

INTEROFFICE COMMUNICATION

To: Alexander Dettloff, P.E., OGE, State Foundation Engineer
COPY: Jere Masey, P.E., District 6 Geotechnical Engineer
FROM: P. Paul Painter, Office of Geotechnical Engineering
DATE: August 7, 2026
SUBJECT: DEL-42-12.63, PID 126936, Wildcat DCP soundings

Pursuant to District 6 Design Engineer, Jeff Hipp, request dated July 29, 2026, please find attached the Wildcat dynamic cone penetration (DCP) soundings for the anticipated new full height headwalls for the programed emergency culvert replacement.

The existing slab top conduit (CFN1832885) is a 72"x108" box, 53 ft long, conveying Sugar Run below SR 42. The existing structure is in very poor condition with the westbound lane currently closed due to failure of the structure resulting in loss of roadway support. Top of footing for the existing structure is El. 937.7 ft. for the inlet and 938.1 ft. for the outlet. Plans call for grading the channel flowline depth approximately 1-ft (El. 937.0 ft.) as part of the channel maintenance. Mr. Hipp requested four (4) wildcat DCP soundings at the corners of the anticipated new headwall locations. An elliptical pipe with standard full-height headwalls is scheduled to be installed utilizing District forces by the end of 2026. D-001-0-26 and D-002-0-26 were planned for the inlet and D-003-0-26 and D-004-0-26 were planned for the outlet. Figure 1 present these locations.



OGE personnel were on site August 5, 2026, to complete the requested DCP soundings. D-001-0-26 was unable to be completed due to the depth of the standing water within the channel restricting access to the personnel. Soundings were extended to a minimum of 1-meter below the current channel and into very stiff soils. Sounding reports are attached with results presented for the DCP penetrations. Positional data was obtained utilizing OGE survey grade gps instrument.

If you have any questions or need additional information please me.

Attachments: DCP Sounding reports; D-002-0-26, D-003-0-26, D-004-0-26



**Department of
Transportation**

WILDCAT DYNAMIC CONE LOG

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The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 126936
DATE STARTED: 08-05-2026
DATE COMPLETED: 08-05-2026

HOLE #: D-002-0-26
CREW: Lopez & Benning
PROJECT: DEL-42-12.63
LAT/LONG: 40.330885, -83.006188
LOCATION: Delaware County, Ohio

SURFACE ELEVATION: 937.7
WATER ON COMPLETION: In channel.
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm ²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY	
					NON-COHESIVE	COHESIVE
-	0	0.0		0	VERY LOOSE	VERY SOFT
-	0	0.0		0	VERY LOOSE	VERY SOFT
- 1 ft	0	0.0		0	VERY LOOSE	VERY SOFT
-	2	8.9	..	2	VERY LOOSE	SOFT
-	4	17.8	....	5	LOOSE	MEDIUM STIFF
- 2 ft	8	35.5	.....	10	LOOSE	STIFF
-	10	44.4	.....	12	MEDIUM DENSE	STIFF
-	8	35.5	.....	10	LOOSE	STIFF
- 3 ft	10	44.4	.....	12	MEDIUM DENSE	STIFF
- 1 m	15	66.6	.....	19	MEDIUM DENSE	VERY STIFF
-	21	81.1	.....	23	MEDIUM DENSE	VERY STIFF
- 4 ft						
-						
-						
- 5 ft						
-						
-						
- 6 ft						
-						
- 2 m						
- 7 ft						
-						
-						
- 8 ft						
-						
-						
- 9 ft						
-						
- 3 m 10 ft						
-						
-						
-						
- 11 ft						
-						
-						
- 12 ft						
-						
- 4 m 13 ft						

Latitude, Longitude & Elevation from OGE Survey Grade Instruments.

WILDCAT DYNAMIC CONE LOG

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The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 126936
DATE STARTED: 08-05-2026
DATE COMPLETED: 08-05-2026

HOLE #: D-003-0-26
CREW: Lopez & Benning
PROJECT: DEL-42-12.63
LAT/LONG: 40.330882, -83.006442
LOCATION: Delaware County, Ohio

SURFACE ELEVATION: 937.8
WATER ON COMPLETION: In channel.
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm ²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY	
					NON-COHESIVE	COHESIVE
-	5	22.2	.....	6	LOOSE	MEDIUM STIFF
-	4	17.8	.....	5	LOOSE	MEDIUM STIFF
- 1 ft	3	13.3	...	3	VERY LOOSE	SOFT
-	4	17.8	.....	5	LOOSE	MEDIUM STIFF
-	5	22.2	.....	6	LOOSE	MEDIUM STIFF
- 2 ft	4	17.8	.....	5	LOOSE	MEDIUM STIFF
-	5	22.2	.....	6	LOOSE	MEDIUM STIFF
-	5	22.2	.....	6	LOOSE	MEDIUM STIFF
- 3 ft	6	26.6	.....	7	LOOSE	MEDIUM STIFF
- 1 m	8	35.5	.....	10	LOOSE	STIFF
-	7	27.0	.....	7	LOOSE	MEDIUM STIFF
- 4 ft	8	30.9	.....	8	LOOSE	MEDIUM STIFF
-	11	42.5	.....	12	MEDIUM DENSE	STIFF
-	12	46.3	.....	13	MEDIUM DENSE	STIFF
- 5 ft	14	54.0	.....	15	MEDIUM DENSE	STIFF
-	14	54.0	.....	15	MEDIUM DENSE	STIFF
-	20	77.2	.....	22	MEDIUM DENSE	VERY STIFF
- 6 ft						
- 2 m						
- 7 ft						
-						
- 8 ft						
-						
- 9 ft						
-						
- 3 m 10 ft						
-						
-						
- 11 ft						
-						
- 12 ft						
-						
- 4 m 13 ft						

Latitude, Longitude & Elevation from OGE Survey Grade Instruments.

WILDCAT DYNAMIC CONE LOG

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The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 126936
DATE STARTED: 08-05-2026
DATE COMPLETED: 08-05-2026

HOLE #: D-004-0-26
CREW: Lopez & Benning
PROJECT: DEL-42-12.63
LAT/LONG: 40.330895, -83.006442
LOCATION: Delaware County, Ohio

SURFACE ELEVATION: 938.5
WATER ON COMPLETION: In channel.
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm ²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY	
					NON-COHESIVE	COHESIVE
-	2	8.9	••	2	VERY LOOSE	SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
- 1 ft	8	35.5	••••••••	10	LOOSE	STIFF
-	12	53.3	••••••••••	15	MEDIUM DENSE	STIFF
-	16	71.0	••••••••••••	20	MEDIUM DENSE	VERY STIFF
- 2 ft	8	35.5	••••••••	10	LOOSE	STIFF
-	6	26.6	••••••	7	LOOSE	MEDIUM STIFF
-	6	26.6	••••••	7	LOOSE	MEDIUM STIFF
- 3 ft	7	31.1	••••••••	8	LOOSE	MEDIUM STIFF
- 1 m	7	31.1	••••••••	8	LOOSE	MEDIUM STIFF
-	10	38.6	••••••••••	11	MEDIUM DENSE	STIFF
- 4 ft	12	46.3	••••••••••	13	MEDIUM DENSE	STIFF
-	14	54.0	••••••••••••	15	MEDIUM DENSE	STIFF
-	17	65.6	••••••••••••••	18	MEDIUM DENSE	VERY STIFF
- 5 ft	18	69.5	••••••••••••••	19	MEDIUM DENSE	VERY STIFF
-						
-						
- 6 ft						
-						
- 2 m						
- 7 ft						
-						
-						
- 8 ft						
-						
-						
- 9 ft						
-						
- 3 m 10 ft						
-						
-						
- 11 ft						
-						
- 12 ft						
-						
- 4 m 13 ft						

Latitude, Longitude & Elevation from OGE Survey Grade Instruments.