



Project No:
DE20-060

PLAN OF BORINGS

IH-10 IMPROVEMENTS
EL PASO COUNTY, TEXAS

FIGURE NO:
21



Project No:
DE20-060

PLAN OF BORINGS

IH-10 IMPROVEMENTS
EL PASO COUNTY, TEXAS

FIGURE NO:
22



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-29
Structure Bridge
Station
Offset

District El Paso
Date
Grnd. Elev. 3855.70 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks | |
|------------|-----|-------------------------|---|-------------------------------|--------------|------------|----|----|----------------|---|--------------------|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | | |
| 5 | | 22 (6) 9 (6) | SAND, slightly compact to dense, tan and reddish brown, silty, w/ crushed gravel and cobble (FILL) (SM) | | | 2 | | | | SPT at 0' 5/12/20 SPT at 1.5' 29/30/32 -Non Plastic -#200=14.2% | |
| | | | | | | | | | | SPT at 3.5' 8/11/14 | |
| | | | | | | | | | | SPT at 6.5' 5/8/7 | |
| | | | | | | | 2 | | | | SPT at 8' 6/7/9 |
| 10 | | 14 (6) 16 (6) | | | | | | | | | SPT at 10.5' 3/5/7 |
| 15 | | 50 (3.75) 50 (2) | SAND, slightly compact to very dense, tan and gray, w/ gravel and cobble | | | | | | | SPT 16.5' 8/10/11 | |
| 3835.720 | | 15 (6) 19 (6) | | | | | | | | SPT at 21.5' 5/8/10 -Non Plastic -#200=1% | |
| 25 | | 50 (2.5) 50 (1.5) | | | | | | | | SPT at 25' 38/6 50/6 -Boulders at 25 feet | |
| 30 | | 50 (1) 50 (0.75) | | | | | | | | -Boulders at 30 feet | |

Remarks: Latitude: 31.85288697 Longitude: -106.5745658

The ground water elevation was not determined during the course of this boring.

Driller: RD Cromeans

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-29
Structure Bridge
Station
Offset

District El Paso
Date
Grnd. Elev. 3855.70 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|--|-------------------------------|--------------|------------|----|----|----------------|-------------------------------------|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3820.735 | | 50 (1.75) 50 (1) | SAND, slightly compact to very dense, tan and gray, w/ gravel and cobble | | | | | | | |
| 40 | | 50 (1.75) 50 (1.25) | BOULDER, very dense, reddish brown, tan, and gray, w/ sand and gravel | | | | | | | |
| 3813.7 | | | | | | | | | | |
| 45 | | 50 (1.75) 50 (1.5) | SAND, dense to very dense, tan and gray, silty, w/ gravel and cobble (SP-SM) | | | | | | | |
| 50 | | 50 (3.5) 50 (2) | | | | | | | | SPT at 51' 34/6 50/2 |
| 55 | | 50 (1.25) 50 (1) | | | | | | | | -Boulders at 55 feet -#200=11.6% |
| 60 | | 50 (2.75) 50 (2) | | | | | | | | |

Remarks: Latitude: 31.85288697 Longitude: -106.5745658

The ground water elevation was not determined during the course of this boring.

Driller: RD Cromeans

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-29
Structure Bridge
Station
Offset

District El Paso
Date
Grnd. Elev. 3855.70 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|--|----------------------|-----------------------|------------|----|----|----------------|----------------------------|
| | | | | Lateral Press. (psi) | Deviator Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 65 | | 50 (3.5) 50 (2.5) | SAND, dense to very dense, tan and gray, silty, w/ gravel and cobble (SP-SM) | | | | | | | SPT at 61' 27/25/26 |
| 70 | | 50 (1) 50 (0.75) | | | | | | | | SPT at 66' 26/34/34 |
| 75 | | 50 (1.75) 50 (1.5) | | | | | | | | -Boulders at 69 to 71 feet |
| 3775.780 | | 50 (4.5) 50 (1.25) | | | | | | | | |
| 85 | | | | | | | | | | |
| 90 | | | | | | | | | | |

Remarks: Latitude: 31.85288697 Longitude: -106.5745658

The ground water elevation was not determined during the course of this boring.

Driller: RD Cromeans

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-30
Structure Bridge
Station
Offset

District El Paso
Date 08/14/2020
Grnd. Elev. 3843.50 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks | |
|------------|-----|-------------------------|--|-------------------------------|--------------|------------|----|----|----------------|--------------------|---|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | | |
| | | | SAND, slightly compact to dense, tan and brown, silty, w/ crushed stone, gravel and cobble (FILL) (SM) | | | 0.5 | | | | SPT at 0' 5/16/34 | |
| 5 | | 40 (6) 30 (6) | | | | | | | | | |
| | | | | | | | 3 | | | | Non Plastic #200=20% SPT at 8.5' 9/11/12 |
| 10 | | 15 (6) 15 (6) | | | | | | | | | SPT at 12.5' 6/6/9 |
| 15 | | 17 (6) 18 (6) | | | | | | | | | SPT at 17.5' 5/7/10 |
| 20 | | 39 (6) 50 (4.5) | | | | | | | | | SPT at 21.5' 18/25/27 Non Plastic #200=19% |
| | | | SAND, compact to dense, tan and gray, w/ gravel and cobble (SP) | | | 5 | | | | | |
| 25 | | 50 (4) 46 (6) | | | | | | | | | SPT at 26.5' 15/15/22 |
| 30 | | 49 (6) 50 (4.5) | | | | | | | | | |

Remarks: Latitude: 31.85288697 Longitude: -106.5745658

The ground water elevation was not determined during the course of this boring.

Driller: Clifford Rigby

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-30
Structure Bridge
Station
Offset

District El Paso
Date 08/14/2020
Grnd. Elev. 3843.50 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|---|-------------------------------|--------------|------------|----|----|----------------|---|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| | | | SAND, compact to dense, tan and gray, w/ gravel and cobble (SP) | | | | | | | SPT at 31.5' 10/29/ 50/4" |
| 35 | | 22 (6) 50 (5.5) | | | | | | | | SPT at 36.5' 18/6" 50/5" |
| 40 | | 50 (4) 50 (5) | | | | | | | | SPT at 41.5' 29/18/ 50/2" -Boulders at 42 to 44 feet |
| 45 | | 24 (6) 36 (6) | | | | | | | | SPT at 46.5' 8/12/18 Non Plastic #200=3% |
| 50 | | 50 (5) 50 (2.5) | | | | 2 | | | | SPT at 51.5' 18/24/31 |
| 55 | | 45 (6) 50 (5) | | | | | | | | SPT at 56.5' 14/14/14 -Boulders at 58 to 60 feet |
| 60 | | 42 (6) 24 (6) | | | | | | | | |

Remarks: Latitude: 31.85288697 Longitude: -106.5745658

The ground water elevation was not determined during the course of this boring.

Driller: Clifford Rigby

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-30
Structure Bridge
Station
Offset

District El Paso
Date 08/14/2020
Grnd. Elev. 3843.50 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks | |
|------------|-----|-------------------------|--|-------------------------------|--------------|------------|----|----|----------------|-----------------------|---|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | | |
| 3780.5 | / | | SAND, compact to dense, tan and gray, w/ gravel and cobble (SP) | | | | | | | SPT at 61.5' 12/15/14 | |
| 3778.565 | | 50 (3.5) 50 (3) | CLAY, brown (CH) | | | | | | | | |
| 70 | . | | SAND, dense to very dense, tan and gray, silty, w/ gravel and cobble (SP-SM) | | | | | | | SPT at 66.5' 29/28/32 | |
| | | 50 (3.75) 50 (2.5) | | | | | | | | | SPT at 71.5' 33/38/43 Non Plastic #200=6% |
| 75 | | 50 (0.5) 50 (0.25) | | | | | | | | | -Boulders at 75 feet SPT at 76.5' 50/1.25" |
| 3763.580 | | 48 (6) 50 (4.75) | | | | | | | | | |
| 85 | | | | | | | | | | | |
| 90 | | | | | | | | | | | |

Remarks: Latitude: 31.85288697 Longitude: -106.5745658

The ground water elevation was not determined during the course of this boring.

Driller: Clifford Rigby

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-31
Structure Bridge
Station
Offset

District El Paso
Date 08/17/2020
Grnd. Elev. 3823.30 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|---|-------------------------------|--------------|------------|----|----|----------------|---|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| | | | SAND, compact, brown, silty, w/ crushed stone, cobble, and gravel (FILL) (SM) | | | 2 | | | | SPT at 0' 12/13/11 |
| 5 | | 23 (6) 36 (6) | | | | | | | | |
| | | | | | | 9 | | | | SPT at 7' 11/14/17 #200=17% |
| 10 | | 32 (6) 46 (6) | | | | | | | | SPT at 11.5' 14/17/20 |
| 3810.3 | | | COBBLE, compact to dense, reddish brown, silty, sandy, w/ gravel (FILL) | | | | | | | |
| 15 | | 36 (6) 40 (6) | | | | | | | | SPT at 16.5' 14/6" |
| 20 | | 38 (6) 50 (5.75) | | | | | | | | |
| 3802.3 | | | SAND, compact to dense, tan and brown, silty, w/ gravel and cobble (SP-SM) | | | | | | | SPT at 21.5' 17/20/22 |
| 25 | | 50 (5.75) 50 (3.75) | | | | | | | | |
| | | | | | | 3 | | | | Non-Plastic #200=10% SPT at 26.5' 36/30/22 |
| 30 | | 29 (6) 25 (6) | | | | | | | | |

Remarks: Latitude: 31.84963604 Longitude: -106.5739114

The ground water elevation was not determined during the course of this boring.

Driller: Tracy

Logger: Rupesh Thapa

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-31
Structure Bridge
Station
Offset

District El Paso
Date 08/17/2020
Grnd. Elev. 3823.30 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|--|-------------------------------|--------------|------------|----|----|----------------|--|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 35 | | 50 (3) 50 (2.75) | SAND, compact to dense, tan and brown, silty, w/ gravel and cobble (SP-SM) | | | | | | | SPT at 31.5' 9/10/11 |
| 40 | | 32 (6) 39 (6) | | | | | | | | -Boulders at 36 to 38.5 feet |
| 3778.345 | | 50 (5.25) 50 (6) | | | | | | | | SPT at 41.5' 13/16/36 |
| 3773.350 | | 50 (1.75) 50 (1.25) | CLAY, hard, reddish brown, sandy, silty, w/ sand seams (CH) | | | 32 | | | | SPT at 46.5' 10/15/22 |
| 55 | | 50 (4) 50 (2.5) | SAND, dense to very dense, gray, silty (SM) | | | 10 | | | | Non-Plastic -#200=25% SPT at 51.5' 31/33/35 |
| 3763.360 | | 50 (3.25) 50 (1.5) | | | | | | | | SPT at 56.5' 29/28/38 |

Remarks: Latitude: 31.84963604 Longitude: -106.5739114

The ground water elevation was not determined during the course of this boring.

Driller: Tracy

Logger: Rupesh Thapa

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-32
Structure Bridge
Station
Offset

District El Paso
Date 08/31/2020
Grnd. Elev. 3820.90 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|---|-------------------------------|--------------|------------|----|----|----------------|---------------------------------|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3820.3 | | | ASPHALT, 7 in. | | | | | | | |
| | | | SAND, dense, reddish brown and tan, silty, w/ gravel and cobble (FILL) (SM) | | | | | | | SPT at 2' 7/8/6 |
| 5 | | 50 (3.5) 50 (4) | | | | 3 | | | | SPT at 6.5' 9/12/11 #200=14% |
| 3812.9 | | | SAND, dense to very dense, reddish brown and tan, silty, w/ gravel and cobble (SP-SM) | | | | | | | SPT at 11.5' 15/13/10 |
| 10 | | 50 (4.75) 50 (2) | | | | | | | | |
| 15 | | 40 (6) 49 (6) | | | | | | | | |
| 20 | | 50 (2) 50 (0.75) | | | | | | | | -Boulders at 20 to 22 feet |
| 25 | | 50 (3) 50 (4.75) | | | | | | | | |
| 30 | | 50 (4.25) 50 (2.5) | | | | | | | | |

Remarks: Latitude: 31.84874896 Longitude: -106.5742786

The ground water elevation was not determined during the course of this boring.

Driller: Clifford Rigby

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH 10
CSJ 2121-01-094

Hole B-32
Structure Bridge
Station
Offset

District El Paso
Date 08/31/2020
Grnd. Elev. 3820.90 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|----------------------|-------------------------|---|-------------------------------|--------------|------------|----|----|----------------|---|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3787.9 | [Soil Sample Column] | | SAND, dense to very dense, reddish brown and tan, silty, w/ gravel and cobble (SP-SM) | | | | | | | -Boulders at 31 feet |
| 35 | | 50 (4) 50 (2) | SAND, dense to very dense, tan and gray, w/ gravel and cobble | | | 12 | | | | SPT at 33' 20/22/19 |
| 40 | | 50 (5) 50 (4.75) | | | | | | | | Non-Plastic #200=12% SPT at 36.5' 17/16/13 |
| 45 | | 50 (5) 50 (3.75) | | | | | | | | SPT at 41.5' 30/25/23 |
| 50 | | 50 (1.75) 50 (1) | | | | | | | | SPT at 46.5' 29/27/26 |
| 55 | | 50 (5) 50 (1.75) | | | | | | | | -Boulders at 50 feet |
| 3760.960 | | 50 (3) 50 (1.75) | | | | | | | | |

Remarks: Latitude: 31.84874896 Longitude: -106.5742786

The ground water elevation was not determined during the course of this boring.

Driller: Clifford Rigby

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH-10
CSJ 2121-01-094

Hole RW-43
Structure Retaining Walls
Station
Offset

District El Paso
Date 02/25/21
Grnd. Elev. 3829.40 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|--|----------------------|-----------------------|------------|----|----|----------------|-------------------------------------|
| | | | | Lateral Press. (psi) | Deviator Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| | | | SAND, slightly compact to dense, tan, w/ gravel and cobbles (SP) | | | | | | | SPT @ 0' 10/8/7 SPT @ 1.5' 5/7/9 |
| | | 14 (6) 17 (6) | | | | | | | | |
| 5 | | 24 (6) 32 (6) | | | | | | | | SPT @ 6.5' 12/36/32 |
| | | | | | | | | | | SPT @ 8.5' 24/23/37 |
| 10 | | 43 (6) 46 (6) | | | | | | | | SPT @ 11.5' 36/32/40 |
| 3814.415 | | 50 (1) 50 (0.5) | SAND, dense to very dense, brown, w/ cobbles (SP) | | | | | | | |
| 3809.420 | | 39 (6) 50 (3) | | | | | | | | |
| 25 | | | | | | | | | | |
| 30 | | | | | | | | | | |

Remarks: Latitude: 31.852804 Longitude: -106.574784

The ground water elevation was not determined during the course of this boring.

Driller: RD Cromeans

Logger: Matthew Davis

Organization: AGG

DRILLING LOG



County El Paso
 Highway IH-10
 CSJ 2121-01-094

Hole RW-44
 Structure Retaining Walls
 Station
 Offset

District El Paso
 Date 02/25/2021
 Grnd. Elev. 3828.20 ft
 GW Elev. N/A

WinCore
 Version 3.3

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|------------------|-------------------------|--|-------------------------------|--------------|------------|----|----|----------------|--|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3817.7 | [Dotted pattern] | | SAND, slightly compact to compact, tan, w/ gravel and cobbles (SP) | | | | | | | SPT @ 0' 12/18/27 SPT @ 1.5' 10/7/7 SPT @ 6.5' 14/13/22 SPT @ 8' 11/32/ 50/1" SPT @ 11.5' 12/16/14 |
| | | 12 (6) 16 (6) | | | | | | | | |
| | | 37 (6) 27 (6) | | | | | | | | |
| | | 25 (6) 27 (6) | | | | | | | | |
| | | 27 (6) 37 (6) | | | | | | | | |
| 3808.220 | | 50 (3.25) 50 (4) | | | | | | | | |
| 25 | | | | | | | | | | |
| 30 | | | | | | | | | | |

Remarks: Latitude: 31.852097 Longitude: -106.574599

The ground water elevation was not determined during the course of this boring.

Driller: RD Cromeans

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH-10
CSJ 2121-01-094

Hole RW-50
Structure Retaining Walls
Station
Offset

District El Paso
Date 02/27/2021
Grnd. Elev. 3830.40 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|--|-------------------------------|--------------|------------|----|----|----------------|----------------------|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3828.9 | | | ASPHALT, 4 in., 14 in. gravel base | | | | | | | SPT @ 1.5' 12/22/32 |
| | | 38 (6) 42 (6) | SAND, slightly compact to dense, tan, w/ gravel and cobbles (SP) | | | | | | | |
| 5 | | 40 (6) 50 (4.5) | | | | | | | | SPT @ 6.5' 17/30/22 |
| | | | | | | | | | | SPT @ 8.5' 17/18/22 |
| 10 | | 22 (6) 50 (5) | | | | | | | | SPT @ 11.5' 37/22/27 |
| | | | | | | | | | | |
| 15 | | 20 (6) 19 (6) | | | | | | | | SPT @ 16.5' 19/14/14 |
| | | | | | | | | | | |
| 3810.420 | | 20 (6) 22 (6) | | | | | | | | |
| | | | | | | | | | | |
| 25 | | | | | | | | | | |
| | | | | | | | | | | |
| 30 | | | | | | | | | | |

Remarks: Latitude: 31.852005 Longitude: -106.574122

The ground water elevation was not determined during the course of this boring.

Driller: RD Cromeans

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH-10
CSJ 2121-01-094

Hole RW-51
Structure Retaining Walls
Station
Offset

District El Paso
Date 02/10/2021
Grnd. Elev. 3832.00 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|------------------|-------------------------|--|-------------------------------|--------------|------------|----|----|----------------|---|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3828.5 | [Dotted pattern] | 50 (3.25) 50 (3.25) | SAND, dense, tan and brown, w/ gravel and cobbles (SP) | | | | | | | SPT @ 0' 6/8/12 SPT @ 1.5' 12/15/20 |
| | | 50 (5.5) 50 (3.5) | SAND, dense to very dense, tan and brown, w/ crushed gravel, cobbles and boulders (SP) | | | | | | | SPT @ 6.5' 24/40/34 SPT @ 8.5' 27/6 50/3.5 |
| | | 50 (2.5) 50 (1.75) | | | | | | | | |
| | | 50 (1.25) 50 (0.5) | | | | | | | | |
| | | 50 (3) 50 (2.5) | | | | | | | | |
| 3810.5 | | | SAND, dense, brown (SP) | | | | | | | SPT @ 21.5' 18/27/38 |
| 3807.25 | | 42 (6) 50 (5) | | | | | | | | |
| 30 | | | | | | | | | | |

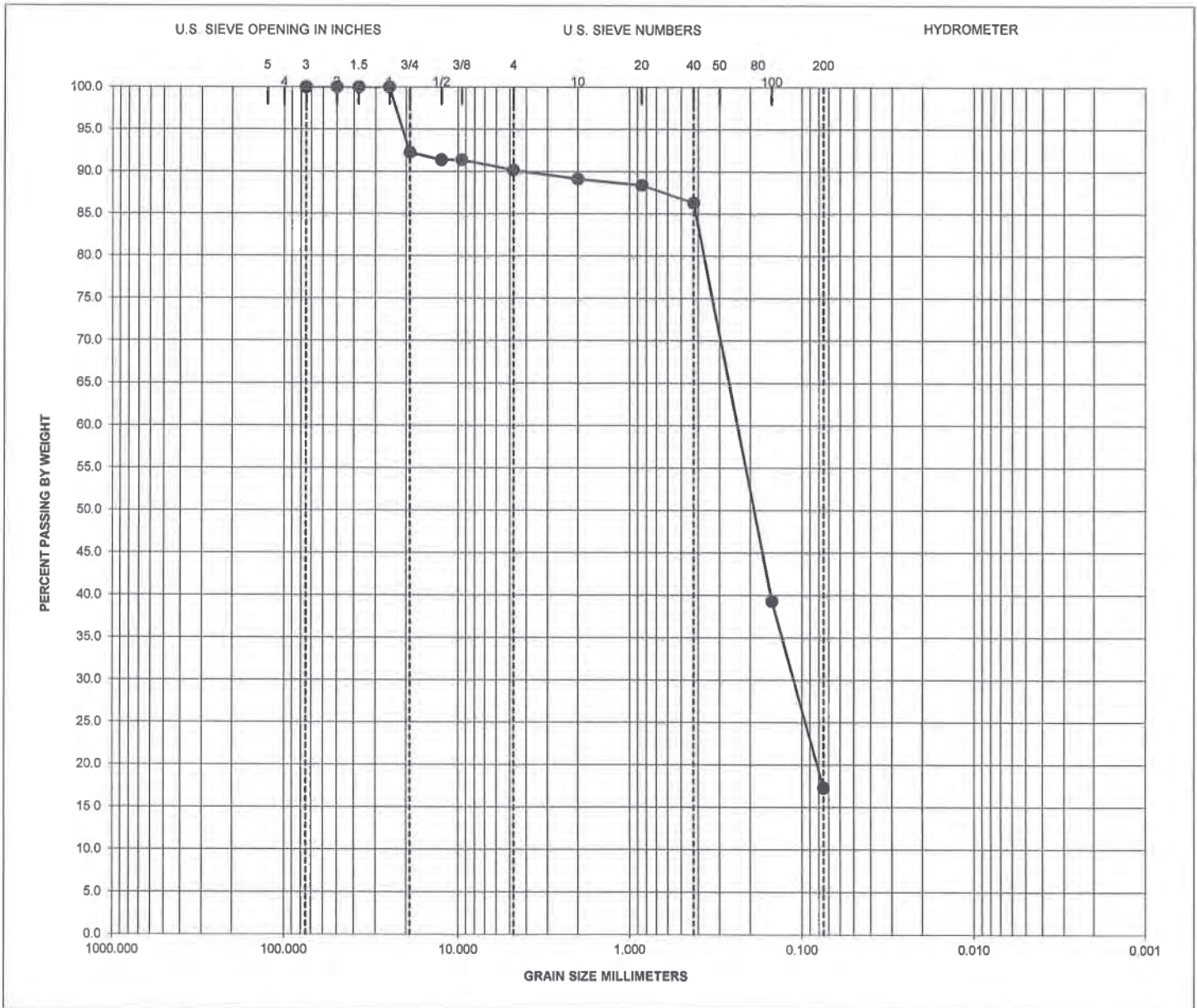
Remarks: Latitude: 31.852954 Longitude: -106.574271

The ground water elevation was not determined during the course of this boring.

Driller: RD Cromeans

Logger: Matthew Davis

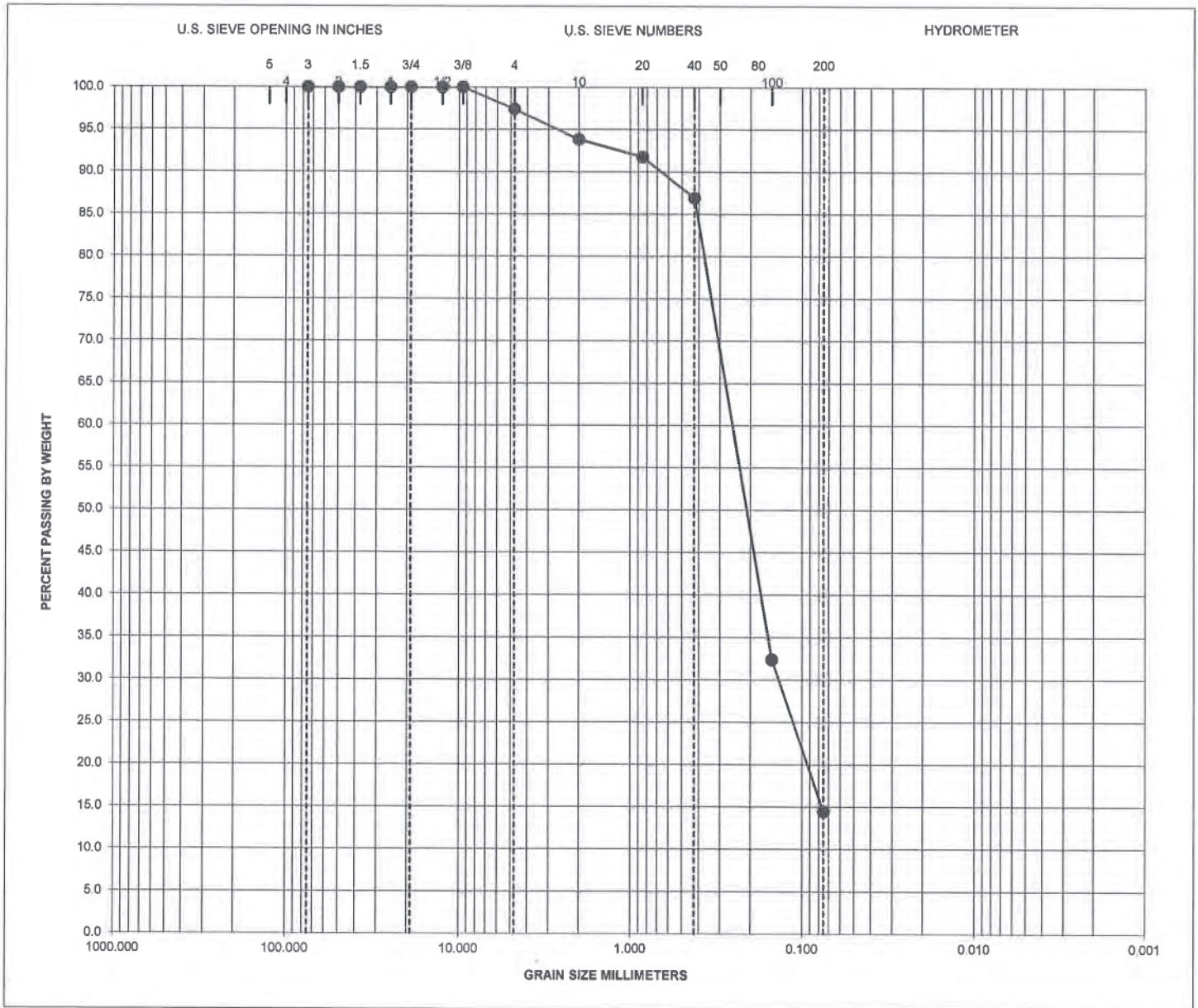
Organization: AGG



| Specimen Identification | | Classification | | | | | LL | PL | PI | Cu | Cc |
|-------------------------|-------|---------------------------------------|--|--|--|--|----|----|----|----|----|
| ● B-31 | 7-8.5 | SAND, brown, silty with gravel (SM) | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| Specimen Identification | | D100 | D50 | D30 | D10 | %Gravel | %Sand | % #200 |
|-------------------------|-------|------|---------|-----|-----|---------|-------|--------|
| ● B-31 | 7-8.5 | | 0.19 mm | | | 9.85 | 72.90 | 17.25 |
| | | | | | | | | |
| | | | | | | | | |

| | | | | |
|------------|--------------------------------|-------------|------------------------------------|--|
| | GRAIN SIZE DISTRIBUTION | | | |
| | Project Name: | | IH10 Improvements - El Paso | |
| | Project No: | | DE20-060 | |
| Tested by: | Date Tested: | Checked by: | ALLIANCE GEOTECHNICAL GROUP | |
| CS | 9/20/2020 | JP | | |



| Specimen Identification | | Classification | | | | | LL | PL | PI | Cu | Cc |
|-------------------------|---------|---|--|--|--|--|----|----|----|----|----|
| ● B-32 | 6.5'-8' | SAND, reddish brown and tan, silty (SM) | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| Specimen Identification | | D100 | D50 | D30 | D10 | %Gravel | %Sand | % #200 |
|-------------------------|---------|------|---------|-----|-----|---------|-------|--------|
| ● B-32 | 6.5'-8' | | 0.29 mm | | | 2.62 | 82.95 | 14.43 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | | | | | |
|------------|--------------------------------|-------------|------------------------------------|--|--|
| | GRAIN SIZE DISTRIBUTION | | | | |
| | Project Name: | | IH 10 Improvements - EL PASO | | |
| | Project No: | | DE20-060 | | |
| Tested by: | Date Tested: | Checked by: | ALLIANCE GEOTECHNICAL GROUP | | |
| CS | 9/16/2020 | JP | | | |

SKIN FRICTION DESIGN

WinCore
Version 3.3

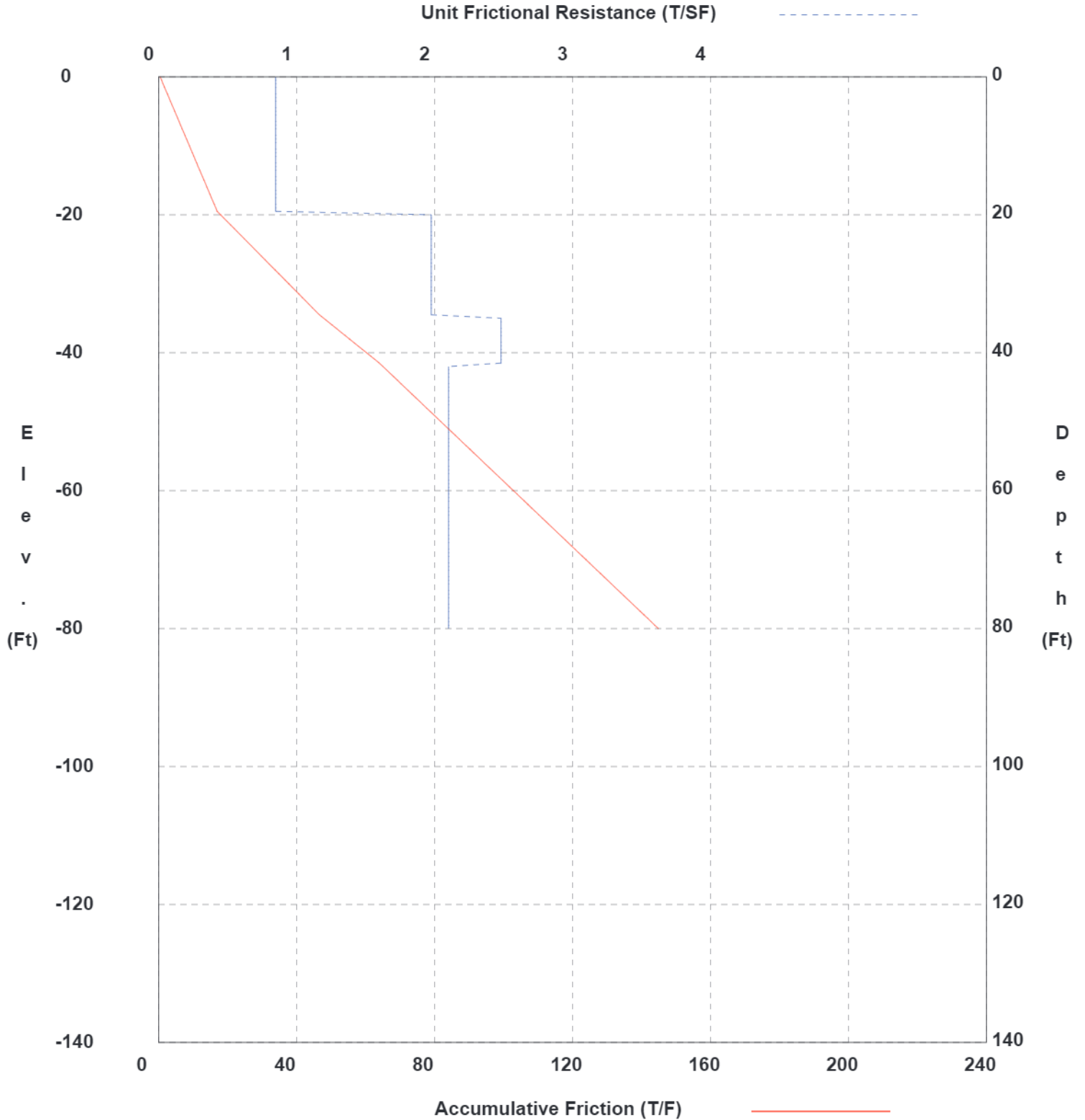
County El Paso
Highway IH 10
Control 2121-01-094

Hole B-29
Structure Bridge
Station
Offset

District El Paso
Date
Grnd. Elev. 0.00 ft
GW Elev. N/A

Drilled Shaft Design: Soil Reduction Factor = 0.7

TAT Friction Values Used



SKIN FRICTION DESIGN

WinCore
Version 3.3

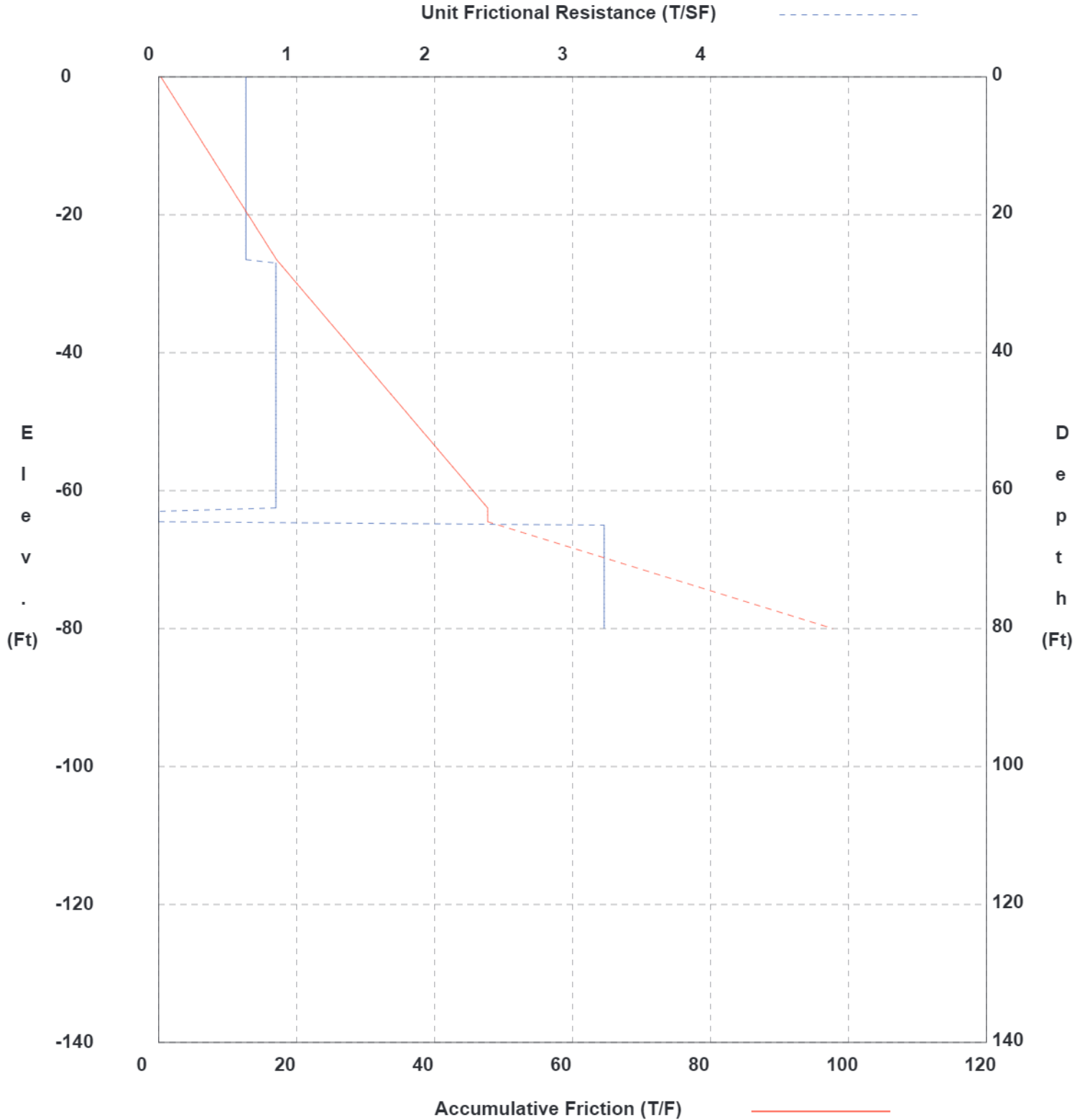
County El Paso
Highway IH 10
Control 2121-01-094

Hole B-30
Structure Bridge
Station
Offset

District El Paso
Date 08/14/2020
Grnd. Elev. 0.00 ft
GW Elev. N/A

Drilled Shaft Design: Soil Reduction Factor = 0.7

TAT Friction Values Used



SKIN FRICTION DESIGN

WinCore
Version 3.3

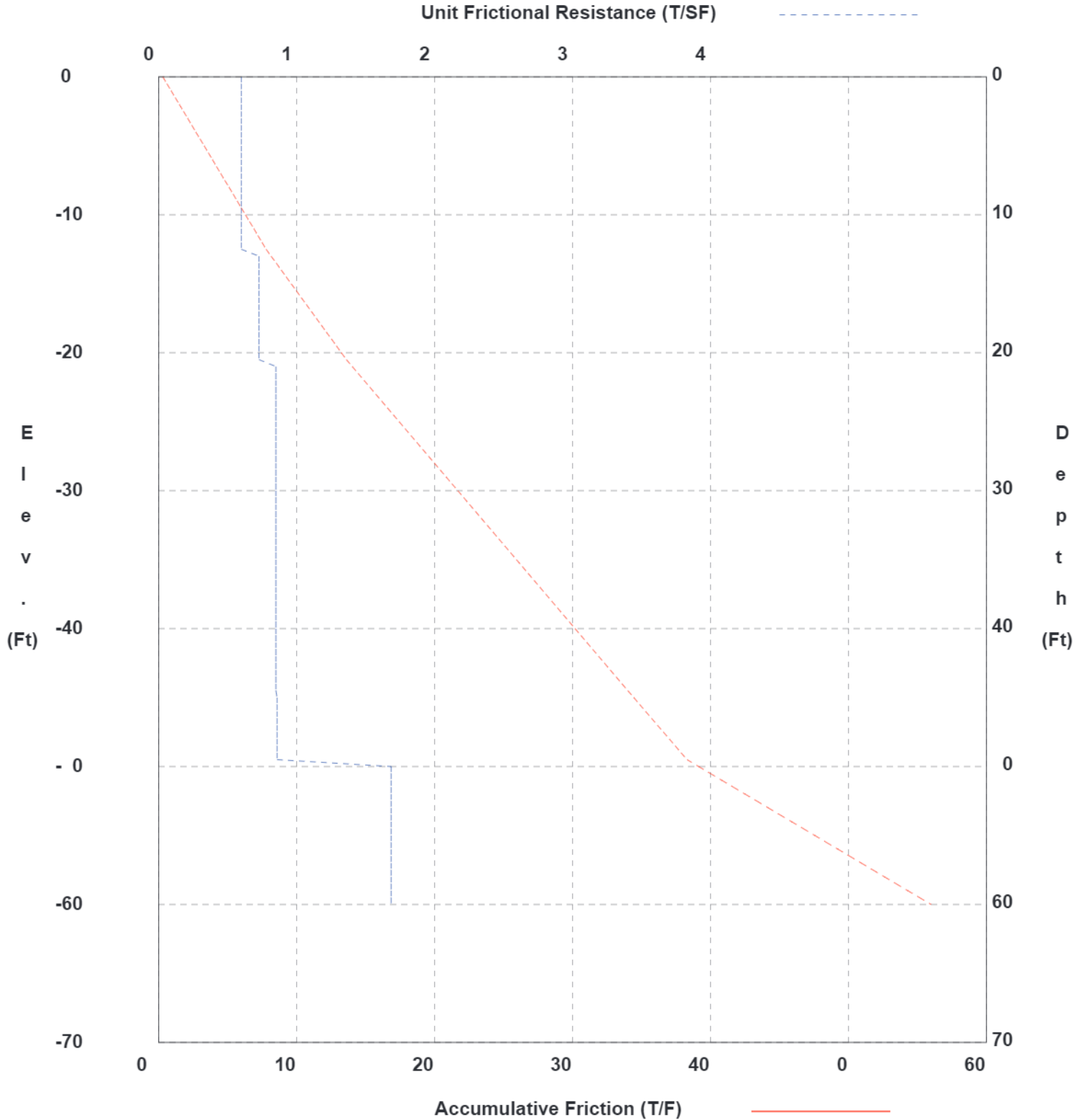
County El Paso
Highway IH 10
Control 2121-01-094

Hole B-31
Structure Bridge
Station
Offset

District El Paso
Date 08/17/2020
Grnd. Elev. 0.00 ft
GW Elev. N/A

Drilled Shaft Design: Soil Reduction Factor = 0.7

TAT Friction Values Used



SKIN FRICTION DESIGN

WinCore
Version 3.3

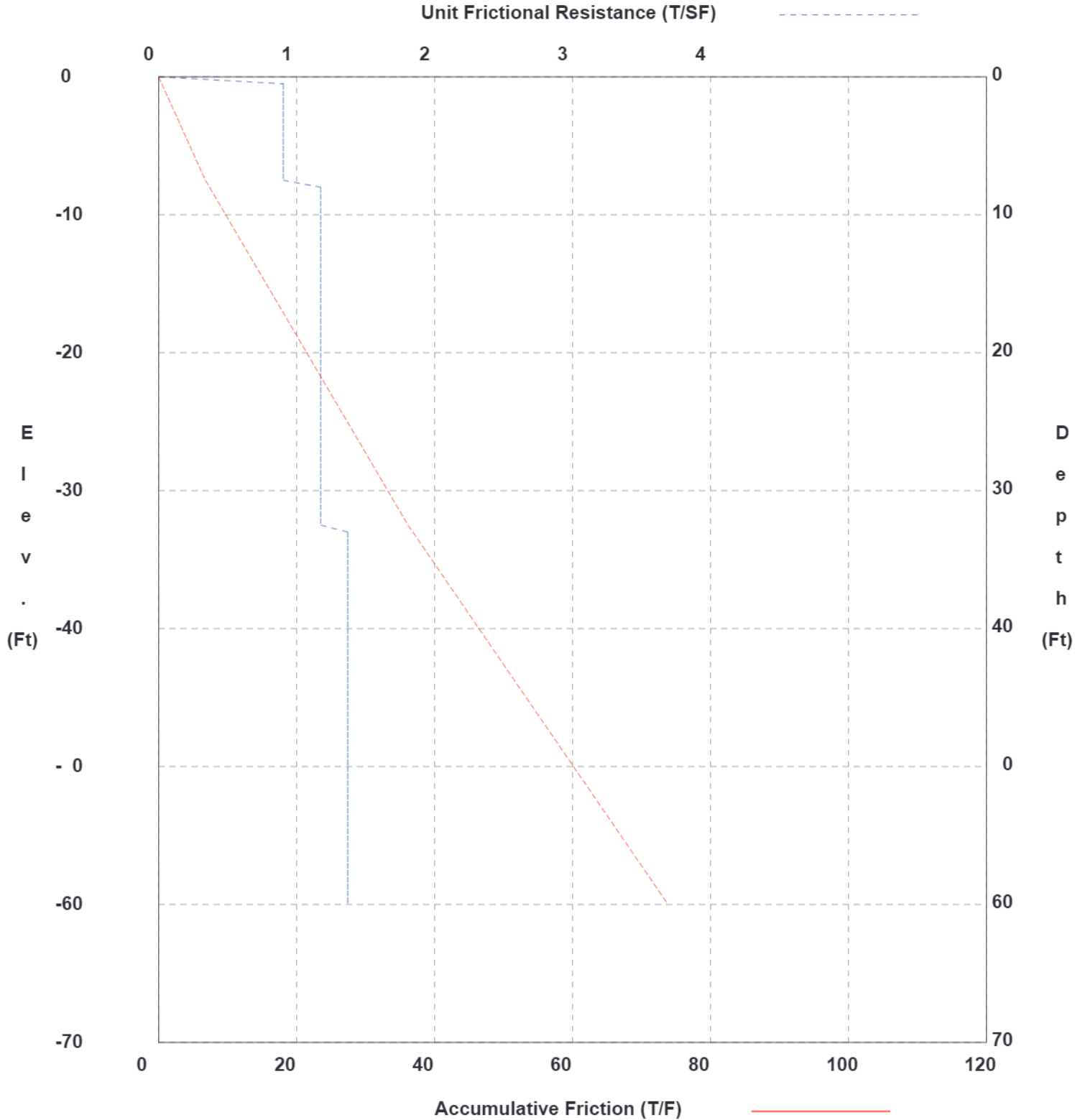
County El Paso
Highway IH 10
Control 2121-01-094

Hole B-32
Structure Bridge
Station
Offset

District El Paso
Date 08/31/2020
Grnd. Elev. 0.00 ft
GW Elev. N/A

Drilled Shaft Design: Soil Reduction Factor = 0.7

TAT Friction Values Used



| Boring No. | Depth (ft.) | Drilled Shaft and/or driven pile Diameter Sizes Between Greater than 24 and 48 Inches | Drilled Shaft and/or driven pile Diameter Sizes Greater Than 48 Inches |
|-------------|-------------|---|--|
| B-25 & B-26 | 0-15 | Ignored | Ignored |
| | 15-30 | 1.8 | 1.8 |
| | 30-45 | 2.0 | 2.4 |
| | 45-50 | 2.0 | 3.0 |

| Boring No. | Depth (ft.) | Drilled Shaft and/or driven pile Diameter Sizes Between Greater than 24 and 48 Inches | Drilled Shaft and/or driven pile Diameter Sizes Greater Than 48 Inches |
|-------------|-------------|---|--|
| B-27 & B-28 | 0-15 | Ignored | Ignored |
| | 15-30 | 1.4 | 1.4 |
| | 30-40 | 2.0 | 2.5 |
| | 40-50 | 2.0 | 5.0 |

| Boring No. | Depth (ft.) | Drilled Shaft and/or driven pile Diameter Sizes Between Greater than 24 and 48 Inches | Drilled Shaft and/or driven pile Diameter Sizes Greater Than 48 Inches |
|-------------|-------------|---|--|
| B-29 & B-30 | 0-15 | Ignored | Ignored |
| | 15-25 | 1.2 | 1.2 |
| | 25-65 | 2.0 | 2.5 |
| | 65-70 | 2.0 | 5.0 |

| Boring No. | Depth (ft.) | Drilled Shaft and/or driven pile Diameter Sizes Between Greater than 24 and 48 Inches | Drilled Shaft and/or driven pile Diameter Sizes Greater Than 48 Inches |
|-------------|-------------|---|--|
| | 0-15 | Ignored | Ignored |
| B-31 & B-32 | 15-45 | 2.0 | 2.4 |
| | 45-50 | 2.0 | 3.6 |



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH-10
CSJ 2121-01-094

Hole P-31
Structure Pavement
Station
Offset

District El Paso
Date 09/15/20
Grnd. Elev. 3830.60 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|---------------------------------------|-------------------------------|--------------|------------|----|----|----------------|---|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3829.2 | | | ASPHALT, 16.5 inches | | | | | | | |
| | | | GRAVEL, brown, tan, and gray, w/ sand | | | 6 | | | | SPT at 1.5' 14/6 20/6 19/6 |
| 3827.6 | | | SAND, tan, silty, w/ gravel (SM-SP) | | | 3 | | | | SPT at 3.5' 16/6 19/6 20/6 -Non Plastic -#200=5.2% |
| 3825.65 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 15 | | | | | | | | | | |

Remarks:

The ground water elevation was not determined during the course of this boring.

Driller: RD

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH-10
CSJ 2121-01-094

Hole P-32
Structure Pavement
Station
Offset

District El Paso
Date 09/12/20
Grnd. Elev. 3829.10 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|-------------|-------------|-------------------------|---|-------------------------------|--------------|------------|----|----|--------------------------|--------------------------|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 5 3823.6 | [Patterned] | | SAND, tan and brown, clayey, w/ crushed gravel (SC) | | | | | | | SPT at 0' 9/6 12/6 17/6 |
| | | | | | | 4 | 18 | 10 | | #200=15.5% |
| | | | | | | | | | | SPT at 2' 15/6 17/6 25/6 |
| | | | | | | 4 | | | SPT at 4' 25/6 17/6 18/6 | |

Remarks:

The ground water elevation was not determined during the course of this boring.

Driller: RD

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH-10
CSJ 2121-01-094

Hole P-33
Structure Pavement
Station
Offset

District El Paso
Date 09/15/20
Grnd. Elev. 3807.20 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-------------|-------------------------|--|-------------------------------|--------------|------------|----|----|----------------|--|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3805.7 | [Patterned] | | SAND, brown, clayey, w/ gravel (SC-SP) | | | 6 | 20 | 10 | | SPT at 0' 10/6 14/6 15/6 #200=11.0% |
| | | | SAND, tan, clayey, w/ gravel (SC) | | | | | | | SPT at 2' 9/6 12/6 16/6 |
| | | | | | | 4 | | | | SPT at 3.5' 20/6 22/6 26/6 |
| 3802.25 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 15 | | | | | | | | | | |

Remarks:

The ground water elevation was not determined during the course of this boring.

Driller: RD

Logger: Matthew Davis

Organization: AGG



DRILLING LOG

WinCore
Version 3.3

County El Paso
Highway IH-10
CSJ 2121-01-094

Hole P-34
Structure Pavement
Station
Offset

District El Paso
Date 09/15/20
Grnd. Elev. 3802.40 ft
GW Elev. N/A

| Elev. (ft) | LOG | Texas Cone Penetrometer | Strata Description | Triaxial Test | | Properties | | | | Additional Remarks |
|------------|-----|-------------------------|---------------------------------------|-------------------------------|--------------|------------|----|----|----------------|--------------------------|
| | | | | Lateral Deviator Press. (psi) | Stress (psi) | MC | LL | PI | Wet Den. (pcf) | |
| 3802.1 | | | ASPHALT, 4 inches | | | | | | | SPT at 0' 10/6 12/6 20/6 |
| | | | SAND, brown, silty, w/ gravel (SM-SP) | | | | | | | SPT at 2' 15/6 27/6 27/6 |
| 3799.9 | | | SAND, tan, silty, w/ gravel (SM-SP) | | | 2 | | | | -Non Plastic -#200=7.1% |
| 3797.45 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 15 | | | | | | | | | | |

Remarks:

The ground water elevation was not determined during the course of this boring.

Driller: RD

Logger: Matthew Davis

Organization: AGG