



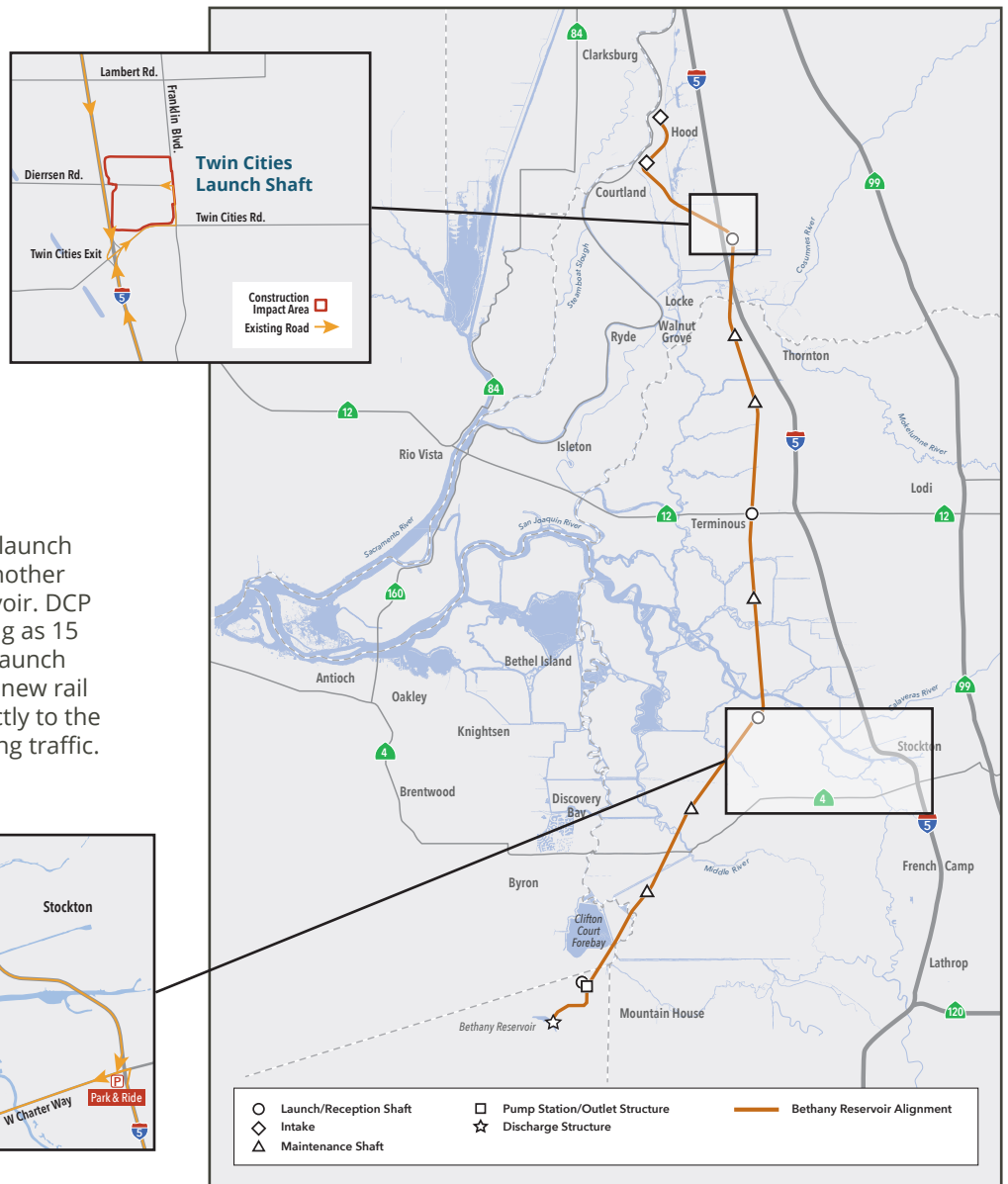
DCA

A CLOSER LOOK: CONSOLIDATING LAUNCH SHAFT SITES

Launch shaft sites are the largest land footprints of the Delta Conveyance Project (DCP) proposed project (Bethany Reservoir Alternative) given the acreage it takes to place tunnel boring machines into the ground, support tunneling operations, and store the reusable tunnel material (RTM) excavated from the tunnel. The Delta Conveyance Design and Construction Authority (DCA), working at the direction of the Department of Water Resources (DWR), has identified a way to construct 45 miles of tunnel with only two launch sites, each including two launch shafts, that are strategically located to minimize impacts.

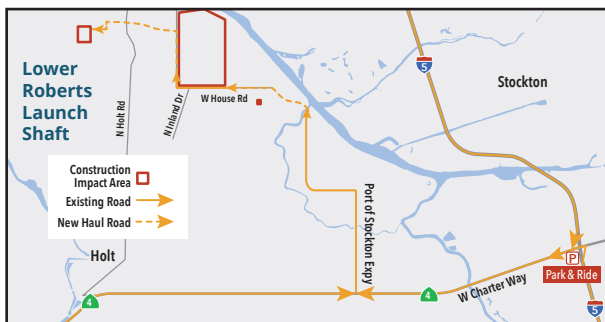
Twin Cities Complex

At the 586-acre Twin Cities Complex, one tunnel will launch northward to the two proposed intakes on the Sacramento River and another southward to meet up with the tunnel driven northward from Lower Roberts Island. Locating the launch site adjacent to Interstate 5 helps to consolidate traffic on major roadways and avoid rural routes. The launch site is close enough to the intakes to avoid launch shafts near the river or the Stone Lakes National Wildlife Refuge.



Lower Roberts Island

At Lower Roberts Island, one tunnel will launch northward from the 610-acre site and another southward to a site near Bethany Reservoir. DCP plans for tunnel machines to bore as long as 15 miles in order to reduce the number of launch sites. Located near the Port of Stockton, new rail infrastructure can connect the Port directly to the Lower Roberts Island launch site, reducing traffic.



Site Selection: With Impacts, Logistics in Mind

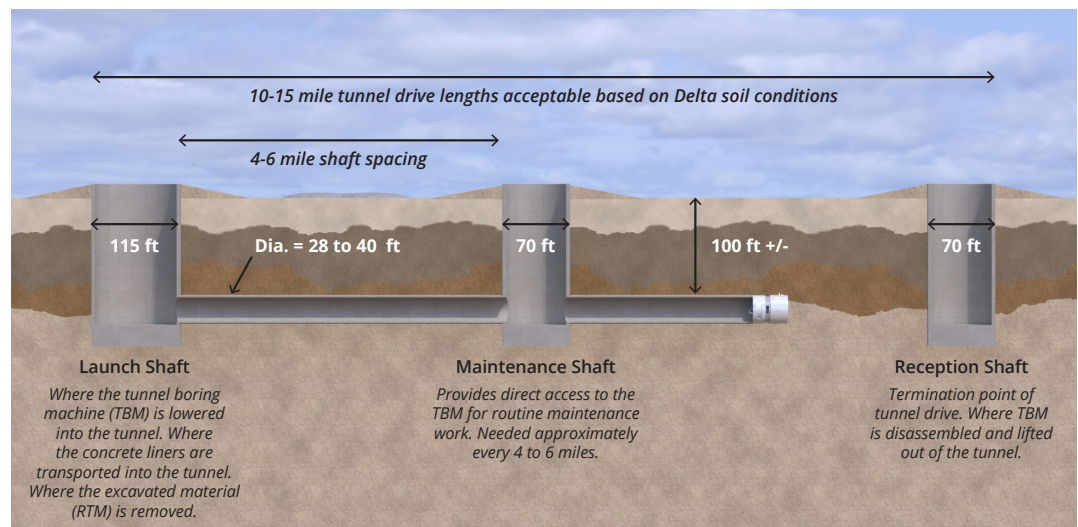
DCA under the direction of DWR examined potential shaft sites throughout the Delta and also received input from its Stakeholder Engagement Committee. The process identified the two proposed sites based on comparisons using the same criteria:

- Construction Considerations – Proximity to and quality of existing roads, rail, and barge routes, condition of existing levees, and proximity to existing high voltage power.
- Geotechnical Considerations – Geologic unit(s) and peat/organics thickness.
- Property and Land Use – Number of landowners, future development, farmland designations, conservation land, refuges, preserves, and critical vernal pool habitat.
- Existing Infrastructure – Presence of existing structures (houses, barns, schools, etc.), powerlines, gas pipelines, aqueducts, water supply wells, gas wells, and oil production fields.

Managing Reusable Tunnel Material

At both the Lower Roberts and Twin Cities sites, the RTM excavated by the tunnel boring machines would be planned for storage on-site. The total long-term footprints for both sites will be less than half that during construction. Other future off-site uses for the RTM are possible and the stored material would be available to help satisfy the demand for usable fill material in the area. The RTM will be managed in phases, including:

- **Testing** – Excavated material would be tested based on state regulations for the presence of hazardous materials. Any RTM identified as hazardous would be transported by truck to licensed disposal sites. At these depths, studies suggest very little hazardous material will be encountered.
- **Drying** – RTM would be high in moisture and non-hazardous material would be conveyed via conveyor belt to a storage area for drying. This process is not anticipated to create odors.
- **Storage** – Dried RTM will be stored in stockpiles 15 feet high, 189 acres on Lower Roberts Island and 214 acres at the Twin Cities complex.



Other Shafts for Maintenance, Retrieval

Launch shafts begin the tunneling process, but other shafts with footprints of approximately a dozen acres are planned to both maintain the boring machines and remove them when the tunneling is completed. The proposed project includes three shafts for receiving and removing the boring machines plus six maintenance shafts for a total of 13 shafts, including the four launch shafts.

Engineering a Reliable Water Supply for California

The DCA's mission is to plan, permit, design and, if the proposed project is approved by DWR, build a modernized state-of-the-art sustainable, resilient, environmentally responsive, and cost-effective Delta Conveyance Project that resolves the long-standing need to assure affordable State Water Project reliability serving future generations of Californians in a way that respects the uniqueness of the Delta as a place and its communities.