



Town of Bartonville

Landfall Circle Rehabilitation

Date: July 20, 2023

Landfall Circle Culvert Rehabilitation

- There was significant erosion and voids noted at the culvert crossing of Landfall Circle near 1501 Landfall Circle. Westwood investigated and the pictures shown below show significant void space. There appear to be two options available, one a more temporary fix and the other complete reconstruction. Given the significant cost of the reconstruction the temporary fix was selected. The drawback of this approach is that it is less certain the time in which the improvements will work. The improvement would be filling the void space with flowable fill which is a cement based material where cementitious material is mixed with aggregate and pumped into the void space. It hardens similar to concrete and provides protection. The drawback is that the void space may propagate outside of the areas that are treated by flowable fill. The flowable fill should not wash away but given it is a hard surface, it may push water upwards which could washout fines above the treated area. This is the drawback but it does come at a significant cost savings. Westwood estimated that approximately 180 cubic yards of flowable fill may be needed. This assumes 40' x 30' space wide (the width and length of the culverts) and a depth of 4'. A quote was provided of \$400/cyd by SPI Asphalt and mobilization and adjusting of the headwall to access the area was included. Thus a cost of \$82,000 was estimated which included \$5,000 for mobilization and \$5,000 for headwall adjustment and 180 cyd of flowable fill at \$400/cyd or \$72,000. It is recommended a not to exceed amount and different quotes could be explored.



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