MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: yes X
no ___

Property Name: Pier 1 (Clinton Street Pier) Inventory Number: B-5268

Address: 1900 South Clinton Street City: Baltimore Zip Code: 21224

County: N/A USGS Topographic Map: Baltimore East

Owner: Maryland Port Administration (State of Maryland) Is the property being evaluated a district? X yes

Tax Parcel Number: 1 Tax Map Number: (Block) 1903B Tax Account ID Number: 001 Ward 01, Section 010, Block 1903B, Lot

Project: N/A Agency: Maryland Port Administration

Site visit by MHT Staff: X no ___yes Name: ___ Date: ___

Is the property located within a historic district? ___yes X no

If the property is within a district District Inventory Number: ___

NR-listed district ___yes Eligible district ___yes District Name: ___

Preparer's Recommendation: Contributing resource ___yes ___no Non-contributing but eligible in another context ___

If the property is not within a district (or the property is a district)

Preparer's Recommendation: Eligible X yes ___no

Criteria: X A ___B X C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G X None

Documentation on the property/district is presented in:

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*

Summary

Pier 1 is a brick, concrete-block, and corrugated metal port facility comprising three major components: a three-story bulkhead shed (1933), a two-story cargo shed (1933) and a one-story cargo shed (1948). The building is located on a 244,854 square foot pier that extends from South Clinton Street into the Baltimore Harbor. The building rests on a poured-concrete apron supported by poured-concrete and wood pilings. Two sets of railroad tracks run along the building's south elevation and one set runs along the north elevation. Railroad tracks lead from the center bay of the bulkhead shed and cross Clinton Street to the east. The resource is located within the heavily industrialized Canton section of Baltimore City. The Liberty Ship John W. Brown (B-4611) and a naval vessel are berthed on the south side of the pier and two naval ships are berthed on the north side. The surrounding area is characterized by marine-related facilities consisting of industrial buildings and piers constructed during the last half of the twentieth century. Access to the pier is restricted and a chain-link fence encloses the bulkhead shed. The chain-link fencing also restricts access to the pier along the north elevation and partially prohibits access to the south elevation.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended X **Eligibility not recommended** ___

Criteria: X **A** ___**B** X **C** ___**D** **Considerations:** ___**A** ___**B** ___**C** ___**D** ___**E** ___**F** ___**G** ___**None**

Comments: ___

Jim VanLuvanee 9/24/2013
Reviewer, Office of Preservation Services **Date**

Reviewer, NR Program 9/30/13
Date

20130905

The following description includes terminology specific to marine and pier construction. These terms, including the cargo mast and cargo shed, are described as they relate to the building; however, the purpose and function of these elements are discussed in greater detail in the historic context following the building description.

Built Resource Descriptions

Pier

The pier is a long, rectangular structure extending above the water from South Clinton Street into Baltimore Harbor that was constructed for on-loading and off-loading general cargo. Poured-concrete pilings support the pier's deck. Wood fenders are present along the south elevation of the pier. Poured-concrete and wood fenders are located on the north elevation of the pier. Metal mooring devices of a variety of types are found on both the north and south elevations of the pier. The pier's west end features a scale; a metal bollard, mooring devices, and metal and wood fenders. The scale no longer appears to be operable. A poured-concrete, pedestrian sidewalk spans the east end of the pier. Access to the underside of the pier was not available.

Bulkhead Shed

The bulkhead shed is a three-story building that occupies the South Clinton Street end of the pier. The marine building adopts the design of a commercial building. The street-oriented bulkhead shed housed commercial offices of shipping companies operating from the pier, and is the most ornamented section of the building. The three-story, seven-bay by three-bay bulkhead shed rests on a poured-concrete base supported directly on the pier. The building terminates in a flat roof incorporating a parapet inscribed with "Pier 1," on the east (front) elevation. The building is constructed in 3:1 common bond brick, poured-concrete, and decorative concrete block. Art Deco stylistic references are found in the curved concrete-block.

Each structural bay of the building features three two-over-two-light, double-hung, wood-sash window units; all of the window openings on first floor are covered in plywood. Window openings differ in size by floor, with larger first and third floor window openings than those found on the second floor. The three center bays of the east elevation's first floor are occupied by overhead garage doors. A poured-concrete ramp, added in 1978, extends from the third floor east elevation across South Clinton Street and links the building to a storage yard to the east. The original third-floor door opening was enlarged to accommodate the ramp. Personnel entrances, which currently are covered in plywood, are found in two bays on the east elevation; decorative metal marquees characterize each opening. Both the north and south elevations of the bulkhead shed contain three window bays similar in design and configuration to the east elevation. The cargo shed, which is described below, adjoins the building's west elevation. Interior survey of the bulkhead shed was prohibited due to the presence of asbestos.

Cargo Shed

A multi-bay metal cargo shed extends from the west elevation of the bulkhead shed and terminates in a shallow gable roof sheathed in corrugated metal. The cargo shed is a covered area used for receiving, sorting, and shipping cargo. Exterior cladding consists of corrugated metal panels supported by metal framing. Skylights pierce the roof. The north and south elevations are nearly identical. Differences exist in the rhythm and location of garage doors and windows.

Three wood-and-metal cargo cars survive on the north elevation. The cars ran on a track located between the ceiling of the first deck and the floor of the second deck. (In marine terminology, floors are referred to as decks.) No cars are present on the south elevation; however, the first deck south elevation projects from the second deck to create a slight balcony at the second level.

Generally, first deck openings consist of overhead metal garage doors. Doors alternate between those that are full-height overhead doors and those that only extend half-way up the opening. Metal, industrial-sash, pivot windows define the second deck openings.

The most prominent feature of the north and south elevations is the cargo mast that extends from the roof. The cargo mast is constructed of metal framing with metal cross bracing. A metal footwalk provides access along the length of the cargo mast.

Addition

A single-story metal-frame addition clad in corrugated metal was constructed on the west end of the cargo shed. The addition terminates in a shallow gable roof. Skylights provide light into the addition's interior. A metal cargo mast extends from the roof of the north and south elevations. Windows, which are present only on the south elevation, are multi-light, industrial-sash, metal units.

The west elevation of the addition features three overhead, rolling track garage doors. Corrugated metal panels cover openings that appear to be former window openings. A 12"-wide poured-concrete curb is located approximately 12" from the west elevation and blocks access to the entrances. This concrete curb extends the length of the elevation. A chain-link fence topped with barbed wire is located half-way down the elevation and restricts access to the north elevation of the building. Overhead metal garage doors define the six-bay north elevation.

Cargo Shed Interior

The interior of the cargo shed is an expanse of uninterrupted space. Metal I-beams resting on poured-concrete piers support the metal floor joists supporting the second-deck floor as well as the metal-truss roofing system at the second deck. Flooring at both decks is poured concrete. A recessed railroad bed projects into the first deck. Poured-concrete ramps flank the railroad bed. Brick elevator shafts provide internal vertical access between the first and second decks. Cargo shoots are located in the second deck floor provide and access to the lower deck.

Alterations Overtime

The building, as a whole, including the bulkhead shed, the cargo shed, and the addition, has undergone modification and currently is in poor condition due to lack of maintenance. The interior wall of the bulkhead shed at the second level has been completely rebuilt in concrete-block. This modification may have been completed when the exterior ramp was constructed in 1978. Large sections of the roofing materials are missing. Many of the window and door openings have been enclosed with corrugated metal or plastic. In addition, many windows have missing or broken lights.

Historic Context

Introduction

Pier 1 was constructed by the Northern Central Railway Company to access the Baltimore City waterfront and to establish a link between marine and land-based transportation. Pier 1 employs a design commonly used in East Coast port cities for marine terminal facilities during the first half of the twentieth century. The building was designed to accommodate then-current commercial cargo handling technologies, such as the burton-and-fall system, as well as the later use of cranes in cargo handling. A brief history of the property, the Port of Baltimore, and twentieth-century commercial cargo shipping industry are provided below.

Property History

The Maryland Port Administration acquired the property containing Pier 1 from the Northern Central Railway Company in 1967 (Baltimore City Land Records Liber 2317 / Folio 189). The transaction covered the conveyance of two parcels containing 14.08 acres and 0.6217 acres. The Northern Central Railway Company had consolidated seven parcels between 1881 and 1913 (Baltimore City Land Records Liber 2317 / Folio 189). This consolidated property eventually was acquired by the Maryland Port Administration.

Planning for the construction of a pier in the Northwest Harbor began during the mid-nineteenth century. The Northern Central Railway Company, previously the Baltimore and & Susquehanna Railroad Company, sought to construct a deep water port that was comparable to the facilities constructed by the B & O Railroad at Locust Point (Churella 2013:358). Attempts by the Northern Central Railway Company, and its predecessor, the Baltimore and & Susquehanna Railroad Company, to construct a short rail line extension into Canton began as early as 1850. Early efforts were halted, first due to the Civil War, and later because of opposition from adjacent property owners (Churella 2013:358). Ultimately, the Pennsylvania Railroad, which obtained a controlling interest in the Northern Central Railway Company, oversaw the construction of port facilities (Churella 2013:358). Pier 1 became the terminus of the Pennsylvania Railroad's Baltimore freight operations (Keith 2005:185).

The construction of Pier 1 documents the efforts of a competitor to the B & O Railroad to obtain access to the Port of Baltimore. During the late nineteenth century and the early twentieth century, many of the port facilities were constructed by rival railroad companies that restricted access to their facilities, and consequently, controlled access to the port. The Northern Central Railway Company acquired the property for its port facility from the Canton Company, a private development company established in 1828. The Canton Company, which operated as a common freight carrier, also had planned to construct new terminal facilities in southeastern Baltimore, away from the heavily congested Inner Harbor (Churella 2013:358). To accomplish that goal, the owners of the Canton Company incorporated the Union Railroad, a company established to facilitate railroad development in Canton. The Canton Company's efforts eventually facilitated the Northern Central Railway Company's access to the port.

The Northern Central Railway Company owned several parcels of land in addition to Pier 1, including its Union Station property, Bond Street yard facilities, and a hotel and property on 12th Street (Snow 1917:311). The company also owned additional land along Clinton Street, including Pier 6, the land for which was acquired in 1900, and a coal wharf with bridge and trestle acquired in 1903 (Snow 1917:311).

Pier 1 functioned as a general cargo pier and later housed recycling operations through the 1980s. Currently, the western end of the cargo shed is used for car parking. The remainder of the first deck and all of the second deck is vacant, as is the entirety of the bulkhead shed.

Historic Context: Development of the Port of Baltimore

Baltimore emerged as a major port with the aid of the Baltimore Clipper, a schooner design that first demonstrated its efficiency prior to the American Revolution, and later played an important role during the War of 1812. The Clipper facilitated overseas trade, particularly with China and South America (Maryland Port Administration n.d.; Maryland State Archives 2013).

Rail development during the early nineteenth century also contributed to the port's growth. The B & O Railroad, for example, built its own wharves at Locust Point for the shipment of Appalachian coal. Rail connections at the port resulted in the proliferation of dockside warehouses and distribution centers to accommodate the increased imports and exports (Maryland Port Administration n.d.).

As the Port of Baltimore continued to grow during the early nineteenth century, Baltimore City undertook efforts to direct construction into the waterways. The port warden's line was established by ordinance enacted by the Mayor and City Council of Baltimore in 1838; the ordinance stipulated the distance that any wharf, pier, or platform could extend into the harbor. Property owners on the harbor could construct off-shore to the port warden's line, but not beyond. The ordinance also granted the city the right to collect "money as an equivalent for any water rights of which the city may be so deprived" through the construction of wharfs, piers, and platforms that extended to the port warden's line (City of Baltimore 1838:32). Any construction into the Port of Baltimore was subject to inspection by the port wardens, who were responsible for managing improvements to and the preservation of navigation in the harbor.

The depth and width of the port changed over time to accommodate shipping and to improve navigation. After surveying the port, the U.S. Army Corps of Engineers established a central lane depth of 17 feet in 1830 (Maryland State Archives 2013). The River and Harbor Act of 1852 was the first legislation to authorize dredging to a specific depth, although dredging had occurred earlier (Maryland State Archives 2013). Additional channels have been created, deepened, and widened over time (Maryland State Archives 2013).

The port continued to grow throughout the nineteenth century and into the early twentieth century. A major expansion of marine facilities occurred as the country mobilized for World War II. During the postwar period, Baltimore was unique among American cities in its shipping and port facilities. Most of the Baltimore port facilities were owned and operated by private enterprise, particularly the railroad industry. Friction between the railroad interests and the trucking interests led then-mayor Thomas D'Alesandro, Jr., to create a committee during the early 1950s to develop a program to improve the port (Dilworth 2011:523). Baltimore's reliance on the railroad, which had developed and was pioneered in the city, ultimately became an obstacle to improved port capabilities. The railroad companies controlled much of the access to the harbor and the piers along the port. Consequently, the facilities constructed supported rail shipping, and products such as coal, potash, or gypsum (Dilworth 2011:523). The trucking industry, on the other hand, transported textiles, machinery, and shoes (Dilworth 2011:523). The railroads imposed wharfage fees against cargo carried by truck, which the trucking industry viewed as discriminatory, and which it claimed forced business to New York City due to its more favorable trucking conditions (Dilworth 2011:523).

The city's efforts to improve the port were met with limited success. Consequently, civic and business leaders lobbied the General Assembly to create a Port Authority to operate public piers and terminals (Maryland Port Administration n.d.). The General Assembly enacted legislation in 1956 establishing the Maryland Port Authority, which was authorized to issue bonds to generate funds for the construction of public piers. The agency also was tasked with promoting the public and private marine terminals at the port and overseeing improvements to marine facilities. In 1957, the Maryland Port Authority was granted the powers, including regulation of the construction of bulkheads and piers, previously held by Baltimore City and the port wardens (Baltimore City Land Records Liber JFC 355 / Folio 400).

Between 1960 and 2012, the Maryland Port Authority, which became the Maryland Port Administration in 1971, invested over a billion dollars in land acquisition, new terminals construction, and dredging activities to accommodate larger ships (Maryland Port Administration n.d.). In 2012, the Port of Baltimore, including public and private piers, moved 36.7 million tons of cargo valued at $53.9 billion (Maryland Port Administration n.d.). Today, the Maryland Port Administration functions as a quasi-independent corporate agency within the state's Department of Transportation (Sherman n.d.:3, 10).

Historic Context: Development along Clinton Street

During the early nineteenth century, port development concentrated in Baltimore's Inner Harbor. By the mid and late nineteenth century, however, construction expanded into southeastern Baltimore City and into Canton, located immediately north of the project area. A review of archival maps suggests piers in the general vicinity of the current structure were present as early 1895 (Douglas 1895).

Originally, Canton's gridded street system was planned to continue south of Boston Street. Little of the original plan was implemented. South Clinton Street and Holabird Avenue, which are in the vicinity of 5th Street on the Bromley 1898 Atlas of the area, are the only elements of the grid that appear to have been constructed (Bromley 1898). Clinton Street, a private thoroughfare owned by the Canton Company, was acquired by Baltimore City in 1922 and converted to a public road (Personal communication, LeBlond, 2013).

Archival maps and aerial photography document that the shoreline consistently changed as new piers were added. The 1914 Topographical Survey of Baltimore depicts a pier in the location of the present-day Pier 1 (Shirley 1914). The pier found on the 1914 map features an iron building, two small and one larger frame buildings, and one brick building. Railroad tracks for the steam railroads servicing the pier traffic in an east/west direction terminated at the iron building at the end of the pier (Shirley 1914). Historic nautical charts depict a constantly changing shoreline. Areas were filled and improvements were constructed, modified, and expanded to accommodate changing technologies. By the 1970s, the number of piers along the Clinton Street waterfront had been reduced and the shoreline altered.

Pier Construction during the Early Twentieth Century

Pier 1 is an example of the type of pier construction employed during the early twentieth century. The facility consists of three components: the pier, the bulkhead shed, and the cargo sheds. The pier is of a type constructed in Baltimore, New York, and Philadelphia and promoted by contemporary engineering and marine manuals. Single-story and two-story buildings were constructed. Each element of the pier is discussed below.

Pier and wharf deck construction generally falls into one of three major categories: all timber, concrete, or composite. Composite piers are those that are constructed of a poured-concrete slab supported by timber or steel pile caps and stringers (Gaythwaite 2004:253). All timber pier construction traditionally was constructed of pile caps on cross-braced bents. The decking was secured to the longitudinal stringers supported by the bents (Gaythwaite 2004:253).

Piers constructed around the same time as Pier 1 generally employed concrete and timber construction. The nine Chelsea Piers in New York City were constructed of pile piers with plank decking covered in creosote, and incorporated the novel innovation of concrete applied over the planking, which was then surfaced with asphalt; extra heavy transverse bracing was employed to resist lateral impact ("The New Piers for Transatlantic Steamships, Chelsea Improvement, New York" 1909:29). The municipal piers in Philadelphia, Piers 38 and 40, employed concrete pedestals connected by heavy concrete cross-beams and cross walls on submerged timber platforms, respectively ("Philadelphia's Southwark Piers Completed" 1915:478). According to contemporary engineering manuals, an efficient pier was one that provided provisions for railroad tracks, which were preferably located in the center of the pier, with railroad connections directly on the pier.

The bulkhead shed, or head house, which faced the street, represented the pier's public façade and was constructed of more permanent materials than the cargo shed ("The New Piers for Transatlantic Steamships, Chelsea Improvement, New York" 1909:31). The bulkhead shed also afforded the pier's only opportunity for architectural expression. When designing the bulkhead shed for the Chelsea Piers, the architects incorporated keystones and

gable returns. Philadelphia's Pier 38 bulkhead shed presented the public with a monumental façade with classical revival ornamentation.

The cargo shed (also called the transit, pier, or reservoir shed) was used "for the collection, sorting, classification, checking, weighing, etc., of freight and its immediate transfer between water and land carriers" (Thompson 1922:65). The cargo shed, with its abundant, unobstructed cargo deck space, was protected from weather and facilitated the sorting and assembling of cargo for delivery to the ship, train, or truck for removal (Thompson 1922:65). Continuous openings were present along on the first deck to facilitate loading and unloading of goods anywhere along the length of the pier. Door heights were at least 20 feet on the first deck (Thompson 1922:68).

The two-deck pier shed first was used in 1909 in the construction of the Chelsea Piers in New York City. The piers represented state-of-the-art, advanced design at the time of their construction ("The New Piers for Transatlantic Steamships, Chelsea Improvement, New York" 1909:29). For sheds constructed with two decks, contemporary engineering manuals suggested the installation of second floor openings in alternating bays. Openings with heights of less than 20 feet would not hamper loading and unloading operations. The construction of two-story pier sheds became common in Philadelphia by the early 1920s (Loveland 1922:75). The two-story pier sheds used in Philadelphia could accommodate loading two ships, one on each side of the pier, while unloading occurred on both floors (Loveland 1922:77).

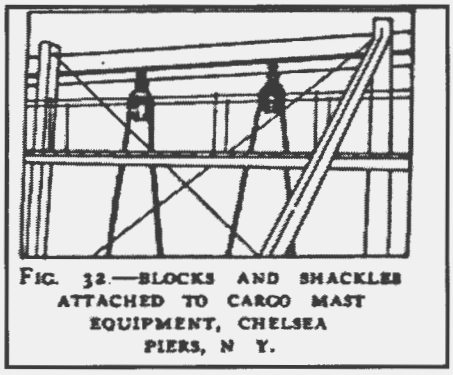
FIG. 32.—BLOCKS AND SHACKLES ATTACHED TO CARGO MAST EQUIPMENT, CHELSEA PIERS, N Y.

Figure 1. Diagram of operation of cargo mast. Excerpted from *Wharf Management. Stevedoring and Storage*, MacElwee and Taylor 1921.

A common feature of the cargo shed was a metal framing system that extended above the shed's roof. This feature, referred to as a cargo mast or cargo hoist, extended the outside columns of the pier shed above the roof to a height of approximately 75 feet above water level. The columns were connected by girders; pulley blocks could be attached to the girder for burtoning with the ship's gear (Thompson 1922:68). Wide aprons were needed to efficiently operate wharf cranes and to avoid fouling the crane's boom with the ship's rigging.

The masts for the cargo holds were located at each column. U-bolts were placed at six-foot intervals on each side of the bent, and the girder beam was braced between the bents by diagonal bars. The hoists then could be attached to the U-bolts, which in turn, could be attached anywhere along the pier. Access to the cargo mast was via a footwalk ("Philadelphia's Southwark Piers Completed" 1915:478). A stirrup in the horizontal beam then could be attached to the blocks (i.e., pulley) from the footwalk (MacElwee and Taylor 1921:118, 119). The burton rope passes through the whip which was attached to the block (Figure 1).

The cargo mast was constructed on the pier shed to assist the operation of the burton-and-fall two-hoist system and to permit the operation of the ship's burton and its winch for other uses. The fall is the entire length of rope used in a tackle, and the burton is the cargo fall that is suspended over the side of the ship (Department of the Navy 1945). The fall-and-burton system was one of three methods for transferring goods from ship to shore (MacElwee and Taylor 1921:111). This was a two–mast system developed for offload the ship and was in common usage during the early twentieth century (MacElwee and Taylor 1921:112). This system employs two booms and two winches located at each hatch. As described in a contemporary guidebook for wharf managers and longshoremen:

> One boom is swung over the center of the hatch carrying the up-and-down fall and hook, and the other is swung outboard from the vessel in order to reach clear of the vessel's side and over the

> wharf. Over this boom the second winch operates the so called "burton fall" or the "outboard fall". ...it should be remembered that the outboard line is called "the burton" and the hatch line is called "the fall" (MacElwee and Taylor 1921:115).
>
> The burton-and-fall two-boom and two-winch method was deemed "so rapid, direct, and efficient that there is plenty of ground for debate as to the superiority of wharf cranes" (MacElwee and Taylor 1921:115). Using the burton-and-fall method in conjunction with the cargo mast enabled longshoremen, working in groups, to work both sides of the ship concurrently (MacElwee and Taylor 1921:118).

On the interior of the pier shed, the number of columns was kept to a minimum (Thompson 1922:69). Three common methods were used to move cargo around within the pier. A platform and automatic elevators, lowerators (i.e., a machine used for moving loads vertically), or chutes were used. A depressed track in the center of the pier shed was an important interior feature and afforded a number of advantages. A natural barrier dividing the interior space in half was created by the car pit and enabled the separation of cargo space allocated to each steamship berth. In addition, the center track allowed longshoremen to work in an enclosed space and allowed train cars to be loaded or unloaded with freight from the ship berths located on either side of the pier (Thompson 1922:67). An article appearing in the March 1922 issue of *Engineers and Engineering* offers a detailed account of how cargo was unloaded and stored in the pier shed:

> When the first pier was built on these lines, the idea was that the lower floor would provide space for the collection of the ship's cargo, which arrived at the terminal at intervals; the merchandise was stored and classified on the lower floor. This left the second floor or upper deck, as it was termed, free to receive the ship's inbound cargo. Tracks on the upper decks of these piers make it as convenient to handle cargo from the upper deck as from the lower. The inbound cargo is classified and loaded into cars on the second floor and as soon as space is available in the ship, the stevedores start loading from the lower floor [to the ship].
>
> ...the placing of cargo from the ship's hold to the upper deck was accomplished much quicker than could have been done if the inbound cargo had been placed on the lower floor. It was found that an average of three drafts could be placed on the second floor, while two were being placed on the lower floor. This scheme permitted better distribution of the men and employment of greater numbers without interfering with each other, which resulted in greater speed in the discharging and loading of cargo (Loveland 1922:77) (Figure 2).

Although widely used in Europe during the first quarter of the twentieth century, cranes did not become widespread in the U. S. until later, although the use of cranes and derricks was promoted during the early 1920s (Loveland 1922:74; MacElwee and Taylor 1921). Indeed, by the 1920s, U. S. engineers and port executives were recommending that pier foundations and superstructures be constructed to enable the future installation of cranes (Thompson 1922:68).

This debate over the efficiency of cranes versus the burton-and-fall two-hoist system reflects the tension between port officials on whether ship's gear (i.e., the derricks and winches on board the ship) should be used for unloading cargo or whether cargo should be unloaded from the pier via derrick or crane (Loveland 1922:1975). In 1922, cranes were not used in the loading and unloading of vessels (Loveland March 1922:76). In Philadelphia, for example, it was common to use the ship's gear rather than installing and using winches on the dock.

Historic Context: Evolution of the Shipping Industry during the Late Twentieth Century

The evolution of the shipping industry following World War II was the result, in part, of the changing ship design. While tankers were steadily increasing in number during the early twentieth century, after World War II, larger tankers and bulk carriers became commonplace. Shipbuilders, in response to the demand for faster ship turnaround due to increased trade, sought to make the loading and off-loading process easier and designed ships accommodating loading pallets, a method of moving goods that increased dramatically for commercial, non-military shipping during the postwar years.

Following World War II, increased trade and larger ships affected how efficiently goods could be moved and transported. Containers allowed the mechanization of the shipping and handling of cargo, which reduced the amount of time the ship spent in port as well as reduced labor costs and dockage and wharfage fees. Prior to containerization, loading, unloading, and storing cargo was laborious and time consuming. Typically, cargo was hoisted onto the ship in small lots, and then stowed in such a way as to minimize damage at sea (Cudahy 2006:6). Unreliable ship schedules resulted in cargo deliveries to the pier, in some cases, days before the ship arrived in port, which led to damage, loss, and theft (Cudahy 2006:6).

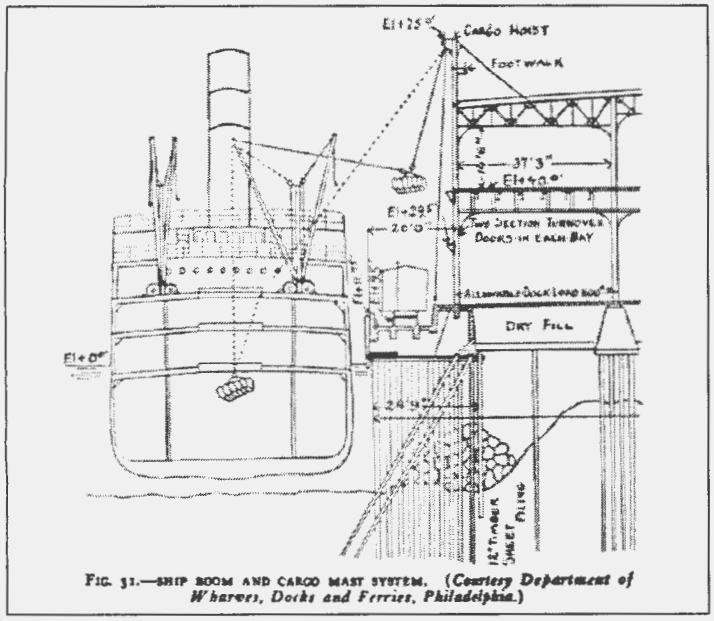

FIG. 31.—SHIP BOOM AND CARGO MAST SYSTEM. (*Courtesy Department of Wharves, Docks and Ferries, Philadelphia.*)

Figure 2. Diagram of operation of cargo mast. Excerpted from *Wharf Management. Stevedoring and Storage*, MacElwee and Taylor 1921.

In addition, the traditional method of loading and unloading cargo required multiple piers that could accommodate several berths concurrently. The shift from pallets, boxes, bales, and similar storage devices to containers required the development of a new method for the temporary storage of cargo. Containerships are able to carry a large amount of freight, consequently, significant area (i.e., "backland") was necessary for sorting and stacking the containers (Rubin 1999). The additional space required for containers could not be accommodated on the existing piers.

The modern containership, which became widely used during the late 1950s and early 1960s, enabled the secure loading of freight in a trailer at the shipper's factory. Gantry cranes, i.e., cranes located

on the shoreside and mounted on tracks, were used to load and unload containers. The use of cranes reduced dramatically the amount of time and labor necessary for the transfer of cargo and, subsequently, the length of time a ship needed to remain at port. In addition, theft and damage also were reduced. The increased use of containers and the larger vessels used to transport them required the redesign of port facilities. Large open tracks of land used for storing the containers quickly replaced the covered pier sheds (Cudahy 2006:7).

Evaluation

Pier 1 is historically associated with development activity that occurred in the Port of Baltimore during the first half of the twentieth century. By the early twentieth century, marine terminal operators explored new opportunities for providing enhanced shipping services outside the heavily congested inner harbor. Expansion of the Port of Baltimore occurred to the south and east. Some of these expansion efforts were undertaken by railroad companies, including the Northern Central Railway Company and its parent company the Pennsylvania Railroad, which were competing with the B & O Railroad and its Locust Point marine terminals. Competitors to the B & O Railroad sought to construct facilities linking their rail lines to the Baltimore City waterfront.

The design, materials, and construction of Pier 1 embody those employed in pier construction in East Coast port cities during the first half of the twentieth century. The building was designed to accommodate contemporary commercial cargo handling methods, such as the burton-and-fall system, as well as the more modern use of cranes. The two-story cargo shed with cargo mast and bulkhead shed represented a departure from previous pier and wharf construction. In addition, the size of cargo ships increased during the first decades of the twentieth century; consequently, facilities large enough to handle the increase trade volume became necessary. Large-scale temporary storage buildings that incorporated efficient methods for off-loading and loading cargo similar to Pier 1 became the preferred option among port administrators and engineers.

Pier 1 was evaluated applying the National Register Criteria for Evaluation (36 CFR 60.4 [a-d]). The pier is associated with the broad pattern of port development that occurred in Baltimore City during the first half of the twentieth century (Criterion A) and the historical trends in marine architecture (Criterion C). The Port of Baltimore grew during the late nineteenth and early twentieth centuries in response to the increased volume in domestic and international trade. The building, including the bulkhead shed, cargo shed, and cargo shed addition, also is representative of a construction type found in other East Coast ports, including Philadelphia and New York City. The pier incorporates stylistic features of the Art Deco style through the use of decorative concrete block and the decorative metal marquees located above the entrances on the east elevation of the bulkhead shed. The building also employs character-defining features common in piers constructed during the first half of the twentieth century. These features include a two-story cargo shed, a cargo mast, a bulkhead shed, and railroad tracks. The building (the bulkhead shed, cargo shed, and cargo shed addition) retains integrity of location, design, setting, materials, workmanship, feeling, and association to merit consideration for inclusion in the National Register of Historic places as a maritime resource for the early twentieth century.

Archival research suggests a pier may have been in the location of the existing resource as early as 1895; the existing pier may represent the replacement of an earlier structure. The existing structure represents modifications necessary to support a large-scale masonry and metal building. The character-defining features of the pier, including the pilings, decking, and apron, required a regular program of replacement to accommodate difficult environmental conditions as well as to adapt to changing marine technology. Modifications to the pier overtime have enabled the pier to continue to function. The pier provides the base for the superstructure it supports, and therefore, contributes to the marine facility.

Works Cited:

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Personal Communication
2013 Patrice LeBlond, April 10.

Photo Log:

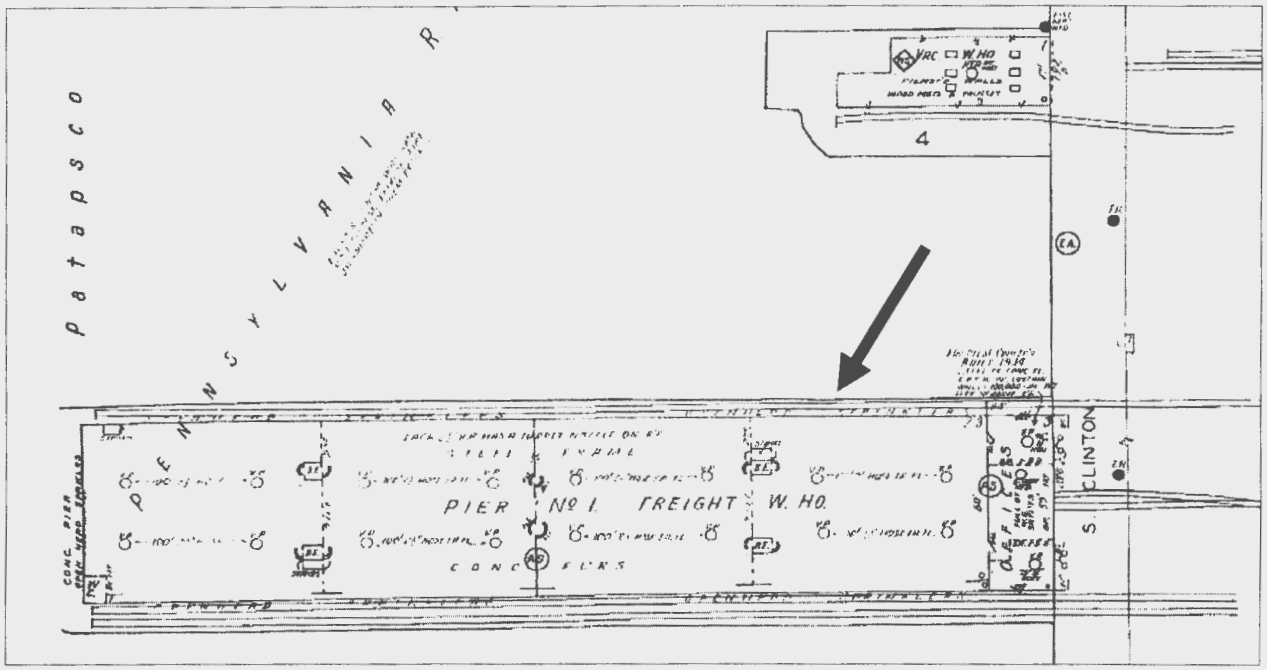
MIHP # B-5268
Pier 1
Baltimore City, Maryland
Photos taken by: Rebecca Gatewood
Photos taken on: March 28, 2013
Photo paper and ink: Epson Ultrachrome K3 ink on HP Premium Photo Paper (high gloss)
Verbatim Ultralife Gold Archival Grade CD-R, PhthaloCyanine Dye

B-5268_2013-03-28-01 – Setting, looking west
B-5268_2013-03-28-02 – Setting, looking southwest
B-5268_2013-03-28-03 – Setting, looking west
B-5268_2013-03-28-04 – Bulkhead shed, south and east elevations
B-5268_2013-03-28-05 – Bulkhead shed, north and east elevations
B-5268_2013-03-28-06 – Cargo shed, south elevation
B-5268_2013-03-28-07 – Bulkhead shed and cargo shed, north elevation
B-5268_2013-03-28-08 – Cargo shed, north elevation
B-5268_2013-03-28-09 – Addition, west elevation
B-5268_2013-03-28-010 – Pier, north elevation
B-5268_2013-03-28-011 – Pier, south elevation
B-5268_2013-03-28-012 – Cargo car, north elevation
B-5268_2013-03-28-013 – Interior, first deck, looking east
B-5268_2013-03-28-014 – Interior, former rail bed, looking west
B-5268_2013-03-28-015 – Interior, second deck, looking west
B-5268_2013-03-28-016 – Detail, first deck, ceiling system

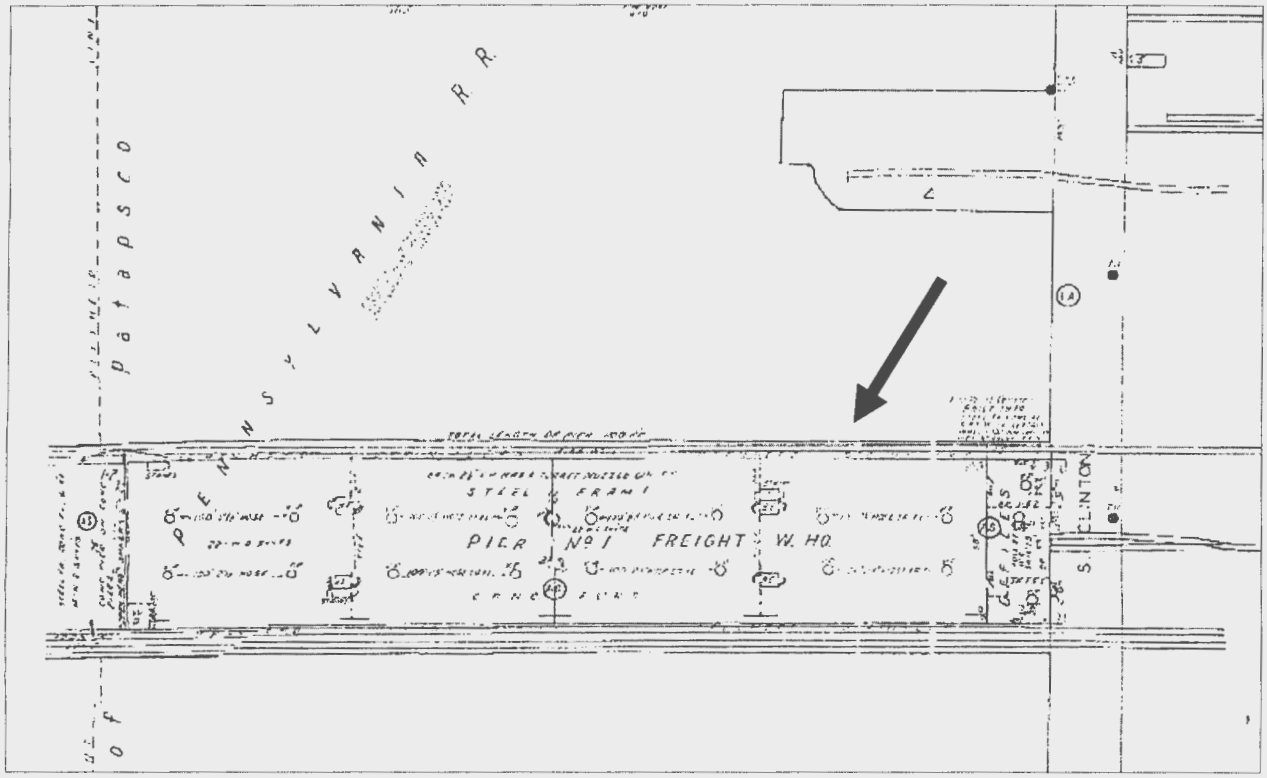
Prepared by: Kirsten Peeler, Senior Project Manager
R. Christopher Goodwin & Associates, Inc.,
241 East Fourth Street
Frederick, MD 21701

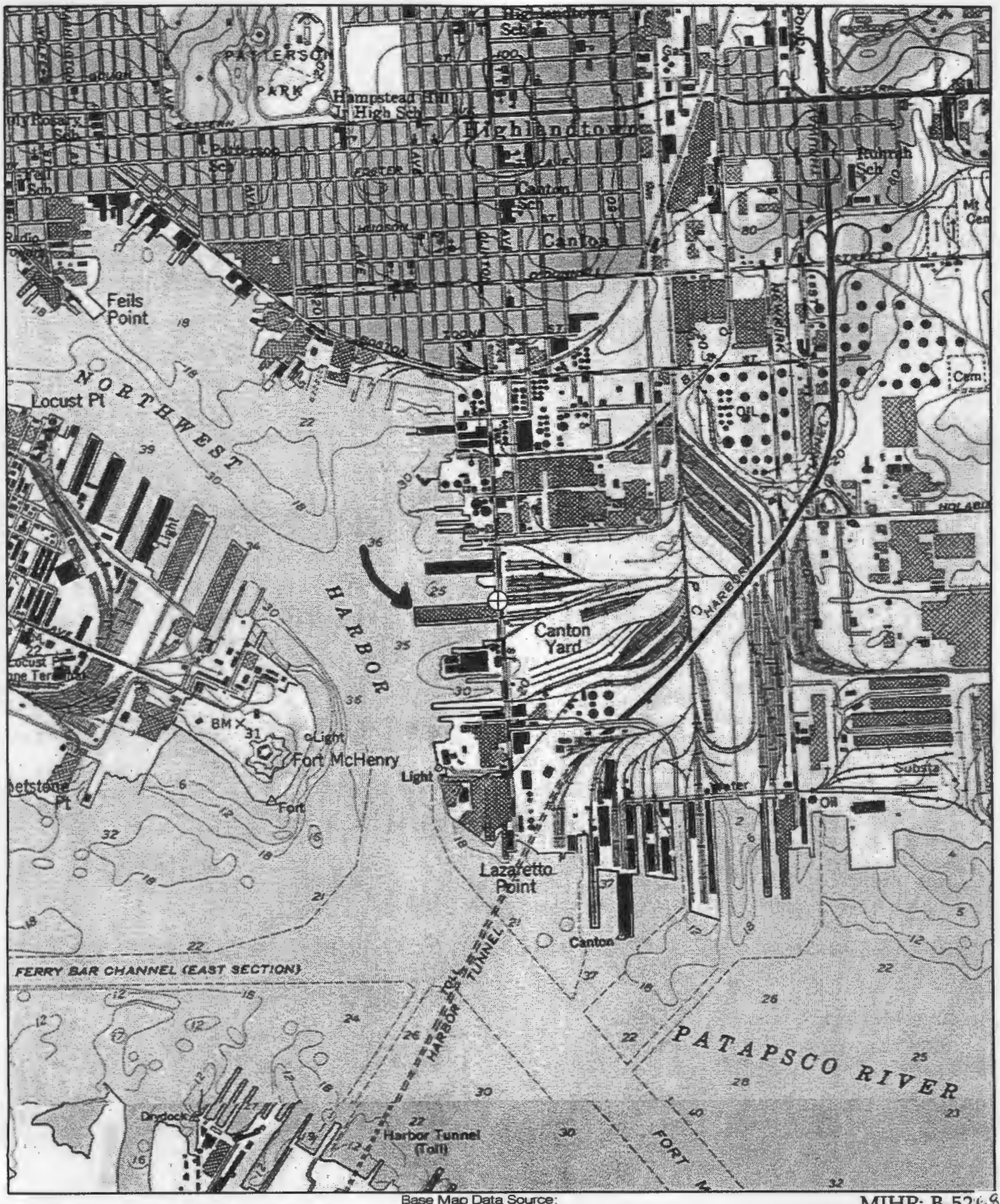
Date Prepared: 7 May 2013

B-5268
Clinton Street Marine Terminal Pier 1 (Clinton Street Pier)
1900 S. Clinton Street
Sanborn Map 1936, Volume 5, Sheet 567



Sanborn Map 1953, Volume 5, Sheet 567





SPATIAL REFERENCE SYSTEM: SPCS MD / NAD 83 (FEET)

MAP SCALE: 1:24,000

N
W E
S

FEET
0 500 1,000 1,500

METERS
0 200 400 600

Base Map Data Source:
USA Topo Maps WMS
(Copyright:© 2013 National Geographic Society, i-cubed)

⊕ Pier 1

MIHP: B-5208
Clinton Street Pier
1900 South Clinton Street
Baltimore, Maryland
USGS Quadrangle: Baltimore East

R. Christopher Goodwin & Associates, Inc.
241 East Fourth Street, Suite 100 Frederick, MD 21701

DATE: 4-23-2013 PREPARED BY: KFH

MHT# B-5268
CLINTON STREET PIER
600 SOUTH CLINTON STREET
BALTIMORE, MD
R. GATEWOOD
MARCH 28, 2013
SETTING LOOKING WEST

1 of 16

MHT # B-5268
CLIFTON STREET PIER
1900 SOUTH CLIFTON STREET
BALTIMORE CITY, MD
R. GATEWOOD
MARCH 28, 2013
SETTING LOOKING SOUTHWEST
#2 of 16


PIER 1

MHSP #- 5268
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATEWOOD
MARCH 23 2013
SETTING WORKING WEST
3 of 16


PIER 1

MHP 5268
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATEWOOD
MARCH 28, 2013
BULKHEAD SHED, SOUTH & EAST ELEV.

4 OF 16


PIER 1
NO STOPPING
WARNING

MHT# B-5266
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE MD
R. GATEWOOD
MARCH 26, 2013
BULKHEAD SHED, NORTH & EAST ELEV

5 of 16


NO PARKING OR STANDING IN FIRE LANE
STATE PROPERTY
NO TRESPASSING
VIOLATORS WILL BE PROSECUTED

MHP # 5268
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GASTEWOOD
MARCH 28, 2013
CARGO SHED SOUTH ELEV
6 OF 16


NO STOPPING
WARNING

MHP # B-5268
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATEWOOD
MARCH 28, 2013
BULKHEAD & CARGO SHED, NORTH ELEV.
#7 of 16

MHP # 8-5208
CLINTON STREET PIER
1900 ~~SOUTH~~ CLINTON STREET
~~BALTIMORE~~ CITY, MD
R. GARDENHOUR
MARCH 26, 2013
CARGO SHED, NORTH ELEV
8 OF 10

MHT # B-5268
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATEWOOD
MARCH 28, 2013
ADDITION, WEST ELEV
9 OF 46

MHT # B-5206
CLINTON STREET PIER
1901 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATEWOOD
MARCH 28, 2013
PIER, NORTH ELEV.

B-1-10

MHT # 5268
CLINTON STREET PIER
FKA SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATEWOOD
MARCH 28, 2013
PIER, SOUTH ELEV

4 of 16

MHHP # B-5268
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATEWOOD, MARCH 28, 2013
CARGO CAR, NORTH ELEV.

12 of 16

MHT # B-5263
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATENWOOD
MARCH 28 2018
INTERIOR, FIRST FLOOR DECK, LOOKING EAST

13 of 16

MHT # B-5268
CLINTON STREET PIER
800 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATENDOO
MARCH 28, 2013
INTERIOR, FORMER RAIL BED, LOOKING WEST

14 of 16

MHP # B-5268
CLIFFORT STREET ALLEY
HOA COURT CLIFFORT STREET
BALTIMORE CITY MD
R. GATEWOOD
MARCH 28, 2013
INTERIOR, SECOND DECK. LOOKING WEST
15 of 46

MHAP # B-5268
CLINTON STREET PIER
1900 SOUTH CLINTON STREET
BALTIMORE CITY, MD
R. GATEWOOD
MARCH 28, 2013
DETAIL, FIRE RATED CEILING SYSTEM
16 of 16