Interlake Tunnel
Meeting with Property Owners

July 14, 2014

Agenda

1. Introductions
2. Purpose of meeting
3. Purpose of the project
4. Project information review
   A. Environmental process initiated
   B. Conceptual horizontal and vertical alignment
   C. Construction methodologies
   D. Project schedule
5. Water supply protection plan
   A. MCWRA commitment to property owners
6. Groundwater data collection initiative
   A. Develop baseline conditions
   B. Data for project design considerations

Introductions

Project Owner

EPC Consultants, Inc

Program Management

HOLLENBECK CONSULTING

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Phenix
Environmental Planning

Conceptual Engineering

Horizon
WATER and ENVIRONMENT

Environmental services

Purpose of meeting

1. Share information with property owners in vicinity of proposed tunnel alignment
2. Obtain information from property owners regarding wells and water supply

Purpose of the project

The Monterey County Water Resources Agency manages, protects, and enhances the quantity and quality of water and provides specified flood control services for present and future generations of Monterey County.

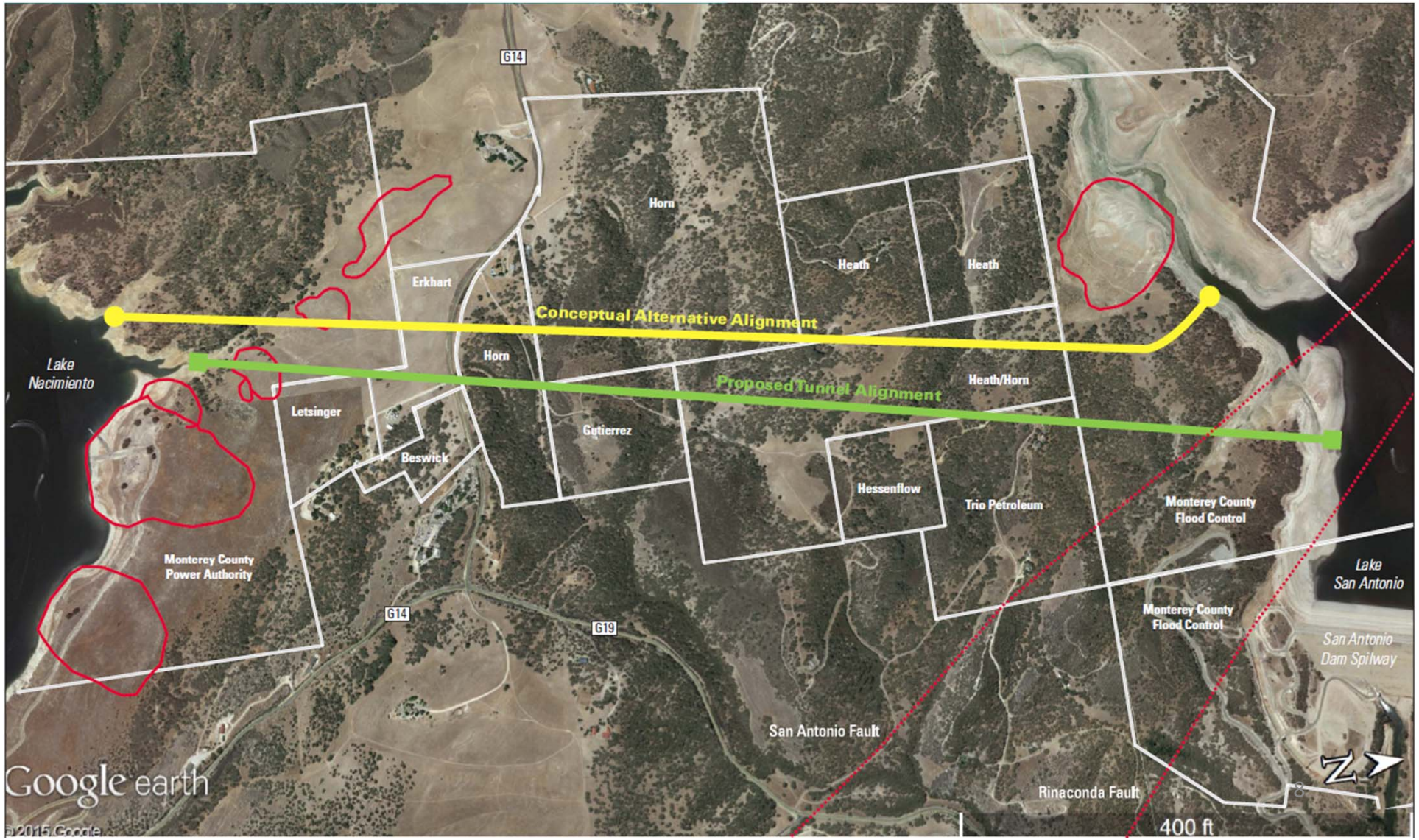
The Interlake Tunnel is a proposed beneficial project under the auspices of MCWRA to provide flood control and enhance the quantity of water supply for Monterey County.

Project objectives

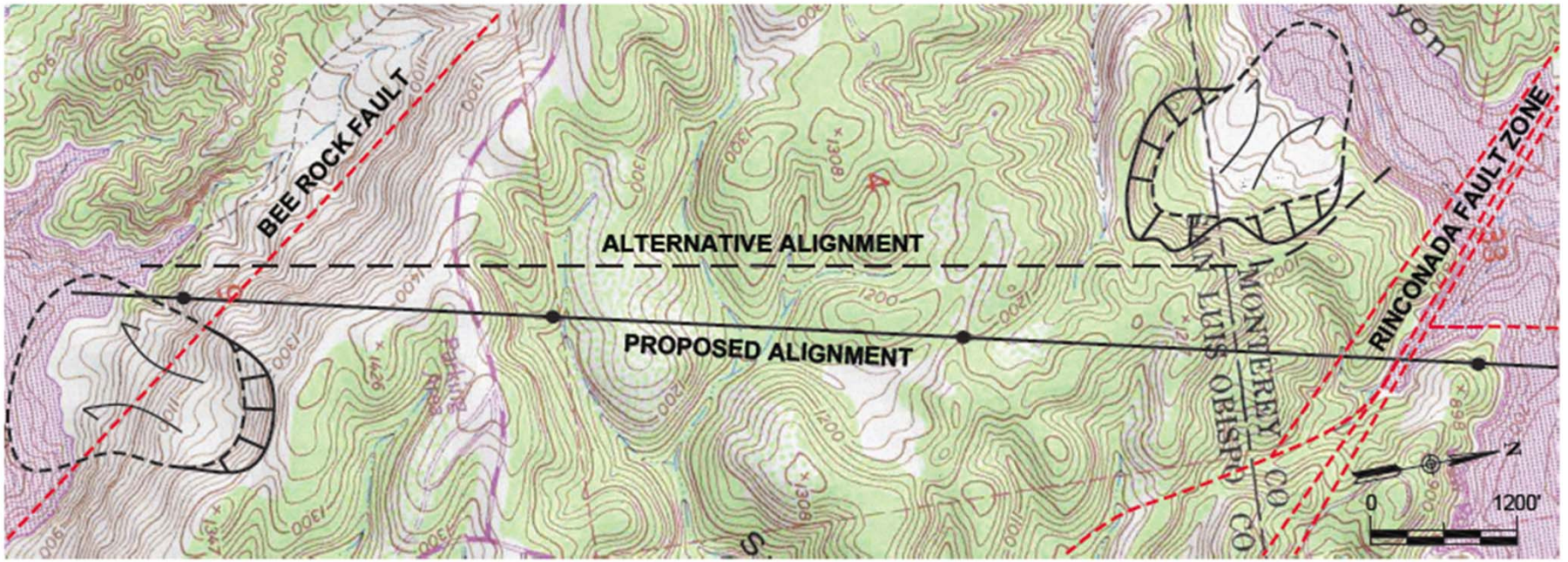
- Minimize flood releases from Nacimiento reservoir and reduce associated downstream flood damages;
- Increase the overall surface water supply available from Nacimiento and San Antonio reservoirs by maximizing the opportunity for water to be collectively stored in the reservoirs;
- Improve the hydrologic balance of the groundwater basin in the Salinas Valley and reduce seawater intrusion;
- Continue to meet environmental flow requirements
- Minimize impact on existing hydroelectric production
- Preserve recreational opportunities in the reservoirs
- Protect agricultural viability and prime agricultural land

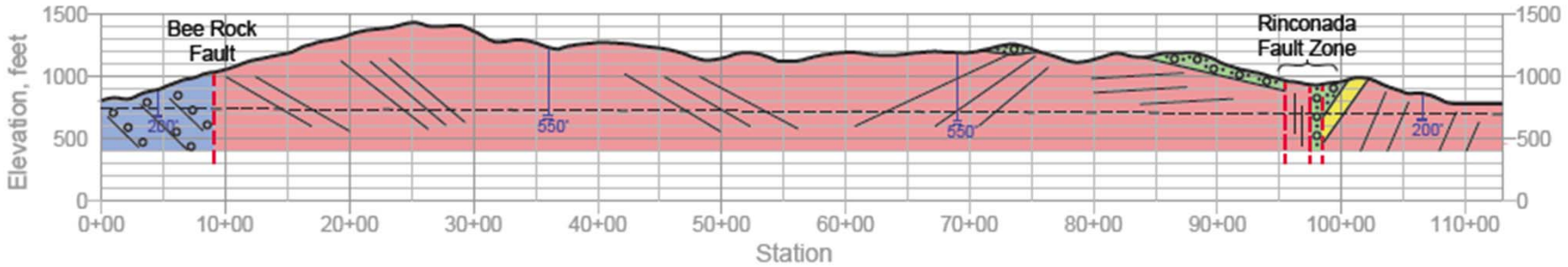
Interlake Tunnel overview

Conceptual Tunnel alignment option - MWH



Conceptual Tunnel alignment option - MJA





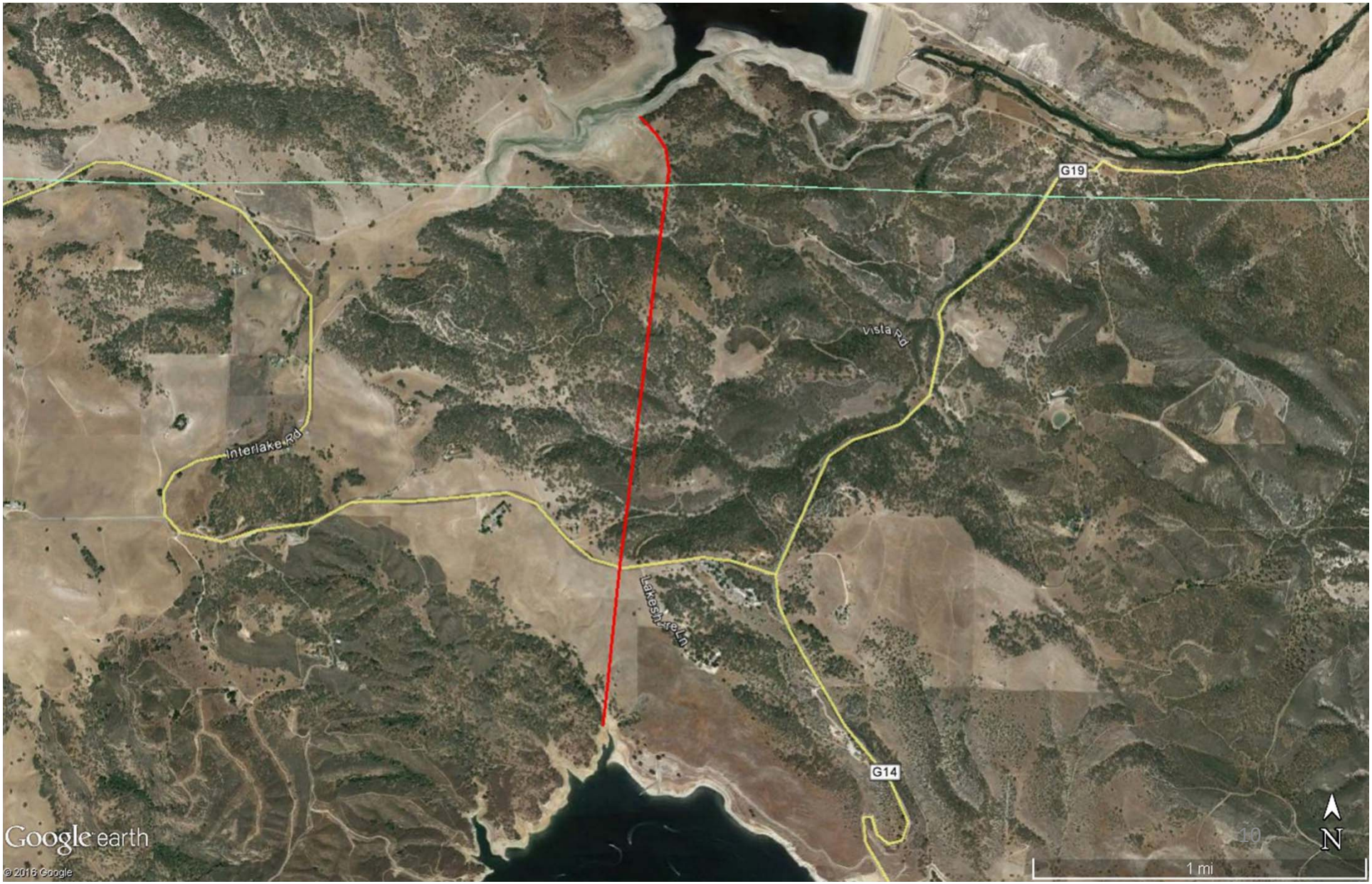
Key

- Approximate Tunnel Horizon
- Proposed Boring
- Approximate Dip of Bedding Planes
- Fault
- Proposed Boring
- Possible Landslide

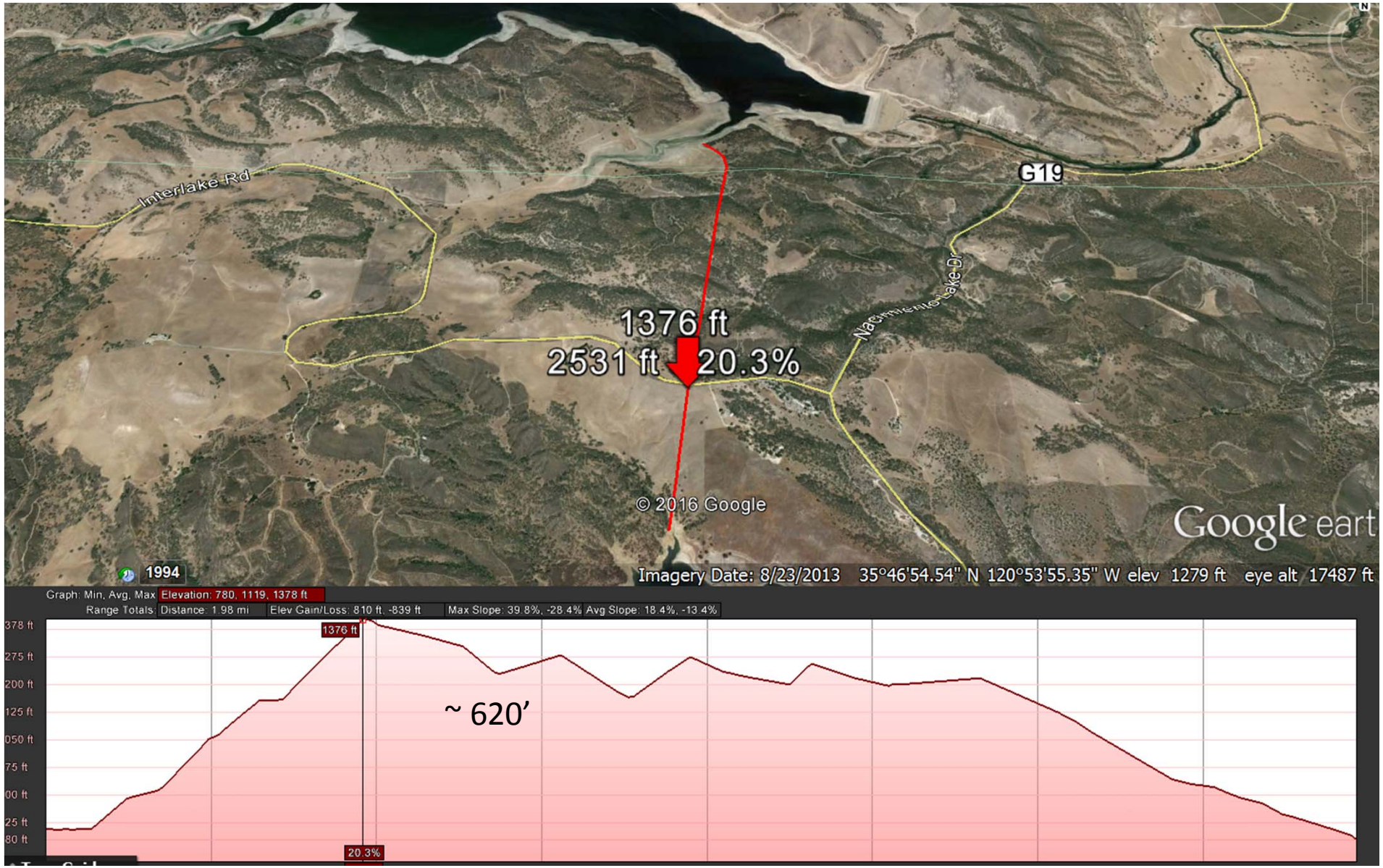
Geologic Profile

- Paso Robles Formation
- Santa Margarita Sandstone
- Monterey Formation
- Upper Cretaceous Sediments

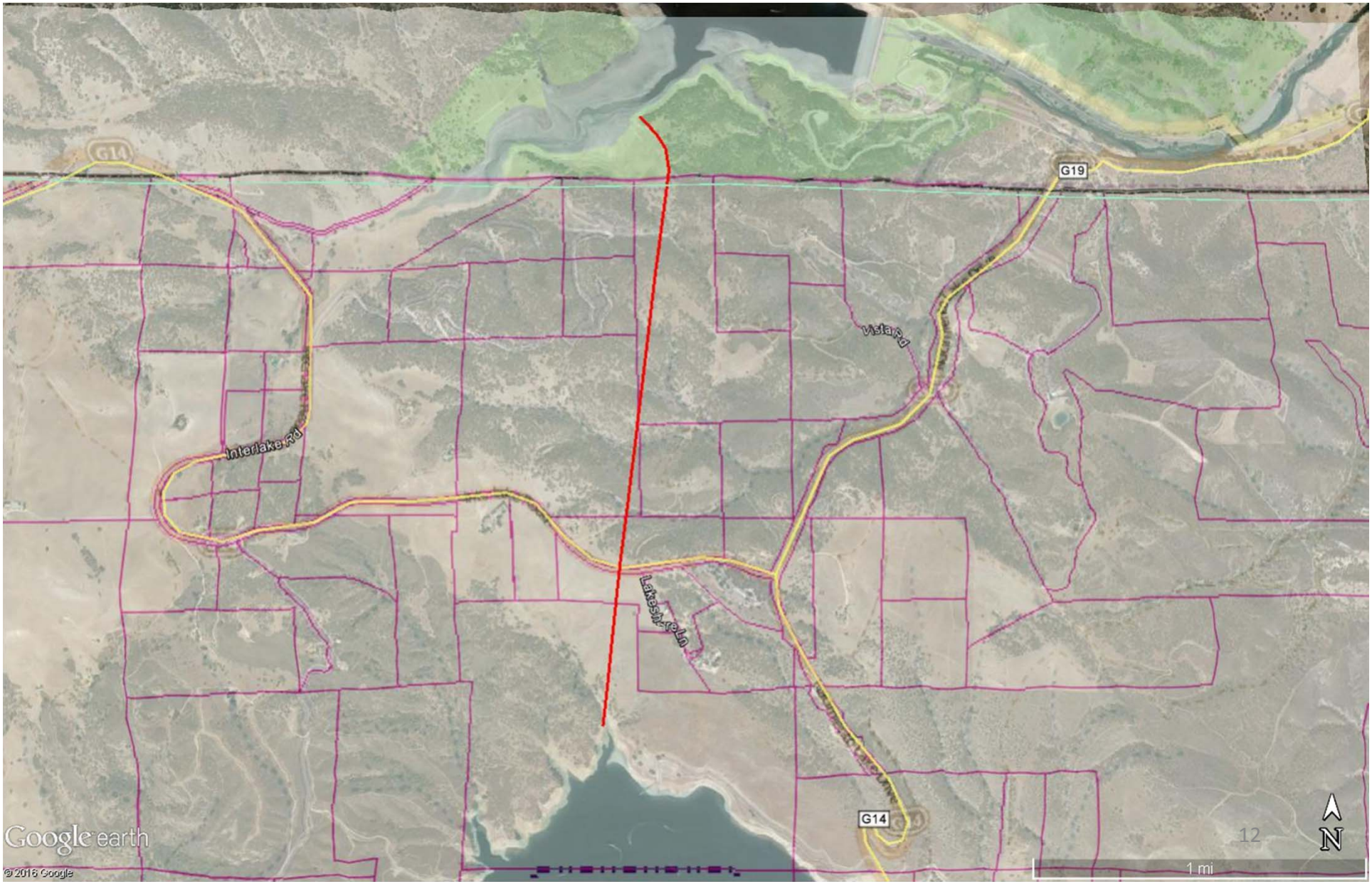
Conceptual tunnel alignment option



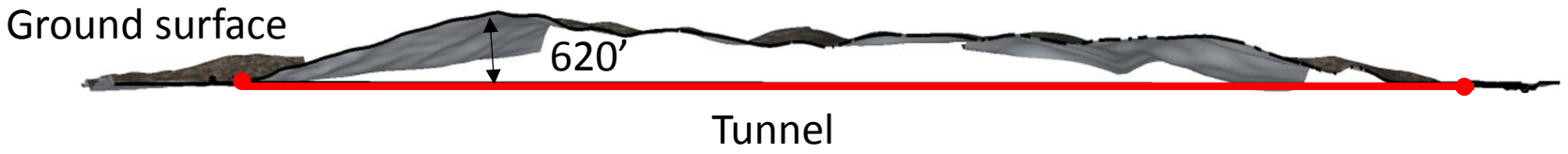
Conceptual tunnel alignment option



Conceptual tunnel alignment with SLO County parcels



Conceptual portals and tunnel profile



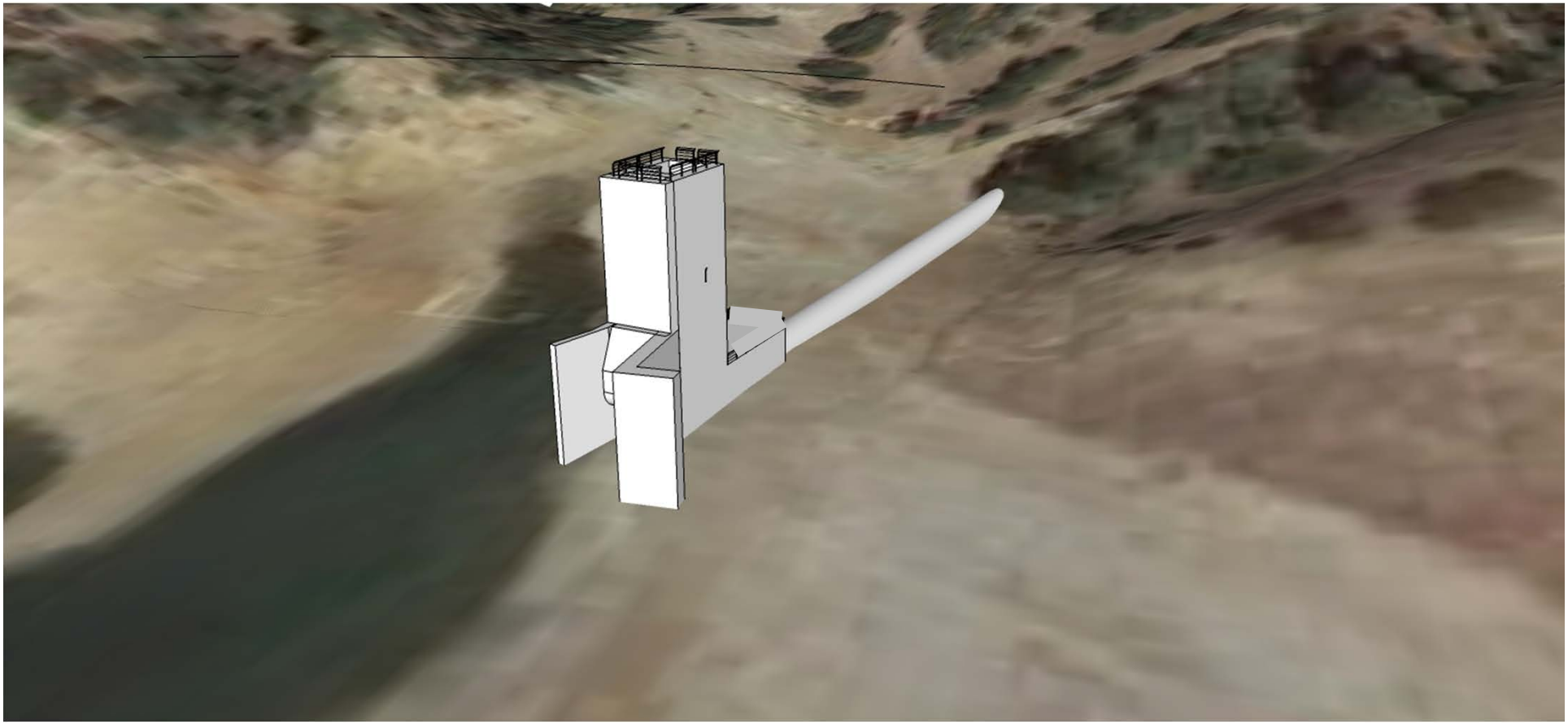
Nacimiento portal

Portal Invert Elevation (~745’)
Spillway elevation ~ 800’

San Antonio portal

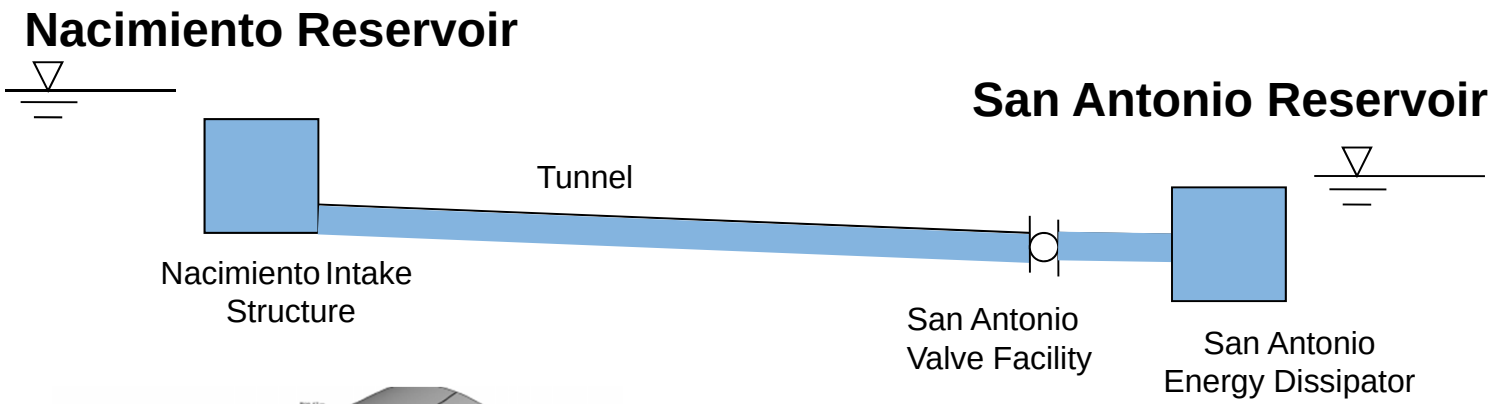
Portal Invert Elevation (~695')
Spillway elevation ~ 780’

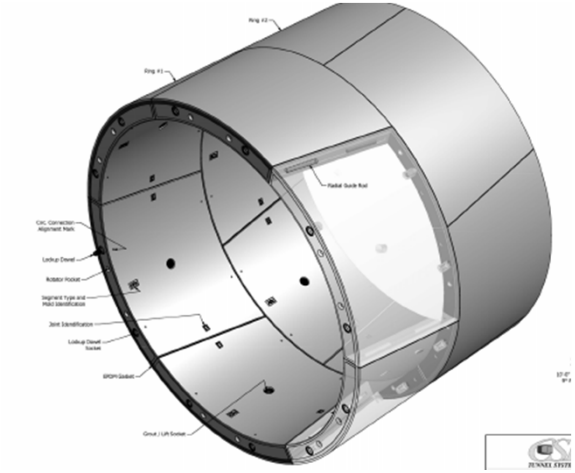
Nacimiento intake structure concept

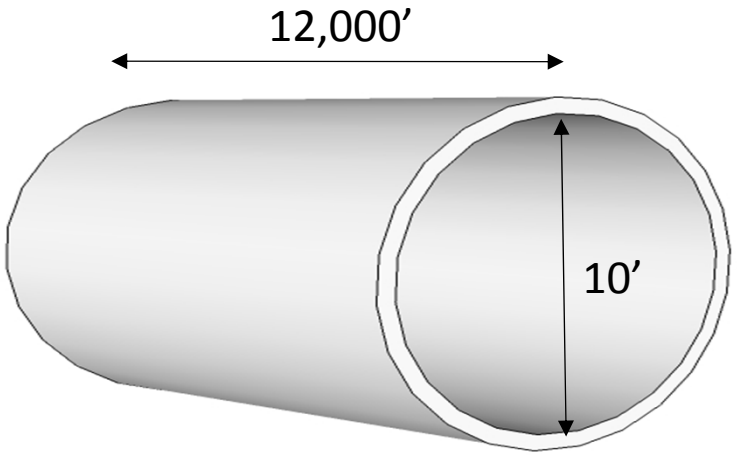


Interlake Tunnel Concept

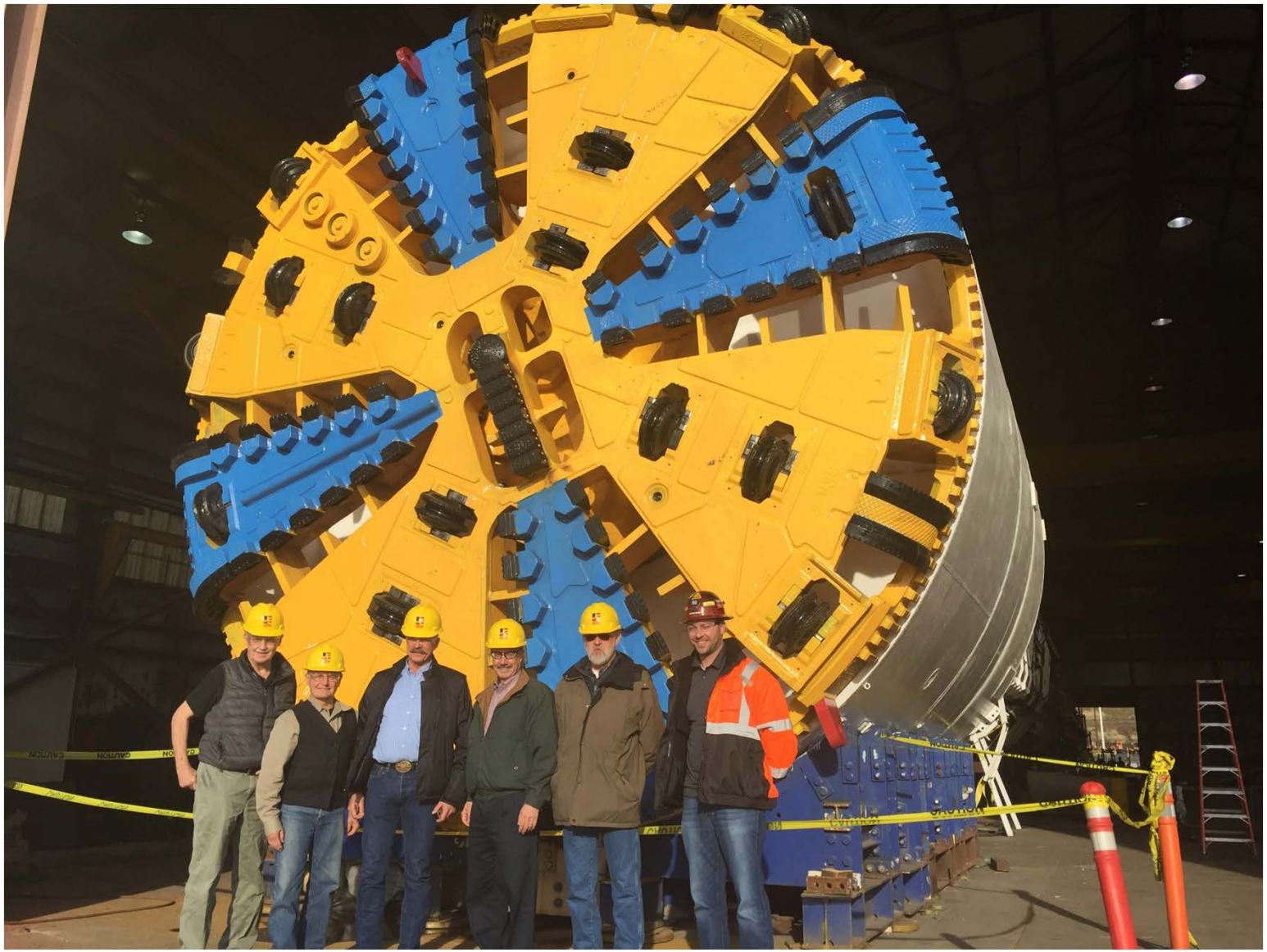
Tunnel maximum flow capacity ~ 1,700 CFS





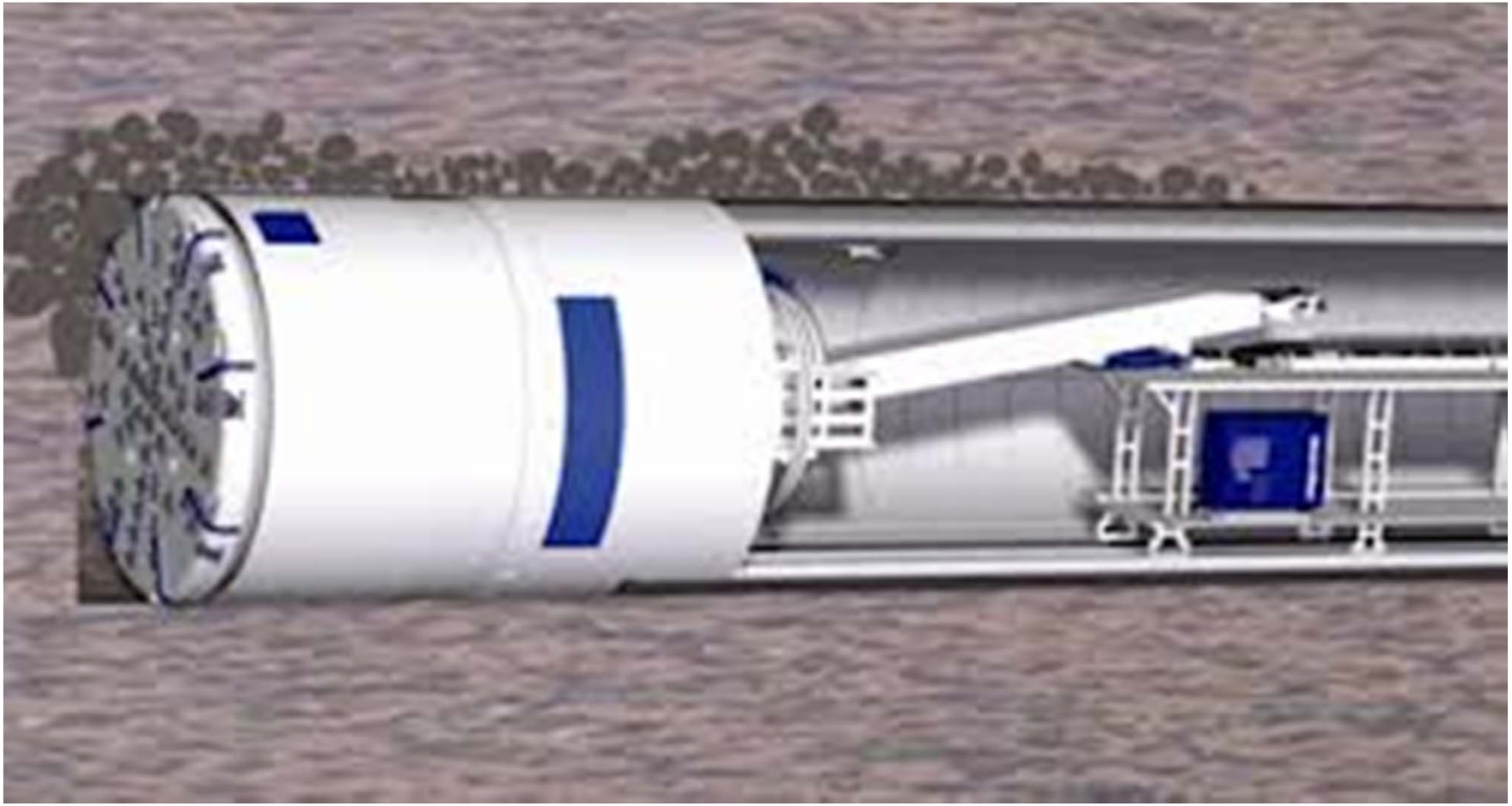


Construction Methodology Alternatives
Tunnel Boring Machine

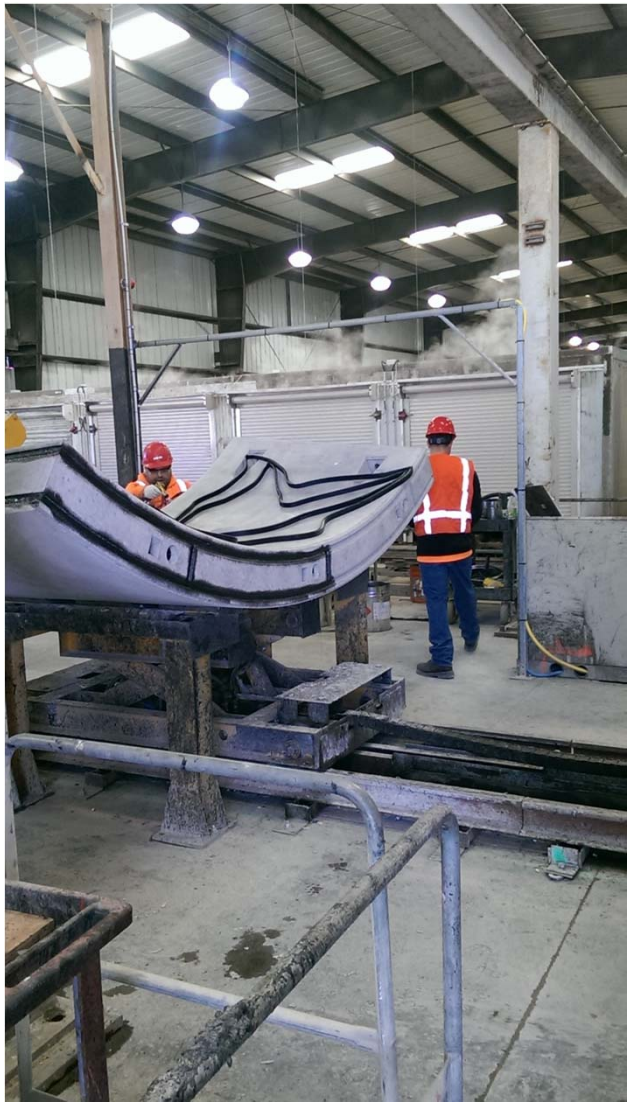


TBM shield and trailing gear

TBM excavation and installation of pre-cast concrete segmental lining



Pre-cast segmental lining system



Roadheader excavator with ribs and lagging

Roadheader excavation

Shotcrete initial lining

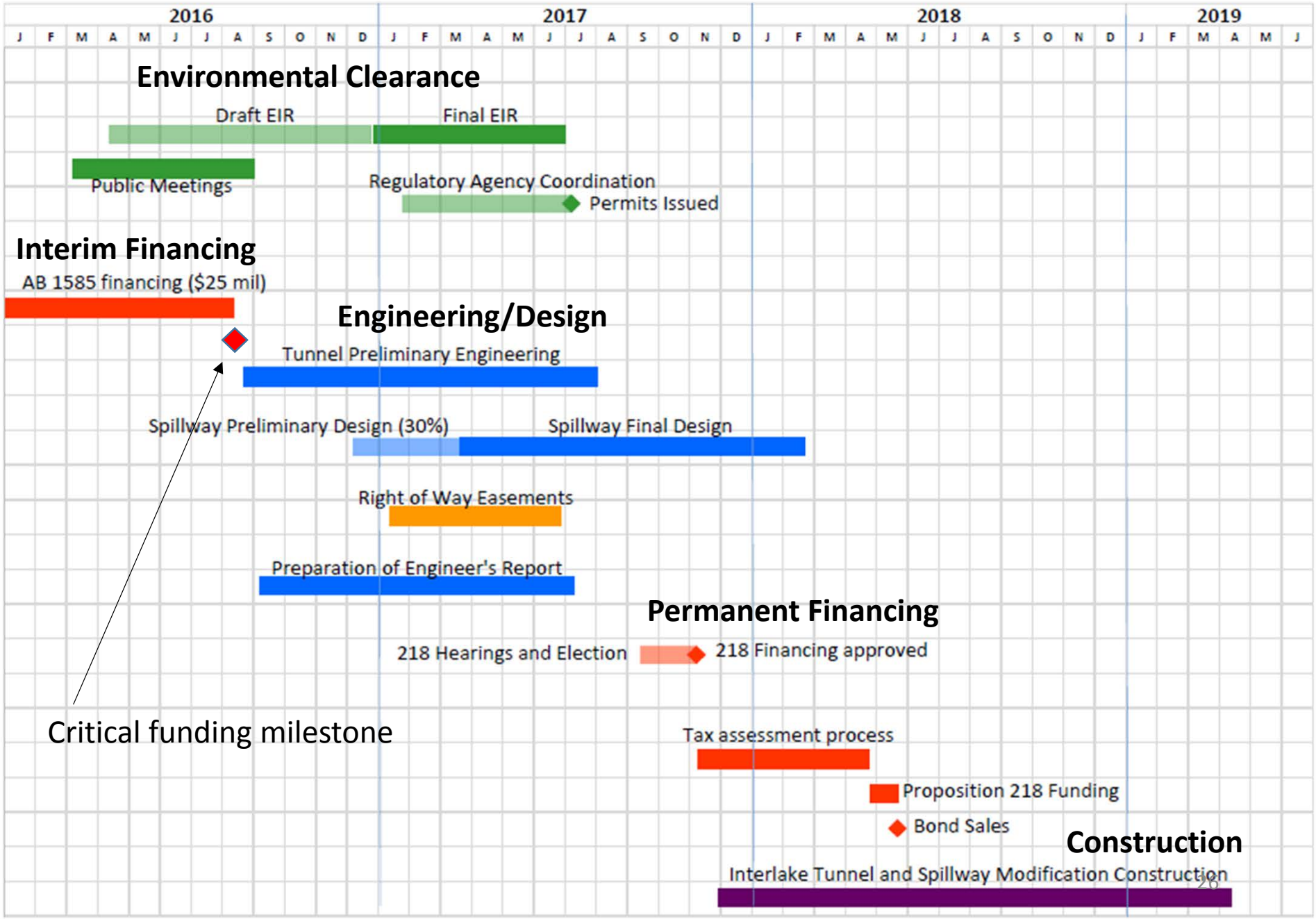
Cast in place final lining

New Crystal Springs Bypass Tunnel

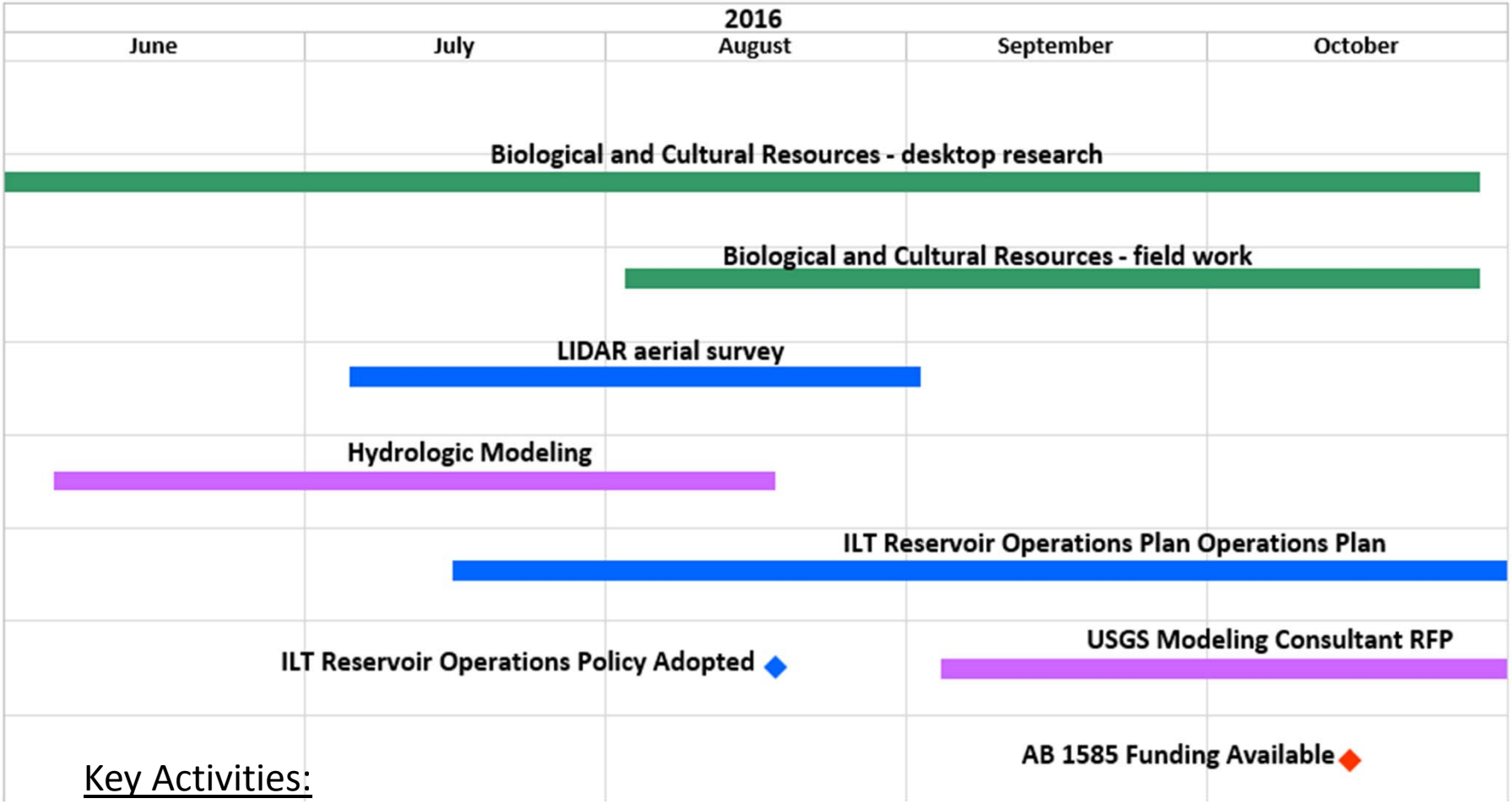
11’ diameter

Tunnel portal at San Antonio example

Interlake Tunnel – Program Schedule



5 Month Look Ahead Schedule



Key Activities:

- Biological studies and surveys
- LiDAR aerial survey of project site and connected rivers
- Finishing hydrologic modeling scenarios
- Development of ILT Reservoir Operations Policy and Plan

MCWRA Water Supply Protection Plan

Before the Board of Directors of the Monterey County Water Resources Agency
County of Monterey, State of California

RESOLUTION No. **16-R03**

RESOLUTION OF THE MONTEREY COUNTY WATER RESOURCES AGENCY IDENTIFYING PRELIMINARY MITIGATION MEASURES FOR POSSIBLE IMPACTS TO PRIVATE WELLS CAUSED BY CONSTRUCTION OF THE INTERLAKE TUNNEL AND SPILLWAY MODIFICATION PROJECT	)))))

1. The Agency is committed to mitigating the potential impacts to private wells as a result of the construction and operation of the tunnel. The mitigation measures will include the implementation of construction techniques to avoid impacts to ground water during construction and operation of the tunnel to the extent feasible and provisions for other mitigation measures to fully address impacts to wells that can be proven to result from construction or operation of the tunnel project.

Resolution # 16R-03

To ensure that project–related impacts are minimized, the EIR will undertake analysis to identify impacts and appropriate mitigation. This will include preparation and implementation of a groundwater management plan, including:

1. a baseline inventory of wells and their existing condition;
2. preconstruction monitoring of wells;
3. groundwater modeling to evaluate potential groundwater inflows into the tunnel and probable effects to well;
4. consideration of the placement of supplemental storage tanks on property where it is determined that wells may be impacted to make up for potential shortfalls during construction;
5. development of a notification system for property owners to report any changes in well conditions during and after construction; and,
6. a contingency plan for the provision of supplemental water for wells that are determined to be affected by the project; this water could be a combination of potable water for human consumption and non-potable water for landscaping and livestock.

Resolution # 16R-03

If plan needs additional mitigation measures, those measures will be evaluated and brought back to the BOD for inclusion and approval

Groundwater data collection initiative

A. Develop baseline conditions
B. Data for project design considerations

GROUNDWATER INVENTORY QUESTIONNAIRE

Accessor's Parcel No. _____

Landowner:/Tennant: _____ Cell Phone: _____

Mailing Address: _____ Home Phone: _____

1. Are there wells or springs on the property? Yes No
   If yes, how many wells? _____ If yes, how many springs? _____
   (Please complete a questionnaire for each well or spring on the property.)

2. Is the residence: Owned Rented

3. What is the Groundwater Source? Well Spring

4. What is the water usage? Domestic Drinking Supply Household Use Only
   Landscape Irrigation Livestock
   Other:

5. What is the condition of the well or spring for the use designated above? Active Inactive
   If inactive, why? _____

6. Does any other household/property use the same well or spring? Yes No
   If yes, please provide name and address: _____
   How many persons use the well or spring: _____

7. Is there water treatment on well or spring? Yes No
   If yes, what kind of treatment? _____

8. Describe the most recent maintenance performed on your well or pump:
   _____

9. Depth of Well: _____ Diameter of Well: _____

10. Static Water Level (and date last measured): _____ Depth of Pump: _____

11. Flow Rate of well or spring, and date last evaluated (gpm) _____

12. Has the well or spring ever been sampled for quality? Yes No
Do you still have the data? Yes No

13. In the user's opinion, what is the quality of the water? _____
List any complaints and describe the water: _____

14. Has the user ever noticed a change in water quality/quantity of the water in well or spring?
Yes No
If so, what was the change and when? _____

15. Does the water stain any surfaces? Yes No
What color? _____ What kind of surfaces? _____

16. Has the well or spring ever gone dry? Yes No
If so, how often does this happen? _____
At what time of year does this normally occur? _____

17. Has a pump test ever been conducted on the well? Yes No
If so, when and do you know what recharge quantity was estimated? _____

18. Is the well cased? Yes No If so, what depth? _____

19. Who drilled the well? _____ What year? _____
Is a well log available? Yes No

20. If the water source is a spring, has it been properly developed? Yes No
Explain: _____

21. How far away from point of use (i.e. residence or stock watering location) is the well or spring located? _____
What direction? _____

22. Do you have any other relevant data for your well or spring? Yes No
If so, please describe: _____

Well or Spring Location: USGS Quad _____
____1/4____1/4 Section _____ TWP_____RGE _____
Coordinates: Longitude_____ Latitude_____

Questions