

PLAINS SCHOOL

PLANNING BOARD REVIEW – DEPARTMENT COMMENTS

1. FIRE DISTRICT #1

(1) The construction phasing plan page C1.2 the roads for the temporary drop off and pick up area along with the temporary gravel parking lot need to be big enough to get are trucks in and out. We would like to see at least 25 ft wide entry and exit area. Further, the turn around should be minimum of 40 ft.

The temporary drop-off and pick-up area has been adequately sized to accommodate fire trucks, as well as the ability for trucks to maneuver in and out.

(2) The temporary chain link fence around the school to separate the school from the construction site. We would like to see several gates installed for emergency exit and entry. Further, we would like entry to the construction area as well.

The contractor will be required to provide a safety plan and to coordinate with the town and the Fire Department on the location of the emergency exits and entrances. This will be submitted by the contractor prior to the start of construction.

(3) Landscape grading plan page L1.2 emergency access road northwest side of the building the 2% grade looks good but what type of material will they be using and will it be strong enough to support our aerial ladder?

The emergency access road will be constructed with a cross section of 4" of topsoil with turf reinforcement over 8 inches of processed aggregate base. A detail has been added to the plans, see Sheet C3.5. This is designed to support an H20 loading.

(4) Just confirming there will be access around the entire school either by roadway or sidewalk correct?

Yes that is correct. There is a proposed emergency access road located along the north side of the building. In addition the proposed sidewalks located on the south and west sides of the building have been designed to accommodate emergency vehicles. They are proposed to be 5 feet wide, with a requirement that a minimum of 1 foot on each side of the sidewalk be kept clear.

2. DEPARTMENT OF PUBLIC WORKS

General

1. Add bar scale to all sheets

A bar scale will be added to all appropriate sheets. The changes will be reflected on the final construction plans.

2. Please confirm as-built plan requirements for site work. DPW requests a copy of shop drawing approvals for all site utility items and a site utility as-built plan prepared directly on the site final construction grading and drainage plans (C1.4 and C1.5) in pdf form showing tape ties to all manholes, yard drains, clean-outs, and inspection ports, invert information for all site sewer and drain improvements, and any deviations from the final design.

Yes, as part of the final plans and specifications it will be noted that Record Drawings are required for each phase of the project.

Stormwater Report

Design appears appropriate for the site taking advantage of the native soil infiltration rate with significant reductions of peak flows. I'd also note that according to the calculations provided the design shows significant reduction in storm volumes at the modeled discharge locations. Only comment/question is whether drawdown calculations and model infiltration rates include an allowance for potential fines clogging or frozen ground. I also note the relatively long 36 hour drawdown in Rain garden 2 and ask if there's any way it could be reduced.

Mass DEP infiltration values include sedimentation allowed within the limits of the Operation and Maintenance Plan. In addition the calculations are conservative and allow for additional storage if the fines should clog the soil media. The rain garden could be redesigned to have a reduced drawdown time, however this would result in higher stormwater runoff volumes and peak flow amounts. It should be noted that the DEP maximum drawdown time is 72 hours.

Sheet C 1.3

1. Consider removal of easternmost island in parking area (nr. circled 14) for ease in plowing as well as addition of a couple of parking spaces.

The design team has already significantly reduced the number of islands in the parking lots. This island is proposed to help maintain and protect the existing 28" oak tree located in this area. As requested by the school board, the project is proposing to save as many of the existing trees as possible.

Sheet C 1.4

1. Note 8 - Change "Worcester" to "South Hadley"

The plans have been corrected and changes will be reflected in the final construction plans.

Sheet C 3.0

1. Are Snow Removal Notes 2, 3, 4, 5, 6 applicable within the contractor's limit of work shown?

Yes. The notes have been revised to include stockpiling within the contractor staging area and to be more specific to this job. Changes will be reflected in the final construction plans.

2. *Confirm location of porous pavement referenced.*

The note has been removed it is not applicable to this project. The change will be reflected in the final construction plans.

3. *O&M Plan Post Construction. Note 7 not applicable for O&M recommendations*

The note has been removed. The change will be reflected in the final construction plans.

Sheet C 3.1

1. *Yard Drain Detail - Is there a minimum depth requirement?*

There is no minimum depth requirement. A note to refer to the site plans for invert elevations has been added to the yard drain detail. The change will be reflected in the final construction plans.

Sheet C3.4

1. *Sloped granite edging detail. Detail should be drawn to match the 60 degree minimum shown for clarity.*

The detail has been revised. The change will be reflected in the final construction plans.

3. CONSERVATION COMMISSION

1. *Plan C1.2, Construction Phasing Plan shows two large areas where "Existing tree(s) in this area to be protected throughout construction". We appreciate the attempt to save as many trees as possible on the lot. Unfortunately the same tree protection areas do not appear on any of the other plans, and in some places grading and development takes place within these "tree protection" areas.*

Examples of this are Plan C1.4, where the grading (apparently for a nature playground area as shown on Plan L1.3 & L4.1) is within the tree protection area shown on Plan C1.2, and there is new asphalt parking areas in the other large tree protection area parallel Lyman Street (as shown on Plan Plan C1.4).

In addition, the shape and size of these tree protection areas shown on C1.2 are quite different on the landscape plans (now called Forest Protection Zones), especially comparing the largest one on the west side of the site, closest to the ravine and conservation land. In the areas of the Forest Protection Zones that are wider than what is shown on C1.2, will the trees have been protected during construction, since the shapes are different and were not included on the "Construction Phasing Plan"? Overall it looks like the amount of gain and loss may be close, but there should not be such a difference in this protection zone and discrepancies between plans. Please correct shapes to reflect what is actually being proposed, so the appropriate tree areas can be protected from the start and we know what is being lost.

The plans have been revised to reflect the correct tree protection areas.

2. *Plan C1.4, Site Grading & Drainage Plan, shows all the stormwater management features, and numbers and labels most of the catch basins (a few on east side not numbered), but does not number and label the basins. Looking at Plan C3.2, Construction Details, there two cross-sections for a rain garden, and Plan L3.1, Site Sections, shows side views of rain gardens and a detention basin. It is not clear to me where these features are on the other plans, especially on C1.4. Are all the basins Rain Gardens, or all but the largest on the west side? These features need to labeled, and numbered for reference if there is more than one of them.*

The plans have been updated with the correct labeling of the infiltration basins and rain gardens. Please see attached Sheet C1.6.

3. On Plan C1.4, Site Grading & Drainage Plan, and also on Plan L1.2, Landscape Grading Plan, there appears to be an emergency overflow structure on the west side of the largest basin. I believe this is the detention basin described in section 01 on Plan L1.1. I do not see any construction detail on this feature (is it ripped?), and believe there needs to be, plus an explanation of how often the engineer expects the basin to possibly overflow. If there is any likelihood of overflow down the steep slope toward the stream, I suggest they move the overflow structure to the south side of the basin, so it discharges to the flatter lawn (Plan L1.3) instead.

The infiltration basin has been designed so that the emergency spillway will not flow during the 100-year storm event. The emergency spillway has been proposed to allow overflow in the event that the outlet structure fails and for the possibility of a larger storm-event occurring. The emergency spillway has been moved slightly to the south, away from the existing slope, to allow for a flatter point of discharge and to accommodate riprap protection. The plans have been revised, please see attached Sheet C1.6.

4. Plan L4.1, Enlargement Plan: Playscapes, does not show the type of surface printed on the area just south of the largest basin, and between it and the two small basins next to the parking lot. Based on Plan L1.3, it should be labeled as lawn. A nice selection of plantings for the rain gardens listed on Plan L1.3

The plans have been updated to include surface types in these areas. Please see attached Sheet L1.3.

5. Good Operation & Maintenance, Erosion Control and Snow Disposal Notes on Plan C3, Erosion & Sedimentation Control Notes.

Thank you.

6. In taking a very cursory look at the Stormwater Report, I have a few questions/comments. First, Figure 3 does label the basins as Infiltration Basins #1 & 2, and Rain Gardens #1-3, and Infiltration Systems #1 & 2 (underground). According to Figure 3, the largest basin on Plan C1.4 is Infiltration Basin #2, and the basin to the east of it is Infiltration Basin #1. Are the two smaller basins close to each other in the area of Infiltration Basin #1 considered as one, or is one an infiltration basin and one (with no drain pipes in or out) a Rain Garden? The smaller isolated basin does not appear to be labeled on Figure 3. There is still a discrepancy between Figure 3 and the other plans. Again, Plan L3.1 site section 01 shows a "detention basin" (Infiltration Basin #2?) and a "Rain Garden" (the larger of the two nearby basins) to the east of it. The Rain Garden to the east is labeled as Infiltration Basin #1 on Figure 3. Which is it, and what is the smaller one with no inlets or outlets?

The plans have been revised with the correct labeling. Please see attached Sheet C1.6.

Second, in the Table 1 of the Stormwater Report, please confirm that the numbers for DP#1 apply to the discharge from the largest basin (Infiltration Basin #2 in Figure 3), and not to the discharge pipe down at the stream. Shouldn't this have been at the basin, not at the end of the pipe which may have other sources coming in to it as well? My understanding is that the runoff from Lyman Street, Lyman Terrace and a large area of Granby Road discharges through that large structure at the stream. We do appreciate that the amount of runoff is described as being significantly reduced, with much more treatment and infiltration taking place over what is there now.

DP #1 applies to the northwest corner of the site as shown on Figures 1 and 2. DP #1 generally incorporates runoff from the areas disturbed by the project. Runoff from a majority of the project does flow into the large infiltration basin; however a small portion of the site flows to the northwest corner. To ensure peak discharge rates account for the whole site development this small portion was included in the computations. It is assumed that the areas of Lyman Street, Lyman Terrace and Granby Road collected by the stormwater system will remain unchanged from existing to proposed and will not have an effect on the peak discharge rates.

Third, in Section 5.2, Soils of the Report the soils described are based on the NRCS soil survey, even though test pits were done in the area. Please confirm that those descriptions in 5.2 are appropriate for the soils actually seen at the test pits, in order to make sure the runoff curve numbers are correct.

The NRCS soil survey does coincide with the test pit information. The test pit information indicates that the soils on site are mostly fine sand soils which have the same properties as the type A soils shown on the NRCS Mapping.

7. At this year's Annual Town Meeting in May the Conservation Commission was severely chided for not having developed handicapped accessible trails in town. One of the two areas that have been on our list for a long time to consider making handicapped accessible is the Black Stevens Conservation Area trail near the Plains School. A good part of this trail is being removed and re-created nearby. The Conservation Commission asks that the Town seriously consider its responsibility to provide handicapped accessible trails by making the section that is being redone on the new Plains School property handicapped accessible. This would be a great start, from which the Conservation Commission, Town and DPW could continue work with grants and volunteer labor to extend the trail to a good turnaround at the first intersection of trails further in the woods. The Conservation Commission cannot afford on its own very limited funds to create such a trail (proper slope and width and surface), and this is an opportunity for the Town to take a big step forward.

We appreciate the input and comments received, however this is outside the scope of the project and would not be reimbursable by the MSBA.

8. The work on the site does not appear to fall under the Conservation Commission's wetland jurisdiction, since all work is more than 100 feet from wetlands or water, and there is no new point discharge for stormwater.

Correct. While we appreciate the input and comments received, they are outside the scope of the project and cannot be accommodated within the project; they would not be reimbursable by the MSBA.

4. SOUTH HADLEY ELECTRIC LIGHT DEPARTMENT

Dwg E0.2:

- *Locate transformer closer to fire lane (4-5 feet from roadway) to facilitate handling by SHELd equipment*
- *Add bollards to protect transformer*
- *Use SHELd details for ductbanks*
- *Move proposed handholes to NE side of Lyman St (position to eliminate horizontal 90s)*
- *Pitch ductbank runs to drain into boxpad and handhole*

All items completed. Electrical Engineer and Civil will coordinate on exact locations between their two different drawings.

Dwg E5.4

- *Delete current transformer detail – Incorporate into service entrance equipment rather than separate enclosure*
- *Use SHELD riser pole detail*

All items completed.

Dwg E5.6

- *Use SHELD transformer boxpad detail*
- *Use SHELD 3x3 handhole detail (see attached) – install on 18” stone bed for drainage*
- *Use SHELD transformer grounding detail*

All items completed

Please provide electrical system 1-Line and load list when available, to facilitate transformer sizing.

Preliminary riser diagram has been sent to SHELD. More detailed loads will be given after further coordination with the different trades involved.