

## General Review Comments:

1. The coordinates provided do not identify if they are for the district tile, waterline, or waterline locates. Coordinates are needed for both district tile and waterline/waterline locates.
2. All of the sheets provided only show partial coordinates (i.e. X and Y) and don't show the elevation or Z coordinate.
3. Sizes and material of district tile at crossings should be identified. <Some still missing.>
4. The clearance between the waterline and the district tile needs to be specifically stated at each crossing. <Although some (not all) tile depths are stated, the clearance is not stated for any of the crossings.>
5. The clearance between the waterline and the flowline of the district open ditch needs to be specifically stated at each crossing.
6. Pictures of installation and on-site data gathered are provided in all of CGA's reports. I don't know if the District Trustees want these from IRUA also or not.
7. The engineering seal and signature only covers that the fact that the submittals were prepared by the engineer and nothing else. It does not cover or state that for each crossing, the crossing is in accordance with all permit requirements or states individual exceptions instead of general ones. <New submittal has engineering seal removed and there still is no stating that each crossing is in accordance with the permit requirements.>
8. What professional errors and omissions insurance coverage does IRUA maintain. I don't believe general liability covers professional negligence if submittals are incorrect.
9. ~~All district main open ditches are labeled as streams on the maps. They need to be corrected.~~  
<Done.>
10. For permits that are requesting to be withdrawn, provide drawings to verify that waterlines are not in the same location as district facilities.
11. No photos were submitted of signage installed.

## Specific Review Comments:

1. District 56 (permit 2017-1 and 2018-2) drawing (9-87-22) ~~appears to not be correct. Based on our survey shots, encasement for pipe being installed was over the district tile and not under.~~ <Done.> Also, when we were on-site the district tile had 1'± of soil and rock in it at broken location that was assumed to have washed in during the month that IRUA left tile open. This needs removed. Finally, based on our survey shots there is not 1' of clearance between top of repaired district tile and bottom of encasement.
2. District 152 (permit 2017-1 and 2018-2) drawing (16-87-22) showed that the waterline was bored under the tile. However, based on our site visits, entire site was disturbed, there was no boring equipment on-site, a trencher was on-site, no boring mud was present in the excavation, and the soil under the tile/above the waterline was very soft. Based on this, our assumption is that instead of using a boring machine, contractor excavated on each side of the tile and shoved the waterline through. <Wording has been changed to "installed" with no additional details of installation methods. The only method allowed by the permit without replacement of the tile is boring.>
3. District 56 (permit 2017-1 and 2018-2) drawing (9-87-22) appears to cross Lateral 22, but said crossing it is not shown. This is especially concerning since the Main tile of DD 56 was damaged during waterline construction.
4. District 14 (permit 2017-1) drawing (34-88-22) ~~appears to be missing a crossing of the Main at the intersection of Co Hwy D41 and Co Hwy S27.~~ <Crossing is now shown, but it indicates that tile was "DAMAGED REPAIRED WITH PVC". This type of repair is not allowed without a variance.>
5. Following district tiles identified as not found:
  - a. DD 11 Lat B (permit 2017-1 and 2018-6) at intersection of Co Hwy S27 and Prairie Ave.
  - b. ~~DD 20 Second Main tile (permit 2017-1) just west of the intersection of Co Hwy D41 and D Ave.~~ <Now shown.>
  - c. DD 11 Main (permit 2017-1 and 2018-6) at driveway for house at 402 Prairie Ave.
  - d. DD 11 Main and Laterals (permit 2017-1 and 2018-6) in Town of BuckeyeThese district tiles do exist and some have been located in the past. CGA can stake out the locations of some on DD 11 and DD 20. However, we were not contacted to do so.
6. The tile materials stated appear to be incorrect on the following (based on records from previous projects):
  - a. DD 143 Original Main (permit 2017-1 – Crossing 2) is not HDPE, but is concrete.
  - b. DD 143 Supplemental Main (permit 2017-1 – Crossing 1) is not HDPE, but is concrete.
  - c. DD 123 Original Main (permit 2017-1 – Crossing 2) is not HDPE, but is concrete.
  - d. DD 123 Supplemental Main (permit 2017-1 – Crossing 1) is not clay, but is HDPE.
  - e. DD 123 Supplemental Lateral 1 (permit 2018-2 – Crossing 3) is not clay, but is HDPE.
7. The tile sizes stated appear to be incorrect on the following (based on records from previous projects):
  - a. DD 56 Main (permit 2017-1) original tile was 28" and repair was 30".
  - b. DD 123 Original Main (permit 2017-1 – Crossing 2) is not 30", but is 36".
  - c. DD 123 Supplemental Lateral 1 (permit 2018-2 – Crossing 3) is not 14", but is 15".

8. The following crossings were not indicated as being installed below the tile per the permit requirements and would require a variance:
  - a. DD 31 Main (permit 2018-2 – Crossing 1) indicates water line was “trenched over”.
  - b. DD 14 Main (permit 2017-1 – Crossing 3) does not indicate if where water line was installed after tile was damaged.
  - c. DD 56 Main (permit 2011-1) indicates water line is “in encasement trenched over tile”.
9. Additional specific comments may be forth coming after information requested in General Review Comments is submitted.