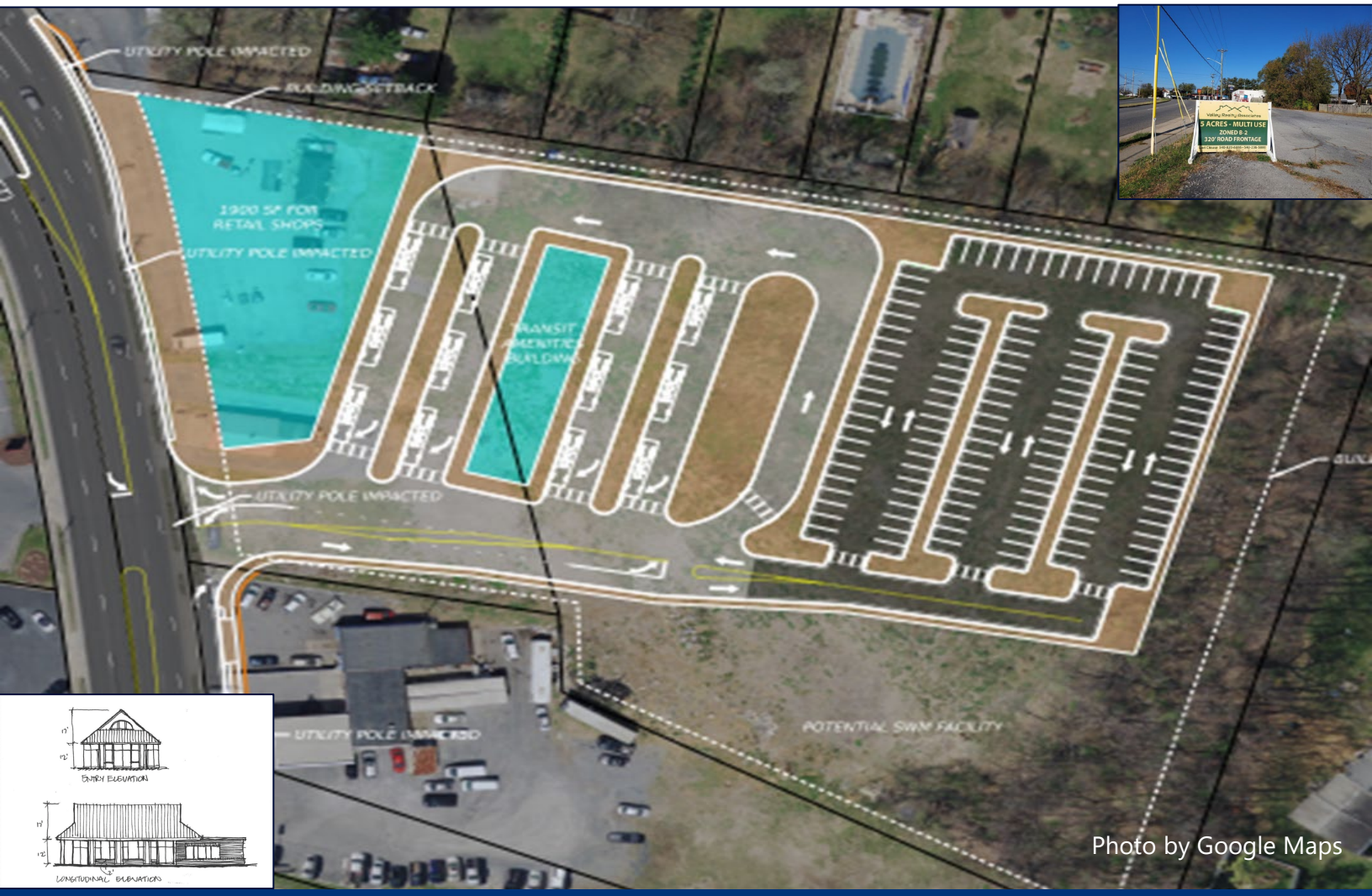
Harrisonburg Multimodal Transit Center Feasibility Study

Final Report – June 2022



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Chapter 1: Introduction and Summary of Public Survey Effort

Introduction

Public transportation in the City of Harrisonburg is provided by the Harrisonburg Department of Public Transportation (HDPT), a department within the city government. HDPT operates fixed-route bus service, Americans with Disabilities Act (ADA) paratransit service, scheduled shuttles to Bridgewater and Dayton, and school bus service. The transit system operates six year-round routes geared toward city residents and numerous seasonal routes, during the school year, geared toward the needs of JMU students and staff. Historically, ridership associated with JMU has accounted for about 90% of the total system ridership. HDPT receives funding assistance from the City of Harrisonburg, JMU, the Virginia Department of Rail and Public Transportation (DRPT), and the Federal Transit Administration (FTA). HDPT also generates fare revenue and has an advertising program, which provides some revenue as local funding.

The primary transfer center for the year-round routes is located in downtown Harrisonburg within a shopping center parking lot, at E. Gay and N. Mason, where five of the six community routes converge. There is also a transfer point located at the Cloverleaf Shopping Center (outside of the downtown), where Routes 1, 3, 4, and 5 come together. While the current transfer locations are functional, HDPT has identified a need to develop a purpose-built multimodal center that will accommodate the city's fixed route transfer function, as well as providing a park and ride lot to serve patrons of the Virginia Breeze intercity bus service and other potential park and ride users.

The development of a new multimodal center will also provide the opportunity for the city to have a transit center that is fully ADA- compliant and designed for safe pedestrian and bicycle access. The city's vision for the project is that it will: provide the opportunity for improved mobility and access through improved parking facilities and multimodal links; enhance transit ridership, both locally and within the region; and maintain community character while improving transportation, circulation, and parking options for residents and visitors.

The purpose of the Multimodal Transit Feasibility Study was to identify potential sites for the proposed multimodal center and park and ride lot; evaluate each of the proposed sites based on a number of criteria; and make a recommendation for the selection of the final site. Once the site was selected, additional tasks included the development of a conceptual site plan; cost estimates for the development of the project; and a funding analysis. The study process was led by an advisory committee made up of city staff and stakeholders. Technical work for the project was completed by the consulting team of KFH Group, Inc, and WRA, LLP.

This report documents the study process and results and is organized into the following chapters:

- **Chapter 1:** Introduction and Summary of Public Survey
- **Chapter 2:** Description and Evaluation of Proposed Sites
- **Chapter 3:** Conceptual Design and Cost Estimate
- **Chapter 4:** Funding Options

The first study task was to develop and administer a community survey to evaluate public interest in the development of a multimodal transit center and park and ride lot. The remainder of this chapter documents the results of that survey.

Public Survey Effort

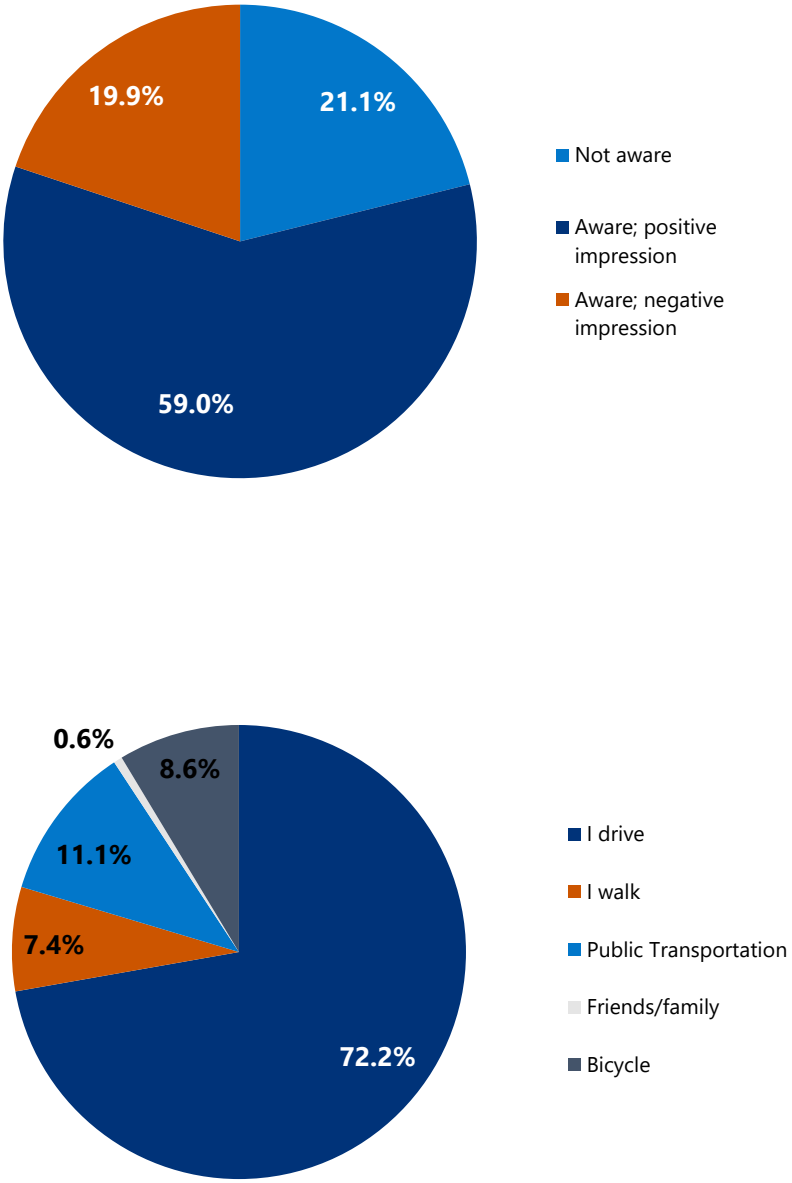
A short community survey was developed to evaluate the public interest in this project. The survey asked respondents about their current travel patterns and what features they would like the multimodal transit center to have. The survey opened to the public in mid-June 2021 and closed in early August 2021 and received 163 responses. The survey was completed primarily on-line, though paper surveys were available at HDPT, City Hall, and the Harrisonburg-Rockingham Department of Social Services. English and Spanish versions were available. A summary of results, as well as a demographic profile of respondents, can be found below. It should be noted that the survey effort took place during the Covid-19 pandemic. A copy of the survey is provided as Appendix A.

Public Survey Summary

Travel Characteristics & Familiarity with HDPT

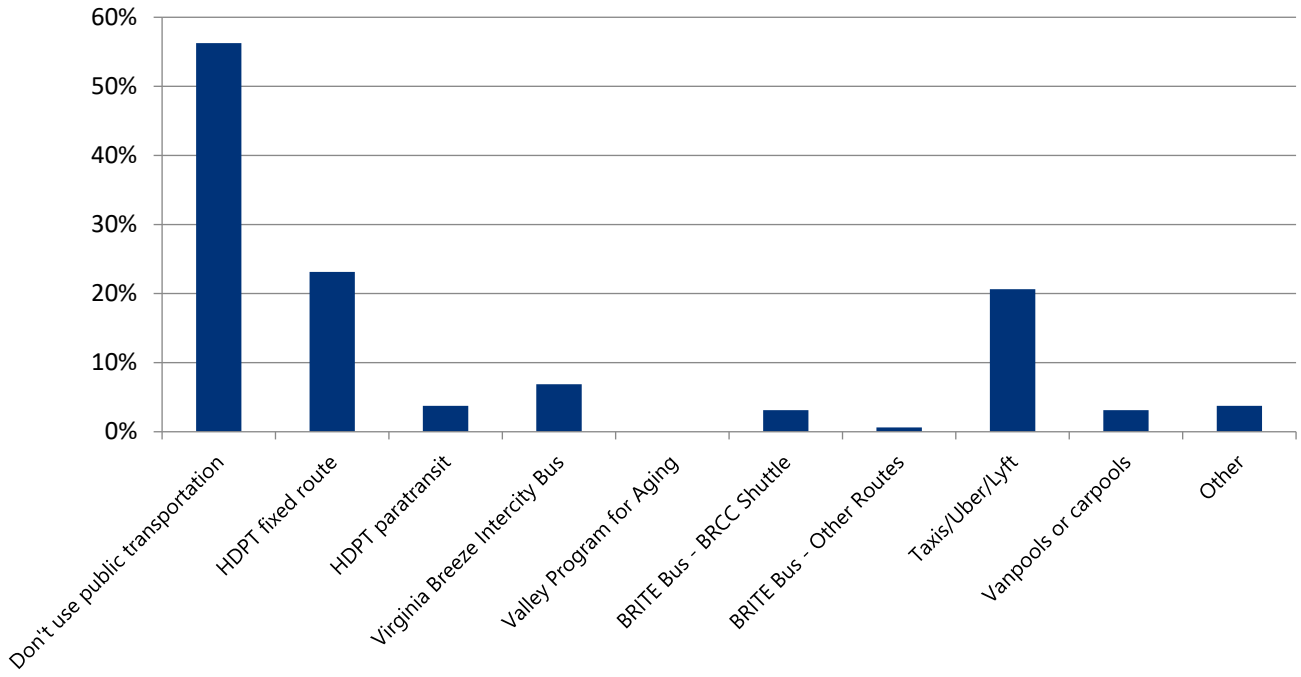
Respondents were asked about their overall awareness and impression of the services HDPT provides. A majority (59.0%) of respondents were aware of HDPT and had an overall positive impression, 19.9% were aware with a negative impression, and 21.2% were not aware of HDPT services. Respondents were asked their primary mode of transportation. The most common modes were: driving themselves (72.2%); public transportation (11.1%); and walking (7.4%). These results are shown in Figure 1-1.

Figure 1-1: Awareness of HDPT and Transportation Modes



Asked what transportation services they used, over half (56.3%) of respondents indicated they do not use public transportation. For those that do use public transportation, nearly a quarter (23.1%) of respondents indicated they used HDPT fixed routes, and another fifth (20.6%) of respondents used taxis, Uber, or Lyft style services. A smaller percentage of respondents used Virginia Breeze (6.9%), HDPT paratransit (3.8%), BRITE BRCC Shuttle (3.1%), or vanpools/carpools (3.1%). These results are shown in Figure 1-2.

Figure 1-2: Transportation Modes Used



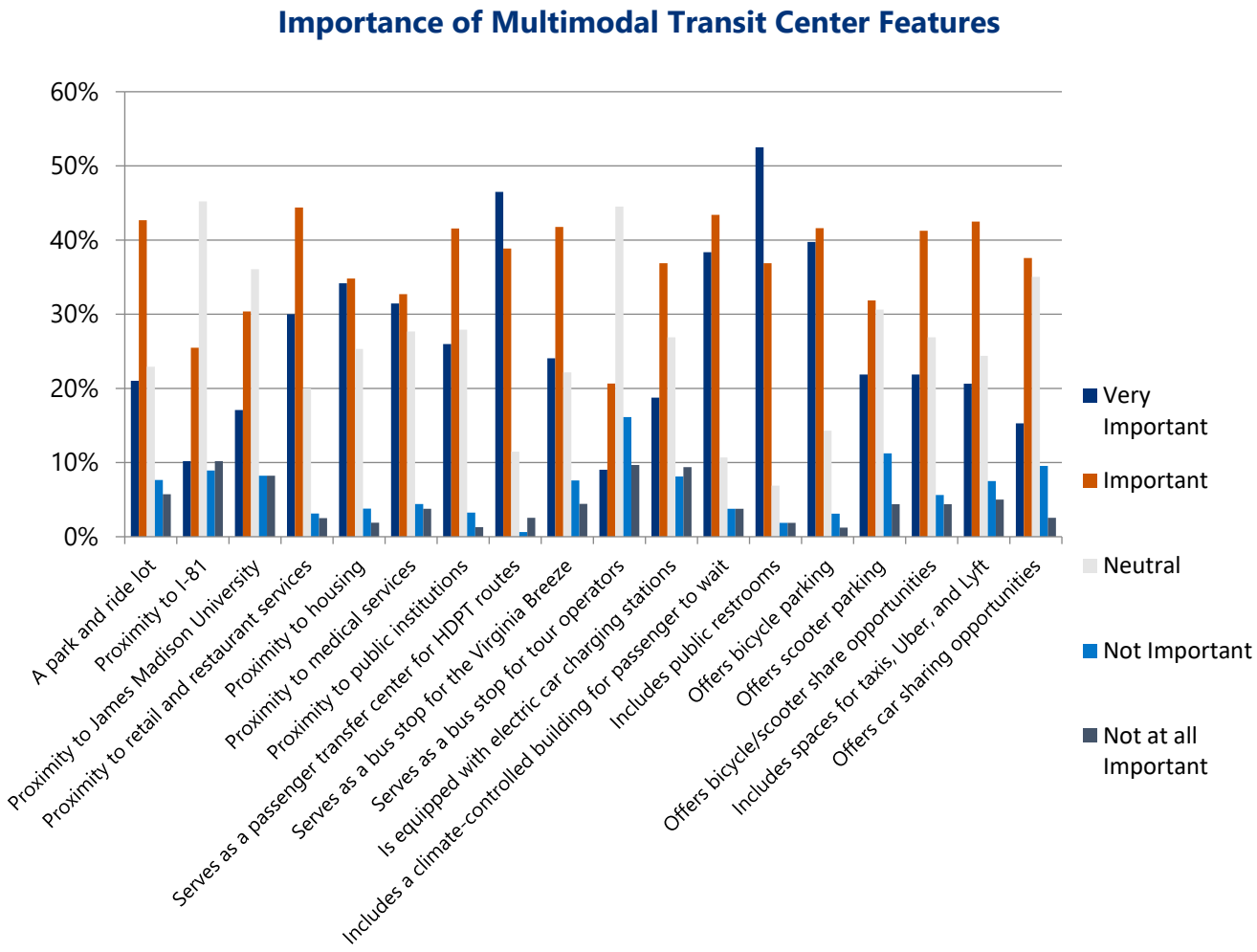
Multimodal Transit Center Features

The survey asked respondents about what features would be most important to include in a new multimodal transit center. Features included parking availability, proximity to local landmarks, connections to the transit networks, and other amenities. Respondents were asked to rank these as "Very Important," "Important," "Neutral," "Not Important," or "Not at all Important." The feature that had the highest percentage of "Very Important" or Important" ratings were public restrooms (89.4%), serving as a transfer point for HDPT routes (85.4%), climate-controlled waiting area (81.8%), and bicycle parking (81.4%). Features that less than half of respondents rated as "Very Important" and "Important" were proximity to James Madison University (47.5%), proximity to I-81 (35.7%), and serving as a bus stop for tour bus operators (29.7%). The full results can be seen in Table 1-1 and Figure 1-3.

Table 1-1: Multimodal Transit Center Features

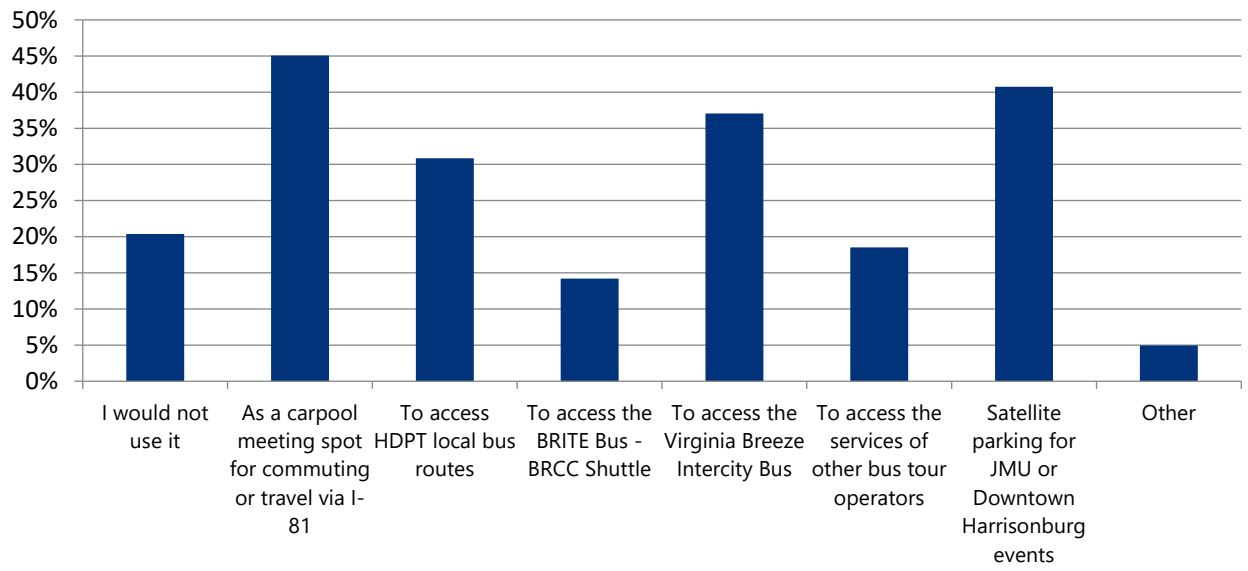
Features	Combined Very Important and Important
Includes public restrooms	89%
Serves as a passenger transfer center for HDPT routes	85%
Includes a climate-controlled building for passenger to wait	82%
Offers bicycle parking	81%
Proximity to retail and restaurant services	74%
Proximity to housing	69%
Proximity to public institutions	68%
Serves as a bus stop for the Virginia Breeze	66%
Proximity to medical services	64%
A park and ride lot	64%
Offers bicycle/scooter share opportunities	63%
Includes spaces for taxis, Uber, and Lyft	63%
Is equipped with electric car charging stations	56%
Offers scooter parking	54%
Offers car sharing opportunities	53%
Proximity to James Madison University	47%
Proximity to I-81	36%
Serves as a bus stop for tour operators	30%

Figure 1-3: Multimodal Transit Center Features



Asked whether they would use a park and ride lot if one were available in Harrisonburg, a slight majority (51.3%) indicated that they would use a park and ride lot if it were available. The most popular potential uses were as a carpool meeting spot for work or I-81 travel (45.1%), satellite parking for JMU or Downtown events (40.7%), and to access Virginia Breeze (37.0%). Some respondents (20.4%) indicated that they would not use the park-&-ride lot. The full results can be seen in Figure 1-4.

Figure 1-4: Park and Ride Lot Usage



Demographics

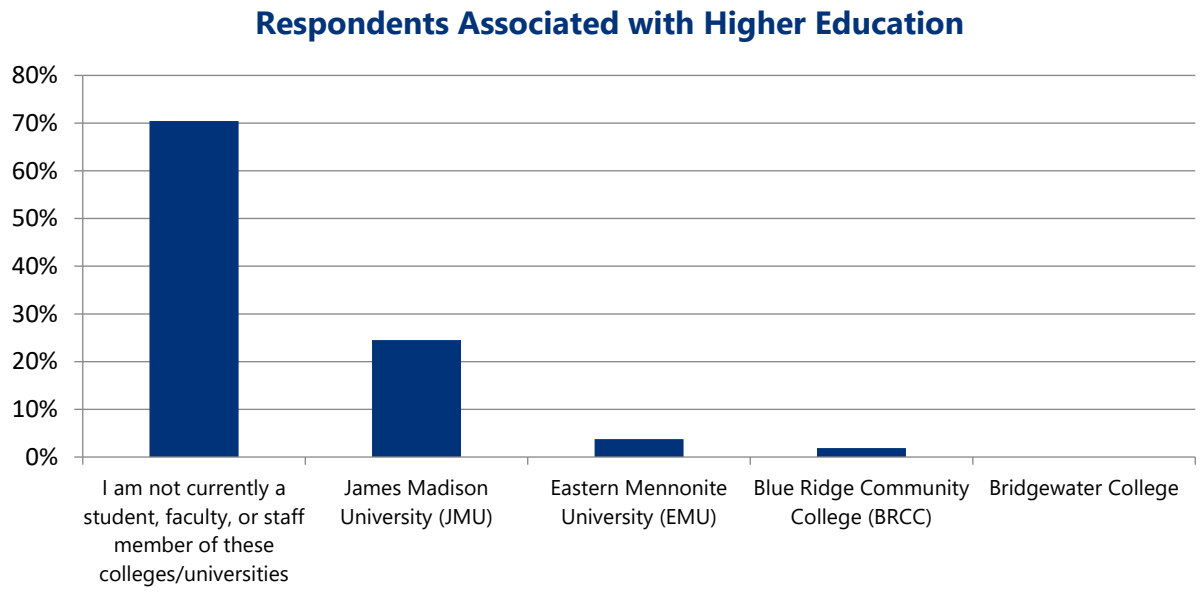
The survey asked two basic demographic questions – the zip code of the respondents and whether they were affiliated with any of the area's higher education institutions. The results show that most of the survey responses were provided by Harrisonburg area residents (143 of the 153 who provided a valid response). These data are shown in Table 1-2.

Asked whether they were affiliated with James Madison University (JMU), Eastern Mennonite University (EMU), Blue Ridge Community College (BRCC), or Bridgewater College, most respondents (70.4%) indicated they were unaffiliated with these institutions. Nearly a quarter (24.5%) of respondents were affiliated with JMU, while small percentages of respondents were associated with EMU (3.8%) and BRCC (1.89%). These results are shown in Figure 1-5.

Table 1-1: Zip Codes of Survey Respondents

City/Area	Zip Code	# Responses
Harrisonburg/Rockingham	22801	86
Harrisonburg/Rockingham	22802	57
Broadway	22815	2
Elkton	22827	2
Bridgewater	22812	1
Dayton	22821	1
Mount Crawford	22841	1
Staunton	24401	1
Grottoes	24441	1
Woodmere, NY	11598	1
Total Valid Responses		**153**

Figure 1-5: Association with Area Universities and Colleges



Comments

At the end of the survey, respondents were given an opportunity to provide any additional comments they had about a possible multimodal transit center. Many comments stressed the need for connections for bikes, scooters, and other alternate forms of transportation, integrating the center with other initiatives to improve walkability and bikeability in high-traffic areas. Providing electric vehicle charging was also mentioned, as was making the transition to electric buses. Other comments suggested that higher frequency and more direct transit routes would make the transit center more useful. Many comments were positive about restrooms and climate-controlled areas for waiting passengers but stressed the need to keep these facilities clean.

Some comments reflected on how moving the HDPT transfer area would negatively impact those living near the current transfer point at Roses. One commenter said that changing the transfer center would limit their mobility. Other residents thought that the facility should be built with the needs of full-time Harrisonburg residents, rather than JMU students, in mind.

Most of the comments were positive or had specific suggestions; however, there were a few negative comments and sentiments that the center is not needed. Due to the variety and thoughtful detail provided by some survey respondents, we have provided the full comments in Table 1-2.

Table 1-2: Open-Ended Survey Comments

Survey Comments
A climate-controlled building might have to be supervised. If not supervised I might start outside. I would rather not use a public bathroom. I hope that it would be kept clean.
A small store space that serves food for passengers while waiting to transfer to other means of bus transportation.
A transit hub where ALL HDPT buses meet is needed, especially one with maintained public facilities (restroom, proper waiting area, etc.). This is also needed for transportation out of Harrisonburg. If possible, please consider trains; and if not, more frequent trips on the buses. Thank you.
Also go fully biodiesel today or fully electric purchase as state and federal government will eliminate carbon diesel over time to maintain global climate. Also retire any vehicles older than 2008 due to much higher deadly local air pollution from tailpipe of those vehicles.
Although I live and work in Dayton, I think that a Transit Center could be a big benefit for the citizens of Harrisonburg, as well as those commuting into Harrisonburg for work or school.
As plans are generated it would be useful to see specific features.
Build it downtown, don't build it next to my house and bring crime in.
Building this system to serve the residents of Harrisonburg is critical. This should not be designed to serve JMU students living outside of the city limits. We should focus on making our city stronger, encouraging people to live in the city, hire a local architectural firm to design, civil engineering firm to locate it, and contractor to build it - all with offices in Hburg
Buses need to run every half hour.
By continuing to build a second high school on RT 11 and Interstate 81, a huge traffic problem is imminent. Why not cut our losses and use part of the golf course property to build an annex for the existing high school, adding all of the space needed to alleviate the overcrowding and to use ONE administrative team instead of paying twice for a second administrative team in a second school. It makes much more sense for the traffic considerations.
Centralized location with restrooms and access to bus lines that have evening hours
Considering the vacant lot next to Lowe's might be a possible site. Thanks for your consideration and for allowing our input.
Creating bicycle paths that link this hub to existing bike path network very important!
Don't waste a lot of MY money on this, I don't know how much longer I will be able to afford to live in this city.

Survey Comments
Get Electric buses first
Great idea! Must have EV charging stations.
Have smoking / and non-smoking sections also
HDPT rocks! They deserve a new transfer center as Roses and Cloverleaf are not safe in my opinion. Thanks
Housing associated with a multimodal transit center is critical for low- income individuals and considered a best practice. Arlington for example is working on a transit center which includes housing. Need to look for a site that can be inclusive of housing.
I could see where college students and residents of the city would benefit from this expensive project but do they really need this additional tax increase?
I have been committed to alternative transportation for 15 years meaning the more we learn to get around other than an automobile the better we and the planet will be.
I just want to make sure I can still catch same bus, but not have to make a lot of transfers and not have to ride all over town to get back home in a timely manner.
I live a10 min walk from downtown so public transit isn't something I need. However, I do believe I would use it to go to other cities
I live just east of Hburg city limits. Traffic on 33 heading to the city continues to grow. An effective public transportation system would include ways to transport people all along that corridor (Elkton or Massanutten to Hburg). That means connecting housing with schools, Rham Park and Hburg. I realize this survey is intended to address a multimodal center. It should be near a Hburg boundary to distribution of all that movement into the city. Could arrive by car, bus, light rail.
I look forward to this center providing a hub for city and JMU transit routes, ticketing center for routes, as well as restrooms for the public and separately for drivers. I am hoping this is a well-designed multi-functional facility that provides Harrisonburg for an upgrade in public transportation services.
I rent a house near the current HUB at roses so that I am able to access any rt I need. Moving the HUB to a different area will severely affect those who have already chosen to live near the HUB in order to get around.
I still think our community members are underserved and I love the idea of climate controlled for families and people who have no other means of transportation. Furthermore, as a mother, restrooms are always important to families.
I suggest the City consider installing a solar panel covered parking structure so that electric vehicles (including City buses) can be charged using clean energy. Solar EV charging is an important solution to multiple challenges facing our City and our planet.

Survey Comments
I think it is a wonderful idea and fully support it!
I think it's a good idea as long as it is not primarily geared to the needs of college students. The non-student residents' needs should also be considered.
I think these are wonderful services even though I'll never use them due to the time required to travel via public transit vs private car.
I think this is a great idea. However, I'd love to use public transit, but the routes don't serve any of my needs because they are too infrequent and require much more time than biking or driving.
I think this would be nice to have for Harrisonburg, but I would be unlikely to use it.
I work with Valley Program for Aging Services. As this project moves forward, I would be willing to participate in discussions if needed. I would also be interested in space to park our senior transportation vehicles when not in use. You can contact me at (contact provided to HDPT).
I would like to see a waiting area that is kept clean, and the no smoking rule was observed. I think all in all the bus routes do an excellent job and I have used them for years as I am older and do not drive. Some of the drivers are so friendly and helpful and I enjoy riding with them.
If a new one is built, what would happen to the one located at Roses?
If it can help reduce the number of transfers on public bus routes in the city that would be a much-needed improvement and encourage more to ride.
If this could be leveraged to increase the availability of long-distance transit options, that would be great. Even just shuttles to Amtrak stations/airports.
If you could make it accessible to the various shuttles, that would be cool. If we could make bikes and scooters and rental cars affordable to low-income people, then homeless and other low-income folks and working poor could access these services. Allow people with Medicaid cards to get a discount or free access to buses, bikes, and other services.
I'm retired but expect to be using public transportation at some time in the future. My wife and I also host out of town visitors, and it would be nice if the multi-modal center could host Greyhound and other over the road buses. I'd suggest working with the Valley Mall and using the back side of the parking area behind the mall on the east side (behind the Target area) to build a transit center with information booth, ticketing area, restrooms and waiting area with charging stations for electric vehicles and parking areas for buses, scooters, motorcycles, carpools, and visitors. The Mall could be a great place to shop and get food and snacks, the Mall is a great central location on Hwy 33 and very near I-81 and is close to JMU and many shopping and eating locations within walking distance. Thank you.

Survey Comments

In-city stops really need to have no more than a 15–20-minute wait between buses. Prefer to see buses keep moving, being on-time at stops, vice long, timed layovers. Hub should not be a bus gathering lot -- buses should come, disembark/embark passengers, and leave (i.e., not like Charlottesville). Ideally, should get from one point in Harrisonburg to another point in Harrisonburg with no more than 1 bus change, and not sitting on a bus at any location for more than a couple of minutes (i.e., no extended timed stops).

It must, foremost, serve the needs of low income/high needs citizens of the Harrisonburg area in an artful, positive way. It must also serve the needs of the middle school/high school students who stay after school and don't have a car ride home. They should not have to pay for taxi/uber/etc. for after school functions.

It's very much needed to serve city residents as most timely bus services cater mostly JMU students. As a JMU alumni, the stark difference using bus services for JMU versus as a city resident and to travel within the city to non JMU locations, is dismal and leaves much to be desired. Also, adding service lines to operate later than 7p would be helpful for those that work in retail or restaurants as bus routes are not available at least up to 10pm. Major lacking for a constantly growing city.

Keep it simple, safe, and spotless

Less immigration, please. Give taxpayers a break!

Most important aspect is to make it easy for alternative transportation to be effective and easy. Bikes, scooters, etc. protected bike lanes and multi-use paths getting to a transit hub would be vital.

My only concern is how to monitor to ensure it is not being used as a parking lot for JMU commuter students who do not want to get a campus parking pass. This currently occurs in the burgess shopping center in the end against Reservoir.

Needs to be privately funded and operated by an entrepreneur. But if publicly funded then the design must be functional rather than elegant and done for the lowest cost.

No Bums on the bus

Park & Ride is a good amenity but need NOT be part of multimodal transit center. It should be located downtown near services NOT close to I-81 or JMU.

Please consider providing DC fast chargers and level 2 charging for electric vehicles. Please consider using FTA funds to purchase electric transit buses. Please consider adding a route on Circle Drive.

Please consider the E Market St bldg. that used to house the gas station (near the AutoZone store & I81)

Please do not locate it at JMU. JMU should improve its own transfer area. Pay-per-use bicycles, scooters, etc. should accept cash or coins. Not everyone has a smart phone or desires to use one.

Please provide a way to have the police and medical emergency equipment there quickly,

Survey Comments
PLEASE redesign bus routes to be bidirectional instead of a loop. Highly recommend looking at Champaign-Urbana's public bus system.
Please work with Rockingham County to expand public transit for major employment centers. There should be better transportation options for our ALICE population.
Public safety should be a priority in the design and maintenance
Remove the transfer station from Roses Parking lot
Routes need to be more user friendly and start earlier to become primary carriers for commuters. Not all routes should need to go through JMU, as if JMU were the only damn thing in the community that is important.
Should be located downtown, close to North East Neighborhood. We should think outside the box on this!! This is an amazing opportunity to ensure accessible transit options.
Smaller buses (vans) and more drivers/times.
Such a center should be planned as an integral part of a strategy to reduce downtown vehicle use, improve and encourage "walkability" and "bike ability" within the downtown and other busy areas, improve/support economic development options, and decrease the city's carbon footprint from transportation through use of electric vehicles (public and private) and by facilitating increased use of walking and biking. City residents should be able to move about the city easily without needing to use their personal vehicles, and county residents who visit the city for personal or business reasons should likewise be able to easily park their vehicles and access public transportation (including ebikes, escooters, walking/biking paths, city buses, taxis) to reach their destinations. Planning for the transit center must look outward at, and forward to, the city's anticipated demographics, services, businesses, cultural offerings, and other opportunities for community gatherings/events over the next 20 to 30 years. Planning should not be in a vacuum but should be done in accordance with other projects and activities to improve the city's effectiveness and attractiveness into the future. Facility construction and use should deploy sustainability design/features and should be preceded by an environmental impact statement. The construction and location SHOULD NOT adversely impact areas/communities already burdened by the impact of previous infrastructure projects, SHOULD foster increased cohesiveness and interaction among disparate communities, and SHOULD provide service to all areas in accordance with their needs. Its location should encourage and enable much greater use of public and shared transportation options both within the city and as a departure/arrival point for travelers within the Central Shenandoah Valley and those venturing to other VA venues, such as NoVA, Richmond, Tidewater, and tourist sites.

Survey Comments
Thank you for considering all of the above amenities at a transit center. I think a safe parking area is really important part of a transit hub, so that one can leave their car there while traveling or taking a bus out of town for a day or more. A climate-controlled space to wait outside of bad weather would be very helpful too!
The current transit program is centered around providing transportation services for JMU students. It would be very helpful if new services considered the needs of low-income Harrisonburg (non-JMU student) residents who rely on public transportation for their essential needs.
There must be some services for seniors, handicaps and also in Harrisonburg, we have a large population of non- English speakers (Kurdish, Arabs., etc.) that are also illiterate, millstone think about more visual signs
This center is not needed. Harrisonburg has enough financial issues adding debt for a Multimodal Transit center that is not needed is a waste of taxpayer money. There is no justified need.
this does not link to anything overall, very negative impression current bus transit only useful for JMU students definitely not for me population density too low for this to work
This is only meant to cater to JMU and at the expense of taxpayers. Of course, citizens get use, but this is more money loss for the city as it doesn't bring much, if any revenue and adds huge costs on a dwindling high income tax paying city that is supported by the tax of the lower middle income. We are starting to notice, because of outspoken individuals in the area. Start working for us and not your own special interests, kickbacks, and James Madison University.
This kind of change is urgent when you consider climate change science to be real with its warnings (not to speak of American's addiction to the automobile. [addiction equals dependence with consequences]
We do not need this
We need more buses so the wait at the stops is not so long to get from point A to point B

City of Harrisonburg Multimodal Transit Center Study

Chapter 2: Description and Evaluation of Proposed Sites

Introduction

One of the most important tasks for the Harrisonburg Multimodal Transit Center Feasibility Study was the site selection process. Choosing a site for the project was not simple, given that there are two somewhat competing goals for the site, which are:

1. Develop a safe and accessible transfer hub for HDPT's community routes; and
2. Develop a park and ride lot.

The development of a safe and accessible transfer hub suggests that the location be central to HDPT's current routes as well as close to downtown and the ridership base. The development of a park and ride lot suggests that the location be somewhat close to I-81 for convenient access. A park and ride lot also increases the project's footprint by 1 to 2 acres, depending upon the size of the lot.

During the initial project meeting City staff provided the study team with significant input concerning their "wish list" for the multimodal center. The next step for the study team was to develop a public survey to gauge public opinion regarding the development of a multimodal center and park and ride lot for the city. The survey results were documented in Chapter 1 and suggested that city residents are interested in the development of multimodal center that catered to the needs of city residents, rather than James Madison University (JMU). Several amenities are desired, with public restrooms at the top of the list. Residents are also interested in a park and ride option, with 51.3% indicating that they would use it.

Potential Sites

Several potential sites for the multimodal center were identified by City staff. A few additional sites were added to the list by the consulting team. The potential sites include a mix of city-owned properties; vacant properties; and properties that are already partially or completely developed. A total of 14 sites were included in the initial site screening process. The existing site at 580 N. Mason Street was included as one of the 14 sites. The list of sites and the basic site information for each is provided in Table 2-1. The transit information for each site is provided in Table 2-2. A map of the city with these sites identified is provided in Figure 2-1.

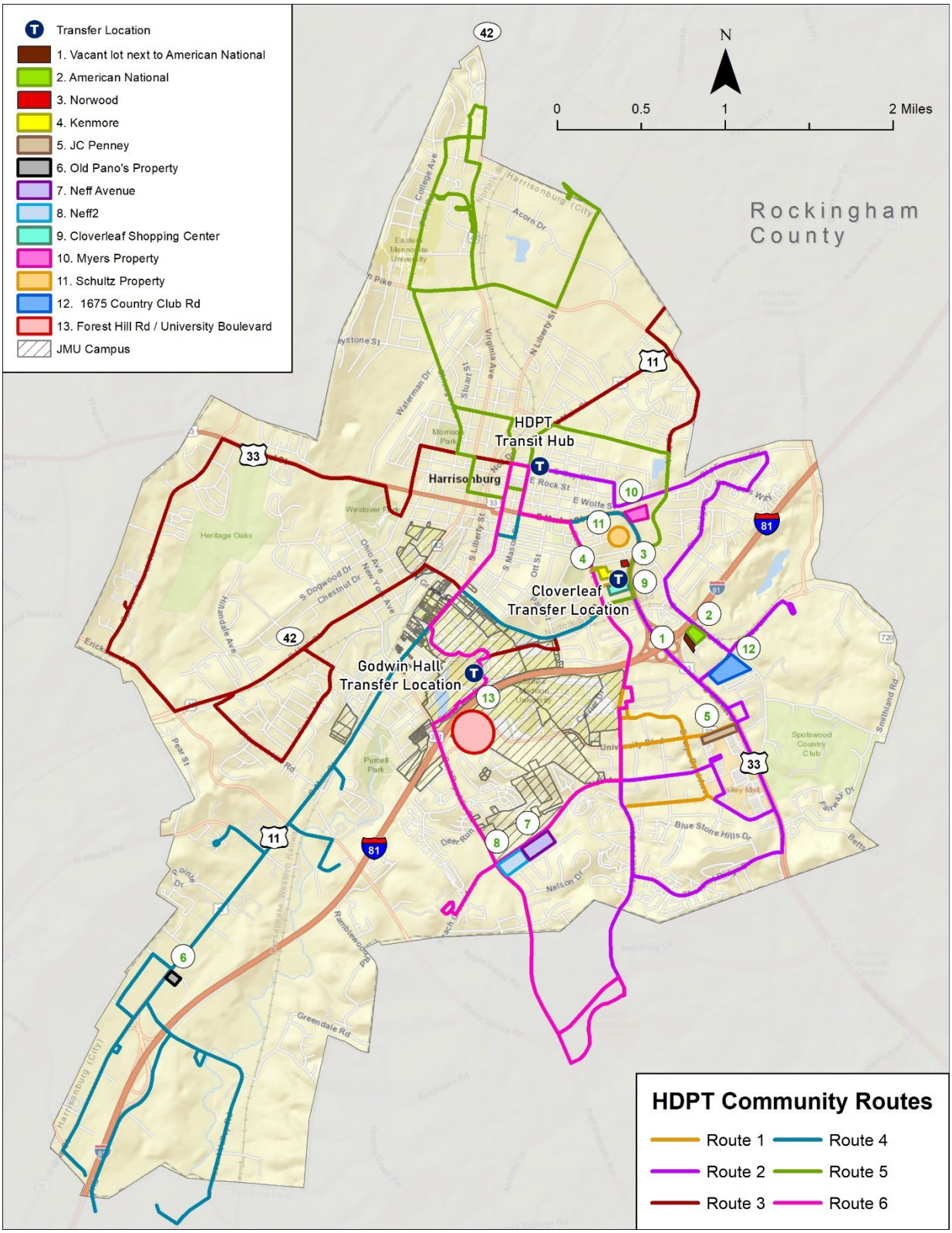
Table 2-1: Potential Sites with Basic Site Information

Site	Address	Ownership	Parcel Size Acres	Zoning	Notes
American National	1515 Country Club Road	Bellvue Enterprises LLC	4.64	B-2	Existing building and parking lot. Purchased 3/26/2021. Note says Sentara Offices
Lot Next to American National	1400 East Market	EH Harrisonburg LLC	7.37	M-1	Vacant lot, no pavement. Same owner as adjacent Double Tree Hotel
Cloverleaf Shopping Center Partial	S. Carlton @ Laundromat	Clover Leaf Shopping Center Corp.	1.5	B-2	Entire parcel is 9.89 acres
Forest Hill Road	Forest Hills/University/I-81	JMU	?	R-1	Multiple parcels. JMU planning on building an access road -leftover land could be available
JC Penney Partial	Valley Mall - University Blvd	SM Valley Mall LLC	2	B-2	Entire parcel is 37.26 acres
Kenmore Street	0/75/81/88 Kenmore	Multiple Owners	2.24	B-2	4 parcels - 3 on south side of Kenmore, one (largest) on north side
Linda Lane	1675 Country Club Road	Skylar & Talli, LLC	9.9	B-2	Vacant Land. Actively for sale
Myers	East Market Street north of Vine Street	Gerald Myers	4	B-2	Vacant lot behind 718-730 E. Market
Neff	Across from 975 Neff	City	8.36	R-1	Next to A Dream Come True Playground
Neff 2	0 Neff Avenue	Leigh Trust	7.23	B-2c	Parcel next to Neff bordering Port Republic Road
Norwood	618-625 Norwood	City	4.55	B-2	5 lots, each one is .91. Adjacent to Norwood Apts
Pano's	3190 South Main	City	1.86	B-2	Building and parking lot - former Pano's restaurant
Shultz	Behind 761 E Market St - 0 Franklin St.	Joyce Schultz MD Living Trust	4.9	R-2	16 parcels of either .30 or .31 each
Existing site- Roses	580 N. Mason	Steroben Associates	1	B-1	Current site of HDPT transfer operation. Entire site is 6.9 acres.

Table 2-2: Transit Information for Each Site

Site	Address	Transit Routes within 1/4 mile
American National	1515 Country Club Road	Routes 1 and 2
Vacant Lot Next to American National	1400 East Market	Routes 1 and 2
Cloverleaf Shopping Center Partial	S. Carlton @ Laundromat	Routes 1, 2, 3, 5, 6
Forest Hill Road	Forest Hills/University/I-81	Route 6
JC Penney	Valley Mall - University Blvd	Routes 1 and 2
Kenmore Street	0/68/75/81/88 Kenmore	Routes 1, 2, 3, 5, 6
Linda Lane/Country Club Lane	1675 Country Club Road	Routes 1 and 2
Myers	East Market Street north of Vine Street	Routes 2, 3, 5
Neff	Across from 975 Neff	Route 6
Neff 2	0 Neff Avenue	Route 6
Norwood	618-625 Norwood	Routes 1, 2, 3, 5, 6
Pano's	3190 South Main	Route 4
Shultz	Behind 761 E Market St - 0 Franklin St.	Routes 1, 2, 3, 5, 6
Existing site- Roses	580 N. Mason	Routes 1, 2, 3, 5, 6

Figure 2-1: Potential Sites



Site Selection Criteria

After documenting the city and public wish lists for a multimodal center, the study team developed a series of criteria upon which each of the sites was compared. These criteria were used to narrow the list down to three sites, at which time more detailed analysis was completed. The site selection criteria are provided in Table 2-3.

Table 2-3 Site Selection Criteria

Criteria	Purpose	Scoring
Served by Current Routes	Indicator of how many of the community routes serve the proposed site	0,1,2,3,4,5,6
Proximity to I-81	Indicator of park and ride feasibility	.5 mile or less = Good (2) >.5 mile < 1 mile = Average (1) Over 1 mile = Poor (0)
Proximity to Downtown as defined as the intersection of Market and Main	Indicator of convenience for current riders	.5 mile or less = Good (2) >.5 mile < 1 mile = Average (1) Over 1 mile = Poor (0)
Residential Access	Indicator of accessibility for users	Within ¼ mile = Yes (1) Farther than ¼ mile = No (0)
Retail/Commercial Access	Indicator of accessibility for users	Within ¼ mile = Yes (1) Farther than ¼ mile = No (0)
Population Density (block group)- People per square Mile	Indicator of proximity to population base	4,000 or more = High (2) 2,000 to 3,999 = Medium (1) Fewer than 2,000 =Low (0)
Access to Title VI Populations	Is the site accessible to Title VI neighborhoods?	Good Access (1) Poor Access (0)
Pedestrian/Bicycle Connections	Indicator of multimodal accessibility	Yes (1) or No (0)
Size of Parcel	Indicator of feasibility of park and ride lot	4 acres or more = Good (2) 2 acres to 3.99 acres = Average (1) Less than 2 acres =Poor (0)
Zoning	Is a multimodal center and park and ride lot consistent with existing zoning?	Allowed by right or not. This criterion was not scored, as "public uses" are allowed by right.
City Ownership	Indicator of potential cost to develop site	Yes (1) or No (0)

Criteria	Purpose	Scoring
Environmental Impacts	Are there any obvious negative environmental impacts?	Apparent streams or wetlands? Y (0) or N (1) Previously disturbed property? Y (1) or N (0) Number of noise sensitive uses within 225 feet of property boundary (homes, hotels, hospitals, nursing homes, churches, schools, libraries, museums, cemeteries) 1 or more = 0. None =1 Potentially historic structures (known historic property, historic district, or building 50+ years old) Yes (0) No (1)
Street Access	Help determine ease of entrance/exit for transit vehicles	Would the site result in a significant number of left turns for transit vehicles? Yes (0) or No (1) Are there any obvious obstructions? Yes (0) or No (1)
Street Condition/Geometry	Help determine level of effort/cost for street improvements	Would street improvements such as widening be necessary? Yes (0) or No (1) Is there enough right of way for sidewalks and other pedestrian infrastructure to be constructed? (If not already in place) Yes (1) or No (0) Are there issues with utilities? Yes (0) or No (1) Are there issues with stormwater management? Yes (0) or No (1)
Joint Use Potential	Is there any potential for joint use development?	Yes (1) or No (0) Scoring based on parcel size – over 5 acres

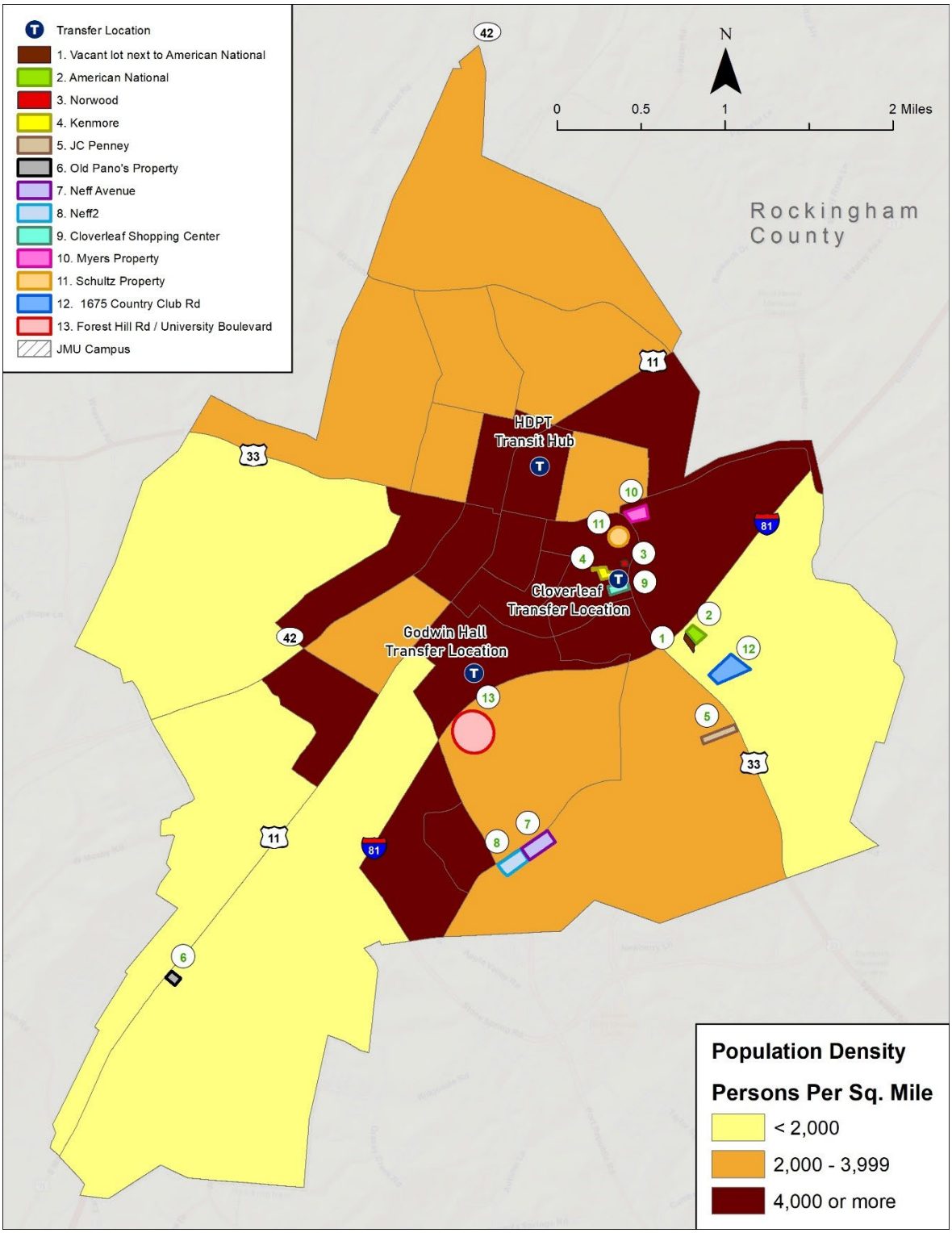
Demographic Maps

Two of the site selection criteria are associated with demographics: population density and access to Title VI populations. To evaluate the sites using these metrics the study team prepared population density and Title VI maps and overlaid the sites on the maps so that visual evaluations could be completed. These maps are displayed if Figures 2-2, 2-3 and 2-4.

The population density map shows the City's Census block groups shaded according to three categories of population density: high (4,000 or more people per square mile); medium (2,000 to 2,999 people per square mile); and low (fewer than 2,000 people per square mile). The potential sites are overlaid on the map.

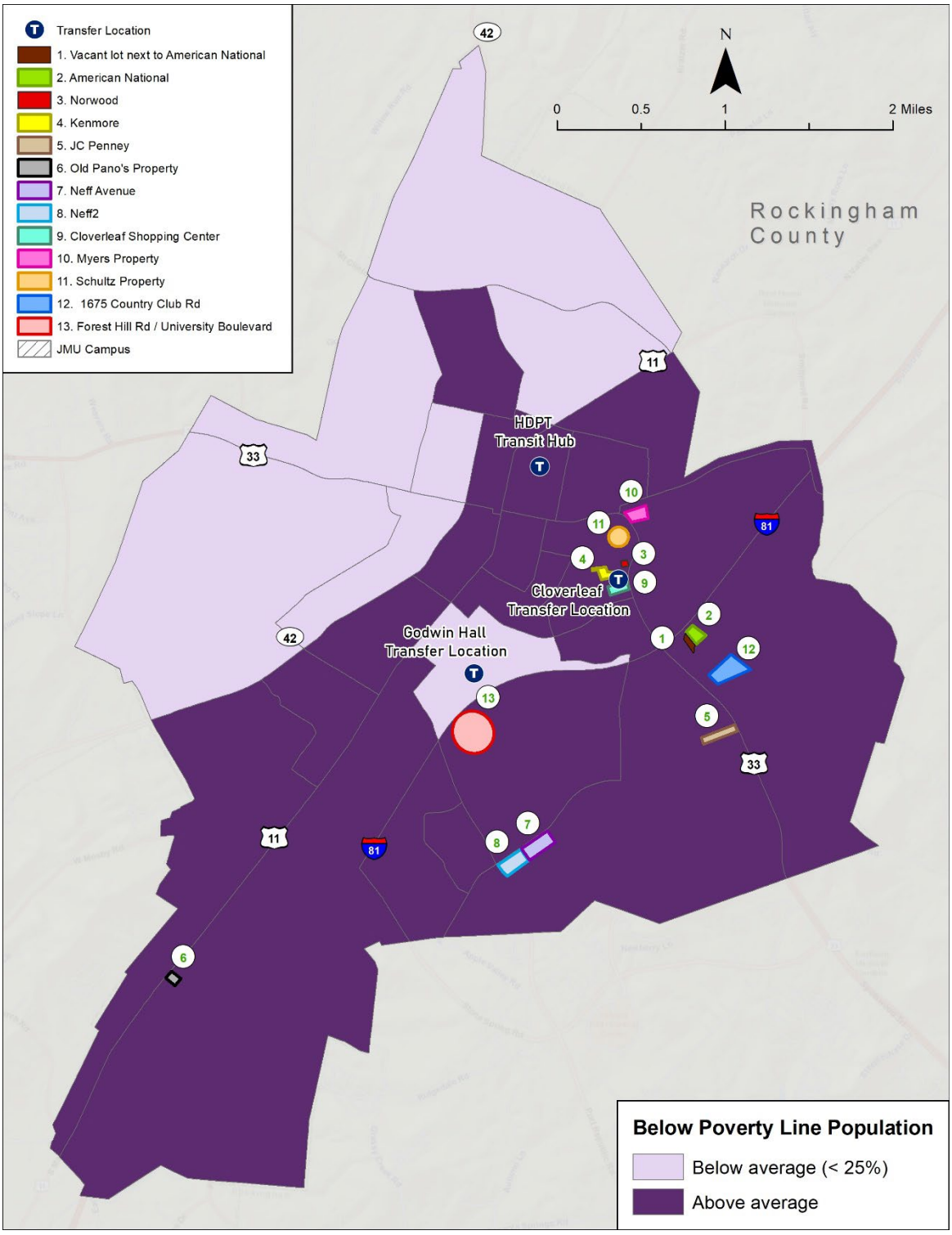
Two maps were prepared for the Title VI criteria: 1) a map of the city showing the Census block groups shaded according to whether the population of the block group is above or below the City's average poverty rate; and 2) a map of the city showing the Census block groups shaded according to whether the population of the block group is above or below the City's average minority rate. It should be noted that the large population of college students raises the City's poverty rate and makes the areas where students live show an above average poverty rate.

Figure 2-2: Potential Sites and Population Density



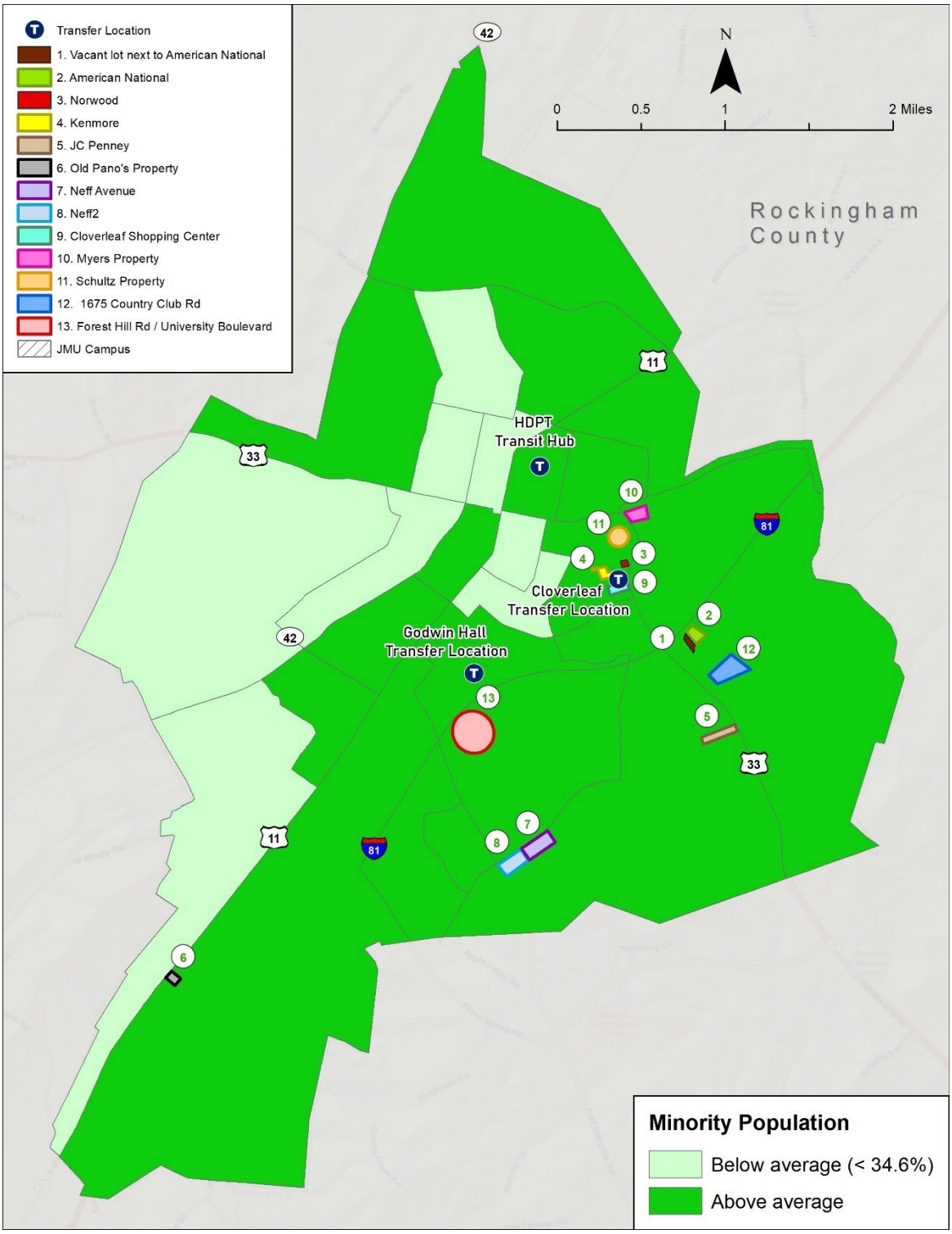
SOURCE: U.S. CENSUS, AMERICAN COMMUNITY SURVEY, 2019.

Figure 2-3: Potential Sites and Poverty Status



SOURCE: U.S. CENSUS, AMERICAN COMMUNITY SURVEY, 2019.

Figure 2-4: Potential Sites and Minority Status



SOURCE: U.S. CENSUS, AMERICAN COMMUNITY SURVEY, 2019.

Site Evaluations

In this section, each of the 14 sites is documented and evaluated based on the site selection criteria outlined in Table 2-3.

American National

The American National University building is located at 1515 Country Club Lane. The building was previously used as an educational facility. It was sold in March of 2021 at a price of $3,800,000 and the property notes indicate it may be a planned Sentara site. A map of the site from the City's ARC GIS program is provided as Figure 2-5.

Information received from the City's Department of Public Works indicates that there is a creek that runs along the front of the property from the I-81 bridge to under Linda Lane, which poses challenges for frontage improvements. The I-81 bridge abutting the property is currently under study for whether it will be replaced with interstate widening. If the bridge is replaced, there are opportunities for road improvements. If the bridge is not replaced, a sidewalk could fit under it, but it would not be ideal and it would have to be shared with bicycles. The railroad also crosses Country Club Road at an unfavorable angle, which is an issue for bicycles and more frequent pedestrian crossing will require enhanced treatment. Coordination with the railroad would be required and has historically been expensive.

Use of the site would likely require demolition of the 29,756 square foot building. Widening of Country Club Road would not likely be necessary. The site selection criteria information for the American National site is provided in Table 2-4.

Figure 2-5: American National Site

Table 2-4: American National Site Selection Information

Criteria	Scoring	Unweighted Score
Served by Current Routes	2	2
Proximity to I-81	.5 mile or less = Good	2
Proximity to Downtown as defined as the intersection of Market and Main	Over 1 mile = Poor	0
Residential Access	Within ¼ mile = No	0
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	Less than 2,000 =Poor	0
Access to Title VI Populations	Poor	0
Pedestrian/Bicycle Connections	No	0
Size of Parcel	Good	2
Zoning	Allowed by right	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? Y Previously disturbed property? Y Number of noise sensitive uses within 225 feet of property boundary. No – 300 feet to hotel No historic structures	3
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? Yes	1
Street Condition/Geometry	Would street improvements such as widening be necessary? No Is there enough right of way for sidewalks? Constrained = .5 Are there issues with utilities? No Are there issues with stormwater management? No	3.5
Joint Use Potential	No	0
	Total	**14.5**

Lot Adjacent to American National

There is a vacant parcel located between the American National property and the DoubleTree Hotel parcel. The address is 1400 East Market. This parcel is owned by the DoubleTree Hotel and is partially wooded. It does not appear to have any direct street frontage, other than to the I-81 entrance ramp. A map of the site from the City's ARC GIS program is provided as Figure 2-6.

Given that the site is landlocked, a large street project would be required for an access road. Information provided by the City's Public Works Department indicated that access could be from the Lowe's parking lot or from the Double Tree parking lot, but there are issues with both. Access from the Lowe's parking lot would require that they re-organize their parking configuration, which might not be permitted if they lose too many spaces. Double Tree access was described as "very problematic" regarding the functional area of the intersections of the Double Tree Access Road/Linda Lane/East Market Street. It was not recommended to add buses to the mix for that intersection. If the hotel access could be re-configured off a new public street for the transit center along the Lowe's property, that would be a positive improvement for the site. Access could also conceivably be provided through the American National property, which was previously discussed. The site selection criteria information for this site is provided in Table 2-5.

Figure 2-6: Lot Adjacent to American National

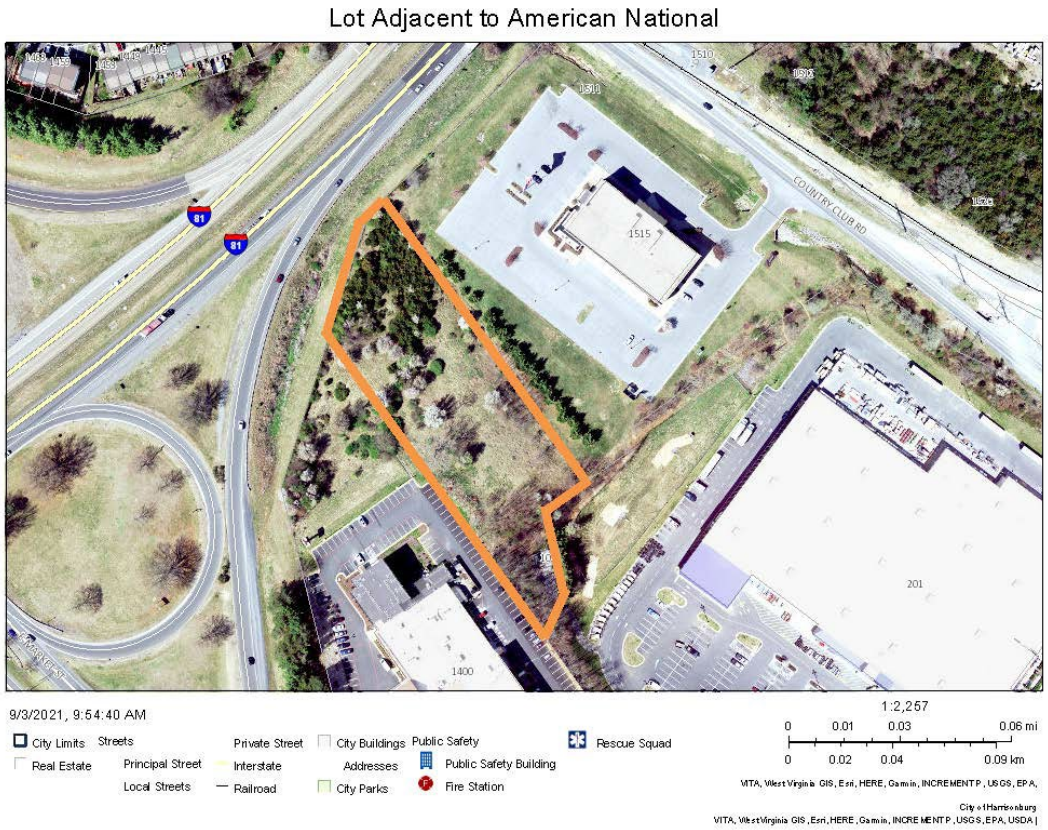


Table 2-5: Site Selection Information for the Lot Adjacent to American National

Criteria	Scoring	Unweighted Score
Served by Current Routes	2	2
Proximity to I-81	.5 mile or less = Good	2
Proximity to Downtown as defined as the intersection of Market and Main	Over 1 mile = Poor	0
Residential Access	Within ¼ mile = No	0
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	Less than 2,000 =Poor	0
Access to Title VI Populations	Poor	0
Pedestrian/Bicycle Connections	No	0
Size of Parcel	Good	2
Zoning	Allowed by right	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? N Number of noise sensitive uses within 225 feet of property – 1 hotel. No known historic structures	2
Street Access	Would the site result in a significant number of left turns for transit vehicles? No street Are there any obvious obstructions? Yes	0
Street Condition/Geometry	Would street improvements such as widening be necessary? Yes Is there enough right of way for sidewalks? Unsure Are there issues with utilities? No Are there issues with stormwater management? No	2
Joint Use Potential	Yes	1
	Total	**12**

Cloverleaf Shopping Center – Partial

The East Market Street side (on-street) currently serves as a transfer location for HDPT routes 1, 3, 4, and 5. The proposed location option contemplates using a portion of South Carlton Street and a portion of the parking lot and potentially the laundromat for the multimodal center. A map of the proposed parcel from the City's ARC GIS program is provided in Figure 2-7.

Information provided by the city characterized this area as in the middle of the transition from residential to commercial. There are currently several entrances on Carlton, which could result in bus/vehicle/ped conflicts. There is enough road width for several uses such as: turn lane; center turn lane; bus pull off; bike lane. Access management improvements would help the safety and operational functionality of the potential Cloverleaf site.

The city previously applied for a Smart SCALE project to improve drainage and underground utilities, and to construct a sidewalk on Carlton Street. The project was not funded. The Department of Public Works indicated that there are utility poles in the gutter pan on the north side of the street and the gutter pan is in various stages of crumbling/ponding water/growing grass. The project estimate was $3 million, which was largely driven by the utility and drainage issues, which do not garner points for Smart SCALE. These issues do not appear to be present on the south side of the street. The site selection criteria information for this site is provided in Table 2-6.

Figure 2-7: Cloverleaf Partial Site

Table 2-6: Site Selection Information for the Cloverleaf Partial Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	5	5
Proximity to I-81	.5 mile or less = Good	2
Proximity to Downtown as defined as the intersection of Market and Main	>.5 mile < 1 mile = Average	1
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	4,000 or more = Good	2
Access to Title VI Populations	Good	1
Pedestrian/Bicycle Connections	Yes, on Reservoir and on East Market	1
Size of Parcel	Poor	0
Zoning	Allowed by right	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? Y Number of noise sensitive uses within 225 feet of property – None Potentially historic structures- none known	4
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? Yes Is there enough right of way for sidewalks? Yes Are there issues with utilities? Yes Are there issues with stormwater management? Yes	1
Joint Use Potential	Yes -existing retail. Not large enough for any new joint uses	0
	Total	**21**

Forest Hill Road

This site does not currently exist; however, the city anticipates that James Madison University will be re-routing University Drive so that it is a straighter road with better access to the JMU Convocation Center. JMU currently owns most of the properties along Forest Hill Road that would be affected by this project. If/when this project moves forward, there likely will be land leftover that may meet some of the site criteria, most notably being close to I-81. A map of the area from the City's ARC GIS program is provided as Figure 2-8. It should be noted that only one of the City's community routes serves near this location.

The city noted that pedestrians can cross under I-81 through Duke Dog Alley or over I-81 via Port Republic Road near the site. The city is also constructing bicycle and pedestrian infrastructure in the area.

Street improvements off the new University Boulevard alignment would be needed for this site to work. Since there are existing streets, there may be an opportunity to use them as a one-way network. The street around the back side of the property is currently slated for demolition as part of the stormwater management plan for the University Boulevard project. If this site is a contender, the city would have to act soon to preserve use for a transit center. The site selection criteria information for this site is provided in Table 2-7.

Figure 2-8: Forest Hill Site

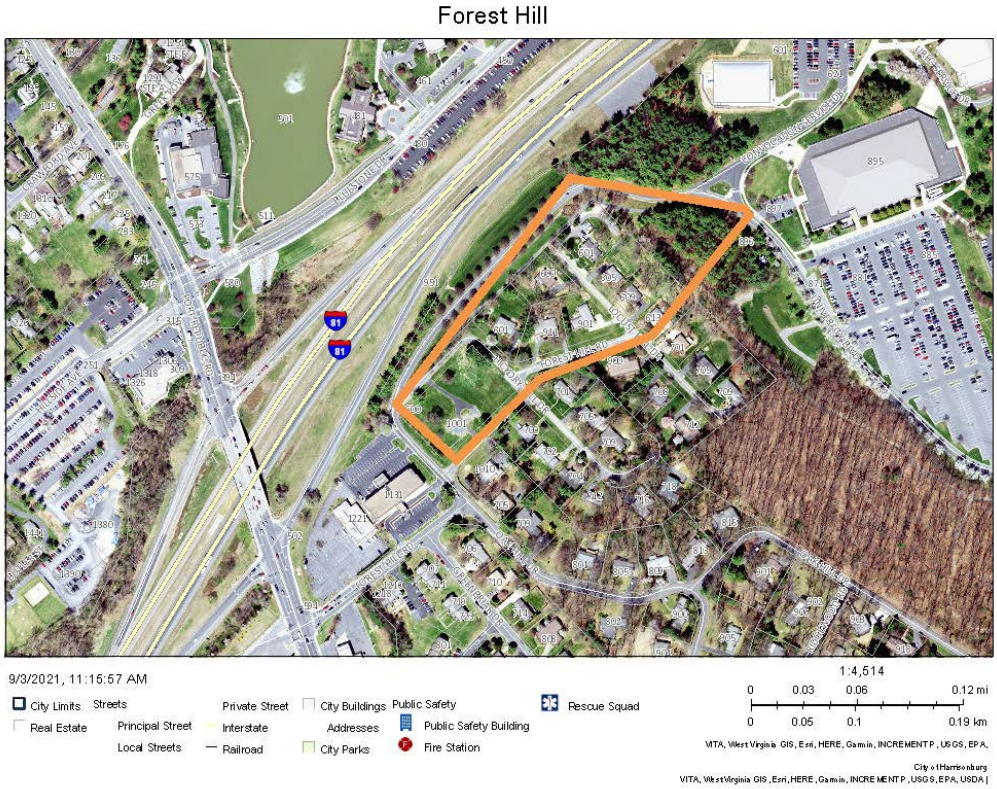


Table 2-7: Site Selection Information for the Forest Hill Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	1	1
Proximity to I-81	.5 mile or less = Good	2
Proximity to Downtown as defined as the intersection of Market and Main	Over 1 mile = Poor	0
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	0
Population Density (block group)- People per square Mile	2,000 to 3,999 = Average	1
Access to Title VI Populations	Poor	0
Pedestrian/Bicycle Connections	Planned	1
Size of Parcel	Unknown	
Zoning	Allowed by right, based on definition of "public use"	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? Y Number of noise sensitive uses within 225 feet of property boundary – Houses Potentially historic structures (known historic property, historic district, or building 50+ years old) - No	3
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? Yes Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	3
Joint Use Potential	No	0
	Total	**14**

JC Penney Partial

The Valley Mall is a local and regional shopping destination with a relatively large footprint of paved area. A concept may work that includes using part of the parking lot adjacent to JC Penney's, in conjunction with University Boulevard. Members of the study team have developed similar sites at shopping malls in Maryland. A map of the area from the City's ARC GIS program is provided as Figure 2-9.

While there are not currently sidewalks on this side of University Boulevard, the city indicated that a Smart SCALE project is planned for this area that will add missing sidewalks and a road diet. The site selection criteria information for this site is provided in Table 2-8.

Figure 2-9: JC Penney Partial

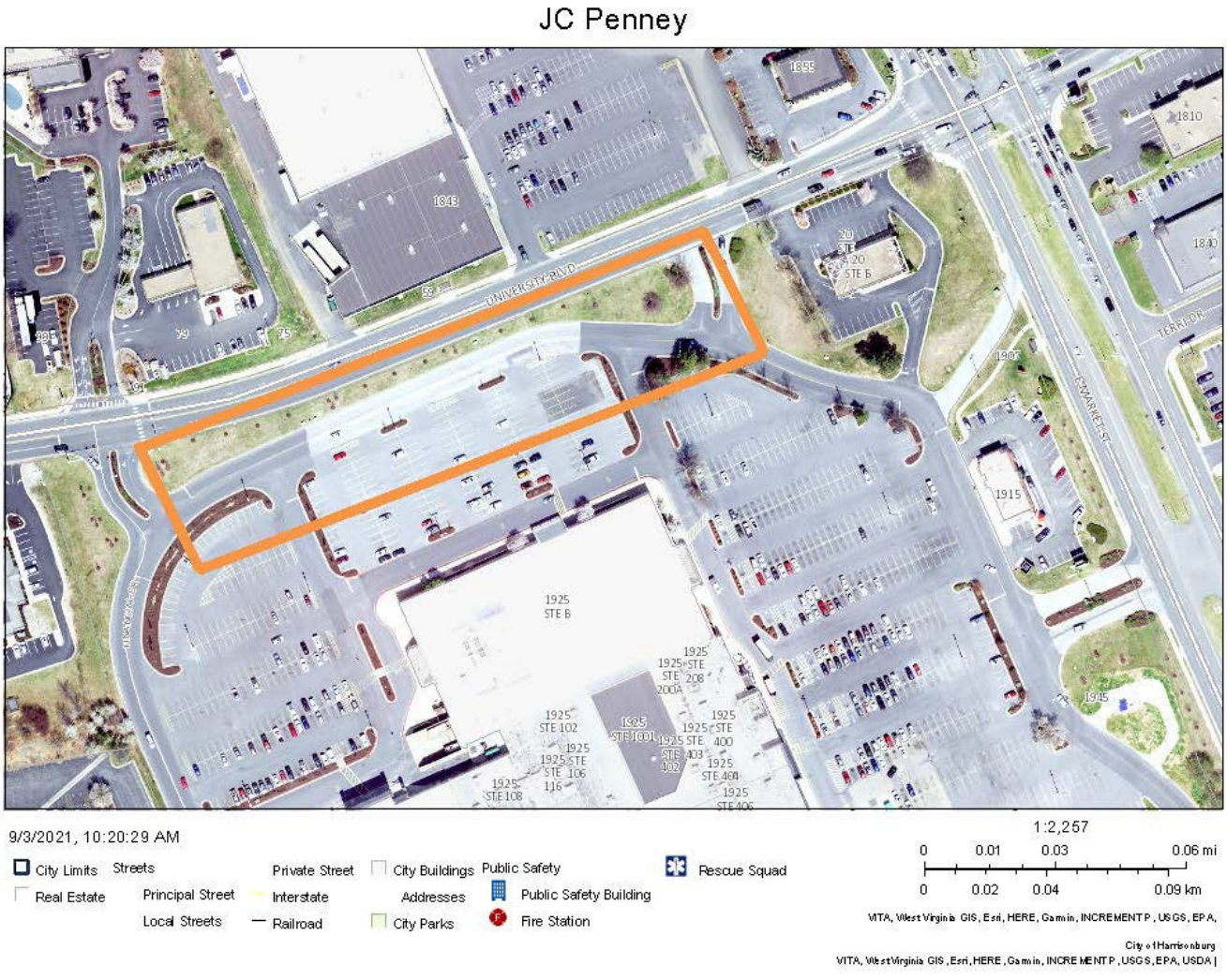


Table 2-8: Site Selection Information for the JC Penney Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	2	2
Proximity to I-81	>.5 mile < 1 mile = Average	1
Proximity to Downtown as defined as the intersection of Market and Main	Over 1 mile = Poor	0
Residential Access	Within ¼ mile = No	0
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	2,000 to 3,999 = Average	1
Access to Title VI Populations	Poor	0
Pedestrian/Bicycle Connections	Planned	1
Size of Parcel	Poor	0
Zoning	Allowed by right	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? Y Number of noise sensitive uses within 225 feet of property boundary – 0 Potentially historic structures- 0	4
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? No Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	4
Joint Use Potential	Yes, existing retail. Not large enough for any new joint uses	0
	Total	**16**

Kenmore Street

Kenmore Street is located close to the Cloverleaf Shopping Center and connects Reservoir Street and East Market Street. The site is comprised of several vacant lots on both the north and south sides of Kenmore Street (though the lot on the north side includes a slope). The parcels are owned by different entities. One of the properties on the south site appears to be for sale. Kenmore is a wide street, which may allow for a combined on-street/off-street site. A map of the area from the City's ARC GIS program is provided as Figure 2-10.

The site could also include acquisition of one of the restaurants facing S. Carlton Street which would allow access between Kenmore Street and S. Carlton Street

The City's Department of Public Works indicated that this area would benefit from sidewalks but is constrained from a utility perspective. There is enough right of way on Kenmore to make improvements, though they would add to the cost of the project. There is not currently a traffic signal at either end of Kenmore Street. The site selection criteria information for this site is provided in Table 2-9.

Figure 2-10: Kenmore

Table 2-9: Site Selection Information for the Kenmore Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	5	5
Proximity to I-81	.5 mile or less = Good	2
Proximity to Downtown as defined as the intersection of Market and Main	>.5 mile < 1 mile = Average	1
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	4,000 or more = Good	2
Access to Title VI Populations	Good	1
Pedestrian/Bicycle Connections	Sidewalks on East Market and on Reservoir	1
Size of Parcel	Average to Poor, depending upon how many parcels are usable	0
Zoning	Allowed by right	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? Partially Number of noise sensitive uses within 225 feet of property boundary – depends upon whether northside parcel is used. Potentially historic structures - No	3
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? Yes Is there enough right of way for sidewalks? Yes Are there issues with utilities? Yes Are there issues with stormwater management? Yes	1
Joint Use Potential	No	0
	Total	**20**

Linda Lane

The Linda Lane Property is the largest of the sites currently being evaluated for the project. Given its size and location, this site probably has the potential for a joint-use project. The site appears to be actively for sale. A map of the area from the City's ARC GIS program is provided as Figure 2-11.

While there are not currently sidewalks adjacent to the site, the city has applied for funding to construct them so that children living in the adjacent trailer park can walk to school. The site selection criteria information for this site is provided in Table 2-10.

Figure 2-11: Linda Lane

Table 2-10: Site Selection Information for the Linda Lane Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	2	2
Proximity to I-81	.5 mile or less = Good	2
Proximity to Downtown as defined as the intersection of Market and Main	Over 1 mile = Poor	0
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	Less than 2,000 =Poor	0
Access to Title VI Populations	Good	1
Pedestrian/Bicycle Connections	Not currently, but planned	1
Size of Parcel	4 acres or more = Good	2
Zoning	Allowed by right	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? No Previously disturbed property? No Number of noise sensitive uses within 225 feet of property – trailer homes adjacent; hotel adjacent Potential historic structures - No	2
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? No Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	4
Joint Use Potential	Yes	1
	Total	**19**

Myers

This property is currently vacant land. Access to the main portion of the property is a different parcel at 722 East Market Street. Access could potentially be provided via any of the properties that front on East Market Street. An access road would need to be constructed. A map of the area from the City's ARC GIS program is provided as Figure 2-12. The site selection criteria information for this site is provided in Table 2-11.

Figure 2-12: Myers Property with Access

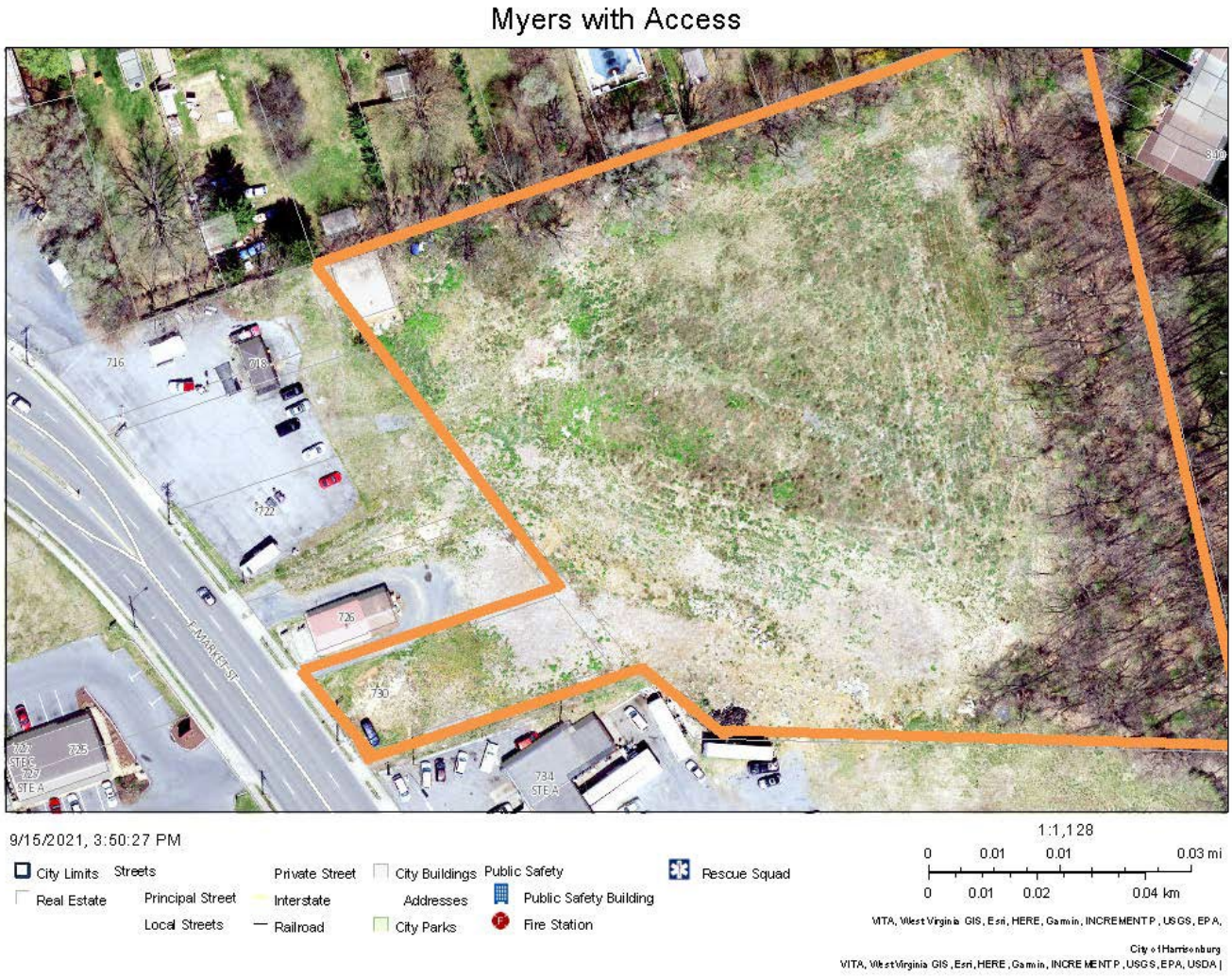


Table 2-11: Site Selection Information for the Myers Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	3	3
Proximity to I-81	>.5 mile < 1 mile = Average	1
Proximity to Downtown as defined as the intersection of Market and Main	>.5 mile < 1 mile = Average	1
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	4,000 or more = Good	2
Access to Title VI Populations	Good	1
Pedestrian/Bicycle Connections	Yes	1
Size of Parcel	4 acres or more = Good	2
Zoning	Allowed by right	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? N Number of noise sensitive uses within 225 feet of property boundary – homes along the periphery. Historic properties - N	2
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? No Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	4
Joint Use Potential	No	0
	Total	**21**

Neff

The Neff site is owned by the city and is adjacent to the A Dream Come True Playground on Neff Avenue, near the intersection with Port Republic Road. It is a large site with over 8 acres. There is good street access, however the site is not located near city route users or destinations. A map of the area from the City's ARC GIS program is provided as Figure 2-13. The site selection criteria information for this site is provided in Table 2-12.

Figure 2-13: Neff Site

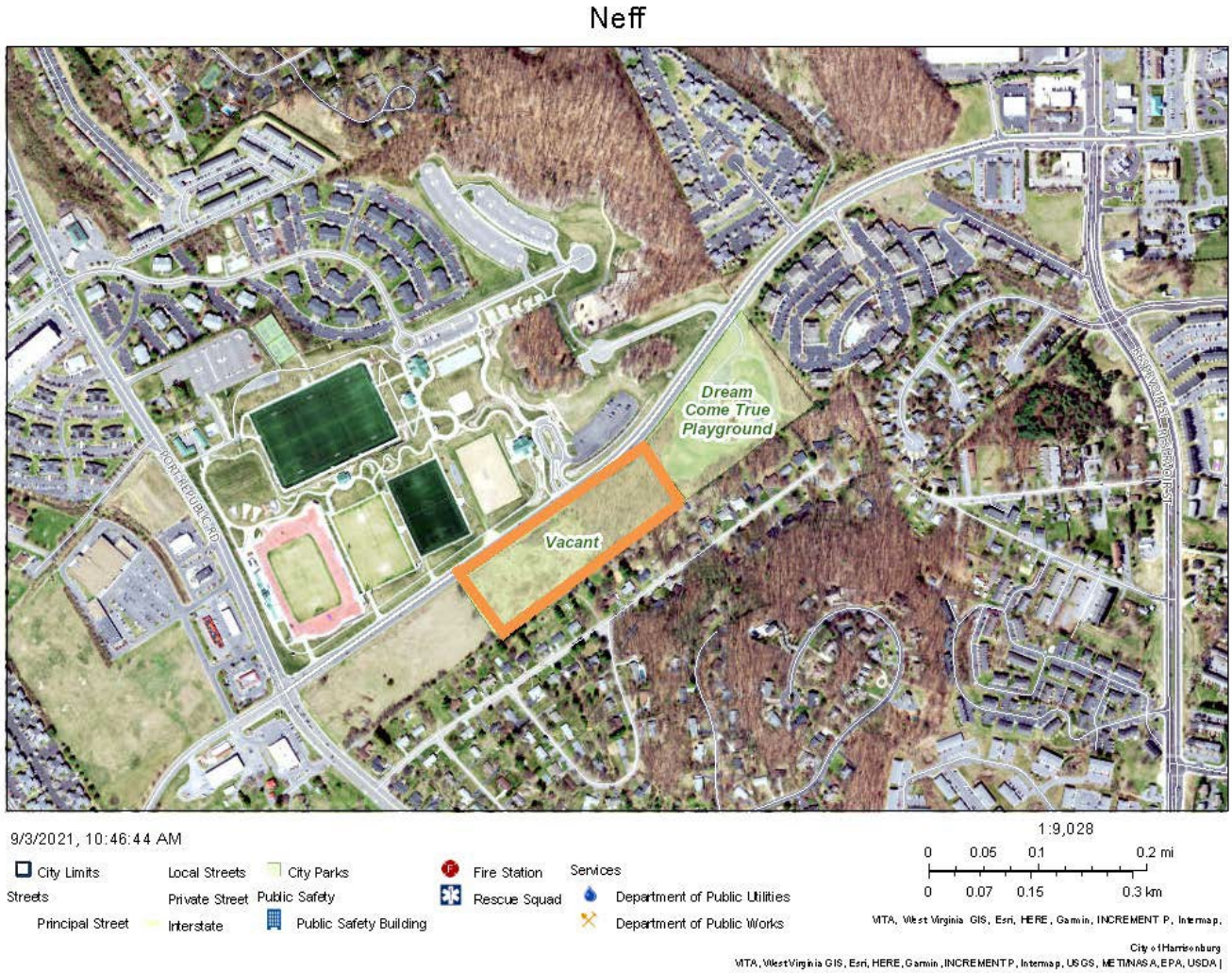


Table 2-12: Site Selection Information for the Neff Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	1	1
Proximity to I-81	Over 1 mile = Poor	0
Proximity to Downtown as defined as the intersection of Market and Main	Over 1 mile = Poor	0
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	2,000 to 3,999 = Average	1
Access to Title VI Populations	Poor	0
Pedestrian/Bicycle Connections	Neff Ave. has a bike lane on the same side of the street as the property. The sidewalk is on the other side of Neff.	1
Size of Parcel	4 acres or more = Good	2
Zoning	Allowed by right, based on definition of "public use"	
City Ownership	Yes	1
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property N Number of noise sensitive uses within 225 feet of property boundary – houses behind property – less than 225 from property line. Potentially historic structures – none known	2
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? No Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	4
Joint Use Potential	Yes	1
	Total	**17**

Neff2

While looking at the city-owned parcel on Neff Avenue, the study team noticed that the adjacent parcel is also vacant and fronts on Port Republic Road. This parcel is privately owned and is also large, with over 7 acres of land. There is good street access, however the site is not located near city route users or destinations. A map of the area from the City's ARC GIS program is provided as Figure 2-14. The site selection criteria information for this site is provided in Table 2-13.

Figure 2-14: Neff 2 Site

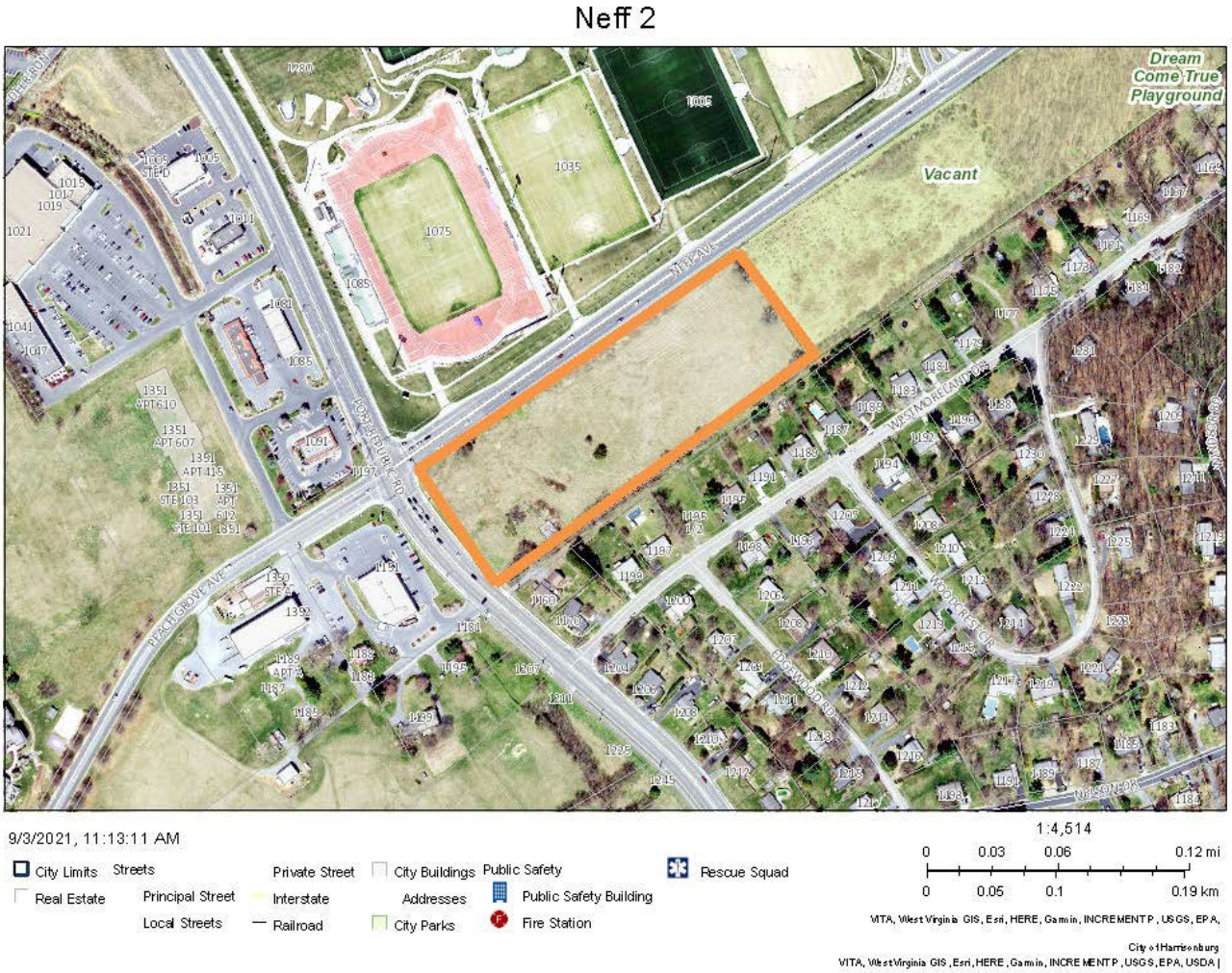


Table 2-13: Site Selection Information for the Neff 2 Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	1	1
Proximity to I-81	Over 1 mile = Poor	0
Proximity to Downtown as defined as the intersection of Market and Main	Over 1 mile = Poor	0
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	2,000 to 3,999 = Average	1
Access to Title VI Populations	Poor	0
Pedestrian/Bicycle Connections	Neff Ave. has a bike lane on the same side of the street as the property. There is a sidewalk on Port Republic Road	1
Size of Parcel	4 acres or more = Good	2
Zoning	Allowed by right, there are conditions on the property (B-2c)	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property Y Number of noise sensitive uses within 225 feet of property boundary – houses behind property – less than 225 from property line. Potentially historic structures – N	3
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? No Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	4
Joint Use Potential	Yes	1
	Total	**17**

Norwood

The Norwood site is comprised of several city-owned lots that are bordered by Norward Street, commercial development on East Market Street, and a multi-family building. Norward Street is narrow with several small multi-family buildings. There appears to be access to East Market Street from this site, though the City indicated that to get an entrance onto southbound East Market Street, negotiations would be needed with the neighbor to the north/west of the site to reconfigure entrances so that space can be made for a transit center entrance. Northbound access onto East Market Street is not possible from the site and the city indicated that a median break at this location would not be advisable. Buses would have to circulate around to S. Carlton Street to access the light to turn north on East Market Street.

The City's Public Works Department also indicated that street improvements would likely be needed for Norwood Street if buses used it to access the site. The area has drainage issues and no storm sewer system. This area would also benefit from sidewalks, but is constrained from a utility perspective, as well as continuous entrances on the frontages. A map of the area from the City's ARC GIS program is provided as Figure 2-15. The site selection criteria information for this site is provided in Table 2-14.

One potential site addition would be the acquisition of the property at 865 East Market Street which is currently the Paleteria La Mexicana. Based on the parking lot configuration, the site may have been a gas station with the potential for prior underground storage tanks.

Figure 2-15: Norwood Site

Table 2-14: Site Selection Information for the Norwood Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	5	5
Proximity to I-81	.5 mile or less = Good	2
Proximity to Downtown as defined as the intersection of Market and Main	>.5 mile < 1 mile = Average	1
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	4,000 or more = Good	2
Access to Title VI Populations	Good	1
Pedestrian/Bicycle Connections	Yes – there is a sidewalk on East Market Street	1
Size of Parcel	4 acres or more = Good	2
Zoning	Allowed by right	
City Ownership	Yes	1
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? Y Number of noise sensitive uses within 225 feet of property boundary – multi-family buildings. Potentially historic structures? No	3
Street Access	Would the site result in a significant number of left turns for transit vehicles? Yes Are there any obvious obstructions? Yes	0
Street Condition/Geometry	Would street improvements such as widening be necessary? Yes Is there enough right of way for sidewalks? Yes Are there issues with utilities? Yes Are there issues with stormwater management? Yes	1
Joint Use Potential	No	0
	Total	**21**

Pano's

The Pano's site is a former restaurant site with parking that is owned by the city. It is southwest of downtown, located along S. Main Street adjacent to the Motel 6. A map of the area from the City's ARC GIS program is provided as Figure 2-16. The building shown in the photo has since been demolished. The city indicated that a new signal will be installed at this intersection to serve a new high school. The area is currently inaccessible for bicycles and pedestrians and is served by just one of the City's routes. The site selection criteria information for this site is provided in Table 2-15.

Figure 2-16: Pano's Site

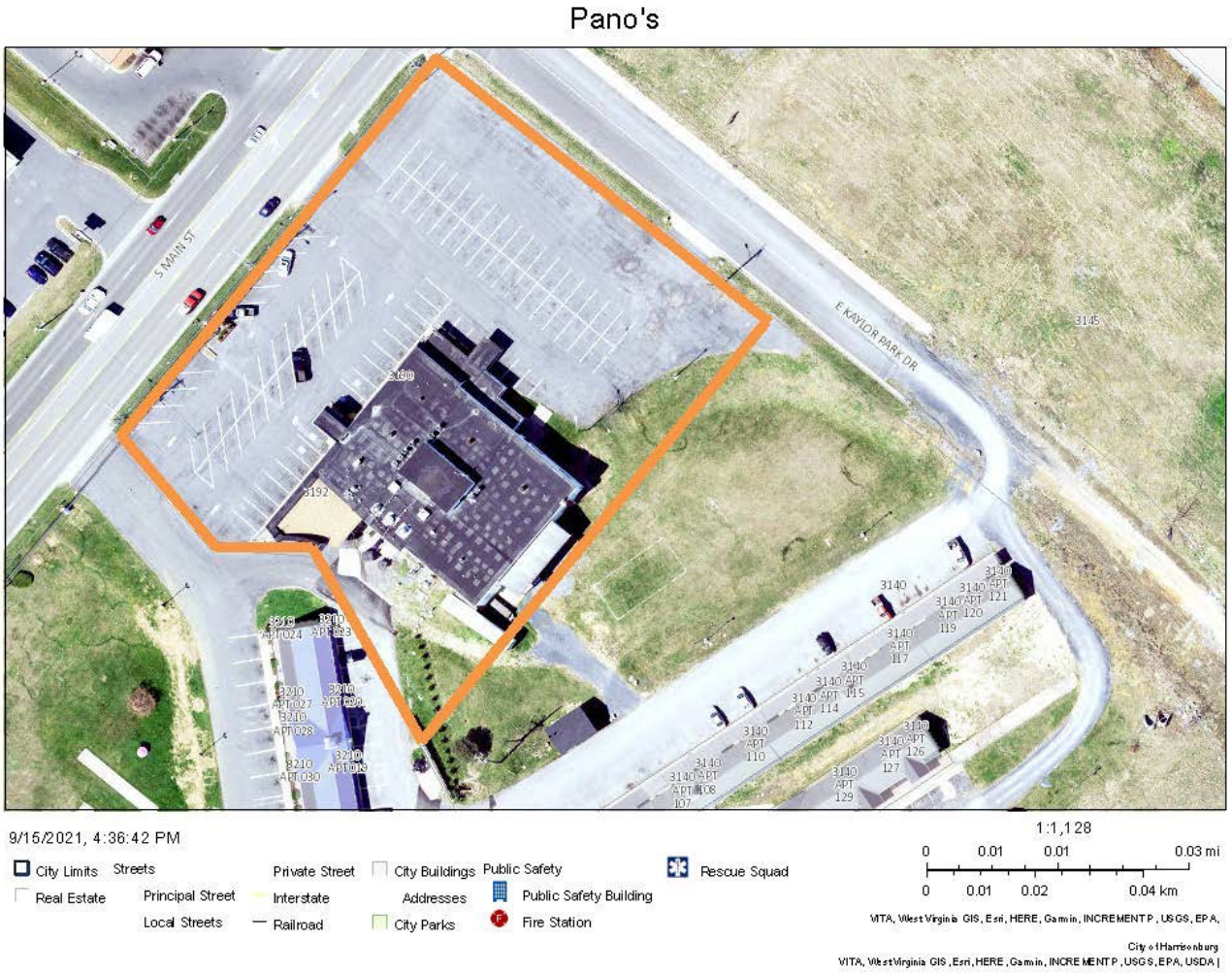


Table 2-15: Site Selection Information for the Pano's Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	1	1
Proximity to I-81	.5 mile or less = Good	2
Proximity to Downtown as defined as the intersection of Market and Main	Over 1 mile = Poor	0
Residential Access	No	0
Retail/Commercial Access	Yes	1
Population Density (block group)- People per square Mile	Less than 2,000 =Poor	0
Access to Title VI Populations	Poor	0
Pedestrian/Bicycle Connections	No	0
Size of Parcel	Less than 2 acres =Poor	0
Zoning	Allowed by right	
City Ownership	Yes	1
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? Y Number of noise sensitive uses within 225 feet of property boundary Adjacent to motel Historic structures? No	3
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? No Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	4
Joint Use Potential	No	0
	Total	**14**

Schultz

The Schultz site is comprised of 18 individual parcels located between the Rolling Hills Shopping Center to the east (East Market St) and the end of Franklin Street to the west. There are residential properties on the Franklin Street side of the site and the Hawkins Street side (south) of the site and commercial properties to the north and east. None of the lots are currently developed and site is wooded. A map of the area from the City's ARC GIS program is provided as Figure 2-17.

There is a proposal to construct Franklin Street extended to E. Market Street that was brought forward in a concept plan presented to city staff to develop this property. The developers of the property did not agree with the City's suggestion that the street be a full city street. There is likely just enough right of way on Franklin Street to construct sidewalks to Reservoir Street, but it is a bit constrained with utilities. Access to the site could be from 765 East Market Street (Meyers Auto Exchange – same owner as the Schultz parcels) or from Hawkins Street. The site selection criteria information for this site is provided in Table 2-16.

Figure 2-17: Schultz Site

Table 2-16: Site Selection Information for the Schultz Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	5	5
Proximity to I-81	>.5 mile < 1 mile = Average	1
Proximity to Downtown as defined as the intersection of Market and Main	>.5 mile < 1 mile = Average	1
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	4,000 or more = Good	2
Access to Title VI Populations	Good	1
Pedestrian/Bicycle Connections	Yes	1
Size of Parcel	4 acres or more = Good	2
Zoning	Allowed by right, based on definition of "public use"	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? N Number of noise sensitive uses within 225 feet of property boundary- Houses border the west and south property lines. Potentially historic structures -none known	2
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? Yes Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	3
Joint Use Potential	No	0
	Total	**22**

Existing Site

HDPT's current primary transfer location for the community routes is located within the southern portion of the Roses site at North Mason Street and East Gay Street. HDPT uses about 15% of the parcel, or about 1 acre. A map of the area from the City's ARC GIS program is provided as Figure 2-18. The city indicated that they will be adding bike lanes onto East Gay Street in association with the Gay Street Road Diet project. The site selection criteria information for this site is provided in Table 2-17. The information assumes a multimodal center would take up a portion of the parcel, rather than the entire parcel.

Figure 2-18: Existing Roses Parcel

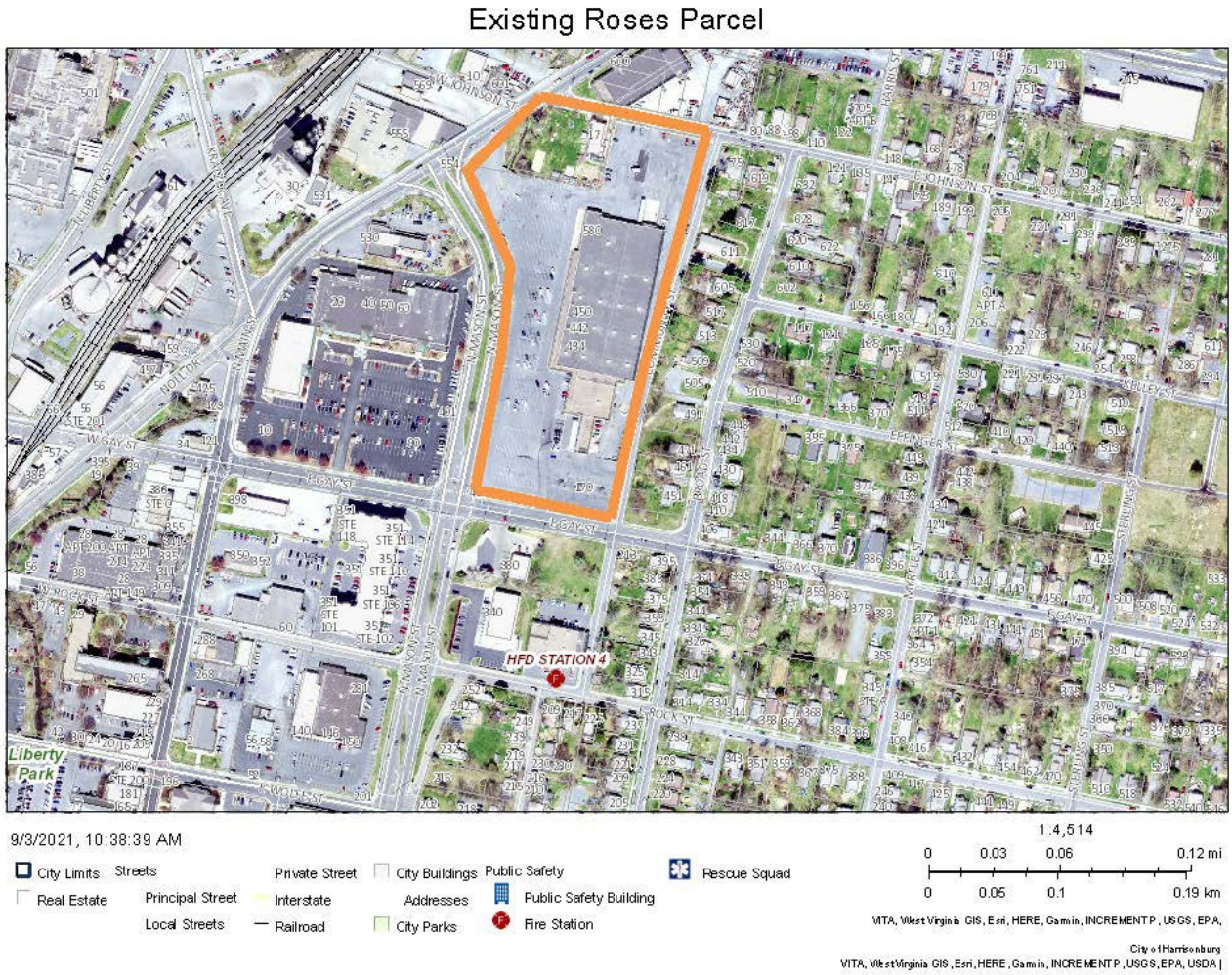


Table 2-17: Site Selection Information for the Existing Site

Criteria	Scoring	Unweighted Score
Served by Current Routes	5	5
Proximity to I-81	Over 1 mile = Poor	0
Proximity to Downtown as defined as the intersection of Market and Main	.5 mile or less = Good	2
Residential Access	Within ¼ mile = Yes	1
Retail/Commercial Access	Within ¼ mile = Yes	1
Population Density (block group)- People per square Mile	4,000 or more = Good	2
Access to Title VI Populations	Good	1
Pedestrian/Bicycle Connections	Yes	1
Size of Parcel	Less than 2 acres =Poor	0
Zoning	Allowed by right	
City Ownership	No	0
Environmental Impacts	Apparent streams or wetlands? N Previously disturbed property? Y Number of noise sensitive uses within 225 feet of property boundary – homes border property to the east. Two churches back to the adjacent Community Street. No known historic structures	3
Street Access	Would the site result in a significant number of left turns for transit vehicles? No Are there any obvious obstructions? No	2
Street Condition/Geometry	Would street improvements such as widening be necessary? No Is there enough right of way for sidewalks? Yes Are there issues with utilities? No Are there issues with stormwater management? No	4
Joint Use Potential	No	0
	Total	**20**

Preliminary Site Comparisons

The study team was hesitant to attach numerical values to the various site selection criteria, as some are a bit subjective, and some criteria may be more important than other criteria. However, to narrow the list, the study team did attach simple numeric values to the criteria to help with the first round of decision-making.

Using the rudimentary scoring for the first round of 14 sites (without assigning weight to any criteria), the Schultz property and the Existing Site scored the highest. Of the top scoring sites, the Schultz parcel is likely the only one that could potentially fit a park and ride lot as well as the multimodal center. The sites on the north/west side of I-81 generally scored higher, as they are served by more transit routes, are closer to the City's population base, and are closer to downtown. The compiled total scores are provided in Table 2-18 and the compiled individual criterion scores are provided in Table 2-19.

Table 2-18: Preliminary Site Comparisons

Property	First Round Score
Shultz	22
Existing site- Roses	22
Cloverleaf Shopping Center Partial	21
Myers	21
Norwood	21
Kenmore Street	20
Linda Lane/Country Club Lane	19
Neff	17
Neff 2	17
JC Penney	16
American National	14.5
Forest Hill Road	14
Pano's	14
Vacant Lot Next to American National	12

Table 2-19: Individual Criterion Comparisons

Criteria	American National	Lot next to A.N.	Clover leaf	Forest Hill	JC Penney	Kenmore	Linda Lane	Myers	Neff	Neff 2	Norwood	Pano's	Schultz	Existing Site
Served by Current Routes	2	2	5	1	2	5	2	3	1	1	5	1	5	5
Proximity to I-81	2	2	2	2	1	2	2	1	0	0	2	2	1	0
Proximity to Downtown as defined as the intersection of Market and Main	0	0	1	0	0	1	0	1	0	0	1	0	1	2
Residential Access	0	0	1	1	0	1	1	1	1	1	1	0	1	1
Retail/Commercial Access	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Population Density (block group)- People per square Mile	0	0	2	1	1	2	0	2	1	1	2	0	2	2
Access to Title VI Populations	0	0	1	0	0	1	1	1	0	0	1	0	1	1
Pedestrian/Bicycle Connections	0	0	1	1	1	1	1	1	1	1	1	0	1	1
Size of Parcel	2	2	0		0	0	2	2	2	2	2	0	2	0
Zoning														
City Ownership	0	0	0	0	0	0	0	0	1	0	1	1	0	0
Environmental Impacts	3	2	4	3	4	3	2	2	2	3	3	3	2	3
Street Access	1	0	2	2	2	2	2	2	2	2	0	2	2	2
Street Condition/Geometry	3.5	2	1	3	4	1	4	4	4	4	1	4	3	4
Joint Use Potential	0	1	0	0	0	0	1	0	1	1	0	0	0	0
Preliminary Scores	**14.5**	**12**	**21**	**14**	**16**	**20**	**19**	**21**	**17**	**17**	**21**	**14**	**22**	**22**

Follow-Up and Decision-Making

The study committee for the project met November 3, 2021, to review the 14 potential sites, with a focus on the seven sites that scored the highest, based on the criteria outlined within this chapter. These sites were:

- The Schultz property
- The existing site
- The Cloverleaf Shopping Center
- The Myers site
- The Norwood site
- Kenmore Street
- Linda Lane/Country Club Lane

The purpose of the meeting was to trim down the list to three or so properties so that the study team could focus on determining which property would be the most suitable. Additional scrutiny of each site was provided with the assistance of the City's Department of Community Development and the City's Department of Public Works. This input provided critical development and infrastructure information for the study team to consider when narrowing down the site choices.

Schultz Property

The highest-ranking site among all of the sites was the Schultz property, which is conveniently sited between I-81 and Downtown Harrisonburg. At almost five acres, the site would accommodate a transit transfer facility and a park and ride lot. Discussion with staff from the Department of Community Development revealed that there was an active development application and concept plan for the site and the development proposal was in keeping with the city's guidelines. In deference to the private investment that had already been made to develop the site in a manner that is in keeping with the city's guidelines, this site was eliminated from consideration.

Existing Site – Rose's Shopping Center

The existing site scored well on many of the site selection criteria, other than those that involve use as a park and ride lot. Further research revealed that this site is discussed within Harrisonburg's Downtown 2040 Plan as a prime site for re-development, including a denser pattern of development. Given the site's future re-development possibilities, which may provide greater value to the city, this site was eliminated from consideration.

Cloverleaf Shopping Center

There is currently an on-street transfer opportunity at the Cloverleaf Shopping Center on East Market Street. The focus of this option was to move the stop to a part of the Cloverleaf parking lot that is now a dry cleaning shop and also use a part of South Carlton Street to create a partial on-street, partial off street center. The site is not large enough for a park and ride lot. Given the city's desire to include a park and ride lot within the project, and the need to potentially purchase an ongoing business, this site was eliminated from consideration.

Norwood Site

The Norwood site is a very appealing site because the city already owns it and it is in a good location, in terms of proximity to I-81, multi-family housing, and shopping destinations. Examining this site more closely revealed the following issues:

- Northbound access onto East Market Street is not possible from the site, given the median along East Market Street. A median break was not likely to be feasible.
- Norwood Street is narrow and lined with small apartment buildings.
- The area has drainage issues and there is no storm sewer system.
- The adjacent property, which includes an active business, would likely to be purchased to create an entrance.
- Continuous sidewalk is difficult to build on this stretch of East Market Street as there are multiple access driveways and utility issues.

Given these issues, the site was eliminated from further consideration.

Kenmore Street

The vacant lot along Kenmore Street appeared to be a good option, though its size would have allowed only a small park and ride lot. This site also offered additional opportunities if access through to South Carlton Street was an option. Further research by the city revealed that contract purchasers for the site had submitted a concept plan for development. In deference to the private investment that had already been made to develop the site in a manner that is in keeping with the city's guidelines, this site was eliminated from consideration.

Linda Lane/Country Club Lane

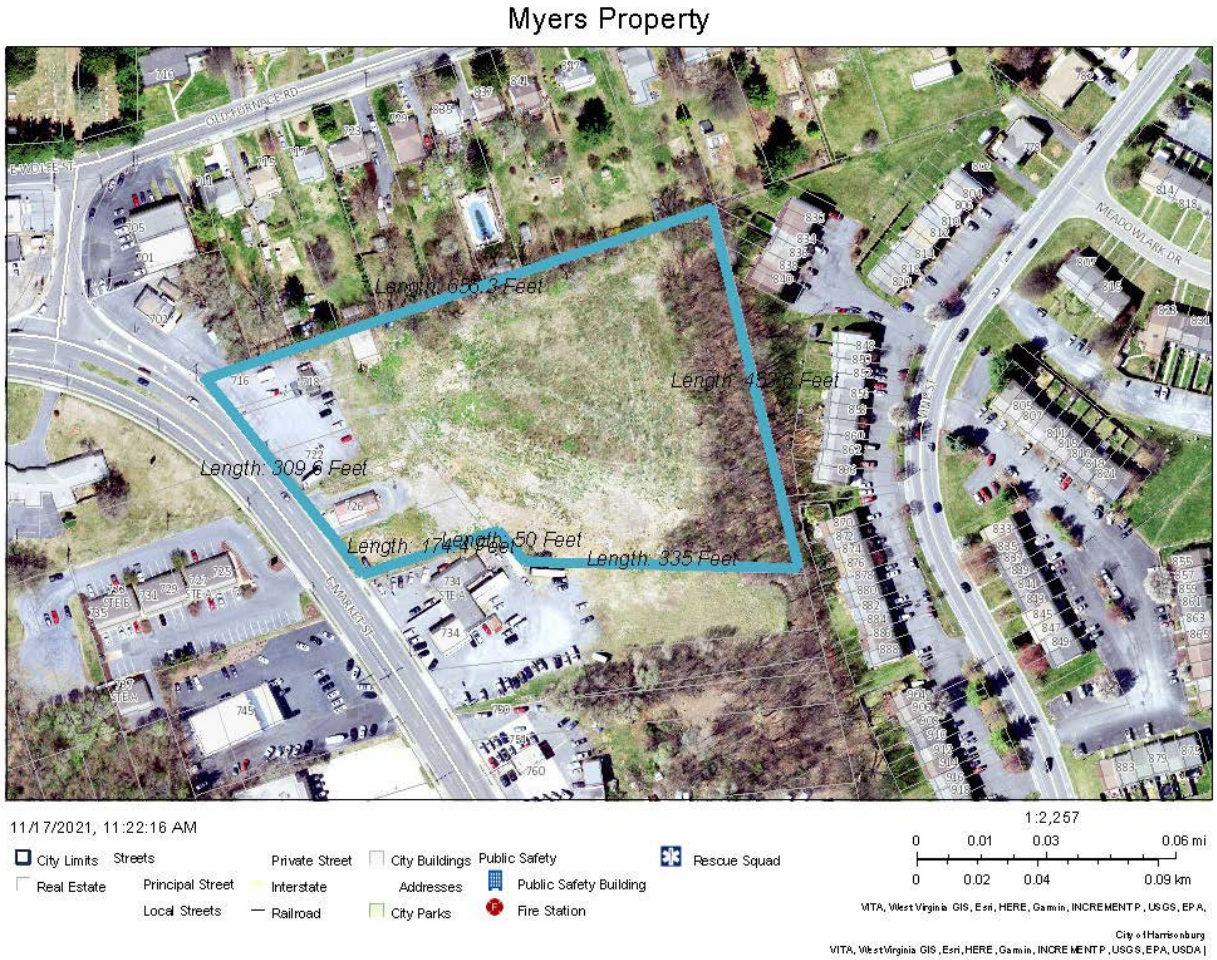
HDPT was very interesting in pursuing the site located at the intersection of Linda Lane and Country Club Lane. It is a large open site (9.9 acres), with no existing development. Given the size of the site, it could be a candidate for joint development possibilities. It is near major shopping attractions and close to I-81. The major drawback to the site is that it is not centrally located for HDPT's ridership base. Given the positive attributes of the site, it was kept on the list for further consideration, including reaching out to the site owners. At this point the site was deemed infeasible, as the property owner was not amenable to working with the city.

Myers Property

The Myers property scored well for a number of reasons – it is large enough to support a transit center and a park and ride lot; it is located between I-81 and downtown Harrisonburg; and it is largely vacant. In addition, three of the HDPT community routes already serve this segment of East Market Street. The site is also actively for sale. Given these positive attributes, the city approached the owners to begin a discussion regarding the site. The preliminary discussion indicated that the owner would be amenable to working with the city on this project.

At this point in the process, the Myers property became the focus of the study team's efforts to fully explore the feasibility of locating a multimodal transit center and park and ride lot at the site. This site is shown in Figure 2-19.

Figure 2-19: Myers Property



A photo of the front of the property is provided as Figure 2-20.

Figure 2-20: Front of Myers Property

City of Harrisonburg Multimodal Transit Center Study
Chapter 3: Conceptual Design and Cost Estimate

Introduction

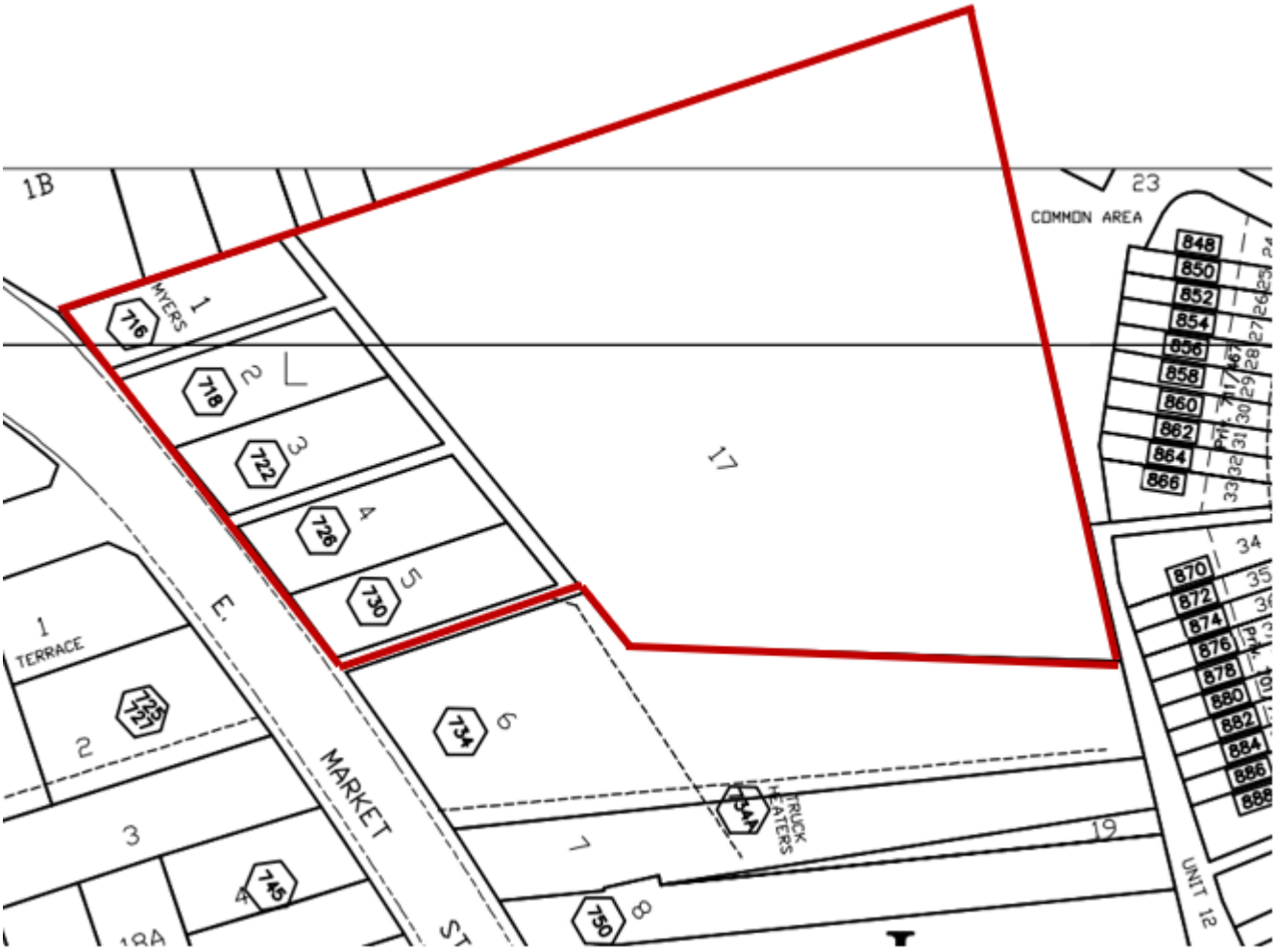
A conceptual design and cost estimate has been prepared for the Myers Property as shown in Figure 3-1. The conceptual design was based on Google Earth images without field surveys. Site utility evaluation was based on observed utilities along East Market Street including electric, water and sewer. Field survey and utility location will be required to advance the conceptual design and refine the conceptual cost estimate.

Figure 3-1: Myers Property

Site Conditions

The Myers Property is comprised of six lots combined into four parcels totaling 5.08 acres as shown in Figure 3-2. Lot 17 is owned by Gerald Myers while lots 1-5 are owned by Stephen T Heitz Trustee. The property is zoned B2-Commercial.

Figure 3-2: Harrisonburg, VA Tax Map 28



The three parcels property adjoining East Market Street are street retail with Fat-Cat Computers located at 726 E. Market Street. Except for the wooded area at the back of the property, the site appears to have been previously graded. The National Wetlands Inventory mapper does not show any streams or wetlands on the property.

Facility Program

The preliminary transit center facility program includes a 12-bus bay transfer facility with passenger waiting room and ticket sales for the Harrisonburg Department of Public Transportation and the Virginia Breeze. The facility program elements include:

- ✓ Twelve bus bays for 40' city transit buses and 45' commuter coaches
- ✓ Transit Center building – 2,588 square feet
- ✓ Nine architectural bus shelters
- ✓ 134 park and ride spaces
- ✓ Three electric automotive charging stations
- ✓ Bike share station

To illustrate the facility size and function Annapolis Transit Center building concepts WRA prepared for the Baltimore Metropolitan Council (BMC) are shown in Figures 3-3 through 3-5.

Figure 3-3: Transit Center Building Concept

Figure 3-4: Transit Center Building Elevation – BMC Annapolis Transit Center

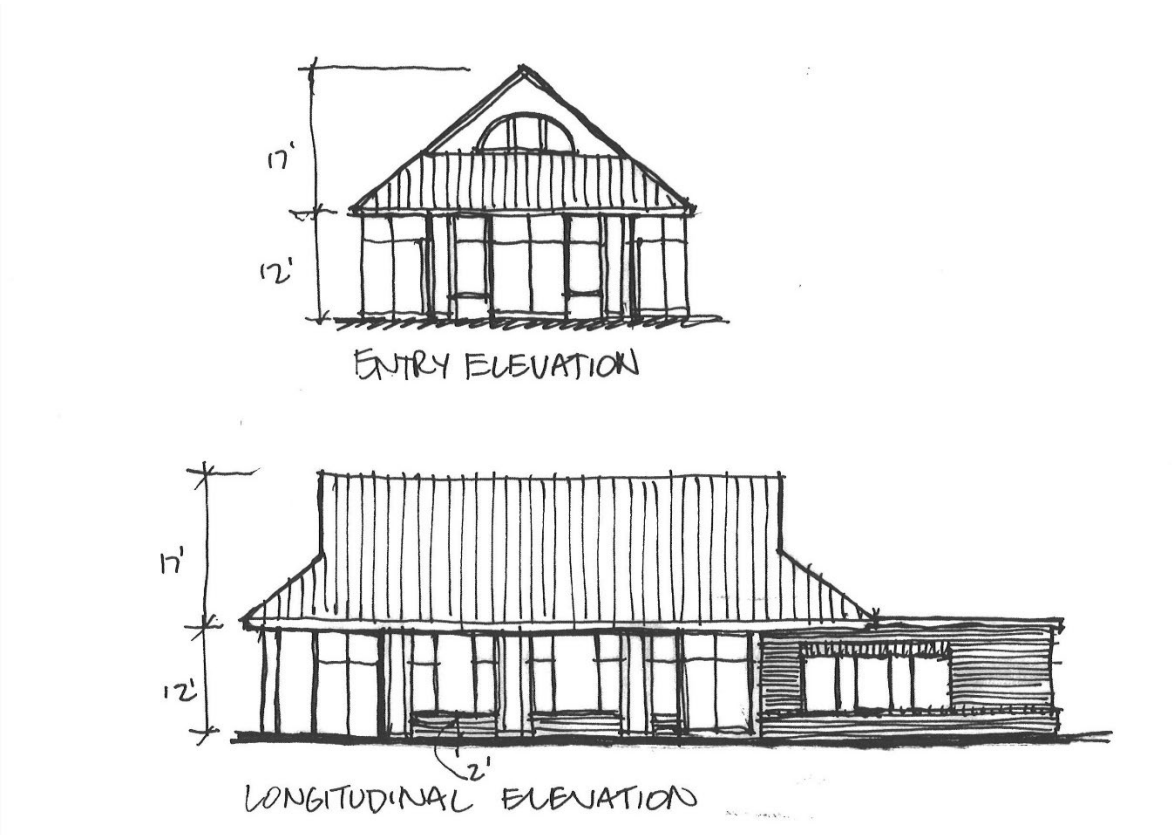
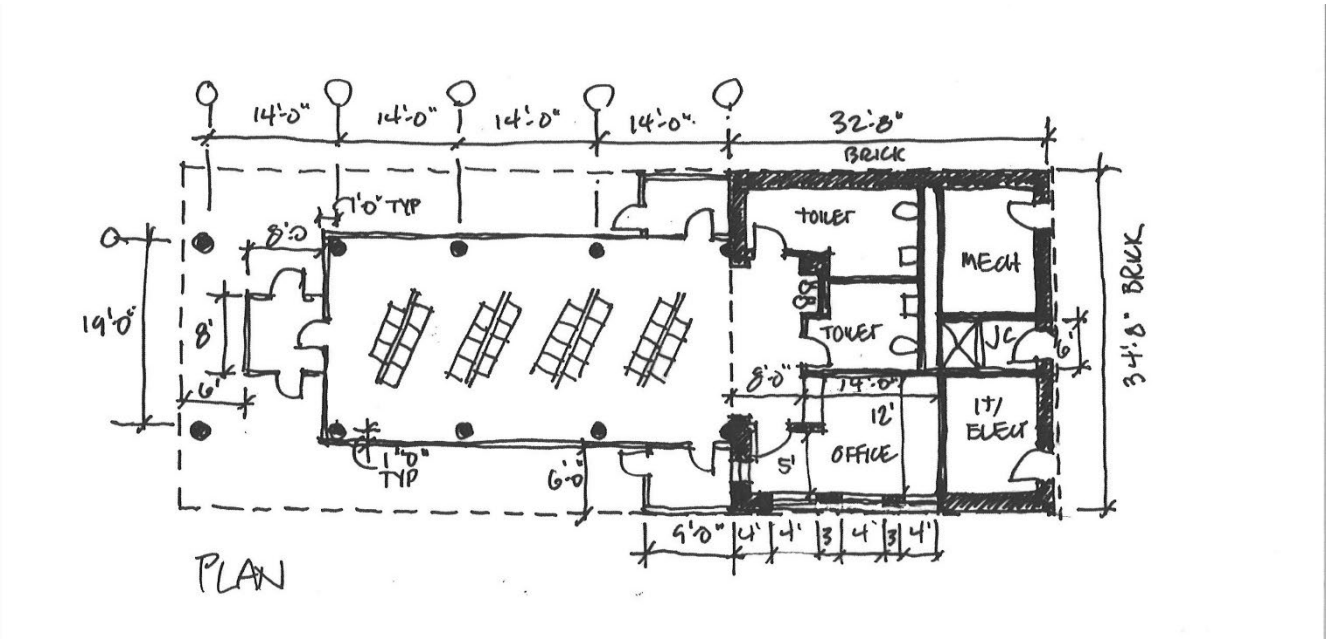


Figure 3-5: Transit Center Floor Plan – BMC Annapolis Transit Center



Site Concept

The preliminary site concept is illustrated in Figure 3-6. Key elements of the plan include:

- ✓ Twelve bus bays
- ✓ 134 park and ride spaces
- ✓ 2,588 square foot transit center building
- ✓ Roadway frontage space for other uses assuming 1,900 square feet of retail classification
- ✓ US 33 left and right turn lanes
- ✓ Utility pole relocation for 4 poles
- ✓ Space for Storm Water Management facility

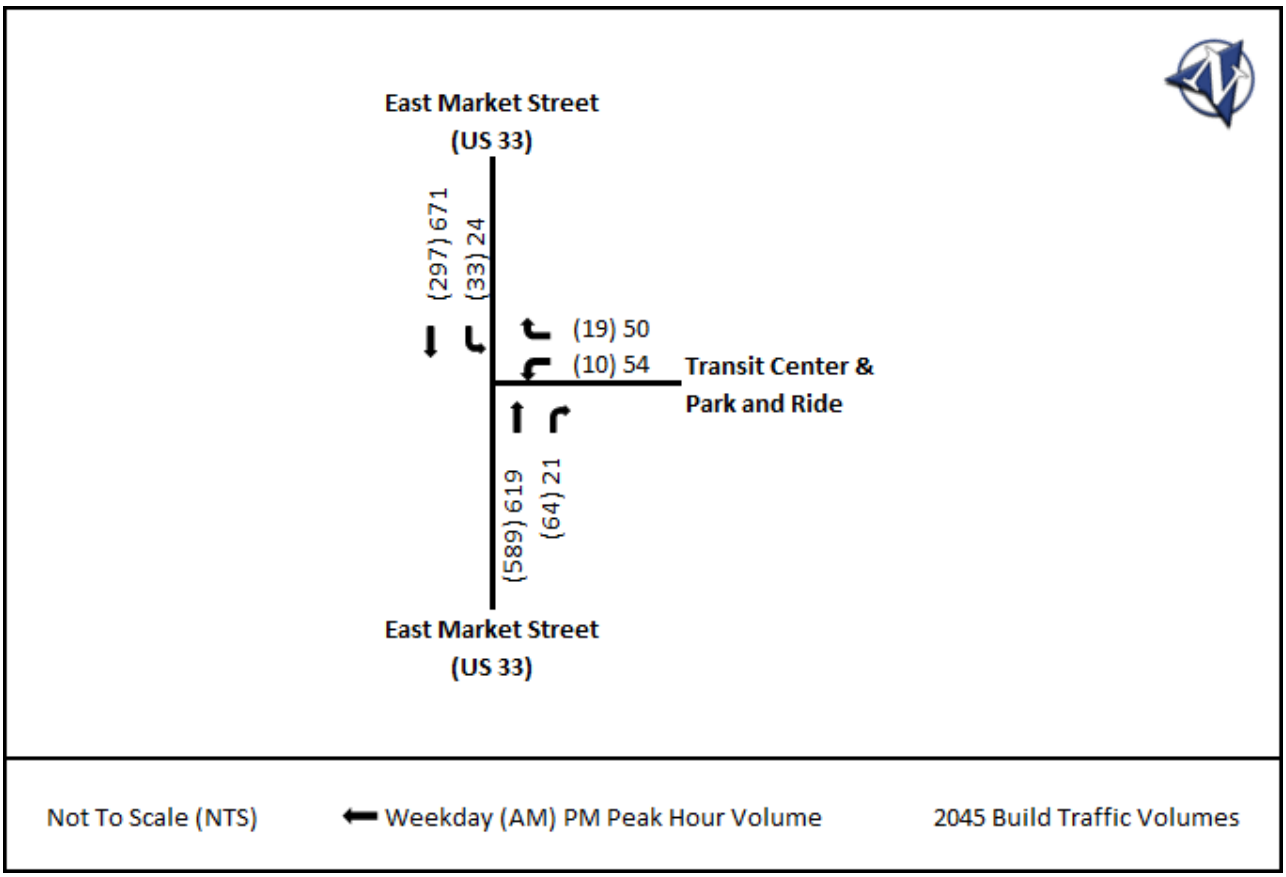
During the next phase of study, the adjoining property owners should be contacted to determine potential impacts and mitigation. Access to the automotive repair and rental car businesses at 734 E. Market Street may be impacted by the right turn lane and utility relocation.

Figure 3-6: Harrisonburg, VA Transit Center Conceptual Site Plan

Traffic Evaluation

A Synchro traffic analysis was performed to evaluate the need for a traffic signal and turn lanes at the proposed transit center entrance which is approximately 440 feet east of the East Market Street (US 33) / Old Furnace Road intersection and 880 feet west of the East Market Street (US 33) / Vine Street intersection. The traffic evaluation considered 2045 AM and PM peak hour traffic based on 2019 traffic counts at the East Market Street (US 33) / Vine Street intersection. Traffic volumes shown in Figure 3-7 were estimated by applying 0.5% annual growth from October 2019 and adding transit center traffic of considering 192 park and ride spaces, fifty bus trips per hour and 2,000 square feet of retail.

Figure 3-7: 2045 Projected Peak Hour Traffic



The Virginia Department of Transportation Road Design Manual, Appendix F Access Management Design Standards were used in the evaluation as shown in Figures 3-8 and 3-9.

Figure 3-8: Left Turn Storage Lane Warrants

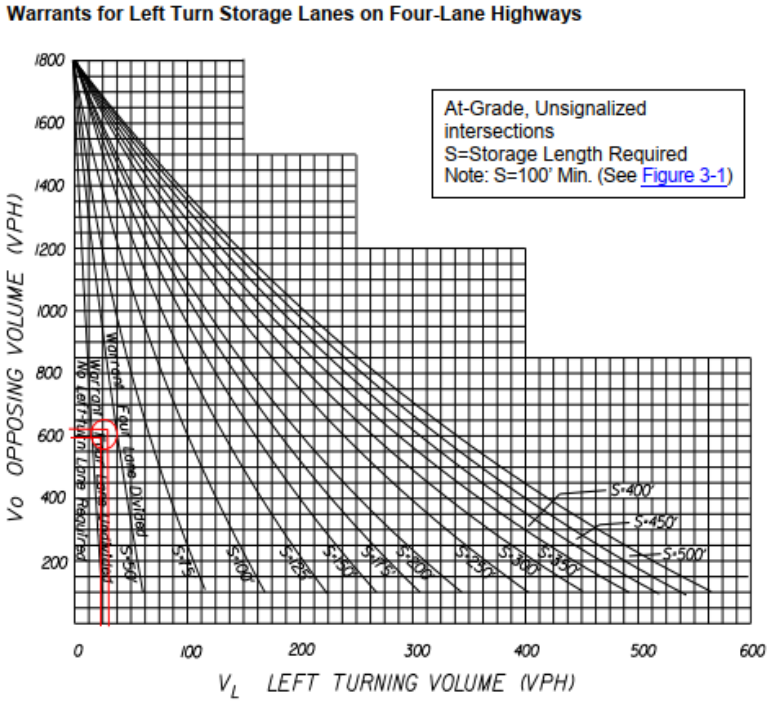


FIGURE 3-3 WARRANTS FOR LEFT TURN STORAGE LANES ON FOUR LANE HIGHWAYS

Figure 3-9: Right Turn Taper Warrants

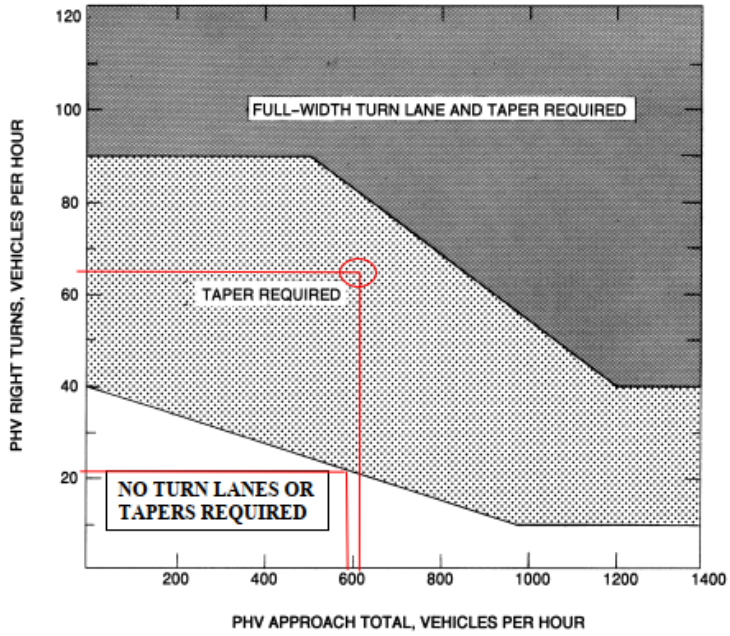


FIGURE 3-27 WARRANTS FOR RIGHT TURN TREATMENT (4-LANE HIGHWAY)

Three traffic control and bus routing alternatives were considered. Figure 3-10 shows full access site egress for buses and automobiles; Figure 3-11 illustrates a restricted crossing U-turn (RCUT) at the Old Furnace Road intersection; Figure 3-12 shows the RCUT conceptual layout; and Figure 3-13 identifies potential routing for eastbound buses using Old Furnace Road and Vine Street.

Figure 3-10: Full Access Unsignalized Site Entrance

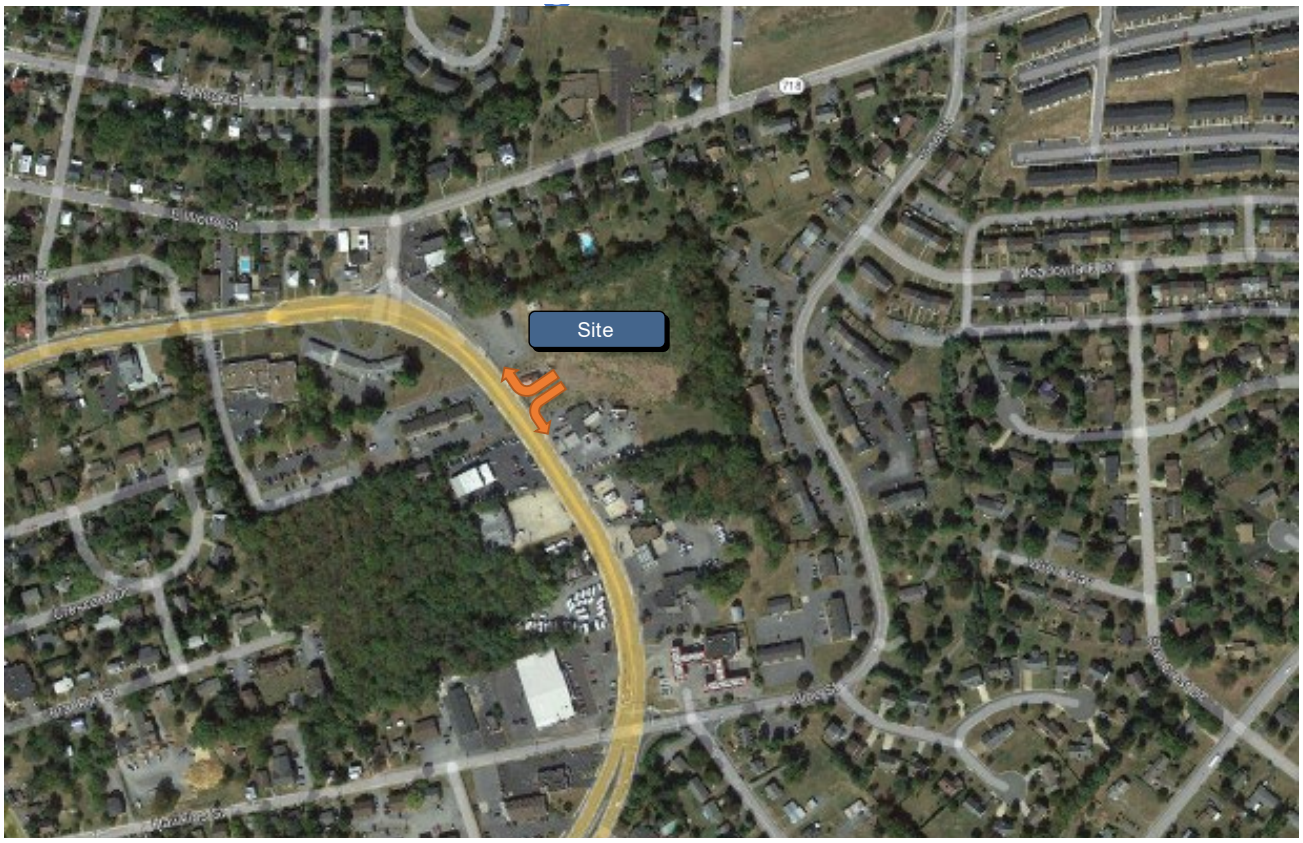


Figure 3-11: Restricted U-Turn (RCUT)

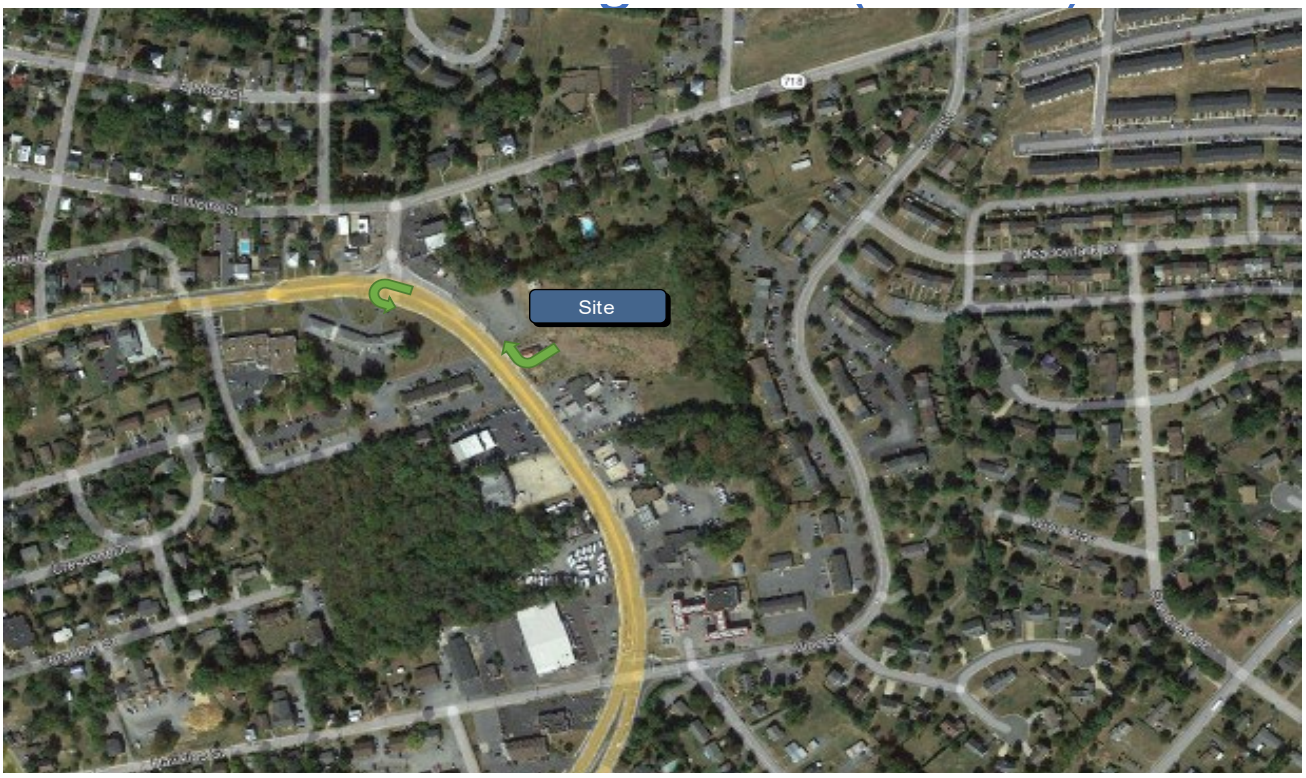


Figure 3-12: RCUT Conceptual Layout

Figure 3-13: Site Egress - Buses Only Use Existing Street Network

Buses using the potential routing shown in Figure 3-13 would be required to turn right from Old Furnace Avenue to Vine Street. This corner has a paved area for right turns. Figure 3-14 illustrates the path of a 45ft commuter coach through the intersection. There is a slight overlap with the curb which can be avoided by the bus operator.

Figure 3-14: Bus Turning Template Old Furnace Avenue at Vine Street

The traffic analysis results are shown in Table 3-1. All access alternatives would operate with acceptable delays.

Table 3-1: Traffic Analysis Results

Alternative	Full Access		RCUT		Utilize Existing Street Network	
Turning Movement	**AM LOS (Delay)**	**PM LOS (Delay)**	**AM LOS (Delay)**	**PM LOS (Delay)**	**AM LOS (Delay)**	**PM LOS (Delay)**
Exiting Right-Turn	B (11.8)	B (11.4)	B (11.9)	B (12.1)	B (12.2)	B (11.8)
Exiting Left-Turn	D (24.5)	E (35.0)	N/A	N/A	C (18.6)	D (29.6)
Entering Left-Turn	A (9.8)	B (10.1)	A (9.8)	B (10.1)	A (9.8)	B (10.1)
U-Turn at Old Furnace	N/A	N/A	A (9.0)	B (10.1)	N/A	N/A

Considering the traffic analysis and property impacts related to the RCUT, WRA recommends a full access unsignalized site entrance with two exit lanes for separate left and right-turn lanes. Buses would be able avoid the left turn onto East Market Street by using the existing street network, as necessary. Left-turn and right-turn lanes should also be added on East Market Street (US 33). The left-turn lane should have 125 feet of storage and a 100-foot taper while the right turn lane should have 100 feet of storage and a 100-foot taper.

Real Estate Property Value Estimates

Planning level real estate property value estimates were prepared as shown in Table 3-2. This estimate assumes a full taking for the four properties owned by Gerald Myers and Stephen T. Heitz Trustee. The properties at 734 and 750 E. Market Street are assumed to be partial takes resulting from the right-turn lane. If subsequent design requires full taking of these properties, additional compensation and business relocation expenses may be required. Business relocation expenses may also be required for the tenant at 726 E. Market Street.

Table 3-2: Real Estate Property Value Estimates

Owner	Property Address	Total Acres	Area (SF)	Assessed $/SF	Assumed $/SF	Total
Myers, Gerald	0 E. Market Street	4.0	174,240	$2.00	$3.00	$532,220
Stephen T Heitz Trustee	716 E. Market Street	0.4	19,166	$0.16	$3.00	$66,998
Stephen T Heitz Trustee	722 E. Market Street	0.2	9,583	$12.02	$12.02	$124,698
Stephen T Heitz Trustee	726 E. Market Street	0.4	18,295	$12.07	$12.07	$230,298
Strawderman, Alan E (PT)	734 E. Market Street	1.7	75,359	$5.82	$5.82	$38,212
KDM Enterprises, LLC (PT)	750 E. Market Street	1.4	60,113	$1.45	$3.00	$19,635
Contingency 40%						$404,824
Total						$1,416,884

Cost Estimate

Preliminary cost estimates have been prepared using the conceptual design and VDOT Smart Scale templates. These estimates are based on limited information and should be revised during the design process. Table 3-3 summarizes the Harrisonburg Multimodal Transit Center and Park and Ride Lot costs by phase. The base cost estimate is further detailed in Table 3-4.

Table 3-3: Harrisonburg Multimodal Transit Center and Park and Ride Lot Cost Estimate

Phase	Base Estimate	Contingency		Total
		%	Amount	
Preliminary Engineering	$2,115,768	30%	$634,731	$2,750,499
Right of Way & Utilities	$1,067,100	43%	$459,864	$1,526,964
Construction	$11,646,726	36%	$4,235,537	$15,882,263
Construction Engineering	$2,115,768	40%	$846,307	$2,962,076
Total	$16,945,362		$6,176,439	$23,121,802

Table 3-4: Base Estimate Detail by Cost Category

Cost Category	Base Estimate	Notes
ROW	$1,416,884	40% added
Utilities	$110,080	Relocate 4 power poles VDOT estimate added 100%
Mobilization / Survey	$1,427,464	
MOT	$500,000	
Roadway	$1,643,513	
Hydraulics	$1,693,138	
In-plan Utilities	$805,883	Possible underground utilities
Traffic	$53,980	
Building / shelters	$2,504,560	Building $620 / Square Foot $100k for 9 shelters
Earthwork	$1,170,500	
Other	$779,804	3 EV charging stations @40K Bike share station @15K Conduit for BEB Chargers $65K

Next Steps

Transit center projects are often advanced through local investment in planning, design, and property acquisition. While some federal and state funding can be available for design and right-of-way, the competitive grants necessary to build larger transit facilities are usually awarded to communities based on project need, project readiness and local investment. The next steps are to:

1. Identify minimum 10% local share
2. Site survey and preliminary design
3. Prepare environmental clearance with documented categorical exclusion (CE)
4. Complete property appraisals following Uniform Act procedures
5. Following DPRT and FTA approval acquire property
6. Seek competitive grants
7. Complete design and construction bidding documents
8. Facility construction

City of Harrisonburg Multimodal Transit Center Study
Chapter 4: Funding Options

Introduction

A critical component for the further development of the Harrisonburg Multimodal Transit Center and Park and Ride Lot project will be the identification and successful pursuit of funding assistance to fully design and construct the project. The current concept for the identified site (the Myers property in the 700 block of East Market Street) includes a transit center and park and ride lot. Bicycle-supportive amenities as well as car charging amenities are included in the plan. There is an opportunity for about 1,900 square feet of retail or other use on the street frontage of the property. The site is actively for sale and is privately owned. The City has approached the property owners and they are amenable to working with the City.

The preliminary cost estimate for the project is $16.9 million base cost, and $23.1 million including contingency costs. This cost estimate was developed using the Virginia Department of Transportation (VDOT) cost estimate template for the Staunton District of Virginia. While there may be ways to reduce this cost, it will still be a large project to fund. The purpose of this chapter is to review the potential federal and state options that may be available to help fund the project.

For reference, Harrisonburg Department of Public Transportation's (HDPT) last major construction project was the expansion and renovation of the administration, operating, and maintenance facility. That project was funded through the Federal Transit Administration's (FTA) Section 5309 program (FY2013) and the flexible Surface Transportation Block Grant program (STP) (FY2014). FTA's Section 5309 program is now the Capital Investment Grant Program (CIG) and focuses on heavy rail, commuter rail, light rail, streetcars, and bus rapid transit.[1] The flexible STP program is no longer directly "flexed" for transit projects but is included in the Commonwealth's Transportation Fund.[2]

Existing Operations and Capital Funding

HDPT's annual operating budget is just over $6.5 million for FY2022. The capital budget is $5.5 million, which is higher than is typical and reflects the availability of the Coronavirus Aid, Relief and Economic Security (CARES) Act funding. Current primary funding sources for HDPT include revenue derived from contracts, fares, and advertising; federal funding; and state funding.

[1] Federal Transit Administration, Capital Investment Grants, website. https://www.transit.dot.gov/capital-investment-grants-5309

[2] Virginia Department of Transportation, FY2022 Commonwealth Transportation Fund Budget, June 2021. https://www.virginiadot.org/about/resources/budget/CTF_Final_FY_2022_Budget.pdf

Federal Formula Funding Opportunities

Federal Sections 5307/5340

The FTA's Section 5307/5340 program provides formula funding to the Governor for transit operations, maintenance, and capital. For FY2021 the Harrisonburg urbanized area was allocated $1,934,370. The 2021 Bipartisan Infrastructure Bill increased the 5307/5340 program by 26.9% which would yield approximately $520,000 in increased annual 5307/5340 funding for Harrisonburg. Because of the funding related to the Covid-19 Pandemic there may also be surplus 5307/5340 program funding from prior years. This funding is available for five years from appropriation. This formula funding will not be sufficient to fund the entire facility but may provide some of the funding for preliminary engineering, design, or property acquisition. Note that if FTA funds are used for property acquisition, then the City could not use the property as in-kind local match.

CARES Act

The Coronavirus Aid, Relief and Economic Security Act (CARES) allocated $5,428,507 to the Governor of Virginia for Harrisonburg. These funds may be used for capital and operations and are available until expended. In reviewing the City's FY2022 budget, it looks like these funds will be used to replace vehicles and purchase technology equipment. If there are remaining CARES Act funds, these funds could also be used for preliminary engineering, design, or property acquisition.

Federal Discretionary Programs

Federal Transit Administration – Section 5339 Bus and Bus Facilities

The Federal Transit Administration Section 5339 discretionary program is a competitive grant opportunity that provides capital funding assistance.[3] Eligible projects include bus purchases and rehabilitation as well as the construction of facilities. A Notice of Funding Opportunity (NOFO) was published on March 4, 2022, for approximately $372 million under the program. Proposals for this funding cycle were due on May 31, 2022, and the total program is funded each year through FY2026 at between $372 million and $412 million for each grant cycle. The federal share is 80% of the net capital project cost. Guidance from DRPT indicated that state funds may be available to help offset some of the project expenses.

[3] Federal Transit Administration web information: https://www.transit.dot.gov/bus-program

Some examples of projects that were recently awarded funding through the competitive 2021 NOFO are listed below:[4]

- **The Central Shenandoah Planning District Commission (CSPDC) in Staunton** will receive $916,500 to construct a bus hub in downtown Staunton. The project includes replacing deteriorated pavement, providing a more formalized travel pattern through the lot, and providing additional shelters and lighting. DRPT is set to contribute 16% of the project cost and the CSPDC is contributing 4% of the project cost.

- **The Rogue Valley Transportation District in Oregon** will receive about $12.5 million to build a new bus maintenance facility.

- **The City of Madison, Wisconsin** will receive $6.4 million to rehabilitate its maintenance and administrative facility.

- **The Southeastern Pennsylvania Transportation Authority** will receive $9.8 million to construct two new bus transportation centers in South Philadelphia. This project will create dedicated end-of-line bus facilities for up to nine routes, featuring ADA accessible bus stops with critical infrastructure and safety enhancements.

- **The City of Durham, North Carolina**, will receive $10.8 million to renovate and upgrade its Durham Station to improve safety and add passenger amenities. The upgrades include additional bus bays, expanded canopies, more seating, and a customer service kiosk.

U.S. Department of Transportation - Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program

A NOFO was published in February 2022 by the U.S. Department of Transportation (USDOT) for the Rebuilding American Infrastructure and Equity (RAISE) grant program. Funds for the FY2022 RAISE grant program are to be awarded on a competitive basis for surface transportation infrastructure projects that will have a significant local or regional impact.[5] This program is referred to as the Local and Regional Project Assistance Program in the Infrastructure Investment and Jobs Act ("Bipartisan Infrastructure Law"). This program replaced the BUILD and TIGER programs from prior years.

The NOFO indicated that $1.5 billion is available for the program for FY2022. No more than 15% of the total funds can be awarded to projects in a single state. Proposals for this funding cycle were due April 14, 2022. As with the Section 5339 program, this program is funded each year through FY2026.

RAISE grant program funds may not exceed 80 percent unless the project is located in a rural area, a historically disadvantaged community, or an area of persistent poverty. At least $15 million in funding

[4] Full list of FY 2021 Projects: https://www.transit.dot.gov/funding/grants/fiscal-year-2021-buses-and-bus-facilities-projects
[5] U.S. Department of Transportation website information - https://www.transportation.gov/RAISEgrants

is guaranteed to go towards projects located in areas of persistent poverty or historically disadvantaged communities. Under the Bipartisan Infrastructure Law, RAISE expands the number of communities eligible for 100 percent federal share of funding, specifically those in rural communities, areas of persistent poverty and historically disadvantaged communities. This program uses the following to define a rural area: "If a project is located outside a Census-designated urbanized area with a population greater than 200,000, it is designated as a rural project."[6] For this program, Harrisonburg would be considered a rural area.

The definition of an area of persistent poverty includes any **Census tract** with a poverty rate of at least 20 percent as measured by the 2014–2018 5-year data series available from the American Community Survey of the Bureau of the Census. The Myers Property is within Census Tract 1.02, which is an area of persistent poverty according to the tool published on the RAISE website. Guidance from DRPT indicated that state funds may be available to help offset some of the project expenses.

Merit criteria for these funds include the following: safety; environmental sustainability; quality of life; improves mobility and community connectivity; economic competitiveness and opportunity; state of good repair; partnership and collaboration; and innovation.
Some examples of projects that were recently awarded funding under the 2021 NOFO are listed below:

- **Multimodal Transportation Center, Yuma, Arizona.** The project converts an historic building in downtown Yuma into a regional transfer hub and central, multimodal transit center for commuter rail, intercity bus, local public transit, and ridesharing. The project includes a renovated pedestrian pathway to Amtrak, bus bays for Greyhound and Yuma Area Transit, transit administration offices, ticket counters and kiosks, a waiting area for taxies, van pools, private shuttles, and rideshare, as well as improved facilities for transit users.
    - Grant Funding: $10,614,225
    - Estimated Total Project Costs: $17,759,801

- **Derby-Shelton Multimodal Transportation Center, Derby, Connecticut.** The project constructs a multimodal transportation center at the existing Derby-Shelton Train Station, including construction of a high-level rail platform, and new bus and rail passenger amenities; improvements to station safety; rehabilitation of the existing train station building; bus waiting/loading areas; electric vehicle charging infrastructure and electric buses; sidewalks and crosswalks throughout the station site; and improved vehicle parking and bus access.
    - Grant Funding: $12,600,000
    - Estimated Total Project Costs: $24,500,000

- **A. Philip Randolph Regional Multimodal Transportation Hub and Complete Streets Connectivity City of Palatka, Florida.** This project will improve multimodal connectivity in Palatka by lengthening the passenger loading platform at the Amtrak station to accommodate a baggage area and adjusting the platform height to meet ADA requirements and allow bicycles to be loaded

[6] IBID

and unloaded at the station and constructing complete streets improvements including resurfacing the roadway, installing new ADA-compliant sidewalks and curb and gutter designating bike lanes, and adding other accessory safety improvements in the project area.

- Grant Funding: $8,176,001
- Estimated Total Project Costs: $8,176,001

State Funding Opportunities

The primary state funding mechanisms for major transit capital projects in Virginia are the MERIT program (Making Efficient Responsible Investments in Transit) and the SMART SCALE program. These programs are discussed below.

MERIT

The MERIT state aid grant program includes the following five categories: operating assistance; capital assistance; demonstration project assistance; technical assistance; and a public transportation intern program.[7] The MERIT program forms the basis of annual grant assistance for transit programs in Virginia. The capital assistance portion of this program includes the following three categories:

- State of good repair
- Minor enhancements
- Major expansions

The proposed Harrisonburg Multimodal Transit Center would fall under the "major expansions" category, as the cost will exceed $2 million. The construction of transit facilities and associated parking are eligible expenses. The state match under this program is 50 percent and the minimum local contribution is 4 percent. This program can be combined with federal funding; however, it would come from the same pot of federal funds that Harrisonburg accesses for other capital needs such as bus replacement.

Preliminary design (up to 30% engineering and design) is an eligible expense. Once the project reaches the 30 percent design phase, DRPT requests that the applicant develops a comprehensive financial plan for the completion of the project. Grant guidance indicates that DRPT puts capital infrastructure projects under multi-year agreements at the time the project is approved for funding.

Scoring criteria for the program are based on the following factors: congestion mitigation: economic development; accessibility; safety; environmental quality; and land use. The grant application period for

[7] Virginia Department of Rail and Public Transportation, Transit and Commuter Assistance Grant Application Manual, "Blue Book," Application Guidance for FY2023. https://www.drpt.virginia.gov/media/3611/fy-2023-drpt-transit-and-commuter-assistance-grant-application-manual_final.pdf

the MERIT program follows DRPT's annual cycle of grant preparation, which is between December 1 and February 1 for the following fiscal year.

The Greater Roanoke Transit Company is using this funding mechanism in part to construct a new transfer center in Downtown Roanoke. In FY2021, the agency received the following capital assistance in support of the project: $5,750,000, of which $3,910,000 was state funding and $1,610,00 was federal STP funds. Federal STP funds are block grant funds (Surface Transportation Block Grant) from the Federal Highway Administration that are apportioned to each state annually. Guidance from DRPT indicated that the transit program no longer receives STP funds from VDOT but does get a contribution to the Mass Transit Account in place of these funds. DRPT also indicated that Roanoke's funding package for the center pre-dated the implementation of the MERIT program.

SMART SCALE

SMART SCALE (System Management and Allocation of Resources for Transportation: Safety, Congestion, Accessibility, Land Use, Economic Development, and Environment) is a grant program that funds transportation projects through a prioritization process that evaluates each project's merits using key factors, including improvements to safety, congestion reduction, accessibility, land use, economic development, and the environment.[8] The SMART SCALE program operates on a biennial schedule, with applications accepted starting in March of even number years. The application process spans several months, with the final application due in August.

Eligible projects under the program include highway, transit, rail, road, safety improvements, operational improvements, and transportation demand management projects. Eligible ***transit*** projects are those that demonstrate expanded capacity and increase ridership. State of good repair projects are not eligible. Transit stations, transfer facilities, multimodal facilities, and park and ride facilities are all specifically listed in the grant guidance as eligible projects.

To date, 17 Virginia transit programs have been awarded funding for a variety of projects through the SMART SCALE program. Six projects have been completed; twelve projects are active; and eighteen projects are inactive.

The initial pre-application deadline of March 31, 2022, required the submission of the following items:

- Detailed project description
- Conceptual sketch that displays and locates the project elements that are included within the project description. Bicycle and pedestrian elements must be shown on the sketch to receive scores in those categories.
- A planning study
- Cost estimate

[8] DRPT website link to SMART SCALE information - https://www.drpt.virginia.gov/about/smart-scale

Per the grant guidance, the City of Harrisonburg can submit up to five pre-applications, with four of those moving forward for full consideration. HDPT submitted a SMART SCALE application for a multimodal transit center and park and ride lot for a different location during a prior round of funding and the project did not score competitively, as the cost for the project was high and the benefits did not score high enough to compensate for the cost.

Partnerships

The Multimodal Transit Center preliminary site layout includes some surplus property that could be available for other uses. Partnerships may be possible to provide affordable housing on part of the site. While affordable housing initiatives will not provide direct funding for the transit facility, there may be opportunities for the proposed transit investment to complement other community initiatives. It is recommended that the City work with the Harrisonburg Redevelopment and Housing Authority to determine if there could be joint development opportunities. Note that if the City decides to include other non-transit uses, these uses should be identified in the original grant application so that they are not considered "incidental."

Funding Discussion

The study team was initially targeting SMART SCALE as the preferred funding program for the project, as these projects are one hundred percent state funded, with no local match required. However, as the project has progressed, it appears that the project cost for this concept may be as high as HDPT's prior concept that was not selected for funding under the program, though this site may offer higher benefits, given that it is closer to Downtown Harrisonburg. In addition, the SMART SCALE timeline is very long, with actual construction likely to occur about three years after the grant submission.

While SMART SCALE may still be a viable option, the federal funding options under the new Bipartisan Infrastructure Law offer significant opportunities under both the Section 5339 discretionary program and the new RAISE program. The RAISE program is particularly interesting, as the match requirement could potentially be higher than 80 percent federal, as Harrisonburg is considered rural under that program and the Myers property is located in a Census tract that is within the "persistent poverty" definition.

The timeline for both the discretionary Section 5339 program and the RAISE program is much faster than SMART SCALE, with the most recent process (FY2021) taking just over four months from application to funding notification for the Section 5339 program. In addition, since both of the federal programs have at least one NOFO per year, HDPT will have more time to solidify the conceptual plan, including preparing the documentation for a categorical exclusion for the site.

Preliminary discussions with DRPT staff indicated that state funding may be available to assist HDPT if a decision is made to make application to either of the competitive FTA programs. If the RAISE program

is chosen, DRPT will need to consider the needs of other transit programs in the Commonwealth also, as no more than 15 percent of RAISE funds each year can be awarded to projects within a single state (note that 15% equates to $341 million for FY2022).

Prior to the Bipartisan Infrastructure Law, industry experience indicated that to be selected as an award recipient under one of the discretionary programs, a project typically needed to exhibit at least 30% local/state funding. With the significant increase in federal funding under these programs, it is not clear if this will still be the case, but a state/local funding commitment higher than the minimum would likely make the project more competitive.

Preliminary Recommendation

The study team's preliminary funding recommendation is to work with DRPT to organize the project into manageable phases that start with local and state funding to finance the 30% design and right-of-way acquisition. This would include the process of documenting that the project meets the criteria for a categorical exclusion (CE) from the National Environmental Policy Act (NEPA).

The first phase of 30% design is estimated to cost about $317,365, based on the total design estimate of $1,057,884. Following the 30% design would be the right-of-way acquisition, which is estimated to be $1,526,964.

If the City pays for this work from local funding, the right-of-way acquisition may be eligible as local in-kind match to apply for either a RAISE grant or a Section 5339 discretionary grant. If the right of way were federally financed, it cannot be used as local share. The guidance for using land as in-kind match is described below:

"The Common Grant Rule at 49 C.F.R. § 18.24 "Matching or Cost Sharing" authorizes grantees to use land as an in-kind local match for Federal funds. FTA's administration of this authority is in FTA Circular 5010.1D, "Grant Management Requirements," Chapter IV.

The Uniform Relocation Assistance and Real Property Acquisition Policies Act, at 42 U.S.C. § 4627, establishes the requirement that a grantee must use federal procedures to purchase land with local funds if it intends to use the land value as an in-kind match." [9]

Obtaining the site for the project would solidify the City's commitment to the project and ensure that a viable site remains available for the project. If the project does not come to fruition, the City can sell the site, but would have to reimburse any state or federal share that was part of the project.

[9] https://www.transit.dot.gov/funding/procurement/third-party-procurement/acquiring-real-estate

Next Steps

The next steps for the project will be for HDPT to work with the city leadership to determine if the City is willing to contribute 10% to 20% ($2.5 to $5 million) to advance the transit center project. To make the project feasible, there must be significant local financial commitment to the early stages of the project through environmental studies, conceptual design and property acquisition. Some of this early work may need to be locally funded and may not be funded through grants.

If it is determined that the City is willing to make a significant financial commitment, the City should consult with DRPT and city leadership to determine if it is feasible for the City to pursue purchasing the Myers property. To preserve future federal funding, the City must complete a NEPA environmental study before negotiating the property acquisition through the Uniform Act process.

Appendix A:
Public Survey

Multimodal Transit Center and Park and Ride Survey

The Harrisonburg Department of Public Transportation (HDPT) is working on a project to develop an improved passenger transfer center for its community bus routes. The routes currently meet in a shopping center parking lot that offers few passenger or driver amenities. HDPT is interested in learning what features the public would like to see included as part of a new center. In many communities these centers are multimodal, which means they offer a place where multiple modes of transportation come together. Connections can be made between modes, such as walking or riding a bicycle to catch a bus or taking a rideshare vehicle home. Additional modes/features could include: taxis; intercity buses; parking; car sharing; and others. Please complete this survey to help us gather public input concerning the development of the project.

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1. Are you aware of the services provided by the Harrisonburg Department of Public Transportation?
   ❑ Not Aware ❑ Aware; overall positive impression ❑ Aware; overall negative impression

2. How do you ***usually*** get to where you need to go within the community for work, school, shopping, errands, or medical appointments? Please choose the mode you use the most.
   ____ I drive ____ I use public transportation ____I walk
   ____ Friends/family drive me ____ I ride a bicycle ____I take a taxi/Uber/Lyft

3. Do you currently use any of the following transportation services? *Please check all that apply.*
   ❑ HDPT fixed routes
   ❑ HDPT paratransit
   ❑ The Virginia Breeze Intercity Bus
   ❑ Taxis/Uber/Lyft
   ❑ Other: _____
   ❑ Valley Program for Aging Services
   ❑ BRITE Bus – BRCC Shuttle
   ❑ BRITE Bus – Other Routes
   ❑ Vanpools or carpools
   ❑ I do not currently use public transportation

4. A Multimodal Transit Center in Harrisonburg could include several features. Please place an "x" in the column that best describes your opinion regarding the features that may be included as part of the project.

Feature	Very Important	Important	Neutral	Not Important	Not at all important
A park and ride lot					
Close proximity to I-81					
Close proximity to James Madison University					
Close proximity to retail and restaurant services					
Close proximity to housing					
Close proximity to medical services					
Close proximity to public institutions					
Serves as a passenger transfer center for HDPT routes					
Serves as a bus stop for the Virginia Breeze					
Serves as a bus stop for tour operators					
Is equipped with electric car charging stations					
Includes a climate-controlled building for passenger to wait					
Includes public restrooms					
Offers bicycle parking					
Offers scooter parking					
Offers bicycle/scooter share opportunities					
Includes spaces for taxis, Uber, and Lyft					
Offers car sharing opportunities					

⇨

5. Would you use a park and ride lot if one were available in the City of Harrisonburg?
   ❑ Yes ❑ No

6. If a park and ride lot were to be included with a multimodal center, for which of the following purposes might you use such a facility (check all that apply):

   ❑ As a carpool meeting spot for commuting or travel via I-81
   ❑ To access HDPT local bus routes
   ❑ To access the BRITE Bus – BRCC Shuttle
   ❑ To access the Virginia Breeze Intercity Bus
   ❑ To access the services of other bus tour operators
   ❑ Satellite parking for JMU or Downtown Harrisonburg events
   ❑ I would not use it
   ❑ Other: _____

7. What is your zip code? _____

8. Are you a student, faculty, or staff member of any of the following area colleges/universities? *Please check all that apply*.

   ❑ James Madison University (JMU)
   ❑ Blue Ridge Community College (BRCC)
   ❑ Eastern Mennonite University (EMU)
   ❑ Bridgewater College
   ❑ I am not currently a student, faculty, or staff member of these colleges/universities

9. Please provide any comments you may have concerning the development of a Multimodal Transit Center for the City of Harrisonburg.

Please return this survey to the collection box where you picked it up, or to:

HDPT, 475 E. Washington Street, Harrisonburg, Virginia.
Contact: Gerald.Gatobu@harrisonburgva.gov

Thank you!