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Title: Design of the New Long and Marble Fountain Gardens

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Abstract:

Water features are important historical elements of Morris Arboretum. In recent years, their preservation and restoration have become a major goal of the Arboretum. The two most recently restored fountains are the Long and Marble Fountains, located on the slope below the Orange Balustrade. The goal of this project was to surround the fountains with gardens that would complement and highlight these features, while taking into account the location and requirements of the site. While part of the same project, the design of each garden is as unique as the style of fountain it is encompassing. The Long Fountain is designed to be a “garden room” that will provide visitors with a tranquil, peaceful experience. To create this “room” effect, a hedge of *Lindera salicifolia* (spicebush) will be planted. The Marble Fountain will provide visitors with a dramatic display of color throughout the summer, a color palette of strong, clear violets and soft, pale oranges. This garden will be planted with a variety of perennials and annuals that will connect it with the neighboring Pennock Garden. Great consideration was taken when selecting plants for these gardens due to the requirements of their southward facing slope location. Also, both gardens require a bit of preparatory work before they are ready to be installed. While these gardens are very different from one another, they come together to complete the axis of this area and give it a more unified feel.

TABLE OF CONTENTS

Introduction.....	3
Long Fountain.....	3
History.....	3
Site Considerations	3
Design of Garden	4
Site Preparation and Installation	5
Marble Fountain.....	5
History.....	5
Site Considerations	6
Design of Garden	6
Site Preparation and Installation	8
Conclusion	8
References.....	9
Appendices	
Table 1: Plant list for Long Fountain Garden	10
Table 2: Plant list for Marble Fountain Garden	11
Figure 1: Design of Long Fountain Garden.....	(see Library)
Figure 2: Design of Marble Fountain Garden.....	(see Library)

INTRODUCTION

Water features are important historical elements of the Morris Arboretum. In recent years, their preservation and restoration have become a major goal of the Arboretum. The two most recently restored fountains are the Long and Marble Fountains, located on the slope below the Orange Balustrade. The goal of this project was to surround the fountains with gardens that would complement and highlight these features, while taking into account the location and requirements of the site. While part of the same project, the design of each garden is as unique as the style of fountain it is encompassing. However, they come together to complete the axis of this area and give it a more unified feel.

LONG FOUNTAIN

HISTORY

John and Lydia Morris spent much of their great wealth on world travel, as was the trend in Victorian society. In 1890, they went on a “Grand Tour,” where they visited many great monuments of western civilization. It is believed that their expedition made a stop at the Alhambra in Spain. John and Lydia were so inspired by the fountains of this fortress that when plans for Compton were laid out, they designed a fountain that resembled what they saw.

Through the years the Long Fountain was neglected and eventually fell into disrepair, looking like nothing more than a dirty trough in the middle of the lawn. In 1995, a new strategic plan focused on the restoration of historic elements in the Morris Arboretum, including the Long Fountain. The construction process began in the summer of 2006 and was completed by late fall of the same year.

SITE CONSIDERATIONS

The site of the Long Fountain is southward facing, meaning it receives direct sunlight all day. Also, with the newly installed bluestone path, there will be an increase in reflected light and heat in this area. Therefore, it was important to choose plants that would withstand this slightly warmer microclimate.

Another important consideration is the amount of light received across the entire space. To the right of the fountain, two mature *Tsuga canadensis* cast a shadow that gives dappled shade to that edge of the bluestone. Conversely, the left side of the fountain receives full sun. It was crucial to find plant material that would tolerate both requirements of full sun and partial shade.

Also on the right side of the fountain is a large mass of *Neillia sinensis* and a mature *Ilex verticillata*, both original Morris Estate plants. The *Neillia* actually has a very interesting history: in 1912 they were sent to John Morris from the Arnold Arboretum and are from E.H. Wilson’s collecting trips to China. However, because these plants are so close to the new pathway, they will need to be taken into account when new plantings are installed.

DESIGN OF GARDEN

To stay true to John and Lydia's original intent of an Alhambra-like setting, the concept of this design is to create a "garden room" that will provide visitors with a tranquil, peaceful experience. Within this secluded sanctuary, visitors will also find elements that engage each of the senses.

To create this "room" effect, a hedge of *Lindera salicifolia* (spicebush) will be planted to completely surround the bluestone path. *Lindera* is not typically used as a hedging material, but it has several attributes that make it a perfect plant for this site. It is a multi-stemmed shrub with a loose habit, making it more informal than a clipped, high maintenance hedge. It will also take the hard pruning that will be necessary in the future to keep its branches from growing into the walkway. *Lindera* will grow equally well in full sun and part shade, which, as previously mentioned, was a major factor in the plant selection process. During the summer, *Lindera* has attractive bright green foliage that, as the common name implies, has a spicy scent. However, its true beauty does not come until fall, when the leaves change to brilliant yellows and oranges. Eventually the color fades to a dull brown, but the leaves persist all through the winter until bud break in the spring. So although it is a deciduous shrub, this characteristic gives it year-round seasonality. Another winter interest occurs when the dried out leaves blow in the wind and make a lovely rattling sound. It is especially nice at that time of the year because while the fountain is turned off, the sound of the leaves resembles the sound of the water.

With this hedge in place, the visitor will be able to fully enjoy the sound, feel, and sight of the water in the fountain. When placing the shrubs for planting, two shrubs that are directly across from the Pennock Garden entrance to the fountain will be set back slightly from the rest of the hedge line. This will create a small alcove within the hedge where a statue or sculpture will be placed. For someone entering the garden from Pennock, this will act as a focal point where one's eye may rest, rather than staring at a large green wall. It will also be a nice surprise for anyone approaching the hedge from other angles. It has not yet been determined what the statue will be; in typical Moorish gardens, no statues were present because it was considered idolatry. However, in Alhambra's Court of the Lion, there is a fountain surrounded by 12 lion figures; we hope to find a similar style of statue to maintain authenticity.

Due to the construction required for the restoration, the portion of turf between the fountain and ADA accessible service road was removed. Rather than trying to reseed this area, it was determined that a new planting bed would be created. The design of this bed is understated as a way to prepare visitors for the serenity of the fountain room. For woody material, three *Syringa* (lilacs) will be planted to tie this bed to the Garden Railway planting beds down the ADA accessible service road, where several lilacs currently exist. Specifically, *Syringa* 'Bailina' (Thumbelina® lilac) will be used. This Thumbelina lilac is part of the Fairytale series of dwarf lilacs from Bailey Nurseries in Minnesota. Morris Arboretum already has the cultivars Prince Charming®, Sugar Plum Fairy®, and Tinkerbelle® from this series; Thumbelina® is the most recent introduction, and it will be a great addition to the arboretum's collection. The buds of this lilac are a medium pink and then open to light pink. It is also the sweetest smelling cultivar. At maturity, these plants will be five to six feet tall and wide.

In front of the *Syringa*, *Hypericum frondosum* 'Sunburst' will be planted. This low growing green groundcover will add to the simplicity of the bed, and also tie into the *Hypericum* 'Brigadoon' that is planted in front of the Pennock Garden entrance.

SITE PREPARATION AND INSTALLATION

Before the hedge can be planted, room needs to be made on the right side of the Long Fountain where the *Neillia* and *Ilex* are now. The large mass of *Neillia* is actually two separate plants with two accession numbers: one adjacent to the fountain, and one that wraps around to face the Katsura. Since these are original Morris plants and are significant to the history of the Arboretum, it is important to keep at least some of the specimen rather than eliminating it completely. Therefore, the *Neillia* that faces the Katsura tree will be kept, while the remainder of the mass will be removed.

Similarly, the *Ilex verticillata* is also an original Morris plant that will be kept on the site, although its growth interferes with the new hedge. This shrub will be drastically pruned, removing the braches that would come in direct contact with the *Lindera*. With the severe cane reduction as well as the increased competition for nutrients from the new shrubs, it is hoped that the *Ilex* will begin to rejuvenate in the opposite direction from the Long Fountain.

Another shrub that is presently planted in the proposed hedge line is *Calycanthus floridus*. It is rather large, reaching about six feet in diameter. Rather than removing it, the *Calycanthus* will be divided and placed on either side of the pathway that leads from the Pennock Garden to the Long Fountain. This symmetrical planting will signify the exit from the colorful and wild Pennock Garden and the entrance into the very balanced, subdued Long Fountain.

To make this move of the *Calycanthus*, two more shrubs will have to be moved: *Hammamelis x intermedia* 'Feuerzauber' and *Hydrangea macrophylla*. They will be moved deeper into the bed they are currently in and closer to the Pennock Garden fence.

Once this preparatory work is completed, the *Lindera* hedge can be installed. At the time of planting the shrubs will be four to five feet tall and wide, but eventually will grow to be about eight feet. For an immediate hedge effect, the shrubs will be planted with some canopy overlap. With time, the increased growth may require that some shrubs be removed. To ensure branches will not crowd the pathway, each shrub will be planted three and a half feet on center from the edge of the bluestone. 35 *Lindera* were ordered for this project, and in the design it is estimated that only 28 will be used in the hedge. The remaining seven shrubs will be planted at Bloomfield Farm; that way, if one shrub in the hedge fails, it can be replaced with another of similar size.

MARBLE FOUNTAIN

HISTORY

In 1900, John and Lydia followed up their Grand Tour with a trip to Italy. The purpose of this excursion was to look at churches, but their travel notes say they shopped for sculptures for the grounds of Compton. It is believed that during this tour the Marble Fountain was purchased. Back at Compton, it was placed on the slope below the Orange Balustrade. Here it served as the focal point for Lydia's Hillside Flower Walk, a long axis marching down the slope. When the University of Pennsylvania took control of the estate after Lydia's death, the Flower Walk was eventually abandoned and the fountain fell into disrepair. In the 1980's, attempts began to revitalize the area, including the renovation of the Orange Balustrade and the replacement of flowerbeds surrounding the Marble Fountain and continuing down the slope.

As mentioned in the history of the Long Fountain, 1995 marked a new strategic planning process for the Morris Arboretum. Along with restoring historic elements, another objective was dedicated to enhancing color in the Arboretum. Thanks to a generous gift from J. Liddon Pennock, Jr., who greatly enjoyed the flowerbeds on the Orange Balustrade slope, the Pennock Garden was constructed and planted with an exotic assortment of colors. The Marble Fountain was then the final piece of the puzzle needed to complete the central axis of the hillside. Along with the Long Fountain, construction began in the summer of 2006 and was completed by late fall of the same year.

SITE CONSIDERATIONS

The site of the Marble Fountain is on a southward facing slope that is surrounded on both sides by large evergreens. These factors result in a very warm microclimate, so warm that it can be considered an entire zone higher than the rest of the Arboretum. The new bluestone will also increase the reflected light and heat in the garden.

While a majority of the garden receives full, direct sunlight, one section does not. The *Magnolia kobus* to the southeast corner of the garden casts a shadow over one of the planting beds. This was an important consideration when choosing the plants for this area, as well as making the bed tie in with the other full sun beds. In addition, since the Marble Fountain has no form of deer exclusion, another criterion for plant selection was deer resistance.

The scale of this garden is also very important to take into account. To put it into perspective, it is smaller than one quadrant in the Rose Garden. Therefore, very large plants would not be appropriate, and many different varieties of plants would look too cluttered. Finding a balance between these extremes was a challenge.

Perhaps the most essential consideration in this garden was its proximity to the Pennock Garden. It is imperative that the Marble Fountain garden ties the two together to create a cohesive transition along the hillside.

DESIGN OF GARDEN

Since the Marble Fountain garden strives to be similar to Pennock, it was helpful to draw some ideas from its original design scheme. On January 25, 2005, the Pennock Garden Design Committee held a meeting to discuss the plan for the garden. It was then decided that strong, clear violets and soft, pale oranges (to mimic the terra cotta color of the Orange Balustrade) would be used. This same color palette will now be found in the Marble Fountain garden, providing visitors with a dramatic display of color throughout the summer. This planting will also take advantage of the warm microclimate created by the south facing slope location. Besides the similar color scheme, this garden will have other aspects that tie into the design of the neighboring Pennock Garden.

The first segment of this design worth mentioning is the row of plants that completely surrounds the garden on the sides furthest from the fountain. This “wall” is meant to imitate the Pennock Garden fence, where visitors will only be able to appreciate the full spectacle of color while inside and walking around the bluestone path. However, this will not be a compact and dense hedge planting; it will be somewhat permeable, so visitors will get a hint of what is there

while at a distance and hopefully be compelled to explore further. Also, two sides of the garden face the beautiful Katsura and *Magnolia* trees, so in these areas the wall will be lower as to maintain these views. The plant material will be made up of grasses, including *Calamagrostis xacutiflora* 'Karl Foerster' and *Pennisetum alopecuroides* 'Cassian's Choice', Cannas, and Elephant Ears. Incidentally, these plants are also used in the Pennock Garden.

Due to the garden's small scale, it was difficult to use many woody shrubs because of their relatively large size. Therefore, the winter interest will mostly be the grasses that line the exterior edge. This became a concern, so as a way to increase the number of woody plants in the garden and as another tie to Pennock, six *Buxus sempervirens* 'Dee Runk' were purchased; four will be placed symmetrically on the long axis of Pennock, and two will be placed at the entrance to the Marble Fountain garden on the path from Pennock. These Dee Runk boxwoods are upright conical growers, reaching a height of about four feet and a width of about 18 inches. Its small size makes it a perfect addition to the Marble Fountain garden. The decision to plant these boxwoods also adds a historic element to the gardens; an archival photograph shows that six conical boxwoods were once symmetrically planted at the base of the Orange Balustrade leading down to the Hillside Flower Walk.

Once the visitor passes through the wall of green to enter the garden, they will be hit with an explosion of color. To achieve this display, a wide variety of perennials and annuals will be used. Again, because of the need to tie into the Pennock Garden, some of the plants found in Pennock will be repeated in the Marble Fountain, such as *Iris sibirica* 'Caesar's Brother', *Solenostemon* 'Sedona' and 'Dark Star', and *Crocasmia* 'Emily McKenzie'. However, to keep the gardens from looking identical, new cultivars of some currently existing Pennock plants will be used, including *Kniphofia* 'Orange Crush' and 'Cobra', *Echinacea* 'Tiki Torch' and 'Sundown', and *Symphyotrichum* (formerly *Aster*) *laevis* 'Bluebird'. There will also be a few new plants, including *Acanthus* 'Summer Beauty' and *Cistus purpureus*.

In the design, there is a great deal of repetition of plant forms. Along the front border of the garden are various cultivars of Daylilies and *Kniphofia*, where their flowing mounded form will mimic the water in the fountain. Two plants with similar leaf texture and form are *Iris* and *Crocasmia*, and they will be planted at regular intervals in the large bed.

In the midst of the design, it became apparent that many of the plants selected had the same grass-like leaf shape and texture. As a contrast, *Acanthus* will be planted because of its bold, dark glossy green foliage. The rounded, bushy form of the Asters will also help to break up the monotonous grassy texture.

Since the microclimate of the Marble Fountain Garden is so warm, some unique plants will be attempted in this area. One such plant is *Cistus purpureus*. Typically a zone eight shrub, purple rockrose has large, showy purple flowers throughout summer. It can tolerate drought but not severe cold, so hopefully it will be sheltered enough to survive and flourish in this microclimate.

Other important plants selected for the Marble Fountain Garden are annuals. Since the goal of the garden is to enhance color, these plants will provide this desired effect all summer long. Some of the annuals selected are *Zinnia* 'Profusion Apricot', *Impatiens* 'Mango Tango', and *Solenostemon* 'Sedona' and 'Dark Star'.

SITE PREPARATION AND INSTALLATION

Due to the construction damage on the site, the planting beds needed to be re-graded. This was done in the fall, and the process involved hauling in soil, tamping it down, and raking it out. It has had the entire winter to settle even more, so it will be ready for planting this spring. The plant material has recently been ordered; extra plants were purchased so this garden will have a stronger impact this first year. But as they mature and grow, many of the plants will have to be divided or moved to make room. Once all of material arrives we will begin planting as soon as possible, and then a layer of mulch will be applied to the surface of the soil. The official opening day for this garden will be May 23, 2007.

CONCLUSION

While the Long Fountain and Marble Fountain Gardens have been included in the same construction and restoration project, the design concepts of each are really quite different from one another. While the Long Fountain aims to calm and sooth, and Marble Fountain is meant to be vivid and exciting. The axis of the slope below the Orange Balustrade is completed once these two gardens are finished. This gives the area a more unified look. Its conclusion also fulfills the goals of the 1995 Strategic Plan, which is a great achievement for the Morris Arboretum.

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TABLE 1: PLANT LIST FOR LONG FOUNTAIN GARDEN

Name	Bloom Time	Height (Feet)	Color
<i>Hypericum frondosum</i> 'Sunburst'	May - September	2 ft	Golden Yellow
<i>Lindera salicifolia</i>	Foliage Effect	8 - 10 ft	Bright green in summer, brilliant yellow and orange fall color
<i>Syrina</i> 'Bailina' (Thumbelina™)	Spring	5 - 6 ft	Medium pink buds, light pink flowers

TABLE 2: PLANT LIST FOR MARBLE FOUNTAIN GARDEN

Perennials	Bloom Time	Height (Inches)	Color
<i>Acanthus</i> 'Summer Beauty'	May-June	30"	Purple/Dark green foliage
<i>Agastache</i> 'Black Adder'	July- October	24-36"	Velvet blue
<i>Agastache aurantiaca</i> 'Apricot Sunrise'	June-October	24-36"	Clear apricot
<i>Crocsmia</i> 'Emily McKenzie'	July-August	30"	Orange
<i>Crocsmia</i> 'Meteore'	June-July	18-24"	Red-orange
<i>Echinacea purpurea</i> 'Tiki Torch'	July-August	24-32"	Orange
<i>Echinacea</i> 'Sundown'	July-October	30-36"	Orange-rose
<i>Echinacea</i> 'Sunset'	July-August	30-36"	Rosy-orange
<i>Geranium pratense</i> Victor Reiter Jr.	May-July	24"	Dark lilac
<i>Geum</i> 'Borisii'	May-July	10-12"	Warm orange
<i>Hemerocallis</i> 'Apricot Sparkles'	June-Sept	15"	Deep apricot
<i>Hemerocallis</i> 'Hot Ember'	July-August	30"	Orange-red
<i>Hemerocallis</i> 'Woodside Amethyst'	June-July	30"	Lavender
<i>Iris sibirica</i> 'Caesar's Brother'	June	24-36"	Velvety-blue
<i>Kniphofia</i> 'Cobra'	June-July	24-36"	Tangerine
<i>Kniphofia</i> 'Orange Crush'	June-July	24-36"	Orange
<i>Lychnis arkwrightii</i> 'Orange Gnome'	June-July	6-8"	Orange-red
<i>Symphyotrichum laeve</i> 'Bluebird'	Sept-October	36-48"	Medium violet-blue
<i>Yucca</i> 'Tiny Star'	Foliage Interest	5"	Creamy gold
Grasses	Bloom Time	Height (Feet)	Color
<i>Pennisetum alopecuroides</i> 'Cassian's Choice'	August-October	2-3'	Golden-orange fall color
<i>Calamagrostis x acutiflora</i> 'Karl Foerster'	May-October	5-6'	Pinkish-purple fading to gold in fall
<i>Cortaderia selloana</i> 'Pumila'	August-October	3-4'	Creamy white
Annuals/Tender Perennials	Bloom Time	Height (Inches)	Color
<i>Alocasia cucullata</i>	Foliage Interest	36"	Shiny green foliage
<i>Calibrachoa</i> 'Caltrablupu'	June-Sept	5-8"	Deep plum
<i>Canna</i> 'City of Portland'	July-October	48-60"	Coral/Apricot

<i>Canna</i> 'Phaison'	July-October	48-60"	Shocking orange flowers, purple striped foliage
<i>Impatiens</i> 'Mango Tango'	May-Sept	12-24"	Light orange
<i>Solenostemon</i> 'Dark Star'	Foliage Interest	12-18"	Dark purple foliage
<i>Solenostemon</i> 'Rustic Orange'	Foliage Interest	12-18"	Bright orange foliage
<i>Solenostemon</i> 'Sedona'	Foliage Interest	12-18"	Orange-red foliage
<i>Zinnia angustifolia</i> 'Apricot Profusion'	June-August	12-18"	Peach

Shrubs	Bloom Time	Height (Feet)	Color
<i>Buxus sempervirens</i> 'Dee Runk'	Foliage Interest	4'	Dark green foliage/Conical shape
<i>Cistus purpureus</i>	June-July	2-3'	Dark pink/Light purple