

CHAPTER 6: THE DESIGN

*What is this mighty labyrinth – the earth,
But a wild maze the moment of our birth?
“Reflections on Walking in the Maze at Hampton Court”
British Magazine, 1747 (Shields, Larry’s Party)*

Today, part of the history of Shuter’s Hill is still visible from the George Washington Masonic Temple. Looking north from the observation tower one has a bird’s eye view of the entire site. Visible on the right (northeast) side is the excavation of the 18th century laundry. To the left northwest side one can see the partial outline of Fort Ellsworth. Despite the fact that the entire top of the hill was graded and leveled during construction of the Memorial, the old fort, outlined by the nitrogen-saturated dark green grass, emerges every spring like a ghost from the past to remind us of the events that took place there before we were born. How long this earth will continue to reveal the past is impossible to say, but the design honors the memory of this event and leaves this grassy space intact.

These two spatial remnants of the 18th and 19th century become the focal points for an elliptical double wall which defines the boundary of site for the cemetery. A massive, grey granite (Barre-Grey) retaining wall rises up from the uneven land in an oval enclosure walling in the past and the future of the site. A second, slighter granite (American Black) wall parallels portions of the outer wall 10 feet away. Within these walls, a granite and earth maze spirals around a deep body of water, flickering like an iris around its pupil. On the northwest side, the fort continues to stand guard against invasion, while the building on the northeast side becomes a funnel between the living and the dead. The design for the cemetery is a walled citadel. (see Appendix A)

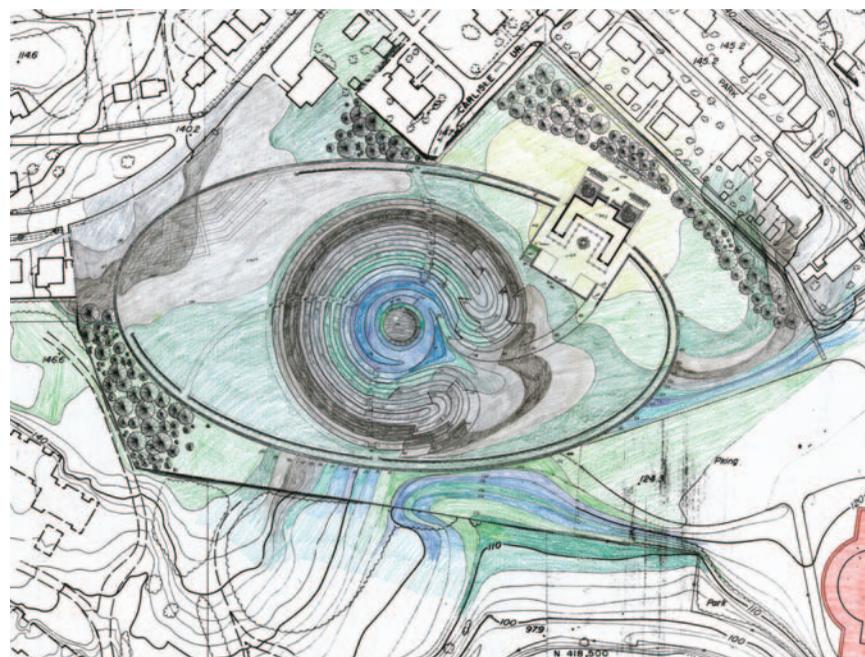


Fig 6.1 Topography of designed site



Fig 6.2 Topographic model of site



Fig 6.3 Model of cemetery design on site

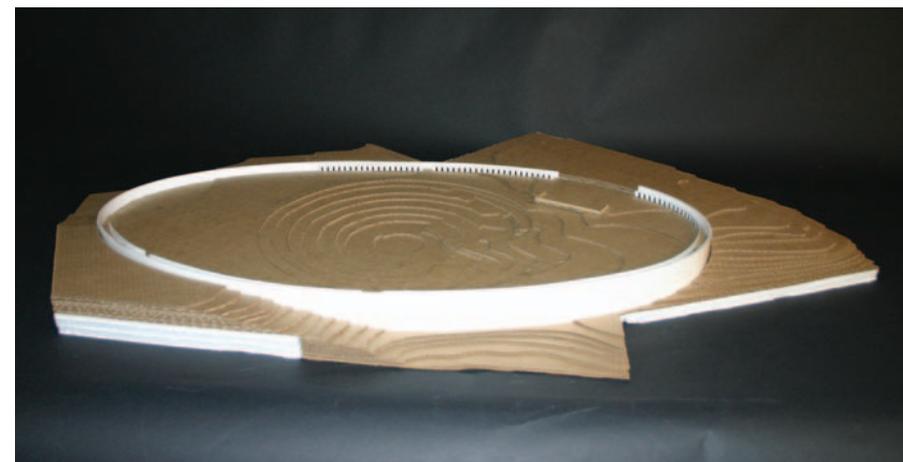


Fig 6.4 Model of cemetery design

The outer perimeter of the property, defined by the chain link fence and the parking lot, is angular and irregular, and contrasts severely with the curves of the elliptical retaining wall. Occasionally, the wall briefly coincides with the perimeter of the site while in others it is separated by over 200 feet. This area between the wall and the property line of the site is a transition zone that buffers the living from the dead. Eastern white pines (*Pinus strobus*) are planted on the north, east and west sides of the property to provide year-around screening for the residential neighbors. The pines symbolize longevity and everlasting life and should reseed themselves, so that in time the pine groves will be populated with all sizes and ages of trees. The northwestern portion of the transition zone is planted with ginkgos (*Ginkgo biloba* 'Princeton Sentry'). Some of the ginkgos are espaliered on the outer and inner surface of the retaining wall and represent forces attempting to enter and/or retreat. The southern portion of the transition zone, facing the parking lot behind the Masonic Memorial, is a grassy slope. In this section the land reaches the lowest point (112 feet in elevation), and the wall rises to its maximum height of 34 feet (from 124 to 158 feet). The outer wall has a rough split finish and projects the power and permanence that is granite rising out from the core of the earth.



Fig 6.5 Espaliered Ginkgos in an alley in Old Town Alexandria

The entrances into the transition zone from the city are a continuation of two existing roads, Hillside Terrace and Park Road. The crunch of the gravel underfoot slows and warns the visitor that one is entering a different space. On one side of the entrance road are the white pines and on the other side is an apple orchard with heirloom apple trees (*Malus pumila* 'Alexander') planted 20 feet on center. An orchard was chosen, because the area around Shuter's Hill used to be scattered with small farms and orchards. In fact, less than a mile away one finds a street named Orchard Street. There are a total of 110 apple trees, 31 on the north side of the building and 79 on the south side. This is a working orchard and the trees represent a fruitful life. Since parking is provided amongst the apple trees, the limbs are kept pruned and the fruit promptly harvested in the fall. The entrances are not gated and one can enter or exit from either one. A six-foot high yew hedge between the pines and property line on the northern and eastern border hides the parking lot from the residential neighborhood.



Fig 6.6 Design in plan

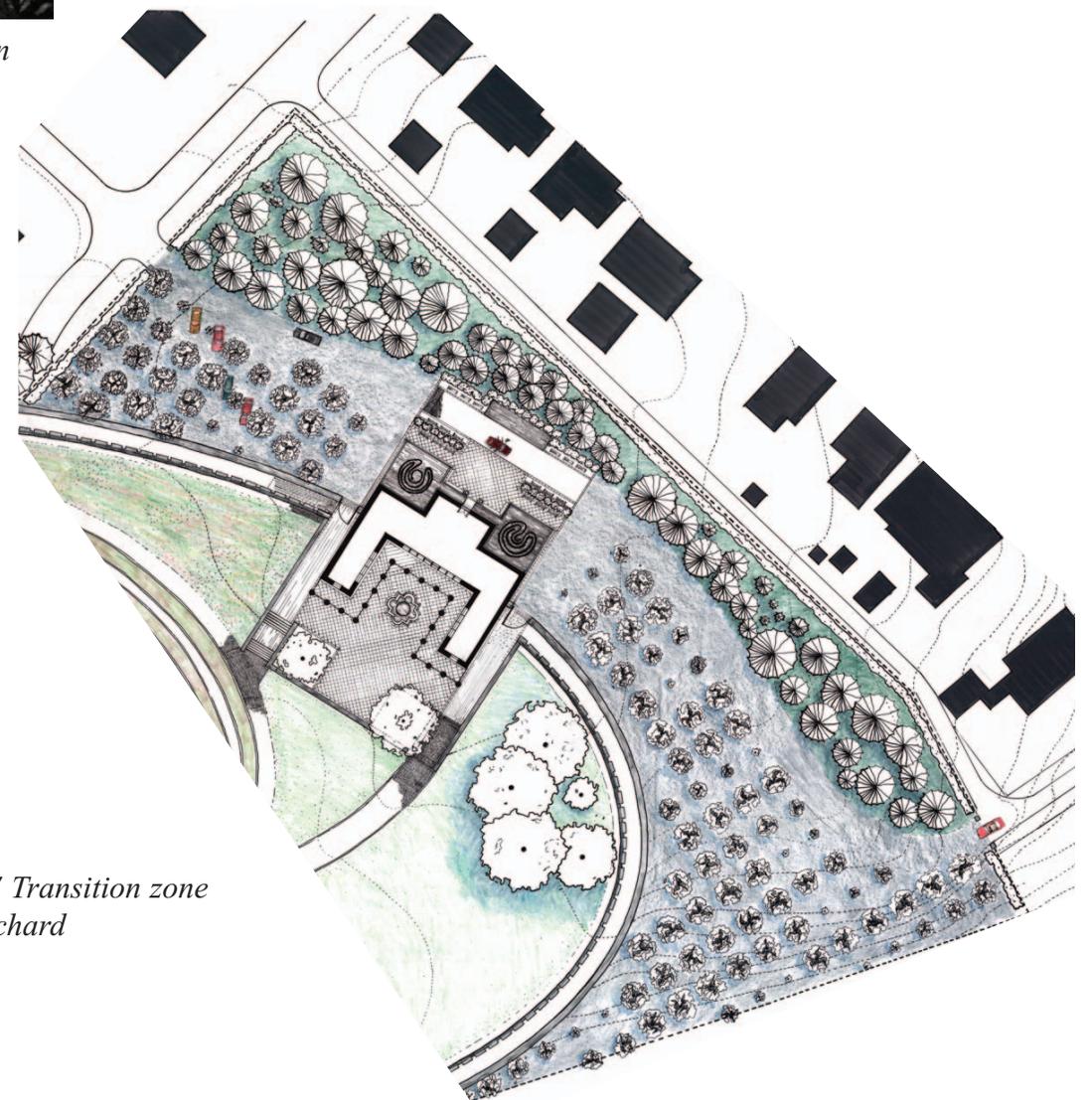


Fig 6.7 Transition zone and orchard

A mourner driving in from the Hillside Terrace entrance in the north, hears the transition from gravel to grey porphyry cobbles that signals arrival. On the right is a grey granite building and the arrival court, paved with reddish purple two-foot square porphyry pavers set on the diagonal with a one-foot wide border. Teak benches provide ample seating for the mourners while they congregate before entering the cemetery. The shallow pools of water on either side of the footbridge to the door are 30 feet square and the connecting canal of water is five feet wide and 40 feet long. The grey granite (Barre Grey) strand of the maze rises just above the surface of the water in the left pool and the second darker grey (American Black) strand emerges from the pool on the right.

On the opposite side of the road, another pool (10x40 feet) is visible, giving the illusion that the road crosses a body of water, when, in fact, this is a separate pool entirely. The design calls for the planting of 24 large mature English boxwood (*Boxwood sempervirens* 'Suffruticosa') framing the shallow pool on three sides, and an additional planting of 14 boxwood in the arrival court. On either side of the five-foot wide path to the front entrance door, one finds a shallow, two and one-half foot wide brass basin on a granite pedestal that holds wood. These may be lit by the mourners as a symbolic lighting of the pyre before burial or scattering of ashes.

The double doors of the building lead the mourner from the outer court through the interior and out onto the covered loggia, which shades the back. This 10-foot deep loggia creates a 40 by 40-foot open space which contains a white marble pool in the center. The pool and eight-foot circular water table in its center are located above the foundation of the 18th century laundry, thus reflecting the past with more water. The terrace continues on out 50 feet to the three-foot high granite retaining wall that overlooks the entire cemetery. From here one can look to the left to the five tulip poplar trees (*Liriodendron tulipifera*) that frame the Masonic Memorial, down to the burial maze, the willows and the well, back up to the scatter meadow on the left, the outline of the fort, the 20 rows of ginkgos and to the second scatter meadow on the right.

The drop from the top of the terrace to the water surface of the well is 30 feet down. On either side of the viewer on the terrace are the planting beds for two American beech (*Fagus grandifolia*) trees, each a 30 by 30-foot square, that include the retaining walls that embrace two sides of the squares. One beech tree is always 50 years older than the other, but never more than 100 years old. They represent sudden death and provide shade for visitors on the terrace. A 20-foot wide path between the trees and the loggia square lead off the terrace onto the side avenues. The entire terrace is paved with two-foot-square pale red porphyry pavers set on the diagonal and bordered by one by two-foot pavers of the same material.

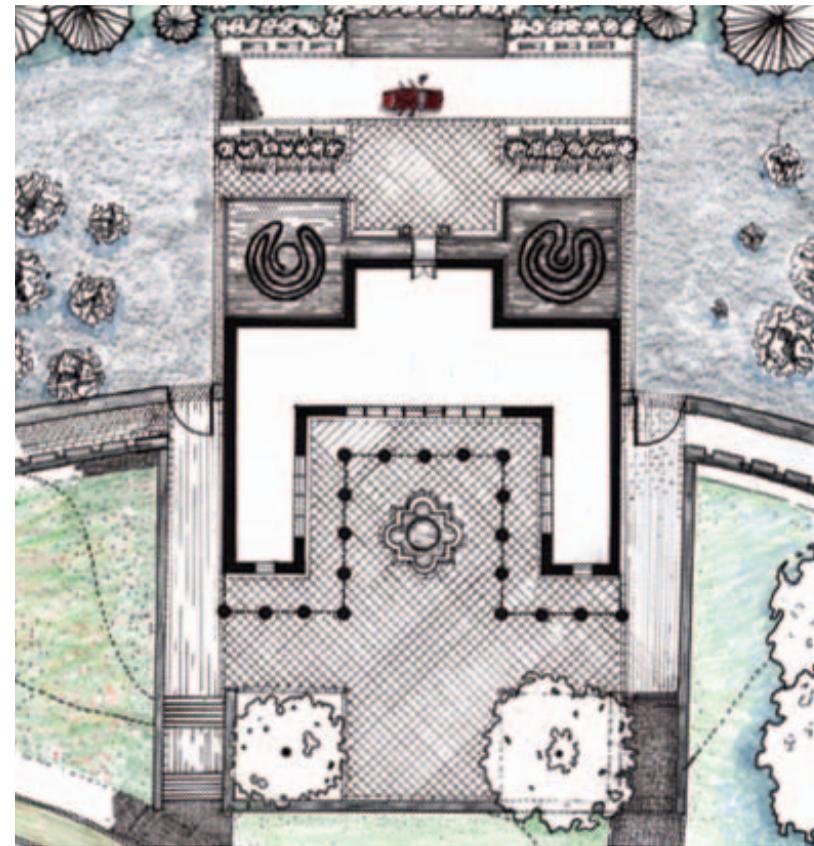


Fig 6.8 Building and terrace

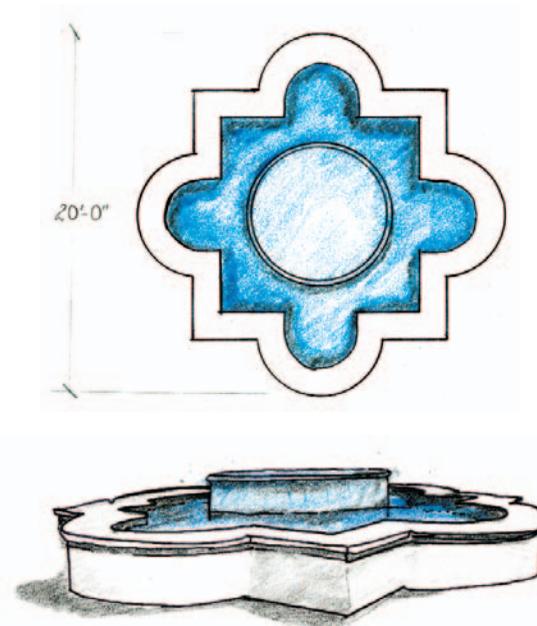


Fig 6.9 Pool plan (above) and elevation (below)

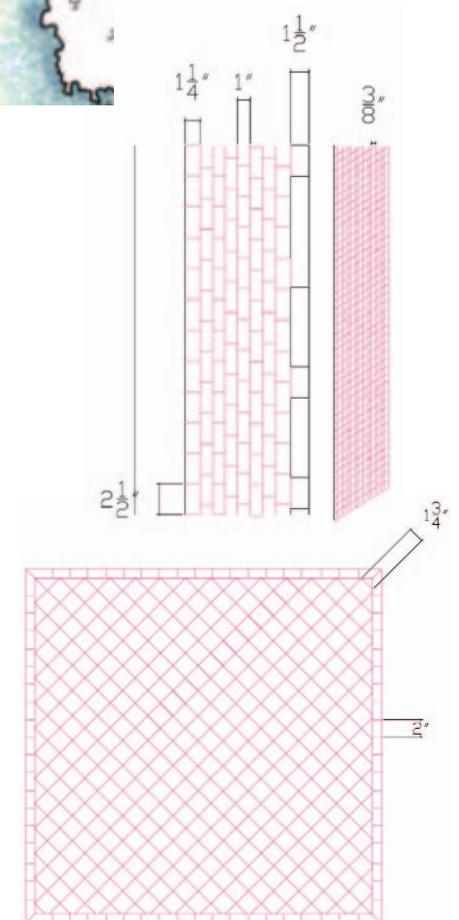


Fig 6.10 Paving pattern of walkway (above) and terrace (below)

Another approach to the cemetery is from the large side gates that are normally kept closed. On either side of the building are 12-foot wide gates, one for each side that open on wheels and, like angel wings, fold back against the wall of the building. The avenues on either side are 15 feet wide and are paved with a running bond pattern of eight by four inch cobbles. The southern gate avenue is level until it reaches the beech tree and passes the side entrance to the terrace, at which point it slopes five percent, all the way to the well in the center of the maze. Maintenance vehicles would use this path as well as persons who do not wish to use steps. The paving changes to four by four inch cobbles when the avenue begins its descent. The northern gate avenue stays level until it reaches the beech tree and then one encounters two sets of six steps each. The granite wall on the outer side of the paths is three feet high and ends at the end of the terrace.

Once through the gates, it is possible to turn and walk the entire perimeter of the cemetery between the two elliptical walls. The walkway is 10-feet wide, with 18-inch deep and six and one-half foot long granite blocks for seating attached to the inner wall, making the walking width effectively only eight and one-half feet. The paving consists of purple reddish porphyry pavers one foot wide and of random length in a running bond pattern and bordered by pavers that are 15 inches wide. There is a two and one-half foot wide portal every six and one-half feet that leads directly onto a four-foot wide path of cobbles that parallels the elliptical wall. The nine-foot high and two-foot deep inner wall is made of blocks of the darker grey granite rough sawn on the outside and smooth and polished, therefore much darker, on the inside. The outer wall is made up of rough sawn light grey granite blocks that taper from four to two and one-half feet in depth at the top. The height of the outer wall from the inside walkway is 14 feet. The top of the wall steps down four inches every so often to adjust to the grade change of the inside walkway. The grade of this path varies from five percent to level and both walls are stepped to reflect these changes.

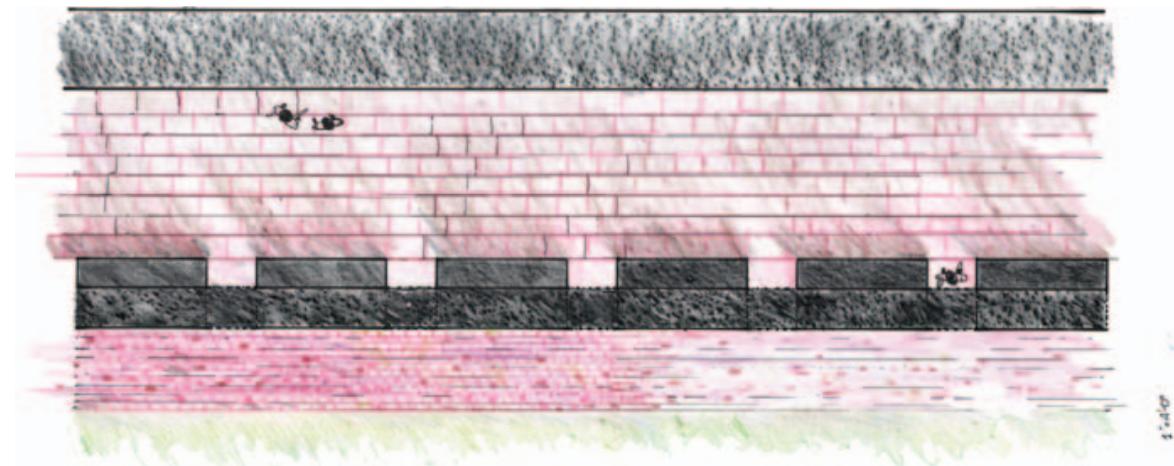


Fig 6.11 Plan of walls and walkway

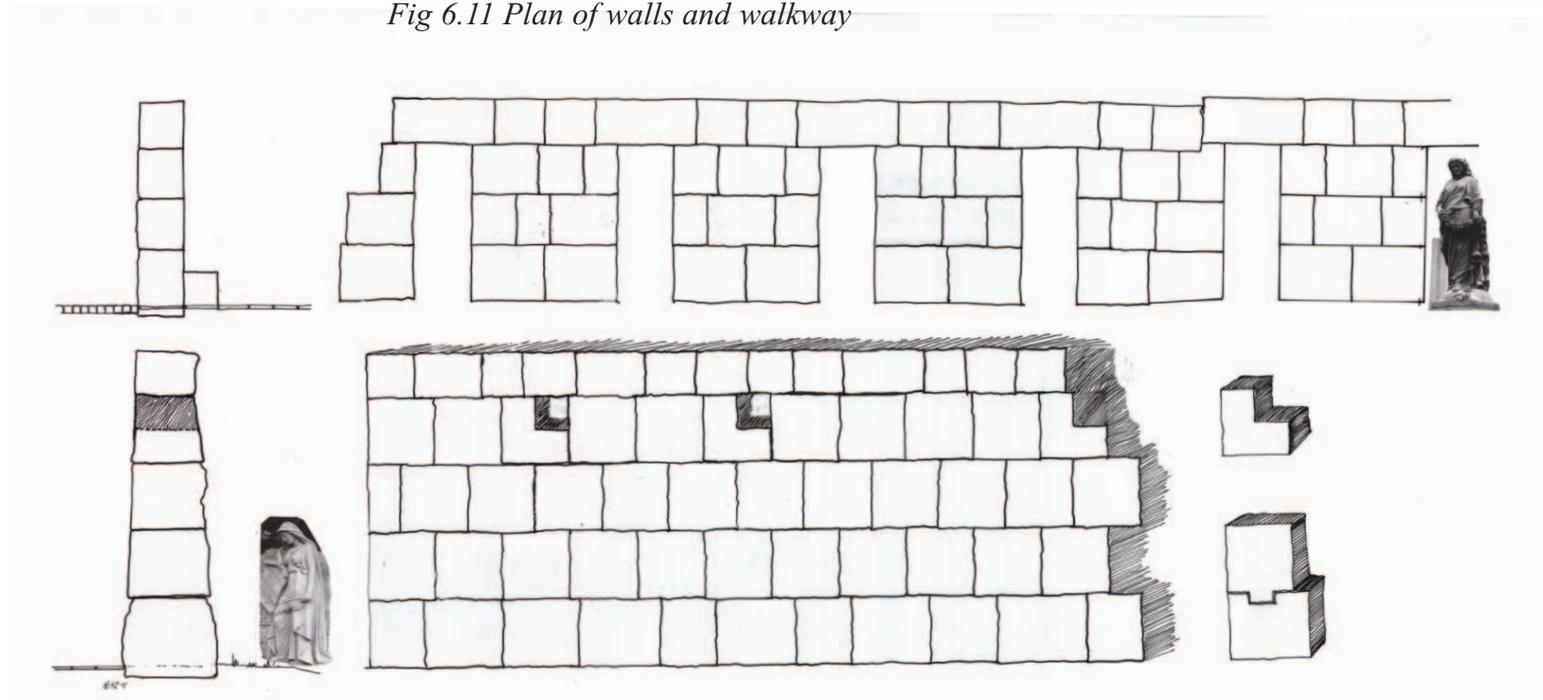


Fig 6.12 Elevation of outer and inner wall

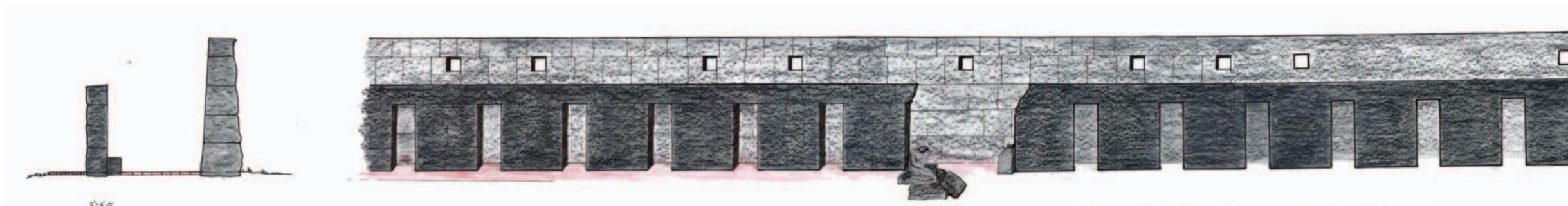


Fig 6.13 Inner and outer wall

The solid grey memorial outer wall encloses the cemetery and becomes, in this design, the permanent and collective tombstone of all the people buried in the cemetery. The names of the dead are consecutively inscribed on the smooth inner face of the granite wall, beginning two feet above the floor and moving counterclockwise. The names and dates wind around the elliptical wall all the way to the top for as long as time and space permits. The inner elliptical wall provides additional room for names.

The granite of the inner wall has a rough split finish on the outer surface and side walls of the portals. The inside surface of the inner wall has a sawed finish and looks much darker. The inner wall consists of five sections that parallel the outer wall. As these walls approach the paths to the maze the construction deteriorates and the blocks of granite are arranged haphazardly on the ground as if time had created a ruin. This is a reminder of the fragility of a material even as hard as granite in the face of weather over time. This design element also denotes a larger exit, since the inner wall is perceived more as a row of wide columns interspersed by narrow exits.

A visitor to the cemetery can sit against the inner wall on the granite blocks attached to the wide columns and look at the rows of names engraved on the opposite wall. He can leave the space at any exit and continue to walk on the narrow, outer four-foot wide walkway or cross over onto the grassy paths that meander around the scatter gardens. The entire cemetery is accessible on foot, though the experience underfoot will vary depending on the path one chooses to follow. The narrow path is rough, yet between the walls, the path is smooth. Both end abruptly when one approaches the fort and grove of ginkgos. Here the path starts out as grass, turns into gravel and then reverts back to grass before joining up again with the wall paths. The experience is that of going from soft and quiet to the loud crunch of marching feet.

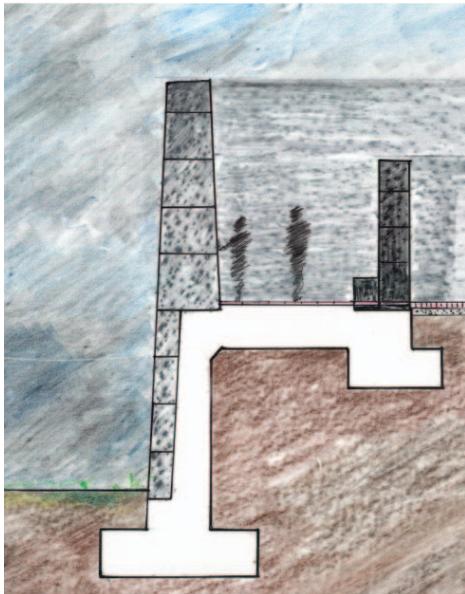


Fig 6.14 South section of ellipse

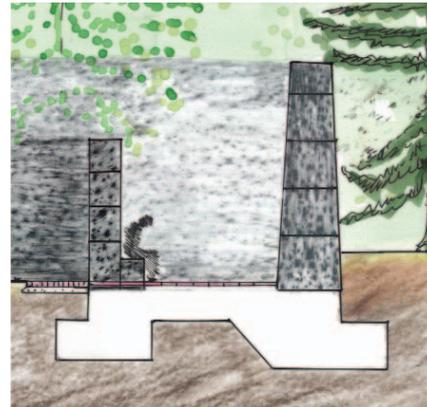


Fig 6.15 North section of ellipse

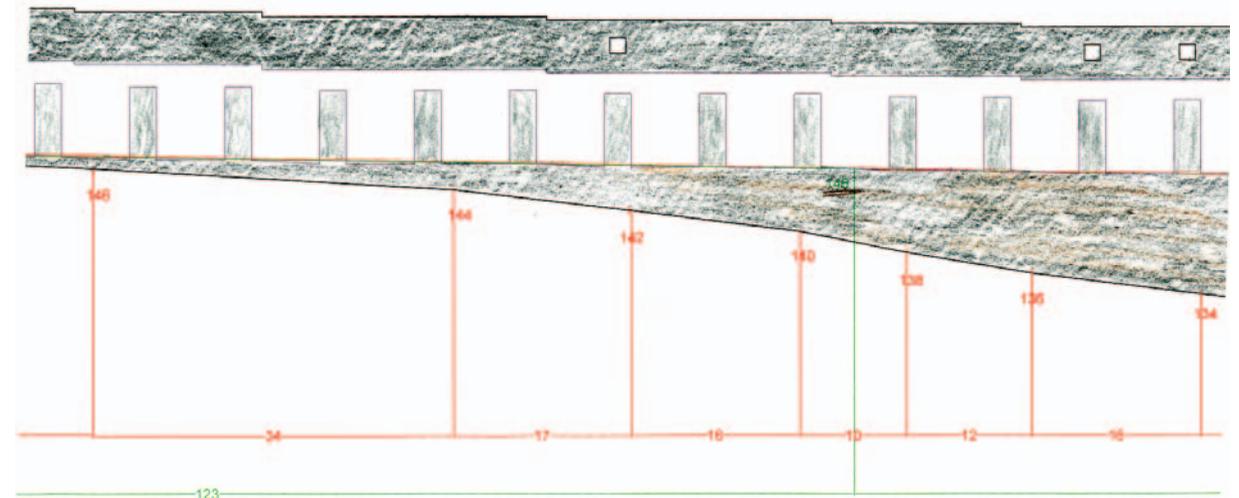


Fig 6.16 Outer wall hugs the ground

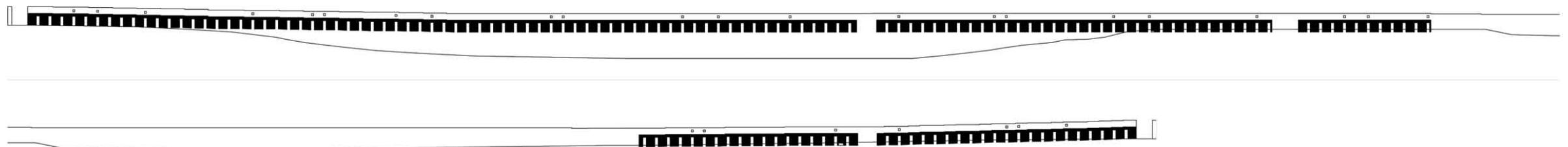


Fig 6.17 Elevation of walls around ellipse

The Union forces stationed at Fort Ellsworth expected any invasion from the Confederacy to come from King Street or Duke Street (Little River Turnpike) and their defenses were set up to counteract this attack that never took place. Like those forces the grove of Ginkgos is divided into 2 sections of 10 rows apiece. One section is perpendicular to King Street and the other to Duke Street. Every row is planted 20 feet behind the other row and every tree in a row is planted on a 10-foot wide grassy strip, separated by a five-foot wide gravel path. The gravel paths converge into five chevron shapes. Three of these paths become trenches that slope down to five feet in the center where the visitor can experience the sensation of earth as cover. This area of the cemetery will provide dappled shade at all times of the day, and chairs will be available for individuals who wish to follow the shade or sun and sit down. From this elevation, which equals that of the terrace, the viewer can look over the outline of Fort Ellsworth, down to the maze and back up and over to the entrance of the cemetery.

There are two small wildflower meadows for those mourners who wish to scatter the ashes directly onto the earth. The north meadow is reached from the elliptical walkway on the north side going counterclockwise from the building. A four-foot wide mulched path winds its way around the meadow and connects the walled walkway to the walk around the maze. After two years this meadow will be abandoned and the earth left fallow. During this period, mourners will scatter ashes in the second, slightly larger wildflower meadow on the south side of the maze. After an additional two years, the soil of the north meadow is tilled under and a new wildflower meadow is planted. A new path will take a different circuit around the meadow. Alternating the use of the north and south meadows allows for restoration of the soil and renewal of the wildflowers.

The largest element in the cemetery is the burial maze. The maze used here is adapted from the classical seven ring labyrinth design that has been in existence for thousands of years. It consists of seven paths and eight concentric walls. Possibly the world's oldest surviving seven-ring labyrinth was found carved (circa 2500 BC) on a rock at Luzzanas in Sardinia (Fisher & Gerster, 12). The classical seven-ring labyrinth has been found all over the world, in Italy, Greece, Egypt, India, Britain, Scandinavia and America. It is not clear if the design sprang up independently amongst these different cultures or if knowledge of this classical design was memorized and transmitted by seafaring travelers, but it is clearly universal. There are many different myths and traditions associated with the classical labyrinth, including that of reincarnation.

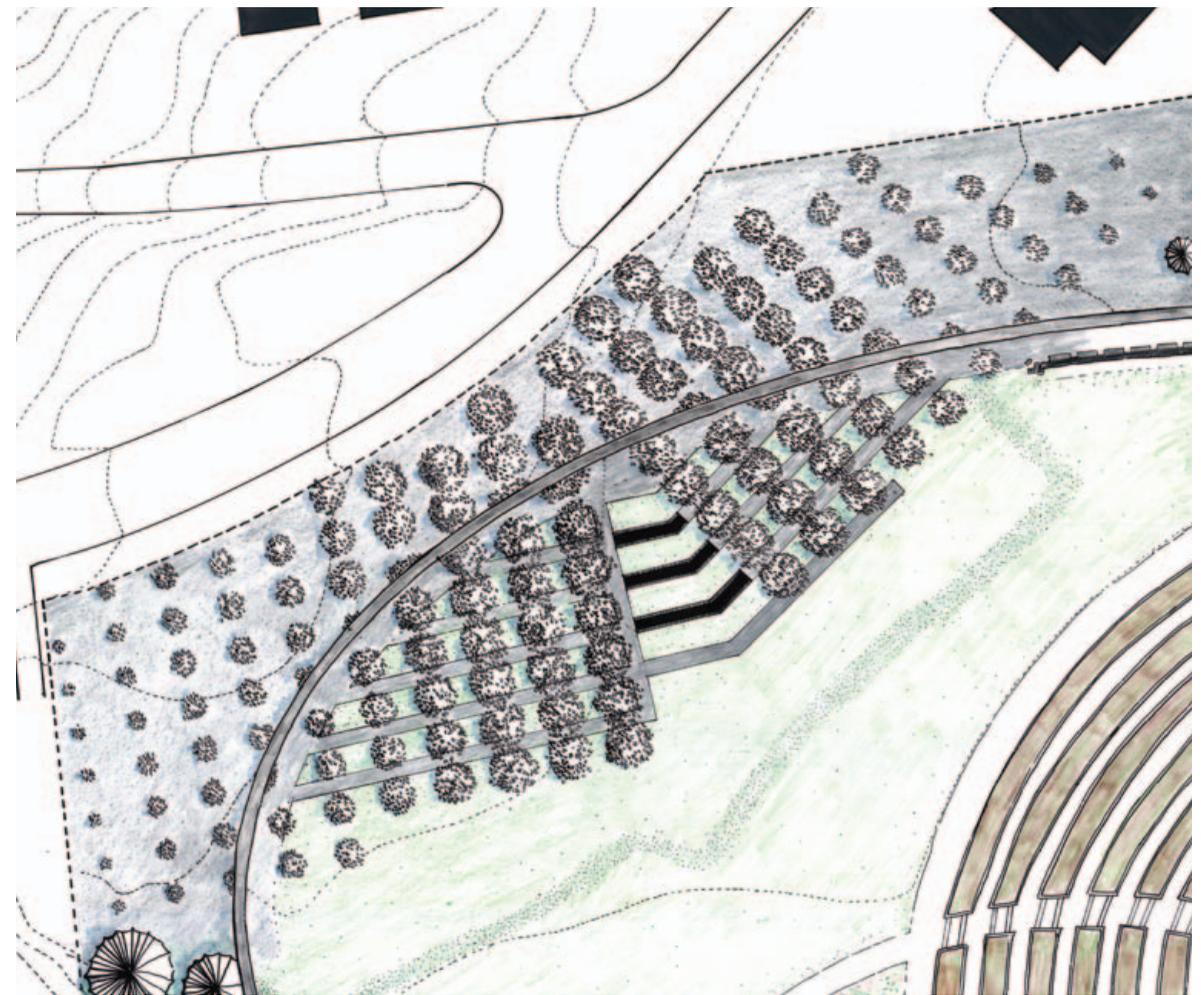


Fig 6.18 Ginkgos



Fig 6.19 Time has seen much

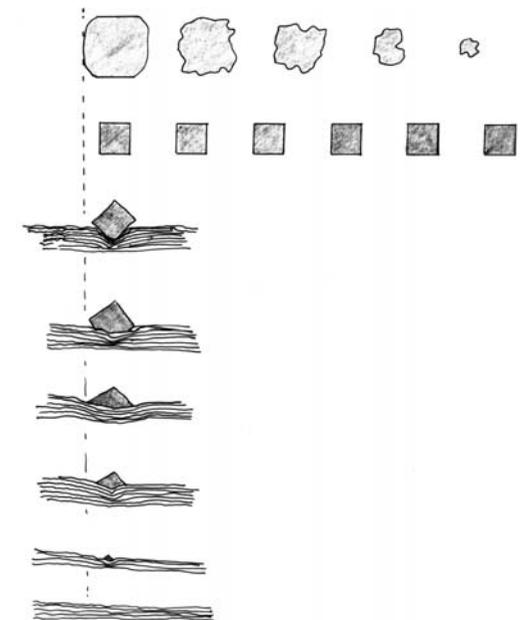


Fig 6.20 Motion studies

The labyrinth in the cemetery consists of two 10-foot wide loops constructed of granite and earth. This is a unicursal maze, which means that there is a single smooth path without any junctions. Like all mazes, this maze makes the most sense when it is viewed from above. The design is meant for movement and compels the mourner towards the final destination and the heart of the maze, which is the well. Most mazes provide only one way out, but here a spiral of paths breaks the maze into 4 sections and allows for easy retreat.

The earth-filled walls of the maze in this design are made of ten-foot wide burial beds. Each burial bed consists of two walls filled with earth. Each burial bed wall is constructed of granite blocks one foot wide, 18 inches deep and four and one-half feet high. Each block is embedded two and one-half feet into the earth on concrete footings and rises two feet out of the ground. Placed one next to the other, they form the sides of the burial bed. Every 50 feet, one of the granite blocks is 18 inches wide and has a hinged brass lid as a cover. This lid opens to reveal a cavity within the granite that holds a plastic container for litter. In addition, the lids are engraved with a roman numeral that provide a way to locate oneself within the maze.

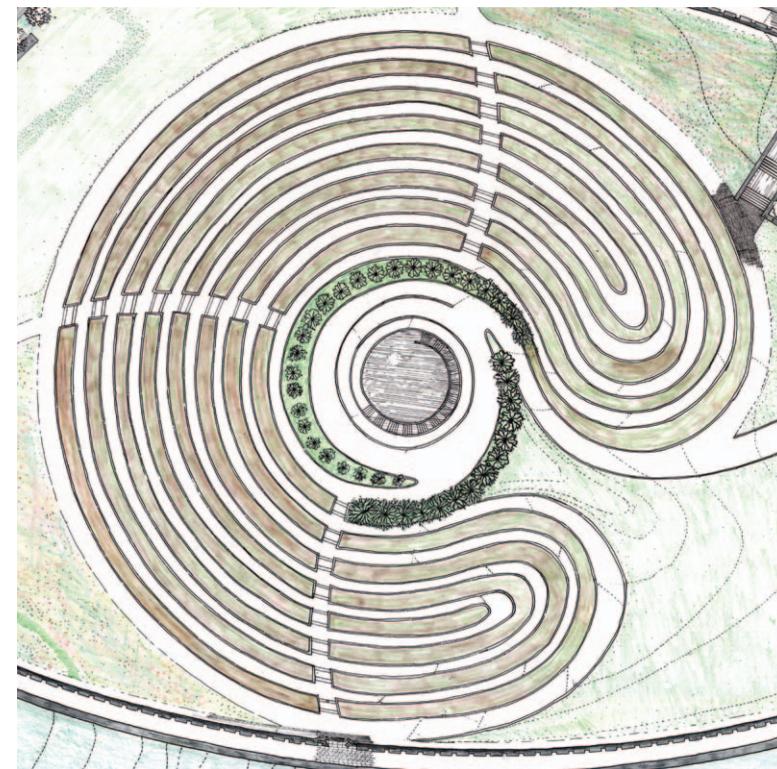


Fig 6.22 The maze

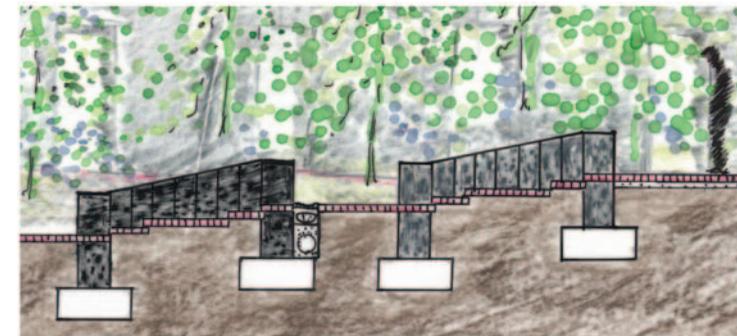


Fig 6.23 Section of burial mound

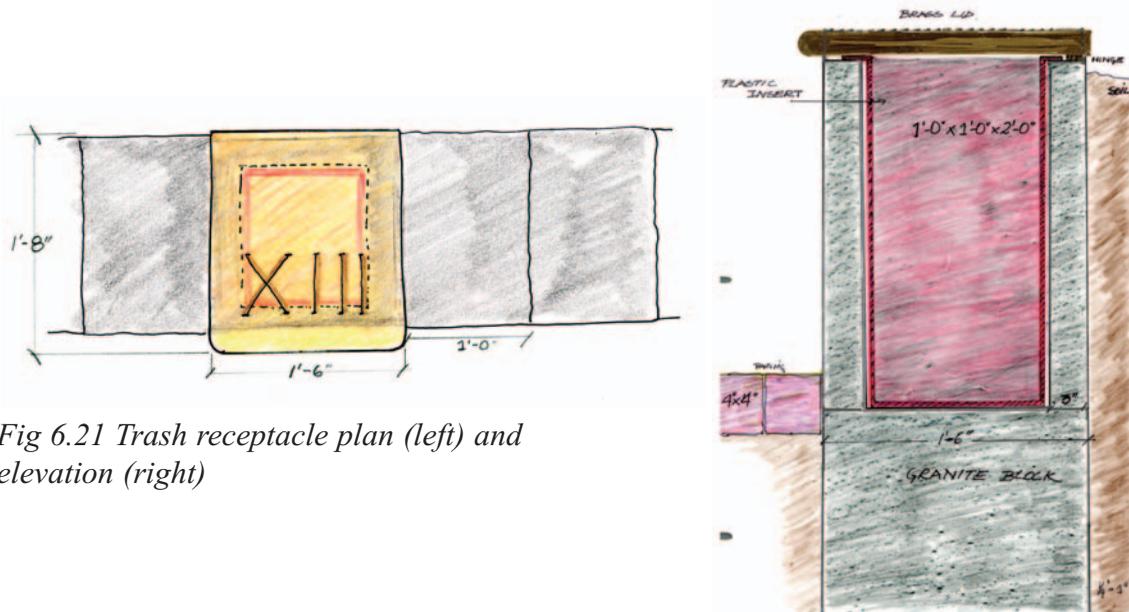


Fig 6.21 Trash receptacle plan (left) and elevation (right)

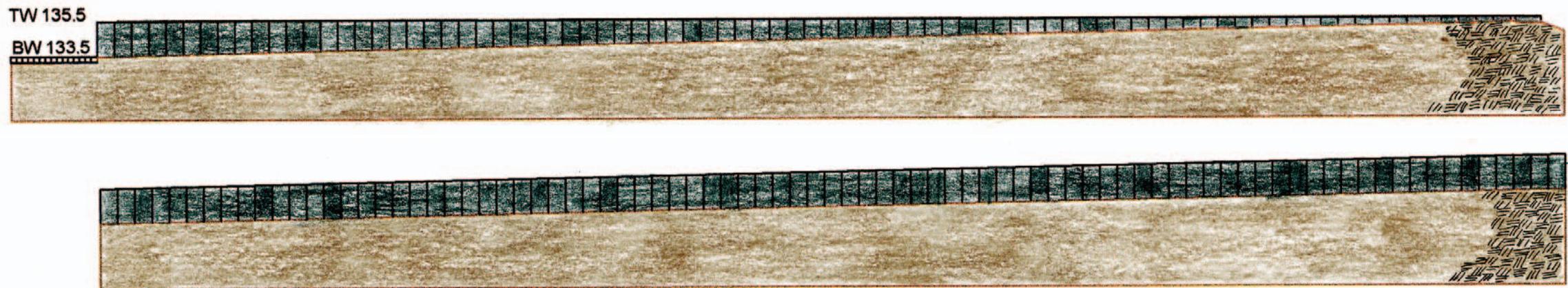


Fig 6.24 Section drawings of sloping burial walls

The paths between the burial beds are five feet wide and paved with four by four-inch porphyry pavers set in sand to allow for shifting over time. Rainwater will run into a continuous eight-inch wide brass trench drain located on the downhill side of all the paths in the maze. Water flows into the trench and is filtered by sand bags lying on a bed of gravel within which lies a perforated, eight-inch diameter pipe. This pipe eventually carries the cleansed water into the well.

The path that surrounds the outer perimeter of the maze and the paths that constitute the spiral are 10 feet in width. The 15-foot wide eastern path which originates at the southern gate of the building joins up with the maze perimeter path and gradually narrows as it descends to the well area, until it too becomes 10 feet wide. The three other paths of the spiral consist of two steps, a four-foot wide landing, two steps, an eight-foot wide landing, and so on, until the bottom is reached. The drop from the top edge of the maze to the well area is 12 feet and each path consists of a total of 32 shallow steps (18 inch treads and four and one-half inch risers). Thus, the maze is divided into four not quite equal sections, which constitute a full cycle for burial.

After the last step, the visitor reaches the area bordered by the willows. The 40 weeping willows (*Salix babylonica*) planted in the depression that surrounds the level area around the well, provide privacy and protection from the rest of the maze. Here the granite walls of the burial beds slope until they meet the level of the ground and become merely an edging of pavers. Rainwater flows from the path directly into the shallow swale and toward the thirsty roots of the willow trees. A design alternative was suggested that would limit the number of willows to 30 and end their planting opposite the last steps of the northern spiral path.

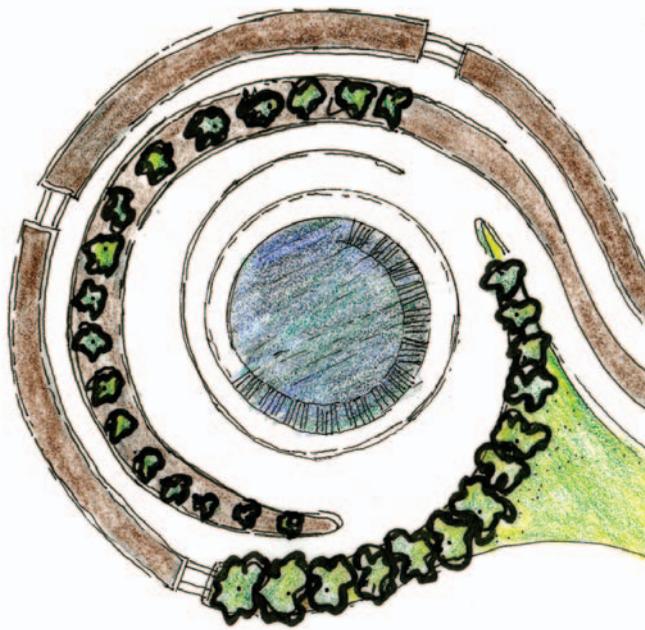


Fig 6.25 Design with 30 willows

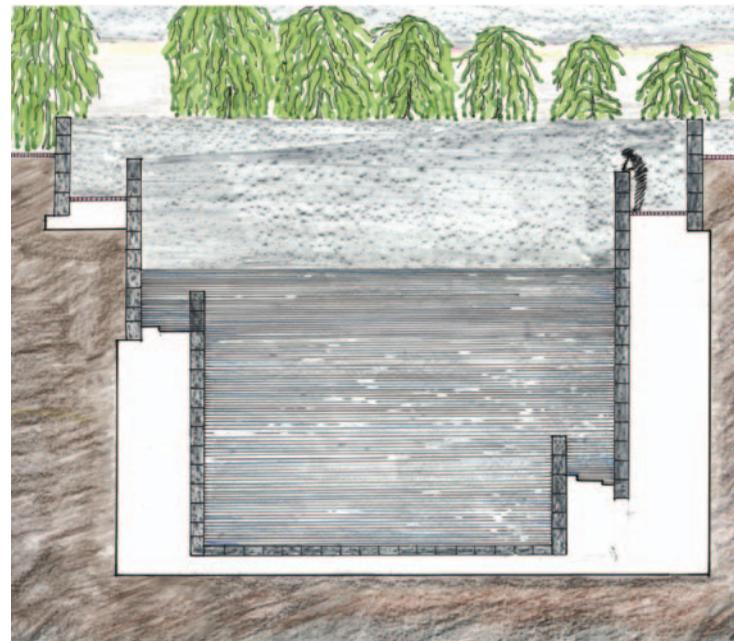


Fig 6.26 Well section

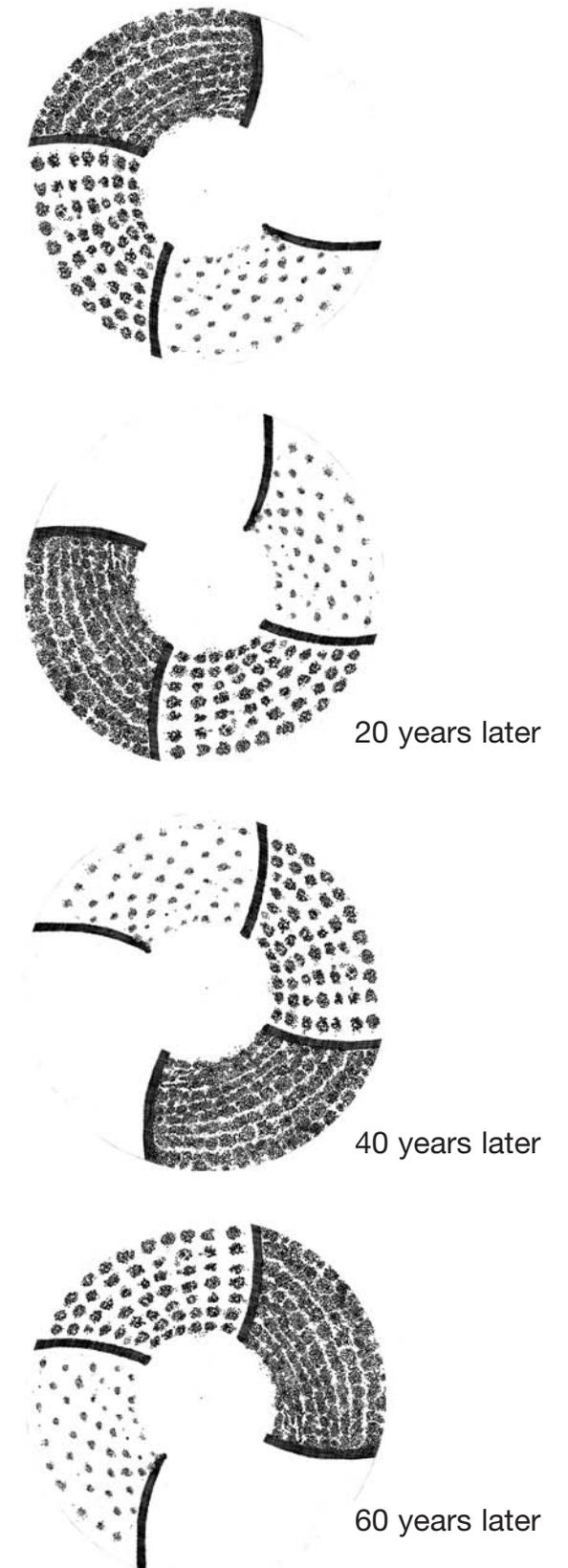


Fig 6.27 Plantings in the maze over time

A 42-inch high granite wall indicates the entrance to the path that gently (three percent) descends eight feet down to the well. The well is 60 feet across at its widest point and 33 feet deep. The entrance is eight feet wide and narrows to five feet as it circles around one and half times until it reaches the steps that go to the bottom of the well. There are 13 sets of stairs, each with five steps (15 inch tread, six-inch riser) and a three-foot landing. The water level in the well varies according to the amount of rainfall and the amount of water removed from the well for irrigation. Under normal conditions, the water level will be a couple of steps below the path. The walls surrounding the well offer privacy to the mourners while they scatter the ashes into the water.

The cemetery gates are meant to close at dusk and allow the night darkness to prevail. The glittering lights of the city frame what is not there. There is lighting for the occasional times when the cemetery opens at night and some lighting is needed. Embedded in the paving of the elliptical walkway are two rows of low-voltage walkover lights set six and one-half feet apart. The stainless steel lights on each row are set nine feet apart and the two rows are evenly staggered to provide an outline of the walkway and walls. The maze path has round steplights set at regular intervals low in the granite burial walls opposite the trench drain. This provides just enough light to allow night processions to follow the maze. The south gate path is the only spiral path that is lit with the same runway lights as the walkway.



Fig 6.28 The site at night