

Storm Water Management & Erosion Control Narrative

for

Chambers-Markle Farmstead Subdivision

Property Logic LLC

Lot 21, Waterview Subdivision

La Crosse, Wisconsin

1.0 Introduction

A. Project Description

Makepeace Engineering is assisting Property Logic with grading, storm water management, and erosion control, for its four lot Chambers-Markle Farmstead Subdivision in the City of La Crosse, La Crosse County, Wisconsin.

The project will subdivide Lot 21 of the Waterview Subdivision into four smaller lots.

B. Pre-Construction Site

The project site includes Lot 21 of the Waterview Subdivision. The parcel has historically included a single-family home and remnant outbuildings from the Chambers-Markle farm. The existing parcel is zoned R2. The land is surrounded by R2 zoned residential development to the north, south, and west, and R1 zoned development across STH 35 to the east.

The total project site is approximately 1.49 acres. The existing site is 78% pervious and drains to the adjacent rights-of-way. The existing parcel includes the following surface area breakdown, measured in square feet:

Roof	Driveway	Sidewalk	Pervious	Total
7,006	7,173	0	50,682	64,861

Once in the right-of-way, existing curb and gutter conveys runoff to regional storm sewer stormwater BMP's constructed for the Waterview Subdivision in 2018.

Lot 21 of the Waterview Subdivision is a member of the Waterview Homeowner's Association. The HOA covenants indicate the HOA is responsible for operation and maintenance of the regional BMP's. The HOA covenants are recorded as a restriction on Lot 21.

C. Soils

NRCS Soil maps indicate a predominance of Chelsea Fine Sand (92.5%), with a small amount of Finchford Loamy Sand (6.2%) and Brice Loamy Fine Sand (1.2%).

NRCS describes the soil as being excessively well drained with greater than 80" to bedrock or groundwater.

Soil borings taken near Lot 21 confirm the presence of predominantly sandy soils with no shallow bedrock or groundwater.

2.0 Erosion Control Plan

Once the Chambers-Markle Farmstead Subdivision plat is completed, three of the four parcels will be offered for sale. When the owners of those parcels apply for building permits, compliance with erosion control requirements will be mandatory, and the City's normal procedure for erosion control permitting will be followed.

3.0 Storm Water Management Plan

A. Post-Construction Site

The post-construction site will consist of four smaller parcels, Lots 26, 27, 28 & 29, all zoned R2. Property Logic plans leave the farmhouse in place, but remove all other existing structures. New single family, or twindo construction will likely occur in 2025 & 2026 on Lots 26, 27, & 28. Slopes will remain below 20%. Storm water runoff from the project site will be managed as detailed below.

Recording of this Chambers-Markle Farmstead plat does not remove the recorded requirements of the HOA Covenants. These new lots will all be members of the Waterview Subdivision HOA and will have the same restrictions and responsibilities for maintenance of the regional stormwater bmp's as Lot 21 of the Waterview Subdivision.

The proposed lots will include the following estimated surface areas, measured in square feet:

<u>Lot</u>	<u>Roof</u>	<u>Driveway</u>	<u>Sidewalk</u>	<u>Pervious</u>	<u>Total</u>
26	3,220	1,000	234	6,946	11,400
27	3,220	1,000	234	6,323	10,777
28	2,867	1,000	142	6,247	10,256
29	1,461	6,624	0	24,343	32,428

B. Post-Construction Performance Requirements

1. 80% reduction of TSS.

C. BMP Selection

Waterview Subdivision Regional Treatment

Regional storm water BMP's were constructed for treatment of runoff from all of the Waterview Subdivision, including Lot 21. Each lot was provided an "Allocation" of roof and paved parking impervious. Design, calculations, and modeling of Waterview's regional storm water treatment system, which shows the system achieves 88.23% TSS

reduction for allocated impervious area was provided to Wisconsin DNR and the City of La Crosse. The Lot 21 impervious allocation was as follows:

Roof 7,006 SF
Pavement 7,173 SF

The regional storm water treatment system was reviewed by Wisconsin DNR and approved on April 20, 2018.

The regional storm water treatment system was reviewed by City of La Crosse Engineering Department for plat review, and approved by the City of La Crosse Plan Commission February 26, 2018, the City of La Crosse Judiciary & Administration Committee on February 27, 2018, and by the City of La Crosse Common Council on March 8, 2018.

Maintenance of the regional storm water BMP's is the responsibility of the Waterview Home Owner's Association. A signed Storm Water O&M Agreement is on file with the La Crosse County register of deeds.

Lot 21 Local Treatment

It is estimated the Chambers-Markle Subdivision will ultimately cause the total Lot 21 impervious area to exceed the Waterview Regional impervious allocation detailed above, and Property Logic must show continued compliance with NR 151 and City of La Crosse stormwater ordinance. The improvements exceed the allocation as follows:

<u>Surface</u>	<u>Proposed</u>	<u>Allocation</u>	<u>Additional</u>
Roof	10,768 SF	7,006 SF	3,762 SF
Pavement	9,624 SF	7,173 SF	2,451 SF
Sidewalk	610 SF	0 SF	610 SF

The existing SLAMM model was modified, increasing the impervious area, and decreasing the pervious area accordingly, in subcatchment 3, and then re-run. The change in surface area decreased the total performance only slightly, with the modeling showing 87.57% TSS reduction.

No new stormwater BMP's are needed.