

RAINBOW BRIDGE TOLL PLAZA ,
INSPECTION OFFICE BUILDING

Rainbow Plaza
Niagara Falls
Niagara County
New York

HABS No. NY-6348-A

HABS
NY
32-NIAF,
5A-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
Northeast Region
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, P.A. 19106

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- Location:** Rainbow Plaza, Niagara Falls, Niagara County, New York
- USGS Map Quadrant: USGS SE/4 Niagara Falls 7.5' Quadrangle,
Universal Transverse Mercator Coordinates:
Point A, 17.657430.4772280; Point B, 17.657490.4772230;
Point C, 17.657400.4772120; Point D, 17.657350.4772190;
- Present Owner:** Niagara Falls Bridge Commission, Post Office Box 1031 Niagara Falls, New York 14302
- Present Occupant:** General Services Administration of the federal government of the United States of America and the Niagara Falls Bridge Commission
- Present Use:** United States Border Crossing; Inspection office building for United States Customs and Immigration officials and Maintenance Facility for Niagara Falls Bridge Commission
- Significance:** At the time of this survey, the Rainbow Bridge Toll Plaza border crossing was the second largest international northern entrance to the United States and seventy-five percent of the traffic was non-Canadian and non-American. The Inspection Office Building is within the site of the Rainbow Bridge Toll Plaza. The toll plaza is within the Niagara Reservation, a National Historic Landmark. The concept for the adjacent park was developed by Frederick Law Olmsted, Sr.
- The Inspection Office Building was designed by Russell Goodwin Larke Architects of Niagara Falls, New York. Aymar Embury II of New York, was consulting architect on the plaza. Waddell and Hardesty was the engineer of the plaza.
- This Historic American Building Survey is being prepared because existing structures must be demolished in order to renovate the plaza. The HABS report is part of the 106 federal process that must be followed when a National Register property will be affected by federal actions.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: The Inspection Office Building was part of the initial construction in 1941. The Rainbow Bridge was opened in August of 1941, however the official opening of the bridge and plaza was not until November 1, 1941. At this time the Bridge Commission began collecting tolls on the American bridge approach.
2. Architect: The initial 1940 design of the Inspection Office Building was by Russell Goodwin Larke Architects of Niagara Falls, New York. Larke's firm no longer exists. Aymar Embury II of New York was consulting architect on the building.
3. Original and subsequent owners: The Niagara Falls Bridge Commission is the original and current owner of the building.
4. Builder, contractor, suppliers: Charles H. Wing, Company of Buffalo, New York was the contractor of the "American terminal." Wing had been low bidder in the first series of bids in January of 1941 however, the Bridge Commission asked for the scope of work to be reduced and the project was bid again on April of 1941. Wing was again the low bidder with a figure of \$99,997 and was awarded the contract. Based on the letters between Hardesty, Larke and Embury it appears that Bethlehem Steel Company was the supplier of the steel for the plaza buildings.
5. Original plans and construction: The exterior appearance of the Inspection Building was the same at the time of this survey as when it was first built with the exception of the addition of the Secondary Inspection Canopy. Original photographs of the building shortly after the plaza was opened are included in this documentation. There have been many changes to the interior of the building since its initial construction.

According to Aymar Embury's summary of bridge construction costs in a letter to Shortridge Hardesty dated October 9, 1942, the construction cost of the 1941 contract AP1 which also included the Toll House and Primary Inspection Canopy, was \$156,260.02 with an additional "extra work order for AP1" of \$33,915.42. The plaza paving and lighting contract was \$42,234.51. The location of the original plans for the Inspection Building is unknown. They are dated March 1, 1941 and copies of the

drawings are in the archives of Hardesty and Hanover, civil engineers (at 1501 Broadway New York, NY 10036). The original photographs of the Rainbow Bridge Toll Plaza, copies of which are included within this report are in the Niagara Falls Bridge Commission archives.

6. Alterations and additions: The Secondary Canopy structure, designed by Cannon, Thiele, Betz and Cannon was added to the Inspection Office Building in 1951. Some partitions were added within the Inspection Building in 1947. The new partitions were in the same materials and design as the existing building. At the time of this survey, a one-story concrete block building with men's and women's toilets and a corridor was added to the rear of the building and openings in the 1941 inspection shed had been closed with corrugated metal. Most of the wooden counter in the Customs inspection room had been removed and what was left had been covered with wood look plastic laminate.

B. Historical context:

The site of the Toll Plaza is within the Niagara Reservation and is adjacent to Niagara Falls, one of the natural wonders of the world. The park adjacent to the site was designed by Frederick Law Olmsted' Sr. The Rainbow Bridge Inspection Building was designed by Russell Goodwin Larke Architects of Niagara Falls, New York. Aymar Embury II of New York was consulting architect on the building. The complex was developed further in the 1940's and 1950's to facilitate the processing of the increased volume of traffic at the American border crossing. The border crossing is the second largest international northern entrance to the United States.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: Aymar Embury referred to the style of this building as "Modern Classicism." It is of a neo-classical, art deco style.
2. Condition of fabric: At the time of this survey, the fabric of the facades and structure was in fair condition. There was some damage to the stone and metal copings on the building. The roof of the building was in poor condition.

B. Description of Exterior:

1. Over-all dimensions: The building plan is two intersecting curves. The length of the more southern curve is 142 feet, two inches and the curve is twenty-nine feet wide and houses offices, a warehouse and an inspection shed. The facade of that wing is seven equal bays wide at the office portion, three equal bays wide at the inspection shed and one additional bay for the warehouse. The length of the shorter curve (containing offices) to the north side of the building is fifty-three feet, two inches long and thirty-six feet, one inch wide. The front facade of that wing is six equal bays wide. The building is primarily one-and-one-half stories high (a ground floor and a mezzanine). There is a small second floor above the northern most side of the building. The building has both a basement and a small sub-basement.
2. Foundations: The foundations beneath the Inspection Shed and Warehouse areas are two feet thick. The foundations throughout the rest of the building vary in dimension from twelve inches to seventeen inches thick. The footings extend four feet below the top of the basement floor slab.
3. Walls: The walls of the one-and-one-half story portion of the Inspection Office Building rise sixteen feet eleven inches above grade and are composed of rectangular cut limestone. Fluted limestone pilasters without capitals or bases, frame each of the windows. An eight-inch high, fluted limestone band; a two foot high, flat limestone band with circular relief carvings above each pilaster and limestone coping sits above the top of the pilasters and windows. There is a granite curb at the bottom of the facades and granite bumpers at the openings around the shed and warehouse.

The second floor office facades consists of fluted limestone around the five windows on the long facades and one window on each of the short facades. There is a flat limestone band and coping above. Although the drawings indicate the interior of the Inspection Shed was originally covered with two-foot-by-two-foot terra cotta panels, the existing walls are made up of greenish-gray one-foot-by-one-foot pieces.
4. Structural system, framing: The building is steel frame construction.
5. Porches, stoops, balconies, bulkheads: None

6. Chimneys: There is one brick stack serving the boiler room. The stack is located in the center of the office section.

7. Openings:

- a. Doorways and doors: The doorways are framed by greenstone accent bands within limestone pilasters and have a three pane window above them. The doors themselves are hollow aluminum. The front entrance door has been replaced; however, the doors that were once the rear exit from the main corridor still remain. There is an aluminum roll up door at the warehouse.
- b. Windows: The original drawings called for double hung aluminum and glass windows. It is not known if these were ever installed, as aluminum may have been eliminated from the job because of its scarcity and expense in 1941. In the historic photos taken circa 1942, the windows appear to have been steel and glass with two operable panes top and bottom. (They are similar in design to those that exist in the toll house presently.) The existing windows are aluminum and are not the original windows.

The windows are framed by greenstone accent bands within limestone pilasters. Below each limestone sill (the aluminum sills that were in the drawings were definitely eliminated for cost savings) is a half inch deep, carved, geometric relief pattern in a limestone panel. At the rear of the Inspection Shed the windows are three-pane steel and glass with an operable awning-type pane in the center. The articulation of the facade is more simple at this location. There are no pilasters here, simply a flat limestone surround, the same greenstone accents as the other windows and a much more simplified carved relief square below the window. In the historical photographs, the second floor windows appear to be double hung.

8. Roof:

- a. Shape, covering: The roof of the Inspection Building is flat, built up roofing on plywood on wood joists and is not visible from grade. The Inspection Shed roof is constructed of precast concrete plank on top of a steel frame. According to the drawings, the underside of the Inspection Shed roof was originally constructed of asbestos board in aluminum channels. At the time of this survey, the ceiling is the painted underside of the plank above.

- b. Cornice: None
- c. Dormers, cupolas, towers: None

C. Description of Interior

1. Floor Plans:

- a. Sub-basement: Although the original plans show a shop and transformer room in the sub-basement, the sub-basement was eliminated as a cost saving measure in the revision of the drawings after January of 1941.
 - b. Basement: Although the original plans show the basement of the Inspection Building contained the boiler room for the forced water heating system; a locker room, offices, offices, detention rooms and a kitchen, most of this area was eliminated as a cost-saving measure in the revision of the drawings after January of 1941. Only a small area was built for mechanical spaces (boiler room, transformer room and a storage area). The area under the Inspection Shed and Warehouse is unexcavated.
 - c. First floor: The main entrance to the building is on the east side of the building. To the south are inspectors' offices, the inspection shed and warehouse. To the north are more offices.
 - d. Mezzanine: The mezzanine is located on the west side of the Inspection Building and consists of about half the floor area above the office area (the rest is the upper portion of the volume of the rooms below). The mezzanine contains detention rooms, locker rooms and lavatories.
 - e. Second Floor: The second floor contains two large offices and two lavatories for the Niagara Falls Bridge Commission.
2. Stairways: There are three stairways in the building. One at the most northern side of the building, one in the center, off the main corridor, and one at the southwestern corner of the inspection offices in the southern curve of the building. The stairs are terrazzo on concrete risers and treads. The guardrails are of square sectioned aluminum verticals with wood handrails. The center stair that leads to the Niagara Falls Bridge Commission's offices on the second floor were treated specially. The walls

are covered with a veneer of one foot by one foot square black marble tiles. The ceiling is arched and made of painted white plaster. There are fluorescent fixtures at the edge of the ceiling that are shaded with wood trim and there is a simple wood rail surface mounted on one side of the stair.

3. **Flooring:** Throughout most of the building, the floors are variegated brown and tan colored terrazzo. In the entrance lobby however, black non-slip terrazzo was used. In that corridor various widths of stainless steel divider strips were used to create a decorative gridded pattern. At the center of the squares are smaller decorative green squares of terrazzo. Within the second floor rooms, a black vinyl composite tile was laid with a deep green vinyl border running around each space. The floors of the inspection Shed and Warehouse are exposed concrete slab. At the time of this survey, some of the floors had been covered over with tan vinyl composite tiles.
4. **Wall and ceiling finishes:** Most of the wall and ceiling finishes in the building are plaster from eight feet, two inches above finished floor, with glazed concrete blocks below. In the main entrance corridor there is what appears to be polished black marble panels up to top of door height of seven feet, four inches with a black marble band above. (There is no aluminum band as indicated in the original drawings.) The panels may be "French gray cement marble" as they were called out in various letters from Russell Larke. There are plaster walls and ceilings above the marble. In the General Customs Room there is ceramic tile wainscoting. The office at the south end of the second floor has black marble pilasters and base. That room also has triple banded painted flat wood cornice molding at the ceiling. The other rooms on the second floor have double banded painted flat wood cornice molding at the ceiling. (At the time of this survey, the ceilings of the first floor are badly water damaged.)
5. **Openings:**
 - a. **Doorways and doors:** The interior doors of the building are seven feet tall and of natural wood. Some doors have full glass lights with stenciled letters of the particular room name. The door frames are hollow metal.
 - b. **Windows:** Although the original drawings called for double hung aluminum and glass windows this was not actually provided, as aluminum may have been eliminated from the job because of its scarcity and expense in 1941. In ~~the~~^{the} historic photos taken circa 1942,

the windows appear to have been steel and glass with two operable panes on top and bottom. (They are similar in design to those that exist in the toll house.) The existing windows are aluminum and are not the original windows. The windows are framed with oak to accept wooden venetian blinds. Some windows have painted steel lintels above them. The sill height is three feet, ten inches above the finished floor. The second floor windows are double hung.

6. **Decorative features and trim:** Because of the simplified style of the architecture of this building, there are not many "decorative" features. In the entrance lobby and on the second floor, special wall and floor treatments were used as mentioned earlier. Otherwise, the finishes and materials of the building are very utilitarian. There is a built-in, natural-finish wood cabinet and shelves in the second floor Commission's office and there is gold leaf lettering on many of the doors in the building.
7. **Hardware:** Most of the hardware in the building is simple brass on bronze round knobs. However, in the Customs inspection area and at the original entrance/egress doors there are brass plated pulls on the pull side of the doors and double horizontal push bars on the push side of the doors.
8. **Mechanical equipment:**
 - a. **Heating, air-conditioning, ventilation:** The heating system for the building is by forced water through cast iron radiators. Although the original drawings show an aluminum enclosure at each unit, exposed cast iron radiators were installed at each window to save cost because of the scarcity of aluminum at the time. The radiators in the entrance corridor are recessed behind the black marble veneer and have perforated aluminum grilles recessed in the marble. Any air-conditioning was added at a later date and was installed by placing individual air-conditioning units in the existing windows.
 - b. **Lighting:** There are mostly ceiling-mounted round incandescent and rectangular fluorescent light fixtures in the building. The lavatories have wall-mounted bare bulbs above the sinks. The second floor rooms have recessed fluorescent fixtures and as mentioned earlier, the central stair has a decorative cove fixture in its curved ceiling. On the rear facade of the Inspection Building, next to the park, are surface-mounted fixtures.

- c. Plumbing: There are white porcelain toilets, sinks and urinals in the toilet rooms.

D. Site:

1. General setting and orientation: The Inspection Building is located at the southern edge of the site.
2. Historic landscape design: The only exterior landscape design is the wrought iron rails at the entrance to the Inspection Building. The geometric shape of the handrails is suggestive of the pattern in the limestone relief frieze underneath the windows on the facade.
3. Outbuildings: None

PART III. SOURCES OF INFORMATION

- A. Original Architectural Drawings: The location of the original plans for the Inspection Building is unknown. They are dated March 1, 1941 and copies of the drawings are in the archives of Hardesty and Hanover, consulting engineers (1501 Broadway New York, NY 10036).
- B. Early Views: The original photographs of the Rainbow Bridge Toll Plaza circa 1942, are in the Niagara Falls Bridge Commission archives.
- C. Interviews: Dave Michelson, Facilities Engineer for the Niagara Falls Bridge Commission, concerning the current conditions of building fabric at Rainbow Bridge Toll Plaza, interview by author, by phone, 20 July 1994.
- D. Bibliography:
 1. Primary and unpublished sources:

Letters of Shortridge Hardesty, Aymar Embury and Russell G. Larke, Niagara Falls and New York City, 1938-1942.

Hardy Holzman Pfeiffer Associates, "State Historic Preservation Office (SHPO) Report, Alternative Scheme Analysis for Expansion of United States Plaza at the Rainbow Bridge" (Niagara Falls Bridge Commission, New York, August 1993).

McFarland-Johnson, Inc., "Draft of Environmental Impact Study for the Renovation of the United States Plaza at Rainbow Bridge" (Niagara Falls Bridge Commission, New York, June 1994).

2. Secondary and published sources:

"Buffalo Firm is Low Bidder for Bridge Contract," *Niagara Falls (New York) Gazette*, 2 April 1941.

"Bridge Building Plans Changed," *Niagara Falls (New York) Gazette*, 25 March 1941.

George Seibel, *Bridges of the Niagara Gorge: Rainbow Bridge, 50 years, 1941-1991* (Niagara Falls, Canada: Niagara Falls Bridge Commission, 1991).

Norval White and Elliot Willensky, eds., *AIA guide to New York City* (New York, New York Chapter, American Institute of Architects, 1967).

E. Likely sources not yet investigated:

History of the State of New York by Alexander Flick (ed.) 10 vols. (New York, 1933-1937)

New York 1930 by Robert Stern

The Olmsted Papers

The State Reservation at Niagara by Charles Dow Albany 1914

WPA Archives "New York City WPA Art Project"

F. Supplemental Material:

The letters of Hardesty, Embury and Larke, Niagara Falls and New York City, 1938-1942 referenced in this report are in the archives of Hardesty and Hanover, engineers (1501 Broadway New York, NY 10036).

PART IV. PROJECT INFORMATION

Prepared by: Alison Roede
Title: Project Architect
Affiliation: Hardy Holzman Pfeiffer Architects
Date: November 8, 1994