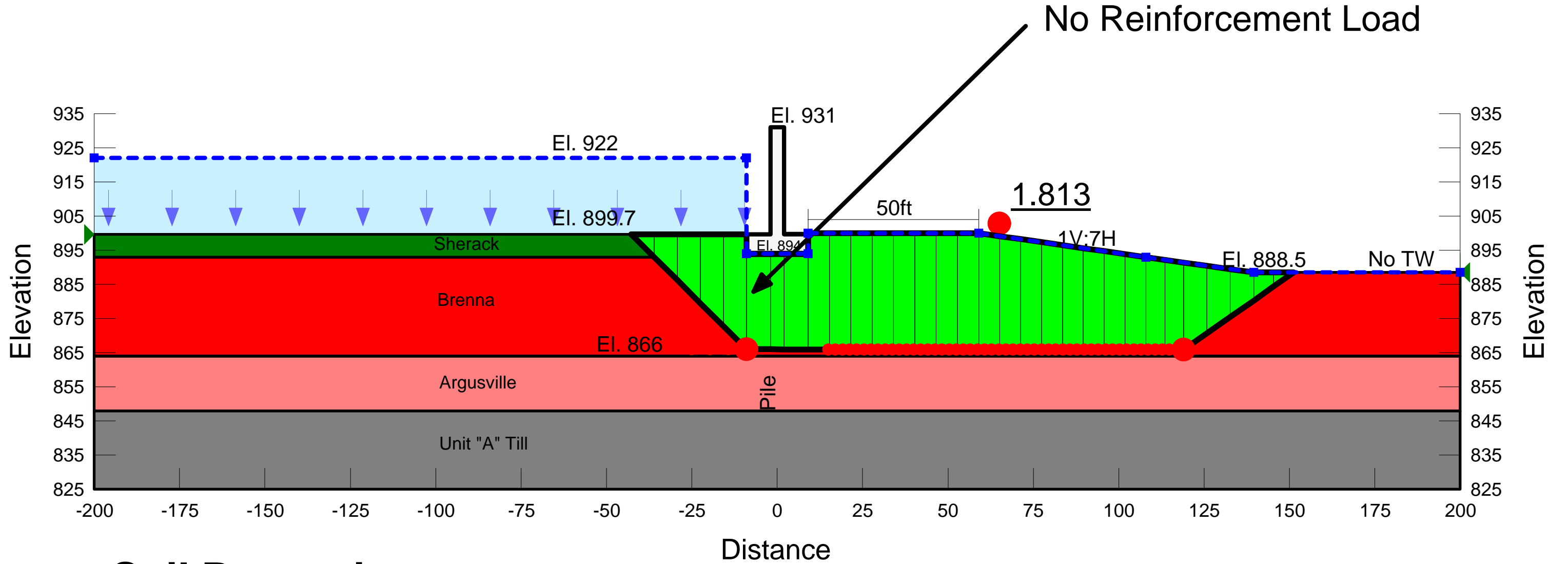


Attachment D-5: Unbalanced Load Analysis

**F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 922
 Inlet Structure Parameters**

T-Wall UBAL Block Spec. El. 866 w/o Reinf



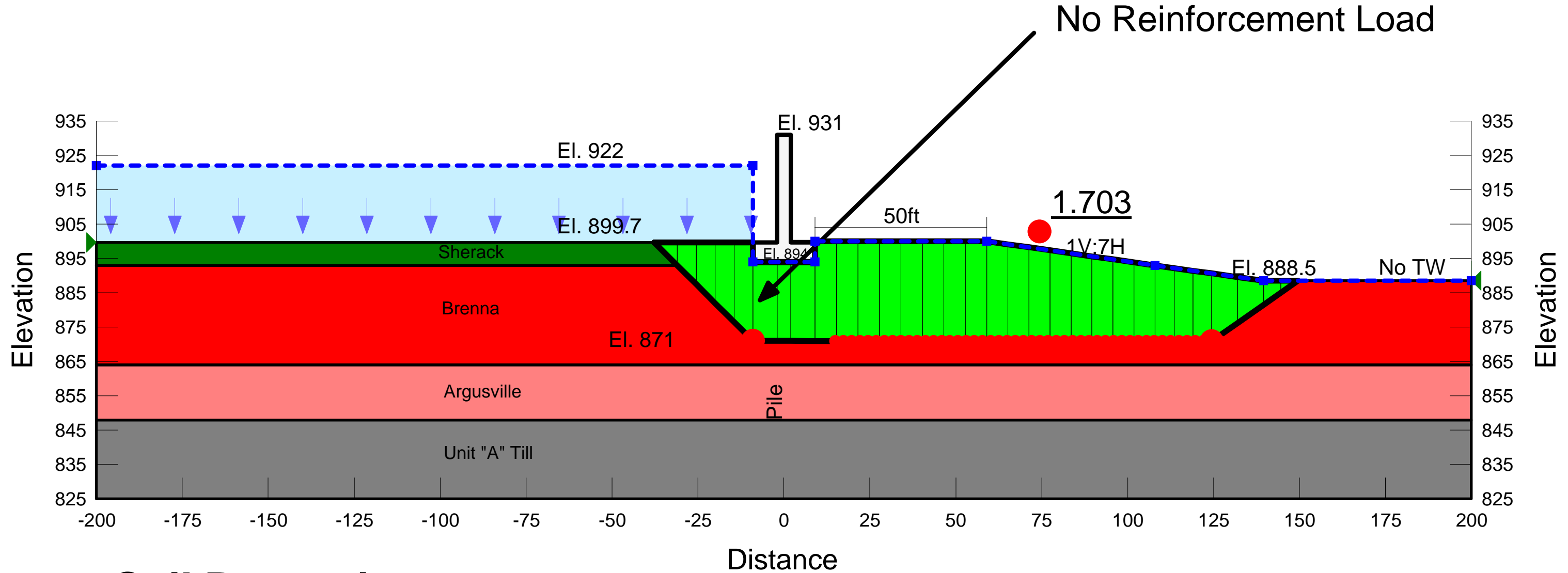
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion': 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion': 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

Created By: Foss, Jason; Schmidt, Luke; & Heckendorf, Kurt
 Last Edited By: Schmidt, Luke L MVP
 Date: 2/26/2016

**F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 922
 Inlet Structure Parameters**

T-Wall UBAL Block Spec. El. 871 w/o Reinf



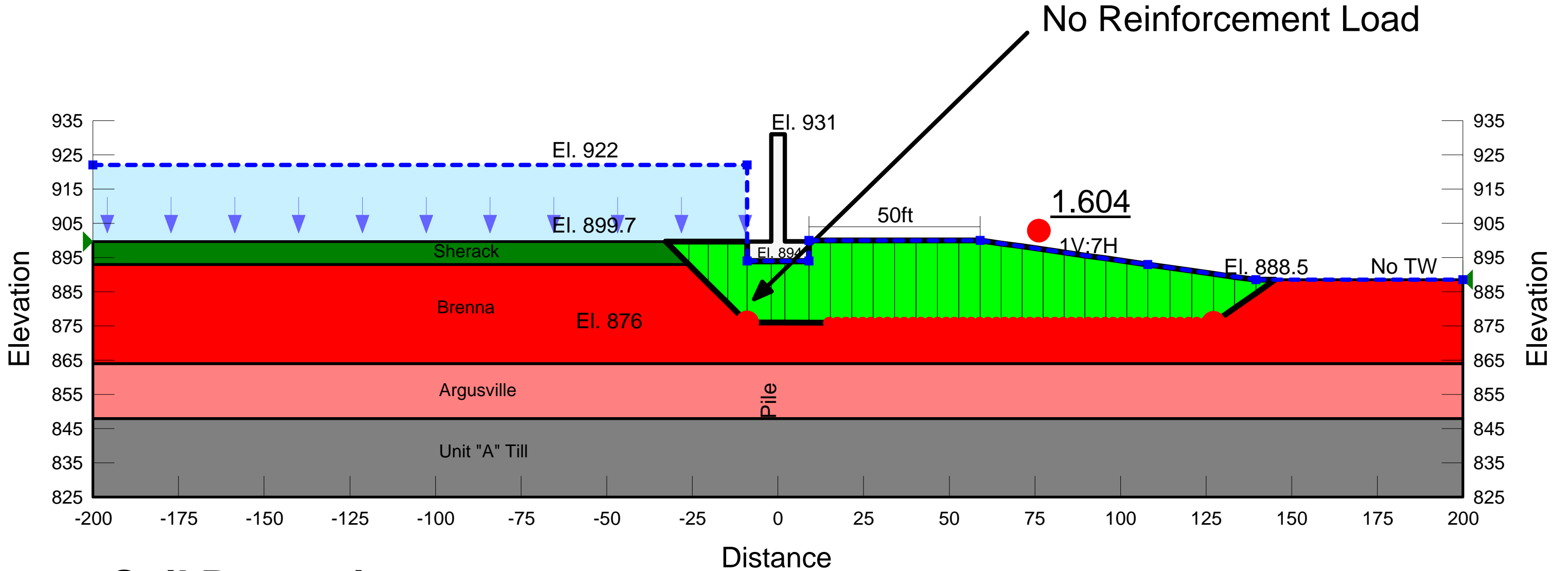
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion': 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion': 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

Created By: Foss, Jason; Schmidt, Luke; & Heckendorf, Kurt
 Last Edited By: Schmidt, Luke L MVP
 Date: 2/26/2016

**F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 922
 Inlet Structure Parameters**

T-Wall UBAL Block Spec. El. 876 w/o Reinf



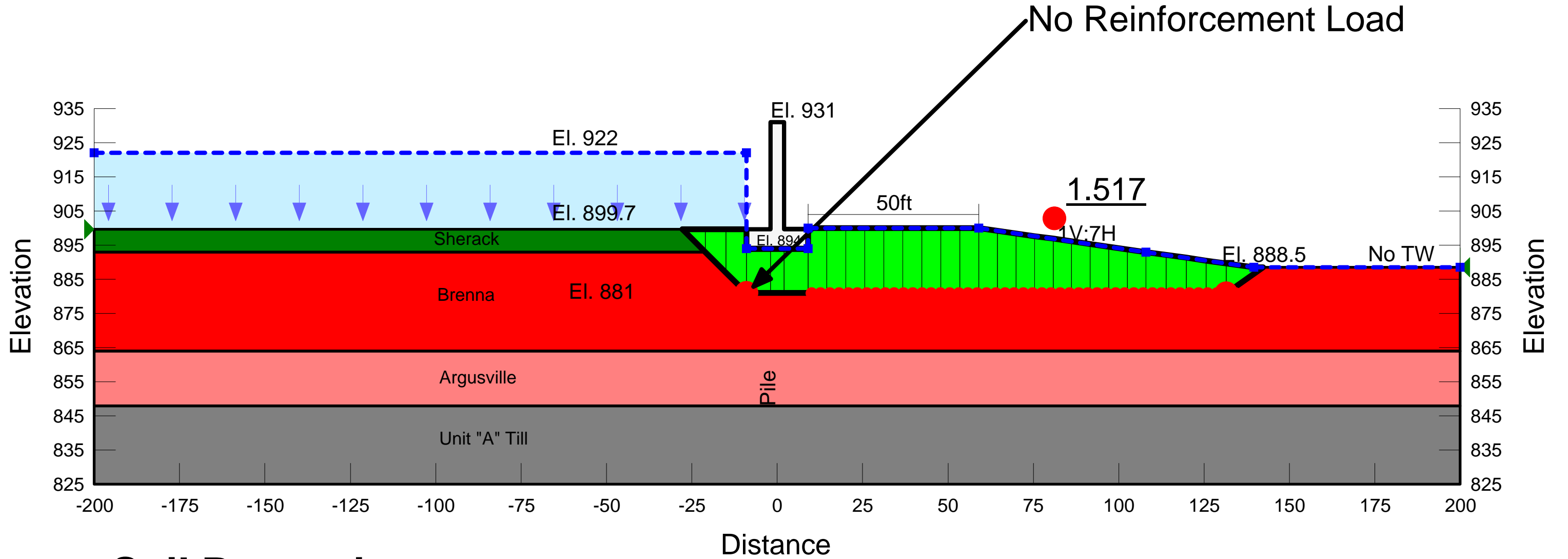
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion: 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion: 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

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**F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 922
 Inlet Structure Parameters**

T-Wall UBAL Block Spec. El. 881 w/o Reinf



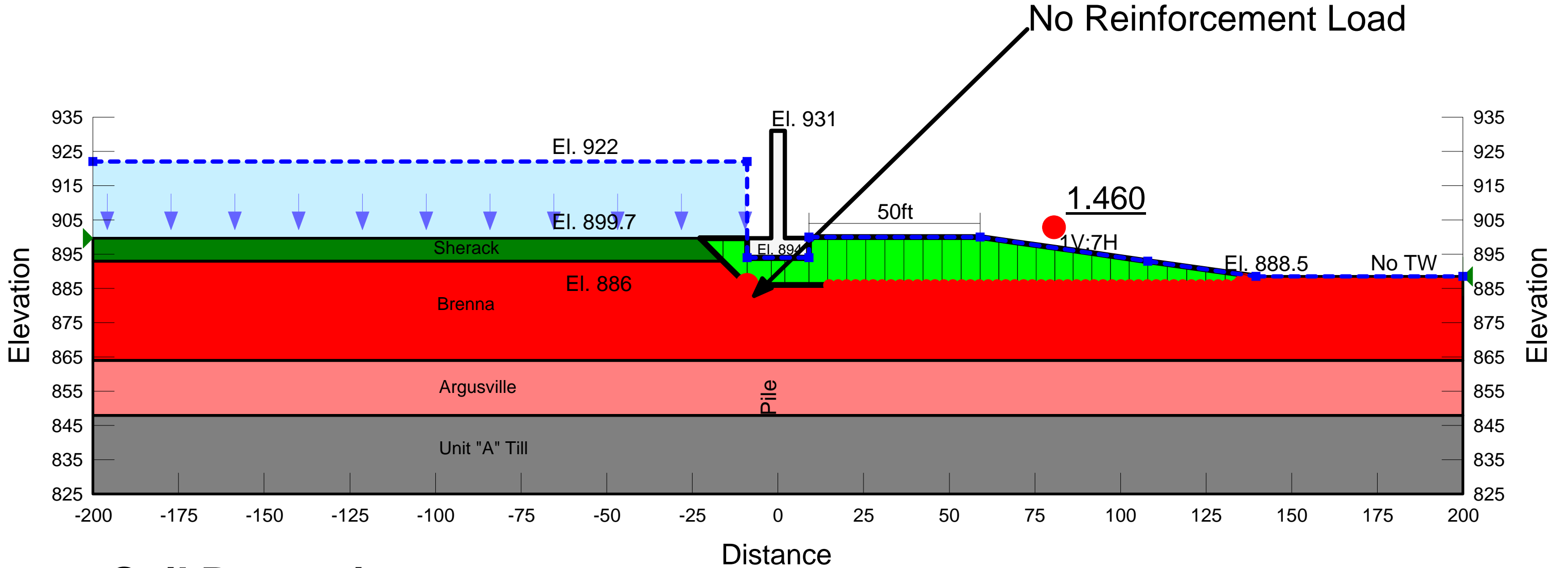
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion': 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion': 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

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 Last Edited By: Schmidt, Luke L MVP
 Date: 2/26/2016

**F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 922
 Inlet Structure Parameters**

T-Wall UBAL Block Spec. El. 886 w/o Reinf



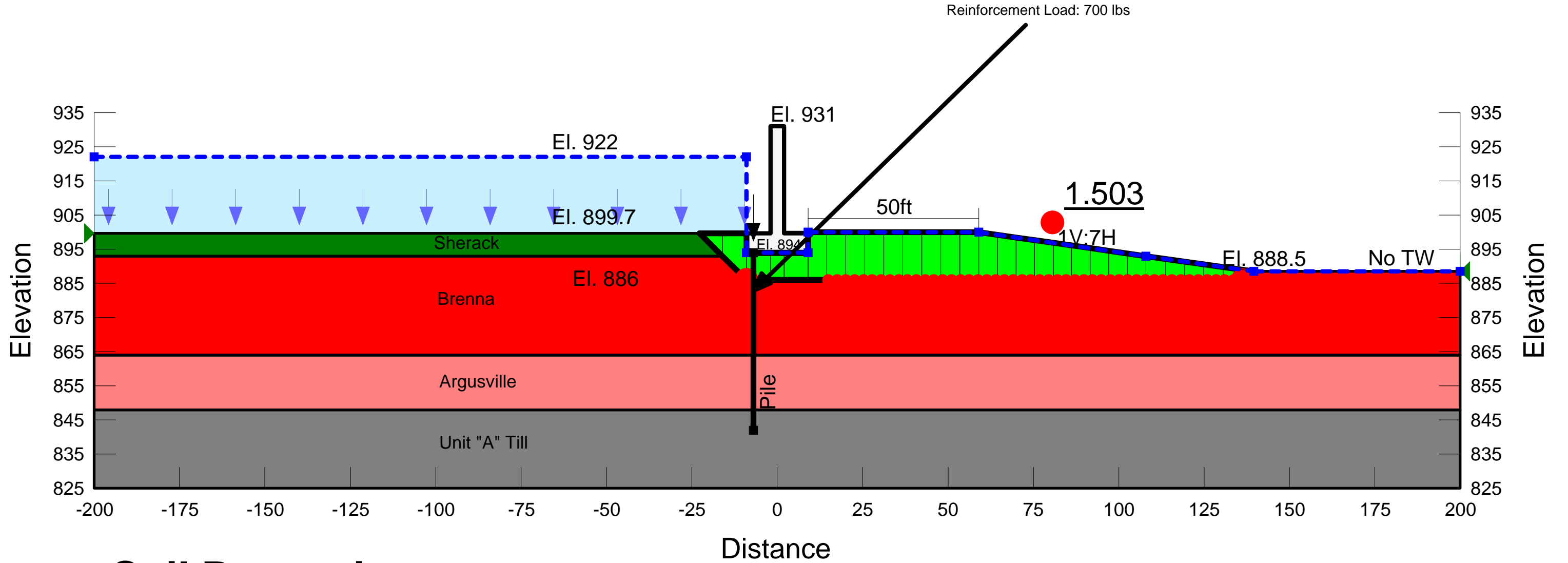
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion': 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion': 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

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 Last Edited By: Schmidt, Luke L MVP
 Date: 2/26/2016

**F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 922
 Inlet Structure Parameters**

T-Wall UBAL Block Spec. El. 886



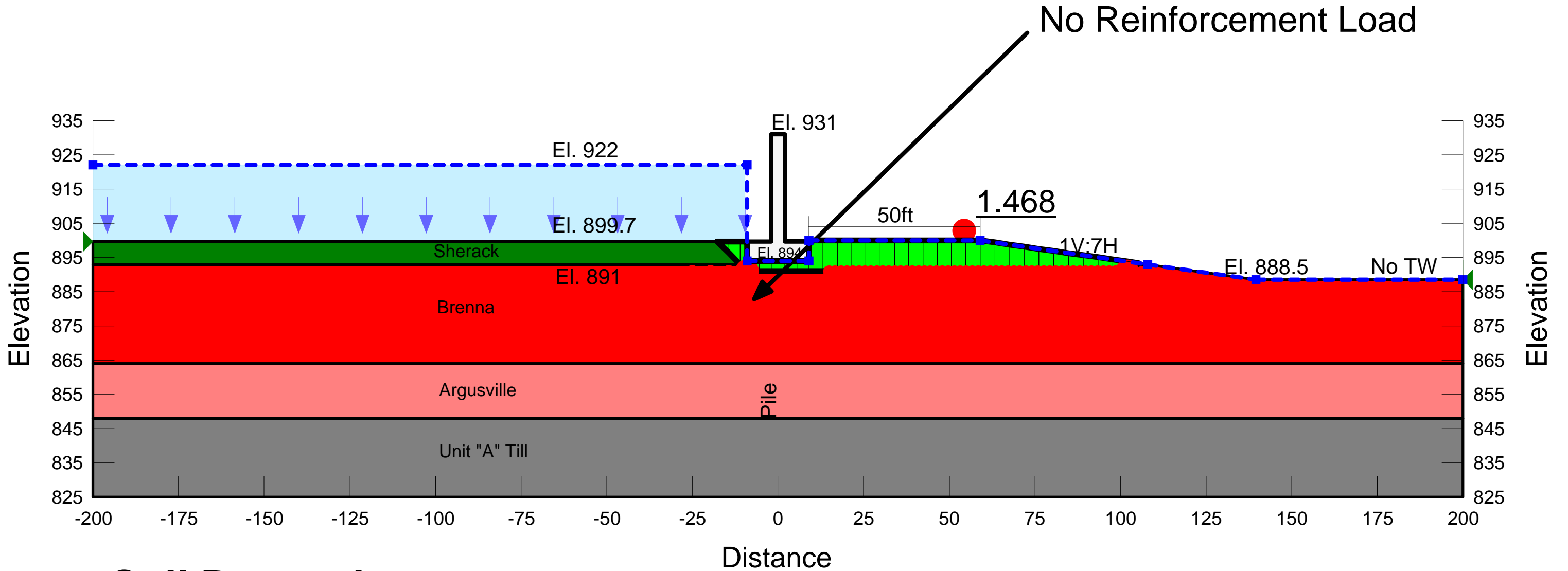
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion': 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion': 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

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Last Edited By: Schmidt, Luke L MVP
Date: 2/26/2016

**F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 922
 Inlet Structure Parameters**

T-Wall UBAL Block Spec. El. 891 w/o Reinf



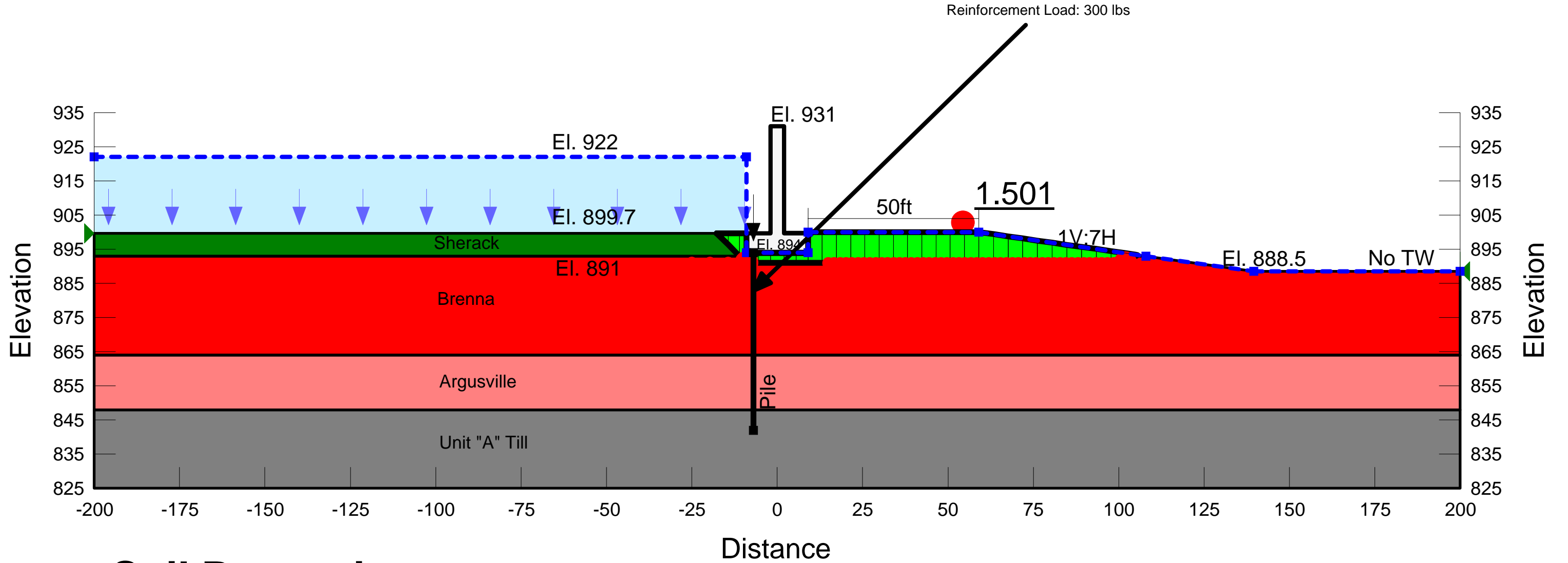
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion': 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion': 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

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**F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 922
 Inlet Structure Parameters**

T-Wall UBAL Block Spec. El. 891



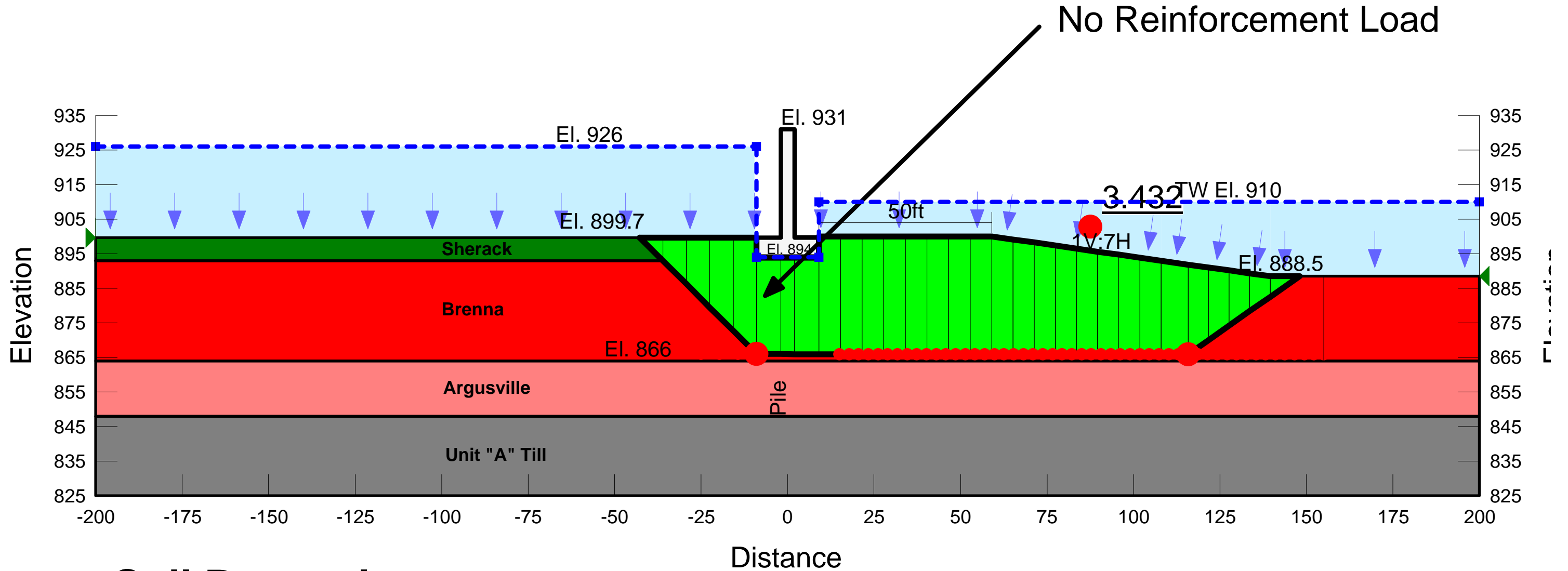
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion': 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion': 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion': 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

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F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 926
 Inlet Structure Parameters

T-Wall UBAL Block Spec. El. 866 w/o Reinf

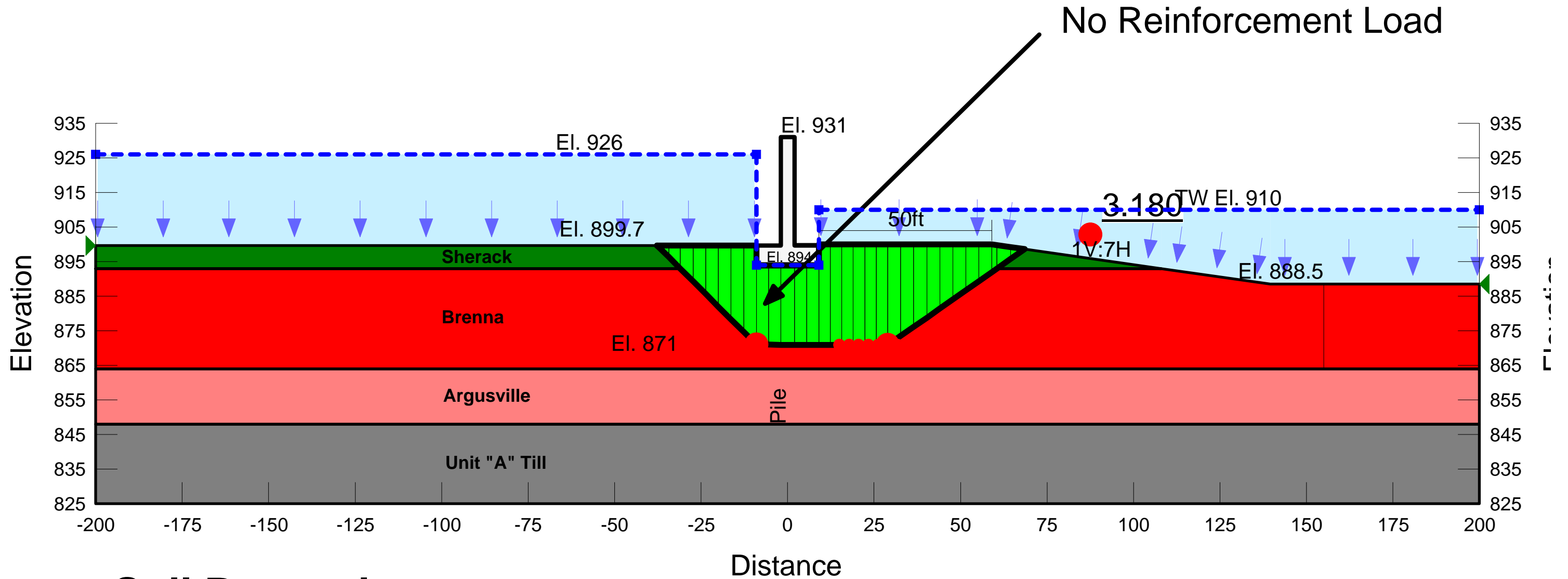


Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion: 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion: 225 psf	Phi: 22 °	Phi-B: 0 °			Piezometric Line: 1

F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 926
 Inlet Structure Parameters

T-Wall UBAL Block Spec. El. 871 w/o Reinf

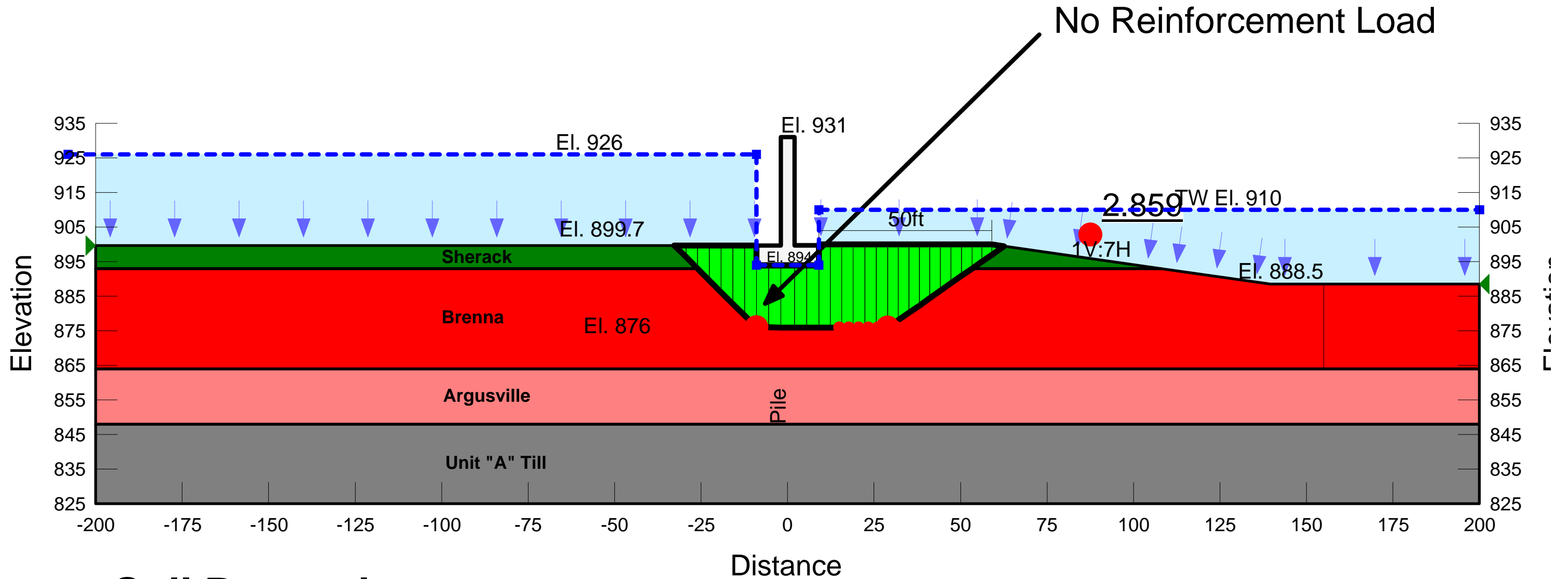


Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion: 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion: 225 psf	Phi: 22 °	Phi-B: 0 °			Piezometric Line: 1

F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 926
 Inlet Structure Parameters

T-Wall UBAL Block Spec. El. 876 w/o Reinf

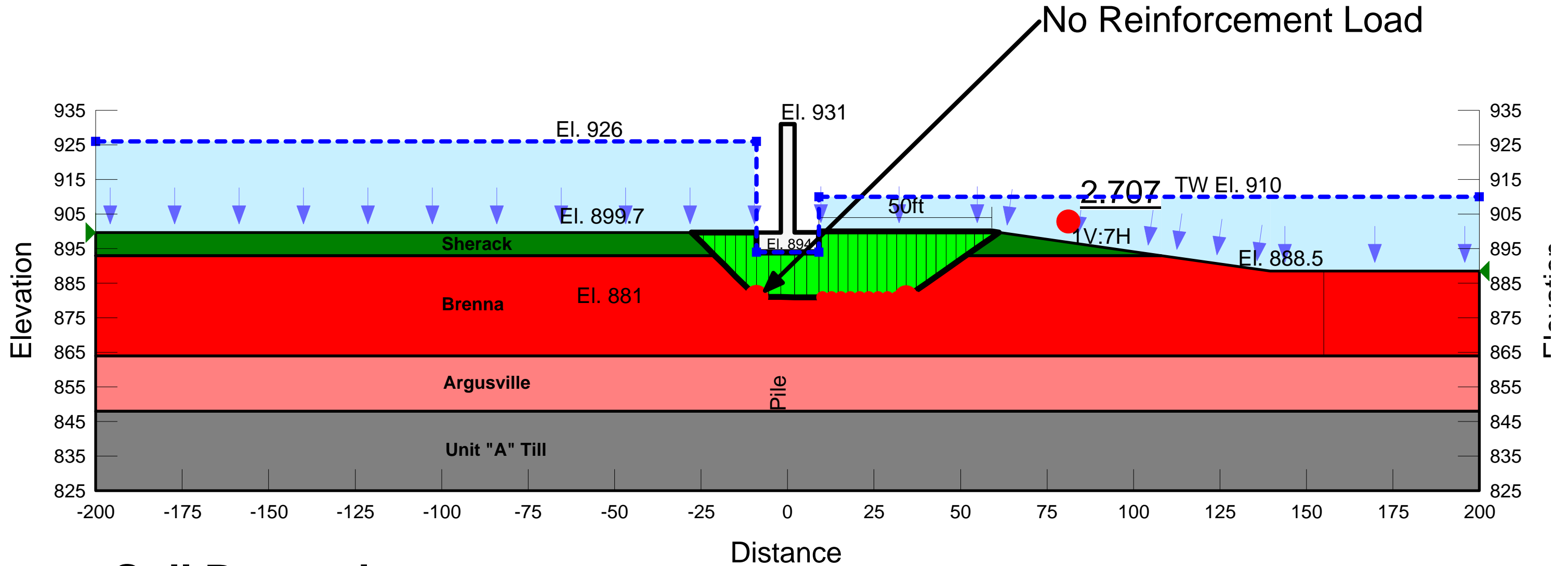


Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion: 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion: 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 926
 Inlet Structure Parameters

T-Wall UBAL Block Spec. El. 881 w/o Reinf

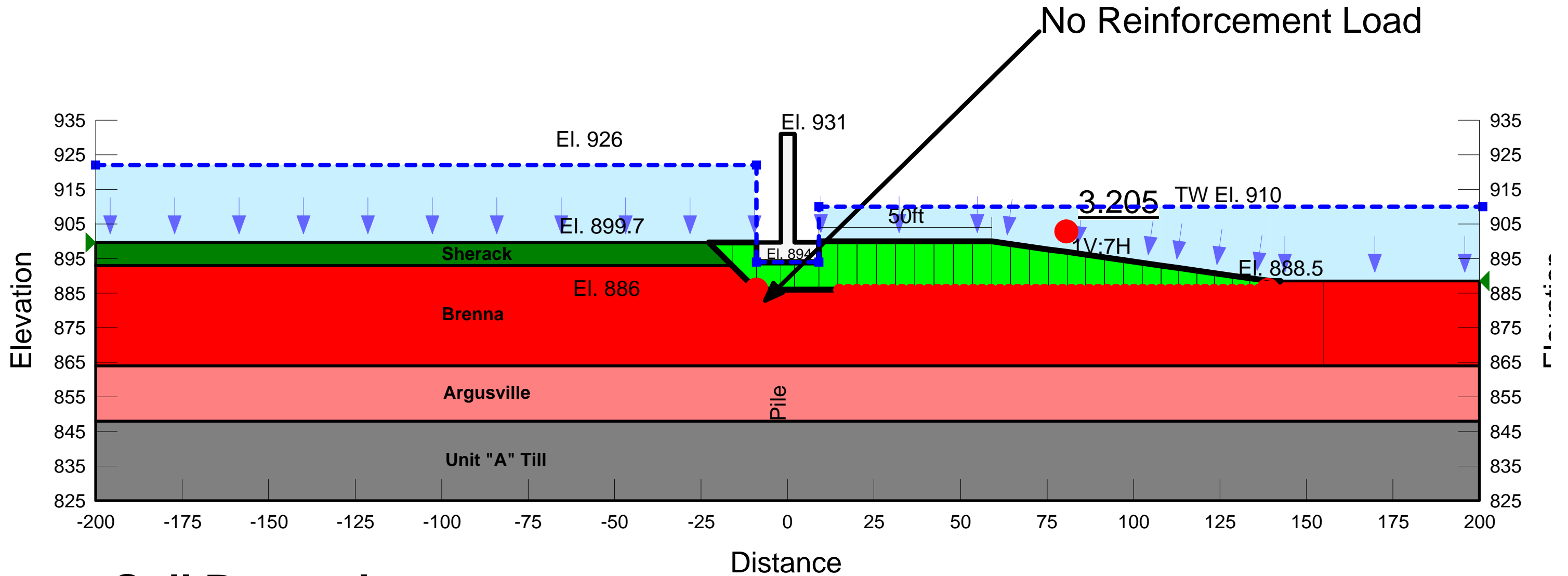


Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion: 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion: 225 psf	Phi: 22 °	Phi-B: 0 °			Piezometric Line: 1

F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 926
 Inlet Structure Parameters

T-Wall UBAL Block Spec. El. 886 w/o Reinf



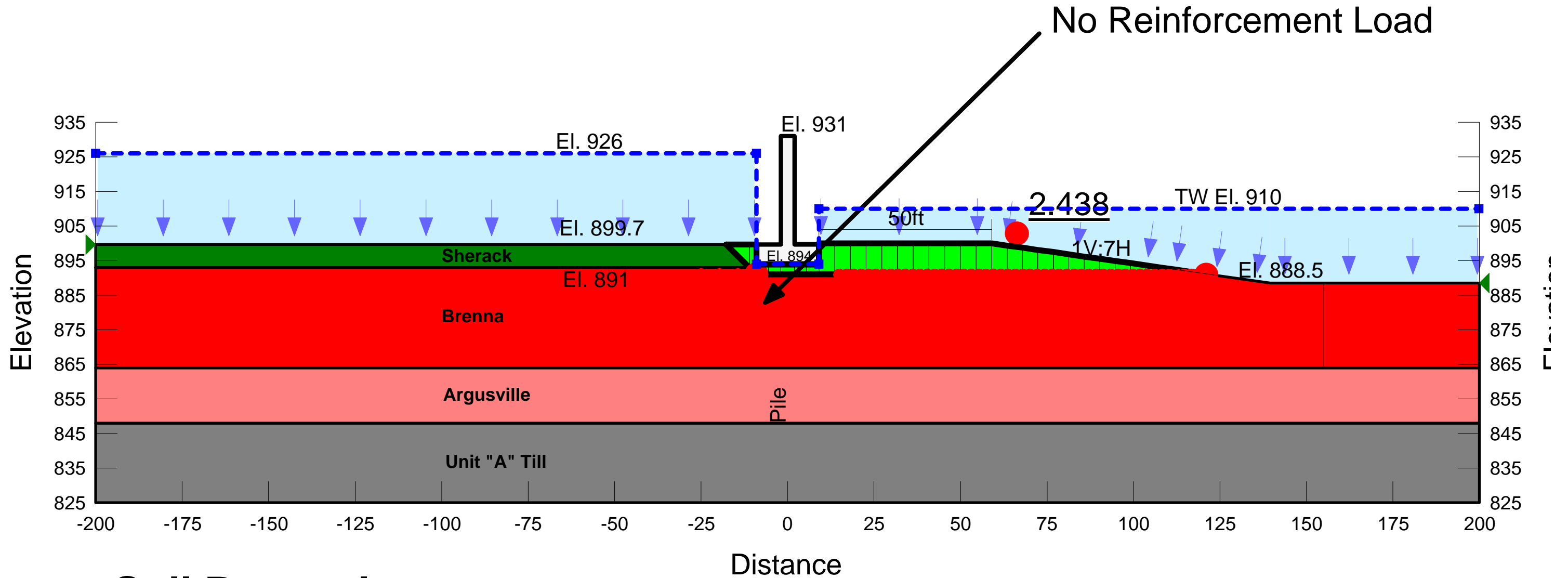
Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion: 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion: 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		

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 Last Edited By: Schmidt, Luke L MVP
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F-M Flood Risk Management
 Inlet Structure (T-Wall)
 Section 1
 Flood Loading at Elevation 926
 Inlet Structure Parameters

T-Wall UBAL Block Spec. El. 891 w/o Reinf



Soil Properties

Name: Sherack	Model: Bilinear	Unit Weight: 115 pcf	Cohesion: 0 psf	Phi 1: 28 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Brenna	Model: Bilinear	Unit Weight: 106 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Argusville	Model: Bilinear	Unit Weight: 110 pcf	Cohesion: 25 psf	Phi 1: 24 °	Phi 2: 11 °	Bilinear Normal: 2,000 psf	Phi-B: 0 °	Piezometric Line: 1
Name: Unit "A" Till	Model: Mohr-Coulomb	Unit Weight: 123 pcf	Cohesion: 225 psf	Phi: 22 °	Phi-B: 0 °	Piezometric Line: 1		