LAKE PONTCHARTRAIN CAUSEWAY AND SOUTHERN TOLL PLAZA, GARAGE
(Police Building)
Causeway Boulevard
Metairie
Jefferson Parish
Louisiana

HAER LA-21-D

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
100 Alabama Street, SW
Atlanta, Georgia 30303

HISTORIC AMERICAN ENGINEERING RECORD

LAKE PONTCHARTRAIN CAUSEWAY
SOUTHERN TOLL PLAZA,
GARAGE
(Police Building)
HAER No. LA-21-D

Location: The Lake Pontchartrain Causeway spans Lake Pontchartrain from Causeway Boulevard in Metairie, Jefferson Parish to Highway 190, Mandeville, St. Tammany Parish, Louisiana. The southern Toll Plaza was located at the Jefferson Parish terminus of the Lake Pontchartrain Causeway.

The southeast corner of the Garage (Police Building) was located at latitude 30.020556, longitude -90.154167. This coordinate represents the location of the southeast corner. This information was acquired using Google Earth imagery. There are no restrictions on the release of this information to the public.

Dates of Construction: The Garage (Police Building) was constructed in 1955-56 and demolished in 2011. The Greater New Orleans Expressway Commission converted the building from a garage to an office building in the last decades of the twentieth century with minor improvements in the decade prior to demolition.

Engineer: Palmer & Baker, Inc. designed the first span to almost exclusively consist of identical panels, caps, and pilings. This allowed for all pieces of the bridge to be prefabricated off site, cutting costs and time needed to build such a large structure. The firm of Palmer & Baker, Inc. began as a one-man operation in 1939. Walter F. Palmer, then Vice-President of the firm of Wilberding & Palmer, moved to Mobile, Alabama, in 1939 to open the firm's southern office. He was joined two years later by Robert Baker, a former chief engineer with Wilberding & Palmer.[1] Palmer, a transportation engineer had substantial experience working with prefabricated concrete structures and brackish water. In 1938, the City of Mobile hired Palmer under a contract with the Works Progress Administration to construct the Bankhead Tunnel in Mobile Bay. Workers constructed seven sections of prefabricated, 10.4′ wide tubes at the Alabama Drydock and Shipbuilding Company, towed the sections one

[1] *The Times-Picayune*, "Engineer Firm Started in 1939," 29 August 1956, 19.

mile to the site, and installed.[2] The mixture of fresh and salt water in the Bay caused challenges when ballasting the elements. When completed in 1950, the tunnel contained two one-way lanes of traffic equipped with hurricane protection gates.[3] Palmer also designed tunnels for Houston and Galveston.

The second span was designed by David Volkert & Associates. The Company was founded in New Orleans, Louisiana, in 1925 as Doullut & Ewin, Inc. as an engineering and construction company. The firm moved to Mobile, Alabama, and reorganized in 1946.[4] Clients of the firm included the Cities of Mobile, Alabama; Pensacola, Florida; and New Orleans, Louisiana; the states of Alabama, Florida, Louisiana, and Tennessee; the U.S. Army Corps of Engineers; the Bureau of Aeronautics; and the Pure Oil Company.[5] The firm again reorganized in 1963 to become David Volkert & Associates. Volkert & Associates personnel had experience with bridge construction, tunnel installation, and port development. By 1967, the firm had designed causeways and bascule bridges in Miami and Brevard County, Florida, and the Patpsco Avenue Bridge in Baltimore.[6]

Builder: The Louisiana Bridge Company, a joint venture between Brown & Root, Inc. of Houston, Texas, and the T.L. James Company of Ruston, Louisiana, implemented Palmer & Baker's design for the Lake Pontchartrain Causeway. Like Palmer & Baker, Brown & Root, Inc. also had extensive experience with construction projects in salt water environments. In 1947, the firm built the first oil platform in the Gulf of Mexico beyond the sight of land. This feat led to the expansion of the offshore oil and gas industry worldwide.[7] The T.L. James Company previously constructed Camp Ruston, a camp northwest of Ruston for the detention of European World War II prisoners of war.[8]

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[2] *The Palm Beach Post*, August 28, 1948, 4.
[3] Association Internationale des Tunnels et de L'Espace Souterrain-International Tunneling and Underground Space Association, "Bankhead Tunnel, Mobile, Alabama" (2009).
[4] David Volkert & Associates, Path to Success, 2012, http://www.volkert.com/history.htm (accessed 7 August 2012).
[5] Ewin Engineering Corporation, "Ewin Engineering Corporation," 1950, http://www.volkert.com/PDF%20Files/Ewin_Engineering%20Brochure_1925-1950.pdf (accessed & August 2012).
[6] David Volkert & Associates, "David Volkert & Associates," 1964, http://www.volkert.com/PDF%20Files/DVA_Historic_Brochure_1964.pdf (accessed 7 August 2012).
[7] Joseph A. Pratt, Tyler Priest, and Christopher J. Castaneda. *Offshore Pioneers: Brown & Root and the History of Offshore Oil and Gas* (Houston: Brown & Root by Gulf Publishing Company: 1997), 1-3, 100-104.
[8] Louisiana Tech University Special Collections, "Camp Ruston", (2010).

Following award of the contract, the Louisiana Bridge Company worked with the Raymond Concrete Pile Company to construct a yard in Mandeville near the planned site for the northshore Toll Plaza. All pieces of the bridge were produced at this location. The Raymond Concrete Pile Company utilized their concrete manufacturing technology to produce prestressed concrete cylinders which could withstand the corrosive conditions of Lake Pontchartrain.

In 1955, the Raymond Concrete Pile Company and the Louisiana Bridge Company built the facility for $6 million, employing approximately 750 workers. Engineers designed, planned, and built the plant to maximize efficiency in construction of the bridge. Workers dredged a canal from the Lake to the interior of the facility to facilitate loading materials on and off barges. Plant workers manufactured pilings on the east side of the plant and constructed spans on the western portion. Concrete mixing machines and spouts separated the two.

James E. Walters, a World War I veteran with a varied professional career, oversaw construction of the first Lake Pontchartrain Causeway. Walters was a sailor, rancher, and bronco-buster prior to becoming an engineer. He oversaw construction of the Pickwick Landing Dam on the Tennessee River during the Great Depression and spent much of World War II conducting aircraft salvage.[9] Under Walters' direction and utilizing prefabrication techniques, the first span was completed four months ahead of schedule.[10]

Construction on the second span began in June 1967. The GNOEC chose another joint Brown & Root-T.L. James & Company-Raymond International (formerly the Raymond Concrete Pile Company) called Prestressed Concrete Products, Inc. to build the span utilizing the same prefabrication techniques that had proven successful before.[11] Prestressed Concrete Products, Inc. manufactured nearly all components of the second bridge at the plant in Mandeville and transported by barge to the construction site in Lake Pontchartrain.[12] James E. Walters, project

[9] *The St. Tammany Farmer* 31 August 1956:1
[10] *The Times-Picayune,* August 31, 1956, "Motorcade Reaches St. Tammany End of Causeway", 1.
[11] *The St. Tammany Farmer*, May 10, 1969, "Dedication of Causeway's Twin a Giant Safety Step.", 19-20, 22.
[12] Gulf Engineers & Consultants, Krebs, LaSalle, Lemieux Construction, Inc. [GEC-KLL], *GNOEC Consulting Engineers' Annual Report of the Lake Pontchartrain Causeway*, 2-4.

engineer for the first span, was by then Executive Vice-President of the Prestressed Concrete Pile Company and once again directed construction.

Original Owner and Use: Greater New Orleans Expressway Commission; garage

Last Owner and Use: The Greater New Orleans Expressway Commission operated the building as an office for the Causeway police prior to demolition of the southern Toll Plaza in 2011.

Significance: The southern toll plaza of the Lake Pontchartrain Causeway included a police building, toll booth, canopy, and administration building. When completed in 1956, the Lake Pontchartrain Causeway was the world's longest bridge. This record was broken by completion of the parallel span in 1969. At 23.87 miles long, the Causeway is the world's longest continuous span over water. The prestressed, pre-cast concrete structural system displays mid-twentieth century technology that typifies modern bridge construction techniques. In addition, the Causeway is significant in the development of the Jefferson and St. Tammany parish communities and the expansion of the greater New Orleans area.

Description: As constructed, the garage building consisted of a 12′-10″ tall brick building with many of the same architectural elements as the Administration Building. The Garage (Police Building) faced the north elevation of the Administration Building. Two wooden garage doors with four lights apiece allowed two cars to be parked inside the building at any given time. Each garage door measured 9′-0″ wide and 8′-6″ tall. A set of double metal doors to the east of the garage doors allowed entrance to the storage area. (Figure 7) A concrete eave capped the garage doors and extended 2′-8″ beyond the façade to provide shade. Two aluminum frame window sets were beneath concrete eaves. Aluminum frame windows wrapped the corners to the north elevation. Other than the corner windows and flat roof, the building possessed no decoration or ornamentation.[13] (Figures 1, 2, 3, 4, 5, 6)

[13] Palmer & Baker, Inc., Plans, 20.

The GNOEC modified the garage into a police station and break area in the late twentieth century. The garage area was converted into small closets and computer rooms divided by thin drywall and/or particle board with single metal doors. Inside the building, offices flanked a break room for employees. The measurements of these rooms is not available. The addition to the rear of the structure had small aluminum frame windows. Maintenance employees could access the original storage area and double metal doors. Prior to demolition, the most noticeable feature of the Police Building was a mural of the Causeway painted during the tenure of Orleans Parish Sheriff Charles Foti through the Orleans Parish Prison Art Program.[14] (Figure 8)

History: When the first span was completed in 1956, each Toll Plaza contained a Garage with space for two cars and a small storage area. At the southern Toll Plaza Complex, this building was modified from a garage to the Police Building while retaining the storage space. Prior to demolition, the Greater New Orleans Expressway Commission (GNOEC) police force used the building for storage, office space, and meeting areas.

Sources:

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David Volkert & Associates. Path to Success. 2012. Accessed August 7, 2012. , http://www.volkert.com/history.htm.

--. "David Volkert & Associates." 1964. Accessed August 7, 2012. http://www.volkert.com/PDF%20Files/DVA_Historic_Brochure_1964.pdf.

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Gulf Engineers & Consultants and Krebs, LaSalle, LeMieux Construction, Inc. *GNOEC Consulting Engineers' Annual Report of the Lake Pontchartrain Causeway.* 1996. Available at the St. Tammany Parish Public Library.

[14] Palmer & Baker, Inc., Plans, 20.

Historic photos in the collection of the Greater New Orleans Expressway Commission.

Palm Beach Post, August 28, 1948. Accessed April 28, 2010. www.news.google.com.

Palmer & Baker, Inc., Plans for the Lake Pontchartrain Causeway and associated Toll Plazas, 1953-56. Available in the collection of the Greater New Orleans Expressway Commission.

Pratt, Joseph A., Tyler Priest, and Christopher J. Castaneda. *Offshore Pioneers: Brown & Root and the History of Offshore Oil and Gas.* Houston: Brown & Root by Gulf Publishing Company: 1997. Accessed April 28, 2010. www.books.google.com.

The St. Tammany Farmer, August 31, 1956, "Once a Chauffeur, Now a Big Construction Man.". Available on microfilm, Covington Branch of St. Tammany Parish Library System.

---. May 10, 1969, "Dedication of Causeway's Twin a Giant Safety Step." Available on microfilm, Covington Branch of St. Tammany Parish Library System.

The Times-Picayune, August 29, 1956. "Engineer Firm Started in 1939." Available online through subscription database, accessed August 7, 2012. www.nola.com/t-p/.

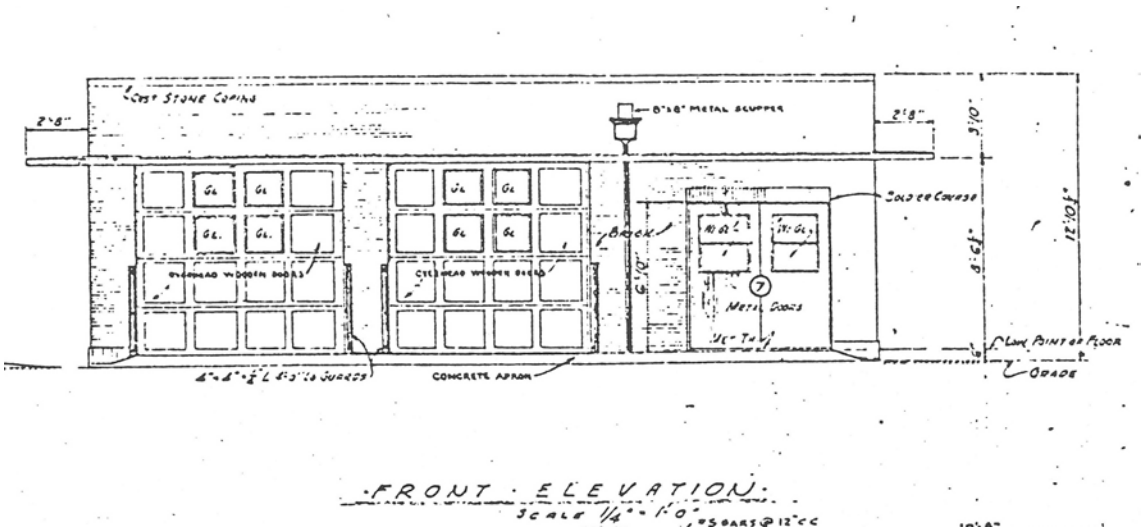
Historian: Kelly Sellers Wittie, R. Christopher Goodwin & Associates, Inc.

Project Information: Following the unprecedented damage caused by Hurricanes Katrina and Rita, the U.S. Army Corps of Engineers (USACE) committed to a 100 year level of protection in southeast Louisiana. This project calls for the construction and floodwall improvements along the south shore of Lake Pontchartrain as part of the Hurricane Storm Damage Risk Reduction System. In 2009, the USACE determined these improvements will produce an adverse effect on the Lake Pontchartrain Expressway and the southern Toll Plaza, properties determined to be eligible for inclusion in the National Register of Historic Places. In accordance with Section 106 of the National Historic Preservation Act (36 CFR Part 800), the USACE executed a Memorandum of Agreement (MOA) with the Louisiana State Historic Preservation Officer, Greater New Orleans Expressway Commission (GNOEC), and the Coastal Protection and Restoration Authority of Louisiana. As part of the MOA, USACE agreed to document

the Lake Pontchartrain Bridge and the structures of the Southern Toll Plaza and prepare an accompanying narrative history.

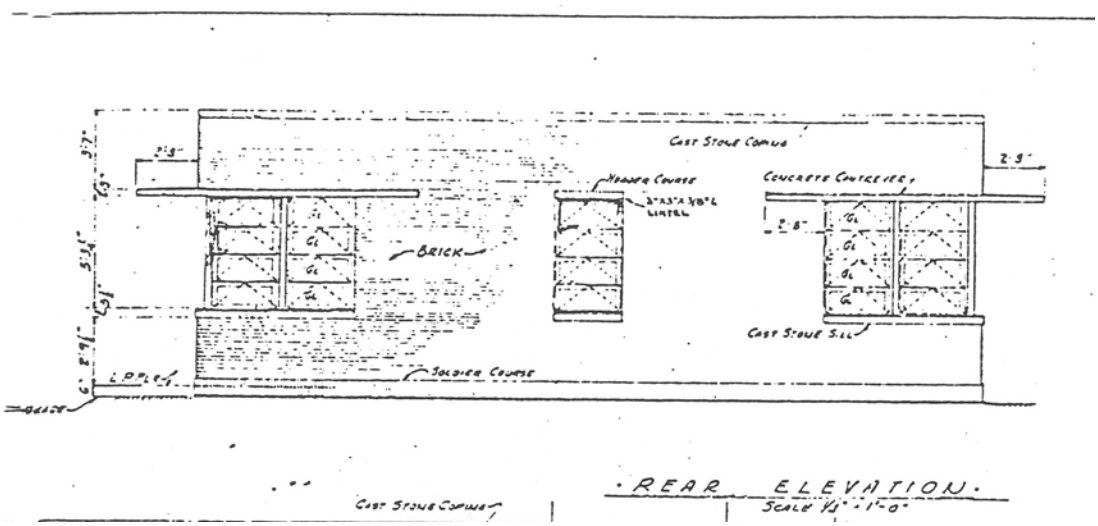
In December 2011, the USACE implemented the plan to improve floodwall protections on Lake Pontchartrain at the Causeway. Since that time, the USACE has demolished the buildings of the southern Toll Plaza and constructed an elevated bridge section to route drivers from Causeway Boulevard in Metairie onto the historic bridge. These alterations allow the USACE to complete a 15′ floodwall along the lakeshore to protect the greater New Orleans metro area from flooding.

Figure 1



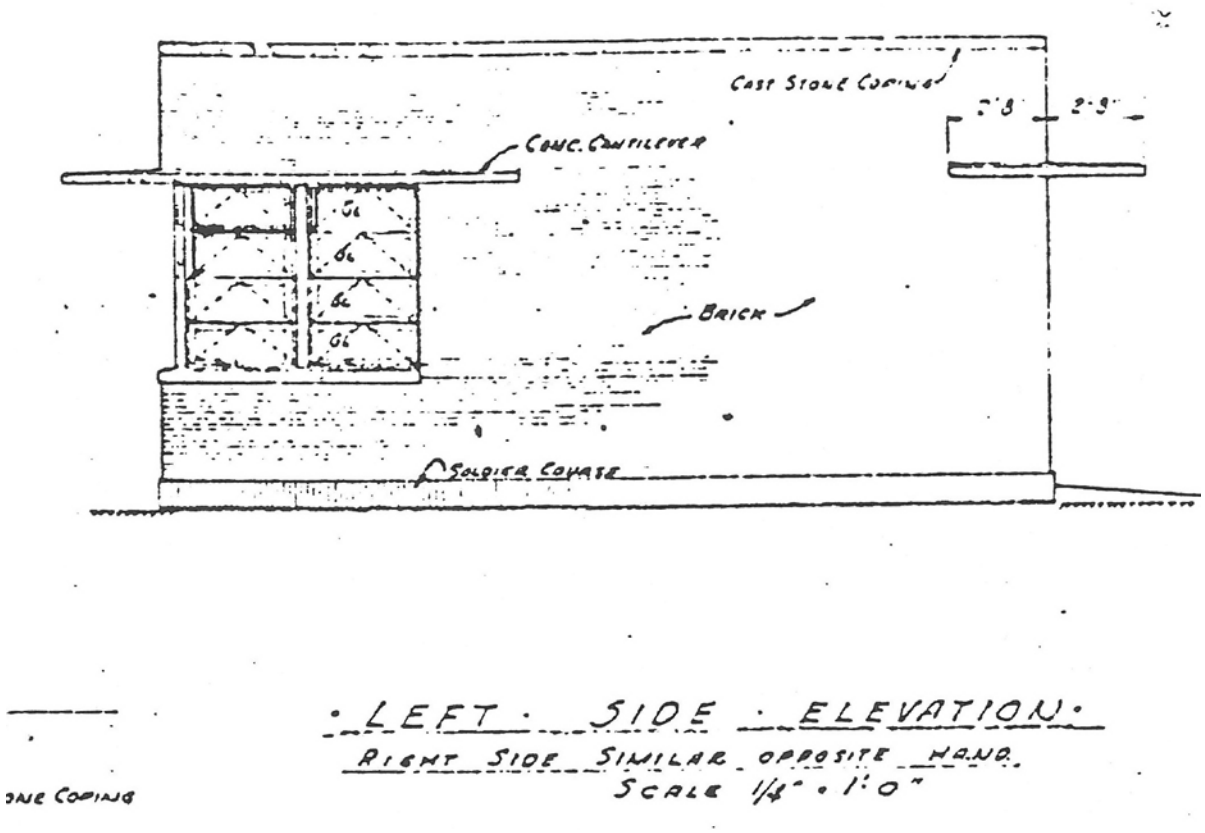
Garage Building south elevation plan
Photocopy of engineering drawing
Palmer & Baker, Inc.
October 15, 1953
Sheet No. 20

Figure 2



Garage Building north elevation plan
Photocopy of engineering drawing
Palmer & Baker, Inc.
October 15, 1953
Sheet No. 20

Figure 3



Garage Building east elevation plan
Photocopy of engineering drawing
Palmer & Baker, Inc.
October 15, 1953
Sheet No. 20

Figure 4

Garage Building, southern Toll Plaza
Photocopy of photograph
(original in the files of the Greater New Orleans Expressway Commission)
Photographer Unknown
Date Unknown

Figure 5

Garage (Police Building) south elevation, southern Toll Plaza
Photocopy of photograph
(original in the files of Terry Greene)
Terry Greene, photographer
March 19, 2010

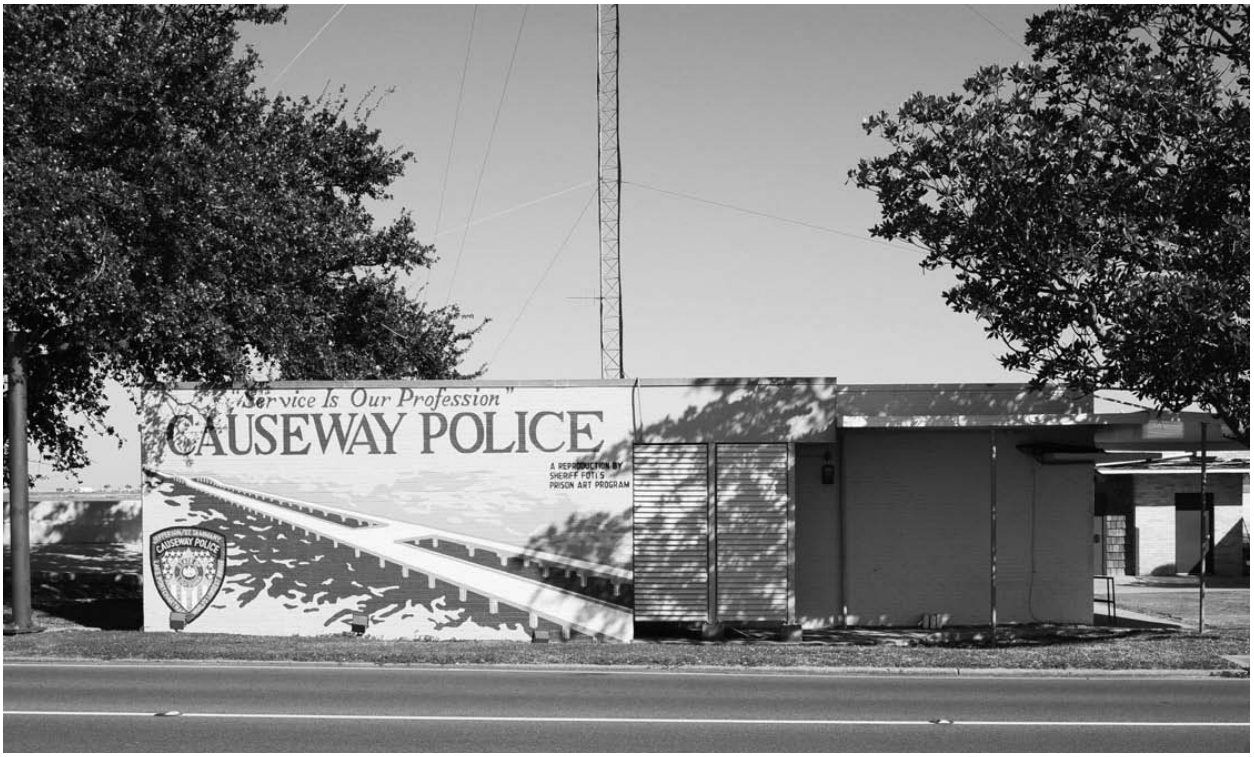
Figure 6

Garage (Police Building) east elevation, southern Toll Plaza
Photocopy of photograph
(original in the files of Terry Greene)
Terry Greene, photographer
March 18, 2010

Figure 7

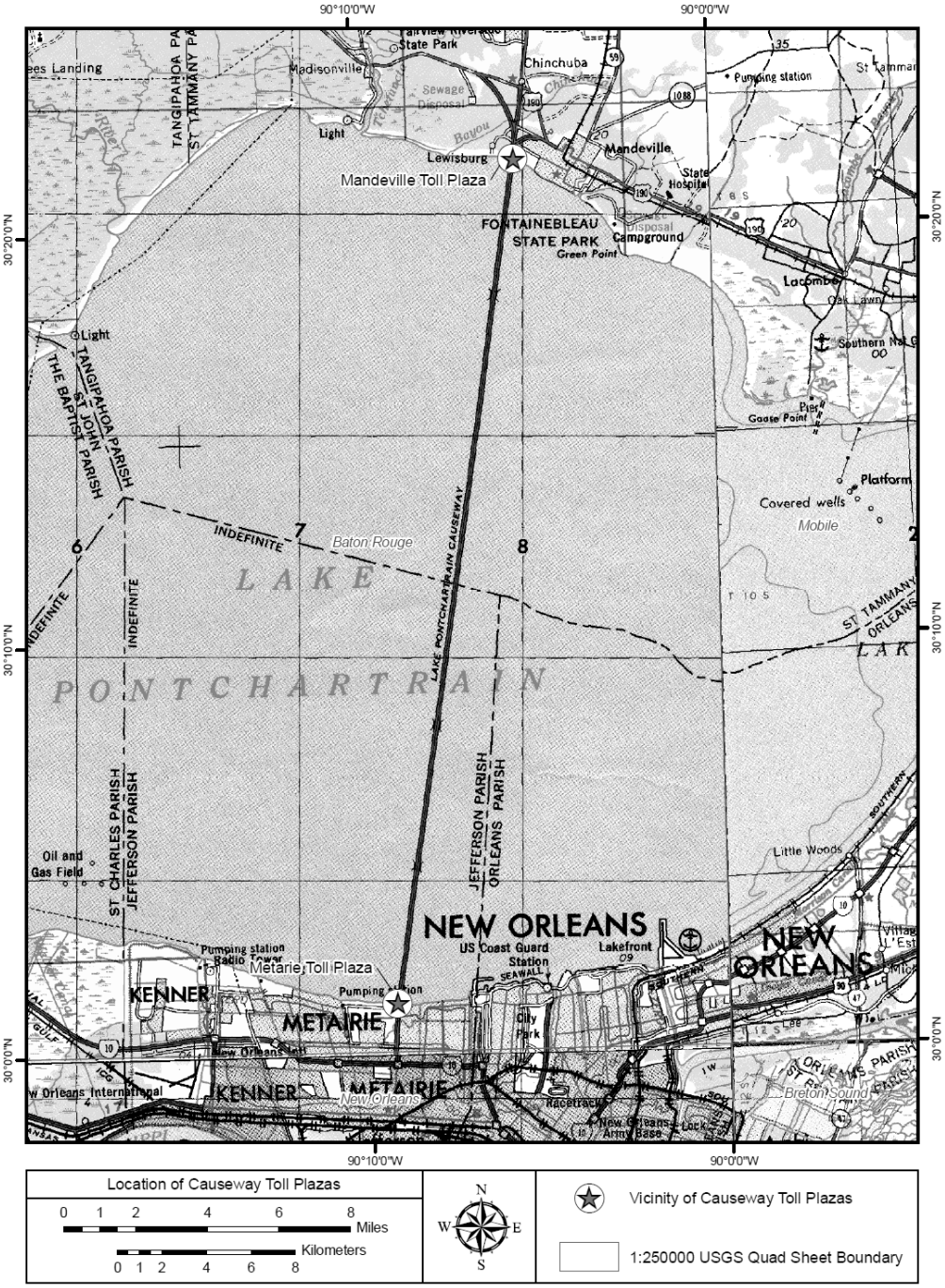
Original doors, Garage (Police Building), southern Toll Plaza
Photocopy of photograph
(original in the files of Terry Greene)
Terry Greene, photographer
March 19, 2010

Figure 8

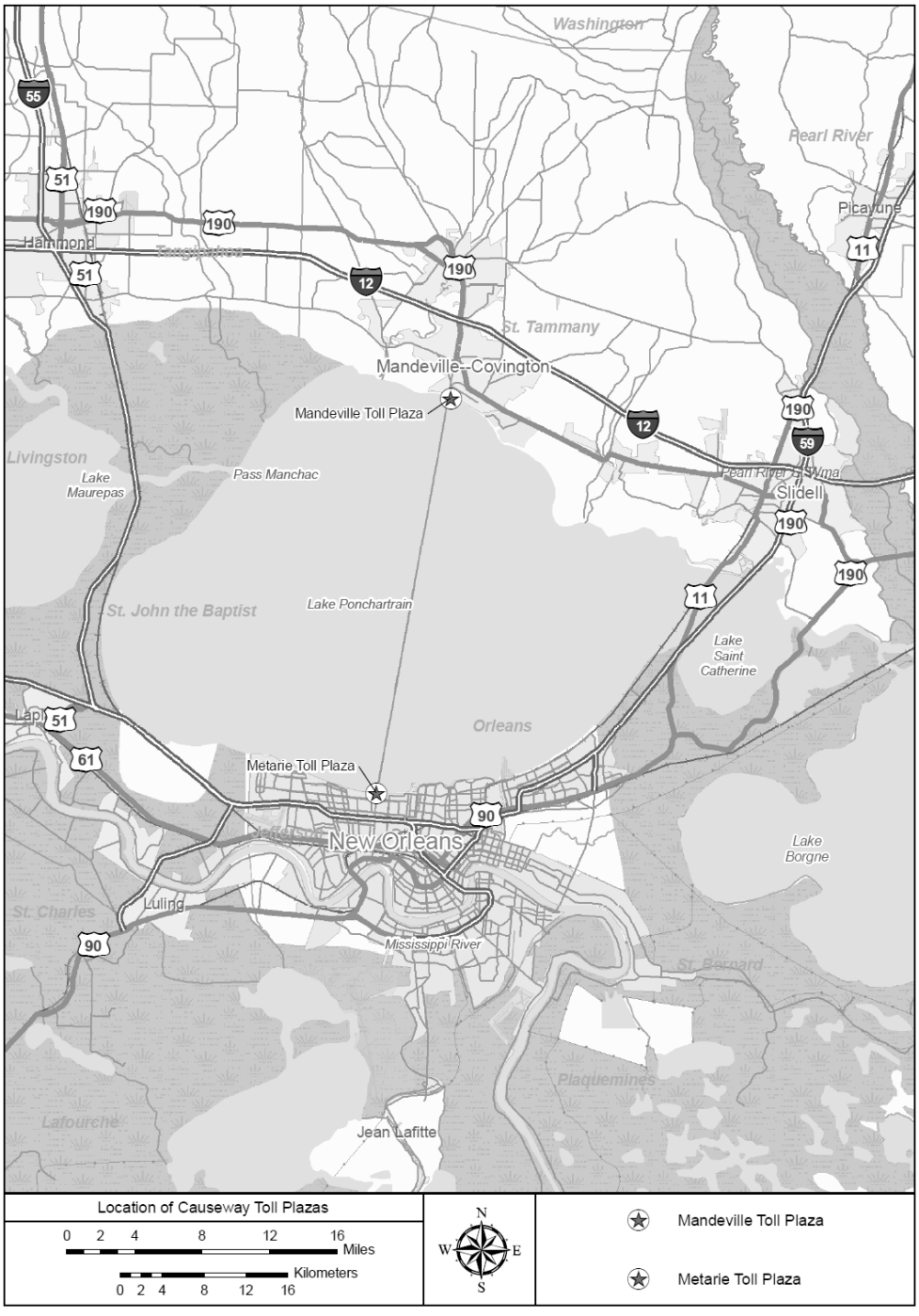


Garage (Police Building) west elevation, southern Toll Plaza
Photocopy of photograph
(original in the files of Terry Greene)
Terry Greene, photographer
March 19, 2010

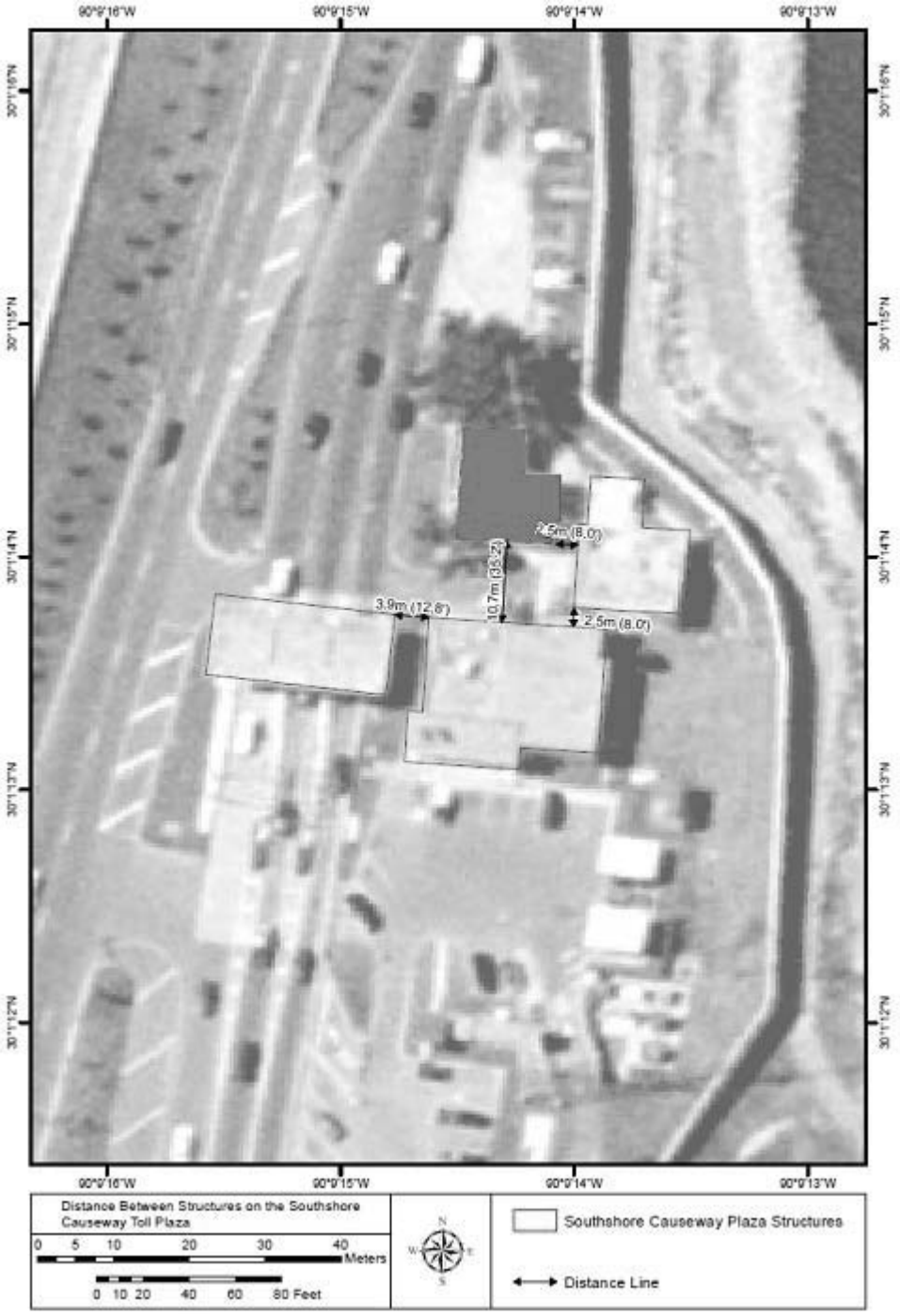
Map 1


90°10'0"W
90°0'0"W
30°20'0"N
30°10'0"N
30°0'0"N
Mandeville Toll Plaza
Metairie Toll Plaza
Lewisburg
Mandeville
Madisonville
Chinchuba
Lacombe
FONTAINEBLEAU STATE PARK
Green Point
Goose Point
Covered wells
Platform
Mobile
Baton Rouge
LAKE
PONTCHARTRAIN
LAKE PONTCHARTRAIN CAUSEWAY
TANGIPAHOA PARISH
ST JOHN THE BAPTIST PARISH
ST CHARLES PARISH
JEFFERSON PARISH
ORLEANS PARISH
ST TAMMANY PARISH
INDEFINITE
NEW ORLEANS
KENNER
METAIRIE
Little Woods
Oil and Gas Field
US Coast Guard Station
Lakefront
City Park
Racetrack
New Orleans Army Base
Breton Sound
Location of Causeway Toll Plazas
0 1 2 4 6 8 Miles
0 1 2 4 6 8 Kilometers
N
W
E
S
Vicinity of Causeway Toll Plazas
1:250000 USGS Quad Sheet Boundary

Map 2


Washington
Pearl River
Picayune
Hammond
Tangipahoa
St. Tammany
Mandeville--Covington
Mandeville Toll Plaza
Livingston
Lake Maurepas
Pass Manchac
Pearl River
Slidell
St. John the Baptist
Lake Ponchartrain
Lake Saint Catherine
Orleans
Metarie Toll Plaza
New Orleans
Lake Borgne
St. Charles
Luling
Mississippi River
St. Bernard
Plaquemines
Lafourche
Jean Lafitte
55
51
190
12
59
11
61
90
Location of Causeway Toll Plazas
0 2 4 8 12 16
Miles
0 2 4 8 12 16
Kilometers
N
W
E
S
Mandeville Toll Plaza
Metarie Toll Plaza

Map 3


90°9'16"W
90°9'15"W
90°9'14"W
90°9'13"W
30°1'20"N
30°1'18"N
30°1'16"N
30°1'14"N
30°1'12"N
30°1'10"N
2.5m (8.0')
10.7m (35.2')
3.9m (12.8')
2.5m (8.0')
Distance Between Structures on the Southshore Causeway Toll Plaza
0 5 10 20 30 40 Meters
0 10 20 40 60 80 Feet
N
W
E
S
Southshore Causeway Plaza Structures
Distance Line