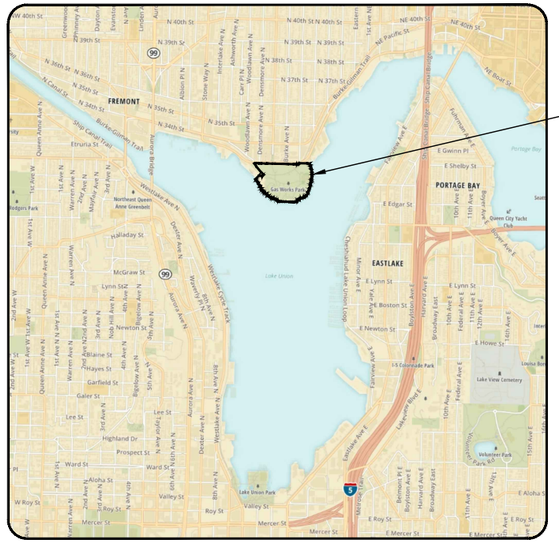
# APPENDIX D
## Play Area Groundwater Infrastructure Installation As-Built Drawings

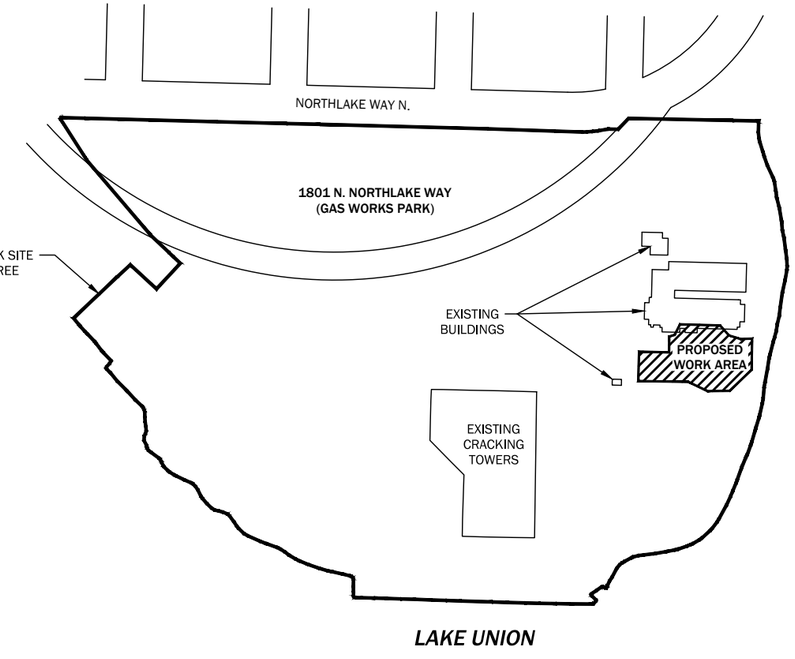
# GAS WORKS PARK SITE

## PLAY AREA GROUNDWATER INFRASTRUCTURE INSTALLATION




### VICINITY MAP

SCALE: NTS




### SITE MAP

SCALE: NTS

### SHEET INDEX:



### DATUM:

VERTICAL = NAVD88

HORIZONTAL = NAD 83/91

### PROPERTY INFO:

ZONE: IB/U45

KING CO. ASSESSOR PARCEL NO.: 124970-0005

OWNER: SEATTLE PARKS & RECREATION

SITE ADDRESS: 1801 N NORTHLAKE WAY, SEATTLE, WA 98103

LEGAL DESCRIPTION: BURKES 1ST ADD ALL BLKS 1 & 2 4 THRU 6 & 9 THRU 11 ALSO BLKS 42 THRU 44 LAKE UNION SHORELANDS ALSO BLK 3 LLEWELLYN'S SUPL BLK 3 BURKES 1ST ALSO BLK 43A LAKE UNION SD LDS 2ND SUPL TGW POR VAC STS ADJ LESS ST & TGW POR VAC N NORTHLAKE PL ADJ AS VAC BY SEATTLE ORD NO 112955

### CONTACTS:


OWNER:
PUGET SOUND ENERGY
PO BOX 90868, PSE-12
BELLEVUE, WA 98009
CONTACT: JOHN RORK
(425) 456-2228

PROPERTY OWNER (GAS WORKS PARK):
SEATTLE PARKS AND RECREATION
800 MAYNARD AVENUE SOUTH, 3RD FLOOR
SEATTLE, WA 98134
CONTACT: DAVID GRAVES
(206) 684-7048

ENGINEER:
GEOENGINEERS, INC.
600 STEWART STREET #1700
SEATTLE, WA 98101
CONTACT: CHRIS BAILEY
(206) 728-2674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GAS WORKS PARK SITE
PLAY AREA GROUNDWATER INFRASTRUCTURE INSTALLATION AS-BUILT
SEATTLE, WASHINGTON

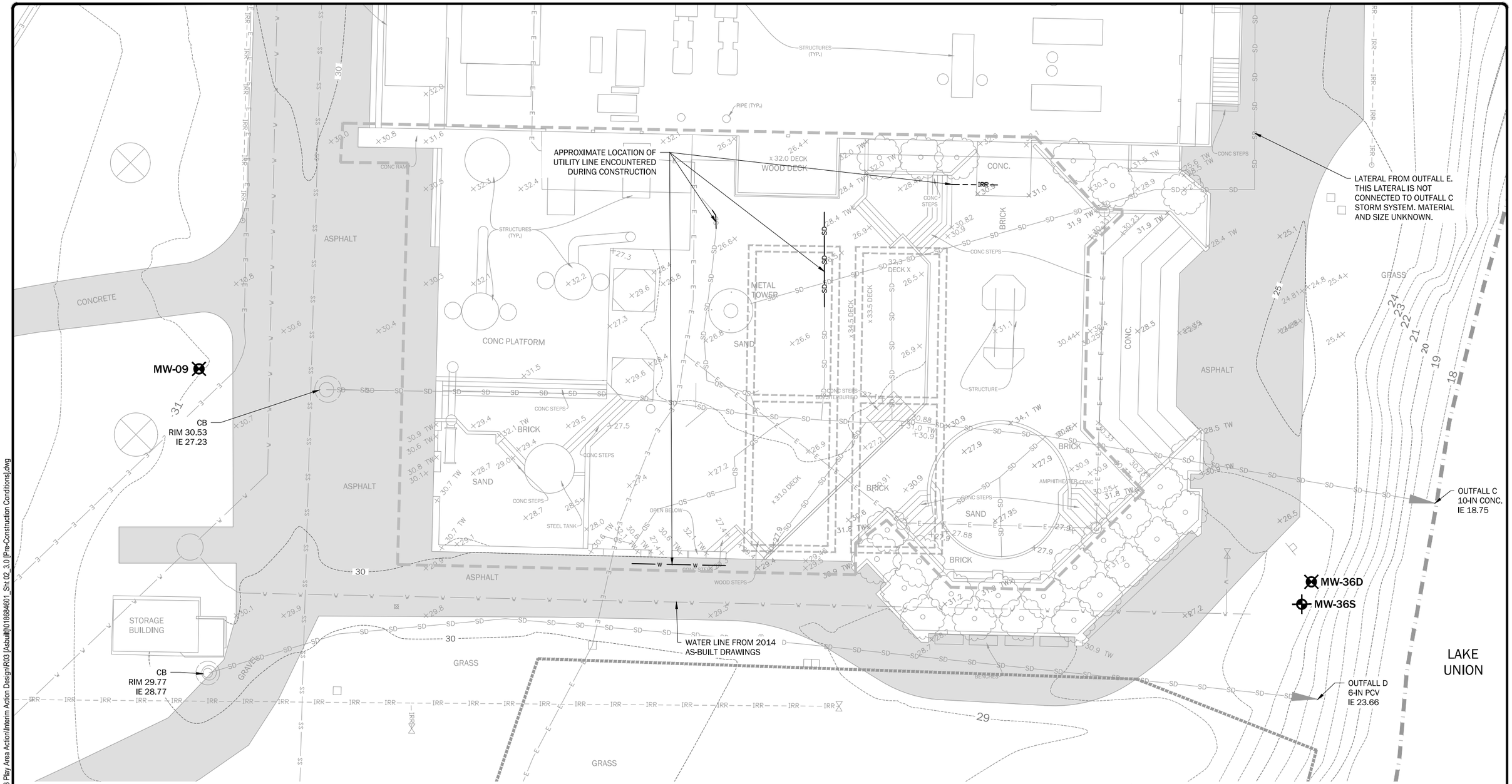
**COVER SHEET**

| | |
|---|---|
| DRAWN: CFS | PROJ NO: 0186-846-01 |
| DESIGN: SMS | SHEET 1 OF 9 |
| CHECKED: CLB | DATE: 08.30.2017 |

SHEET NO. **1.0**

AS-BUILT

Plotted: 08/29/2017 19:46 | cstickel P:\0\0186846\01\CAD\Task 1803 Play Area Action\Interim Action Design\R03 [Asbuilt]\0186846l01_Sht 01_1.0 [Cover Sheet].dwg




NOTES:
1. VERTICAL DATUM NAVD88.
2. EXISTING CONDITIONS FROM SEATTLE PARKS AND RECREATION 11-06-02 AS BUILT DRAWINGS LAST REVISED MARCH 2014.
3. OUTFALL C AND D BASED ON APS DECEMBER 5, 2014 SURVEY.

LEGEND

- 30 — EXISTING CONTOUR (NAVD88)
- SD — EXISTING STORMDRAIN
- W — EXISTING WATER
- E — EXISTING ELECTRICAL
- IRR — EXISTING IRRIGATION
- FORMER SUBSURFACE CONCRETE TANKS
- PLAY AREA RENOVATION FOOTPRINT
- APPROXIMATE EDGE OF EXISTING IMPERMEABLE LINER
- EXISTING ASPHALT, GRAVEL, AND/OR CONCRETE PATHS
- EXISTING MONITORING WELL - FILL
- EXISTING MONITORING WELL - OUTWASH

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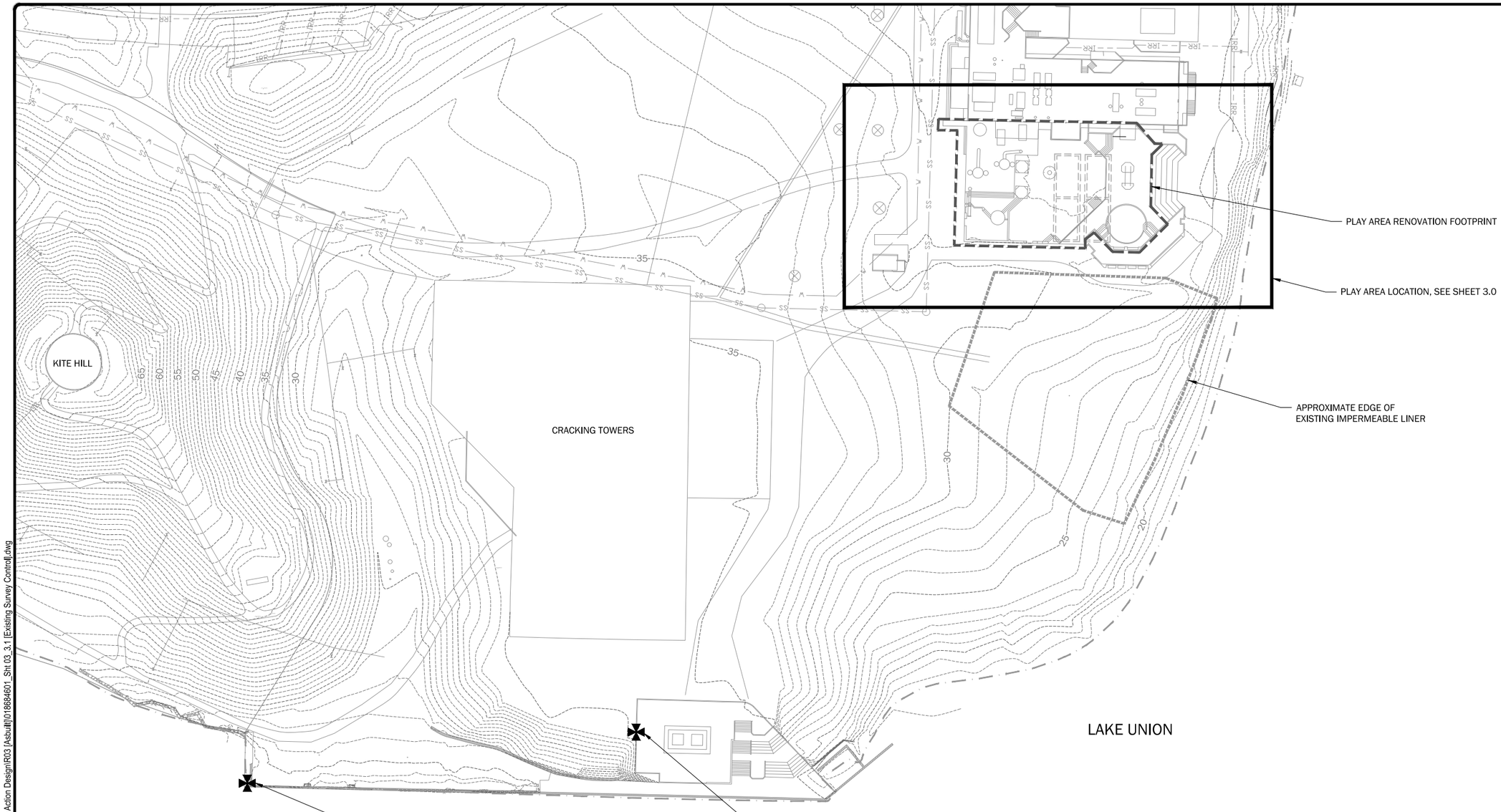
**PRE-CONSTRUCTION CONDITIONS**

| | |
|---|---|
| DRAWN: CFS | PROJ NO: 0186-846-01 |
| DESIGN: SMS | SHEET 2 OF 9 |
| CHECKED: CLB | DATE: 08.30.2017 |

SHEET NO. 3.0

AS-BUILT

Plotted: 08/29/2017, 19:47 | csticke| P:\0\01868460\01\CAD\Task 1803 Play Area Action\Interim Action Design\R03 (Astbuilt)\01868460_1_Sht 02_3.0 (Pre-Construction Conditions).dwg




NOTES:
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE, NAD83, NORTH ZONE, US FOOT
   VERTICAL DATUM: NAVD88
2. EXISTING CONDITIONS FROM SEATTLE PARKS AND RECREATION 11-06-02 AS BUILT DRAWINGS LAST REVISED MARCH 2014.
3. SURVEY CONTROL PROVIDED BY TRUE NORTH LAND SURVEYING, INC.

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SEATTLE, WASHINGTON

**EXISTING SURVEY CONTROL**

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| DRAWN: CFS | PROJ NO: 0186-846-01 |
| DESIGN: SMS | SHEET 3 OF 9 |
| CHECKED: CLB | DATE: 08.30.2017 |
| SHEET NO. 3.1 | |

AS-BUILT

Plotted: 08/29/2017 - 19:47 | cslickel P:\0\0186846\01\CAD\Task 1803 Play Area Action\Interim Action Design\R03 [Asbuilt]\0186846\01_Sht 03_3.1 [Existing Survey Control].dwg

## INJECTION WELLS

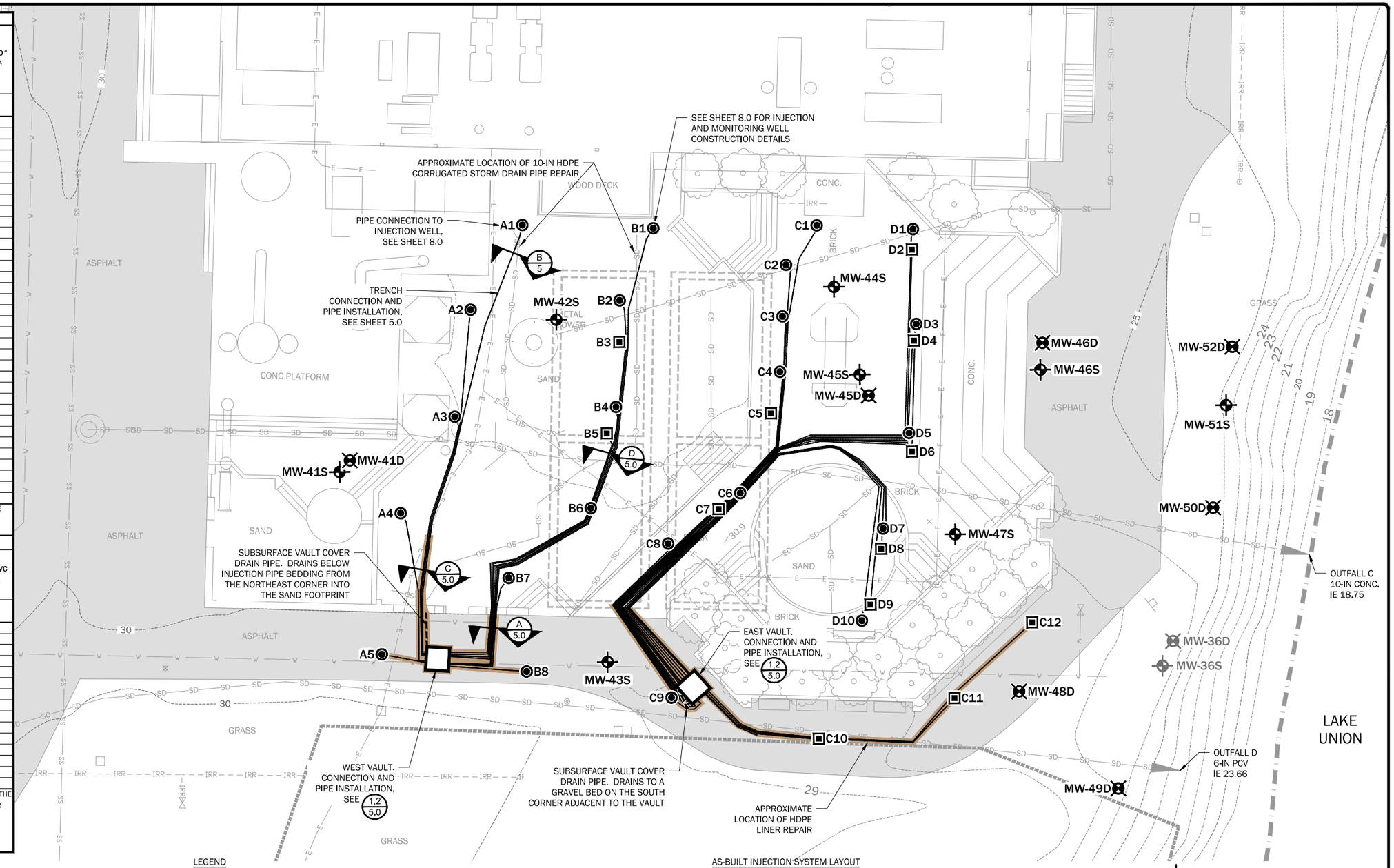
| WELL ID | NORTHING | EASTING | GROUND SURFACE AT TIME OF INSTALLATION (MARCH - APRIL 2017) | TOP OF 90° ELBOW[A] |
|---|---|---|---|---|
| | WA STATE PLANE, NORTH ZONE, NAD83, US FT | | ELEVATION FT (NAVD88) | |
| A1 | 239171.14 | 1270661.05 | 26.75 | 25.04 |
| A2 | 239154.91 | 1270651.15 | 26.87 | 24.92 |
| A3 | 239134.46 | 1270648.11 | 26.99 | 25.50 |
| A4 | 239115.96 | 1270637.76 | 27.44 | 25.58 |
| A5 | 239088.96 | 1270634.15 | 29.38 | 26.86 |
| B1 | 239170.51 | 1270686.12 | 26.83 | 24.19 |
| B2 | 239156.70 | 1270679.68 | 26.64 | 24.40 |
| B3 | 239148.72 | 1270679.61 | 26.61 | 24.18 |
| B4 | 239136.33 | 1270678.98 | 26.76 | 24.38 |
| B5 | 239131.24 | 1270677.21 | 26.76 | 24.31 |
| B6 | 239116.94 | 1270674.15 | 27.00 | 24.50 |
| B7 | 239103.60 | 1270658.44 | 27.33 | 24.69 |
| B8 | 239085.68 | 1270661.88 | 29.44 | 26.44 |
| C1 | 239171.07 | 1270717.40 | 31.11 | 25.87 |
| C2 | 239163.52 | 1270711.53 | 30.81 | 25.92 |
| C3 | 239153.65 | 1270710.85 | 30.80 | 26.03 |
| C4 | 239143.04 | 1270710.36 | 30.69 | 26.37 |
| C5 | 239135.08 | 1270708.63 | 30.73 | 26.14 |
| C6 | 239119.81 | 1270702.75 | 30.90 | 26.30 |
| C7 | 239116.76 | 1270698.62 | 30.87 | 26.30 |
| C8 | 239110.16 | 1270688.96 | 30.88 | 26.39 |
| C9 | 239080.68 | 1270689.61 | 28.96 | 26.50 |
| C10 | 239072.82 | 1270717.81 | 28.30 | 25.67 |
| C11 | 239080.59 | 1270743.78 | 27.45 | 24.73 |
| C12 | 239095.06 | 1270758.65 | 27.43 | 24.51 |
| D1 | 239170.34 | 1270735.83 | 30.77 | 25.97 |
| D2 | 239166.43 | 1270735.63 | 30.56 | 25.82 |
| D3 | 239152.19 | 1270736.47 | 30.33 | 25.80 |
| D4 | 239149.00 | 1270736.02 | 30.44 | 25.95 |
| D5 | 239131.33 | 1270735.09 | 30.41 | 26.01 |
| D6 | 239127.76 | 1270735.17 | 30.56 | 25.94 |
| D7 | 239113.05 | 1270730.11 | 27.99 | 25.63 |
| D8 | 239109.15 | 1270729.73 | 28.03 | 25.48 |
| D9 | 239098.48 | 1270727.69 | 27.82 | 25.19 |
| D10 | 239095.41 | 1270726.05 | 27.88 | 25.29 |

A. TOP OF 90° ELBOW IS THE HIGHEST POINT ON THE INJECTION WELLS. SEE SHEET 8.0 FOR WELL SCHEMATIC.

## MONITORING WELLS

| WELL ID | NORTHING | EASTING | TOP OF MONUMENT[A] | TOP OF PVC CASING |
|---|---|---|---|---|
| | WA STATE PLANE, NORTH ZONE, NAD83, US FT | | ELEVATION FT (NAVD88) | |
| MW-41S | 239123.85 | 1270626.07 | B | 29.02 |
| MW-41D | 239126.07 | 1270628.03 | B | 29.19 |
| MW-42S | 239153.02 | 1270667.56 | B | 27.82 |
| MW-43S | 239087.49 | 1270677.38 | 29.37 | 29.03 |
| MW-44S | 239159.31 | 1270720.72 | B | 30.29 |
| MW-45S | 239142.50 | 1270725.64 | B | 30.74 |
| MW-45D | 239138.49 | 1270727.34 | B | 30.00 |
| MW-46S | 239143.44 | 1270760.23 | 25.41 | 24.84 |
| MW-46D | 239148.59 | 1270760.61 | 25.40 | 24.92 |
| MW-47S | 239111.94 | 1270743.90 | B | 29.80 |
| MW-48D | 239081.86 | 1270756.15 | 27.27 | 26.80 |
| MW-49D | 239063.29 | 1270775.15 | 26.75 | 26.15 |
| MW-50D | 239117.04 | 1270793.29 | 25.52 | 25.06 |
| MW-51S | 239136.65 | 1270795.79 | 25.74 | 25.37 |
| MW-52D | 239147.84 | 1270796.96 | 25.76 | 25.31 |

A. TOP OF MONUMENT IS THE HIGHEST POINT ON THE MONITORING WELLS. THE WELL MONUMENTS ARE FLUSH WITH GROUND SURFACE. SEE SHEET 8.0 FOR WELL SCHEMATIC.
B. WELL DOES NOT CURRENTLY HAVE A FINISHED MONUMENT AND IS IN CONSTRUCTION SEQUENCING STAGES DESCRIBED IN SHEET 6.0 OR 7.0 AND MONUMENT COMPLETION WILL FOLLOW SPR CONSTRUCTION.




LEGEND

- EXISTING CONTOUR (NAVD88)
- EXISTING STORMDRAIN
- EXISTING WATER
- EXISTING ELECTRICAL
- EXISTING SUBSURFACE CONCRETE TANKS
- PLAY AREA RENOVATION FOOTPRINT
- APPROXIMATE EDGE OF EXISTING IMPERMEABLE LINER
- EXISTING ASPHALT, GRAVEL, AND/OR CONCRETE
- EXISTING MONITORING WELL - FILL
- EXISTING MONITORING WELL - OUTWASH

AS-BUILT INJECTION SYSTEM LAYOUT

- A1 INJECTION WELL - FILL
- B3 INJECTION WELL - OUTWASH
- MW-46S MONITORING WELL - FILL
- MW-46D MONITORING WELL - OUTWASH
- TRENCHED INJECTION PIPE
- SYSTEM VAULT
- APPROXIMATE LOCATION OF CONTROLLED DENSITY FILL (CDF) BACKFILL AREAS

NOTE:
INJECTION SYSTEM SURVEY INFORMATION PROVIDED BY TRUE NORTH LAND SURVEYING INC. AUGUST 14, 2017. VERTICAL DATUM IS NAVD88.

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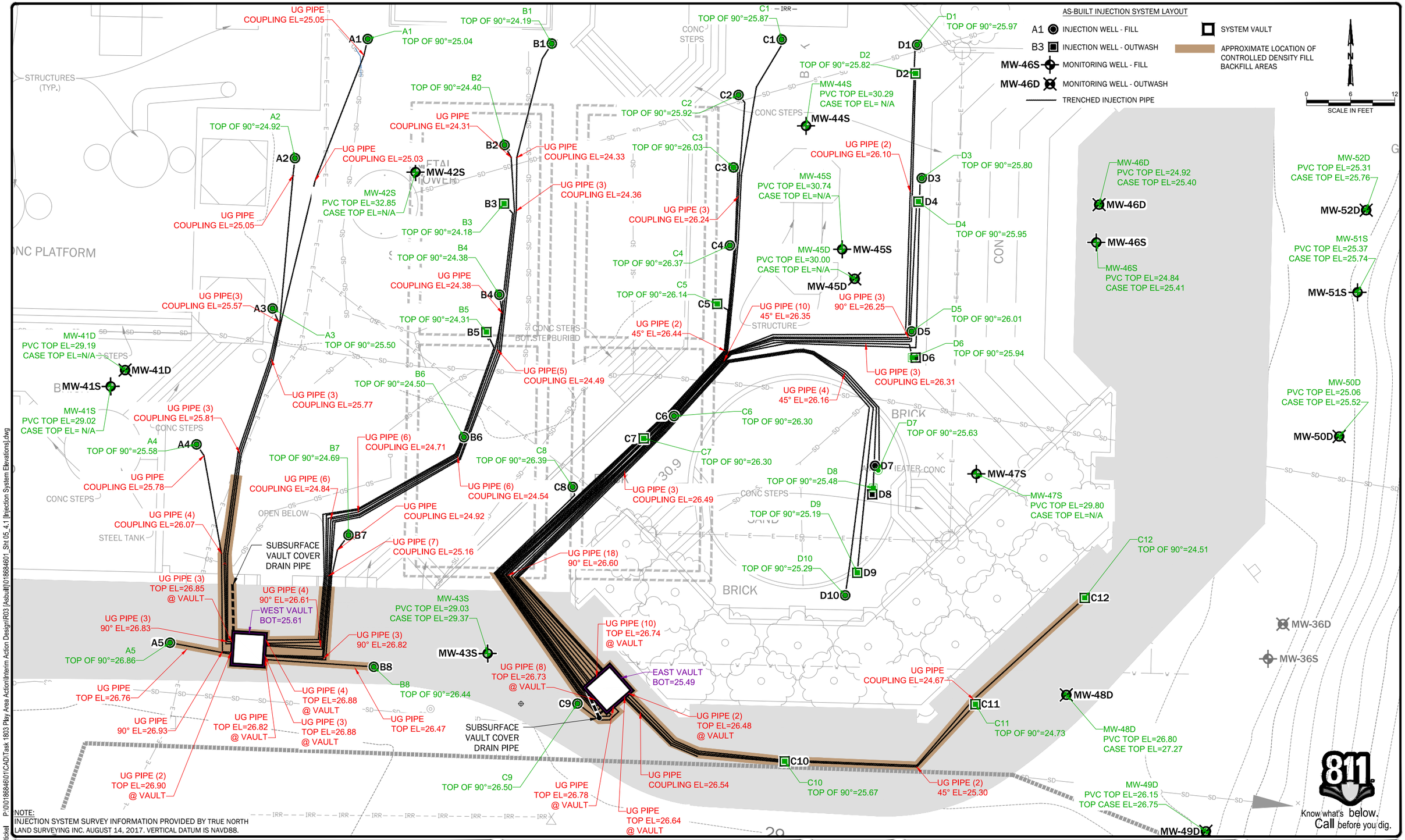
**INJECTION SYSTEM LAYOUT**

| | |
|---|---|
| DRAWN: CFS | PROJ NO: 0186-846-01 |
| DESIGN: SMS | SHEET 4 OF 9 |
| CHECKED: CLB | DATE: 08.30.2017 |
| SHEET NO. 4.0 | |

AS-BUILT

Plotted: 08/29/2017 19:47 | cstickel P:\0\0186846\01\CAD\Task 1803 Play Area Action\Interim Action Design\R03 [Asbuilt]\0186846_Sht 04_4.0 [Injection System Layout].dwg

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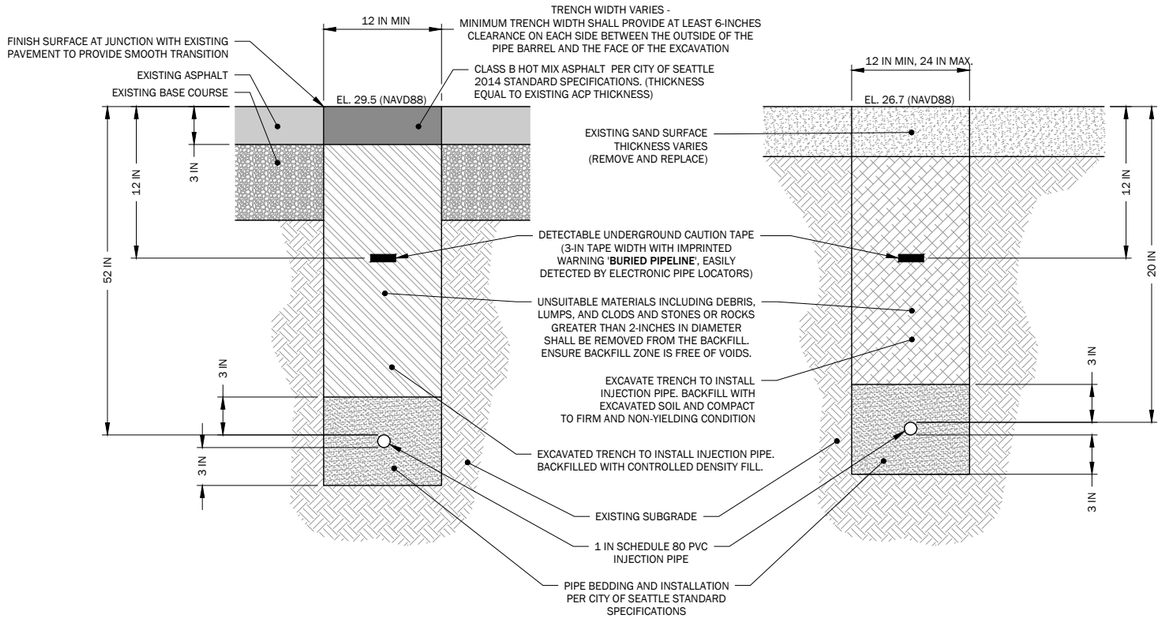
**INJECTION SYSTEM ELEVATIONS**

| | | | |
|---|---|---|---|
| DRAWN: CFS | PROJ NO: 0186-846-01 | | |
| DESIGN: SMS | SHEET 5 OF 9 | | |
| CHECKED: CLB | DATE: 08.30.2017 | | |
| SHEET NO. 4.1 | | | |

AS-BUILT

Plotted: 08/29/2017, 19:47 | cstickel | P:\0\0186846\01\CAD\Task 1803 Play Area Action\Interim Action Design\R03 (Asbuilt)\0186846 01_Sht 05_4.1 (Injection System Elevations).dwg

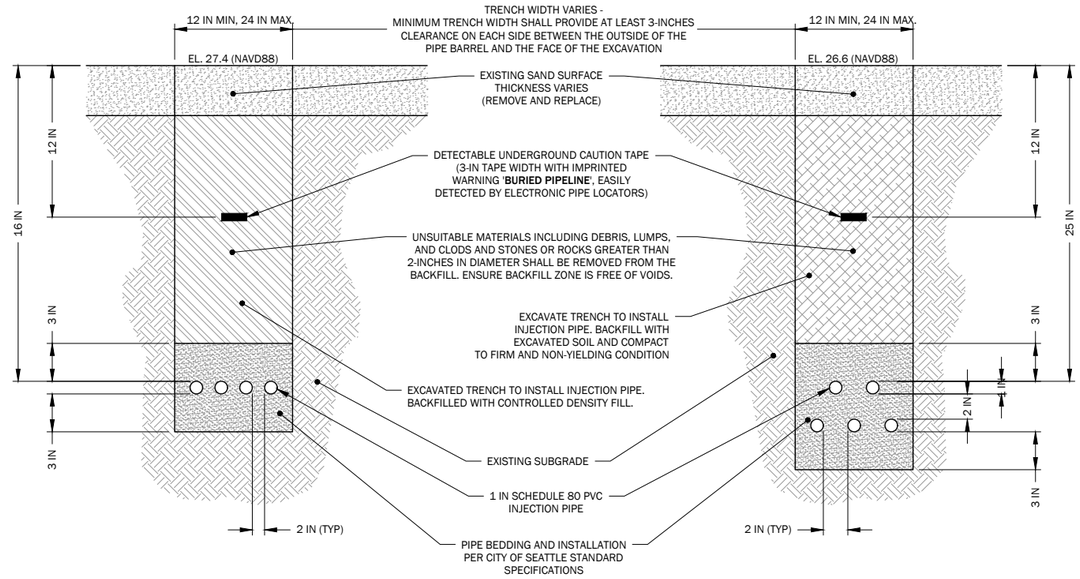



VIEW ALONG TRENCH ALIGNMENT - ASPHALT PATHWAY

**CROSS-SECTION A-A'** (A)
SCALE: NOT TO SCALE 5.0

VIEW ALONG TRENCH ALIGNMENT - PLAYGROUND

**CROSS-SECTION B-B'** (B)
SCALE: NOT TO SCALE 5.0



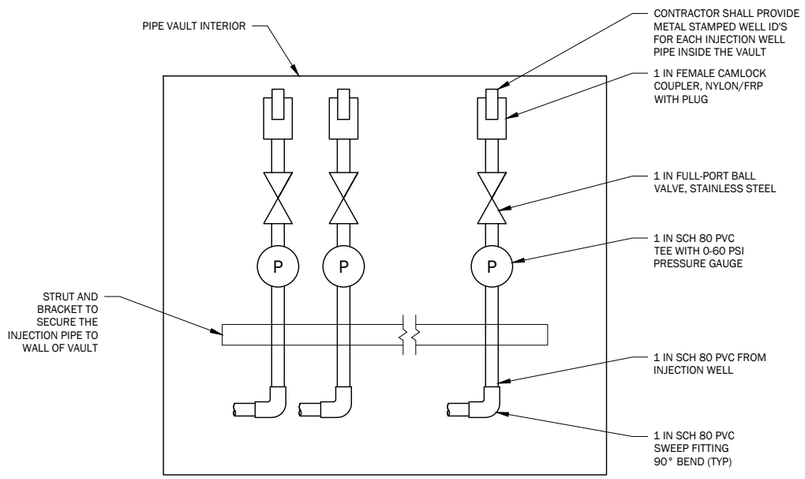

VIEW ALONG TRENCH ALIGNMENT - PLAYGROUND

**CROSS-SECTION C-C'** (C)
SCALE: NOT TO SCALE 5.0

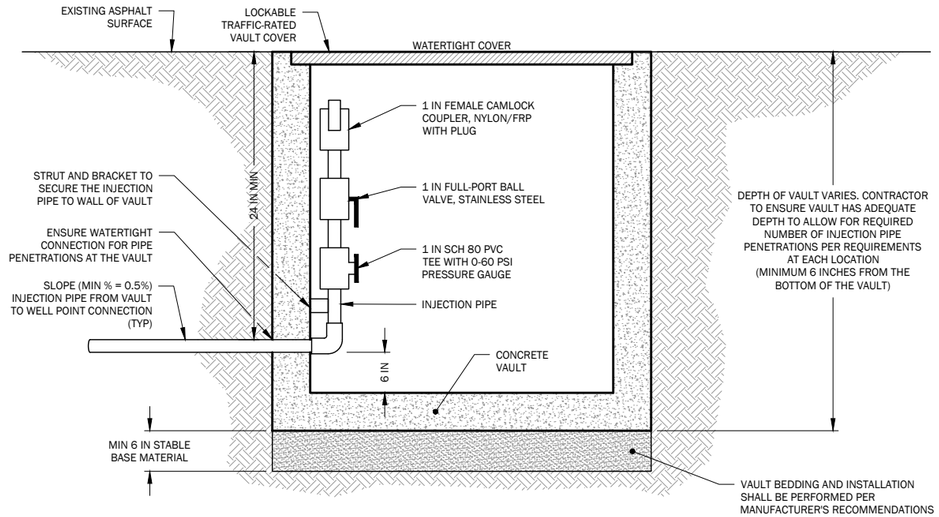
VIEW ALONG TRENCH ALIGNMENT - PLAYGROUND

**CROSS-SECTION D-D'** (D)
SCALE: NOT TO SCALE 5.0

**INJECTION PIPING AND TRENCH DETAIL** (-)
SCALE: NOT TO SCALE 5.0




**VAULT PIPING DETAIL** (1)
SCALE: NOT TO SCALE 5.0




**WEST VAULT**
CONTRACTOR INSTALLED OLDCASTLE PRECAST VAULT MODEL 444-LA AND WATER TIGHT LID

**EAST VAULT**
CONTRACTOR INSTALLED OLDCASTLE PRECAST VAULT MODEL 504-LA AND WATER TIGHT LID

**INJECTION SYSTEM VAULT DETAIL** (2)
SCALE: NOT TO SCALE 5.0

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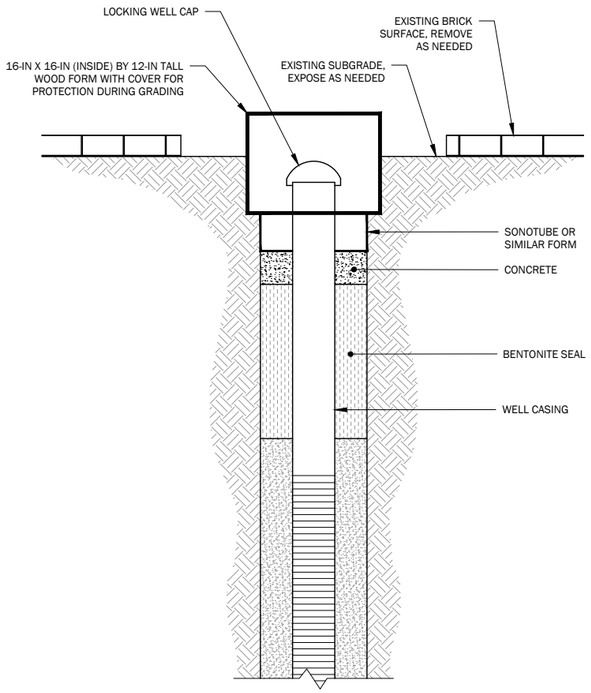
**TRENCHING AND INJECTION SYSTEM DETAILS**

| | |
|---|---|
| DRAWN: CFS | PROJ NO: 0186-846-01 |
| DESIGN: SMS | SHEET 6 OF 9 |
| CHECKED: CLB | DATE: 08.30.2017 |

SHEET NO. **5.0**

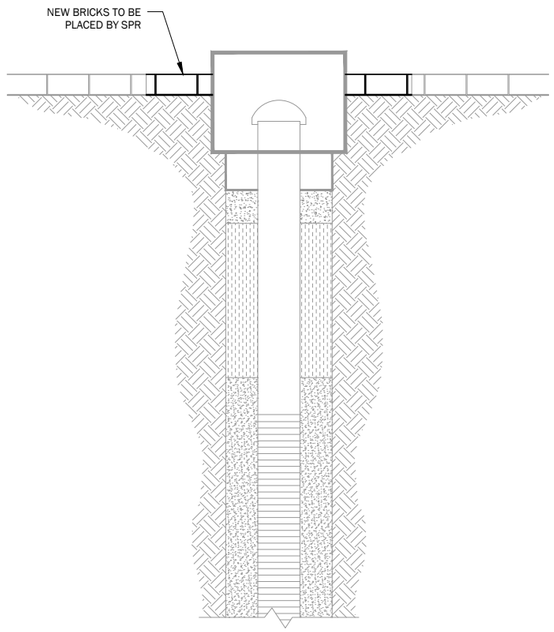
AS-BUILT

Plotted: 08/29/2017 19:48 | cstickel P:\0\0186846\01\CAD\Task 1803 Play Area Action\Interim Action Design\R03 [Asbuilt]\0186846l01_Sht 06_5.0 [Trenching & Injection System Details].dwg



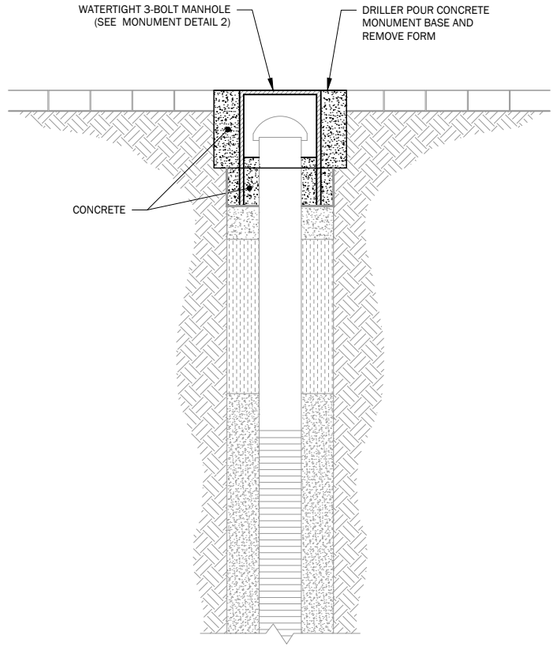

WELL CONDITION DURING CONSTRUCTION (STAGE 1)
**COMPLETED**

NOTES:
1. MONITORING WELL INSTALLATION COMPLETED BY LICENSED WELL DRILLER PRIOR TO MOBILIZATION BY SPR RENOVATION CONTRACTOR.
2. MONITORING WELL PROTECTION INSTALLED BY WELL DRILLER.
3. TEMPORARY WELL PROTECTION COMPLETED BY WELL DRILLERS JUNE 2017.




WELL CONDITION DURING CONSTRUCTION (STAGE 2)
**TO BE COMPLETED**

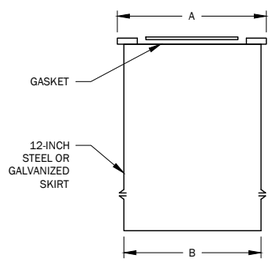
NOTES:
1. SPR RENOVATION CONTRACTOR COMPLETES BACKFILL AND BRICK LAYING AROUND PROTECTED MONITORING WELL. CONTRACTOR TO EXERCISE CAUTION DURING BACKFILLING OPERATIONS AND PROTECT THE MONITORING WELL FROM DAMAGE.
2. SPR RENOVATION CONTRACTOR TO NOTIFY GEOENGINEERS AFTER COMPLETION OF BRICK LAYING ACTIVITIES.
3. ALLOW APPROXIMATELY 90-180 DAYS FOR BRICK INSTALLATION BY SPR.




FINAL WELL CONDITION (STAGE 3)
**TO BE COMPLETED**

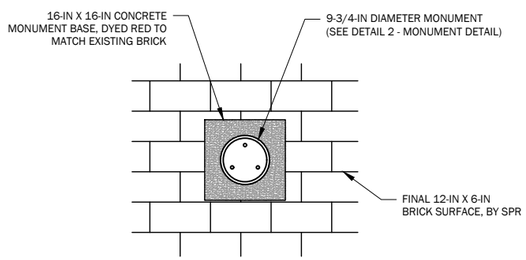
NOTES:
1. LICENSED WELL DRILLER TO INSTALL WELL MONUMENT AT REQUIRED ELEVATION BASED ON SURROUNDING BRICK SURFACE. WELL DRILLER TO REMOVE WOOD FORM AND POUR CEMENT MONUMENT BASE FLUSH WITH SURROUNDING BRICK.

## MONITORING WELL SURFACE COMPLETION CONSTRUCTION SEQUENCING - BRICK FINAL SURFACE 1
SCALE: NOT TO SCALE 6.0




| DIMENSIONS | | |
|---|---|---|
| SIZE | A | B |
| 8-IN MANHOLE | 9-3/4 IN | 8-5/8 IN |

## MONUMENT DETAIL 2
SCALE: NOT TO SCALE 6.0




## MONITORING WELL SURFACE COMPLETION IN BRICK SURFACE 3
SCALE: NOT TO SCALE 6.0

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SEATTLE, WASHINGTON

**MONITORING WELL SURFACE COMPLETION CONSTRUCTION SEQUENCING BRICK PLAZA**

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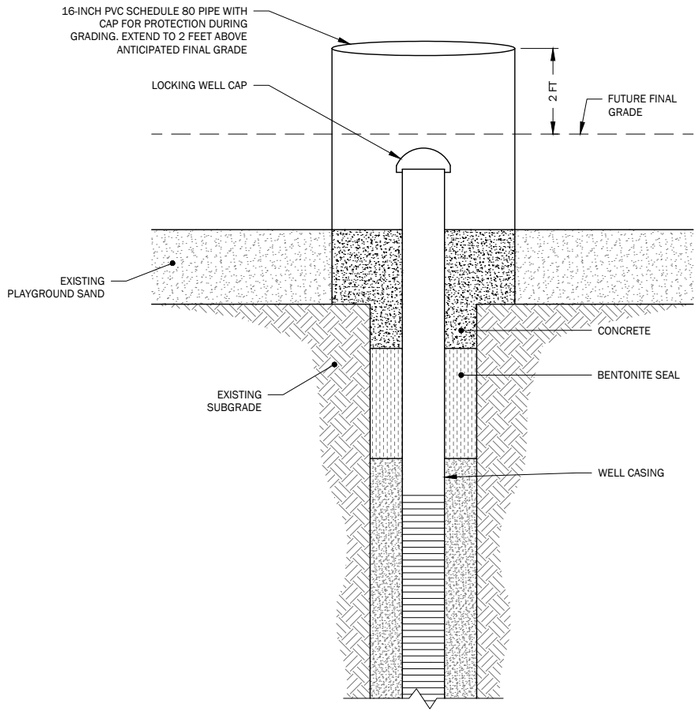
| DRAWN: CFS | PROJ NO: 0186-846-01 |
| DESIGN: SMS | SHEET 7 OF 9 |
| CHECKED: CLB | DATE: 08.30.2017 |

SHEET NO. 6.0

AS-BUILT

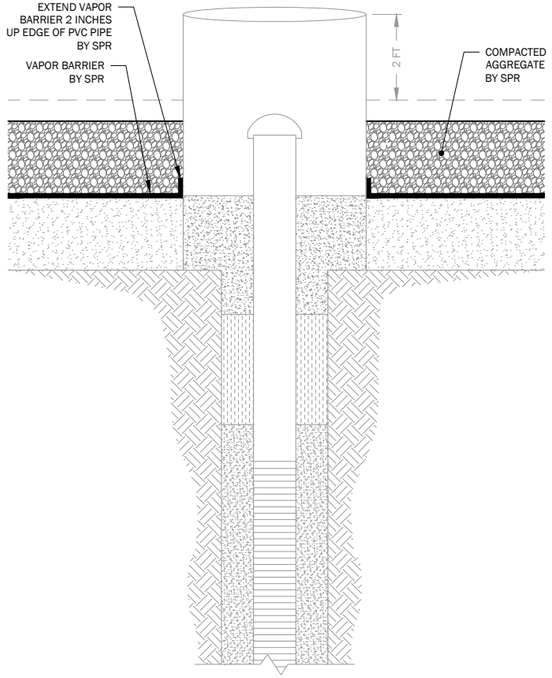
Plotted: 08/29/2017, 21:03 | cstickel P:\0\0186846\01\CAD\Task 1803 Play Area Action\Interim Action Design\R03 (Asbuilt)\0186846 01_Sht 07 - Sht 08_6.0 & 7.0 [Well Head Details].dwg




WELL CONDITION DURING CONSTRUCTION (STAGE 1)

**COMPLETED**

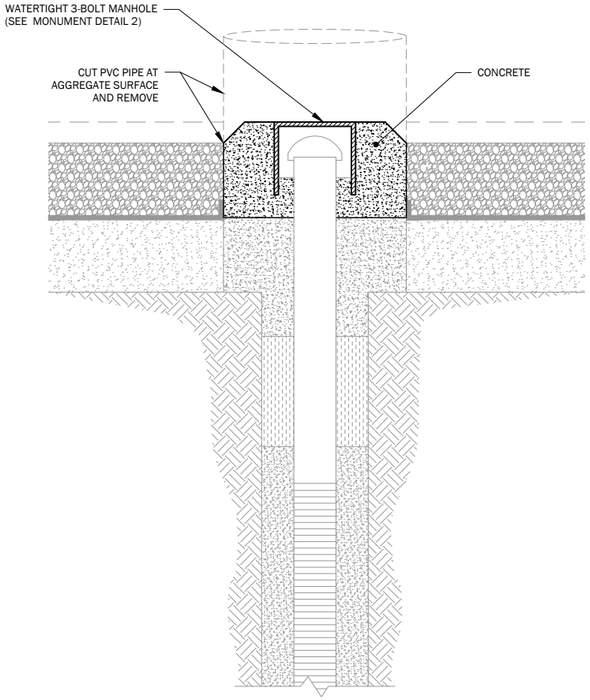
NOTES:
1. MONITORING WELL INSTALLATION SHALL BE COMPLETED BY LICENSED WELL DRILLER PRIOR TO MOBILIZATION BY SPR RENOVATION CONTRACTOR.
2. MONITORING WELL PROTECTION SHALL BE INSTALLED BY WELL DRILLER.
3. TEMPORARY WELL PROTECTION COMPLETED BY WELL DRILLERS JUNE 2017.




WELL CONDITION DURING CONSTRUCTION (STAGE 2)

**TO BE COMPLETED**

NOTES:
1. SPR RENOVATION CONTRACTOR WILL COMPLETE AGGREGATE BACKFILLING AND GRADING TO PVC PROTECTION PIPE. CONTRACTOR TO EXERCISE CAUTION DURING BACKFILLING OPERATIONS AND PROTECT THE MONITORING WELL FROM DAMAGE.
2. SPR RENOVATION CONTRACTOR WILL NOTIFY GEOENGINEERS AFTER BACKFILLING.
3. ALLOW APPROXIMATELY 90-180 DAYS FOR INSTALLATION BY SPR.



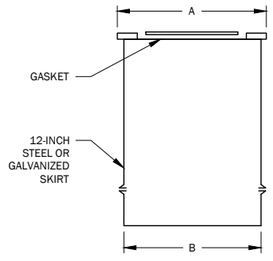

WELL CONDITION DURING CONSTRUCTION (STAGE 3)

**TO BE COMPLETED**

NOTES:
1. LICENSED WELL DRILLER TO SET MANHOLE AND CONCRETE BASE AT PROPOSED ELEVATION OF PIP SURFACE TO BE INSTALLED BY SPR.
2. AFTER CONCRETE BASE SETS, LICENSED WELL DRILLER TO CUT PVC PIPE FORM WITH SURROUNDING AGGREGATE SURFACE AND REMOVE.
3. SPR CONTRACTOR TO INSTALL PIP SURFACE FLUSH WITH WELL MONUMENT,

## MONITORING WELL SURFACE COMPLETION CONSTRUCTION SEQUENCING - POURED IN PLACE FINAL SURFACE 1

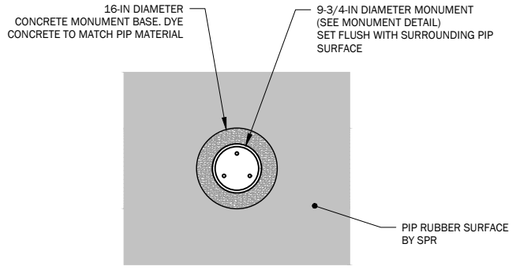
SCALE: NOT TO SCALE 7.0




| DIMENSIONS | | |
|---|---|---|
| SIZE | A | B |
| 8-IN MANHOLE | 9-3/4 IN | 8-5/8 IN |

## MONUMENT DETAIL 2

SCALE: NOT TO SCALE 7.0




## MONITORING WELL SURFACE COMPLETION IN POURED-IN-PLACE (PIP) RUBBER SURFACE 3

SCALE: NOT TO SCALE 7.0

811 Know what's below. Call before you dig.

| NO. | DATE | BY | REVISION |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

GeoEngineers

600 STEWART ST : SUITE 1700 : SEATTLE, WA 98101 : 206-728-2674 : WWW.GEOENGINEERS.COM

CHRISTOPHER LEE STANLEY — STATE OF WASHINGTON — 39963 — REGISTERED PROFESSIONAL ENGINEER — 8/30/17

GAS WORKS PARK SITE
PLAY AREA GROUNDWATER INFRASTRUCTURE INSTALLATION AS-BUILT
SEATTLE, WASHINGTON

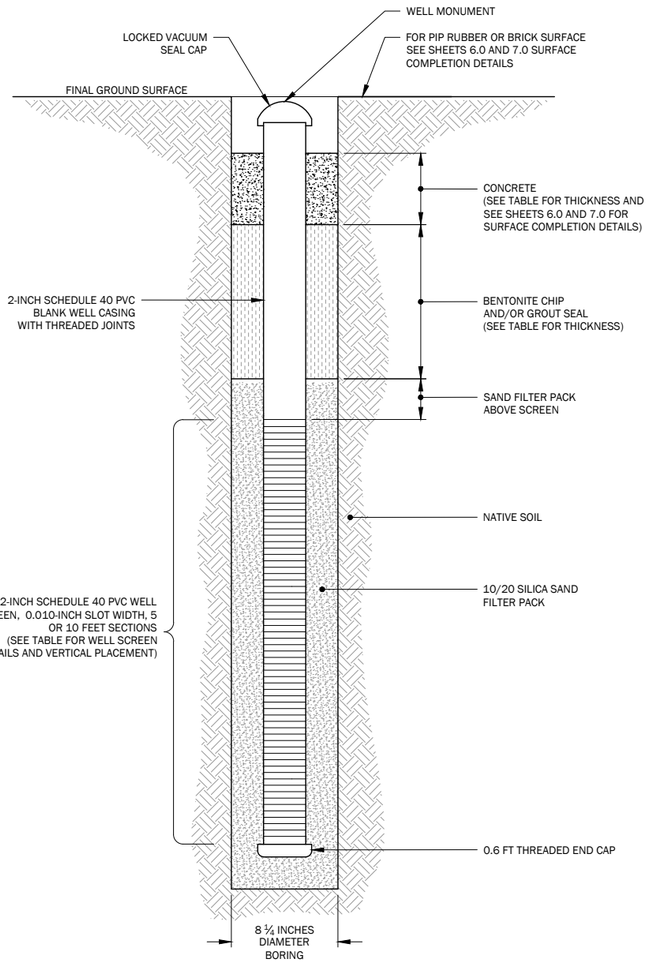
**MONITORING WELL SURFACE COMPLETION CONSTRUCTION SEQUENCING PLAYGROUND**

| | |
|---|---|
| DRAWN: CFS | PROJ NO: 0186-846-01 |
| DESIGN: SMS | SHEET 8 OF 9 |
| CHECKED: CLB | DATE: 08.30.2017 |

SHEET NO. **7.0**

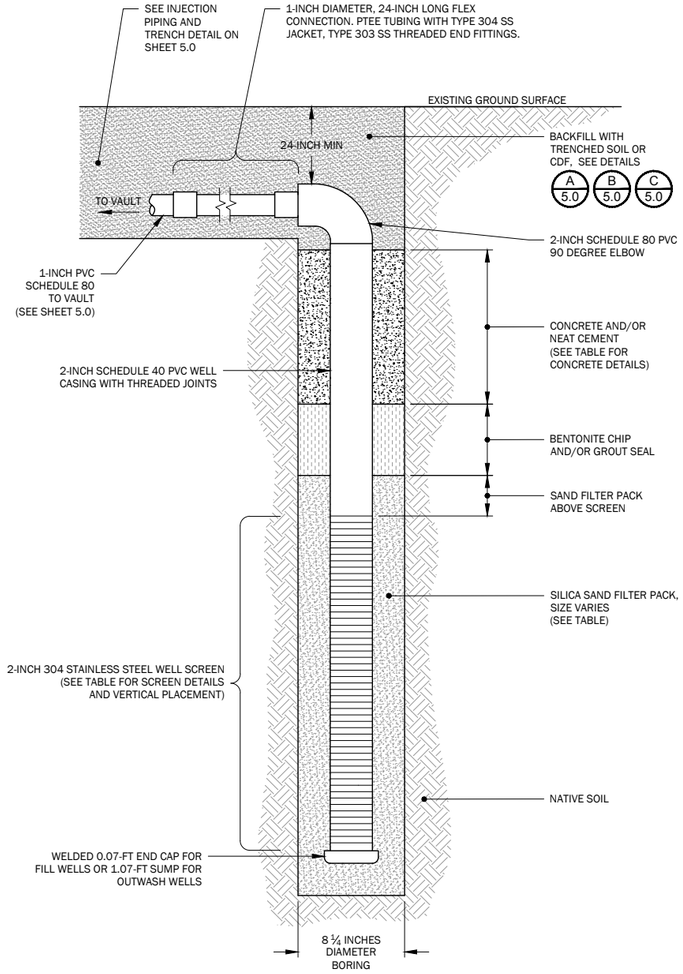
AS-BUILT

Plotted: 08/29/2017, 21:03 | cstickel P:\0186846\01\CAD\Task 1803 Play Area Action\Interim Action Design\R03 (Asbuilt)\0186846l_Sht 07 - Sht 08_6.0 & 7.0 (Well Head Details).dwg




## MONITORING WELL SCHEMATIC 1

SCALE: NOT TO SCALE 8.0




## INJECTION WELL SCHEMATIC 2

SCALE: NOT TO SCALE 8.0

| WELL ID | WELL SCREEN GEOLOGIC UNIT | ELEVATION FEET (NAVD88) | | | | | | DEPTH (FEET BELOW GROUND SURFACE AT TIME OF INSTALLATION) | | SCREEN LENGTH (FEET) | THICKNESS (FEET) | | | | SAND FILTER PACK | SLOT SIZE[B] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TOP OF CONCRETE | TOP OF NEAT CEMENT | TOP OF BENTONITE CHIP/ GROUT SEAL | TOP OF SAND | SCREEN START | SCREEN END | SCREEN START | SCREEN END | | CONCRETE | NEAT CEMENT | BENTONITE CHIP/ GROUT SEAL | SAND FILTER PACK ABOVE SCREEN | | |
| **INJECTION WELLS** | | | | | | | | | | | | | | | | |
| A1 | FILL | 24.6 | 22.5 | 22.5 | 21.5 | 20.5 | 15.0 | 6.3 | 11.8 | 5.5 | 2.1 A | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| A2 | FILL | 24.3 | 23.2 | 23.2 | 22.2 | 21.2 | 15.7 | 5.7 | 11.2 | 5.5 | 1.1 A | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| A3 | FILL | 25.0 | 22.9 | 22.9 | 21.9 | 20.9 | 15.9 | 6.1 | 11.1 | 5.0 | 2.1 A | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| A4 | FILL | 25.1 | 23.3 | 23.3 | 22.3 | 21.3 | 17.8 | 6.2 | 9.7 | 3.5 | 1.8 A | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| A5 | FILL | 26.5 | 24.8 | 24.8 | 23.8 | 23.3 | 18.3 | 6.1 | 11.1 | 5.0 | 1.7 | 0.0 | 1.0 | 0.5 | 6/9 | 50 |
| B1 | FILL | 23.7 | 22.3 | 22.3 | 21.3 | 20.3 | 10.8 | 6.5 | 16.0 | 9.5 | 1.4 A | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| B2 | FILL | 24.0 | 21.8 | 21.8 | 20.8 | 19.8 | 10.8 | 6.9 | 15.9 | 9.0 | 2.2 A | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| B3 | OUTWASH | 23.5 | 21.5 | 11.0 | 10.0 | 9.0 | 2.5 | 17.6 | 24.1 | 6.5 | 2.0 | 10.5 | 1.0 | 1.0 | 10/20 | 20 |
| B4 | FILL | 23.9 | 21.9 | 21.9 | 20.9 | 19.9 | 13.4 | 6.9 | 13.4 | 6.5 | 2.0 | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| B5 | OUTWASH | 23.8 | 21.8 | 11.3 | 10.3 | 9.3 | 2.3 | 17.5 | 24.5 | 7.0 | 2.0 | 10.5 | 1.0 | 1.0 | 10/20 | 20 |
| B6 | FILL | 24.0 | 22.4 | 22.4 | 21.4 | 20.4 | 13.9 | 6.6 | 13.1 | 6.5 | 1.6 | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| B7 | FILL | 24.3 | 22.4 | 22.4 | 21.4 | 20.4 | 15.4 | 7.0 | 12.0 | 5.0 | 1.9 A | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| B8 | FILL | 25.9 | 23.9 | 23.9 | 22.9 | 21.9 | 16.4 | 7.5 | 13.0 | 5.5 | 2.0 | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| C1 | FILL | 25.4 | 22.8 | 22.8 | 21.8 | 20.8 | 13.3 | 10.3 | 17.8 | 7.5 | 2.6 | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| C2 | FILL | 25.4 | 22.8 | 22.8 | 21.8 | 20.8 | 12.8 | 10.0 | 18.0 | 8.0 | 2.6 | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| C3 | OUTWASH | 25.5 | 21.8 | 10.8 | 9.8 | 8.8 | 0.8 | 22.0 | 30.0 | 8.0 | 3.7 | 11.0 | 1.0 | 1.0 | 10/20 | 20 |
| C4 | FILL | 25.9 | 23.2 | 23.2 | 22.2 | 21.2 | 15.7 | 9.5 | 15.0 | 5.5 | 2.7 | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| C5 | OUTWASH | 25.6 | 21.4 | 9.4 | 8.4 | 7.4 | 0.4 | 23.3 | 30.3 | 7.0 | 4.2 | 12.0 | 1.0 | 1.0 | 10/20 | 20 |
| C6 | FILL | 25.9 | 22.1 | 21.6 | 20.6 | 19.6 | 16.6 | 11.4 | 14.4 | 3.0 | 3.8 | 0.5 | 1.0 | 1.0 | 6/9 | 50 |
| C7 | OUTWASH | 25.8 | 24.8 | 12.2 | 11.2 | 10.2 | 3.2 | 20.7 | 27.7 | 7.0 | 1.0 | 12.6 | 1.0 | 1.0 | 10/20 | 20 |
| C8 | FILL | 25.9 | 23.6 | 23.6 | 22.6 | 21.6 | 16.1 | 9.3 | 14.8 | 5.5 | 2.3 | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| C9 | FILL | 26.0 | 22.7 | 22.7 | 21.7 | 20.7 | 15.7 | 8.3 | 13.3 | 5.0 | 3.3 | 0.0 | 1.0 | 1.0 | 6/9 | 50 |
| C10 | OUTWASH | 25.2 | 23.0 | 13.5 | 12.5 | 11.5 | 0.5 | 16.8 | 27.8 | 11.0 | 2.2 | 9.5 | 1.0 | 1.0 | 10/20 | 20 |
| C11 | OUTWASH | 23.9 | 22.4 | 10.9 | 9.9 | 8.9 | -3.1 | 18.6 | 30.6 | 12.0 | 1.5 | 11.5 | 1.0 | 1.0 | 10/20 | 20 |
| C12 | OUTWASH | 24.0 | 21.2 | 5.2 | 4.2 | 3.2 | -5.8 | 24.2 | 33.2 | 9.0 | 2.8 | 16.0 | 1.0 | 1.0 | 10/20 | 20 |
| D1 | FILL | 25.5 | 21.7 | 20.7 | 19.7 | 18.7 | 12.7 | 12.1 | 18.1 | 6.0 | 3.8 | 1.0 | 1.0 | 1.0 | 4/8 | 90 |
| D2 | OUTWASH | 25.3 | 21.8 | 12.8 | 11.8 | 10.8 | 1.3 | 19.7 | 29.2 | 9.5 | 3.5 | 9.0 | 1.0 | 1.0 | 10/20 | 20 |
| D3 | FILL | 25.3 | 21.5 | 20.5 | 19.5 | 18.5 | 11.5 | 11.8 | 18.8 | 7.0 | 3.8 | 1.0 | 1.0 | 1.0 | 4/8 | 90 |
| D4 | OUTWASH | 25.3 | 20.3 | 9.3 | 8.3 | 7.3 | -1.7 | 23.1 | 32.1 | 9.0 | 5.0 | 11.0 | 1.0 | 1.0 | 10/20 | 20 |
| D5 | FILL | 25.6 | 22.4 | 21.4 | 20.4 | 19.4 | 9.4 | 11.1 | 21.1 | 10.0 | 3.2 | 1.0 | 1.0 | 1.0 | 4/8 | 90 |
| D6 | OUTWASH | 25.4 | 21.5 | 9.5 | 8.5 | 7.5 | -2.5 | 23.0 | 33.0 | 10.0 | 3.9 | 12.0 | 1.0 | 1.0 | 10/20 | 20 |
| D7 | FILL | 24.9 | 21.3 | 21.3 | 20.3 | 19.3 | 12.3 | 8.7 | 15.7 | 7.0 | 3.6 | 0.0 | 1.0 | 1.0 | 4/8 | 90 |
| D8 | OUTWASH | 24.6 | 19.6 | 11.0 | 10.0 | 9.0 | -3.0 | 19.1 | 31.1 | 12.0 | 5.0 | 8.6 | 1.0 | 1.0 | 10/20 | 20 |
| D9 | OUTWASH | 24.6 | 22.6 | 11.6 | 10.6 | 9.6 | -2.4 | 18.2 | 30.2 | 12.0 | 2.0 | 11.0 | 1.0 | 1.0 | 10/20 | 20 |
| D10 | FILL | 24.7 | 21.1 | 21.1 | 20.1 | 19.1 | 14.1 | 8.8 | 13.8 | 5.0 | 3.6 | 0.0 | 1.0 | 1.0 | 4/8 | 90 |
| **MONITORING WELLS** | | | | | | | | | | | | | | | | |
| MW-41S | FILL | 27.6 | – | 26.1 | 24.6 | 24.1 | 19.1 | 5.5 | 10.5 | 5.0 | 1.5 | 0.0 | 1.5 | 0.5 | 10/20 | 10 |
| MW-41D | OUTWASH | 26.5 | – | 25.0 | 12.2 | 10.7 | 0.7 | 18.8 | 28.8 | 10.0 | 1.5 | 0.0 | 12.8 | 1.5 | 10/20 | 10 |
| MW-42S | FILL | 26.6 | – | 25.6 | 24.1 | 23.1 | 18.1 | 3.8 | 8.8 | 5.0 | 1.0 | 0.0 | 1.5 | 1.0 | 10/20 | 10 |
| MW-43S | FILL | 28.5 | – | 26.8 | 23.0 | 21.5 | 16.5 | 7.8 | 12.8 | 5.0 | 1.7 | 0.0 | 3.8 | 1.5 | 10/20 | 10 |
| MW-44S | FILL | 30.2 | – | 28.3 | 24.8 | 23.4 | 13.4 | 7.4 | 17.4 | 10.0 | 1.9 | 0.0 | 3.5 | 1.4 | 10/20 | 10 |
| MW-45S | FILL | 29.3 | – | 27.8 | 25.8 | 24.0 | 14.0 | 6.8 | 16.8 | 10.0 | 1.5 | 0.0 | 2.0 | 1.8 | 10/20 | 10 |
| MW-45D | OUTWASH | 29.8 | – | 28.3 | 7.3 | 5.2 | 0.2 | 25.6 | 30.6 | 5.0 | 1.5 | 0.0 | 21.0 | 2.1 | 10/20 | 10 |
| MW-46S | FILL | 24.4 | – | 23.0 | 20.5 | 18.0 | 8.0 | 7.5 | 17.5 | 10.0 | 1.4 | 0.0 | 2.5 | 2.5 | 10/20 | 10 |
| MW-46D | OUTWASH | 24.4 | – | 23.4 | 2.9 | 0.9 | -4.1 | 24.5 | 29.5 | 5.0 | 1.0 | 0.0 | 20.5 | 2.0 | 10/20 | 10 |
| MW-47S | FILL | 29.3 | – | 28.0 | 19.5 | 15.7 | 10.7 | 14.8 | 19.8 | 5.0 | 1.3 | 0.0 | 8.5 | 3.8 | 10/20 | 10 |
| MW-48D | OUTWASH | 26.2 | – | 24.7 | 5.7 | 4.7 | -5.3 | 22.5 | 32.5 | 10.0 | 1.5 | 0.0 | 19.0 | 1.0 | 10/20 | 10 |
| MW-49D | OUTWASH | 25.6 | – | 22.2 | 3.7 | 2.1 | -7.9 | 24.6 | 34.6 | 10.0 | 3.4 | 0.0 | 18.5 | 1.6 | 10/20 | 10 |
| MW-50D | OUTWASH | 24.5 | – | 23.0 | -1.0 | -4.1 | -9.1 | 29.6 | 34.6 | 5.0 | 1.5 | 0.0 | 24.0 | 3.1 | 10/20 | 10 |
| MW-51S | FILL | 24.8 | – | 23.2 | 19.7 | 18.8 | 8.8 | 6.9 | 16.9 | 10.0 | 1.6 | 0.0 | 3.5 | 0.9 | 10/20 | 10 |
| MW-52D | OUTWASH | 24.8 | – | 20.8 | -1.7 | -4.0 | -9.0 | 29.8 | 34.8 | 5.0 | 4.0 | 0.0 | 22.5 | 2.3 | 10/20 | 10 |

A. CONCRETE DIAMETER FOR A1 AND A2 IS 20 INCHES. CONCRETE DIAMETER FOR A3, A4, B1, B2 AND B7 IS 18 INCHES.
B. SLOT SIZES: 10 = 0.010-INCH OPENINGS. 20 = 0.020-INCH OPENINGS. 50 = 0.050-INCH OPENINGS. 90 = 0.090-INCH OPENING

NOTES:
1. REFER TO SHEETS 6.0 AND 7.0 FOR SURFACE COMPLETION IN BRICK AND PIP RUBBER. SURFACE COMPLETION IN ASPHALT AND GRASS TO MATCH EXISTING CONDITIONS PRIOR TO DRILLING. 12-INCH MONUMENT SKIRT LENGTH SHALL BE USED FOR MONITORING WELL COMPLETIONS.
2. WELL DETAILS BASED ON FIELD MEASUREMENTS.

Know what's below. Call before you dig.

| NO. | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

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GAS WORKS PARK SITE
PLAY AREA GROUNDWATER INFRASTRUCTURE INSTALLATION AS-BUILT
SEATTLE, WASHINGTON

**WELL CONSTRUCTION SCHEMATIC DETAILS**

| | |
|---|---|
| DRAWN: CFS | PROJ NO: 0186-846-01 |
| DESIGN: SMS | SHEET 9 OF 9 |
| CHECKED: CLB | DATE: 08.30.2017 |
| SHEET NO. 8.0 | |

AS-BUILT

Plotted: 08/29/2017 17:56 | cstickel P:\0\0186846\011\CAD\Task 1803 Play Area Action\Interim Action Design\R03 [Asbuilt]\0186846011_Sht 09_8.0 [Well Construction Schematic Details].dwg

# APPENDIX E
## Monitoring Well Installation Logs

## SOIL CLASSIFICATION CHART

| MAJOR DIVISIONS | | | SYMBOLS GRAPH | SYMBOLS LETTER | TYPICAL DESCRIPTIONS |
|---|---|---|---|---|---|
| COARSE GRAINED SOILS | GRAVEL AND GRAVELLY SOILS | CLEAN GRAVELS (LITTLE OR NO FINES) | | GW | WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES |
| | | | | GP | POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES |
| | MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE | GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES) | | GM | SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES |
| | | | | GC | CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES |
| MORE THAN 50% RETAINED ON NO. 200 SIEVE | SAND AND SANDY SOILS | CLEAN SANDS (LITTLE OR NO FINES) | | SW | WELL-GRADED SANDS, GRAVELLY SANDS |
| | | | | SP | POORLY-GRADED SANDS, GRAVELLY SAND |
| | MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE | SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES) | | SM | SILTY SANDS, SAND - SILT MIXTURES |
| | | | | SC | CLAYEY SANDS, SAND - CLAY MIXTURES |
| FINE GRAINED SOILS | SILTS AND CLAYS | LIQUID LIMIT LESS THAN 50 | | ML | INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY |
| | | | | CL | INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS |
| | | | | OL | ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY |
| MORE THAN 50% PASSING NO. 200 SIEVE | SILTS AND CLAYS | LIQUID LIMIT GREATER THAN 50 | | MH | INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS |
| | | | | CH | INORGANIC CLAYS OF HIGH PLASTICITY |
| | | | | OH | ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY |
| HIGHLY ORGANIC SOILS | | | | PT | PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS |

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

## ADDITIONAL MATERIAL SYMBOLS

| SYMBOLS GRAPH | SYMBOLS LETTER | TYPICAL DESCRIPTIONS |
|---|---|---|
| | AC | Asphalt Concrete |
| | CC | Cement Concrete |
| | CR | Crushed Rock/ Quarry Spalls |
| | SOD | Sod/Forest Duff |
| | TS | Topsoil |

### Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

### Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

### Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

### Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

### Laboratory / Field Tests

| | |
|---|---|
| %F | Percent fines |
| %G | Percent gravel |
| AL | Atterberg limits |
| CA | Chemical analysis |
| CP | Laboratory compaction test |
| CS | Consolidation test |
| DD | Dry density |
| DS | Direct shear |
| HA | Hydrometer analysis |
| MC | Moisture content |
| MD | Moisture content and dry density |
| Mohs | Mohs hardness scale |
| OC | Organic content |
| PM | Permeability or hydraulic conductivity |
| PI | Plasticity index |
| PP | Pocket penetrometer |
| SA | Sieve analysis |
| TX | Triaxial compression |
| UC | Unconfined compression |
| VS | Vane shear |

### Sheen Classification

| | |
|---|---|
| NS | No Visible Sheen |
| SS | Slight Sheen |
| MS | Moderate Sheen |
| HS | Heavy Sheen |

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

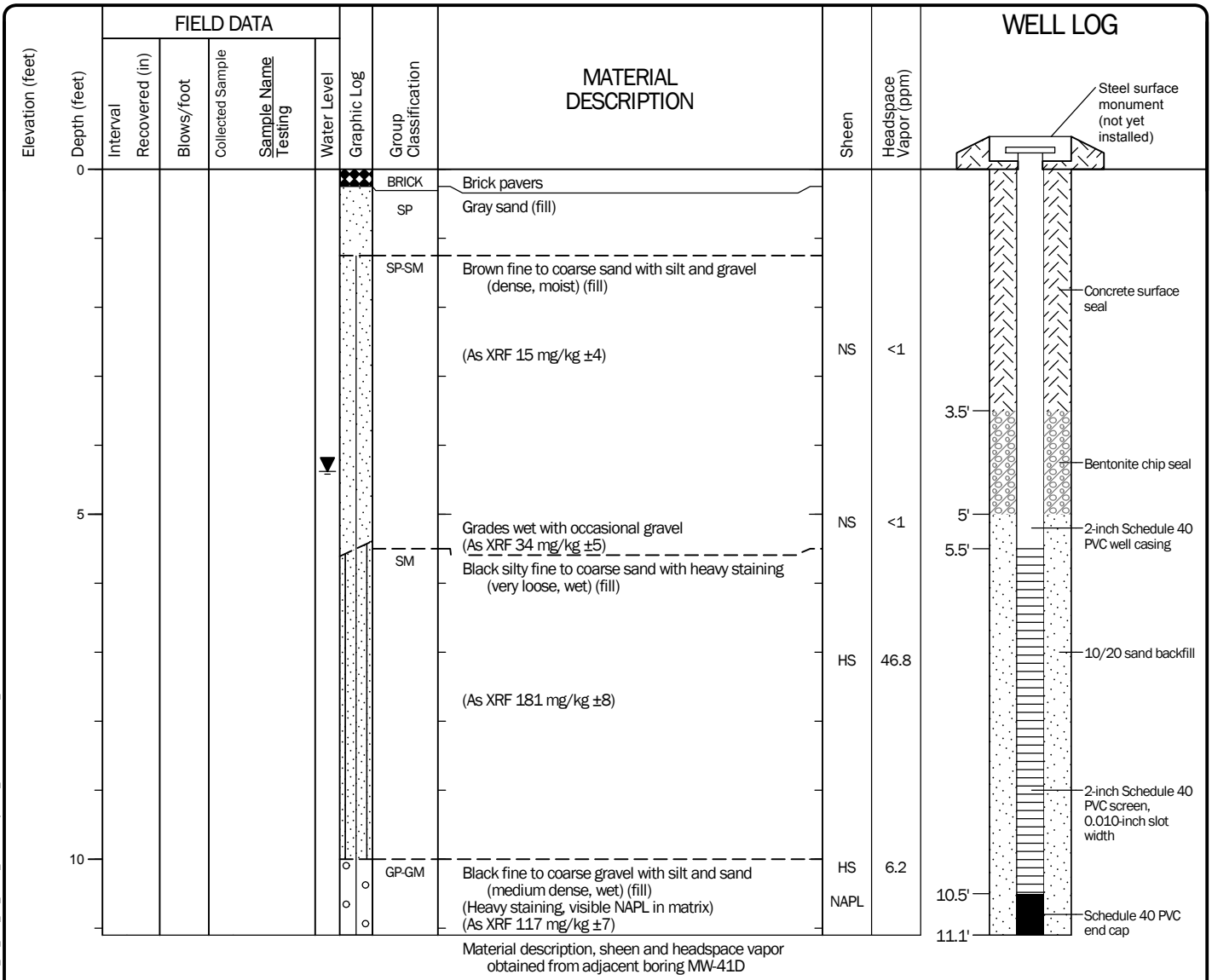
# Key to Exploration Logs

GeoEngineers

Figure E-1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/28/2017 End 3/28/2017 | Total Depth (ft) 11.1 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | | DOE Well I.D.: BKA 043<br>A 2 (in) well was installed on 3/28/2017 to a depth of 11.1 (ft). | |
| Surface Elevation (ft) Vertical Datum: Undetermined USACE (Locks) | | Top of Casing Elevation (ft): 32.27 | | Groundwater<br>Date Measured: 4/24/2017<br>Depth to Water (ft): 4.38<br>Elevation (ft): | |
| Easting (X) 1270626.07<br>Northing (Y) 239123.85 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well temporarily protected by a 16-inch square, 12-inch deep, covered wood form per drawing Sheet 6.0 (Stage 1).
Monitoring well developed by alternately pumping and surging; 14 gallons removed.




Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-41S

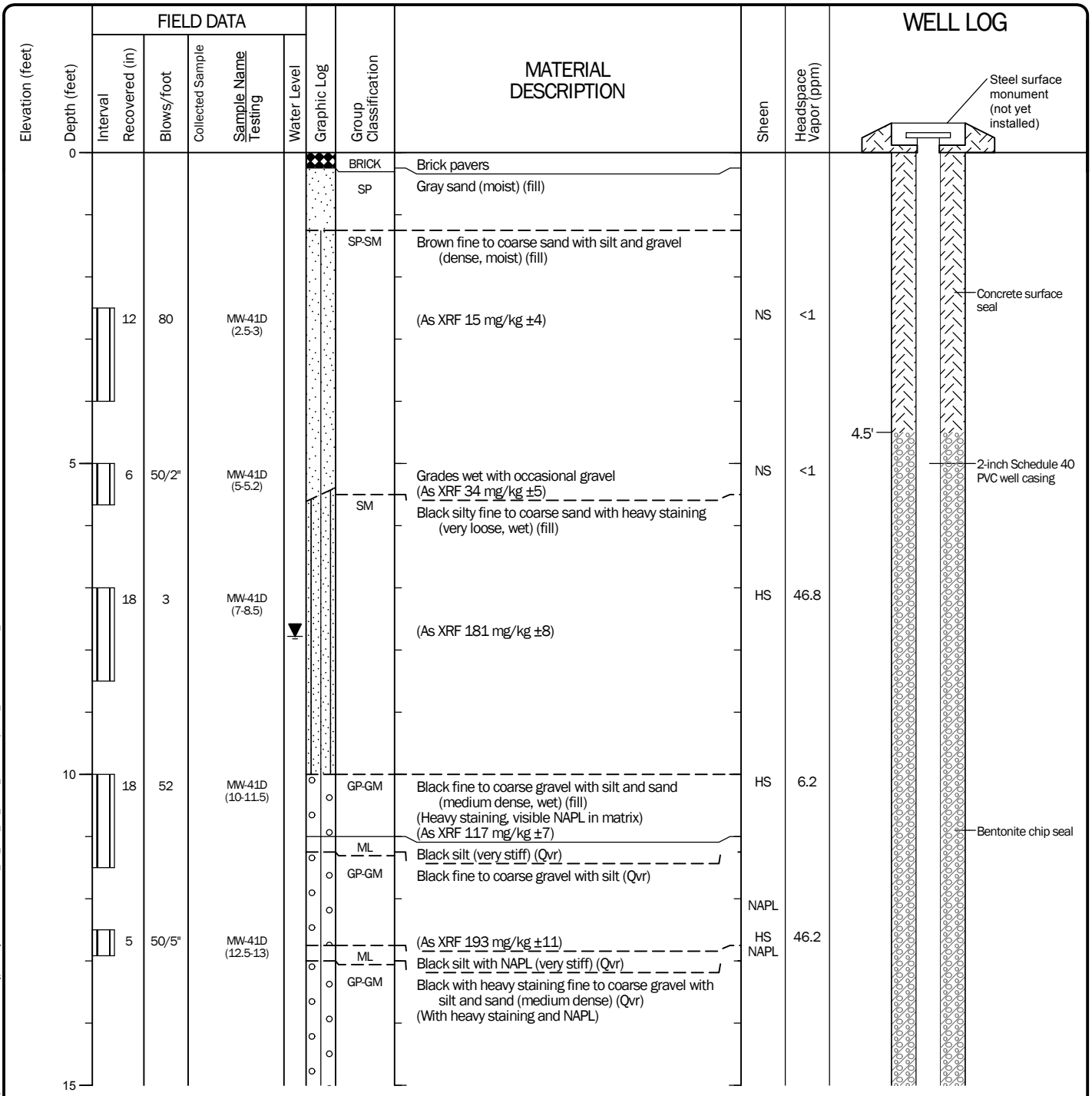
GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-2
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/28/2017 End 3/28/2017 | Total Depth (ft) 29.4 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | | DOE Well I.D.: BKA 042<br>A 2 (in) well was installed on 3/28/2017 to a depth of 29.4 (ft). | |
| Surface Elevation (ft) Vertical Datum: Undetermined USACE (Locks) | | Top of Casing Elevation (ft): 32.44 | | Groundwater<br>Date Measured: 4/24/2017<br>Depth to Water (ft): 7.78<br>Elevation (ft): | |
| Easting (X) 1270628.03<br>Northing (Y) 239126.07 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well temporarily protected by a 16-inch square, 12-inch deep, covered wood form per drawing Sheet 6.0 (Stage 1).
Monitoring well developed by alternately pumping and surging; 12 gallons removed.



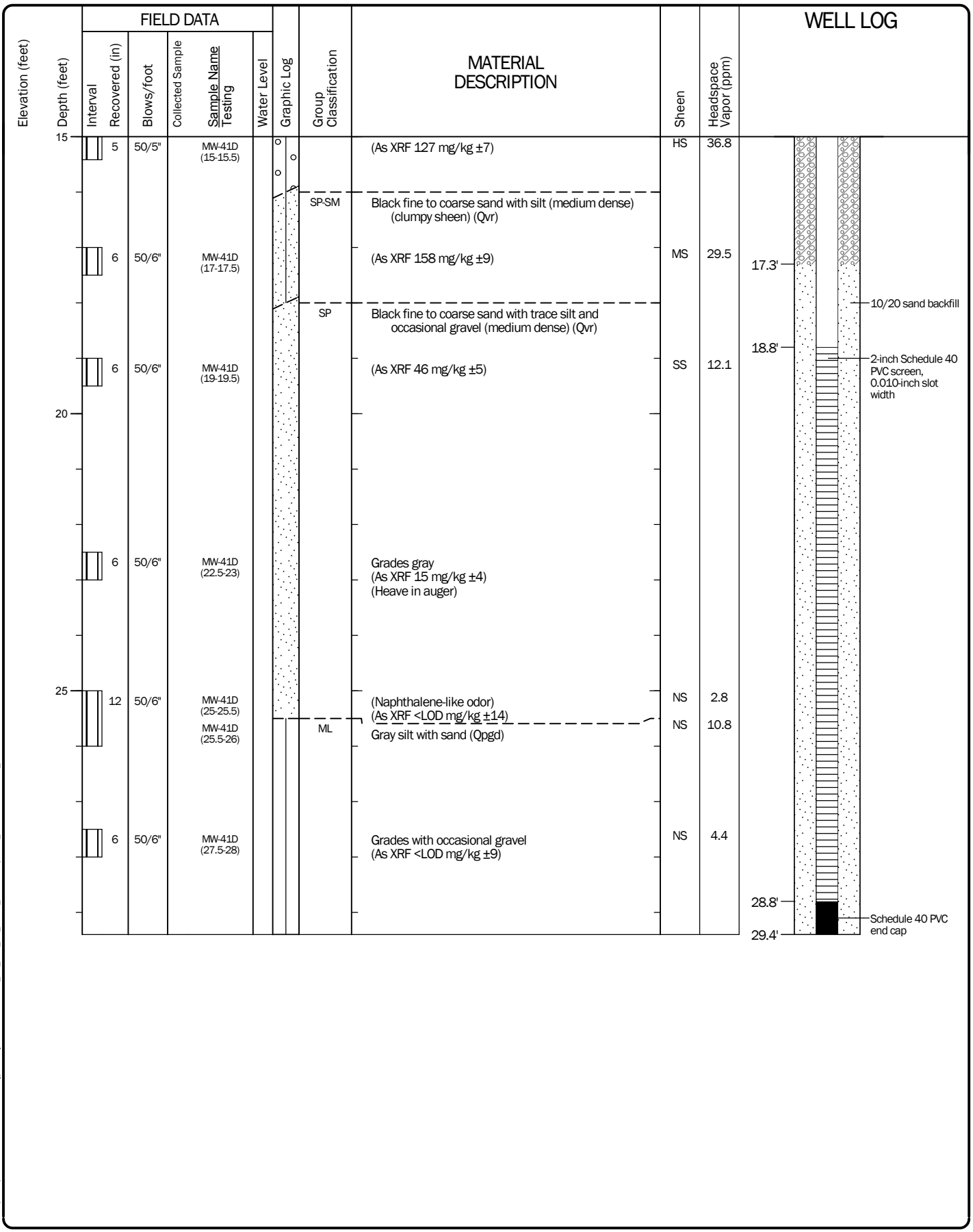

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-41D

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-3
Sheet 1 of 2




## Log of Monitoring Well MW-41D (continued)

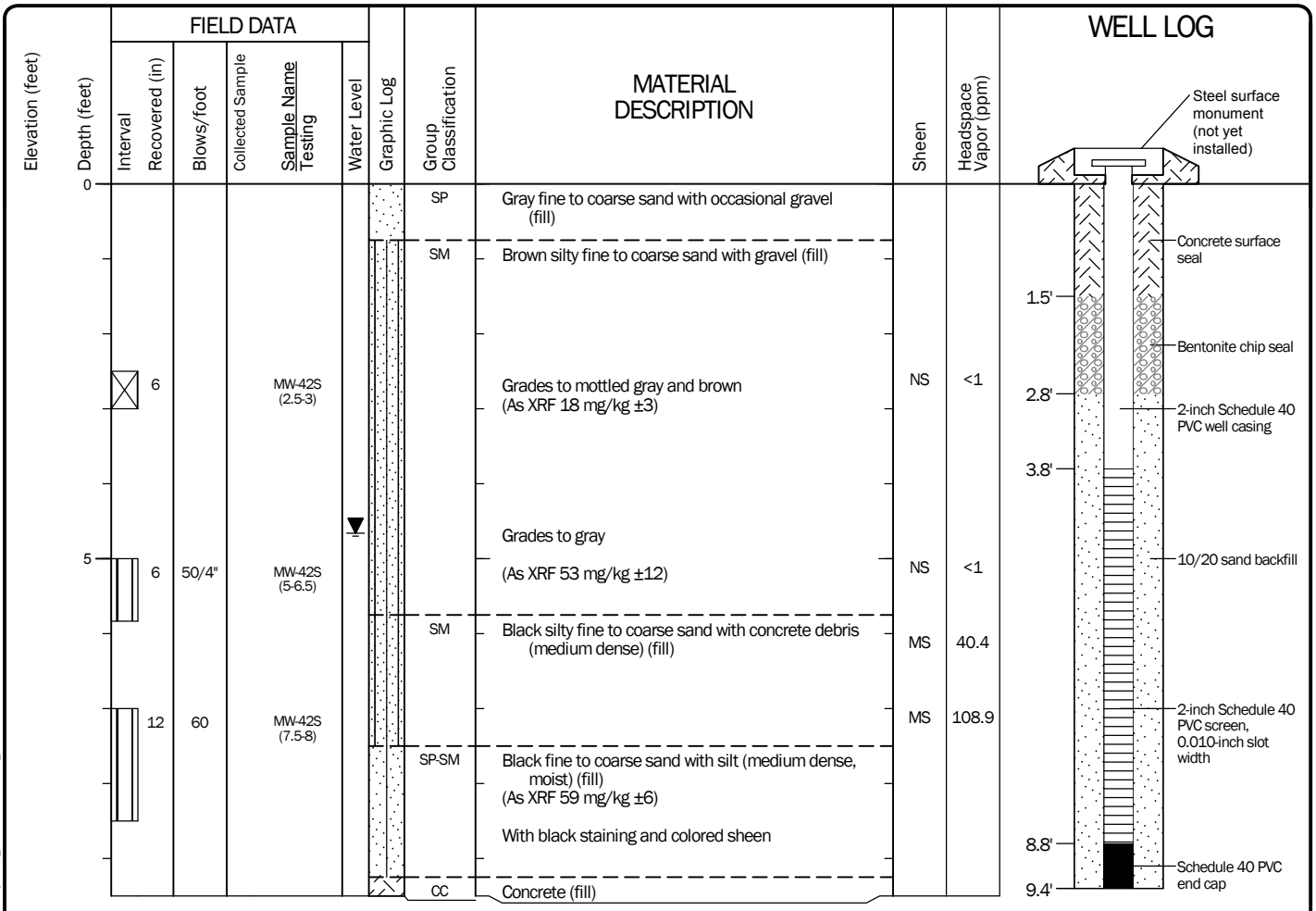
GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-3
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/27/2017 End 3/27/2017 | Total Depth (ft) 9.5 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | | DOE Well I.D.: BKA 040<br>A 2 (in) well was installed on 3/27/2017 to a depth of 9.4 (ft). | |
| Surface Elevation (ft) Vertical Datum: Undetermined USACE (Locks) | | Top of Casing Elevation (ft): 36.10 | | Groundwater<br>Date Measured: 4/24/2017<br>Depth to Water (ft): 4.66<br>Elevation (ft): | |
| Easting (X) 1270667.56<br>Northing (Y) 239153.02 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well temporarily protected by a 16-inch-diameter Schedule 80 PVC covered protective pipe, per drawing Sheet 7.0 (Stage 1).
Monitoring well developed by alternately pumping and surging; 32 gallons removed.




Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-42S

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-4
Sheet 1 of 1

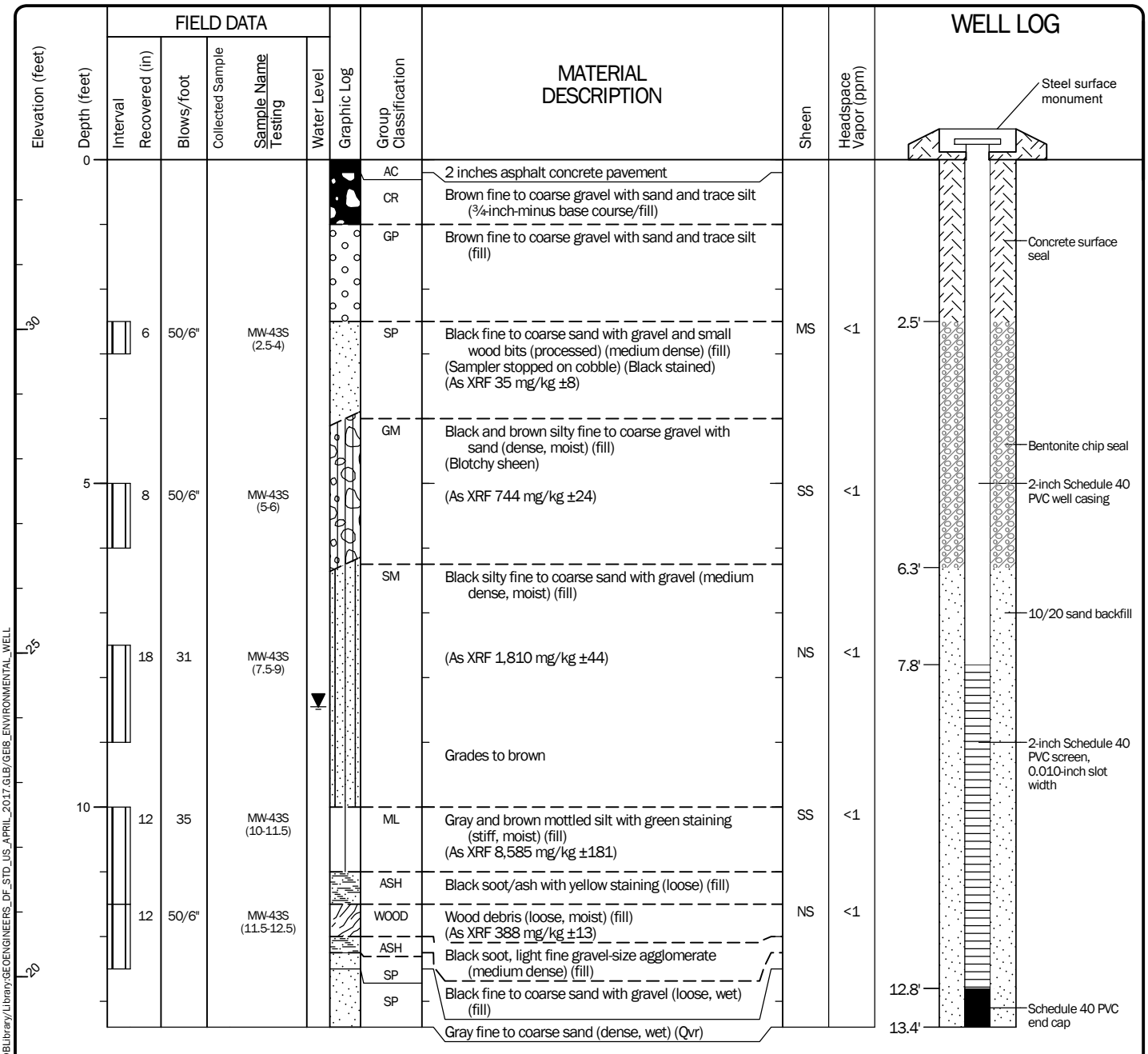
| Drilled | Start | End | Total Depth (ft) | | Logged By | PDR | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4/12/2017 | 4/12/2017 | | 13.4 | Checked By | SBS | Cascade Drilling | | | 8¼-inch OD Hollow-stem Auger |

| | | | |
|---|---|---|---|
| Hammer Data | Wire Release 140 (lbs) / 30 (in) Drop | Drilling Equipment | CME 55 |
| Surface Elevation (ft) Vertical Datum | 32.62 USACE (Locks) | Top of Casing Elevation (ft) | 32.28 |
| Easting (X) Northing (Y) | 1270677.38 239087.49 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 072
A 2 (in) well was installed on 4/12/2017 to a depth of 13.4 (ft).

| Groundwater Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 8.45 | 23.83 |

Notes: Monitoring well completed with an 8-inch-diameter steel flush-mounted monument.
Monitoring well developed by alternately pumping and surging; 11 gallons removed.




Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-43S

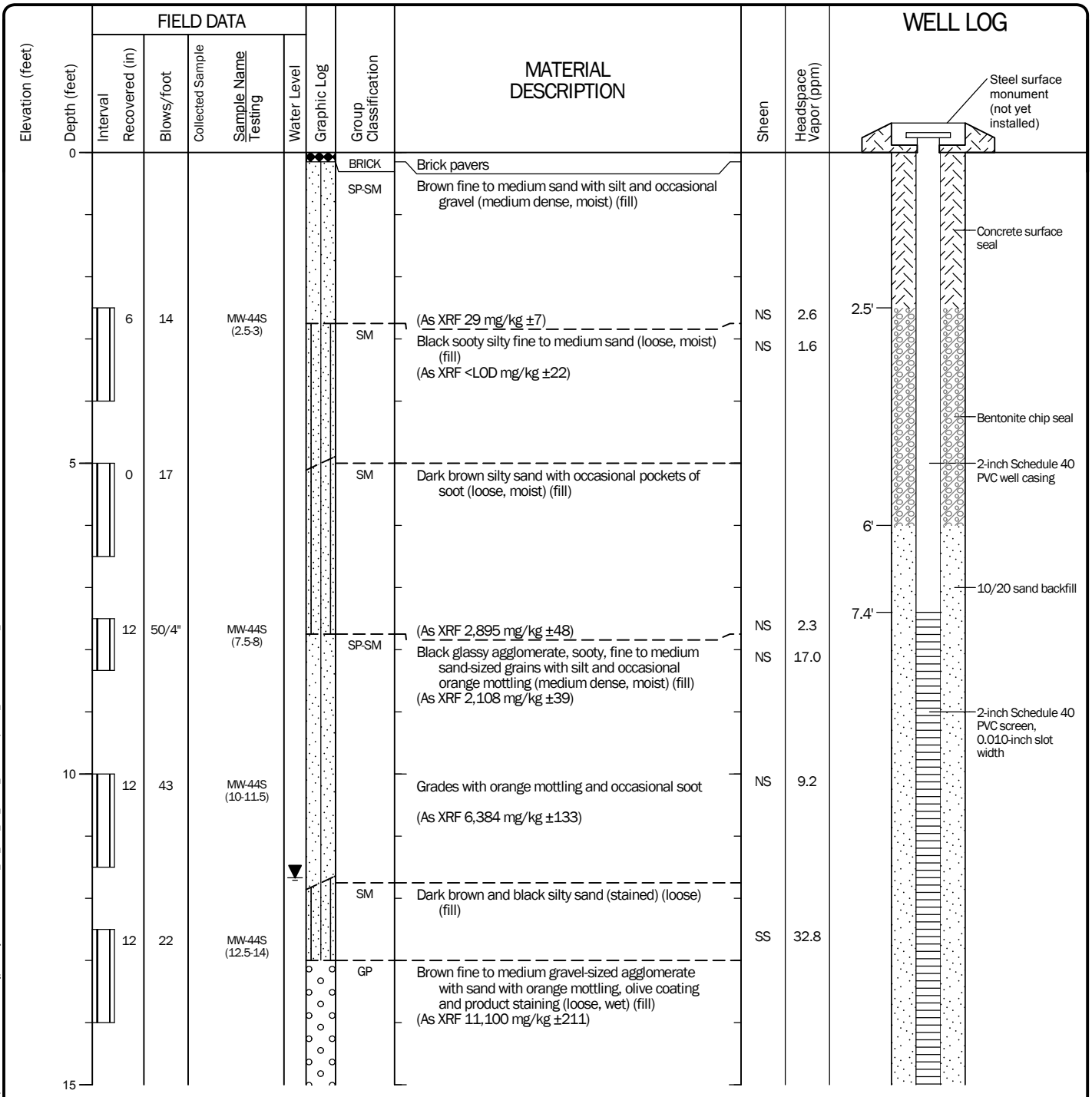
GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-5
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 4/14/2017 End 4/14/2017 | Total Depth (ft) 19 | Logged By CDV Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | DOE Well I.D.: BKA 056<br>A 2 (in) well was installed on 4/14/2017 to a depth of 18.0 (ft). | | |
| Surface Elevation (ft) Vertical Datum: Undetermined USACE (Locks) | | Top of Casing Elevation (ft): 33.54 | Groundwater<br>Date Measured: 4/24/2017<br>Depth to Water (ft): 11.67<br>Elevation (ft): | | |
| Easting (X) 1270720.72<br>Northing (Y) 239159.31 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well temporarily protected by a 16-inch square, 12-inch deep, covered wood form per drawing Sheet 6.0 (Stage 1).
Monitoring well developed by alternately pumping and surging; 14 gallons removed.



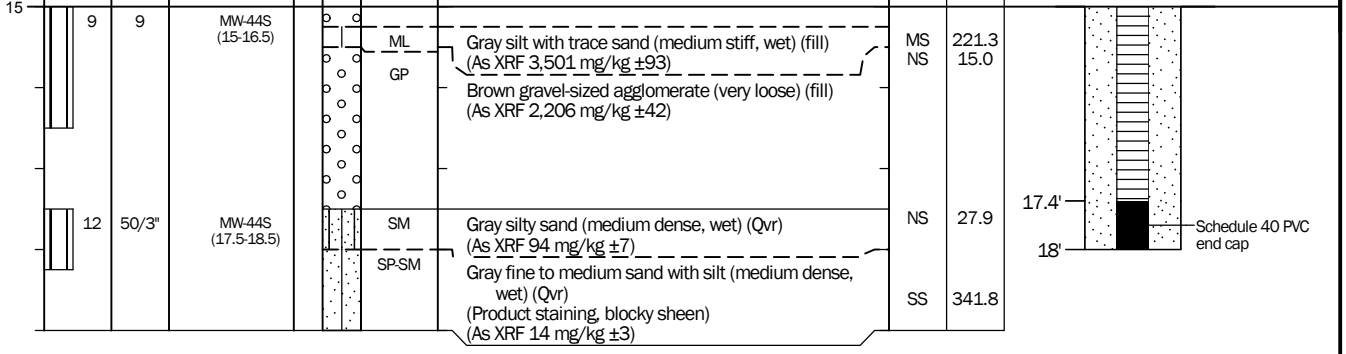

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-44S

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-6
Sheet 1 of 2




## Log of Monitoring Well MW-44S (continued)

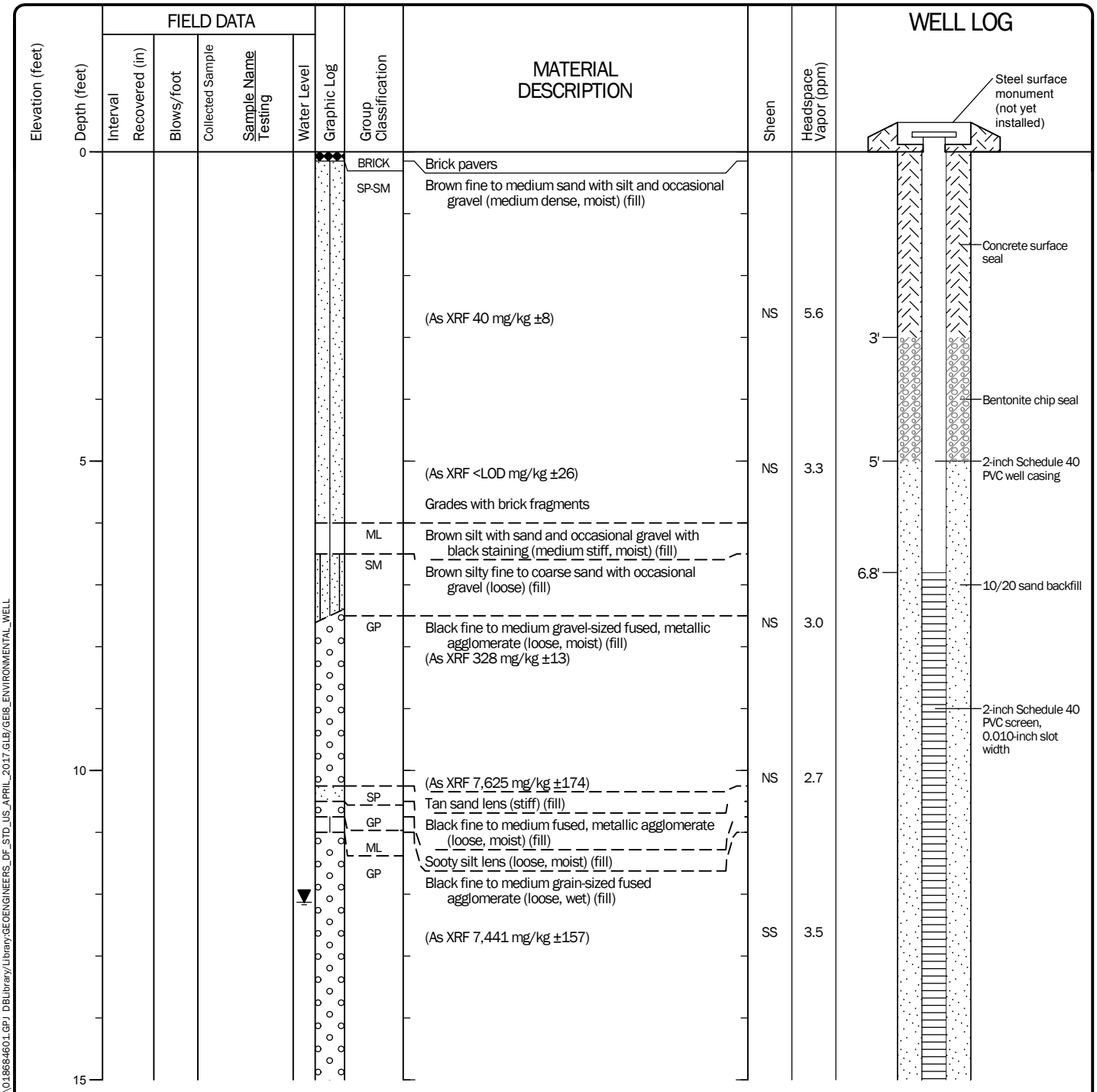
GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-6
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/31/2017 End 3/31/2017 | Total Depth (ft) 17.5 | Logged By CDV Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | | DOE Well I.D.: BKA 051<br>A 2 (in) well was installed on 3/31/2017 to a depth of 17.4 (ft). | |
| Surface Elevation (ft) Vertical Datum: Undetermined USACE (Locks) | | Top of Casing Elevation (ft): 33.99 | | Groundwater<br>Date Measured: 4/24/2017<br>Depth to Water (ft): 12.13<br>Elevation (ft): | |
| Easting (X) 1270725.64<br>Northing (Y) 239142.50 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well temporarily protected by a 16-inch square, 12-inch deep, covered wood form per drawing Sheet 6.0 (Stage 1).
Monitoring well developed by alternately pumping and surging; 29 gallons removed.



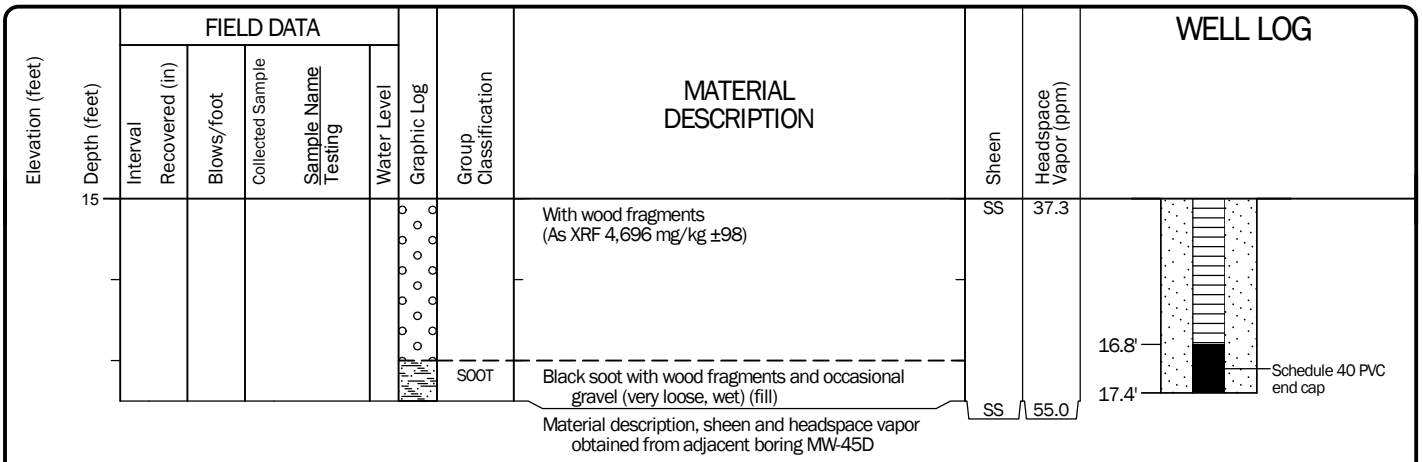

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-45S

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-7
Sheet 1 of 2




## Log of Monitoring Well MW-45S (continued)

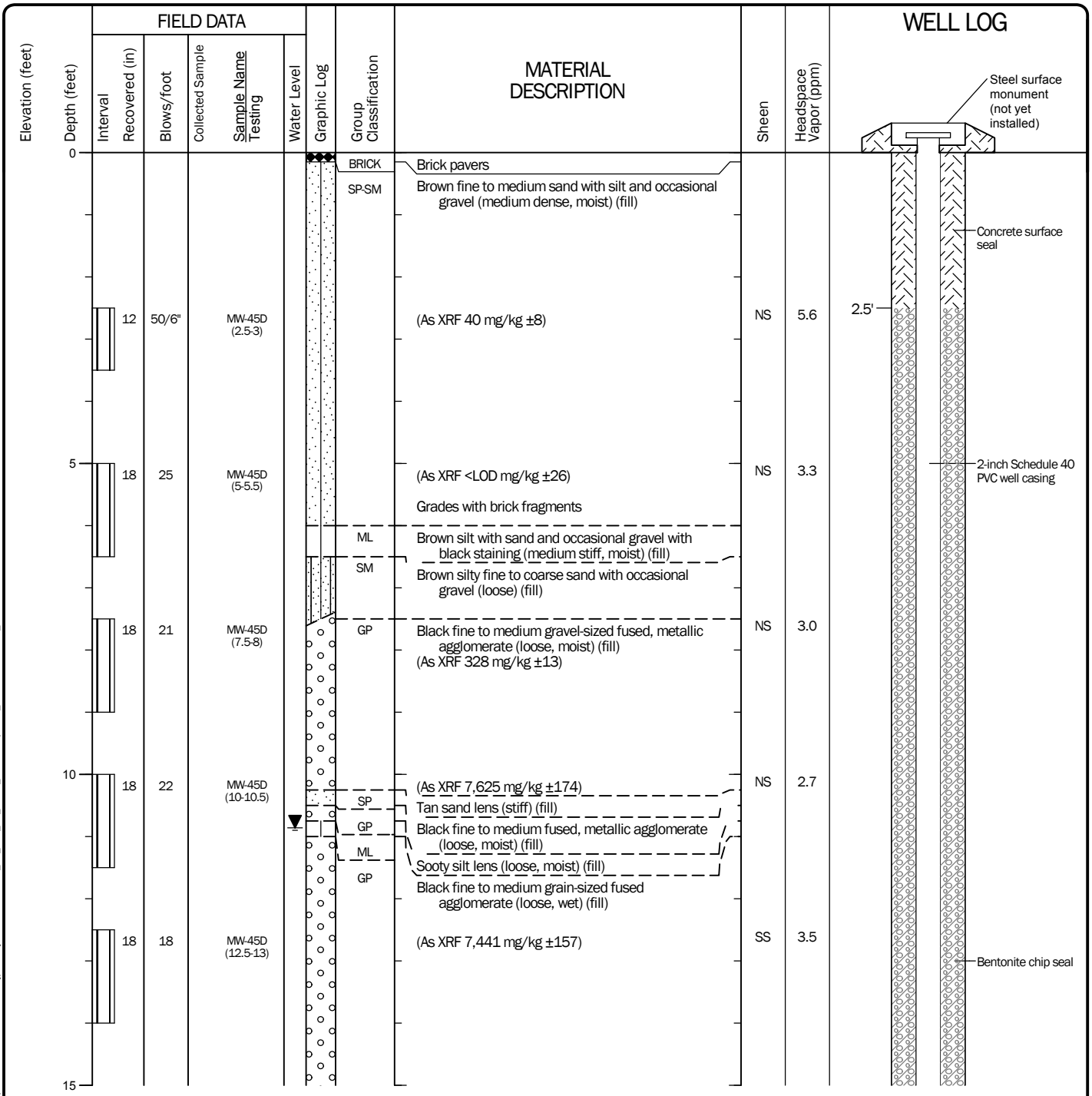
GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-7
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/31/2017 End 3/31/2017 | Total Depth (ft) 31.2 | Logged By CDV Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | DOE Well I.D.: BKA 050<br>A 2 (in) well was installed on 3/31/2017 to a depth of 31.2 (ft). | | |
| Surface Elevation (ft) Vertical Datum: Undetermined USACE (Locks) | | Top of Casing Elevation (ft): 33.25 | Groundwater<br>Date Measured: 4/24/2017<br>Depth to Water (ft): 10.86<br>Elevation (ft): | | |
| Easting (X) 1270727.34<br>Northing (Y) 239138.49 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well temporarily protected by a 16-inch square, 12-inch deep, covered wood form per drawing Sheet 6.0 (Stage 1).
Monitoring well developed by alternately pumping and surging; 37 gallons removed.




Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-45D

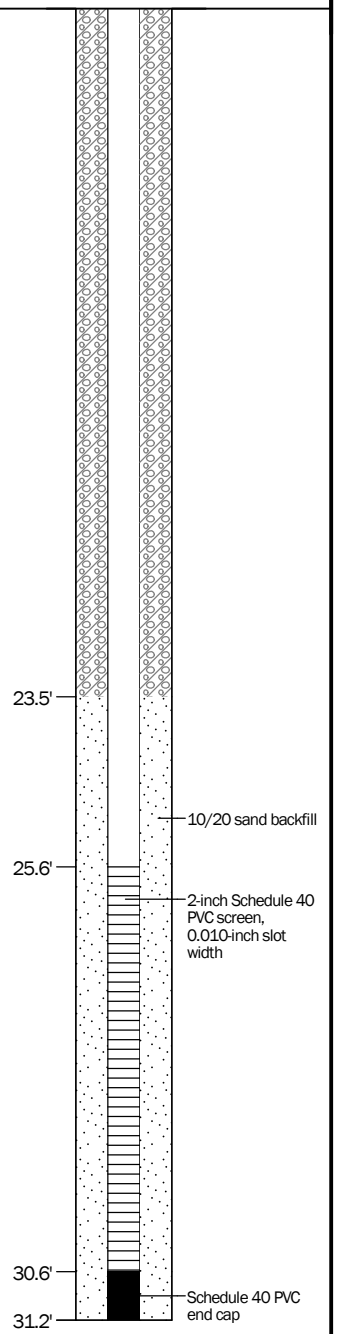
GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-8
Sheet 1 of 2

| Elevation (feet) | Depth (feet) | FIELD DATA: Interval | Recovered (in) | Blows/foot | Collected Sample | Sample Name Testing | Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 15 | | 18 | 35 | | MW-45D (15-15.5) | | | | With wood fragments (As XRF 4,696 mg/kg ±98) | SS | 37.3 |
| | | | | | | | | | SOOT | Black soot with wood fragments and occasional gravel (very loose, wet) (fill) (Naphthalene-like odor) (As XRF 1,402 mg/kg ±35) | SS | 55.0 |
| | | | 18 | 13 | | MW-45D (17.5-18) | | | ML | | NS | 72.9 |
| | | | | | | MW-45D (18-18.5) | | | | Gray silt with trace fibrous organic matter/wood (medium stiff, wet) (Qvr) (As XRF 437 mg/kg ±13) | | |
| | | | 12 | 50/6" | | MW-45D (19.5-20) | | | | | NS | 23.5 |
| | 20 | | | | | | | | | Brown fibrous wood from 19.3 to 19.4 feet (As XRF 398 mg/kg ±14) | | |
| | | | | | | | | | | Grades very stiff, organic matter grades out | | |
| | | | 12 | 50/6" | | MW-45D (22.5-23.5) | | | | | NS | 20.9 |
| | | | | | | | | | SP-SM | Gray fine to medium sand with silt and occasional gravel (medium dense, wet) (Qva) (As XRF 23 mg/kg ±4) | | |
| | 25 | | 6 | 50/6" | | MW-45D (25-25.5) | | | | Grades with gravel (As XRF 29 mg/kg ±4) | NS | 7.0 |
| | | | 6 | 50/6" | | MW-45D (27.5-28) | | | | (As XRF 16 mg/kg ±4) | NS | 10.8 |
| | 30 | | 12 | 50/6" | | MW-45D (30-30.5) | | | | Grades to dense (Heaving sand) (As XRF <LOD mg/kg ±10) | NS | 3.4 |

WELL LOG






## Log of Monitoring Well MW-45D (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

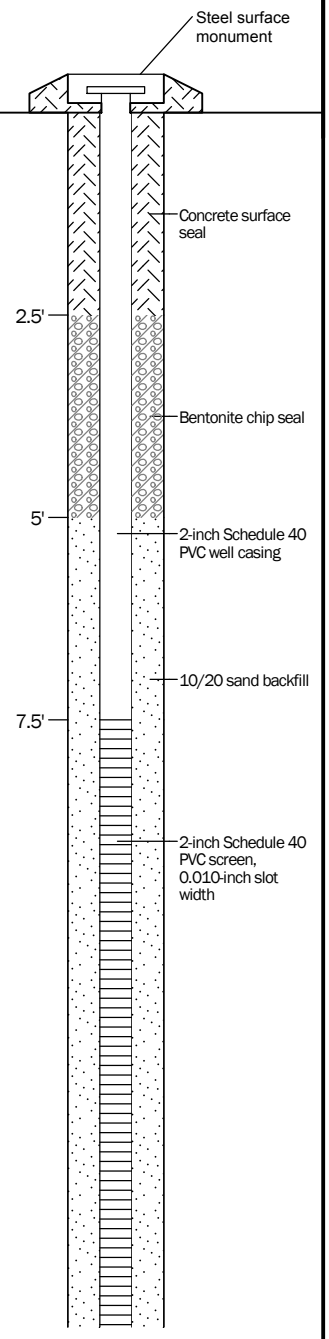
Figure E-8
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 4/13/2017 End 4/13/2017 | Total Depth (ft) 18.1 | Logged By CDV Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | | DOE Well I.D.: BKA 078<br>A 2 (in) well was installed on 4/13/2017 to a depth of 18.1 (ft). | |
| Surface Elevation (ft) Vertical Datum: 28.66 USACE (Locks) | | Top of Casing Elevation (ft): 28.09 | | Groundwater Date Measured: 4/24/2017 | Depth to Water (ft): 6.18 / Elevation (ft): 21.9 |
| Easting (X) 1270760.23<br>Northing (Y) 239143.44 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well completed with an 8-inch-diameter steel flush-mounted monument.
Monitoring well developed by alternately pumping and surging; 8 gallons removed.

| Elevation (feet) | Depth (feet) | Interval Recovered (in) | Blows/foot | Collected Sample | Sample Name Testing | Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | | AC | Asphalt concrete pavement | | |
| | | | | | | | | CR | ¾-inch-minus base course | | |
| | | | | | | | | SM | Brown silty fine to coarse sand with gravel (fill) | | |
| | | | | | | | | SP-SM | Black fine to coarse sand with silt, soot and brick fragments (medium dense, moist) (fill) | | |
| | | | | | | | | | (As XRF 89 mg/kg ±14) | NS | 6.8 |
| | | | | | | | | SP | Black-brown fine to coarse sand-sized agglomerate with soot and wood pieces (medium dense, moist) (fill) | | |
| -25 | | | | | | | | | | | |
| | 5 | | | | | | | SP | Brown-black fine to coarse sand-sized vesicular agglomerate (very loose, moist) (fill) | | |
| | | | | | | | | | (As XRF <LOD mg/kg ±26) | SS | 5.6 |
| | | | | | | ▼ | | | (Platy sheen) | | |
| | | | | | | | | SP | Black and brown fine to coarse sand-sized agglomerate, vesicular pieces, some brick fragments (loose, moist) (fill) | | |
| | | | | | | | | | (As XRF 49 mg/kg ±9) | | |
| | | | | | | | | | (Sheen 60% small blebs) | HS | 131.2 |
| -20 | | | | | | | | | | | |
| | 10 | | | | | | | SP | Black cinders with fine to coarse sand-sized vesicular agglomerate and some sand (loose, wet) (fill) | | |
| | | | | | | | | | (As XRF 31 mg/kg ±6) | | |
| | | | | | | | | | (Sheen 20% rainbow color) | MS | 73.8 |
| | | | | | | | | SP | Black-brown fine to coarse sand-sized agglomerate with coarse gravel-sized fused agglomerate (loose, wet) (fill) | | |
| | | | | | | | | | (As XRF 71 mg/kg ±6) | | |
| -15 | | | | | | | | | | SS | 19.7 |
| | 15 | | | | | | | SP | Black fine to coarse sand-sized agglomerate (loose, | | |

WELL LOG



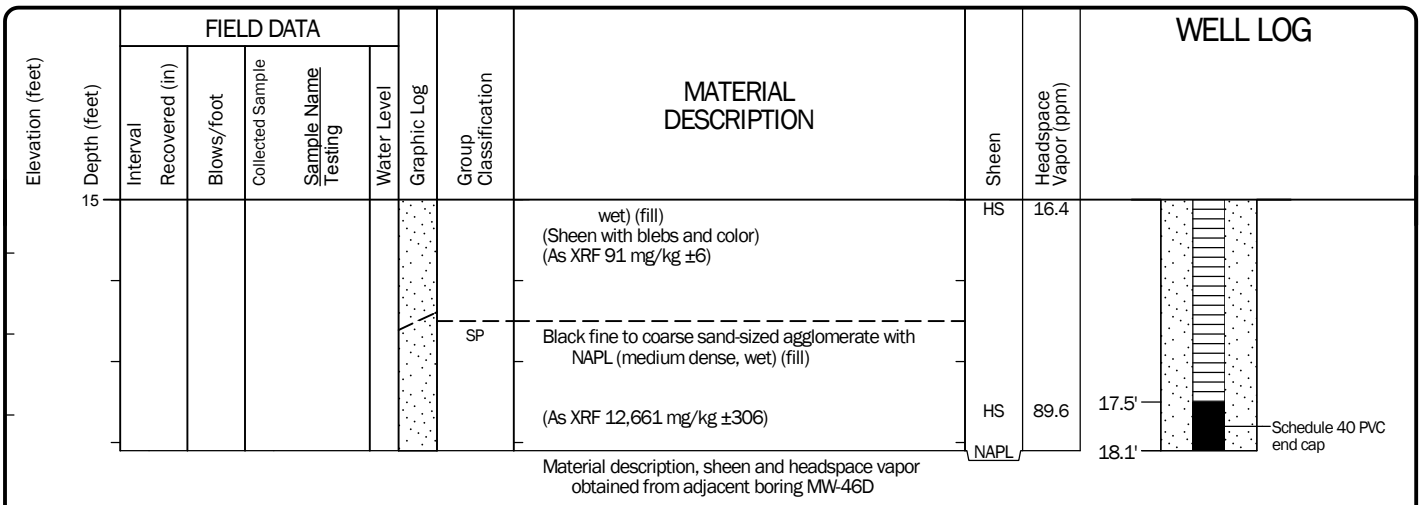

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-46S

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-9
Sheet 1 of 2




## Log of Monitoring Well MW-46S (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-9
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/13/2017 | 4/13/2017 | 30.5 | PDR | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger |

| | | | |
|---|---|---|---|
| Hammer Data | Wire Release 140 (lbs) / 30 (in) Drop | Drilling Equipment | CME 55 |
| Surface Elevation (ft) Vertical Datum | 28.65 USACE (Locks) | Top of Casing Elevation (ft) | 28.17 |
| Easting (X) Northing (Y) | 1270760.61 239148.59 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 074
A 2 (in) well was installed on 4/13/2017 to a depth of 30.1 (ft).

| Groundwater Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 5.9 | 22.3 |

Notes: Monitoring well completed with an 8-inch-diameter steel flush-mounted monument.
Monitoring well developed by alternately pumping and surging; 13 gallons removed.

| Elevation (feet) | Depth (feet) | Interval | Recovered (in) | Blows/foot | Collected Sample | Sample Name Testing | Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | | | AC | Asphalt concrete pavement | | |
| | | | | | | | | | CR | ¾-inch-minus base course | | |
| | | | | | | | | | SM | Brown silty fine to coarse sand with gravel (fill) | | |
| | | | | | | | | | SP-SM | Black fine to coarse sand with silt, soot and brick fragments (medium dense, moist) (fill) | | |
| | | | 18 | 37 | | MW-46D (2.5-4) | | | SP | (As XRF 89 mg/kg ±14)<br>Black-brown fine to coarse sand-sized agglomerate with soot and wood pieces (medium dense, moist) (fill) | NS | 6.8 |
| -25 | | | | | | | | | SP | Brown-black fine to coarse sand-sized vesicular agglomerate (very loose, moist) (fill)<br>(As XRF <LOD mg/kg ±26) | | |
| | 5 | | 18 | 16 | | MW-46D (5-6) | | | | (Platy sheen) | SS | 5.6 |
| | | | | | | | | | SP | Black and brown fine to coarse sand-sized agglomerate, vesicular pieces, some brick fragments (loose, moist) (fill)<br>(As XRF 49 mg/kg ±9) | | |
| | | | 18 | 19 | | MW-46D (7.5-9) | | | | (Sheen 60% small blebs) | HS | 131.2 |
| -20 | | | | | | | | | SP | Black cinders with fine to coarse sand-sized vesicular agglomerate and some sand (loose, wet) (fill)<br>(As XRF 31 mg/kg ±6) | | |
| | 10 | | 18 | 11 | | MW-46D (10-11.5) | | | | (Sheen 20% rainbow color) | MS | 73.8 |
| | | | | | | | | | SP | Black-brown fine to coarse sand-sized agglomerate with coarse gravel-sized fused agglomerate (loose, wet) (fill)<br>(As XRF 71 mg/kg ±6) | | |
| | | | 18 | 20 | | MW-46D (12.5-14) | | | | | SS | 19.7 |
| -15 | | | | | | | | | SP | Black fine to coarse sand-sized agglomerate (loose, | | |
| | 15 | | | | | | | | | | | |

WELL LOG

Steel surface monument
Concrete surface seal
2.5'
2-inch Schedule 40 PVC well casing
Bentonite chip seal

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

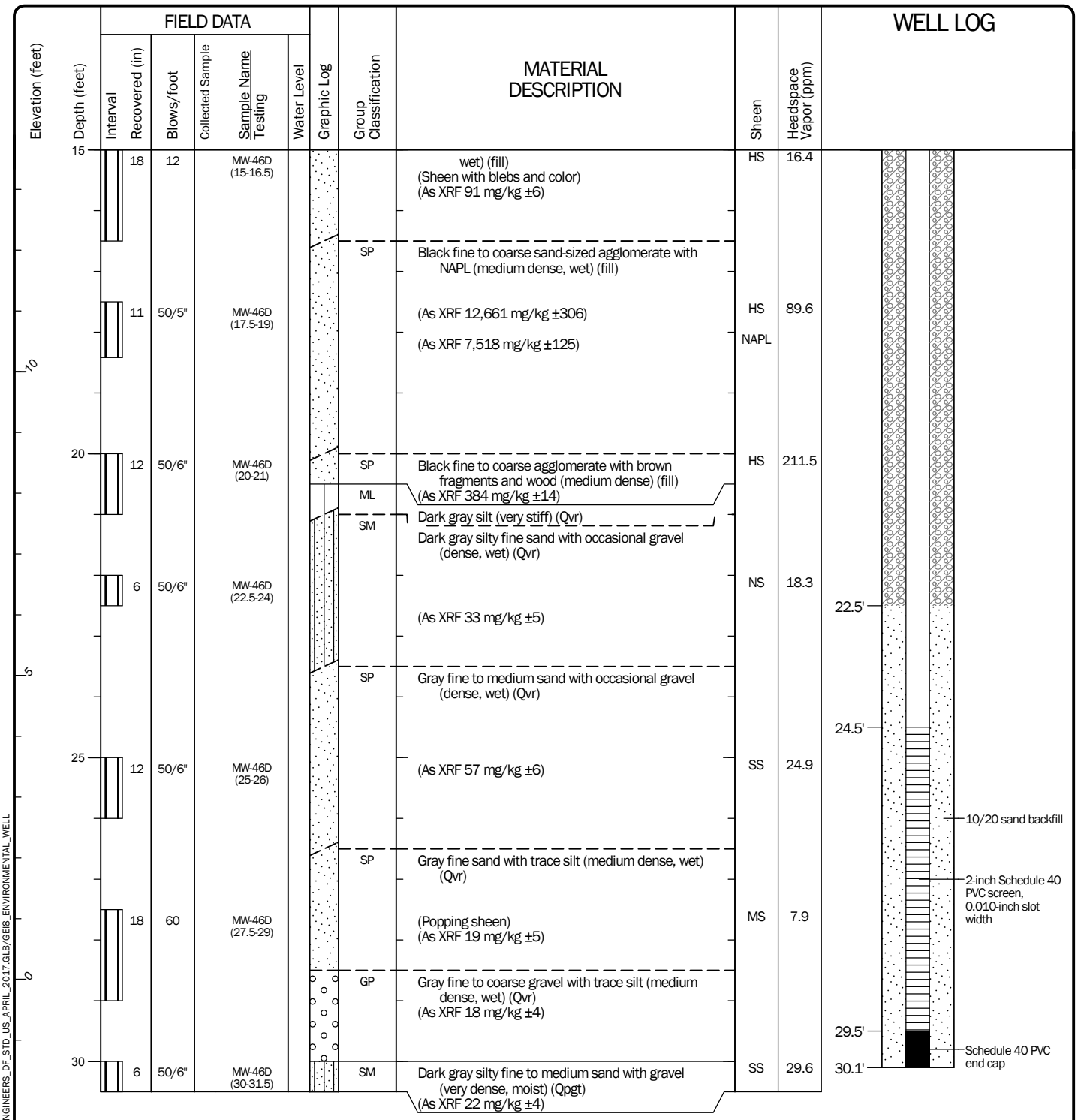
# Log of Monitoring Well MW-46D

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-10
Sheet 1 of 2

Date:9/14/17 Path:P:\0\0186846\GINT\018684601.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_APRIL_2017.GLB/GEI8_ENVIRONMENTAL_WELL




## Log of Monitoring Well MW-46D (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-10
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled | Start 4/4/2017 | End 4/4/2017 | Total Depth (ft) 20.7 | Logged By CDV<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger |

| | | | |
|---|---|---|---|
| Hammer Data | Wire Release<br>140 (lbs) / 30 (in) Drop | Drilling Equipment | CME 55 |
| Surface Elevation (ft)<br>Vertical Datum | Undetermined<br>USACE (Locks) | Top of Casing Elevation (ft) | 33.05 |
| Easting (X)<br>Northing (Y) | 1270743.9<br>239111.94 | Horizontal Datum | WA State Plane North<br>NAD83 (feet) |

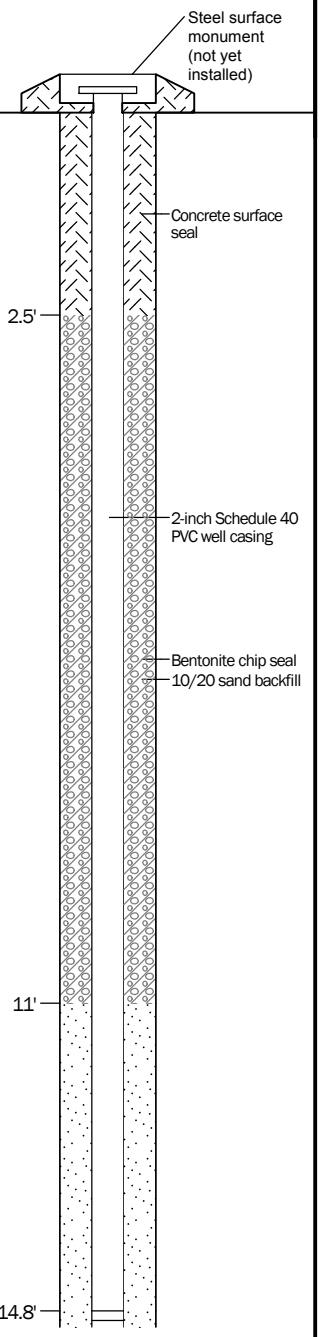
DOE Well I.D.: BKA 057
A 2 (in) well was installed on 4/4/2017 to a depth of 20.4 (ft).

| Groundwater<br>Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 11.12 | |

Notes: Monitoring well temporarily protected by a 16-inch square, 12-inch deep, covered wood form per drawing Sheet 6.0 (Stage 1).
Monitoring well developed by alternately pumping and surging; 11 gallons removed.

| Elevation (feet) | Depth (feet) | Interval Recovered (in) | Blows/foot | Collected Sample / Sample Name Testing | Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | BRICK | Brick pavers | | |
| | | | | | | | SP | Light brown fine to coarse sand (medium dense, moist) (fill) | | |
| | | 6 | 50/6" | MW-47S (2.5) | | | | (As XRF 14 mg/kg ±4) | NS | 2.4 |
| | 5 | 11 | 50/5" | MW-47S (5.0) | | | SM | Brown silty fine to coarse sand with soot lenses and occasional gravel (medium dense, moist) (fill) (As XRF 39 mg/kg ±5) | NS | 1.9 |
| | | 12 | 35 | MW-47S (8.0) | | | GP | Black fine to medium gravel-sized fused vesicular agglomerate, glassy, multi-colored (tan and orange) (medium dense, moist) (fill) (As XRF <LOD mg/kg ±10) | NS | 2.1 |
| | 10 | 6 | 35 | MW-47S (10.5) | ▼ | | | (As XRF 18 mg/kg ±4) | NS | 1.9 |
| | | 12 | 9 | MW-47S (13) | | | GP | Black fine to coarse gravel-sized fused agglomerate with occasional orange coarse-grained gravel-sized agglomerate (very loose, wet) (fill) (As XRF 28 mg/kg ±5) | NS | 8.8 |
| | 15 | | | | | | | | | |

WELL LOG



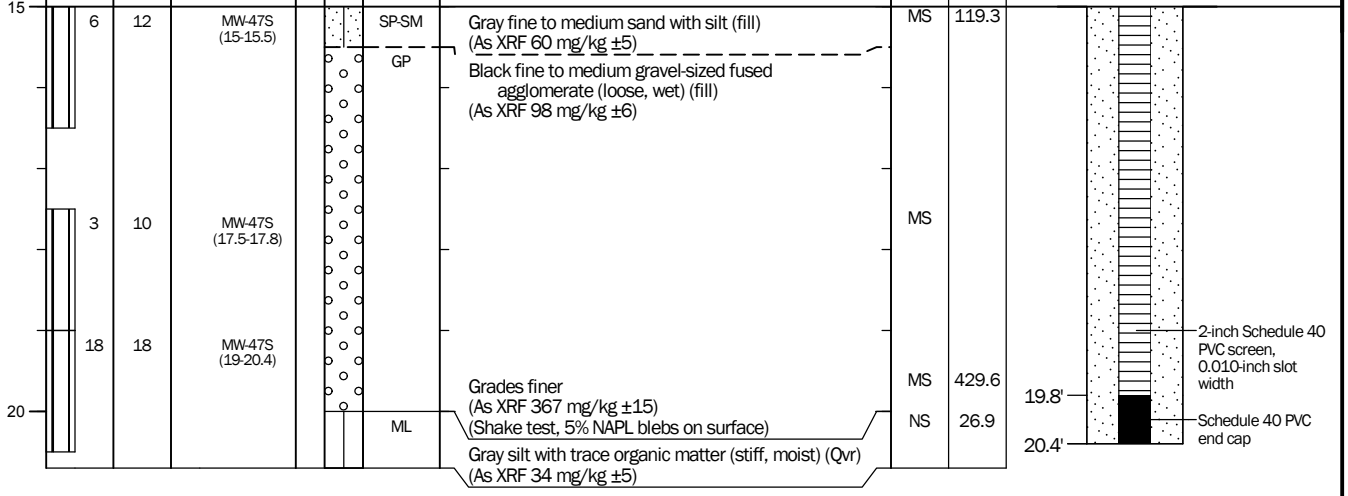

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-47S

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-11
Sheet 1 of 2




## Log of Monitoring Well MW-47S (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-11
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/13/2017 | 4/13/2017 | 33.1 | PDR | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger |

| | | | |
|---|---|---|---|
| Hammer Data | Wire Release 140 (lbs) / 30 (in) Drop | Drilling Equipment | CME 55 |
| Surface Elevation (ft) Vertical Datum | 27.27 USACE (Locks) | Top of Casing Elevation (ft) | 30.05 |
| Easting (X) Northing (Y) | 1270756.15 239081.86 | Horizontal Datum | WA State Plane North NAD83 (feet) |

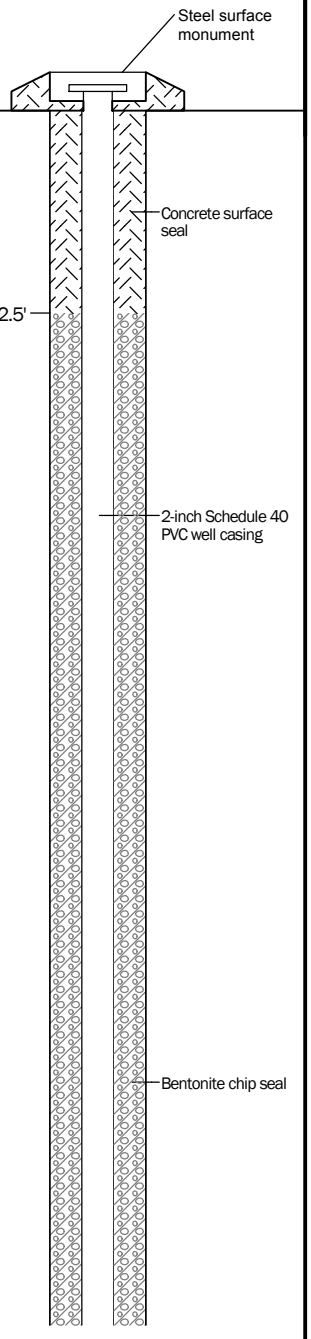
DOE Well I.D.: BKA 073
A 2 (in) well was installed on 4/13/2017 to a depth of 33.1 (ft).

| Groundwater Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 8.1 | 21.9 |

Notes: Monitoring well completed with an 8-inch-diameter steel flush-mounted monument.
Monitoring well developed by alternately pumping and surging; 44 gallons removed.

| Elevation (feet) | Depth (feet) | Interval Recovered (in) | Blows/foot | Collected Sample | Sample Name Testing | Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | | AC | 2 inches asphalt concrete pavement | | |
| | | | | | | | | CR | Brown fine to coarse gravel with sand and trace silt (¾-inch-minus base course/fill) | | |
| | | | | | | | | SP-SM | Brown fine to coarse sand with silt (loose, moist) (fill) | | |
| | | | | | | | | SM | Brown silty fine to coarse sand with gravel (dense, moist) (fill) | | |
| | | 12 | 50/6" | | MW-48D (2.5-3.5) | | | | (As XRF <LOD mg/kg ±12) | NS | 1.3 |
| | 5 | 5 | 50/5" | | MW-48D (5-5.5) | | | SM | Brown soot with small sand-sized, glassy agglomerate pieces, brick fragments and sand (loose, moist) (fill) (20% globular sheen) (As XRF <LOD mg/kg ±18) | SS | 4.8 |
| | | 18 | 20 | | MW-48D (7.5-9) | ▼ | | | (As XRF <LOD mg/kg ±13) (30% globular sheen) | SS | 9.8 |
| | | | | | | | | SP | Black sand-sized agglomerate with fine to coarse sand (medium dense, wet) (fill) | | |
| | 10 | 18 | 25 | | MW-48D (10-11.5) | | | | (As XRF 37 mg/kg ±5) (Heavy sheen, 50% no color) | HS | 24.5 |
| | | 18 | 11 | | MW-48D (12.5-14) | | | SP | Black fine to coarse sand-sized agglomerate with some brown fine to coarse agglomerate (loose, wet) (fill) (As XRF 72 mg/kg ±5) | HS | 49.6 |
| | | | | | | | | SP | Black fine to coarse sand-sized agglomerate with fused pieces, some vesicular pieces and sand (loose, wet) (fill) | | |
| | 15 | | | | | | | | | | |

WELL LOG



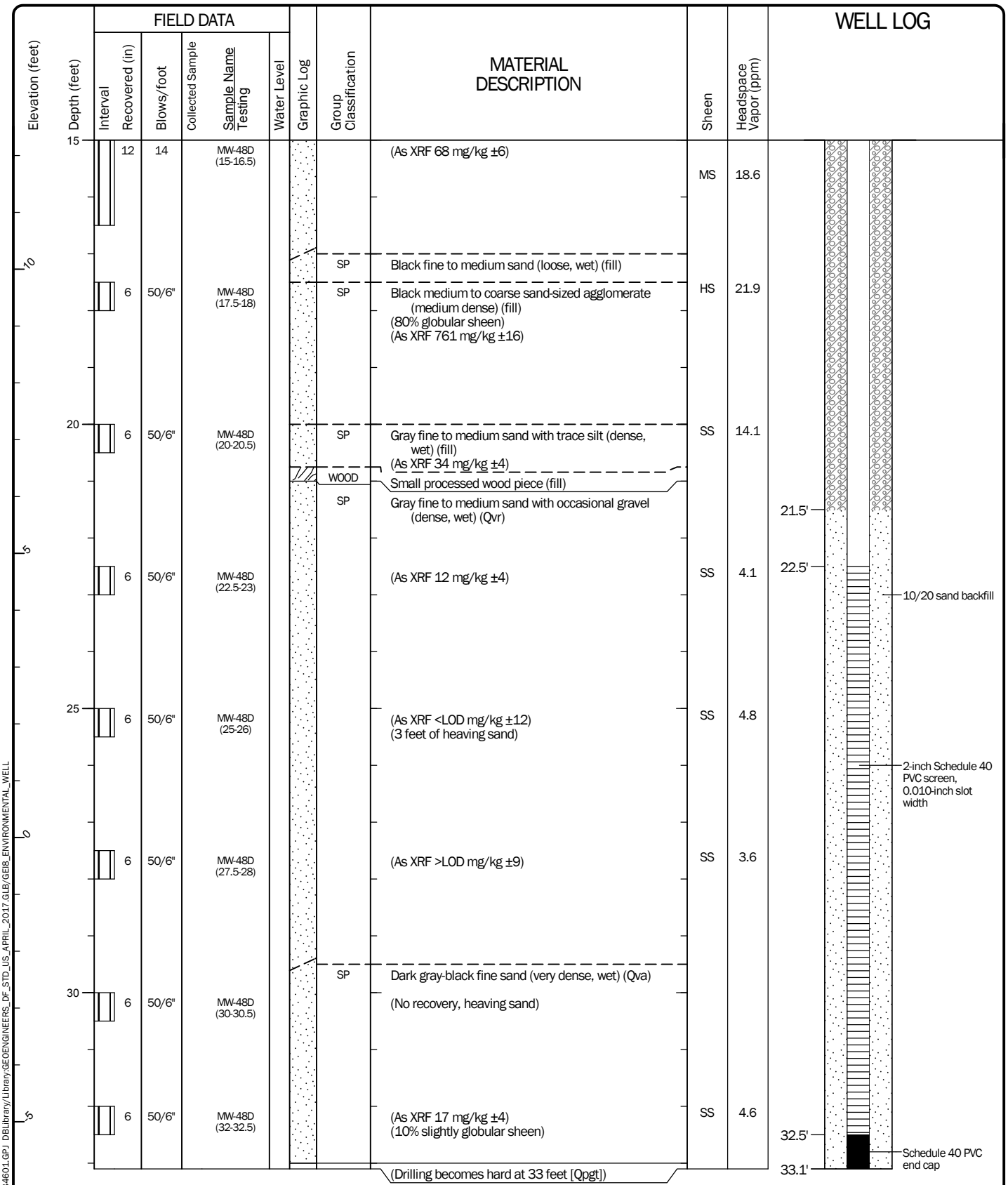

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-48D

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-12
Sheet 1 of 2




Date:9/14/17 Path:P:\0\0186846\GINT\018684601.GPJ DBLibrary\Library:GEOENGINEERS_DF_STD_US_APRIL_2017.GLB/GEI8_ENVIRONMENTAL_WELL

## Log of Monitoring Well MW-48D (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-12
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/18/2017 | 4/18/2017 | 35.5 | PDR | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger |

| | | | |
|---|---|---|---|
| Hammer Data | Wire Release 140 (lbs) / 30 (in) Drop | Drilling Equipment | CME 55 |
| Surface Elevation (ft) Vertical Datum | 30.00 USACE (Locks) | Top of Casing Elevation (ft) | 29.40 |
| Easting (X) Northing (Y) | 1270775.15 239063.29 | Horizontal Datum | WA State Plane North NAD83 (feet) |

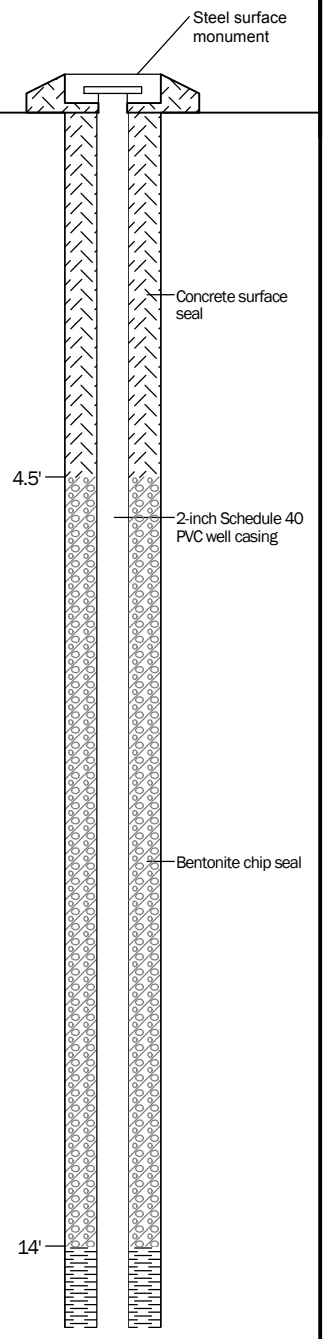
DOE Well I.D.: BKA 079
A 2 (in) well was installed on 4/18/2017 to a depth of 35.2 (ft).

| Groundwater Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 7.5 | 21.9 |

Notes: Monitoring well completed with an 8-inch-diameter steel flush-mounted monument.
Monitoring well developed by alternately pumping and surging; 5 gallons removed.

| Elevation (feet) | Depth (feet) | Interval Recovered (in) | Blows/foot | Collected Sample Sample Name Testing | Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | SM | Dark brown silty fine to coarse sand with occasional gravel (loose, moist) (fill) | | |
| | | 6 | 50/6" | MW-49D (2.5-3) | | | | (As XRF <LOD mg/kg ±14) | NS | 3.6 |
| | | | | | | | ML | Dark gray silt with sand, wood fragments and occasional vesicular agglomerate (stiff, moist) (fill) | | |
| -25 | 5 | 0 | 50/6" | | | | | (No recovery) | | |
| | | 12 | 50/6" | MW-49D (7.5-8.5) | ▼ | | | (As XRF <LOD mg/kg ±11) (Sheen metallic color with silver blebs) | MS | 71.5 |
| | | | | | | | SP | Black-red sand-sized fine to coarse agglomerate with wood and brick fragments (dense, wet) (fill) | | |
| -20 | 10 | 12 | 45 | MW-49D (10-11.5) | | | SP | Black sticky-stained fine to coarse sand-sized agglomerate with wood fragments and gravel (loose, wet) (fill) (As XRF <LOD mg/kg ±11) (Sheen metallic/rainbow color with blebs) | HS | 1,147 |
| | | 12 | 13 | MW-49D (12.5-14) | | | SP | Black-stained fine to coarse sand-sized agglomerate with wood fibers (loose, wet) (fill) (As XRF 11 mg/kg ±3) (Sheen metallic/rainbow color with blebs) | HS | 757.2 |
| -15 | 15 | | | | | | | | | |

WELL LOG



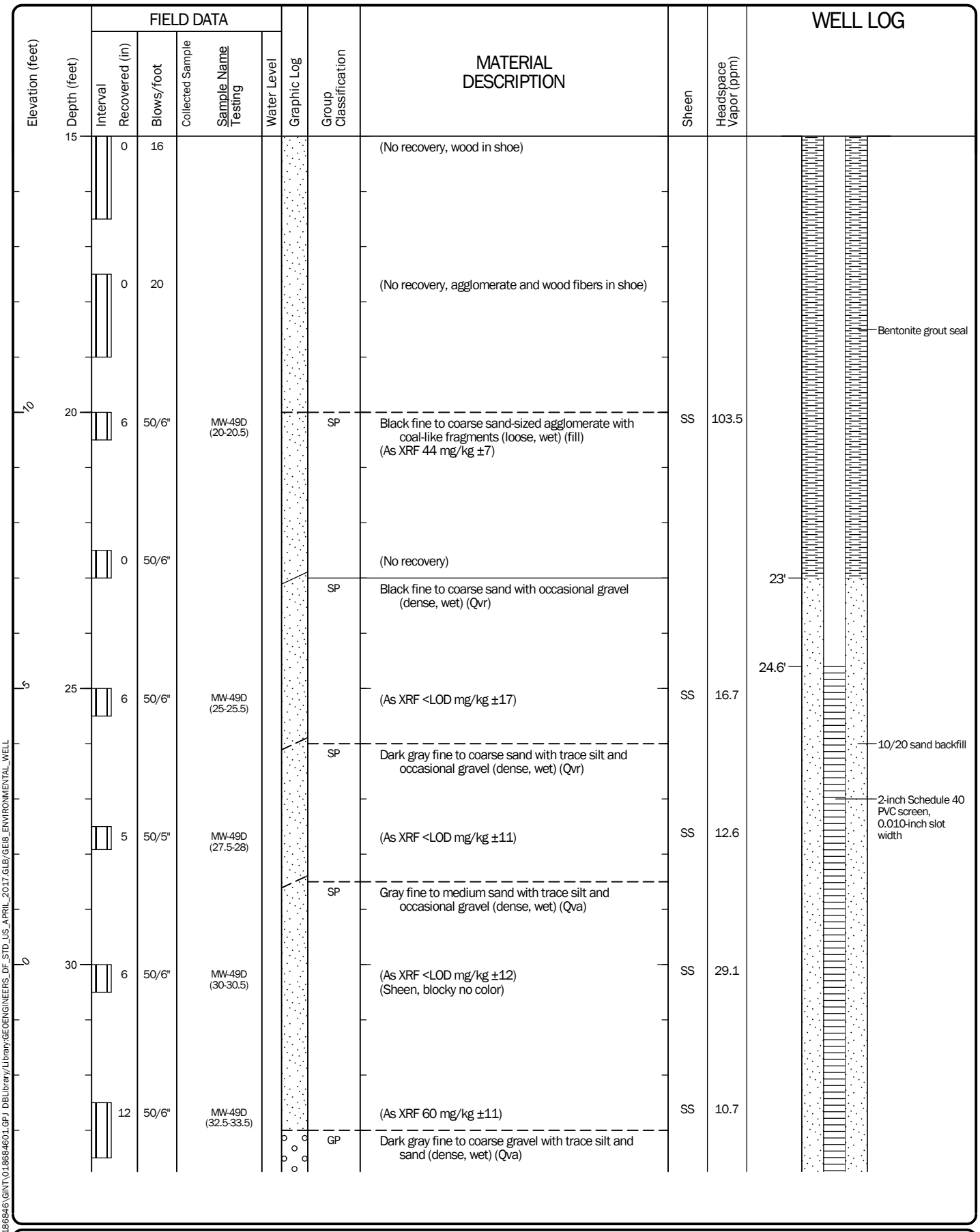

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-49D

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-13
Sheet 1 of 3

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## Log of Monitoring Well MW-49D (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-13
Sheet 2 of 3

| Elevation (feet) | Depth (feet) | FIELD DATA: Interval Recovered (in) | FIELD DATA: Blows/foot | FIELD DATA: Collected Sample / Sample Name Testing | FIELD DATA: Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) | WELL LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -5 | 35 | 6 | 50/6" | MW-49D (35-35.5) | | | ML | Dark gray silt with sand and gravel (very stiff, moist) (Qpgd)<br>(As XRF 44 mg/kg ±7) | | 8.3 | 34.6' – 35.2' Schedule 40 PVC end cap |



## Log of Monitoring Well MW-49D (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

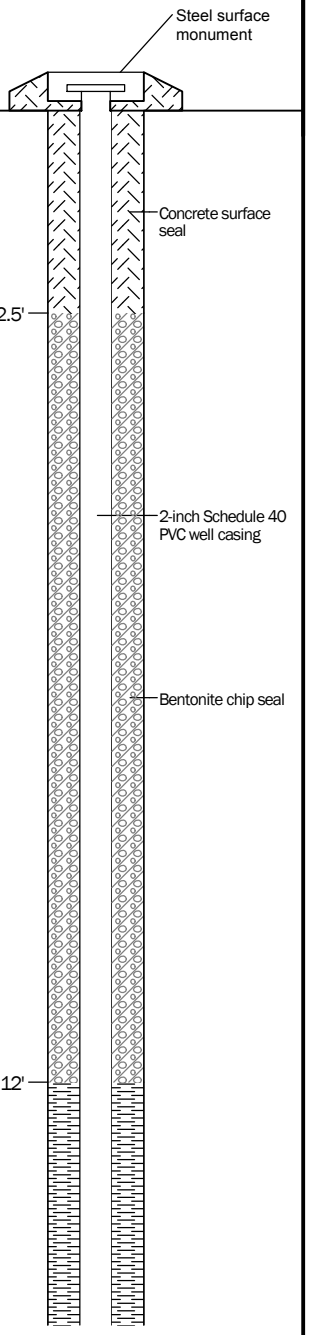
Figure E-13
Sheet 3 of 3

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 4/17/2017 End 4/17/2017 | Total Depth (ft) 35.2 | Logged By PDR Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | | DOE Well I.D.: BKA 077<br>A 2 (in) well was installed on 4/17/2017 to a depth of 35.2 (ft). | |
| Surface Elevation (ft) Vertical Datum: 28.77 USACE (Locks) | | Top of Casing Elevation (ft): 28.31 | | Groundwater Date Measured: 4/24/2017 | Depth to Water (ft): 6.4 / Elevation (ft): 21.9 |
| Easting (X) 1270793.29<br>Northing (Y) 239117.04 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well completed with an 8-inch-diameter steel flush-mounted monument.
Monitoring well developed by alternately pumping and surging; 25 gallons removed.

| Elevation (feet) | Depth (feet) | Interval Recovered (in) | Blows/foot | Collected Sample / Sample Name Testing | Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | SM | Dark brown silty fine to coarse sand with gravel and trace organic matter (fill) | | |
| | | 6 | 50/6" | MW-50D (2.5-3) | | | SP | Black and brown fine to coarse sand-sized agglomerate with trace soot and sand (medium dense, moist) (fill)<br>(As XRF 15 mg/kg ±4) | NS | <1 |
| -25 | | | | | | | | | | |
| | 5 | 18 | 20 | MW-50D (5-6.5) | | | | (As XRF <LOD mg/kg ±15) | NS | 1.1 |
| | | | | | ▼ | | SP-SM | Black, red and brown fine to coarse sand-sized agglomerate with silt and soot (very loose, wet) (fill)<br>(As XRF 11 mg/kg ±4) | SS | 4.5 |
| -20 | | 18 | 7 | MW-50D (7.5-9) | | | | | | |
| | 10 | 6 | 9 | MW-50D (10-11.5) | | | | (As XRF 15 mg/kg ±4)<br>(Sheen 80%, clumping, no blebs, no color) | HS | 63.0 |
| -15 | | 12 | 6 | MW-50D (12.5-14) | | | | (As XRF 31 mg/kg ±5)<br>(Sheen 40%, clumping, no blebs) | MS | 22.6 |
| | 15 | | | | | | SP | Black-brown fine to coarse sand-sized agglomerate with small wood chips (loose, wet) (fill) | | |

WELL LOG



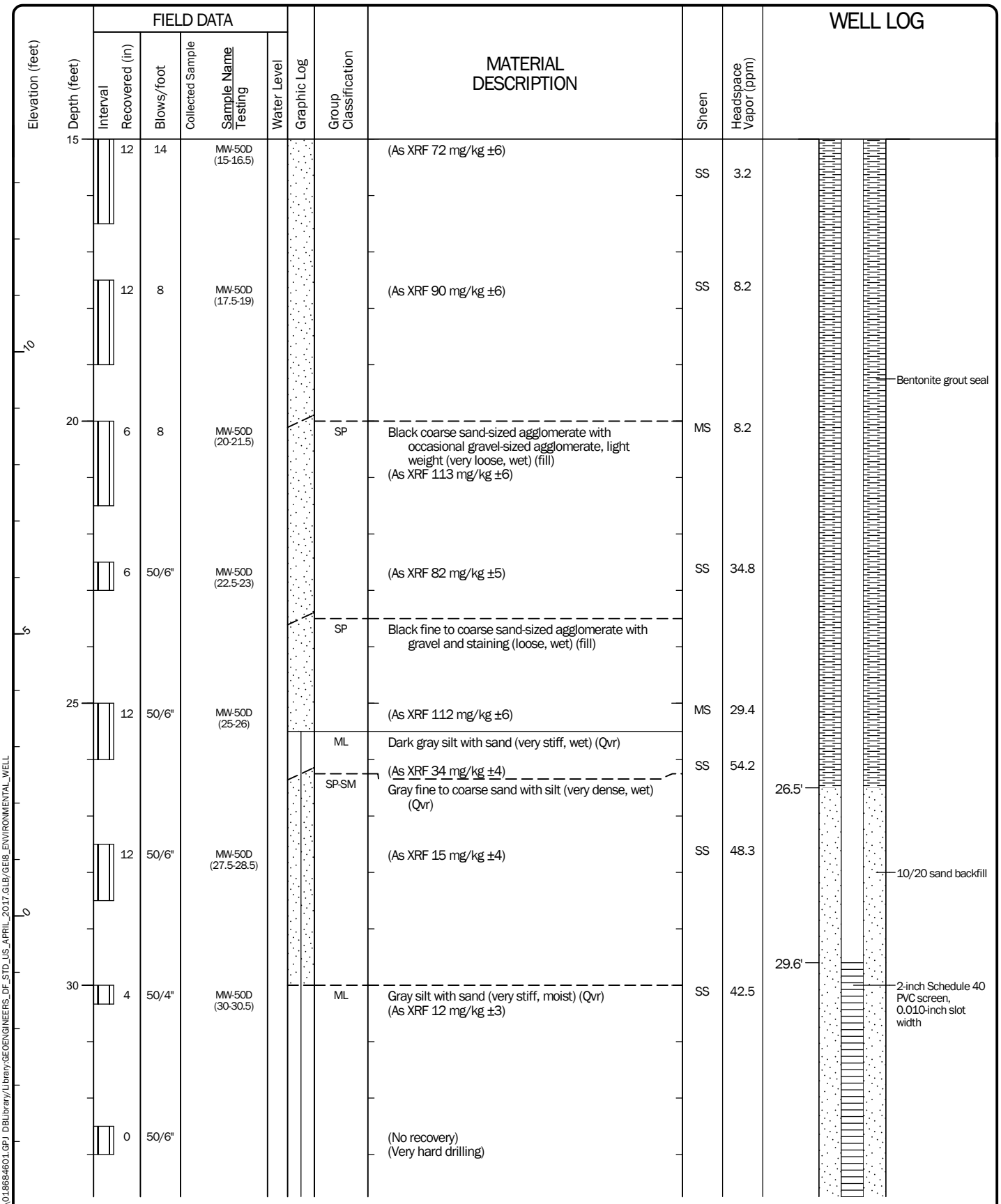

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-50D

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-14
Sheet 1 of 3

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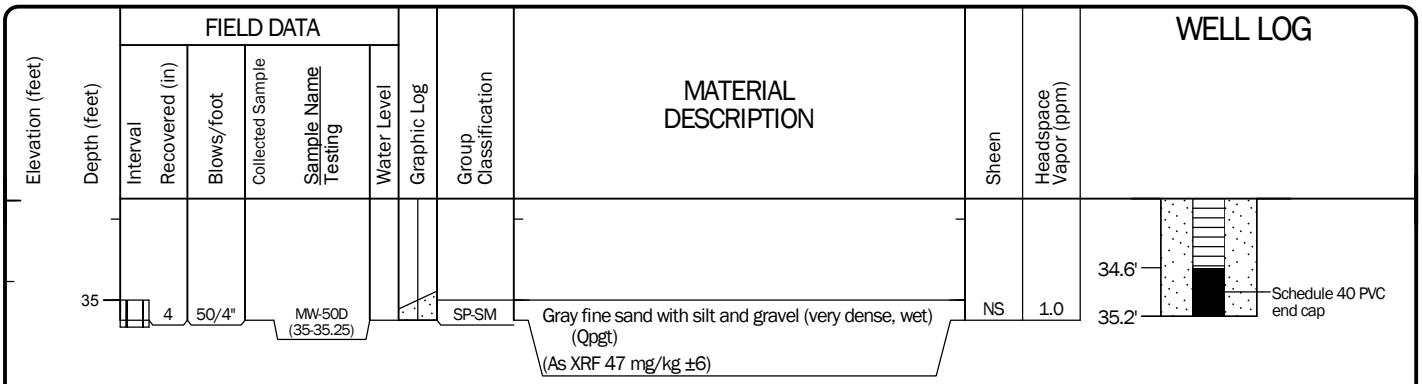
## Log of Monitoring Well MW-50D (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-14
Sheet 2 of 3




## Log of Monitoring Well MW-50D (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

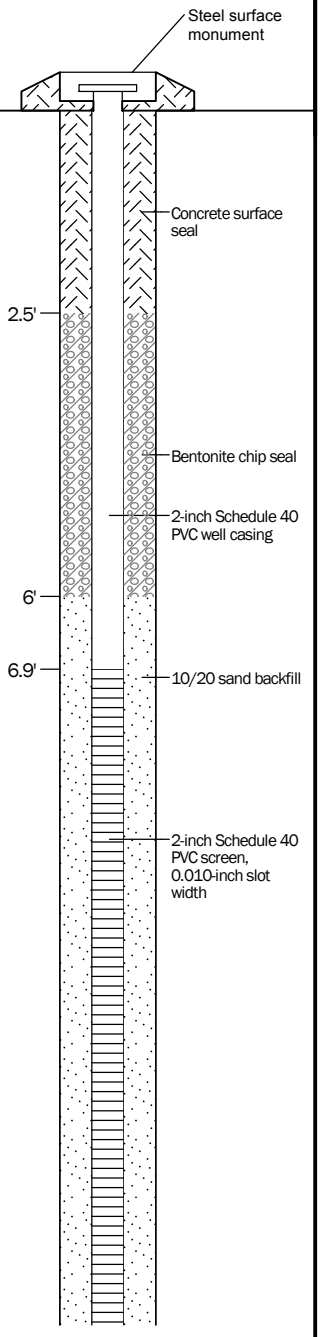
Figure E-14
Sheet 3 of 3

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 4/14/2017 End 4/14/2017 | Total Depth (ft) 17.5 | Logged By PDR Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger | |
| Hammer Data: Wire Release 140 (lbs) / 30 (in) Drop | | Drilling Equipment: CME 55 | DOE Well I.D.: BKA 076<br>A 2 (in) well was installed on 4/14/2017 to a depth of 17.5 (ft). | | |
| Surface Elevation (ft) Vertical Datum: 28.99 USACE (Locks) | | Top of Casing Elevation (ft): 28.62 | Groundwater<br>Date Measured: 4/24/2017<br>Depth to Water (ft): 6.7<br>Elevation (ft): 21.9 | | |
| Easting (X) 1270795.79<br>Northing (Y) 239136.65 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | | |

Notes: Monitoring well completed with an 8-inch-diameter steel flush-mounted monument.
Monitoring well developed by alternately pumping and surging; 6 gallons removed.

| Elevation (feet) | Depth (feet) | FIELD DATA: Interval Recovered (in) | Blows/foot | Collected Sample / Sample Name Testing | Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | SM | Dark brown silty fine to coarse sand with gravel (fill) | | |
| | | | | | | | | Grades to black | | |
| | | | | | | | SM | Black silty fine to coarse sand with gravel (loose, moist) (fill) | | |
| -5 | 5 | 12 | 14 | MW-51S (5-6.5) | | | | (As XRF <LOD mg/kg ±33) | NS | <1 |
| | | | | | | | SP | Black-brown fine to coarse sand-sized agglomerate with some soot (very loose, moist) (fill)<br>(As XRF <LOD mg/kg ±28) | NS | <1 |
| -10 | 10 | 12 | 7 | MW-51S (7.5-8.5) | | | SP | Black fine to coarse sand-sized agglomerate with occasional vesicular agglomerate (very loose, wet) (fill)<br>(As XRF <LOD mg/kg ±32) | | |
| | | | | | | | | (Rainbow color sheen with clumps) | MS | 1.4 |
| | | 12 | 7 | MW-51S (10-11.5) | | | | (As XRF 21 mg/kg ±7) | | |
| | | | | | | | | (Rainbow color sheen 20% clumps) | MS | 155.5 |
| -15 | 15 | 6 | 13 | MW-51S (12.5-14) | | | SP | Black fine to coarse sand-sized agglomerate with occasional vesicular agglomerate and sand (loose, wet) (fill)<br>(As XRF 29 mg/kg ±8) | | |
| | | | | | | | | | MS | 104.3 |

WELL LOG




Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

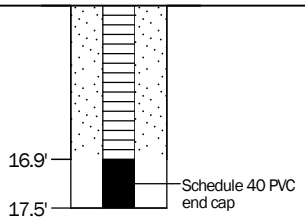
# Log of Monitoring Well MW-51S

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-15
Sheet 1 of 2

| Elevation (feet) | Depth (feet) | FIELD DATA: Interval | FIELD DATA: Recovered (in) | FIELD DATA: Blows/foot | FIELD DATA: Collected Sample | FIELD DATA: Sample Name / Testing | FIELD DATA: Water Level | Graphic Log | Group Classification | MATERIAL DESCRIPTION | Sheen | Headspace Vapor (ppm) | WELL LOG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 15 | | 6 | 16 | | MW-51S (15-16.5) | | | | (As XRF <LOD mg/kg ±24) | MS | 67.2 | |




## Log of Monitoring Well MW-51S (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-15
Sheet 2 of 2

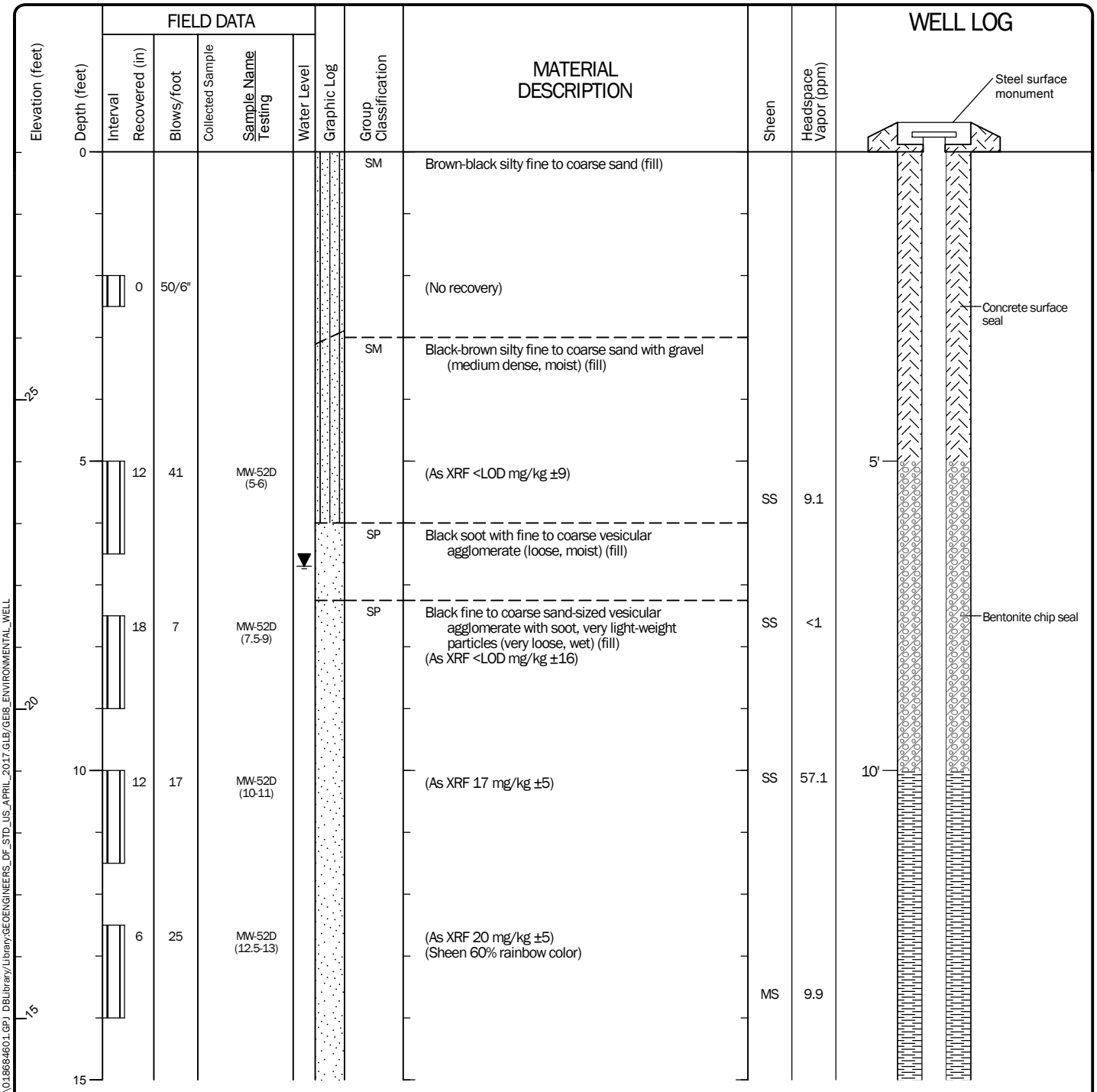
| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/14/2017 | 4/14/2017 | 35.5 | PDR | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger |

| | | | |
|---|---|---|---|
| Hammer Data | Wire Release 140 (lbs) / 30 (in) Drop | Drilling Equipment | CME 55 |
| Surface Elevation (ft) Vertical Datum | 29.01 USACE (Locks) | Top of Casing Elevation (ft) | 28.56 |
| Easting (X) Northing (Y) | 1270796.96 239147.84 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 075
A 2 (in) well was installed on 4/14/2017 to a depth of 35.4 (ft).

| Groundwater Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.70 | 21.9 |

Notes: Monitoring well completed with an 8-inch-diameter steel flush-mounted monument.
Monitoring well developed by alternately pumping and surging; 3 gallons removed.



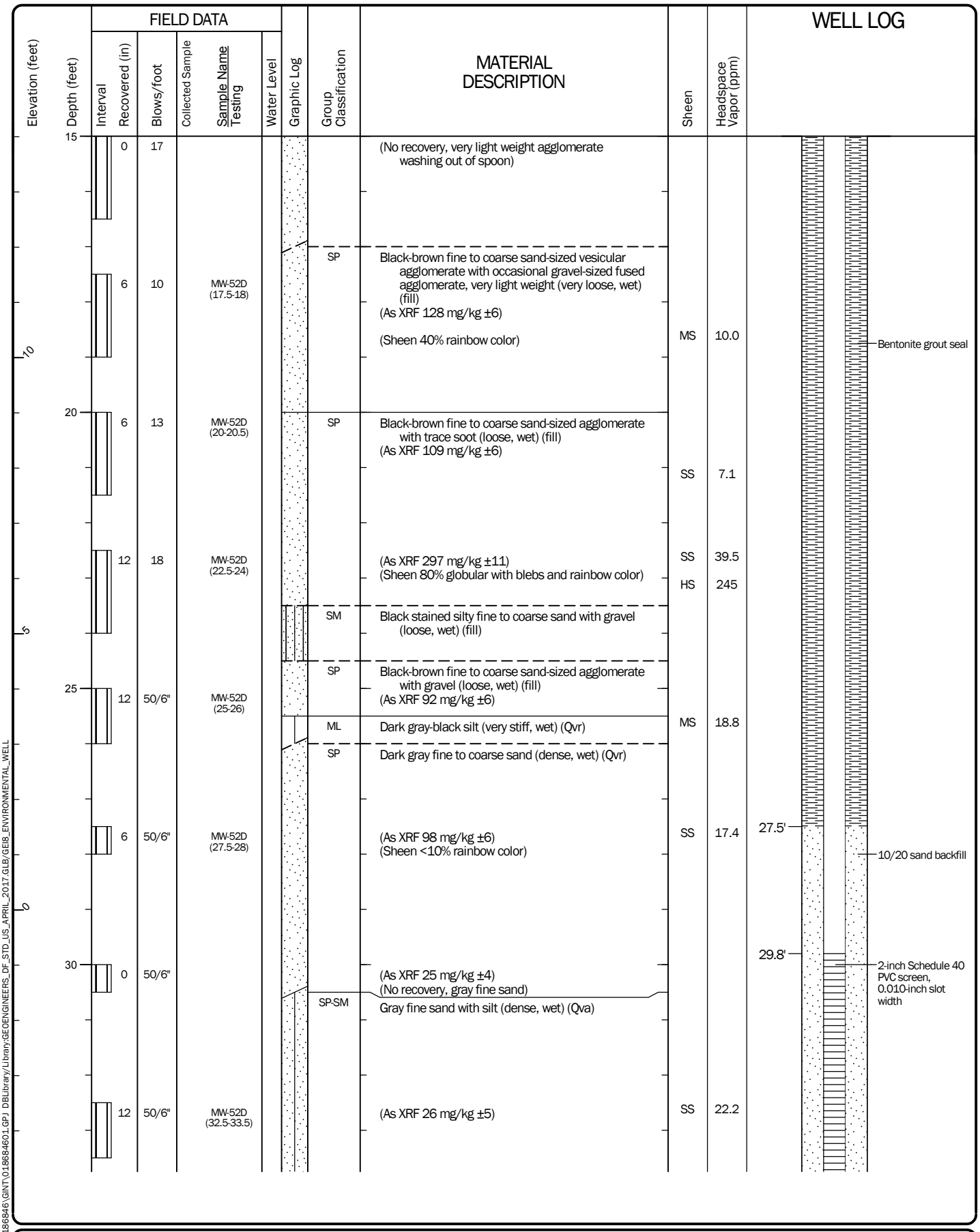

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on Locational Survey

# Log of Monitoring Well MW-52D

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-16
Sheet 1 of 3

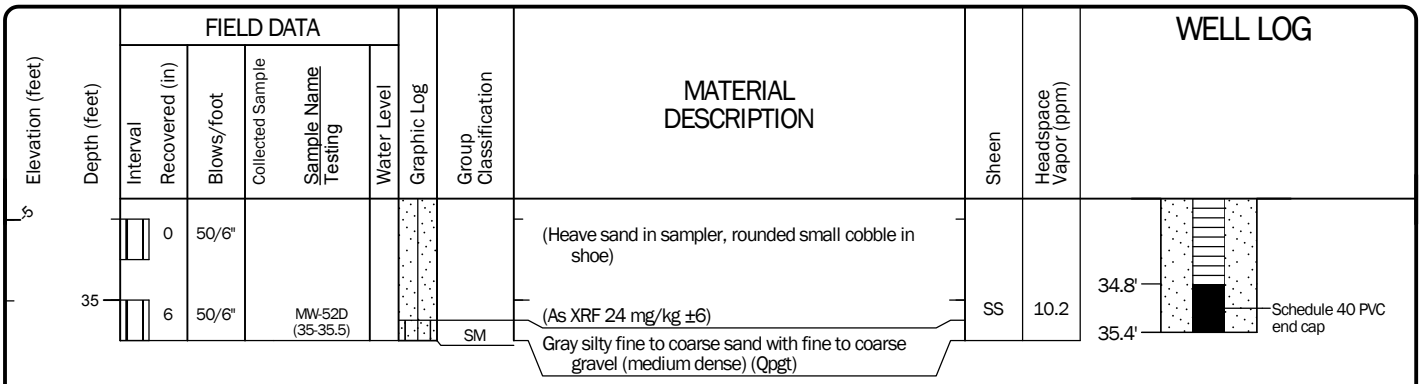



## Log of Monitoring Well MW-52D (continued)

GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-16
Sheet 2 of 3




## Log of Monitoring Well MW-52D (continued)

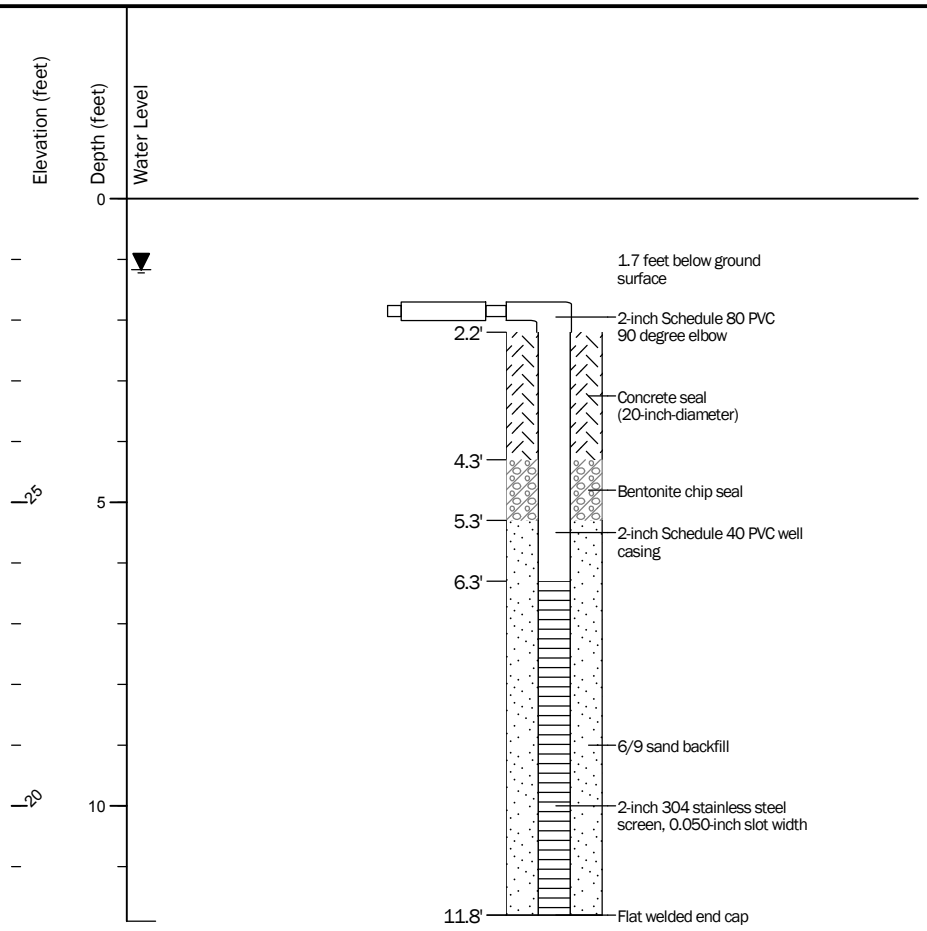
GeoEngineers

Project: GWPS-Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-16
Sheet 3 of 3

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/21/2017 End 3/21/2017 | Total Depth (ft) 11.9 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 030<br>A 2 (in) well was installed on 3/21/2017 to a depth of 11.8 (ft). | |
| Surface Elevation (ft) Vertical Datum 30 USACE (Locks) | | Top of Casing Elevation (ft) 28.29 | | Groundwater | |
| Easting (X) 1270661.05<br>Northing (Y) 239171.14 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 1.17 — Elevation (ft): 27.12 |

Notes: Well developed by alternately pumping and surging, 16 gallons removed. Well connected to west vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well A1 (fill)

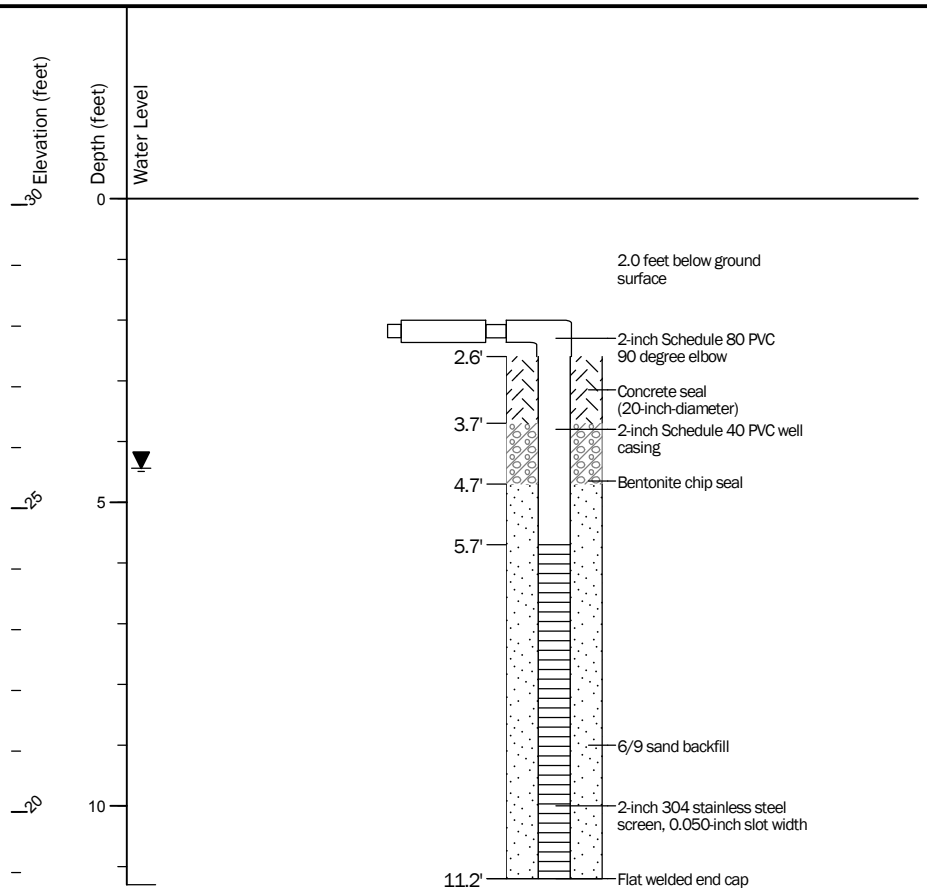
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-17
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/22/2017 End 3/22/2017 | Total Depth (ft) 11.3 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 031<br>A 2 (in) well was installed on 3/22/2017 to a depth of 11.2 (ft). | |
| Surface Elevation (ft) Vertical Datum 30.1 USACE (Locks) | | Top of Casing Elevation (ft) 28.17 | | Groundwater | |
| Easting (X) 1270651.15<br>Northing (Y) 239154.91 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 4.44 — Elevation (ft): 23.73 |

Notes: Well developed by alternately pumping and surging, 49 gallons removed. Well connected to west vault. Concrete encountered from 5 to 6 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well A2 (fill)

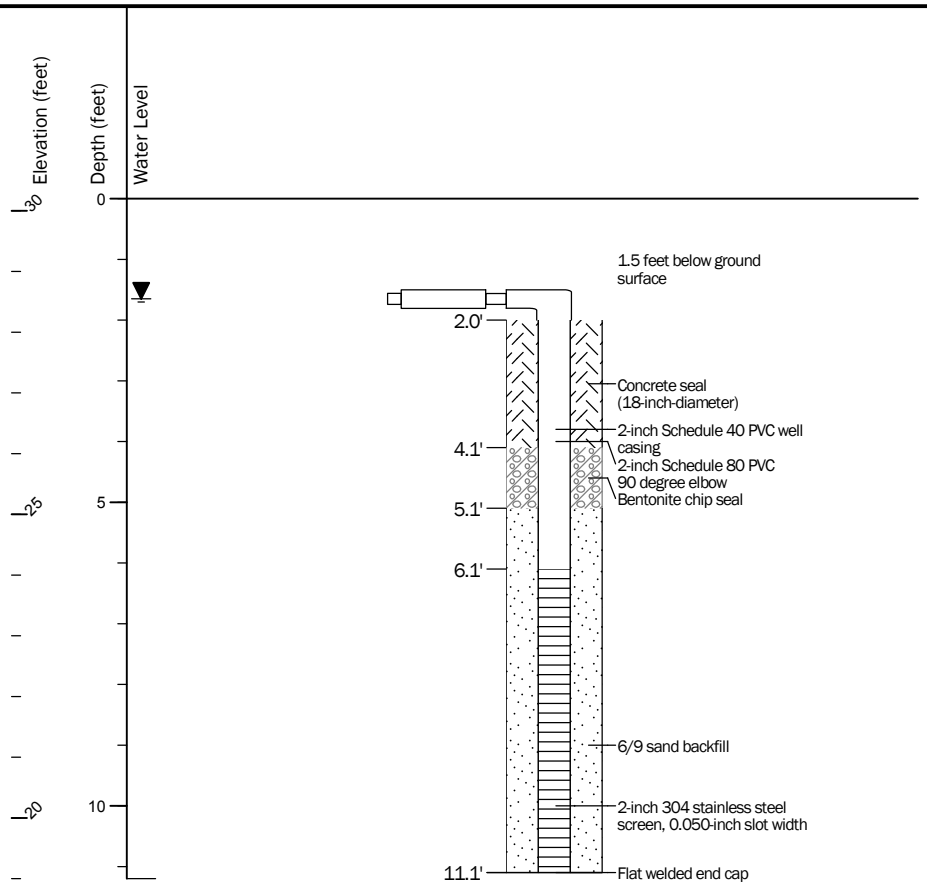
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-18
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/22/2017 End 3/22/2017 | Total Depth (ft) 11.2 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 032<br>A 2 (in) well was installed on 3/22/2017 to a depth of 11.1 (ft). | |
| Surface Elevation (ft) Vertical Datum 30.2 USACE (Locks) | | Top of Casing Elevation (ft) 28.75 | | Groundwater | |
| Easting (X) 1270648.11<br>Northing (Y) 239134.46 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 1.65 — Elevation (ft): 27.10 |

Notes: Well developed by alternately pumping and surging, 84 gallons removed. Well connected to west vault. Concrete encountered from 5 to 6 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well A3 (fill)

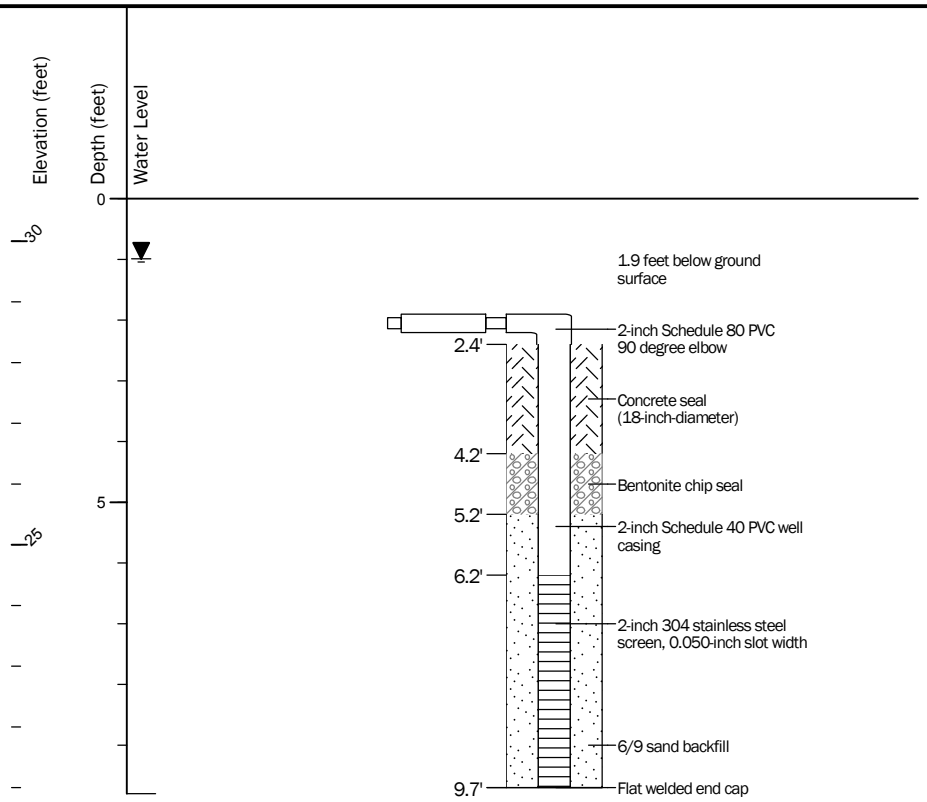
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-19
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/27/2017 End 3/27/2017 | Total Depth (ft) 9.8 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 041<br>A 2 (in) well was installed on 3/27/2017 to a depth of 9.7 (ft). | |
| Surface Elevation (ft) Vertical Datum 30.7 USACE (Locks) | | Top of Casing Elevation (ft) 28.83 | | Groundwater | |
| Easting (X) 1270637.76<br>Northing (Y) 239115.96 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured | Depth to Water (ft) / Elevation (ft) |
| | | | | 4/24/2017 | 0.99 / 27.84 |

Notes: Well developed by alternately pumping and surging, 26 gallons removed. Well connected to west vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well A4 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-20
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4/10/2017 | 4/10/2017 | | 11.2 | Checked By | PDR SBS | Cascade Drilling | | | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

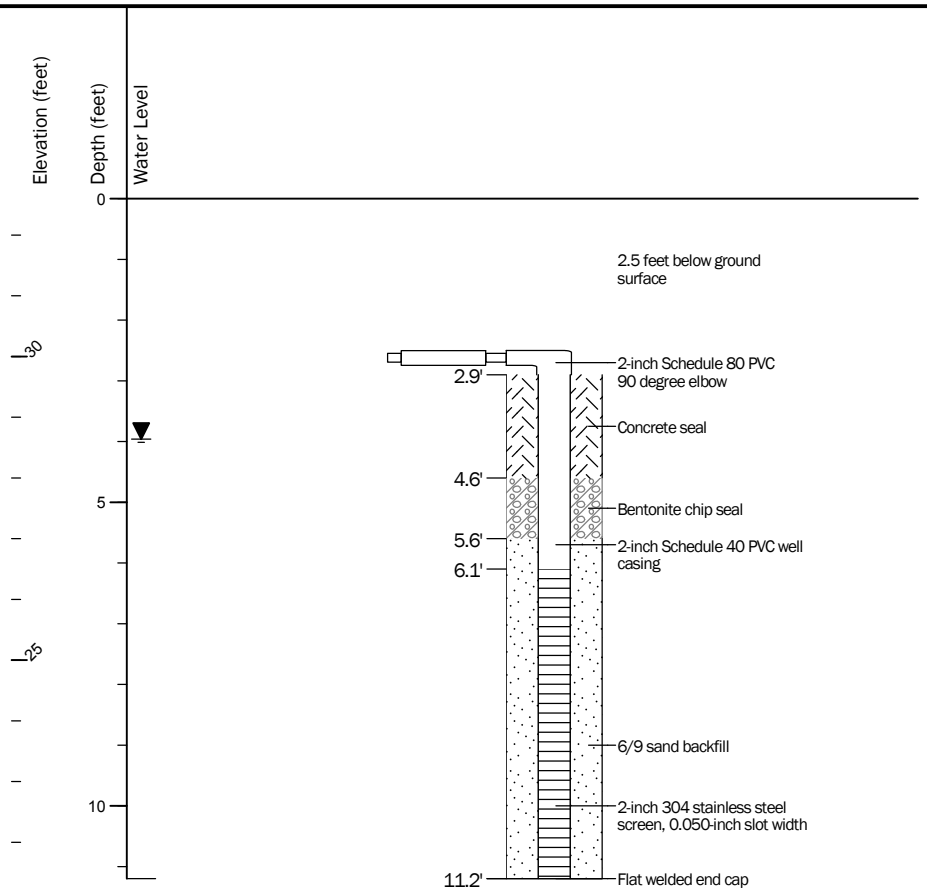
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 32.6 USACE (Locks) | Top of Casing Elevation (ft) | 30.11 |
| Easting (X) Northing (Y) | 1270634.15 239088.96 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 066
A 2 (in) well was installed on 4/10/2017 to a depth of 11.1 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 3.96 | 26.15 |

Notes: Well developed by alternately pumping and surging, 20 gallons removed. Well connected to west vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well A5 (fill)

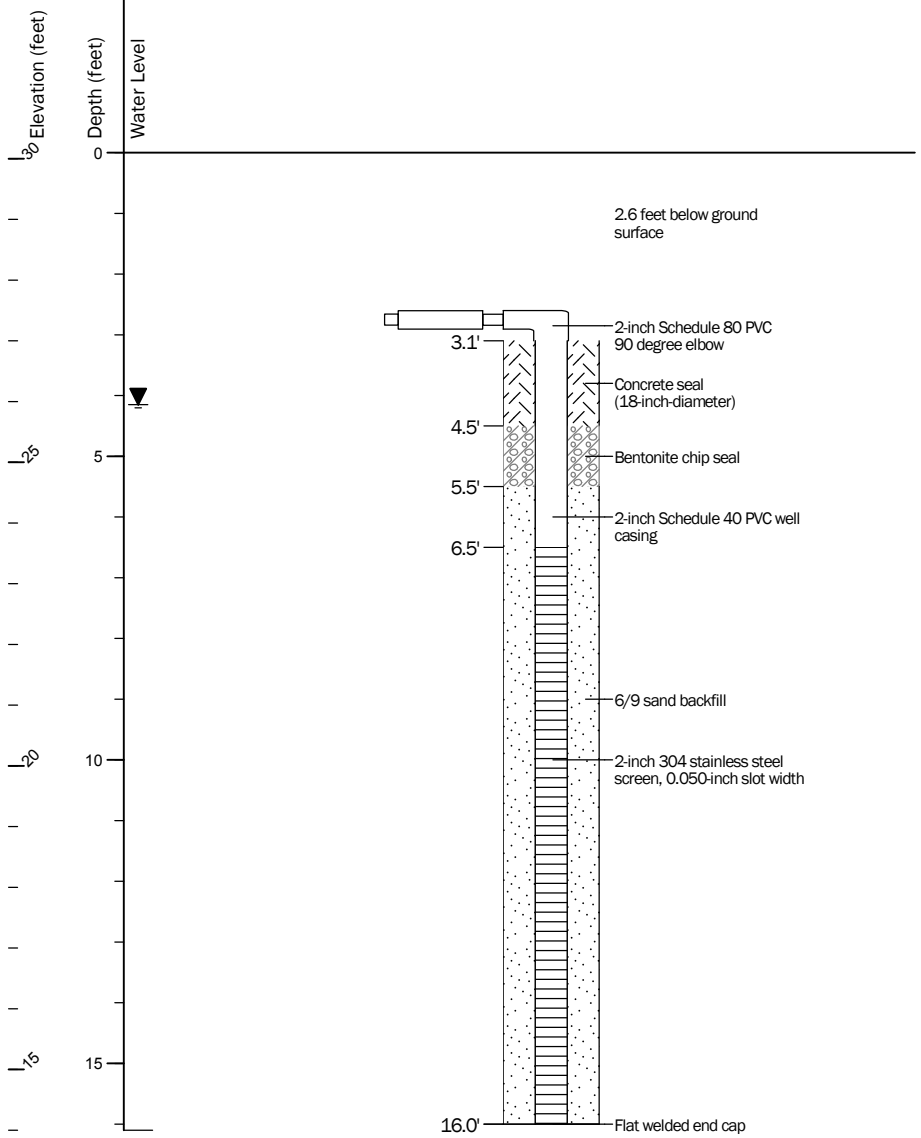
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-21
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/23/2017 End 3/23/2017 | Total Depth (ft) 16.1 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 033<br>A 2 (in) well was installed on 3/23/2017 to a depth of 16 (ft). | |
| Surface Elevation (ft) Vertical Datum 30.1 USACE (Locks) | | Top of Casing Elevation (ft) 27.44 | | Groundwater | |
| Easting (X) 1270686.12<br>Northing (Y) 239170.51 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 4.15 — Elevation (ft): 23.29 |

Notes: Well developed by alternately pumping and surging, 31 gallons removed. Well connected to west vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well B1 (fill)

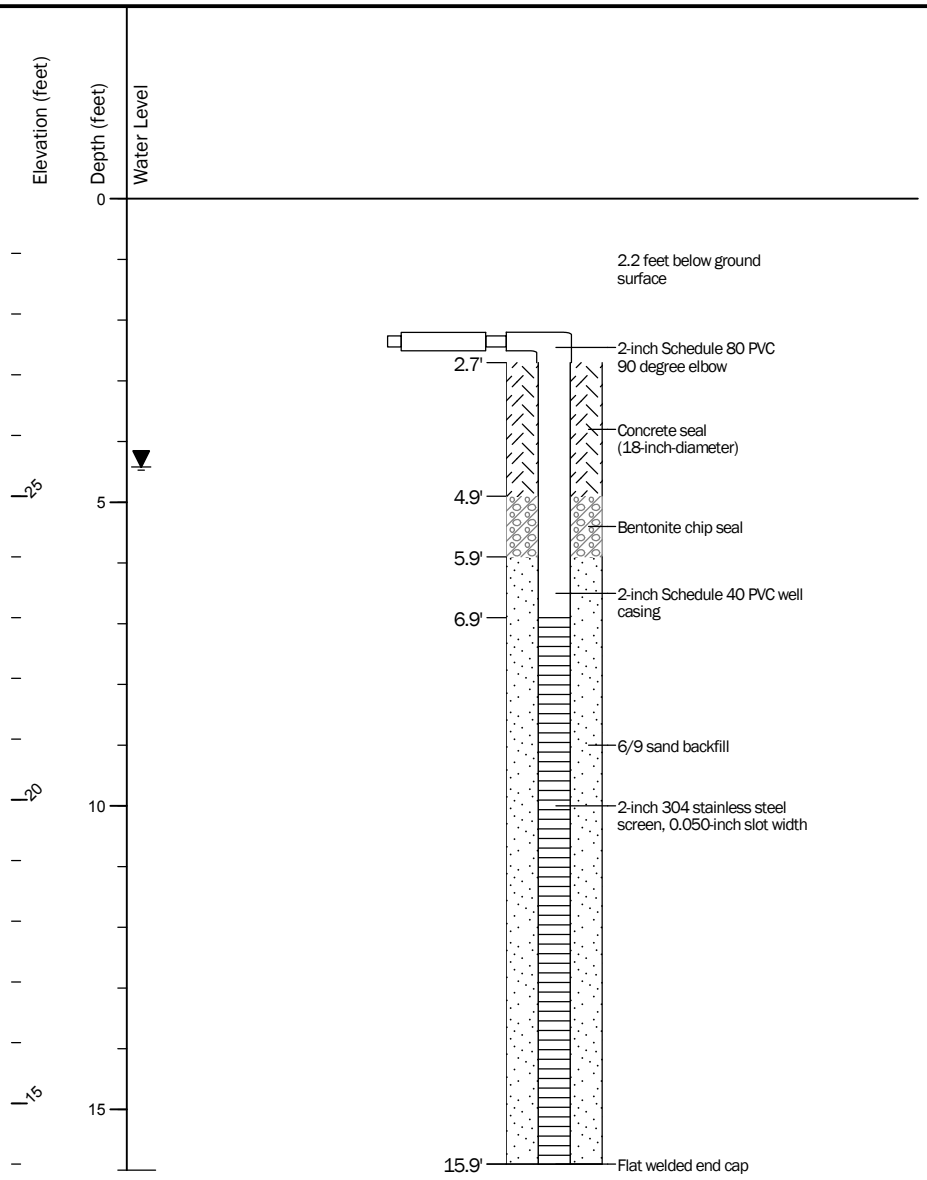
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-22
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/23/2017 End 3/23/2017 | Total Depth (ft) 16.0 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 034<br>A 2 (in) well was installed on 3/23/2017 to a depth of 15.9 (ft). | |
| Surface Elevation (ft) Vertical Datum 29.9 USACE (Locks) | | Top of Casing Elevation (ft) 27.65 | | Groundwater | |
| Easting (X) 1270679.68<br>Northing (Y) 239156.7 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 4.42 — Elevation (ft): 23.23 |

Notes: Well developed by alternately pumping and surging, 59 gallons removed. Well connected to west vault.Concrete encountered from 10 to 11 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well B2 (fill)

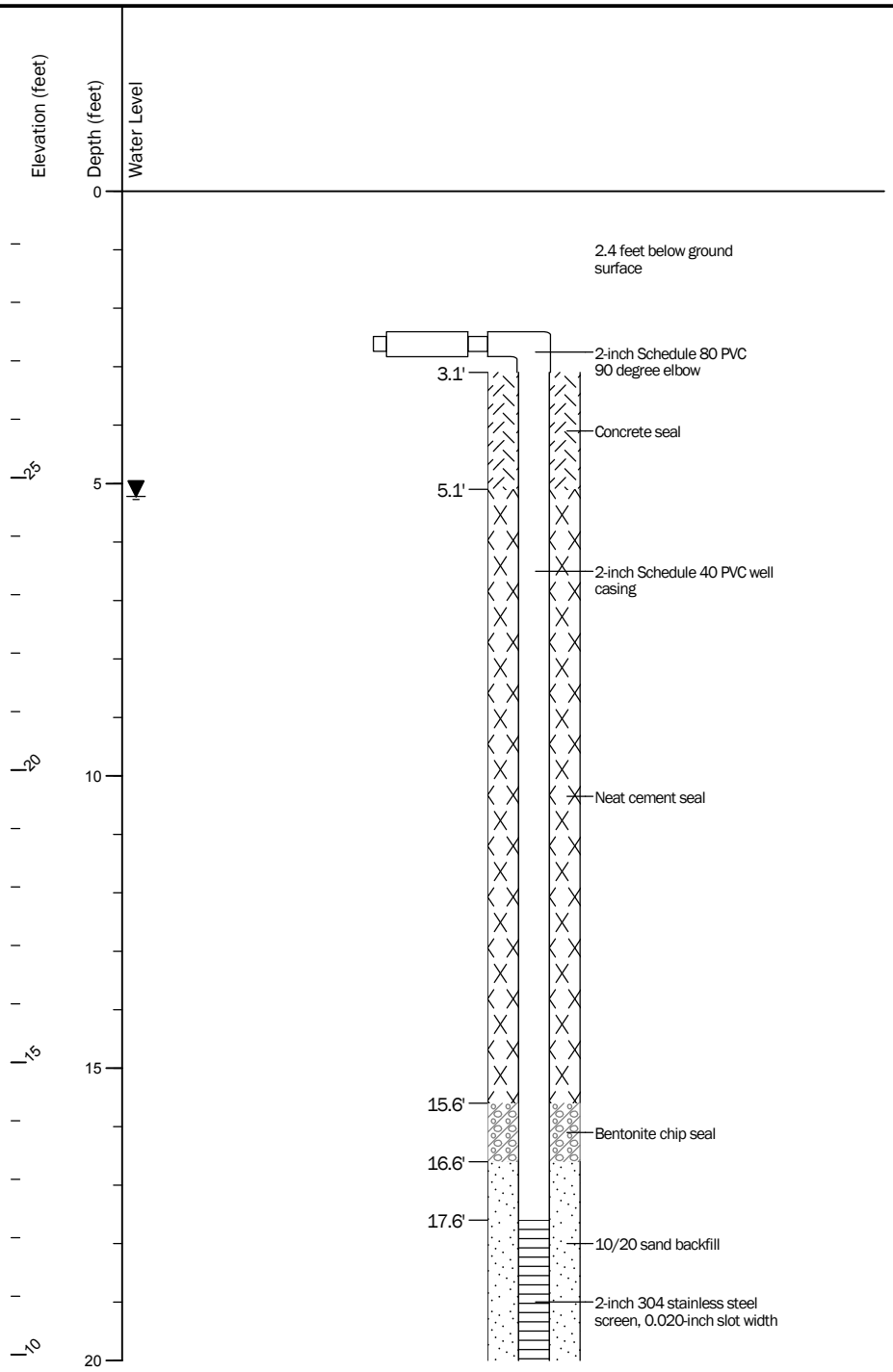
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-23
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/23/2017 End 3/23/2017 | Total Depth (ft) 25.1 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 035<br>A 2 (in) well was installed on 3/23/2017 to a depth of 25.1 (ft). | |
| Surface Elevation (ft) Vertical Datum 29.9 USACE (Locks) | | Top of Casing Elevation (ft) 27.43 | | Groundwater | |
| Easting (X) 1270679.61<br>Northing (Y) 239148.72 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 5.22 — Elevation (ft): 22.21 |

Notes: Well developed by alternately pumping and surging, 37 gallons removed. Well connected to west vault. Concrete encountered from 9½ to 11 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

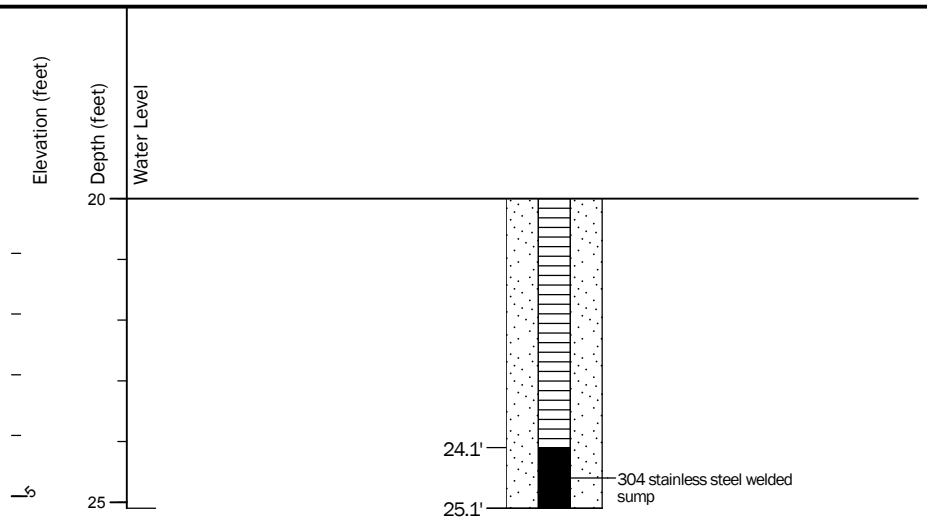



# Log of Well B3 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-24
Sheet 1 of 2




## Log of Well B3 (outwash) (continued)

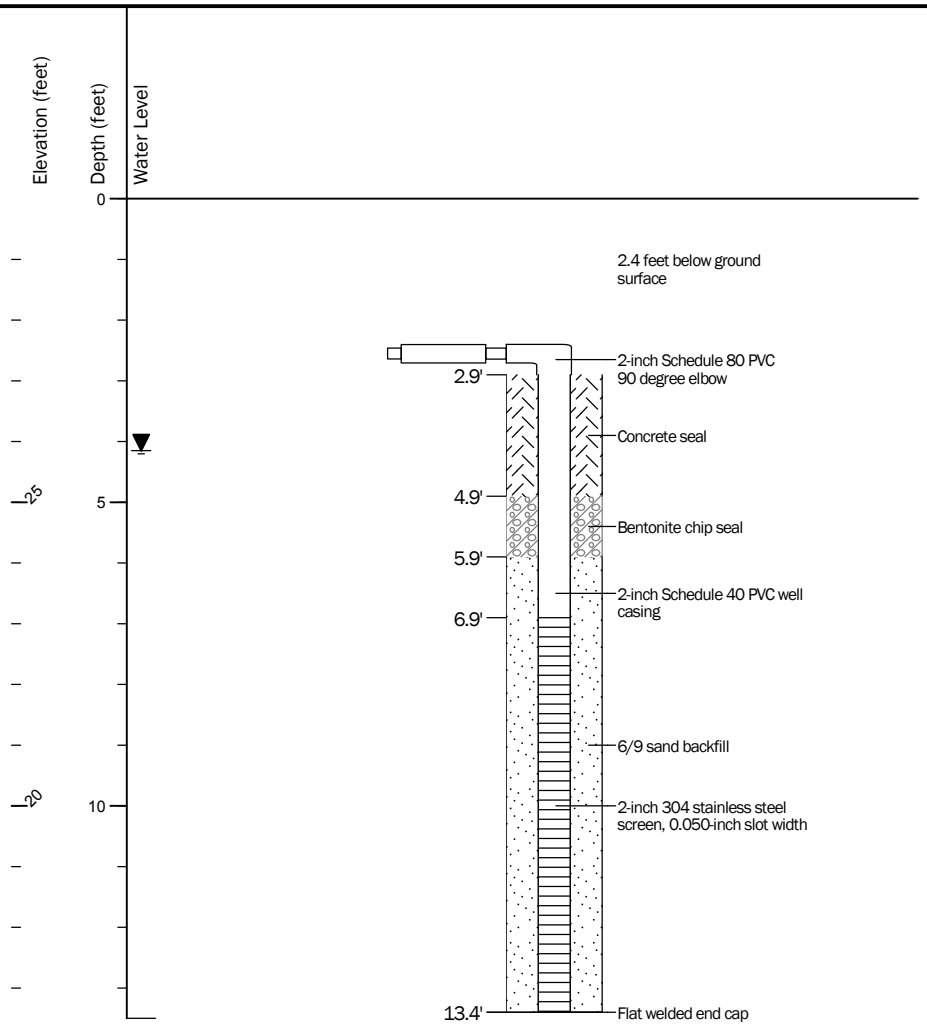
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-25
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/24/2017 End 3/24/2017 | Total Depth (ft) 13.5 | Logged By PDR<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 036<br>A 2 (in) well was installed on 3/24/2017 to a depth of 13.4 (ft). | |
| Surface Elevation (ft) Vertical Datum 30 USACE (Locks) | | Top of Casing Elevation (ft) 27.63 | | Groundwater | |
| Easting (X) 1270678.98<br>Northing (Y) 239136.33 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 4.15 — Elevation (ft): 23.48 |

Notes: Well developed by alternately pumping and surging, 34 gallons removed. Well connected to west vault. Concrete encountered from 8 to 12 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well B4 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-26
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3/23/2017 | 3/23/2017 | 25.5 | | Checked By | PDR SBS | Cascade Drilling | | 8¼-inch OD Hollow-stem Auger w/ Star Bit | |

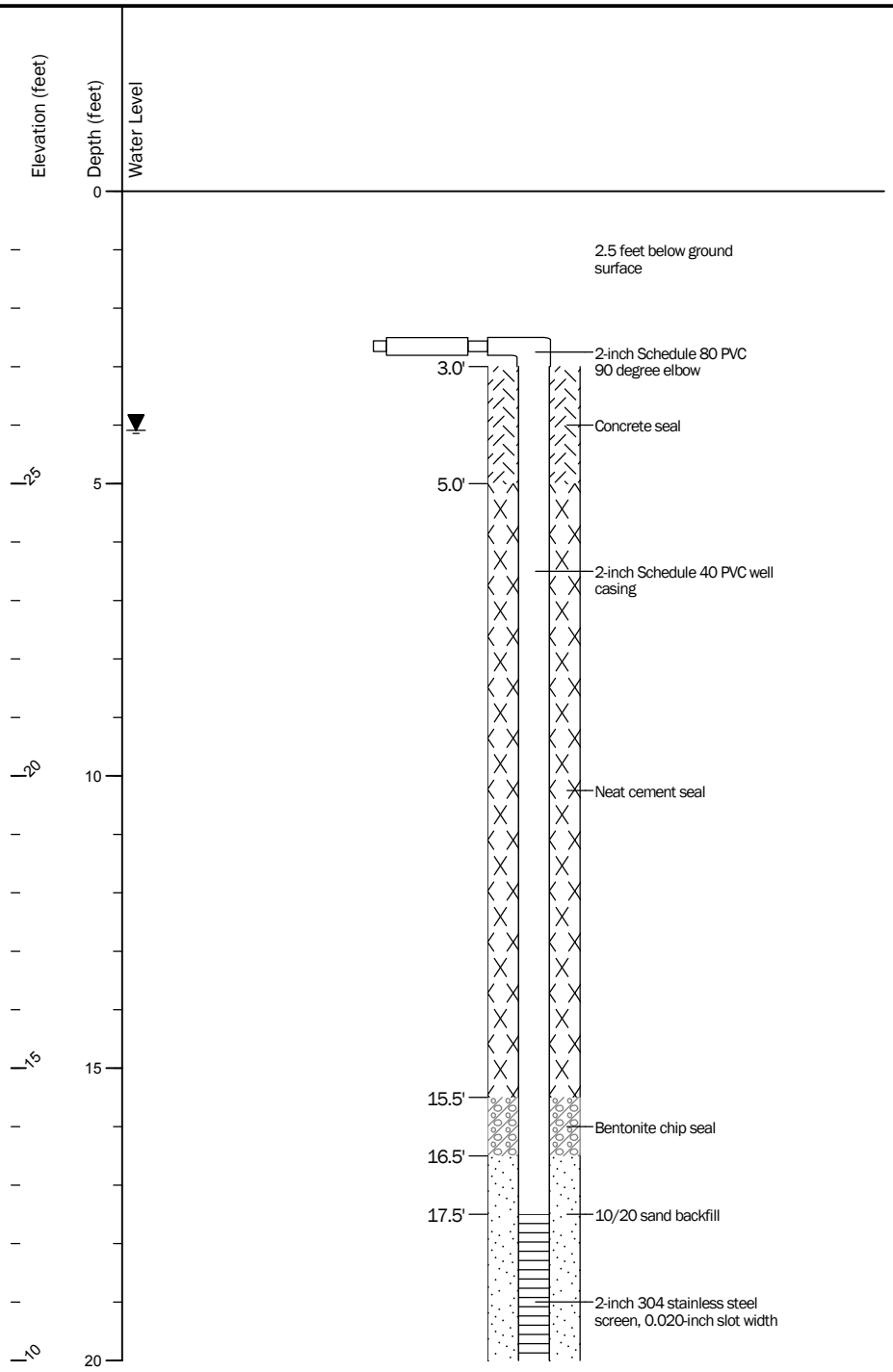
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 30 USACE (Locks) | Top of Casing Elevation (ft) | 27.56 |
| Easting (X) Northing (Y) | 1270677.21 239131.24 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 037
A 2 (in) well was installed on 3/23/2017 to a depth of 25.5 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 4.09 | 23.47 |

Notes: Well developed by alternately pumping and surging, 29 gallons removed. Well connected to west vault. Concrete encountered from 9 to 12 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

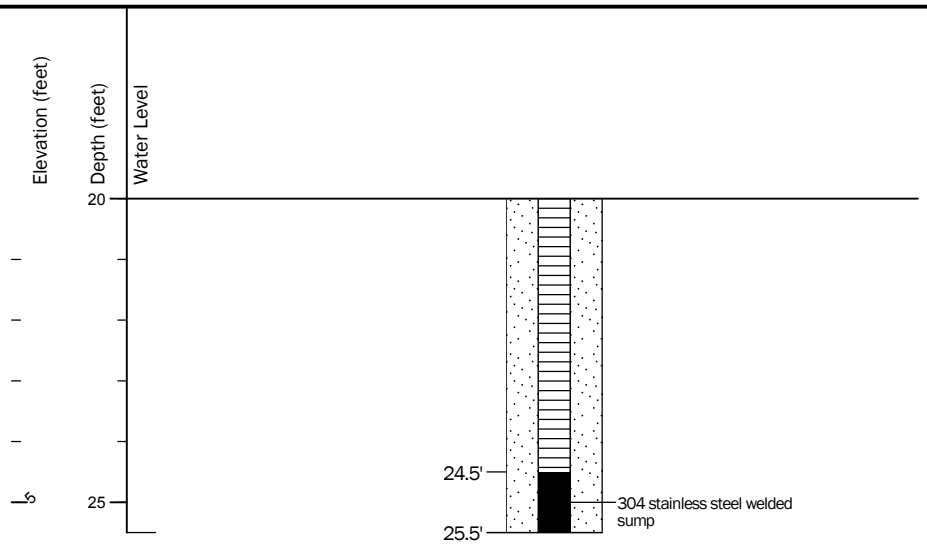



# Log of Well B5 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-27
Sheet 1 of 2




## Log of Well B5 (outwash) (continued)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-27
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3/24/2017 | 3/24/2017 | 13.2 | | Checked By | PDR SBS | Cascade Drilling | | 8¼-inch OD Hollow-stem Auger w/ Star Bit | |

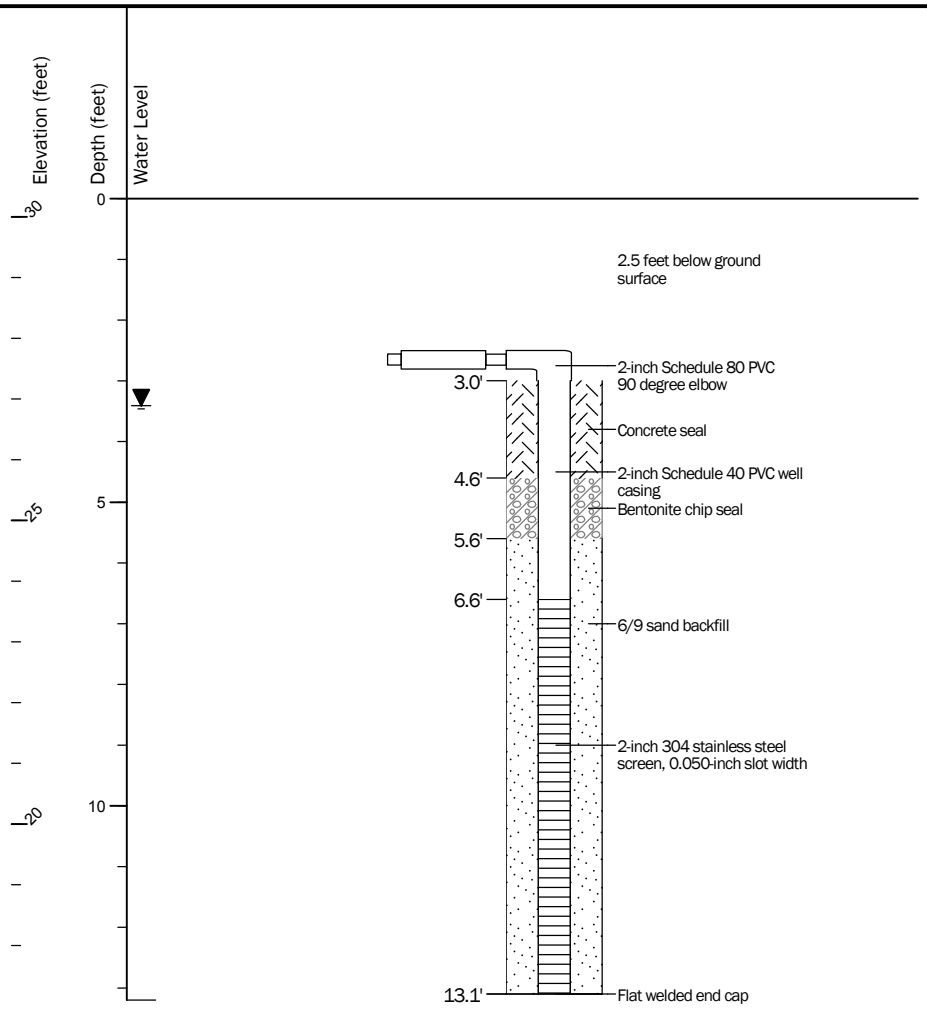
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 30.3 USACE (Locks) | Top of Casing Elevation (ft) | 27.75 |
| Easting (X) Northing (Y) | 1270674.15 239116.94 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 038
A 2 (in) well was installed on 3/24/2017 to a depth of 13.1 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 3.41 | 24.34 |

Notes: Well developed by alternately pumping and surging, 64 gallons removed. Well connected to west vault. Concrete encountered from 9 to 12 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well B6 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-28
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3/27/2017 | 3/27/2017 | | 12.1 | Checked By | PDR SBS | Cascade Drilling | | | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

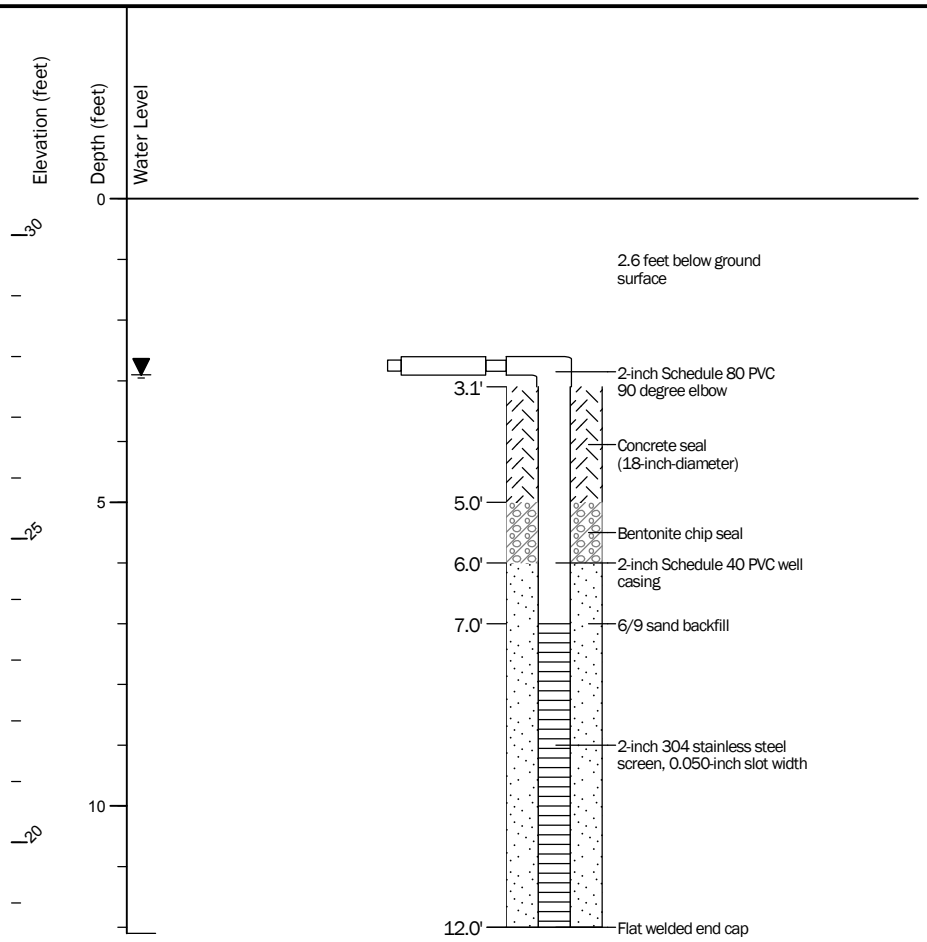
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 30.6 USACE (Locks) | Top of Casing Elevation (ft) | 27.94 |
| Easting (X) Northing (Y) | 1270658.44 239103.6 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 039
A 2 (in) well was installed on 3/27/2017 to a depth of 12 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 2.90 | 25.04 |

Notes: Well developed by alternately pumping and surging, 48 gallons removed. Well connected to west vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well B7 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-29
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4/10/2017 | 4/10/2017 | 13.1 | | Checked By | PDR SBS | Cascade Drilling | | 8¼-inch OD Hollow-stem Auger w/ Star Bit | |

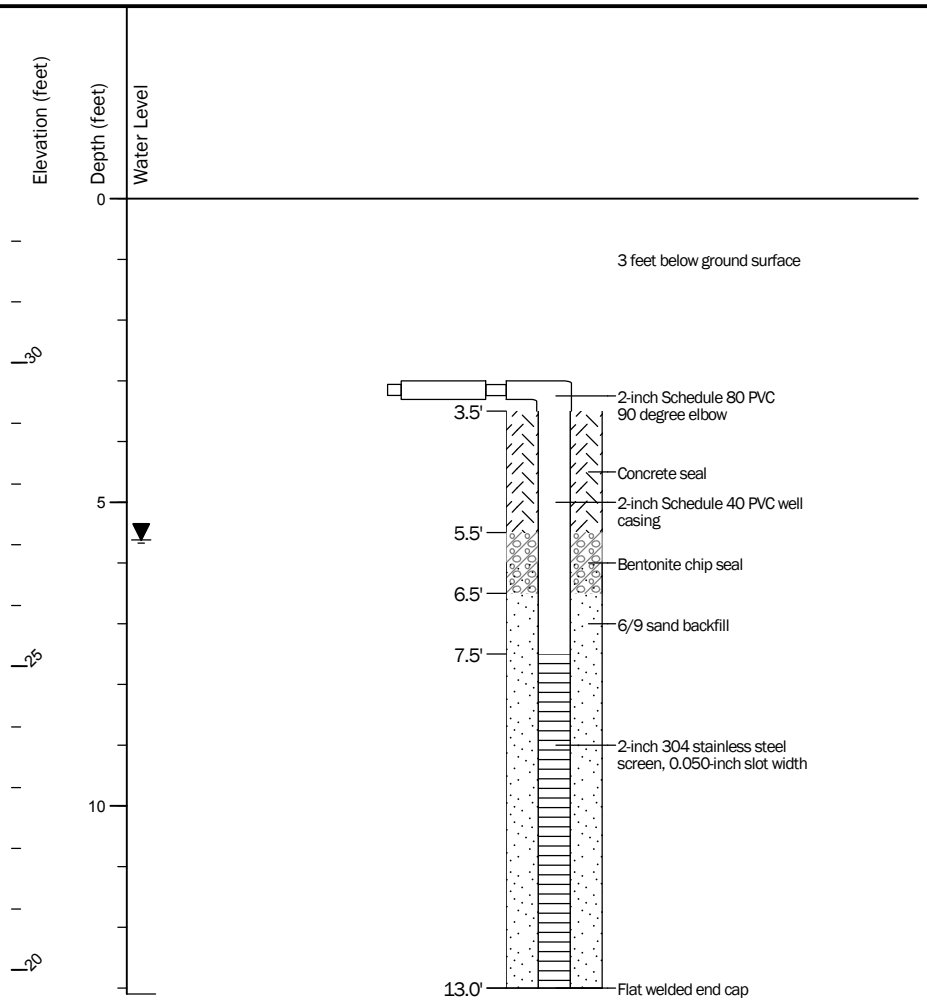
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 32.7 USACE (Locks) | Top of Casing Elevation (ft) | 29.69 |
| Easting (X) Northing (Y) | 1270661.88 239085.68 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 067
A 2 (in) well was installed on 4/10/2017 to a depth of 13 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 5.62 | 24.07 |

Notes: Well developed by alternately pumping and surging, 13 gallons removed. Well connected to west vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well B8 (fill)

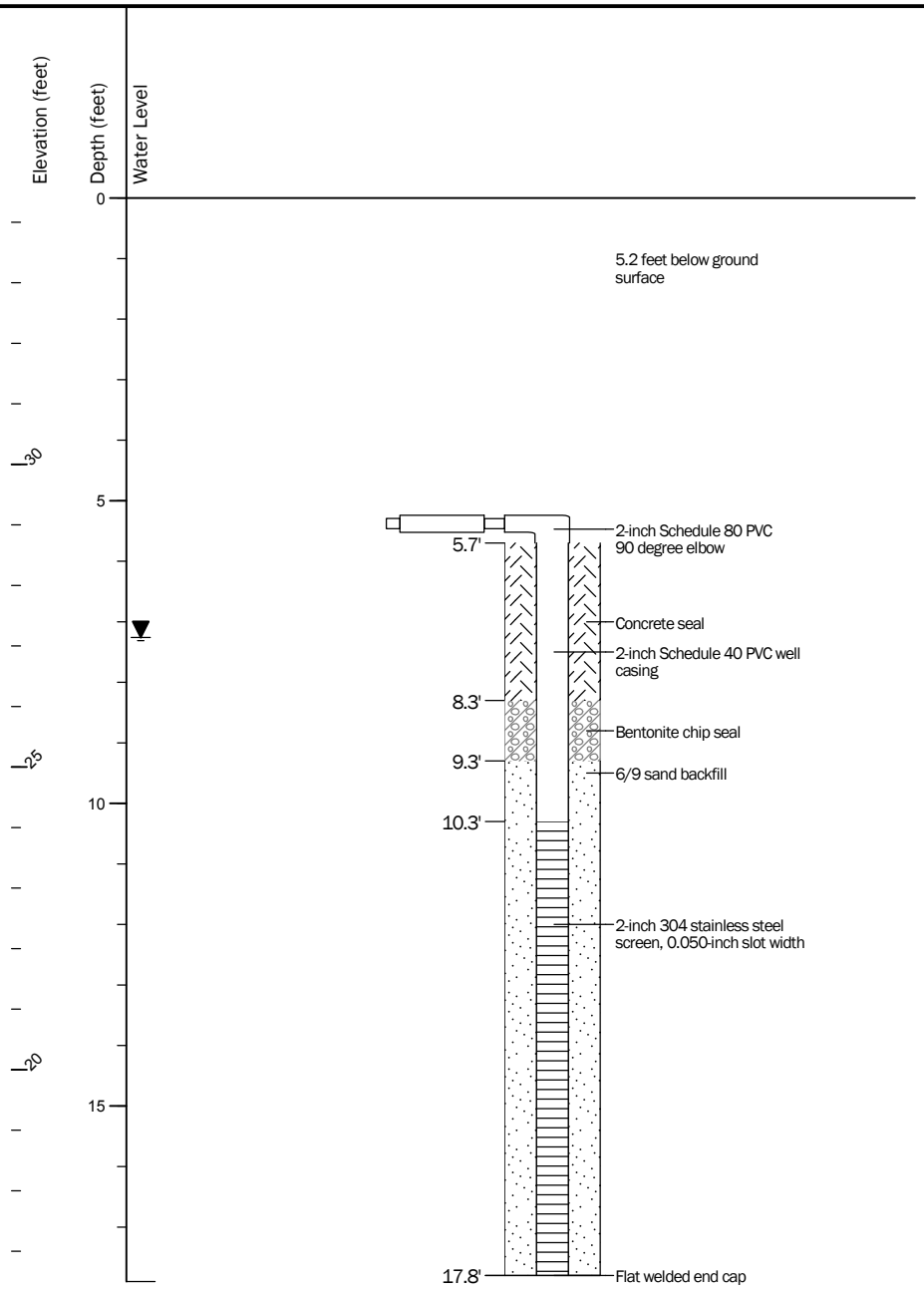
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-30
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled: Start 4/3/2017 End 4/3/2017 | Total Depth (ft): 17.9 | Logged By: PDR Checked By: SBS | Driller: Cascade Drilling | Drilling Method: 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data: N/A | | Drilling Equipment: Track-mounted CME 55 | | DOE Well I.D.: BKA 053<br>A 2 (in) well was installed on 4/3/2017 to a depth of 17.8 (ft). | |
| Surface Elevation (ft) Vertical Datum: 34.4 USACE (Locks) | | Top of Casing Elevation (ft): 29.12 | | Groundwater | |
| Easting (X) Northing (Y): 1270717.4 239171.07 | | Horizontal Datum: WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 7.26 / Elevation (ft): 21.86 |

Notes: Well developed by alternately pumping and surging, 13 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well C1 (fill)

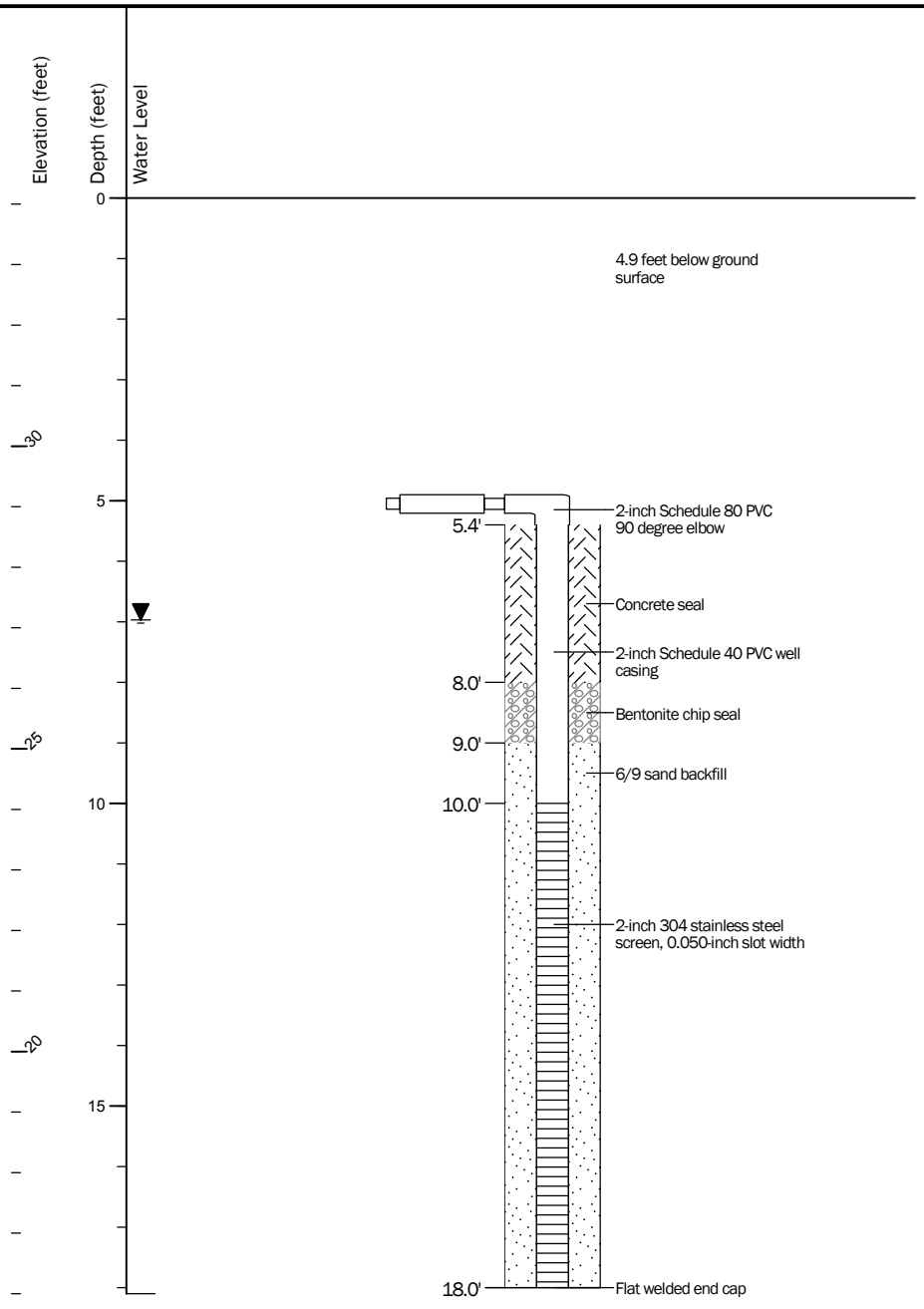
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-31
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled: Start 4/3/2017 End 4/3/2017 | Total Depth (ft) 18.1 | Logged By CVD<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 052<br>A 2 (in) well was installed on 4/3/2017 to a depth of 18 (ft). | |
| Surface Elevation (ft) Vertical Datum 34.1 USACE (Locks) | | Top of Casing Elevation (ft) 29.17 | | Groundwater | |
| Easting (X) 1270711.53<br>Northing (Y) 239163.52 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 6.97 — Elevation (ft): 22.20 |

Notes: Well developed by alternately pumping and surging, 40 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well C2 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-32
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/3/2017 | 4/3/2017 | 31.0 | CVD | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

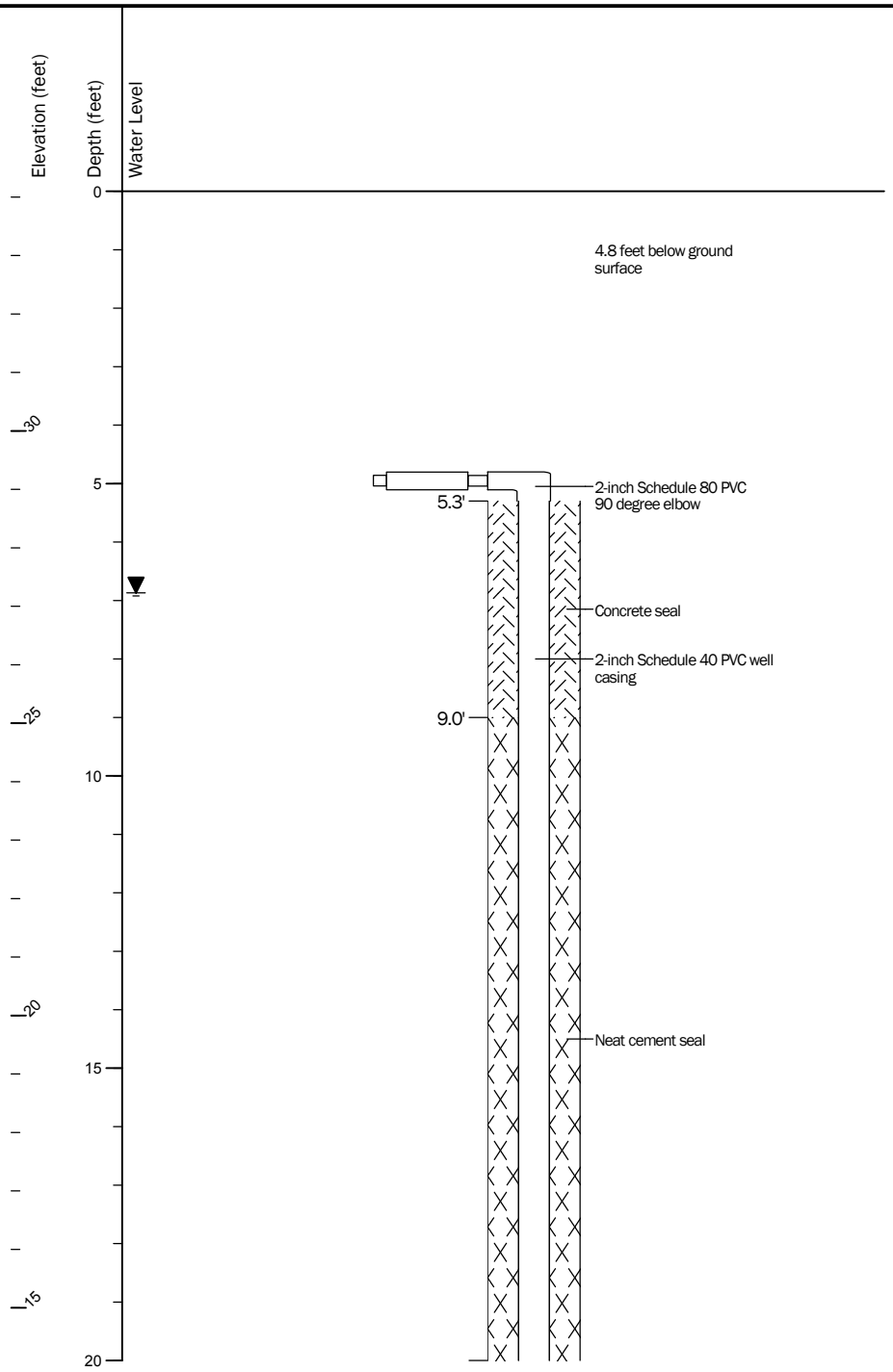
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 34.1 USACE (Locks) | Top of Casing Elevation (ft) | 29.28 |
| Easting (X) Northing (Y) | 1270710.85 239153.65 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 054
A 2 (in) well was installed on 4/3/2017 to a depth of 31 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.87 | 22.41 |

Notes: Well developed by alternately pumping and surging, 24 gallons removed. Well connected to east vault. Concrete encountered from 15 to 17 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

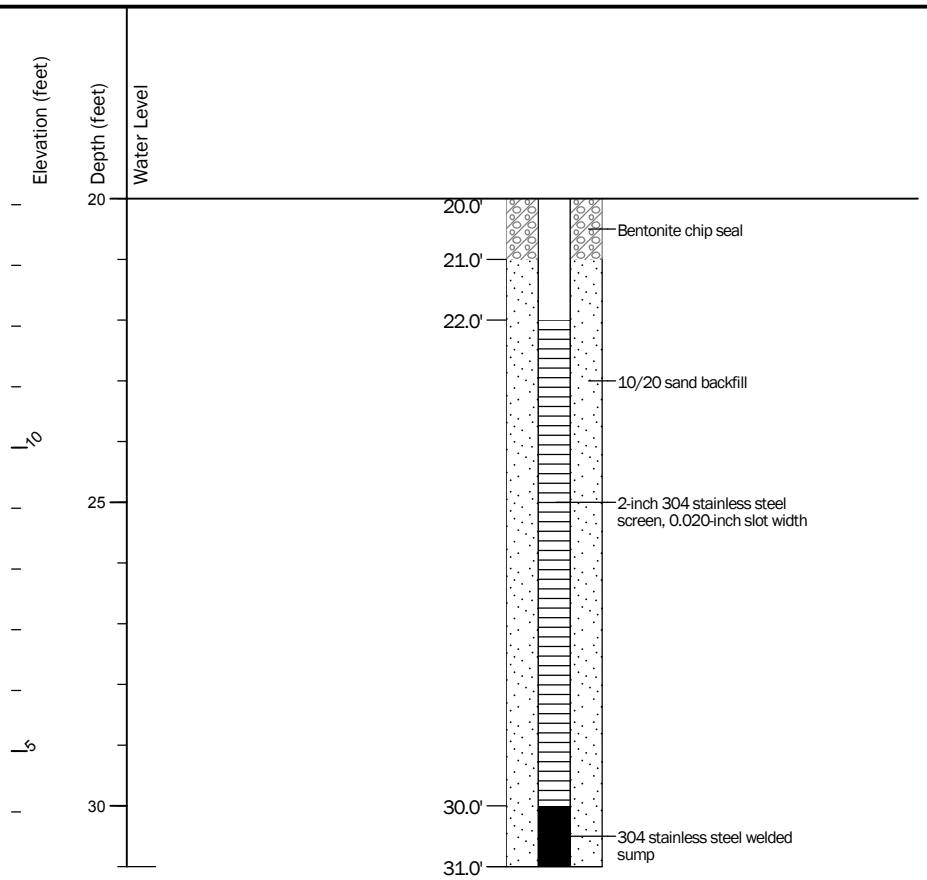



# Log of Well C3 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-33
Sheet 1 of 2




## Log of Well C3 (outwash) (continued)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-33
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/4/2017 | 4/4/2017 | 15.1 | CVD | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

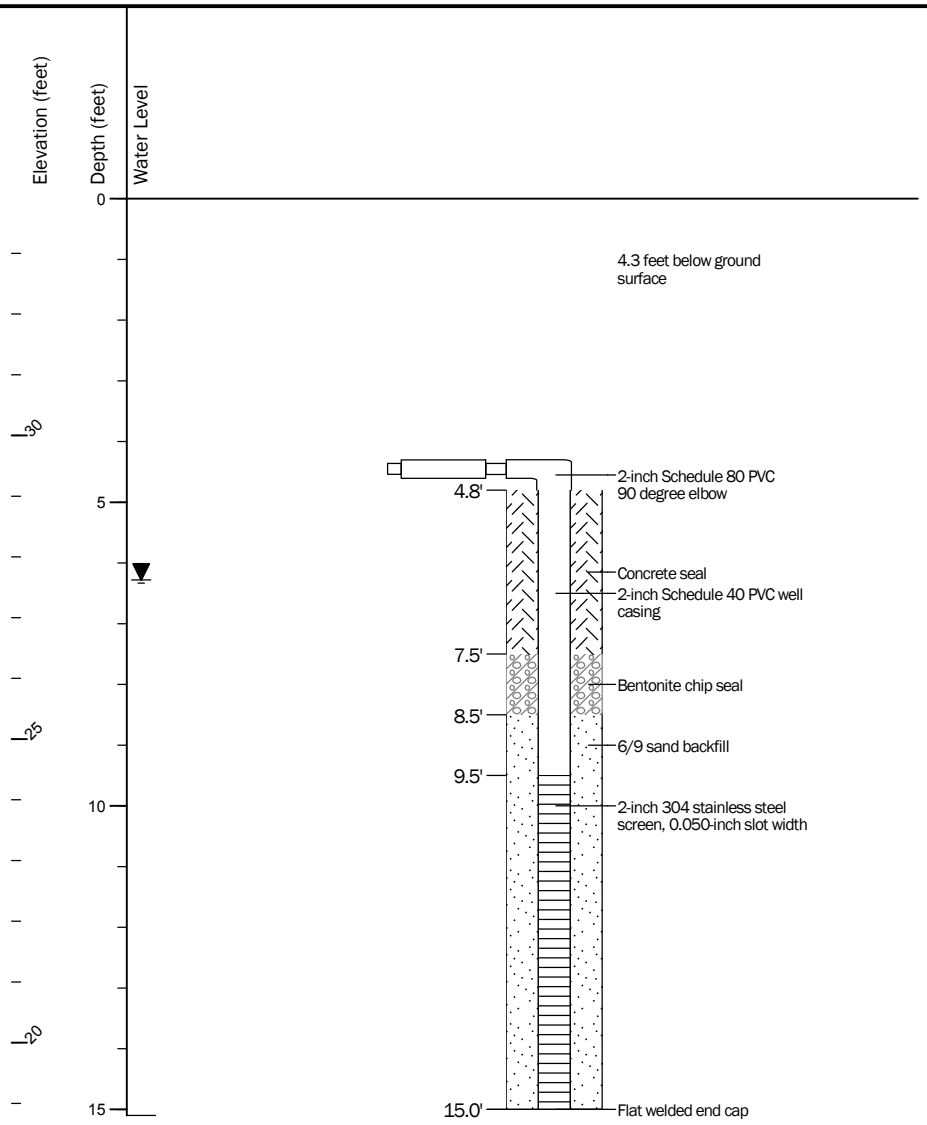
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 33.9 USACE (Locks) | Top of Casing Elevation (ft) | 29.62 |
| Easting (X) Northing (Y) | 1270710.36 239143.04 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 055
A 2 (in) well was installed on 4/4/2017 to a depth of 15 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.28 | 23.34 |

Notes: Well developed by alternately pumping and surging, 21 gallons removed. Well connected to east vault. Concrete encountered at 15 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well C4 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-34
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/5/2017 | 4/5/2017 | 31.3 | CVD | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

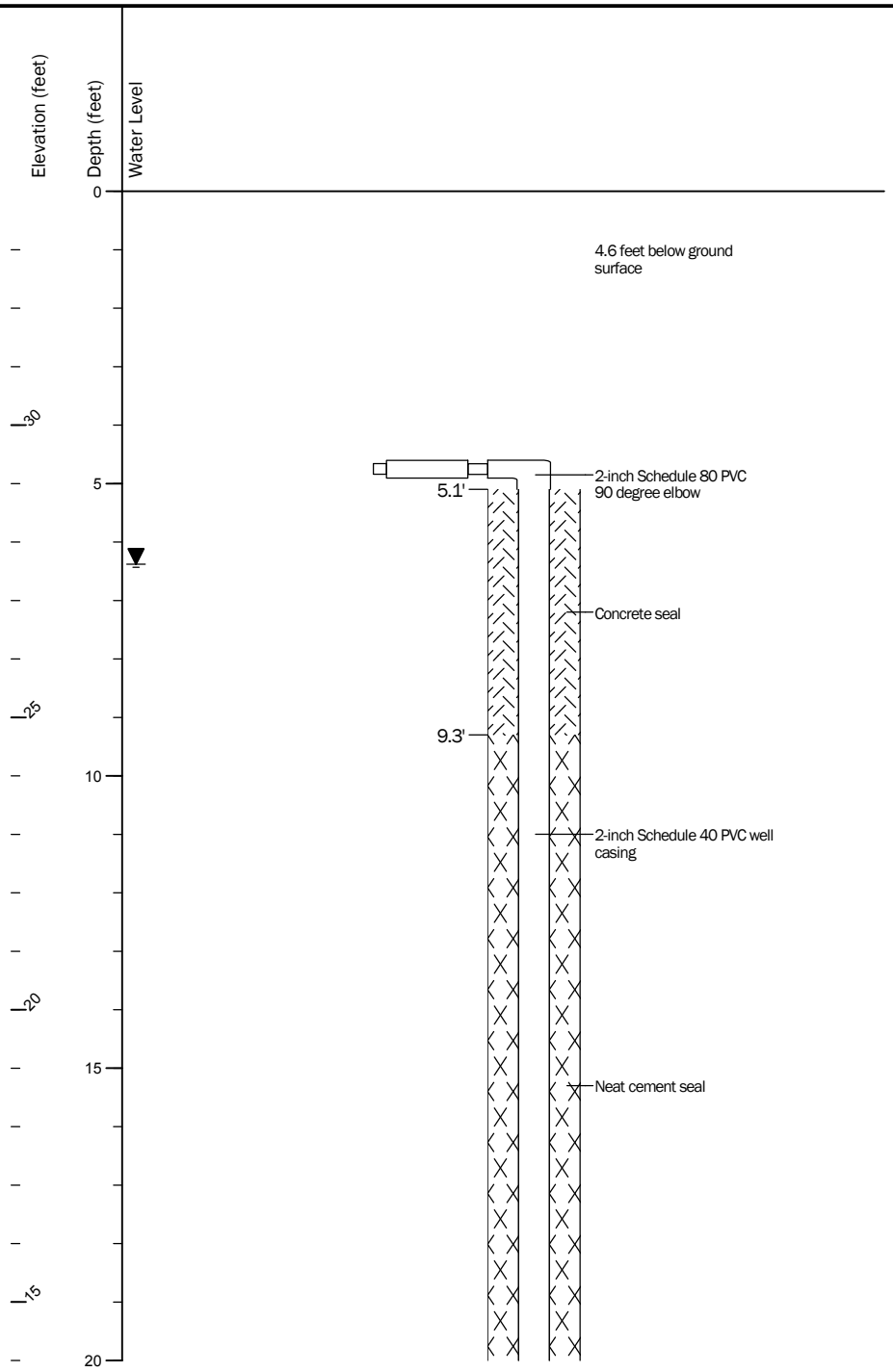
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 34 USACE (Locks) | Top of Casing Elevation (ft) | 29.39 |
| Easting (X) Northing (Y) | 1270708.63 239135.08 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 058
A 2 (in) well was installed on 4/5/2017 to a depth of 31.3 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.38 | 23.01 |

Notes: Well developed by alternately pumping and surging, 28 gallons removed. Well connected to east vault. Concrete encountered from 11 to 17 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

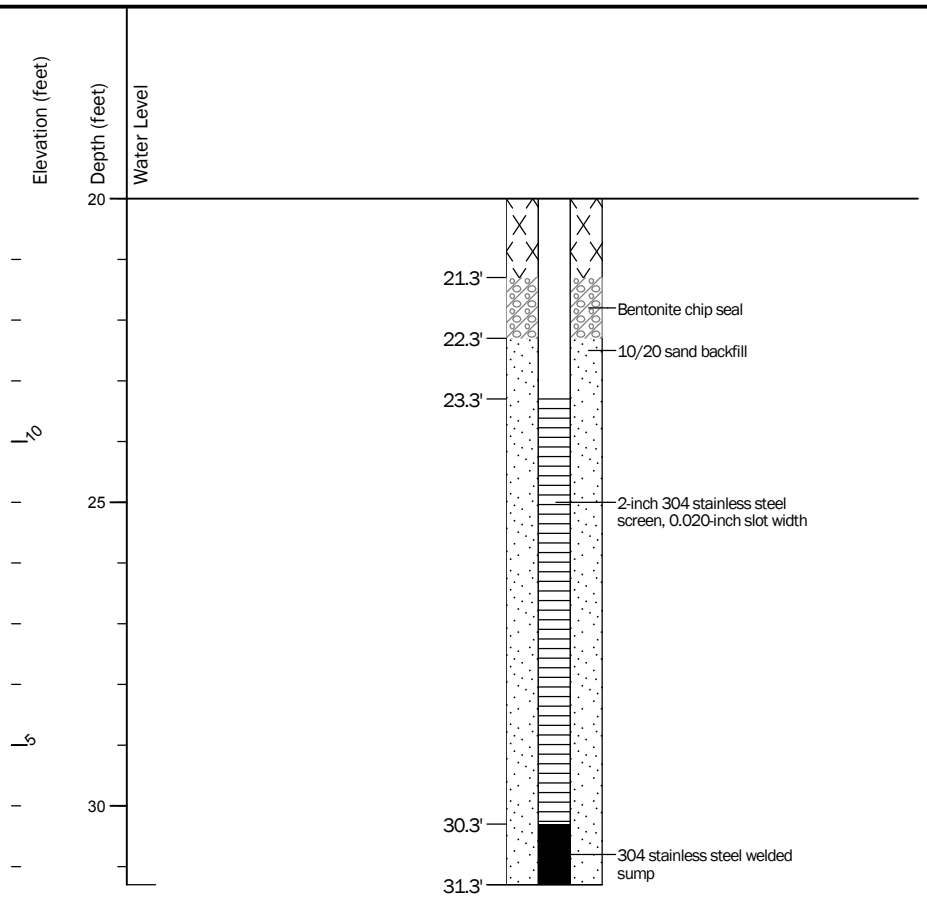



# Log of Well C5 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-35
Sheet 1 of 2




## Log of Well C5 (outwash) (continued)

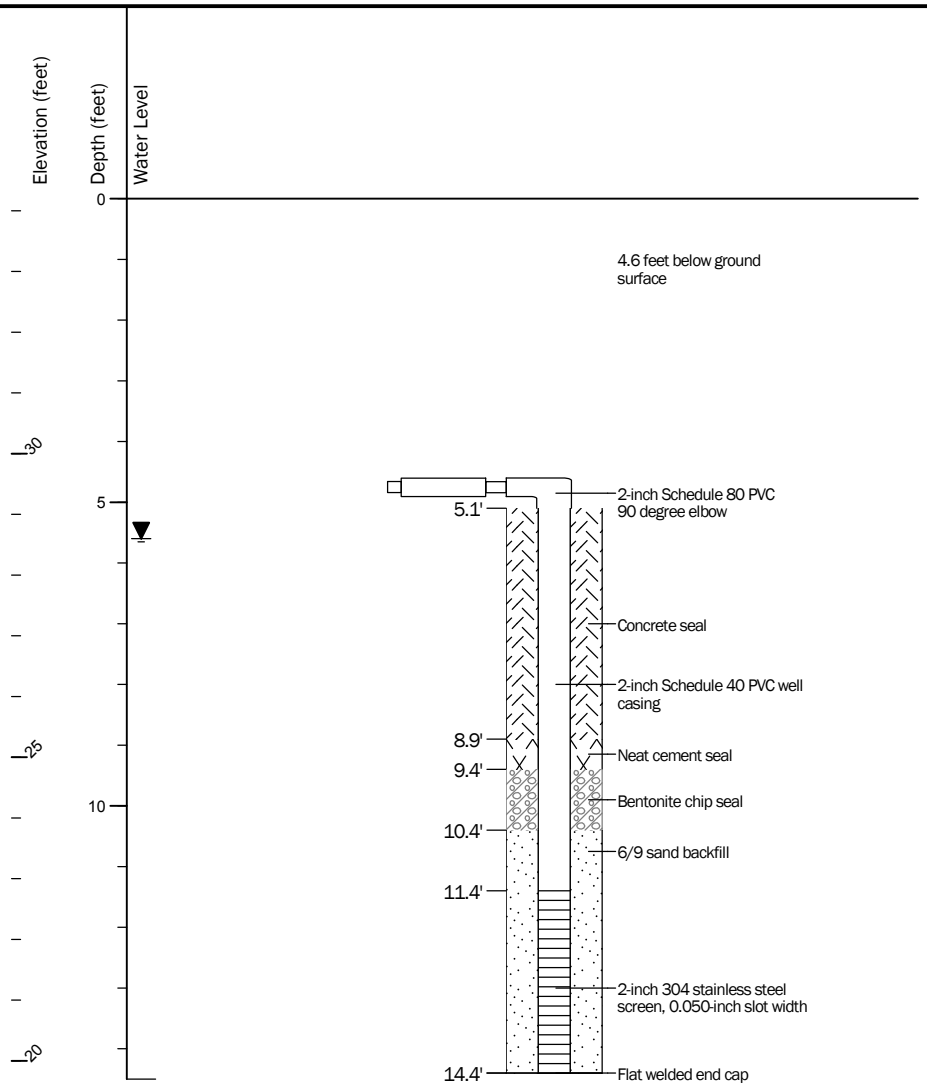
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-35
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 4/5/2017 End 4/5/2017 | Total Depth (ft) 14.5 | Logged By CVD<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 059<br>A 2 (in) well was installed on 4/5/2017 to a depth of 14.4 (ft). | |
| Surface Elevation (ft) Vertical Datum 34.2 USACE (Locks) | | Top of Casing Elevation (ft) 29.55 | | Groundwater | |
| Easting (X) 1270702.75<br>Northing (Y) 239119.81 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 5.60 — Elevation (ft): 23.95 |

Notes: Well developed by alternately pumping and surging, 31 gallons removed. Well connected to east vault. Concrete encountered from 14 to 14½ feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well C6 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-36
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/7/2017 | 4/7/2017 | 28.7 | PDR | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

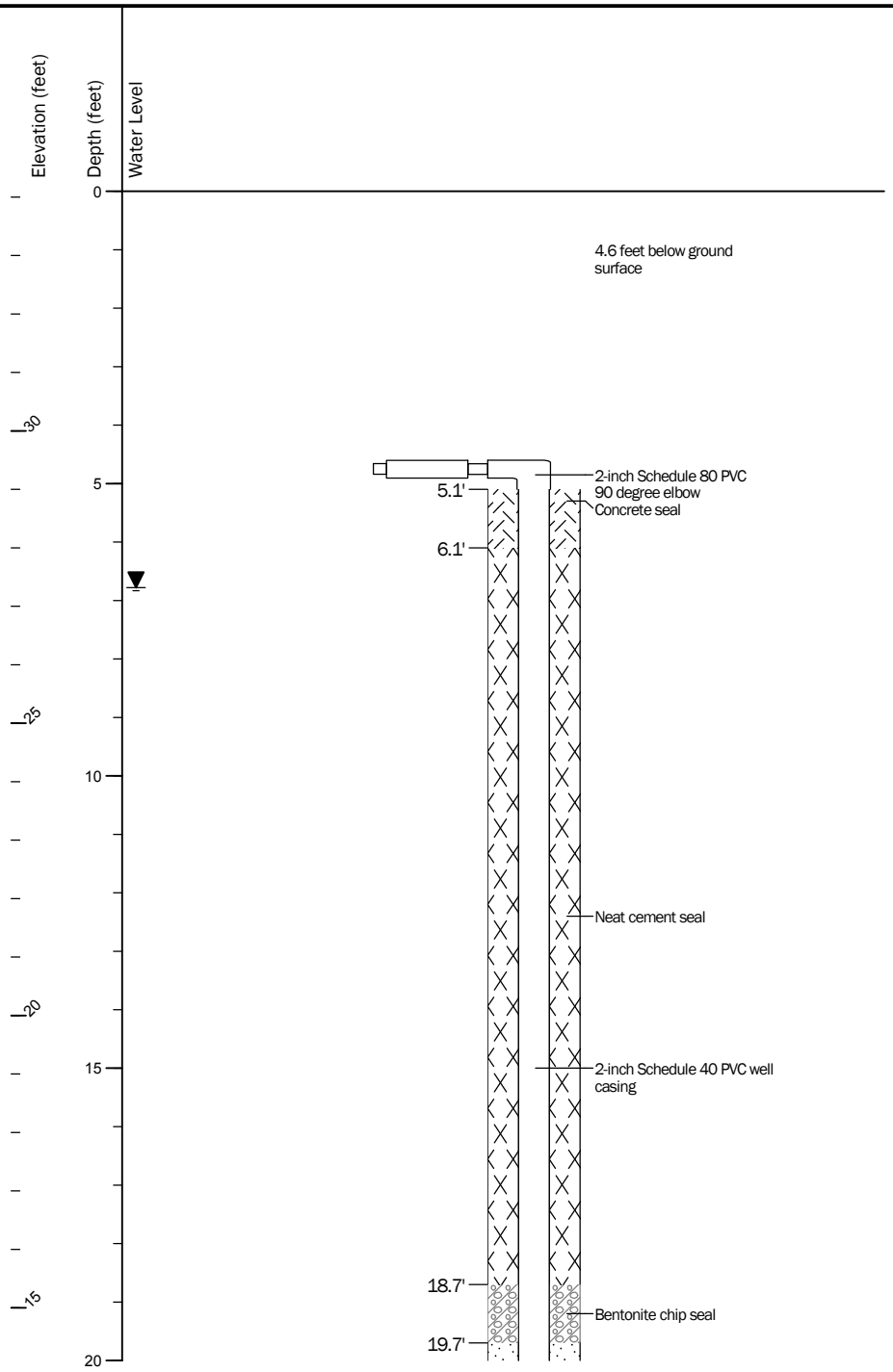
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 34.1 USACE (Locks) | Top of Casing Elevation (ft) | 29.55 |
| Easting (X) Northing (Y) | 1270698.62 239116.76 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 064
A 2 (in) well was installed on 4/7/2017 to a depth of 28.7 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.78 | 22.77 |

Notes: Well developed by alternately pumping and surging, 15 gallons removed. Well connected to east vault. Concrete encountered from 15 to 17 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

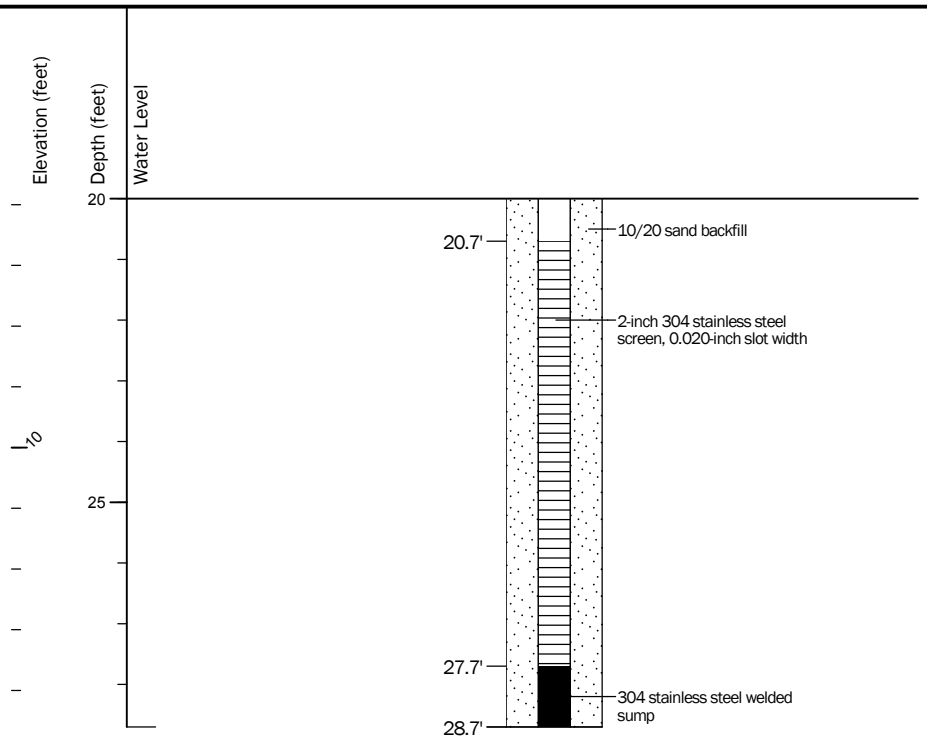



# Log of Well C7 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-37




## Log of Well C7 (outwash) (continued)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-37
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4/10/2017 | 4/10/2017 | | 14.9 | Checked By | PDR SBS | Cascade Drilling | | | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

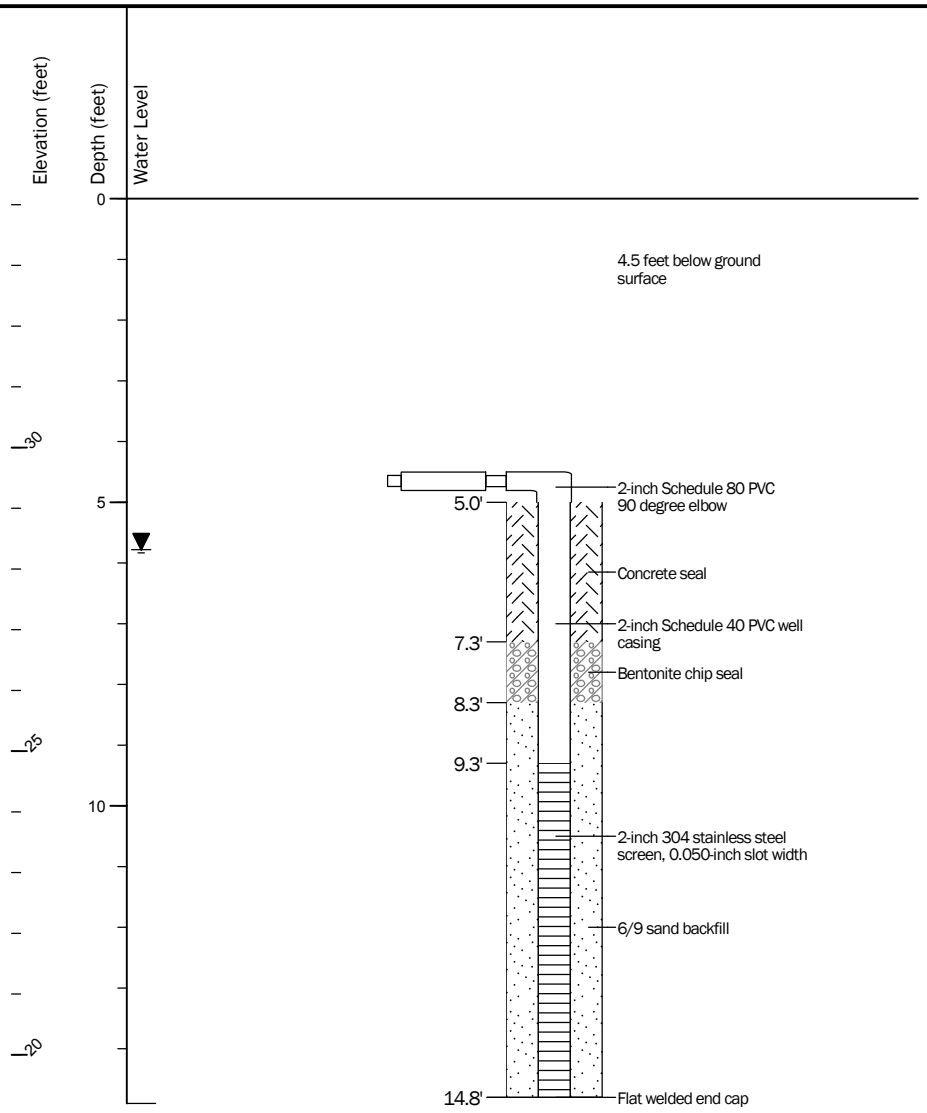
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 34.1 USACE (Locks) | Top of Casing Elevation (ft) | 29.64 |
| Easting (X) Northing (Y) | 1270688.96 239110.16 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 065
A 2 (in) well was installed on 4/10/2017 to a depth of 14.8 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 5.78 | 23.86 |

Notes: Well developed by alternately pumping and surging, 39 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well C8 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-38
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4/10/2017 | 4/10/2017 | 13.4 | | Checked By | PDR SBS | Cascade Drilling | | 8¼-inch OD Hollow-stem Auger w/ Star Bit | |

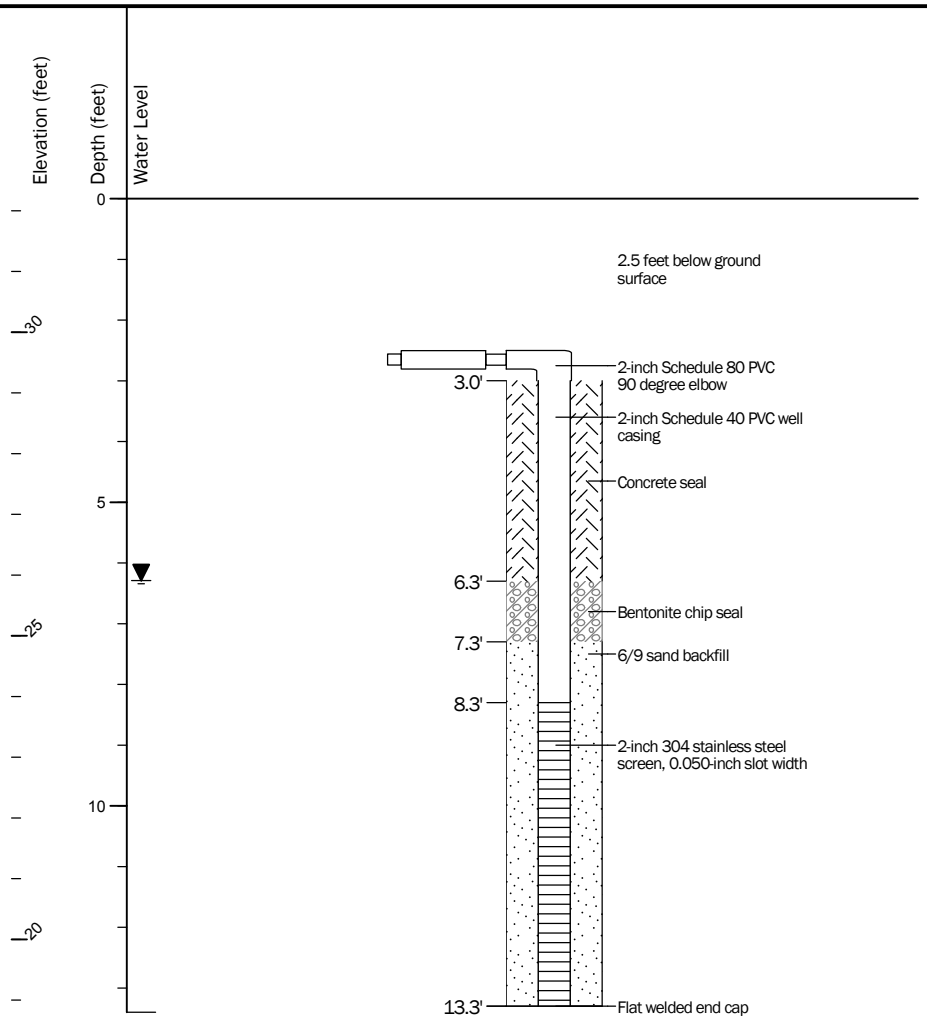
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 32.2 USACE (Locks) | Top of Casing Elevation (ft) | 29.75 |
| Easting (X) Northing (Y) | 1270689.61 239080.68 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 068
A 2 (in) well was installed on 4/10/2017 to a depth of 13.3 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.29 | 23.46 |

Notes: Well developed by alternately pumping and surging, 32 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well C9 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-39
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4/11/2017 | 4/11/2017 | 28.8 | | Checked By | PDR SBS | Cascade Drilling | | 8¼-inch OD Hollow-stem Auger w/ Star Bit | |

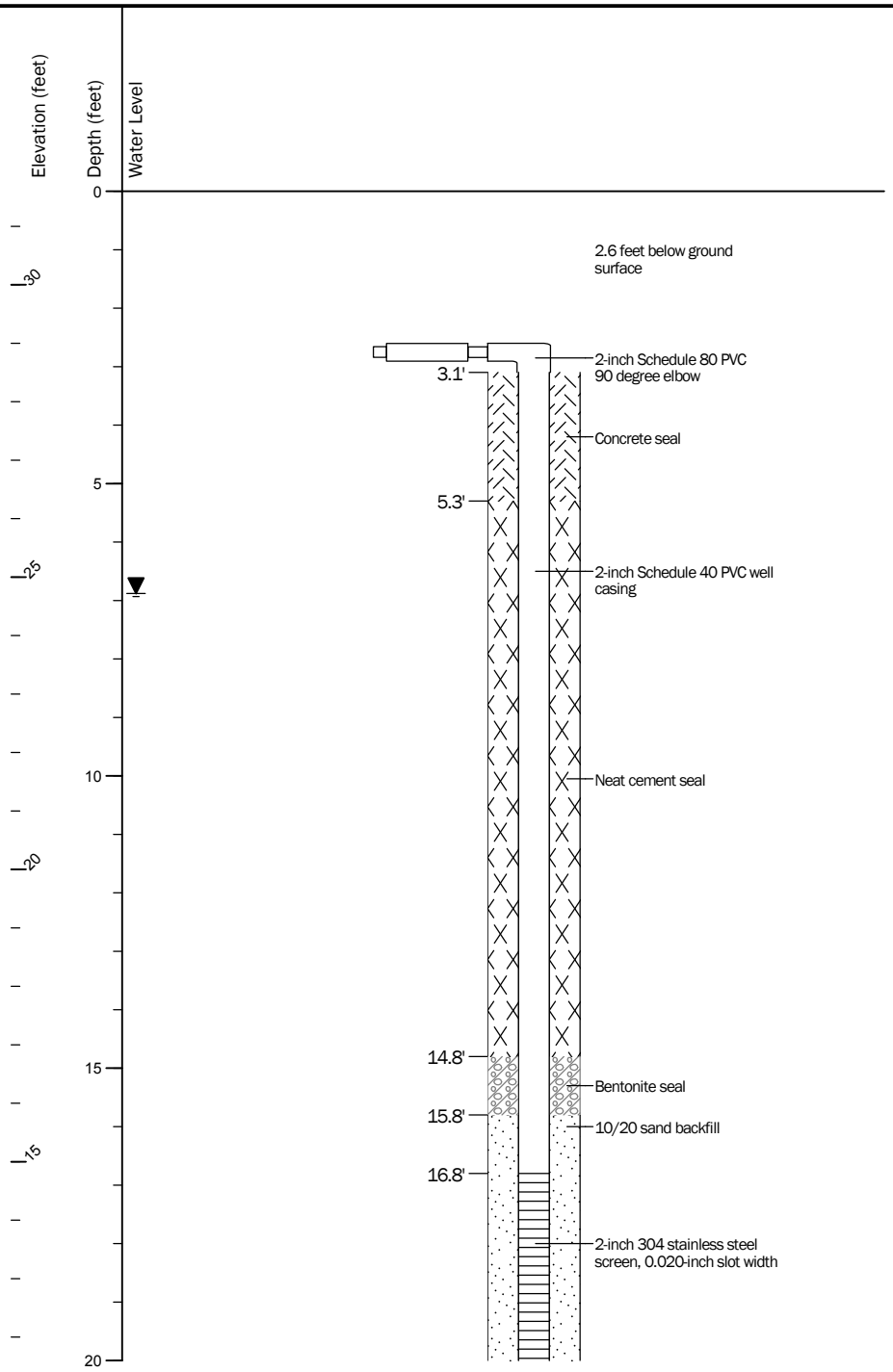
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 31.6 USACE (Locks) | Top of Casing Elevation (ft) | 28.92 |
| Easting (X) Northing (Y) | 1270717.81 239072.82 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 069
A 2 (in) well was installed on 4/11/2017 to a depth of 28.8 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.88 | 22.04 |

Notes: Well developed by alternately pumping and surging, 19 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

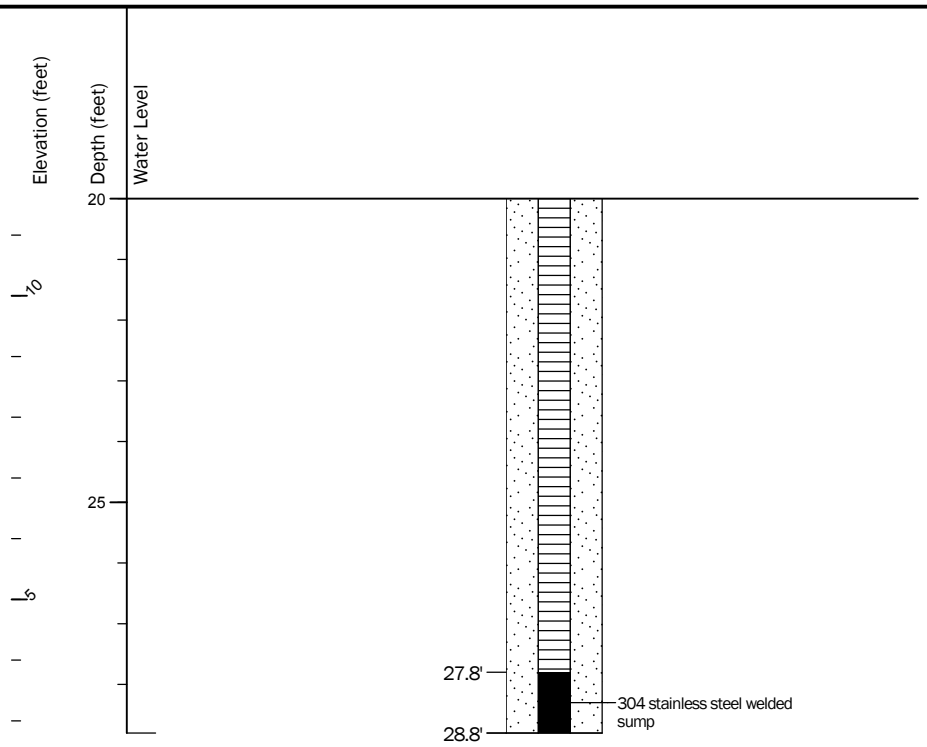



# Log of Well C10 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-40
Sheet 1 of 2




## Log of Well C10 (outwash) (continued)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-40
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/11/2017 | 4/11/2017 | 31.6 | PDR | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

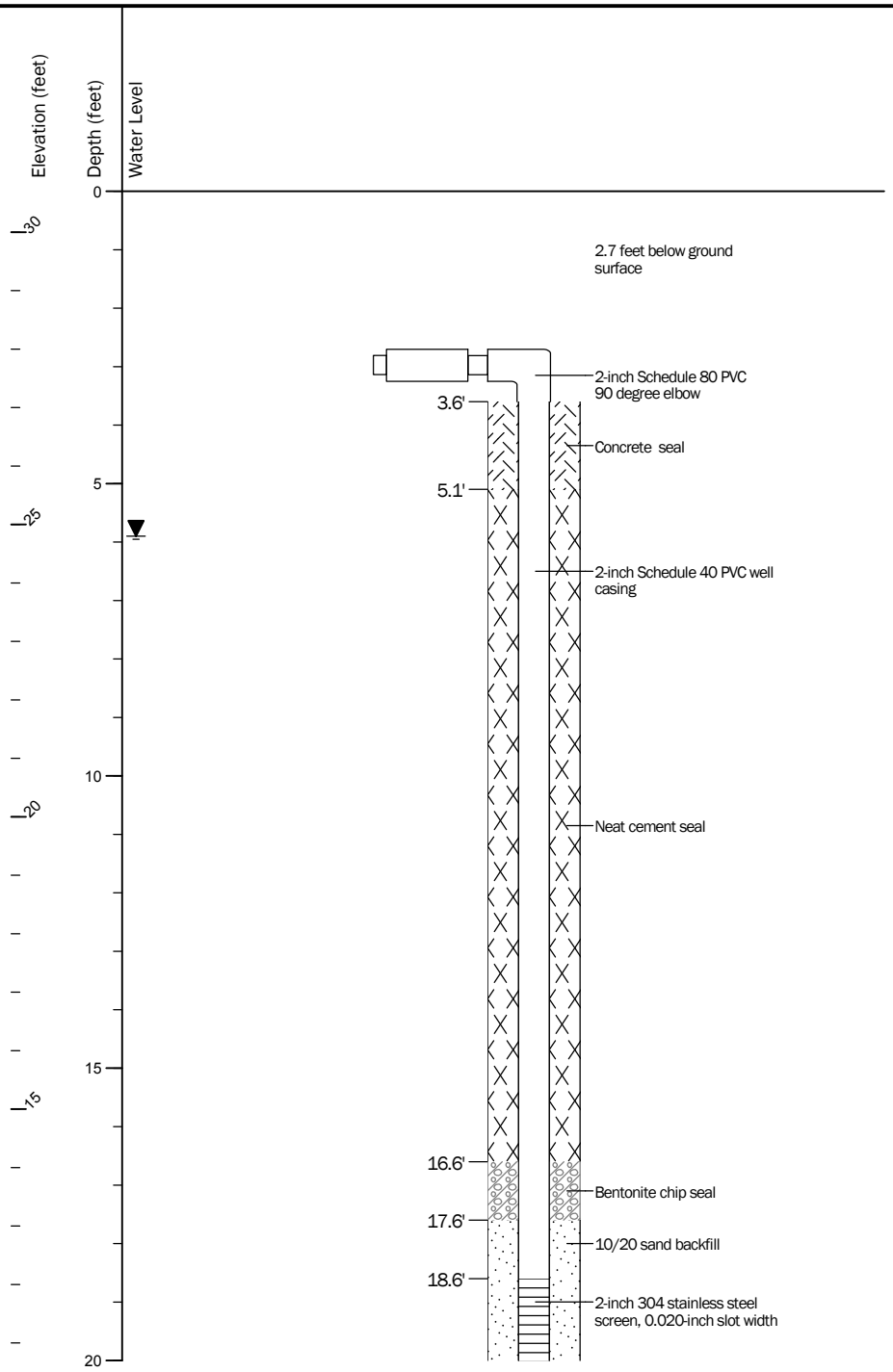
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 30.7 USACE (Locks) | Top of Casing Elevation (ft) | 27.98 |
| Easting (X) Northing (Y) | 1270743.78 239080.59 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 070
A 2 (in) well was installed on 4/11/2017 to a depth of 31.6 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 5.90 | 22.08 |

Notes: Well developed by alternately pumping and surging, 84 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

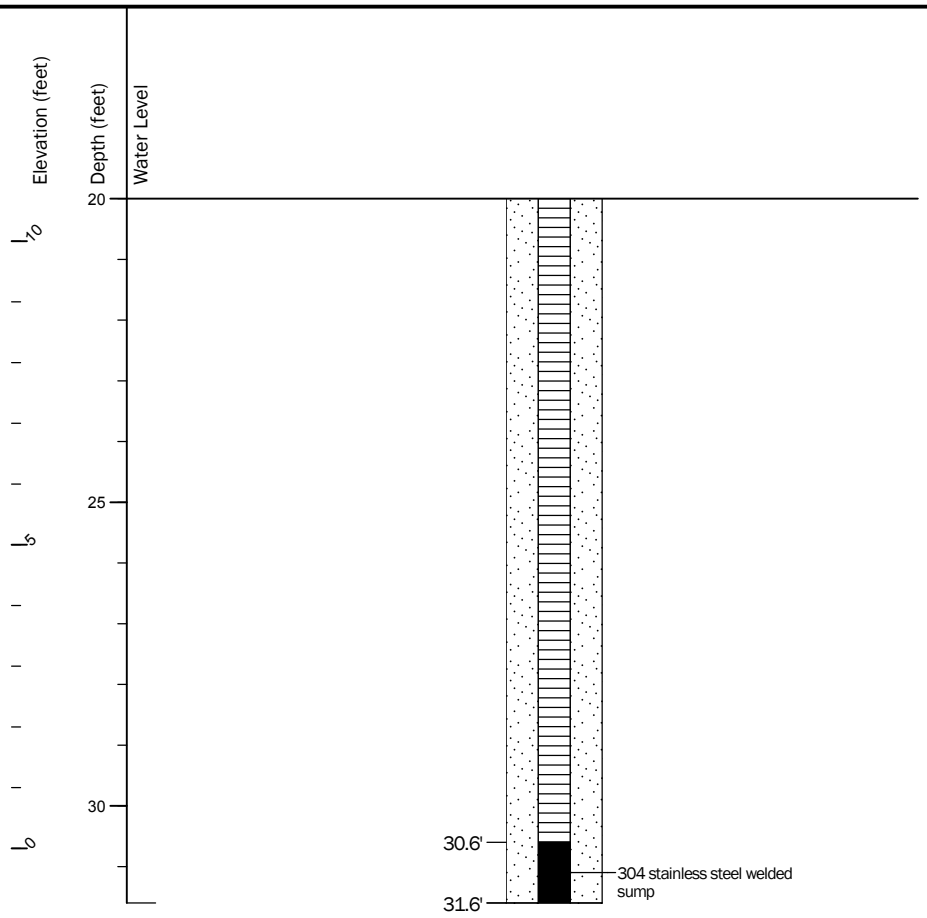



# Log of Well C11 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-41
Sheet 1 of 2




## Log of Well C11 (outwash) (continued)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-41
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 4/11/2017 | 4/11/2017 | 34.2 | | Checked By | PDR SBS | Cascade Drilling | | 8¼-inch OD Hollow-stem Auger w/ Star Bit | |

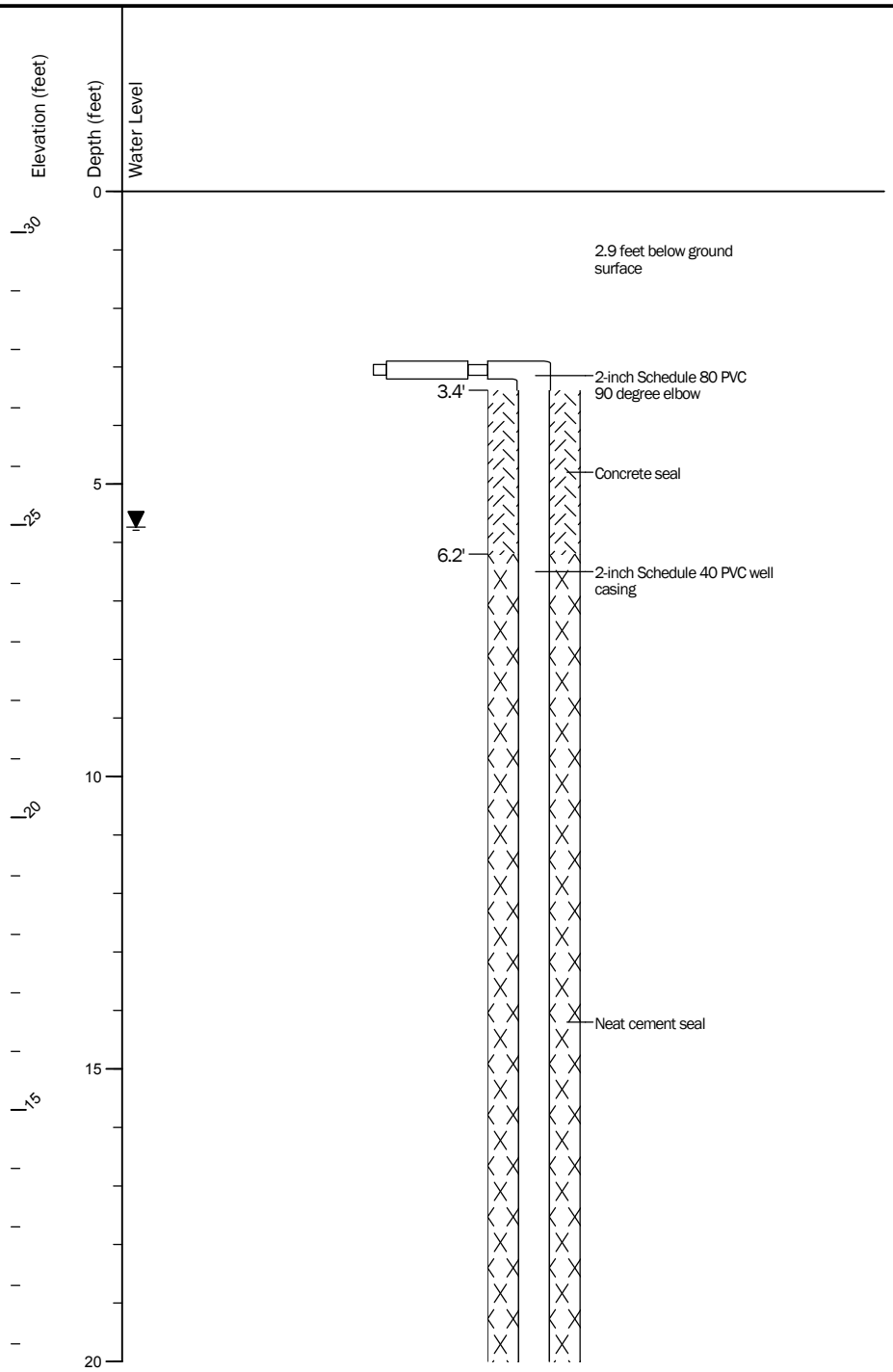
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 30.7 USACE (Locks) | Top of Casing Elevation (ft) | 27.76 |
| Easting (X) Northing (Y) | 1270758.65 239095.06 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 071
A 2 (in) well was installed on 4/11/2017 to a depth of 34.2 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 5.74 | 22.02 |

Notes: Well developed by alternately pumping and surging, 17 gallons removed. Well connected to east vault. Heaving sands encountered from 14 to 34½ feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

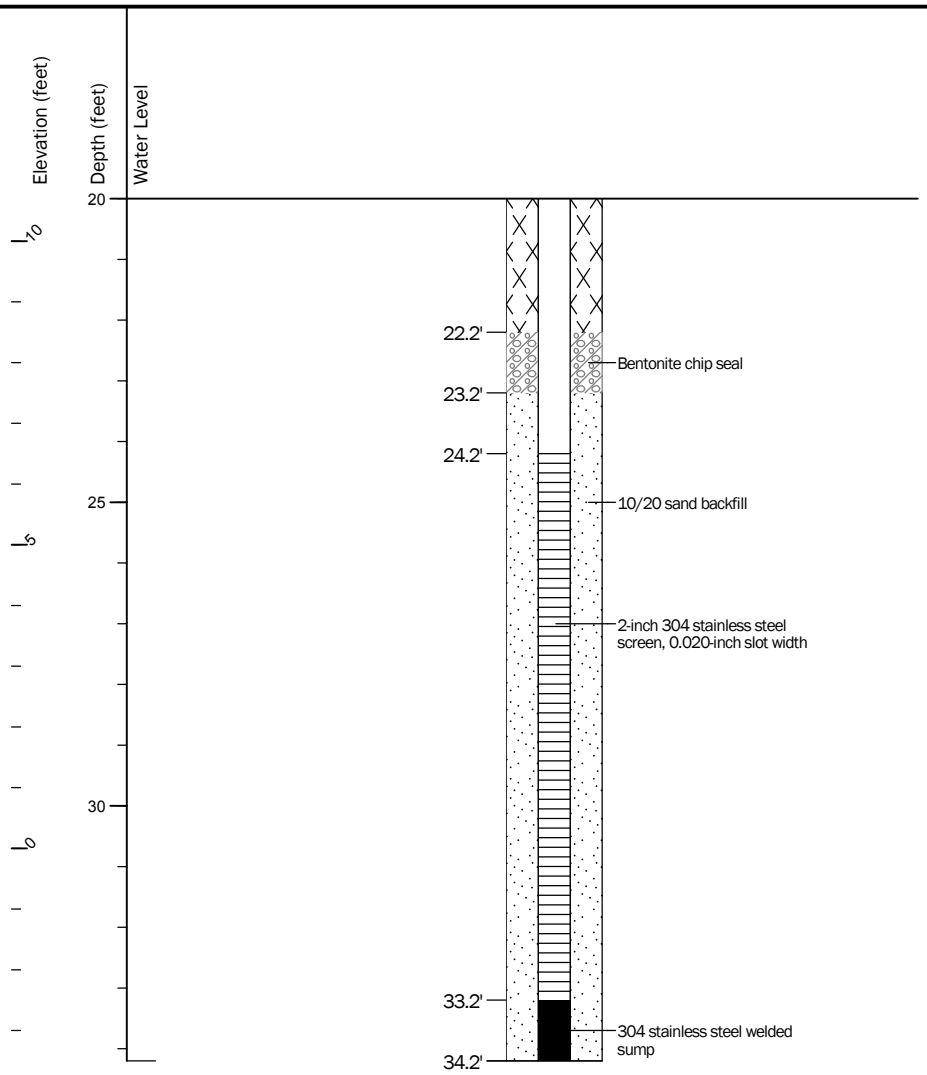



# Log of Well C12 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-42
Sheet 1 of 2




## Log of Well C12 (outwash) (continued)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-42
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | | Logged By | | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3/29/2017 | 3/29/2017 | | 18.2 | Checked By | CVD SBS | Cascade Drilling | | | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

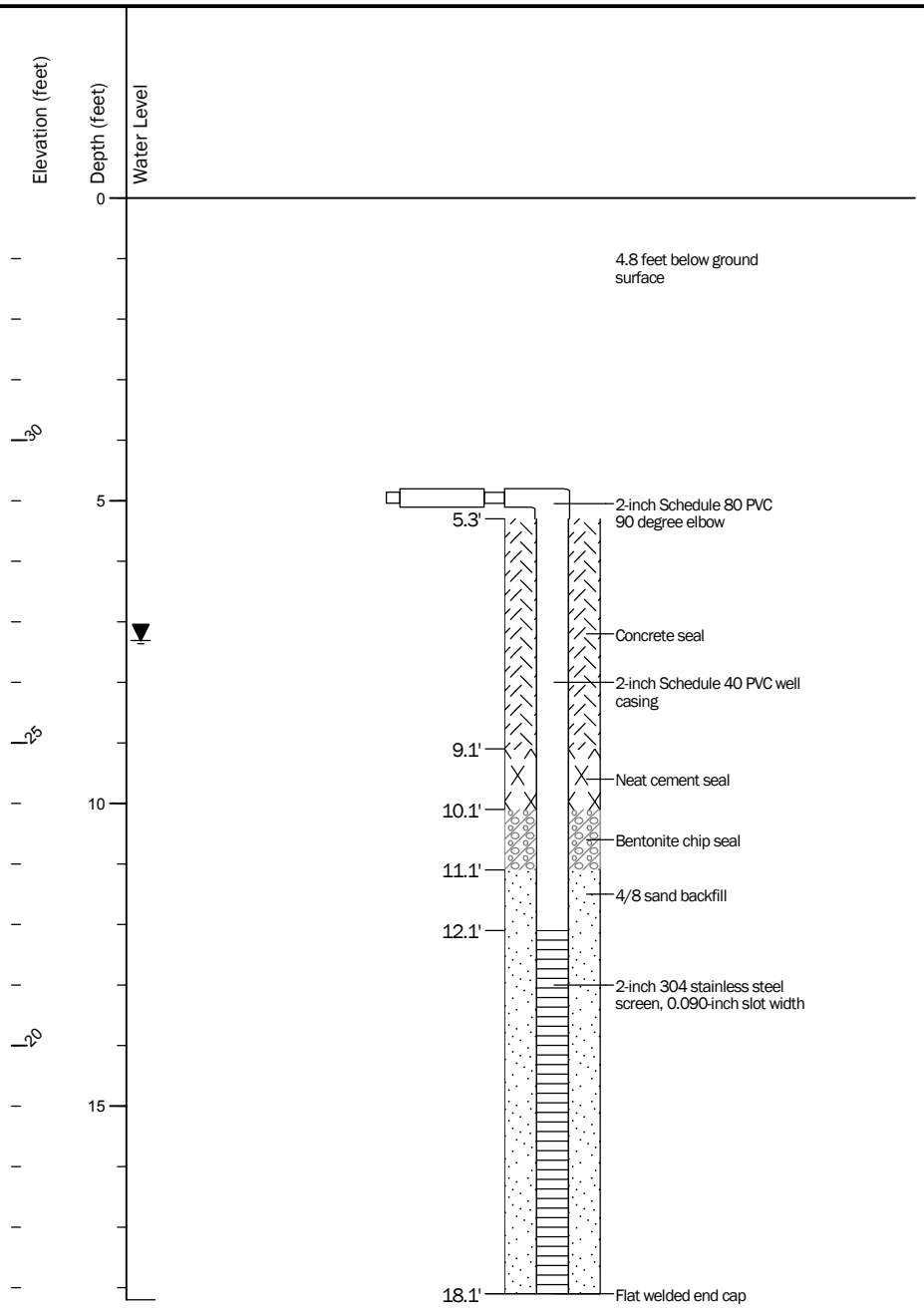
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 34.0 USACE (Locks) | Top of Casing Elevation (ft) | 29.22 |
| Easting (X) Northing (Y) | 1270735.83 239170.34 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 044
A 2 (in) well was installed on 3/29/2017 to a depth of 18.1 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 7.31 | 21.91 |

Notes: Well developed by alternately pumping and surging, 113 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well D1 (fill)

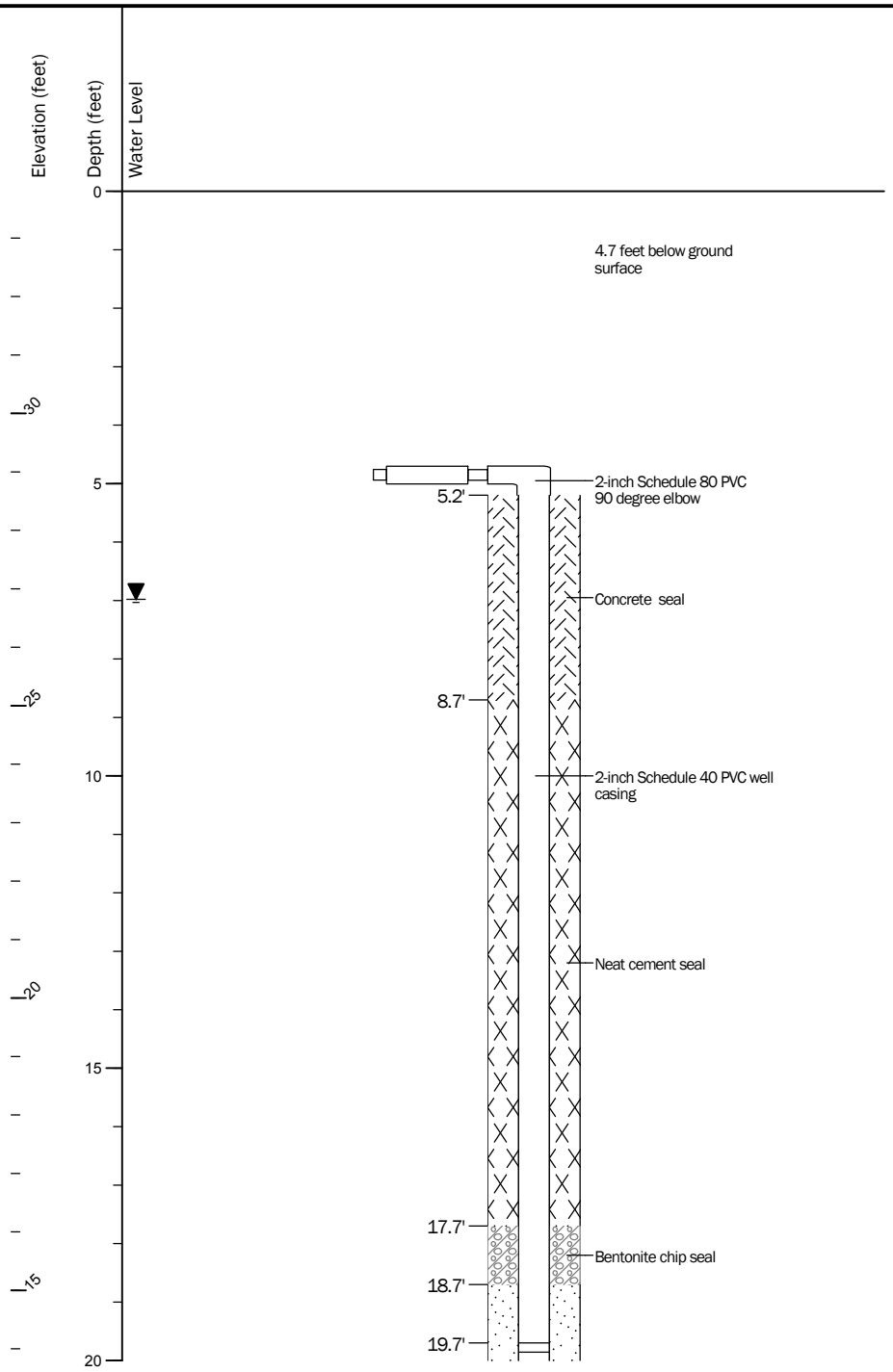
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-43
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/29/2017 End 3/29/2017 | Total Depth (ft) 30.2 | Logged By CVD<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 045<br>A 2 (in) well was installed on 3/29/2017 to a depth of 30.2 (ft). | |
| Surface Elevation (ft) Vertical Datum 33.8 USACE (Locks) | | Top of Casing Elevation (ft) 29.07 | | Groundwater | |
| Easting (X) 1270735.63<br>Northing (Y) 239166.43 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured | Depth to Water (ft) / Elevation (ft) |
| | | | | 4/24/2017 | 6.98 / 22.09 |

Notes: Well developed by alternately pumping and surging, 35 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

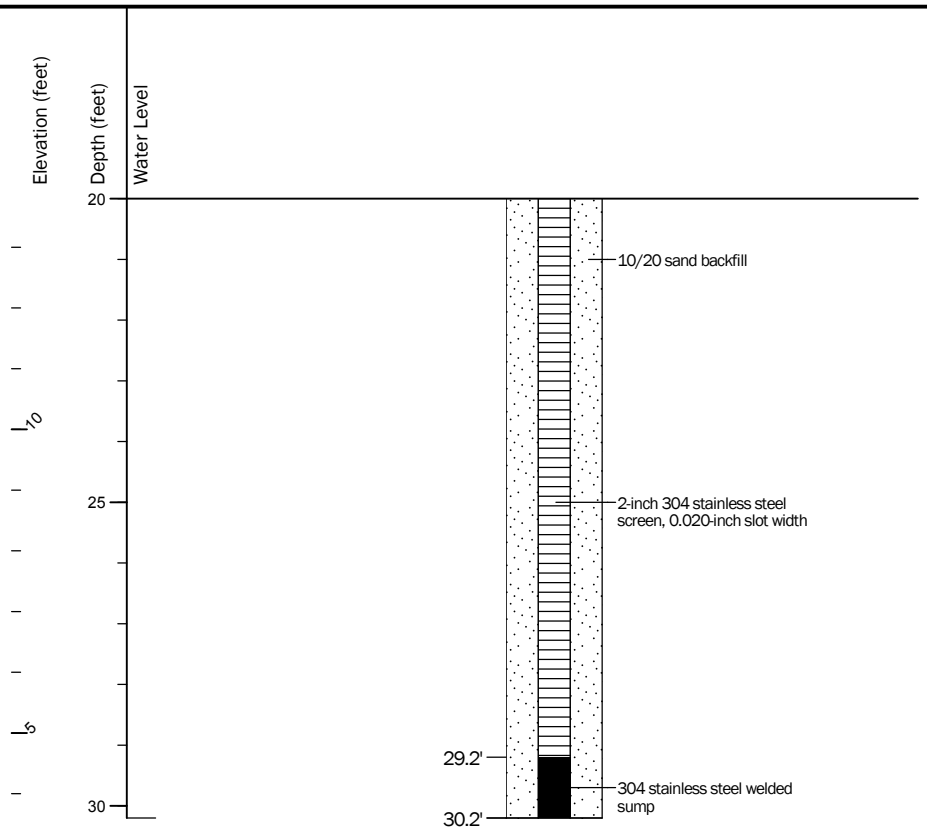



# Log of Well D2 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-43
Sheet 1 of 2




## Log of Well D2 (outwash) (continued)

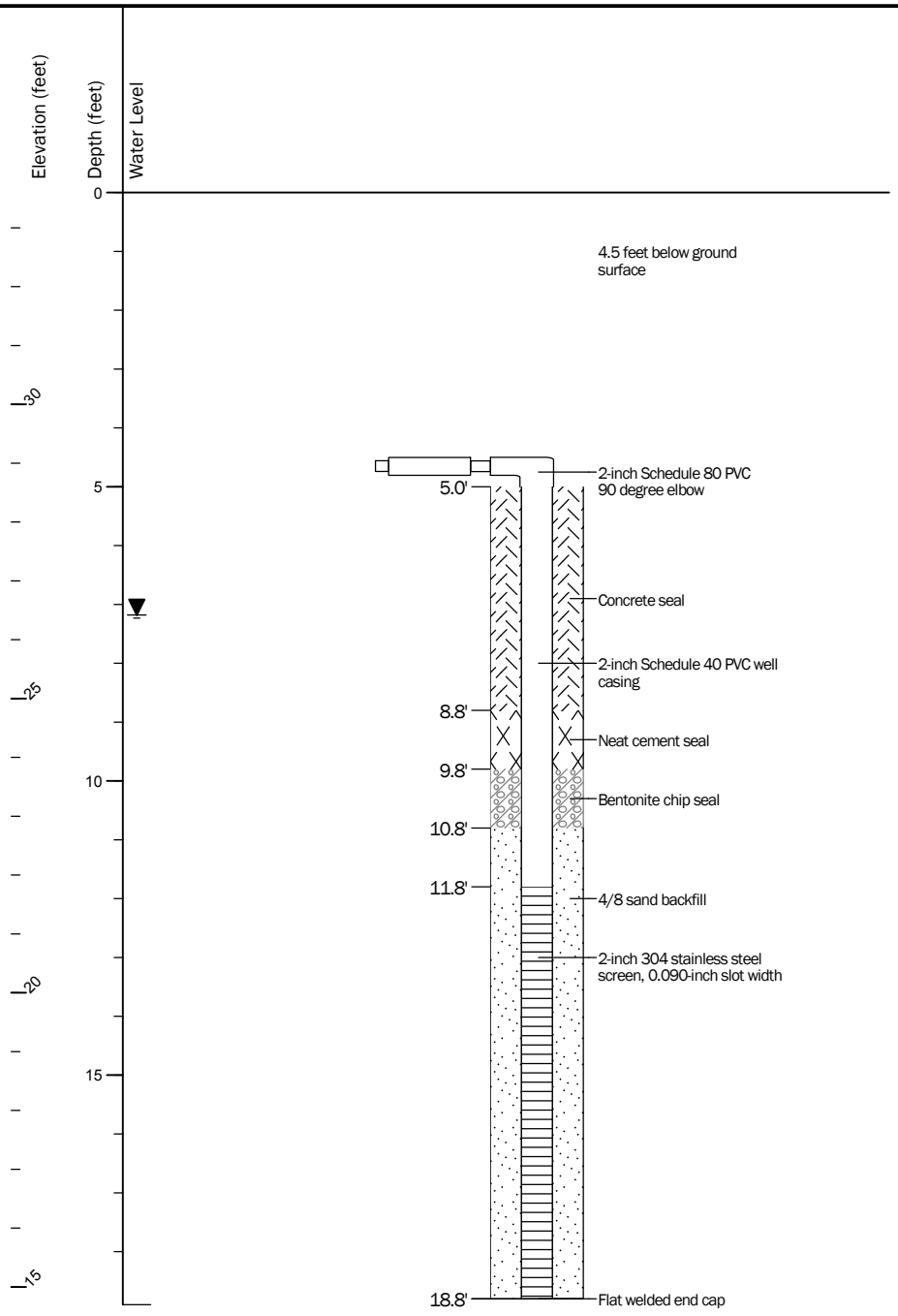
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-43
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/29/2017 End 3/29/2017 | Total Depth (ft) 18.9 | Logged By CVD<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 046<br>A 2 (in) well was installed on 3/29/2017 to a depth of 18.8 (ft). | |
| Surface Elevation (ft) Vertical Datum 33.6 USACE (Locks) | | Top of Casing Elevation (ft) 29.05 | | Groundwater | |
| Easting (X) 1270736.47<br>Northing (Y) 239152.19 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 7.18 — Elevation (ft): 21.87 |

Notes: Well developed by alternately pumping and surging, 84 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well D3 (fill)

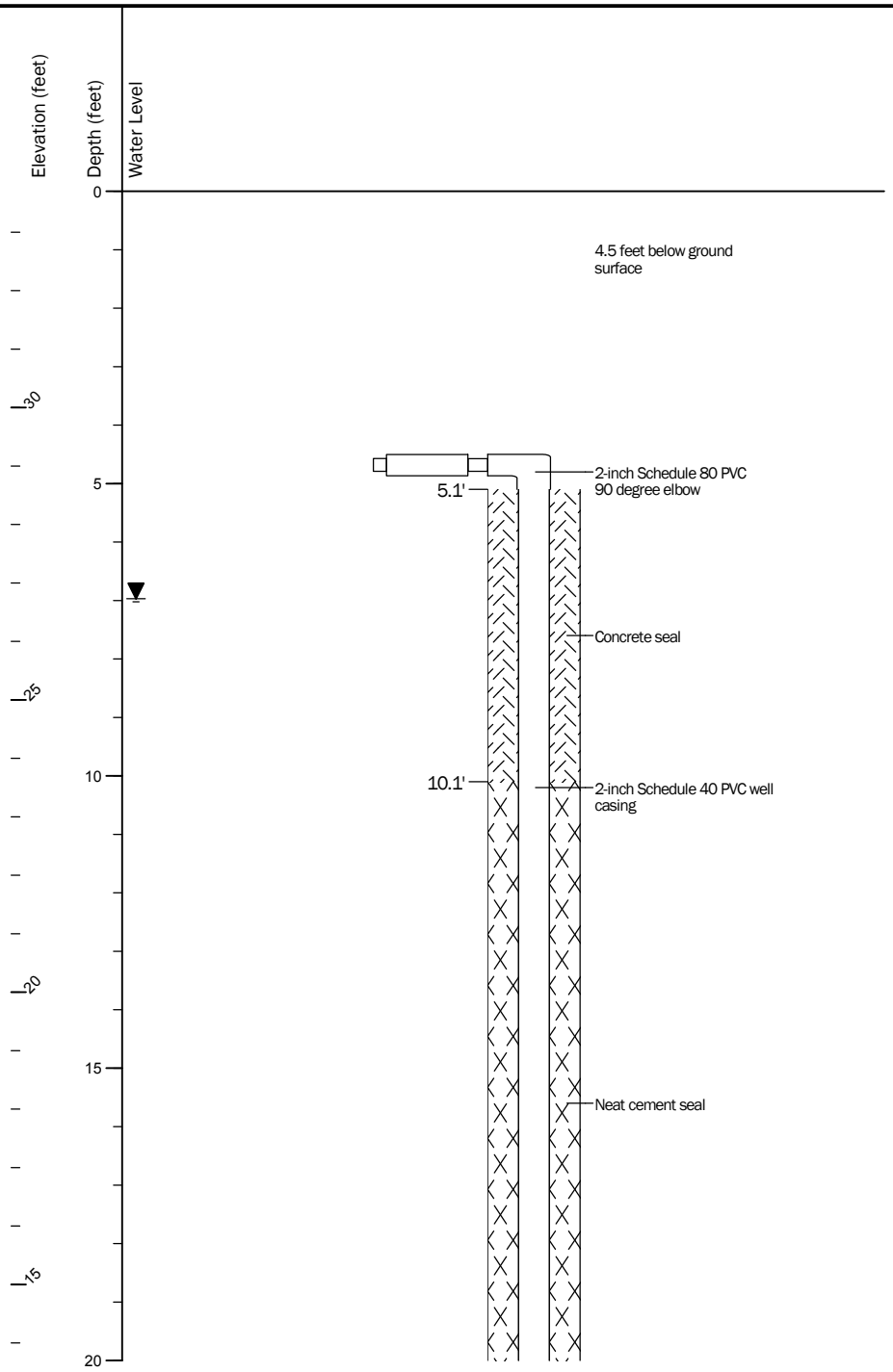
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-44
Sheet 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Drilled Start 3/30/2017 End 3/30/2017 | Total Depth (ft) 33.1 | Logged By CVD<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 049<br>A 2 (in) well was installed on 3/30/2017 to a depth of 33.1 (ft). | |
| Surface Elevation (ft) Vertical Datum 33.7 USACE (Locks) | | Top of Casing Elevation (ft) 29.20 | | Groundwater | |
| Easting (X) 1270736.02<br>Northing (Y) 239149 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 6.97 — Elevation (ft): 22.23 |

Notes: Well developed by alternately pumping and surging, 73 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

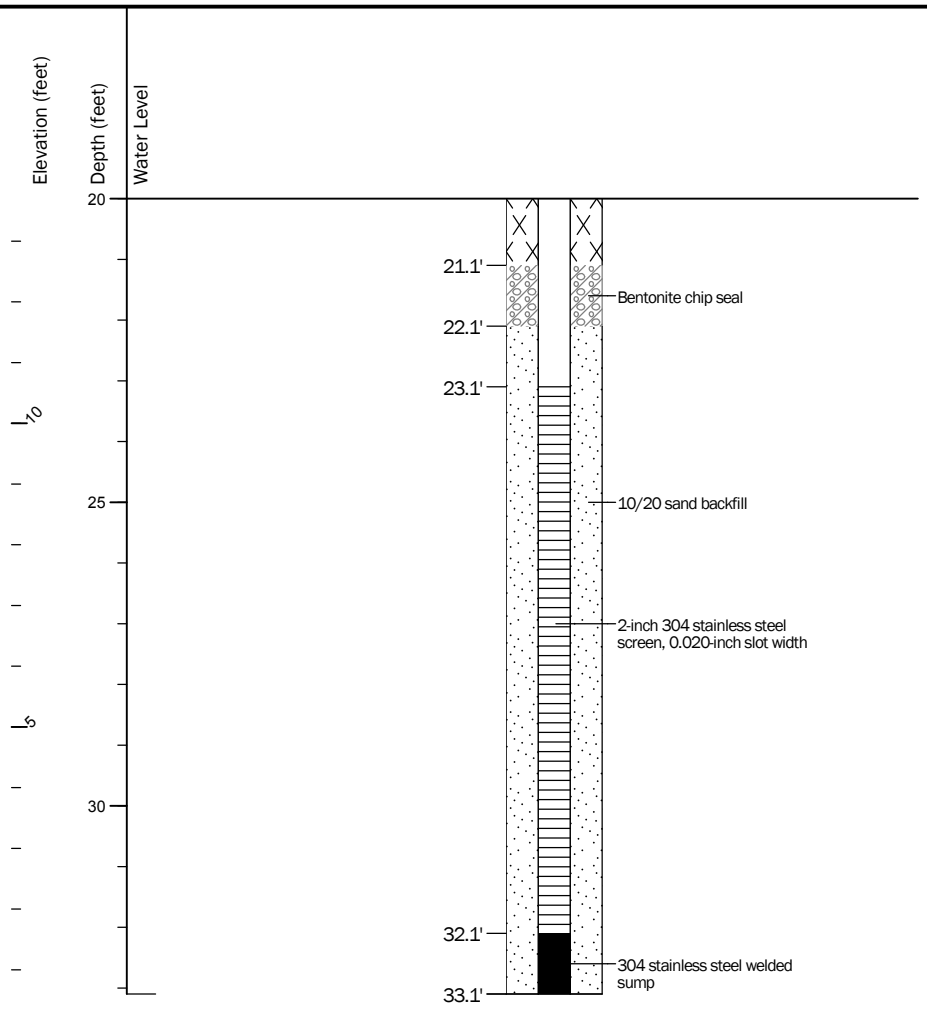



# Log of Well D4 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-45
Sheet 1 of 2




## Log of Well D4 (outwash) (continued)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-45
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 3/30/2017 | 3/30/2017 | 21.1 | CVD | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

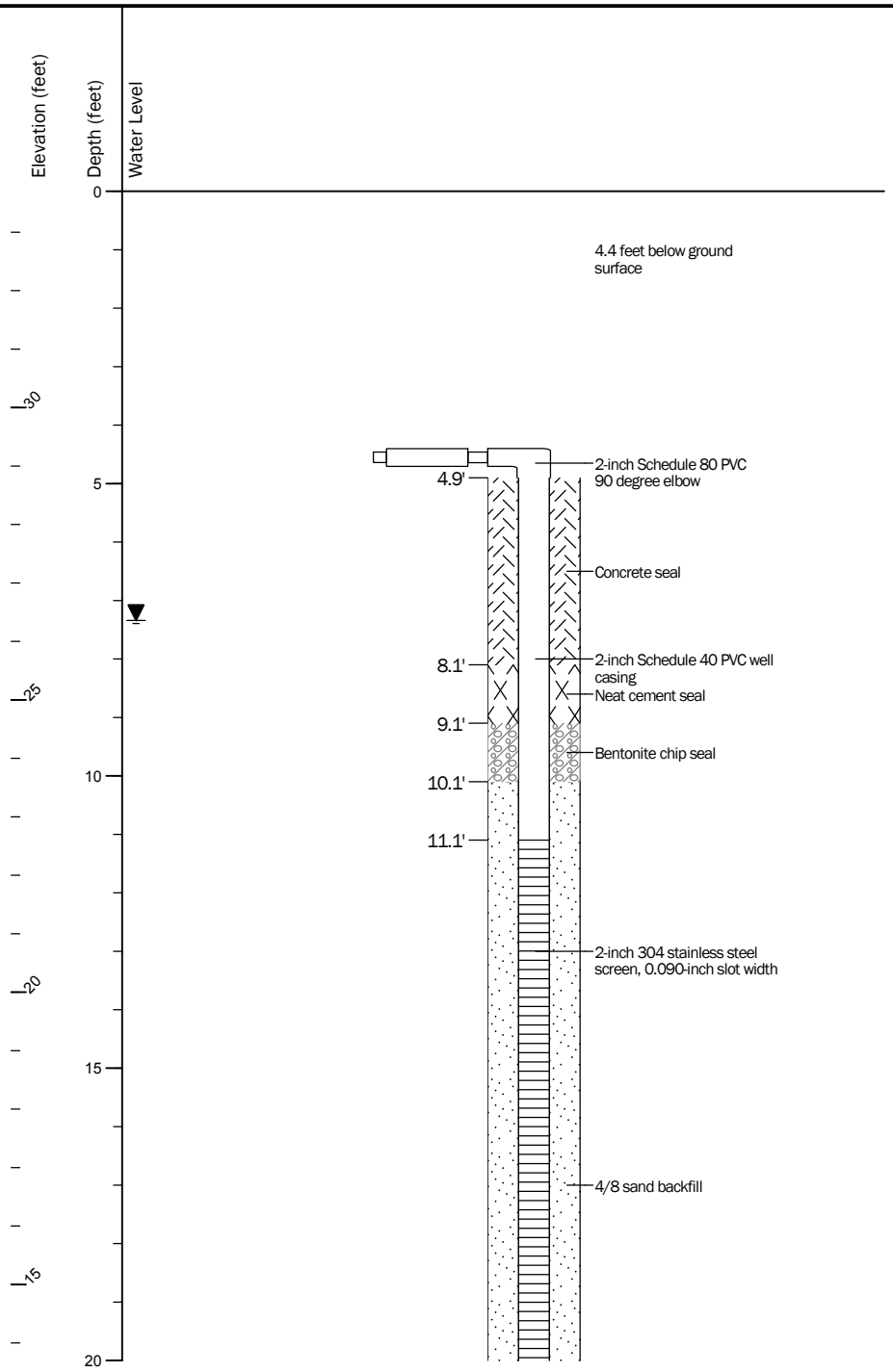
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 33.7 USACE (Locks) | Top of Casing Elevation (ft) | 29.26 |
| Easting (X) Northing (Y) | 1270735.09 239131.33 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 048
A 2 (in) well was installed on 3/30/2017 to a depth of 21.1 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 7.34 | 21.92 |

Notes: Well developed by alternately pumping and surging, 66 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

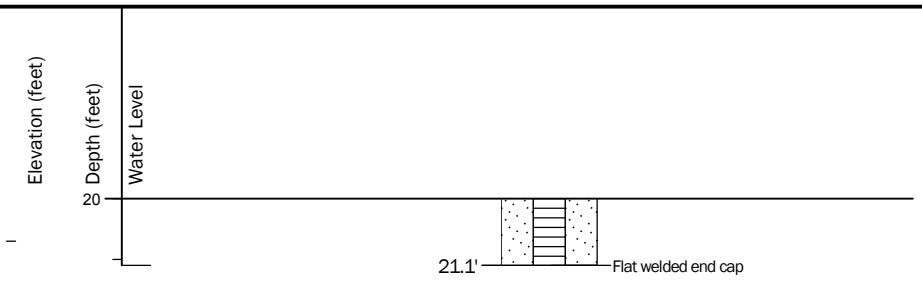



# Log of Well D5 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-46
Sheet 1 of 2




## Log of Well D5 (fill) (continued)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-46
Sheet 2 of 2

| Drilled | Start | End | Total Depth (ft) | | Logged By | CVD | Driller | | Drilling Method | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3/30/2017 | 3/30/2017 | | 34.0 | Checked By | SBS | | Cascade Drilling | | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

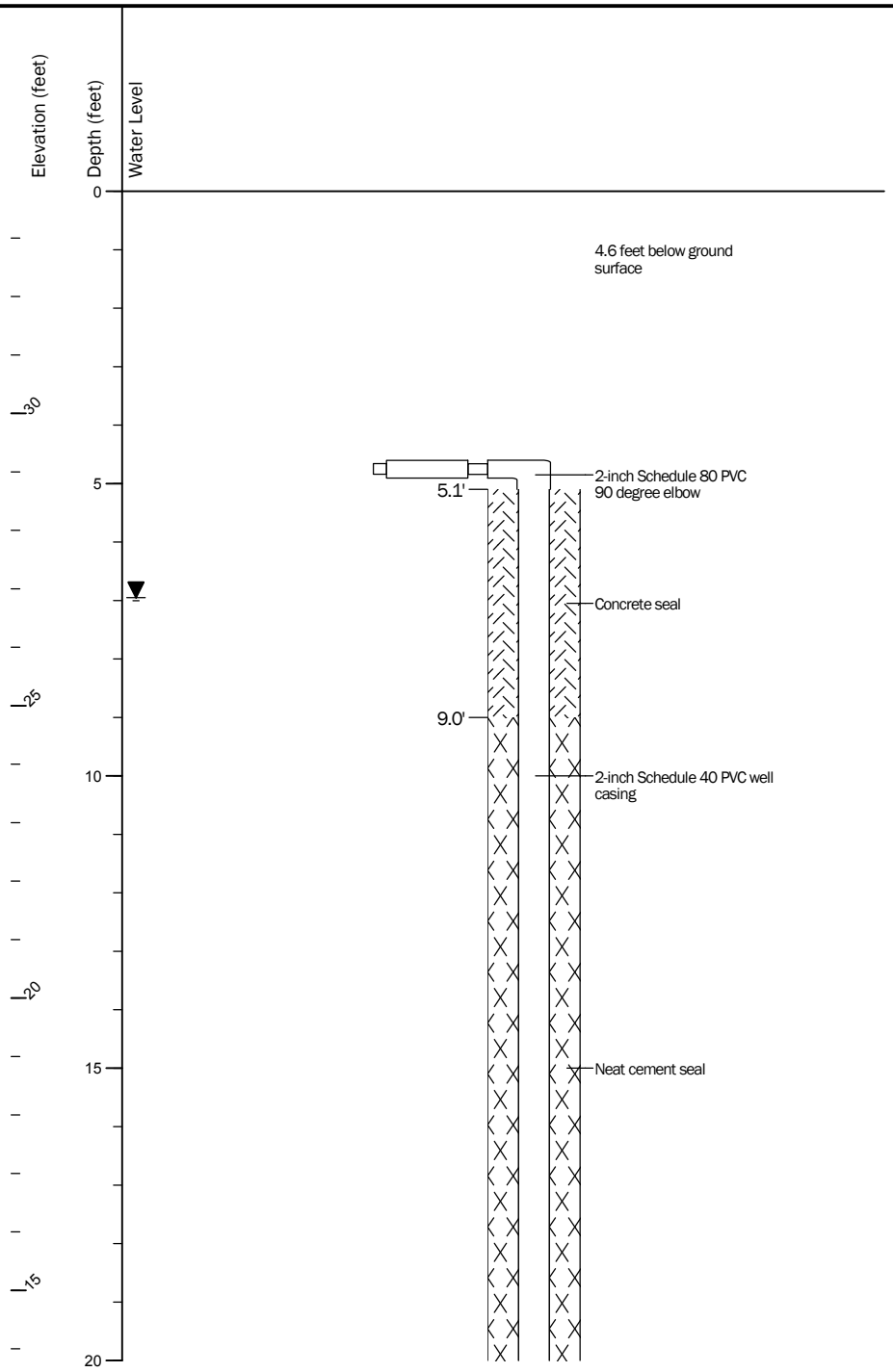
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 33.8 USACE (Locks) | Top of Casing Elevation (ft) | 29.19 |
| Easting (X) Northing (Y) | 1270735.17 239127.76 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 047
A 2 (in) well was installed on 3/30/2017 to a depth of 34 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.95 | 22.24 |

Notes: Well developed by alternately pumping and surging, 76 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

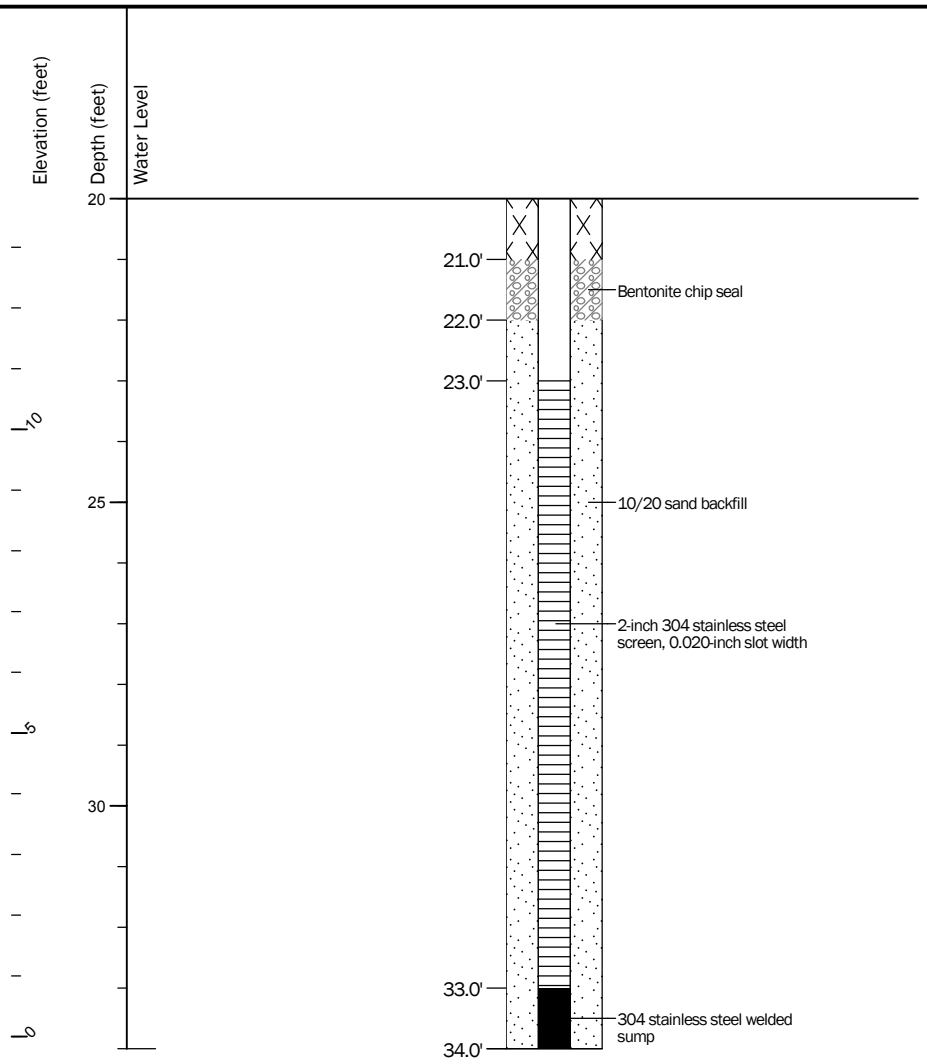



# Log of Well D6 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-47
Sheet 1 of 2




## Log of Well D6 (outwash) (continued)

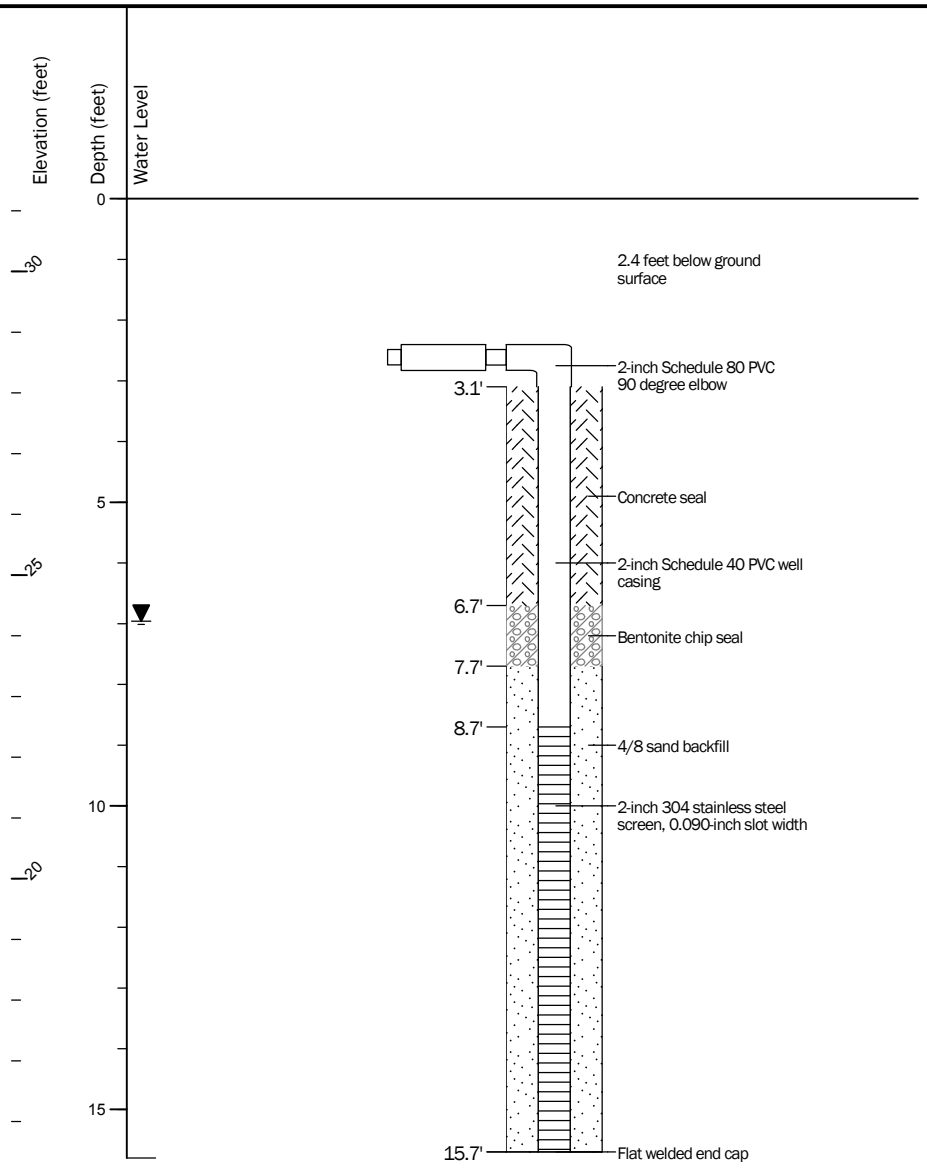
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-47
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled: Start 4/6/2017 End 4/6/2017 | Total Depth (ft) 15.8 | Logged By CVD<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 060<br>A 2 (in) well was installed on 4/6/2017 to a depth of 15.7 (ft). | |
| Surface Elevation (ft) Vertical Datum 31.2 USACE (Locks) | | Top of Casing Elevation (ft) 28.88 | | Groundwater | |
| Easting (X) 1270730.11<br>Northing (Y) 239113.05 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 6.96 — Elevation (ft): 21.92 |

Notes: Well developed by alternately pumping and surging, 60 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well D7 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure A-48
Sheet 1 of 1

| Drilled | Start | End | Total Depth (ft) | Logged By | Checked By | Driller | Drilling Method |
|---|---|---|---|---|---|---|---|
| | 4/6/2017 | 4/6/2017 | 32.1 | CVD | SBS | Cascade Drilling | 8¼-inch OD Hollow-stem Auger w/ Star Bit |

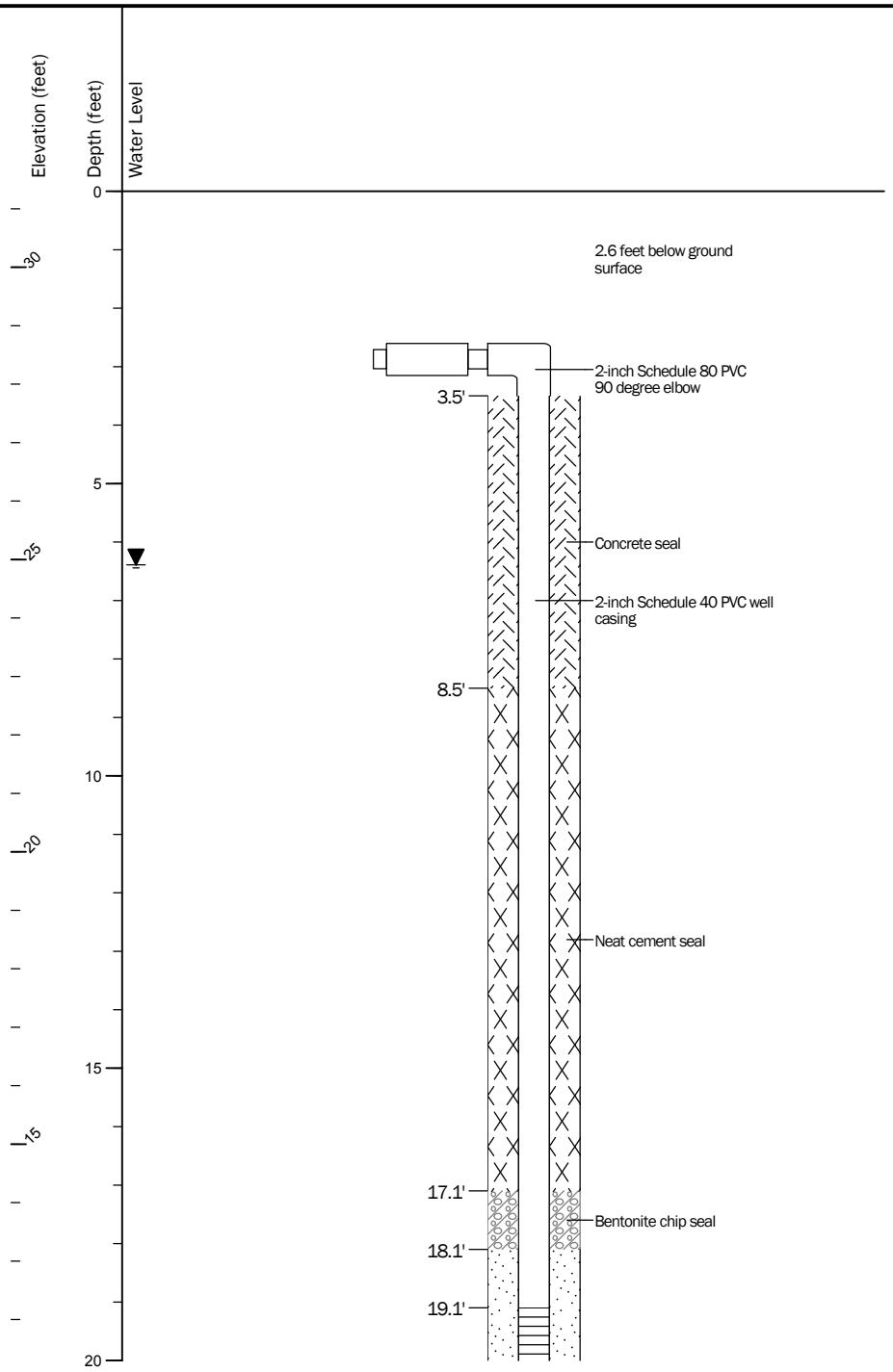
| | | | |
|---|---|---|---|
| Hammer Data | N/A | Drilling Equipment | Track-mounted CME 55 |
| Surface Elevation (ft) Vertical Datum | 31.3 USACE (Locks) | Top of Casing Elevation (ft) | 28.73 |
| Easting (X) Northing (Y) | 1270729.73 239109.15 | Horizontal Datum | WA State Plane North NAD83 (feet) |

DOE Well I.D.: BKA 061
A 2 (in) well was installed on 4/6/2017 to a depth of 32.1 (ft).

Groundwater

| Date Measured | Depth to Water (ft) | Elevation (ft) |
|---|---|---|
| 4/24/2017 | 6.39 | 22.34 |

Notes: Well developed by alternately pumping and surging, 44 gallons removed. Well connected to east vault. Heaving sands encountered from 17 to 32 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

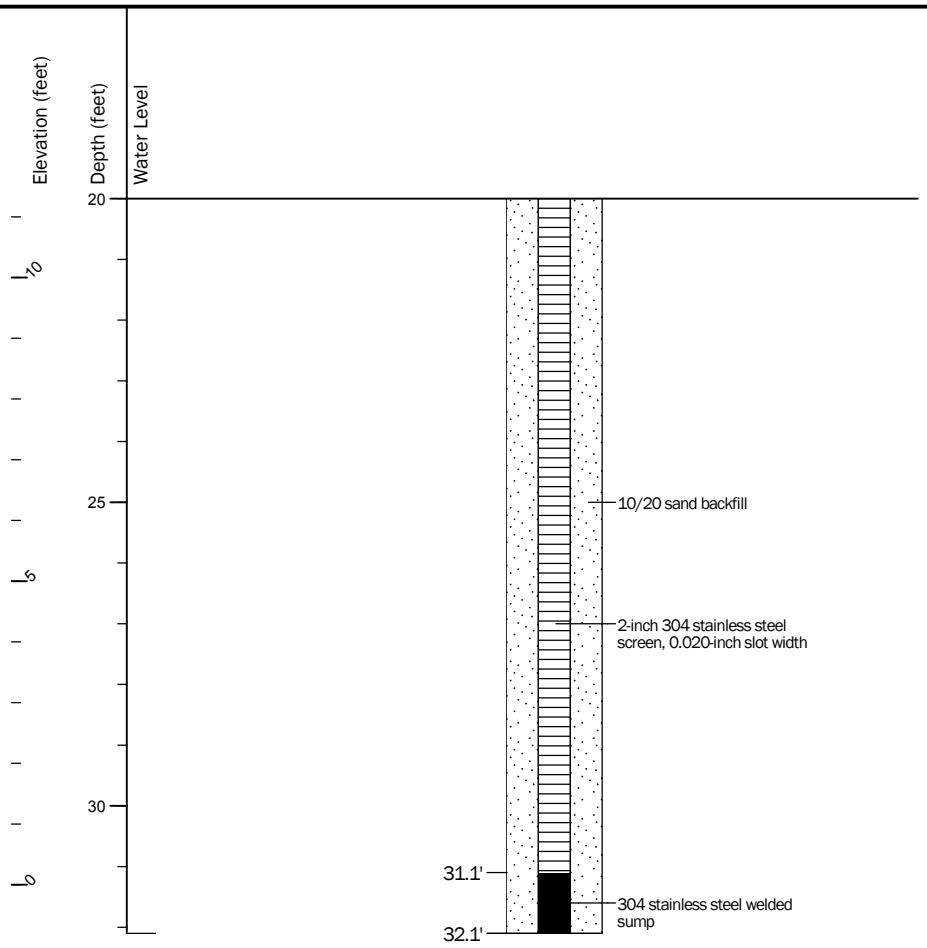



# Log of Well D8 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-49
Sheet 1 of 2




## Log of Well D8 (outwash) (continued)

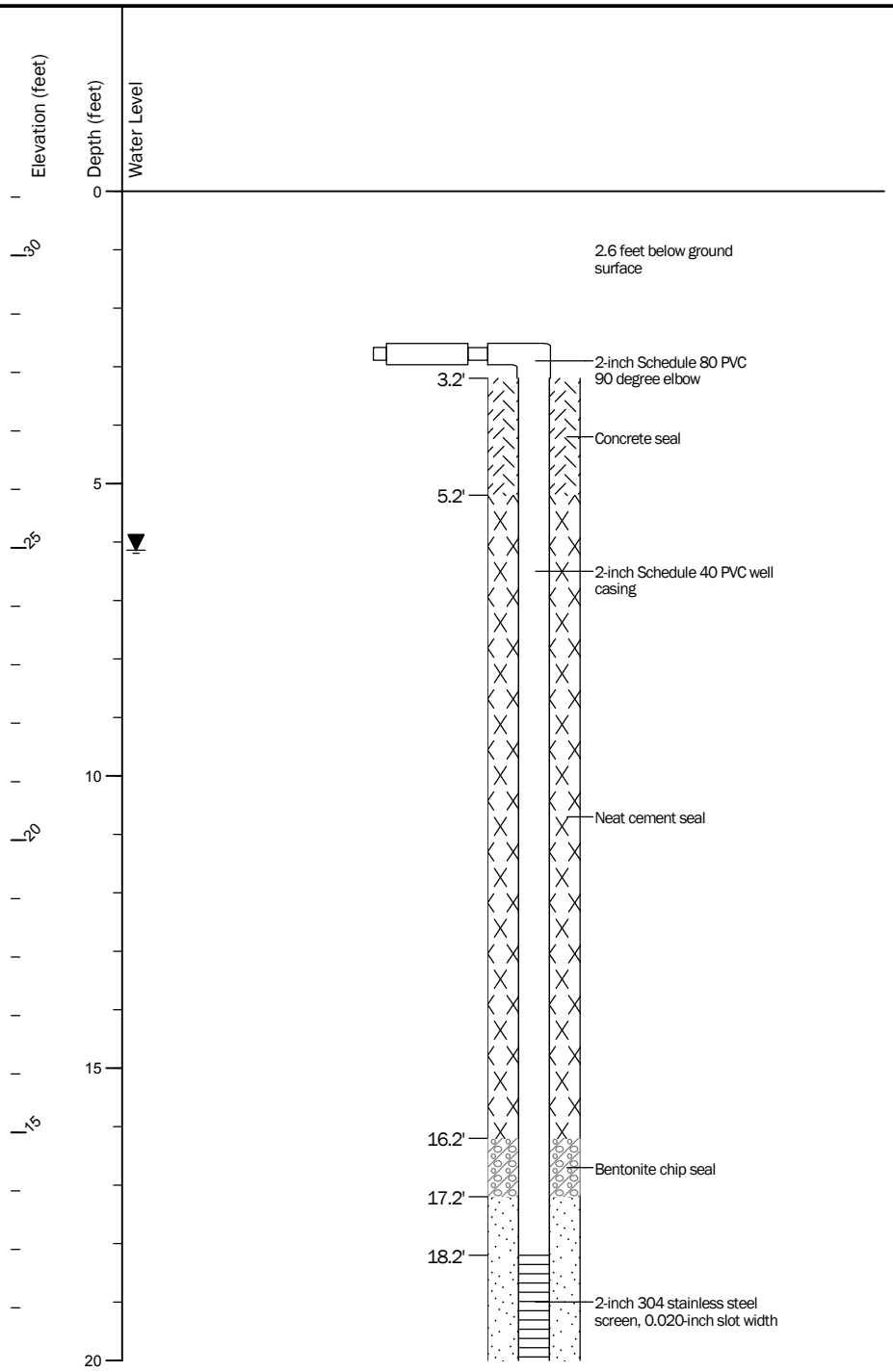
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-49
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled: Start 4/7/2017 End 4/7/2017 | Total Depth (ft): 31.2 | Logged By: PDR Checked By: SBS | Driller: Cascade Drilling | Drilling Method: 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data: N/A | Drilling Equipment: Track-mounted CME 55 | DOE Well I.D.: BKA 063<br>A 2 (in) well was installed on 4/7/2017 to a depth of 31.2 (ft). | | | |
| Surface Elevation (ft) Vertical Datum: 31.1 USACE (Locks) | Top of Casing Elevation (ft): 28.44 | Groundwater | | | |
| Easting (X) Northing (Y): 1270727.69 239098.48 | Horizontal Datum: WA State Plane North NAD83 (feet) | Date Measured | Depth to Water (ft) | Elevation (ft) | |
| | | 4/24/2017 | 6.14 | 22.30 | |

Notes: Well developed by alternately pumping and surging, 29 gallons removed. Well connected to east vault. Heaving sands encountered from 15 to 31 feet.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.

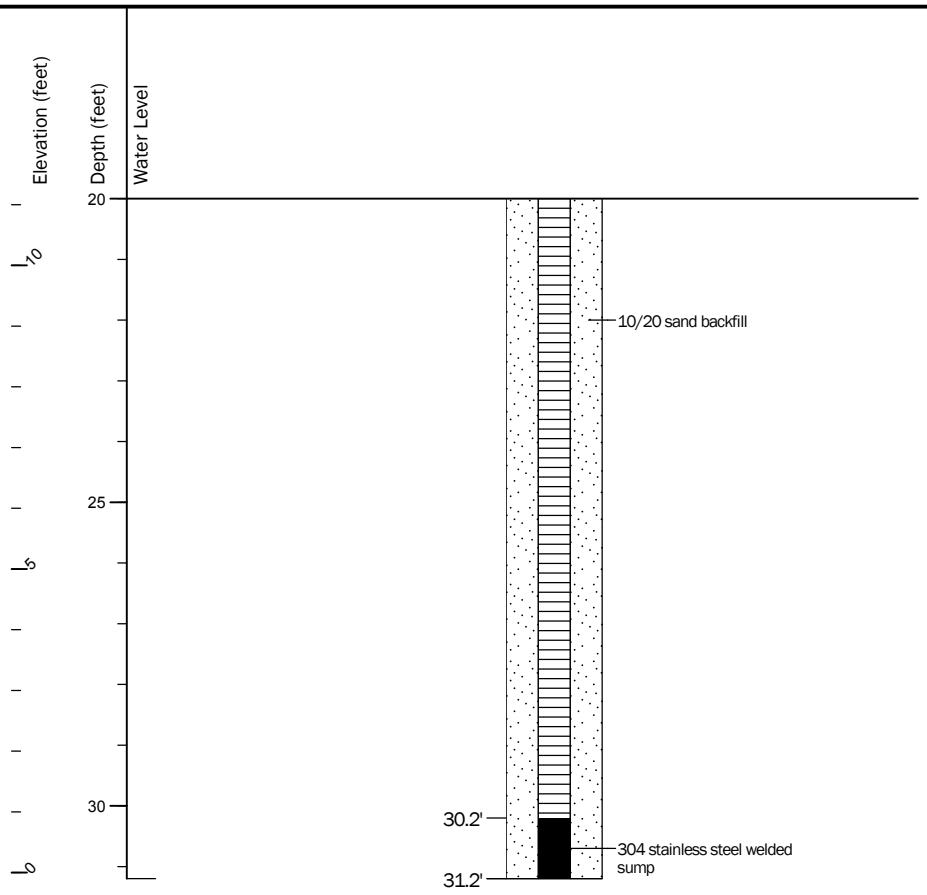



# Log of Well D9 (outwash)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-50
Sheet 1 of 2




## Log of Well D9 (outwash) (continued)

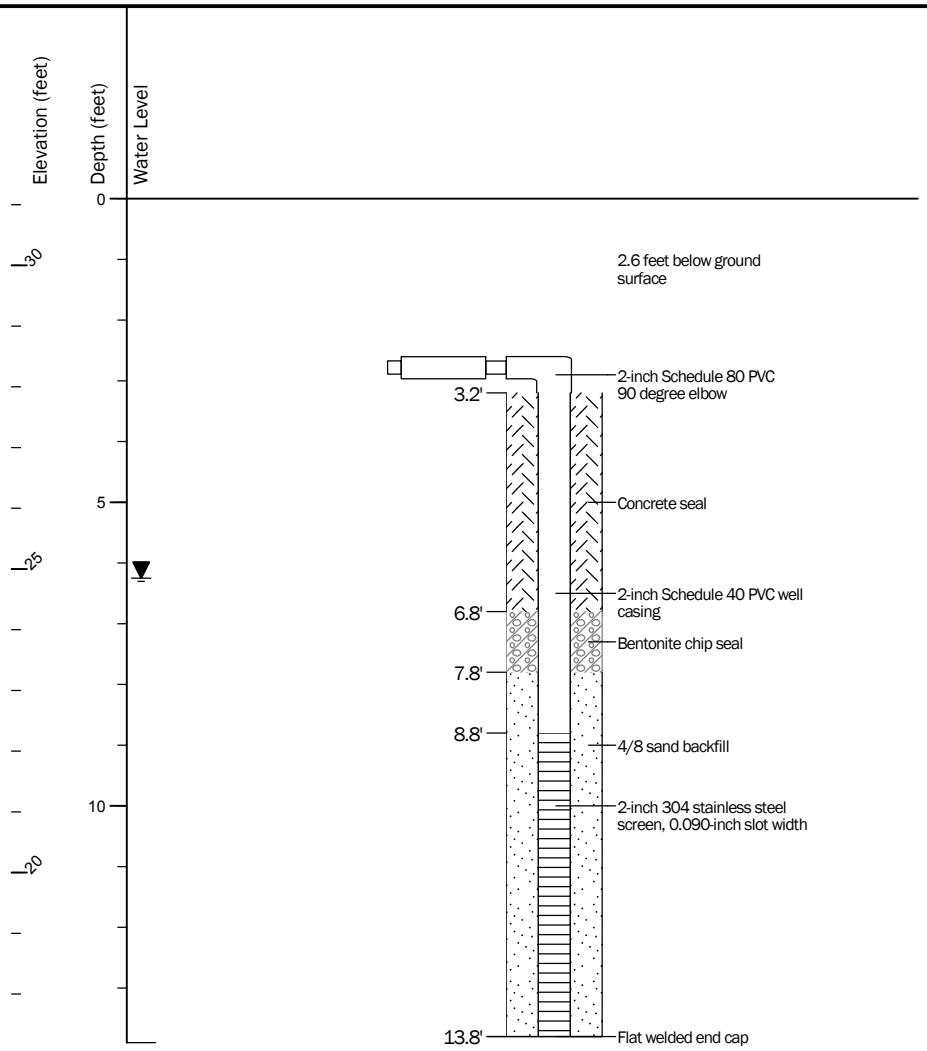
GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-50
Sheet 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Drilled: Start 4/6/2017 End 4/6/2017 | Total Depth (ft) 13.9 | Logged By CVD<br>Checked By SBS | Driller Cascade Drilling | Drilling Method 8¼-inch OD Hollow-stem Auger w/ Star Bit | |
| Hammer Data N/A | | Drilling Equipment Track-mounted CME 55 | | DOE Well I.D.: BKA 062<br>A 2 (in) well was installed on 4/6/2017 to a depth of 13.8 (ft). | |
| Surface Elevation (ft) Vertical Datum 31.1 USACE (Locks) | | Top of Casing Elevation (ft) 28.54 | | Groundwater | |
| Easting (X) 1270726.05<br>Northing (Y) 239095.41 | | Horizontal Datum WA State Plane North NAD83 (feet) | | Date Measured: 4/24/2017 | Depth to Water (ft): 6.25 — Elevation (ft): 22.29 |

Notes: Well developed by alternately pumping and surging, 39 gallons removed. Well connected to east vault.
Subtract 3.25 feet to convert elevations to NAVD88 from USACE (Locks) datum.




# Log of Well D10 (fill)

GeoEngineers

Project: GWPS - Play Area Groundwater Infrastructure Installation
Project Location: Gas Works Park, Seattle, Washington
Project Number: 0186-846-01

Figure E-51
Sheet 1 of 1

# APPENDIX F
## Injection Piping Cut Sheet

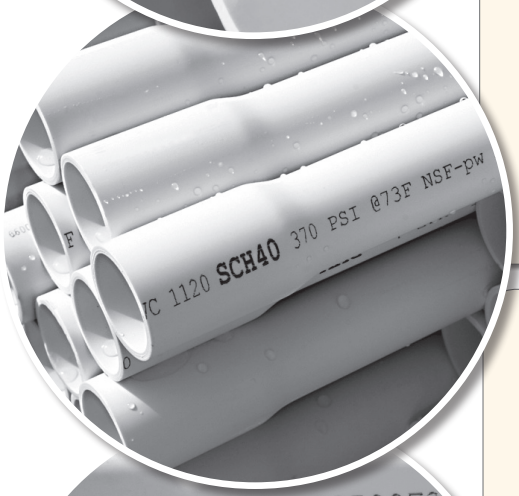
JM Eagle™

*Building essentials for a better tomorrow™*

# SOLVENT WELD

## SCHEDULE SERIES

MEETS ASTM D1785 AND D2665.





## APPLICATIONS

**JM Eagle Solvent Weld Schedule Series pipes are suitable for use in both pressure and drain, waste and vent applications.**

## DESCRIPTION

JM Eagle's wide line of Solvent Weld includes PVC Schedule 40 (ASTM D1785 and ASTM D2665) and 80 (ASTM D1785) for both pressure and non-pressure applications.

The pipes are available in 10- and/or 20-foot lengths, in ½- to 16-inch diameters in Schedule 40, bell end, and ½- to 12-inch diameters in Schedule 80, plain end.

JM Eagle's ASTM 1785 product also comes in a specially formulated PVC material to increase resistance to ultraviolet rays. Called SolarBlok, it comes in IPS, 20-foot lengths, in beige.

Solvent Weld joints are designed to provide a rigid (or restrained) joint connection, and the schedule-rated products are specifically engineered for use in partial support systems above ground.

A 20-foot length of Solvent Weld Schedule 40 PVC water pipe weighs approximately 72 pounds.

## BENEFITS

**JM Eagle Solvent Weld schedule series pipe is cost-effective and long-lasting.**

- It can be field-cut with a power saw or ordinary handsaw without the use of expensive or complicated machinery.
- Easy to load, transport and handle, installers prefer it because it goes into the ground quickly, saving installation costs.
- It maintains performance against tuberculation, corrosion and external galvanic soil conditions without lining wrapping, coating or cathodic protection.
- It keeps its smooth interior over long years of service with virtually no loss in carrying capacity, allowing for savings in pumping costs, as well as savings on the size of the pipe required.
- It can be connected directly to most plumbing and IPS fixtures without complicated procedures or adapters, as well as into CIOD fittings with adapters and/or transition gaskets.
- A cured joint of JM Eagle Solvent Weld schedule series pipe offers a zero-leak joint that is structurally sound.

Revised 3/2/2012. This information may have been updated. Please download the latest version at www.jmeagle.com/onesheets.

JM Eagle™

*Building essentials for a better tomorrow™*

# SOLVENT WELD

## SCHEDULE SERIES

### SUBMITTAL AND DATA SHEET

### JM EAGLE™ PVC SCHEDULE 40

Specifications: ASTM D1785 & ASTM D2665 : :

Listed : ANSI/NSF-PW NSF-DWV
Standard 61, Standard 14

: : Standard Color: White, Standard Length 10' & 20', Plain End and Belled End.

| NOM. PIPE SIZE (IN) | O.D. (IN) | NOM. I.D. (IN) | MIN. T. (IN) | WATER PRESSURE RATING AT 23°C (73°F) | APPROX. WEIGHT (LBS/FT) |
|---|---|---|---|---|---|
| ½ | 0.840 | 0.609 | 0.109 | 600 | 0.164 |
| ¾ | 1.050 | 0.810 | 0.113 | 480 | 0.218 |
| 1 | 1.315 | 1.033 | 0.133 | 450 | 0.324 |
| 1¼ | 1.660 | 1.363 | 0.140 | 370 | 0.439 |
| 1½ | 1.900 | 1.593 | 0.145 | 330 | 0.525 |
| 2 | 2.375 | 2.049 | 0.154 | 280 | 0.705 |
| 2½ | 2.875 | 2.445 | 0.203 | 300 | 1.118 |
| 3 | 3.500 | 3.042 | 0.216 | 260 | 1.463 |
| 4 | 4.500 | 3.998 | 0.237 | 220 | 2.083 |
| 6 | 6.625 | 6.031 | 0.280 | 180 | 3.663 |
| 8 | 8.625 | 7.942 | 0.322 | 160 | 5.512 |
| 10 | 10.750 | 9.976 | 0.365 | 140 | 7.815 |
| 12 | 12.750 | 11.889 | 0.406 | 130 | 10.333 |
| 14 | 14.000 | 13.073 | 0.437 | 130 | 12.220 |
| 16 | 16.000 | 14.940 | 0.500 | 130 | 15.980 |

### JM EAGLE™ PVC SCHEDULE 80 PIPE

Specifications: ASTM D1785 : :

Listed : ANSI/NSF-PW Standard 61, Standard 14

: : Standard Color: Dark Gray, Standard Length: 20' overall, Plain End Only
† Available in Western Region Only.
I.D. : Inside Diameter
O.D. : Outside Diameter
T. : Wall Thickness

| NOM. PIPE SIZE (IN) | O.D. (IN) | NOM. I.D. (IN) | MIN. T. (IN) | PRESSURE RATING (psi) | APPROX. WEIGHT (LBS/FT) |
|---|---|---|---|---|---|
| ½ | 0.840 | 0.528 | 0.147 | 850 | 0.210 |
| ¾ | 1.050 | 0.724 | 0.154 | 690 | 0.285 |
| 1 | 1.315 | 0.936 | 0.179 | 630 | 0.419 |
| 1¼ | 1.660 | 1.255 | 0.191 | 520 | 0.579 |
| 1½ | 1.900 | 1.476 | 0.200 | 470 | 0.701 |
| 2 | 2.375 | 1.913 | 0.218 | 400 | 0.969 |
| 2½ | 2.875 | 2.290 | 0.276 | 420 | 1.479 |
| 3 | 3.500 | 2.864 | 0.300 | 370 | 1.979 |
| 4 | 4.500 | 3.786 | 0.337 | 320 | 2.892 |
| 6 | 6.625 | 5.709 | 0.432 | 280 | 5.516 |
| 8 | 8.625 | 7.565 | 0.500 | 250 | 8.336 |
| 10† | 10.750 | 9.493 | 0.593 | 230 | 12.375 |
| 12† | 12.750 | 11.294 | 0.687 | 230 | 17.027 |

### JM EAGLE™ SOLARBLOK UVR SCHEDULE 40 IPS SIZE

Specifications: ASTM D1785

Listed : ANSI/NSF 61

Pipe color is beige.
Pipe is produced with integral Solvent Weld bells.
Available in 20 foot lengths only.
PVC material is specially formulated to increase resistance to ultraviolet rays.
The material includes the maximum amount of titanium dioxide allowed by the PPI PVC Range Composition for pressure pipe applications.

| NOM. PIPE SIZE (IN) | O.D. (IN) | APPROX. I. D. (IN) | MIN. T. (IN) | PRESSURE RATING (psi) | APPROX. WEIGHT (LBS/FT) |
|---|---|---|---|---|---|
| ½ | 0.840 | 0.609 | 0.109 | 600 | 0.164 |
| ¾ | 1,050 | 0.810 | 0.113 | 480 | 0.218 |
| 1 | 1.315 | 1.033 | 0.133 | 450 | 0.324 |
| 1¼ | 1.660 | 1.363 | 0.140 | 370 | 0.439 |
| 1½ | 1.900 | 1.593 | 0.145 | 330 | 0.525 |
| 2 | 2.375 | 2.049 | 0.154 | 280 | 0.705 |
| 2½ | 2.875 | 2.445 | 0.203 | 300 | 1.118 |
| 3 | 3.500 | 3.042 | 0.216 | 260 | 1.463 |
| 4 | 4.500 | 3.998 | 0.237 | 220 | 2.083 |

Revised 3/2/2012. This information may have been updated. Please download the latest version at www.jmeagle.com/onesheets.

**P-T Coupling Co., Inc.**
1414 E. Willow
Enid,
**Phone:**580-237-4060
**Website:** http://www.ptcoupling.com

**Item # 2900410, D-Coupler (Coupler x Female NPT Thread)**
List Price QUOTE

PT hose shanks are the most versatile for attaching to hose. The specially designed multi-barbed shank allows for attachment via original Punch-Lok™ center punch clamps or by an interlocked ProGrip™ C-50 ferrule or sleeve.

HBS cam arms are made of 300 series Stainless Steel.

HB cam arms are made of Brass

All Stainless Steel castings are 316 and all standard components are 300 series Stainless Steel.

Please call for special quote on complete cam arm assembly and components in 316 Stainless Steel.

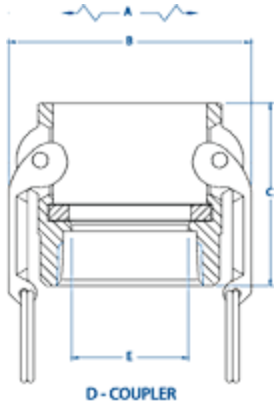
8, 10 and 12 inch couplers are 4-cam designs with the STA-LOK® positive locking feature.

All 1-1/2" to 6" Aluminum or Hard Coat Aluminum castings are available with Undersized shank. To order add the letters "US" after the existing item numbers listed above.

Couplings not interchangeable in the industry are sizes 8" through 12".

Made in the U.S.A.

*Note: Prices subject to change without notice.*


## Specifications

| | |
|---|---|
| **Part Name** | 10D |
| **Type** | Coupler x Female NPT Thread |
| **Material** | Nylon |
| **Size** | 1 in. |
| **Coupler Size** | 1 in. |
| **Thread (Female NPT)** | 1 in. |
| **O. D. with Cam Arms Extended (A)** | 5.10 in.<br>130 mm |

| | |
|---|---|
| **Outside Diameter (B)** | 2.44 in.<br>62 mm |
| **Overall Length (C)** | 2.50 in.<br>64 mm |
| **Inside Diameter (E)** | 0.97 in.<br>25 mm |
| **Engagement Length** | 1.19 in. |

**P-T Coupling Co., Inc.**
1414 E. Willow
Enid,
**Phone:**580-237-4060
**Website:** http://www.ptcoupling.com

**W-Adapter (Dust Plug)**

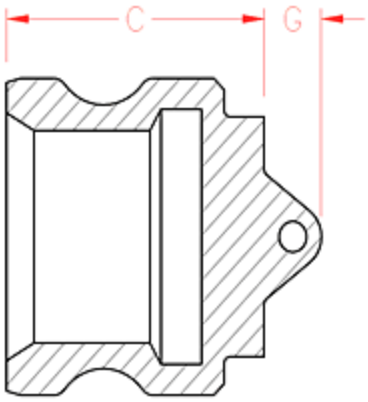
PT maintains inventories at its 16 branch warehouse locations.

Couplings not interchangeable in the industry are sizes 5" and 8" through 12".

Made in the U.S.A.

*Note: Prices subject to change without notice.*

**More Information:**
Recommended Operating Conditions (PDF)
Safety Instructions & Recommended Materials (PDF)
PT Coupling Warranty Information (PDF)




Results 1 - 91 of 91

| Item # | Part Name | Material | Adapter Size | Chain Lug Extension (G) | Inventory | List Price |
|---|---|---|---|---|---|---|
| 1001201 | E05W | Aluminum | 1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 1201201 | E05W | Brass | 1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 1401201 | E05W | Stainless Steel | 1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 1801201 | E05W | Ductile Iron | 1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 2001201 | E05W | Hard Coat Aluminum | 1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 2401201 | E05W | Carbon Steel | 1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 1001207 | 07W | Aluminum | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |
| 1201207 | 07W | Brass | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1401207 | 07W | Stainless Steel | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |
| 1801207 | 07W | Ductile Iron | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |
| 2001207 | 07W | Hard Coat Aluminum | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |
| 2401207 | 07W | Carbon Steel | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |
| 2701207 | 07W | Polypropylene | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |
| 2771207 | 07W | Food Grade Poly | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |
| 2901207 | 07W | Nylon | 3/4 in. | 0.59 in.<br>15 mm | N/A | QUOTE |
| 1001210 | 10W | Aluminum | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 1201210 | 10W | Brass | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 1401210 | 10W | Stainless Steel | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 1801210 | 10W | Ductile Iron | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 2001210 | 10W | Hard Coat Aluminum | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 2401210 | 10W | Carbon Steel | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 2701210 | 10W | Polypropylene | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 2771210 | 10W | Food Grade Poly | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 2901210 | 10W | Nylon | 1 in. | 0.96 in.<br>24 mm | N/A | QUOTE |
| 1001212 | 12W | Aluminum | 1-1/4 in. | 0.62 in.<br>16 mm | N/A | QUOTE |
| 1201212 | 12W | Brass | 1-1/4 in. | 0.62 in.<br>16 mm | N/A | QUOTE |
| 1401212 | 12W | Stainless Steel | 1-1/4 in. | 0.62 in.<br>16 mm | N/A | QUOTE |
| 1801212 | 12W | Ductile Iron | 1-1/4 in. | 0.62 in.<br>16 mm | N/A | QUOTE |
| 2001212 | 12W | Hard Coat Aluminum | 1-1/4 in. | 0.62 in.<br>16 mm | N/A | QUOTE |
| 2701212 | 12W | Polypropylene | 1-1/4 in. | 0.62 in.<br>16 mm | N/A | QUOTE |
| 2771212 | 12W | Food Grade Poly | 1-1/4 in. | 0.62 in.<br>16 mm | N/A | QUOTE |
| 1001215 | 15W | Aluminum | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 1201215 | 15W | Brass | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 1401215 | 15W | Stainless Steel | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 1801215 | 15W | Ductile Iron | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2001215 | 15W | Hard Coat Aluminum | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 2401215 | 15W | Carbon Steel | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 2701215 | 15W | Polypropylene | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 2771215 | 15W | Food Grade Poly | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 2901215 | 15W | Nylon | 1-1/2 in. | 0.50 in.<br>13 mm | N/A | QUOTE |
| 1001220 | 20W | Aluminum | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 1201220 | 20W | Brass | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 1401220 | 20W | Stainless Steel | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 1801220 | 20W | Ductile Iron | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 2001220 | 20W | Hard Coat Aluminum | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 2401220 | 20W | Carbon Steel | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 2701220 | 20W | Polypropylene | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 2771220 | 20W | Food Grade Poly | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 2901220 | 20W | Nylon | 2 in. | 0.70 in.<br>18 mm | N/A | QUOTE |
| 1001225 | 25W | Aluminum | 2-1/2 in. | 0.81 in.<br>21 mm | N/A | QUOTE |
| 1201225 | 25W | Brass | 2-1/2 in. | 0.81 in.<br>21 mm | N/A | QUOTE |
| 1401225 | 25W | Stainless Steel | 2-1/2 in. | 0.81 in.<br>21 mm | N/A | QUOTE |
| 1801225 | 25W | Ductile Iron | 2-1/2 in. | 0.81 in.<br>21 mm | N/A | QUOTE |
| 2001225 | 25W | Hard Coat Aluminum | 2-1/2 in. | 0.81 in.<br>21 mm | N/A | QUOTE |
| 1001230 | 30W | Aluminum | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1201230 | 30W | Brass | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1401230 | 30W | Stainless Steel | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1801230 | 30W | Ductile Iron | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2001230 | 30W | Hard Coat Aluminum | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2401230 | 30W | Carbon Steel | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2701230 | 30W | Polypropylene | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2771230 | 30W | Food Grade Poly | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2901230 | 30W | Nylon | 3 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1001240 | 40W | Aluminum | 4 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1201240 | 40W | Brass | 4 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1401240 | 40W | Stainless Steel | 4 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1801240 | 40W | Ductile Iron | 4 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2001240 | 40W | Hard Coat Aluminum | 4 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2401240 | 40W | Carbon Steel | 4 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2701240 | 40W | Polypropylene | 4 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2771240 | 40W | Food Grade Poly | 4 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1001250 | 50W | Aluminum | 5 in. | 0.85 in.<br>22 mm | N/A | QUOTE |
| 1201250 | 50W | Brass | 5 in. | 0.85 in.<br>22 mm | N/A | QUOTE |
| 1401250 | 50W | Stainless Steel | 5 in. | 0.85 in.<br>22 mm | N/A | QUOTE |
| 1801250 | 50W | Ductile Iron | 5 in. | 0.85 in.<br>22 mm | N/A | QUOTE |
| 2001250 | 50W | Hard Coat Aluminum | 5 in. | 0.85 in.<br>22 mm | N/A | QUOTE |
| 1001260 | 60W | Aluminum | 6 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1201260 | 60W | Brass | 6 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1401260 | 60W | Stainless Steel | 6 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1801260 | 60W | Ductile Iron | 6 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 2001260 | 60W | Hard Coat Aluminum | 6 in. | 1.00 in.<br>25 mm | N/A | QUOTE |
| 1001280 | 80W | Aluminum | 8 in. | 1.18 in.<br>30 mm | N/A | QUOTE |
| 1201280 | 80W | Brass | 8 in. | 1.18 in.<br>30 mm | N/A | QUOTE |
| 1401280 | 80W | Stainless Steel | 8 in. | 1.18 in.<br>30 mm | N/A | QUOTE |
| 1801280 | 80W | Ductile Iron | 8 in. | 1.18 in.<br>30 mm | N/A | QUOTE |
| 2001280 | 80W | Hard Coat Aluminum | 8 in. | 1.18 in.<br>30 mm | N/A | QUOTE |
| 1001290 | 100W | Aluminum | 10 in. | 0.90 in.<br>23 mm | N/A | QUOTE |
| 1201290 | 100W | Brass | 10 in. | 0.90 in.<br>23 mm | N/A | QUOTE |
| 1401290 | 100W | Stainless Steel | 10 in. | 0.90 in.<br>23 mm | N/A | QUOTE |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1801290 | 100W | Ductile Iron | 10 in. | 0.90 in.<br>23 mm | N/A | QUOTE |
| 1001292 | 120W | Aluminum | 12 in. | N/A | N/A | QUOTE |

Results 1 - 91 of 91

# Spears® Technical Information

19-Jan-17 01:19:59 PM

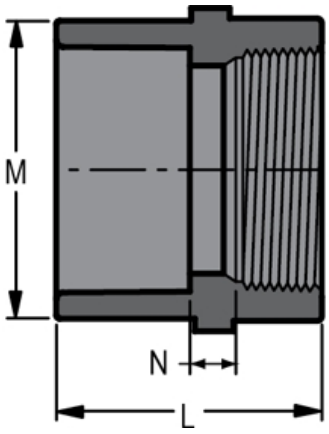
**Part No:** 835-010 **Schedule 80 PVC & CPVC** **Adapter**

**Desc:** 1 PVC FEM ADAPTER SOCXFPT SCH80

**MSRP:** 12.91 **Part Code:** 080

**Weight(lbs):** 0.11 **Weight(kg):** 0.05 **Weight(gm):** 50

**Size:** 1" **Color:** GRAY **Material:** PVC




**Connection** Socket x Fipt

**Type** Standard

**M** = 1-23/32 **N** = 3/32 **L** = 2- 1/8

## Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

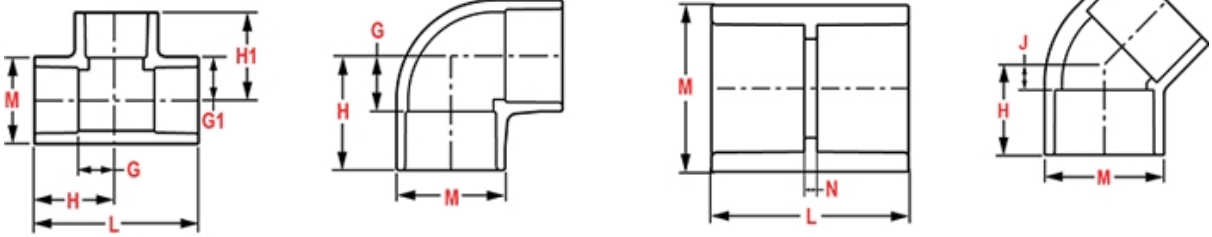
L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

W = Height of cap; ± 1/16 inch

## Typical Molded Dimension References



# Spears® Technical Information

19-Jan-17 01:21:41 PM

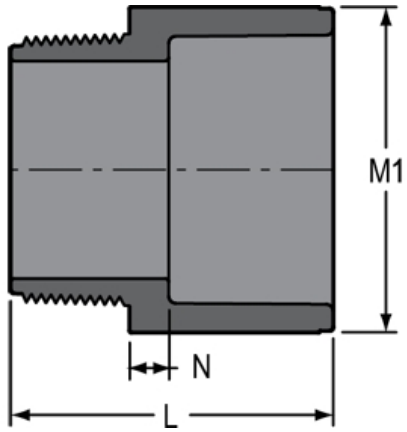
**Part No:** 836-010 **Schedule 80 PVC & CPVC** **Adapter**

**Desc:** 1 PVC MALE ADAPTER MPTXSOC SCH80

**MSRP:** 14.04 **Part Code:** 080

**Weight(lbs):** 0.093 **Weight(kg):** 0.042 **Weight(gm):** 42

**Size:** 1" **Color:** GRAY **Material:** PVC




**Connection** Mipt x Socket

**Type** Standard

**L** = 2- 5/32 **M1** = 1-23/32 **N** = 7/32

## Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

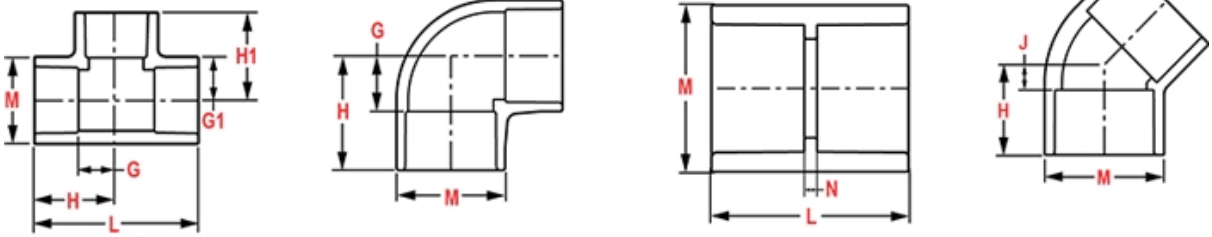
L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

W = Height of cap; ± 1/16 inch

## Typical Molded Dimension References



# Spears® Technical Information

19-Jan-17 01:16:02 PM

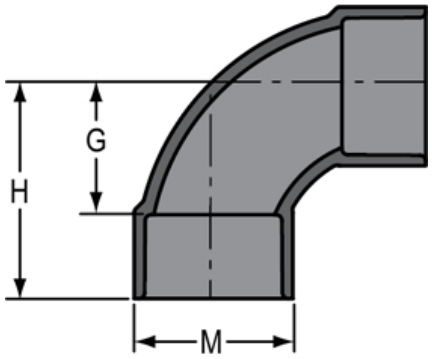
**Part No:** 806-010S **Schedule 80 PVC & CPVC** **Elbow**

**Desc:** 1 PVC SWEEP ELL SOC SCH80

**MSRP:** 18.09 **Part Code:** 080

**Weight(lbs):** 0.196 **Weight(kg):** 0.089 **Weight(gm):** 89

**Size:** 1" **Color:** GRAY **Material:** PVC




**Connection** Sweep - Short

**Angle** 90°

**Type** Standard

**G** = 1- 5/16 **H** = 2- 7/16 **M** = 1-23/32

## Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

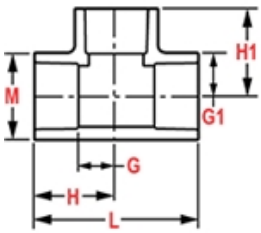
L = Overall length of fittings; ± 1/16 inch.

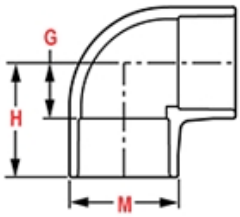
M = Outside diameter of socket/thread hub; ± 1/16 inch.

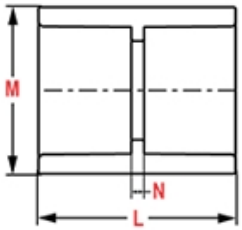
N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

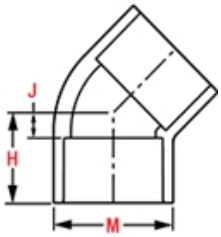
W = Height of cap; ± 1/16 inch

## Typical Molded Dimension References



# Spears® Technical Information

19-Jan-17 01:23:01 PM

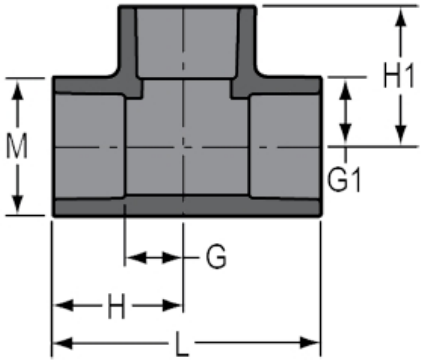
**Part No:** 801-010 **Schedule 80 PVC & CPVC** **Tee**

**Desc:** 1 PVC TEE SOC SCH80

**MSRP:** 12.86 **Part Code:** 080

**Weight(lbs):** 0.256 **Weight(kg):** 0.116 **Weight(gm):** 116

**Size:** 1" **Color:** GRAY **Material:** PVC




**Connection** Socket x Socket x Socket

**Type** Standard

**G** = 7/8 **G1** = 7/8 **H** = 2 **H1** = 2 **L** = 4

**M** = 1- 3/4

## Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

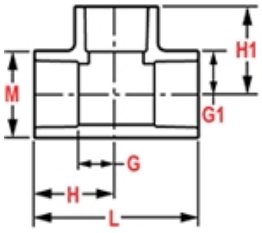
L = Overall length of fittings; ± 1/16 inch.

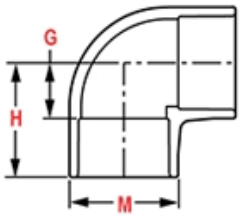
M = Outside diameter of socket/thread hub; ± 1/16 inch.

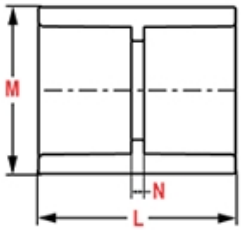
N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

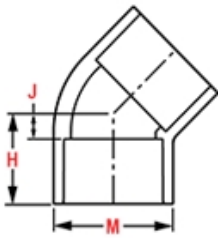
W = Height of cap; ± 1/16 inch

## Typical Molded Dimension References



# Spears® Technical Information

19-Jan-17 01:24:53 PM

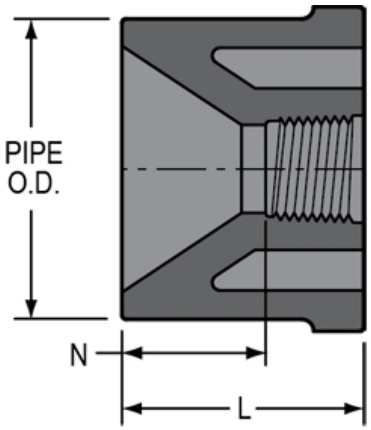
**Part No:** 838-128 **Schedule 80 PVC & CPVC** **Bushing**

**Desc:** 1X1/4 PVC RED BUSHING SPGXFPT SCH80

**MSRP:** 6.37 **Part Code:** 080

**Weight(lbs):** 0.066 **Weight(kg):** 0.03 **Weight(gm):** 30

**Size:** **Color:** GRAY **Material:** PVC




**Connection** Spigot x Fipt

**Type** Reduction

**L** = 1-13/32 **N** = 25/32

## Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

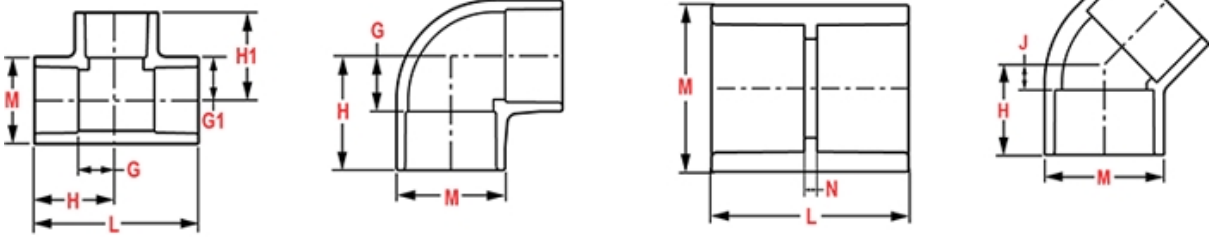
L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

W = Height of cap; ± 1/16 inch

## Typical Molded Dimension References



# Spears® Technical Information

19-Jan-17 01:15:11 PM

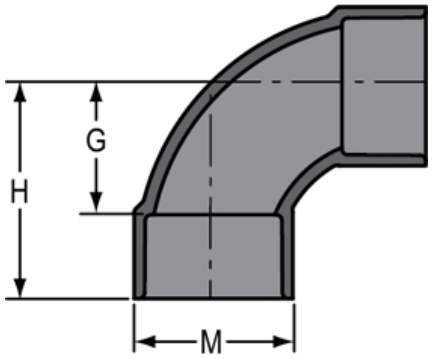
**Part No:** 806-020S **Schedule 80 PVC & CPVC** **Elbow**

**Desc:** 2 PVC SWEEP ELL SOC SCH80

**MSRP:** 31.16 **Part Code:** 080

**Weight(lbs):** 0.644 **Weight(kg):** 0.292 **Weight(gm):** 292

**Size:** 2" **Color:** GRAY **Material:** PVC




**Connection** Sweep - Short

**Angle** 90°

**Type** Standard

**G** = 2- 5/16 **H** = 3-13/16 **M** = 2- 7/8

## Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

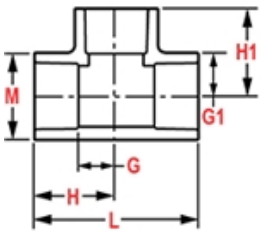
L = Overall length of fittings; ± 1/16 inch.

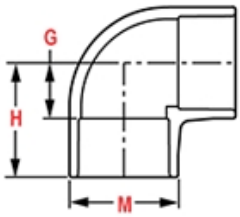
M = Outside diameter of socket/thread hub; ± 1/16 inch.

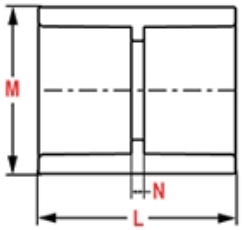
N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

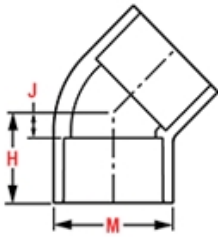
W = Height of cap; ± 1/16 inch

## Typical Molded Dimension References



# Spears® Technical Information

19-Jan-17 01:17:54 PM

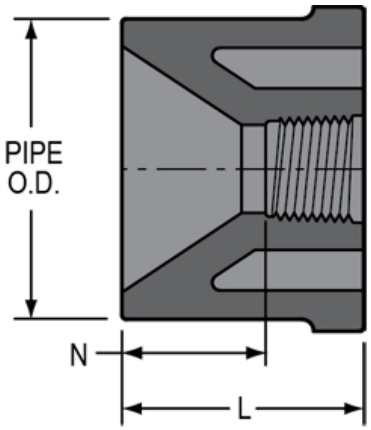
**Part No:** 838-249 **Schedule 80 PVC & CPVC** **Bushing**

**Desc:** 2X1 PVC RED BUSH SPIGOTXFPT SCH80

**MSRP:** 18.08 **Part Code:** 080

**Weight(lbs):** 0.258 **Weight(kg):** 0.117 **Weight(gm):** 117

**Size:** 2"X1" **Color:** GRAY **Material:** PVC




**L** = 1-29/32 **N** = 1

**Connection** Spigot x Fipt

**Type** Reduction

## Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

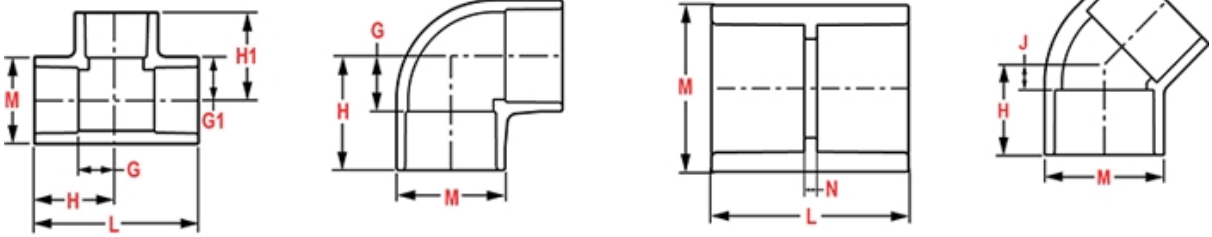
L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

W = Height of cap; ± 1/16 inch

## Typical Molded Dimension References



# APPENDIX G
## Injection Piping Testing Documentation

**Hydrostatic Pressure Test Results**
**Play Area Groundwater Infrastructure Installation**
**Seattle, WA**

| Injection Well ID | Testing Time (minutes) | Test Pressure (psi) | Hydrostatic Test Result |
|---|---|---|---|
| A-1 | 32 | 50 | Pass |
| A-2 | 30 | 50 | Pass |
| A-3 | 30 | 50 | Pass |
| A-4 | 30 | 50 | Pass |
| A-5 | 35 | 50 | Pass |
| B-1 | 35 | 48 | Pass |
| B-2 | 30 | 50 | Pass |
| B-3 | 32 | 50 | Pass |
| B-4 | 30 | 50 | Pass |
| B-5 | 30 | 50 | Pass |
| B-6 | 30 | 50 | Pass |
| B-7 | 30 | 50 | Pass |
| B-8 | 30 | 50 | Pass |
| C-1 | 30 | 50 | Pass |
| C-2 | 30 | 49 | Pass |
| C-3 | 30 | 47 | Pass |
| C-4 | 30 | 52 | Pass |
| C-5 | 30 | 50 | Pass |
| C-6 | 30 | 50 | Pass |
| C-7 | 30 | 50 | Pass |
| C-8 | 30 | 52 | Pass |
| C-9 | 30 | 47 | Pass |
| C-10 | 35 | 50 | Pass |
| C-11 | 37 | 51 | Pass |
| C-12 | 32 | 49 | Pass |
| D-1 | 30 | 50 | Pass |
| D-2 | 30 | 50 | Pass |
| D-3 | 30 | 45 | Pass |
| D-4 | 30 | 50 | Pass |
| D-5 | 30 | 50 | Pass |
| D-6 | 30 | 47 | Pass |
| D-7 | 30 | 50 | Pass |
| D-8 | 30 | 50 | Pass |
| D-9 | 30 | 50 | Pass |
| D-10 | 30 | 48 | Pass |

Notes:
1. Hydrosatatic pressure testing for injection piping performed per AWWA Standard C605.
2. Per the AWWA Standard C605, all pipes tested held the test pressure with negligible pressure loss during the testing period.

# APPENDIX H
## Import Fill Material Documentation

ICONM**982 CF

**HOT MIX ASPHALT MIX DESIGN SUBMITTAL**

**Modified "B" / Commercial 1/2" HOT MIX ASPHALT (HMA)**
Submittal Date:
Paving Contractor:
Hot Mix Asphalt Supplier:

## 1. AGGREGATE, BINDER AND ANTI-STRIP SOURCES

A. First Mineral Aggregate - Washington State D.O.T. Source #A-464 (ICON Materials Auburn resource)
B. Second Mineral Aggregate - Source A-464
C. Blending Sand - Source A-464
D. Asphalt Cement - PG 64--22 - U.S. Oil & Refining - Tacoma WA refinery

## 2. BLENDING RATIO

A. First Mineral Aggregate (5/8" chips) = 16 %
B. Second Mineral Aggregate (1/2" - 0) = 69%
C. Blending Sand - 15%
D. AC Content - Most recent WSDOT design was for Contract (2014 - Mix ID No. MD14009) asphalt binder content was set at 5.3% by weight of total mix. The proposed job mix formula is revised (finer) to accommodate the project's modified Class B specification. MD14009 is a substantially similar HMA design.

## 3. PROPOSED GRADATION

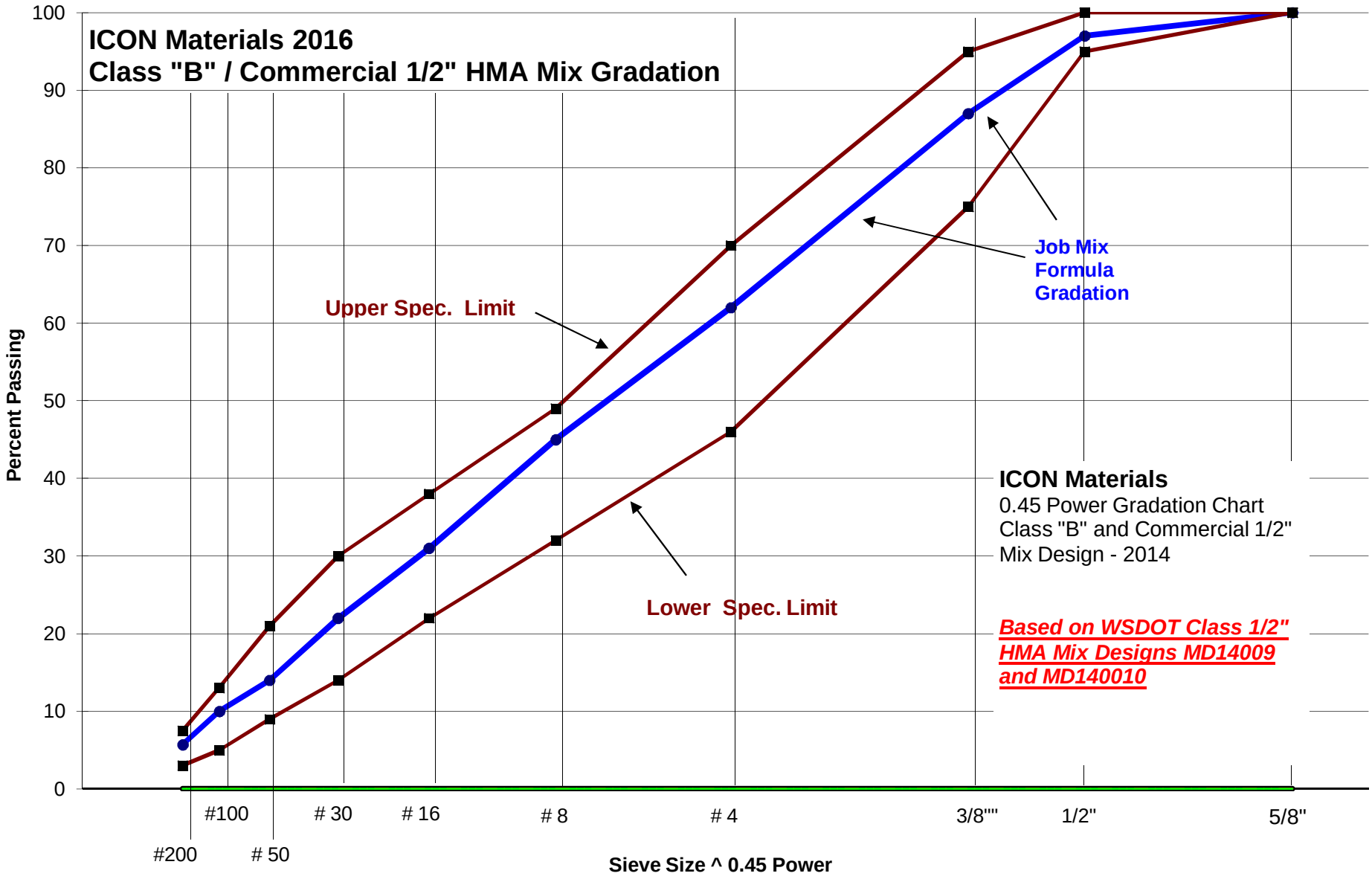
| | Percent Passing by Weight | | | | |
|---|---|---|---|---|---|
| | Stockpile Averages with blending ratios | | | | Modified |
| Sieve Sizes | First Mineral Aggregate (16%) (5/8" chips) | Second Mineral Aggregate (69%) (3/8" to 0) | Blending Sand (15%) | Proposed Target Gradation (Job Mix Formula) | Historic Class B Specification Limits * |
| 3/4" | 100 | 100 | 100 | 100 | 100 |
| 1/2" | 78.5 | 100 | 100 | 97 | 95 - 100 |
| 3/8" | 27.7 | 98.2 | 100 | 87 | 75 - 95 |
| #4 | 2.8 | 67.3 | 100 | 62 | 46 - 70 |
| #10 | 1.4 | 37 | 96 | 40 | 30 - 45 |
| #40 | 1.1 | 15 | 50 | 18 | 11 - 26 |
| #200 | 0.8 | 8.0 | 0.4 | 5.7 | 3.0 - 7.5 |

## 4. MISCELLANEOUS DATA

Sand Equivalent (Ave.) > 40 | Sand/Silt Ratio = 7.0 | Fracture > 90% | Ave. Rice Density (Historic) = 154.6 pcf

*** The gradation shown here is the historic WSDOT Class "B" specification (retired in 2002) shifted to a finer gradation than ICON's current Class 1/2" HMA. Gradation is finer on the 1/2" (+2%), 3/8" (+6%), #4 (+8%), #10 (+7%) and #40 (+1.5) sieves to establish a finer graded (modified) design. The proposed design maintains the basic structure of the Class "B" and/or Class 1/2" HMA design in a finer textured hot mix asphalt.**

**ICON Materials**
1508 Valentine Ave. SE Pacific WA 98047
206.575.3200 * 206.575.3207 facsimile
An Equal Opportunity Employer


ICON Materials 2016
Class "B" / Commercial 1/2" HMA Mix Gradation
Percent Passing
100
90
80
70
60
50
40
30
20
10
0
Upper Spec. Limit
Job Mix
Formula
Gradation
Lower Spec. Limit
ICON Materials
0.45 Power Gradation Chart
Class "B" and Commercial 1/2"
Mix Design - 2014
Based on WSDOT Class 1/2"
HMA Mix Designs MD14009
and MD140010
#200
#100
# 50
# 30
# 16
# 8
# 4
3/8""
1/2"
5/8"
Sieve Size ^ 0.45 Power

CDF. GEO 17 1490

# Sales/Delivery Ticket

CALPORTLAND®

ADMIN Office: (800) 750-0123
PO Box 1730 Seattle, WA 98111

TICKET#:1604855

| | |
|---|---|
| Leave Plant | 11:10 |
| Arrive Job | 11:40 |
| Start Pour | 11:40 |
| Finish Pour | |
| Finish Wash | |
| Leave Job | |
| Arrive Plant | |
| Time Allowed | |
| Time Used | |
| Excess Time | |

**Warning: Irritation to Skin and Eyes**

This product contains Portland Cement. Freshly mixed cement, mortar, grout or concrete may cause skin irritation and/or allergic reaction. Do not use without protective gear and clothing. Avoid any contact with skin. Wash exposed areas immediately with water. If cementitous materials get into the eye, rinse immediately and repeatedly with water and get prompt medical attention.

Keep Away From Children

**WEIGHMASTER CERTIFICATE**
California Only

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

Weighmaster:

| Water added at customer's request | |
|---|---|
| | Slump on arrival |
| | Gals to full load |
| | Gals to 2/3 load |
| | Gals to 1/3 load |

Rev Counter on Load:

Test Cylinders Taken:

This concrete is designed in accordance to American Concrete Institute Standards. Any water added to this design will be at purchasers risk. Materials hereby sold become property of purchaser at time of orgin. Calportland is not responsible for damages to property in the event that delivery is beyond curb line. Seller is not responsible for popouts or other imperfections resulting from reactive aggregates.

| Reasons for Delay Time |
|---|
| Job not ready |
| Lack of Help |
| Wheel Barrow Job |
| Pump Late/Problems |
| Other |

| Date/Time: | Superplasticer Amt Added: | Cust. Proj#: | Ordered By: | Phone #: | Map Page: |
|---|---|---|---|---|---|
| 5/9/2017 10:54 AM | | 5571 | AARON | | |

| Customer: | Order Type: | P.O. Number | Driver Name: | Truck #: | Order #: |
|---|---|---|---|---|---|
| 1008242 WYSER CONSTRUCTIONINC | Charge | GEO171490 | JOHN NESCHKE | 7657 | 109 |

| Scheduled Arrival: | Slump: | Load#: | Prev. Truck #: | Qty This Load: | Qty Delivered: | Qty Ordered: | Plant: | Alley: | Truck License #: |
|---|---|---|---|---|---|---|---|---|---|
| 11:27:00 AM | 6.00 | 1 | 7657 | 9.00 | 9.00 | 9.00 | 282 | | |

Delivery Address:

01 N NORTH LAKE WAY
EATTLE, WA

Ticket Notes:
GASWORKS PLAY AREA

| Quantity | UOM | Product Code | Product Description | Unit Price | Amount | Changed |
|---|---|---|---|---|---|---|
| 9.00 | yd | 3739 | SEATTLE TRENCH BACK FIL | | | |
| 9.00 | CY | 9990 | ENV FEE | | | |
| 1.00 | LD | 9900 | FUEL SURCHARGE | | | |

| Sales Tax: | Ticket Total: | Balance Forward: | Standing Time: | Order Total: |
|---|---|---|---|---|
| | | | | |

| Truck | Driver | User | Disp T | Num | Ticket ID | Time | Date |
|---|---|---|---|---|---|---|---|
| 7657 | 2449 | TTEA | 1604855 | | 274591 | 10:54 | 5/9/17 |

| Load Size | Mix Code | Returned | Qty | Mix Age | Seq | Load ID |
|---|---|---|---|---|---|---|
| 9.00 CY | 3739 | | | | W | 274589 |

| Material | Description | Design Qty | Required | Batched | % Var | % Moisture | Actual Wat |
|---|---|---|---|---|---|---|---|
| BLD SAND | CLASS 2 | 2887 lb | 27650 lb | 27540 lb | -0.40% | 6.41% A | 199 gl |
| FLYASH | 2-17 class f | 330 lb | 2970 lb | 2965 lb | -0.17% | | |
| T I-II | lot #17-102 | 30 lb | 270 lb | 275 lb | * 1.85% | | |
| WATER | GATE #1 | 300.0 lb | 916.4 lb | 908.0 lb | -0.92% | | 108.8 gl |

Actual Num Batches: 1

Loa tal: 31688 lb Design 0.833 Water/Cement 0.793 A Design 323.6 gl Actual 307.7 gl To Add: 15.8 gl

Slu 6.00 in Water in Truck: 0.0 lb Adjust Water: 0.0 lb / Load Trim Water:-13.0 lb/ CY

04 A875861

I have read, understood and I agree to all the above, including the Terms and Conditions on the reverse of, or accompanying this document, and incorporated by reference.

Signature _____

CUSTOMER

CDF . GEO-17-1490 1215 1225

# Sales/Delivery Ticket

CALPORTLAND®

ADMIN Office: (800) 750-0123
PO Box 1730 Seattle, WA 98111

TICKET#: 1604973

| | |
|---|---|
| Leave Plant | |
| Arrive Job | |
| Start Pour | |
| Finish Pour | |
| Finish Wash | |
| Leave Job | |
| Arrive Plant | |
| Time Allowed | |
| Time Used | |
| Excess Time | |

**Warning: Irritation to Skin and Eyes**

This product contains Portland Cement. Freshly mixed cement, mortar, grout or concrete may cause skin irritation and/or allergic reaction. Do not use without protective gear and clothing. Avoid any contact with skin. Wash exposed areas immediately with water. If cementitous materials get into the eye, rinse immediately and repeatedly with water and get prompt medical attention.

Keep Away From Children

**WEIGHMASTER CERTIFICATE**
California Only

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

Weighmaster:

| | |
|---|---|
| Water added at customer's request | |
| | Slump on arrival |
| | Gals to full load |
| | Gals to 2/3 load |
| | Gals to 1/3 load |

Rev Counter on Load:

Test Cylinders Taken:

This concrete is designed in accordance to American Concrete Institute Standards. Any water added to this design will be at purchasers risk. Materials hereby sold become property of purchaser at time of orgin. Calportland is not responsible for damages to property in the event that delivery is beyond curb line. Seller is not responsible for popouts or other imperfections resulting from reactive aggregates.

| Reasons for Delay Time |
|---|
| Job not ready |
| Lack of Help |
| Wheel Barrow Job |
| Pump Late/Problems |
| Other |

| Date/Time: | Superplasticer Amt Added: | Cust. Proj#: | Ordered By: | Phone #: | Map Page: |
|---|---|---|---|---|---|
| 5/9/2017 12:07 PM | | 5571 | AARON | | |

| Customer: | Order Type: | P.O. Number | Driver Name: | Truck #: | Order #: |
|---|---|---|---|---|---|
| 1008242 WYSER CONSTRUCTIONINC | Charge | GEO171490 | BRYAN CLAPPER | 7346 | 109 |

| Scheduled Arrival: | Slump: | Load#: | Prev. Truck #: | Qty This Load: | Qty Delivered: | Qty Ordered: | Plant: | Alley: | Truck License #: |
|---|---|---|---|---|---|---|---|---|---|
| 12:41:00 PM | 6.00 | 2 | 7346 | 3.50 | 12.50 | 12.50 | 282 | | |

Delivery Address:

1801 N NORTH LAKE WAY
SEATTLE, WA

Ticket Notes:

GASWORKS PLAY AREA

| Quantity | UOM | Product Code | Product Description | Unit Price | Amount | Changed |
|---|---|---|---|---|---|---|
| 3.50 | yd | 3739 | SEATTLE TRENCH BACK FIL | | | |
| 3.50 | CY | 9990 | ENV FEE | | | |
| 1.00 | LD | 9900 | FUEL SURCHARGE | | | |
| 5.50 | CY | 9960 | SHORT LOAD FEE | | | |

| Sales Tax: | Ticket Total: | Balance Forward: | Standing Time: | Order Total: |
|---|---|---|---|---|
| | | | | |

| Truck | Driver | User | Disp Ticket Num | Ticket ID | Time | Date |
|---|---|---|---|---|---|---|
| 7346 | 1735 | DGILL | 1604973 | 274638 | 12:07 | 5/9/17 |

| Load Size | Mix Code | Returned | Qty | Mix Age | Seq | Load ID |
|---|---|---|---|---|---|---|
| 3.50 CY | 3739 | | | | W | 274636 |

| Material | Description | Design Qty | Required | Batched | % Var | % Moisture | Actual Wat |
|---|---|---|---|---|---|---|---|
| BLD SAND | CLASS 2 | 2887 lb | 10753 lb | 10660 lb | -0.86% | 6.41% A | 77 gl |
| FLYASH | 2-17 class f | 330 lb | 1155 lb | 1150 lb | -0.43% | | |
| T-II | lot #17-102 | 30 lb | 105 lb | 105 lb | 0.00% | | |
| | GATE #1 | 300.0 lb | 356.3 lb | 354.0 lb | ( -0.66% | | 42.4 gl |

Actual Num Batches: 1

Load Total: 12269 lb Design 0.833 Water/Cement 0.794 A Design 125.8 gl Actual 119.4 gl To Add: 6.4 gl
Slump: 6.00 in Water in Truck: 0.0 lb Adjust Water: 0.0 lb / Load Trim Water:-13.0 lb/ CY

DL-04 A875876

I have read, understood and I agree to all the above, includIng the Terms and Conditions on the reverse of, or accompanying this document, and incorporated by reference.

Signature _____ CUSTOMER

# Sales/Delivery Ticket

**CALPORTLAND®**

ADMIN Office: (800) 750-0123
PO Box 1730 Seattle, WA 98111

TICKET#: 1614161

| | |
|---|---|
| Leave Plant | 1230 |
| Arrive Job | 1230 |
| Start Pour | 1255 |
| Finish Pour | |
| Finish Wash | |
| Leave Job | |
| Arrive Plant | |
| Time Allowed | |
| Time Used | |
| Excess Time | |

**Warning: Irritation to Skin and Eyes**

This product contains Portland Cement. Freshly mixed cement, mortar, grout or concrete may cause skin irritation and/or allergic reaction. Do not use without protective gear and clothing. Avoid any contact with skin. Wash exposed areas immediately with water. If cementitous materials get into the eye, rinse immediately and repeatedly with water and get prompt medical attention.

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Weighmaster:

| Water added at customer's request | | Rev Counter on Load: | This concrete is designed in accordance to American Concrete Institute Standards. Any water added to this design will be at purchasers risk. Materials hereby sold become property of purchaser at time of orgin. Calportland is not responsible for damages to property in the event that delivery is beyond curb line. Seller is not responsible for popouts or other imperfections resulting from reactive aggregates. | Reasons for Delay Time |
|---|---|---|---|---|
| 6 | Slump on arrival | | | Job not ready |
| | Gals to full load | | | Lack of Help |
| | Gals to 2/3 load | Test Cylinders Taken: | | Wheel Barrow Job |
| | Gals to 1/3 load | | | Pump Late/Problems |
| | | | | Other |

| Date/Time: | Superplasticer Amt Added: | Cust. Proj#: | Ordered By: | Phone #: | Map Page: |
|---|---|---|---|---|---|
| 5/22/2017 12:19 PM | | 5571 | DARON | | |

| Customer: | Order Type: | P.O. Number | Driver Name: | Truck #: | Order #: |
|---|---|---|---|---|---|
| 1008242 WYSER CONSTRUCTIONINC | Charge | GE0171490 | BYRON BAKER | 8304 | 107 |

| Scheduled Arrival: | Slump: | Load#: | Prev. Truck #: | Qty This Load: | Qty Delivered: | Qty Ordered: | Plant: | Alley: | Truck License #: |
|---|---|---|---|---|---|---|---|---|---|
| 12:55:00 PM | 6.00 | 1 | | 9.00 | 9.00 | 18.00 | 291 | | |

Delivery Address:

1801 N NORTH LAKE WAY
SEATTLE, WA

Ticket Notes:

GASWORKS PLAY AREA MANUEL (206
10-1031

| Quantity | UOM | Product Code | Product Description | Unit Price | Amount | Changed |
|---|---|---|---|---|---|---|
| 9.00 | yd | 3739 | SEATTLE TRENCH BACK FIL | | | |
| 9.00 | CY | 9990 | ENV FEE | | | |
| 1.00 | LD | 9900 | FUEL SURCHARGE | | | |

| Sales Tax: | Ticket Total: | Balance Forward: | Standing Time: | Order Total: |
|---|---|---|---|---|
| | | | | |

| Truck | Driver | User | Disp Ticket Num | Ticket ID | Time | Date |
|---|---|---|---|---|---|---|
| 8304 | 2560 | DPADON | 1614161 | 134933 | 12:19 | 5/22/17 |

| Load Size | Mix Code | Returned Qty | Mix Age | Seq | Load ID |
|---|---|---|---|---|---|
| 9.00 CY | 3739 | | | W | 134931 |

| Material | Description | Design Qty | Required | Batched | % Var | % Moisture | Actual Wat |
|---|---|---|---|---|---|---|---|
| BLD SAND | CLASS 2 | 2087 lb | 27691 lb | 27600 lb | -0.04% | 6.57% A | 205 gl |
| FLYASH | 2-17 class f | 330 lb | 2970 lb | 2955 lb | -0.51% | | |
| T I-II | CERT lot # 17-102 | 30 lb | 270 lb | 270 lb | 0.00% | | |
| WATER | GATE #1 | 300.0 lb | 872.6 lb | 866.0 lb | -0.75% | | |
| AEA | DARVAIR1000 | 5.0 oz | 45.0 oz | 44.0 oz | -2.22% | | 103.8 gl |

ual Num Batches: 2
d Total: 31774 lb Design 0.833 Water/Cement 0.798 A Design 323.6 gl Actual 308.3 gl To Add: 15.2 gl
Slump: 6.00 in Water in Truck: 0.0 lb Adjust Water: 0.0 lb / Load Trim Water:-13.0 lb/ CY

I have read, understood and I agree to all the above, including the Terms and Conditions on the reverse of, or accompanying this document, and incorporated by reference.

DL-04 A888125 Signature _____ CUSTOMER

# Sales/Delivery Ticket

CALPORTLAND®

ADMIN Office: (800) 750-0123
PO Box 1730 Seattle, WA 98111

TICKET#: 1614247

| | |
|---|---|
| Leave Plant | 1330 |
| Arrive Job | 1400 |
| Start Pour | |
| Finish Pour | |
| Finish Wash | |
| Leave Job | |
| Arrive Plant | |
| Time Allowed | |
| Time Used | |
| Excess Time | |

**Warning: Irritation to Skin and Eyes**

This product contains Portland Cement. Freshly mixed cement, mortar, grout or concrete may cause skin irritation and/or allergic reaction. Do not use without protective gear and clothing. Avoid any contact with skin. Wash exposed areas immediately with water. If cementitous materials get into the eye, rinse immediately and repeatedly with water and get prompt medical attention.

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California Only

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Weighmaster:

This concrete is designed in accordance to American Concrete Institute Standards. Any water added to this design will be at purchasers risk. Materials hereby sold become property of purchaser at time of orgin. Calportland is not responsible for damages to property in the event that delivery is beyond curb line. Seller is not responsible for popouts or other imperfections resulting from reactive aggregates.

| Water added at customer's request | |
|---|---|
| | Slump on arrival |
| | Gals to full load |
| | Gals to 2/3 load |
| | Gals to 1/3 load |

Rev Counter on Load:

Test Cylinders Taken:

| Reasons for Delay Time |
|---|
| Job not ready |
| Lack of Help |
| Wheel Barrow Job |
| Pump Late/Problems |
| Other |

| Date/Time: | Superplasticer Amt Added: | Cust. Proj#: | Ordered By: | Phone #: | Map Page: |
|---|---|---|---|---|---|
| 5/22/2017 1:16 PM | | 5571 | DARON | | |

| Customer: | Order Type: | P.O. Number | Driver Name: | Truck #: | Order #: |
|---|---|---|---|---|---|
| 1008242 WYSER CONSTRUCTIONINC | Charge | GE0171490 | JAMES JR WITHA | M8314 | 107 |

| Scheduled Arrival: | Slump: | Load#: | Prev. Truck #: | Qty This Load: | Qty Delivered: | Qty Ordered: | Plant: | Alley: | Truck License #: |
|---|---|---|---|---|---|---|---|---|---|
| 1:52:00 PM | 6.00 | 2 | 8304 | 9.00 | 18.00 | 18.00 | 291 | | |

Delivery Address:

801 N NORTH LAKE WAY
SEATTLE, WA

Ticket Notes:
GASWORKS PLAY AREA MANUEL (206
10-1031

| Quantity | UOM | Product Code | Product Description | Unit Price | Amount | Changed |
|---|---|---|---|---|---|---|
| 9.00 | yd | 3739 | SEATTLE BENCH BACK FIL | | | |
| 9.00 | CY | 9990 | ENV FEE | | | |
| 1.00 | LD | 9900 | FUEL SURCHARGE | | | |

| Sales Tax: | Ticket Total: | Balance Forward: | Standing Time: | Order Total: |
|---|---|---|---|---|
| | | | | |

| Truck | Driver | User | Disp Ticket Num | Ticket ID | Time | Date |
|---|---|---|---|---|---|---|
| 8314 | 2724 | DPADON | 1614247 | 134960 | 13:16 | 5/22/17 |

| Load Size | Mix Code | Returned Qty | Mix Age | Seq | Load ID |
|---|---|---|---|---|---|
| 9.00 CY | 3739 | | | W | 134958 |

| Material | Description | Design Qty | Required | Batched | % Var | % Moisture | Actual Wat |
|---|---|---|---|---|---|---|---|
| BLD SAND | CLASS 2 | 2887 lb | 27696 lb | 27680 lb | -0.06% | 6.59% A | 205 gl |
| FLYASH | 2-17 class f | 330 lb | 2970 lb | 2955 lb | -0.51% | | |
| T I-II | CERT lot # 17-102 | 30 lb | 270 lb | 270 lb | 0.00% | | |
| WATER | GATE #1 | 300.0 lb | 867.1 lb | 853.0 lb | -1.05% | | 102.8 gl |
| AEA | DARVAIR1000 | 5.0 oz | 45.0 oz | 44.0 oz | -2.22% | | |

Num Batches: 2
Total: 31766 lb Design 0.833 Water/Cement 0.797 A Design 323.6 gl Actual 308.0 gl To Add: 15.6 gl
Slump: 6.00 in Water in Truck: 0.0 lb Adjust Water: 0.0 lb / Load Trim Water:-13.0 lb/ CY

A888136

I have read, understood and I agree to all the above, including the Terms and Conditions on the reverse of, or accompanying this document, and incorporated by refere

Signature _____ CUSTOMER

# Gradation Test With Sieve Chart Report

**Plant** 727A-DuPont WSDOT Pit # B-335
**Product** AWA8725-Building Sand
**Specification** WSDOT Class 2 Sand

1874828959

## Sample Information

**Sample No** 1874828959
**Date Sampled** 09/21/2016 13:42
**Sampled By** Jared Pedroza
**Type** Shipping
**Method** Stockpile

**Split Sample** ☐
**Resample** ☐

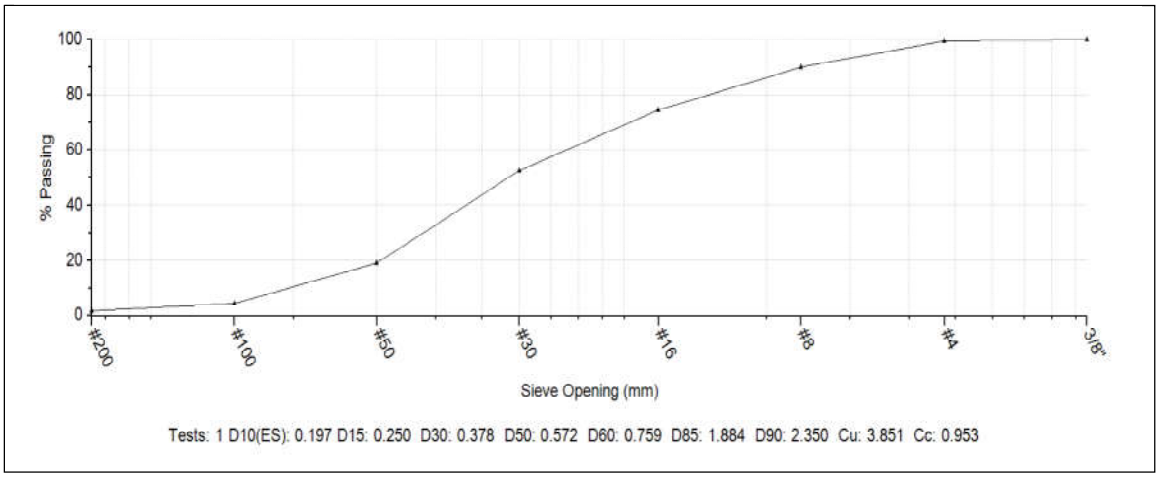
**Test Note**
STOCKPILE

## Gradation Results

**Date Completed** 09/21/2016 13:42
**Tested By** Jared Pedroza

| Unit | Moist Mass | Dry Mass | Wash Mass | Moisture % | Wash Loss % | Procedure |
|---|---|---|---|---|---|---|
| g | 629.50 | 584.30 | 575.30 | 7.7 | 1.5 | |

| Sieve | Mass Retained | Cum Mass Retained | Ind % Retained | % Retained | % Passing | Target | Specification | Comment |
|---|---|---|---|---|---|---|---|---|
| 3/8" (9.5mm) | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | 99-100 | |
| #4 (4.75mm) | 3.0 | 3.0 | 0.5 | 0.5 | 99.5 | | 95-100 | |
| #8 (2.36mm) | 54.6 | 57.6 | 9.3 | 9.9 | 90.1 | | | |
| #16 (1.18mm) | 91.7 | 149.3 | 15.7 | 25.6 | 74.4 | | 45-80 | |
| #30 (0.6mm) | 129.5 | 278.8 | 22.2 | 47.7 | 52.3 | | | |
| #50 (0.3mm) | 194.9 | 473.7 | 33.4 | 81.1 | 18.9 | | 10-30 | |
| #100 (0.15mm) | 86.0 | 559.7 | 14.7 | 95.8 | 4.2 | | 2-10 | |
| #200 (75µm) | 14.7 | 574.4 | 2.52 | 98.31 | 1.69 | | 0-2.5 | |
| Pan | 0.9 | 575.3 | 1.69 | 100.00 | 0.00 | | | |



WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System** **DATE: May 1, 2017**

**at Gas Works Park** GEO-17-1490

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | Wyser Construction | 3204/1598971 | 10:38 AM | 13.81 ton | Calportland | 5/1/2017 | Builders Sand | 13.81 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | Sand | Total Tons | 13.81 |
| 18 | | | | | | | | |

703A AGG KENMORE
5/1/2017 10:38:28 A

6423 NE 175TH STREET
KENMORE, WA 980284808

CALPORTLAND

NO: 1598971

*Copy*

Customer: 1008242 WYSER CONSTRUCTION INC
Project: 29957 AGG 2017 MASTER BID PRICING
P.O.: GEO17-1490 Job Number: GEO17--1490
Product: 8725 ASTM C33 BUILD SAND

Delv To:
6423 NE 175TH ST

KENMORE WA 98028

| DELIVERY TOTALS | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 1 |
| QTY | 13.81 | 13.81 |

Weighmaster: MURPHY, DEBBIE

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 5/1/2017 10:38:25 AM | Man WT | 87,260 | 43.63 | 39.58 | Gross |
| 5/1/2017 10:38:08 AM | Man WT | 59,640 | 29.82 | 27.05 | Tare |
| ☐ Driver Off | | 27,620 | 13.81 | 12.53 | Net |

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

Hauler: 999 FOB PICKUP
Truck: WYS30 WYSER #30 FLATBED

REC'D BY _____ DATE _____

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System** **DATE: May 11, 2017**

**at Gas Works Park** GEO-17-1490

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| 1 | Z & S Trucking | 3214/1606626 | 10:02 AM | 14.03 ton | Calportland | 5/11/2017 | Builders Sand | 14.03 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | Sand | Total Tons | 14.03 |
| 18 | | | | | | | | |

703A AGG KENMORE 6423 NE 175TH STREET
5/11/2017 10:02:13 KENMORE, WA 980284808

CALPORTLAND

NO: 1606626

*Copy*

Customer: 1008242 WYSER CONSTRUCTION INC
Project: 29957 AGG 2017 MASTER BID PRICING
P.O.: GEO17-1419 Job Number: geo17--1419
Product: 8725 ASTM C33 BUILD SAND

| DELIVERY TOTALS | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 2 |
| QTY | 14.03 | 27.84 |

Delv To:
6423 NE 175TH ST

KENMORE WA 98028

Weighmaster: MURPHY, DEBBIE

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 5/11/2017 10:02:10 A | Man WT | 70,200 | 35.10 | 31.84 | Gross |
| 12/14/2016 11:43:15 A | Man WT | 42,140 | 21.07 | 19.11 | Tare |
| ☐ Driver Off | | 28,060 | 14.03 | 12.73 | Net |

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

Hauler: 999 FOB PICKUP
Truck: WYS30T WYSER CONSTRUCTION

REC'D BY _____ DATE _____

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System** **DATE: May 15, 2017**

**at Gas Works Park** GEO-17-1490

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | Wyser Construction | 3217/1608634 | 9:57 AM | 14.37 ton | Calportland | 5/15/2017 | Builders Sand | 14.37 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | Sand | Total Tons | 14.37 |
| 18 | | | | | | | | |

703A AGG KENMORE
5/15/2017 9:57:32 A

6423 NE 175TH STREET
KENMORE, WA 980284808

CALPORTLAND

NO: 1608634

*Copy*

Customer: 1008242 WYSER CONSTRUCTION INC
Project: 29957 AGG 2017 MASTER BID PRICING
P.O.: GEO17-1490 Job Number: GEO17-1490
Product: 8725 ASTM C33 BUILD SAND

| DELIVERY TOTALS | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 3 |
| QTY | 14.37 | 42.21 |

Delv To:
6423 NE 175TH ST

KENMORE WA 98028

Weighmaster: MURPHY, DEBBIE

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 5/15/2017 9:57:29 AM | Man WT | 71,280 | 35.64 | 32.33 | Gross |
| 5/15/2017 9:57:21 AM | Man WT | 42,540 | 21.27 | 19.30 | Tare |
| ☐ Driver Off | | 28,740 | 14.37 | 13.04 | Net |

Hauler: 999 FOB PICKUP
Truck: WYS30T WYSER CONSTRUCTION

REC'D BY _____ DATE _____

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System** **DATE: June 14, 2017**

**at Gas Works Park** GEO-17-1490

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | Wyser Const. #W25 | 1629290 | 8:05 AM | 7.67 ton | Calportland | 6/14/2017 | Builders Sand | 7.67 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | Builders | Sand | Total Tons | 7.67 |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |

703A KENMORE 6423 NE 175TH STREET
6/14/2017 8:05:40 A KENMORE, WA 980284808

CALPORTLAND

NO: 1629290

*Copy*

Customer: 1008242 WYSER CONSTRUCTION INC
Project: 29957 AGG 2017 MASTER BID PRICING
P.O.: 6EO-17-1490 Job Number: 6EO-17-1490
Product: 8725 ASTM C33 BUILD SAND

| DELIVERY TOTALS | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 4 |
| QTY | 7.67 | 49.88 |

Delv To:
6423 NE 175TH ST

KENMORE WA 98028

Weighmaster: MURPHY, DEBBIE

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 6/14/2017 8:05:37 AM | Man WT | 32,120 | 16.06 | 14.57 | Gross |
| 6/14/2017 7:55:12 AM | Man WT | 16,780 | 8.39 | 7.61 | Tare |
| | | 15,340 | 7.67 | 6.96 | Net |

☐ Driver Off

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

Hauler: 999 FOB PICKUP
Truck: WYS25S WYSER CONSTRUCTION

REC'D BY DATE

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System at Gas Works Park** GEO-17-1490

**DATE: February 10, 2017**

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | Wyser Construction | 3134/1544278 | 7:40 AM | 13.95 ton | Calportland | 2/10/2017 | Sand | 13.95 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | Sand | Total Tons | 13.95 |
| 18 | | | | | | | | |

705A AGG SEATTLE
2/10/2017 7:40:27 A

4002 WEST MARGINAL WAY SW
SEATTLE, WA 981061208

CALPORTLAND

**NO: 1544278**

*Copy*

Customer: 008242 WYSER CONSTRUCTION INC
Project: 29226 AGG 2017 LIST PRICE
P.O.: GEO 171490 Job Number: GEO 171490
Product: 8725 ASTM C33 BUILD SAND

Delv To:
4002 WEST MARGINAL WAY SW

SEATTLE WA 98106

**DELIVERY TOTALS**

| | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 1 |
| QTY | 13.95 | 13.95 |

Weighmaster: WEBB, JUDY

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 2/10/2017 7:40:24 AM | Seattle Agg | 54,660 | 27.33 | 24.79 | Gross |
| 2/3/2017 10:51:58 AM | Seattle Agg | 26,760 | 13.38 | 12.14 | Tare |
| ☐ Driver Off | | 27,900 | 13.95 | 12.66 | Net |

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

Hauler: 999 FOB PICKUP
Truck: WYS30SS WYSER TRK 30 S

REC'D BY _____ DATE _____

CDF. GEO 17 1490

# Sales/Delivery Ticket

CALPORTLAND®

ADMIN Office: (800) 750-0123
PO Box 1730 Seattle, WA 98111

TICKET#:1604855

| | |
|---|---|
| Leave Plant | 11:10 |
| Arrive Job | 11:40 |
| Start Pour | 11:40 |
| Finish Pour | |
| Finish Wash | |
| Leave Job | |
| Arrive Plant | |
| Time Allowed | |
| Time Used | |
| Excess Time | |

**Warning: Irritation to Skin and Eyes**

This product contains Portland Cement. Freshly mixed cement, mortar, grout or concrete may cause skin irritation and/or allergic reaction. Do not use without protective gear and clothing. Avoid any contact with skin. Wash exposed areas immediately with water. If cementitous materials get into the eye, rinse immediately and repeatedly with water and get prompt medical attention.

Keep Away From Children

**WEIGHMASTER CERTIFICATE**
California Only

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

Weighmaster:

| Water added at customer's request | |
|---|---|
| | Slump on arrival |
| | Gals to full load |
| | Gals to 2/3 load |
| | Gals to 1/3 load |

Rev Counter on Load:

Test Cylinders Taken:

This concrete is designed in accordance to American Concrete Institute Standards. Any water added to this design will be at purchasers risk. Materials hereby sold become property of purchaser at time of orgin. Calportland is not responsible for damages to property in the event that delivery is beyond curb line. Seller is not responsible for popouts or other imperfections resulting from reactive aggregates.

| Reasons for Delay Time |
|---|
| Job not ready |
| Lack of Help |
| Wheel Barrow Job |
| Pump Late/Problems |
| Other |

| Date/Time: | Superplasticer Amt Added: | Cust. Proj#: | Ordered By: | Phone #: | Map Page: |
|---|---|---|---|---|---|
| 5/9/2017 10:54 AM | | 5571 | AARON | | |

| Customer: | Order Type: | P.O. Number | Driver Name: | Truck #: | Order #: |
|---|---|---|---|---|---|
| 1008242 WYSER CONSTRUCTIONINC | Charge | GEO171490 | JOHN NESCHKE | 7657 | 109 |

| Scheduled Arrival: | Slump: | Load#: | Prev. Truck #: | Qty This Load: | Qty Delivered: | Qty Ordered: | Plant: | Alley: | Truck License #: |
|---|---|---|---|---|---|---|---|---|---|
| 11:27:00 AM | 6.00 | 1 | 7657 | 9.00 | 9.00 | 9.00 | 282 | | |

Delivery Address:

01 N NORTH LAKE WAY
EATTLE, WA

Ticket Notes:
GASWORKS PLAY AREA

| Quantity | UOM | Product Code | Product Description | Unit Price | Amount | Changed |
|---|---|---|---|---|---|---|
| 9.00 | yd | 3739 | SEATTLE TRENCH BACK FIL | | | |
| 9.00 | CY | 9990 | ENV FEE | | | |
| 1.00 | LD | 9900 | FUEL SURCHARGE | | | |

| Sales Tax: | Ticket Total: | Balance Forward: | Standing Time: | Order Total: |
|---|---|---|---|---|
| | | | | |

| Truck | Driver | User | Disp T | Num | Ticket ID | Time | Date |
|---|---|---|---|---|---|---|---|
| 7657 | 2449 | TTEA | 1604855 | | 274591 | 10:54 | 5/9/17 |

| Load Size | Mix Code | Returned | Qty | Mix Age | Seq | Load ID |
|---|---|---|---|---|---|---|
| 9.00 CY | 3739 | | | | W | 274589 |

| Material | Description | Design Qty | Required | Batched | % Var | % Moisture | Actual Wat |
|---|---|---|---|---|---|---|---|
| BLD SAND | CLASS 2 | 2887 lb | 27650 lb | 27540 lb | -0.40% | 6.41% A | 199 gl |
| FLYASH | 2-17 class f | 330 lb | 2970 lb | 2965 lb | -0.17% | | |
| T I-II | lot #17-102 | 30 lb | 270 lb | 275 lb | * 1.85% | | |
| WATER | GATE #1 | 300.0 lb | 916.4 lb | 908.0 lb | -0.92% | | 108.8 gl |

Actual Num Batches: 1

Loa tal: 31688 lb Design 0.833 Water/Cement 0.793 A Design 323.6 gl Actual 307.7 gl To Add: 15.8 gl

Slu 6.00 in Water in Truck: 0.0 lb Adjust Water: 0.0 lb / Load Trim Water:-13.0 lb/ CY

04 A875861

I have read, understood and I agree to all the above, including the Terms and Conditions on the reverse of, or accompanying this document, and incorporated by reference.

Signature _____

CUSTOMER

CDF . GEO-17-1490 1215 1225

# Sales/Delivery Ticket

CALPORTLAND®

ADMIN Office: (800) 750-0123
PO Box 1730 Seattle, WA 98111

TICKET#: 1604973

| | |
|---|---|
| Leave Plant | |
| Arrive Job | |
| Start Pour | |
| Finish Pour | |
| Finish Wash | |
| Leave Job | |
| Arrive Plant | |
| Time Allowed | |
| Time Used | |
| Excess Time | |

**Warning: Irritation to Skin and Eyes**

This product contains Portland Cement. Freshly mixed cement, mortar, grout or concrete may cause skin irritation and/or allergic reaction. Do not use without protective gear and clothing. Avoid any contact with skin. Wash exposed areas immediately with water. If cementitous materials get into the eye, rinse immediately and repeatedly with water and get prompt medical attention.

Keep Away From Children

**WEIGHMASTER CERTIFICATE**
California Only

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

Weighmaster:

| | |
|---|---|
| Water added at customer's request | |
| | Slump on arrival |
| | Gals to full load |
| | Gals to 2/3 load |
| | Gals to 1/3 load |

Rev Counter on Load:

Test Cylinders Taken:

This concrete is designed in accordance to American Concrete Institute Standards. Any water added to this design will be at purchasers risk. Materials hereby sold become property of purchaser at time of orgin. Calportland is not responsible for damages to property in the event that delivery is beyond curb line. Seller is not responsible for popouts or other imperfections resulting from reactive aggregates.

| Reasons for Delay Time |
|---|
| Job not ready |
| Lack of Help |
| Wheel Barrow Job |
| Pump Late/Problems |
| Other |

| Date/Time: | Superplasticer Amt Added: | Cust. Proj#: | Ordered By: | Phone #: | Map Page: |
|---|---|---|---|---|---|
| 5/9/2017 12:07 PM | | 5571 | AARON | | |

| Customer: | Order Type: | P.O. Number | Driver Name: | Truck #: | Order #: |
|---|---|---|---|---|---|
| 1008242 WYSER CONSTRUCTIONINC | Charge | GEO171490 | BRYAN CLAPPER | 7346 | 109 |

| Scheduled Arrival: | Slump: | Load#: | Prev. Truck #: | Qty This Load: | Qty Delivered: | Qty Ordered: | Plant: | Alley: | Truck License #: |
|---|---|---|---|---|---|---|---|---|---|
| 12:41:00 PM | 6.00 | 2 | 7346 | 3.50 | 12.50 | 12.50 | 282 | | |

Delivery Address:

1801 N NORTH LAKE WAY
SEATTLE, WA

Ticket Notes:

GASWORKS PLAY AREA

| Quantity | UOM | Product Code | Product Description | Unit Price | Amount | Changed |
|---|---|---|---|---|---|---|
| 3.50 | yd | 3739 | SEATTLE TRENCH BACK FIL | | | |
| 3.50 | CY | 9990 | ENV FEE | | | |
| 1.00 | LD | 9900 | FUEL SURCHARGE | | | |
| 5.50 | CY | 9960 | SHORT LOAD FEE | | | |

| Sales Tax: | Ticket Total: | Balance Forward: | Standing Time: | Order Total: |
|---|---|---|---|---|
| | | | | |

| Truck | Driver | User | Disp Ticket Num | Ticket ID | Time | Date |
|---|---|---|---|---|---|---|
| 7346 | 1735 | DGILL | 1604973 | 274638 | 12:07 | 5/9/17 |

| Load Size | Mix Code | Returned | Qty | Mix Age | Seq | Load ID |
|---|---|---|---|---|---|---|
| 3.50 CY | 3739 | | | | W | 274636 |

| Material | Description | Design Qty | Required | Batched | % Var | % Moisture | Actual Wat |
|---|---|---|---|---|---|---|---|
| BLD SAND | CLASS 2 | 2887 lb | 10753 lb | 10660 lb | -0.86% | 6.41% A | 77 gl |
| FLYASH | 2-17 class f | 330 lb | 1155 lb | 1150 lb | -0.43% | | |
| T-II | lot #17-102 | 30 lb | 105 lb | 105 lb | 0.00% | | |
| | GATE #1 | 300.0 lb | 356.3 lb | 354.0 lb | ( -0.66% | | 42.4 gl |

Actual Num Batches: 1

Load Total: 12269 lb Design 0.833 Water/Cement 0.794 A Design 125.8 gl Actual 119.4 gl To Add: 6.4 gl
Slump: 6.00 in Water in Truck: 0.0 lb Adjust Water: 0.0 lb / Load Trim Water:-13.0 lb/ CY

DL-04 A875876

I have read, understood and I agree to all the above, includIng the Terms and Conditions on the reverse of, or accompanying this document, and incorporated by reference.

Signature _____ CUSTOMER

# Sales/Delivery Ticket

**CALPORTLAND®**

ADMIN Office: (800) 750-0123
PO Box 1730 Seattle, WA 98111

TICKET#: 1614161

| | |
|---|---|
| Leave Plant | 1230 |
| Arrive Job | 1230 |
| Start Pour | 1255 |
| Finish Pour | |
| Finish Wash | |
| Leave Job | |
| Arrive Plant | |
| Time Allowed | |
| Time Used | |
| Excess Time | |

**Warning: Irritation to Skin and Eyes**

This product contains Portland Cement. Freshly mixed cement, mortar, grout or concrete may cause skin irritation and/or allergic reaction. Do not use without protective gear and clothing. Avoid any contact with skin. Wash exposed areas immediately with water. If cementitous materials get into the eye, rinse immediately and repeatedly with water and get prompt medical attention.

Keep Away From Children

**WEIGHMASTER CERTIFICATE**
California Only

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

Weighmaster:

| Water added at customer's request | | Rev Counter on Load: | This concrete is designed in accordance to American Concrete Institute Standards. Any water added to this design will be at purchasers risk. Materials hereby sold become property of purchaser at time of orgin. Calportland is not responsible for damages to property in the event that delivery is beyond curb line. Seller is not responsible for popouts or other imperfections resulting from reactive aggregates. | Reasons for Delay Time |
|---|---|---|---|---|
| 6 | Slump on arrival | | | Job not ready |
| | Gals to full load | | | Lack of Help |
| | Gals to 2/3 load | Test Cylinders Taken: | | Wheel Barrow Job |
| | Gals to 1/3 load | | | Pump Late/Problems |
| | | | | Other |

| Date/Time: | Superplasticer Amt Added: | Cust. Proj#: | Ordered By: | Phone #: | Map Page: |
|---|---|---|---|---|---|
| 5/22/2017 12:19 PM | | 5571 | DARON | | |

| Customer: | Order Type: | P.O. Number | Driver Name: | Truck #: | Order #: |
|---|---|---|---|---|---|
| 1008242 WYSER CONSTRUCTIONINC | Charge | GE0171490 | BYRON BAKER | 8304 | 107 |

| Scheduled Arrival: | Slump: | Load#: | Prev. Truck #: | Qty This Load: | Qty Delivered: | Qty Ordered: | Plant: | Alley: | Truck License #: |
|---|---|---|---|---|---|---|---|---|---|
| 12:55:00 PM | 6.00 | 1 | | 9.00 | 9.00 | 18.00 | 291 | | |

Delivery Address:

1801 N NORTH LAKE WAY
SEATTLE, WA

Ticket Notes:

GASWORKS PLAY AREA MANUEL (206
10-1031

| Quantity | UOM | Product Code | Product Description | Unit Price | Amount | Changed |
|---|---|---|---|---|---|---|
| 9.00 | yd | 3739 | SEATTLE TRENCH BACK FIL | | | |
| 9.00 | CY | 9990 | ENV FEE | | | |
| 1.00 | LD | 9900 | FUEL SURCHARGE | | | |

| Sales Tax: | Ticket Total: | Balance Forward: | Standing Time: | Order Total: |
|---|---|---|---|---|
| | | | | |

| Truck | Driver | User | Disp Ticket Num | Ticket ID | Time | Date |
|---|---|---|---|---|---|---|
| 8304 | 2560 | DPADON | 1614161 | 134933 | 12:19 | 5/22/17 |

| Load Size | Mix Code | Returned Qty | Mix Age | Seq | Load ID |
|---|---|---|---|---|---|
| 9.00 CY | 3739 | | | W | 134931 |

| Material | Description | Design Qty | Required | Batched | % Var | % Moisture | Actual Wat |
|---|---|---|---|---|---|---|---|
| BLD SAND | CLASS 2 | 2087 lb | 27691 lb | 27600 lb | -0.04% | 6.57% A | 205 gl |
| FLYASH | 2-17 class f | 330 lb | 2970 lb | 2955 lb | -0.51% | | |
| T I-II | CERT lot # 17-102 | 30 lb | 270 lb | 270 lb | 0.00% | | |
| WATER | GATE #1 | 300.0 lb | 872.6 lb | 866.0 lb | -0.75% | | |
| AEA | DARVAIR1000 | 5.0 oz | 45.0 oz | 44.0 oz | -2.22% | | 103.8 gl |

ual Num Batches: 2
d Total: 31774 lb Design 0.833 Water/Cement 0.798 A Design 323.6 gl Actual 308.3 gl To Add: 15.2 gl
Slump: 6.00 in Water in Truck: 0.0 lb Adjust Water: 0.0 lb / Load Trim Water:-13.0 lb/ CY

I have read, understood and I agree to all the above, including the Terms and Conditions on the reverse of, or accompanying this document, and incorporated by reference.

DL-04 A888125 Signature _____ CUSTOMER

# Sales/Delivery Ticket

CALPORTLAND®

ADMIN Office: (800) 750-0123
PO Box 1730 Seattle, WA 98111

TICKET#: 1614247

| | |
|---|---|
| Leave Plant | 1330 |
| Arrive Job | 1400 |
| Start Pour | |
| Finish Pour | |
| Finish Wash | |
| Leave Job | |
| Arrive Plant | |
| Time Allowed | |
| Time Used | |
| Excess Time | |

**Warning: Irritation to Skin and Eyes**

This product contains Portland Cement. Freshly mixed cement, mortar, grout or concrete may cause skin irritation and/or allergic reaction. Do not use without protective gear and clothing. Avoid any contact with skin. Wash exposed areas immediately with water. If cementitous materials get into the eye, rinse immediately and repeatedly with water and get prompt medical attention.

Keep Away From Children

**WEIGHMASTER CERTIFICATE**
California Only

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

Weighmaster:

This concrete is designed in accordance to American Concrete Institute Standards. Any water added to this design will be at purchasers risk. Materials hereby sold become property of purchaser at time of orgin. Calportland is not responsible for damages to property in the event that delivery is beyond curb line. Seller is not responsible for popouts or other imperfections resulting from reactive aggregates.

| Water added at customer's request | |
|---|---|
| | Slump on arrival |
| | Gals to full load |
| | Gals to 2/3 load |
| | Gals to 1/3 load |

Rev Counter on Load:

Test Cylinders Taken:

| Reasons for Delay Time |
|---|
| Job not ready |
| Lack of Help |
| Wheel Barrow Job |
| Pump Late/Problems |
| Other |

| Date/Time: | Superplasticer Amt Added: | Cust. Proj#: | Ordered By: | Phone #: | Map Page: |
|---|---|---|---|---|---|
| 5/22/2017 1:16 PM | | 5571 | DARON | | |

| Customer: | Order Type: | P.O. Number | Driver Name: | Truck #: | Order #: |
|---|---|---|---|---|---|
| 1008242 WYSER CONSTRUCTIONINC | Charge | GE0171490 | JAMES JR WITHA | M8314 | 107 |

| Scheduled Arrival: | Slump: | Load#: | Prev. Truck #: | Qty This Load: | Qty Delivered: | Qty Ordered: | Plant: | Alley: | Truck License #: |
|---|---|---|---|---|---|---|---|---|---|
| 1:52:00 PM | 6.00 | 2 | 8304 | 9.00 | 18.00 | 18.00 | 291 | | |

Delivery Address:

801 N NORTH LAKE WAY
SEATTLE, WA

Ticket Notes:
GASWORKS PLAY AREA MANUEL (206
10-1031

| Quantity | UOM | Product Code | Product Description | Unit Price | Amount | Changed |
|---|---|---|---|---|---|---|
| 9.00 | yd | 3739 | SEATTLE BENCH BACK FIL | | | |
| 9.00 | CY | 9990 | ENV FEE | | | |
| 1.00 | LD | 9900 | FUEL SURCHARGE | | | |

| Sales Tax: | Ticket Total: | Balance Forward: | Standing Time: | Order Total: |
|---|---|---|---|---|
| | | | | |

| Truck | Driver | User | Disp Ticket Num | Ticket ID | Time | Date |
|---|---|---|---|---|---|---|
| 8314 | 2724 | DPADON | 1614247 | 134960 | 13:16 | 5/22/17 |

| Load Size | Mix Code | Returned Qty | Mix Age | Seq | Load ID |
|---|---|---|---|---|---|
| 9.00 CY | 3739 | | | W | 134958 |

| Material | Description | Design Qty | Required | Batched | % Var | % Moisture | Actual Wat |
|---|---|---|---|---|---|---|---|
| BLD SAND | CLASS 2 | 2887 lb | 27696 lb | 27680 lb | -0.06% | 6.59% A | 205 gl |
| FLYASH | 2-17 class f | 330 lb | 2970 lb | 2955 lb | -0.51% | | |
| T I-II | CERT lot # 17-102 | 30 lb | 270 lb | 270 lb | 0.00% | | |
| WATER | GATE #1 | 300.0 lb | 867.1 lb | 853.0 lb | -1.05% | | 102.8 gl |
| AEA | DARVAIR1000 | 5.0 oz | 45.0 oz | 44.0 oz | -2.22% | | |

Num Batches: 2
Total: 31766 lb Design 0.833 Water/Cement 0.797 A Design 323.6 gl Actual 308.0 gl To Add: 15.6 gl
Slump: 6.00 in Water in Truck: 0.0 lb Adjust Water: 0.0 lb / Load Trim Water:-13.0 lb/ CY

A888136

I have read, understood and I agree to all the above, including the Terms and Conditions on the reverse of, or accompanying this document, and incorporated by refere

Signature _____ CUSTOMER

PO Box 2260 | Renton, WA 98056
p: 425.254.1820 | f: 425.254.1821
www.nwasphalt.com

# ADDED WORK

Quoted to: Wyser
Attn: **Darren Ness**
Address:

Phone: 206-678-5122
Email: darren@wyserdirt.com

Quote Date: 5/19/2017
Estimator: Shane Olson
Phone: 206-255-3130
Email: Shane@nwasphalt.com

Project: **Gas Works Park**
Location: 2101 N Northlake Way
Seattle 98103

| QTY. | UNITS | DESCRIPTION | $/UNIT | AMOUNT |
|---|---|---|---|---|
| 200 | SF | **ITEM 1.)Added Patching**<br>Pave with 3" of 3/8" asphalt.<br>Bobcat and hand work. | LS | $ 2,100.00 |
| | | **Please note:**<br>• Prices for above stated items only.<br>• Prices are based on the current cost of liquid asphalt and are subject to change.<br>• Prices include _1__ pave mob(s). Additional mobs are $2,500 each.<br>• Prices specifically exclude traffic control, permitting and testing. | TOTAL | $ 2,100.00 |

*SALES TAX WILL APPLY UNLESS CURRENT RESELLER PERMIT IS ON FILE*
*TERMS & EXCLUSIONS ARE LISTED ON LAST PAGE. ACCEPTANCE OF THIS QUOTATION ACCEPTS THESE TERMS & EXCLUSIONS.*

Are you a contractor? Yes _____ No _____ Contractor Lic. # _____
Do you require retention withheld? Yes _____ No _____ Retention % _____
Are you exempt from sales tax? Yes _____ No _____ Resale Permit # _____

For questions regarding this quote contact Northwest Asphalt, Inc

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System** **DATE: May 1, 2017**

**at Gas Works Park** GEO-17-1490

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | Wyser Construction | 3204/1598971 | 10:38 AM | 13.81 ton | Calportland | 5/1/2017 | Builders Sand | 13.81 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | Sand | Total Tons | 13.81 |
| 18 | | | | | | | | |

703A AGG KENMORE
5/1/2017 10:38:28 A

6423 NE 175TH STREET
KENMORE, WA 980284808

CALPORTLAND

NO: 1598971

*Copy*

Customer: 1008242 WYSER CONSTRUCTION INC
Project: 29957 AGG 2017 MASTER BID PRICING
P.O.: GEO17-1490 Job Number: GEO17--1490
Product: 8725 ASTM C33 BUILD SAND

Delv To:
6423 NE 175TH ST

KENMORE WA 98028

| DELIVERY TOTALS | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 1 |
| QTY | 13.81 | 13.81 |

Weighmaster: MURPHY, DEBBIE

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 5/1/2017 10:38:25 AM | Man WT | 87,260 | 43.63 | 39.58 | Gross |
| 5/1/2017 10:38:08 AM | Man WT | 59,640 | 29.82 | 27.05 | Tare |
| ☐ Driver Off | | 27,620 | 13.81 | 12.53 | Net |

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

Hauler: 999 FOB PICKUP
Truck: WYS30 WYSER #30 FLATBED

REC'D BY _____ DATE _____

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System** **DATE: May 11, 2017**

**at Gas Works Park** GEO-17-1490

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| 1 | Z & S Trucking | 3214/1606626 | 10:02 AM | 14.03 ton | Calportland | 5/11/2017 | Builders Sand | 14.03 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | Sand | Total Tons | 14.03 |
| 18 | | | | | | | | |

703A AGG KENMORE 6423 NE 175TH STREET
5/11/2017 10:02:13 KENMORE, WA 980284808

CALPORTLAND

NO: 1606626

*Copy*

Customer: 1008242 WYSER CONSTRUCTION INC
Project: 29957 AGG 2017 MASTER BID PRICING
P.O.: GEO17-1419 Job Number: geo17--1419
Product: 8725 ASTM C33 BUILD SAND

| DELIVERY TOTALS | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 2 |
| QTY | 14.03 | 27.84 |

Delv To:
6423 NE 175TH ST

KENMORE WA 98028

Weighmaster: MURPHY, DEBBIE

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 5/11/2017 10:02:10 A | Man WT | 70,200 | 35.10 | 31.84 | Gross |
| 12/14/2016 11:43:15 A | Man WT | 42,140 | 21.07 | 19.11 | Tare |
| ☐ Driver Off | | 28,060 | 14.03 | 12.73 | Net |

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

Hauler: 999 FOB PICKUP
Truck: WYS30T WYSER CONSTRUCTION

REC'D BY _____ DATE _____

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System** **DATE: May 15, 2017**

**at Gas Works Park** GEO-17-1490

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | Wyser Construction | 3217/1608634 | 9:57 AM | 14.37 ton | Calportland | 5/15/2017 | Builders Sand | 14.37 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
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| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | Sand | Total Tons | 14.37 |
| 18 | | | | | | | | |

703A AGG KENMORE
5/15/2017 9:57:32 A

6423 NE 175TH STREET
KENMORE, WA 980284808

CALPORTLAND

NO: 1608634

*Copy*

Customer: 1008242 WYSER CONSTRUCTION INC
Project: 29957 AGG 2017 MASTER BID PRICING
P.O.: GEO17-1490 Job Number: GEO17-1490
Product: 8725 ASTM C33 BUILD SAND

| DELIVERY TOTALS | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 3 |
| QTY | 14.37 | 42.21 |

Delv To:
6423 NE 175TH ST

KENMORE WA 98028

Weighmaster: MURPHY, DEBBIE

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 5/15/2017 9:57:29 AM | Man WT | 71,280 | 35.64 | 32.33 | Gross |
| 5/15/2017 9:57:21 AM | Man WT | 42,540 | 21.27 | 19.30 | Tare |
| ☐ Driver Off | | 28,740 | 14.37 | 13.04 | Net |

Hauler: 999 FOB PICKUP
Truck: WYS30T WYSER CONSTRUCTION

REC'D BY _____ DATE _____

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System** **DATE: June 14, 2017**

**at Gas Works Park** GEO-17-1490

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | Wyser Const. #W25 | 1629290 | 8:05 AM | 7.67 ton | Calportland | 6/14/2017 | Builders Sand | 7.67 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | Builders | Sand | Total Tons | 7.67 |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |

703A KENMORE 6423 NE 175TH STREET
6/14/2017 8:05:40 A KENMORE, WA 980284808

CALPORTLAND

NO: 1629290

*Copy*

Customer: 1008242 WYSER CONSTRUCTION INC
Project: 29957 AGG 2017 MASTER BID PRICING
P.O.: 6EO-17-1490 Job Number: 6EO-17-1490
Product: 8725 ASTM C33 BUILD SAND

| DELIVERY TOTALS | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 4 |
| QTY | 7.67 | 49.88 |

Delv To:
6423 NE 175TH ST

KENMORE WA 98028

Weighmaster: MURPHY, DEBBIE

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 6/14/2017 8:05:37 AM | Man WT | 32,120 | 16.06 | 14.57 | Gross |
| 6/14/2017 7:55:12 AM | Man WT | 16,780 | 8.39 | 7.61 | Tare |
| | | 15,340 | 7.67 | 6.96 | Net |

☐ Driver Off

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

Hauler: 999 FOB PICKUP
Truck: WYS25S WYSER CONSTRUCTION

REC'D BY DATE

WYSER INC CONSTRUCTION

# IMPORT MATERIALS LOG

**GEO Engineers Underground Injection System at Gas Works Park** GEO-17-1490

**DATE: February 10, 2017**

| LOAD NO. | TRUCKING COMPANY | MANIFEST # | LOAD TIME | ESTIMATED QUANTITY | LOCATION | DATE | TYPE OF MATERIALS | TONNAGE SLIPS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 1 | Wyser Construction | 3134/1544278 | 7:40 AM | 13.95 ton | Calportland | 2/10/2017 | Sand | 13.95 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
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| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | Sand | Total Tons | 13.95 |
| 18 | | | | | | | | |

705A AGG SEATTLE
2/10/2017 7:40:27 A

4002 WEST MARGINAL WAY SW
SEATTLE, WA 981061208

CALPORTLAND

**NO: 1544278**

*Copy*

Customer: 008242 WYSER CONSTRUCTION INC
Project: 29226 AGG 2017 LIST PRICE
P.O.: GEO 171490 Job Number: GEO 171490
Product: 8725 ASTM C33 BUILD SAND

Delv To:
4002 WEST MARGINAL WAY SW

SEATTLE WA 98106

**DELIVERY TOTALS**

| | TODAY | PROJECT |
|---|---|---|
| LOAD | 1 | 1 |
| QTY | 13.95 | 13.95 |

Weighmaster: WEBB, JUDY

| DATE | SOURCE | lbs | Tons | TNE | |
|---|---|---|---|---|---|
| 2/10/2017 7:40:24 AM | Seattle Agg | 54,660 | 27.33 | 24.79 | Gross |
| 2/3/2017 10:51:58 AM | Seattle Agg | 26,760 | 13.38 | 12.14 | Tare |
| ☐ Driver Off | | 27,900 | 13.95 | 12.66 | Net |

| AMOUNT | |
|---|---|
| PRODUCT | $0.00 |
| FREIGHT | $0.00 |
| ENV FEE | $0.00 |
| TAX | $0.00 |
| TOTAL | $0.00 |

Hauler: 999 FOB PICKUP
Truck: WYS30SS WYSER TRK 30 S

REC'D BY _____ DATE _____