

GERALD AND DARLENE JORDAN BOYS & GIRLS CLUB CHELSEA, MASSACHUSETTS

- OWNER
Boys & Girls Club of Boston
- ARCHITECT
The Architectural Team, Inc.
- CONSTRUCTION COST
\$6,700,000
- GENERAL CONTRACTOR
CWC Builders, Inc.



PROJECT DESCRIPTION

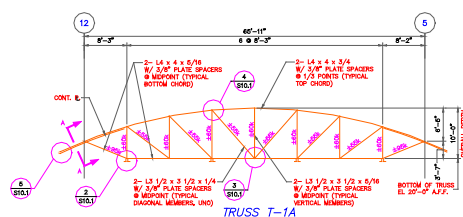
The Gerald and Darlene Jordan Boys & Girls Club is a welcome addition to this challenged area of greater Boston. It recently received an award from the Boston Society of Architects as part of its K-12 Educational Facilities Design Awards program.

The Club is built in a former industrial area, near the ocean, using in part a previous storage building. The location was very demanding, due to the poor soil conditions. The slab on grade of the existing building was far from being horizontal, being very depressed at midbays. As such, it was decided to use a structural slab on grade, 7 inches thick supported by a network of concrete drilled minipiles having a 25 ton capacity. The existing slab on grade remained in place 2 feet +/- below the top of the new slab. During the installation of the minipiles, it was discovered that a deeper concrete slab on grade (unreinforced) for the initial building existed, with sand on top, followed by the existing slab on grade (reinforced with welded wire mesh) which was probably built due to the sinking of the initial slab.

The existing building is one-story construction with a light roof (steel deck and steel joists) and cmu walls having an area of 27,500 square feet. A 56 foot wide strip in the middle of the long side of the building has been completely demolished to insert a new 2-story construction, above a new swimming pool. Heavily reinforced cmu walls have been provided on the perimeter due to a high seismic demand. The first floor features long span W beams and composite steel deck. The second story is light construction (steel columns and braced frames, steel deck and roof joists).

The new gymnasium construction was raised on one side of the main building, featuring 67 foot span steel trusses (custom design) at +/- 15 feet on center with a 3 inch steel roof deck. The gymnasium is structurally separated from the main building and its lateral system consists of steel braced frames. As for the foundation, a different system has been used – structural grade beams spanning up to 35 feet, supported by caissons with 3 foot diameter and a one-way 8 inch thick structural slab on grade spanning +/- 15 feet, between the rows of grade beams.

The main feature of the project was the foundation structure, one for the new construction and one for the existing building.



CAD Elevation of Trusses in New Gymnasium



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