

GHWTP Filter Rehabilitation and Upgrades

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PROJECT PURPOSE – WHY?

1. Filters and Plant commissioned in 1960, expanded in 1968 and Modernized in 1986
2. Improve performance
3. Address backwash issues
4. Piping improvements (address air-binding and corrosion issues)
5. Add seismic reinforcing and new coatings

Improve Performance

1. Replace existing clay tile underdrains with low-profile stainless steel underdrains
2. Increase filter media depth
3. Replace filter wash system

Improve Performance (Replace Underdrains)

Existing

Clay Tile Underdrain

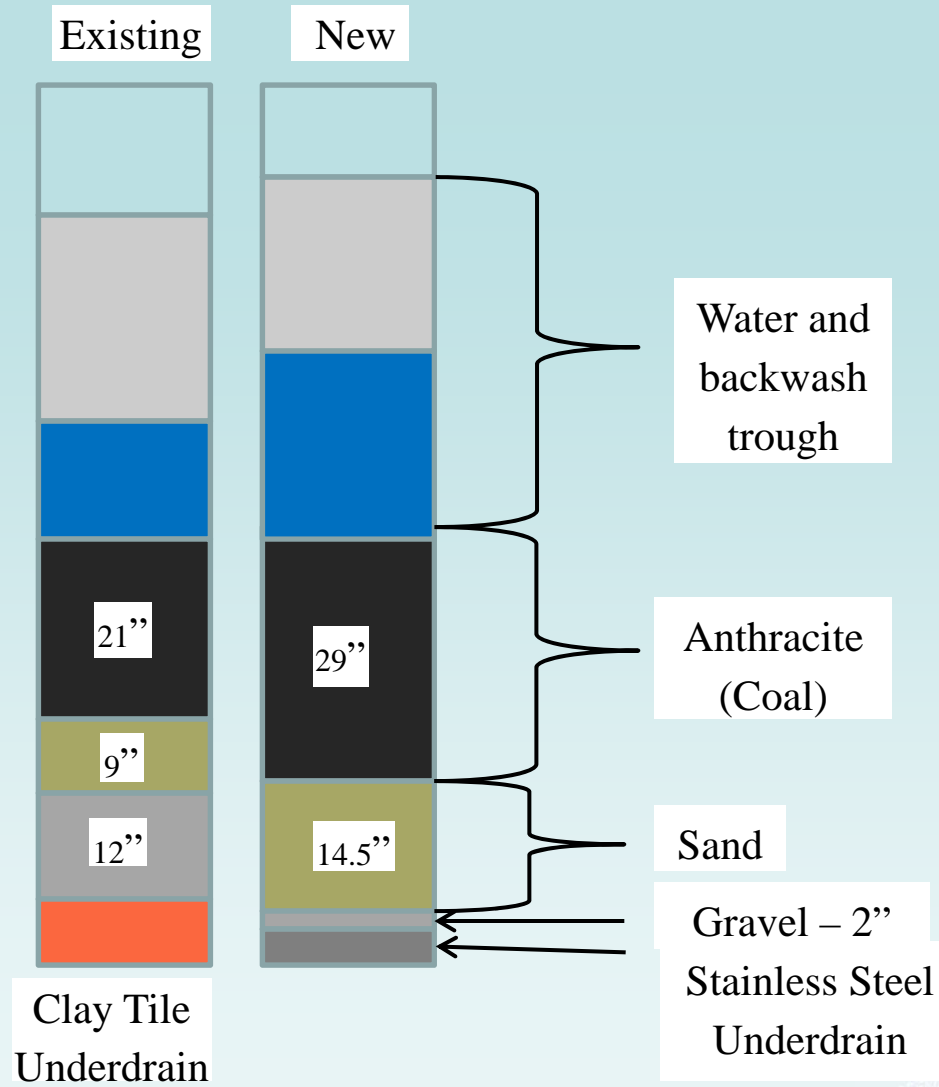


NEW

Stainless Steel Folded Plate Underdrain

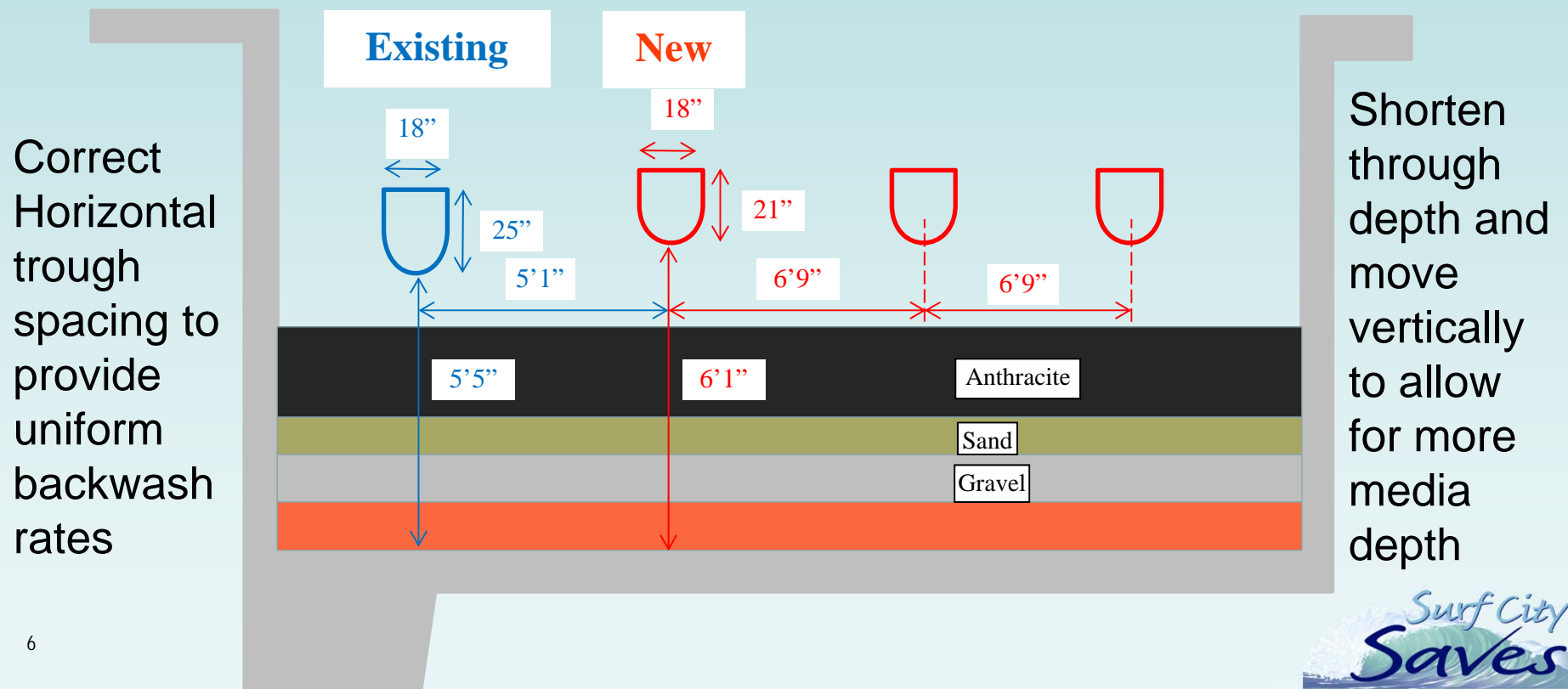


Improve Performance (Media Replacement)

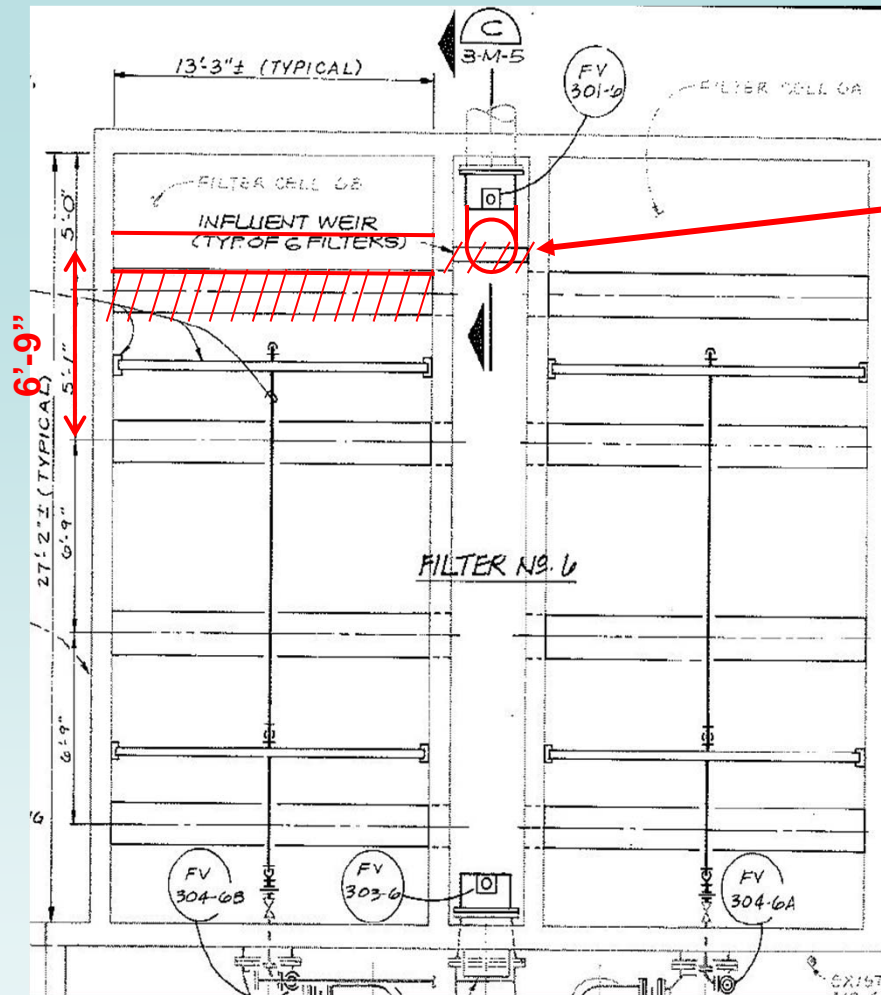


Address Backwash Issues

1. Make Washwater Trough Improvements
2. Add Polymer System to Backwash Water



Trough Spacing Improvements



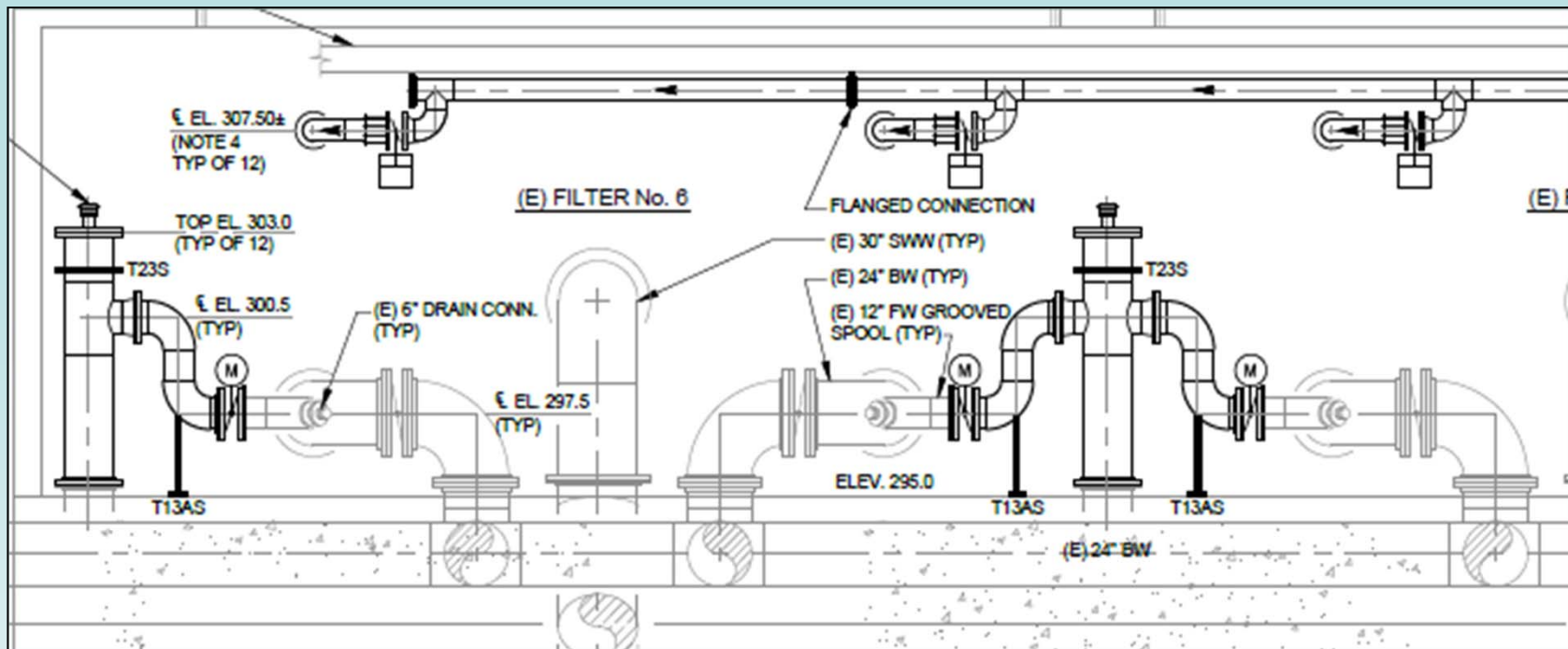
Demolish weir wall in filter gullet and replace with upturned elbow circular weir

Polymer system addition



Since the plant has no filter to waste capability, polymer will be added to backwash water to mitigate high turbidity in the filtered water after backwashing

Piping Improvements



Address Air-binding issues by installing standpipes and create a vented discharge that raises the Hydraulic Grade Line to eliminate vacuum condition in filtered water pipe

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1. Construction Cost ~4.5 Million
2. Construction Duration ~ 14 months