



CITY OF WASHINGTON, ILLINOIS

City Council Communication

Meeting Date: August 9, 2021

Prepared By: Dennis Carr, P.E. – City Engineer

Agenda Item: Trails Edge 9&10 Drainage

Background:

This memorandum analyzes the storm water drainage requirements set forth in the City's Code of Ordinances ("Code") and applies those requirements to the preliminary plat submitted by Washington Trails Edge LLC ("Developer") for the area to be known as Trails Edge Sections 9 and 10 ("Proposed Development"). Section 152.024 of the Code incorporates Chapter 53 "Stormwater Runoff Control" as part of the City's Subdivision Code.

25 Year Rainfall Event Requirement

Section 53.004(A) of the City's Code of Ordinances requires a subdivision's storm water drainage system, including storm sewers, to drain the subdivision development and all other upstream areas that are tributary to the development for a 25-year rainfall event. Furthermore, upstream areas are to be calculated as if they were fully developed according to the City's Land Use Plan. Section 53.004(C) sets forth the technical requirements for stormwater detention.

Like most residential subdivisions, the Trails Edge subdivision was developed in multiple phases over a period of years. The Trails Edge subdivision includes a detention basin located northeast of the Kelsey/Anne intersection designed to comply with the Code Section 53.004 by detaining a 25-year rain event while releasing an undeveloped 2-year rainfall event. When a rainfall event exceeds a 50-year event, the detention basin is designed to engage a spillway built for a 100-year event. Although including more impervious surfaces with the additional zero-lot line duplexes than a preliminary plat approved by the City in 2014, the Proposed Development still complies with the requirements of Section 53.004 without the construction of any additional detention basin.

100 Year Rainfall Event Requirement

Section 53.005 of the Code requires a subdivision to include a flood route consisting of natural and/or man-made surface channels to provide sufficient capacity to convey through a development stormwater runoff (including from all upstream tributary areas) at a peak rate of a 100-year rain event. Most subdivisions satisfy this Code requirement through a surface level drainage easement so long as the water does not overtop curbs.

Sections 1-8 of Trail Edge satisfy the Section 53.005 requirement primarily with surface drainage easements. The Proposed Development can satisfy these requirements without any variance from Code requirements. However, the Developer communicated to City staff that the Developer believed that stormwater control measures beyond the Code requirements is prudent to minimize the impact of heavy rain events on the Proposed Development and other portions of the Trails Edge subdivision due to the

flatness of the Proposed Development. Some control measures considered included higher curb height and flatter pavement cross slope which were discussed at the April Committee of the Whole Meeting.

Voluntary Stormwater Control Design Considerations

The Proposed Development considered at the August 2, 2021 City Council meeting included design features that went beyond the Code requirements, including additional inlets and some slight profile changes were made that would keep the water in the curb lines without the need to increase the curb height or flatten the cross slope. If incorporated in the construction, the streets in the Proposed Development would also act as a detention pond, holding the water until the existing storm sewer in place could remove the water, decreasing the runoff onto adjacent properties along Debates, Grandyle, and Patricia by diverting the water into the roadway and ultimately into the storm sewer. To be clear, the design features brought forward at the April Committee of the Whole, are not required to comply with the Code's Chapter 53 stormwater control requirements. They do act as a benefit to the resident by keeping the stormwater in the roadway and not in the yards in a surface drainage easement.

Comments made during the August 2 City Council meeting expressed concern the Proposed Development will negatively impact stormwater management in the Trails Edge area. The Developer met with City staff on August 4 to discuss potential additional stormwater control measures beyond the City Code requirements. The Developer proposes to modify the Proposed Development to include a surface drainage easement in the Proposed Development that will serve as temporary detention (see attached depiction of the preliminary drainage easement).

Recommendation Summary and Action Requested: Staff has determined the Proposed Development complies with the Code's stormwater control requirements. Developer has voluntarily offered to include additional stormwater control measures not required by the City Code. Staff recommends approval of the preliminary plat.



AUSTIN ENGINEERING CO., INC.
 Consulting Engineers / Surveyors
 220 Emerson Place, Suite 101A
 Des Plaines, IL 60018
 Certificate No. 05131338



TRAILS EDGE SECTION 9 & 10

DEBATES ST. (SEC. 9) & STEPHANIE CT. (SEC. 10)
 WASHINGTON, ILLINOIS 61571

CLIENT: TRAILS EDGE DEVELOPERS LLC

ISSUED
 08-04-2021 CONCEPTUAL STORMWATER EXHIBIT

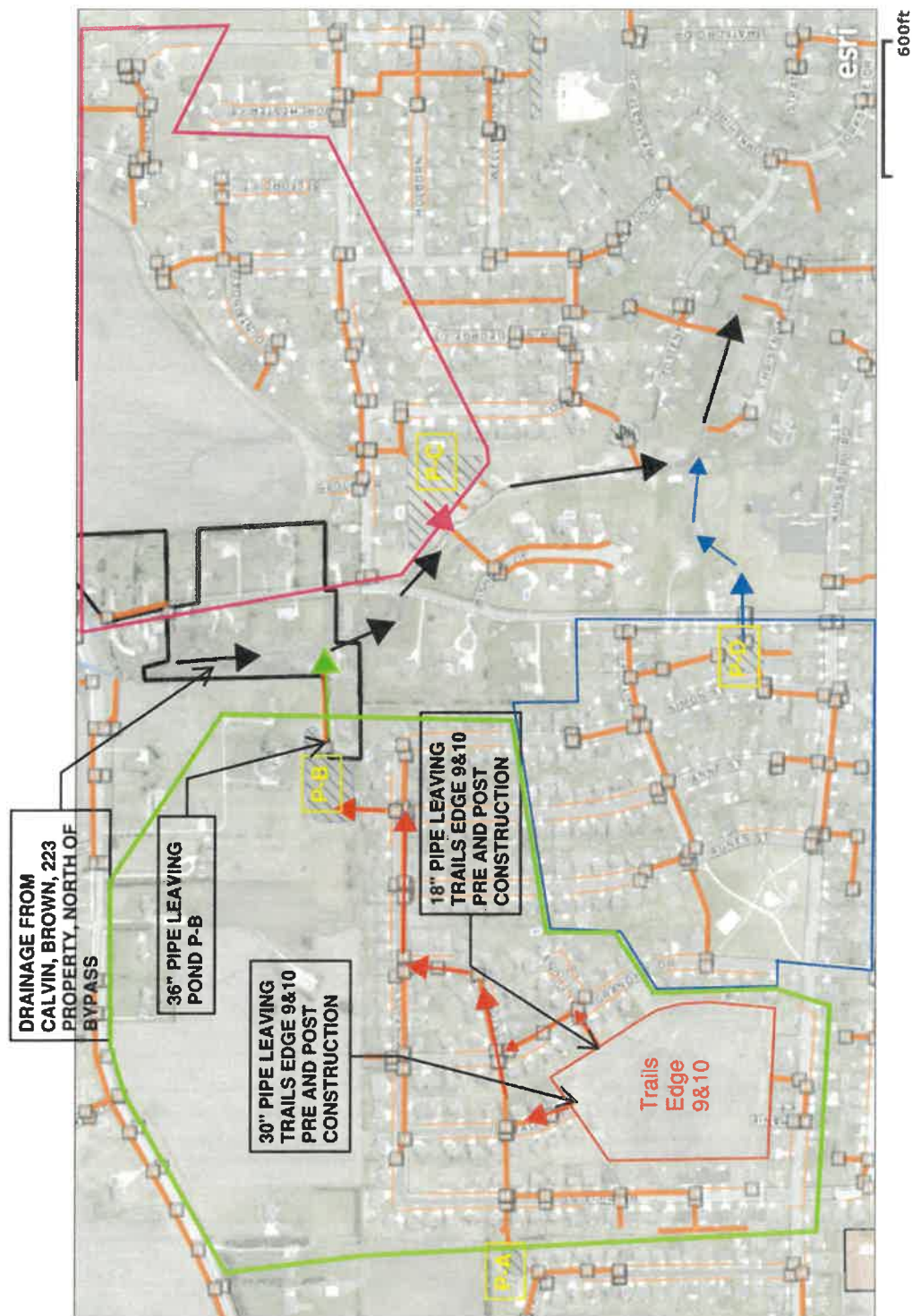
CONCEPTUAL
 NOT FOR CONSTRUCTION

CONCEPTUAL STORMWATER EXHIBIT

PROJECT NO. 75-21-008
 DATE 08-04-2021
 SURVEYED BY
 DESIGNED BY
 DRAWN BY
 APPROVED BY

SHEET

A quick breakdown of the drainage basins and what drains to them is below. The further downstream you look the more drainage areas get picked up by this channel that ultimately crosses under the bridge at Westgate. The Channel behind Bishop Ct sees drainage from most of the North Central part of the City and even includes the fields to the north of the Bypass 24 from Nofsinger to the Lake.



RESOLUTION NO. _____

**RESOLUTION APPROVING THE
PRELIMINARY PLAT FOR
TRAILS EDGE SUBDIVISION SECTIONS 9 AND 10**

WHEREAS, the Developer of Trails Edge Subdivision Sections 9 and 10 has submitted a Preliminary Plat to the City for approval, and

WHEREAS, the City Plat Officer has reviewed the Preliminary Plat and recommends approval of the plat.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF WASHINGTON, TAZEWELL COUNTY, ILLINOIS, that the Preliminary Plat of Trails Edge Subdivision Sections 9 and 10 is hereby approved.

Dated this second day of August, 2021.

Ayes: _____

Nays: _____

Mayor

Attest:

City Clerk

CITY OF WASHINGTON, ILLINOIS

PRELIMINARY PLAT REVIEW CHECKLIST

NAME OF SUBDIVISION Trails Edge Sections 9 and 10
OWNER OF SUBDIVISION Washington Trails Edge, LLC
ADDRESS OF OWNER 3303 N. Main St.
CITY East Peoria **State** IL **Zip** 61611
NAME OF PERSON COMPLETING THIS CHECKLIST Jon Oliphant
ADDRESS OF PERSON COMPLETING THIS CHECKLIST City Hall
CITY **State** **Zip**
TELEPHONE NUMBER 444-1135
DATE OF SUBMITTAL OF THIS PRELIMINARY PLAT TO THE CITY 6/14/21

WHAT IS THE ZONING CLASSIFICATION OF THIS SUBDIVISION? R-1

DO THE PROPOSED USES AND LOT SIZES PROPOSED IN THIS SUBDIVISION COMPLY WITH THE CITY'S ZONING CODE OR THE COUNTY'S ZONING CODE, AS APPLICABLE? Yes
IF NOT, WHAT ACTIONS ARE BEING MADE TOWARDS COMPLIANCE?

Complete the following checklist. Generally, items on the checklist will be checked under the "YES" or "N/A" (not applicable) column. Those items checked "YES" will be shown on the plat or on supporting documentation (construction plans, restrictive covenants, etc.), included with this submittal. For those items that are checked under the "NO" column, explain why this plat should be approved without those items, in the Letter of Request for Preliminary Plat Review.

<u>NO.</u>	<u>REQUIREMENT</u>	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1.	Application for Subdivision with Owner and Developer Identified.	x		
2.	15 copies of Preliminary Plat.	x		
3.	Submitted No Later Than the 15 th Day of the Month Prior to Planning and Zoning Commission Meeting.	x		
4.	Legal Description and Area of Subdivision.	x		
5.	Zoning on and Adjacent to the Site, Including Identification of Non-residential Land Uses.	x		
6.	Names of Owners and Property Tax Identification Numbers of Adjacent Unplatted Land	x		
7.	Names of Adjacent Platted Subdivisions.	x		
8.	Topography on and Adjacent to the Site with 2' Contours Based Upon State Plane Coordinates.			x
9.	100-Year Flood Plain, Flood Hazard Areas, Water Courses and Wooded Areas.	x		

<u>NO.</u>	<u>REQUIREMENT</u>	<u>YES</u>	<u>NO</u>	<u>N/A</u>
10.	Lot lines and Sizes, Block and Lot numbers and Minimum Building Setback Lines.	x		
11.	Easements on and Adjacent to the Site, with Purpose, Location and Dimensions.	x		
12.	Streets and Roads on and Adjacent to the Site, Including Location, Name, and Right-of-Way Width.	x		
13.	Utilities on and Adjacent to the Site, Including Location and Size of Water, Storm and Sanitary Sewers, and Location of Gas, Electric, Telephone and Street Lights.	x		
14.	Existing and Proposed Locations of Storm Water Controls.	x		
15.	Registered Land Surveyor's Certificate.	x		
16.	Plat Officer's Certificate.	x		
17.	City Clerk's Certificate.	x		
18.	Scale not Smaller than 100' Per Inch.	x		
19.	Title, North Arrow, and Date.	x		
20.	Restrictive Covenants, if any.			x
21.	Certificate of Registration on File with City Clerk.			x

FOR CITY OF WASHINGTON USE ONLY

Reviewer: Jon Oliphant

Date of Plat Submittal: 6/14/21

Date of Review: 6/21/21

Date to Go Before Planning and Zoning Commission: 7/7/21

Comments to Planning and Zoning Commission: See the attached memo

Recommendation of Planning and Zoning Commission: 2-2-1 (serves as a recommendation to deny approval)

TO: Sam LaHood, PE

FROM: David Wright, P.E., PTOE

DATE: 14 June 2021

RE: **Trip Generation Statement**
Trails Edge Subdivision, Washington, IL

Introduction

This memorandum serves as a Trip Generation Statement for the proposed last phase of Trails Edge Subdivision in Washington, Illinois. The parcel is located along the north side of Kingsbury Road, between Patricia Street and Grandyle Drive. The development can accommodate up to 47 single-family lots with a minimum of 65 feet of frontage. The proposed configuration is 22 single-family lots with a minimum of 65 feet of frontage and 30 zero lot-line single family lots with a minimum of 100 feet of frontage, totaling 52 single family homes. Following is a trip generation comparison between the two configurations.

Trip Generation

The *ITE Trip Generation Manual 10th Edition* was used to estimate the projected trips by these developments (attached).

Table 1 contains the summary of the land uses and sizes used for the current configuration.

Table 1 - ITE Trip Generation								
Average Weekday Driveway Volumes					AM Peak Hour		PM Peak Hour	
Land Use	ITE Code	Size		Daily Trips	Enter	Exit	Enter	Exit
Single-Family Housing	210	52	Dwelling Units	570	11	31	34	20

Table 2 contains the summary of the land uses and sizes used for the 47 lot configuration.

Table 2 - ITE Trip Generation								
Average Weekday Driveway Volumes					AM Peak Hour		PM Peak Hour	
Land Use	ITE Code	Size		Daily Trips	Enter	Exit	Enter	Exit
Single-Family Detached Housing	210	47	Dwelling Units	519	10	28	31	18

As shown, the proposed trip generation is only minimally higher than the original configuration for the number of total trips anticipated. There are only 51 added daily trips, with AM peak hour trips added of 1 entering and 3 exiting and PM peak hour trips added of 3 entering and 2 exiting.

Please do not hesitate to contact me at 312.343.2151 with any questions.

Project Information	
Project Name:	Trails Edge Addition
No:	
Date:	6/10/2021
City:	Washington
State/Province:	Illinois
Zip/Postal Code:	
Country:	
Client Name:	
Analyst's Name:	DAW
Edition:	Trip Gen Manual, 10th Ed

Land Use	Size	Weekday		Weekday, AM Peak Hour		Weekday, PM Peak Hour	
		Entry	Exit	Entry	Exit	Entry	Exit
210 - Single-Family Detached Housing (General Urban/Suburban)	52 Dwelling Units	285	285	11	31	34	20
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		285	285	11	31	34	20
Total		285	285	11	31	34	20
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		285	285	11	31	34	20

Project Information	
Project Name:	Trails Edge Addition
No:	
Date:	6/10/2021
City:	Washington
State/Province:	Illinois
Zip/Postal Code:	
Country:	
Client Name:	
Analyst's Name:	DAW
Edition:	Trip Gen Manual, 10th Ed

Land Use	Size	Weekday		Weekday, AM Peak Hour		Weekday, PM Peak Hour	
		Entry	Exit	Entry	Exit	Entry	Exit
210 - Single-Family Detached Housing (General Urban/Suburban)	47 Dwelling Units	260	259	10	28	31	18
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		260	259	10	28	31	18
Total		260	259	10	28	31	18
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		260	259	10	28	31	18

