



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9731</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3477061.5 N, 5397176.6 E)	STATION & OFFSET: 968+91.84 and -334.5ft
ELEVATION : 749.2 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/2/2001
 END :
 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)	#TYPE		6"-6"-6" (N)		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
749.2				Silty Sandy Clay (CL-ML) brown, moist <			



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9732</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476949.1 N, 5397014.6 E)	STATION & OFFSET: 966+97.33 and -366.8ft
ELEVATION : 754.3 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : 3.9 ft bgs
 START : 10/2/2001
END :
LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
	RECOVERY (in)	#TYPE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
754.3				Sandy Silty Clay (ML) brown-black, moist		
				Silty Sandy Clay (CL-ML) brown, moist		
5 749.3						
10 744.3				Broken/weathered Limestone		
15 739.3						
20 734.3						
25 729.3						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9733</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476940.9 N, 5396898.3 E)	STATION & OFFSET: 966+08.28 and -442.0ft
ELEVATION : 759.2 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---	START : 10/2/2001	END :	LOGGER :
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DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
759.2				Sandy Silty Clay (ML) brown-black, moist		
5						
754.2				Silty Sandy Clay (CL-ML) brown, moist		
				Broken/weathered Limestone		
10						
749.2				Bottom of Boring at 8.0 ft bgs on 10/2/2001		
15						
744.2						
20						
739.2						
25						
734.2						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9735</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476835.5 N, 5396859.5 E)	STATION & OFFSET: 965+06.99 and -393.5ft
ELEVATION : 765.7 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---	START : 10/3/2001	END :	LOGGER :
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DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
765.7				Glacial Clay brown, moist		
5						
760.7				Limestone poor quality		
10						
755.7						
15						
750.7						
20						
745.7						
25						
740.7						
30						
				Bottom of Boring at 16.0 ft bgs on 10/3/2001		

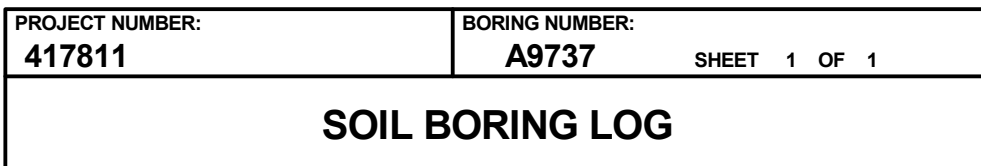


PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9736</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476901.1 N, 5396802.3 E)	STATION & OFFSET: 965+11.7 and -480.4ft
ELEVATION : 765.1 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : 4.8 ft bgs	START : 10/3/2001	END :
		LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
765.1				Sandy Silty Clay (ML) brown and black, moist		
				Glacial Clay brown, moist		
5						
760.1						
10						
755.1				dark gray, moist		
15						
750.1				Bottom of Boring at 15.0 ft bgs on 10/3/2001		
20						
745.1						
25						
740.1						
30						



ORIENTATION :

LOGGER :

WATER LEVELS		START		END		EQUISER		
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)			SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION			
	#	TYPE						
					</			



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9738</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476706.7 N, 5396700.4 E)	STATION & OFFSET: 963+03.13 and -412.0ft
ELEVATION : 778.1 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ▼ 2.8 ft bgs	START : 10/3/2001	END :	LOGGER :
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WATER LEVELS : ± 2.0 fbs			START : 10/3/2001		END :		LOGGER :	
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)			SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY			DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
	#TYPE	6"-6"-6" (N)						
	778.1				Glacial Clay brown, moist			
5								
773.1								
10								
768.1								
15								
763.1				Limestone poor quality				
20								
758.1				Bottom of Boring at 20.0 ft bgs on 10/3/2001				
25								
753.1								
30								



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9739</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476773.1 N, 5396642.2 E)	STATION & OFFSET: 963+07.67 and -500.1ft
ELEVATION : 777.6 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : 4.7 ft bgs

 START : 10/3/2001

 END :

 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
777.6				Silty Clay (ML) brown, moist		
				Glacial Clay brown, moist		
5						
772.6						
10						
767.6						
15						
762.6						
20				Limestone poor quality		
757.6						
25				Bottom of Boring at 23.0 ft bgs on 10/3/2001		
752.6						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9740</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476716.8 N, 5396548.0 E)	STATION & OFFSET: 962+00.91 and -525.5ft
ELEVATION : 787.7 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : 12.0 ft bgs	START : 10/3/2001	END :
	LOGGER :	

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
787.7				Silty Clay (ML) brown, moist		
5				Glacial Clay brown, moist		
782.7						
10						
777.7						
15				dark gray, moist, with occasional limestone pieces		
772.7						
20						
767.7						
25				Bottom of Boring at 23.0 ft bgs on 10/3/2001		
762.7						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9741</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476571.6 N, 5396546.4 E)	STATION & OFFSET: 960+98.49 and -422.5ft
ELEVATION : 780.9 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/3/2001
 END :
 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
780.9				Silty Clay (ML) brown		
5				Glacial Clay brown		
775.9						
10						
770.9						
15				dark gray, with occasional limestone layer		
765.9						
20						
760.9						
25				Bottom of Boring at 23.0 ft bgs on 10/3/2001		
755.9						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9742</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476567.5 N, 5396421.3 E)	STATION & OFFSET: 960+05.93 and -506.8ft
ELEVATION : 780.4 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/3/2001
 END :
 LOGGER :

WATER LEVELS		START : 10/3/2001		END :		LOGGER :		
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)			SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION			
	#	TYPE						
780.4				Silty Clay (ML) brown, moist				
5				Glacial Clay brown				
775.4								
10								
770.4								
15								
765.4								
20								
760.4								
25								
755.4								
30								



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9743</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476439.1 N, 5396412.2 E)	STATION & OFFSET: 959+09.92 and -421.0ft
ELEVATION : 772.8 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : 12.4 ft bgs

 START : 10/3/2001

 END :

 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
772.8				Silty Clay (ML) brown, moist		
5				Glacial Clay brown, moist		
767.8						
10						
762.8						
15				dark gray, with occasional limestone layer		
757.8						
20				Bottom of Boring at 18.0 ft bgs on 10/3/2001		
752.8						
25						
747.8						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9744</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476404.2 N, 5396282.2 E)	STATION & OFFSET: 957+92.45 and -486.6ft
ELEVATION : 773.0 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---	START : 10/3/2001	END :	LOGGER :
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DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
773.0				Silty Clay (ML) brown, moist		
5						
768.0				Glacial Clay brown, moist		
10						
763.0				dark gray, moist, with occasional limestone pieces		
15						
758.0						
20						
753.0						
25						
748.0						
30						
				Bottom of Boring at 13.0 ft bgs on 10/3/2001		



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9745</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476286.1 N, 5396254.0 E)	STATION & OFFSET: 956+89.81 and -421.6ft
ELEVATION : 771.9 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---				START : 10/3/2001	END :	LOGGER :
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
771.9				Silty Clay (ML) black and brown		
5 766.9				Glacial Clay brown		
10 761.9				Bottom of Boring at 13.0 ft bgs on 10/3/2001		
15 756.9						
20 751.9						
25 746.9						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9746</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476130.8 N, 5396112.3 E)	STATION & OFFSET: 954+80.02 and -409.0ft
ELEVATION : 771.6 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : 3.1 ft bgs	START : 10/3/2001	END :
		LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
771.6				Silty Clay (ML) black and brown, moist		
5						
766.6				Glacial Clay brown, moist, with occasional sand seam		
10						
761.6						
15						
756.6						
20						
751.6						
25						
746.6						
30						
				Bottom of Boring at 13.0 ft bgs on 10/3/2001		



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9747</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3477066.9 N, 5397056.0 E)	STATION & OFFSET: 968+09.14 and -422.4ft
ELEVATION : 754.5 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : 1.9 ft bgs	START : 10/4/2001	END :	LOGGER :
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DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
754.5				Silty Sandy Clay (CL) brown, moist		
5						
749.5						
10				Broken/weathered Limestone with occasional shale layer		
744.5						
15				Bottom of Boring at 13.0 ft bgs on 10/4/2001		
739.5						
20						
734.5						
25						
729.5						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9748</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476576.9 N, 5396679.5 E)	STATION & OFFSET: 961+97.62 and -333.5ft
ELEVATION : 770.0 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : 9.7 ft bgs	START : 10/3/2001	END :
		LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
770.0				Sand And Silt Fill (SP) brown and black, moist		
5				Glacial Clay dark gray, moist		
765.0				Limestone poor quality		
10				Bottom of Boring at 17.0 ft bgs on 10/3/2001		
760.0						
15						
755.0						
20						
750.0						
25						
745.0						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9749</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476438.7 N, 5396532.7 E)	STATION & OFFSET: 959+96.03 and -336.7ft
ELEVATION : 770.0 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---	START : 10/4/2001	END :	LOGGER :
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DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
770.0				Sand And Clay Fill (SP) brown-black, moist		
5						
765.0						
				Glacial Clay brown, moist		
10						
760.0				dark gray, moist, with occasional limestone layer		
15						
755.0						
20				Bottom of Boring at 17.0 ft bgs on 10/4/2001		
750.0						
25						
745.0						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9750</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476714.8 N, 5396827.5 E)	STATION & OFFSET: 963+99.93 and -329.2ft
ELEVATION : 771.0 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---	START : 10/4/2001	END :	LOGGER :
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DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
771.0				Sand Fill (SP) brown, moist		
5				Glacial Clay brown		
766.0				Limestone poor quality		
10				Bottom of Boring at 17.0 ft bgs on 10/4/2001		
761.0						
15						
756.0						
20						
751.0						
25						
746.0						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9751</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476522.9 N, 5396596.7 E)	STATION & OFFSET: 961+00.68 and -352.5ft
ELEVATION : 770.3 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---	START : 10/4/2001	END :	LOGGER :
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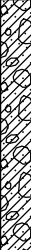

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
770.3				Sand And Clay Fill (SP) black-brown		
5						
765.3				Glacial Clay brown		
10				dark gray, moist		
760.3						
15						
755.3						
20				Bottom of Boring at 16.0 ft bgs on 10/4/2001		
750.3						
25						
745.3						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9752</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476822.2 N, 5396986.6 E)	STATION & OFFSET: 965+88.81 and -295.4ft
ELEVATION : 769.5 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/8/2001
 END :
 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
	RECOVERY (in)	#TYPE				
6"-6"-6" (N)						
769.5				Sand And Clay Fill (SP) black-brown, moist		
5						
764.5				Silty Clay (ML) black, moist		
10						
759.5				Glacial Clay brown, moist		
15						
754.5				Shaley Clay (CL) brown, with broken limestone		
20						
749.5						
25				Bottom of Boring at 23.0 ft bgs on 10/8/2001		
744.5						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9753</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476758.3 N, 5396908.8 E)	STATION & OFFSET: 964+88.52 and -303.7ft
ELEVATION : 768.8 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/8/2001
 END :
 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)	#TYPE		6"-6"-6" (N)		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
768.8				Sand And Clay Fill (SP) black-brown, moist			
5							
763.8				Silty Clay (ML) brown, moist			
10				Glacial Clay brown, moist			
758.8							
				Shale brown and gray, moist			
15							
753.8				Limestone poor quality			
				Bottom of Boring at 18.0 ft bgs on 10/8/2001			
20							
748.8							
25							
743.8							
30							



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9754</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3475985.2 N, 5396143.3 E)	STATION & OFFSET: 954+00.7 and -283.0ft
ELEVATION : 767.5 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :




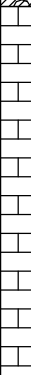
WATER LEVELS : ---	START : 10/9/2001	END :	LOGGER :
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DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
767.5				Silty Clay (ML) gray-brown to gray, stiff		
5						
762.5						
10						
757.5				Glacial Clay gray-brown, firm		
15						
752.5						
20				dark gray, very firm		
747.5						
25						
742.5				Bottom of Boring at 25.0 ft bgs on 10/9/2001		
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9755</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476934.4 N, 5397153.3 E)	STATION & OFFSET: 967+86.52 and -259.6ft
ELEVATION : 770.0 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS :  ---			START : 10/9/2001		END :		LOGGER :	
DEPTH BELOW EXISTING GRADE (ft)		STANDARD PENETRATION TEST RESULTS		SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
INTERVAL (ft)				SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY			DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
RECOVERY (in)		#TYPE						
		6"-6"-6" (N)						
770.0				Sand And Clay Fill (SP) black and brown				
5								
765.0								
10								
760.0								
15				Glacial Clay brown				
755.0								
				Limestone poor quality				
20								
750.0				medium hard, occasional separation				
25				Bottom of Boring at 25.0 ft bgs on 10/9/2001				
745.0								
30								



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9756</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476866.4 N, 5397079.5 E)	STATION & OFFSET: 966+86.26 and -262.3ft
ELEVATION : 767.8 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/9/2001
 END :
 LOGGER :

WATER LEVELS		START : 10/9/2001		END :		LOGGER :		
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)			SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY			DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
	#	TYPE						
767.8				Sand And Clay Fill (SP) black and brown, moist				
5								
762.8								
10								
757.8								
15				Glacial Clay brown, moist				
752.8								
20				Limestone poor quality, occasional layer of medium hard limestone				
747.8								
25				Bottom of Boring at 24.0 ft bgs on 10/9/2001				
742.8								
30								



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9757</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3476964.8 N, 5397249.8 E)	STATION & OFFSET: 968+76.94 and -214.1ft
ELEVATION : 767.0 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/9/2001
 END :
 LOGGER :

WATER LEVELS		START : 10/9/2001		END :		LOGGER :	
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS
	RECOVERY (in)	#TYPE		6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
767.0				Sand Fill (SP) brown, moist			
5							
762.0				Glacial Clay dark gray, moist			
10							
757.0							
15							
752.0							
20							
747.0							
25							
742.0							
30							

Bottom of Boring at 23.0 ft bgs on 10/9/2001



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9758</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3477027.0 N, 5397327.1 E)	STATION & OFFSET: 969+75.71 and -204.8ft
ELEVATION : 770.2 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---	START : 10/9/2001	END :	LOGGER :
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DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
770.2				Sand Fill (SP) brown, moist		
5						
765.2						
10						
760.2						
15				Glacial Clay Fill dark gray, moist		
755.2						
20						
750.2						
25						
745.2						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9758</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3477027.0 N, 5397327.1 E)	STATION & OFFSET: 969+75.71 and -204.8ft
ELEVATION : 770.2 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/9/2001
 END :
 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
	RECOVERY (in)	6"-6"-6" (N)		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
#TYPE						
740.2						
35						
735.2						
40						
730.2						
45						
725.2						
50						
720.2						
55						
715.2						
60						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9759</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3477056.2 N, 5397423.7 E)	STATION & OFFSET: 970+65.41 and -158.5ft
ELEVATION : 767.3 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/11/2001
 END :
 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
	RECOVERY (in)	#TYPE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
767.3				Sand And Clay Fill (SP) brown, moist		
5						
762.3						
10						
757.3				Glacial Clay Fill dark gray, moist		
15						
752.3						
20				Sandy Clay Fill (CL) brown, moist		
747.3						
25						
742.3						
30						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">A9759</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : (3477056.2 N, 5397423.7 E)	STATION & OFFSET: 970+65.41 and -158.5ft
ELEVATION : 767.3 ft	DRILLING CONTRACTOR :	
DRILLING EQUIPMENT AND METHOD :		ORIENTATION :

WATER LEVELS : ---
 START : 10/11/2001
 END :
 LOGGER :

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
737.3						
35						
732.3				Sand (SP) brown, wet, occasional sand seam		
40						
727.3						
45						
722.3				Bottom of Boring at 45.0 ft bgs on 10/11/2001		
50						
717.3						
55						
712.3						
60						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-66</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : As stake (3475710.1 N, 5395551.93E)	ELEVATION & OFFSET: 947+84.94 and -498.0ft
ELEVATION : 809.9 ft	DRILLING CONTRACTOR : Terracon	
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer		ORIENTATION : Vertical
WATER LEVELS : 22.0 ft bgs	START : 11/2/11 12:50	END : 11/2/11 13:30
LOGGER : E. Carrasco		

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
809.9				Sandy Silty Clay (CL-ML) brown, moist, very fine grained		Bulk Sample (0.0'-22.0') laboratory results: Gravel = 0%, Sand = 33%, Silt = 50%, Clay = 17% LL = 23, PL = 16, PI = 7, WC = 14% Proctor Max. Density = 118 pcf Proctor Optimum M.C. = 13%
5						
804.9						
10						
799.9						
15						Groundwater encountered at 22.0' bgs during drilling. Bulk Sample (22.0'-50.0') laboratory results: Gravel = 0%, Sand = 9%, Silt = 75%, Clay = 17% LL = 27, PL = 21, PI = 6, WC = 24% Proctor Max. Density = 115 pcf Proctor Optimum M.C. = 14%
794.9						
20						
789.9						
25						
784.9						
30						
779.9						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-66</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa LOCATION : As stake (3475710.1 N, 5395551.93 E) ELEVATION & OFFSET: 947+84.94 and -498.0ft

ELEVATION : 809.9 ft DRILLING CONTRACTOR : Terracon

DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer ORIENTATION : Vertical

WATER LEVELS : 22.0 ft bgs START : 11/2/11 12:50 END : 11/2/11 13:30 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)				STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
INTERVAL (ft)			SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION		
RECOVERY (in)		#TYPE					
				6"-6"-6" (N)			
774.9							
40							
769.9							
45							
764.9							
50							
759.9				Bottom of Boring at 50.0 ft bgs on 11/2/11 13:30			
55							
754.9							
60							
749.9							
65							
744.9							
70							



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-67</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 3 feet east-southeast (3476010.1 N 53°15'35.0" W) OFFSET: 949+91.61 and -715.5ft
ELEVATION : 787.9 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ▼ 10.0 ft bgs	START : 11/2/11 11:32 END : 11/2/11 12:05 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
787.9				Top Soil Lean To Fat Clay (CL) brown, moist, soft to medium stiff, medium to high plasticity		
5						
782.9						
10						
777.9				Fat Clay (CH) brown, wet, very soft to soft, high plasticity, some silt		Groundwater encountered at 10.0' bgs during drilling.
15						
772.9				Glacial Till gray, wet, medium stiff to stiff, medium plasticity		
20						
767.9						
25						
762.9						
30						
757.9						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-67</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 3 feet east-southeast (3476010.1 N 53°35'48.07" E) OFFSET: 949+91.61 and -715.5ft
ELEVATION : 787.9 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : 10.0 ft bgs	START : 11/2/11 11:32 END : 11/2/11 12:05 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
752.9						
40						
747.9				Weathered Rock		40.0'-41.0': auger chattering
				Bottom of Boring at 41.0 ft bgs on 11/2/11 12:05		
45						
742.9						
50						
737.9						
55						
732.9						
60						
727.9						
65						
722.9						
70						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-68</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : As stake (3475863.0 N, 5395810.0 E)	STATION & OFFSET: 950+76.58 and -427.7ft
ELEVATION : 780.6 ft	DRILLING CONTRACTOR : Terracon	
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer		ORIENTATION : Vertical
WATER LEVELS : ▼ 10.0 ft bgs	START : 11/2/11 12:10	END : 11/2/11 12:45
LOGGER : E. Carrasco		

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
780.6				Top Soil Lean Clay (CL) brown, moist to wet, low plasticity		
5						
775.6						
10						
770.6				Silty Sand (SM) light brown, wet, very fine grained		Groundwater encountered at 10.0' bgs during drilling.
15						
765.6						
20						
760.6						
25						
755.6						
30						
750.6						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-68</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

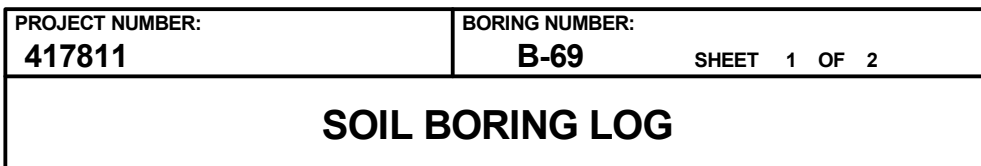
PROJECT : IA-100, Cedar Rapids, Iowa LOCATION : As stake (3475863.0 N, 5395810.0 E) ELEVATION & OFFSET: 950+76.58 and -427.7ft

ELEVATION : 780.6 ft DRILLING CONTRACTOR : Terracon

DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer ORIENTATION : Vertical

WATER LEVELS : 10.0 ft bgs START : 11/2/11 12:10 END : 11/2/11 12:45 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)	#TYPE		6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
745.6								
40								
740.6								
45								
735.6								
50								
730.6				Bottom of Boring at 50.0 ft bgs on 11/2/11 12:45				
55								
725.6								
60								
720.6								
65								
715.6								
70								



LOCATION : 5 feet south offset (3476310.1 N, 5937641.0 E) OFFSET: 951+98.29 and -932.9ft

DRILLING CONTRACTOR : Terracon

ORIENTATION : Vertical

LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)		STANDARD PENETRATION TEST RESULTS		SOIL DESCRIPTION		SYMBOLIC LOG		COMMENTS	
INTERVAL (ft)		RECOVERY (in)		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		PP (TSF)		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
		#TYPE		6"-6"-6" (N)					
804.7	0.0	4.0	SS-1	3-3-3 (6)	Sandy Lean Clay (CL) dark brown, moist, medium stiff, low plasticity, fine to medium grained sand			SS-1 laboratory results: LL = 37, PL = 22, PI = 16, WC = 19% Carbon = 4%	
	1.5								
	4.0							SS-2 laboratory results: WC = 13%	
5	5.5	10.0	SS-2	5-4-2 (6)	Clayey Sand (SC) brown, moist, loose, low plasticity clay				
799.7	5.5								
	9.0								
10	10.5	12.0	SS-3	6-6-5 (11)	Silty Sand With Gravel (SM) reddish brown, moist, medium dense, fine to medium grained				
794.7	10.5								
	14.0								
	15.5	4.0	SS-4	7-7-9 (16)	coarse grained				
15	15.5							SS-4 laboratory results: Gravel = 21%, Sand = 56%, Silt = 17%, Clay = 6% WC = 10%	
789.7	15.5								
	19.0							17.0': Driller notes top of glacial till.	
20	20.5	18.0	SS-5	5-8-12 (20)	Glacial Till (CL) dark gray and brown, moist, very stiff, low plasticity, some sand				
784.7	20.5								
	24.0								
25	25.5	18.0	SS-6	5-8-8 (16)				SS-6 laboratory results: Gravel = 2%, Sand = 44%, Silt = 34%, Clay = 20% LL = 29, PL = 13, PI = 16 WC = 11%	
779.7	25.5								
	29.0								
30	30.5	18.0	SS-7	5-8-11 (19)					
774.7	30.5								
	34.0								
35		15.0	SS-8	6-8-10					



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-69</div> <div style="text-align: right; font-size: 0.8em;">SHEET 2 OF 2</div>
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 5 feet south offset (3476310.1 N, 539546.1 E) OFFSET: 951+98.29 and -932.9ft
ELEVATION : 804.7 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 3 1/4" HSA, 140lb Auto Hammer, 2" OD Spoon	
ORIENTATION : Vertical	
WATER LEVELS : 17.0 ft bgs	START : 10/31/11 12:49 END : 10/31/11 14:31 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS	
		RECOVERY (in)				PP (TSF)	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
		#TYPE					
769.7	35.5		6"-6"-6" (N)			3.5-4.0	
	39.0						
40 764.7	40.5	16.0	SS-9	6-11-16 (27)		>4.0	
	44.0						
45 759.7	45.5	10.0	SS-10	6-9-10 (19)		3.5-3.75	SS-10 laboratory results: Gravel = 1%, Sand = 42%, Silt = 35%, Clay = 23% LL = 29, PL = 14, PI = 16 WC = 13%
	49.0						
50 754.7	50.5	15.0	SS-11	5-5-9 (14)		3.25	
				stiff			
				Bottom of Boring at 50.5 ft bgs on 10/31/11 14:31			
55 749.7							
60 744.7							
65 739.7							
70							



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-70</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa LOCATION : 6 feet northeast offset (3476163.0 N, 839600.0 E) STATIONING: 952+83.26 and -645.2ft
 ELEVATION : 781.4 ft DRILLING CONTRACTOR : Terracon
 DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer ORIENTATION : Vertical

WATER LEVELS : 12.0 ft bgs START : 11/2/11 08:00 END : 11/2/11 08:43 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
781.4				Poorly Graded Sand (SP) brown, moist, fine grained, trace silt	•••••	
5						
776.4						
10						
771.4						
15				Sandy Lean Sand (CL) brown, wet, low plasticity	//	12.0': Groundwater table during drilling.
766.4						
20				gray, low to medium plasticity		
761.4						
25						
756.4						
30						
751.4						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-70</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 6 feet northeast offset (3476163.0 N 1396006.0 E) STATIONING: 952+83.26 and -645.2ft
ELEVATION : 781.4 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer	
ORIENTATION : Vertical	
WATER LEVELS : 12.0 ft bgs	START : 11/2/11 08:00 END : 11/2/11 08:43 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
746.4				medium plasticity, greater sand content		
40						
741.4				Bottom of Boring at 50.0 ft bgs on 11/2/11 08:43		
45						
736.4						
50						
731.4						
55						
726.4						
60						
721.4						
65						
716.4						
70						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-71</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 4 feet south-southeast offset (347651.01N 539354.57E) 954+04.89 and -1150.3ft
ELEVATION : 781.8 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : 21.0 ft bgs	START : 10/31/11 14:40 END : 10/31/11 15:10 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
781.8			6"-6"-6" (N)	Poorly Graded Sand (SP) brown, moist, trace clay, low plasticity		
5				Sandy Lean Clay (CL) brown, wet, low plasticity		
776.8						
10				Glacial Till gray, moist to wet, low plasticity		10.0': driller notes hard drilling
771.8						
15						
766.8						
20						
761.8						
25						
756.8						
30				low to medium plasticity		
751.8						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-71</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 4 feet south-southeast offset (3476610.01N 539354.57E) 954+04.89 and -1150.3ft
ELEVATION : 781.8 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : 21.0 ft bgs	START : 10/31/11 14:40 END : 10/31/11 15:10 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
746.8						
40						
741.8						
45						
736.8						43.5': driller notes even harder drilling
50						
731.8				Bottom of Boring at 50.0 ft bgs on 10/31/11 15:10		
55						
726.8						
60						
721.8						
65						
716.8						
70						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-72</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 5 feet north-northwest offset (3476+83.01N+89.86E) 954+89.86 and -862.7ft
ELEVATION : 791.7 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	
ORIENTATION : Vertical	
WATER LEVELS : ---	
START : 11/1/11 12:45 END : 11/1/11 13:20 LOGGER : E. Carrasco	

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
791.7			6"-6"-6" (N)	Clayey Sand (SC) brown, moist, fine to medium grained		
5						
786.7				Sandy Lean Clay (CL) brown, moist, fine to medium grained, low plasticity		
10						
781.7						
15						
776.7						
				brown and gray, transition zone		
20						
771.7				Glacial Till gray, moist, low plasticity, trace sand		
25						
766.7						
30						
761.7						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-72</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa LOCATION : 5 feet north-northwest offset (3476+89.86 and -862.7ft) 3476+89.86 and -862.7ft
 ELEVATION : 791.7 ft DRILLING CONTRACTOR : Terracon
 DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer ORIENTATION : Vertical
 WATER LEVELS : --- START : 11/1/11 12:45 END : 11/1/11 13:20 LOGGER : E. Carrasco

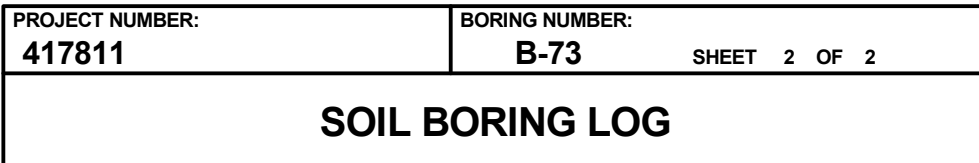
WATER LEVEL (ft)		START: 11/1/11 12:45		END: 11/1/11 10:20		LOGGERS: E. Garza		
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)	#TYPE		6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
756.7								
40								
751.7								
45								
746.7								
50								
741.7								
55								
736.7								
60								
731.7								
65								
726.7								
70								



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-73</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : As stake (3476316.0 N, 5396064.63E)	ELEVATION & OFFSET: 955+74.9 and -575.0ft
ELEVATION : 774.6 ft	DRILLING CONTRACTOR : Terracon	
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer		ORIENTATION : Vertical
WATER LEVELS : ---	START : 11/2/11 08:49	END : 11/2/11 09:41
	LOGGER : E. Carrasco	

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
774.6				Poorly Graded Sand (SP) dark brown, moist, fine grained		
5						
769.6						
10				Lean Clay (CL) brown, moist, medium plasticity, trace sand		
764.6						
15						
759.6						
20				Glacial Till gray, moist, very stiff, medium plasticity		
754.6						
25						
749.6						
30						
744.6						
35						





PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-74</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 4 feet south offset (3476910.0 N, 599536.0 E)
ELEVATION : 768.5 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ▼ 12.0 ft bgs	START : 11/1/11 08:10 END : 11/1/11 08:54 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)		STANDARD PENETRATION TEST RESULTS		SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
INTERVAL (ft)		RECOVERY (in)		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY			DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
			#TYPE					
768.5								
					Top Soil			
					Glacial Till (CL) dark brown, moist to wet, low to medium plasticity, sandy, trace gravel			Bulk Sample (1.0'-16.0') laboratory results: Gravel = 2%, Sand = 44%, Silt = 34%, Clay = 20% LL = 30, PL = 14, PI = 16, WC = 21% Proctor Max. Density = 117 pcf Proctor Optimum M.C. = 14%
5								
763.5								
10								
758.5								
								Groundwater encountered at 12.0' bgs during drilling.
15								
753.5								
					dark brown and gray, hard, no gravel			16.0': driller notes harder drilling.
20								Bulk Sample 16.0'-50.0') laboratory results: Gravel = 0%, Sand = 38%, Silt = 36%, Clay = 26% LL = 30, PL = 12, PI = 18, WC = 16% Proctor Max. Density = 121 pcf Proctor Optimum M.C. = 12%
748.5								
25								
743.5								
30								
738.5								
35								



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-74</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 4 feet south offset (3476910.0 N, 539530.0 E) OFFSET: 956+11.5 and -1367.9ft
ELEVATION : 768.5 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : 12.0 ft bgs	START : 11/1/11 08:10 END : 11/1/11 08:54 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
733.5						
40						
728.5						
45						
723.5						
50						
718.5				Bottom of Boring at 50.0 ft bgs on 11/1/11 08:54		
55						
713.5						
60						
708.5						
65						
703.5						
70						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-75</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 6 feet south offset (3476763.0 N, 539790.1 E) OFFSET: 956+96.54 and -1080.2ft
ELEVATION : 782.0 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ---	START : 11/1/11 12:06 END : 11/1/11 12:39 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
782.0			6"-6"-6" (N)	Lean Clay With Sand (CL) brown, moist, low plasticity		Bulk Sample (0.0'-8.0') laboratory results: Gravel = 0%, Sand = 24%, Silt = 49%, Clay = 27% LL = 34, PL = 18, PI = 16, WC = 15% Proctor Max. Density = 113 pcf Proctor Optimum M.C. = 15%
5						
777.0						
10						
772.0				Lean Clay (CL) brown, moist, medium plasticity, trace sand		
15						
767.0						
20						
762.0						
25						
757.0						
30						
752.0						
35						
				Glacial Till gray, moist, very stiff, medium plasticity, trace sand		



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-75</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 6 feet south offset (3476763.0 N, 539790.1 E) OFFSET: 956+96.54 and -1080.2ft
ELEVATION : 782.0 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	
ORIENTATION : Vertical	
WATER LEVELS : ---	
START : 11/1/11 12:06 END : 11/1/11 12:39 LOGGER : E. Carrasco	

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
747.0						
40						
742.0						
45						
737.0						
50						
732.0				Bottom of Boring at 50.0 ft bgs on 11/1/11 12:39		
55						
727.0						
60						
722.0						
65						
717.0						
70						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-76</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 5 feet southeast offset (3476615.9 STA) 63.2' OFFSET: 957+81.5 and -792.5ft
ELEVATION : 791.6 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ---	START : 11/1/11 13:30 END : 11/1/11 14:10 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
791.6			6"-6"-6" (N)	Poorly Graded Sand (SP) orange-brown, moist, fine to medium grained		Bulk Sample (0.0'-8.0') laboratory results: WC = 11%
5						
786.6						
10				Lean Clay With Sand (CL) brown, moist, low plasticity		
781.6						
15				Glacial Till gray, moist, low to medium plasticity, trace sand		
776.6						
20						
771.6						
25						
766.6						
30						
761.6						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-76</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 5 feet southeast offset (3476615.9 STA) 63.2 ft offset: 957+81.5 and -792.5ft
ELEVATION : 791.6 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ---	START : 11/1/11 13:30 END : 11/1/11 14:10 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
756.6						
40						
751.6						
45						
746.6						
50						
741.6				Bottom of Boring at 50.0 ft bgs on 11/1/11 14:10		
55						
736.6						
60						
731.6						
65						
726.6						
70						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-77</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : As stake (3476468.9 N, 5396322.7 E)	STATION & OFFSET: 958+66.54 and -504.8ft
ELEVATION : 774.4 ft	DRILLING CONTRACTOR : Terracon	
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer		ORIENTATION : Vertical
WATER LEVELS : 31.0 ft bgs	START : 11/2/11 10:30	END : 11/2/11 10:52
LOGGER : E. Carrasco		

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)			DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
774.4				Poorly Graded Sand (SP) brown, moist to wet, fine to medium grained		
5						
769.4						
				Sandy Lean Clay (CL) brown, moist, medium plasticity		Bulk Sample (7.0'-12.0') laboratory results: WC = 18%
10						
764.4						
				Glacial Till gray, moist, very stiff, medium plasticity		
15						
759.4						
20						
754.4						
25						
749.4						
30						
744.4						
				Weathered Rock With Clay (limestone) gray and white, wet, medium plasticity, ground limestone		31.0': groundwater table during drilling 31.0'-34.5': moderate rig chattering
35						
				Bottom of Boring at 34.5 ft bgs on 11/2/11 10:52		



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-78</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 4 feet south offset (3477063.0 N, 539796.0 E) OFFSET: 959+03.21 and -1297.7ft
ELEVATION : 766.9 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : 44.0 ft bgs	START : 10/31/11 15:20 END : 10/31/11 16:00 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
766.9			6"-6"-6" (N)	Lean Clay (CL) black, moist, low to medium plasticity, trace roots		
5						
761.9				Fat Clay (CH) brownish gray, moist, medium to high plasticity, trace silt		
10						
756.9						
15						
751.9						
20						
746.9						
25						
741.9						
30						
736.9						
35				trace of whitish gray gravel		32.5'-35.0': driller notes cobbles



PROJECT NUMBER:

417811

BORING NUMBER:

B-78

SHEET 2 OF 2

SOIL BORING LOG

PROJECT : IA-100, Cedar Rapids, Iowa

LOCATION : 4 feet south offset (3477063.0 N, 5397961.8 E) OFFSET: 959+03.21 and -1297.7ft

ELEVATION : 766.9 ft

DRILLING CONTRACTOR : Terracon

DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer

ORIENTATION : Vertical

WATER LEVELS : 44.0 ft bgs

START : 10/31/11 15:20

END : 10/31/11 16:00

LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)		STANDARD PENETRATION TEST RESULTS		SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
INTERVAL (ft)	RECOVERY (in)	#	TYPE	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
			6"-6"-6" (N)			
731.9						35.0': driller notes gravelly drilling
40						
726.9						
45						
721.9						
50						
716.9				Bottom of Boring at 50.0 ft bgs on 10/31/11 16:00		
55						
711.9						
60						
706.9						
65						
701.9						
70						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-79</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 5 feet north offset (3476915.9 N, 5396510.1 E) OFFSET: 959+88.18 and -1009.9ft
ELEVATION : 778.5 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ---	START : 11/1/11 10:20 END : 11/1/11 10:49 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
778.5				Sandy Lean Clay (CL) brown, moist, low plasticity		Bulk Sample (0.0'-8.0') laboratory results: Gravel = 0%, Sand = 24%, Silt = 49%, Clay = 27% LL = 34, PL = 18, PI = 16, WC = 15% Proctor Max. Density = 113 pcf Proctor Optimum M.C. = 15%
5						
773.5						
10						
768.5						
15						
763.5						
20						
758.5						
25						
753.5						
30						
748.5						
35						
				Bottom of Boring at 35.0 ft bgs on 11/1/11 10:49		



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-80</div>
SHEET 1 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 6 feet north offset (3476768.9 N, 5396110.9 E) OFFSET: 960+73.22 and -722.3ft
ELEVATION : 790.0 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer	
ORIENTATION : Vertical	
WATER LEVELS : ---	START : 11/2/11 10:57 END : 11/2/11 11:25 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
790.0				Poorly Graded Sand (SP) brown, moist, medium grained, trace clay		
5						
785.0						
10						
780.0						
15						
775.0				Glacial Till gray, moist, stiff, medium plasticity, trace gravel		
20						
770.0						
25						
765.0						
30						
760.0						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-80</div>
SHEET 2 OF 2	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 6 feet north offset (3476768.9 N, 5965110.1 E) OFFSET: 960+73.22 and -722.3ft
ELEVATION : 790.0 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 550, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ---	START : 11/2/11 10:57 END : 11/2/11 11:25 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		#TYPE	6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
755.0						
40						
750.0						
45						
745.0						
50						
740.0				Bottom of Boring at 50.0 ft bgs on 11/2/11 11:25		
55						
735.0						
60						
730.0						
65						
725.0						
70						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-81</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 4 feet south offset (3477068.9 N, 539316.8 E) OFFSET: 962+79.89 and -939.7ft
ELEVATION : 772.3 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ---	START : 11/1/11 09:02 END : 11/1/11 09:25 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
772.3			6"-6"-6" (N)	Sandy Lean Clay (CL) brown to dark brown, moist, low plasticity		
5						
767.3						
10						
762.3						
15						
757.3						
20				Glacial Till gray, moist to wet, low to medium plasticity		Groundwater encountered at 16.0' bgs during drilling.
752.3						
25				Weathered Rock Fragments And Sand (limestone) white, dry, fine white sand		26.0-29.5': strong chattering, driller notes cobbles.
747.3						
30				Bottom of Boring at 29.5 ft bgs on 11/1/11 09:25		
742.3						
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-82</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	




PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 6 feet south offset (3476921.9 N, 5396702.1 E) OFFSET: 963+64.93 and -652.1ft
ELEVATION : 778.3 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	
ORIENTATION : Vertical	
WATER LEVELS : 16.0 ft bgs	START : 11/1/11 09:57 END : 11/1/11 10:11 LOGGER : E. Carrasco

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		RECOVERY (in)				
		#TYPE				
			6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
778.3				Sandy Lean Clay (CL) brown, moist, low plasticity		
5						
773.3						
10						
768.3				Glacial Till gray, moist, medium plasticity		
15						
763.3						
20				Weathered Rock Fragments With Clay (limestone) gray, wet, ground pieces of rock		16.0': driller notes top of rock Groundwater encountered at 16.0' bgs during drilling.
25						
758.3						
30				Bottom of Boring at 21.0 ft bgs on 11/1/11 10:11		
35						



PROJECT NUMBER: <div style="font-size: 1.2em; font-weight: bold;">417811</div>	BORING NUMBER: <div style="font-size: 1.2em; font-weight: bold;">B-83</div>
SHEET 1 OF 1	
<div style="font-size: 1.5em; font-weight: bold;">SOIL BORING LOG</div>	

PROJECT : IA-100, Cedar Rapids, Iowa	LOCATION : 5 feet south offset (3476995.3 N, 599860.8 E) OFFSET: 966+24.6 and -502.0ft
ELEVATION : 761.2 ft	DRILLING CONTRACTOR : Terracon
DRILLING EQUIPMENT AND METHOD : CME 928 truck mounted, 4" SSA, 140lb Auto Hammer	ORIENTATION : Vertical
WATER LEVELS : ---	START : 11/1/11 09:30 END : 11/1/11 09:50 LOGGER : E. Carrasco

WATER LEVEL (ft)		START: 11/1/11 09:50		END: 11/1/11 09:50		LOGGERS: E. Garza	
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS
	RECOVERY (in)	#TYPE		6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
761.2				Lean Clay With Sand (CL) brown, moist, low plasticity		Bulk Sample (5.0'-13.0') laboratory results: Bulk sample from 5'-13'. Gravel = 0%, Sand = 22%, Silt = 40%, Clay = 38% LL = 37, PL = 17, PI = 20, WC = 24% Proctor Max. Density = 106 pcf Proctor Optimum M.C. = 19%	
5							
756.2							
10							
751.2							
15				Weathered Rock Fragments (limestone) white, dry, with some clay and sand, ground pieces of rock			
746.2							
20				Bottom of Boring at 17.5 ft bgs on 11/1/11 09:50			
741.2							
25							
736.2							
30							
731.2							
35							