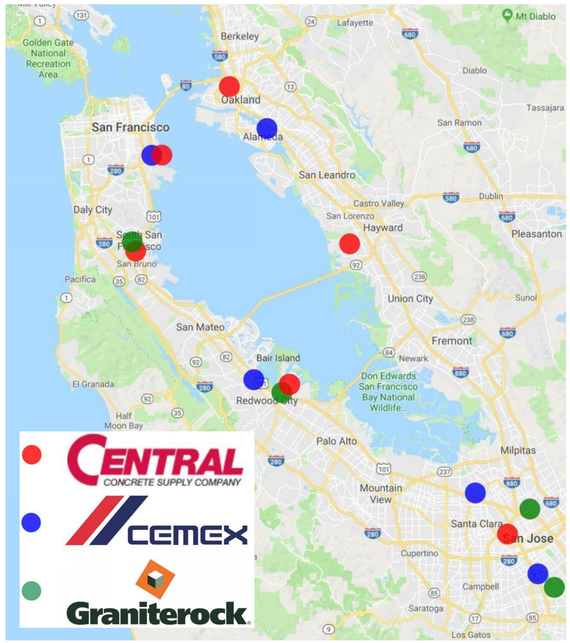
Implementing an On-Site Concrete Batch Plant on a Large Construction Project in the Bay Area

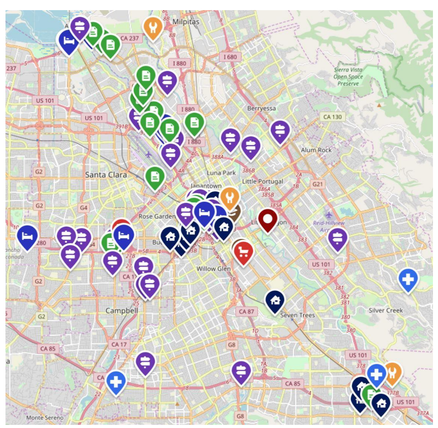
The demand for ready-mix concrete in the San Francisco Bay Area continues to grow with the booming development and construction industry. Concrete is a very common construction material with a wide range of use on projects ranging from parking garages all the way to high-rise buildings. The typical method of concrete delivery in the Bay Area is to order concrete from a ready-mix supplier who trucks the concrete to the project from a nearby batch plant. Concrete is a perishable commodity that demands timely batching and delivery to meet customer requested specifications. The small number of batch plants and congested delivery routes in the Bay Area often results in slow delivery service that negatively affects contractor budget and schedule. This project will explore how Pacific Structures utilized an on-site concrete batch plant for a large Bay Area project that demands around the clock concrete to meet the owner's schedule requirements. The study will touch on the current delivery capabilities of off-site batch plants and focus on why the decision to utilize an on-site batch plant was made. The purpose of the study is to discover the ways in which the on-site plant affected project coordination, deliveries, site-logistics, cost, and risk.

Batch-Plants Servicing the Bay Area



Active Commercial Construction Projects:

San Francisco



San Jose

Typical Delivery from Off-Site Batch Plant

- Truck staging space required on-site
- Concrete deliveries come from multiple local plants at an estimated 150 cubic yards/hour
- Delivery speed dependent on traffic and plant schedule – slow delivery impacts budget and schedule and brings risk of expired batches and cold joints
- Any number or combination of mix designs

On-Site Batch Plant

- Requires 1.5 acres of space
- Can output 200 cubic yards/hour
- Limited number of mix designs – increased number of mix designs increases space required for plant, keeping number to a minimum increases plant efficiency
- Plant specific SWPPP required
- Must receive certification that it is calibrated to create ASCI approved concrete
- SSSP required for plant Batchmen
- Requires access to temporary site utilities
- Must obtain permits from Owner and BAAQMD (Bay Area Air Quality Management Department)

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