
Davis Park Golf Course
Irrigation System Issues

Mainline Pipes





Front 9 Holes

- The mainline is transite pipe (Asbestos Cement Pipe) and is hazardous to repair.
- Transite pipe is rated to last around 70 years depending on pH, groundwater, etc.
- Our transite pipe is close to 60 years old.
- The pipe is undersized for the volume of water we use.

Back 9 Holes

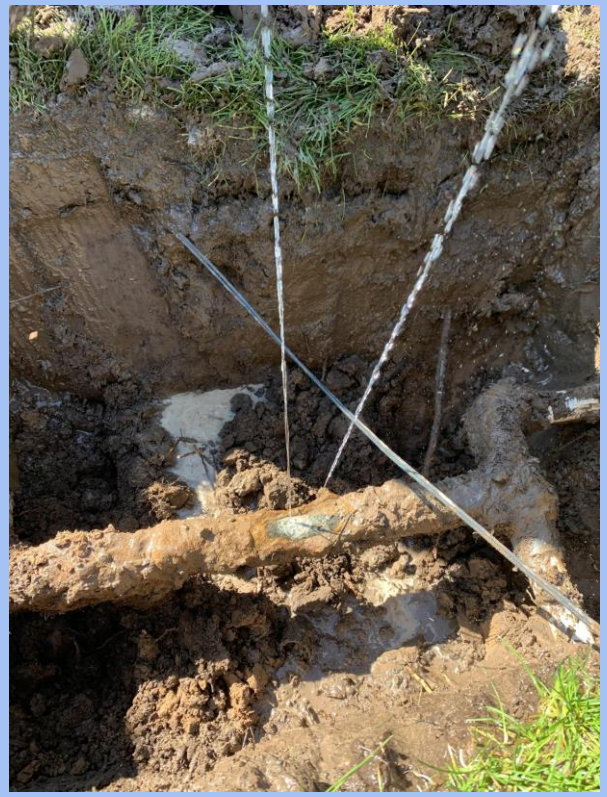
- The mainline is ductile iron pipe and asphalt coating makes repairs difficult.
- Rated to last about 100 years.
- The pipe is undersized for the volume of water we use.

Lateral Pipes

Front 9 Holes

- The lateral pipes are primarily galvanized steel.
- The life expectancy is 40-60 years.
- Has been leaking for at least 5 years due to corrosion.





Back 9 Holes

- The majority of the lateral pipes are PVC pipe.
- Has old and weak poly pipe that occasionally creates major leaks.
- Also has galvanized steel (life expectancy is 40-60 years) on #12 and maybe other locations.



Poor Sprinkler Spacing

- Inconsistent spacing between sprinkler heads; heads range from 50’-110’ apart and have no efficient watering patterns.
- Inefficient application of watering creates excessive wet areas and dry areas.
- Inefficient watering patterns = Extreme water waste!





Ideal Sprinkler Spacing

- 60’-65’ apart with a consistent triangular pattern.
- Efficient watering patterns = Efficient use of water.



Wiring Issues



Main Power Supply

- Improper repairs performed several years ago using 14-gauge wire in between 10-gauge wire causes loss of voltage further down the line. This has caused an irrigation controller to continuously malfunction.



Shallow Wiring

- Shallow wires installed across the course several years ago has made it very difficult to perform aeration without inadvertently cutting wires.

- Residential irrigation wire (18-gauge multi-strands comprised of 5-13 wires that are sheathed together) has been used throughout the course. When the wire is cut or damaged, the problem is compounded because it is difficult to determine for certain which wires within the sheath are actually being used, requiring all 13 wires to be repaired/replaced. It consumes considerably more time and money to repair.

Isolation and Shutoff Valves

Insufficient Number of Valves

- Generally requires 2-3 holes to shut down for a repair.
- Wastes large amounts of water when draining the pipes for repair.
- Multiple valves must be shut off for one repair - often 4 or more valves.

Valves Leak

- Valves leak after they're shut off and water continues to flow at a slow pace making it difficult to repair leaks, i.e., broken pipes, sprinkler heads.
    - Usually requires shutting off the *entire* back 9 irrigation because the valves continuously leak and it's difficult to isolate and drain to make a repair.
    - Wastes very large amounts of water.

Driving Range

- The majority of the driving range uses the old hydraulic pressure system.
  - Pressurized tubing controls whether the sprinkler heads turn on or off.
    - If the tubing is leaking or cut, the line loses pressure and the sprinkler heads on that line turn on, and can't be turned off until the leak is fixed.

- Requires 4-8 sprinkler heads running simultaneously for one station.
  - This means 4-8 heads are running when it's only necessary to run 1-2 sprinklers for a dry spot - this causes everything around it to be over saturated.
  - Wastes an excessive amount of water.

