Removal of Intrusions from the Burial Ground of the Flushing Meeting House of the Religious Society of Friends, 137-16 Northern Boulevard (Block 4977, Lot 26), Flushing, Queens

DRAFT

Prepared for
The Flushing Meeting of the Religious Society of Friends

Prepared by
Joan H. Geismar, Ph.D., LLC

May 28, 2013
To: Brian Doherty, as the Representative of the Flushing Meeting House of the Religious Society of Friends
From: Joan H. Geismar, Ph.D., LLC
Date: May 28, 2013

This end of field memo documents the successful removal of intrusions from the burial ground of the historic Flushing Meeting House of the Religious Society of Friends [hereafter, Friends], 137-16 Northern Boulevard (Block 4977, Lot 26), Flushing, County of Queens (Figure 1). As outlined in the project’s approved scope of work (Geismar 2013; Sutphin 2013, Mackey 2013), as agreed by both affected parties (the Friends and Pinnacle Engineers), and as described in the Miscellaneous Amendments issued by the New York City Landmarks Preservation Commission (2013), the removals were carried out from May 15 to May 17, 2013. They were undertaken by Pinnacle Engineers (Pinnacle) with archaeological oversight provided by Joan H. Geismar, Ph.D., assisted by Shelly Spritzer, MA. At issue were ten iron Soldier-Beams (I-Beams), the wooden lagging between these beams located on or adjacent to the south property line of the Friends’ burying ground, and the remnants of a wooden utility pole of unknown depth located further north, that is, within the burial ground (see Figure 2 for locations). At the Friends’ request, what remained of the utility pole and the upper 2 feet (0.61 m) of the ten soldier beams and the wooden lagging were to be removed with minimal site disturbance. As agreed, the utility pole was to be extracted without new excavation and the excavation required to remove the Soldier Beams and lagging was not to extend more than 2 feet (0.61 m) below the existing ground surface nor more than 2 feet (0.61 m) into the cemetery.

The undertaking, which was efficiently carried out, proved to require less excavation than anticipated (the east-west trench excavated to facilitate removal of the Soldier-Beams and lagging was 2-feet [0.61 m] deep as anticipated, but only in one instance (the removal of SB10) did it extend as far as 2 feet (0.61) into the burial ground. Moreover, all trenching proved to be in disturbed soil that mainly, if not entirely, comprised fill.

All excavation, which was by hand, was carried out by Pinnacle personnel. The excavated soil was troweled by Dr. Geismar or Ms. Spritzer to observe or collect cultural material. However, intrusions of small ceramic and glass fragments of indeterminate age and some oyster shell in association with modern material such as a whole 1994 alcoholic beverage bottle, bricks and brick fragments, wood fragments, concrete and plastic sheeting fragments, and, in one instance, a scrap of newspaper that referred to [Bett?] Midler, negated the need for screening. Several small bone fragments, apparently none of them human (one was charred), were noted but, following
the established protocol, all were returned to the soil. Of interest was the tooth (molar?) of a large
animal (see Photo 3), the enamel almost totally worn down by use and indicative of age. This
isolated specimen (there were no other associated bones) was collected for identification
purposes and its preliminary identification of a horse tooth was confirmed (Brown 2013:personal
communication). Following the established protocol (any bone material was to be returned to the
soil), the tooth will be reburied at the Friends’ direction.

The entire undertaking was documented in photographs (for example, see Photos 1 to 22). A
schematic profile of the north trench wall in the eastern part of the trench, representative of the
trench in general, is provided in Figure 3. Table 1 documents the dimensions of the lagging
sections and of the removed lagging components; the dimensions of each removed Soldier Beam
segment and the utility pole will be found in Table 2.

While measurements were often variable, all met or exceeded the requirements of the scope
(lagging pieces ranged from 1.9/2.0 feet [0.58/0.61m] to 2.8 feet [0.85 m] and the Soldier-Beam
segments from 2.2 feet [0.67 m] to 3.0 feet [0.9 m]; see Tables 1 and 2). The ten soldier beams at
issue were identified sequentially as Number 10 at the eastern end and Number 1 on the western
end (see Figure 2). Four linear feet (1.2 m) of lagging were removed west of Soldier Beam (SB)
No. 1 (an eleventh soldier-beam in the progression, located west of the Friend’s property,
remains intact). The utility pole, which was encountered between .6 and 1 foot (0.20 to 0.31 m)
below the current (uneven) ground surface, proved to be wrapped in blue plastic sheeting tied with
cord. The plastic sheeting, which covered the upper 2 feet (0.61 m) of the pole remnant, was
apparently introduced by HPI after it had been exposed during an earlier testing program (Mascia
2012). However, there were no above ground markings to identify its exact location. Using
information from the site’s non-intrusive, Ground Penetrating Radar (GPR) survey (Horsley
2012), Ms. Yan A. Huang of Pinnacle successfully located the pole.

To remove the pole, Pinnacle erected surface-supported scaffolding to accommodate a hand
operated winch and chain to hoist the pole from the ground. A plate was screwed into the top of
the pole and a chain attached. The hand operated winch was then activated and the pole slowly
emerged. Once the pole was above ground, a strap was wrapped around it, the winching
continued, and it was lifted out. To prevent the hole from collapsing, sand was introduced during
and after the pole’s extraction (eleven 10-pound bags in all). The pole proved to be 8.0 feet (2.4
m) long (see Photos 16 to 20 that document the procedure and the pole). The entire undertaking
was accomplished in just under an hour. The excavation trench had been backfilled and the
debris cleared after the Soldier Beams were removed the previous day. Once the pole was
extracted, the scaffolding was dismantled and a final clean-up was done (see Photos 21 and 22).

As noted above, all trenching was in disturbed soil and mainly fill, and the minimal hand
excavation required to locate the pole was in soil that obviously had been previously excavated.
In sum, all removals were as planned and the undertaking was carried out efficiently,
cooperatively, and without incident.
### Table 1. FLUSHING FRIENDS MEETING HOUSE
LAGGING REMOVALS BETWEEN SOLDIER-BEAMS (SB) IN 10THS OF FEET (METERS)

<table>
<thead>
<tr>
<th>Lagging Section</th>
<th>Trench E-W/ N-S/ Depth</th>
<th>Lagging Removed (Height)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB 10-9</td>
<td>8.7 ft (2.4 m) x 1.2 ft (0.37 m) x c. 3 ft (0.9 m)</td>
<td>2.8 ft (0.85 m)</td>
<td></td>
</tr>
<tr>
<td>SB 9-8</td>
<td>8.4 ft (2.6 m) x 1.4 ft (0.43 m) x 2.5 ft (0.76 m)</td>
<td>2.0 ft (0.61 m)</td>
<td></td>
</tr>
<tr>
<td>SB 8-7</td>
<td>8.2 ft (2.5 m) x 1.4 ft (0.43 m) x 2.3 ft (0.70 m)</td>
<td>2.0 ft (0.61 m)</td>
<td></td>
</tr>
<tr>
<td>SB 7-6</td>
<td>8.0 ft (2.4 m) x 1.4 ft (0.43 m) x 2.2 ft (0.64 m)</td>
<td>1.9/2.0 ft (0.58/0.61 m)</td>
<td></td>
</tr>
<tr>
<td>SB 6-5</td>
<td>8.4 ft x 1.3 ft (0.4 m) x 2.0 ft (0.61 m)</td>
<td>2.0 ft (0.61 m)</td>
<td></td>
</tr>
<tr>
<td>SB 5-4</td>
<td>8.1 ft (2.5 m) x 1.4 ft (0.43 m) x 2.1 ft (0.61 m)</td>
<td>1.9/2.1 ft (0.58/0.64 m)</td>
<td></td>
</tr>
<tr>
<td>SB 4-3</td>
<td>8.7 ft (2.65 m) x 1.7 ft (0.5 m) x 2.3 ft (0.7 m)</td>
<td>2.0 ft (0.61 m)</td>
<td></td>
</tr>
<tr>
<td>SB 3-2</td>
<td>8.0 ft (2.4 m) x 1.6 ft (0.49 m) x 2.0 ft (0.61 m)</td>
<td>2.0 ft (0.61 m)</td>
<td></td>
</tr>
<tr>
<td>SB 2-1</td>
<td>8.2 ft (2.5 m) x 1.4 ft (0.43 m) x 2.0 ft (0.61 m)</td>
<td>2.0 ft (0.61 m)</td>
<td>Large mammal tooth (enamel very worn) c. 1.2 ft (0.37 m) BGS</td>
</tr>
<tr>
<td>SB 1-0</td>
<td>2.7 ft (0.83 m) x 1.0 ft (0.3 m) x 2.2 ft (0.67 m)</td>
<td>2.2 ft (0.67 m)</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2. FLUSHING FRIENDS MEETING HOUSE
SOLDIER-BEAM (SB) & UTILITY POLE (UP) REMOVALS IN 10THS OF FEET (METERS)

<table>
<thead>
<tr>
<th>SB No. / UP</th>
<th>Length of SB/UP Removed</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB 10</td>
<td>3.0 ft (0.9 m)</td>
<td>1.0 ft (0.31 m) between SB &amp; trench N wall; Styrofoam on building wall</td>
</tr>
<tr>
<td>SB 9</td>
<td>2.25 ft (0.69 m)</td>
<td>Styrofoam on building wall</td>
</tr>
<tr>
<td>SB 8</td>
<td>2.23 ft (0.68 m)</td>
<td></td>
</tr>
<tr>
<td>SB 7</td>
<td>2.2 ft (0.67 m)</td>
<td></td>
</tr>
<tr>
<td>SB 6</td>
<td>2.4 ft (0.73 m)</td>
<td>SB close to tree</td>
</tr>
<tr>
<td>SB 5</td>
<td>2.3 ft (0.70 m)</td>
<td></td>
</tr>
<tr>
<td>SB 4</td>
<td>2.3 ft (0.70 m)</td>
<td>1.2 ft (0.37 m) between SB &amp; N trench wall</td>
</tr>
<tr>
<td>SB 3</td>
<td>2.3 ft (0.70 m)</td>
<td>0.9 ft (0.28 m) between SB and N trench wall</td>
</tr>
<tr>
<td>SB 2</td>
<td>2.2 ft (0.67 m)</td>
<td>Styrofoam on building wall</td>
</tr>
<tr>
<td>SB 1</td>
<td>2.4 ft (0.73 m)</td>
<td>S of partition wall</td>
</tr>
<tr>
<td>UP</td>
<td>8.0 ft (2.6 m)</td>
<td>Ground surface and top of pole both uneven, therefore depth BGS to top of pole variable (ca. 0.6 to 1.0 ft [0.20 to 0.31 m]); 11 10-lb bags of clean sand introduced during &amp; after removal</td>
</tr>
</tbody>
</table>

All excavations by hand; excavated soils troweled; BGS = Below Ground Surface

Joan H. Geismar, Ph.D., LLC
Flushing Friends’ Meeting House Removals
May 28, 2013

3
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Sutphin, Amanda
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FIGURES
trench, approx. 1.2 ft (0.37 m) wide
- Soldier-Beam (I-Beam), upper 2 ft (0.61 m) removed*
1, 2 Soldier-Beam (I-Beam No.)
--- lagging, upper 2 ft (0.61 m) removed*
• utility pole (approx., not to scale), removed

*Minimally 2 feet (0.61 m) removed. See Tables 1 and 2 for actual measurements.
Adapted from a Pinnacle Plan, enhanced.
FLUSHING FRIENDS MEETING HOUSE  North Wall Schematic Profile Between Soldier-Beams 9 and 10

Approximate location of 2- x 2-foot (0.61 x 0.61 m) section of the north "wall" profiled near the eastern end of the trench. Note the patch of orange (corrosion?) sand (upper arrow) and a fragment of old black plastic sheeting (bottom arrow) in the trench wall. Both indicate fill. (Geismar 5/16/13)
PHOTOS  May 15 to May 17, 2013
(photos by Joan H. Geismar)
Photo 1. Pinnacle personnel during removal of the second of three lagging planks removed between SB10 and SB9. A blowtorch is being used to eliminate a support. Note the narrow trench in front of the lagging. The trench width never exceeded 2 feet (0.61 m) and was considerably narrower for much of its length.

Photo 2. Lagging removal between SB9 and SB8, a typical lagging removal. While two planks were the norm, in some sections, such as SB10 - SB9 noted in Photo 1, three planks were removed to meet the 2-foot (0.61 m) requirement.

Photo 3. The only collected “artifact,” this large tooth, its enamel extremely worn, was recovered from soil excavated between SB2 and SB1. Its field identification as the tooth of an aged horse has been confirmed (see text).
Photo 4. Lagging removal west of SB1, adjacent to a wood partition and extending to the line of an east-west running chain-link fence that protrudes through the wood partition (see Photo 5).

Photo 5. View of the void beyond the line of the chain-link fence that intrudes between SB1 and an 11th Soldier-Beam. The wood partition, the fence post, and its concrete support (arrow) are to the right.

Photo 6. View east from SB4 - SB3 along the narrow trench excavated to provide access to the lagging and Soldier-Beams. The lagging has been removed and the Soldier-Beams exposed.
Photo 7. SB1 being torched for removal. The cramped location and styrofoam on the wall made removal difficult. The east end of a neighboring parking lot can be seen to the far right, behind the chain-link fence.

Photo 8. The upper 2.4 feet (0.73 m) of SB1 after removal.

Photo 9. The removal of the upper part of SB3 shown here was typical of the torch-and-hammer removal procedure.

Photo 10. The upper 2.3 feet (0.7 m) of SB3 after removal.
Photo 11. View east from the location of SB2 after all but SB10 at the western end of the trench had been removed.

Photo 12. Clearing to remove SB10 at the southeast corner of the new building. Removal of this corner element required greater effort and excavation than was typically necessary.

Photo 13. Torching SB10 to remove the upper portion. The height of the ground surface in this area made removal of this last remaining SB within the project area more difficult than elsewhere.

Photo 14. SB10. This was the largest of the ten SB segments (3.0 feet [0.9 m]) that were removed.
Photo 15. The exposed top of the truncated utility pole located about 1 foot (0.31 m) below the current ground surface. The blue plastic sheeting tied with cord that covered the upper 2 feet (0.61 m) was evidence of the previously reported excavation around the pole (Mascia 2012:10).

Photo 16. Surface-supported scaffolding being introduced to allow the use of a winch and chain to extract the truncated utility pole without involving excavation other than what was needed to uncover it. On a previous site visit, in anticipation of the pole’s removal, Ms. Yan Huang of Pinnacle (standing in the foreground) had determined and marked the pole’s location based on a ground penetrating radar survey.
Photo 17. Hoisting the pole, its length as yet unknown.

Photo 18. The pole’s extraction in progress.

Photo 19. What proved to be an 8-foot (2.6 m), pole remnant being lifted from the hole. Note that sand has been introduced during the extraction to prevent hole’s collapse.
Photo 20. The 8-foot (2.6-m) utility pole remnant. The successful effort by Pinnacle personnel took less than one hour. Filling the hole required eleven 10-lb bags of sand.

Photo 21. Looking east from SB1 about one hour after the pole’s removal. The trench has been backfilled and the site cleared.

Photo 22. Looking west, the patch of sand in the right foreground marks the former location of the utility pole.