



MEMORANDUM FOR RECORD

SUBJECT: Site visit to Ceredo-Kenova LPP for slope instability near Jordan Branch ponding area.

1. On 14 May 2024, the undersigned Geological and Levee Safety Engineering staff visited the Jordan Branch pump station and ponding area, which is part of the Ceredo-Kenova local protection project (LPP) in Ceredo, WV. The purpose of this visit was due to a request from the mayor to inspect apparent slope instability at the end of East 2nd Street. Figure 1 includes an aerial view of the site.
2. Several indications of long-term slope instability were observed. Figure 2 includes a view at the top of the slope. The soil slope is oversteepened (estimate steeper than 1V:1H), pavement is displaced several inches (Figures 3 and 4), tree trunks are misaligned (Figure 5), and bulging at the base of slope could be the toe of a slip surface or simply accumulated talus. There is no visible head scarp, but this might be masked by pavement. These issues are not impacting levee or pump station operations.
3. If the parties that are responsible for this property, such as the City or homeowners, wish to stabilize the slope, then they should retain a qualified engineering firm to design short- and long-term stabilization measures. Short-term concepts that could be undertaken more quickly may include surface drainage improvements to prevent stormwater runoff from infiltrating the slope. Ensure gutters and downspouts flow properly and water doesn't discharge uncontrollably over the slope. Driveway concrete slabs could be raised, and any cracks or gaps sealed. Long-term concepts might include underpinning of the houses and structural measures to stabilize the slope, such as construction of a retaining wall. Another structural measure could include excavation of the slope to remove vegetation and failed soils and construction of a stone buttress. However, this may necessitate impacts to the houses.

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Encls



Figure 1. Aerial view of the inspected area at the end of East 2nd Street, Ceredo, WV.

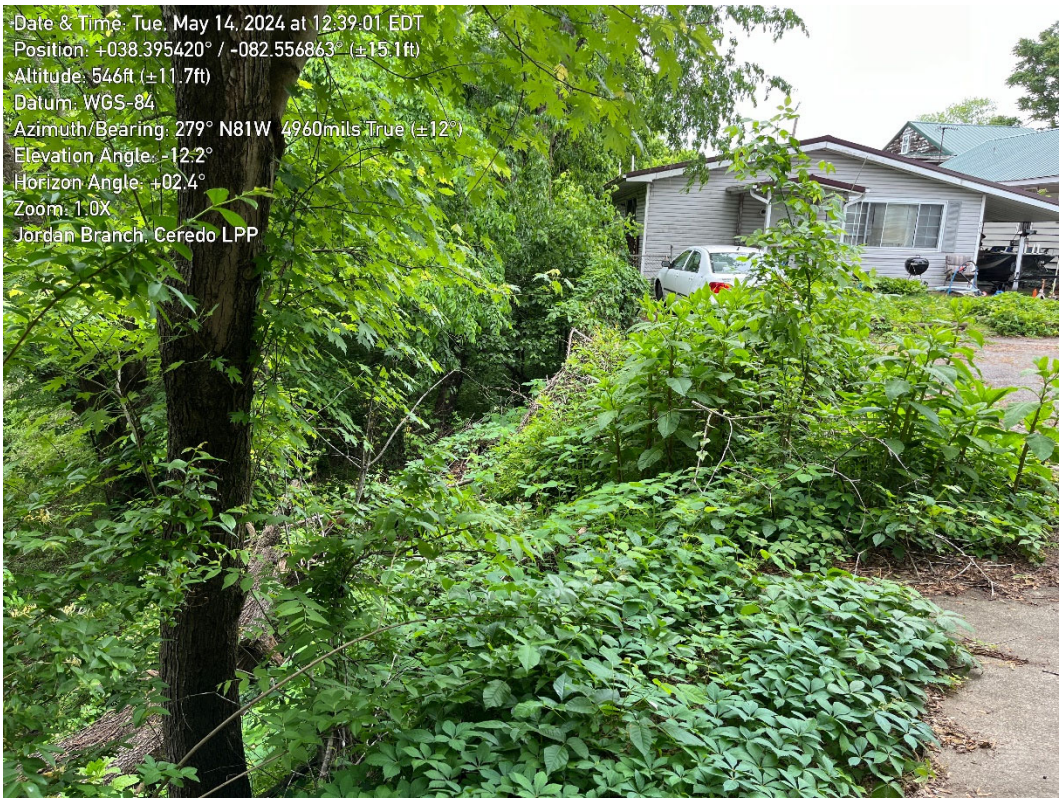


Figure 2. View along top of slope.



Figure 3. Concrete slab is tilted from left-to-right.



Figure 4. Concrete slab is displaced.



Figure 5. Trees within the slope are misaligned.