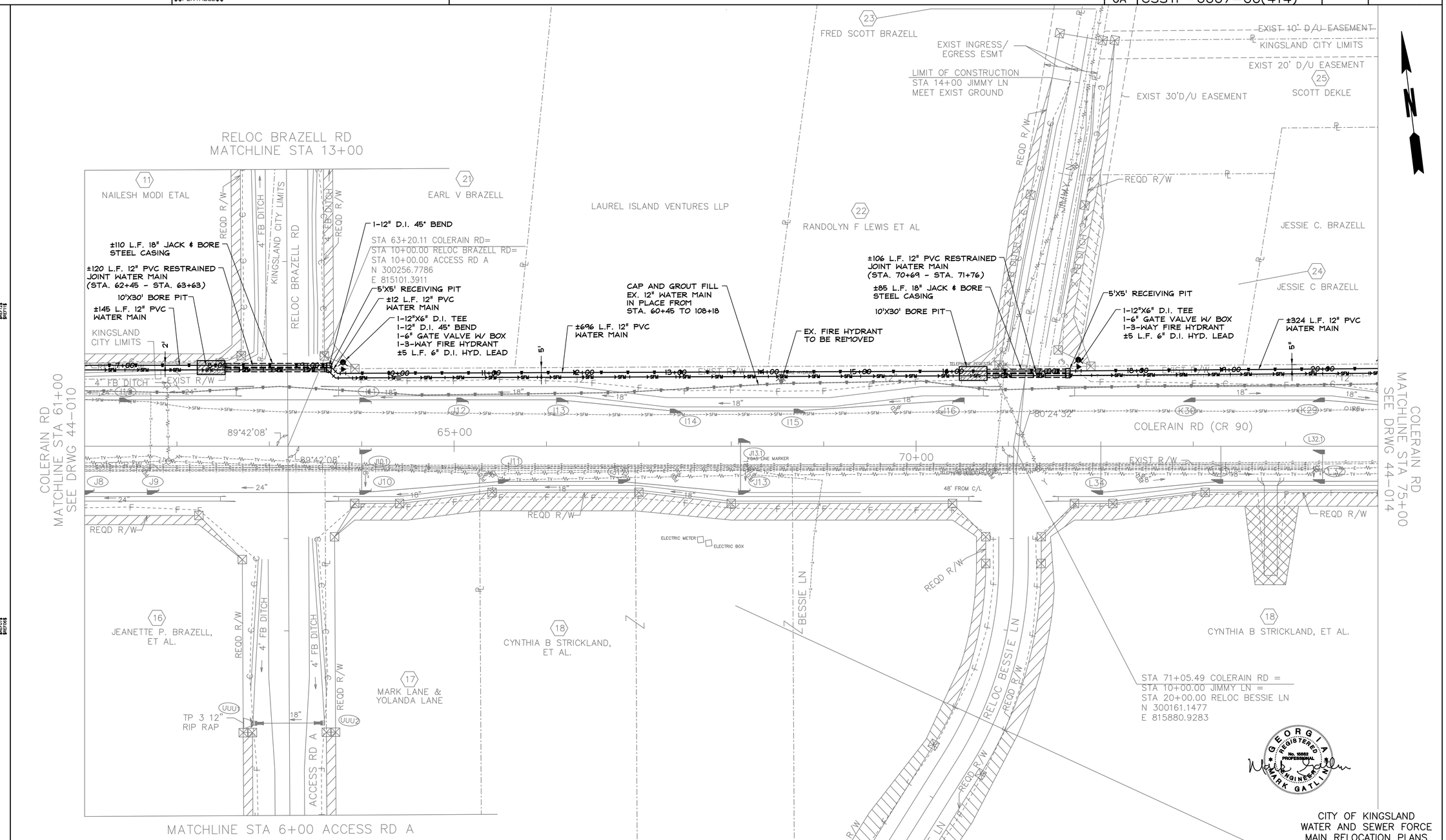
COLERAIN RD-SEWER IMPROVEMENTS
STA 47+00 TO STA 61+00

DRAWING No. 44-011

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
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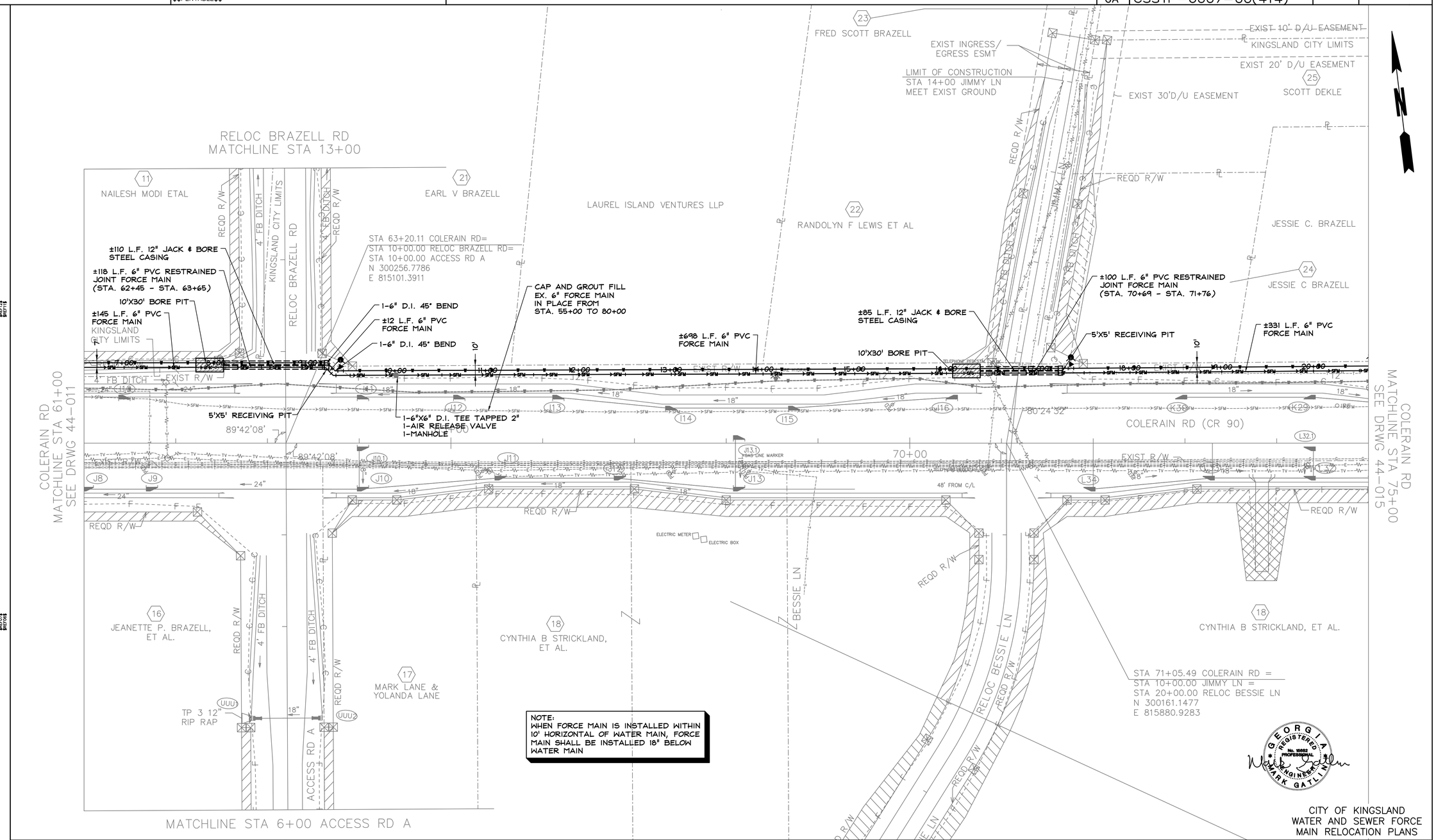
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 61+00 TO STA 75+00

DRAWING No. 44-012

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-SEWER IMPROVEMENTS
STA 61+00 TO STA 75+00

DRAWING No. 44-013

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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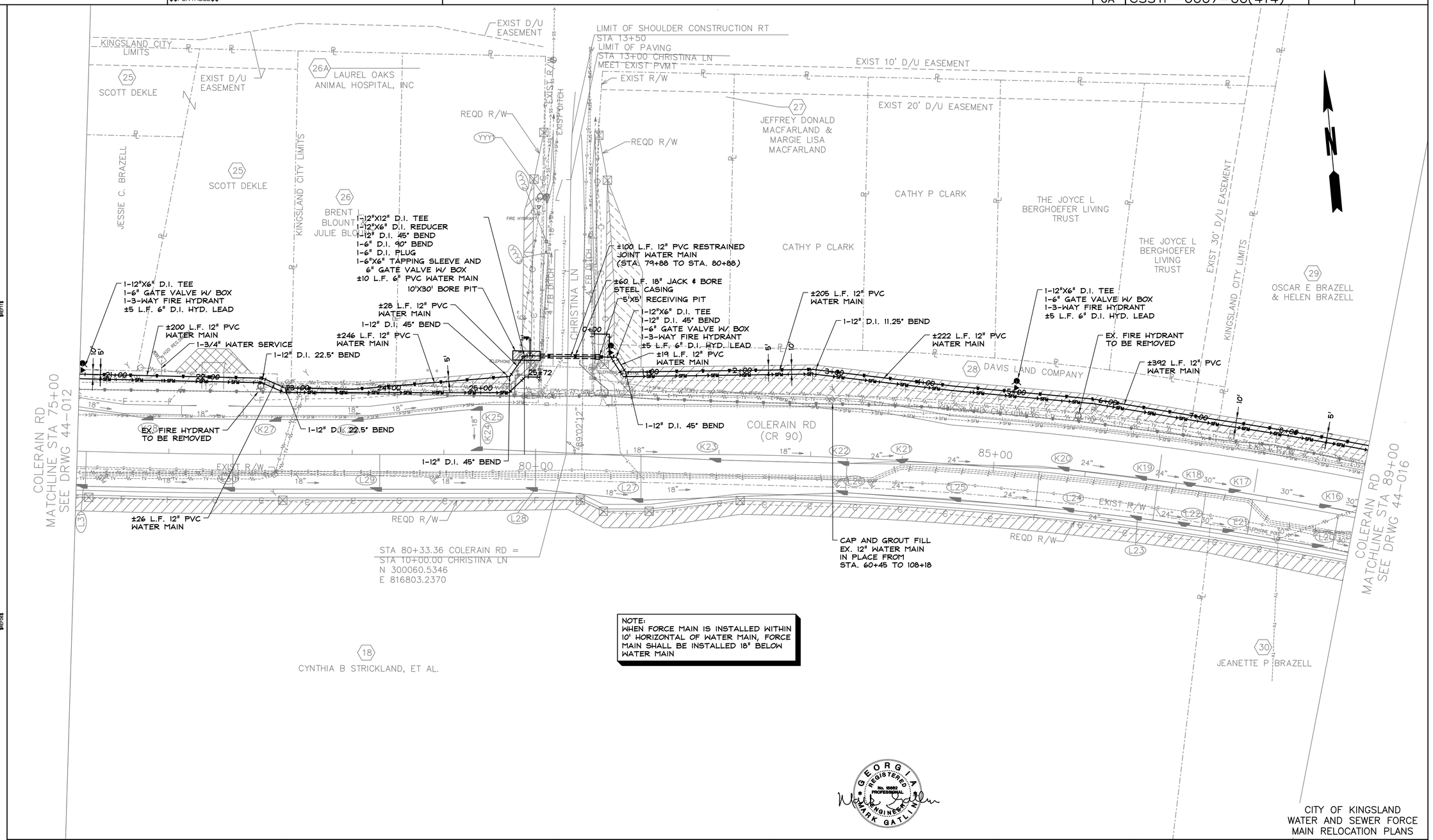

NOTE:
WHEN FORCE MAIN IS INSTALLED WITHIN 10' HORIZONTAL OF WATER MAIN, FORCE MAIN SHALL BE INSTALLED 18" BELOW WATER MAIN

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 15882 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

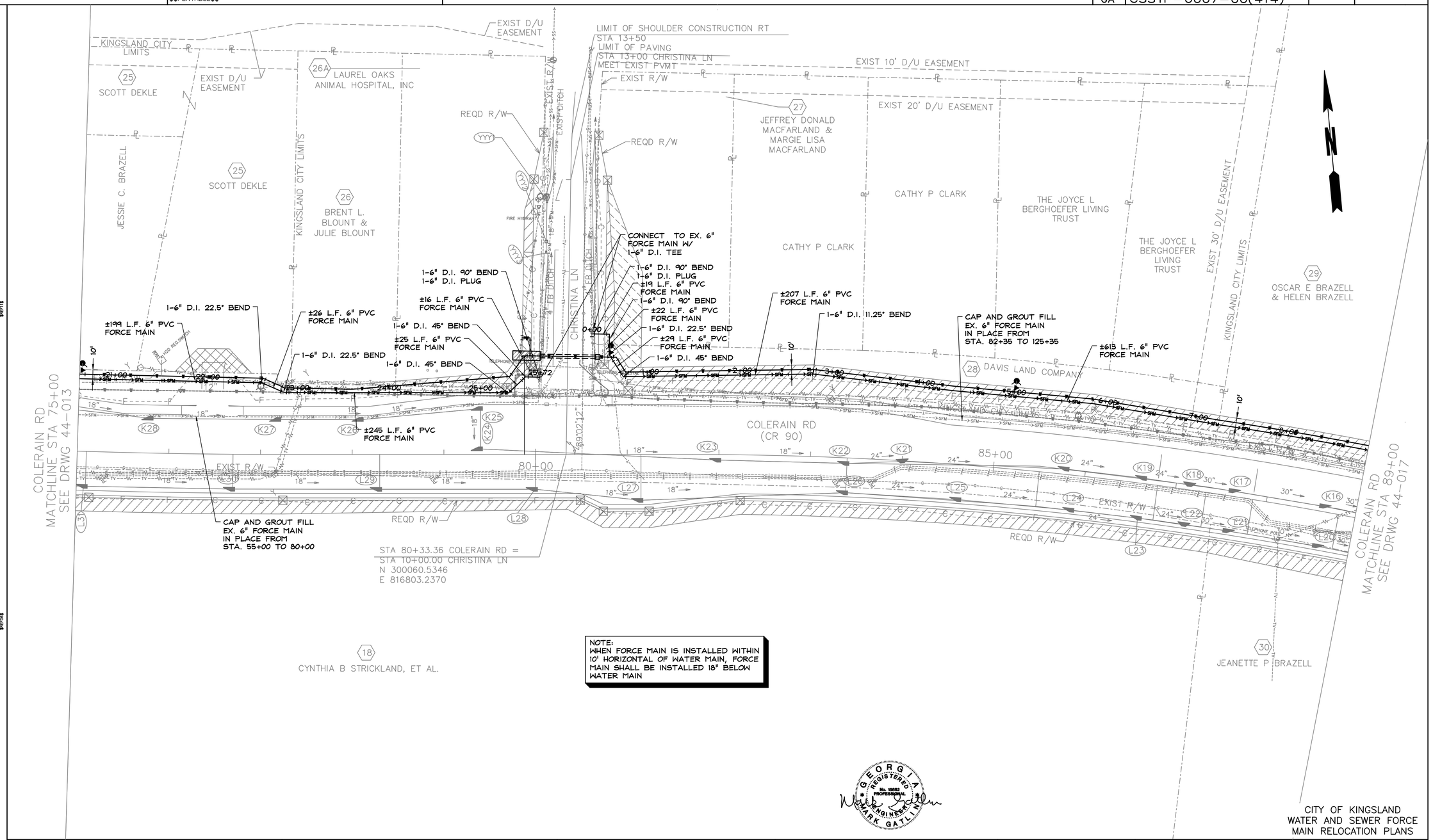
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 75+00 TO STA 89+00

DRAWING No. 44-014

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



NOTE:
WHEN FORCE MAIN IS INSTALLED WITHIN 10' HORIZONTAL OF WATER MAIN, FORCE MAIN SHALL BE INSTALLED 18" BELOW WATER MAIN

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 16662 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
WATER AND SEWER FORCE MAIN RELOCATION PLANS
COLERAIN RD-SEWER IMPROVEMENTS
STA 75+00 TO STA 89+00
DRAWING No. 44-015

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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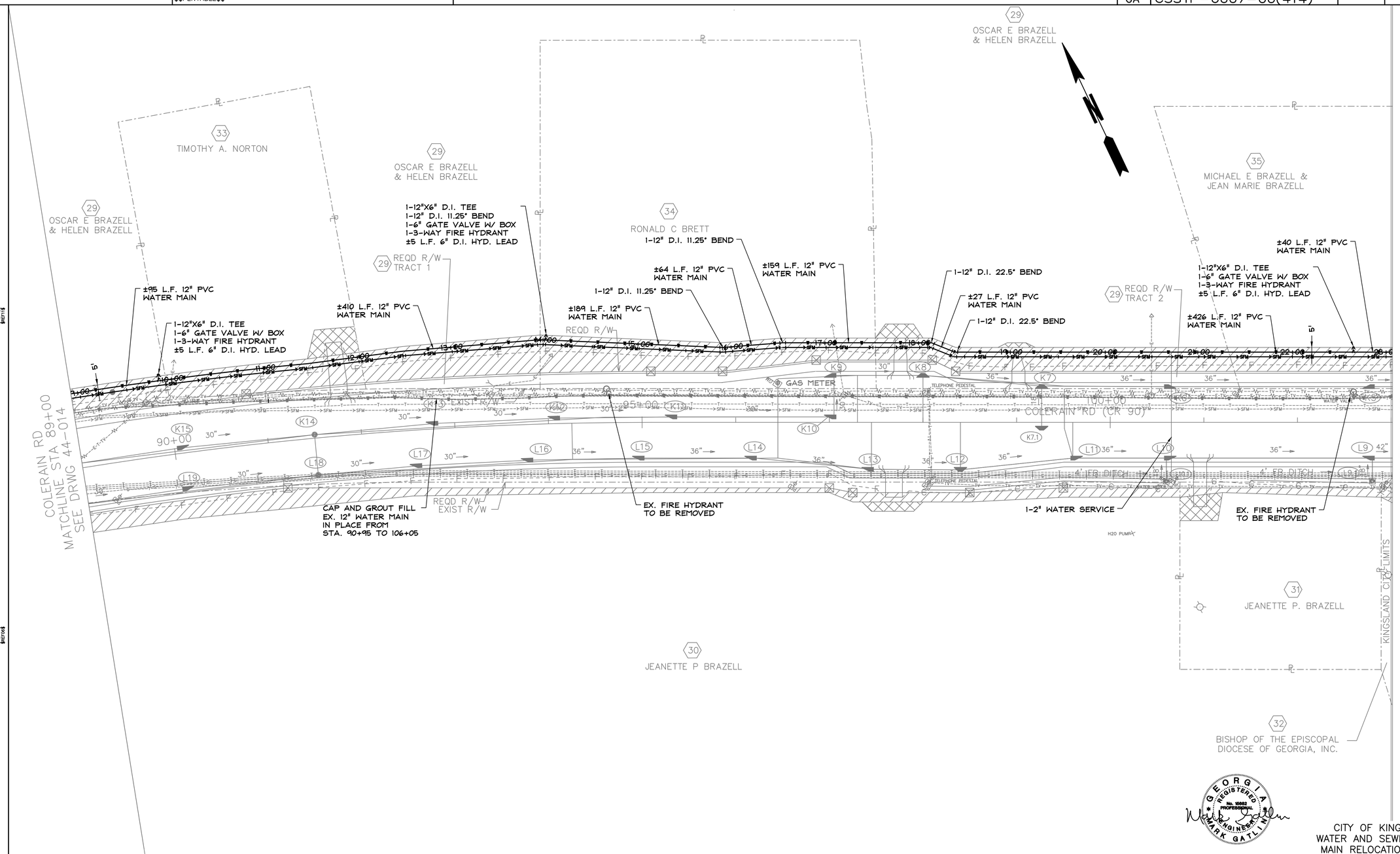

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

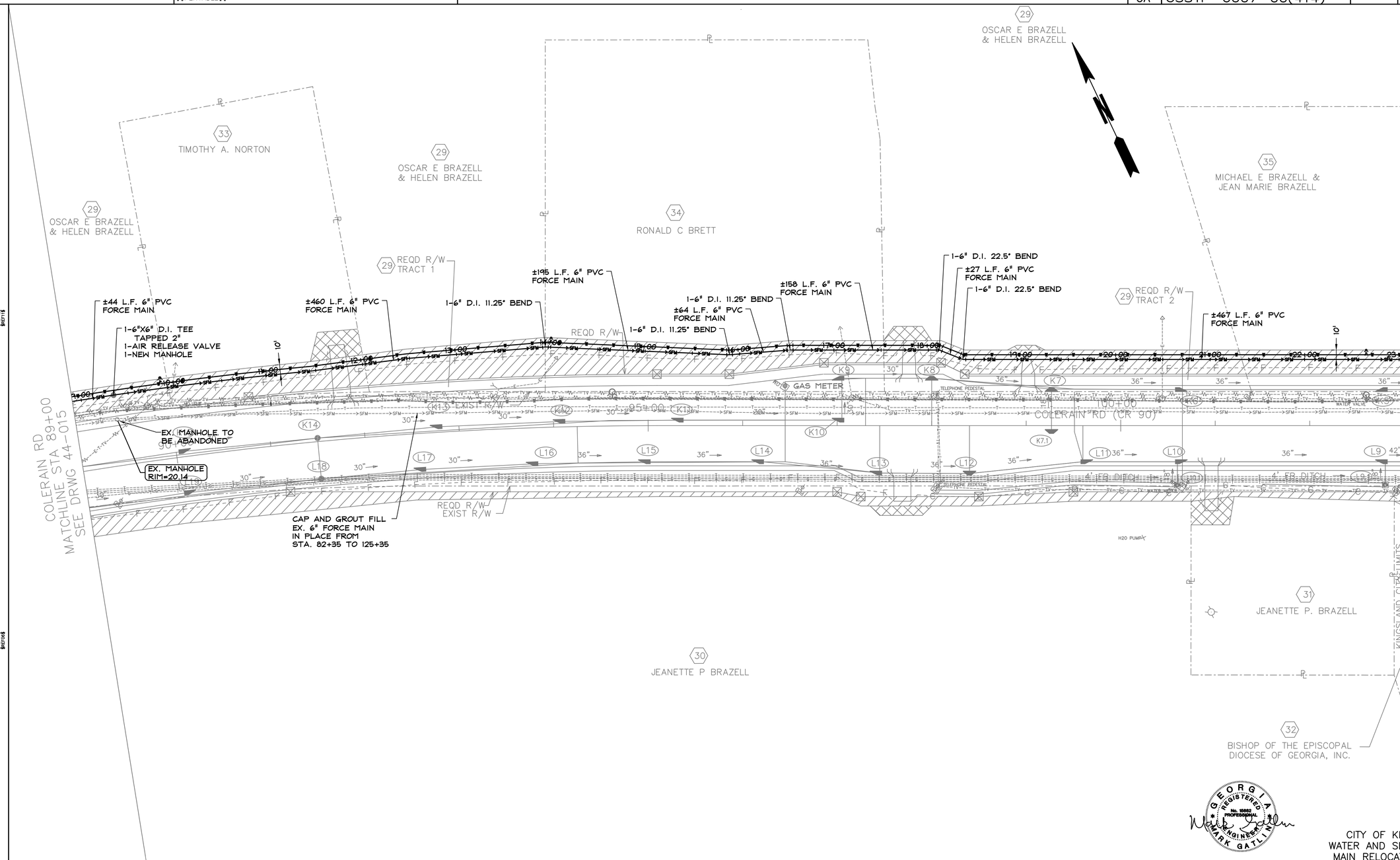
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 89+00 TO STA 103+00

DRAWING No. 44-016

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 15684 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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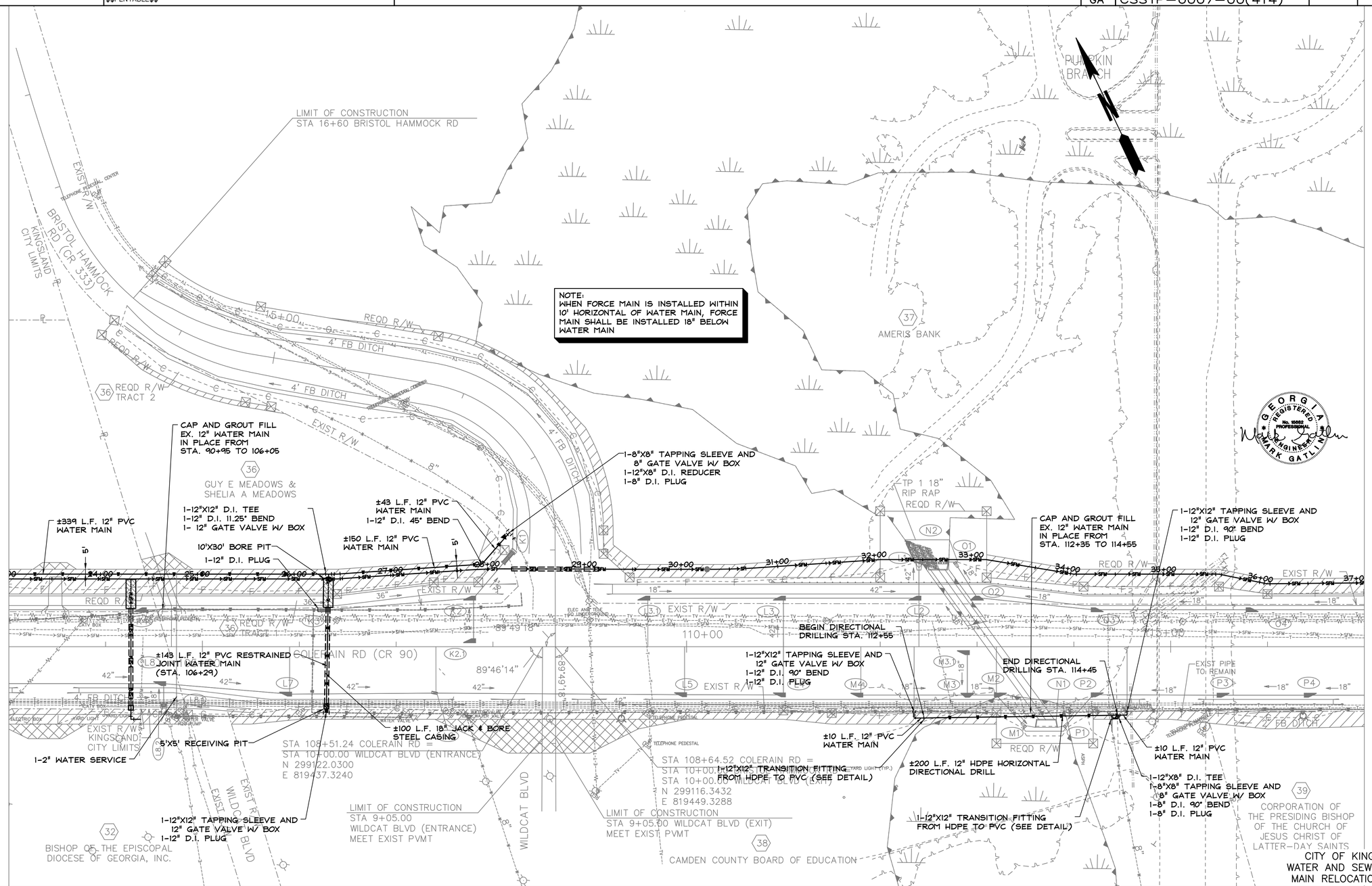
REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
WATER AND SEWER FORCE MAIN RELOCATION PLANS
COLERAIN RD-SEWER IMPROVEMENTS
STA 89+00 TO STA 103+00
DRAWING No. 44-017

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
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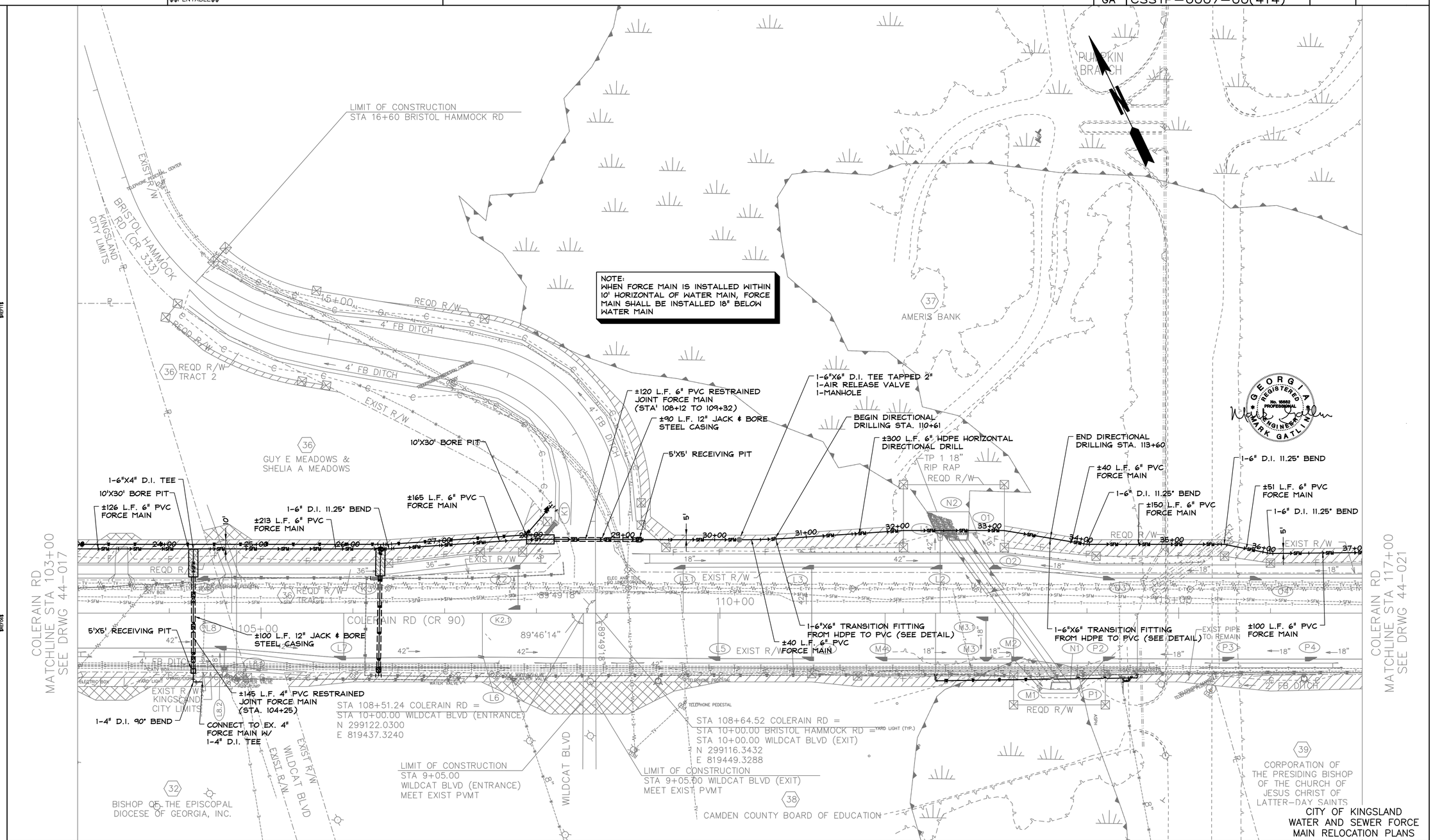
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 103+00 TO STA 117+00

DRAWING No. 44-018

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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REVISION DATES		

STATE OF GEORGIA
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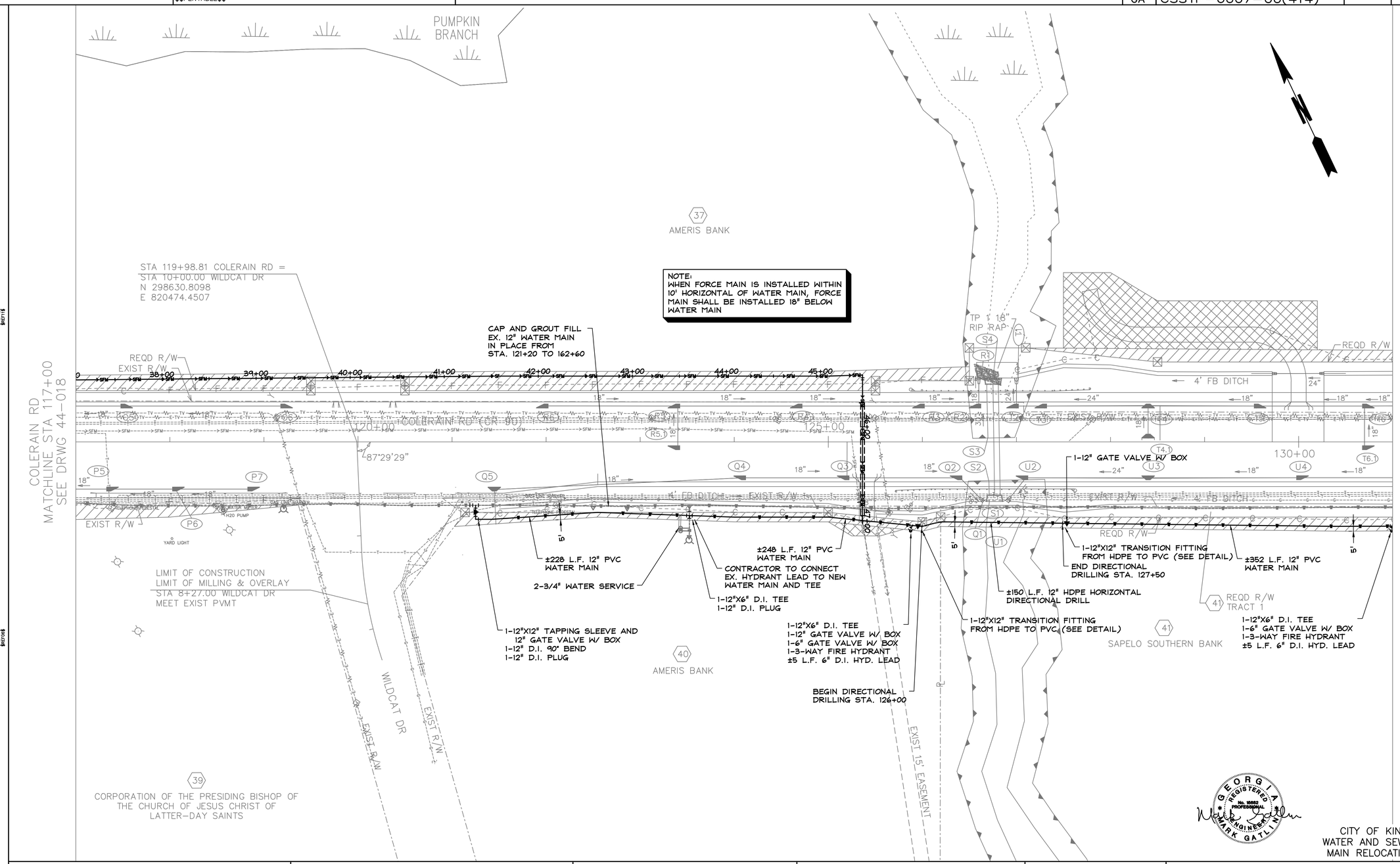
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-SEWER IMPROVEMENTS
STA 103+00 TO STA 117+00

DRAWING No. 44-019

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
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2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

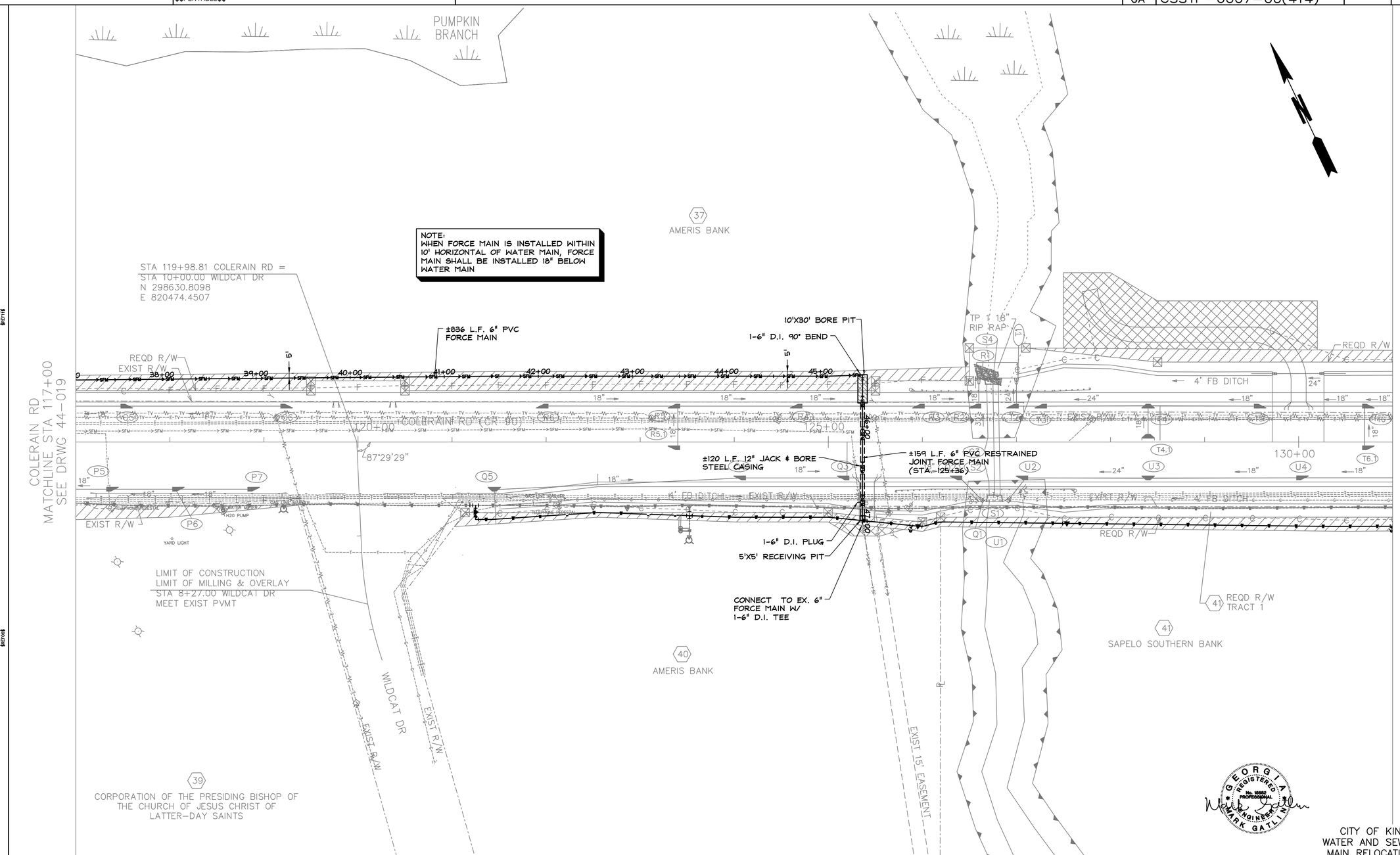
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 117+00 TO STA 131+00

DRAWING No. 44-020

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



GEORGIA REGISTERED No. 19802 PROFESSIONAL ENGINEER MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

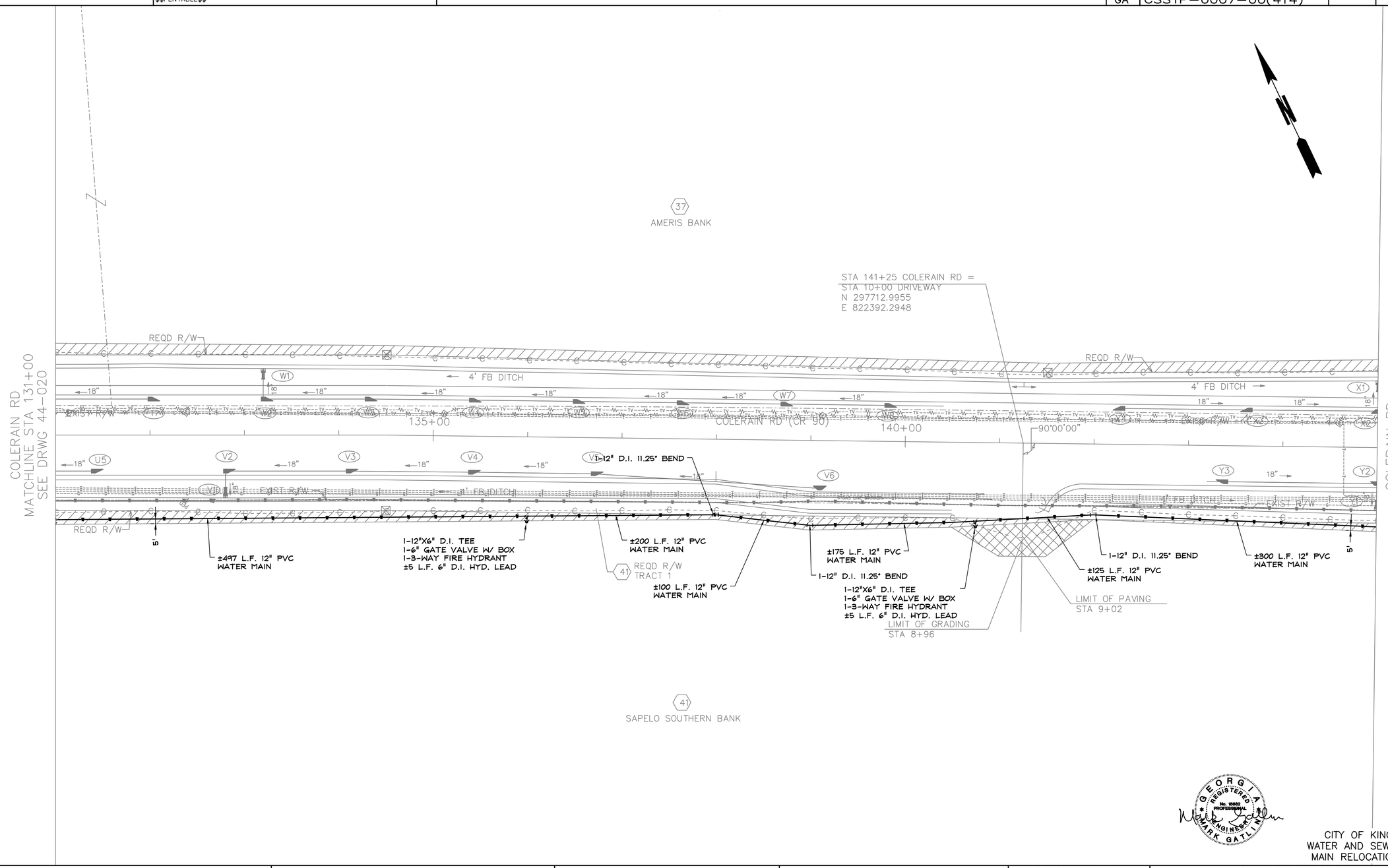
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-SEWER IMPROVEMENTS
STA 117+00 TO STA 131+00

DRAWING No. 44-021

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 15082 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◇ ALBANY ◇ ATHENS ◇ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

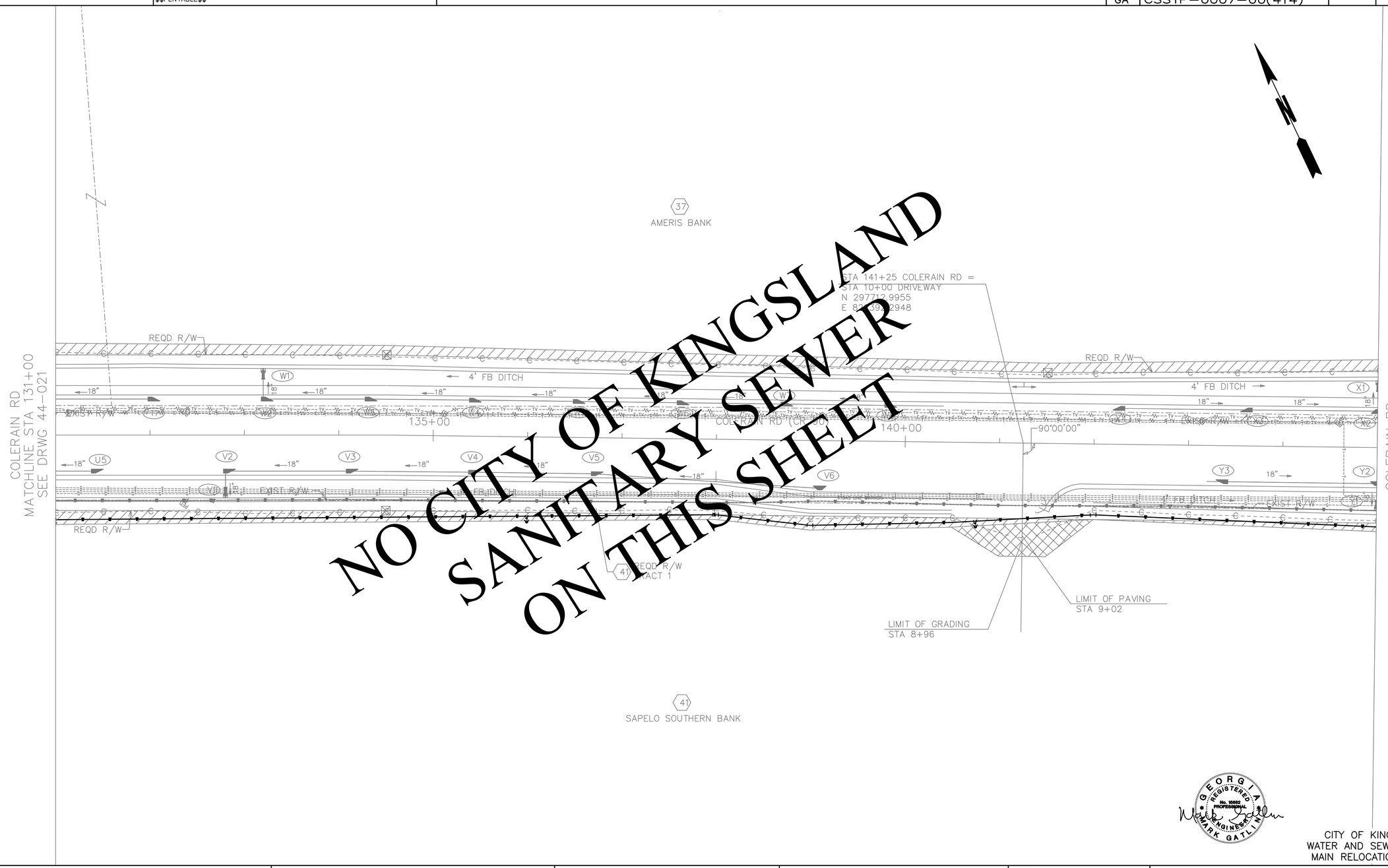
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 131+00 TO STA 145+00

DRAWING No. 44-022

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



NO CITY OF KINGSLAND
SANITARY SEWER
ON THIS SHEET

GEORGIA REGISTERED No. 15662 PROFESSIONAL ENGINEER MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

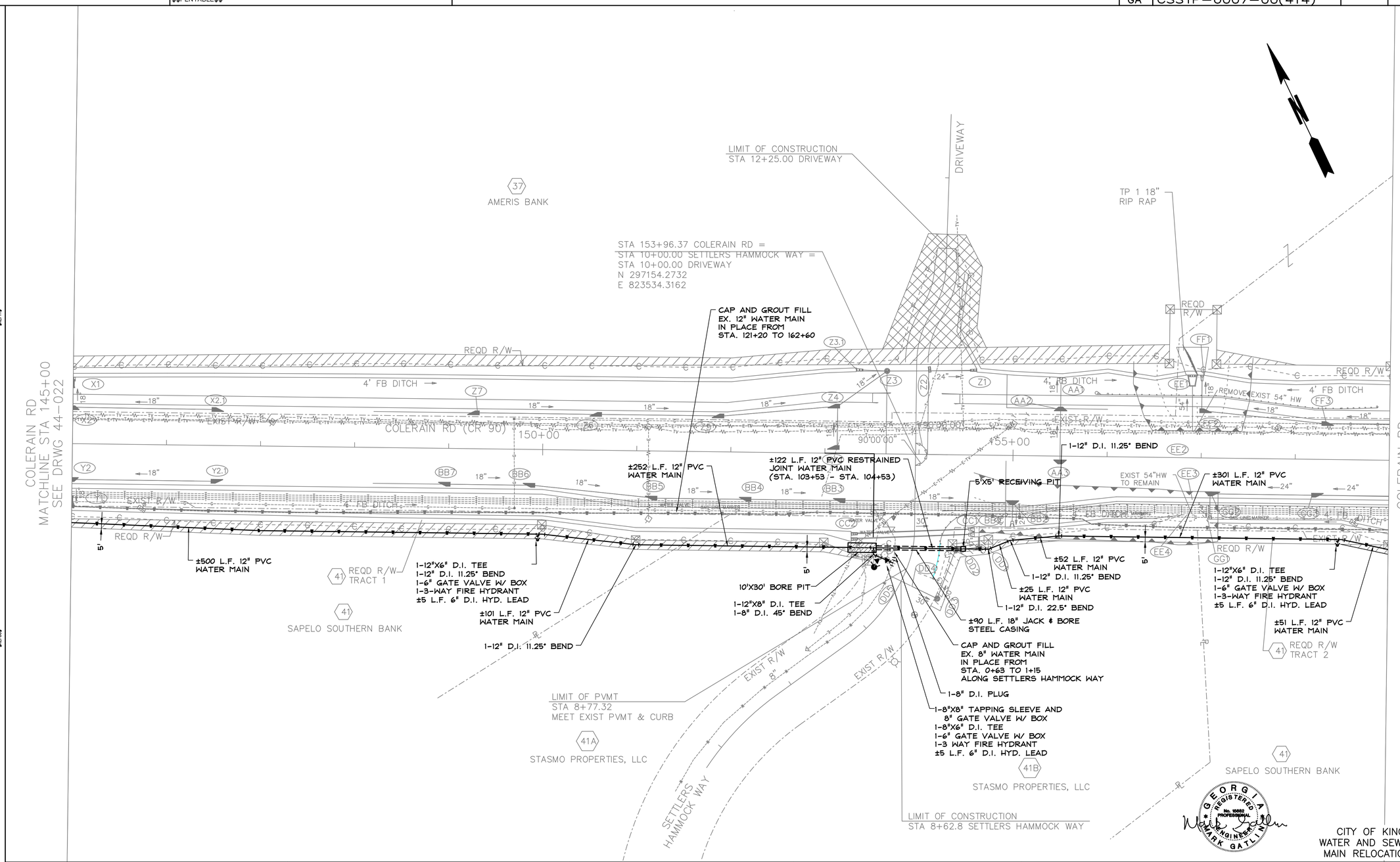
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-SEWER IMPROVEMENTS
STA 131+00 TO STA 145+00

DRAWING No. 44-023

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

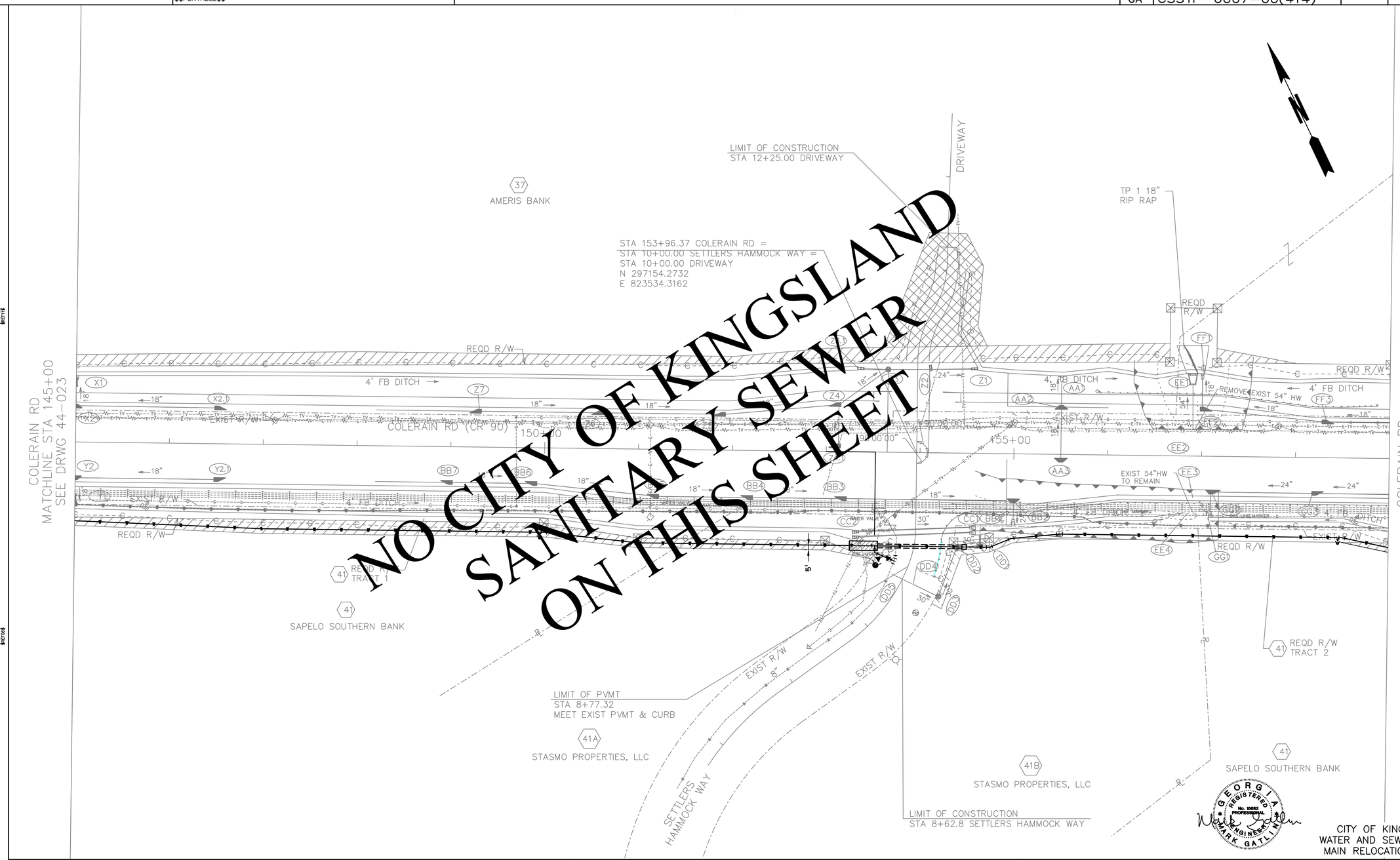
Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B , ALBANY, GA 31707 , 229.317.4220 TEL , 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
WATER AND SEWER FORCE MAIN
RELOCATION PLANS
COLERAIN RD-WATER IMPROVEMENTS
STA 145+00 TO STA 159+00
DRAWING No. 44-024

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



NO CITY OF KINGSLAND
SANITARY SEWER
ON THIS SHEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 16682 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
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MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE: PROGRAM DELIVERY

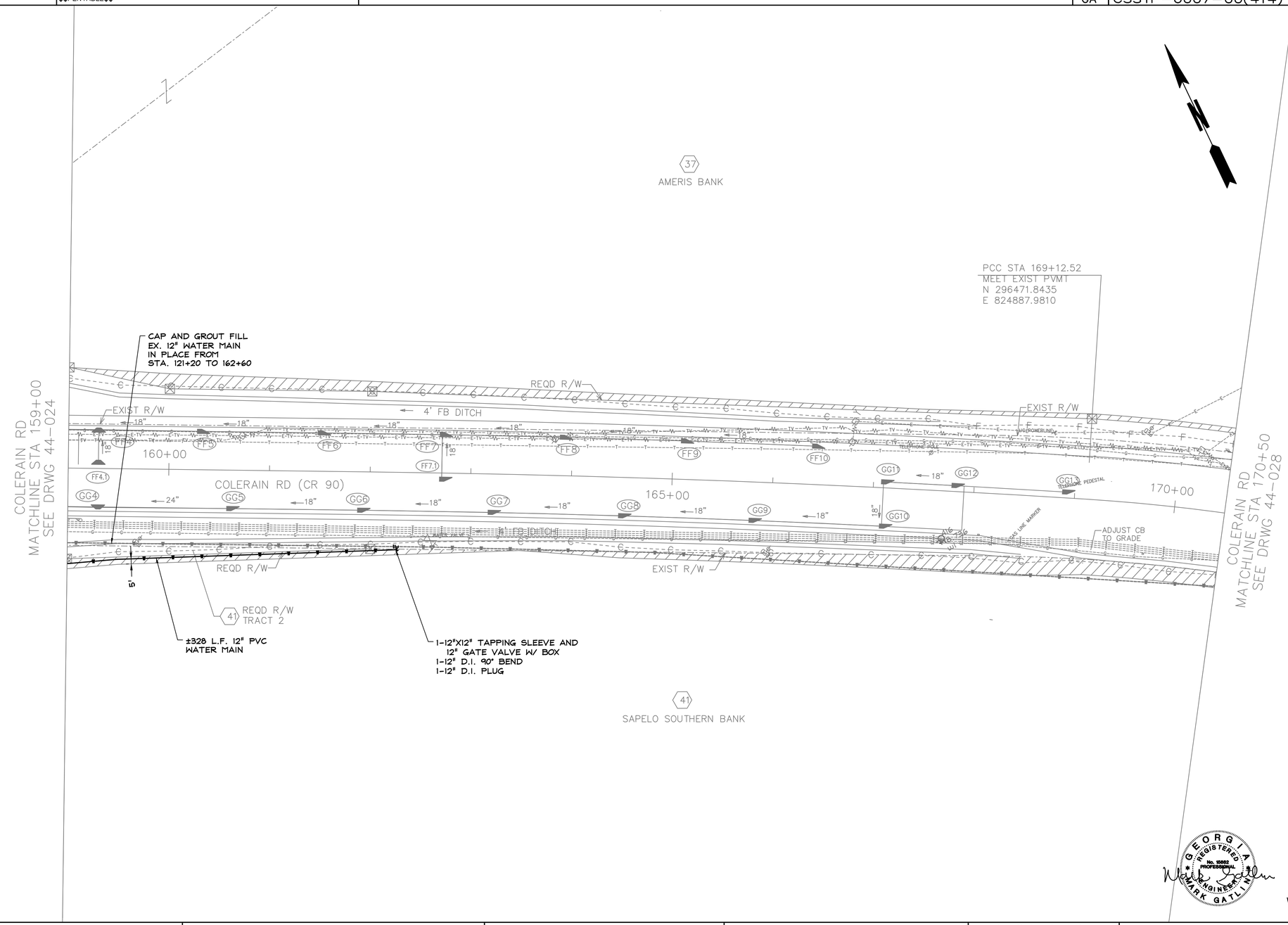
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-SEWER IMPROVEMENTS
STA 145+00 TO STA 159+00

DRAWING No. 44-025

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 15662 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
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Carter & Sloope
CONSULTING ENGINEERS
MACON ◇ ALBANY ◇ ATHENS ◇ CANTON
2620 DAWSON ROAD, SUITE B , ALBANY, GA 31707 , 229.317.4220 TEL , 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN
RELOCATION PLANS
COLERAIN RD-WATER IMPROVEMENTS
STA 159+00 TO STA 122+00
BY OTHERS

DRAWING No.
44-026

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

NO CITY OF KINGSLAND SANITARY SEWER ON THIS SHEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 15684 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
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CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B , ALBANY, GA 31707 , 229.317.4220 TEL , 229.317.4225 FAX

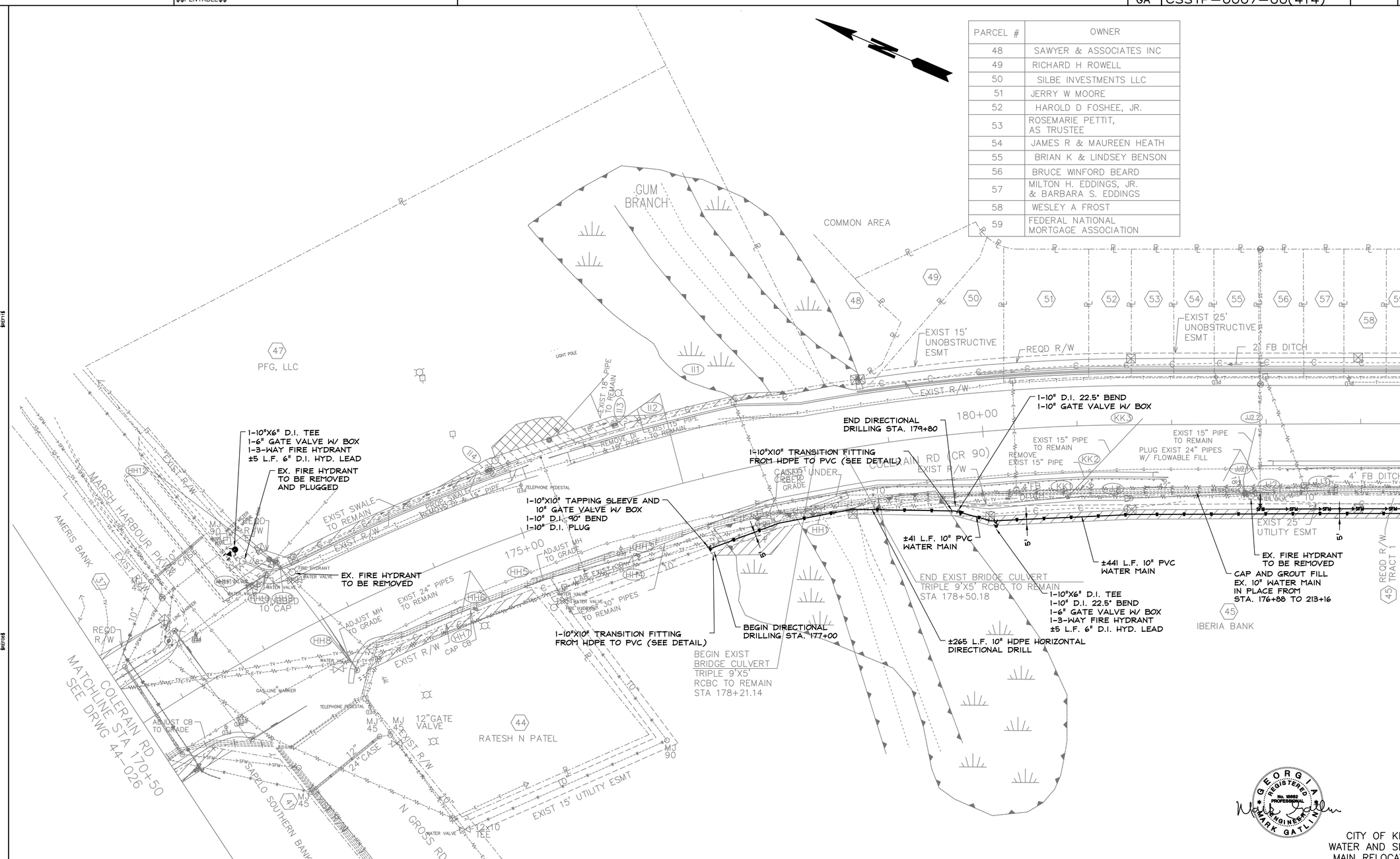
REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
WATER AND SEWER FORCE MAIN RELOCATION PLANS
COLERAIN RD-SEWER IMPROVEMENTS
STA 159+00 TO STA 122+00
BY OTHERS
DRAWING No. 44-027

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

PARCEL #	OWNER
48	SAWYER & ASSOCIATES INC
49	RICHARD H ROWELL
50	SILBE INVESTMENTS LLC
51	JERRY W MOORE
52	HAROLD D FOSHEE, JR.
53	ROSEMARIE PETTIT, AS TRUSTEE
54	JAMES R & MAUREEN HEATH
55	BRIAN K & LINDSEY BENSON
56	BRUCE WINFORD BEARD
57	MILTON H. EDDINGS, JR. & BARBARA S. EDDINGS
58	WESLEY A FROST
59	FEDERAL NATIONAL MORTGAGE ASSOCIATION



CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
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Carter & Sloope
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MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B , ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

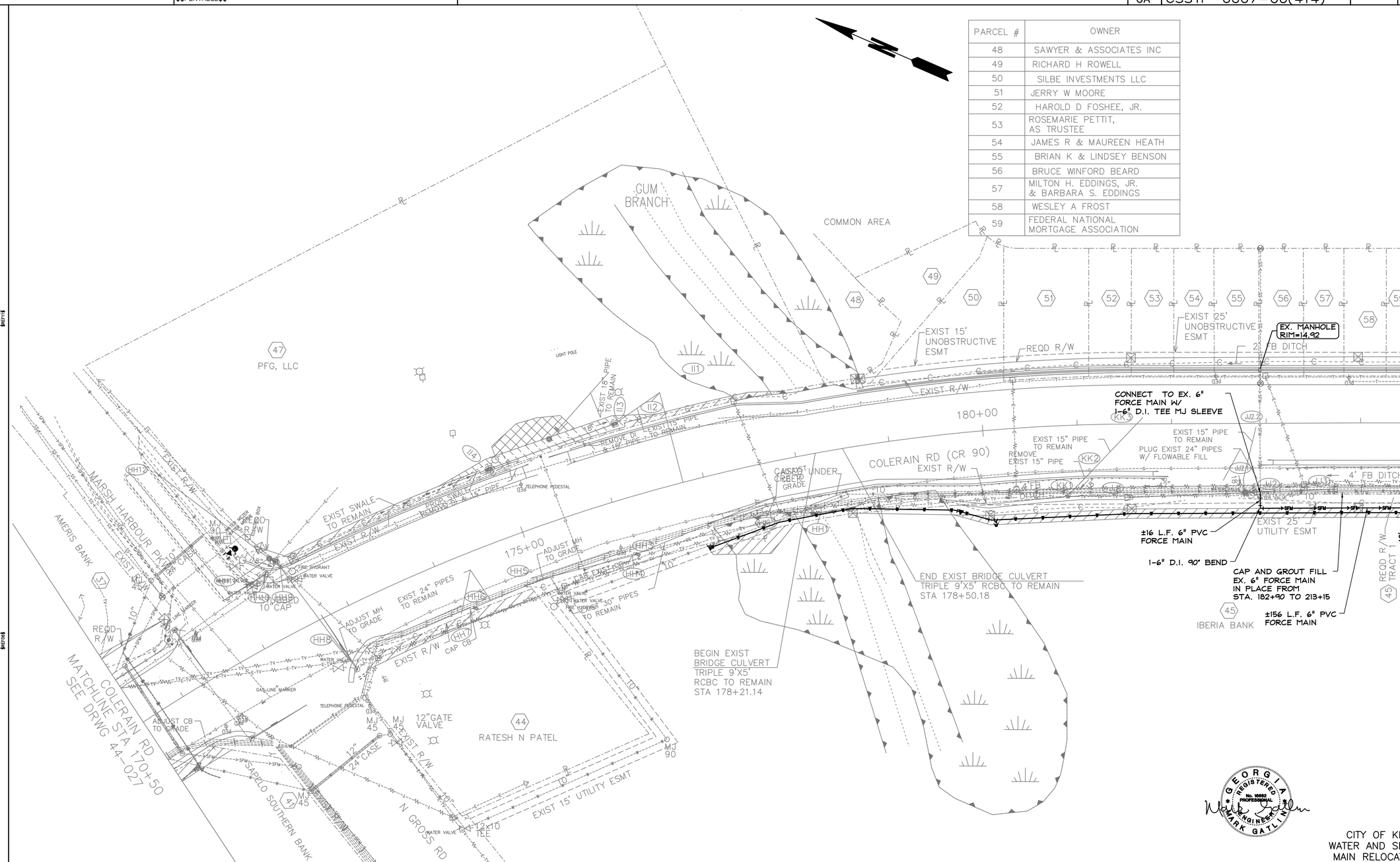
WATER AND SEWER FORCE MAIN RELOCATION PLANS
COLERAIN RD-WATER IMPROVEMENTS
STA 122+00 BY OTHERS
TO STA 135+50 BY OTHERS

DRAWING No. 44-028

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

PARCEL #	OWNER
48	SAWYER & ASSOCIATES INC
49	RICHARD H ROWELL
50	SILBE INVESTMENTS LLC
51	JERRY W MOORE
52	HAROLD D FOSHEE, JR.
53	ROSEMARIE PETTIT, AS TRUSTEE
54	JAMES R & MAUREEN HEATH
55	BRIAN K & LINDSEY BENSON
56	BRUCE WINFORD BEARD
57	MILTON H. EDDINGS, JR. & BARBARA S. EDDINGS
58	WESLEY A FROST
59	FEDERAL NATIONAL MORTGAGE ASSOCIATION



SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B , ALBANY, GA 31707 , 229.317.4220 TEL , 229.317.4225 FAX

REVISION DATES

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 15652 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

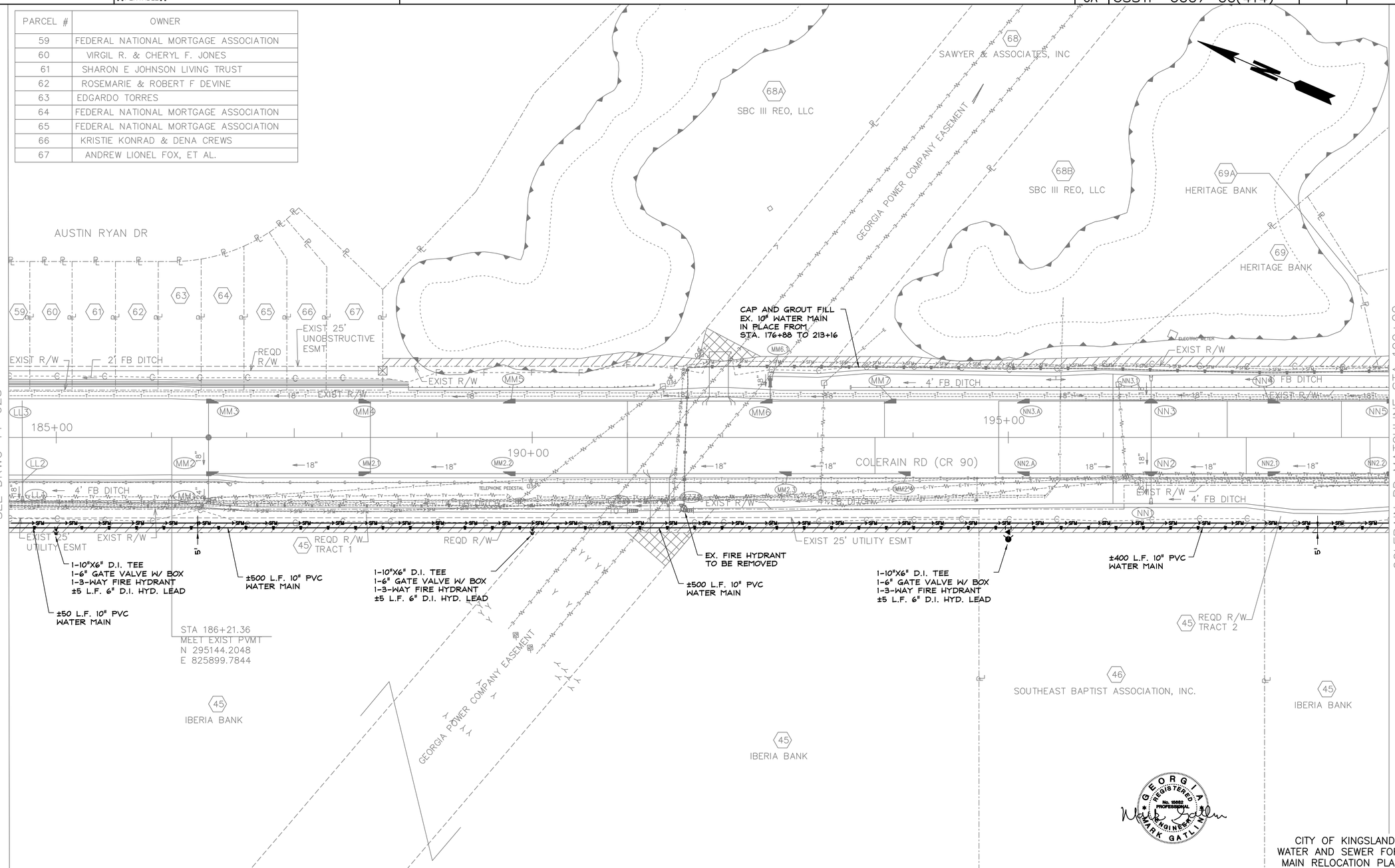
WATER AND SEWER FORCE MAIN RELOCATION PLANS
COLERAIN RD-SEWER IMPROVEMENTS
STA 122+00 BY OTHERS
TO STA 135+50 BY OTHERS

DRAWING No. 44-029

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

PARCEL #	OWNER
59	FEDERAL NATIONAL MORTGAGE ASSOCIATION
60	VIRGIL R. & CHERYL F. JONES
61	SHARON E JOHNSON LIVING TRUST
62	ROSEMARIE & ROBERT F DEVINE
63	EDGARDO TORRES
64	FEDERAL NATIONAL MORTGAGE ASSOCIATION
65	FEDERAL NATIONAL MORTGAGE ASSOCIATION
66	KRISTIE KONRAD & DENA CREWS
67	ANDREW LIONEL FOX, ET AL.



CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN RELOCATION PLANS

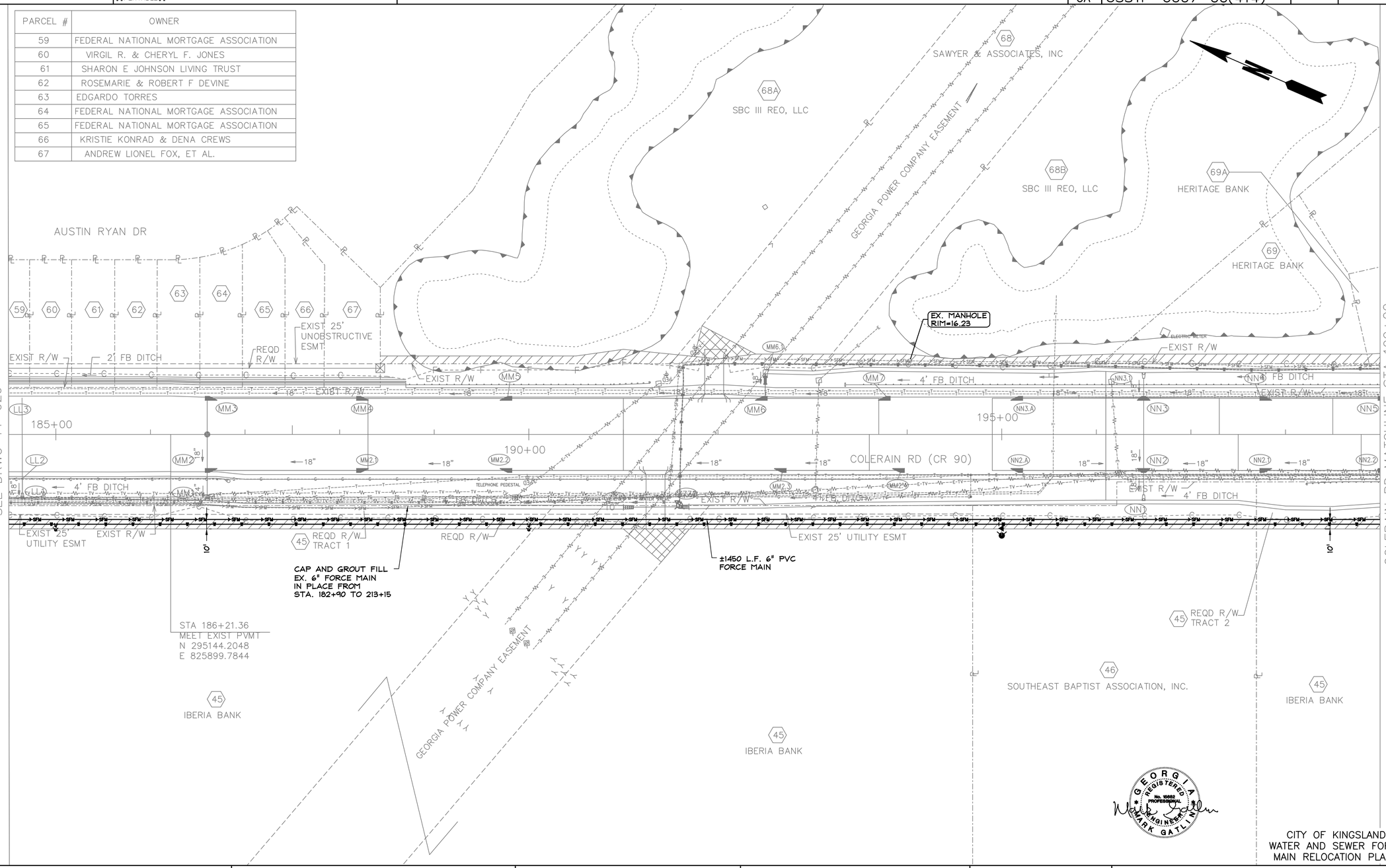
COLERAIN RD-WATER IMPROVEMENTS
STA 135+50 BY OTHERS TO STA 199+00

DRAWING No. 44-029A

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

PARCEL #	OWNER
59	FEDERAL NATIONAL MORTGAGE ASSOCIATION
60	VIRGIL R. & CHERYL F. JONES
61	SHARON E JOHNSON LIVING TRUST
62	ROSEMARIE & ROBERT F DEVINE
63	EDGARDO TORRES
64	FEDERAL NATIONAL MORTGAGE ASSOCIATION
65	FEDERAL NATIONAL MORTGAGE ASSOCIATION
66	KRISTIE KONRAD & DENA CREWS
67	ANDREW LIONEL FOX, ET AL.



CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◇ ALBANY ◇ ATHENS ◇ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

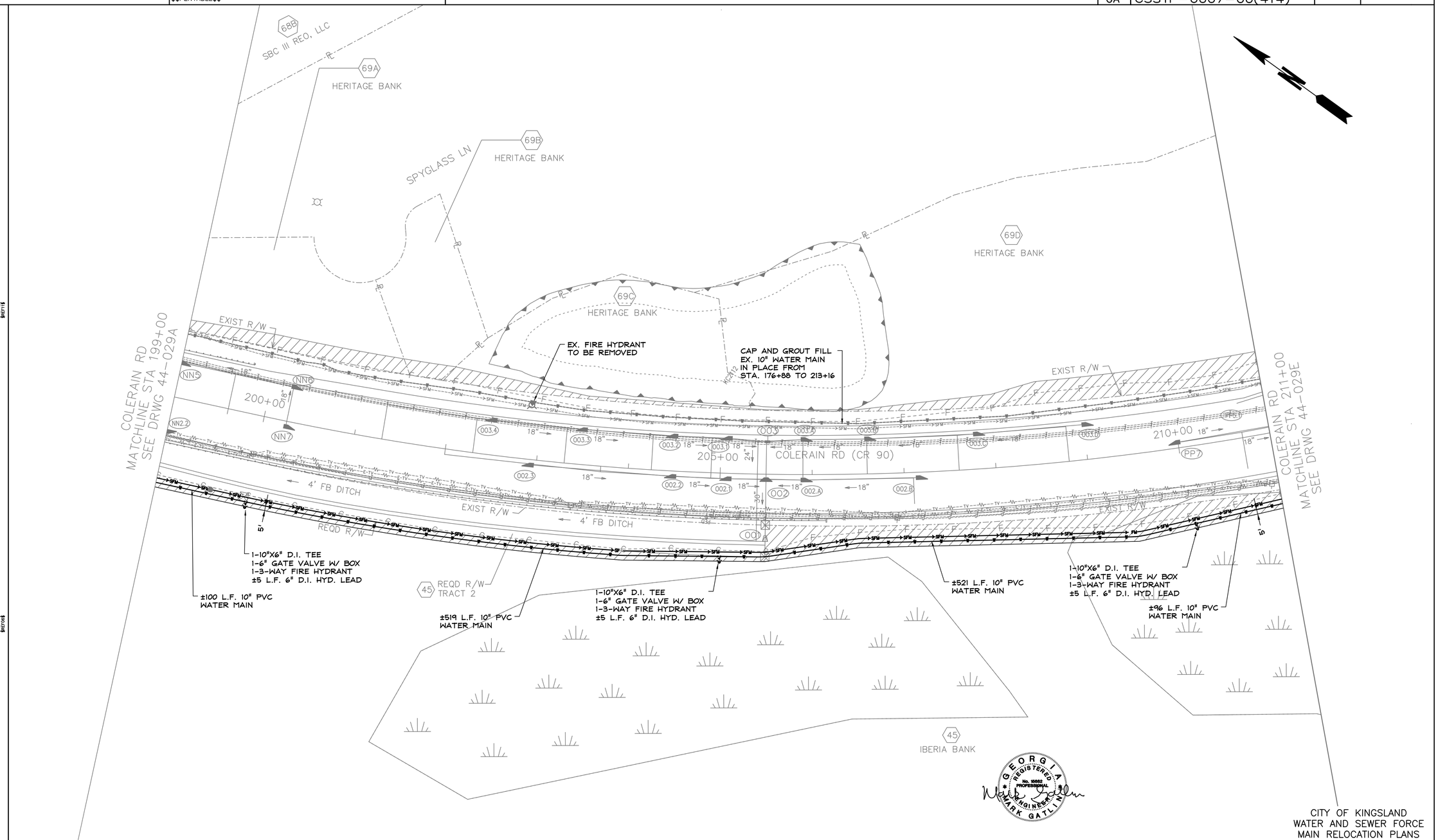
WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD-SEWER IMPROVEMENTS
STA 135+50 BY OTHERS TO STA 199+00

DRAWING No. 44-029B

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

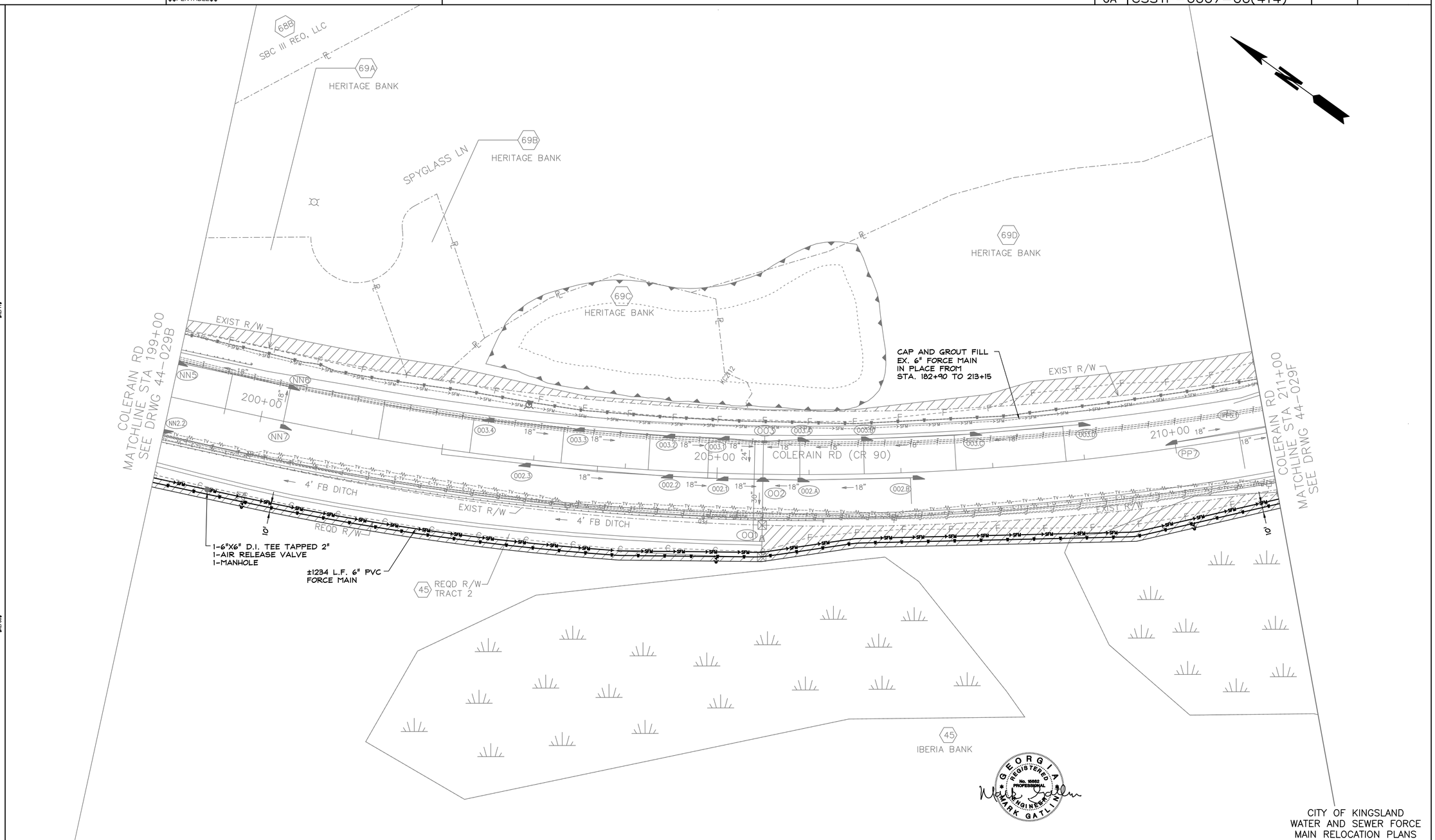
WATER AND SEWER FORCE MAIN
RELOCATION PLANS

COLERAIN RD-WATER IMPROVEMENTS
STA 199+00 TO STA 211+00

DRAWING No. 44-029C

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		



CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B , ALBANY, GA 31707 , 229.317.4220 TEL , 229.317.4225 FAX

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN
RELOCATION PLANS

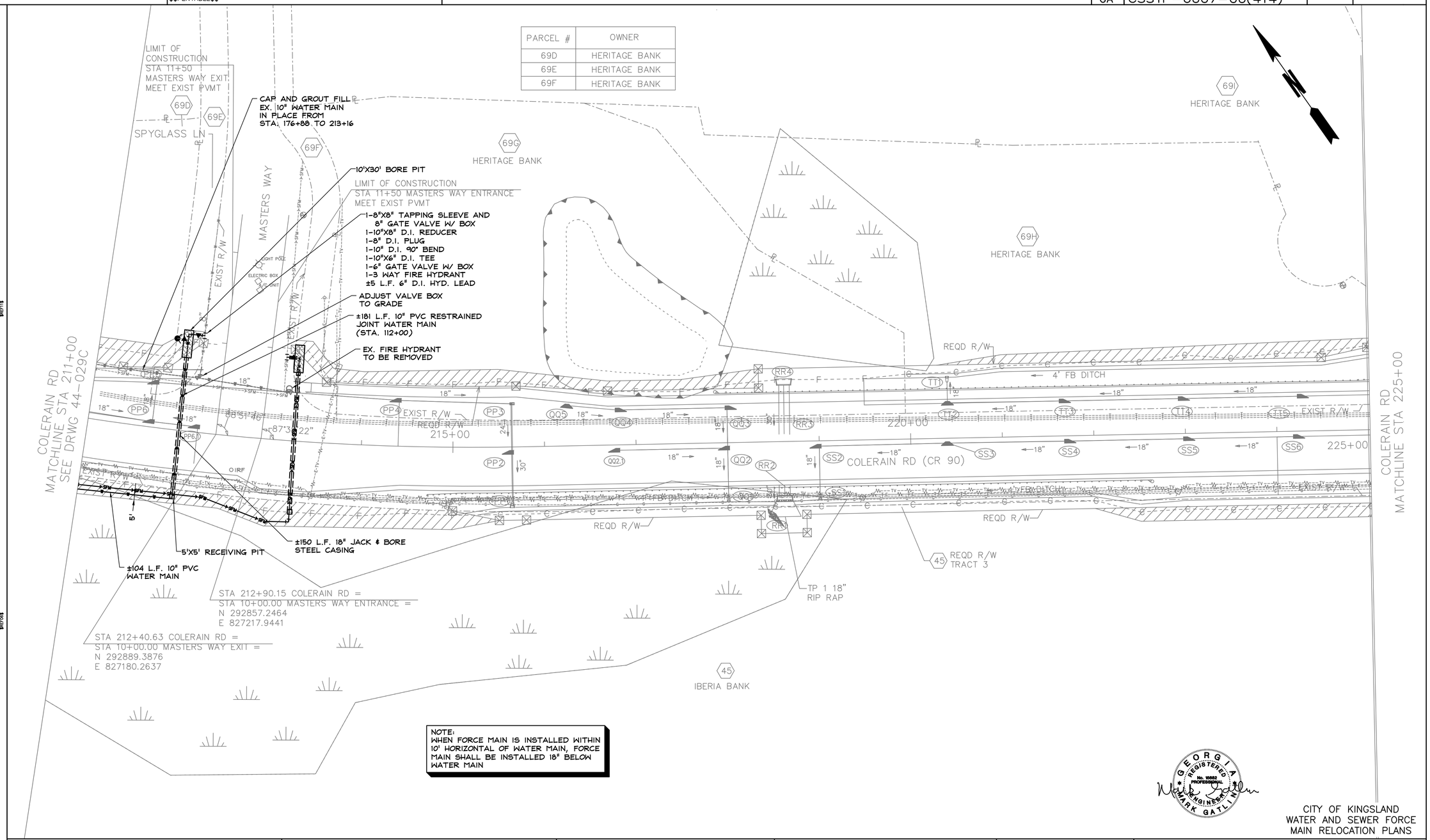
COLERAIN RD-SEWER IMPROVEMENTS
STA 199+00 TO STA 211+00

DRAWING No. 44-029D

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

PARCEL #	OWNER
69D	HERITAGE BANK
69E	HERITAGE BANK
69F	HERITAGE BANK



NOTE:
WHEN FORCE MAIN IS INSTALLED WITHIN 10' HORIZONTAL OF WATER MAIN, FORCE MAIN SHALL BE INSTALLED 18" BELOW WATER MAIN

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 10662 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

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2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B . ALBANY, GA 31707 . 229.317.4220 TEL . 229.317.4225 FAX

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN RELOCATION PLANS

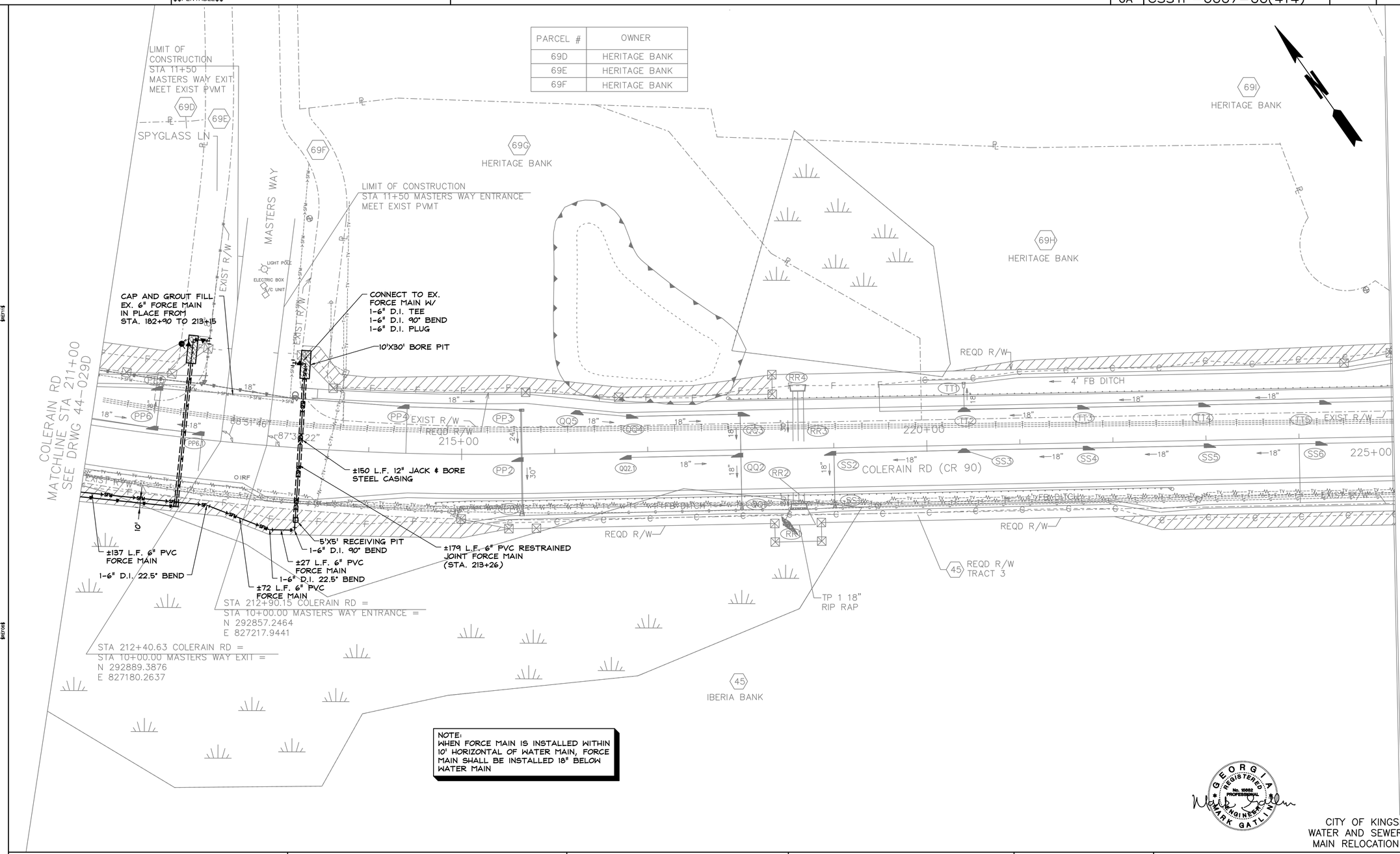
COLERAIN RD-WATER IMPROVEMENTS
STA 211+00 TO STA 225+00

DRAWING No. 44-029E

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

PARCEL #	OWNER
69D	HERITAGE BANK
69E	HERITAGE BANK
69F	HERITAGE BANK



NOTE:
WHEN FORCE MAIN IS INSTALLED WITHIN 10' HORIZONTAL OF WATER MAIN, FORCE MAIN SHALL BE INSTALLED 18" BELOW WATER MAIN

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 15882 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

SCALE IN FEET
0 50 100 200

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B , ALBANY, GA 31707 , 229.317.4220 TEL , 229.317.4225 FAX

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

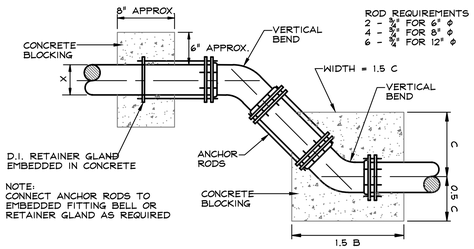
WATER AND SEWER FORCE MAIN RELOCATION PLANS

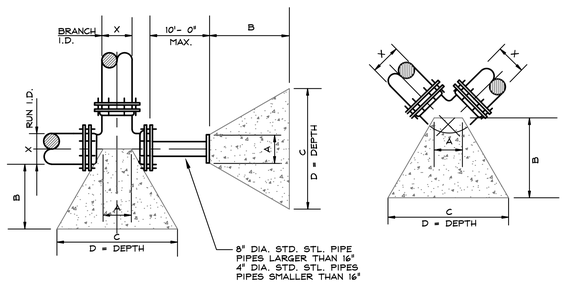
COLERAIN RD-SEWER IMPROVEMENTS
STA 211+00 TO STA 225+00

DRAWING No. 44-029F

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		





BLOCKING DIMENSIONS

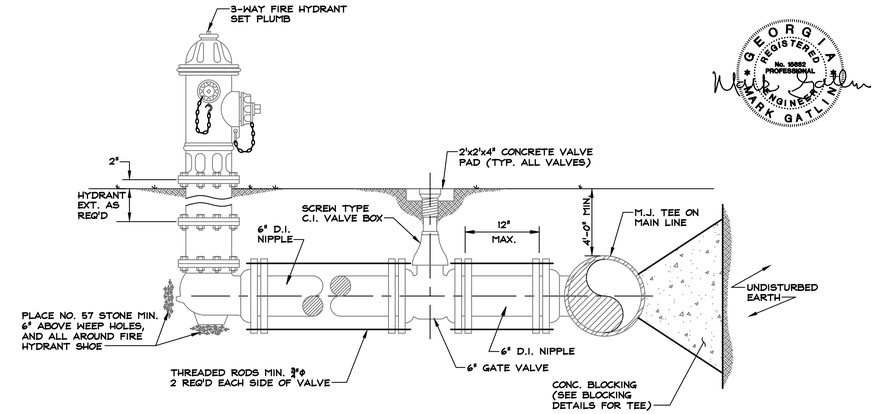
	BENDS					BENDS				
	X	A	B	C	D	X	A	B	C	D
90° BEND	30"	2'-0"	11'-6"	15'-3"	6'-0"	30"	1'-0"	2'-10"	4'-3"	3'-0"
	24"	2'-0"	7'-9"	10'-9"	5'-6"	24"	1'-0"	2'-6"	3'-8"	2'-6"
	20"	1'-9"	6'-0"	8'-6"	5'-0"	20"	10"	2'-0"	3'-0"	2'-0"
	16"	1'-3"	4'-0"	6'-0"	4'-6"	16"	16"	1'-8"	2'-6"	1'-6"
	12"	10"	2'-9"	4'-0"	4'-0"	12"	8"	1'-0"	1'-6"	1'-6"
	10"	10"	2'-6"	3'-9"	3'-0"	10"	10"	1'-0"	1'-6"	1'-0"
	8"	8"	1'-9"	2'-6"	2'-6"	8"	8"	1'-0"	1'-6"	1'-0"
	6"	6"	1'-3"	2'-0"	2'-0"	6"	6"	1'-0"	1'-0"	1'-0"
	4"	4"	1'-0"	1'-6"	1'-6"	4"	4"	1'-0"	1'-0"	9"
45° BEND	30"	1'-6"	7'-6"	10'-0"	5'-0"	TEES & DEAD ENDS				
	24"	1'-3"	5'-9"	8'-0"	4'-0"	X	A	B	C	D
	20"	1'-0"	4'-9"	6'-8"	3'-6"	30"	3'-0"	8'-9"	13'-0"	5'-0"
	16"	1'-3"	3'-3"	5'-0"	3'-3"	24"	2'-6"	7'-3"	10'-8"	3'-9"
	12"	10"	1'-9"	3'-0"	2'-9"	20"	2'-0"	5'-3"	8'-0"	3'-6"
	10"	10"	1'-9"	3'-0"	2'-0"	16"	1'-0"	4'-8"	6'-4"	3'-0"
	8"	8"	1'-6"	2'-0"	2'-0"	12"	10"	2'-9"	4'-6"	2'-6"
	6"	6"	1'-3"	1'-6"	1'-6"	10"	10"	2'-0"	3'-3"	2'-6"
	4"	4"	1'-0"	1'-0"	1'-0"	8"	8"	1'-9"	2'-6"	2'-0"
22-½° BEND	30"	1'-0"	4'-8"	6'-4"	4'-0"	6"	6"	1'-3"	2'-0"	1'-6"
	24"	1'-0"	3'-9"	5'-0"	3'-6"					
	20"	1'-0"	2'-6"	4'-4"	3'-0"					
	16"	1'-0"	1'-9"	3'-0"	2'-6"					
	12"	10"	1'-3"	2'-3"	2'-0"					
	10"	10"	1'-0"	2'-0"	1'-6"					
	8"	8"	1'-0"	1'-9"	1'-9"					
	6"	6"	1'-0"	1'-6"	1'-6"					
	4"	4"	1'-0"	1'-3"	1'-3"					

NOTE: 200 P.S.I. TEST PRESSURE
SOIL BEARING OF 2500 P.S.F.
3000 P.S.I. CONCRETE
PIPE LESS THAN 4" IN DIAMETER
SHALL HAVE THE SAME REQUIREMENTS
AS 4" DIAMETER PIPE

THRUST BLOCK

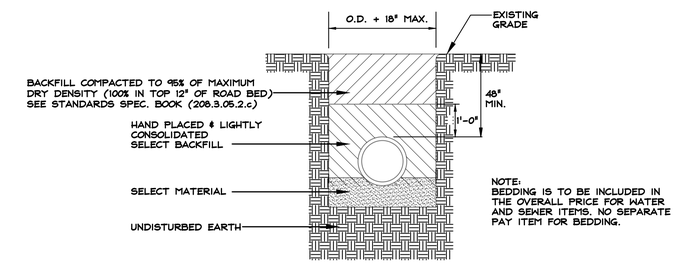
N.T.S.

NOTE: THE COST OF THE CLASS A CONCRETE REQUIRED FOR BLOCKING IS TO BE INCLUDED IN THE OVERALL PRICE FOR THE WATER AND SEWER FORCE MAIN RELOCATIONS.



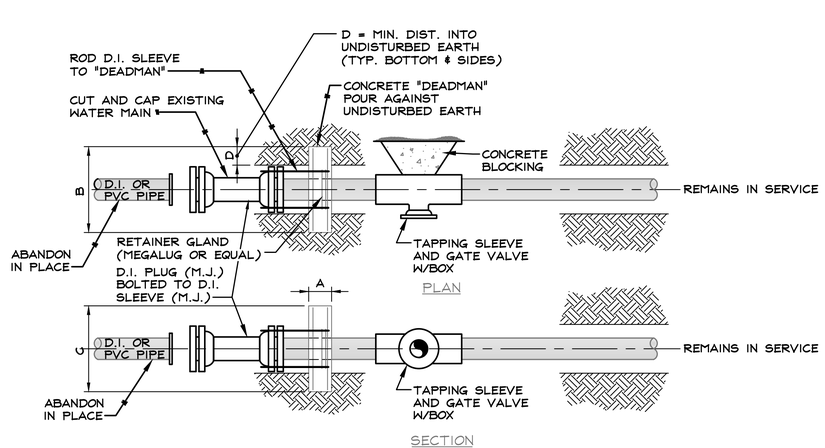
TYPICAL FIRE HYDRANT SETTING

N.T.S.



PVC WATER BEDDING DETAIL

N.T.S.



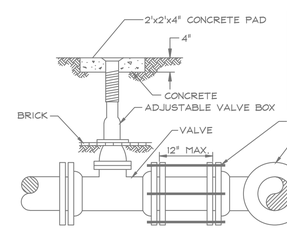
MAIN DIA	CONCRETE COLLAR DIM.			
	A	B	C	D
24"	2'-0"	8'-0"	8'-0"	2'-0"
16"	2'-0"	6'-6"	6'-6"	1'-6"
12"	2'-0"	5'-3"	5'-3"	1'-0"
6" or 8"	2'-0"	4'-0"	4'-0"	0'-8"

RODDING SCHEDULE		
PIPE DIA	NO. RODS REQ'D	ROD DIA.
24"	8	3/4"
16"	6	3/4"
12"	4	3/4"
8"	2	3/4"
6"	2	3/4"

TEST PRESSURE: 150 P.S.I.
SOIL BEARING PRESSURE: 3000 P.S.F.

TAPPING SLEEVE TIE-IN DETAIL

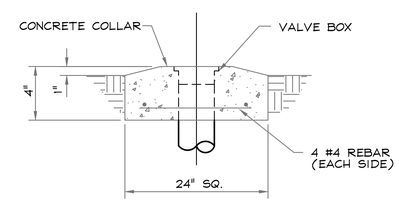
N.T.S.



RODDING SCHEDULE		
PIPE DIA	NO. RODS REQ'D	ROD DIA.
24"	8	3/4"
16"	6	3/4"
12"	4	3/4"
8"	2	3/4"
6"	2	3/4"

DETAIL - VALVE SETTING AND BOX

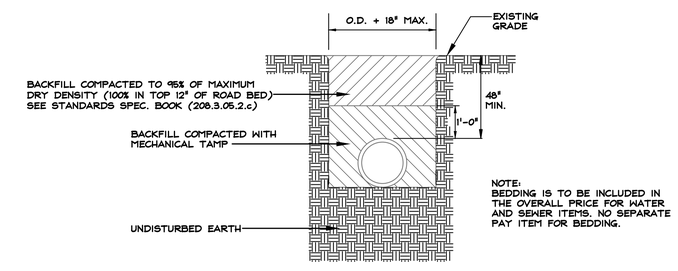
N.T.S.



NOTE: CONCRETE COLLAR MAY BE PRECAST OR CAST IN PLACE. COST FOR COLLARS TO BE INCLUDED WITH PRICE FOR VALVE.

CONCRETE VALVE PAD DETAIL

N.T.S.



D.I. WATER BEDDING DETAIL

N.T.S.

CITY OF KINGSLAND
WATER AND SEWER FORCE
MAIN RELOCATION PLANS

Moreland Altobelli Associates, Inc.
2211 Beaver Ruin Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-5945

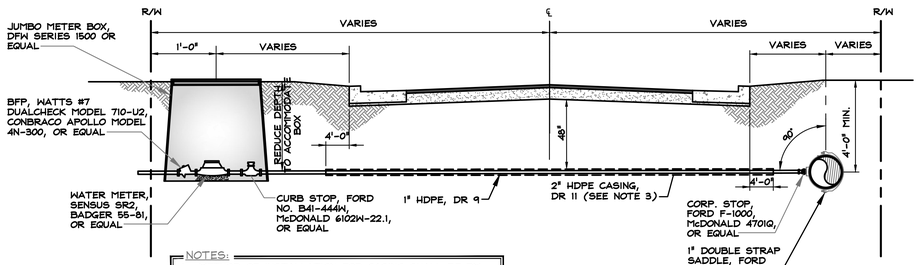
Carter & Sloope
CONSULTING ENGINEERS
MACON ◆ ALBANY ◆ ATHENS ◆ CANTON
2620 DAWSON ROAD, SUITE B , ALBANY, GA 31707 , 229.317.4220 TEL , 229.317.4225 FAX

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY
WATER AND SEWER FORCE MAIN RELOCATION PLANS
COLERAIN ROAD
DRAWING No. 44-029G

3/1/2007 GPLN

DATE$$$	TIME$$$	PRF	DGN	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

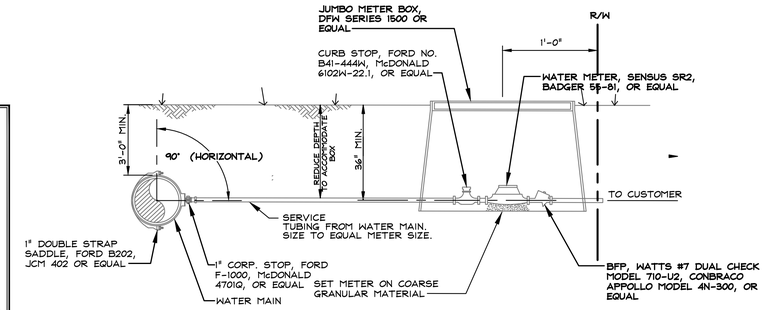


NOTES:
1. METHOD OF INSTALLATION FOR CASING SHALL BE BY DIRECTIONAL BORE.
2. METERS ARE TO BE SET DIRECTLY OPPOSITE TAP ON MAIN. THE METER SHALL NOT BE OFFSET LATERALLY FROM TAP ON WATER MAIN.
3. CASING NOT REQUIRED FOR 2-LANE ROAD. ONLY REQUIRED FOR THREE LANE OR MORE, UNLESS OTHERWISE SHOWN.

TYPICAL LONG SIDE SERVICE

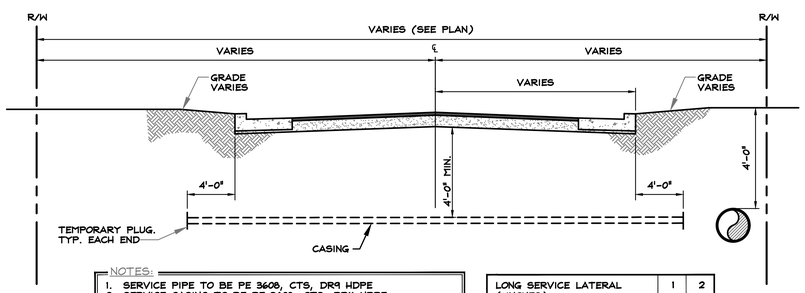
N.T.S.

NOTES:
1. NEW METERED SERVICES SHALL CONSIST OF A NEW TAPPING SADDLE, CORPORATION COCK, CURB STOP, METER, BACKFLOW PREVENTER, AND METER BOX. ALL REMNANTS OF OLD SERVICES WITH EXCEPTION TO TUBING SHALL BE REMOVED. THE OLD CORPORATION COCK SHOULD BE CLOSED AND PLUGGED BEFORE ABANDONMENT.
2. TRANSFER OF WATER SERVICE WITHOUT METER REPLACEMENT SHALL CONSIST OF A NEW TAPPING SADDLE AND CORPORATION COCK. FURTHERMORE, RELOCATED SERVICES WILL ALSO REQUIRE A NEW METER BOX. ALL OTHER COMPONENTS WITH EXCEPTION TO TUBING MAY BE REUSED UNLESS DAMAGED DURING RELOCATION. THE OLD CORPORATION COCK SHOULD BE CLOSED AND PLUGGED BEFORE ABANDONMENT.
3. ANY EXISTING ANCILLARY ITEMS NOT SPECIFICALLY REFERENCED ABOVE SHALL BE REUSED AND RELOCATED WITH THE METER AS NECESSARY TO MIMIC CURRENT SET-UP. SUCH ITEMS MAY INCLUDE PRESSURE REGULATORS, SHUT-OFF VALVES, HOSE BIBBS, OR EXTRA METER / VALVE BOXES.



TYPICAL SHORTSIDE SERVICE CONNECTION

N.T.S.



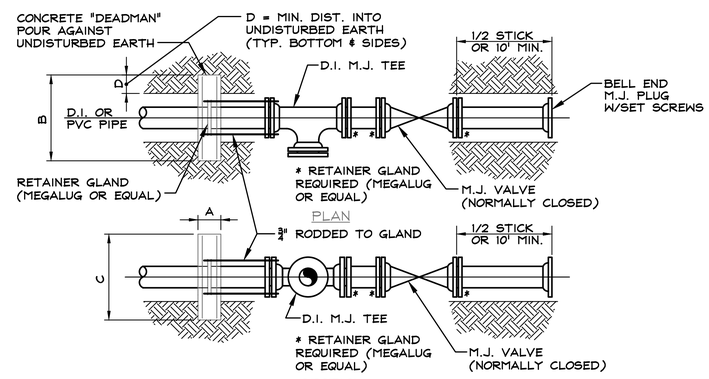
NOTES:
1. SERVICE PIPE TO BE PE 3608, CTS, DR9 HDPE
2. SERVICE CASING TO BE PE 3608, CTS, DR11 HDPE
3. BURY SERVICE LINE & CASING AT SUFFICIENT DEPTH TO AVOID ANY CONFLICT WITH LONGITUDINAL STORM DRAINAGE.

LONG SERVICE LATERAL (#INCHES)	1	2
CASING DIAMETER (#INCHES)	2	4

#NOMINAL SIZE

TYPICAL SERVICE LINE CASING

N.T.S.



MAIN DIA	CONCRETE COLLAR DIM. A	B	C	D
24"	1'-6"	8'-0"	8'-0"	2'-0"
16"	1'-3"	6'-6"	6'-6"	1'-6"
12"	1'-2"	5'-3"	5'-3"	1'-0"
6" or 8"	1'-0"	4'-0"	4'-0"	0'-8"

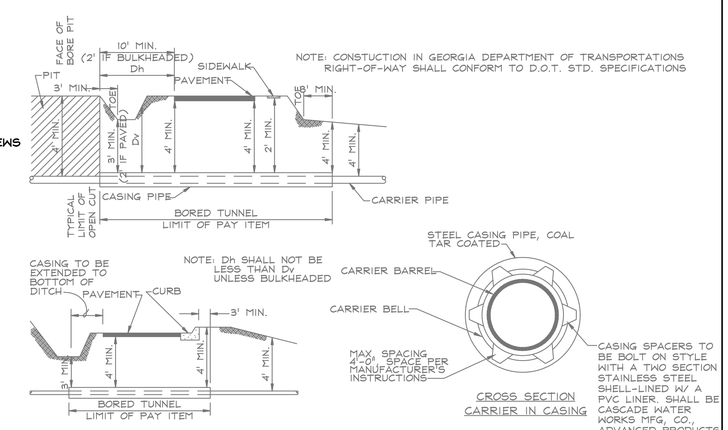
TEST PRESSURE: 150 P.S.I.
SOIL BEARING PRESSURE: 3000 P.S.F.

NOTE: CONCRETE THRUST BLOCKING REQUIRED ON ALL FITTINGS AS SPECIFIED IN THE THRUST BLOCK DETAIL.

NOTE: THE COST OF CLASS "A" CONCRETE REQUIRED FOR BLOCKING SHALL BE INCLUDED IN THE OVERALL PRICE FOR THE WATER AND SEWER FORCE MAIN RELOCATIONS.

WATER MAIN TERMINATION

N.T.S.



NOTE: CONSTUCTION IN GEORGIA DEPARTMENT OF TRANSPORTATIONS RIGHT-OF-WAY SHALL CONFORM TO D.O.T. STD. SPECIFICATIONS

NOTE: Dh SHALL NOT BE LESS THAN Dv UNLESS BULKHEADED

HIGHWAY UTILITY CROSSING DETAIL

N.T.S.

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 15682 MARK GATLIN

CITY OF KINGSLAND
WATER AND SEWER FORCE MAIN RELOCATION PLANS

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REVISION DATES		

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OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN RELOCATION PLANS

COLERAIN RD

DRAWING No. 44-029H

3/1/2007 GPLN

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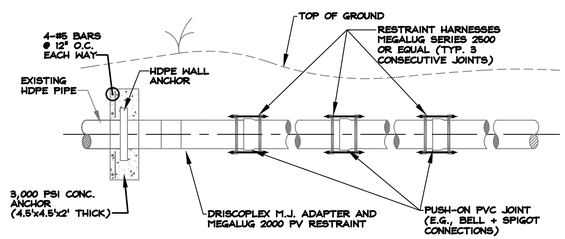
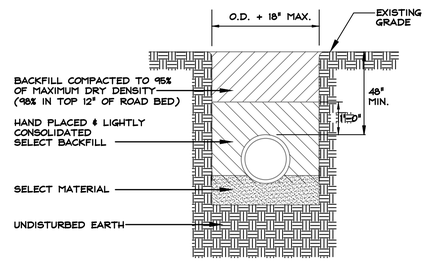
$USER$		$$PENTABLE$$		GA	CSSTP-0007-00(414)		

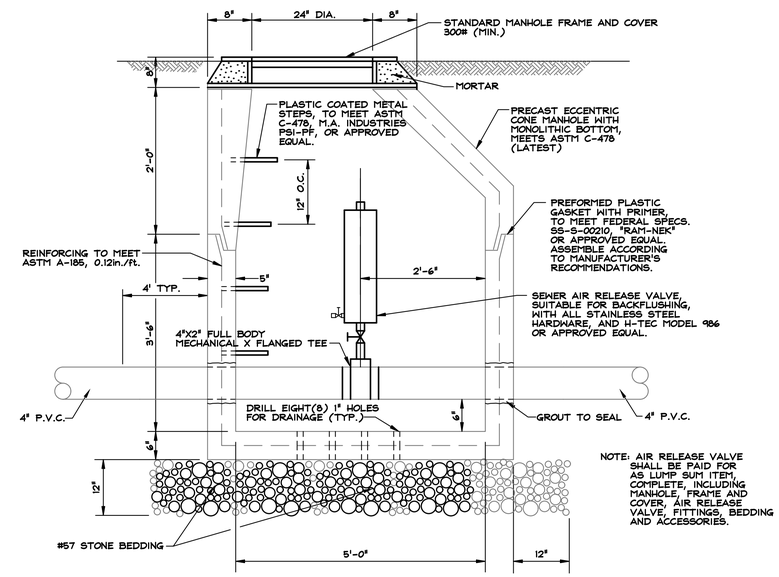


CONNECT PVC FORCE MAIN TO
HDPE FORCE MAIN
N.T.S.



ONLY SUITABLE SOIL SHALL BE USED AS BACKFILL

PVC FORCE MAIN
BEDDING DETAIL
N.T.S.



NOTE: AIR RELEASE VALVE SHALL BE PAID FOR AS LUMP SUM ITEM, COMPLETE, INCLUDING MANHOLE, FRAME AND COVER, AIR RELEASE VALVE, FITTINGS, BEDDING AND ACCESSORIES.

AIR RELEASE VALVE
N.T.S.

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DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

WATER AND SEWER FORCE MAIN
RELOCATION PLANS

COLERAIN RD

DRAWING No.
44-0291

3/1/2007 GPLN