

Integrated Testing and Engineering Company of San Antonio, L.P. Geotechnical & Environmental Engineering • Construction Services • Geologic Assessment

E.A. Palaniappan, Ph.D., P.E. Murali Subramaniam, Ph.D., P.E. Kausi Subramaniam, B.S.

November 9, 2023

Boerne Medical Center, LTD C/o: Barry Sanditen 500 N. Cap. of Tex. Hwy. Bldg. 7 Austin, TX 78746

Re:

Concrete Tests

Boerne Professional Center

Frontage Rd. IH 10 West to Switchback Trail Boerne

Kendall County, Texas 78006

InTEC Project #: S232861-3

Gentlemen:

Concrete field and compressive strength test results for the above referenced project are presented for your review.

We appreciate and wish to thank you for the opportunity to be of service to you on this project. If we can be of additional assistance, or if you have any questions, please call us.

Respectfully Submitted, InTEC of San Antonio, L.P.

Murali Subramaniam, Ph.D., P.E.

Copies Submitted: Above (1 VINH QUOC LE



12028 Radium San Antonio, TX 78216 Phone: 210-525-9033

Compressive Strength of Concrete

Test Method: ASTM C 39

Client:

Project:

S232861

V.K. Knowlton Construction and Utilities, Inc.

18225 FM 2252 San Antonio, TX 78266 Boerne Professional Center 29.8139704.-98.7532319

Report Date: 11/09/2023

Sample: 23468

Boerne, TX

Samp		

Set #: Technician: Cisneros, Ramiro Batched: 11:01 CDT Specimen Size: 6" X 12" Cast By: Cisneros, Ramiro Sampled: 11:25 CDT Specimens In Set: **Date Cast:** 07/18/23 Cast: 11:40 CDT 4

Truck / Ticket #: / 2318464 Sampled From: Chute Truck Empty: **Placement Method: Placement Time:** Contractor: VKK Chute

Location

Placement Location: Other

Location Details: Sewer line encasement Sample Location / Notes: Sewer line encasement

> **Batch Log Specifications**

Supplier: Tex Mix Strength: 3000 (psi)

On-Site Admixtures: None

Field Measurements

Weather: Plastic Unit Weight: Sunny Slump (in): 5 (ASTM C143)

Air Content: Air Temperature (F): 95 Concrete Temp (F):

> **Load Volume:** 10.00 (yd3)

Lab Test Results

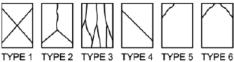
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
1-1	7	07/25/23	1/6	6.00	28.27	70,000	2,410	3		U
1-2	7	07/25/23	1/6	6.00	28.27	77,000	2,650	5		U
1-3	28	08/15/23	1 / 27	6.00	28.27	96,250	3,410	3		U
1-4	28	08/15/23	1 / 27	6.00	28.27	81,000	2,790	3		U

Test Age Average Strengths (psi): 7 Day - 2530, 28 Day - 3100

Capping Methods U: Unbonded Caps (ASTM C1231) Tested By: Alex Martinez (1,2,3,4) Checked In: 07/19/2023 (1,2,3,4)



















12028 Radium San Antonio, TX 78216 Phone: 210-525-9033

Compressive Strength of Concrete

Test Method: ASTM C 39

Client:

Project:

S232861

V.K. Knowlton Construction and Utilities, Inc.

18225 FM 2252 San Antonio, TX 78266 Boerne Professional Center 29.8139704,-98.7532319

Report Date: 11/09/2023

Sample: 23818

Boerne, TX

Sample Details										
Set #:	2	Technician:	Castellanos, Arturo	Batched:	08:27 CDT					
Specimen Size:	6" X 12"	Cast By:	Castellanos, Arturo	Sampled:	09:30 CDT					
Specimens In Set:	4	Date Cast:	08/09/23	Cast:	09:40 CDT					
Truck / Ticket #:	832 / 2319125	Sampled From:	Chute	Truck Empty:	09:45 CDT					
Contractor:	Vk KNOWLTON	Placement Method:	Bucket	Placement Time:	78 (min)					

Location

Placement Location: Flowable Fill

Location Details: Trench FLOWABLE FILL Sample Location / Notes: TRENCH FLOWABLE FILL

		Batch Log		Specifications
Supplier:	Tex Mix		Strength:	75 (psi)

On-Site Admixtures: None

Field Measurements

Weather: 5-1/2 (ASTM C143) Plastic Unit Weight: Sunny Slump (in):

83 (ASTM C1064) Air Content: Air Temperature (F): 79 Concrete Temp (F):

Load Volume: 10.00 (yd3)

Lab Test Results

Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
2-1	7	08/16/23	1/6	6.00	28.27	5,000	180	2		U
2-2	7	08/16/23	1/6	6.00	28.27	4,100	150	2		U
2-3	28	09/06/23	1 / 27	6.00	28.27	14,500	510	3		U
2-4	28	09/06/23	1 / 27	6.00	28.27	15.000	530	5		U

Test Age Average Strengths (psi): 7 Day - 160, 28 Day - 520

	Capping Methods
Tested By: Alex Martinez (1,2,3,4)	U: Unbonded Caps (ASTM C1231)
Checked In : 08/10/2023 (1.2.3.4)	















TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6



12028 Radium San Antonio, TX 78216 Phone: 210-525-9033

Compressive Strength of Concrete

Test Method: ASTM C 39

Client:

Project:

V.K. Knowlton Construction and Utilities, Inc.

18225 FM 2252 San Antonio, TX 78266 S232861 Boerne Professional Center 29.8139704.-98.7532319

Report Date: 11/09/2023

Sample: 23847

Boerne, TX

San			

Set #: Technician: Cisneros, Ramiro Batched: 09:57 CDT Specimen Size: 6" X 12" Cast By: Cisneros, Ramiro Sampled: 10:30 CDT Specimens In Set: **Date Cast:** 08/10/23 Cast: 10:45 CDT

Truck / Ticket #: 2145 / 2319199 Sampled From: Chute Truck Empty: **Placement Time:** Contractor: VKK **Placement Method:** Chute

Location

Placement Location: Other **Location Details:** Manholes Sample Location / Notes: Manholes

> **Batch Log Specifications**

Supplier: Strength: 4000 (psi) Tex Mix

On-Site Admixtures: None

Field Measurements

Weather: Plastic Unit Weight: Slump (in): 5 (ASTM C143) Sunny

Air Temperature (F): 86 Concrete Temp (F): Air Content:

> Load Volume: 10.00 (yd3)

Lab Test Results

Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
3-1	7	08/17/23	1/6	6.00	28.27	95,000	3,360	5		U
3-2	7	08/17/23	1/6	6.00	28.27	100,000	3,540	2		U
3-3	28	09/07/23	1 / 27	6.00	28.27	125,000	4,420	2		U
3-4	29	09/08/23	1 / 28	6.00	28.27	130,000	4,600	5		U

Test Age Average Strengths (psi): 7 Day - 3450, 28 Day - 4420, 29 Day - 4600

Capping Methods U: Unbonded Caps (ASTM C1231) Tested By: Alex Martinez (1,2,3,4) Checked In: 08/11/2023 (1,2,3,4)













TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6



12028 Radium San Antonio, TX 78216 Phone: 210-525-9033

Compressive Strength of Concrete

Test Method: ASTM C 39

Project:

S232861

V.K. Knowlton Construction and Utilities, Inc. 18225 FM 2252

San Antonio, TX 78266

Client:

Boerne Professional Center 29.8139704.-98.7532319

Report Date: 11/09/2023

Sample: 24257

Boerne, TX

Sample I	Details
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Set #: Technician: Cisneros, Ramiro Batched: 10:46 CDT Specimen Size: 6" X 12" Cast By: Cisneros, Ramiro Sampled: 11:40 CDT Specimens In Set: **Date Cast:** 09/06/23 Cast: 11:55 CDT

Truck / Ticket #: 2139 / 2319778 Sampled From: Chute Truck Empty: Curb & Gutter **Placement Time:** Contractor: VKK **Placement Method:**

Location

Placement Location: Curb and Gutter **Location Details:** Curb at Switchback Trail Sample Location / Notes: Curb at Switchback Trail

> **Batch Log Specifications** 4000 (psi)

Supplier: Tex Mix Strength:

On-Site Admixtures: None

Field Measurements

Weather: 2-1/2 (ASTM C143) Plastic Unit Weight: Partly Cloudy Slump (in):

Air Temperature (F): 96 Concrete Temp (F): Air Content:

> Load Volume: 10.00 (yd3)

Lab Test Results

Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
4-1	7	09/13/23	1/6	6.00	28.27	100,000	3,540	2		U
4-2	7	09/13/23	1/6	6.00	28.27	70,000	2,480	3		U
4-3	28	10/04/23	1 / 27	6.00	28.27	130,000	4,600	2		U
4-4	28	10/04/23	1 / 27	6.00	28.27	127,000	4,490	2		U

Test Age Average Strengths (psi): 7 Day - 3010, 28 Day - 4550

Capping Methods U: Unbonded Caps (ASTM C1231) Tested By: Alex Martinez (1,2,3,4) Checked In: 09/07/2023 (1,2,3,4)













TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6



San Antonio, TX 78216

Phone: 210-525-9033

12028 Radium

Compressive Strength of Concrete

Test Method: ASTM C 39

Project:

Report Date: 11/09/2023 Sample: 24336 (1,2,3,4)

Client:

V.K. Knowlton Construction and Utilities, Inc.

18225 FM 2252 San Antonio, TX 78266 S232861

Boerne Professional Center 29.8139704.-98.7532319

Boerne, TX

Sample Details

Set #: 5 Technician: Pereida, Gerald Batched: 09:58 CDT Specimen Size: 6" X 12" Cast By: Pereida, Gerald Sampled: 10:06 CDT **Date Cast:** 09/11/23 Cast: 10:10 CDT Specimens In Set: Truck / Ticket #: 2140 / 2319877 Sampled From: Chute Truck Empty: 10:55 CDT **Placement Time:** Contractor: Vk knowlton construction Placement Method: Chute 57 (min)

Location

Placement Location: Sidewalk

Location Details: Sidewalk on Switchback trail, east-section

Sample Location / Notes: Sidewalk

> **Batch Log Specifications**

Tex Mix Strength: 4000 (psi) Supplier:

Plant: 23 Boerne On-Site Admixtures: None

Field Measurements

Weather: 4 (ASTM C143) **Plastic Unit Weight:** Overcast Slump (in):

Air Temperature (F): 80 Concrete Temp (F): 69 (ASTM C1064) Air Content:

Load Volume: 10.00 (yd3)

Lab Test Results

Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
5-1	7	09/18/23	1/6	6.00	28.27	75,000	2,650	3		U
5-2	7	09/18/23	1/6	6.00	28.27	76,000	2,690	3		U
5-3	28	10/09/23	1 / 27	6.00	28.27	113,000	4,000	3		U
5-4	28	10/09/23	1 / 27	6.00	28.27	115,000	4,070	2		U

Test Age Average Strengths (psi): 7 Day - 2670, 28 Day - 4030

Capping Methods Tested By: Alex Martinez (1,2,3,4) U: Unbonded Caps (ASTM C1231) Checked In: 09/12/2023 (1,2,3,4)















TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6



San Antonio, TX 78216

Phone: 210-525-9033

12028 Radium

Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 11/09/2023

Sample: 24768

Client: Project:

V.K. Knowlton Construction and Utilities, Inc.

18225 FM 2252 San Antonio, TX 78266 S232861 **Boerne Professional Center** 29.8139704.-98.7532319 Boerne, TX

	Sample Details										
Set #:	6	Technician:	Pereida, Gerald	Batched:	10:26 CDT						
Specimen Size:	6" X 12"	Cast By:	Pereida, Gerald	Sampled:	10:48 CDT						
Specimens In Set:	4	Date Cast:	10/10/23	Cast:	10:49 CDT						
Truck / Ticket #:	2145 / 2320683	Sampled From:	Chute	Truck Empty:	11:40 CDT						
Contractor:	Vk knowlton construction	Placement Method:	Chute	Placement Time:	74 (min)						

Location

Placement Location: Drain - Inlet

Location Details: 4-way inlet, Switchback trail, STA 15+96

Sample Location / Notes: 4-way inlet

Batch Log Specifications 4000 (psi) Supplier: Tex Mix Strength: Plant: Boerne

On-Site Admixtures: None

Field Measurements

Weather: Overcast 5 (ASTM C143) **Plastic Unit Weight:** Slump (in):

Air Temperature (F): 70 Concrete Temp (F): 69 (ASTM C1064) Air Content:

> **Load Volume:** 10.00 (yd3)

Lab Test Results

Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
6-1	7	10/17/23	1/6	6.00	28.27	115,000	4,070	5		U
6-2	7	10/17/23	1/6	6.00	28.27	108,000	3,820	2		U
6-3	28	11/07/23	1 / 27	6.00	28.27	145,000	5,130	2		U
6-4	28	11/07/23	1 / 27	6.00	28.27	140,000	4,950	3		U

Test Age Average Strengths (psi): 7 Day - 3940, 28 Day - 5040

Capping Methods Tested By: Alex Martinez (1,2,3,4) U: Unbonded Caps (ASTM C1231) Checked In: 10/11/2023 (1,2,3,4)

















TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6