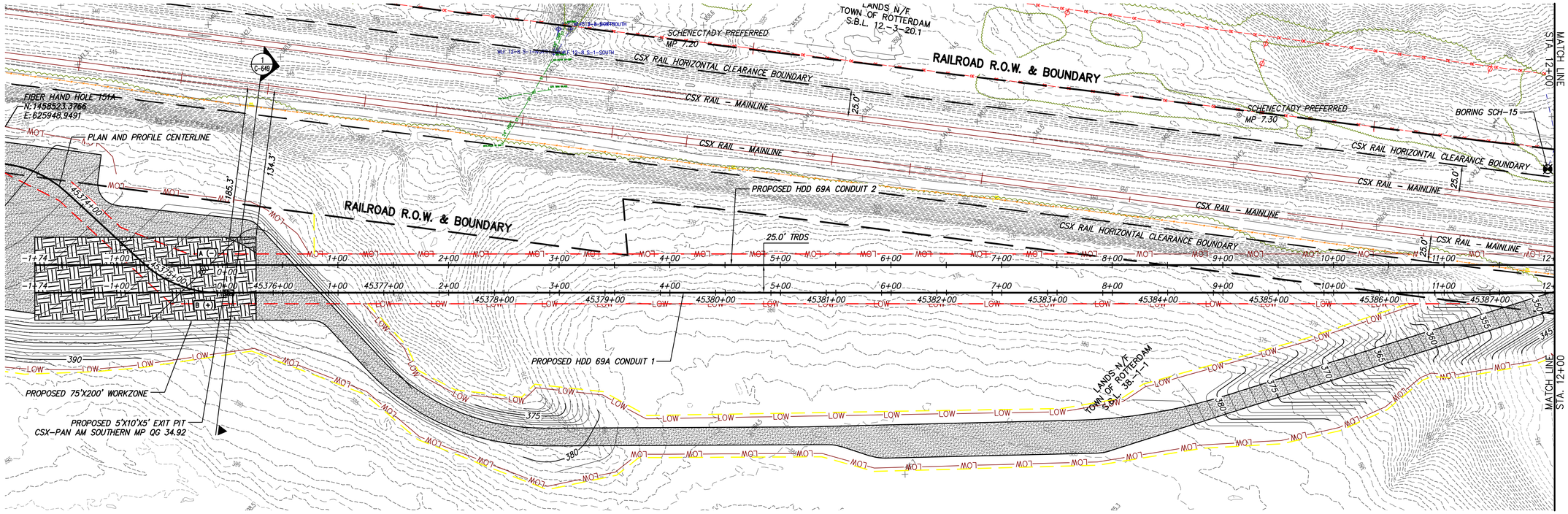


PROPOSED HDD 69A PLAN VIEW
CONDUIT 1

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
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Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling

NOTE:
1. "HDD#69A CONSISTS OF (2) HVDC ELECTRICAL TRANSMISSION CABLES HOUSED IN INDIVIDUAL 8" FPVC DR 17 DIAMETER CONDUITS. A THIRD 3" HDPE DR 7 CASING WILL BE BUNDLED WITH ONE OF THE 8" CONDUITS FOR A TELECOMMUNICATION LINE.
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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

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087450
LICENSED PROFESSIONAL ENGINEER

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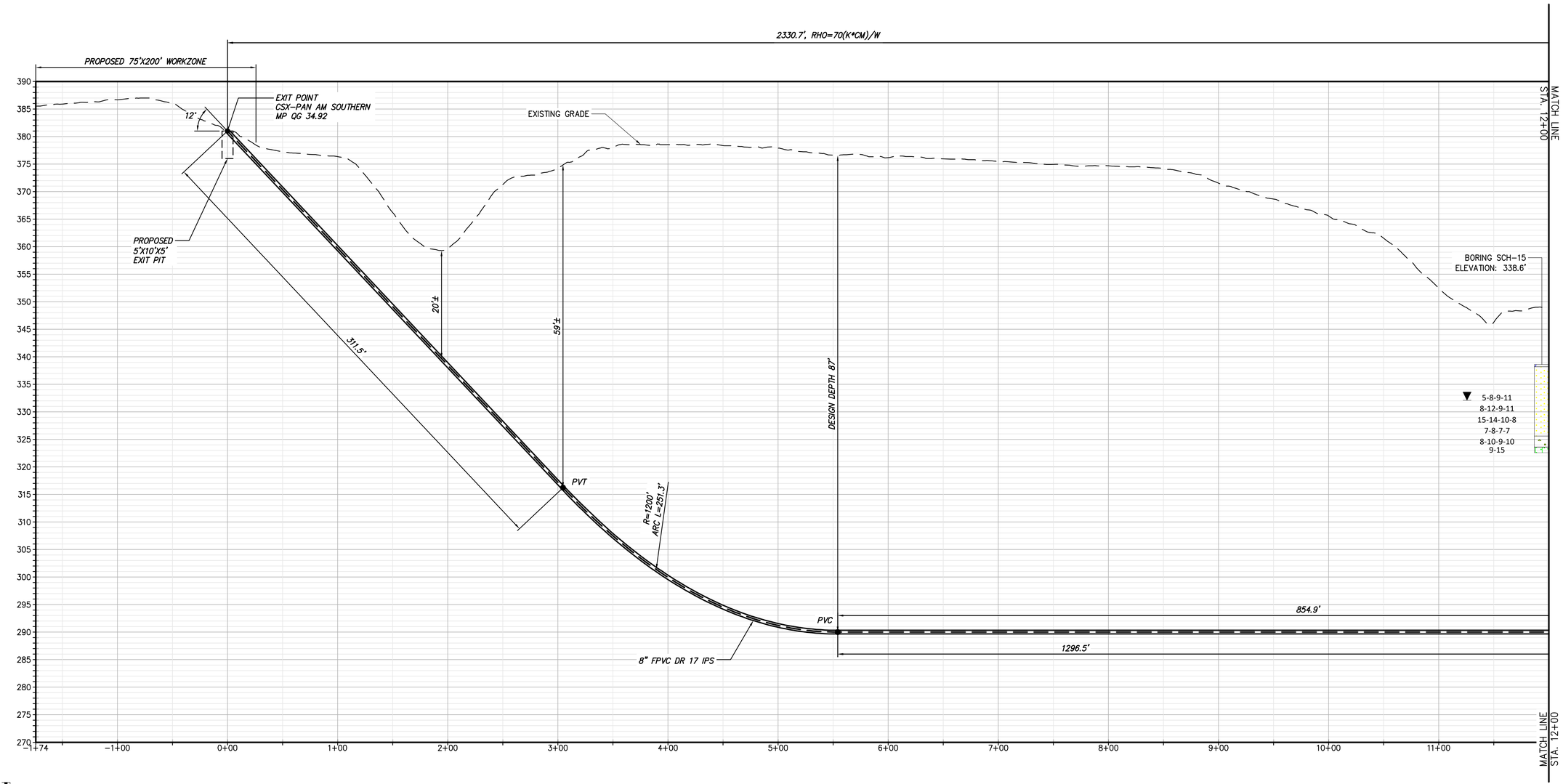
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	07/28/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

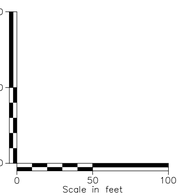
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN VIEW - HDD 69A, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311

DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO
SCALE AS NOTED | DATE 07/28/2023
REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 4\DESIGN PACKAGE B\066076_P4B - C-311 - C-311A3.DWG Saved: 7/26/2023 8:38:18 AM Plotted: 7/26/2023 9:49:01 AM Current User: Snyder, Morgan LastSavedBy: 6043





PROPOSED HDD 69A PROFILE

CONDUIT 1

NOTE:

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BORING LOG STRIP LEGEND



2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration

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
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GW-GM	Well Graded GRAVEL with SILT
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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
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SC	CLAYEY SAND
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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

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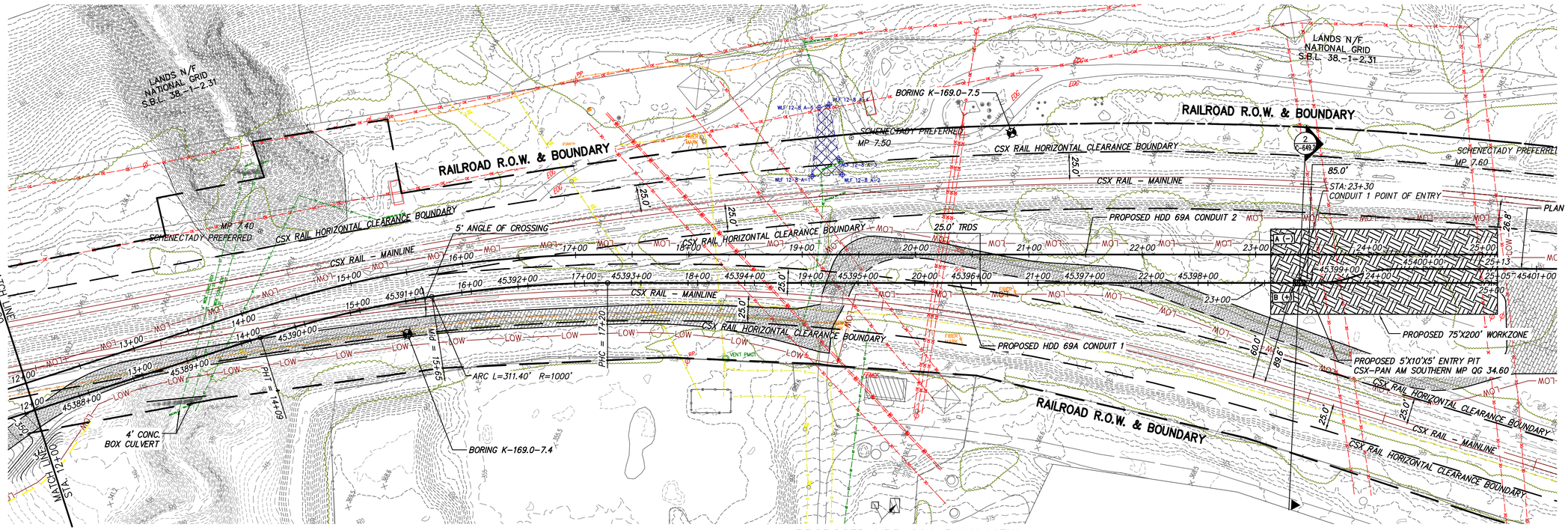
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	07/28/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PROFILE VIEW - HDD 69A, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311.1

DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 07/28/2023 | SH.NO.

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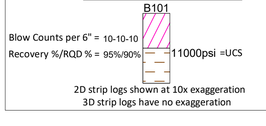


PROPOSED HDD 69A PLAN VIEW
CONDUIT 1

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BORING LOG STRIP LEGEND



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
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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
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SW	Well graded SAND
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Topsoil	Topsoil
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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

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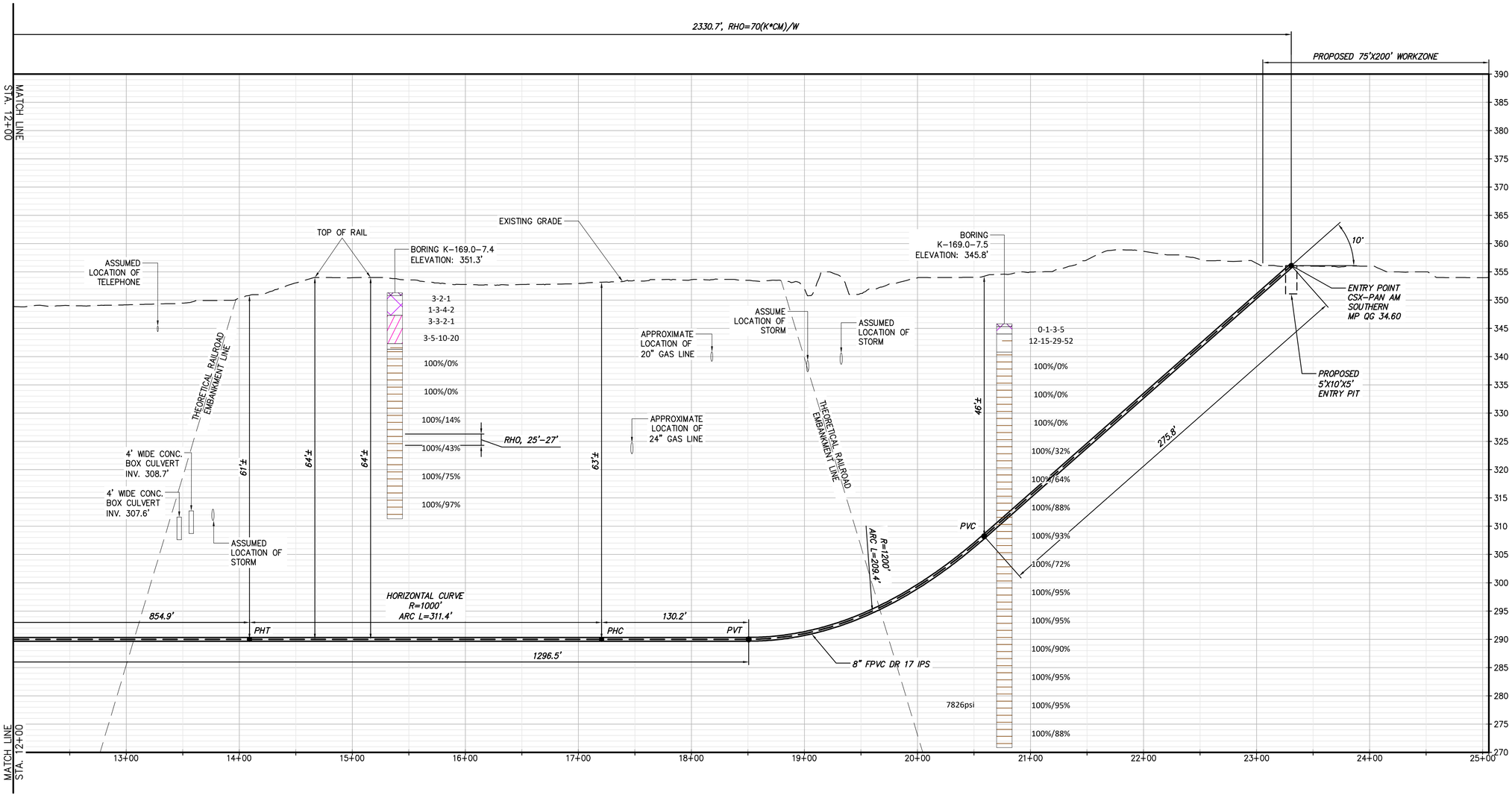
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN VIEW - HDD 69A, CONDUIT 1

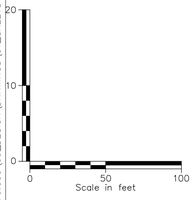
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311.2

DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 07/28/2023 | SH.NO.

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PROPOSED HDD 69A PROFILE

CONDUIT 1

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

Legend	
ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
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USGS 708	Gneiss
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NOTE:

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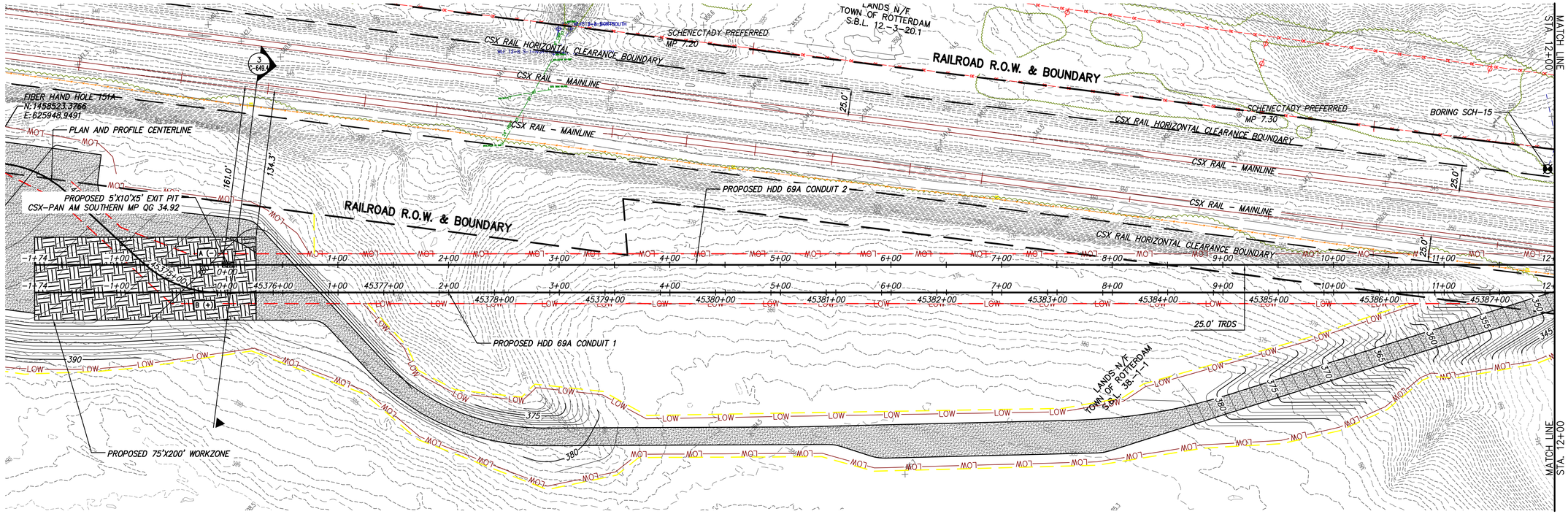
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PROFILE VIEW - HDD 69A, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311.3

DRAWN BY: | DESIGNED BY: | APPROVED BY: JEO | SCALE AS NOTED | DATE 07/28/2023 | REV. NO. X | SH.NO.



0 50 100
Scale in feet

PROPOSED HDD 69A PLAN VIEW
CONDUIT 2

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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	Void	Void
	Water	Water
	Weathered Rock	Undefined
	Water Table	Water Table during drilling
	Delayed Water Table	Water Table after drilling

NOTE:
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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

Champlain Hudson Power Express

Kiewit

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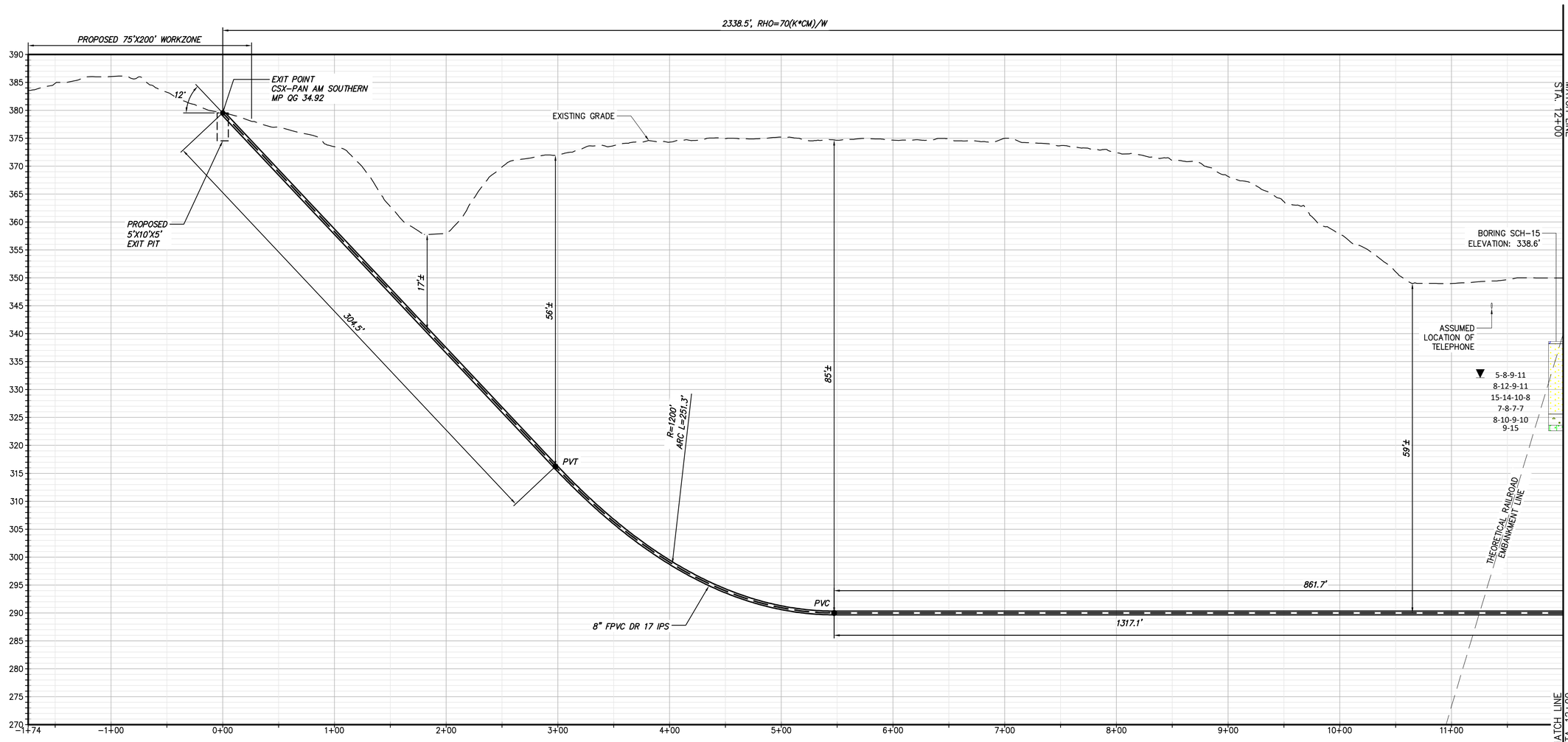
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0	07/28/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

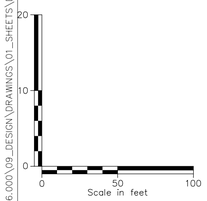
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN VIEW - HDD 69A, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311A

DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO | SCALE AS NOTED | DATE 07/28/2023 | REV. NO. X | SH.NO.

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PROPOSED HDD 69A PROFILE
CONDUIT 2

NOTE:
1. *"HDD#69A CONSISTS OF (2) HVDC ELECTRICAL TRANSMISSION CABLES HOUSED IN INDIVIDUAL 8" FPVC DR 17 DIAMETER CONDUITS. A THIRD 3" HDPE DR 7 CASING WILL BE BUNDLED WITH ONE OF THE 8" CONDUITS FOR A TELECOMMUNICATION LINE.*
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BORING LOG STRIP LEGEND



2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration

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

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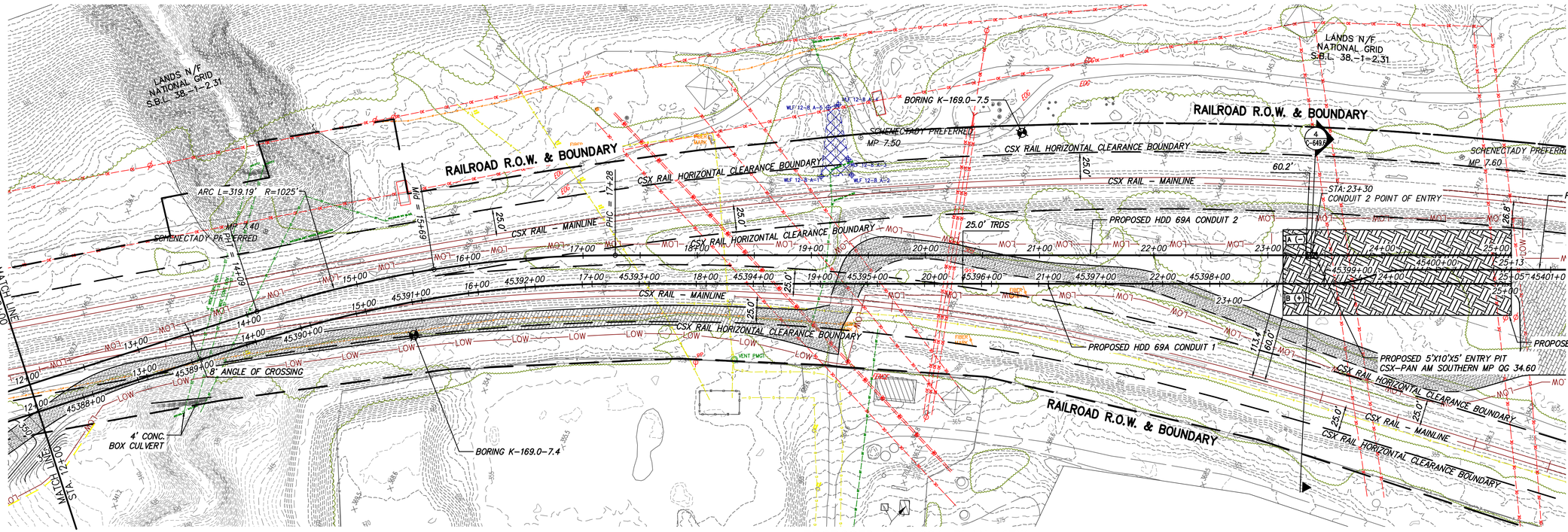
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	07/28/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PROFILE VIEW - HDD 69A, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311A.1
SCALE	AS NOTED
DATE	07/28/2023
REV. NO.	X
SH.NO.	

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PROPOSED HDD 69A PLAN VIEW
CONDUIT 2

0 50 100
Scale in feet

NOTE:
1. "HDD#69A CONSISTS OF (2) HVDC ELECTRICAL TRANSMISSION CABLES HOUSED IN INDIVIDUAL 8" FPVC DR 17 DIAMETER CONDUITS. A THIRD 3" HDPE DR 7 CASING WILL BE BUNDLED WITH ONE OF THE 8" CONDUITS FOR A TELECOMMUNICATION LINE.
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BORING LOG STRIP LEGEND

B101

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2D strip logs shown at 10x exaggeration
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CL-ML	SILTY CLAY
CONCRETE	Concrete
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Rock	Rock
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SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
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SP-SC	Poorly Graded SAND with CLAY
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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
USGS 654	Subgraywacke
USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
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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

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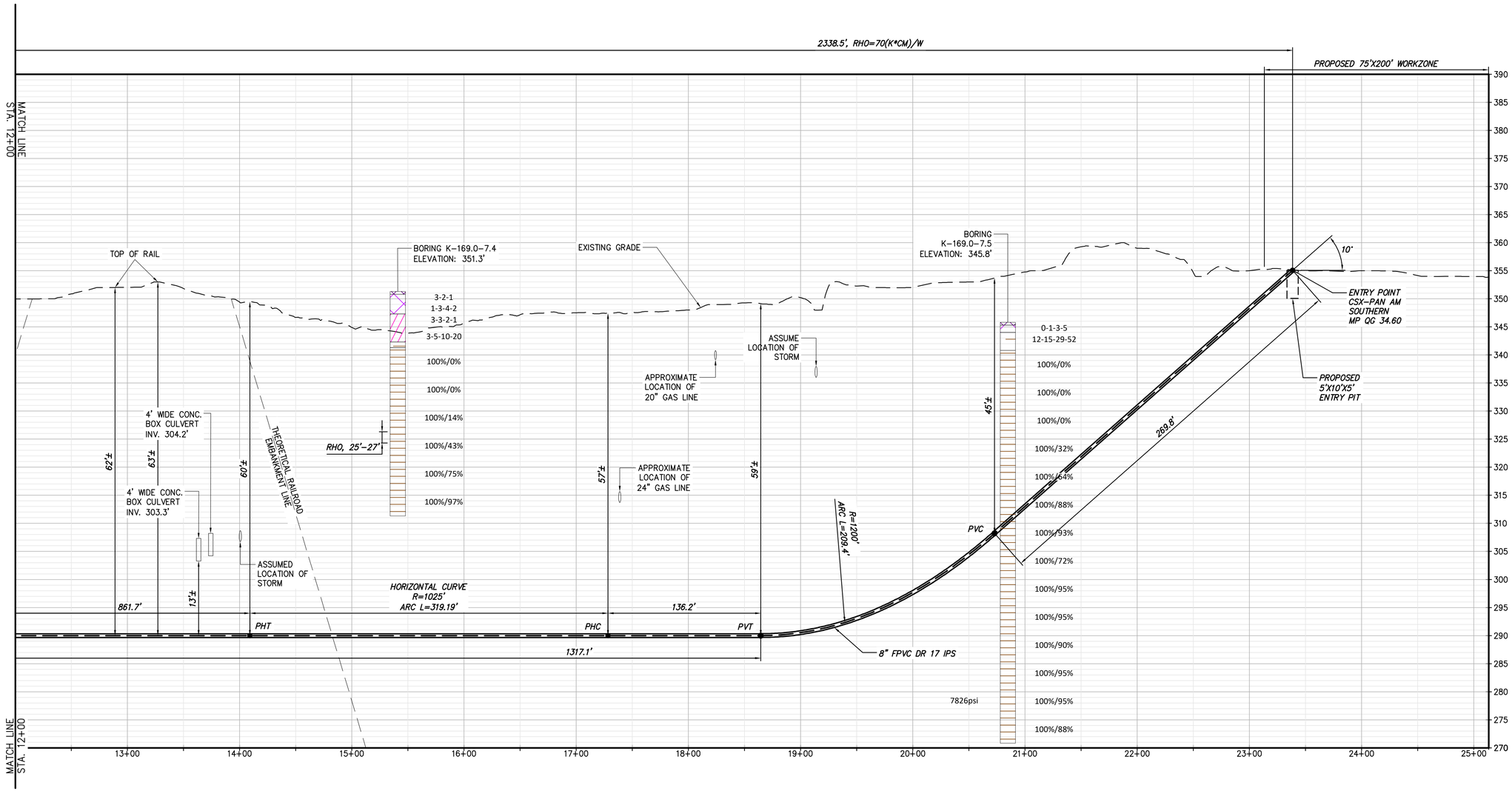
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN VIEW - HDD 69A, CONDUIT 2

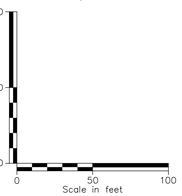
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311A.2

DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 07/28/2023 | SH.NO.

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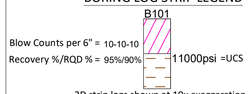




PROPOSED HDD 69A PROFILE

CONDUIT 2

BORING LOG STRIP LEGEND



2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration

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
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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
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NOTE:

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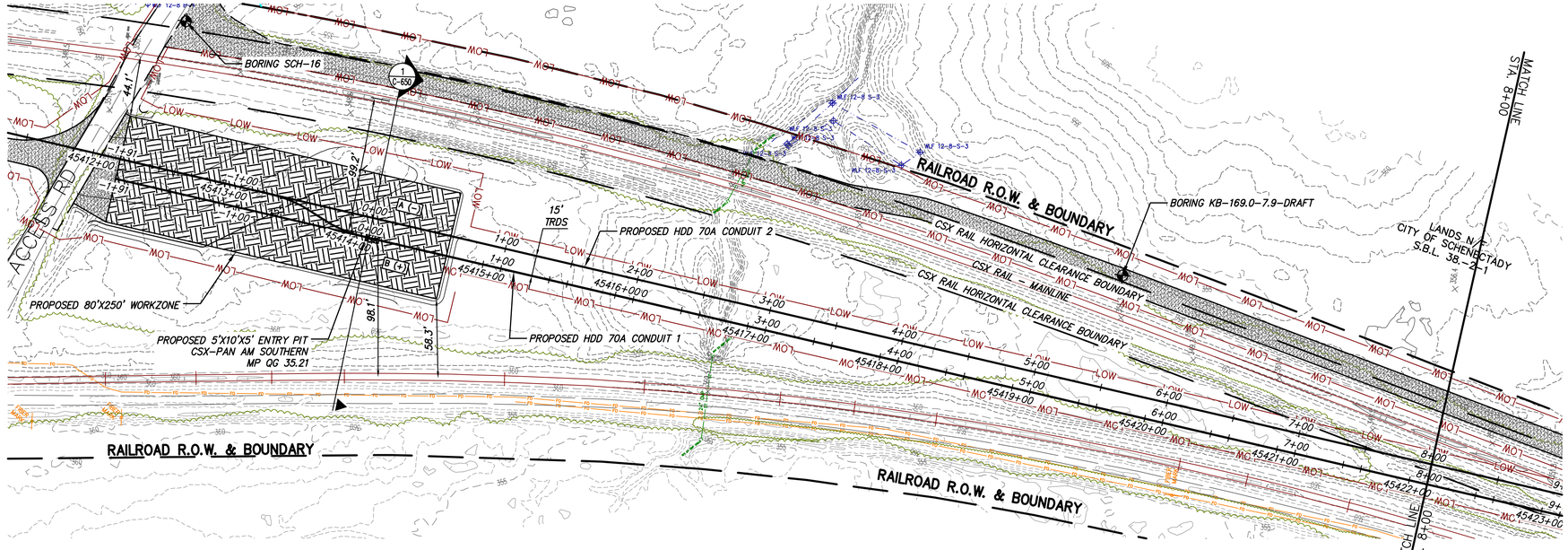
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DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PROFILE VIEW - HDD 69A, CONDUIT 2

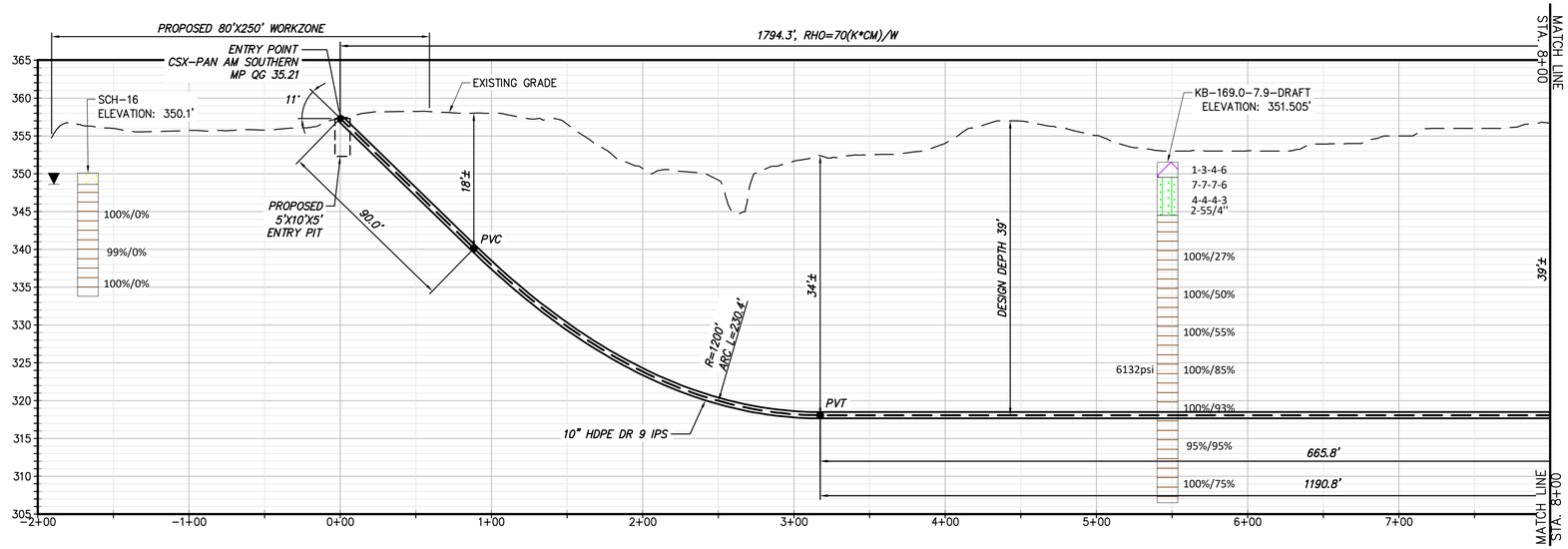
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CHA PROJECT NO.	066076
DRAWING NO.	C-311A.3
SCALE	AS NOTED
DATE	07/28/2023
REV. NO.	X
SH.NO.	

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0 50 100
Scale in feet

PROPOSED HDD 70A PLAN VIEW
CONDUIT 1

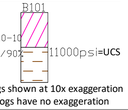


20
10
0
0 50 100
Scale in feet

PROPOSED HDD 70A PROFILE
CONDUIT 1

NOTES:
1. GEOTECHNICAL BORES KB-169.0-8.1 AND KB-169.0-8.2 AND FINAL REPORTS WILL BE AVAILABLE IN MIDDLE AUGUST OF 2023. THESE WILL BE ADDED TO SHEETS C-312.1 AND C-312A.1. BASED OF INITIAL REPORTS IT IS ANTICIPATED THE LOGS WILL SUPPORT THE PROFILE DEVELOPED. THIS INDIVIDUAL DRAWING IS P.E. SEALED FOR PERMIT AND OVERALL PACKAGE 4B IFC STATUS. THE ENGINEERING SUPPORTING THIS DRAWING SUGGESTS ADDITIONAL GEOTECHNICAL AND SUBSURFACE DATA WOULD BE BENFICIAL AND ONLY REPRESENTS THE ANALYSIS AVAILABLE WHEN SEALED. DO NOT USE THIS DRAWING FOR SUBSURFACE CONSTRUCTION ACTIVITIES.

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Legend	
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PROFESSIONAL ENGINEER

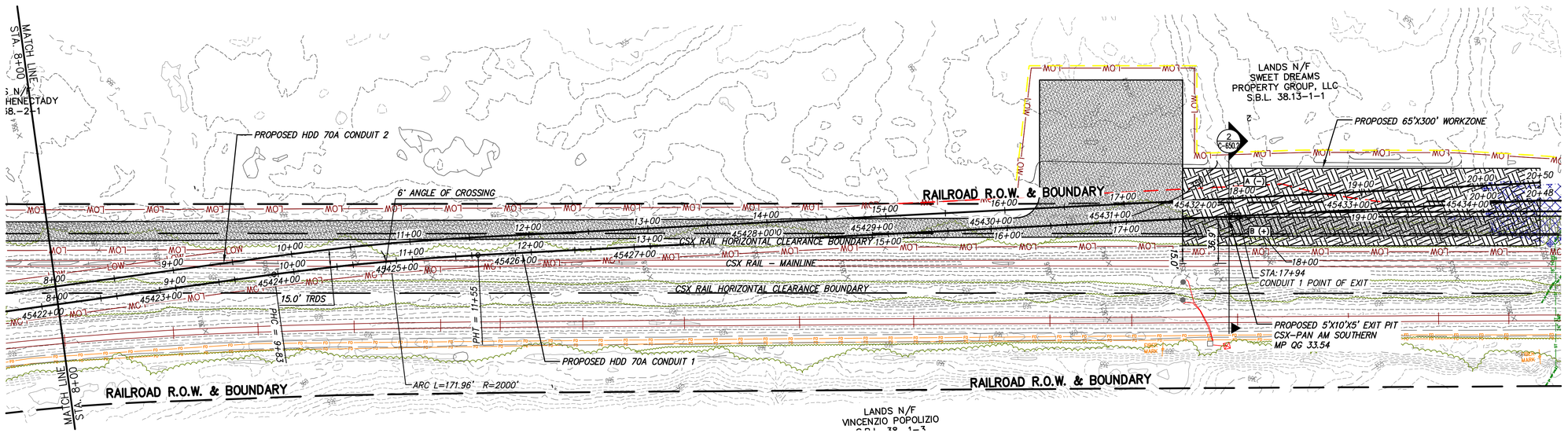
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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	07/28/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN AND PROFILE - HDD 70A, CONDUIT 1

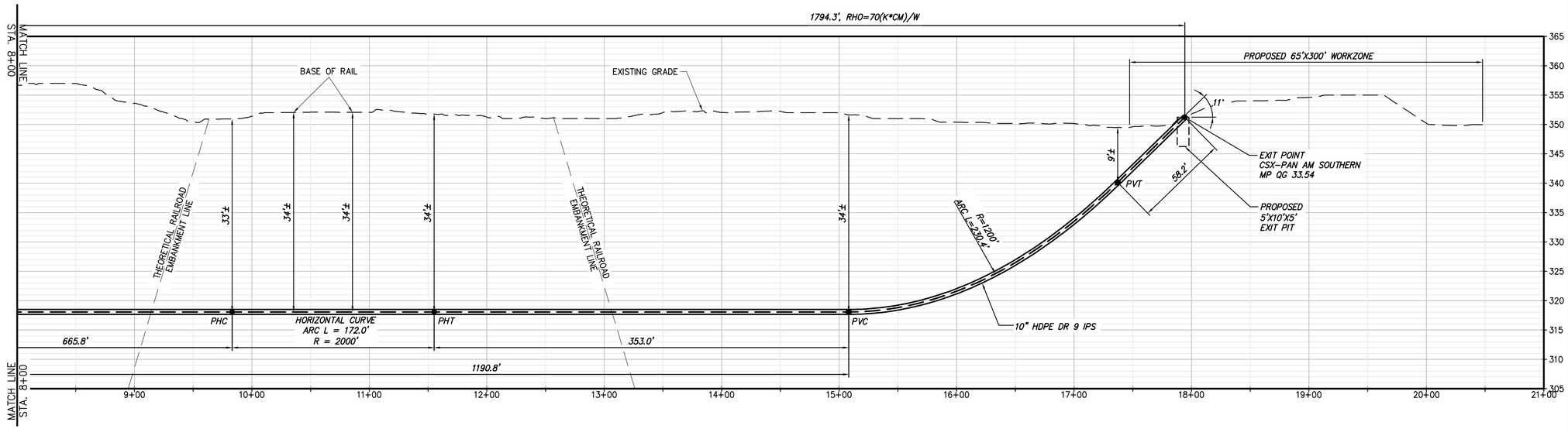
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-312

DRAWN BY: JAS | DESIGNED BY: ZSH | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 07/28/2023 | SH.NO.



0 50 100
Scale in feet

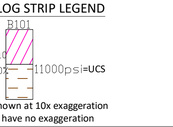
PROPOSED HDD 70A PLAN VIEW
CONDUIT 1



20 10 0
0 50 100
Scale in feet

PROPOSED HDD 70A PROFILE
CONDUIT 1

NOTES:
1. GEOTECHNICAL BORES KB-169.0-B.1 AND KB-169.0-B.2 AND FINAL REPORTS WILL BE AVAILABLE IN MIDDLE AUGUST OF 2023. THESE WILL BE ADDED TO SHEETS C-312.1 AND C-312A.1. BASED OF INITIAL REPORTS IT IS ANTICIPATED THE LOGS WILL SUPPORT THE PROFILE DEVELOPED. THIS INDIVIDUAL DRAWING IS P.E. SEALED FOR PERMIT AND OVERALL PACKAGE 4B IFC STATUS. THE ENGINEERING SUPPORTING THIS DRAWING SUGGESTS ADDITIONAL GEOTECHNICAL AND SUBSURFACE DATA WOULD BE BENFICIAL AND ONLY REPRESENTS THE ANALYSIS AVAILABLE WHEN SEALED. DO NOT USE THIS DRAWING FOR SUBSURFACE CONSTRUCTION ACTIVITIES.

BORING LOG STRIP LEGEND


2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration

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

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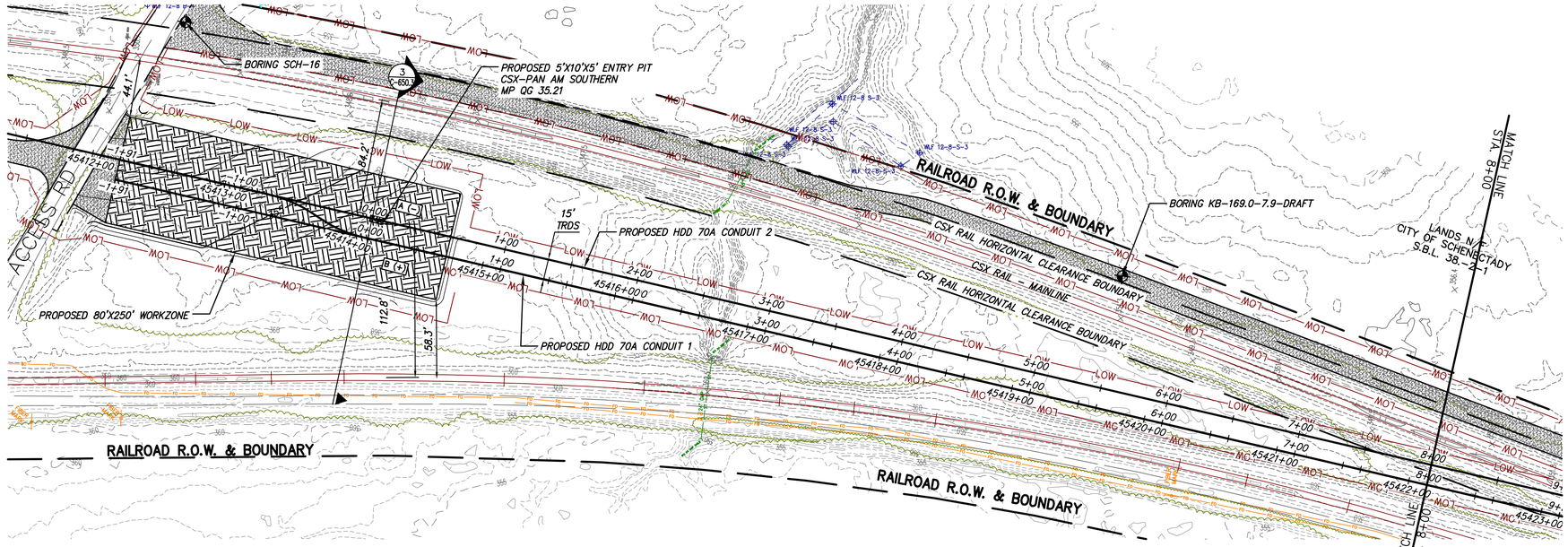
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	07/28/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN AND PROFILE - HDD 70A, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-312.1

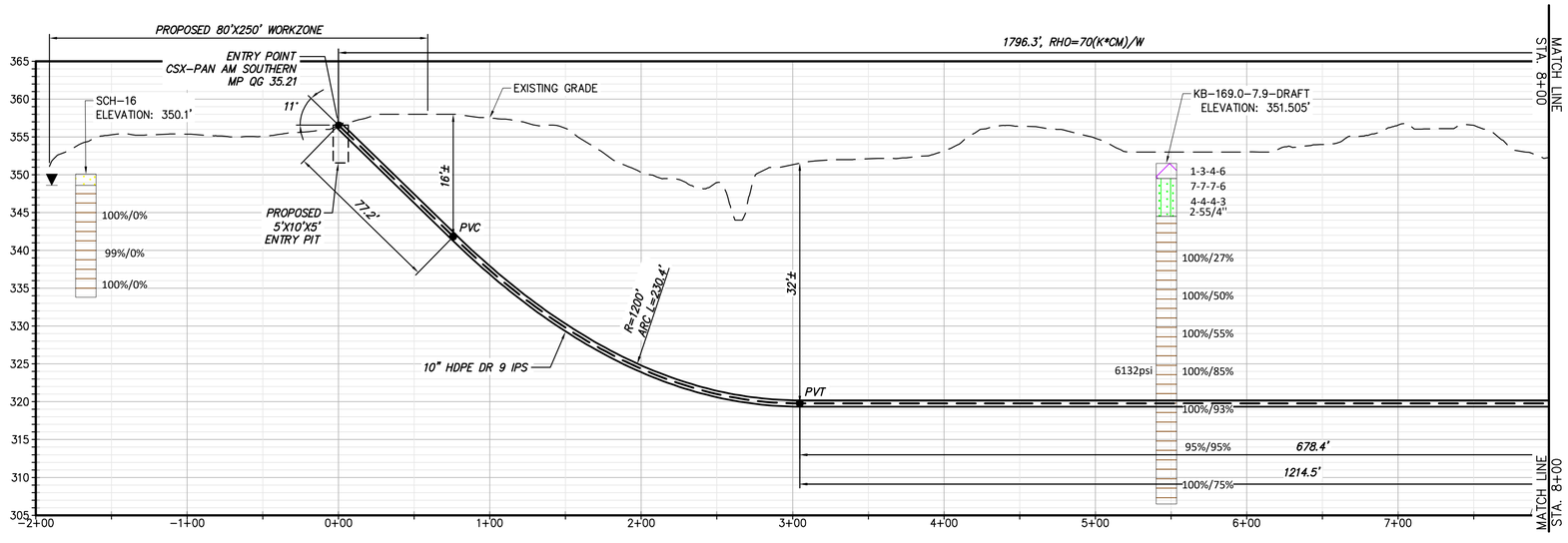
DRAWN BY: JAS | DESIGNED BY: ZSH | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 07/28/2023 | SH.NO.

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 4\DESIGN PACKAGE B\066076_P4B - C-312 - C-312A1.DWG Saved: 7/26/2023 8:45:55 AM Plotted: 7/26/2023 9:55:49 AM Current User: Snyder, Morgan LastSavedBy: 6043



0 50 100
Scale in feet

PROPOSED HDD 70A PLAN VIEW
CONDUIT 2



0 50 100
Scale in feet

PROPOSED HDD 70A PROFILE
CONDUIT 2

NOTES:
1. *GEOTECHNICAL BORES KB-169.0-8.1 AND KB-169.0-8.2 AND FINAL REPORTS WILL BE AVAILABLE IN MIDDLE AUGUST OF 2023. THESE WILL BE ADDED TO SHEETS C-312.1 AND C-312A.1. BASED OF INITIAL REPORTS IT IS ANTICIPATED THE LOGS WILL SUPPORT THE PROFILE DEVELOPED. THIS INDIVIDUAL DRAWING IS P.E. SEALED FOR PERMIT AND OVERALL PACKAGE 4B IFC STATUS. THE ENGINEERING SUPPORTING THIS DRAWING SUGGESTS ADDITIONAL GEOTECHNICAL AND SUBSURFACE DATA WOULD BE BENFICIAL AND ONLY REPRESENTS THE ANALYSIS AVAILABLE WHEN SEALED. DO NOT USE THIS DRAWING FOR SUBSURFACE CONSTRUCTION ACTIVITIES.*

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

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

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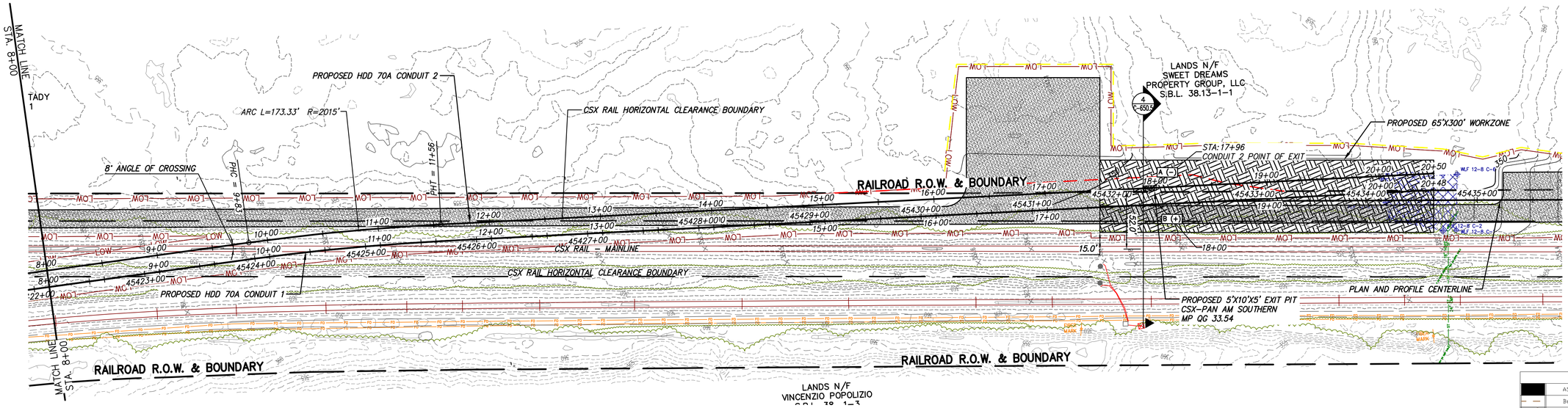
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	07/28/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN AND PROFILE - HDD 70A, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-312A

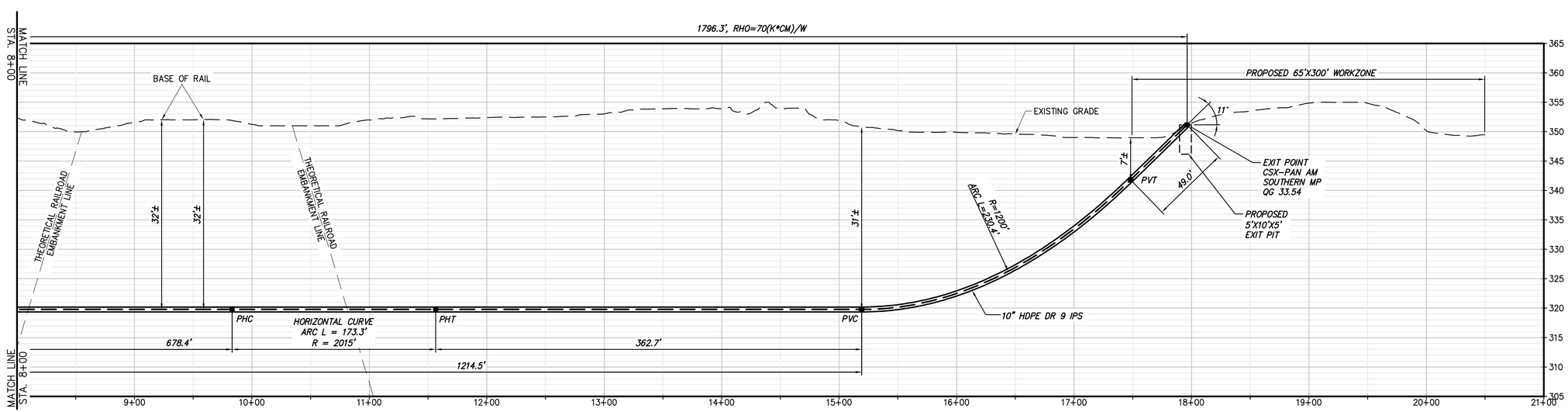
DRAWN BY: JAS | DESIGNED BY: ZSH | APPROVED BY: JEO | SCALE AS NOTED | DATE 07/28/2023 | REV. NO. X | SH.NO.

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0 50 100
Scale in feet

PROPOSED HDD 70A PLAN VIEW
CONDUIT 2

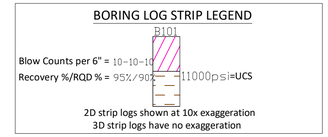


0 50 100
Scale in feet

PROPOSED HDD 70A PROFILE
CONDUIT 2

NOTES:
1. *GEOTECHNICAL BORES KB-169.0-B.1 AND KB-169.0-B.2 AND FINAL REPORTS WILL BE AVAILABLE IN MIDDLE AUGUST OF 2023. THESE WILL BE ADDED TO SHEETS C-312.1 AND C-312A.1. BASED OF INITIAL REPORTS IT IS ANTICIPATED THE LOGS WILL SUPPORT THE PROFILE DEVELOPED. THIS INDIVIDUAL DRAWING IS P.E. SEALED FOR PERMIT AND OVERALL PACKAGE 4B IFC STATUS. THE ENGINEERING SUPPORTING THIS DRAWING SUGGESTS ADDITIONAL GEOTECHNICAL AND SUBSURFACE DATA WOULD BE BENFICIAL AND ONLY REPRESENTS THE ANALYSIS AVAILABLE WHEN SEALED. DO NOT USE THIS DRAWING FOR SUBSURFACE CONSTRUCTION ACTIVITIES.*

BORING LOG STRIP LEGEND



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

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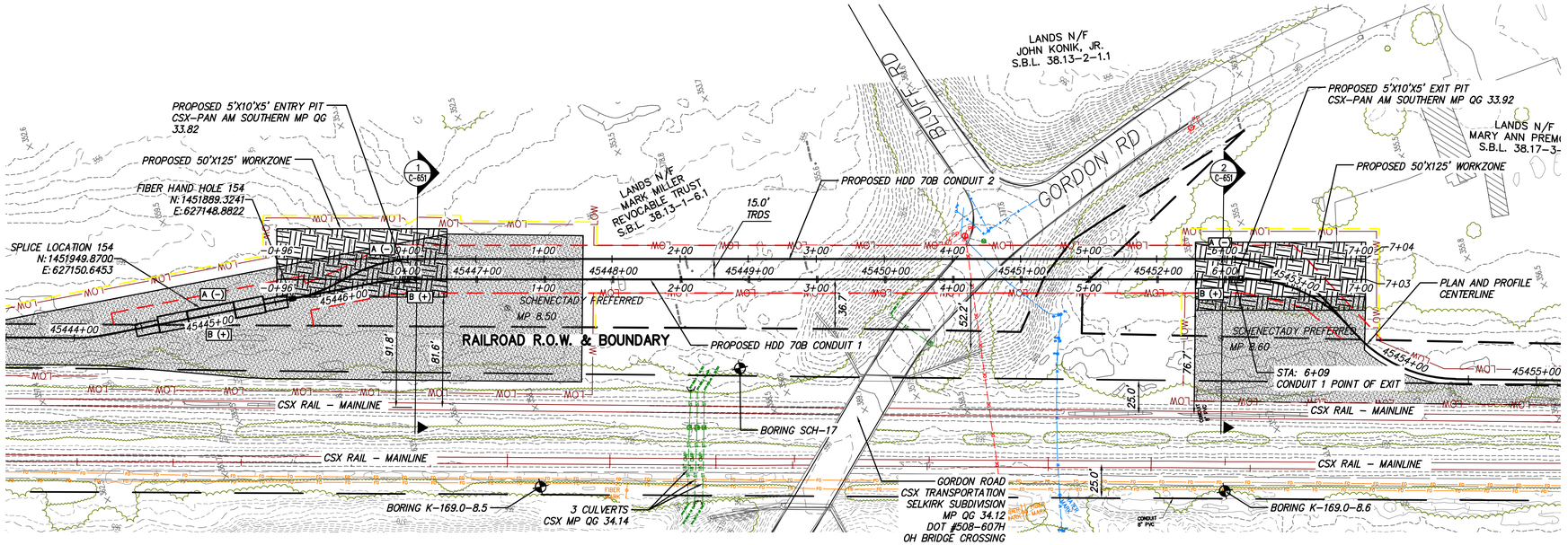
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN AND PROFILE - HDD 70A, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-312A.1

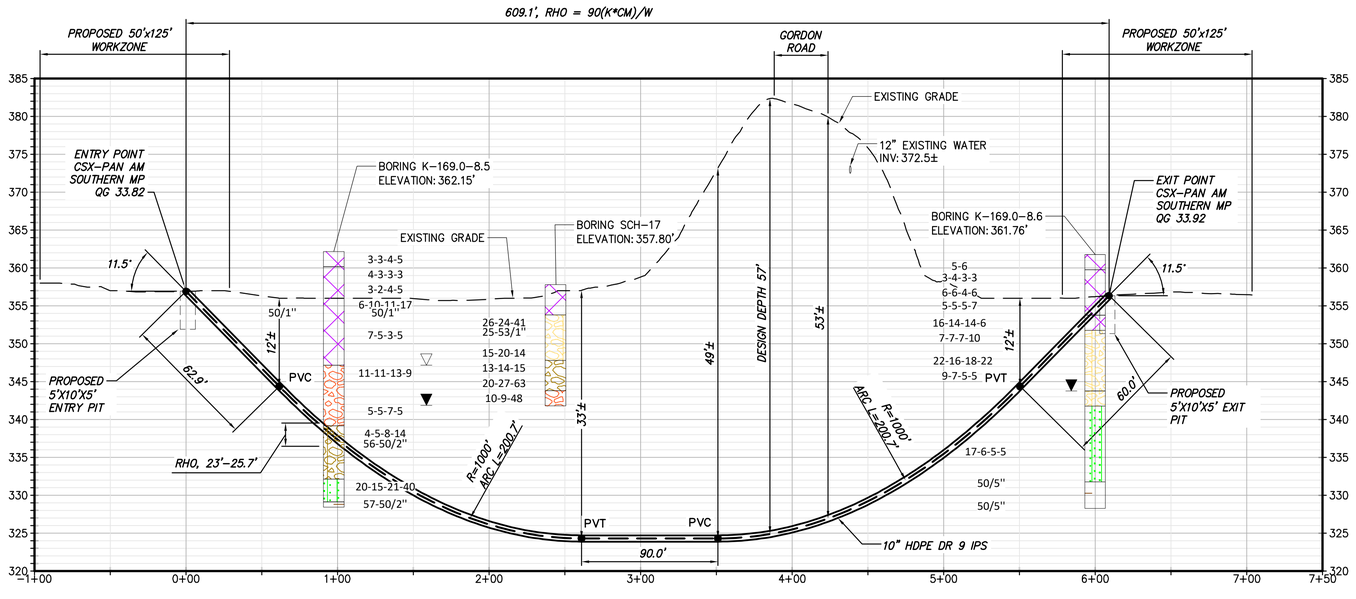
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0 50 100
Scale in feet

PROPOSED HDD 70B PLAN VIEW
CONDUIT 1



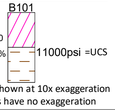
0 10 20
0 50 100
Scale in feet

NOTES:

1. CONDUCTOR CASINGS FOR THE ENTRY AND EXIT VERTICAL TANGENT SECTIONS OF THE ALIGNMENTS SHOULD BE CONSIDERED.
2. THE HDD DRILLER MAY CONSIDER A SUPPLEMENTAL GEOTECHNICAL BORE BELOW THE BOTTOM TANGENT ELEVATION TO ESTABLISH THE THICKNESS OF THE WEATHERED ROCK AND TRANSITION TO BEDROCK IF APPLICABLE. THESE CONDITIONS MAY IMPACT THE VERTICAL CURVE ON ENTRY, THE RELATIVE DIFFICULTY OF THIS BORE, AND TECHNIQUES TO MANAGE A TILL TO ROCK TRANSITION.

PROPOSED HDD 70B PROFILE
CONDUIT 1

BORING LOG STRIP LEGEND



2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration

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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USGS 702	Quartzite
USGS 705	Schist
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USGS 708	Gneiss
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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ERET O'DONNELL
087450
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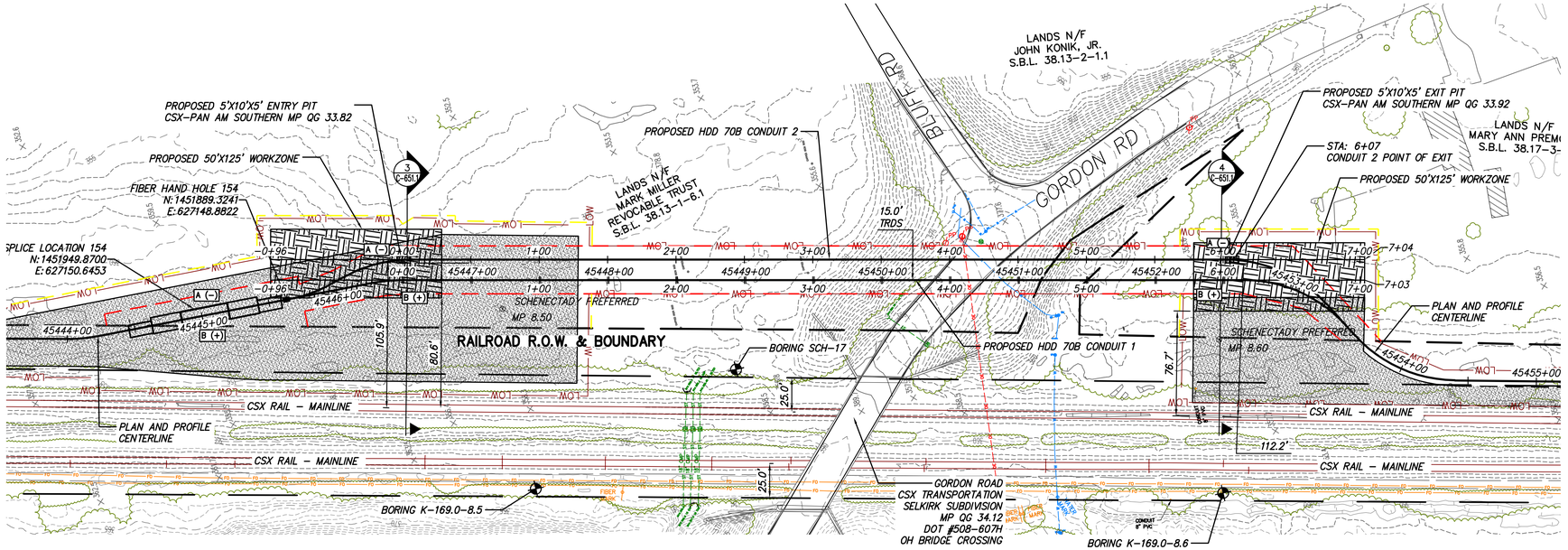
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN AND PROFILE - HDD 70B, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-313

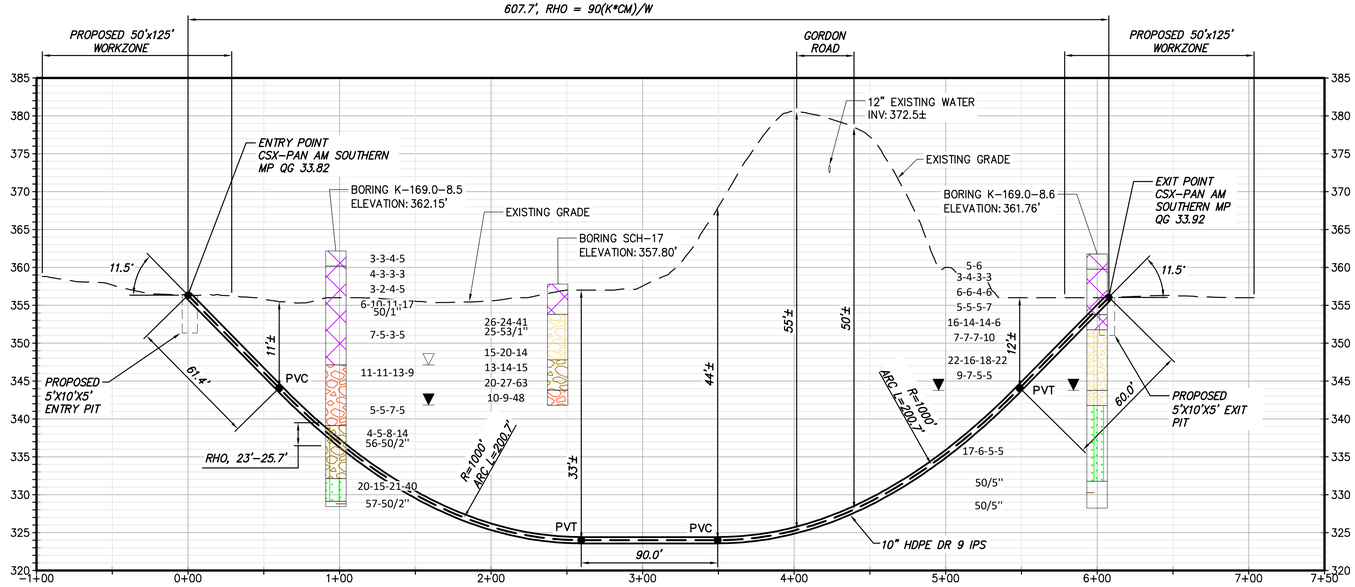
DRAWN BY: ZH | DESIGNED BY: ZH | APPROVED BY: JEO | SCALE AS NOTED | DATE 07/28/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 4\DESIGN PACKAGE BY\066076_P4B - C-313 - C-313A.DWG Saved: 7/26/2023 6:15:15 AM Plotted: 7/26/2023 10:00:21 AM Current User: Snyder, Morgan LastSavedBy: 8275



0 50 100
Scale in feet

PROPOSED HDD 70B PLAN VIEW
CONDUIT 2



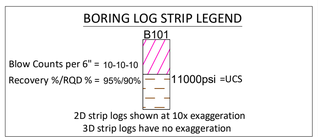
20 10 0
0 50 100
Scale in feet

PROPOSED HDD 70B PROFILE
CONDUIT 2

NOTES:

1. CONDUCTOR CASINGS FOR THE ENTRY AND EXIT VERTICAL TANGENT SECTIONS OF THE ALIGNMENTS SHOULD BE CONSIDERED.
2. THE HDD DRILLER MAY CONSIDER A SUPPLEMENTAL GEOTECHNICAL BORE BELOW THE BOTTOM TANGENT ELEVATION TO ESTABLISH THE THICKNESS OF THE WEATHERED ROCK AND TRANSITION TO BEDROCK IF APPLICABLE. THESE CONDITIONS MAY IMPACT THE VERTICAL CURVE ON ENTRY, THE RELATIVE DIFFICULTY OF THIS BORE, AND TECHNIQUES TO MANAGE A TILL TO ROCK TRANSITION.

BORING LOG STRIP LEGEND



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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

STATE OF NEW YORK
JEFFREY O'DONNELL
087450
LICENSED PROFESSIONAL ENGINEER

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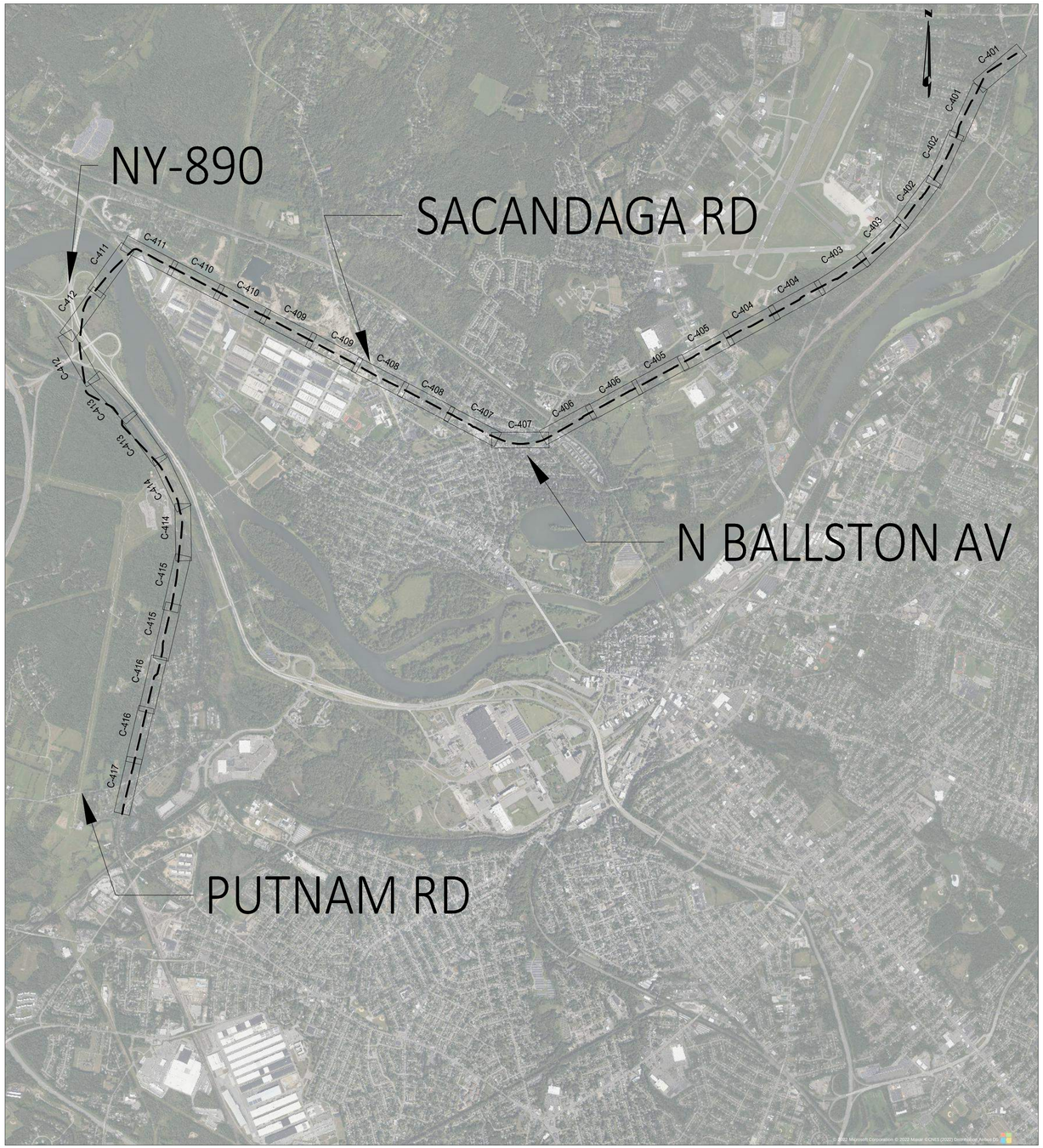
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
PLAN AND PROFILE - HDD 70B, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-313A

DRAWN BY: ZH | DESIGNED BY: ZH | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 07/28/2023 | SH.NO.

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PLAN AND PROFILE KEY MAP
SCALE: 1" = 6000'

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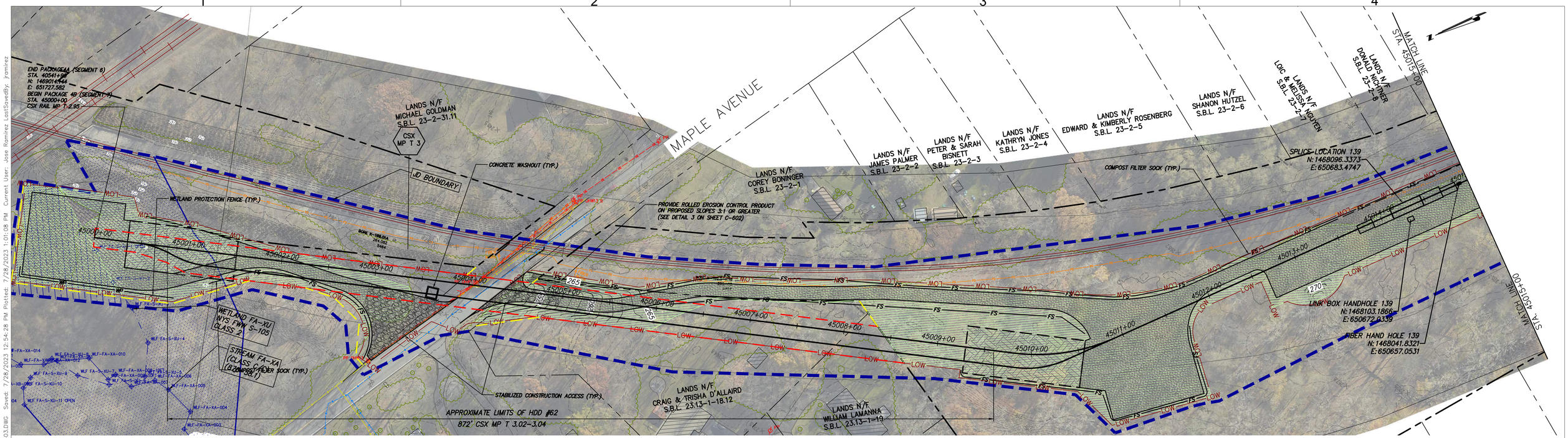
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
E&S KEY PLAN

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	C-400

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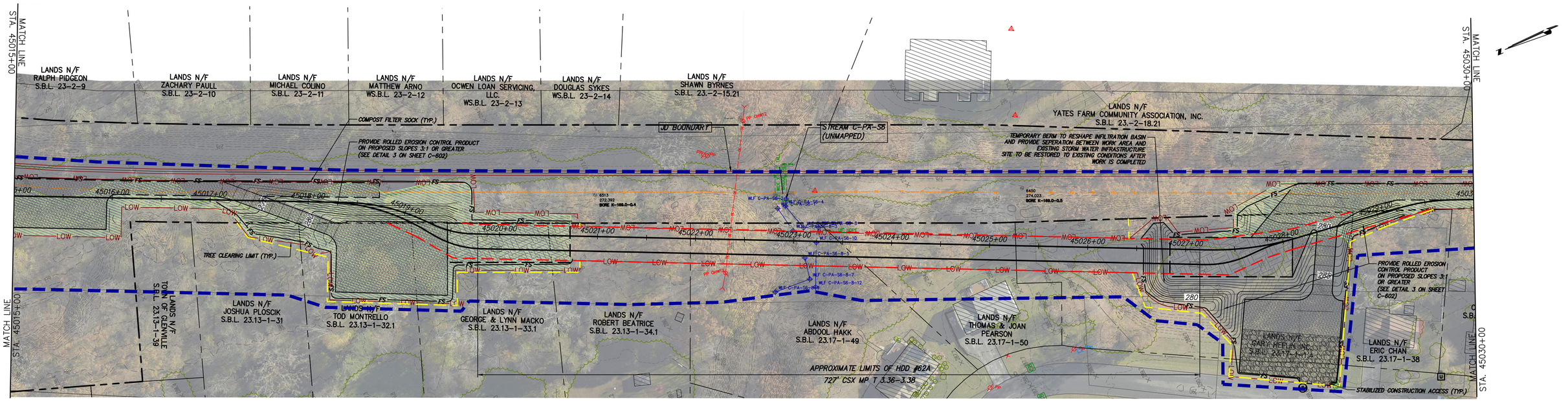
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STA. 45000+00 TO STA. 45015+00 PLAN VIEW
SCALE: 1" = 50'

0 50 100
Scale in feet



STA. 45015+00 TO STA. 45030+00 PLAN VIEW
SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

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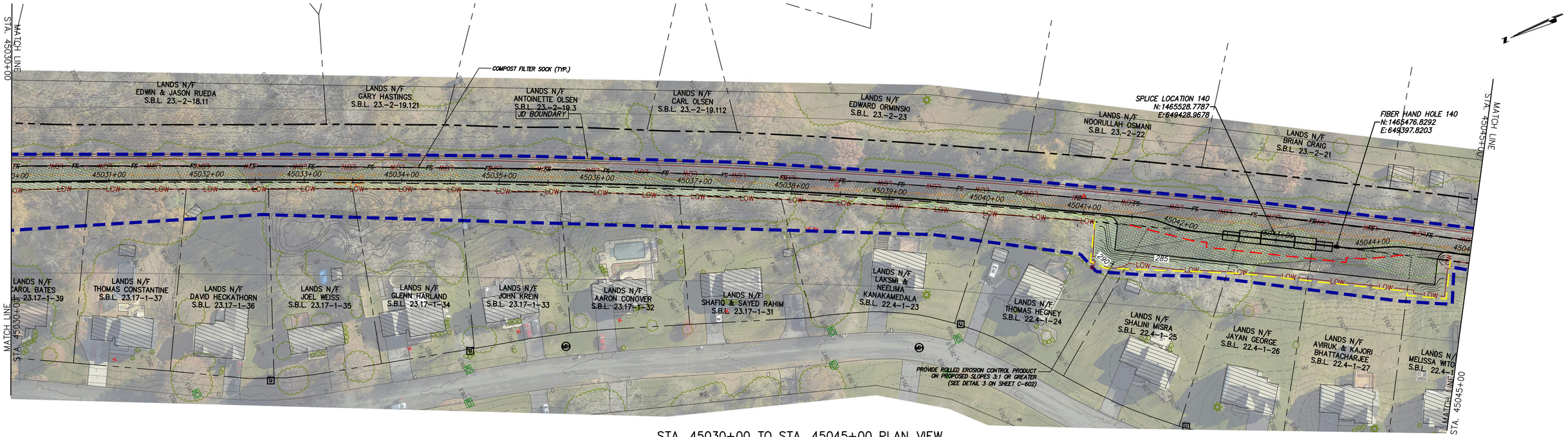
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
EROSION AND SEDIMENT CONTROL PLAN
STA. 45000+00 TO STA. 45030+00

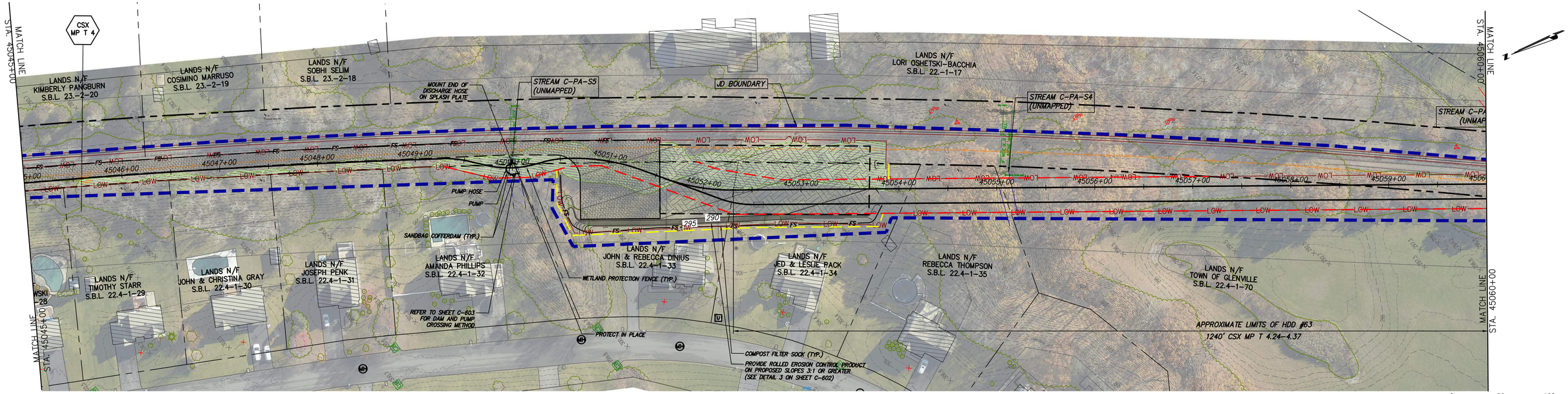
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KC PROJECT NO.	120174
DRAWING NO.	C-401

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STA. 45030+00 TO STA. 45060+00 PLAN VIEW
SCALE: 1" = 50'



STA. 45045+00 TO STA. 45060+00 PLAN VIEW
SCALE: 1" = 50'

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 7 (PACKAGE 4B) - CSX - PAN AM SOUTHERN
EROSION AND SEDIMENT CONTROL PLAN
STA. 45030+00 TO STA. 45060+00

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	**C-402**

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