00 91 01 ADDENDUM #1

Owner:	Cobb County-Marietta Water Authority
Project:	Blackjack Mountain 36-inch Pipeline Replacement
Project No.:	505-9005-30-19-0000/CBR18759
Addendum No.	1
Addendum Date:	April 20, 2020

The following additions, deletions, modifications, or clarifications shall be made to the appropriate portions of the Contract Documents. Offerors must acknowledge receipt of this Addendum in the space provided on the Bid Form.

ARTICLE 1 – ADDENDUM

1.01 Amend the Contract Documents

A. Make the additions, modifications, or deletions to the Contract Documents described in this Addendum.

1.02 Acknowledge Addenda

A. Acknowledge receipt of this Addendum in the Bid Form submitted for this Project. Failure to acknowledge receipt of this addendum in the Bid Form may render the Bid as non-responsive and serve as the basis for rejecting the Bid.

ARTICLE 2 – BID REQUIREMENTS

2.01 Section 00 11 13 "Advertisement for Bid"

A. See below for the list of Contractor's present at the mandatory Pre-bid Meeting.

Pre-Bid Meeting Contractor Attendee List	
1	Unity
2	Ruby-Collins
3	John Plott Co.
4	Mid South Builders, Inc.
5	Garney
6	Reynolds Construction
7	Moorhead Construction
8	Strack
9	Morgan Contracting
10	John D Stevens
11	Cleary Construction
12	Legacy Water Group

2.02 Due to the ongoing COVID-19 epidemic, Cobb County-Marietta Water Authority's (CCMWA) mail service has been discontinued at their office, and they have limited admin staff working at this time. In order to ensure that everyone's bid package is received by the due date, CCMWA requires all bid packages to be hand delivered on 4/27 from 1PM-5PM EST or 4/28 from 8AM-11AM EST.

2.03 Section 00 41 13 "Bid Form"

A. Delete the "Bid Proposal" form included in Section 00 41 13, Bid Form and replace it with the attached, new "Bid Proposal" form included with this Addendum. Submit only the revised form with the Bid.

ARTICLE 3 – SPECIFICATIONS

3.01 Section 00 11 13 "Advertisement for Bid"

A. Page 00 11 13-1

1. Revise the Pre-bid Conference location to occur via Skype at the following link: https://meet.lync.com/freese/ryan.ellena/MG2FP4T3?sl=1

3.02 Section 00 21 13 "Instructions to Bidders"

A. Paragraph 22.1, Page 00 21 13-9

1. Replace Paragraph 22.1 with the following:

A mandatory Pre-Bid Conference will be held for all Bidders via Skype at the following link: https://meet.lync.com/freese/ryan.ellena/MG2FP4T3?sl=1 on Tuesday, April 14th, 2020, at 11:00 AM. Attendance is mandatory for all bidders.

3.03 Section 00 73 00 “Supplementary Conditions”

A. Paragraph 4.02.C.1 and 4.02.C.2, Page 00 73 00-1

1. Please replace with the following:

“4.02.C.1 Report dated 12/27/19, prepared by United Consulting, Inc., entitled Geotechnical Exploration CCMWA Blackjack 36” Water Main Replacement Cobb County, Georgia.

4.02.C.2 Report dated 01/31/20, prepared by Southern Cathodic Protection entitled Field and Laboratory Review of Route of Blackjack Mountain 36 inch Water Pipe Replacement, Cobb County Georgia for CCMWA.”

B. Page 00 73 00-9

1. Add the following new Section SC-12.03 that reads as follows:

“SC-12.03 Delays

F. Weather Delays

1. Extensions of time will be granted for abnormal inclement weather conditions that delay the critical path of the progress of the work.

2. Abnormal weather is defined as days lost to weather where precipitation exceeds 0.10-inches.

3. Contract Time will not be extended for normal bad weather. The Contract Time in the Contract Documents includes due allowance for calendar days on which work cannot be performed outdoors. For the purpose of this Contract, Contractor agrees that he may expect to lose a total number of calendar days between the Notice to Proceed date and the Substantial Completion date due to weather in accordance with the following table which is the average from three local area weather stations:

Month	**Days**
January	7
February	7
March	7
April	6
May	6
June	7
July	8
August	7
September	5
October	4
November	5
December	7

4. If the total accumulated (not on an individual month-by-month basis) number of calendar days (pro-rated for the Notice to Proceed date month and/or Substantial Completion date per the table above as may

be applicable to reflect the actual dates of these occurrences) lost to weather from the Notice to Proceed date to the Substantial Completion date exceeds the total accumulated number to be expected for the same period from the table above, time for completion will be extended by the number of calendar days needed to include the excess number of calendar days lost. The contractor shall submit with each pay request a letter stating the number of days lost for the respective pay period so that it may be agreed upon by all parties.

5. No reduction in Contract Time shall be imposed if the total days actually lost to weather is less than the total to have been expected for that same period."

3.04 Section 01 11 00 "Summary of Work"

A. Paragraph 3.1.B.2, Page 01 11 00-3

1. Add the following paragraph:

"f. Indian Hills Parkway, north of Lower Roswell Road: restricted to Summer dates; detour route is Lower Roswell Road, and Fairfield Drive; detour sign plan must be developed in accordance with MUTCD requirements and is subject to review/approval by Cobb DOT; CCDOT road closure permit must be submitted no later than 3 weeks before proposed road closure is to begin."

B. Paragraph 3.1.B, Page 01 11 00-4

1. Replace Paragraph 6 with the following:

"6. Construction from STA 162+00 to STA 185+75 and from to STA 211+35 to STA 238+00 must take place between the months of November and February per the easement agreement between CCMWA and Indian Hills Country Club, Inc. (See copy of easement agreement in Appendix D - Easements)."

2. Renumber the last paragraph of the Section from "6" to "7".

3.05 Section 01 22 00 "Measurement and Payment"

A. Replace Section 01 22 00 with the revised Section 01 22 00 included with this addendum.

3.06 Section 01 35 13 "Special Project Procedures"

A. Paragraph 1.19.A, Page 01 35 13-5

1. Replace the paragraph with the following:

"A. Where the pipeline is in the CCMWA easement, CCMWA is compensating property owners for landscaping restoration, permanent fencing, irrigation system replacement (<u>except</u> within the Indian Hills County Club property – from STA 162+00 to STA 185+75 and from to STA 211+35 to STA 238+00), and private property sheds that are within the easement area. The Contractor is not responsible for restoration of landscaping, only fine grading and permanent grassing. The Contractor is also not responsible for the reinstallation of fences that are on the easement but will be required to adequately support existing fences where dismantled at the edge of the easement and tie-in the tree save

temporary fence outside of the easement to restrict access from neighboring properties to the work area, including temporary posts as needed to secure the area. Owners were advised to remove private property sheds ahead of construction within the CCMWA easement. Sheds not removed ahead of construction will be removed by the contractor. Contractor will not be responsible for replacement of sheds. Easement stipulation table indicates which sheds have been paid for at the time of bid. Contractor will be responsible for coordinating with property owners on construction schedule, so that property owners are aware of the duration of work on their property. Contractor shall communicate with property owners when contractor access is no longer needed. Contractor shall notify individual property owners when landscape restoration may begin."

3.07 Section 31 25 00 "Erosion and Sediment Control"

A. Paragraph 2.2.A.3, Page 31 25 00-2

1. Replace the paragraph with the following:

"3. Construction exit shall consist of National Stone Association Grade (NSA) R-2 with a D_{50} of 1.5-inches, minimum of 1-inch and a maximum of 3-inch stone. The geotextile underliner shall be a non-woven fabric equal to No. C-45NW as manufactured by Contech Construction Products, Inc. or equal."

3.08 Section 33 05 16.13 "Precast Concrete Structures"

A. Paragraph 2.1.B.9.a, Page 33 05 16.13-6

1. Revise the paragraph to read:

"a. Manhole covers shall be of cast iron or ductile iron. The ring and cover shall provide a 30-inch diameter access opening. The cover shall have two pickbars; each pickbar shall be 1-inch diameter and made from stainless steel. The ring cover shall be EJ1480EZ frame with 1480B cover, or approved equal. The word "WATER" shall be cast on the cover in letters approximately two (2) inches high. All manhole covers shall be vented with twenty-four (24) one (1) inch diameter holes, six in each quadrant."

3.09 Section 33 11 13 "Water Main Construction"

A. Paragraph 2.4.J, Page 33 11 13-5

1. Add the following paragraph:

"J. All butterfly valves shall be right to close, left to open."

B. Paragraph 2.5.L, Page 33 11 13-6

1. Add the following paragraph:

"L. All gate valves shall be right to close, left to open."

C. Paragraph 2.6.C, Page 33 11 13-6

1. Add Sigma as an approved valve box manufacturer.

D. Paragraph 3.10.G, Page 33 11 13-16

1. Replace paragraph G with the following:

"G. In rock excavation, the backfill shall not contain over 50% broken stone, and the maximum sized stone placed in the trench shall not exceed two inches in its largest dimension. Excess rock and fragments of rock exceeding two inches shall be loaded and hauled to disposal as directed by the Engineer. If it is necessary, in order to comply with the above specifications, selected backfill shall be borrowed and hauled to the trenches in rock excavation, at no additional cost to the Owner. Under no circumstances shall bottom of pipe rest against rock or unyielding material. Minimum bedding of 6" carefully compacted backfill shall separate bottom of pipe from rock or unyielding material."

ARTICLE 4 – DRAWINGS

4.01 Sheet C-14 – Segment A – STA 162+50 TO STA 175+00

A. Addition: Add a callout at STA 174+00 on the plans indicating a Cathodic Test Station (CTS).

4.02 Sheet C-15 – Segment A – STA 175+00 TO 187+50

A. Addition: Add a callout at STA 183+00 on the plans indicating a Cathodic Test Station (CTS).

4.03 Sheet C-23 – Segment B – STA 25+00 TO 35+50

A. Addition: Add a callout at STA 33+08 on the plans indicating a Cathodic Test Station (CTS).

4.04 Sheet C-24 – Segment B – STA 35+50 TO 48+00

A. Revision: Revise the bedding type from Station 40+65 to 44+00 from Type 4 bedding to Type 5 bedding.

4.05 Sheet C-25 – Segment B – STA 48+00 TO 60+50

A. Addition: Add a callout at STA 50+51 on the plans indicating a Cathodic Test Station (CTS).

B. Addition: Add a callout at STA 58+85 on the plans indicating a Cathodic Test Station (CTS).

C. Deletion: Delete the callout at STA 55+73 on the plans indicating a Cathodic Test Station (CTS).

4.06 Sheet D-4 – Details IV

A. Replacement: Replace the Cathodic Test Station Location Table with the table below.

CATHODIC TEST STATION LOCATION TABLE			
CTS #	SEGMENT	STATION	CTS TYPE
1	B	1+11	GV
2	B	6+20	AV
3	B	11+80	BO
4	B	14+75	AV
5	B	23+82	GV
6	B	33+08	GROUND
7	B	42+39	BO
8	B	50+51	GROUND

CATHODIC TEST STATION LOCATION TABLE			
CTS #	SEGMENT	STATION	CTS TYPE
9	B	58+85	GROUND
10	B	67+47	GV
11	B	78+75	VAULT
12	B	81+50	AV
13	A	1+10	GV
14	A	10+81	BO
15	A	21+61	AV
16	A	37+18	BO
17	A	49+50	GV
18	A	54+48	GV
19	A	57+00	BO
20	A	62+00	AV
21	A	67+29	BO
22	A	70+50	AV
23	A	79+23	BO
24	A	83+60	AV
25	A	92+68	GV
26	A	107+20	BO
27	A	111+67	AV
28	A	117+50	BO
29	A	124+65	AV
30	A	137+93	BO
31	A	142+05	GV
32	A	143+01	GV
33	A	159+00	AV
34	A	164+18	BO
35	A	174+00	GROUND
36	A	183+00	GROUND
37	A	193+78	GROUND
38	A	203+18	AV
39	A	219+14	BO
40	A	229+43	AV
41	A	232+93	BO
42	A	243+93	AV

4.07 Sheet D-5 – Details V

A. Replacement: Replace the Abandonment Table with the table below.

1. Revised Abandonment Table

ABANDONMENT TABLE			
ITEM #	ITEM	REFERENCE LOCATION STATION	NOTES
SEGMENT A			
1	ABANDON AIR RELEASE VALVE	49+90	
2	ABANDON LINE VALVE & MH	54+50	
3	ABANDON BLOW OFF VALVE	57+20	INCLUDES REMOVAL OF PIPING
4	ABANDON AIR RELEASE VALVE	71+00	
5	ABANDON GATE VALVE	91+40	
6	ABANDON OUTLET VALVE	91+90	
7	ABANDON AIR RELEASE VALVE	92+40	
8	ABANDON BLOW OFF VALVE	171+75	INCLUDES REMOVAL OF PIPING
9	ABANDON AIR RELEASE VALVE	227+50	COORDINATE WITH IHCC STAFF DURING ABANDONMENT
SEGMENT B			
10	ABANDON MARIETTA METER VAULT AND CONNECTION	11+14	REMOVE VAULT TOP, METER, BLOWOFF VALVE AND PIPING, & CAP EACH SIDE, FILL WITH NO. 57 STONE.
11	ABANDON LINE VALVE	58+45	MARIETTA WATER LINE VALVE (CUT BELOW GRADE AND CONCRETE)
12	ABANDON LINE VALVE	59+45	MARIETTA WATER LINE VALE (CUT BELOW GRADE AND CONCRETE)
13	METER VAULT NEAR SOARING DRIVE	60+75	REMOVE VAULT TOP, METER, BLOWOFF VALVE, & CAP EACH SIDE FILL WITH NO. 57 STONE. OUTLET VALVE TO COVENTRY TOWNSHIP METER, LINE VALVE; 61+50; ABANDON IN PLACE.
14	ABANDON OUTLET VALVE TO METER	61+55	
15	ABANDON LINE VALVE	61+60	

4.08 Sheet D-7 – Details VII

A. Addition: Add a callout to the concrete thrust collar detail that states, “Min 6" clearance between faces of megalugs. Wedge action restraints to be torqued to manufacturer's specification.”

B. Replacement: Replace the concrete thrust block table with the following:

TABLE FOR CONCRETE BLOCKING (225 PSI TEST PRESSURE)					
FITTING	**MINIMUM BEARING AREA (LENGTH X HEIGHT)**				
	16”	12”	10”	8”	6”
11.25° BEND	3’ X 2’	2’ X 2’	2’ X 1’	2’ X 1’	1’ X 1’
22.5° BEND	4’ X 3’	3’ X 2’	2’ X 2’	2’ X 2’	2’ X 1’
45° BEND	5’ X 3’	4’ X 2’	3’ X 2’	2’ X 2’	2’ X 2’
90° BEND	6’ X 5’	5’ X 3’	4’ X 3’	4’ X 2’	3’ X 2’
TEE	6’ X 3’	4’ X 3’	4’ X 2’	3’ X 2’	2’ X 2’
DEAD END	6’ X 3’	4’ X 3’	4’ X 2’	3’ X 2’	2’ X 2’
NOTE: SOIL BEARING STRENGTH OF 1500 PSI IS ASSUMED IN THE CALCULATIONS ABOVE.					

4.09 Sheet D-8 – Details VIII

A. Deletion: Delete the “City of Marietta Trench Repair Detail” dated 12/2/2019

4.10 Replace the following Drawings:

Drawing No.	Drawing Title
C-4	SEGMENT A – STA 37+50 TO STA 50+00
C-5	SEGMENT A – STA 50+00 TO STA 62+50
C-11	SEGMENT A – STA 125+00 TO STA 137+50
C-20	SEGMENT A – STA 236+50 TO END
C-27	SEGMENT B – STA 73+00 TO END
CD-2	CONNECTION DETAILS II
CD-7	TANK VALVE CONTROL VAULT REPLACEMENT DETAIL
D-1	DETAILS I

ARTICLE 5 – APPENDICES

Not Used.

ARTICLE 6 – BIDDER QUESTIONS AND CLARIFICATIONS

6.01 Question: *Requesting to have JS Valve added as an approved manufacture. JS Valve - Series 6900 Series 6800 - AWWA - Resilient Seated Gate Valve, Ductile Iron, NRS, MJ x MJ and Flange x Flange End Connections. JS Valves Improve the Industry Standard for AWWA Gate Valves by providing a Heavy Thick Wall All Ductile Iron Gate Valve with a Large Diameter Stainless Steel Stem, Stainless Steel Hardware, and a Superior Interior and Exterior Fusion Bonded Epoxy Coating.*

Response: Cobb County-Marietta Water Authority reviews all significant materials that will be incorporated in their projects under a thorough evaluation process. The current stage in the bid process does not provide enough time for product review before the bid opening on April 28.

6.02 Question: *The Advertisement for Bid states "Only those contractors that are pre-qualified with the Cobb County-Marietta Water Authority to construct 36" diameter water mains at the time of the first publication of this notice will be allowed to receive plans and specifications and bid this project". However, GC 6.06.K states "All pipe installation must be performed by the general contractor or subcontractor that has been prequalified by the Cobb County-Marietta Water Authority for the installation of 48" ductile iron pipe". Are both provisions correct? Please clarify.*

Response: Please refer to the Prequalified Contractors list (approved on 2/17/2020). Contractors in categories 2, 3, and 4 are qualified to bid and install pipe on this project.

6.03 Question: *How long will the Barnes Mill Meter @ +/- Sta. 23+82 be allowed to be offline?*

Response: The Barnes Mill meter at this location can be offline for an extended duration to allow replacement of the meter, concurrent to pipeline installation. If needed, the meter could be offline for the duration of the "Segment B" phase of the project.

6.04 Question: *Will access to the proposed waterline be allowed through the apartments off of Lower Roswell Rd. Sta. 30+00 to Sta.051+00 and also Sta. 53+00 to 67+00?* The concrete wall and guard rail prevents access to the easement from Lower Roswell Rd.

Response: From Station 30+00 to 37+50, the contractor shall maintain access within the existing easement (access is available from the dead end of Bentley Lake Road). From Station 37+50 to 50+00 and 53+00 to 67+00 the contractor will need to notify/coordinate with the property owner of the access from Roswell Road if deemed necessary. Access has not been coordinated or granted by the apartment property owners. Access from 53+00 to 67+00 from the public ROW at the dead end of McBurnette Rd may be utilized to reach this area.

6.05 Question: *Who is responsible for the construction staking and as-builts?*

Response: Contractor is responsible for construction staking per specification 01 32 23. Contractor is responsible for providing record information per specification 33 11 33, section 3.38.

6.06 Question: *Can an item be added to cover all the property pins that will have to be replaced or how will that be handled?*

Response: Refer to specification section 01 32 23 1.1.D. Property monuments or markers requiring replacement will be the responsibility of the contractor.

6.07 Question: *What are the specific requirements for the Merritt Rd. (Wallace Rd.) closure?*

Response: Should full road closure be required on Merritt Rd., the closure will be limited to weekends during the summer months and subject to final approval by City of Marietta DOT.

6.08 Question: *Are all road closures restricted to the Summer months?*

Refer to specification section 01 11 00 3.1.B. Listed road closures required in subsection B.2 will be restricted to summer dates.

6.09 Question: *Will any consideration be given to only holding retainage on the Allowances as they are used?* Two retainage line items will be easy to keep track of.

Response: Retainage will only be held on Allowance that is billed on the project.

6.10 Question: *When will the overtime for the inspector be charged?*

Response: Refer to Standard General Conditions of the contract Article 6, Section 6.02.

6.11 Question: *How will new septic field lines that are required be paid for?*

Response: Septic fields will be paid under the owner directed allowance for Force Account Work.

6.12 Question: *Allowances Sect. 01 21 16-2 Paragraph 2.7A. States additional testing points will be installed and removed at the contractor's expense. Will this line be chlorinated per AWWA C651 with testing points every 1,200'?*

Response: No. Cobb County-Marietta Water Authority does follow AWWA C651 testing guidelines, but additional testing points will not be required. Testing will be through appurtenances shown on the plans.

6.13 Question: *Will consideration be given to a jack and bore at Holt Rd due to all of the existing utilities?*

Response: No. A jack and bore at this location would be directly in the path of existing 30" PCCP water main. Preference is to not have abandoned pipe in Cobb DOT R/W.

6.14 Question: *Will consideration be given to adding a Trench Rock Item? There is a lot of evidence of rock laying all on top of the ground contrary to some of the soil borings and distance between some of the borings.*

Response: No additional trench rock item will be added to the bid form at this time.

END OF ADDENDUM NO. 1

4/20/20

SECTION 01 22 00
MEASUREMENT AND PAYMENT

1 GENERAL

1.1 GENERAL

A. No quantities shall be measured for payment except items listed in the proposal, unless the Owner has approved "extra" work in accordance with the contract documents and has so advised the Contractor before the work was actually performed.

B. Any and all other material, labor, etc., furnished and required shall be considered as incidental to the items to be measured and shall be included in the unit price bid for water main.

C. The unit or lump sum prices bid for the various items shall be full compensation for furnishing all materials, tools, equipment, labor and incidentals necessary and/or required to complete the work as shown on the Drawings and called for in the specifications.

D. The quantities to be paid for shall be determined by actual measurement of the amounts placed. The Engineer shall make all measurements and the contractor shall make certain all work has been measured before concealing; otherwise, he may be required to uncover or make accessible any work so concealed in order to receive payment for such items.

2 PAY ITEMS

2.1 WATER MAINS

A. Measurement of the pipe in place will be along the main axis of the pipeline. No deduction in the length of pipe will be made for space occupied by valves, specials, and fittings.

B. The unit price bid for pipe shall include all materials, labor and incidentals necessary for the completion of the pipeline, including rock excavation, as called for under SECTION 33 11 13, WATER MAIN CONSTRUCTION, except as specifically called for in other pay items herein. Where in roadways, geogrid soil reinforcement as specified in Section 33 11 13 shall be included in the pipe price. Geogrid shall be installed as depicted by the thick black line on Detail 105 and 114 on Sheet D-2 between the compacted soil backfill and the GAB.

C. The unit price bid for water line shall include and cover all clearing and grubbing on the entire pipeline right-of-way or easement and the disposal of excess materials and all debris, and in dressing and finishing after the line is installed. There will be no additional payment where extra depth is incurred due to valve

locations, tie-ins, restrained joint requirements, conflicts with other utilities, or other field conditions.

D. The Contractor shall be responsible for the reuse of acceptable in-place soils material including the drying or wetting to obtain suitable moisture content for compaction during backfill operations under Pay Item 2.1.

E. Pipe will be paid for at the unit price bid for various sizes and types.

2.2 RESTRAINED JOINTS / RETAINER GLANDS

A. Special restrained joints will be counted in place and paid for at the unit price bid per each type and size listed in bid proposal. A restrained joint shall be defined as the separated or loose portion of materials that are installed separately from pipe, fittings, or valves. Portions of restraint that are permanently attached to pipe, fittings, or valves and/or are an integral part of the system, do not qualify for additional payment. The restraint system shall be counted only once and shall be a complete system for each joint that is to be restrained.

B. In the case of straight pipe, the payment for each restrained joint will be paid separate from the unit price per foot of pipe. In the case of ductile iron fittings, the payment for restrained joints will be paid separately from the payment for fittings. In the case of valves, the payment for each restrained joint will be paid separate from the unit price bid for each valve.

2.3 DUCTILE IRON FITTINGS

A. Measurement of all diameter fittings shall be measured in place and payment made for approved fitting installation per pound of all diameter fittings installed. The unit price bid for fittings shall include all materials, labor and incidentals necessary for the complete installation of each fitting as called for in these specifications. Weight of iron fittings for payment purposes shall be determined by the AWWA C153 weight for the lightest weight fitting as appropriate for service intended not including joint accessories.

B. Fittings that will be counted for payment under this item will include: (a) main-line fittings that are labeled on the Drawings, (b) plugs that are shown on stub-outs and on temporary ends for future connections, and (c) fittings on blow-off piping. Fittings installed for the Contractor's convenience or negligence will not be counted for payment.

C. Additional fittings called for in the bid proposal and not shown on the drawings shall be installed as directed by the Engineer or Owner.

D. All straight pipe of any length shall be defined as pipe rather than fittings, unless it is listed on the bid proposal as a special pay item.

2.4 OPEN CUT STEEL CASING PIPE

A. Measurement for this pay item shall be by the linear foot of casing pipe installed as measured in plan view complete, in place for the diameter indicated.

B. Unit price bid shall include all materials, tools, labor, equipment, and incidentals necessary for open cut installation to include casing pipe, water main stabilization/restraint inside the casing to prevent movement and flotation, bulkheads, and incidentals necessary for the complete installation of each steel casing as called for in these specifications. Carrier pipe will be paid for under bid item for Water Mains.

2.5 JACK & BORE STEEL CASING PIPE

A. Measurement for this pay item shall be by the linear foot of casing pipe installed as measured in plan view complete, in place for the diameter indicated.

B. Unit price bid shall include all materials, tools, labor, equipment and incidentals necessary for jack-and-bore installation to include bore pit excavation and shoring, spoils removal, casing pipe, water main stabilization/restraint inside the casing to prevent movement and flotation, bulkheads, and incidentals necessary for the complete installation of each steel casing as called for in these specifications. Carrier pipe will be paid for under bid item for Water Mains.

2.6 CASING SPACERS IN STEEL CASING

A. Measurement of each casing spacer shall be measured in place and payment made for each approved casing spacer installation. The unit price bid for casing spacer shall include all materials, labor and incidentals necessary for the complete installation of each casing spacer as called for in these specifications.

B. Casing spacers used in steel casing will be paid for at the unit price per each size as listed in the proposal.

2.7 VALVES

A. Measurement of each valve shall be measured in place and payment made for approved valve installation per each valve installed. The unit price bid for valves shall include all materials, labor and incidentals necessary for the complete installation of each valve as called for in these specifications.

B. Unit price shall include all excavation, furnishing and installing of the valves and valve extensions as required, operator and all necessary incidentals to complete the work. Access manholes, test connections, or valve boxes shall be paid for under a separate bid item.

2.8 PIPE OUTLETS

A. Measurement of each welded outlet shall be measured in place and payment made for approved welded outlet installation per each welded outlet installed. The unit price bid for welded outlets shall include all materials, labor and incidentals necessary for the complete installation of each welded outlet as called for in these specifications.

B. Unit price for outlets shall include additional cost for parent pipe wall thickness increase necessary for welding and shall be based on a twenty-foot length of parent pipe. No extra payment for increased parent pipe wall thickness under this item or other bid items shall be paid.

C. Restrained gaskets, such as Flex Ring, Fast-Grip, or Field Lok, shall be paid under the separate bid item for those gaskets when used on push-on welded outlets.

2.9 SAMPLE TEST CONNECTION

A. Measurement of each sample test station shall be measured in place and payment made for approved test station installation per each installed. The unit price bid for sample test station shall include all materials, labor and incidentals necessary for the complete installation of each sample test station at the inline valve locations as called for in these specifications and as shown in contract drawings. Payment will include the cost of the flanged gate valve with handwheel, blind flange, corporation stop, curb stop, Type K copper tubing in the size shown, copper, brass and iron fittings, as specified, and copper piping supports.

B. There are two sample test stations or ports for most mainline valve locations. In locations with three valves, the interior ports may be omitted on one or more valves. The test stations are depicted on the drawings as black circles on either side of each isolation valve.

2.10 AIR & VACUUM VALVE

A. Measurement of each air and vacuum valve shall be measured in place and payment made for approved air and vacuum valve per each installed. The unit price bid for air and vacuum valves shall include all materials, labor and incidentals necessary for the complete installation of each air and vacuum valve and associated flanged gate valve as called for in these specifications. Access manholes for valves shall be paid for under a separate bid item. The 36” tee, plug, and/or blind flange required for connection of the water main to the isolation gate valve will be paid for under the Ductile Iron Fittings pay item.

2.11 VALVE MARKERS

A. Valve Markers will be counted in place and paid for at the unit price bid for each. Unit price shall include all items necessary for the installation of the valve marker.

2.12 VALVE BOXES

A. Valve boxes will be counted in place and paid for at the unit price bid for each. Unit price shall include all excavation and installation of the box, concrete collar around the box and all necessary incidentals to complete the work. Extension stems will be paid under the bid item for the valve.

2.13 POLYETHYLENE ENCASEMENT

A. Polyethylene encasement will be measured in place along the length of pipe and paid for at the unit price bid per linear foot for double wrap encasement (8-mil white V-Bio and additional black 8-mil tubing) as listed in the bid proposal. Payment will be for the double wrap encasement and proper taping of all pipes as required by Specification Section 33 11 13.

2.14 BONDED JOINTS

A. Measurement for the bonding of joints shall be for each pipe joint bonded with two bonding cables.

B. Continuity testing instrument for testing of pipe joint bonds shall be incidental to the cost of bonded joints.

2.15 CATHODIC TEST STATION

A. Measurement for the cathodic test stations shall be for each station installed and shall include all 4 wires, terminal board, crimp on connections, and COTT. In addition, measurement in manholes and vaults shall include the wall mounting adapter required to mount the test stations inside the structure.

2.16 CONNECTIONS TO EXISTING MAINS

A. Payment for this item will be at the unit price bid listed in the bid proposal. Payment shall be full compensation for traffic control, locating, cutting-in and connecting to the existing water main and removal of existing piping as necessary to complete the connection. Pipe, sleeves and fittings used to make this connection will be paid for under the Ductile Iron Pipe and Ductile Iron Fittings pay items. Concrete thrust blocking and any thrust collars will be paid for under Miscellaneous Concrete and Miscellaneous Reinforcing Steel pay items.

B. Connections include:

Connection Type	Station	Size	Segment	Serves
To Marietta Water	49+50	8”	A	Marietta
To CCWS	54+50	12"	A	CCWS
To CCWS	92+68	8"	A	CCWS
To CCWS	142+05	8"	A	CCWS
To Existing Main	244+03	30"	A	CCMWA
Barnes Mill Meter Replacement	1+00	Varies	B	Marietta
To Existing Main	1+00	30"	B	CCMWA
To Existing Main	15+11	30"	B	CCMWA
To Existing Main	22+48	30"	B	CCMWA
To Marietta Water	23+79	8"	B	Marietta
To Existing Tank	82+17	30"	B	CCMWA

2.17 BLACKJACK GROUND STORAGE TANK CONTROL VALVE AND VAULT

A. Payment for this item will be at the lump sum price bid listed in the bid proposal. Payment shall include concrete vault top slab and access hatch removal, new access ladder, and replacement for access to vault interior; ductile iron pipe, fittings, and specials; 30” butterfly valve and actuator; bypass line gate valves; test ports; electrical conduit; and other equipment and materials as required for a complete replacement of the existing vault piping and equipment to the limits shown in the Drawings.

B. Contractor shall coordinate with Beck Electric Actuators on salvaging and shipping the Beck actuator on the existing butterfly back to Beck for inspection and refurbishment. The new 30” butterfly valve to be installed in the tank vault shall be procured by Beck actuators and assembled with new bracketry at the Beck factory before the valve is shipped back to the job site for installation.

2.18 BARNES MILL METER REPLACEMENT

A. Payment for this item will be at the lump sum price bid listed in the bid proposal. Payment shall include concrete vault top slab and access hatch removal and replacement for access to vault interior; ductile iron pipe, fittings and specials; valves; test ports; flow meters; and other equipment and materials as required for a complete replacement of the existing flow meters to the limits shown in the Drawings.

2.19 BONNIE DELL METER REPLACEMENT

A. Payment for this item will be at the lump sum price bid listed in the bid proposal. Payment shall include concrete vault top slab and access hatch removal, placement of new vault top slab and access hatch for access to vault interior; ductile iron pipe, fittings and specials; valves; test ports; flow meter; and other equipment and materials as required for a complete replacement of the existing flow meters to the limits shown in the Drawings.

2.20 MARKER BALL LOCATOR INSTRUMENT

A. Payment for this item will be made at the unit price bid and shall be full payment for furnishing the number of instruments shown as specified in Section 33 11 13. Marker balls will be paid for separately.

2.21 MARKER BALL INSTALLATION ON EXISTING WATER MAIN TO BE ABANDONED

A. The marker ball installation will be paid for at the unit price bid per each installation. The price shall be compensation for all labor, tools, equipment, and materials necessary to complete the installation as shown on the Drawings including marker balls. The Contractor is responsible for installation of vertical PVC pipe to the top of the existing pipe, installation of backfill after pipe location has been surveyed, furnishing and installation of marker balls with appropriate information, capping of pipe, and backfilling and paving as necessary.

B. Contractor shall install marker balls on existing water main to be abandoned in place at an approximate spacing of 100 feet, with one marker ball located at each end of the abandoned section. The marker balls are to be installed after the existing main is located and before the locating crew and traffic control personnel leave each site.

2.22 MARKER BALL AND INSTALLATION ON NEW WATER MAIN

A. The marker ball installation will be paid for at the unit price bid per each installation. The price shall be compensation for all labor, tools, equipment, and materials necessary to complete the installation as shown on the Drawings including marker balls. The Contractor is responsible for installation of vertical PVC pipe at the time of construction, maintaining pipe during construction, installation of backfill after pipe location has been surveyed, furnishing and installation of marker balls with appropriate information, capping of pipe, and backfilling.

2.23 CONCRETE MANHOLE ASSEMBLY

A. Measurement of each concrete manhole assembly shall be measured in place and payment made for approved concrete manhole assembly installation per each installed. The unit price bid for concrete manhole assembly shall include all materials, labor and incidentals necessary for the complete installation of each concrete manhole assembly as called for in these specifications.

B. Unit price for each concrete manhole assembly shall include up to ten vertical feet of complete manhole assembly, as measured from the outside bottom of the pipe to the top of the manhole. A complete manhole assembly at a minimum shall consist of base foundation preparation and materials, a manhole base, riser sections of the diameter called for on the contract drawings, grade rings, manhole ring, and manhole cover. Manhole rings shall be poured in the top slab unless they are in pavement or sidewalks. The manhole assembly shall provide a means of egress via embedded ladder rungs or other as shown on the Drawings. No extra payment for grade ring adjusters for final grade shall be paid.

C. Unit price for each vertical foot in excess of ten vertical feet shall be measured and paid per vertical foot installed of the manhole riser section installed.

2.24 FLOWABLE FILL ENCASEMENT

A. Flowable fill encasement will be measured in place along the length of pipe and paid for at the unit price bid per cubic yard for encasement as listed in the bid proposal. Payment will be for the flowable fill encasement of pipes as required by Specification Section 33 11 13.

2.25 PIPE BEDDING AND SUBGRADE STABILIZER STONE

A. Measurement for payment for subgrade stabilizer stone will be made by the ton.

B. Weight for payment will be taken from dray tickets for stone actually placed in accordance with the following limitations:

1. Stone used for stabilizing trench bottom in wet areas will be paid for.
2. Stone used for Type 4 and 5 bedding conditions will be paid for.
3. Stone used for constructing temporary and permanent driveways will be paid for.
4. Stone used for construction haul roads will not be measured for payment, nor will that which is placed contrary to contract requirements.
5. GAB for paving paid separately under Paving.
6. Stone used for Construction Exits paid separately.

2.26 MISCELLANEOUS CONCRETE

A. Miscellaneous concrete will be measured in place and paid for at the unit price bid per cubic yard. Concrete for thrust collars, thrust blocks, cradles for fittings, and anchors will be paid for as Miscellaneous Concrete. Reinforcing steel, where required, will be paid for separately as outlined.

2.27 MISCELLANEOUS REINFORCING STEEL

A. The unit price shall include all costs associated with the furnishing and installing reinforcing steel of the sizes required for a concrete structure. The amount of reinforcing steel will be measured in place and paid for at the unit price bid per pound. Only work shown on the drawings or directed by the Engineer will be paid for.

2.28 TREE SAVE FENCE

A. Temporary tree save fence shall be paid for at the unit price bid per linear foot and will be measured in place. The quantity shall be field measured and only the quantity installed at the Engineer's approval will be measured for payment. The unit price bid shall be full compensation for all material, labor, tools and equipment necessary to install, maintain and remove the tree save fence as specified in the contract documents. Tree save fence will be placed each side of easement limits for entire project and be tied to existing fencing where required to close gaps between private property fencing and construction work area. Tree save fence will only be measured for payment once.

2.29 TEMPORARY SILT FENCE (Sd1-S and Sd1-Ns)

A. Temporary silt fence shall be paid for at the unit price bid per linear foot and will be measured in place. The quantity shall be field measured and only the quantity installed at the engineer's approval will be measured for payment. The unit price bid shall be full compensation for all material, labor, tools and equipment necessary to install, maintain, and remove the temporary silt fence as specified in the contract documents. Silt fence will only be measured for payment once.

2.30 HAY BALE BARRIER

A. Hay bale barriers will be measured in place and paid for at the unit price bid per each. Each straw bale shall be a minimum of 14 in. wide, 18 in. in height, 36 in. in length and should have a minimum mass of 50 lbs. The straw bale should be composed entirely of vegetative matter, except for the binding material. Payment shall be full compensation for all labor tools, equipment, materials and any incidentals necessary to install, maintain and remove hay bale barriers. No payment will be made for hay bale barriers placed without the approval of the Engineer.

2.31 RIP-RAP

A. Rip-rap will be measured in place and paid for at the unit price bid per square yard. Placement of rip-rap will be as shown on the Drawings. Unit price bid shall be full compensation for all labor, materials and equipment required to furnish and install required rip-rap and geotextile filter fabric.

2.32 CONSTRUCTION EXIT (Co)

A. Construction exits will be counted in place and paid for at the unit price bid for each. The unit price bid shall be full compensation for all material, labor, tools and equipment necessary to install, maintain and remove all construction exits as specified in the contract documents. Only exit locations approved by Engineer will be counted for payment.

2.33 STRAW MULCH STABILIZATION (Ds1)

A. Straw mulch stabilization shall be paid for at the unit price bid per square yard and will be measured in place. Measurement shall be along the centerline of the pipeline multiplied by the average width of the area mulched. The unit price bid shall be full compensation for all material, labor, tools and equipment necessary to install the straw mulch stabilization as specified in the contract documents.

2.34 GRASSING (Ds2/Ds3)

A. Grassing shall be paid for at the unit price bid per square yard of grassing. Contractor shall be responsible for replacing all grass destroyed during installation of water main. Grassing area measured for payment will be limited to a strip not to exceed 60 feet wide measured along the length of the water main. Where grassing is required in areas adjacent to any residential or commercial lawn, the type of grass to be planted and grown shall match the type of grass growing on the adjacent lawn, unless otherwise shown on the Drawings. No modification shall be made in the unit price.

2.35 EROSION CONTROL MATTING AND BLANKETS (Mb)

A. Payment for erosion control matting and blankets will be made at the unit price bid per square yard. The unit price bid shall be full compensation for all tools, labor, equipment, materials, protection of erosion mat against weather, and any incidentals necessary for the installation of the erosion mat as required. No payment will be made for erosion control mat placed without the approval of the Engineer.

2.36 INLET SEDIMENT TRAP (Sd2)

A. Inlet sediment traps will be counted in place and paid for at the unit price bid for each. Payment shall be full compensation for all labor, tools, equipment, materials and any incidentals necessary to install, maintain and remove sediment traps. No payment will be made for sediment traps placed without the approval of the Engineer.

2.37 TURBIDITY CURTAIN (Tc)

A. Turbidity curtain will be counted in place and paid for at the unit price bid for each. Payment shall be full compensation for all labor, tools, equipment, materials and any incidentals necessary to install, maintain and remove outlet protection. No payment will be made for outlet protection placed without the approval of the Engineer.

2.38 NPDES PERMIT COMPLIANCE

A. Payment for compliance with NPDES permit requirements shall be made at the lump sum price bid. The lump sum bid shall be full compensation for compliance with NPDES requirements as described in Specification Section 31 25 00 including the employment of an Environmental Professional for specified services. Fees charged for the Land Disturbance Activity Permit and Notice of Intent by the Georgia Environmental Protection Division (EPD) and Cobb County will be reimbursed to the Contractor under the Allowance for Force Account Work.

2.39 REMOVE & REPLACE ASPHALT DRIVEWAYS, GOLF CART PATHS AND PARKING LOTS

A. Payment for this item will be at the unit price bid per square yard. Measurement shall be the length of the pavement removed and replaced, measured along the centerline of the pipe multiplied by the trench width unless otherwise shown in the Drawings. The unit price bid shall be full compensation for the asphalt, tack, GAB, and all materials, labor, tools and equipment required to complete the replacement as shown on drawings. Maintenance of the driveway and parking lot during construction until replacement shall be included in unit price.

B. Asphalt driveway, golf cart paths or parking lot surfaces damaged or removed due to contractor error or negligence will not be paid for. No compensation will be allowed for the removal of existing asphalt driveways and parking lots.

2.40 REMOVE AND REPLACE GRAVEL DRIVEWAYS AND PARKING LOTS

A. Payment for this item will be at the unit price bid per square yard. The unit price will be full compensation for smoothing the driveway bed and leveling an 8”

thick layer of graded aggregate base. Maintenance of the driveway during construction shall be included in the unit price for this item.

2.41 REMOVE & REPLACE CONCRETE SIDEWALKS

A. Sidewalks removed and replaced, as necessary for pipe installation, shall be measured in place and shall be paid for at the unit price bid per square yard. Concrete sidewalks shall be replaced with a minimum thickness of four (4) inches and of a matching width, including reinforcing bars, unless directed otherwise by the Engineer. The unit price bid shall include the cost of saw cutting, removal, and disposal of the existing sidewalk.

2.42 REMOVE & REPLACE CONCRETE CURB AND GUTTER

A. Curb or curb and gutter completed in place and accepted shall be measured in linear feet along the face of the curb.

B. Each type of curb and curb and gutter removed and replaced shall be paid for at the contract unit price bid per linear foot. Payment is full compensation for removal of existing curb or curb and gutter, furnishing of materials, preparing subgrade or pavement surface, installing, and maintaining curb or curb and gutter installed.

2.43 PAVING 1.5 INCHES OF GDOT 12.5 MM SUPERPAVE

A. Measurement shall be the length of the pavement replaced within Cobb County jurisdictional limits, measured along the centerline of the pipe multiplied by the full road width unless otherwise directed by the Owner. Payment will include application of Bitumen Tack Coat at a rate of 0.04-0.06 Gallons per Square Yard and furnishing and installation of 12.5 mm Superpave. The unit of measurement shall be the square yard.

B. Roadways replaced will be measured in place and paid for at the unit price bid per square yard. Asphalt road surfaces damaged or removed due to contractor error or negligence will not be paid for. The unit price bid shall be full compensation for the asphaltic concrete, tack, and all materials, labor, tools and equipment required to complete the replacement as shown on drawings. Maintenance of the roadway surface during construction shall be included in this unit price.

2.44 PAVING 1.5 INCHES OF GDOT 9.5 MM SUPERPAVE

A. Measurement shall be the length of the pavement replaced within the City of Marietta limits (Barnes Mill Road from STA 1+00 to approximate STA 44+00), measured along the centerline of the pipe multiplied by the full road width unless otherwise directed by the Owner. Payment will include application of Bitumen Tack Coat at a rate of 0.04-0.06 gallons per square yard and furnishing and

installation of 9.5 mm Superpave. The unit of measurement shall be the square yard.

B. Roadways replaced will be measured in place and paid for at the unit price bid per square yard. Asphalt road surfaces damaged or removed due to contractor error or negligence will not be paid for. The unit price bid shall be full compensation for the asphaltic concrete, tack, and all materials, labor, tools and equipment required to complete the replacement as shown on drawings. Maintenance of the roadway surface during construction shall be included in this unit price.

2.45 PAVING (12 INCHES GAB, 8 INCHES 19 MM GDOT SUPERPAVE)

A. Measurement shall be the length of the pavement replaced, measured along the centerline of the pipe multiplied by the trench width plus two feet, per the asphalt pavement replacement detail. Payment will include application of Bitumen Tack Coat at a rate of 0.04-0.06 gallons per square yard and furnishing and installation of 19 mm Superpave. The unit of measurement shall be the square yard.

B. Roadways replaced will be measured in place and paid for at the unit price bid per square yard. Asphalt road surfaces damaged or removed due to contractor error or negligence will not be paid for. The unit price bid shall be full compensation for the asphalt, concrete, tack, GAB, and all materials, labor, tools and equipment required to complete the replacement as shown on drawings. Maintenance of the roadway surface during construction until replacement shall be included in this unit price.

C. Payment for milling and asphalt overtopping will be made under a separate bid item.

2.46 ASPHALT PAVEMENT MILLING

A. Measurement shall be the length and width of the pavement milled to a depth of 1.5 inches. Payment will include removal and disposal of original materials. The unit of measurement shall be the square yard to include temporary asphalt patch and existing road (generally two travel lanes in width).

2.47 PAVEMENT MARKING

A. Pavement marking shall be measured in place and paid by the unit shown on the Bid Proposal. Pavement marking shall be in accordance with GDOT latest specifications for thermoplastic markings and shall match pre-construction markings (turn lanes, arrows, crosswalks, etc.). No separate payment shall be made for temporary markings.

2.48 ABANDON EXISTING CCMWA VALVE MANHOLE AND VALVES

A. The existing mains owned by CCMWA that will be abandoned also contain several line or air valves that will require removal of the upper section of the manhole, filling in of the manhole with stone or concrete, backfill and surface restoration. Valve to be abandoned in place (in the closed position).

B. Payment for this item will be made at the unit price bid listed in the proposal and shall be full compensation for all tools, materials, equipment, and labor necessary to locate utilities, provide traffic control (if in the pavement), saw cut existing pavement (if in the pavement), excavate around the manhole, remove the upper manhole section, fill the manhole with stone (if not in pavement) or concrete (if in pavement), backfill and restore the surface, and installation of marker balls at each location. Unit price bid shall be for each location.

C. Any fittings needed will be paid for under the Ductile Iron Fittings bid item, pavement replacement will be paid for under the applicable bid item, stone used will be paid for under the Subgrade Stabilizer Stone bid item and concrete used will be paid under the Miscellaneous Concrete bid item.

D. Contractor shall install marker balls on existing valves to be abandoned. The marker balls are to be installed after the existing valve is located and before the locating crew and traffic control personnel leave each site. The marker ball installation will be paid for at the unit price bid per each installation. The price shall be compensation for all labor, tools, equipment, and materials necessary to complete the installation as shown on the Drawings. The Contractor is responsible for installation of vertical PVC pipe to the top of the existing valve, installation of backfill after valve location has been surveyed, furnishing and installation of marker balls with appropriate information, capping of pipe, and backfilling and paving as necessary.

2.49 ABANDON EXISTING CCMWA VALVE BOX AND VALVE

A. The existing CCMWA main to be abandoned in place includes several line or air valves that will require removal of the upper section of the valve box, filling in of the valve box with concrete, backfill and surface restoration. Valve to be abandoned in place (in the closed position).

B. Payment for this item will be made at the unit price bid listed in the proposal and shall be full compensation for all tools, materials, equipment, and labor necessary to locate utilities, provide traffic control (if in the pavement), saw cut existing pavement (if in the pavement), excavate around the valve box, remove the valve box, fill the void with stone (if not in pavement) or concrete (if in pavement), backfill and restore the surface. Unit price bid shall be for each location.

C. Any fittings needed will be paid for under the Ductile Iron Fittings bid item, pavement replacement will be paid for under the applicable bid item, stone used will be paid for under the Subgrade Stabilizer Stone bid item and concrete used will be paid under the Miscellaneous Concrete bid item.

D. Contractor shall install marker balls on existing valves to be abandoned. The marker balls are to be installed after the existing valve is located and before the locating crew and traffic control personnel leave each site. The marker ball installation will be paid for at the unit price bid per each installation. The price shall be compensation for all labor, tools, equipment, and materials necessary to complete the installation as shown on the Drawings. The Contractor is responsible for installation of vertical PVC pipe to the top of the existing valve, installation of backfill after valve location has been surveyed, furnishing and installation of marker balls with appropriate information, capping of pipe, and backfilling and paving as necessary.

2.50 ABANDON EXISTING CCMWA BLOWOFF VALVE

A. The existing CCMWA main to be abandoned in place includes several blowoff valves that will need to be cut below ground and plugged. The only visible components of the blowoff valves are usually the valve box for the valve and a plugged discharge elbow on the riser. The work involves cutting the valve box and blowoff riser at least 24 inches below ground and filling the box and riser with concrete below ground.

B. Payment for this item will be made at the unit price bid listed in the proposal and shall be full compensation for all tools, materials, equipment, and labor necessary to locate utilities, excavate, cut and plug the existing valve box and riser, and restore the surface. Unit price bid shall be for each location.

C. Any fittings needed will be paid for under separate bid item for Ductile Iron Fittings, any pavement replacement will be paid for under the applicable bid item and any stone used will be paid for under the Subgrade Stabilizer Stone bid item.

D. Contractor shall install marker balls on existing blowoff valves to be abandoned. The marker balls are to be installed after the existing blowoff valve is located and before the locating crew and traffic control personnel leave each site. The marker ball installation will be paid for at the unit price bid per each installation. The price shall be compensation for all labor, tools, equipment, and materials necessary to complete the installation as shown on the Drawings. The Contractor is responsible for installation of vertical PVC pipe to the top of the existing blowoff valve, installation of backfill after blowoff valve location has been surveyed, furnishing and installation of marker balls with appropriate information, capping of pipe, and backfilling and paving as necessary.

2.51 GROUT FILL EXSITING 30-INCH MAIN WITHIN GDOT R/W (STA 51+00 TO 53+00)

A. Payment for this item will be made at the unit price bid listed in the proposal and shall be full compensation for all tools, materials, equipment, and labor necessary to completely fill existing pipe that remains within GDOT's right-of-way (inside and outside paved lanes) with grout per GDOT specifications. This item includes all necessary materials for fill and vent ports. The Engineer must approve calculation of the amount of material to be placed prior to placement. Payment shall be based on cubic yardage of each pipe size listed.

2.52 REMOVE AND DISPOSE OF EXISTING WATER MAIN (PCCP/DIP) AND APPURTENANCES

A. The unit price bid for pipe shall include all material, labor and incidentals necessary for the complete removal and suitable, offsite disposal of the PCCP/DIP pipe, manholes, and appurtenances for sections of pipe indicated to be removed (same ditch relay). Existing 30" water main will be removed as shown on the Drawings and generally when it is within 6-feet of the centerline of the proposed DIP water main. The unit price bid for removal and disposal of PCCP shall include all excavation, backfilling and the disposal of all debris, after the line is removed. There will be no additional payment where extra depth is incurred due to valve locations, conflicts with other utilities, or other field conditions. Contractor shall not crush PCCP to remove concrete mortar for burial. Fully intact PCCP should be removed and disposed of.

2.53 CUT AND PLUG EXISTING 30" WATER MAIN

A. Water mains cut and plugged with mortared brick shall be paid at the unit price bid for each. The unit price bid shall be full compensation for all labor, materials, tools, and equipment necessary to complete the procedure. This item shall also apply to any bulkhead and grout/vent piping used to plug existing main segments that will be abandoned under pavement. For pipes other than PCCP, if a purchased plug is used instead of mortared brick, the plug will be paid under the Ductile Iron Fittings pay item. If concrete is used to plug the ends of PCCP to be abandoned, such concrete will be paid under the Miscellaneous Concrete pay item, however, this will apply only for the concrete necessary to plug the main. Grout or flowable fill shall be paid under the Flowable Fill pay item.

2.54 REMOVE AND REPLACE GUARD RAIL

A. Payment for this item will be made at the unit price bid listed in the proposal and shall be full compensation for all tools, materials, equipment, and labor necessary to remove and replace the existing guard rail near the Barnes Mill Road and Merritt Road Intersection near Station 43+25 on Segment B, if needed for installation of the water main. No payment will be made for guardrail removal/replacement without the approval of the Engineer.

2.55 REMOVE AND REPLACE STORM DRAIN PIPE

A. Payment for this item will be made at the unit price bid per linear foot for removal of existing corrugated metal pipe (CMP) where required for water main installation (and approved in writing by the Owner) and replacement with new reinforced concrete pipe (RCP) for each size listed in the bid proposal. Payment will include removal and disposal of original materials and installation of new storm drain pipes. No payment will be made for storm drain removal/replacement without the approval of the Engineer.

2.56 REMOVE AND REPLACE CATCH BASIN/CURB INLET

A. Removal and replacement of existing storm catch basin where required for water main installation (and approved in writing by the Owner) will be measured in place after replacement and paid for at the unit price bid individually. Payment will include removal and disposal of original materials and installation of new catch basins of the same type and size as the catch basin removed. No payment will be made for catch basin/curb inlet removal/replacement without the approval of the Engineer.

2.57 PROJECT SIGNS

The unit price shall include all materials, labor and incidentals necessary for the Contractor to furnish and install project signs at the unit price bid for each made of 4’ x 8’ sheet metal, painted with white background and blue letters and containing the name and contact information of the Contractor, Owner, and Engineer (including logos).

2.58 TRAFFIC CONTROL

A. The unit price shall include all materials, labor and incidentals necessary for the Contractor to prepare a traffic control plan, road or lane closure permits as required, and obtain approval from GDOT, City of Marietta DOT, and Cobb County DOT and provide personnel and equipment to implement the approved plan, including traffic barriers, message boards, and all signs. The Allowance for Traffic Control shall only be used to reimburse the Contractor for the use of police officers to control traffic, if required by Cobb County DOT or City of Marietta.

2.59 TEMPORARY PAVING

A. The lump sum price bid shall include all materials, labor and incidentals necessary for the Contractor to provide temporary pavement as required for compliance with permits issued by Cobb County and City of Marietta DOT. Contractor shall coordinate with Cobb County and City of Marietta DOT, provide specifications and details as required for permitting, and provide temporary

pavement and striping meeting Cobb County DOT and the City of Marietta DOT approval. Temporary pavement method selected shall be coordinated with final pavement required. Several options were presented to Cobb County DOT during the design phase and may be acceptable for use on this project:

Method No.	Description	Maximum Length (LF)
1	Steel Plate	300
2	8" GAB	1,000
3	6" GAB + 2" Rolled Asphalt Milling	1,000
4	6" GAB + 2" 19mm Superpave	2,000
5	8" 19 mm Superpave	2,000

2.60 REMOVE & REPLACE CONCRETE DRIVEWAYS

A. Payment for this item will be at the unit price bid per square yard. Measurement shall be the length of the concrete driveway removed and replaced, measured along the centerline of the pipe multiplied by the trench width unless otherwise shown in the Drawings. The unit price bid shall be full compensation for all materials, labor, tools and equipment required to complete the replacement as shown on drawings. Maintenance of the driveway during construction until replacement shall be included in unit price.

B. Concrete driveway surfaces damaged or removed due to contractor error or negligence will not be paid for. No compensation will be allowed for the removal of existing asphalt driveways and parking lots.

2.61 MOBILIZATION

A. The amount bid for mobilization shall not exceed four percent (4%) of the total contract bid price. The amount bid shall include furnishing the required Insurance, Bonds, Schedule of Values, Construction Schedule, and Shop Drawings for materials used during the first thirty (30) days of construction. The amount bid shall be payable to the Contractor on the first application for payment following approval of these documents.

END OF SECTION

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN, 36-INCH PIPELINE REPLACEMENT
BID PROPOSAL

ITEM NO.	M&P ITEM	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE BID	EXTENDED AMOUNT
		UNIT PRICE ITEMS				
1	2.1	Water Mains 8" DIP, Zinc Coated, PC 350	530	LF	$	$
2	2.1	Water Mains 12" DIP, Zinc Coated, PC 350	650	LF	$	$
3	2.1	Water Mains 30" DIP, Zinc Coated, PC 200	430	LF	$	$
4	2.1	Water Mains 36" DIP, Zinc Coated, PC 200	6,850	LF	$	$
5	2.1	Water Mains 36" DIP, Zinc Coated, PC 250	26,260	LF	$	$
6	2.2	Restrained Joints / Manufacturer's Pipe Gasket 8"	54	EA	$	$
7	2.2	Restrained Joints / Manufacturer's Pipe Gasket 12"	40	EA	$	$
8	2.2	Restrained Joints / Manufacturer's Pipe Restraint 30"	30	EA	$	$
9	2.2	Restrained Joints / Manufacturer's Pipe Restraint 36"	440	EA	$	$
10	2.2	MJ Fitting, Retainer Gland 8"	200	EA	$	$
11	2.2	MJ Fitting, Retainer Gland 12"	90	EA	$	$
12	2.2	MJ Fitting, Retainer Gland 30"	30	EA	$	$
13	2.2	MJ Fitting, Retainer Gland 36"	280	EA	$	$
14	2.3	Ductile Iron Fittings, Zinc Coated	317,000	LB	$	$
15	2.4	48" Steel Casing Pipe - Open Cut	250	LF	$	$
16	2.5	48" Steel Casing Pipe - Jack & Bore	300	LF	$	$
17	2.6	Casing Spacers for 36" DIP	70	EA	$	$
18	2.7	Valves 8" Gate Valve, MJ x MJ	12	EA	$	$
19	2.7	Valves 12" Gate Valve, MJ x MJ	14	EA	$	$
20	2.7	Valves 36" Gate Valve, MJ x MJ	10	EA	$	$
21	2.7	Valves 8" Butterfly Valve, MJ x MJ	10	EA	$	$
22	2.7	Valves 12" Butterfly Valve, MJ x MJ	4	EA	$	$
23	2.7	Valves 30" Butterfly Valve, MJ x MJ	1	EA	$	$
24	2.8	Pipe Outlets 4" Flanged Radial Welded-on Outlet on 36" DIP	20	EA	$	$
25	2.9	Sample Test Connection	28	EA	$	$
26	2.10	6" Air & Vacuum Valve (AVV and Isolation Gate Valve)	22	EA	$	$
27	2.11	Valve Markers	15	EA	$	$

ITEM NO.	M&P ITEM	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE BID	EXTENDED AMOUNT
28	2.12	Valve Boxes	15	EA	$	$
29	2.13	Polyethylene Encasement, 8" Double Encasement	530	LF	$	$
30	2.13	Polyethylene Encasement, 12" Double Encasement	650	LF	$	$
31	2.13	Polyethylene Encasement, 30" Double Encasement	430	LF	$	$
32	2.13	Polyethylene Encasement, 36" Double Encasement	33,110	LF	$	$
33	2.14	Bonded Joints, Two Cables Each	2,800	EA	$	$
34	2.15	Cathodic Test Station	50	EA	$	$
35	2.16	8" Marietta Water Connection (Segment A STA 49+50)	1	LS	$	$
36	2.16	12" CCWS Connection (Segment A STA 54+50)	1	LS	$	$
37	2.16	8" CCWS Connection (Segment A STA 92+68)	1	LS	$	$
38	2.16	8" CCWS Connection (Segment A STA 142+05)	1	LS	$	$
39	2.16	30" CCMWA Connection Segment A STA 244+03)	1	LS	$	$
40	2.16	30" CCMWA Connection (Segment B STA 1+00)	1	LS	$	$
41	2.16	30" CCMWA Connection (Segment B STA 15+11)	1	LS	$	$
42	2.16	30" CCMWA Connection (Segment B STA 22+48)	1	LS	$	$
43	2.16	8" Marietta Water Connection (Segment B STA 23+79)	1	LS	$	$
44	2.16	30" CCMWA Connection (Segment B STA 82+17)	1	LS	$	$
45	2.17	Blackjack Ground Storage Tank Control Valve and Vault (Segment B STA 78+75)	1	LS	$	$
46	2.18	Barnes Mill Meter Replacement (Segment B STA 1+00)	1	LS	$	$
47	2.19	Bonnie Dell Meter Replacement (Segment B STA 23+80)	1	LS	$	$
48	2.20	Marker Ball Locator Instrument	2	EA	$	$
49	2.21	Marker Ball Installation on Existing Water Main to be Abandoned	170	EA	$	$
50	2.22	Marker Ball Installation on New Water Main	780	EA	$	$
51	2.23	Concrete Manhole Assembly, 4' Diameter (Double MH BOV and CCWS/Marietta Connections)	12	EA	$	$
52	2.23	Concrete Manhole Assembly, Extra Payment for Sections Exceeding Ten VF, 4' Diameter	28	EA	$	$
53	2.23	Concrete Manhole Assembly, 6' Diameter (6" Air & Vacuum Valve and Single MH BOV)	33	EA	$	$
54	2.23	Concrete Manhole Assembly, Extra Payment for Sections Exceeding Ten VF, 6' Diameter	21	VF	$	$
55	2.23	Concrete Manhole Assembly, 8' Diameter (Gate Valves and Double BOV @ Golf Cousrse)	11	EA	$	$
56	2.23	Concrete Manhole Assembly, Extra Payment for Sections Exceeding Ten VF, 8' Diameter	19	VF	$	$
57	2.24	Flowable Fill Encasement	500	CY	$	$
58	2.25	Pipe Bedding and Subgrade Stabilizer Stone	26,000	TON	$	$

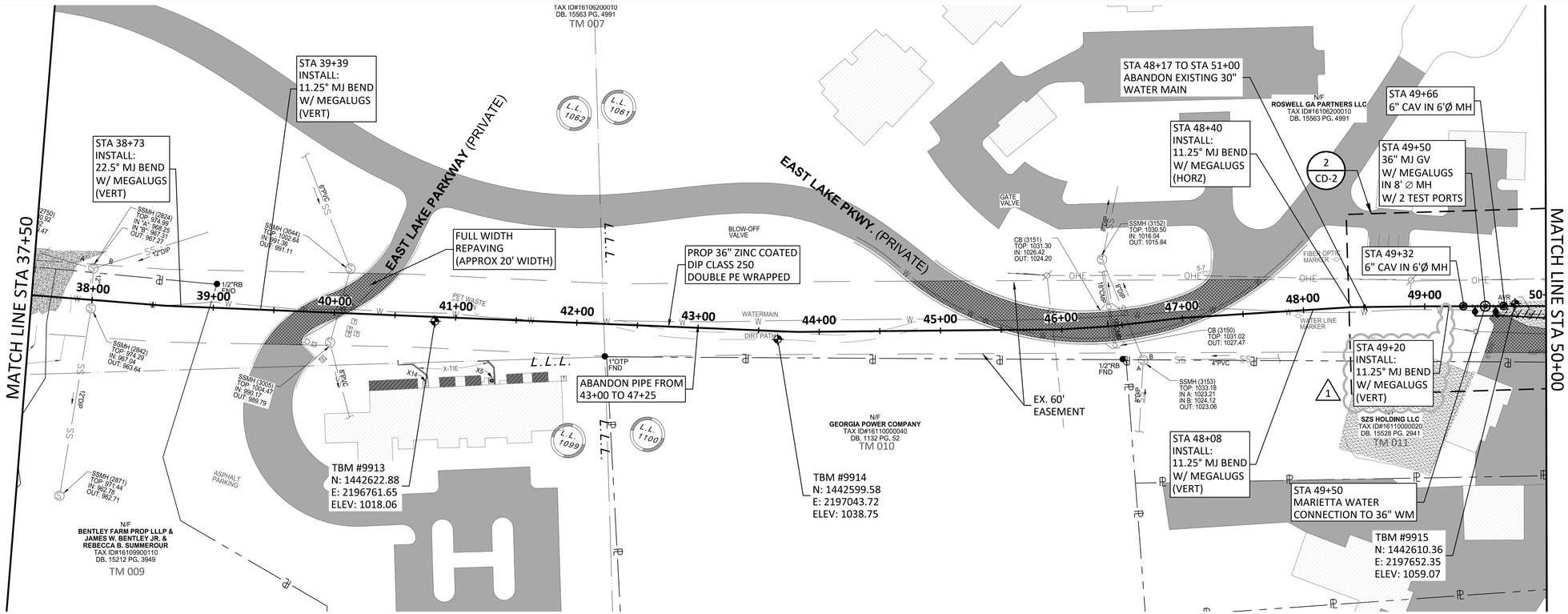
ITEM NO.	M&P ITEM	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE BID	EXTENDED AMOUNT
59	2.26	Miscellaneous Concrete	175	CY	$	$
60	2.27	Miscellaneous Reinforcing Steel	5,000	LB	$	$
61	2.28	Tree Save Fence	49,000	LF	$	$
62	2.29	Temporary Silt Fence (Sd1-S)	14,000	LF	$	$
63	2.29	Temporary Silt Fence (Sd1-Ns)	40,000	LF	$	$
64	2.30	Hay Bale Barrier	100	EA	$	$
65	2.31	Rip-Rap (12" Thick, Type 1) for Blow-Off Valve Aprons	500	SY	$	$
66	2.32	Construction Exit (Co)	30	EA	$	$
67	2.33	Straw Mulch Stabilization (Ds1)	180,000	SY	$	$
68	2.34	Grassing, Temporary (Ds2)	180,000	SY	$	$
69	2.34	Grassing, Permanent (Ds3)	180,000	SY	$	$
70	2.35	Erosion Control Matting and Blankets (Sb)	1,000	SY	$	$
71	2.36	Inlet Sediment Trap (Sd2)	50	EA	$	$
72	2.37	Turbidity Curtain (Tc)	3	EA	$	$
73	2.38	NPDES Permit Compliance	1	LS	$	$
74	2.39	Remove & Replace Asphalt Golf Cart Path	2,270	SY	$	$
75	2.39	Remove & Replace Asphalt Driveways and Parking Lots	5,600	SY	$	$
76	2.40	Remove & Replace Gravel Driveways and Parking Lots	160	SY	$	$
77	2.40	Installation of BOV Access Gravel Driveways	2,720	SY	$	$
78	2.41	Remove & Replace Concrete Sidewalks (4" Thick)	1,300	SY	$	$
79	2.42	Remove & Replace Concrete Curb and Gutter	14,000	LF	$	$
80	2.43	Paving 1.5 inches of GDOT 12.5 mm Superpave	24,600	SY	$	$
81	2.44	Paving 1.5 inches of GDOT 9.5 mm Superpave	11,670	SY	$	$
82	2.45	Paving Subgrade 12" GDOT GAB	12,260	SY	$	$
83	2.45	Paving 8" of 19 mm GDOT Superpave	12,260	SY	$	$
84	2.46	Asphalt Pavement Milling (1.5" Depth)	36,270	SY	$	$
85	2.47	Thermoplastic Pavement Marking 6" Skip (2:6) White or Yellow	12,260	LF	$	$
86	2.47	Thermoplastic Pavement Marking 6" Solid White or Yellow	12,260	LF	$	$
87	2.48	Abandon Existing CCMWA Valve Manhole and Valves	15	EA	$	$
88	2.49	Abandon Existing CCMWA Valve Box and Valves	6	EA	$	$
89	2.50	Abandon Existing CCMWA Blowoff Valve	2	EA	$	$

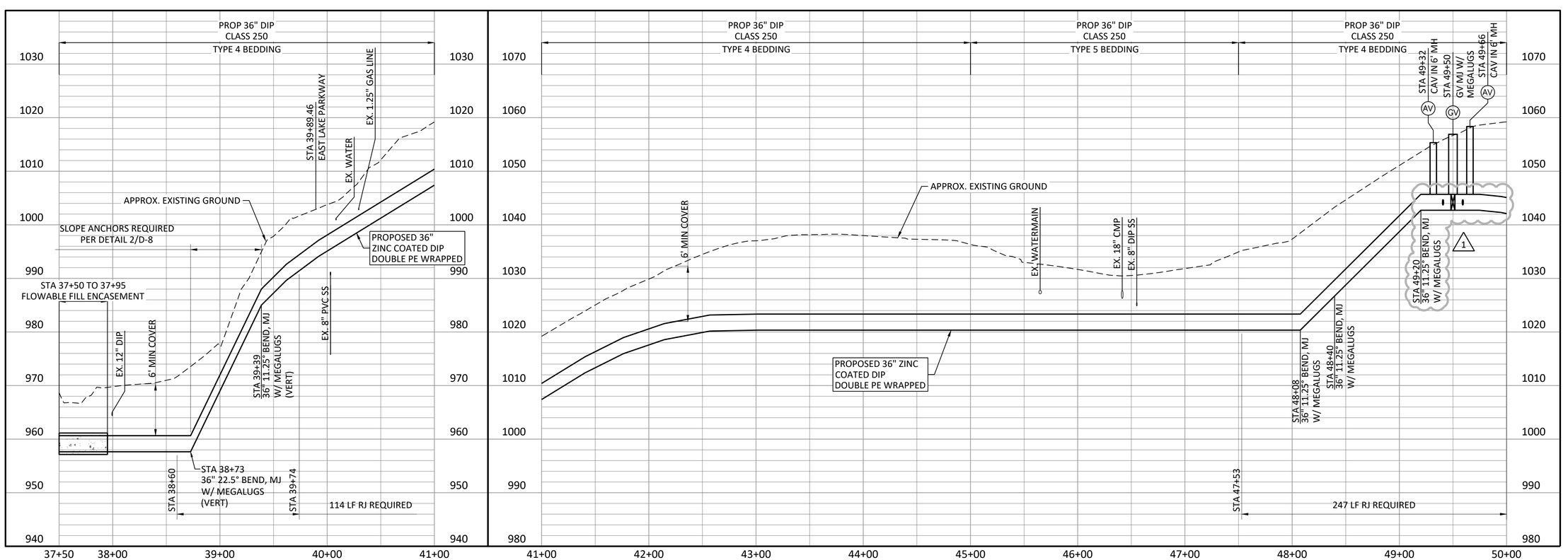
ITEM NO.	M&P ITEM	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE BID	EXTENDED AMOUNT
90	2.51	Grout Fill Exsiting 30-inch Main within GDOT R/W (STA 51+00 to 53+00)	70	CY	$	$
91	2.52	Remove and Dispose of Existing Water Main (PCCP/DIP) and Appurtenances	20,000	LF	$	$
92	2.53	Cut and Plug Existing 30" Water Main	52	EA	$	$
93	2.54	Remove and Replace Guard Rail	50	LF	$	$
94	2.55	Remove and Replace Storm Drain Pipe	120	LF	$	$
95	2.56	Remove and Replace Catch Basin/Curb Inlet	4	EA	$	$
96	2.57	Project Signs	10	EA	$	$
97	2.58	Traffic Control	1	LS	$	$
98	2.59	Temporary Paving	1	LS	$	$
99	2.60	Remove and Replace Concrete Driveways	2,000	SY	$	$
100	2.61	Mobilization	1	LS	$	$
					UNIT PRICE SUB-TOTAL (ITEMS 1 THROUGH 100)	

ITEM NO.	M&P ITEM	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE BID	EXTENDED AMOUNT
		ALLOWANCES				
101	2.1A	Allowance for Force Account Work	1	LS	$ 2,500,000.00	$ 2,500,000.00
102	2.2A	Allowance for Materials Testing	1	LS	$ 200,000.00	$ 200,000.00
103	2.3A	Allowance for Utility Relocation by Others	1	LS	$ 200,000.00	$ 200,000.00
104	2.4A	Allowance for Corrosion Control	1	LS	$ 100,000.00	$ 100,000.00
105	2.5A	Allowance for Landscaping	1	LS	$ 100,000.00	$ 100,000.00
106	2.6A	Allowance for Traffic Control	1	LS	$ 100,000.00	$ 100,000.00
107	2.7A	Allowance for Water Main Disinfection and Dechlorination of Flushing Water	1	LS	$ 150,000.00	$ 150,000.00
				ALLOWANCE SUB-TOTAL (ITEMS 2.1A THROUGH 2.7A)		**$ 3,350,000.00**

TOTAL BASE BID AMOUNT (UNIT PRICE SUB-TOTAL PLUS ALLOWANCE SUB-TOTAL) - Numbered Here (Written in Words Below):

_____ dollars and _____ cents





NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER
PE041985
RYAN CHRISTOPHER WHITE
4/20/20

FREESE NICHOLS
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COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 37+50 TO STA 50+00

P&W JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
CHECKED	JCS		
FILE NAME	CV-LNA-PP-SHTS01.dwg		

NO.	ISSUE	BY	DATE
1	ADDENDUM #1	RCE	04/15/20
2	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-4
SEQ. 13

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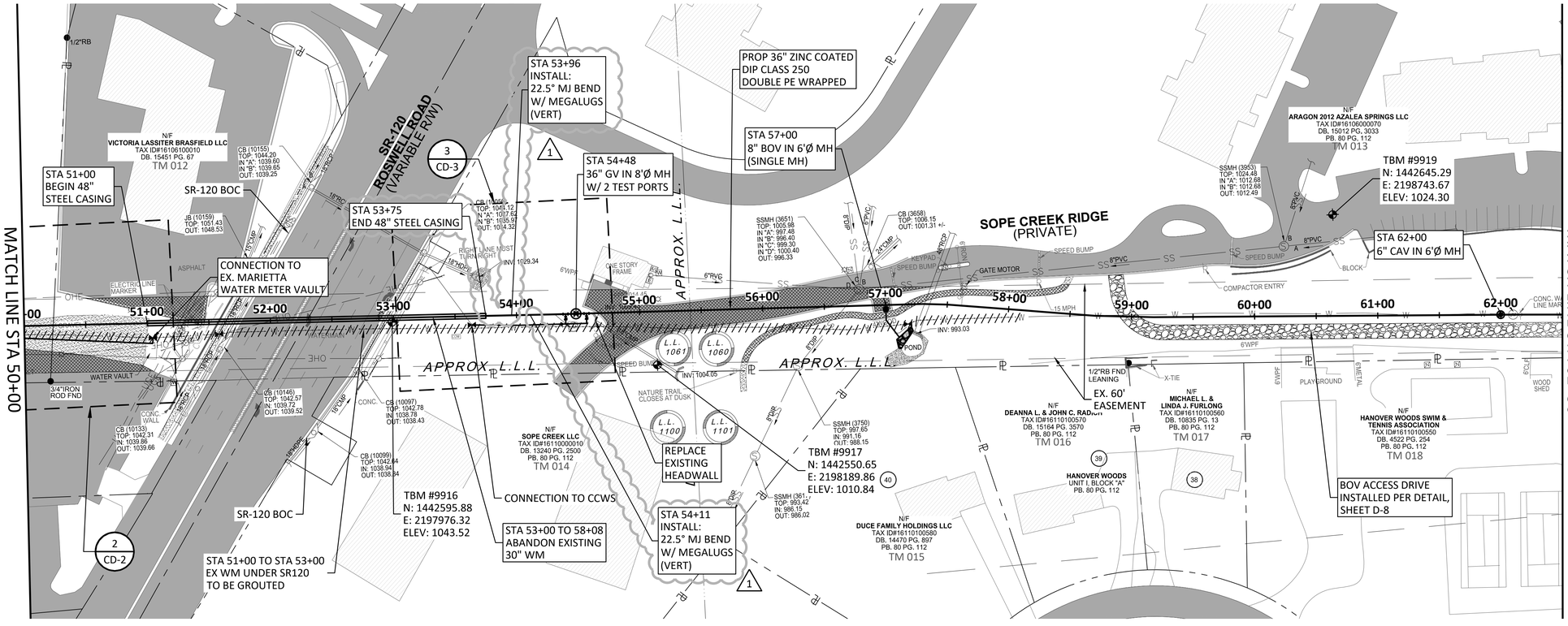

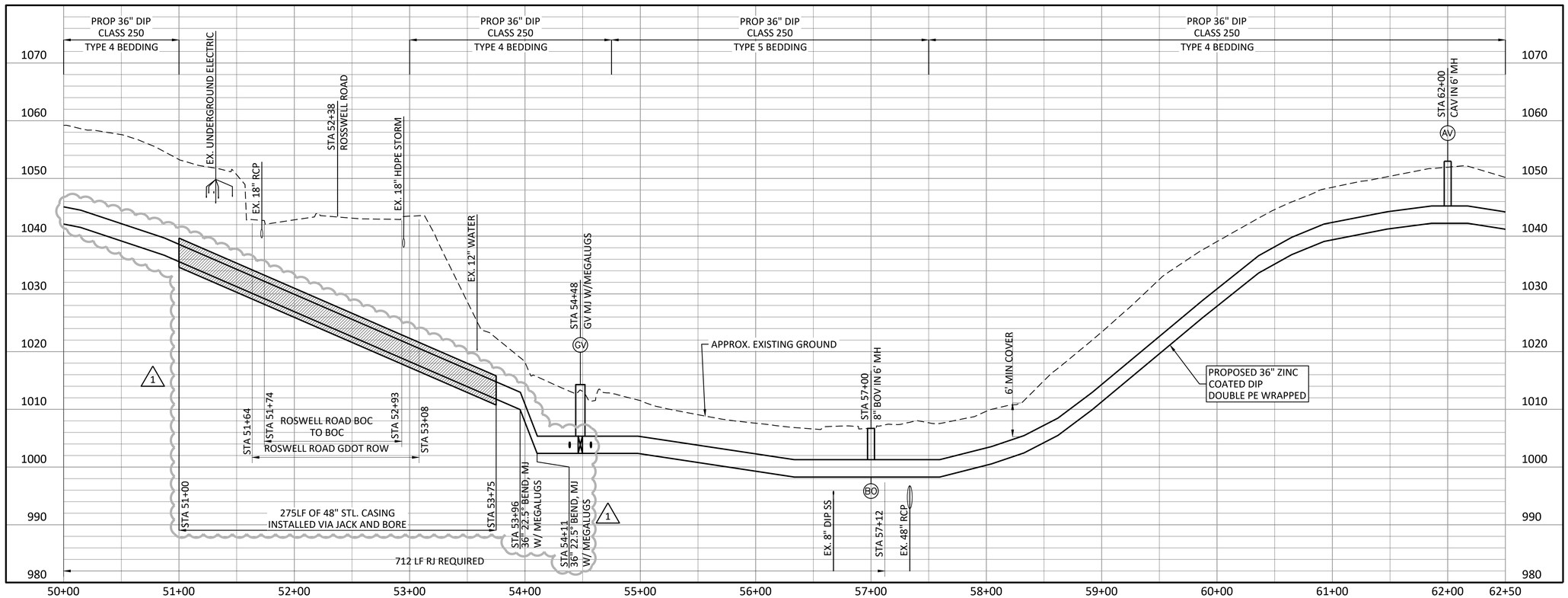

NORTH

0 50' 100'
SCALE IN FEET HORIZONTAL

0 10' 20'
SCALE IN FEET VERTICAL

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. POSTED SPEED LIMIT FOR SR-120 IS 45 MPH.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WHITE 4/20/20

FREESE NICHOLS
360 Interstate North Parkway, Suite 250 Atlanta, GA 30339
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COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 50+00 TO STA 62+50

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
REVISED	
FILE NAME	CV-LNA-PP-SHTS01.dwg

NO.	ISSUE	BY	DATE
1	ADDENDUM #1	RCE	04/15/20
0	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-5
SEQ. 14

ACAD Rel: 23.0s (LMS Tech)
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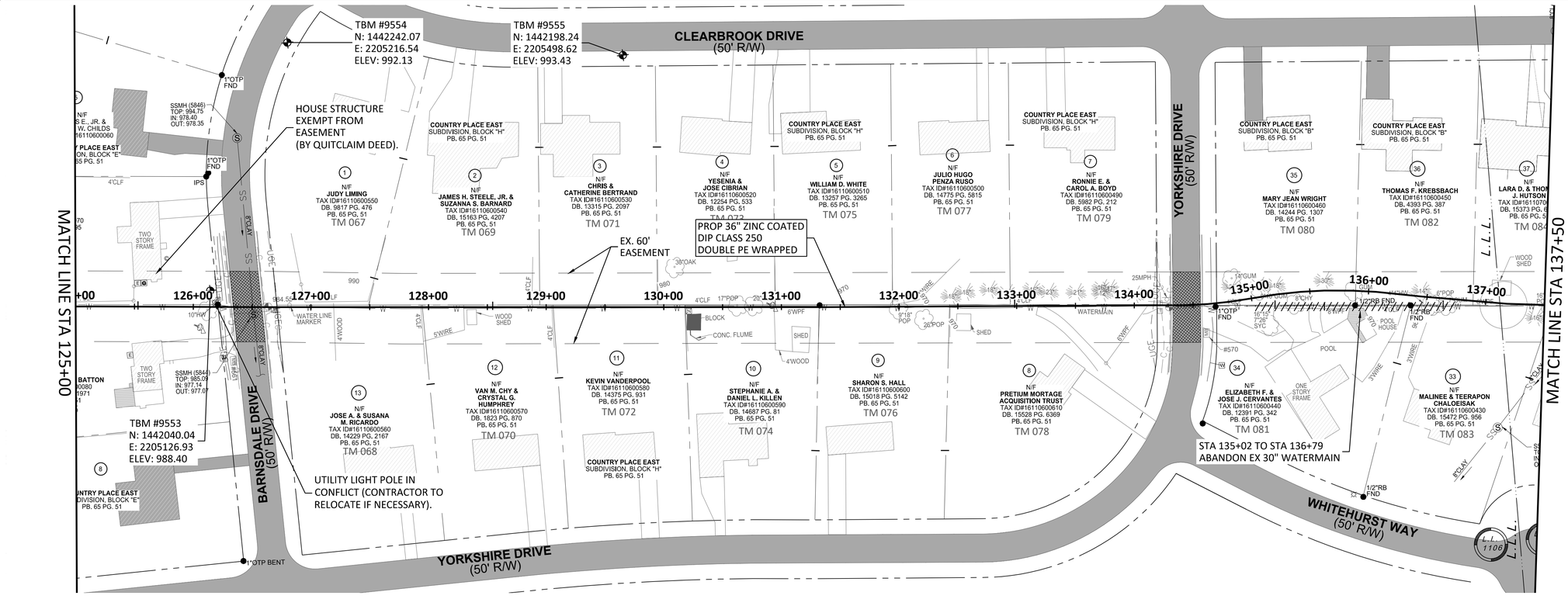

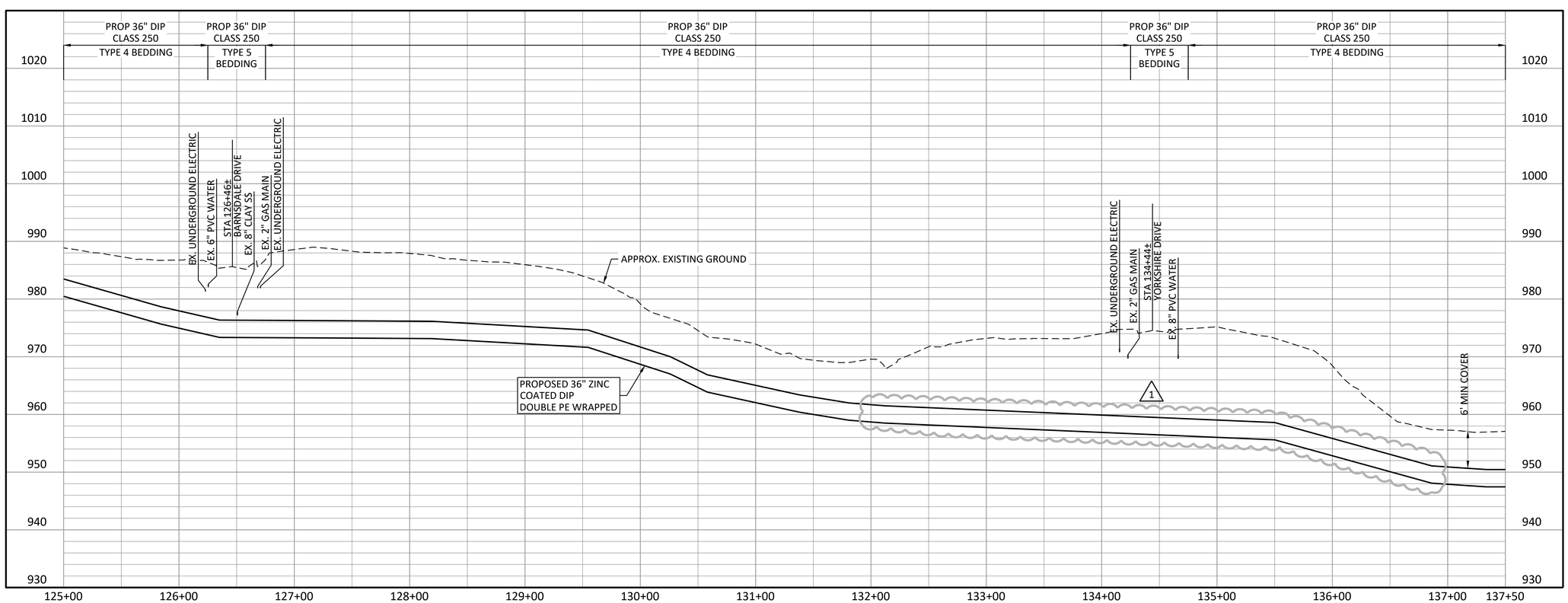

NORTH

SCALE IN FEET HORIZONTAL
0 50' 100'

SCALE IN FEET VERTICAL
0 10' 20'

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WHITE PE034585 4/20/20

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

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COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD
SEGMENT A - STA 125+00 TO STA 137+50

F&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
CHECKED	JCS		
FILE NAME	CV-LNA-PP-SHTS02.dwg		

NO.	ISSUE	BY	DATE
1	ADDENDUM #1	RCE	04/15/20
2	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-11
SEQ. 20

ACAD Rel: 23.0s (LMS Tech)
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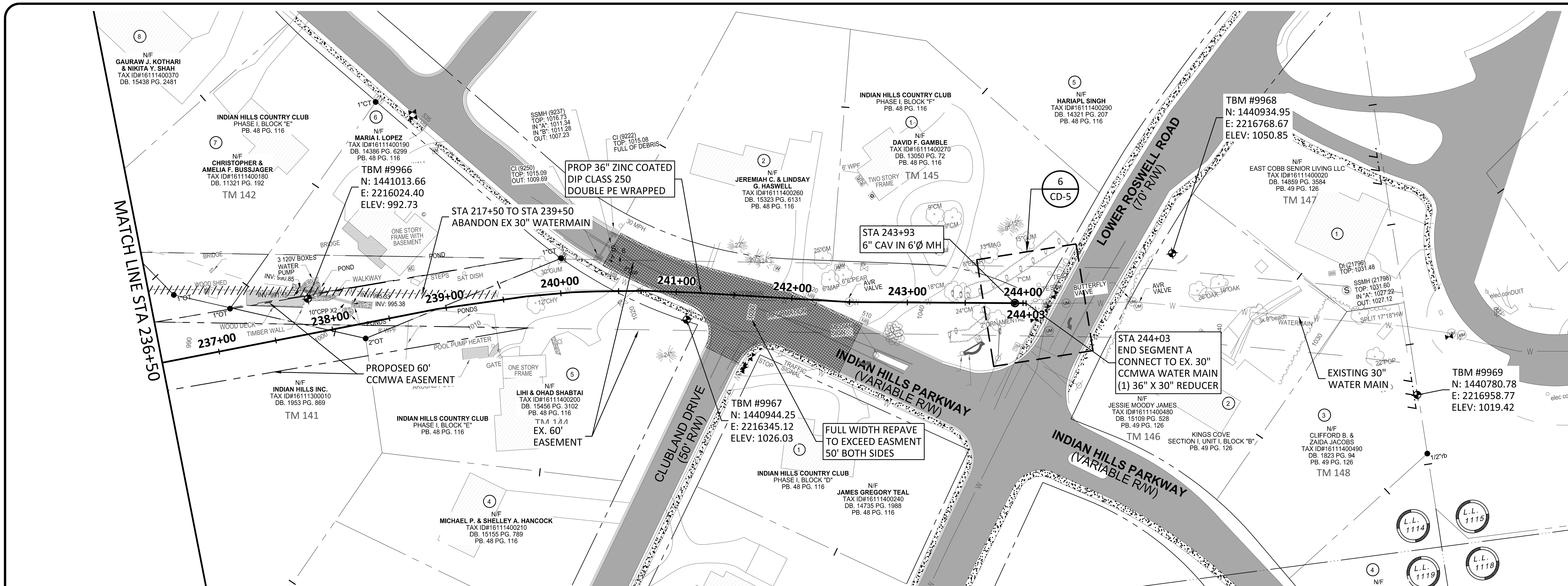
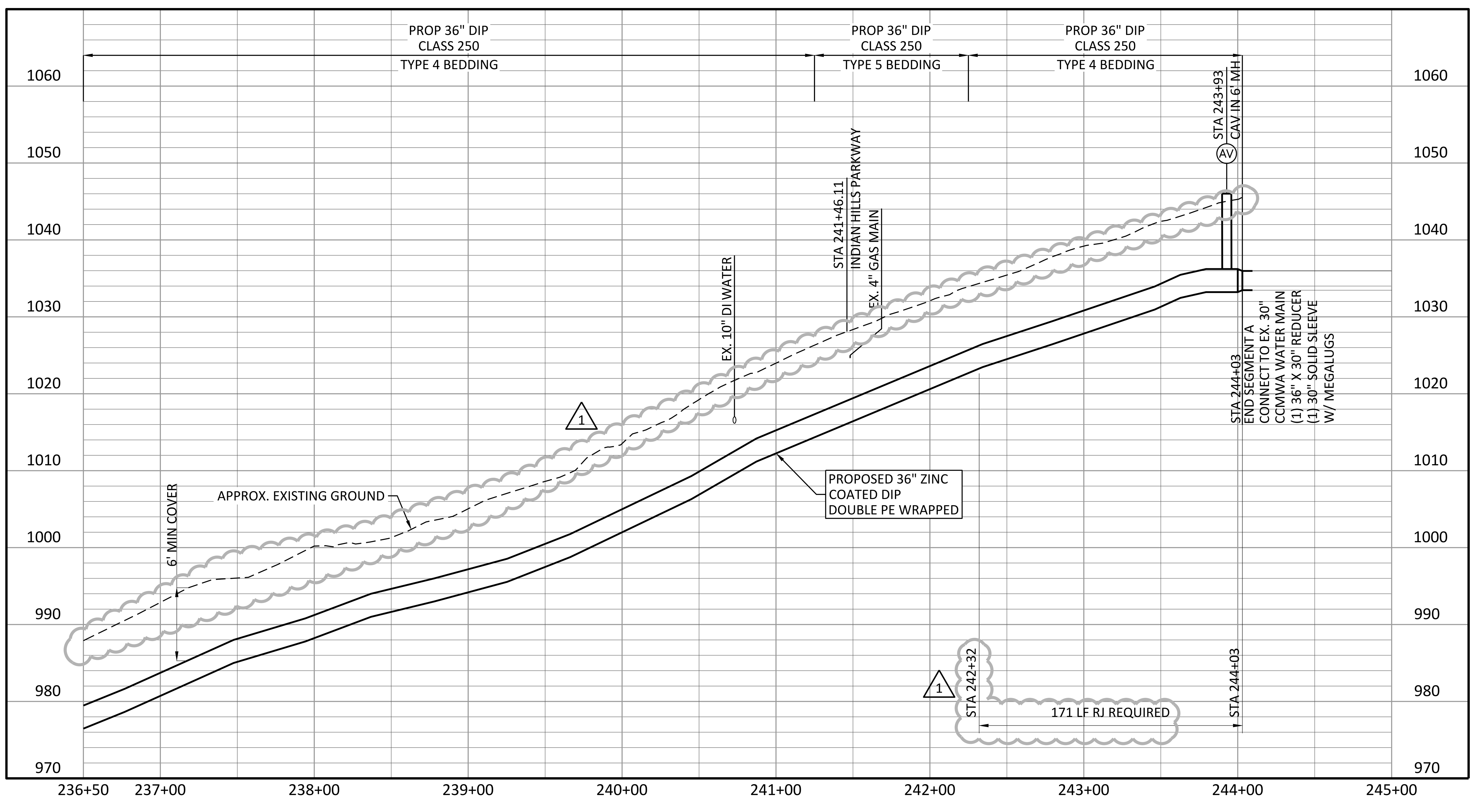


NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. ALL CONSTRUCTION ACTIVITY BETWEEN APPROX. STA 211+00 AND 238+00 TO BE PERFORMED NOV 2020-FEB 2021 AND NOV 2021-FEB 2022 - REFER TO EASEMENT DOCUMENT FOR ALL STIPULATIONS.



Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER ELLIS
4/20/20

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COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

BARNES MILL RD TO LOWER ROSWELL RD SEGMENT A - STA 236+50 TO END

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
REVISED	
CHECKED	JCS
FILE NAME	CV-LNA-PP-SHTS02.dwg

NO.	ISSUE	BY	DATE
1	ADDENDUM #1	RCE	04/15/20
	ISSUED FOR BID	RCE	03/12/20

VERIFY SCALE: Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET C-20

SEQ. 29

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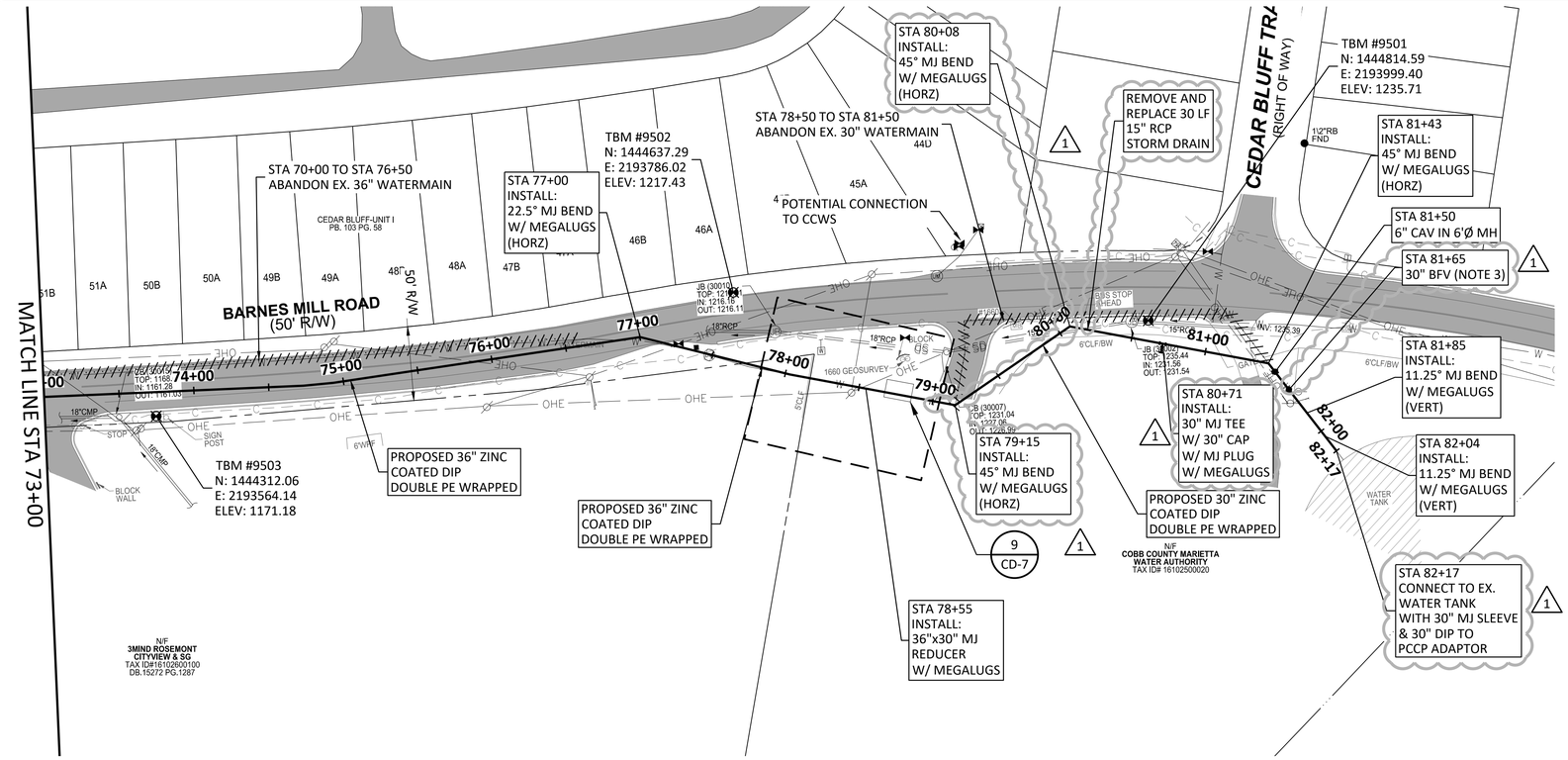

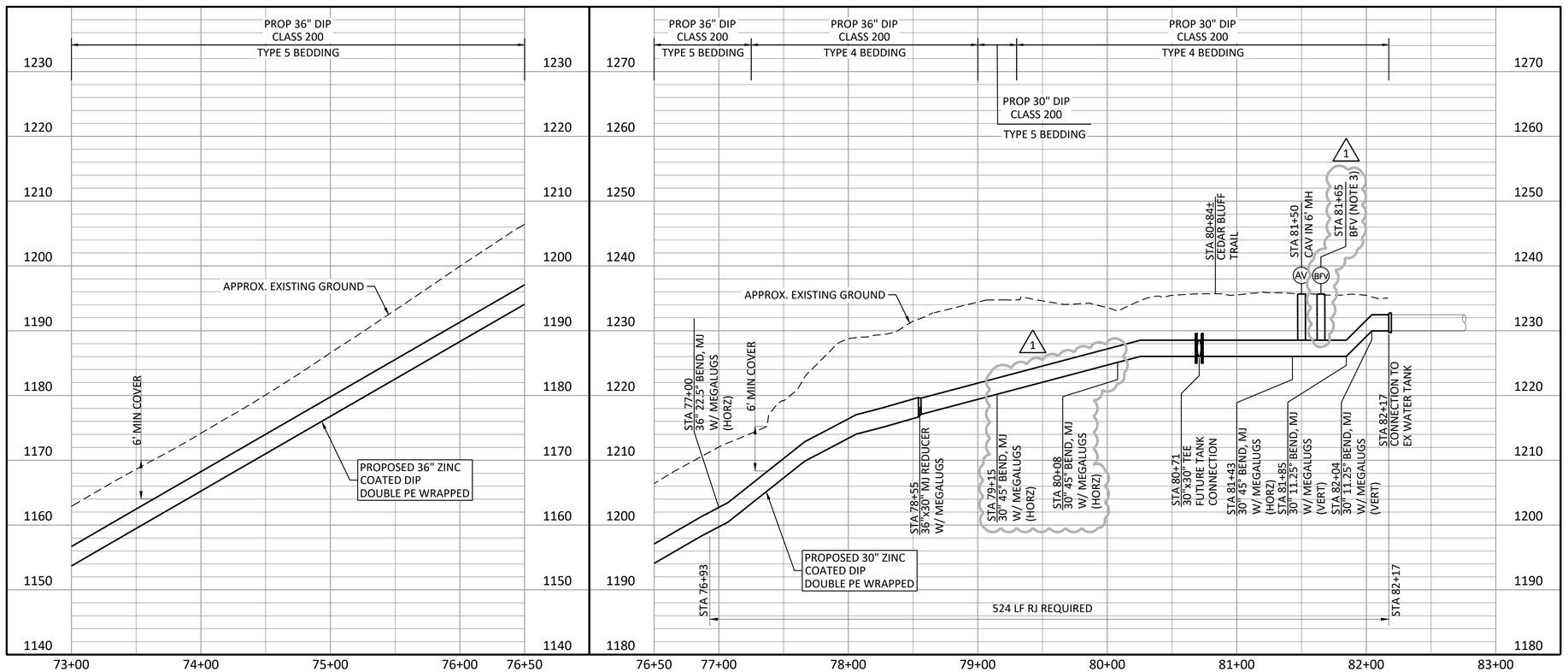

NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
2. EXISTING 30" PCCP WATER MAIN TO BE REMOVED AND REPLACED WITH PROPOSED 36" DIP UNLESS OTHERWISE NOTED.
3. INCLUDE 4' MH FLAT TOP, RISER SECTIONS, AND MH COVER OVER THE TOP OF THE VALVE.

NORTH

0 50' 100'
SCALE IN FEET
HORIZONTAL

0 10' 20'
SCALE IN FEET
VERTICAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER RYAN CHRISTOPHER WHITE PE034585 4/20/20

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COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
BARNES MILL RD
SEGMENT B - STA 73+00 TO END

F&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
REVISED			
DATE			
CHECKED	JCS		
FILE NAME	CV-LNB-PP-SHTS01.dwg		
NO.	ISSUE	DATE	BY
1	ADDENDUM #1	04/15/20	RCE
0	ISSUED FOR BID	03/12/20	RCE

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET C-27
SEQ. 36

ACAD Rel: 23.0s (LMS Tech)
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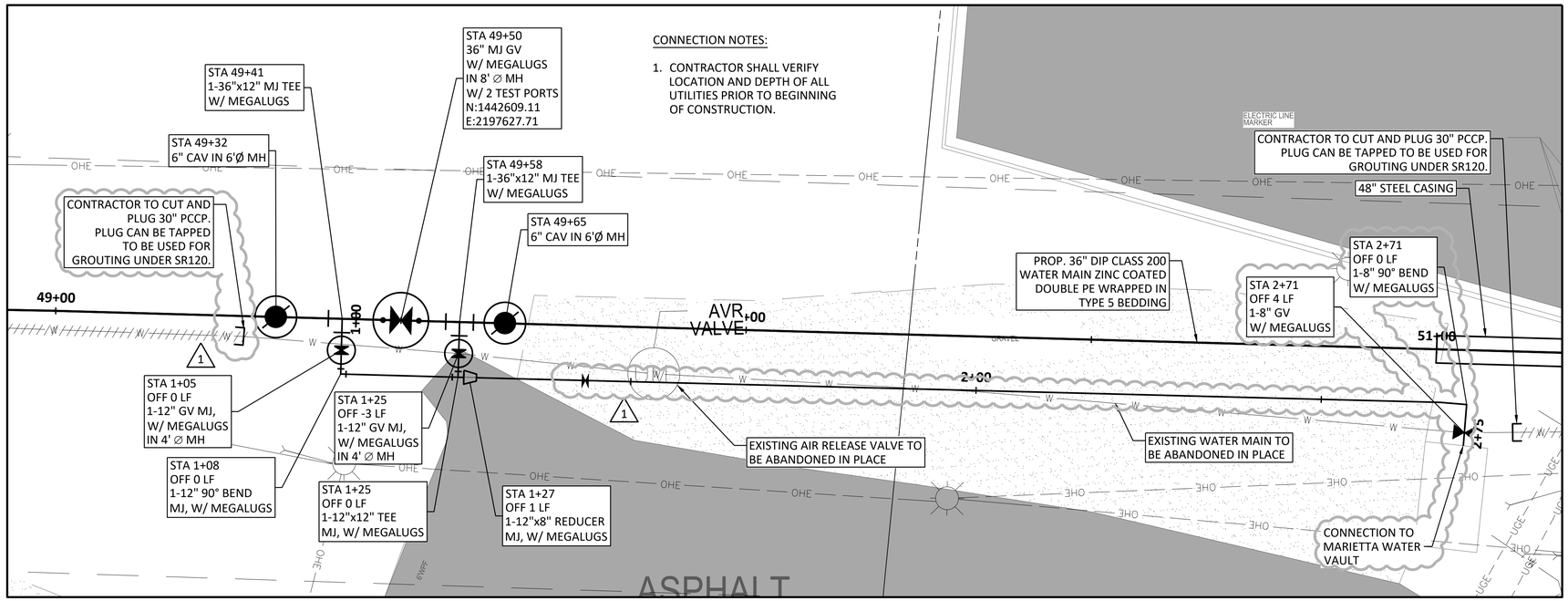
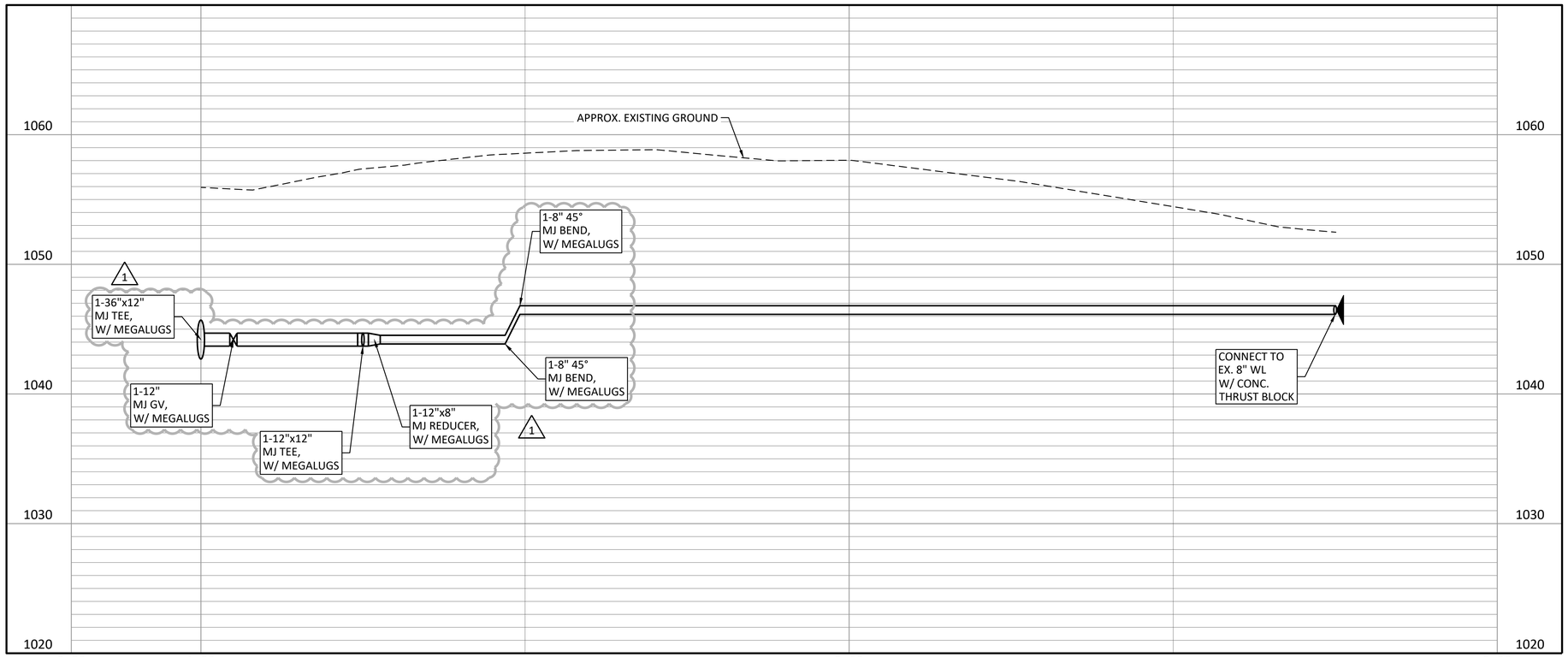




2
C-5

SEGMENT A
CONNECTION STA 49+50
8" MARIETTA WATER AT ROSWELL ROAD

NORTH

SCALE IN FEET HORIZONTAL: 0, 10', 20'

SCALE IN FEET VERTICAL: 0, 5', 10'

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER PE034586 RYAN CHRISTOPHER WHITE

4/20/20

FREESE NICHOLS
360 Interstate North Parkway,
Suite 250 30339
Atlanta, GA
Phone – (404) 334-4310
Web – www.freese.com

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT A
CONNECTION DETAILS II

F&N JOB NO.	CBR18759
DATE	03/12/20
DESIGNED	RCE
DRAWN	CKM
CHECKED	JCS
FILE NAME	CV-ALL-SHT_DTL.DWG

NO.	ISSUE	BY	DATE
1	ADDENDUM #1	RCE	04/15/20
0	ISSUED FOR BID	RCE	03/12/20

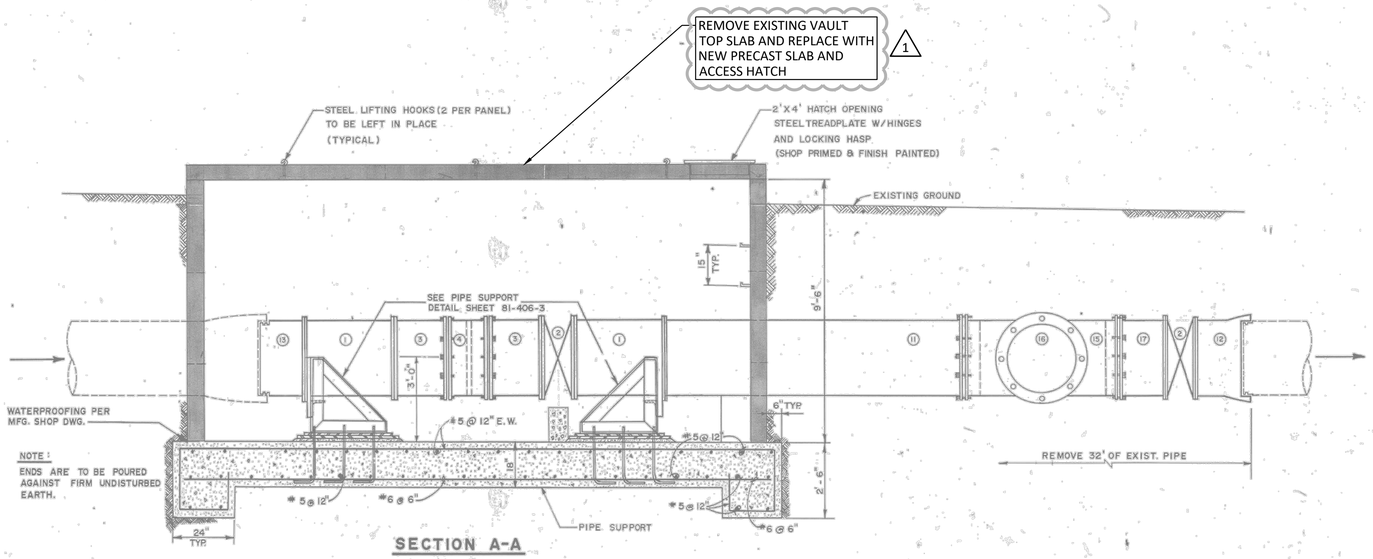
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET CD-2
SEQ. 38

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 4/20/2020 2:07 PM Saved By: 02618

Plot Date: 4/20/2020 2:08 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG

REMOVE EXISTING VAULT TOP SLAB AND REPLACE WITH NEW PRECAST SLAB AND ACCESS HATCH (1)



SECTION A-A

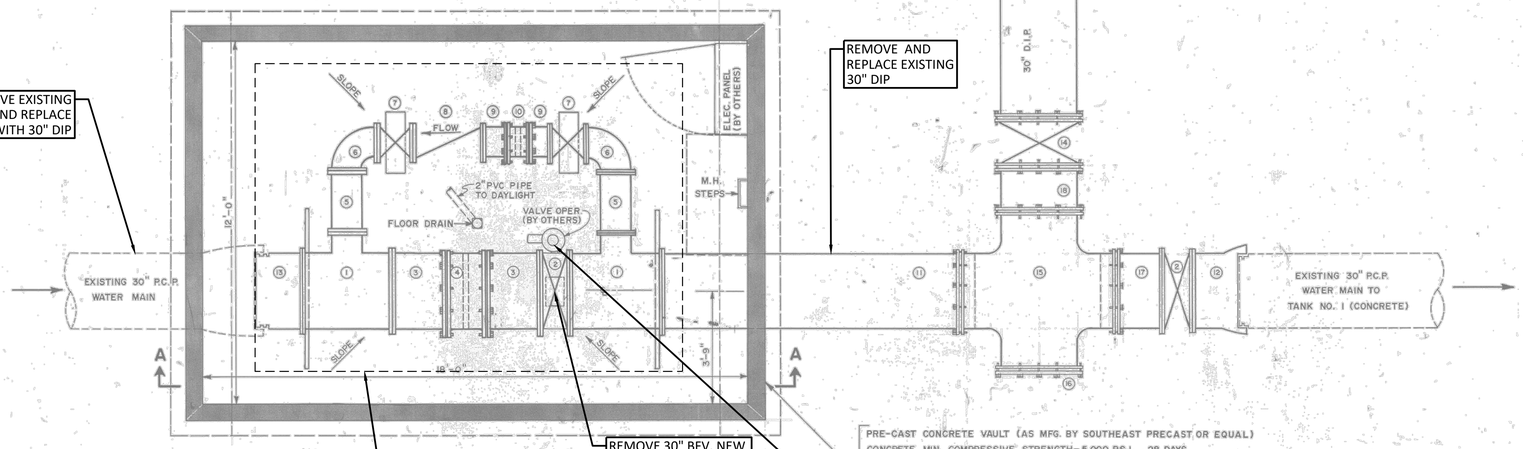
MATERIALS LIST		
NO.	DESCRIPTION	QUANTITY
(1)	30"X12" TEE (FL.X FL.)	2
(2)	30" BUTTERFLY VALVE (FL.XFL.)	2
(3)	30"ϕ X 28" LONG D.I.P. (FL. X P.E.)	2
(4)	30" M.J. SLEEVE (SHORT)	1
(5)	12"ϕ SPOOL 24" LONG (FL.X FL.)	2
(6)	12" 90° BEND (FL. X FL.)	2
(7)	12" G.V. (FL. X FL.) NOTE 1	2
(8)	12" CHECK VALVE	1
(9)	12"ϕ X 12" LONG D.I.P. (FL.X P.E.)	2
(10)	12"ϕ M.J. SLEEVE (SHORT)	1
(11)	30"ϕ X 10'-4" LONG D.I.P. (FL. X P.E.)	1
(12)	30" FL. X L.J. BELL ADAPTER	1
(13)	30" FL. X L.J. SPIGOT ADAPTER	1
(14)	30" BUTTERFLY VALVE (M.J.)	1
(15)	30"X30" CROSS (M.J.)	1
(16)	30" RESTRAINED PLUG	1
(17)	30"ϕ X 2'-0" LONG D.I.P. (FL. X P.E.)	1
(18)	30"ϕ X 2'-0" LONG D.I.P. (P.E. X P.E.)	1

NOTES:

(1.) EACH VALVE SHALL HAVE CONCRETE SUPPORT

REMOVE EXISTING PCPCP AND REPLACE WITH 30" DIP

REMOVE AND REPLACE EXISTING 30" DIP



PLAN

REMOVE AND REPLACE ALL PIPING AND APPURTENANCES IN THE VAULT (EXCLUDING THE BFV TO BE SALVAGED TO CCMWA)

REMOVE 30" BFV. NEW BFV TO BE SUPPLIED WITH ACTUATOR FROM BECK ELECTRIC ACTUATORS.

NOTE: SETTING PLATE & PIPE SUPPORT STEEL ARE NOT SHOWN IN PLAN VIEW. SEE DETAIL SHEET NO. 81-406-3.

PRE-CAST CONCRETE VAULT (AS MFG. BY SOUTHEAST PRECAST OR EQUAL)
CONCRETE MIN. COMPRESSIVE STRENGTH- 5,000 P.S.I. , 28 DAYS
STEEL REINFORCEMENT- ASTM A-615-77, GRADE 60, MIN. COVER 1"
DESIGN LOADING - AASHO- H 20
DESIGN CRITERIA - ACI 318-77

SALVAGE EXISTING VALVE ACTUATOR TO BECK FOR REFURBISHMENT AND ASSEMBLY TO NEW BFV.

NOTES:
1. CCMWA STAFF TO REINSTALL SCADA AND ELECTRICAL CONNECTIONS.
2. CONTRACTOR SHALL PROTECT EXISTING VALVE VAULT FLOOR, WALLS, AND ELECTRICAL PANEL DURING CONSTRUCTION.
3. INSTALL NEW PIPING, VALVES AND APPURTENANCES IN VAULT IN SAME ARRANGEMENT AS EXISTING SHOWN (INCLUDING TAPS AND NEW BFV WITH ACTUATOR).

"RECORD DRAWINGS"

COBB COUNTY-MARIETTA WATER AUTHORITY
CONTROLS FOR WATER STORAGE TANKS
BLACKJACK MOUNTAIN

WELKER & ASSOCIATES ENGINEERS
MARIETTA, GEORGIA

DRAWN: D.M.
TRACED: G.D.W.
CHECKED: R.L.H.
DATE: OCT., 1981
SCALE: 1/2" = 1'-0"
SHEET: 81-406-5

SEGMENT B
CONNECTION STA 78+77

9
C-27

NORTH

N.T.S.

(1)

CONNECTION NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER PE034585 RYAN CHRISTOPHER WHITE
4/20/20

FREESE NICHOLS
360 Interstate North Parkway, Suite 250 Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freese.com

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL
SEGMENT B
TANK VALVE CONTROL VAULT REPLACEMENT DETAIL

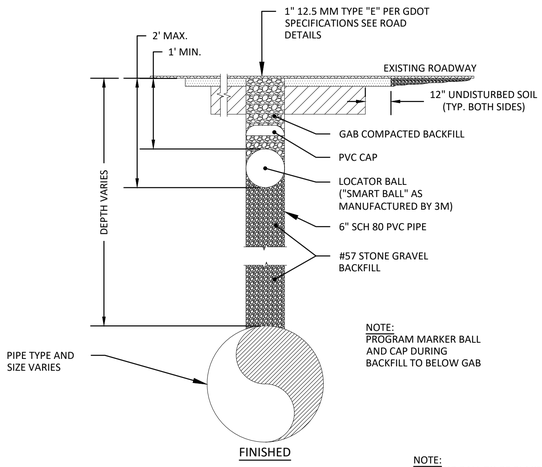
F&N JOB NO.	CBR18759				
DATE	03/12/20				
DESIGNED	RCE				
DRAWN	CKM	04/15/20	RCE	ADDENDUM #1	
REVISED	----	03/12/20	RCE	ISSUED FOR BID	
CHECKED	JCS	DATE	BY	ISSUE	
FILE NAME	CV-ALL-SHT_DTL.DWG				

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1"

SHEET CD-7
SEQ. 43

ACAD Rel: 23.0s (LMS Tech)
Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG
Last Saved: 4/20/2020 2:07 PM Saved By: 02618

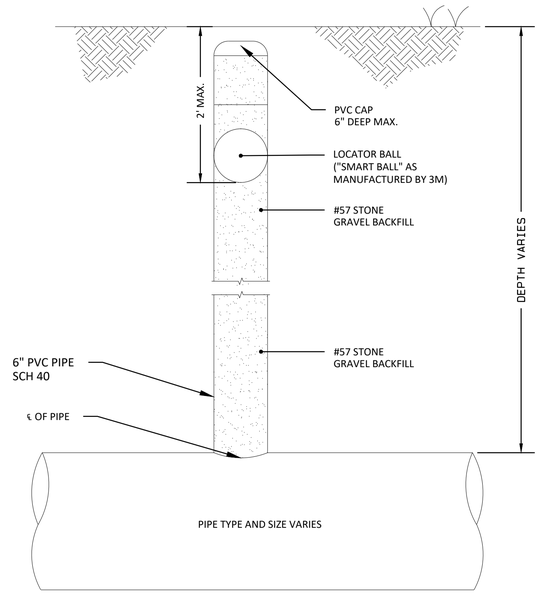
Plot Date: 4/20/2020 2:09 PM Plot By: 02618 Filename: N:\WTU\Drawings\CV-ALL-SHT_DTL.DWG



NOTE:
LOCATOR BALL TO BE PLACED AT ALL FITTINGS, CONNECTIONS TO EXISTING LINES, AND AT 3RD JOINT OF PIPE ON STRAIGHT RUNS.

PVC AS-BUILT LOCATOR INSTALLATION DETAIL
(IN PAVEMENT)

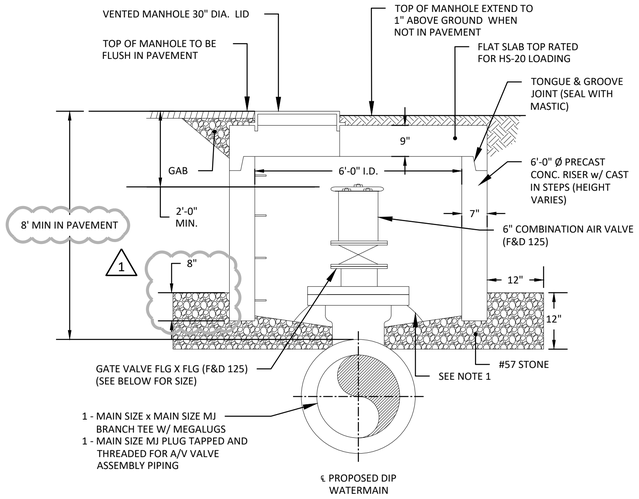
N.T.S.



PVC AS-BUILT LOCATOR INSTALLATION DETAIL
(OUTSIDE OF PAVEMENT)

N.T.S.

DETAIL 110



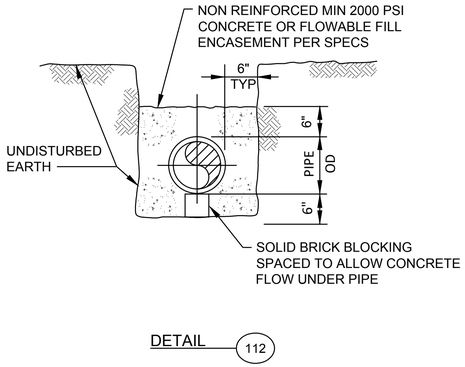
NOTES:

1. DOGHOUSE MANHOLE SECTION AS REQ'D TO MAINTAIN 1'-0" CLEAR ABOVE PIPE.
2. MANHOLES LIDS TO BE VENTED
3. ALL GASKETS SHALL BE TORUSEAL, NO SUBSTITUTION.

DETAIL 130

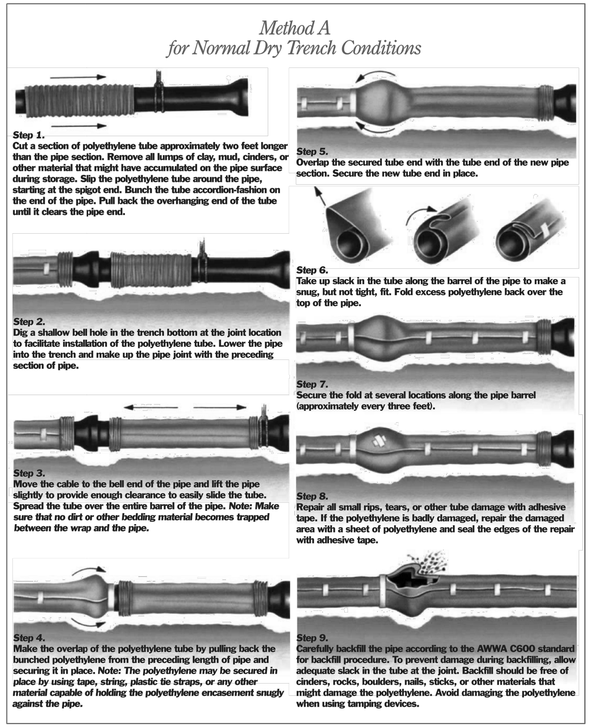
COMBINATION AIR & VACUUM ASSEMBLY WITH MANWAY DETAIL

SCALE: N.T.S.

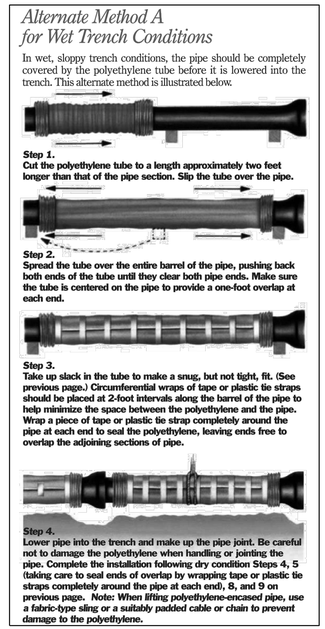


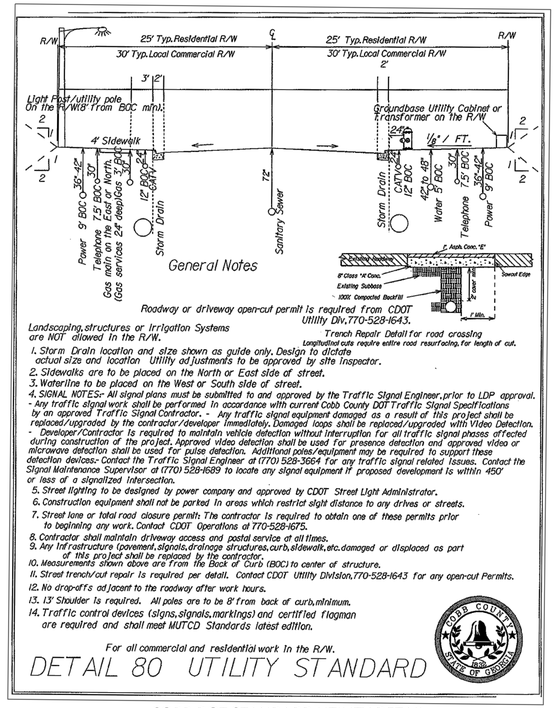
DETAIL 112

CONCRETE OR FLOWABLE FILL ENCASEMENT



POLYETHYLENE ENCASEMENT INSTALLATION





COBB DOT STANDARD UTILITY DETAIL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2020

GEORGIA REGISTERED PROFESSIONAL ENGINEER PE034586 RYAN CHRISTOPHER KELLY

FREESE NICHOLS
360 Interstate North Parkway, Suite 250 30339
Atlanta, GA
Phone – (404) 334-4310
Web – www.freese.com

4/20/20

COBB COUNTY-MARIETTA WATER AUTHORITY
BLACKJACK MOUNTAIN
36-INCH PIPELINE REPLACEMENT
CIVIL

DETAILS I

P&N JOB NO.	CBR18759		
DATE	03/12/20		
DESIGNED	RCE		
DRAWN	CKM		
CHECKED	JCS		
FILE NAME	GN-ALL-DTLS.dwg		

NO.	ISSUE	DATE	BY
1	ADDENDUM #1	04/15/20	RCE
2	ISSUED FOR BID	03/12/20	RCE
	REVISED	----	

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1"

SHEET D-1
SEQ. 48

ACAD Rel: 23.0s (LMS Tech)
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Last Saved: 4/17/2020 2:28 PM Saved By: 02618

Plot Date: 4/17/2020 2:29 PM Plot By: 02618 Filename: N:\WTU\Drawings\GN-ALL-DTLS.dwg