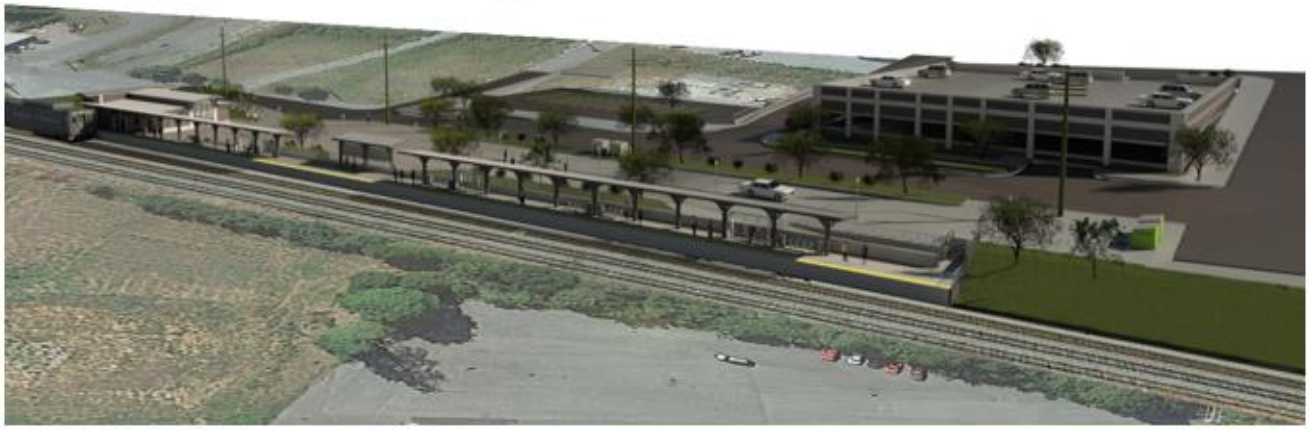
Town of Bedford Passenger Rail Station Feasibility Study and Conceptual Plan



March 15, 2016

wendel

EXECUTIVE SUMMARY

In 2014, the Virginia Department of Rail and Public Transportation (DRPT) announced that Amtrak Route 46 – the Virginia sponsored Amtrak route that originates in Lynchburg, Virginia – would be extended to Roanoke. Officials in the Bedford area soon learned that DRPT did not anticipate the train stopping in Bedford which is located on the route between Roanoke and Lynchburg. This was contrary to the 2008 Virginia State Rail Plan that showed a stop located in Bedford for its I-81/Route 29 Passenger Rail Project which was the genesis of Amtrak Route 46.

Upon learning this, a group of local officials convened to determine what steps could be taken to have a train station for Bedford reinstated in the State's plans. This group, the Bedford/Franklin Regional Rail Initiative (BFRRI), is comprised of local officials from the Town of Bedford, Bedford County, Franklin County, the region's chambers of commerce, local businesses and private citizens. The BFRRI prepared an analysis demonstrating the benefits and advantages of locating a train station in Bedford and in the fall of 2015 presented their findings to DRPT. DRPT indicated that additional analysis was necessary – specifically a rail patronage estimate and economic benefits analysis was needed. In addition, the development of a conceptual plan for a Bedford station was needed. In December, 2015 BFRRI secured local funding to hire a consultant to perform the additional analysis and to help advance the first phase of the Bedford Station project. The Town of Bedford assumed the lead role for the advancement of the project.

In January, 2016 the architecture and engineering company Wendel was selected to perform the work and was engaged to conduct the analysis and to prepare a conceptual plan for Bedford Station. This report presents the findings of the study.

The rail patronage analysis performed for this study shows that when Route 46 is extended to originate in Roanoke, ridership on the route at Roanoke and Lynchburg combined will increase by about 36,000 boardings and alightings each year – from 72,000 up to 108,000. With the opening of the Roanoke station, about 6,000 trips will be drawn away from Lynchburg to Roanoke annually but the net gain of 36,000 trips for Route 46 is about a 50% increase in ridership over current levels. If a station is established in Bedford, ridership at the Roanoke, Bedford and Lynchburg stations combined will increase to 134,000. This is a gain of 26,000 trips or 24% beyond what simply extending the train to Roanoke will produce. Opening Bedford station will draw some patronage away from Lynchburg – about 6,000 trips per year – but will not decrease ridership at Roanoke. Annual ridership at Bedford Station is predicted to total 32,000 boardings and alightings. This would place Bedford Station as 13th among Virginia's 22 Amtrak stations in terms of annual patronage.

A preferred site for the Bedford Station was selected in an analysis previously performed by BFRRI. The preferred site located north of the Town of Bedford Municipal Building at the intersection of Court Street and Plunkett Street was examined closely in this study. Our analysis showed that the preferred site will support the proposed project with no significant obstacles. The exact location of the platform and drop off areas will need to be discussed with the Town of Bedford Electric Department to ensure acceptability of the positioning of the station in relation to an adjacent substation and an above ground transmission line. An environmental analysis of the proposed site revealed no negative impacts. It is essential that the proposed site for Bedford Station must be presented to Norfolk Southern Railroad for their review and determination of the suitability of the site to their freight operations. This review must be initiated by the Virginia Department of Rail and Public Transportation.

The generally accepted guidance for the development of Amtrak station plans is a document prepared and published by Amtrak entitled **"Amtrak Station Program and Planning Guidelines"**. These guidelines establish design standards and criteria for stations platforms and the station site, program requirements, station features and amenities, station finishes and architectural design. The Wendel team used this document to determine the appropriate size and features for the Bedford Station and then working with the project sponsors developed a specific program for the Bedford Station. It is proposed that Bedford Station should be designed in accordance with Amtrak's guidelines for a Category 3 or Caretaker Station and that Bedford Station should be constructed in two phases. Included in the first phase would be a 450 foot long and 14 foot wide rail passenger platform with shelters and benches, a ticket vending machine, passenger drop off area, a bus bay and a parking area with 50 parking spaces. If the station proves successful and growing patronage justifies further improvements to the station, a second phase will be pursued. In the second phase a station building will be constructed with a passenger waiting area and restrooms, a second bus bay and additional parking will be provided. The station will not be staffed by an Amtrak agent but will include an interior waiting facility with restrooms that is opened, closed and maintained by the Town of Bedford. The size and scope of the station conceptual design were kept minimal – especially for the first phase – to ensure that the station will fit at all of the prospective sites and to keep costs down while still providing a safe, functional and attractive facility. A conceptual level cost estimate was prepared for constructing phase 1 of the project at the preferred site. The estimate indicates that phase 1 of Bedford Station could be constructed and equipment provided for the facility for approximately $1.5 million. If the preferred site proves to be unacceptable to Norfolk Southern and another site is selected, additional site improvements may be required. We expect that phase 1 of the Bedford Station project could be constructed at other prospective sites for under $2.0 million.

In summary, establishing an Amtrak station in the Town of Bedford after Route 46 is extended to Roanoke will increase ridership in the region by 24% without noticeably increasing the cost of operating the Route. This will increase the profitability of Northeast Regional Route 46 which already is considered one of the most successful state sponsored routes in the nation. The economic impacts on the Bedford area are expected to include an increase in spending of about $3.4 million per year which will support 9 jobs. The annual benefits for people in the Bedford area that ride the train will be about $4.5 million per year. All of this can be achieved with an initial investment of about $2.0 million to construct Bedford Station without producing negative environmental impacts. The conceptual plans for the preferred station location show a safe and functional facility which will serve as an attractive addition to downtown Bedford and a gateway to the Bedford region. Clearly a solid business case has been established for creating Bedford Station. It is hoped that presented with this study, the Virginia Department of Rail and Public Transportation will embrace the project and begin discussions with Norfolk Southern Railroad to evaluate the suitability of the preferred site for Bedford Station. If the site is not viable to Norfolk Southern, the other four prospective sites for the station should be reviewed and a suitable site selected. A site suitable for Norfolk Southern should be selected, DRPT should forward this report to Amtrak for their review and concurrence and Bedford Station should advance to design and construction with an opening date as soon as feasible after the extension of Amtrak Northeast Regional Train 46 to Roanoke.

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INTRODUCTION

The Town of Bedford has engaged Wendel Architects and Engineers (Wendel) to conduct a feasibility study and to prepare a conceptual plan for the construction of an Amtrak station in the downtown area. The Bedford Station project seeks to bring passenger rail service back to the Town of Bedford shortly after the initiation of passenger rail service to Roanoke. The Virginia Department of Rail and Public Transportation (DRPT) has indicated that Amtrak service to Roanoke should begin in the fall of 2017. The Bedford Station project will be conducted in two phases. The first phase includes a feasibility and conceptual design followed by final design phase. The second phase will be construction of the project. This report represents the first tasks in phase one of the project. This report will be submitted to DRPT as documentation to support an application from the Town of Bedford seeking funding to pay for the final design for the Bedford Station Project – the second task for phase one of the project. The Town is seeking funding support from DRPT's Intercity Passenger Rail Operating and Capital (IPROC) grant program.

BACKGROUND

In 2014 and shortly after the Virginia Department of Rail and Public Transportation (DRPT) announced the extension to Roanoke of its state sponsored Amtrak route that originates in Lynchburg, Virginia officials in the Bedford area learned that no stop for the service was being planned for Bedford. This was contrary to the 2008 Virginia State Rail Plan that showed a stop anticipated for Bedford for its I-81/Route 29 Passenger Rail Project.

Upon learning this, a group of local officials convened to determine what steps could be taken to have a train station for Bedford reinstated in the State's plans. This group, the Bedford/Franklin Regional Rail Initiative (BFRRI), is comprised of local officials from the Town of Bedford, Bedford County, Franklin County, the region's chambers of commerce, local businesses and private citizens. The BFRRI prepared an analysis demonstrating the benefits and advantages of locating a train station in Bedford and in the fall of 2015 presented their findings to DRPT. DRPT indicated that additional analysis was necessary – specifically a rail patronage estimate and economic benefits analysis was needed. In addition, the development of a conceptual plan for a Bedford station was needed. In December, 2015 BFRRI secured $73.5K in local funding to hire a consultant to perform the additional analysis and to help advance the first phase of the Bedford Station project. The Town of Bedford assumed the lead role for the advancement of the project.

In January, 2016 the architecture and engineering company Wendel was selected to perform the work and was engaged to carry out a study that includes the following five tasks:

Task 1 – Project Initiation and Rail Patronage Study: The first part of this task is to convene a meeting of the project stakeholders and discuss the Town of Bedford's desires for a train station and the roles and responsibilities of the Wendel Team and Stakeholders. A study of rail patronage at the Bedford station will be undertaken. The Wendel Team will produce an accurate ridership projection for the Bedford station with a high degree of confidence that it will match Amtrak's own projection, utilizing a national intercity rail model developed by AECOM for corridor analysis, calibrated to match the base Amtrak ridership data for the Washington-Lynchburg existing service. The rail patronage study will include passenger rail ridership forecasts for the proposed Bedford station, along with the proportion of ridership diverted from Roanoke or Lynchburg stations. This patronage study will be sent to Amtrak for their review and validation.

Task 2 – Facility Needs Assessment: Working closely with the Town of Bedford, and other stakeholders to include DRPT, Amtrak and Norfolk Southern, Wendel will identify the current and future services that will be accommodated at the train station. Based on the activities that will take place at the center and the types and levels of transportation services that will utilize the facility, space needs will be defined.

Task 3 – Site Evaluation: The Wendel Team will assess the feasibility of locating the train station in the area identified by the Town and will examine on-site improvement options to accommodate the passenger rail station, parking and other improvements. An environmental review will be conducted for the project.

Task 4 – Conceptual Design: Using the space program developed in Task 2 and the findings of the site evaluations in Task 3, a conceptual plan will be developed that will include a site plan, a floor plan, building sections with and elevations, bus alignment/AutoTURN, and other vehicular interfaces. A conceptual level cost estimate will be prepared and an economic benefits analysis will be prepared.

Task 5 – Final Report: A report documenting the analyses will be prepared. After the completion of the feasibility study and conceptual plan, the project will be ready to move into design work. It is expected that an RFP will be issued by the Town and an A&E firm selected to conduct the design of the project. The scope of design will include preliminary engineering (30% level design), design development (30% to 90% design and specifications) and construction documents (90% to 100% design and permitting.) It will be important that full participation by DRPT, Norfolk Southern and Amtrak will be secured to help guide the design efforts.

In February, 2016, the Town of Bedford submitted a grant application to DRPT under their Intercity Passenger Rail Operating and Capital (IPROC) funding program. This application requested state support for the full architectural and engineering design of Bedford Station. It is envisioned that upon the acceptance of the project for advancement by DRPT, Norfolk Southern and Amtrak, a second IPROC application will be submitted in 2017 to support the construction of the station. The roles and responsibilities of the Town of Bedford, DRPT, Norfolk Southern and Amtrak in the bidding, construction and equipping of the Bedford Station will be discussed and finalized during the design process for the station.

BEDFORD RAIL PATRONAGE REPORT

The Bedford Rail Patronage Report was prepared by AECOM – a member of the Wendel Team and a firm with many years of experience in performing ridership estimating for Amtrak and DRPT. AECOM prepared the ridership forecast that led to the implementation of Amtrak Northeast Regional Route 46 – the train that originates in Lynchburg, Virginia. The AECOM report is found as Appendix I to this report.

Methodology

Data collected for this effort included demographic data for the Roanoke Transportation Management Area, including population and employment for years 2010 and 2040; national demographic data including population, employment, and income at the Census Division level for the entire study area for years 2010 and 2013; and total ridership for the Washington-Lynchburg Amtrak route for FY13 through FY15.

The station ridership was developed using a national intercity rail model developed by AECOM for corridor analysis of Amtrak's Northeast Corridor, Southeast Corridor, Florida, and multiple corridors in the Midwest. The station ridership was calibrated to match the base Amtrak ridership data provided by the Virginia Department of Rail and Public Transportation (DRPT) for the Washington-Lynchburg existing service.

The inputs required for this model analysis include:

- Geographic zonal system covering the study area
- Existing rail and bus ridership
- Socio-economic data for the zone system
- Highway network connecting all of the zones and rail stations in the study area
- Rail schedules for the existing and proposed service
- Travel characteristics for auto and rail

Model Structure

The travel demand modeling approach used in this project is based on a model system developed by AECOM and used in many previous applications to evaluate proposed intercity and high speed rail services for several states and Amtrak throughout the country. The travel demand model was originally developed from extensive market research and observed travel volumes and service characteristics by mode that were conducted/assembled in the various study corridor markets including Northeast, Southeast, and other regions.

The travel demand forecasting approach utilizes a two-stage model system. The first stage forecasts the growth in the total number of person trips in each market, and the second stage predicts the market share of each available mode in each market. Both stages are dependent on the service characteristics of each mode and the socio-economic characteristics of the corridor. The key markets addressed in the forecasting model system are defined by geographical location (i.e., origin-destination zone pair).

The first stage addresses the growth in the total intercity person travel volumes. This includes "natural" growth and "induced" demand. The "natural" growth component is captured by the growth in population and employment. The "induced" component is captured by including a measure of the composite level of modal service expressed in the mode share model- within the total travel model.

The second stage of the model is the mode share component, which estimates the share of total person travel by mode. This model considers both auto and rail. Key variables in the mode share model include:

- Line haul travel time
- Access/egress time
- Travel cost or fare
- Frequency of service

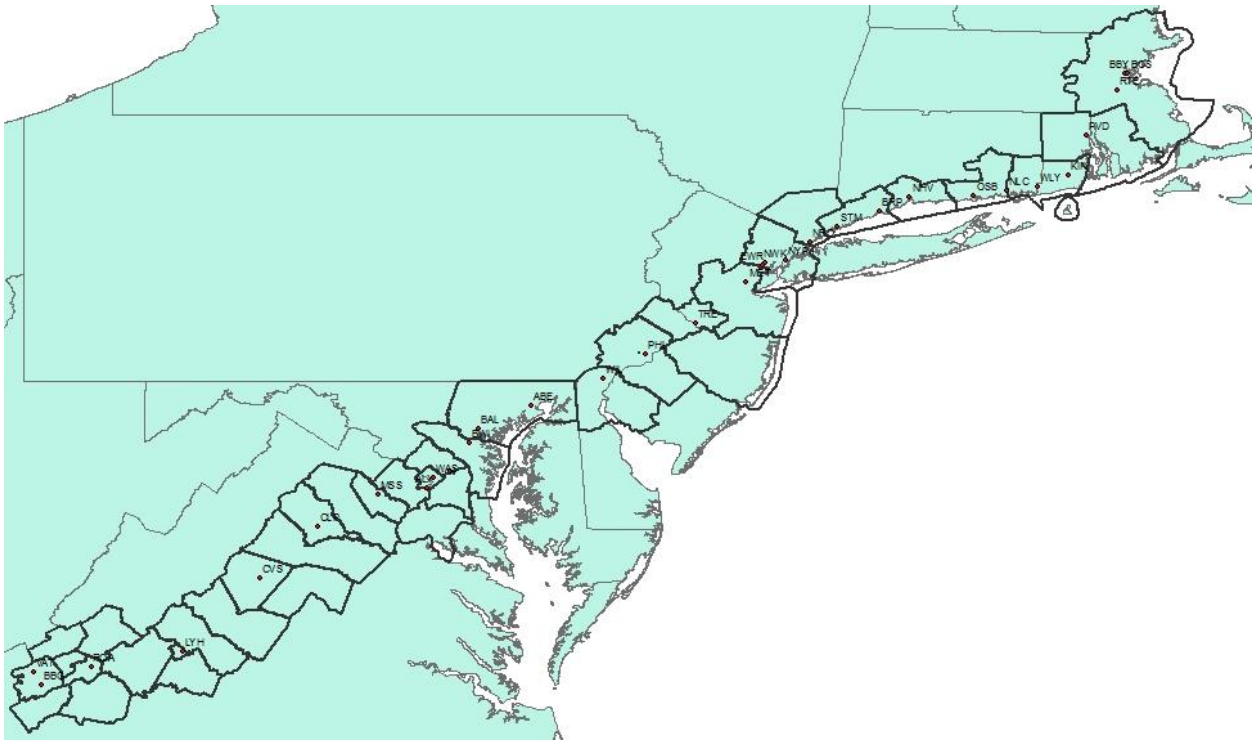
Total market-to-market frequencies were scaled based on arrival and departure times of each train serving the market. These scaling factors are based on the observed performance of trains in different departure/arrival time slots within rail corridors throughout the US. The rail utility and market share are determined by the combination of arrival and departure factors along with the time to the previous and subsequent trains, travel time, cost, access/egress times and on-time performance.

The mode choice model was calibrated to match the existing corridor by running the time, cost, and frequency characteristics of the existing Amtrak service, with current population, employment, and income data. The model parameters were then adjusted until the forecasted output corresponded with the actual ridership data.

Study Area Geography

The study area is focused on the existing Washington-Lynchburg-Roanoke corridor, but also includes connecting service up the Northeast Corridor to Boston. The zonal system was developed for the study area and defines the geographic level of detail at which the intercity travel demand forecasting process is applied. The study area is found in Figure 1.

Figure 1: Bedford Study Area



Network and Service Characteristics

Service characteristics are the key independent variables for the mode choice modeling process. The model in the project uses the following service characteristics:

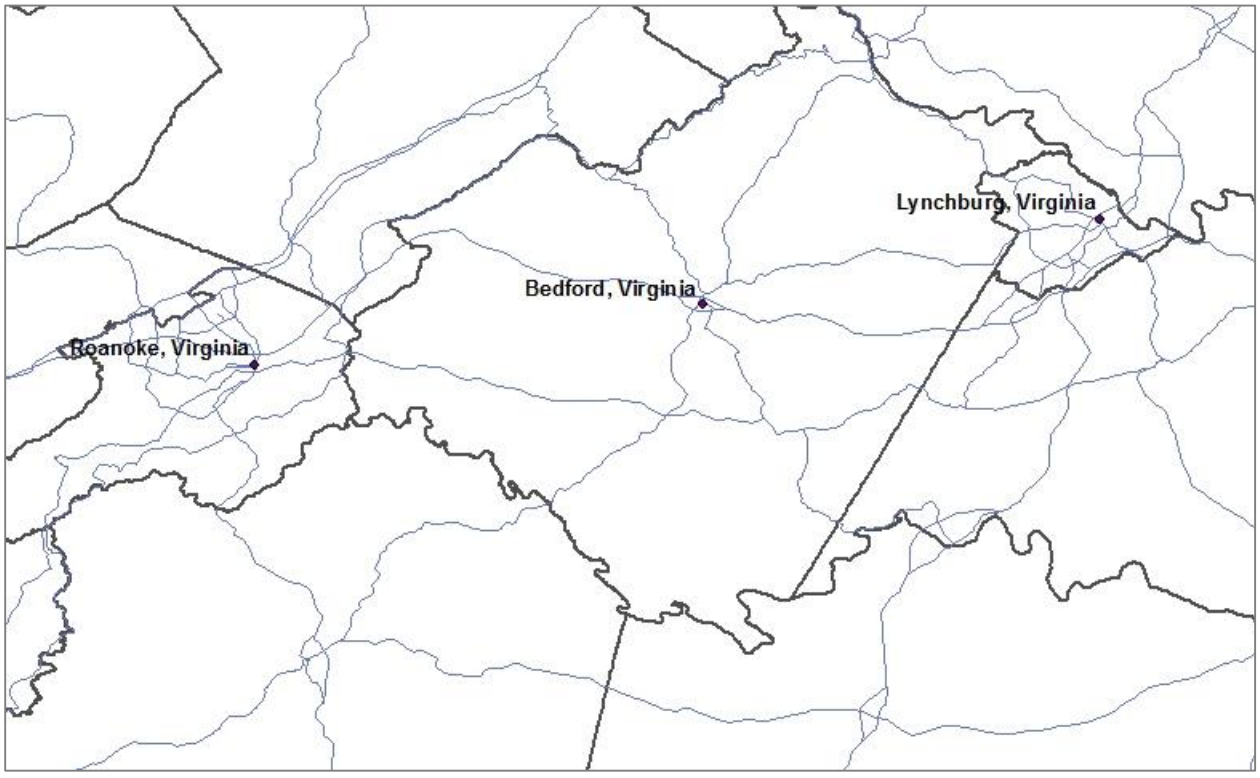
* Travel time (minutes)

* Travel cost (dollars)
* Frequency (rail departures per day)

The auto service characteristics for each study area zone pair (including time, distance, and cost) were developed using a GIS-based intercity highway network. The network was derived from the Oak Ridge National Highway Network, of which an example is shown in Figure 2.

In order to create zone-to-zone travel times, a set of network skims was produced using ArcGIS by creating the minimum travel time path to/from each zone centroid in the study area based on congested travel time. Each minimum path calculation produces the time, distance and toll costs associated with the trip. In additional to tolls, auto cost is calculated at a per-mile basis of $0.54 per mile for business travel (full reimbursement cost) and $0.15 per mile for non-business travel (incremental cost of fuel).

Figure 2: Highway Network



Service characteristics for rail travel were also developed for each study area zone pair. These were based on the highway network and published time tables for existing service. The key characteristics include line haul time, frequency of service, fares, terminal times, access/egress times and costs, and rail on-time performance.

Published Amtrak timetables provided the basis for quantifying the line haul time and frequency of service. Average rail fares were obtained from previous rail studies in the corridor. The access/egress times and costs include the time/cost traveling from the origin zone to the boarding rail station, the time associated with the station (including waiting/boarding times), and the time/cost traveling from the destination station to the final destination zone. Access/egress times and costs for travel between zones and stations were developed using the same network procedure and cost per mile rates described above and were used for the auto zone-to-zone travel characteristics. The existing Washington to Lynchburg service has one round-trip per day, and the Roanoke analysis extended this service to the Roanoke station for the future analysis. Travel times and costs for the extended service were based on the speed and distance/cost relationships of the other station pairs in the corridor.

Demographic Data

Socio-economic data are used both to develop the base trip table and estimate market growth. The market growth in this case is small, as the 2010 demographic data provided by the Roanoke Valley-Alleghany Regional Commission is factored up to the base of 2013. The other major source of demographic data is Economy.com's national database at the county-level, which includes population, employment and per capita income for the years 2010 and 2013, which are based on Census numbers. Table 1 provides a summary of the 2010 and 2013 socio-economic data for selected major markets in the study area. These markets include the metropolitan areas surrounding the cities.

Table 1: Summary of Socio-Economic Data

	2010			2013		
	Population	Employment	Per Capita Income (2005$)	Population	Employment	Per Capita Income (2005$)
Blacksburg, VA	110,974	45,051	24,419	112,422	47,410	25,535
Bedford, VA	75,004	19,949	33,481	76,439	19,664	33,232
Roanoke, VA	194,682	121,710	34,779	196,906	124,884	34,930
Lynchburg, VA	75,709	40,634	27,781	77,440	41,245	27,944
Charlottesville, VA	142,753	87,482	40,490	148,364	89,404	39,853
Culpepper, VA	54,362	18,099	31,540	56,586	18,839	31,826
Manassas, VA	459,146	117,138	38,898	494,191	126,732	38,689
Washington, DC	3,746,666	2,284,090	90,719	3,912,659	2,348,886	91,305

Base Travel Market Data

The base trip table was developed for the three trip purposes: business, recreation, and other. The first step was to determine the total annual travel between all zonal pairs in the study area. This was done by applying standard market formulas from other nationwide studies using socio-economic characteristics (including population, employment, and income) and travel-related service characteristics including distance and travel time, and then calibrating it to match known data from various sources, including rail ridership from Amtrak (FY15 ridership for the Washington-Lynchburg train) and estimates of auto travel from the NEC Intercity Auto Origin-Destination study by the Northeast Corridor Commission. The total trips were then split by purpose for each zonal pair using the trip purpose split from the NEC Intercity Auto OD study. Table 2 provides a summary of base trips to and from selected major markets in the study area. These markets include the metropolitan areas surrounding the cities.

Table 2: Summary of Estimated Annual Person Trips by Purpose for Major Markets

	Business	Recreation	Other	Total
Blacksburg, VA	298,533	321,830	1,030,507	1,650,871
Roanoke, VA	706,875	762,040	2,440,066	3,908,981
Bedford, VA	313,768	338,255	1,083,098	1,735,120
Lynchburg, VA	341,848	368,526	1,180,028	1,890,403
Charlottesville, VA	464,447	500,693	1,603,228	2,568,368
Culpepper, VA	528,224	569,446	1,823,378	2,921,047
Manassas, VA	127,308	137,243	439,455	704,007

Forecast Results

The ridership forecast was prepared based on 2013 demographics and FY2013 Amtrak base ridership. Tables 3 through 5 provide the annual boardings and alightings for the stations in the Roanoke extension for trips entirely south of Washington and trips which travel through Washington and connect to the Northeast Corridor. The three tables show the results for the existing route ending at Lynchburg, extending to just Roanoke, and the extension to Roanoke with the inclusion of the Bedford station. Please note that the numbers shown for Lynchburg include patronage for Amtrak Route 46 (Washington – Lynchburg) only. Additional patronage at Lynchburg is generated by Amtrak's Crescent train service.

Table 3: Annual Rail Boardings and Alightings for Existing Route

	South of Washington	Through Washington	Total
Lynchburg	53,000	19,000	72,000
Bedford	-	-	-
Roanoke	-	-	-
Total Boardings/Alightings	53,000	19,000	72,000

Table 4: Annual Rail Boardings/Alightings for Roanoke Extension without Bedford Station

	South of Washington	Through Washington	Total
Lynchburg	52,000	14,000	66,000
Bedford	-	-	-
Roanoke	30,000	12,000	42,000
Total Boardings/Alightings	82,000	26,000	108,000

Table 5: Annual Rail Boardings/Alightings for Roanoke Extension with Bedford Station

	South of Washington	Through Washington	Total
Lynchburg	47,000	11,000	58,000
Bedford	27,000	5,000	32,000
Roanoke	32,000	12,000	44,000
Total Boardings/Alightings	106,000	28,000	134,000

Overall, the total annual boardings plus alightings for the Lynchburg to Roanoke segment increase by approximately 36,000 with the extension to Roanoke, and increase by another 26,000 with the addition of the Bedford station. Many of the riders using the Bedford station could previously have driven to either Lynchburg or Roanoke, but now have a much shorter access travel time to the rail station. For most Franklin County and Smith Mountain Lake residents, the time required to reach Bedford Station will be 30 to 40 minutes. This makes access to passenger rail service much more convenient for these people and will contribute significantly to the success of the station. The Lynchburg station sees a decrease in ridership due to riders switching to the Bedford station, as most Bedford travelers would typically have previously chosen Lynchburg over Roanoke, as most travel is oriented to the north. Roanoke sees a slight increase in ridership in the South of Washington segment, due to travel between Bedford and Roanoke, while the through Washington travel stays primarily the same. The

reason for Roanoke not decreasing is that it is now the end of the route, and has a larger travel shed, picking up travelers from further west and south.

Comparison of Anticipated Bedford Station Patronage to Other Virginia Amtrak Stations

Amtrak operates over 20 trains daily in Virginia. These include the state-supported Amtrak Virginia Regional service to Lynchburg, Richmond, Newport News, and Norfolk as well as the following National Network trains:

- The Auto Train (daily Lorton, VA - Sanford, Fla.)
- The Cardinal (tri-weekly New York-Washington, DC-Charlottesville-Cincinnati-Chicago)
- The Crescent (daily New York-Charlottesville-Atlanta-New Orleans)
- The Palmetto (daily New York-Richmond-Savannah)
- The Silver Meteor (daily New York-Richmond-Miami)
- The Silver Star (daily New York-Richmond-Tampa-Miami)

Amtrak also operates one other state-supported train through Virginia, the Carolinian (daily New York – Richmond – Charlotte).

Figure 3 provides a map that shows the locations of the Amtrak routes and stations in the Commonwealth of Virginia and notes the entities that own the track that the routes operate over. Not shown on the map are the routes and stations served by Virginia's commuter railroad, the Virginia Railway Express (VRE). VRE operates on the Norfolk Southern (NS) tracks between Broad Run just west of Manassas, Virginia and Union Station in Washington DC and along the CSX tracks from Spotsylvania just south of Fredericksburg, Virginia to Union Station.

Figure 3: Amtrak Service in Virginia

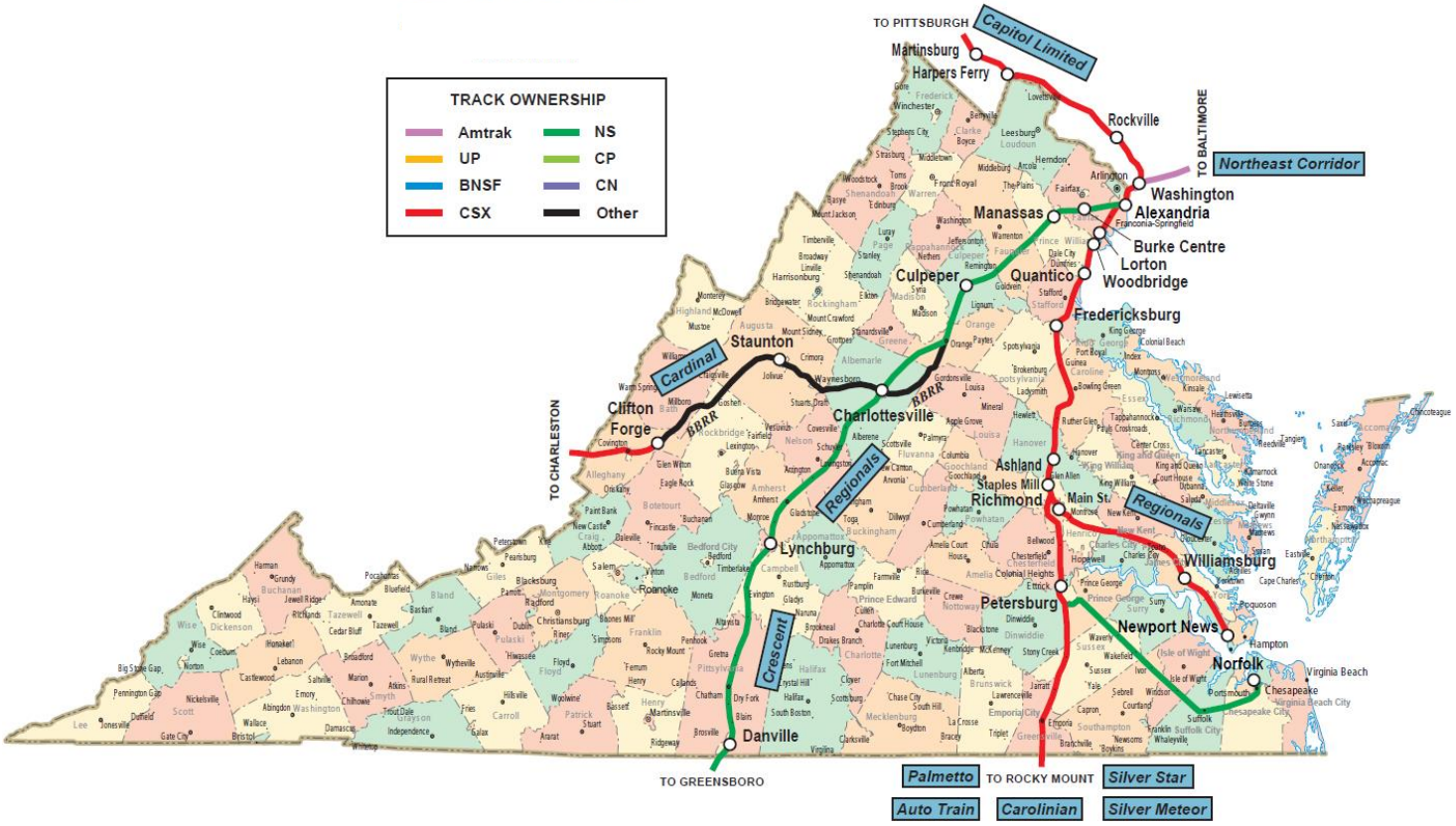


Table 6 shown the number of boardings and alightings that occurred in Fiscal Year 2015 for Amtrak trains at stations in Virginia. Total Amtrak patronage in Virginia totaled 1,606,007 boardings and alightings for FY 2015. This was about a one percent increase over the total for FY 2014. It should be noted that the Manassas and Burke Amtrak stations on the NS line and all of the Amtrak stations from Fredericksburg north to Washington Union Station are served by VRE trains. The VRE patronage numbers are not included in Table 6 and therefore total passenger rail patronage at these stations is considerably greater than the numbers shown. The numbers shown in red for Roanoke, Bedford and Lynchburg are projected patronage numbers developed for this study. The actual total number of boardings and alightings for the Lynchburg station in FY15 was 84,975.

Table 6: Annual Amtrak Boardings and Alightings at Virginia Stations

Ranking	Virginia Stations	Annual Ridership (FY15 Data)
1	Richmond Staples Mill	361,996
2	Lorton	271,622
3	Alexandria	186,841
4	Charlottesville	134,485
5	Fredericksburg	117,423
6	Newport News	115,440
7	Lynchburg**	70,888
8	Williamsburg	61,625
9	Richmond Main Street	45,062
10	Norfolk	44,852
11	Roanoke*	44,000
12	Quantico	32,754
13	Bedford*	32,000
14	Petersburg	29,892
15	Ashland	28,141
16	Manassas	28,220
17	Woodbridge	24,212
18	Culpeper	14,508
19	Danville	7,736
20	Burke	7,241
21	Staunton	6,735
22	Clifton Forge	2,247

Source: Amtrak Fact Sheet, Fiscal Year 2015

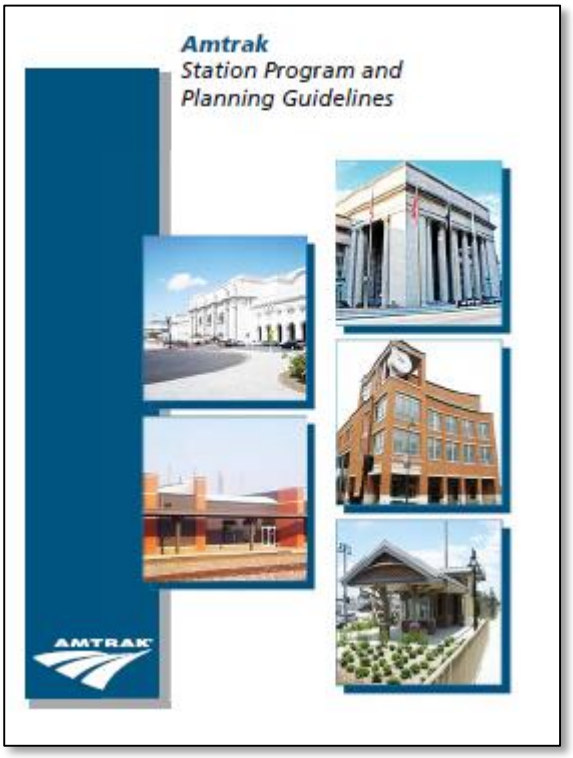
* Projected numbers for Lynchburg, Roanoke and Bedford patronage on Amtrak Route 46.
** The Lynchburg station number assumes 58,000 from the Route 46 (the Roanoke train) and an additional 12,888 boardings and alightings from Amtrak's Crescent Route.

The patronage numbers shown in Table 6 reveal that the Lynchburg, Roanoke and Bedford stations all will play significant roles in generating passenger rail ridership for Virginia. The Bedford station is expected to provide more Amtrak patronage in its first year of operation than nine other Amtrak stations in the Commonwealth.

NEEDS ASSESSMENT FOR THE BEDFORD STATION

Facility Program

The first step in developing a conceptual plan for the Bedford Station is to develop a program for the station. A program is a document that describes the components that will be included in the station and identifies the size needed for the site and structures. The generally accepted guidance for the development of Amtrak station plans is a document prepared and published by Amtrak entitled "Amtrak Station Program and Planning Guidelines". In this document Amtrak states that "These guidelines are intended to assist local governments, transportation agencies and authorities, designers, Amtrak staff and other stakeholders in the planning, design, construction, rehabilitation and redevelopment of Amtrak served passenger stations and related facilities. The guidelines presented here establish design standards and criteria for stations platforms and the station site, starting with governing principals, followed by information on the planning and design process, service and facility types, program requirements, station features and amenities, station finishes and architectural design." The Wendel team used this document to determine the appropriate size and features for the Bedford Station and then working with the project sponsors developed a specific program for the Bedford Station.



The Amtrak document relies in part upon the categorization of stations based primarily on passenger volume. Four levels of stations are defined:

- Category 1: Large Stations, annual ridership greater than 400,000, fully staffed with multiple transit services and amenities;
- Category 2: Medium Stations, annual ridership between 100,000 and 400,000, lower levels of staff with some supporting transit and amenities;
- Category 3: Caretaker Stations, annual ridership between 20,000 and 100,000, enclosed waiting areas but no ticket agents and only limited amenities; and

- Category 4: Shelter Stations, annual ridership less than 20,000, platforms with only shelters and/or canopies and no amenities.

With annual ridership projected to be at 32,000, the Bedford Station will fall into Category 3 – Caretaker Stations and should be programmed and designed accordingly. Figure 4 is taken from the Amtrak document and shows the features and amenities that should be included in Bedford Station listed in the column for Caretaker Stations.

This document and a programming questionnaire developed by Wendel were reviewed with the Town of Bedford and Bedford County, the project sponsors, to develop a program for Bedford Station. The station programming questionnaire that was completed is found in Appendix II. Following the Amtrak Station Classification and Features Matrix shown in Figure 4, the Bedford Station Program contains the following elements:

Facility Structure Elements

- Platform – An elevated platform is envisioned for the Bedford Station for easy access by the disabled. The platform will be designed in accordance with Amtrak guidelines.
- Platform Canopy – A platform canopy will be included covering two thirds the length of the platform – as recommended by Amtrak
- Sheltered Waiting Area – It is envisioned the platform canopy will serve as a sheltered waiting area initially and that a waiting area will be included in a future station building.
- Station Building – A station building is included in the plans for the Bedford Station as a future or second phase to the project.

Access and Wayfinding

- Auto/Taxi Pick-Up/Drop-Off Lanes – Pick-up and drop-off lanes will be included in the design for Bedford Station.
- Parking – Parking will be included in the design for Bedford Station – including an expanded parking area as a future or second phase to the project.
- Rental Cars on Call – Rental cars will be available in the Town off site.
- Rental Cars on Property – No on property rental cars are envisioned for this project.
- Transit and Bus Access – Transit and bus access will be provided to the station. Initially one forty-foot bus bay and access for smaller shuttle vehicles will be provided. Future expansion may include a second forty-foot bus bay if it is needed.
- Taxi Access – Taxi and private transportation access will be provided at the station.
- Staff Parking – There will be no staff parking at the station.
- Bicycle Racks – Bicycle racks will be provided at the station.

- Station Signage (Amtrak Standards) – Station signage will be provided in accordance with Amtrak standards.
- Regulatory Signage (MUTCD) – All appropriate regulatory signage will be included at the station.

Station Features and Functions

- Restrooms – Restrooms will be included in the future station building to be constructed as a second phase of the project.
- Drinking Fountains – Drinking fountains will be included in the future station building to be constructed as a second phase of the project.
- Site Lighting – Site lighting will be included in the design for Bedford Station.
- Trash Receptacles – Trash receptacles will be included in the design.
- Trash Pick-Up and Snow Removal – The Town of Bedford will perform trash pick-up and snow removal for Bedford station.

Customer Service

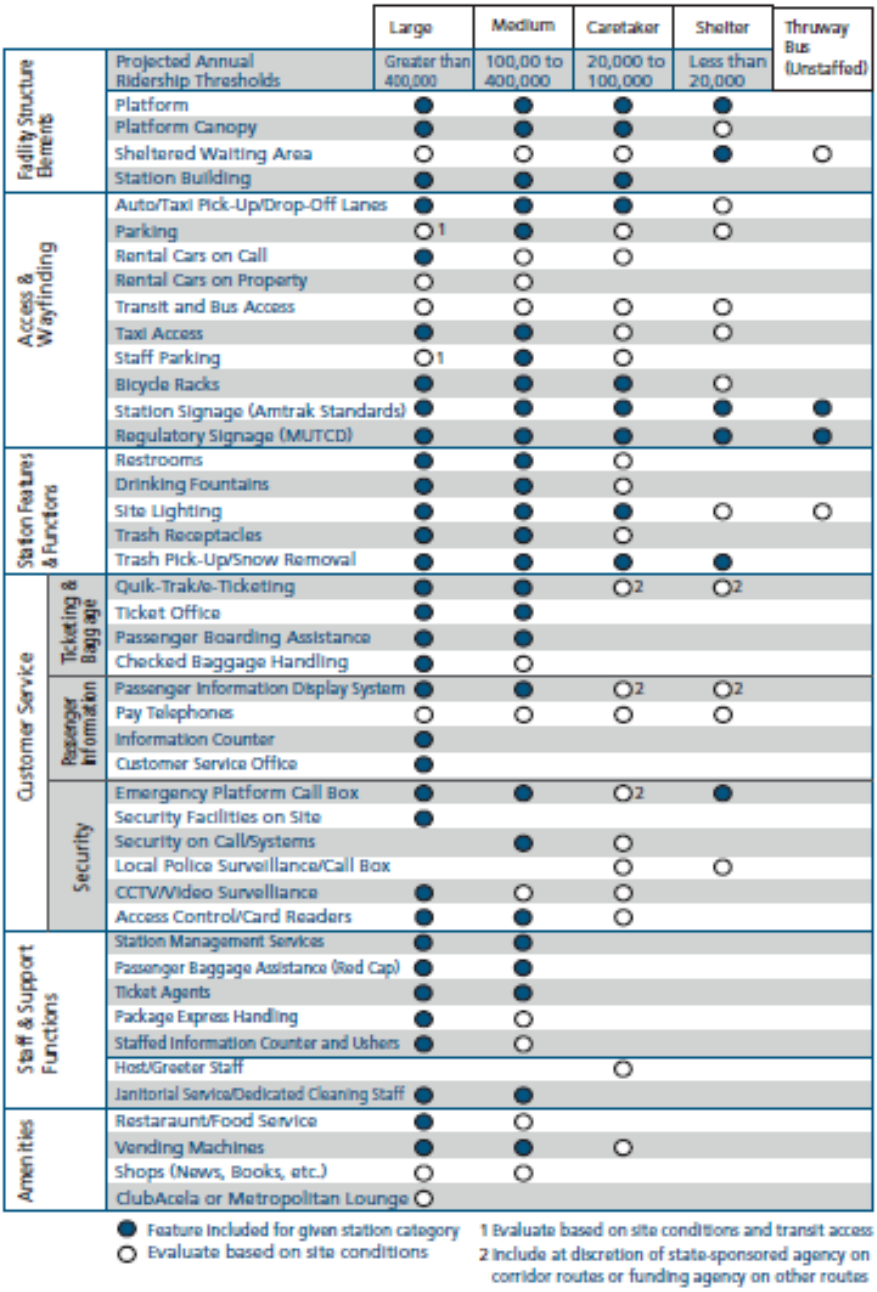
- Ticketing and Baggage – An Amtrak Quick-Trak machine is envisioned at Bedford Station.
- Passenger Information – Passenger Information at the Bedford Station will be provided by the Amtrak Quick-Trak machine.
- Security – Surveillance by local police will be provided. Proposed site is located next to a police station.

Staff and Support Functions – Not appropriate for a Class 3 Caretaker Station as per Amtrak guidelines.

Amenities

- Vending Machines – Vending machines are not anticipated at Bedford Station. Accommodations may be provided for one or two vendor food trucks in the parking area or adjacent areas.

Figure 4: Amtrak Station Classification and Features Matrix



		Large	Medium	Caretaker	Shelter	Thruway Bus (Unstaffed)
Facility Structure Elements	Projected Annual Ridership Thresholds	Greater than 400,000	100,00 to 400,000	20,000 to 100,000	Less than 20,000	
	Platform	●	●	●	●	
	Platform Canopy	●	●	●	○	
	Sheltered Waiting Area	○	○	○	●	○
	Station Building	●	●	●		
Access & Wayfinding	Auto/Taxi Pick-Up/Drop-Off Lanes	●	●	●	○	
	Parking	○1	●	○	○	
	Rental Cars on Call	●	○	○		
	Rental Cars on Property	○	○			
	Transit and Bus Access	○	○	○	○	
	Taxi Access	●	●	○	○	
	Staff Parking	○1	●	○		
	Bicycle Racks	●	●	●	○	
	Station Signage (Amtrak Standards)	●	●	●	●	●
	Regulatory Signage (MUTCD)	●	●	●	●	●
Station Features & Functions	Restrooms	●	●	○		
	Drinking Fountains	●	●	○		
	Site Lighting	●	●	●	○	○
	Trash Receptacles	●	●	○		
	Trash Pick-Up/Snow Removal	●	●	●	●	
Customer Service – Ticketing & Baggage	Quik-Trak/e-Ticketing	●	●	○2	○2	
	Ticket Office	●	●			
	Passenger Boarding Assistance	●	●			
	Checked Baggage Handling	●	○			
Customer Service – Passenger Information	Passenger Information Display System	●	●	○2	○2	
	Pay Telephones	○	○	○	○	
	Information Counter	●				
	Customer Service Office	●				
Customer Service – Security	Emergency Platform Call Box	●	●	○2	●	
	Security Facilities on Site	●				
	Security on Call/Systems		●	○		
	Local Police Surveillance/Call Box			○	○	
	CCTV/Video Surveillance	●	○	○		
	Access Control/Card Readers	●	●	○		
Staff & Support Functions	Station Management Services	●	●			
	Passenger Baggage Assistance (Red Cap)	●	●			
	Ticket Agents	●	●			
	Package Express Handling	●	○			
	Staffed Information Counter and Ushers	●	○			
	Host/Greeter Staff			○		
	Janitorial Service/Dedicated Cleaning Staff	●	●			
Amenities	Restaraunt/Food Service	●	○			
	Vending Machines	●	●	○		
	Shops (News, Books, etc.)	○	○			
	ClubAcela or Metropolitan Lounge	○				

● Feature included for given station category
○ Evaluate based on site conditions

1 Evaluate based on site conditions and transit access
2 Include at discretion of state-sponsored agency on corridor routes or funding agency on other routes

Facility Sizing

Platform – Bedford Station will be served by a Virginia sponsored Amtrak train operating on Route 46. This route is named a Northeast Regional type service. The Amtrak Station

Program and Planning Guidelines instruct that the preferred length for a platform at a station not located on the Northeast Corridor and served by a Northeast Regional route is 1,000 feet. The Guidelines further instruct that the minimum length for a platform at such a station shall be 425 feet. The assumed length for the Bedford Station platform will be 450 feet - slightly greater than the minimum. This will help to hold down the cost of constructing Bedford station and still provide adequate length to serve the trains operating on Route 46.

The width of the platform at Bedford Station will be 14 feet. This is within the guidelines set by Amtrak and sufficiently great to maintain a 6 foot clearance between the edge of the platform and any obstruction such as a bench for seating. This also is a requirement by Amtrak.

Waiting Area – The Amtrak Guidelines provide a six step formula for calculating the size of the passenger waiting area in the station building. The key factor to calculate the size of the waiting area is the annual ridership at the station. The annual ridership for the Bedford Station is estimated at 32,000 with two trains serving the station per day. The calculation for the station's waiting area is as follows.

1. Daily ridership = Annual ridership/270 or 32,000/270 = 119

Amtrak assumes that ridership will not occur uniformly over the year but that certain days will have more ridership than others and uses a divisor or 270 days rather than 365 days. The daily ridership at the Bedford Station is estimated at 119 boardings and alightings.

2. Peak hour 2 way traffic = daily ridership/number of daily trains or 119/2 = 59

Since most travel on Amtrak is round trip travel, Amtrak assumes that each train will proved a similar number of trips (northbound travel will equal southbound travel). The typical number of boardings and alightings from each train serving Bedford Station will be 59.

3. Peak hour 1 way traffic = peak hour 2 way traffic * 0.65 or 59 * 0.65 = 39

Amtrak assumes that travel patterns will be uneven and the formula assumes that more than half the passengers will be boarding. The peak number of people waiting to board a train at Bedford Station (with the exception of extreme peaks such as Thanksgiving) is calculate at 39 people.

4. Number of people to be seated = Peak hour 1 way traffic * 0.75 or 39 * 0.75 = 30

For long train rides Amtrak suggests that seating should be provided for 75% of the people waiting to board a train. In the Bedford Station waiting area seating will be provided for 30 people.

5. Seating area required = 20 ft^2 * number to be seated or 20 ft^2 * 30 = 600 ft^2

Amtrak suggests that twenty square feet will be required for each seated passenger. In the Bedford Station six hundred square feet will be required for seating.

6. Standing area required = 10 ft^2 * number of people standing or 10 ft^2 * 9 = 90 ft^2

Amtrak suggests that ten square feet will be required for each standing passenger. In the Bedford Station ninety square feet will be required for standing passengers.

7. Total area required = seating area + standing area or 600 ft^2 + 90 ft^2 = 690 ft^2

Based upon Amtrak's formula, the passenger waiting area inside the station building should be a least six hundred and ninety square feet.

Parking – According to the Amtrak formula, the peak number of people that will arrive to catch a train in the morning at the Bedford Station will be thirty-nine people. Some people – such as families – will be traveling together and arrive in a single automobile. Others will be dropped off to catch a train and still others will arrive by taxi, bus or shuttles. Assuming that parking will be required for 75% of the people arriving at the station, a total of twenty-nine parking spaces will be needed for a peak arrival load. To accommodate trips that last multiple days and therefore producing uneven demand for parking, a total of fifty parking spaces will be planned initially at Bedford Station with a future capacity of seventy-five to one hundred spaces.

SITE SELECTION FOR THE BEDFORD STATION

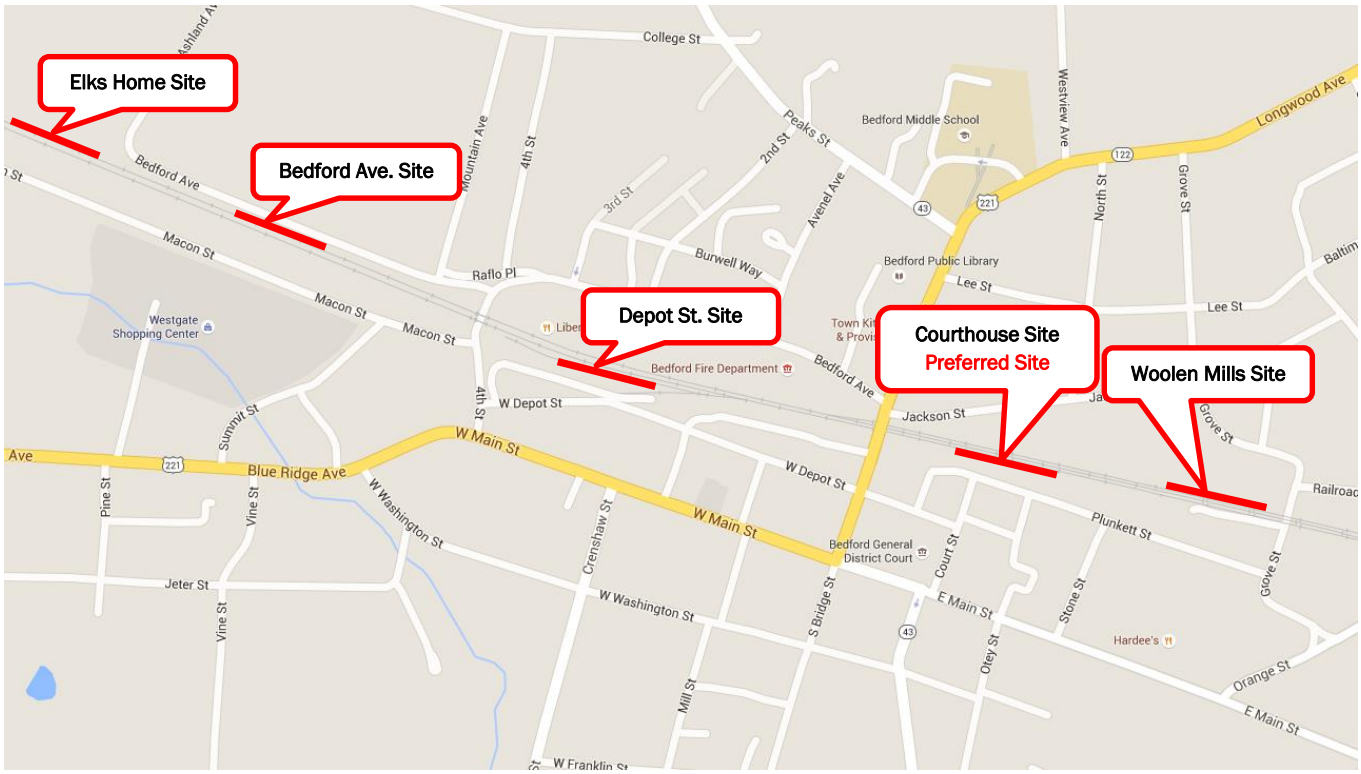
In the fall of 2015, members of the Bedford-Franklin Regional Rail Initiative (BFRRI) prepared a white paper that set out the benefits of establishing an Amtrak station in the Town of Bedford. Included in the white paper was an analysis of prospective sites for the station. The analysis identified five rail frontage sites in the vicinity of downtown Bedford with reasonable roadway access and that could accommodate a platform of at least seven hundred feet in length. The five sites are shown below in Figure 5.

A key factor in selecting a site for Bedford Station will be the suitability of the sites from the perspective of the owner of the railroad that runs through Bedford, Norfolk Southern Railroad

(NS). The railroad tracks through Bedford are heavily utilized for freight traffic and NS will not permit the construction of a station if it interferes with rail freight traffic to any significant extent. Conversations with NS on this topic will be extremely important to this project and should be initiated as soon as DRPT determines that they will endorse a station at Bedford.

Until DRPT endorses Bedford Station, NS is not likely to engage in conversation about the acceptability of any station location. In the meantime, evaluation criteria that are significant to Bedford are most appropriate for initial site screening.

Figure 5: Sites Evaluated for the Location of Bedford Station



In the BFRRI analysis, each of the five sites was evaluated under seven criteria including:

- Automobile access
- Parking
- Bus access
- Proximity to the central business district
- Real estate cost
- Construction cost

- Multi-use potential

For each of the evaluation criteria a ranking of one to five was assigned at each prospective site – with five being the most favorable score. The Courthouse site was identified as the preferred location in the rankings shown below in Table 7. It should be noted that all of the sites appear to be viable and each has its own distinct characteristics. It the preferred site proves to be unacceptable for any reason, other sites noted below should be given careful consideration.

Table 7: Bedford Station Site Rankings

Criteria	Woolen Mills	Courthouse	Depot St.	Bedford Ave.	Elks Home
Car Access	2	4	3	3	3
Parking	1	5	3	4	3
Bus Access	3	4	4	3	3
Access to CBD	3	5	4	2	2
Real estate cost	4	5	2	5	1
Construction cost	4	4	3	4	2
Multi-use potential	5	4	2	1	2
Total Score	**22**	**31**	**21**	**22**	**16**

SITE EVALUATION FOR THE BEDFORD STATION

A Site Evaluation Report on the suitability of the proposed site for Bedford Station (Appendix III) was undertaken by Draper Aden Associates – a member of the Wendel Team.

Civil Narrative

The civil narrative was prepared based on the known scope of the proposed project, site reconnaissance, and readily available information, including aerial photography and topography, Federal Emergency management Agency (FEMA) Flood Insurance Rate Maps (FIRM), and the Bedford County GIS.

Standards and codes which govern site development for this project include the Town of Bedford and Bedford County Erosion and Sediment Control, Stormwater Management, and Zoning Ordinances, and other commonwealth and federal regulations.

Existing Site Conditions

The subject properties are located within downtown Bedford south of the Norfolk Southern Railroad, north of E. Depot Street, and adjacent to Plunkett and Court Streets. The proposed

development parcels are owned by the Town of Bedford. Current land uses within the project areas include the following:

1. An asphalt surface parking lot north of E. Depot Street, south of Plunkett Street and west of Court Street;
2. Open space south of the Norfolk Southern Railroad and north of Plunkett Street; and
3. A gravel parking / staging area south Plunkett Street and east of Court Street.

The existing topography within the project area has elevations ranging from approximately 978 to 950 (south to north and west to east). The existing parking lot south of Plunkett Street has retaining walls adjacent to E. Depot Street ranging in height from approximately 6 to 12 feet, along the west property line ranging in height from approximately 0 to 12 feet, along Court Street from the south to the entrance ranging in height from 0 to 6 feet.

FEMA Floodplain Considerations

The proposed project lies outside the one (1) percent annual chance (100-year) Zone A floodplain of John's Creek.

Zoning

The subject properties are zoned B1 Limited Business. Bus terminal facilities, excluding repairs and maintenance, with such attendant restaurant and retail facilities as are customarily incident to the operation thereof and which are primarily oriented to the needs of bus passengers are permitted uses. Rail facilities are not mentioned as allowable permitted or conditional uses.

The following is a summary of the zoning requirements / restrictions.

1. Maximum building height: Equal to or less than 40 feet measured from the average level of the ground adjacent to the front exterior wall
2. Building setbacks: None.

Demolition

During Phase 1, minimal demolition of existing features is anticipated.

For Phase 2, the existing parking lot west of Court Street will be modified to accommodate the construction of an elevated parking area above the existing lot. Existing sidewalks within the adjacent rights-of-way of the subject properties along E. Depot Street and Court Street will also be demolished and replaced, which may also require relocation of existing street lights. Other

existing sidewalks within rights-of-way adjacent to site improvements activities will be removed and replaced to provide an improved pedestrian experience and access between parking areas and the future station building.

Roadway / Parking / Pedestrian Access Improvements

Existing roadways will be utilized to access the train station and new parking facilities.

Phase 1: Plunkett Street will likely be resurfaced and curb and gutter added, where needed to provide positive drainage toward existing and new stormwater inlets. A new sidewalk will be added along the south side of Plunkett Street and west of Court Street to provide access to the train station. Pedestrian crosswalk signage and stripping will be added.

Phase 2: An elevated parking area is planned to be constructed above the existing parking lot north of E. Depot Street and west of Court Street providing a total of 100 parking spaces; there will be no direct connection between the levels of parking. Sidewalks adjacent to the new elevated parking area may be replaced.

The access drive to Town Hall (west of Court Street) will likely improved and widened as needed to provide access to the proposed parking area. A parking area providing approximately 30 spaces is planned to be constructed within the existing gravel lot east of Court Street. This lot will require approximately 20 feet of 0 to 8 feet high retaining wall. Pedestrian crosswalk signage and stripping will be added.

Utility Systems

Gas Service

Natural Gas is not available in the area. Several propane providers currently serve the area.

Electric Service

The Town of Bedford Electric Department provides electric service to the Town of Bedford and part of Bedford County. There is a substation located at the west terminus of Plunkett Street, south of the Norfolk Southern Railroad, and east of N. Bridge Street. An above-ground transmission line is located north of and adjacent to Plunkett Street along the length of the project area.

Communications Service

Shentel provides telecommunication and data service in the area.

Water

Existing

The Bedford Regional Water Authority (BRWA) provides potable water to the Town of Bedford. In addition to treating potable water, BRWA maintains existing and new lines. The current capacity of the BRWA water treatment plant is 3 million gallons per day (MGD), with an available capacity of up to 1 MGD for new development. Existing 8-inch and 10-inch water mains perimeter the subject properties. Adequate capacity exists and additional demands resulting from the proposed construction of the Passenger Rail Facility will have no appreciable effect on the quality of service provided BRWA to the surrounding community.

There is an existing fire hydrant located approximately 60 feet southeast of the proposed Bedford Fire Station building. One (1) additional fire hydrant may be needed for this project near the intersection of Court and Plunkett Streets.

Proposed

For the proposed station building domestic water service may be needed. The service is proposed via a lateral from the existing 10-inch diameter main running perpendicular to the Norfolk Southern Railroad and Plunkett Street approximately 25 feet east of the future station building. Existing flow and pressure in the water lines surrounding the project will be verified by flow testing during the design process to determine the optimum connection point for service. All exterior fire protection services, as needed, shall be in accordance with the International Plumbing Code and NFPA 24.

Sanitary Sewer

Existing

BRWA manages and maintains the City of Bedford wastewater infrastructure. An existing 8-inch sanitary sewer main is located within the Plunkett Street right-of-way and is expected to have sufficient capacity to serve the future station building. The wastewater treatment plant has a capacity of 2.0 MGD and currently treats an average of 1.125 MGD.

Proposed

A 50 linear foot 6-inch sanitary sewer lateral is proposed to connect to the 8-inch main to serve the future station building in Phase 2.

Storm Sewer

Existing

Stormwater runoff from the project area flows into existing inlets and piped system along the south side of Plunkett Street within the entire project limits; pipe sizes are unknown. This storm sewer system ultimately discharges to John's Creek.

Proposed

Phase 1: Additional inlets and manholes are proposed to capture surface runoff from the new train station and tie into the existing storm sewer on Plunkett Street.

Phase 2: Additional inlets and manholes are proposed to capture surface runoff from the proposed station building and new parking facilities.

Stormwater Management

Water quantity and quality control will be designed in accordance with the Part IIB criteria of the Virginia Stormwater Management Program (VSMP) Regulations (9VAC25-870). This project will be considered to be a redevelopment scenario.

Based on the Phase 1 and 2 plans, the following is a summary of approximate land cover per phase.

Phase 1:	Existing Impervious Area	=	0.72 acres
	Proposed Impervious Area	=	1.01 acres
	Proposed Managed Turf Area	=	0.56 acres
Phase 2:	Existing Impervious Area	=	0.43 acres
	Proposed Impervious Area	=	0.53 acres
	Proposed Managed Turf Area	=	0.28 acres

Quality Control – Preliminary Analysis

Although the proposed project does not result in an increase of impervious area, the total phosphorus load must be reduced by at least 20% per 9VAC25-870-63[2.a.] for both phases. Approximately 0.9 and 0.3 pounds per year of phosphorus load reduction is required for phases 1 and 2 respectively. Compliance may be achieved with a combination of Best Management Practices (BMPs) such as dry swales, bioretention, and/or manufactured BMPs (e.g. Filterra). Any BMP's selected shall meet the Standards and Specifications of the Virginia Stormwater BMP Clearinghouse. For example for the Phase 1 development, a Level 1 dry swale or bioretention treating 0.8 acres of impervious area will meet the required pollutant removal.

Quantity Control – Preliminary Analysis

The proposed project does increase impervious surface area, therefore stormwater quantity control facilities will be required per 9VAC25-870-66[B.1.a]. Stormwater quantity control could be provided via a bio retention facility or underground detention for this project.

ENVIRONMENTAL IMPACT OF THE PROPOSED BEDFORD STATION

An Environmental Impact Review for the Bedford Station project was undertaken by Draper Aden Associates – a member of the Wendel Team – and can be found in Appendix IV.

Approach to Environmental Review

The project approach for the Environmental Analysis and Documentation assumes that design and construction of the train station will not be supported by Federal funds. Therefore, the provisions of the National Environmental Protection Act (NEPA) will not apply to the project. However, since the construction may be undertaken under VDRPT funding and the cost may exceed $500,000, environmental review under Virginia Code §10.1-1188 may become applicable. Therefore, environmental analysis for this project was proposed and completed in general accordance with the state Environmental Impact Review (EIR) process.

This report presents the Environmental Analysis of the project was prepared and formatted in general accordance with the guidance provided in VDEQ's Procedure Manual for Environmental Impact Reviews of Major State Facilities dated July 2013. At the start of this project in January 2016, a larger, general project area was identified, on which this environmental analysis was completed (Figures 6 & 7). A preliminary concept plan was prepared for a subset area within the larger general project area previously identified for the project, and this concept plan was included, where appropriate, in the environmental evaluation.

To complete the Environmental Analysis, standard environmental records, tribal records, physical setting sources including topographic maps, geologic maps, soils maps, wetland and floodplain maps, and prior site reports were identified and reviewed. A site reconnaissance was conducted for a visual inspection of the site. The interior of buildings was not observed. Information was retrieved from a number of sources identified in Section 8.0. Regulatory agencies were contacted, as needed, to conduct a project review relative to environmental sources for inclusion in this EIR. Additional regulatory agency input may be received by the Virginia Department of Environmental Quality's (VDEQ) or elsewhere during subsequent submittals and reviews as part of the funding requirements. Where information was readily available within limited sources, consideration of existing environmental impacts, if any, from

on and off-site sources, such as petroleum releases, was also included in this review. However, the completed review of existing environmental impacts within the project area is limited and should not be construed a comprehensive effort which is typically achieved under a Phase I Environmental Site Assessment (ESA) process. A full account of the methodology, findings and documentation of the environmental analysis preformed for this project is provided as Appendix IV to this report. Selected excerpts to the full report are provided below.

Figure 6: Environmental Review Site Location Map

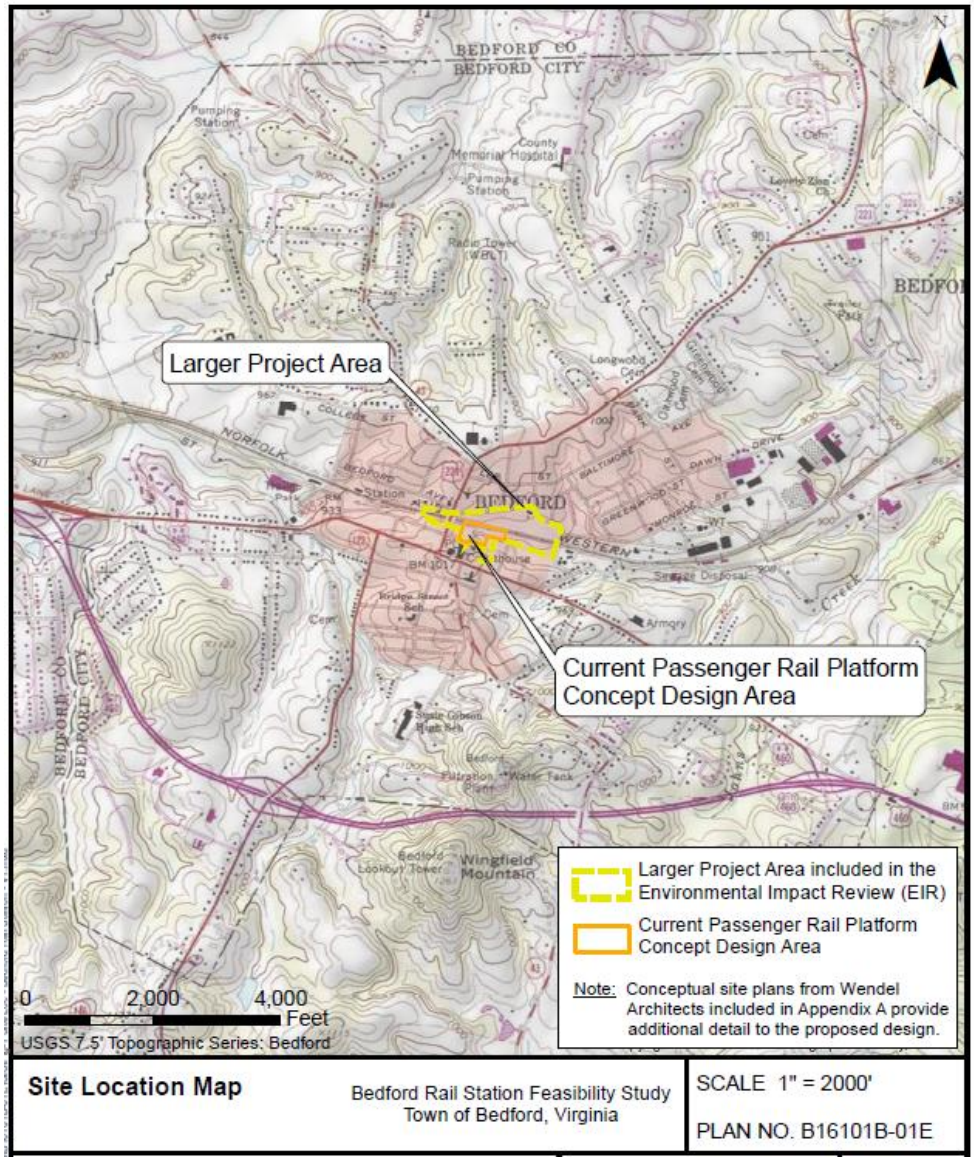
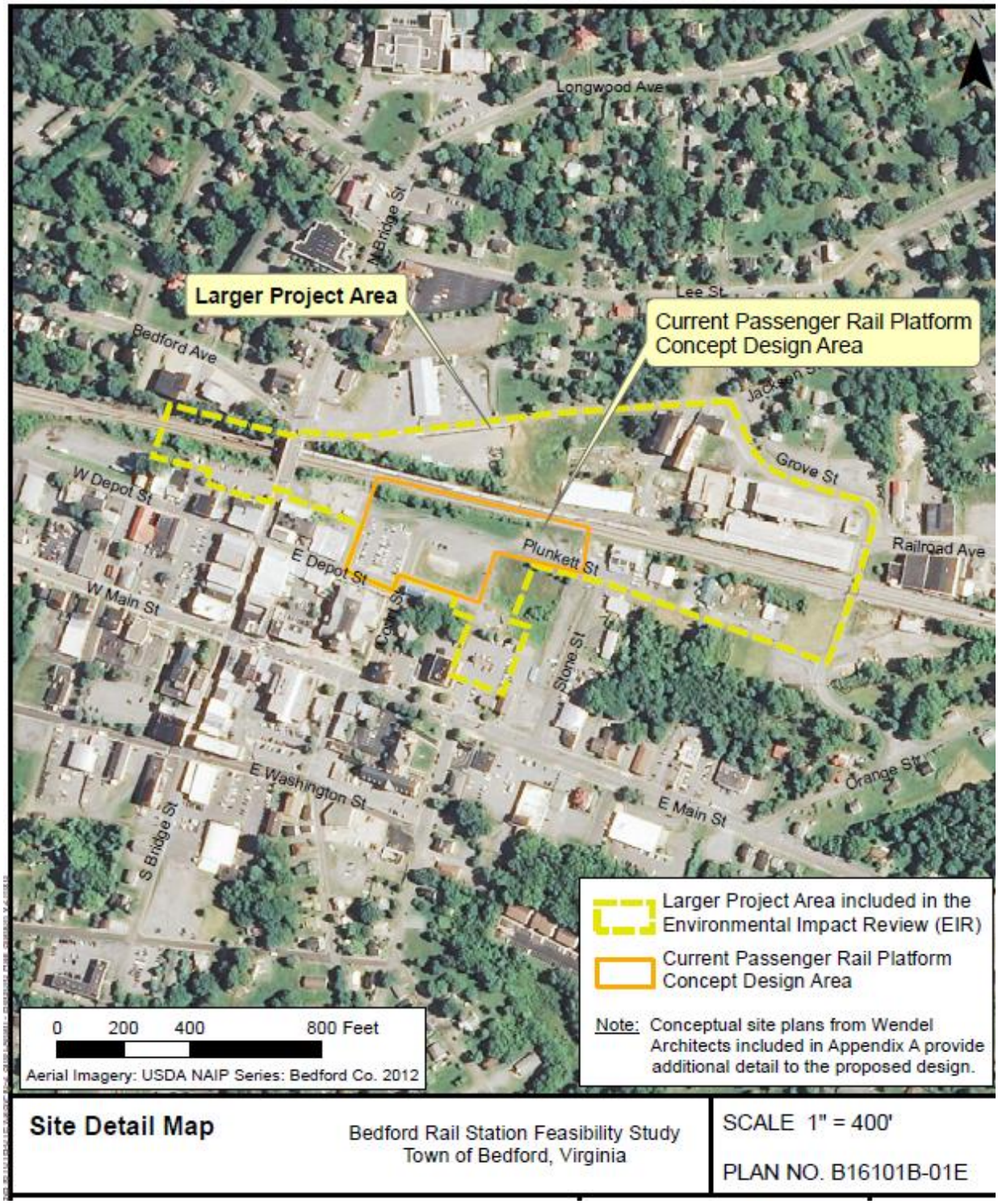


Figure 7: Environmental Review Site Detail Map



Site Description

The project site is located within the Town of Bedford in Bedford County, Virginia. The existing rail line runs approximately through the center of the larger project area. Figure 6, Site Location Map, identifies the site and vicinity. Figure 7 highlights the larger project area as well as the specific site within the larger project area identified at this time as the preferred, proposed location for the passenger rail station, on an aerial photograph from 2012.

The larger project site includes relatively steep gradients that slope downward towards the existing rail line primarily near Bridge Street. The gradient shallows to the east toward Grove Street, where the rail line crosses the road at grade. Along Plunkett Street, the rail line is only slightly topographically lower; however, topography slopes upward again from Plunkett Street to the south toward Main Street. The current preferred, proposed passenger rail station development area is south of the rail line along Plunkett Street near the County Courthouse as illustrated on the site conceptual drawings shown in a subsequent section of this report. However, all areas shown as potential sites in Figure 5 remain under consideration.

Currently, the area south of the N&S railroad, south of E. Depot Street and adjacent to Plunkett and Court Streets is the preferred and proposed development area under consideration. Current land uses within this area includes asphalt parking and open space areas. Topography in this area ranges from 978 to 952 feet above mean sea level.

Current Land Uses

The project site is located in a mixed use area of the Town of Bedford that includes a variety of residential, community, commercial, light industrial, transportation and recreational uses. The rail line passes through the approximate center of the larger general project area. West of Bridge Street is a small pocket park on the northern side and undeveloped property covered with vegetative overgrowth and a parking lot on the southern side. To the north of the rail line are open spaces including parking and a community garden along Jackson Street. Further east along Jackson Street and bounded by Grove Street is a former industrial complex that is currently vacant with the exception of some residential revitalization in one of the buildings. A cemetery is also located adjacent to the industrial complex along Jackson Street. To the south of the rail line are a mix of private commercial/light industrial developments until passing Stone Street at which point the project area is primarily undeveloped open space or parking. An electrical substation is located on the southern side of the rail line adjacent to Bridge Street to the west and is excluded from the potential development area. Light industrial and commercial buildings are located within the project area on the eastern side of the site, north and south of the rail line. A portion of the industrial buildings on the northeastern side has

been converted into residential loft space. These buildings are privately owned and no demolition or renovation to these buildings is planned or anticipated. Demolition of existing parking areas and sidewalks are planned, which may require relocation of existing fire hydrants, street lights, stormwater drainage and other subsurface and aboveground utilities and structures.

Utilities currently available to the site include electric, water, sewer, and communications. Natural gas is not available. Stormwater runoff currently flows into existing inlets and piped system along the south side of Plunkett Street and ultimately discharges to Johns Creek. A map of existing utility lines at and near the site is included in Appendix B of the full environmental report.

The Town of Bedford recently passed a resolution that would allow the rail station to fit within the Comprehensive Plan. Current zoning within the Town-owned properties and the area of the current concept plan is B1 Limited Business. Portions of the privately owned properties in the eastern portion of the site are zoned CNW Central Neighborhood Work or CLI Commercial/Light Industrial and include current and former commercial and light industrial properties. Rail facilities are not currently mentioned as allowable permitted or conditional use and may require special permitting. However, the project site is located in an urban area of the Town of Bedford and the planned future use appears consistent with current surrounding property uses. Representative photographs of the site and vicinity are included in Appendix A of the full environmental report.

Summary of Potential Impacts

As noted previously, a full account of the methodology, findings and documentation of the environmental analysis preformed for this project is provided as an Appendix to this report. In the full report, the various sections describe and analyze direct, indirect, and cumulative effects on environmental resources (identified in the EIR Procedure Manual Section B.3) as a result of the preferred alternative. Additional resources were identified beyond those listed in the EIR Procedure Manual and are included in the report. Specific resource information was obtained through published documents, database research, visual observations made during a site reconnaissance conducted on February 8, 2016, and correspondence with regulatory agencies relative to the site and surrounding areas. Environmental resource and agency correspondence documentation is included in Appendix C to the full report, where available, or is referenced within the EIR (Appendix IV, Section 7.0).

Each of the sections of the full report identifies resources, if present and evaluates the potential effect on those resources as a result of the proposed action. **For this evaluation, all**

areas of the larger project area were considered for future development. Where the effect of the proposed action is different depending on the area of planned development within the overall project area, it is noted. Otherwise, a statement of effect or no effect anticipated applies to the entire project area.

Table 8 outlines the anticipated effects of the proposed action on resources identified and reviewed as part of this project.

Table 8: Summary of Potential Impacts

Affected Environment	Effect Direct, Indirect, or Cumulative	Type Beneficial or Adverse	Area Site-Specific, Local, or Regional	Duration Short-Term or Long-Term	Intensity Negligible, Low, Moderate, or High
Threatened and Endangered Species	*No Effect Anticipated*				
Species of Concern	*No Effect Anticipated*				
Terrestrial Wildlife of Bird Habitat	*No Effect Anticipated*				
Unique or Important Terrestrial Vegetation	*No Effect Anticipated*				
Aquatic Life and Water Quality*	*No Effect Anticipated based on Current Information*				
Anadromous Fish and Trout Streams	*No Effect Anticipated*				
Historic Structures (Effect Determination Pending)*	Direct	Pending	Local	Long-Term	Pending
Archaeological Resources (Effect Determination Pending)*	Pending	Pending	Site-Specific	Long-Term	Pending
Agricultural Land	*No Effect Anticipated*				
Forest Land	*No Effect Anticipated*				
Tidal and Non-Tidal Wetlands*	*No Effect Anticipated (Based on Current Concept Plans).* Additional evaluation and potential delineation required if development occurs on the north side of the rail line (see Section 3.10), potential adverse effect if wetlands/Waters of the US features are confirmed and development is planned in those areas.				
Streams, Rivers, Lakes, and Ponds	*No Effect Anticipated*				
Public Water Supplies	*No Effect Anticipated*				
Chesapeake Bay Resource Protection	n/a				
Virginia Coastal Resource Management	n/a				
100-Year Flood Plain	*No Effect Anticipated*				
Groundwater	*No Effect Anticipated*				
Parks and Recreational Areas*	*No Effect Anticipated (Based on Current Concept Plans);* Potential Effect as listed below if development occurs elsewhere (see Section 3.17).				
	Direct	Adverse	Site-Specific	Long-Term	Low to Moderate
Natural Areas	*No Effect Anticipated*				

Table 8: Summary of Potential Impacts (Continued)

Affected Environment	Effect	Type	Area	Duration	Intensity
	Direct, Indirect, or Cumulative	Beneficial or Adverse	Site-Specific, Local, or Regional	Short-Term or Long-Term	Negligible, Low, Moderate, or High
Scenic Resources	*No Effect Anticipated*				
Air Quality (Construction)*	Direct	Adverse	Site-specific, Local	Short-term	Low
Air Quality (Proposed Action)	*No Effect Anticipated*				
Indoor Air Quality	*No Effect Anticipated*				
Geology and Mineral Resources	*No Effect Anticipated*				
Transportation (Construction)*	Direct	Adverse	Site-Specific	Short-Term	Low
Transportation (Proposed Action)	Indirect, Cumulative	Beneficial	Local, Regional	Long-Term	Low to Moderate
Utilities (Upgrades and Relocations)	Direct	Beneficial	Site-Specific	Long-Term	Low
Noise (Construction)*	Direct	Adverse	Site-Specific	Short-Term	Negligible
Noise (Proposed Action)	Direct	Adverse	Local	Long-Term	Long-Term
Socioeconomics	Indirect	Beneficial	Local, Regional	Long-Term	Low to Moderate
Environmental Management*	*No Effect Anticipated*				
Geology and Mineral Resources	*No Effect Anticipated*				

*Mitigation recommended in support of effect determination (See Section 5.0).

Overall, the long term results of the project are considered beneficial to the community. No significant adverse effects to environmental resources were identified, pending information from VDHR. The proposed project will have negligible effect to the cumulative effect of continued urban development in the area.

Short-term impacts related to construction will be low to moderate in nature. Long-term effects from operation include increased noise and a potential increase in local vehicular traffic. The effect on local traffic is countered by a regional benefit to transportation thoroughfares from the inclusion of this rail station connecting the Town of Bedford with the Cities of Lynchburg and Roanoke.

Potential sources of impact to the site from existing/historical commercial/industrial operations may exist in the vicinity of the proposed action. Additionally, potential on-site sources of impact exist, primarily related to former and current rail operations and long term urban development in the area. Special handling of material may be required at the time of design and construction, if impact is identified.

VDHR's project review of the proposed action is pending. Based on verbal communication with VDHR from February 11 and 12 and subsequent to the project review request submittal, it is possible that an effect determination from VDHR may require additional site evaluation including potential archaeological survey of portions of the project area and/or special consideration of architectural resources in and near the project area. However, mitigation options currently exist related to the proposed action and it is unlikely that the effect to historic resources will significantly affect the proposed action. Mitigation may require

specific design considerations or restrict ground disturbance in certain areas. Additional coordination with VDHR will likely be required during the design process.

Once the project progresses, if any material is unearthed during site grading or excavating that could potentially be of archaeological significance, construction activities should cease and VDHR should be contacted for guidance. Information from VDHR, once received, will be provided as an addendum.

ECONOMIC IMPACT OF THE PROPOSED BEDFORD STATION

An analysis of the Economic Impact of Bedford Station was prepared by Chmura Economics and Analytics – a member of the Wendel Team. Their report is found in Appendix V of this report.

An important consideration in evaluating the feasibility of establishing a Bedford Amtrak Station is whether there is a business case for the project. Making the business case includes an assessment of the improvements that the project will make to the mobility of people in the region. This has been identified in the patronage analysis discussed in a previous section of the report. The business case also includes and assessment of the economic impacts of the project. As part of the Wendel team, Chmura Economics & Analytics (Chmura) was contracted to perform an economic impact analysis of Bedford station for the Bedford region. The study region is defined as the counties of Bedford and Franklin.

The economic impact of Bedford station can be realized in two phases: (1) initial capital investment, which provides a one-time impact during the construction period, and (2) Bedford station operations, which includes the operations of Amtrak, potential intercity bus and regional bus service, and taxi service after the project is completed. For both phases, the direct, indirect, and induced impacts in spending and job creation are estimated.

The direct impact is defined as the primary economic activity generated by the project under consideration. The indirect impact is the secondary economic activity generated by the project via demand for products from suppliers. An example of indirect impact is a construction company purchasing construction materials. The induced impact is economic activity generated when construction workers spend their income as consumers (such as at retail, restaurants, and doctor's offices) in the region. Chmura used the IMPLAN Pro® model[1] to simulate the economic impact of this project. Outside the economic impact of the initial

[1] IMPLAN Professional was created in the 1970s by the Forestry Service and is widely used by economists to estimate the impact of specific events on regional economies. It is now owned by Minnesota IMPLAN Group.

investment and Bedford station operations, Chmura estimated the benefits of the project for future users of the station. In addition, tax revenue from the project was estimated.

Economic Benefit of Initial Investment

The total capital cost for Bedford station is estimated to be $2.0 million, which will be used to construct and improve the station and surrounding areas. Construction is expected to start in March 2018 and be completed in October 2018. The first full year of station operation is expected to be in 2019.[2]

Table 9 presents the estimated one-time economic impact from the initial investment in Bedford station. In 2018, initial investment activities will generate a total economic impact (including direct, indirect, and induced impacts) of $2.8 million that can support 21 jobs in the Bedford region. Among the total economic impact, $2.0 million is derived from direct spending of the initial investment in Bedford station. This spending can directly support 14 jobs in the region in 2018. The indirect impact in the region during the development phase is estimated to be $0.5 million and 6 jobs from other industries supporting the initial investment, such as equipment rental or truck transportation. The induced impact during the development phase is expected to be $0.3 million, which can support two jobs—these jobs are expected to be concentrated in consumer service-related industries such as restaurants, hospitals, and retail stores.

Table 9: One-time Economic Impact from Bedford Station Initial Investment

	Direct	Indirect	Induced	Total
Spending (Millions)	$2.0	$0.5	$0.3	$2.8
Employment	14	6	2	21

Note: Numbers may not sum due to rounding
Source: IMPLAN Pro 2014

Economic Impact of Bedford Station Ongoing Operations

This section focuses on the economic impact of Bedford station's ongoing operations. Located at Bedford station will be the Amtrak passenger rail service, potential intercity bus service, and taxi service.[3]

Wendel conducted an Amtrak ridership forecast (for both departures and arrivals) at Bedford station. Total rail customers would reach an estimated 32,000 per year. Among those, 27,000 will travel from Bedford to destinations south of Washington, and 5,000 will travel to and

[2] Wendel assumes that the impact of a full year in operation is in 2019
[3] This station is not anticipated to have retail and food services.

through Washington to further destinations. Based on current sample prices from Lynchburg's Amtrak station, the average one-way ticket is assumed to cost $61.6 in 2016.[4]
It is anticipated that Bedford station will also host a regional bus stop and may host an intercity bus stop, which provides daily intercity bus service from Bedford to cities around the region and state. Currently, the closest intercity bus services to Bedford are the Greyhound stations in Roanoke and Lynchburg.[5] Assuming an intercity bus service similar to Greyhound is established at Bedford station, Chmura estimates that total passengers (departures and arrivals) for the intercity bus service will be 9,472 per year. The average ticket price per bus trip would be $27.30 in 2016.[6] For taxi service at Bedford station, it is assumed that 15% of rail and bus passengers will need a taxi, with an average fare of $5 in 2016.[7]

The total annual operational impact (direct, indirect, and induced impacts) of Bedford station is estimated to be $3.4 million in 2019, which can support 9 jobs in the Bedford region.[8] Among those impacts, direct revenue from the Amtrak operation, intercity bus service, and taxi service at the station are estimated to be $2.4 million, which can support 6 jobs. The indirect impact is estimated to be $0.7 million and 2 jobs, benefiting other businesses within the region that support rail, bus, and taxi service. The induced impact is estimated to be $0.3 million and 1 job in the region, mostly benefiting consumer-related businesses such as retail shops, healthcare facilities, and restaurants. The total annual economic impact of ongoing operations of Bedford station is summarized in Table 10.

Table 10: Annual Economic Impact of Bedford Station Operation (2019)

		Direct	Indirect	Induced	Total Impact
Amtrak Operation	Spending ($Million)	$2.1	$0.5	$0.3	$2.9
	Employment	3	2	1	6
Bus Operation	Spending ($Million)	$0.3	$0.2	$0.0	$0.4
	Employment	2	0	0	2
Taxi	Spending ($Million)	$0.0	$0.0	$0.0	$0.0
	Employment	1	0	0	1
Total	**Spending ($Million)**	**$2.4**	**$0.7**	**$0.3**	**$3.4**
	Employment	**6**	**2**	**1**	**9**

Note: Numbers may not sum due to rounding
Source: IMPLAN Pro 2014

[4] Chmura researched February 2016 ticket prices from Lynchburg to Washington and New York.
[5] The operational details of an intercity bus stop are not available. Currently, there is no intercity bus service in Bedford. Chmura uses assumptions from similar stations in other cities such as Roanoke to estimate the passenger volume.
[6] This is estimated based on a similar station in Roanoke. Chmura also researched February 2016 Greyhound bus ticket prices from Lynchburg to cities including Richmond and Washington, D.C. Greyhound is the only intercity bus service in the Roanoke/Lynchburg area.
[7] Source: This is estimated based on data for similar stations in other cities such as Roanoke.
[8] In this report, estimated jobs include both full-time and part-time. It does not include full-time-equivalent (FTE) jobs.

Bedford Station User Benefits

Outside the economic impact of operations, Bedford station can also provide other ongoing benefits for users of the station. Individuals impacted by Bedford station will be passengers of both Amtrak and the intercity bus service.

There are three broad user benefits estimated in this study. The first benefit is travel time savings from congestion mitigation. Though using a bus or rail service may increase travel time for passengers, it reduces the number of vehicles on area roads, providing traffic congestion relief for many drivers. The second benefit is motor vehicle-related cost savings. Individuals traveling by rail or bus will reduce their usage of vehicles, thus saving money on operational costs. The third benefit is safety. Fewer vehicles on the road can reduce both accidents and accident-related injuries. The safety benefit also reduces inconveniences and costs involved with both minor and major car accidents. Though not quantified in this study, the resulting decrease in automobile usage can help reduce greenhouse gas emissions, resulting in environmental benefits.

The estimated benefit for Bedford station users will depend on reduced vehicle miles travelled (VMT) as users shift from using automobiles to buses or trains. Travel time savings, vehicle operation cost reduction, and safety benefits are all based on reduced VMT.[9] Based on the average trip length and number of rail and bus passengers, it is estimated that Bedford station can reduce VMT by an estimated 9.4 million miles per year in 2019. The majority of VMT reduction comes from Amtrak operations, and the rest comes from the intercity bus service.

Bedford station is expected to divert traffic from highways and streets. Less traffic will reduce congestion of regional roadways, thus providing travel time savings for motorists. The cost of traffic congestion is assumed to be 6.9 cents per VMT in 2019.[10] Applying this to total diverted vehicle miles, the annual benefit of travel time savings is estimated to be $0.6 million in 2019 (Table 11).

[9] Chmura uses the same methodology as in the 2013 study: Benefit/Cost Analysis of Main Street Station Multimodal Transportation Center, prepared by Chmura Economics & Analytics, December 2013.
[10] Inflated from the 2007 value, which can be found in the following documentation: Corporate Average Fuel Economy for Model Year (MY) 2012-MY 2016 Passenger Cars and Light Trucks. US Department of Transportation, National Highway Traffic Safety Administration, August 2009.

Table 11: Estimated Annual User Benefits ($Million 2019)

Value of Travel Time Saving	$0.6
Vehicle Operation Cost Saving	$3.6
Safety Benefit	$0.3
Total	**$4.5**

Source: Chmura Economics & Analytics

Vehicle operation cost is reduced as travelers switch from cars to buses and trains. Those individuals incur additional costs to purchase bus or train tickets. As a result, bus or train ticket costs need to be excluded from the benefit of the project. The annual cost of vehicle operation is assumed to be 58 cents per VMT in 2015.[11] This figure includes fuel, maintenance, and repair costs. Total diverted vehicle miles are estimated to be 9.4 million per year. In 2016, the average bus fare from Bedford to various locations is assumed to be $27.30 per trip, while the average train ticket from Bedford to locations such as Washington, D.C. and beyond is assumed to be $61.6 per trip. These numbers are inflated to 2019 values using the consumer price index before being subtracted from vehicle operation cost savings. As a result, the net benefit of vehicle cost savings is estimated to be $3.6 million in 2019.

Bedford station is expected to divert traffic from highways and streets. Less traffic will reduce the probability of crashes as well as property damage and injury costs associated with car accidents. In 2019, the cost of a car accident is assumed to be 3 cents per vehicle mile traveled.[12] The annual safety benefits are estimated to be $0.3 million in 2019.
In summary, total user benefits are estimated to be $4.5 million per year in 2019 dollars for users of Bedford station.

Fiscal Impact for State and Local Governments

Both the initial development activities and ongoing operation of Bedford station will generate tax revenue for local and state governments. In order to be conservative, only tax revenue from the direct impact was estimated.[13]

During the initial development phase (2016 to 2017), local governments in Virginia can typically collect business, professional, and occupational license (BPOL) tax. Since neither

[11] The latest estimate from AAA indicated driving cost per mile was 58 cents in 2015. Source: http://exchange.aaa.com/wp-content/uploads/2015/04/Your-Driving-Costs-2015.pdf
[12] This is inflated from the 2007 value, which can be found in the following documentation: Corporate Average Fuel Economy for Model Year (MY) 2012-MY 2016 Passenger Cars and Light Trucks. US Department of Transportation, National Highway Traffic Safety Administration, August 2009.
[13] This approach is recommended by Burchell and Listokin in The Fiscal Impact Handbook.

Bedford County nor Franklin County requires BPOL tax, the estimated local tax revenue is zero. The state government is expected to receive $19,859 in individual income tax and $5,347 in corporate income tax from the initial development activities of the project. To arrive at those figures, Chmura first used the IMPLAN Pro model to assess the percentages of total initial investment allocated to both labor cost and profit. Chmura then applied those percentages to the direct initial investment before applying an individual income tax rate of 5% and a corporate income tax rate of 6%.[14]

Table 12: Tax Revenue from Bedford Station

		Local Governments	State Government
Initial Investment (2018)	Individual Income Tax		$19,859
	Corporate Income Tax		$5,347
	Total	**$0**	**$25,206**
Ongoing Operations (2019⇨)	Individual Income Tax		$20,924
	Corporate Income Tax		$17
	Total	**$0**	**$20,940**

Note: Numbers may not sum due to rounding
Source: Chmura Economics & Analytics

For ongoing operation, since the station will not have retail or food services, local governments will not collect any sales or meals tax from the operation. BPOL tax is irrelevant as well because Bedford County does not have this tax. The state government can benefit from individual and corporate income taxes from the ongoing operation of Bedford station. The state individual and corporate income tax revenues are estimated to be $20,924 and $17 (from bus and taxi services),[15] respectively, in 2019.

CONCEPTUAL PLANS FOR THE BEDFORD STATION

As described previously in this report, the Wendel team used a document prepared and published by Amtrak entitled **"Amtrak Station Program and Planning Guidelines"** to determine the appropriate size and features for the Bedford Station. These guidelines establish design standards and criteria for stations platforms and the station site, program requirements, station features and amenities, station finishes and architectural design. The Wendel team reviewed this document with the project sponsors and then jointly developed a specific program for the Bedford Station. It is proposed that Bedford Station should be advanced in

[14] Source: Virginia Tax Department.
[15] Recent financial statements for Amtrak show that its operational expense is greater than its operational revenue. As a result, Amtrak's corporate income tax obligation is zero.

two phases. Phase 1 would produce a safe, functional and attractive station and if the station proves to be successful and warrant additional improvements, Phase 2 would add a station building, additional bus access and additional parking. The phased approach is proposed to hold down the cost for establishing Bedford Station and getting it operational. It is expected that the success of the station once it is opened will generate enthusiasm to advancing the station to the second phase. All conceptual design components are in accordance with Amtrak's guidelines for a Category 3 or Caretaker Station.

Phase 1

In the first phase of the project, it is proposed to construct the rail passenger platform, vehicle and pedestrian access, and to improve an existing parking area. Figure 8 shows a conceptual site plan for Phase 1 of Bedford Station. Conceptual renderings of the station and facilities in Phase 1 are shown in Figures 10, and 11.

The platform will be 450 feet long and 14 feet wide. This is 25 feet longer than the minimum recommended by Amtrak and 2 feet wider. The additional length allows for easier positioning of a six car train when it stops at the platform. The additional width is required to maintain a minimum 6 foot clearance from the edge of the platform to any obstruction. The surface of the platform will be constructed 48 inches above the top of the rail to allow level boarding. Canopies will be constructed on the platform to offer shelter to waiting rail passengers. In addition, wind screens and benches will be provided on the platform. Seating will be available for 36 passengers on the platform. An Amtrak Quick-Trak ticketing machine will be provided on the platform. The platform also will have lighting and trash and recycling receptacles.

Pedestrian access will be provided via a paved area between the vehicle drop off area and the platform. Landscaping will be provided throughout the site. Bicycle racks will be provided in the paved area as well as Amtrak signage.

An eight space vehicle drop off area will be provided in front of the station just off of Plunkett Street and separated from the street by a median. A bus bay will be provided at the east end of the station as a pull off area from Plunkett Street heading westbound.

In phase 1 a parking area will be improved in the area bordered by Plunkett Street, Court Street and East Depot Street. The parking area will be accessed from Plunkett Street and will contain 50 parking spaces.

A conceptual level cost estimate was prepared for constructing phase 1 of the project at the preferred site and as shown in the conceptual drawings. The estimate was developed using current wage rates and materials costs for the Bedford area. The estimate includes general

conditions costs, a construction manager fee, escalation over an 18 month construction period and a design contingency of 25%. A summary of the estimate is shown below in Table 13. A full detailed estimate is provided in Appendix VI. The estimate indicates that phase 1 of Bedford Station could be constructed and equipment provided for the facility for approximately $1.5 million. If the preferred site proves to be unacceptable to Norfolk Southern and another site is selected, additional site improvements may be required. We expect that phase 1 of the Bedford Station project could be constructed at other prospective sites that have been identified for under $2.0 million.

Table 13: Conceptual Level Construction Estimate for Phase 1

	Division	Total Material	Total Labor	Total Cost	Building $/GSF	% of Total
01	GENERAL REQUIREMENTS	$ -	$ 4,807	$ 4,807	$ 0.0984	
02	EXISTING CONDITIONS	$ -	$ 30,000	$ 30,000	$ 0.6141	
03	CONCRETE	$ 19,070	$ 10,952	$ 30,023	$ 0.6146	
05	METALS	$ 126,687	$ 9,888	$ 136,575	$ 2.7956	
10	SPECIALTIES	$ 107,880	$ 201,870	$ 309,750	$ 6.3404	
11	EQUIPMENT	$ 2,250	$ 1,230	$ 3,480	$ 0.0712	
12	FURNISHINGS	$ 12,080	$ 34	$ 12,114	$ 0.2480	
26	ELECTRICAL	$ -	$ 100,000	$ 100,000	$ 2.0470	
31	EARTHWORK	$ 48,987	$ 57,601	$ 106,588	$ 2.1818	
32	EXTERIOR IMPROVEMENTS	$ 176,989	$ 152,421	$ 329,410	$ 6.7429	
	ARCHITECTURAL TOTALS:	$ 493,944	$ 568,804	**$ 1,062,747**	$ 21.75	70.8%
	GENERAL CONDITIONS (CM)	3%		$ 31,882	$ 0.65	2.1%
			Subtotal:	$ 1,094,630	$ 22.41	72.9%
	CONSTRUCTION MANAGER FEE	5%		$ 54,731.49	$ 1.12	3.6%
			Subtotal:	$ 1,149,361	$ 23.53	76.5%
	ESCALATION	4.54%		$ 52,135	$ 1.07	3.5%
			Subtotal:	$ 1,201,496	$ 24.59	80.0%
	DESIGN CONTINGENCY	25%		$ 300,374	$ 6.15	20.0%
	Project Gross Square Feet (GSF)	48,853				
			TOTAL:	**$ 1,501,870**	**$ 30.74**	**100.0%**

Phase 2

If Bedford station is successful and ridership warrants additional improvements to the station, a second phase of construction is envisioned. In the second phase of the project, it is proposed to construct a rail station building, add a second bus bay and construct additional

parking. Figure 9 shows a conceptual site plan for Phase 2 of Bedford Station. Conceptual renderings of the station and facilities in Phase 2 are shown in Figures 12, 13, 14 and 15.

The building constructed in phase two would be climate controlled and include a waiting area, restrooms, drinking fountains, storage areas, and an area to relocate the Amtrak Quick-Trak ticketing machine. The actual size and floor plan for the building will be developed during the architectural and engineering design for Phase 2. The building shown in the conceptual drawings for Phase 2 is drawn to a scale of approximately 2,400 square feet – more than enough to meet the program requirements as currently envisioned.

Phase 2 includes the construction of a second bus bay which will be located as a pull off from Plunkett Street heading eastbound. This will allow more transit access to the station when the trains arrive and depart and will support regional buses.

Phase 2 also includes an expansion of parking at the station. Two options for parking expansion are shown in the conceptual site plan. A second surface parking lot is shown east of Court Street at the corner with Plunkett Street. Access to this parking area would be from Plunkett Street. The parking area would include a passenger drop off area and 28 additional parking spaces.

If additional parking is needed beyond the second surface lot, the Phase 2 conceptual plans show that the 50 space surface lot in Phase 1 could be converted to a parking deck with 100 spaces. Access to the lower level of parking would be from Plunkett Street and access to the upper level of parking would be from East Depot Street.

A conceptual level cost estimate was not prepared for the improvements for Phase 2. All of the elements shown in the conceptual drawings for Phase 2 are optional. However the construction of a station building is called for in Amtrak's Station Program and Planning Guidelines for a Level 3 station and it is strongly recommended for Bedford. This will provide an attractive, convenient and comfortable place for Amtrak passengers to wait for trains and will create a more significant sense of place for Bedford Station.

Figure 8: Bedford Station Conceptual Site Plan - Phase 1

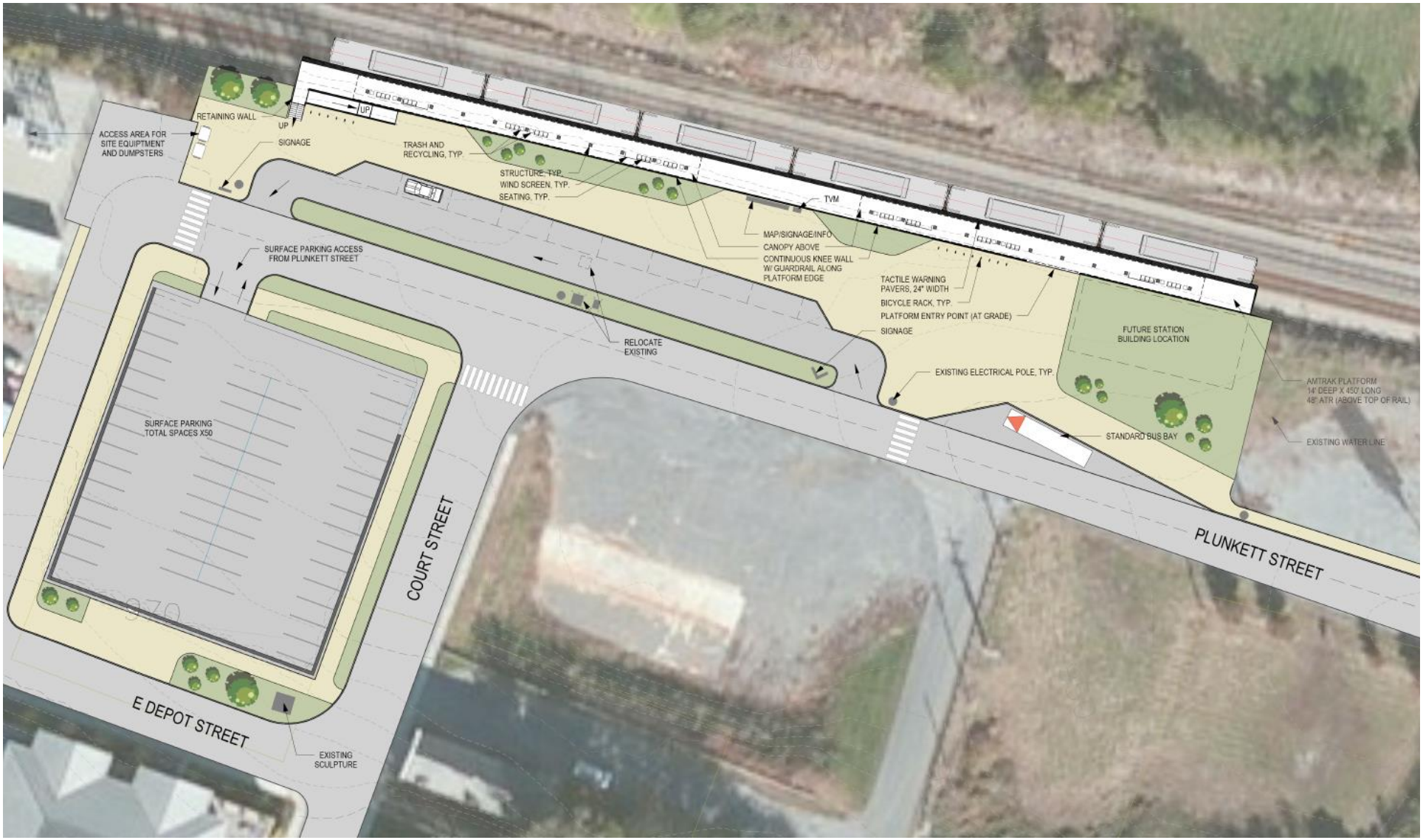


Figure 9: Bedford Station Conceptual Site Plan - Phase 2

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Figure 10: Bedford Station Conceptual Image - Phase 1 Aerial View

Figure 11: Bedford Station Conceptual Image - Phase 1 Approach to the Platform from the West

Figure 12: Bedford Station Conceptual Image - Phase 2 Aerial View

Figure 13: Bedford Station Conceptual Image - Phase 2 Approach to the Station from the West

Figure 14: Bedford Station Conceptual Image - Phase 2 Approach to the Station from the East

Figure 15: Bedford Station Conceptual Image - Phase 2 Platform View