

August 26, 2014



Kimley-Horn and Associates, Inc.  
7740 N. 16<sup>th</sup> Street, Suite 300  
Phoenix, Arizona 85020

Attn: Mr. Sterling Margetts

Re: **Report of Infiltration Test Results**  
**Tom Jones Ford Dealership**  
**Yuma Road from S. Apache Road to 247<sup>th</sup> Avenue**  
**Buckeye, Arizona**  
**Terracon Project No. 65145203**

Dear Mr. Margetts:

At your request, Terracon Consultants, Inc. (Terracon) has completed infiltration testing in association with the proposed Tom Jones Ford Dealership project in Buckeye, Arizona. These services were performed in general accordance with our proposal dated July 15, 2014 and subsequent Individual Project Order No. 191826000-2 dated August 6, 2014. This report presents the results of borings and double-ring infiltration testing performed at the planned locations of surface retention basins, as required by the City of Buckeye. The results of our services, including a site plan, logs of the borings, and double-ring infiltrometer test results are attached to this report.

### **Introduction**

Based on the information provided by Kimley-Horn and Associates, Inc. (KHA), a total of six (6) surface retention basins are planned at the site. Two on-site retention basins planned at the east and west ends of the planned dealership, and four additional retention basins are planned along Yuma Road to the east of the planned dealership.

The number of tests performed within each planned retention basin was determined in accordance with Maricopa County Flood Control District (MCFCD) guidelines and based upon the bottom area of each basin. Two (2) double-ring infiltrations tests were performed in the far west basin, four (4) double-ring infiltrations tests were performed within the far east basin, and three (3) double-ring infiltrations tests were performed within each intermediate basin. The infiltration tests were performed near the planned bottom elevations of the retention basins, which is approximately four (4) to (5) feet below existing site grades. A backhoe was used to excavate a pit to the infiltration test depths. In addition to double-ring infiltrations testing, a boring extending to a minimum depth of 10 feet below the planned bottom of basin elevation (i.e., approximate 16 feet below existing grade) was performed adjacent to each double-ring test location. The approximate boring and infiltration test locations are shown on Exhibit A-1, attached. The following photograph depicts a typical infiltration test setup at the project site.



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Geotechnical



Environmental



Construction Materials



Facilities

**Report of Infiltration Test Results**

Tom Jones Ford Dealership ■ Buckeye, Arizona  
August 26, 2014 ■ Terracon Project No. 65145203



## Report of Infiltration Test Results

Tom Jones Ford Dealership ■ Buckeye, Arizona  
August 26, 2014 ■ Terracon Project No. 65145203



### Field Exploration

A total of 18 test borings were drilled at the site on August 19, 2014. The borings were drilled to depths ranging from 15 to 16½ feet below the ground surface at the approximate locations shown on Exhibit A-1. The test borings were advanced with a truck-mounted CME-75 drill rig utilizing 8-inch diameter hollow-stem augers. Logs of the borings are presented on Exhibits A-2 through A-19, attached.

During the drilling operations, a field geologist logged the borings, recorded the results of penetration tests, and collected representative samples. At selected intervals, samples of the subsurface materials were taken by driving ring-lined barrel and standard split-spoon samplers.

### Groundwater Conditions

Groundwater was not observed in any test boring at the time of field exploration, nor when checked upon completion of drilling. These observations represent groundwater conditions at the time of the field exploration and may not be indicative of other times, or at other locations. Groundwater conditions can change with varying seasonal and weather conditions, and other factors. Based on information obtained from the Arizona Department of Water Resources – Groundwater Data website (<https://gisweb.azwater.gov/waterresourcedata/GWSI.aspx>), the depth to regional groundwater was measured in January 2014 to be approximately 155 feet below the ground surface (approximate elevation of 840 feet above mean sea level) at an Arizona Department of Water Resources (ADWR) monitored well site (Local I.D. B-01-21DBB) located approximately 1½ miles southeast of the site.

### Double-Ring Infiltrometer Testing

Test results from infiltration testing conducted within the footprints of the planned surface retention basins are presented on Exhibits A-20 through A-37, and are summarized in the following table. The infiltration tests were performed in general accordance with ASTM D 3385 utilizing a double-ring infiltrometer in accordance with MCFCD guidelines. Refer to Exhibit A-1 (attached) for the approximate infiltration test locations.

Infiltration Test Results				
Test	Visual Soil Classification	Field Infiltration Rate (inches/hour)	De-Rating Factor <sup>2</sup>	Design Infiltration Rate (inches/hour)
INF-1	Silty Sand w/ Gravel (SM)	1.25	2	0.63
INF-2	Silty Sand w/ Gravel (SM)	3.06	2	1.53
INF-3	Silty Sand w/ Gravel (SM)	14.0 <sup>1</sup>	2	7.0
INF-4	Silty Clayey Sand (SC-SM)	1.42	2	0.71
INF-5	Clayey Sand w/ Gravel (SC)	0.13	2	0.07
INF-6	Silty Clayey Sand w/ Gravel (SC-SM)	1.34	2	0.67

## Report of Infiltration Test Results

Tom Jones Ford Dealership ■ Buckeye, Arizona  
August 26, 2014 ■ Terracon Project No. 65145203



Infiltration Test Results				
Test	Visual Soil Classification	Field Infiltration Rate (inches/hour)	De-Rating Factor <sup>2</sup>	Design Infiltration Rate (inches/hour)
INF-7	Silty Clayey Sand w/ Gravel (SC-SM)	0.68	2	0.34
INF-8	Silty Gravel w/ Sand (GM)	14.0 <sup>1</sup>	2	7.0
INF-9	Silty Clayey Sand w/ Gravel (SC-SM)	2.03	2	1.02
INF-10	Silty Clayey Sand w/ Gravel (SC-SM)	2.46	2	1.23
INF-11	Poorly Graded Sand w/ Silt and Gravel (SP-SM)	2.05	2	1.03
INF-12	Silty Sand w/ Gravel (SM)	4.71	2	2.36
INF-13	Poorly Graded Sand w/ Gravel (SP)	6.54	2	3.27
INF-14	Silty Sand w/ Gravel (SM)	2.61	2	1.31
INF-15	Silty Sand w/ Gravel (SM)	6.01	2	3.01
INF-16	Silty Sand w/ Gravel (SM)	4.03	2	2.02
INF-17	Silty Clayey Sand w/ Gravel (SC-SM)	2.14	2	1.07
INF-18	Silty Sand w/ Gravel (SM)	2.28	2	1.14

<sup>1</sup> Free-draining conditions were observed at test locations INF-3 and INF-8 and faster rates than those shown in the table were measured in the field. However, the test method is generally valid up to a rate of 14 inches/hour, and we recommend this value be used during infiltration basin design.

<sup>2</sup> The de-rating factor was obtained from Table 9.2 of the MCFCD Drainage Design Manual – Hydraulics dated August 15, 2013.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

**Terracon Consultants, Inc.**

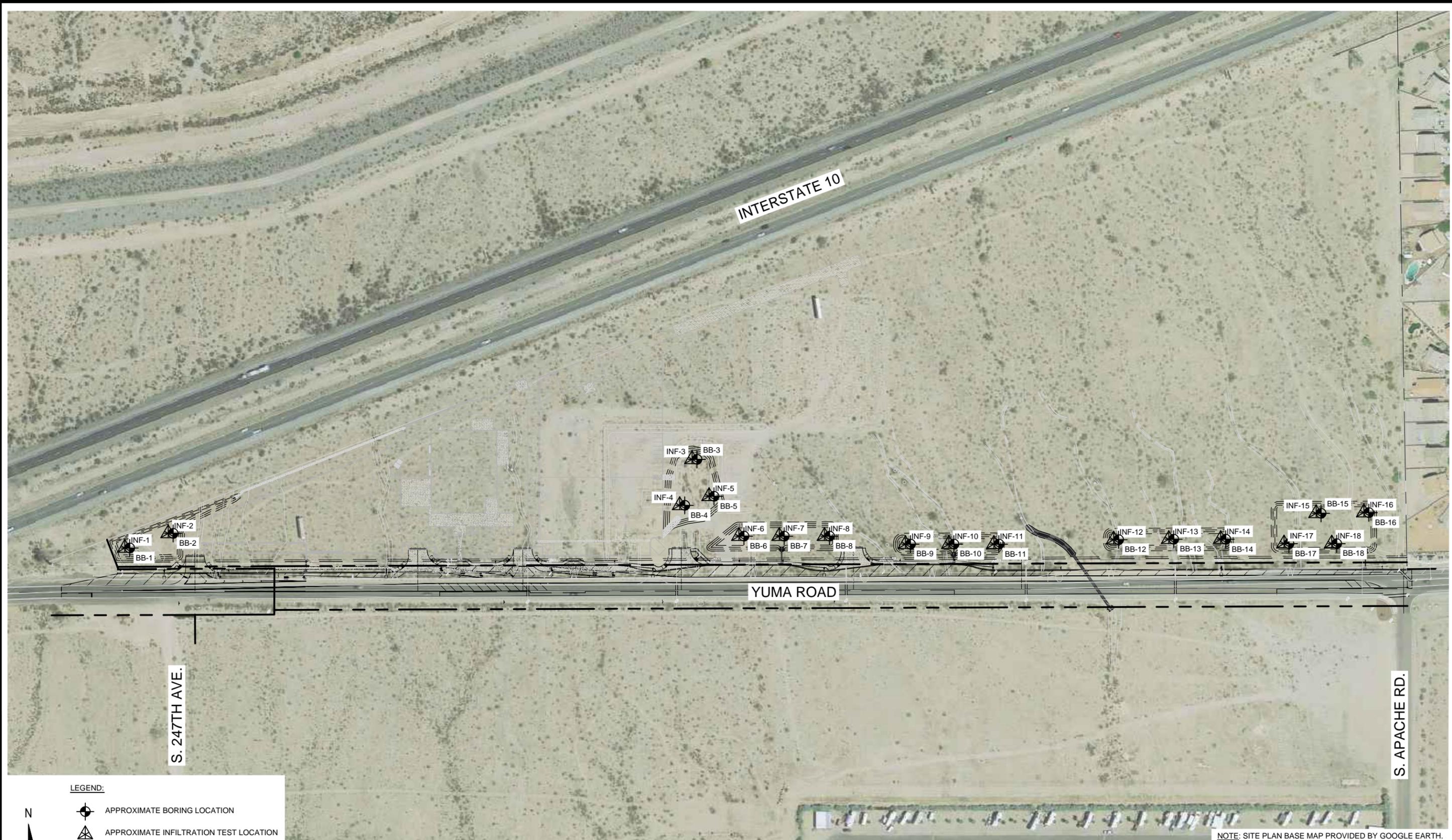
Jesse R. Huston, P.E.  
Senior Project Manager



Scott D. Neely, P.E.  
Principal

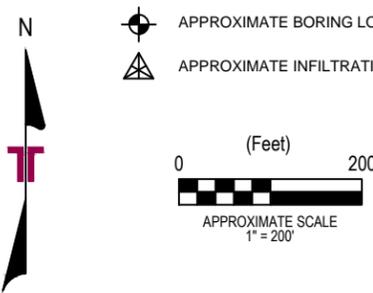
Attachments:

- Exhibit A-1: Site Plan and Test Locations
- Exhibit A-2 thru A-19: Boring Logs
- Exhibit A-20 thru A-37: Infiltration Test Results



NOTE: SITE PLAN BASE MAP PROVIDED BY GOOGLE EARTH.

**LEGEND:**  
 APPROXIMATE BORING LOCATION  
 APPROXIMATE INFILTRATION TEST LOCATION



Project Mngr:	JRH	Project No.	65145203
Drawn By:	BJD	Scale:	AS SHOWN
Checked By:	SDN	File No.	65145203.DWG
Approved By:	SDN	Date:	08/25/2014

**Terracon**  
 Consulting Engineers and Scientists  
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**SITE PLAN AND TEST LOCATIONS**  
**TOM JONES FORD DEALERSHIP**  
 YUMA ROAD FROM S. APACHE ROAD TO 247th AVENUE

ARIZONA

**EXHIBIT**  
**A-1**

# BORING LOG NO. BB-1

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
	DEPTH							LL-PL-PI		
	<p><b>SILTY SAND WITH GRAVEL (SM)</b>, brown, dense</p> <p>light brown, weak cementation</p>	5			13-26-12 N=38					
	<p><b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b>, light brown, dense, moderate cementation</p>	10			15-18-22 N=40					
	<p><b>SILTY SAND WITH GRAVEL (SM)</b>, brown to light brown, very dense, weak to moderate cementation</p>	15			21-33-50/3"					
	<p><b>Boring Terminated at 16.5 Feet</b></p>									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-2

# BORING LOG NO. BB-2

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	<b>SILTY SAND WITH GRAVEL (SM)</b> , brown, medium dense	5			4-7-13 N=20				
	<b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b> , brown to light brown, medium dense, weak cementation	6.0							
	<b>SILTY SAND (SM)</b> , brown, dense	9.0			17-24-21 N=45				
	<b>Boring Terminated at 16.5 Feet</b>	10			15				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-3

# BORING LOG NO. BB-3

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT\_8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
DEPTH									
4.0	<b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , brown								
5	<b>SILTY SAND WITH GRAVEL (SM)</b> , brown to light brown, medium dense to dense, weak cementation			X	21-28-21 N=49				
10				X	8-8-16 N=24				
15	very dense			X	15-31-50/5"				
16.5	<b>Boring Terminated at 16.5 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-4

# BORING LOG NO. BB-4

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	<b>SILTY CLAYEY SAND (SC-SM)</b> , brown to light brown, very dense, weak to moderate cementation	5			14-21-35 N=56				
	<b>SILTY GRAVEL WITH SAND (GM)</b> , brown, dense  very dense, weak to moderate cementation	10			16-17-14 N=31				
		15			15-31-32 N=63				
	<b>Boring Terminated at 16.5 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-5

# BORING LOG NO. BB-5

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
	DEPTH LOCATION See Exhibit A-1									
	<b>CLAYEY SAND WITH GRAVEL (SC)</b> , brown, dense, weak cementation	5			23-18-24 N=42					
	8.0 <b>SILTY SAND WITH GRAVEL (SM)</b> , light brown, very dense, weak to moderate cementation	10			33-50/5"					
	12.0 <b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b> , light brown, dense, weak to moderate cementation	15			23-19-25 N=44					
	16.5 <b>Boring Terminated at 16.5 Feet</b>									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-6

# BORING LOG NO. BB-6

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	<b>CLAYEY SAND WITH GRAVEL (SC)</b> , light brown, moderate cementation	3.0							
	<b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b> , light brown, medium dense to dense, no to weak cementation	5		X	12-14-15 N=29				
	<b>CLAYEY SAND WITH GRAVEL (SC)</b> , brown to light brown, dense, weak cementation	8.0							
	<b>SILTY GRAVEL WITH SAND (GM)</b> , light brown, very dense, no to weak cementation	14.0		X	14-19-16 N=35				
	<b>Boring Terminated at 15.5 Feet</b>	15.5		X	50/5"				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-7

# BORING LOG NO. BB-7

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	<b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b> , brown to light brown, dense, weak cementation	5		X	5-11-35 N=46				
	<b>SILTY SAND (SM)</b> , brown to light brown, dense to very dense	10		X	19-31-21 N=52				
		15		X	19-21-14 N=35				
	<b>Boring Terminated at 16.5 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*

Notes:



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-8

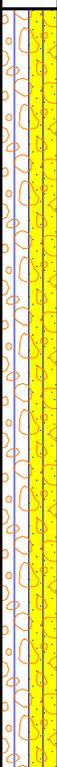
# BORING LOG NO. BB-8

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	<b>SILTY GRAVEL WITH SAND (GM)</b> , brown, medium dense	5			7-7-7 N=14					
	very dense, weak cementation	10			34-29-25 N=54					
	<b>SILTY SAND WITH GRAVEL (SM)</b> , light brown, very dense, weak to moderate cementation	13.0								
	16.0	15			31-50/5"					
	<b>Boring Terminated at 16 Feet</b>									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-9

# BORING LOG NO. BB-9

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	<p><b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b>, brown, dense</p> <p style="text-align: center;">light brown to white, weak cementation</p>	5			18-22-26 N=48				
	<p><b>SILTY SAND WITH GRAVEL (SM)</b>, brown to light brown, very dense, weak to moderate cementation</p>	10			50				
	<p><b>POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM)</b>, brown, very dense</p>	15			16-23-35 N=58				
<p><b>Boring Terminated at 16.5 Feet</b></p>									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-10

# BORING LOG NO. BB-10

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. 65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	<p><b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b>, brown to light brown, dense, weak to moderate cementation</p>	5			6-19-28 N=47				
	<p>7.0</p> <p><b>SILTY SAND WITH GRAVEL (SM)</b>, light brown, very dense, weak to moderate cementation</p>	10			22-33-50/5"				
	<p>13.0</p> <p><b>SILTY GRAVEL WITH SAND (GM)</b>, brown, very dense, no to weak cementation</p>	15			50/2"				
	<p>15.0</p> <p><b>Boring Terminated at 15 Feet</b></p>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-11

# BORING LOG NO. BB-11

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ\_TERRACON2012.GDT\_8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
0.0	<b>SILTY CLAYEY SAND (SC-SM)</b> , brown, no to weak cementation								
2.0	<b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , brown, medium dense								
5.0		5		X	8-8-9 N=17				
9.0	<b>CLAYEY SAND (SC)</b> , brown, medium dense to dense, no to weak cementation								
10.0		10		X	12-15-14 N=29				
14.0	<b>SILTY GRAVEL WITH SAND (GM)</b> , light brown, very dense, weak to moderate cementation								
15.0		15		X	11-12-44 N=56				
16.5	<b>Boring Terminated at 16.5 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-12

# BORING LOG NO. BB-12

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
4.0	<b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b> , brown									
5	<b>SILTY SAND WITH GRAVEL (SM)</b> , brown, medium dense to dense			X	9-14-15 N=29					
	very dense, weak to moderate cementation									
10				X	40-50/5"					
12.0	<b>SILTY GRAVEL WITH SAND (GM)</b> , brown to light brown, very dense, weak to moderate cementation									
15				X	30-50/5"					
	<b>Boring Terminated at 16 Feet</b>									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-13

# BORING LOG NO. BB-13

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
5.0	<b>CLAYEY SAND WITH GRAVEL (SC)</b> , brown, weak cementation								
9.0	<b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , brown, medium dense	5	X		5-4-11 N=15				
13.0	<b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b> , light brown to white, very dense, moderate cementation	10	X		50				
15.5	<b>SILTY GRAVEL WITH SAND (GM)</b> , brown to light brown, very dense, weak cementation	15	X		50/4"				
	<b>Boring Terminated at 15.5 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-14

# BORING LOG NO. BB-14

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
4.0	<b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b> , brown to light brown								
5	<b>SILTY SAND WITH GRAVEL (SM)</b> , brown to light brown, very dense, weak to moderate cementation			X	17-50/5"				
10				X	19-50/4"				
12.0	<b>SILTY GRAVEL WITH SAND (GM)</b> , brown, medium dense								
15				X	8-12-16 N=28				
16.5	<b>Boring Terminated at 16.5 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-15

# BORING LOG NO. BB-15

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	DEPTH								
	<p><b>SILTY SAND WITH GRAVEL (SM)</b>, brown, very dense, weak to moderate cementation</p>	5		X	14-30-38 N=68				
	<p><b>SILTY GRAVEL WITH SAND (GM)</b>, brown, very dense</p>	10		X	50				
	<p><b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b>, brown to reddish-brown, very dense</p>	15		X	11-23-29 N=52				
	<b>Boring Terminated at 16.5 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-16

# BORING LOG NO. BB-16

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	<p><b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b>, brown to light brown, very dense, weak cementation</p>	5			50/4"				
	<p><b>SILTY SAND WITH GRAVEL (SM)</b>, brown to light brown, very dense</p>	10			32-45-50/5"				
	<p><b>CLAYEY SAND WITH GRAVEL (SC)</b>, brown to light brown, very dense, weak cementation</p>	15			23-37-41 N=78				
	<p><b>Boring Terminated at 16.5 Feet</b></p>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-17

# BORING LOG NO. BB-17

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	DEPTH								
	5	<b>SILTY CLAYEY SAND WITH GRAVEL (SC-SM)</b> , brown to light brown, very dense, weak to moderate cementation			44-50				
	7.0	<b>SILTY SAND WITH GRAVEL (SM)</b> , brown, very dense			14-39-37 N=76				
	10	<b>CLAYEY SAND WITH GRAVEL (SC)</b> , reddish-brown to light brown, very dense, moderate cementation			10-44-50/4"				
	15								
	15.0								
	16.5								
	<b>Boring Terminated at 16.5 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-18

# BORING LOG NO. BB-18

**PROJECT:** Tom Jones Ford Dealership

**CLIENT:** Kimley-Horn and Associates, Inc.  
Phoenix, Arizona

**SITE:** Yuma Rd. from S. Apache Rd. to 247th Ave.  
Buckeye, Arizona

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_65145203 - INFILTRATION BORINGS.GPJ TERRACON2012.GDT 8/27/14

GRAPHIC LOG	LOCATION See Exhibit A-1	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	<p><b>SILTY SAND WITH GRAVEL (SM)</b>, brown to light brown, very dense, no to weak cementation</p> <p style="text-align: center; margin-top: 20px;">medium dense</p>	5			33-50/5"				
	<p>14.0</p> <p><b>SILTY GRAVEL WITH SAND (GM)</b>, brown, very dense</p> <p>15.0</p>	10			15-15-12 N=27				
	<p><b>Boring Terminated at 15 Feet</b></p>	15			50/2"				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

Abandonment Method:  
Backfilled with soil cuttings upon completion.

Notes:

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 8/19/2014

Boring Completed: 8/19/2014

Drill Rig: CME-75

Driller: D&S

Project No.: 65145203

Exhibit: A-19

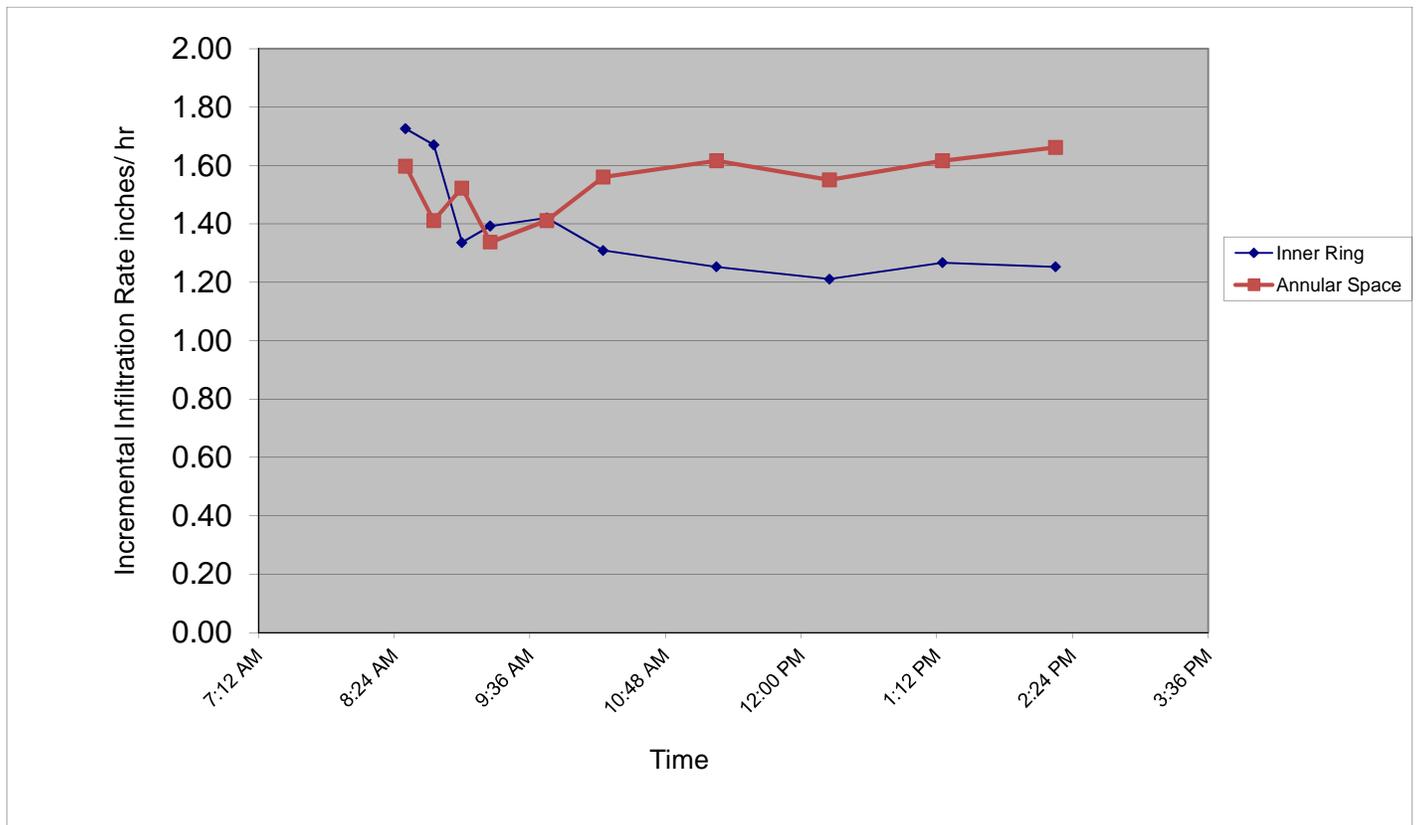
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-1</b>	Inner Ring Area:	707	cm <sup>2</sup>
Location:	See Exhibit A-1	Inner Ring Diameter:	300	mm
Depth:	4-5' Below Existing Grade	Annular space between Outer and Inner rings:	2120	cm <sup>2</sup>
Technician:	BJD	Outer Ring Diameter:	600	mm
Date:	8/14/2014	Depth of Liquid Inner Ring:	150	mm
Weather:	Hot and Clear	Depth of Liquid Annular Space:	150	mm
Liquid Type:	Tap water	Graduated Cylinder #1:	5,000	cm <sup>3</sup>
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #2:	13,000	cm <sup>3</sup>
Ground Temp:	84 °F at start of test			

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-7	Silty Sand w/ Gravel (SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	8:15:00 AM	8:30:00 AM	0:15:00	775	2,150	1.73	1.60	75
1	8:30:00 AM	8:45:00 AM	0:15:00	750	1,900	1.67	1.41	88
2	8:45:00 AM	9:00:00 AM	0:15:00	600	2,050	1.34	1.52	88
3	9:00:00 AM	9:15:00 AM	0:15:00	625	1,800	1.39	1.34	89
4	9:15:00 AM	9:45:00 AM	0:30:00	1,275	3,800	1.42	1.41	90
5	9:45:00 AM	10:15:00 AM	0:30:00	1,175	4,200	1.31	1.56	91
6	10:15:00 AM	11:15:00 AM	1:00:00	2,250	8,700	1.25	1.62	97
7	11:15:00 AM	12:15:00 PM	1:00:00	2,175	8,350	1.21	1.55	101
8	12:15:00 PM	1:15:00 PM	1:00:00	2,275	8,700	1.27	1.62	103
9	1:15:00 PM	2:15:00 PM	1:00:00	2,250	8,950	1.25	1.66	104



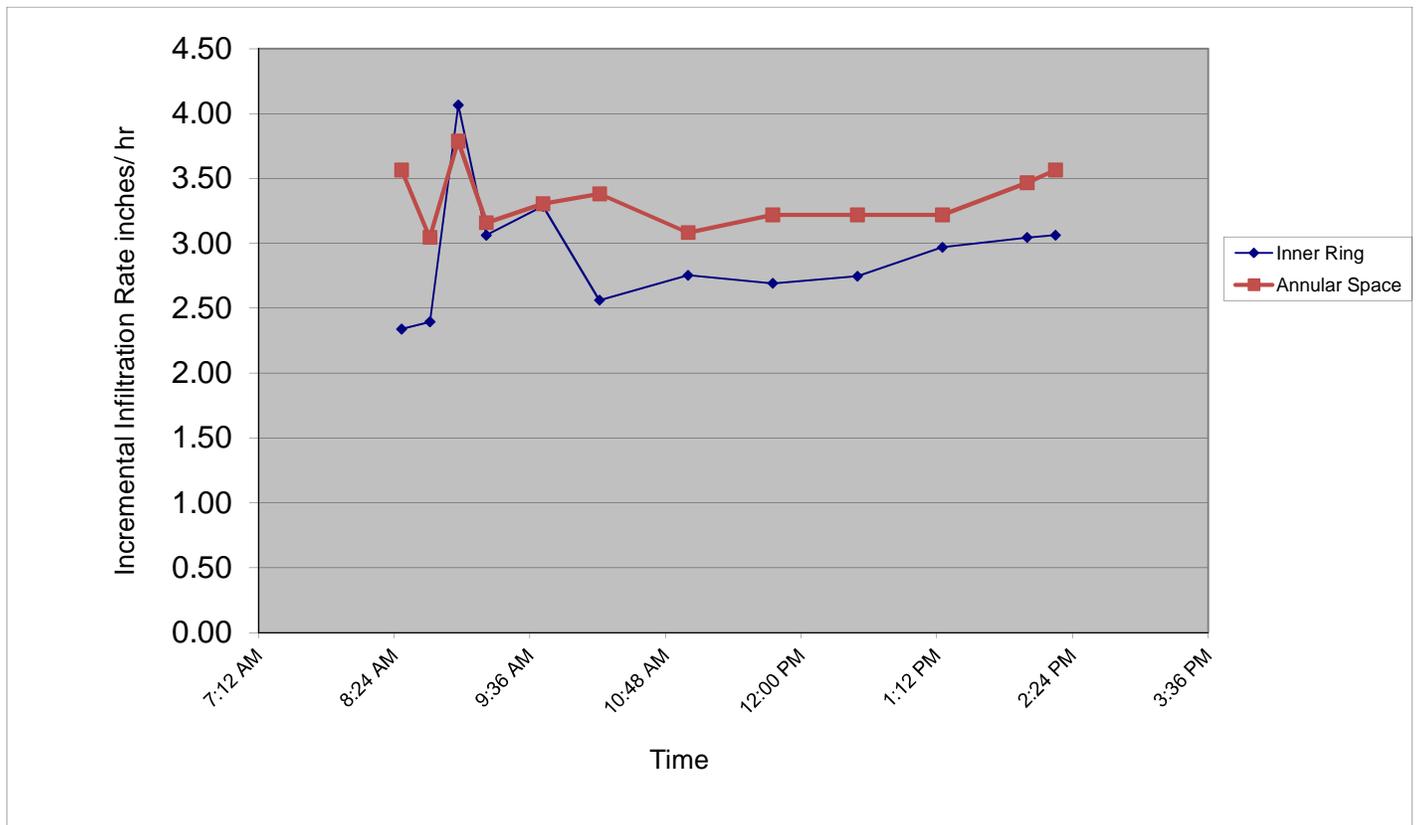
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-2</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	BJD	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/25/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	82 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-6	Silty Sand w/ Gravel (SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	8:13:00 AM	8:28:00 AM	0:15:00	1,050	4,800	2.34	3.57	89
1	8:28:00 AM	8:43:00 AM	0:15:00	1,075	4,100	2.39	3.05	89
2	8:43:00 AM	8:58:00 AM	0:15:00	1,825	5,100	4.07	3.79	89
3	8:58:00 AM	9:13:00 AM	0:15:00	1,375	4,250	3.06	3.16	89
4	9:13:00 AM	9:43:00 AM	0:30:00	2,950	8,900	3.29	3.31	90
5	9:43:00 AM	10:13:00 AM	0:30:00	2,300	9,100	2.56	3.38	92
6	10:13:00 AM	11:00:00 AM	0:47:00	3,875	13,000	2.75	3.08	94
7	11:00:00 AM	11:45:00 AM	0:45:00	3,625	13,000	2.69	3.22	98
8	11:45:00 AM	12:30:00 PM	0:45:00	3,700	13,000	2.75	3.22	99
9	12:30:00 PM	1:15:00 PM	0:45:00	4,000	13,000	2.97	3.22	100
10	1:15:00 PM	2:00:00 PM	0:45:00	4,100	14,000	3.04	3.47	100
11	2:00:00 PM	2:15:00 PM	0:15:00	1,375	4,800	3.06	3.57	100



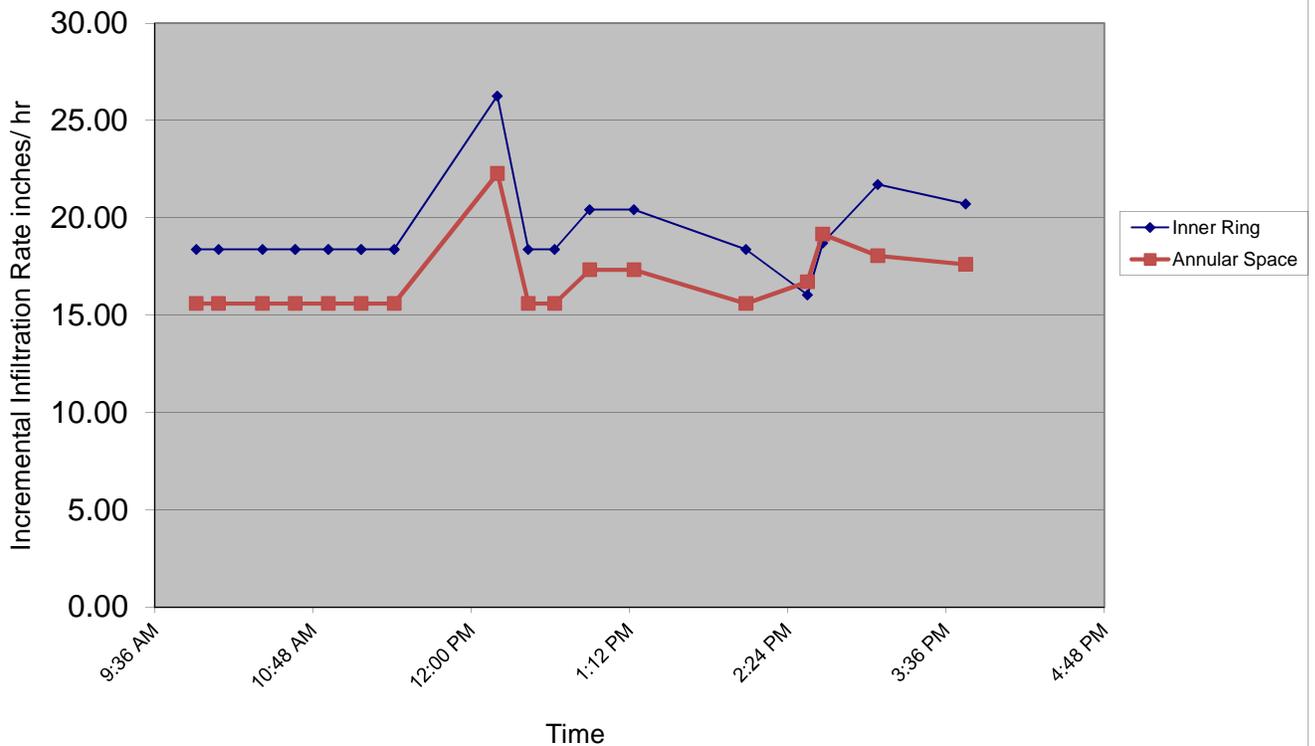
## DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-3</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	DJJ	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/16/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	88 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
4-16.5	Silty Sand w/ Gravel (SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F Liquid
	Start	Finish				Inner Ring	Annular Space	
0	9:45:00 AM	9:55:00 AM	0:10:00	5,500	14,000	18.38	15.60	90
1	9:55:00 AM	10:05:00 AM	0:10:00	5,500	14,000	18.38	15.60	89
2	10:15:00 AM	10:25:00 AM	0:10:00	5,500	14,000	18.38	15.60	90
3	10:30:00 AM	10:40:00 AM	0:10:00	5,500	14,000	18.38	15.60	89
4	10:45:00 AM	10:55:00 AM	0:10:00	5,500	14,000	18.38	15.60	
5	11:00:00 AM	11:10:00 AM	0:10:00	5,500	14,000	18.38	15.60	
6	11:15:00 AM	11:25:00 AM	0:10:00	5,500	14,000	18.38	15.60	
7	12:05:00 PM	12:12:00 PM	0:07:00	5,500	14,000	26.25	22.28	
8	12:16:00 PM	12:26:00 PM	0:10:00	5,500	14,000	18.38	15.60	
9	12:28:00 PM	12:38:00 PM	0:10:00	5,500	14,000	18.38	15.60	
10	12:45:00 PM	12:54:00 PM	0:09:00	5,500	14,000	20.42	17.33	
11	1:05:00 PM	1:14:00 PM	0:09:00	5,500	14,000	20.42	17.33	
12	1:55:00 PM	2:05:00 PM	0:10:00	5,500	14,000	18.38	15.60	
13	2:28:00 PM	2:33:00 PM	0:05:00	2,400	7,500	16.04	16.71	
14	2:35:00 PM	2:40:00 PM	0:05:00	2,800	8,600	18.71	19.17	
15	3:00:00 PM	3:05:00 PM	0:05:00	3,250	8,100	21.72	18.05	
16	3:40:00 PM	3:45:00 PM	0:05:00	3,100	7,900	20.72	17.61	



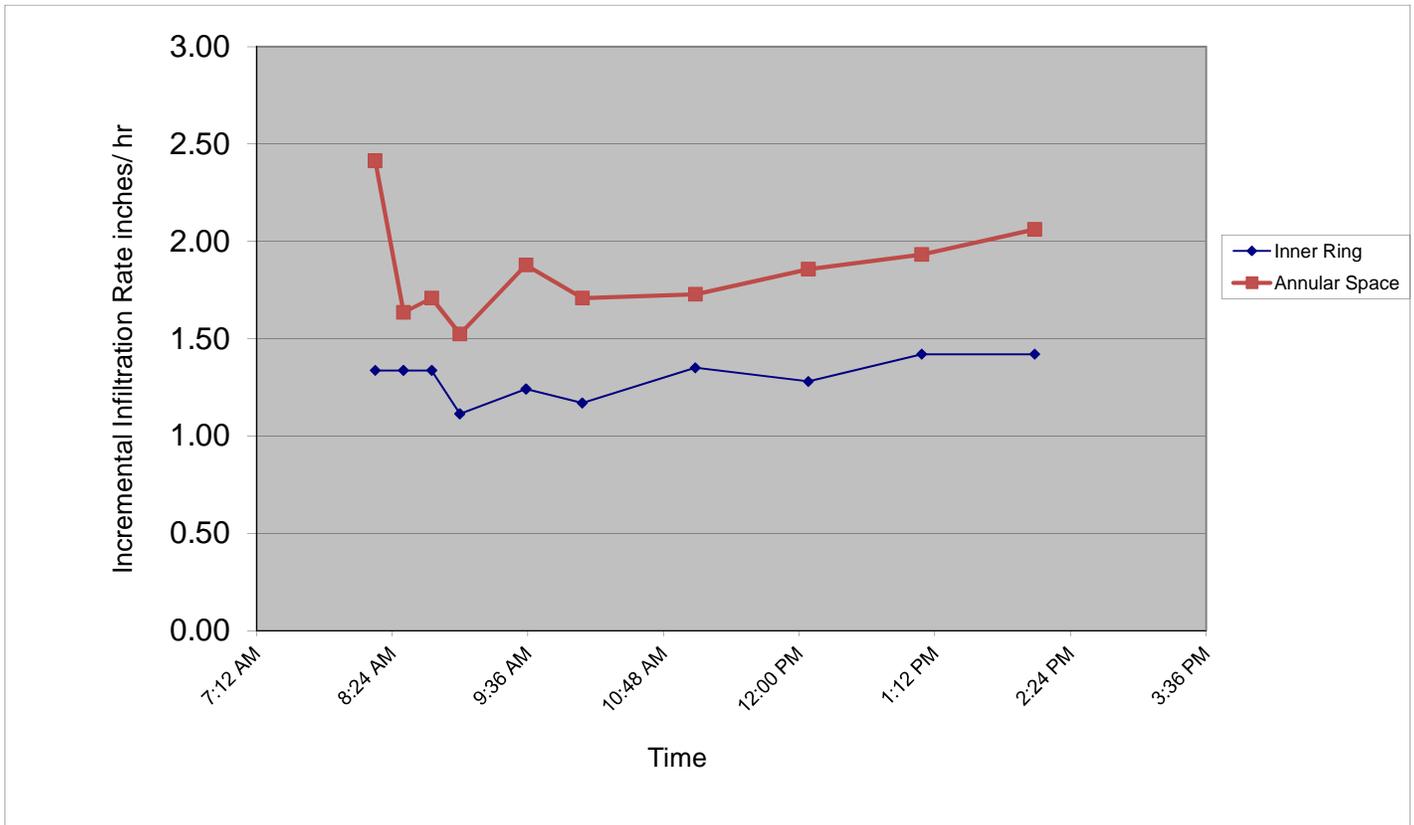
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-4</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	BJD	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/15/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	88 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-7	Silty Clayey Sand (SC-SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	8:00:00 AM	8:15:00 AM	0:15:00	600	3,250	1.34	2.41	90
1	8:15:00 AM	8:30:00 AM	0:15:00	600	2,200	1.34	1.63	90
2	8:30:00 AM	8:45:00 AM	0:15:00	600	2,300	1.34	1.71	90
3	8:45:00 AM	9:00:00 AM	0:15:00	500	2,050	1.11	1.52	90
4	9:00:00 AM	9:35:00 AM	0:35:00	1,300	5,900	1.24	1.88	90
5	9:35:00 AM	10:05:00 AM	0:30:00	1,050	4,600	1.17	1.71	91
6	10:05:00 AM	11:05:00 AM	1:00:00	2,425	9,300	1.35	1.73	92
7	11:05:00 AM	12:05:00 PM	1:00:00	2,300	10,000	1.28	1.86	96
8	12:05:00 PM	1:05:00 PM	1:00:00	2,550	10,400	1.42	1.93	101
9	1:05:00 PM	2:05:00 PM	1:00:00	2,550	11,100	1.42	2.06	104



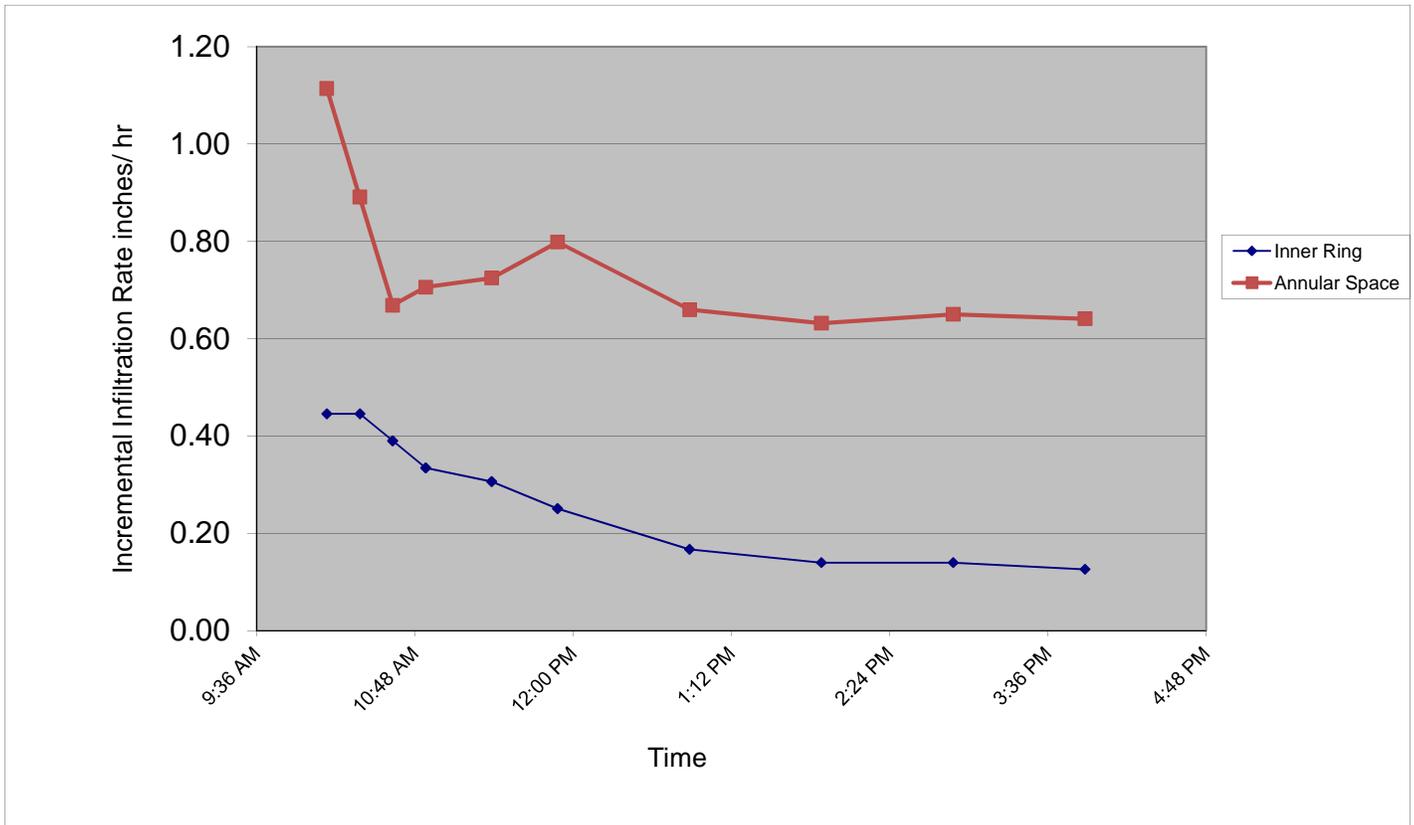
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-5</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	DJJ	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/16/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	93 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-8	Clayey Sand w/ Gravel (SC)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	9:53:00 AM	10:08:00 AM	0:15:00	200	1,500	0.45	1.11	87
1	10:08:00 AM	10:23:00 AM	0:15:00	200	1,200	0.45	0.89	88
2	10:23:00 AM	10:38:00 AM	0:15:00	175	900	0.39	0.67	88
3	10:38:00 AM	10:53:00 AM	0:15:00	150	950	0.33	0.71	89
4	10:53:00 AM	11:23:00 AM	0:30:00	275	1,950	0.31	0.72	91
5	11:23:00 AM	11:53:00 AM	0:30:00	225	2,150	0.25	0.80	92
6	11:53:00 AM	12:53:00 PM	1:00:00	300	3,550	0.17	0.66	96
7	12:53:00 PM	1:53:00 PM	1:00:00	250	3,400	0.14	0.63	98
8	1:53:00 PM	2:53:00 PM	1:00:00	250	3,500	0.14	0.65	99
9	2:53:00 PM	3:53:00 PM	1:00:00	225	3,450	0.13	0.64	99



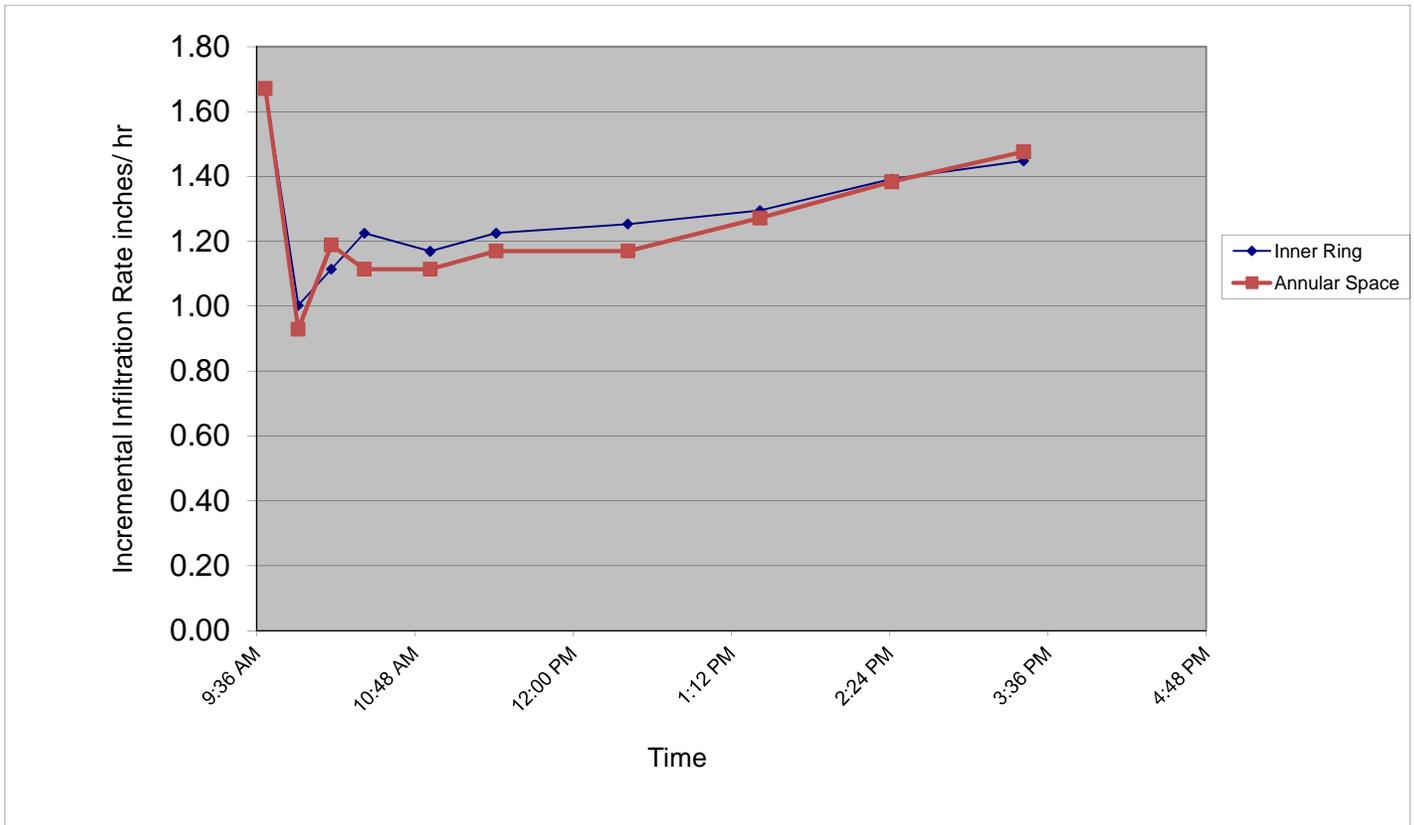
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-6</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	BJD	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/15/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	87 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
3-8	Silty Clayey Sand w/ Gravel (SC-SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	9:25:00 AM	9:40:00 AM	0:15:00	750	2,250	1.67	1.67	88
1	9:40:00 AM	9:55:00 AM	0:15:00	450	1,250	1.00	0.93	89
2	9:55:00 AM	10:10:00 AM	0:15:00	500	1,600	1.11	1.19	90
3	10:10:00 AM	10:25:00 AM	0:15:00	550	1,500	1.23	1.11	90
4	10:25:00 AM	10:55:00 AM	0:30:00	1,050	3,000	1.17	1.11	91
5	10:55:00 AM	11:25:00 AM	0:30:00	1,100	3,150	1.23	1.17	93
6	11:25:00 AM	12:25:00 PM	1:00:00	2,250	6,300	1.25	1.17	99
7	12:25:00 PM	1:25:00 PM	1:00:00	2,325	6,850	1.29	1.27	103
8	1:25:00 PM	2:25:00 PM	1:00:00	2,500	7,450	1.39	1.38	105
9	2:25:00 PM	3:25:00 PM	1:00:00	2,600	7,950	1.45	1.48	105



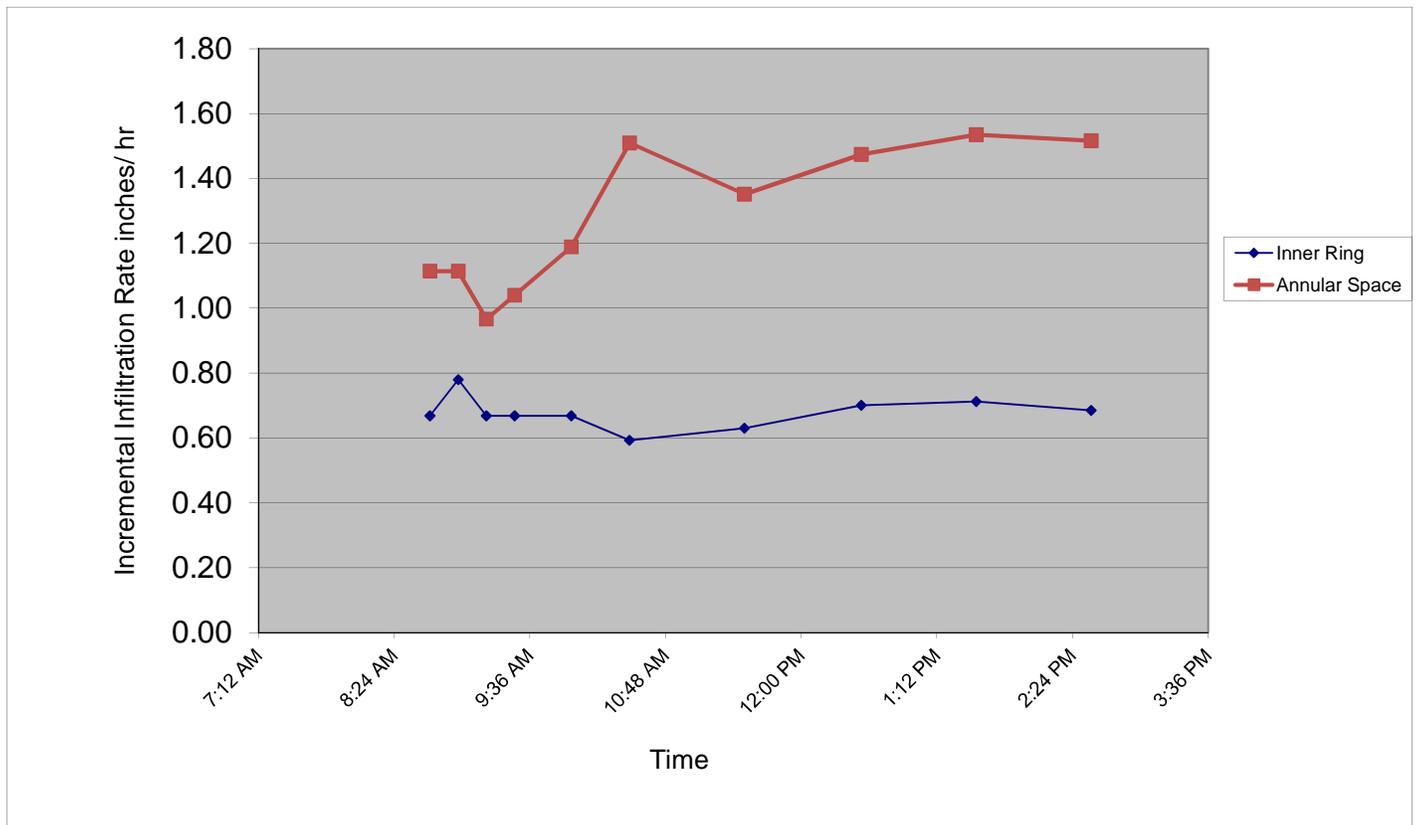
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-7</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	DJJ	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/22/2014	Outer Ring Diameter:	600 mm
Weather:	Cloudy and Warm	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	84 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-7	Silty Clayey Sand w/ Gravel (SC-SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	8:28:00 AM	8:43:00 AM	0:15:00	300	1,500	0.67	1.11	71
1	8:43:00 AM	8:58:00 AM	0:15:00	350	1,500	0.78	1.11	71
2	8:58:00 AM	9:13:00 AM	0:15:00	300	1,300	0.67	0.97	72
3	9:13:00 AM	9:28:00 AM	0:15:00	300	1,400	0.67	1.04	72
4	9:28:00 AM	9:58:00 AM	0:30:00	600	3,200	0.67	1.19	73
5	9:58:00 AM	10:29:00 AM	0:31:00	550	4,200	0.59	1.51	74
6	10:29:00 AM	11:30:00 AM	1:01:00	1,150	7,400	0.63	1.35	77
7	11:30:00 AM	12:32:00 PM	1:02:00	1,300	8,200	0.70	1.47	82
8	12:32:00 PM	1:33:00 PM	1:01:00	1,300	8,400	0.71	1.53	91
9	1:33:00 PM	2:34:00 PM	1:01:00	1,250	8,300	0.68	1.52	94



### DOUBLE RING INFILTRATION TEST SUMMARY

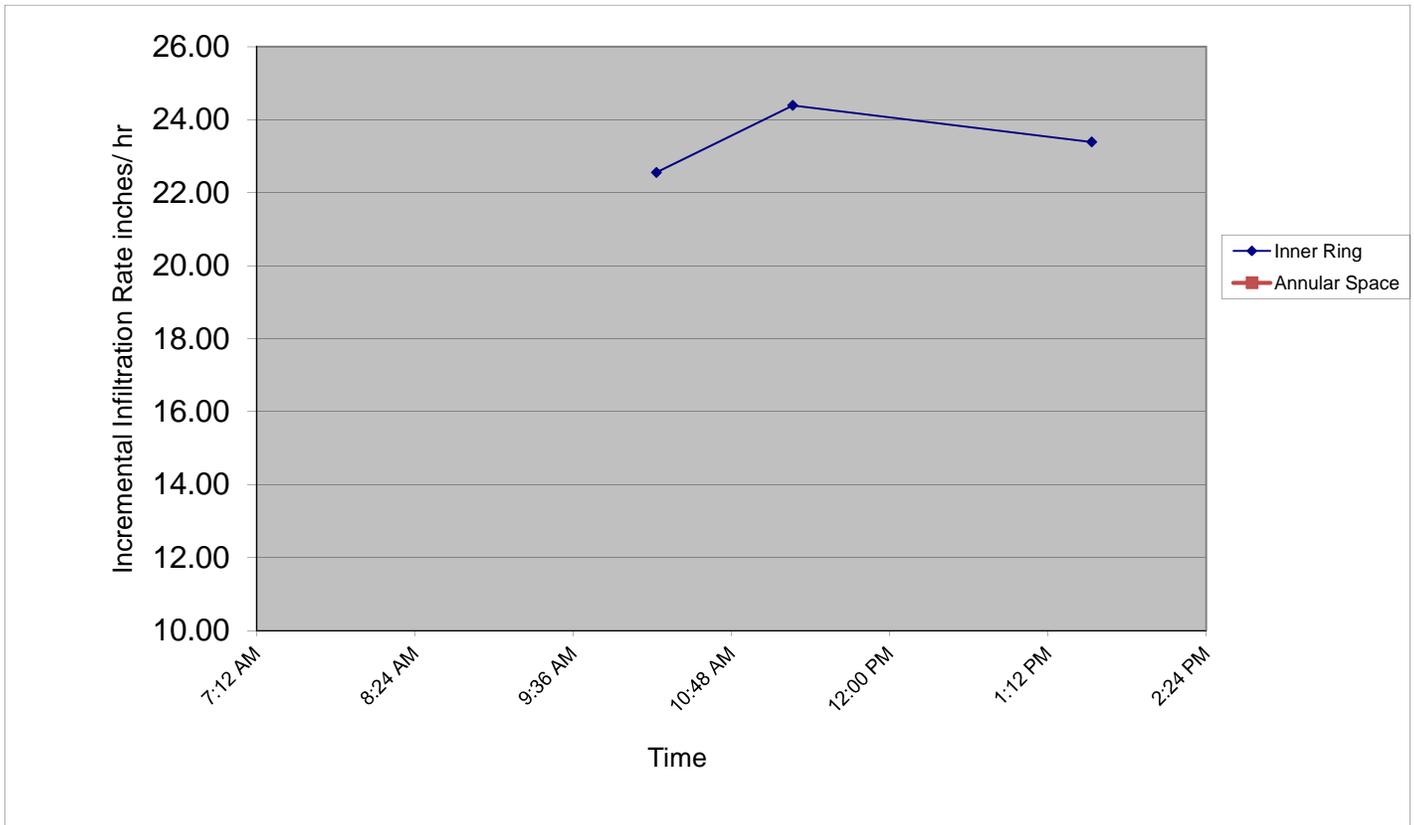
Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-8</b>	Inner Ring Area:	707	cm <sup>2</sup>
Location:	See Exhibit A-1	Inner Ring Diameter:	300	mm
Depth:	4-5' Below Existing Grade	Annular space between Outer and Inner rings:	2120	cm <sup>2</sup>
Technician:	DJJ	Outer Ring Diameter:	600	mm
Date:	8/22/2014	Depth of Liquid Inner Ring:	150	mm
Weather:	Hot and Clear	Depth of Liquid Annular Space:	150	mm
Liquid Type:	Tap water	Graduated Cylinder #1:	5,000	cm <sup>3</sup>
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #2:	13,000	cm <sup>3</sup>
Ground Temp:	84 °F at start of test			

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-7	Silty Gravel w/ Sand (GM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F Liquid
	Start	Finish				Inner Ring	Annular Space	
0	10:08:00 AM	10:14:00 AM	0:06:00	4,050		22.55		
1	11:11:00 AM	11:16:00 AM	0:05:00	3,650		24.39		
2	1:27:00 PM	1:32:00 PM	0:05:00	3,500		23.39		

**Note:** Free-draining conditions, both inner ring and annulus space completely drain within 5 minutes.



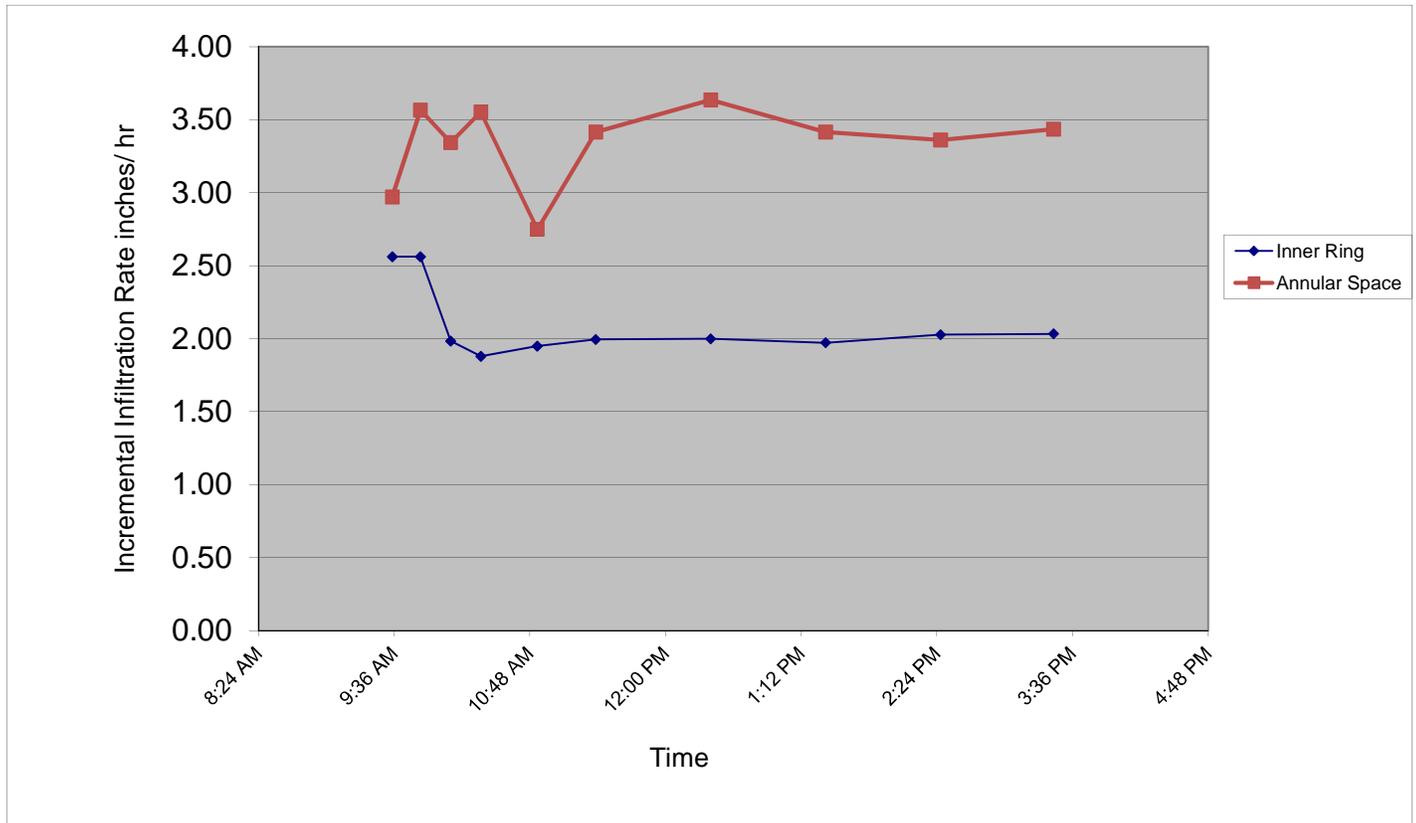
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-9</b>	Inner Ring Area:	707	cm <sup>2</sup>
Location:	See Exhibit A-1	Inner Ring Diameter:	300	mm
Depth:	4-5' Below Existing Grade	Annular space between Outer and Inner rings:	2120	cm <sup>2</sup>
Technician:	BJD	Outer Ring Diameter:	600	mm
Date:	8/21/2014	Depth of Liquid Inner Ring:	150	mm
Weather:	Cloudy and Warm	Depth of Liquid Annular Space:	150	mm
Liquid Type:	Tap water	Graduated Cylinder #1:	5,000	cm <sup>3</sup>
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #2:	13,000	cm <sup>3</sup>
Ground Temp:	89 °F at start of test			

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-7	Silty Clayey Sand w/ Gravel (SC-SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	9:20:00 AM	9:35:00 AM	0:15:00	1,150	4,000	2.56	2.97	78
1	9:35:00 AM	9:50:00 AM	0:15:00	1,150	4,800	2.56	3.57	79
2	9:50:00 AM	10:06:00 AM	0:16:00	950	4,800	1.98	3.34	79
3	10:06:00 AM	10:22:00 AM	0:16:00	900	5,100	1.88	3.55	79
4	10:22:00 AM	10:52:00 AM	0:30:00	1,750	7,400	1.95	2.75	80
5	10:52:00 AM	11:23:00 AM	0:31:00	1,850	9,500	1.99	3.41	80
6	11:23:00 AM	12:24:00 PM	1:01:00	3,650	19,900	2.00	3.64	82
7	12:24:00 PM	1:25:00 PM	1:01:00	3,600	18,700	1.97	3.42	84
8	1:25:00 PM	2:26:00 PM	1:01:00	3,700	18,400	2.03	3.36	88
9	2:26:00 PM	3:26:00 PM	1:00:00	3,650	18,500	2.03	3.44	93



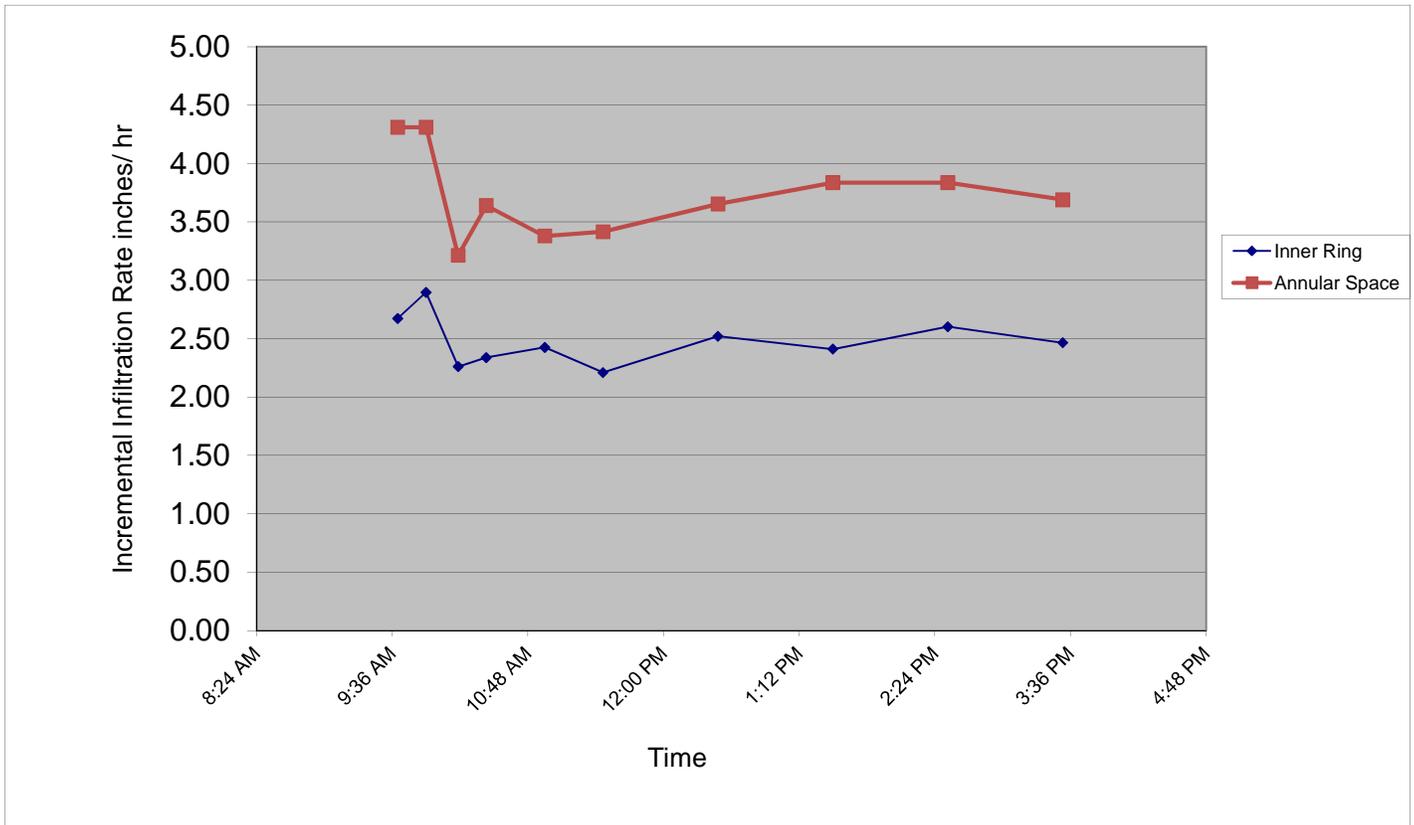
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-10</b>	Inner Ring Area:	707	cm <sup>2</sup>
Location:	See Exhibit A-1	Inner Ring Diameter:	300	mm
Depth:	4-5' Below Existing Grade	Annular space between Outer and Inner rings:	2120	cm <sup>2</sup>
Technician:	DJJ	Outer Ring Diameter:	600	mm
Date:	8/21/2014	Depth of Liquid Inner Ring:	150	mm
Weather:	Cloudy and Warm	Depth of Liquid Annular Space:	150	mm
Liquid Type:	Tap water	Graduated Cylinder #1:	5,000	cm <sup>3</sup>
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #2:	13,000	cm <sup>3</sup>
Ground Temp:	90 °F at start of test			

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-7	Silty Clayey Sand w/ Gravel (SC-SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	9:24:00 AM	9:39:00 AM	0:15:00	1,200	5,800	2.67	4.31	79
1	9:39:00 AM	9:54:00 AM	0:15:00	1,300	5,800	2.90	4.31	79
2	9:54:00 AM	10:11:00 AM	0:17:00	1,150	4,900	2.26	3.21	80
3	10:11:00 AM	10:26:00 AM	0:15:00	1,050	4,900	2.34	3.64	80
4	10:26:00 AM	10:57:00 AM	0:31:00	2,250	9,400	2.43	3.38	80
5	10:57:00 AM	11:28:00 AM	0:31:00	2,050	9,500	2.21	3.41	79
6	11:28:00 AM	12:29:00 PM	1:01:00	4,600	20,000	2.52	3.65	83
7	12:29:00 PM	1:30:00 PM	1:01:00	4,400	21,000	2.41	3.84	85
8	1:30:00 PM	2:31:00 PM	1:01:00	4,750	21,000	2.60	3.84	89
9	2:31:00 PM	3:32:00 PM	1:01:00	4,500	20,200	2.46	3.69	94



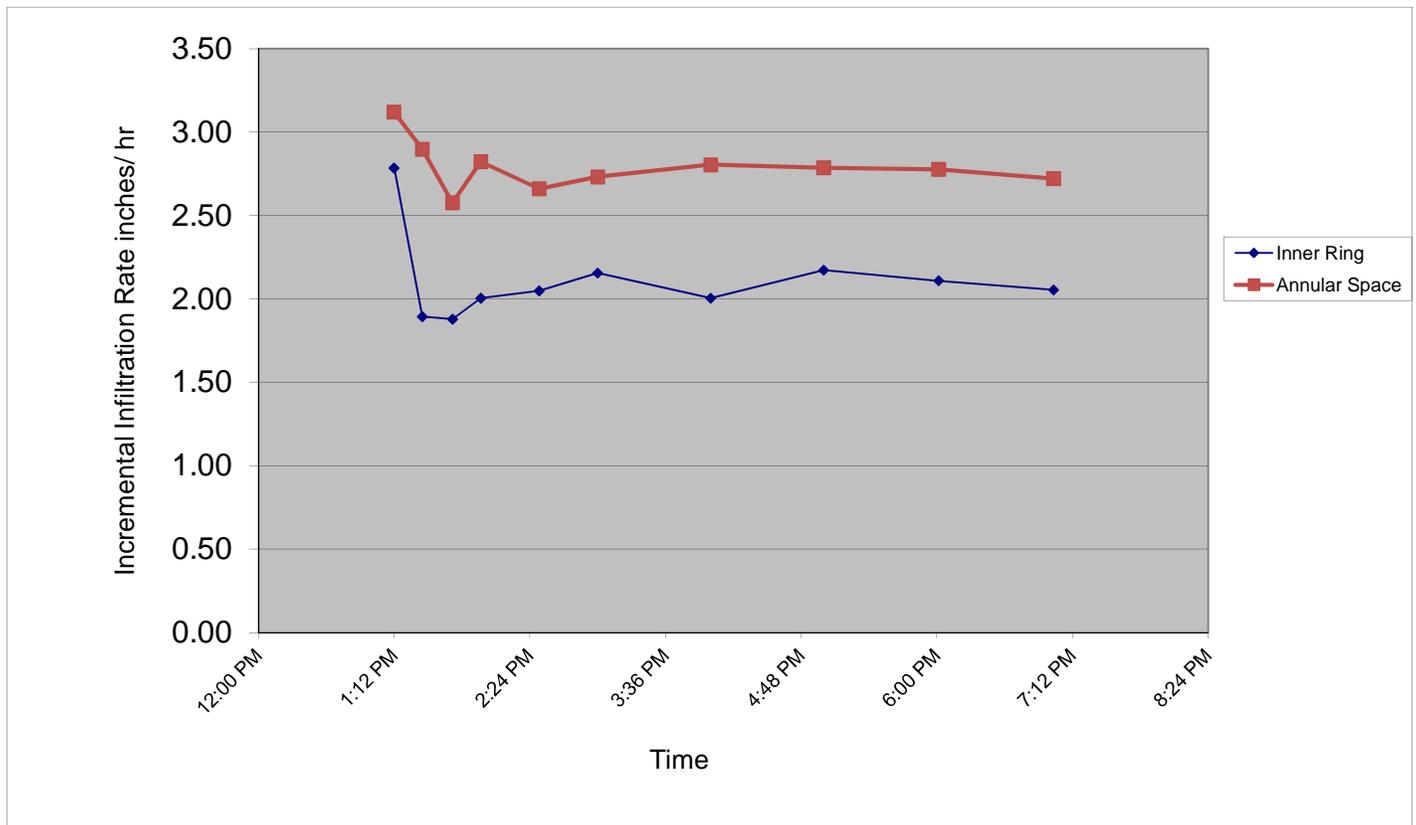
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-11</b>	Inner Ring Area:	707	cm <sup>2</sup>
Location:	See Exhibit A-1	Inner Ring Diameter:	300	mm
Depth:	4-5' Below Existing Grade	Annular space between Outer and Inner rings:	2120	cm <sup>2</sup>
Technician:	DJJ	Outer Ring Diameter:	600	mm
Date:	8/20/2014	Depth of Liquid Inner Ring:	150	mm
Weather:	Hot and Clear	Depth of Liquid Annular Space:	150	mm
Liquid Type:	Tap water	Graduated Cylinder #1:	5,000	cm <sup>3</sup>
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #2:	13,000	cm <sup>3</sup>
Ground Temp:	90 °F at start of test			

<b>Depth (ft)</b>	<b>Soil Description:</b>
2-9	Poorly Graded Sand w/ Silt and Gravel (SP-SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	12:57:00 PM	1:12:00 PM	0:15:00	1,250	4,200	2.78	3.12	94
1	1:12:00 PM	1:27:00 PM	0:15:00	850	3,900	1.89	2.90	94
2	1:27:00 PM	1:43:00 PM	0:16:00	900	3,700	1.88	2.58	95
3	1:43:00 PM	1:58:00 PM	0:15:00	900	3,800	2.00	2.82	96
4	1:58:00 PM	2:29:00 PM	0:31:00	1,900	7,400	2.05	2.66	98
5	2:29:00 PM	3:00:00 PM	0:31:00	2,000	7,600	2.16	2.73	100
6	3:00:00 PM	4:00:00 PM	1:00:00	3,600	15,100	2.00	2.80	101
7	4:00:00 PM	5:00:00 PM	1:00:00	3,900	15,000	2.17	2.79	100
8	5:00:00 PM	6:01:00 PM	1:01:00	3,850	15,200	2.11	2.78	98
9	6:01:00 PM	7:02:00 PM	1:01:00	3,750	14,900	2.05	2.72	96



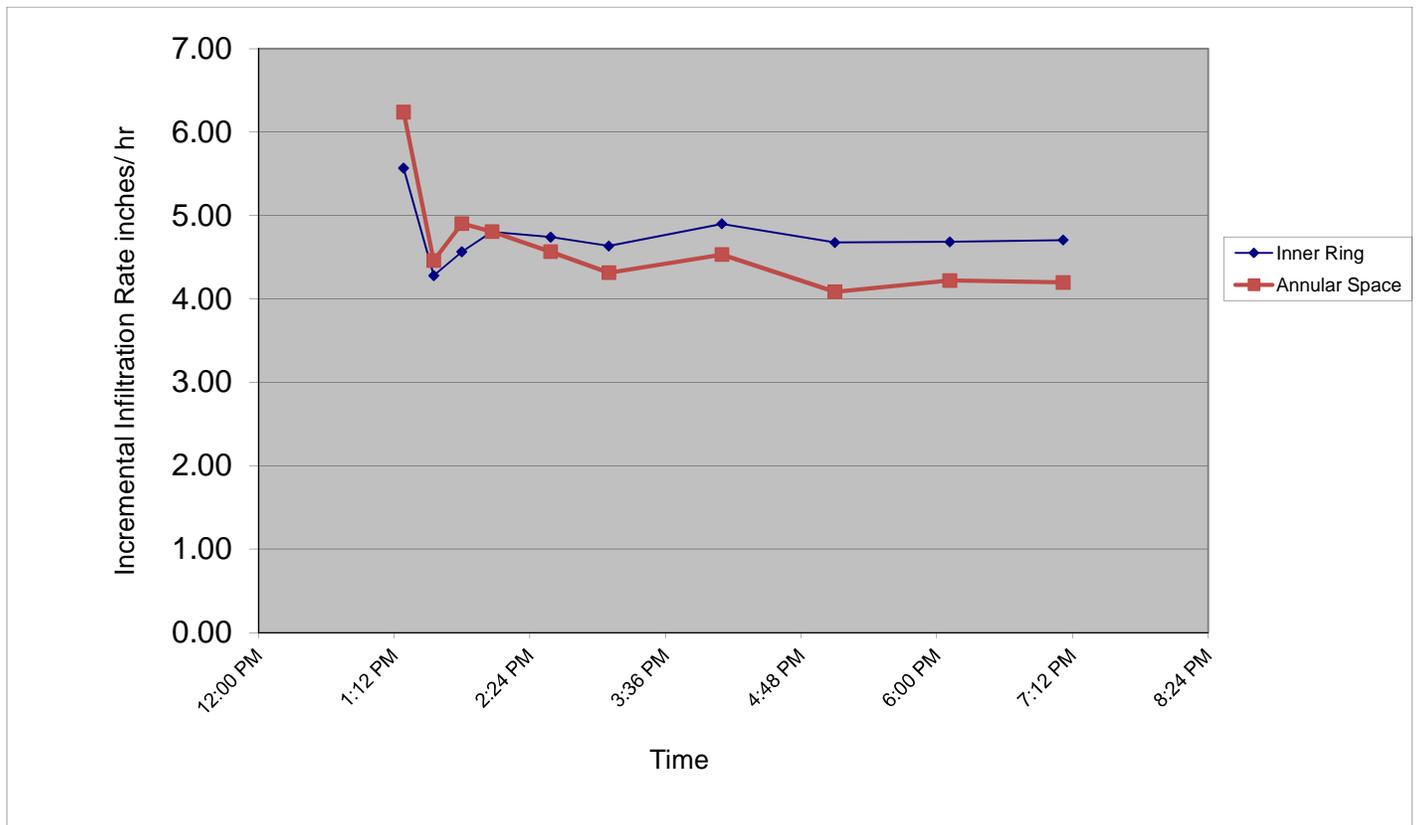
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-12</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	DJJ	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/20/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	89 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
4-12	Silty Sand w/ Gravel (SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	1:02:00 PM	1:17:00 PM	0:15:00	2,500	8,400	5.57	6.24	94
1	1:17:00 PM	1:33:00 PM	0:16:00	2,050	6,400	4.28	4.46	95
2	1:33:00 PM	1:48:00 PM	0:15:00	2,050	6,600	4.57	4.90	95
3	1:48:00 PM	2:04:00 PM	0:16:00	2,300	6,900	4.80	4.81	97
4	2:04:00 PM	2:35:00 PM	0:31:00	4,400	12,700	4.74	4.56	99
5	2:35:00 PM	3:06:00 PM	0:31:00	4,300	12,000	4.63	4.31	101
6	3:06:00 PM	4:06:00 PM	1:00:00	8,800	24,400	4.90	4.53	100
7	4:06:00 PM	5:06:00 PM	1:00:00	8,400	22,000	4.68	4.09	98
8	5:06:00 PM	6:07:00 PM	1:01:00	8,550	23,100	4.68	4.22	96
9	6:07:00 PM	7:07:00 PM	1:00:00	8,450	22,600	4.71	4.20	93



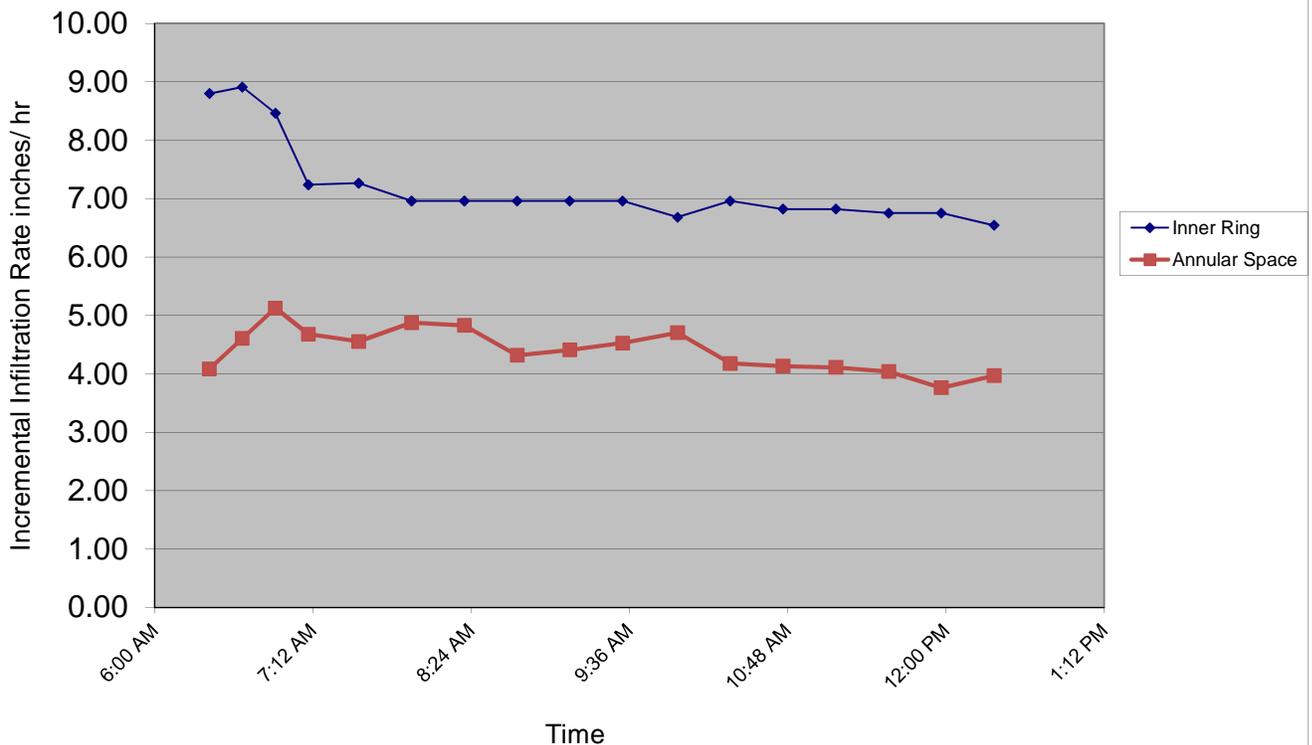
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-13</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	BJD	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/20/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	75 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
5-9	Poorly Graded Sand w/ Gravel (SP)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	6:10:00 AM	6:25:00 AM	0:15:00	3,950	5,500	8.80	4.09	78
1	6:25:00 AM	6:40:00 AM	0:15:00	4,000	6,200	8.91	4.61	77
2	6:40:00 AM	6:55:00 AM	0:15:00	3,800	6,900	8.46	5.13	77
3	6:55:00 AM	7:10:00 AM	0:15:00	3,250	6,300	7.24	4.68	77
4	7:10:00 AM	7:33:00 AM	0:23:00	5,000	9,400	7.26	4.55	78
5	7:33:00 AM	7:57:00 AM	0:24:00	5,000	10,500	6.96	4.87	78
6	7:57:00 AM	8:21:00 AM	0:24:00	5,000	10,400	6.96	4.83	79
7	8:21:00 AM	8:45:00 AM	0:24:00	5,000	9,300	6.96	4.32	80
8	8:45:00 AM	9:09:00 AM	0:24:00	5,000	9,500	6.96	4.41	80
9	9:09:00 AM	9:33:00 AM	0:24:00	5,000	9,750	6.96	4.53	86
10	9:33:00 AM	9:58:00 AM	0:25:00	5,000	10,550	6.68	4.70	88
11	9:58:00 AM	10:22:00 AM	0:24:00	5,000	9,000	6.96	4.18	89
12	10:22:00 AM	10:46:00 AM	0:24:00	4,900	8,900	6.82	4.13	90
13	10:46:00 AM	11:10:00 AM	0:24:00	4,900	8,850	6.82	4.11	90
14	11:10:00 AM	11:34:00 AM	0:24:00	4,850	8,700	6.75	4.04	92
15	11:34:00 AM	11:58:00 AM	0:24:00	4,850	8,100	6.75	3.76	92
16	11:58:00 AM	12:22:00 PM	0:24:00	4,700	8,550	6.54	3.97	94



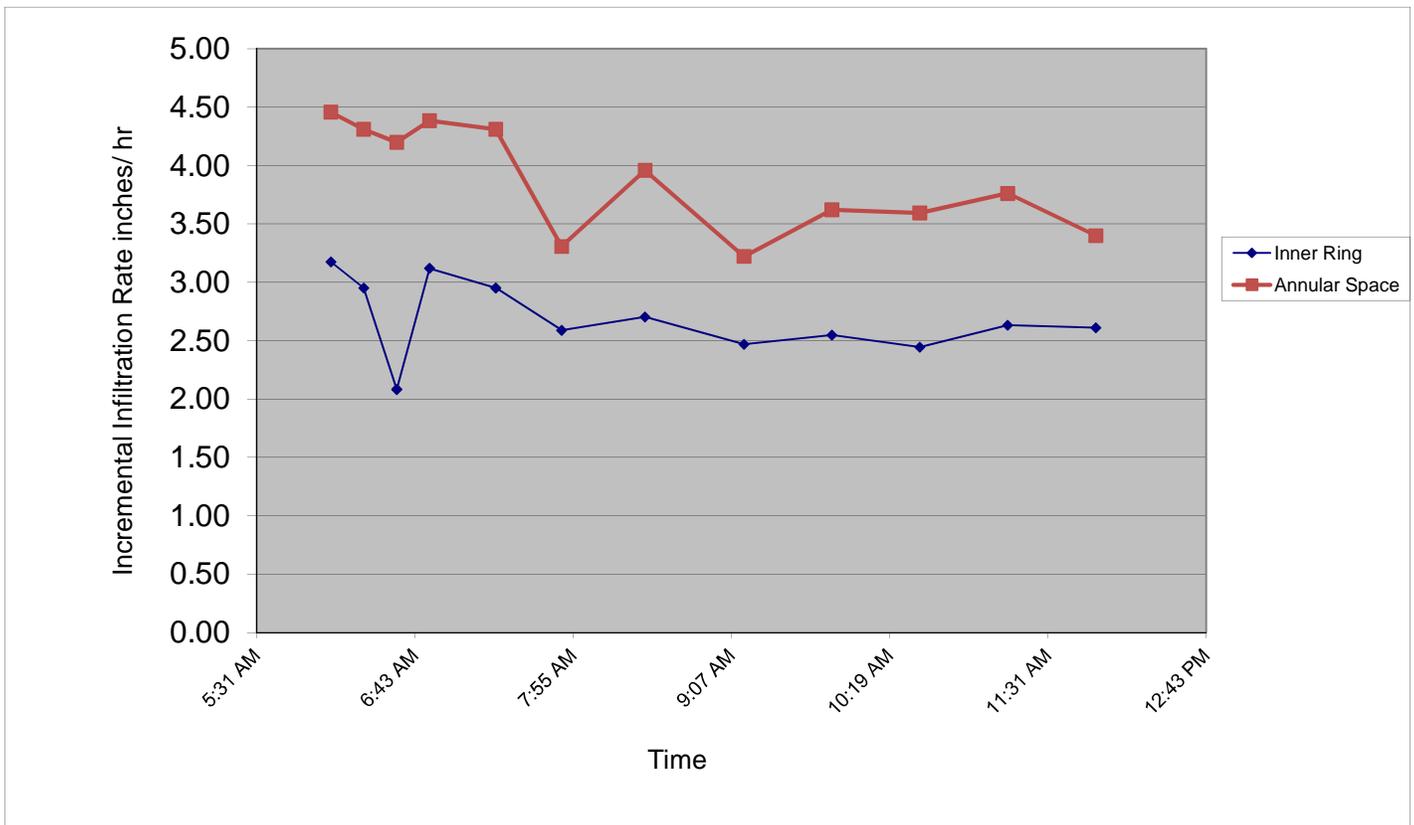
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-14</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	BJD	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/20/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	77 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
4-12	Silty Sand w/ Gravel (SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	5:50:00 AM	6:05:00 AM	0:15:00	1,425	6,000	3.17	4.46	75
1	6:05:00 AM	6:20:00 AM	0:15:00	1,325	5,800	2.95	4.31	75
2	6:20:00 AM	6:35:00 AM	0:15:00	935	5,650	2.08	4.20	75
3	6:35:00 AM	6:50:00 AM	0:15:00	1,400	5,900	3.12	4.38	76
4	6:50:00 AM	7:20:00 AM	0:30:00	2,650	11,600	2.95	4.31	76
5	7:20:00 AM	7:50:00 AM	0:30:00	2,325	8,900	2.59	3.31	77
6	7:50:00 AM	8:28:00 AM	0:38:00	3,075	13,500	2.70	3.96	79
7	8:28:00 AM	9:13:00 AM	0:45:00	3,325	13,000	2.47	3.22	80
8	9:13:00 AM	9:53:00 AM	0:40:00	3,050	13,000	2.55	3.62	82
9	9:53:00 AM	10:33:00 AM	0:40:00	2,925	12,900	2.44	3.59	86
10	10:33:00 AM	11:13:00 AM	0:40:00	3,150	13,500	2.63	3.76	90
11	11:13:00 AM	11:53:00 AM	0:40:00	3,125	12,200	2.61	3.40	92



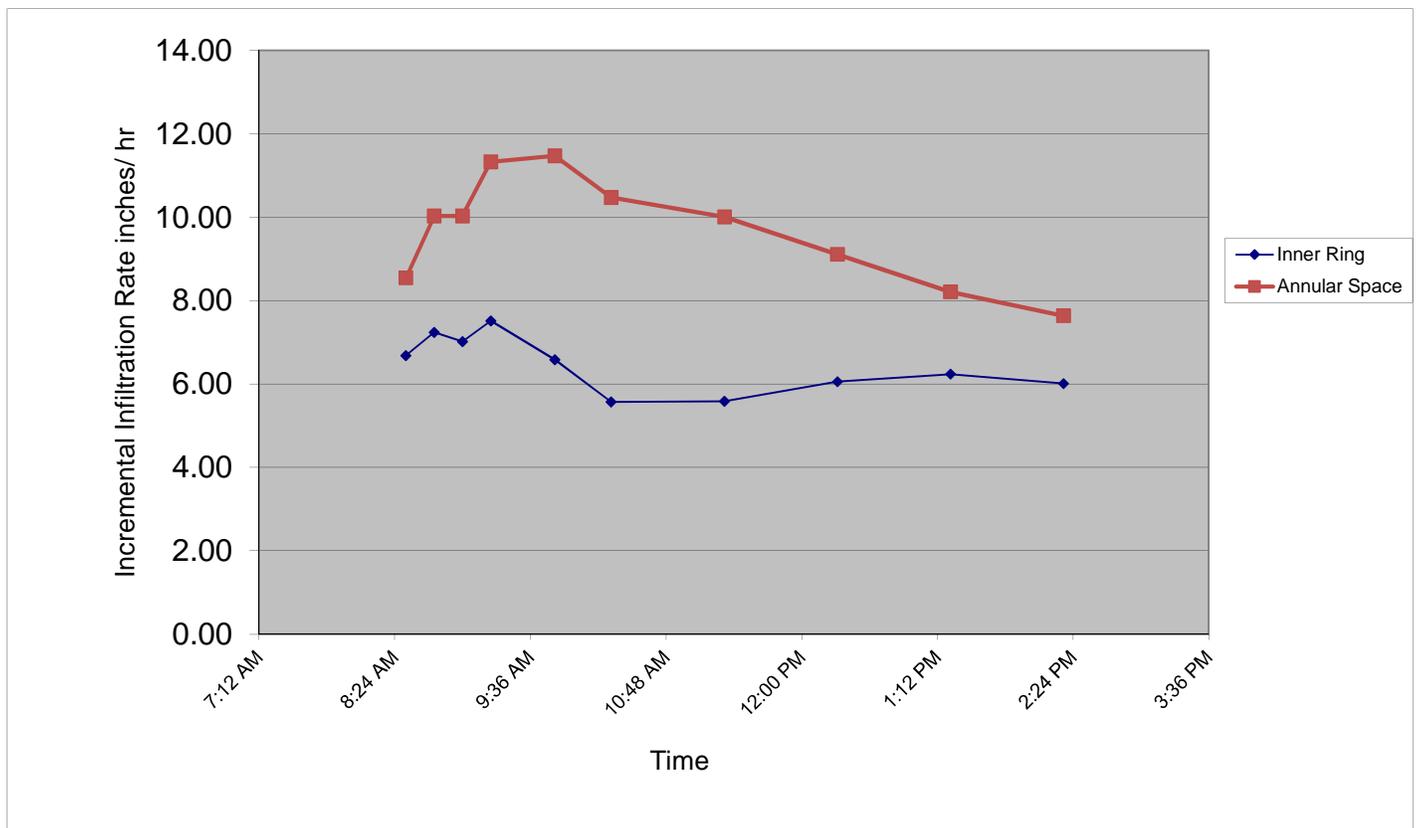
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-15</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	BJD	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/19/2014	Outer Ring Diameter:	600 mm
Weather:	Cloudy and Warm	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	85 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-8	Silty Sand w/ Gravel (SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	8:15:00 AM	8:30:00 AM	0:15:00	3,000	11,500	6.68	8.54	87
1	8:30:00 AM	8:45:00 AM	0:15:00	3,250	13,500	7.24	10.03	87
2	8:45:00 AM	9:00:00 AM	0:15:00	3,150	13,500	7.02	10.03	88
3	9:00:00 AM	9:15:00 AM	0:15:00	3,375	15,250	7.52	11.33	88
4	9:15:00 AM	9:49:00 AM	0:34:00	6,700	35,000	6.58	11.47	89
5	9:49:00 AM	10:19:00 AM	0:30:00	5,000	28,200	5.57	10.47	90
6	10:19:00 AM	11:19:00 AM	1:00:00	10,025	53,900	5.58	10.01	90
7	11:19:00 AM	12:19:00 PM	1:00:00	10,875	49,050	6.06	9.11	95
8	12:19:00 PM	1:19:00 PM	1:00:00	11,200	44,200	6.24	8.21	97
9	1:19:00 PM	2:19:00 PM	1:00:00	10,800	41,100	6.01	7.63	98



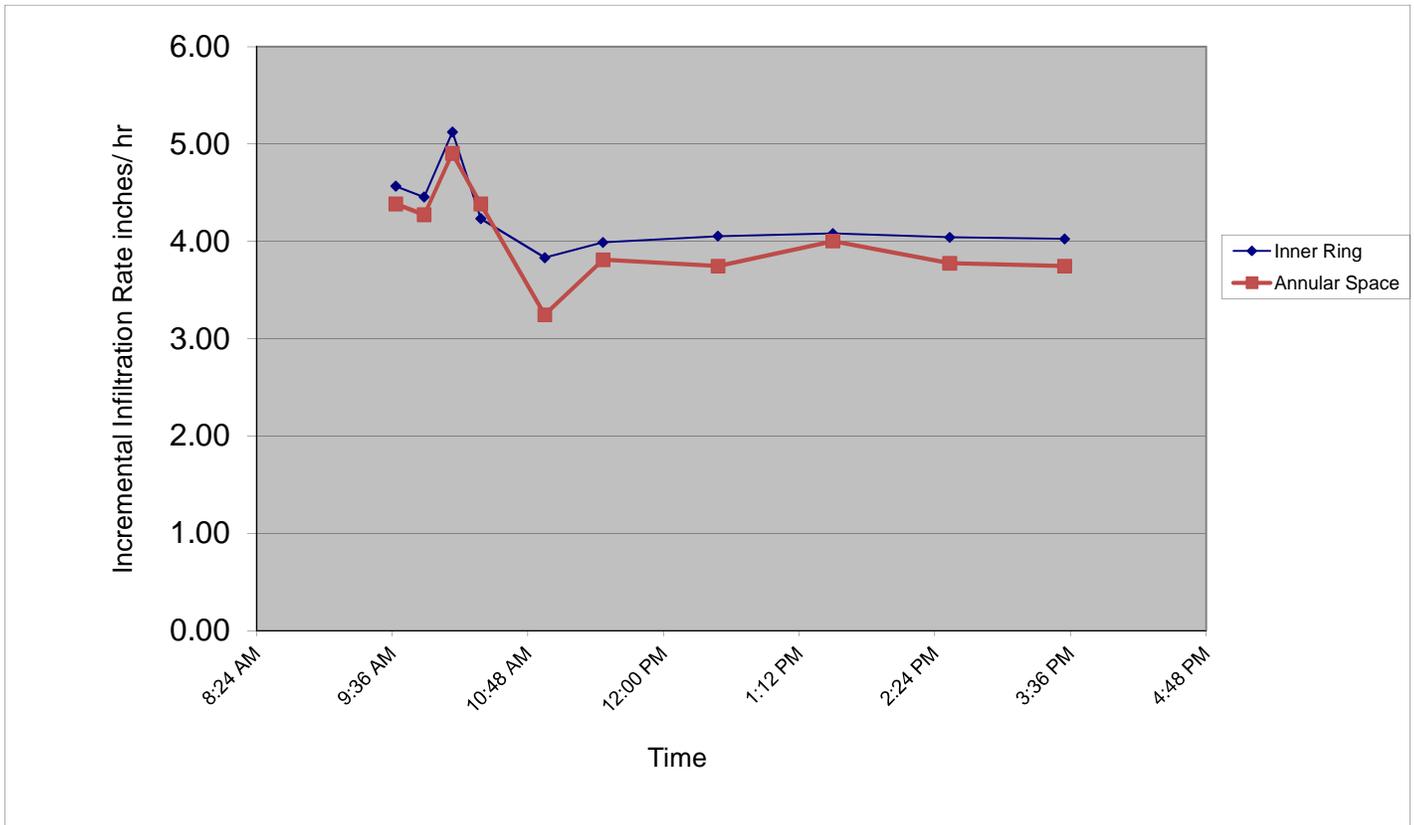
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-16</b>	Inner Ring Area:	707	cm <sup>2</sup>
Location:	See Exhibit A-1	Inner Ring Diameter:	300	mm
Depth:	4-5' Below Existing Grade	Annular space between Outer and Inner rings:	2120	cm <sup>2</sup>
Technician:	BJD	Outer Ring Diameter:	600	mm
Date:	8/18/2014	Depth of Liquid Inner Ring:	150	mm
Weather:	Cloudy and Warm	Depth of Liquid Annular Space:	150	mm
Liquid Type:	Tap water	Graduated Cylinder #1:	5,000	cm <sup>3</sup>
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #2:	13,000	cm <sup>3</sup>
Ground Temp:	88 °F at start of test			

<b>Depth (ft)</b>	<b>Soil Description:</b>
6-13	Silty Sand w/ Gravel (SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	9:23:00 AM	9:38:00 AM	0:15:00	2,050	5,900	4.57	4.38	87
1	9:38:00 AM	9:53:00 AM	0:15:00	2,000	5,750	4.45	4.27	87
2	9:53:00 AM	10:08:00 AM	0:15:00	2,300	6,600	5.12	4.90	87
3	10:08:00 AM	10:23:00 AM	0:15:00	1,900	5,900	4.23	4.38	88
4	10:23:00 AM	10:57:00 AM	0:34:00	3,900	9,900	3.83	3.24	88
5	10:57:00 AM	11:28:00 AM	0:31:00	3,700	10,600	3.99	3.81	88
6	11:28:00 AM	12:29:00 PM	1:01:00	7,400	20,500	4.05	3.74	89
7	12:29:00 PM	1:30:00 PM	1:01:00	7,450	21,900	4.08	4.00	92
8	1:30:00 PM	2:32:00 PM	1:02:00	7,500	21,000	4.04	3.77	93
9	2:32:00 PM	3:33:00 PM	1:01:00	7,350	20,500	4.03	3.74	94



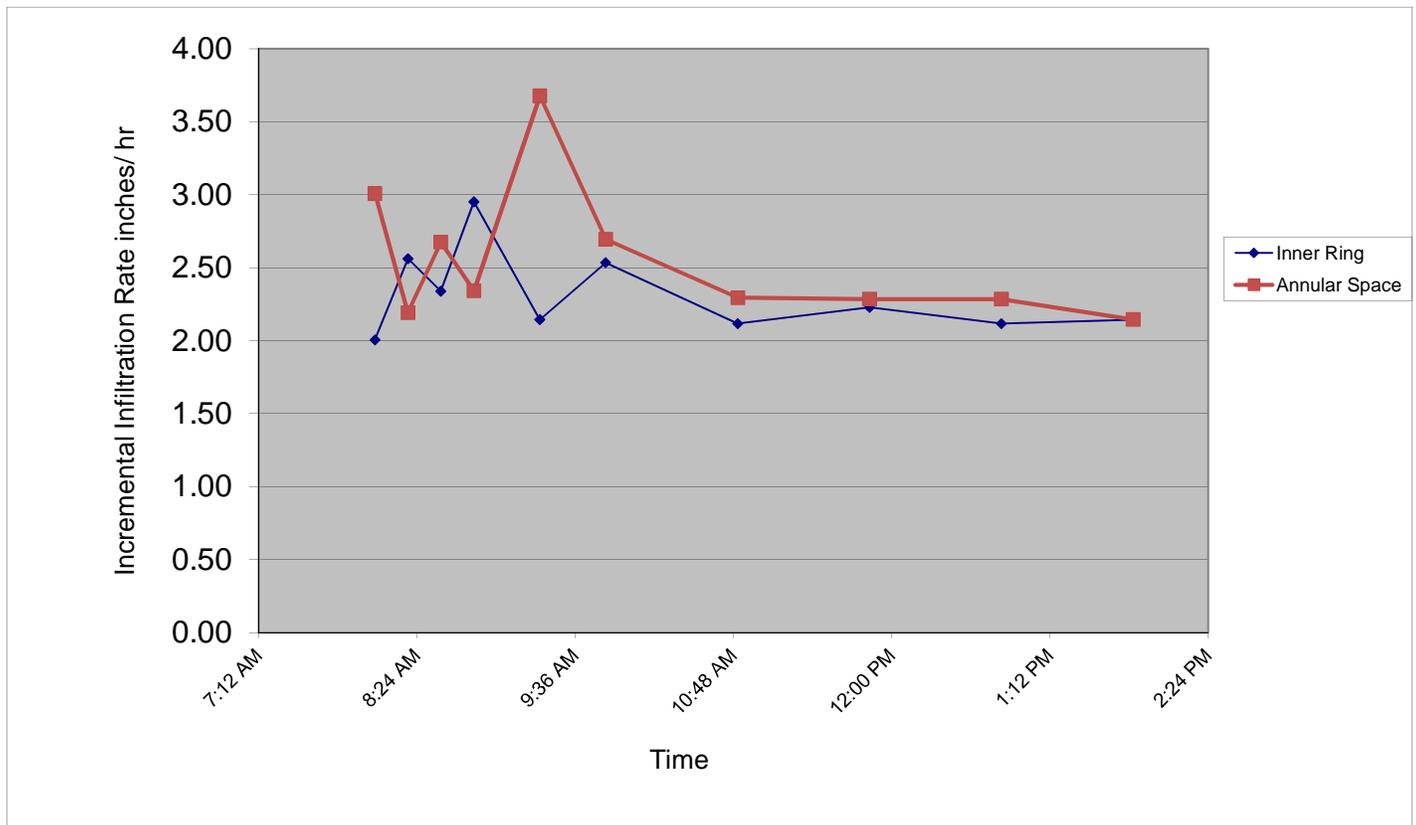
### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-17</b>		
Location:	See Exhibit A-1	Inner Ring Area:	707 cm <sup>2</sup>
Depth:	4-5' Below Existing Grade	Inner Ring Diameter:	300 mm
Technician:	BJD	Annular space between Outer and Inner rings:	2120 cm <sup>2</sup>
Date:	8/19/2014	Outer Ring Diameter:	600 mm
Weather:	Hot and Clear	Depth of Liquid Inner Ring:	150 mm
Liquid Type:	Tap water	Depth of Liquid Annular Space:	150 mm
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #1:	5,000 cm <sup>3</sup>
Ground Temp:	84 °F at start of test	Graduated Cylinder #2:	13,000 cm <sup>3</sup>

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-7	Silty Clayey Sand w/ Gravel (SC-SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	7:50:00 AM	8:05:00 AM	0:15:00	900	4,050	2.00	3.01	87
1	8:05:00 AM	8:20:00 AM	0:15:00	1,150	2,950	2.56	2.19	87
2	8:20:00 AM	8:35:00 AM	0:15:00	1,050	3,600	2.34	2.67	87
3	8:35:00 AM	8:50:00 AM	0:15:00	1,325	3,150	2.95	2.34	87
4	8:50:00 AM	9:20:00 AM	0:30:00	1,925	9,900	2.14	3.68	88
5	9:20:00 AM	9:50:00 AM	0:30:00	2,275	7,250	2.53	2.69	88
6	9:50:00 AM	10:50:00 AM	1:00:00	3,800	12,350	2.12	2.29	89
7	10:50:00 AM	11:50:00 AM	1:00:00	4,000	12,300	2.23	2.28	91
8	11:50:00 AM	12:50:00 PM	1:00:00	3,800	12,300	2.12	2.28	94
9	12:50:00 PM	1:50:00 PM	1:00:00	3,850	11,550	2.14	2.14	96



### DOUBLE RING INFILTRATION TEST SUMMARY

Tom Jones Ford Dealership  
 Yuma Road from S. Apache Road to 247th Avenue  
 Buckeye, Arizona  
 Terracon Project No. 65145203

Test No.:	<b>INF-18</b>	Inner Ring Area:	707	cm <sup>2</sup>
Location:	See Exhibit A-1	Inner Ring Diameter:	300	mm
Depth:	4-5' Below Existing Grade	Annular space between Outer and Inner rings:	2120	cm <sup>2</sup>
Technician:	DJJ	Outer Ring Diameter:	600	mm
Date:	8/18/2014	Depth of Liquid Inner Ring:	150	mm
Weather:	Hot and Clear	Depth of Liquid Annular Space:	150	mm
Liquid Type:	Tap water	Graduated Cylinder #1:	5,000	cm <sup>3</sup>
pH of Liquid:	7.5 at 79 °F	Graduated Cylinder #2:	13,000	cm <sup>3</sup>
Ground Temp:	89 °F at start of test			

<b>Depth (ft)</b>	<b>Soil Description:</b>
0-7	Silty Sand w/ Gravel (SM)

Trial No.	Time		Elapsed Time (hr:min:sec)	Inner Ring Volume, cm <sup>3</sup>	Annular Space Volume, cm <sup>3</sup>	Infiltration Rate, in/hr		Temperature, °F
	Start	Finish				Inner Ring	Annular Space	
0	9:30:00 AM	9:45:00 AM	0:15:00	1,975	10,900	4.40	8.10	87
1	9:45:00 AM	10:03:00 AM	0:18:00	1,700	10,900	3.16	6.75	88
2	10:03:00 AM	10:19:00 AM	0:16:00	1,800	9,700	3.76	6.76	88
3	10:19:00 AM	10:34:00 AM	0:15:00	1,750	10,100	3.90	7.50	88
4	10:34:00 AM	11:06:00 AM	0:32:00	2,900	17,200	3.03	5.99	88
5	11:06:00 AM	11:37:00 AM	0:31:00	2,950	16,200	3.18	5.82	89
6	11:37:00 AM	12:39:00 PM	1:02:00	5,550	29,800	2.99	5.36	89
7	12:39:00 PM	1:40:00 PM	1:01:00	4,950	31,200	2.71	5.70	89
8	1:40:00 PM	2:41:00 PM	1:01:00	3,950	34,400	2.16	6.28	92
9	2:41:00 PM	3:41:00 PM	1:00:00	4,100	32,200	2.28	5.98	94

