

**-Regular Meeting Minutes  
CAPITAL PROJECT BUILDING COMMITTEE  
Wastewater Treatment Facility Conference Room**

**Committee:** Capital Project Building Committee

**Date:** April 22, 2019

**Time:** 6:00 pm

**Attendees:** Tom Arcari, Mark Belanger, Tom Lozaw, Steve Martino, Gil Nadeau, Richard Negro, Ken Restelli

**Absent:** Jim Tufts

**Also Present:** Facilities Director: Steve Busel, O&G: Mark Sedensky, Assistant to the Town Manager: Scott Colby, Water Pollution Control: Joe Alosso, Associates from Daniel O'Connell's Sons, Inc., Associates from Tighe & Bond

**Early Departure:**

**Tour of the WPCF Phosphorus Upgrade Project**

The committee decided not to tour the Facility because it began to rain. Mr. Alosso invited them to view the project at another time.

**Call to Order:**

The meeting was called to order at 6:00 pm by Chairman Mark Belanger.

**Approval of Minutes:**

**RICHARD NEGRO MADE A MOTION TO APPROVE THE MINUTES FOR THE REGULAR MEETING ON MARCH 25, 2019. STEVE MARTINO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**Update on the WPCF Phosphorus Removal Upgrade Project:**

Mr. Alosso gave an update on the project. He stated that the project is going well and is on schedule. At the last meeting Mr. Alosso presented Change Order #3 in the sum of \$58,010.67 for the Committee's approval. There were many questions regarding additional charges for dewatering and the Committee decided to table the approval until more information could be presented. Associates from Daniel O'Connell's Sons, Inc. and Tighe & Bond were present at the meeting for clarification and discussion. The following summary information was provided:

*CR-06 – Summary Information*

*Please see the following and attached information on the Additional Dewatering charge, There were two borings provided at bid time which were located on the west side of the Filter Building, TB-1 and TB-2 did not indicate any shale, the boring information is also attached. The second drawing in the attachment, C-104, shows where shale was found. There is no way this shale could have been anticipated based on provided information. The shale acted as a conduit, water flowed through the shale into the excavation even though the shale was above the level of*

*the water table. There were no test pits in the area of the Filter Building; in addition, test pits were completed after the job was underway. The test pit locations are indicated by a rectangle with an X on the attached C-106. The issue caused by the layer of shale which acted as a conduit was further compounded by the abnormally high amounts of rain and subsequent river flows. Flow levels for the Pequabuck River which runs immediately behind the Filter Building are also included.*

Change Order #3 was done on a Time & Material basis to save on the cost. The cost of this Change Order will come from contingency. Discussion continued.

**RICHARD NEGRO MADE A MOTION TO APPROVE CHANGE ORDER #3 FOR CONTRACTOR DANIEL O'CONNELL'S SONS, INC. IN THE SUM OF \$58,010.67. GIL NADEAU SECONDED THE MOTION. THE MOTION PASSED 5 VOTES YES, 2 VOTES NO. (RICHARD NEGRO AND STEVE MARTINO VOTED NO) THE MOTION CARRIED.**

**For the record: Vice Chairman Martino stated:**

*Because the project is at such a low contingency amount, he doesn't have too many issues with this but there are a couple of things that he is not happy about.*

**Approval of Payment Application #9;**

**STEVE MARTINO MADE A MOTION TO APPROVE PAYMENT APPLICATION #9 TO DANIEL O'CONNELL'S SONS, INC. THAT INCLUDES CHANGE ORDER #3 IN THE SUM OF \$1,133,865.54. RICHARD NEGRO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**Update on the Wheeler School Project:**

Mark Sedensky gave an update on the project. He stated that the project is on schedule. Due to the Spring break, demolition occurred in different areas of the building. At this time the project is still financially sound.

**Proposed Change Orders:**

**PCO 00036 Addit Marker and Tack Boards**

Provide additional Markerboards and Tackboards per response to RFI #064. Work was requested by Principal. This change does not include "relocation" of existing markerboards that will be removed to install the replacement whiteboards. That work if requested can be performed on a Time & Material basis. This Change Order is in the sum of \$8,233.00.

**STEVE MARTINO MADE A MOTION TO APPROVE PROPOSED CHANGE ORDER #00036 FROM O&G INDUSTRIES IN THE SUM OF \$8,233.00. GIL NADEAU SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**PCO 00044 Rm C119 Therapy Swing + PR7 Casework**

Ref: RFI#88, SKS-15 Rm C119 Swing Support

Provide additional labor and material to furnish and install structural support for therapy swing in Room C119 Resource Room. Work was requested by Wheeler School Staff. The Change Order is in the sum of \$3,608.00.

**STEVE MARTINO MADE A MOTION TO APPROVE PROPOSED CHANGE ORDER #00044 FROM O&G INDUSTRIES IN THE SUM OF \$3,608.00. RICHARD NEGRO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**Payment Application #8:**

**STEVE MARTINO MADE A MOTION TO APPROVE PAYMENT APPLICATION #8 FROM O&G INDUSTRIES IN THE SUM OF \$811,539.79. KEN RESTELLI SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**Additional Supply order for the Wheeler School Project:**

Mr. Busel, Facilities Director informed the committee that Scott Martin, Custodial Director, has been getting quotes from 3 different vendors for additional supplies for Wheeler Elementary Schools. He is requesting that the Committee approve the additional funds to purchase the equipment need for Wheeler School.

The low bidders for the required supplies are:

|                 |             |
|-----------------|-------------|
| NEC Supply, LLC | \$15,311.70 |
| School Fix      | \$ 389.85   |
| Staples         | \$ 5,111.46 |

TOTAL AMOUNT \$20,813.01

**RICHARD NEGRO MADE A MOTION TO APPROVE THE PURCHASE OF ADDITIONAL SUPPLIES FOR WHEELER SCHOOL FROM NEC SUPPLY, LLC IN THE SUM OF \$15,311.70, SCHOOL FIX IN THE SUM OF \$389.85 AND STAPLES IN THE SUM OF \$5,111.46. STEVE MARTINO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**Formal Approval for Phase 2 FF&E for Wheeler Elementary School:**

On April 16 a proposal for FF&E for Phase 2 at Wheeler School was received from Insalco Corporation. Dr. Maureen Brummett, Superintendent, requested that it be forwarded to the Committee for approval prior to the next schedule meeting. On April 17 the Committee approved the purchase of the FF&E for Wheeler School. The five committee members that approved the purchase via e-mail were Steve Martino, Thomas Arcari, Gil Nadeau, Mark Belanger and Richard Negro. Tonight the Committee is asked to formally accept the purchase.

**RICHARD NEGRO MADE A MOTION TO APPROVE THE PURCHASE OF FF&E FOR PHASE 2 OF THE WHEELER PROJECT IN THE SUM OF \$200,898.50 FROM INSALCO CORPORATION. STEVE MARTINO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**Approval of Invoices:**

**STEVE MARTINO MADE A MOTION TO APPROVE PAYMENT TO KBA FOR INVOICE #16066.06-5 DATED MARCH 29, 2019 IN THE SUM OF \$577.50 FOR WHEELER SCHOOL. RICHARD NEGRO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**STEVE MARTINO MADE A MOTION TO APPROVE PAYMENT TO KBA FOR INVOICE #16066.01-20 DATED MARCH 29, 2019 IN THE SUM OF \$8,338.77 FOR WHEELER SCHOOL. RICHARD NEGRO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**STEVE MARTINO MADE A MOTION TO APPROVE PAYMENT TO IES FOR INVOICE #18019 DATED APRIL 1, 2019 IN THE SUM OF \$3,924.84 FOR WHEELER SCHOOL. RICHARD NEGRO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**STEVE MARTINO MADE A MOTION TO APPROVE PAYMENT TO TRI STATE MATERIALS TESTING LAB, LLC FOR INVOICE #TSMT6445 DATED APRIL 8, 2019 IN THE SUM OF \$1,820.00 FOR WHEELER SCHOOL. RICHARD NEGRO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**STEVE MARTINO MADE A MOTION TO APPROVE PAYMENT TO TRC FOR INVOICE #351541 DATED MARCH 26, 2019 IN THE SUM OF \$2,781.50 FOR WHEELER SCHOOL. RICHARD NEGRO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.**

**Other:**

Scott Colby wants the committee to be aware that at Wheeler School they have uncovered an abandoned Transformer Vault and there is discussion about potential PCB's. He asked Steve Busel to speak to it. Mr. Busel stated that as part of the Phase 1 and 2 site survey that were done, they found a vault with 3 transformers in it. At this time they have not discovered any PCB's. The vault will need to be abated; they will remove the water and have it tested along with the sediment that is at the bottom of the tank. The vault is in the back of the building underground, it is shown on the drawings and will be removed. The removal of this vault is part of the existing contract. Mr. Busel after having conversations with Eversource, feels it probably doesn't contain PCB's but will keep the Committee informed about the testing results. Discussion continued.

**Adjournment:**

**STEVE MARTINO MADE A MOTION TO ADJOURN THE MEETING. RICHARD NEGRO SECONDED THE MOTION. THE MOTION PASSED UNANIMOUSLY. THE MOTION CARRIED.** The meeting was adjourned at 7:05 PM.

Respectfully Submitted,

A handwritten signature in black ink that reads "Tina Gryguc". The signature is written in a cursive, flowing style.

Tina Gryguc  
Recording Secretary

**MOTION MADE AT THE  
CAPITAL PROJECTS BUILDING COMMITTEE MEETING  
April 25, 2019**

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ESTABLISHED 1879

Daniel O'Connell's Sons  
Construction Managers and General  
Contractors

800 Kelly Way  
Holyoke, MA 01040  
413-534-0246  
413-534-2902 (fax)

April 8, 2019

CR-06 - Summary Information

Please see the following and attached information on the Additional Dewatering change, CR-06:

There were two borings provided at bid time which were located on the west side of the Filter Building, TB-1 and TB-2. Attached drawing C-106 has these two locations highlighted. Borings TB-1 and TB-2 did not indicate any shale, the boring information is also attached. The second drawing in the attachment, C-104, shows where shale was found, a photo is also included. There is no way this shale could have been anticipated based on provided information.

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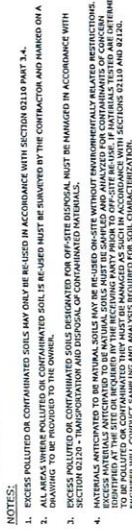


Phosphorous  
Removal  
UpgradePlainville WPCF  
Town of Plainville

Plainville, Connecticut

**VERIFY SCALE**  
BAR IS 1 INCH ON  
ORIGINAL DRAWING  
IF NOT ONE INCH ON  
THIS SHEET, ADJUST  
SCALE ACCORDINGLY

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|-----|---------|----------------------------|
| 2   | 11/18   | FIELD ORDER 1              |
| 3   | 3/18    | CONFORMED FOR ADDITION 1-3 |
| 4   | 3/18    | ISSUED FOR CONSTRUCTION    |
| 5   | 3/18    | ISSUED FOR CONSTRUCTION    |
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**LEGEND:**

AREAS ANTICIPATED TO CONTAIN NATURAL SOILS. EXCESS SOILS TO BE STOCKPILED AND LABELED AS NON-POLLUTED OR CONTAMINATED.

AREAS ANTICIPATED TO CONTAIN POLLUTED OR CONTAMINATED SOILS. EXCESS SOILS TO BE STOCKPILED AND LABELED AS POLLUTED OR CONTAMINATED.



**LEGEND:**

| STRUCTURE ID | NORTHING     | EASTING      |
|--------------|--------------|--------------|
| SHH-03       | N 809,952.72 | E 969,074.60 |
| SHH-04       | N 810,007.37 | E 969,133.54 |
| SHH-05       | N 809,995.57 | E 969,251.86 |
| SHH-06       | N 810,026.45 | E 969,157.03 |
| CH-01        | N 810,011.29 | E 969,140.82 |
| WCS-01       | N 810,092.29 | E 969,148.52 |
| ICS-01       | N 810,080.87 | E 969,201.19 |
| DCS-01       | N 810,094.76 | E 969,230.08 |
| EMD-01       | N 810,123.15 | E 969,255.67 |
| CT2-02       | N 809,967.22 | E 969,073.54 |

| POINT NUMBER | DESCRIPTION        | COORDINATE NODE TABLE |              |
|--------------|--------------------|-----------------------|--------------|
|              |                    | NORTHING              | EASTING      |
| 14           | REGION CURB / CONC | N 110,909.72          | E 960,100.14 |
| 15           | PT CURB            | N 110,055.96          | E 960,185.22 |
| 16           | CL WALK            | N 110,049.46          | E 960,154.00 |
| 17           | CL PLAP            | N 110,039.86          | E 960,153.66 |
| 18           | CL WALK            | N 110,007.28          | E 960,100.20 |
| 19           | CORNER CURB        | N 7,680.93            | E -6,351.11  |
| 20           | PT CURB            | N 7,680.93            | E -6,351.66  |
| 21           | PT CURB            | N 7,680.25            | E -6,352.28  |
| 22           | END CURB           | N 7,682.85            | E -6,352.28  |
| 30           | PT EOP             | N 809,932.15          | E 960,620.18 |
| 31           | CORNER CONC        | N 809,992.40          | E 960,128.50 |
| 32           | CORNER CONC        | N 110,072.62          | E 961,186.69 |

| COORDINATE NODE TABLE |                | NORTHING     |              | EASTING  |         |
|-----------------------|----------------|--------------|--------------|----------|---------|
| POINT NUMBER          | DESCRIPTION    | NORTHING     | EASTING      | NORTHING | EASTING |
| 1                     | PT COP         | N 809,934.20 | E 960,074.66 |          |         |
| 2                     | PT COP         | N 809,909.87 | E 960,108.48 |          |         |
| 3                     | PT COP         | N 810,054.02 | E 960,114.85 |          |         |
| 4                     | PT COP         | N 810,107.92 | E 960,120.22 |          |         |
| 5                     | PT COP         | N 810,132.02 | E 960,130.22 |          |         |
| 6                     | PT COP         | N 810,098.34 | E 960,276.59 |          |         |
| 7                     | PT COP         | N 810,032.15 | E 960,230.83 |          |         |
| 8                     | COP, MEET EAST | N 809,990.22 | E 960,235.41 |          |         |
| 9                     | COP, MEET EAST | N 809,986.64 | E 960,311.24 |          |         |
| 10                    | CL WALK        | N 809,950.87 | E 960,311.24 |          |         |
| 11                    | CL WALK        | N 810,025.36 | E 960,314.54 |          |         |
| 12                    | CL WALK        | N 810,023.25 | E 960,279.83 |          |         |
| 13                    | PT COP         | N 810,075.16 | E 960,200.69 |          |         |
| 14                    | PT COP         | N 810,083.08 | E 960,188.00 |          |         |

THIS SET OF DRAWINGS HAS BEEN MODIFIED TO INCORPORATE  
ADDITIONAL NUMBERS 1 THROUGH 5 CONTRACT MODIFICATIONS ONLY.  
THERE IS NO ASSURANCE, IMPLIED OR OTHERWISE, THAT ALL CHANGES  
WILL BE PROPERLY REFLECTED. THIS DOCUMENT HAS BEEN COMPILED FOR  
THE CONVENIENCE OF FIELD PERSONNEL DURING CONSTRUCTION.  
OFFICIAL CONTRACT DOCUMENTS SHOULD BE CONSULTED ROUTINELY.

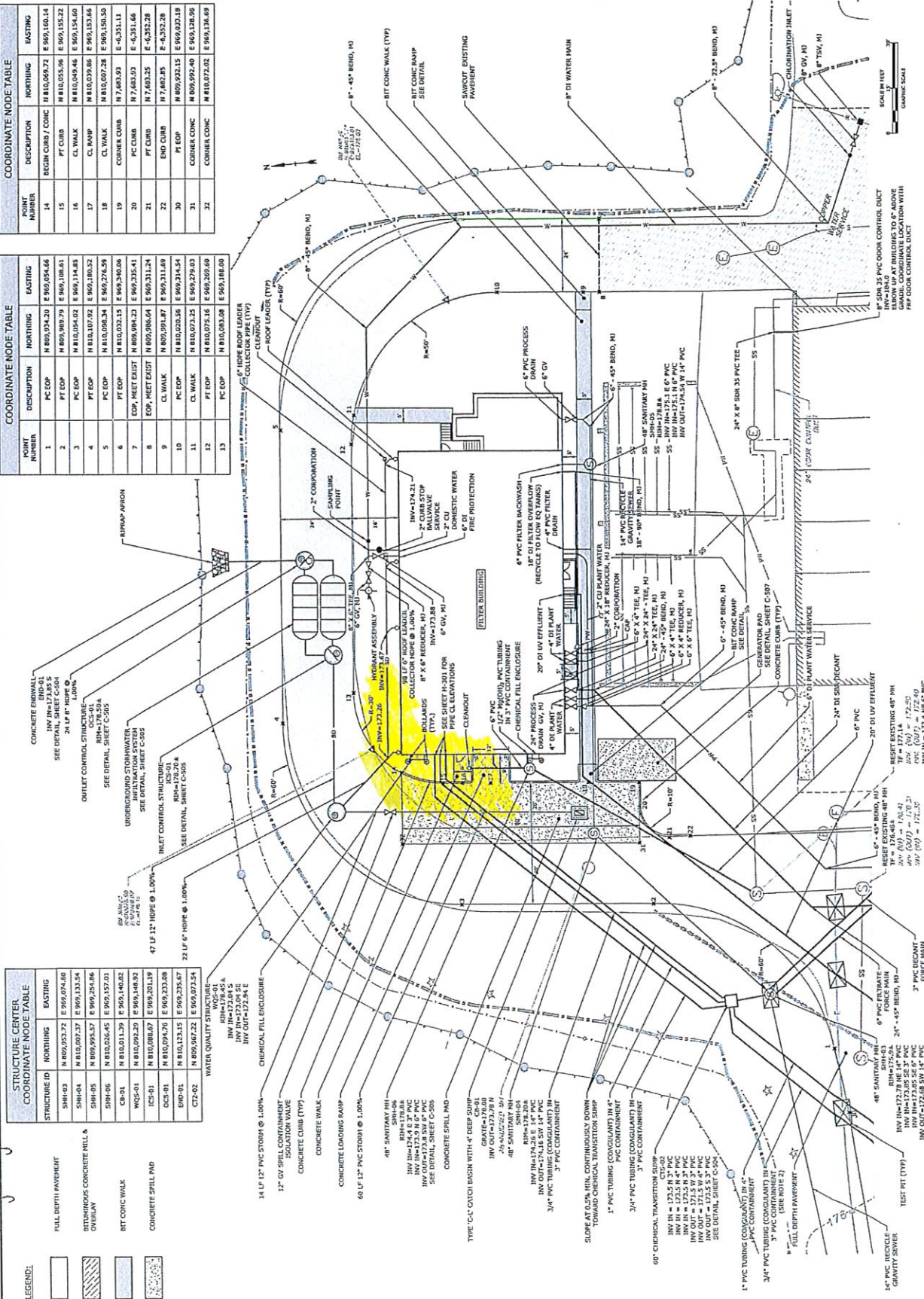
## Phosphorous Removal Upgrade

Plainville WPCF  
Town of Plainville

Plainville, Connecticut

**VERIFY SCALE**  
BAR IS 1 INCH ON  
ORIGINAL DRAWING  
IF NOT ONE INCH ON  
THIS SHEET, ADJUST  
SCALES ACCORDINGLY

|                           |        |                       |                          |
|---------------------------|--------|-----------------------|--------------------------|
| 2                         | 3      | 11/18                 | FIELD GROUP 1            |
| 1                         | 1      | 7/18                  | COMPLETED PER AGENDA 1-5 |
| 0                         | 2/18   | 1                     | ISSUED FOR CONSTRUCTION  |
| A                         | 3/18   | 2                     | CT DEEP REVIEW           |
|                           | 4/1/18 | 1                     | DATE DESCRIPTION         |
| SUBJECT NO:               |        | P-8339                |                          |
| DATE:                     |        | 2018/03/27/25         |                          |
| DRAWN BY:                 |        | P0539 C-104 18-104-18 |                          |
| CHECKED:                  |        | REV                   |                          |
| APPROVED:                 |        | PAA, SUS              |                          |
| SITE ENLARGEMENT PLAN - 3 |        |                       |                          |
| SCALE:                    |        | 1"=15'                |                          |
|                           |        | C-104                 |                          |
|                           |        | SHEET 18 OF 104       |                          |





|           |                                  |
|-----------|----------------------------------|
| Project:  | Phosphorus Removal Upgrade       |
| Location: | Plainville WPCF - Plainville, CT |
| Client:   | Town of Plainville               |

Drilling Co.: Soil Exploration Corp.

|             |                               |      |          |
|-------------|-------------------------------|------|----------|
| Foreman:    | George                        |      |          |
| T&B Rep.:   | D. Connolly                   |      |          |
| Date Start: | 11/09/16                      | End: | 11/09/16 |
| Location    | See Exploration Location Plan |      |          |
| GS. Elev.   | ± 176' Datum: NGVD 29         |      |          |

|             | Casing            | Sampler     |
|-------------|-------------------|-------------|
| Type        | HSA-HW            | Split Spoon |
| I.D./O.D.   | 4.3"/8.3"-4"/4.3" | 1-3/8"/2"   |
| Hammer Wt.  |                   | 140#        |
| Hammer Fall |                   | 30"         |
| Other       | Auto Hammer       |             |

## Groundwater Readings

| Date       | Time  | Depth | Casing | Sta. Time    |
|------------|-------|-------|--------|--------------|
| 11/11/2016 | 13:00 | 8.6   |        | +/- 48 Hours |
|            |       |       |        |              |
|            |       |       |        |              |
|            |       |       |        |              |

| Depth<br>(ft.) | PID     | Sample<br>No.    | Sample<br>Depth<br>(ft.) | Blows<br>Per 6"  | Sample Description  | General Stratigraphy | Notes | Well Construction       |         |   |
|----------------|---------|------------------|--------------------------|--|---|----------------------|-------|-------------------------|---------|---|
|                |         | Rec. (in)        |                          |  |   |                      |       | Flush mount<br>road box |         |   |
| 5              | 0.0     | S-1/19           | 0-2                      | 4 - 6  | 6" Topsoil  | 0.5' TOPSOIL         | 1     | 2" PVC<br>Riser         | 5'      | Cuttings<br>and Sand<br>2'<br>Bentonite<br>3' |
|                |         |                  |                          | 8 - 13   | S-1: Medium dense, red/brown, fine to medium SAND, some Silt, trace Organics, dry, wood in tip  | FILL                 |       |                         |         |   |
|                | 0.0     | S-2/4            | 2-4                      | 16 - 16  | S-2: Medium dense, red/brown, fine to medium SAND, trace Silt, trace organics, dry  |                      |       |                         |         |   |
|                | 1.2     | S-2A/4           |                          | 10 - 10  | S-2A: Medium dense, black, SILT, some fine Sand, dry  |                      |       |                         |         |   |
|                | 0.0     | S-3/0            | 4-6                      | 5 - 5  | S-3: No recovery  |                      |       |                         |         |   |
|                |         |                  | 6 - 7                    |  |   |                      |       |                         |         |   |
| 1.1            | S-4/4   | 6-8              | 7 - 12                   | S-4: Medium dense, black, SILT, some fine Sand, dry                              |   |                      |       |                         |         |   |
|                |         |                  | 12 - 18                  |  |   |                      |       |                         |         |   |
| 10             | 0.8     | S-5/8            | 8-10                     | 9 - 13   | S-5: Medium dense, dark brown, SILT, some fine Sand, moist; S-5A: Medium dense, red/brown SILT, trace Gravel, trace Sand, moist; S-5B: Medium dense, dark brown, fine SAND, little Silt, little Organics, moist | 12.4'                |       | 0.010<br>Slot<br>Screen | #2 Sand |   |
|                | 0.0     | S-5A/8<br>S-5B/6 |                          | 9 - 9  |   |                      |       |                         |         |   |
|                | 1.0     | S-6/14           | 10-12                    | 3 - 3  | S-6: Loose, dark brown, SILT, some fine Sand, little Organics, moist  |                      |       |                         |         |   |
|                | 0.0     |                  |                          | 3 - 8  |   |                      |       |                         |         |   |
|                | 0.0     | S-7/5            | 12-14                    | 5 - 6  | S-7: Medium dense, dark brown, fine SAND, some Silt, trace Gravel, wet  | SAND                 |       |                         |         |   |
| 0.0            | S-7A/10 |                  | 7 - 7                    | S-7A: Medium dense, red/brown, fine to coarse SAND, some Gravel, trace Silt, wet |   |                      |       |                         |         |   |
| 15             |         |                  |                          |  |   | 15'                  |       |                         |         | 2   |
|                | 0.0     | S-8/6            | 15-17                    | 5 - 6  | S-8: Medium dense, dark brown, fine SAND and SILT, wet  | 15.5' SAND AND SILT  |       |                         |         |   |
|                | 0.0     | S-8A/8           |                          | 12 - 13  | S-8A: Medium dense, dark brown, fine SAND, some Silt, little Gravel, wet  | SAND                 |       |                         |         |   |
|                | 0.0     | S-8B/6           |                          |  | S-8B: Medium dense, gray, fine to coarse SAND, some Gravel, trace Silt, wet   |                      |       |                         |         |   |
|                |         |                  |                          |  |   |                      |       |                         |         |   |
|                |         |                  |                          |  |   |                      |       |                         |         |   |
| 20             | 0.0     | S-9/5            | 20-22                    | 6 - 7  | S-9: Medium dense, red/brown, fine to coarse SAND, trace Gravel, trace Silt, wet  | SAND                 |       |                         |         |   |
|                | 0.0     | S-9A/8           |                          | 8 - 11   | S-9A: Medium dense, tan, fine SAND, trace Silt, wet   |                      |       |                         |         |   |
|                |         |                  |                          |  |   |                      |       |                         |         |   |
|                |         |                  |                          |  |   |                      |       |                         |         |   |
|                | 25      |                  |                          |  |   |                      | SAND  |                         |         |   |
| 0.0            |         | S-10/10          | 25-27                    | 5 - 5  | S-10: Medium dense, tan, fine SAND, trace Silt, wet   |                      |       |                         |         |   |
|                |         |                  |                          | 8 - 8  |   |                      |       |                         |         |   |
|                |         |                  |                          |  |   |                      |       |                         |         |   |
|                |         |                  |                          |  |   |                      |       |                         |         |   |
| 30             |         |                  |                          |  |   |                      |       |                         |         |   |

## Notes:

1. On 11/11/16 a Shelby tube was pushed 5' west of TB-1/MW-1 at a depth of approximately 9.5-12' below the ground surface, and the tube contained fill soils.

2. Advanced boring to 22 feet using HSA, and from 22 to 32 feet using HW casing and drive and wash methods.

### Proportions Used

|              |           |
|--------------|-----------|
| TRACE (TR.)  | 0 - <10%  |
| LITTLE (LI.) | 10 - <20% |
| SOME (SO.)   | 20 - <35% |
| AND          | 35 - <50% |

## Density/Consistency

| <u>Density/Consistency</u> |       |                  |
|----------------------------|-------|------------------|
| VERY LOOSE                 | 0-4   | VERY SOFT <2     |
| LOOSE                      | 4-10  | SOFT 2-4         |
| MEDIUM DENSE               | 10-30 | MEDIUM 4-8       |
| DENSE                      | 30-50 | STIFF 8-15       |
|                            |       | VERY STIFF 15-30 |
|                            |       | HARD >30         |

Project: Phosphorus Removal Upgrade  
Location: Plainville WPCF - Plainville, CT  
Client: Town of Plainville

Boring No. TB-1/MW-1  
Page 2 of 2  
File No. P-06592  
Checked by: D. Brogan

Drilling Co.: Soil Exploration Corp.

Foreman: George  
T&B Rep.: D. Connolly  
Date Start: 11/09/16 End: 11/09/16  
Location: See Exploration Location Plan  
GS. Elev.  $\pm 176'$  Datum: NGVD 29

Type: I.D./O.D.  
Hammer Wt.  
Hammer Fall  
Other

Casing: HSA-HW  
Split Spoon  
4.3"/8.3"-4"/4.3"  
1-3/8"/2"  
140#  
30"  
Auto Hammer

Groundwater Readings

| Date       | Time  | Depth | Casing | Sta. Time    |
|------------|-------|-------|--------|--------------|
| 11/11/2016 | 13:00 | 8.6   |        | +/- 48 Hours |
|            |       |       |        |              |
|            |       |       |        |              |
|            |       |       |        |              |

| Depth<br>(ft.) | PID | Sample<br>No.<br>Rec. (in) | Sample<br>Depth<br>(ft.) | Blows<br>Per 6" | Sample Description                                  | General Stratigraphy | N<br>o<br>t<br>e<br>s | Well Construction |
|----------------|-----|----------------------------|--------------------------|-----------------|---|----------------------|-----------------------|-------------------|
| 0.0            |     | S-11/13                    | 30-32                    | 4 - 5           | S-11: Medium dense, tan, fine SAND, trace Silt, wet | SAND                 |                       |                   |
|                |     |                            |                          | 5 - 6           |   |                      |                       |                   |
|                |     |                            |                          |                 | Bottom of Exploration at 32'                        |                      |                       |                   |
| 35             |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
| 40             |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
| 45             |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
| 50             |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
| 55             |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
|                |     |                            |                          |                 |   |                      |                       |                   |
| 60             |     |                            |                          |                 |   |                      |                       |                   |

Notes:

Proportions Used

TRACE (TR.) 0 - <10%  
LITTLE (LI.) 10 - <20%  
SOME (SO.) 20 - <35%  
AND 35 - <50%

Density/Consistency

|              |       |            |       |
|--------------|-------|------------|-------|
| VERY LOOSE   | 0-4   | VERY SOFT  | <2    |
| LOOSE        | 4-10  | SOFT       | 2-4   |
| MEDIUM DENSE | 10-30 | MEDIUM     | 4-8   |
| DENSE        | 30-50 | STIFF      | 8-15  |
|              |       | VERY STIFF | 15-30 |
|              |       | HARD       | >30   |



Project: Phosphorus Removal Upgrade  
Location: Plainville WPCF - Plainville, CT  
Client: Town of Plainville

Boring No. **TB-2**  
Page **1** of **2**  
File No. **P-06592**  
Checked by: **D. Brogan**

Drilling Co.: Soil Exploration Corp.

Foreman: George  
T&B Rep.: D. Connolly  
Date Start: 11/09/16 End: 11/09/16  
Location: See Exploration Location Plan  
GS. Elev. ± 177' Datum: NGVD 29

Type: I.D./O.D.  
Casing: HSA-HW 4.3"/8.3"-4"/4.3"  
Sampler: Split Spoon 1-3/8"/2"  
Hammer Wt.: 140#  
Hammer Fall: 30"  
Other: Auto Hammer

## Groundwater Readings

| Date       | Time | Depth | Casing | Sta. Time |
|------------|------|-------|--------|-----------|
|            |      |       |        |           |
| See note 1 |      |       |        |           |
|            |      |       |        |           |
|            |      |       |        |           |

| Depth<br>(ft.) | PID | Sample<br>No.<br>Rec. (in) | Sample<br>Depth<br>(ft.) | Blows<br>Per 6" | Sample Description  | General Stratigraphy | Notes | Well Construction |
|----------------|-----|----------------------------|--------------------------|-----------------|---|----------------------|-------|-------------------|
| 5              | 0.0 | S-1/24                     | 0-2                      | 5 - 9           | 4" Topsoil  | 0.3' TOPSOIL         | 1     | No Well Installed |
|                | 0.0 |                            |                          | 12 - 20         | S-1: Medium dense, red/brown, fine to medium SAND, little Gravel, trace Silt, dry | FILL                 |       |                   |
|                |     | S-2/12                     | 2-4                      | 12 - 12         | S-2: Medium dense, red/brown, fine to coarse SAND, some Gravel, little Silt, dry  |                      |       |                   |
|                |     |                            |                          | 12 - 12         |   |                      |       |                   |
|                | 0.0 | S-3/6                      | 4-6                      | 10 - 6          | S-3: Medium dense, red/brown, fine to medium SAND, trace Silt, trace Gravel, dry  |                      |       |                   |
|                | 0.0 | S-3A/10                    |                          | 6 - 15          | S-3A: Medium dense, red/black, fine SAND and SILT, trace organics, dry            |                      |       |                   |
|                | 6.4 | S-4/8                      | 6-8                      | 10 - 13         | S-4: Dense, red/brown, fine to coarse SAND, some Gravel, trace Silt, dry          |                      |       |                   |
|                | 0.0 | S-4A/4                     |                          | 30 - 34         | S-4A: Very dense, gray, CONCRETE fragments, dry                                   |                      |       |                   |
|                | 0.0 | S-5/6                      | 8-10                     | 11 - 13         | S-5: Medium dense, red/brown, fine to coarse SAND, some Gravel, trace Silt, moist |                      |       |                   |
|                | 0.0 | S-5A/12                    |                          | 16 - 17         | S-5A: Medium dense, red, coarse SAND, some Gravel, trace Silt, wet                |                      |       |                   |
| 10             | 0.0 | S-6/15                     | 10-12                    | 11 - 13         | S-6: Medium dense, red/brown, fine to medium SAND, some Silt, trace Gravel, wet   |                      |       |                   |
|                |     |                            |                          | 10 - 16         |   |                      |       |                   |
|                | 0.0 | S-7/14                     | 12-14                    | 20 - 48         | S-7: Very dense, red/brown, fine to medium SAND, some Silt, trace Gravel, wet     |                      |       |                   |
|                |     |                            |                          | 35 - 44         |   |                      |       |                   |
| 15             |     |                            |                          |                 |   |                      |       |                   |
|                | 0.0 | S-8/16                     | 15-17                    | 20 - 26         | S-8: Very dense, red/brown, fine to coarse SAND and GRAVEL, trace Silt, wet       | SAND and GRAVEL      |       |                   |
|                |     |                            |                          | 26 - 30         |   |                      |       |                   |
|                |     |                            |                          |                 |   |                      |       |                   |
|                |     |                            |                          |                 |   |                      |       |                   |
| 20             |     |                            |                          |                 |   | 18.5'                |       |                   |
|                | 0.0 | S-9/6                      | 20-22                    | 10 - 15         | S-9: Dense, red/brown, fine to coarse SAND, trace Gravel, trace Silt, wet         | SAND                 |       |                   |
|                |     |                            |                          | 16 - 16         |   |                      |       |                   |
|                |     |                            |                          |                 |   |                      |       |                   |
|                |     |                            |                          |                 |   |                      |       |                   |
| 25             | 0.0 | S-10/18                    | 24-26                    | 5 - 5           | S-10: Medium dense, tan/brown, fine SAND, some Silt, wet                          |                      | SAND  |                   |
|                |     |                            |                          | 6 - 7           |   |                      |       |                   |
|                |     |                            |                          |                 |   |                      |       |                   |
|                |     |                            |                          |                 |   |                      |       |                   |
| 30             |     |                            |                          |                 |   | SAND                 |       |                   |
|                | 0.0 | S-11/7                     | 29-31                    | 4 - 5           | S-11: Medium dense, tan, fine SAND, trace Silt, wet                               |                      |       |                   |

### Notes:

1. Groundwater observed at a depth of approximately 7' during drilling based on sample wetness  
2. Advanced boring to 22 feet using HSA, and from 22 to 31 feet using HW casing and drive and wash methods

### Proportions Used

TRACE (TR.) 0 - <10%  
LITTLE (LI.) 10 - <20%  
SOME (SO.) 20 - <35%  
AND 35 - <50%

### Density/Consistency

|              |       |            |       |
|--------------|-------|------------|-------|
| VERY LOOSE   | 0-4   | VERY SOFT  | <2    |
| LOOSE        | 4-10  | SOFT       | 2-4   |
| MEDIUM DENSE | 10-30 | MEDIUM     | 4-8   |
| DENSE        | 30-50 | STIFF      | 8-15  |
|              |       | VERY STIFF | 15-30 |
|              |       | HARD       | >30   |



Project: Phosphorus Removal Upgrade  
Location: Plainville WPCF - Plainville, CT  
Client: Town of Plainville

Boring No. **TB-2**  
Page **2** of **2**  
File No. **P-06592**  
Checked by: **D. Brogan**

Drilling Co.: Soil Exploration Corp.

Foreman: George  
T&B Rep.: D. Connolly  
Date Start: 11/09/16 End: 11/09/16  
Location: See Exploration Location Plan  
GS. Elev. ± 177' Datum: NGVD 29

Type: HSA-HW  
I.D./O.D.: 4.3"/8.3"-4"/4.3"  
Hammer Wt.: 140#  
Hammer Fall: 30"  
Other: Auto Hammer

Groundwater Readings

| Date       | Time | Depth | Casing | Sta. Time |
|------------|------|-------|--------|-----------|
|            |      |       |        |           |
| See note 1 |      |       |        |           |
|            |      |       |        |           |
|            |      |       |        |           |

| Depth<br>(ft.) | PID | Sample<br>No.<br>Rec. (in) | Sample<br>Depth<br>(ft.) | Blows<br>Per 6" | Sample Description           | General Stratigraphy | N<br>o<br>t<br>e<br>s | Well Construction |
|----------------|-----|----------------------------|--------------------------|-----------------|------------------------------|----------------------|-----------------------|-------------------|
|                |     |                            |                          | 6 - 9           |                              | SAND                 |                       |                   |
|                |     |                            |                          |                 | Bottom of Exploration at 31' |                      |                       |                   |
| 35             |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
| 40             |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
| 45             |     |                            |                          |                 |                              |                      |                       | No Well Installed |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
| 50             |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
| 55             |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
|                |     |                            |                          |                 |                              |                      |                       |                   |
| 60             |     |                            |                          |                 |                              |                      |                       |                   |

|        |                         |           |                            |       |
|--------|-------------------------|-----------|----------------------------|-------|
| Notes: | <u>Proportions Used</u> |           | <u>Density/Consistency</u> |       |
|        | TRACE (TR.)             | 0 - <10%  | VERY LOOSE                 | 0-4   |
|        | LITTLE (LI.)            | 10 - <20% | LOOSE                      | 4-10  |
|        | SOME (SO.)              | 20 - <35% | MEDIUM DENSE               | 10-30 |
|        | AND                     | 35 - <50% | DENSE                      | 30-50 |
|        |                         |           | VERY SOFT                  | <2    |
|        |                         |           | SOFT                       | 2-4   |
|        |                         |           | MEDIUM                     | 4-8   |
|        |                         |           | STIFF                      | 8-15  |
|        |                         |           | VERY STIFF                 | 15-30 |
|        |                         |           | HARD                       | >30   |



Northwest corner of excavation for Filter Building





Plainville WPCF - River Flow Data

| Year            | Days<br>(Sept 1 - Nov 7) | Integral<br>(ft <sup>3</sup> /sec)*day | Volume in ft <sup>3</sup><br>in 69 days | Average Flow<br>ft <sup>3</sup> /sec | Average Flow<br>ft <sup>3</sup> /day | Average Flow<br>acre-foot/day | Volume (acre-<br>feet) in 69 days | Variance from<br>Average |
|-----------------|--------------------------|--|---|--------------------------------------|--------------------------------------|-------------------------------|-----------------------------------|--------------------------|
| 2016            | 69                       | 1,204                                  | 104,025,600                             | 17                                   | 1,507,617                            | 35                            | 2,388                             | -40%                     |
| 2017            | 69                       | 2,865                                  | 247,536,000                             | 42                                   | 3,587,478                            | 82                            | 5,683                             | 43%                      |
| 2018            | 69                       | 7,335                                  | 633,744,000                             | 106                                  | 9,184,696                            | 211                           | 14,549                            | 266%                     |
| 69 year average | 69                       | 2,004                                  | 173,145,600                             | 29                                   | 2,509,357                            | 58                            | 3,975                             | -                        |

Based on information collect by the USGS and posted on [waterdata.usgs.gov](http://waterdata.usgs.gov)  
 Measuring station - [USGS 01189000 Pequabuck R at Forestville, CT](#)