

**PUBLIC WORKS ENGINEERING DIVISION**

**Inspection Summary**

Permit #: PRPWFR20171420, Public Works Infrastructure Permit - Residential  
CREEKSIDE AT RAINTREE

Address:

This work has been inspected and the inspection results noted below. Please call for re-inspection once all corrective actions have been completed. Do not cover any work until approved.

Inspection Item:

<b>Inspection:</b>	<b>Inspector:</b>	<b>Outcome:</b>	<b>Date:</b>
DEI-Sanitary Sewer Construction Inspection	Brice Lawson	Partial	Wednesday, March 14, 2018

Informational

- 1 Brice Lawson 11/16/2017 10:46 AM  
Precision broke an existing 21" I/D sanitary main that is approx. 11' west of the existing 20" PVC force main located at STA. 1+36.30. This was damaged when they were excavating to install the proposed 8" sewer pipe between MH 1-A1 and existing MH 64-003. Barry Parks with LBVSD came on site and confirmed that this damaged DI pipe is an abandoned LBVSD sewer pipe. He said he is ok if the pipe is plugged on each side of the broken area.

Informational

- 2 Brice Lawson 11/17/2017 2:06 PM  
Precision is excavating the sanitary trench between proposed MH 1-A1 and the existing City MH 1-A1. Rock has been encountered in this trench and is being broke up with a stinger attachment.

Informational

- 3 Brice Lawson 11/20/2017 3:15 PM  
Precision has installed the base for MH 1-A1. The 8" SDR 26 sewer main has been installed from MH 1-A1 to the existing City MH 64-003. It appears that full sticks of pipe have been used except at the closure at the MH. The pipe has been bedded in clean rock.

Informational

- 4 Brice Lawson 11/28/2017 11:16 AM  
Precision has installed the base for MH 1-A3. The 8" sanitary main has been installed from MH 1-A2 to MH 1-A3. The service wyes have been installed for lots 6,7,8,9,12 and 13. The pipe is being bedded and covered with clean gravel.

Informational

- 5 Brice Lawson 11/30/2017 3:40 PM

Precision has installed the concrete cradle for the outside drop assembly outside of MH 1-A1. The Stubs and tracer wires have been installed for lots 6, 9, 10, and 11. The flowable fill trench checks have been installed on the stubs for lots 10 and 11. 4" SDR 26 pipe is being used for the stubs. The pipes are being bedded in clean rock.

Informational

6 Brice Lawson 12/01/2017 11:51 AM

Precision is working on the sanitary main between just north of MH 1-A3. The stubs for lots 6,7,8,9 and 12 have been installed. The trench checks for lots 6,8,9,12 and 13 have been installed.

Informational

7 Brice Lawson 12/05/2017 4:26 PM

Precision has installed the 8" sanitary main from MH 1-A3 to the wye at STA. 7+60. The main is being bedded in clean rock. The wye fittings were installed for lots 5, 14,15,16 and 17. The tracer wire and stubs have been installed for lots 14, 15 and 16. The stubs and main trenches from the tie in to existing MH to MH 1-A3 have been partially backfilled. It appears that the trenches are being backfilled and compacted in lifts with a sheepsfoot style compactor. It appears that the trenches are at least 5' wide. There is a testing lab on site taking compaction tests every 50' on the main and on the stub crossings across the road.

Informational

8 Brice Lawson 12/08/2017 11:28 AM

The 8" sanitary main has been installed on line 1-A from STA. 7+60 to MH 1-A4. The base for MH 1-A4 has been installed. The stubs and tracers wires appear to be installed from MH 1-A3 to MH 1-A4. The 8" SDR 26 main has been installed from MH 1-A4 to approx. STA. 3+20 on line 1-B. Some of the wyes and stubs have been installed. Tracer wires are being installed with the stubs. Areas for trench checks have been excavated. It appears that the pipes are being bedded in clean rock. The sanitary main between MH 1-A3 and MH 1-A4 is being backfilled. A sheepsfoot style compactor is being used to compact the soil. The trenches appear to be about 5' wide. KCTE is on site to perform moisture density testing. I let Daniel Bryant with KCTE know that the moisture content for soil backfill of the trenches is +/- 2%.

Informational

9 Brice Lawson 12/11/2017 3:41 PM

The 8" SDR 26 sewer main has been installed from MH 1-A4 to approx. STA. 9+16. The pipe has been bedded in clean rock. The wye fitting, tracer wire and stub have been installed for lot 18.

Informational

10 Brice Lawson 12/12/2017 4:14 PM

Precision has installed the base for MH 1-A5. The 8" sanitary main has been installed from STA. 9+35 to MH 1-A5. The stub wye and tracer wire have been installed for lots 19 and 29. The 8" sanitary main has been installed from MH 1-A5 to approx. STA. 10+65. The wye fitting has been installed for lot 28. The pipe is being bedded in clean rock. KCTE was on site performing moisture/density testing on the sanitary trench backfill.

On 12/11 a SDR 35 wye was installed for lot 19. Precision assured me that the SDR 35 wyes and 45 bend fittings were only installed at lot 19. They removed the wye and installed a SDR 26 wye and removed the rest of the SDR 35 wyes from the site.

Informational

11

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Brice Lawson 12/13/2017 3:09 PM

Precision has installed the 8" SDR 26 sanitary main from approx. STA. 10+65 to the wye fitting at STA. 11+36 on line 1-A. The sewer stubs, wyes and tracer wires have been installed for lots 27, 28, 20 and 21. The rebar cage has been installed for the encasement at STA. 10+47. The rebar cage appeared to be installed in a typical manner. The crew was getting ready to install the concrete. They plan to use a vibrator.

Informational

12

Brice Lawson 12/14/2017 4:38 PM

Precision has installed the 8" sanitary main for line 1-A from STA. 11+36 to MH 1-A6. The 8" sanitary main has been installed from MH 1-A6 to the wye fitting located at STA. 12+93. The stubs have been installed for lots 23, 24 and 26. The trench check has been installed for lot 24. It appeared the pipes are being bedded and covered with clean rock. The sewer main and stub trenches are being backfilled between MH 1-A4 and MH 1-A6. It appears that the fill is being placed in lifts and compacted with a sheepsfoot style compactor. KCTE is on site performing moisture density testing on the backfill.

The crew was getting ready to install MH 1-A7 and the stub for lot 25.

Informational

13

Brice Lawson 12/19/2017 3:31 PM

The sewer stub and tracer wire for lot 25 have been installed. This has been partially backfilled.

The base for MH 1-C1 has been installed on a bed of clean rock. Approx. 75' of 12" SDR 26 sewer main has been installed in clean rock from this manhole towards MH 1-C2. It appears that the pipe is being bedded and covered with clean rock.

Informational

14

Brice Lawson 12/20/2017 3:25 PM

Precision is installing the 12" SDR 26 sewer main pipe between MH 1-C1 and MH 1-C2. It appears that the pipe is being bedded and covered with clean rock. The existing MH 64-001 has been exposed in preparation of the bore to be completed.

Informational

15

Brice Lawson 12/22/2017 2:13 PM

It appears that the 12" PVC sanitary main has been installed from approx. 2+15 to approx. STA. 4+24 on sanitary line 1-C. The existing manhole 62-001 has been core drilled and it appears that the 12" PVC sanitary main has been installed from this manhole to MH 1-C1. It appears that the pipe is being bedded and covered in clean rock. It appears that the gasket has been installed at the core hole. It appears that there is at least 6" between the core hole and the hole for the existing main.

Informational

16 Brice Lawson 01/22/2018 12:41 PM  
Precision worked on Saturday 1/20/18 installing the remainder of the 12" sanitary main between MH 1-C2 and MH 1-C1. This was approx. 20' of main that was connected to MH 1-C2. Bedding rock is covering this section of pipe. It is raining today and there is a stream of water running into the excavated pit for the manhole. The manhole base has only been installed at this time.

Informational

17 Brice Lawson 02/13/2018 9:41 AM  
Danny with Precision had a few questions that he needed answered about the placement of fire hydrants.

Precision is working on installing the outside drop assembly for MH1-C2. The manhole has been core drilled a PSX Direct Drive manhole gasket has been installed to connect the proposed 12" sanitary main to MH 1-C2.

Corrective Action Required

18 Brice Lawson 02/13/2018 3:27 PM  
The sanitary line segments and manholes have been installed for sanitary lines 1-A and 1-B. The contractor has requested to begin sanitary testing soon. I inspected all of the manholes on these two lines. Make the following corrections.

Remove the excess mastic at the horizontal joints in MH 1-B1 and MH 1-A7.

Install the invert for the new 8" pipe that was connected to the existing City MH 64-003.

Informational

19 Brice Lawson 02/13/2018 3:40 PM  
Precision has installed the 12" SDR 26 sewer pipe from MH 1-C2 to MH 62-003. The PVC SDR 26 outside drop pipe has been installed at MH 1-C2. The pipe was connected to MH 62-003 with a PSX Direct Drive manhole connector. Part of the pipe has been bedded in clear rock. The crew was installing the rebar for the vertical encasement for the outside drop assembly.

Informational

20 Brice Lawson 02/14/2018 10:28 AM  
Precision is installing the vertical concrete encasement for the outside drop assembly for MH 1-C2. WA610-1-4 concrete mix was used. A vibrator was used to consolidate the concrete. It appears that the rebar cage was installed for the encasement.

The inverts was installed for MH1-C1 with this same concrete mix.

Informational

21 Brice Lawson 02/14/2018 3:36 PM  
The cone section was installed on MH 1-C1. Mastic was installed between the cone and base. The exterior joint has been wrapped. The 4" adjustment ring has been installed with mastic.

Informational

22 Brice Lawson 02/15/2018 5:23 PM

The concrete pipe cradle has been installed for the sanitary line at MH 1-C2. It appears that the cradle has been installed in compliance with the detail. The rebar has been installed.

Informational

23 Brice Lawson 03/14/2018 3:32 PM

The existing city MH 64-003 has roots growing into that the water dept. plans to remove when they have staff available. There is also debris that has collected on the benches. Josh Roach said they will hopefully get to this soon.

DEI-Sanitary Sewer - Mandrel Brice Lawson

Partial

Wednesday,  
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Informational

1 Brice Lawson 02/27/2018 10:46 AM

Precision performed the mandrel test on the 8" line segment from MH 1-A6 to Mh 1-A7. The mandrel was pulled from MH 1-A6 towards MH 1-A7. The mandrel did not pass from the pipe to the invert in MH 1-A7. They are going to make corrections and retest.

Informational

2 Brice Lawson 03/14/2018 11:52 AM

Precision has ground down the areas in the inverts that the mandrel would not pass through on the previous mandrel test.

Mandrel testing was performed today using a 7.37" mandrel.

A mandrel test was performed on the following sanitary line segments:

MH 1-A7 to MH 1-A6

MH 1-A6 to MH 1-A5

MH 1-A5 to MH 1-A4

MH 1-B1 to MH 1-A4

MH 1-A4 to MH 1-A3

All of these line segments passed the mandrel test.

DEI-Grading/Excavation/Fill Inspection Brice Lawson

Partial

Wednesday,  
March 14,  
2018

Informational

1 Brice Lawson 07/11/2017 4:05 PM

Gradeco Construction was working on grading, clearing and grubbing the site. They were working on the north diversion ditch. The road was free of debris.

Informational

2 Brice Lawson 07/12/2017 11:17 AM\line Gradeco Construction has been working

separating the brush on site that they piled up. They have installed a diversion ditch on the north end of the site with rock checks in the ditch. They began a fill operation that appears to be on future lots 25 and 26 and east of the storm pipe outlet structure. They said that they have installed approx. 2.5' of fill in this area. They were using a sheeps foot to compact the fill after it was spread. I asked them to stop working on this fill because there was no testing being performed on the lifts of fill. Darrell Vaughn said he would have them stop the fill operation and he was aware that a testing lab should be on site.

Informational

3 Brice Lawson 07/18/2017 1:33 PM

Gradeco Construction continues to perform cut and fill operations. It appears that they are working on lots #23 thru #27 and the north cul de sac. It appears that they are installing the material in lifts and compacting it with sheeps foot. They let me know that they are getting compaction tests on each lift.

Informational

4 Brice Lawson 12/11/2017 4:24 PM

The sanitary sewer main and stub trenches have been backfilled to what appears to be existing grade from existing MH at 1+00 on line 1 to MH 1-A1, from MH 1-A1 to MH 1-A2, and from MH 1-A2 to MH 1-A3.

The sanitary main and stub trenches from MH 1-A3 to MH 1-A4 are partially backfilled. It appears that the soil is being placed and compacted in the trench in lifts. It appears that the sanitary main and stub trenches from MH 1-A4 to MH 1-B1 are being backfilled and compacted in lifts. KCTE is on site performing moisture/density testing on the trench backfill. They let me know that the moisture/density tests are passing and he has noticed that the large rocks are being culled from the soil and stockpiled. He has not noticed any large rocks being placed in the trench backfill.

Informational

5 Brice Lawson 03/01/2018 11:58 AM

The curb stakes have been installed. The contractor is grading the road subgrade. They plan to leave the subgrade about 2" high in case it rains. They plan to get compaction tests done on the fills that were previously installed by Gradeco.

Informational

6 Tom Chandler 03/02/2018 3:48 PM Cutting grade and testing subgrade. KCTE on-site for testing.

Informational

7 Brice Lawson 03/06/2018 2:58 PM

Precision is backfilling the trench for sanitary line C. It appears that they are installing the soil and compacting the backfill in lifts with a vibratory sheeps foot. There did not appear to be any large rocks in the material. KCTE Testing is on site to perform moisture/density testing on the trench backfill.

Informational

8 Brice Lawson 03/09/2018 2:45 PM

The backfill on sanitary line 1-C has been completed. KCTE testing has tested the remainder of the trench backfill today.

Corrective Action Required

9 Brice Lawson 03/14/2018 11:49 AM

The grade of the top of storm manhole 1-10E appears to be in a low spot. There is no grading proposed on the plan in this area. The contractor said that some grading will need to be done. I emailed the engineer and developer to see if any adjustments need to be made to the grading or top elevations to the structure in this area. I am waiting on a reply.

DEI-Miscellaneous PWORKS  
Inspection

Brice Lawson

Partial

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Informational

1 Brice Lawson 03/14/2018 10:17 AM

The base rock has already been installed at the location where the underdrain was installed on Nautilus. Tom asked them to leave the geogrid exposed for inspection prior to installing the base rock. I contacted the contractor and he said that he has pictures of the geogrid. I will review the pictures if and when I get them.

**Comments:**

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