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# M E M O R A N D U M

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**DATE:** May 5, 2016

**TO:** Planning Commission (May 9 meeting)

**FROM:** Dan Olson, City Planner

**SUBJECT:** Public Hearing: Application 2016-04 for a conditional use permit and site plan for Beacon Academy at 3420 Nevada Avenue North

## A. **BACKGROUND**

Beacon Academy, a public charter school for K-8 students, is proposing to purchase the property located at 3420 Nevada Avenue North. The property is currently owned by Cornerstone Church, who also leases building space to Lionsgate Academy. Before the property purchase is finalized, Beacon is requesting a conditional use permit (CUP) and site plan approval to allow their school to locate on the property and to construct an approximately 15,000 SF building expansion. The property is zoned Low Density Residential (R-1).

Beacon Academy currently leases space at Church of the Open Door in Maple Grove, Minnesota. The relocation to Crystal would allow the school to expand enrollment from 400 students to 750. This would include a 15,000 SF of classroom addition to the building at 3420 Nevada Avenue North. According to City Code Section 515.33 Subd. 4 (b), public institutional uses such as the proposed school are a conditional use within the R-1 zoning district. Notice of the May 9 public hearing was published in the Sun Post on April 28. Since the project could have an impact on a wide area, City staff has mailed the hearing notice to property owners within 700 feet of 3420 Nevada Avenue North rather than the 350 feet required by State law (see Attachment C). A hearing notice was also sent to the City of New Hope since the property is adjacent to the New Hope/Crystal boundary line.

### **Attachments:**

- A. Site location map
- B. Photos of site
- C. Map showing public hearing notification area
- D. Existing zoning map
- E. 2030 Land Use Comprehensive Plan map
- F. Applicant's project narrative
- G. Traffic analysis and student enrollment map
- H. Public comments received
- I. Building elevations and floor plans
- J. Proposed site plan (10 sheets)

## **B. PROPOSED CONDITIONAL USE**

### Property History

The existing building was constructed in 1965 as Crystal Heights Elementary School. The school operated on the property until 1983, when the City Council approved a CUP to allow the church to locate on the property. In 2008, another CUP was approved by the City Council to allow Lionsgate Academy to operate on the property alongside Cornerstone Church.

### Neighborhood Meeting

The applicant held a neighborhood meeting on March 21, 2016, which was attended by the City Planner, City Engineer, and four area residents. The purpose of the meeting was to provide information on the proposed project to property owners near the proposed school. Attendees asked questions about the school's impact on the neighborhood, and also expressed concerns about increased traffic as a result of the project.

In addition to the neighborhood meeting, staff has received other comments on the proposed CUP and site plan. Those comments and the staff response are included as Attachment H.

### Current Use of Property

The property is currently used by Cornerstone Church, the property owner, and by Lionsgate Academy, a charter school for grades 7-12 specializing in educating students with autism spectrum disorders. Lionsgate will vacate the property in the summer of 2016, and Cornerstone Church will vacate the property by August 26, 2017.

One element of Cornerstone's use is a single-family home located at the intersection of 35<sup>th</sup> and Louisiana Avenues North, and addressed as 3447 Louisiana Avenue North. The lot meets lot area, width, and depth requirements. The existing home meets setback requirements except that it is only located 20 feet from the front (Louisiana Avenue) property line rather than the required 30 feet. Therefore, the existing home is classified as "legally non-conforming". Beacon has stated that they intend to demolish the house and incorporate its lot into the school site, but there is no requirement for them to do so.

### Proposed Use of Property

Beacon Academy is a public charter school for grades K-8 currently located in Maple Grove, Minnesota, with an enrollment of 400 students and 71 staff. The applicant is proposing to relocate their school to the property at 3420 Nevada Avenue North, add a 15,000 SF addition to the building, and eventually increase their student enrollment to 750 students and 110 staff.

The existing church property is comprised of three property identification numbers (PID) at Hennepin County: two for the existing church building and grounds and one for the existing home at 3447 Louisiana Avenue North. Since portions of the existing parking areas and drive aisles span the property line between the two main parcels, staff

recommends a condition of approval for the CUP and site plan that Beacon combine the two PIDs into one PID. The PID for the existing home does not need to be combined with the other two parcels since that parcel is to be used as open space for the school. Also, having a separate PID for the existing home allows for future construction of a home on that parcel, if desired by the property owner.

Conditional Use Approval Criteria: City Code Section 515.33, Subd. 4(b) provides requirements for public institutional uses as a conditional use in the R-1 zoning district. The following are those requirements, followed by staff response.

- 1) Side setbacks shall be double that required for the district.

***Response: According to the Zoning Code, this property is defined as a corner lot. The side yards are both Nevada and Louisiana Avenues North, which have a setback requirement of 10 feet. Double that setback requirement would be 20 feet. The proposed building addition along Nevada Avenue is over 200 feet from the property line. The existing building far exceeds setback requirements.***

- 2) The facility is served by arterial, collector or municipal state aid streets and such pedestrian facilities as are necessary to accommodate the traffic generated by the facility.

- ***Response: According to the City's Comprehensive Plan, Nevada Avenue North is both a minor collector and a municipal state aid street, and 36<sup>th</sup> Avenue North is a major collector and a municipal state aid street. The existing building is served by entrances and exits on both Nevada and Louisiana Avenues North. The City's Public Works Director and the West Metro Fire Rescue District have reviewed this proposal and found it adequate to continue meeting vehicle movement within the site, including fire trucks. Although there are no sidewalks on the perimeter of the property, there are on-site sidewalks providing access to the building. Starting in 2016 Three Rivers Park District will construct a ten foot wide bituminous extension of the Bassett Creek Regional Trail on the west side of Nevada Avenue North.***

- 3) The city council determines that all applicable requirements of subsection 515.05, subdivision 3 a) and section 520 are considered and satisfactorily met. Section 515.05: 1) Consistency of the proposed use with the comprehensive plan; 2) Characteristics of the subject property as they relate to the proposed use; and 3) impact of the proposed use on the surrounding area. Section 520 contains the requirements for a site plan.

***Response: 1) The 2030 Comprehensive Plan land use designation for this property is "Public Institutional (Low Density Residential)". The proposed school facility with its large open space is consistent with this designation; 2) The property and existing building are designed for a public institutional use with a great deal of open space, and the facility will continue to exhibit these***

***characteristics; 3) The property has been an institutional use for many years, and this institutional use will continue with Beacon's use of the property. The proposed addition is in conformance with the requirements of Section 520 of the Zoning Code, Site and Building Plan Review.***

### **C. SITE PLAN ELEMENTS**

The following is a description of the site plan improvements proposed for the property at 3420 Nevada Avenue North. As required by City Code Section 520.15, the applicant will be required as a condition of approval for the CUP and site plan to sign a site improvement agreement and provide a cash escrow deposit to ensure completion of the new driveway, sidewalk, stormwater infiltration basins, landscaping, and dumpster enclosure.

- **Building expansion** – The proposed building addition consists of approximately 15,000 SF of classroom space. This addition far exceeds the required minimum setback of 20 feet from the property line along Nevada Avenue North by locating the addition about 200 feet from that property line. The maximum amount of lot coverage for the R-1 zoning district is 50%, and with the building addition the lot coverage for this use will be 33%.
- **Parking** - According to City Code Section 515.17, Subd. 5 (e), with the proposed building addition at least 65 parking spaces are required for the property. Currently, there are 167 parking spaces on the property. Therefore the parking requirement is met and the applicant is not proposing to construct additional parking. Beacon staff will primarily park in the lots located on the north, south, and east side of the building. The parking lot nearest Nevada Avenue will be used for those parents who may park while dropping off and picking up their children. With the exception of an annual picnic, Beacon is not proposing to have any special events in which additional parking is anticipated. However when the annual picnic is held parking is anticipated to occur on public streets. Within the neighborhood, there are “no parking” signs located on Louisiana Avenue North between 35<sup>th</sup> and 36<sup>th</sup> Avenues North. After the Three Rivers Park District constructs the Bassett Creek Regional Trail on Nevada Avenue North, parking will not be allowed on the east side of Nevada.
- **Student pick up and drop off** - There are two existing areas off of Nevada and Louisiana Avenues North where students could be picked up and dropped off. Beacon is proposing to have those students who arrive by school bus to be picked up and dropped off on the Louisiana Avenue side of the building, while parents will pick up and drop off students on the Nevada Avenue. In the interest of both safety and site circulation, Beacon will install traffic cones during arrival and dismissal times so that vehicles will not have access between the parent and bus drop off and pick up areas. The applicant will add an additional driveway access off of Nevada to create a one-way loop-shaped driveway that will make it easier for parents to exit the property once their children have been picked up or dropped off. There is sufficient stacking space available on the Louisiana Avenue side of the building for the school buses. The City's Public Works Director, the Police Department, and West Metro Fire Rescue District, have reviewed this student pick up and drop off

plan and found it adequate to meet vehicle movement within the site, including fire trucks.

With a peak enrollment of 750 students the school will have ten buses dropping off and picking up students. At their Maple Grove facility, Beacon states that 68% of the students take the bus to school and they believe approximately the same percentage of students will take the bus to the Crystal location. Therefore, about 200 vehicles per day will be dropping off and picking up students at the Nevada side of the building. Student drop off will occur between 8:30 and 9:00 AM, and pick up will occur between 3:30 and 4:00 PM. School staff will arrive before 8:30 AM and leave after 4:00 PM. Additional information about proposed traffic impacts is discussed below.

- Traffic impacts – The applicant has provided a traffic analysis report (Attachment G), which provides a description of trips generated as a result of this school use and suggestions to reduce the amount of traffic generated by this use. In the project narrative (Attachment F), the applicant has provided a traffic management plan for this use:
  - Parent pick up and drop off will be separated from bus pick up and drop off areas. The busier parent traffic will be concentrated on Nevada Avenue which is designed to handle heavier traffic volumes.
  - With the creation of a one-way, loop-shaped driveway on Nevada, it will be quicker for parents to enter, drop off or pick up their children, and leave the school property. This will help minimize congestion on Nevada Avenue since vehicles will not be stacked on that street.
  - Traffic conflicts will be minimized by having school staff arrive earlier and leave later than parents dropping off and picking up their children.
  - Beacon staff will serve as traffic monitors before and after school to direct traffic, and the school will also install directional signage at driveway entrances.
  - Beacon will encourage students to bus, walk, bike or carpool with other students. The school's communication plan will reinforce where parents are to pick up and drop off their children. A bike rack is shown on the site plan near the Louisiana Avenue North building entrance.

Recently City staff deployed traffic monitoring equipment south of the intersection of Nevada and 36<sup>th</sup> Avenues North to identify current traffic patterns with Cornerstone church and Lionsgate Academy on the property. After reviewing current traffic patterns, staff believes the traffic management plan created by Beacon is reasonable for the following reasons:

- Nevada Avenue, where the heavier school traffic will be concentrated, is a municipal state aid street and minor collector designed to handle larger traffic volumes. The most recent traffic count by the Minnesota Department of Transportation (MnDOT) had approximately 1,800 vehicle per day on Nevada. Traffic volumes on 36<sup>th</sup> Avenue North, which is a major collector and a municipal state aid street, are approximately 12,000 vehicles per day. Since collector streets are typically designed to accommodate a range of

1,000 to 15,000 vehicles per day, these traffic volumes are well within normal operating conditions for streets with these functional classifications. There are currently no traffic control devices, such as stop signs, at the intersections of Nevada/Louisiana Avenues and 36<sup>th</sup> Avenue North. As elsewhere in the city, any decision to install traffic control devices is based on engineering standards in the Minnesota Manual on Uniform Traffic Control Devices.

- Arrival and departure times for the school differ from peak traffic times for vehicles in the neighborhood leaving and arriving from the workplace.
- There are options for the City to ease traffic congestion, including striping modifications on Nevada to create a left turn lane for traffic turning onto 36<sup>th</sup> Avenue and to create a left turn lane into the school property for traffic heading south on Nevada from 36<sup>th</sup>. These changes would have an impact on parking restrictions on Nevada Avenue North and would have to be evaluated prior to implementation. If striping is implemented, staff recommends a condition of approval of the CUP and site plan that Beacon reimburse the City for those costs.
- The City will monitor traffic flow in the surrounding area and conduct additional studies if needed based on identified concerns. Staff recommends making this a condition of approval of the CUP and site plan.
- Grading, drainage and erosion control – Engineering staff has reviewed the grading, drainage and erosion control plans and found them acceptable. Erosion control techniques that will be used on-site include silt fences, inlet protection, wattles, logs, and a gravel construction entrance. The applicant is required to have the Bassett Creek Watershed Management Commission review and approve the erosion control plan and this has been made a condition of approval of the CUP and site plan.
- Stormwater management – The applicant has submitted a “Stormwater Management Plan” which has been reviewed by engineering staff. Stormwater management will be provided by two new on-site infiltration basins that will connect with existing storm sewer pipes. The first basin is located near the proposed building and the second basin is located near the proposed new driveway. The City Engineer has verified that these basins are adequately sized to accommodate the additional stormwater runoff for the building expansion.
- Utilities - The proposed building addition will connect with existing water, sanitary sewer and storm sewer mains. Engineering staff have reviewed these utility connections and found them acceptable. The following is a description of existing utility connections:
  - Water main: Existing 6” main in Valley Place North, existing 8” in Louisiana and Nevada Avenues North
  - Sanitary sewer main: Existing 8” main in Valley Place North, Nevada and Louisiana Avenues North
  - Storm sewer main: Existing 18” main in Nevada Avenue North, existing 12” main in Valley Place North, Louisiana Avenue North, and within the property
- Landscaping – The applicant is not proposing to remove any trees from the property as a result of the building addition. The applicant will be planting a total of 79 new trees: sixteen “liberty elm”, nine “swamp white oak”, thirteen “river birch”, seventeen “boulevard american linden”, fourteen “black hills spruce”, and ten “white pine”. All of these species are acceptable to the City. The applicant will also be planting

various shrub species on the property, and installing plantings around the stormwater infiltration basins.

- Pedestrian connections – There are no sidewalks on the perimeter of the property, but there are on-site sidewalks providing access to the building. There is an existing sidewalk on the north side of the existing driveway access off of Nevada Avenue North. The traffic analysis (Attachment G) recommended providing a sidewalk on the south side of the new driveway for children to walk to the school entrance once they have been dropped off by their parents. This sidewalk is not shown on the site plan, and staff recommends a condition of approval of the CUP and site plan that this sidewalk be added. The traffic analysis also recommended a new sidewalk on the west side of Louisiana south of 35<sup>th</sup> to connect the existing sidewalk north of 35<sup>th</sup> with the school property. Staff discussed adding this sidewalk connection and felt that it would not be greatly utilized since few children will walk to this charter school. Therefore, staff is recommending not requiring this sidewalk connection. Beginning in 2016 Three Rivers Park District will construct a ten foot wide bituminous extension of the Bassett Creek Regional Trail on the west side of Nevada Avenue North.
- Exterior elevations – The proposed addition will be constructed to match the exterior building materials of the existing church building (Attachment I).
- Exterior lighting – The applicant is not proposing to add any new exterior wall lighting onto the building.
- Screening - The applicant is not proposing any new rooftop or ground mechanical equipment that will need to be screened. There are existing unscreened dumpsters located on the side of the building facing Louisiana Avenue North. The applicant is proposing to enclose these dumpsters with a metal gate with brick pillars that are compatible with the building. As discussed previously, Beacon is adding many new trees and shrubs to help screen the use from the surrounding residential neighborhood.
- Signs – The applicant will be adding traffic control signs to the property to direct bus and parent traffic. Existing monuments signs along Nevada and Louisiana Avenues North will be re-faced for Beacon. Any new walls signs would require the submittal of a sign permit application prior to installation.

#### **D. REQUESTED ACTION**

The Planning Commission is being asked to make a recommendation to the City Council to either deny or approve the CUP and site plan to allow Beacon Academy to locate at 3420 Nevada Avenue North and expand the existing building by 15,000 SF. A recommendation taken by the Planning Commission should include findings of fact either for or against the proposal. The Commission may reference the findings for approval in Sections B and C, above. Staff recommends approval of the conditional use permit and site plan to allow this school use and building expansion, subject to the following conditions of approval:

1. By reference, the approval of this CUP and site plan is described as those property improvements shown in Attachment J.

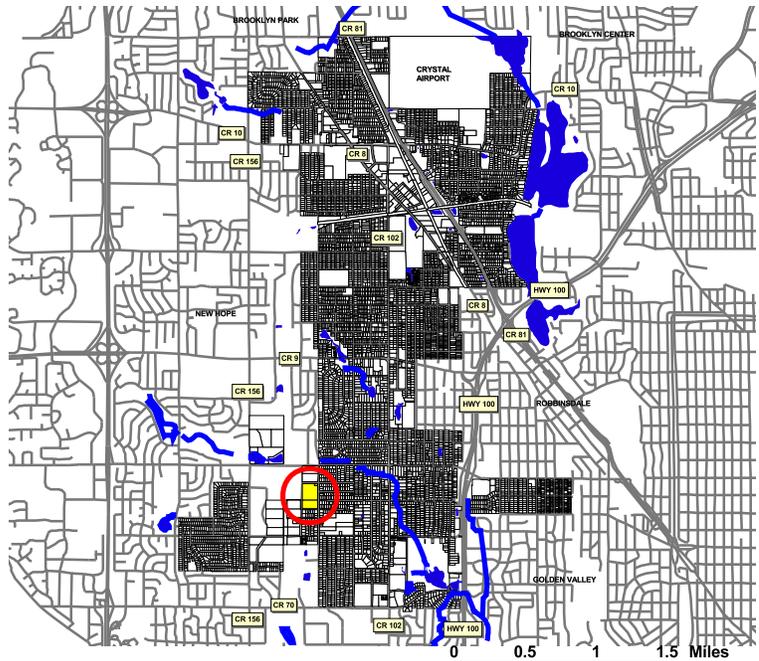
2. With this CUP and site plan approval, Beacon Academy is limited to 750 students. If additional students are desired, Beacon shall apply to the City for an amendment to this CUP and site plan.
3. Cornerstone Church and Lionsgate Academy shall vacate the property by August 26, 2017.
4. Directional signs shall be installed to make site circulation clear including where parent and school bus drop offs and pick ups are to occur, and where staff and parent parking is located.
5. Prior to disturbing the site for the building addition, Beacon Academy shall:
  - Submit an erosion control plan to the Bassett Creek Watershed Management Commission for their review and approval.
  - Submit a request to the Metropolitan Council to determine the sewer availability charge (SAC), and pay the City this fee.
  - Sign a site improvement agreement with the City to guarantee completion of the installation of the new driveway, sidewalk, stormwater infiltration basins, landscaping, and dumpster enclosure.
  - Revise the site plan to add an additional sidewalk connection on the south side of the new driveway as shown in Attachment G.
6. The City will monitor the traffic generated by Beacon Academy for impacts to the City streets. The City may require street pavement striping modifications on Nevada Avenue North to mitigate certain impacts if appropriate, and Beacon shall reimburse the City for the costs of that striping.
7. Beacon shall combine the two main parcels into one property identification number with Hennepin County. If Beacon demolishes the home at 3447 Louisiana Avenue North, then it may combine that parcel with the other two.
8. A sign permit application shall be approved by the City prior to the installation of any exterior signs.
9. As required by City Code Section 520.07, construction activity must commence for this project by December 31, 2017, unless an extension has been granted by the City Council according to the requirements found in City Code.

City Council action is anticipated on May 17, 2016.

# Location Map



**Site: Proposed  
Beacon Academy @  
3420 Nevada Ave N  
Crystal, MN**



City of Crystal  
4141 Douglas Drive N.  
Crystal, MN 55422



# Attachment B



from West



from west



from East



from East



from ~~South~~ East

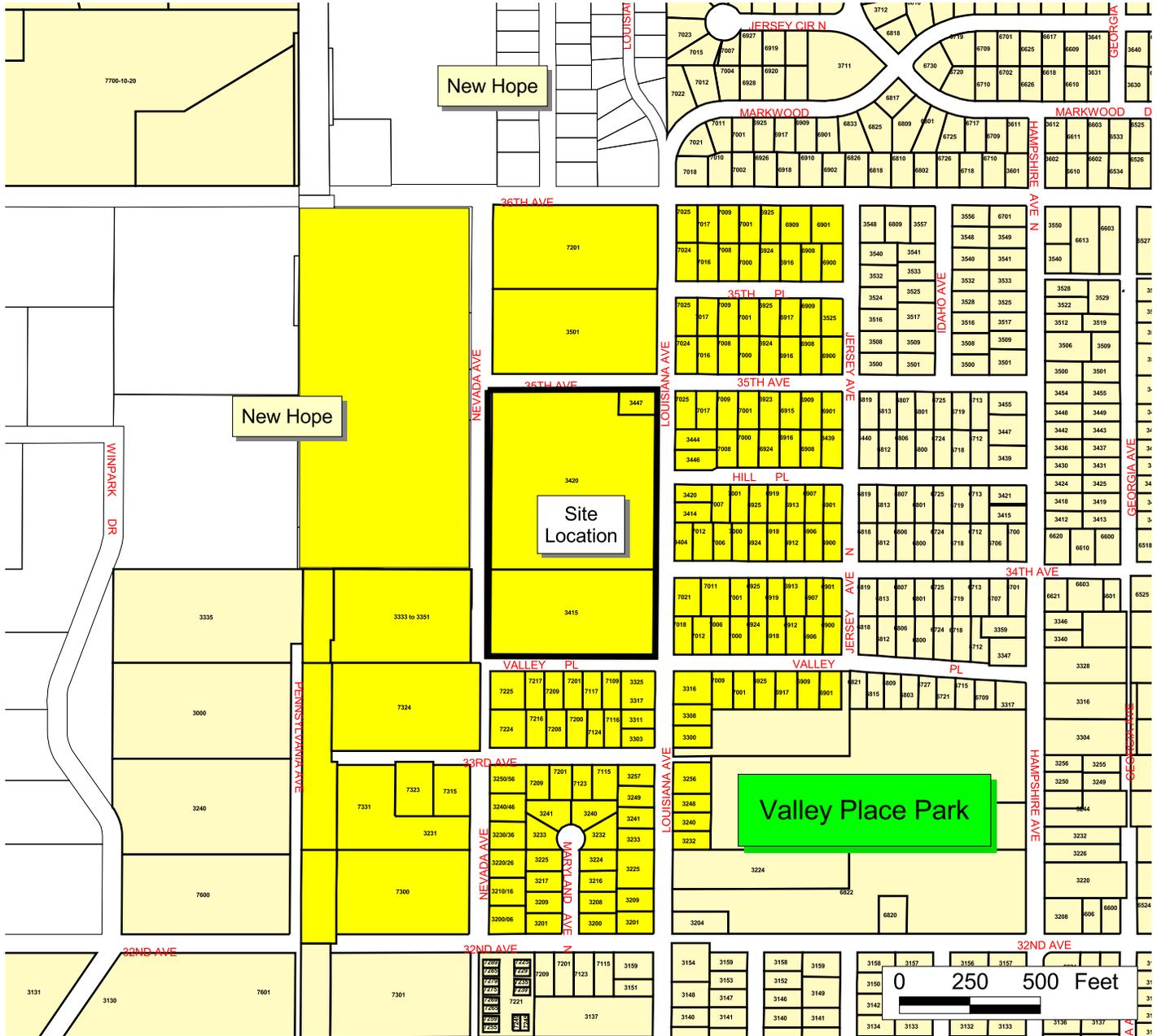


from south



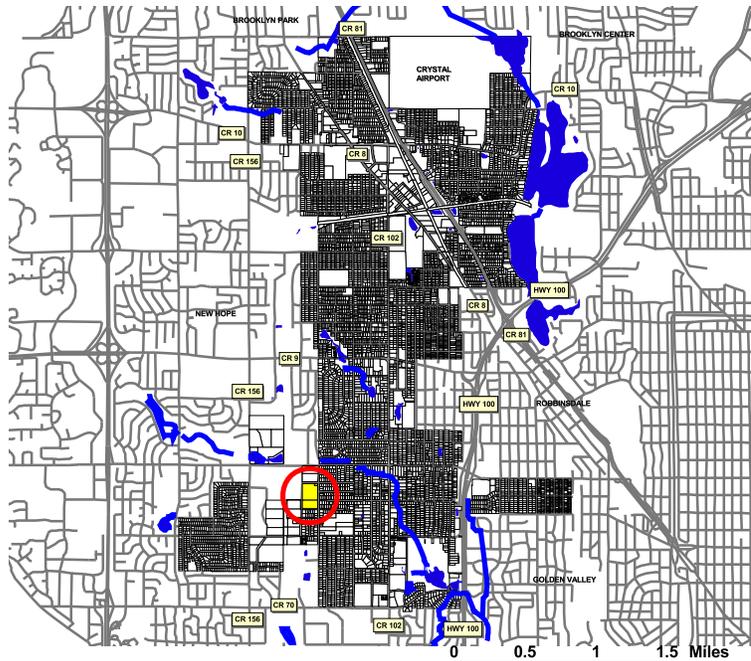
house

# Attachment C Public Hearing Notification



**Site: Proposed  
Beacon Academy @  
3420 Nevada Ave N  
Crystal, MN**

Parcel Bounds



**City of Crystal  
4141 Douglas Drive N.  
Crystal, MN 55422**

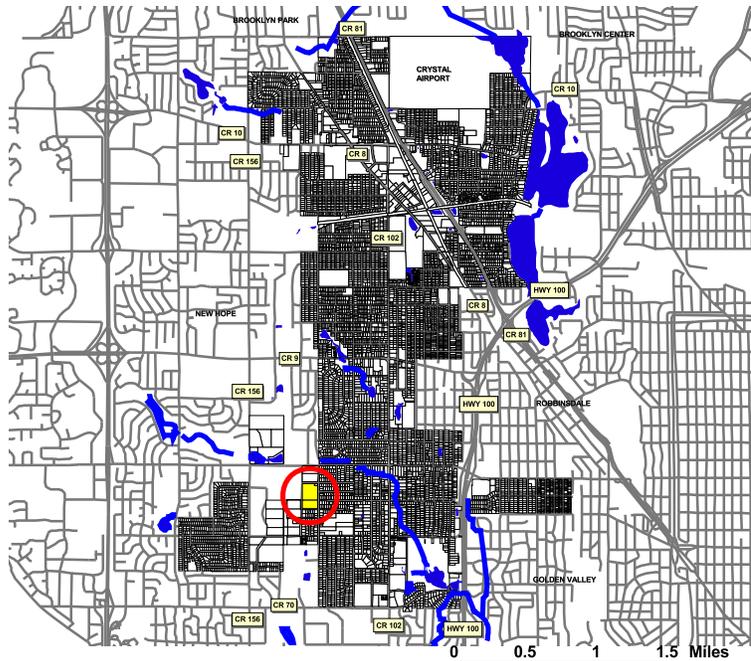


# Zoning Code Map



**Site: Proposed  
Beacon Academy @  
3420 Nevada Ave N  
Crystal, MN**

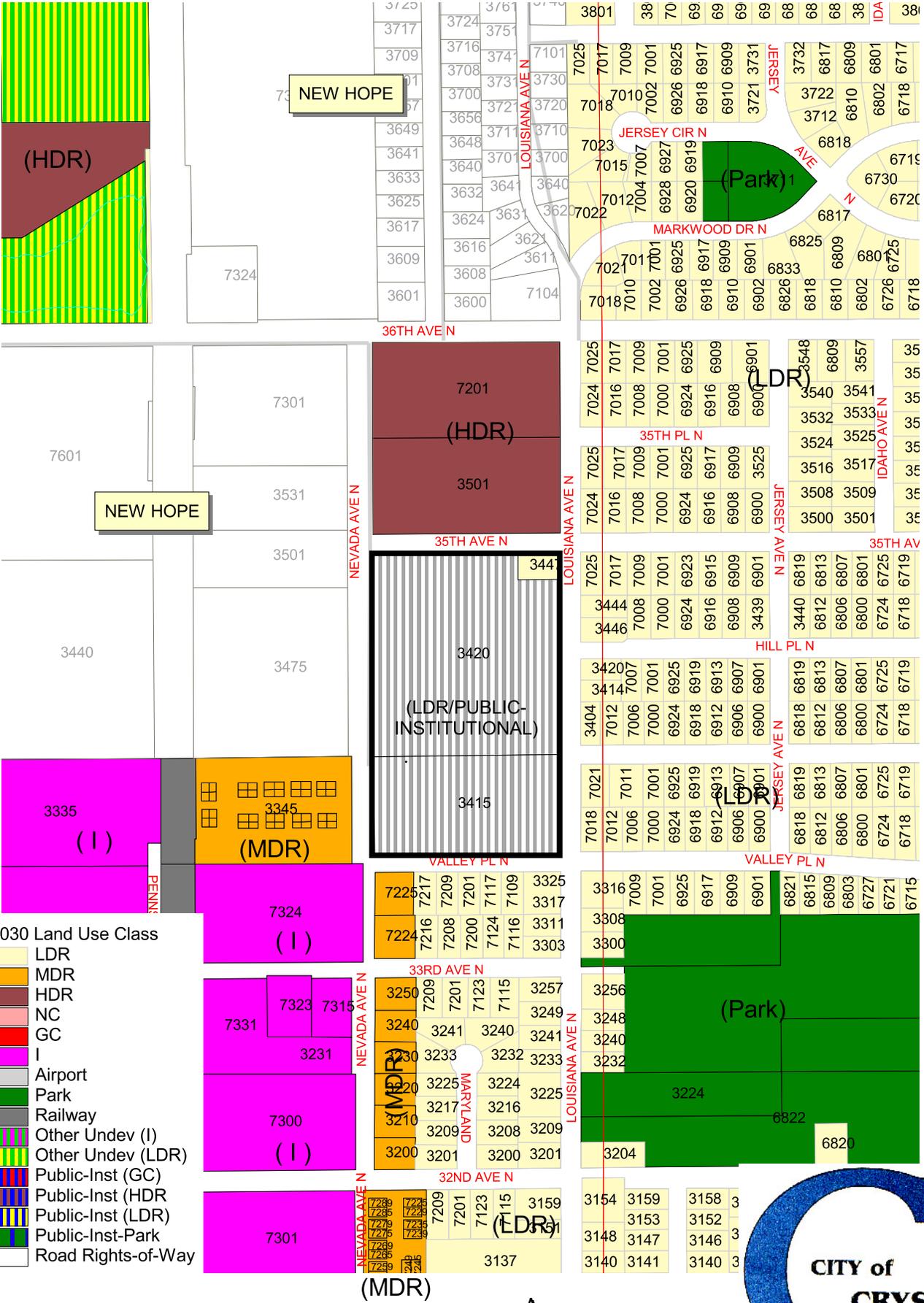
- Parcel Bounds
- Zoning Codes:
  - C-1
  - C-2
  - I-1
  - PUD
  - R-1
  - R-2
  - R-3



City of Crystal  
4141 Douglas Drive N.  
Crystal, MN 55422



Attachment E



- 2030 Land Use Class
- LDR
  - MDR
  - HDR
  - NC
  - GC
  - I
  - Airport
  - Park
  - Railway
  - Other Undev (I)
  - Other Undev (LDR)
  - Public-Inst (GC)
  - Public-Inst (HDR)
  - Public-Inst (LDR)
  - Public-Inst-Park
  - Road Rights-of-Way



# Attachment F

**Beacon Academy  
Application for a Conditional Use Permit and Site Plan Review  
3420 Nevada Avenue North, Crystal**

## **1. Project Proposal Overview**

Beacon Academy plans to purchase 3420 Nevada Avenue North and use the site for its K-8 public charter school. Beacon plans to renovate the interiors of the existing buildings and add a 15,000 square foot addition on the northwest side of the facility. The facility is currently 61,208 square feet and the addition will bring the facility to 76,208 square feet. The lot size is 12.52 acres or 545,371 square feet. The projected opening date for the school is September 2017. Construction is projected to begin in September 2016. Friends of Beacon (FOB), an affiliated building company (ABC) will acquire and develop the site through tax-exempt bond financing.

Originally, in 1965, this site was developed as a public elementary school. Currently, Olivet Baptist Church of Minneapolis d/b/a Cornerstone Church owns the site and since 2008 has shared its use with Lionsgate Academy, a public charter school. Lionsgate is moving to a new site in Minnetonka and will open there for the start of school in September 2016. Cornerstone Church will occupy the worship space on site until August 2017, and then will move to a new location. When Beacon Academy opens its doors in September 2017, both Lionsgate and Cornerstone will have moved.

3420 Nevada Avenue North is zoned Low Density Residential (R-1). Schools are allowed as a conditional use within the R-1 district. Beacon is submitting this Conditional Use Permit application along with a Site Plan application, which is required for the building addition.

## **2. Description of Beacon Academy**

In 2004 Beacon Academy, a public charter school opened its grades K-3 school in Plymouth, MN. In 2010, due to a need for more space, Beacon Academy moved to Maple Grove where it currently leases space in the lower level of the Church of the Open Door at 9060 Zanzibar Lane North. Its mission is "to provide Twin Cities' families with a proven, rigorous and content-rich curriculum integrated with sequential Spanish language instruction. The school will create a results-driven small learning community built around a culture of positive character development and committed parental involvement."

In 2012 Beacon Academy began searching for a larger space and one that better fits its programming needs. The site at 3420 Nevada Avenue in Crystal offers Beacon permanent classroom space, display space in classrooms and hallways, and playground/green space for students. The Crystal site will also accommodate Beacon's plans to expand its offerings to more students.

(See *Beacon Academy Overview*, attached.)

### **3. Current Activity on the Site**

**Cornerstone Church** has been located at 3420 Nevada Avenue North since 1984. Cornerstone Church has a congregation of 906 members. Two services are held on Sunday mornings which approximately 420 people attend, parking 80-100 vehicles on the site. Cornerstone has a Wednesday evening program which 120 children attend; parents drop the children off and approximately 50 cars park. They also hold an annual fall kick-off with attendance similar to that of a Sunday service.

**Lionsgate Academy Charter School** has been located at 3420 Nevada Avenue since September 2008. It is a grades 7-12 charter school specializing in educating students with autism spectrum disorders. Lionsgate Academy currently has 118 students and 125 staff on site. (They will increase their enrollment to 150 students at their new site.) Because of the nature of its mission, Lionsgate Academy has a very low student to staff ratio, with approximately 8-15 students in a classroom with two teachers. Students arrive at 8:00 am and are dismissed at 2:50 pm. Two days a week, students stay for after-school activities until 3:45 pm. About 50% of the students (approximately 58) are transported to and from school in 15 7-passenger vans. Lionsgate also has two in-district transportation routes using 2 larger vehicles for 15 students. The remaining 41 students arrive and depart in parent vehicles, with some carpooling (several students drive themselves to school and park on site).

### **4. Beacon Academy Enrollment and Facilities**

Beacon Academy currently has 415 students in grades K-8. Like Lionsgate Academy, Beacon draws students from communities throughout the metro area, including the City of Crystal. Currently, Beacon has 18 classrooms, two per grade. There are 71 staff on site. The school day begins at 9:00 am and ends at 3:30 pm.

Beacon plans to increase its enrollment over the next 5 years. It plans to add one classroom per grade to a total of 3 classrooms per grade and a maximum of no more than 750 students and 110 staff. At 3420 Nevada Avenue, with the building addition, there will be 27 classrooms, allowing for three classrooms per grade, as well as a computer lab, media center, art room, Spanish classrooms, and special education classrooms.

The addition will use exterior materials similar to those on the existing building to ensure a cohesive look to the facility. (See photos.) The addition will be one story and the elevation will match that of the existing building. No additional exterior lighting on the site is planned.

The trash enclosure for Beacon's garbage, recycling and organics program will be located on the east side of the building where the existing dumpsters are located. Currently the dumpsters are not screened. Beacon will screen its dumpsters with a metal panel fence and gate separated by brick posts that match the building exterior materials. (See elevation drawing.) Beacon will also add a concrete pad under the dumpsters to avoid damage to the existing asphalt surface. Delivery trucks will unload at this location as well.

## 5. Transportation Plan for Beacon Academy

Beacon Academy intends to manage its traffic so that students, staff and neighborhood residents are safe; arriving and departing vehicles access the site easily; and the neighborhood is not negatively impacted. As part of its site planning process, Beacon Academy hired Spack Consulting to carry out a traffic review to help estimate traffic volumes at maximum enrollment and to recommend traffic management strategies.

Currently, at Beacon's site in Maple Grove, five school buses transport 280 students, approximately 68% of the student body, to and from school. Approximately 135 students come to school in parent vehicles. The Crystal site is 13 miles from the current site.

At maximum enrollment (anticipated in 2021) it is projected that 8-10 school buses will transport 70% of the students (525), and parents (individually and in carpools) will transport the remaining 30% of students (225, some of whom are siblings) to and from school (approximately 175-200 parent vehicles). One hundred ten staff would be on site every day and most will be driving to school as well. As this is a K-8 school there are no student drivers. Beacon encourages families to use school bus transportation, and anticipates that more students will live closer to school in Crystal and that bus and carpool use will increase.

### Enrollment and Transportation Summary

|                              | Lionsgate Academy | Beacon Academy<br>(current) | Beacon Academy<br>(at maximum enrollment) |
|------------------------------|-------------------|-----------------------------|---|
| Enrollment                   | 118               | 415                         | 750                                       |
| Buses/vans                   | 17                | 5                           | 8-10                                      |
| Parent vehicles<br>(approx.) | 41                | 110                         | 175-200                                   |
| Staff on site                | 125               | 71                          | 110                                       |

**Beacon will implement the following traffic management strategies:**

**a. Separation of parent vehicles and buses.** Parent vehicles will enter and exit the site from Nevada Avenue, keeping the majority of the school traffic on a municipal state aid street (as required by Crystal zoning code Section 515.33, Subd. 4) and away from surrounding residential areas. School buses will enter and exit the site from Louisiana Avenue, keeping the traffic on that street to a minimum, and separating bus and car traffic on site. All student drop-off and pick-up will happen on the site adjacent to building entrances.

**b. Added driveway for parent and staff vehicles.** As part of its traffic management plan, Beacon is proposing to add a driveway to the site from Nevada Avenue North. It will be located just to the south of the existing driveway. The new driveway will allow vehicles to enter the site, drop off students, and then continue through and out of the site via the northern driveway to Nevada Avenue. At maximum enrollment (expected in 2021) approximately 175-200 parent vehicles will arrive at the site in the morning between 8:30 and 9:00 am to drop students off, and will pick students up in the afternoon between 3:30 and 4:00 pm. The added driveway will allow more vehicles to stack off of the streets. There is room for cars to pull over and let their children out, while other cars can continue to move along the driveway. There is a sidewalk along the existing north driveway. There is also parking between the driveways for parents who wish to park and get out of their cars to accompany their children. (See attached site plan.)

**c. School bus traffic.** At maximum enrollment, 8-10 school buses will enter the site at the northern entrance on Louisiana Avenue, unload children by the building, and then exit the site by the southern entrance on Louisiana Avenue. Similarly they will pick children up in the afternoon. Buses will be able to stack up along the east side of the building. Buses will not park on the street.

**d. Staff vehicles.** Approximately 110 staff will enter and exit the site from Nevada Avenue and park in the lots to the south and east of the building. Staff will arrive before 8:30 am and will leave after 4:00 pm, which will minimize interaction between their vehicles and the school buses and parent vehicles on the site. Staff will park in the lots to the south (18 parking spaces), to the east (77 parking spaces) and to the north (19 spaces) of the building.

**e. Traffic monitoring.** Beacon Academy staff will be outside before and after school directing students. Staff will meet children at the buses outside the main entrance of the building on the east side, and staff will meet children outside the entrance on the west side of the building where they will be dropped off and picked up by parents. Beacon will work with families throughout the year to ensure the successful operation of its traffic management plan.

**f. Signage.** The entrances and exits to the site will be well marked, helping make the flow of traffic smooth and safe. Parking as well as vehicular flow on the site itself will be clearly marked, including bus drop-off areas, parent drop-off areas, staff parking, parent parking, and one-way directions on the Nevada driveways.

**g. Communications.** In addition to signage at the driveways, school orientation and communication materials will be used to reinforce instructions to parents to use the Nevada Avenue driveway and parking area for drop off and pick up students. The school will also use these communication channels to encourage the use of its bus services, and carpooling.

**h. Bicycle transportation.** Bike racks and shower facilities will be provided at Beacon Academy.

**i. Other traffic.** Although students will use the school entrance facing Nevada at the beginning and end of the school day, the main entrance to the school faces Louisiana Avenue. Therefore, during the school day, occasional delivery trucks and parent vehicles will arrive at the building from Louisiana Avenue.

**j. School-wide events.** Once per year, at the annual picnic, all families and staff will be at the school together. At this event, the school parking lots are likely to fill, and some parking is likely to occur on surrounding streets. Beacon could also approach businesses on Nevada Avenue about using their parking lots for this event.

## **6. Traffic Impact at 36th and Nevada**

Although additional queuing is anticipated at the intersection of 36<sup>th</sup> Street and Nevada Avenue due to the expected school traffic, this additional traffic is not anticipated to cause significant back-ups or harm to existing traffic operations due to the following characteristics:

- Through traffic on 36<sup>th</sup> Street does not stop at Nevada Avenue and will not be disrupted by additional traffic to or from Nevada. Right turning traffic to Nevada has priority over other turning vehicular traffic and will not need to stop other than for the occasional pedestrian. Left turning traffic to Nevada Avenue will be able to wait in the center lane, outside of the through lane, to complete their turn.
- Nevada Avenue at 36<sup>th</sup> Street has sufficient width to allow for left and right turns to occur at one time. Although not striped for two lanes, most motorists allow for this dual stacking opportunity when the width is provided.
- The existing daily traffic on Nevada Avenue is 1,550 vehicles per day based on MnDOT traffic counts. This level of traffic is considerably below the capacity of the road and suggests the intersection with 36<sup>th</sup> Street has the capability to serve more traffic.

- The signalized intersection at 36<sup>th</sup> Street and Winnetka Avenue will provide some gaps in the traffic flow on 36<sup>th</sup> Street for turning traffic to/from Nevada Avenue. While the full benefits of an adjacent signal will not be realized at the distance of just under 2,000 feet, the situation is better than without any nearby signals.
- Left turning traffic from Nevada Avenue onto 36<sup>th</sup> Street will have a convenient secondary route of using 32<sup>nd</sup> Avenue to Winnetka Avenue to the signal at 36<sup>th</sup> Avenue to complete their desired route.

For these reasons, we anticipate traffic operations at the intersection 36<sup>th</sup> Street and Nevada Avenue to be acceptable in the future with the proposed development.

### 7. Recreational and playground activities

Beacon Academy students have recess once per day for 25 minutes. Currently, recess is held from 11:25 am - 12:25 pm. As enrollment grows, Beacon anticipates that children will be at recess, in small groups, between 11:00 am and 1:00 pm. Students will use the fields and green space on the west side of the school. Students will also be outside sometimes during gym class in fall and spring. The gym teacher would take one class of 28 students at a time outside for 35-45 minutes.

### 8. Off-Street Parking Requirements

There are 167 existing parking spaces on the site. Beacon plans to remove 9 spaces with the construction of the building addition, which will leave 158 parking spaces on the site.

As required by the City of Crystal, Off-Street Parking Requirements, 515.13 Subd. 5, the number of spaces required by an elementary and junior high school is:

| Parking Requirements for Elementary/Junior High School | Current Enrollment (415)<br>(2 classrooms/grade) | Maximum Enrollment (750)<br>(3 classrooms/grade) |
|--|--|--|
| Base requirement                                       | 10 spaces  | 10 spaces  |
| 1 space/classroom                                      | 18   | 27   |
| 1 space/40 students                                    | 11   | 19   |
| <b>TOTAL SPACES REQUIRED</b>                           | <b>39 spaces</b>                                 | <b>56 spaces</b>                                 |

The site has adequate parking for Beacon Academy.

## **9. Landscaping Requirements**

Beacon Academy will landscape the site and will meet the requirements of the Crystal Code Section 520.13, *Landscaping Standards*. Landscaping plans include plantings at the entrances, trees along the new west side driveway, trees to screen the east side parking lot, trees along the north and east sides of the property, and plantings around the addition. Tree species to be used are on Crystal's approved species list. The landscaping beautifies the site, buffers it from surrounding uses, and shades and screens parking areas. Landscaping will be maintained by Beacon Academy. No trees will be removed from the site during construction. No new roof or ground mechanical equipment will be added to the site. Dumpsters will be screened. (See the attached Landscape plan.)

## **10. Stormwater Management**

Because Beacon plans to add a 15,000 square foot addition, stormwater management strategies will be implemented. A biofiltration system will be integrated into the site, west of the new addition and north of the new driveway. (See the attached site plan.)

## **11. House on northeast corner of the site**

There is a house, 3447 Louisiana Avenue, on the NE corner of the site. The house is currently owned by Cornerstone Church and is included in the purchase by Beacon Academy. Beacon Academy plans to remove the house during construction of the school addition. The trees around the house will be left intact. Beacon Academy's plan is to add a playground in this area.

## **12. Neighborhood Informational Meeting**

Beacon Academy held an information meeting for neighbors on Monday, March 21, 2016, 6:00 - 7:00 pm at Cornerstone Church. The City of Crystal provided Beacon with a list of addresses for the surrounding neighborhoods and property owners were invited to the meeting. Plans for the site, including the addition, were presented and time was spent answering the questions and concerns of those in attendance. Questions generally concerned traffic and how it would be managed so as not to adversely impact the neighboring properties.

## **13. Standards for Elementary Schools in R-1 Zoning Districts (515.33, Subd. 4)**

Beacon Academy meets the standards for elementary schools in R-1 districts:

- a. The side setbacks are double that required by the zoning district
- b. The facility is served by arterial, collector or municipal state aid streets, and pedestrian facilities are as necessary to accommodate the traffic generated by the facility

c. All requirements of 515.05 subd 3 (Conditional Use Permit) and 520 are considered and satisfactorily met

#### **14. General Conditional Use Standards (Subd. 7, 8)**

Beacon Academy meets the general conditional use standards.

- a. No more than 50% of lot may be covered by structures. Lot coverage will be 14%.
- b. Height is not to exceed 2 stories or 32 feet. Height will be one story.
- c. The front and rear setbacks must be 30 feet from the lot line and the side setbacks must be 5 feet. Actual setbacks will be \_\_\_ along Louisiana Avenue and \_\_\_ along Nevada Avenue.

#### **15. Attachments**

- a. Beacon Academy Overview
- b. ALTA survey of the site
- c. Site plan
- d. Architectural drawings and floor plans of the existing building and the addition
- e. Elevations of the addition and dumpster enclosure area
- f. Landscape plan
- g. City of Crystal form to combine parcels
- h. Table of Project Cost



## Technical Memorandum

**To:** Joe Radach, PE, Carlson McCain, Inc.

**From:** Bryant Ficek, P.E., P.T.O.E.

**Date:** April 7, 2016

**Re:** Beacon Academy Traffic Review

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Beacon Academy is a charter school providing kindergarten through 8<sup>th</sup> grade classes. A new location is proposed in the City of Crystal, between Nevada Avenue/Louisiana Avenue and 35<sup>th</sup> Avenue/Valley Place. This technical memorandum examines the proposed school in terms of expected traffic generation and site circulation.

### Conclusions

Based upon the information and analysis in this report, the following conclusions and recommendations are made:

- The proposed school is expected to generate up to 227 entering trips and 189 exiting trips during a typical weekday a.m. peak hour. Traffic during the school afternoon peak and the normal p.m. peak hour are expected to be up to 125 in/153 out and 73 in/76 out, respectively.
- The proposed site circulation should be improved through consideration of Space, Time, and Behavior categories. Specific recommendations include:
  - Separate bus and parent drop-off/pick-up areas.
  - A new access to Nevada Avenue, creating a one-way loop road around the west side parking lot for drop-offs/pick-ups.
  - A sidewalk adjacent to the new road to extend the stacking spaces for drop-offs/pick-ups.
  - A sidewalk connection to the existing sidewalk on Louisiana Avenue, north of 35<sup>th</sup> Avenue.
  - Staggered start and end times for classes.
  - Before and/or after school activities, such as sports, arts, or general child care.
  - Bicycle parking on-site.
  - Facilities, like showers if possible, for staff that may bike or walk/run to work.
  - Incentives to encourage bus, biking, walking/running to work/school as well as carpooling.
  - Planned procedures to accommodate drop-offs/pick-ups, usually involving older students, staff, and/or volunteers to ensure safety.
  - Publicizing procedures and any incentives to ensure families are aware of options, of the expected behaviors, and of any potential incentives.

Following these recommendations will direct most traffic toward Nevada Avenue, as desired by the City, and provide for smooth traffic operations during the peak periods. See attached figure for these recommendations.

**Trip Generation**

The proposed school is expected to serve kindergarten through 8<sup>th</sup> grade students. Several methods were examined to determine the expected traffic to and from the site:

- Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9<sup>th</sup> Edition* – a national standard compiling the results of studies across the country.
- Spack Consulting Local Trip Generation – the results of our studies on other school projects.
- Direct Calculations – using expected student and staff numbers with national data to translate those numbers into vehicles.

Three peak periods were examined in terms of expected trip generation; a.m. coinciding with the regular morning peak, school p.m. coinciding with the release of general classes, and p.m. coinciding with the regular afternoon peak. Using the above methods, the expected trip generation for the proposed school is shown in Table 1.

**Table 1 – Expected Beacon Academy Trip Generation**

| Projection Method                    | AM Peak Hour |      | School PM Peak |      | PM Peak Hour |      |
|--------------------------------------|--------------|------|----------------|------|--------------|------|
|                                      | Enter        | Exit | Enter          | Exit | Enter        | Exit |
| ITE – Land Use 534 <sup>A</sup>      | 186          | 152  | 95             | 116  | 55           | 58   |
| Spack Consulting School <sup>B</sup> | 211          | 127  | 68             | 91   | 42           | 66   |
| Direct Calculations <sup>C</sup>     | 227          | 189  | 125            | 153  | 73           | 76   |

<sup>A</sup> Trip Generation rates for an Elementary School based on 750 students.

<sup>B</sup> Compilation of local data for elementary school within the Twin Cities.

<sup>C</sup> Assumes trip modes, student to car ratios, arrivals/departures during peak periods based on national data.

During the morning peak hour, up to 227 vehicles are expected to arrive at the proposed site with the majority of those dropping off children and then exiting the school. As shown, the a.m. peak hour is anticipated to be the busiest under any method. After-school activities, including sports, arts, and child care, spread traffic out during the afternoon times.’

**Site Circulation**

School traffic tends to have very defined peak traffic as most parents will seek to drop-off and pick-up their student(s) close to the class start and end times. To provide for an orderly movement of vehicles into and out of the proposed site, three general categories are examined:

- Space
- Time
- Behavior

The Space category refers to the physical location of movements and parking around the school. In general, conflicting movements should be avoided and different modes of travel should be separated. Additional information considered is the desire of the City to have most traffic, parent drop-off/pick-up in this case, directed toward Nevada Avenue.

To achieve these goals, bus and passenger vehicles should be separated. Bus traffic should be provided on the east side using the existing two access roads to Louisiana Avenue. This space should be restricted to buses only during the school start and end times, but could allow for parking at other times.

Keeping parent traffic toward Nevada Avenue can be achieved by creating a loop road using the existing access to Nevada Avenue and creating a new road to the south. This road should provide for one-way traffic, entering on the new south road and looping around to the existing north road. Cones and/or facility personnel can prevent vehicles from crossing over to the Louisiana Avenue access points.

To provide sufficient space for the drop-offs and pick-ups, a sidewalk should be provided on the south side of the new road. This will provide a large stacking area for cars and a safe walking spot for children away from the vehicle movements. The cones and/or monitor at the intersection between the west and east sides of the parking/driving areas will allow for safe crossing of children to the school.

The only existing sidewalk in the surrounding area is on the west side of Louisiana Avenue, to the north of 35<sup>th</sup> Avenue. If a significant amount of children are expected to use that sidewalk, a connection should be provided between that existing sidewalk and the internal sidewalks on the proposed school grounds. If necessary, a school crossing guard (older students, volunteers, and/or staff) could be provided to monitor and assist children at the crossing of 35<sup>th</sup> Avenue.

The Time category refers to the start and end times of school sessions. With several grades, these times could be offset by five to 15 minutes each to spread out the traffic through the peak hour. For example, one school previously examined by Spack Consulting uses three groups (K thru 2, 3 to 4, 5 to 6) separated by five or ten minutes each. Although seemingly a small distinction, this separation has the desired effect of spreading traffic out over a greater amount of time and reducing congestion.

Another element in the Time category is providing for before and/or after school activities. There is a great variety in activities offered by schools to accommodate students that are dropped off early or picked up after the end of classes. Providing for these activities reduces the number of vehicles in the peak periods.

Finally, the Behavior category refers to strategies intended to reduce the number of cars that travel to and from the school. These items can include infrastructure or incentives to encourage other modes of travel, or methods to improve the orderly movement during peak times.

Infrastructure items should include convenient bicycle parking, ideally located in close proximity to the front doors. Internal facilities, like showers for staff that may bike or walk/run to work, would also encourage these modes.

Incentives could be developed and offered to staff and/or parents/students at the proposed school. For staff, incentives could include health care discounts for biking or walking to work a certain number of times per month, preferential parking for carpooling, or discounts on transit passes.

For parents, the best incentives are usually through the students, such as special recognition for carpooling or biking/walking. Other items could include publicizing 'walk-to-school' or 'bike-to-school' days.

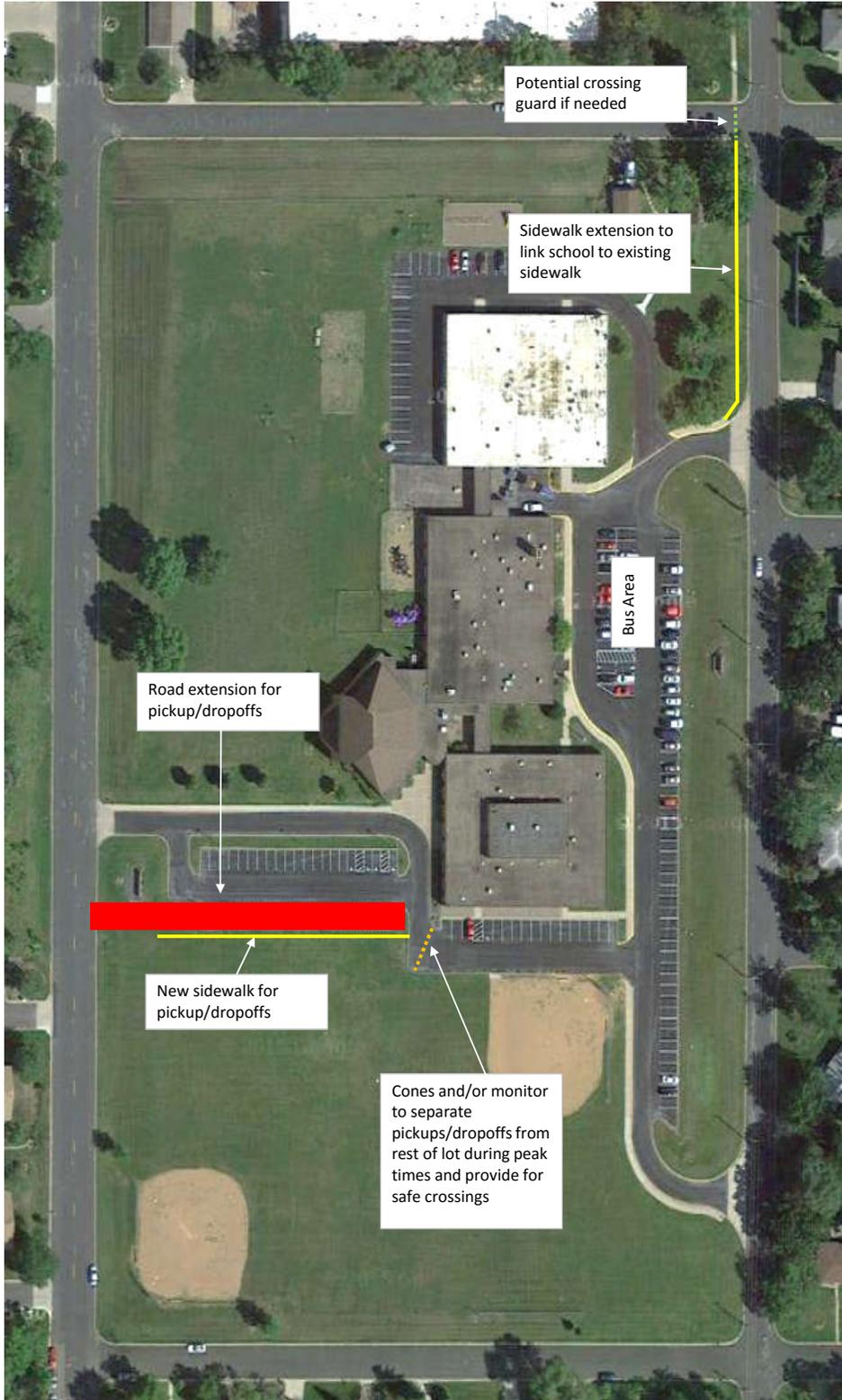
The best school operations, in terms of drop-offs and pick-ups, will generally involve staff or volunteers to provide for an orderly movement of vehicles and ensure the safety of children to and from their vehicles. In some cases, moving vehicles in groups also works well, having five or ten vehicles released from their drop-off/pick-up spot at one time and having the next group of vehicles move into those spots at once. This can reduce congestion and ensure that all students are safely in or out of their vehicles before the cars move out.

For any incentives and methods of movements around the proposed school, a primary key is to let everyone know they exist. Ideally, this would be in the form of a transportation packet for families at the beginning of the school year, a refresher during the school year as needed, and information plainly provided on the website.

# Proposed Beacon Academy in Crystal, Minnesota

## Internal Traffic Circulation Recommendations

### Physical Infrastructure Modifications to Improve Site Circulation



### Other Options to Improve Traffic Flow

#### Spread Traffic Over More Time:

- Offset school start and end times
- Before and after school activities

#### Reduce the Number of Cars on Site:

- Convenient bicycle parking
- Walk-to-School or Bike-to-School days
- Encourage Options for Staff, such as
  - Health care discounts for biking or walking
  - Showers/facilities for staff who bike or walk
  - Preferential carpooling parking
  - Transit pass discounts
  - And/or other incentives

Use older students, staff, and/or volunteers to help facilitate orderly traffic flow and movement of students into/out of cars

Group drop-offs/pick-ups in five or ten cars at a time to reduce jockeying among drivers for parking spots

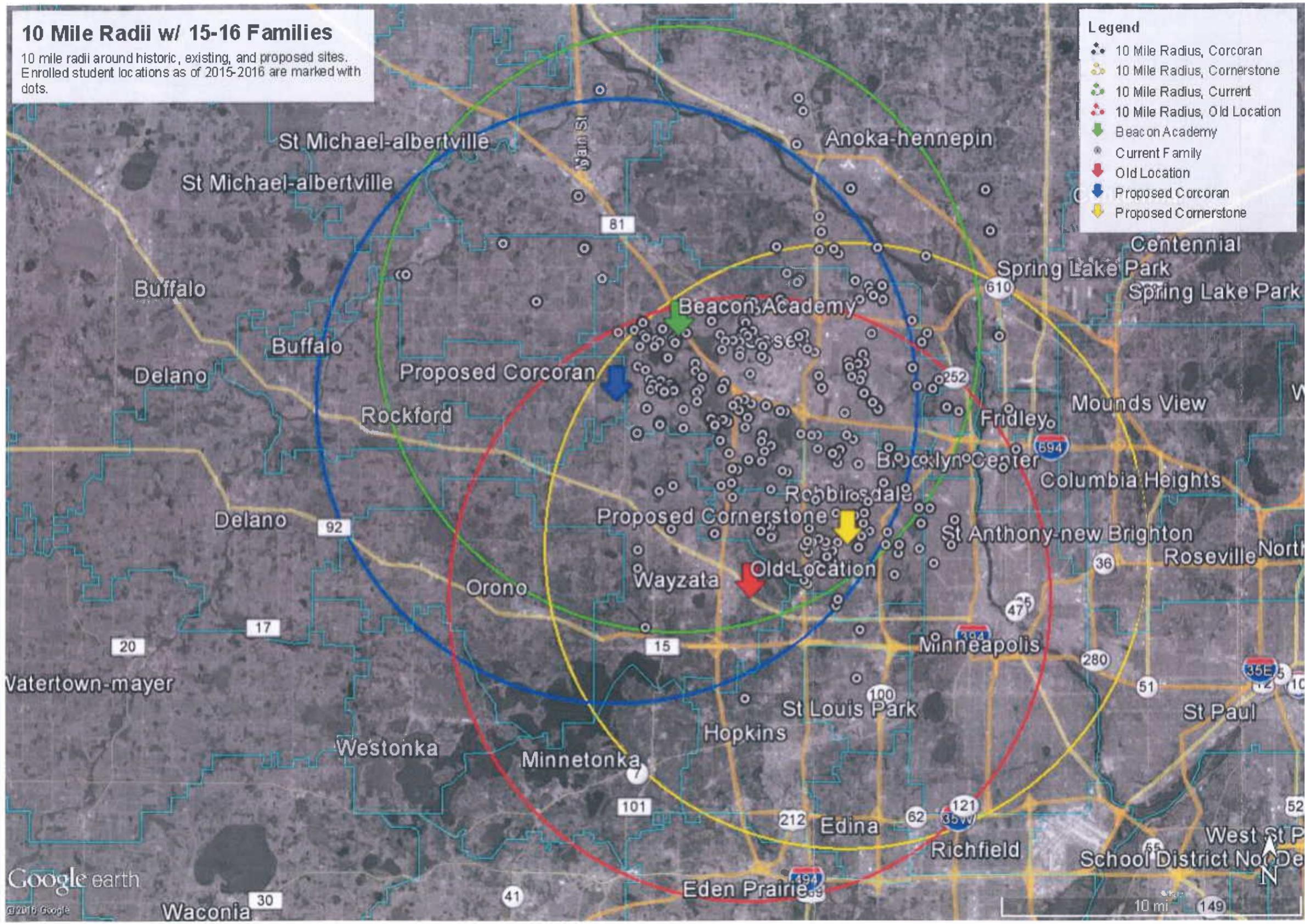
Publicize incentives and desired operations around the school, such as:

- A transportation information packet.
- Information clearly provided on the school website.

### 10 Mile Radii w/ 15-16 Families

10 mile radii around historic, existing, and proposed sites. Enrolled student locations as of 2015-2016 are marked with dots.

- Legend**
- 10 Mile Radius, Corcoran
  - 10 Mile Radius, Cornerstone
  - 10 Mile Radius, Current
  - 10 Mile Radius, Old Location
  - Beacon Academy
  - Current Family
  - Old Location
  - Proposed Corcoran
  - Proposed Cornerstone



# Attachment H

**Dan Olson**

---

**From:** Mark Ray  
**Sent:** Monday, May 02, 2016 1:32 PM  
**To:** kinolan@comcast.net  
**Cc:** Dan Olson  
**Subject:** RE: proposed land use for 3420 Nevada ave

Good Afternoon Kim,

Thanks for the email regarding your concern about traffic at the intersections of Nevada Ave and Louisiana Ave with 36th Ave N.

City staff also had concerns about potential traffic impacts from the proposed use and have communicated these concerns to the developer since early in this process. The developer has worked to address these concerns. For example, with regards to parent drop off and pick up, those vehicles will enter and leave the school area from Nevada Ave. School buses will arrive and depart using Louisiana Avenue. The school has indicated at their full build they will have 10 buses shuttling kids to and from school. Teachers will be arriving from a variety of directions and will be arriving at the school prior to parents and school buses. In the afternoon the teachers will depart after the parents and school buses. The dismissal period for the school is different from the afternoon peak traffic hours which reduces the compounding of the potential delays.

A few weeks ago the City deployed some traffic monitoring equipment at the intersection of 36th and Nevada to observe the existing traffic for an entire week. Right now the equipment is on a different project, but we will deploy it at Louisiana Ave and 36th as well. Based on the review of the data collected, further traffic control options may be explored. At this point in time there are no changes in the traffic control along 36th planned. The decision to install traffic control devices, such as stop signs, is based on engineering standards in the Minnesota Manual on Uniform Traffic Control Devices. Should the proposed land use be approved and the project move forward, the City will continue to monitor conditions and conduct additional data collection if needed.

Thanks again for your email. If you have any questions, please let me know.

Have a great afternoon,

---

**Mark Ray, PE | Public Works Director/City Engineer | City of Crystal**

4141 Douglas Drive North | Crystal, MN 55422 | 763.531.1160 (direct)  
763.531.1000 (general) | 763.531.1188 (Fax) | [mark.ray@crystalmn.gov](mailto:mark.ray@crystalmn.gov)

---

**From:** kinolan@comcast.net [mailto:kinolan@comcast.net]  
**Sent:** Sunday, May 01, 2016 2:12 PM  
**To:** Dan Olson  
**Subject:** proposed land use for 3420 Nevada ave

Hello Dan,

We received the letter in the mail about the proposed land use for 3420 Nevada Ave N in Crystal.

I wanted to bring up one huge issue. Since the 4-way stop signs have been removed from Louisiana and 36th Avenues, it has been nothing less than a nightmare. People sit on Louisiana four to five cars deep several times

during the day and evening. Louisiana avenue is a heavily used road. Its use includes school buses, City buses and garbage haulers along with the Cornerstone church and Lionsgate academy.

Now this proposal will add many more school buses, along with full staff and parents traveling on Louisiana Avenue. I believe it is time to put back this 4-way stop sign as it has become and will continue to be a safety issue.

If this is not already included in the plan going forward, what do we as the residents have to do to make this happen? I have not spoken to one person in this area who doesn't believe that there should be a 4 way stop on either Louisiana and/or Nevada Avenue and 36th Avenue.

Thank you for your time and consideration in this matter.

Kim Nolan  
7000 35th Ave N  
Crystal  
763-533-3830

## Dan Olson

---

**From:** Dan Olson  
**Sent:** Tuesday, May 03, 2016 11:09 AM  
**To:** 'Renee Werner'  
**Subject:** RE: Proposed land use of 3420 Nevada Ave.

Hi Renee – Thanks for your comment on the Beacon proposal. Sorry that the intersection of 36<sup>th</sup> and Louisiana is a source of frustration. I've been speaking to our City Engineer, Mark Ray, about traffic with the Beacon proposal, and I'll ask him to address your questions. For your question in the third bullet, you are correct that Beacon is proposing to demolish the home and not replace it with any buildings.



**Dan Olson**  
**City Planner, City of Crystal**  
763-531-1142 | 763-531-1188 | [www.crystalmn.gov](http://www.crystalmn.gov)  
4141 Douglas Dr. N. | Crystal, MN 55422-1696



**From:** Renee Werner [mailto:[rwerner@crystalmn.gov](mailto:rwerner@crystalmn.gov)]  
**Sent:** Tuesday, May 03, 2016 10:46 AM  
**To:** Dan Olson  
**Subject:** Proposed land use of 3420 Nevada Ave.

Hi Dan,

Recently we received a letter about the proposed land use change for 3420 Nevada Ave. in Crystal. I have a couple large concerns regarding this proposed change. A couple of years ago the city changed the intersection of Louisiana and 36<sup>th</sup> Ave by removing the 4 way stop. This change has caused impossible access to 36<sup>th</sup> Ave. from Louisiana at peak times of traffic from mid-afternoon thru early evening. I have spoken to neighbors that have the same concern and we believe it should be restored to a 4 way stop again even before considering adding a large school population. Here are my concerns on the land use change:

- I am deeply concerned that adding enrollment of 750 students, staff and parents picking up students will only compound the problem accessing 36<sup>th</sup> Ave from Louisiana. The 4 way stop at this intersection should be restored and one added to Nevada and 36<sup>th</sup> to stagger the additional traffic use the school will bring to our neighborhood.
- The quality of the roads on Louisiana and Nevada are in very poor condition now. I assume that is primarily because of the current user's heavy use. Would the proposal include the users pay to upgrade the condition of the roads surrounding the site to accommodate their heavy traffic use?
- I understand that the church-owned home on the corner of 35<sup>th</sup> Ave and Louisiana will be demolished per the notice. It says the area will be incorporated into the site of the school grounds. Seeing this is on the corner of our street can I assume it will be just open green space and not an office or non-residential building to be constructed there?

I appreciate the opportunity to voice my concerns to this change to our neighborhood. Thank you for your time and consideration to the issues listed above.

Sincerely,

Renee Werner

6924 35<sup>th</sup> Ave. N

Crystal, MN

## Dan Olson

---

**From:** Mark Ray  
**Sent:** Wednesday, May 04, 2016 8:27 AM  
**To:** 'rwernermn@gmail.com'  
**Cc:** Dan Olson  
**Subject:** RE: Proposed land use of 3420 Nevada Ave.

Good Morning Renee,

Thank you for contacting the City with your comments about the proposed land use change at 3420 Nevada Ave N. Dan Olson forwarded me your email with some specific concerns related to public works.

With regards to the stop sign requests for 36<sup>th</sup> at both Nevada Ave N and Louisiana Ave N, the City recently collected some traffic data for the Nevada Ave N intersection and will be doing a similar study at the Louisiana Ave N intersection. The decision to install stop signs is based on engineering standards established by the Minnesota Manual on Uniform Traffic Control Devices. That said, based on our current review, stop signs are not warranted to be installed on 36<sup>th</sup>. So while the City is looking into it again, I don't want to give the false impression that stop signs will be installed along 36<sup>th</sup>.

While the ten school busses will use Louisiana Avenue North to enter and exit the school, the parent vehicles dropping off students will use Nevada Ave for both entering and exiting the school. This separation in traffic will greatly reduce the impact of the school for traffic on Louisiana Ave N.

The pavement issues that you commented on for both Nevada and Louisiana Ave N are not unique to this location in the City. The City is having a similar issue on a lot of streets in the southern portion of the City. As you may have noticed, City crews are out milling the existing problem areas and will be re-paving these roads in the near future. Unfortunately, the problem being experienced is more due to the type of material that was used for the streets than the amount of traffic on the roads.

If you have any questions, please let me know.

Have a great day,

---

**Mark Ray, PE | Public Works Director/City Engineer | City of Crystal**  
4141 Douglas Drive North | Crystal, MN 55422 | 763.531.1160 (direct)  
763.531.1000 (general) | 763.531.1188 (Fax) | [mark.ray@crystalmn.gov](mailto:mark.ray@crystalmn.gov)



**From:** Renee Werner [<mailto:rwernermn@gmail.com>]  
**Sent:** Tuesday, May 03, 2016 10:46 AM  
**To:** Dan Olson  
**Subject:** Proposed land use of 3420 Nevada Ave.

Hi Dan,

Recently we received a letter about the proposed land use change for 3420 Nevada Ave. in Crystal. I have a couple large concerns regarding this proposed change. A couple of years ago the city changed the intersection of Louisiana and 36<sup>th</sup> Ave by removing the 4 way stop. This change has caused impossible access to 36<sup>th</sup> Ave. from Louisiana at peak times of traffic from mid-afternoon thru early evening. I have spoken to neighbors that have the same concern and we believe it should be restored to a 4 way stop again even before considering adding a large school population. Here are my concerns on the land use change:

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I appreciate the opportunity to voice my concerns to this change to our neighborhood. Thank you for your time and consideration to the issues listed above.

Sincerely,

Renee Werner

6924 35<sup>th</sup> Ave. N

Crystal, MN



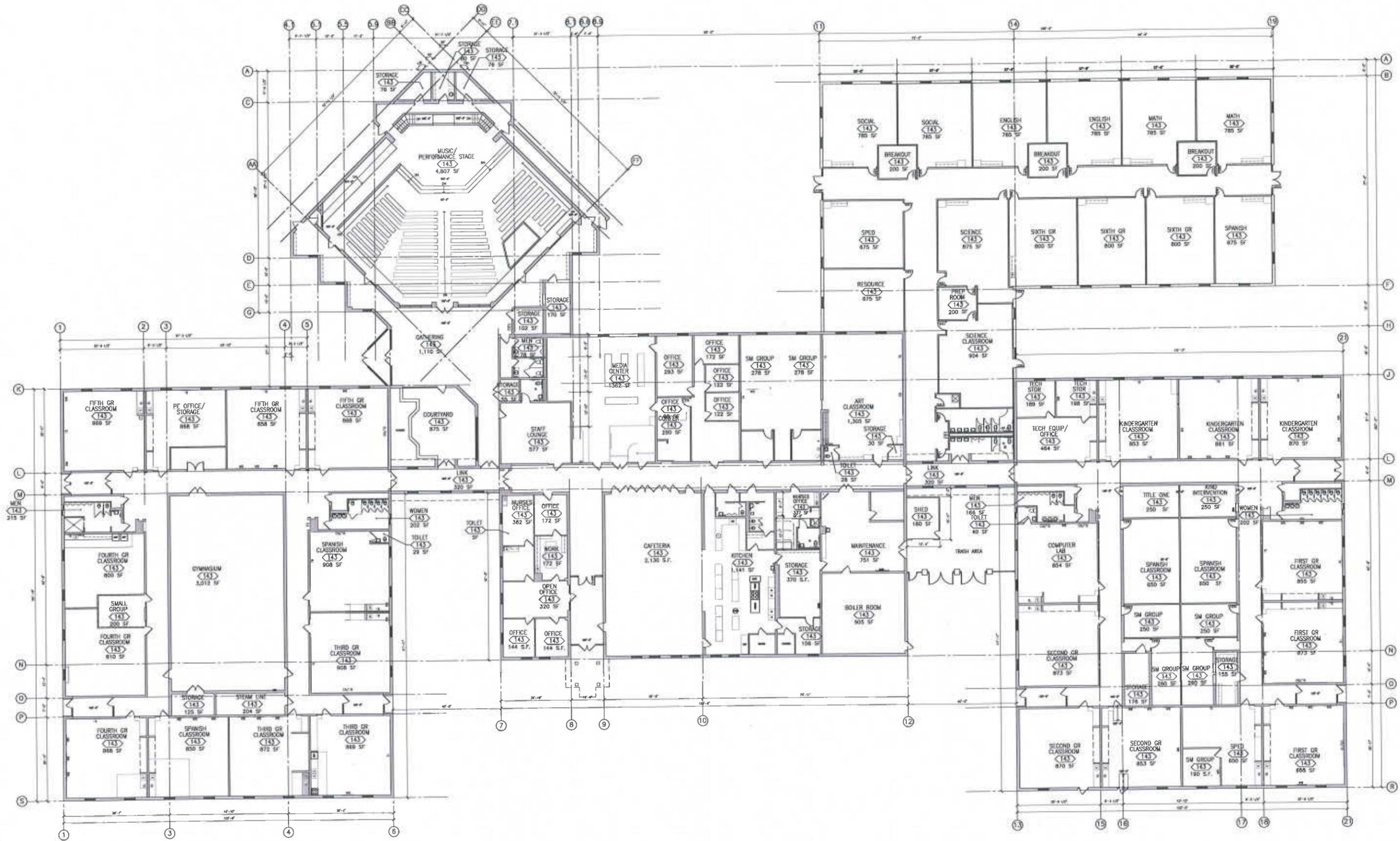
15105-00  
04-01-2016

# BEACON ACADEMY

1 FIRST FLOOR PLAN  
PLAN

1/8" = 1'-0"  
NORTH





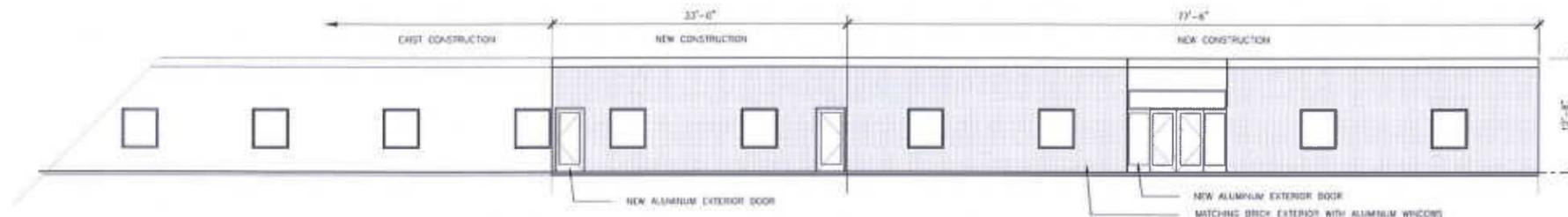
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04-25-2016

# BEACON ACADEMY

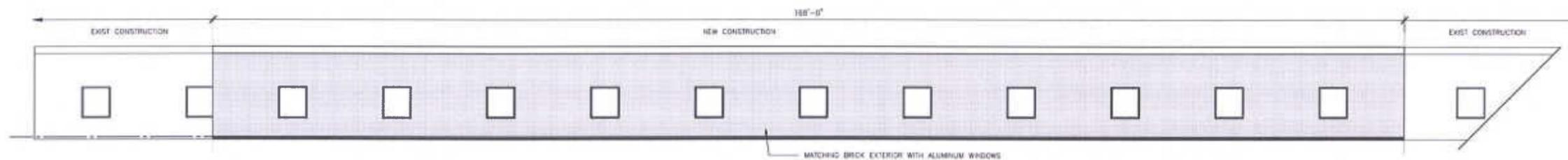
1 FIRST FLOOR PLAN - OPT 1  
PLAN

1/8" = 1'-0"

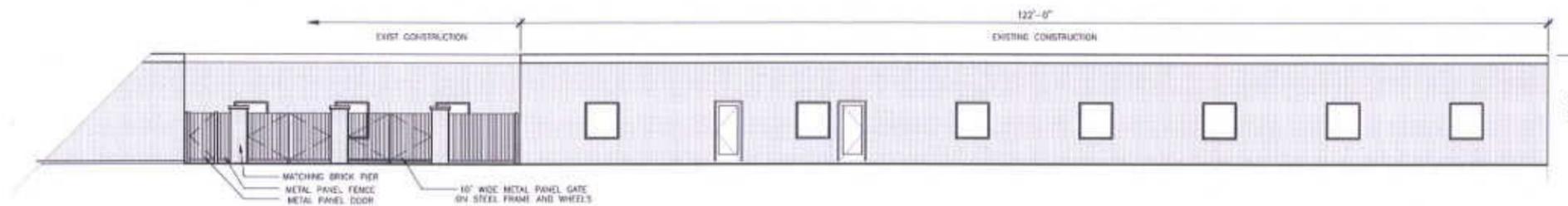




**1 NORTH ELEVATION**  
PLAN 1/8" = 1'-0"



**2 WEST ELEVATION**  
PLAN 1/8" = 1'-0"



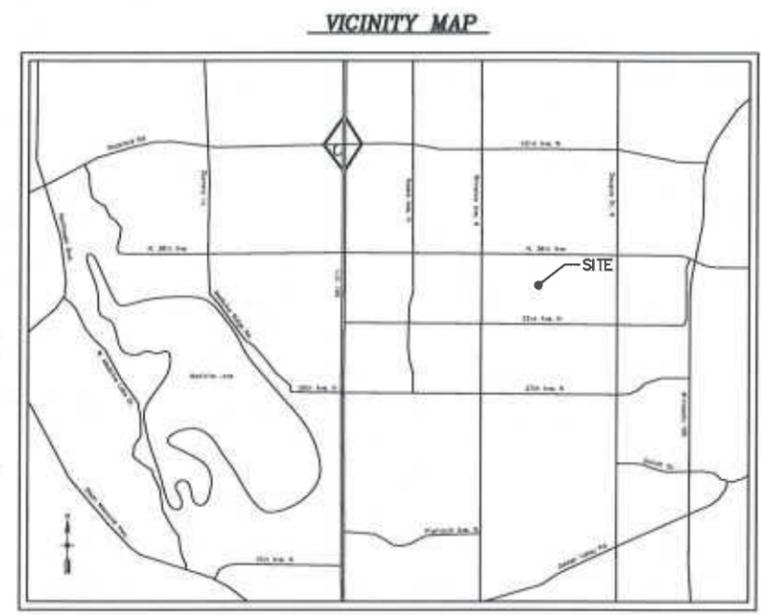
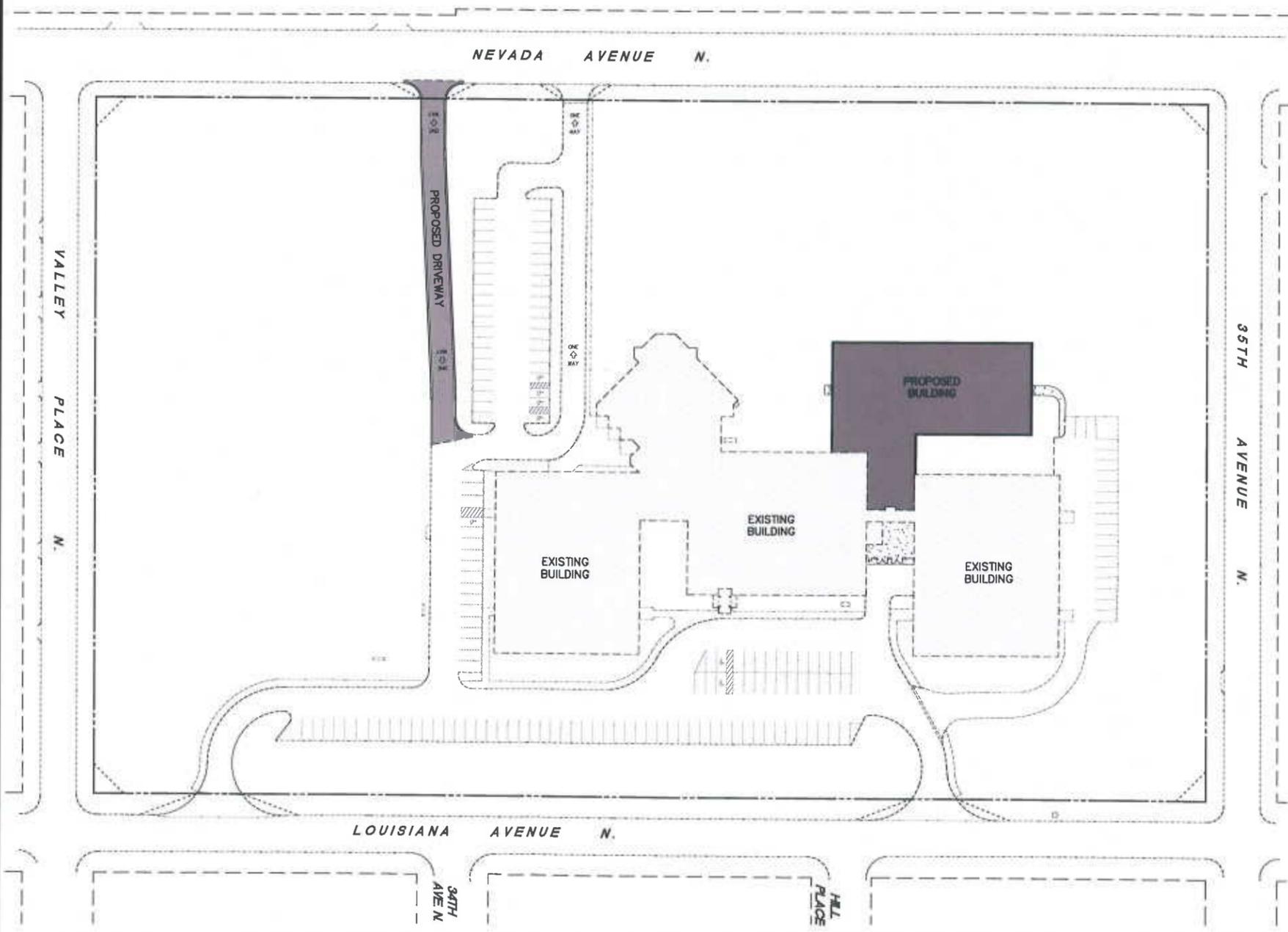
**3 EAST ELEVATION (PARTIAL WITH NEW TRASH ENCLOSURE)**  
PLAN 1/8" = 1'-0"



# BEACON ACADEMY

## ~ SITE IMPROVEMENT PLANS ~

### CRYSTAL, MINNESOTA



**PROJECT OWNER**

FRIENDS OF BEACON  
ANN MARIE RODER  
9060 ZANZIBAR LANE N.  
MAPLE GROVE, MN 55311  
763-546-9999

**CIVIL ENGINEER**

CARLSON MCCAIN, INC.  
JOSEPH RADACH  
3890 PHEASANT RIDGE DRIVE NE #100  
BLAINE, MINNESOTA 55449  
763-489-7900

**ARCHITECT**

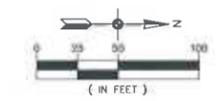
RIVERA ARCHITECTS, INC.  
DEBORAH RATHMAN  
775 FAIRMOUNT AVENUE  
ST. PAUL, MN 55105  
651-222-3245

**LANDSCAPE ARCHITECT**

CARLSON MCCAIN, INC.  
SCOTT BILBEN  
3890 PHEASANT RIDGE DRIVE NE #100  
BLAINE, MINNESOTA 55449  
763-489-7900

**SHEET INDEX**

- C1. COVER SHEET
- C2. EXISTING CONDITIONS & REMOVALS PLAN
- C3. SITE & SIGNAGE PLAN
- C4. GRADING, DRAINAGE & EROSION CONTROL PLAN
- C5. STORMWATER POLLUTION PREVENTION PLAN
- C6. UTILITY PLAN
- C7. DETAILS
- L1. LANDSCAPE PLAN
- L2. LANDSCAPE PLAN



| BENCHMARKS |   |
|------------|---|
| 1.         | TOP NUT OF FIRST FIRE HYDRANT SOUTH OF 35TH AVENUE N. WEST SIDE OF NEVADA AVENUE N.<br>ELEVATION = 906.89 |
| 2.         | TOP NUT OF FIRE HYDRANT NORTHEAST QUADRANT OF 35TH AVENUE N AND LOUISIANA AVENUE N.<br>ELEVATION = 909.69 |



**Carlson McCain**  
ENVIRONMENTAL - ENGINEERING - SURVEYING  
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Phone: 763-489-7900 Fax: 763-489-7959

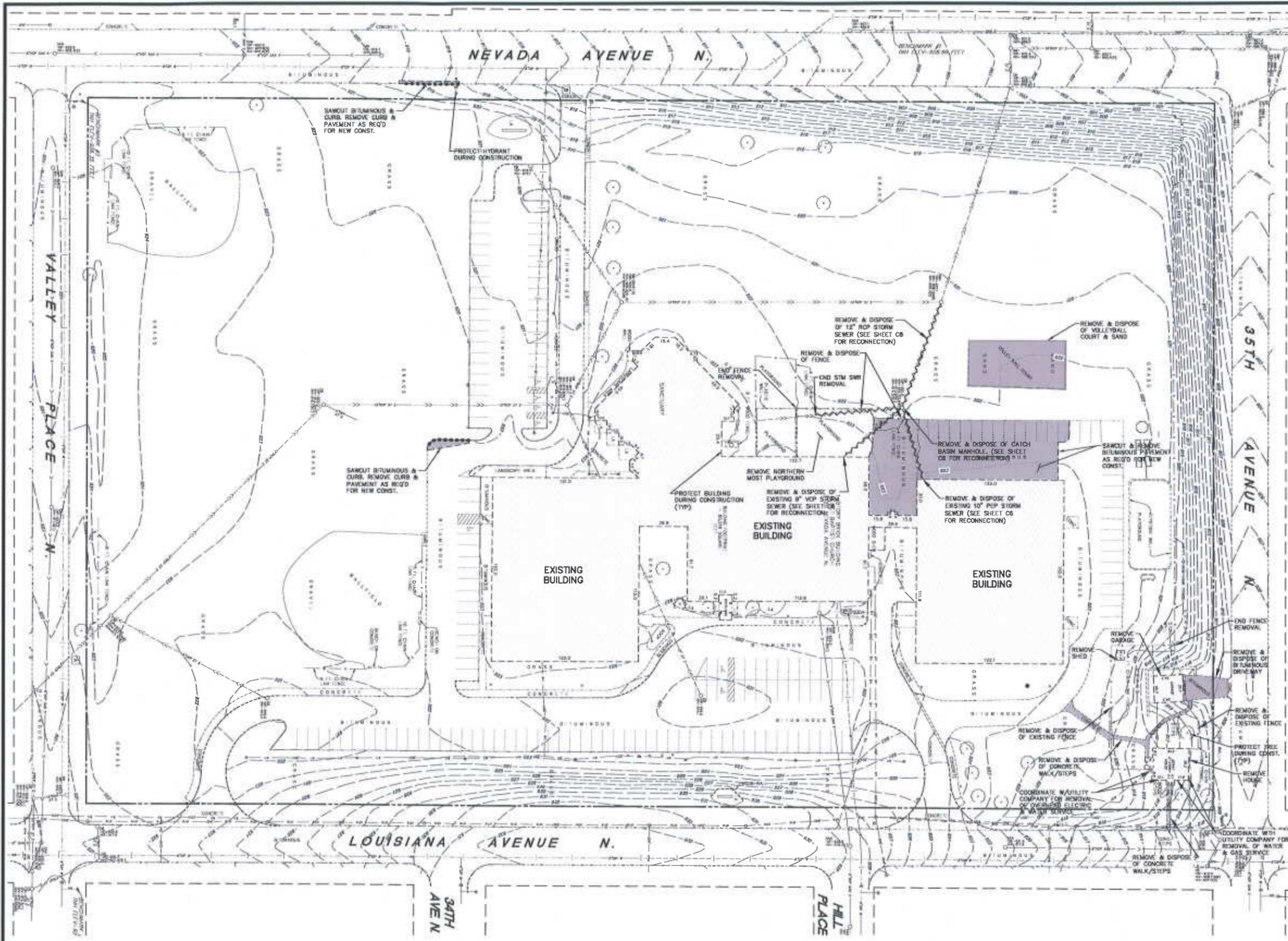
**COVER SHEET**  
**BEACON ACADEMY**  
3420 Nevada Avenue North  
Crystal, MN 55427

**FRIENDS OF BEACON**  
9060 Zanzibar Lane North  
Maple Grove, MN 55311

| REVISIONS |                             |
|-----------|-----------------------------|
| 1.        | 04/26/18 Per City Comments. |
| 2.        |                             |
| 3.        |                             |
| 4.        |                             |
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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

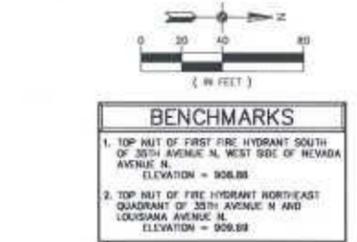
Name: Joseph T. Radach, P.E.  
Signature: *J. Radach*  
Date: 04/11/18 License #: 42089



**LEGEND**

| EXISTING             | REMOVAL              |
|----------------------|----------------------|
| PROPERTY LINE        | PROPERTY LINE        |
| EASEMENT LINE        | EASEMENT LINE        |
| CURB LINE            | CURB LINE            |
| BITUMINOUS PAVEMENT  | BITUMINOUS PAVEMENT  |
| CONCRETE WALK        | CONCRETE WALK        |
| SANITARY SEWER       | SANITARY SEWER       |
| STORM SEWER          | STORM SEWER          |
| WATER MAIN           | WATER MAIN           |
| UNDERGROUND GAS      | UNDERGROUND GAS      |
| OVERHEAD ELECTRIC    | OVERHEAD ELECTRIC    |
| CATCH BASIN          | CATCH BASIN          |
| MANHOLE              | MANHOLE              |
| HYDRANT              | HYDRANT              |
| GATE VALVE           | GATE VALVE           |
| LIGHT POLE           | LIGHT POLE           |
| POWER POLE           | POWER POLE           |
| COMMUNICATION BOX    | COMMUNICATION BOX    |
| TRAFFIC CONTROL SIGN | TRAFFIC CONTROL SIGN |
| FENCE LINE           | FENCE LINE           |

- REMOVAL PLAN NOTES**
- EXISTING CONDITIONS BASED ON THE SURVEY PROVIDED BY SUNDE LAND SURVEYING, LLC.
  - ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, DEPTH AND TYPES OF EXISTING UTILITIES AND TO NOTIFY THE OWNER AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLAN.
  - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, APPURTENANCES AND STRUCTURES NOT INDICATED FOR REMOVAL. DAMAGE CAUSED BY DEMOLITION OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
  - CONTRACTOR TO REMOVE/RELOCATE EXISTING PRIVATE UTILITIES AS NECESSARY. THE CONTRACTOR SHALL COORDINATE THESE ACTIVITIES WITH THE UTILITY COMPANIES.
  - THE CONTRACTOR IS RESPONSIBLE FOR ALL THE REMOVALS SHOWN ON THE PLANS AND SHALL CONFORM/ADHERE TO ALL GOVERNING STATE AND LOCAL REGULATIONS. ALL PERMITS, APPLICATIONS AND FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
  - ALL SAWCUTS SHALL BE FULL-DEPTH CUTS.



CALL BEFORE YOU DIG

Know what's below. Call before you dig.

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 ENVIRONMENTAL - ENGINEERING - SURVEYING  
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**EXISTING CONDITIONS & REMOVALS PLAN**

**BEACON ACADEMY**  
 3420 Nevada Avenue North  
 Crystal, MN 55427

**FRIENDS OF BEACON**  
 9060 Zanzibar Lane North  
 Maple Grove, MN 55311

**REVISIONS**

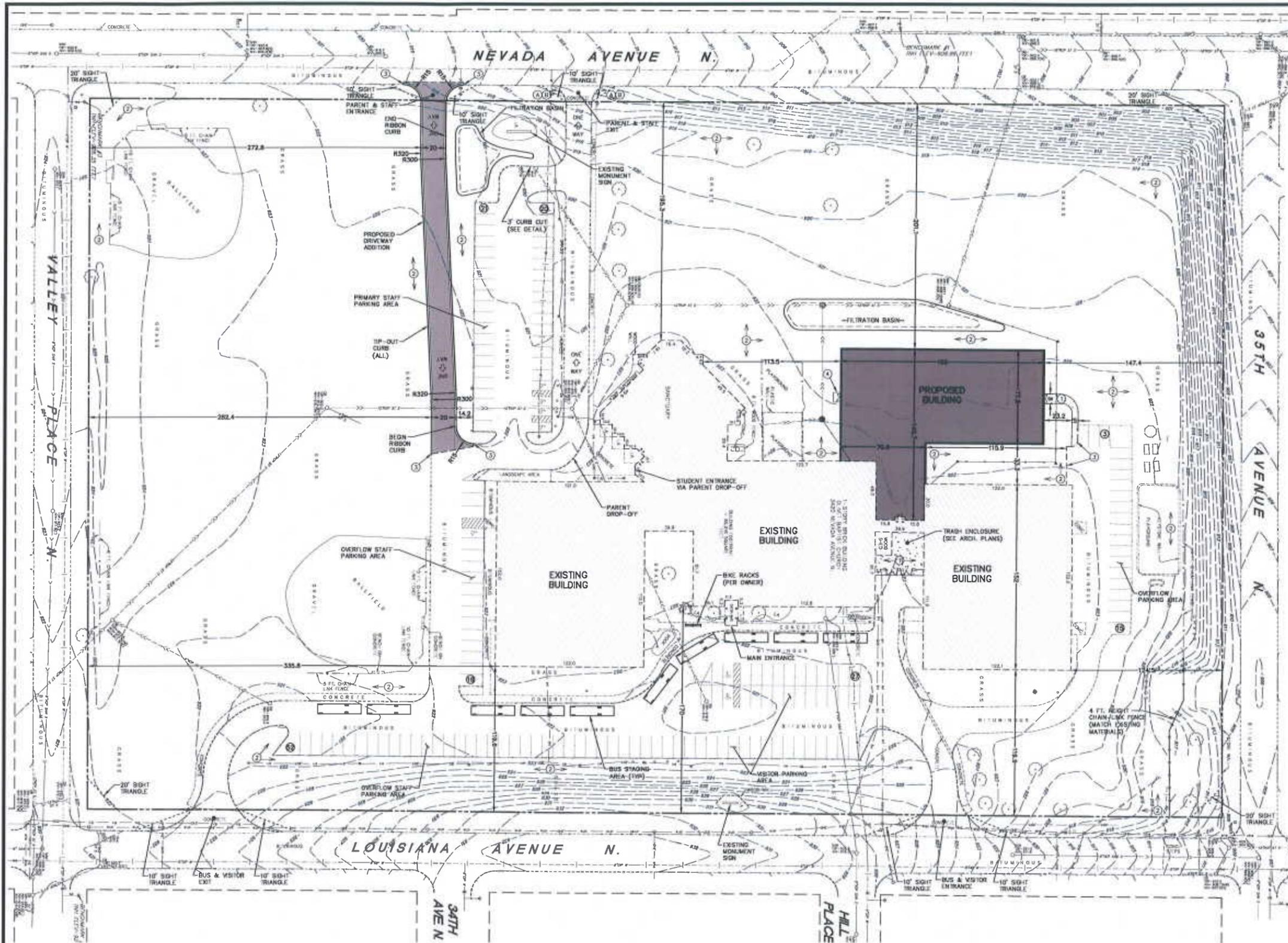
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|----|----------|--------------------|
| 1. | 04/26/18 | Per City Comments. |
| 2. |          |                    |
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| 5. |          |                    |
| 6. |          |                    |

DRAWN BY: DRS  
 ISSUE DATE: 04/11/18  
 FILE NO: 6107

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name: Joseph T. Redetz, P.E.  
 Signature: [Signature]  
 Date: 04/11/18 License #: 45888

C2 of 7



**LEGEND**

|                      | EXISTING | PROPOSED |
|----------------------|----------|----------|
| PROPERTY LINE        | ---      | ---      |
| EASEMENT LINE        | ---      | ---      |
| CURB LINE            | ---      | ---      |
| BITUMINOUS PAVEMENT  |          |          |
| CONCRETE WALK        | ----     | ----     |
| SANITARY SEWER       | ---      | ---      |
| STORM SEWER          | ---      | ---      |
| WATER MAIN           | ---      | ---      |
| UNDERGROUND GAS      | ---      | ---      |
| UNDERGROUND ELECTRIC | ---      | ---      |
| OVERHEAD ELECTRIC    | ---      | ---      |
| CATCH BASIN          | ○        | ○        |
| MANHOLE              | ○        | ○        |
| HYDRANT              | ○        | ○        |
| GATE VALVE           | ○        | ○        |
| LIGHT POLE           | ○        | ○        |
| POWER POLE           | ○        | ○        |
| COMMUNICATION BOX    | ○        | ○        |
| TRAFFIC CONTROL SIGN | ○        | ○        |
| FENCE LINE           | ---      | ---      |

**SITE PLAN NOTES**

- EXISTING CONDITIONS BASED ON SURVEY PROVIDED BY SUNDE LAND SURVEYING, LLC.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
- ALL CURBS AND GUTTER SHALL BE 8612 UNLESS OTHERWISE NOTED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF SITE WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF DISCREPANCIES AND/OR VARIATIONS FROM THE PLAN.
- UNLESS OTHERWISE SHOWN ON THIS DRAWING, CONTRACTOR SHALL PROVIDE CONTROL JOINTS, CONSTRUCTION JOINTS AND EXPANSION JOINTS IN SLAB ON GRADE, SIDEWALKS AND DRIVES PER THE FOLLOWING REQUIREMENTS:  
 CONTROL JOINT MAX SPACING: WALKS-8' O.C.  
 ALL OTHERS-10' O.C.  
 SAW CUT CONTROL JOINTS MINIMUM 1/4 CONCRETE THICKNESS.  
 EXPANSION JOINTS MAX SPACING: WALKS-24' O.C.  
 ALL OTHERS-40' O.C.  
 \*AT ALL POINTS WHERE A CHANGE IN PAVEMENT THICKNESS OCCURS AND/OR WHERE NEW PAVEMENT WILL MATCH EXISTING PAVEMENT, AN EXPANSION JOINT SHALL BE PROVIDED.  
 DOWEL ALL EXPANSION JOINTS: 24" O.C. MAX.

**SIGNING AND STRIPING NOTES**

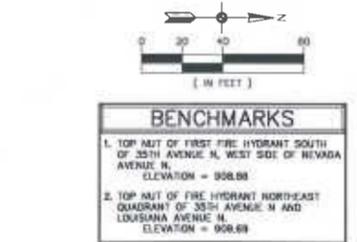
- ALL SIGNS SHALL BE PLACED 18" MINIMUM BEHIND CURB UNLESS OTHERWISE NOTED.
- SIGNAGE SHALL INCLUDE SIGN POST, HARDWARE, CONCRETE FOOTING AND STEEL CASING (IF REQUIRED).
- PARKING LOT STRIPING SHALL BE 4" SOLID WHITE PAINT.
- ALL SIGNS SHALL MEET THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) FOR RETRO REFLECTIVITY AND INSTALLATION.

**SIGN SCHEDULE (PER MMUTCD)**

Ⓐ STOP SIGN: R1-1 (24" x 24")  
 Ⓑ DO NOT ENTER: R5-1 (30" x 30")

**SITE PLAN KEYNOTES**

- 4" CONCRETE WALK.
- LANDSCAPE AREA. SEE LANDSCAPE PLAN.
- MATCH EXISTING CURB & GUTTER/PAVEMENT.
- 4" CONCRETE STOP.



**PARKING SUMMARY**

|                 |     |
|-----------------|-----|
| STANDARD STALLS | 148 |
| HANDICAP STALLS | 10  |
| TOTAL STALLS    | 158 |

**SITE DATA**

|             |                                |
|-------------|--------------------------------|
| ZONING:     | R-1<br>LOW DENSITY RESIDENTIAL |
| TOTAL AREA: | 545,228 SF                     |
| EXISTING    |                                |
| IMPERVIOUS: | 171,272 SF 31%                 |
| PERVIOUS:   | 373,954 SF 69%                 |
| PROPOSED    |                                |
| IMPERVIOUS: | 182,344 SF 33%                 |
| PERVIOUS:   | 362,882 SF 67%                 |

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 Phone: 763-489-7900 Fax: 763-489-7959

**SITE & SIGN PLAN**

**BEACON ACADEMY**  
 3420 Nevada Avenue North  
 Crystal, MN 55427

**FRIENDS OF BEACON**  
 9060 Zanzibar Lane North  
 Maple Grove, MN 55311

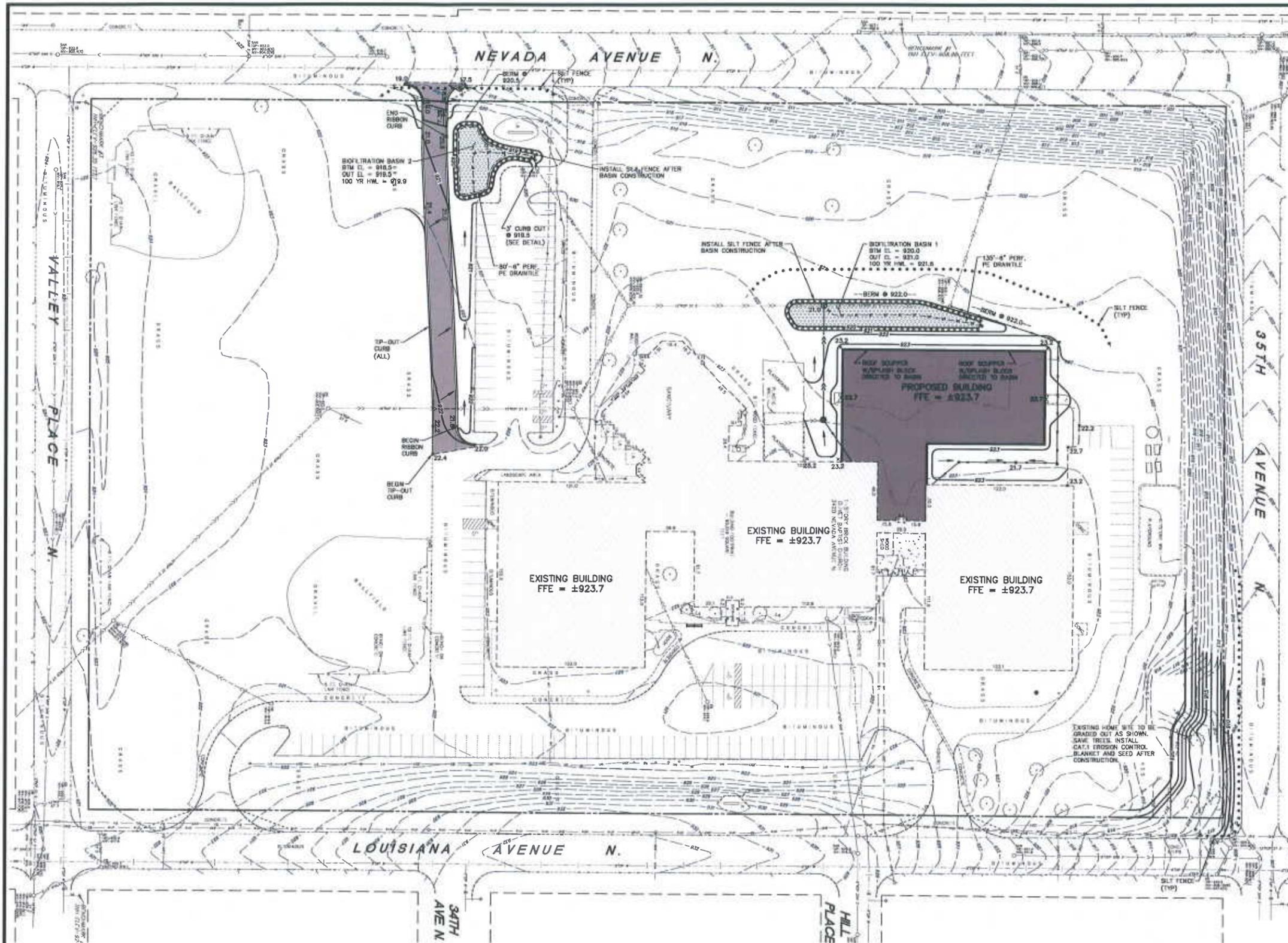
**REVISIONS**

|    |          |                    |
|----|----------|--------------------|
| 1. | 04/26/18 | Per City Comments. |
| 2. |          |                    |
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| 4. |          |                    |
| 5. |          |                    |
| 6. |          |                    |

DRAWN BY: DR3  
 ISSUE DATE: 04/11/18  
 FILE NO: 6185

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name: Joseph T. Radtch, P.E.  
 Signature: [Signature]  
 Date: 04/11/18 License #: 49889

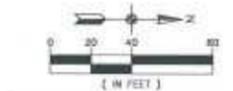


**LEGEND**

|   | EXISTING | PROPOSED |
|---|----------|----------|
| PROPERTY LINE                                       | ---      | ---      |
| EASEMENT LINE                                       | ---      | ---      |
| CURB LINE   | ---      | ---      |
| BITUMINOUS PAVEMENT                                 | XXXXXX   | XXXXXX   |
| CONCRETE WALK                                       | -----    | -----    |
| SANITARY SEWER                                      | ---      | ---      |
| STORM SEWER   | ---      | ---      |
| WATER MAIN  | ---      | ---      |
| UNDERGROUND GAS                                     | ---      | ---      |
| UNDERGROUND ELECTRIC                                | ---      | ---      |
| OVER-HEAD ELECTRIC                                  | ---      | ---      |
| CATCH BASIN   | ○        | ○        |
| MANHOLE   | ○        | ○        |
| HYDRANT   | ○        | ○        |
| GATE VALVE  | ○        | ○        |
| LIGHT POLE  | ○        | ○        |
| POWER POLE  | ○        | ○        |
| COMMUNICATION BOX                                   | ○        | ○        |
| TRAFFIC CONTROL SIGN                                | ○        | ○        |
| FENCE LINE  | ---      | ---      |
| 10' CONTOUR   | ---      | ---      |
| 2' CONTOUR  | ---      | ---      |
| SPOT ELEVATION (CURB ELEVATIONS ARE TO GUTTER LINE) | ---      | ---      |
| TOP OF CURB ELEV.                                   | ---      | ---      |
| GUTTER LINE ELEV.                                   | ---      | ---      |
| EMERGENCY OVERTFLOW                                 | ---      | ---      |
| SILT FENCE  | ---      | ---      |

- GRADING NOTES**
- EXISTING CONDITIONS BASED ON THE SURVEY PROVIDED BY SUNDE LAND SURVEYING, LLC.
  - SILT FENCE AND EXISTING CATCH BASIN MUST PROTECTION SHALL BE INSTALLED PRIOR TO GRADING CONSTRUCTION, AND SHALL BE MAINTAINED UNTIL THE SITE HAS BEEN STABILIZED. (SEE SWPPP)
  - CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF GRADING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF DISCREPANCIES OR VARIATIONS FROM THE PLAN.
  - CONTRACTOR SHALL STRIP, STOCKPILE, AND RESPREAD SUFFICIENT TOPSOIL TO PROVIDE A MINIMUM OF 4" OF TOPSOIL OVER ALL DISTURBED AREAS THAT WILL BE SOODED, SEEDED OR LANDSCAPED.
  - SOIL ESTABLISHMENT SHALL BEGIN AS SOON AS POSSIBLE BUT IN NO CASE LATER THAN 7 DAYS AFTER GRADING COMPLETION.
  - ALL SLOPES SHALL BE A MAXIMUM OF 3:1.

- GOVERNING SPECIFICATIONS**
- THE LATEST EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE CITY OF CRYSTAL SPECIFICATIONS.
  - THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
  - THE LATEST EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD SPECIFICATIONS.



**BENCHMARKS**

- TOP NUT OF FIRE HYDRANT SOUTH QUADRANT OF 35TH AVENUE N, WEST SIDE OF NEVADA AVENUE N. ELEVATION = 906.08
- TOP NUT OF FIRE HYDRANT NORTH-EAST QUADRANT OF 35TH AVENUE N AND LOUISIANA AVENUE N. ELEVATION = 905.68



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**GRADING, DRAINAGE & EROSION CONTROL PLAN**  
**BEACON ACADEMY**  
 3420 Nevada Avenue North  
 Crystal, MN 55427

**FRIENDS OF BEACON**  
 9060 Zanzibar Lane North  
 Maple Grove, MN 55311

**REVISIONS**

|    |          |                    |
|----|----------|--------------------|
| 1. | 04/26/18 | Per City Comments. |
| 2. |          |                    |
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| 5. |          |                    |
| 6. |          |                    |

DRAWN BY: DRS  
 REVISOR DATE: 04/11/18  
 FILE NO: 6105

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name: Joseph T. Radach, P.E.  
 Signature: [Signature]  
 Date: 04/11/18, License #: 65889

C4 of 7

**SITE LOCATION MAP**



**GENERAL INFORMATION**  
 MINNESOTA'S CONSTRUCTION STORMWATER PERMIT IS AN EXTENSION OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM STORMWATER PROGRAM, WHICH IS PART OF THE FEDERAL CLEAN WATER ACT. REGULATED PARTIES MUST DEVELOP A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP PROVIDES INFORMATION ON THE EXISTING AND PROPOSED SITE CONDITIONS, CONTROL MEASURES FOR STORMWATER POLLUTION PREVENTION BEFORE, DURING AND AFTER CONSTRUCTION, INSPECTION, MAINTENANCE AND INFORMATION RELATED TO THE PERMANENT STORMWATER MANAGEMENT SYSTEM. THE SWPPP SHALL BE KEPT ON SITE AT ALL TIMES DURING ACTIVE CONSTRUCTION.

**PROJECT INFORMATION**  
 PROJECT NAME: BEACON ACADEMY  
 PROJECT LOCATION: CRYSTAL, HENNING COUNTY, MINNESOTA  
 PROJECT OWNER: FRIENDS OF BEACON

**RESPONSIBLE PARTIES**  
 THE OWNER MUST IDENTIFY A PERSON KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL SWPPP'S WHO WILL OVERSEE THE IMPLEMENTATION OF THE SWPPP, AND THE INSTALLATION, INSPECTION AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL SWPPP'S.

**SITE MANAGER:** \_\_\_\_\_  
**TRAINING DOCUMENTATION:** \_\_\_\_\_  
**INSPECTION REPRESENTATIVE:** \_\_\_\_\_  
**TRAINING DOCUMENTATION:** \_\_\_\_\_

**EXISTING SITE CONDITIONS**  
 THE SITE IS LOCATED SOUTH AND EAST OF THE INTERSECTION OF NEVADA AVENUE NORTH AND 35TH AVENUE NORTH IN CRYSTAL, MINNESOTA. THE SITE IS BOUNDED ON THE NORTH BY 35TH AVE. N, ON THE EAST BY LOUISIANA AVE. N, ON THE SOUTH BY VALLEY PLACE N, AND ON THE WEST BY NEVADA AVE. N. THE SITE IS CURRENTLY USED AS A CHURCH AND MARKET SCHOOL. THE TOTAL SITE AREA IS 12.52 ACRES, OF WHICH 3.43 ACRES ARE IMPERVIOUS SURFACE.

THE SITE HAS A SLOPING TOPOGRAPHY, WITH ELEVATIONS RANGING FROM 932 IN THE EAST, DOWN TO 800 IN THE NORTHWEST. STORMWATER FROM THE SITE IS COLLECTED IN ON-SITE STORM SEWER BEFORE DISCHARGING OFF-SITE TO TRUNK STORM SEWER. ALL STORMWATER FROM THE SITE ULTIMATELY DISCHARGES TO BASSETT CREEK.

**PROPOSED SITE CONDITIONS**  
 BEACON ACADEMY PLANS ON IMPROVING THE SITE BY CONSTRUCTING A 15,000 SQUARE FOOT BUILDING ADDITION AND A NEW DRIVEWAY. DURING CONSTRUCTION, APPROXIMATELY 1.7 ACRES WILL BE DISTURBED. AFTER THE SITE IMPROVEMENTS ARE COMPLETED, THE SITE WILL CONTAIN 4.18 ACRES OF IMPERVIOUS SURFACE, FOR A NET INCREASE OF 0.25 ACRES.

STORMWATER FROM THE NEWLY CONSTRUCTED IMPERVIOUS SURFACES WILL BE DIRECTED TO TWO INFILTRATION BASINS. THESE BASINS WILL PROVIDE WATER QUALITY TREATMENT AND RATE CONTROL FOR THE ADDITIONAL IMPERVIOUS SURFACE. THE BASINS WILL OULET TO THE EXISTING ON-SITE STORM SEWER.

**SOIL INFORMATION**  
 IN MARCH 2018, AMERICAN ENGINEERING TESTING DRILLED SIX SOIL BORINGS TO APPROXIMATE ON-SITE SOILS. THE BORINGS INDICATE THAT ON-SITE SOILS CONSIST PRIMARILY OF CLAYEY SAND WITH AREAS OF SANDY LEAN CLAY. THESE SOILS FALL WITHIN THE HYDROLOGIC SOIL GROUP (HSG) 'C'.

**WETLAND CONSIDERATIONS**  
 THERE ARE NO KNOWN WETLANDS ON SITE.

**STORMWATER RECEIVING WATERS**  
 ALL STORMWATER FROM THE SITE WILL ULTIMATELY DISCHARGE TO CITY OF CRYSTAL TRUNK STORM SEWER, WHICH ULTIMATELY DISCHARGES TO BASSETT CREEK.

**SPECIAL/IMPAIRED WATER CONSIDERATIONS**  
 THE NORTHWOOD LAKE IS LISTED AS AN IMPAIRED LAKE AND IS LOCATED APPROXIMATELY 5,100 FEET NORTHWEST OF THE SITE LOCATION.

ADDITIONAL SWPPP REQUIRED INCLUDE: SOIL STABILIZATION WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED, TEMPORARY SEDIMENT BASIN FOR COMMON DRAINAGE AREAS OF 5 ACRES OR MORE, AND REQUIRED WATER QUALITY VOLUME OF 1" OF RUNOFF FROM NEW IMPERVIOUS SURFACES.

**STORMWATER MANAGEMENT PLAN**  
 BECAUSE THE PROPOSED CONSTRUCTION WILL NOT RESULT IN THE CREATION OF ONE OR MORE ACRES OF IMPERVIOUS SURFACE, THE MPCA CONSTRUCTION STORMWATER PERMIT OR BASSETT CREEK WATER MANAGEMENT ORGANIZATION DO NOT REQUIRE WATER QUALITY TREATMENT. THE CITY OF CRYSTAL REQUIRES THAT PROPOSED RATES ARE LIMITED TO THAT OF EXISTING RATES FOR THE 2-YEAR, 10-YEAR, AND 100-YEAR STORMS.

THE TWO PROPOSED INFILTRATION BASINS PROVIDE 0.10 ACRE FEET OF STORAGE, AND PROVIDE ADEQUATE RATE CONTROL FOR THE SITE. SEE STORMWATER MANAGEMENT PLAN FOR DETAILED INFORMATION.

**PRIOR TO START OF CONSTRUCTION**  
 THE FOLLOWING STORMWATER POLLUTION PREVENTION MEASURES SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION. REFER TO GRADING AND EROSION CONTROL PLANS FOR LOCATIONS.

- SILT FENCE**  
 SILT FENCE SHALL BE INSTALLED AT THE LIMIT OF GRADING ON ANY SLOPE AREAS. ADDITIONAL SILT FENCE MAY BE REQUIRED IN CUT SLOPE AREAS. SILT FENCE SHALL ALSO BE INSTALLED AROUND ANY INFILTRATION/VEGETATION PRACTICE.
- ROCK CONSTRUCTION ENTRANCE**  
 ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE FIELD ENTRANCES TO THE SITE.
- CATCH BASINS**  
 ALL CATCH BASINS SHALL BE PROTECTED WITH INLET PROTECTION DEVICES APPROVED BY THE LOCAL GOVERNING UNIT. THESE SHALL INCLUDE, BUT ARE NOT LIMITED TO, WINDO PROTECTION DEVICES, INFRASAFE PROTECTION DEVICES, FILTER FABRIC, BIO ROLLS AND STRAW BALES.

**DURING CONSTRUCTION**  
 THE FOLLOWING STORMWATER POLLUTION PREVENTION MEASURES SHALL BE IMPLEMENTED DURING CONSTRUCTION. REFER TO GRADING AND EROSION CONTROL PLANS FOR LOCATIONS.

- PHASED GRADING**  
 TO THE EXTENT POSSIBLE, GRADING SHALL BE PHASED TO MINIMIZE THE AMOUNT OF DISTURBED AREAS DURING SITE CONSTRUCTION.
- TRACKED SEDIMENT**  
 ANY SEDIMENT TRACKED FROM THE SITE ONTO THE STREET SHALL BE REMOVED IMMEDIATELY UPON DETECTION. THE ROCK CONSTRUCTION ENTRANCE SHALL BE INSPECTED AND REPAIRED IF INDICATED WITH SEDIMENT.
- STOCKPILES**  
 STOCKPILES SHALL BE PLACED IN AN AREA THAT WILL MINIMIZE THE NEED FOR RELOCATION. IF A STOCKPILE WILL REMAIN IN PLACE FOR AN EXTENDED PERIOD OF TIME, STABILIZATION MEASURES SHALL BE IMPLEMENTED, INCLUDING BUT NOT LIMITED TO, SEEDING AND SOIL FENCING. TEMPORARY STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AND CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, CONDUITS OR DITCHES.
- TOPSOIL**  
 UPON GRADING COMPLETION, A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED OVER ALL DISTURBED AREAS, EXCLUDING PROPOSED STREETS AND PARKING AREAS.
- RESTORATION**  
 ALL DISTURBED AREAS NOT ACTIVELY WORKED SHALL BE RESTORED WITH SEED AND MULCH, EROSION CONTROL BLANKET AND/OR SOO WITHIN 7 DAYS.
- SLOPES**  
 IN ORDER TO MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES, THERE SHALL BE NO UNPROTECTED SLOPE LENGTHS OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 3:1 OR STEEPER.
- DRAINAGE DITCHES**  
 THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH THAT DRAINS WATER FROM THE SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER. STABILIZATION MUST BE COMPLETED WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.
- Pipe Outlets**  
 PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENTRANCE DISSEMINATION WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.
- CATCH BASINS**  
 ALL CATCH BASINS SHALL BE PROTECTED WITH INLET PROTECTION DEVICES APPROVED BY THE LOCAL GOVERNING UNIT. THESE SHALL INCLUDE, BUT ARE NOT LIMITED TO, WINDO PROTECTION DEVICES, INFRASAFE PROTECTION DEVICES, FILTER FABRIC, BIO ROLLS AND STRAW BALES.
- DUST**  
 CONSTRUCTION DUST SHALL BE CONTAINED TO THE EXTENT POSSIBLE. IF THE SITE BECOMES EXCESSIVELY DUSTY, APPROPRIATE MEASURES SHALL BE TAKEN TO REDUCE DUST BEING TRANSPORTED FROM THE SITE. DUST CONTROL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, WATERING AND CALCIUM CHLORIDE APPLICATION.
- DEWATERING**  
 DEWATERING ACTIVITIES SHALL BE CONDUCTED WISE AND APPROVED BY THE LOCAL GOVERNING UNIT. IF THERE WILL BE ANY DEWATERING OR BASIN DRAINING THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE, THE WATER MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. APPROPRIATE BMP'S SHALL BE USED FOR EROSION AND SEDIMENT CONTROL AND ENERGY DISSIPATION.
- CONSTRUCTION MATERIALS AND DEBRIS**  
 CONSTRUCTION MATERIALS SHALL BE STORED IN AN ORDERLY MANNER AND IN AN AREA THAT WILL MINIMIZE CONFLICTS WITH OTHER CONSTRUCTION ACTIVITIES. CONSTRUCTION DEBRIS SHALL BE CONTAINED IN DUMPSTERS AND REMOVED FROM THE SITE AS NECESSARY.
- CHEMICALS**  
 CHEMICALS SHALL BE STORED IN A SAFE AREA IN SEALED CONTAINERS WITH THE ORIGINAL LABELING AND MATERIAL SAFETY DATA SHEETS AVAILABLE.
- SPILLS AND CONTAMINATION**  
 IF FUEL, OIL, OR A HAZARDOUS CHEMICAL IS SPILLED OR DETECTED DURING CONSTRUCTION ACTIVITIES, ALL APPROPRIATE AGENCIES SHALL BE IMMEDIATELY NOTIFIED, INCLUDING, BUT NOT LIMITED TO, THE MINNESOTA DUTY OFFICER AT 800-422-0778.
- CONCRETE WASHOUT AREA**  
 ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. AN IMPERMEABLE COMPACTED CLAY LAYER IS SUFFICIENT. CONCRETE WASHOUT IN THE APPROPRIATE WASHOUT BASE IS ALLOWED. A SIGN MUST BE INSTALLED AT EACH WASHOUT FACILITY TO DIRECT EQUIPMENT OPERATORS TO THE APPROPRIATE LOCATION.

**POST CONSTRUCTION**  
 WHEN THE SITE HAS BEEN COMPLETELY CONSTRUCTED, THE SITE MUST UNDERGO FINAL STABILIZATION. FINAL STABILIZATION OCCURS WHEN ALL OF THE GRADING, INFRASTRUCTURE AND BUILDING ACTIVITIES HAVE BEEN COMPLETED. TO ACHIEVE FINAL STABILIZATION, THE FOLLOWING MEASURES SHALL BE COMPLETED.

- ALL DISTURBED AREAS WITHOUT PERMANENT IMPERVIOUS SURFACES SHALL BE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER. AREAS NOT REQUIRING SOO OR EROSION CONTROL BLANKET SHALL BE SEEDED AND MULCHED.
- SEDIMENT FROM CONVEYANCES AND TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS SHALL BE CLEANED OUT. SEDIMENTATION BASINS SHALL BE SUFFICIENTLY CLEANED OUT TO RETURN THE BASIN TO DESIGN CAPACITY. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN OR CONVEYANCES DISCHARGING OFF-SITE OR TO SURFACE WATERS.
- WHEN STABILIZED VEGETATION HAS BEEN ESTABLISHED OVER 70 PERCENT OF THE PREVIOUS SURFACE AREA, ALL EXCESSIVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED BY THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, SILT FENCE, TREE FENCE AND CATCH BASIN INLET PROTECTION DEVICES.

**NOTICE OF TERMINATION**  
 THE PERMITEE(S) MUST SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCA WITHIN 30 DAYS AFTER FINAL STABILIZATION IS COMPLETE, OR ANOTHER OWNER/OPERATOR (PERMITEE) HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION.

**INSPECTIONS & RECORD KEEPING**  
 STORMWATER POLLUTION PREVENTION INSPECTIONS SHALL OCCUR ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. INSPECTIONS MAY BE CEASED DURING FROZEN GROUND CONDITIONS. WHERE WORK HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE REQUIRED INSPECTIONS AND MAINTENANCE MUST TAKE PLACE WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE. DURING THE COURSE OF CONSTRUCTION, IT MAY BE DETERMINED THAT ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES MAY BE NEEDED, OR CERTAIN MEASURES ARE NOT PRACTICAL TO INSTALL. IN THESE CASES, AN AMENDMENT TO THE SWPPP SHALL BE MADE, AND SUPPORTING REASONS SHALL BE DOCUMENTED IN THE SWPPP.

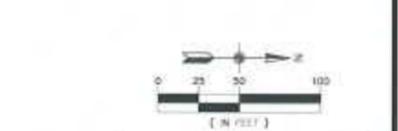
- RECORD NAME OF INSPECTOR AND DATE AND TIME OF INSPECTION.
  - RECORD RAINFALL AMOUNT SINCE MOST RECENT INSPECTION.
  - INSPECT ROCK CONSTRUCTION ENTRANCES FOR SEDIMENTATION, INSPECT ADJACENT STREETS FOR SEDIMENT TRACKING.
  - INSPECT SITE FOR EXCESSIVE EROSION AND SEDIMENT ACCUMULATION.
  - INSPECT SILT FENCE AND OTHER TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES FOR EROSION, SEDIMENTATION AND MAINTENANCE.
  - INSPECT FLARED END SECTIONS FOR EROSION AND SEDIMENTATION.
  - INSPECT PONDS, INFILTRATION BASINS, TEMPORARY SEDIMENTATION BASINS AND ALL OTHER BMP'S FOR EROSION AND SEDIMENTATION.
  - INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSION.
  - INSPECT SITE AND ADJACENT PROPERTIES FOR CONSTRUCTION DEBRIS, TRASH AND SPILLS.
  - INSPECT STABILIZED AREAS FOR EROSION.
  - RECORD RECOMMENDED REPAIRS, MAINTENANCE AND/OR REPLACEMENTS REQUIRED TO ENSURE EROSION AND SEDIMENTATION CONTROL MEASURES ARE SUFFICIENT.
  - RECORD RECOMMENDED AMENDMENTS TO THE SWPPP.
  - RECORD REPAIRS, MAINTENANCE AND/OR REPLACEMENTS THAT WERE COMPLETED SINCE THE LAST INSPECTION.
- NOTE: FOR AREAS THAT HAVE UNDERGONE FINAL STABILIZATION, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH.

**MAINTENANCE**  
 THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION, INSPECTION AND MAINTENANCE OF ALL STORMWATER POLLUTION PREVENTION MEASURES FOR THE DURATION OF THE PROJECT. THE FOLLOWING GUIDELINES SHALL BE USED TO DETERMINE NECESSARY REPAIRS, MAINTENANCE AND/OR REPLACEMENT OF THE EROSION AND SEDIMENTATION CONTROL MEASURES.

- ROCK CONSTRUCTION ENTRANCES SHALL BE REPAIRED OR REPLACED IF THE ROCK BECOMES INUNDATED WITH SEDIMENT AND/OR EXCESSIVE SEDIMENT IS BEING TRACKED FROM THE SITE. SEDIMENT TRACKED ONTO ADJACENT STREETS SHALL BE REMOVED. MEASURES SHALL BE TAKEN IMMEDIATELY UPON DISCOVERY.
- SILT FENCE SHALL BE REPAIRED OR REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE SILT FENCE. THE SILT FENCE IS DAMAGED AND/OR THE SILT FENCE BECOMES NONFUNCTIONAL. MEASURES SHALL BE TAKEN WITHIN 24 HOURS OF DISCOVERY.
- CATCH BASIN INLET PROTECTION DEVICES SHALL BE CLEANED WHEN SEDIMENT REACHES 1/2 THE HEIGHT OF THE SEDIMENT TRAP AND/OR REPAIRED OR REPLACED IF THE DEVICE BECOMES NONFUNCTIONAL. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.
- FLARED END SECTIONS SHALL BE CLEANED IF DEBRIS IS RESTRICTING FLOW OR IF SEDIMENT HAS ACCUMULATED AT THE OUTLET. IF A FLARED END SECTION BECOMES NONFUNCTIONAL OR DAMAGED, IT SHALL BE REPAIRED OR REPLACED. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.
- IF SEDIMENT IS OBSERVED OFF-SITE OR NEAR SURFACE WATERS, THE SOURCE OF SEDIMENT SHALL BE DETECTED AND ADDITIONAL MEASURES SHALL BE IMPLEMENTED. THE PERMITEE(S) SHALL COORDINATE SEDIMENT RETRIEVAL FROM SURFACE WATERS WITH ALL APPROPRIATE AGENCIES. MEASURES SHALL BE TAKEN WITHIN 7 DAYS OF DISCOVERY.
- PODS, INFILTRATION BASINS, TEMPORARY SEDIMENTATION BASINS AND ALL OTHER BMP'S SHALL BE CLEANED IF DEBRIS IS PRESENT AND/OR EXCESSIVE SEDIMENTATION HAS OCCURRED. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN SEDIMENT HAS FILLED THE BASIN TO 1/2 THE STORAGE VOLUME. NO SEDIMENT SHALL BE ALLOWED TO ACCUMULATE IN INFILTRATION BASINS. MEASURES SHALL BE TAKEN WITHIN 72 HOURS OF DISCOVERY.

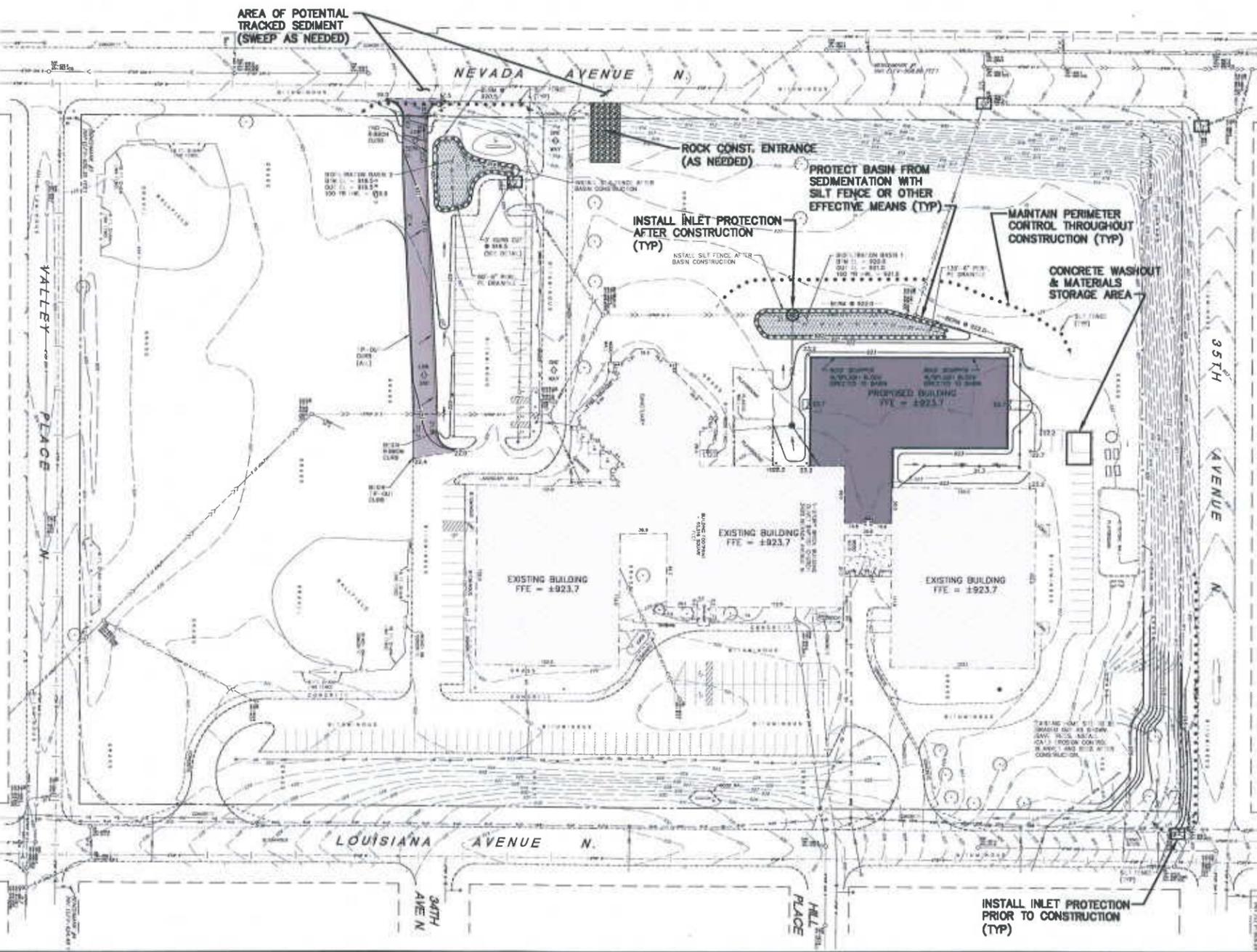
**QUANTITIES**  
 THE FOLLOWING TABLE PROVIDES ESTIMATED QUANTITIES FOR STORMWATER POLLUTION PREVENTION THROUGHOUT THE PROJECT.

| ITEM                | UNIT | ESTIMATED QUANTITY |
|---------------------|------|--------------------|
| ROCK ENTRANCE       | EA   | 1,300              |
| SILT FENCE          | L.F. | 1,300              |
| INLET PROTECTION    | EA   | 5                  |
| "ELB" ESTABLISHMENT | AC   | 5.0                |



**BENCHMARKS**

- TOP CORNER OF FIRST HYDRANT SOUTH OF 35th AVENUE N, WEST SIDE OF NEVADA AVENUE N. ELEVATION = 908.05
- TOP CORNER OF FIRST HYDRANT NORTH-EAST CORNER OF 35th AVENUE N AND LOUISIANA AVENUE N. ELEVATION = 908.05



**Carlson McCain**  
 ENVIRONMENTAL - ENGINEERING - SURVEYING  
 3890 Pheasant Ridge Dr. NE #100, Blaine, MN  
 Phone: 763-489-7900 Fax: 763-489-7959

**STORMWATER POLLUTION PREVENTION PLAN**  
**BEACON ACADEMY**  
 3420 Nevada Avenue North  
 Crystal, MN 55427

**FRIENDS OF BEACON**  
 9060 Zanzibar Lane North  
 Maple Grove, MN 55311

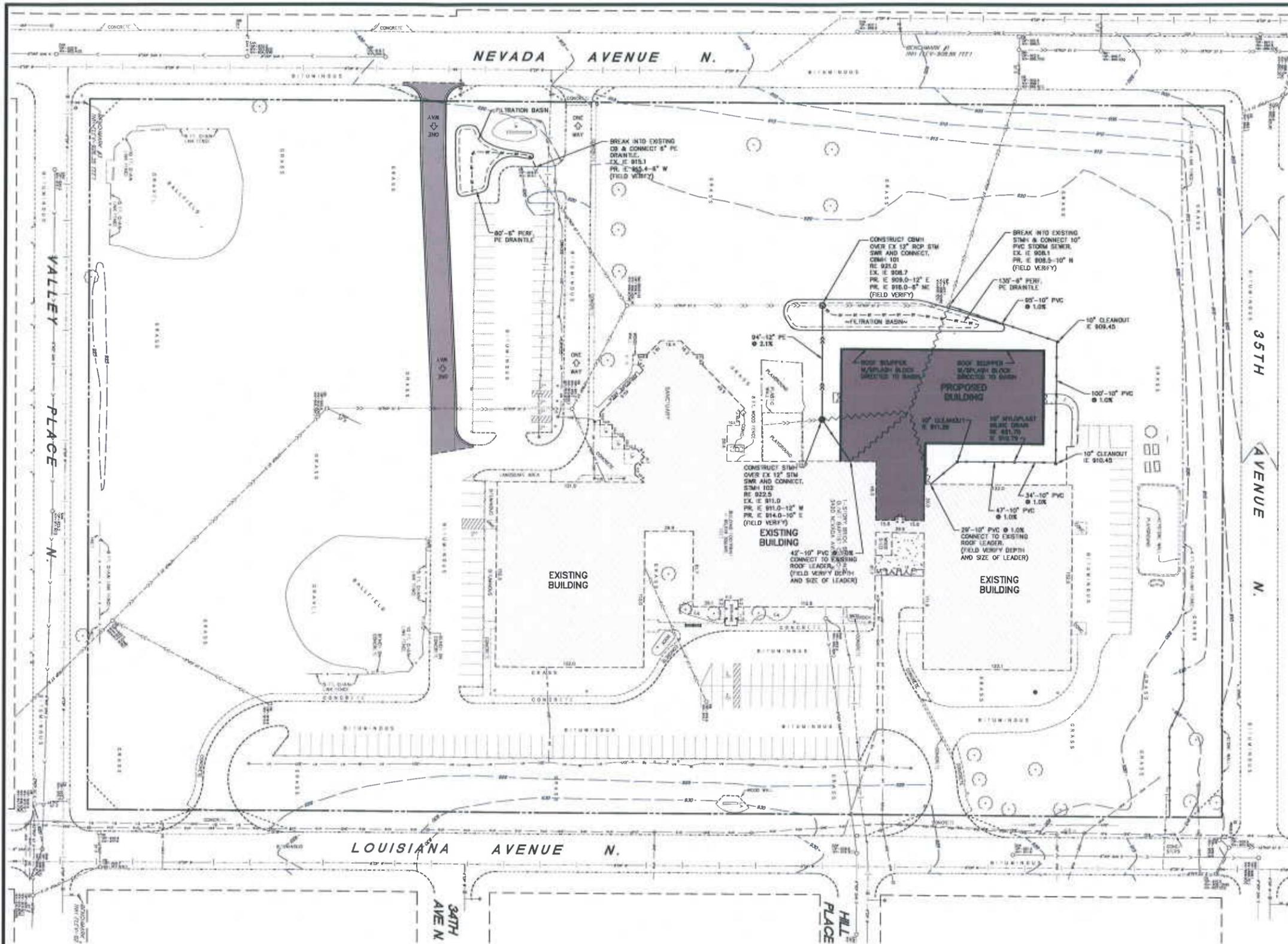
**REVISIONS**

| NO. | DATE     | DESCRIPTION        |
|-----|----------|--------------------|
| 1.  | 04/11/18 | Per City Comments. |
| 2.  |          |                    |
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| 5.  |          |                    |

Drawn by: BBS  
 Issue Date: 04/11/18  
 File No: 6593

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name: Joseph T. Rastach, P.E.  
 Signature: [Signature]  
 Date: 04/11/18 License #: A5089



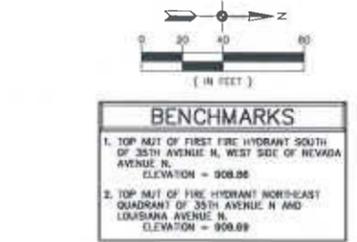
**LEGEND**

|                     | EXISTING | PROPOSED |
|---------------------|----------|----------|
| PROPERTY LINE       | ---      | ---      |
| EASEMENT LINE       | ---      | ---      |
| CURB LINE           | ---      | ---      |
| BITUMINOUS PAVEMENT | ---      | ---      |
| CONCRETE WALK       | ---      | ---      |
| SANITARY SEWER      | ---      | ---      |
| STORM SEWER         | ---      | ---      |
| WATER MAIN          | ---      | ---      |
| UNDERGROUND GAS     | ---      | ---      |
| OVERHEAD ELECTRIC   | ---      | ---      |
| CATCH BASIN         | ---      | ---      |
| MANHOLE             | ---      | ---      |
| HYDRANT             | ---      | ---      |
| GATE VALVE          | ---      | ---      |
| LIGHT POLE          | ---      | ---      |
| POWER POLE          | ---      | ---      |
| COMMUNICATION BOX   | ---      | ---      |
| TRAFFIC CONTROL     | ---      | ---      |
| SIGN                | ---      | ---      |
| FENCE LINE          | ---      | ---      |

- UTILITY PLAN NOTES**
- EXISTING CONDITIONS BASED ON THE SURVEY PROVIDED BY SURIC LAND SURVEYING, LLC.
  - CONVEYING SPECIFICATIONS: THE LATEST EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION", THE CITY OF CRYSTAL STANDARD SPECIFICATIONS AND ENGINEERING GUIDELINES AND THE MINNESOTA PLUMBING CODE.
  - STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD SPECIFICATIONS & THE MINNESOTA PLUMBING CODE.
  - A MINIMUM OF 2 FEET VERTICAL SEPARATION SHALL BE REQUIRED FOR ALL UTILITY CROSSINGS.
  - CATCH BASINS IN THE GUTTER LINE SHALL BE SUMPED 0.1'. ELEVATIONS SHOWN ON THE PLANS REFLECT THE SUMPED ELEVATIONS.

**STORM SEWER SCHEDULE**

| STRUCTURE  | NEENAH CASTING OR EQUAL |
|------------|-------------------------|
| TYPE & No. | SIZE                    |
| CBMH-101   | 48" DIA. R-4342         |
| SMH-102    | 48" DIA. R-1733         |



CALL BEFORE YOU DIG

Know what's below. Call before you dig.

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 ENVIRONMENTAL - ENGINEERING - SURVEYING  
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 Phone: 763-489-7900 Fax: 763-489-7959

**UTILITY PLAN**

**BEACON ACADEMY**  
 3420 Nevada Avenue North  
 Crystal, MN 55427

**FRIENDS OF BEACON**  
 9060 Zanzibar Lane North  
 Maple Grove, MN 55311

**REVISIONS**

| No. | Description                 |
|-----|-----------------------------|
| 1.  | 04/26/18 Per City Comments. |
| 2.  |                             |
| 3.  |                             |
| 4.  |                             |
| 5.  |                             |

DRAWN BY: BRS  
 ISSUE DATE: 04/11/18  
 FILE NO: 8893

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name: Joseph T. Radtke, P.E.  
 Signature: [Signature]  
 Date: 05/11/18 License #: 45889





**GENERAL NOTES:**

- LANDSCAPE CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS ON THE PROPERTY WITH THE GENERAL CONTRACTOR AND BY GOPHER STATE ONE CALL PRIOR TO STAKING PLANT LOCATIONS.
- COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON THE SITE.
- WHERE EXISTING TREES AND/OR SIGNIFICANT SHRUB MASSINGS ARE FOUND ON THE SITE WHETHER SHOWN ON THE DRAWINGS OR NOT, THEY SHALL BE PROTECTED AND SAVED UNLESS NOTED TO BE REMOVED AND/OR ARE WITHIN THE GRADING LIMITS. ANY QUESTION REGARDING WHETHER PLANT MATERIAL SHOULD OR SHOULD NOT REMAIN SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO REMOVAL.
- ALL EXISTING TREES TO REMAIN SHALL BE FERTILIZED AND PRUNED TO REMOVE DEAD WOOD AND DAMAGED OR RUBBING BRANCHES.
- BB TREES AND SHRUBS ARE BALLED AND BURLAPPED.
- NO PLANT MATERIAL SUBSTITUTIONS WILL BE ACCEPTED UNLESS APPROVAL IS REQUESTED OF THE LANDSCAPE ARCHITECT BY THE LANDSCAPE CONTRACTOR PRIOR TO SUBMISSION OF BID AND/OR QUOTATION.
- ALL PLANT MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSEYMEN.
- THE CONTRACTOR IS RESPONSIBLE FOR ON-GOING MAINTENANCE OF ALL NEWLY INSTALLED MATERIALS UNTIL TIME OF OWNER ACCEPTANCE. ANY ACTS OF VANDALISM OR DAMAGE WHICH MAY OCCUR PRIOR TO OWNER ACCEPTANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR THE OWNER ACCEPTANCE INSPECTION.
- WARRANTY FOR THE LANDSCAPE MATERIALS SHALL BEGIN ON THE DATE OF ACCEPTANCE BY THE LANDSCAPE ARCHITECT AFTER THE COMPLETION OF PLANTING ALL LANDSCAPE MATERIALS. NO PARTIAL ACCEPTANCE WILL BE CONSIDERED.
- CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM THE DATE OF OWNER ACCEPTANCE WITH ALL REPLACEMENTS TO BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

**PLANTING SPECIFICATIONS:**

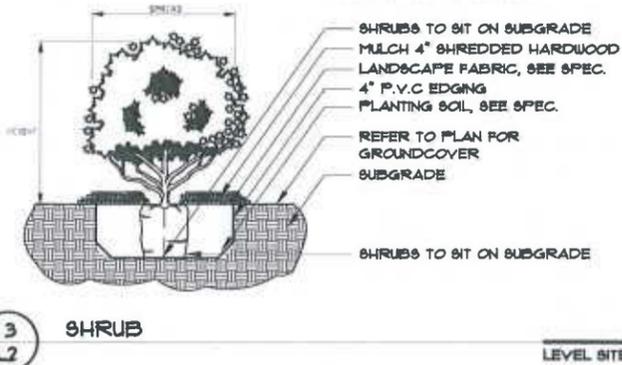
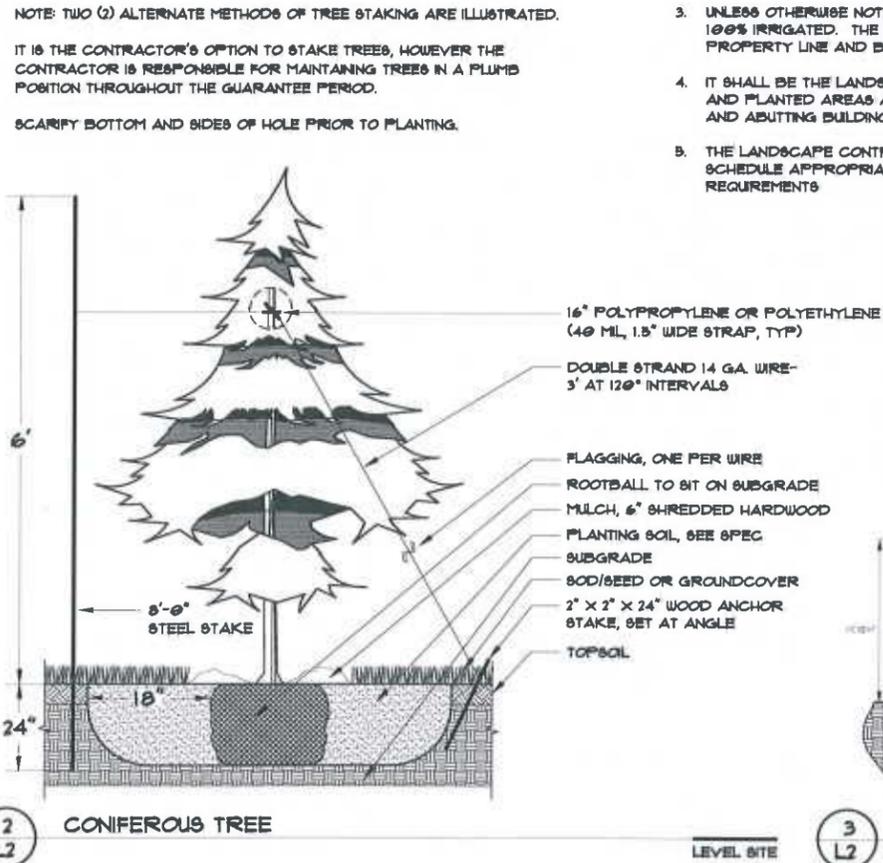
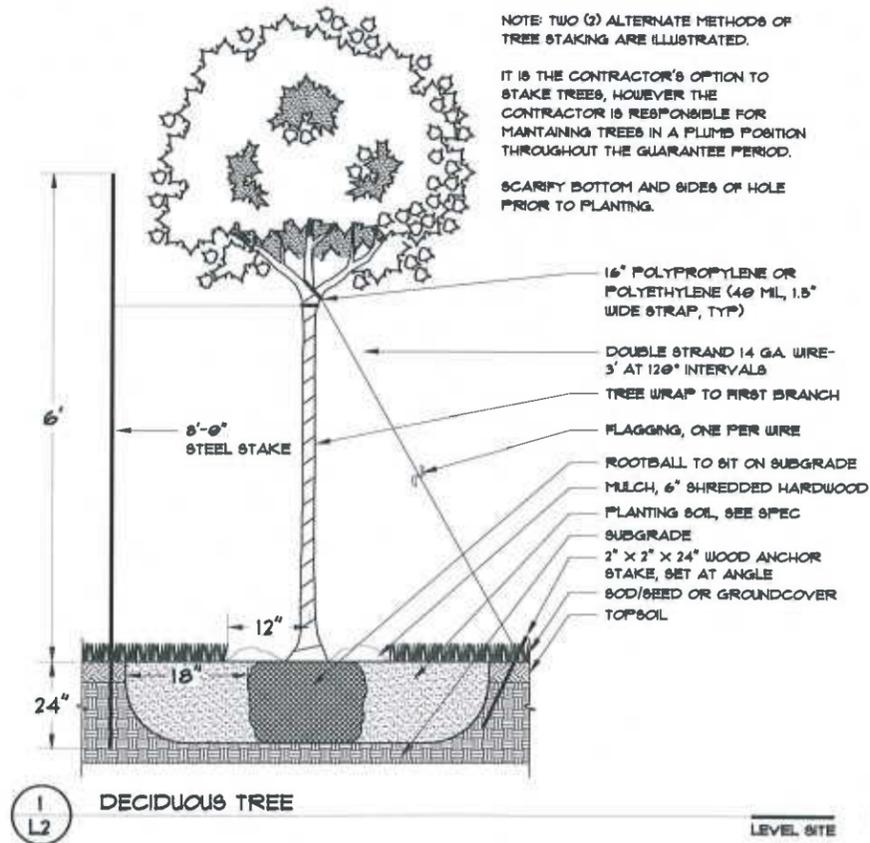
- PLANTING BED PREPARATION: ALL MASS PLANTING BEDS SHALL BE TILLED TO A MINIMUM DEPTH OF 10". AMENDMENTS SHALL BE APPLIED AFTER CULTIVATION.
- BACKFILL SOIL: USE SOIL EXCAVATED FROM PLANTING HOLES & PROVIDE AMENDMENTS. REMOVE ALL DEBRIS AND ROCKS LARGER THAN 3" IN DIA.
- FERTILIZATION: IT IS RECOMMENDED THAT NEWLY PLANTED TREES AND SHRUBS SHOULD NOT BE FERTILIZED THE FIRST YEAR. IF NECESSARY, BEGIN FERTILIZING TREES AND SHRUBS THE SECOND YEAR AFTER ESTABLISHMENT AT A RATIO AND RATE BASED ON A SOIL TEST.
- MULCH MATERIAL: AS SPECIFIED ON LANDSCAPE PLANS. MASS MULCH ALL PLANTING BEDS TO 3" DEPTH OVER FIBER MAT WEED BARRIER. ALL PERENNIAL PLANTING BEDS TO RECEIVE 3" DEEP SHREDDED HARDWOOD MULCH WITH NO FIBER WEED MAT BARRIER. ALL DECIDUOUS AND EVERGREEN TREES TO RECEIVE 6" DEEP SHREDDED HARDWOOD MULCH WITH NO MULCH IN DIRECT CONTACT WITH TREE TRUNK.
- TREE STAKING: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO STAKE AND/OR GUY THE TREES ACCORDING TO THE DETAILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE EVERY STEP NECESSARY TO MAINTAIN THE TREES AND SHRUBS ON AN UPRIGHT AND PLUMB CONDITION AT ALL TIMES UNTIL THE END OF THE PLANT GUARANTEE PERIOD, ESPECIALLY WHERE VANDALISM, SOIL OR WIND CONDITIONS ARE A PROBLEM.
- TREE WRAPPING: WRAPPING MATERIAL SHALL BE QUALITY, HEAVY WATERPROOF CREPE PAPER MANUFACTURED FOR THIS PURPOSE. WRAP ALL DECIDUOUS TREES IN THE FALL PRIOR TO 12-1 AND REMOVE ALL WRAPPING BY 5-1.
- RODENT PROTECTION: PROVIDE ON ALL TREES, EXCEPT SPRUCE UNLESS OTHERWISE NOTED.
- PLANTING PLAN: ALL PROPOSED PLANTS SHALL BE LOCATED CAREFULLY AS SHOWN ON THE PLANS. THE PLAN TAKES PRECEDENCE OVER THE NOTES. RESPECT STATED DIMENSIONS. DO NOT SCALE DRAWINGS.
- EDGING: EDGING SHALL BE 4" P.V.C COMMERCIAL GRADE EDGING WITH THREE (3) METAL ANCHOR STAKES PER 20 FOOT SECTION, UNLESS OTHERWISE NOTED ON THE PLAN. ALL MASS PLANTING BEDS SHALL HAVE EDGING PLACED BETWEEN MULCH AND ANY ADJACENT TURF AREAS.

**PLANTING NOTES:**

- NO PLANTING TO BE INSTALLED UNTIL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- ALL PLANT MATERIAL LOCATIONS MUST BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO ANY AND ALL DIGGING.
- IF THE LANDSCAPE CONTRACTOR PERCEIVES ANY DEFICIENCIES IN THE PLANT SELECTIONS, SOIL CONDITIONS, OR ANY OTHER SITE CONDITION WHICH MIGHT NEGATIVELY AFFECT PLANT MATERIAL ESTABLISHMENT, SURVIVAL OR GUARANTEE, THEY SHALL BRING THESE DEFICIENCIES TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- ADJUSTMENTS IN THE LOCATION OF PROPOSED PLANT MATERIAL MAY BE NEEDED IN THE FIELD. SHOULD AN ADJUSTMENT BE ADVISED, THE LANDSCAPE ARCHITECT MUST BE NOTIFIED.
- ALL PLANTS TO BE INSTALLED PER PLANTING DETAILS.
- ONE SHRUB PER TYPE AND SIZE IN EACH PLANTING BED AND EVERY TREE SHOULD BE CLEARLY IDENTIFIED (COMMON OR LATIN NOMENCLATURE) WITH A PLASTIC TAG WHICH SHALL NOT BE REMOVED PRIOR TO OWNER ACCEPTANCE.
- WHERE 80D/SEED ABUTS PAVED SURFACES, FINISHED GRADE OF SEED/80D SHALL BE HELD 1" BELOW SURFACE ELEVATION OF TRAIL, SLAB, CURB, ETC.
- 80D SHALL BE LAID PARALLEL TO THE CONTOURS AND SHALL HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES, THE 80D SHALL BE STAKED TO THE GROUND.
- SEED ALL AREAS DISTURBED DUE TO GRADING OTHER THAN THOSE TO RECEIVE 80D.
- REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.

**IRRIGATION NOTES:**

- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS ILLUSTRATING IRRIGATION PLANS AND SPECIFICATIONS AS PART OF THE SCOPE OF WORK WHEN BIDDING. THESE SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO ORDER.
- VERIFY EXISTING/PROPOSED SYSTEM LOCATION.
- UNLESS OTHERWISE NOTED, ALL 80D/SEED AND PLANTING AREAS INDICATED ON THE PLAN SHALL BE 100% IRRIGATED. THE IRRIGATION SHALL INCLUDE THE PUBLIC RIGHT OF WAY BETWEEN THE PROPERTY LINE AND BACK OF CURB WHERE NEW LANDSCAPE IMPROVEMENTS ARE PROPOSED.
- IT SHALL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL 80DDED/SEEDDED AND PLANTED AREAS ARE IRRIGATED PROPERLY, INCLUDING THOSE AREAS DIRECTLY AROUND AND ABUTTING BUILDING FOUNDATION.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH A WATERING/LAWN IRRIGATION SCHEDULE APPROPRIATE TO THE PROJECT SITE CONDITIONS AND TO PLANT MATERIAL GROWTH REQUIREMENTS.



NOTE: TWO (2) ALTERNATE METHODS OF TREE STAKING ARE ILLUSTRATED. IT IS THE CONTRACTOR'S OPTION TO STAKE TREES, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TREES IN A PLUMB POSITION THROUGHOUT THE GUARANTEE PERIOD. SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING.

NOTE: HAND LOOSEN ROOTS OF CONTAINERIZED MATERIAL (TYP). SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING.

**Carlson McCain**  
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 Phone: 763-489-7900 Fax: 763-489-7959

**LANDSCAPE DETAILS**  
**BEACON ACADEMY**  
 3420 Nevada Avenue North  
 Crystal, MN 55427

**FRIENDS OF BEACON**  
 9060 Zanzibar Lane North  
 Maple Grove, MN 55311

**REVISIONS**

|    |          |                    |
|----|----------|--------------------|
| 1. | 04/28/18 | Per City Comments. |
| 2. |          |                    |
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DRAWN BY: EDR  
 ISSUE DATE: 04/11/18  
 FILE NO: 1808

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

Name: Scott G. Nelson  
 Signature: [Signature]  
 Date: 04/11/18 License #: 00647

