HAWAII RAIL TRANSIT PROJECT: Phases 1 and 2

SCHWAGER HONOLULU, HI

SDI Scope

Precast & Cast-in-Place Post-tensioning Strand and Duct Supply

Contractor

Kiewit

Owner

HART





The Project

The Hawaii Rail Transit System, an elevated track stretching over 20 miles from Kapolei to Ala Moana Center, will provide vital transportation for Hawaiian residents and tourists alike. Each of the 21 rail stations will be aesthetically and functionally designed to reflect the history, culture, and passenger needs of its local community. The transit project is expected to reduce traffic congestion and pollution by eliminating over 40,000 automobile trips daily. The steel-on-steel track technology installs over precast and cast-in-place segments to form the elevated track system. HART expects its first segments open to the public in 2021 with the entire line operating in 2026. By 2030, ridership is expected to reach 119,600 weekday passenger trips.

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Schwager Davis, Inc. 198 Hillsdale Avenue – San Jose, CA 95136 Tel: (408) 281-9300 Fax: (408) 281-9301 www.schwagerdavis.com HAWAII RAIL TRANSIT PROJECT: Phases 1 and 2 HONOLULU, HI

SDI'S SUPPLY AND PT DUCT DIFFERENCE

SDI supplied all of the post-tensioning material required for the Farrington and Kamehameha portions of the elevated track. More than 10 million feet of strand were supplied, including longitudinal and transverse post-tensioning anchorage systems (over 8 million lbs. of steel supplied in total).

SDI also provided over 500,000 ft of **plastic corrugated duct, produced in-house**. Newly designed SDI ducts are easier to install than others on the market, yet still exceed all strength and use specification requirements (SDI's duct features fewer coupling parts to assemble and a more intuitive design producing a faster, more reliable installation process). SDI supplied the project's HDPE and corrugated steel duct. SDI also supplied over 7,000 of its specially designed **Fusion Duct Connections** to ensure excellent tendon grouting.



Note SDI's Corrugated Plastic Duct (white) visible running through the unpoured half of the elevated guideway segment (during precasting). Full-poured segments stand in the background.

PROJECT HIGHLIGHTS AND FACTS

Anchorage System Types: 2.6A Anchorages, 12,252 count 4.6A Anchorages, 5,800 count 12.6-PC Anchorages, 3,092 count 19.6-PC Anchorages, 608 count 27.6-PC Anchorages, 4,097 count Installation Dates: 2013-2016

HART chose to use "steel-on-steel" track technology for their train which has historically proven to be a most reliable configuration.

Elevated rail transit systems are typically faster, safer, and more cost-effective than other mass transit solutions because the train does not cross paths with cars or pedestrians (nor does it incur the uncertain cost, confined space safety issues, or environmental/foundation concerns of underground boring).



SDI provides technical support and assistance for supplied materials to ensure excellent product installation and performance. Here SDI Engineer Michelle Haughey inspects the Honolulu Rail project accompanied by the onsite construction manager.

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