




**TO:** Steve Lewis, City Manager  
**FROM:** Terry Floyd, Development Coordinator  
**DATE:** July 17, 2017  
**SUBJECT:** Change Order #1 – Norman Public Library East

City Council Resolution R-1112-55 grants administrative authority to the City Manager to approve change order requests up to \$40,000 or 10% of contract amount, whichever is less, and subsequently report those approvals to the City Council. Attached is a Change Order Summary and quote for additional pier depth drilling, concrete, reinforcing and labor for the Norman Public Library East Project, along with a request for final approval for seven (7) additional weather days to extend the contract date to May 20, 2018.

Due to the ongoing Norman Public Library East Project, a change order is being requested by Globe Construction Company in the amount of \$7,588.12. This change order has been reviewed and is being recommended by the project architect, Meyers, Scherer and Rockcastle, Ltd. (MSR), and has been further reviewed and recommended by the NORMAN FORWARD program management firm, ADG. The change order is necessary because the pier depth needed to be extended as part of the final pier depth drilling for the library structure. All weather delay days were due to wet weather conditions at the site and have been also been reviewed and recommended for approval by MSR and ADG.

We have reviewed the change order with both MSR and ADG to confirm that the items listed therein are acceptable. At this time, we recommend approval of the change order from Globe Construction Company in the amount of 7,588.12. Funding is available in account number 51-9507-455.6101 - Project NFB 017.

Reviewed by: Jeff Bryant, City Attorney  
Anthony Francisco, Finance Director

Approved by:  Date: 7/24/17  
Steve Lewis, City Manager



# AIA Document G701™ – 2001

## Change Order

<b>PROJECT</b> (Name and address): Norman Public Library East 3051 E. Alameda, Norman, OK 73071	<b>CHANGE ORDER NUMBER:</b> 001 <b>DATE:</b> July 5, 2017	<b>OWNER:</b> <input checked="" type="checkbox"/> <b>ARCHITECT:</b> <input checked="" type="checkbox"/> <b>CONTRACTOR:</b> <input checked="" type="checkbox"/> <b>FIELD:</b> <input type="checkbox"/> <b>OTHER:</b> <input type="checkbox"/>
<b>TO CONTRACTOR</b> (Name and address): Globe Construction Co. P.O. Box 17420 Oklahoma City, Oklahoma 73136-1420	<b>ARCHITECT'S PROJECT NUMBER:</b> 2016006 <b>CONTRACT DATE:</b> February 28, 2017 <b>CONTRACT FOR:</b> General Construction	

### THE CONTRACT IS CHANGED AS FOLLOWS:

(Include, where applicable, any undisputed amount attributable to previously executed Construction Change Directives)

Weather Days: #1 (04.14.17) #2 (04.17.17) #3 (04.21.2017) #4 (04.26.17) #5 (05.01.2017) #6 (05.11.2017) #7 (05.17.2017)

PCO #001 - Additional Pier Depths: Provide additional drilling, concrete, reinforcing and labor to install piers to additional depth as recorded by CEC (testing engineer). Unit pricing for pierdepths was not included in the prime contract. Piers needed to be extended to actual bearing strata.

The original Contract Sum was	\$	3,654,500.00
The net change by previously authorized Change Orders	\$	0
The Contract Sum prior to this Change Order was	\$	3,654,500.00
The Contract Sum will be increased by this Change Order in the amount of	\$	\$7,588.12
The new Contract Sum including this Change Order will be	\$	3,662,088.12

The Contract Time will be increased by seven (7) days.

The date of Substantial Completion as of the date of this Change Order therefore is May 20, 2018

**NOTE:** This Change Order does not include changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

### NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

<u>MS &amp; R LTD</u> ARCHITECT (Firm name)	<u>GLOBE CONSTRUCTION CO.</u> CONTRACTOR (Firm name)	<u>City of Norman, Okla.</u> OWNER (Firm name)
<u>710 S. 2ND ST</u> ADDRESS	<u>P.O. Box 17420 OKC, OK 73136</u> ADDRESS	<u>201 W. Gray St. Norman, OK 73069</u> ADDRESS
<u>MATHEW S. KENNEDY</u> BY (Signature)	<u>Peter Morrical</u> BY (Signature)	<u>[Signature]</u> BY (Signature)
<u>[Signature]</u> (Typed name)	<u>PETER MORRICAL</u> (Typed name)	<u>Steve Lewis</u> (Typed name)
<u>JULY 5, 2017</u> DATE	<u>7/5/17</u> DATE	<u>7-26-17</u> DATE



PCO #001

Globe Construction Co.  
P.O. Box 17420  
Oklahoma City, Oklahoma 73136  
Phone: (405) 478-3502  
Fax: (405) 478-3301

Project: #3805 - Norman Public Library East  
3051 E. Alameda  
Norman, Oklahoma 73071

### Prime Contract Potential Change Order #001: Additional Pier Depths

<b>TO:</b>	City of Norman 201 W. Gray St., Bldg. A Norman Oklahoma, 73069	<b>FROM:</b>	Globe Construction Co. P.O. Box 17420 Oklahoma City Oklahoma, 73136
<b>PCO NUMBER/REVISION:</b>	001 / 0	<b>CONTRACT:</b>	1 - Norman Public Library East Prime Contract
<b>REQUEST RECEIVED FROM:</b>	Jerry Hickman (Concrete Enterprises, Inc.)	<b>CREATED BY:</b>	Peter Morriral (Globe Construction Co.)
<b>STATUS:</b>	Pending - In Review	<b>CREATED DATE:</b>	6/20 /2017
<b>REFERENCE:</b>	S101 / S502	<b>PRIME CONTRACT CHANGE ORDER:</b>	None
<b>FIELD CHANGE:</b>	No	<b>ACCOUNTING METHOD:</b>	Amount Based (G702/G703)
<b>LOCATION:</b>	Building Pad	<b>PAID IN FULL:</b>	No
<b>SCHEDULE IMPACT:</b>	0 days	<b>TOTAL AMOUNT:</b>	\$7,588.12

POTENTIAL CHANGE ORDER TITLE: Additional Pier Depths

CHANGE REASON: Field Conditions

**POTENTIAL CHANGE ORDER DESCRIPTION:** *(The Contract Is Changed As Follows)*

Provide additional drilling, concrete, reinforcing and labor to install piers to additional depth as recorded by CEC (testing engineer). Unit pricing for pier depths was not included in the prime contract. Piers needed to be extended to actual bearing strata.

**ATTACHMENTS:**

[Pier Log.pdf](#)

#	Cost Code	Description	Type	Amount
1		Cast in Place Concrete	Professional Services	\$ 6,552.78
<b>Subtotal:</b>				\$6,552.78
<b>Bonds &amp; Insurance: 1.80% on all line item types</b>				\$ 117.95
<b>Overhead: 8.00% on all line item types</b>				\$ 524.22
<b>Profit: 6.00% on all line item types</b>				\$ 393.17
<b>Grand Total:</b>				<b>\$7,588.12</b>





# Contract SC-#3805-003

invoices, "accounting@globebuilds.com" is the only email address to receive billings. If this method of submission is chosen, do not submit a hard copy of invoice by mail.

46. Globe Construction Co. job site work hours are 7:30 am to 4:30 pm Monday through Friday with makeup days on Saturday if rained out any day Monday through Friday. During Daylight Savings Time these hours may change to 7:00 am to 4:00 pm. IF ADDITIONAL HOURS OF SUPERVISION ARE REQUIRED DUE TO SUBCONTRACTOR NOT PERFORMING DURING NORMAL BUSINESS HOURS, SUBCONTRACTOR WILL BE BACKCHARGED (INCLUDING OVERHEAD AND PROFIT) FOR THIS SUPERVISION. NO EXCEPTIONS.

47. In accordance with Plans and Specifications dated January 11, 2017 prepared by MSR, enumerated in the attached Subcontract Exhibits A and B, including Addendum Nos. No. 001 dated 2/8/17; Addendum No. 002 dated 2/10/17; Addendum No. 003 dated 2/14/17 and Addendum No. 004 dated 2/15/17, SUBCONTRACTOR shall furnish all the required labor, material and equipment necessary to perform all the work required by the following portions of the contract:

### INCLUSIONS:

Furnish all Material, Labor and Equipment for CAST IN PLACE CONCRETE Scope of work per contact documents as prepared by MSR dated 1.11.17 Base Bid plus all Alternates

DIV 00

DIV 01

### SPECIFICALLY NOTED:

- Section 13335 - Leed - NC Checklist V3.0 Project
- Section 013514.01 - LEED NC 2009 Credit Summary
- Section 013515 - LEED Certification Procedures
- Section 013516 - LEED Submittal Forms
- Section 033000 - Cast-In-Place Concrete
- Section 072100 - Thermal Insulation

-Sales Tax

-LEED paperwork as requested and as required

All packaging and waste material must be recycled on the jobsite or removed by subcontractor at the end of each day

All LEED documentation must be turned in fourteen (14) days after the APPROVED submittals are returned to subcontractor.

Failure to turn in LEED documentation on time will result in a reduction of the monthday draw payments

-Provide layout for concrete work

-Structural excavation and spoil removal for foundations (spoiled on site)

-Drill and Place Piers

-Earth form and place grade beams including perimeter insulation and carton forms

-Place and grout anchor bolts (bolts by others)

-Edge form and place 5" slab on grade on 15 mil vapor barrier on 4" gravel base

-Curing and saw cutting of control joints

-Form, shore and place 8" structural elevated slab at restrooms

-form and place recess slab at front entry

-Form and place stem wall and cast in place wall; back fill and compact wall

-Place site sign footing

-Furnish and place reinforcing steel

-Daily housecleaning (dumpsters by others)

-Coordinate with Globe all concrete debris or waste for recycling

-Concrete pumping

-Dewater Rain Water

-Place and finish mechanical pads

-Place and finish OG&E Transformer pad

-Drill and place six light pole bases

-Furnish schedule of values to Globe for review with (at the minimum) the following:

- Drill Piers
- Place Piers
- Reinforcing Material
- Reinforcing Labor
- Grade beams
- Form Place stem wall
- Form / Place wall
- Place gravel base
- Place Vapor Barrier
- Form / Place SOG
- Transformer pad
- Light pole bases
- Mechanical Pads
- Site Sign foundation

### UNIT PRICING - ADD

18" Piers \$34.00 LF



# Contract SC-#3805-003

24" Piers \$46.00 LF  
 30" Piers \$66.00 LF  
 36" Piers \$90.00 LF

### UNIT PRICING - DEDUCT

18" Piers \$0.00 LF  
 24" Piers \$0.00 LF  
 30" Piers \$0.00 LF  
 36" Piers \$0.00 LF

### UNIT PRICING - CASING ADD

18" Pier Casing \$38.00 LF  
 24" Pier Casing \$44.00 LF  
 30" Pier Casing \$50.00 LF  
 36" Pier Casing \$62.00 LF

### EXCLUSIONS:

- Testing, permits, bonds, inspections
- Paving, colored concrete, plaza, sidewalk, curbs and gutter
- Dirt work
- Termite Protection or Erosion control
- Rock excavation or ground dewatering
- Demolition
- Location, relocation or repair of utilities
- Layout for other trades
- Engineering
- Rails or cables at elevated work
- Lime stabilization
- Gabion retaining wall
- Any steel embed plates, angles, etc.
- Joint sealants
- Below grade waterproofing
- Any temporary facilities
- Overtime or afterhours work

### ATTACHMENTS:

[Attachment B - specification sections.pdf](#) [Attachment A - Plans.pdf](#)

#	COST CODE	DESCRIPTION	TYPE	AMOUNT
1		Concrete Building	Professional Services	\$ 146,400.00
2		Concrete - Mech and transformer pads	Professional Services	\$ 2,800.00
3		Concrete - Light pole bases	Professional Services	\$ 4,000.00
			<b>Grand Total:</b>	<b>\$ 153,200.00</b>



13801 N. Meridian Ave.  
 Oklahoma City, OK 73134  
 Phone:(405) 753-6840

**Drilled Pier Observation**

Report Date: 06/14/2017  
 Project: 12130.22  
 Norman East Branch Library

Date Sampled: 06/09/2017  
 Sampled By: Bill Waddle

Location: Piers

Client: City of Norman  
 Contractor: Globe Construction Co.  
 Client PO: 000277531

Lab No: OKC#2766-17

Report No: 0038

Page 1 of 3

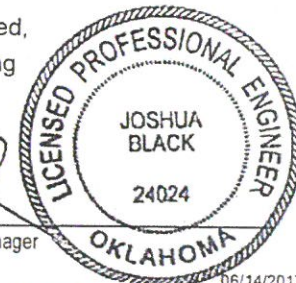
**TEST RESULTS**

Pier Designation	C-2 ✓		E-1 ✓		F-1 ✓	
Column Row Designation	C-2 ✓		E-1 ✓		F-1 ✓	
Date Drilled	6/9/2017		6/9/2017		6/9/2017	
	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	30	30	24	24 ✓	24	24 ✓
Reference Elevation, ft.		99.25 ✓		99.25		99.25
Depth to Bottom, ft.		20.25 ✓		24.00 ✓		26.58 ✓
Bottom Elevation, ft.		79.00		75.25		72.67
Bearing Strata Top Elevation, ft.		83.67		77.25		75.09
Penetration Into Hard Strata, ft.	4.00 ✓	4.67	2.00 ✓	2.00	2.00 ✓	2.42
Hard Strata Description	Red Shale		Red Shale		Red Shale	
Depth to Ground Water, ft.	N/A		N/A		N/A	
Casing	No		No		No	
Reinforcing Steel, Vertical	6#7W/#3 Ties		5#7W/#3 Ties		5#7W/#3 Ties	
Dowels	4#5's		4#5's		4#5's	
Date of Concrete Placement	6/9/2017		6/9/2017		6/9/2017	
Remarks:						

- 1-ec Architectural Design Group  
Attn: Kyle Lombardo
- 1-ec Globe Construction Co. Attn: Cliff Caudle
- 1-ec ADG OKC Attn: William Harrell
- 1-ec The McKinney Partnership Architects, PC  
Attn: Jude Waltman
- 1-ec MSR Attn: Tom Haller
- 1-ec Architectural Design Group Attn: Leslie Tabor
- 1-ec City of Norman Attn: Terry Floyd
- 1-ec 360 Engineering Group Attn: Sanooj Edalath
- 1-ec Globe Construction Co. Attn: Peter Morriral

Respectfully Submitted,  
 CEC Materials Testing

*Josh Black*  
 Josh Black P.E., Project Manager



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Date Sampled: 06/09/2017  
 Sampled By: Bill Waddle

Location: Piers

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 Client PO: 000277531

Lab No: OKC#2766-17

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Page 2 of 3

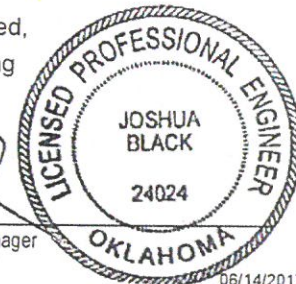
**TEST RESULTS**

Pier Designation	F-1.7 ✓		F-2.5 ✓		D-2 ✓	
Column Row Designation	6/9/2017		6/9/2017		6/9/2017	
Date Drilled	Design	As-Built ✓	Design	As-Built	Design	As-Built
Shaft Diameter, in.	18	18 ✓	36	36	24	24
Reference Elevation, ft.		99.25		99.25		99.25
Depth to Bottom, ft.		25.16 ✓		32.16 ✓		18.83 ✓
Bottom Elevation, ft.		74.09		67.09		80.42
Bearing Strata Top Elevation, ft.		77.00		79.75		83.25
Penetration Into Hard Strata, ft.	2.00 ✓	2.91	9.00 ✓	12.66	2.00 ✓	2.83
Hard Strata Description	Red Shale		Red Shale		Red Shale	
Depth to Ground Water, ft.	N/A		N/A		N/A	
Casing	No		No		No	
Reinforcing Steel, Vertical	6#5's W/#3 Ties		14#8's W/#3 Ties		5#7's W/#3 Ties	
Dowels	4#5's		4#5's		4#5's	
Date of Concrete Placement	6/9/2017		6/9/2017		6/9/2017	
Remarks:						

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- 1-ec Globe Construction Co. Attn: Peter Morriral

Respectfully Submitted,  
 CEC Materials Testing

*Josh Black*  
 Josh Black P.E., Project Manager



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 Sampled By: Bill Waddle

Location: Piers

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 Client PO: 000277531

Lab No: OKC#2766-17  
 Report No: 0038  
 Page 3 of 3

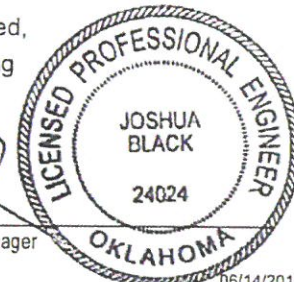
**TEST RESULTS**

Pier Designation						
Column Row Designation	E-2 ✓					
Date Drilled	6/9/2017					
	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	24	24				
Reference Elevation, ft.		99.25 ✓				
Depth to Bottom, ft.		23.58 ✓				
Bottom Elevation, ft.		75.67		0.00		0.00
Bearing Strata Top Elevation, ft.		77.67				
Penetration Into Hard Strata, ft.	2.00 ✓	2.00		0.00		0.00
Hard Strata Description	Red Shale					
Depth to Ground Water, ft.	N/A					
Casing	No					
Reinforcing Steel, Vertical	5#7's W/#3 Ties					
Dowels	4#5's					
Date of Concrete Placement	6/9/2017					
Remarks:						

- 1-ec Architectural Design Group  
Attn: Kyle Lombardo
- 1-ec Globe Construction Co. Attn: Cliff Caudle
- 1-ec ADG OKC Attn: William Harrell
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 CEC Materials Testing

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 Sampled By: Bill Waddle

Location: Piers

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 Contractor: Globe Construction Co.

Lab No: OKC#2765-17

Client PO: 000277531

**TEST RESULTS**

Report No: 0037

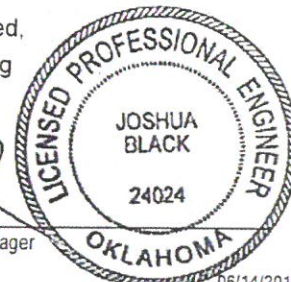
Page 1 of 7

Pier Designation	A-1 ✓		A-1.5 ✓		A6-1 ✓	
Column Row Designation	6/8/2017		6/8/2017		6/8/2017	
Date Drilled	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	24	24	24	24	24	24
Reference Elevation, ft.		99.25		99.25		99.25
Depth to Bottom, ft.		18.66 ✓		18.25 ✓		17.75 ✓
Bottom Elevation, ft.		80.59		81.00		81.50
Bearing Strata Top Elevation, ft.		83.59		84.25		83.60
Penetration Into Hard Strata, ft.	2.00 ✓	3.00	2.00 ✓	3.25	2.00 ✓	2.10
Hard Strata Description	Red Shale		Red Shale		Red Shale	
Depth to Ground Water, ft.	N/A		N/A		N/A	
Casing	No		No		No	
Reinforcing Steel, Vertical	5#7 W/#3 Ties		5#7 W/#3 Ties		5#7 W/#3 Ties	
Dowels	4#5's		4#5's		4#5's	
Date of Concrete Placement	6/8/2017		6/8/2017		6/8/2017	
Remarks:						

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 CEC Materials Testing

*Josh Black*  
 Josh Black P.E., Project Manager



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**TEST RESULTS**

Report No: 0037

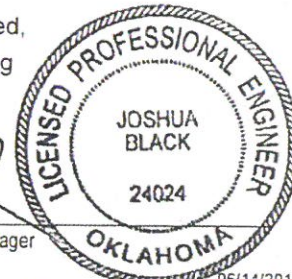
Page 2 of 7

Pier Designation	A-3 ✓		A-2 ✓		A-1.7 ✓	
Column Row Designation	6/8/2017		6/8/2017		6/8/2017	
Date Drilled	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	24	24	24	24	24	24
Reference Elevation, ft.		99.25		99.25		99.25
Depth to Bottom, ft.		18.41 ✓		18.33 ✓		18.50 ✓
Bottom Elevation, ft.		80.84		80.92		80.75
Bearing Strata Top Elevation, ft.		83.75		83.84		83.84
Penetration Into Hard Strata, ft.	2.00 ✓	2.91	2.00 ✓	2.92	2.00 ✓	3.09
Hard Strata Description	Red Shale		Red Shale		Red Shale	
Depth to Ground Water, ft.	N/A		N/A		N/A	
Casing	No		No		No	
Reinforcing Steel, Vertical	5#7 W/#3 Ties		5#7 W/#3 Ties		5#7 W/#3 Ties	
Dowels	4#5's		4#5's		4#5's	
Date of Concrete Placement	6/8/2017		6/8/2017		6/8/2017	
Remarks:						

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Respectfully Submitted,  
 CEC Materials Testing

*Joshua Black*  
 Joshua Black P.E., Project Manager



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Report No: 0037

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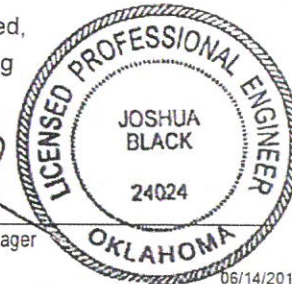
**TEST RESULTS**

Pier Designation	A-6-I.7 ✓		B-1 ✓		B-2 ✓	
Column Row Designation	A-6-I.7 ✓		B-1 ✓		B-2 ✓	
Date Drilled	6/8/2017		6/8/2017		6/8/2017	
	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	24	24	24	24	30	30
Reference Elevation, ft.		99.25		99.25		99.25
Depth to Bottom, ft.		17.58 ✓		18.25 ✓		20.16 ✓
Bottom Elevation, ft.		81.67		81.00		79.09
Bearing Strata Top Elevation, ft.		84.00		83.92		83.50
Penetration Into Hard Strata, ft.	2.00 ✓	2.33	2.00 ✓	2.92	4.00 ✓	4.41
Hard Strata Description	Red Shale		Red Shale		Red Shale	
Depth to Ground Water, ft.	N/A		N/A		N/A	
Casing	No		No		No	
Reinforcing Steel, Vertical	5#7W/#3 Ties		5#7W/#3 Ties		6#7W/#3 Ties	
Dowels	4#5's		4#5's		4#5's	
Date of Concrete Placement	6/8/2017		6/8/2017		6/8/2017	
Remarks:						

- 1-ec Architectural Design Group  
Attn: Kyle Lombardo
- 1-ec Globe Construction Co. Attn: Cliff Caudle
- 1-ec ADG OKC Attn: William Harrell
- 1-ec The McKinney Partnership Architects, PC  
Attn: Jude Wallman
- 1-ec MSR Attn: Tom Haller
- 1-ec Architectural Design Group Attn: Leslie Tabor
- 1-ec City of Norman Attn: Terry Floyd
- 1-ec 360 Engineering Group Attn: Sanooj Edalath
- 1-ec Globe Construction Co. Attn: Peter Morriral

Respectfully Submitted,  
 CEC Materials Testing

*Josh Black*  
 Josh Black P.E., Project Manager



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 REPORT CREATED BY ElmTree SYSTEM



13801 N. Meridian Ave.  
 Oklahoma City, OK 73134  
 Phone:(405) 753-6840

**Drilled Pier Observation**

Report Date: 06/14/2017  
 Project: 12130.22  
 Norman East Branch Library

Date Sampled: 06/08/2017  
 Sampled By: Bill Waddle

Location: Piers

Client: City of Norman  
 Contractor: Globe Construction Co.  
 Client PO: 000277531

Lab No: OKC#2765-17

Report No: 0037

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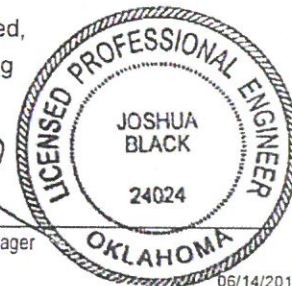
**TEST RESULTS**

Pier Designation	D-3 ✓		E-3 ✓		F-3 ✓	
Column Row Designation	6/8/2017		6/8/2017		6/8/2017	
Date Drilled	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	24	24	24	24	24	24
Reference Elevation, ft.		99.25		99.25		99.25
Depth to Bottom, ft.		18.00 ✓		25.50 ✓		32.41 ✓
Bottom Elevation, ft.		81.25		73.75		66.84
Bearing Strata Top Elevation, ft.		83.75		76.25		73.25
Penetration Into Hard Strata, ft.	2.00 ✓	2.50	2.00 ✓	2.50	4.50 ✓	6.41
Hard Strata Description	Red Shale		Red Shale		Red Shale	
Depth to Ground Water, ft.	N/A		N/A		N/A	
Casing	No		No		No	
Reinforcing Steel, Vertical	5#7W/#3 Ties		5#7W/#3 Ties		8#7W/#4 Ties	
Dowels	4#5's		4#5's		4#5's	
Date of Concrete Placement	6/8/2017		6/8/2017		6/8/2017	
Remarks:						

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Respectfully Submitted,  
 CEC Materials Testing

*Josh Black*  
 Josh Black P.E., Project Manager



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Report Date: 06/14/2017  
 Project: 12130.22  
 Norman East Branch Library

Date Sampled: 06/08/2017  
 Sampled By: Bill Waddle

Location: Piers

Client: City of Norman  
 Contractor: Globe Construction Co.  
 Client PO: 000277531

Lab No: OKC#2765-17

Report No: 0037

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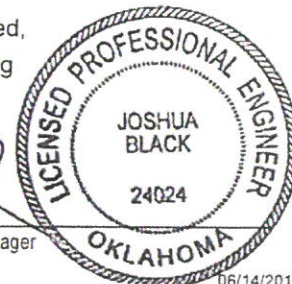
**TEST RESULTS**

Pier Designation	C-3 ✓		C.1-2.6 ✓		D-1 ✓	
Column Row Designation	6/8/2017		6/8/2017		6/8/2017	
Date Drilled	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	24	24	24	24	24	24
Reference Elevation, ft.		99.25		99.25		99.25
Depth to Bottom, ft.		18.33 ✓		19.00 ✓		18.41 ✓
Bottom Elevation, ft.		80.92		80.25		80.84
Bearing Strata Top Elevation, ft.		84.09		83.25		83.50
Penetration Into Hard Strata, ft.	2.00 ✓	3.17	3.00 ✓	3.00	2.00 ✓	2.66
Hard Strata Description	Red Shale		Red Shale		Red Shale	
Depth to Ground Water, ft.	N/A		N/A		N/A	
Casing	No		No		No	
Reinforcing Steel, Vertical	5#7W/#3 Ties		5#7W/#3 Ties		5#7W/#3 Ties	
Dowels	4#5's		4#5's		4#5's	
Date of Concrete Placement	6/8/2017		6/8/2017		6/8/2017	
Remarks:						

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 CEC Materials Testing

*Josh Black*  
 Josh Black P.E., Project Manager



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**Drilled Pier Observation**

Report Date: 06/14/2017  
 Project: 12130.22  
 Norman East Branch Library

Date Sampled: 06/08/2017  
 Sampled By: Bill Waddle

Location: Piers

Client: City of Norman  
 Contractor: Globe Construction Co.  
 Client PO: 000277531

Lab No: OKC#2765-17

Report No: 0037

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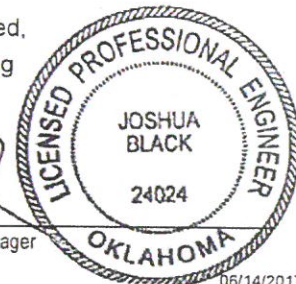
**TEST RESULTS**

Pier Designation	B-3 ✓		B.2-2.6 ✓		C-1 ✓	
Column Row Designation	6/8/2017		6/8/2017		6/8/2017	
Date Drilled	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	24	24	24	24	24	24
Reference Elevation, ft.		99.25		99.25		99.25
Depth to Bottom, ft.		18.50 ✓		18.66 ✓		18.00 ✓
Bottom Elevation, ft.		80.75		80.59		81.25
Bearing Strata Top Elevation, ft.		83.50		84.17		83.25
Penetration Into Hard Strata, ft.	2.00 ✓	2.75	3.00 ✓	3.58	2.00 ✓	2.00
Hard Strata Description	Red Shale		Red Shale		Red Shale	
Depth to Ground Water, ft.	N/A		N/A		N/A	
Casing	No		No		No	
Reinforcing Steel, Vertical	5#7/W#3 Toes		5#7/W#3 Toes		5#7/W#3 Toes	
Dowels	4#5's		4#5's		4#5's	
Date of Concrete Placement	6/8/2017		6/8/2017		6/8/2017	
Remarks:						

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 CEC Materials Testing

*Joshua Black*  
 Joshua Black P.E., Project Manager



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Date Sampled: 06/08/2017  
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Lab No: OKC#2765-17

Client PO: 000277531

**TEST RESULTS**

Report No: 0037

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Pier Designation						
Column Row Designation	F-2 ✓					
Date Drilled	6/8/2017					
	Design	As-Built	Design	As-Built	Design	As-Built
Shaft Diameter, in.	24	24				
Reference Elevation, ft.		99.25 ✓				
Depth to Bottom, ft.		28.25 ✓				
Bottom Elevation, ft.		71.00		0.00		0.00
Bearing Strata Top Elevation, ft.		75.84				
Penetration Into Hard Strata, ft.	4.50 ✓	4.84		0.00		0.00
Hard Strata Description	Red Shale					
Depth to Ground Water, ft.	N/A					
Casing	No					
Reinforcing Steel, Vertical	8#7W/#4 Ties					
Dowels	4#5's					
Date of Concrete Placement	6/8/2017					
Remarks:						

- 1-ec Architectural Design Group  
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- 1-ec Globe Construction Co. Attn: Cliff Caudle
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