CITY OF Apple Valley

MEMO
Public Works

TO: Kathy Bodmer, Planner

FROM: Brandon S. Anderson, City Engineer

DATE: September 14, 2017

SUBJECT: Diamond Path Elementary School Addition Final Plat

Alex,

The following are comments regarding the Diamond Path Elementary School Addition site plans dated August 23, 2017. Please include these items as conditions to approval.

General

1. All work and infrastructure within public easements or right of way shall be to City standards.
2. All work and infrastructure within public easements or right of way shall be to City standards. A public improvement project will be required for work in 144th Street.
3. Additional Right of Way or Trail and Sidewalk Easement will be required for the additional turn lane and sidewalk relocation along 144th St W.
4. Provide a narrative of how the buildings will be constructed and any impacts prior to building permit authorization. The narrative shall include the following:
    a. Shoring (if applicable)
    b. Material Storage.
    c. Haul routes to and from the site.
    d. Phasing

Permits

5. Provide a copy of the executed Minnesota Department of Health, Minnesota Pollution Control Agency, Met Council, Department of Labor and any other required permits.
6. A right of way permit will be required for all work within public easements or right of way.
7. A Natural Resource Management Permit (NRMP) will be required prior to any land disturbing activity commences.

Site

8. Plans should be updated to reflect City Project scope of work in 144th Street.
9. Stop signs should be provided at driveways leaving the site and indicated on plans.

10. Additional directional striping is recommended in the parking lot and drive lanes to better direct parent drop off/pick up routing and bus routes. Include striping and signage details on site plan.
11. Provide additional dimensions on site plan indicating radiuses, drive lane widths, etc…
12. Provide additional drawing showing Auto turn turning movements to verify site circulation and layout requirements for planned vehicle usage to be used onsite. Please indicate (or show vehicle) stacking distances on the plan as circulation indicates potential for vehicles to back up onto public roadways at exit and entrance access' to the site. Show truck movement with Auto turn entering site to ensure emergency and service vehicle can maneuver directly to front entrance.
13. It appears that the buses in the proposed bus parking area will be required to back out. Consider re-striping to allow for a single lane bypass in front of the buses along the curb to allow vehicles to pass while buses are onsite and to allow more room for buses to pull forward and not back up.

Grading, Drainage and Erosion Control

14. Final Grading Plans shall be reviewed and approved by City Engineer.
15. Provide clarity on which C1.31 plan sheet is being referenced in the plan set.
16. Additional details are required to indicate how drainage will be directed to proposed infiltration areas. Pre-treatment is required.
17. Final Storm water Management Plan shall be reviewed and approved by City Engineer.
18. Erosion control measures shall be installed prior to beginning grading operations.
19. Street sweeping shall be performed as necessary to address material tracking from the site.
20. The location and elevation of the site emergency overflow(s) (EOF) shall be identified on the plans. All critical HP and LP shall be identified along with drainage arrows.
21. 2% minimum grades are required in all landscaped areas.
22. Provide the overall site composite Curve Number (CN) along with the impervious % on the area tabulation
23. Lowest floor levels shall be 1.0' above the EOF.
24. Soil borings/testing shall be provided in the area of infiltration features prior to building permit authorization.

Sanitary Sewer, Water Main and Storm Sewer

25. Final locations and sizes of Sanitary & Storm Sewer and Water main shall be reviewed with the final construction plans and approved by City Engineer.
26. Remove references to unused detail plates from sheets C2.11- C2.13.

Landcape and Natural Resources

27. Restoration/Landscape plan should indicate required buffers and appropriate seed mixtures for infiltration area, aquatic bench and upland areas associated with any storm water basins.
28. Landscape plan should clearly indicate drainage and utility easements and property line.
29. No major tree plantings shall be located over any underground utilities. Clusters of trees shall be used near or around these areas instead of planting in a row. The Drainage and

Utility Easement will require clearance around the underground utilities, or the expectation that trees may have to be removed for access when needed.

30. Sediment controls should be around the entire basin and not through the basin to provide adequate protection during construction. Sediment controls placed at the base of infiltration basin slopes without erosion control on the basin slopes themselves is inadequate protection from sedimentation and clogging of the basin and does not comply with state or local standards.
31. Silt fence would provide more protection from equipment driving through the basin and improper material storage in the basin than sediment logs.
32. The City recommends changing the grass plantings in the basin to taller native plants or shrubs. It is not clear what the intended design of the infiltration basin is from the proposed plans. Redundant details have been provided and needs to be clarified.
33. It is unclear that a mix of fescue will hold up to the conditions experienced within the basin. Additionally, mown grass tends to show more the sediment and trash collected in the basins over time.
34. Quantities and locations of trees should be indicated on plan to show diversity of species. Some species appear on the Plant Schedule but not on the plan.
35. Some of the different details on the plans for the infiltration basins seem inconsistent. For example, some areas mention seeding, while others indicate the use of mulch (seed is unlikely to germinate with several inches of mulch covering it – that is part of the reason you use mulch – to guard against weeds germinating).
36. I would recommend against using seed to establish the basins. Seed provides a "fuzzier" less organized look for the basins. It makes it difficult to identify what is a weed and what is not. Shrubs are also a planting option for ease of maintenance. If seed is selected, a longer establishment maintenance schedule will be needed to keep the basin weed free and ensure vigorous growth; a year minimum after seeding is generally required. Also, timing for when seed will be installed will need to be indicated. There are certain times of year that installing native seed should be avoided.
37. Basins need to be kept off line (no water entering) until vegetation has been established. This timeline will be longer for seeded areas.
38. Staging of installation and protection of the area the basins are in needs more detail.
39. Shredded hardwood mulch should be used. Shredded hardwood much aids in the uptake of certain pollutants. Shredded hardwood mulch is better for plant health. Mulch should NOT be used if seeding; a blanket or hydro mulch should be used instead.
40. Absolutely no fabrics shall be installed in the basin: no protective weed barriers, no fabric over gravel around drain tile. Fabrics will clog will fine sediments. Socks around drain tile shall conform to Dakota County Low Impact Development Standard 2.44 p.7 http://www.dakotaswcd.org/pdfs/Dakota%20LID%20Standards%20Revised%2002-09-12.pdf.
41. A 3 year Maintenance plan is required from the proposed filtration basins.
    a. The property owner shall maintain healthy plants suitable for use in raingardens throughout the raingarden. The property owner shall replace dead or diseased vegetation with plants capable of tolerating conditions encountered in the raingardens.
    b. The raingarden shall be kept free of non-native invasive plant species and noxious weeds, including buckthorn.
    c. The overall areas of the raingarden shall not be reduced during the maintenance term.

d. The raingarden shall be watered such that it receives 1 inch of water per week combined from rain and other sources during the first growing season.
e. Fertilizers shall not be applied to any part of the raingarden.
f. Insecticides and fungicides shall only be applied when damage from non-native species is of concern.
g. Herbicides shall be limited to spot applications.
h. The property owner may remove dried vegetation once a year in the spring prior to May 30th if desired.
i. The property owner shall maintain at minimum a three inch layer of shredded hardwood mulch for the maintenance term.
j. The raingarden must drain free of water within 48 hours after a rainstorm except for in times of frozen soils.

42. The property owner is responsible for locating all utilities prior to installation. The owner shall only hand dig within 2 feet of utility markings. The raingardens shall not be installed over any utilities.