

15 June 2017  
File No. 16081-001

Academy of Hope Adult Public Charter School  
2315 18<sup>th</sup> Place NE  
Washington, DC 20017

Attention: Ms. Krystal Ramseur, MPA  
Senior Manager of Operations

Subject: Quarterly Instrumentation Report No. 4  
Academy of Hope  
2315 18<sup>th</sup> Place NE  
Washington, DC 20018

Ladies and Gentlemen:

This report provides a summary of readings to date of the crack gauges installed both inside and outside of the building at 2315 18<sup>th</sup> Place NE, Washington, DC. This work is being performed by Pons & Associates, LLC (Pons & Associates) in accordance with our agreement dated 9 June 2016, authorized by Brian McNamee on 13 June 2016. The most recent photographs of the crack gauges are shown on the attached Photo Log.

Twelve crack gauges were installed on 29 June 2016 on significant cracks identified in previous investigative work completed by others. Crack gauge #7, installed on a wall in an interior downstairs storage room, was re-installed on 29 September 2016 when it was found to be disengaged from the wall. Table I attached to this report provides a summary of crack gauge readings, including initial readings, those made on 29 September 2016 after the first quarter, those made on 20 December 2016 after the second quarter, those made on 15 March 2017 after the third quarter, and those made on 2 June 2017 after the fourth quarter. Most of the crack gauge readings to date indicate that little or no movement has occurred since the gauges were installed on cracks on the exterior northern wall or within the interior downstairs storage and electrical rooms.

Crack gauge #1 on the north exterior wall did not show any movement in the first two quarterly readings, but showed possible right lateral movement of approximately 1.0 mm on 15 March 2017. This movement was reversed in the fourth quarter reading, back to the gauge's original position. Crack gauges #'s 2, 3, 4, 5, 9 and 12 all showed similar patterns of movement and reversion. Most of these showed overall range of motion of less than approximately 1.0 mm, except for gauge #12 which is discussed below. These gauges will be tracked for further movement, but the small magnitude of movement may be attributed to environmental factors such as moisture or temperature changes, or could be related to seasonal changes in the moisture content of underlying plastic soils resulting in some shrink-swell action. Gauges #'s 6, 7, 8, 10 and 11 showed little or no motion over the fourth quarter.

Crack gauge #12 installed on the western exterior stairwell showed lateral movement to the west (away from the building) of over 2.0 mm and a movement to the north of 1.9 mm over the first two quarters. The third quarterly reading (15 March 2017) showed the stairs moved back east towards the wall slightly, narrowing the crack to 1.5 mm, and the northward reading increased slightly to 2.0 mm. The fourth quarterly reading (2 June 2017) showed a continued closure of the crack to only 0.75 mm (west movement) and 0.8 mm (north movement). This pattern of movement is likely related to seasonal changes in the moisture content of underlying plastic soils resulting in some shrink-swell action, or to other environmental factors as noted above, rather than reflective of progressive movement

of the stairs relative to the wall. This crack gauge will continue to be closely monitored for additional signs of movement. Longer-term observations will yield more accurate information of the true spreading rates.

The next quarterly crack gauge reading is scheduled to occur in September, 2017. At this time, further data will be collected and any missing or disrupted gauges will be replaced. As more data is collected, we will gain a better understanding of any movements that are occurring for the cracks in question.

If you have any questions about the information presented in this report, please do not hesitate to contact us.

Sincerely yours,  
PONS & ASSOCIATES, LLC



Ian Godwin  
Engineering Geologist



Elizabeth Austin, P.E. (VA)  
Associate

#### Attachments

- Photo Log (4 pages)
- Table I Summary of Crack Gauge Readings
- Figure 1 - Crack Gage Location Plan



Photo 1: Crack gauge 1 position on a vertical crack on the north exterior wall.



Photo 2: Close up view of crack gauge 1.



Photo 3: Crack gauge 2 position on a vertical crack on the north exterior wall.

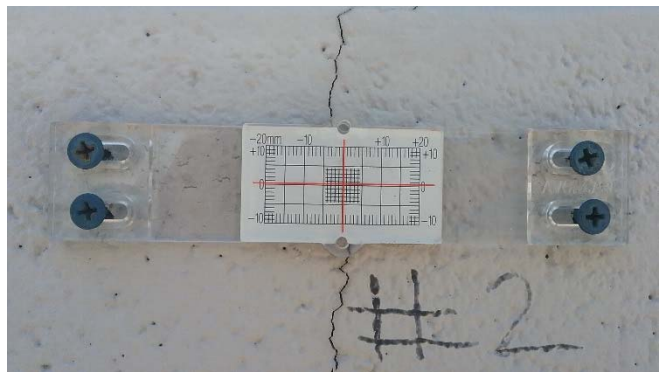


Photo 4: Close up view of crack gauge 2.



Photo 5: Crack gauge 3 position on a vertical crack on the north exterior wall.



Photo 6: Close up view of crack gauge 3.



Photo 7: Crack gauge 4 position on a vertical crack on the north exterior wall.



Photo 8: Close up view of crack gauge 4.



Photo 9: Crack gauge 5 position on a vertical crack on the north exterior wall.

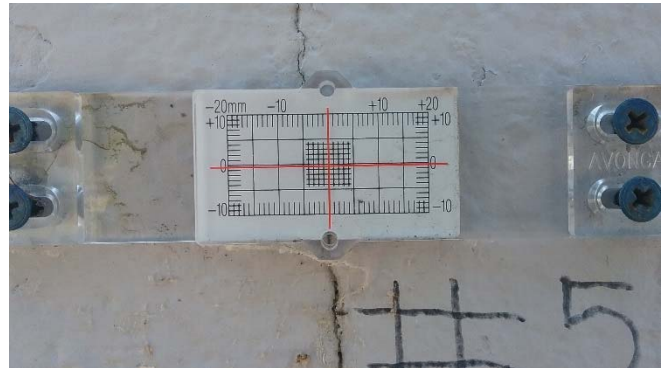


Photo 10: Close up view of crack gauge 5.



Photo 11: Crack gauge 6 position on a diagonal crack on the north exterior wall.

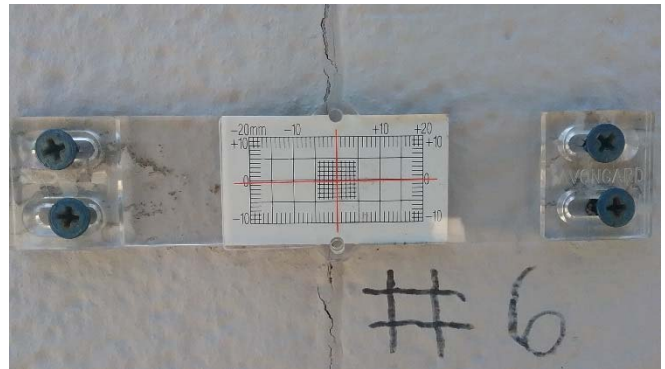


Photo 12: Close up view of crack gauge 6.



Photo 13: Crack gauge 7 position in an interior storage room.

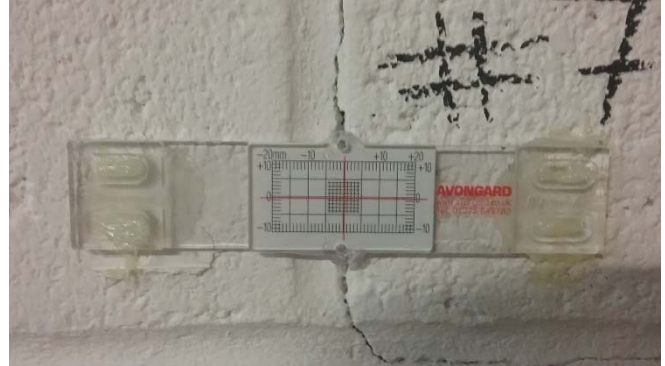


Photo 14: Close up view of crack gauge 7.



Photo 15: Crack gauge 8 position on a diagonal crack in an interior storage room.

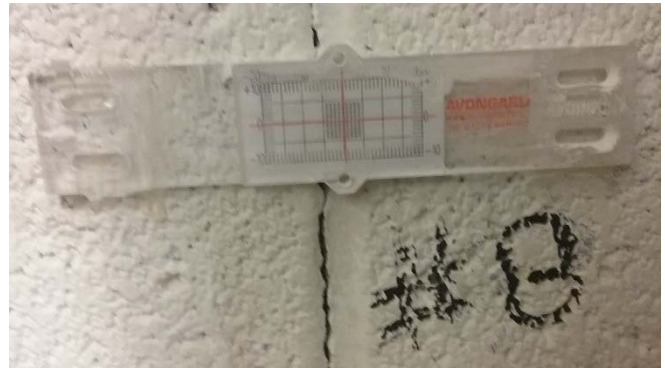


Photo 16: Close up view of crack gauge 8.



Photo 17: Crack gauge 9 position on a vertical crack in an interior storage room.

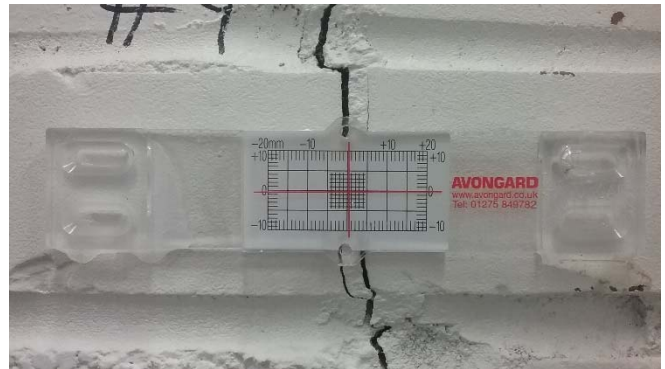


Photo 18: Close up view of crack gauge 9.



Photo 19: Crack gauge 10 position on a diagonal crack in an interior storage room.



Photo 20: Close up view of crack gauge 10.



Photo 21: Crack gauge 11 position on a low diagonal crack inside the electrical room.



Photo 22: Close up view of crack gauge 11.



Photo 23: Crack gauge 12 positioned between the wall and the exterior west staircase.



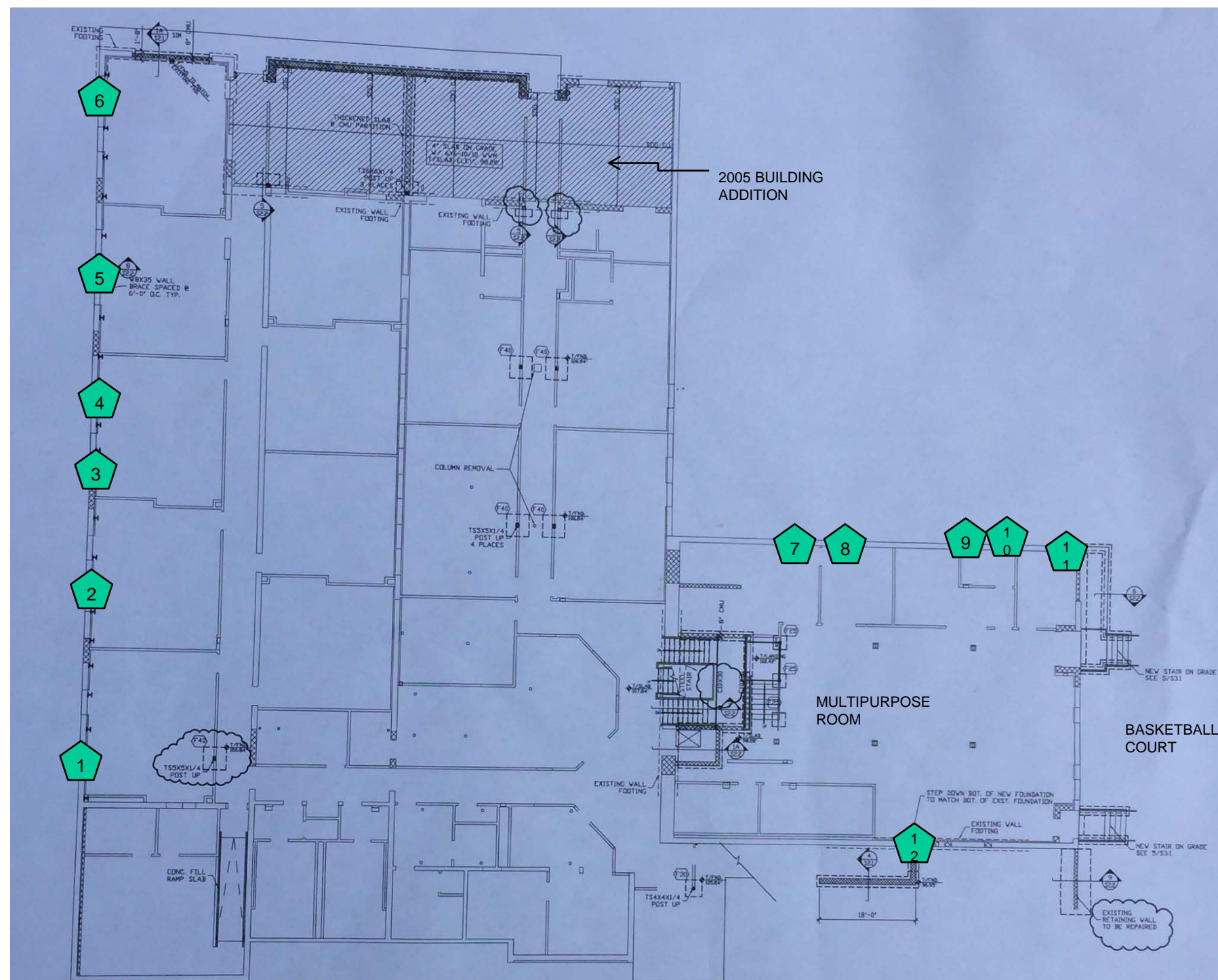
Photo 24: Close up view of crack gauge 12.

TABLE I  
SUMMARY OF CRACK GAUGE READINGS  
2315 18TH PLACE, NE, WASHINGTON DC  
ACADEMY OF HOPE CHARTER SCHOOL

Crack Gauge	Date: 29 June 2016		Date: 29 September 2016		Date: 20 December 2016		Date: 15 March 2017		Date: 2 June 2017		Date:	
	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis
1	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	1 mm	0 mm	0 mm	0 mm	0 mm	0 mm
2	0 mm	0 mm	0 mm	0 mm	0.1 mm	0.3 mm	0.5 mm	0.3 mm	0 mm	0.5 mm	0 mm	0 mm
3	0 mm	0 mm	0.5 mm	0 mm	1 mm	0 mm	1 mm	0 mm	0.1 mm	0 mm	0 mm	0 mm
4	0 mm	0 mm	0 mm	0 mm	0.3 mm	0 mm	0.3 mm	0 mm	0 mm	0 mm	0 mm	0 mm
5	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0.2 mm	(-) 0.3 mm	0 mm	(-) 0.3 mm	0 mm	0 mm
6	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	(-) 0.2 mm	0 mm	0 mm
7	0 mm	0 mm	0 mm	0 mm	0 mm	(-) 0.2 mm	0 mm	(-) 0.2 mm	0 mm	(-) 0.2 mm	0 mm	0 mm
8	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm
9	0 mm	0 mm	0 mm	0 mm	0.9 mm	0.3 mm	0.9 mm	0.3 mm	0.3 mm	0 mm	0 mm	0 mm
10	0 mm	0 mm	0 mm	(-) 1 mm	0.1 mm	(-)1 mm	0.1 mm	(-) 0.75 mm	0.1 mm	(-) 0.75 mm	0 mm	0 mm
11	0 mm	1 mm	0 mm	1 mm	0 mm	1 mm	0.3 mm	1 mm	0.5 mm	1.0 mm	0 mm	0 mm
12	0 mm	(-) 1 mm	2 mm	(-) 1 mm	2.1 mm	(-)1.9 mm	1.5 mm	(-) 2 mm	0.75 mm	(1) 0.8 mm	0 mm	0 mm

Notes:

1. Crack gauges installed on 29 June 2016.
2. Crack gauge 7 was reinstalled on 29 September 2016.



← 18<sup>TH</sup> PLACE NE →

NOT TO SCALE

**LEGEND:**



DESIGNATION AND APPROXIMATE LOCATION OF CRACK GAGES

**NOTES:**

1. MAP IS IMAGE OF SHEET S1.1 FOR TREE OF LIFE PUBLIC CHARTER SCHOOL BUILDING ADDITION/RENOVATION STRUCTURAL PLAN, SHEET S1.1, PREPARED BY STRUCTURAL DESIGN GROUP, DATED 18 APRIL 2005

**PONS&ASSOCIATES**

*Environmental, Geotechnical  
Engineering and Facilities Consulting*

ACADEMY OF HOPE  
2315 18<sup>TH</sup> PLACE NE  
WASHINGTON, DC 20018

**CRACK GAGE LOCATION PLAN**

JULY 2016

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FIGURE 1