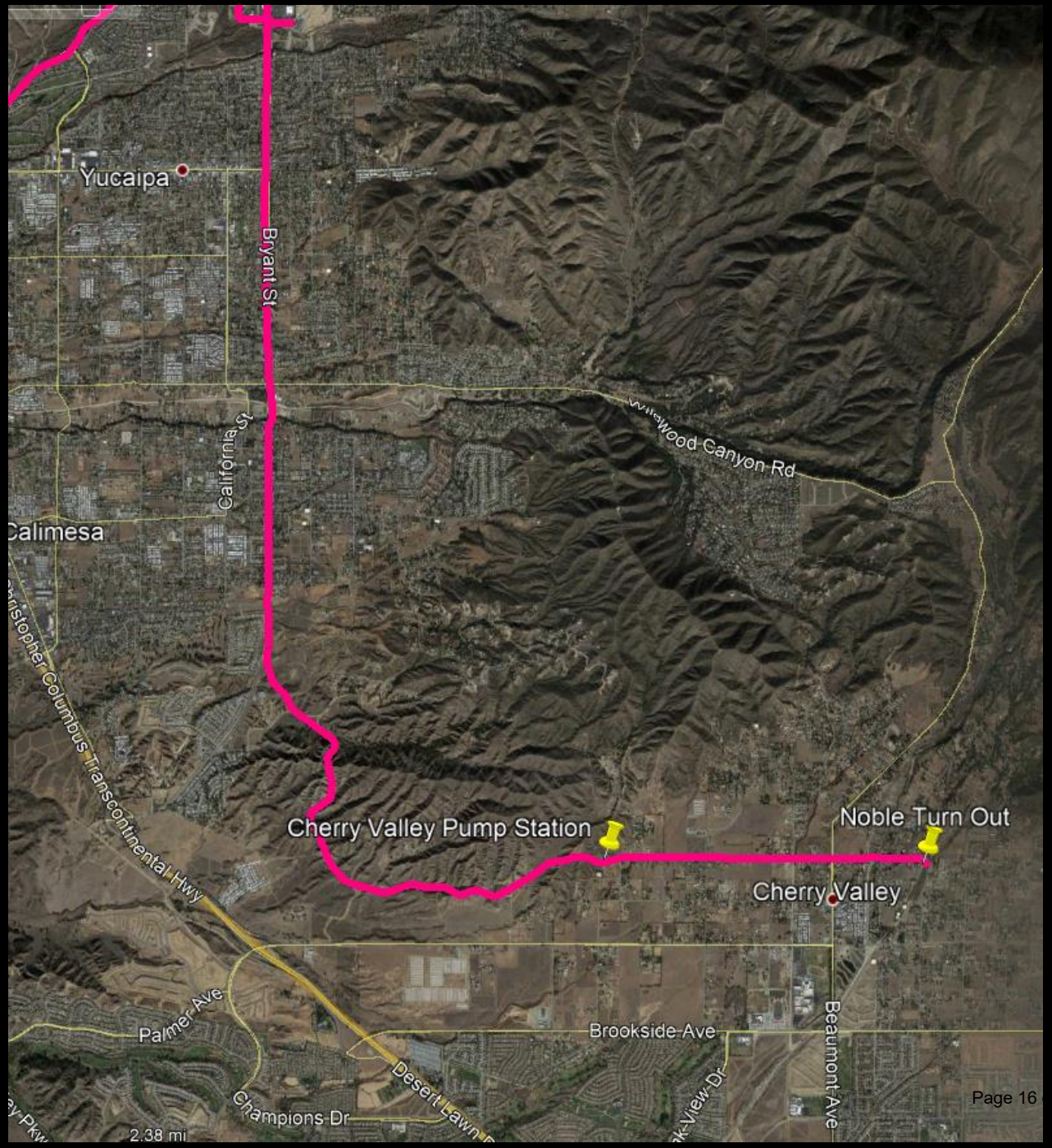
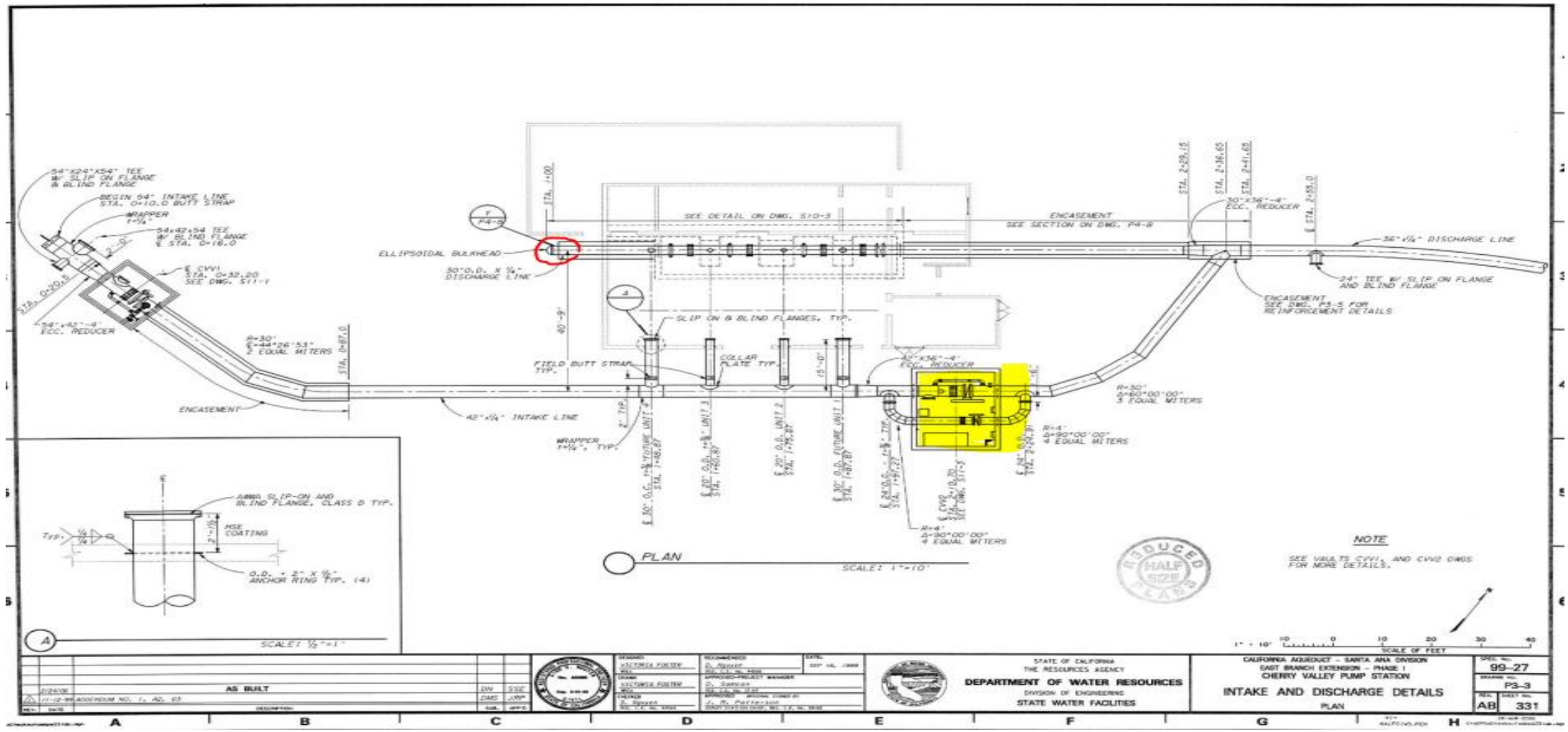
Southern Field Division East Branch Extension
Cherry Valley Pump Station


Yucaipa
Bryant St
California St
Wildwood Canyon Rd
Calimesa
Cherry Valley Pump Station
Noble Turn Out
Cherry Valley
Palmer Ave
Brookside Ave
Beaumont Ave
Champions Dr
2.38 mi

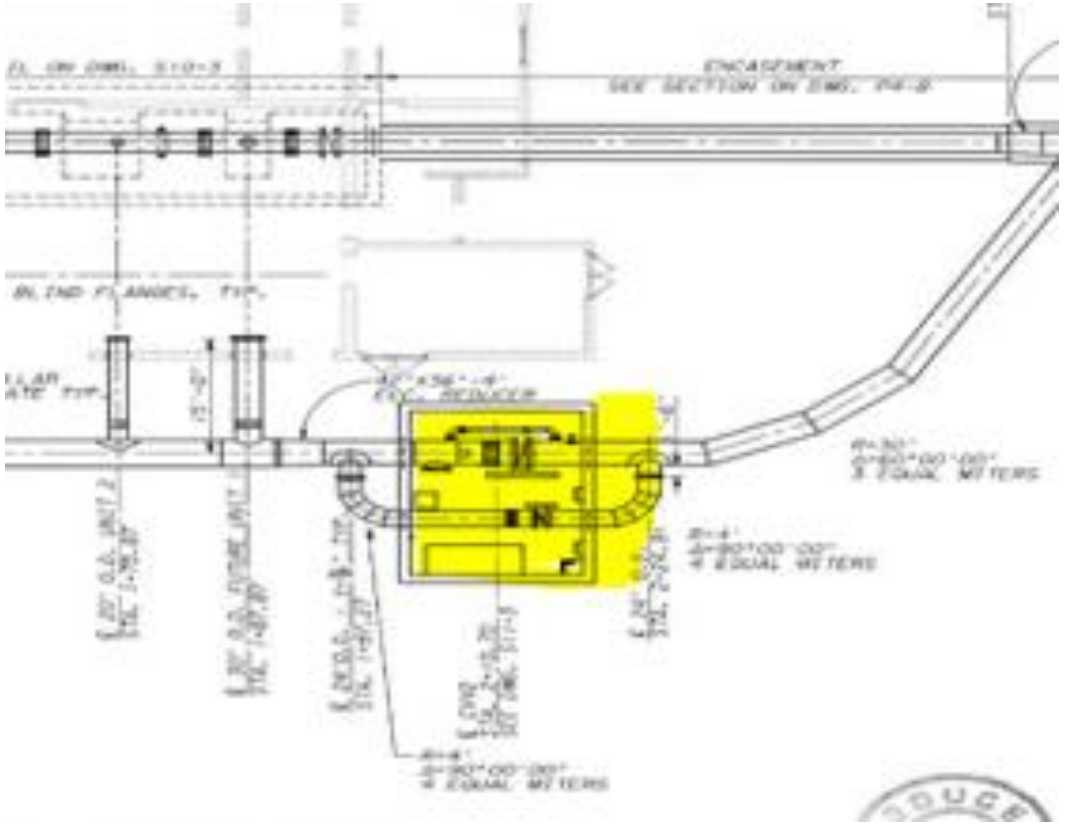
Golden Valley Ln
Taylor Dr

CVPS Intake And Discharge Details



Sequence of events

- 12/3/2020
  - SCE power shutdown due to red flag alert.
  - Battery back up depleted.
- 12/4/2020
  - SCE power restored.
  - Staff discovered HPU for bypass valves BFV-5 and BFV-7 was in alarm.
  - Electricians entered vault to reset HPU (hydraulic power unit). After resetting HPU, both bypass valves opened, releasing approximately 40 CFS.

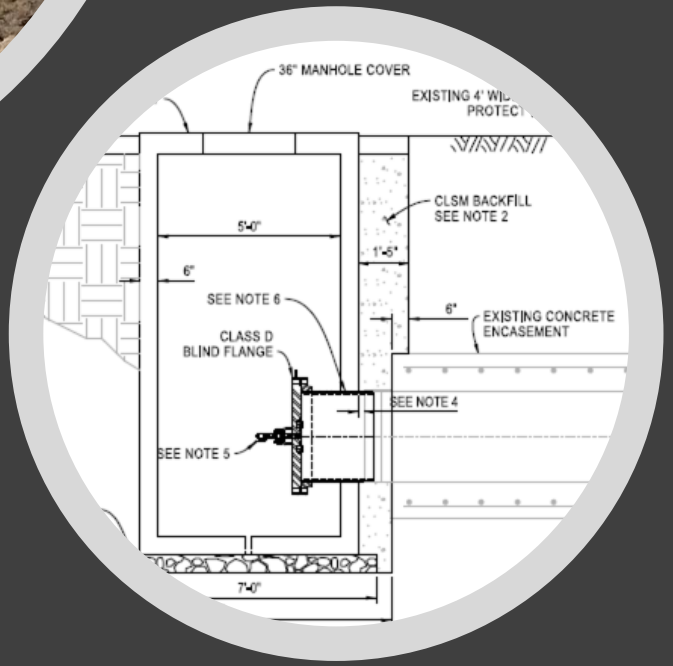


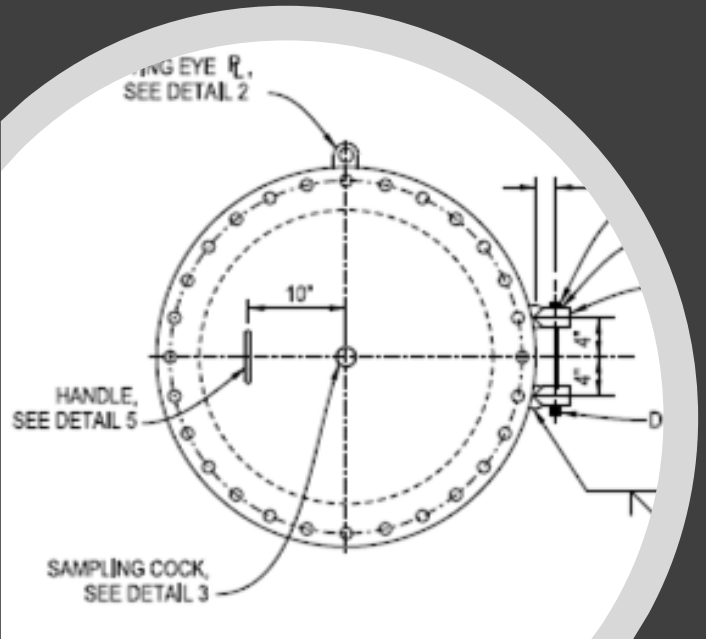
Sequence of events

- Bypass valve BFV-5 was closed then bypass valve BFV- 7.
- When the electricians exited the vault, they noticed water near the transformer pad.
- The plant was isolated by closing the inlet and outlet valves.
- It was confirmed that the bulkhead failed.

Contributing Factors

- Due to Power loss, and no permanent SEG (standby emergency generator) installed, Cherry Valley lost PLC (program logic controller) communication to the bypass HPU.
- Upon restoring power and resetting the HPU both bypass valves opened. Bypass BFV- 5 was closed then BFV-7.
- BFV-7 closed much faster than expected causing water hammer, which was with in the designed pressure thresholds.
- Root cause leading to the failure can be attributed to corrosion inside the bulkhead.





Repairs

- Upgraded Bulkhead for future inspections.
- Pump Discharge extensions and elbows.
- Pump extension riser re-coat.

Blasting & Recoating

January, 2021

Future Mitigations

- Overall comprehensive condition assessment and maintenance needs for Cherry Valley and EBX, as it relates to corrosion issues.
- Review and evaluate the PLC program/operations versus the Design Engineering Criteria.
- Review and evaluate the current operations .
- Evaluate battery life and have permanent SEG onsite to maintain power and communications during primary power loss.