

Ten Stations on White Plains Road

Borough of the Bronx, New York City, New York

PROJECT NAME

Ten Stations on White Plains Road (New York City Transit Project CM-1159)

PROJECT OWNER

MTA New York City Transit

PROJECT CLIENT

URS Consultants

START/END DATES

2000 – 2004

PROJECT DESCRIPTION

The purpose of this project was to rehabilitate all elements of the elevated line structure and to provide for the structural rehabilitation of the following stations in the Bronx:

- Allerton Avenue
- Bronx Park East
- Burke Avenue
- Gun Hill Road
- Pelham Parkway
- 219th Street
- 225th Street
- 233rd Street
- 238th Street
- 241st Street

Design work under this contract encompassed preliminary engineering and final structural design for rehabilitation of the stations, with the exception of Pelham Parkway. The surveying services for this project included:

TOPOGRAPHIC SURVEY/UTILITY MAPPING

KS Engineers, P.C. (KSE) prepared topographic and utility surveys (including reflected ceiling plans for all utilities at the platform level) for street-level areas, mezzanine levels, and platform levels. Street-level surveys included utility, stair, and intersection locations; curbs and sidewalks; lane lines, striping, and gore striping; spot elevations; and curb reveals, among other physical characteristics. Mezzanine-level surveys located stairs, and critical structures (mezzanine hangars, through girders, and tops of staircases and landings, among other such features), including their elevations. KSE also provided legal grade elevations and minimum existing clearances between the lowest portion of each station and the roadway.

The following mapping files were provided for nine of the stations:

- Street-level plan views
- Mezzanine-level plan views
- Mezzanine-level reflected ceiling plans
- Platform-level plan views
- Platform-level reflected ceiling plans (canopies)

Utilities identified at the stations included New York City DOT traffic signals and street lighting; Con Edison electric and gas lines and customer electrical service boxes; and telephone, cable, sewer, and water services.

STRUCTURAL ENGINEERING

The structural engineering company required that KSE conduct platform and station (wall) condition surveys and prepare associated drawings showing concrete spalls, cracks, defective joints, and other structural deficiencies. The platform condition surveys included areas both underneath and above the platforms and were intended to map, identify the type of concrete used (precast or cast-in-place), and quantify the magnitude of concrete cracking and spalling on each platform. KSE also checked structural



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calculations to determine whether columns supporting the station mezzanines were overstressed.

SITE/CIVIL ENGINEERING

Sidewalk reconstruction plans were prepared to address existing deficiencies and accommodate the reconstruction of the stairway landings at street levels. A Builders Pavement Plan was prepared for the sidewalk reconstruction.