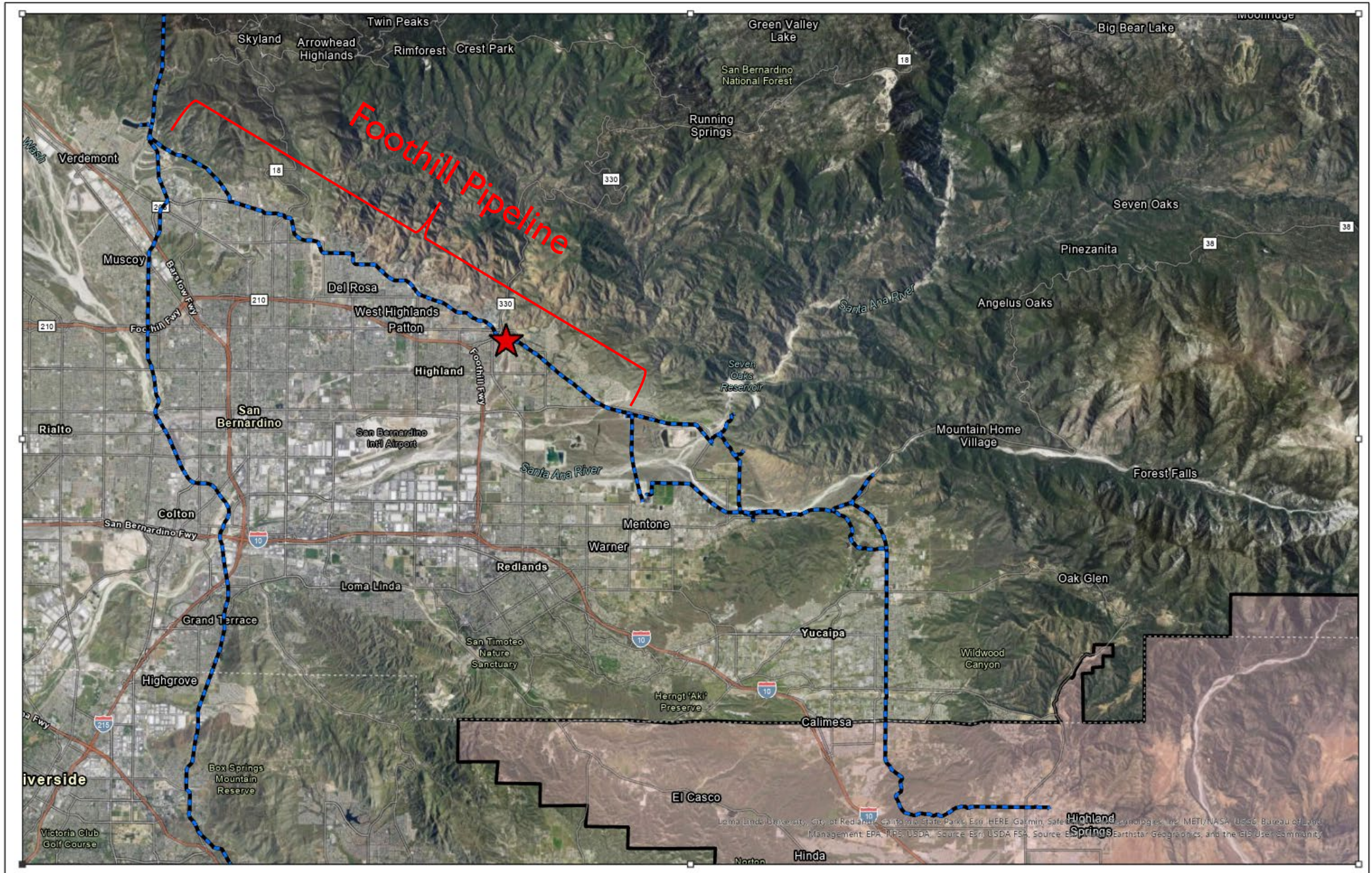


Foothill Pipeline Crossing at City Creek



A REGIONAL WATER AGENCY
SINCE 1954





Loma Linda University, City of Redlands, California State Parks, Esri, HERE, Garmin, SafePoint, DeLorme, GeoEye, (Geo)Portal, Inc., METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Source: Esri, USDA, FS, Source: Esri, NOAA, Earthstar* Geographics, and the GIS User Community

Background & History



1975 - Foothill Pipeline Constructed

2000 - Inland Feeder Highland Pipeline Constructed

2003 – Wildfires and 8,000 cfs Storm Flow

2005 - 9,900 cfs Storm Flow in City Creek

2005 – Channel cleared of debris

2005 – MWD notices erosion in City Creek

2006 – E&H Scour Analysis Report for MWD

2006 – B&V Engineering Report for MWD

2007 – SBVMWD design of Temp. Rip Rap Blanket

2008 – West Scour Analysis Report for SBVMWD

2009 – SBVMWD Constructs Temp. Rip Rap Blanket

2010 – December storms threaten Foothill Pipeline

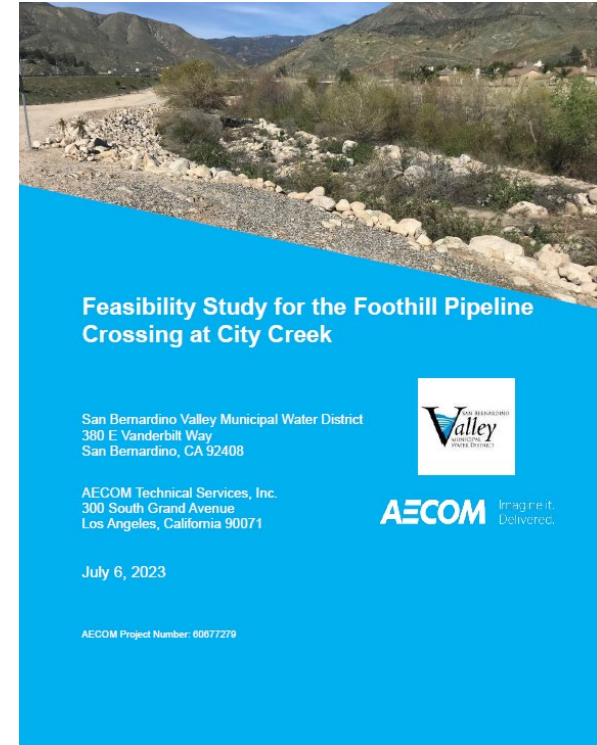
2010 – Remedial repairs lost to 50-year storm event

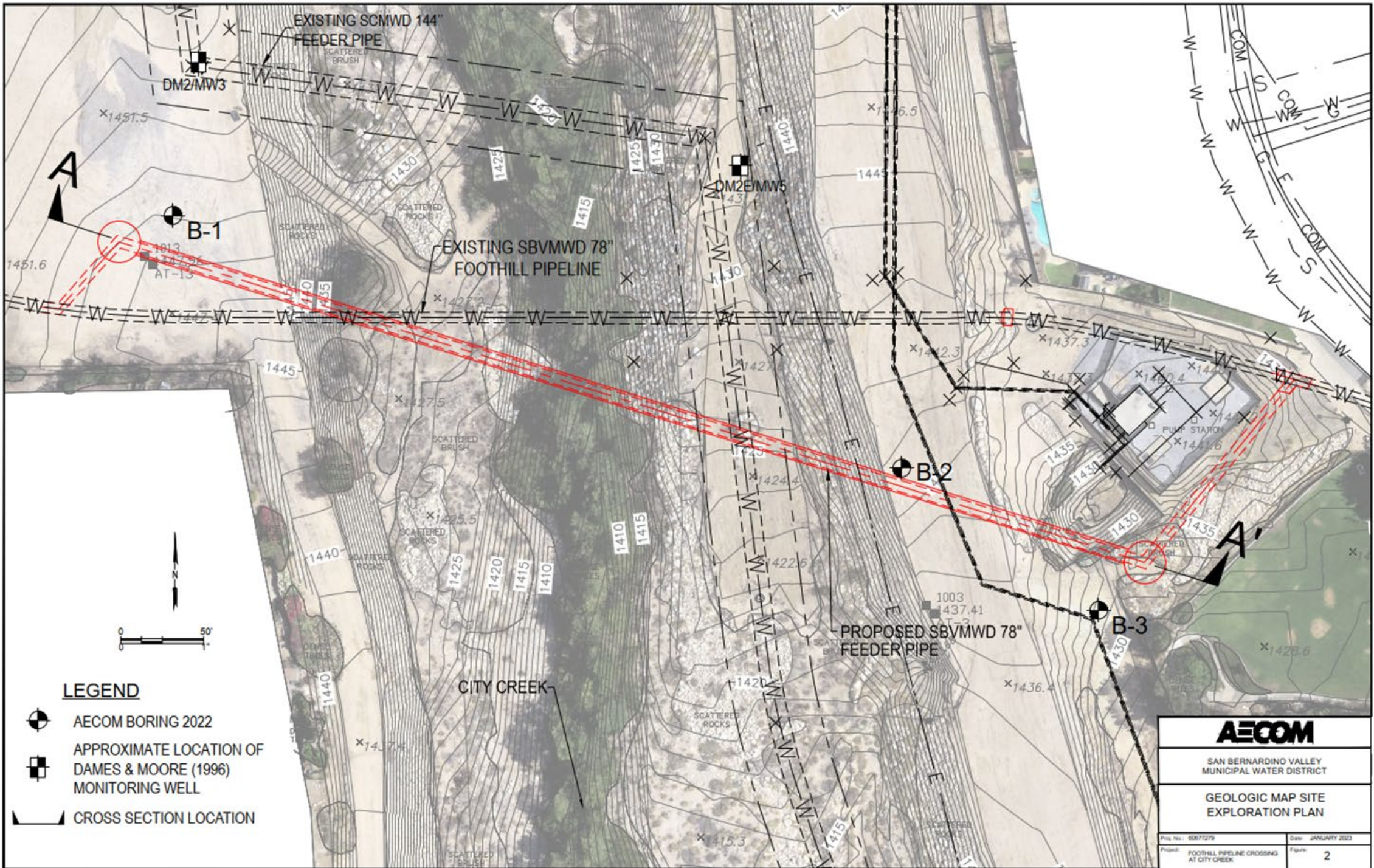
Current – Yearly storm events continue to erode/scour stream channel bottom

Feasibility Study Summary




Contents:

1. Geotechnical Investigations
2. Alignment Evaluation
3. Tunnel Feasibility
4. Risk Analysis
5. Regulatory Agency Requirement
6. Opinion of Probable Construction Cost
7. Conclusions and Recommendations

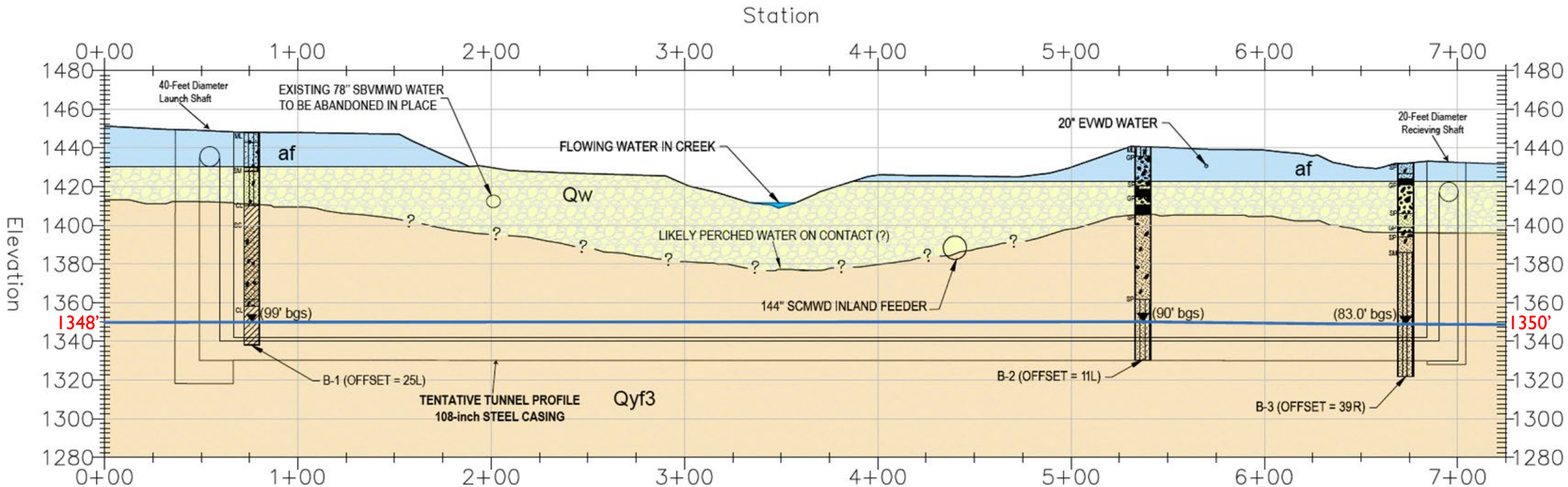




LEGEND

-  AECOM BORING 2022
-  APPROXIMATE LOCATION OF DAMES & MOORE (1996) MONITORING WELL
-  CROSS SECTION LOCATION

AECOM	
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT	
GEOLOGIC MAP SITE EXPLORATION PLAN	
Proj. No.: 50677279	Date: JANUARY 2023
Project: FOOTHILL PIPELINE CROSSING AT CITY CREEK	Figure: 2



LEGEND

GEOLOGY

- af = ARTIFICIAL FILL, SAND, GRAVEL, SILTY SAND WITH OCCASIONAL COBBLES & BOULDERS
- Qw = HOLOCENE WASH DEPOSITS, UNCONSOLIDATED, SAND & CLAY WITH COBBLES & BOULDERS
- Qyf3 = MIDDLE HOLOCENE ALLUVIAL FAN DEPOSITS, SLIGHTLY TO MODERATELY CONSOLIDATED, SAND, SILT & CLAY

GROUNDWATER LEVEL

USCS LOG KEY

- SILT (ML)
- POORLY-GRADED GRAVEL GP
- SILTY SAND (SM)
- POORLY-GRADED SAND (SP)
- CLAY (CL)
- Boulder
- CLAYEY SAND (SC)

Upcoming Project Components



Component	Status	Anticipated Cost
Design/Permitting	Kicking Off Q4 2023	~\$900k
Construction	Anticipated Q4 2024	~\$16M



Questions?