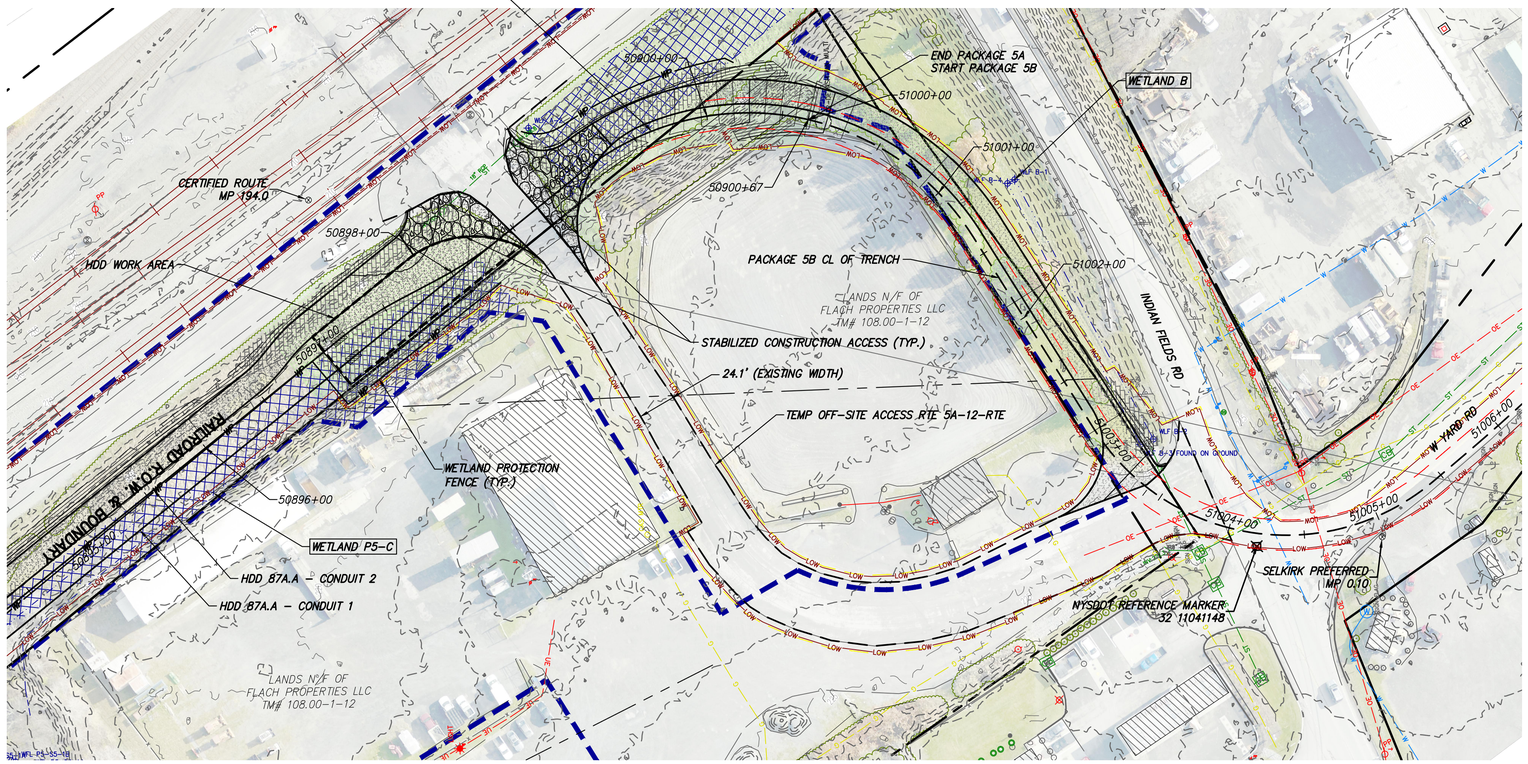

TEMP OFF-SITE ACCESS RTE 5A-12-RTE PLAN VIEW

SCALE: 1" = 50'

0 50 100
Scale in feet

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	06/09/2023	ISSUED FOR CONSTRUCTION SUBMISSION	BV	TK

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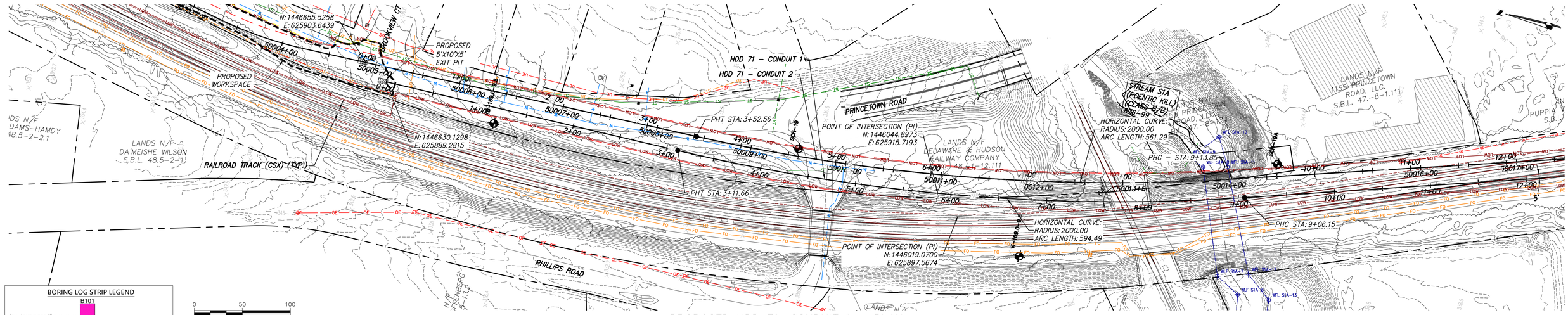
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM - BETHLEHEM
TEMP OFF-SITE ACCESS ROUTES (5A-12-RTE)

KIEWIT PROJECT NO. 21162

DRAWING NO. **C-224**

DRAWN BY: AR | DESIGNED BY: BV | APPROVED BY: TK | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. 101 OF

File: P:\KIE-CHPE\3-DES\02 RDW\SHTS\PS\21162_5_C_ART_223-224.DWG Saved: 6/8/2023 9:05:20 AM Plotted: 6/8/2023 9:50:07 AM Current User: Yelena.Philippi LastSavedBy: Fernando.Rivas1



PROPOSED HDD 71, CONDUIT 1 – PLAN

SCALE: 1" = 50'

0 50 100
Scale in feet

BORING LOG STRIP LEGEND

B101

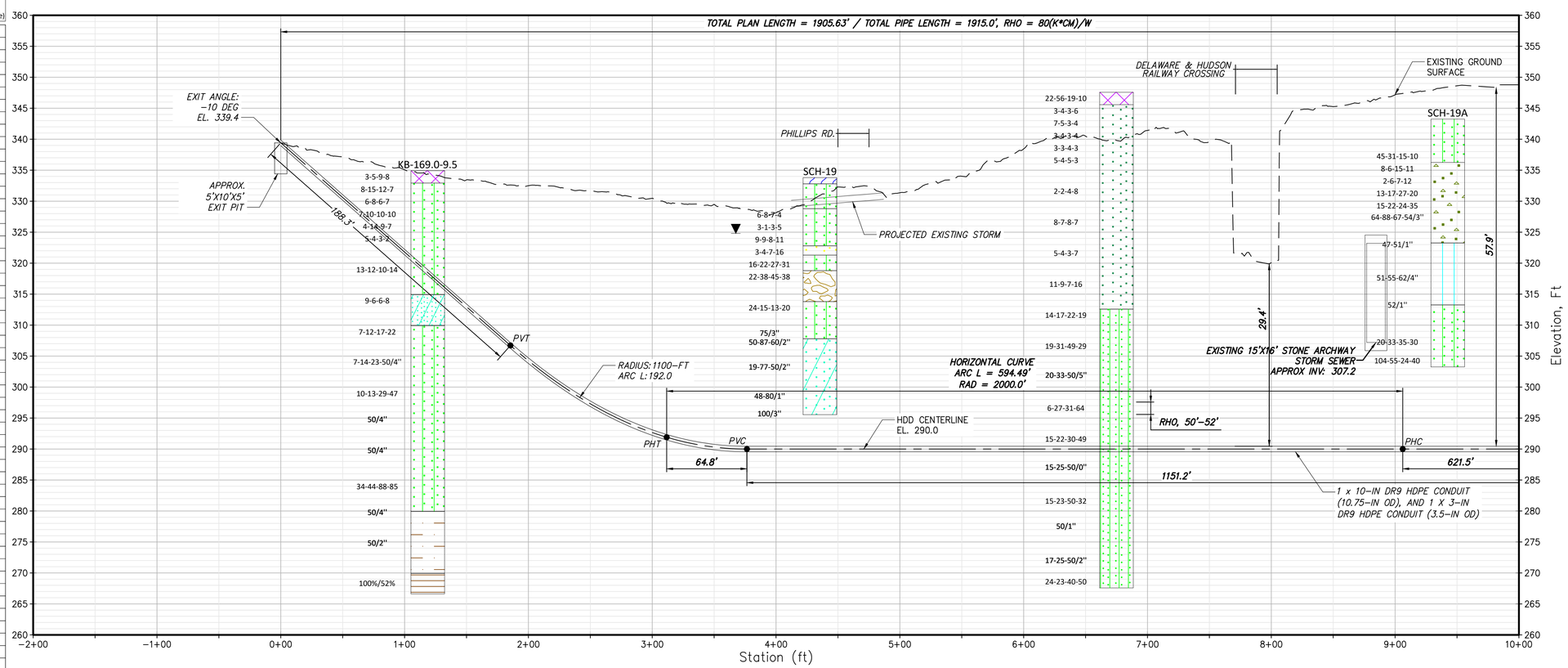
Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

Legend	
ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SC	Poorly Graded SAND with CLAY
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
SW-SC	Well Graded SAND with CLAY
SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
USGS 654	Subgraywacke
USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
USGS 708	Gneiss
USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling



PROPOSED HDD 71, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

6/7/2023
STATE OF NEW YORK · BRIAN C DORMAR · 080342 · LICENSED PROFESSIONAL ENGINEER

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 71
CSX RR / BURDECK STREET CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-301
SCALE	AS SHOWN
REV. NO.	0
DATE	06/09/2023
SH.NO.	XX OF 189

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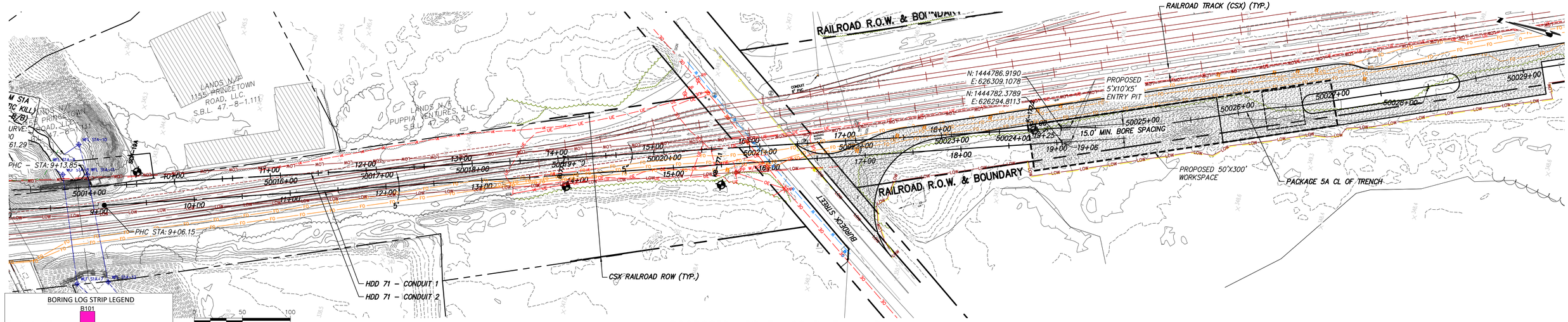
LastSavedBy: bconnelly



PROPOSED HDD 71, CONDUIT 1 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

Legend	
ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH–MH	SILTY Fat CLAY
CL	Lean CLAY
CL–ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC–GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP–GC	Poorly Graded Gravel with CLAY
GP–GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW–GC	Well Graded GRAVEL with CLAY
GW–GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC–SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP–SC	Poorly Graded SAND with CLAY
SP–SM	Poorly Graded SAND with SILT
SW	Well graded SAND
SW–SC	Well Graded SAND with CLAY
SW–SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
USGS 654	Subgraywacke
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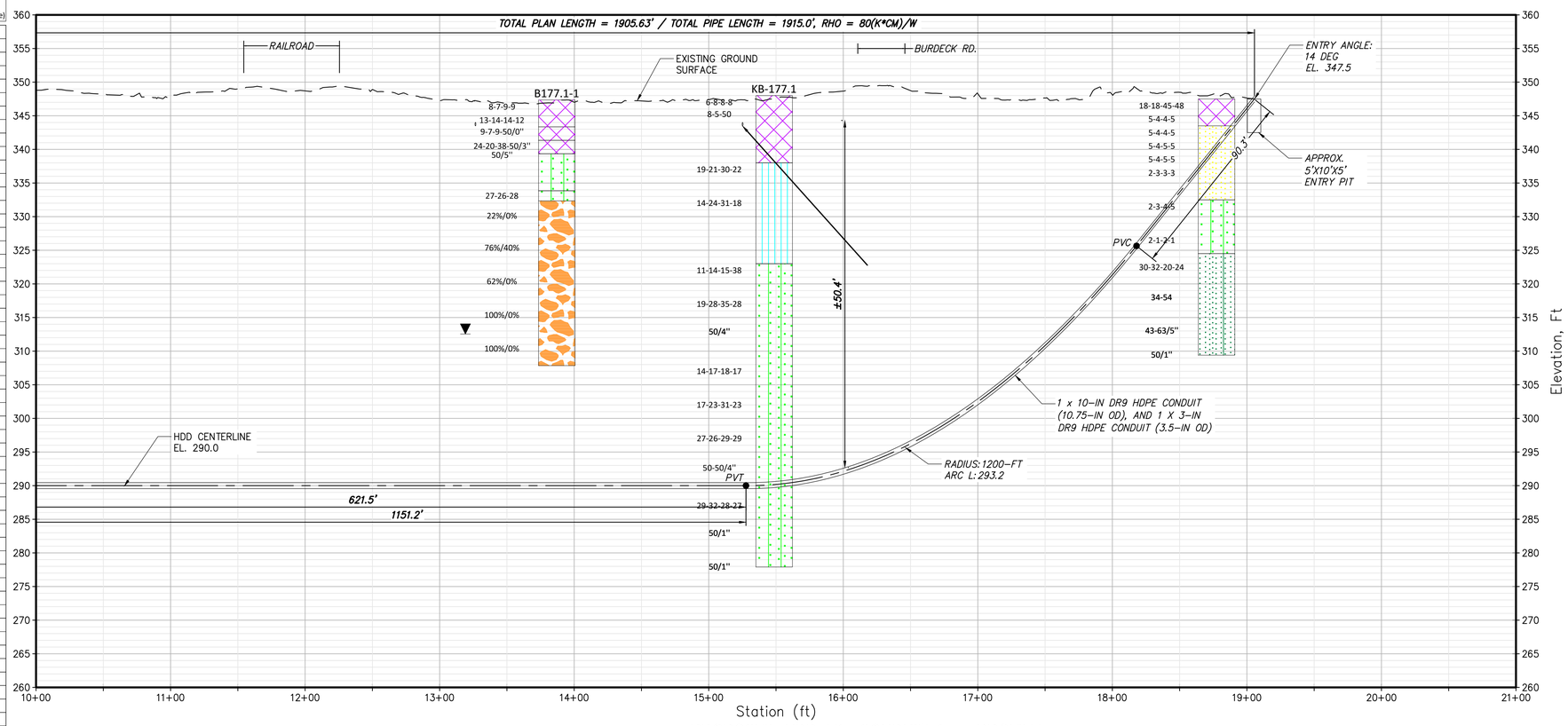
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
USGS 708	Gneiss
USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling



PROPOSED HDD 71, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

6/7/2023

STATE OF NEW YORK · BRIAN C DORWART · 080342 · LICENSED PROFESSIONAL ENGINEER

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 71
CSX RR / BURDECK STREET CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO. 21162
BRIERLEY PROJECT NO. 322004-000
DRAWING NO. **C-302**

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

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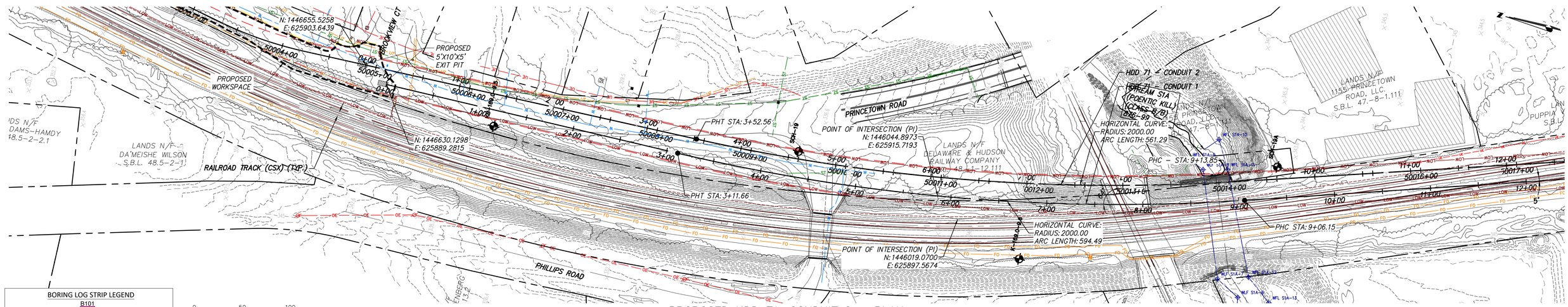
LastSavedBy: bconnelly



PROPOSED HDD 71, CONDUIT 2 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

Legend	
ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
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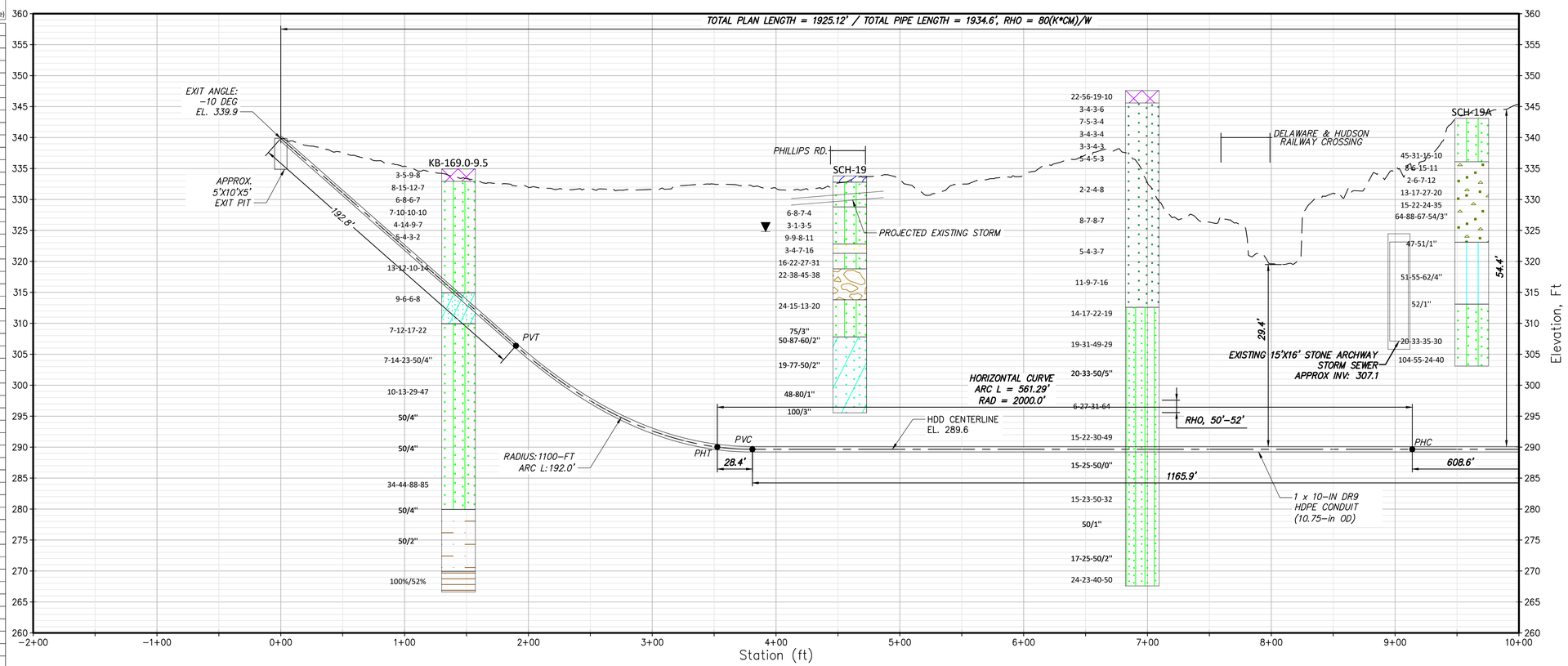
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SC	Poorly Graded SAND with CLAY
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
SW-SC	Well Graded SAND with CLAY
SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
USGS 654	Subgraywacke
USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
USGS 708	Gneiss
USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling



PROPOSED HDD 71, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

6/7/2023

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	06/09/2023	ISSUED FOR CONSTRUCTION SUBMISSION	NS	BD

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 71

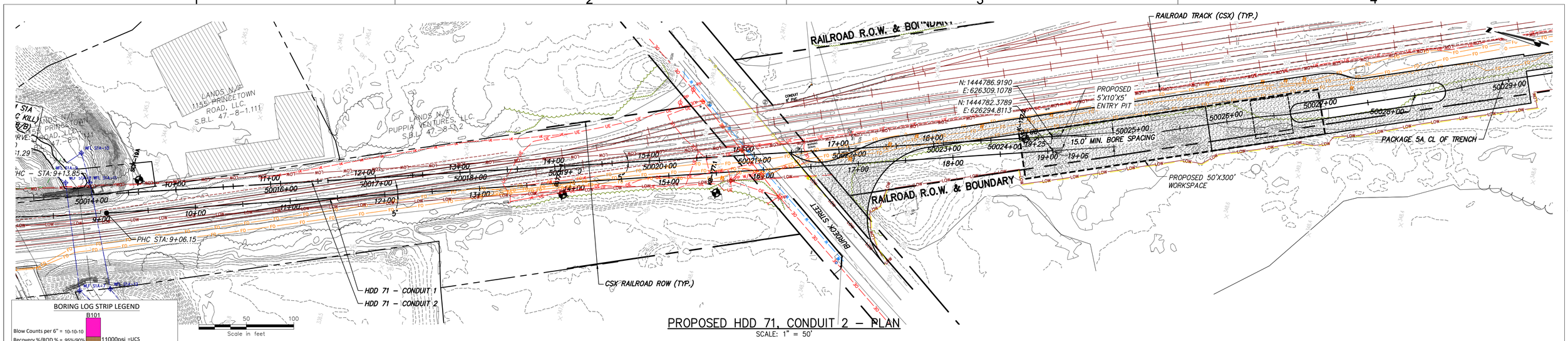
CSX RR / BURDECK STREET CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD

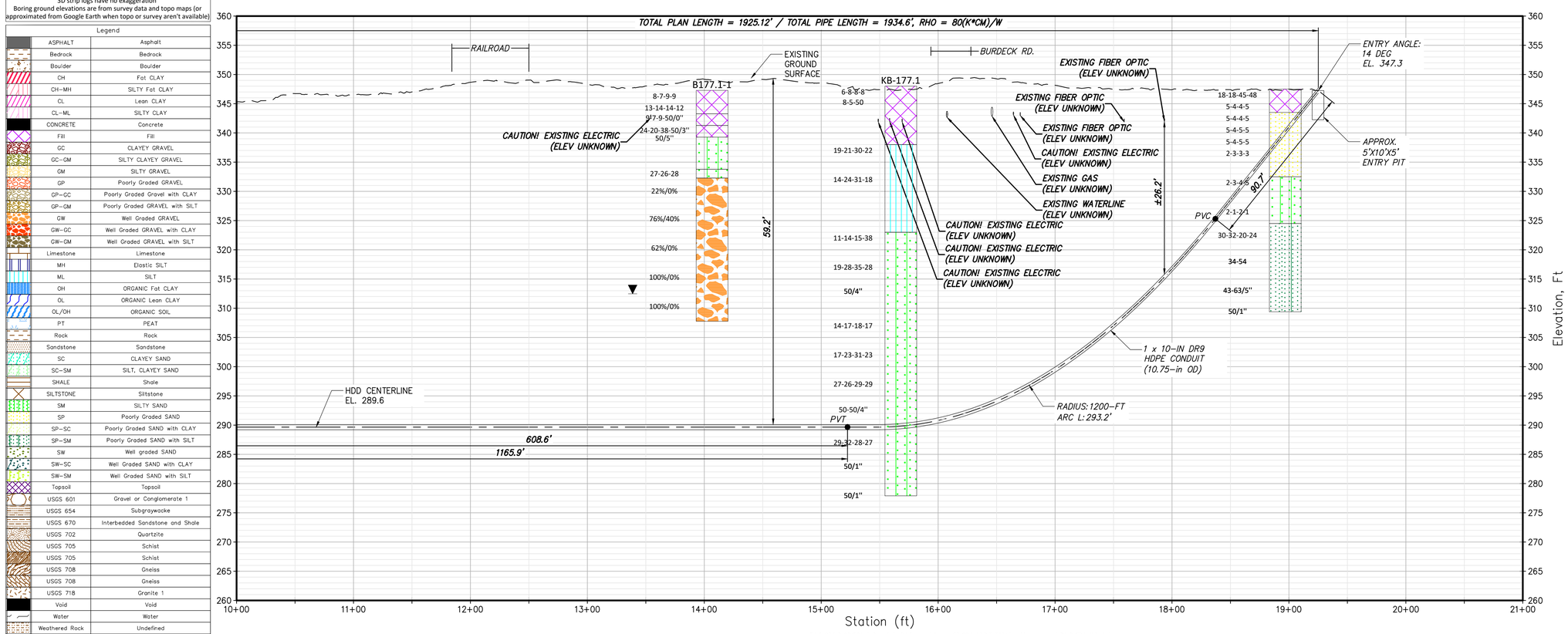
KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-303
SCALE	AS SHOWN
REV. NO.	0
DATE	06/09/2023
SH.NO.	XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_301-308.DWG Saved: 6/6/2023 10:34:58 PM Plotted: 6/7/2023 7:16:32 PM Current User: Brian Connelly
LastSavedBy: bconnelly



PROPOSED HDD 71, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 71, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

Legend

ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
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MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SC	Poorly Graded SAND with CLAY
SP-SM	Poorly Graded SAND with SILT
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SW-SC	Well Graded SAND with CLAY
SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
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USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
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USGS 708	Gneiss
USGS 718	Granite 1
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Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
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CHPE Champlain Hudson Power Express

Kiewit

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6/7/2023

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 71

CSX RR / BURDECK STREET CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

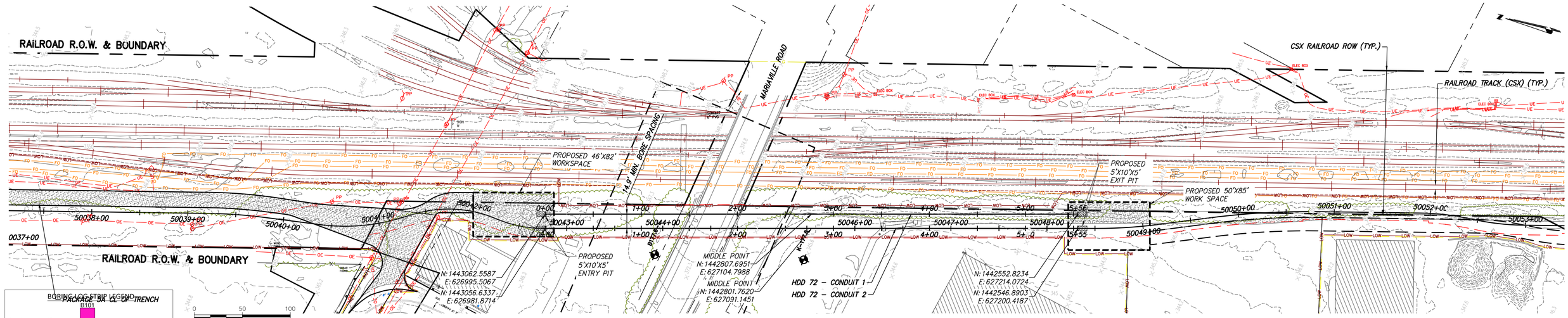
KIEWIT PROJECT NO. 21162

BRIERLEY PROJECT NO. 322004-000

DRAWING NO. **C-304**

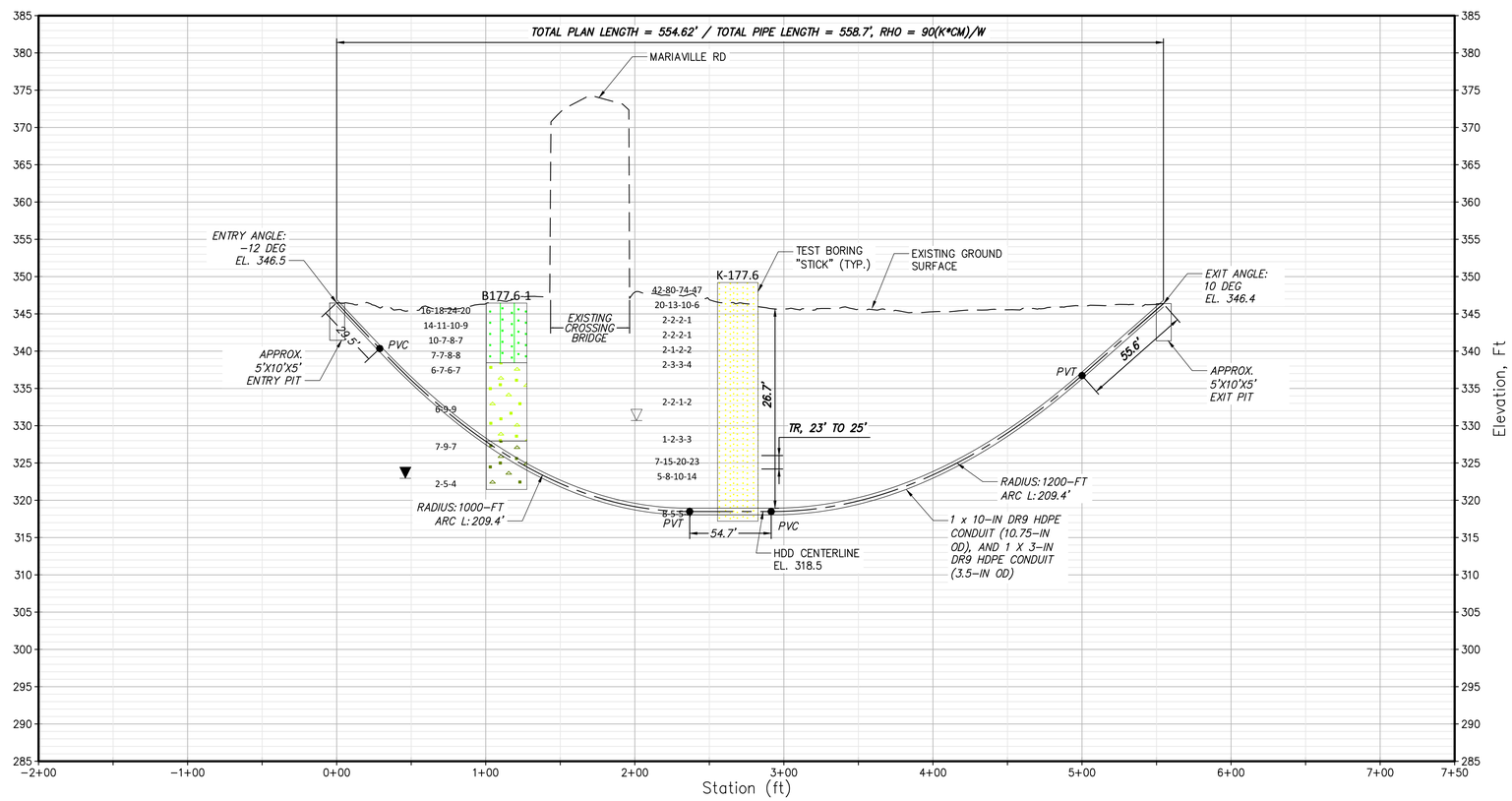
DRAWN BY: BCC | DESIGNED BY: NS | APPROVED BY: BDX | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELL\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_301-308.DWG Saved: 6/6/2023 10:34:58 PM Plotted: 6/7/2023 7:18:44 PM Current User: Brian Connelly
LastSavedBy: bconnelly



PROPOSED HDD 72, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 72, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

Scale in feet

BORING LOG STRIP LEGEND

PACKAGE 5A CL OF TRENCH

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

Legend

ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
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GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
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MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
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SP-SC	Poorly Graded SAND with CLAY
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USGS 601	Gravel or Conglomerate 1
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USGS 702	Quartzite
USGS 705	Schist
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Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

6/7/2023
STATE OF NEW YORK · BRIAN C DORWART · 080342 · LICENSED PROFESSIONAL ENGINEER

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0	06/09/2023	ISSUED FOR CONSTRUCTION SUBMISSION	NS	BD

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 72

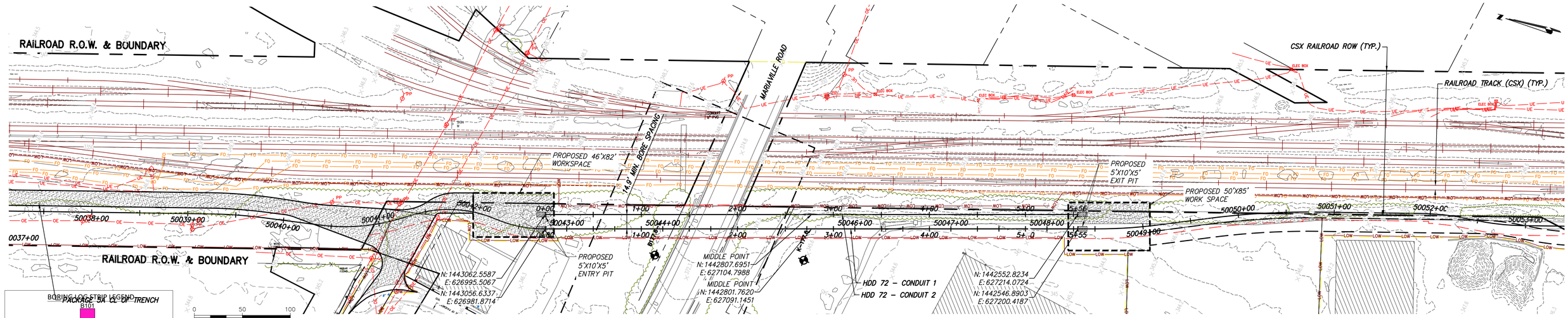
MARIAVILLE ROAD CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0

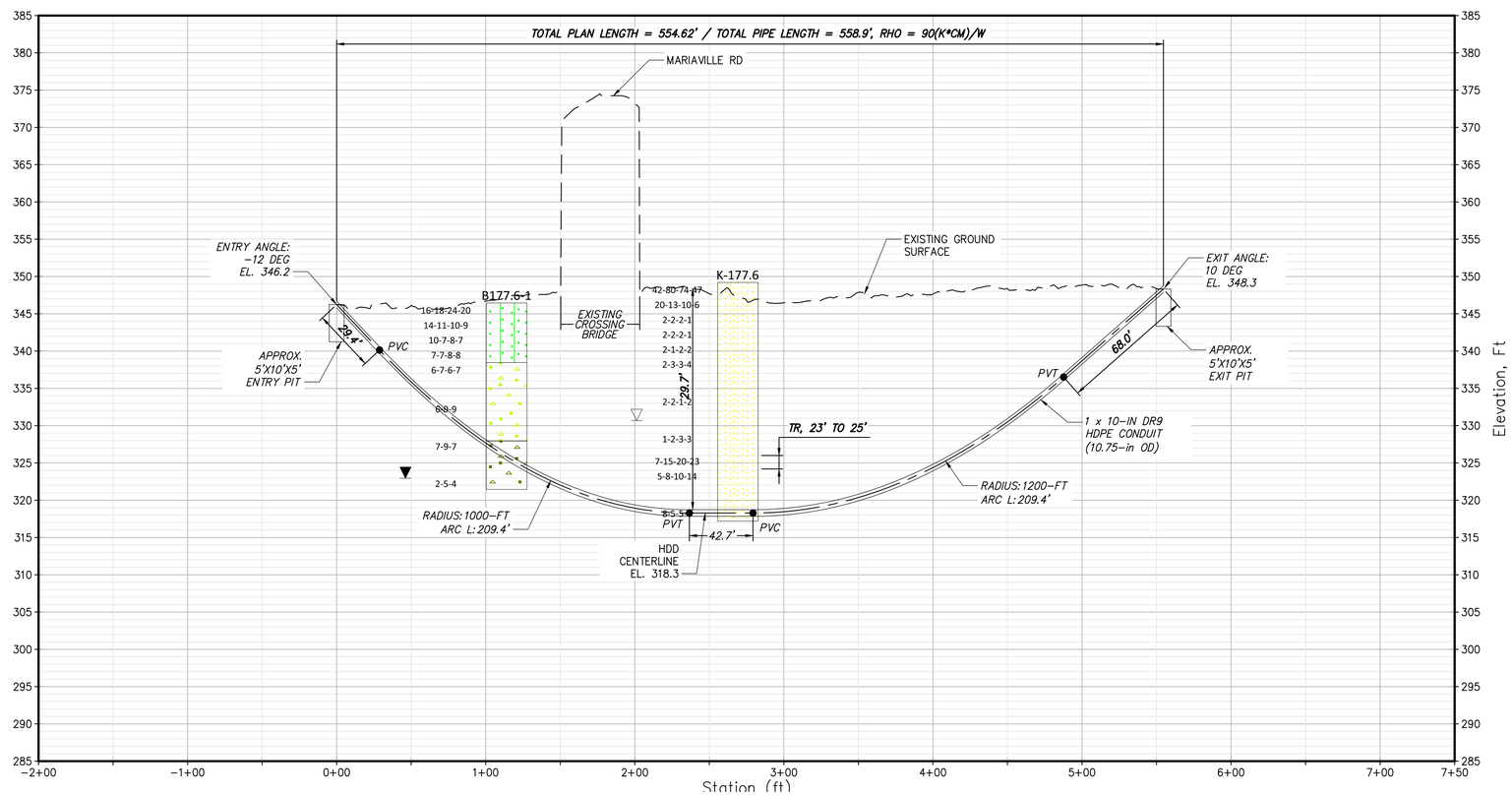
KIEWIT PROJECT NO. 21162
BRIERLEY PROJECT NO. 322004-000
DRAWING NO. **C-305**
DATE 06/09/2023
SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_301-308.DWG Saved: 6/6/2023 10:34:58 PM Plotted: 6/7/2023 7:20:59 PM Current User: Brian Connelly
LastSavedBy: bconnelly



PROPOSED HDD 72, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 72, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

PACKAGE 5A CL OF TRENCH

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

Legend	
ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SC	Poorly Graded SAND with CLAY
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
SW-SC	Well Graded SAND with CLAY
SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
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USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
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USGS 718	Granite 1
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Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 72

MARIAVILLE ROAD CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO. 21162

BRIERLEY PROJECT NO. 322004-000

DRAWING NO. **C-306**

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

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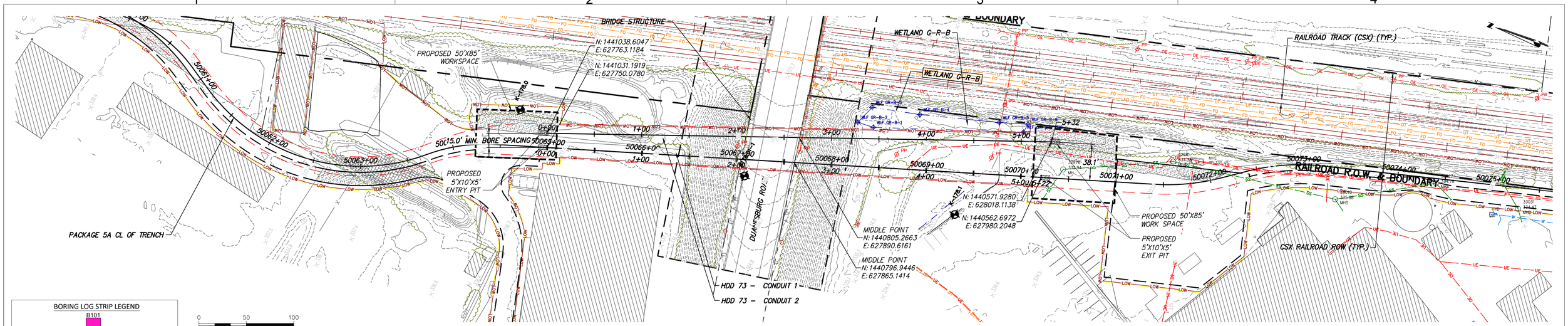
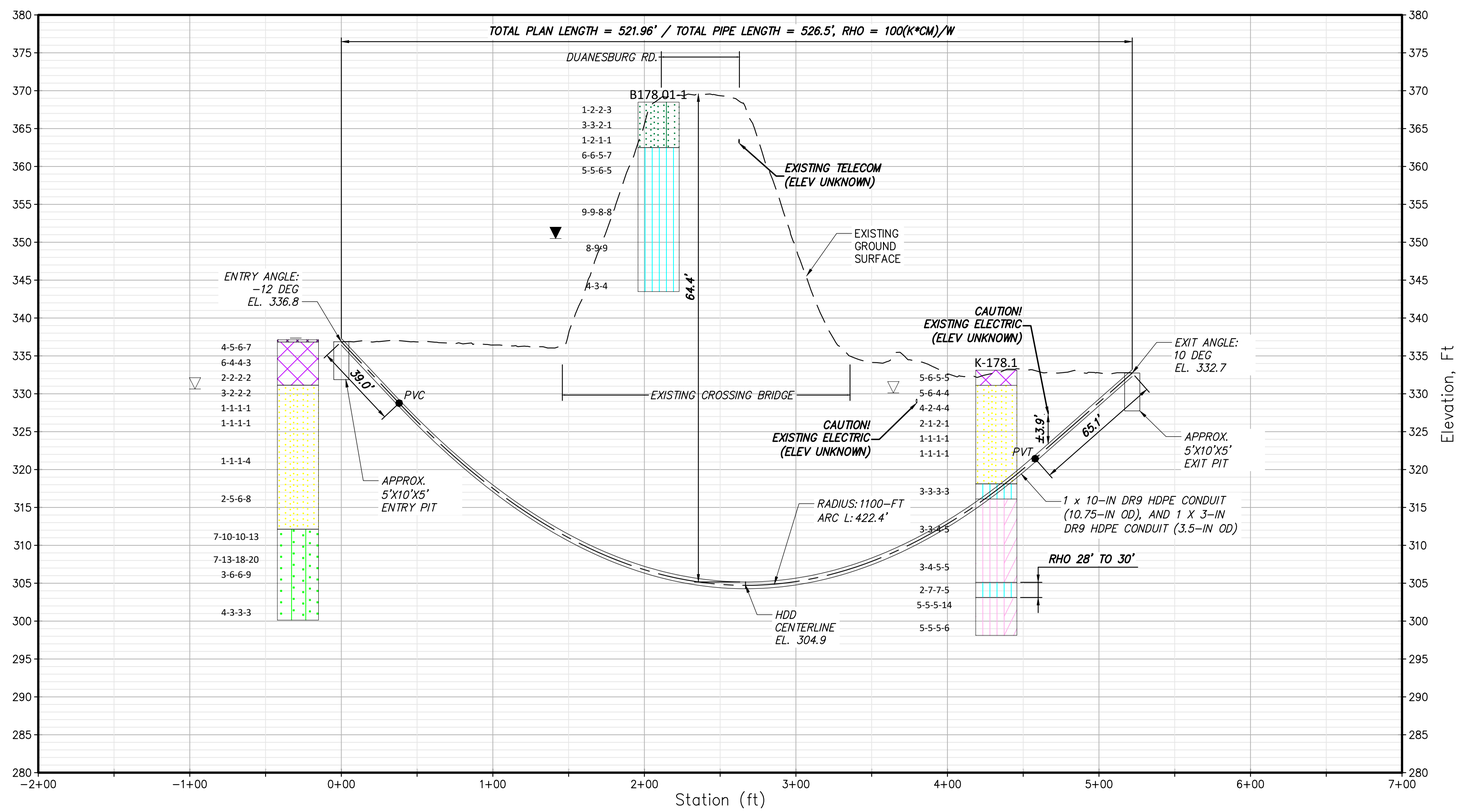
LastSavedBy: bconnelly



PROPOSED HDD 73, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 73, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

0 50 100
Scale in feet

Legend	
ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
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GC-GM	SILTY CLAYEY GRAVEL
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0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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6/7/2023
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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 73

DUANESBURG ROAD CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-307

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE: AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

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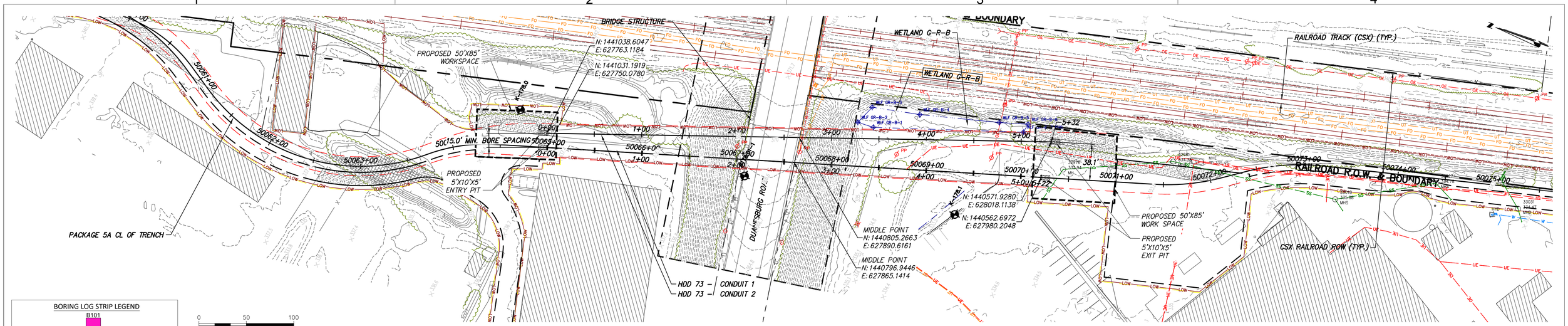
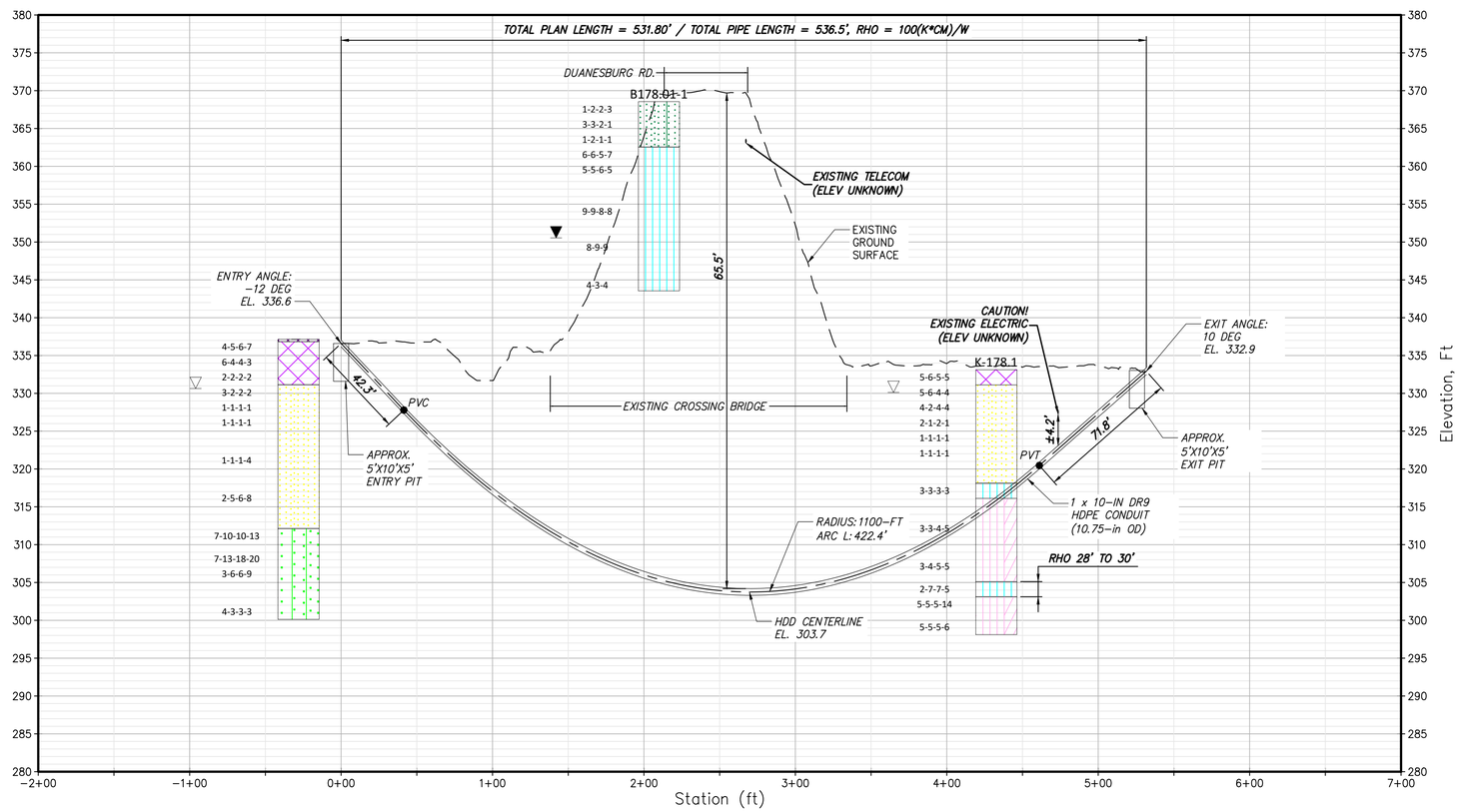
LastSavedBy: bconnelly



PROPOSED HDD 73, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 73, CONDUIT 2 –PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

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OL/OH	ORGANIC SOIL
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CHPE Champlain Hudson Power Express

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 73
DUANESBURG ROAD CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO. 21162
BRIERLEY PROJECT NO. 322004-000
DRAWING NO. **C-308**

DRAWN BY: BCC | DESIGNED BY: NS | APPROVED BY: BDC | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

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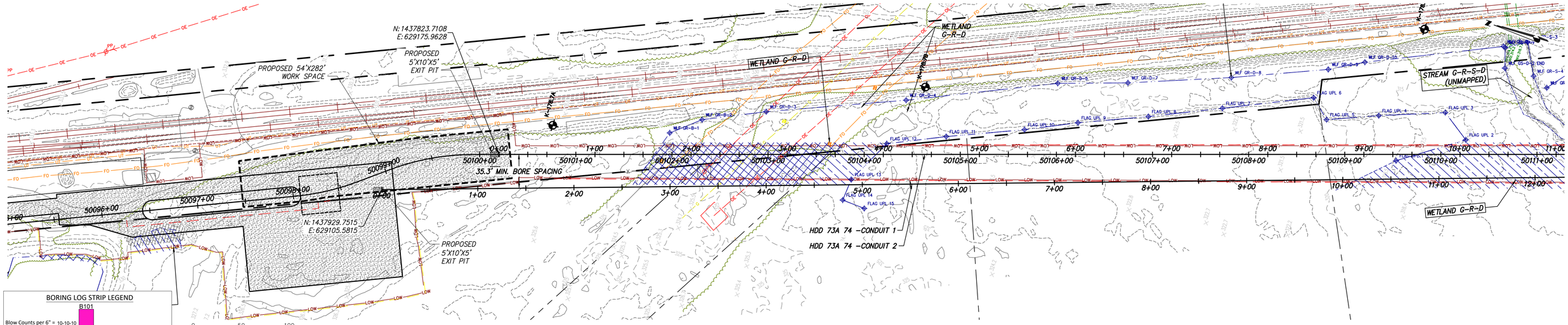
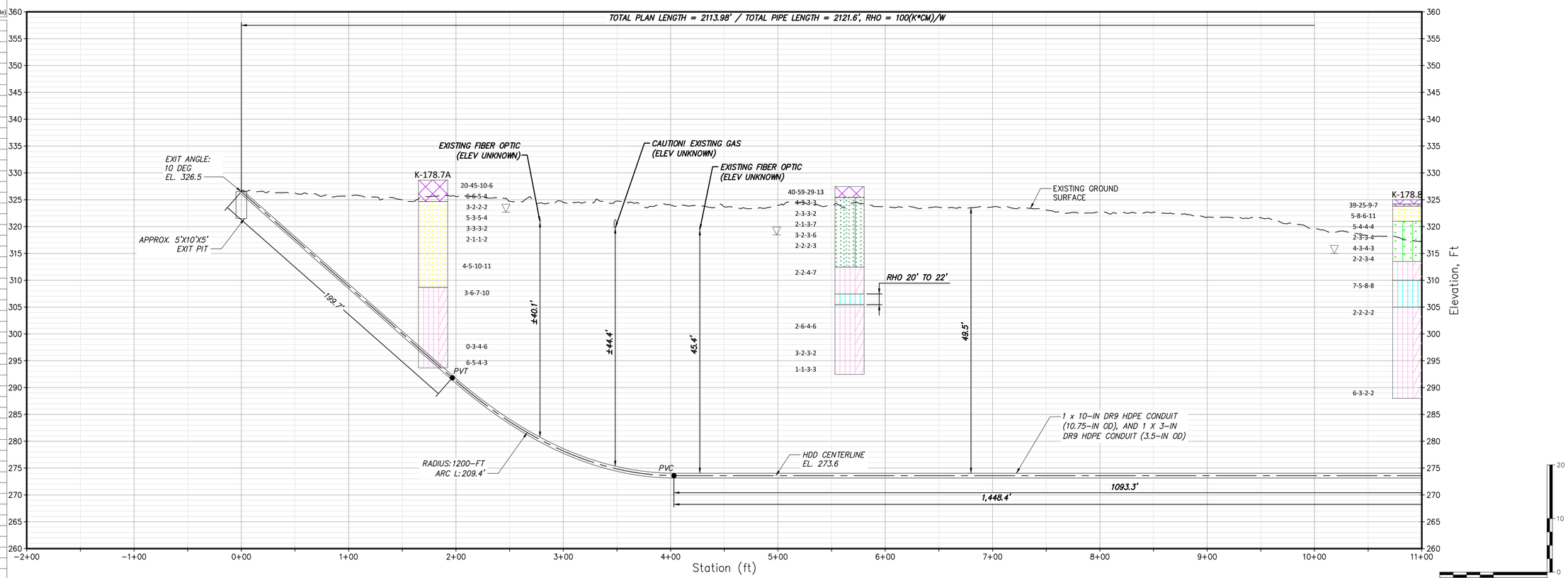


PROPOSED HDD 73A 74, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 73A 74, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

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Bedrock	Bedrock
Boulder	Boulder
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CH-MH	SILTY Fat CLAY
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CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
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USGS 702	Quartzite
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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 73A 74
NEW YORK STATE THRUWAY (I-90) CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0

KIEWIT PROJECT NO. 21162
BRIERLEY PROJECT NO. 322004-000
DRAWING NO. **C-309**
DATE 06/09/2023
SH.NO. XX OF 189

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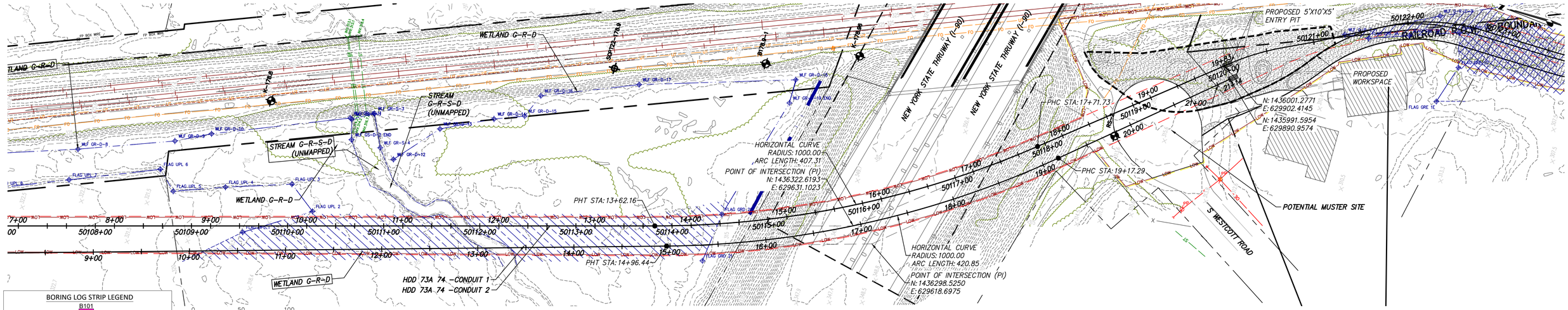

PROPOSED HDD 73A 74, CONDUIT 1 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

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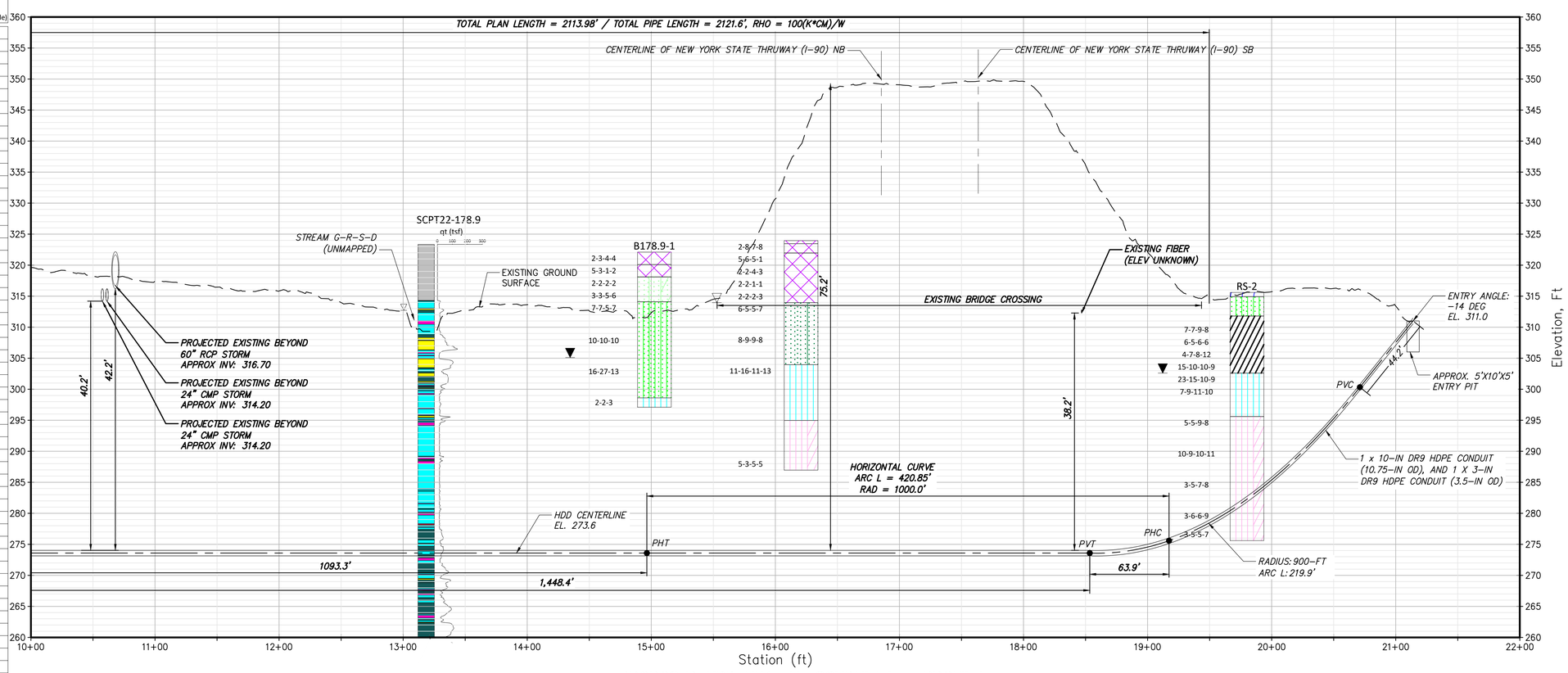

PROPOSED HDD 73A 74, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

Soil Behavior Types QTn (PKR2009)	
Description	SBT Zone
Clays	3
Gravelly Sand to Sand	7
Organic Soils	2
Sand Mixtures	5
Sands	6
Sensitive, Fine Grained	1
Silt Mixtures	4
Stiff Sand to Clayey Sand	8
Undefined	0
Very Stiff Fine Grained	9

Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

6/7/2023 STATE OF NEW YORK BRIAN C DORWART 080842 LICENSED PROFESSIONAL ENGINEER

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	06/09/2023	ISSUED FOR CONSTRUCTION SUBMISSION	NS	BD

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 73A 74

NEW YORK STATE THRUWAY (I-90) CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO. 21162

BRIERLEY PROJECT NO. 322004-000

DRAWING NO. **C-310**

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_309-314.DWG Saved: 6/6/2023 4:40:45 PM Plotted: 6/7/2023 7:31:55 PM Current User: Brian Connelly
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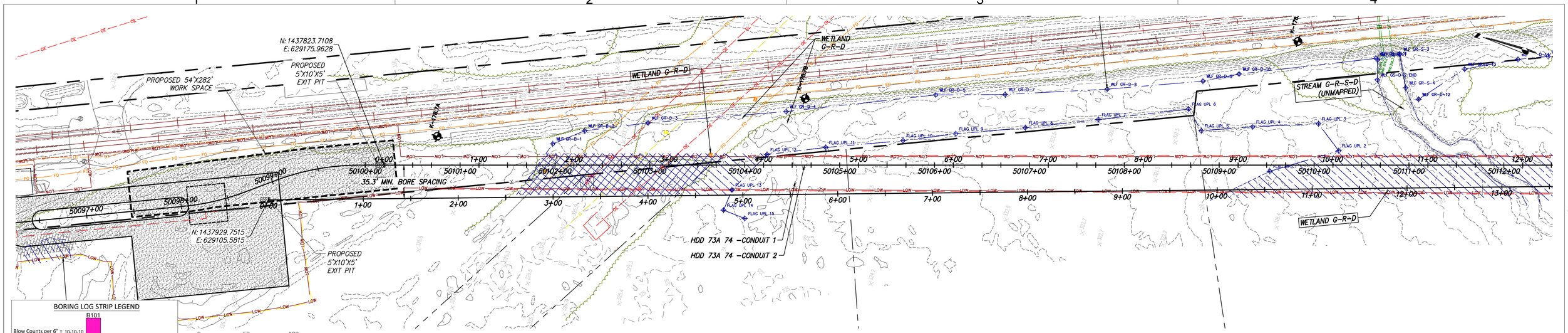
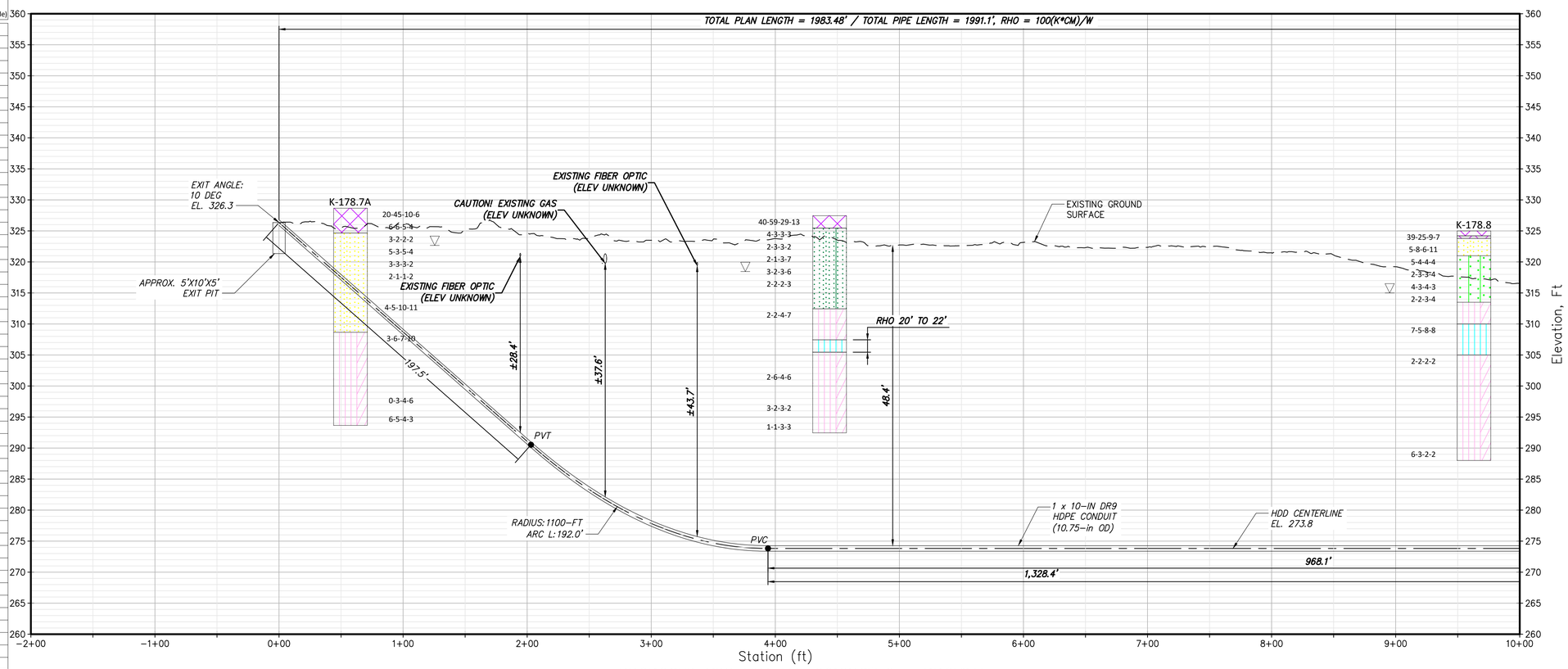


PROPOSED HDD 73A 74, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 73A 74, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

Legend	
ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
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SP-SC	Poorly Graded SAND with CLAY
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SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
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CHPE Champlain Hudson Power Express

Kiewit

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6/7/2023
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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 73A 74
NEW YORK STATE THRUWAY (I-90) CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-311

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE: AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

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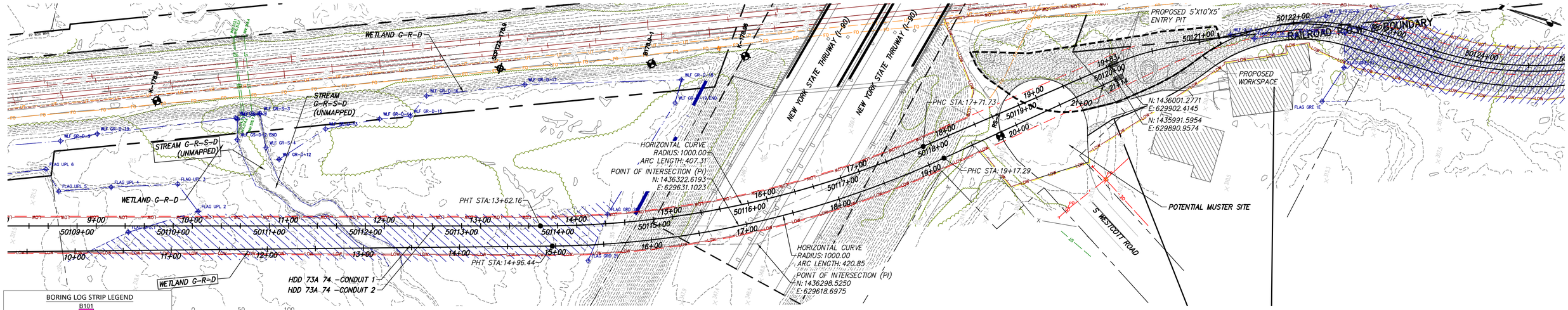
LastSavedBy: bconnelly



PROPOSED HDD 73A 74, CONDUIT 2 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

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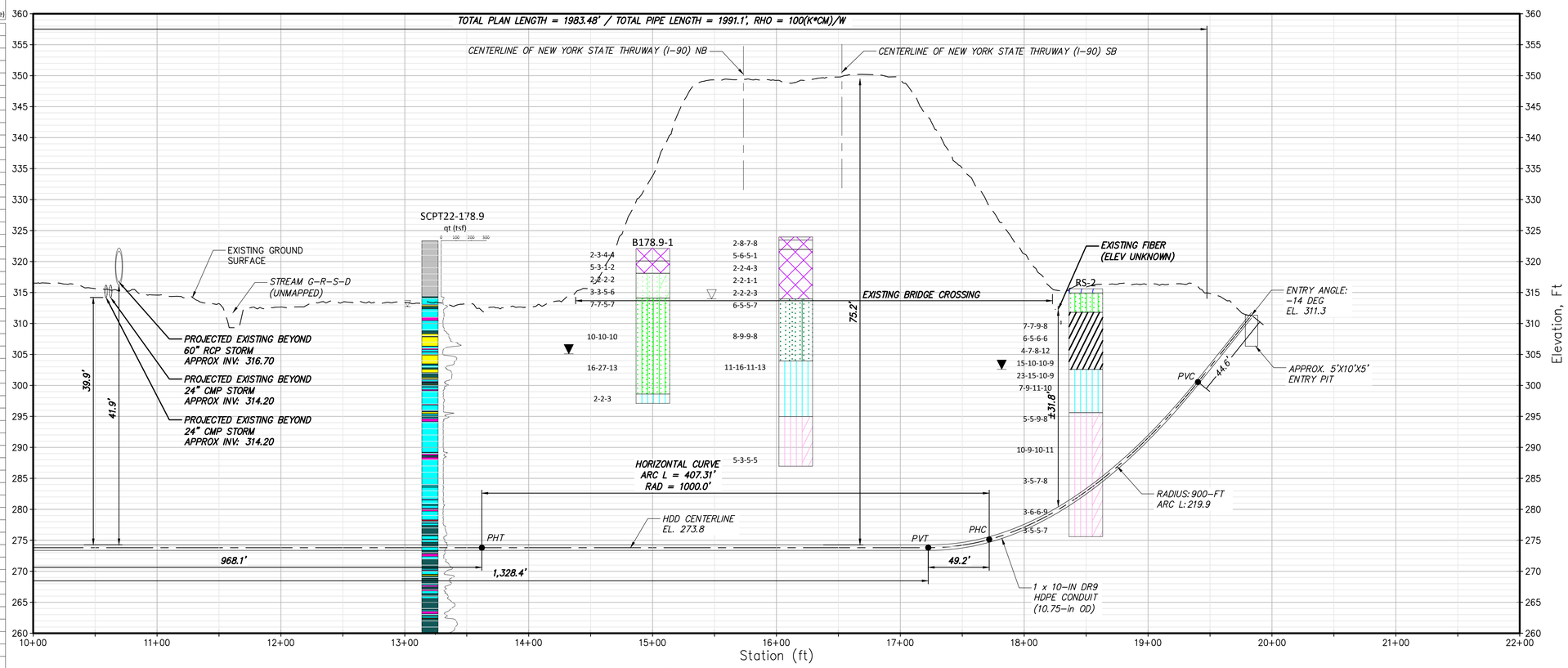

PROPOSED HDD 73A 74, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

Soil Behavior Types QTn (PKR2009)	
Description	SBT Zone
Clays	3
Gravelly Sand to Sand	7
Organic Soils	2
Sand Mixtures	5
Sands	6
Sensitive, Fine Grained	1
Silt Mixtures	4
Stiff Sand to Clayey Sand	8
Undefined	0
Very Stiff Fine Grained	9

Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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6/7/2023

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 73A 74

NEW YORK STATE THRUWAY (I-90) CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO. 21162

BRIERLEY PROJECT NO. 322004-000

DRAWING NO. **C-312**

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

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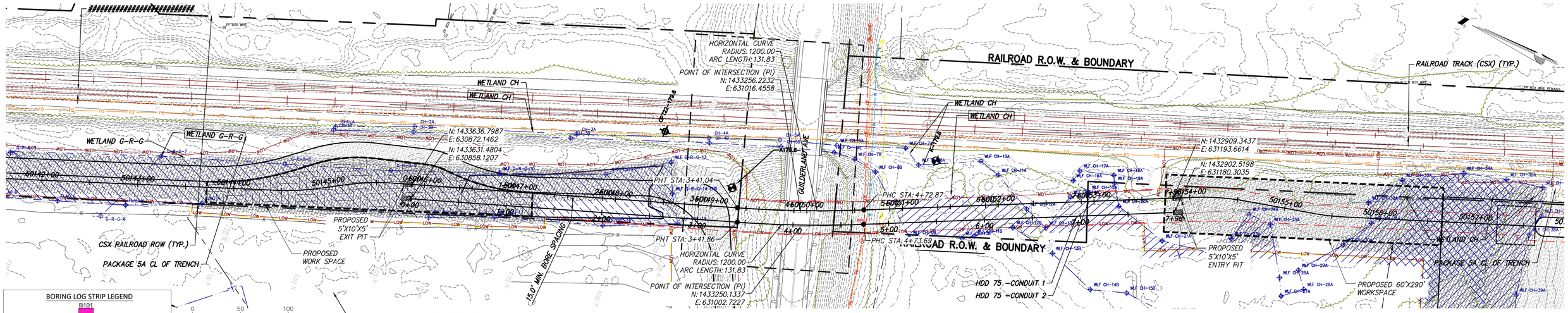
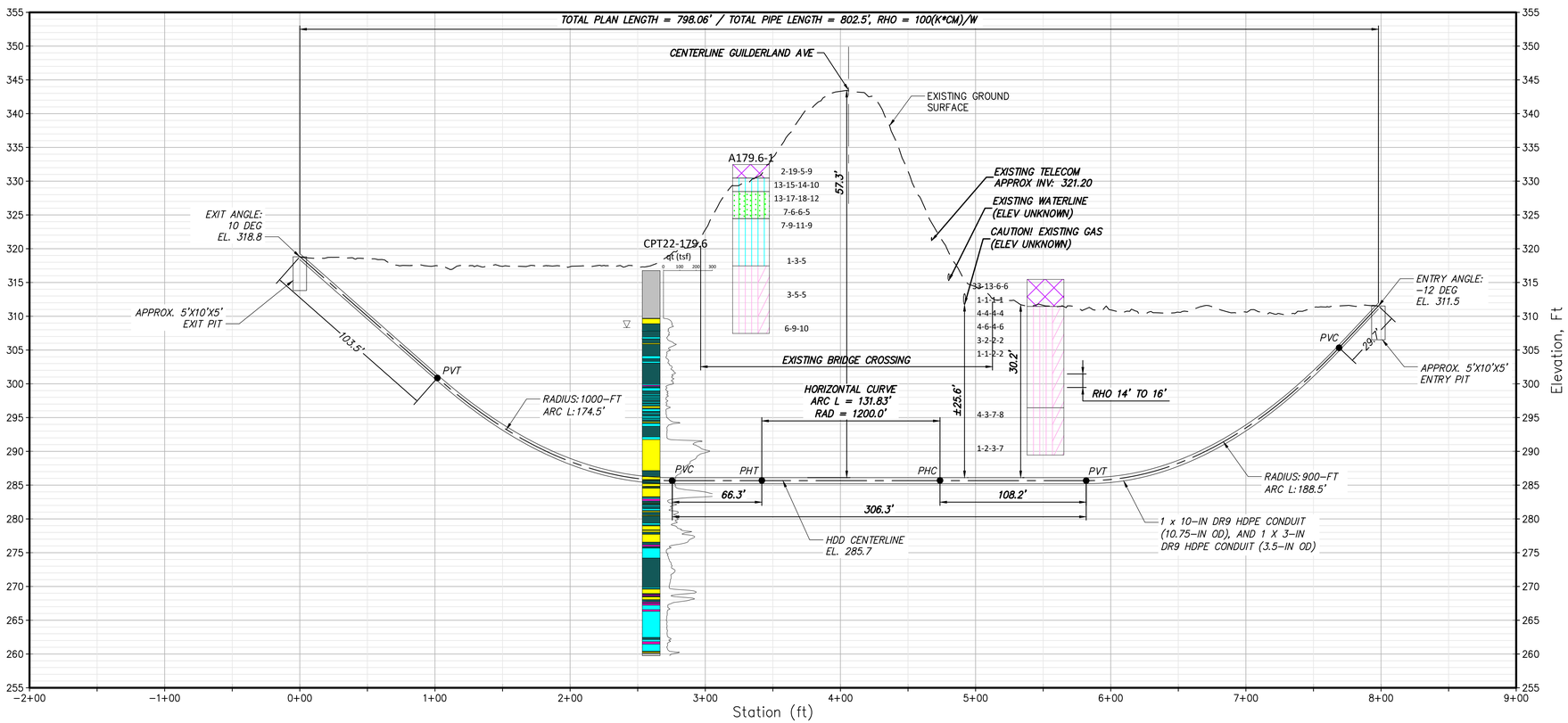
LastSavedBy: bconnelly



PROPOSED HDD 75, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 75, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

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OL/OH	ORGANIC SOIL
PT	PEAT
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Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 75
GUILDERLAND AVE CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO. 21162
BRIERLEY PROJECT NO. 322004-000
DRAWING NO. **C-313**

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

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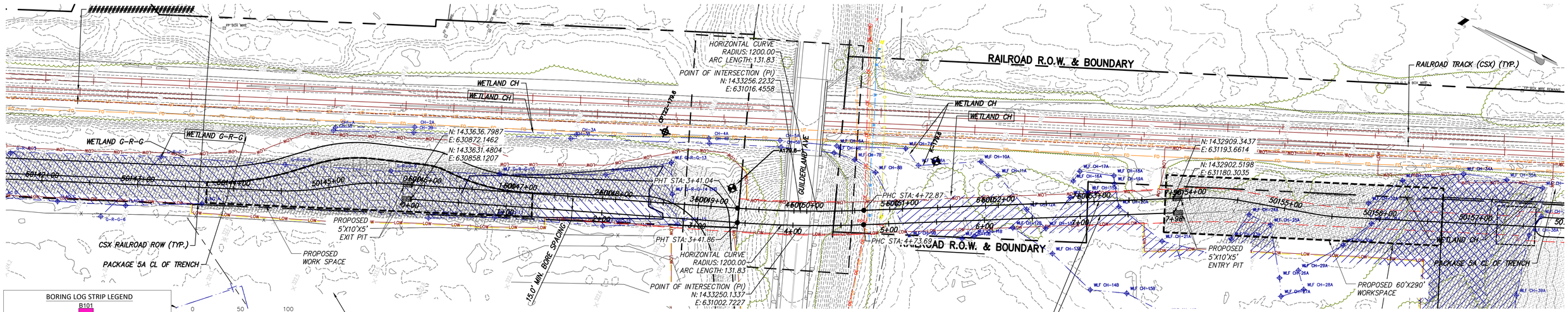
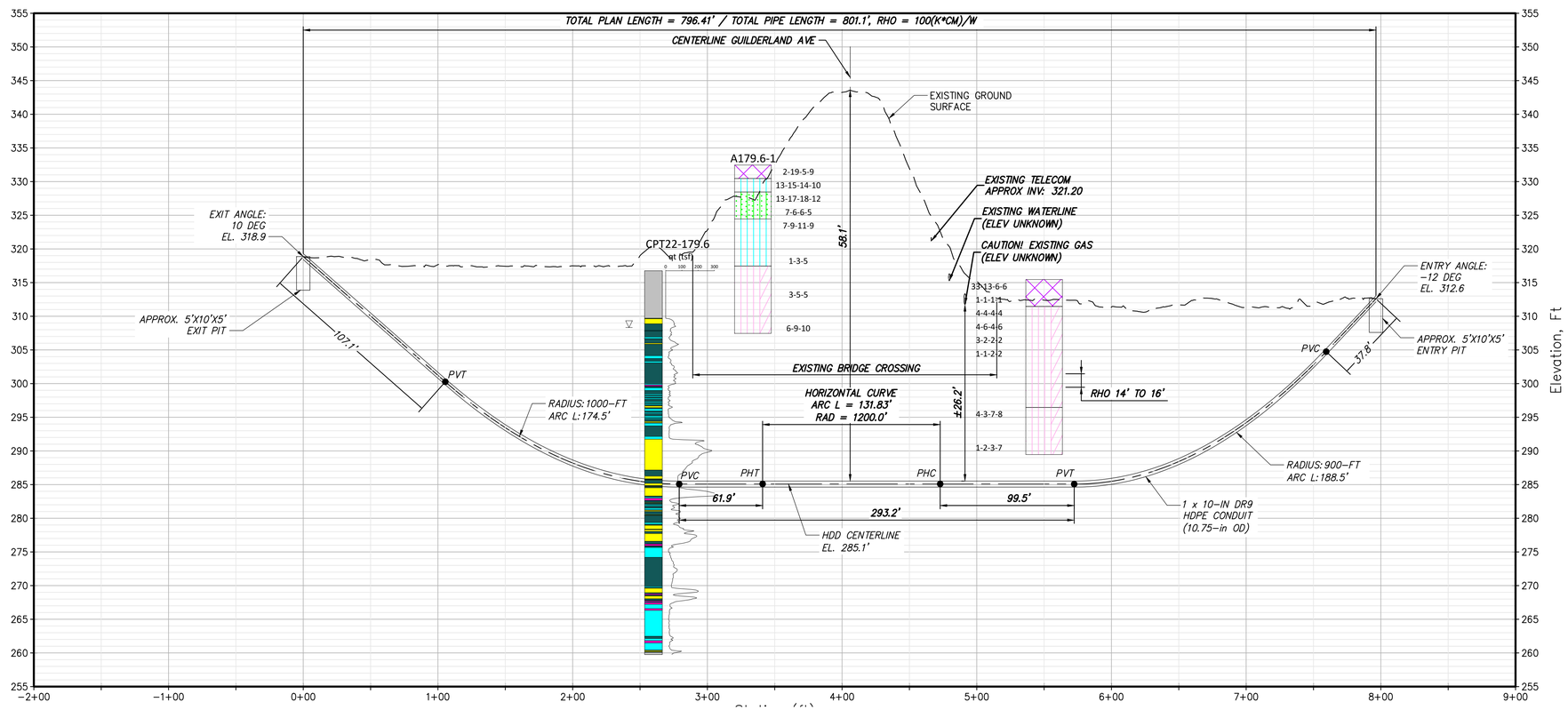


PROPOSED HDD 75, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 75, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

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Legend

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Scale in feet

CHPE Champlain Hudson Power Express

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 75

GUILDERLAND AVE CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE: AS SHOWN | REV. NO. EGEN

KIEWIT PROJECT NO. 21162

BRIERLEY PROJECT NO. 322004-000

DRAWING NO. **C-314**

DATE 06/09/2023 | SH.NO. XX OF 189

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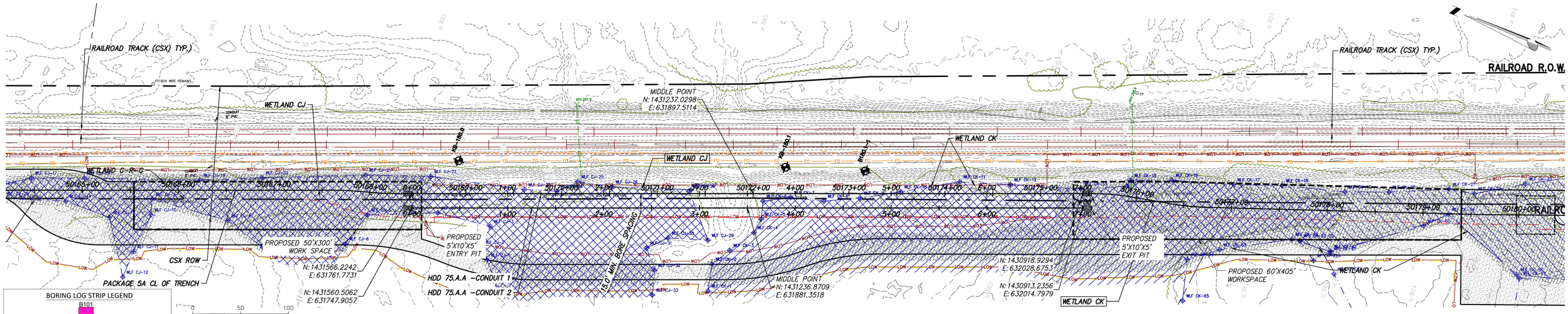

PROPOSED HDD 75.A.A. CONDUIT 1 – PLAN

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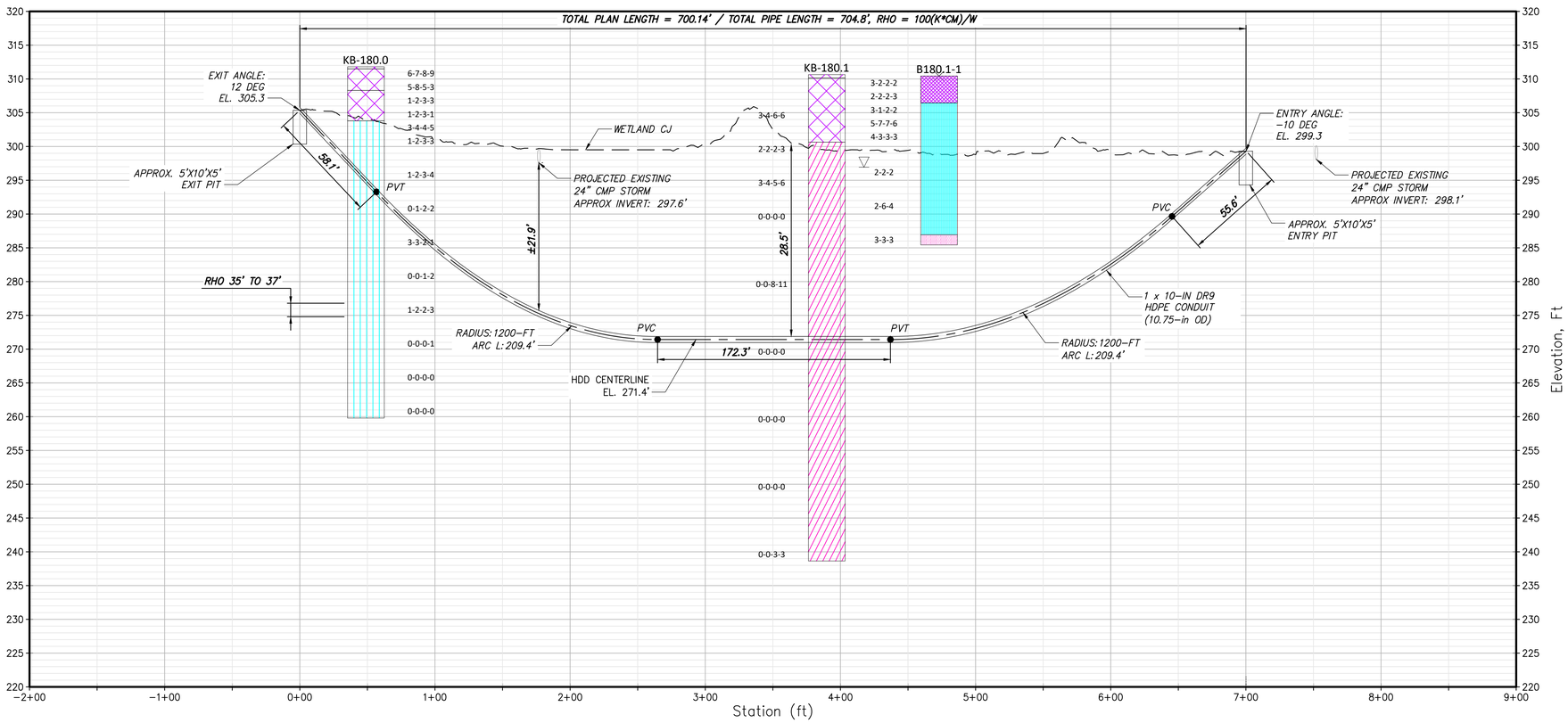

PROPOSED HDD 75.A.A. CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

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OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SC	Poorly Graded SAND with CLAY
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
SW-SC	Well Graded SAND with CLAY
SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
USGS 654	Subgraywacke
USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
USGS 708	Gneiss
USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

6/7/2023 STATE OF NEW YORK BRIAN C DORWART 080342 LICENSED PROFESSIONAL ENGINEER

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	06/09/2023	ISSUED FOR CONSTRUCTION SUBMISSION	NS	BD

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 75A.A

WETLAND CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0

KIEWIT PROJECT NO. 21162

BRIERLEY PROJECT NO. 322004-000

DRAWING NO. **C-315**

DATE 06/09/2023

SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_315-320.DWG Saved: 5/16/2023 1:35:44 PM Plotted: 6/7/2023 7:40:39 PM Current User: Brian Connelly LastSavedBy: bconnelly