


SCDOT

DRILLED SHAFT LOG (REV 06-03-02)

Project Name _____	Page	1	of	6
File No. _____	Bent No.	_____		
Contractor _____	Shaft No.	_____		
Completed By Contractor DS Foreman - _____	Date	/	/	Station
Reviewed By SCDOT Inspector - _____	Date	/	/	Offset

		Construction	Temporary	
Date Cased _____	Casing Type: _____			
Date Opened _____	Casing Dimension (OD): _____			
Date Poured _____	Bottom of Casing Elevation (FT) _____			
<p style="text-align: center;">Elevation (ft)</p> <div style="border: 1px solid black; height: 100%; width: 100%;"></div>	Top of Casing Elevation (FT) _____			
	Diameter of Rock Socket (IN) _____			
	Diameter of Shaft (IN) _____			
	Mud-line/Ground Surface Elevation (FT) _____			
	Wet & Dry Shaft Length (FT) _____			
	Rock Socket Length (FT) _____			
	Top of Shaft Elevation (FT) _____			
	Tip Elevation (FT) _____			
	Constructed Shaft Length (FT) _____			
	Testing/Other: _____			
	Volume of Concrete: _____	Theoretical (VT) CY _____		
	OP = VP-VT = _____ UP = VT - VP= _____	Actual (VP) CY _____		
	Reinforcement Cage Installed: _____	Type _____		
	Duration of Pour (min) _____			
	Legend			
TOC	Top of Casing		Sand	
TOG	Top of Ground			
TOS	Top of Shaft		Silt	
TOR	Top of Rock			
BOC	Bottom of Casing		Clay	
BOS	Bottom of Shaft			
BOR	Bottom of Rock		Rock	
 ← Water Level				
Completed by _____				
Contractor _____	DS Foreman/Engineer			
Reviewed by _____				
SCDOT _____	Inspector/Engineer			
Notes: _____				
Shaft location variance at top: _____				

HOW TO COMPLETE THE DRILLED SHAFT LOG



Project Name _____	Page _____ of _____	
Project No. _____	Plan No. _____	
Contract or _____	Sheet No. _____	
Inspected By _____	Date / / _____	Station _____
Approved By _____	Date / / _____	Dist _____

Date Cores _____	Coating Type _____
Date Opened _____	Coating Dimension _____
Date Poured _____	Bottom of Coating Elevation (ft) _____
	Diameter of Rock Socket (in) _____
	Diameter of Overburden Shaft (in) _____
	Median Ground Surface Elevation (ft) _____
	Overburden Shaft Length (ft) _____
	Rock Socket Length (ft) _____
	Cut-off Elevation (ft) _____
	Top Elevation (ft) _____
	Constructed Shaft Length (ft) _____
	Testing Office _____
	Volume of Concrete - Theoretical (cy) _____
	Actual (cy) _____
	Reinforcement Cage Installed - Type _____
	Duration of Pour (min) _____
	Legend
	FOC Top of Coating <input type="checkbox"/> Sand
	FOG Top of Ground <input type="checkbox"/> Silt
	FOS Top of Shaft <input type="checkbox"/> Clay
	FOR Top of Rock <input type="checkbox"/> Rock
	BOC Bottom of Coating <input type="checkbox"/>
	BOS Bottom of Shaft <input type="checkbox"/>
	Water Level _____
	Inspected by _____
	Field Engineer _____
	Approved by _____
	Project Engineer _____
	Distribution _____

Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

1. Heading:
 - Fill in before drilling starts.
 - Be sure to print your name and the start date of drilling.
 - The Geotechnical Engineer will sign approval line.
2. Shaft Data: - Fill in appropriate dates, elevations, and diameters.
3. Concrete Data: Record data from the Concrete Volumes form.
4. Construct Shaft Illustration using the symbols provided.
5. Fill in "Inspected by" and "Distribution".



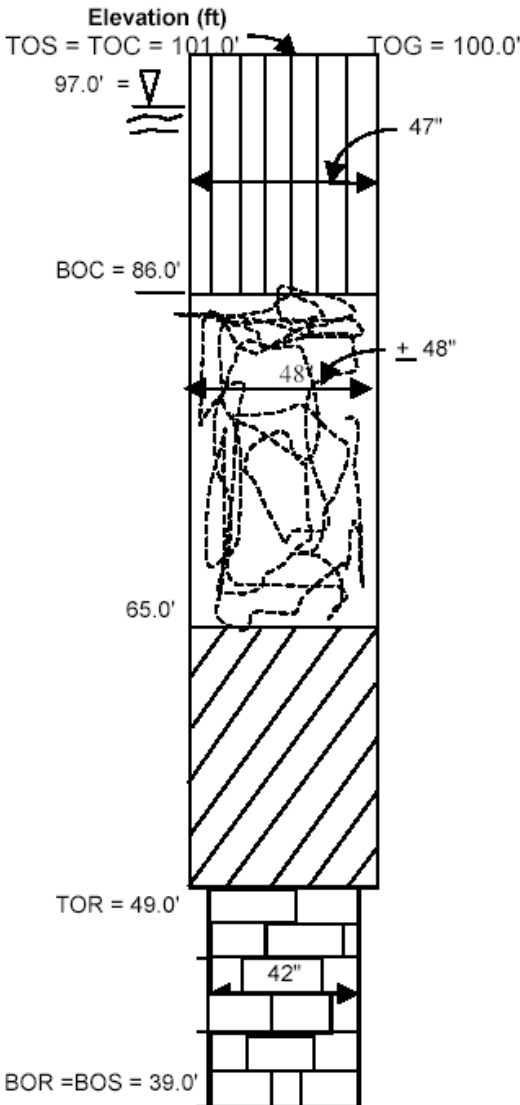
DRILLED SHAFT LOG (REV 06-03-02)
SAMPLE 1 Construction Casing

Project Name	Replace Bridge over Cooper Creek along US-322	Page	1	of	6
File No.	4.995	Bent No.	3		
Contractor	Drilled Shaft, Inc.	Shaft No.	3		
Completed By Contractor	DS Foreman - John Q. Doe	Date	06/05/02	Station	508 + 36
Reviewed By SCDOT	Inspector - John Smith	Date	06/05/02	Offset	24 FT. Right

Date Cased 06/04/02
 Date Opened 06/04/02
 Date Poured 06/05/02

Casing Type:
 Casing Dimension (OD):
 Bottom of Casing Elevation (FT)
 Top of Casing Elevation (FT)
 Diameter of Rock Socket (IN)
 Diameter of Shaft (IN)
 Mud-line/Ground Surface Elev. (FT)
 Wet & Dry Shaft Length (FT)
 Rock Socket Length (FT)
 Top of Shaft Elevation (FT)
 Tip Elevation (FT)
 Constructed Shaft Length (FT)

Construction	Temporary
Steel	
48.0 IN.	
86.0 FT. msl	
101.0 FT. msl	
42.0 IN.	
37 Ft. @ +48.0 IN. & 15 FT. @ 47 IN.	
100.0 FT. msl	
52.0 FT.	
10.0 FT. @ 42IN.	
101.0 FT. msl	
39.0 FT. msl	
62.0 FT.	



Testing/Other: Slurry, Slump, Air, Compression Cylinders, & CSL

Volume of Concrete: Theoretical (VT) CY 27.2
 OP = VP-VT = 0.6 CY UP = VT - VP=
 Actual (VP) CY 27.8
 Reinforcement Cage Installed: Type Spiral
 Duration of Pour (min) 100 Min.

Legend

TOC	Top of Casing		Sand
TOG	Top of Ground		Silt
TOS	Top of Shaft		Clay
TOR	Top of Rock		Rock
BOC	Bottom of Casing		
BOS	Bottom of Shaft		
BOR	Bottom of Rock		

Water Level

Completed by _____
 Contractor DS Foreman/Engineer - John Q Doe
 Reviewed by _____
 SCDOT Inspector/Engineer - John Smith
 Notes:

Shaft location variance at top: 2" after plan station & 1" right.



DRILLED SHAFT LOG (REV 06-03-02)
SAMPLE 2 Temporary Casing

Project Name	Replace Bridge over Cooper Creek along US-322	Page	1	of	6
File No.	4.995	Bent No.	6		
Contractor	Drilled Shaft, Inc.	Shaft No.	3		
Completed By Contractor	DS Foreman - John Q. Doe	Date	06/05/02	Station	508 + 36
Reviewed By SCDOT	Inspector - Jane Smith	Date	06/05/02	Offset	24 FT. Right

<p>Date Cased <u>06/04/02</u></p> <p>Date Opened <u>06/04/02</u></p> <p>Date Poured <u>06/05/02</u></p>	<p>Casing Type:</p> <p>Casing Dimension (OD):</p> <p>Bottom of Casing Elevation (FT)</p> <p>Top of Casing Elevation (FT)</p> <p>Diameter of Rock Socket (IN)</p> <p>Diameter of Shaft (IN)</p> <p>Mud-line/Ground Surface Elev. (FT)</p> <p>Wet & Dry Shaft Length (FT)</p> <p>Rock Socket Length (FT)</p> <p>Top of Shaft Elevation (FT)</p> <p>Tip Elevation (FT)</p> <p>Constructed Shaft Length (FT)</p> <p>Testing/Other: Slurry, Slump, Air, Compression Cylinders, & CSL</p> <p>Volume of Concrete:</p> <p>OP = VP - VT = <u>0.5 CY</u> UP = VT - VP =</p> <p>Reinforcement Cage Installed:</p> <p>Duration of Pour (min)</p>	<table border="1"> <thead> <tr> <th>Construction</th> <th>Temporary</th> </tr> </thead> <tbody> <tr> <td></td> <td>Steel</td> </tr> <tr> <td></td> <td>48.0 IN.</td> </tr> <tr> <td></td> <td>86.0 FT.</td> </tr> <tr> <td></td> <td>101.0 FT.</td> </tr> <tr> <td></td> <td>42.0 IN.</td> </tr> <tr> <td></td> <td>+ 48.0 IN.</td> </tr> <tr> <td></td> <td>100.0 FT. msl</td> </tr> <tr> <td></td> <td>51.0 FT.</td> </tr> <tr> <td></td> <td>10.0 FT.</td> </tr> <tr> <td></td> <td>100.0 FT. msl</td> </tr> <tr> <td></td> <td>39.0 FT. msl</td> </tr> <tr> <td></td> <td>61.0 FT.</td> </tr> <tr> <td></td> <td>Theoretical (VT) CY <u>27.3</u></td> </tr> <tr> <td></td> <td>Actual (VP) CY <u>27.8</u></td> </tr> <tr> <td></td> <td>Type: <u>Welded Hoops</u></td> </tr> <tr> <td></td> <td>100 Min.</td> </tr> </tbody> </table>	Construction	Temporary		Steel		48.0 IN.		86.0 FT.		101.0 FT.		42.0 IN.		+ 48.0 IN.		100.0 FT. msl		51.0 FT.		10.0 FT.		100.0 FT. msl		39.0 FT. msl		61.0 FT.		Theoretical (VT) CY <u>27.3</u>		Actual (VP) CY <u>27.8</u>		Type: <u>Welded Hoops</u>		100 Min.
Construction	Temporary																																			
	Steel																																			
	48.0 IN.																																			
	86.0 FT.																																			
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	61.0 FT.																																			
	Theoretical (VT) CY <u>27.3</u>																																			
	Actual (VP) CY <u>27.8</u>																																			
	Type: <u>Welded Hoops</u>																																			
	100 Min.																																			

Elevation (ft)

TOTC = 101.0'

TOS & TOG = 100.0'

97.0' =

BOTC = 86.0'

± 48"

48"

65.0'

TOR = 49.0'

42"

BOR = BOS = 39.0'

Legend

TOC	Top of Casing		Sand
TOG	Top of Ground		Silt
TOS	Top of Shaft		Clay
TOR	Top of Rock		Rock
BOC	Bottom of Casing		
BOS	Bottom of Shaft		
BOR	Bottom of Rock		

Water Level

Completed by _____

Contractor DS Foreman/Engineer - John Q Doe

Reviewed by _____

SCDOT Inspector/Engineer - Jane Smith

Notes:

Shaft location variance at top: 1" after plan station & 4" left. Called Bridge Construction Engineer prior to pour. Received verbal approval to cast concrete from BCE. Contractor told to submit letter covering this shaft variance.

HOW TO COMPLETE THE DRILLED SHAFT EXCAVATION LOG



Project Name _____		Page _____ of _____	
Project No. _____		Plan No. _____	
Contracted to _____		Sheet No. _____	
Inspected By _____		Date _____	Station _____
Approved By _____		Date _____	Sheet _____
Casing Information			
ID _____	OD _____	Top Elev. _____	Length _____
		Soil Auger Diam. _____	Ground Surface Elev. _____
		Water Table Elev. _____	Reference Elev. _____
		Drilling Mud _____	
Notes _____			
Depth	Elev.	Time	Soil Description and Notes
			In
			Out
			In
			Out
			In
			Out
			In
			Out
			In
			Out
			In
			Out
			In
			Out
			In
			Out
			In
			Out

Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

1. Heading:
 - Fill in before drilling starts.
 - Be sure to print your name and the start date for drilling.
 - The Geotechnical Engineer will sign approval line.

2. Casing:
 - Measure Length (L) in the field.
 - Surveyor provides Top of Casing elevation (TE).
 - Compute bottom elevation(BE): $TE-L=BE$

3. Site Data
 - Soil Auger diameter – measure and record in inches.
 - Ground surface elev. – provided by surveyor.
 - Water table elev. – measure w/tape in hole before slurry is introduced (if applicable).
 - Water table may need to be estimated from seepage in dry hole method.
 - Reference Elevation – provided by surveyor.
 - Drill mud – If used, complete the "**Slurry Inspection Log**"; compare to Installation Plan

4. Depth/Elevation:
 - Depth (D) can be measured by:
 - 1) Contractor has kelly bar marked (spot checking only)
 - 2) Weighted tape (for accurate measurements)
 Reference elevation is always known; i.e., template, top of casing, or top of ground.

 - Elevation (E) – compute $TE-D=E$
 - Enter Depth/Elev. For EVERY change in the soil/rock condition.

5. Time:
 - May use military or 24 hour clock. Be consistent and correct! Remember that shaft drilling can occur over several days, so be sure to mark date changes.

6. Material:
 - Use this form to record all activity during shaft excavation. Label all major soil strata.



**DRILLED SHAFT EXCAVATION LOG (REV 06-03-02)
SAMPLE 1 Construction Casing**

Project Name	Replace Bridge over Cooper Creek along US-322	Page	2	of	6
File No.	4.995	Bent No.	3		
Contractor	Drilled Shaft, Inc.	Shaft No.	3		
Completed By Contractor	DS Foreman - John Q. Doe	Date	06/03/02	Station	508 + 36
Reviewed By SCDOT	Inspector - John Smith	Date	06/03/02	Offset	24 Ft. Right

Note: Preaugering not allowed when using construction casing.

Casing Information: Construction <input checked="" type="checkbox"/> Temporary <input type="checkbox"/>					Soil Auger Diam.	46"
ID	OD	Top Elev.	Length	Bot. Elev.	Rock Core Diam.	42"
47"	48"	101.0 MSL	15'	86.0 MSL	Ground Surface Elev.	100.0 MSL
					Water Table Elev.	97.0 MSL
					Reference Elev.	101.0 MSL
					Drilling Mud	Slurry
Notes	Switched to 42" Rock Core @ 52.0' (49.0' MSL) at 1:50 pm.					

Depth (Feet)	Elev. (Ft. MSL)	Time		Soil Description and Notes
1.0	100.0	7:30 am	In	Tan Silty Sand
15.0	86.0	9:00 am	Out	Tan Silty Sand
15.0	86.0	9:10 am	In	Dark Tan Sand
36.0	65.0	11:30 am	Out	Dark Tan Sand
36.0	65.0	11:40 am	In	Dense Silty Sand (PWR) w/Mica
52.0	49.0	1:30 pm	Out	Dense Silty Sand (PWR) w/Mica
52.0	49.0	1:50 pm	In	Very Dense Rock (Granite)
61.0	40.0	4:50 pm	Out	Very Dense Rock (Granite)
61.0	40.0	7:15 am	In	Very Dense Rock (Granite) Continued drilling from previous day
62.0	39.0	7:30 am	Out	Very Dense Rock (Granite) Continued drilling from previous day
			In	
			Out	
			In	
			Out	
			In	
			Out	
			In	
			Out	



**DRILLED SHAFT EXCAVATION LOG (REV 06-03-02)
SAMPLE 2 Temporary Casing**

Project Name	Replace Bridge over Cooper Creek along US-322	Page	2	of	6
File No.	4,995	Bent No.	6		
Contractor	Drilled Shaft, Inc.	Shaft No.	3		
Completed By Contractor	DS Foreman - John Q. Doe	Date	06/03/02	Station	508 + 36
Reviewed By SCDOT	Inspector - Jane Smith	Date	06/03/02	Offset	24 Ft. Right

Note: Preaugering not allowed when using construction casing.

Casing Information: Construction _____ Temporary <u>X</u>					Soil Auger Diam.	46"
ID	OD	Top Elev.	Length	Bot. Elev.	Rock Core Diam.	42"
47"	48"	101.0 MSL	15'	86.0 MSL	Ground Surface Elev.	100.0 MSL
_____	_____	_____	_____	_____	Water Table Elev.	97.0 MSL
_____	_____	_____	_____	_____	Reference Elev.	101.0 MSL
_____	_____	_____	_____	_____	Drilling Mud	Slurry
Notes	Switched to 42" Rock Core @ 52.0' (49.0' MSL) at 1:50 pm.					

Depth (Feet)	Elev. (Ft. MSL)	Time		Soil Description and Notes
1	100.0	7:30 am	In	Tan Silty Sand
15.0	86.0	9:00 am	Out	Tan Silty Sand
15.0	86.0	9:10 am	In	Dark Tan Sand
36.0	65.0	11:30 am	Out	Dark Tan Sand
36.0	65.0	11:40 am	In	Dense Silty Sand (PWR) w/Mica
52.0	49.0	1:30 pm	Out	Dense Silty Sand (PWR) w/Mica
52.0	49.0	1:50 pm	In	Very Dense Rock (Granite)
61.0	40.0	4:50 pm	Out	Very Dense Rock (Granite)
61.0	40.0	7:15 am	In	Very Dense Rock (Granite) Continued drilling from previous day
62.0	39.0	7:30 am	Out	Very Dense Rock (Granite) Continued drilling from previous day
			In	
			Out	
			In	
			Out	
			In	
			Out	
			In	
			Out	



SLURRY INSPECTION LOG (REV 06-03-02)

Project Name			
File Number			
Bent No.	Shaft No.	Brand	Type
Water Source: *		Composition:	Proportions
Date of Initial Hydration	/ /	Mineral Type	
	Time	Additives	

TEST PROPERTIES

Sampling	Before Introduction of Slurry	First 8 Hours During Construction **				Additional Testing		At End of Excavation	Before Concreting Test 1	Before Concreting Test 2
		Test 1	Test 2	Test 3	Test 4	Test 1	Test 2			
Date:										
Time:										
Test Depth at Levels:	Holding Tank						At Bottom	At Bottom	At Bottom	
Density										
Viscosity										
% Sand										
pH										
Cake / Filtrate	N/A									

Notes: * Salt water shall not be used to hydrate the slurry or stabilize the excavation.

** A minimum of 4 sets of tests shall be made during the first 8 hours of slurry use. Slurry sampling and testing shall be observed by the Engineer. When the results show consistent behavior, the testing frequency may be decreased to 1 set every 4 hours of slurry use.

Contractor DS Foreman: _____ Date: / /

SCDOT Inspector: _____ Date: / /

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HOW TO COMPLETE THE SLURRY INSPECTION LOG

SLURRY INSPECTION LOG

Project No. _____	1	Composition:	Brand		Proportions
Drilled Shaft No. _____		Mineral Type		2	
Start Location _____		Additives			
Water Source: " " _____					

TEST PROPERTIES

Sampling	Before Introduction of Slurry	First 8 Hours During Construction *				Additional Testing		At End of Excavation	Before Concreting Test 1	Before Concreting Test 2
		Test 1	Test 2	Test 3	Test 4	Test 1	Test 2			
Date:										
Time:										
Properties	Test Depth at Level:		3					At Bottom	At Bottom	At Bottom
Density										
Viscosity										
% Sand										
pH										
Cake / Filtrate										
Notes: * A minimum of 4 sets of tests shall be made during the first 8 hours of slurry use. Slurry sampling and testing shall be observed by the Engineer. When the results show consistent behavior, the testing frequency may be decreased to 1 set every 4 hours of slurry use. ** Salt water shall not be used to hydrate the slurry 4 the excavation.										
Contractor Representative: _____ 5 _____ Date: / / State Inspector: _____ Date: / /										

1. Heading: - Fill in before drilling starts.
- The Project Resident Engineer will sign approval line.
2. Slurry Data: - Fill in appropriate brands, types, and proportion.
3. Test Data: - Record test data as the testing Inspector performs the tests.
- Note the depth at which the samples were obtained.
- Make sure that a minimum of 4 tests are performed within the first 8 hours of slurry use.
4. Notes: Record any unusual events or results.
5. Fill in "Contractor Representative" and "State Inspector".

Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.



**SLURRY INSPECTION LOG (REV 06-03-02)
SAMPLE 1 Construction Casing**

Project Name Replace Bridge over Cooper Creek along US-322

File Number 4.995

Bent No. 3 Shaft No. 3

Water Source: * Hydrant (City water)

Date of Initial Hydration 06/03/02 Time 9:00 am

Composition:	Brand	Type	Proportions
Mineral Type	Augua Gel	Bentonite	1400 LBS / 5000 GAL
Additives			

TEST PROPERTIES

Sampling	Before Introduction of Slurry	First 8 Hours During Construction **				Additional Testing		At End of Excavation	Before Concreting Test 1	Before Concreting Test 2
		Test 1	Test 2	Test 3	Test 4	Test 1	Test 2			
Date:	06/04/02	06/04/02	06/04/02	06/04/02	06/04/02		06/05/02	06/05/02	06/05/02	
Time:	11:00 am	1:30 pm	2:30 pm	4:00 pm	5:00 pm		7:30 am	8:15 am	9:20 am	
Test Depth at Levels:	Holding Tank	50 FT	53 FT	58 FT	60 FT		At Bottom	At Bottom	At Bottom	
Density	65	67.1	67.3	65.8	66.3		69.1	66.1	66.3	
Viscosity	33	37	38	36	37		42	38	37	
% Sand	0%	3%	4%	2%	2.5%		10%	2%	2%	
pH	10	9	9	9	9		9	10	10	

Notes: * Salt water shall not be used to hydrate the slurry or stabilize the excavation.

** A minimum of 4 sets of tests shall be made during the first 8 hours of slurry use. Slurry sampling and testing shall be observed by the Engineer. When the results show consistent behavior, the testing frequency may be decreased to 1 set every 4 hours of slurry use.

Note: Side of shaft caked. Cleaned shaft sides.

Contractor DS Foreman: John Q. Doe

Date: 06/05/02

SCDOT Inspector: John Smith

Date: 06/05/02

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**SLURRY INSPECTION LOG (REV 06-03-02)
SAMPLE 2 Temporary Casing**

Project Name Replace Bridge over Cooper Creek along US-322

File Number 4.995

Bent No. 6 Shaft No. 3

Water Source: * Hydrant (City water)

Date of Initial Hydration 06/03/02 Time 9:00 am

Composition:	Brand	Type	Proportions
Mineral Type	Augua Gel	Bentonite	1400 LBS / 5000 GAL
Additives			

TEST PROPERTIES

Sampling	Before Introduction of Slurry	First 8 Hours During Construction **				Additional Testing		At End of Excavation	Before Concreting Test 1	Before Concreting Test 2
		Test 1	Test 2	Test 3	Test 4	Test 1	Test 2			
Date:	06/04/02	06/04/02	06/04/02	06/04/02	06/04/02		06/05/02	06/05/02	06/05/02	
Time:	11:00 am	1:30 pm	2:30 pm	4:00 pm	5:00 pm		7:30 am	8:15 am	9:20 am	
Test Depth at Levels:	Holding Tank	50 FT	53 FT	58 FT	60 FT		At Bottom	At Bottom	At Bottom	
Density	65	67.1	67.3	65.8	66.3		69.1	66.1	66.3	
Viscosity	33	37	38	36	37		42	38	37	
% Sand	0%	3%	4%	2%	2.5%		10%	2%	2%	
pH	10	9	9	9	9		9	10	10	

Notes: * Salt water shall not be used to hydrate the slurry or stabilize the excavation.

** A minimum of 4 sets of tests shall be made during the first 8 hours of slurry use. Slurry sampling and testing shall be observed by the Engineer. When the results show consistent behavior, the testing frequency may be decreased to 1 set every 4 hours of slurry use.

Note: Side of shaft caked. Cleaned shaft sides.

Contractor DS Foreman: John Q. Doe

Date: 06/05/02

SCDOT Inspector: Jane Smith

Date: 06/05/02

HOW TO COMPLETE THE DRILLED SHAFT INSPECTION LOG



Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

1. **Heading:**
 - Fill in before drilling starts.
 - Be sure to print your name and the start date of drilling.
 - The Project Resident Engineer or designated representative will sign approval line.

2. **Shaft Status:**

Drill Fluid Check – Responsibility of Contractor. Record density check performed by Contractor or Inspector.

Type of Drill Fluid – record	
a)	Natural
b)	Mineral (commercial)
c)	Plain water
Remember: Polymer slurry not allowed	

 - Bottom Cleanout Method: Observe and record equipment type (i.e., cleanout bucket, air lift, submersible pump, etc.). Must match Installation Plan.
 - Time/Date Final Cleanout: Record when last cleanout performed prior to rebar cage placement.
 - Shaft Bottom Elevation – Use weighted tape to measure; record.
 - Estimate Shaft Bottom Diameter – record auger diameter.

3. **Cage Check:**
 - Reinforcing cage usually checked by others.
 - Proper number of Vertical bars – count and record # of vertical bars in hole; compare to plan.
 - Epoxy – you should never see coated rebar

4. **Shaft Cleanliness:** – check procedure being used, record
 - 1) Using S.I.D., visually inspect the shaft bottom in each of a minimum of 5 locations as shown on form.
 - 2) Using a weighted tape, sound the shaft in each of a minimum of 5 locations as shown on form. “Feel” for hard bottom – it translates to clean hole. Remember specifications.

5. **Record Results:**

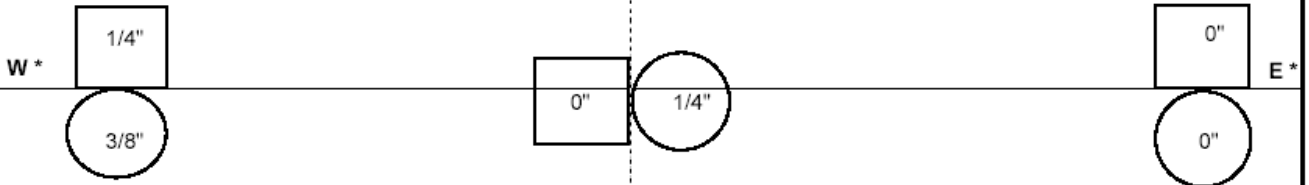


**DRILLED SHAFT INSPECTION LOG (REV 06-03-02)
SAMPLE 1 Construction Casing**

Project Name	<u>Replace Bridge over Cooper Creek along US-322</u>	Page	<u>4</u>	of	<u>6</u>
File No.	<u>4.995</u>	Bent No.	<u>3</u>		
Contractor	<u>Drilled Shaft, Inc.</u>	Shaft No.	<u>3</u>		
Completed By Contractor	<u>DS Foreman - John Q. Doe</u>	Date	<u>06/05/02</u>	Station	<u>508 + 36</u>
Reviewed By SCDOT	<u>Inspector - John Smith</u>	Date	<u>06/05/02</u>	Offset	<u>24 FT. Right</u>

Type of Drilling Fluid	<u>Bentonite</u>	Shaft Plumbness Check/4'	<u>1/2 In. per 4 Ft.</u>
DS Location Variance at Top	<u>2" After Sta. & 1" Right</u>	Rebar Cage: Proper # Vert. Bars	<u>16 EA # 36 Bars</u>
Bottom Cleanout Method	<u>Airlift</u>	Proper # Horiz. Bars	<u># 19 Bar @ 4 3/8" Spiral</u>
Time/Date Final Cleanout	<u>7:45 am on 06/05/02</u>	Side Spacers	<u>4 EA every 10 Ft.</u>
Shaft Bottom Elev.	<u>39.0 msl</u>	Bottom Spacers	<u>16 EA @ 6" Length</u>
Est. Shaft Bottom Dia.	<u>42 Inches</u>	Ties & Connections	<u>Checked and okay.</u>

Inspected By:	<u>JQD</u>	Visual	<u> </u>	Sounding	<u>X</u>	N *	* Based on Compass Direction
Time Test Started	<u>7:45 am</u>						Test just prior to placing Rebar cage <input type="checkbox"/> (inches)
Time Test Finished	<u>8:00 am</u>						Test just prior to placing concrete <input type="checkbox"/> (inches)
Time Test Started	<u>9:10 am</u>						* Direction
Time Test Finished	<u>9:25 am</u>						



**Note: 50% of base shall have < 1/2 Inch of sediment.
No area of shaft bottom shall be more than 1 1/2 Inches.**

Notes	Comments/Recommendations
80% area < 1/2", first test okay.	Rebar cage placed & concrete ordered after first test.
<u>60% area < 1/2", second test okay.</u>	Concrete placed after second test was okay.

Results:	<u>X</u> Satisfactory	DS Foreman	<u>John Q Doe</u>
	<u> </u> Unsatisfactory	SCDOT Inspector	<u>John Smith</u>
		Time	<u>9:25 am</u> Date <u>06/05/02</u>

NOTE: Specification Tolerances - Location Variance at Top = 3 inches Max. Vertical (Plumbness) = 1 inch per 4 Ft. Max.



DRILLED SHAFT INSPECTION LOG (REV 06-03-02)
SAMPLE 2 Temporary Casing

Project Name	<u>Replace Bridge over Cooper Creek along US-322</u>	Page	<u>4</u>	of	<u>6</u>
File No.	<u>4.995</u>	Bent No.	<u>6</u>		
Contractor	<u>Drilled Shaft, Inc.</u>	Shaft No.	<u>3</u>		
Completed By Contractor	<u>DS Foreman - John Q. Doe</u>	Date	<u>06/05/02</u>	Station	<u>508 + 36</u>
Reviewed By SCDOT	<u>Inspector - Jane Smith</u>	Date	<u>06/05/02</u>	Offset	<u>24 FT. Right</u>

Type of Drilling Fluid	<u>Bentonite</u>	Shaft Plumbness Check/4'	<u>1/2 In. per 4 Ft.</u>
DS Location Variance at Top	<u>1" Before Sta. & 4" Left**</u>	Rebar Cage: Proper # Vert. Bars	<u>16 EA # 36 Bars</u>
Bottom Cleanout Method	<u>Airlift</u>	Proper # Horiz. Bars	<u># 19 W Hoops @ 7 IN.</u>
Time/Date Final Cleanout	<u>7:45 am on 06/05/02</u>	Side Spacers	<u>4 EA every 10 Ft.</u>
Shaft Bottom Elev.	<u>39.0 msl</u>	Bottom Spacers	<u>16 EA @ 6" Length</u>
Est. Shaft Bottom Dia.	<u>42 Inches</u>	Ties & Connections	<u>Checked and okay.</u>

* Based on Compass Direction

Inspected By:	<u>JQD</u>	Visual	<u> </u>	Sounding	<u>X</u>	N *	
Time Test Started	<u>7:45 am</u>						Test just prior to placing Rebar cage <input type="checkbox"/> (inches)
Time Test Finished	<u>8:00 am</u>						Test just prior to placing concrete <input type="checkbox"/> (inches)
Time Test Started	<u>9:10 am</u>						* Direction
Time Test Finished	<u>9:25 am</u>						

Note: 50% of base shall have < 1/2 Inch of sediment.
No area of shaft bottom shall be more than 1 1/2 Inches.

Notes	Comments/Recommendations
<u>60% area < 1/2", first test okay.</u>	<u>Rebar cage placed & concrete ordered after first test.</u>
<u>60% area < 1/2", second test okay.</u>	<u>Concrete placed after second test was okay.</u>
	<u>** - See note on Page 1.</u>

Results:	<u>X</u> Satisfactory	DS Foreman	<u>John Q Doe</u>
	Unsatisfactory	SCDOT Inspector	<u>Jane Smith</u>
		Time	<u>9:25 am</u>
		Date	<u>06/05/02</u>

NOTE: Specification Tolerances - Location Variance at Top = 3 inches Max. Vertical (Plumbness) = 1 inch per 4 Ft. Max.

HOW TO COMPLETE THE DRILLED SHAFT CONCRETE PLACEMENT LOG

Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

1. Heading:
 - Fill in before drilling starts.
 - Be sure to print your name and the start date of drilling.
 - The Project Resident Engineer or designated representative will sign approval line.
2. Indicate correct "Placement" and "Deairing" method.
3. Compute and fill in Concrete Volumes: $V = (\pi d^2 / 4) \times L$
4. Fill in as much as possible prior to pour.
5. Record Truck number and amount of concrete.
6. Time:
 - May be military or standard clock. Be consistent and correct.
 - Watch for date changes on late night pours.
7. Depths:
 - Tremie embedment may be measured by markings on the tremie. Depth to concrete may be measured by weighted tape.
8. Notes:
 - Record any unusual events or items.
9. Casing/Rebar Data:
 - The rebar cage fabrication will normally be performed on-site. Observe the lifting to make sure deformation or damage does not occur (especially to CSL tubes). Check that the correct cage is being used. Check reinforcing steel diagram against the actual cage to be sure cage is correct. When the cage is being placed, observe the spacing to assure the cage is set to the proper elevation.



DRILLED SHAFT CONCRETE VOLUMES LOG (REV 06-03-02)

Project Name _____	Page <u>6</u> of <u>6</u>	
File No. _____	Bent No. _____	
Contractor _____	Shaft No. _____	
Completed By Contractor <u>DS Foreman -</u> _____	Date <u> / /</u> _____	Station _____
Reviewed By SCDOT <u>Inspector -</u> _____	Date <u> / /</u> _____	Offset _____

Concreting Curve

Depth (ft)						

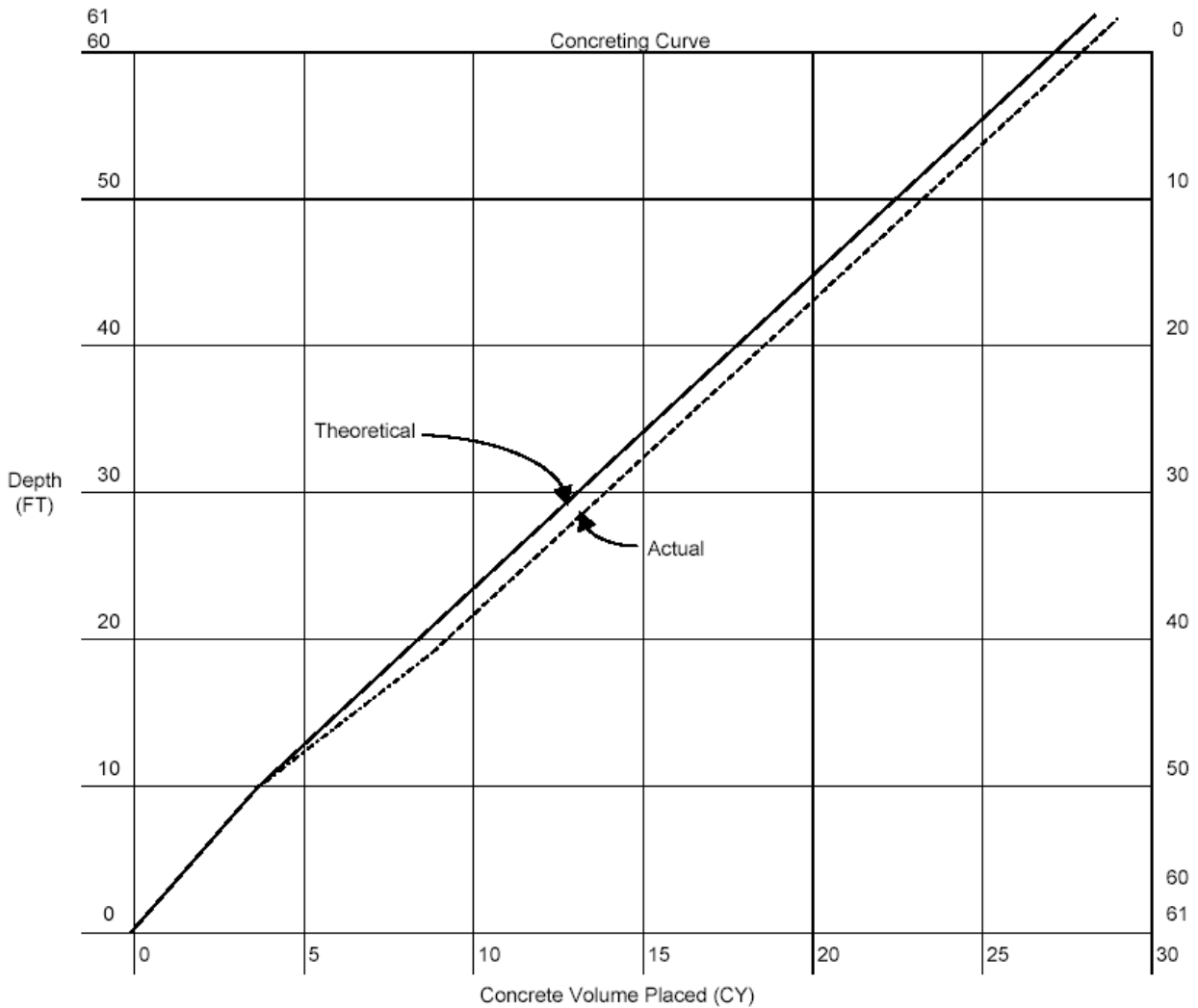
Concrete Volume Placed (cy)

Volume Delivered	VD	_____ cy
Volume In Pump Truck + Lines	VPTL	_____ cy
Volume of CSL Tubes	VCSLT	_____ cy
Wastage	VW	_____ cy
Volume Placed	VP	_____ cy
= VD-VPTL-VCSLT-VW =		
Theoretical Volume	VTh	_____ cy
Over Pour (VP-VTh \geq 1.00)	OP	_____ cy
Under Pour (VP-VTh < 1.00)	UP	_____ cy



DRILLED SHAFT CONCRETE VOLUMES LOG (REV 06-03-02)
SAMPLE 1 Construction Casing

Project Name	Replace Bridge over Cooper Creek along US-322	Page	6	of	6
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Contractor	Drilled Shaft, Inc.	Shaft No.	3		
Completed By Contractor	DS Foreman - John Q. Doe	Date	06/05/02	Station	508 + 36
Reviewed By SCDOT	Inspector - John Smith	Date	06/05/02	Offset	24 FT. Right

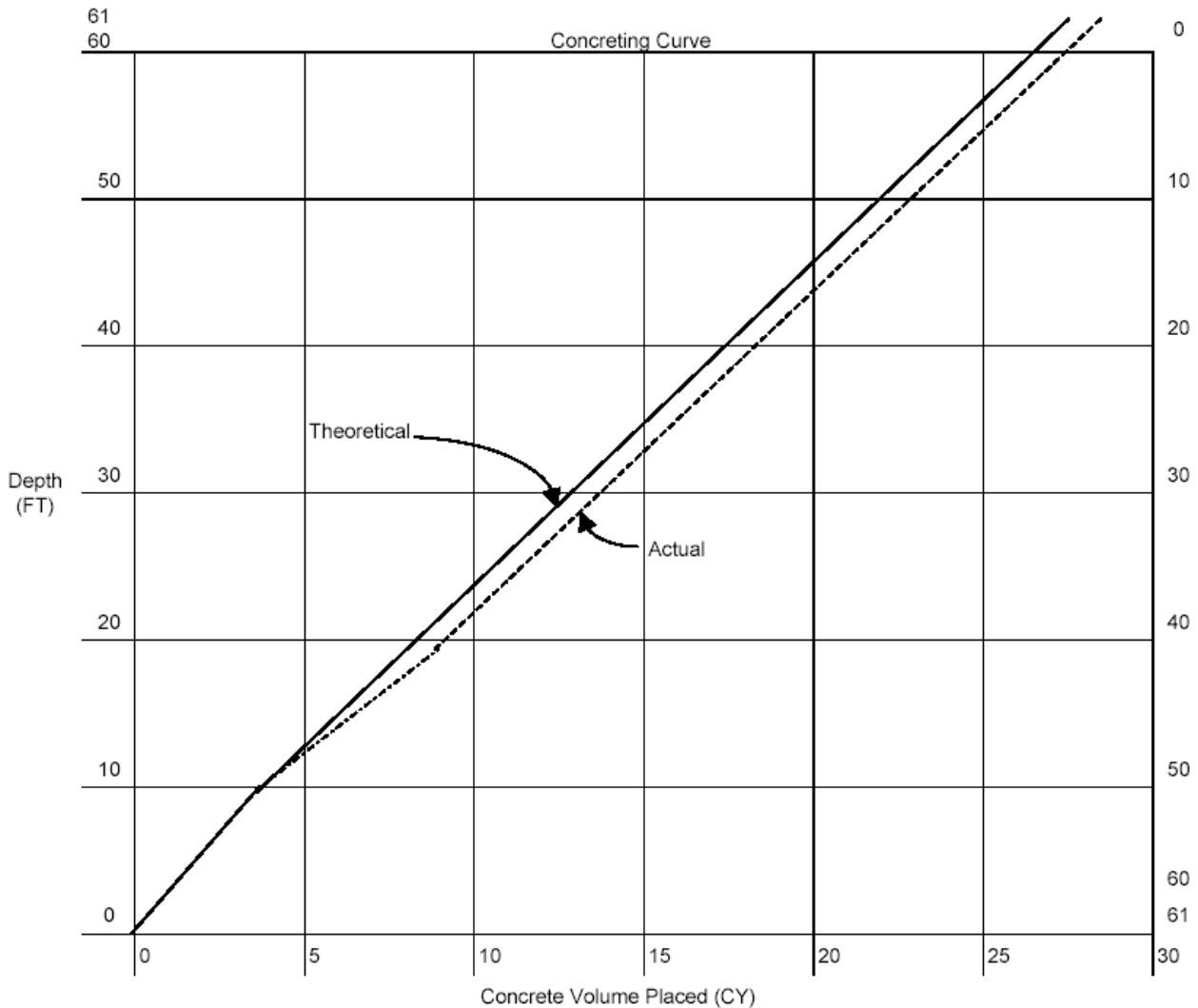


Volume Delivered	VD	31.0	CY
Volume In Pump Truck + Lines	VPTL	-1.4	CY - Volume left in pump truck and lines.
Volume of CSL Tubes	VCSLT	+0.2	CY
Wastage	VW	-2.0	CY - Removed pump lines and concrete overflow.
Volume Placed	VP	27.8	CY
= VD-VPTL-VCSLT-VW =			
Theoretical Volume	VTh	27.2	CY
Over Pour (VP-VTh \geq 1.00)	OP	0.6	CY
Under Pour (VP-VTh < 1.00)	UP	NA	CY



DRILLED SHAFT CONCRETE VOLUMES LOG (REV 06-03-02)
SAMPLE 2 Temporary Casing

Project Name	<u>Replace Bridge over Cooper Creek along US-322</u>	Page	<u>6</u>	of	<u>6</u>
File No.	<u>4.995</u>	Bent No.	<u>6</u>		
Contractor	<u>Drilled Shaft, Inc.</u>	Shaft No.	<u>3</u>		
Completed By Contractor	<u>DS Foreman - John Q. Doe</u>	Date	<u>06/05/02</u>	Station	<u>508 + 36</u>
Reviewed By SCDOT	<u>Inspector - Jane Smith</u>	Date	<u>06/05/02</u>	Offset	<u>24 FT. Right</u>



Volume Delivered	VD	<u>31.0</u>	CY
Volume In Pump Truck + Lines	VPTL	<u>-1.4</u>	CY - Volume left in pump truck and lines.
Volume of CSL Tubes	VCSLT	<u>+0.2</u>	CY
Wastage	VW	<u>-2.0</u>	CY - Removed pump lines and concrete overflow.
Volume Placed	VP	<u>27.8</u>	CY
= VD-VPTL-VCSLT-VW =			
Theoretical Volume	VTh	<u>27.3</u>	CY
Over Pour (VP-VTh => 1.00)	OP	<u>0.5</u>	CY
Under Pour (VP-VTh < 1.00)	UP	<u>NA</u>	CY