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Land Use Department

STORMWATER DESIGN SUMMARY

DATE: 04/01/2026

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PROJECT NAME: Multi-Family Residential

PROJECT NUMBER: 2502197

Introduction

EG Home, LLC is seeking to develop the existing ± 10.63 -acre parcel located at 1947 Center Groton Road within the Town of Ledyard, New London County, Connecticut. The proposed development will include 17 residential buildings for a total of 72 units, a private drive around the site, associated utilities, landscaping, lighting, and a stormwater management system. There are 31,967 SF (0.73 acres) of wetlands that exist on site. No wetlands are proposed to be disturbed because of this development. The proposed disturbance in the upland review area is 60,481 SF (1.38 acres). The total permanent disturbance which is impervious surfaces added to the upland review area is 2,076 SF (0.047 acres). The total proposed site disturbance is 381,856 SF (8.76 acres).

Hydraulic Analysis

In the existing condition the site drains to four different design points as described below.

- DP-1 (Existing 18" RCP on Center Groton Road)
- DP-2 (Existing Wetlands)
- DP-3 (Northern Property Line)
- DP-4 (Southern Property Line)

The proposed drainage system has been designed to mimic existing drainage flow patterns and reduce peak flows. The proposed stormwater management system consists of a stormwater conveyance pipe network, two rain gardens, and three stormwater detention basins. The stormwater detention basins have been sized to safely handle the 100-year rain event. Infiltration within the basins is assumed where type B soils exist consistent with the CT Stormwater Quality Manual requirements and will be confirmed with future onsite soil testing. The chart below shows the pre and post development peak flows for the 2-yr, 10-yr, 25-yr, and 100-yr event. The 2-yr event was reduced to the maximum extent practical. As shown on the chart below peak flows are reduced across all storms for each design point with the exception of DP-1 in the 2-year rainfall event. This event has an insignificant increase of 0.12 cfs. The overall analysis for the entire site shows reductions across all modeled storms.

Design Point	2-Year Flow (CFS)	10-Year Flow (CFS)	25-Year Flow (CFS)	100-Year Flow (CFS)
DP - 1 – Pre-Development	0.66	2.26	3.48	5.54
DP - 1 – Post Development	0.78	1.87	3.01	4.47
Difference	18%	-17%	-14%	-19%
DP - 2 – Pre-Development	3.09	7.48	10.61	15.68
DP - 2 – Post Development	2.52	6.01	8.58	13.41
Difference	-18%	-20%	-19%	-14%
DP - 3 – Pre-Development	0.14	0.47	0.72	1.15
DP - 3 – Post Development	0.05	0.19	0.30	0.49
Difference	-64%	-60%	-58%	-57%
DP - 4 – Pre-Development	1.23	3.42	5.03	7.67
DP - 4 – Post Development	0.51	2.98	4.69	7.50
Difference	-59%	-13%	-7%	-2%
Design Points Combined- Pre-Development	5.12	13.63	19.84	30.04
Design Points Combined- Post Development	3.86	11.05	16.58	25.87
Difference	-25%	-19%	-16%	-14%

Water Quality

Water quality treatment is achieved through the use of multiple structural methods including hooded catch basins, a hydrodynamic separator, one rain garden, and three stormwater detention basins. The required water quality volume is 16,508 CF. The proposed stormwater management system provides 18,993 CF.

Conclusion

With the implementation of the stormwater management system designed for this project, there will be no negative impacts on-site or on downstream properties. The rate of runoff for subject property has been decreased through all storm events with the exception of DP-1 in the 2-year rainfall event which has an insignificant increase of 0.12 cfs. This design summary has been prepared to complement the submitted project plans and is in general conformance with the design parameters set forth by the Town of Ledyard and the State of Connecticut. A full stormwater management report will be submitted on April 15th, 2026.

Appendix A

Pre and Post Drainage Area Maps

HYDROLOGY LEGEND

PROPERTY LINE

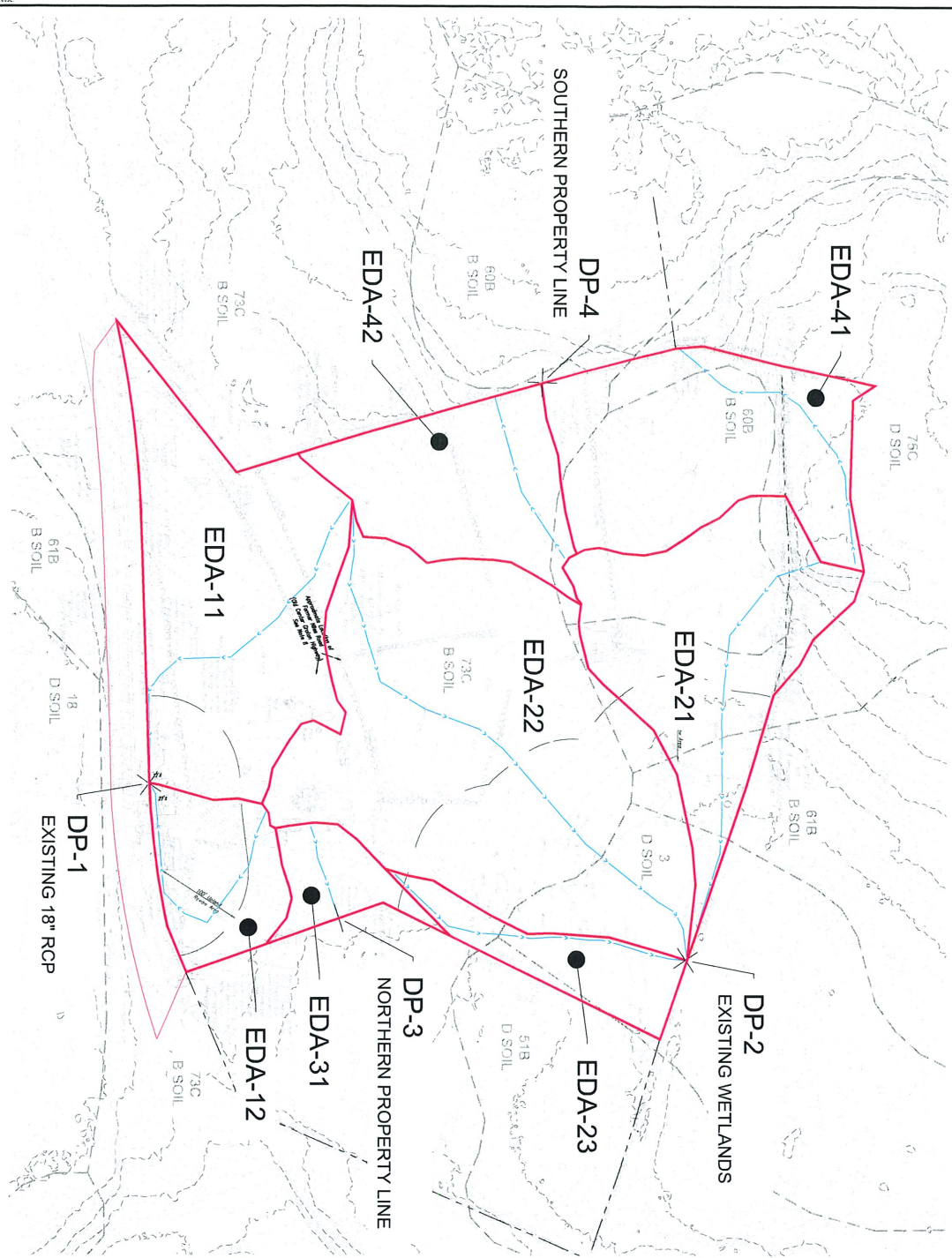
EXISTING DRAINAGE

PROPOSED DRAINAGE

EXISTING WETLANDS

EXISTING 18" RCP

DP-X



FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION



EDA-1

EXISTING DRAINAGE AREA MAP

NO.	DATE	DESCRIPTION	BY	CHKD
1	10/12/2015	Initial Map	JAL	JAL
2	10/12/2015	Revised Map	JAL	JAL
3	10/12/2015	Revised Map	JAL	JAL
4	10/12/2015	Revised Map	JAL	JAL
5	10/12/2015	Revised Map	JAL	JAL
6	10/12/2015	Revised Map	JAL	JAL
7	10/12/2015	Revised Map	JAL	JAL
8	10/12/2015	Revised Map	JAL	JAL
9	10/12/2015	Revised Map	JAL	JAL
10	10/12/2015	Revised Map	JAL	JAL

PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT
1947 CENTER GROTON ROAD
LEDYARD, CT 06339

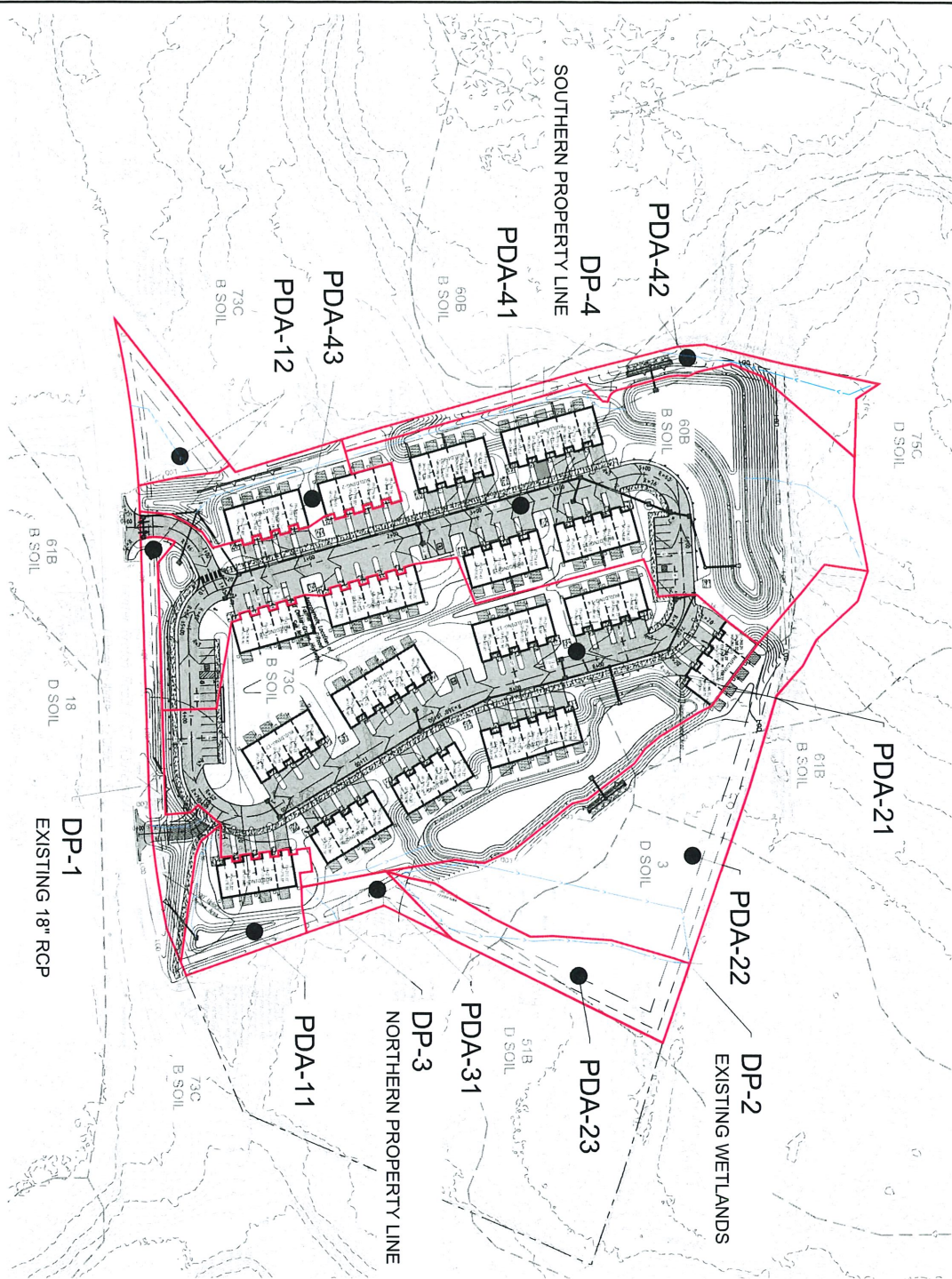
BL **Compare**

Architecture
Engineering
Environmental
Land Surveying

201 North Main Street
Ledyard, CT 06339

HYDROLOGY / LEGEND
 PROPOSED DRAINAGE AREA
 EXISTING DRAINAGE AREA
 EXISTING WETLANDS
 EXISTING 18" RCP
 DESIGN POINT

DP-X-X-X



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GRAPHIC SCALE
 60 30 0 60
 SCALE IN FEET



PROPOSED MULTI-FAMILY
 RESIDENTIAL DEVELOPMENT
 1947 CENTER GROTON ROAD
 LEDYARD, CT 06339

10/12/2011 10:00 AM



NO.	DESCRIPTION	DATE	BY
1	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
2	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
3	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
4	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
5	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
6	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
7	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
8	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
9	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011
10	PROPOSED DRAINAGE AREA MAP	10/12/2011	10/12/2011

PDA-1