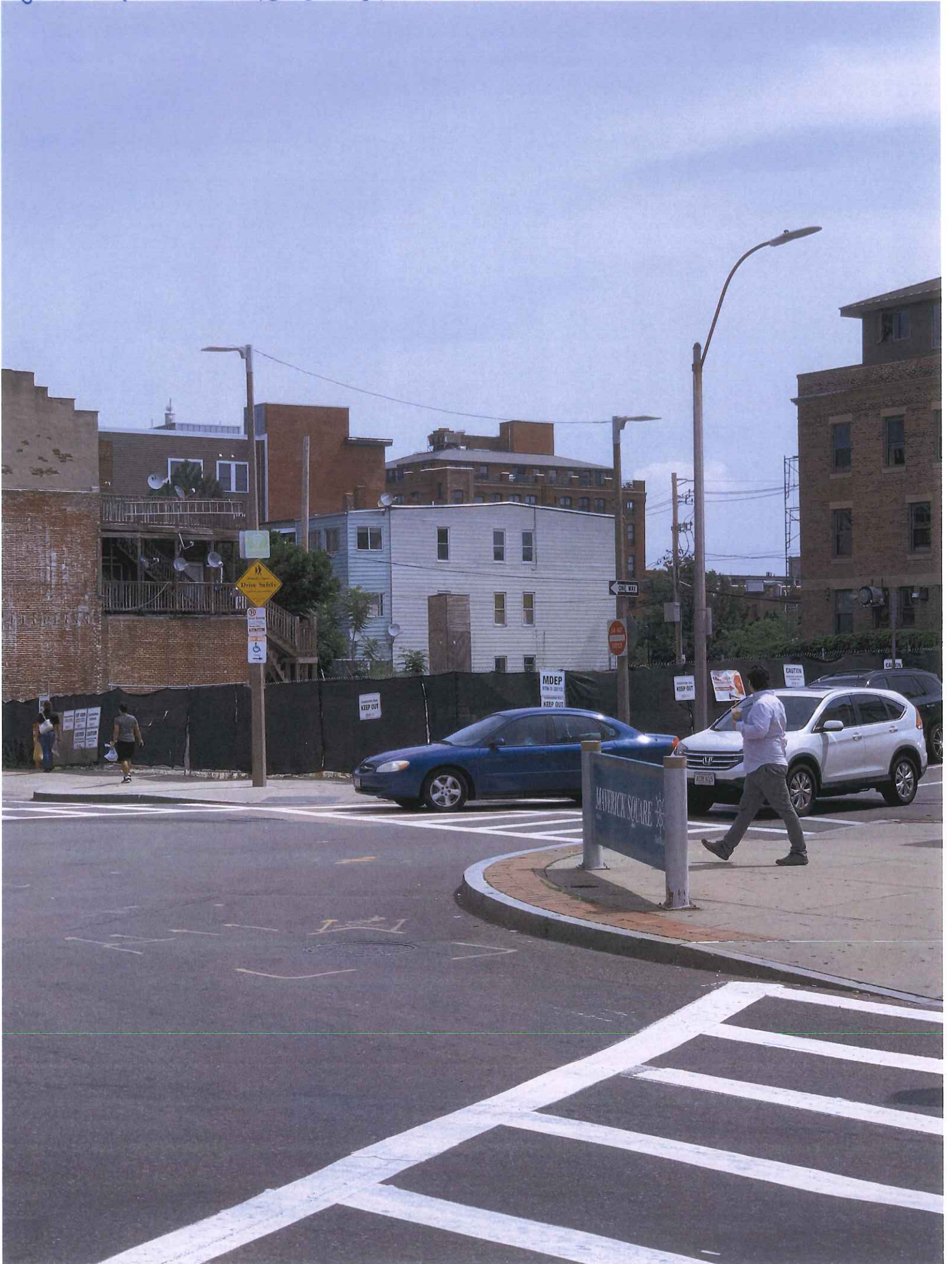


8-6-19 - 9 Chelsea St





8-6-19 9 Chelsea St





8-6-19 20 maverick Sq





8-6-19 20 Maurice St

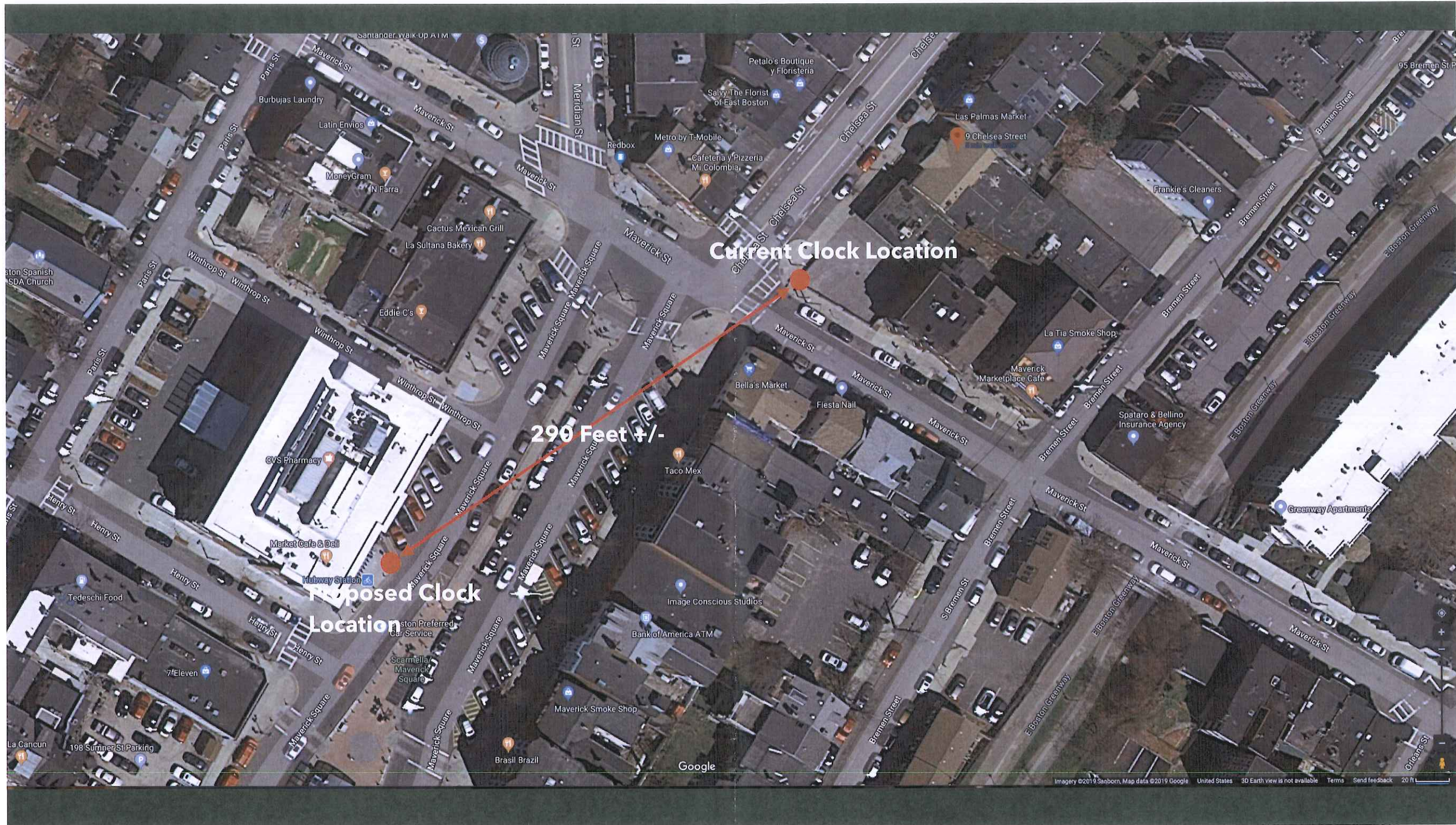




8-6-19 20 Marick Sq







Current Clock Location

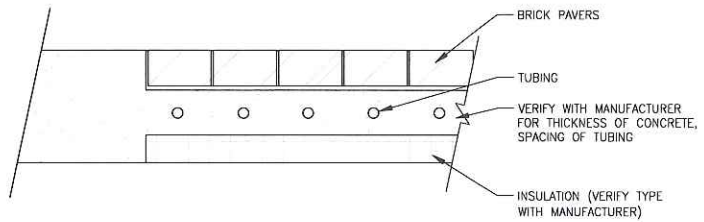
290 Feet +/-

Proposed Clock Location

Google

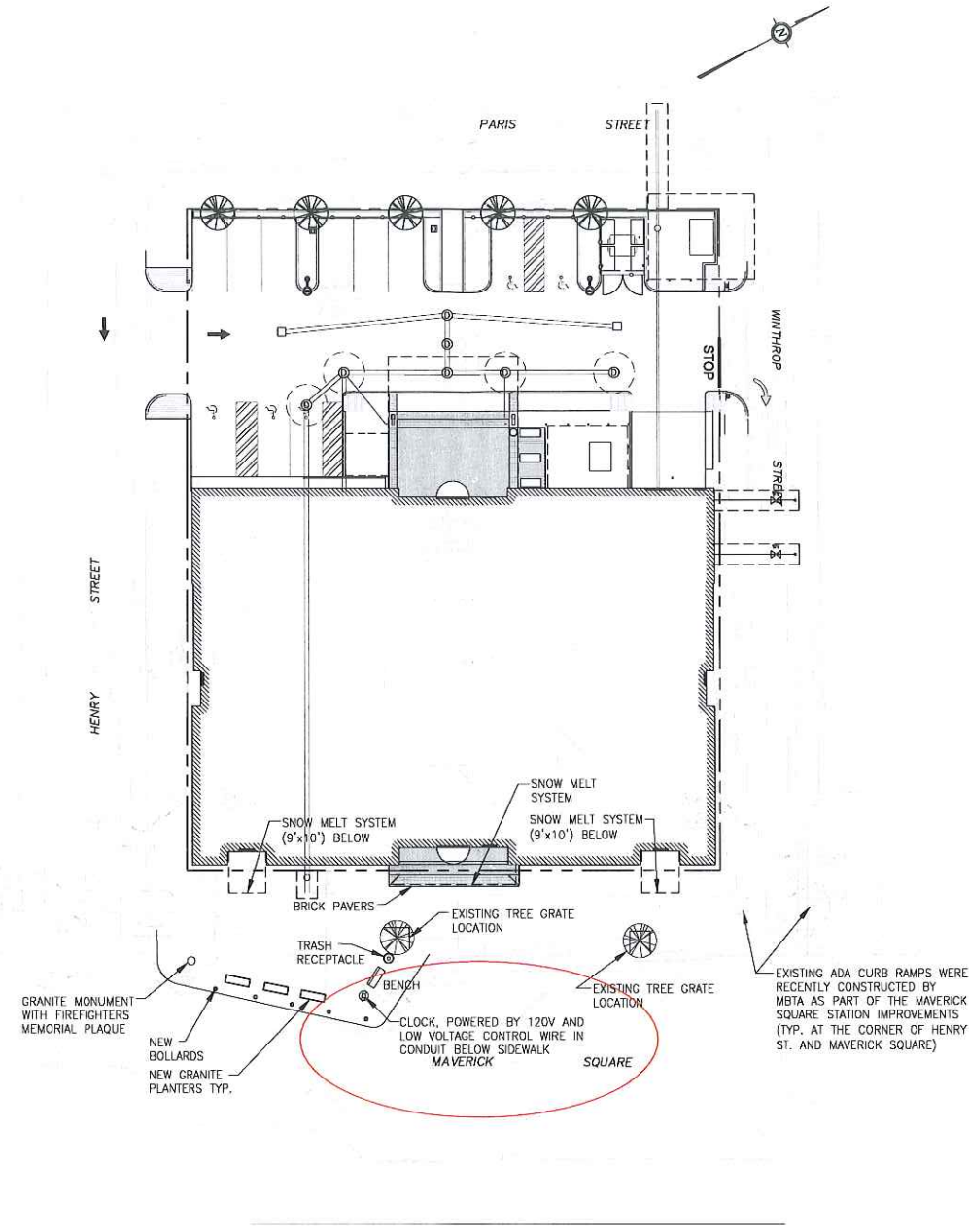


1/10/2018 10:00 AM



### RADIANT FLOORING DETAIL

N.T.S.



FOR REGISTRY USE ONLY

PETER SPANOS, P.E.  
MASSACHUSETTS REG. NO. 48407  
REGISTERED PROFESSIONAL ENGINEER

DATE: \_\_\_\_\_

CHECKED FOR GENERAL DESIGN AND CONFORMITY TO CITY STANDARDS

PUBLIC WORKS DEPARTMENT

PUBLIC IMPROVEMENT COMMISSION

CHIEF ENGINEER

APPROVED

COMMISSIONER OF PUBLIC WORKS

PREPARED BY

**GALE**

Gale Associates, Inc.  
Engineers and Planners  
163 LIBBEY PARKWAY | WEYMOUTH, MA 02189  
P 781.335.6485 F 781.335.6487  
www.galeco.com

CITY OF BOSTON PUBLIC IMPROVEMENT COMMISSION

SPECIFIC REPAIR PLAN

**EAST BOSTON NEIGHBORHOOD HEALTH CENTER**

70 MAVERICK SQUARE, EAST BOSTON

Scale: 1" = 20'

CITY DIVISION ENGINEER

Date Issued: \_\_\_\_\_

Proposed Retail Structure

9 Chelsea Street  
 East Boston, MA

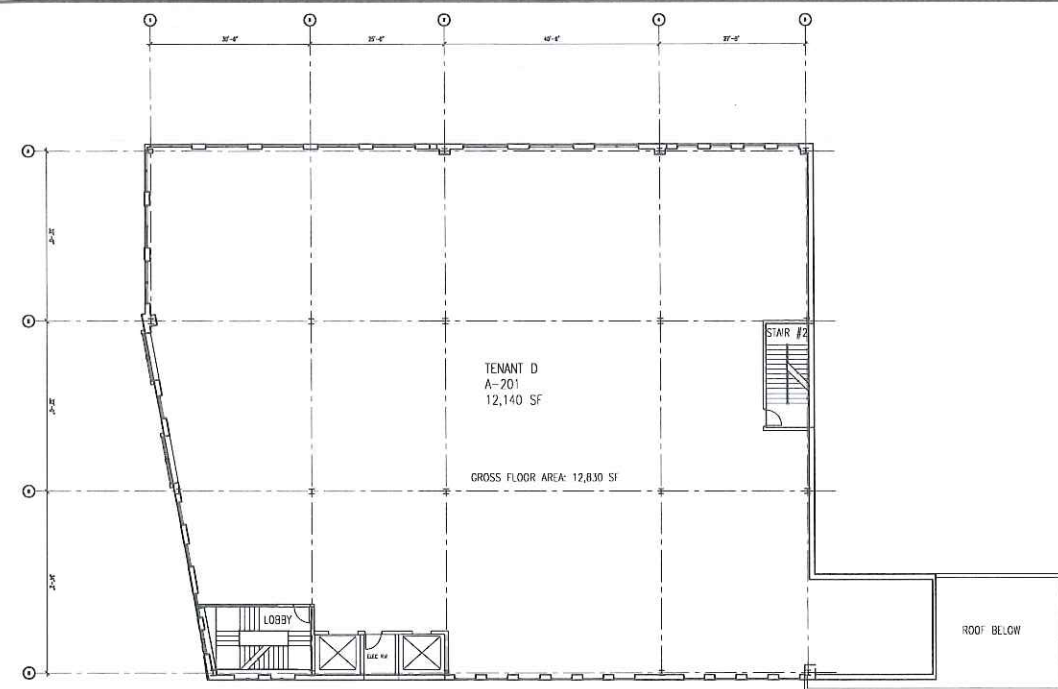


Project No: 15012  
 Drawn By: MM/CDIAC  
 Checked By: JR  
 Issue Date: 4 December 2018

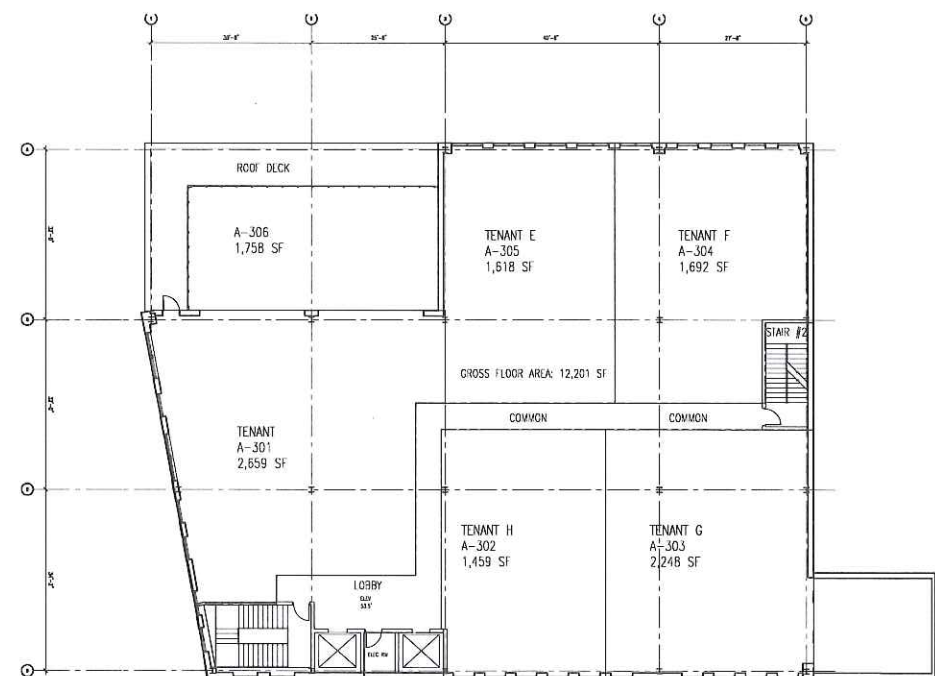
Revisions		
No	Date	Description

Drawing Title:  
 PRELIMINARY FIRST,  
 SECOND, AND THIRD  
 FLOOR PLANS

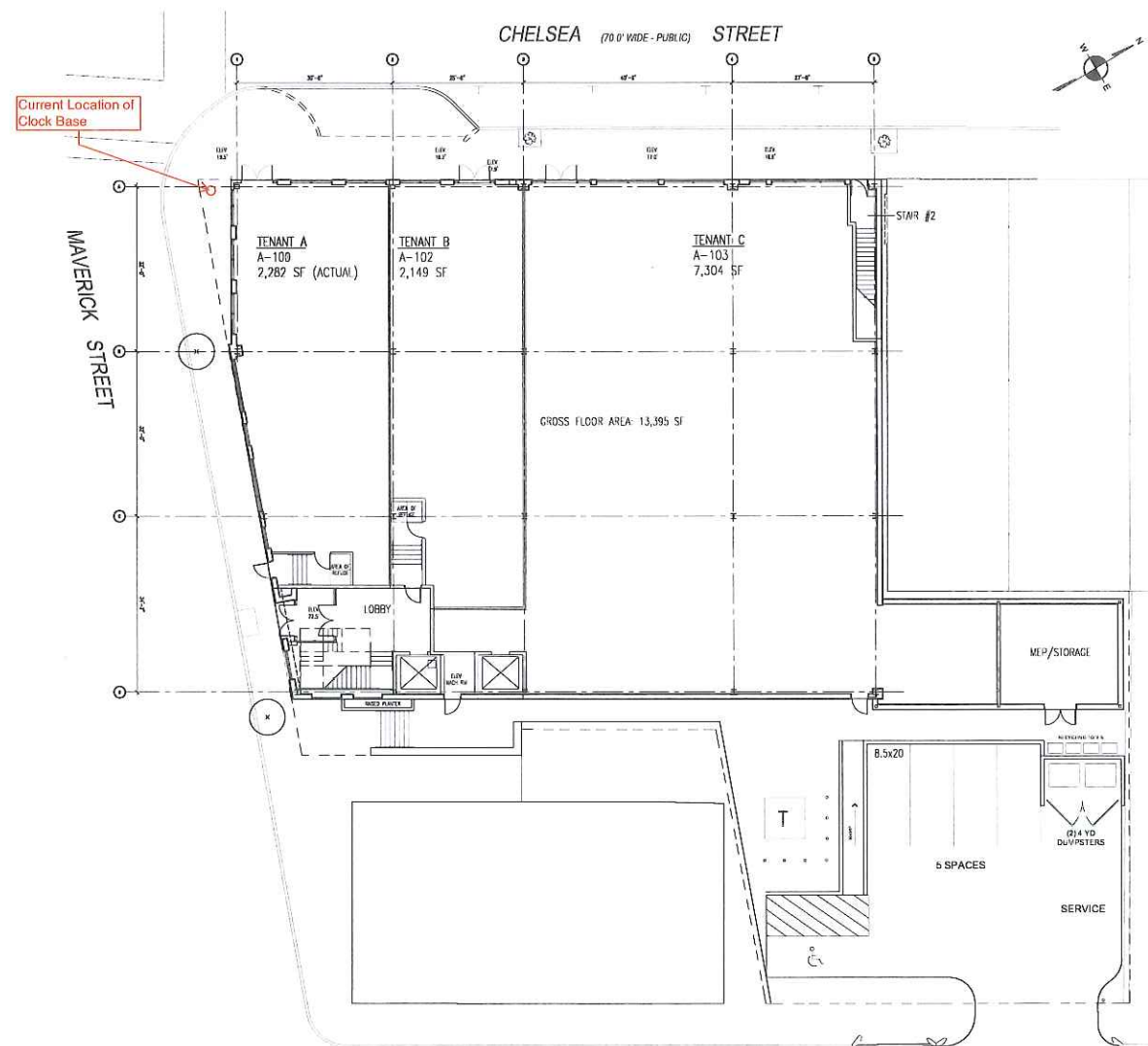
Drawing Number  
**A-2.01**



2 SECOND FLOOR PLAN  
 SCALE: 1/16"=1'-0"



3 THIRD FLOOR PLAN  
 SCALE: 1/16"=1'-0"



1 GROUND FLOOR PLAN  
 SCALE: 1/16"=1'-0"



**E. Howard Post Clock  
9 Chelsea Street  
East Boston, Massachusetts**



**Prepared by: Balzer Family Clock Works  
1 Lady Slipper Lane  
Freeport, Maine 04032**



1 Lady Slipper Lane  
Freeport, Maine 04032



Tower Clock Specialists  
Manufacturing & Restoration

Linear Retail Properties  
5 Burlington Woods Dr.  
Suite 107  
Burlington, MA 01803  
Attn: Greg DrocZ

November 13, 2017

Dear Greg,

Thank you for selecting our company to examine, evaluate and propose the recommended work required, including options, for the restoration of the E. Howard post clock located at 9 Chelsea St., in East Boston.

As you are aware, this clock was originally a fully mechanical, weight driven, pendulum regulated timepiece, circa 1900. At some point in time, some of the mechanical components (pendulum, movement gearing, weight, pulleys) were removed and a motor was installed to operate the remaining gearing and vertical shaft in the clock movement up to the bevel gears, dial gears and hands located in the hood of the timepiece. Unfortunately, this practice of "electrifying" mechanical timepieces was all too common in the 40's, 50's, and 60's and ultimately doomed the operation of the clock. With a fully mechanical timepiece, the ratio of power source, meaning the weight, to the power required to run, is balance so that if any problems occur within the clock movement or its related components, the clock will stop so that the repair or adjustment can be performed before any major damage can occur. It is a brilliant yet simple system. However, an electric motor is designed to operate continuously regardless of the needs of the mechanics until the motor burns up due to the increase friction of the damaged mechanics. Mechanical timepieces require monthly maintenance, although it is minimal. Once a mechanical timepiece is electrified, maintenance to the remaining mechanical components is usually forgotten. Mechanical timepieces also require weekly winding of the weight but that is easily avoided by adding an automatic weight winding system.



The E. Howard post clock at 9 Chelsea Street is the "Sign Ornament" model. The top gallery came in either a solid piece where the advertisement (town, business etc.) was lettered onto the cast iron or a framework with the advertisement lettered onto glass and illuminated at night. The photo Richard showed us of the post clock in Scollay Square is the "Fancy Top Ornament" model. It is possible, but not feasible, that the gallery would have been replaced as that would have required a lot of machining to make it fit properly. The advertising area on the Chelsea Street gallery must have been repainted after the "Landmark Designation" report since the "R", visible in the photo related to the report, was not there at the examination (see report cover photo of the Chelsea St. clock). Careful removal of the paint in this area may reveal its original installation.

There is a good example of the Chelsea Street post clock model outside the American Watch and Clock Museum in Bristol, Connecticut (see attached photo).

When considering your options, it is important to keep in mind that the operating longevity of the electric systems is 5 to 15 years before it will need to be replaced, depending on the quality of manufacture (see attached document "Timekeeping systems: Mechanical vs. Electric" attached).

As tower clock restorers and manufacturers, we believe that the weight driven, pendulum regulated mechanical timepiece is still the very best timekeeping system for tower or post clock application, especially in areas of changing temperature and weather conditions. Over time they have passed the test of durability and longevity as some have been running for over 700 years. Regardless of the condition, they are always restorable because they were designed to be repaired, not replaced. It is important to keep in mind that the operating problems with these clocks generally occurs only after decades of partial or improper repair and maintenance, although well intended.

It may be of interest to you to know that all the weight driven, pendulum regulated mechanical tower clocks are registered with the National Association of Watch and Clock Collectors, a world- wide organization dedicated to the preservation and education of horology and horological artifacts. Electric timepieces are not included in this registry.

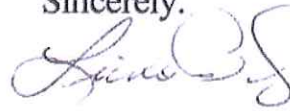


The following report includes:

1. History of Edward Howard, the maker of the 9 Chelsea Street post clock
2. Report of condition of the cast iron base, fluted post, dial frames, gallery, dials, hands and remaining mechanical components
3. Recommended restoration of the cast base, fluted post, dial frames, gallery, dials and hands
4. Restoration of the mechanical movement returning the timepiece back to its mechanical operation, as originally designed restoring the historical and horological value back into the timepiece.
5. Available options listed separately with their cost.
  1. Automatic weight winding system for the mechanical movement operation.
  2. Two electric options

Please contact us if you require further information or have questions regarding the information contained in this report.

Sincerely,



Linda Balzer-President  
Balzer Family Clock Works





EST.  
1952

AMERICAN  
CLOCK & WATCH MUSEUM

E. HOWARD & CO.  
BOSTON



## **Balzer Family Clock Works**

### **Timekeeping Systems: Mechanical vs. Electric**

Balzer Family Clock Works travels the country converting the electrified mechanical systems back to the gravity driven, pendulum controlled operation due to the poor operating performance or failure of the electrified system.

Balzer Family Clock Works manufactures the weight driven pendulum regulated mechanical systems to replace the poorly operating and failed electric systems.

The following are pros and cons of both systems:

Electric systems are less expensive than mechanical systems

Mechanical systems are more expensive unless one is already in place.

The power source for the pendulum controlled systems is gravity which is constant, reliable and unaffected by power outages or power variances.

Electric driven systems do not operate during power outages.

Time reset on electric driven systems, due to power outages or seasonal time changes, can be automatic but can take several hours to adjust.

Mechanical systems require manual reset for seasonal time changes and adjustments.



## Balzer Family Clock Works

### Timekeeping Systems: Mechanical vs. Electric (pg. 2)

Electric systems can be made reasonably accurate with adjustment system (GPS)

Mechanical systems can be made very accurate.

Power surges can destroy the electronics associated with the electric driven systems.

Longevity of service for the gravity driven systems is over 700 years, so far. Some that were built in the 1300's are still running.

Longevity of service of the electric systems 5-20 years.

Electric driven systems and mechanical systems require maintenance

Electric driven systems become obsolete and replacement components are often unavailable.

Electric driven systems are designed to be replaced, not repaired.

Mechanical driven systems are always restorable and are designed to be repaired.

Mechanical systems have public display and educational benefits (mechanics, mathematics, physics etc.)

See: [www.balzerclockworks.com](http://www.balzerclockworks.com)



## Balzer Family Clock Works

### **Timekeeping Systems: Mechanical vs. Electric (pg. 3)**

Electric systems are of little or no historical or horological value.

All mechanical tower clocks are registered with the National Association of Watch and Collectors, a world- wide organization dedicated to the preservation and education of horology and horological items.

The gravity driven, pendulum controlled systems, unlike the electric driven systems have always increased in value.

#### Balzer Clock Works Manufacture Tower Clocks on Display and Operating:

L.L. Bean- Freeport, Maine

Fair Haven Middle School- New Haven, CT

Neiman Marcus-Coral Gables, FL

University of Arkansas- Fayetteville, AR

National Science Ctr.-Augusta, GA

Priority Properties-Topsham, ME

Hokkaido University of Science-Sapporo, Japan

#### Timepieces restored by Balzer Clock Works on Display and Operating:

Dept. of Police Service- North Attleborough, MA

Town of Danforth, ME

Walnut Sq. School- Haverhill, MA

Public Museum of Grand Rapids-MI

Tourneau, NY

NAWCC Museum- Columbia, PA

Hokaido Institute of Technology- Sapporo, Japan

N.H. Historical Society-Concord, NH

First Free Will Baptist Church- North Sutton, NH

International Tennis Hall of Fame- Newport, RI

City of Lewiston, ME



## Balzer Family Clock Works

### Timekeeping Systems: Mechanical vs. Electric (pg. 4)

Timepieces restored by Balzer Clock Works on Display and Operating:

The Center School- Mattapoissett, MA  
First Congregational Church- Gorham, ME  
Science Museum - El Paso, Texas  
First Congregational Church- Rowley, MA  
City Of Fredericton- New Brunswick, Canada  
First Church-New Knoxville, Ohio  
Reformed Church of the Tarrytowns, Tarrytown, NY  
First Congregational Church- Wells River VT  
Groton School-Groton, MA  
City of Boyne City, Michigan  
Bromo Seltzer Arts Tower, Baltimore, MD  
Town of West Winsor. VT.

**Note:** Plexiglas or plastic material is not recommended as a dial material for mechanical tower clocks due to its flexibility which can damage the mechanical dial components and affect its accuracy.

¼" double frosted glass or ¼" white structural glass was the standard material used for these dials. Neither are available now, however, we can make the ¼" double frosted glass.

**Consulting services are available. Fee for service provided upon request.**



## E. Howard "Sign Ornament" Post Clock Circa 1900

### FEATURES:

- Cast iron post, hood, gallery, day dials, wood hands
- Original mechanical movement "electrified"
- Time only function

Illustration in "The E. Howard Clock Company"  
Catalogue 1923

"Post or Sidewalk Clocks"  
"Sign Ornament"



DAY DIAL

### HISTORICAL INFORMATION OF MAKER:

Edward Howard was born in Hingham, Massachusetts and at an early age apprenticed to Aaron Willard, a renowned Massachusetts clockmaker. He began manufacturing clocks in 1842 and soon became known as a mechanical genius. Edward Howard, along with Aaron Dennison from Freeport, Maine, began the first watch manufacturing company in the United States called "The American Horologe Company" eventually to become the "Waltham Watch Company".

His companies won many awards for their clocks, banker's scales and balances, watches, sewing machines and fire engines. However, the watches and clocks remain their greatest legacy and are avidly sought after by collectors worldwide.



## **REPORT OF CONDITION:**

### **Cast Iron Base, Fluted Post, Hood, Gallery, Dial Frames, Hood Ring, Dials**

The base and post are one complete casting. Approximately 7" of the base is buried under poured concrete. The paint continues to lift on the exterior of the base and fluted post and rust has formed on the exposed areas. The brass "E. Howard & Company Boston, Mass." name plate is still attached to the base. The lock on the door is broken. The interior of the base and fluted post, particularly the top, is badly rusted due to leakage over the years but this has accelerated due to the direct exposure to the elements since the hood fell. There is one cast iron corner leaf adornment missing and two or three cast iron center leaf adornments missing on the top of the fluted post.

The cast iron yoke section between the top of the fluted post and the cast iron hood ring that contains the dial frames is broken into several pieces. Rust on the edges of some of the broken pieces of this casting indicates earlier cracks and leakage and the area around some of the fasteners, as well as fasteners themselves that secure this piece to the fluted post were rusted through. Not much, if anything was securing this piece, and thus the hood, to the post.

The cast iron hood ring shattered into several pieces when the hood fell. The two cast iron dial frames also have damage with some pieces broken out of the casting. The crystals over the dials are a plastic material which has weathered from UV and exposure to the elements. The top gallery has several broken pieces and there is a crack in the front of one of the advertising areas. The tip of one of the leaf finials on the top of the gallery is broken off and missing.

There is one broken section on one of the cast iron dials and one hour designation and two minute designations are missing. There are several holes that have been drilled around the perimeter of each dial to hold the neon tubes that were added later to illuminate the dial. The neon tubes are no longer usable. The center section of each dial appear to have been repainted avoiding the area where the "E. Howard & Company Boston" is lettered.

The two sets of hands are there but in poor condition. One of the minute hands is broken at the hub and the spade end is missing on the other minute hand. The four cast hubs onto which the hands are attached appear to be usable.

Most of broken pieces are there and can be welded as these are thick castings. The missing castings can be replicated and a new steel hood ring would be fabricated. The hood attachment would be engineered to assure its secure attachment. This would not change the outward appearance of the structure.



Leaf Finial

Gallery

Hood Ring

Dial Frame

Dial

Yoke

Leaf Adornments

Fluted Post

Base



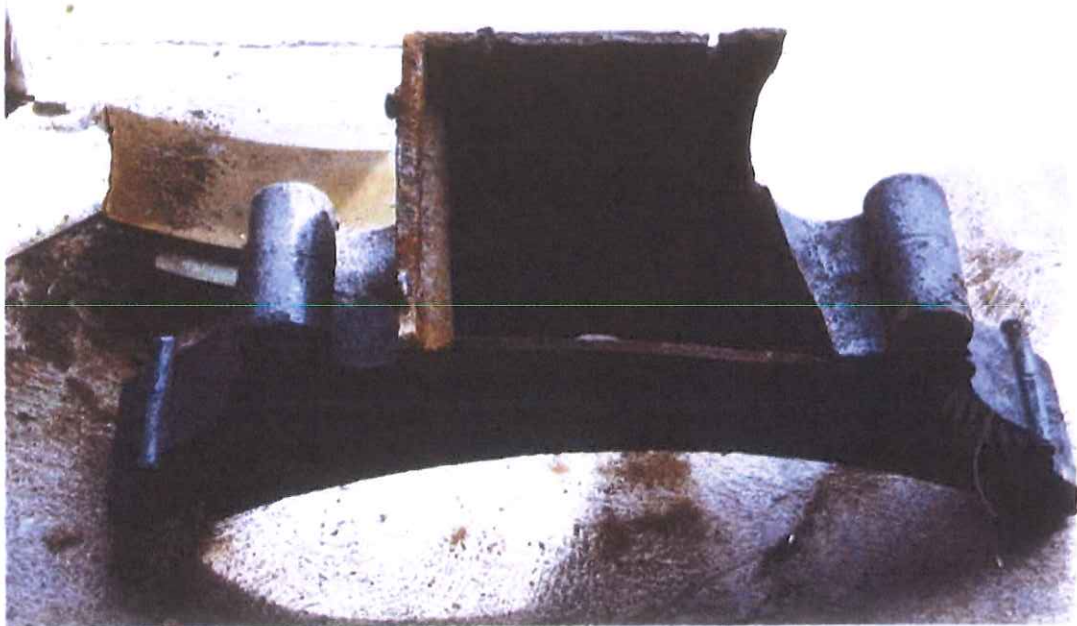


9 Chelsea St. East Boston





9 Chelsea St. East Boston



9 Chelsea St. East Boston





## **REPORT OF CONDITION (pg. 2):**

### **Mechanical Timepiece and Related Components and Electrical Components**

The original mechanical movement is located in the base of the post.

Remaining components:

- . Two cast iron movement plates
- . Bridge plate
- . Second wheel, shaft and pinion
- . Center Wheel and shaft
- . Two bevel gears, vertical shaft, set dial and knob, minute/hour pointer and a set of universals

Missing components:

- . Great Wheel, pawl, wind drum, maintaining power spring assembly, shaft and bushings
- . Intermediate wheel, pinion shaft and bushings
- . Escape wheel, shaft and bushings
- . Verge, pallets, shaft, crutch assembly and bushings
- . Pendulum assembly (cast iron and wood rod, pendulum bob and nut)
- . Suspension spring and regulation knob assembly
- . Pulley, weight and wire rope
- . Assorted fasteners

Mechanical components in the hood to drive the two sets of hands:

The adjustment dog is on the vertical shaft that protrudes above the fluted post but the mating unit is broken although the universal unit is attached at the bevel geared differential. The bevel geared differential is complete although the cast iron support for the bevel geared differential, which was mounted in the center of the hood, is broken and some pieces are missing. The hour pipe on one set of dial gears is bent and both sets of dial gears are missing their minute wheel and pinion.

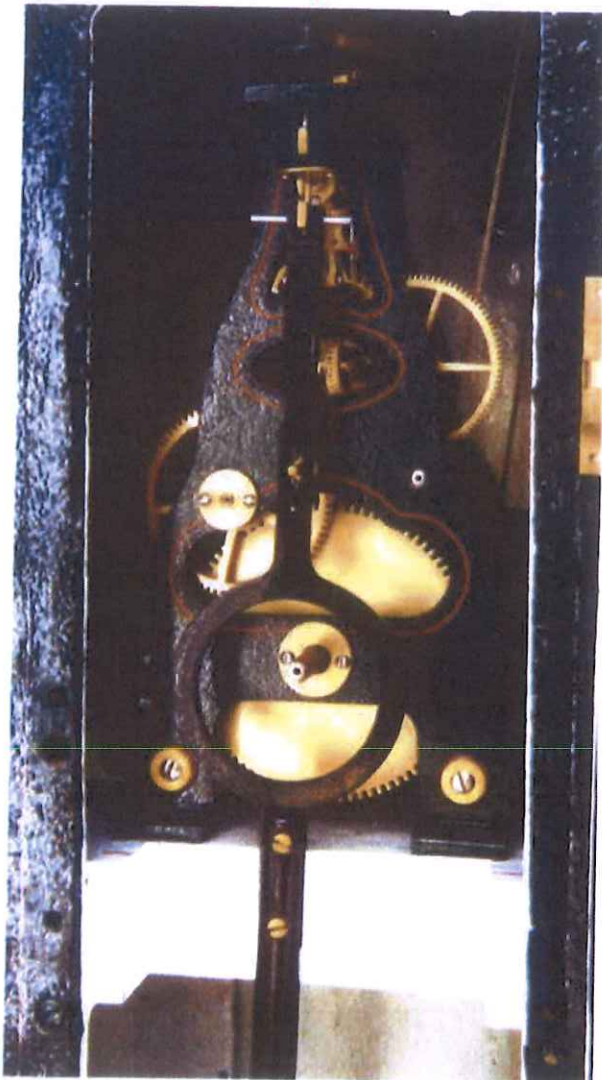
Electrical Components:

The electrical components are badly corroded and are outdated and unusable.

9 Chelsea Street Electrified  
E. Howard Clock Movement



Restored E. Howard Completely  
Mechanical Clock Movement





## **RESTORATION PROCEDURE:**

### **Cast Iron Base, Fluted Post, Hood, Gallery, Dial Frames, Cast Iron Hood Ring, Dials**

#### **Scope of Work:**

- . Remove the cast iron post (by owner). Balzer Family Clock Works will be on site to provide technical assistance during the removal process. Owner is responsible for transport of the cast iron post, dial frames, dials and miscellaneous cast iron components to our shop in Freeport, Maine.
- . Remove the base door and hinges. Remove the broken door lock and the "E. Howard and Company" brass name plate from the base door.
- . Remove the remaining cast iron leaf adornments from the top of the post. Have cast one missing corner leaf adornments and all missing center leaf adornments.
- . Remove by bead blasting the paint and rust on the exterior and interior of the base and door, fluted post and the leaf adornments. Prime with "Rust Destroyer" or similar product that is designed to bond to any remaining rust.
- . Top coat the inside of the base, door and fluted post with two applications of Dupont Imron polyurethane paint, color white. Top coat the exterior of the base, door, fluted post and the leaf adornments with two applications of Dupont Imron polyurethane paint, color "Howard" green.
- . Attach the leaf adornments with new fasteners. Install the base door. Highlight the base, fluted post and leaf adornments with gold leaf.
- . Clean and lacquer the brass name plate and attach with new fasteners.
- . Repair and install the lock for the base door.

## **RESTORATION PROCEDURE (pg. 2):**

### **Cast Iron Base, Fluted Post, Hood, Gallery, Dial Frames, Cast Iron Hood Ring, Dials**

#### **Scope of Work**

- . Engineer, design, fabricate and install the attachment framework of the hood to the post. This will not change the outward appearance of the post clock.
- . Weld the broken cast iron pieces on the yoke under the hood that served as the attachment point between the hood and the post.  
This will no longer serve as the attachment point but only as an additional support.
- . Fabricate a new steel hood ring. Design and machine the dial frame attachments. Prime with "Rust Destroyer" or similar product that is designed to bond to any remaining rust.
- . Weld the broken sections on the cast iron dial frames. Fabricate any missing or unusable pieces and weld into place.
- . Weld the broken pieces of the cast iron gallery. Weld a section of cast iron onto the gallery for the missing tip of the decorative scroll and leaf finial. Grind and shape to match the three other finials. Weld the crack in the face of the gallery.
- . Remove by bead blasting the paint and rust on the exterior and interior of the dial frames and gallery. Prime with "Rust Destroyer" or similar product that is designed to bond to any remaining rust.
- . Top coat the inside and exterior of the dial frames, yoke, gallery and steel ring with two applications of Dupont Imron polyurethane paint, color "Howard" green.
- . Install tempered glass into the two dial frames.



**RESTORATION PROCEDURE (pg. 3):**

**Cast Iron Base, Fluted Post, Hood, Gallery, Dial Frames, Cast Iron Hood Ring, Dials**

**Scope of Work**

- . Weld the broken section back onto the cast iron dial. Fabricate and attach two missing minute designations and one hour designation. Prepare the surfaces of both dials and prime all surfaces with Rust Destroyer” or similar product that is designed to bond to any remaining rust.
  
- . Top coat both sides with Dupont Imron polyurethane paint, color black. Duplicate, as original, the “E. Howard & Company Boston” lettering onto the face of the dials.
  
- . Apply gold leaf to the numerals and minute and hour designations and the “E. Howard & Company Boston” lettering.
  
- . Remove the four hand hubs from the two sets of hands and recondition. Cut from all heart California redwood, two hour hands and two minute hands to match original E. Howard design. Plane to taper, prime and paint with Dupont Imron polyurethane paint. Apply 23k gold leaf to the surface of each hand, install the reconditioned hand hubs. Machine a counterweight for each hand and balance each hand.

**Cost (not to exceed).....\$57,500.00**

**Exclusions:**

1. Removal or delivery of the post clock components to our shop for restoration. Balzer Family Clock Works will be on site to provide technical assistance during the removal process.
2. Transportation of the post clock components from our shop in Freeport, Maine to the installation site in Boston, MA or lifting the post and hood for installation onto the anchor pad.
3. Preparation or installation of the post clock anchor pad. Balzer Family Clockworks will provide the drawing for the bolt anchor locations.
4. Any electrical wiring that may be required.
5. Any permits that may be required from the City of Boston or the State of Massachusetts to install the post clock components.
6. Mechanical or electric movement options

## **RESTORATION PROCEDURE (pg. 4):**

### **Clock Movement Options:**

#### **Option 1:**

##### **Completely Mechanical Operation (as originally designed):**

This option will restore the historical and horological value back into the timepiece. A fully mechanical timepiece will require monthly maintenance and although minimal, it is essential to the continued performance of the timepiece. The timepiece will also require weekly winding but also included is a separate option for an automatic weight winding system. If Balzer Family Clock Works is the chosen contractor for this project, we will train the designated personnel in the proper maintenance required and provide illustrated written instructions for reference. The timepiece will require manual reset for seasonal time changes.

Restore the remaining original components:

- . Clean, bead blast, and paint with Dupont Imron polyurethane paint the two Cast iron movement plates and bridge plate replicating the original pinstripe design.
- . Clean polish and lacquer the brass second wheel. Machine a new shaft and pinion from 316 stainless steel.
- . Clean polish and lacquer the brass center wheel. Machine a new shaft from 316 stainless steel.
- . Clean, polish and lacquer the two bevel gears, set dial and knob. Clean, paint and lacquer the minute/hour pointer.
- . Machine a new vertical shaft that is located with the clock movement from 316 stainless steel.
- . Clean, polish and lacquer the three brass bevel gears for the bevel geared differential
- . Clean and paint the two sets of universals.
- . Clean, polish and machine where necessary, the two sets of dial gears. Machine a brass minute wheel, pinion and 316 stainless steel shaft for each set.



## RESTORATION PROCEDURE (pg. 5):

### Clock Movement Options:

#### Option 1 (cont.):

#### Completely Mechanical Operation (as originally designed):

Machine the following missing movement components:

- . Great Wheel, pawl, wind drum, maintaining power spring assembly, 316 stainless steel shaft and brass bushings
- . Intermediate wheel, 316 stainless steel pinion and shaft and brass bushings
- . Escape wheel, 316 stainless steel shaft and brass bushings
- . Verge, pallets, 316 stainless steel shaft, brass crutch assembly and bushings
- . Pendulum assembly (cast iron and wood rod, cast iron pendulum bob and nut)
- . Suspension spring and regulation knob assembly
- . Assorted fasteners
  
- . Machine a vertical shaft from 316 stainless steel that is installed from universal on the top of the movement in the cast iron base to the bevel geared differential located in the center of the hood.
  
- . Fabricate and weld the missing and broken framework of the bevel geared differential.
  
- . Machine three pulleys for the weight system. Make a mold and cast in lead the three part weight.
  
- . Install all components and attach the wire rope weight cable.
  
- . Clean, polish and machine where necessary, the two sets of dial gears. Machine a brass minute wheel, pinion and 316 stainless steel shaft for each set.

Cost (not to exceed).....	\$8,120.00
* Balzer Clock Works Donation .....	<u>- 3,500.00</u>
<b>Total Cost (not to exceed).....</b>	<b>\$4,620.00</b>

\* If Balzer Family Clock Works is the chosen contractor for the restoration work we will donate, restore and install original E. Howard components to replace the missing mechanical movement components.

Note: No electrical wiring is required with **Option 1** unless an automatic weight winding system (**Option 1-A**) is added

**RESTORATION PROCEDURE (pg. 6):**

**Clock Movement Options:**

**Option 1-A:**

**Automatic Weight Winding System**

Our automatic winding system is designed with the intent to be installed or removed without any modification to the clock movement and without the need to remove any of the mechanical components thus preserving the historical and horological value of the timepiece.

Components: Clutch/ gearbox/ motor, assembly, chain, fabricate a framework to mount the unit under the clock movement, electrical relay box, 2 limit switches and 1 safety switch, weight cage.

**Cost (not to exceed) including installation.....\$3,000.00**

**Exclusion:** Electrical wiring to the inside of the base of the post clock



## **RESTORATION PROCEDURE (pg. 7):**

### **Clock Movement Options:**

#### **Option 2 (cont.):**

#### **Synchronous Motor Driving the Remaining Mechanical Components:**

Restore the remaining original components:

- . Clean, bead blast, and paint with Dupont Imron polyurethane paint the two cast iron movement plates and bridge plate replicating the original pinstripe design.
  
- . Clean polish and lacquer the brass second wheel. Machine a new shaft and pinion from 316 stainless steel.
  
- . Clean polish and lacquer the brass center wheel. Machine a new shaft from 316 stainless steel.
  
- . Clean, polish the two bevel gears, set dial and knob. Clean and paint the minute/hour pointer and the set of universals
  
- . Machine a new vertical shaft that is located with the clock movement from 316 stainless steel.
  
- . Clean, polish and lacquer the three brass bevel gears for the bevel geared differential
  
- . Clean and paint the two sets of universals.
  
- . Clean, polish and machine where necessary, the two sets of dial gears. Machine a brass minute wheel, pinion and 316 stainless steel shaft for each set.
  
- . Machine a vertical shaft from 316 stainless steel that is installed from the top of the movement in the cast iron base to the bevel geared differential located in the center of the hood.

**RESTORATION PROCEDURE (pg. 8):**

**Clock Movement Options:**

**Option 2 (cont.):**

**Synchronous Motor Driving the Remaining Mechanical Components:**

- . Fabricate and weld the missing and broken framework of the bevel geared differential.
  
- . Install a new synchronous motor to drive the mechanical components.

**Cost (not to exceed).....\$4,400.00**

**Exclusion:** Electrical wiring into the base of the post clock.

**Note:** The mechanical components will require monthly maintenance and manual reset for power outages and seasonal time change

**Option 3:**

**Completely Electric System with Automatic Reset for Power Outages and Seasonal Time Changes.**

- . Two electric movements, one mounted at each dial.
  
- . Digital Master Clock (temperature sensitive)
  
- . Modify the hand hubs to fit the electric movements or flat aluminum hands from the electric movement supplier which will fit the movements but will not look like the originals.

**Cost (not to exceed)..... \$4,500.00**

**Exclusion:** Electrical wiring into the base of the post clock.

**Note:** The running longevity of an electric system is 5-15 years depending on the quality of the manufacturer. Once the system fails it will need to be replaced.