



Friendship Village Senior Living Community

8210 and 8100 Highwood Drive
Bloomington, Minnesota

Redevelopment Plan Narrative
06/08/17

I. Project Summary

Lifespace Communities ("the Owner") is proposing to redevelop portions of Friendship Village Senior Living Community located at 8100 Highwood Drive in Bloomington, Minnesota. The current campus is a 23.93-acre Continuum of Care Retirement Community, consisting of 296-residential living apartments, 6-residential living duplex townhomes, 56-boarding care apartments providing assisted living and memory care and a 66-bed skilled nursing facility.

The proposed redevelopment will consist of a new 3-story healthcare center building and a 4-story residential living building. The Owner has acquired an adjacent 1.75-acre property, which includes 2 existing commercial buildings, located at the southwest corner of the site. The healthcare center will be constructed, in part, on this new building area. The new residential building will be constructed around the existing pond, creating views and accessibility to this water feature. When complete, the new buildings will be connected to the existing campus buildings, allowing residents to enjoy easy access to the existing building amenities, without leaving a climate controlled environment.

II. Campus History

Friendship Village was built in 1979 and is in Bloomington, MN (on the Hyland Lake Park Reserve). Friendship Village is Minnesota's first True Life Care Community, which offers security for the future with an on-site health care center. Friendship Village also offers great amenities, such as, multiple dining venues, modern fitness center, beauty/spa, billiards and game room, craft room, as well as regularly scheduled activities and trips.

The current boarding care building and skilled nursing wing are functionally obsolete. Lifespace is currently executing a multi-year, multi-phased modernization and expansion of the Friendship Village campus, which will ultimately result in the replacement of the existing boarding care building and nursing facility. Construction of the new assisted living and memory care apartments will be registered through the Minnesota Department of Health as Housing with Services / Assisted Living.

III. Campus Phasing and Scope of Work

A. Phase-I - New 3-story Healthcare Center (constructed in 2-phases).

- Phase I of the new health center will consist of 32-memory care apartments, 42-assisted living apartments and associated activity and support spaces.
- The assisted living and memory care will be registered with the Minnesota Department of Health as as Housing with Services / Assisted Living.
- The assisted living apartments will consist of generously sized studio, 1-bedroom and 2-bedroom apartments, designed to cater to the needs of residents with a broad range of needs from relatively passive oversight, to those who require assistance with activities of daily living, such as bathing, dressing and medication administration.
- The assisted living apartments are designed with accessible bathrooms and a small kitchenette that includes a refrigerator, sink and microwave oven.



- The common areas of the building will include gracious dining and activity areas designed to be functional and attractive for residents with, or without mobility impairments.
- By providing support for each resident at his or her level of need, residents are encouraged to maintain as much functional ability as possible as they age. The community will be staffed by licensed caregivers 24-hours per day. On-site staff will have the ability to respond to certain medical emergencies when the need arises.
- The memory care apartments will be housed on the ground floor surrounding a secure garden courtyard. The memory care neighborhood will provide state-of-the-art secure environment, designed and operated specifically for residents with various levels of cognitive impairment.
- Each memory care resident will have a studio apartment with bathroom, including accessible shower and will be part of a secure memory care neighborhood.
- The secure memory care neighborhood will have common areas for dining, bathing and activities that are an essential element of the resident's care plans.
- The memory care community will maintain a 24-hour staff, including caregivers who are specifically trained to provide for the needs of memory care residents. Services will include three well balanced meals per day, housekeeping, laundry service, life enrichment activities, exercise programs and assistance as needed with bathing, hygiene, dressing, eating and medication management.
- Phase I will include a satellite kitchen to service the building residents' various dining rooms and meals.
- Phase I also includes a loading dock, which is designed to circulate deliveries, and trash removal through the lower level.
- A lower level parking garage will provide parking for approx. 49 cars.
- Preparation of the site will include the demolition of the existing commercial buildings on the recently acquired site.
- Approximately 50 new parking spaces will be added along the west property line to help meet the project parking requirements.
- The health center building will be submitted for permit in the Summer of 2017 and will comply with all applicable codes having project jurisdiction.
- This phase is proposed to start construction in the fall of 2017 and be complete within 15months.

B. Phase-II– Completion of the 3-story Health Center.

- Phase II of the health center will consist of 66-skilled nursing beds, dining, activity, support spaces and expansion of the lower parking garage.
- The skilled nursing health center will be licensed by the Minnesota Department of Health.
- The first floor will consist of 16 private short-term rehabilitation nursing suites, dining, activity, support and a physical/occupational therapy gym, which will serve the short-term rehabilitation residents, as well as other residents within the FVB community.
- The upper floors will consist of 25-private skilled nursing suites on each floor, in a household model neighborhood. Each floor/neighborhood will include a dining room, activity and support spaces and staffed with 24-hour licensed care staff.
- Each skilled nursing resident room will be a generous sized single bed suite, including a private, fully accessible bathroom with shower.
- Each skilled nursing neighborhood will maintain a 24-hour staff, including nurses and caregivers who are specifically trained to provide for the needs of nursing care residents. Services will include three well balanced meals per day, housekeeping, laundry service, life enrichment activities, exercise programs and assistance as needed with bathing, hygiene, dressing, eating and medication.
- The new skilled nursing health center is designed to be a state-of-the-art replacement of the existing 66-bed, functionally obsolete, skilled nursing care center.
- The new health center will connect to the existing campus buildings, allowing residents internal ground level access to other building amenities.
- The lower level parking garage will be expanded to add approx. 41 parking spaces.



- The redevelopment of the existing nursing wing will take place after the completion of the new HC building. The interior remodeling scope is yet to be finalized, but will include redevelopment of the first-floor commons area to function more harmoniously with the new commons.
- Preparation of the site will include the demolition of the existing boarding care building after the existing boarding care residents are relocated to the completed Phase I portion of the health center.
- This phase is proposed to begin construction in late 2018, after the occupancy of the new Health Center in Phase I. The total construction time is slated to take 14 months.

C. Phase-II- Residential Living Building (may be constructed concurrently with Phase II portion of the health center):

- The new 4-story residential living building will consist of 94 apartments and a lower level parking garage for approximately 70 cars.
- The residential living apartments will be housed in a four-story building and will have a mix of one-bedroom, two-bedroom and three-bedroom apartments. Each residential living apartment will be fully appointed with a full kitchen, complete with a dishwasher and in-unit washer/dryer.
- The majority of apartments will include balconies and provide views of the pond and surrounding wooded area.
- A bridge will provide a connection to the existing building common areas and will allow residents easy access to an array of common areas and activities available to them.
- Services will include the provision for meals, housekeeping, non-medical emergency response and other activities and amenities geared to residents experiencing the natural decline in functional ability associated with aging.
- The building will also include a 2-story activity lounge, providing residents with a destination to overlook the pond and access to a patio and walking paths.
- The residential building will be submitted for permit in early Spring of 2018 and will comply with all applicable codes having project jurisdiction.
- This project may begin construction as early as late Spring of 2018, based on the achievement of the various conditions of finance. The total construction time is slated to take between 20-21 months.

IV. Civil Engineering

The proposed Friendship Village Redevelopment will require replacement of the existing infrastructure already in place. The sanitary sewer will need to be removed and replaced to align within our revised building and parking layout. The existing watermain will need to be removed and replaced within the project limits to maintain the looped system throughout campus. New hydrants will be installed, as well as new services for the proposed buildings.

In order to comply with the City and watershed stormwater management rules, best management practices will need to be installed to handle the runoff. These include a proposed infiltration basin, underground infiltration systems, and a biofiltration system. The existing storm sewer within the project area will be removed and replaced in order to convey drainage to these BMPs. The existing stormwater pond on the property will be used to manage the rate control of the runoff leaving the property. The existing stormwater pond has been delineated as a wetland. The proposed Residential Living building will impact a portion of this existing basin, but a modified outlet control structure will ensure the proposed rates of runoff will meet agency standards. In order to mitigate for this impact, this project will apply for a mitigation permit and offsite banking credits will be purchased. We have been in contact with the governing agencies for this impact, and wetland replacement permitting will take place concurrently with the city approvals process.



V. Zoning and Land Development

Lifespace Communities is requesting a Preliminary and Final Plat, Preliminary and Final Development Plan, Comprehensive Plan Amendment and Rezoning to a RM-50 (PD) Multiple-Family Residential Plan Development and to extend the Planned Development (PD) Overlay District over 8210 Highwood Drive. Based on the current Bloomington, MN Code of Ordinances and review with Bloomington planning staff, an RM 50 (PD) is the most appropriate and necessary to align with the proposed redevelopment and future needs of the community. Please refer to the zoning data chart on the drawings, which outlines the requirements of an RM-50 (PD) compared to the existing and proposed redevelopment.

A. RM 50 (PD)

Through various meetings and conversations with City staff, ownership is aware of the concerns of the Bloomington planning division regarding the appropriateness of applying the RM-50 zoning district to the Friendship Village property. We have taken into consideration these concerns and provide the following response:

1. Lack of nearby transit.

Although there is not currently readily available public transit, private transit service offered by the community is available to all residents. As part of the amenities available to residents, Friendship Village maintains and operates scheduled shuttle transportation to nearby services and amenities, such as shopping, dining, entertainment and medical destinations. The majority of community residents are retired and do not require regular access to public transportation. As a significant employer, FVB employees reside throughout the region and have typically not relied on public transit.

2. Lack of proximate services and amenities

One of the greatest assets of the FVB community is the availability of a vast array of on-campus services and amenities. We have attached a list of services and amenities and schedule of campus activities offered at Friendship Village. A partial list of amenities are as follows:

- Multiple dining venues, including large group formal dining, with custom menu choices and small less formal dining Café type venues for snacks and refreshments.
- State of the art Recreational Facility, which includes a large swimming pool, strength and aerobic fitness equipment, group activity classes such as yoga and aerobic exercise, spa, beauty salon, full – swing golf simulation and 9-hole outdoor putting green, game rooms and snack shop
- FVB's Pavilion includes a large multipurpose space, which is used for entertainment, such as concerts, plays, lectures, voting, parties and rummage/bake sales.
- Full Service Banking
- Beauty Salon/Barber shop
- Arts and Crafts
- Business Office / Computer Room
- Game rooms with billiard tables
- Library
- Guest rooms
- Woodworking shop
- Lounges and Party Rooms
- Gardening



3. Proximity to Single-Family Residential

Although the east boundary of the site is bordered by single family residential homes located on a ridge above the FVB campus, the overwhelming majority of the of the campus is bordered by expressways 169 & 494 and the Anderson Lakes Park Reserve.

The existing FVB property is on average 10-12' below the adjacent single family neighborhood located along the east property line, which helps mitigate some concerns of a RM-50 adjacent to single family residential. A shadow study, attached, indicates that the shadows cast from the proposed building, do not cast onto the adjacent single-family residential houses.

A significant amount of effort and care has been taken in the design of the proposed Residential Living building, such as reducing the overall length, orientation of the building and reduction in height/stories at the end of the residential living building closest to the east property line and the existing duplex townhomes.

Traffic generated by the property does not access the adjacent single family residential neighborhood. The campus has 2 entrance locations, located along the north Marth Road and south property boundary Highwood drive, neither of which require resident and/or service vehicles to traverse through the roads of the adjacent single family residential neighborhood.

A trip generation report, identifies that the trips generated by the proposed redevelopment are very few and much less than generated by other RM-50 multi-family uses.

B. Requested Code Deviations

1. Parking

As determined by the planning division, a parking study was conducted for the existing and proposed development. The parking study considered the existing conditions, proposed development, parking at various times of day, city code requirements, the Institute of Transportation Engineers, parking Generation Manual, 2016 Resident Staff and Visitor Data. The final parking study, dated February 17, 2017, concluded that the parking quantity for the proposed development would be sufficient. At the time of the study, the proposed redevelopment included a total of 639 parking spaces, which is greater than the estimated peak demand of 569 spaces identified in the parking study.

Since the parking study was published, the total number of new Resident Apartments was reduced from 106 to 94 apartments, which correlates to a reduction of 18 required parking spaces.

The owner requests a deviation from the city code required number of parking spaces from 692 spaces to 639 spaces, which is within 10% of the required number of spaces and has been deemed to be sufficient by the parking study for this development.

At the request of the Fire Department, the proposed redevelopment eliminates 47 existing parallel parking spaces along the main circulation drive, and thus this deviation is believed to be in the best interest and safety of the public and the community.



2. *Parking Setback*

The owner requests a deviation from the required parking setback distance along the west property line, adjacent to Hwy 169 Towline Road. The west property line is considered a side property line abutting a public street, which requires a 20' setback, in lieu of the typical 5' sideyard setback. Between the west property line and Marth Road, MNDOT has installed sound barrier walls, the walls are approximately 40' west of the west property line at the narrowest point.

The owner requests a parking setback deviation to allow for new perpendicular parking along the west property line and the elimination of existing parallel parking along the main circulation ring drive, which is believed to be in the best interest and safety of the public and community.

3. *Exterior Materials*

The owner is requesting a deviation from section Section 19.63.08(c)(1) of the City Code, regarding allowed exterior façade materials in a RM-50 district. The proposed elevations, which include approximately 24-30% cement fiber siding, have been developed to be harmonious and consistent with the percentage of siding on the existing campus buildings. Buildings of primarily masonry materials, in our opinion, will appear to be out of context, inconsistent and foreign to the architectural character of the existing campus buildings.

The owner requests an exterior façade material deviation, required in an RM-50 district, to allow the architectural design character of the new buildings to be contextual and harmonious with the existing architectural character of the campus buildings, which is believed to be in the best interest of the public and community.

No additional code deviations are requested.

VI. *Resident and Neighbor Meetings*

Lifespace has been transparent regarding the redevelopment process by hosting a number of resident and neighborhood community meetings, allowing for question and answer sessions. The neighbors within 500' of Friendship Village were mailed invitations to attend a meeting, which was held on 4/20/17. Overall, the project was well received and no concerns were raised regarding the proximity, height or density of the proposed buildings and the overall redevelopment.

VII. *Summary*

As evidence of the care and consideration that went into the planning of the Friendship Village redevelopment project, Lifespace spent a great deal of time in due diligence and architectural study before establishing the current plan of redevelopment. Initial due diligence and engagement of necessary consultants began in August 2014. In response to information discovered during due diligence, the project planning and architectural designs continued to be refined through July 2016. In that time, financial models, market studies, Lifespace Board of Directors presentations, and continuous architectural concepts varying significantly from one schematic to another were conducted. Multiple site options were considered with respect to the scope and design of the project. The current plan was approved by the Lifespace Board of Directors in July 2016 and chosen by them as it promised the most amenities and services for the residents in a financially feasible model. It is important to note that the costs of construction are not paid by a fund that Lifespace holds apart from resident revenue. The business model for a not-for-profit senior living community is built entirely on revenue received from the residents. The challenge for any not-for-profit senior living provider is to provide the best services and amenities at a cost that the residents can afford. It is very important to note that the



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proposed development will not come at any additional expense to the current residents at Friendship Village. To support the business model, the revenue created by the residential living expansion will support the debt needed to construct a new Health Center building and renovate and expand the common amenities available to the residents. The current residents will retain tremendous value for the fees that they pay while “inheriting” brand new amenities.

We look forward to continuing our work on this exciting project with Bloomington City staff and the community.



June 8, 2017

Application #: PL201700072

RE: 8210 and 8100 Highwood Dr., Bloomington, MN 5438

To Whom It May Concern,

We received comments completed by the City of Bloomington and provided on May 23th, 2017. The following are our responses to the review comments, separated by discipline:

Planning

Contact: Nick Johnson at nmjohnson@BloomingtonMN.gov, (952) 563-8925

1) Rezoning the site from R-1(PD) to RM-50(PD) does not match the stated intent of the RM-50 zoning district. RM-50 is meant for sites that are well served by public transit and are near areas of employment. The adjacency of single-family residential uses also calls into question rezoning to RM-50. Staff acknowledges the unique amenities and services offered within the Friendship Village senior living community. Staff believes RM-24 would be a better fit for this location.

Response: Based on the current Bloomington, MN Code of Ordinances, a RM 50 (PD) is the most appropriate zoning district to align with the proposed redevelopment and future needs of the community. Please refer to the Redevelopment Plan Narrative for a summary of the RM-50 PD zoning requested by the Owner.

2) Additional information must be provided about whether the existing skilled nursing wing proposed to be vacated will be demolished. Previous conversations with the project team about the future of the existing skilled nursing wing have not been clear. The future use of the existing skilled nursing wing have implications related to future parking requirements and floor area ratio (FAR) calculations.

Response: The demolition of the existing wings is not included in this projects' scope of work. The owner intends to convert portions of the vacated skilled nursing wings into additional activity, administrative and dining venues as necessitated by the addition of the proposed Residential Living building.

3) The floor area ratio (FAR) proposed is 0.64. Per the institutional use standards (Sec. 21.302.06), the FAR proposed necessitates the rezoning of the property to RM-50. Staff is wondering if the project team has considered removing the existing skilled nursing wing that is proposed to be vacated in order to lower the FAR to 0.6 or below. With PD flexibility, 0.6 is the maximum that would be allowed under the RM-24 zoning district. Has the project team completed FAR calculations for alternative scenarios that would remove portions of the Friendship Village facility that are to be vacated?



Response: Yes, several scenarios and FAR options were prepared and reviewed with the Owner. These scenarios studied the removal of three of the existing skilled nursing wings, which did not calculate to a FAR of 0.6 or below.

4) Staff acknowledges that the proposed building mass and height of the independent residential living building has been moderately reduced at the southeast corner, stepping down to a two-story building. However, it must be noted that recent multi-family residential projects adjacent to single-family residential dwellings have resulted in greater reductions in building mass and height. Given precedents established by recent multi-family residential projects in proximity to single-family residential, staff is concerned about the building height proposed adjacent to the east property line.

Response: A great deal of care and consideration has gone into the design and planning of the independent residential living building to address the adjacency of the single-family residential homes and townhouses. In response the height and mass concerns, the length of the east wing was reduced approximately 90', the quantity of apartments was reduced from 106 to 94 and the height of the building, nearest the east property line, was reduced from four to two stories. Ownership has held several meetings with residents and neighbors to present the proposed project, which included plans and renderings. Overall, the project has been well received and no concerns were raised regarding the proximity, height or density of the proposed buildings and the overall redevelopment.

5) The applicants are proposing to fill approximately 36% of a medium value wetland. A Wetland Replacement Plan must be approved by the City Council prior to review and approval of Final Development Plans. Staff is concerned about the timing of the public review of the Final Development Plans prior to the approval of the Wetland Replacement Plan. The feasibility of the project as proposed is dependent on the outcome of the Wetland Replacement Plan.

Response: The Applicant is currently preparing the sequencing discussion and replacement plan for the proposed project to demonstrate wetland impacts are unavoidable.

6) According to the Wetland Conservation Act, the filling and modification of wetlands is only to be considered when no other alternatives exist on-site. In addition, Nine Mile Creek Watershed District rules require that minimum buffers be provided for the wetland. The required wetland buffers are presently not provided with the submitted plans. Based on the size and nature of the wetland impacts proposed, staff is concerned about potential future environmental and stormwater management impacts in this area. There are many factors pertaining to the wetland that are presently unknown, making the feasibility of the project as proposed unclear at this time.

Response: The Applicant is currently preparing the sequencing discussion and replacement plan for the proposed project to demonstrate wetland impacts are unavoidable.

The Applicant plans to apply for a variance from the NMCWD wetland buffer requirements. With the variance request, the applicant will demonstrate that



because of the unique conditions inherent in the property, undue hardship on the applicant will result from strict application of the rule.

The unique condition is that the existing condition of the wetland buffer averages an approximately 20-foot width. Existing conditions around the buffer consist of a road around the west, north and northeast and residential townhomes along the east and south edges of the wetland. The NMCWD buffer requirement for a medium value wetland is 40-foot average. As such, the developer, whose goal is to increase senior living facilities, services, and circulation on the established FV campus, is already constrained by an established site that already falls below the minimum requirement for buffer. A strict application of the rule would require the removal or realignment of portions of the main road through the site, moving existing townhomes, and would severely limit the ability to provide additional living and health facilities currently lacking on the site.

As part of the wetland replacement plan application the applicant demonstrates why wetland impacts are unavoidable in the context of the project. The Friendship Village community is an existing senior living community that needs to increase its level of residential living spaces as well as improve senior health and social services to meet existing demand. The overarching need for the living facilities to be close and easily accessible to all the other services on the campus drive the unavoidable impacts to the wetland from the residential building. Because these wetland impacts are unavoidable, further impacts to NMWCD buffers are also unavoidable.

The current hardship was not created by the landowner as Friendship Village is an established senior living community, in a confined land area with housing and road infrastructure already in place around the existing wetland.

The reduction of the buffer along the north side of the wetland will not materially adversely affect water resources, flood levels, drainage or the general welfare in the District. The wetland itself will not be degraded because currently the wetland receives untreated stormwater from the surrounding development. With development, stormwater will be pre-treated before entering the wetland, which should significantly improve wetland water quality. Additionally existing buffer around the south of the wetland will be preserved. Flood levels will not be affected by this loss of buffer or wetland as the ponding volume and treatment lost to the wetland fill will be compensated within the underground stormwater basins. Similarly, the lost functions that the buffer and wetland provide in facilitating drainage across the site will be compensated within the stormwater management system so that no increased flooding occurs as a result of lost wetland and buffer areas.

Because of the need to site the residential housing in proximity to other services on the campus, there is no other feasible alternative to siting the building on the wetland edge and consequently impacting the required buffer.



7) In the RM-50 zoning district, cement fiber siding is only permitted as a secondary building material. Per Section 19.63.08 of the City Code, secondary building materials are limited to 15% of total area for each individual building elevation. As proposed, there are multiple building elevations that exceed the maximum amount of secondary materials permitted. Staff recommends that the applicant submit calculations of the building materials on each elevation should substantial amount of secondary materials be proposed. The exterior materials of both the health center and residential living building must comply with Section 19.63.08(c)(1) of the City Code.

Response: *The owner is requesting a deviation from this section of the City Code. The proposed elevations, which include approximately 24-30% cement fiber siding, have been developed to be compatible and consistent with the current percentage of siding and character of the existing campus buildings. Buildings of primarily masonry materials, in our opinion, will appear to be out of context, inconsistent and foreign to the architectural character of the existing residential buildings on campus. Calculations of the percentage of cement fiber siding have been include on the exterior elevation drawings.*

8) Submit a copy of Nine Mile Creek Watershed District permit and comments prior to issuance of City of Bloomington permits (www.ninemilecreek.org)

Response: *Comment noted. We will continue to work with Nine Mile Creek Watershed concurrently with the City of Bloomington so that permit approvals are in hand from the watershed prior to construction.*

9) Institutional structures require a 50-foot setback from single-family residential uses (Sec. 21.302.06(b)(5)).

Response: *The occupancy designation for the RL building is a residential occupancy (R-2) and it is not categorized as an institutional building per the prevailing building Code. Additionally, this building does not provide any assisted living services. We have provided setback per the city ordinance, which requires a calculated setback of 10' plus .25 feet for each foot in height over 30 feet. While the required setback at this location would then be 18', we have provided approximately 46' setback (floors 1 & 2) and then a 54' setback (floors 3 & 4) to the closest point.*

10) A Code-compliant amount of trees and shrubs is proposed.

Response: *Noted.*



11) The extent of tree removal adjacent to single family residential uses reduces the existing screen and buffer. These removals are concerning to staff. Staff would like to see tree removals adjacent to Single Family minimized.

Response: The amount of trees removed has been adjusted. In addition, note significant new foliage and landscaping will be installed in this area that will increase the overall screen and buffer to 'better than existing' conditions. See landscape plans.

12) Perimeter screening that complies with Section 19.52(d)(2) of the City Code must be demonstrated or provided.

Response: A code compliant landscape plan is included in our set.

13) Retaining walls over 4 feet in height require principle structure setback and must be designed by a civil engineer.

Response: Comment noted. All walls shown in the plans that are over four feet in height will be designed by a structural engineer. See note 11 on Sheet C500.

14) Along TH 169, Code requires a 20-foot landscape yard. Due to the presence of the sound wall, staff is supportive of a deviation to reduce the parking setback to 5 feet.

Response: Noted.

15) The requested parking deviation is 9.9% of the total quantity required by City Code. Alliant Engineering completed a parking study dated May 16, 2017 for the proposed development. The parking study concludes that the parking supply is sufficient if the underground parking is sufficiently utilized.

Response: Noted.

16) All signage must be consistent with Article X, Sign Regulations, of the City Code.

Response: Noted, the general contractor will also be notified of this requirement.

17) Drive aisles adjacent to 90 degree parking must be 24 feet wide.

Response: Noted. The current design follows this requirement and is noted on the site plan.

18) Standard 90 degree parking stalls must be 9 feet x 18 feet.



Response: Noted. The current design follows this requirement and is noted on the site plan.

19) A building security system must be approved by the Bloomington Police Department per Section 21.302.23(d)(3)(E) of the City Code.

Response: Noted. Security system drawings shall be submitted to the police department and the city upon completion of construction drawings for permit.

20) Kitchen equipment must be approved by the Environmental Health division. Fire suppression must be provided per the Fire Code.

Response: Kitchen equipment and fire suppression will be submitted for approval to the appropriate parties and meet all applicable codes.

21) Trash and recycling facilities must comply with Section 19.51 of the City Code and the MN State Building Code.

Response: Comment noted. Construction documents will finalize trash and recycling facilities that coordinate with code requirements and the Owner's operational requirements for campus garbage collection. We anticipate that garbage compaction will be provided in each proposed structure. These details will be submitted for permit with the construction documents.

22) Lighting plan is not Code compliant. Light levels for the parking areas must be maintained at 1.0 FC except for the perimeter 25 feet (along the property line) which must be maintained at 0.5 FC. See Section 21.301.07.

Response: Engineer will submit code compliant lighting levels and calculations.

23) Please see Section 21.301.07 for lighting requirements at all entrances. Primary entrance lighting of 5.0 FC within 5 feet of the door. The site is deficient in some areas.

Response: Engineer will submit code compliant lighting levels and calculations.

24) Existing parking lots are required to meet the minimum light levels no later than December 31, 2020. It may be beneficial to make the improvements now or plans for the new lighting accordingly. Section 21.301.07

Response: Engineer to confirm with Friendship Village. At this time, these improvements will not be a part of this projects scope of work



25) Show all light levels for all fixtures. Many light levels are not shown on the plan. The BB3 light has light levels which appear to exceed the allowed 0.5 FC at the property line. The BB3 does not appear to have a back shield option.

Response: Will comply. Engineer to show all lighting calculations per city requirements.

26) Code requires minimum lighting for the indoor parking garages. This site is required 3.0 FC anywhere on the parking surface except for the perimeter 25 feet of the garage is 1.5 FC maintained). The entrance must also have 25 FC within 35 feet from the access door. See Section 21.301.07

Response: Engineer will comply with the lighting requirements and will verify the information in the permit drawings

27) The LED lights proposed require LM-80, LM-79 and IN-SITU reports be provided for review.

Response: Engineer will provide the information as required at time of permit submittal

28) All residential zones and lighting within 300 feet of a residential Zone is limited to no more than 30,000 initial lumens per light source and may not be mounted higher than 28 feet. (Sec 31.301.07(c)(12)).

Response: Will comply

29) Energy use calculations showing compliance with the Minnesota Energy Code, without exemptions, is required. All parking lots regulated by this Section are considered public parking lots in the Minnesota State Energy Code. (Sec. 21.301.07) <https://energycode.pnl.gov/COMcheckWeb/>

Response: Noted, energy calculations will be provided via ComCheck upon completion and submittal for permit.

30) City Code requires the installation or replacement of parking lot and access lighting with an efficacy less than 70 lumens per watt for the luminaire. The plan appears to provide lighting with efficiency of less than 70 LPW.

Response: Noted

31) All lights required for security (as require by the Bloomington Police Department) must be on an alternate circuit or motion dimmer. All other exterior lighting must be illuminated no earlier than one



hour before the start of business and must be extinguished no later than one hour after the end of business. (NOTE: IECC requires occupancy dimming, when possible.) (Sec 31.301.07(c)(12)

Response: Noted, we shall comply with details on the construction drawings.

32) A management plan must be provided detailing program operation, staffing, security details, and access control per Section 21.302.23(d)(3)(C) of the City Code.

Response: Noted. A management plan will be submitted by the Owner once all staffing arrangements and programs are finalized. Delayed egress hardware will be provided for all nursing and Memory Support exits. Only (1) delayed egress device will be provided per exit pathway and will be shown on the construction documents submitted for permit.

33) Details in the plans provided are not adequate to complete the necessary review. Staff is scheduling the Planning Commission public hearing for June 29th, 2017. The scheduling change is necessary to allow time for the applicant to submit the Wetland Replacement Plan and to resubmit plans addressing review comments. Staff requests that the revised plans addressing the review comments by June 8th, 2017 to allow staff enough time to review the plans and prepare a report for Planning Commission.

Response: Responses and revisions are submitted as requested.

34) New commercial kitchen facilities require odor control devices, which must be approved by the Environmental Health Division.

Response: Noted. Odor control devices will be shown on the drawings submitted for permit and as required by the Environmental Health Division.

Fire Department

Contact: Laura McCarthy at lmccarthy@BloomingtonMN.gov, (952) 563-8965

1) Grass-Crete doesn't meet the requirements for emergency access lanes to be maintainable and provide a surface that allows all-weather driving capabilities.

Response: Grass-Crete will not be used. Per a separate meeting with the fire department and the City of Bloomington, fire lanes will not be required on the pond side and short ends of the proposed Residential building.

2) Minimum 13'6" clearance below link.



Response: The current drawings comply with this requirement.

3) Emergency access road meeting the requirements of the MN State Fire Code required around the entire structure.

Response: Please kindly note, that per a separate meeting with the fire department and the City of Bloomington, fire lanes will not be required on the pond side and short ends of the proposed Residential building. The MN State Fire Code also provides exceptions for Group 'R' occupancy buildings as listed in section 503.1.1.1, Items 1-3.

Public Works

Contact: Jen Desrude at jdesrude@BloomingtonMN.gov, (952) 563-4862

1) SHOW GATED AND FENCED. DRAINAGE AND EROSION PLAN NEEDED. RESTORATION PLAN (SEE SHEET C301).

Response: Comment noted. The contractor will submit a permit application to use this area for staging. Additional site plan/grading & drainage information will be provided as part of this permit application.

2) SHOW X-SECTION (SEE SHEET C302).

Response: See attached cross-section of Pond on Sheet C505.

3) HOW WILL THE POND/WETLAND BE PROTECTED DURING CONSTRUCTION? WILL IT NEED TO BE DRAINED? FLOOD CONTROL (SEE SHEET C305)

Response: General Contractor intends to install required silt fencing and pond silt curtains to minimize site silt infiltration into the pond area. Residential building fill material will be with washed sand. At this time, draining the pond is not being considered.

4) ADDITIONAL DETAIL AND CONSTRUCTION METHODS DETAIL WILL BE NEEDED FOR THIS GRADING AREA (SEE SHEET C500).

Response: Additional details and construction methods can be provided once construction documents are completed and submitted for permit. The general contractor will also be made aware of this requirement.



5) PROVIDE X-SECTION AND DESCRIPTION OF CONSTRUCTION METHOD. DISCUSS DEWATERING (SEE SHEET C505).

Response: General Contractor intends to install a well point system as appropriate and plans to drain into site outflow structure. Ground water will be silt free. This will be finalized once a permit submission is made and construction documents and the general contractors logistics plans are finalized for working on the site.

6) REROUTE SO THIS IS NOT UNDER THE BUILDING (SEE SHEET C600).

Response: After reviewing the storm sewer in this area, it is not possible to keep the storm sewer at the required elevations, and go around the building. The pipe will be placed within a steel casing. See revised sheet C605.

7) Retaining walls within public easements will require an easement encroachment agreement.

Response: Noted

Utility

Contact: Jen Desrude at jdesrude@BloomingtonMN.gov, (952) 563-4862

1) See document for several important comments related to the development. The list below may not include all the mark-up comments.

Response: Plans have been revised per the comments provided.

2) Private common utility easement/agreement must be provided.

Response: Comment noted. Private common utility easement agreements will be provided as necessary prior to construction.

3) Encroachment agreement application must be submitted for encroachment in public right-of-way or easements.

Response: Comment noted. Encroachment agreements will be provided as necessary prior to construction.

4) A Minnesota licensed civil engineer must design and sign all civil plans.



Response: Comment noted. Civil plans will be signed/ sealed and submitted as part of the building permit process prior to construction.

5) Utility as-builts must be provided prior to issuance of Certificate of Occupancy.

Response: Will comply. General Contractor will be made aware of this requirement.

6) Use updated city standard details for driveways, utilities, erosion control, etc. found on the website at www.bloomingtonmn.gov/information-sheets-and-handouts-engineering-division

Response: Details on Sheets C700 to C702 have been placed from the City of Bloomington website.

7) Show and label all property lines and easements on all plan sheets.

Response: Comment noted. Property lines and easements are shown on each sheet, and identified in the legend.

8) Utility permits are required for connections to the public storm, sanitary, and water system. Contact Utilities (952-563-8777) for permit information.

Response: The general contractor will be made aware of this requirement.

9) All unused water services must be properly abandoned at the main. All unused sanitary sewer services must be properly abandoned at the property line.

Response: The general contractor will be made aware of this requirement. Notes have been revised on sheet C600 regarding abandoning existing services.

10) Contact Met Council (651-602-1378) for Sewer Availability Charge (SAC) determination.

Response: Noted.

11) A minimum 10-foot horizontal separation and 18-inch vertical separation is required between watermain and sewers.

Response: Notes on sheet C600 have been revised accordingly.

12) Provide peak hour and average day water demand and wastewater flow estimates.



Response: See attached revised letter for peak hour and average day water demand and wastewater flow estimates. The findings are as follows:

- **Health Care Building: (unchanged from the previous numbers)
1700 fixture units, 300 GPM water/sanitary (including common area and kitchen estimates) 300GPM, 9,600 gallons per day.**
- **Resident Living: 1948 fixture units, 320 GPM water/sanitary (including common area),
and 8,500 gallons per day.**

13) Provide valves for system isolation (longest interval cannot exceed 400 feet) and for building isolation without shutting down supply to hydrants.

Response: Will comply. Additional valves were added to the plans as indicated.

14) Install hydrants to provide fire protection for entire building. Each hydrant covers 150-foot radius.

Response: Will comply. Additional hydrants were added to the plans as required.

15) Provide a minimum of 8-feet and a maximum of 10-feet of cover over all water lines, valves, services, etc.

Response: Comment noted. See note 12 on Sheet C600.

16) Use Class 52 DIP water main for pipe 12-inches in diameter and smaller. A minimum 8 mil polywrap is required on all DIP.

Response: Comment noted. See note 12 on Sheet C600.

17) Minnesota Department of Health (MDH) water permit/review may be required. Provide a copy of MDH approval letter or written confirmation from MDH that no permit/approval is required.

Response: We are currently discussing the submittal process with MDH. Any required permits will be acquired prior to construction and submitted as requested. We anticipate that drawings will be submitted for permit and to MDH concurrently.

18) Minnesota Pollution Control Agency (MPCA) sanitary sewer permit/review may be required. Provide a copy of MPCA approval letter or written confirmation from MPCA that no permit/approval is required.



Response: Comment noted. If a MPCA permit is needed, it will be provided prior to construction.

19) An inspection manhole is required on all commercial sewer services.

Response: The proposed sanitary sewer services are extended from manholes as required. See utility plans on Sheets C600 to C605.

20) Use standard short cone manholes without steps.

Response: Comment noted. See revised notes on sheet C600.

21) Any new or substantial remodel of a food service facility must provide an exterior grease interceptor and grease interceptor maintenance agreement.

Response: An exterior grease trap will be provided. Size and location will be shown on the construction documents submitted for permit.

22) Install interior chimney seals on all sanitary sewer manholes.

Response: Comment noted. See revised notes on sheet C600.

23) Taps of live water mains are done by City forces and paid for and coordinated with the Contractor.

Response: The general contractor will be made aware of this requirement.

24) Utility and mechanical contractors must coordinate the installation of all water and sewer service pipes into the building to accommodate city inspection and testing.

Response: The general contractor will be made aware of this requirement.

25) Sanitary sewer mainline, clean-outs, manholes, and services must be designed with adequate depth of cover or install high-density polystyrene insulation to prevent freezing.

Response: Comment noted. All sewer is designed adequately deep to prevent freezing.

26) Use schedule 40, SDR 26, or better for PVC sewer services.



Response: Comment noted. See revised notes on sheet C600.

27) Combination fire and domestic services must terminate with a thread on flange or an MJ to flange adapter.

Response: Water services were revised to utilize combination services. See utility notes on sheet C600. Additionally, the fire protection stub with flange fittings will be shown and detailed on construction documents by the engineer.

28) All components of the water system, up to the water meter or fire service equipment must utilize protective internal coatings meeting current ANSI/AWWA standards for cement mortar lining or special coatings. The use of unlined or uncoated pipe is not allowed.

Response: Comment noted. See revised notes on sheet C600.

Construction/Infrastructure

Contact: Jen Desrude at jdesrude@BloomingtonMN.gov, (952) 563-4862

1) Restore boulevard areas to preconstruction conditions. Use Bloomington Standard Non-Residential Driveway for proposed driveway.

Response: The general contractor will be made aware of this requirement. Additionally, notes will be indicated on the demo site plan on the construction documents submitted for permit.

2) Provide TPAR for removed sidewalk during construction.

Response: The general contractor will be made aware of this requirement.

3) Pedestrian Access Ramps near building access.

Response: Additional Pedestrian Ramps have been added near the building entries.

4) Retaining wall details not provided.

Response: Retaining wall design is the responsibility of the Contractor, see grading plan notes on sheet C500.

5) Staging area needs to allow access to manholes.



Response: The general contractor will be made aware of this requirement. The contractor will submit a permit application to use this area for staging. Additional site plan/grading & drainage information will be provided as part of this permit application. Manholes will remain accessible and protected as required.

6) Sheet 303 of 40 shows crosswalk marking. Is there marking planned for here? Can't tell if the perpendicular lines are crosswalk or decorative given the one at the south leg of the intersection.

Response: Yes, pedestrian crossing striping is noted in a number of locations, identified as note 6.

7) Move end of wall so not in drainage and utility easement

Response: The retaining wall has been relocated to keep the wall and the reinforcement out of MNDOT property. Some encroachment into drainage and utility easement will be needed. We will require an encroachment agreement prior to construction.

8-10) Move wall so not in easement & tiebacks remain on private property and not in MnDOT ROW.

Response: See response to comment (7) above.

11) Will the color be different enough to use as a crosswalk? Looks very similar to intersection color and may be creating a risk for pedestrians crossing.

Response: At the south entry, there is a crosswalk indicated with pavers. The colors will be chosen and reviewed in the field to make sure it is a clear location of a crosswalk.

12) Will need inlet protection given where the construction staging area is proposed.

Response: Comment noted. The contractor will submit a permit application to use this area for staging. Additional site plan/grading & drainage information will be provided as part of the permit application.

13) Will also need MnDOT permission/agreement to install tiebacks from retaining wall onto public ROW.

Response: Will comply as wall has been shifted so tiebacks will not be on MNDOT property. Additionally, the construction documents will provide the final retaining wall design to be used and will be submitted for permit at that time.



14) Add notes about regrading/restoring site to existing conditions

Response: Comment noted. See grading and erosion control notes on sheet C500.

15) This is a lot of water to drain over the face of the wall. Has consideration been made to swale behind the wall or has the design compensated for the drainage and steep slope?

Response: We will work with MnDOT to determine an acceptable design on their property, and discuss a potential swale behind the wall.

16) Verify that the storm pipe and building foundation don't conflict.

Response: The proposed pipe was modified in depth to make sure that it lies below the foundation.

17) Verify batter & geo reinforcement stays on private property and out of easements.

Response: The retaining wall has been relocated to keep the wall and the reinforcement out of MNDOT property. Some encroachment into drainage and utility easement will be needed. We will require an encroachment agreement prior to construction.

18) Show 3:1 slope behind wall. Are there provisions needed to handle that type of slope?

Response: We will work with MNDOT to determine an acceptable slope on their property, and provide erosion control blanket on slopes steeper than 4:1.

19) Emergency access road meeting the requirements of the MN State Fire Code required around the entire structure.

Response: Please kindly note that per a separate meeting with the fire department and the City of Bloomington, fire lanes are not required on the posnd side and ends of the proposed Residential building. The MN State Fire Code also provides exceptions for Group 'R' occupancy buildings as listed in section 503.1.1.1, Items 1-3.

Traffic

Contact: Jen Desrude at jdesrude@BloomingtonMN.gov, (952) 563-4862

1) Demonstrate that this monument sign is outside of the sight line for drivers.

Response: The monument sign on Highwood Drive is existing to remain and is not part of this projects' scope of work.



2) Verify that the bollard lights meet lighting standards and ADA standards for sidewalk setback

Response: *The engineer will verify the required information and will submit a compliant fixture once construction documents are completed. This will be submitted for permit at a later date.*

3) Monument sign not shown on plan. Is it being removed or already removed. If it is staying in place, demonstrate that sight lines are not blocked at both driveways (both vertical and horizontal).

Response: *The monument sign on Highwood Drive is existing to remain and is not part of the project's scope of work.*

4) Is this driveway for emergency access only? Show signage and dimensions. Check sight lines for the driveway.

Response: *Per review with the FD, this access road will not be at this location, but further east along Highwood Drive. The new location is over 200' further away from the existing drive. The access lane is intended to be for emergency vehicles only and will be further detailed in the construction documents to be submitted for permit.*

5) A signage and pavement markings must be MMUTCD compliant. If this is intended to be a marked crosswalk, the markings must be MMUTCD compliant (zebra or longitudinal, retro reflective markings)

Response: *Will comply.*

6) All of the proposed sidewalks on the site appear to be 5' wide. While this meets the FHWA recommended minimum width for Accessible Sidewalks, it should be noted that 6' is needed for wheelchairs to pass on a sidewalk.

Response: *Comment noted.*

7) Add Commercial driveway opening detail.

Response: *This detail was added to the plans. see sheet C700.*

8) The details do not clearly identify the difference between notes 2) Accessible dropped ped ramp and 3) Pedestrian curb ramp.



Response: All ramps will be “Pedestrian Curb Ramps” which will follow MnDOT standard details.

9) Include the bike rack details in this section, including all spacing dimensions for installation.

Response: Details will be provided in the construction drawings submitted for permit.

10) Show all signs and pavement markings on the plans. Provide appropriate MMUTCD references for signs proposed for site traffic. All private signage must be installed outside of the city right-of-way.

Response: Comment noted.

Water Resources

Contact: Steve Segar at ssegar@BloomingtonMN.gov, (952) 563-4533

1) See document for several important comments related to the development. The list below may not include all the mark-up comments.

Response: Comments noted. We have updated the plans per comments provided.

2) Provide Wetland Mitigation Plan, sequencing, alternatives, etc. Restoration of temporary impacts.

Response: The wetland mitigation plan/ fill application will be submitted shortly to the city.

3) Label Friendship Village S. Pond on these sheets.

Response: Comment noted. The pond has been labeled on the site grading plans.

4) Avoid compacting soils within infiltration basin.

Response: Notes added to Sheet C501 regarding compaction of the Infiltration basin. The general contractor will also be made aware of this requirement for construction.

5) Two feet above 100yr HWL = 849.21, for lowest floor elevation.

Response: In our review of the watershed rules and requirements, we believe the required separation is 1.5 feet from the 100-year flood elevation, or 848.5. Westwood will



provide these calculations for additional city review. Calculations are per Nine Mile Creek Watershed Rules, Appendix 4a: Low Floor Elevation Guidance.

6) Provide floating silt curtain.

Response: Floating silt fence was added to Sheet C505 as requested.

7) Will underground systems have pretreatment and sediment maintenance?

Response: The underground storage systems are equipped with isolator rows and access manholes for pre-treatment and sediment removal. See details for additional information on Sheet C703.

8) A maintenance agreement must be signed by the property owner and recorded at Hennepin County.

Response: Owner will provide the necessary signatures as required during construction.

9) A National Pollutant Discharge Elimination System (NPDES) construction site permit and Storm Water Pollution Prevention Plan (SWPPP) must be provided.

Response: All required permits and approvals will be obtained prior to starting work.

10) An erosion control bond is required.

Response: The general contractor will be made aware of this requirement.

11) Submit a copy of Nine Mile Creek Watershed District permit and comments prior to issuance of City of Bloomington permits (www.ninemilecreek.org)

Response: Comment noted. We will continue to work with Nine Mile Creek Watershed concurrently with the City of Bloomington so that permit approvals are in hand from the watershed prior to construction.

12) Provide Inlet protection for active storm sewer inlets.

Response: The grading sheets (C500 to C505) have been updated to include inlet protection locations.



Stormwater Report still under review. Wetland mitigation plan has not been received.

Response: The wetland mitigation plan & fill application will be submitted shortly to the city.

PW Admin

Contact: Bruce Bunker at bbunker@BloomingtonMN.gov, (952) 563-4546

1) See plans for comments on needed revisions.

Response: Plans have been revised as requested.

2) Right-of-way dedication is required on the final plat.

Response: Will comply, comment noted.

3) If there is no public water going to pond or infiltration basin there is no drainage and utility easement needed over them.

Response: Comment noted. Easements have been revised as requested.

4) Need agreement from State and City for staging area in ROW.

Response: Staging area will remain out of the state ROW. Agreements will be sought with the city as requested.

5) Encroachment agreement application must be submitted for encroachment in public right-of-way or easements. Or move walls out of d/u easements.

Response: Walls have been revised to pull them further onto private property. Encroachment agreements will be provided as necessary prior to construction.

6) Show and label all property lines and easements on all plan sheets. The dedicated ROW for Hwy 169 in southwest corner of property is not shown on all plan sheets. Landscape plan shows tree planted in ROW area.

Response: Property lines and Easements are shown on all plans, and indicated in the legend of each sheet.



7) Move landscaping, pond, retaining wall, or other structure out of right-of-way or easement. Retaining walls on west line and on east line are in d/u easements. Will construction and tie backs require easements on MnDOT ROW on the west and private property to the east?

Response: Walls have been revised to pull them further onto private property. Encroachment agreements will be provided as necessary prior to construction.

8) A title opinion or title commitment that accurately reflects the state of the title of the property being platted, dated within 6 months of requesting City signatures, must be provided.

Response: Comment noted.

9) Property must be platted per Chapter 22 of the City Code and the approved plat recorded at Hennepin County prior to the issuance of a foundation or building permit.

Response: Comment noted.

10) Public drainage/utility and easements must be provided on the plat.

Response: Comment noted. Public Drainage & utility easements have been added to the plat.

11) Existing easements may be vacated. Contact Bruce Bunker at 952-563-4546 or bbunker@BloomingtonMN.gov for information regarding the Public Rights-of-Way Vacation Application. It is the responsibility of the developer to determine if private utilities exist in the easement prior to submitting the application. Developer/owner to provide legal description and Engineering staff will prepare vacation document.

Response: Comment noted. We will work to vacate existing easements prior to recording the final plat.

12) \$15 fee for certified copy of plat. Engineering staff will obtain a certified copy of the plat from Hennepin County.

Response: Noted.

13) Consent to plat form is needed from any mortgage companies with property interest.

Response: Ownership to review. Please provide the appropriate form and we will complete this item and coordinate with the Owner as required. This will likely be



completed during the construction phase once financials are finalized via construction contract.

Assessing

Contact: Kent Smith at ksmith@BloomingtonMN.gov, (952) 563-8707

1) There will be Park Dedication due to platting of property. We are still trying to determine how much based on demo and re-build. What is happening to existing skilled nursing after it is relocated to new building? Can we get square footages of skilled nursing to be built and that will be demolished? Kent Smith will give the number to Nick Johnson once calculated.

Response: As discussed on the phone with Kent Smith on June 7, 2017, the demolition of the existing healthcare building and skilled nursing wings is not part of this projects' scope of work; however it is understood, that in order to determine park dedication calculations, some existing square footages are needed for consideration. I have included a site plan sketch to indicate the following information for your convenience and reference:

Building to be demolished:

- ***Existing Boarding Care (2-story): 35,600 sf***

Buildings that may be demolished at a later date (not a part of this project for reference only):

- ***Existing Skilled Nursing wing: 13,200 sf***
- ***Existing Healthcare wing: 6,500 sf***
- ***Total: 19,700 sf***

Westwood

MEMORANDUM

Date: May 5, 2017

Re: Trip Generation – Friendship Village
 Westwood Project #0009018.00

To: Ryan Bluhm, P.E.

From: Steve Manhart, P.E. PTOE, PTP

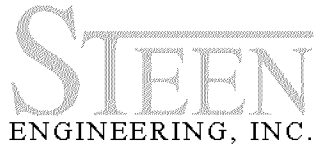
The following table shows the projected trip generation of Friendship Village given the land use and rates shown below:

- Assisted Living – 16 new units (26 replacement units) assuming one bed per unit
- Congregate Care Facility – memory support with 6 new units (26 replacement units)
- Elderly Housing Attached – 94 new residential living apartments
- Nursing Home – skilled nursing beds (66 replacement beds)

Table 1 – Trip Generation

Land Use	ITE Code	Size	Weekday		AM peak		PM Peak	
			Enter	Exit	Enter	Exit	Enter	Exit
Assisted Living	254	42 beds	56	56	4	2	4	5
Congregate Care Facility	253	32.0 units	32	32	1	1	3	2
Elderly Housing - Attached	252	94.0 units	162	162	6	12	13	11
Nursing Home	620	66 beds	90	90	8	3	5	10
-		-						
-		-						
-		-						
-		-						
-		-						
-		-						
			340	340	19	18	25	28
			680		37		53	

(Source: ITE Trip Generation Manual, Ninth Edition, 2012)



5430 Douglas Drive North Crystal, MN 55429 763-585-6742 main 763-585-6757 fax Email: steen@steeneng.com

June 06, 2017 (Revised from May 05, 2016)

Mr. Jon Lindstrom
SAS Architects & Planners
630 Dundee Rd., Suite 110
Northbrook, IL 60062

Re: Estimated Water/Waste Water Flow
 Friendship Village CCRC
 Bloomington, MN
 Steen #SAS201601

Dear Jon:

The anticipated water and wastewater flow is estimated to be as follows:

- 3 story Health Care Building:(unchanged from the previous numbers)
1700 fixture units, 300 GPM water/sanitary (including common area and kitchen estimates) 300GPM, 9,600 gallons per day.
- Resident Living:
1948 fixture units, 320 GPM water/sanitary (including common area), and 8,500 gallons per day.

If you have any questions or comments, please call.

Sincerely,
Steen Engineering, Inc.

A handwritten signature in black ink, appearing to read "Victor R. Pipars".

Victor R. Pipars, #16252
Associate, Sr. Mechanical Engineer

