

MAY - 3 2019



100 GROVE ST. | WORCESTER, MA 01605

May 3, 2019

PLANNING BOARD GRAFTON, MA

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**Subject: The Grafton Public Library, 35 Grafton Common
Special Permit, Site Plan, Wetland Regulations and Stormwater Regulations
Preliminary Plan Review**

Dear Joseph and Conservation Commissioners:

We received the following documents on April 22, 2019:

- Correspondence from CDW to Grafton Planning Board and Grafton Conservation Commission dated April 19, 2019 RE: Response to Graves Engineering Peer Review Comments, The Grafton Public Library, 35 Grafton Common.
- Sheets C100, C200, C300, C400, C500, C501, C502, and C503 of plans entitled The Grafton Public Library, 35 Grafton Common, Grafton, MA dated January 31, 2019 and last revised April 19, 2019, prepared CDW Consultants, Inc. for the Town of Grafton. (8 sheets)

We also received the following documents on April 26, 2019:

- Correspondence from CDW to Grafton Planning Board and Grafton Conservation Commission dated April 26, 2019 RE: Revised plan per Conservation Commission Comments, The Grafton Public Library 35 Grafton Common.
- Document entitled Stormwater Management Report for Town of Grafton Public Library dated January 29, 2019 and revised April 24, 2019, prepared by CDW Consultants, Inc.
- Sheets C100, C200-A, C200-B C300-A, C300-B, C400-A, C400-B, C500, C501, C502 and C503 of plans entitled The Grafton Public Library, 35 Grafton Common, Grafton, MA dated January 31, 2019 and last revised April 25, 2019, prepared CDW Consultants, Inc. for the Town of Grafton. (11 sheets)

We also received the following documents on May 3, 2019:

- Plan entitled The Grafton Public Library, Planting Plan Option A dated January 30, 2019, prepared Berkshire Design Group. (1 sheet)
- Plan entitled The Grafton Public Library, Planting Plan Option B dated January 30, 2019, prepared Berkshire Design Group. (1 sheet)

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' conformance with applicable "Grafton Zoning By-Law" amended through October 15, 2018; Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and

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standard engineering practices on behalf of the Planning Board. GEI has also been requested to review and comment on the documents' conformance with applicable "Grafton Wetland Regulations" amended through May 2017 and Grafton Conservation Commission "Regulations Governing Stormwater Management" dated May 28, 2013 on behalf of the Conservation Commission.

This letter is a follow-up to our previous review letter dated April 10, 2019. For clarity, the comments from our previous letter are *italicized* and our comments to the design engineer's responses are depicted in **bold**. Previous comment numbering has been maintained.

Our comments follow:

Zoning By-Law

1. *Lot coverage calculations showing the percentage of buildings, percentage of pavement, and percentage of open space/landscaped need to be included in the plans. (§1.3.3.3.d.15)*
Acknowledged. A table of the information was added to Sheets C100, C200-A and C200-B.
2. *Parking calculations need to be provided for the proposed use. (§1.3.3.3.d.16)*
Acknowledged. Parking calculations were added to Sheets C200-A and C200-B.

Grafton's Regulations Governing Stormwater Management

3. *GEI has reviewed the Stormwater Management Plan and has no issues relative to compliance with the Grafton Stormwater Management Standards.*
No further comment necessary.

Grafton Wetland Regulations

4. *GEI has no issues relative to compliance with the Grafton Wetland Regulations except as noted in the following two comments.*
GEI has no issues relative to compliance with the Grafton Wetland Regulations.
5. *Stormwater Basin #1 and Stormwater Basin #2 are proposed with interior slopes of 2H:1V; the regulations require a maximum embankment slope of 3H:1V. Whereas the stormwater basins are depressions in the ground rather than built-up earthen embankments, GEI defers to the Conservation Commission whether the proposed 2H:1V slopes are acceptable. (§1.V.B.5.h.(i))*
Acknowledged. The plans were revised to provide a 3H:1V slope in Basin #2 and on the parking lot-side of Basin #1.
6. *At Stormwater Basin #2, the level spreader elevation (482.80 feet in the hydrology calculations) needs to be labeled. Based upon a nearby existing spot elevation of 483.4 feet, some minor grading may occur within the 25-foot wetland buffer. (§1.V.C.5.a)*
Acknowledged. The level spreader elevation has been adjusted to 483.5 feet.

Hydrology & MassDEP Stormwater Management Review

7. *GEI reviewed the hydrology computations and found them to be in order except as noted in the following comment.*
The revised hydrology computations are in order.

8. *The orifice size for CB2 (OCS) is inconsistent between the HydroCAD computations and the construction detail provided on Sheet C501. The information needs to be consistent.*
Acknowledged. The computations and plans were revised and are consistent.
9. *Compliance with MassDEP Stormwater Handbook is reasonable.*
No further comment necessary.

General Engineering


10. *The title blocks of Sheets C100 through C400 indicate that the scale is 1"=20', however the scale bar and measured dimensions on the sheets are at a scale of approximately 1"=25.3'. The plotted scale on these plan sheets needs to be re-checked.*
Addressed. Per the design engineer, the plan sheets were set up to be plotted full-size on 30" x 42" sheets.
11. *On Sheet C100, the lines for the erosion control barriers needs to be labeled or identified in the legend.*
Acknowledged. A label was added to Sheet C100.
12. *The existing conditions plan does not reflect the curb-line improvements at the intersection of Upton Street and South Street that were made in 2017. Nevertheless, the 2017 curb-line improvements don't have a negative impact on the proposed project.*
No further comment necessary.
13. *GEI performed a cursory review of the traffic memorandum. GEI has no issues with information presented in the memorandum.*
No further comment necessary.

General Comments

14. *The two HC ramps southwest of the building will have grades of approximately 7.8%. Per the Massachusetts Architectural Access Board regulations, the ramps will need to have handrails. Handrails were not shown on Sheet C200.*
Acknowledged. Handrails will be added to the plans if the walkway option with ramps is utilized.
15. *GEI did not review the architectural plans.*
No further comment necessary.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,
GRAVES ENGINEERING, INC.


Jeffrey M. Walsh, P.E.
Principal

cc: Eric S. Wilhelmsen, P.E.; CDW Consultants, Inc.