VRE Manassas Park Station
Parking Expansion
Alternatives Analysis
Summary Report

September 18, 2017
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1.0 Introduction

Parking at the Virginia Railway Express (VRE) Manassas Park station is over-subscribed. The parking lot often fills up prior to the last train departing the station. With future ridership, and consequently parking demand, forecasted to increase at this station, VRE initiated a study in fall 2016 to investigate parking expansion needs and alternatives for the VRE Manassas Park station.

The goal of the parking expansion study was to determine the additional number of parking spaces required, as well as to evaluate potential sites and identify a preferred site for the planned parking expansion. Other considerations included connection to a future second platform and a design that would fit with the vision for the City Center Redevelopment District, a proposed transit-accessible high-density mixed-use town center of Manassas Park.

The study included an assessment of existing conditions, environmental documentation, and analysis of locations and design alternatives for the proposed parking facility. Based on the analysis and review of candidate alternatives, including consideration of public input, VRE identified the preferred location, size, and design of the proposed parking facility, and the type of grade-separated pedestrian access to the existing platform.

Throughout the process, VRE has been working closely with the City of Manassas Park and the public to gather feedback and gain consensus on the proposed parking expansion. VRE presented at the Governing Body meetings on September 6, 2016; October 18, 2016; and May 16, 2017; and also held Town Hall Meetings on November 1, 2016 and June 20, 2017.

These meetings provided opportunities for the City and other stakeholders to learn about the project and provide comments on the results of each step in the process. Based on the input received during these meetings, VRE worked with City staff to address comments and as appropriate incorporate the feedback into the project. The comments provided generally included questions or suggestions related to the following topic areas:

- Location and size of the proposed garage
- Access to the garage
- Architectural treatment and other design features of the garage
- Pedestrian access between the garage and the VRE platform

Additional meetings with the Governing Body and stakeholders will occur during the next phases of the project.
2.0 **Summary of Existing Conditions**

**Land Use**

The VRE Manassas Park station is located at 9300 Manassas Drive in Manassas Park, Va. (Figure 1). The station is the third-to-last station on VRE’s Manassas Line, which provides commuter rail service between Broad Run station in Prince William County, VA, and Union Station in Washington, D.C. The station includes a single, 710-foot long platform located on the east side of the Norfolk Southern (NS) Washington District Main Line at Milepost 30.5. The station features a circular Kiss-and-Ride drop-off area and two surface lots and adjacent on-street parking with 616 parking spaces, including Americans with Disabilities Act (ADA) compliant parking spaces.

![Figure 1 Existing VRE Manassas Park Station and Surface Parking](image-url)
The City of Manassas Park is largely built out, with a traditional suburban development pattern dominating. The City’s land use plan recognizes that future land use and development pattern changes will likely occur through redevelopment, and identifies three districts for such activity: City Center, Conner Center, and Four Corners (Figure 2).

- The **City Center Redevelopment District** encompasses the existing VRE station and parking, extending north to Euclid Avenue. This district is envisioned to become a high-density mixed-use town center, with commercial and office uses supplemented by multi-family housing. The district, for which the VRE station is an integral component, will be designed to accommodate all transportation modes.

- The **Conner Center Redevelopment District** is located west of the Norfolk Southern Tracks and east of City Hall, and is adjacent to the City Center District. The Conner Center District will transition from predominantly industrial land use and development pattern to a mixture of light industrial and office. The proposed land use changes and proximity to the VRE station provide opportunities for increased ridership and activity around the station.

- The **Four Corners Redevelopment District** is located along the portion of Route 28 that runs through the City of Manassas Park, and centers on the intersection of Route 28 and Manassas Drive. This district is envisioned as a primary retail commercial hub and a gateway for the city, building on existing retail uses in the area.
The study area is located wholly within the City Center Redevelopment District. The district encompasses an area of approximately 110 acres, including the VRE station, that extends along Manassas Drive from Euclid Avenue to properties on the east side of Digital Drive. The purpose of this district is to encourage an integrated mixture of commercial, office and residential uses. City Center will be a mixed-use and pedestrian-friendly district supporting a diversity of activities and land uses in the area. The mix may include commercial, office, retail, restaurants, hotels, multifamily rental and owner-occupied housing, structured garage and street parking, along with pedestrian walkways and sidewalks that incorporate established City Center streetscape enhancements.

It is anticipated that multiple parcels of land will be consolidated within the City Center Redevelopment District to create higher density, urban, mixed-use developments. Density is intended to be carefully considered, with taller buildings stepping down to complement adjacent areas. Design guidelines envision a unified streetscape and an established building wall located close enough to primary
roadways to make pedestrians feel secure, but far enough away from the roadway to provide an adequate buffer from traffic, space for the streetscape elements, and outdoor dining in appropriate locations.

This type of development pattern is transit supportive, providing a higher concentration of people and activity within close proximity of the VRE station. Residents within this district benefit from having easy access to a transportation option that connects them to some of the region's largest job centers. Incorporating a mix of other activities can also benefit those commuters traveling from a further distance to the VRE station by providing them with retail opportunities within a short walk of both the train and their parked vehicle.

The study area is primarily zoned as I-1 (Industrial) and A-1 (Agricultural), with the southernmost portion of the area along Manassas Drive zoned as B-1 (Neighborhood Business) and B-2 (General Business). The land immediately northwest of the study area is zoned as MU-D (Downtown Mixed-Use), a zoning district that the city created for the purpose of implementing its vision for City Center. The PUD (Planned Unit Development) zoning district is also acceptable within City Center, provided that the residential component of the subject area's development does not comprise more than 40% of the development's total floor area without a waiver having first been approved. Figure 3 shows existing zoning within and surrounding the study area.
In addition to planned and potential development associated with City of Manassas Park redevelopment districts, substantial additional development is planned for northeastern Prince William County (Figure 4). The county has approved construction of Richmond Station and Walker’s Station, both located within a half mile of the VRE Manassas Park station. In total, more than 2,500 units of single-family, multifamily, and townhouse dwellings are planned for Prince William County within three miles of the station. These developments will increase population density in the area, generating additional vehicular traffic and increased demand for VRE service.

VRE developed estimates for future ridership at Manassas Park as part of the Gainesville-Haymarket Extension Study (as of July 2016). That study estimated increases in boardings, which are described in Section 3.0 of this report.
Transportation
Manassas Drive, a four-lane minor arterial roadway, provides the primary vehicular access to the study area. Manassas Drive provides connectivity to Route 28/Centerville Road to the west, which in turn provides access I-66; and to Signal View Drive to the east, which connects to Prince William Parkway. Railroad Drive provides access to the VRE Manassas Park station surface parking lots from Manassas Drive.

Figure 4 Planned Developments in Manassas Park and northeastern Prince William County
VRE rider surveys show that most VRE riders (91 percent) access the station by driving. Traffic counts show that approximately 40 percent of the vehicles arriving at the VRE Manassas Park station parking lot come from the north and 60 percent come from the south.

There are three (3) existing signals in the study area along Manassas Drive: One at Euclid Avenue, one at Park Center Court and one at Railroad Drive (Figure 5). Each of these intersections have different operating characteristics related to the volume of traffic and function of the intersection. There is also an at-grade railroad crossing on Manassas Drive where it crosses the Norfolk Southern tracks. Overflow parking in the City Hall lot can be accessed via Park Center Court or through a separate driveway entrance on the north end of the City Hall lot.

In addition to vehicular access, the VRE Manassas Park station can be accessed by walking, biking, and public transit. The surrounding area features good pedestrian connectivity, with sidewalks along most streets and around the VRE station. Most of the people arriving by foot travel from the nearby apartments or townhomes. A shared-use path connects Signal Hill Park on Signal View Drive with Railroad Drive. Potomac and Rappahannock Transportation Commission (PRTC) provides local bus service that stops on Manassas Drive near the VRE station, with service every 60-75 minutes between 5:15 a.m. and 8:25 p.m. Relatively few people access the station by bike or bus.

Figure 5 shows the multimodal access and circulation in and around the study area.
Parking
Parking Capacity
Parking at the VRE Manassas Park station is currently accommodated through a combination of a surface lot at the station with 596 parking spaces. The lot is located at the end of Railroad Drive, directly south of the rail line and station platform. VRE riders also use nearby on-street parking on Railroad Drive and Manassas Drive, temporary spaces on Park Center Court, as well as two parking lots at City Hall. Table 1 shows a breakout of parking capacity by location.

The parking along Park Center Court is signed as temporary parking for VRE patrons, allowing riders to park on the shoulder during periods when other parking options are full.
<table>
<thead>
<tr>
<th>Parking Area</th>
<th>Space Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRE Surface Lot</td>
<td>596</td>
</tr>
<tr>
<td>Railroad Drive (on-street)</td>
<td>20</td>
</tr>
<tr>
<td>Manassas Drive (on-street)</td>
<td>42</td>
</tr>
<tr>
<td>City Hall Lot</td>
<td>146</td>
</tr>
<tr>
<td>City Hall Gravel Lot</td>
<td>50</td>
</tr>
<tr>
<td>Park Center Court (on-street)</td>
<td>29</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>883</strong></td>
</tr>
</tbody>
</table>

**Parking Utilization**

A review of parking data provided by VRE indicates that lot counts can vary month-to-month, with a small drop in parked vehicles observed during the months around major holidays, periods of significant weather events that impact operation of the federal government, and summers. Average parking counts for the Manassas Park Station have increased since the summer of 2013 (Figure 6). This increase is in line with recent ridership data for the same period of time, which shows a small growth in boardings at the Manassas Park Station since 2013. The most recent 12-month period of count data – from July 2015 to June 2016 – showed an average of 600 occupied parking spaces in the VRE lot.

![Figure 6](image-url)
Daily parking counts for March 2016 (a month without a widely observed holiday) were reviewed to observe daily patterns of parking activity. The data showed that the surface lots reached capacity every day except for Friday, with Wednesdays having the highest number of parked vehicles (Figure 7). Both Monday and Friday typically had fewer parked vehicles, with Friday consistently the lowest. This drop is likely associated with many federal government employees telecommuting or opting for flex scheduling.

![Figure 7 March 2016 Daily Parking Counts at the VRE Manassas Park Station](image)

Parking counts collected on a Wednesday in September 2016 reflected similar utilization, with both VRE lots and the on-street parking along Railroad Drive to be 100 percent utilized. The count data showed an additional 44 riders parked on Manassas Drive (10), Park Center Court (6), and in the City Hall lot (28) and walked to the station. Ten riders were observed parking in the lot of the office building on Railroad Drive and walking to the station. In total, 670 VRE patrons drove and parked to ride the train that day.

On a typical weekday, the VRE parking lot is the first to fill, and, as it reaches capacity, riders will park along Railroad Drive and Manassas Drive and in the City Hall paved lot. Figure 8 shows the pattern of the VRE lot filling up on the morning
observations were collected. Daily parking counts for March 2016 and observations conducted in September 2016 indicated that the VRE Manassas Park station surface lots and the on-street parking on Railroad Drive reached capacity every weekday except for Friday.

![Figure 8: Weekday Morning Parking Fill Behavior (September 2016)](image)

Observations of the Kiss-and-Ride area at the VRE Manassas Park station indicated that people do not necessarily drop off and pick up within the designated area. In addition, multiple crosswalks around the existing Kiss-and-Ride circular drive appear to be confusing to some VRE patrons.

**Hydrology**

Most of the VRE Manassas Park station study area drains to Russia Branch, which lies south of the rail line and connects with Bull Run and ultimately deposits into the Potomac River. There is a pipe that allows water to pass below the tracks from north to south near the center of the existing platform. A portion of the study area along the north and eastern edges drain to a small unnamed stream that flows to the existing stormwater pond just east of the study area.
**Topography**

The topography of the study area is gently to steeply rolling with some steeper slopes of 15 percent or greater, particularly along Russia Branch and its tributaries (Figure 9). There are also some steeper slopes adjacent to the Norfolk Southern rail line where grading was done to enable the tracks to be built.

![Figure 9 VRE Manassas Park Station Slope Analysis](image)

A notable feature of the area topography is the different elevations immediately adjacent to the existing VRE platform. The existing VRE platform is located at an elevation of approximately 230 feet above mean sea level. The areas on the west side of the platform and tracks range from 225 feet above mean sea level directly west of the tracks to 245 feet above mean sea level on Park Center Court. On the east side, the existing VRE parking lot is generally located at 220 feet above mean sea level. These differing elevations may present challenges in providing a direct, grade-separated connection between the two sides of the track.
These challenges, and a determination of whether the platform connection is above or below grade, will be addressed as part of the preliminary design phase of the project.

Utilities

The study area is served by a network of water and sewer lines that can be extended to support development of a new parking facility (Figure 10). Depending on the preferred location of a parking facility, further investigations would need to be conducted to determine whether water lines would need to be moved to avoid construction impacts or to facilitate future development.

Multiple stormwater facilities in the study area support existing development. Additional information will be required to determine the current capacity of these facilities and whether they can support the development of a parking facility. The goal will be to use the existing facilities to the extent possible and develop additional stormwater facilities as part of the parking expansion project as needed.

A major electrical transmission line bisects the existing VRE surface parking lots. This transmission line, which is part of the larger regional electrical grid, represents a complicating factor in consideration of the existing parking lot as a parking expansion site.
Figure 10  Existing Utilities in the VRE Manassas Park Station Study Area
### 3.0 Parking Demand Forecast

Ridership at the VRE Manassas Park Station averaged approximately 750 daily boardings in 2015.\(^1\) Based on responses collected in the 2015 VRE Annual Customer Survey, most patrons (91%) arrived at the station in a vehicle, with 85 percent of patrons parking at the station (Table 2). Approximately 9 percent of riders arrived on foot. Very few riders accessed the station by bike or bus.

#### Table 2  Mode of Arrival for VRE Manassas Park Station Patrons

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drove alone / Parked</td>
<td>429</td>
<td>83%</td>
</tr>
<tr>
<td>Drove / Rode with other and parked</td>
<td>15</td>
<td>3%</td>
</tr>
<tr>
<td>Dropped off by car</td>
<td>26</td>
<td>5%</td>
</tr>
<tr>
<td>Walked</td>
<td>45</td>
<td>9%</td>
</tr>
<tr>
<td>Biked</td>
<td>2</td>
<td>0%</td>
</tr>
<tr>
<td>Bus (PRTC Omnilink)</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>518</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: 2015 VRE Annual Customer Survey

Forecasting future parking demand for the VRE Manassas Park Station requires an understanding of future ridership demand for VRE service. Ridership forecasts have been developed for the entire VRE system under a number of scenarios as part of the planning for an extension of the Manassas Line to Gainesville and Haymarket, with projected ridership for the VRE Manassas Park Station ranging from 950 to 1,560 daily boardings in 2040. Table 3 summarizes the scenarios considered and associated service levels and projected boardings for the VRE Manassas Park station (as of July 29, 2016).

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\(^1\) Based on 2015 VRE Master Agreement Survey.
Table 3 VRE Manassas Park Station Forecasted Daily Boardings (2040)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
<th>No. Trains per Day</th>
<th>Forecasted Mannassas Park Daily Boardings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1</td>
<td>Maintain existing service levels</td>
<td>16</td>
<td>950</td>
</tr>
<tr>
<td>Scenario 2</td>
<td>Improve service levels using existing train slots</td>
<td>22</td>
<td>1,310</td>
</tr>
<tr>
<td>Scenario 2a</td>
<td>Improve service levels using existing train slots with Gainesville/Haymarket extension</td>
<td>22</td>
<td>1,250</td>
</tr>
<tr>
<td>Scenario 3</td>
<td>Increase service levels based on VRE 2040 System Plan</td>
<td>46</td>
<td>1,560</td>
</tr>
<tr>
<td>Scenario 3a</td>
<td>Increase service levels based on VRE 2040 System Plan with Gainesville/Haymarket extension</td>
<td>46</td>
<td>1,490</td>
</tr>
</tbody>
</table>

For purposes of the parking demand forecast, ridership values for 2020 and 2030 were interpolated from the 2015 and 2040 ridership figures. The 85 percent observed mode split, which is in line with the results reported in the 2015 VRE Master Plan Agreement Survey, was used as the baseline for forecasting parking demand. A 5 percent contingency figure was applied to the existing mode split to calculate the estimated parking demand for each scenario in 2020, 2030, and 2040 (Table 4).

Table 4 VRE Manassas Park Station Parking Forecast (2020, 2030, and 2040)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Avg. Daily Parking Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>1  Continue Existing Service (16 Daily Trains)</td>
<td>670</td>
</tr>
<tr>
<td>2  Improved Service Plan (22 Daily Trains)</td>
<td>670</td>
</tr>
<tr>
<td>2a Improved Service Plan with GHX (22 Daily Trains)</td>
<td>670</td>
</tr>
<tr>
<td>3  2040 System Plan (46 Daily Trains)</td>
<td>670</td>
</tr>
<tr>
<td>3a 2040 System Plan with GHX (46 Daily Trains)</td>
<td>670</td>
</tr>
</tbody>
</table>

Based on VRE’s existing capacity to expand service, Scenarios 2 and 2a were deemed the most likely to occur by 2040 and were used to determine future parking needs at the station. Scenarios 3 and 3a require other more extensive infrastructure improvements that are not solely within the control of VRE.

The forecasted parking demand for the VRE Manassas Park station for Scenarios 2 and 2a in 2040 is between 1,130 and 1,180 spaces. Meeting this demand requires an additional 510 to 560 parking spaces at the station. Table 5 summarizes projected 2040 ridership and parking demand by scenario.
<table>
<thead>
<tr>
<th>Scenario</th>
<th>2040 Boardings</th>
<th>2040 Parking Demand</th>
<th>Existing Parking Supply</th>
<th>2040 Unmet Parking Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Continue Existing Service (16 Daily Trains)</td>
<td>950</td>
<td>860</td>
<td>616</td>
<td>240</td>
</tr>
<tr>
<td>2 Improved Service Plan (22 Daily Trains)</td>
<td>1,310</td>
<td>1,180</td>
<td>616</td>
<td>560</td>
</tr>
<tr>
<td>2a Improved Service Plan w/ GHX (22 Daily Trains)</td>
<td>1,250</td>
<td>1,130</td>
<td>616</td>
<td>510</td>
</tr>
<tr>
<td>3 2040 System Plan (46 Daily Trains)</td>
<td>1,560</td>
<td>1,400</td>
<td>616</td>
<td>790</td>
</tr>
<tr>
<td>3a 2040 System Plan w/ GHX (46 Daily Trains)</td>
<td>1,490</td>
<td>1,340</td>
<td>616</td>
<td>730</td>
</tr>
</tbody>
</table>
4.0 Site Assessment

Candidate Parking Expansion Sites

Through discussions with City of Manassas Park staff, six initial candidate sites – including the existing VRE surface parking lot – were identified for parking expansion at the VRE Manassas Park station. The five initial sites included both publicly- and privately-owned sites. All five sites were located on the east side of Manassas Drive, either adjacent to or highly proximate to the Norfolk Southern tracks. A sixth site, a privately-owned parcel located on the west side of Manassas Drive, was included for consideration at the request of the City of Manassas Park Governing Body as a result of public outreach.

Following is a summary description of the seven candidate parking expansion sites. Figure 11 shows a map of the candidate locations.

- The **Existing VRE Surface Parking Lots (Location 1 in Figure 11)** are located on the south side of the Norfolk Southern tracks and features 596 parking spaces and a circular driveway with a Kiss-and-Ride area.

- The **City Hall Site (2)** is located on the north side of Park Center Court, directly west of City Hall. This 2.3-acre site, which is accessible from Manassas Drive, is not immediately adjacent to the Norfolk Southern tracks. The site is owned by the City of Manassas Park and currently houses a 150-space surface lot.

- The **Millicent Site (3a)** is an undeveloped two-acre parcel adjacent to the Norfolk Southern tracks at the intersection of Manassas Drive and Park Center Court. The site is owned by the City of Manassas Park.

- The **Millicent and Truck Driving School Site (3a and 3b)** features one publicly and one privately owned site - the undeveloped Millicent Site and an adjacent parcel used for commercial driver’s license training - combined to provide 6 acres accessible from both Manassas Drive and Park Center Court.

- The **Car Repair Site (4)** is a 2.9-acre site located adjacent to the Norfolk Southern tracks. The site features multiple existing buildings and currently houses three automotive businesses. The privately-owned site is accessible from Park Center Court.
- The **Bays Site (5)** is located adjacent to the Norfolk Southern tracks, at the far end of Park Center Court. At 7.6 acres, this is the largest of the candidate sites. The site is publicly owned and is mostly undeveloped at present.

- The **South Corner Site (6)** is a privately-owned parcel on the west side of Manassas Drive, immediately south of the Norfolk Southern Tracks. The site is accessible from Railroad Drive.

![Figure 11 Candidate Sites for VRE Manassas Park Station Parking Expansion](image-url)
Evaluation Criteria
A set of assessment criteria was developed – drawing on input from VRE and City of Manassas Park staff and from the public – to facilitate selection of a preferred parking expansion site.

Each site was evaluated based on four primary criteria:

- **Proximity to the platform** reduces passenger walk time. A parking facility that is within a short walk of the station platform will be more desirable. Consideration for how the station platform and parking facility will connect is also critical.

- **Public property ownership** reduces development cost and time. Sites that are not publicly owned will require additional time to allow for negotiations and acquisition. A privately held site will require additional funding for purchase.

- **Support for the City Center Vision** in building form and location of land uses. The City of Manassas Park is committed to realizing the potential of the City Center Redevelopment District and turning it into a mixed-use and vibrant activity center. Placing parking on a site may limit its development potential. Conversely, the siting of parking may provide added benefits to other nearby properties.

- **Traffic access and circulation** considerations, with an emphasis on facilitating parking facility ingress and egress and minimizing congestion on adjacent roads. The location of driveways of the parking facility in relation to existing streets and developments can have a positive or negative impact on future traffic patterns in the city.

Each site was scored based on the criteria outlined above to inform the selection of a preferred site to advance into the next phase of the project. During this phase of assessment, both the public and the Governing Body for the City of Manassas Park were given the opportunity to review findings and provide comment. This stakeholder input was taken into consideration prior to the City’s Governing Body adopting a preferred site.
Development Potential

The City of Manassas Park’s vision for the City Center Redevelopment District calls for a mixed-use development that would allow residents to conduct daily shopping and business in a walkable environment, resulting in fewer vehicle trips to access such destinations outside the city. The city owns three major development parcels in the area, as well as City Hall and its supporting parking lots. Those parcels are all potentially available to support a mixed-use development and to help fund the VRE parking expansion.

The potential contributions that a Public Private Partnership could make to the garage development will depend on the land value generated by demand for development. Land value, the amount that a user/developer is willing to pay for its development rights, is a direct function of what uses can be built; how much can be built; and what rents/prices can be charged for the ultimate development (supportable rents).

Supportable rents/prices reflect the rents and prices achieved on competitive properties plus any increment related to the advantages due to a site’s location – including access to the VRE station – and appeal due to a well-designed walkable environment with inviting public spaces.

An analysis of the potential market for development in the City of Manassas Park (see Appendix A) showed the candidate VRE parking expansion sites have a proven market for apartments, but opportunities for office and retail development are much more limited. Among the key findings of the market analysis were:

- The office market is overbuilt for the primary tenancy of neighborhood-serving professionals and service providers.

- The retail market is generally well-served, but the two sites with frontage on Manassas Drive could likely attract retailers if developed with sufficient adjacent parking.

- There is minimal demand for retail and service space on the Bays Site, except perhaps for a childcare center serving VRE commuters.
• The City’s goal of a mixed-use development that devotes 60 percent to commercial space is challenging. Similar town center projects in suburban locations are more likely to be 60 percent to 80 percent residential.

This market review provided perspective on the potential demand for development and guidance relative to placement on the site for maximum returns. These findings ultimately will affect the funding strategy selected for garage construction.

Site Assessments – Surface Parking

Construction of 560 additional surface spaces – the projected unmet parking demand in 2040 – would require approximately 4.5 acres of land. An initial exercise was conducted to determine whether any of the candidate sites could accommodate a new surface parking lot of this size.

The existing VRE surface lots were the first to be considered for expansion. This location is constrained by current site conditions adjacent to the parking lots, including two existing stormwater management facilities (one just east of Railroad Drive and one at the northeast edge of the surface lot).

Russia Branch Creek runs just east of the parking lot. This creek is located at a lower elevation than the existing VRE parking lot, creating steeper grades adjacent to the creek. There are also relatively tall retaining walls, approximately 10-15 in height, that were constructed to facilitate the construction of a flat parking lot in the current location.

It was therefore determined that an expansion of the existing surface parking lot would not be feasible based on the existing stormwater facilities, steep slopes, existing stream, and associated wetland areas.

The candidate sites west of the Norfolk Southern tracks were considered for a surface parking lot. Locating a large surface parking lot on any of the sites considered would create a large parking area that would impact the future potential for the development of the City Center Redevelopment District. The only site that would be feasible to support a 4.5-acre parking lot is the Bays Site, which is a total of 7.5 acres in size. Figure 12 shows the approximate area that would be necessary to provide 560 parking spaces as a surface lot.
Figure 12  Estimated Surface Parking Area Required for 560 spaces

It was determined that construction of a new surface lot on any of the other candidate sites was infeasible, due to lack of available acreage and negative impacts to development opportunities and fulfillment of the City Center vision. Based on this determination, each site was then assessed for a potential parking structure.
Site Assessments – Structured Parking

Existing VRE Surface Parking Lot
The existing VRE surface lot has a capacity of 596 parking spaces. On the side nearest the Norfolk Southern tracks is a Kiss-and-Ride area for passengers to be dropped off and picked up from the station.

There are two stormwater facilities adjacent to the parking lot, including one directly east of the circular driveway and one at the far northeastern edge of the parking lots. These facilities also border the Russia Branch Creek.

The pedestrian network includes sidewalks along the northwest edge of the parking lot between the parking and the VRE platform. This sidewalk extends to the southwest to connect to Manassas Drive where riders parking along Manassas Drive or near City Hall can access the station on foot. There are sidewalks on the east and southern side of Railroad Drive providing connections to riders that walk from parking along Railroad Drive or from nearby housing developments.

The site has a high-voltage transmission line that spans the entire site from west-to-east (Figure 13). In order to accommodate a parking structure, the transmission line and the towers would need to be relocated. Another consideration for using this site would be the need for temporary parking for VRE riders during construction. Having to find a temporary parking location would entail costs associated with constructing temporary parking spaces or leasing space, and possibly shuttling riders to the station.
Figure 13 Existing VRE Surface Parking Lots
City Hall Parking Site

The City Hall Parking Site is a 150-space surface lot located directly west of City Hall. This site is accessible from Manassas Drive approximately 250 feet north of Park Center Court and from Park Center Court just east of the City Hall. The site supports two functions: it provides parking for City Hall staff and visitors and it provides 100 parking spaces through an agreement to support the City Center Development.

The concept for developing a parking structure on this site is shown in Figure 14. In the concept, the garage replaces the existing parking lot. To accommodate up to 560 VRE parking spaces, replace the 100 spaces on the site, and support retail uses on the first level would require up to a six (6) level building. The building would feature retail and retail parking on the first floor, four (4) levels of VRE parking above the retail, and an additional level of parking to replace the existing surface parking.

The garage could be designed with retail frontage along Manassas Drive. In this option, the parking garage entrances could be located at the current access locations into the parking lot, with one at the north end of the site and another along Park Center Court just west of City Hall. These entrances could be designed with both locations allowing both entering and exiting movements or with separate entrance and exit locations.

Redesigned sidewalks would surround the garage to support pedestrian access around the garage and from the garage to the VRE platform to the south. Along Manassas Drive, the sidewalk would be wider to support retail uses that front the street. The sidewalk connections would need to continue across Park Center Court, including a pedestrian crosswalk to connect to a sidewalk connecting to a bridge or tunnel across the rail line to the existing platform east of the tracks. Areas adjacent to the garage would also need to be designed to provide locations for stormwater management facilities.
Figure 14 City Hall Site Parking Structure Concept
**Millicent Site**

The two-acre Millicent Site, previously identified as a temporary park, is an undeveloped area at the intersection of Park Center Court and Manassas Drive. The northern portion of the site is generally at the same elevation as Park Center Court and then drops lower towards the southeast portion of the site. There is an existing cluster of mature vegetation along the eastern side of the site.

As shown in Figure 15, the garage would be located along the northern portion of the site, extending from the eastern property line to the western property line. Based on this configuration, access in and out of the garage would only be available from an entrance near the eastern edge of the garage. This design requirement is needed to allow for queuing of vehicles along Park Center Court when exiting the garage in the evening.

Based on the estimate of 560 spaces, the garage would include four (4) levels to support VRE parking needs. Access from the garage to the station platform would occur from the southeast edge of the garage via a sidewalk and a bridge or tunnel connection to the platform along the east side of the tracks.

Sidewalks would be constructed on each side of the garage to support both the garage users as well as the adjacent development’s access to the station platform. Stormwater management facilities would be located south of the garage.
Figure 15  Millicent Site Parking Structure Concept
Millicent and Truck Driving School Site
The combination of the Millicent Site and the adjacent Truck Driving School Site yields a 6-acre parcel. While the Millicent Site is currently undeveloped, the Truck Driving Site is occupied by Shippers Choice Truck CDL Training. There are two (2) single-story buildings on the site that house the offices and other support activities for the school. The remaining portions of the site are mostly paved areas that support vehicular and truck parking. This site is at a lower elevation than the Millicent Site and is closer in elevation to that of the existing railroad tracks. The site has a driveway along Manassas Drive that allows for both left and right turns from Manassas Drive into the parking area.

As shown in Figure 16, by combining the Millicent and Truck Driving School Sites there is additional space available to allow for the construction of retail uses along Manassas Drive and a road connection between Park Center Court and Manassas Drive. The garage could then have access points connecting to the new road, allowing for access to the garage from both Park Center Court and Manassas Drive. Based on the dimensions of the garage and retail space, there would be some available surface space between the garage and the retail buildings that could serve as parking and provide service access to the retail.

Based on this layout, the garage could be a total of three (3) floors. Sidewalks would be provided along both Park Center Court and Manassas Drive and would connect to the VRE platform via a bridge or tunnel. A stormwater management facility is shown at the south end of the garage to help address the onsite stormwater requirements.
Figure 16  Millicent and Truck Driving School Site Parking Structure Concept
Car Repair Site
The Car Repair Site contains three existing businesses: Park Center Automotive, Manassas Quality, and V&D Auto detailing, each of which have separate buildings on the property. These sites can be accessed by two driveways along Park Center Court. The northern half of the Car Repair Site contains the three buildings and parking areas to support the automotive uses. The south half of the site is lower in elevation and includes a drainage area that collects water from locations along Park Center Court. The stormwater collected in this drainage area passes below the railroad tracks and is then carried to the stormwater management facility northeast of the existing VRE parking lot.

As shown in Figure 17, the placement of a garage on the Car Repair Site would generally cover most of the width of the site. Because the garage has an extended frontage along Park Center Court, garage ingress and egress could be provided at two locations along Park Center Court. The three (3) level garage would have approximately 185 spaces per level.

Sidewalks would be constructed along the Park Center Court frontage and on the side of the garage, connecting to the existing VRE platform via a bridge or tunnel. A stormwater management facility is shown at the south end of the garage to help address the onsite stormwater requirements.
Figure 17  Car Repair Site Parking Structure Concept
Bays Site
At 7.6 acres, the Bays Site is the largest of the candidate sites. This mostly undeveloped site is located at the east end of Park Center Court, and includes a narrow unpaved access road. On each side of the access road are a mix of coniferous and deciduous wooded areas. The highest elevation of the site occurs near the intersection with Park Center Court. From there, the site slopes down toward the railroad tracks to the east, toward the stormwater facility to the northeast and toward the drainage swale to the north.

A 12-inch existing water line traverses the property starting at the end of Park Center Court and going southeast toward the railroad tracks, then running parallel to the railroad tracks toward the north.

Figure 18 illustrates a concept for construction of a parking garage on the Bays Site. The garage is proposed to be located near the western edge of the property, allowing for the remaining portion to be used for future mixed-use development associated with City Center. The three (3) level garage concept would provide 185 spaces per level. The garage would occupy approximately 1.2 acres of the 7.6-acre property, compared to the 4.5 acres that would be needed to provide surface parking.

Because the garage is located on the western edge of the property and close to the existing rail line to minimize the walking distance to the platform, the existing water line will need to be relocated, most likely along the extension of Park Center Court.

Sidewalks would be provided along the Park Center Court frontage and along the side of the garage, connecting the existing VRE platform via a bridge or tunnel. A stormwater management facility is shown at the southeast edge of the garage to help address the onsite stormwater requirements.
Figure 18 Bays Site Parking Structure Concept
**South Corner Site**
The South Corner Site is located west of Manassas Drive and north of the intersection of Railroad Drive. The site is privately owned and currently has some existing stormwater management facilities along with a high voltage power line along the northern edge.

As shown in Figure 19, a VRE parking garage could be placed on this site just north of Railroad Drive, with access from Railroad Drive. The garage would be located in the southern portion of the parcel to remain clear of the existing high voltage power line along the northern edge of the site. Access to this area would need to be maintained to allow for maintenance to the power line. The existing stormwater management facility would need to be reconstructed or relocated to accommodate the siting of the garage.

The four (4) level garage would provide about 165 spaces per level. The garage could be designed with either one or two driveway locations along Railroad Drive to support ingress and egress.

Siting a parking facility on the west side of Manassas Drive would require pedestrian improvements – preferably grade-separated – to provide a safe connection between the parking facility and the station area. Because of the relatively low existing elevation of the site it may be feasible to build a tunnel connection below Manassas Drive, thereby providing more direct access to the station area. Any plans to construct a pedestrian bridge across Manassas Drive would need to consider the power lines along the northern and eastern edges of the property. It would also be beneficial to upgrade the at-grade pedestrian crossing of Manassas Drive at Railroad Drive to provide an alternative to accessing the station. This intersection was recently upgraded with pedestrian curb cuts, crosswalks, and pedestrian signals associated with the new development.

Sidewalks also would be improved along the Railroad Drive frontage to connect to the pedestrian crossing on Manassas Drive. A stormwater management facility is shown along the western edge of the garage to help address the onsite stormwater requirements.
Figure 19  South Corner Site Parking Structure Concept
VRE Parking Expansion within the City Center Context

To help understand how a parking garage might work as part of the larger City Center development, an overall concept was developed showing each candidate garage site within the larger development context (Figure 20). This City Center concept is not intended to be a preferred development plan but rather an example of how the area might develop in the coming years. The specific uses that might be built on each of the sites could vary, but this plan illustrates what the area may look like in the future.

Figure 20  City Center Development Concept with Candidate Garage Locations
Grade-Separated Connection to the Existing VRE Platform

Another consideration during the planning process was comparing the potential for a pedestrian bridge connection across the tracks with an underground tunnel connection. Based on the initial analysis, both options were feasible. Each had some pros and cons that should be further considered during the preliminary design process. Figure 21 and Figure 22 provide conceptual illustrations of pedestrian bridge and pedestrian tunnel treatments, respectively.

Key considerations during the next phase of evaluation for a pedestrian connection between the parking structure and VRE platform will include the walking distance and vertical connection requirements, including need for additional elevators; the cost of a tunnel versus a pedestrian bridge; safety during evening hours; and construction phasing.
## 5.0 Selection of Preferred Parking Expansion Site

The study team evaluated each candidate parking expansion site against the four primary selection criteria: proximity to the platform; public property ownership; support for the City Center vision; and ease of traffic access and circulation. Table 6 summarizes the pros and cons for each site as they relate to the selection criteria.

### Table 6  Summary of Pros and Cons for Each Candidate Parking Expansion Site

<table>
<thead>
<tr>
<th><strong>VRE Surface Parking Lots</strong></th>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public ownership</td>
<td>High-voltage power line needs relocation</td>
</tr>
<tr>
<td></td>
<td>Proximate to existing platform</td>
<td>Increased congestion at Railroad Drive and Manassas Drive intersection</td>
</tr>
<tr>
<td></td>
<td>Currently used for VRE parking</td>
<td>Construction would result in temporary loss of existing parking</td>
</tr>
<tr>
<td></td>
<td>Grade-separated crossing not required to access existing platform</td>
<td>Would not support City Center District development</td>
</tr>
<tr>
<td></td>
<td>Proximity to existing platform</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>City Hall Site</strong></th>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public ownership</td>
<td>Long walk to existing platform (average 725 feet)</td>
</tr>
<tr>
<td></td>
<td>Location supports shared use of parking spaces</td>
<td>Six levels of parking on prime development site</td>
</tr>
<tr>
<td></td>
<td>Opportunity for two access points</td>
<td>Requires pedestrian crossing of Park Center Court and Millicent Site to access platform</td>
</tr>
<tr>
<td></td>
<td>Provides some queuing distance for vehicles</td>
<td>Construction would result in temporary loss of existing parking</td>
</tr>
<tr>
<td></td>
<td>Currently used for parking</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Millicent Site</strong></th>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short walk to platform (average 375 feet)</td>
<td>Only one potential access point to garage</td>
</tr>
<tr>
<td></td>
<td>Public ownership</td>
<td>Limited queuing distance available for vehicles</td>
</tr>
<tr>
<td></td>
<td>Location supports shared use of parking spaces</td>
<td>No retail on prime development site</td>
</tr>
<tr>
<td></td>
<td>Four levels of parking</td>
<td></td>
</tr>
</tbody>
</table>
### Millicent and Truck Driving School Site

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
</table>
| › Short walk to existing platform (average 300 feet)  
› Location supports shared use of parking spaces  
› Opportunity for retail along Manassas Drive  
› Three levels of parking  
› Provides some queuing distance for vehicles | › Requires acquisition of private property  
› Requires construction of new road between Park Center Court and Manassas Drive |

### Car Repair Site

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
</table>
| › Short walk to existing platform (average 300 feet)  
› Three levels of parking  
› Location supports shared use of parking spaces  
› Opportunity for two access points  
› Provides some queuing distance for vehicles | › Requires acquisition of private property |

### Bays Site

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
</table>
| › Short walk to existing platform (average 300 feet)  
› Public ownership  
› Three levels of parking  
› Opportunity for two access points  
› Provides greater queuing distance for vehicles | › Passengers access platform only from north end  
› Location may not support shared use of parking spaces  
› Requires relocation of 12-inch water line |

### South Corner Site

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
</table>
| › Four levels of parking  
› Does not hinder development sites in the City Center District  
› Opportunity for two access points  
› Does not require grade-separated crossing of tracks to access existing platform  
› Topography supports tunnel under Manassas Drive for pedestrian connections | › Long walk to platform (average 1,000 feet)  
› Requires acquisition of private property  
› Location does not support shared use of parking spaces  
› Limited queuing distance available for vehicles  
› Increases traffic volumes at the Manassas Drive and Railroad Drive intersection  
› High-voltage power line partially impacts site  
› Requires relocation of existing stormwater infrastructure |
After consideration of the advantages and disadvantages of each candidate site against the selection criteria, VRE selected the Bays Site as the preferred location for parking expansion. This site benefits from a number of factors, including its public ownership; support for the City Center vision and capacity to accommodate future mixed-use development; provision of adequate queuing distance for vehicles exiting the facility and opportunity for multiple access points; and relative proximity to the platform. Figure 23 summarizes the evaluation of each candidate site by selection criteria.

![Figure 23 Summary Evaluation Matrix for the Candidate Parking Expansion Sites](image)

On November 15, 2016, the City of Manassas Park voted to endorse the Bays Site as the preferred site for a VRE parking structure.
6.0 **Estimated Cost**

As part of the initial planning for the project, a Rough Order of Magnitude (ROM) cost has been developed for the concept phase of the project. These costs are based on the conceptual site plans prepared for the preferred alternative.

The costs have been developed in two major categories: construction costs and design/management/administration costs. The construction costs including site preparation, utility relocation and connections, site landscaping and best management practices (BMP – stormwater facilities), construction of the parking garage, and construction of the pedestrian bridge or tunnel to provide direct access to the station platform.

The design/management/administration costs include the costs for preparation of the garage design including the engineering drawings, management of the design contract, and costs associated with management of the garage construction including costs associated with support provided by Norfolk Southern.

Table 7 summarizes the estimated costs by work type.

**Table 7 VRE Manassas Park Station Parking Expansion Cost Estimate**

<table>
<thead>
<tr>
<th>Estimated Implementation Costs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction Costs</strong></td>
<td></td>
</tr>
<tr>
<td>Parking Facility (560 spaces @ $18,000 per space)</td>
<td>$10,080,000</td>
</tr>
<tr>
<td>Pedestrian Bridge &amp; Equipment</td>
<td>$2,334,000</td>
</tr>
<tr>
<td>Sitework</td>
<td>$2,216,000</td>
</tr>
<tr>
<td></td>
<td><strong>$14,630,000</strong></td>
</tr>
<tr>
<td><strong>Design/Management/Administration Costs</strong></td>
<td></td>
</tr>
<tr>
<td>Project Development</td>
<td>$700,000</td>
</tr>
<tr>
<td>Final Design</td>
<td>$1,800,000</td>
</tr>
<tr>
<td>Professional Services and Allowances</td>
<td>$1,084,000</td>
</tr>
<tr>
<td>Unallocated Contingency (30%)</td>
<td>$5,464,000</td>
</tr>
<tr>
<td></td>
<td><strong>$9,048,000</strong></td>
</tr>
<tr>
<td><strong>Total Estimated Cost</strong></td>
<td><strong>$23,678,000</strong></td>
</tr>
</tbody>
</table>
7.0 Funding Options

VRE was awarded two grants by the Northern Virginia Transportation Authority (NVTA) to conduct the Alternatives Analysis, Preliminary Engineering, Environmental Documentation, and Final Design for the parking expansion project. The above phases were procured as a single procurement and are scheduled to be completed in fall 2018.

![Timeline for Alternatives Analysis, Environmental Documentation, and Design](image)

VRE applied for construction funding for the VRE Manassas Park Station parking garage as part of the Manassas Line Expansion Project. As of September 18, 2017, the NVTA had made a recommendation to the Commonwealth Transportation Board to fund the project through the Commonwealth of Virginia’s Transform I-66 Outside the Beltway (OTB) project.

The Transform I-66 OTB project is an approximately $2.3 billion multimodal public private partnership between Commonwealth of Virginia agencies and a private partner, Express Mobility Partners. The goal of the project is to move more people more reliably, and it is intended to create and support new multimodal travel options. The final agreement between the Commonwealth of Virginia and Express Mobility Partners is expected to include a $500 million concessionaire payment for multimodal projects within the I-66 OTB corridor.
VRE believes that the Manassas Park station parking garage is well positioned to receive funding under Transform I-66 OTB because the garage project will benefit users in the corridor; will facilitate expansion of multimodal options in the corridor; and will be shovel-ready by 2022, when toll collection is slated to begin in the corridor.

In the event that funding is not awarded through the Transform I-66 OTB project, the Manassas Park parking garage is a good candidate for other upcoming grant opportunities, including the NVTA’s Six-Year program, and the Commonwealth’s Smart Scale program.
Summary Report

Appendices
Appendix A

Memorandum

To: VRE Manassas Park Station Parking Team
From: Anita Morrison
Partners for Economic Solutions
Date: August 19, 2016
Subject: Land Use Development Considerations

The City of Manassas Park’s vision for its new city center calls for a mixed-use development that would allow residents to conduct daily shopping and business in a walkable environment with fewer trips outside the city. The City owns three major development parcels in the area as well as City Hall and its supporting parking lots. Those parcels are all potentially available to support a mixed-use development and to help fund the Virginia Railway Express (VRE) commuter parking garage.

The potential contributions that a Public/Private Partnership could make to the garage development will depend on the land value generated by demand for development. Land value, the amount that a user/developer is willing to pay for its development rights, is a direct function of:

- what uses can be built;
- how much can be built; and
- what rents/prices can be charged for the ultimate development.

Supportable rents/prices reflect the rents and prices achieved on competitive properties plus any increment related to the sites’ particular locational advantages, including access to the VRE station and the synergies of a quality walkable environment with superior public spaces.

This market review provides perspective on the potential demand for development and guidance relative to placement on the site for maximum returns. These findings ultimately will affect the funding strategy.

Conclusions

The subject sites have a proven market for apartments, but opportunities for office and retail development are much more limited. The office market is overbuilt for the primary tenancy of neighborhood-serving professionals and service providers. The retail market is generally well-served but the two sites with frontage on Manassas Drive could likely attract retailers if developed with sufficient adjacent parking. There is minimal demand for retail and service space on the rear site, except perhaps for a childcare center serving VRE commuters.

The City’s goal of a mixed-use development that devotes 80 percent to commercial space is unrealistic. Similar town center projects in suburban locations are more likely to be 60 to 80 percent residential.
Residential Development Potential

Development in Manassas Park’s central area will compete within a market area that encompasses, the city, Manassas and parts of northeastern Prince William County. Shown on Map 1, the market area is generally bounded by I-66, the Occoquan River, a line from Hemlock Overlook Regional Park to Limstrong, and the Prince William Parkway. The market area has 112,500 residents living in 39,400 households. The number of households has grown 22.6 percent since 2000, an average rate of 1.3 percent per year. Following the housing crisis, renters have become a larger share of market area households, increasing from 33.2 percent in 2000 to 40.4 percent in 2016. Local and national trends favor a continued high share of renters into the future.

Market area households are relatively large with an average household size of 3.04 persons. However, almost half (48.2 percent) of households have only one or two persons, who are often drawn to multi-family apartments and condominiums. Households in the market area have a median income of $77,919. Among renter households, 40.1 percent have incomes between $50,000 and $100,000, and 13.7 percent have incomes of $100,000 or more. These demographic trends suggest good demand for the type of quality multi-family housing that could be developed in Manassas Park’s city center.

Multi-family trends compiled by CoStar (Apartments.com) show that the market area includes 9,982 multi-family rental units. (See Table A-1.) The vacancy rate of only 5.1 percent is healthy; it increased...
from 3.4 percent in 2015 with the opening of 305 new units. The multi-family inventory has grown 63 percent since 2000 and 22.4 percent over the last decade. More than 1,300 units have been built since 2011. Annual absorption has averaged 192 units over the past decade. Rents now average $1,340 per month or $1.43 per square foot. As would be expected, rents among newer developments are higher with Class A buildings renting at $1,100 to $1,500 for one-bedroom units and $1,450 to $1,900 for two-bedroom units. Proximity to the VRE station yields an extra rent premium.

These rent levels are sufficient to support wood-frame construction of up to five stories with surface parking. They would need to increase significantly to support the cost of structured parking. Some potential cost savings could be achieved through some shared use of VRE parking in the evenings and on weekends.

New residential development proposed for sites near the VRE station includes Palisades at Manassas Park, a 304-unit complex on Manassas Drive at Railroad Drive. The Elms at Signal Hill Station opened in 2016 in Prince William County within walking distance of the station and is planned for a total of 296 units. Other proposed multi-family developments include Richmond Station east of the Norfolk Southern Railroad and north of Liberia Avenue adjoining Signal Hill Park, which is planned for 70 multi-family units and 104 townhouses. Orchard Bridge has 368 new units of a planned total of 1,260 units along Route 28 just south of the Fairfax County line.

Given the land use patterns of Manassas Park and surrounding jurisdictions, auto ownership is almost mandatory. This means that parking ratios need to be appropriate to the suburban setting. Using VRE for the daily commute of one of the household’s wage earners possibly could allow a couple to reduce from one to two cars, but it will not eliminate the need for a car given the heavy dependence on auto access. Every apartment will generate a need for at least 1.5 to 2.0 parking spaces with additional spaces for visitor parking. There is no local precedent for paid parking.

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**Retail Development Potential**

Retail demand is a function of the number of market area households within easy walking and driving distance, their incomes and the extent, nature and location of competitive retail operations. The market area that can be tapped by a retailer is defined as the area within easy driving distance from which the retailer is expected to draw 80 to 90 percent of its residentially-based customers. It is defined by distance, by the location of competitive retail clusters and by natural and man-made boundaries.

When retailers seek sites, they are focused on several key criteria, including:

- a minimum number of current market area households (not projections of future households);
- minimum income levels and/or other characteristics (such as homeownership) shared by their likely customers;
- appropriate retail space with ceilings that are at least 14 feet high, glass fronts, typically 60 to 100 feet deep, with adequate loading and service areas;
- visibility from a major thoroughfare for effective marketing;
- convenient parking with three to five spaces per 1,000 square feet of retail space, preferably immediately adjacent to the store;
- synergies with major activity generators, such as a grocery store or other anchor store, a library or recreation center, a transit station and/or a major programmed public space;
- competitive rents; and
- development incentives, such as allowances for interior fit-out and finishes.

Most retail chains have strict requirements (such as minimum numbers of households within a three-mile radius, minimum household incomes and minimum levels of pass-by traffic) that are based on their business model and lengthy research on what works for their businesses.

At the same time, cities are seeking to activate their downtown streets and public spaces by including active uses on the first floors of office and residential buildings. Over the years, zoning requirements that all first-floor spaces include retail space have created unfortunate situations with retail spaces that have never been leased because they do not meet the criteria imposed by prospective retail tenants. Such requirements are best imposed only in locations that can reasonably compete for retail uses and in amounts appropriate to the scale of the market support. Building too much retail space can result in high retail vacancies and/or low sales for all of the retailers, increasing business failures and turnover.

There are alternative approaches to activating streets and public areas. In residential buildings, the fitness center, business center and/or tenant lounge areas can be located to the first floor with extensive glass for views from the sidewalk. Civic facilities can be located on the first floor, such as a library or recreation use; they are less dependent on visibility from pass-by traffic. Childcare facilities could benefit from collocation with VRE parking. Landscaped areas and public art can soften a building’s edge and improve the pedestrian experience on the adjoining sidewalk.

Most mixed-use developments with 400 to 600 residential units do not generate enough internal demand to support much retail space. As a result, retailers typically need to attract shoppers from beyond the project borders. Most cannot succeed strictly on the strength of their own marketing and promotions. They need the benefit of visibility from a major thoroughfare to alert residents and visitors to their presence and then remind potential patrons that they are there.

The Manassas retail market area, shown in Map 2, includes 4.2 million square feet of retail space with a current vacancy rate of 4.8 percent, down from a high of 8.2 percent in 2011. (See Table A-2.) Since 2006, net absorption has averaged 51,000 square feet with deliveries averaging 70,700 square feet annually. No space has been added since 2013, but 56,200 square feet is currently under construction in a new neighborhood center on Liberia Avenue and a childcare center in the Park Towers development behind the Residences at City Center.
City Center has leased only two retail spaces, a bank and an insurance agency, since entering the market in 2009 with up to 26,132 square feet still available. In part, this reflects the owner’s unwillingness to fund any tenant improvements and possibly the location of its parking across Manassas Drive adjacent to City Hall.

The Palisades mixed-use development on Manassas Drive just east of Railroad Drive includes 22,750 square feet of retail space in its first phase. The second phase would expand on the south side of Manassas Drive to include another 17,600 square feet of retail space.

On-site employees generate primarily lunchtime restaurant demand. Lunch business alone is not enough to support most restaurants. Almost all need to combine that lunchtime business with dinner, evening and weekend business. They need nearby residential development to generate that evening/weekend activity and to support and enliven the retail area. Most successful mixed-use developments, especially in the suburbs, devote a large majority of their space to residential units, typically 60 to 80 percent.

Retail tenancy in most town center projects is primarily focused on restaurants, cafes and other businesses that can generate frequent repeat visits. Daily support uses, such as dry cleaners and banks, can be successful as well if they can offer convenient curbside parking that allows off-site residents with quick, convenient access.
The location at the VRE station offers an opportunity to take advantage of homeward bound commuters with food retailers and restaurants. Retail development along Park Center Court would be appropriate only for the Manassas Drive and Park Center Court frontage. Few, if any, retail uses could be attracted further into the site’s interior. One potential opportunity would be childcare for VRE commuters.

**Office Development Potentials**

It is unlikely that even a well-executed mixed-use development in the city center could attract a major corporate office use to the site.

Trends in regional and national office markets suggest that demand for space in conventional single-purpose office parks is waning in favor of offices in mixed-use districts that can offer a range of uses within easy walking distance. Many Millennials and other knowledge workers are gravitating to jobs in walkable mixed-use districts with easy access to restaurants, retail and services. As labor markets have become more competitive and businesses have become more dependent on being able to attract young workers, businesses are choosing offices in locations that appeal to these valuable workers.

In metropolitan Washington, DC, that has resulted in shifts to urban and suburban sites around Metro stations so as to access transit-dependent workers from around the region. While VRE creates a transit-oriented development potential, it will have minimal impact on office demand. Unlik Metro’s 18-hour operations with frequent service in each direction, VRE operates primarily in rush hour to help commuters access jobs in Washington, Arlington and Alexandria. Only one mid-day train operates in the reverse direction. Employers receive no advantage from being located at an outboard commuter rail station that delivers neither employees nor customers, so there is minimal office demand generated by the VRE station.

The primary office demand in Manassas Park is for professional and other services focused on nearby residents – dental and medical offices, physical therapy, legal, insurance, real estate, home health care and tax services. Large tenants with more than 10,000 square feet of space in newer Manassas and Manassas Park office buildings are relatively few. They include training institutes, engineers, construction contractors and government agencies, such as the Federal Bureau of Investigation field office.

Office trends in the Greater Manassas Market Area shown on Map 1 provide valuable context for this market assessment. This market area includes 4.1 million square feet of office space in 289 buildings with a 12.1-percent vacancy rate, as shown in Table A-3. Based on historical absorption trends, the current overhang of vacant space represents a six- to nine-year supply. The vacancy rate is down from 16.7 percent in 2013 but still well above healthy levels of six to eight percent. Since 2009, only 22,500 square feet of space has been added to the market area inventory. Even prior to the Great Recession, deliveries of new space averaged only 139,600 square feet per year from 2000 through 2007.

The single building under construction is in Innovation Park near the George Mason University Science & Technology Campus for BerkleyNet, a worker’s compensation insurance underwriter. An additional 500,000 square feet of space is proposed in the Market Area but not yet started, almost all located either along I-66 or in Innovation Park.
Within a one-mile radius of the VRE Manassas Park station are 16 office buildings with 309,314 square feet and a current vacancy rate of 8.5 percent. Only two buildings have been built since 1990, both opening in 2006 – Railroad Professional Building and Signal Hill Professional Building. With 30,000 square feet of space, 25 percent of the Railroad Professional Building is vacant. Signal Hill Professional Building is a condominium office building on Liberia Avenue with 10,924 square feet in five spaces available for sale. These vacancy levels would dissuade other developers from building in the area for three years or more.

Competitive office buildings offer surface parking. Structured parking to achieve higher densities is an expense not typically justified by current office rent levels.

**Shared Parking**

Given the very specific blocks of time used for VRE commuter parking, there could be opportunities to share that parking with on-site retail, restaurant and residential uses whose needs peak in the evening and on weekends if located proximate to those uses.
Table A-1. Market Area Multi-Family Housing Trends, 2000-June 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Buildings</th>
<th>Total</th>
<th>Vacant</th>
<th>Percent Vacant</th>
<th>Net Absorption</th>
<th>Under Construction</th>
<th>Average Square Feet</th>
<th>Per Unit</th>
<th>Per Square Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>30</td>
<td>6,111</td>
<td>111</td>
<td>1.9%</td>
<td>2</td>
<td>5/6</td>
<td>874</td>
<td>$927</td>
<td>$1.06</td>
</tr>
<tr>
<td>2001</td>
<td>31</td>
<td>6,687</td>
<td>248</td>
<td>3.8%</td>
<td>439</td>
<td>450</td>
<td>898</td>
<td>$961</td>
<td>$1.07</td>
</tr>
<tr>
<td>2002</td>
<td>32</td>
<td>6,766</td>
<td>212</td>
<td>3.2%</td>
<td>115</td>
<td>1,000</td>
<td>897</td>
<td>$936</td>
<td>$1.04</td>
</tr>
<tr>
<td>2003</td>
<td>34</td>
<td>7,145</td>
<td>383</td>
<td>5.5%</td>
<td>209</td>
<td>768</td>
<td>908</td>
<td>$967</td>
<td>$1.06</td>
</tr>
<tr>
<td>2004</td>
<td>37</td>
<td>7,913</td>
<td>758</td>
<td>9.7%</td>
<td>393</td>
<td>-</td>
<td>913</td>
<td>$1,012</td>
<td>$1.11</td>
</tr>
<tr>
<td>2005</td>
<td>37</td>
<td>7,913</td>
<td>391</td>
<td>5.0%</td>
<td>367</td>
<td>402</td>
<td>913</td>
<td>$1,047</td>
<td>$1.15</td>
</tr>
<tr>
<td>2006</td>
<td>37</td>
<td>7,913</td>
<td>259</td>
<td>3.3%</td>
<td>323</td>
<td>402</td>
<td>913</td>
<td>$1,065</td>
<td>$1.17</td>
</tr>
<tr>
<td>2007</td>
<td>38</td>
<td>8,315</td>
<td>415</td>
<td>5.1%</td>
<td>246</td>
<td>287</td>
<td>924</td>
<td>$1,097</td>
<td>$1.19</td>
</tr>
<tr>
<td>2008</td>
<td>40</td>
<td>8,602</td>
<td>457</td>
<td>5.4%</td>
<td>245</td>
<td>292</td>
<td>927</td>
<td>$1,116</td>
<td>$1.20</td>
</tr>
<tr>
<td>2009</td>
<td>41</td>
<td>8,893</td>
<td>526</td>
<td>6.0%</td>
<td>233</td>
<td>-</td>
<td>925</td>
<td>$1,119</td>
<td>$1.21</td>
</tr>
<tr>
<td>2010</td>
<td>41</td>
<td>8,893</td>
<td>375</td>
<td>4.3%</td>
<td>151</td>
<td>-</td>
<td>925</td>
<td>$1,152</td>
<td>$1.24</td>
</tr>
<tr>
<td>2011</td>
<td>41</td>
<td>8,893</td>
<td>339</td>
<td>3.9%</td>
<td>36</td>
<td>425</td>
<td>925</td>
<td>$1,208</td>
<td>$1.30</td>
</tr>
<tr>
<td>2012</td>
<td>42</td>
<td>9,006</td>
<td>357</td>
<td>4.0%</td>
<td>95</td>
<td>680</td>
<td>920</td>
<td>$1,246</td>
<td>$1.35</td>
</tr>
<tr>
<td>2013</td>
<td>43</td>
<td>9,318</td>
<td>376</td>
<td>4.1%</td>
<td>295</td>
<td>368</td>
<td>920</td>
<td>$1,247</td>
<td>$1.35</td>
</tr>
<tr>
<td>2014</td>
<td>44</td>
<td>9,686</td>
<td>457</td>
<td>4.8%</td>
<td>287</td>
<td>-</td>
<td>930</td>
<td>$1,263</td>
<td>$1.36</td>
</tr>
<tr>
<td>2015</td>
<td>44</td>
<td>9,686</td>
<td>325</td>
<td>3.4%</td>
<td>132</td>
<td>305</td>
<td>930</td>
<td>$1,285</td>
<td>$1.38</td>
</tr>
<tr>
<td>Jun-16</td>
<td>45</td>
<td>9,982</td>
<td>504</td>
<td>5.1%</td>
<td>116</td>
<td>9</td>
<td>939</td>
<td>$1,340</td>
<td>$1.43</td>
</tr>
</tbody>
</table>

2006-June 2016 Total and Average Annual Change

| Number | 8   | 2,069 | 245 | 0 | 192 | 393 | 26 | $275 | $0.26 |
| Percent | 21.6% | 26.1% | 94.6% | 54.5% | 97.8% | 2.8% | 20.8% | 22.2% |

**Note:** Market Area includes Manassas Park, Manassas and Prince William County's Route 29 subarea generally bounded on the north by I-66, on the east by the Occoquan River, on the south by a line drawn between Hemlock Overlook Regional Park and Limstron, and on the west by Prince William Parkway.


<table>
<thead>
<tr>
<th>Year</th>
<th>Total Buildings</th>
<th>Total Square Feet</th>
<th>Vacant Square Feet</th>
<th>Vacant Percent</th>
<th>Net Absorption</th>
<th>Deliveries</th>
<th>Under Construction</th>
<th>Net Rent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>375</td>
<td>3,541,208</td>
<td>54,114</td>
<td>1.5%</td>
<td>110,384</td>
<td>45,945</td>
<td>92,875</td>
<td>$23.35</td>
</tr>
<tr>
<td>2007</td>
<td>379</td>
<td>3,647,467</td>
<td>176,347</td>
<td>4.8%</td>
<td>-</td>
<td>15,974</td>
<td>106,259</td>
<td>$16.86</td>
</tr>
<tr>
<td>2008</td>
<td>389</td>
<td>3,833,390</td>
<td>241,771</td>
<td>6.3%</td>
<td>120,499</td>
<td>185,923</td>
<td>333,433</td>
<td>$22.41</td>
</tr>
<tr>
<td>2009</td>
<td>398</td>
<td>4,185,731</td>
<td>305,202</td>
<td>7.3%</td>
<td>288,910</td>
<td>352,341</td>
<td>-</td>
<td>$19.63</td>
</tr>
<tr>
<td>2010</td>
<td>399</td>
<td>4,191,760</td>
<td>286,313</td>
<td>6.8%</td>
<td>24,918</td>
<td>6,029</td>
<td>3,500</td>
<td>$16.99</td>
</tr>
<tr>
<td>2011</td>
<td>396</td>
<td>4,187,312</td>
<td>341,662</td>
<td>8.2%</td>
<td>-</td>
<td>59,797</td>
<td>3,500</td>
<td>$18.80</td>
</tr>
<tr>
<td>2012</td>
<td>396</td>
<td>4,199,809</td>
<td>300,227</td>
<td>7.1%</td>
<td>53,932</td>
<td>14,820</td>
<td>-</td>
<td>$18.84</td>
</tr>
<tr>
<td>2013</td>
<td>393</td>
<td>4,176,099</td>
<td>309,929</td>
<td>7.4%</td>
<td>-</td>
<td>33,412</td>
<td>3,020</td>
<td>$17.84</td>
</tr>
<tr>
<td>2014</td>
<td>393</td>
<td>4,176,099</td>
<td>264,318</td>
<td>6.3%</td>
<td>45,611</td>
<td>-</td>
<td>-</td>
<td>$19.95</td>
</tr>
<tr>
<td>2015</td>
<td>391</td>
<td>4,171,536</td>
<td>236,398</td>
<td>5.7%</td>
<td>23,357</td>
<td>-</td>
<td>-</td>
<td>$20.18</td>
</tr>
<tr>
<td>Jun-16</td>
<td>391</td>
<td>4,171,536</td>
<td>199,979</td>
<td>4.8%</td>
<td>36,419</td>
<td>-</td>
<td>56,200</td>
<td>$20.48</td>
</tr>
</tbody>
</table>

2006-June 2015 Total and Average Annual Change

| Number | 16   | 630,328 | 145,865 | 3.3% | 50,996 | 70,725 | 62,101 | $2.87 |
| Percent | 4.3% | 17.8% | 269.6% | 220.0% | - | - | - | -12.3% |

**Note:** Market Area includes Manassas Park, Manassas and Prince William County's Route 28 subarea generally bounded on the north by Godwin Road and Manassas Park's northwestern boundary, on the east by the Occoquan River, on the south by a line drawn between Hemlock Overlook Regional Park and Limstron, and on the west by Prince William Parkway.

### Table A-3. Market Area Office Trends, 2000-June 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Buildings</th>
<th>Total Square Feet</th>
<th>Vacant Square Feet</th>
<th>Vacant Percent</th>
<th>Net Absorption (Square Feet)</th>
<th>Under Construction</th>
<th>Base Rent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>255</td>
<td>2,929,296</td>
<td>161,490</td>
<td>5.50%</td>
<td>114,637</td>
<td>164,155</td>
<td>70,063</td>
</tr>
<tr>
<td>2001</td>
<td>259</td>
<td>2,999,359</td>
<td>162,749</td>
<td>5.40%</td>
<td>68,804</td>
<td>70,063</td>
<td>30,702</td>
</tr>
<tr>
<td>2002</td>
<td>260</td>
<td>3,030,061</td>
<td>266,681</td>
<td>8.80%</td>
<td>-</td>
<td>73,230</td>
<td>30,702</td>
</tr>
<tr>
<td>2003</td>
<td>285</td>
<td>3,135,953</td>
<td>265,497</td>
<td>8.50%</td>
<td>107,076</td>
<td>105,892</td>
<td>66,824</td>
</tr>
<tr>
<td>2004</td>
<td>270</td>
<td>3,266,464</td>
<td>140,486</td>
<td>4.30%</td>
<td>255,522</td>
<td>130,511</td>
<td>117,326</td>
</tr>
<tr>
<td>2005</td>
<td>272</td>
<td>3,336,216</td>
<td>205,399</td>
<td>6.20%</td>
<td>4,839</td>
<td>69,752</td>
<td>364,065</td>
</tr>
<tr>
<td>2006</td>
<td>281</td>
<td>3,700,281</td>
<td>389,766</td>
<td>10.50%</td>
<td>179,698</td>
<td>364,065</td>
<td>181,929</td>
</tr>
<tr>
<td>2007</td>
<td>285</td>
<td>3,879,620</td>
<td>481,614</td>
<td>12.40%</td>
<td>-</td>
<td>90,409</td>
<td>181,929</td>
</tr>
<tr>
<td>2009</td>
<td>288</td>
<td>4,033,612</td>
<td>592,007</td>
<td>14.70%</td>
<td>43,599</td>
<td>153,992</td>
<td>21,535</td>
</tr>
<tr>
<td>2010</td>
<td>288</td>
<td>4,033,612</td>
<td>635,390</td>
<td>15.80%</td>
<td>43,383</td>
<td>-</td>
<td>21,535</td>
</tr>
<tr>
<td>2011</td>
<td>288</td>
<td>4,033,612</td>
<td>585,885</td>
<td>14.50%</td>
<td>49,505</td>
<td>-</td>
<td>21,535</td>
</tr>
<tr>
<td>2012</td>
<td>288</td>
<td>4,033,612</td>
<td>627,380</td>
<td>15.60%</td>
<td>41,495</td>
<td>-</td>
<td>21,535</td>
</tr>
<tr>
<td>2013</td>
<td>289</td>
<td>4,055,147</td>
<td>677,245</td>
<td>16.70%</td>
<td>28,330</td>
<td>21,535</td>
<td>-</td>
</tr>
<tr>
<td>2014</td>
<td>289</td>
<td>4,055,147</td>
<td>596,593</td>
<td>14.70%</td>
<td>80,652</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2015</td>
<td>289</td>
<td>4,055,147</td>
<td>507,525</td>
<td>12.50%</td>
<td>89,068</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Jun-16</td>
<td>289</td>
<td>4,055,147</td>
<td>491,228</td>
<td>12.10%</td>
<td>16,297</td>
<td>73,500</td>
<td>-</td>
</tr>
</tbody>
</table>

### 2006-June 2016 Total and Average Annual Change

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Total</th>
<th>Annual Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>8</td>
<td>354,866</td>
<td>37,627</td>
</tr>
<tr>
<td>Percent</td>
<td>2.8%</td>
<td>9.6%</td>
<td>15.2%</td>
</tr>
</tbody>
</table>

Note: Market Area includes Manassas Park, Manassas and Prince William County’s Route 29 subarea generally bounded on the north by I-66, on the east by the Occoquan River, on the south by a line drawn between Hemlock Overlook Regional Park and Limstron, and on the west by Prince William Parkway.

Appendix B

Memorandum

To: VRE Manassas Park Station Parking Team
From: Anita Morrison
Partners for Economic Solutions
Date: August 19, 2016
Subject: Financing Potentials

The limited budgetary resources available to the City of Manassas Park will restrict its ability to fund development of a major new parking facility for Virginia Railway Express (VRE) commuters. Financing options are needed beyond the City’s General Fund and Capital Improvement Budget.

The City’s primary assets are three land parcels near the VRE station and City Hall with a total of roughly 15.7 acres. Ideally, a Public/Private Partnership (P3) could be developed that could leverage those land resources and contribute to the cost of the parking garage. Such a P3 could generate revenues from:

- sale or lease of the land;
- tax-increment financing (TIF);
- shared parking; and/or
- developer proffers negotiated in the development approval process.

Other options could include Northern Virginia Transportation Authority funding and Federal Transportation Improvements Generating Economic Recovery (TIGER) Discretionary Grants.

Sale of the Land

PES’s evaluation of development potentials indicates potential for residential apartments and a limited amount of retail space over the next four to seven years. Based on the density of comparable apartment developments (45 to 60 dwelling units per acre), a total of 400 to 600 units might be developed on the City’s three properties assuming that two acres are used for the parking garage, two to four acres for retail space and parking, and one acre for public open space.
This assumes surface parking because market rents do not now support the cost of structured parking. However, this total could be reduced by stormwater management requirements.

Sale of the City-owned parcels for this development program might generate $6 to $8 million in sales revenue or an annual lease rate that could support an equivalent amount in debt financing. This very preliminary estimate is based on the sales price of the land on Digital Drive being developed for the Palisades at Manassas Park (purchased in 2011 and 2013), so it may be somewhat conservative. Achieving this sales revenue would require zoning and development approvals that would allow a largely residential development. Requiring that 80 percent of the new development be for commercial uses likely would preclude near-term sales.

**Tax-Increment Financing**

Tax-Increment Financing (TIF) earmarks the incremental property taxes generated by the increases in property value following designation of a TIF District for funding public infrastructure. The taxing body continues to receive the property taxes generated by the property value at the time of designation. As development proceeds and property values increase, the tax revenues generated by that incremental value are pledged to support public costs of infrastructure and related improvements. Once the construction is underway and investors are assured that the development will be completed, those future tax revenues can secure bond financing. The amount of tax revenues and the size of the potential bond financing depend on:

- when the TIF District is formed;
- the value of any taxable improvements demolished to accommodate development;
- the scale and value of the new development;
- assessment ratios and practices (e.g., how closely assessed value is to market value);
- future land and building value appreciation;
- then-current property tax rates;
- the portion of the tax increment pledged to the improvements;
- bond interest rates;
- the length of the bond period;
- the extent of required reserves; and
- the cost of bond issuance.

Because the size and timing of the bond issue depend on having reliable prospects of future revenues, the bond buyers are likely to require that the “steel is coming out of the ground” before purchasing bonds unless there is a back-up pledge of other revenues on which they can rely. Without such back-up revenues, TIF bonds are often delayed until after the initial infrastructure investments are made.
TIF financing of garage construction would be difficult without simultaneous development of taxable private uses.

**Shared Parking**
The commuter parking garage could offer some opportunities for shared parking with new City Center developments with parking demands that complement those of VRE’s weekday service hours. Some retail, service and residential uses could potentially share parking, reducing somewhat the number of private spaces needed to support new mixed-use development on the City-owned parcels, particularly for uses adjacent to the garage. The ability to substitute commuter spaces for private spaces would allow the developer to build to a higher density and save on some parking costs. The extent of those savings and density increases would need to be determined based on specific site plans and analysis of the timing of parking demands of each use. Depending on the scale of those impacts, the developer might be willing to contribute to the cost of the garage.

**Developer Proffers**
Virginia jurisdictions often negotiate development approvals conditioned upon developer investments in supportive infrastructure, such as road improvements, traffic signals, donation of school sites and other public facility needs created by the development’s impacts. The site review process is designed to identify such impacts and provide the opportunity for the developer to proffer private funding to mitigate the impacts. The potential for proffers depends upon the site zoning and the nature of the approval process. Under by-right zoning, which allows development of specific types and scales without additional approvals, developers do not offer such proffers.

The City of Manassas Park has not typically used proffer negotiations as a means of funding off-site improvements, particularly when the City is the land seller. It typically relies instead on negotiating such investments through the development and sales agreement with the developer. Financially, this has the same effect – dollars that a developer spends on off-site improvements are dollars not available to pay the City for the land.
Appendix C

Memorandum

To: VRE Manassas Park Station Parking Team
From: John Judge, Desman
Date: September 27, 2016
Subject: Parking Garage Cost Comparison

The table below is a snapshot of our current projects (under construction or recently completed) in the mid-Atlantic region. Each of the reported construction costs includes site work.

As you can see, there is quite a disparity in unit costs which is due to the wide variation of site conditions, foundations conditions, and façade expectations.

In the current market, based on the durability needs of the VRE and the expected façade treatment desired by VRE and the City, I suggest benchmarking the parking structures at $17,500 per space and adding site work costs to that figure. This figure is consistent with what we have verbally stated in front of VRE and the City.

<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
<th>Construction Cost</th>
<th>No. Spaces</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-116 Parking Structure at Lot H</td>
<td>NSA Bethesda, MD</td>
<td>$14,000,000</td>
<td>650</td>
<td>$21,500</td>
</tr>
<tr>
<td>MedImmune Garage C1</td>
<td>Gaithersburg, MD</td>
<td>$21,100,000</td>
<td>955</td>
<td>$22,100</td>
</tr>
<tr>
<td>Howard CC East Garage Exp.</td>
<td>Columbia, MD</td>
<td>$13,787,000</td>
<td>743</td>
<td>$18,600</td>
</tr>
<tr>
<td>JMU Mason Street Deck</td>
<td>Harrisonburg, VA</td>
<td>$17,405,000</td>
<td>1014</td>
<td>$17,200</td>
</tr>
<tr>
<td>McHenry Row Phase II</td>
<td>Baltimore, MD</td>
<td>$6,918,000</td>
<td>599</td>
<td>$11,500</td>
</tr>
<tr>
<td>Savage MARC Station Garage</td>
<td>Savage, MD</td>
<td>$9,020,000</td>
<td>696</td>
<td>$13,000</td>
</tr>
<tr>
<td>Holy Cross Hospital Garage</td>
<td>Germantown, MD</td>
<td>$9,332,000</td>
<td>696</td>
<td>$13,400</td>
</tr>
</tbody>
</table>