Design and Build Services for the Construction of Skyline Hills Fire Station 51

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Objectives
- To provide cost effective Design-Build services to the City of San Diego for the brand new Skyline Hills Fire Station 51.
- Create a site layout plan and construction schedule that allows the Firefighter's work and construction to occur simultaneously.
- Exceed expectations in sustainability by achieving Gold Standard Envision Certification as well as implementing water saving alternatives and recyclable construction material recommendations.
- Provide an accurate grading plan after completing an elevation survey of the site.
- Develop a space for the Firefighters of San Diego that promotes & rewards their work for their community.

Plans & Exhibits
- Construction shall be split into two phases to allow for preexisting buildings to remain active.
- Foundation plan displaying dimensions and concrete and rebar detailing.
- Architectural representation of the proposed building featuring solar panels and a green plant wall.
- Two stories with an estimated 12,000 square feet.

Geotechnical Evaluation
- Site survey with marked elevations
- 5 ft of elevation change.
- No significant geologic hazards.
- Subject to seismic shaking.
- Subsurface conditions: Undocumented Fill (Qufd), San Diego Formation (Tsd), Otay Formation (ToF).
- Undocumented Fill needs remedial grading.

Sewer & Water Study
Sewer:
- Turtle Engineering is assuming 7 Drainage Fixture Units (DFUs) for the first floor of the building and 30 DFUs for the second floor.
- Turtle Engineering calculates a 3 inch sewer connection will be required from the sewer to the Fire Station to the Point of Contact.

Water:
- Through Turtle Engineering's calculations, we have found the 1st floor water demand to be 56.1 gallons per minute and the 2nd floor water demand to be 209.5 gallons per minute.

Results
- Cost estimate for Turtle Engineering's scope of work is $349,000 and includes general conditions, sitework, and structural foundation
  - $86,000 for staffing & temporary facilities
  - $172,000 for surveying, demolition, earthwork and utilities
  - $54,000 for field engineering, concrete reinforcement & carpentry
- Turtle Engineering will be on site for a duration of 4 months, and the overall project duration is estimated to be from July 2nd, 2021 until March 17th, 2022 for an overall duration of 8.5 months.