Memorandum

To: Brian Swets-City of Portsmouth
Bob Baldwin-City of Portsmouth

Date: 11/6/2017

From: Emily Crow, AICP, and Anthony Scheffler
McBride Dale Clarion

Re: Food Access Analysis

Overview

This memo was prepared to assess the City of Portsmouth for areas with low access to fresh foods and to evaluate the walkability of the City. The analysis is part of the Build One Portsmouth plan update process. These elements have been combined to provide information about vulnerable populations and insight on access to food via car, foot, and transit. In an effort to identify areas that may have low access to healthy food an analysis was done of the entire City to include an analysis of the walkability of all areas of the City as well as the distribution and access to grocery stores. In the analysis several maps were created to illustrate findings and support evidence that was found in outside sources such as Walkscore.com and American Fact Finder.

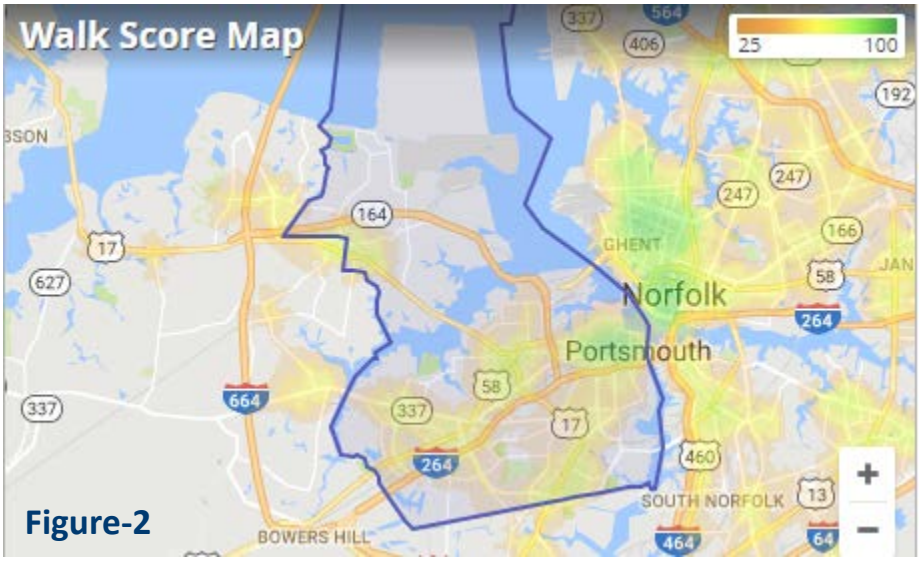
Figure-1

The initial step in the analysis of walkability and food deserts was to create a map that highlighted the grocery stores within the City of Portsmouth. After locating the grocery stores buffers of ¼, ½, ¾ and 1 mile were placed around each grocery store to give a rough indication of accessibility based on distance from the grocery store. The transit lines for the City were then placed in the map with an additional ¼ mile buffer placed around the transit lines to indicate a 5 minute walk to public transportation that could then provide access to a grocery store.

This identified immediate area that had access to public transportation or were within reasonable walking distance of a store. The analysis also identified areas outside of walking distance that don't have access to public transportation due to

distance from a transit line. (*See Figure-1 page 1*)

The next step examined Walkscore.com, which analyzes a multitude of factors including but not limited to, walking routes to destinations such as grocery stores, schools, parks, restaurants, and retail and assigns an area a walkability score based on these factors. In overlaying the map from Walkscore with the map created in step 1, the highly walkable areas are located immediately around the grocery stores with the exception being the downtown area which is rated highly walkable even without a grocery store. (*See Figure-2 page 2*)



The next data examined was the census tract data for the City. After the census tract layer was placed into ArcMap a new field was created and the median household income from the American Community Survey 5-Year Estimates was input into the layer. With the data input the median income is displayed with a color ramp gradient from dark red to white, dark red being the lowest median income and white being the highest. With the data displayed this data we could get a better understanding of distance from grocery stores and the correlation to median household income. It was shown that the areas that were located farther away from the grocery stores generally had higher median incomes, which also means there is a higher probability of personal transportation. (*See figure-3 on page 4*)

Next the analysis examines the housing distribution and where it was located in relation to the grocery stores and the buffers that were created. A building layer was added to the map and everything that was not a residential building was removed from the layer. Once this was done the building layer was clipped to the buffers that had been previously created in order to visually demonstrate the distribution and location of housing. After the building layer was clipped the attribute table was examined and the number of buildings located within each buffer layer was identified. This data showed that within ¼ mile of the stores and transit routes there was 56.7% of the housing units, within ½ mile there was 63% of housing units and within 1 mile

there was 82.4% of all housing in the City. This was a good indication because that meant that only 17.6% of all housing units were located more than ¼ mile from a transit line and more than 1 mile from a grocery store. (*See Figure-4 on page 5*)

Combining these two data sets in an overlay reveals that the majority of the housing located outside the buffer areas is also located in higher median income areas. This indicated that these areas are likely less dependent on public transportation and most likely had some form of personal transportation. (*See Figure-5 on page 6*)

In conclusion, there are some areas of the City that are outside of the walkability area for grocery stores as well as transit lines, which are predominantly in higher median income areas and therefore are not dependent of walking or public transit. However, due to the fact that these areas are located within larger census tract areas, it cannot be determined as to whether or not all homes identified as being located outside the buffer zone are adequately able to access grocery stores. As for the areas that are located within these buffer zones, they are either within immediate walking distance of a grocery store or there is adequate public transportation in the area that they could use to access a grocery store.

Figure-3

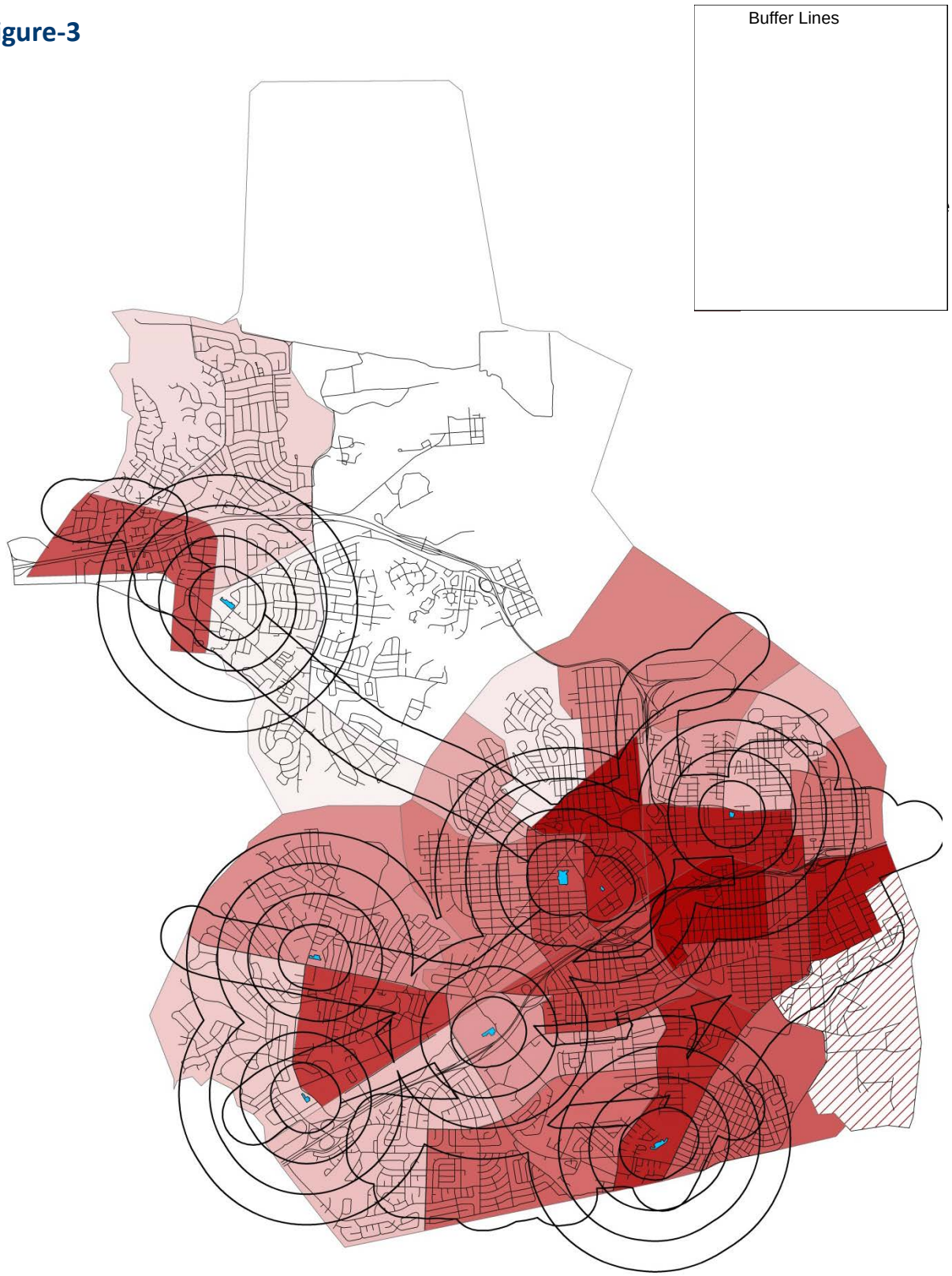


Figure-4

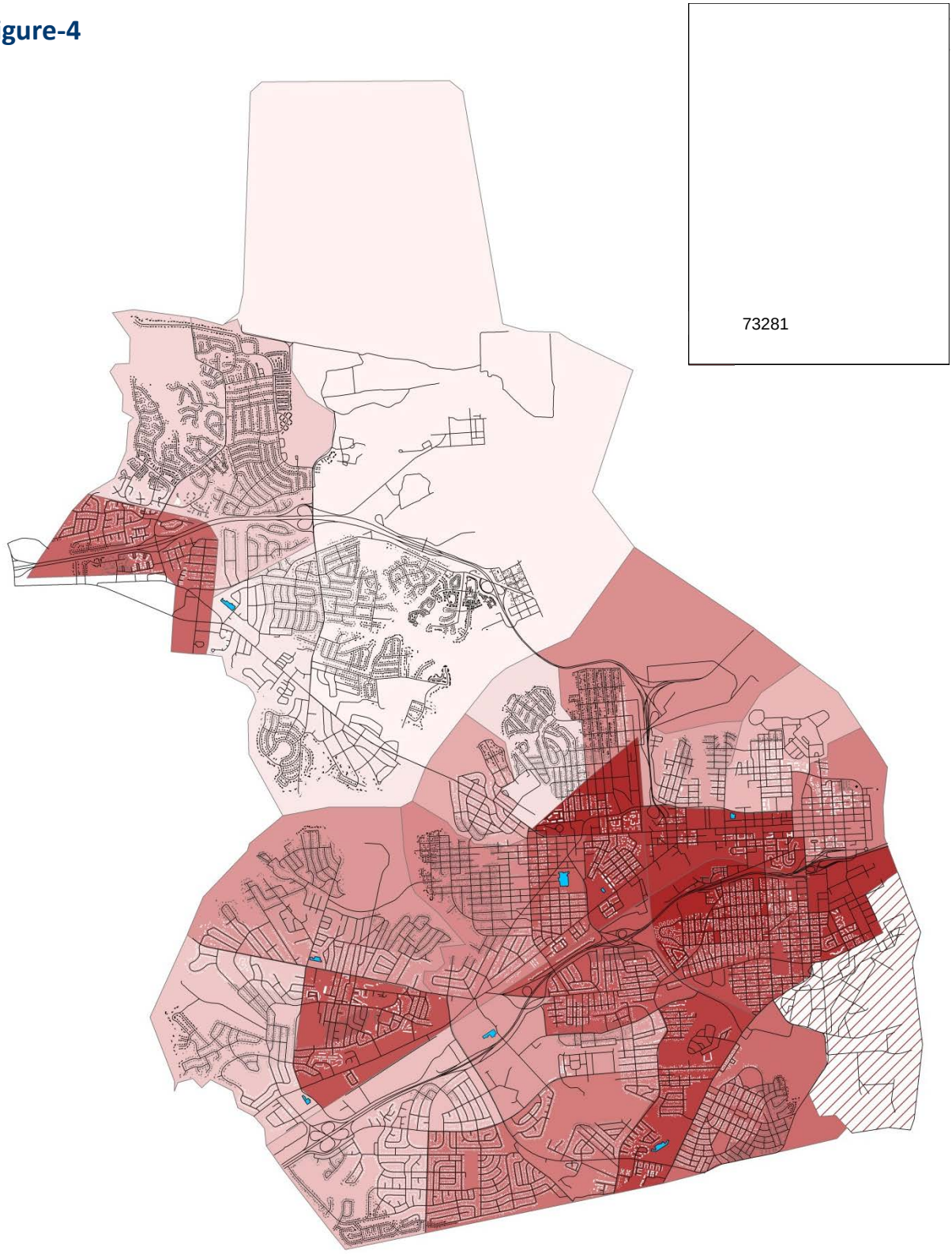


Figure-5