

Hazen *Memorandum*

February 24, 2017

To: Nick Domenick, PE

From: Kathleen Smith, PE

Re: **Blueprint Linden – Artane/Parkwood 60% Design Parking Study**

Artane/Parkwood Parking Study

The Division of Sewerage and Drainage (DOSD) and the Department of Public Service (DPS) requested an analysis of parking within Artane-Parkwood based on the submitted Green Infrastructure Design of the 60% drawings. A survey of utilized parking in the area was completed as well as an analysis of available parking based on GIS data.

The analysis of required on-street parking in the area was completed by counting the houses in the area and identifying existing driveways, garages, or alley parking. In order to minimize the distance between where vehicles park in relation to their respective house, both sides of the street were analyzed separately. The following is a list of assumptions used to complete this parking study analysis:

1. One on-street parking space is defined as 20 feet in length.
2. Each house requires a maximum of two on-street parking spaces on the same side of the street as the house.
3. Each house with a driveway can accommodate one vehicle.
4. Each house with a garage and/or parking in an alley can accommodate one vehicle.
5. On-street parking is not required for houses where both a driveway and a garage and/or alley parking are present.

These assumptions were made to create a conservative estimate of required on-street parking spaces. After completing a survey of actual parking in the area it is clear that many driveways can hold multiple vehicles, negating the need for on-street parking.

To determine the number of required on-street parking spaces, the City of Columbus Municipal code for parking was referenced. The following is a list to determine areas where on-street parking is restricted:

1. Within 5 feet of a driveway.
2. Within 10 feet of a fire hydrant.
3. Within 20 feet of a crosswalk.
4. Within 30 feet of a stop sign.
5. Within 20 feet of an intersection (including alleys).

To calculate the on-street parking spaces eliminated due to the installed curb extension basins, the following criteria was used:

1. A parking spot is eliminated if there is not 4 feet from the edge of curb to the beginning of the basin.

2. A parking spot is eliminated on the street opposite a bump out if the width of the remaining road is less than 19 feet.

The number of parking spots eliminated includes values for all potential bump outs, including alternate or backup basins listed.

Table 1 provides the results of the analysis for the Artane/Parkwood area and identifies the existing on-street parking spaces, the required on-street parking spaces and whether additional parking is required based on the eliminated parking spots due to GI design.

In order to complete an accurate parking study, a survey was completed on all affected streets within Artane/Parkwood. The counts were taken on Sunday February 19th during the morning and on Monday February 20th during the evening. Table 2 provides the parking counts taken and highlights the time where the maximum number of vehicles was seen.

Table 3 provides a parking comparison for Artane/Parkwood. According to the data, there are no conflicts with available on-street parking.

Table 1: Artane/Parkwood Parking Analysis

Location	Homes	Number of Vehicles	Existing On-Street Parking	Homes with Driveways	Homes with Parking in Garage or Alley	Homes with Both Driveways and either Garage Parking or Alley Parking	Homes without Driveways or Garage/Alley Parking	Required On-Street Parking Spots Calculated	Parking Spots Eliminated by Submitted GI Design	Parking Spots Needed (Negative Means No Additional Parking Required)
Genessee Between Cleveland and Bancroft (North)	8	16	20	5	4	3	2	7	0	-13
Genessee Between Cleveland and Bancroft (South) (GI)	4	8	13	4	0	0	0	4	4	-5
Genessee Between Bancroft and Joyce (North)	10	20	18	5	3	1	3	12	0	-6
Genessee Between Bancroft and Joyce (South)	7	14	11	7	3	3	0	4	0	-7
Genessee Between Joyce and Parkwood (North)	17	34	42	9	10	5	1	15	0	-27
Genessee Between Joyce and Parkwood (South) (GI)	11	22	35	11	7	7	0	4	7	-24
Bancroft Between Republic and Arlington (West)	23	46	34	23	18	18	0	5	0	-29
Bancroft Between Republic and Arlington (East) (GI)	20	40	33	20	13	13	0	7	6	-20
Republic Between Bancroft and Joyce (North)	7	14	19	7	4	4	0	3	0	-16
Republic Between Bancroft and Joyce (South) (GI)	5	10	18	5	0	0	0	5	2	-11
Republic Between Delbert and Joan (North) (GI)	3	6	5	3	0	0	0	3	2	0
Republic Between Delbert and Joan (South)	2	4	5	2	1	1	0	1	0	-4
Delbert Between Joan and Hudson (North)	7	14	14	6	2	2	1	6	0	-8
Delbert Between Joan and Hudson (South) (GI)	8	16	15	6	1	1	2	9	1	-5
Myrtle Between Bretton and Taylor (North)	4	8	8	4	4	4	0	0	0	-8
Myrtle Between Bretton and Taylor (South)(GI)	5	10	7	5	2	2	0	3	4	0
Myrtle Between Taylor and Parkwood (North)	2	4	7	2	2	2	0	0	0	-7
Myrtle Between Taylor and Parkwood (South)(GI)	2	4	7	2	2	2	0	0	3	-4
Taylor Between Myrtle and Republic (West)	15	30	26	13	7	7	2	10	0	-16
Taylor Between Myrtle and Republic (East)(GI)	17	34	32	10	8	3	2	16	4	-12
Parkwood Between Republic and Hudson (West)(GI)	11	22	10	11	7	7	0	4	2	-4
Parkwood Between Republic and Hudson (East)	4	8	10	4	4	4	0	0	0	-10
Briarwood Between Greenwich and Cleveland (North)	10	20	15	6	3	1	2	11	0	-4
Briarwood Between Greenwich and Cleveland (South)	8	16	11	5	6	5	2	5	0	-6

Table 2: Artane/Parkwood Observed Parking

		2/20/2017	2/19/2017	Max Parked Vehicles
		Weekday Evening	Weekend Morning	
Location	Homes	Parked Vehicles	Parked Vehicles	
Genessee Between Cleveland and Bancroft (North)	8	2	2	2
Genessee Between Cleveland and Bancroft (South) (GI)	4	2	3	3
Genessee Between Bancroft and Joyce (North)	10	5	6	6
Genessee Between Bancroft and Joyce (South)	7	0	0	0
Genessee Between Joyce and Parkwood (North)	15	10	9	10
Genessee Between Joyce and Parkwood (South) (GI)	11	3	2	3
Bancroft Between Republic and Arlington (West)	23	0	2	2
Bancroft Between Republic and Arlington (East) (GI)	20	4	4	4
Republic Between Bancroft and Joyce (North)	7	3	4	4
Republic Between Bancroft and Joyce (South) (GI)	5	1	2	2
Republic Between Delbert and Joan (North) (GI)	3	0	0	0
Republic Between Delbert and Joan (South)	2	0	0	0
Republic Between Joan and Hudson (North)	7	1	1	1
Republic Between Joan and Hudson (South) (GI)	8	3	2	3
Myrtle Between Bretton and Taylor (North)	4	0	0	0
Myrtle Between Bretton and Taylor (South)(GI)	5	1	1	1
Myrtle Between Taylor and Parkwood (North)	3	0	0	0
Myrtle Between Taylor and Parkwood (South)(GI)	2	0	0	0
Taylor Between Myrtle and Republic (West)	15	4	4	4
Taylor Between Myrtle and Republic (East)(GI)	17	11	10	11
Parkwood Between Republic and Hudson (West)(GI)	11	3	3	3
Parkwood Between Republic and Hudson (East)	4	1	1	1
Briarwood Between Greenwich and Cleveland (North)	10	5	6	6
Briarwood Between Greenwich and Cleveland (South)	8	3	2	3

Table 3: Artane/Parkwood Surplus Parking Analysis

Location	Homes	Existing On-Street Parking	Parking Spots Eliminated by Submitted GI Design	On-Street Parking Spots Remaining Based on Submitted GI Design	Max Parked Vehicles	Surplus (Max)
Genessee Between Cleveland and Bancroft (North)	8	20	0	20	2	18
Genessee Between Cleveland and Bancroft (South) (GI)	4	13	4	9	3	6
Genessee Between Bancroft and Joyce (North)	10	18	0	18	6	12
Genessee Between Bancroft and Joyce (South)	7	11	0	11	0	11
Genessee Between Joyce and Parkwood (North)	15	42	0	42	10	32
Genessee Between Joyce and Parkwood (South) (GI)	11	35	7	28	3	25
Bancroft Between Republic and Arlington (West)	23	34	0	34	2	32
Bancroft Between Republic and Arlington (East) (GI)	20	33	6	27	4	23
Republic Between Bancroft and Joyce (North)	7	19	0	19	4	15
Republic Between Bancroft and Joyce (South) (GI)	5	18	2	16	2	14
Republic Between Delbert and Joan (North) (GI)	3	5	2	3	0	3
Republic Between Delbert and Joan (South)	2	5	0	5	0	5
Republic Between Joan and Hudson (North)	7	14	0	14	1	13
Republic Between Joan and Hudson (South) (GI)	8	15	1	14	3	11
Myrtle Between Bretton and Taylor (North)	4	8	0	8	0	8
Myrtle Between Bretton and Taylor (South)(GI)	5	7	4	3	1	2
Myrtle Between Taylor and Parkwood (North)	3	7	0	7	0	7
Myrtle Between Taylor and Parkwood (South)(GI)	2	7	3	4	0	4
Taylor Between Myrtle and Republic (West)	15	26	0	26	4	22
Taylor Between Myrtle and Republic (East)(GI)	17	32	4	28	11	17
Parkwood Between Republic and Hudson (West)(GI)	11	10	2	8	3	5
Parkwood Between Republic and Hudson (East)	4	10	0	10	1	9
Briarwood Between Greenwich and Cleveland (North)	10	15	0	15	6	9
Briarwood Between Greenwich and Cleveland (South)	8	11	0	11	3	8