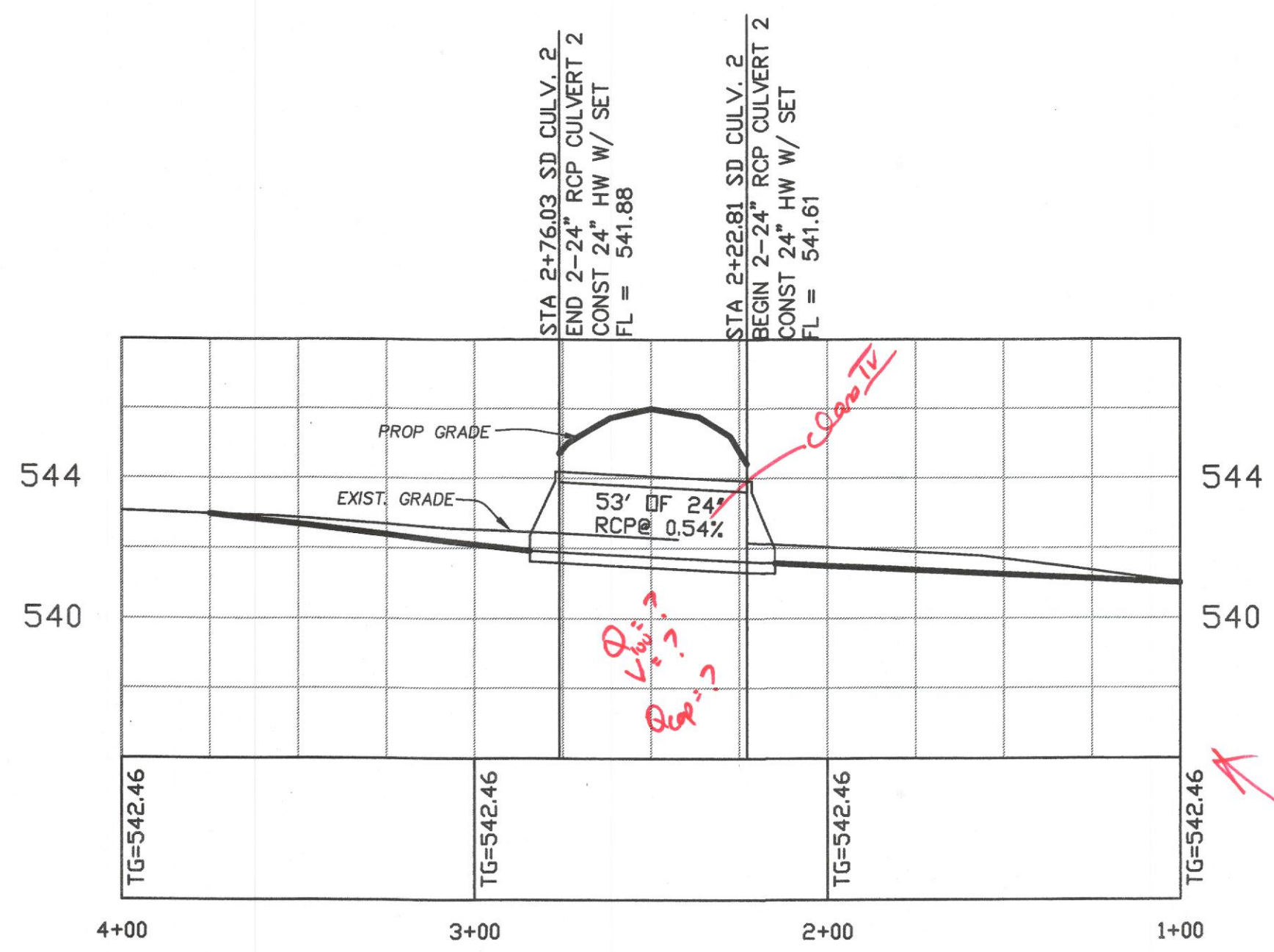


CULVERT 2 PROFILE



Culvert Calculator

All calculator output should be verified prior to design use

Entered Data:

- Shape Circular
- Number of Barrels 2
- Solving for Headwater
- Chart Number 1
- Scale Number 2
- Chart Description CONCRETE PIPE CULVERT; NO BEVELED RING ENTRANCE
- Scale Description GROOVE END ENTRANCE WITH HEADWALL
- Overlapping Off
- Flowrate 51.9900 cfs
- Manning's n 0.0130
- Roadway Elevation 546.0000 ft
- Inlet Elevation 541.8800 ft
- Outlet Elevation 541.6100 ft
- Diameter 24.0000 in
- Length 53.0000 ft
- Entrance Loss 0.0000
- Tailwater 2.0000 ft

Computed Results:

- Headwater 545.3704 ft Outlet Control
- Slope 0.0051 ft/ft
- Velocity 8.2745 fps

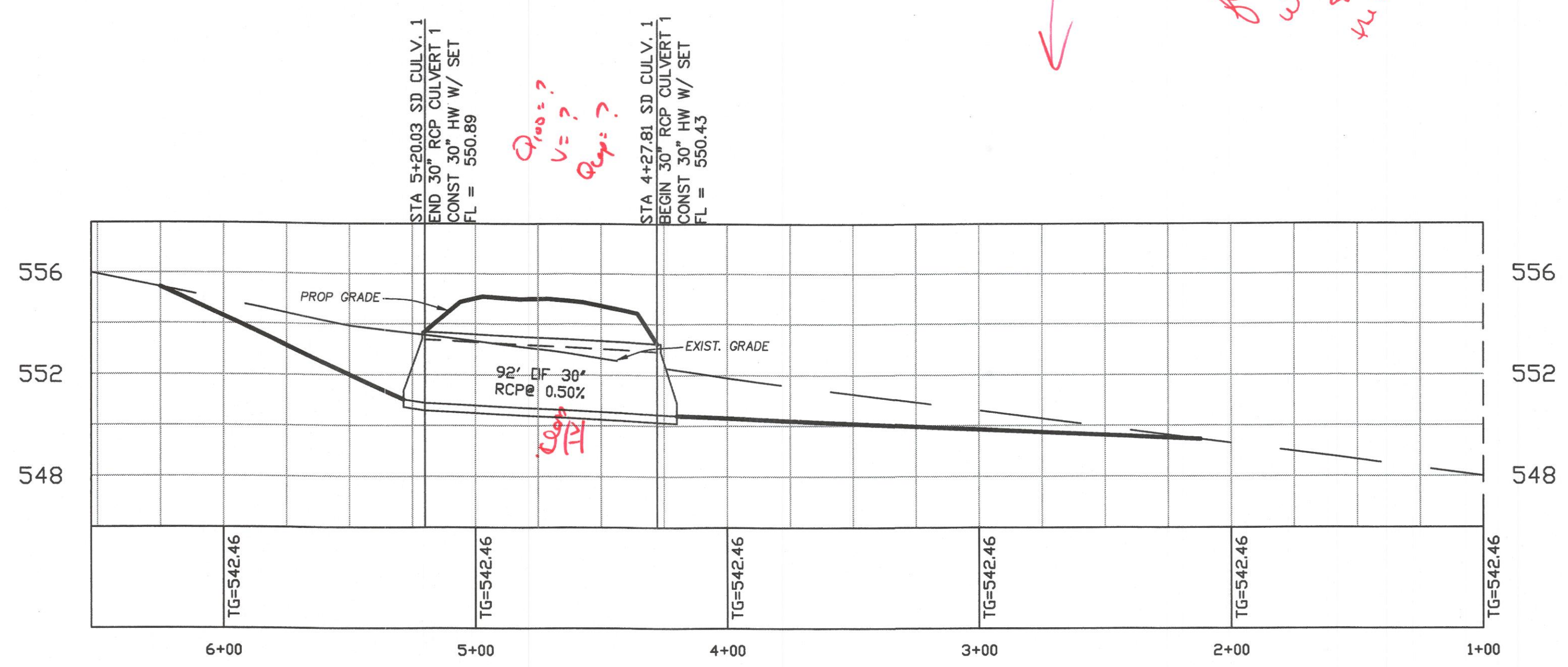
Messages:

- Outlet head > Inlet head.
- Computing Outlet Control headwater.
- Outlet submerged.
- Full flow.
- Headwater depth computed using FHWA equation.
- Headwater: 545.3704 ft

Extend culvert past curb return then install HW

Need plan for both culverts with proposed shading (if any on the banks)

CULVERT 1 PROFILE



Culvert Calculator

All calculator output should be verified prior to design use

Entered Data:

- Shape Circular
- Number of Barrels 1
- Solving for Headwater
- Chart Number 1
- Scale Number 2
- Chart Description CONCRETE PIPE CULVERT; NO BEVELED RING ENTRANCE
- Scale Description GROOVE END ENTRANCE WITH HEADWALL
- Overlapping Off
- Flowrate 31.8600 cfs
- Manning's n 0.0130
- Roadway Elevation 555.0000 ft
- Inlet Elevation 550.8900 ft
- Outlet Elevation 550.4300 ft
- Diameter 30.0000 in
- Length 92.2200 ft
- Entrance Loss 0.0000
- Tailwater 2.0000 ft

Computed Results:

- Headwater 554.3996 ft Outlet Control
- Slope 0.0050 ft/ft
- Velocity 7.5680 fps

Messages:

- Outlet head > Inlet head.
- Computing Outlet Control headwater.
- Outlet not submerged.
- Normal Depth: 30.0000 in
- Critical Depth: 23.0723 in
- Flow is subcritical.
- Normal depth > critical depth.
- Tailwater depth < normal depth.
- M2 drawdown profile.
- Tailwater depth > critical depth.
- Depth computed with direct step method starting at tailwater depth.
- Headwater: 554.3996 ft