AAAEA National Conference
November 13 and 14, 2020

Technical Presentation

ARGO Drain Project

A project funded by City of Los Angeles
Proposition O and Los Angeles World Airports

Argo Drain – Project Overview

Project Cost: $36M
Clients: City of Los Angeles
Dept of Public Work – Bureau of Engineering
Dept of Public Works – LA Sanitation
Los Angeles World Airports

Engineer of Record: AECOM
General Contractor: OHL USA
Construction Manager: PMCS Group

"We can no longer afford to let stormwater run off as pollution into our ocean. We must clean it, we must capture it and we must put it to good use."

- Mayor Eric Garcetti commenting on Argo Drain Sub-basin Facility Project, Los Angeles Times, May 8, 2015.

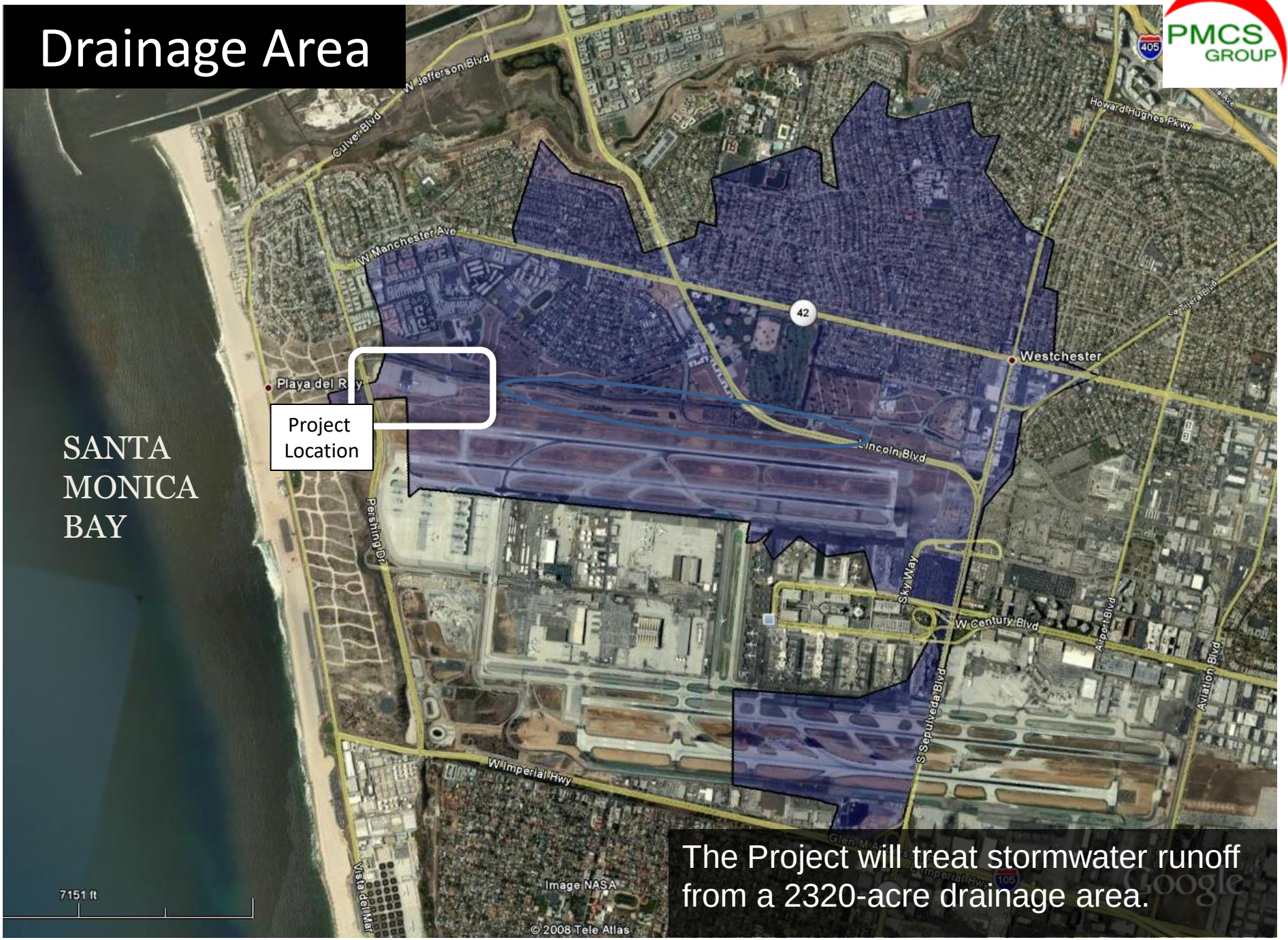
Argo Drain Background

- Argo is a Best Management Practices (BMP) stormwater project located on LAX property. LAWA and LASAN entered into a 50-year Lease Agreement to allow the project to be constructed and operated.

- The Project will treat stormwater runoff from a 2,320-acre drainage area, including areas of LAX, that would normally discharge to the Pacific Ocean/Dockweiler Beach.

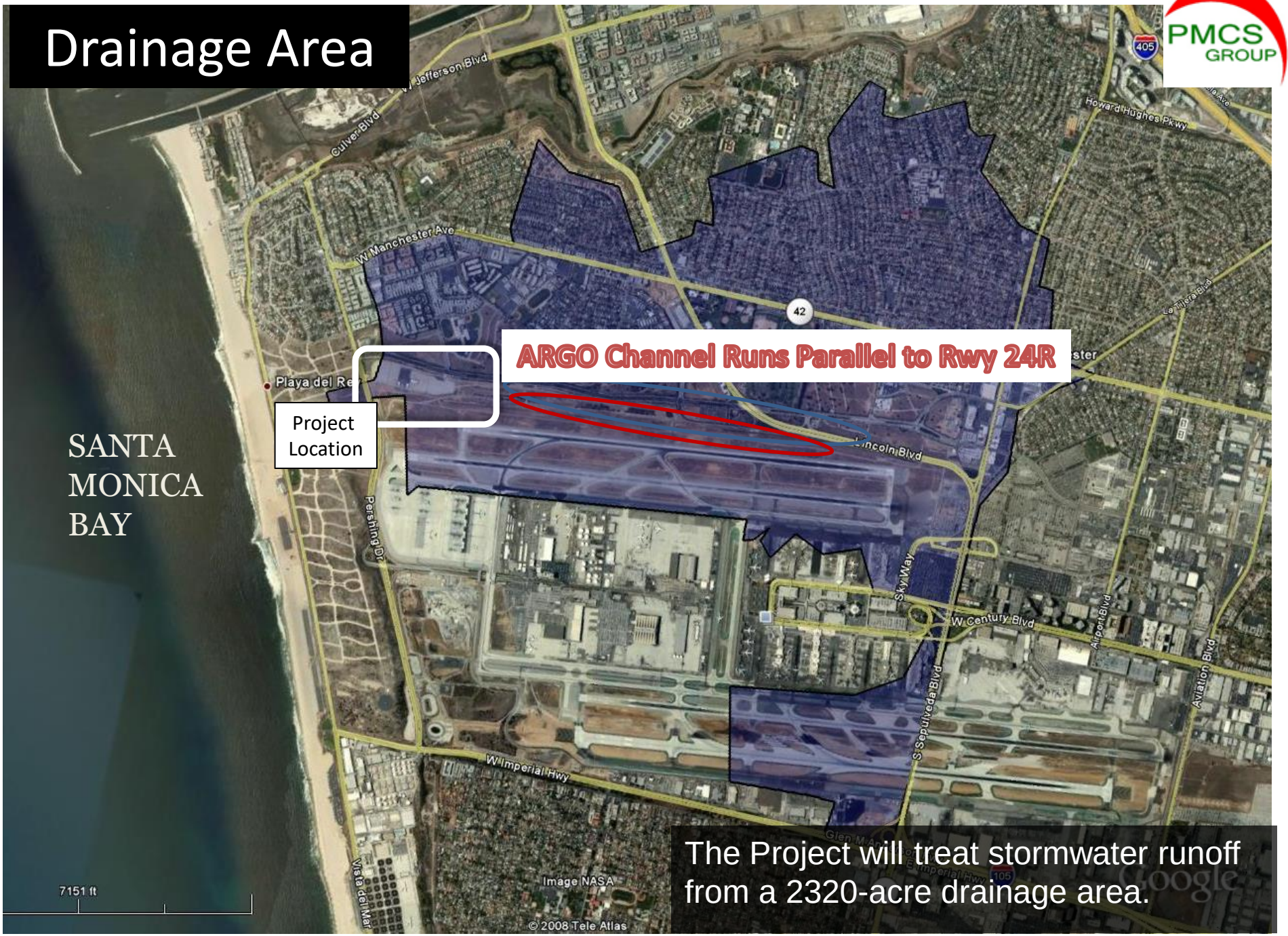
- Argo will capture approximate the first ¾-inch rainfall from the (i) Argo Drain, (ii) 8-foot by 9-foot box County of LA Drain #647, and (iii) 84-inch diameter City of LA Falmouth Drain, which discharge into Santa Monica .

Drainage Area



The Project will treat stormwater runoff from a 2320-acre drainage area.

Drainage Area



The Project will treat stormwater runoff from a 2320-acre drainage area.

Treatment Process

(1) Pre-treated to remove trash,

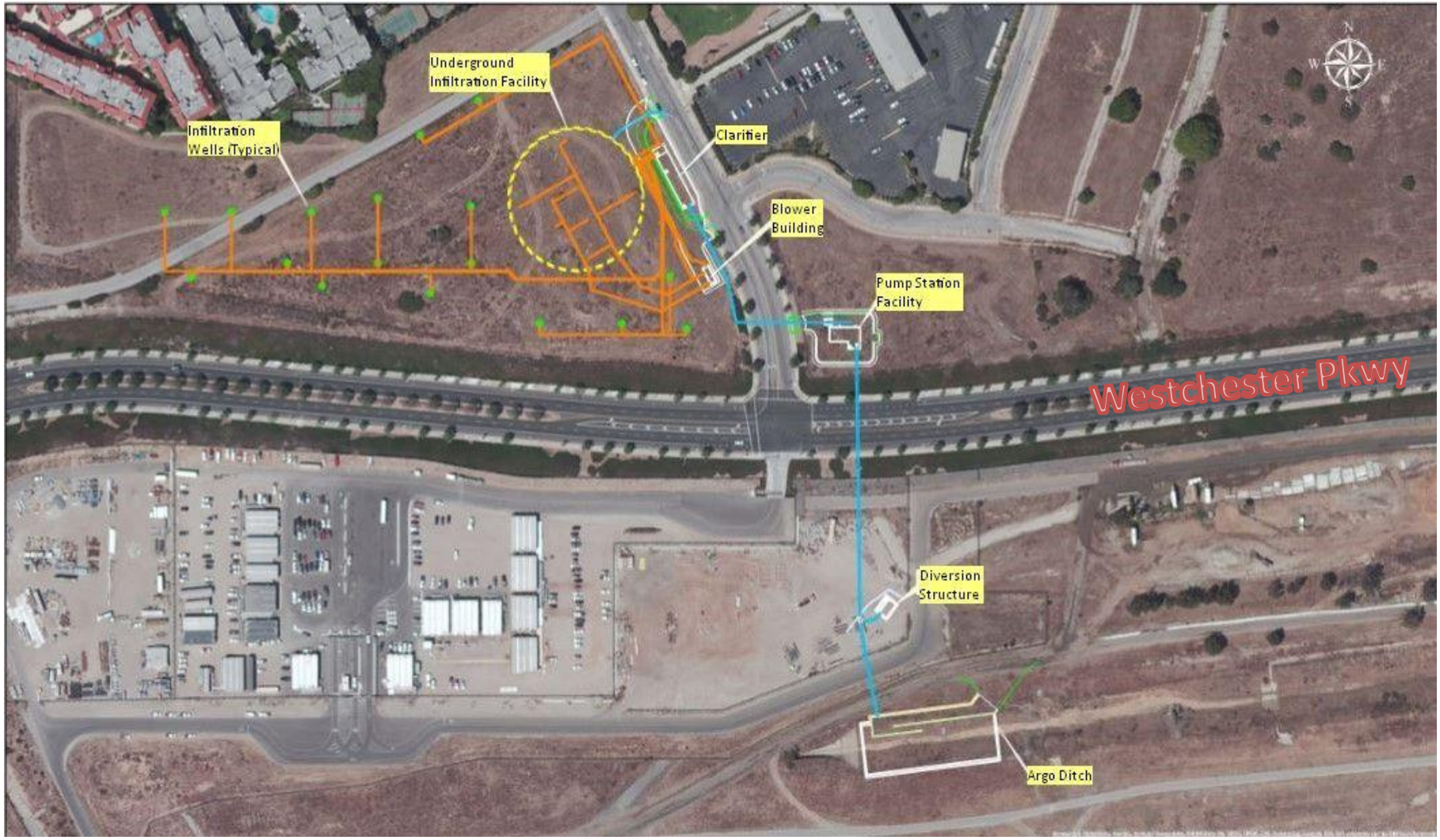
(2) Diverted to a pump station,

(3) Move into a clarifier to settle out suspended solids,

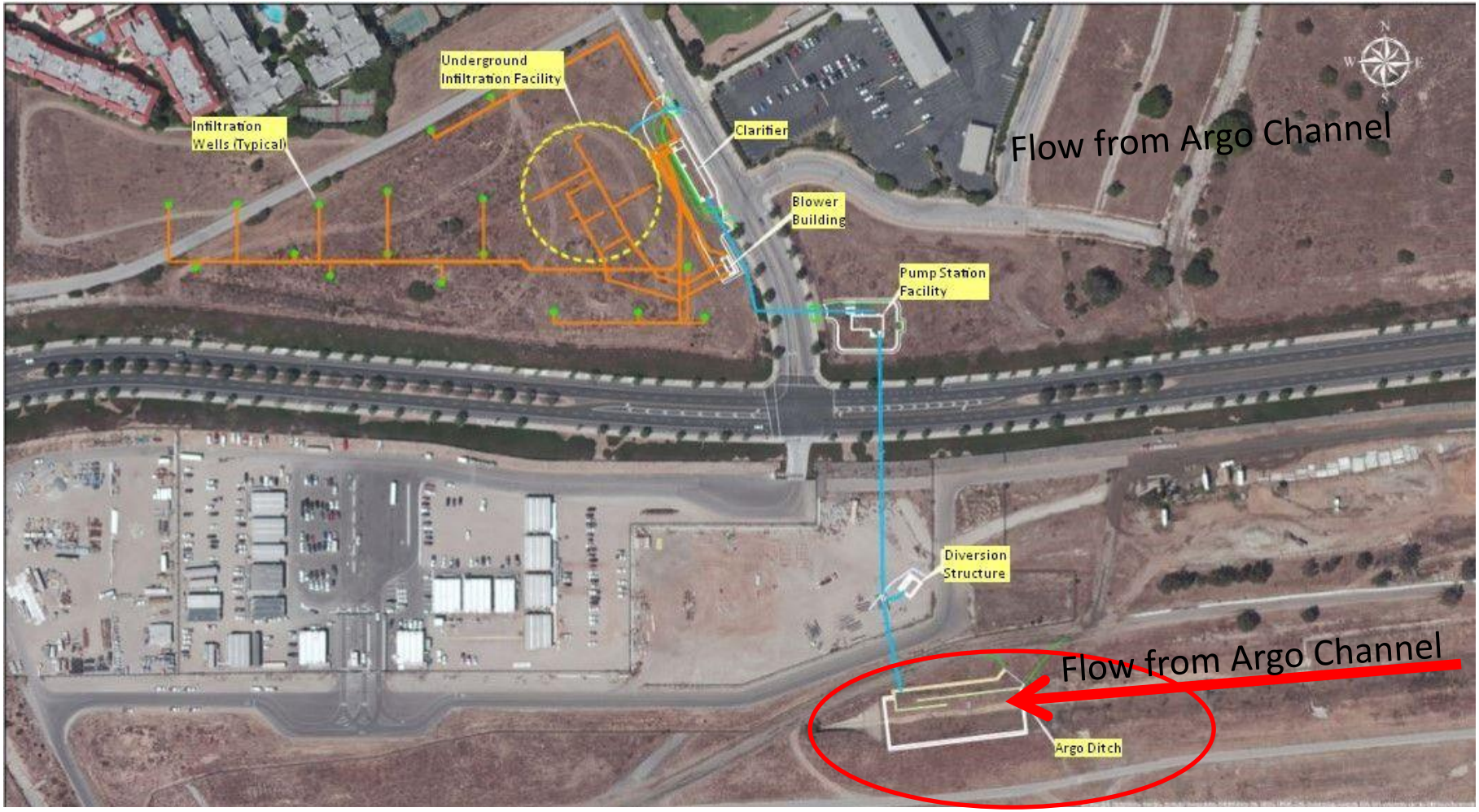
(4) Flow to a 250-foot diameter x 30-foot deep underground open bottom Infiltration Tank (IT) with an 8.1 million gallon capacity.

(5) Additional volume not handled by the IT is diverted to a set of 18 – 36” dia. X 100 ft deep wells.

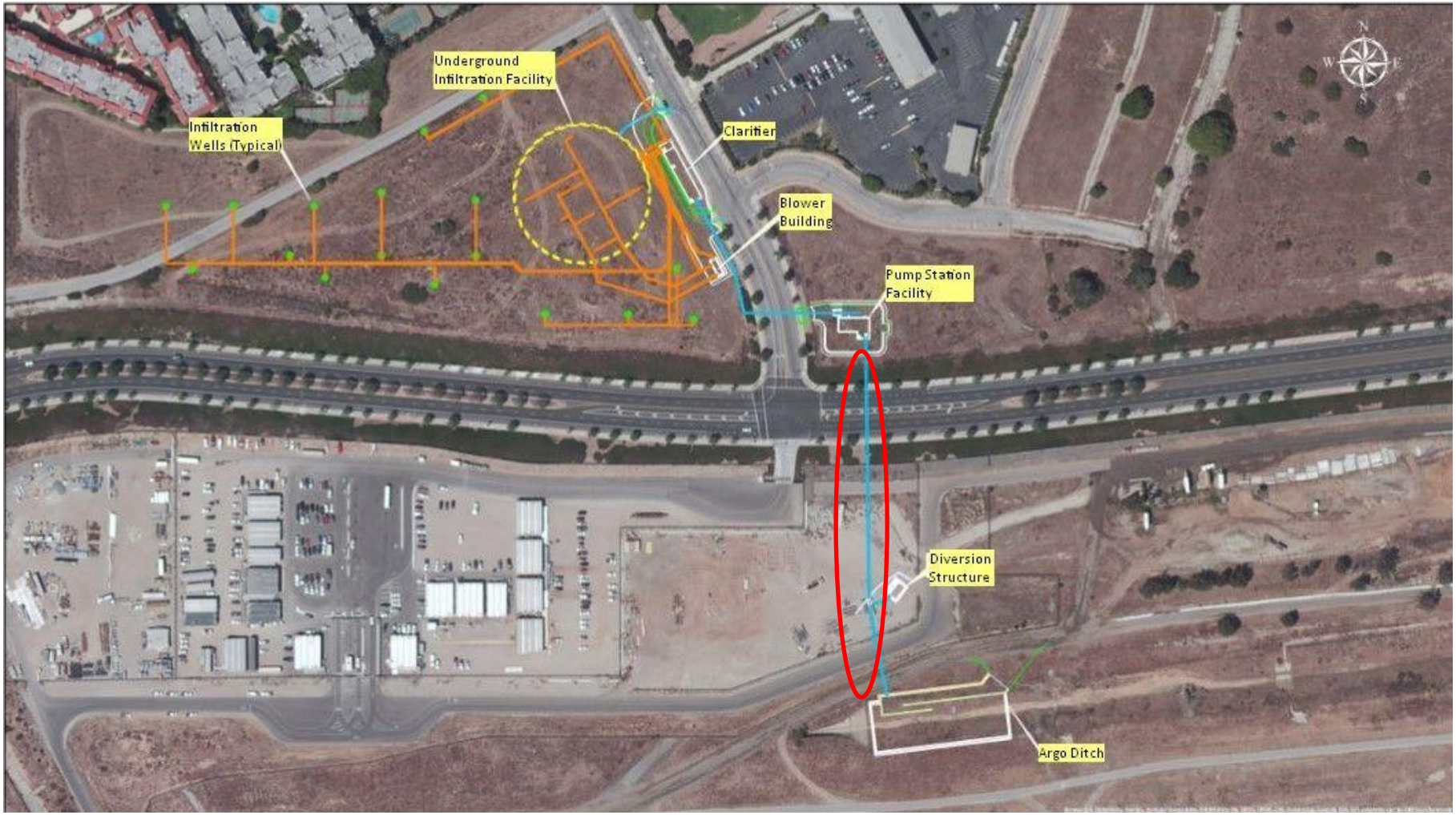
Aerial View


Underground Infiltration Facility
Infiltration Wells (Typical)
Clarifier
Blower Building
Pump Station Facility
Westchester Pkwy
Diversion Structure
Argo Ditch

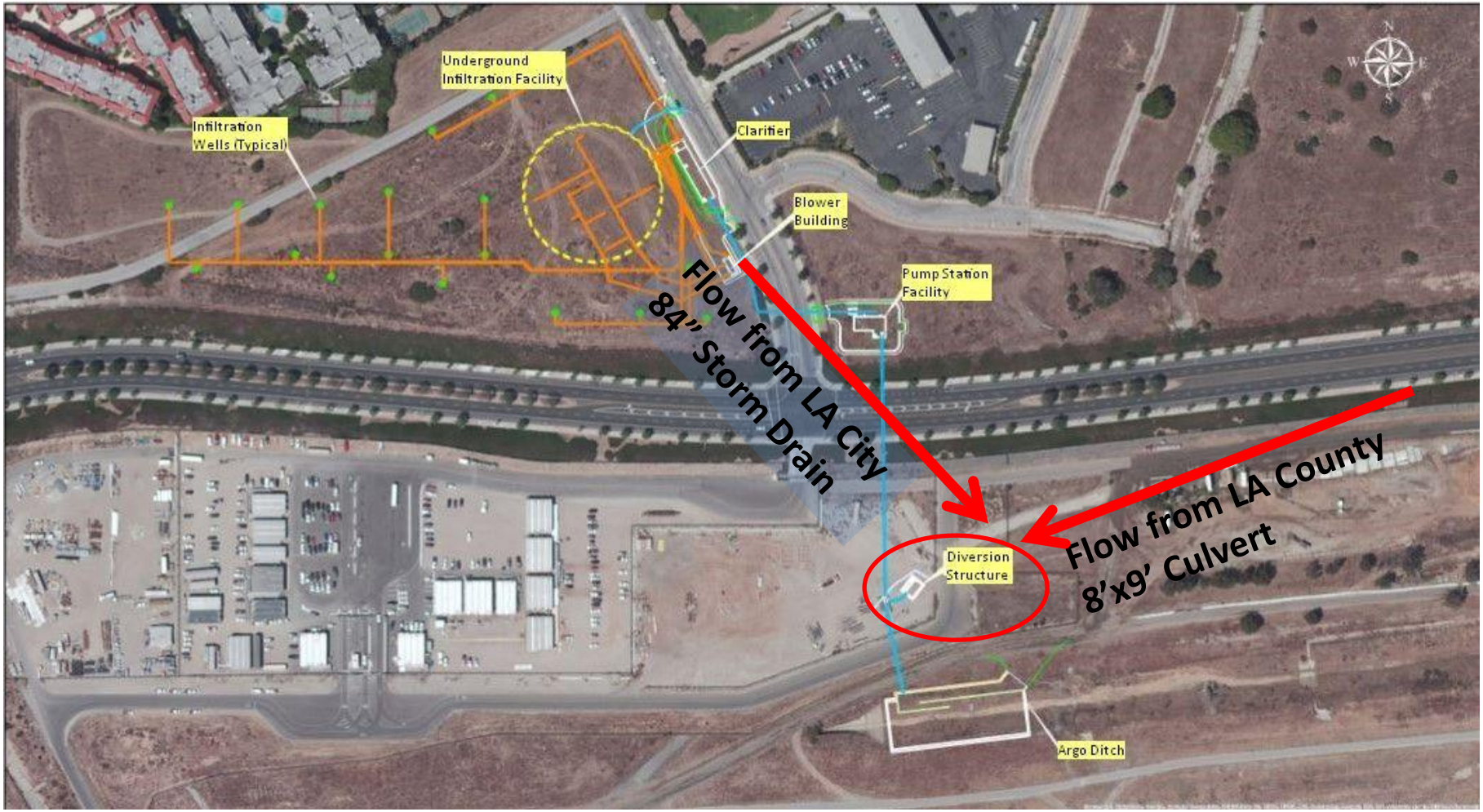
Location of ARGO Channel And Low Flow Diversion Structure



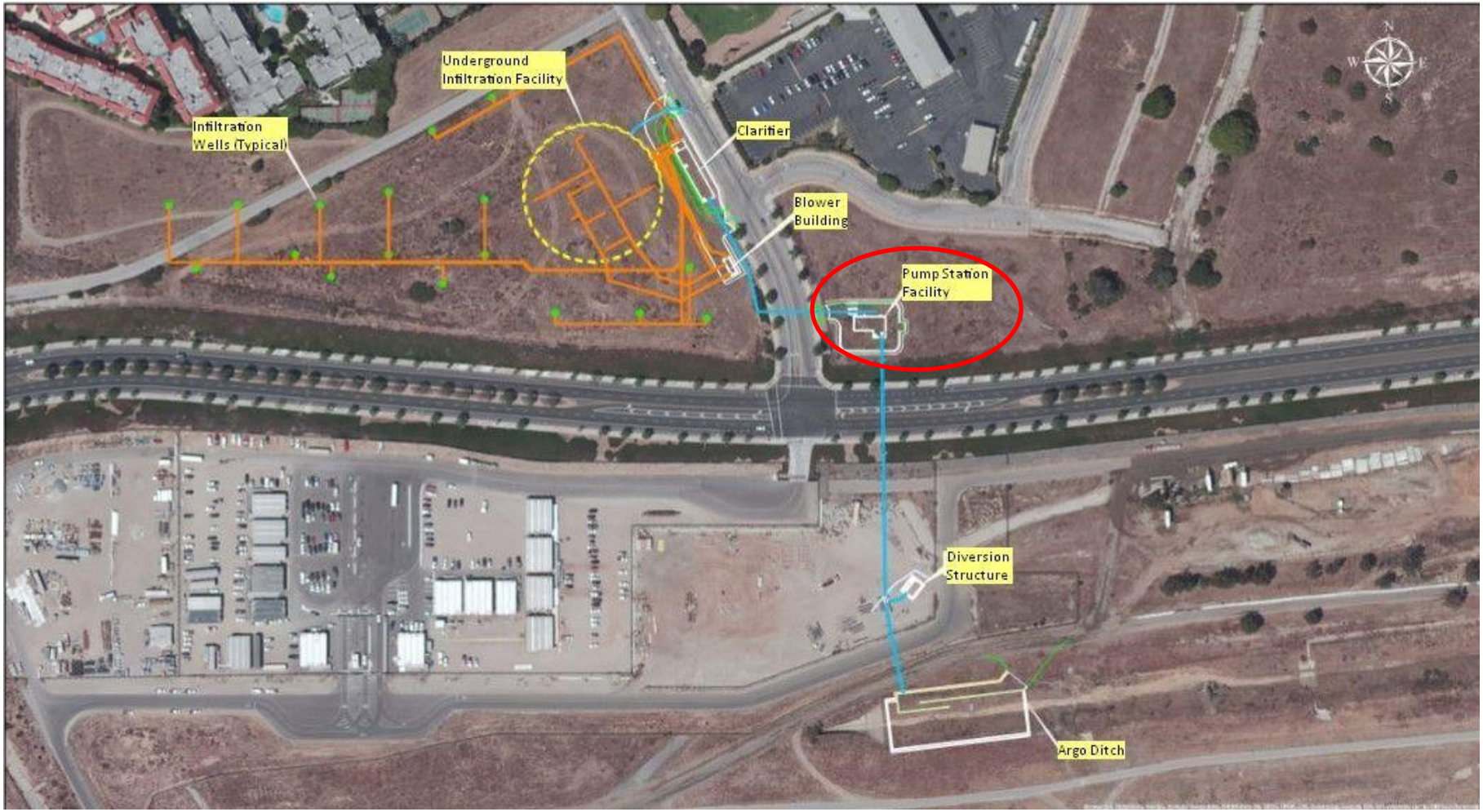
Location of Tunnel Between ARGO Low Flow Diversion Structure and Pump Station – 42” RCP



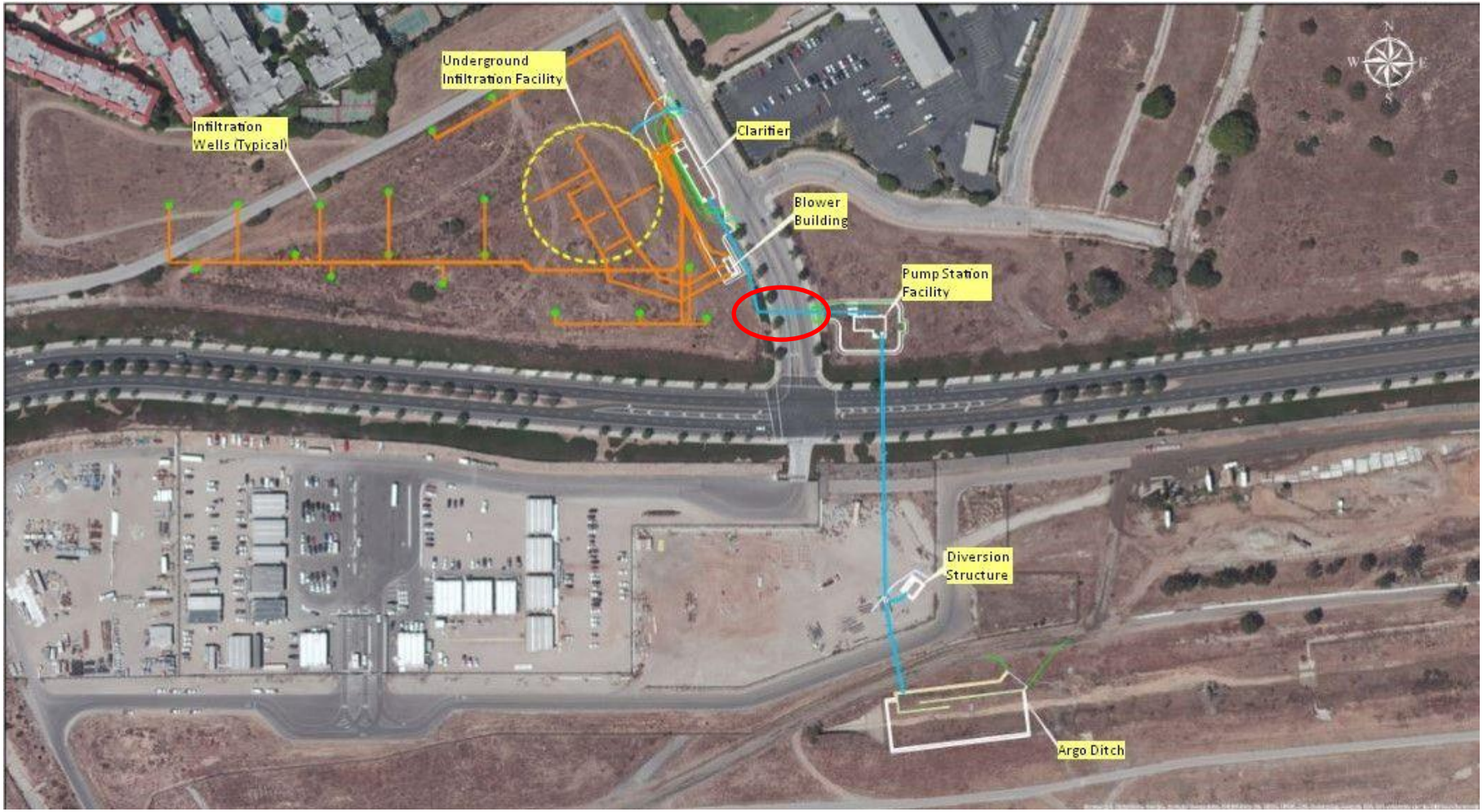
Location of LA County Storm Drain Intercept and Low Flow Diversion



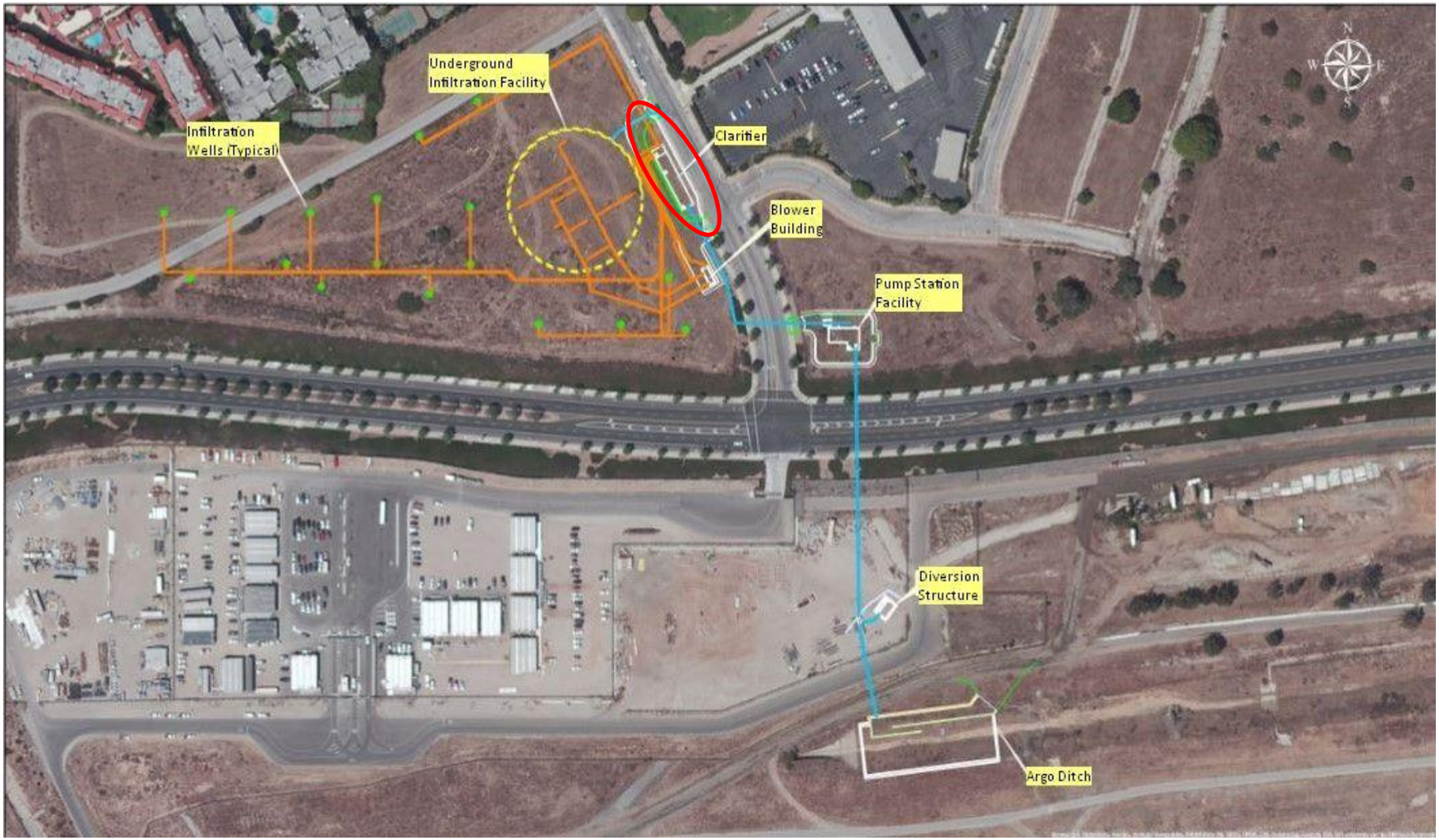
Location of Pump Station



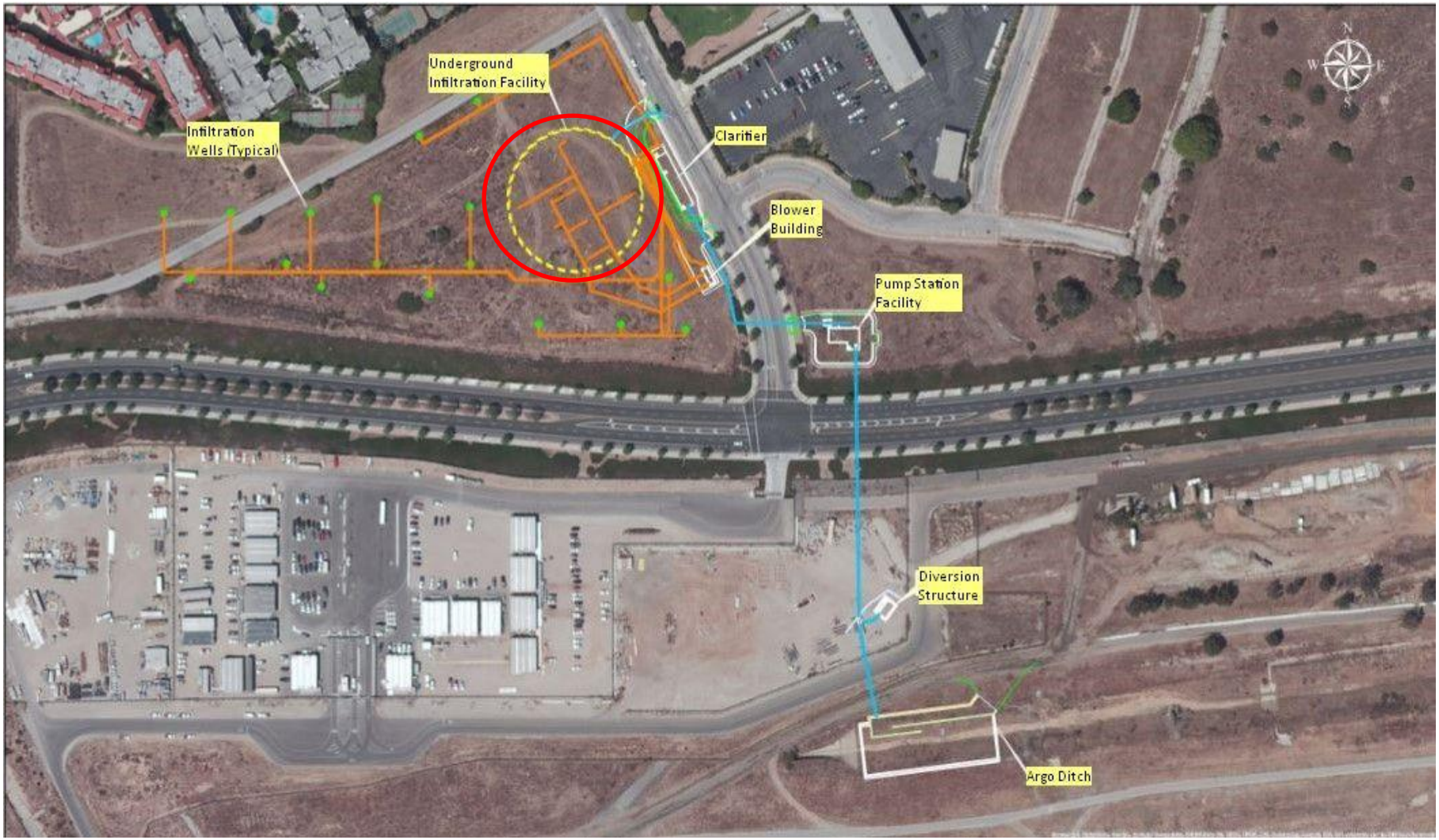
Location of Tunnel Between Pump Station and Clarifier – 66” Steel Casing



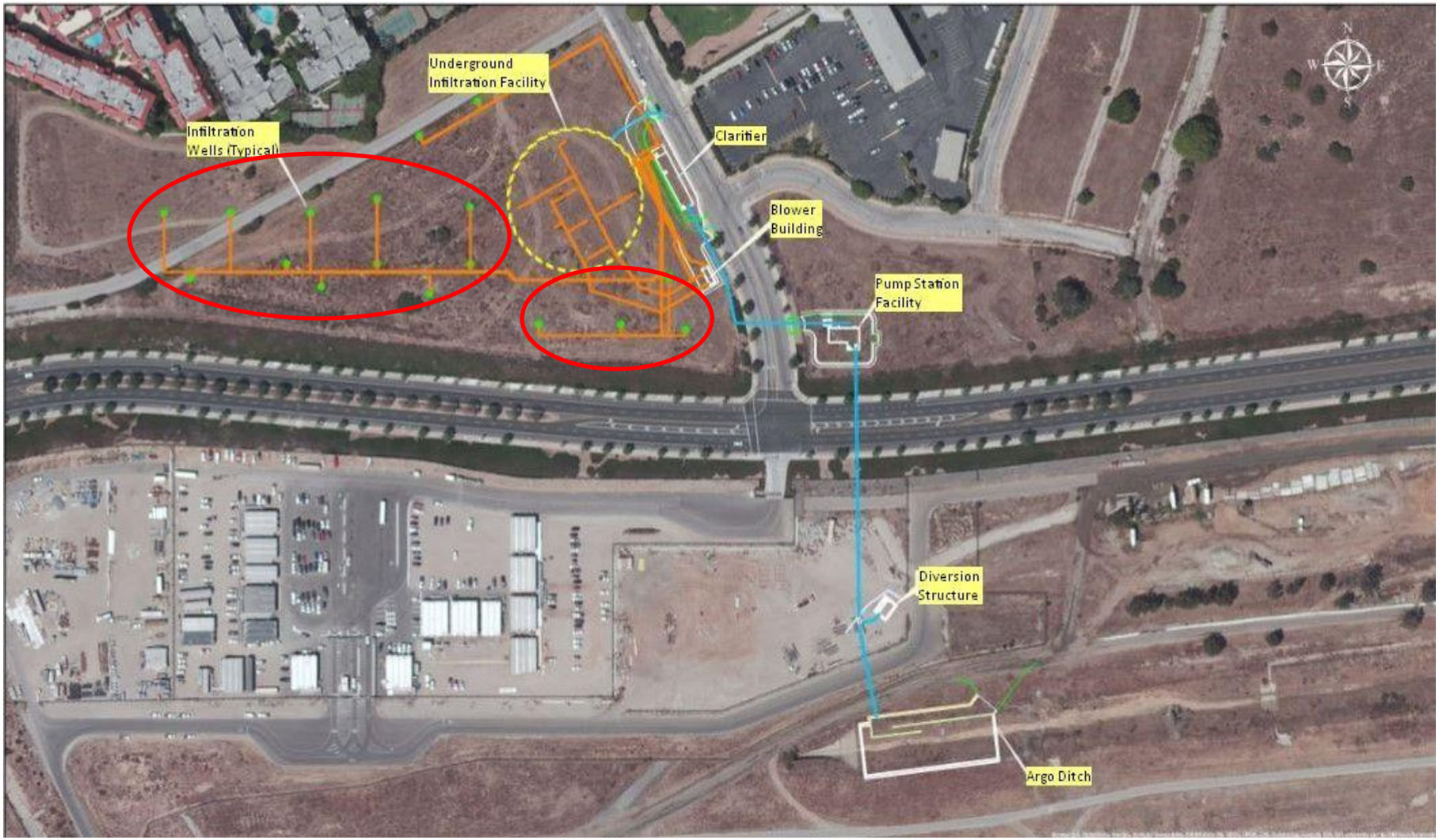
Location of Clarifier



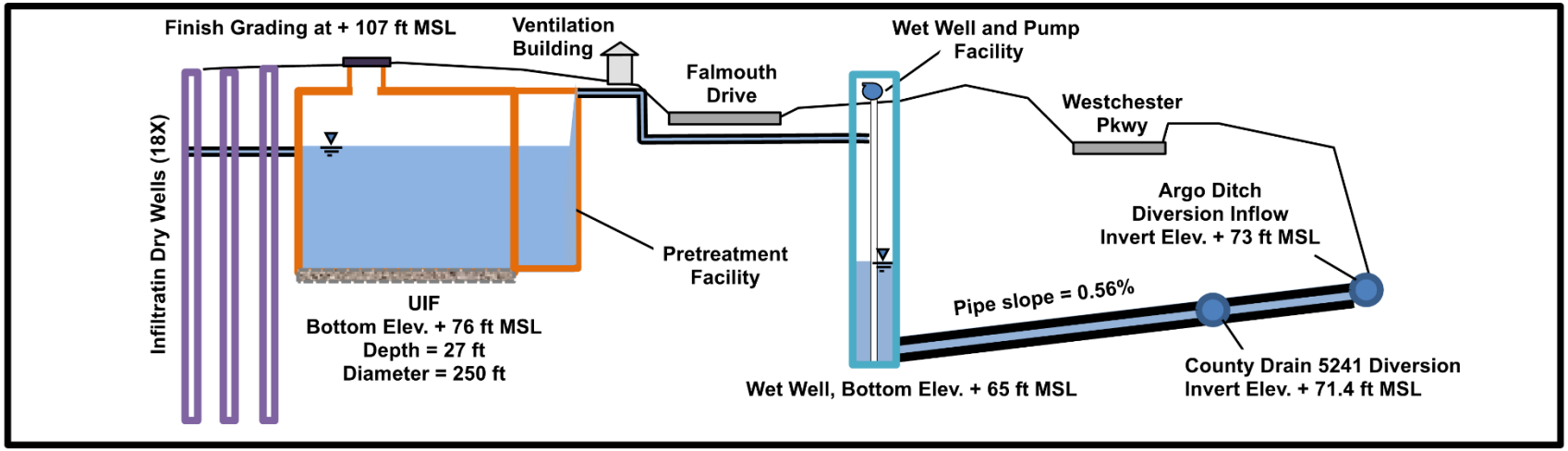
Location of Underground Infiltration Tank



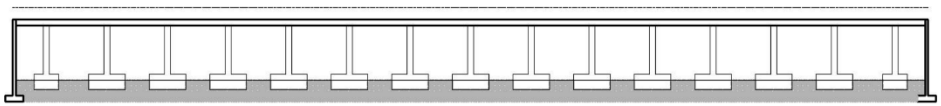
Location of Infiltration Wells



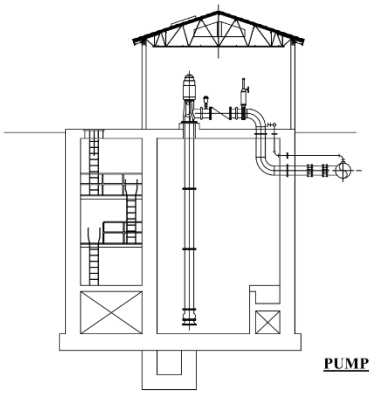
TREATMENT PROCESS



TREATMENT PROCESS SECTION



UNDERGROUND INFILTRATION FACILITY (UIF) SECTION



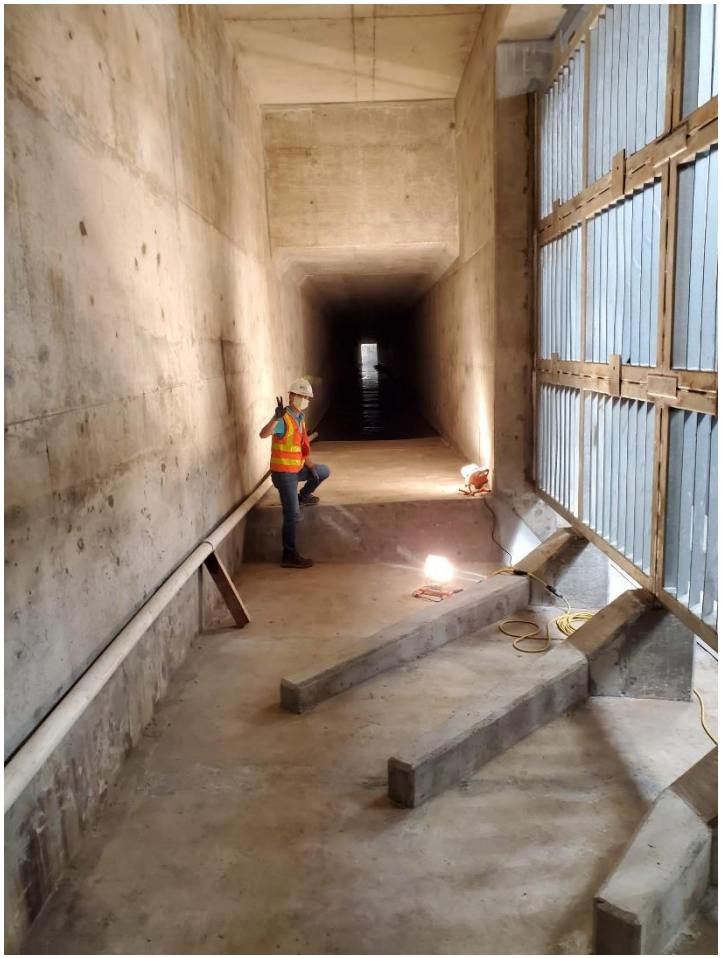
PUMP STATION FACILITY SECTION

ARGO DRAIN SUBBASIN FACILITY PROJECT - SECTIONS

Argo Structure Low Flow Diversion

ARGO Structure – Low Flow Diverison to the Right

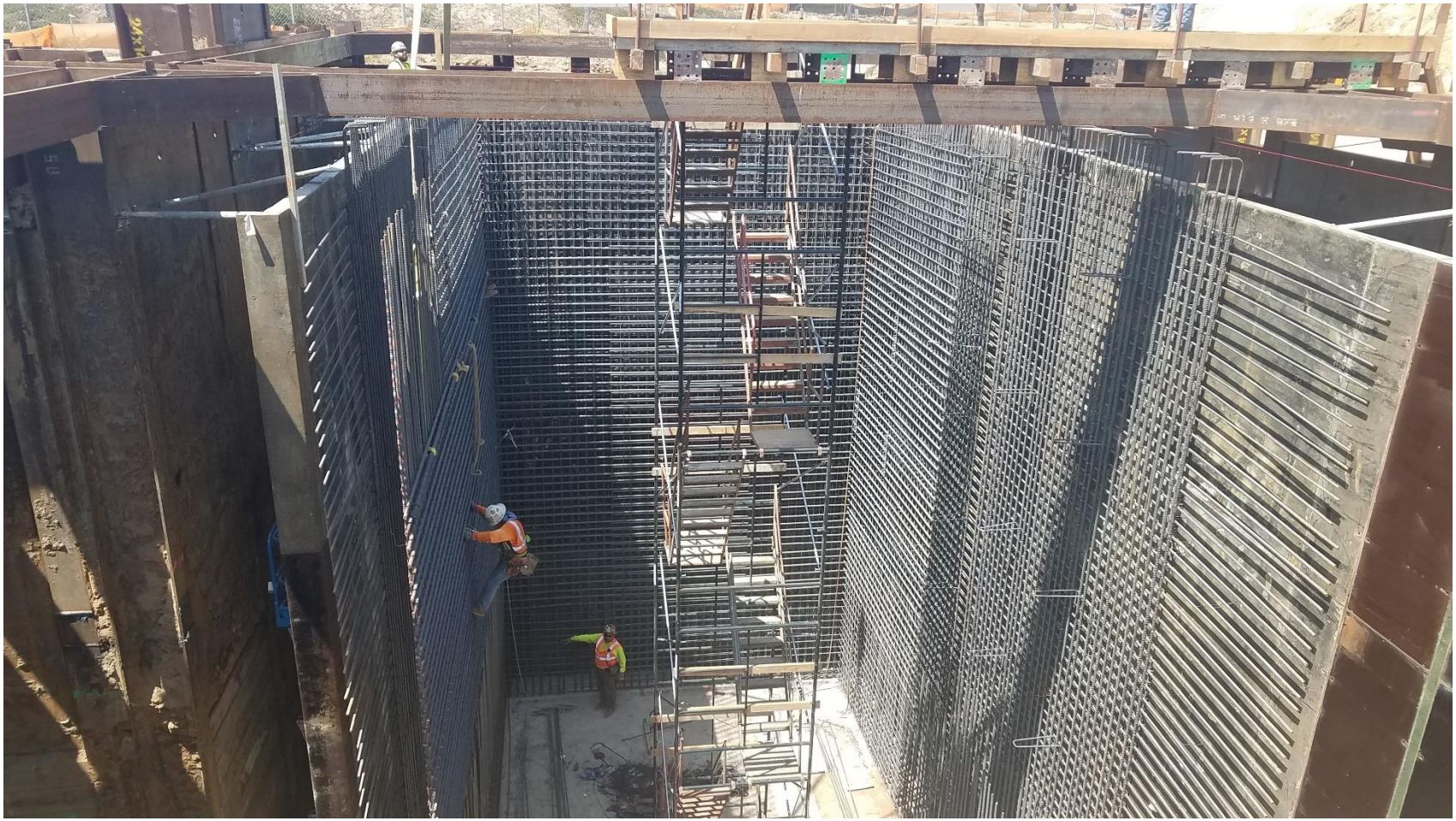
LA County Storm Drain Intercept and Low Flow Diversion



Screening and Trash Capture

Tunnel Operations

Pump Station Construction



SOE Install

Lift Pumps

Infiltration Tank – Post Tensioned

Infiltration Tank Backfill

Final Project Rendering

Interesting Data

- Approx. 68,000 cubic yards of soil exported out of site - equivalent to 7000 truck loads
- Approx. 9,500 cubic yards of concrete – equivalent to 1000 concrete trucks.
- Infiltration Tank concrete walls wrapped with approx. 4 miles of steel cable and post-tensioned to 18,000 lb force.
- 800 feet of tunneling under major roadways.
- Pump Station includes 3 vertical lift pumps each capable of lifting 3500 gallons per minute a height of 30 feet.

Conclusion

- Q and A
- If you need more info please feel free to contact me:
  - Walid Azar, PE
  - wazar@PMCSGroup.net
  - Cell 213.272.4254
- Happy Conference!