

DOCUMENTATION OF STONE CONSERVATION TREATMENTS TO ASSINIPPI CEMETERY, HANOVER, MA June 2015

Standards of Practice

The goal of the cemetery conservator is to preserve both the substance and significance of funerary monuments. Because of the physical proximity of the visitor to the artifacts, cemetery conservation procedures demand closer tolerances of color and texture than are generally enforced in the related field of architectural historic preservation. They require the collaboration of the conservator and the historian/curator on ethical, technical and aesthetic considerations, especially with regard to issues of the restoration of inscriptions and decoration.

In general, cemetery conservators have in the recent years, been moving toward a “conserve as found” approach, emphasizing the

Documentation

Prior to starting any work, all gravestones, tombs and other monuments to be restored were digitally recorded. A condition assessment form was prepared for each monument, describing existing conditions and recommended treatments.

Documentation was made of all conservation treatments performed, and a completed set of these documents is enclosed. All digital images are recorded on the enclosed DVD and are identified with the markers ID number.

Restoration work was also digitally documented with the ID number followed by a decimal number.

Cleaning

The goal of cleaning is not to return the monument to a "like new" appearance, but to remove particulate soiling, staining and biological growth that may interfere with successful restoration. In most situations, cleaning was done prior to other treatments.

Removal of biofilm was with D/2 Biological Solution. It is an aqueous antibacterial solution that also aids in the removal of algae, fungi and other organisms. After application and scrubbing with soft brushes, surfaces are fully rinsed with water. Stubborn, well-attached growths will slowly release their grip in a short amount of time and the stone will appear cleaner.

Cleaning of marble markers was limited to those requiring structural adhesions. General cleaning of marbles would make the markers appear very white and not historically accurate.

Failed adhesives, mortars and pins were carefully removed before proceeding with new conservation treatment. Mechanical removal was done with hand tools and smaller power tools.



B28 Seth Curtis, before and after treatment with D/2

Resetting Tilted

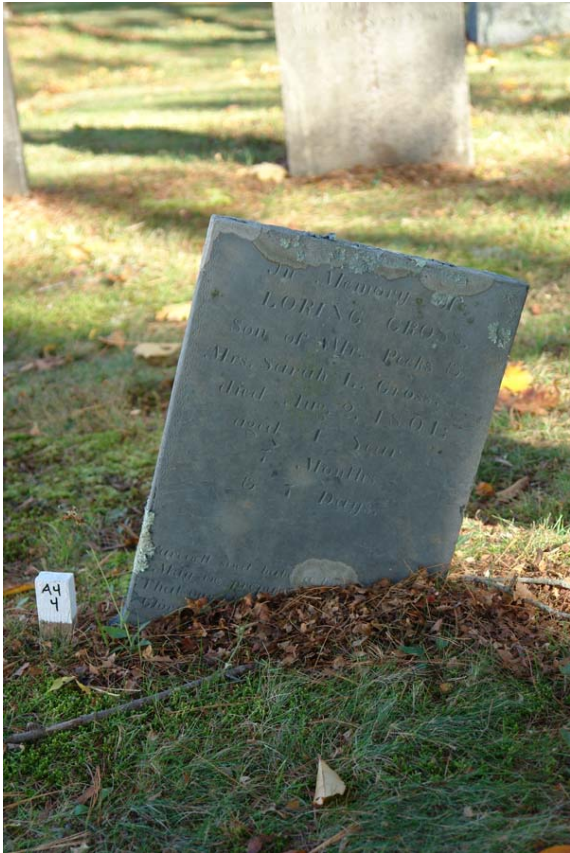
Earlier gravestones are typically long panels of stone that were set directly into the ground. After determination of the correct location and orientation of the stone, soil was removed to an appropriate depth. Gravel (or broken stone) was introduced to establish a stable base. The stone was made plumb and level, and set in plane with the adjacent markers. Backfilling was done with sand and gravel, wetted and compacted. Every effort was to replace disturbed areas with existing topsoil and turf, however additional topsoil was

required
number
sites.

at a
of



A common cause of tilted markers are roots from nearby trees



A4.4 Luring Cross Before and after– severely tilted

Resetting into existing bases

In many cases, fallen markers had been originally set into below grade sandstone bases. When discovered, these bases were often uncommonly deep, more than one foot. Bases were excavated, examined for soundness and reset level at a higher elevation and aligned with adjacent markers.



Old base aligned with adjacent markers and reset level.



These original bases were raised to an appropriate level and reset plumb



When excavating for resetting often original, or old bases are discovered

Resetting into existing bases cont'd

Gravestones that required insertion into existing bases were set with a relatively weak cement/lime-based grout (3:2:9:1) with fine aggregates (000), made fluid with a high-range water reducer which ensures a complete fill. This was poured or injected into the base slot. Stones were braced for a minimum of three days to limit movement during curing of the grout.



Example of marker reset into slot and braced



Lower fragment reset into slot and braced. Top fragment will be attached with structural adhesive after grout has sufficiently cured.

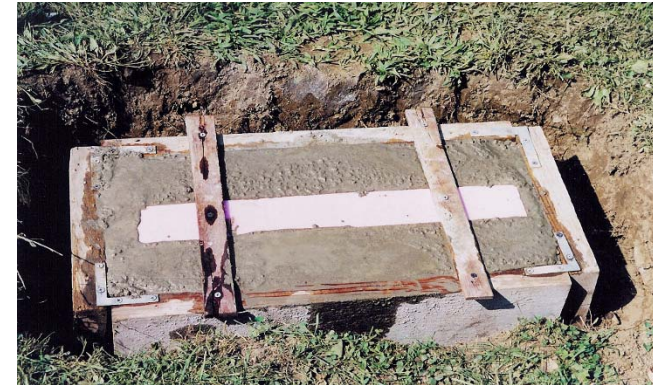
Resetting into New Bases

A new below-grade base was fabricated when an original base could not be located, or the existing base was damaged beyond repair. Fabrication of a base was also necessary to re-erect the upper fragment(s) of earlier gravestones that did not have adequate length for conventional re-setting. These stones were usually fractured at or near the ground level and their lower elements are missing.

Bases were made on site by casting in place with concrete. The casting is generally 9 to 12 inches deep, and 6 inches greater in both thickness and width than the stone itself. The finished top surface of the base should be entirely below grade. A form for a 2 inch deep setting slot, $\frac{1}{2}$ inch wider and $\frac{1}{2}$ thicker than the stone, was positioned in the concrete. After the base cured, the gravestone was reset into the slot with a cement/lime-based grout as previously described. The top of the new base was covered with topsoil.



Form for new below grade concrete base



Concrete poured, with form for setting slot in place



Form removed, ready for resetting marker

Resetting onto existing Bases

When required, existing bases were leveled and aligned with adjacent markers.

For resetting onto existing bases or ledgers, setting surfaces were first primed with Acryl 60 diluted with water 1:3, and markers were reset with a cement/lime-based grout (3:2:9:1) with fine aggregates (000).

When necessary, stones were braced for a minimum of three days to limit movement during curing of the grout.



B33 Henry and Phoebe Maine reset onto existing base.

Structural Adhesion

All fragments were carefully cleaned and dry fitted. A thixotropic, thermosetting structural resin (A-5522, by Abatron, Kenosha, WI or equivalent) was thinly and evenly applied along the bond line only. The fragments were aligned, joined with clamps, and adequately braced during curing, which was typically a period of several days.

Several factors, including weathering, can result in a loss of stone surface, which results in a poor 'fit' at the fracture. In this instance, a structural fill (mix of structural resin and fine aggregates) was required in addition to the structural adhesive. The fill was tucked into any voids of the fracture, but was kept well back from the surface of the stone. After curing, the structural fill was concealed by installation of an appropriately colored cement/lime-based crack filler or restoration mortar (see "Cracks and Losses").

Work in this section was not performed when the temperature of the air or of the stone surface was below 50 degrees Fahrenheit.



#A3.2 Jotham Sylvester. An example of a marker requiring structural adhesion



Clamping and bracing in a vertical position allows gravity to help position fragments. Often marble becomes "bowed" or curved with time.

Cracks and Losses

The color and texture of all composites used to fill cracks and losses was matched to that of adjacent unsoiled stone. Fine cracks were filled with an integrally colored cement/lime-based formulation (RepliCal™ Crack Filler. Larger areas of loss were filled with either Jahn™ M-70 Restoration Mortar or with RepliCal™ a cementitious repair composite designed to match weathered surfaces. For marbles, Replical contains specially sized and graded marble aggregates.

After partial curing, the fills were treated with a light acid washing with 5% acetic acid. This final treatment removes any cement or lime from the surface of the filled area and exposes the aggregates of the mix. All treated areas were thoroughly rinsed with water.

Fills and patches are made to look weathered. Where lettering and inscriptions are lost, they are not replaced.

In these areas the filled plane is kept slightly back from the stone surface to indicate that there is a loss. Areas where there are no inscriptions can be filled level with the original stone.



#A3.2 Jotham Sylvester. Open joints filled with Replical crack filler.



B26.2, William Jacobs. Losses were filled with Jahn M-70 pigmented restoration mortar.

Delaminations

The treatment of delaminations is designed to prevent further detachment of stone, by re-establishing cohesion between layers, and preventing the penetration of water.

Because slates have such extreme temperature variations, their continual expansion and contraction will eventually loosen any solid fills or grouts. Thus, most solid fills will fail within a short period of time. What appears to be a simple treatment is actually quite challenging. Recent successful treatments have been with industrial flexible fillers.

All voids caused by delaminating are usually filled along the top side of the marker only. The sides are kept open to allow the escape of any water that may enter the interior.

Best practice begins with the careful removal of loose debris in the voids, using hand tools and the cautious use of compressed air.

Open joints along the top were filled with a pigmented flexible industrial “crack filler” by Sto.



Filling top cavities with a pigmented crack filler by Sto. Material can be applied by trowel or injection. Excess material will be immediately wiped off with damp sponging

After removal of loose material, the interior surfaces are saturated with a wetting solution, such as isopropanol/ water.

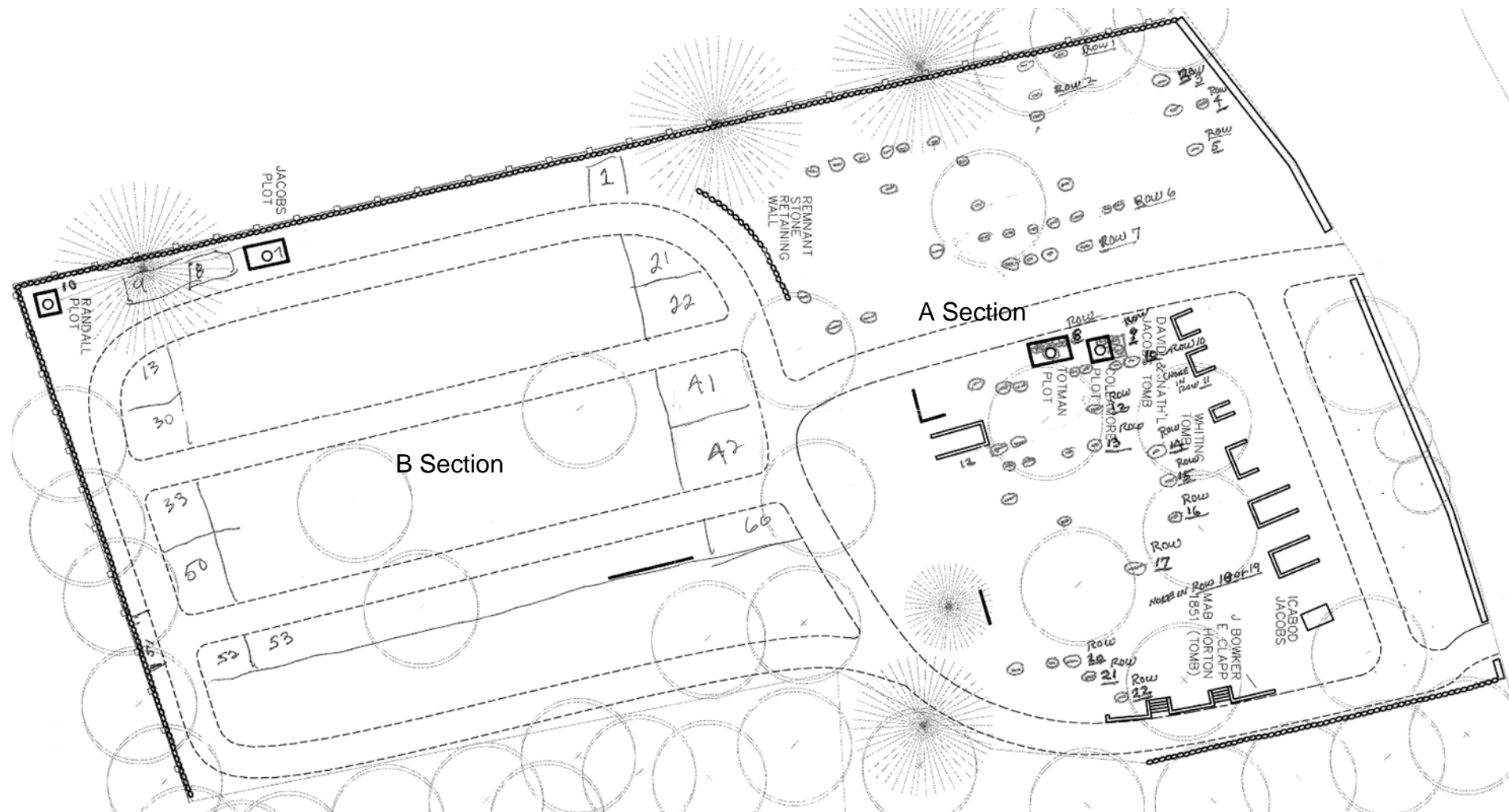
When required, a pigmented pozzolanic hydraulic lime manufactured by VoidSpan (PHLc Grout) was used as a flowable grout to fill large cavities.

The filled areas and surrounding surfaces are lightly misted with water and kept covered for a minimum of 3 days. After a partial cure the covering is removed and the filled areas and adjoining surfaces of the stone are treated with a weak acetic acid wash applied with a soft brush to remove excess grout and fully rinsed with water.

Small open joints along the top were filled with a pigmented flexible industrial “crack filler” by Sto. Excess grout is immediately removed with damp sponging.



#A15.2, Jemima Farrow. Before and After. Delaminations filled with Sto Crack Filler

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PRODUCTS/SUPPLIERS

D/2 Biological Solution

Granite City Tool
11 Blackwell Street Barre, VT 05641
802) 476-3137

**RepliCal™
Jahn™ Restoration Mortars**

Cathedral Stone Products Inc.
7266 Park Circle Drive
Hanover, MD 21076 USA
800 684 0901 fax 800 684 0904

**Adhesives
Aboweld 55-22**

Abatron Inc
5501 95th Avenue
Kenosha, WI 53144
414 653 2000 fax 414 653 2019

Sto Flexible Crack Filler

<http://www.stocorp.com/>

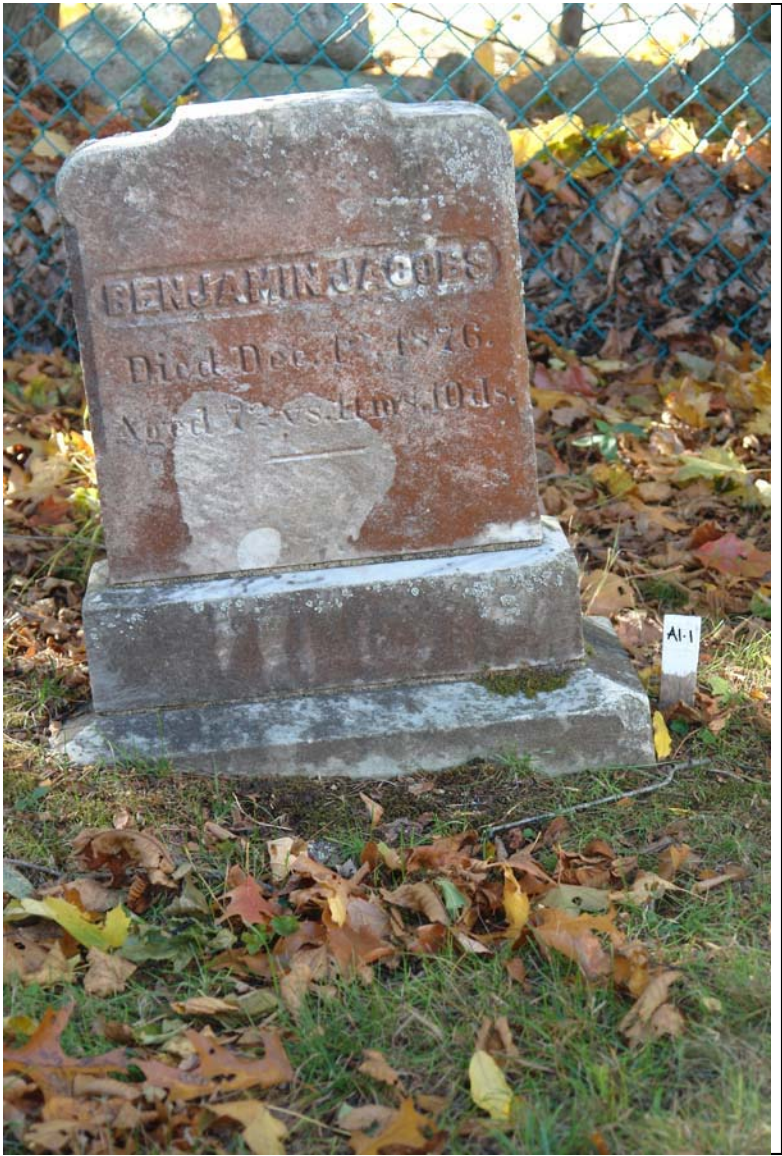
PRODUCTS/SUPPLIERS

VoidSpan PHLc

VoidSpan Technology
34 Boardman St
Salem MA 01970

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Benjamin Jacobs
Death Date: 12/12/1876	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base Tilted	Level base Reset elements
<div> <div>TREATMENT</div> <div>Treatment Dates 5/10/2015</div> <div> <ol style="list-style-type: none"> 1. Soundness of setting joint of marker to base inspected, if found to be unstable, marker removed from base. 2. Area excavated to an appropriate depth removing any roots or large stones. 3. Base is aligned with adjacent markers and re-set level. 4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil 5. Failed mortar removed from setting area and bottom of marker 6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins 7. Setting surfaces primed with Acryl 60 diluted 1:3 with water. 8. Marker reset plumb onto base with cement/lime mortar (3/2/8) with 000 sand. 9. Excess grout removed and joint area cleaned. </div> </div>	

Comments:



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Union Assinippi Cemetery, Hanover, MA		
NAME ON MARKER		Gustaus Jacobs
Death Date:	1/12/1862	Marker Type: Headstone/base
Cond. of Inscription:	Decipherable	Material: Marble
EXISTING CONDITIONS		CONSERVATION STRATEGY
Tilted base		Reset base with marker plumb
TREATMENT		
Treatment Dates		5/20/2015
<div>1. Soundness of setting joint of marker to base inspected, if found to be unstable, marker removed from base.</div> <div>2. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker</div> <div>6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.</div> <div>9. Excess grout removed and joint area cleaned.</div>		

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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER **L. T. (Luther Turner)**

Death Date: 10/14/1839 Marker Type: Footstone

Cond. of Inscription: Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen	Reset into new below grade base

TREATMENT	Treatment Dates
1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound. 2. Soling removed by light brushing with nylon brushes and water. 3. Setting area excavated immediately behind headstone to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers 4. Area backfilled around marker with tamped sand and gravel 5. Disturbed areas re-graded with existing topsoil and sod.	5/27/2015

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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Julia Ann Burrell

Death Date:
3/20/1849

Marker Type:
Headstone

Cond. of Inscription:
Barely decipherable

Material:
Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb Possible new below grade base

TREATMENT

Treatment Dates

5/26/2015

1. Existing base located below grade while excavating for resetting.

2. Base inspected and found to be sound and re-useable

3. Area excavated to an appropriate depth removing any roots or large stones.

4. Base is aligned with adjacent markers and re-set level.

5. Area around base was backfilled with tamped gravel and re-graded with existing topsoil

6. Failed mortar removed from setting area and bottom of marker

7. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins

8. Setting surfaces primed with Acryl 60 diluted 1:3 with water.

9. Marker reset plumb onto base with a cement/lime mortar (3/2/9) with 000 sand

10. Excess grout removed and joint area cleaned.

Comments:



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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Jotham Sylvester
Death Date: 8/2/1852	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured Out of ground	Evaluate Reset if possible
<div> <div>TREATMENT</div> <div>Treatment Dates 5/17-6/12/2015</div> <div> <div>1. Existing base located below grade and found to be sound.</div> <div>2. Area excavated to an appropriate depth and base was aligned with adjacent markers and re-set level and backfilled with tamped gravel.</div> <div>3. Setting slot cleaned of debris or failed mortar</div> <div>4. Lower fragment reset plumb and level into slot using a cement/lime grout (3/2/9) with 000 sand. Braced for min 3 days</div> <div>5. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools</div> <div>6. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.</div> <div>7. Cracks and losses filled with RepliCal Marble products .</div> <div>8. Filled areas misted with water and covered for 3 days minimum</div> <div>9. Filled surface areas treated with light acid wash rinsed thoroughly</div> <div>10. When required, all surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div> </div> </div>	

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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Harriet Gardner

Death Date: 1876

Marker Type: Headstone/base

Cond. of Inscription: Legible

Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base	Reset base with marker plumb

TREATMENT

Treatment Dates 5/19/2015

- Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.
- Base inspected and found to be sound and re-useable
- Base is aligned with adjacent markers and re-set level.
- Area around base was backfilled with tamped gravel and re-graded with existing topsoil
- Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.
- When required, the lower setting edge was re-squared by power grinder with minimal loss.
- Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.
- Excess grout removed and joint area cleaned.
- Marker braced for a minimum 3 days

Comments:



Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	John Gardner
Death Date: 1875	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset Possible new base
TREATMENT Treatment Dates 5/19/2015	
<div>1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	

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Height 19 Width 12 Thickness 2.5 Marker# **A.3.4**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Marietta Gardner
Death Date: 1922	Marker Type: Headstone/base
Cond. of Inscription: Legible	Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset Possible new base

TREATMENT	Treatment Dates 5/19/2015
<div>1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	

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Height 19 Width 12 Thickness 2.5 Marker# **A.3.5**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Calvin Wilder
Death Date: 2/27/1853	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
<div>TREATMENT</div> <div>Treatment Dates 5/19/2015</div> <div> 1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound. 2. Soling removed by light brushing with nylon brushes and water. 3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers 4. Area backfilled around marker with tamped sand and gravel 5. Disturbed areas re-graded with existing topsoil and sod. </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	David Vining
Death Date: 9/10/1859	Marker Type: Headstone/base
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base	Reset base with marker plumb
<div> <div>TREATMENT</div> <div>Treatment Dates 5/19/2015</div> <div> <ol style="list-style-type: none"> Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones. Base inspected and found to be sound and re-useable Base is aligned with adjacent markers and re-set level. Area around base was backfilled with tamped gravel and re-graded with existing topsoil Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments. When required, the lower setting edge was re-squared by power grinder with minimal loss. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned. Marker braced for a minimum 3 days </div> </div>	
Comments:	

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Height 37 Width 19 Thickness 3 Marker# **A.3.7**

Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER	Martha Vining
Death Date: 4/13/1897	Marker Type: Small headstone/base
Cond. of Inscription: Legible	Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted, sunken	Reset base higher Reset marker to base

TREATMENT	Treatment Dates 5/12/2015
<div>1. Soundness of setting joint of marker to base inspected, if found to be unstable, marker removed from base.</div> <div>2. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker</div> <div>6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.</div> <div>9. Excess grout removed and joint area cleaned.</div>	

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Height 12 Width 14 Thickness 5 Marker# **A.3.8**

Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER	Lois Green
Death Date: 3/17/1887	Marker Type: Small headstone/base
Cond. of Inscription: Decipherable	Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Off base Tilted base Losses	Level base Reset marker Fill loses

TREATMENT	Treatment Dates 5/26-26/2015
<div>1. Marker and base found to be in sound condition.</div> <div>2. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker</div> <div>6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.</div> <div>9. Excess grout removed and joint area cleaned.</div>	

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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER **Andrew Green**

Death Date: 3/24/1893 Marker Type: Small headstone/base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Off base Tilted base Losses	Level base Reset marker Fill loses

TREATMENT	Treatment Dates 5/26-27/2015
<div>1. Marker and base found to be in sound condition.</div> <div>2. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker</div> <div>6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.</div> <div>9. Excess grout removed and joint area cleaned.</div>	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Christopher
Death Date: n.a.	Marker Type: Small marker
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose from base Tilted base Fragmented	Reset base plumb Attach fragments Reset marker
TREATMENT Treatment Dates 5/26-6/10/2015	
1. Area excavated to an appropriate depth removing any roots or large stones aligning base with adjacent markers and re-set level. 2. Setting surfaces cleaned with water and any failed adhesives or mortar removed with hand tools from setting area and bottom of marker 3. Fragments attached with structural adhesive, clamped and braced until cured. Epoxy removed with hand chisels within 24 hours. 4. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins 5. Setting surfaces primed with Acryl 60 diluted 1:3 with water. 6. Marker reset plumb and level onto base with cement/lime grout (3/2/9) with 000 sand. Braced for min 3 days. Excess grout removed. 7. Cracks and losses filled with RepliCal Marble products or Jahn restoration mortar. 8. Filled areas misted with water and covered for 3 days minimum 9. Filled surface areas treated with light acid wash and rinsed thoroughly	

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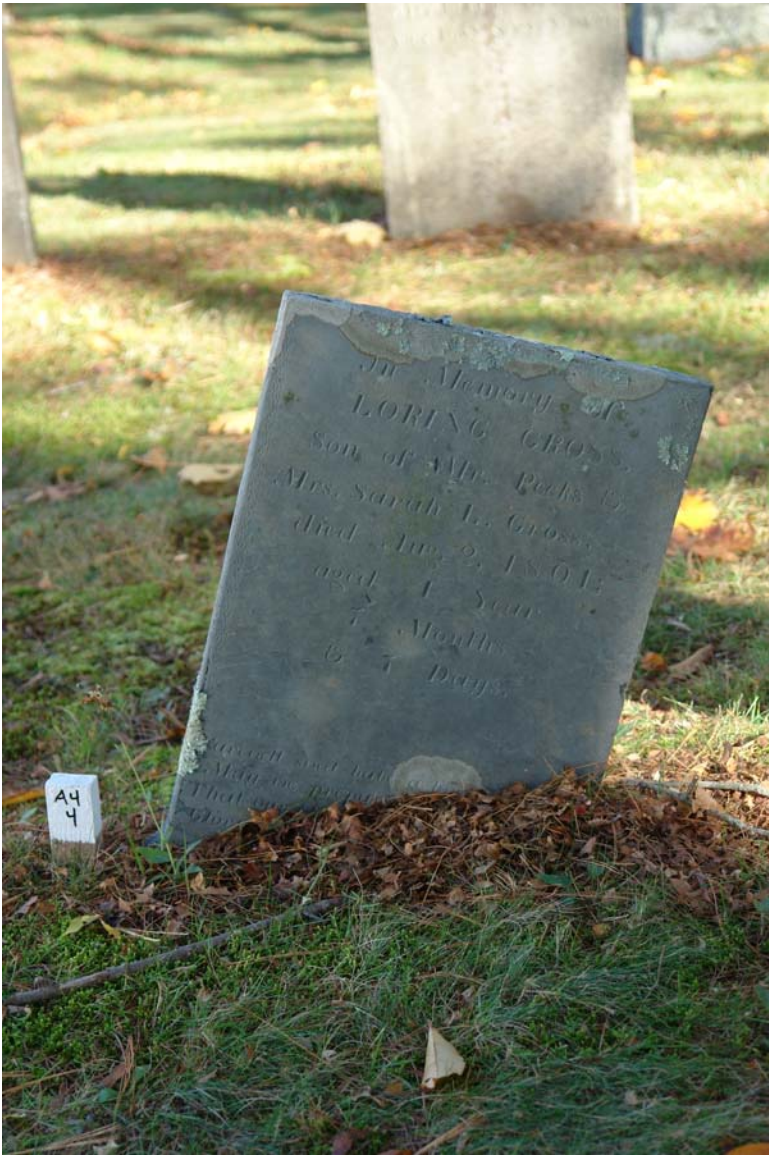


Height 15 Width 15 Thickness 5 Marker# **A.4.3**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Loring Cross
Death Date: 8/2/1801	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
TREATMENT	
Treatment Dates 5/20/2015	
1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.	
2. Soling removed by light brushing with nylon brushes and water.	
3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers	
4. Area backfilled around marker with tamped sand and gravel	
5. Disturbed areas re-graded with existing topsoil and sod.	

Comments:

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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER
Benjamin Young

Death Date: 1936
Marker Type: Small headstone/base

Cond. of Inscription: Legible
Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base Tilted	Level base Reset elements

TREATMENT

Treatment Dates 5/30/2015

1. Soundness of setting joint of marker to base inspected, if found to be unstable, marker removed from base.
 2. Area excavated to an appropriate depth removing any roots or large stones.
 3. Base is aligned with adjacent markers and re-set level.
 4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil
 5. Failed mortar removed from setting area and bottom of marker
 6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins
 7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.
 8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.
 9. Excess grout removed and joint area cleaned.

Comments:



Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Rebecca Groce
Death Date: 1922	Marker Type: Monument
Cond. of Inscription: Legible	Material: Granite
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted, sunken	Reset base higher Reset marker to base
<div> <div>TREATMENT</div> <div>Treatment Dates 5/30/2015</div> <div> <ol style="list-style-type: none"> 1. Soundness of setting joint of marker to base inspected, if found to be unstable, marker removed from base. 2. Area excavated to an appropriate depth removing any roots or large stones. 3. Base is aligned with adjacent markers and re-set level. 4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil 5. Failed mortar removed from setting area and bottom of marker 6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins 7. Setting surfaces primed with Acryl 60 diluted 1:3 with water. 8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand. 9. Excess grout removed and joint area cleaned. </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA
 NAME ON MARKER **Baby Ernest (Ernest Shurtleff)**
 Death Date: 1936 Marker Type: Small marker
 Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base Marker set too low	Level base and reset higher Reset elements

TREATMENT	Treatment Dates 5/19/2015
1. Soundness of setting joint of marker to base inspected, if found to be unstable, marker removed from base. 2. Area excavated to an appropriate depth removing any roots or large stones. 3. Base is aligned with adjacent markers and re-set level. 4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil 5. Failed mortar removed from setting area and bottom of marker 6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins 7. Setting surfaces primed with Acryl 60 diluted 1:3 with water. 8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand. 9. Excess grout removed and joint area cleaned.	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Ansile Jacob
Death Date: 12/17/1795	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
TREATMENT	
Treatment Dates 5/20/2015	
1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound. 2. Soling removed by light brushing with nylon brushes and water. 3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers 4. Area backfilled around marker with tamped sand and gravel 5. Disturbed areas re-graded with existing topsoil and sod.	

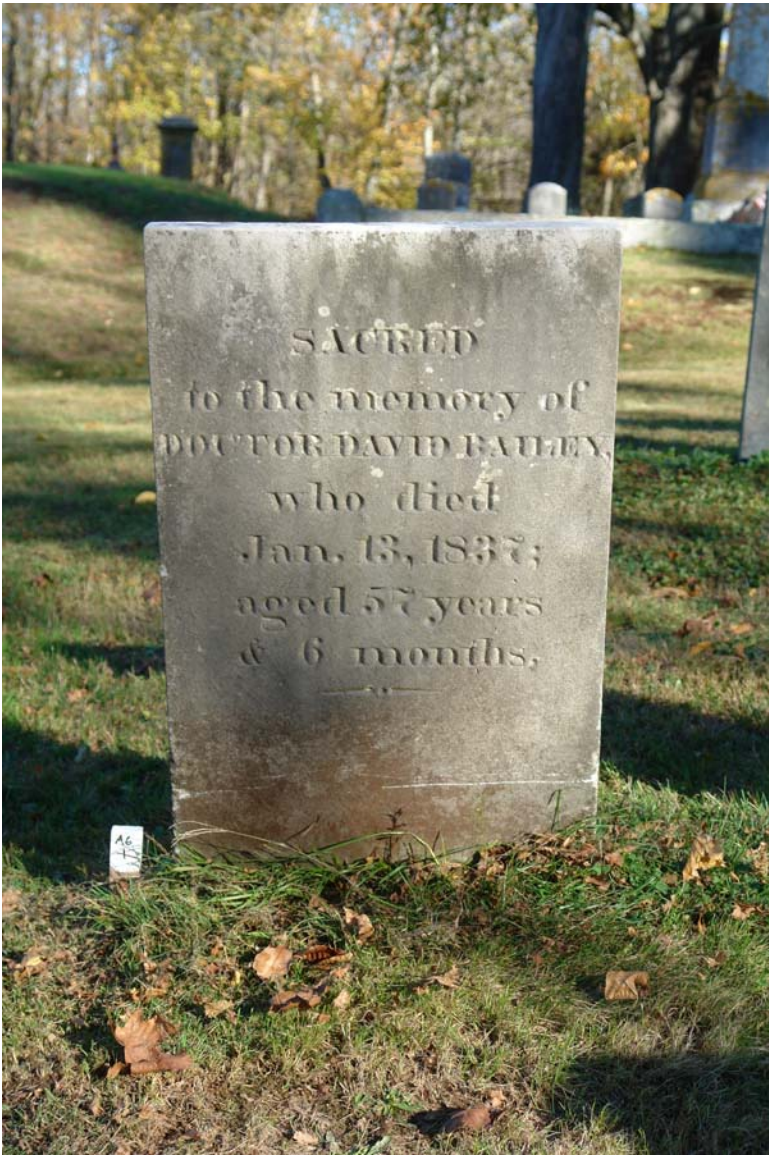
Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Doctor David Bailey
Death Date: 1/13/1837	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base Tilted	Level base Reset elements
<div>TREATMENT</div> <div>Treatment Dates 5/26/2015</div> <div> <ol style="list-style-type: none"> Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones. Base inspected and found to be sound and re-useable Base is aligned with adjacent markers and re-set level. Area around base was backfilled with tamped gravel and re-graded with existing topsoil Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments. When required, the lower setting edge was re-squared by power grinder with minimal loss. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned. Marker braced for a minimum 3 days </div>	
Comments:	

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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Joanna Bailey

Death Date: 4/4/1847

Marker Type: Headstone

Cond. of Inscription: Legible

Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb

TREATMENT

Treatment Dates 5/26/2015

1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.

2. Base inspected and found to be sound and re-useable

3. Base is aligned with adjacent markers and re-set level.

4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil

5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.

6. When required, the lower setting edge was re-squared by power grinder with minimal loss.

7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.

8. Excess grout removed and joint area cleaned.

9. Marker braced for a minimum 3 days

Comments:



Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Lucy Stowell
Death Date: 10/3/1857	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base	Reset base reset marker plumb
TREATMENT Treatment Dates 5/26/2015	
<div>1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Rebecca Gardner
Death Date: 12/6/1840	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted Sunken	Reset higher
TREATMENT	
Treatment Dates 5/26-27/2015	
1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water. 2. Setting area excavated for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. 3. Wooden forms and setting slot form stabilized and aligned with adjacent markers before concrete is poured 4. When required, the lower edge of marker is re-squared with minimal loss using a power grinder 5. Setting forms are removed after partial curing of the concrete and the base backfilled with tamped sand or gravel 6. Marker reset into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. 7. Marker set plumb and level, and braced for minimum of 5 days. 8. Disturbed areas backfilled with existing topsoil.	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	David Bailey
Death Date: 9/18/1882	Marker Type: Small monument
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base	Reset base with marker plumb
TREATMENT Treatment Dates 5/26-27/2015	
<div>1. Marker and base found to be in sound condition.</div> <div>2. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker</div> <div>6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.</div> <div>9. Excess grout removed and joint area cleaned.</div>	

Comments:

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Height 24 Width 18 Thickness 4 Marker# **A.6.5**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Deborah Bailey
Death Date: 4/6/1867	Marker Type: Small monument
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted, sunken	Reset base higher Reset marker to base
TREATMENT Treatment Dates 5/26-27/2015	
<div>1. Marker and base found to be in sound condition.</div> <div>2. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker</div> <div>6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.</div> <div>9. Excess grout removed and joint area cleaned.</div>	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	William Bailey
Death Date: 9/4/1836	Marker Type:Headstone
Cond. of InscriptionDecipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
TREATMENT	
Treatment Dates 5/26/2015	
<div>1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	

Comments:

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Height 17 Width 12 Thickness 2 Marker# A.6.7

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Joanna Bailey
Death Date: 7/14/1813	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured at grade	Reset into new below grade base
TREATMENT Treatment Dates 5/26/2015	
<div>1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	

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Height 23 Width 12 Thickness 2 Marker# **A.6.8**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	James Gray
Death Date: 5/4/1812	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base Tree roots	Reset base with marker plumb
TREATMENT Treatment Dates 5/18/2015	
<div>1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	

Comments:

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Height 40 Width 20 Thickness 2 Marker# **A.6.9**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Frances Bowker
Death Date: 3/4/1902	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base Tilted	Level base Reset elements
<div> <div>TREATMENT</div> <div>Treatment Dates 5/27/2015</div> <div> <div>1. Marker and base found to be in sound condition.</div> <div>2. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker</div> <div>6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.</div> <div>9. Excess grout removed and joint area cleaned.</div> </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Peleg Curtis
Death Date: 6/22/1835	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted, fractured	Reset plumb Attach fragments with structural adhesive
<div> <div>TREATMENT</div> <div> <div>Treatment Dates 5/13-26/2015</div> <div> <ol style="list-style-type: none"> 1. Area around lower fragment carefully excavated and inspected for soundness. Area probed for existing fragments. 2. Lower fragment re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers 3. Area backfilled around marker with tamped sand and gravel 4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools 5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Epoxy removed with hand chisels within 24 hours. 6. Cracks and losses filled with RepliCal products, misted with water and covered for 3 days min. 7. Filled surface areas treated with light acid wash rinsed thoroughly with water 8. When required, all surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water </div> </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Peleg Curtis
Death Date: 1/15/1797	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
TREATMENT Treatment Dates 5/20/2015	
<div>1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.</div> <div>2. Soling removed by light brushing with nylon brushes and water.</div> <div>3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers</div> <div>4. Area backfilled around marker with tamped sand and gravel</div> <div>5. Disturbed areas re-graded with existing topsoil and sod.</div>	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Hosea Whiting
Death Date: 4/12/1883	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset base with marker plumb
<div>TREATMENT</div> <div>Treatment Dates 5/18/2015</div> <div> <ol style="list-style-type: none"> Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones. Base inspected and found to be sound and re-useable Base is aligned with adjacent markers and re-set level. Area around base was backfilled with tamped gravel and re-graded with existing topsoil Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments. When required, the lower setting edge was re-squared by power grinder with minimal loss. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned. Marker braced for a minimum 3 days </div>	
Comments:	

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Height 34 Width 18 Thickness 3 Marker# A.7.4

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Lydia Doten
Death Date: 6/15/1837	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset Possible new base
TREATMENT Treatment Dates 5/18/2015	
<div>1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	

Comments:

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Height 23 Width 11.5 Thickness 2.5 Marker# **A.7.5**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Charles Totman
Death Date: 7/21/1825	Marker Type: Small marker
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker
TREATMENT Treatment Dates 5/27-28/2015	
1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water. 2. No existing bases were found. Setting area excavated for new below grade cast concrete base using a 8” sonotube as a form about 18” deep. . 3. Marker was reset onto new base with a cement/lime mortar (3/2/9) with 000 sand	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Sophia Totman
Death Date: 1/20/1868	Marker Type: Small marker
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker
<div> <div>TREATMENT</div> <div> <div>Treatment Dates 5/27-28/2015</div> <div> 1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water. 2. No existing bases were found. Setting area excavated for new below grade cast concrete base using a 8" sonotube as a form about 18" deep. . 3. Marker was reset onto new base with a cement/lime mortar (3/2/9) with 000 sand </div> </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Enoch Totman
Death Date: 4/6/1824	Marker Type: Small marker
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker
TREATMENT Treatment Dates 5/27-28/2015	
1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water. 2. No existing bases were found. Setting area excavated for new below grade cast concrete base using a 8” sonotube as a form about 18” deep. . 3. Marker was reset onto new base with a cement/lime mortar (3/2/9) with 000 sand	

Comments:

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Height 7.5 Width 9 Thickness 3 Marker# **A.8.3**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Charles Totman
Death Date: 11/20/1888	Marker Type: Small marker
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker
<div> <div>TREATMENT</div> <div> <div>Treatment Dates 5/27-28/2015</div> <div> 1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water. 2. No existing bases were found. Setting area excavated for new below grade cast concrete base using a 6" sonotube as a form about 18" deep. . 3. Marker was reset onto new base with a cement/lime mortar (3/2/9) with 000 sand </div> </div> </div>	

Comments:

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Height 7.5 Width 9 Thickness 3 Marker# **A.8.4**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Thais Totman
Death Date: 9/2/1868	Marker Type: Small marker
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker
TREATMENT Treatment Dates 5/27-28/2015	
1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water. 2. No existing bases were found. Setting area excavated for new below grade cast concrete base using a 6” sonotube as a form about 18” deep. . 3. Marker was reset onto new base with a cement/lime mortar (3/2/9) with 000 sand	

Comments:

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Height 7.5 Width 9 Thickness 3 Marker# **A.8.5**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Anthony Totman
Death Date: 8/21/1856	Marker Type: Small marker
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker
TREATMENT Treatment Dates 5/27-28/2015	
1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water.	
2. No existing bases were found. Setting area excavated for new below grade cast concrete base using a 6" sonotube as a form about 18" deep. .	
3. Marker was reset onto new base with a cement/lime mortar (3/2/9) with 000 sand	

Comments:

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Height 7.5 Width 9 Thickness 3 Marker# **A.8.6**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Totman Monument
Death Date: 1824-1888	Marker Type: Obelisk
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted Reset elements	Stabilize base Reset elements
<div> <div>TREATMENT</div> <div>Treatment Dates 6/10/2015</div> <div> <div>1. Monument removed from base area with mechanical assistance, inspected for soundness,</div> <div>2. Setting base excavated and aligned with adjacent markers and re-set level, backfill w/ gravel.</div> <div>3. Setting areas cleared of debris and any failed setting mortar removed. Setting surfaces treated with D/2 antimicrobial, scrubbed with nylon brushes and fully rinsed with water.</div> <div>4. Setting bed primed with Acryl 60 diluted 1:3 with water.</div> <div>5. Monumnet reset with a cement/lime mortar (3/2/9) with 000 sand. If necessary lead shims facilitated leveling. Excess mortar removed and joint area cleaned</div> <div>6. Excess mortar removed and joint area cleaned</div> <div>7. All surfaces treated with D/2 Biological Solution, rinsed fully with water.</div> </div> </div>	

Comments:

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Height 53 Width 12 Thickness 12 Marker# A.8.7

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Hannah Whiting
Death Date: 9/25/1824	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Base tilted Fractured Loose on base	Reset base plumb Attach fragments Reset marker
<div> <div>TREATMENT</div> <div>Treatment Dates 5/27-6/10/2015</div> <div> <div>1. Area excavated to an appropriate depth removing any roots or large stones aligning base with adjacent markers and re-set level.</div> <div>2. Setting surfaces cleaned with water and any failed adhesives or mortar removed with hand tools from setting area and bottom of marker</div> <div>3. Fragments attached with structural adhesive, clamped and braced until cured. Epoxy removed with hand chisels within 24 hours.</div> <div>4. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>5. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>6. Marker reset plumb and level onto base with cement/lime grout (3/2/9) with 000 sand. Braced for min 3 days. Excess grout removed.</div> <div>7. Cracks and losses filled with RepliCal Marble products or Jahn restoration mortar.</div> <div>8. Filled areas misted with water and covered for 3 days minimum</div> <div>9. Filled surface areas treated with light acid wash and rinsed thoroughly</div> </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA
 NAME ON MARKER **Enoch Collamore**
 Death Date: 3/17/1839 Marker Type: Small headstone/base
 Cond. of Inscription: Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base Tilted	Level base Reset elements

TREATMENT	Treatment Dates 5/27/2015
1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones. 2. Base inspected and found to be sound and re-useable 3. Base is aligned with adjacent markers and re-set level. 4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil 5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments. 6. When required, the lower setting edge was re-squared by power grinder with minimal loss. 7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. 8. Excess grout removed and joint area cleaned. 9. Marker braced for a minimum 3 days	

Comments:

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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER	Britton Whiting
Death Date: 1838	Marker Type: Small headstone/base
Cond. of Inscription: Decipherable	Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset Possible new base

TREATMENT	Treatment Dates 5/27/2015
<div>1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Michael Lapham
Death Date: 2/24/1809	Marker Type: Headstone
Cond. of Inscription:n.a.	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Overgrown fractured	Attach fragments with structural adhesive Reset to base
<div> <div>TREATMENT</div> <div>Treatment Dates 5/27-6/11/2015</div> <div> <div>1. Area excavated to an appropriate depth. Base is aligned with adj. markers and reset level at appropriate height.</div> <div>2. Setting slot cleaned of debris or failed mortar and bottom frag- ment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned.</div> <div>3. Marker braced for a minimum 3 days</div> <div>4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools</div> <div>5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.</div> <div>6. Cracks and losses filled with RepliCal Marble products, filled ar- eas misted with water and covered for 3 days minimum</div> <div>7. Filled areas treated with light acid wash and rinsed thoroughly.</div> <div>8. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div> </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Nathaniel Prouty
Death Date: 10/25/1826	Marker Type: Footstone
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Sunken, tilted	Reset higher
TREATMENT Treatment Dates 5/27/2015	
<div>1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.</div> <div>2. Soling removed by light brushing with nylon brushes and water.</div> <div>3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers</div> <div>4. Area backfilled around marker with tamped sand and gravel</div> <div>5. Disturbed areas re-graded with existing topsoil and sod.</div>	

Comments:

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Height 12 Width 7 Thickness 2 Marker# **A.10.1**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	William Prouty
Death Date: 5/23/1842	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractures	Attach fragments with structural adhesive
<div>TREATMENT</div> <div>Treatment Dates 5/28-6/11/2015</div> <div> <ol style="list-style-type: none"> Area excavated to an appropriate depth. Base is aligned with adj. markers and reset level at appropriate height. Setting slot cleaned of debris or failed mortar and bottom fragment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned. Marker braced for a minimum 3 days All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours. Cracks and losses filled with RepliCal Marble products, filled areas misted with water and covered for 3 days minimum Filled areas treated with light acid wash and rinsed thoroughly. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water </div>	
Comments:	

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Height 34 Width 18 Thickness 2.5 Marker# A.10.2

Union Assinippi Cemetery, Hanover, MA
 NAME ON MARKER Elizabeth Drake
 Death Date: 3/8/1865 Marker Type: Headstone/base
 Cond. of Inscription: Partially decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base Tilted	Level base Reset elements

TREATMENT	Treatment Dates 6/10/2015
1. Area excavated to an appropriate depth removing any roots or large stones. 2. Base inspected and found to be sound and re-useable 3. Base is aligned with adjacent markers and re-set level. 4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil 5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments. 6. When required, the lower setting edge was re-squared by power grinder with minimal loss. 7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. 8. Excess grout removed and joint area cleaned. 9. Marker braced for a minimum 3 days	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Bezer Drake
Death Date: 4/13/1840	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured at grade	Reset into new below grade base
<div> <div>TREATMENT</div> <div> <div>Treatment Dates 5/27-28/2015</div> <div> <div>1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water.</div> <div>2. Setting area excavated for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone.</div> <div>3. Wooden forms and setting slot form stabilized and aligned with adjacent markers before concrete is poured</div> <div>4. When required, the lower edge of marker is re-squared with minimal loss using a power grinder</div> <div>5. Setting forms are removed after partial curing of the concrete and the base backfilled with tamped sand or gravel</div> <div>6. Marker reset into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>7. Marker set plumb and level, and braced for minimum of 5 days.</div> <div>8. Disturbed areas backfilled with existing topsoil.</div> </div> </div> </div>	
Comments:	

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Height 16 Width 10 Thickness 2 Marker# A.10.4

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Galen Prouty
Death Date: 10/25/1804	Marker Type: Headstone
Cond. of Inscription: Currently illegible	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
<div> <div>TREATMENT</div> <div> <div>Treatment Dates 5/27/2015</div> <div> 1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound. 2. Soling removed by light brushing with nylon brushes and water. 3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers 4. Area backfilled around marker with tamped sand and gravel 5. Disturbed areas re-graded with existing topsoil and sod. </div> </div> </div>	

Comments:

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Height 24 Width 22 Thickness 1.5 Marker# **A.10.5**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Elizabeth Prouty
Death Date: 5/21/1800	Marker Type: Headstone
Cond. of Inscription: Currently illegible	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted Fragmented	Reset lower fragment plumb Attach fragments with structural adhesive
TREATMENT Treatment Dates 5/27-28/2015	
<div>1. Setting area excavated for new below grade cast concrete base</div> <div>2. A new concrete base sized min. 12" deep, 12" greater in thickness and 6" wider than the stone is cast. The finished top to be below grade. A form for a setting slot is placed in the concrete.</div> <div>3. Setting forms are removed after partial curing of the concrete and the base backfilled with tamped sand or gravel</div> <div>4. When required, the lower edge of marker is re-squared with minimal loss using a power grinder</div> <div>5. Lower fragment was reset plumb and level into slot using a cement/ lime grout (3/2/9) with 000 sand. Braced for min 3 days</div> <div>6. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools</div> <div>7. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.</div> <div>8. All surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div>	

Comments:

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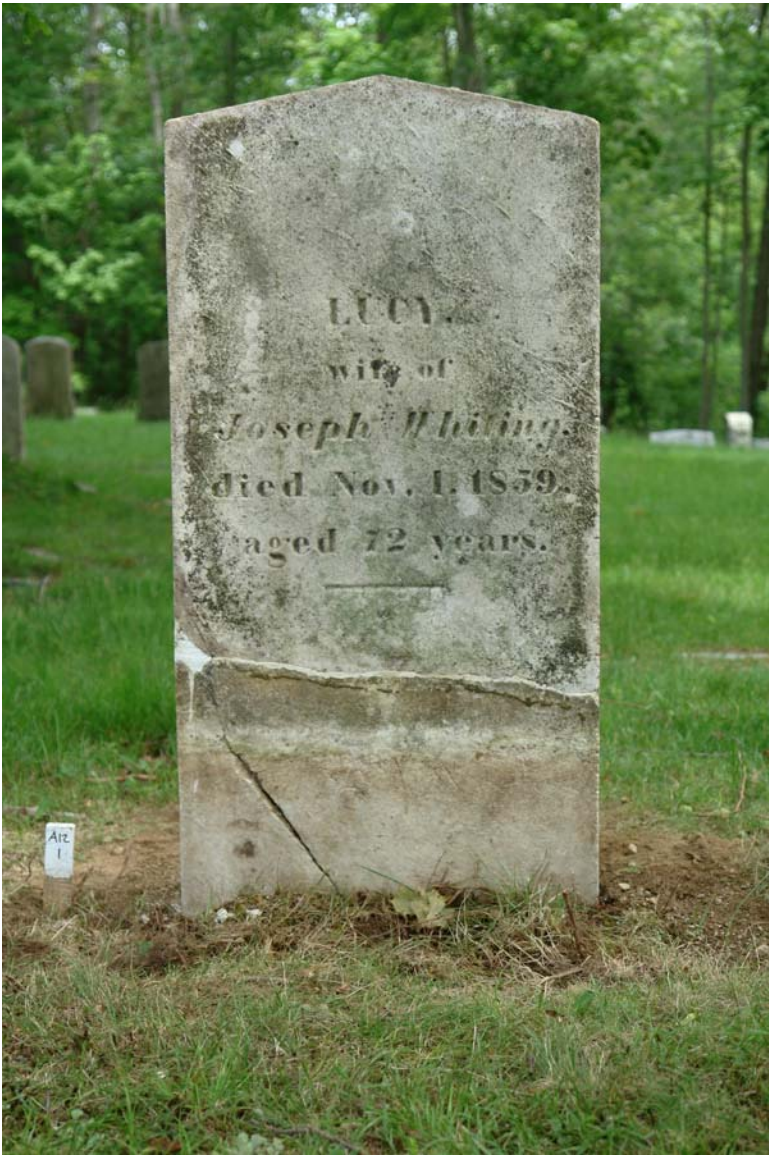


Height - Width - Thickness - Marker# **A.10.6**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Lucy Whiting
Death Date: 1/3/1837	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen fractured	Attach fragments with structural adhesive Reset to base
TREATMENT Treatment Dates 6/10-12/2015	
<div>1. Area excavated to an appropriate depth. Base is aligned with adj. markers and reset level at appropriate height.</div> <div>2. Setting slot cleaned of debris or failed mortar and bottom fragment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned.</div> <div>3. Marker braced for a minimum 3 days</div> <div>4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools</div> <div>5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.</div> <div>6. Cracks and losses filled with RepliCal Marble products, filled areas misted with water and covered for 3 days minimum</div> <div>7. Filled areas treated with light acid wash and rinsed thoroughly.</div> <div>8. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div>	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	James Barrell
Death Date: 4/16/1827	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
TREATMENT Treatment Dates 5/27/2015	
<div>1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.</div> <div>2. Soling removed by light brushing with nylon brushes and water.</div> <div>3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers</div> <div>4. Area backfilled around marker with tamped sand and gravel</div> <div>5. Disturbed areas re-graded with existing topsoil and sod.</div>	

Comments:

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Height 30 Width 16 Thickness 1.5 Marker# **A.12.2**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Deborah Barrell
Death Date: 3/10/1813	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
<div>TREATMENT</div> <div>Treatment Dates 5/27-6/10/2015</div> <div> <div>1. Marker excavated and found to be sound. A new, below base concrete base will be required for resetting.</div> <div>2. Setting area excavated for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone.</div> <div>3. Wooden forms and setting slot form stabilized and aligned with adjacent markers before concrete is poured</div> <div>4. When required, the lower edge of marker is re-squared with minimal loss using a power grinder</div> <div>5. Setting forms are removed after partial curing of the concrete and the base backfilled with tamped sand or gravel</div> <div>6. Marker reset into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>7. Marker set plumb and level, and braced for minimum of 5 days.</div> <div>8. Disturbed areas backfilled with existing topsoil.</div> </div>	
Comments:	

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Height 23 Width 17 Thickness 1 Marker# A.12.3.

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Barrell
Death Date: n.a.	Marker Type: Headstone
Cond. of Inscription: Partially legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen, overgrown	Evaluate Reset if possible
TREATMENT	Treatment Dates
Area probed unsuccessfully for additional fragments. Remaining fragment found to be sugary and not restorable	

Comments:



Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Noah Barrell
Death Date: 5/27/1839	Marker Type: Headstone
Cond. of Inscription: Partial/missing	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen, fractured	Evaluate Reset if possible
TREATMENT Treatment Dates	
Area probed unsuccessfully for additional fragments. Remaining fragment found to be sugary and not restorable	

Comments:

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Height - Width - Thickness - Marker# **A.13.2**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	James Barrell
Death Date: 11/1790	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset Possible new base
TREATMENT Treatment Dates 5/28/2015	
<div>1. Area excavated to an appropriate depth. Base is aligned with adj. markers and reset level at appropriate height.</div> <div>2. Setting slot cleaned of debris or failed mortar and bottom fragment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned.</div> <div>3. Marker braced for a minimum 3 days</div> <div>4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools</div> <div>5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.</div> <div>6. Cracks and losses filled with RepliCal Marble products, filled areas misted with water and covered for 3 days minimum</div> <div>7. Filled areas treated with light acid wash and rinsed thoroughly.</div> <div>8. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div>	

Comments:

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Height 20 Width 12 Thickness 2 Marker# **A.13.3**

Union Assinippi Cemetery, Hanover, MA
 NAME ON MARKER
James Barrell

Death Date: 7/1/1850
 Marker Type: Headstone
 Cond. of Inscription: Decipherable
 Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset Possible new base

TREATMENT

Treatment Dates 5/27/2015
 1. Existing base located below grade while excavating for resetting. Area excavated to an appropriate depth removing any roots or large stones.
 2. Base inspected and found to be sound and re-useable
 3. Base is aligned with adjacent markers and re-set level.
 4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil
 5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.
 6. When required, the lower setting edge was re-squared by power grinder with minimal loss.
 7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.
 8. Excess grout removed and joint area cleaned.
 9. Marker braced for a minimum 3 days

Comments:



Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Cyrus Stoddard

Death Date: 4/3/1853 Marker Type: Headstone/base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base	Reset base with marker plumb

TREATMENT

Treatment Dates 5/27/2015

1. Area excavated to an appropriate depth removing any roots or large stones.

2. Base inspected and found to be sound and re-useable

3. Base is aligned with adjacent markers and re-set level.

4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil

5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.

6. When required, the lower setting edge was re-squared by power grinder with minimal loss.

7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.

8. Excess grout removed and joint area cleaned.

9. Marker braced for a minimum 3 days

Comments:

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Height 33 Width 18 Thickness 4 Marker# **A.14.1**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Elizabeth Randall
Death Date: 6/26/1871	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
<div> <div>TREATMENT</div> <div>Treatment Dates 5/28/2015</div> <div> <div>1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.</div> <div>2. Soling removed by light brushing with nylon brushes and water.</div> <div>3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers</div> <div>4. Area backfilled around marker with tamped sand and gravel</div> <div>5. Disturbed areas re-graded with existing topsoil and sod.</div> </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Infant Prouty
Death Date: 4/4/1799	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Slate
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted Delaminating	Reset plumb Cap delaminations
<div> <div>TREATMENT</div> <div>Treatment Dates 6/10/2015</div> <div> <div>1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound. No filling to delaminated areas necessary.</div> <div>2. Soling removed by light brushing with nylon brushes and water.</div> <div>3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers</div> <div>4. Area backfilled around marker with tamped sand and gravel</div> <div>5. Disturbed areas re-graded with existing topsoil and sod.</div> </div> </div>	

Comments:

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Height 18 Width 13 Thickness 1.5 Marker# A.15.1

Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Jemima Farrow

Death Date: 5/23/1794

Marker Type: Footstone

Cond. of Inscription: Currently illegible

Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted Delaminating	Reset plumb Cap delaminations

TREATMENT

Treatment Dates 6/10/2015

1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.
 2. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level, aligned w/ adjacent markers
 3. Area backfilled around marker with tamped sand and gravel and re-graded with existing topsoil and sod.
 4. Delaminated areas treated with D/2 Biological Solution and brushed into stone with nylon brushes and rinsed fully with water
 5. Interior voids flushed with water and any lichens and/or debris removed with hand tools.
 6. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along sides of monument typically left open to allow escape of any water which may enter.
 7. Excess crack filler immediately removed with repeated damp sponging.

Comments:



Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Judith Damon
Death Date: 6/24/1867	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base Tree roots	Reset base with marker plumb
<div>TREATMENT</div> <div>Treatment Dates 6/10/2015</div> <div> <ol style="list-style-type: none"> Existing base located below grade when excavating. Base inspected and found to be sound and re-useable Area excavated to an appropriate depth removing any roots or large stones and base aligned with adjacent markers re-set level. Area around base was backfilled with tamped gravel and re-graded with existing topsoil Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments. When required, the lower setting edge was re-squared by power grinder with minimal loss. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned. Marker braced for a minimum 3 days </div>	
Comments:	

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Height 32 Width 18 Thickness 2.5 Marker# A.16.1

Union Assinippi Cemetery, Hanover, MA					
NAME ON MARKER	Heman Stoddard				
Death Date: 3/29/1864	Marker Type: Headstone				
Cond. of Inscription: Legible	Material: Marble				
EXISTING CONDITIONS	CONSERVATION STRATEGY				
Fractured at grade Losses	Reset into new below grade base Patch losses				
<table><tr><td>TREATMENT</td><td>Treatment Dates</td></tr><tr><td colspan="2"><div>1. Existing base located below grade when excavating.</div><div>2. Base inspected and found to be sound and re-useable</div><div>3. Area excavated to an appropriate depth removing any roots or large stones and base aligned with adjacent markers re-set level.</div><div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div><div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div><div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div><div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div><div>8. Excess grout removed and joint area cleaned.</div><div>9. Marker braced for a minimum 3 days</div></td></tr></table>		TREATMENT	Treatment Dates	<div>1. Existing base located below grade when excavating.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Area excavated to an appropriate depth removing any roots or large stones and base aligned with adjacent markers re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>	
TREATMENT	Treatment Dates				
<div>1. Existing base located below grade when excavating.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Area excavated to an appropriate depth removing any roots or large stones and base aligned with adjacent markers re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div>					

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Harriet Wilder
Death Date: 3/27	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
TREATMENT Treatment Dates 5/28/2015	
1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.	
2. Soling removed by light brushing with nylon brushes and water.	
3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers	
4. Area backfilled around marker with tamped sand and gravel	
5. Disturbed areas re-graded with existing topsoil and sod.	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Lydia Curtis
Death Date: 10/8/1838	Marker Type: Headstone/base
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base	Reset base with marker plumb
<div> <div>TREATMENT</div> <div>Treatment Dates 6/11-12/2015</div> <div> <div>1. Marker excavated and found to be sound. A new, below base concrete base will be required for resetting.</div> <div>2. Setting area excavated for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone.</div> <div>3. Wooden forms and setting slot form stabilized and aligned with adjacent markers before concrete is poured</div> <div>4. When required, the lower edge of marker is re-squared with minimal loss using a power grinder</div> <div>5. Setting forms are removed after partial curing of the concrete and the base backfilled with tamped sand or gravel</div> <div>6. Marker reset into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>7. Marker set plumb and level, and braced for minimum of 5 days.</div> <div>8. Disturbed areas backfilled with existing topsoil.</div> </div> </div>	
Comments:	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Hannah Curtis
Death Date: 7/1886	Marker Type: Headstone/base
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose on base	Reset to base
TREATMENT Treatment Dates 5/28-6/10/2015	
<div>1. Soil removed around base unit and base jacked up to level.</div> <div>2. Base re-set plumb at appropriate height and level, aligned with adjacent markers</div> <div>3. Area around base backfilled with tamped sand and gravel</div> <div>4. Disturbed areas re-graded with existing topsoil.</div> <div>5. Failed setting mortars removed from setting bed with hand chisels as necessary</div> <div>6. Setting pins examined, if sound they were re-used, if rusted or failed and required, replaced with stainless steel threaded studs.</div> <div>7. Setting bed area primed with Acryl 60 diluted 1:3 with water, marker reset with cement/lime grout (3/2/9) with 000 sand.</div> <div>8. Marker plumbed as necessary with lead shims.</div> <div>9. Excess grout removed and joint area cleaned.</div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Lucy Gardner
Death Date: 9/3/1870	Marker Type: Headstone/base
Cond. of Inscription: Partially legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen, fractured	Evaluate Reset if possible
<div> <div>TREATMENT</div> <div>Treatment Dates 6/10-12/2015</div> <div> <div>1. Area excavated to an appropriate depth removing any roots or large stones aligning base with adjacent markers and re-set level.</div> <div>2. Setting surfaces cleaned with water and any failed adhesives or mortar removed with hand tools from setting area and bottom of marker</div> <div>3. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>4. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>5. Marker reset plumb and level onto base with cement/lime grout (3/2/9) with 000 sand. Braced for min 3 days. Excess grout removed.</div> <div>6. Cracks and losses filled with Jahn restoration mortar.</div> <div>7. Filled areas misted with water and covered for 3 days minimum</div> <div>8. Filled surface areas treated with light acid wash and rinsed thoroughly</div> </div> </div>	

Comments:

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Height 27 Width 18 Thickness 4 Marker# A.21.1

CONDITION ASSESSMENT Inspection Date: 11/3/2014 Inspected By: IS & MJ

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Union Assinippi Cemetery, Hanover, MA
NAME ON MARKER **Albert Sanborn**
Death Date: 12/7/1871 Marker Type: Double headstone/base
Cond. of Inscription: n.a. Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Overgrown with vegetation	Remove vegetation

TREATMENT	Treatment Dates
Surrounding vegetation removed, marker stable	6/11/2015

Comments:

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Height - Width - Thickness - Marker# **A22.1**

Union Assinippi Cemetery, Hanover, MA NAME ON MARKER Paul Curtis Death Date: 7/21/1867 Marker Type: Marker on base Cond. of Inscription: n.a. Material: Marble	
EXISTING CONDITIONS Marker off base	CONSERVATION STRATEGY Check base for level Reset marker
TREATMENT Treatment Dates 5/19-20/2015 1. Area excavated to an appropriate depth removing any roots or large stones. 2. Setting post inspected and found to be sound and re-useable 3. Posts were aligned and re-set level. 4. Area around post was backfilled with tamped gravel and re-graded with existing topsoil 5. Failed mortar removed from setting area and bottom of marker using hand tools. 6. Setting surfaces primed with Acryl 60 diluted 1:3 with water. 7. Marker reset plumb onto post with cement/lime mortar (3/2/9) with 000 sand. 8. Excess grout removed and joint area cleaned.	

Comments:

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Height - Width - Thickness - Marker# **B.4.1**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Lydia Morse
Death Date: 4/22/1880	Marker Type: Small marker
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose on post	Inspect base unit Reset marker to post
<div> <div>TREATMENT</div> <div>Treatment Dates 5/19-26/2015</div> <div> <div>1. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Setting post inspected and found to be sound and re-useable</div> <div>3. Posts were aligned and re-set level.</div> <div>4. Area around post was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker using hand tools.</div> <div>6. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>7. Marker reset plumb onto post with cement/lime mortar (3/2/9) with 000 sand.</div> <div>8. Excess grout removed and joint area cleaned.</div> </div> </div>	

Comments:

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Height - Width - Thickness - Marker# B.6.1

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Horace Morse
Death Date: 3/1/1903	Marker Type: Small marker
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose on post	Inspect base unit Reset marker to post
TREATMENT Treatment Dates 5/19-26/2015	
<div>1. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Setting post inspected and found to be sound and re-useable</div> <div>3. Posts were aligned and re-set level.</div> <div>4. Area around post was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker using hand tools.</div> <div>6. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>7. Marker reset plumb onto post with cement/lime mortar (3/2/9) with 000 sand.</div> <div>8. Excess grout removed and joint area cleaned.</div>	

Comments:

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Height - Width - Thickness - Marker# **B.6.2**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Joseph Morse
Death Date: 1918	Marker Type: Small marker
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose on post	Inspect base unit Reset marker to post
<div> <div>TREATMENT</div> <div>Treatment Dates 5/19-26/2015</div> <div> <div>1. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Setting post inspected and found to be sound and re-useable</div> <div>3. Posts were aligned and re-set level.</div> <div>4. Area around post was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker using hand tools.</div> <div>6. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>7. Marker reset plumb onto post with cement/lime mortar (3/2/9) with 000 sand.</div> <div>8. Excess grout removed and joint area cleaned.</div> </div> </div>	

Comments:

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Height- Width - Thickness - Marker# B.6.3

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Horace Morse
Death Date: 1904	Marker Type: Small marker
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose on post	Inspect base unit Reset marker to post
<div> <div>TREATMENT</div> <div>Treatment Dates 5/19-26/2015</div> <div> <div>1. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Setting post inspected and found to be sound and re-useable</div> <div>3. Posts were aligned and re-set level.</div> <div>4. Area around post was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker using hand tools.</div> <div>6. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>7. Marker reset plumb onto post with cement/lime mortar (3/2/9) with 000 sand.</div> <div>8. Excess grout removed and joint area cleaned.</div> </div> </div>	
Comments:	

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Height - Width - Thickness - Marker# B.6.4

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Francina Morse
Death Date: 1916	Marker Type: Small marker
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose on post	Inspect base unit Reset marker to post
<div> <div>TREATMENT</div> <div>Treatment Dates 5/19-26/2015</div> <div> <div>1. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Setting post inspected and found to be sound and re-useable</div> <div>3. Posts were aligned and re-set level.</div> <div>4. Area around post was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker using hand tools.</div> <div>6. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>7. Marker reset plumb onto post with cement/lime mortar (3/2/9) with 000 sand.</div> <div>8. Excess grout removed and joint area cleaned.</div> </div> </div>	

Comments:



Height - Width - Thickness - Marker# B.6.5

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Loring Jacobs
Death Date: 9/15/1879	Marker Type: Monument
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Missing urn	Search for urn
TREATMENT	
Treatment Dates	
Note: The extremely weathered surface of the pin area suggests that this element has been missing for some time.	
Surrounding area searched for top finial, nothing found	

Comments:

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Height 41 Width 16 Thickness 16 Marker# **B.8.1**

Union Assinippi Cemetery, Hanover, MA
NAME ON MARKER **Husband (Loring Jacobs)**
Death Date: 9/15/1879 Marker Type: Small marker
Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose on post	Inspect base unit Reset marker to post

TREATMENT	Treatment Dates 5/20/2015
<div>1. Setting posts excavated and aligned and reset plumb</div> <div>2. Small markers were attached with structural adhesive</div> <div>3. Losses filled with Jahn restoration mortar</div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Wife (Mary Jacobs)
Death Date: 2/1/1903	Marker Type: Small marker
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose on post	Inspect base unit Reset marker to post
TREATMENT Treatment Dates 5/20/2015	
1. Setting posts excavated and aligned and reset plumb 2. Small markers were attached with structural adhesive 3. Losses filled with Jahn restoration mortar	

Comments:

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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Marshall Jacobs

Death Date: n.a.

Marker Type: Small marker

Cond. of Inscription: Legible

Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Detached from base	Reset to base

TREATMENT

Treatment Dates 5/18/2015

1. Original base excavated and found to be sound, reset level at appropriate height and alignment.
2. Marker reset onto base with 000 grout

Comments:



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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Lapham “Mother”
Death Date: n.a.	Marker Type: Marker/base
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base	Level and stabilize large base
TREATMENT Treatment Dates 5/26/2015	
Markers appear to be securely set to the base.	
1. Base jacked up and area beneath setting base excavated and base reset level onto stone foundation.	
2. Area re-graded with fill and seeded.	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Abigail Damon
Death Date: 6/26/1863	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured at grade	Remove in-ground fragment and reset into new below grade base
TREATMENT Treatment Dates 5/12-20/2015	
<div>1. Original base discovered and aligned with adj. markers and re-set level at appropriate height.</div> <div>2. Setting slot cleaned of debris or failed mortar and bottom fragment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned.</div> <div>3. Marker braced for a minimum 3 days</div> <div>4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools</div> <div>5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.</div> <div>6. Cracks and losses filled with RepliCal Marble products, filled areas misted with water and covered for 3 days minimum</div> <div>7. Filled areas treated with light acid wash and rinsed thoroughly.</div> <div>8. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Jacob Damon
Death Date: 1/1857	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured at grade	Remove in-ground fragment and reset into new below grade base
<div>TREATMENT</div> <div>Treatment Dates 5/12-20/2015</div> <div> 1. Original base discovered and aligned with adj. markers and re-set level at appropriate height. 2. Setting slot cleaned of debris or failed mortar and bottom fragment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned. 3. Marker braced for a minimum 3 days 4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools 5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours. 6. Cracks and losses filled with RepliCal Marble products, filled areas misted with water and covered for 3 days minimum 7. Filled areas treated with light acid wash and rinsed thoroughly. 8. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Charles Harris
Death Date: 8/8/1852	Marker Type: Small headstone
Cond. of Inscription: Illegible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
TREATMENT Treatment Dates 5/12/2015	
1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound. 2. Soling removed by light brushing with nylon brushes and water. 3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers 4. Area backfilled around marker with tamped sand and gravel 5. Disturbed areas re-graded with existing topsoil and sod.	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Clara Chapman
Death Date:	Marker Type: Headstone in base
Cond. of Inscription:	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Recently fallen and fractured	Construct new below grade base Attach fragments with structural adhesive
TREATMENT Treatment Dates 5/28-6/11/2015	
1. Setting area excavated for new below grade cast concrete base	
2. A new concrete base sized min. 12” deep, 12” greater in thickness and 6” wider than the stone is cast. The finished top to be below grade. A form for a setting slot 1” wider than the marker is placed in the concrete.	
3. Setting forms are removed after partial curing of the concrete and the base backfilled with tamped sand or gravel	
4. Lower fragment was reset plumb and level into slot using a cement/ lime grout (3/2/9) with 000 sand. Braced for min 3 days	
5. All mating edges of fragments cleaned with water	
6. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.	
7. All surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Daniel Chapman
Death Date: 3/18/1881	Marker Type: Headstone
Cond. of Inscription: illegible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured	Attach fragments with structural adhesive
TREATMENT Treatment Dates 5/12-20/2015	
<div>1. Original base discovered and aligned with adj. markers and re-set level at appropriate height.</div> <div>2. Setting slot cleaned of debris or failed mortar and bottom fragment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. Excess grout removed and joint area cleaned.</div> <div>3. Marker braced for a minimum 3 days</div> <div>4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools</div> <div>5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.</div> <div>6. Cracks and losses filled with RepliCal Marble products, filled areas misted with water and covered for 3 days minimum</div> <div>7. Filled areas treated with light acid wash and rinsed thoroughly.</div>	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Daniel Daman
Death Date: 3/3/1896	Marker Type: Small marker
Cond. of Inscription: Legible	Material: Granite
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb
<div> <div>TREATMENT</div> <div>Treatment Dates 5/12/2015</div> <div> <div>1. Marker carefully excavated. The soil and large roots around tilted markers were removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.</div> <div>2. Soling removed by light brushing with nylon brushes and water.</div> <div>3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers</div> <div>4. Area backfilled around marker with tamped sand and gravel</div> <div>5. Disturbed areas re-graded with existing topsoil and sod.</div> </div> </div>	
Comments:	

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Sarah Sears
Death Date: 12/14/1869	Marker Type: Headstone
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Off base Tilted base Losses	Level base Reset marker Fill loses
<div> <div>TREATMENT</div> <div>Treatment Dates 5/12-19/2015</div> <div> <div>1. Area excavated to an appropriate depth removing any roots or large stones aligning existing base with adjacent markers and re-set level.</div> <div>2. Setting surfaces cleaned with water and any failed adhesives or mortar removed with hand tools from setting area and bottom of marker</div> <div>3. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>4. Marker reset plumb and level onto base with structural adhesive, leveled as necessary with lead shims. Braced for min 3 days.</div> <div>5. Cracks and losses filled with Jahn restoration mortar.</div> <div>6. Filled areas misted with water and covered for 3 days minimum</div> <div>7. Filled surface areas treated with light acid wash and rinsed thoroughly</div> <div>8. All surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div> </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Caroline Sears
Death Date: 11/3/1855	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured at grade	Reset into new below grade base
<div>TREATMENT</div> <div>Treatment Dates 5/12-20/2015</div> <div> 1. Original base discovered while excavating. Base is aligned with adj. markers and reset level at appropriate height. 2. Setting slot cleaned of debris or failed mortar and bottom fragment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer. 3. Marker braced for a minimum 3 days 4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools 5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours. 6. Cracks and losses filled with RepliCal Marble products, filled areas misted with water and covered for 3 days minimum 7. Filled areas treated with light acid wash and rinsed thoroughly. 8. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water </div>	

Comments:

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Height - Width - Thickness - Marker# B.25.2

Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Nellie Jacobs

Death Date: 11/1/1868

Marker Type: Small marker

Cond. of Inscription: Legible

Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base	Reset

TREATMENT

Treatment Dates 5/18/2015

- Soundness of setting joint of marker to base inspected, if found to be unstable, marker removed from base.
- Area excavated to an appropriate depth removing any roots or large stones.
- Base is aligned with adjacent markers and re-set level.
- Area around base was backfilled with tamped gravel and re-graded with existing topsoil
- Failed mortar removed from setting area and bottom of marker
- When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins
- Setting surfaces primed with Acryl 60 diluted 1:3 with water.
- Marker reset plumb onto base with cement/lime mortar (3/2/8) with 000 sand.
- Excess grout removed and joint area cleaned.

Comments:



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Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER	William Jacobs
Death Date: 6/12/1867	Marker Type: Small headstone/base
Cond. of Inscription: Legible	Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base Fractured	Reset base Attach fragments with structural adhesive

TREATMENT	Treatment Dates 5/26-27/2015
<div>1. Area excavated to an appropriate depth removing any roots or large stones aligning base with adjacent markers and re-set level.</div> <div>2. Setting surfaces cleaned with water and any failed adhesives or mortar removed with hand tools from setting area and bottom of marker</div> <div>3. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>4. Marker reset plumb and level onto base with structural adhesive and plumbed with lead shims. Braced for min 3 days.</div> <div>5. Fragment attached with structural adhesive.</div> <div>6. Cracks and losses filled with Jahn restoration mortar.</div> <div>7. Filled areas misted with water and covered for 3 days minimum</div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Seth Curtis
Death Date: 3/23/1860	Marker Type: Headstone/base
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Off base Tilted base	Level base Reset marker
TREATMENT Treatment Dates 5/12-13/2015	
<div>1. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div> <div>10. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div>	

Comments:

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Height 43 Width 20 Thickness 3 Marker# **B.28.1**

Union Assinippi Cemetery, Hanover, MA					
NAME ON MARKER	Caroline Jacobs				
Death Date: 3/26/1852	Marker Type: Headstone/base				
Cond. of Inscription: Legible	Material: Marble				
EXISTING CONDITIONS	CONSERVATION STRATEGY				
Loose in base Tilted	Level base Reset elements				
<table><tr><td>TREATMENT</td><td>Treatment Dates 5/18-20/2015</td></tr><tr><td colspan="2"><div>1. Area excavated to an appropriate depth removing any roots or large stones.</div><div>2. Base inspected and found to be sound and re-useable</div><div>3. Base is aligned with adjacent markers and re-set level.</div><div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div><div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div><div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div><div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div><div>8. Excess grout removed and joint area cleaned.</div><div>9. Marker braced for a minimum 3 days</div><div>10. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div></td></tr></table>		TREATMENT	Treatment Dates 5/18-20/2015	<div>1. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div> <div>10. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div>	
TREATMENT	Treatment Dates 5/18-20/2015				
<div>1. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>2. Base inspected and found to be sound and re-useable</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Debris removed from setting slot. When required, power grinders were used to facilitate removal of stone fragments.</div> <div>6. When required, the lower setting edge was re-squared by power grinder with minimal loss.</div> <div>7. Marker reset plumb and level into setting slot with cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>8. Excess grout removed and joint area cleaned.</div> <div>9. Marker braced for a minimum 3 days</div> <div>10. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div>					

Comments:

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Height 47 Width 22 Thickness 4 Marker# **B.30.1**

Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Henry Maine

Death Date: 1925 Marker Type: Small die/base

Cond. of Inscription: Legible Material: Granite

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base Reset to base	Reset base plumb Reset marker to base

TREATMENT

Treatment Dates 5/12/2015

1. Soil removed around base unit and base jacked up to level.

2. Base re-set plumb at appropriate height and level, aligned with adjacent markers

3. Area around base backfilled with tamped sand and gravel

4. Disturbed areas re-graded with existing topsoil.

5. Failed setting mortars removed from setting bed with hand chisels as necessary

6. Setting bed area primed with Acryl 60 diluted 1:3 with water, marker reset with cement/lime grout (3/2/9) with 000 sand.

7. Marker plumbed as necessary with lead shims.

8. Excess grout removed and joint area cleaned.

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Isaac Burrell
Death Date: 5/23/1878	Marker Type: Small obelisk
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Monument off base	Reset to base
<div>TREATMENT</div> <div>Treatment Dates 5/12/2015</div> <div> <div>1. Elements removed from in-ground base unit and base reset plumb at appropriate height and level, aligned with adjacent markers</div> <div>2. Area around base backfilled with tamped sand and gravel</div> <div>3. Disturbed areas re-graded with existing topsoil.</div> <div>4. Failed setting mortars removed from setting bed as necessary with hand chisels</div> <div>5. Setting bed area primed with Acryl 60 diluted 1:3 with water, intermediate base reset with cement/lime grout (3/2/9) with 000 sand.</div> <div>6. Obelisk reset as above and plumbed as necessary with lead shims.</div> <div>7. Excess grout removed and joint areas cleaned.</div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Joseph Burrell
Death Date: 11/12/1847	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured	Possible new base Structural adhesion
TREATMENT Treatment Dates 6/11-12/2015	
<div>1. Original base discovered while excavating. Base is aligned with adj. markers and reset level at appropriate height.</div> <div>2. Setting slot cleaned of debris or failed mortar and bottom fragment reset plumb and level into setting slot with a cement/lime grout (3/2/9) with 000 sand made fluid with a super plasticizer.</div> <div>3. Marker braced for a minimum 3 days</div> <div>4. All mating edges of fragments cleaned with water and any failed adhesives removed with hand tools</div> <div>5. Fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed with hand chisels within 24 hours.</div> <div>6. Cracks and losses filled with RepliCal Marble products, filled areas misted with water and covered for 3 days minimum</div> <div>7. Filled areas treated with light acid wash and rinsed thoroughly.</div> <div>8. All Surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water</div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Isaac Burrell
Death Date: 1/24/1863	Marker Type: Headstone
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured	Attach fragments with structural adhesive
TREATMENT Treatment Dates 5/13-20/2015	
1. Mating surfaces cleaned and any failed adhesives or mortar removed 2. Where required, mating edges were treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water 3. Fractured elements were dry fitted to ascertain final soundness and to check for large losses at mating areas. 4. Dry fragments attached with structural adhesive (Abatron 55-22), clamped and braced until cured. Excess epoxy removed by hand chisels 5. Cracks and voids filled with RepliCal products. Any large losses filled with Jahn cementitious mortar. 6. Filled areas misted with water and covered for 3 days minimum 7. Filled surface areas treated with light acid wash and rinsed thoroughly 8. All surfaces treated with D/2 Biological Solution, scrubbed with nylon brushes and water. Rinsed fully with water	

Comments:

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Height - Width - Thickness - Marker# **B.40.3**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	W. Prouty
Death Date: 1/28/1884	Marker Type: Headstone/base
Cond. of Inscription: Legible	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in base Tilted	Level base Reset elements
<div> <div>TREATMENT</div> <div>Treatment Dates 5/13/2015</div> <div> <ol style="list-style-type: none"> 1. Soil removed around base unit. 2. Base re-set plumb at appropriate height and level, aligned with adjacent markers 3. Area around base backfilled with tamped sand and gravel 4. Disturbed areas re-graded with existing topsoil. 5. Failed setting mortars removed from setting bed with hand chisels as necessary 6. Setting bed area primed with Acryl 60 diluted 1:3 with water, marker reset with cement/lime grout (3/2/9) with 000 sand. 7. Marker plumbed as necessary with lead shims. 8. Excess grout removed and joint area cleaned. </div> </div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Martha Prouty
Death Date: n.a.	Marker Type: Headstone
Cond. of Inscription: n.a.	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen, fractured	Evaluate Reset if possible
TREATMENT	Treatment Dates
Area probed unsuccessfully for additional fragments. Remaining fragments found to be sugary and not restorable	

Comments:

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Height - Width - Thickness - Marker# **B.43.2**

Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	Eliza Curtis
Death Date: 5/18/1905	Marker Type: Headstone/base
Cond. of Inscription: Decipherable	Material: Marble
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted base	Reset base with marker plumb
TREATMENT Treatment Dates 5/18/2015	
<div>1. Soil removed around base unit.</div> <div>2. Base re-set plumb at appropriate height and level, aligned with adjacent markers</div> <div>3. Area around base backfilled with tamped sand and gravel</div> <div>4. Disturbed areas re-graded with existing topsoil.</div> <div>5. Failed setting mortars removed from setting bed with hand chisels as necessary</div> <div>6. Setting bed area primed with Acryl 60 diluted 1:3 with water, marker reset with cement/lime grout (3/2/9) with 000 sand.</div> <div>7. Marker plumbed as necessary with lead shims.</div> <div>8. Excess grout removed and joint area cleaned.</div>	

Comments:

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Height 37 Width 18 Thickness 4 Marker# **B.44.1**

Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Robinson ?

Death Date: n.a. Marker Type: Headstone

Cond. of Inscription: Currently illegible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen, fractured	Evaluate Reset if possible

TREATMENT Treatment Dates

Area probed unsuccessfully for additional fragments.
Remaining fragment found to be sugary and not restorable

Comments:



Union Assinippi Cemetery, Hanover, MA
NAME ON MARKER **Winnie (Winthrop Wilder)**
Death Date: 9/1/1865 Marker Type: Small marker
Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker

TREATMENT	Treatment Dates 5/13/2015
<div>1. Marker and base found to be in sound condition.</div> <div>2. Area excavated to an appropriate depth removing any roots or large stones.</div> <div>3. Base is aligned with adjacent markers and re-set level.</div> <div>4. Area around base was backfilled with tamped gravel and re-graded with existing topsoil</div> <div>5. Failed mortar removed from setting area and bottom of marker</div> <div>6. When required, any existing pins were inspected, and if necessary, replaced with stainless steel threaded pins</div> <div>7. Setting surfaces primed with Acryl 60 diluted 1:3 with water.</div> <div>8. Marker reset plumb onto base with cement/lime mortar (3/2/9) with 000 sand.</div> <div>9. Excess grout removed and joint area cleaned.</div>	

Comments:

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Union Assinippi Cemetery, Hanover, MA
 NAME ON MARKER
Emma Litchfield
 Death Date: 1928 Marker Type: Small marker
 Cond. of Inscription: Legible Material: Granite

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	Reset plumb

TREATMENT Treatment Dates 5/13/2015

1. Marker carefully excavated. The soil around tilted markers was removed to an appropriate depth. When required, the marker was removed from the ground. Marker appears to be sound.
 2. Soling removed by light brushing with nylon brushes and water.
 3. Setting area excavated to sufficient depth and stone re-set plumb at appropriate height and level onto gravel bed, aligned with adjacent markers
 4. Area backfilled around marker with tamped sand and gravel
 5. Disturbed areas re-graded with existing topsoil and sod.

Comments:



Union Assinippi Cemetery, Hanover, MA

NAME ON MARKER

Snell Wade

Death Date: 8/29/1859

Marker Type: Small marker/base

Cond. of Inscription: Decipherable

Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker

TREATMENT

Treatment Dates 5/18-19/2015

1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water.
 2. No existing bases were found. Setting area excavated for new below grade cast concrete base using a 8" sonotube as a form about 18" deep. .
 3. Marker was reset onto new base with a cement/lime mortar (3/2/9) with 000 sand

Comments:



Union Assinippi Cemetery, Hanover, MA	
NAME ON MARKER	D.R.W (Deborah Wade)
Death Date: 3/11/1888	Marker Type: Small marker/base
Cond. of Inscription: Legible	Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	Check base for level Reset marker

TREATMENT	Treatment Dates 5/18-19/2015
1. Marker excavated and found to be sound. Light soiling removed by brushing with nylon brushes and water.	
2. No existing bases were found. Setting area excavated for new below grade cast concrete base using a 8” sonotube as a form about 18” deep. .	
3. Marker was reset onto new base with a cement/lime mortar (3/2/9) with 000 sand	

Comments:

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Height - Width - Thickness - Marker# **B.56.2**

Union Assinippi Cemetery, Hanover, MA					
NAME ON MARKER	Sarah Lapham				
Death Date: 8/11/1886	Marker Type: Headstone/base				
Cond. of Inscription: Legible	Material: Marble				
EXISTING CONDITIONS	CONSERVATION STRATEGY				
Tilted base	Reset base with marker plumb				
<table><tr><td>TREATMENT</td><td>Treatment Dates 5/13/2015</td></tr><tr><td colspan="2"><div>1. Soil removed around base unit. 2. Base re-set plumb at appropriate height and level, aligned with adjacent markers 3. Area around base backfilled with tamped sand and gravel 4. Disturbed areas re-graded with existing topsoil. 5. Failed setting mortars removed from setting bed with hand chisels as necessary 6. Setting bed area primed with Acryl 60 diluted 1:3 with water, marker reset with cement/lime grout (3/2/9) with 000 sand. 7. Marker plumbed as necessary with lead shims. 8. Excess grout removed and joint area cleaned.</div></td></tr></table>		TREATMENT	Treatment Dates 5/13/2015	<div>1. Soil removed around base unit. 2. Base re-set plumb at appropriate height and level, aligned with adjacent markers 3. Area around base backfilled with tamped sand and gravel 4. Disturbed areas re-graded with existing topsoil. 5. Failed setting mortars removed from setting bed with hand chisels as necessary 6. Setting bed area primed with Acryl 60 diluted 1:3 with water, marker reset with cement/lime grout (3/2/9) with 000 sand. 7. Marker plumbed as necessary with lead shims. 8. Excess grout removed and joint area cleaned.</div>	
TREATMENT	Treatment Dates 5/13/2015				
<div>1. Soil removed around base unit. 2. Base re-set plumb at appropriate height and level, aligned with adjacent markers 3. Area around base backfilled with tamped sand and gravel 4. Disturbed areas re-graded with existing topsoil. 5. Failed setting mortars removed from setting bed with hand chisels as necessary 6. Setting bed area primed with Acryl 60 diluted 1:3 with water, marker reset with cement/lime grout (3/2/9) with 000 sand. 7. Marker plumbed as necessary with lead shims. 8. Excess grout removed and joint area cleaned.</div>					

Comments:

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Height 24 Width 17 Thickness 7 Marker# **B.57.1**