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Therapeutic Garden Design in Hospice Settings: A Case Study Employing the Lake Superior Hospice Garden in Marquette, MI

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A Case Study Employing the Lake Superior Hospice Garden in Marquette, MI

Master's Project

Presented by
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With the latest inclinations to be well,
We should not be sick…
Nature is but another name for health

– Henry David Thoreau

The doctor of the future will give no medication,
but will interest his patients in the care of the human frame,
diet and in the cause and prevention of disease.

– Thomas A. Edison

“Them hath he filled with wisdom of heart,
to work all manner of work,
of the engraver, and of the cunning workman,
and of the embroiderer, in blue, and in purple, in scarlet,
and in fine linen, and of the weaver,
even of them that do any work,
and of those that devise cunning work.”

“y los ha llenado de sabiduría de corazón,
para que hagan toda obra de arte y de invención,
y de bordado en azul, en púrpura, en carmesí,
en lino fino y en telar,
para que hagan toda labor,
e inventen todo diseño.”

– Exodus 35:35

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It is dedicated to the Department of Landscape Architecture and Regional Planning, at the University of Massachusetts Amherst and to my family.
Adapted from the address on May 12, 2017

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May our hearts continue to increase in joy, and may wisdom continue to be the central part of your decision-making process for the wonderful students that you will guide and nurture in the future.

INTRODUCTION

Gardens have been used as places for meditation, relaxation, and restoration through the ages. From the earliest times, gardens were used as sanctuaries and restorative places, providing psychological, spiritual, emotional, and physical health care delivery in Western, Eastern, and Asian societies. In the late twentieth century Roger Ulrich's (1984) scientific investigations showed the tie between nature's positive effects on human health and the ability of patients to recover from surgery faster. This and other scientific research gave rise to the creation of therapeutic gardens in healthcare facilities. Today, therapeutic gardens are designed to meet medical goals through activities known to improve human health—e.g., walking, socializing, massage therapy, etc. The intent is to support the patient's recovery in the medical environment, and to provide positive measurable results (Gerlach-Spriggs & Healy 2009). Conventional wisdom suggests that the most effective therapeutic gardens tend to be designed for a specific patient group, and those surrounding the patient—i.e., medical staff, family members, and care givers. Specific activities can be designed into a therapeutic garden that match the standards of care and therapeutic outcomes defined for a patient group. These may include: walking (physical therapy), planting (horticulture therapy), smelling (aroma therapy), viewing flowers and plants (chromotherapy, cognitive therapy), and all other therapeutic treatments aided by nature. Since a therapeutic garden often targets the deficits of specific patient groups, they oftentimes are not designed alike nor do they follow the same guidelines. This project identifies tests the idea that therapeutic gardens should be designed for the primary patient population and/or the secondary support personnel that care for a patient; it uses a hospice garden to test whether this notion of unique design is appropriate within the broader specialty area of therapeutic garden design.

This professional paper is an exploratory study that examines the distinct benefits that a garden provides under hospice conditions. Unlike more traditional therapeutic gardens, the primary user group—i.e., the patient—quickly fades from the program elements, leaving three distinct secondary populations to being served—medical staff, family members, and care givers. Understanding the desired outcomes for these three populations helped the author broaden her knowledge and appreciation of the relationship between, and among, health care delivery, therapeutic garden goals/objectives, and standard treatment protocols. It is for this reason that this study attempted to define when standard therapeutic garden design protocols and goals are appropriate, and when the designer must go to a broader set of goals and objectives that address the health and wellbeing of a secondary "patient" group—i.e., those medical staff, family, and care giver who have been left behind.

This paper is organized into four parts—a literature review, methodology section, data findings, and a conclusions chapter. The literature review section presents a general history of garden use in the treatment of patients and contemporary thoughts on gardens in health care delivery. It also discusses current needs for therapeutic gardens in hospice care, since hospice is the final stage in palliative care delivery. The methodology chapter begins with a typical request for a design project with solution, involving the Lake Superior Hospice Association and their property in Marquette, MI. At that time, a preliminary set of plans were completed, using the typical questions a designer would address with a client. Among the questions to be addressed were

what are the specific characteristic of this hospice; what do we know about its users and their needs in terms of garden program? To broaden out an understanding of hospice environments, this preliminary set of plans were set aside to pursue a second and third phase of inquiry involving this evaluation of four other hospice facilities and their users in order to develop baseline data on the similarities and differences in hospices. It allowed the author to define a broader base of personal, professional and/or therapeutic benefits a hospice garden might provide to its users; it also identified other needs that hospices might have that were different from the Lake Superior case study. The chapter on data findings summarizes the investigation into hospice similarities and differences and is applied to the Lake Superior Hospice (LSH)Association) in Marquette, MI in a final set of plans which can be found in the conclusions chapter.

The paper essentially involved studying the pre-construction condition of a site with a narrow perspective on hospice garden design, which was then followed by a broader investigation of hospice facilities operating elsewhere, and using that data to suggest possible improvements (i.e., a metaphoric post-construction evaluation) in the original design that serves the LSHA more appropriately.

This project will contribute to the advancement of landscape architecture as it continues its transition to an evidence-based profession. Findings from the case study and baseline data comparison was used to create a conceptual framework for decisions affecting garden design that serves patients, patient advocates, and hospice staff, who deal with end-of-life circumstances. The appropriateness of certain design elements under different hospice conditions—structurally, environmentally, managerially, and demographically – must be taken into account. This will provide better design outcomes that can be used to compare and analyze the decisions affecting therapeutic gardens in a hospice healthcare system.

Keywords: Therapeutic Garden Design, Hospice Environments, Primary and Secondary Patients, Improved Outcomes

CHAPTER I. LITERATURE REVIEW

A. General History of Gardens in the Treatment of Patients

The eighteenth-century Romantic movement's revival of pastoralism gave birth and popularity to the therapeutic connection between the nursing and medicine within the hospitals and the gardens. Nature and gardens came to be thought of once more as places of bodily and spiritual restoration (Gerlach-Spriggs et al 1998, p. 16). Importance of hospital architecture and open space was prioritized. New hospital sites had to be well drained, having wide grounds, and abundant air and sunlight (Gerlach-Spriggs et al 1998).
German theorist Christian Cay Lorenz Hirschfeld (1741-1792) wrote a prescription to hospital sitting and hospital garden design, expressing the cultural union between horticulture and medicine:

> Hospitals should be situated outside and away from cities, to allow for garden space. Hospitals should be located away from busy urban areas in a healthy and positive and inspiring location, not in valleys … but on sunny, warm hilltops protected from the wind or on southern slopes on dry soil.
>
> A hospital should lie open, not encased by high walls, not fended in by looming trees. The garden should be directly connected to the hospital, or even better, surround it. Because a view from the window onto blooming and happy scenes will invigorate the patient, a nearby garden also invites patients to take a walk.
> The plantings, therefore, should wind along dry paths that offer benches and chairs. Clusters of trees are preferred to alleys of trees, which through the years will mature and meet at the top so that air will not circulate….
>
> Sad conifers should not be used but trees with light and colored leaves and flowering and fragrant shrubs and flowers. A hospital garden should have everything to encourage a positive outlook; everything in it should be serene and happy. No scene of melancholy, no memorial of mortality should be permitted to intrude. The spaces between the three groups could have beautiful lawns and colorful flowerbeds.
> Noisy brooks could run through flowering fields, and merry waterfalls could reach your ear through shady shrubbery. Many plants with fortifying fragrances could be grouped together. Numerous songbirds will be attracted by the shade peace, and freedom. And their songs will rejoice many weak hearts.
>
> As decorations you could… build seats with roof or a gazebo from which the view is magnificent.

In the nineteenth century in the United States mental hospitals were designed to have great vistas to provide harmony with the views of nature. Under this criteria, the Worcester State Hospital in Massachusetts (1833-1835), showed promising results to its discharged patients. Forty-five percent (45%) went on to live successful lives: they did not commit suicide, become welfare

cases, or require further hospitalization. This success did not last long however. Poor immigrants began flooding the hospitals. Political power responded by building massive institutions like the "pavilion hospital" (Gerlach-Spriggs et al 1993). The fast spread of cross-infections and death among patients began to raise questions surrounding the need of closing all hospitals as a whole. Around this time, John Hopkins (1795-1873) in his deed, gifted a new "free hospital." The new hospital's large surrounding grounds were to be covered with trees and flowers as to "afford solace to the sick and be an ornament to the section of the city in which the grounds are located" (Gerlach-Spriggs et al. 1993, 22). The new hospital building surrounded a central garden and fountain so that the patients could have access to sunshine and fresh air. This fresh air treatment gained the most popularity before World War I, and made the new Johns Hopkins hospital an example for future hospital construction. Nevertheless, new elaborate medical equipment, practices, and pharmaceuticals would soon replace the fresh air treatment. The expenses of land and the heat consuming low-rise pavilion-hospitals were replaced with compact multistory buildings.

In the early twentieth century, hospital gardens disappeared to be replaced with parking and tennis courts for employees and visitors, and landscaping was restricted to entrance beautification. This set the style for hospital design in the post-1920's. In 1949, fifty percent of deaths in the United States happened in hospitals, and by 1995, eighty percent deaths happened in hospitals. In the late 1990's gardens started to bring another embodiment in rehabilitation programs, cancer and AIDS treatment facilities, nursing homes, mental hospitals, and hospices for the dying (Gerlach-Spriggs et al 1998). The value of restorative gardens is portrayed in the early modern works by Oliver Sacks's book (1984), *A Leg to Stand On* and Harold F. Searle's book (1960), *The Non-Human Environment in Normal Development and Schizophrenia*. In the former book, physician Sacks becomes the patient after an incident with a bull while in Norway. Thus, he experiences the adversity that patients experience while in rehabilitation. This allows him to practice medicine with additional compassion and empathy and a view to nature. His experience gives medicine a human level of practice, from what was previously expressed as a veterinary approach by his friend, A.R. Luria. Likewise, Searle's participatory experience with psychiatric patients allows him to associate and understand this group of patients and helps him to further the development of human psyche concepts.

Thompson and Goldin's book (1975) *The Hospital: A Social and Architectural History,* compares the trajectory of different hospital settings and their lack of healing function, and design strategies. It explores the relationship between the environment and the patient's lack of privacy affecting his/her healing progress. These works became cornerstones followed by research of the important relationship between people and nature. Roger Ulrich's ground-breaking medical article, *View Through a Window May Influence Recovery from Surgery* (1984), and Ulrich and Russ Parson's review, *Influences of Passive Experiences with Plants on Individual Well-Being and Health* in Diane Relf's, *The Role of Horticulture in Human Well-Being and Social Development* (1992) are two important benchmark attempts to tie human recovery to environmental conditions. Likewise, Stephen R. Kellert and Edward O. Wilson's, *The Biophilia Hypothesis* (1993), provides scientific data of the beneficial relationship of recovery and nature restoration for patients.

B. Contemporary Thoughts on Gardens in Health Care Delivery

Using gardens in healthcare facilities has scientifically proven their positive benefits on the recovery of patients, staff, and visitors. However there is still more to learn about how, when, whom and in which context, nature can offer benefits (Hartig et al 2014). “With the epidemiologic transition to chronic, lifestyle-related diseases as the major cause of mortality, biopsychosocial explanation came to compete with the biomedical model. Constructs such as “psychological stress” and “social support” came into widespread use with the broader model (Hartig et al. 2014, p. 209).” Creating a multidisciplinary scientific forum for presenting research and new ideas toward improving the quality of hospital design and care is on-going (Ulrich 2001).

Some of the main benefits from viewing landscapes have been identified as: short-term recovery from stress or mental fatigue; faster physical recovery from illness; and long-term overall improvement on people's health and well-being (Ulrich 1984; Ulrich & Parson 1992; Velarde et al., 2007, Hartig et al 2014). A therapeutic garden is designed to produce a given effect and outcome for a defined user group or population as they recover in a medical environment (Gerlach-Spriggs and Healy 2012).

David Sacamano (2009) presented the four types of therapeutic gardens at the Oregon Health and Science University. These types are: restorative, meditative, rehabilitative and enabling. He describes each of these types in terms of focus, program, and purpose in the following lines. “

> A restorative garden’s focus is to heal the psychological and emotional state of patients. It is programmed to help regain homeostasis in a patient/user/group and passively allow the body to regain balance after stressful events. A meditative garden focuses on the psychological and spiritual wellbeing of the patient. These gardens are designed to allow individuals or small groups to quietly reflect and turn their thoughts inward. Rehabilitative gardens focus on the physical, psychological, and emotional stability of patients. They are programmed to parallel the treatment protocols of a target patient population (stroke, brain injury, heart attack). An enabling garden’s focus is the anatomical, physical wellbeing, and psychological stability of patients. It is designed to maintain and enhance the physical condition of a target patient population through programmed activities (muscle strength, range of motion, gross/fine motor skills, coordination).”

Environmental psychology presents the restorative garden as a place that allows an agitated stressed or unable to focus person to return to his/her ideal or normal state. The restorative garden must provide four essential components, “being away (i.e. physical or psychological state), extent (i.e. connectedness and scope, sense of whole other world), fascination (i.e. involvement), and compatibility (i.e. environmental support of intended activities) (Gerlach-Spriggs and Healy 2012).”

As previously stated in the history of hospitals, gardens and nature used to be part of the care given to patients. Studies like Ulrich describe the benefit also given to staff. Patients recovering from surgery who had a natural view had less complains and required less medication; they were

"nicer" to the nurses. Views to nature decreased stress and increased alertness in pediatric nurses (Pati, Harvey, & Barach 2008).

Work overload, family and work-life imbalance, insufficient resources, and excessive administrative duties can lead physicians to burn out and create a state of "mental and/or physical exhaustion" caused by prolonged stress (Quill et al 2014). This happens when physicians place patients' needs first neglecting their own. Exercising in a natural rich environment versus an urban environment can help decrease depression (Mind 2017) and "ruminative thoughts" (Bratman et al 2015). A nature-rich environment can increase memory performance and attention spam (Berman, Jonides, & Kaplan, 2008). Outdoor activity in the morning has proved to reduce unwanted behaviors later in the day and cut the use of psychotropic medication by 40% (Gold 2004). A garden is a place to just be in, it can be therapeutic without the mediation of medical personnel. Gardens reduce stress, through the combination of bird sounds, or water, and nature. A garden should encourage people to socialize, spend desired time alone or with others, stroll, exercise, sunbath or shade use, etc. Finally a garden can be healing for people who are actively engaged in creating and maintaining it (Cooper-Marcus & Barnes 1999, p. 4).

In hospice, working with seriously ill patients can be very emotionally and intellectually rewarding but "the intensity of the work and exposure to human suffering and frailty can increase the risks of burnout and job dissatisfaction (Quill et al 2014)." In hospice the disciplinary team offers mutual support and servicers like psychotherapy to help. Regular exercise, having a hobby and/or having a regular spiritual practice are self-care methods to avoid or manage burnout (Quill el at 2014). A hospice garden offers the opportunity to reaffirm life amidst illness, and stimulation for the senses brought by lush, shaded beauty (Gerlach-Spriggs et al, 1998), "a desired garden is frequently a verdant place, a shaded lush oasis, full of texture and blossoms, with water – dripping splashing, flowing (Gerlach-Spriggs et al, 1998, p. 88)." Clare Cooper-Marcus and Naomi Sachs (2013) provide seventeen hospice garden guidelines (G1-G17) that a hospice garden needs. Nine are *required* general considerations; three *recommended* general considerations; two *required and recommended* visual access guidelines; one *required* physical access guideline; one *recommended* planting guideline; and a maintenance manual guideline. In their book, each guideline has a definition and pictures that go along with the description. These guidelines have been paraphrased in the following table.

Hospice Garden Guidelines Definitions

Required General Considerations		
G1	Familiar landscape	People are comforted by what is familiar. A home-like environment is favorable to both patients and caregivers. The garden design portrays the culture of the place.
G2	Transcendent image	The inclusion of familiar, comforting features balanced with unique elements that are sensitive to the patient culture and yet transcend the common realities of life can ease apprehension of passing from life to death. Objects or spaces that deal with the

		metaphysical (internal personal belief).
G3	Maximize the # of sun-facing rooms	Nature and its elements connect hospice patients to what is beyond their rooms. Abundant sunlight and views into the garden help patients in bed experience nature.
G4	Soothing natural sounds	Natural soft sounds are well received by patients because of their soothing effects and because hearing is the last of the senses to remain before death. Different sources of natural sounds are incorporated in the garden.
G5	Getting away	The design of the garden and its elements (secluded clusters, garden shelter, and gazebo) provides solitude and escape, allowing users to get away from the hospice setting for private conversations, thought, and prayer.
G6	Private garden	The garden has an enclosed garden or a place inside the hospice, a chapel, a viewing room (into the garden) which offers privacy and lets caregivers grieve, pray, and meditate.
G7	First impressions	The arrival experience must be effortless and reassuring. The entrance is visible, the parking close and convenient, and the building softened by appropriate landscaping.
G8	A memorial garden – or not?	Many U.S. hospices employ plaques, photographs, inscribed bricks, or paving stones to commemorate hospice members who have passed away. The garden has memorial elements, benches and a dedicated memorial garden.
G9	Outdoor play for children	Families accompanied by children will be among the visitors. The garden includes play elements, a lawn area, or a playground to provide children with a positive experience.
Recommended General Considerations		
G10	Bird feeders	Bird feeders next to patient windows enable patients and their caregivers to observe wildlife and connect them to the natural world beyond their rooms. Water features attract other kinds of wildlife like chipmunks and squirrels.
G11	Water and wildlife	Wildlife help patients forget about their medical condition. There are water features or bodies of water on site or in the garden to attract wildlife.
G12	Facilities for pets	Interaction with animals is therapeutic. There is shelter (kennels, stables) for pets in the facility, and a place outside in the garden where hospice users can interact with their pets.

G13	Required Visual Access: Patient rooms with access to a semiprivate patio or balcony	A semi-private patio or balcony is provided with clear views to the sky and layers of vegetation. The position of the patient in the room allows them to look outside without having to move. The patients' beds can be rolled outside during a nice day.
G14	Recommended Visual Access: Panoramic view	The topography of the facility allows for panoramic views. This is observed from the patient's room and also from the seating in the garden.
G15	Required Physical Access: A door outside to a patio or balcony	Patients' desire to go outside and feel the fresh air and sun, watch the clouds, and hear wildlife sounds. This allows them to see beyond what is in their rooms. Appropriate exit space and walkways allow patients to be taken outside to the garden or a semi-private patio.
G16	Recommended Planting: Swaths of ornamental grasses and long-lasting perennials	Swaths of ornamental grasses and long-lasting perennials are favored, as well as fragrant climbers and aromatic herbs. Trees and shrubs which move in the wind provide energy. Familiar plants can evoke memories and inspire conversation. A small array of unique plants can intrigue curiosity. Continuity through the seasons is important.
G17	Maintenance: a clear maintenance manual	Whether the garden will be maintained by volunteers or an outside contractor, the garden will need a suitable plan of care to avoid unnecessary changes in the design that would detract from the calming and peaceful nature of the garden.

C. Current Need for Hospice Care

As of 2014, there were about 1.6 to 1.7 million patients receiving hospice nationwide (NHPCO, 2015). When hospice care was established in the United States, 1970s, cancer patients made up the largest percentage of hospice admissions. Today, cancer diagnoses account for less than half of all hospice admissions (36.6%). Currently, less than 25% of all U.S. deaths are now caused by cancer, with the majority of deaths due to other terminal diseases. The top four non-cancer primary diagnoses for patients admitted to hospice in 2014 were dementia (14.8%), heart disease (14.7%), lung disease (9.3%), and stroke or coma (6.4%). From the year 2013 to 2014 there was a 100, 000 increase of patients admitted to hospice (NHPCO, 2015), There are more than 3,200 hospices in the U.S., and another 8,000 hospices in 100 nations around the world (Franklin, 2011). As of 2014, the majority of hospice patients were over the age of 85+ years (41%), and were mostly white (76%). In work by Quill, et al (2014), characteristics of hospice were outlined as such:

- *Hospice focuses on caring, not curing, and in most cases, care is provided in the person's home.*
- *Hospice care also is provided in freestanding hospice centers, hospitals, and nursing homes and other long-term care facilities.*
- *Hospice services are available to patients of any age, religion, race, or illness.*
- *Hospice care is covered under Medicare, Medicaid, most private insurance plans, HMOs, and other managed care organizations (Quill et al 2014).*

Gerlach-Spriggs et al. (1998) describe hospice as a movement between the euthanasia movement (using modern medical knowledge to allow a suffering person to request their own death) and an "unceasing popular search for a personal attitude of fulfillment and serenity, imagined to ensure a comfortable death." Hospice employs techniques of modern medicine to relieve pain, help breathing, stabilize the bowels, and manage the symptoms of the dying (NHPCO 2015). Modern medicine, equipment, and techniques are used by hospice staff to allow hospice patients to die consciously and without serious pain. The environment created and provided to hospice patients, their caregivers, and families, takes them away from feeling isolated – aiding in their acceptance of death as a natural process, as a stage of life itself. Psychological problems, of anger, fear, and depression are addressed by a skilled interdisciplinary team (Gerlach-Spriggs et al,, 1998; NHPCO, 2015).

Diagram 1. Interdisciplinary approach, adapted from the 2015 NHPCP Facts and Figures

"Spiritual distress and the search for meaning or fairness or hope in the context of terminal illness are also high priorities for hospice teams and their interventions." (Gerlach-Spriggs et al,, 1998, p.84). "The life cycle itself is a process of such fundamental change that even a few years from now we may not recognize ourselves. Physically, these transformations are often obvious, yet our life experiences can similarly age our emotions, imagination, curiosity, thinking and our willingness to live fully. To appreciate the full range of human experiences associated with growing up, aging and death, we must also have the time to grieve, heal, understand and challenge ourselves again (Schneider 1994, 14)."

Coping with terminally ill patient's physical and mental impairments can be overwhelming for the caregiver. People that work for hospice usually have had a connection in the past with hospice through their friends or family members, such is the case of Cynthia Swanson Nyquist, RN, the Founder of the Upper Peninsula Home, Health & Hospice (Franklin, 2011). According to Schneider (1994),

> "*Hospice staff need time to regenerate; obligations and responsibilities have to be set aside to enjoy, quiet, solitude, while listening to soothing music or reading reflective poetry, or taking a trip to the lake. Our own grief can stimulate grief issues in others.. Providing aid to the hospice staff and their families is of major importance because disruptive losses including traumatic episodes exceed our capacity to continue life as usual. These episodes include life-threatening illnesses, death of a child, divorce, rape or murder.*"

Mental fatigue is another factor for which a restorative place like a garden is needed. People who experience mental fatigue have a difficult time processing information. They are prone to make errors, and can get easily irritated by others (Kaplan et al, 1998). In order to mitigate mental fatigue, it is necessary for the person to get away. In a hospice therapeutic garden, the family members and staff are often the primary users, because the person in hospice is often too ill to experience the garden. In other cases, the patient may have died, and the garden serves those that are left behind. Cooper Marcus and Barnes (1999) argue that hospice gardens need to have private areas that separate family encounters from staff and care-givers use of the garden because each group has its own special needs as a patient approaches end of life. In the case of staff, the garden affords a place to relax and alleviate work related stress.

Terminally ill patients in hospices (home or hospital-based), have better quality of life and live longer than those who received conventional care (Wallston, 1988). In hospice care, there are no screened beds or isolated rooms; hospice patients enter a society of friends, relatives, and professionals who can talk about death and dying at the discretion of the patient (Gerlach-Spriggs et al. 1998). This is because the hospice team is sensitive to knowing each person intimately (Franklin, 2011). Hospices improve the well-being of their patients as well as their family members and provide satisfaction in the place that the patient chooses (Meier 2011). A staff person shares this perspective on hospice care, "there has to be something deep inside of us to 'do unto others'. I try to treat each patient like they were my mother, brother or sister. Even so, the family may feel guilty leaving their loved one with perfect strangers and trusting us to take care of them until they return. It takes time to build that trust (Franklin 2011)."

In 1984, Parkes and Parkes published a study that measured the success of a hospice versus the success of a hospital. The results indicated that hospices were more successful at treating chronic disease pain, depression, and anxiety among late-stage cancer patients. Other studies also prove that hospices reduce the suffering of the patient's family because the family is in closer contact with the staff, both before and after bereavement (Parkes & Parkes 1984). This alliance allows caregivers to feel calmer and provide better care for their loved ones. Scientific research also proves that offering palliative care in an early stage of illness can be beneficial to terminally-ill patients suffering with Metastatic Non–Small-Cell Lung Cancer Temel et al (2010) showed that palliative care (such as care provided during hospice) can promote life and improve quality of life for patients in end-stage cancer. Their study reported:

> "This study shows the effect of palliative care when it is provided throughout the continuum of care for advanced lung cancer. Early integration of palliative care with standard oncologic care in patients with metastatic non–small-cell lung cancer resulted in survival that was prolonged by approximately 2 months and clinically meaningful improvements in quality of life and mood. Moreover, this care model resulted in greater documentation of resuscitation preferences in the outpatient electronic medical record, as well as less aggressive care at the end of life. Less aggressive end-of-life care did not adversely affect survival. Rather, patients receiving early palliative care, as compared with those receiving standard care alone, had improved survival. This and other studies suggest that palliative care should be considered as a high priority treatment for quality of care, and less expensive than contemporary medicine (Temel et al, 2010)."

The patient and his/her caregiver choose between four levels of hospice care and palliative care according to what the patient's needs may be: Routine Home Care (R), Continuous Care (C), Respite Care (R) and "General Inpatient Care" (GIP).

> Routine home care – is provided intermittently by a hospice team member at the patient's temporary place of residence.
>
> Continuous Care – is provided continuously for a minimum of eight hours when it is medically necessary during a brief period of crisis.
>
> Respite care – is provided to the hospice patient in a hospital or appropriately certified nursing facility on a short-term basis; so that the caregiver can rest.
>
> General Inpatient Care – is provided to the hospice patient during a short-stay admission to a hospital or appropriately certified nursing facility for acute pain or other symptom management that cannot be accomplished in the home setting (*residentialhospice.com*).

Meier (2011) identifies four primary barriers to receiving quality palliative care and hospice: 1) variability in access by geography and other characteristics; 2) an inadequate workforce and workforce pipeline to meet the needs of patients and their families; 3) the lack of an adequate research evidence base to guide and measure the quality of care; and 4) the lack of public knowledge of, and demand for, the benefits of palliative care and hospice.

D. Therapeutic Garden Design in Relationship to Hospice and Palliative Care

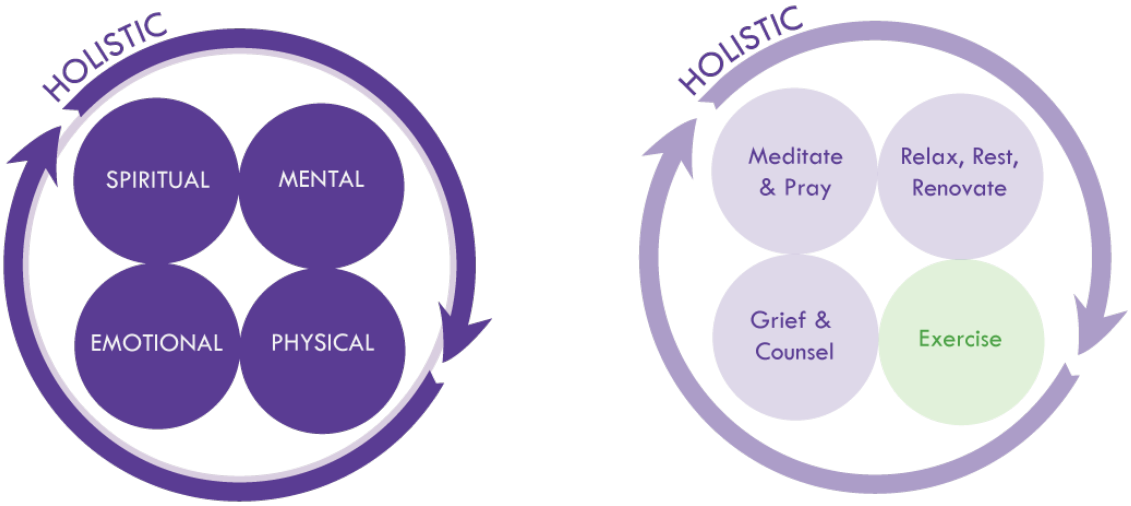


Diagram 2. Holistic approach compared to a hospice garden's potential holistic approach

Since the late 20th century there has been an increase in scientific research to define and identify the role of therapeutic gardens as part of the healing process for patients (Tyson 1998; Gerlach-Spriggs et al. 1998; Cooper and Barnes 1999). Therapeutic landscapes have traditionally been

used to describe landscapes with an enduring reputation for achieving physical, mental and spiritual healing (Gesler, 2003; Velarde et al., 2007). Therapeutic gardens differ from other types of gardens in that they are the most goal-directed of the garden types; their underlying purpose is to support the patient's recovery through rehabilitation (Gerlach-Spriggs & Healy 2012) or to improve quality of life in palliative care settings and situations.

In 1998, Tyson pioneered early discussions surrounding the goals and objectives of a therapeutic garden, based on existing literature and environments designed for special needs groups, including the elderly, physically or cognitively impaired, and ill (Tyson, 1998). The objectives involve the person (individual's needs), place (physical environment), and interaction (behavior).

Therapeutic Goals for Residents and Patients:

- Support abilities and compensate for loss
- Establish connections to the familiar
- Instill a sense of belonging and usefulness
- Establish a sense of pride or ownership in surroundings
- Provide opportunities to continue with work or hobbies
- Maintain sense of security in physical surroundings
- Heighten awareness of nature, seasons, places and time
- Create places for physical exercise
- Maximize a sense of independence and freedom

Therapeutic Goals for Staff

- Create a pleasant work environment
- Provide desired amount of space for activities
- Allow for complete surveillance of area
- Maintain flexibility to adapt environment to changing needs
- Provide places for residents' respite from stress
- Create places for staff breaks and respite
- Provide ability to use space around the clock
- Establish pathway system for agitated residents
- Implement therapeutic programming

Therapeutic Goals for Families and Visitors

- Provide assurance that residents have quality care
- Provide a familiar homelike living environment
- Opportunities for residents to continue normal social roles
- Create a sense of privacy and comfortable visiting places
- Encourage involvement with resident care program

Therapeutic gardens should include elements that enhance an individual's sense of control. For example, a garden should support the desire to be alone at times, and with others, when desired. The garden should enhance the perception of independence in nature while providing

opportunities to reflect with others at other times. All of these characteristics have been found to be among mankind's most profound needs (Winterbottom and Wagenfeld 2015). When we are in nature, we can find a balance between solitude and companionship (Schneider 1994). Another aspect that a therapeutic garden should provide is coherence, which fosters and maintains good health. A therapeutic garden is kept "clean" or "organized" – making it easier to understand the place (Kaplan et al, 1998). Another aspect is resilience or referred as salutogenic landscape design (Winterbottom and Wagenfeld, 2015), which promotes restoration. Therapeutic gardens are intended to meet medical goals through activities that may include but are not limited to walking, socializing, sunbathing, etc. The intent is to support the patient's recovery in the medical environment, and to provide positive measurable results (Gerlach-Spriggs & Healy, 2009). A study on children therapy garden found that acute pediatric patients have shown positive psychological affect and behaviors when they are allowed to play and rest in the garden while recovering (Ismail et al, 2002). A therapeutic garden should parallel standard medical treatment protocols for given patient groups; such consideration insures that the garden will facilitate treatment outcomes, whether the outcome serves palliative or rehabilitative needs (Westphal, 2013 TEDxPresentation). From this discussion, it can be said that this type of garden has to be carefully thought through prior to design. There is no one-size fits all therapeutic garden; site-specific and user-specific research is essential (Cooper-Marcus and Sachs, 2013).

Contemporary health care and therapeutic gardens are alike in that both seek to find data, to inform benefits, and provide scientific results. However, contemporary health does not include treatment for the patient's holistic needs in its protocol; it may provide individualized or personalized medicine but these do not include holistic characteristics. Hospitalized patients experience loss of control through lack of information, loss of privacy, loss of control over eating and sleeping times, lack of authority over what to wear, inability to readjust room lighting and temperature, and way-finding difficulties in complex and unfamiliar buildings (Cooper-Marcus & Barnes, 1999). Contemporary health care limits diagnosis to the physical symptoms of a disease. Therapeutic gardens on the other hand have ancient holistic treatment roots, and they are customized to the appropriate user and healthcare facility.

Like therapeutic gardens, hospice implements holistic (spiritual, mental, social, physical) practices by providing palliative care to its patients. "Palliative care throughout the continuum of illness, involves addressing physical, intellectual, emotional, social, and spiritual needs to facilitate patient autonomy, access to information and choice (Quill et al 2014)." Palliative tends to patients with advanced disease who need excellent symptom management. Like hospice, it provides psychological support, assistance with difficult decision-making, and warm relationships with professional caregivers. Palliative care however, is offered to all stages of a serious illness, hospice is a specialized form of palliative care for patients who are in the terminal stage of the illness (Quill et al 2014).

The hospice setting is the topic of study for this research. Patients undergoing rehabilitative care will eventually recover and continue a productive life by overcoming deficits lost during a traumatic event, illness, or life-threatening occurrence like an accident, heart attack or stroke. Patients undergoing palliative care receive a high quality, end-of-life treatment based on patient and family needs and goals independent of prognosis (Meire 2011, Quill et al 2014). Dementia,

Parkinson, Multiple sclerosis, etc. patients fall into this latter category and are eventually admitted to hospice, the final health care setting.

People in hospice fall under the palliative care designation, since their illness is unlikely to be reversed, having been given less than six months to live. The goal is to improve quality of life for both the patient and the family as the patient approaches death. Palliative care is provided by a specially trained team of doctors, nurses, social workers and other specialists in collaboration with a patient's doctors to provide an extra layer of support. Hospice and palliative care affirm life (Wu and Volker, 2012). However, circumstances surrounding hospice, such as end of life decisions affecting the terminally ill in their last days/months of life, create a second set of *de facto* patients: the family care-giver(s) and/or patient advocate(s). This transformation from family member or advocate to a *de facto* patient in medical terms is called *transference*, and it is a medically-recognized/diagnosed condition (Westphal, 2016). Individuals charged with carrying out the wishes of the terminally ill become significantly stressed while dealing with their own sense of loss and grief. Likewise, hospice staff face similar stressful conditions while tending daily to patients and family members during end of life. Experiencing illness and death on a daily basis often produces stress and mental fatigue, i.e.: inability to focus, impatience, human error due to fatigue, rash, uncooperativeness, incompetence, irritability, aggressiveness, less likely to help someone in need, and decreased sensitivity to socially important cues (Kaplan 1995). Therefore, any improvements in surrounding environments (both built and non-built) are thought to relieve/reduce stress levels, and are studied to improve healthcare facilities and people's wellbeing.

A goal of contemporary treatment of those facing death and those there to support the individual at end of life is to alleviate social and institutional isolation, adopt modern scientific health care techniques, and provide psychological and spiritual support assistance (Gerlach-Spriggs et al, 1998). In the twentieth century, middle class families would place terminally ill patients in hospitals. In the late 20th century Nuland (1994) wrote that the very biotechnical culture that has produced the triumphs of modern medicine actually extend the suffering of the dying rather than ease their path toward death. He described modern dying as: "it takes place in a hospital, hidden, cleansed of organic blight, and packaged for burial". Gardens in a long-term care center or hospice address particular needs of the patient as their physical and cognitive abilities diminish, and they also are places of restoration for families and other caregivers (Gerlach-Spriggs, Healy 2012).

LITERATURE REVIEW CONCLUSION

Evidence proves that hospice and palliative care are effective in providing quality of life to terminally ill patients and their caregivers. Palliative care can prolong the life expectancy of terminally ill patients, and provide support for caregivers through the process of the illness, death and grief. Caregivers learn to manage their grief and stress, through holistic practices provided by palliative care. The hospice staff is an interdisciplinary team of experts that provide compassionate, high quality of life services as well as contemporary medical practices. Hospice proves to be less expensive than contemporary institutional (hospital) medicine, and it can be provided through Medicare or Medicaid.

The need to access nature for healing dates back to the beginning of the history of medicine. Nature and access to pure air and sun can help the three user groups of hospice, because a natural environment's availability and accessibility acts as a renewable and renewing resource (Kaplan & Kaplan, 1982). A hospice garden can serve the patient, the caregiver, and the hospice staff; therefore all types of therapeutic garden (restorative, meditative, rehabilitative and enabling) should be applied to designing a hospice garden. This will align to the holistic practices of hospice and palliative care. A hospice garden may not always provide physical activity to terminally ill patients, but it can provide this amenity to the families and caregivers. Private spaces should be provided to hospice staff and caregivers to re-assure their well-being through time alone, contemplation, and meditation.

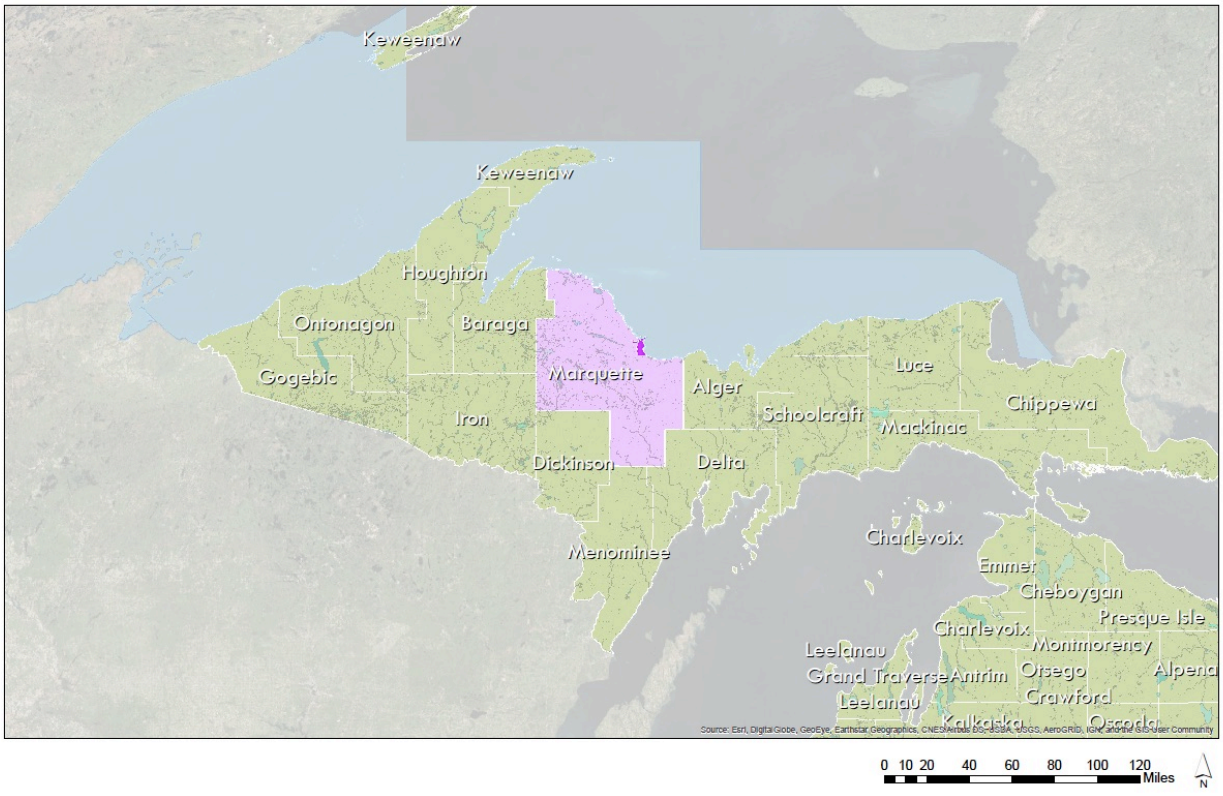
Currently, there is need to address hospice gardens guidelines since there is no one size fits all. The required or recommended guidelines may apply to each hospice garden differently. These may differ according to the location of the facility and the clientele served or targeted.

A hospice residence should be built within an area where vegetation and space for gardens is appropriate.

II. METHODS

This chapter describes the different methods used to study and analyze the Lake Superior Garden and hospice gardens in general. The first phase was a detailed site analysis of the Lake Superior Hospice Garden, meetings with the client, preliminary designs, and feedback. The second phase was an evaluation of hospice residences in Massachusetts to develop insights for the proposed project in Michigan. The third phase were surveys done in person (interviews) and/or completed by each individual and mailed back. The survey questions developed on a better understanding of the hospice experience as well as the use of garden at the same locations. The fourth phase was developing a conceptual framework that will help understand the similarities and differences between a therapeutic garden and a hospice garden. The final phase evaluated the preliminary design of the Lake Superior Hospice in order to meet the hospice garden guidelines and therapeutic garden benefits.

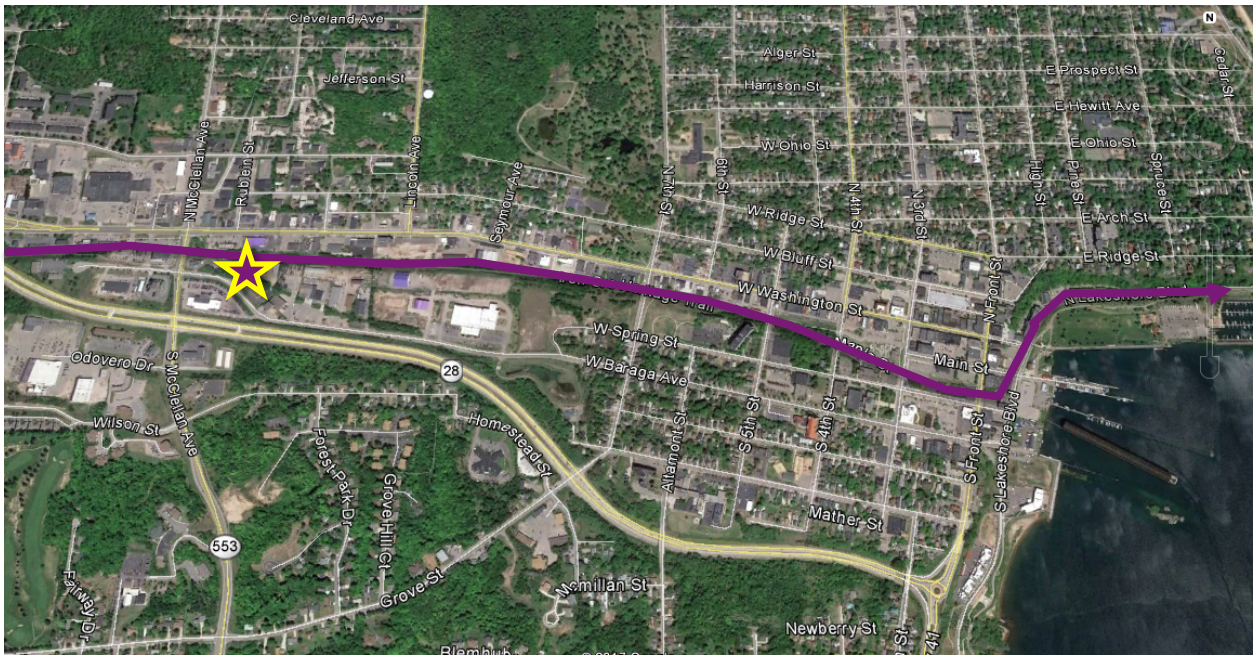
PHASE 1: CASE STUDY OF LSH GARDEN PROJECT



Aerial 1. Map of the Upper Peninsula, MI State in green, Marquette County in Purple, LSH location in dark purple

The Lake Superior Hospice is a community-based organization serving Marquette County since 1979. It is Michigan's oldest existing hospice. It is located on West Baraga Avenue, in a commercial area in the City of Marquette, MI. Marquette is a major port for the Lake Superior.

In 1845 iron deposits were found near Teal Lake, west of Marquette, this started the history of iron ore in the area. The Village of Marquette began in 1849. It was first called New Worcester, after Edward Clark, an agent for Waterman A. Fisher of Worcester, Massachusetts. Later, it was named Marquette, after Jacques Marquette, the French Jesuit missionary who had explored the region. Marquette was linked by rail to numerous mines and became the leading shipping center of the Upper Peninsula.



Aerial 2. LSH location (star) showing the connection to the waterfront through the IOHT

Located along the Iron Ore Heritage Trail (IOHT), the trail connects the LSH garden (star) development area to parks along the greenway and to the Lake Superior waterfront. The LSH site slopes down from all sides - about 10 feet from the north, 5 feet from the east, 6-7 feet from the south, and 1-2 from the west, reducing the noise from traffic and the surrounding business.

Aerial 3. LSH Facility and adjacent sites

The Whetstone Brook, a Type I trout stream with permanent vegetative riparian 15 feet buffers on both sides, runs west to east cutting through the LSH property. A steal-concrete bridge connects the facility to the

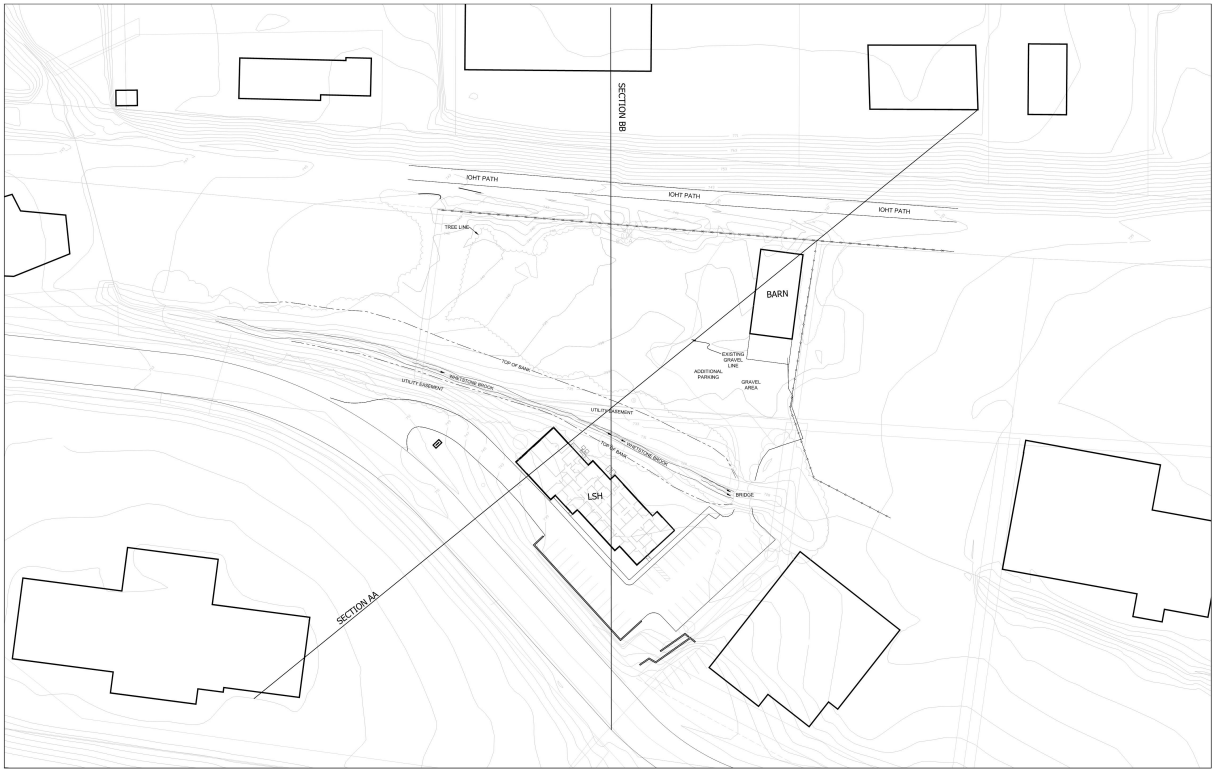
garden area, on the east side of the LSH facility. The property is surrounded by a bank (West), a car dealer (South), and the waste management (East). The Iron Ore Heritage Trail runs on the north side of the LSH property, this trail gives access to the Spring Street Park, and The Lake Superior waterfront.
There is a barn located in the garden development area across the bridge, the barn is rented by blacksmith Gordon Gearheart (south entrance), and by St. Vincent's (west entrance). Almost 1/3 of the garden development area is dirt and gravel. The LSH would like to pave 20 parking spaces. Parking will be used mainly for the garden but for the businesses as well, including a delivery truck. The truck deliveries happen from Monday to Friday and varying between 9am – 5pm.

The garden development area is fenced on the east and north (IOHT - trail) sides. The LSH garden committee has entertained the idea to provide access to the garden for the Iron Ore Heritage trail community, but until now has not agreed to this. The delivery truck is about the size of a 15 passenger van but taller. It is not semi size. The LSH has not discussed allowing the barn renters to use it for events, however it could be a possibility since they see it open to the public.

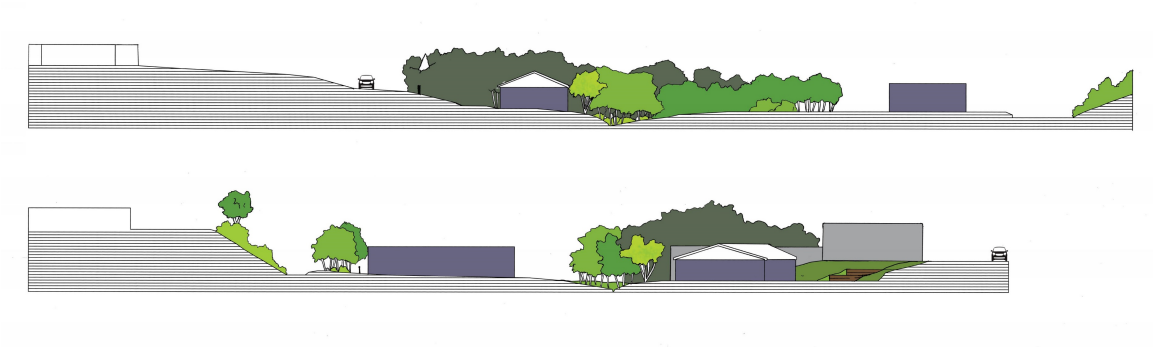
Map 1. Site analysis, highlighting surrounding vegetation and Whetstone Brook

The site contains mostly poplars, birches, willows, and shrubs; mature vegetation is by the Whetstone Brook. Ideally the Coldwater stream should rarely exceed 71.6 degrees Fahrenheit during the summer. Existing vegetation along the stream and riparian areas should be preserved in order to provide immediate shade, canopy and habitat. Funding and assistance to develop a tree and shrub planting program may be available through the MDNR Urban and Community Forestry

Program or other State and Federal programs. Natural groundcover shall be preserved to the fullest extent feasible and where removed it shall be replaces with vegetation that is equally effective in retarding runoff, preventing erosion and preserving natural beauty (More information can be found at the Whetstone Brook and Orianna Creek Watershed Management Plan 2002). Grading and filling are prohibited within the conservation corridor, except for work authorized under a Soil Erosion and Sedimentation Permit (Whetstone Brook and Orianna Creek Watershed Management Plan 2002). All exposed slopes and graded areas shall be landscaped with groundcover, shrubs and trees native to the Upper Peninsula and Marquette. Existing mature trees shall be incorporated into project design where feasible.



Map 2. Section cuts



Section AA (above), Section BB (Below)

Site Analysis Images

Figure 1. Looking north from W. Baraga Avenue, LSH Roof on the right

Figure 2. Entrance to the Lake Superior Hospice off of W. Baraga Ave., LSH Sign on right

Figure 3. West side of the building, conference room window

Figure 4. Main entrance to the building

Figure 5. Looking at the east side of the building, this entrance is mostly used by the LSH staff

Figure 6. Southeast parking lot corner, facing the Waste Management building

Figure 7. Looking south, the right side of the parking near the facility, showings Waste Mgnt-HP and LSH-LP

Figure 8. North side of the building, next to the Whetstone Broook

Figure 9. Whetstone Bridge, looking north to the barn

Figure 10. Whetstone bridge and riparian vegetation

Figure 11. Barn next to gravel area

Figure 12. Looking north, in the middle of the garden, barn on right.

Figure 13. Fence and mound that divide the LSH garden development area from the Iron Ore Heritage Trail

Figure 14. Looking West from the middle of the garden, shrubs and trees on background

Figure 15. West “entrance/exit path”, leading to the mBank, and the Iron Ore Heritage Trail

Figure 16. West side of the garden, wooded area between garden and mBank

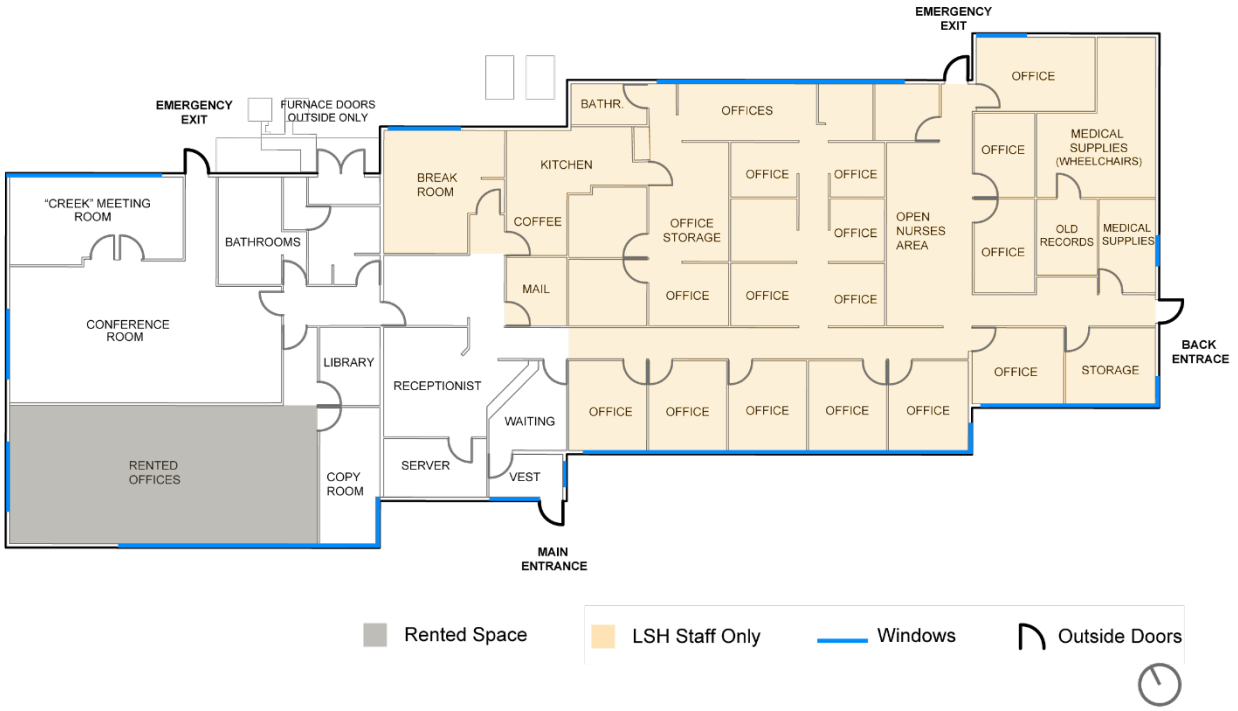
Figure 17. Looking east into the LSH garden site

Figure 18. Looking south into garden from

The LSH Garden meeting minutes identifies the client's needs and future use of the garden space. In this collection of readings from February 4 to May 12 of 2016, the LSH describes the possibility to have a central garden, a memorial garden, a meditative garden, and a children's garden, all within the space provided for development.

The LSH future garden space will held events including memorial services twice yearly, the National Hospice Month's Bells for Hospice and Honor a Life Tree Lighting (both are hospice awareness and fund raising events), the children's reunion after Camp STAR (a camp organized for children who have lost a sibling), and fundraising gatherings. Currently these events are held at the Children's Museum, the Marquette Commons, the Masonic Building, churches, the Presque Isle pavilion, etc. The LSH also hopes to offer counseling and group grief sessions in the garden.

The LSH building is used for office space, counseling and grief support sessions, and for monthly



gatherings (luncheon). Patients do not come to the hospice HQ, but caregivers and family do come for grief counseling, both in scheduled groups and individually. The Bottom Line Marketing firm rents a section of the building (see floor plan).

Floor plan 1. The LSH Staff only is highlighted in orange, the clients stay in the white zone.

The researcher spent nineteen days with Dr. Westphal, therapeutic garden expert, learning about hospice and therapeutic gardens. Both visited the site of the Lake Superior Hospice (LSH) facility to do site analysis and have informal personal interviews with LSH staff.

On August 18, 2016 the researcher presented three preliminary designs to six LSH Garden committee members and Dr. Joanne Westphal. Early in August, Dr. Westphal and the researcher visited the LSH garden site and looked at architecture, parks, and gardens around the community to get a feel for local styles, landscapes and materials. Later, they collaborated in Traverse City on design and post-occupancy evaluation. Examples of measurable objectives include stress reduction, building a sense of community and supporting survivors.

Figure 19. Downtown Marquette

Figure 20. Picnic structure at Presque Isle Park, Marquette MI

Figure 21. Presque Isle Park View, Marquette MI

Figure 22. Hospice patients memorial at Presque Isle. Dedicated by the Upper Peninsula Hospice

Figure 23. Hospice patients memorial

Figure 24. A gazebo at Presque Isle Park

Figure 25. Lighthouse by Presque Isle

Figure 26. Lake Superior Sunset

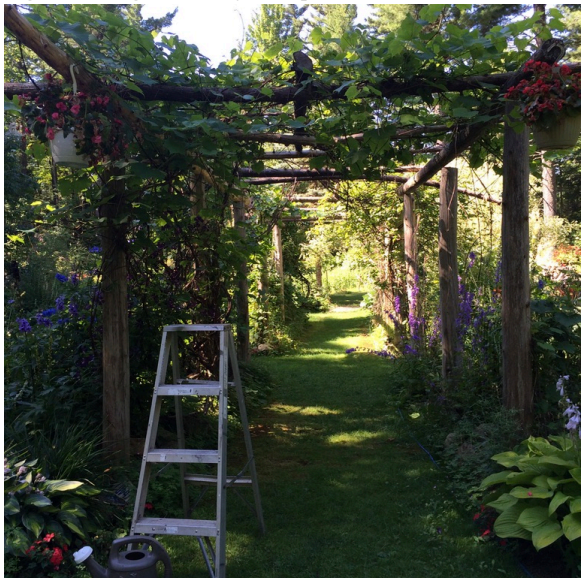


Figure 27. Carp River Gardens, Marquette, MI

Figure 28. Carp River Gardens, Marquette, MI

Figure 29. Carp River Gardens, Marquette, MI

Figure 30. Carp River Gardens, Marquette, MI

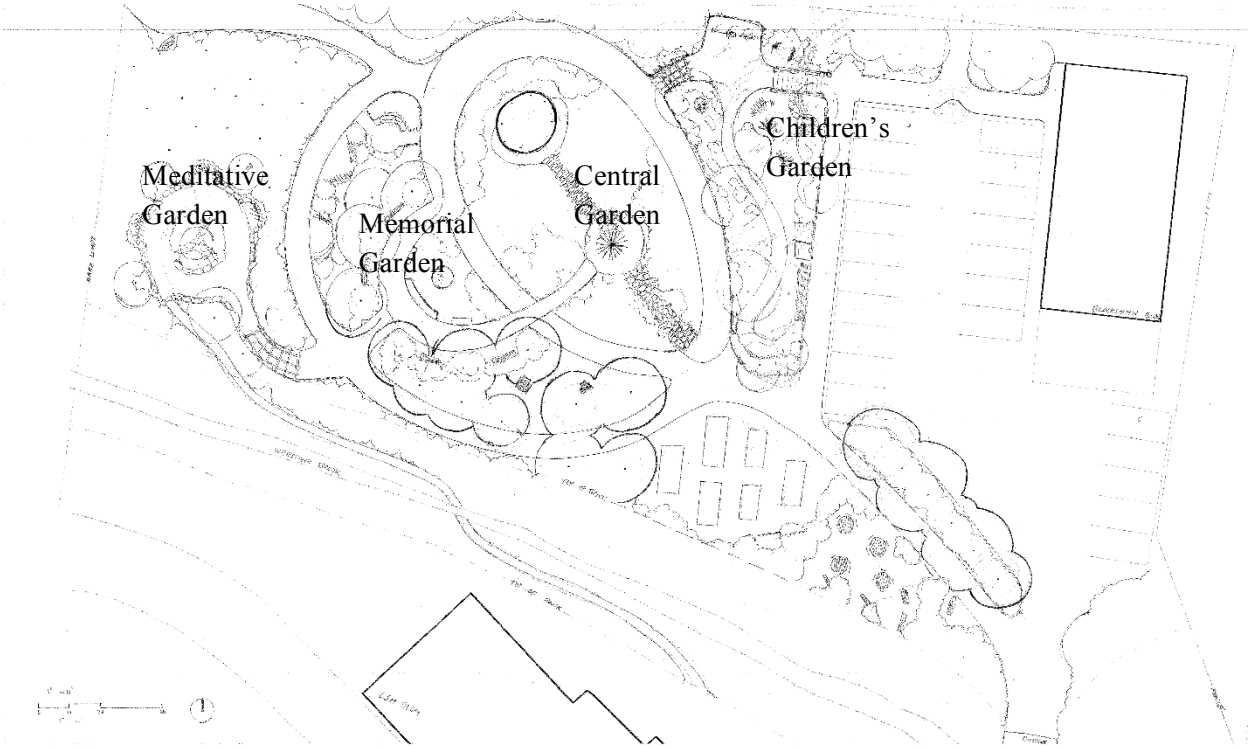
Criteria to Design Preliminary Designs

After reading the LSH Garden minutes and identifying the four garden spaces, a list of key words were selected to be used as part of the criteria for the design of the garden. This list of words were taken from the core programs written/developed by the LSH Garden committee on May 12, 2016, the key words were identified as but not limited to: quiet, reflection, retreat, relieve, stress, private, therapy, aroma, and awareness. Moreover, another set of key words were taken from the mission, vision and values of the LSH, these were identified us: compassionate, care, serve/service, education, advocacy, collaboration, respect, responsible, medical, community (ies), understanding, helping, meaning, and dignity. A second list of words was considered by the researcher, these are in relevance with the physical setting design of the garden. The following key words were identified as but not limited to: walkability, handicap, accessibility, lighting, shade, seating, design, rhythm, ease, comfort, rest, transition, paving pattern, material, natural, safe/safety, and home (hospice).

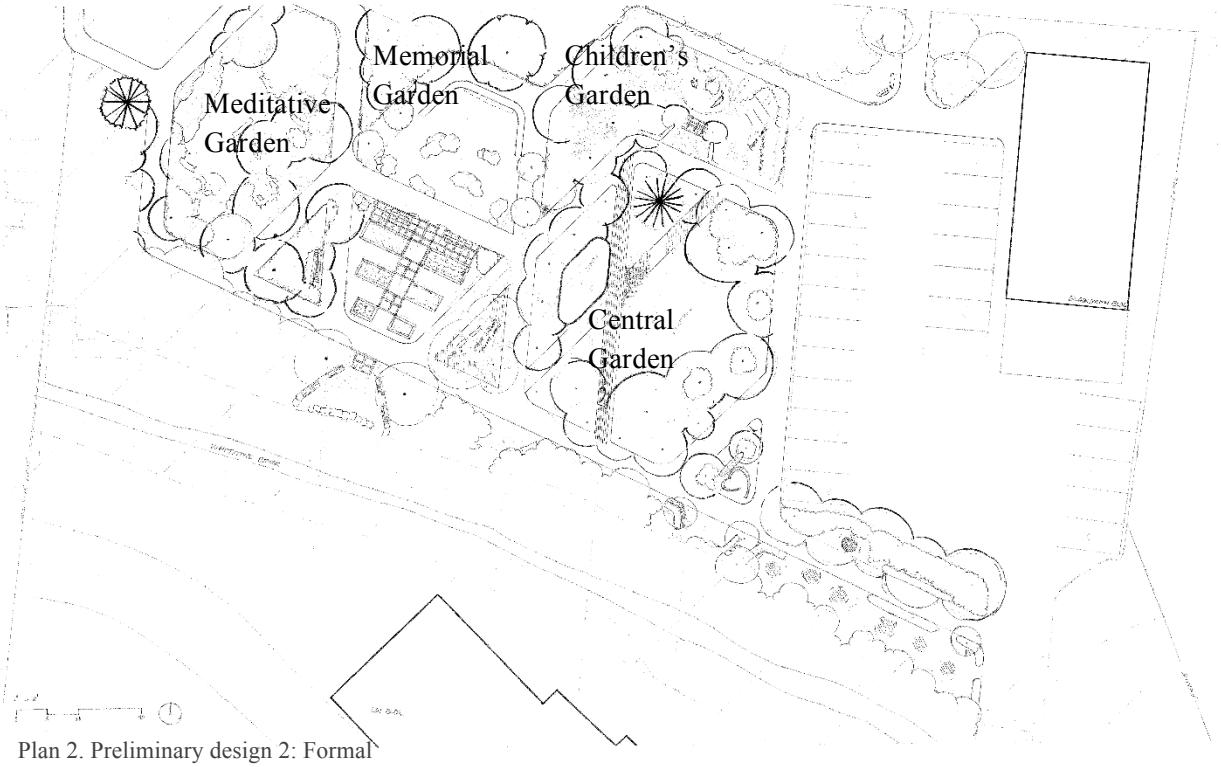
These LSH and therapeutic garden key words informed the three preliminary designs: a formal design, a naturalistic design and a design that falls between the two featuring a path shaped like the LSH heart logo.

Each design includes the four primary use areas previously defined: central, memorial, meditative and children's gardens. The components of each use area and types of plants including phytoremediation plants to improve brownfield sites were discussed at the August 18 meeting. All those present at the meeting were drawn to the heart themed preliminary.

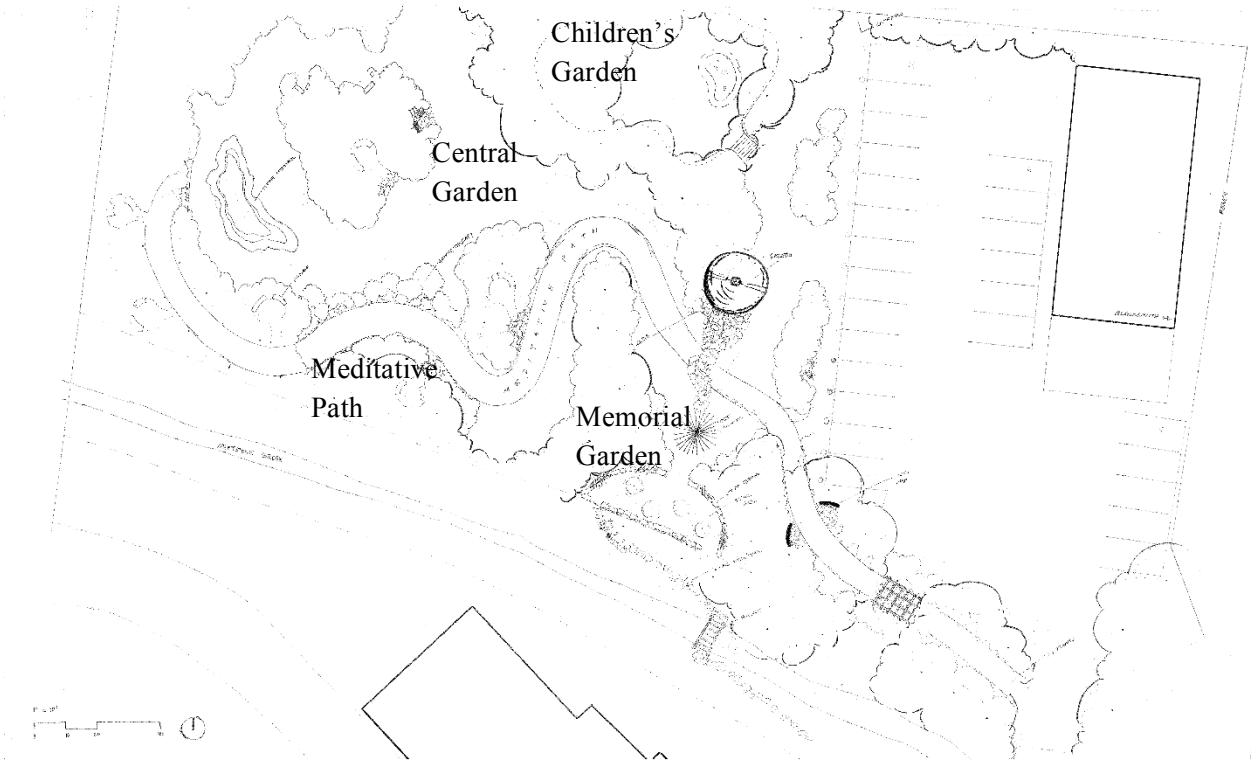
The Three Preliminary Design Plans



Plan 1. Preliminary design 1: LSH Heart Theme (Preferred)



Plan 2. Preliminary design 2: Formal



Plan 3. Preliminary design 3: Natural

Next Steps after the August 2016 Presentation and Meeting

Concern was expressed about the cost of the many features and their maintenance. Funding and extending hospice services are the first priority, the organization is financially constrained, and major fundraising efforts present a challenge. This led to discussion of local possibilities for volunteer labor: master gardener groups, scouts, the Marquette Beautification & Restoration Committee, Senior Center gardeners. Garden experts may be able to help in planning and staging development. Owners of the Carp River Gardens have offered to help. A local mason or a city employee may be interested in teaching dry masonry skills to volunteers constructing paved paths like others found around town. MSU Extension, NMU, and local landscape contractors might contribute. Bill Shaw at MSHS or NMU construction programs might be willing to incorporate a project building arbors and bridges into a class. The Iron Ore Heritage Trail, Marquette Arts and Culture Division, and Superior Watershed Partnership & Land Trust earlier offered to help.

If water features are problematic due to cost or seasonal maintenance, similar visual effects can be designed with stone. A Japanese rock or Zen garden with gravel or sand that can be raked to represent waves would be unique to the region and forge connection with visitors. The group felt the raised beds for planting were not likely to be as useful as perhaps a memorial forest or 'angel garden' instead near the entry.

The group asked the researcher to break down construction of the garden into phases that can be tackled incrementally as funding becomes available, beginning with the central garden to serve as

a venue for several core programs and the picnic area adjacent to the entrance for staff and visitors.

Some first steps that may be taken now are removing debris, piling gravel near parking area where it can be put to use later, and laying out some features such as the trails by mowing or flagging. The parking area will need to be delineated with a surface coating and access clearly retained for daily truck deliveries to the back door of the pole barn. It may be time to make initial contact with other potential funding partners like the neighboring MBank, the hospital and UPHP.

There was some discussion about whether a coordinator is needed to plan the sequence and timeline. Jim Rutkowski may be able to advise the group about this when he returns from leave.

Seven detailed construction phases were sent to the LSH to explain construction stages. The first phase, clearing and weeding along with planting vegetation, can be done in-house by the LSH staff. The final design graphics will be used to distribute to future sponsors and/or funding agencies.

LSH Heart Theme Likes and Dislikes:

Likes	Dislikes
• Naturalistic • Biodiversity • It flows, changes based on the season • Meditation area • Swings in children's garden • Central area	• Horticulture area – most patients live far away, no one would use it
Recommendations	
• Create a memorial forest instead of the horticulture garden • Suspension bridge connection from building to garden • Keep thinking about audience • Emotional durability • Considerer big enough space for tents and bathroom	• The memorial will bring the donor back over time • There are no Zen gardens in Marquette, this could be an opportunity • Details can be done with a shop class • The LSH staff will do quite of the work in-house: site cleaning.

PHASE 2: EVALUATION OF HOSPICE RESIDENCES IN MASSACHUSETTS

Garden evaluations provide insight to hospice residence's garden design approach and use. The tool used to evaluate each garden was taken and adapted from Clare Cooper-Marcus and Naomi Sachs's (2014) hospice garden guidelines. There were four garden evaluations done in Massachusetts, three were hospice residences and one was a hospice office.

These evaluations or case studies illustrate the importance of context and location: facilities, services, organizational structure, and personnel emphasis on outdoor environments. The results provide a baseline data on hospice and how gardens enhance the ambience surrounding hospice staff, patient, their families and caregivers. It also compares how hospice facilities differ from other healthcare facilities.

These seventeen guidelines were used by the researcher to create the *Hospice Garden Evaluation* instrument. The Hospice Garden Evaluation assesses whether the hospice garden fulfills the required and recommended guidelines with a "Y-yes" or "N-no" check. It rates the success of each guideline with a 0-10 scale rating system, zero being the lowest and ten being the highest.

Example (G9):

		No elements				Lawn area						Playground
Outdoor play for children	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10

The scale rating system provides key words to measure the success of each required or recommended guideline.

Example (G9):

		No elements				Lawn area						Playground
Outdoor play for children	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10

The researcher rated each garden evaluation, and described why this score was given to each one of the guidelines.

Example: ● Y *Score:* 5, *"The facility has enough lawn space where children can play."*

The second portion of the evaluation (G13-G17) is a YES and NO check list of the visual and physical access, and planting recommendation.

Example (G17):

Maintenance manual for garden ● Y ○ N

Rating System

A perfect score equals 120/120 plus 5Y/5Y (Y-yes), this will be the summary after applying all the required and recommended guidelines, plus a maintenance manual. If the recommended guidelines were not added to the final score, the highest score will be 90/120 and 2Y/5Y. If some gardens don't meet the required guideline, they will have an "N" check, which is valued as "0", "Y" is any number from 1-10.

Hospice Gardens

The four evaluated gardens vary in size, type use, and landscaping or gardening style. The researcher visited each of the four locations, spending from 10-45 minutes evaluating each garden, taking photographs and notes. A staff member from each one of the hospices took the researcher on a tour inside the hospice residence/office and the garden.

List of hospice gardens evaluated:

1. Hospice of the Fisher Home, Amherst, MA February 8, 2017

2. Mercy Hospice, West Springfield, MA February 29, 2017
3. The Kaplan Family Hospice House, Danvers, MA March 2, 2017
4. Rose Monahan Hospice Home, Worcester MA March 7, 2017

Hospice residences in Massachusetts provide "Routine and respite care" (R) and "General Inpatient Care" (GIP).

> Routine home care – is provided intermittently by a hospice team member at the patient's temporary place of residence.
>
> Respite care – is provided to the hospice patient in a hospital or appropriately certified nursing facility on a short-term basis; so that the caregiver can rest.
>
> General Inpatient Care – is provided to the hospice patient during a short-stay admission to a hospital or appropriately certified nursing facility for acute pain or other symptom management that cannot be accomplished in the home setting (*residentialhospice.com*).

Beside evaluating the hospices' gardens and landscaping, the researched also interview staff (both personnel and volunteers) about their personal hospice experience. The interviews and surveys are explained and narrated in Phase 3. The four interviewees were staff at the hospices above.

PHASE 3: SURVEY OF STAFF AT FACILITIES IN PHASES 1 AND 2.

Hospice Facility and Garden Survey

The researcher conducted four in-person interviews at three hospice residences and one hospice office facility, all four located in Massachusetts. A few more surveys were sent to the researcher from two different hospices in Massachusetts. A total of six hospices participated in the survey. The interview and survey findings are discussed in the findings chapter.

Phone calls were made to several hospices in Western Massachusetts and in Connecticut. When making phone calls the researcher noticed that only residence hospices had gardens. Hospice offices were most likely to be located in urban settings, where there is little space for gardens. The researcher contacted The Hospice & Palliative Care Federation of Massachusetts (HPCFM) to ask if they could provide a list of hospices that have gardens but this information has not been recorded. The HPCFM staff e-mailed a list of all eleven hospice residences in Massachusetts to narrow down the search for gardens, calls were made to all eleven hospice residences.

An introductory letter was mailed out to the four hospices affiliated staff. It described the goals of the survey, summarized in two questions: 1) what makes a hospice setting uniquely different from other health care settings? And 2) what makes a hospice garden uniquely different from other therapeutic gardens? The letter requested 15-45 minutes of their time. It explained that all information was confidential. It mentioned that copies of the survey results would be provided to the researcher's University of Massachusetts advisor Robert Ryan Ph.D. Finally, it gave the

option for the participant to obtain a summary copy of the study by completing and detaching the Request for Information Form.

The Hospice Garden Survey asks questions about the benefits of hospice care, its services, the facility's common use areas, window lookouts, and the importance or necessity of having a garden. The goal of the survey is to identify the importance of hospice and palliative care. The survey works in similitude to the pre-occupancy evaluation for hospice facilities that do not currently have a therapeutic garden. It can also co-work as a post-occupancy evaluation for hospice facilities that have gardens.

The first seven questions were about hospice care and the facility, and the last twelve questions were about hospice garden. Out of the twelve garden questions, five used a rating system, from 0 to 10, to rate the success of the garden, regarding: access, way finding, seating, safety, and therapeutic property or value. All of the questions were developed to understand the client, the benefits of hospice, and the benefits of having a garden at the hospice residence.

The data collected provides useful information regarding 1) the physical, mental, and spiritual healing properties needed for a hospice garden, 2) the user experience of hospice care, and 3) whether a hospice garden is a useful addition to the hospice experience.

Lake Superior Hospice Facility Survey

In order to fully identify the needs of the Lake Superior Hospice staff, a different survey with similar questions to the general survey was created for the Lake Superior Hospice. The survey has a total of fifteen questions. It addressed questions regarding the impact of the LSH among the Marquette community, the LSH facility, the quality of work atmosphere, and the benefits of having a garden.

Seven staff members and one volunteer filled out and mailed the survey. The eight participants include six females, one male, and one not identified. All participants are in the 50+ age range.

PHASE 4: CONCEPTUAL FRAMEWORK FOR A HOSPICE THERAPEUTIC GARDEN

A conceptual framework for the appropriateness of a hospice therapeutic garden was developed based on the evaluation and survey work. This activity intends to address the need to classify hospice therapeutic gardens distinctly different from therapeutic gardens, and frame consideration for further research.

PHASE 5: LSH PRELIMINARY DESIGN EVALUATION

The final method will consist of evaluating the preliminary design for the LSH. The evaluators were the researcher's committee members. All the findings will be compared to the preliminary LSH garden design with information found in Phase 2; then modifications will be made to the design of LSH to fit the decision tree recommendation. The modified version will be the final design for construction.

Hospice Garden Evaluation
Modified from Cooper-Marcus and Sachs *(2014)* *Hospice Design Guidelines*

Hospice Name: _____

Required General Considerations

			Institutional			Some Residential					Home like	
1.	Familiar landscape	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			No symbolism			Some elements					Many symbols	
2.	Transcendent image	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			None			Some					All	
3.	Maximize the # of sun-facing rooms	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			Urban sounds			Urban-natural sounds					Natural sounds	
4.	Soothing natural sounds	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			Not at all			Semi-immersive					Immersive	
5.	Getting away	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			None			Private seating					Private garden	
6.	Private garden	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			Inconvenient			Obvious gateway					Visible entry & convenient park.	
7.	First impressions	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			No elements			Plaques/Inscriptions					Dedicated Garden	
8.	A memorial garden – or not?	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			No elements			Lawn area					Playground	
9.	Outdoor play for children	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10

10. Required Visual Access: Patient rooms with access to a semiprivate patio or balcony ○ Y ○ N

11. Required Physical Access: A door outside to a patio or balcony ○ Y ○ N

Recommended General Considerations

			None			Some					Next to every room	
12.	Bird feeders	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			None			Some water					Natural water body	
13.	Water and wildlife	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10
			None			Dog Park					Kennels, Stables	
14.	Facilities for pets	○ Y ○ N	0	1	2	3	4	5	6	7	8	9	10

15. Recommended Visual Access: Panoramic view ○ Y ○ N

16. Recommended Planting: Swaths of ornamental grasses and long-lasting perennials ○ Y ○ N

17. Maintenance: a clear maintenance manual ○ Y ○ N

Hospice Facility & Garden Survey

Hospice Name: _____

Your Age: ○18-25 ○25-35 ○35-50 ○50+ Gender: ○ F ○ M

I am a ○ caregiver ○ staff _____ ○ volunteer _____

Hospice Care and Facility Questions

1. What would you consider to be the positive aspects of hospice?

2. Where do your support groups meet within the facility? *(i.e., support group room, chapel, garden)*

3. Where do you go during your free time while at the hospice?

4. Which places inside the hospice do you use to look outside? *(i.e., my room, kitchen)*

5. What is/are your favorite view(s) from the hospice facility?

6. Do you have a favorite place in the hospice? ○ Y ○ N
   If yes, which area and why?

7. What would make the hospice facility a better experience for you?

Hospice Garden Questions

The following section evaluates your current hospice garden and its benefits

Rate the following questions on a scale of 0 to 10 *Not at all* *Neutral* *Very*

8. How accessible is the garden? 0 1 2 3 4 5 6 7 8 9 10

9. Is it easy to find your way around the garden? 0 1 2 3 4 5 6 7 8 9 10
10. How comfortable is the seating in the garden? 0 1 2 3 4 5 6 7 8 9 10
11. How safe do you feel in the garden? 0 1 2 3 4 5 6 7 8 9 10
12. How therapeutic do you find this garden? 0 1 2 3 4 5 6 7 8 9 10
    a. What makes this garden therapeutic?

    b. What detracts from the garden being therapeutic?

13. What do you like and dislike about the garden?
    Like
    Dislike
14. Within the garden is there a quiet, private area to reflect? ○ Y ○ N
    If yes, which area?

15. Are there gathering spaces in the garden? ○ Y ○ N
    If yes, what spaces?

16. What kind of activities do you enjoy in the garden?

17. What meaning does this garden have to you?

18. Are there elements or spaces in this garden that would be beneficial for home base hospice care?

19. Should therapeutic gardens be a part of hospice care? ○ Y ○ N Why?

Thank you for your time and collaboration! Is there anything else that you would like to share for future design and development of therapeutic gardens?

Lake Superior Hospice Facility Survey

Your Age: ○18-25 ○25-35 ○35-50 ○50+ Gender: ○ F ○ M

I am a ○ caregiver ○ staff: _____ ○ volunteer: _____

1. What would you consider to be the positive aspects of hospice care?

2. What makes hospice uniquely different from other healthcare settings?

3. How are the LSH services benefiting the Marquette community?

4. Where do your support groups meet within the facility? *(i.e., support group room, kitchen, etc.)*

5. Where do you go during your free time while at the hospice? *(i.e., my office, bike trail, etc.)*

6. What does your regular day consist of and how much time do you spend at the LSH facility?

7. Which places inside the hospice do you use to look outside? *(i.e., my room, conference room, etc.)*

8. What is/are your favorite view(s) from the hospice facility?

9. Do you have a favorite place in the hospice? If yes, which area and why?

10. What would make the LSH facility a better experience for you?

11. Why is it important for the LSH to have a garden?

12. How would you benefit from having a garden at the LSH location?

13. How would the LSH and the Marquette community benefit from having a garden at the LSH location and what uses do you think a hospice garden could serve?

14. Kubbler-Ross wrote about end-of-life experiences and the emotional roller-coaster that marks patients and care-givers as they approach death. In what ways do you think a therapeutic garden can serve individuals facing end-of-life events? *(provide as many ways as you can think of)*.

15. Why should therapeutic gardens be a part of hospice care?

Thank you for your time and collaboration! Is there anything else or an experience that you would like to share for the future design and development of the LSH garden?

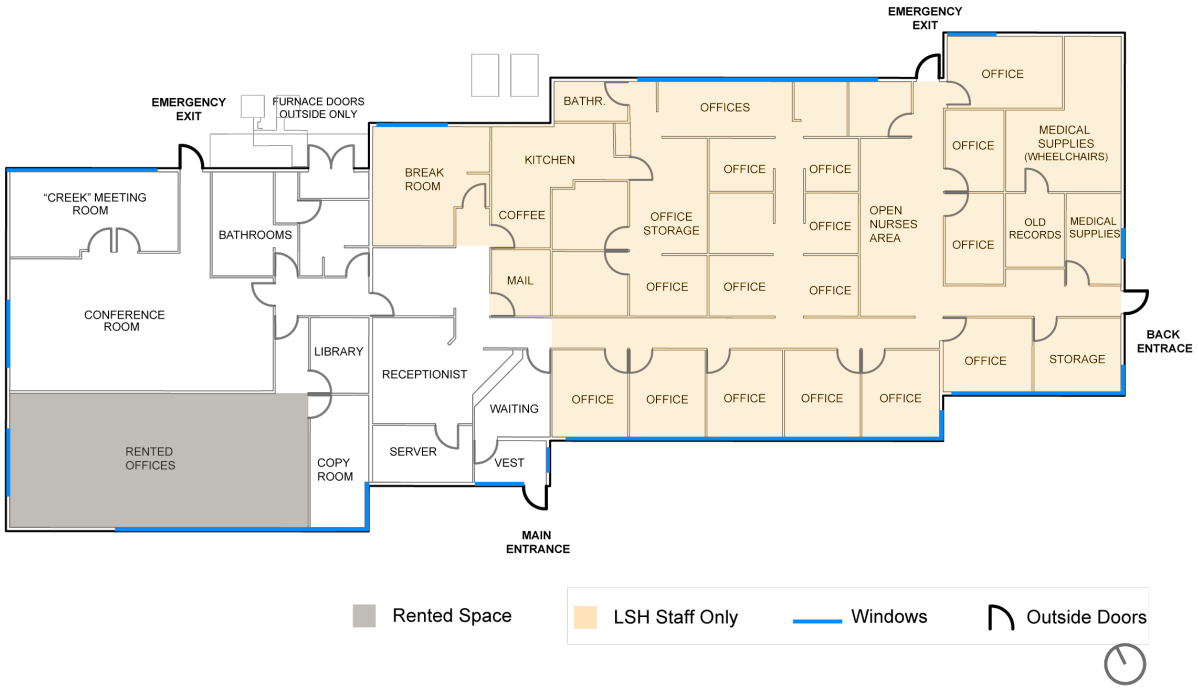
III. FINDINGS

The findings of this project hope to contribute to the advancement of landscape architecture as it transitions to an evidence-based profession. Findings from the baseline and case study were used to create a conceptual framework for decisions affecting the design of the Lake Superior Hospice (LSH) therapeutic garden design and other hospice facilities with gardens. These findings can also be used to better serve patients, patient advocates, and hospice staff, who deal with end-of-life circumstances. Appropriateness of certain design elements under different hospice conditions—structurally, environmentally, managerially, population-wise — must be considered before implementing these design guidelines.

This chapter recorded the findings from the LSH building and user analysis, the Massachusetts case studies results, the surveys and interviews results from the hospice residences and the LSH staff, and the LSH preliminary design evaluation results from the committee and researcher.

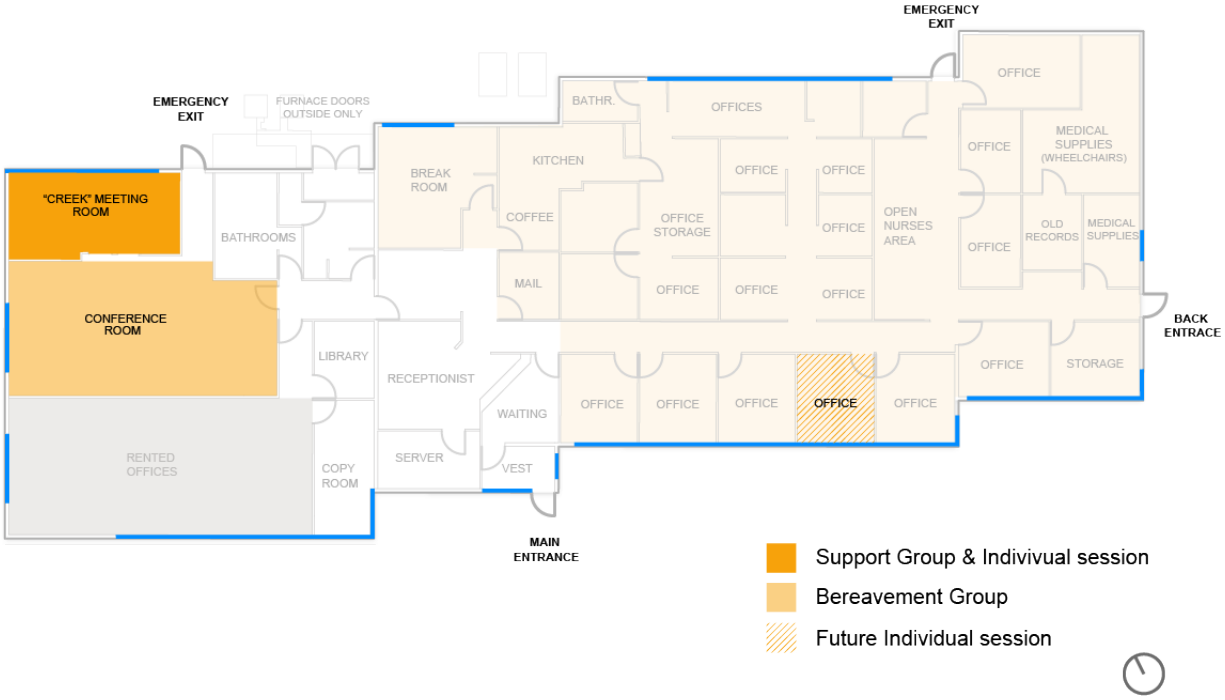
PHASE 1: SITE ANALYSIS OF THE LSH GARDEN PROJECT

A building analysis is of major importance for any healthcare facility. It helps designers create beautiful framed views through windows that can be seasonally attractive. Choosing the right plant species will attract wildlife near patients or staff's windows. The LSH building has big windows all around its facility. These outside areas are key and play an important role in the design.

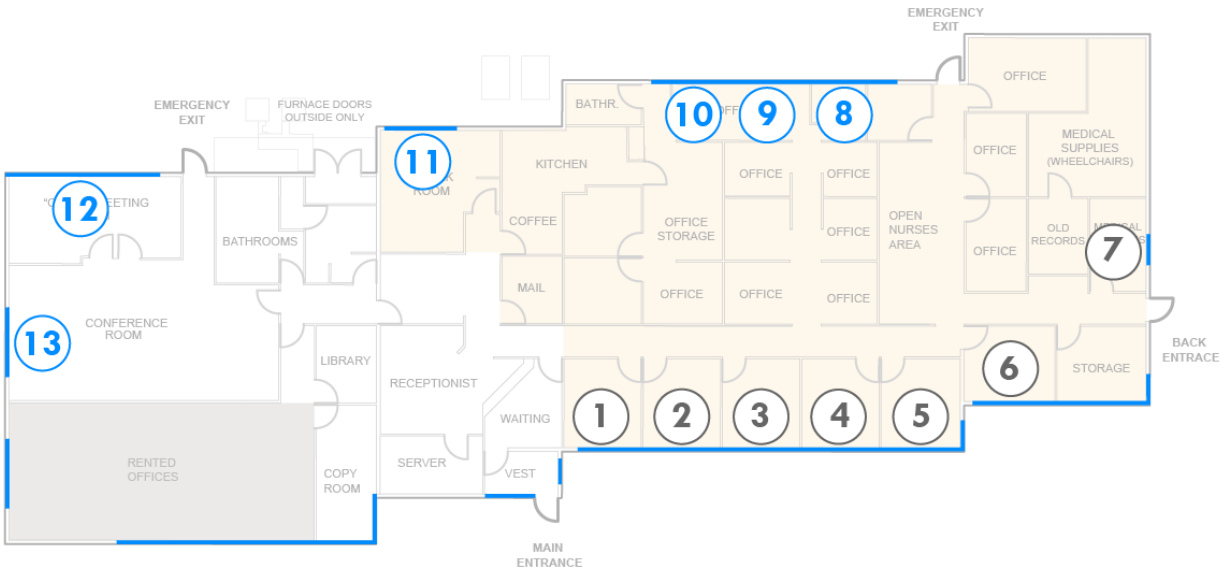


LSH Common Rooms and Dominant Views

“The Creek Room” is where staff spends most of their free time and where support groups meet, it is listed as their favorite place. The “break room,” is also another area in the facility where the LSH staff spend their free time. Both of these rooms, the Creek room and the break room, have framed views with large windows that overlook the Whetstone Brook and surrounding vegetation. The conference room, where staff and bereavement meetings are held, also has a window that looks into a sloped area with grass and shows a little peak of the Whetstone Brook. One of the offices will be used for individual counseling sessions in the future, requiring special attention of the window facing the parking area.



Common & Dominant Views



The four dominant views are found in the rooms where people spend the most time: The Break Room, The Creek Room, and The Conference room. The Creek Room view is the favorite view. The office, which will become a counseling room in the future, may be the most challenging room to design around since it has the road and car dealer view on the background.

Figure 31. View 4, from future office for counseling

Figure 32. View 11, Break Room View

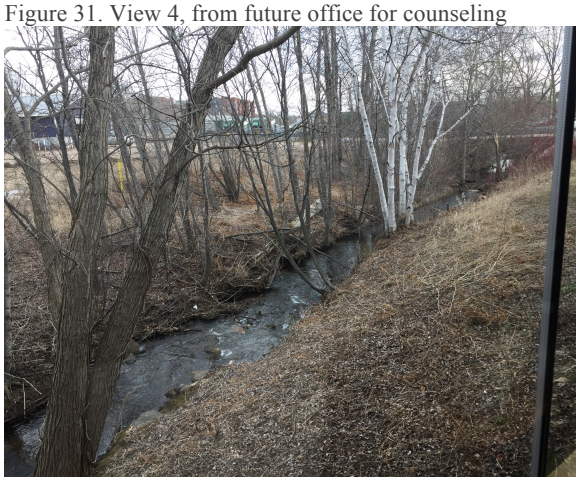
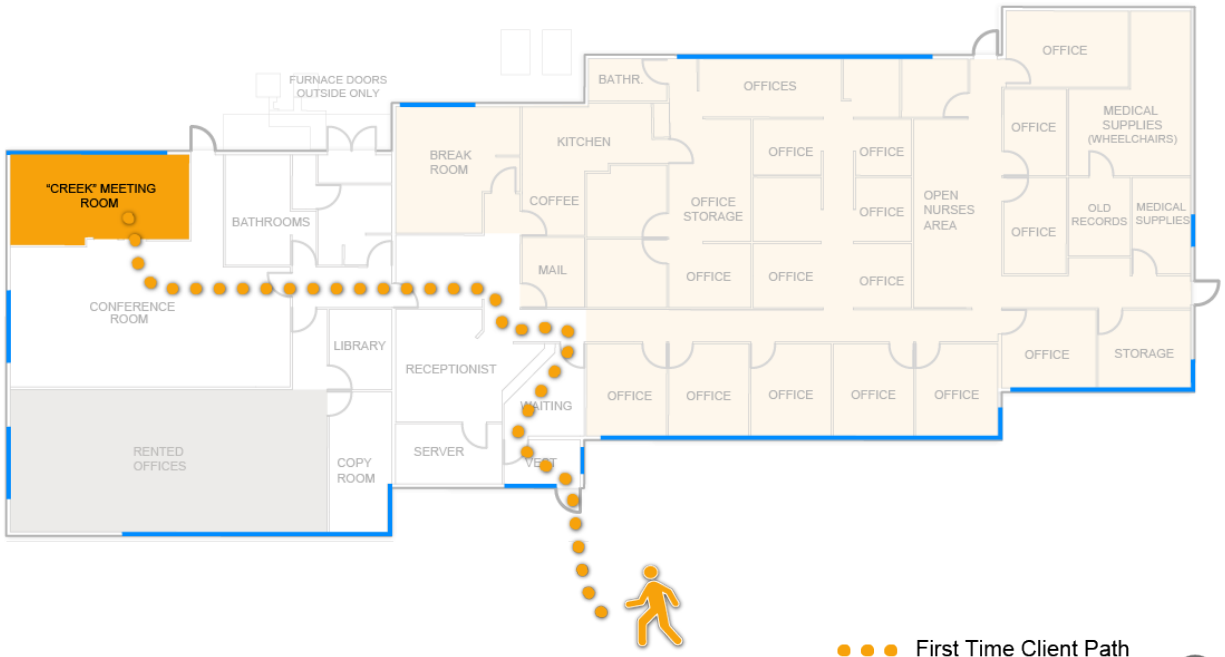


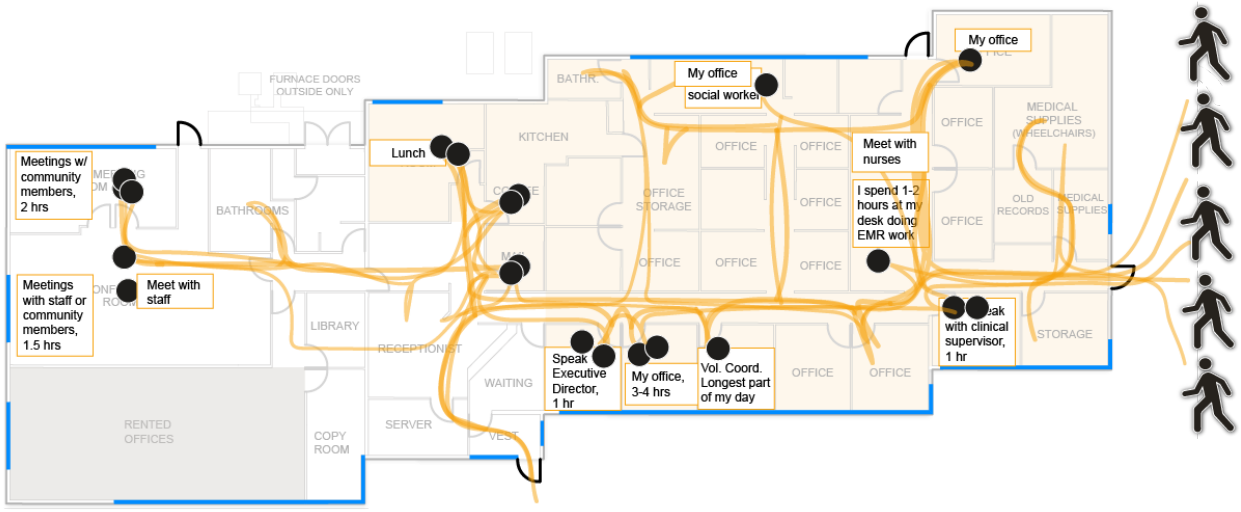
Figure 33. View 12, from Creek Room

Figure 34. View 13, from Conference Room

When a first time client visits the LSH he/she usually enters the building through the main entrance and walks to the Creek room.

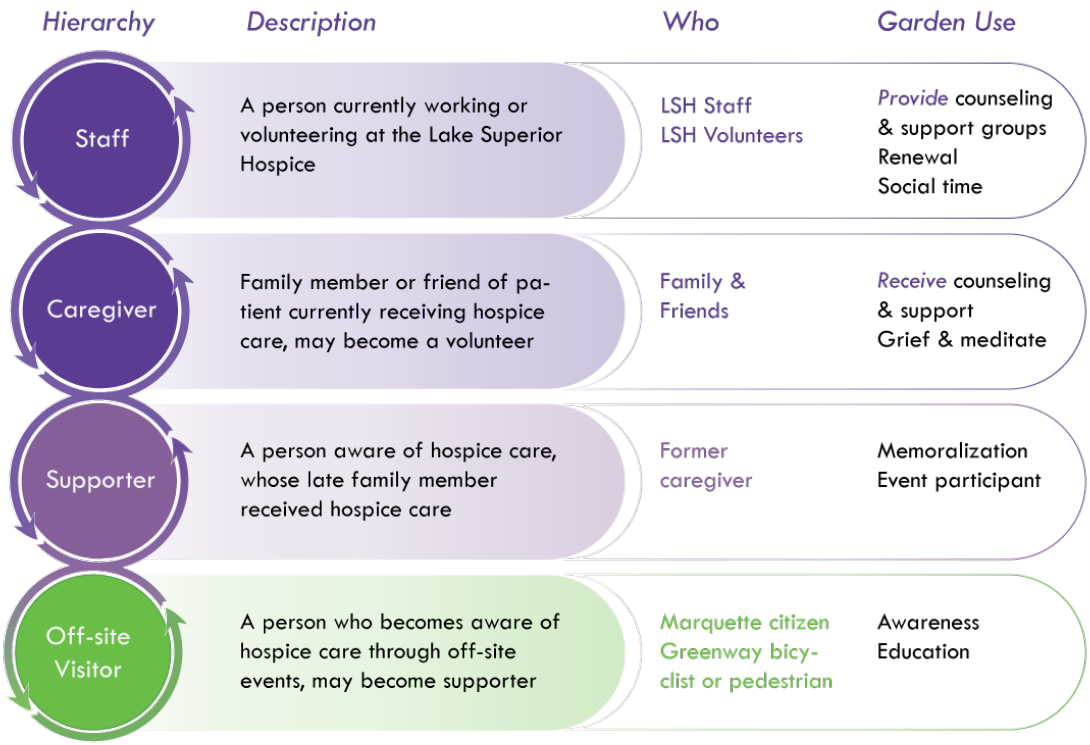


Unlike first time clients, the LSH staff's daily path is usually from the side entrance of the building. Five LSH staff members drew their daily path on the map and wrote how much time they usually spend on each room (see plan --).



Garden User Groups

This study identifies four garden user groups. The main user in this garden is the LSH staff because they are the ones who spend most of their time at the facility. The second group is the family or friend caregiver. They not only come for counseling but may also come to the LSH to participate in other events in the future. The third group is the supporter of the LSH who may only come to special events put out by the LSH. The last user group is the off-site visitors who may not know about hospice, and have become aware of this type of service through a LSH local event. Because the facility is not a residence, the patients are not within any category. As stated by the LSH, patients do not come to the facility, staff services them at home or other type of residence.



PHASE 2: EVALUATION OF HOSPICE RESIDENCES IN MASSACHUSETTS

The following describe an evaluation of four hospice residents in Massachusetts using an evaluation tool described Chapter 2. Methods that had a series of evaluation criteria. The results from these evaluations show the importance of the location and geographic surrounding. It is important to have hospice residences that promote a natural feeling (i.e. near nature, water, and vegetation) while still giving residents a sense of being connected to caregivers and other family members. In these case studies the residence that was most successful is located near a lake, it has bird feeders on all of its windows and is located in a residential zone.

CASE STUDIES

Case Study 1: Hospice of the Fisher Home, Amherst, MA

Introduction: Located in the Town of Amherst, MA, on 1165 North Pleasant Street, the Fisher Home operates as an independent, freestanding, nonprofit facility, which serves all of western Massachusetts.

Context and Location:
The Hospice of the Fisher Home has adjacent properties that includes a Japanese restaurant, and private residences. North Pleasant Street gives access to the Fisher Home.

Volunteers take care of the gardens. All the grounds are used for special events during good weather. They have vegetable gardens, raised beds, a gazebo and wooded areas to the south and northeast.

Map 2. Fisher Home Facility and adjacent sites

The Fisher Home finished re-construction in the beginning of 2017, after a fire damaged part of the house. In the spring of 2017, the Fisher home worked with a University of Massachusetts landscape architecture undergraduate student to develop a parking plan in the entry way to allocate more room for cars.

The Hospice of the Fisher Home was recently chosen to be on the Amherst Historical Society's 2017 Garden Tour. Only six gardens are chosen each year for this honor.

Service: Routine and respite care

The residence holds nine beds and its clinical staff is a multidisciplinary team of specialists in end-of-life care that includes nurses and certified nursing assistants, a medical doctor, a bereavement and spiritual counselor, and social worker. Service is available to patients 24 hours a

day, providing medical care, pain and symptom management, practical help, emotional support, and counseling. Organizational structure: Clinical Director, Medical Director, plus staff.

Figure 35. Parking on the south side of the house.

Figure 36. Rhododendron, roses, and lavender, next to the main entrance.

Map 3. Context and location.

Fig. 37. Tomato pots, and vegetable box.

Figure 38. The front of the Fisher Home

Emphasis on outdoor environment: The ranking schemes is based on 0-10 scale rating system, 0 being the least and 10 being the most, it is described in more depth in the methods chapter.

Figure 39. Memorial garden located on the east side at the back of the house.

Familiar landscape (5), the Hospice of the Fisher Home is located within a residential neighborhood. The red brick building identifies the facility with New England and the

University of Massachusetts building palette. The parking is not well defined; as of the early spring of 2017 the entry drive lawn has been used as parking, this makes the hospice house look chaotic. The facility's outside and inside look like a residence, and the surroundings gardens are typical home gardens, not extravagant, but well-kept during the season.

Figure 40. Large windows on the back side of the house.

Transcendent image (0), there are no symbols such as "forget me not" flowers or landscape elements like an eternal flame, or a paved walkway with names.

Maximize the # of sun-facing rooms (7), most room-windows surround the entire facility and receive sun-exposure, the windows are large and provide plenty of sunlight.

Figure 41. Gazebo on the right side of the house.

Soothing natural sounds (4), the sounds of cars and traffic can be heard from a nearby intersection. The wooded area at the back of the house, and the bird feeders attract birds, which make natural sounds.

Getting away (2), currently there is no definition of a private area, the gazebo is right next to the parking, so although it is enclosed, it may be interrupted by people walking, and cars entering or leaving the site.

Private garden (0), there is no private garden, each plot is small and distinct from the others.

First impressions (2), currently there is a small sign that says hospice at the entrance to the hospice home but because the house is not close to the edge of the road, a person looking for

it may miss the entrance. The first time that the researcher drove through into the site, the lawn was been used as parking and it was muddy.

A memorial garden – or not? (9) There is a bench in the back of the house with an inscription on it, as well as a memorial garden courtesy of Western Massachusetts Master Gardener Association.

Outdoor play for children (5) – There is enough lawn space in front and around the house where children can play. The lawn areas are well used during good weather.

Every room has a *bird feeder* (10) – The facility location is highly urban, limiting the likelihood to experience other types of *water and wildlife* (0), other than birds. There are no bodies of water. There are *no facilities for pets* (0).

Patient rooms don't have visual *access to a semiprivate patio or balcony*. Since the house is surrounded by homes there is not a *panoramic view*. None of the patient rooms or staff offices have *doors outside to a patio or balcony*. There are a few *ornamental grasses and some long-lasting perennials*. The volunteer gardeners make sure that the plants are well kept and vibrant through the seasons (except for winter). Currently the Fisher House does not have a *maintenance manual*.

Figure 42. Back side of the house parking area and back entry to offices.

Figure 43. Bird feeder outside patient's room, on the west side of house.

Figure 44. Perennials outside the office entrance.

Conclusion: The Fisher Home obtained 44/120 or 44/90 and 0Y/5Y.

Considerations: It should be noted that the overall ratings of the Fisher home may be lower than expected because the facility had just re-opened a few weeks prior to the visit/evaluation. The garden had not been maintained since the previous year, and the garden evaluation took place during the winter. Nonetheless, this facility rated lower due to its physical layout with parking area prominent at the entry and ill-defined garden areas.

CASE STUDY 2: Mercy Hospice, West Springfield, MA

Introduction: The Mercy Hospice is located on 2112 Riverdale Street, Suite 3, West Springfield, MA. The Mercy Hospice is not a residence, but an office shared-space for staff. It has served Western Massachusetts cities, including: Agawam, Amherst, Chicopee, Easthampton, East Longmeadow, East Springfield, Feeding Hills, Florence, Hatfield, Holyoke, Longmeadow, Ludlow, Southampton, Springfield, Westfield, Westhampton, West Springfield, and Whately.

Context and Location: The Mercy Hospice is located in a healthcare institution, owned by the Sisters of Providence Health. It is about 5 minutes away from the Holyoke Mall. It borders Holyoke and is in short proximity to Chicopee, connecting to Memorial Drive. Mary's Meadow, a nursing homecare complex at Providence is located to the north. The Tannery Brook runs on the Northeast side of the hospice location. There are residential houses on the south side along Highland Avenue near the entrance.

Map 4. Mercy Hospice context and location.

Services: Community Education, Hospice Home Care, General Inpatient Hospice (GIP), Group Adult Counseling, Individual Adult Counseling, Widow/Widower Group

Mercy Hospice partners with the patient's physician to provide a comprehensive range of services. These services are tailored to the patient's needs and their families. The services include: nursing assessments and ongoing care; on-call 24/7 support and assistance from social

workers, spiritual support, guidance and comfort from chaplains. Bereavement education and counseling.

Additionally, they offer companionship and respite care from volunteers, coordination and delivery of medication and medical equipment to the patient's home.

Organizational structure: The Mercy Medical Center is part of the Sisters of Providence Health System, a member of Trinity Health - New England.

Emphasis on outdoor environment: The ranking schemes is based on 0-10 scale rating system, 0 being the least and 10 being the most, it is described in more depth in the methods chapter.

Figure 45. Main entrance to the Mercy Hospice

Figure 46. Looking on the west of the facility, inside the conference room.

Figure 47. Entering the south entrance through metal fences/gates.

Familiar landscape (0), since this site used to be part of a psychiatric hospital, the buildings and landscape are institutional.

Transcendent image (0), there are no symbols such as "forget me not" flowers or landscape elements like an eternal flame, or a paved walkway with names.

Maximize the # of sun-facing rooms (3), the conference room is well lit.

Soothing natural sounds (8), it is pleasant and peaceful to walk around the facility, where the natural sounds of trees, birds, and wind are present. Urban sounds are minimized because the location is removed from urban noise due to the area involved.

Getting away (0), not applicable.

Private garden (0), not applicable.

First impressions (5), the sign to enter the site is not visible. The old gates on both sides of the entrance give the impression of passing through an abandoned place. The driveway in the site, however, is very beautiful.

A memorial garden – or not? (0), a small table installation inside the facility has flowers and the names of patients who have passed away pinned on a board.

Outdoor play for children (3), there are no playgrounds. There are large lawn areas on a slope all around the property.

Figure 48. Looking from the south side, large lawn space.

Bird feeders (0) – currently there are no bird feeders, but they could be implemented outside the conference room and offices.

Water and wildlife (0) – the Tannery Brook runs on the northeast side of the hospice but it is not close enough to the facility to hear water sounds or observe wildlife.

Figure 49. Small memorial table with flowers, above bulletin board with pictures and names of patients

Facilities for pet (0) – not applicable; not a residence.

Access to a semiprivate patio or balcony – is not applicable to the Mercy Hospice because they are not a residence. The landscape of the property has large lawn spaces, these offer a semi-*panoramic view* within the property line. There are no *doors outside to a patio or balcony*. The entire landscape of the site is covered with lawn, with a few trees and bushes, there are no *ornamental grasses or long-lasting perennials*. The Mercy Hospice does not have a *maintenance manual*.

Conclusion: The Mercy Hospice obtained 19/120 or 19/90 and 1Y/5Y.

Considerations: In summary, the Mercy Hospice had a healthcare institutional design which contributed to its lower ratings. The rating system emphasizes the need for a hospice to have a more residential feeling. Additionally, despite the overall large areas of lawn space on the back side of the building, there was little actual usable garden area.

CASE STUDY 3: The Kaplan Family Hospice House

Introduction: The Kaplan House is located in a residential neighborhood area in Danvers, MA. The Kaplan House is a home-like place where patients receive hospital-level medical care, comfort, and support. Private rooms overlook the landscape gardens. Common areas include a kitchen, family and children's play areas, a chapel, and a library. The suites provide sleeper sofas where a friend or family caregiver can choose to stay at any time.

The Kaplan House is a branch of Care Dimensions Inc., which serves patients & families in 90 communities throughout eastern Massachusetts. Those communities include cities and towns from the North Shore to Greater Boston to the MetroWest regions (www.guideStar.com).

Context and location: The Kaplan House is located in a residential neighborhood, off of highway 128, and is about 15 miles from Boston.

Map 5. Kaplan House

Service: The Kaplan House has 20 beds, and admits patients upon discharge from the hospital. They offer Routine and Respite Care, and General Inpatient Care, short-term residential care. The Kaplan House collaborates with patients and caregivers, primary care providers and specialists to develop personalized plans to manage illness and honor the goals and needs of the patient. Social workers help families to cope with emotional and practical issues. A chaplain offers non-

denominational spiritual support. Trained volunteers provide companionship and help with errands. Bereavement counselor helps families prepare for death and cope with grief.

Organizational structure: The Kaplan House is a branch from Care Dimensions. It has a president / CEO, plus seven professional leadership members, five board of directors and sixteen members.

Emphasis on outdoor environment: The ranking schemes is based on 0-10 scale rating system, 0 being the least and 10 being the most, it is described in more depth in the methods chapter.

Figure 50. Main entrance to the Kaplan House

Familiar landscape (5) – the Kaplan house is located in a residential area. In recent years it has expanded to provide space for a total of twenty beds. Although it is a beautiful facility, because of its size, it looks somewhat institutional. The main entrance into the house has a portico (which allows cars to park next to the entrance and drop off people), similar to a hospital's main entrance.

Transcendent image (10), there is a paved walkway with names.

Maximize the # of sun-facing rooms (10) – every patient's room has glass doors to the outside and large windows leveled at the patients bed view.

Figure 51. Inside a patient's room, sunlight coming through the window and glass door

Soothing natural sounds (5) – the healing garden in the center of the facility has a water fountain that provides soothing sounds to patients, they can listen to these sounds by opening their windows during good weather. There are also wetlands in the back of the house that attract wildlife.

Figure 52. Water fountain in the healing garden.

Getting away (6) – The back side of the house is surrounded by a wetland area, it makes one feel slightly separate from the site, yet this area is the back side of the patients' patios and is only divided by the paved path all around the hospice which doesn't make it private for those walking on the path.

Private garden (5) – there is an enclosed healing garden that has a private stone seating area, the Kaplan home staff mention that this area is not well used and mentioned that it may be due to the fact that windows surround it, making it like a fish bowl.

First impressions (10) – it was very easy to enter the site, the sides of the entry road have trees, the landscape plantings are well kept and pruned, and there is plenty of parking in front of the house

A memorial garden – or not? (7) – there are bricks with inscriptions outlining the concrete path, as well as benches donated in memory of a patient, and the country kitchen was also a donation in memory/honor of a patient.

Outdoor play for children (4) – currently there are lawn areas where children can play, the biggest is to the right side of the house

Bird feeders (3) – a few patient windows had bird feeders located outside their windows.

Water and wildlife (7) – the water fountain in the middle of the facility (healing garden) and the wetland located in the back of the Kaplan house attract wildlife, mostly birds like cardinals.

There are *no facilities for pets* (0).

All patient rooms have visual *access to a semiprivate patio or balcony*. The wetlands area adds a semi - *panoramic view* visual access to the property. All patient rooms have *a door outside to a patio or balcony* and the entire property is surrounded by s*waths of ornamental grasses and long-lasting perennials*.
The Kaplan house does not have *a maintenance manual.*


Figure 53. Wetland area on the east side of the house


Figure 54. Brick inscriptions on the paths


Figure 55. Patient room's on the east side of the house

Conclusion: The Kaplan House obtained a score of 72/120 or 72/90 and 4Y/5Y. This hospice residence scored higher than the other two gardens previously evaluated because it incorporated elements of the Hospice Garden Guidelines that were not present in the previous two gardens evaluated. For example, it had a strong residential feel, yet had distinct garden areas for patient and caregiver use and viewing.

CASE STUDY 4: Rose Monahan Hospice Home, Worcester, MA

Introduction: VNA Care Hospice, Inc. Rose Monahan Hospice Home is a hospice care provider in Worcester, MA. It is the first hospice residence in Central Massachusetts, opened in 1997.

Context and location: The Rose Monahan Hospice Home is located on 10 Judith Road, in Worcester, MA. It is off of June Street – the last home on Judith Rd. The Coes Reservoir adds beauty to the home on the west and south side of the house.

Map 6. Rose Monahan context and location.

Service: Routine and respite care (R) and General Inpatient Care (GIP).

Organizational structure: The Rose Monahan Home is a branch of the VNA Care Hospice system.

Emphasis on outdoor environment: The ranking schemes is based on 0-10 scale rating system, 0 being the least and 10 being the most, it is described in more depth in the methods chapter.

Familiar landscape (10) – a residential neighborhood. The home looks and feels like a house, there are no commercial

Image 56. Entrance to Rose M. Home

facilities around it, and it does not appear institutional either.

Transcendent image (0), there are no symbols such as "forget me not" flowers or landscape elements like an eternal flame, or a paved walkway with names.

Maximize the # of sun-facing rooms (10) – every single room in the home is facing south, and are in a slight angle that allows sun light through the entire day.

Soothing natural sounds (10) – the property is far enough and away from the street that urban sounds are not present, it is also surrounded by trees that block urban noise, when the wind blows the leaves of the trees make pleasant sounds with the wind.

Getting away (7) – Coes Reservoir creates a feeling of getting away; this beautiful water body has a great calming effect, where one can forget about time.

Private garden (5) – there is a semi-private garden located next to the Coes Reservoir; the garden sits on a lower grade, beyond a retaining wall, adding privacy.

First impressions (10) – accessing the site was easy, the entry was obvious, and the parking convenient.

A memorial garden – or not? (6) – next to the door entry is a picture of Rose Monahan, this hospice was built in her memory. There are also benches with inscriptions, in the front of the house and in the backyard facing the Coes Reservoir.

Outdoor play for children (0) – there is not an outdoor play space for children.

Bird feeders (10) – every single patient room has a bird feeder.

Water and wildlife (10) – the Coes Reservoir attracts birds, geese, and swans.

Facilities for pets (0) – there are no facilities for pets.

Image 57. All of the patient rooms are situated in the back side of the house, facing the reservoir.
All patient rooms have a balcony and large windows.

Image 58. The semi-private garden looking south to Coes Reservoir

Image 59. Memorial bench with inscription on the ground, next to the parking area on the left, in front of the house.

> Every single patient room has *door access* to go outside to their own *balcony.* The Coes Reservoir offers a *panoramic view.* The Rose M. Hospice does not *have swaths of ornamental grasses or ornamental and long-lasting perennials*, and it does not have a *maintenance manual*.

Conclusion: The Rose M. Hospice obtained a score of 78/120 or 78/90 and 3Y/5Y.

Considerations: The Rose M. Hospice is currently the facility with the highest score, primarily because of the setting/location, in proximity to a large body of water. Although the researcher visited the facility on a cloudy day the lake still looked beautiful and the images don't portray its beauty.

Figure 60. Patio below large balcony, used during breaks

Figure 61. Ramp walkway connecting to lower garden.

Figure 62. Large balcony located on the second floor, by the common area, some call "ski lounge"

Figure 63. Coes Reservoir

From these case studies we understand that having enough space for nature and wildlife are necessary to satisfy the hospice garden guidelines. It is important to note that water is an element that will have a greater effect on the recovery of patients, because of its calming effect and wildlife attraction.

Zoning regulations should be applied when building a new hospice residence, it is preferable to build in a rural area with little to no urban noise.

Transcendent image and facilities for pets are two hospice garden guideline that may not be necessary, it does not offer therapeutic value, nor does it fulfill a hospice criteria to celebrate life. The success of a hospice garden is measure on how natural the garden is, not necessarily extravagant. Nature itself represents transcendence in its changing seasons.

PHASE 3: SURVEY OF STAFF AT FACILITY IN PHASES 1 & 2

The survey's description list of questions can be found in the Methods chapter. Fourteen people from six different hospices completed the survey, ten females, three males, and one unknown. Eleven were in the 50+ age range, two were in the 35-50 age range and one was in the 18-25 age range. Among these fourteen participants who completed the survey six were volunteers, seven staff members (including a registered nurse, a social worker, and a bereavement therapist), and one caregiver. Out of these fourteen surveys, four were in-person interviews, and ten were completed independently and mailed to the researcher's school address. Section 1 of Phase 3 is a summary of the answers from the surveys. Section 2 of Phase 3 is a summary of the interviewee's conversation with the researcher.

Participant	**Age**	**Gender**	**Hospice Name**	**Hospice affiliation**
1	50+	F	Hospice 1	Volunteer
2	50+	F	Hospice 1	Volunteer
3	50+	-	Hospice 1	Volunteer
4	50+	F	Hospice 1	Staff
5	50+	M	Hospice 1	Volunteer
6	18-25	F	Hospice 1	Volunteer
7	50+	F	Hospice 1	Volunteer
8	50+	M	Hospice 2	Caregiver
9	35-50	F	Hospice 3	Staff: Clinical Director, RN
10	50+	F	Hospice 3	Staff
11	50+	F	Hospice 3	Staff: Social Worker
12	50+	M	Hospice 4	Staff: Chaplain & Bereavement therapist
13	35-50	F	Hospice 5	Staff
14	50+	F	Hospice 6	Staff
14 P	**3 (18-50)** **11 (50+)**	**10 F** **3 M**	**6 Hospices**	**6 volunteers, 7 staff members, 1 caregiver**

SECTION 1: SUMMARY OF SURVEY RESULTS

The following list provides the participants' survey answers in summary; these were completed by each individual and mailed back of the researcher's school address. The questions and individual responses are located at the end of this section:

1. **The Positive Aspects of Hospice Care**
   - Hospice care offers 24/7 great patient care and emotional support to both caregivers and patients.
   - The hospice team is heartily caring, compassionate, dedicated, honest, and respectful of autonomy
   - Caregivers and patients become easily comfortable with hospice personnel and bond quickly
   - Hospice care helps reduce stress and allows one to relax
   - The hospice environment feels like a home
   - Raises quality of life for patients

2. *Gathering Spaces* - A hospice is a home-like setting (the building and structure are like a house). The residence however, provides space where support groups, meetings and counseling can take place: a conference room, bereavement room. A hospice provides a common area for caregivers to socialize: kitchen, living room. A hospice may choose to keep the facility strictly for patients, no meetings. Other gathering spaces may include: library, boardroom, center of healing, community senior center, etc.

3. *Free time hot spots* – During their free time, participants go outside to the gazebo, garden, sometimes downtown, their home, or the garden trail. Some mentioned staying in the building and spending their free time at the volunteer room, and other common areas, including: kitchen, living room, dining room, hallways.

4. *Rooms with beautiful views* – All of the hospices in the study have windows in most or all rooms. Participants mentioned that they enjoy the views from "My office," patient room(s), living room. Library, and other common areas like: the hallway and kitchen.

5. *Favorite Views* – The participants' favorite views were summarized in four categories: a) Vegetation: memorial garden, front lawn, woods, flowers, trees, memorial tree, b) Structures: gazebo, seating areas (chairs), c) Wildlife: bird feeders, and d) Water: pond

6. *Favorite hospice place* – Although most staff has a favorite place, out of the fourteen people, five didn't have a favorite place within the facility. This needs to be addressed when developing a pre-occupancy evaluation, understanding that time alone is an important part of hospice. Participants listed, garden, common areas, such as: kitchen, living room, "the ski lodge," "my office," seating area outside, Chapel, Lobby with fireplace, Patient's rooms during the summer- with open doors to patio, among their favorite place within the hospice.

7. *Enhancing the hospice experience* – In order to enhance the hospice experience participants listed having more vegetable gardens, seating and parking, perhaps adding a fire pit, updating the garden and/or expanding it.

8-12. Questions 8 through 12 use a rating system from 0 to 10 to rate the success of the garden, regarding: access, way-finding, seating, safety, and therapeutic property value. The highest scores in the garden were access to the garden and safety. The main problem in the gardens is that there is not enough seating or the seating is not comfortable.

12a. Wildlife, natural sounds, water make a garden therapeutic by bringing out feelings of peace and tranquility.

12b. The major complain that detracts from the garden being therapeutic is traffic sounds and proximity to roads, parking and buildings - urbanism, while inadequate seating and maintenance were factors also.

13. Participants liked that a garden has thoughtful planting and organization, as well as having water and variety (vegetation and seasons). Many factors that are specific to each garden could be improved, including lack of water, maintenance, and seating.

14. The gazebo was the most popular private area followed by the healing garden and the courtyard. However, some of the participants were not able to think of a private space. This should be considered as an important feature for the development of a hospice garden

15. Gathering spaces in the garden include the gazebo and benches. Benches do not provide enough space for a group to gather, a gathering space should be part of the design of a garden according to the program of the hospice - depending of the activities that they will have outside.

16. A garden provides a wide range of leisure activities, mostly centered on time alone and contemplation.

17. A garden is meaningful in that one can immerse in nature, encounter different emotions, and feel at peace.

18. Because of the greatly different responses, question eighteen "**Are there elements or spaces in this garden that would be beneficial for home-based hospice care?"** may need to be revised.

19. Everyone agreed that therapeutic gardens should be a part of the hospice care because of positive healing effects.

Section 1A – QUESTIONS AND INDIVIDUAL RESPONSES

Q1. What would you consider to be positive aspects of hospice?

H1	Emotional support for both caregiver and patient. It is amazing how a person can bond with a person that they don't know. Every time hospice comes mom with dementia gets better.
H1	24/7 care - support
H1	Stress reduction, relaxing, good patient care
H1	team caring for patient and loved one
H1	Compassion, honesty, dedication to the needs of the residents
H1	Staff attitude and willingness to help. Patient care and respect for autonomy. Compassion. Environment (i.e. homey feel, bird feeders)
H1	A place to have physical and mental needs met in a caring, compassionate manner. Respect for the individual person.
H2	We are here to raise quality of life, we're all about life for how much time they have remaining
H3	Countless, expertise to family and patients, certified. Best care, is amazing how families allows us to be part of their lives.
H3	The care
H3	Support to patient and family from a team.
H4	Reconcile things within themselves or other people, or taking care of unfinished business. It's emotional and allows people to be emotional in order to take care of the above. There has to be humor.
H5	One-on-one support, validation, human connection.
H6	Pt. & family support & education Pain Management, comfort care

Q2. Where do your support groups meet within the facility? (i.e., support group room, chapel, garden)

H1	In the garden at 7 am every Friday

H1	New conference Room
H1	N/A
H1	conference room
H1	_
H1	Support room
H1	Support room, or living room
H2	Conference room for bereavement community. Staff and support group, conference room, Finances
H3	Center of healing, meeting rooms, home-like country kitchen
H3	Bertolon Center at the Kaplan House
H3	Bereavement Center
H4	Not within this facility, this facility is strictly for patients. We usually meet at the VNA headquarters in downtown Worcester (120 Thomas Street)
H5	board room, library
H6	Office meeting room, Community Senior Centers

Q3. Where do you go during your free time while at the hospice?

H1	Outside and at the gazebo
H1	Gardening - volunteer. BSFM + Fisher
H1	I'm a volunteer so I go where needed
H1	outside if weather permits
H1	Kitchen, living room, dining room, hallways
H1	Living room/common room, dining room, visit patient rooms
H1	Volunteer room, visit to patient rooms
H2	No free time, usually on the go. Meet at a restaurant
H3	If I have a free time I would go home or down the street, but some stuff members use the paths around the facility.
H3	I walk the grounds except on really cold, snowy or rainy days
H3	N/A
H4	No breaks, there is a break room bur I travel across the state - in my free time (outside of work) I hike, sometimes go hiking with friends and socialize, I go to concerts, local concerts. But mostly hiking.
H5	garden
H6	Walk around the building/block. Run errands in town

Q4. Which places inside the hospice do you use to look outside? (i.e., my room, kitchen)

H1	all rooms have windows to look at the gardens outside
H1	Kitchen, office space, patient rooms
H1	Patient rooms, living room, kitchen
H1	all rooms
H1	Living room, dining room, kitchen
H1	volunteer office, living room, patient rooms
H1	Volunteer office (the gazebo) kitchen, patient rooms (bird feeders)
H2	Used to be hospital rooms, Used to be part of Brightside
H3	My office There are windows all throughout
H3	My office window. I have a beautiful view of the garden with our beautiful little brook and lovely statues

H3		Office window overlooks courtyard with water feature. Any and all windows or doors I walk past
H4		Every room has the Coes Pond view, that is the first thing that people notice
H5		library, common hallway
H6		Conference room, general office area

Q5. What is/are your favorite view(s) from the hospice facility?

H1		tree trunk, plants and its flowers, the foreground, land slope
H1		Kitchen - back porch
H1		I don't have one
H1		memorial garden from kitchen window
H1		Front lawn/gazebo
H1		Into woodsy area, or outside volunteer office w/ the gazebo
H1		I love looking at the bird feeders from residents' rooms. Flowers around the window from any window.
H2		Looking at the trees, all windows have views
H3		The seating area, where the chairs are. Rooms 14 & 15
H3		It's very hard to pick a favorite. I like a couple of spots for different reasons
H3		The view to the gazebo, from the kitchen.
H4		Coes Pond, it is also the only view.
H5		View of garden from hallway
H6		Our "Hospice Tree" which was planted for our yearly Memorial Service

Q6. Do you have a favorite place in the hospice? If yes, which area and why?

H1	Y	garden, gazebo
H1	_	All new space - haven't decided yet
H1	N	No
H1	N	_
H1	Y	Kitchen- staff, volunteers, family, and sometimes residents often cross paths there
H1	Y	Living room, it's very homey and welcoming
H1	_	The living room is quite inviting but the dining room is where I usually meet with residents.
H2	Y	Just my office, you can get away and time to think to process what is going on.
H3	_	Animals run across, seating area.
H3	Y	Inside, I like the chapel and the front lobby with the big inviting fireplace
H3	N	But I enjoy visiting the patients' rooms in the summer when the patio doors open to let in the fresh air.
H4	Y	The large common area, it reminds me of a ski lodge because of the high ceiling. A wedding was held, one of the male patient's daughter got married there because his dad was in a weak stage.
H5	N	
H6	N	My desk to be near a window

Q7. What would make the hospice facility a better experience for you?

H1		New garden beds for a vegetable garden
H1		Nothing

H1 _
H1 _
H1 Hard to think of anything - such a positive place now
H1 more sitting area outside for nice days - fire pit, etc.
H1 More sitting places near the gardens for nice days.
H2 The garden of meditation area and would identify need
H3 I don't know that there is anything
H3 The front lobby could use a little updating
H3 _
H4 More parking
H5 Larger garden, more seating
H6 _

Questions 8 through 12 use a rating system from 0 to 10 to rate the success of each existing garden, regarding: access, way-finding, seating, safety, and therapeutic property value.

Q8. How accessible is the garden?
Q9. Is it easy to find your way around the garden?
Q10. How comfortable is the seating in the garden?
Q11. How safe do you feel in the garden?
Q12. How therapeutic do you find this garden?

Hospice	Q8	Q9	Q10	Q11	Q12	Total
H1	10	10	10	10	10	50
H1				10	4	14
H1	10	10	5	10	8	43
H1	10	10	8	10	10	48
H1	9	9	7	10	10	45
H1	9	9	7	10	7	42
H1	9	9	6	10	8	42
H2	N/A	N/A	N/A	N/A	N/A	N/A
H3	10	10	10	10	10	50
H3	10	10	4	10	10	44
H3	9	9	8	9	9	44
H4	8	10	7	10	9	44
H5	10	10	9	9	10	48
H6	N/A	N/A	N/A	N/A	N/A	N/A
Average	**9.5**	**9.6**	**7.36**	**9.83**	**8.75**	

Q12a. What makes this garden therapeutic?

H1 The staff and families tell us that is wonderful
H1 Space, plants
H1 bubbling water feature, healthy plants, walking paths, meditative spaces
H1 beautiful, peaceful
H1 It's well - tended, varied, aesthetically pleasing
H1 Calm, outside, bird feeders

H1 The beautiful flowers, the bird feeders (the birds)
H2 _
H3 Quiet, peaceful, well-kept/maintained
H3 It's quite, lots of birds and rabbits, the plants, bushes + trees are very nice
H3 The sounds of nature - wind through the tall grasses - birds.
H4 The water, Coes Pond and the woods, the trees, during all four season it is pretty nice. And it is very peaceful.
H5 Various plants, stones, art pieces
H6 _

Q12b. What detracts from the garden being therapeutic?

H1 we have to have parking for cars
H1 noise
H1 dead plants, ill kept
H1 _
H1 _
H1 cars, road, that are nearby + sometimes make a lot of noise
H1 The parked cars
H2 _
H3 The sound from cars
H3 _
H3 If the sun is too hot - shade -
H4 Probably that it is too close to the hospice house. It is 20 years old. The land was owned by the catholic church and VNA designed and built the house.
H5 Little seating
H6 _

Q13a. What do you like about the garden?

H1 _
H1 looking forward to spring plantings
H1 I love the flowers
H1 varies with seasons
H1 See above
H1 relaxing
H1 Well planned out in reference to flowers
H2 _
H3 well maintained, appropriately designed, not boring
H3 pretty much everything
H3 mature growth - variety -
H4 The trees and water
H5 Lots to look at - water feature
H6 _

Q13b. What do you dislike about the garden?

H1 nothing
H1 no water sounds
H1 _
H1 need a vegetable garden - it is coming

H1 _
H1 has potential for more things
H1 Needs more things to connect to (Buddha, birdbath)
H2 _
H3 _
H3 not enough sprinklers to keep all the bushes watered
H3 _
H4 A little too close, it is not that private
H5 Little seating options
H6 _

Q14. Within the garden is there a quiet, private area to reflect? If yes, which area?

H1	Y	Gazebo
H1	N	_
H1	Y	_
H1	N	_
H1	Y	Gazebo
H1	N	_
H1	N	_
H2	_	_
H3	Y	Internal healing garden, can be very private
H3	Y	Gazebo could use a couple of bench around back
H3	Y	Gazebo & courtyard
H4	N	It's quite but visually not private
H5	N	_
H6	_	_

Q15. Are there gathering spaces in the garden? If yes, what spaces?

H1	_	_
H1	N	_
H1	Y	gazebo
H1	Y	Tables and chairs outside
H1	Y	Near the clinical area entrance, Gazebo
H1	Y	few benches
H1	N	few benches
H2	_	_
H3	_	There is physical open space
H3	Y	gazebo
H3	Y	Gazebo
H4	Y	Patio with seating
H5	N	_
H6	_	_

Q16. What kind of activities do you enjoy in the garden?

H1 maintaining it and planting
H1 Companionship

H1	_
H1	Sitting, sharing meals, meditating
H1	Just strolling around, cutting flowers for display
H1	sitting, thinking, reflecting
H1	Quiet, time for talking, reflecting, sitting quietly
H2	_
H3	N/A
H3	Just walking quietly by myself, watching the birds and rabbits, you can also hear the clanging of the boats which I like
H3	Walking - sitting
H4	Seating and thinking. There is a former caregiver who comes 2-3 times a week and always stands outside. His wife was part of the hospice house.
H5	Listening
H6	_

Q17. What meaning does this garden have to you?

H1	The garden is very meaningful to all 7 gardeners. It brings everyone together
H1	Peace
H1	_
H1	Special, especially memorial garden
H1	_
H1	safe place, peaceful
H2	A way of connecting with nature: birds, flowers
H3	_
H3	Place of solitude, comfort if weather is nice.
H3	A place to collect my thoughts, relax, just take 5 for myself. Occupationally, my husband meets me for lunch and we take a walk around the gardens.
H4	Peaceful spot - I often encourage families to take breaks by walking the garden path.
H5	It's part of the beauty of this place. Building without the pond would take half of the personality of this place. It means peacefulness, comfort, inspiration). There are swans
H6	Renewal

Q18. Are there elements or spaces in this garden that would be beneficial for home-based hospice care?

H1	Taking flowers from the garden to patients
H1	Wheelchair accessible
H1	_
H1	bereavement meeting
H1	Gazebo, sitting areas
H1	fresh air, bird feeders
H1	The residents love seeing the birds, and flowers
H2	If we had, it would be beneficial for people, caregivers
H3	Benches, water fountain
H3	I think it depends on the patient.
H3	_
H4	It' beneficial for gardens for families.
H5	Not sure
H6	_

Q19. Should therapeutic gardens be a part of hospice care? Why?

H1	Y	Nature is so important. Our society needs to get back to the idea of having nature. It should be a part of everyone's life.
H1	Y	Very calming - bring back memories
H1	Y	Because evidence shows it reduces stress to have connection to nature
H1	?	
H1	Y	
H1	Y	can bring peace and relaxation. Take away bad thoughts. Can become a safe haven
H1	Y	Can redirect a residents' thoughts to nature and outside themselves - momentarily
H2	Y	
H3	Y	Evidence by all the people who take advantage - during harsh weather, there is still people using it. Even for families who come back by their brick.
H3	Y	I think, here at the Kaplan House it adds to the beauty and ambiance of the house both for patients, families, and me.
H3	Y	Patients and families need a place to connect with nature. Offers areas for reflection & space to move around.
H4	Y	Because they are effective - nature is therapeutic. Wild woods, a lot of this environment is natural, whether it is more manicured or not, either way it is therapeutic.
H5	Y	A unique, important positive impact that you can't get any other way
H6		If possible. Space, land, maintenance all plug into the idea to support a Hospice Garden

SECTION 2: INTERVIEWS SUMMARY

In order to expand on the survey results, the researcher conducted four interviews that gave closer insight to the patients' experience from the perspective of those who are closest to them, the caregivers (chaplains, nurse, and a volunteer). The designer met each of the individuals at the hospice where they work and asked the questions from the survey, writing down their answers to each questions. More information was actually gathered through the interviews than the surveys. These interviews gave a closer insight into the hospice community life, regarding their personal stories with hospice care. The following paragraphs are descriptions of the conversations that were carried during the interviews.

Volunteering was recognized as highly important for hospice care. One of the interviewees said, "The hospice staff is a group of caring people whose (most of the time) volunteers were once caregivers in the same place. The volunteers go through rigorous training to understand what it means to serve hospice patients. The training teaches resiliency, compassion, and most importantly it builds trust among each volunteer and the staff; the trust is the stronghold that binds the hospice together."
A person willing to volunteer must go through the training process before he or she can volunteer. During the training process volunteers have to be willing to share their own experiences and listen to the rest of the volunteers' experiences. This process makes each of the future volunteers vulnerable and yet accepting of each other. The hospice team turns into a family in a short period of time to first-time patients and their families. Even with busy schedules the team is expected to maintain a calm atmosphere. "Inside the hospice home, there is no rushing or running around and looking concerned or stressed. Everyone is amiable, respectful, hospitable, and under control."

So how does a caregiver deal with his or her emotions when a patient dies, and how does he or she manage stress? One of the interviewee's answered, "Dealing with death is hard but the hospice team has to constantly move forward, sometimes there is no time to stop and think but move on to the next patient that needs assistance." Another one said, "It's good to laugh and crack jokes often" - hospice staff can't allow themselves to go deep in a susceptible stage because there is so much to do. Some people spend their weekends hiking and visiting places when they can. Regenerating after death episodes is very important. It isn't making each person numb to the situation but about remembering to celebrate life, giving their best to the care of their patients, and making sure that their patients have a clear understanding to enjoy their last days to the fullest. The personal experience of a family caregiver is of thanksgiving. These individuals donate to hospice so that future hospice patients and caregivers can receive the same quality of life that their loved ones received.

Once the interviews were over, the researcher toured the facility, accompanied by a staff member at times. Touring the facility allowed the researcher to experience the spaces where staff, caregivers and residents spend their time. The following lines describe the researcher's experience within the facility. the landscape around the facility was recorded in the findings methods chapter, under the evaluation findings.

> The settings are well divided to provide a familiar space to the patient, the paths are decorated with home-like items and/or nature paintings. Patients are encouraged to bring personal belongings from their home to decorate. A common area is a must-have because residents' families are always expected to come and encourage socializing. The homes are open 24/7 to family and friend caregivers. Some hospice residences provide extra room for caregivers to spend the night. One of the hospice homes has pullout beds so caregivers can spend the night, if they choose to. Most of the homes have long hallways leading to the patients' rooms. All of the patient rooms have big windows and sometimes balconies or doors to the outside. There were bird feeders around mostly all of the home residences. Several of the garden spaces or structures had plaques and were named after someone or dedicated to someone's life, these structures or rooms are made due to the caregiver's donations.

The list below were statements made by the interviewees, these are listed because they pertain specifically to the future of hospice garden design and the need for a hospice garden:

- The patients' biggest concern is not being able to go outside.
- In order to better serve the next patient, staff needs an environment that can help them move on quickly from dealing with death
- Specific religious as well as cultural affiliation should be taken into account.
- Water is a great element, fountains and water. It's not just visual but soothing through the sound.
- A hospice garden should be design for all 4 seasons, because some patients will only be alive during a specific season.
- "We need to have more therapeutic gardens."

SECTION 3: LAKE SUPERIOR HOSPICE FACILITY SURVEY SUMMARY RESULTS

This survey addresses questions regarding the impact of the LSH among the Marquette community, the LSH facility, the quality of work atmosphere, and the benefits of having a garden. A table of each question and individual answers can be found at the end of this section, Section 3A.

Seven staff members and one volunteer filled out and mailed the surveys. The eight participants include six females, one male, and one unknown. All participants are in the 50+ age range.

1. Some of the positive aspects of hospice is that it keeps one mindful of what's important, and the brevity of life. In hospice you meet amazing families and become a part of them. It is a positive and hopeful environment.
2. Hospice is uniquely different from other healthcare settings in that the larger focus is on reducing suffering and providing high-quality of care. It focuses on the whole person, not only the physical/medical. Unlike a hospital, it is personal, bringing peace and support to the patient.
3. The LSH non-profit services are benefitting the Marquette community by providing medical care, mental/emotional/spiritual care and social work care to terminal and near-death severely ill individuals. They have developed a robust bereavement program. Their services offer a support system for the community. They provide guidance when a family knows not what to do during a time of distress. Their program involves care extensive time with family. Their focus is on loving each day fully and providing caregivers with trusted aid through their services.
4. Designing around the Creek and conference rooms are important locations, since these two areas are the once used the most, by staff and caregivers. Another area that is important is the break room.
5. Same as 4.
6. The time spent at the facility varies by staff member, nurses are away visiting patients, while other staff members work through the day in the office.
7. Most staff members enjoy going to the Creek room to look outside, its corner location gives it a close-up look into the Whetstone Brook.
8. The Creek room's view is their favorite view from the facility.
9. The Creek room is the favorite room in the facility.
10. Better landscaping and more flowers were two landscape related approaches mentioned by the LSH staff to enhance their experience at the hospice. Other factors were improving the inside of the building.
11. All of the staff who filled out the survey have a clear understanding of the therapeutic benefits of nature. One person mentioned that it is important for the LSH to have a garden because it will be a positive addition to the community.
12. The LSH staff will benefit from having a garden by spending time in it to decompress.
13. Gathering space for the community, a quick stop for rest for those along the Iron Ore Heritage Trail, and a place where memorial services could be performed.
14. A therapeutic garden can help alleviate one's distress, sadness, grief. It helps one believe, and hope.

15. Therapeutic gardens should be a part of hospice care because it meets more than physical needs, it finds healing in nature.

SECTION 3A – LSH SURVEY QUESTIONS AND INDIVIDUAL RESPONSES

Q1. What would you consider to be the positive aspects of hospice care?
Hospice provides face-to face, one to one, in-home help to patients and family members in real crisis, facing imminent death. It eases their fears and teaches them tools and methods for reducing suffering and getting through loss.
tender care, presence, compassion, comfort
Meeting amazing families
privilege of providing support, being welcomed into family
Keeps one mindful of what's important, & the brevity of life
relationships, trust, honoring values, dignity
Giving hope no matter the circumstance
Helpful positive, passionate, care & aide in supporting the families and patients through end of life, usually in a home environment
Allowing patient / family to make decisions, focus on relationships, honoring life
in-home, trained professionals, compassion

Q2. What makes hospice uniquely different from other healthcare settings?
The larger focus on reducing suffering, and for increasing best possible quality of life during the patients' limited time left of life.
Keeping them to have a quality of life while they are transitioning from their life to the next life.
perhaps easier to focus on whole person - not just physical/medical aspects
devoted care - not rushed. Staff available for support/listening/teaching
You (patient) decide what your goals are & we help you achieve: even when this means dealing with eminent death
It removes the non-personal, hospital setting, adding more peace & support to the patient.
_extent of family involvement, family's primary role in decision making
in home, compassion, partner coach families, personal

Q3. How are the LSH services benefitting the Marquette community?
Providing medical care, mental/emotional/spiritual care and social work care to terminal and near-death severely ill patients, providing education about end-of-life issues.
They are unique to all other build of care
We provide non-profit service - more personal focus on spiritual - Also more developed bereavement program
Providing excellent care to pts & families - the right care at the right time for the right reason.
Death with comfort, hope, support & dignity
It's a much needed support system for our community. Providing guiding help when a family knows not what to do at this time
Often holistic, care extensive time with family. Focus on loving each day fully.
confidence to families & caregivers, comfort to families & dying, spiritual connection

Q4. Where do your support groups meet within the facility?
Large conference room, smaller "Creek Room" meeting room, and worker's individual offices.
Creek room
Creek room!

"Creek Room" - overlooking potential garden
Conf/Meeting room or Creek room
We have several in house meeting rooms both formal & very easy
big conference room

Q5. Where do you go during your free time while at the hospice?
Bathroom, kitchen, break room.
Bike trail - usually there is no free time
Creek room, break room
No free time - ofc.
Really don't have any - occasionally sit in Creek Room
I usually don't leave my area, as I am key to any incoming visitors & calls
Office
NA

Q6. What does your regular day consists of and how much time do you spend at the LSH facility?
My regular day at work is a 4 or 8 hour shift in the office, two to three days a week.
Patient visits. 3-4 hours daily at LSH
4-5 hrs a day - but often out on a visit
8 1/2 hrs day. Seeing patients, office work
Home visits - 1-2 hours daily
all day-
Part time employee - spend time in my office at meeting
1-2 hrs/wk

Q7. Which places inside the hospice do you use to look outside?
Through large windows facing north in the large conference room, the creek room, and the break room.
My office window
Creek room
Creek Room, lunch room & my office
Break room, Creek room
We have 2 rooms that have large windows looking over a lovely creek in the back of the building
dining area off kitchen
Creek room

Q8. What is/are your favorite view(s) from the hospice facility?
My favorite views are from the large conference room through large windows facing north and west.
The creek
Creek room
Creek room -> looking at creek and garden area
The brook outside
Those in #7. An empty undeveloped lot sits behind our little creek
Above - beautiful stream.
Creek

Q9. Do you have a favorite place at the hospice? If, yes, which area and why?
My favorite place in in the Creek Room facing north.

Creek room & my office window
Creek room - view is best
Creek room, running creek = peace and tranquility
Creek Room - quiet
The "Creek Room." It is like a lovely quiet living room.
Creek room cozy, intimate, great view

Q10. What would make the LSH facility a better experience for you?
(1) An overhead fan/vent in each bathroom to get rid of any bad smells right away.
(2) Get rid of, or organize better all the paperwork clutter in my own office.
(3) A big video screen I could easily plug my laptop into to display my reports at committee meetings without using up paper.
better landscaping
If I had an office w/ window
It's a wonderful atmosphere to work in - because of the team.
Outside area to sit
Flowers trees and nature are always very comforting. We have most of that element here in the natural sense.
neater gardens

Q11. Why is it important for the LSH to have a garden?
Experiencing nature by walking through it, or by gazing at it through a window is calming to the soul.
Peaceful reflection
nature is powerful, reviving & inspiring effect on our souls
Community recognition of the LSH & its values. More exposure to community who don't know we're here.
There is healing in nature & a sense of peace connecting with the earth
It would be a wonderful place for reflection, peace, & tranquility.
Provides an ongoing experience of renewal, gentle beauty of nature.
Attractive, calming, pleasing
Q12. How would you benefit from having a garden at the LSH location?
I would enjoy gazing at it through our large windows that face north. All this gazing through windows that I would do would be during our daily, weekly, and monthly meetings.
Integrate my office work and my fieldwork. Reflection optimizes, those two things.
Would be a place to reflect, to debrief, decompress
Beauty, peaceful
A place to share
I'm not sure I would benefit, but it would be a lovely memorial for the entire community.
Would walk in it
Visiting place, reflective place

Q13. How would the LSH and the Marquette community benefit from having a garden at the LSH location and what uses do you think a hospice garden could serve?
The community would benefit from the calming effect of seeing and walking through outdoor scenic beauty. The uses would be the beauty, the calming effect, and maybe ritual use: gatherings for memorial ceremonies.
It would be lath a resource and a ford patient that the community does not have currently.
A place to reflect, meditate, be quiet in a natural setting.

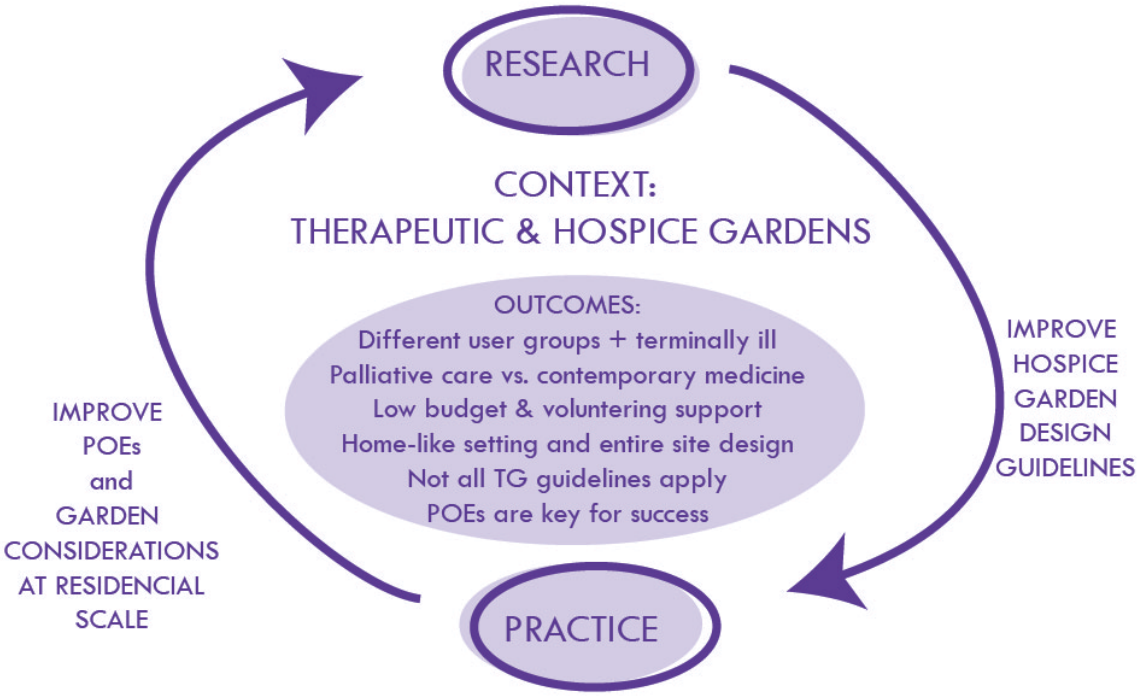
Could have memorial service there, also support groups in good weather.
Would like to see it be a community resource - to observe and enjoy flowers, plants, a walkway
Our location is next to the city walking path. I think our garden would be an inviting place of peace for those passing by
Could be a place for people and the community to walk/sit.
gathering for families & caregivers to remember loved ones

Q14. Kubbler-Ross wrote about end-of-life experiences and the emotional roller-coaster that marks patients and care-givers as they approach death. In what ways do you think a therapeutic garden can serve individuals facing end-of-life events?
A therapeutic garden can serve individuals facing end-of-life events by guiding their thoughts toward regeneration, regrowth, hope. Each season brings change. The symbolism at awaiting spring blooms that come from dormant bulbs under the soil can help those in the process of grief.
a place of constant beauty + peace + rest
a place of consistency while everything else is constantly changing
nature reminds us of a bigger picture, something "beyond"
Certainty a place of rest for caregivers
Sense of knowing that life goes on - as flowers die in fall they are reborn in spring. Passing from this earth is a natural part of life.
Not only those facing - but afterword. Our hospice follows our family groups for support following death. A garden for LSH would be a wonderful place for memorial gatherings.
Focus on renewal, value of simple things
Place of peace, beauty, walk with/ comforters, meet w/ pastor

Q15
Why should therapeutic gardens be a part of hospice care?
Because it is yet another way to comfort people who are experiencing painful loss.
They can be a statement that even during times of loss and transition life's beauty continues to constantly unfold
a refuge from "noise" in our culture
Getting back to basics - the earth and its natural beauty
Help staff & patients feel God's presence & smell and feel the wonder of creation.
They could be an uplifting, peaceful, thoughtful place for hospice.
focus on healing found in nature
meeting more than physical needs

Is there anything else or an experience that you would like to share for future design and development of the LSH garden?
Something that speaks to beauty, peace, hope, and eternity even during winter months.

PHASE 4: CONCEPTUAL FRAMEWORK FOR A HOSPICE



PHASE 5: LSH PRELIMINARY DESIGN EVALUATION

The final method consists of evaluating the preliminary design for the LSH that was done prior to doing the case studies and surveys. The evaluators were the three committee members and the researcher. The Hospice Garden Evaluation was used to analyze the preliminary LSH garden design. A table with the results can be found at the end of this Phase.

Modifications were made to the preliminary design to create the final design of LSH, this design intends to fit the decision tree recommendation. The modified version will be reviewed by the researcher's committee and then sent to the LSH.

EVALUATION SUMMARY

The preliminary design will need to change in order to meet the Hospice Garden Evaluation. It did not meet the criteria as a whole. The preliminary design did not integrate the entire LSH site, failing to provide a *familiar landscape* to its users as well as integrate *first impressions*. These are both very important guidelines that provide reassurance and ease to "vulnerable" caregivers. Second, the preliminary design did not incorporate elements or areas in the garden that would bring out the idea of life and death through *transcendent image*. This may or may not have to be reconsidered since the LSH facility is an office space not a residence. The preliminary design did include, however, some therapeutic and hospice garden elements, like, wide paved paths with wheelchair access, an aroma therapy flower garden, private spaces, safety, and a memorial

garden. Some hospice guidelines, like # of sun-facing rooms, private balconies and patios, and facilities for pets, do not apply to the facility since the LSH is not a residence.

The final design focus is around the current attributes that the LSH site already has, water and wildlife.

PHASE 5. TABLE

PRELIMINARY DESIGN RESULTS	**JW**	**TE**	**RR**	**MT**
Required Guidelines				
1. Familiar landscape	2	4	7	2
2. Transcendent image	9	1.5	5	0
3. Maximize the # of sun-facing rooms	0	0	0	0
4. Soothing natural sounds	7	6.5	9	9
5. Getting away	9	8.5	7	8
6. Private garden	9	7	8	8
7. First impressions	5	2	3	5
8. A memorial garden – or not?	10	7	8	10
9. Outdoor play for children	0	9	8	10
Total	51	45.5	55	52
Recommended Guidelines				
10. Bird feeders	5	0	0	0
11. Water and wildlife	9		10	10
12. Facilities for pets	0	0	0	0
Total	**14**	**0**	**10**	**10**
	65	**45.5**	**65**	**62**
13. Visual Access Required: Patient rooms with access to a semiprivate patio or balcony	N	N	Y	N
14. Physical Access Required: A door outside to a patio or balcony	Y	Y	N	N
15. Visual Access Recommended: Panoramic view	Y	N	N	N
16. Planting Recommended: Swaths of ornamental grasses and long-lasting perennials	Y		Y	Y
17. Maintenance: a maintenance manual	N		N	N
Total	3Y 2N	1Y 2N	2Y 3N	1Y 4N

IV. CONCLUSIONS

The final chapter summarizes the findings applied to the research of hospice garden designs as well as the application to the final design of the Lake Superior Hospice (LSH). This chapter is divided in four sections. The first section begins by describing the comparison of the LSH garden to other gardens, the gardens that were evaluated. Section 2, gives insight to how this knowledge can be applied to the construction of future gardens. Section 3 describes the final design and the criteria used to design it. And lastly, Section 4, describes the limitations and delimitations of the project and design.

SECTION 1: Comparisons to Other Gardens

In comparison to the other four evaluated gardens the LSH hospice garden design met the criteria of the Hospice Garden Guidelines more fully. Wildlife and natural views were two especially desirable guidelines to include in the garden. Therefore, the LSH design offers views throughout the site, and also has a planting plan that attracts birds without needing bird feeders on the windows, it is a natural approach. Another comparison that makes the LSH garden design favorable is the Whetstone Brook, and the separation from the building to the garden. This creates an oasis and sense of being away. Three of the hospice gardens that were evaluated didn't have enough space to provide a sense of being away because of their proximity to urban noise and views. Although the LSH garden is within a commercial area, and next to a bank, and the Waste management, the use of vegetation plays a big role on masking its surroundings. Its concave topographic location also helps in keeping out noise from W Baraga Ave.

Evaluation & Survey Application

The evaluation of the existing hospice gardens was most helpful in understanding that not only a portion of the site has to be designed but the entire site, an approach that was applied to the LSH site design. This evaluation was an excellent instrument for research in that we can measure the success of each hospice garden. note differences between each garden, investigate why a certain element or area(s) in the garden are not working well, and what the garden may be lacking. This information helps the reader understand the importance of having hospice gardens that are beautiful as well as useful.

The LSH site is a great location to have a garden, as described in the findings chapter, having hospice homes near nature enables the site to achieve hospice garden guidelines/requirements. It is located near a body of water, creating soothing sounds. It does not have as much traffic sound, one of the complaints from the survey of some other gardens.

The survey application gave a full understanding of the current use of hospice homes and the LSH facility with their respective program of activities. This knowledge is applied to the program of the LSH garden, many of the current activities in the building are to be duplicated and enhanced outside in the garden. The understanding of the users' type of work with hospice, in this case the interviewees, is key to develop a healing environment, a holistic place that can aid recovery for staff and caregivers. Likes and dislikes are opportunities on how to approach the design of the garden and think about what would or wouldn't work. For example, favorite views and rooms are areas to study, why are these views and rooms desired? Answering that question enables the designer to mimic or

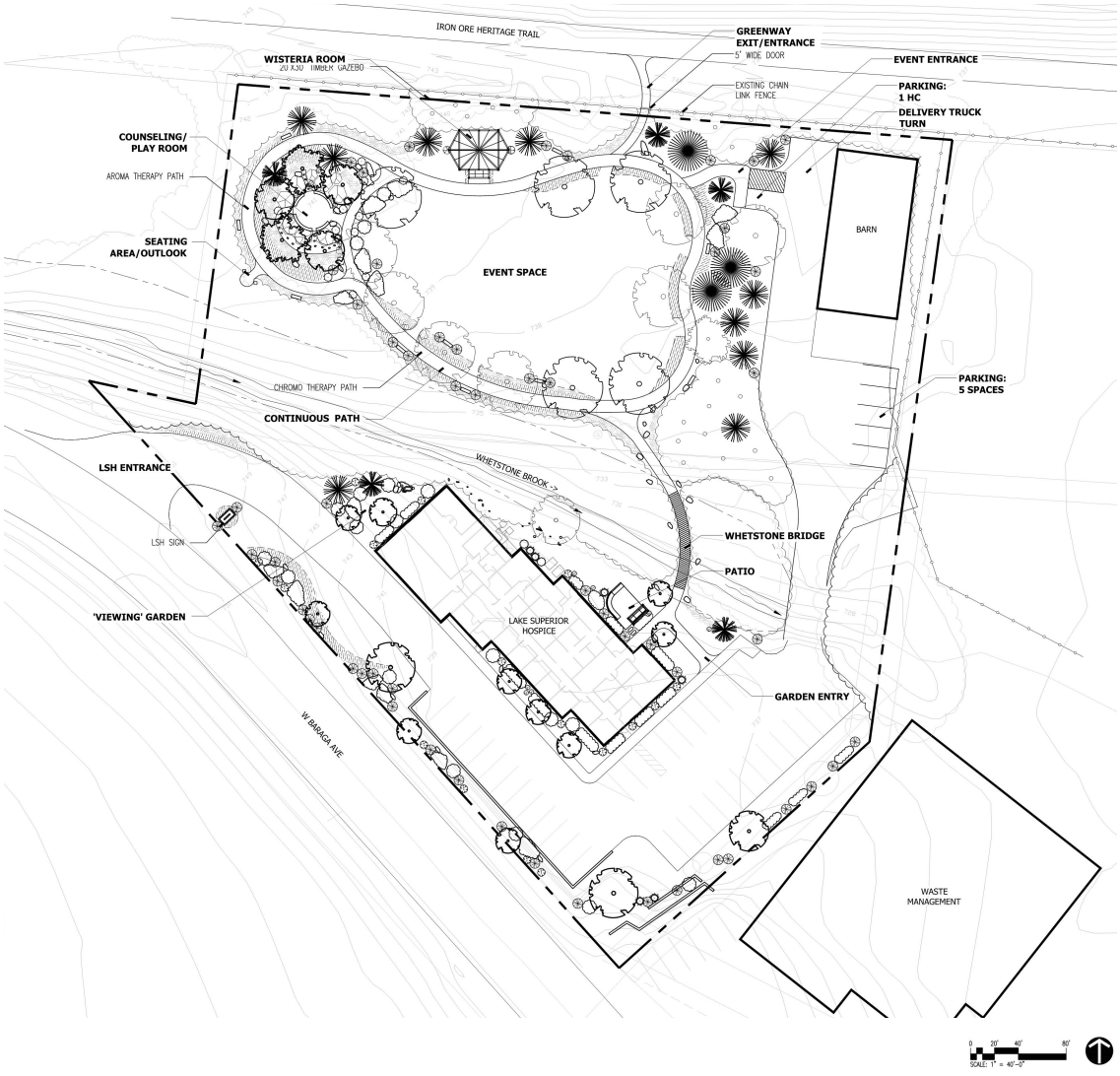
enhance what is liked in a place. Understanding how much time a staff member or caregiver spends in the facility is also important, because this makes the opportunity to design around a window and frame a view.

The rating that each survey respondent gave their respective garden showed a focus on safety along with complaints about not having enough seating or it being uncomfortable. This informed the important elements for the garden – add benches and comfortable places to sit, and make them accessible and safe. Achieving safety in the garden design includes making the garden ADA accessible, easy to find, and arranging vegetation to clearly define entries and choice points. Noise, was another problem expressed in the surveys, the design must use vegetation to block off traffic noise. And lastly time, respondents indicated having a need for spaces to be alone as well as gathering spaces.

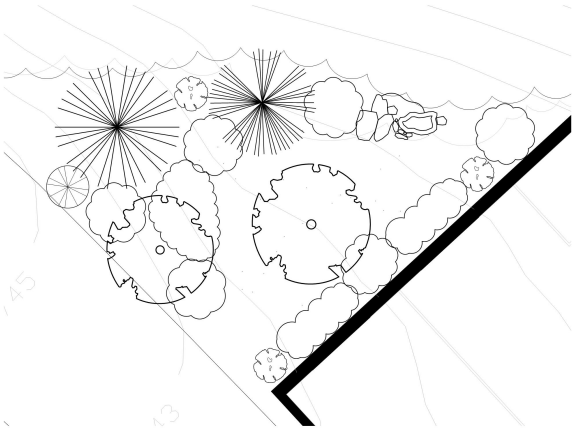
In conclusion, the major focus of the garden is to create outdoor spaces for its users with specific activities, such as those within the hospice organization program: counseling and support group sessions, that can be held outdoors in the garden.

SECTION 2: DESIGN DEVELOPMENT AND EXPLANATION

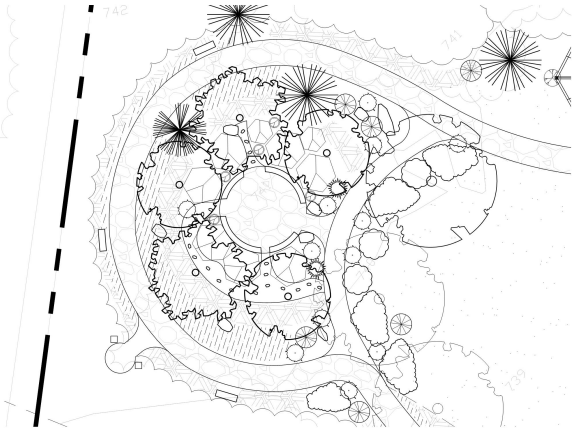
The final design for the Lake Superior Hospice (LSH) provides the unique opportunity for staff, caregivers, and visitors to find peace, rest, support, and fellowship in a holistic landscape. Its goal is to enhance the quality of life for all its users through the garden's program. The design's focus is to frame every view in order to have a year-round or four-season interest, as well as person-nature interaction in and outside of the building. The site's planting selection is used strategically to provide these views and focal points throughout the site. There are four outdoor spaces designed to help accomplish the goals of the LSH services. These are: The Patio, The Whetstone Bridge, The Wisteria Room, and The Counseling/Play Room. The open space, approximately 12,500 ft^2, is designed to be the event space for monthly and annual LSH events. The Viewing Room, located next to the conference room, is designed to attract wildlife with its selection of plants. There is also a stone bird bath and boulders around it that will become a snow-covered sculpture during the beginning of the winter. Six new parking spaces are provided across the bridge. A new entry to the garden is located on the north side for Greenway users as well as for LSH staff who wish to use the IOHT and/or the commercial area.



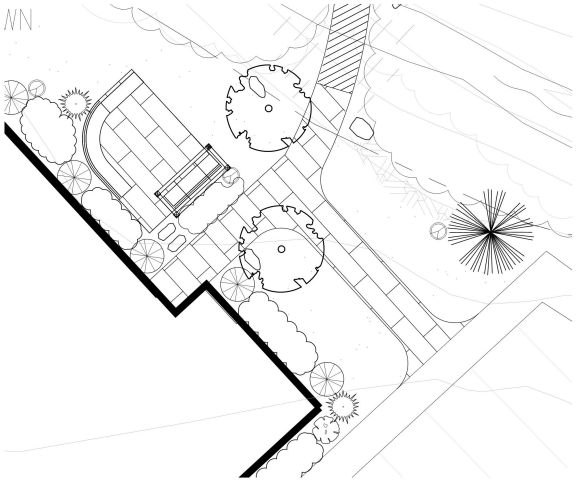
ENLARGED PLANS:



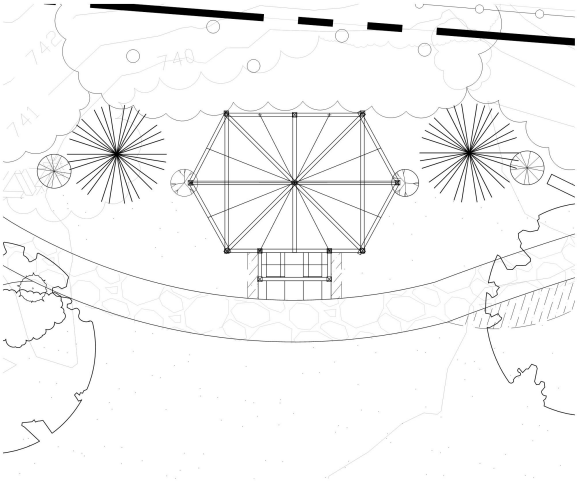
1. ENLARGED PLAN - VIEWING ROOM



3. ENLARGED PLAN - COUNCELING/PLAY ROOM



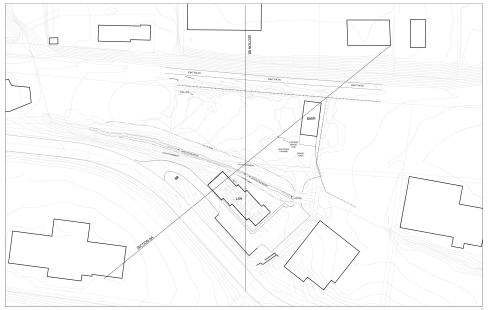
2. ENLARGED PLAN - GARDEN ENTRANCE & PATIO

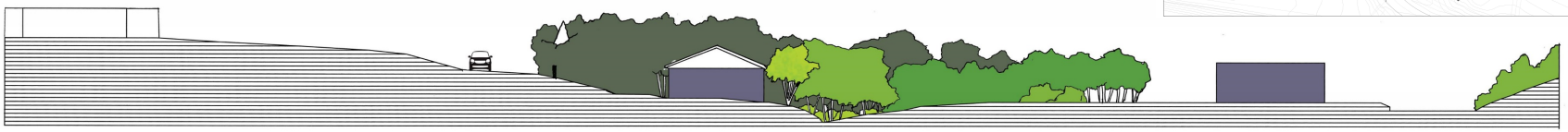


4. ENLARGED PLAN - WISTERIA ROOM

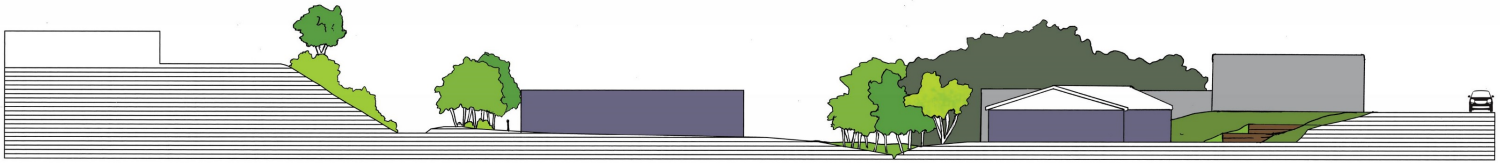

EVENT ENTRANCE
PARKING: 1 HC
DELIVERY TRUCK TURN
PARKING: 5 SPACES
GREENWAY EXIT/ENTRANCE
WHETSTONE BRIDGE
PATIO
GARDEN ENTRY
EVENT SPACE
WISTERIA ROOM
CONTINUOUS PATH
COUNSELING/ PLAY ROOM
SEATING AREA/OUTLOOK
LSH ENTRANCE
VIEWING GARDEN

SITE PLAN





Section AA - Before



Section BB - Before

Section AA - After

Section BB - After

DOMINANT VIEWS

1. Conference Room View

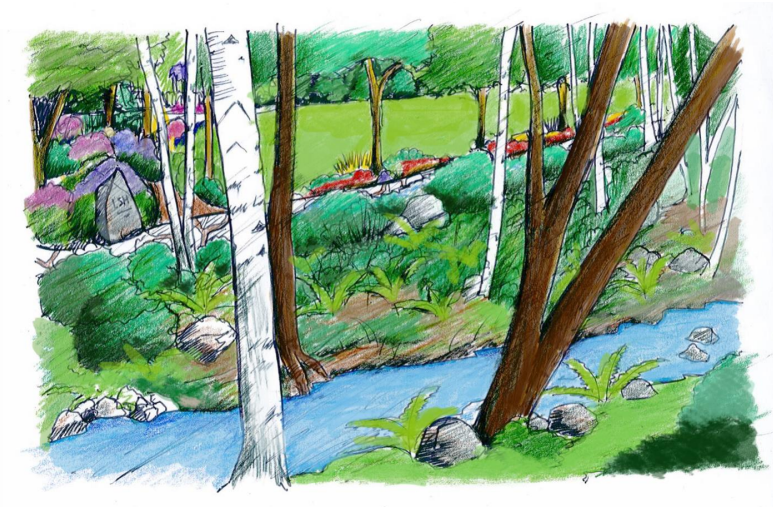
- Focal Point: Apple Blossom
- Evergreen shrubs with edible fruits
- Birch, poplar, and evergreen trees in the background
- Birdbath and boulders to create landforms

2. Break Room View

- Focal Point: Birch tree
- Evergreen shrubs near windows with fruit interest to attract birds
- Ferns and rocks near water
- Evergreen trees
- Wisteria Room in the background (purple)

3. Creek Room View

- Focal Point: Whetstone Brook
- Ferns and rocks near water
- Shrubs and perennials along the path
- Green open event Space
- Path leading to counseling/play room
- Green vegetation and white birch trees contrast



PROGRAM

Understanding the user groups was key to designing a program that would work for the LSH garden. As stated in the methods chapter, there are four user groups for the LSH site: Staff, Caregiver, Supporter, and Off-site visitor. Each of these groups will use the garden differently. When events or counseling sessions are held, two or more user groups will use the same space at the same time. The following diagrams show each user's activity on the site plan. Thicker lines represent that a certain path is used more than a thinner path. Larger circles represent more use and time spent in a space or area in the garden, smaller circles represent less time spent in an area of the garden, this circles also represent a smaller group vs. an individual.

LSH Garden Program

1. Dominant Views – consists on framing all possible views within the site, especially views from the Conference room, Creek room, and Break room. These are all rooms where the LSH staff spends most of their time and are their favorite views from the windows.
2. Viewing Room – seasonal interest, maintenance entry next to road, acts as a natural mural.
3. Patio – breaks, lunch, small gatherings
4. Whetstone Bridge – a memorable transition to the garden
5. Counseling & Play Room
    - Counseling Room – bereavement and support groups, time alone, individual counseling, gathering space, work space for staff
    - Play Room – children's garden, stones path behind bushes
6. Brook Lookout – (7' x 7') small individual seating/space
7. Wisteria Room (20'x 30') – event space, counseling, memorial services or as background to the memorial services, break room, conference room
8. Open Space – Approximately 600-800 ft^2 of event space for monthly and annual LSH events, capable to have over 100 people
9. Portable Bathroom space for events is located behind the proposed handicap space, next to barn.
10. Proposed Parking: 6 spaces (1 HC)
11. Current Parking: 36 spaces (3 HC)
    - If people carpool – 4 people per car – parking will be sufficient for 132 persons
    - If people carpool – 2 people per car – parking will be sufficient for 66 persons
    - If people carpool – 50% 4 p.p.c. and 50% of 2 p.p.c. – parking will be sufficient for 96 persons

Staff – Garden Use Description

As the staff arrives, they will park in the back/east side of the parking and enter the back/side door. Some will go to their offices, and later go to the conference room to have office meetings, go to the break room to have a break or a meal. Most of them will also go to the Creek room to rest and look at the Whetstone Brook. The staff may go outside to continue a counseling session. The continuous path is to encourage exercise and the benches are located for contemplation. The Patio will be used as the new break room, both Wisteria room (gazebo) and counseling rooms should also be used to have time-alone, a break, conduct a counseling session or office meetings. An enclosed area is located near the counseling room; this room is small but can potentially have two individuals, its proximity to the water makes it a soothing place. The Greenway access can bring one to the commercial area, to buy lunch, go to the bank, or take a long stroll at the IOH Trail.

User Group Diagram 1 – STAFF

Caregiver – Garden Use Description

The views into the garden and next to the drive should make the caregivers feel welcomed. Once inside the building a staff may offer to have the counseling session outside or go for a walk after a few minutes of counseling. An entire group may meet in the Counseling outdoor room or in the Wisteria room to have bereavement sessions or counseling. The caregiver may at times be scheduled to have a session at the garden. In this case, he/she will park in the back and walk straight into the garden, may give them time to wonder and sit to contemplate. Soothing sounds, the colors and aromas of the flowers, pine needles etc., will therapeutically help them distress. The caregiver may also come when events, such as aerobics, are being held in the open/event space area.

User Group Diagram 2 - CAREGIVER

Supporter – Garden Use Description

A supporter is someone who gives to hospice through donating. They may not have any interaction with the building but come to an event. They will park and walk into the garden open space or go to the Wisteria Room, depending on the size of the event group. A dedicated area for portable bathrooms is located next to the barn. Children who come with supporters will have the opportunity to wander all around the garden. As they explore through the garden, they will find the playroom. At the playroom, they can play and hide following the stone pavers on the ground and around the bushes.

User Group Diagram 3 - SUPPORTER

Off-site Visitor – Garden Use Description

An off-site visitor may feel invited to come in, and there should be a sign with the title of the garden on it at the entry of the garden by the IOH Trail. The sign is intended to raise the awareness of off-site visitor about the hospice experience and the other therapeutic benefits that the garden offers. Since this group comes by foot or bike, a bicycle rack should be provided at the entrance of the hospice. A donation box should be located near the bridge and at the trail entry, that can be used to help fund maintenance in the future. The visitor will experience the garden from the opposite direction. There will be engraved stones with the name of each outdoor room that can help the user understand the site. At times the IOH Trail gate will be open when having fundraising and hospice awareness events to encourage IOH Trail visitor participation.

User Group Diagram 4 – OFF-SITE VISITOR

Hospice Garden Guidelines

The LSH site aims to implement the Hospice Garden Guideline requirements. Some of the requirements do not apply as the facility is not residential, other guidelines were adapted to the office and may meet the "home-like" requirements. The following requirements do not apply to the site:

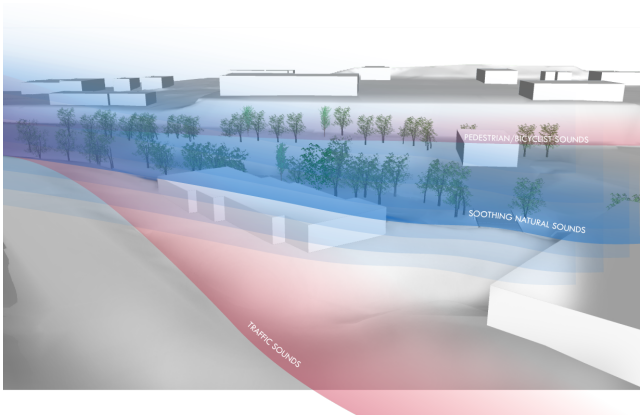
- Maximize the # of sun-facing rooms
- Facilities for pets

The next paragraphs describe how each of the guidelines have been applied to the site:

A Familiar Landscape - The site contains native plants, especially the Apple Blossom – Michigan's state flower, to define edges and frame entrances. These trees are located near the entry drive of the site and at the entrance to the garden. A hedge of perennials adorns the drive into the site. Perennials and shrubs are used to soften edge of trees next to the drive into the site, to make it inviting. Above the perennials, thinning out branches as required, opens up a view into the garden.

While in Marquette, the researcher observed the beautiful use of rocks at Carp River Gardens and used this idea as inspiration. Marquette is known for its tourist destination located at Presque Isle, Black Rocks. Pictured Rocks, located in Munising, is another tourist attraction of rock formation near Marquette. This makes rocks a special element to be used in the site. There are boulders and stones all through the site, they are used for defining edges. During the winter months these rocks will become landforms of snow and make the landscape appealing.

The Crossing as Transcendent Image – The Whetstone Bridge is a key transition and entry into the garden. It allows one to cross through the forest, hear and see soothing water, feel peace, and tranquility. It's a transition to something beyond, a connection with one's spirituality, an understanding that there is something greater and better then ourselves, especially as one approaches the end of life Once the user enters the garden, the reward of life is granted and or reminded as he/she sees the beauty of the flowers and trees.



Natural immersion experience – The site's topography and hydrology provide soothing natural sounds to the garden. The Whetstone Brook and forested edge limit the traffic noise coming from W Baraga Avenue. A

wide selection of trees and shrubs provide berries that will attract birds. Bird sounds will complement the already existing natural sounds.

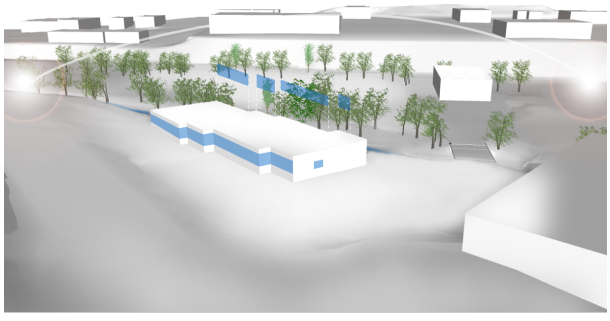
A Sense of Being Away – As the users immerse themselves into the garden, they will feel removed from the everyday. The garden provides a place where the users can sit alone to reflect and pray. The Continuous Path is another element that provides a route for walking with someone else, to talk and forget about time.

The Counseling Room – One of the elements that the LSH wanted was a private garden where counseling sessions could happen. The Counseling Room will provide this space. Vegetation is used to enclose the outdoor room and provide privacy. The timber benches have drawers where pillows can be stored and used for comfort. The benches differ in sizes in order to seat groups or individuals. The vegetation frames views from the inside of the Counseling Room. The berry shrubs and fruit trees attract birds and facilitate amazement to the users.

Equipped to Hold Events – The location of the LSH facility is convenient and the design can accommodate events with more than a hundred people. There are enough parking spaces for people to car pool and park at the existing parking. There are 6 new parking spaces (1 HC) across the bridge that can be used if needed. The trees along W Baraga Ave make the upcoming turn from the avenue into the site more obvious and the ornamental grasses on both sides of the LSH sign make it more visible.

Dedicated to All – The site is designed to serve the Marquette community and to celebrate life, and the lives of those who were served by the LSH staff. There is a boulder at the entrance of the garden that will have a script saying, “Dedicated and Honoring All Whom We Serve.”

Play Room - The play room also known as the Counseling Room provides a smaller scale garden for children. This area will be mainly used when events are happening. The natural materials and plants should inspire their imagination and allow them to be creative, play, and wonder. There is an engineered wood fiber behind the central area where the children can hide and run around. The open lawn will be used for running/playing. The entire garden should also encourage play by using the path and openings, boulders and stones.



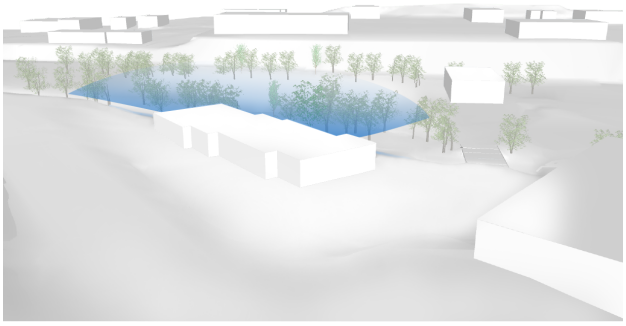
The Views – The big windows throughout the building already frame the views into the garden, the proposed vegetation near the windows will enhance these views and also attract birds with their fruit. It will be a complete experience just looking out from the windows. The front side of the building has small trees that will provide some shade and sunlight filtered glare.

The Patio – An outdoor break room is located existing from the north door of the facility, currently an emergency exit. This patio can fit 10-12 people comfortably. The swing with the overhang faces the white birch in front of the break room and the benches face the bridge into the garden.

A Bird Oasis – Plants were selected to attract birds all through the site, if desired, bird feeders can be hanged from the shade trees inside the garden, as well as around the windows.

The Whetstone Brook – Water is a focal point from the break and Creek rooms. Trimming some branches is recommended to enhance the view of the Whetstone Brook. Planting ferns and locating boulders will increase its beauty, especially during the fall.

Panoramic View – A panoramic view is created by the new proposed vegetation. This will be of interest through the seasons. The evergreen trees in the background will soften the edge and view of the barn during the winter, and the shade trees will act as such the rest of the seasons. The Whetstone Brook vegetation creates a curtain in front of the garden.



Swaths of ornamental grasses and long-lasting perennials are planted throughout the site. Flame grass (Miscanthus sinensis 'Purpurascenc'), Garden Phlox (Phlox paniculata), and Speedwell (Veronica longifolia 'First Glory') are some of the plants chosen for their colors long-blooming season. The Wisteria Room also provides a flowering accent that will bloom year after year.

THERAPEUTIC GARDEN BENEFITS

The entire site is designed to aid in the healing process for caregivers, families and friends, whether it be mental, physical, emotional or spiritual healing. From the moment a client arrives by car, he or she should feel like they have come to the right place to seek help. Once in the building, the staff will encourage the client to continue the conversation outside if appropriate. Five minutes of exercise, walking, will improve their health, mood and self-esteem (Barton & Pretty, 2010). The senses of the client should be revived once in the garden. Views, smell, touch, and exposure to sunlight should provide a richer experience, not only for the client but for the counselor/staff as well. Just being exposed to sunlight will improve the user's sleep later in the day. The open space creates the opportunity to hold exercise programs like aerobics. The counseling room facilitates a space for group support and individual counseling session. This area can also be used to meditate and pray. There is a small lookout near the Counseling room which is for individual use. Two small wooden stools are placed in there for time alone. The benches around the Continuous Path have framed views and are located near flowers and bushes that attract wildlife. This creates time for attention restoration, which will help with better memory performance and attention span.

The experience should bring the user back and encourage the staff and caregiver to use the space on a daily basis when weather permits. The garden gives positive outcomes to the LSH, as it will enhance the client's health, client and staff satisfaction, provide a better image, and create more opportunities for fundraising.

THE CONCEPTUAL DESIGN

The conceptual design provides a set of garden phases prioritizing areas that could be built first and why. The following seven stages are an overall idea of how the garden could be constructed:

1. The Wisteria Room – An outdoor gathering space is most important. The Wisteria Room should be the first built structure, as it provides enough gathering space for counseling groups, bigger events, and individual reflection for both caregivers and staff. Having a big enough area to hold events can be a strategy to continue fundraising on site for the rest of the project.
2. The Viewing Room – since the viewing room consists mostly of planting, it should be budgeted first along with plants around the parking and building.
3. Landscaping – first impressions should be shown as the starting point for beautifying the LSH. This will attract wildlife and seasonal interest for a few months.
   In this stage all of the evergreen trees should be planted, if not possible, the evergreens next to the
4. The Path and Vegetation – Planting and laying down the main path will add beauty (vegetation) to the garden by enhancing and buffering areas that may be reducing the sense of *being away*. It also gives an opportunity to introduce walking as part of the therapy/counseling session for caregivers. Vegetation will add enclosure to future garden areas/rooms. Seeing the progress of the garden's development/construction will give the users a future sense of the completed garden.
5. The Counseling/Play Room – After introducing an outdoor area (The Wisteria Room) caregivers and staff will have the possibility of having a smaller enclosed room for counseling, in similitude to a living room, with comfortable chairs inside a circle shaped area, better for sharing/discussion. In this stage the LSH should be able to provide positive benefits from spending time in nature.
6. The Whetstone Bridge – Enhances the entrance experience to the hospice garden. This smooth transition immerses the person with nature and reflects the hospice care ideals.
   Placing benches around the main path should also be done in this stage.
7. The Patio and lookout room will be the last phase in the project.

Construction Drawings

A set of construction drawings were developed assuming that funding becomes available to build the entire garden at once. The first construction phase is a demolition plan of areas where new material will be placed, the path, surface for Patio, Counseling room, and Wisteria Room. A second survey should be taken after the demolition is completed. The second construction phase is laying out the paths and surfaces. The last construction phase is the Planting plan. These construction phases are beyond the scope of work of this master's project and will be addressed as the LSH and designer move forward with construction decisions. The following pages have the three construction phases:

1. Site Demolition Plan
2. Site Layout & Materials Plan
3. Site Planting Plan


UNIVERSITY OF MASSACHUSETTS 1863 AMHERST
LA&RP
Landscape Architecture & Regional Planning
LAKE SUPERIOR HOSPICE GARDEN
914 W. BARAGA AVE. MARQUETTE, MI 49855
SITE DEMOLITION PLAN
L1.01
NOTES
LEGEND
IOHT PATH
TREE LINE
UTILITY EASEMENT
WHETSTONE BROOK
TOP OF BANK
EXISTING GRAVEL LINE
GRAVEL AREA
REQUIRED PARKING
ADDITIONAL PARKING
BRIDGE

UNIVERSITY OF MASSACHUSETTS AMHERST 1863

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FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01

SCALE: 1" = 40'-0"

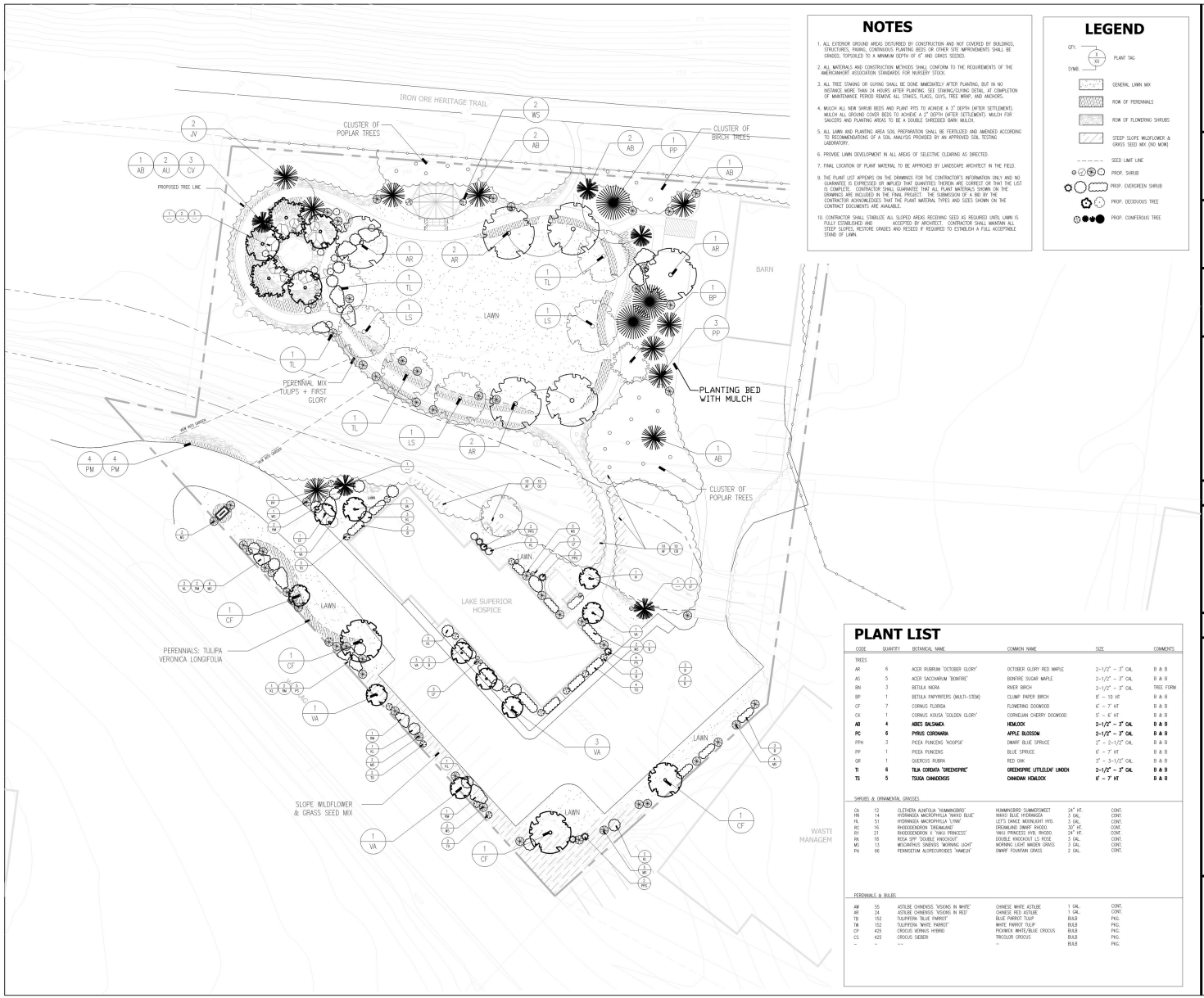
LAKE SUPERIOR HOSPICE GARDEN

914 W. BARAGA AVE.
MARQUETTE, MI 49855

MASTER'S PROJECT ADVISORS: PR, JK, TE DRAWN BY: MT

SITE LAYOUT & MATERIALS PLAN

DRAWING NO.: L2.01



NOTES

1. ALL EXTERIOR GROUND AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY BUILDINGS, STRUCTURES, PAVING, CONTINUOUS PLANTING BEDS OR OTHER SITE IMPROVEMENTS SHALL BE GRADED, TOPSOILED TO A MINIMUM DEPTH OF 6" AND GRASS SEEDED.
2. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANHORT ASSOCIATION STANDARDS FOR NURSERY STOCK.
3. ALL TREE STAKING OR GUYING SHALL BE DONE IMMEDIATELY AFTER PLANTING, BUT IN NO INSTANCE MORE THAN 24 HOURS AFTER PLANTING. SEE STAKING/GUYING DETAIL. AT COMPLETION OF MAINTENANCE PERIOD REMOVE ALL STAKES, FLAGS, GUYS, TREE WRAP, AND ANCHORS.
4. MULCH ALL NEW SHRUB BEDS AND PLANT PITS TO ACHIEVE A 3" DEPTH (AFTER SETTLEMENT). MULCH ALL GROUND COVER BEDS TO ACHIEVE A 2" DEPTH (AFTER SETTLEMENT). MULCH FOR SAUCERS AND PLANTING AREAS TO BE A DOUBLE SHREDDED BARK MULCH.
5. ALL LAWN AND PLANTING AREA SOIL PREPARATION SHALL BE FERTILIZED AND AMENDED ACCORDING TO RECOMMENDATIONS OF A SOIL ANALYSIS PROVIDED BY AN APPROVED SOIL TESTING LABORATORY.
6. PROVIDE LAWN DEVELOPMENT IN ALL AREAS OF SELECTIVE CLEARING AS DIRECTED.
7. FINAL LOCATION OF PLANT MATERIAL TO BE APPROVED BY LANDSCAPE ARCHITECT IN THE FIELD.
9. THE PLANT LIST APPEARS ON THE DRAWINGS FOR THE CONTRACTOR'S INFORMATION ONLY AND NO GUARANTEE IS EXPRESSED OR IMPLIED THAT QUANTITIES THEREON ARE CORRECT OR THAT THE LIST IS COMPLETE. CONTRACTOR SHALL GUARANTEE THAT ALL PLANT MATERIALS SHOWN ON THE DRAWINGS ARE INCLUDED IN THE FINAL PROJECT. THE SUBMISSION OF A BID BY THE CONTRACTOR ACKNOWLEDGES THAT THE PLANT MATERIAL TYPES AND SIZES SHOWN ON THE CONTRACT DOCUMENTS ARE AVAILABLE.
10. CONTRACTOR SHALL STABILIZE ALL SLOPED AREAS RECEIVING SEED AS REQUIRED UNTIL LAWN IS FULLY ESTABLISHED AND ACCEPTED BY ARCHITECT. CONTRACTOR SHALL MAINTAIN ALL STEEP SLOPES, RESTORE GRADES AND RESEED IF REQUIRED TO ESTABLISH A FULL ACCEPTABLE STAND OF LAWN.

LEGEND

- QTY. / SYMB. — PLANT TAG
- GENERAL LAWN MIX
- ROW OF PERENNIALS
- ROW OF FLOWERING SHRUBS
- STEEP SLOPE WILDFLOWER & GRASS SEED MIX (NO MOW)
- SEED LIMIT LINE
- PROP. SHRUB
- PROP. EVERGREEN SHRUB
- PROP. DECIDUOUS TREE
- PROP. CONIFEROUS TREE

PLANT LIST

CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
TREES					
AR	6	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2-1/2" - 3" CAL.	B & B
AS	5	ACER SACCHARUM 'BONFIRE'	BONFIRE SUGAR MAPLE	2-1/2" - 3" CAL.	B & B
BN	3	BETULA NIGRA	RIVER BIRCH	2-1/2" - 3" CAL.	TREE FORM
BP	1	BETULA PAPYRIFERA (MULTI-STEM)	CLUMP PAPER BIRCH	8' - 10' HT	B & B
CF	7	CORNUS FLORIDA	FLOWERING DOGWOOD	6' - 7' HT	B & B
CK	1	CORNUS KOUSA 'GOLDEN GLORY'	CORNELIAN CHERRY DOGWOOD	5' - 6' HT	B & B
AB	**4**	**ABIES BALSAMEA**	**HEMLOCK**	**2-1/2" - 3" CAL**	**B & B**
PC	**6**	**PYRUS CORONARIA**	**APPLE BLOSSOM**	**2-1/2" - 3" CAL**	**B & B**
PPH	3	PICEA PUNGENS 'HOOPSII'	DWARF BLUE SPRUCE	2" - 2-1/2" CAL	B & B
PP	1	PICEA PUNGENS	BLUE SPRUCE	6' - 7' HT	B & B
QR	1	QUERCUS RUBRA	RED OAK	2" - 3-1/2" CAL	B & B
TI	**6**	**TILIA CORDATA 'GREENSPIRE'**	**GREENSPIRE LITTLELEAF LINDEN**	**2-1/2" - 3" CAL**	**B & B**
TS	**5**	**TSUGA CANADENSIS**	**CANADIAN HEMLOCK**	**6' - 7' HT**	**B & B**
SHRUBS & ORNAMENTAL GRASSES					
CA	12	CLETHERA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	24" HT.	CONT.
HH	14	HYDRANGEA MACROPHYLLA 'NIKKO BLUE'	NIKKO BLUE HYDRANGEA	3 GAL.	CONT.
HL	51	HYDRANGEA MACROPHYLLA 'LUNA'	LET'S DANCE 'MOONLIGHT' HYD.	3 GAL.	CONT.
RC	16	RHODODENDRON 'DREAMLAND'	DREAMLAND DWARF RHODO.	30" HT.	CONT.
RY	21	RHODODENDRON X 'YAKU PRINCESS'	YAKU PRINCESS HYB. RHODO.	24" HT.	CONT.
RK	18	ROSA OPY 'DOUBLE KNOCKOUT'	DOUBLE KNOCKOUT LS ROSE	3 GAL.	CONT.
MS	13	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT MAIDEN GRASS	3 GAL.	CONT.
PH	66	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	3 GAL.	CONT.
PERENNIALS & BULBS					
AW	55	ASTILBE CHINENSIS 'VISIONS IN WHITE'	CHINESE WHITE ASTILBE	1 GAL.	CONT.
AR	24	ASTILBE CHINENSIS 'VISIONS IN RED'	CHINESE RED ASTILBE	1 GAL.	CONT.
TB	152	TULIPIFERA 'BLUE PARROT'	BLUE PARROT TULIP	BULB	PKG.
TW	152	TULIPIFERA 'WHITE PARROT'	WHITE PARROT TULIP	BULB	PKG.
CP	423	CROCUS VERNUS HYBRID	PICKWICK WHITE/BLUE CROCUS	BULB	PKG.
CS	423	CROCUS SIEBERI	TRICOLOR CROCUS	BULB	PKG.
--	--	---	--	BULB	PKG.

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01

SCALE: 1" = 40'-0"

LAKE SUPERIOR HOSPICE GARDEN

914 W. BARAGA AVE.
MARQUETTE, MI 49855

MASTER'S PROJECT ADVISORS: RR, JK, TE — DRAWN BY: MT

SITE PLANTING PLAN

DRAWING NO.:
L5.01

SECTION 3: LESSONS LEARNED & FUTURE WORK

Clients, User Groups, & POEs

Understanding the client and identifying the user group for any landscape design was the most important research portion of this project. This understanding was accomplished through dialogue, interviews, and data collection (surveys and POEs). It is important to listen to the client and collaborate with them to create their desired space, garden. After having a better understanding of the client, which may include: individual garden preferences, community services, service goals and program; identifying the user groups for the garden becomes achievable. In this project four main user groups were identified, albeit there may be other hospice situations in which more or less groups are identified.

Pre-occupancy evaluation and surveys were two of the methods used to collect higher data about the use of the facility, as well as the future use of the hospice garden. This data information was used to understand the user interaction with the entire landscape and facility and be able to create a cohesive experience of the facility and its surroundings. The pre-occupancy summarized likes, desires, glitches, and opportunities to be addressed with the design of the garden. Learning about the LSH staff's favorite rooms and views from the building were key. As a result the garden design enhances and frames all through the garden and around the building.

If done correctly, the pre-occupancy evaluation will provide measurable results when the post-occupancy evaluation is completed. The LSH garden post-occupancy evaluation hopes to record the positive health and well-being benefits for all four LSH user groups after the garden is constructed.

Literature Review

Today more and more scientific studies about the connection of nature and its health benefits are increasing awareness among healthcare providers but there is little literature on hospice garden.
This project's literature review touched upon the use of garden as part of the treatment for patients, with a focus on the writings of Cooper-Marcus and Sachs on hospice garden design. The Hospice Garden Guidelines were a tool to understand hospice garden design and develop the Hospice Garden Evaluation. Research studies about hospice benefits, quality of life, and extended life expectancy create a baseline for the future role of hospice and therapeutic gardens as one. Among the goals of hospice services, the research of this project hopes to increase awareness of hospice care as well as the use of therapeutic gardens in hospice settings. This awareness will ultimately generate discussion to embrace therapeutic gardens as part of the hospice care protocol.

Future Work

This master's project concludes with the conceptual design. After the garden is built, a post-occupancy evaluation will be conducted under the guidance of Dr. Westphal, to measure its therapeutic garden benefits and success. This future work is as important as the research done to understand user groups, hospice care and garden design, because it will give us data that can measure the importance of including nature as part of the hospice care.

Financial aid for construction and maintenance of the garden are most of the time donated by the caregivers when it should be part of the budget for the hospice. In hospice the donor is the caregiver.

In each of the homes visited, a garden, bench, and even an entire room (kitchen, a chapel), was built from donations. It must come to the attention of the provider that landscaping and garden design must be part of the hospice finances.

The holistic approach given to patients should also be studied and adapted for the caregiver. It is recommended that the staff engages in a holistic lifestyle, including spirituality. Spirituality, the sense of morality, and rationality are found in the frontal lobe. Also, thinking, decision-making, and planning are tasks performed by the frontal lobe, it is critical that hospice providers are functioning at their best in order to facilitate to the needs of the clients and patients and carry out this type of meaningful work. Although spirituality was not covered in this study, the garden hopes to create spaces that will further these discussions and allow hospice providers, caregivers and patients to pursue their own individual spiritual growth.

SECTION 4: INSIGHTS FOR FUTURE GARDENS AND GARDEN DESIGNERS

The following insights for garden designers and hospice advocates hope to enable in planning future hospice gardens. The first lines are a series of tips for hospice garden design; the latter paragraphs are about a designer's priority in understanding the client and user. These tips were drawn from the research portion as well as the field (surveys and evaluations) portion:

- Locate a site big enough that can assist the hospice's goals and program
- A hospice garden may always provide spaces to gather in three sizes, big enough to have events, such as memorial services, medium size, for gatherings, such as bereavement and counseling sessions, and small enough that can make a person feel enclosed allowing him/her to pray, unburden/cry, or restore in private.
- A replica of a house could be used to understand the design of the hospice garden: having a living room, a room, and a restroom.
- Also when planning to construct a new hospice home, it is desired that the surroundings of the location can enrich the services of the hospice with natural vistas, bodies of water, pure air, and wildlife.
- ADA is important, but there may be instances where more challenging walks/ hikes may be incorporated into a hospice setting for family members and staff to access more distant natural areas.
- Safety, regarding lighting, and signage may not always be required, the LSH patient will always be accompanied by a staff or caregiver, capable enough to keep the patient safe.
- Locating a sign about the hospice care and the garden along with a donation box may be considered as part of raising awareness of hospice care, and budget for garden maintenance.
- Understanding who the users are through meetings, interviews, surveys, etc. is imperative as it is in all therapeutic garden design. The designer must work closely with the users, and understand their needs.
- Like a doctor listens to his/her patients, listening and understanding the user is a must.

Create a program that can encourage the use of the garden, i.e. aerobics class for caregivers and staff, or horticulture as part of the therapy for both caregivers and staff members. It is critical to provide the necessary nature resources to the staff in order that they may be able to manage and control stress and burnout without the use of addictive substances but the natural remedies, the garden being one of them. The help of an environmental psychologist may be needed to understand and encourage this practice in hospice care - what can be done to implement natural remedies and nature as part of the treatment for persons dealing with hospice.

The use of POEs should be a requirement. In order to understand the development of a hospice garden, an evaluation should be done. This will be the most efficient way to help further the study of hospice gardens, and allow for modifications of existing designs, as well as improve new designs.
Listening and experiencing made this project successful. A designer has to go beyond of what he or she is used to or taught to do. Experiencing what the user is going through is key in the development of a therapeutic garden and should be considered for all garden types. For example, surveys as a method is the fastest way to collect data in a period of time, it is a great tool, however the looks, excitement, sadness or, emotional stage at the moment the person is filling out a survey is not captured by the surveyor. This missed portion is necessary because it allows the designer to work with compassion. An interview gives the designer a story and a face to go with, it makes one realize how intense the situation may be. It gives one an idea of what people have to go through on a daily basis, and by seen another suffer maybe the designer will be capable to relate to the user. Going beyond helping someone is part of the designer's job.

It is not easy to relate to a stranger. Therefore, a designer must allow time to reflect on what he or she is about to do. For this project, the designer read a collection of Hospice stories developed by a Marquette hospice worker. The book is a medley of emotions with happy and sad episodes, but always concluding in how much "the helper" was touched by somebody else's life. Humility must be practiced to understand someone else's feelings. The helper isn't always the stronger character of the story; it is (in hospice) the one fighting to live or the families and friends of the patient. The helper needs to be strong enough to witness all the suffering without getting immune or senseless to his/her feelings. It is not easy to have to face death on a daily basis, but as compassion develops in a person's heart, it becomes an honor to serve the dying.

Desiring to die is the ultimate relief of the suffering. Wishing someone's death in hospice (as morbid as it may sound) is an act of love. The researcher watched a few documentaries of hospice; one of them was the story of a family, whose little boy was suffering with a rare brain disease, which caused him to have seizures. The dad and grandpa are trying to do anything and everything they can to help their boy, and as they worry to make sure that everything is ok, his older sister walks around the room and sits in different areas of the house. Then she comes close to her brother plays a song, and begins to sing to him while touching his head softly. Later in the week she has a blank and sad stare on her face. She's about eight years old. The camera's focuses on the girl's face, she looks lost. The dad asks her, "are you scared of your brother?" To which she responds, after a long stare and confused yet naïve look, "yeah." Then he asks, "why?" Again she takes a long time and says, "I don't know." In the documentary, the doctor pays attention to what is a child's suffering, in this circumstance, the researchers have to pay extra caution on dealing with the older sister since it is harder for a child to speak of what they are feeling, they may not know; this work can only be performed by a very talented and compassionate team of people. This is why

hospice is an art type of work, because beyond medication, getting personal is part of the job. Helping someone allows them to create an atmosphere of ease to both their patients and the patient's caregivers.

A designer must fully live the story of the users to design a meaningful space. Each stage of the research was done to have a personal understanding of what it means to be in hospice. Our work must go beyond the technicality of a site design; it must be an art that will touch lives of all ages, all religions, and maybe even all cultures. This project helped the designer to reinforce the meaning of life, living it to the fullest, by making each individual realize this gift!

Listening looks easy, but it is not simple.
Every head is a world.
Cuban Proverb

A friend is one before whom I may think aloud.
Ralph Waldo Emerson

Greater love has no man than this,
that a man lay down his life for his friends.
John 15:13

BIBLIOGRAPHY

1. Berman, M. G., Jonides, J., & Kaplan, S. (2008). The cognitive benefits of interacting with nature. *Psychological Science*, *19*(12): 1207–212.
2. Bratman, G. N., Hamilton, J. P., Hahn, K. S., Daily, G. C., & Gross, J. J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proceedings of the National Academy of Sciences*, 112(28), 8567-8572.
3. Cooper-Marcus, C. & Barnes, M. (1999). Healing Gardens: Therapeutic Benefits and Design Recommendations. New York: John Wiley & Sons.
4. Cooper-Marcus, C. and Sachs, N. (2013). Therapeutic Landscapes: An Evidence-Based Approach to Designing Healing Gardens and Restorative Outdoor Spaces (1). Somerset, US: John Wiley & Sons, Incorporated. ProQuest ebrary. Web. 12 January 2017.
5. Diane, R., Janick, J., Lewis C.A., Parsons, R., and Ulrich, R. (1992). Role of horticulture in human well-being and social development, exploring people-plant interactions. Part 2, Part 2. Blacksburg, Va: Virginia Tech.
6. Franklin (2011). Hospice Personal Stories. Upper Peninsula Home Health and Hospice. Michigan. (Not printed for sell)
7. Gerlach-Spriggs, N., Kaufman R.E., Warner, S.B. (1998) Restorative Gardens: The Healing Landscape.
8. Gerlach-Spriggs, N. and Healy, V. (2009). "The therapeutic garden: A definition." Healthcare and therapeutic design newsletter. Spring.
9. Gesler, W. M. (2003). Healing Places. Lanham, Md: Rowman & Littlefield Publishers.
10. Get Palliative Care. 2016. What is Palliative Care? Getpalliativecare.org Center for Advance Palliative Care: https://getpalliativecare.org/whatis/
11. Gold, M. F. (2004). Designs for extended living. *Provider*, November, 18-33.
12. Hartig, T., Mitchell, R., De Vries, S., & Frumkin, H. (2014). "Nature and health". *Annual Review of Public Health* 35: 207-228.
13. Kaplan, S. (1995). The restorative benefits of nature: Toward an integrative framework. *Journal of Environmental Psychology* 15(3): 169-182.
14. Kaplan, S., & Kaplan, R. (1982). Humanscape : Environments For People. Ann Arbor, Mich. : Ulrich's Books, [1982].
15. Kaplan, R., Kaplan, S., & Ryan, R. L. (1998). With People In Mind : Design And Management Of Everyday Nature. Washington, D.C. : Island Press, [1998].
16. Kellert, S.R., and Wilson, E.O. (1993). The Biophilia Hypothesis. Washington, D.C.: Island Press.
17. Meier, D. E. (2011). Increased access to palliative care and hospice services: opportunities to improve value in health care. Milbank Quarterly, 89(3), 343-380.
18. Mind. (2007). *Ecotherapy: The Green Agenda for Mental Health. Executive Summary*. Mind.
19. Nuland, S. B. (1994). How We Die reflections on Life's Final Chapter. N.P.: New York:A_A Knopf.
20. Pati, Debajyoti, Tom E. Harvey, and Paul Barach. "Relationships between Exterior Views and Nurse Stress: An Exploratory Examination." HERD: *Health Environments Research And Design Journal* 1, no. 2 (January 1, 2008): 27. Supplemental Index, EBSCOhost (accessed September, 2016).

21. Quill, T.E. Bower, K.A., Holloway, R.G., Caprio, T.V. Olden, A., Storey Jr., C. (2014). Primer of Palliative Care, Sixth Edition. *American Academy of Hospice and Palliative Medicine.*
22. Sacamo, D. (2009). Designing Restorative Environments for Patients and Healthcare Providers: An Introduction to Healing Gardens and Creating Low-Cost Wellness Features. Oregon Office of Rural Health, *Oregon Health and Science University*. October 27, 2009.
23. Sacks, O. (1984). A leg to stand on. New York: *Summit Books.*
24. Searles, H.F. (1960). The nonhuman environment: In normal development and schizophrenia. Vol. 5. *International Universities Press*.
25. Schneider, J.M. (1994). Finding My Way, Healing and Transformation Through Loss and Grief. Colfax, WI. : Seasons Press.
26. Temel, J. S., Greer, J. A., Muzikansky, A., Gallagher, E. R., Admane, S., Jackson, V. A., & Billings, J. A. (2010). Early palliative care for patients with metastatic non–small-cell lung cancer. *New England Journal of Medicine*, *363*(8), 733-742.
27. Thompson, J. D., & Goldin, G. (1975). The hospital: A social and architectural history.
28. Tyson, M. M. (1998). *The healing landscape : therapeutic outdoor environments.* New York : McGraw-Hill, [1998].
29. Ulrich, R. (1984). View through a window may influence recovery. *Science* no. 4647:420.
30. Ulrich, R. S., & Parsons, R. (1992). Influences of passive experiences with plants on individual well-being and health. In: The Role of Horticulture in Human Well-Being and Social Development, 93-105.
31. Ulrich, R. S. (2001). "Effects of healthcare environmental design on medical outcomes." Design and Health: Proceedings of the Second International Conference on Health and Design. Stockholm, Sweden: *Svensk Byggtjanst*. 2001.
32. Velarde, M. D., Fry, G., & Tveit, M. (2007). Health effects of viewing landscapes–Landscape types in environmental psychology. *Urban Forestry & Urban Greening* 6(4): 199-212.
33. Wallston, K.A., Burger, C., Smith, R.A. and Baugher, R.J. (1988). Comparing the quality of death for hospice and non-hospice cancer patients. *Medical Care*, pp.177-182.
34. Westphal, J. (2013). The Healing Landscape: Therapeutic Outdoor Environments. *TedMED Life*, Michigan State University.
35. Westphal, J. (2016). Transference of a medical condition between patient and caregiver in end of life situations. Personal conversation. Traverse City, MI August, 2016.
36. Winterbottom, D., & Wagenfeld, A. (2015). Therapeutic Gardens: Design for Healing Spaces n.p.: Portland, Oregon: *Timber Press*.
37. Wu, H. L., & Volker, D. L. (2012). Humanistic nursing theory: application to hospice and palliative care. *Journal of Advanced Nursing* 68(2): 471-479.