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Hudson Bergen Light Rail Transit System Design-Build Project Retaining Wall and Viaduct Pier Design, Contract No. 07-056X

Bayonne, New Jersey

PROJECT TYPE

Design

PROJECT OWNER/CLIENT

New Jersey Transit

CONTRACT AMOUNT

\$349,000 fee

START & END DATES

05/2008 – 07/2009

ROLE

Subconsultant to George Harms
Construction Co., Inc. / Gannett Fleming,
Inc., design-build team
Structural Engineering
Transportation Engineering

REFERENCES

Tom Zink, Gannett Fleming, Inc.
(856) 802-9930

PROJECT DESCRIPTION

This \$55 million design-build project involved the design and construction of a viaduct to support two tracks for the Hudson Bergen Light Rail System, a station building, a retaining wall at the end of the viaduct, emergency stairs for NJ Transit personnel to access the tracks from the street level, and other ancillary structures.

The viaduct consists of concrete drilled shafts with capbeams to function as hammerhead type piers that support the steel stringers for the tracks. The retaining wall consists of a soldier pile and lagging system. Precast reinforced concrete panels were used as lagging with steel beam soldier piles. The soldier piles received a concrete facing for aesthetic purposes. The concrete lagging panels used formliners.

We performed design services for the retaining wall, emergency stairs, walkway, and railing, analysis for drilled shafts for the viaduct, STAAD modeling for the drilled shaft soil-structure interaction analysis, and shop drawing review for the viaduct structure and walls.



SJH Engineering, P.C.