RAINBOW BRIDGE TOLL PLAZA, TOLL BUILDING HABS No. NY-6348-B
Rainbow Plaza
Niagara Falls
Niagara County
New York

HABS
NY
32-NIAF,
5B-

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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RAINBOW BRIDGE TOLL PLAZA, TOLL BUILDING

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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: Niagara Falls Bridge Commission

Present Use: United States Border Crossing; toll collection and toll offices

Significance: At the time of this survey, the Rainbow Bridge Toll Plaza border crossing is the second largest international northern entrance to the United States and seventy-five percent of the traffic is non-Canadian and non-American. The site of the Toll Building is within the Rainbow Bridge Toll Plaza. The Rainbow Bridge Toll Plaza is within the Niagara Reservation, a National Historic Landmark. The concept for the adjacent park was developed by Frederick Law Olmsted.

The Rainbow Bridge Toll Plaza was originally 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 Toll Building and primary inspection canopy were 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 they began collecting tolls on the American bridge approach.

2. Architect: The initial 1940 design of the toll building was by Russell Goodwin Larke Architects of Niagara Falls, New York. Aymar Embury II of New York was consulting architect on the building.

3. Original and subsequent owners: The Niagara Falls Bridge Commission was the original 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 appearance of the Toll Building was the same at the time of this survey as when it was first built with the exception of the changes to the inspection and toll collection areas underneath the Primary Inspection Canopy and the toll enclosure at the toll building. However, the original drawings are not representative of what was built. The basement was never constructed and the aluminum sills planned for the windows were not included because of the expense of the material and shortages during the war. Original photographs of the building shortly after the plaza was opened are included in this survey. The original photographs of the Rainbow Bridge Toll Plaza, copies of which are included within this documentation are in the Niagara Falls Bridge Commission archives.

   According to Aymar Embury's summary of bridge construction costs in a letter to Shortridge Hardesty dated October 9, 1942, the cost of the 1941 contract AP1 for the American Terminal which included the Toll House and Primary Inspection Canopy, the construction cost 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 Toll 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).

6. Alterations and additions: The toll booths and inspection booths, 1958, under the Primary Inspection Canopy and the light metal truss and the flags that the truss supports (circa 1976) were added at a later date. A toll enclosure was attached to the side of the building at some later date in the location that was originally simply an opening in the side of the building for toll collection.

B. Historical context:

The site of the Toll Plaza is part of the Niagara Reservation and is adjacent to Niagara Falls, one of the natural wonders of the world. The park adjacent to the plaza was designed by Frederick Law Olmsted. The Rainbow Bridge Toll Building was designed by Russell Goodwin Larke Architects of Niagara Falls, New York. Aymar Embury II of New York, Robert Moses' favorite architect, was consulting architect on the Rainbow Bridge Toll Plaza. 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. This Historic American Building Survey is being prepared because the tenant group is an American federal agency, and 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 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 facade, roof, and structure are in fair condition, the facades are slightly stained and some of the limestone is chipped. However, the attached primary inspection and toll collection canopy is in poor condition the metal coping is badly dented, the roof is leaking and the underside of the canopy is very damaged by water. The light pylon is in good condition.

B. Description of Exterior:

1. Over-all dimensions: The plan of the Toll Building is a circle with a twenty-eight foot, eight inch diameter. It is a one story building eighteen feet, six inches above grade at the top of the coping and a metal-clad, light pylon rising sixty-two, feet six inches above the roof line of the Toll Building.

2. Foundations: The foundations beneath the Toll Building are two feet thick. The footings probably extend four feet below the top of the crawl space floor slab.

3. Walls: The continuous facade of the one-story Toll Building rises eighteen feet six inches above grade and is composed of fluted, limestone pilasters without capitals or bases that 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.

4. Structural system, framing: The construction of the Toll Building is steel frame.

5. Canopy: The Primary Inspection and Toll Collection canopy is twenty-three feet, eight inches wide and is 234 feet, six inches long at the front of the concave curve. The thin, slightly sloping roof supports the later addition (circa 1976) of a hidden, horizontal, steel truss which supports flag poles extending above it. Originally, there were two toll booths (thirteen feet, four inches high, four feet wide and fourteen feet, two inches long) at the east end of the canopy. In 1958, the two booths were replaced and booths were added to the three inspection lanes. The newer booths are metal and glass but do not resemble the original construction. The roof is supported by two columns at each of the three inspection islands and by four columns at the two original toll booth islands. The canopy is supported by the Toll Building at its east end and by the Inspection Building at its west end. The canopy has metal coping on both sides of the roof fourteen feet above grade and supports toll and inspection related signage. At the time of construction, the underside of the canopy was finished with asbestos board supported by aluminum channels. At the time of the survey the surface had been replaced with painted exterior plaster.

6. Chimneys: None

7. Openings:

   a. Doorways and doors: The doorway is framed by greenstone accent bands within limestone pilasters. The door itself was hollow aluminum and there was a six-pane steel and glass window above the door. At the time of this survey, the original door had been replaced.

   b. Windows and shutters: There are eight windows in the circular plan of the Toll Building. The windows are framed by greenstone accent bands within stone pilasters. The windows themselves are twelve pane steel and glass windows. The top nine panes are of patterned glass and the bottom three panes are clear glass. It is not known if the patterned glass is original. The top center pane and the bottom center pane of the windows are operable. Below each limestone sill is a half-inch deep, carved, geometric relief pattern in a limestone panel.

8. Roof:

   a. Shape, covering: The roof of the Toll Building is flat, built up roofing on plywood on wood joists and is not visible from grade.

   b. Cornice: None

   c. Light Pylon: The corrugated, metal clad light pylon rises fifty-two feet six inches above the top of coping of the Toll Building. There is a smaller diameter stainless steel decorative top that rises another ten feet above the lower portion of the pylon and contained flood lights to light the plaza and bridge approach. (At the time of this survey the floodlights had been removed.) Although the original drawings of the Toll House show a flag pole on the roof of the building, the light pylon was probably built at the same time as the other 1941 buildings. The letters between Hardesty, Embury and Larke, indicate that they were already specifying the fabrication of the tower in 1940. In addition, the 1942 photographs of the plaza prove the light pylon existed at that time.

C. Description of Interior

1. Floor Plans:

   a. Crawl Space: In the original drawings for the Toll Building there was a locker room and lavatory in the basement. The basement was eliminated as a cost saving measure in the revision of the drawings

after January of 1941. The crawl space is used for mechanical equipment.

b. First floor: Entrance to the Toll Building is to the south of the circular plan. The door opens directly into a corridor then onto a locker room which comprises the eastern quarter of the circle. To the north of the locker room is a lavatory and the Toll Captains' office. To the south side of the circle is a small toll booth and cashier's room.

2. Stairways: There was one stairway in the original Larke drawings at the center of the plan that led to the basement. When the basement was deducted from the job, the stair was replaced with a steel access door in the floor of the toll collectors room.

3. Flooring: At the time of this survey, there are tan vinyl composite tiles throughout the Toll Building. It appears that a similar material was in the building originally.

4. Wall and ceiling finishes: All the walls in the Toll Building are of a yellowish-gold color, glazed masonry unit up to wainscot height, with off-white plaster walls and ceiling above. At the time of this survey, the ceilings are badly water damaged.

5. Openings:

a. Doorways and doors: The interior doors in the Toll Building are wood with full clear glass lights. The toilet room door is a flush wood door. All doors are seven feet tall and are in hollow metal frames.

b. Windows: The windows themselves are twelve-pane steel and glass windows. At the time of this survey, the top nine panes are of patterned glass and the bottom three panes are clear glass. (It does not appear that the patterned glass is original in the historic photographs.) The top center pane and the bottom center pane of the windows are operable. The windows have marble sills.

6. Decorative features and trim: None

7. Hardware: The doors have unremarkable, brass knobs. The windows have a steel lever handle on each operable pane.

8. Mechanical equipment:

a. Heating, air conditioning, ventilation: The heating system for the building is forced water. 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 is one, two bulb fluorescent fixture in each room. There are square recessed light fixtures in the underside of the Primary Inspection Canopy.

c. Plumbing: There is one white porcelain toilet in the lavatory and a molded fiberglass sink that is not original.

D. Site:

1. General setting and orientation: The Toll Building is located at the east edge of the Toll Plaza site.

2. Historic landscape design: None

3. Outbuildings: None

PART III. SOURCES OF INFORMATION

A. Original Architectural Drawings: Location of the original drawings is unknown. The plans for the Toll Plaza 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 (Post Office. Box 1031 Niagara Falls, New York 14302.)

C. Interviews: Dave Michelson, Facilities Engineer for the Niagara Falls Bridge Commission, concerning the current conditions of building fabric at Rainbow Bridge Toll Building, 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 U. S. 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.

"$100,000 Project Under way at Bridge," *Niagara Falls (New York) Gazette*, 1 May 1958.

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)

Olmsted Papers

The State Reservation at Niagara by Charles Dow Albany 1914

WPA Archives "New York City WPA Art Project"

F. Supplemental Material:

The original copies of selected letters of Shortridge Hardesty, Aymar Embury and Russell G. Larke, Niagara Falls and New York City, 1938-1942 that are referenced in this report are located in the archives of Hardesty and Hanover, consulting engineers (1501 Broadway New York, NY 10036).

PART IV. PROJECT INFORMATION

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