



**Street Improvements Package for:
Rancho Vistoso Valley Vista - 5x and 5W
Phase 1A**

Attention: Tom Collins

PHOENIX
1102 West Southern Avenue, Suite 4
Tempe, Arizona 85282
Dispatch 602-272-7890
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TUCSON
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April 07, 2020

Pulte Tucson Land - MS-1021

P.O. Box 3660

Portland, OR 97208

Re: Street Report

[120269930]

5X and 5W Phase 1A @ Rancho Vistoso Valley Vista

Lot #: Street Improvements Permit #:

ProTeX Job ID#: 0234Dev-3579-8866

To Whom It May Concern:

In accordance with your request, we have completed the material testing of the street improvements within the subject project. To the best of my knowledge, the results are in substantial conformance with Pima County and City of Tucson specifications and requirements. Field density tests and lab results are enclosed.

For questions or comments regarding this submittal, please contact the undersigned at (602) 272-PTX1 or engineering@protex-az.com.

Submitted by:

ProTeX - the PT Xperts, L.L.C.



Expires 3/31/2023

Jones Tembo, P.E.

Rancho Vistoso Valley Vista-Phase 1A
Town of Oro Valley, Arizona
ProTeX Job ID: 8866



Concrete Subgrade



Field Density Summary Report

2/49

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1A

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8866

Lot: Streets

Test Type: Curb Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
10/01/2019	Kalalau Drive	STA 15+23	FG	8"	118.9	9.1	121.2	10.0	98	95 min.	-3 to +3	191957	Pass
10/01/2019	Kalalau Drive	STA 16+23	FG	8"	119.9	9.4	121.2	10.0	99	95 min.	-3 to +3	191957	Pass
10/01/2019	Kalalau Drive	STA 11+08	FG	8"	118.5	8.9	121.2	10.0	98	95 min.	-2 to +2	191957	Pass
10/01/2019	Kalalau Drive	STA 13+03	FG	8"	117.4	8.4	121.2	10.0	97	95 min.	-3 to +3	191957	Pass

Rancho Vistoso Valley Vista-Phase 1A
Town of Oro Valley, Arizona
ProTeX Job ID: 8866



Street Subgrade



Field Density Summary Report

3/49

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1A

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8866

Lot: Streets

Test Type: Street Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
10/10/2019	Moore Loop Road	STA 101+15	FG	8"	121.8	9.4	122.1	10.0	100	95 min.	-2 to +2	192000	Pass
10/10/2019	Moore Loop Road	STA 101+00	FG	8"	120.2	8.7	122.1	10.0	98	95 min.	-2 to +2	192000	Pass
11/05/2019	Romsdalen Road	STA 23+23	FG	10"	121.5	9.4	122.1	10.0	100	95 min.	-2 to +2	192000	Pass
11/05/2019	Romsdalen Road	STA 21+20	FG	10"	120.4	8.7	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
11/05/2019	Romsdalen Road	STA 29+00	FG	10"	120.8	8.6	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
11/05/2019	Romsdalen Road	STA 26+50	FG	10"	121.8	9.5	122.1	10.0	100	95 min.	-2 to +2	192000	Pass
11/05/2019	Kalalau Drive	STA 19+23	FG	10"	121.4	9.3	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
11/05/2019	Kalalau Drive	STA 13+23	FG	10"	121.6	9.2	122.1	10.0	100	95 min.	-2 to +2	192000	Pass
11/05/2019	Kalalau Drive	STA 11+00	FG	10"	120.5	8.9	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
11/05/2019	Kalalau Drive	STA 17+25	FG	10"	122.1	9.5	122.1	10.0	100	95 min.	-2 to +2	192000	Pass
11/05/2019	Kalalau Drive	STA 15+65	FG	10"	120.9	9.1	122.1	10.0	99	95 min.	-2 to +2	192000	Pass

Rancho Vistoso Valley Vista-Phase 1A
Town of Oro Valley, Arizona
ProTeX Job ID: 8866



ABC Subgrade



Field Density Summary Report

1/49

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1A

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8866

Lot: Streets

Test Type: ABC Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
11/08/2019	Romsdalen Road	STA 23+23	FG	4"	128.6	8.9	126.4	9.4	102	100 min.	-3 to +3	198360	Pass
11/08/2019	Romsdalen Road	STA 21+20	FG	4"	128.9	8.9	126.4	9.4	102	100 min.	-3 to +3	198360	Pass
11/08/2019	Romsdalen Road	STA 29+00	FG	4"	129.2	9.4	126.4	9.4	102	100 min.	-3 to +3	198360	Pass
11/08/2019	Romsdalen Road	STA 26+50	FG	4"	128.5	8.8	126.4	9.4	102	100 min.	-3 to +3	198360	Pass
11/08/2019	Kalalau Drive	STA 13+23	FG	4"	128.0	9.7	126.4	9.4	101	100 min.	-3 to +3	198360	Pass
11/08/2019	Kalalau Drive	STA 11+00	FG	4"	128.2	9.4	126.4	9.4	101	100 min.	-3 to +3	198360	Pass
11/08/2019	Kalalau Drive	STA 17+25	FG	4"	129.5	9.2	126.4	9.4	102	100 min.	-3 to +3	198360	Pass
11/08/2019	Kalalau Drive	STA 15+65	FG	4"	128.3	9.2	126.4	9.4	102	100 min.	-3 to +3	198360	Pass
11/13/2019	Lauterbrunnen Lane	STA 22+00	FG	4"	128.6	9.1	127.8	9.0	101	100 min.	-3 to +3	198360	Pass
11/13/2019	Lauterbrunnen Lane	STA 24+80	FG	4"	128.2	8.7	127.8	9.0	100	100 min.	-3 to +3	198360	Pass

Rancho Vistoso Valley Vista-Phase 1A
Town of Oro Valley, Arizona
ProTeX Job ID: 8866



Asphaltic Concrete



ProTeX the PT Xperts LLC
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Fax: (602) 272-7892

AC Core Density

Client:	Pulte Tucson Land	ProTeX Job No:	8866
Project Name:	Rancho Vistoso Valley Vista	ProTeX Lab No:	201624
Job Name:	5X and 5W Phase 1A	Date Received:	3/9/2020
Material:	AC Cores	Sampled By:	Sean Hancock
Material Source:	Marana	Date Sampled:	3/9/2020
Depth:	Surface	Submitted By:	John Kilmer
Material Supplier:	Vulcan Materials Company		
Asphalt Product:	PAG 2 Subdivision & Development		

Test Method: ARIZ 415

Plan Thickness (in): 3.00

Core #	Retest	Location	Marshall / Rice (pcf)	Thickness (in)	Average Thickness (in)	% Water Absorption	Specific Gravity	Unit Weight (pcf)	% Comp.	Avg. Unit Weight (pcf)	Avg. % Comp.	Thickness Deficiency	Density Deficiency
1		Kalalau Drive, STA 14+25, WB	142.8	3.30	-	2.15	2.212	137.8	96.5	-	-		
2		Kalalau Drive, STA 16+50, EB	142.8	3.00	3.00	2.58	2.170	135.2	94.7	135.9	95.2		
2	A	Kalalau Drive, STA 15+50, EB	142.8	-	-	2.73	2.162	134.7	94.3	-	-		
2	B	Kalalau Drive, STA 17+50, EB	142.8	-	-	2.01	2.213	137.9	96.5	-	-		
3		Romsdalen Road, STA 21+50, SB	142.8	3.05	3.05	2.07	2.169	135.1	94.6	136.7	95.7		
3	A	Romsdalen Road, STA 20+50, SB	142.8	-	-	2.79	2.199	137.0	95.9	-	-		
3	B	Romsdalen Road, STA 22+50, SB	142.8	-	-	2.10	2.216	138.1	96.7	-	-		
4		Romsdalen Road, STA 25+75, WB	142.8	2.80	2.80	3.45	2.173	135.4	94.8	135.4	94.8		
4	A	Romsdalen Road, STA 24+75, WB	142.8	-	-	2.67	2.171	135.2	94.7	-	-		
4	B	Romsdalen Road, STA 26+75, WB	142.8	-	-	2.41	2.176	135.6	94.9	-	-		
5		Romsdalen Road, STA 29+60, EB	142.8	3.30	3.30	1.74	2.178	135.7	95.0	136.6	95.6		
5	A	Romsdalen Road, STA 28+60, EB	142.8	-	-	1.43	2.224	138.6	97.0	-	-		
5	B	Romsdalen Road, STA 29+80, EB	142.8	-	-	3.46	2.174	135.4	94.8	-	-		
6		Lauterbrunnen Lane, STA 23+40, NB	142.8	3.30	-	1.29	2.227	138.7	97.1	-	-		
7		Lauterbrunnen Lane, STA 18+25, SB	142.8	4.20	-	0.88	2.251	140.2	98.2	-	-		

Remarks: Surface course

Reviewed By:


Jones Tembo



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AC Core Density

Client:	Pulte Tucson Land	ProTeX Job No:	8866
Project Name:	Rancho Vistoso Valley Vista	ProTeX Lab No:	201624
Job Name:	5X and 5W Phase 1A	Date Received:	3/9/2020
Material:	AC Cores	Sampled By:	Sean Hancock
Material Source:	Marana	Date Sampled:	3/9/2020
Depth:	Surface	Submitted By:	John Kilmer
Material Supplier:	Vulcan Materials Company		
Asphalt Product:	PAG 2 Subdivision & Development		

Test Method: ARIZ 415

Plan Thickness (in): 3.00

Core #	Retest	Location	Marshall / Rice (pcf)	Thickness (in)	Average Thickness (in)	% Water Absorption	Specific Gravity	Unit Weight (pcf)	% Comp.	Avg. Unit Weight (pcf)	Avg. % Comp.	Thickness Deficiency	Density Deficiency
8		Lauterbrunnen Lane, STA 13+00, WB	142.8	3.75	-	1.82	2.218	138.2	96.8	-	-		
9		Haa Valley Court, STA 11+25, SB	142.8	3.25	-	0.95	2.274	141.7	99.2	-	-		
10		Nubra Valley Court, STA 11+00, WB	142.8	3.45	-	1.04	2.243	139.8	97.8	-	-		
11		Nubra Valley Court, STA 13+55, EB	142.8	3.10	3.10	1.93	2.175	135.5	94.9	136.6	95.6		
11	A	Nubra Valley Court, STA 14+55, EB	142.8	-	-	1.64	2.209	137.6	96.3	-	-		
11	B	Nubra Valley Court, STA 12+55, EB	142.8	-	-	2.19	2.194	136.7	95.7	-	-		
12		Barun Valley Place, STA 10+50, WB	142.8	2.90	-	1.97	2.202	137.2	96.1	-	-		
13		Barun Valley Place, STA 14+25, EB	142.8	3.05	-	1.12	2.238	139.4	97.6	-	-		

Remarks: Surface course

Reviewed By:


Jones Tembo

Rancho Vistoso Valley Vista-Phase 1A
Town of Oro Valley, Arizona
ProTeX Job ID: 8866



Laboratory Tests



ProTeX the PT Xperts LLC
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Soils Summary

Client: Pulte Tucson Land
 Project Name: Rancho Vistoso
 Job Name: 5X and 5W Mass Grading
 Material: Native (On-Site)
 Material Supplier: -
 Sample Location: Lot 10 (-)

ProTeX Job No: 8944
 ProTeX Lab No: 191957 - Phoenix
 Date Received: 3/27/2019
 Sampled By: Joseph Navarro
 Date Sampled: 3/25/2019
 Submitted By: Joseph Navarro

Plasticity Index	
Liquid Limit	NA
Plastic Limit	NA
Plasticity Index	NA

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

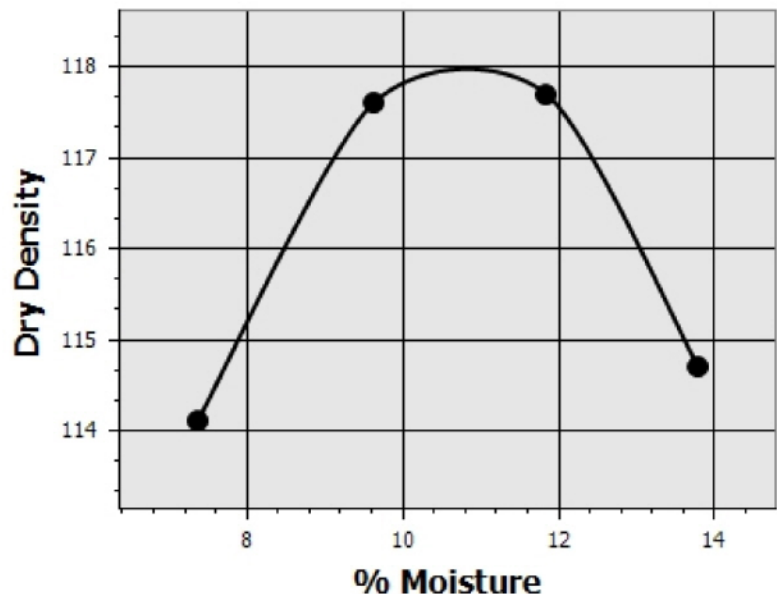
pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

Class: _____
 Symbol: _____

ASTM D698-A	
Moisture Density (Proctor)	
Max. Dry Density	118.0
Opt. Moisture %	10.8
Corr. Max. Dry Density	121.2
Corr. Opt. Moisture %	10.1
% Rock	8

* = out of specification

Moisture Vs. Density



Remarks: Grus with sand

Reviewed By:

Jerald W Grossarth



ProTeX the PT Xperts LLC
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Soils Summary

Client: Pulte Tucson Land
 Project Name: Rancho Vistoso
 Job Name: 5X and 5W Mass Grading
 Material: Native (On-Site)
 Material Supplier:
 Sample Location: Lot 168 (#8) (-)

ProTeX Job No: 8944
 ProTeX Lab No: 192000 - Phoenix
 Date Received: 3/28/2019
 Sampled By: Joseph Navarro
 Date Sampled: 3/25/2019
 Submitted By: Joseph Navarro

Plasticity Index	
Liquid Limit	NA
Plastic Limit	NA
Plasticity Index	NA

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

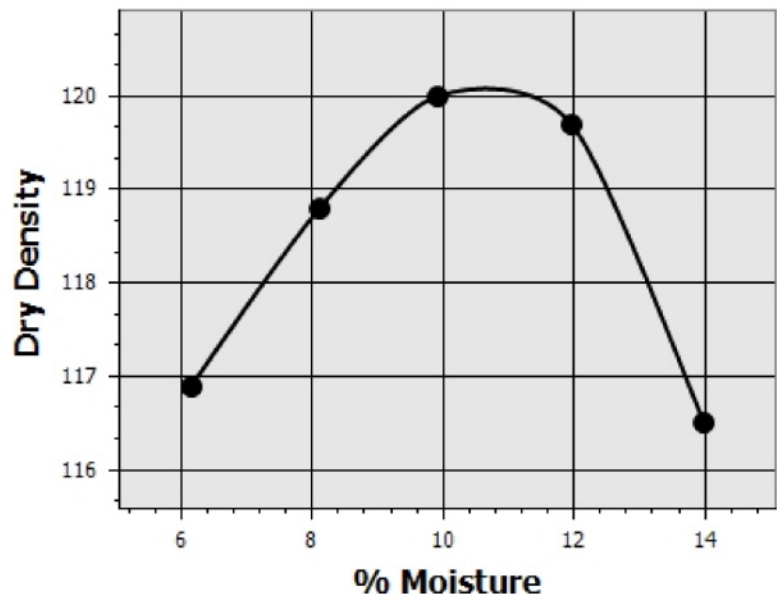
pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

Class: _____
 Symbol: _____

ASTM D698-A	
Moisture Density (Proctor)	
Max. Dry Density	120.1
Opt. Moisture %	10.7
Corr. Max. Dry Density	122.1
Corr. Opt. Moisture %	10.1
% Rock	6

* = out of specification

Moisture Vs. Density



Remarks:

Reviewed By:

Jerald W Grossarth



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Soils Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1A
Material: Aggregate Base Course (Avra Valley)
Material Supplier: Vulcan Materials
Sample Location: On-site Stockpile off Lot 122 (Surface)

ProTeX Job No: 8866
ProTeX Lab No: 198360 - Tucson
Date Received: 11/8/2019
Sampled By: Sergio Montiel
Date Sampled: 11/5/2019
Submitted By: Sergio Montiel

AASHTO T89/T90	
Plasticity Index	
Liquid Limit	NV
Plastic Limit	NP
Plasticity Index	NP

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

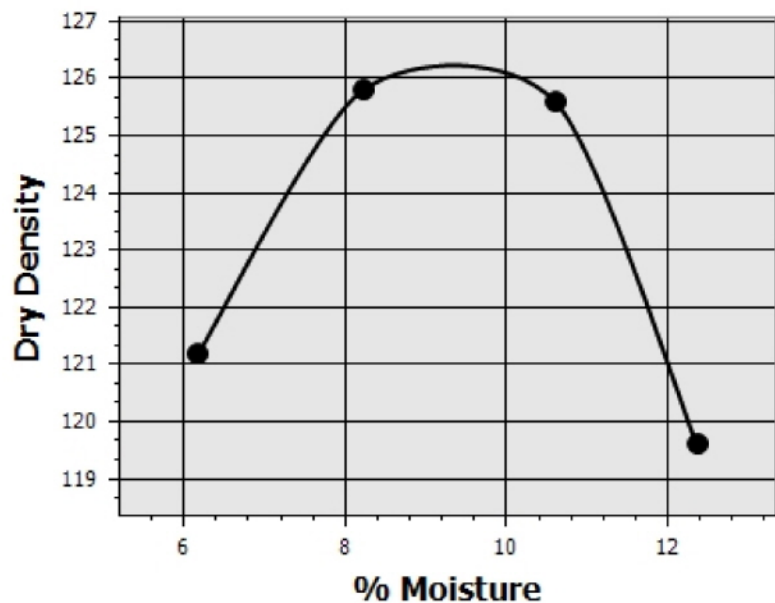
Class: _____
Symbol: _____

ASTM D698-A	
Moisture Density (Proctor)	
Max. Dry Density	126.4
Opt. Moisture %	9.4
Corr. Max. Dry Density	127.8
Corr. Opt. Moisture %	9.0
% Rock	5

* = out of specification

ARIZ 201			
Sieve	% Pass	Specs	*
3"	100		
2-1/2"	100		
2"	100		
1-1/2"	100		
1"	100	100	
3/4"	95	90-100	
1/2"	82		
3/8"	76		
1/4"	68	45-75	
#4	65		
#8	54		
#10	51		
#16	40		
#30	23		
#40	19		
#50	16		
#100	12		
#200	10	0-10	

Moisture Vs. Density



Remarks: Sand with Gravel, Tan brown

Reviewed By:

Jones Tembo
Jones Tembo



ProTeX the PT Xperts LLC
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Asphalt Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1A
Material: AC (Marana HMA)
Material Supplier: Vulcan Materials Company
Sample Location: Kalalau Drive STA 12+50 (WB)
Product Mix Code: 31158N (2018)

ProTeX Job No: 8866
ProTeX Lab No: 198621 - Phoenix
Date Received: 11/18/2019
Sampled By: John Kilmer
Date Sampled: 11/15/2019
Submitted By: John Kilmer
Mix Type: PAG 2 Subdivision & Developments

ARIZ 427			
Sieve	% Pass	Specs	*
1-1/2"	100		
1"	100		
3/4"	100		
1/2"	89		
3/8"	82	79-91	
1/4"	66		
#4	58		
#8	43	40-52	
#10	40		
#16	29		
#30	19		
#40	15	9-19	
#50	11		
#100	7		
#200	4.5	2.8-6.4	

ARIZ 427	
Asphalt Content	*
6.0	

Asphalt Content Specs

LL	TV	UL
6.0	6.4	6.8

ARIZ 410	
Percent Air Voids	*
4.3	

Air Void Specs

LL	TV	UL
1.6	3.6	4.6

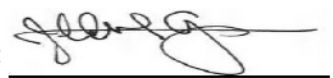
ARIZ 417	
Max Theoretical Density, pcf	
149.2	

ARIZ 410	
Marshall Density, pcf	
142.8	

Uncompacted Voids	
Uncompacted Voids Specs: >0.0	

Remarks: Compaction Temp. Range 294-303 F PAG 2 Subdivision & Developments

Reviewed By:


Jerald W Grossarth



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Asphalt Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1A
Material: AC (Marana HMA)
Material Supplier: Vulcan Materials Company
Sample Location: Romsdalen Road STA 20+25 (NB)
Product Mix Code: 31158N (2018)

ProTeX Job No: 8866
ProTeX Lab No: 198622 - Phoenix
Date Received: 11/18/2019
Sampled By: John Kilmer
Date Sampled: 11/15/2019
Submitted By: John Kilmer
Mix Type: PAG 2 Subdivision & Developments

ARIZ 427			
Sieve	% Pass	Specs	*
1-1/2"	100		
1"	100		
3/4"	100		
1/2"	88		
3/8"	84	79-91	
1/4"	77		
#4	66		
#8	48	40-52	
#10	45		
#16	33		
#30	21		
#40	16	9-19	
#50	12		
#100	8		
#200	5.2	2.8-6.4	

AASHTO T308	
Asphalt Content	*
6.5	

Asphalt Content Specs

LL	TV	UL
6.0	6.4	6.8

ARIZ 410	
Percent Air Voids	*
4.6	

Air Void Specs

LL	TV	UL
1.6	3.6	4.6

ARIZ 417	
Max Theoretical Density, pcf	
147.9	

ARIZ 410	
Marshall Density, pcf	
141.1	

Uncompacted Voids	
Uncompacted Voids Specs: >0.0	

Remarks: Compaction Temp. Range 294-303 F PAG 2 Subdivision & Developments

Reviewed By:

Jerald W Grossarth



Compressive Strength Report

7/49

106821955

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 8/26/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 142591

Concrete



Mortar



Grout



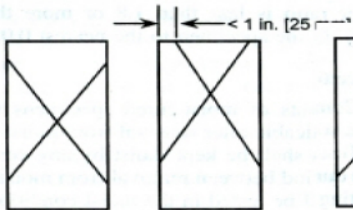
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 4 (C143) Slump (in) ACTUAL: 4
 Batch Time: 7:53 AM (C1064) Material Temperature (deg F): 84
 Sample Description: Catch Basin Head Walls Ambient Temperature (deg F): 97
 Sample Location: Romsdalen Road; STA 20+15 Admixtures: _____
 Date Sampled: 8/26/2019 Mode of Discharge: Chute
 Time Sampled: 8:53 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1010774
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 (C231) Air Content (%) _____



Type 1



Type 2



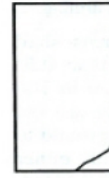
Type 3



Type 4



Type 5



Type 6

Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1425911	8	9/3/2019	4	12.57	8	5	33890	2700	
1425913	28	9/23/2019	4	12.57	8	3	47115	3750	
1425912	28	9/23/2019	4	12.57	8	4	46625	3710	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

8/49

107035235

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 8/28/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 142844

Concrete



Mortar



Grout



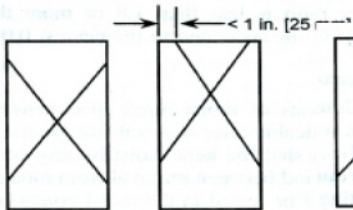
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 6 (C143) Slump (in) ACTUAL: 4.5
 Batch Time: 8:35 AM (C1064) Material Temperature (deg F): 83
 Sample Description: Catch Basin Headwall Ambient Temperature (deg F): 93
 Sample Location: Lauterbrunnen Lane; STA 19+74 Admixtures: _____
 Date Sampled: 8/28/2019 Mode of Discharge: Pump
 Time Sampled: 9:37 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1011448
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft3) _____
 C231) Air Content (%) _____



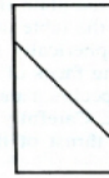
Type 1



Type 2



Type 3



Type 4



Type 5



Type 6

Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1428441	7	9/4/2019	4	12.57	8	3	38080	3030	
1428443	28	9/25/2019	4	12.57	8	3	48370	3850	
1428442	28	9/25/2019	4	12.57	8	3	56455	4490	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

9/49

108887642

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 9/26/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 145064

Concrete



Mortar



Grout



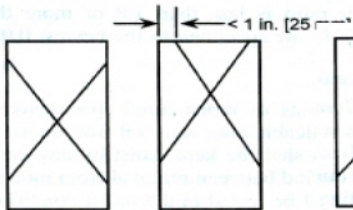
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 10.5 (C143) Slump (in) ACTUAL: 5.5
 Batch Time: 8:21 AM (C1064) Material Temperature (deg F): 83
 Sample Description: Box Culvert Wall Ambient Temperature (deg F): 71
 Sample Location: Lauterbrunnen Lane; STA 19+73 Admixtures: _____
 Date Sampled: 9/26/2019 Mode of Discharge: Chute
 Time Sampled: 9:21 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1018127
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft3) _____
 (C231) Air Content (%) _____



Type 1



Type 2



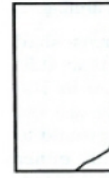
Type 3



Type 4



Type 5



Type 6

Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1450641	7	10/3/2019	4	12.57	8	3	45860	3650	
1450642	28	10/24/2019	4	12.57	8	3	57435	4570	
1450643	28	10/24/2019	4	12.57	8	3	56555	4500	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

10/49

109610127

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 10/7/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 146005

Concrete



Mortar



Grout



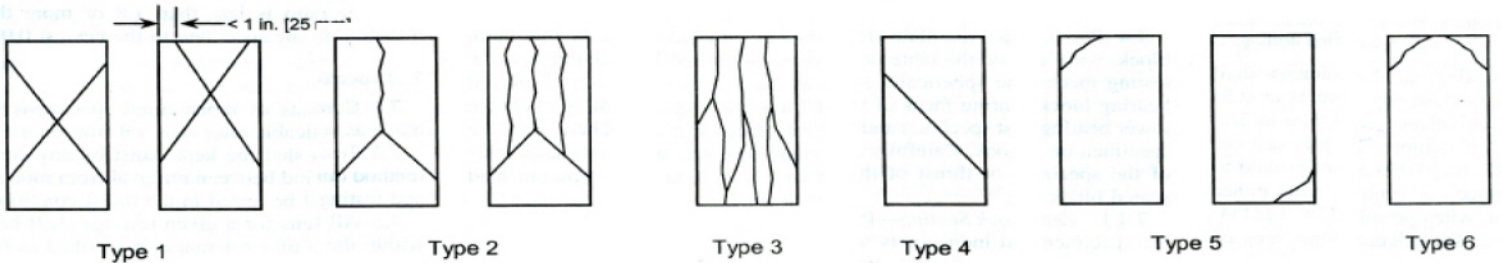
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 9 (C143) Slump (in) ACTUAL: 5
 Batch Time: 7:05 AM (C1064) Material Temperature (deg F): 81
 Sample Description: Culvert Floor Ambient Temperature (deg F): 75
 Sample Location: Moore Loop Road; STA 89+00 Admixtures: _____
 Date Sampled: 10/7/2019 Mode of Discharge: Chute
 Time Sampled: 8:15 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1020614
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft3) _____
 C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1460051	7	10/13/2019	4	12.57	8	3	39320	3130	
1460052	28	11/4/2019	4	12.57	8	3	53705	4270	
1460053	28	11/4/2019	4	12.57	8	3	54770	4360	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

11/49

109740332

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 10/9/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 146178

Concrete



Mortar



Grout



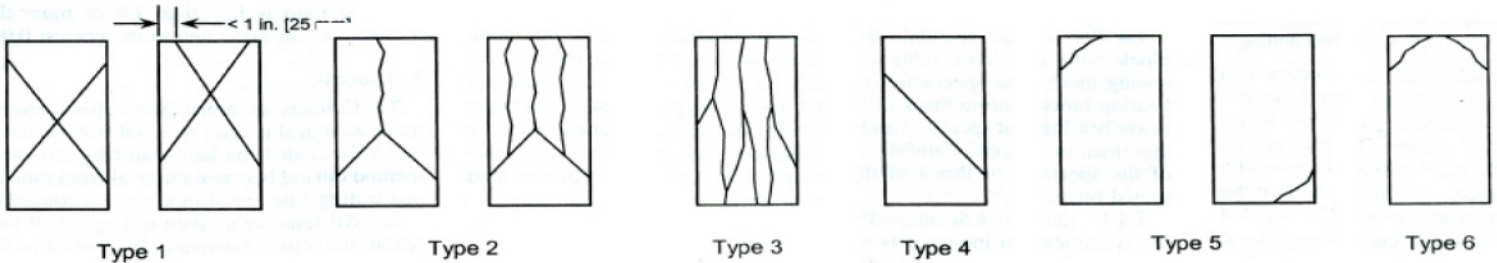
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 0 (C143) Slump (in) ACTUAL: 4.75
 Batch Time: 7:15 AM (C1064) Material Temperature (deg F): 81
 Sample Description: Box Culvert Wing Walls Ambient Temperature (deg F): 69
 Sample Location: Lauterbrunnen Lane; STA 19+73 Admixtures: _____
 Date Sampled: 10/9/2019 Mode of Discharge: Pump
 Time Sampled: 8:17 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1021267
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1461781	7	10/16/2019	4	12.57	8	5	35800	2850	
1461782	28	11/6/2019	4	12.57	8	3	50990	4060	
1461783	28	11/6/2019	4	12.57	8	2	55695	4430	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

12/49

110105007

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 10/14/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 146734

Concrete



Mortar



Grout



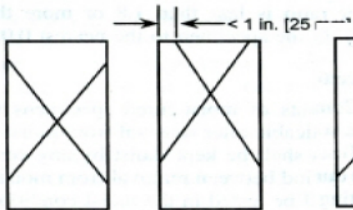
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 9 (C143) Slump (in) ACTUAL: 3.5
 Batch Time: 9:08 AM (C1064) Material Temperature (deg F): 82
 Sample Description: Culvert Headwalls Ambient Temperature (deg F): 72
 Sample Location: Moore Loop Road; STA 85+00 Admixtures: _____
 Date Sampled: 10/14/2019 Mode of Discharge: Pump
 Time Sampled: 10:12 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1022657
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 (C231) Air Content (%) _____



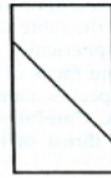
Type 1



Type 2



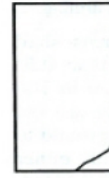
Type 3



Type 4



Type 5



Type 6

Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1467341	7	10/21/2019	4	12.57	8	5	40270	3200	
1467342	29	11/12/2019	4	12.57	8	3	59230	4710	
1467343	29	11/12/2019	4	12.57	8	3	63180	5030	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

13/49

110303728

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 10/16/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 146943

Concrete



Mortar



Grout



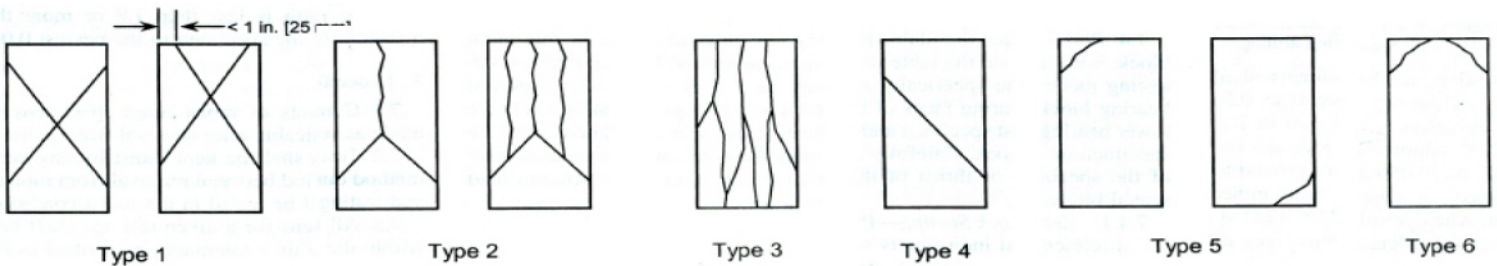
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 3.5
 Batch Size (CY): 7.5 (C143) Slump (in) ACTUAL: 4
 Batch Time: 8:56 AM (C1064) Material Temperature (deg F): 87
 Sample Description: Culvert Box Walls Ambient Temperature (deg F): 81
 Sample Location: Lauterbrunnen Lane; STA 19+73 Admixtures: _____
 Date Sampled: 10/16/2019 Mode of Discharge: Chute
 Time Sampled: 9:41 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1023440
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1469431	7	10/23/2019	4	12.57	8	3	44885	3570	
1469432	28	11/13/2019	4	12.57	8	3	63325	5040	
1469433	28	11/13/2019	4	12.57	8	3	64820	5160	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

14/49

110565260

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 10/18/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 147288

Concrete



Mortar



Grout



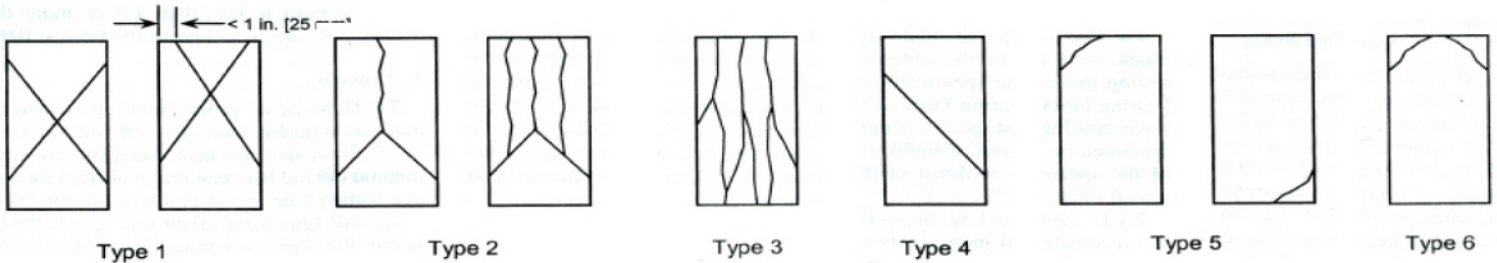
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 3.5
 Batch Size (CY): 10 (C143) Slump (in) ACTUAL: 3
 Batch Time: 10:46 AM (C1064) Material Temperature (deg F): 85
 Sample Description: Culvert Box Wing Walls Ambient Temperature (deg F): 79
 Sample Location: Lauterbrunnen Lane; STA 19+73 Admixtures: _____
 Date Sampled: 10/18/2019 Mode of Discharge: Chute
 Time Sampled: 11:37 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1024304
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft3) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1472881	7	10/25/2019	4	12.57	8	3	37930	3020	
1472882	28	11/15/2019	4	12.57	8	3	61250	4870	
1472883	28	11/15/2019	4	12.57	8	3	60545	4820	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

15/49

110565242

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 10/18/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 147287

Concrete



Mortar



Grout



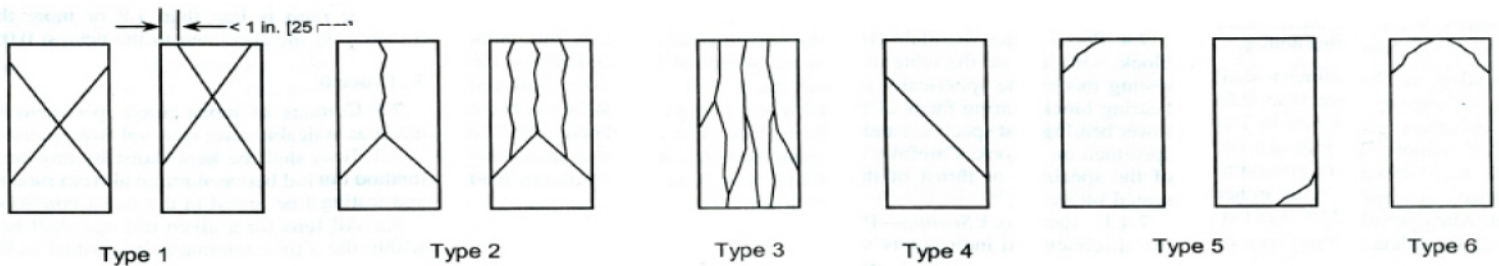
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 125362A Slump (in) SPECIFIED: 0.5
 Batch Size (CY): 10.5 (C143) Slump (in) ACTUAL: 1.5
 Batch Time: 10:06 AM (C1064) Material Temperature (deg F): 87
 Sample Description: Curb Ambient Temperature (deg F): 79
 Sample Location: Romsdalen Road; STA 25+03 Admixtures: _____
 Date Sampled: 10/18/2019 Mode of Discharge: Chute
 Time Sampled: 11:07 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 1024283
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft3) _____
 C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1472871	7	10/25/2019	4	12.57	8	2	40450	3220	
1472872	28	11/15/2019	4	12.57	8	3	59650	4740	
1472873	28	11/15/2019	4	12.57	8	3	60010	4770	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

16/49

110921599

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 10/25/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 147819

Concrete



Mortar



Grout



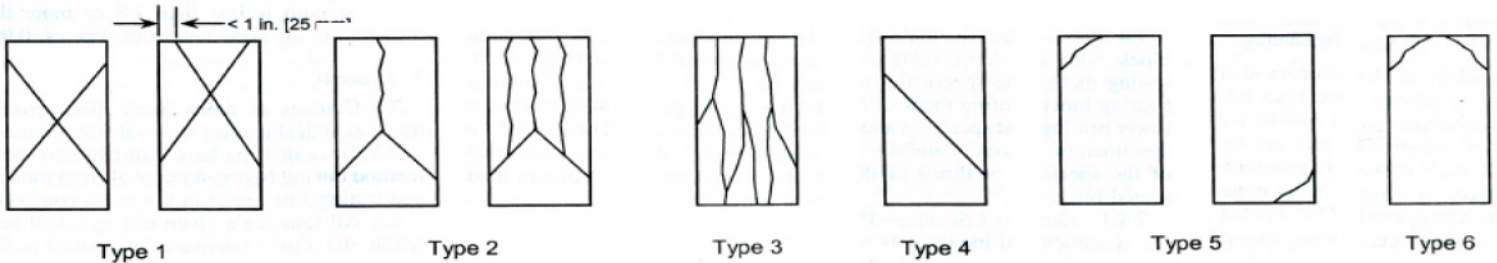
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 10 (C143) Slump (in) ACTUAL: 4
 Batch Time: 8:59 AM (C1064) Material Temperature (deg F): 82
 Sample Description: Box Culvert Deck Ambient Temperature (deg F): 65
 Sample Location: Lauterbrunnen Lane, STA 19+73 Admixtures: _____
 Date Sampled: 10/25/2019 Mode of Discharge: Chute
 Time Sampled: 10:02 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1026036
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft3) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1478191	7	11/1/2019	4	12.57	8	3	43330	3450	
1478193	28	11/22/2019	4	12.57	8	2	62305	4960	
1478192	28	11/22/2019	4	12.57	8	3	68570	5460	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

17/49

111337582

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 10/29/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 148274

Concrete



Mortar



Grout



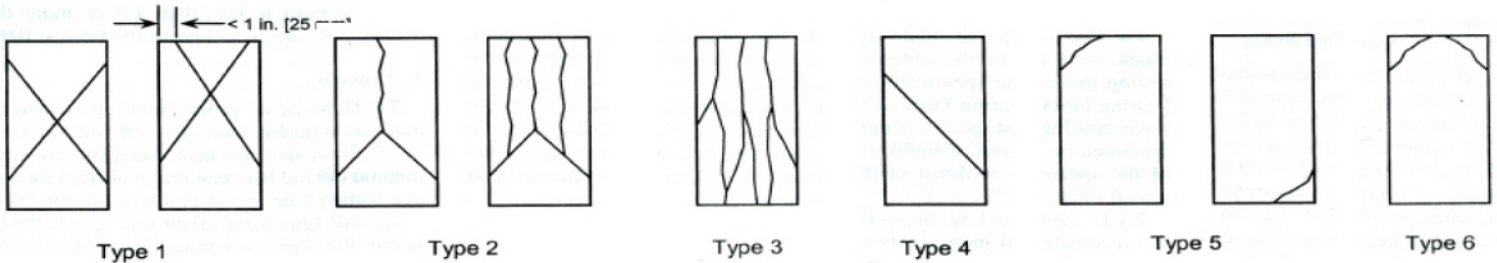
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 125344 Slump (in) SPECIFIED: 3.5
 Batch Size (CY): 7.5 (C143) Slump (in) ACTUAL: 4
 Batch Time: 7:03 AM (C1064) Material Temperature (deg F): 79
 Sample Description: Sidewalk Ambient Temperature (deg F): 62
 Sample Location: Romsdalen Road; STA 26+25 Admixtures: _____
 Date Sampled: 10/29/2019 Mode of Discharge: Chute
 Time Sampled: 8:12 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 1026661
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft³) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1482741	7	11/5/2019	4	12.57	8	6	42430	3380	
1482742	28	11/26/2019	4	12.57	8	1	68400	5440	
1482743	28	11/26/2019	4	12.57	8	3	59925	4770	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

18/49

112362078

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: John Kilmer
 Permit: _____ PO: _____ Inspection Date: 11/13/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 149357

Concrete



Mortar



Grout



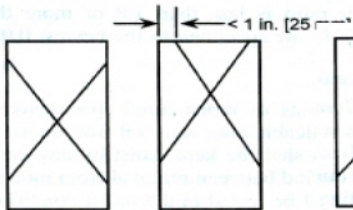
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 5
 Batch Size (CY): 10 (C143) Slump (in) ACTUAL: 4
 Batch Time: 7:35 AM (C1064) Material Temperature (deg F): 70
 Sample Description: Box Culvert #2 (Floor) Ambient Temperature (deg F): 63
 Sample Location: Moore Loop Road; STA 59+66 Admixtures: _____
 Date Sampled: 11/13/2019 Mode of Discharge: Pump
 Time Sampled: 8:40 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1031037
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft3) _____
 C231) Air Content (%) _____



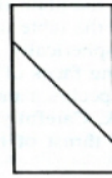
Type 1



Type 2



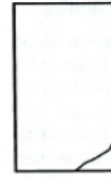
Type 3



Type 4



Type 5



Type 6

Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1493571	7	11/20/2019	4	12.57	8	3	44270	3520	
1493572	28	12/11/2019	4	12.57	8	3	58045	4620	
1493573	28	12/11/2019	4	12.57	8	3	59490	4730	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

19/49

113507754

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: John Kilmer
 Permit: _____ PO: _____ Inspection Date: 12/2/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 150530

Concrete



Mortar



Grout



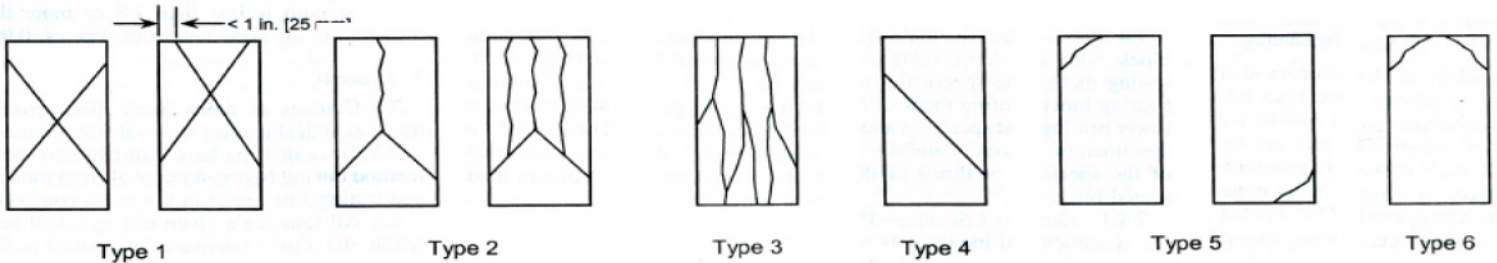
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 125362A Slump (in) SPECIFIED: 1
 Batch Size (CY): 10 (C143) Slump (in) ACTUAL: 1
 Batch Time: 5:43 AM (C1064) Material Temperature (deg F): 68
 Sample Description: Rolled Curb Ambient Temperature (deg F): 43
 Sample Location: Lauterbrunnen Lane; STA 11+90 (E/B) Admixtures: _____
 Date Sampled: 12/2/2019 Mode of Discharge: Chute
 Time Sampled: 6:49 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 1034801
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft3) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1505301	7	12/9/2019	4	12.57	8	4	50170	3990	
1505302	29	12/31/2019	4	12.57	8	3	64445	5130	
1505303	29	12/31/2019	4	12.57	8	3	68695	5460	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

20/49

113508056

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: John Kilmer
 Permit: _____ PO: _____ Inspection Date: 12/2/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 150531

Concrete



Mortar



Grout



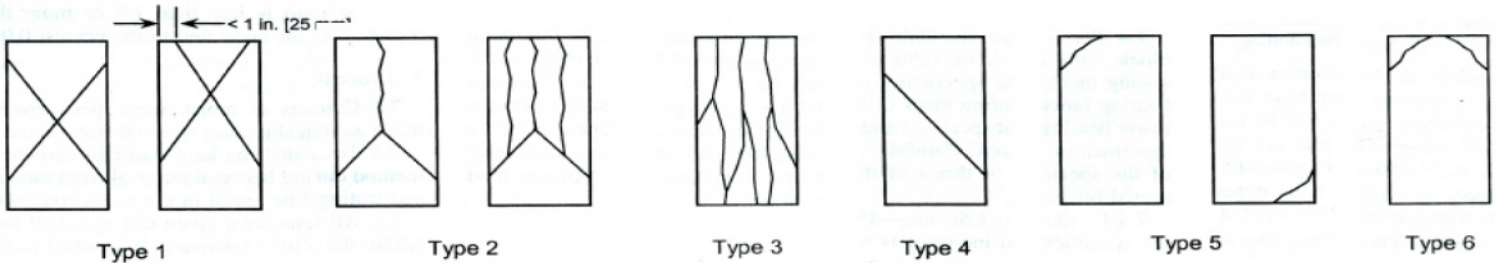
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 125362A Slump (in) SPECIFIED: 1
 Batch Size (CY): 10 (C143) Slump (in) ACTUAL: 1
 Batch Time: 7:13 AM (C1064) Material Temperature (deg F): 71
 Sample Description: Rolled Curb Ambient Temperature (deg F): 61
 Sample Location: Haa Valley Court; STA 10+64 (S/B) Admixtures: _____
 Date Sampled: 12/2/2019 Mode of Discharge: Chute
 Time Sampled: 8:33 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 1034855
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft3) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1505311	7	12/9/2019	4	12.57	8	3	56105	4460	
1505313	29	12/31/2019	4	12.57	8	4	71555	5690	
1505312	29	12/31/2019	4	12.57	8	3	69665	5540	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

21/49

115527971

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1A Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8866 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 1/3/2020 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 152561

Concrete



Mortar



Grout



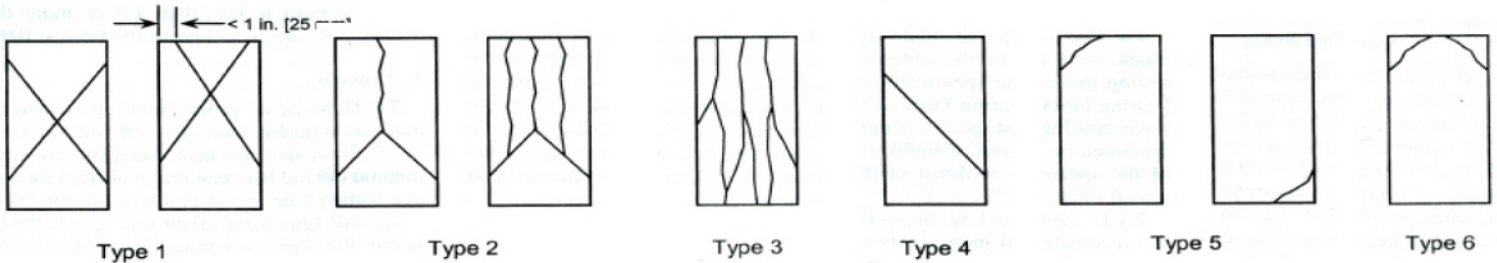
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 125344 Slump (in) SPECIFIED: 4
 Batch Size (CY): 10 (C143) Slump (in) ACTUAL: 3.5
 Batch Time: 9:33 AM (C1064) Material Temperature (deg F): 79
 Sample Description: ADA Ramp Ambient Temperature (deg F): 48
 Sample Location: Lauterbrunnen Lane; STA 12+50 (E/B) Admixtures: _____
 Date Sampled: 1/3/2020 Mode of Discharge: Chute
 Time Sampled: 10:24 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 1042146
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft3) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1525611	7	1/10/2020	4	12.57	8	2	37230	2960	
1525612	28	1/31/2020	4	12.57	8	3	52520	4180	
1525613	28	1/31/2020	4	12.57	8	2	52800	4200	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



**Street Improvements Package for:
Rancho Vistoso Valley Vista - 5x and 5W
Phase 1B**

Attention: Tom Collins

PHOENIX
1102 West Southern Avenue, Suite 4
Tempe, Arizona 85282
Dispatch 602-272-7890
(o) 602-272-PTX1 (7891)
(f) 602-272-7892



TUCSON
916 West Grant Road
Tucson, Arizona 85705
Dispatch 520-352-0150
(o) 520-352-0150
(f) 520-731-9344

April 08, 2020

Pulte Tucson Land - MS-1021

P.O. Box 3660

Portland, OR 97208

Re: Street Report

[120270501]

5X and 5W Phase 1B @ Rancho Vistoso Valley Vista

Lot #: Street Improvements Permit #:

ProTeX Job ID#: 0234Dev-3579-8867

To Whom It May Concern:

In accordance with your request, we have completed the material testing of the street improvements within the subject project. To the best of my knowledge, the results are in substantial conformance with Pima County and City of Tucson specifications and requirements. Field density tests and lab results are enclosed.

For questions or comments regarding this submittal, please contact the undersigned at (602) 272-PTX1 or engineering@protex-az.com.

Submitted by:

ProTeX - the PT Xperts, L.L.C.



Expires 3/31/2023

Jones Tembo, P.E.

Rancho Vistoso Valley Vista-Phase 1B
Town of Oro Valley, Arizona
ProTeX Job ID: 8867



Concrete Subgrade



Field Density Summary Report

2/48

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1B

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8867

Lot: Streets

Test Type: ADA Ramp Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
12/04/2019	Barun Valley	Near STA 15+29 (NWC)	FG	10"	119.4	9.3	122.1	10.0	98	95 min.	-2 to +2	192000	Pass
12/06/2019	Nubra Valley	Near STA 15+25 (NWC)	FG	10"	120.2	9.5	122.1	10.0	98	95 min.	-2 to +2	192000	Pass
12/06/2019	Nubra Valley	Near STA 15+25 (NEC)	FG	10"	120.5	9.7	122.1	10.0	99	95 min.	-2 to +2	192000	Pass



Field Density Summary Report

3/48

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1B

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8867

Lot: Streets

Test Type: Curb Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
11/25/2019	Nubra Valley	STA 13+50	FG	8"	120.8	9.8	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
11/25/2019	Barun Valley	STA 13+00	FG	8"	121.3	9.3	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
11/25/2019	Nubra Valley	STA 10+15	FG	8"	120.4	9.9	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
11/25/2019	Barun Valley	STA 11+00	FG	8"	119.4	9.4	122.1	10.0	98	95 min.	-2 to +2	192000	Pass
11/25/2019	Barun Valley	STA 15+00	FG	8"	119.2	9.1	122.1	10.0	98	95 min.	-2 to +2	192000	Pass
11/25/2019	Nubra Valley	STA 14+70	FG	8"	119.8	9.5	122.1	10.0	98	95 min.	-2 to +2	192000	Pass



Field Density Summary Report

4/48

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1B

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8867

Lot: Streets

Test Type: Headwall Backfill

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
12/03/2019	Moore Loop Road	STA 79+23	4' BFG	10"	120.2	9.6	122.1	10.0	98	95 min.	-2 to +2	192000	Pass
12/04/2019	Moore Loop Road	STA 79+23	2' BFG	10"	118.8	9.6	122.1	10.0	97	95 min.	-2 to +2	192000	Pass

Rancho Vistoso Valley Vista-Phase 1B
Town of Oro Valley, Arizona
ProTeX Job ID: 8867



Street Subgrade



Field Density Summary Report

5/48

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1B

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8867

Lot: Streets

Test Type: Street Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
12/11/2019	Lauterbrunnen Lane	STA 15+75	FG	8"	120.9	9.0	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
12/11/2019	Lauterbrunnen Lane	STA 13+23	FG	8"	121.3	9.2	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
12/11/2019	HAA Valley Court	STA 11+23	FG	8"	121.7	9.6	122.1	10.0	100	95 min.	-2 to +2	192000	Pass
12/11/2019	HAA Valley Court	STA 10+00	FG	8"	122.1	9.8	122.1	10.0	100	95 min.	-2 to +2	192000	Pass
12/11/2019	Nubra Valley	STA 13+00	FG	8"	120.1	9.3	122.1	10.0	98	95 min.	-2 to +2	192000	Pass
12/11/2019	Nubra Valley	STA 10+23	FG	8"	120.4	9.1	122.1	10.0	99	95 min.	-2 to +2	192000	Pass
12/11/2019	Lauterbrunnen Lane	STA 11+00	FG	8"	121.9	9.5	122.1	10.0	100	95 min.	-2 to +2	192000	Pass
12/11/2019	Nubra Valley	STA 15+50	FG	8"	121.7	9.7	122.1	10.0	100	95 min.	-2 to +2	192000	Pass

Rancho Vistoso Valley Vista-Phase 1B
Town of Oro Valley, Arizona
ProTeX Job ID: 8867



ABC Subgrade



Field Density Summary Report

1/48

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1B

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8867

Lot: Streets

Test Type: ABC Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
12/17/2019	Lauterbrunnen Lane	STA 14+50	FG	4"	128.4	8.4	127.8	9.0	100	100 min.	-3 to +3	198360	Pass
12/17/2019	Lauterbrunnen Lane	STA 12+00	FG	4"	128.1	8.2	127.8	9.0	100	100 min.	-3 to +3	198360	Pass
12/17/2019	HAA Valley Court	STA 10+50	FG	4"	129.4	8.7	127.8	9.0	101	100 min.	-3 to +3	198360	Pass
12/17/2019	Lauterbrunnen Lane	STA 16+00	FG	4"	129.1	8.3	127.8	9.0	101	100 min.	-3 to +3	198360	Pass
12/17/2019	Nubra Valley	STA 12+50	FG	4"	128.5	8.2	127.8	9.0	101	100 min.	-3 to +3	198360	Pass
12/17/2019	Nubra Valley	STA 14+23	FG	4"	128.9	8.1	127.8	9.0	101	100 min.	-3 to +3	198360	Pass
12/17/2019	Nubra Valley	STA 10+23	FG	4"	128.3	7.9	127.8	9.0	100	100 min.	-3 to +3	198360	Pass

Rancho Vistoso Valley Vista-Phase 1B
Town of Oro Valley, Arizona
ProTeX Job ID: 8867



Asphaltic Concrete



ProTeX the PT Xperts LLC
1102 W. Southern Ave., Ste. 4
Tempe, AZ 85282

Office: (602) 272-7892
Fax: (602) 272-7892

AC Core Density

Client:	Pulte Tucson Land	ProTeX Job No:	8866
Project Name:	Rancho Vistoso Valley Vista	ProTeX Lab No:	201624
Job Name:	5X and 5W Phase 1A	Date Received:	3/9/2020
Material:	AC Cores	Sampled By:	Sean Hancock
Material Source:	Marana	Date Sampled:	3/9/2020
Depth:	Surface	Submitted By:	John Kilmer
Material Supplier:	Vulcan Materials Company		
Asphalt Product:	PAG 2 Subdivision & Development		

Test Method: ARIZ 415

Plan Thickness (in): 3.00

Core #	Retest	Location	Marshall / Rice (pcf)	Thickness (in)	Average Thickness (in)	% Water Absorption	Specific Gravity	Unit Weight (pcf)	% Comp.	Avg. Unit Weight (pcf)	Avg. % Comp.	Thickness Deficiency	Density Deficiency
1		Kalalau Drive, STA 14+25, WB	142.8	3.30	-	2.15	2.212	137.8	96.5	-	-		
2		Kalalau Drive, STA 16+50, EB	142.8	3.00	3.00	2.58	2.170	135.2	94.7	135.9	95.2		
2	A	Kalalau Drive, STA 15+50, EB	142.8	-	-	2.73	2.162	134.7	94.3	-	-		
2	B	Kalalau Drive, STA 17+50, EB	142.8	-	-	2.01	2.213	137.9	96.5	-	-		
3		Romsdalen Road, STA 21+50, SB	142.8	3.05	3.05	2.07	2.169	135.1	94.6	136.7	95.7		
3	A	Romsdalen Road, STA 20+50, SB	142.8	-	-	2.79	2.199	137.0	95.9	-	-		
3	B	Romsdalen Road, STA 22+50, SB	142.8	-	-	2.10	2.216	138.1	96.7	-	-		
4		Romsdalen Road, STA 25+75, WB	142.8	2.80	2.80	3.45	2.173	135.4	94.8	135.4	94.8		
4	A	Romsdalen Road, STA 24+75, WB	142.8	-	-	2.67	2.171	135.2	94.7	-	-		
4	B	Romsdalen Road, STA 26+75, WB	142.8	-	-	2.41	2.176	135.6	94.9	-	-		
5		Romsdalen Road, STA 29+60, EB	142.8	3.30	3.30	1.74	2.178	135.7	95.0	136.6	95.6		
5	A	Romsdalen Road, STA 28+60, EB	142.8	-	-	1.43	2.224	138.6	97.0	-	-		
5	B	Romsdalen Road, STA 29+80, EB	142.8	-	-	3.46	2.174	135.4	94.8	-	-		
6		Lauterbrunnen Lane, STA 23+40, NB	142.8	3.30	-	1.29	2.227	138.7	97.1	-	-		
7		Lauterbrunnen Lane, STA 18+25, SB	142.8	4.20	-	0.88	2.251	140.2	98.2	-	-		

Remarks: Surface course

Reviewed By:


Jones Tembo



ProTeX the PT Xperts LLC
1102 W. Southern Ave., Ste. 4
Tempe, AZ 85282

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Fax: (602) 272-7892

AC Core Density

Client:	Pulte Tucson Land	ProTeX Job No:	8866
Project Name:	Rancho Vistoso Valley Vista	ProTeX Lab No:	201624
Job Name:	5X and 5W Phase 1A	Date Received:	3/9/2020
Material:	AC Cores	Sampled By:	Sean Hancock
Material Source:	Marana	Date Sampled:	3/9/2020
Depth:	Surface	Submitted By:	John Kilmer
Material Supplier:	Vulcan Materials Company		
Asphalt Product:	PAG 2 Subdivision & Development		

Test Method: ARIZ 415

Plan Thickness (in): 3.00

Core #	Retest	Location	Marshall / Rice (pcf)	Thickness (in)	Average Thickness (in)	% Water Absorption	Specific Gravity	Unit Weight (pcf)	% Comp.	Avg. Unit Weight (pcf)	Avg. % Comp.	Thickness Deficiency	Density Deficiency
8		Lauterbrunnen Lane, STA 13+00, WB	142.8	3.75	-	1.82	2.218	138.2	96.8	-	-		
9		Haa Valley Court, STA 11+25, SB	142.8	3.25	-	0.95	2.274	141.7	99.2	-	-		
10		Nubra Valley Court, STA 11+00, WB	142.8	3.45	-	1.04	2.243	139.8	97.8	-	-		
11		Nubra Valley Court, STA 13+55, EB	142.8	3.10	3.10	1.93	2.175	135.5	94.9	136.6	95.6		
11	A	Nubra Valley Court, STA 14+55, EB	142.8	-	-	1.64	2.209	137.6	96.3	-	-		
11	B	Nubra Valley Court, STA 12+55, EB	142.8	-	-	2.19	2.194	136.7	95.7	-	-		
12		Barun Valley Place, STA 10+50, WB	142.8	2.90	-	1.97	2.202	137.2	96.1	-	-		
13		Barun Valley Place, STA 14+25, EB	142.8	3.05	-	1.12	2.238	139.4	97.6	-	-		

Remarks: Surface course

Reviewed By:


Jones Tembo

Rancho Vistoso Valley Vista-Phase 1B
Town of Oro Valley, Arizona
ProTeX Job ID: 8867



Laboratory Tests



ProTeX the PT Xperts LLC
1102 W. Southern Ave., Ste. 4
Tempe, AZ 85282
Office: (602)-272-7891
Fax: (602) 272-7892

Soils Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso
Job Name: 5X and 5W Mass Grading
Material: Native (On-Site)
Material Supplier:
Sample Location: Lot 168 (#8) (-)

ProTeX Job No: 8944
ProTeX Lab No: 192000 - Phoenix
Date Received: 3/28/2019
Sampled By: Joseph Navarro
Date Sampled: 3/25/2019
Submitted By: Joseph Navarro

Plasticity Index	
Liquid Limit	NA
Plastic Limit	NA
Plasticity Index	NA

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

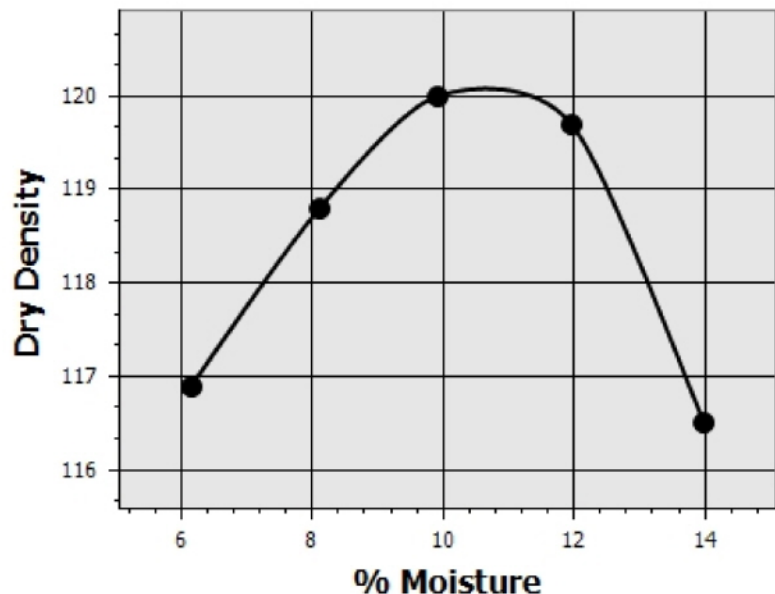
pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

Class: _____
Symbol: _____

ASTM D698-A	
Moisture Density (Proctor)	
Max. Dry Density	120.1
Opt. Moisture %	10.7
Corr. Max. Dry Density	122.1
Corr. Opt. Moisture %	10.1
% Rock	6

* = out of specification

Moisture Vs. Density



Remarks:

Reviewed By:

Jerald W Grossarth



ProTeX the PT Xperts LLC
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Tempe, AZ 85282 Fax: (602) 272-7892

Soils Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1A
Material: Aggregate Base Course (Avra Valley)
Material Supplier: Vulcan Materials
Sample Location: On-site Stockpile off Lot 122 (Surface)

ProTeX Job No: 8866
ProTeX Lab No: 198360 - Tucson
Date Received: 11/8/2019
Sampled By: Sergio Montiel
Date Sampled: 11/5/2019
Submitted By: Sergio Montiel

AASHTO T89/T90	
Plasticity Index	
Liquid Limit	NV
Plastic Limit	NP
Plasticity Index	NP

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

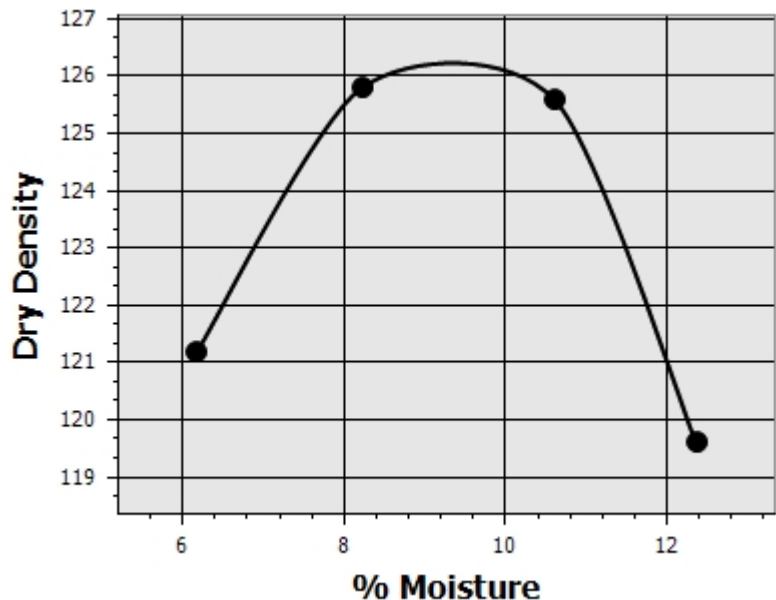
Class: _____
Symbol: _____

ASTM D698-A	
Moisture Density (Proctor)	
Max. Dry Density	126.4
Opt. Moisture %	9.4
Corr. Max. Dry Density	127.8
Corr. Opt. Moisture %	9.0
% Rock	5

* = out of specification

ARIZ 201			
Sieve	% Pass	Specs	*
3"	100		
2-1/2"	100		
2"	100		
1-1/2"	100		
1"	100	100	
3/4"	95	90-100	
1/2"	82		
3/8"	76		
1/4"	68	45-75	
#4	65		
#8	54		
#10	51		
#16	40		
#30	23		
#40	19		
#50	16		
#100	12		
#200	10	0-10	

Moisture Vs. Density



Remarks: Sand with Gravel, Tan brown

Reviewed By:

Jones
Jones Tembo



ProTeX the PT Xperts LLC
1102 W. Southern Ave., Ste. 4
Tempe, AZ 85282

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Soils Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1B
Material: ABC (Avra Valley)
Material Supplier: Vulcan Material
Sample Location: West of Lot 60 (Stock Pile)

ProTeX Job No: 8867
ProTeX Lab No: 200091 - Tucson
Date Received: 1/6/2020
Sampled By: Sergio Montiel
Date Sampled: 12/16/2019
Submitted By: Sergio Montiel

Plasticity Index	
Liquid Limit	NA
Plastic Limit	NA
Plasticity Index	NA

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

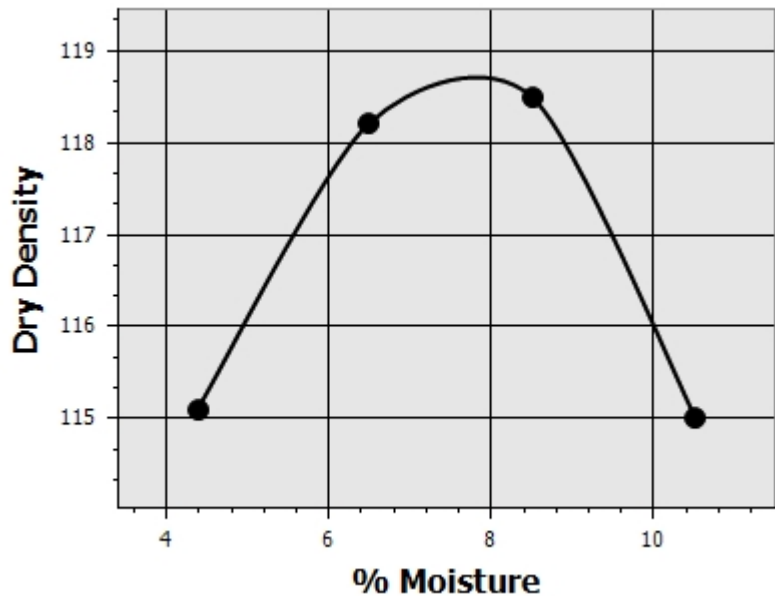
pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

Class: _____
Symbol: _____

ASTM D698-C	
Moisture Density (Proctor)	
Max. Dry Density	118.8
Opt. Moisture %	7.8
Corr. Max. Dry Density	120.3
Corr. Opt. Moisture %	7.4
% Rock	5

* = out of specification

Moisture Vs. Density



Remarks: Sandy Gravel Tan Brown

Reviewed By: _____

Jerald W Grossarth



ProTeX the PT Xperts LLC
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Tempe, AZ 85282 Fax: (602) 272-7892

Asphalt Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1A
Material: AC (Marana HMA)
Material Supplier: Vulcan Materials Company
Sample Location: Kalalau Drive STA 12+50 (WB)
Product Mix Code: 31158N (2018)

ProTeX Job No: 8866
ProTeX Lab No: 198621 - Phoenix
Date Received: 11/18/2019
Sampled By: John Kilmer
Date Sampled: 11/15/2019
Submitted By: John Kilmer
Mix Type: PAG 2 Subdivision & Developments

ARIZ 427			
Sieve	% Pass	Specs	*
1-1/2"	100		
1"	100		
3/4"	100		
1/2"	89		
3/8"	82	79-91	
1/4"	66		
#4	58		
#8	43	40-52	
#10	40		
#16	29		
#30	19		
#40	15	9-19	
#50	11		
#100	7		
#200	4.5	2.8-6.4	

ARIZ 427	
Asphalt Content	*
6.0	

Asphalt Content Specs

LL	TV	UL
6.0	6.4	6.8

ARIZ 410	
Percent Air Voids	*
4.3	

Air Void Specs

LL	TV	UL
1.6	3.6	4.6

ARIZ 417	
Max Theoretical Density, pcf	
149.2	

ARIZ 410	
Marshall Density, pcf	
142.8	

Uncompacted Voids	
Uncompacted Voids Specs: >0.0	

Remarks: Compaction Temp. Range 294-303 F PAG 2 Subdivision & Developments

Reviewed By:

Jerald W Grossarth



ProTeX the PT Xperts LLC
1102 W. Southern Ave., Ste. 4 Office: (602)-272-7891
Tempe, AZ 85282 Fax: (602) 272-7892

Asphalt Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1A
Material: AC (Marana HMA)
Material Supplier: Vulcan Materials Company
Sample Location: Romsdalen Road STA 20+25 (NB)
Product Mix Code: 31158N (2018)

ProTeX Job No: 8866
ProTeX Lab No: 198622 - Phoenix
Date Received: 11/18/2019
Sampled By: John Kilmer
Date Sampled: 11/15/2019
Submitted By: John Kilmer
Mix Type: PAG 2 Subdivision & Developments

ARIZ 427			
Sieve	% Pass	Specs	*
1-1/2"	100		
1"	100		
3/4"	100		
1/2"	88		
3/8"	84	79-91	
1/4"	77		
#4	66		
#8	48	40-52	
#10	45		
#16	33		
#30	21		
#40	16	9-19	
#50	12		
#100	8		
#200	5.2	2.8-6.4	

AASHTO T308	
Asphalt Content	*
6.5	

Asphalt Content Specs

LL	TV	UL
6.0	6.4	6.8

ARIZ 410	
Percent Air Voids	*
4.6	

Air Void Specs

LL	TV	UL
1.6	3.6	4.6

ARIZ 417	
Max Theoretical Density, pcf	
147.9	

ARIZ 410	
Marshall Density, pcf	
141.1	

Uncompacted Voids	
Uncompacted Voids Specs: >0.0	

Remarks: Compaction Temp. Range 294-303 F PAG 2 Subdivision & Developments

Reviewed By:

Jerald W Grossarth



ProTeX the PT Xperts LLC
1102 W. Southern Ave., Ste. 4 Office: (602)-272-7891
Tempe, AZ 85282 Fax: (602) 272-7892

Asphalt Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1A
Material: AC (Marana HMA)
Material Supplier: Vulcan Materials Company
Sample Location: Romsdalen Road STA 20+25 (NB)
Product Mix Code: 31158N (2018)

ProTeX Job No: 8866
ProTeX Lab No: 198622 - Phoenix
Date Received: 11/18/2019
Sampled By: John Kilmer
Date Sampled: 11/15/2019
Submitted By: John Kilmer
Mix Type: PAG 2 Subdivision & Developments

ARIZ 427			
Sieve	% Pass	Specs	*
1-1/2"	100		
1"	100		
3/4"	100		
1/2"	88		
3/8"	84	79-91	
1/4"	77		
#4	66		
#8	48	40-52	
#10	45		
#16	33		
#30	21		
#40	16	9-19	
#50	12		
#100	8		
#200	5.2	2.8-6.4	

AASHTO T308	
Asphalt Content	*
6.5	

Asphalt Content Specs

LL	TV	UL
6.0	6.4	6.8

ARIZ 410	
Percent Air Voids	*
4.6	

Air Void Specs

LL	TV	UL
1.6	3.6	4.6

ARIZ 417	
Max Theoretical Density, pcf	
147.9	

ARIZ 410	
Marshall Density, pcf	
141.1	

Uncompacted Voids	
Uncompacted Voids Specs: >0.0	

Remarks: Compaction Temp. Range 294-303 F PAG 2 Subdivision & Developments

Reviewed By:

Jerald W Grossarth



Compressive Strength Report

8/48

107815934

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1B Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8867 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 9/11/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 143755

Concrete



Mortar



Grout



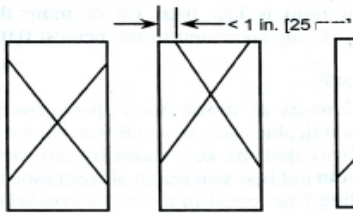
Shot-Crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 10.5 (C143) Slump (in) ACTUAL: 4
 Batch Time: 4:52 AM (C1064) Material Temperature (deg F): 84
 Sample Description: Box Culvert Base Ambient Temperature (deg F): 73
 Sample Location: Lauterbrunnen Lane; STA 23+38 Admixtures: _____
 Date Sampled: 9/11/2019 Mode of Discharge: Pump
 Time Sampled: 6:14 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1014469
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 C231) Air Content (%) _____



Type 1



Type 2



Type 3



Type 4



Type 5



Type 6

Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1437551	7	9/18/2019	4	12.57	8	3	46070	3660	
1437552	28	10/9/2019	4	12.57	8	3	64245	4510	
1437553	28	10/9/2019	4	12.57	8	3	60300	3090	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

9/48

108334097

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1B Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8867 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 9/18/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 144333

Concrete



Mortar



Grout



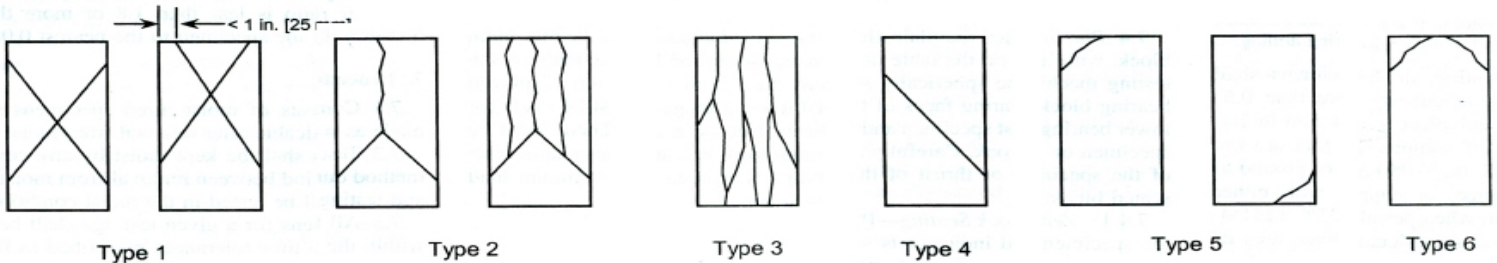
Shot-Crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 10.5 (C143) Slump (in) ACTUAL: 5
 Batch Time: 9:40 AM (C1064) Material Temperature (deg F): 86
 Sample Description: Box Culvert Wall Ambient Temperature (deg F): 84
 Sample Location: Lauterbrunnen Lane; STA 19+73 Admixtures: _____
 Date Sampled: 9/18/2019 Mode of Discharge: Chute
 Time Sampled: 10:41 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1016677
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1443331	7	9/25/2019	4	12.57	8	3	38235	3040	
1443333	28	10/16/2019	4	12.57	8	5	50165	3990	
1443332	28	10/16/2019	4	12.57	8	5	48665	3870	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

10/48

114477330

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1B Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8867 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 12/16/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 151707

Concrete



Mortar



Grout



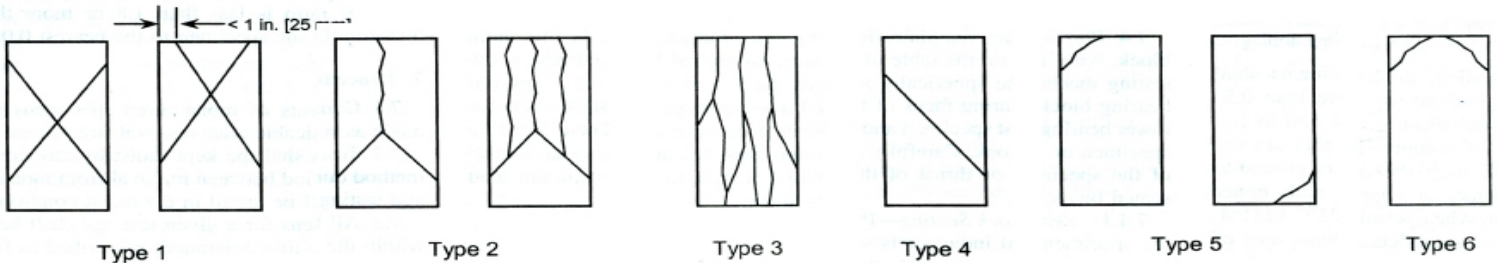
Shot-Crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 125344 Slump (in) SPECIFIED: 4
 Batch Size (CY): 10 (C143) Slump (in) ACTUAL: 4.5
 Batch Time: 11:04 AM (C1064) Material Temperature (deg F): 81
 Sample Description: Sidewalk Ambient Temperature (deg F): 52
 Sample Location: Lauterbrunnen Lane; STA 18+65 (E/B) Admixtures: _____
 Date Sampled: 12/16/2019 Mode of Discharge: Pump
 Time Sampled: 12:04 PM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 1038879
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft³) _____
 C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1517071	7	12/23/2019	4	12.57	8	3	40890	3250	
1517072	28	1/13/2020	4	12.57	8	2	58130	4620	
1517073	28	1/13/2020	4	12.57	8	2	60355	4800	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

11/48

114738988

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1B Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8867 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: John Kilmer
 Permit: _____ PO: _____ Inspection Date: 12/19/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 151937

Concrete



Mortar



Grout



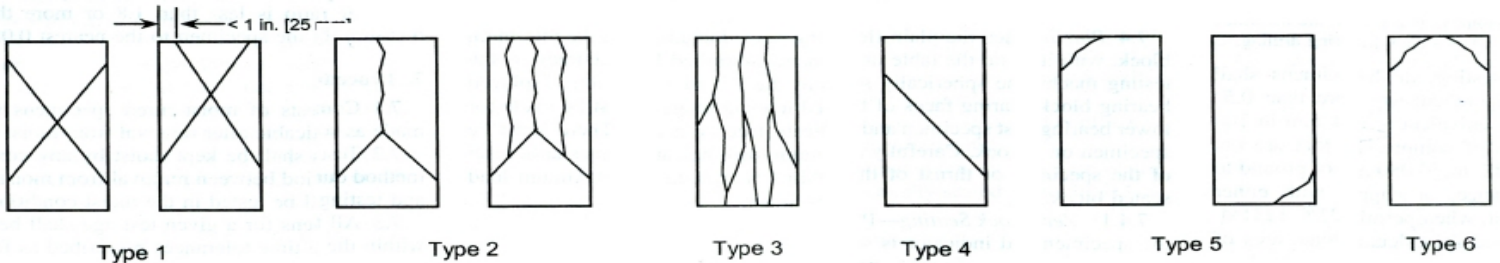
Shot-Crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 5
 Batch Size (CY): 9 (C143) Slump (in) ACTUAL: 5
 Batch Time: 11:19 AM (C1064) Material Temperature (deg F): 79
 Sample Description: Box Culvert Wall Ambient Temperature (deg F): 59
 Sample Location: Moore Loop Road; STA 59+68 Admixtures: _____
 Date Sampled: 12/19/2019 Mode of Discharge: Pump
 Time Sampled: 12:23 PM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1040036
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1519371	7	12/26/2019	4	12.57	8	5	31245	2490	
1519372	28	1/1/1990	4	12.57	8	3	55365	4400	
1519373	28	1/1/1990	4	12.57	8	3	48920	3890	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

12/48

114961218

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1B Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8867 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Sergio Montiel
 Permit: _____ PO: _____ Inspection Date: 12/23/2019 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 152185

Concrete



Mortar



Grout



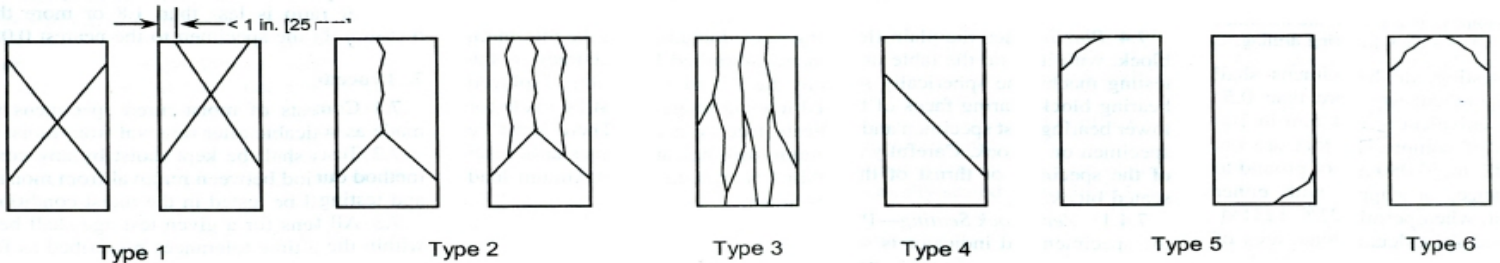
Shot-Crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 4
 Batch Size (CY): 8.5 (C143) Slump (in) ACTUAL: 4.5
 Batch Time: 9:13 AM (C1064) Material Temperature (deg F): 69
 Sample Description: Box Culvert Walls Ambient Temperature (deg F): 54
 Sample Location: Moore Loop Road; STA 57+79 Admixtures: _____
 Date Sampled: 12/23/2019 Mode of Discharge: Pump
 Time Sampled: 10:08 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1040784
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1521851	8	12/31/2019	4	12.57	8	5	42825	3410	
1521852	28	1/1/1990	4	12.57	8	2	64085	5100	
1521853	28	1/1/1990	4	12.57	8	3	63065	5020	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



**Street Improvements Package for:
Rancho Vistoso Valley Vista – 5X and 5W
Phase 1C**

Attention: Andy Martinez

PHOENIX
1102 West Southern Avenue, Suite 4
Tempe, Arizona 85282
Dispatch 602-272-7890
(o) 602-272-PTX1 (7891)
(f) 602-272-7892



TUCSON
916 West Grant Road
Tucson, Arizona 85705
Dispatch 520-352-0150
(o) 520-352-0150
(f) 520-731-9344

February 09, 2021

Pulte Tucson Land - MS-1021

P.O. Box 3660

Portland, OR 97208

Re: Street Report

[141762299]

5X and 5W Phase 1C @ Rancho Vistoso Valley Vista

Lot #: Street Improvements Permit #:

ProTeX Job ID#: 0234Dev-3579-8868

To Whom It May Concern:

In accordance with your request, we have completed the material testing of the street improvements within the subject project. To the best of my knowledge, the results are in substantial conformance with Pima County and City of Tucson specifications and requirements. Field density tests and lab results are enclosed.

At the discretion of Pulte Tucson Land, the areas with gradation deficiencies may be resolved following PAG standard specifications for Public Improvements Section 110-2.02 (Table 110-2).

For questions or comments regarding this submittal, please contact the undersigned at (602) 272-PTX1 or engineering@protex-az.com.

Submitted by:

ProTeX - the PT Xperts, L.L.C.



Jones Tembo, P.E.

Rancho Vistoso Valley Vista – 5X and 5W Phase 1C
Oro Valley, Arizona
ProTeX Job ID: 8868



Concrete Subgrade



Field Density Summary Report

2/41

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1C

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8868

Lot: Streets

Test Type: ADA Ramp Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
12/28/2020	Geyser Valley Street	STA 13+30 (N/W)	FG	10"	122.3	7.2	125.3	10.2	98	95 min.	-3 to +3	191998	Pass
12/28/2020	Geyser Valley Street	STA 13+30 (N/W)	FG	10"	121.7	7.8	121.2	10.1	100	95 min.	-3 to +3	191957	Pass
12/28/2020	Geyser Valley Street	STA 12+90 (S/W)	FG	10"	120.0	8.1	121.2	10.1	99	95 min.	-3 to +3	191957	Pass



Field Density Summary Report

3/41

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1C

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8868

Lot: Streets

Test Type: Curb Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
12/15/2020	Geyser Valley Street	STA 17+00 (S/B)	FG	8"	117.1	8.1	121.2	10.1	97	95 min.	-3 to +3	191957	Pass
12/15/2020	Geyser Valley Street	STA 19+25 (S/B)	FG	8"	117.5	8.2	123.8	10.0	95	95 min.	-3 to +3	191963	Pass
12/15/2020	Geyser Valley Street	STA 18+00 (N/B)	FG	8"	129.2	8.2	125.3	10.2	103	95 min.	-3 to +3	191998	Pass
12/15/2020	Geyser Valley Street	STA 19+75 (N/B)	FG	8"	127.4	8.3	125.3	10.2	102	95 min.	-3 to +3	191998	Pass
12/15/2020	Danum Valley Drive	STA 11+00 (E/B)	FG	8"	120.1	7.5	125.3	10.2	96	95 min.	-3 to +3	191998	Pass
12/15/2020	Harua Valley Road	STA 20+75 (E/B)	FG	8"	123.2	8.0	123.8	10.0	100	95 min.	-3 to +3	191963	Pass
12/15/2020	Harua Valley Road	STA 20+25 (W/B)	FG	8"	123.5	7.8	125.3	10.2	99	95 min.	-3 to +3	191998	Pass
12/15/2020	Geyser Valley Street	STA 15+00 (N/B)	FG	8"	116.7	7.8	121.2	10.1	96	95 min.	-3 to +3	191957	Pass
12/15/2020	Geyser Valley Street	STA 11+00 (S/B)	FG	8"	122.4	7.2	125.3	10.2	98	95 min.	-3 to +3	191998	Pass
12/15/2020	Danum Valley Drive	STA 12+00 (W/B)	FG	8"	124.3	7.2	125.3	10.2	99	95 min.	-3 to +3	191998	Pass
12/15/2020	Geyser Valley Street	STA 14+00 (S/B)	FG	8"	118.1	7.4	121.2	10.1	97	95 min.	-3 to +3	191957	Pass
12/15/2020	Geyser Valley Street	STA 12+00 (N/B)	FG	8"	118.4	7.4	123.8	10.0	96	95 min.	-3 to +3	191963	Pass



Field Density Summary Report

4/41

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1C

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8868

Lot: Streets

Test Type: Scupper Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
12/28/2020	Geyser Valley Street	STA 14+72	FG	10"	118.0	9.2	121.2	10.1	97	95 min.	-3 to +3	191957	Pass
12/28/2020	Harua Valley Road	STA 20+21	FG	10"	118.9	9.9	121.2	10.1	98	95 min.	-3 to +3	191957	Pass



Field Density Summary Report

5/41

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1C

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8868

Lot: Streets

Test Type: Sidewalk Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
12/28/2020	Geyser Valley Street	STA 12+50 (N/B)	FG	10"	116.3	9.1	121.2	10.1	96	95 min.	-3 to +3	191957	Pass
12/28/2020	Geyser Valley Street	STA 15+50 (N/B)	FG	10"	120.8	7.9	121.2	10.1	100	95 min.	-3 to +3	191957	Pass
12/28/2020	Geyser Valley Street	STA 10+00 (N/B)	FG	10"	117.8	8.9	121.2	10.1	97	95 min.	-3 to +3	191957	Pass
12/28/2020	Harua Valley Road	STA 21+00 (E/B)	FG	10"	127.4	7.6	128.5	9.1	99	95 min.	-3 to +3	191998	Pass
12/28/2020	Harua Valley Road	STA 13+00 (N/B)	FG	10"	118.2	8.9	121.2	10.1	98	95 min.	-3 to +3	191957	Pass

Rancho Vistoso Valley Vista – 5X and 5W Phase 1C
Oro Valley, Arizona
ProTeX Job ID: 8868



Street Subgrade



Field Density Summary Report

6/41

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1C

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8868

Lot: Streets

Test Type: Street Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
01/05/2021	Danum Valley Drive	STA 10+50 (E/B)	FG	8"	123.5	8.2	125.3	10.2	99	95 min.	-3 to +3	191998	Pass
01/05/2021	Harua Valley Road	STA 21+00 (E/B)	FG	8"	124.3	8.7	125.3	10.2	99	95 min.	-3 to +3	191998	Pass
01/05/2021	Geyser Valley Street	STA 10+00 (S/B)	FG	8"	128.0	7.7	128.5	9.1	100	95 min.	-3 to +3	191998	Pass
01/05/2021	Danum Valley Drive	STA 13+00 (W/B)	FG	8"	124.3	8.2	125.3	10.2	99	95 min.	-3 to +3	191998	Pass
01/05/2021	Harua Valley Road	STA 20+00 (W/B)	FG	8"	130.0	7.1	130.1	8.6	100	95 min.	-3 to +3	191998	Pass
01/05/2021	Geyser Valley Street	STA 12+50 (N/B)	FG	8"	124.3	8.1	125.3	10.2	99	95 min.	-3 to +3	191998	Pass
01/05/2021	Geyser Valley Street	STA 16+00 (S/B)	FG	8"	129.4	7.3	130.1	8.6	99	95 min.	-3 to +3	191998	Pass
01/05/2021	Geyser Valley Street	STA 15+50 (N/B)	FG	8"	119.6	9.9	125.3	10.2	95	95 min.	-3 to +3	191998	Pass
01/05/2021	Geyser Valley Street	STA 13+00 (S/B)	FG	8"	127.0	7.9	126.9	9.7	100	95 min.	-3 to +3	191998	Pass
01/05/2021	Geyser Valley Street	STA 19+00 (S/B)	FG	8"	122.0	9.4	125.3	10.2	97	95 min.	-3 to +3	191998	Pass
01/05/2021	Geyser Valley Street	STA 18+50 (N/B)	FG	8"	126.7	8.5	126.9	9.7	100	95 min.	-3 to +3	191998	Pass
01/05/2021	Geyser Valley Street	STA 19+50 (N/B)	FG	8"	121.7	9.6	125.3	10.2	97	95 min.	-3 to +3	191998	Pass

Rancho Vistoso Valley Vista – 5X and 5W Phase 1C
Oro Valley, Arizona
ProTeX Job ID: 8868



ABC Subgrade



Field Density Summary Report

1/41

Client: Pulte Tucson Land

Project Name: Rancho Vistoso Valley Vista

Job Name: 5X and 5W Phase 1C

Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road

Job ID #: 8868

Lot: Streets

Test Type: ABC Subgrade

Date	Street	Lot / Sta.	Depth of Test	Direct Trans. Used	Field Dry Density (lb/ft ³)	Field Moisture (%)	Max Dry Density (corr) (lb/ft ³)	Opt. Moisture (corr) (%)	% Comp.	Density Spec. (%)	Moisture Spec. (%)	Proctor Lab #	Pass
01/14/2021	Danum Valley Drive	STA 11+00 (E/B)	FG	4"	127.2	6.9	127.2	9.1	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Harua Valley Road	STA 20+75 (E/B)	FG	4"	129.7	6.6	129.4	8.5	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Geyser Valley Street	STA 12+00 (N/B)	FG	4"	130.0	6.3	129.4	8.5	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Danum Valley Drive	STA 12+00 (W/B)	FG	4"	127.0	6.6	127.2	9.1	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Harua Valley Road	STA 20+25 (W/B)	FG	4"	127.2	7.9	127.2	9.1	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Geyser Valley Street	STA 15+00 (N/B)	FG	4"	128.9	6.8	129.4	8.5	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Geyser Valley Street	STA 14+00 (S/B)	FG	4"	127.5	6.8	127.2	9.1	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Geyser Valley Street	STA 11+00 (S/B)	FG	4"	127.5	6.2	127.2	9.1	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Geyser Valley Street	STA 17+00 (S/B)	FG	4"	126.8	7.6	127.2	9.1	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Geyser Valley Street	STA 19+75 (N/B)	FG	4"	127.2	6.2	127.2	9.1	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Geyser Valley Street	STA 19+25 (S/B)	FG	4"	128.3	7.1	128.7	8.6	100	100 min.	-3 to +3	210172	Pass
01/14/2021	Geyser Valley Street	STA 18+00 (N/B)	FG	4"	136.8	6.6	136.7	6.5	100	100 min.	-3 to +3	210172	Pass

Rancho Vistoso Valley Vista – 5X and 5W Phase 1C
Oro Valley, Arizona
ProTeX Job ID: 8868



Asphaltic Concrete



ProTeX the PT Xperts LLC
1102 W. Southern Ave., Ste. 4
Tempe, AZ 85282

Office: (602) 272-7892
Fax: (602) 272-7892

AC Core Density

Client:	Pulte Tucson Land	ProTeX Job No:	8868
Project Name:	Rancho Vistoso Valley Vista	ProTeX Lab No:	210990
Job Name:	5X and 5W Phase 1C	Date Received:	2/4/2021
Material:	AC Cores	Sampled By:	Sean Hancock
Material Source:	Tangerine Pit	Date Sampled:	2/4/2021
Depth:	Surface	Submitted By:	Joseph Navarro
Material Supplier:	Granite		
Asphalt Product:	PAG 2 LV		

Test Method: ARIZ 415

Plan Thickness (in): 3.00

Core #	Retest	Location	Marshall / Rice (pcf)	Thickness (in)	Average Thickness (in)	% Water Absorption	Specific Gravity	Unit Weight (pcf)	% Comp.	Avg. Unit Weight (pcf)	Avg. % Comp.	Thickness Deficiency	Density Deficiency
1		Harau Valley Road, STA 20+50, EB	144.5	2.85	-	0.84	2.290	142.6	98.7	-	-		
2		Geyser Valley Street, STA 19+00, NB	144.5	3.50	-	1.36	2.239	139.5	96.6	-	-		
3		Geyser Valley Street, STA 16+00, SB	144.5	3.25	-	0.58	2.294	142.9	98.9	-	-		
4		Geyser Valley Street, STA 11+00, NB	144.5	3.20	-	0.17	2.313	144.1	99.8	-	-		
5		Danum Valley Drive, STA 12+00, WB	144.5	2.95	-	0.36	2.312	144.1	99.7	-	-		

Remarks:

Reviewed By:


Jones Tembo

Rancho Vistoso Valley Vista – 5X and 5W Phase 1C
Oro Valley, Arizona
ProTeX Job ID: 8868



Laboratory Tests



ProTeX the PT Xperts LLC
 1102 W. Southern Ave., Ste. 4 Office: (602)-272-7891
 Tempe, AZ 85282 Fax: (602) 272-7892

Soils Summary

Client: Pulte Tucson Land
 Project Name: Rancho Vistoso
 Job Name: 5X and 5W Mass Grading
 Material: Native (On-Site)
 Material Supplier: -
 Sample Location: Lot 10 (-)

ProTeX Job No: 8944
 ProTeX Lab No: 191957 - Phoenix
 Date Received: 3/27/2019
 Sampled By: Joseph Navarro
 Date Sampled: 3/25/2019
 Submitted By: Joseph Navarro

Plasticity Index	
Liquid Limit	NA
Plastic Limit	NA
Plasticity Index	NA

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

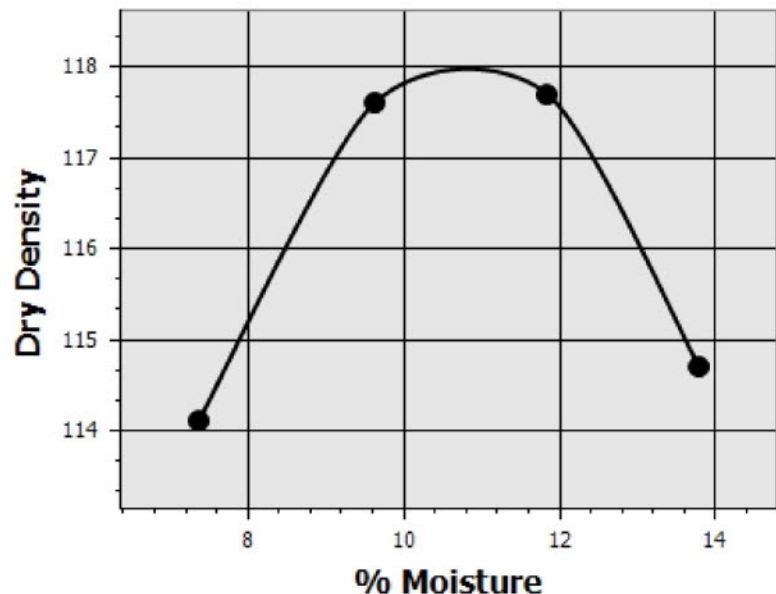
pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

Class: _____
 Symbol: _____

ASTM D698-A	
Moisture Density (Proctor)	
Max. Dry Density	118.0
Opt. Moisture %	10.8
Corr. Max. Dry Density	121.2
Corr. Opt. Moisture %	10.1
% Rock	8

* = out of specification

Moisture Vs. Density



Remarks: Grus with sand

Reviewed By:

Jerald W Grossarth



ProTeX the PT Xperts LLC
 1102 W. Southern Ave., Ste. 4 Office: (602)-272-7891
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Soils Summary

Client: Pulte Tucson Land
 Project Name: Rancho Vistoso
 Job Name: 5X and 5W Mass Grading
 Material: Native (On-Site)
 Material Supplier: -
 Sample Location: Lot 40 (-)

ProTeX Job No: 8944
 ProTeX Lab No: 191963 - Phoenix
 Date Received: 3/27/2019
 Sampled By: Joseph Navarro
 Date Sampled: 3/25/2019
 Submitted By: Joseph Navarro

Plasticity Index	
Liquid Limit	NA
Plastic Limit	NA
Plasticity Index	NA

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

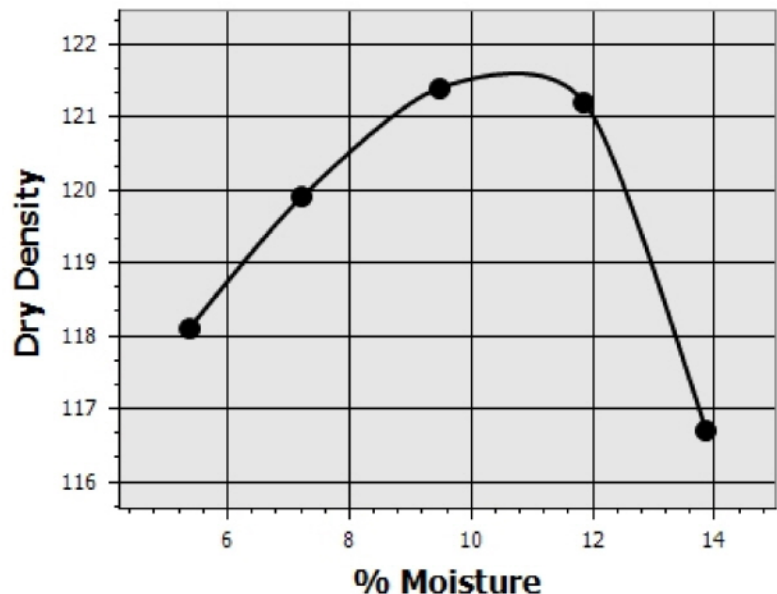
pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

Class: _____
 Symbol: _____

ASTM D698-A	
Moisture Density (Proctor)	
Max. Dry Density	121.6
Opt. Moisture %	10.7
Corr. Max. Dry Density	123.8
Corr. Opt. Moisture %	10.0
% Rock	7

* = out of specification

Moisture Vs. Density



Remarks: Grus with sand

Reviewed By:

Jerald W Grossarth



ProTeX the PT Xperts LLC
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Soils Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso
Job Name: 5X and 5W Mass Grading
Material: Native (On-Site)
Material Supplier: -
Sample Location: Lot 91 (#4)

ProTeX Job No: 8944
ProTeX Lab No: 191998 - Phoenix
Date Received: 3/28/2019
Sampled By: Joseph Navarro
Date Sampled: 3/25/2019
Submitted By: Joseph Navarro

Plasticity Index	
Liquid Limit	NA
Plastic Limit	NA
Plasticity Index	NA

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

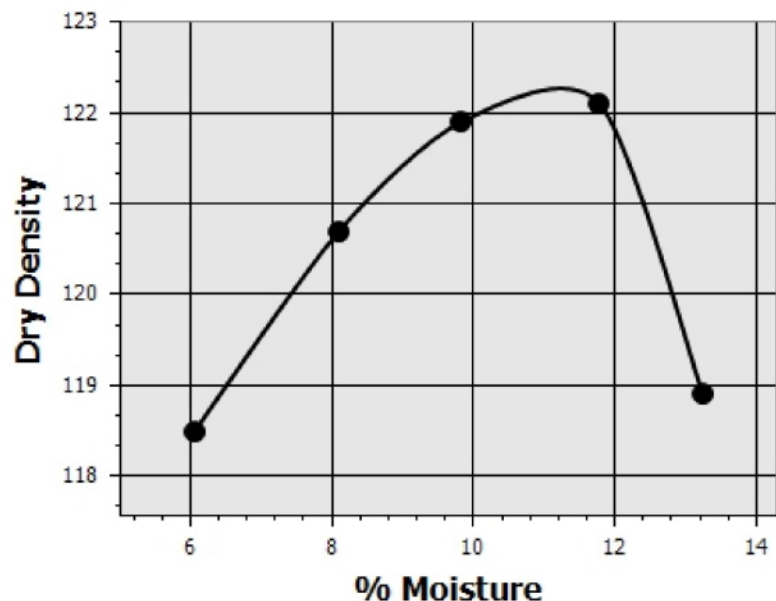
pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

Class: _____
Symbol: _____

ASTM D698-A	
Moisture Density (Proctor)	
Max. Dry Density	122.3
Opt. Moisture %	11.2
Corr. Max. Dry Density	125.3
Corr. Opt. Moisture %	10.2
% Rock	10

* = out of specification

Moisture Vs. Density



Remarks:

Reviewed By:

Jerald W Grossarth



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Soils Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1C
Material: Aggregate Base Course (Marana Sand and Gravel)
Material Supplier: Vulcan Materials
Sample Location: Site stockpile (Surface)

ProTeX Job No: 8868
ProTeX Lab No: 210172 - Tucson
Date Received: 1/7/2021
Sampled By: Joseph Navarro
Date Sampled: 1/6/2021
Submitted By: Joseph Navarro

AASHTO T89/T90	
Plasticity Index	
Liquid Limit	NV
Plastic Limit	NP
Plasticity Index	NP

Expansion Index, (EI)	Potential Expansion
0 - 20	Very Low
21 - 51	Low
52 - 90	Medium
91 - 130	High
> 130	Very High

Expansion Index	
EI =	NA

Percent Swell of Soil	
% Swell	NV
Notes:	

pH and Resistivity	
pH Reading:	NA
Resistivity (ohms-cm)	NA

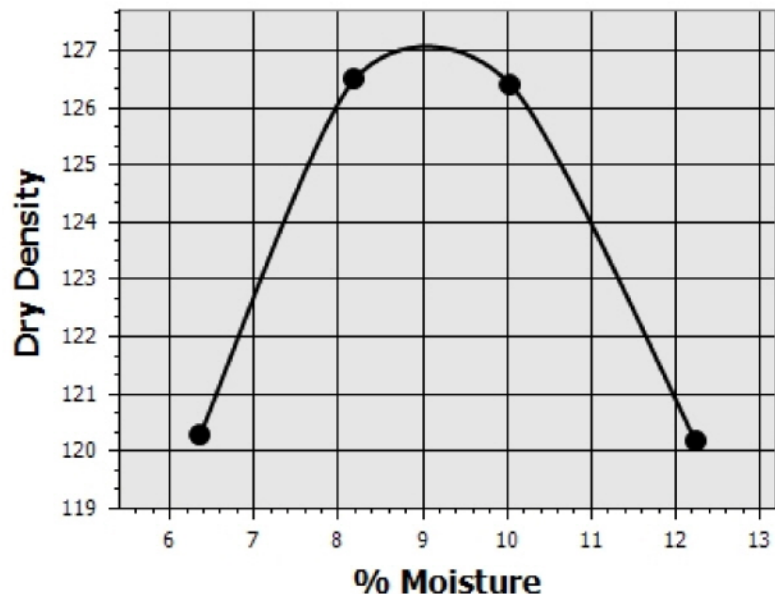
Class: Poorly-graded sand with gravel
Symbol: SP

ASTM D698-C	
Moisture Density (Proctor)	
Max. Dry Density	127.2
Opt. Moisture %	9.1
Corr. Max. Dry Density	129.4
Corr. Opt. Moisture %	8.5
% Rock	7

* = out of specification

ASTM C117 / C136			
Sieve	% Pass	Specs	*
3"	100		
2-1/2"	100		
2"	100		
1-1/2"	100		
1"	100	100	
3/4"	93	90-100	
1/2"	82		
3/8"	75		
1/4"	66	45-75	
#4	60		
#8	48		
#10	44		
#16	31		
#30	16		
#40	10		
#50	7		
#100	3		
#200	1.9	0-10	

Moisture Vs. Density



Remarks: Gravelly sand, tan brown

Reviewed By:

Jones Tembo
Jones Tembo



ProTeX the PT Xperts LLC
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Asphalt Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1C
Material: AC (Tangerine Hot Plant)
Material Supplier: Granite
Sample Location: Geyser Valley Street, STA 18+00, NB (Surface)
Product Mix Code: 13331 - PAG 2 LV (2020)

ProTeX Job No: 8868
ProTeX Lab No: 210405 - Phoenix
Date Received: 1/19/2021
Sampled By: Joseph Navarro
Date Sampled: 1/16/2021
Submitted By: Joseph Navarro
Mix Type: PAG 2 Low Volume Roads (50 Blow)

ARIZ 427			
Sieve	% Pass	Specs	*
1-1/2"	100		
1"	100		
3/4"	100		
1/2"	92		
3/8"	82	74-86	
1/4"	73		
#4	68		
#8	51	38-50	*
#10	47		
#16	35		
#30	25		
#40	20	11-21	
#50	17		
#100	12		
#200	8.8	4.9-8.5	*

ARIZ 427			*
Corrected Asphalt Content	5.9		
Uncorrected Asphalt Content	6.1		
Calibration Factor	0.25		

Asphalt Content Specs

LL	TV	UL
5.1	5.5	5.9

ARIZ 410		
Percent Air Voids		*
3.8		

Air Void Specs

LL	TV	UL
2.1	4.1	5.1

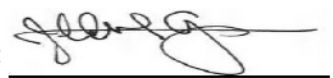
ARIZ 417	
Max Theoretical Density, pcf	
150.2	

ARIZ 410	
Marshall Density, pcf	
144.4	

Uncompacted Voids	
Uncompacted Voids Specs: >45.0	

Remarks: Compaction Temp. Range 295-303 F PAG 2 LV PG 70-10

Reviewed By:


Jerald W Grossarth



ProTeX the PT Xperts LLC
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Tempe, AZ 85282 Fax: (602) 272-7892

Asphalt Summary

Client: Pulte Tucson Land
Project Name: Rancho Vistoso Valley Vista
Job Name: 5X and 5W Phase 1C
Material: AC (Tangerine Hot Plant)
Material Supplier: Granite
Sample Location: Geyser Valley Street, STA 12+00, SB (Surface)
Product Mix Code: 13331 - PAG 2 LV (2020)

ProTeX Job No: 8868
ProTeX Lab No: 210406 - Phoenix
Date Received: 1/19/2021
Sampled By: Joseph Navarro
Date Sampled: 1/16/2021
Submitted By: Joseph Navarro
Mix Type: PAG 2 Low Volume Roads (50 Blow)

ARIZ 427			
Sieve	% Pass	Specs	*
1-1/2"	100		
1"	100		
3/4"	100		
1/2"	90		
3/8"	78	74-86	
1/4"	69		
#4	64		
#8	47	38-50	
#10	43		
#16	33		
#30	24		
#40	20	11-21	
#50	17		
#100	12		
#200	9.4	4.9-8.5	*

ARIZ 427			*
Corrected Asphalt Content	5.7		
Uncorrected Asphalt Content	6.0		
Calibration Factor	0.25		

Asphalt Content Specs

LL	TV	UL
5.1	5.5	5.9

ARIZ 410		
Percent Air Voids		*
3.8		

Air Void Specs

LL	TV	UL
2.1	4.1	5.1

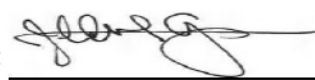
ARIZ 417	
Max Theoretical Density, pcf	
150.2	

ARIZ 410	
Marshall Density, pcf	
144.5	

Uncompacted Voids	
Uncompacted Voids Specs: >45.0	

Remarks: Compaction Temp. Range 295-303 F PAG 2 LV PG 70-10

Reviewed By:


Jerald W Grossarth



Compressive Strength Report

133700119

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1C Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8868 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: John Kilmer
 Permit: _____ PO: _____ Inspection Date: 9/18/2020 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 171413

Concrete



Mortar



Grout



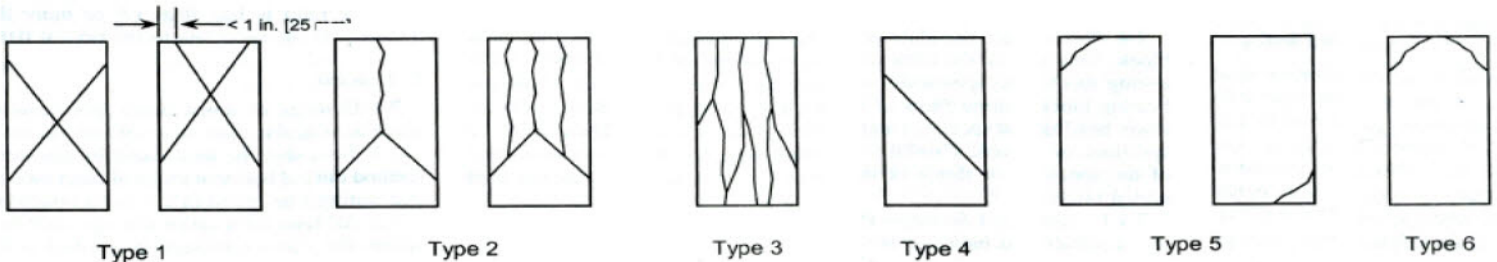
Shot-crete



Core



Supplier: CalPortland Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 130624 Slump (in) SPECIFIED: 5
 Batch Size (CY): 10 (C143) Slump (in) ACTUAL: 4
 Batch Time: 6:45 AM (C1064) Material Temperature (deg F): 80
 Sample Description: Catch Basin Walls (Phase 1 park common area) Ambient Temperature (deg F): 74
 Sample Location: Moore Loop near STA 56+00 Admixtures: Chilled Water
 Date Sampled: 9/18/2020 Mode of Discharge: Chute
 Time Sampled: 7:47 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 3000 @ 28 days Material Ticket #: 1109559
 Delivered Mix Design Strength (psi) 3000 @ 28 days (C138) Unit Weight (lb/ft³) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1714131	7	9/25/2020	4	12.57	8	3	43025	3420	
1714133	28	10/16/2020	4	12.57	8	3	57345	4560	
1714132	28	10/16/2020	4	12.57	8	3	56925	4530	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:

SPECIAL INSPECTIONS • GEO-TECHNICAL/ MATERIALS • LABORATORY • ENGINEERING CONSULTATION



Compressive Strength Report

139682312

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1C Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8868 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Jonathan Navarro
 Permit: _____ PO: _____ Inspection Date: 12/16/2020 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 178246

Concrete



Mortar



Grout



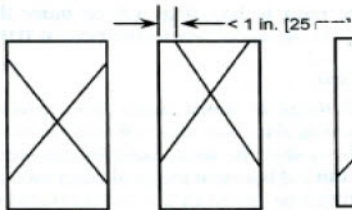
Shot-crete



Core



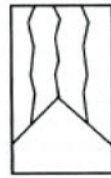
Supplier: Cemex Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 1588245 Slump (in) SPECIFIED: 0
 Batch Size (CY): 11 (C143) Slump (in) ACTUAL: 1
 Batch Time: 12:57 PM (C1064) Material Temperature (deg F): 75
 Sample Description: Curb Ambient Temperature (deg F): 60
 Sample Location: Harua Valley Road; STA 21+00 (W/B) Admixtures: Hot Water
 Date Sampled: 12/16/2020 Mode of Discharge: Chute
 Time Sampled: 1:44 PM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 57362077
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft3) _____
 (C231) Air Content (%) _____



Type 1



Type 2



Type 3



Type 4



Type 5



Type 6

Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1782461	7	12/23/2020	4	12.57	8	2	29375	2340	
1782462	28	1/13/2021	4	12.57	8	3	40185	3200	
1782463	28	1/13/2021	4	12.57	8	3	42505	3380	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

139865806

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1C Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8868 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Jonathan Navarro
 Permit: _____ PO: _____ Inspection Date: 12/18/2020 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 178446

Concrete



Mortar



Grout



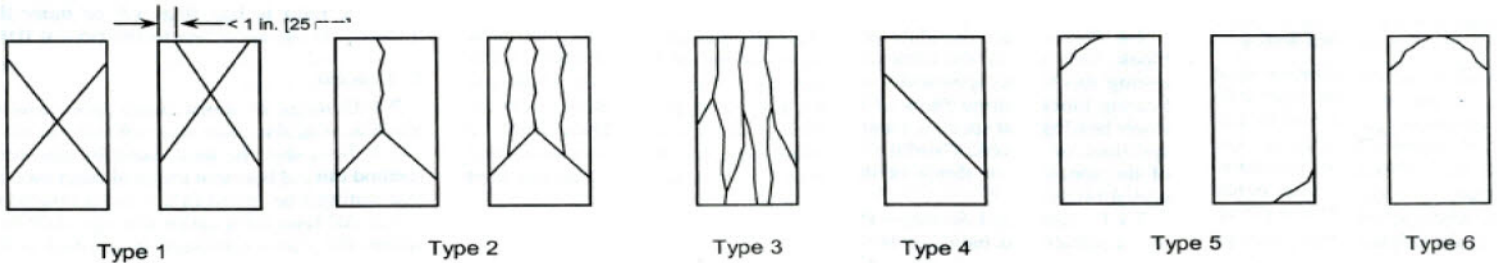
Shot-crete



Core



Supplier: Cemex Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 1588245 Slump (in) SPECIFIED: 1
 Batch Size (CY): 11 (C143) Slump (in) ACTUAL: 1
 Batch Time: 8:38 AM (C1064) Material Temperature (deg F): 65
 Sample Description: Curb Ambient Temperature (deg F): 55
 Sample Location: Geyser Valley Street, STA 10+00 (S/B) Admixtures: Hot Water
 Date Sampled: 12/18/2020 Mode of Discharge: Pump
 Time Sampled: 9:22 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 57362210
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft3) _____
 (C231) Air Content (%) _____



Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1784461	10	12/28/2020	4	12.57	8	5	29590	2350	
1784462	28	1/15/2021	4	12.57	8	2	22865	1820	
1784463	28	1/15/2021	4	12.57	8	3	39465	3140	

C31, C39, C511, ☐ C617, ☒ C1231

Comments:



Compressive Strength Report

140449089

Client: Pulte Tucson Land Builder: Pulte Tucson Land Project Name: Rancho Vistoso Valley Vista
 Job Name: 5X and 5W Phase 1C Cross Streets: N Rancho Vistoso Boulevard and E Tangerine Road
 Job ID #: 8868 Lot #: Streets Address: _____
 Model #/Elevation: _____ CSM: Jonathan Navarro
 Permit: _____ PO: _____ Inspection Date: 12/29/2020 Reinspection: ☐ Inv: _____
 Concrete Contractor: _____ Report Number: 179346

Concrete



Mortar



Grout



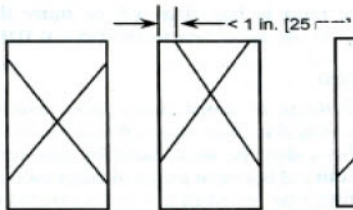
Shot-crete



Core



Supplier: Cemex Break Schedule: 7, 28, 28, Hold
 Mix ID/Product Code: 1588396 Slump (in) SPECIFIED: 4
 Batch Size (CY): 7 (C143) Slump (in) ACTUAL: 4
 Batch Time: 8:27 AM (C1064) Material Temperature (deg F): 66
 Sample Description: Sidewalk Ambient Temperature (deg F): 42
 Sample Location: Geyser Valley Street; STA 15+50 (N/B) Admixtures: Hot Water
 Date Sampled: 12/29/2020 Mode of Discharge: Chute
 Time Sampled: 9:17 AM Water added BEFORE test (gal) 0
 Weather: Clear Water added AFTER test (gal) 0
 Project Specified Design Strength (psi) 2500 @ 28 days Material Ticket #: 57362489
 Delivered Mix Design Strength (psi) 2500 @ 28 days (C138) Unit Weight (lb/ft³) _____
 (C231) Air Content (%) _____



Type 1



Type 2



Type 3



Type 4



Type 5



Type 6

Specimen No.	Age	Date Tested	Dia. (in)	Area (sq in)	Length (in)	Break Type	Peak (lbs)	Strength (psi)	Lab Technician
1793461	7	1/5/2021	4	12.57	8	5	17945	1430	
1793463	28	1/26/2021	4	12.57	8	3	27585	2200	
1793462	28	1/26/2021	4	12.57	8	3	26870	2140	

C31, C39, C511, ☐ C617, ☒ C1231

Comments: