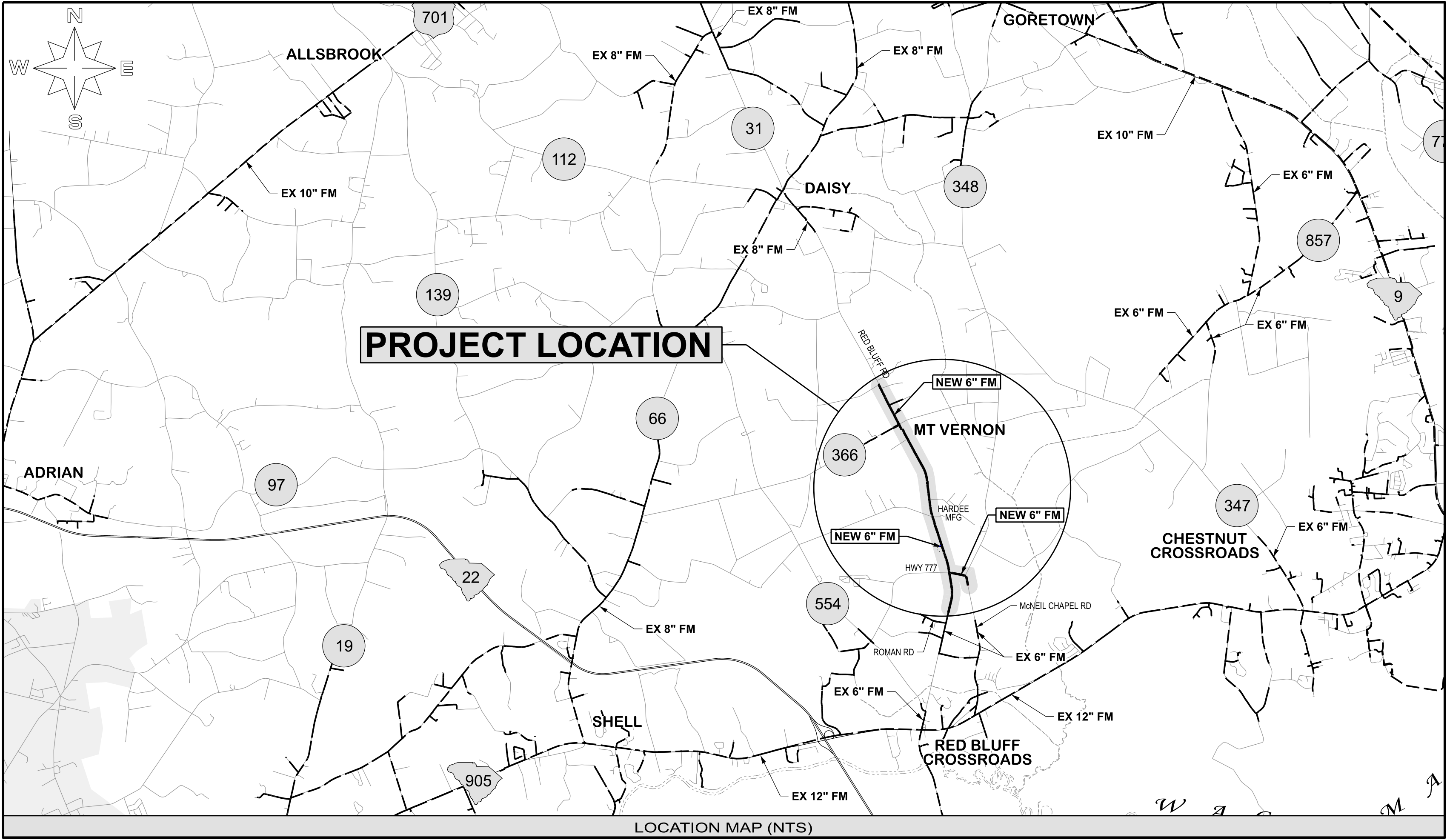


Red Bluff Rd (S26-31) Ext. 6

- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1

- Rural Sewer Project (#990-37 / #S15-18) -



SHEET INDEX:

1	TITLE W/ SHEET INDEX, NOTES, & LEGEND
2	OVERALL SEWER PLANS
3-12	PLAN & PROFILE SHEETS (RS22-18)
13-14	PLAN & PROFILE SHEETS (RS15-18)
15	MT VERNON BAPTIST CHURCH PS
16	MT VERNON GROCERY & HARDWARE PS
17-	BORE AS-BUILTS

LEGEND (APPLIES TYPICALLY THROUGHOUT PLAN SHEETS)	
DIRT/GRASS DRIVEWAY	SEWER FM AIR RELEASE VALVE
COQUINA/GRAVEL DRIVEWAY	SEWER FM PUMPER CONNECTION ASSEMBLY
CONCRETE DRIVEWAY	SEWER FM PLUG VALVE
ASPHALT DRIVEWAY	SEWER MANHOLE
REINFORCED CONCRETE PIPE (RCP)	SEWER LIFT STATION
TELEPHONE PEDESTAL	SEWER S.T.E.P. TANK
T.V. CABLE PEDESTAL	SEWER GRINDER PUMP STATION
ELECTRIC POWER POLE	WATER FIRE HYDRANT
U.G. ELECTRIC TRANSFORMER	WATER POST HYDRANT
GAS MAIN	WATER GATE VALVE
TELEPHONE/TV CABLE	WATER/SEWER REDUCER
FIBER OPTIC CABLE	WATER SERVICE METER
CATCH BASIN	
WATER WELL HOUSE	

1. WORK WITHIN PUBLIC RIGHT-OF-WAYS OR PRIVATE EASEMENTS SHALL BE ACCOMPLISHED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OR CONDITIONS OF THE ENCROACHMENT PERMIT OR OTHER LEGAL DOCUMENTS AS THOUGH DOCUMENTS WERE ISSUED IN THE CONTRACTORS NAME. THE CONTRACTOR SHALL MAINTAIN COPIES OF THESE DOCUMENTS ON THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF PUBLIC RIGHTS-OF-WAY DURING CONSTRUCTION OF THE PROJECT AND UNTIL THE CONTRACTOR OBTAINS AND DELIVERS TO THE OWNER A WRITTEN SIGN-OFF FROM HORRY COUNTY AND/OR THE S.C.D.O.T. THAT THE PUBLIC AGENCY HAS ACCEPTED THE RIGHT-OF-WAY BACK FOR MAINTENANCE. FINAL PAYMENT AND RELEASE OF RETAINAGE WILL NOT BE MADE TO THE CONTRACTOR UNTIL WRITTEN SIGN-OFF HAS BEEN OBTAINED FROM THE APPROPRIATE PUBLIC AGENCY AND PROVIDED TO THE OWNER.
2. PROVISIONS SHALL BE MADE TO PREVENT EROSION AND SILTRATION CAUSED BY CONSTRUCTION. TEMPORARY GRASSING, HAY BALES, SILT FENCES OR OTHER METHODS, AS CALLED FOR ON THE PLAN OR THAT MAY BE REQUIRED, SHALL BE USED.
3. DISTANCES SHOWN ON THE PLAN FOR THE DESIGNATED LOCATION OF THE PROPOSED LINE WHICH MAY BE FROM THE EDGE OF PAVEMENT OR OTHERWISE SHOWN IS INTENDED ONLY AS A DESIRED LOCATION FOR THIS INSTALLATION. HOWEVER, SHOULD A CONFLICT OCCUR AND/OR DUE TO UNFORESEEN OR OTHER UTILITIES DISCOVERED THAT ARE IN CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR ANY AND ALL INSTALLATIONS AND DEVIATIONS OF ALIGNMENT NECESSARY TO ACHIEVE A CHANGED AND SATISFACTORY LOCATION FOR THIS INSTALLATION. THE INSTALLATION COSTS THAT MAY OCCUR DUE TO ALIGNMENT CHANGES ARE CONSIDERED TO BE A PART OF THE PRICE SUBMITTED FOR PIPE INSTALLATION AND NO ADDITIONAL COMPENSATION IS ALLOWED. THE FINAL LOCATION SELECTED FOR INSTALLATION BY THE CONTRACTOR OTHER THAN WHAT IS SHOWN ON THE PLANS SHALL BE FIRST APPROVED BY THE AUTHORITY PRIOR TO PROCEEDING WITH THE WORK AND ACTUAL INSTALLATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND EXISTENCE OF ALL UNDERGROUND UTILITIES BOTH PRIOR TO THE BID SUBMITTAL AND DURING CONSTRUCTION. LOCATION OF UTILITIES AS TENTATIVELY SHOWN ON THE PLANS, WHETHER FULLY AND CORRECTLY LOCATED OR PARTIALLY AND/OR INCORRECTLY LOCATED OR OMITTED WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OR LIABILITY FOR PROVIDING FOR ANY DEVIATION FROM THE PLANNED LOCATION AND FOR THE COMPLETE INSTALLATION AND/OR DAMAGE TO OTHER UTILITIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING LOCAL

UTILITIES FOR ASSISTANCE IN LOCATING UTILITIES BOTH PRIOR TO BID PROPOSALS AND DURING INSTALLATIONS. THE CONTRACTOR MUST FULLY COMPLY WITH THE SOUTH CAROLINA UNDERGROUND UTILITIES DAMAGE PREVENTION ACT, GENERAL STATUTES 58-35, SECTIONS 20 THROUGH 120 AND ALL APPLICABLE STATUTES AND STATE APPROVED REQUIREMENTS.

4. WHEN THE CONTRACTOR IS UNABLE TO COMPLETE HIS WORK AS SHOWN ON THE PLANS BECAUSE OF AN EXISTING UTILITY, CONTRACTOR SHALL STAKE THE LOCATION OF THE UTILITY PRIOR TO PROCEEDING AND CONTACT THE ENGINEER.
5. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AGENCIES, THE OWNER, THE ENGINEER AND ALL OTHER CONCERNED PARTIES WHEN CONSTRUCTION IS TO COMMENCE SO THAT INSPECTIONS AND OTHER SITE VISITS MAY BE SCHEDULED.
6. DATA REQUIRED FOR PREPARATION OF AS-BUILT DRAWINGS SHALL BE OBTAINED BY THE CONTRACTOR AT THE TIME OF INSTALLATION. THIS DATA SHALL BE ACCUMULATED BY THE CONTRACTOR AND COORDINATED WITH THE PROJECT INSPECTOR ON A DAILY BASIS DURING THE CONSTRUCTION PERIOD AND BE SUBMITTED TO THE PROJECT INSPECTOR IN A NEAT AND LEGIBLE MANNER AFTER COMPLETION OF THE PROJECT.
7. ALL MATERIALS AND/OR INSTALLATION, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AUTHORITY'S WATER AND SEWER STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE, ALL FEDERAL, SOUTH CAROLINA AND LOCAL ORDINANCES, REGULATIONS, SPECIFICATIONS AND PERMITS.
8. SPECIAL NOTE: PRIOR TO ANY EXCAVATION THE CONTRACTOR IS REQUIRED TO CONTACT HORRY TELEPHONE COOPERATIVE FOR CABLE LOCATIONS AT 365-2151. THIS PROJECT HAS SEVERAL CABLES OFF EDGE OF PAVEMENT THAT THE CONTRACTOR WILL BE REQUIRED TO LOCATE AND EXPOSE PRIOR TO THE INSTALLATION OF ANY MATERIALS.
9. REPLACE IN KIND ALL AREAS PROPERTY OWNER HAS DEVELOPED SPECIAL GRASS, TURF, OR LANDSCAPING. ALL DISTURBED AREAS ARE TO BE RAKED AND SEEDED.

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawrimore Construction

Directional bores installed by:
Lawrimore Construction

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: MARK DAWSEY 2020-07-22
INSPECTIONS DATE

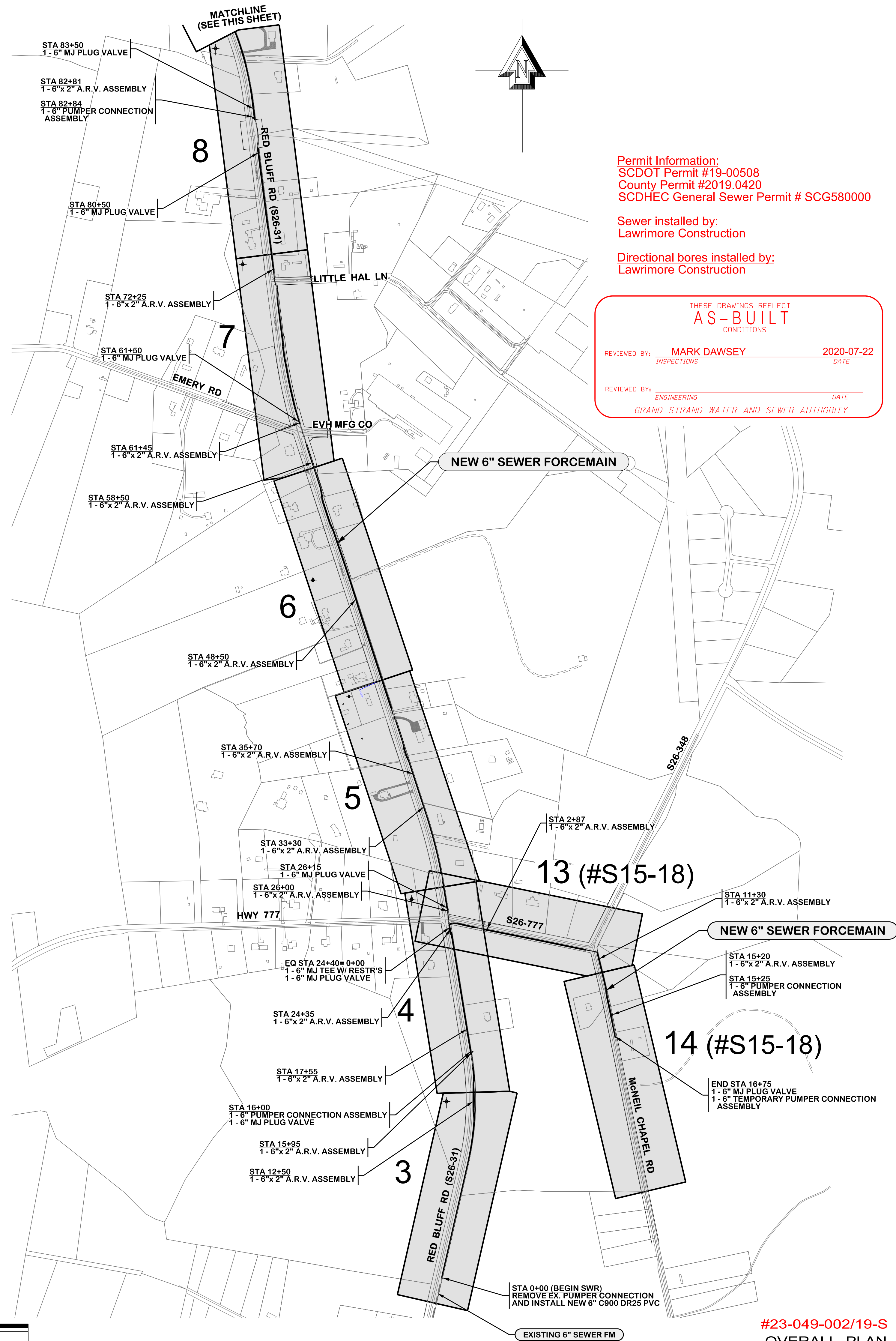
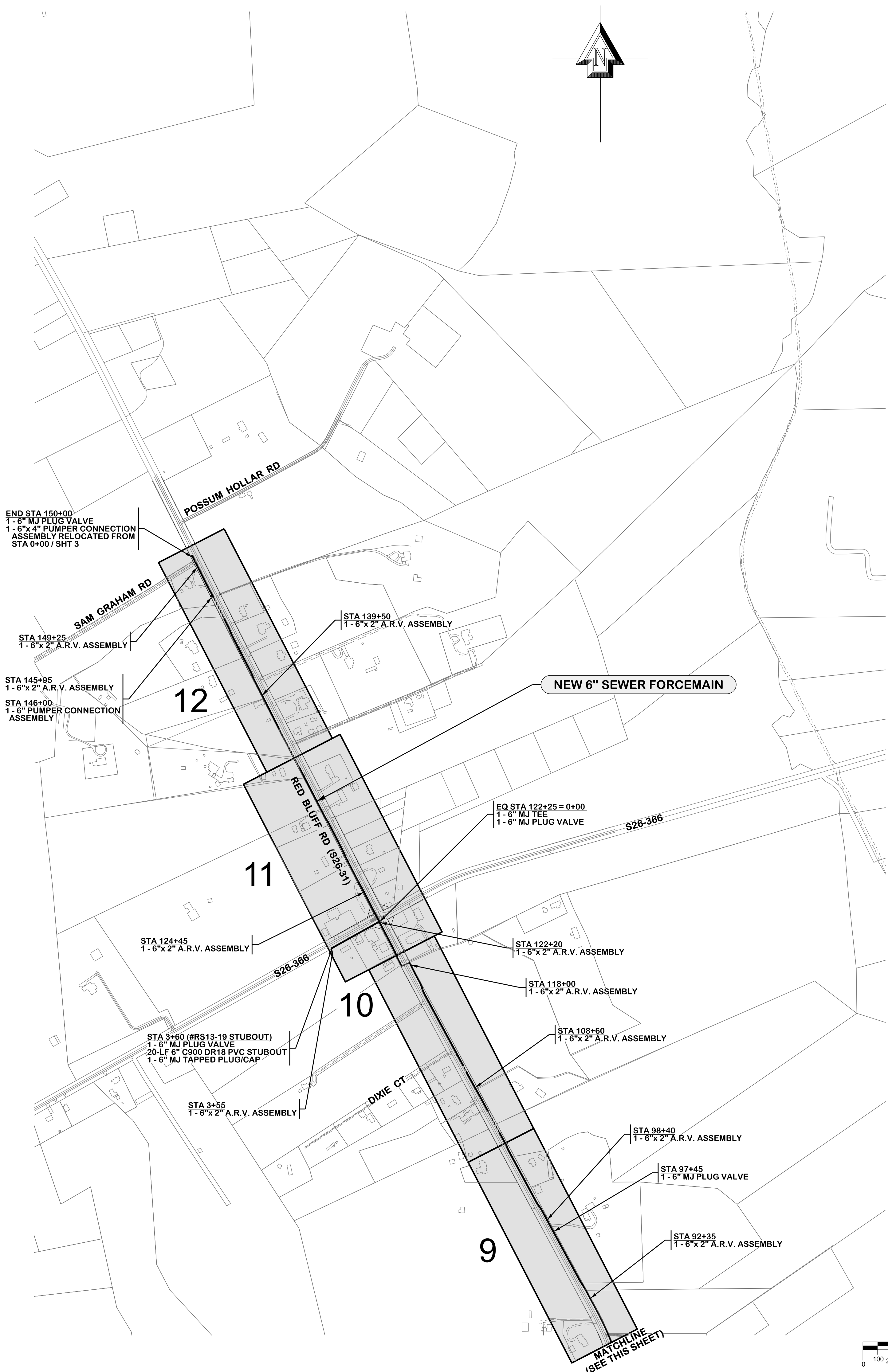
REVIEWED BY: DATE
ENGINEERING

GRAND STRAND WATER AND SEWER AUTHORITY



PREPARED BY:
GRAND STRAND WATER & SEWER AUTHORITY
166 JACKSON BLUFF RD.
P.O. BOX 2368 CONWAY, SC 29528-2368
(843) 443-8200 OR 347-4641
(843) 347-4680 (FAX)
E-MAIL: GSWSA.COM

APPROVED BY:
JASON L. POSTON, PE #26566



Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawrimore Construction

Directional bores installed by:
Lawrimore Construction

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: MARK DAWSEY 2020-07-22
INSPECTIONS DATE

REVIEWED BY: ENGINEERING DATE
GRAND STRAND WATER AND SEWER AUTHORITY

REVISION	DATE
AS-BUILT	2020-07-22

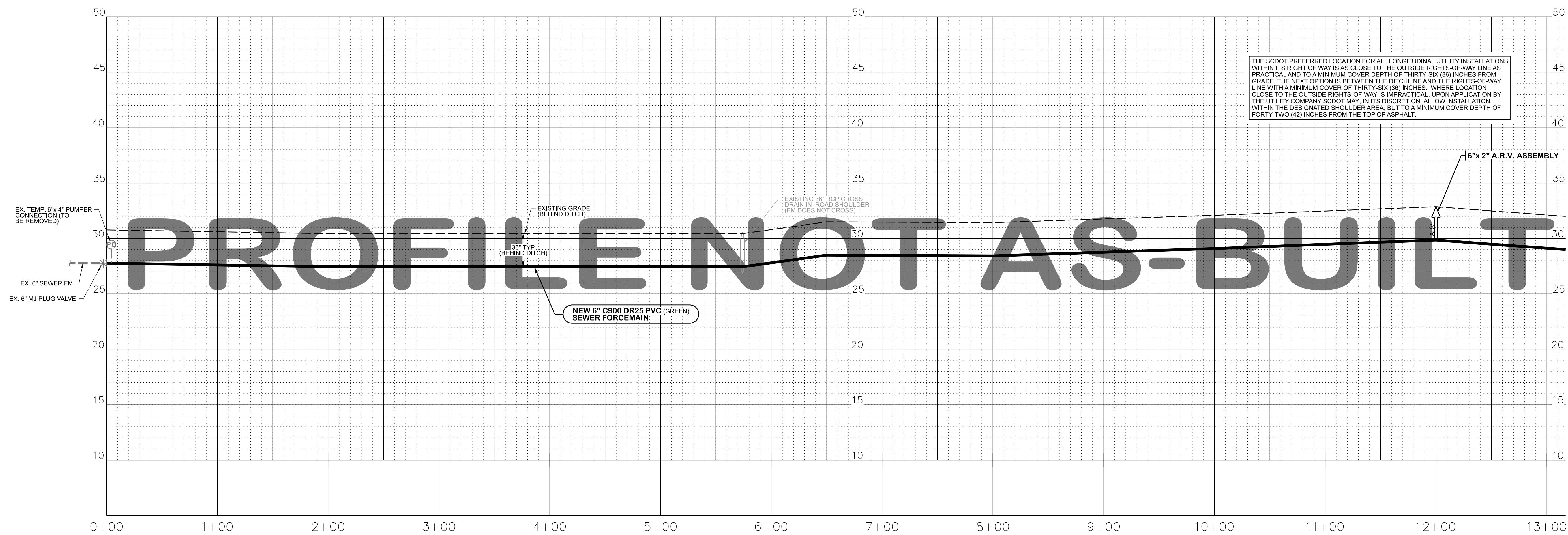
GRAND STRAND WATER & SEWER AUTHORITY
166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29525-2368
(843) 335-0500 FAX (843) 335-0501
E-MAIL: GSWSA@GSA.COM

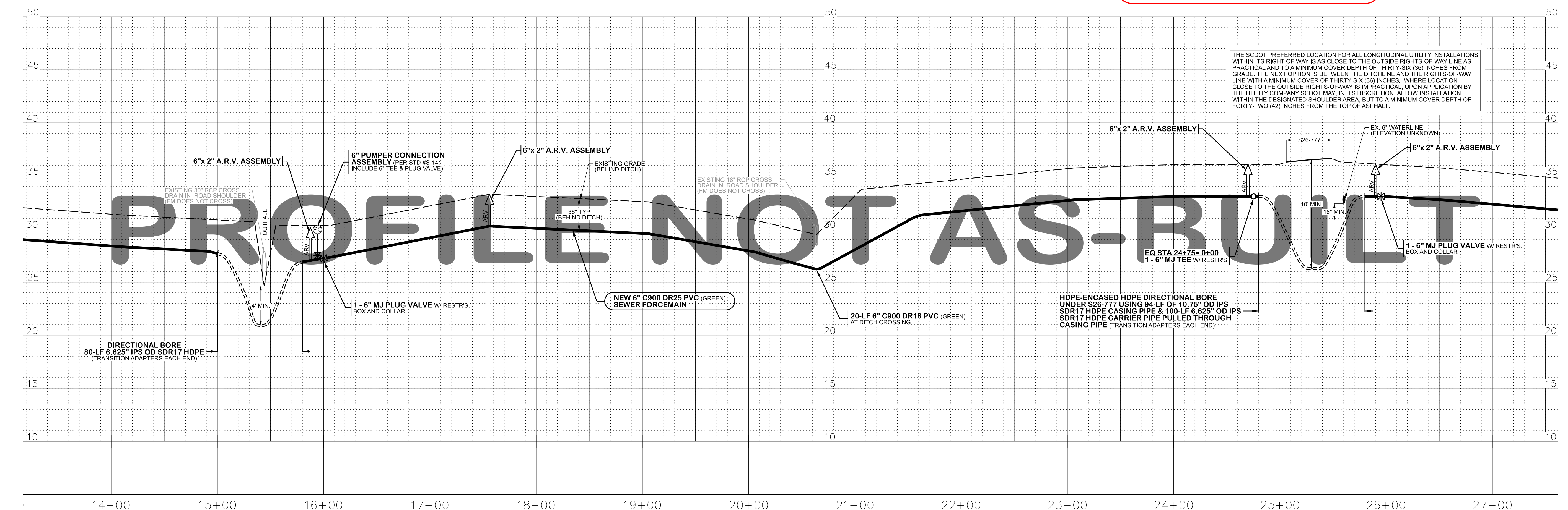
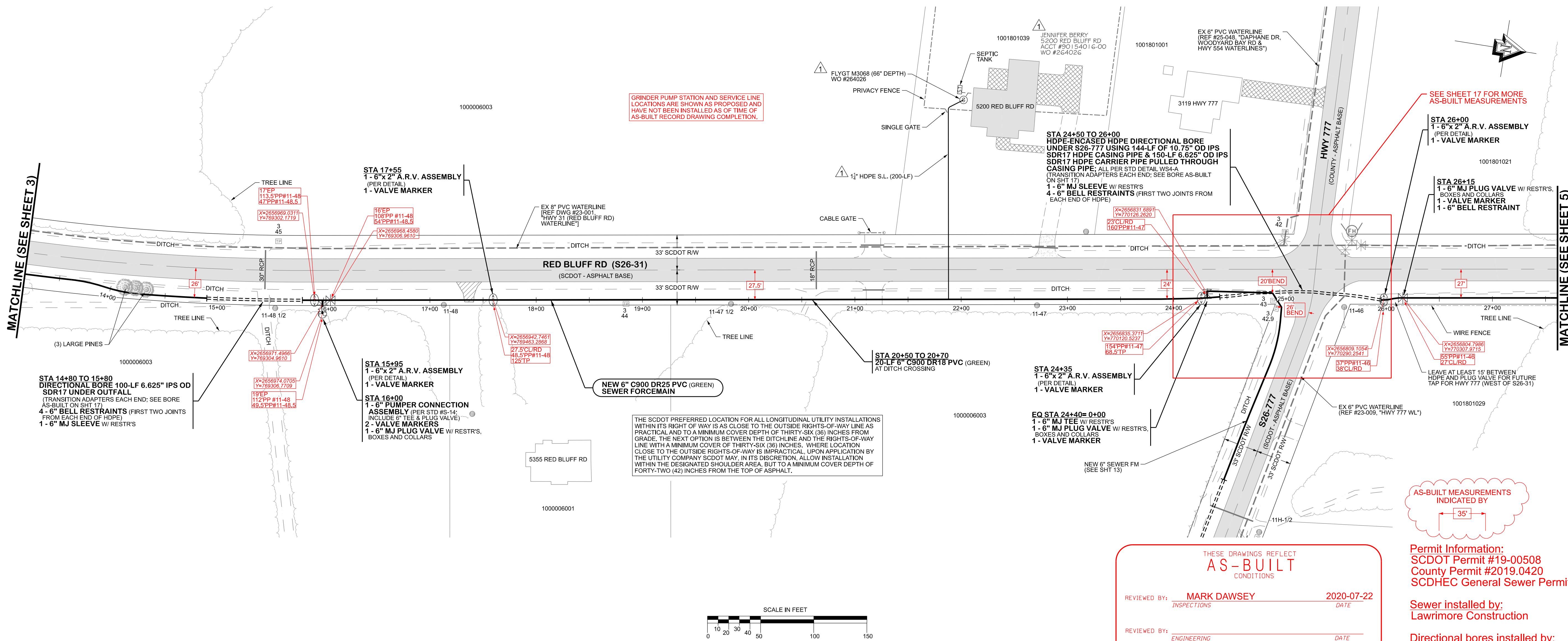
Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)

DATE: November 2019 A.D.
SCALE: as shown
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn
DESIGNED BY: Ray Thompkins
CHECKED BY: Jason L. Poston
APPROVED BY: JASON L. POSTON, PE #26566

SHEET **2** OF 19





AS-BUILT MEASUREMENTS
INDICATED BY

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: **MARK DAWSEY** 2020-07-22
INSPECTIONS DATE

REVIEWED BY: _____
ENGINEERING DATE

GRAND STRAND WATER AND SEWER AUTHORITY

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawmore Construction

Directional bores installed by:
Lawmore Construction

DATE: 2020-04-06
BY: DRT
REVISION: ADDED NEW CUSTOMER (5200 RED BLUFF)
DRT
AS-BUILT

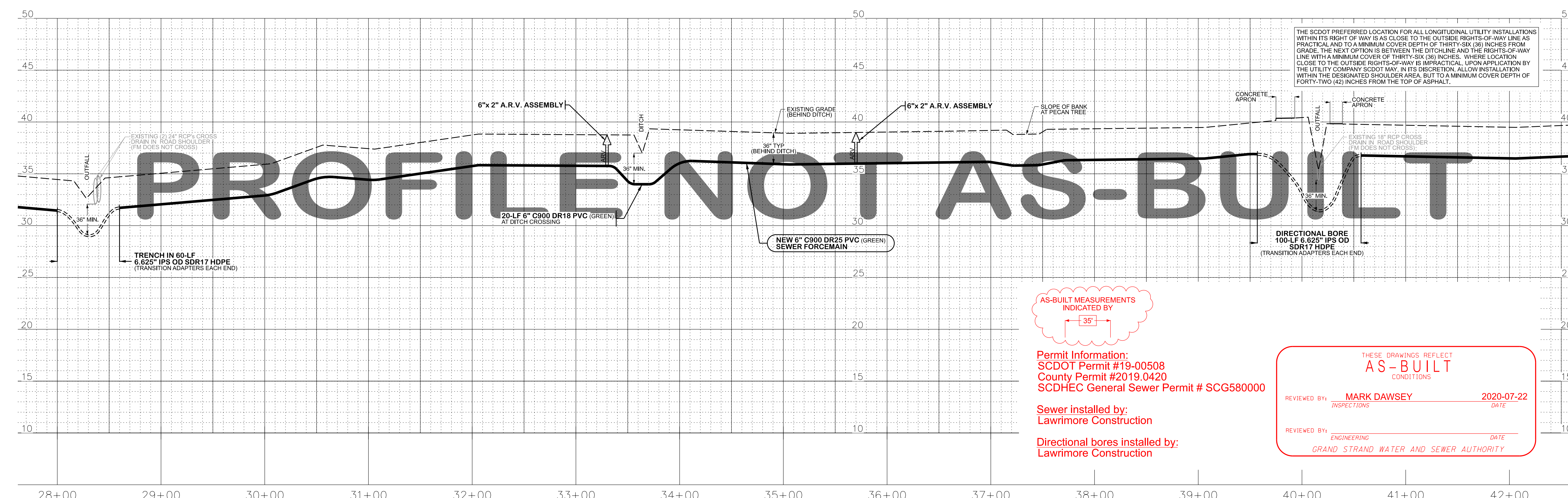
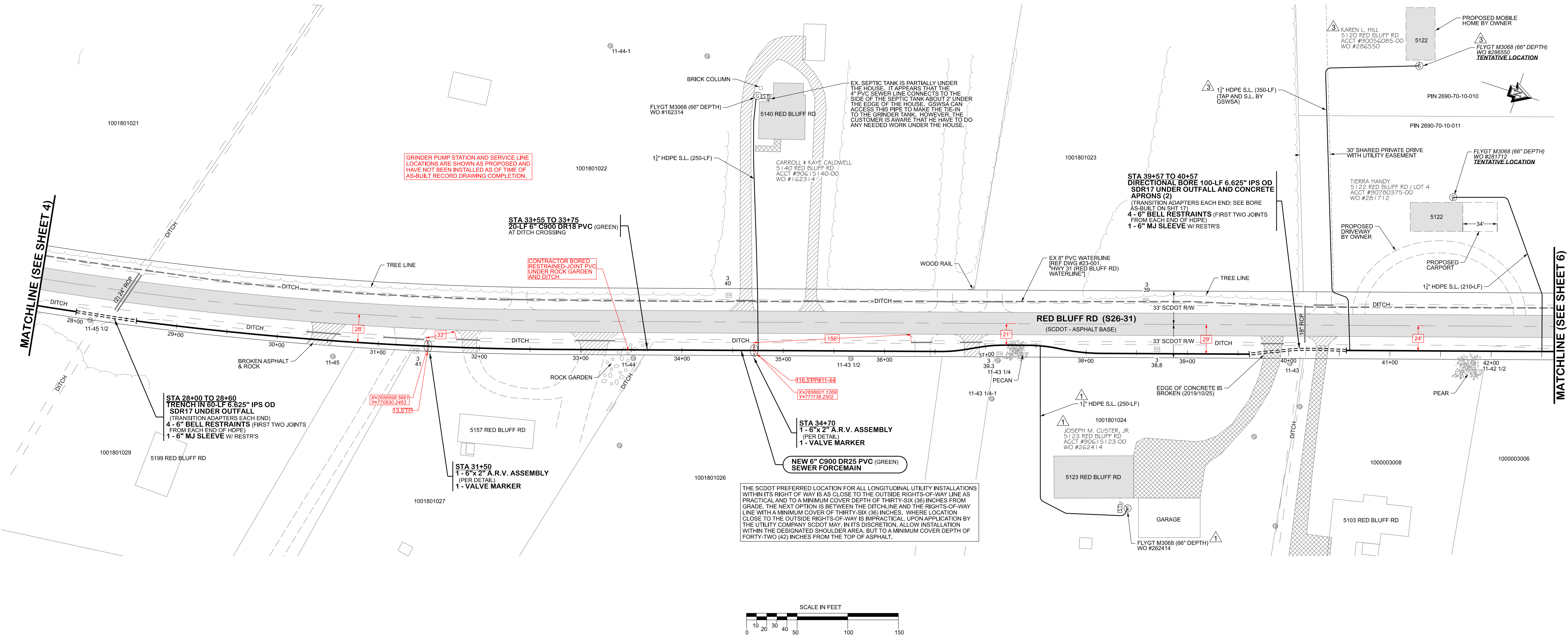
GRAND STRAND WATER & SEWER AUTHORITY
168 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29520-2368
(843) 343-5500 FAX (843) 343-5501
E-MAIL: GSWSA@GSA.COM

Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)

DATE: November 2019 A.D.
SCALE: as shown
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn
DESIGNED BY: Ray Thompkins
CHECKED BY: Jason L. Poston
APPROVED BY: JASON L. POSTON, PE #26566

SHEET
4
OF 19



AS-BUILT MEASUREMENTS
INDICATED BY

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawmore Construction

Directional bores installed by:
Lawmore Construction

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: **MARK DAWSEY** 2020-07-22
INSPECTIONS DATE

REVIEWED BY: _____ DATE
ENGINEERING GRAND STRAND WATER AND SEWER AUTHORITY

REVISION	BY	DATE
1	ADDED NEW CUSTOMER (5123 RED BLUFF)	2020/03/31
2	ADDED NEW CUSTOMER (5122 RED BLUFF)	2020/06/23
3	ADDED NEW CUSTOMER (5122 RED BLUFF)	2020/07-22
AS-BUILT		

GRAND STRAND WATER & SEWER AUTHORITY

166 JACOBSON BLUFF RD.
CONWAY, SC 29626-2668
(843) 345-5000 FAX (843) 345-4641
(843) 345-5000 E-MAIL: GSWSA.COM

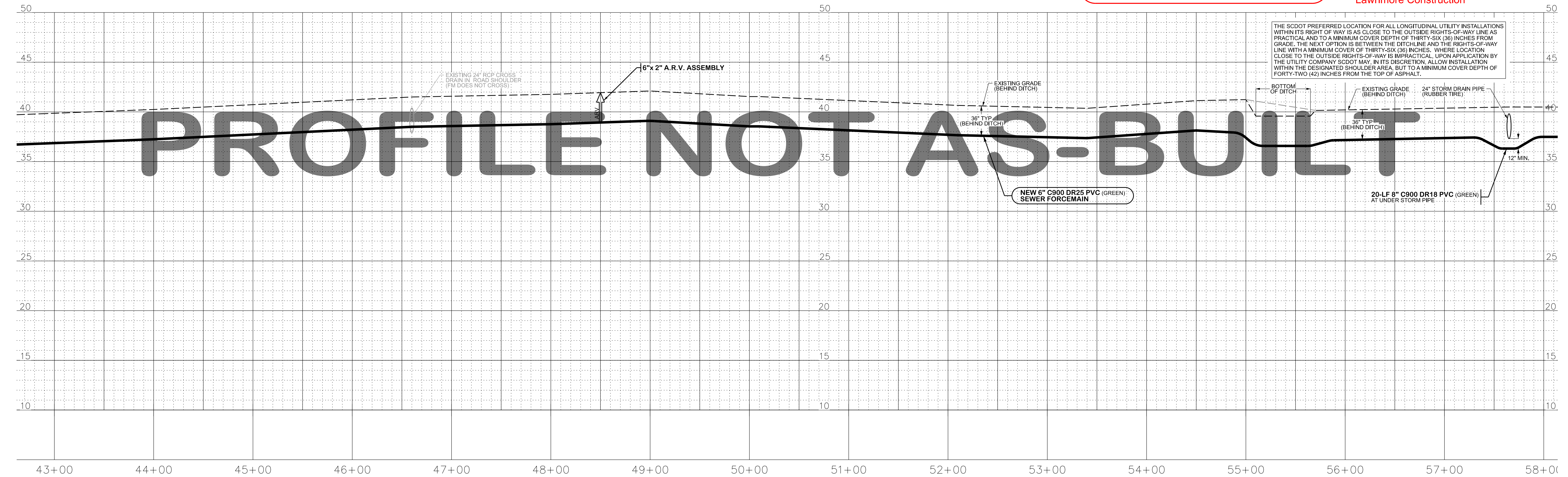
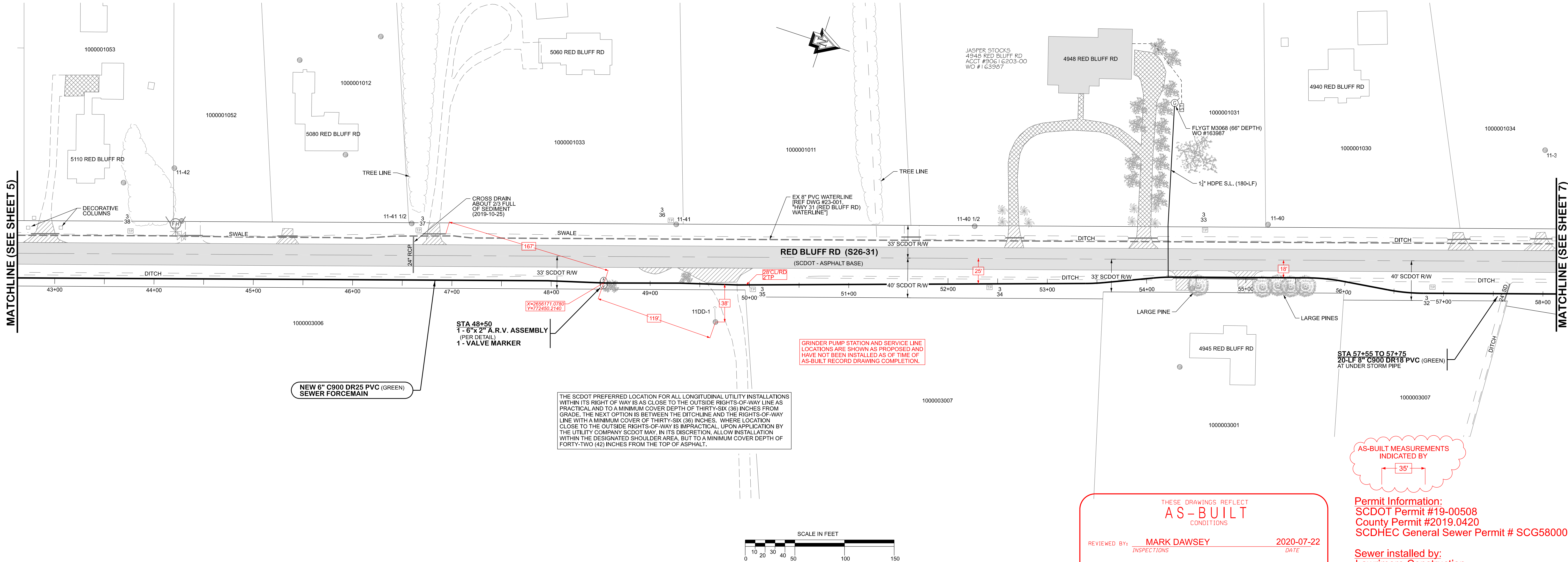
Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)

DATE: November 2019 A.D.
SCALE: as shown
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn

DESIGNED BY: Ray Thompkins
CHECKED BY: Jason L. Poston
APPROVED BY: JASON L. POSTON, PE #26566

SHEET **5** OF 19



BY: DRT
DATE: 2020-07-22

REVISION: AS-BUILT

GRAND STRAND WATER & SEWER AUTHORITY

166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29520-2368
(843) 335-0506 / (843) 335-0507
FAX: (843) 335-0508
E-MAIL: GSWSA@GSA.COM

Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)

DATE: November 2019 A.D.
SCALE: as shown
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn

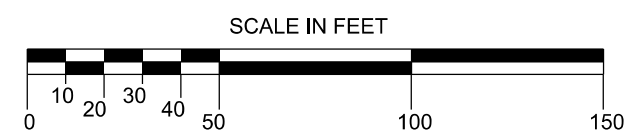
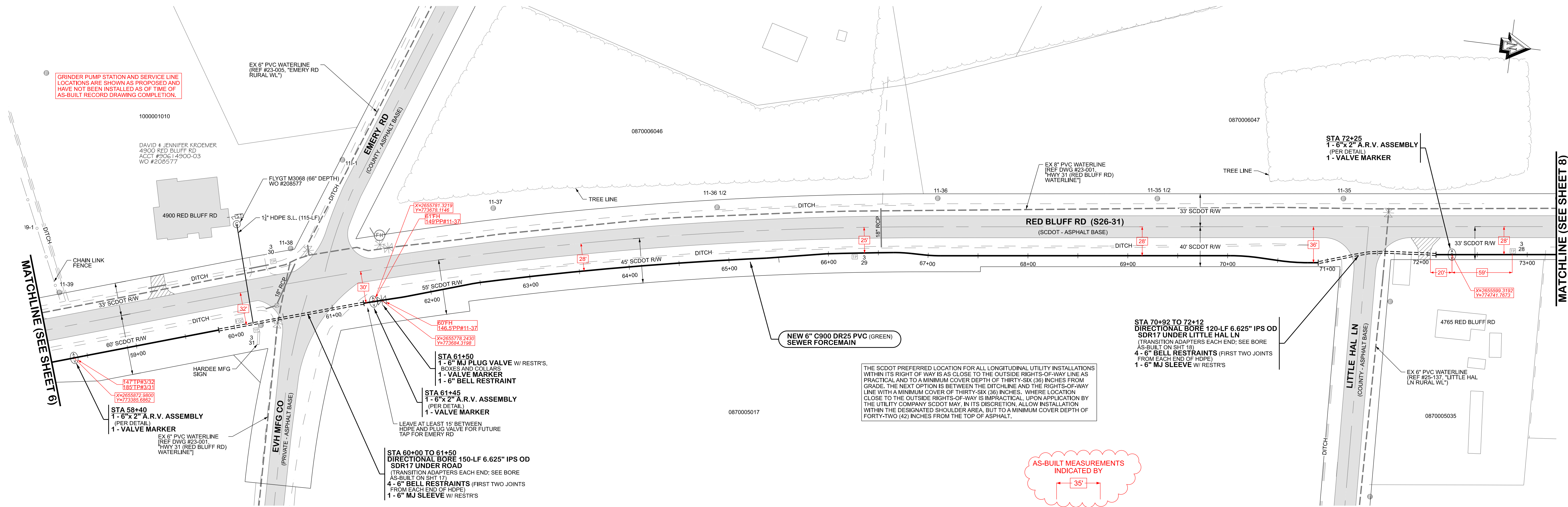
DESIGNED BY: Ray Thompkins

CHECKED BY: Jason L. Poston

APPROVED BY: JASON L. POSTON, PE #26566

SHEET 6 OF 19

#23-049-006/19-S
Red Bluff Rd (S26-31) Ext 6 #S22-18



PROFILE NOT AS-BUILT

AS-BUILT MEASUREMENTS INDICATED BY

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawrimore Construction

Directional bores installed by:
Lawrimore Construction

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: **MARK DAWSEY** 2020-07-22
INSPECTIONS DATE

REVIEWED BY: **ENGINEERING** DATE
GRAND STRAND WATER AND SEWER AUTHORITY

THE SCDOT PREFERRED LOCATION FOR ALL LONGITUDINAL UTILITY INSTALLATIONS WITHIN ITS RIGHT OF WAY IS AS CLOSE TO THE OUTSIDE RIGHTS-OF-WAY LINE AS PRACTICAL AND TO A MINIMUM COVER DEPTH OF THIRTY-SIX (36) INCHES FROM GRADE. THE NEXT OPTION IS BETWEEN THE DITCHLINE AND THE RIGHTS-OF-WAY LINE WITH A MINIMUM COVER OF THIRTY-SIX (36) INCHES. WHERE LOCATION CLOSE TO THE OUTSIDE RIGHTS-OF-WAY IS IMPRACTICAL, UPON APPLICATION BY THE UTILITY COMPANY SCDOT MAY, IN ITS DISCRETION, ALLOW INSTALLATION WITHIN THE DESIGNATED SHOULDER AREA, BUT TO A MINIMUM COVER DEPTH OF FORTY-TWO (42) INCHES FROM THE TOP OF ASPHALT.

BY DATE
DRT 2020-07-22

REVISION
AS-BUILT

GRAND STRAND
WATER & SEWER
AUTHORITY

166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29526-2368
(843) 353-5000 / 353-5472
(843) 353-5000 / 353-5472
E-MAIL: GSWA@GSA.COM

Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
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SCALE: as shown
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn

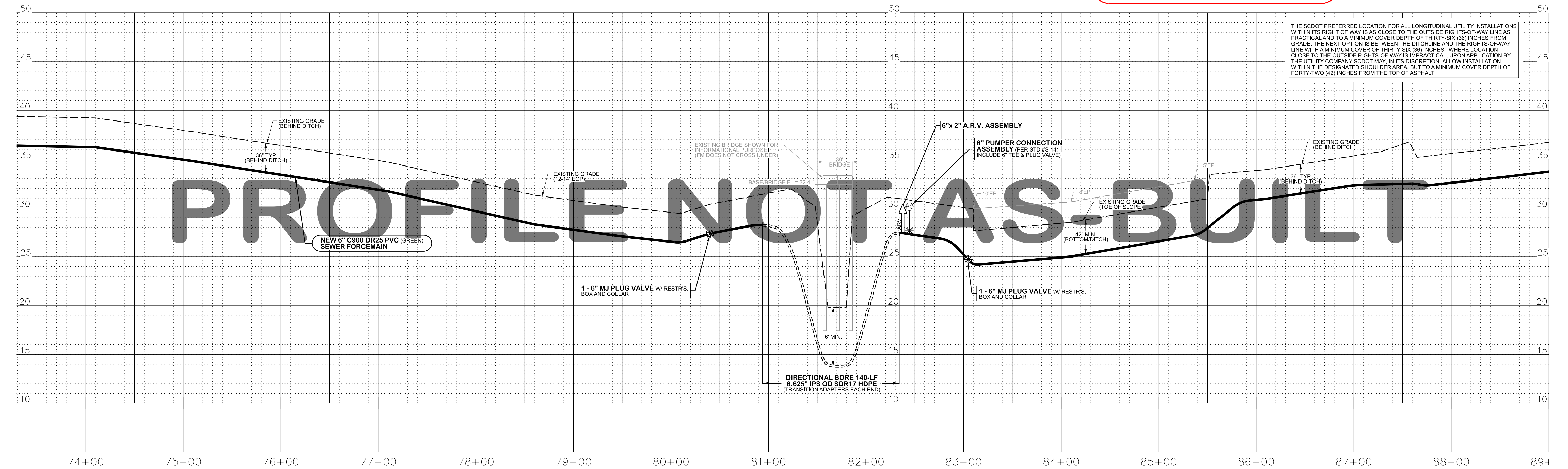
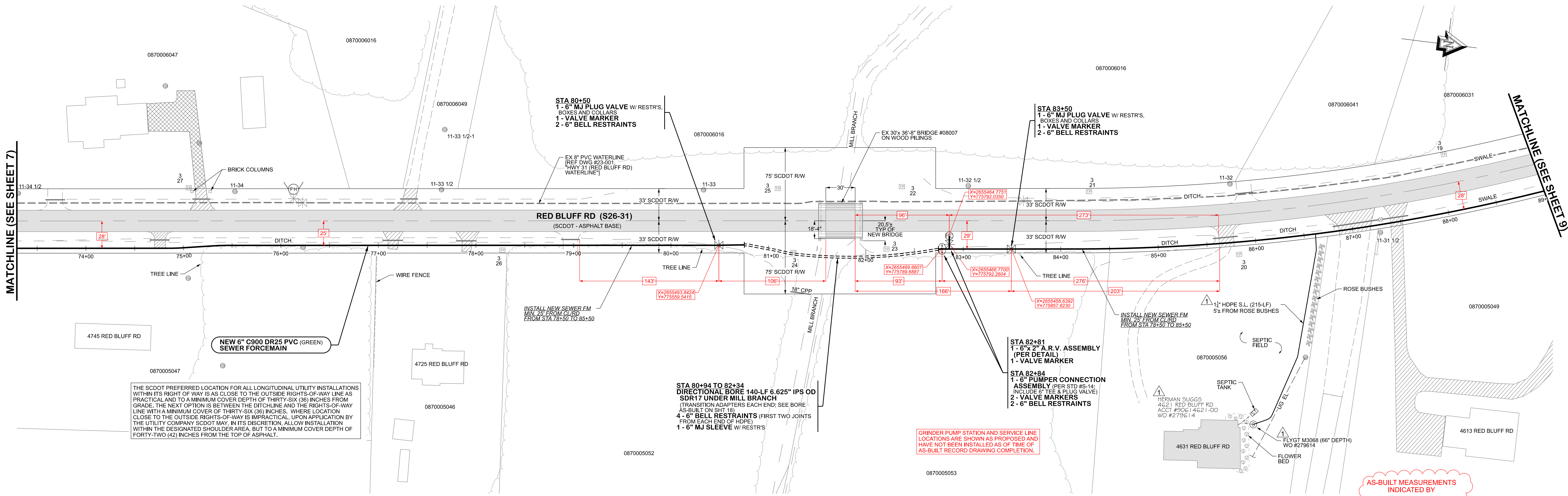
DESIGNED BY
Ray Thompkins

CHECKED BY
Jason L. Poston

APPROVED BY
JASON L. POSTON, PE #26566

SHEET
7
OF 19

#23-049-007/19-S
Red Bluff Rd (S26-31) Ext 6 #S22-18



THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: **MARK DAWSEY** 2020-07-22
INSPECTIONS DATE

REVIEWED BY: _____
ENGINEERING DATE

GRAND STRAND WATER AND SEWER AUTHORITY

AS-BUILT MEASUREMENTS
INDICATED BY

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawmore Construction

Directional bores installed by:
Lawmore Construction

DATE 2020-06-11
BY DRT
REVISION ADDED NEW CUSTOMER (4621 RED BLUFF)
AS-BUILT

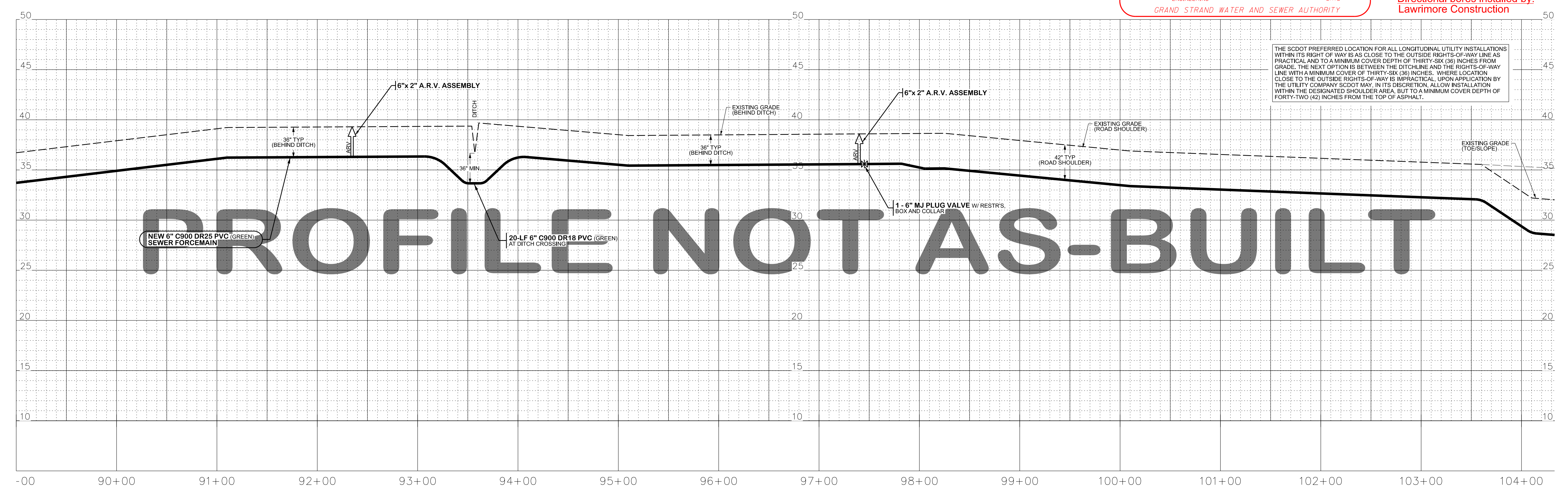
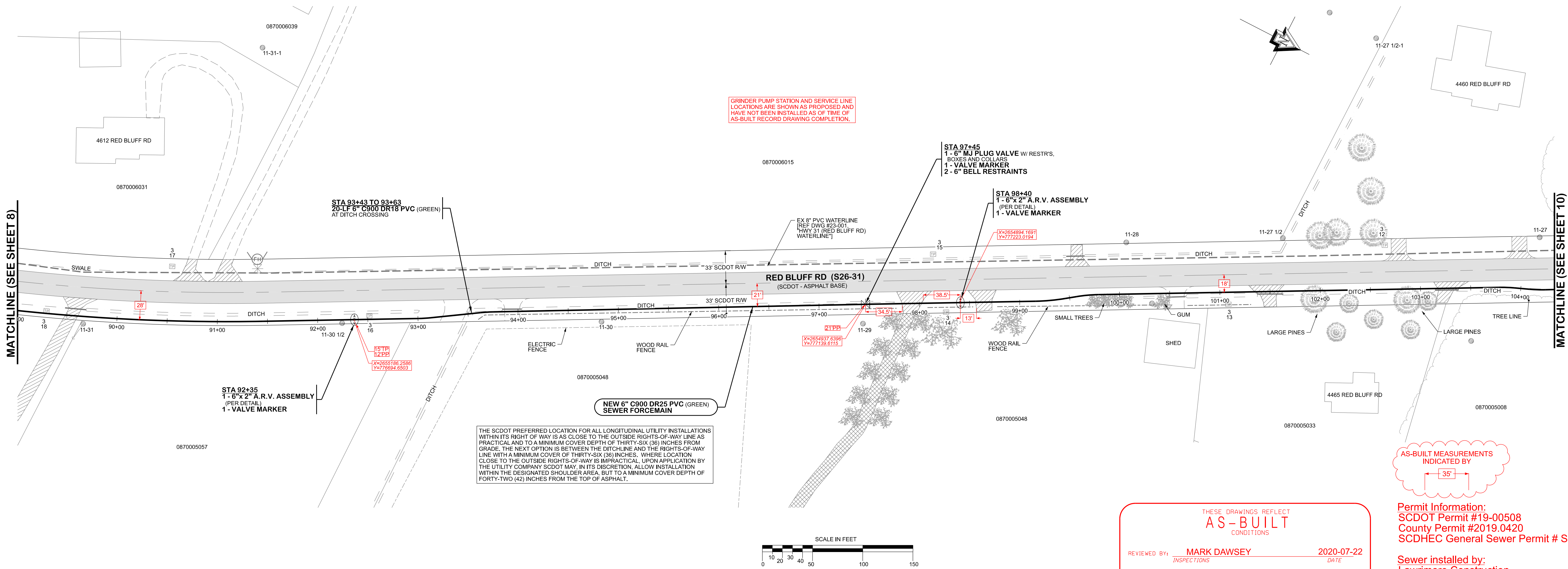
GRAND STRAND WATER & SEWER AUTHORITY
166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29520-2368
(843) 355-0505 / (843) 355-0506
FAX (843) 355-0507
E-MAIL: GSWSA@GSA.COM

Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)

DATE: November 2019 A.D.
SCALE: as shown
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn
DESIGNED BY: Ray Thompkins
CHECKED BY: Jason L. Poston
APPROVED BY: JASON L. POSTON, PE #26566

SHEET 8
OF 19



BY
DRT

DATE
2020-07-22

REVISION

AS-BUILT

GRAND STRAND WATER & SEWER AUTHORITY

166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29520-2368
(843) 343-5000 / (843) 343-5001
FAX: (843) 343-5002
E-MAIL: GSWSA@GSA.COM

Red Bluff Rd (S26-31) Ext. 6

- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1

- Rural Sewer Project (#990-37 / #S15-18) -

(between Red Bluff Crossroads & Daisy)

DATE: November 2019 A.D.

SCALE: as shown

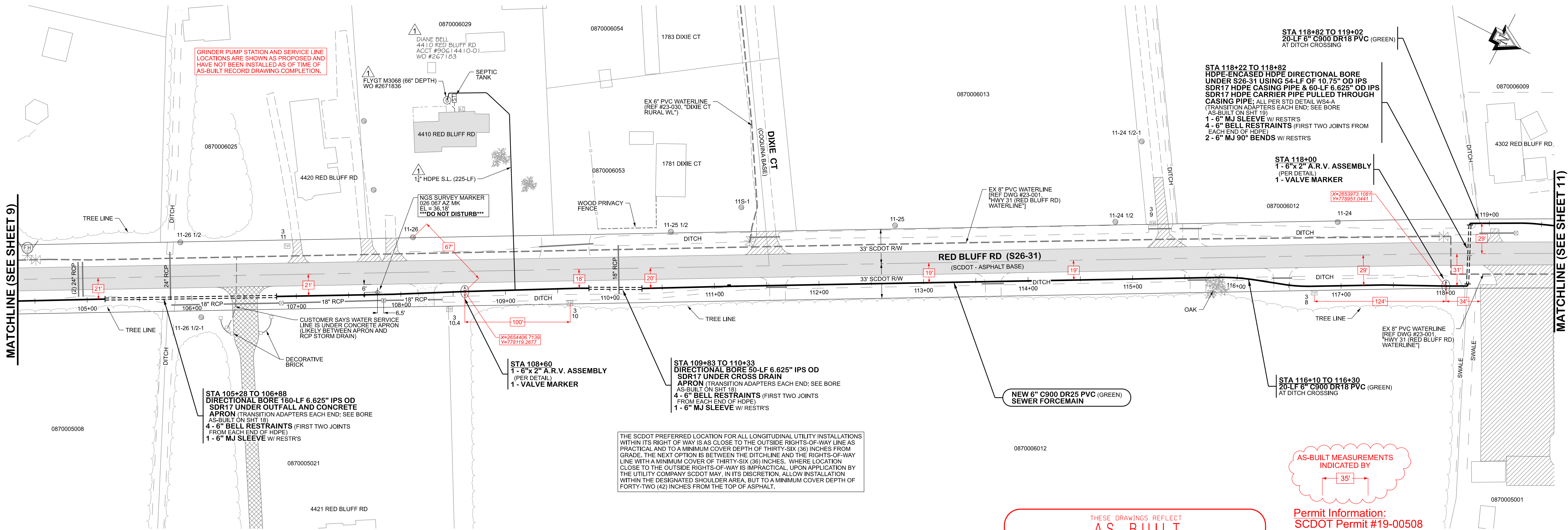
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn

DESIGNED BY: Ray Thompkins

CHECKED BY: Jason L. Poston

APPROVED BY: JASON L. POSTON, PE #26566

SHEET 9 OF 19



THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: **MARK DAWSEY** 2020-07-22
INSPECTIONS DATE

REVIEWED BY: **ENGINEERING** DATE
GRAND STRAND WATER AND SEWER AUTHORITY

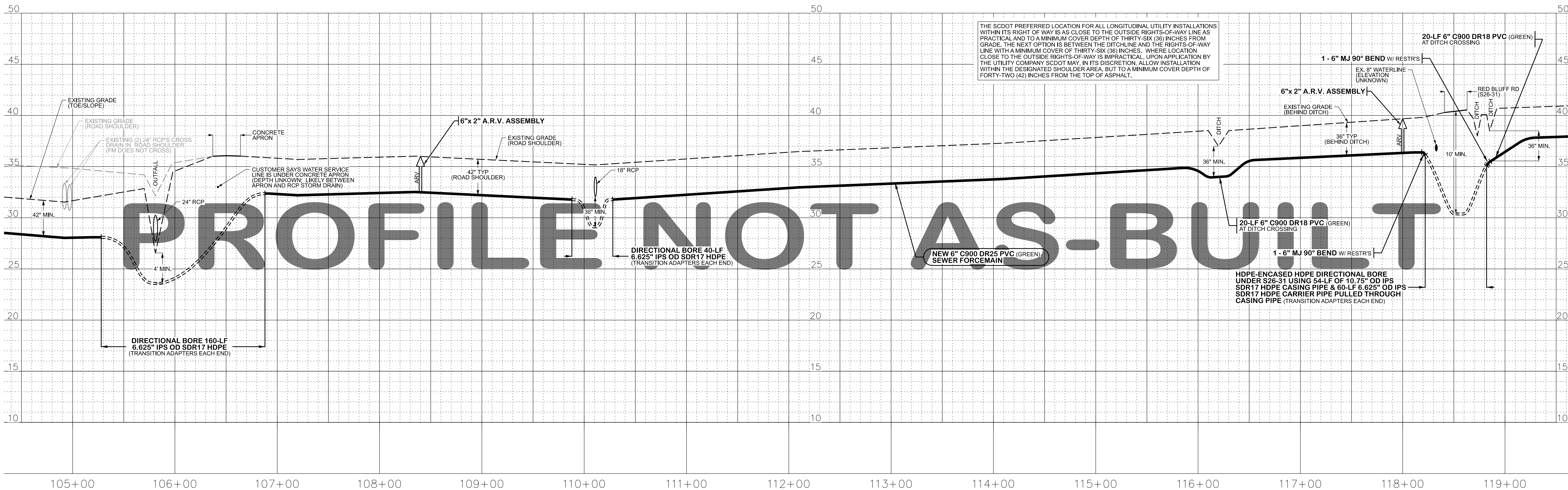
AS-BUILT MEASUREMENTS
INDICATED BY

35'

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawmore Construction

Directional bores installed by:
Lawmore Construction



REVISION	BY	DATE
ADDED NEW CUSTOMER (4410 RED BLUFF)	DRT	2020-04-17
AS-BUILT	DRT	2020-07-22

GRAND STRAND
WATER & SEWER
AUTHORITY

166 JACKSON BLUFF RD.
CONWAY, SC 29526-2368
(843) 343-5000 / (843) 343-5001
(843) 343-5002 / (843) 343-5003
E-MAIL: GSWSA@GSA.COM

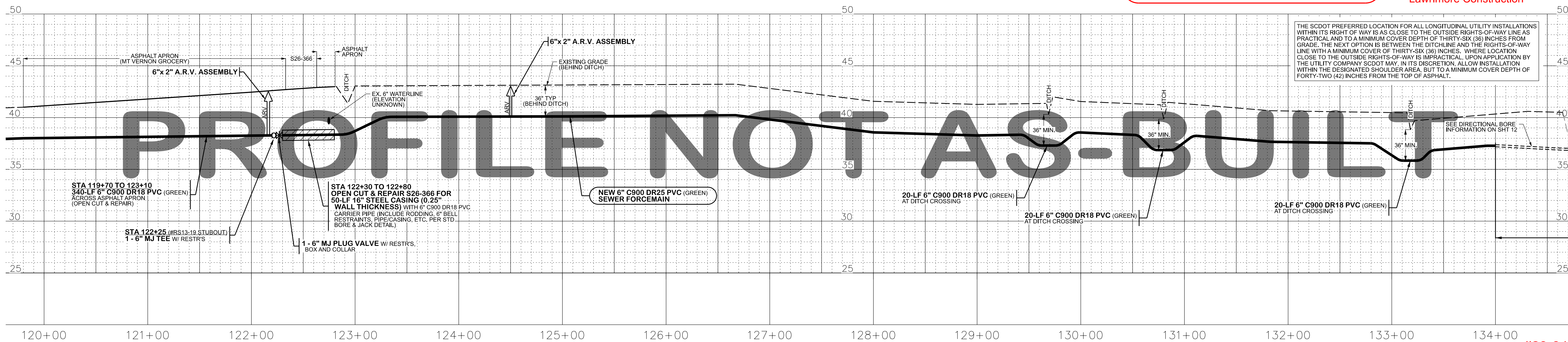
Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -

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- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)

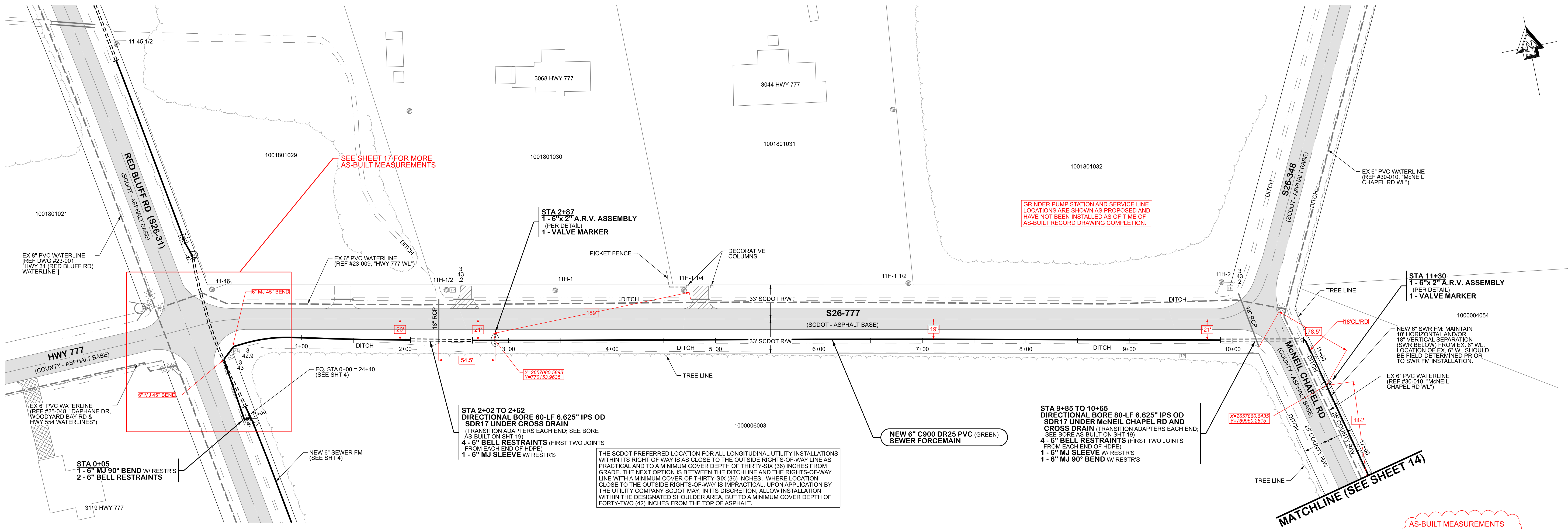
DATE: November 2019 A.D.
SCALE: as shown
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn

DESIGNED BY: Ray Thompkins
CHECKED BY: Jason L. Poston
APPROVED BY: JASON L. POSTON, PE #26566

SHEET
10
OF 19



SHEET
11
OF 19



THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: **MARK DAWSEY** 2020-07-22
INSPECTIONS DATE

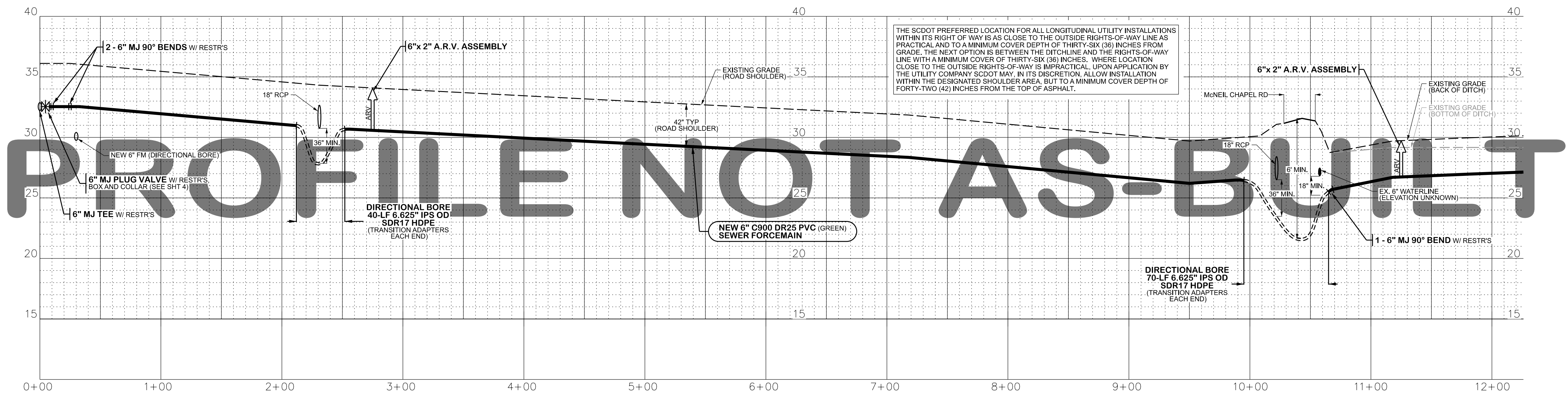
REVIEWED BY: _____ DATE _____
ENGINEERING GRAND STRAND WATER AND SEWER AUTHORITY

AS-BUILT MEASUREMENTS
INDICATED BY
[35']

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawmore Construction

Directional bores installed by:
Lawmore Construction



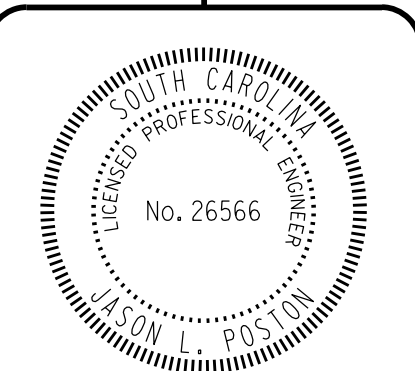
REVISION	BY	DATE
AS-BUILT	DRT	2020-07-22

GRAND STRAND WATER & SEWER AUTHORITY

166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29520-2368
(843) 343-5000 FAX (843) 343-5001
E-MAIL: GSWSA.COM

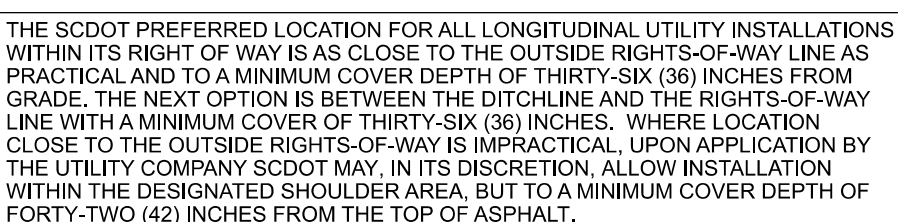
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- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)




DATE:	November 2019 A.D.
SCALE:	as shown
FILENAME:	Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn
DESIGNED BY:	Ray Thompkins
CHECKED BY:	Jason L. Poston
APPROVED BY:	
	JASON L. POSTON, PE #26566

SHEET
13
OF 19




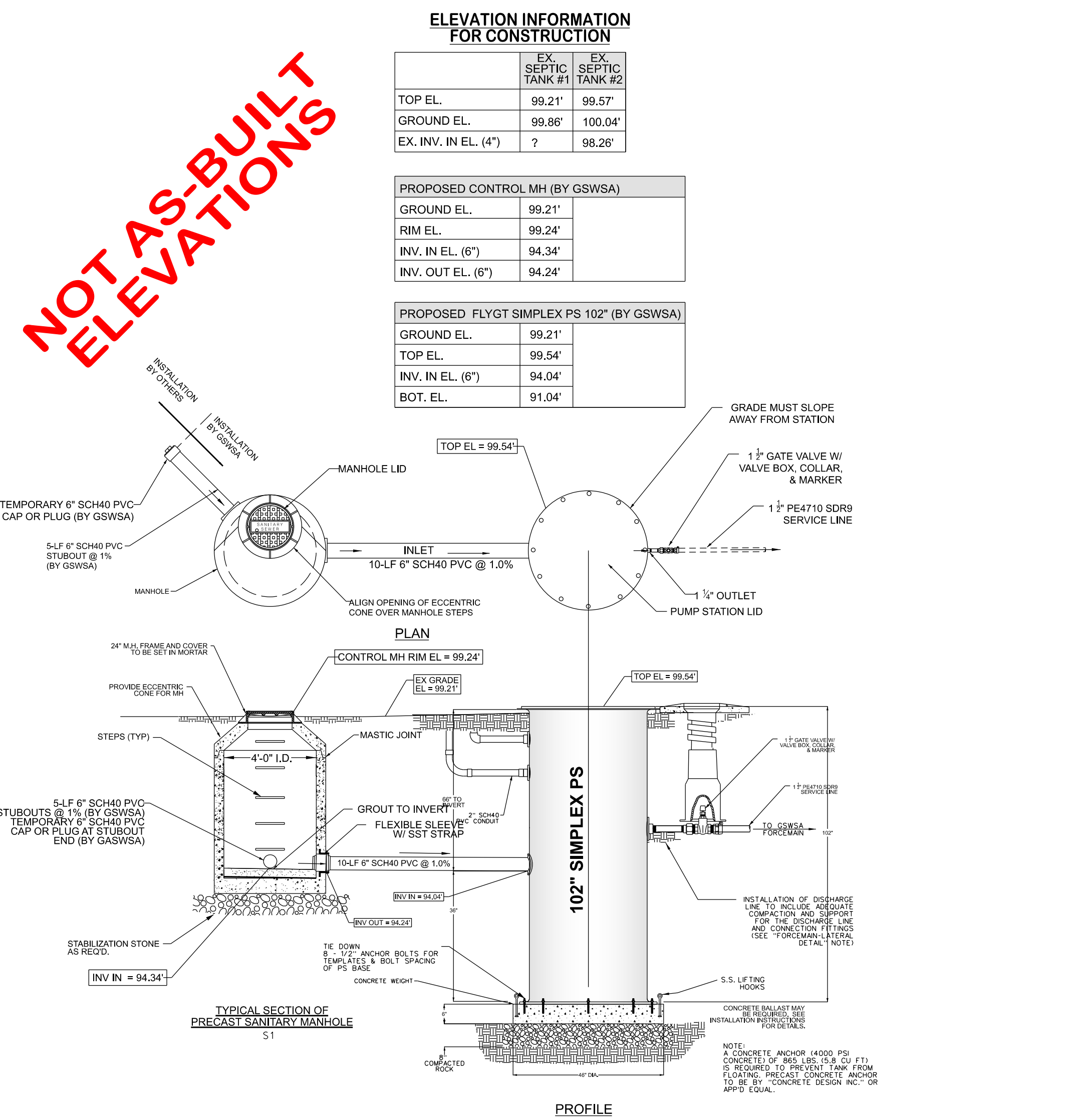
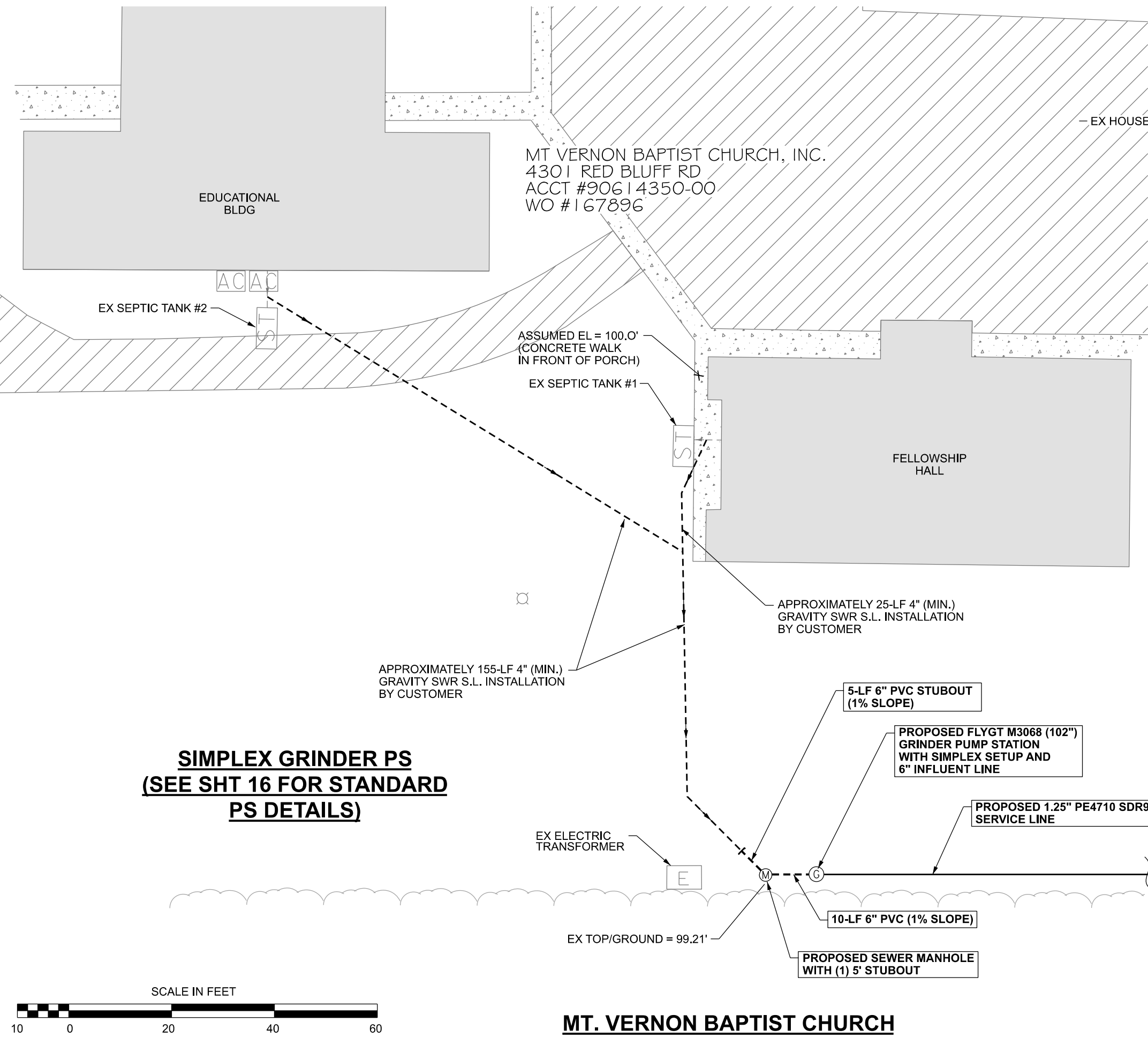
AS-BUILT MEASUREMENTS
INDICATED BY



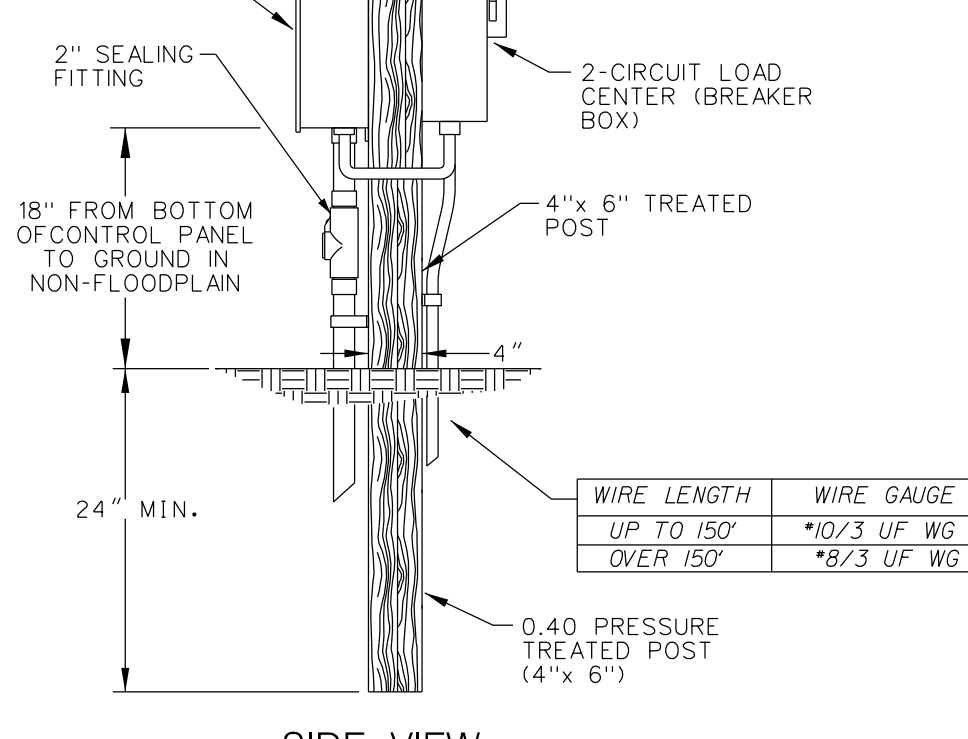
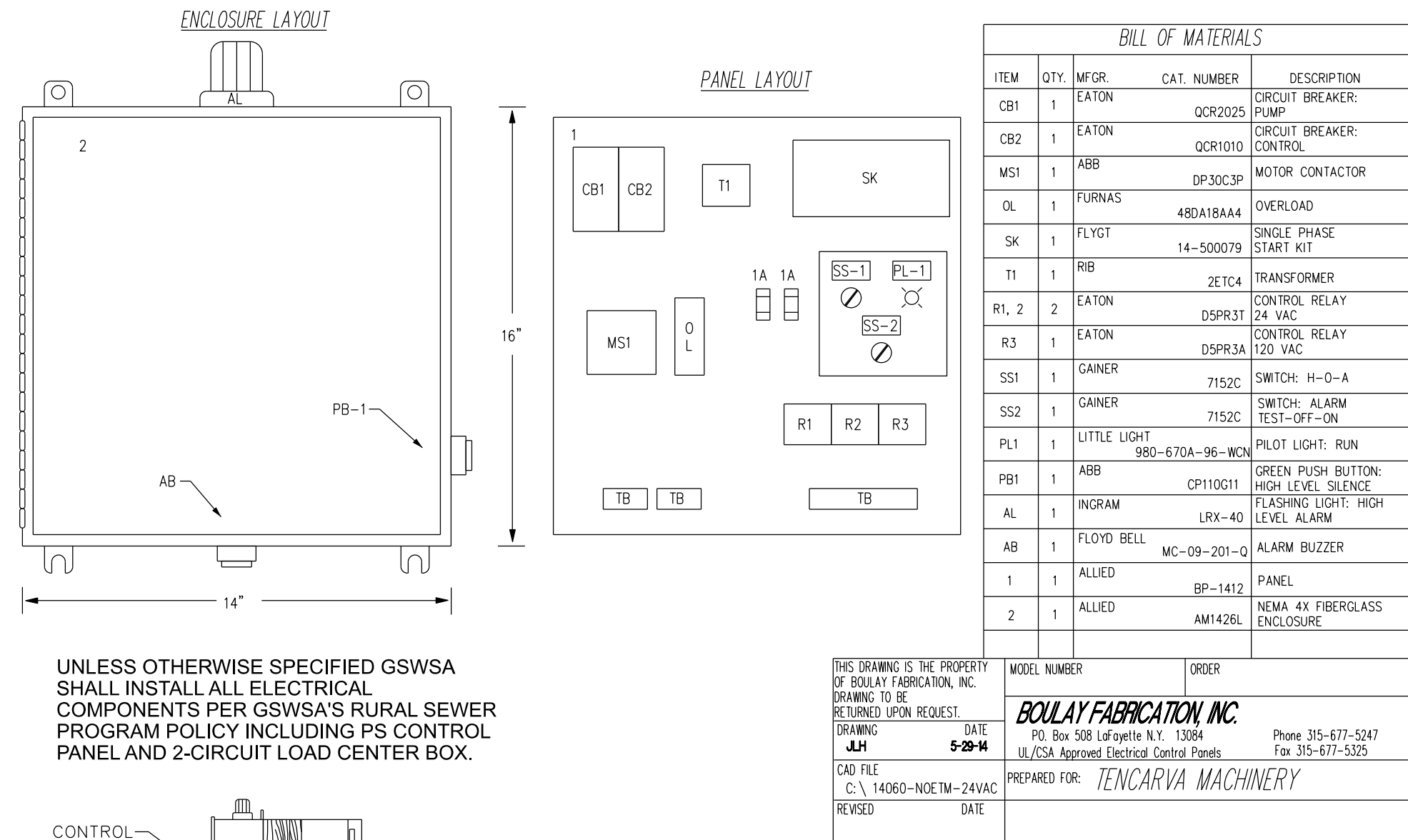
Directional bores installed by:
Lawrimore Construction

THESE DRAWINGS REFLECT	
AS-BUILT	
CONDITIONS	
REVIEWED BY: MARK DAWSEY	2020-07-22
INSPECTIONS	DATE
REVIEWED BY:	DATE
ENGINEERING	
GRAND STRAND WATER AND SEWER AUTHORITY	

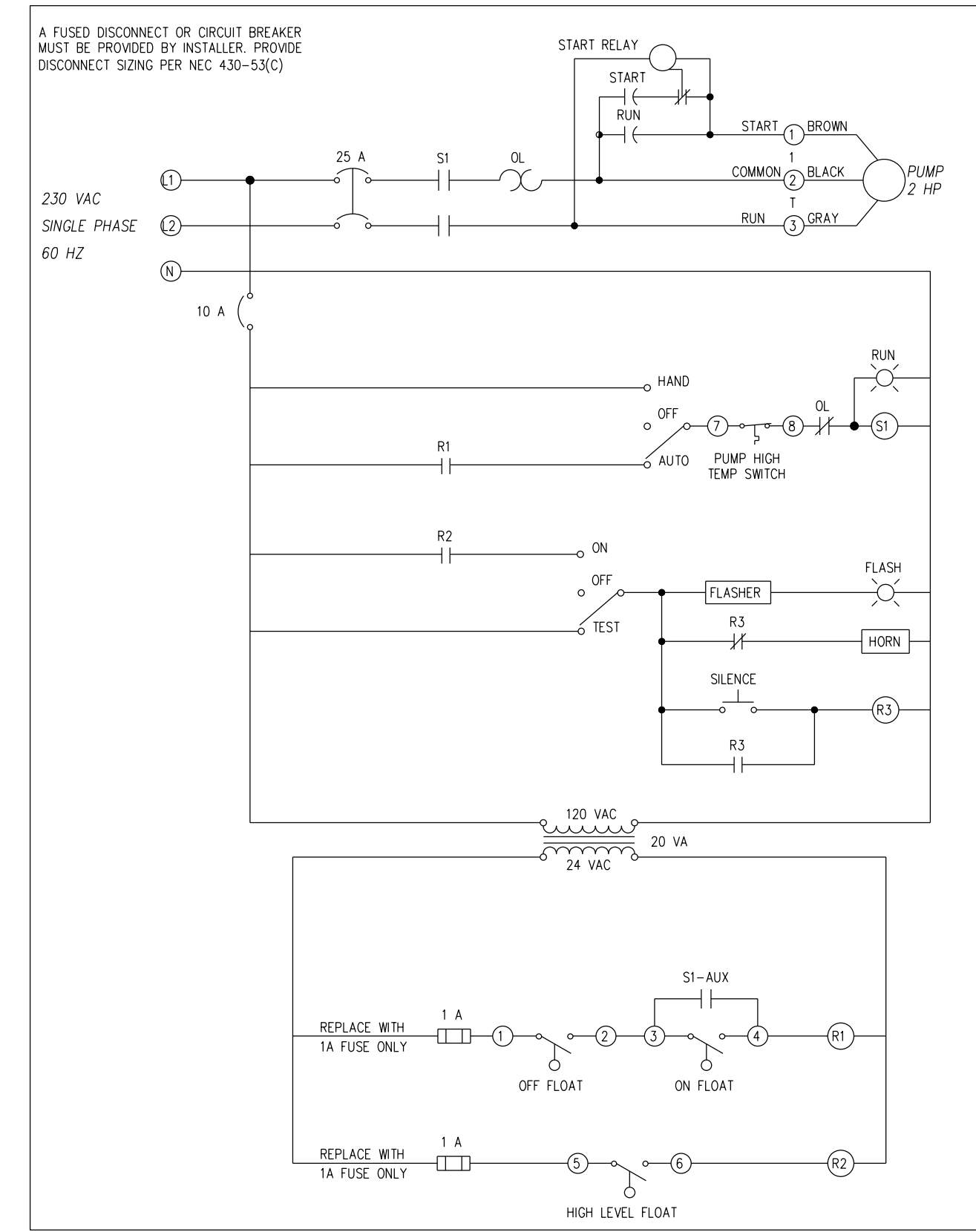
	
DATE: November 2019 A.D.	
SCALE: as shown	
FILENAME: _design - Red Bluff Rd Ext E (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 177 RS15-18.dgn	
DESIGNED BY	Ray Thompkins
CHECKED BY	Jason L. Poston
APPROVED BY	
JASON L. POSTON, PE #26566	
SHEET	
14	
OF 19	



NOT AS-BUILT ELEVATIONS



ALTERNATIVE POST-MOUNTED PANELS



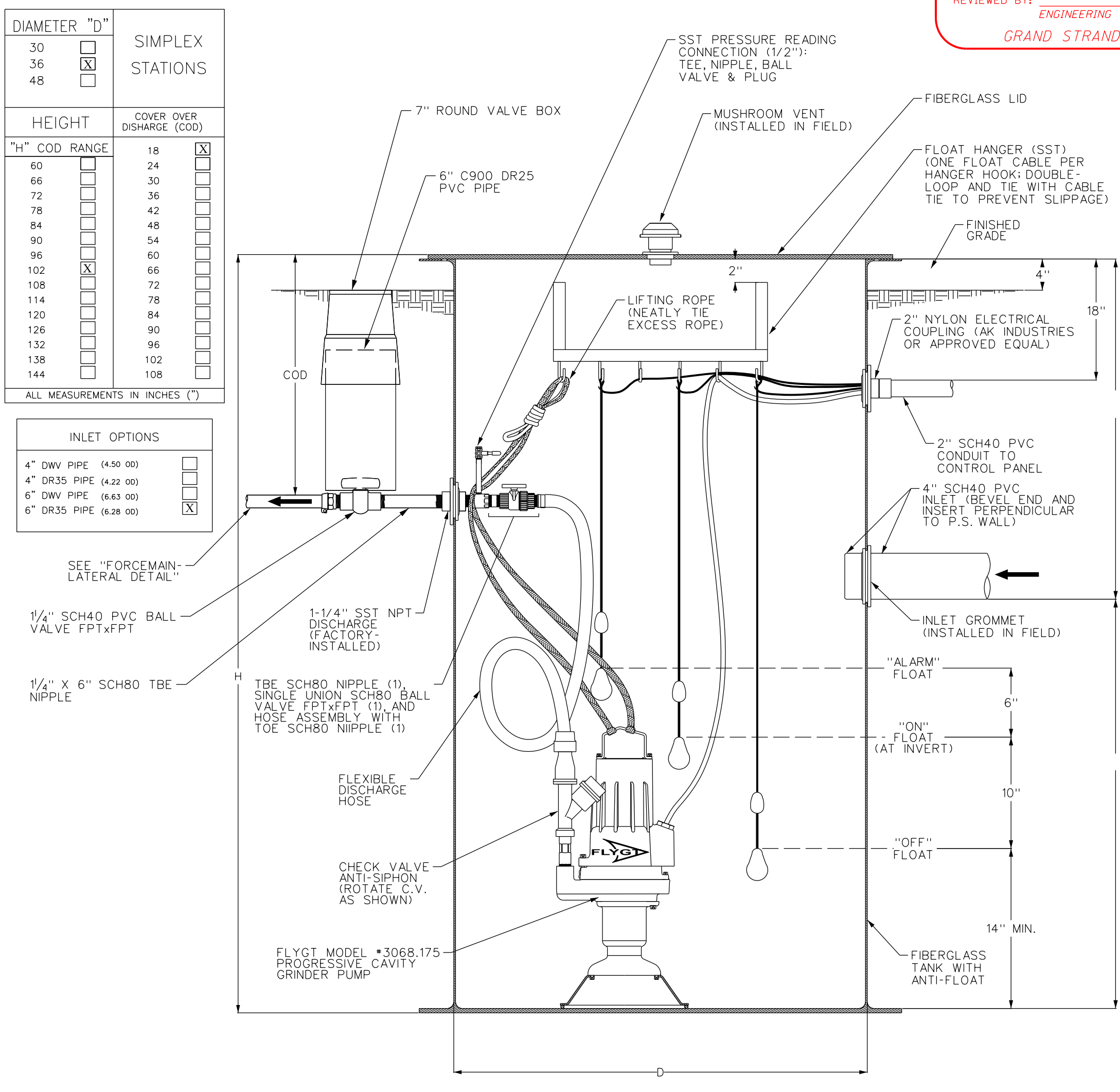
STANDARD CONTROL PANEL FOR FLYGT PUMP TANK

THESE DRAWINGS REFLECT AS-BUILT CONDITIONS

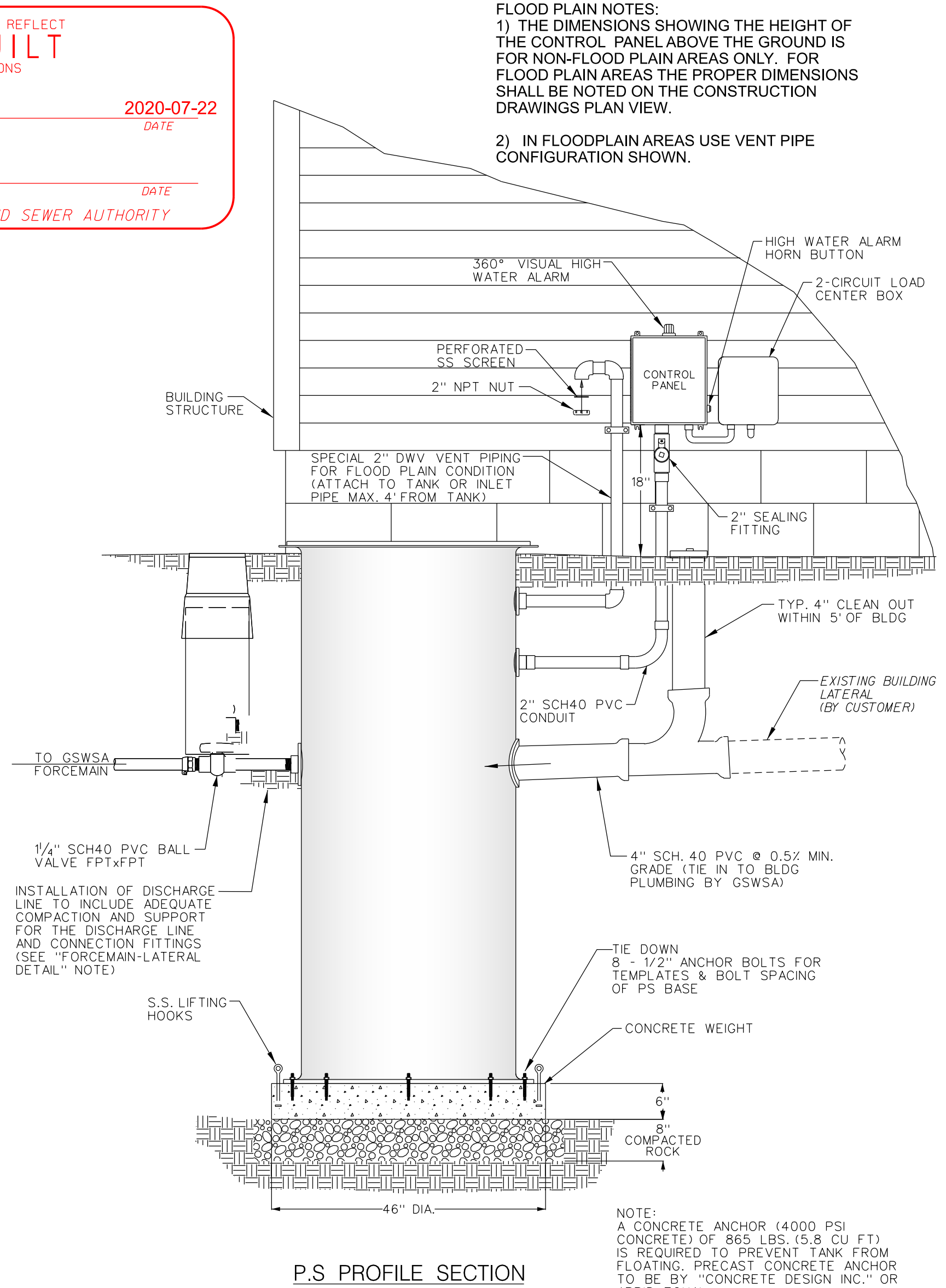
REVIEWED BY: MARK DAWSEY 2020-07-22

REVIEWED BY: ENGINEERING DATE

GRAND STRAND WATER AND SEWER AUTHORITY



FLYGT OR APPROVED EQUAL



ANTI-FLOTATION COLLAR, PANELS PEDESTAL AND VENTILATION DETAIL

MT VERNON BAPTIST CHURCH FLYGT GRINDER PUMP STATION SIMPLEX DESIGN

#23-049-015/19-S

BY DATE 2020-07-22

REVISION

AS-BUILT

GRAND STRAND WATER & SEWER AUTHORITY

166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29526-2368
(843) 353-5000 FAX (843) 353-5001
(843) 353-5000 FAX (843) 353-5001
E-MAIL: GSWSA.COM

Red Bluff Rd (S26-31) Ext. 6

- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1

- Rural Sewer Project (#990-37 / #S15-18) -

(between Red Bluff Crossroads & Daisy)

Seal: No. 26566

DATE: November 2019 A.D.

SCALE: as shown

FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn

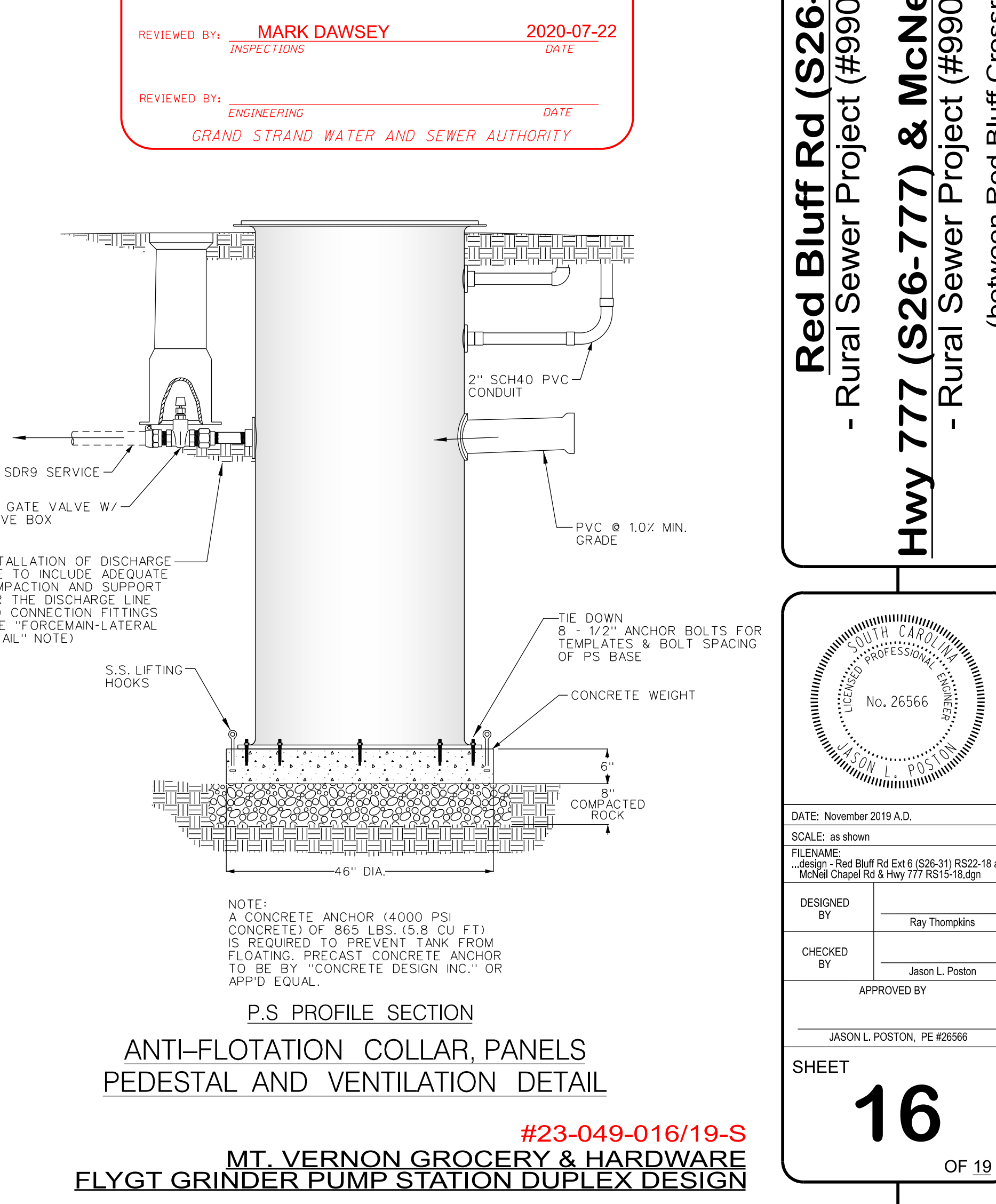
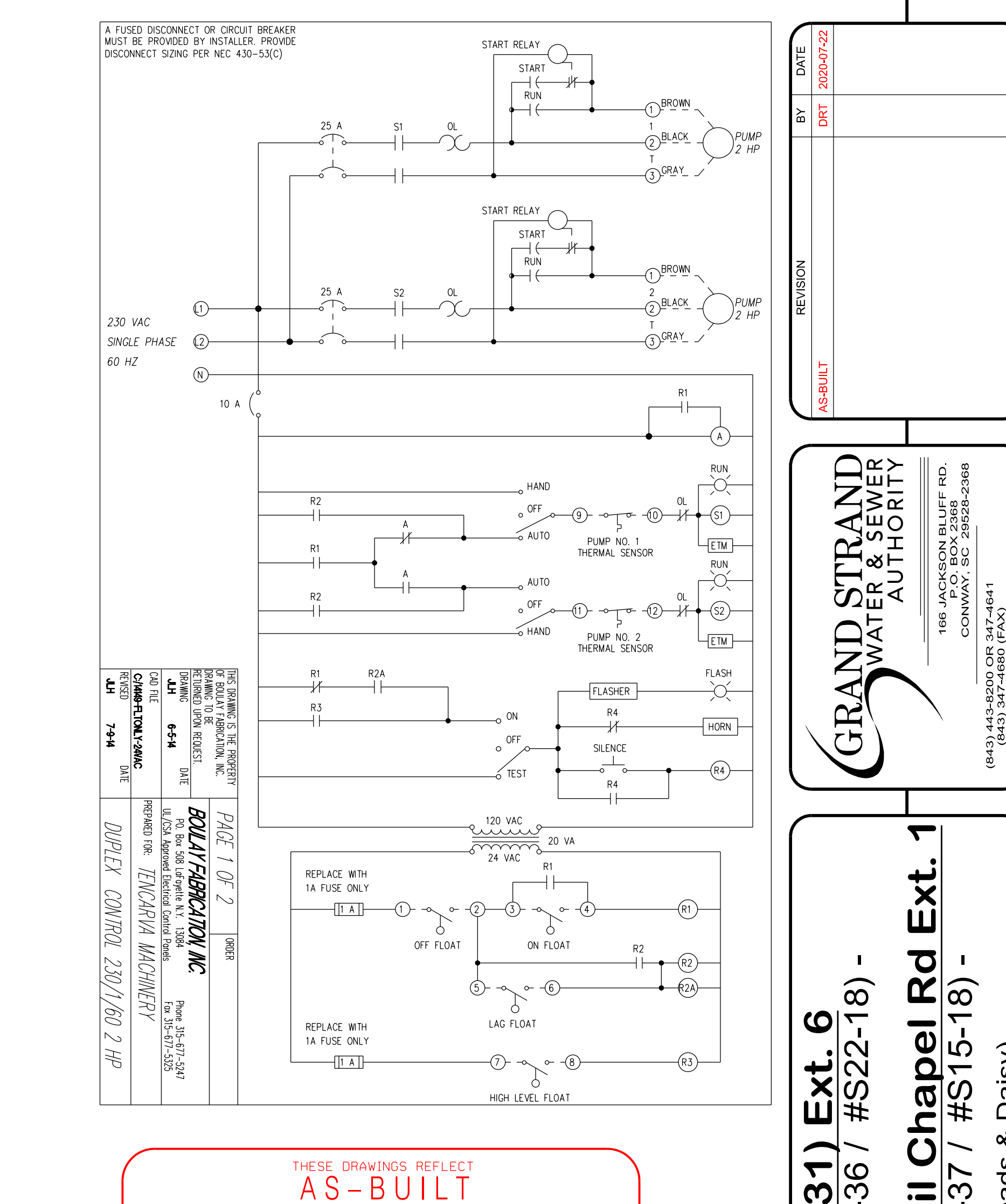
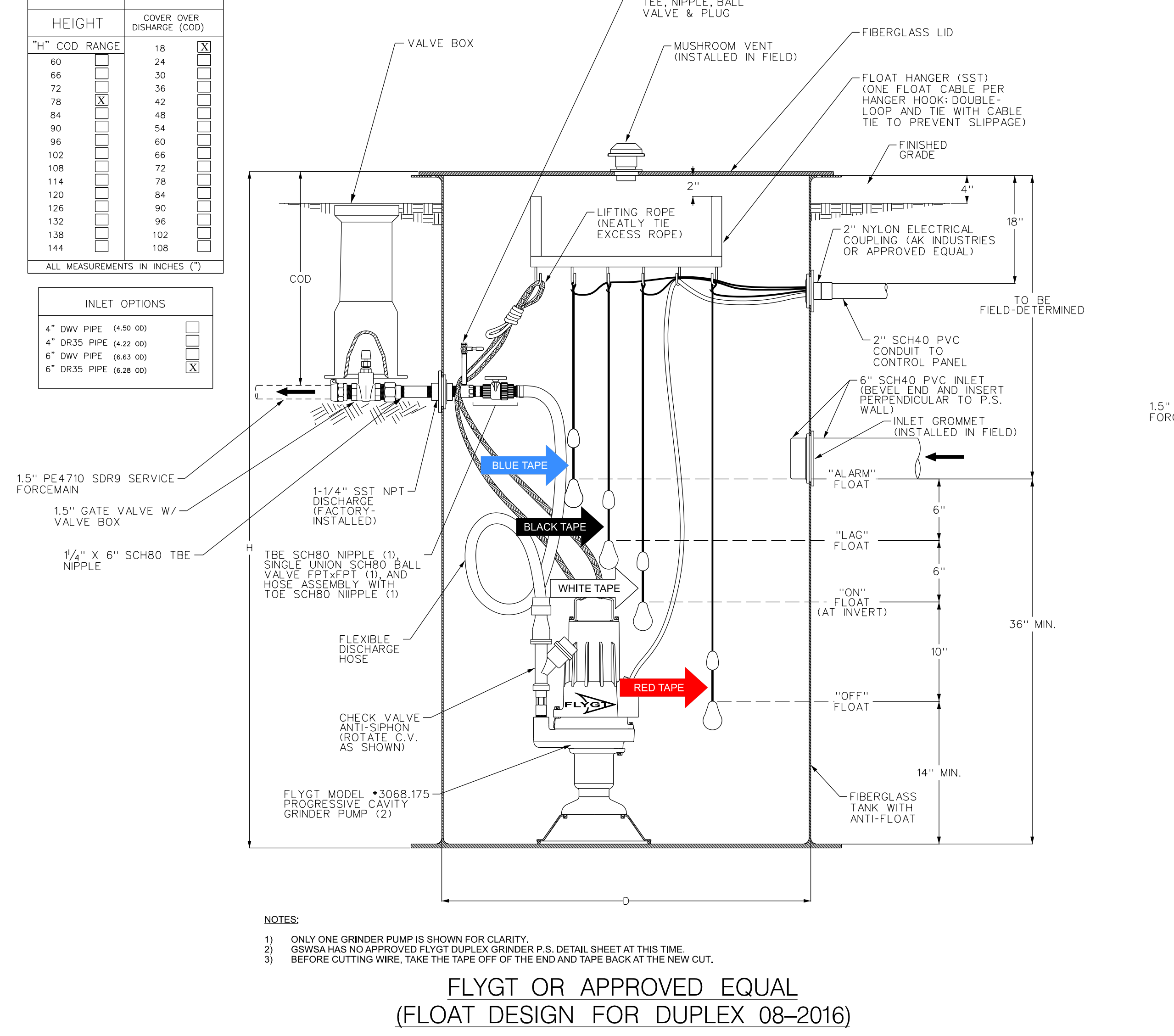
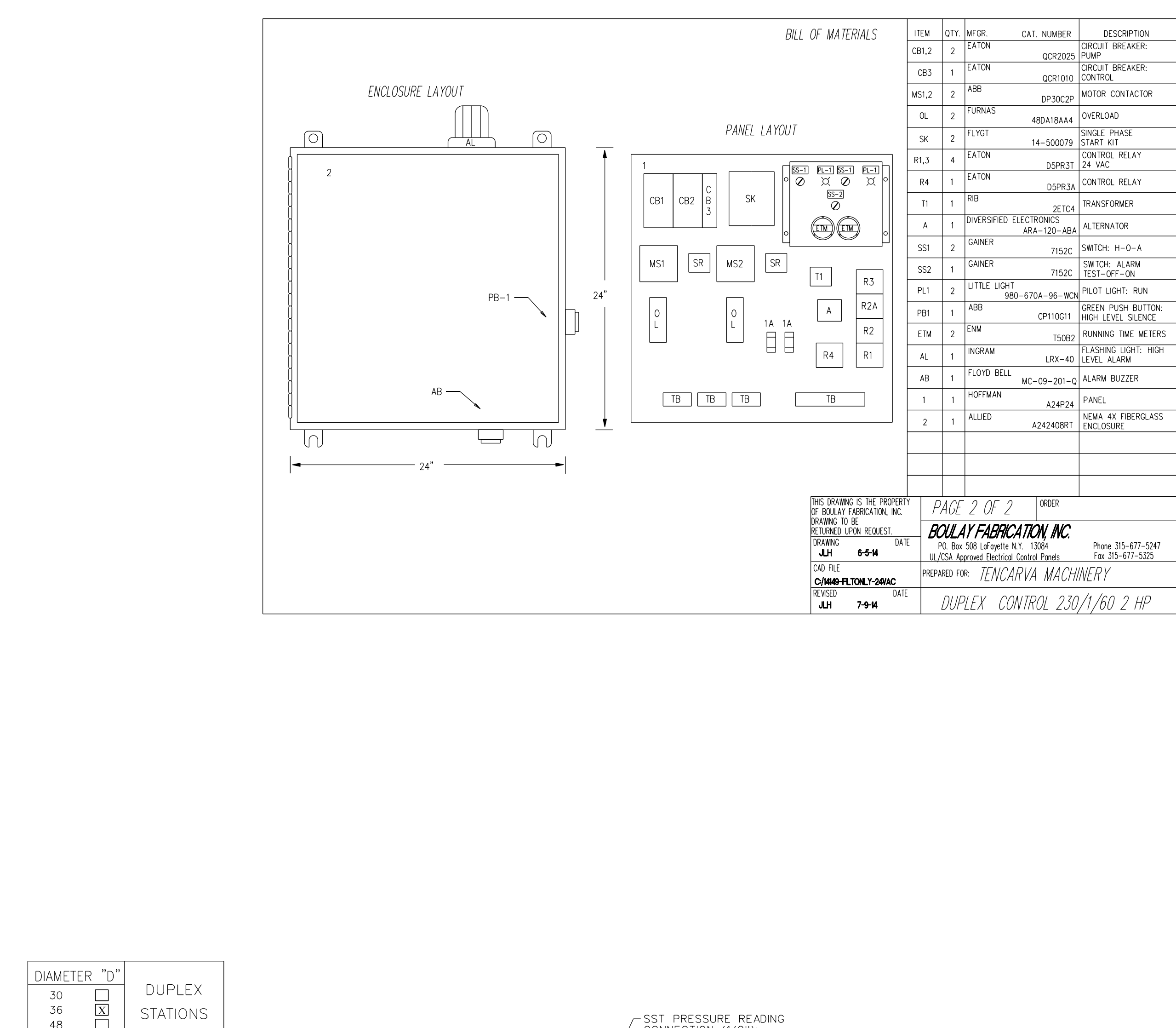
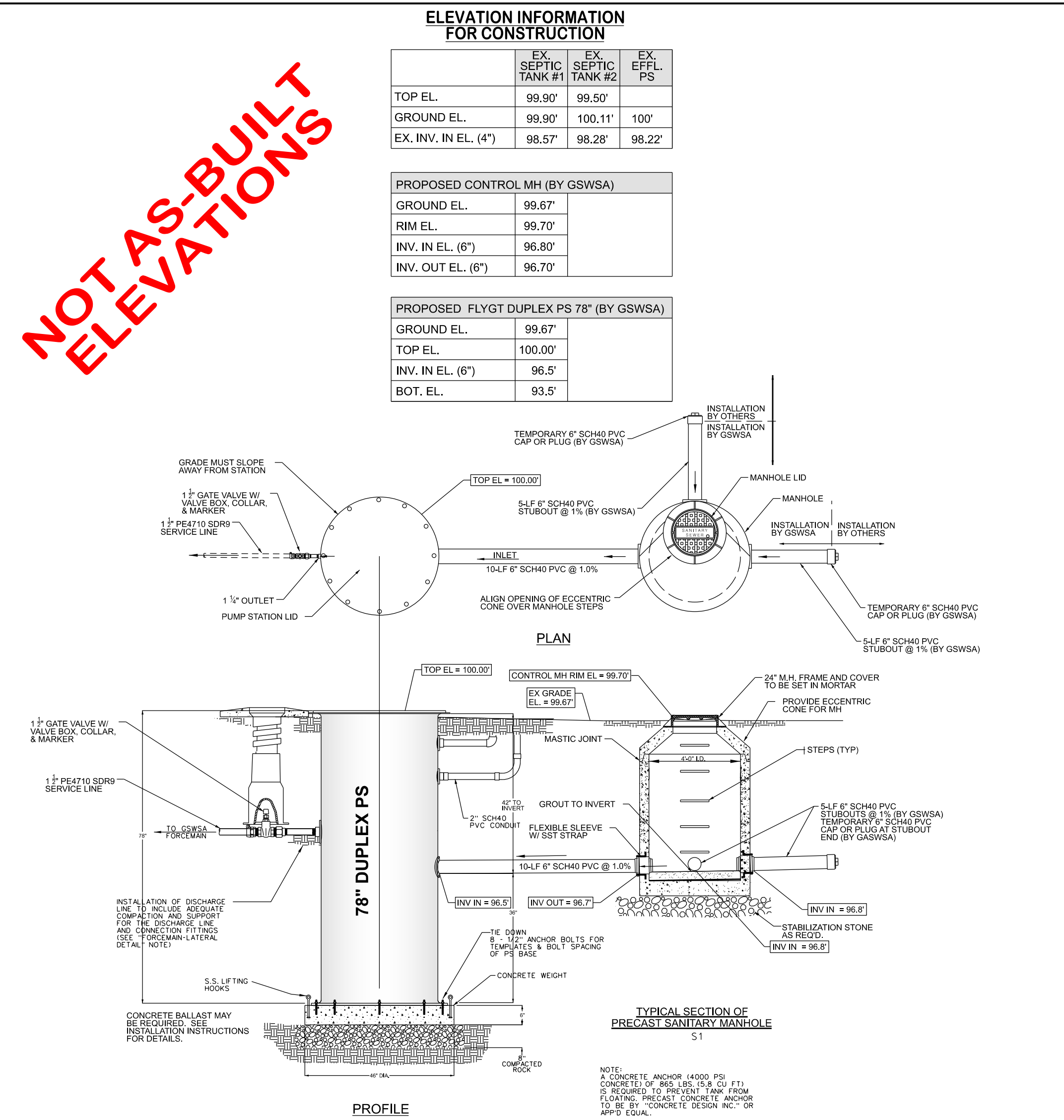
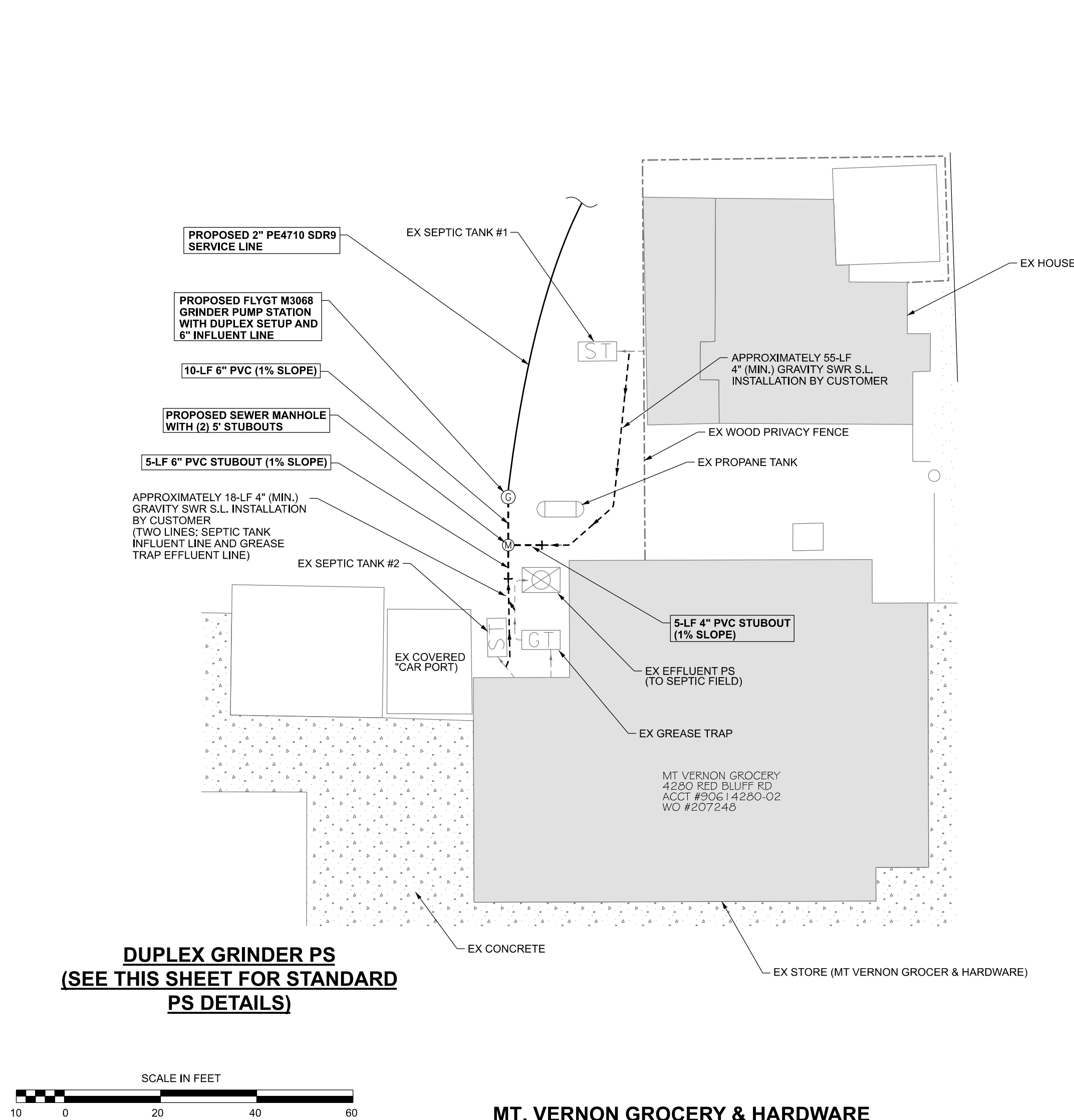
DESIGNED BY: Ray Thompson

CHECKED BY: Jason L. Poston

APPROVED BY:

JASON L. POSTON, PE #25566

SHEET 15 OF 19



BY DATE
DST 2020-07-22

REVISION
AS-BUILT

GRAND STRAND WATER & SEWER AUTHORITY

166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29525-2368
(843) 343-5000 (843) 343-5006 (843) 343-5007
E-MAIL: GSWSA@GSA.COM

Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -

Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)

DATE: November 2019 A.D.
SCALE: as shown
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn
DESIGNED BY: Ray Thompkins
CHECKED BY: Jason L. Poston
APPROVED BY: JASON L. POSTON, PE #25566

NO. 26566
JASON L. POSTON, P.E.
SHEET 16 OF 19

Digitrak LWD

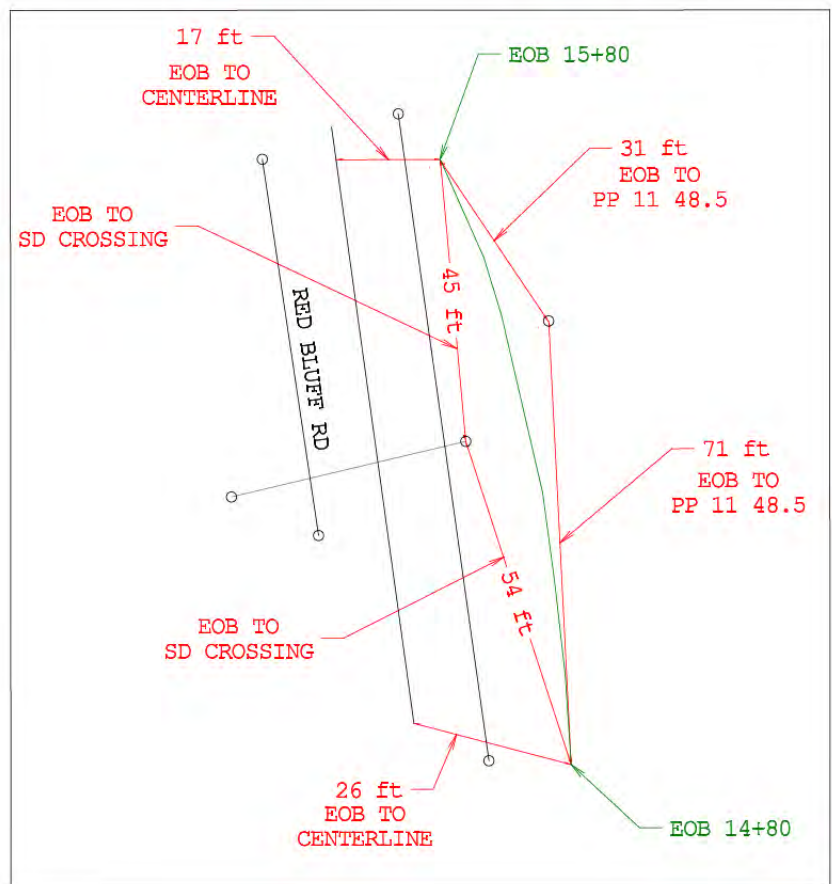
DataLog® Drill Report		
Job Information		
Name: Pipeline Contract 13	Client Information: Grand Strand Water & Sewer Authority	Contractor Information: Lawmore Construction, Inc.
Contact:		Jarred Shelley
Phone: 843-397-4499	Address: 166 Jackson Bluff Road	City: Loris, SC
	City: Loris, SC	State: SC 29527
Receiver/Job Information		
8 data points collected on unit Serial Number: 30118975 in Job 30 on 04/03/2020. Flags and Pins listed below (if applicable).		
All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.		
Reference Elevation is not measured.		
Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.		
Exit Terrain not surveyed.		
First Rod Length is 10.50		
Typical Rod Length is 15.00		
Last Rod Length is 15.00		
Total number of rods 7		
Job Comments		
100' of 6" SDR17 - FM		
STA 14+80 to STA 15+80		
Drill at STA 15+80		

Digitrak LWD



Digitrak LWD

Drill Data Points													
FLIP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - c(override) - f(filled in) - e(e)interpolated	Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	LR Offset	Deviation	Latitude	Longitude	GNSS X Dist.
✓ 0 PO 0.00 0.00 -21.0 0.00 0.00 N/A N/A N/A N/A N/A N/A	1	LL	10.50	10.25	-23.5	-2.28	3.23	0.04	N/A	N/A	N/A	N/A	N/A
✓ 2 LL 25.50 24.86 -23.0 -5.68 6.79 1.10 N/A N/A N/A N/A N/A N/A	3	LL	25.50	24.86	-23.0	-5.68	6.79	1.10	N/A	N/A	N/A	N/A	N/A
✓ 4 LL 55.50 54.54 4.8 -9.53 10.68 1.15 N/A N/A N/A N/A N/A N/A	5	LL	70.50	69.48	12.5	-4.24	9.95	1.72	N/A	N/A	N/A	N/A	N/A
✓ 6 LL 100.50 94.33 16.0 -5.12 6.25 0.16 N/A N/A N/A N/A N/A N/A	7	LL	100.50	94.33	16.0	-5.12	6.25	0.16	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (100-lf) under drainage area at STA 14+80 to 15+80 (sht 4)

Digitrak LWD

DataLog® Drill Report		
Job Information		
Name: Pipeline Contract 13	Client Information: Grand Strand Water & Sewer Authority	Contractor Information: Lawmore Construction, Inc.
Contact:		Jarred Shelley
Phone: 843-397-4499	Address: 166 Jackson Bluff Road	City: Loris, SC
	City: Loris, SC	State: SC 29527
Receiver/Job Information		
12 data points collected on unit Serial Number: 30118975 in Job 31 on 04/06/2020. Flags and Pins listed below (if applicable).		
All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.		
Reference Elevation is not measured.		
Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.		
Exit Terrain not surveyed.		
First Rod Length is 10.50		
Typical Rod Length is 15.00		
Last Rod Length is 15.00		
Total number of rods 11		
Job Comments		
150' of 6" SDR17 - FM		
STA 24+50 to STA 26+00		
Drill at STA 24+50		

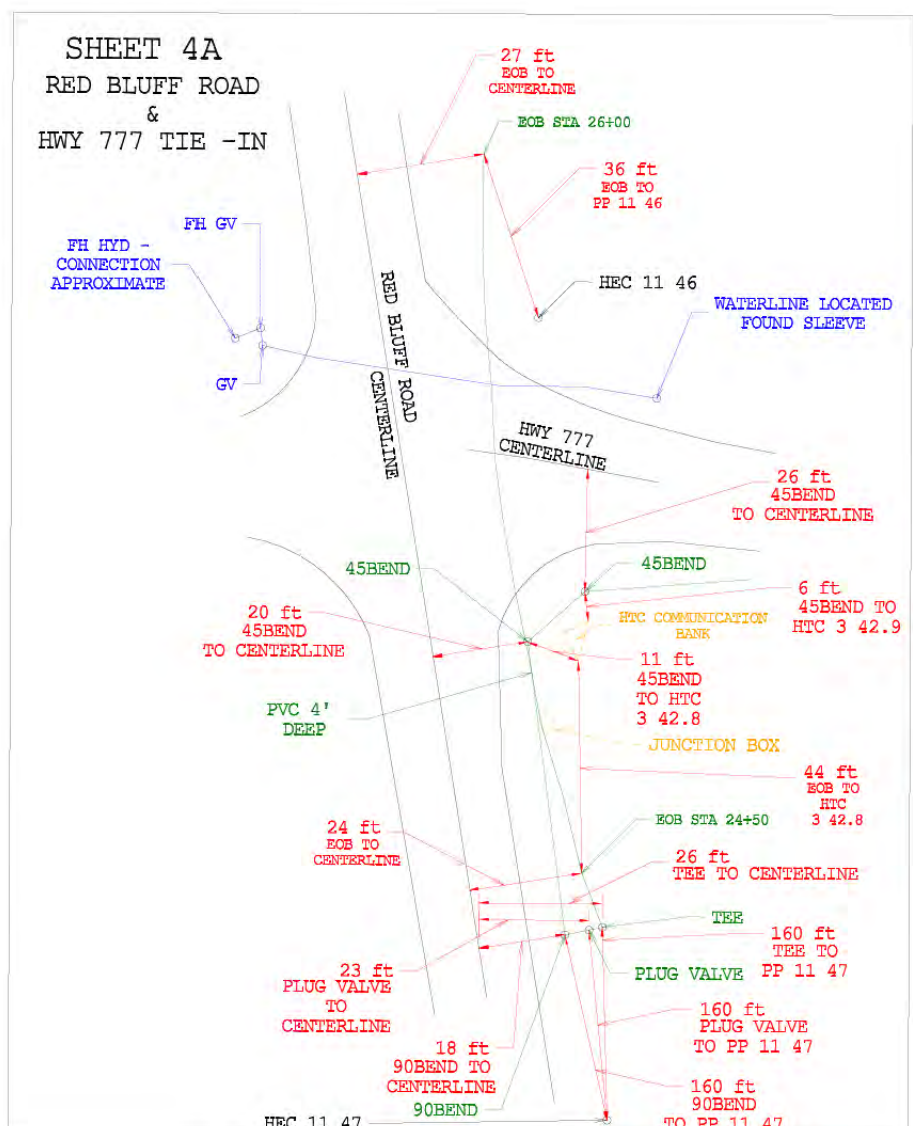
Digitrak LWD



Digitrak LWD

Drill Data Points													
FLIP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - c(override) - f(filled in) - e(e)interpolated	Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	LR Offset	Deviation	Latitude	Longitude	GNSS X Dist.
✓ 0 PO 0.00 0.00 -21.0 0.00 0.00 N/A N/A N/A N/A N/A N/A	1	LL	10.50	10.25	-23.0	-2.28	2.96	0.70	N/A	N/A	N/A	N/A	N/A
✓ 2 LL 25.50 24.87 -23.0 -5.63 0.41 0.41 N/A N/A N/A N/A N/A N/A	3	LL	25.50	24.87	-23.0	-5.63	0.41	0.41	N/A	N/A	N/A	N/A	N/A
✓ 4 LL 55.50 53.65 24.5 -13.38 14.68 1.31 N/A N/A N/A N/A N/A N/A	5	LL	70.50	68.62	-12.0	-16.03	115.13	-0.90	N/A	N/A	N/A	N/A	N/A
✓ 6 LL 100.50 83.59 0.9 -16.00 15.97 -1.28 N/A N/A N/A N/A N/A N/A	7	LL	100.50	83.59	0.9	-16.00	15.97	-1.28	N/A	N/A	N/A	N/A	N/A
✓ 8 LL 115.50 113.55 8.4 -15.26 13.68 -1.68 N/A N/A N/A N/A N/A N/A	9	LL	130.50	128.41	18.5	-13.27	10.64	-2.63	N/A	N/A	N/A	N/A	N/A
✓ 10 LL 145.50 143.11 22.5 -10.26 7.24 -3.02 N/A N/A N/A N/A N/A N/A	11	LL	145.50	143.11	22.5	-10.26	7.24	-3.02	N/A	N/A	N/A	N/A	N/A

*point missed & added



6" Sewer Forcemain Directional Bore (144-LF 10" HDPE casing / 150-LF 6" HDPE carrier) under Hwy 777 (S26-777) at STA 24+50 to 26+00 (sht 4)

Digitrak LWD

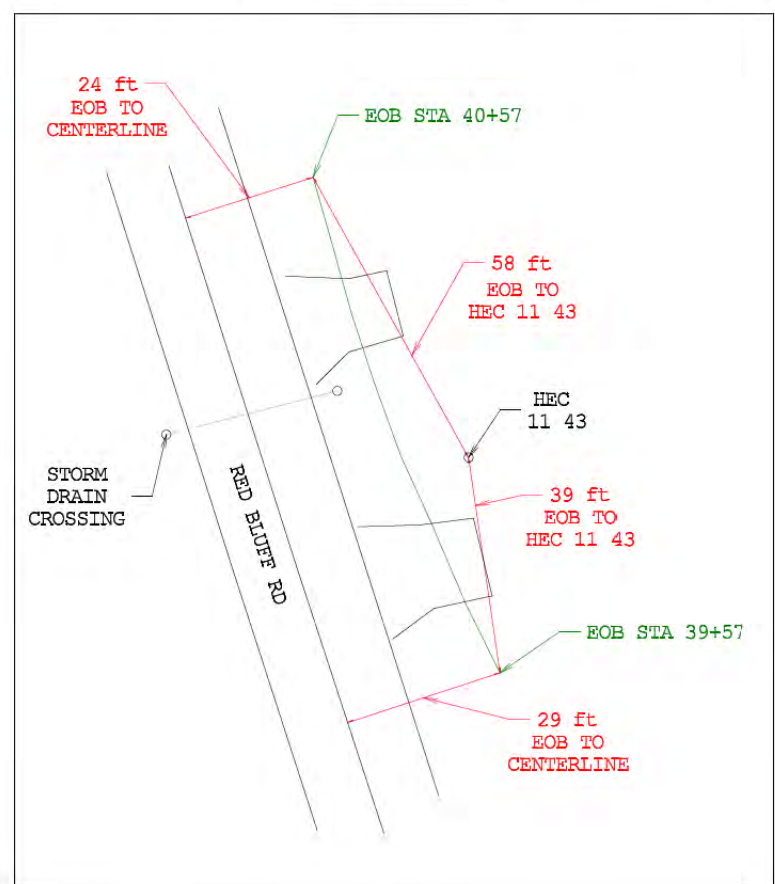
DataLog® Drill Report		
Job Information		
Name: Pipeline Contract 13	Client Information: Grand Strand Water & Sewer Authority	Contractor Information: Lawmore Construction, Inc.
Contact:		Jarred Shelley
Phone: 843-397-4499	Address: 166 Jackson Bluff Road	City: Loris, SC
	City: Loris, SC	State: SC 29527
Receiver/Job Information		
9 data points collected on unit Serial Number: 30118975 in Job 38 on 04/17/2020. Flags and Pins listed below (if applicable).		
All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.		
Reference Elevation is not measured.		
Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.		
Exit Terrain not surveyed.		
First Rod Length is 10.50		
Typical Rod Length is 15.00		
Last Rod Length is 15.00		
Total number of rods 8		
Job Comments		
100' of 6" SDR17 - FM		
STA 39+57 to STA 40+57		
Drill at STA 40+57		

Digitrak LWD



Digitrak LWD

Drill Data Points													
FLIP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - c(override) - f(filled in) - e(e)interpolated	Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	LR Offset	Deviation	Latitude	Longitude	GNSS X Dist.
✓ 0 PO 0.00 0.00 -20.5 0.00 2.74 0.00 N/A N/A N/A N/A N/A N/A	1	LL	10.50	10.26	-23.5	-2.25	2.74	0.49	N/A	N/A	N/A	N/A	N/A
✓ 2 LL 25.50 24.83 -25.0 -5.79 6.31 0.82 N/A N/A N/A N/A N/A N/A	3	LL	25.50	24.83	-25.0	-5.79	6.31	0.82	N/A	N/A	N/A	N/A	N/A
✓ 4 LL 55.50 54.58 -12.0 -11.45 6.63 -2.81 N/A N/A N/A N/A N/A N/A	5	LL	70.50	69.26	2.1	-12.19	11.07	-1.12	N/A	N/A	N/A	N/A	N/A
✓ 6 LL 85.50 84.22 -12.5 -11.10 6.53 -1.57 N/A N/A N/A N/A N/A N/A	7	LL	100.50	98.66	18.0	-6.84	6.88	-2.16	N/A	N/A	N/A	N/A	N/A
✓ 8 LL 115.50 113.80 19.0 -6.11 3.85 -2.22 N/A N/A N/A N/A N/A N/A	9	LL	115.50	113.80	19.0	-6.11	3.85	-2.22	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (100-lf) under outfall and concrete aprons (2) at STA 39+57 to 40+57 (sht 5)

AS-BUILT MEASUREMENTS INDICATED BY

35'

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawmore Construction

Directional bores installed by:
Lawmore Construction

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

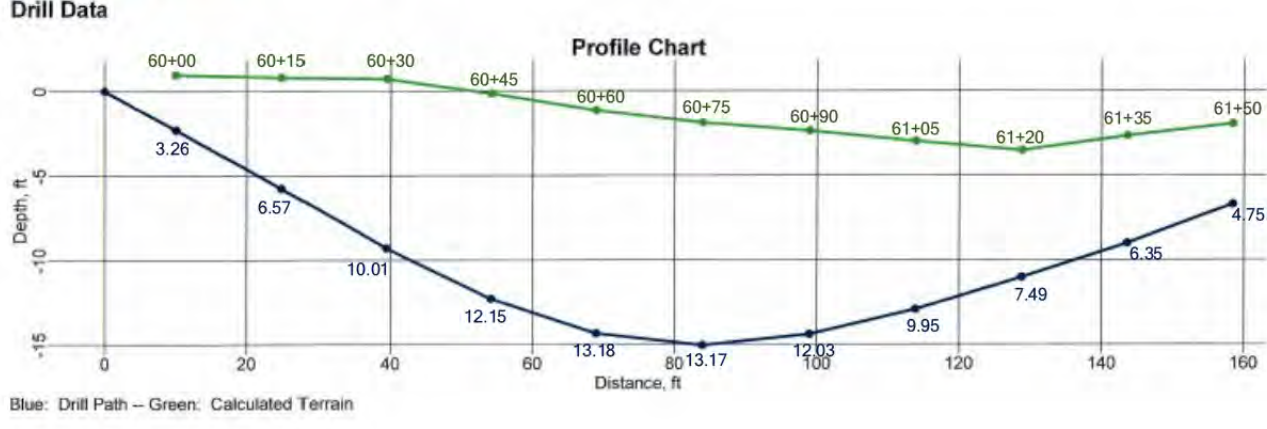
REVIEWED BY: MARK DAWSEY 2020-07-22
INSPECTIONS DATE

REVIEWED BY: ENGINEERING DATE
GRAND STRAND WATER AND SEWER AUTHORITY

Digitrak LWD

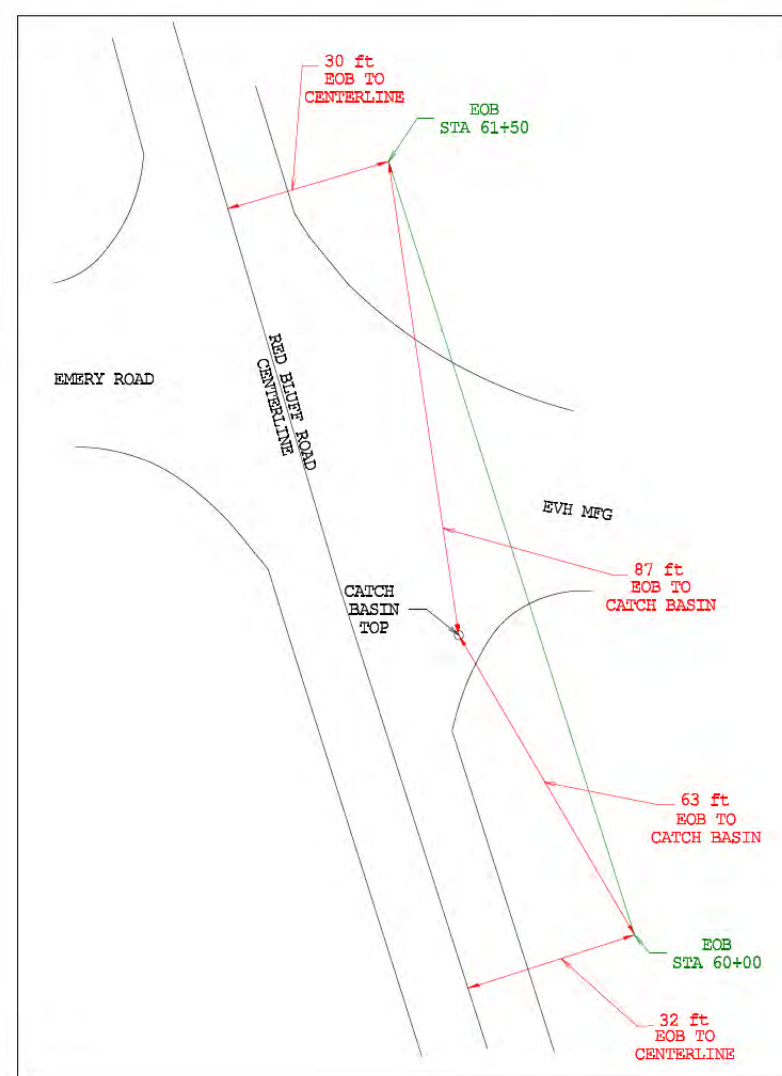
DataLog® Drill Report		
Job Information		
Name: Pipeline Contract 13	Client Information: Grand Strand Water & Sewer Authority	Contractor Information: Lawmore Construction, Inc.
Contact:		Jarred Shelley
Phone: 843-397-4499	Address: 166 Jackson Bluff Road	City: Loris, SC
	City: Loris, SC	State: SC 29527
Receiver/Job Information		
12 data points collected on unit Serial Number: 30118975 in Job 39 on 04/23/2020. Flags and Pins listed below (if applicable).		
All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.		
Reference Elevation is not measured.		
Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.		
Exit Terrain not surveyed.		
First Rod Length is 10.50		
Typical Rod Length is 15.00		
Last Rod Length is 15.00		
Total number of rods 11		
Job Comments		
150' of 6" SDR17 - FM		
STA 60+00 to STA 61+50		
Drill at STA 60+00		

Digitrak LWD



Digitrak LWD

Drill Data Points													
FLIP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - c(override) - f(filled in) - e(e)interpolated	Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	LR Offset	Deviation	Latitude	Longitude	GNSS X Dist.
✓ 0 PO 0.00 0.00 -22.0 0.00 3.26 0.00 N/A N/A N/A N/A N/A N/A	1	LL	10.50	10.24	-23.0	-2.31	3.26	0.06	N/A	N/A	N/A	N/A	N/A
✓ 2 LL 25.50 24.84 -24.5 -5.77 6.57 0.80 N/A N/A N/A N/A N/A N/A	3	LL	25.50	24.84	-24.5	-5.77	6.57	0.80	N/A	N/A	N/A	N/A	N/A
✓ 4 LL 55.50 54.11 -17.0 -12.32 12.15 -0.17 N/A N/A N/A N/A N/A N/A	5	LL	70.50	68.07	-10.5	-14.35	13.18	-1.17	N/A	N/A	N/A	N/A	N/A
✓ 6 LL 85.50 83.95 0.9 -15.07 13.17 -1.89 N/A N/A N/A N/A N/A N/A	7	LL	100.50	98.01	18.0	-6.84	6.88	-2.16	N/A	N/A	N/A	N/A	N/A
✓ 8 LL 115.50 113.87 12.0 -13.94 9.95 -2.99 N/A N/A N/A N/A N/A N/A	9	LL	130.50	128.75	15.5	-11.94	7.49	-3.55	N/A	N/A	N/A	N/A	N/A
✓ 10 LL 145.50 143.81 13.5 -9.03 6.35 -2.68 N/A N/A N/A N/A N/A N/A	11	LL	145.50	143.81	13.5	-9.03	6.35	-2.68	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (150-lf) under EVH MFG Road at STA 60+00 to 61+50 (sht 7) #23-049-017/19-S Bore As-builts

REVISION	DATE
AS-BUILT	2020-07-22

GRAND STRAND WATER & SEWER AUTHORITY
166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29527-2368
(843) 397-4499 FAX (843) 397-4441
(843) 397-4499
E-MAIL: GSWSA@GSA.COM

Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -
Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)



DATE: November 2019 A.D.
SCALE: NTS
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn
DESIGNED BY: Ray Thompkins
CHECKED BY: Jason L. Poston
APPROVED BY: JASON L. POSTON, PE #26566
SHEET 17 OF 19

Digitrak LWD

Job Location: Pipeline Contract 13
Name: Grand Strand Water & Sewer Authority
Contact: Jarred Shelley
Phone: 843-397-4499
Address: Red Bluff Road Hwy 777
City: Loris, SC 29526

Client Information: 166 Jackson Bluff Road
Contractor Information: Lawmire Construction, Inc.
Jarred Shelley
843-397-4499
6240 Cypress Swamp Rd.
Conway, SC, 29527

Receiver/Job Information
10 data points collected on unit Serial Number: 30118975 in Job 40 on 04/27/2020. Flags and Pins listed below (if applicable).
All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.
Reference Elevation is not measured.
Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.
Exit Terrain not surveyed.
First Rod Length is 10.50
Typical Rod Length is 15.00
Last Rod Length is 15.00
Total number of rods 9
Job Comments
120' 6" SDR17 FM
STA 72+12 to 72+12
0 = STA 72+12

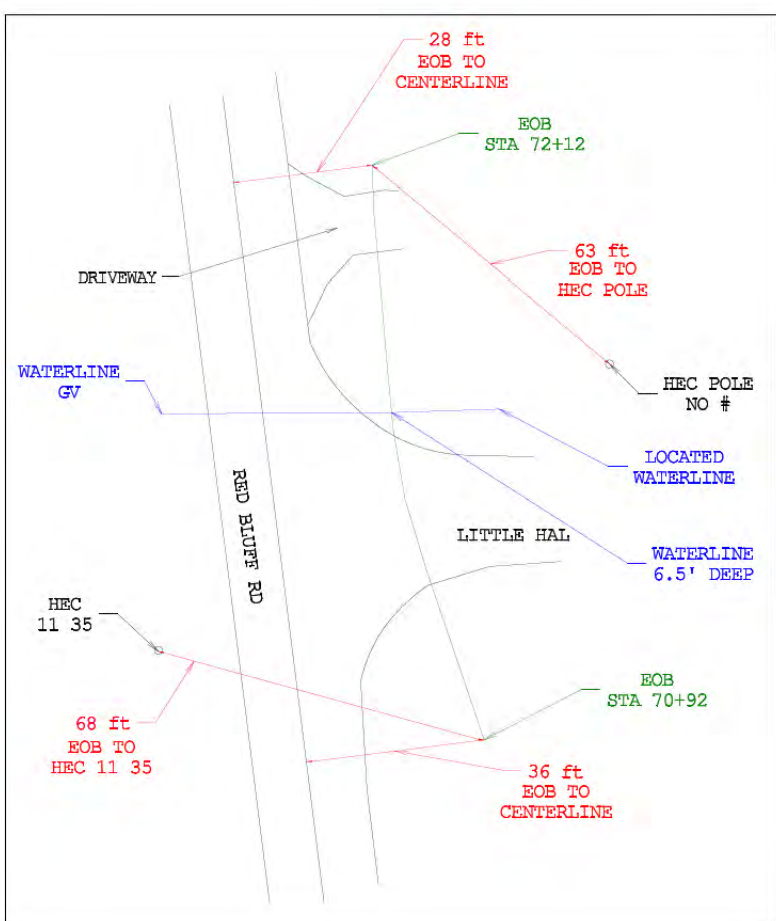
Digitrak LWD



Digitrak LWD

Drill Data Points

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
1	PO	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
2	LL	10.50	10.26	-23.5	-2.23	3.16	0.13	N/A	N/A	N/A	N/A	N/A
3	LL	25.50	24.80	-27.0	-5.91	6.80	0.70	N/A	N/A	N/A	N/A	N/A
4	LL	40.50	39.85	-29.5	-9.00	11.11	-0.33	N/A	N/A	N/A	N/A	N/A
5	LL	55.50	54.27	-11.5	-11.45	11.11	-0.33	N/A	N/A	N/A	N/A	N/A
6	LL	70.50	69.25	2.1	-12.15	10.90	-1.25	N/A	N/A	N/A	N/A	N/A
7	LL	85.50	84.21	11.5	-11.14	9.15	-1.98	N/A	N/A	N/A	N/A	N/A
8	LL	100.50	98.98	14.5	-5.35	3.34	-2.00	N/A	N/A	N/A	N/A	N/A
9	LL	115.50	113.98	13.0	-7.39	4.83	-2.56	N/A	N/A	N/A	N/A	N/A
10	LL	130.50	128.84	14.5	-5.35	3.34	-2.00	N/A	N/A	N/A	N/A	N/A

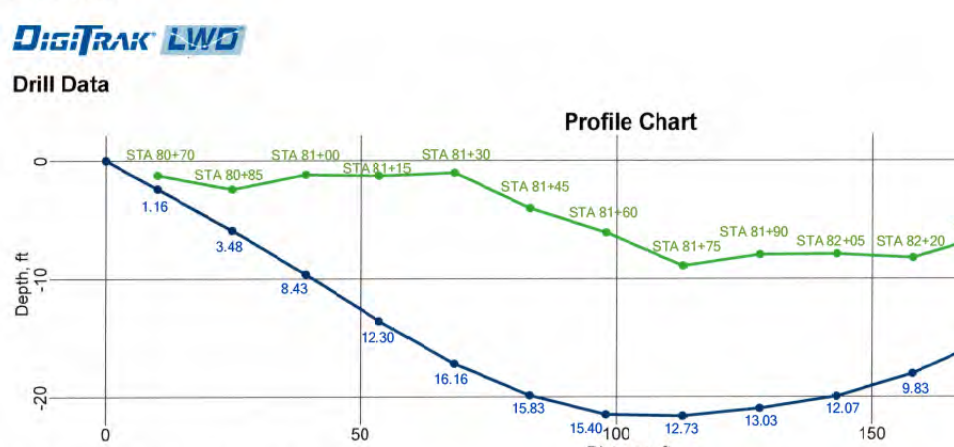


6" Sewer Forcemain Directional Bore (120-lf) under Little Hal Ln at STA 70+92 to 72+12 (sht 7)

Digitrak LWD

Job Information
Job Location: Pipeline Contract 13
Name: Grand Strand Water & Sewer Authority
Contact: Jarred Shelley
Phone: 843-397-4499
Address: Red Bluff Road Hwy 777
City: Loris, SC 29526

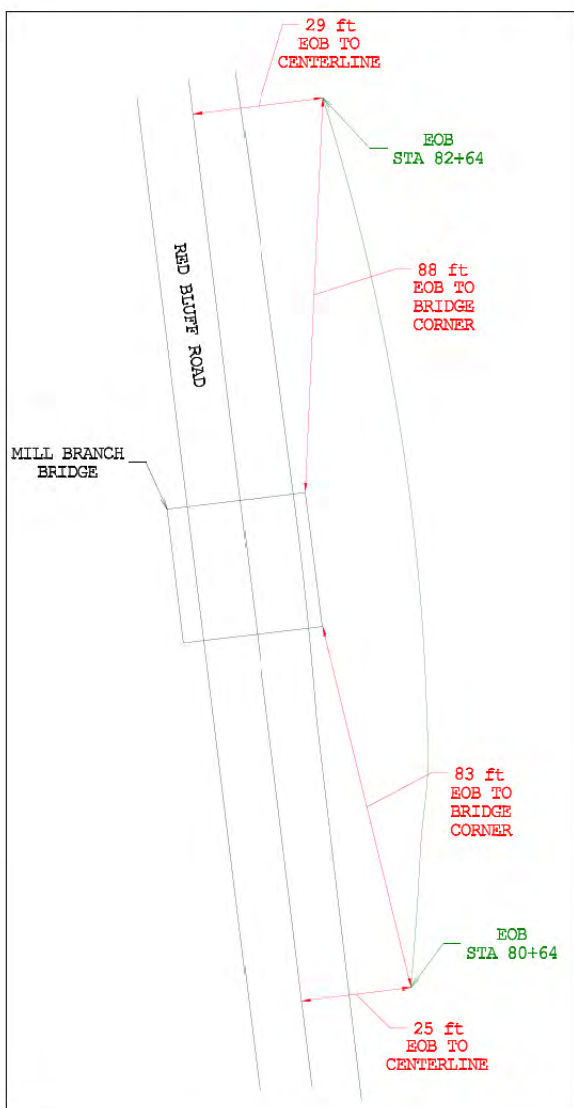
Client Information: 166 Jackson Bluff Road
Contractor Information: Lawmire Construction, Inc.
Jarred Shelley
843-397-4499
6240 Cypress Swamp Rd.
Conway, SC, 29527



Digitrak LWD

Drill Data Points

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
1	PO	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
2	LL	10.50	10.22	-23.5	-2.40	1.16	-1.25	N/A	N/A	N/A	N/A	N/A
3	LL	25.50	24.61	-24.5	-5.91	3.48	-2.43	N/A	N/A	N/A	N/A	N/A
4	LL	40.50	39.34	-26.5	-9.81	8.43	-1.18	N/A	N/A	N/A	N/A	N/A
5	LL	55.50	53.80	-28.5	-13.59	12.30	-1.30	N/A	N/A	N/A	N/A	N/A
6	LL	70.50	68.36	-21.0	-17.20	16.16	-1.04	N/A	N/A	N/A	N/A	N/A
7	LL	85.50	83.12	-15.5	-19.89	19.33	-4.06	N/A	N/A	N/A	N/A	N/A
8	LL	100.50	98.08	-8.0	-24.96	24.96	-8.00	N/A	N/A	N/A	N/A	N/A
9	LL	115.50	113.03	4.4	-21.64	12.73	-8.91	N/A	N/A	N/A	N/A	N/A
10	LL	130.50	128.02	4.4	-20.98	13.03	-7.85	N/A	N/A	N/A	N/A	N/A
11	LL	145.50	142.99	9.0	-19.68	12.07	-7.51	N/A	N/A	N/A	N/A	N/A
12	LL	160.50	157.86	17.0	-16.05	8.83	-8.22	N/A	N/A	N/A	N/A	N/A
13	LL	175.50	172.59	21.5	-15.22	8.86	-8.37	N/A	N/A	N/A	N/A	N/A
14	LL	190.50	187.31	17.5	-12.35	7.42	-4.53	N/A	N/A	N/A	N/A	N/A
15	LL	205.50	202.18	9.5	-10.35	4.73	-5.62	N/A	N/A	N/A	N/A	N/A
16	LL	220.50	217.14	4.6	-9.98	4.86	-5.25	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (200-lf) at Mill Branch at STA 80+64 to 82+64 (sht 8)

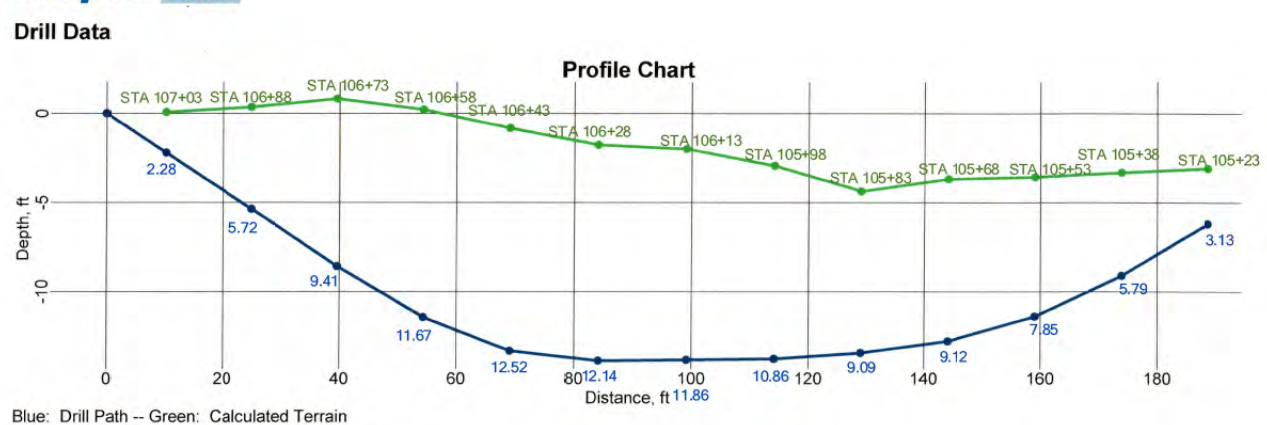
Digitrak LWD

Job Information
Job Location: Pipeline Contract 13
Name: Grand Strand Water & Sewer Authority
Contact: Jarred Shelley
Phone: 843-397-4499
Address: Red Bluff Road Hwy 777
City: Loris, SC 29526

Client Information: 166 Jackson Bluff Road
Contractor Information: Lawmire Construction, Inc.
Jarred Shelley
843-397-4499
6240 Cypress Swamp Rd.
Conway, SC, 29527

Receiver/Job Information
14 data points collected on unit Serial Number: 30118975 in Job 40 on 04/29/2020. Flags and Pins listed below (if applicable).
All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.
Reference Elevation is not measured.
Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.
Exit Terrain not surveyed.
First Rod Length is 10.50
Typical Rod Length is 15.00
Last Rod Length is 15.00
Total number of rods 13
Job Comments
170' 6" SDR17 FM
STA 105+23 to 106+93
0 = STA 106+93

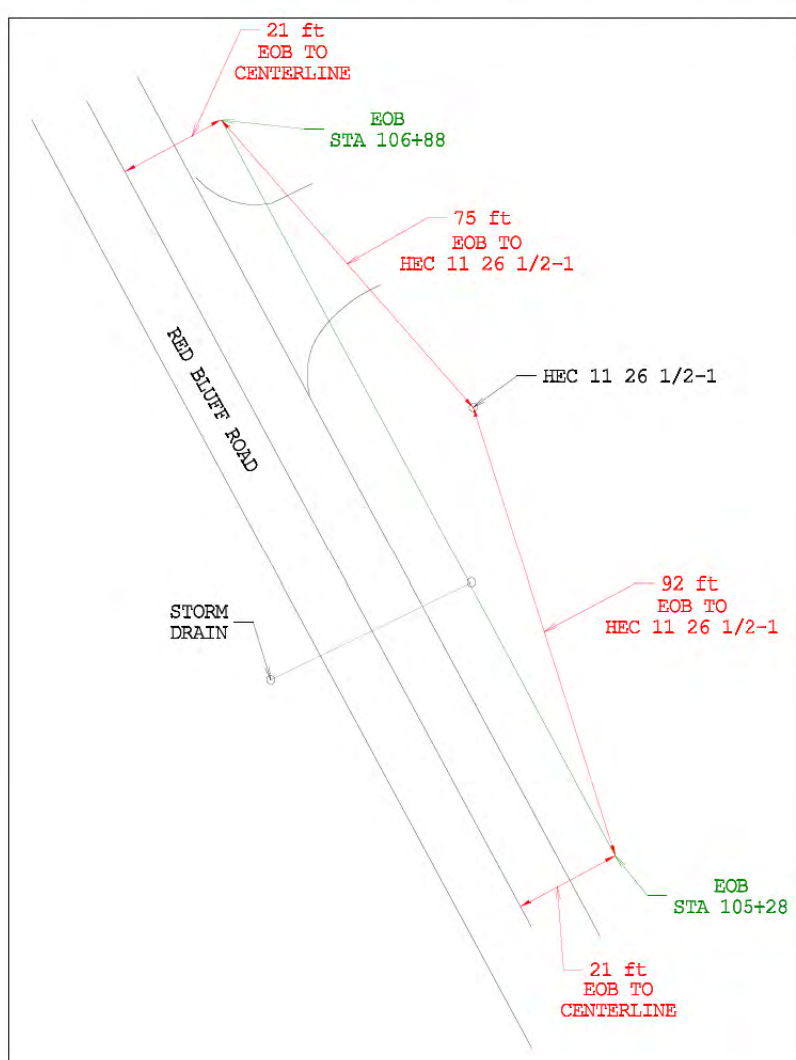
Digitrak LWD



Digitrak LWD

Drill Data Points

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
1	PO	0.00	0.00	-21.0	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
2	LL	10.50	10.27	-22.0	-2.21	2.28	0.07	N/A	N/A	N/A	N/A	N/A
3	LL	25.50	24.93	-21.0	-5.36	5.72	0.36	N/A	N/A	N/A	N/A	N/A
4	LL	40.50	39.58	-23.0	-9.69	11.67	0.21	N/A	N/A	N/A	N/A	N/A
5	LL	55.50	54.30	-16.0	-11.46	11.67	0.21	N/A	N/A	N/A	N/A	N/A
6	LL	70.50	69.16	-9.5	-13.35	12.52	-0.13	N/A	N/A	N/A	N/A	N/A
7	LL	85.50	84.17	2.0	-13.91	12.14	-1.77	N/A	N/A	N/A	N/A	N/A
8	LL	100.50	99.17	1.0	-13.91	11.96	-2.04	N/A	N/A	N/A	N/A	N/A
9	LL	115.50	114.17	2.2	-13.80	10.86	-2.94	N/A	N/A	N/A	N/A	N/A
10	LL	130.50	129.17	2.2	-13.47	9.89	-4.38	N/A	N/A	N/A	N/A	N/A
11	LL	145.50	144.15	6.6	-12.81	9.12	-3.69	N/A	N/A	N/A	N/A	N/A
12	LL	160.50	159.86	12.0	-11.42	8.86	-3.82	N/A	N/A	N/A	N/A	N/A
13	LL	175.50	173.91	19.0	-9.12	5.79	-3.32	N/A	N/A	N/A	N/A	N/A
14	LL	190.50	188.63	20.5	-6.21	3.13	-3.09	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (160-lf) under outfall and concrete apron at STA 105+28 to 106+88 (sht 10)

AS-BUILT MEASUREMENTS INDICATED BY

35'

Permit Information:
SCDOT Permit #19-00508
County Permit #2019.0420
SCDHEC General Sewer Permit # SCG580000

Sewer installed by:
Lawmire Construction

Directional bores installed by:
Lawmire Construction

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: MARK DAWSEY 2020-07-22
INSPECTIONS DATE

REVIEWED BY: ENGINEERING DATE
GRAND STRAND WATER AND SEWER AUTHORITY

Digitrak LWD

Job Information
Job Location: Pipeline Contract 13
Name: Grand Strand Water & Sewer Authority
Contact: Jarred Shelley
Phone: 843-397-4499
Address: Red Bluff Road Hwy 777
City: Loris, SC 29526

Client Information: 166 Jackson Bluff Road
Contractor Information: Lawmire Construction, Inc.
Jarred Shelley
843-397-4499
6240 Cypress Swamp Rd.
Conway, SC, 29527

Receiver/Job Information
6 data points collected on unit Serial Number: 30118975 in Job 42 on 05/04/2020. Flags and Pins listed below (if applicable).
All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.
Reference Elevation is not measured.
Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.
Exit Terrain not surveyed.
First Rod Length is 10.50
Typical Rod Length is 15.00
Last Rod Length is 15.00
Total number of rods 5
Job Comments
50' 6" SDR17 FM
STA 109+83 to 110+33
0 = STA 110+33

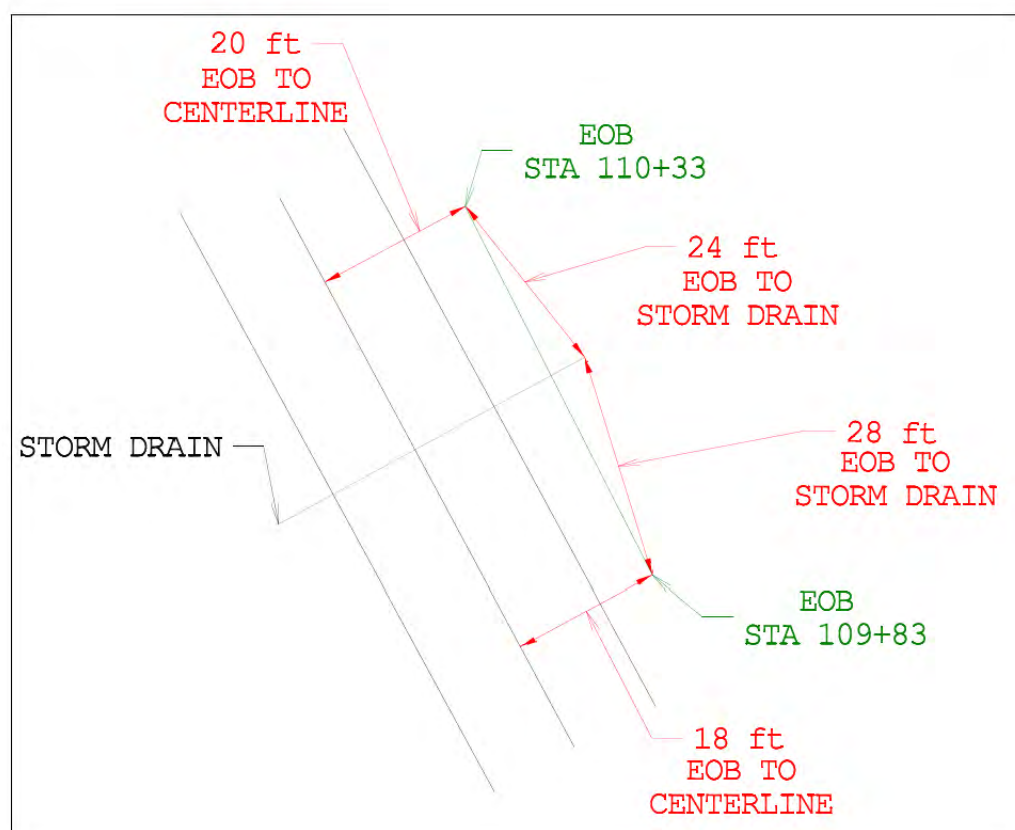
Digitrak LWD



Digitrak LWD

Drill Data Points

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
1	PO	0.00	0.00	-20.5	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
2	LL	10.50	10.27	-22.5	-2.20	2.71	0.50	N/A	N/A	N/A	N/A	N/A
3	LL	25.50	24.99	-16.5	-5.07	5.33	0.26	N/A	N/A	N/A	N/A	N/A
4	LL	40.50	39.60	-9.0	-9.46	10.88	-2.81	N/A	N/A	N/A	N/A	N/A
5	LL	55.50	54.91	10.5	-5.91	5.14	-0.78	N/A	N/A	N/A	N/A	N/A
6	LL	70.50	69.63	10.5	-4.25	5.13	0.79	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (50-lf) under cross drain at STA 109+83 to 110+33 (sht 10) #23-049-018/19-S Bore As-builts

REVISION	DATE
AS-BUILT	2020-07-22

GRAND STRAND WATER & SEWER AUTHORITY

166 JACKSON BLUFF RD.
P.O. BOX 2368
CONWAY, SC 29526-2368
(843) 397-4499
(843) 397-4499
E-MAIL: GSWSA.COM

Red Bluff Rd (S26-31) Ext. 6
- Rural Sewer Project (#990-36 / #S22-18) -
Hwy 777 (S26-777) & McNeil Chapel Rd Ext. 1
- Rural Sewer Project (#990-37 / #S15-18) -
(between Red Bluff Crossroads & Daisy)

DATE: November 2019 A.D.
SCALE: NTS
FILENAME: Design - Red Bluff Rd Ext 6 (S26-31) RS22-18 and McNeil Chapel Rd & Hwy 777 RS15-18.dgn
DESIGNED BY: Ray Thompkins
CHECKED BY: Jason L. Poston
APPROVED BY: Jason L. Poston, PE #26566
SHEET 18 OF 19

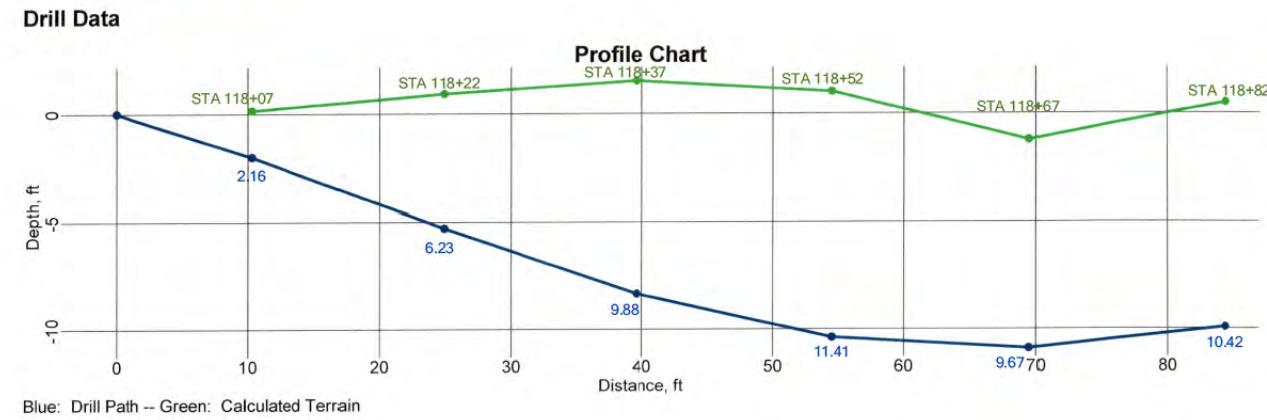
DataLog® Drill Report

Job Information

Job Location: Client Information: Contractor Information:
 Name: Pipeline Contract 13 Grand Strand Water & Sewer Authority Lawmore Construction, Inc.
 Contact: Jarred Shelley
 Phone: 843-397-4499
 Address: Red Bluff Road 166 Jackson Bluff Road 6240 Cypress Swamp Rd.
 Hwy 777 Conway, SC, 29529 Conway, SC, 29527
 City: Loris, SC

Receiver/Job Information

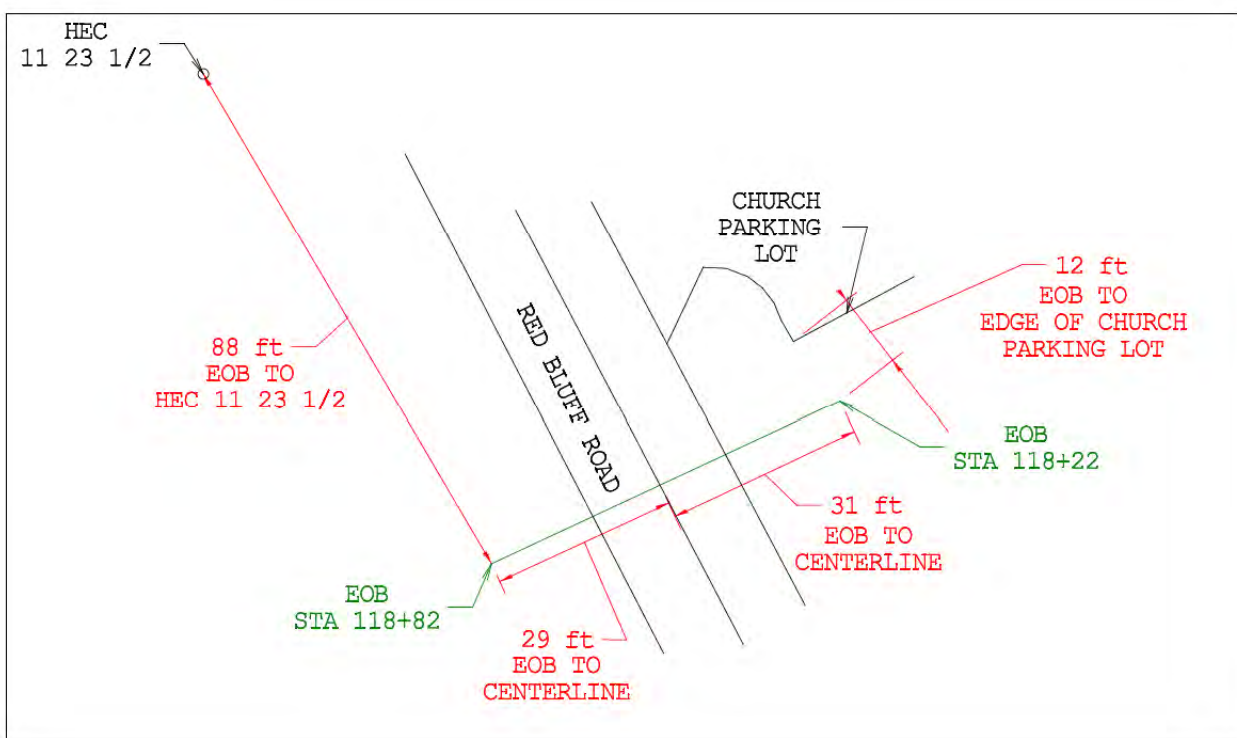
7 data points collected on unit Serial Number: 30118975 in Job 43 on 05/08/2020. Flags and Pins listed below (if applicable).
 All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.
 Reference Elevation is not measured.
 Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.
 Exit Terrain not surveyed.
 First Rod Length is 10.50
 Typical Rod Length is 15.00
 Last Rod Length is 15.00
 Total number of rods 6
 Job Comments
 60" x 10" SDR17 FM
 STA 118+22 to 118+82
 0 = STA 118+22



Drill Data Points

FLP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - (c)override - (f)filled in - (i)interpolated

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
0	PO	0.00	0.00	-17.0	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1	LL	10.50	10.31	-22.0	-2.01	2.16	0.15	N/A	N/A	N/A	N/A	N/A
2	LL	25.50	24.54	-23.0	-5.30	6.23	0.53	N/A	N/A	N/A	N/A	N/A
3	LL	55.50	54.49	-9.0	-10.38	11.41	1.02	N/A	N/A	N/A	N/A	N/A
4	LL	70.50	69.48	-2.1	-10.92	9.87	1.23	N/A	N/A	N/A	N/A	N/A
5	LL	85.50	84.45	11.0	-9.92	10.42	0.49	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (54-LF 10" HDPE casing / 60-LF 6" HDPE carrier) under Red Bluff Rd (S26-31) at STA 118+22 to 118+62 (sht 10)

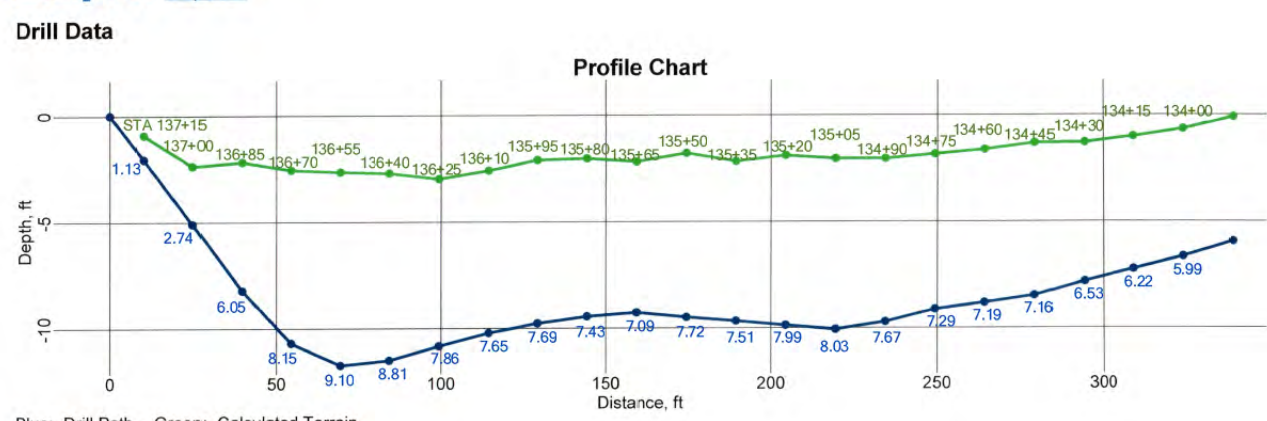
DataLog® Drill Report

Job Information

Job Location: Client Information: Contractor Information:
 Name: Pipeline Contract 13 Grand Strand Water & Sewer Authority Lawmore Construction, Inc.
 Contact: Jarred Shelley
 Phone: 843-397-4499
 Address: Red Bluff Road 166 Jackson Bluff Road 6240 Cypress Swamp Rd.
 Hwy 777 Conway, SC, 29526 Conway, SC, 29527
 City: Loris, SC

Receiver/Job Information

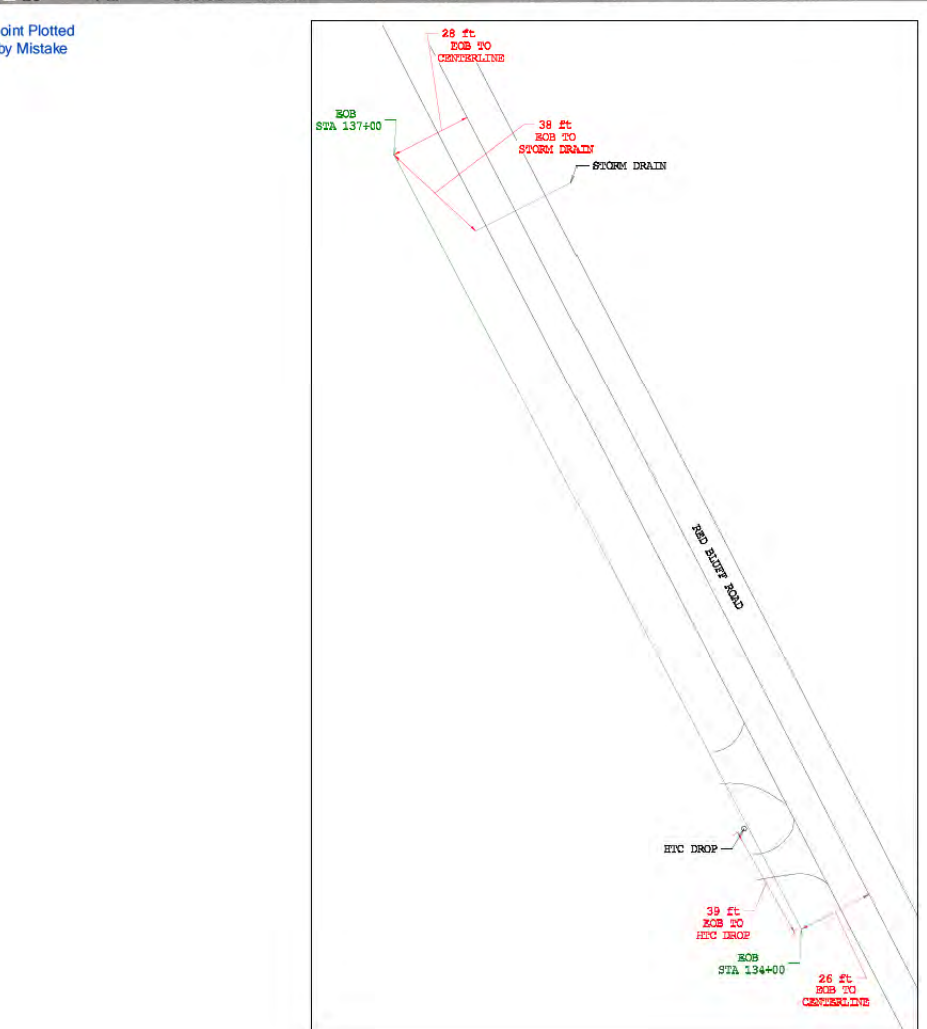
24 data points collected on unit Serial Number: 30118975 in Job 44 on 05/14/2020. Flags and Pins listed below (if applicable).
 All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.
 Reference Elevation is not measured.
 Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.
 Exit Terrain not surveyed.
 First Rod Length is 10.50
 Typical Rod Length is 15.00
 Last Rod Length is 15.00
 Total number of rods 23
 Job Comments
 300" 6" SDR17 FM
 STA 134+00 to 137+00
 0 = STA 137+00



Drill Data Points

FLP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - (c)override - (f)filled in - (i)interpolated

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
0	PO	0.00	0.00	-20.0	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1	LL	10.50	10.30	-20.0	-2.06	1.13	-0.57	N/A	N/A	N/A	N/A	N/A
2	LL	25.50	24.98	-21.5	-5.10	2.74	-2.37	N/A	N/A	N/A	N/A	N/A
3	LL	40.50	39.66	-24.0	-8.22	6.08	-2.16	N/A	N/A	N/A	N/A	N/A
4	LL	55.50	54.45	-12.5	-10.70	8.15	-2.55	N/A	N/A	N/A	N/A	N/A
5	LL	70.50	69.41	-1.6	-11.75	9.10	-2.65	N/A	N/A	N/A	N/A	N/A
6	LL	85.50	84.41	-4.8	-11.52	8.81	-2.71	N/A	N/A	N/A	N/A	N/A
7	LL	100.50	99.40	-4.2	-10.84	7.86	-2.88	N/A	N/A	N/A	N/A	N/A
8	LL	115.50	114.33	-4.0	-10.23	7.05	-2.56	N/A	N/A	N/A	N/A	N/A
9	LL	130.50	129.38	-2.0	-9.78	7.89	-2.09	N/A	N/A	N/A	N/A	N/A
10	LL	145.50	144.37	-2.3	-9.46	7.43	-2.03	N/A	N/A	N/A	N/A	N/A
11	LL	160.50	159.37	-0.3	-9.28	7.09	-2.18	N/A	N/A	N/A	N/A	N/A
12	LL	175.50	174.37	-3.0	-9.50	7.72	-1.76	N/A	N/A	N/A	N/A	N/A
13	LL	190.50	189.37	-0.5	-9.68	7.51	-2.17	N/A	N/A	N/A	N/A	N/A
14	LL	205.50	204.37	-3.2	-9.88	7.99	-1.89	N/A	N/A	N/A	N/A	N/A
15	LL	220.50	219.37	-0.4	-10.08	8.03	-2.02	N/A	N/A	N/A	N/A	N/A
16	LL	235.50	234.38	-4.2	-9.71	7.07	-2.05	N/A	N/A	N/A	N/A	N/A
17	LL	250.50	249.35	-3.6	-9.13	7.29	-1.83	N/A	N/A	N/A	N/A	N/A
18	LL	265.50	264.35	-0.5	-8.82	7.19	-1.62	N/A	N/A	N/A	N/A	N/A
19	LL	280.50	279.34	-4.6	-8.46	7.16	-1.59	N/A	N/A	N/A	N/A	N/A
20	LL	295.50	294.33	-4.8	-7.82	6.53	-1.29	N/A	N/A	N/A	N/A	N/A
21	LL	310.50	309.32	-3.0	-7.24	6.22	-1.02	N/A	N/A	N/A	N/A	N/A
22	LL	325.50	324.31	-4.8	-6.66	5.99	-0.67	N/A	N/A	N/A	N/A	N/A
23	FLP	340.50	339.39	-4.8	-6.86	6.88	-0.36	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (300-lf) under tree line in congested area at STA 134+00 to 137+00 (sht 11-12)

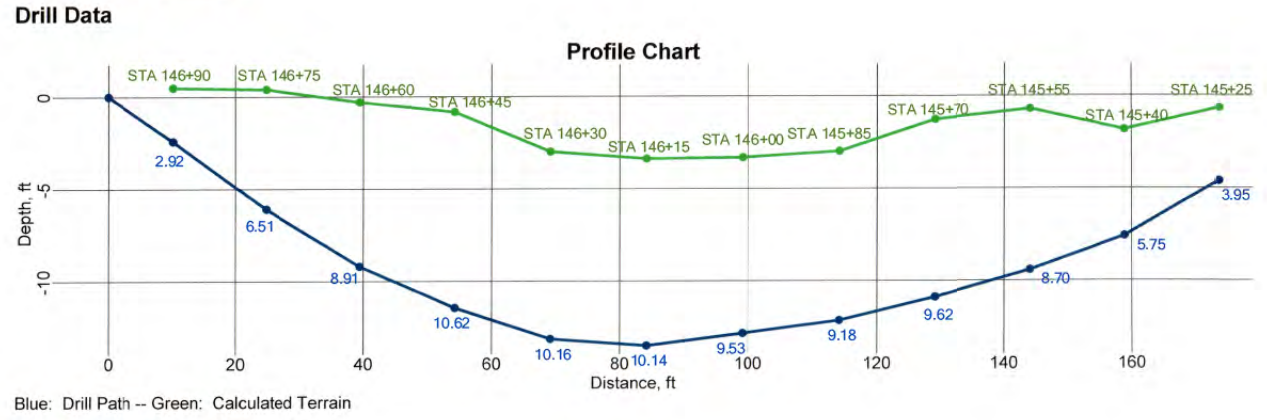
DataLog® Drill Report

Job Information

Job Location: Client Information: Contractor Information:
 Name: Pipeline Contract 13 Grand Strand Water & Sewer Authority Lawmore Construction, Inc.
 Contact: Jarred Shelley
 Phone: 843-397-4499
 Address: Red Bluff Road 166 Jackson Bluff Road 6240 Cypress Swamp Rd.
 Hwy 777 Conway, SC, 29526 Conway, SC, 29527
 City: Loris, SC

Receiver/Job Information

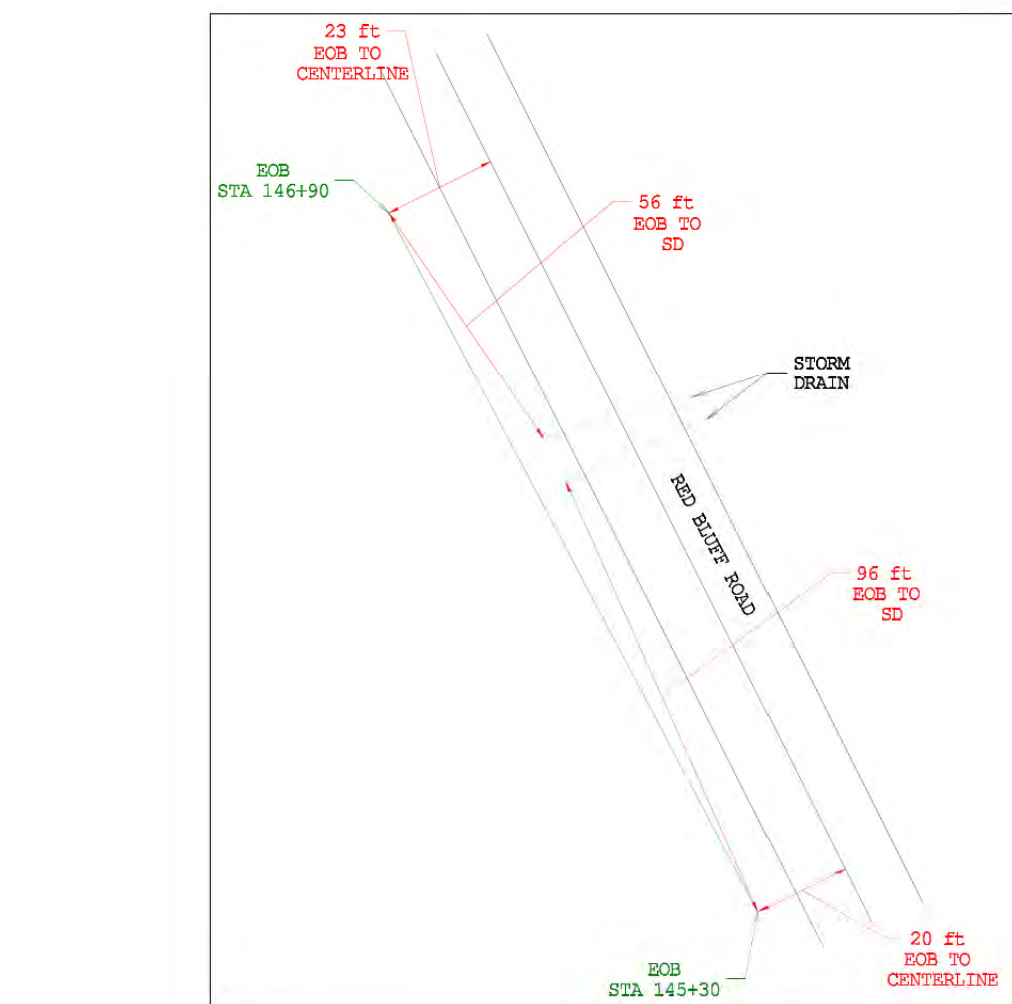
13 data points collected on unit Serial Number: 30118975 in Job 45 on 05/18/2020. Flags and Pins listed below (if applicable).
 All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.
 Reference Elevation is not measured.
 Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.
 Exit Terrain not surveyed.
 First Rod Length is 10.50
 Typical Rod Length is 15.00
 Last Rod Length is 15.00
 Total number of rods 12
 Job Comments
 160" 6" SDR17 FM
 STA 145+30 to 146+90
 0 = STA 146+90



Drill Data Points

FLP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - (c)override - (f)filled in - (i)interpolated

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
0	PO	0.00	0.00	-23.0	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1	LL	10.50	10.22	-24.5	-2.43	2.92	0.49	N/A	N/A	N/A	N/A	N/A
2	LL	25.50	24.76	-26.0	-4.10	6.91	0.41	N/A	N/A	N/A	N/A	N/A
3	LL	40.50	39.43	-19.6	-3.23	8.91	-0.29	N/A	N/A	N/A	N/A	N/A
4	LL	55.50	54.26	-14.0	-11.46	10.02	-0.84	N/A	N/A	N/A	N/A	N/A
5	LL	70.50	69.17	-8.6	-13.16	10.18	-2.59	N/A	N/A	N/A	N/A	N/A
6	LL	85.50	84.16	-3.6	-13.52	10.14	-3.38	N/A	N/A	N/A	N/A	N/A
7	LL	100.50	99.16	-2.2	-12.86	9.34	-3.33	N/A	N/A	N/A	N/A	N/A
8	LL	115.50	114.13	-4.0	-12.17	9.18	-2.59	N/A	N/A	N/A	N/A	N/A
9	LL	130.50	129.08	-13.0	-10.90	8.62	-1.28	N/A	N/A	N/A	N/A	N/A
10	LL	145.50	144.01	-6.8	-9.43	8.70	-0.73	N/A	N/A	N/A	N/A	N/A
11	LL	160.50	158.88	-16.0	-7.66	8.28	-1.86	N/A	N/A	N/A	N/A	N/A
12	LL	175.50	173.60	-22.5	-4.62	3.95	-0.67	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (160-lf) under outfall at STA 145+30 to 146+90 (sht 12)

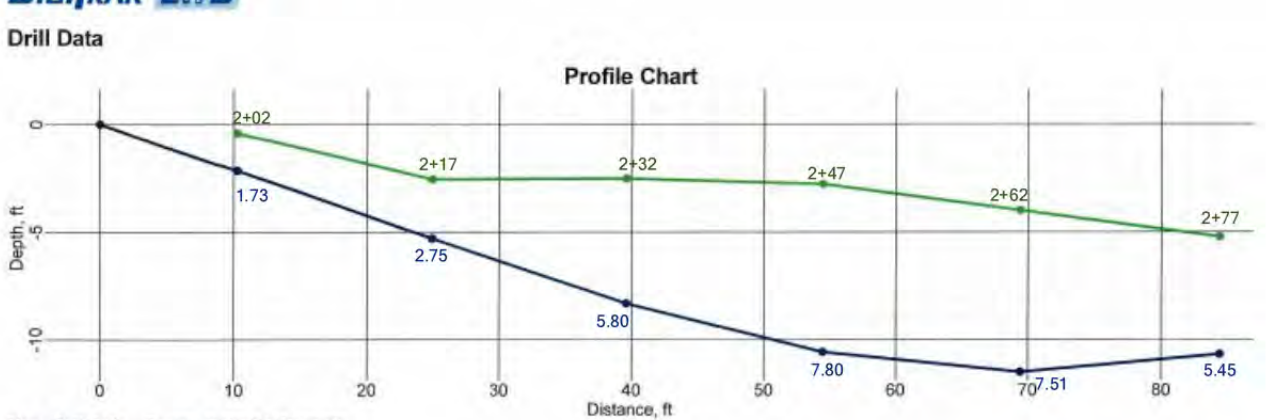
DataLog® Drill Report

Job Information

Job Location: Client Information: Contractor Information:
 Name: Pipeline Contract 13 Grand Strand Water & Sewer Authority Lawmore Construction, Inc.
 Contact: Jarred Shelley
 Phone: 843-397-4499
 Address: Red Bluff Road 166 Jackson Bluff Road 6240 Cypress Swamp Rd.
 Hwy 777 Conway, SC, 29526 Conway, SC, 29527
 City: Loris, SC

Receiver/Job Information

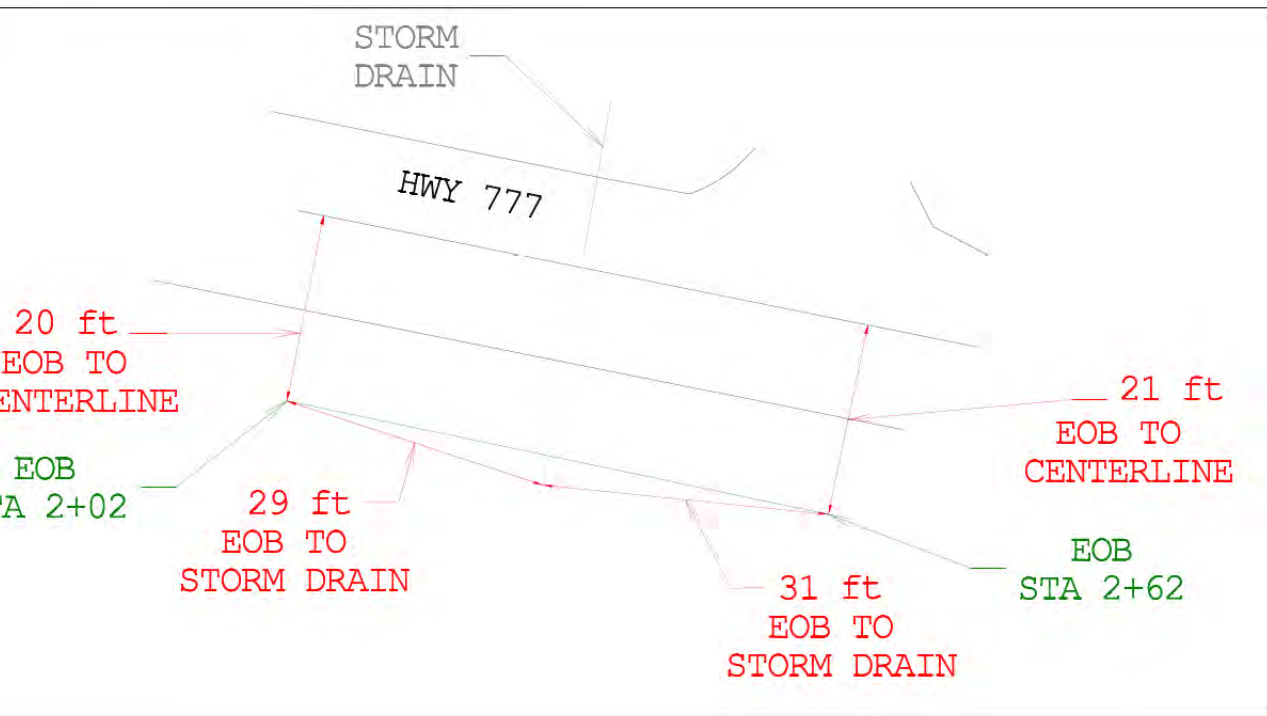
7 data points collected on unit Serial Number: 30118975 in Job 34 on 04/09/2020. Flags and Pins listed below (if applicable).
 All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.
 Reference Elevation is not measured.
 Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.
 Exit Terrain not surveyed.
 First Rod Length is 10.50
 Typical Rod Length is 15.00
 Last Rod Length is 15.00
 Total number of rods 6
 Job Comments
 Hwy 777
 60" 6" SDR17
 STA 2+02 to STA 2+62
 Drill at STA 2+02



Drill Data Points

FLP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - (c)override - (f)filled in - (i)interpolated

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
0	PO	0.00	0.00	-21.0	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1	LL	10.50	10.28	-21.0	-2.16	1.73	-0.43	N/A	N/A	N/A	N/A	N/A
2	LL	25.50	24.94	-22.0	-5.31	2.75	-2.57	N/A	N/A	N/A	N/A	N/A
3	LL	40.50	39.43	-19.9	-3.23	8.91	-0.29	N/A	N/A	N/A	N/A	N/A
4	LL	55.50	54.46	-11.5	-13.59	7.85	-2.79	N/A	N/A	N/A	N/A	N/A
5	LL	70.50	69.43	-0.9	-11.51	7.51	-4.00	N/A	N/A	N/A	N/A	N/A
6	LL	85.50	84.41	12.0	-10.68	5.45	-5.24	N/A	N/A	N/A	N/A	N/A



6" Sewer Forcemain Directional Bore (60-lf) under cross drain at STA 2+02 to 2+62 (sht 13)

DataLog® Drill Report

Job Information

Job Location: Client Information: Contractor Information:
 Name: Pipeline Contract 13 Grand Strand Water & Sewer Authority Lawmore Construction, Inc.
 Contact: Jarred Shelley
 Phone: 843-397-4499
 Address: Red Bluff Road 166 Jackson Bluff Road 6240 Cypress Swamp Rd.
 Hwy 777 Conway, SC, 29526 Conway, SC, 29527
 City: Loris, SC

Receiver/Job Information

8 data points collected on unit Serial Number: 30118975 in Job 38 on 04/14/2020. Flags and Pins listed below (if applicable).
 All units in charts and tables are Distance in ft, Depth in ft, Pitch in %.
 Reference Elevation is not measured.
 Entry Point Relative Depth 0.00. Chart and Table zero are the Reference Elevation.
 Exit Terrain not surveyed.
 First Rod Length is 10.50
 Typical Rod Length is 15.00
 Last Rod Length is 15.00
 Total number of rods 7
 Job Comments
 Hwy 777 & McNeil Chapel Rd
 80" 6" SDR17
 STA 9+85 to STA 10+65
 Drill at STA 9+85



Drill Data Points

FLP(Front Locate) - LL(Locate Line) - PO(Pitch Only) - BL(No Data) - (c)override - (f)filled in - (i)interpolated

Rod ID	Type	Bore Len.	X Dist.	Pitch	Rel.Depth	Depth	Rel.Elev.	L/R Offset	Deviation	Latitude	Longitude	GNSS X Dist.
0	PO	0.00	0.00	-18.5	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1	LL	10.50	10.30	-21.0	-2.03	2.20	0.17	N/A	N/A	N/A	N/A	N/A
2	LL	25.50	24.98	-21.0	-5.12	5.31	0.19	N/A	N/A	N/A	N/A	N/A
3	LL	40.50	39.67	-20.0	-8.11	8.54	-0.55	N/A	N/A	N/A	N/A	N/A
4	LL	55.50	54.47	-13.5	-10.61	10.54	-0.07	N/A	N/A	N/A	N/A	N/A
5	LL	70.50	69.42	-3.2	-11.86	12.03	0.18	N/A	N/A	N/A	N/A	N/A
6	LL	85.50	84.41	8.0	-11.45	10.96	-0.49	N/A	N/A	N/A	N/A	N/A
7	BL	99.50	98.42	8.0	-11.45	10.96	-0.49	N/A	N/A	N/A	N/A	N/A