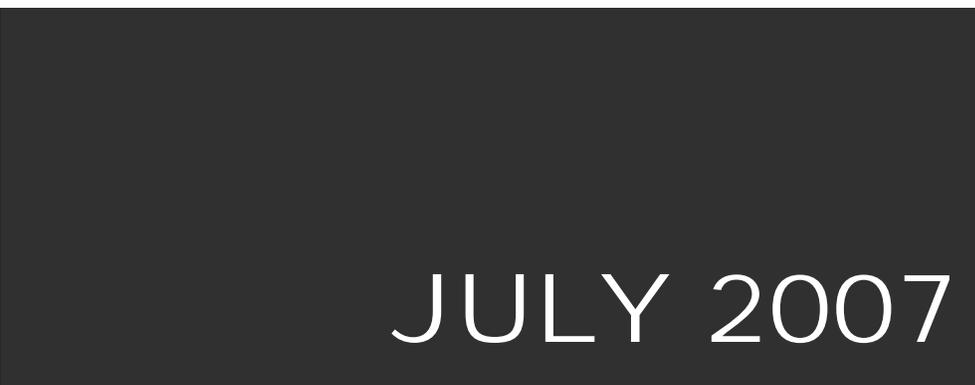


Isle of Wight Intermodal Park Concept



Final Report

1 Executive Summary

Isle of Wight County is seeking to develop an intermodal park on three sites they identified totaling 2,748 acres known as;

- Shirley T. Holland
- Norfolk Southern
- International Paper

While the U.S. continues to see manufacturing outsourced overseas, there has been significant growth in the need for distribution and logistics services. Driven substantially by the growth of imports coming back into the U.S., Isle of Wight views this as an opportunity. Working with the support of The Virginia Port Authority Isle of Wight requested an analysis of the intermodal park opportunity relative to the three properties it identified.

1.1 Issue

Isle of Wight will be making a substantial investment in land, infrastructure and economic development costs as they develop an intermodal park. Currently they own and are developing the Shirley T. Holland property. The other two properties are owned by others and are considered raw land requiring additional investment to become ready for development.

One of the two properties not owned by Isle of Wight is owned by Norfolk Southern. Norfolk Southern's willingness to sell the property will be tied to their desire to see an increase in cargo that is transported by rail on Norfolk Southern from the development of this property.

Prior to Isle of Wight making these investments they would like to further reduce their risk with more information and analysis regarding:

- Growth of intermodal parks
- The condition of the properties
- Property attributes
- Existing infrastructure and infrastructure needs
- Conceptual intermodal park layouts for the properties
- How an intermodal park might affect rail cargo and be an incentive for Norfolk Southern to sell their property to Isle of Wight
- The risks and constraints that Isle of Wight should be prepared for along with contingency plans

1.2 Background

The reality of growth in imports is that handling this freight one or more times is often required before it can get to the shelf and reach the consumer. This handling is performed at distribution centers and cross-docks. Big box retailers such as WalMart and companies employing supply chain management strategies started a trend and now companies seek to place these facilities closest to a port of entry or closest to the final customer. These facilities will often cluster together in intermodal parks to take advantage of favorable zoning already in place and shared infrastructure and amenities. Isle of Wight believes this adds to their opportunity as they are situated close to The Port of Virginia for handling imports and exports and close to regional consumers accessed via US Route 460. Isle of Wight's opportunity can be further enhanced by intermodal park customers extending their reach via rail to access customers.

The United States on the whole handled 42 million twenty foot equivalent units (TEU) in 2006. Global Insight and others are forecasting demand for port related cargo will grow to 160 million TEU by 2040.

There are ten major ports in the United States that handle more than 80% of the total volume. Many of these ports are all quickly reaching capacity and searching for ways to expand, increase efficiency leading to more capacity, and attract more business through their terminals.

As one of those ten, The Port of Virginia moved over two million TEU in 2006 making The Port of Virginia the second largest port on the East Coast. The standard measurement for the industry is the twenty foot equivalent unit known as a TEU. The most common size containers for international shipping are twenty and forty foot boxes. Thus a twenty foot box equals one TEU and a forty foot box equals two TEU.

By the year 2040, demand in Hampton Roads is predicted to exceed 10 million TEU. This 500% increase shown below is based on the straight line forecasted growth of water borne cargo handled in the United States and applied to the cargo moving through Hampton Roads.

Plans are in place for The Port of Virginia to handle this growth in demand. In 2007 APM Maersk will open a new 450 acre marine terminal that will have a capacity of 2.1 million TEU. VPA is in the design stage for the construction of a new 600 acre terminal at Craney Island with a capacity of at least 2.5 million TEU. The first phase of Craney Island is scheduled to open in 2017.

Previous studies that have addressed the growth of port related cargo estimate that 20 to 60 million square feet of additional distribution center space will be required in Virginia by 2030 to service the cargo moving through The Port of Virginia.

With the new terminal capacity, The Port of Virginia will have the capacity to handle the cargo at the docks. As will be explained in this report, Isle of Wight has the capability to build approximately 20 million square feet of distribution centers on the three properties being studied.

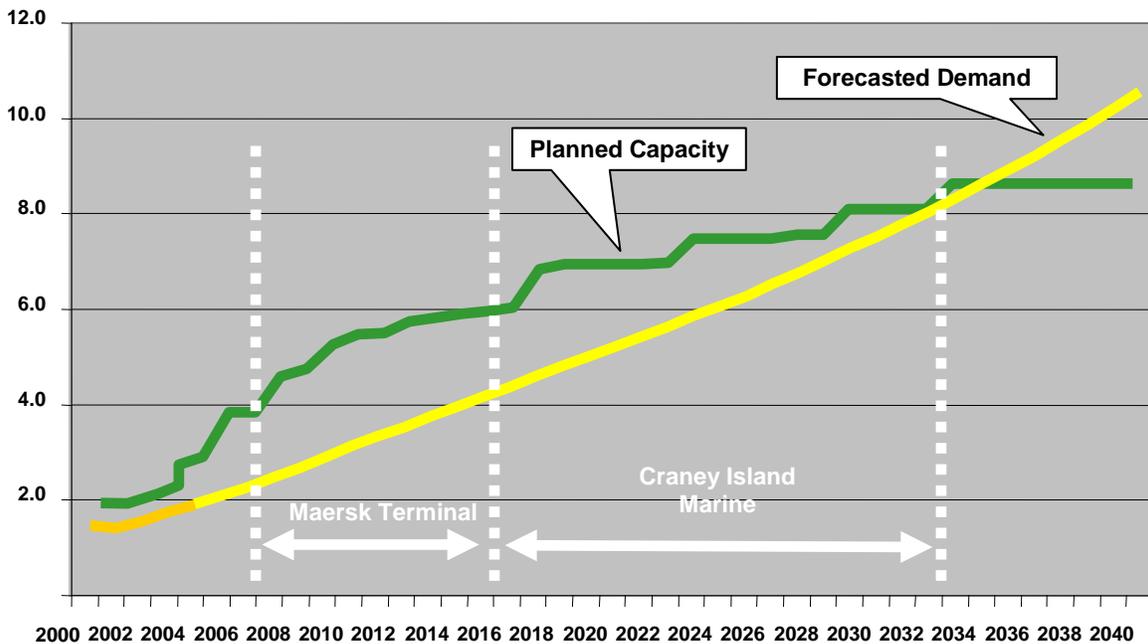


Figure 1 Hampton Roads Containerized Demand Forecast

In consideration of the background that has led to this opportunity and the issues faced by Isle of Wight, a well thought out was employed for this study.

1.3 Approach

Moffatt & Nichol utilized numerous sources, previous research and conducted thorough analysis to address Isle of Wight's opportunity.

Our approach covered the following for this study:

- A breakdown of each property and its attributes
- The existing infrastructure and needs for each property including;
 - Roads
 - Utilities
 - Wetlands
- Conditions that can be viewed as constraints such as;
 - Chesapeake Preservation Act
 - Planned improvements not under Isle of Wight's control (US Route 460)
- Conceptual layouts of four different scenarios that considered:
 - Isle of Wight is able to acquire all three properties, US Route 460 is improved and the intermodal park gets rail access.
 - What would change if US Route 460 is not improved
 - What would change if the intermodal park does not get rail access
 - What an intermodal park would look like without the Norfolk Southern property
- The development of a rail cargo analysis and changes to rail cargo resulting from the development of an intermodal park
- Identification of key risks and constraints and contingency actions that should be considered to address risks
- Conclusions on the intermodal park opportunity in Isle of Wight

1.4 Findings

The findings arrived at during the course of this study are presented below:

The Properties Identified

The three properties identified by Isle of Wight are suitable for development of an intermodal park. These properties total 2,748 acres. When wetlands, Chesapeake Bay Preservation Act along with other factors are considered, 2,200 acres can be developed into an intermodal park.

The Shirley T. Holland property is about 440 acres. This property is being developed and has experienced significant distribution center activity.

The Norfolk Southern property is about 1,740 acres provides adjacent boundaries with the Shirley T. Holland and International Paper properties. The Norfolk Southern property would provide access to the Norfolk Southern rail line.

The International Paper property is approximately 590 acres. The Norfolk Southern property is between International Paper and Shirley T. Holland. The International Paper property boundary provides access to US Route 258.

Topography

The topography of all three properties ranges between gently rolling and generally flat making them conducive to development.

Easements

There is an easement for high voltage transmission lines that traverse the Norfolk Southern property. This easement does not allow structures to be developed on it. Roads may cross through this easement. The Chesapeake Bay Preservation Act limits the property by requiring that impervious acreage for pavement and facilities is capped at 60% of the net acreage after wetlands and drainage pond acreage is deducted. Columbia Natural Gas has an easement for a 12" high pressure transmission line that runs through all three properties. Construction is not allowed on the Columbia Gas easement. All other easements for telephone lines, wastewater and water do not seriously impact the property. These easements must be respected but do not preclude developing the majority of these properties.

Wetlands

Wetlands information indicates; Shirley T. Holland has addressed wetlands during the course of its development. Norfolk Southern has an area of wetlands that are predominately concentrated in one area that would allow for development of about 80% of the property. The International Paper property has very little wetlands.

Roads and Transportation

There are existing roads around and through the properties that form the basis for developing good traffic patterns and flows for an intermodal park. The capacity of the proposed US Route 460 improvements would provide many times the estimated volume of vehicles that an intermodal park would generate. When these volumes are coupled with the Virginia Department of Transportation (VDOT) estimates of other traffic that would utilize the new US Route 460 over the next twenty years less than 50% of the routes capacity would be consumed.

Utilities

Utilities are available at Shirley T. Holland. Electricity, wastewater and communications are available in sufficient quantities to fully develop all three properties. Water and natural gas would not have sufficient capacity in the current condition. Solutions for water sources and natural gas do present themselves and are not considered showstoppers.

Concept Site Plans

Four concepts were developed for an intermodal park that considered the properties identified by Isle of Wight and several variables. The optimal scenario looked at developing all three parcels, including an intermodal container transfer facility (ICTF) and accounting for the planned improvements for US Route 460. This concept generates the highest opportunity resulting in the construction of 20 million square feet of distribution of facilities, an ICTF capable of providing up to 900,000 rail lifts and all of the highway capacity that would be needed for an intermodal park of this size.

Other concepts looked at intermodal park development considering the; absence of the planned US Route 460 improvements, an ICTF not being constructed and the Norfolk Southern property not being available for development.

Rail Cargo

The development of an intermodal park on these properties can mean substantially more rail business for Norfolk Southern. This would in turn support the construction of an ICTF on the Norfolk Southern property to provide intermodal rail access. As detailed in the body of this report, new rail business can accrue to Norfolk Southern from opportunities that would include;

- Export consolidation
- Transloading import shipments
- Tenants at the intermodal park that are new rail users

There may also be operational advantages for Norfolk Southern if an ICTF is constructed at an intermodal park in Isle of Wight.

Risks and Contingencies

Over the course of developing an intermodal park many events will occur that will need to be addressed. Those having the highest material affect on Isle of Wight's plans are discussed below:

The Norfolk Southern Property

The outcome of Isle of Wight's efforts to acquire the Norfolk Southern property has a major impact on what the development of this intermodal park will look like. The Norfolk Southern property represents over 60% of the net acreage that can be developed from the three identified properties.

The property is also located between the Shirley T. Holland and International Paper properties so it provides on-site access across all three properties.

The Norfolk Southern property is required to construct an ICTF with direct access to the Norfolk Southern rail line.

Highway Capacity

The new US Route 460 would provide an intermodal park in Isle of Wight plenty of capacity for the estimated volume of vehicles that would go to and from the intermodal park after it is fully developed. If the new US Route 460 is not constructed then there will be highway capacity constraints. Provided in more detail in the body of this report are considerations that should be given to accessing US Route 258 and improving or keeping available the ability to improve a 6.5 mile route south of the properties to access US Route 58.

1.5 Conclusions and Recommendations

There is sufficient evidence that continuing to pursue the development of an intermodal park is the right opportunity for Isle of Wight. While the opportunity is highest with all three properties, an interstate quality road and an ICTF, the estimated demand for distribution and logistics services would attract tenants in varying degrees to any of the concepts presented.

Isle of Wight should move forward when one considers:

- The forecasted need for 20 to 60 million square feet of distribution facilities in Virginia
- Isle of Wight's proposed location right in the path of the east-west corridors the freight travels along
- The size of the three properties identified can develop about 2,200 acres and 20 million square feet of space
- The condition of the properties would allow development to commence
- The existing road and utility infrastructure presents no show stoppers
- The availability of solutions for expanding infrastructure needs
- The advantages of an interstate quality route to and from these properties
- Access to rail
- The demand for rail services that can be generated
- The County's position on this opportunity and the resources they are willing to allocate to aggressively pursuing development of an intermodal park

Isle of Wight should continue to pursue intermodal park development as an opportunity. As pointed out above, and discussed in detail in the body of this report, there are no showstoppers and numerous positive attributes that would support this development as an opportunity.

Following is the detailed discussion on this opportunity and the body of this report.

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2 Introduction

The United States has seen dramatic growth in the movement of containerized cargo. Volumes have more than doubled over the last ten years. In 2006 the US moved 41.9 million twenty foot equivalent units (TEU) as reported by the American Association of Port Authorities (AAPA). As a direct result of rising imports from China, India, and other international locations, the Port of Virginia, as well as other US ports predict significant growth; expecting a 400% increase in cargo within the next 20 to 30 years. Forecasts from Global Insight and others predict that current US port capacity could be reached as early as 2010. The Port of Virginia, through improvements to existing marine terminals and two new terminals opening in phases between 2007 and 2032, will increase its capacity by more than 400%. Therefore, as many other ports do not have plans or the space to achieve similar capacity increases, The Port of Virginia is expected to meet or exceed the forecasted growth in demand for containerized cargo.

Marine terminal capacity provides only part of the distribution requirements for this cargo. It must still proceed efficiently to its final destination. Often times cargo arriving from overseas requires additional handling and storage before reaching the consumer. The anticipated rise in cargo will generate corresponding increases in demand for distribution space and supporting logistics services. In fact, previous studies are estimating that 20 to 60 million square feet of additional distribution space will be needed by 2030 to service the cargo moving through The Port of Virginia. Without additional distribution space, freight handling capacity would be reached, and could force cargo to shift to other port locations.

The trend that has developed is for these distribution centers to cluster together into intermodal parks taking advantage of shared infrastructure and other amenities. The preferred location for intermodal parks is in areas with good transportation access, affordable land and close proximity to the origin or destination of the freight they handle. Therefore common locations have been near ports and major population center such as; Chicago, Kansas City and Dallas. Through their development of Intermodal Parks, regions outside of Hampton Roads Virginia have seen broad economic benefits. Often, these Intermodal Parks evolve into logistics hubs providing freight related services and supply chain management for their regions. Regional benefits gained from logistics based economics can be seen in many areas including Eastern California's Inland Empire and the Virginia Inland Port located in Front Royal, Virginia. These benefits supersede employment from distribution activities as housing, retail and other businesses locate to these areas taking advantage of the growth.

Isle of Wight County has identified the distribution and logistics market as an opportunity that should be pursued aggressively. The successful development of distribution center activity in Isle of Wight will depend on a sound plan that identifies where to locate these facilities and how to develop infrastructure needs. The following report details and analyzes the broad steps needed to implement such a plan.

3 Overview

Isle of Wight County provides a desirable location to provide distribution center space and logistics services for the Hampton Roads region. It is in close proximity to marine terminals located in Norfolk, Portsmouth, and Newport News. Much of the port related cargo moves along an east-west corridor putting Isle of Wight directly in its path

Additionally, Isle of Wight could be part of the solution to avoid potential future capacity constraints referenced in the introduction with:

- The development of twenty million square feet of distribution center space,
- A rural setting allowing for a development of this size without being adjacent to large residential areas,
- Proximity to rail access allowing for intermodal services and
- Virginia Department of Transportation's plan, (recently passed by the legislature) to improve US Route 460 thus providing interstate quality transportation from Isle of Wight to or near the marine terminals.

Isle of Wight has already developed significant distribution center activity at the Shirley T. Holland industrial park. Additionally, the County has identified two adjacent parcels of land comprising some 2,300 acres, the Norfolk Southern and International Paper properties as potential acquisitions. Together these properties would allow the construction of a large Intermodal Park with potential to accommodate over 20 million square feet of distribution center space with direct access to Norfolk Southern rail.

In light of this opportunity, Isle of Wight has requested an analysis examining concepts for providing expanded distribution and logistics services across the above mentioned sites. Isle of Wight believes these parcels are well suited for the development of an Intermodal Park that will provide a regional location in which a variety of distribution centers will reside along with ancillary businesses concerned with the efficient movement of goods. Accordingly, this study includes an analysis of the Norfolk Southern and International paper properties in combination with the County's existing Shirley T. Holland industrial park and cargo that would be served by rail from an Intermodal Container Transfer Facility (ICTF) located in Isle of Wight. The County and The Virginia Port Authority (VPA), who is equally interested in the outcome, require the following areas to be considered and analyzed:

- Determine existing attributes, opportunities, constraints, and improvements needed to maximize the value for distribution center activity.
- Each property separately
- Properties in combination with the others
- Impacts of ICTF development and direct rail access
- Impacts of the proposed Route improvements and impacts if Route 460 is not improved.
- Existing Infrastructure and future infrastructure requirements.

The next section is an executive summary of this study which is then followed by the body of this report providing detailed analysis and discussion of this opportunity.

4 Existing Property Attributes

In an effort to take advantage of rising growth rates in port-related commerce, Isle of Wight has identified three parcels totaling more than 2,700 acres on which to develop an Intermodal Park. The three properties are known as:

- Shirley T. Holland
- Norfolk Southern
- International Paper

The Shirley T. Holland parcel is owned by Isle of Wight County. The site is being developed in two phases. Currently, the parcel has tenants on site and additional facilities under construction.

The additional two parcels being considered are under private ownership by Norfolk Southern and International Paper, respectively, although Isle of Wight is close to completing negotiations with International Paper to acquire its property.

Each parcel is in close proximity or adjacent to the others, within thirty miles of The Port of Virginia marine terminals, and next to US Route 460 and Norfolk Southern's main east-west rail line for the region. The following sections describe attributes of each parcel, providing an overview of general site characteristics, addressing easements, utilities and wetlands. A wetlands delineation was not performed as part of this study; however, previously performed delineations and wetlands information are referenced.

4.1 Common Attributes

The three parcels identified by Isle of Wight are located somewhat adjacent to each other and share some common property boundaries. These properties are located between 0.5 and 1.5 miles to the south and east of the town of Windsor, VA.

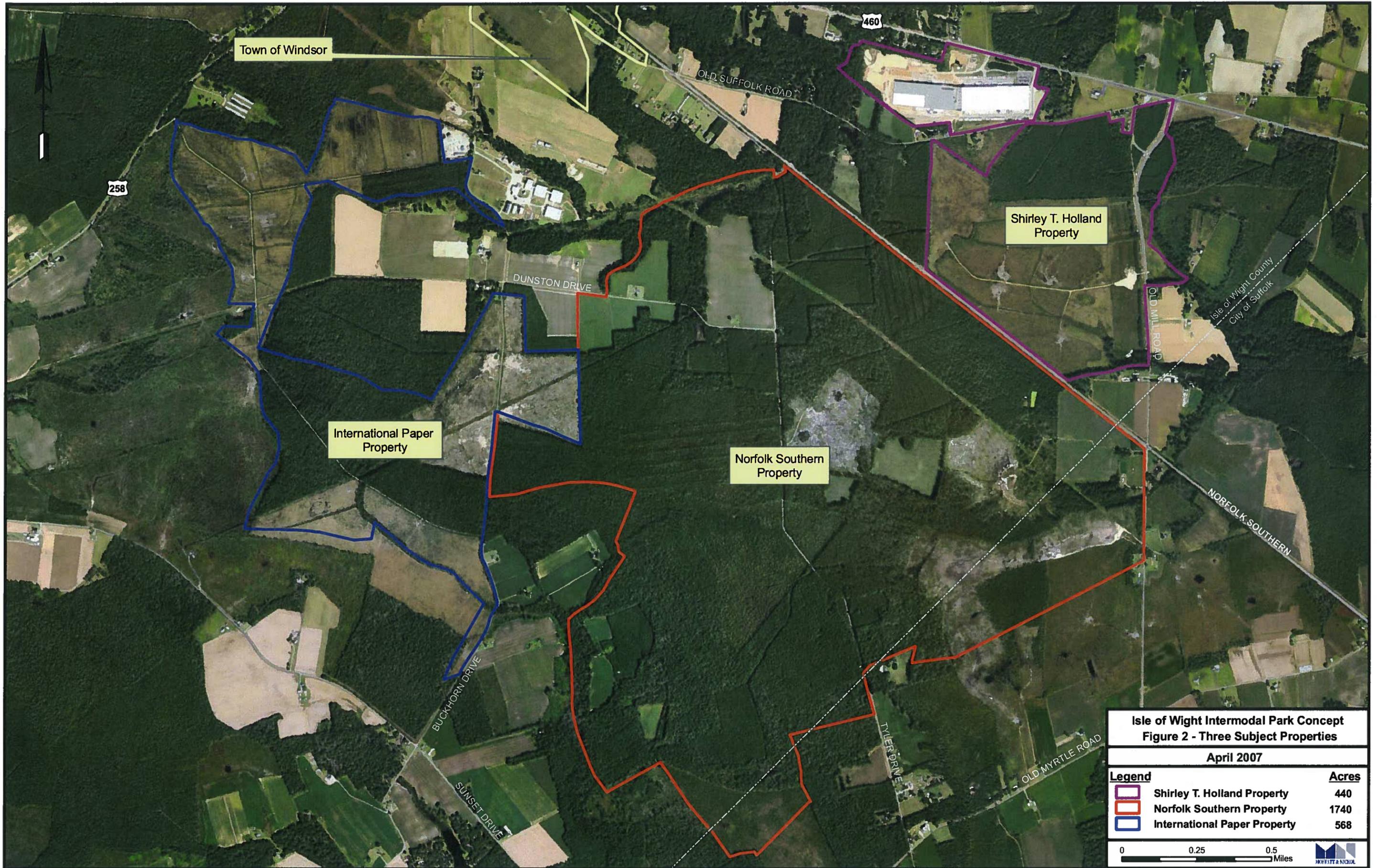
They are located approximately 30 miles west of the marine terminals located in Norfolk, Portsmouth and Newport News. Transportation to the East and West is achieved via US Route 460 and to the North and South via US Route 258. US Route 460 was widened to 4 lanes in the 1950's but has no medians, shoulders or divided sections.

The Commonwealth of Virginia recently passed legislation for an improved US Route 460 to be constructed. This improvement will result in an interstate quality limited access route from the point US Route 460 meets the interstate at the junction of the US Route 58 bypass in Suffolk, VA and to the west near Petersburg, VA and the interchange with I-295.

The improved US Route 460 would provide better access for trucks going to and from the proposed sites. The existing US Route 460 would remain and is envisioned primarily as a local commuter route.

The properties are located in a rural setting surrounded by wooded areas and farmland with few residences. There are no residences on the three subject properties.

Figure 2 below shows the three parcels relative to the town of Windsor, VA, the Isle of Wight-City of Suffolk boundary, US Routes 460 and 258 and the Virginia Department of Transportation proposed alignment for the new US Route 460.



Town of Windsor

258

460

OLD SUFFOLK ROAD

DUNSTON DRIVE

Shirley T. Holland Property

International Paper Property

Norfolk Southern Property

Isle of Wight County
City of Suffolk

OLD MILL ROAD

NORFOLK SOUTHERN

BUCKHORN DRIVE

SUNSET DRIVE

TYLER DRIVE

OLD MYRTLE ROAD

**Isle of Wight Intermodal Park Concept
Figure 2 - Three Subject Properties**

April 2007

Legend		Acres
	Shirley T. Holland Property	440
	Norfolk Southern Property	1740
	International Paper Property	568



4.3 Shirley T. Holland Property

The Shirley T. Holland (Phase I and II) property is shown in Figure 2. Phase one is located to the North and Figure 3 identifies the boundary between phases. The development of phase one can be seen in this figure.

Shirley T. Holland is located approximately 1.5 miles southeast of Windsor, Virginia. The site is approximately 440+/- acres. It is bounded on the south by Norfolk Southern's main rail line and on the west by agricultural property, eventually giving way to the town limits of Windsor. It is bounded on the east by State Route 607 "Old Mill Road" and on the north by Old Suffolk Road. The topography is slightly rolling, almost completely covered by Loblolly Pine in areas not currently developed. The site lies approximately 70-75 feet above sea level, with drainage from west to east.

Easements

Two utility easements exist on the property. Both easements run from east-to-west, comprised by a Columbia Natural Gas line located approximately center to the property and an AT&T Coaxial Cable Line located on the southern portion of the property.

Utilities

Electricity is provided by Dominion Virginia Power and consists of 34.5 kV power line running parallel to U.S. Route 460, with 115 kV available. A high power transmission line runs through an easement just south of the property. This provides sufficient electricity capacity for the area utilizing step down lines from the transmission lines to provide distribution.

Water service is provided by Isle of Wight County. Isle of Wight sources water from wells that access the aquifer in its region. A 16" water line runs along U.S. Route 460, turning south along State Route 607 to access the property. The current capacity of the exiting wells is limited. Additionally, a 600,000 gallon water tower has been constructed on the adjacent Shirley T. Holland Phase I property. Like the water source the water tower will not provide enough capacity for peak usage reserve and fire flow protection once the site is developed. As the property is developed water source and additional reserve will be needed. Additional water sources will require looking at additional wells to access the aquifer currently used by Isle of Wight along with the possibility of tapping into the Lake Gaston pipeline that services Virginia Beach and runs through the properties. Additional water towers will be need as an intermodal park is developed for peak usage and fire protection reserves. These are discussed further in the development concepts for fire flow and peak usage reserves.

Wastewater service is supplied by the Hampton Roads Sanitation District (HRSD). HRSD has a 20" diameter force main interceptor line identified as the Windsor Interceptor Force main running along U.S. Route 460 from the Town of Windsor towards the City of Suffolk. This line transports sewage to the HRSD Nansemond Wastewater Treatment Plant located in Suffolk. A 4" force main line and pump station have been located on the property. The 20" force main currently is handling flow at one foot per second or 130,000 gallons per day (gpd) according to Tim Marsh at HRSD. The capacity of this line can exceed three million gpd.

Natural gas service is provided by Columbia Gas Transmission, a subsidiary of Columbia Energy Group. Currently, a 12" high-pressure steel transmission line traverses the site. The capacity on the Columbia line is believed to be nearing capacity. Heather Barker and Tim Beeler at Columbia Natural Gas-Virginia indicated that there is little capacity left on this main line. To gain additional capacity Columbia Natural Gas believes its planned betterment projects could provide sufficient capacity around 2010 with the construction of a point of distribution (POD) delivery connection at the intermodal park.

Telecommunications are available from Cavalier Telephone Company, Cox Communications and Verizon. Telephone and T-1 with sufficient capacity is available.

Wetlands

Through the course of site development jurisdictional wetlands have been addressed within the boundaries of the Shirley T. Holland property.



Town of Windsor

Shirley T. Holland Property

Isle of Wight County
City of Suffolk

**Isle of Wight Intermodal Park Concept
Figure 3 - Shirley T. Holland Property**

April 2007

Legend		Acres
	Shirley T. Holland Property	440



4.5 Norfolk Southern Property

The Norfolk Southern Property, shown in Figure 4, has also been known as the Windsor Mega Site and is located approximately 1.2 miles south and east of the Town of Windsor, Virginia. The site is approximately 1,740+/- acres. It is adjacent to and west and south of the Shirley T. Holland Phase II Property, where the Norfolk Southern main rail line divides the two properties. The southeastern portion of the property straddles the Isle of Wight County/City of Suffolk line. The eastern edge of the property is bounded by State Route 607 "Old Mill Road" and Tyler Drive and Dunston Drive traverse the property. Other properties adjacent to the Norfolk Southern parcel are lightly populated and include scattered single family dwellings, wooded and agricultural use parcels, as well as the International Paper property. The site is generally flat, with elevations between 45-85 feet above sea level

Easements

Portions of rural State Routes 635 and 608 run through the property with easements and are known as Dunston Drive and Tyler Drive respectively. At the northern tip of the site parallel to the property boundary an easement exists that is identified on the United States Geological Services (USGS) 7.5 minute quadrangle map as "aqueduct". Additionally, three utility easements exist on the property. Columbia Gas Transmission, a subsidiary of Columbia Energy Group, has a 12" high pressure steel line, described previously with the Shirley T. Holland property, which crosses the property from east to west. Dominion Virginia Power has a 115 kV transmission line running from the southeastern side of the site to the northwestern side. AT&T coaxial cable also has an easement running east to west across the property.

Utilities

Electricity is provided by Dominion Virginia Power with a 115 kV line on site and 500 kV, in close proximity due east. A step down line(s) from the high power transmission that traverses the property can provide sufficient distribution capacity to the property.

Water is currently not available. The 600,000 gallon water tower discussed previously services the town of Windsor and provides water to Shirley T. Holland. This tower will not provide sufficient capacity if the Norfolk Southern property is developed. Additional water sources and towers for fire flow and peak usage reserves will be required and are included in the development concepts.

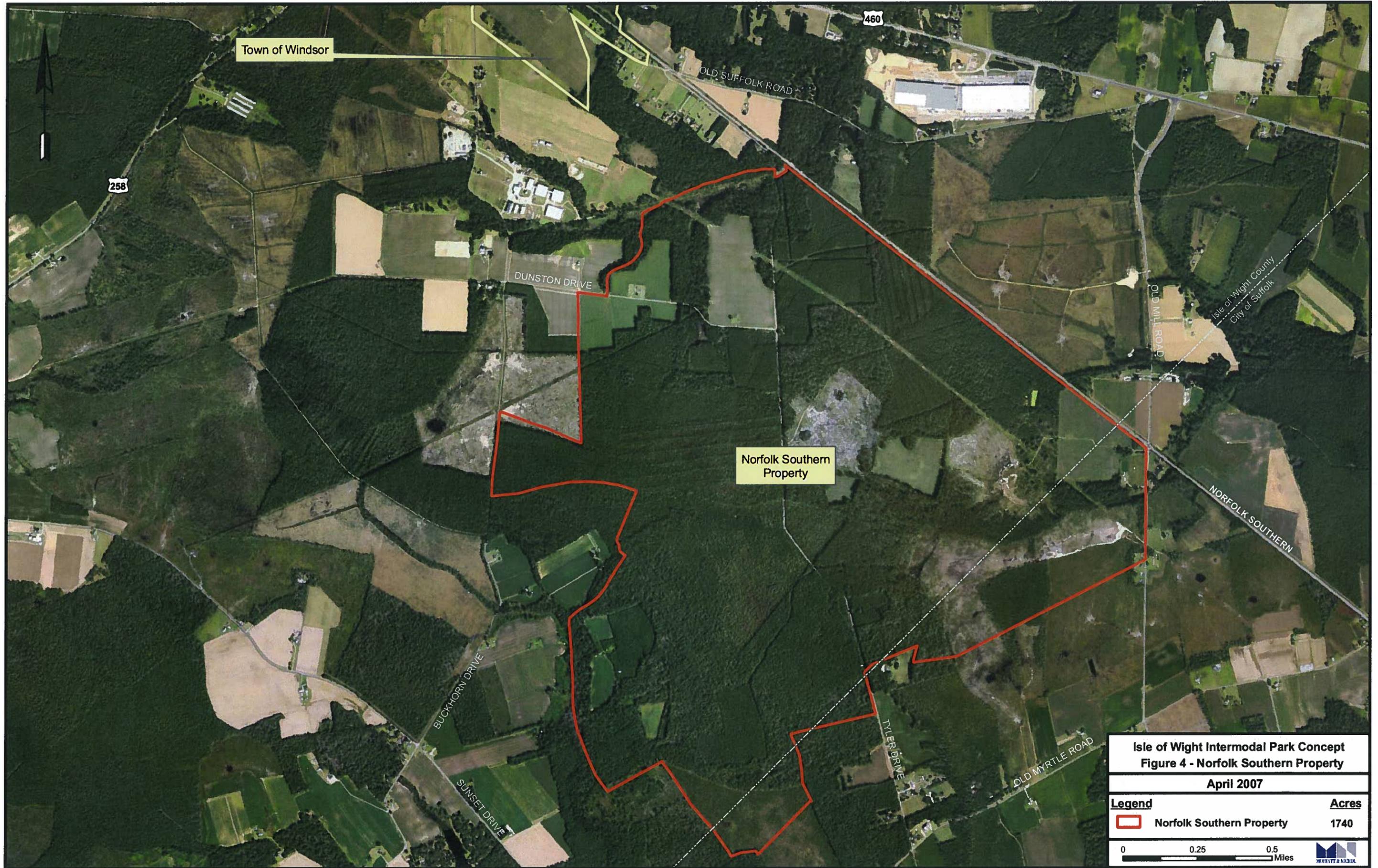
Wastewater is currently not available. An HRSD 20" diameter force main interceptor line, previously described when discussing the Shirley T. Holland exists approximately one mile north of the site. This line has sufficient capacity but connections will need to run from the property to access the line.

Natural gas service is provided by Columbia Gas Transmission, a subsidiary of Columbia Energy Group. A 12" high-pressure steel transmission line traverses the site. Gas capacity is expected to be limited.

Telecommunications are available from Cavalier Telephone Company, Cox Communications and Verizon. Telephone and T-1 data is available to the property with sufficient capacity.

Wetlands

In 1992 Norfolk Southern conducted a wetlands delineation of the property. The Norfolk Southern report indicated 280 acres of jurisdictional wetlands were contained on this property. These wetlands are predominately clustered together in a drainage system that runs across the center of the property flowing from the North and West to the South and East. A figure illustrating the wetlands for the parcels is included at the end of this section. Wetlands mitigation options are also discussed that could maximize the use of the Norfolk Southern property.



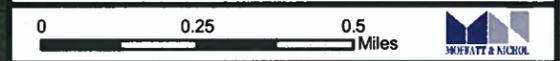
Town of Windsor

Norfolk Southern Property

Isle of Wight Intermodal Park Concept
Figure 4 - Norfolk Southern Property

April 2007

Legend		Acres
	Norfolk Southern Property	1740



4.7 International Paper Property

As shown in Figure 5, The International Paper Property is located approximately 0.5 miles south of the Town of Windsor, adjacent to and west of the Norfolk Southern Property. Other adjacent properties include scattered single family dwellings, wooded and agricultural use parcels. The site is approximately 570+/- acres. A review of available aerial photography shows the property is bisected by two dirt access roads, and overall use appears to be timber farming. A review of the USGS 7.5 minute quadrangle map of the area shows the property to be generally flat and slightly rolling with elevations between 80 and 90 feet above sea level. The West boundary of the property is located within approximately three hundred feet of US Route 258 a North-South route that runs through Isle of Wight County and South across US Route 58 and into North Carolina.

Easements

Columbia Gas Transmission, a subsidiary of Columbia Energy Group, has a line which crosses the southern portion of the property generally from east to west. At a narrow portion in the center of the property an easement exists that is identified on the USGS 7.5 minute quadrangle map simply as "aqueduct".

Utilities

While electricity, water and wastewater are in close proximity to the International Paper property as discussed previously for the Shirley T. Holland and Norfolk Southern properties, only the AT&T coaxial line and the Columbia Gas transmission line are on this property. Connections will be required to reach sources for water, electricity and wastewater. Each utility is discussed in more detail below.

Electricity is provided by Dominion Virginia Power. There is a 115 kV line approximately 500 feet from the northern section of the property, and 500 kV in close proximity due east. Electricity capacity is not deemed to be an issue for this property but will require connecting a distribution line from a transmission source which is located in close proximity.

Water is not currently available to the site or viable without additional sources. Additional sources for water will be needed. Possible sources include digging additional wells to access the aquifer in Isle of Wight and the Lake Gaston pipeline which is located on the properties. The 600,000 gallon water tower located approximately 1.5 miles to the northeast of the property on the Shirley T. Holland property will not have reserve capacity as discussed previously. The 16" waterline extended onto the Phase II portion of the Shirley T. Holland Property is approximately 4,000 feet from the International Paper Property. The capacity of the water tower at Windsor will not provide a sufficient reserve as the sites are developed; additional water towers will be required for fire flow and peak usage reserves and are shown on the development concepts that include the International Paper property.

Wastewater is currently not available. The HRSD 20" diameter force main interceptor line, described previously does have sufficient capacity and is located approximately a mile north of the site.

Natural gas service is provided by Columbia Gas Transmission, a subsidiary of Columbia Energy Group. Currently, a 12" high-pressure steel transmission line traverses the site. This property faces the same issues with natural gas supply as previously discussed.

Telecommunications are available from Cavalier Telephone Company, Cox Communications and Verizon. Telephone and data are available with sufficient capacity.

Wetlands

Wetlands information for the International Paper property was provided by Isle of Wight. This information showed approximately 33 acres of jurisdictional wetlands on site. These wetland estimates were utilized in generating the development concepts



4.9 Analysis of Existing Attributes

By determining and analyzing existing attributes of each of the three sites, we draw broad insight into the improvements and expansions to infrastructure needed that would generate the most value for distribution center activity. Observations provided in this section cover requirements needed to address easements, utilities, wetlands and transportation access.

Analysis of Easements

There are several easements on the sites being considered by Isle of Wight for an intermodal park. These easements have varying degrees of impact on the construction of an intermodal park. Observations on these easements are presented below.

Roads

Several roads traverse across the three properties. Old Suffolk Road runs between Phase one and Phase two of Shirley T. Holland. Old Mill Road runs from North to South through Shirley T. Holland and is then adjacent to the Norfolk Southern Eastern property line. Tyler Drive and Dunston Drive go across the Norfolk Southern property North-South and East-West respectively. Buckhorn Drive runs in a North South direction through the International Paper property and is adjacent to the meeting point between the Norfolk Southern's most western property line and the International Paper property.

These roads and their associated easements provide a basis for generating good traffic flow across the properties as an intermodal park is developed. Traffic patterns for the concept scenarios that were developed use these roads as the foundation for providing vehicle capacity requirements. Figure 8 at the end of this section illustrates the existing and proposed roads for these properties.

Dominion Virginia Power Transmission Lines

An easement exists on the Norfolk Southern property for high voltage transmission lines in an east west direction that parallel the Norfolk Southern rail line. Old Mill Road crosses this easement as it travels between the Norfolk Southern and Shirley T. Holland properties on the southeastern end of the area being analyzed. Facilities cannot be constructed on this easement. In addition to Old Mill Road, several concept scenarios include an additional road crossing this easement to facilitate traffic flow on the northwestern end of the site. There is an area encompassing 150+/- acres between the transmission lines and the Norfolk Southern rail line on the northern boundary of the property. The configuration of this area allowed it to be shown as an ICTF facility in several of the development concepts.

Columbia Gas Line

The Columbia Gas high pressure line runs in a mostly north south direction across all three properties. Roads may cross over but permanent structures cannot be placed on top of this line. All concept scenarios developed avoided the Columbia Gas Line easement.

Chesapeake Bay Preservation Act

Although not considered an easement in the truest definition of the word, discussion of the Chesapeake Bay Preservation Act (CBPA) and its impact, similar to an easement, on these properties is warranted. The CBPA has standards aimed at controlling the collection, ground filtering and runoff of waters that may eventually enter systems that flow into the Chesapeake Bay. For these properties the impact of CBPA results in development concepts that limit the construction of impervious surfaces (buildings and pavement) to sixty percent of the total net acreage. Net acreage is defined as the gross acreage less wetlands and drainage pond areas.

Other Easements

The AT&T coaxial line runs through the Shirley T. Holland and Norfolk Southern properties. Water lines and HRSD wastewater are on site at Shirley T. Holland. Easements for these utilities do not have a material impact on the development of these properties

Analysis of Utilities

To support the development of an Intermodal Park, the proposed site will require that utilities are available to each of the properties and with sufficient capacity. In determining existing attributes, we learn that utilities and utility connections will need to be extended to the Norfolk Southern and International Paper properties to meet this need. All utilities, including electricity, water, wastewater, natural gas and telecommunications have working infrastructure in place at Shirley T. Holland. The Norfolk Southern property is in close proximity to utility connections on Shirley T. Holland separated by approximately three hundred feet where the rail line bisects the two sites. The International Paper property is approximately eleven thousand feet away from Shirley T. Holland. Utility connections for International Paper may find a shorter path along the 0.5 miles from the property towards the town of Windsor.

The minimum distance for each property to reach the closest connection points does not take into account capacity. In addition to extending utility connection points additional capacity is needed for water and natural gas.

While it was previously determined that water and natural gas capacities will not be sufficient the capacity needed for the sites to be developed can be estimated for all utilities. Several sources including Hampton Roads Sanitation District (HRSD), Columbia Gas, commercial developers and standards that were developed in detail for brownfield redevelopment in New York were used. Listed below are some utility consumption standards to guide required improvements and expansions to the utilities infrastructure. These standards are developed per 50 acres of industrial use property:

Electricity

- Kilowatt (kW) Demand: 1,350 kW
- Monthly Kilowatt Hour (kWh) Usage: 1,000,000 kWh
- Should be on a 15 kVA line, or preferably larger
- Should be within 3 miles of a substation with minimum available capacity of 25mVa
- Potential for dual feed from a substation is preferred.

Natural Gas

- Demand: 8,300 CF/Hr. (Columbia Gas measures in thousand CF or MCF)
- Usage: 175,000 Therms/year
- Minimum available capacity: 4-6 inch high pressure line within 3 miles

Water

- Employees 30 gallons per day (gpd)
- Minimum: 8,000 gallons per minute potable existing available capacity, for up to 4 hours with 8 hour recovery for fire flow
- Water distribution line serving the site should be a minimum of 10 inches in diameter.
- Municipal system preferred

Sewer/Wastewater

- Minimum available capacity: 20,000 gallons per day (gpd) at site boundary
- Employees 24 gallons per day (gpd)
- Municipal system preferred

Telecommunications

- T-1 level of service capacity a minimum

Capacity Requirements

Consideration needs to be given to the amount of acreage that might be developed in each of the concept scenarios. For example when applying utility consumption standards per fifty acres it is valid to estimate that similar buildings will consume at similar rates whether in Isle of Wight or New York. However, this cannot be applied across the gross acreage developed. The standards for New York brownfield re-development do not consider wetlands and CBPA limits on impervious acreage ratios required in Virginia. Therefore, to apply utility consumption estimates for Isle of Wight intermodal park development, acreage for wetlands and green space required under CBPA but not associated with particular building sites is not included.

There are four concept scenarios that will be presented in Section 5. Each is listed below:

- Scenario A – Shows the development of all three parcels, the construction of the new US Route 460 with interchanges to access the site and an Intermodal Container Transfer Facility (ICTF) to load and unload rail shipments.
- Scenario B – Changes Scenario A to show the impact if the new US Route 460 is not constructed
- Scenario C – Changes Scenario A to show the development of the site without an ICTF
- Scenario D – Shows the development of an intermodal park if only the Shirley T. Holland and International Paper properties are developed. An ICTF is not included in this scenario by virtue of the Norfolk Southern property being required for an ICTF

The utility consumption estimates are so similar for Scenarios A, B and C that they can be discussed as one. The elimination of the 1,740 +/- acres from the Norfolk Southern property illustrated in Scenario D results in a lower utility consumption and will be discussed separately.

For scenarios A, B and C, 1,550 acres was used. This is sixty percent of the net acreage after wetlands and ponds are deducted plus a 20% contingency added back in to avoid under estimating utility consumption.

For scenario D 700 acres was used. This is also sixty percent of the net acreage after wetlands and ponds are deducted plus a 20% contingency.

Table 1 below shows the current utility capacity available for the properties and the estimated consumption when fully developed. Estimated needs and comments on sources for additional capacity are provided.

ISLE OF WIGHT INTERMODAL PARK UTILITY REQUIREMENTS

	Current Additional Capacity	Scenarios A-B-C Consumption	Scenarios A-B-C Shortfall	Scenarios D Consumption	Scenarios D Shortfall	Comments
Net Acreage		1,300		600		
Full Employment		25,000		10,000		
Electricity	Unlimited	OK	0	OK	0	Step Downs from Transmission Lines
Water	0	3,000,000 gpd	3,000,000 gpd	1,450,000 gpd	1,450,000 gpd	New Sources + Water Towers on Site
Wastewater	3,000,000 +	2,400,000 gpd	0 gpd	1,160,000 gpd	0 gpd	Sufficient Capacity
Natural Gas	0	160 mcf	160 mcf	77 mcf	77 mcf	Betterment Project Planned
Telecommunications	Unlimited	OK	0	OK	0	Sufficient Capacity

Table 1 Utility Capacity and Needs

Analysis of Wetlands

As major waterways and systems flow through Isle of Wight connecting with the James and Elizabeth Rivers onward towards the Chesapeake Bay, Wetlands remain a concern in this region for any proposed development. Although a wetlands delineation was not performed as part of this study, by analyzing available information over 2,200 net acres on these three properties could be developed not including the areas allocated for drainage ponds.

When considering the estimated wetlands map shown in Figure 6, there is an opportunity to maximize the development of contiguous parcels and still provide on-site wetlands restoration for areas that are disturbed. This treatment for wetlands restoration is preferred by the Virginia Department of Environmental Quality (DEQ) and is usually easier to get permitted than addressing a net loss of on-site wetlands acreage. The major wetlands system on the properties is an area that drains from the Northwest to the South.

An illustration of an on-site wetlands restoration concept resulting in no net loss of wetlands acreage is shown in Figure 7.

Analysis of Transportation

As the properties are developed, vehicles entering and exiting the intermodal park will need sufficient route capacity. Not considering this future need could result in unwanted congestion, gridlock and businesses not viewing this intermodal park as an attractive location to locate. Each development concept presented includes existing and proposed roads on the properties to provide good traffic flows.

Transportation capacity getting to and from the site from other locations was also considered.

Planned US Route 460 improvements are for a limited access four lane divided highway that parallels the existing US 460 between Suffolk and Petersburg. The VDOT "460 Route Location Study" states that the total capacity on this four lane limited access route will be 200,000 vehicles per day, 100,000 in each direction. The VDOT study forecasted total travel demand in both directions will reach 42,700 total vehicles per day around 2026. Thus there is a remaining capacity of 157,300 vehicles per day. As illustrated below, this would provide sufficient capacity for the flow of traffic to and from the proposed intermodal park.

With up to 20 million square feet of distribution related space and an ICTF providing rail lift services the estimated daily vehicle count when the site is fully developed was determined to be fewer than 50,000. Some percent of these vehicles would already be in the VDOT study estimates though now stopping in Isle of Wight instead of some other distribution center location along this route. However even if the intermodal park traffic is viewed as 100% additive to the VDOT study, less than 50% of the proposed US Route 460 capacity will be consumed.

Over 80% of the daily vehicle count, (40,000 vehicles), will be personal vehicles for employee trips and not truck traffic. The analysis to reach these conclusions is presented below.

1. Truck Traffic resulting from the Intermodal Container Transfer Facility (ICTF)

A rail yard with 900,000 annual lifts is shown in the scenario concepts. At full capacity it therefore would require up to 900,000 truck trips to the ICTF. Existing experience on port related truck trips and data shows that 70% of the trips are two way trips with a truck carrying cargo both entering and exiting the intermodal park. This would generate 630,000 one way segments for half of the lifts. The other 30% are one way trips. This would generate 540,000 one-way segments. A 10% contingency of the total lifts was added to account for trucks arriving to pick up just a chassis, arriving in error and provides an additional margin of error on this calculation. This equates 3,500 one-way truck trip segments a day over a 360 day working year.

2. Distribution Facility Truck Traffic

At the high-end 20,000,000 square feet could be constructed at an intermodal park in Isle of Wight comprised of the Shirley T. Holland, Norfolk Southern and International Paper properties. Actual building sizes and number of dock doors will ultimately be determined by the tenants of the property over time as development occurs. An analysis was performed that used the concept site plan with the highest density. This resulted in facilities with 5,300 dock doors and truck parking slots.

American Ports, a distribution services provider at many ports who operates cross-docks and distribution centers, reported that although supply chains will continue to improve, on average a dock door handles one shipment every other day. Similar to the ICTF 70% of the trucks will carry cargo in both directions and 30% will make one-way trips. With the addition of a 10% contingency, this results in 3,710 one-way truck trip segments.

Therefore after being fully developed total truck trip segments on the new US Route 460 are estimated at 7,210 per day.

3. Employees

An intermodal park encompassing 20,000,000 square feet would be expected to generate employment up to 25,000. This is based on results at similar recently developed industrial properties. Not all employees will be at work every day for a variety of reasons including illness and vacation. Some employees will commute or ride share. If every employee came to and from the site, every day and drove themselves a daily count of 50,000 one way personal vehicle trips could be reached. Using the VDOT study methodology to account for the percent of employee at work on average resulted in 80% or 40,000 personal vehicle trip segments per day.

This resulted in the following daily traffic counts from a fully developed intermodal park:

Truck Trips

ICTF Trucks	3,500
Distribution Center Trucks	3,710

Personal Vehicle Trips

Employees	40,000
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Volumes will be more widely dispersed than an office building complex with a typical eight or nine hour day. With multiple shifts most traffic should be expected between 5:00 AM and 10:00 PM. Traffic will experience peak times as employees will come and go predominately on shift changes. There will be some further traffic dispersion as employees find a combination of routes to go between work and home such as; the existing US Route 460, US Route 258, Buckhorn Drive, Old Mill Road and the new US Route 460.

An issue does arise if the new US Route 460 is not constructed. The 47,210 daily trip segments will generate congestion on the transportation network utilizing only the existing US Route 460.

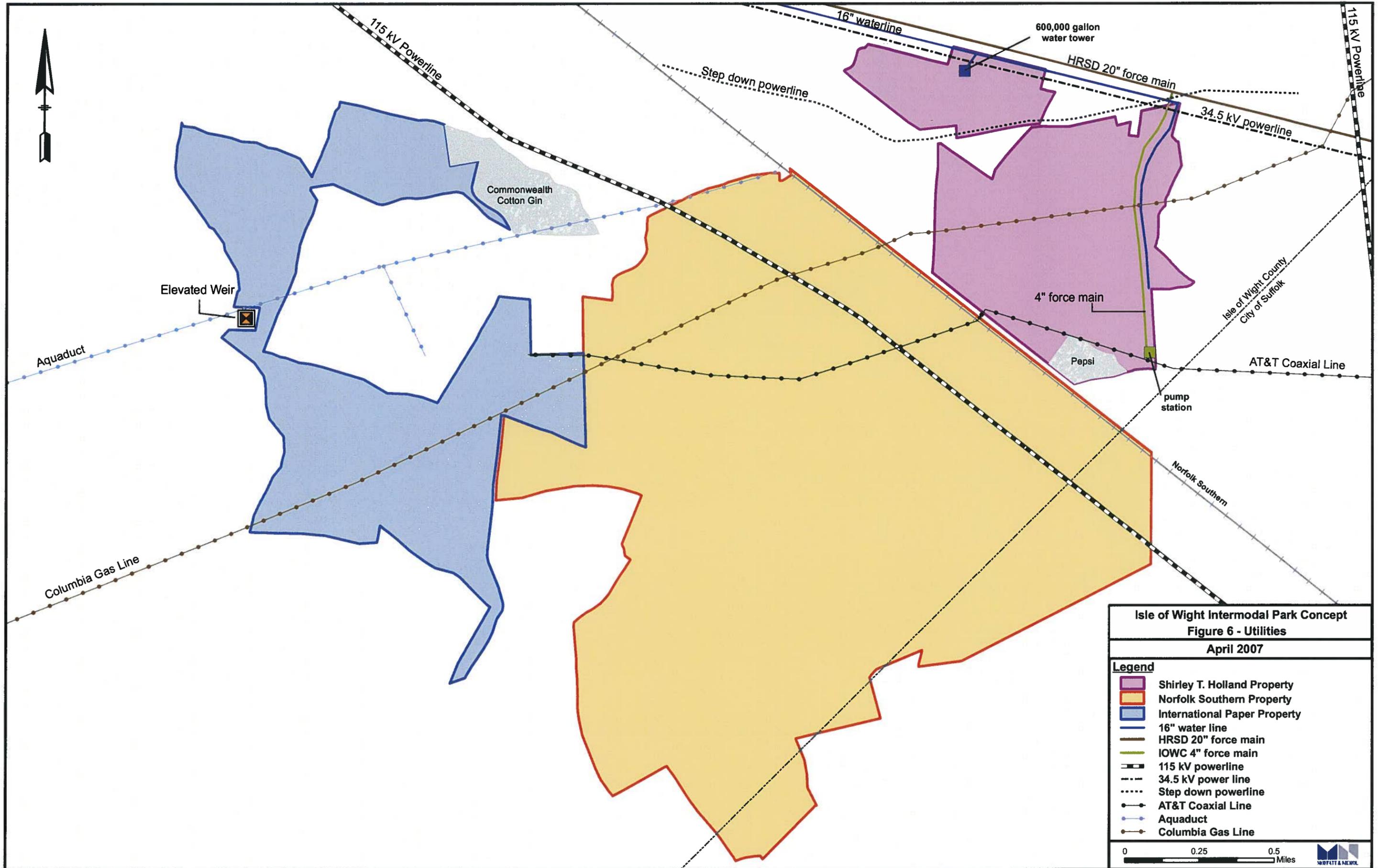
The existing US Route 460 is not conducive with its speed limits, unlimited access points including intersections and driveways, certain turning radius and other attributes to carry high volume-high speed personal vehicle and truck traffic. Although US Route 460 has capacity as an undivided 4 lane highway in many places it has been classified by VDOT as having a higher than average accident rate compared to similar roads. Contingency actions to consider in lieu of a new US Route 460 are discussed in Section 8 "Recommendations and Contingency Actions".

Figure 8, shows the proposed road network for the development concepts including the new US Route 460. The location for the new US Route 460 shown in this study is a route south of Windsor that the VDOT has stated is the preferred route location. This could potentially be changed between now and when construction commences.

Summary of Analysis

The three properties being considered by Isle of Wight for the development of an intermodal park have desirable attributes that support proceeding forward with this opportunity. Development is already underway and existing tenants provide a proof of concept that distribution can locate to the area. There are areas where easements need to be avoided and the size of the opportunity is restricted by the Chesapeake Bay Preservation Act. There are jurisdictional wetlands on the properties that need to be considered. Their estimated location and size indicates that wetlands are manageable. Many utilities such as electricity, communications and wastewater are located in close proximity and with sufficient capacities for full development. Water towers will need to be built to provide water for the site and there is not an available source for more natural gas capacity nearby. Transportation to, from and across the properties will find sufficient roadway infrastructure as long as planned US Route 460 improvements are constructed. Without the new US Route 460, transportation to and from an intermodal park will become congested prior to full development.

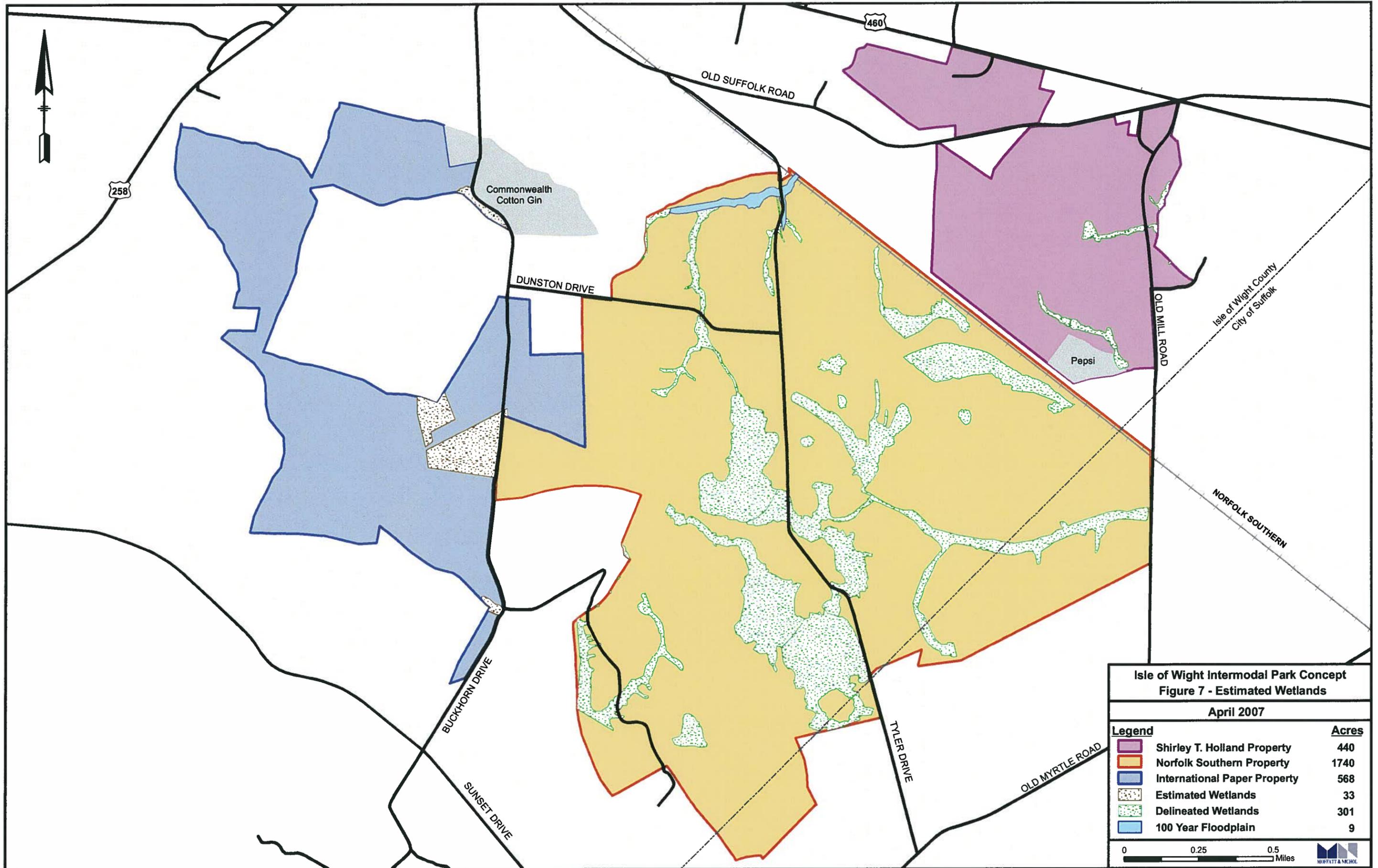
The properties, their attributes, ownership and needs have been discussed. This brings us to the point where development concepts can be presented and considered by Isle of Wight in the next section.

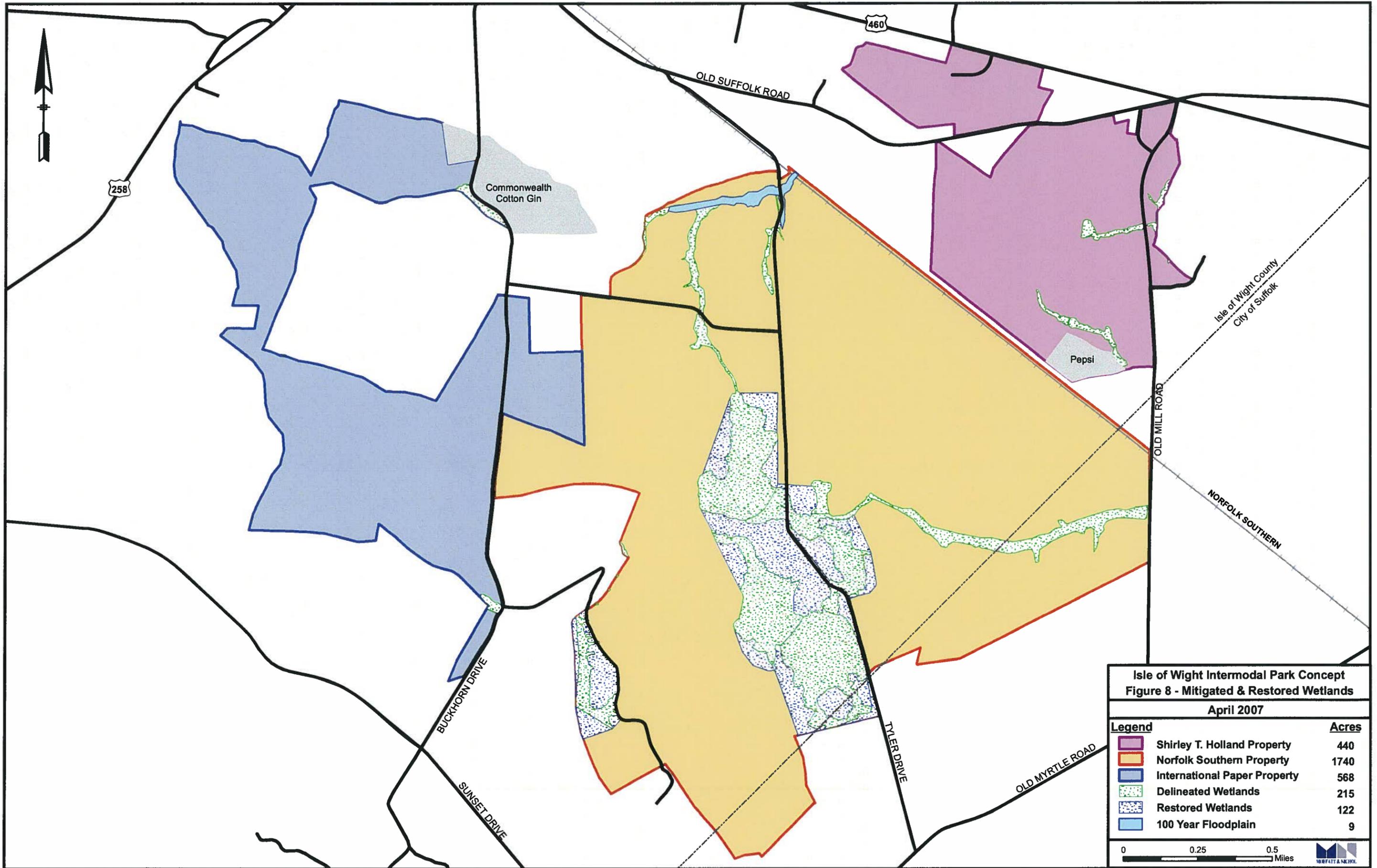


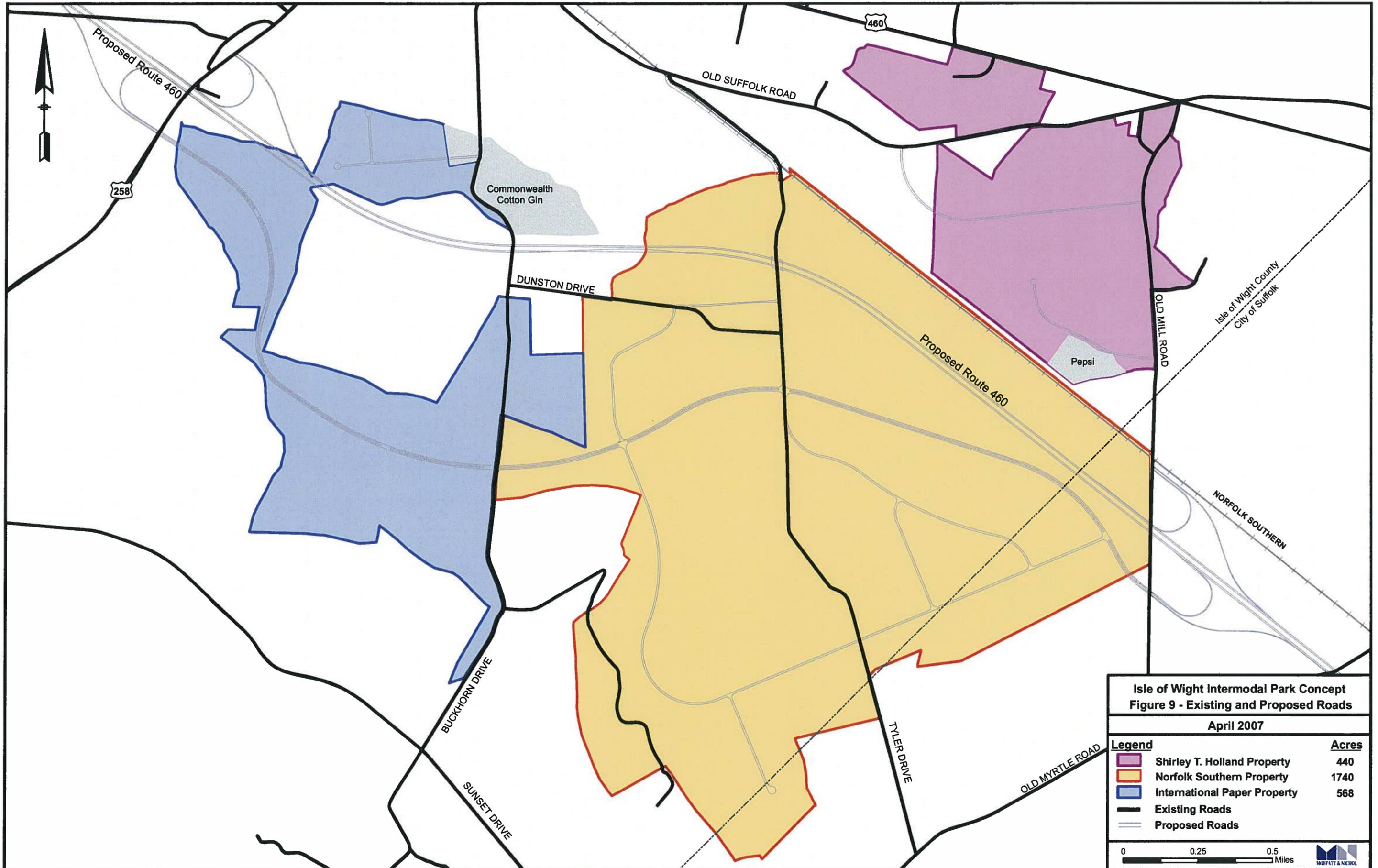
Isle of Wight Intermodal Park Concept
 Figure 6 - Utilities
 April 2007

- Legend**
- Shirley T. Holland Property
 - Norfolk Southern Property
 - International Paper Property
 - 16" water line
 - HRSD 20" force main
 - IOWC 4" force main
 - 115 kV powerline
 - 34.5 kV power line
 - Step down powerline
 - AT&T Coaxial Line
 - Aquaduct
 - Columbia Gas Line









Isle of Wight Intermodal Park Concept
Figure 9 - Existing and Proposed Roads
 April 2007

Legend		Acres
	Shirley T. Holland Property	440
	Norfolk Southern Property	1740
	International Paper Property	568
	Existing Roads	
	Proposed Roads	



5 Concept Scenarios

Several concept site plan scenarios were requested by Isle of Wight and The Virginia Port Authority.

By virtue of owning Shirley T. Holland, Isle of Wight is developing an intermodal park. The size condition and the attributes of the other properties identified by Isle of Wight would allow for the development to be several times larger. While no “showstoppers” are present, there are several variables the outcome of each leading to different results. The following four scenarios were developed as concepts for an Intermodal Park in Isle of Wight County that address the impact of the largest variables:

Scenario A - Illustrates the development of all three parcels identified by Isle of Wight. It includes the construction of an ICTF and the completion of Virginia’s planned improvements to US Route 460.

Scenario B - Adjusts scenario A to look at an intermodal park if the planned improvements to US Route 460 are not realized.

Scenario C - Considers the differences to scenario A from not constructing an ICTF and having direct rail access available at the site.

Scenario D - Examines the opportunity if the Norfolk Southern property is not acquired

5.1 Scenario A

Scenario A Characteristics

Scenario A concept results in the highest opportunity for developing an Intermodal Park on the three properties identified by Isle of Wight.

As presented in the “Scenario A” drawing the construction of 20 million square feet of facility and an ICTF capable of providing over 900,000 lifts annually will fit on the three properties.

Transportation

This scenario includes the planned improvement of US Route 460 recently approved by the Virginia legislature. The US Route 460 study previously conducted by VDOT included the construction of nine interchanges one of which is slated at US Route 258 and in close proximity of the Northwest end of the site next to the International Paper property. Based on the construction of 20 million square feet of facilities and the expected truck and employee vehicle traffic that would accompany this development another interchange has been proposed in this report and is shown to the Southeast of Old Mill Road.

Traffic patterns and proposed roads have been configured to allow for the efficient movement of cargo and traffic through the park and beyond. In addition to US Route 460 improvements, an additional 4.3 miles of 4 lane and 9.6 miles of 2 lane roads are proposed along with driveways and access to the facilities. This concept also makes best use of the existing roads known as; Buckhorn Drive, Tyler Drive, Dunston Drive, Old Suffolk Road and Old Mill Road. Currently a section of Tyler Drive crosses through the area proposed for wetlands mitigation and restoration. Scenario A proposes not using this section of Tyler Drive to avoid additional infrastructure or wetlands disturbance that would be required for a high volume truck route through this section.

ICTF Rail Services

An intermodal container transfer facility is shown next to the Norfolk Southern Rail line. This facility would provide services for transferring cargo between rail and truck.

The proposed ICTF has an annual capacity around 900,000 lifts utilizing:

- 145 acres
- 4,100 wheeled parking slots,
- 43,000 feet of working track,
- 53,000 feet of storage track
- an eight lane gate

The ICTF would be accessible from facilities on the Norfolk Southern, International Paper and the Shirley T. Holland properties.

Facilities

This concept shows around 3.3 million square feet of high volume cross-docks located closest to the ICTF. These facilities can perform transloading, mixed load, and other services for rail destined containers along with traditional cross-dock services.

To the South of the cross-dock area are traditional distribution centers and warehouses totaling 11.7 million square feet.

Moving west across the site some space has been set aside for manufacturing and light industrial tenants, shown in Scenario A with 4.1 million square feet. The market and growth patterns will ultimately decide the mix of these facilities and facilities shown as light industrial and manufacturing could end up as distribution centers and warehouses.

Closest to US Route 258 and with southern frontage paralleling the proposed new US Route 460 is an area allocated for industrial wholesalers with 1.3 million square feet. These tenants typically prefer highway visibility and rely on some drive by traffic for their customer base. Tucked in the Northwest corner of the International Paper property near the Commonwealth Cotton Gin is three hundred and fifty thousand square feet of space that could be used by logistics services companies. One or two stories high these are designed to be mixed use office space.

There are strips of green space that parallel the main (and unnamed) proposed road that bisects the property from Old Mill Road west to US Route 258. Illustrated in Scenario A with three structures, this space can be used to satisfy demand for retail services such as; convenience stores, gas stations and the like as the intermodal park is developed.

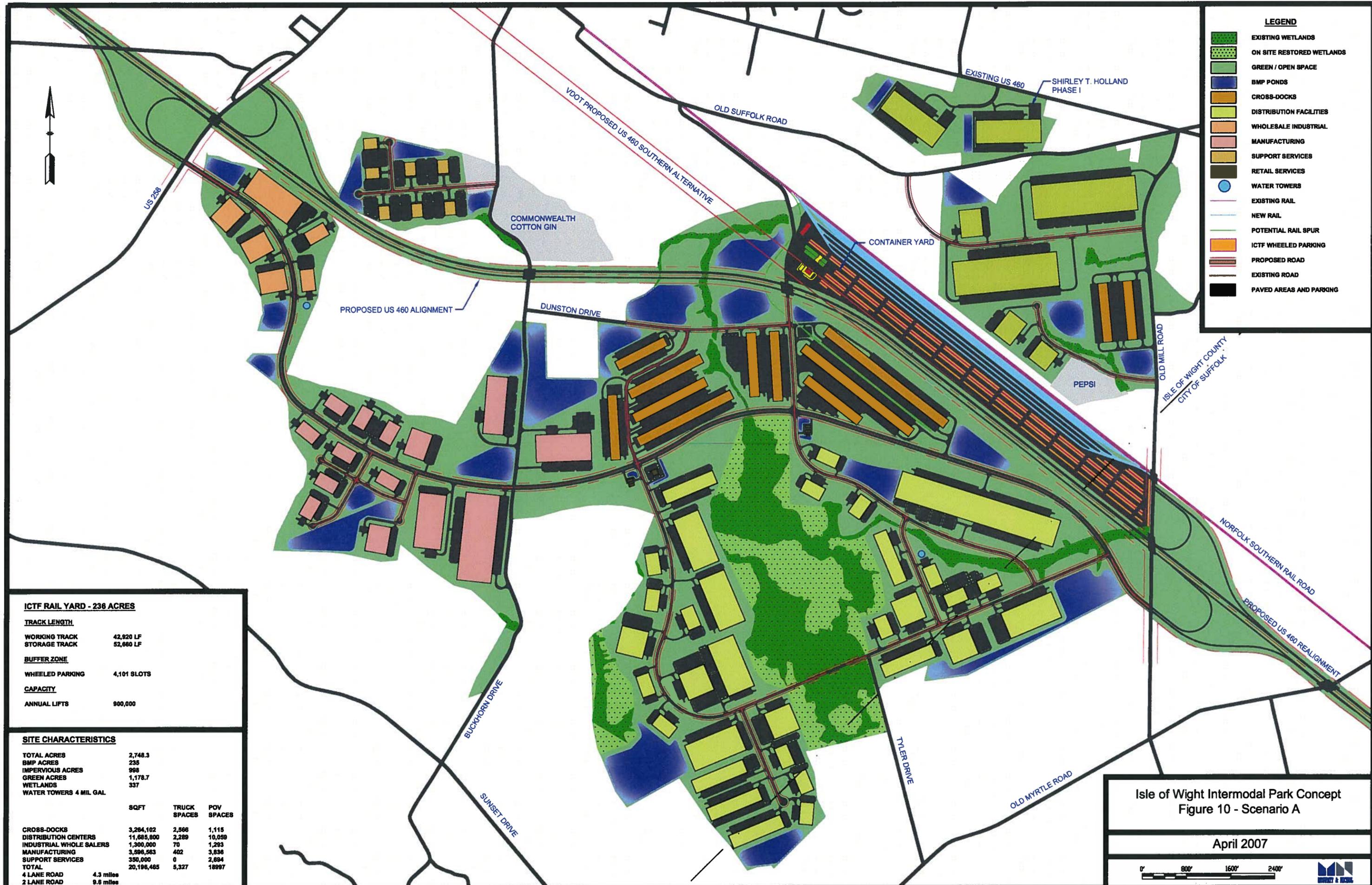
The current concept shows over 20,000 parking spaces for personal vehicles the majority of who will be employees. At 20 million square feet a percentage of these facilities will operate two and three shifts.

Infrastructure

Two water towers with capacities up to 2 million gallons each have been placed on the site. One is located on the Norfolk Southern property the other is on the International Paper property. More water source is needed and additional wells accessing the aquifer in Isle of Wight and the Lake Gaston pipeline should be looked at.

Based on a 1992 wetlands delineation conducted on the Norfolk Southern property and information provided on the International Paper property estimated wetlands that were impacted were restored on site with no net loss of wetland acres maintaining the main drainage system that flows from the Northwest to the Southeast across the Norfolk Southern property.

Drainage ponds have been regionalized along the property and total 220 acres.



LEGEND

- EXISTING WETLANDS
- ON SITE RESTORED WETLANDS
- GREEN / OPEN SPACE
- BMP PONDS
- CROSS-DOCKS
- DISTRIBUTION FACILITIES
- WHOLESALE INDUSTRIAL
- MANUFACTURING
- SUPPORT SERVICES
- RETAIL SERVICES
- WATER TOWERS
- EXISTING RAIL
- NEW RAIL
- POTENTIAL RAIL SPUR
- ICTF WHEELED PARKING
- PROPOSED ROAD
- EXISTING ROAD
- PAVED AREAS AND PARKING

ICTF RAIL YARD - 236 ACRES

TRACK LENGTH

WORKING TRACK	42,920 LF
STORAGE TRACK	52,660 LF

BUFFER ZONE

WHEELED PARKING	4,101 SLOTS
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CAPACITY

ANNUAL LIFTS	900,000
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SITE CHARACTERISTICS

TOTAL ACRES	2,748.3
BMP ACRES	235
IMPERVIOUS ACRES	998
GREEN ACRES	1,178.7
WETLANDS	337
WATER TOWERS 4 MIL. GAL	

	SQFT	TRUCK SPACES	POV SPACES
CROSS-DOCKS	3,264,102	2,566	1,115
DISTRIBUTION CENTERS	11,685,800	2,289	10,059
INDUSTRIAL WHOLE SALERS	1,300,000	70	1,293
MANUFACTURING	3,598,563	402	3,836
SUPPORT SERVICES	350,000	0	2,694
TOTAL	20,196,465	5,327	18997

4 LANE ROAD	4.3 miles
2 LANE ROAD	9.6 miles

**Isle of Wight Intermodal Park Concept
Figure 10 - Scenario A**

April 2007

0' 800' 1600' 2400'

5.3 Scenario B

Scenario B Characteristics

Scenario B is similar to Scenario A in most respects. This concept illustrates the intermodal park development without the new US Route 460. On site it generates a similar opportunity for the development of an Intermodal Park on the three parcels identified by Isle of Wight.

As presented in Figure 11, Scenario B provides for the construction of 20 million square feet of facility and an ICTF capable of providing over 900,000 lifts annually will fit on the three properties identified. There is some additional space for development that is not consumed by the easement for a new US Route 460 that was presented in scenario A.

The difference that needs to be addressed is that Scenario B looks at the development of an intermodal park on these three properties with no improvement made to US Route 460. While transportation alternatives are discussed the question that cannot be answered is at what point, if any would development cease due to congestion. If the importance of handling and transporting port related freight is viewed from the context of the west coast ports, one could argue that full development of an intermodal park on these properties could still occur with the existing road network. If one can live with the assumption that the cargo will be coming to The Port of Virginia regardless of US Route 460 improvements then most areas will be impacted by the lack of highway improvements yet freight will still require handling and distribution services.

Transportation

The scenario considers that congestion is increased between the park and points to the east and west without the capacity afforded by an interstate quality highway. Additionally, it explores the ability of the alternative routes to disperse increasingly saturated volumes of truck traffic combined with additional commuter traffic. Without an improved US Route 460 it is critical to provide adequate entrances and exits to the property and disperse the flow of traffic as efficiently as possible.

Under Scenario B it would be prudent to look at improving, or creating and maintaining zoning buffers that would allow for future improvement of the 6.5 miles of existing road between Buckhorn Drive on the southern boundary of the identified properties and US Route 58. A four lane road extending 6.5 miles to US Route 58 would place vehicles at approximately the same east-west point as vehicles exiting the intermodal park via US Route 460 to the north of the site. This could present a comparable alternative for mitigating congestion if US Route 460 is not improved. US Route 258 is an existing road that also intersects with US Route 58 and would be accessible from the International Paper property. However, if traffic were to use US Route 258 to reach a similar point on US Route 58 it adds almost thirty miles (sixty miles per round trip) to reach the same point. In the context of a round trip from the proposed intermodal park to and from one of the marine terminals the mileage is almost doubled.

There is capacity on the existing US Route 460 that would allow for development to commence for some period of time. It would be anticipated that US Route 460 would reach a failing grade prior to reaching the 48,240 daily vehicles plus additional growth in commuter, truck and residential traffic resulting from expansion and ensuing residential growth related to development of the intermodal park.

Traffic patterns and proposed roads have been configured on site to allow for the efficient movement of cargo and traffic through the park and beyond. In addition to US Route 460 improvements, an additional 4.3 miles of 4 lane and 9.6 miles of 2 lane roads are proposed. The concept also makes best use of the existing roads known as; Buckhorn Drive, Tyler Drive, Dunston Drive, Old Suffolk Road and Old Mill Road.

ICTF Rail Services

An intermodal container transfer facility is shown next to the Norfolk Southern Rail line. This facility would provide services for transferring cargo between rail and truck.

The proposed ICTF has an annual capacity of 900,000 lifts utilizing:

- 145 acres
- 4,100 wheeled parking slots,
- 43,000 feet of working track,
- 53,000 feet of storage track
- an eight lane gate

The ICTF would be accessible from facilities on the Norfolk Southern, International Paper and the Shirley T. Holland properties.

Facilities

The concept shows around 3.3 million square feet of high volume cross-docks closest to the ICTF. These facilities can perform transloading, mixed load, and other services for rail destined containers along with traditional cross-dock services.

To the South of the cross-dock area are traditional distribution centers and warehouses totaling 11.7 million square feet.

Moving west across the site some space has been set aside for manufacturing and light industrial tenants shown in Scenario A with 4.1 million square feet. The market and growth patterns will ultimately decide the mix of these facilities and facilities shown as light industrial and manufacturing could end up as distribution centers and warehouses.

Closest to US Route 258 and with southern frontage paralleling the proposed new US Route 460 is an area allocated for industrial wholesalers with 1.3 million square feet. These tenants typically prefer highway visibility and rely on some drive by traffic for their customer base. Tucked in the Northwest corner is three hundred and fifty thousand square feet of space that could be used by logistics services companies. One or two stories high these are conceived to be mixed use office space.

There are strips of green space that parallel the main (and unnamed) proposed road that bisects the property from Old Mill Road to US Route 258. Illustrated in Scenario A with three structures, this space can be used to satisfy demand for retail services such as; convenience stores, gas stations and the like as the intermodal park is developed.

The current concept shows 20,000 parking spaces for personal vehicles the majority of who will be employees. At 20 million square feet a percentage of these facilities will operate two and three shifts allowing for some spaces to support more than one employee.

Infrastructure

Two water towers with capacities up to 2 million gallons each have been placed on the site. Water source issues previously mentioned are the same for this concept.

In keeping with likely development requirements drainage ponds totaling about 220 acres (10% of the property) are illustrated and the percent of total impervious to green space is maintained close to the 60% threshold.

Based on a 1992 wetlands delineation conducted on the Norfolk Southern property and information provided on the International Paper property estimated wetlands that were impacted were restored on site and the main drainage system that flows from the Northwest to the Southeast across the Norfolk Southern property was maintained.



LEGEND

- EXISTING WETLANDS
- ON SITE RESTORED WETLANDS
- GREEN / OPEN SPACE
- BMP PONDS
- CROSS-DOCKS
- DISTRIBUTION FACILITIES
- WHOLESALE INDUSTRIAL
- MANUFACTURING
- SUPPORT SERVICES
- RETAIL SERVICES
- WATER TOWERS
- EXISTING RAIL
- NEW RAIL
- PROPOSED RAIL SPUR
- ICTF WHEELED PARKING
- PROPOSED ROAD
- EXISTING ROAD
- PAVED AREAS AND PARKING

ICTF RAIL YARD - 308 ACRES

TRACK LENGTH	
WORKING TRACK	42,920 LF
STORAGE TRACK	52,660 LF
BUFFER ZONE	
WHEELED PARKING	5682 SLOTS
CAPACITY	
ANNUAL LIFTS	900,000

SITE CHARACTERISTICS

TOTAL ACRES	2,520.3		
BMP ACRES	235		
IMPERVIOUS ACRES	998		
GREEN ACRES	1,250.3		
WETLANDS	337		
WATER TOWERS	4 MIL. GAL.		
	SQFT	TRUCK SPACES	POV SPACES
CROSS-DOCKS	3,264,102	2,566	1,115
DISTRIBUTION CENTERS	11,685,800	2,289	10,059
INDUSTRIAL WHOLE SALEERS	1,300,000	70	1,293
MANUFACTURING	3,598,563	402	3,836
SUPPORT SERVICES	350,000	0	2,694
TOTAL	20,196,465	5,327	18,997
4 LANE ROAD	4.3 miles		
2 LANE ROAD	9.3 miles		

**Isle of Wight Intermodal Park Concept
Figure 11 - Scenario B**

April 2007

0' 600' 1600' 2400'

5.5 Scenario C

Scenario C Characteristics

Scenario C looks at a concept with all three properties available for the development of an intermodal park, a new US Route 460 but without the construction of an ICTF.

It shares many characteristics of Scenario A. It allows for the construction of more than 20 million square feet of distribution related space. For an intermodal park of that size space has been allocated for support and retail services. The major difference for this scenario is it is shown without an ICTF and therefore, a reduction in the areas allocated for cross-docks.

Transportation

Road access and traffic flow is maintained with a slight difference from the previous scenarios is less access from multiple points to the 145 acres allocated as an ICTF in Scenarios A&B.

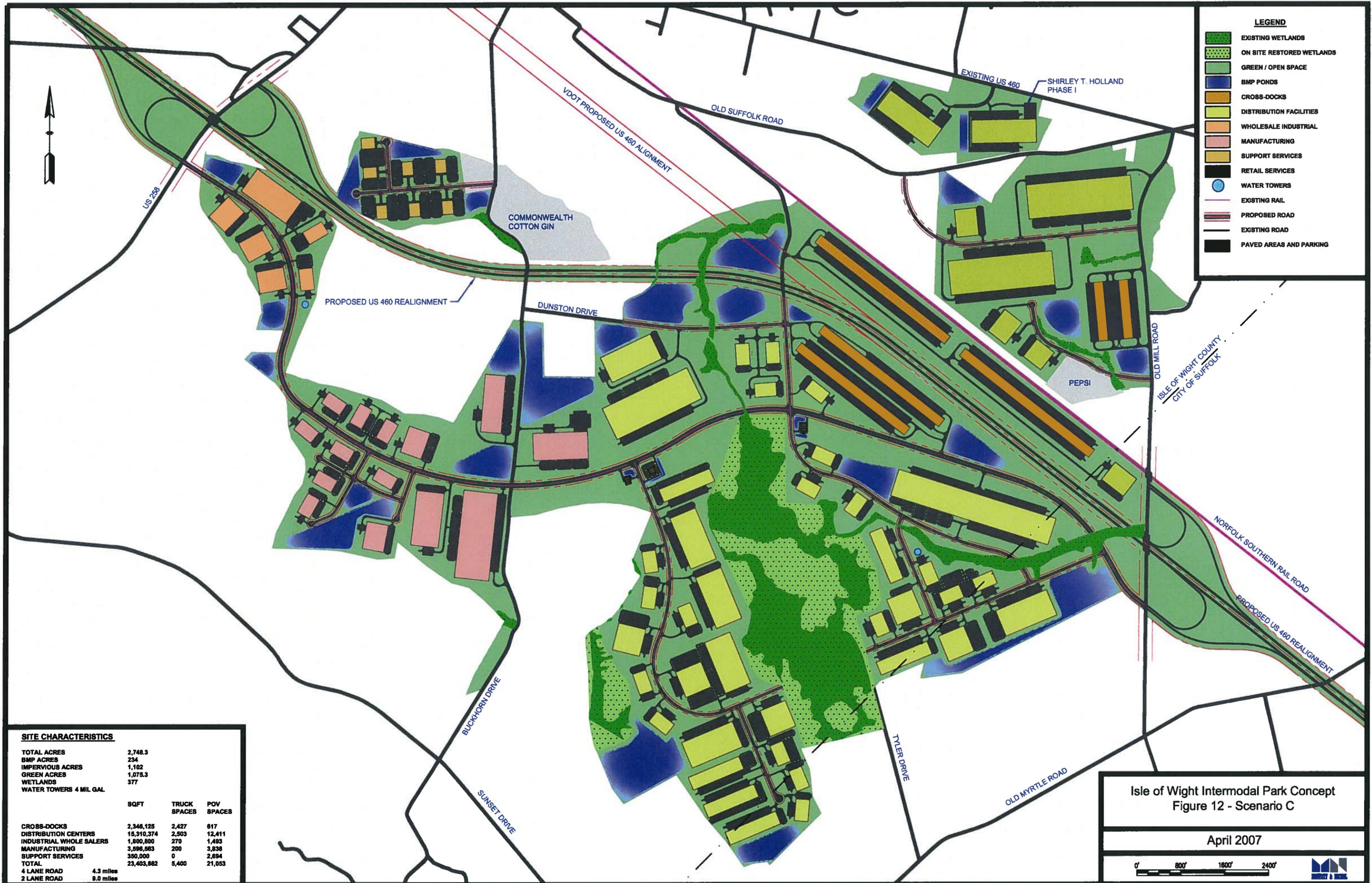
Facilities

Two large cross-docks are situated on the 145 acres close to the new US Route 460 that was used in other scenarios for an ICTF and a few smaller cross-docks are shown on the Shirley T. Holland property. The majority of the properties are used for distribution centers and allocations similar to Scenarios A & B for Manufacturing and Light Industrial and Industrial Wholesalers.

Infrastructure

Wetlands are mitigated and restored on-site maintaining the east-west drainage system that runs through the Norfolk Southern property.

A market study was not conducted as part of this study. However, the sight may develop slower than Scenario A without the added attraction of an ICTF.



- LEGEND**
- EXISTING WETLANDS
 - ON SITE RESTORED WETLANDS
 - GREEN / OPEN SPACE
 - BMP PONDS
 - CROSS-DOCKS
 - DISTRIBUTION FACILITIES
 - WHOLESALE INDUSTRIAL
 - MANUFACTURING
 - SUPPORT SERVICES
 - RETAIL SERVICES
 - WATER TOWERS
 - EXISTING RAIL
 - PROPOSED ROAD
 - EXISTING ROAD
 - PAVED AREAS AND PARKING

SITE CHARACTERISTICS

TOTAL ACRES	2,748.3		
BMP ACRES	234		
IMPERVIOUS ACRES	1,102		
GREEN ACRES	1,075.3		
WETLANDS	377		
WATER TOWERS 4 MIL GAL.			
	sqft	TRUCK SPACES	POV SPACES
CROSS-DOCKS	2,346,125	2,427	617
DISTRIBUTION CENTERS	15,310,374	2,503	12,411
INDUSTRIAL WHOLE SALERS	1,800,800	270	1,493
MANUFACTURING	3,596,563	200	3,838
SUPPORT SERVICES	350,000	0	2,694
TOTAL	23,403,862	5,400	21,053
4 LANE ROAD	4.3 miles		
2 LANE ROAD	9.0 miles		

Isle of Wight Intermodal Park Concept
Figure 12 - Scenario C

April 2007

0' 600' 1800' 2400'

5.7 Scenario D

Scenario D Characteristics

Scenario D looks at the opportunity for Isle of Wight if the Norfolk Southern property is not developed. Eliminating the Norfolk Southern property for this concept also eliminates the opportunity to construct an ICTF and on-site shared access between the Shirley T. Holland and International Paper properties.

Scenario D results in construction of 10 million square feet of facility. Overall demand in Virginia for distribution facilities and services would still occur as discussed previously whether the Norfolk Southern property is or is not developed. Therefore it would be expected that the full development of an intermodal park comprised of just the Shirley T. Holland and International Paper properties would be reached sooner.

Transportation

Access between the two parcels making up the site requires utilizing US Route 258 to US Route 460 or the using Buckhorn Drive and driving east to access Old Mill Road.

Facilities

The occupancy rate would be expected to reach capacity sooner with an offering totaling 10 million square feet as opposed to 20 million square feet. Additionally, while the new US Route 460 is shown in this concept, traffic congestion would be much less of an issue if the Norfolk Southern property is not developed.

This concept does not allocate any space for support services, shows one facility for manufacturing and is dominated by distribution centers.

Infrastructure

Available information shows very little jurisdictional wetlands on the International Paper property. Scenario D shows areas where wetlands would be mitigated and restored on-site



LEGEND

- EXISTING WETLANDS
- ON SITE RESTORED WETLANDS
- GREEN / OPEN SPACE
- BMP PONDS
- CROSS-DOCKS
- DISTRIBUTION FACILITIES
- WHOLESALE INDUSTRIAL
- MANUFACTURING
- SUPPORT SERVICES
- WATER TOWERS
- EXISTING RAIL
- PROPOSED ROAD
- EXISTING ROAD
- PAVED AREA AND PARKING

SITE CHARACTERISTICS

TOTAL ACRES	1008		
BMP ACRES	101		
IMPERVIOUS ACRES	382		
GREEN ACRES	492		
WETLANDS	33		
WATER TOWERS	2 MIL. GAL.		
	SQFT	TRUCK SPACES	POV SPACES
CROSS-DOCKS	374,453	428	144
DISTRIBUTION CENTERS	7,878,206	858	5,640
INDUSTRIAL WHOLE SALERS	1,300,000	70	1,283
MANUFACTURING	500,000	120	450
SUPPORT SERVICES	150,000	0	1,285
TOTAL	10,202,659	1,476	8,782
4 LANE ROAD	1.8 miles		
2 LANE ROAD	2.9 miles		

**Isle of Wight Intermodal Park Concept
Figure 13 - Scenario D**

April 2007

0' 800' 1600' 2400'

6 Analysis of Rail Cargo and Rail Cargo Potential

6.1 Overview

Considering Isle or Wight's desire to aggressively pursue the development of an intermodal park it is necessary to discuss rail cargo. Isle of Wight County identified the three adjacent parcels on which to develop an intermodal park that are the subject of this report. Isle of Wight owns the Shirley T. Holland property and has an agreement in principle to purchase the International Paper property. The third parcel is presently owned by Norfolk Southern Corporation (NS). As previously shown in the four concept scenarios, the ultimate use of the Norfolk Southern property has the single biggest impact on the size of this opportunity.

The potential acquisition and development of the NS property requires a willingness by Norfolk Southern to see this property developed by Isle of Wight. Norfolk Southern, a Class I railroad that generates its revenues from the movement of cargo by rail can, in part, determine its willingness to develop the property based on two criteria:

1. The value received for parting with the property relative to other potential value it might receive
2. The impact on rail cargo and rail cargo potential from Isle of Wight developing an intermodal park relative to other alternative uses

In addition to Isle of Wight and Norfolk Southern being key stakeholders interested in the eventual use of this property The Virginia Port Authority is also a key stakeholder with an interest in the outcome. This presents the need to analyze the impact of rail cargo and rail cargo potential in the context of the overall development of an intermodal park by Isle of Wight and its affect on these stakeholders. We begin by briefly discussing the perspective on the Norfolk Southern property by each of the key stakeholders.

Isle of Wight

The addition of the Norfolk Southern property with the other two properties identified is attractive to Isle of Wight. The Norfolk Southern property contains developable acres that exceed the total acreage of Shirley T. Holland and International Paper properties combined. Through the development of over two thousand two hundred acres, from all three properties, Isle of Wight would be well positioned to achieve its goal of becoming a logistics hub for the region. A key factor to becoming a full service logistics hub is to acquire the Norfolk Southern property and utilize its rail line access to provide intermodal rail services. Such services would present a key incentive in attracting customers and freight to this location that utilize both truck and rail modes. Without the Norfolk Southern property there is not sufficient acreage with rail line frontage or rail access to develop a significant rail services component. As previously illustrated in Figure 2, the Norfolk Southern property is also attractive for Isle of Wight as it lies between the Shirley T. Holland and International Paper properties. These two properties are absent shared access points without the Norfolk Southern Property to connect them.

Virginia Port Authority

The development of the Isle of Wight proposed project site would also potentially benefit the Virginia Port Authority and represents no downside for them. As demand for waterborne containerized cargo increases The Port of Virginia is projected to invest over two billion dollars in an effort to more than triple marine terminal capacity over the next twenty-five years. The development of this site with several million square feet of distribution center space and direct rail access would only enhance VPA's ability to attract customers and cargo to The Port of Virginia marine terminals.

Norfolk Southern

The Norfolk Southern property identified by Isle of Wight is one of the largest industrial zoned sites in Norfolk Southern Corporation's real estate portfolio. Agreeing to let Isle of Wight acquire and develop the property as part of an intermodal park is an easier decision if it is believed it results in the highest value accruing to Norfolk Southern.

Property Value

Only Norfolk Southern can determine an agreeable price for the property and the value of reinvesting the funds received from Isle of Wight in the near-term versus the sale or use of this property at some later undetermined date. Property price is not discussed further in this report.

Rail Cargo

Norfolk Southern has already expressed some skepticism on the impact Isle of Wight developing this site would have on its rail network. Ultimately Norfolk Southern will make a decision on which of the following three outcomes it believes is most likely and therefore where the highest value for Norfolk Southern resides:

1. Letting Isle of Wight develop the property generates more incremental cargo for Norfolk Southern than other options
2. The property will have the highest increase to rail freight if Norfolk Southern waits until it can find a rail served manufacturer or similar rail served business to develop the property
3. Letting Isle of Wight develop the property has a neutral or negative impact on the volume of cargo Norfolk Southern will carry

The remainder of this section focuses on rail cargo relative to this opportunity.

6.2 Approach to Analyzing Rail Cargo

In order to adequately address rail cargo relative to the opportunity that presents itself in Isle of Wight and specifically the Norfolk Southern property, the following must be considered in concert:

1. The intermodal rail market demand for port related cargo in the U.S.
2. Forecasted growth of this market over the next twenty-five years
3. The port related intermodal rail market demand in Hampton Roads and on Norfolk Southern
4. Forecasted growth of this market in Hampton Roads over the next twenty-five years
5. Current intermodal rail capacity in Hampton Roads (ICTF lift capacity)
6. Planned ICTF lift capacity in Hampton Roads
7. Comparison of intermodal rail demand and lift capacity
8. The Norfolk Southern Network and Operations
9. Events that can influence the Hampton Roads intermodal rail demand
10. The impact from an ICTF constructed in Isle of Wight

Adequately analyzed this approach leads to an understanding of;

- How large Hampton Roads port related intermodal rail volumes can become on Norfolk Southern
- What actions may be required in addition to forecasted unconstrained growth that increases the likelihood of reaching higher cargo volumes
- Any potential lift capacity needs
- The role Norfolk Southern's current and planned network plays relative to opportunities for increased cargo and an ICTF in Isle of Wight
- The positive, neutral or negative impact from developing the Norfolk Southern property in Isle of Wight

6.3 The U.S. Intermodal Rail Market

Importers and exporters moved 41.9 million TEU through US seaports in 2006. The largest Class I railroads typically report the number of international and domestic containers they carried. Some but not all of the domestic containers moved by rail carry cargo that originated overseas, landed at marine terminals and at some point was transloaded into domestic containers, usually forty-eight foot and fifty-three foot boxes. The U.S. containerized cargo moving by rail would therefore fall somewhere between 38% (international container movements reported by rail) and 49% with the higher range being most likely when one considers the Intermodal Association of North America (IANA) and others reported that about 20% of west coast cargo shipped by rail gets transloaded into domestic containers. The following facts were used to arrive at this conclusion and they provide some additional detail on port related rail movements:

To validate that 38% to 49% of port related cargo moves by rail we look at the following:

- 2006 International Lifts reported by IANA equaled 11.8 million
- Converting Lifts (20 and 40 foot containers) to TEU by using the industry standard 1.74 factor equals 20.5 million TEU. This factor results from many lifts being 2 TEU (40 foot containers). Making these conversions help bridge between port related statistics in TEU and railroad statistics reported in lifts
- Percent of the 41.9 million U.S. TEU that moves by Rail therefore equals 49 %

Of the total port related cargo movements by rail, an analysis of International Intermodal Moves from the railroads financial Statements, AAR, Public Announcements by IANA and the Railroads identifies 9.2 million that moved in an international container on the largest five of the seven Class I railroads and were not transloaded into domestic containers shown below in Table 2.

INTERNATIONAL CONTAINER MOVEMENT & CONTAINER ECONOMICS ON CLASS I RAILROADS		
Carrier	Units/Lifts	TEUS
BN Total Int'l Container Moves =	3,195,000	5,559,300
UP Total Int'l Container Moves =	1,762,560	3,066,854
CN Total Int'l Container Moves =	1,241,999	2,161,078
NS Total Int'l Container Moves =	1,758,510	3,059,807
CSX Total Int'l Container Moves =	1,281,000	2,228,940
TOTAL	9,239,069	16,075,980

Table 2 International Container Lifts Reported

Total transloaded containers are not reported by each railroad regarding whether the source is domestic or international cargo. However IANA and others report that the west coast ports partially driven by congestion, transload 22% of their rail shipments into 48 and 53 foot domestic containers. Accounting for that information adds to the 9.2 million reported by the railroads just for the international lifts and correlates very closely to the 11.8 million total lifts reported by IANA.

The west coast ports, with mini land-bridge service to points east, move a much higher percentage of their cargo by rail. The percent of freight moving by rail for selected ports as garnered from the TTX 2006 Trade Flow Study and reporting from Port Authorities is shown below:

- Southern California 68% to 70%
- NY/NJ 15%
- VPA 23%
- Savannah 17%

Thus the current demand for port related cargo moving by rail in containers, international or domestic, is believed to be about 11.8 million containers, 20.5 million TEU and approximately 49% of the total U.S. volume. The west coast moves over 65% of their containerized cargo by rail and the east coast ranges between 15% and 25% with Hampton Roads being close to the 25% level.

6.4 Forecasted Growth of the U.S. Market

Manufacturing increases in China, India and other parts of Asia, continued outsourcing of U.S. manufacturing and growth of U.S. consumption will lead to continued increases in containerized shipping. Although demand will fluctuate over the next twenty-five years through the course of normal business cycles, Global Insight and others predict average annual growth of 4.2% over this period. Below in table 3 the unconstrained forecast of containerized cargo growth and TEU and containers moved by rail is shown.

	UNCONSTRAINED FORECAST CONTAINERIZED CARGO						
	2006	2010	2015	2020	2025	2030	2035
U.S. Total TEU	41.9	49.4	60.7	74.5	91.6	112.5	138.2
U.S. Total Containers	24.1	28.4	34.9	42.8	52.6	64.6	79.4
TEU by Rail	20.5	24.2	29.7	36.5	44.9	55.1	67.7
Containers by Rail	11.8	13.9	17.1	21.0	25.8	31.7	38.9

Table 3 Containerized Cargo Forecast

The forecast shown above in Table 3 is used as the baseline for conclusions reached throughout the remainder of this section. It is believed to be conservative because outsourced U.S. manufacturing continues to occur, there are several efforts to increase the use of rail over truck to relieve highway congestion and reduce air emissions. Railroads which have been adjusting to the requirements for intermodal rail vs. traditional commodity movements have been improving their networks. These events would support a relative increase in containerized cargo and the percent that is moved by rail.

Therefore, containerized cargo moving by rail in the U.S. is predicted, at minimum, to rise from just under twelve million containers in 2006 to almost forty million containers by 2035.

6.5 Hampton Roads Intermodal Rail Demand

In 2006 Hampton Roads demand for port related intermodal rail movements totaled more than 343,000 lifts.

According to Norfolk Southern, Maersk generated about 40,000 lifts from the terminal they lease from VPA in Portsmouth, that were handled at Norfolk Southern's Portlock facility in Chesapeake Virginia. According to VPA, its terminals generated approximately 13,000 lifts that were handled by CSX Railroad mostly destined for Chicago and handled at the Harper Road facility. Maersk moves on CSX are not known so the above data coupled with the 289,698 lifts for Norfolk Southern generated from VPA terminals shown in Table 4, total lifts for Hampton Roads would exceed 343,000.

Norfolk Southern Lifts for VPA Containerized Cargo				
VPA Rail Ramp Matrix	On Ramp	Off Ramp	Total Lift	TEU
Chicago	53,633	53,337	106,970	186,128
Louisville & Georgetown	23,728	14,516	38,244	66,545
VIP Front Royal	16,552	16,206	32,758	56,999
Columbus	12,286	12,000	24,286	42,258
Sharronville - Cincinatti	12,000	12,415	24,415	42,482
Detroit	9,177	7,336	16,513	28,733
St. Louis	7,580	5,110	12,690	22,081
Cleveland	5,842	5,835	11,677	20,318
Kansas City	6,404	4,794	11,198	19,485
Decatur, IL	6,242	1,269	7,511	13,069
Memphis	784	143	927	1,613
Charleston	432	219	651	1,133
Savannah	542	52	594	1,034
Houst. John	0	593	593	1,032
Atlanta/Austell	171	319	490	853
Harrisburg	91	4	95	165
Meridian	0	63	63	110
New Orleans	5	1	6	10
Dallas	0	5	5	9
Jacksonville	0	5	5	9
Appli Park	4	0	4	7
Miami	0	3	3	5
Total	155,473	134,225	289,698	504,075

Table 4 Norfolk Southern Moves from VPA Terminals

6.6 Forecasted Growth of Hampton Roads Demand

Although there is every reason to believe intermodal rail demand in Hampton Roads will exceed a straight line forecast, we will start at this point.

Table 5 shows that by applying the 4.2% annual growth rate in demand for U.S. containerized cargo to intermodal rail in Hampton Roads demand would increase from 343,000 lifts in 2006 to over 1.1 million by 2035.

	UNCONSTRAINED FORECAST CONTAINERIZED CARGO						
	2006	2010	2015	2020	2025	2030	2035
HR Lift Demand (millions)	0.343	0.404	0.497	0.610	0.750	0.921	1.131

Table 5 Hampton Roads Intermodal Rail Forecast (in millions of lifts)

Until we consider additional events that can impact demand, it is believed that demand in Hampton Roads for intermodal rail will exceed 1.1 million lifts by 2035. This would represent 2.8% of the forecasted U.S. demand.

6.7 Current Hampton Roads Lift Capacity

Current volume is 343,000 lifts in Hampton Roads and is forecasted to increase to at least 1.1 million lifts by 2035. We now look at the lift capacity for Hampton Roads to handle this demand.

Current intermodal rail service for the area is offered at the Norfolk Southern Portlock yard in Chesapeake, Virginia or through on-dock rail at Norfolk International Terminals (NIT). Current capacity is estimated to be about 420,000 lifts annually. Lift capacity is calculated by considering

the length of working tracks at a facility and the throughput rate to build trains on those tracks. Working hours, number and length of trains scheduled all affect the capacity.

Portlock Yard

The Norfolk Southern facility at Portlock in Chesapeake, Virginia handles a segment of container cargo traffic for the region. The Portlock facility receives containers from Portsmouth Marine Terminal (PMT) and Newport News Marine Terminal (NNMT). While Norfolk Southern does not release cargo capacity figures for Portlock, it is estimated at 170,000 lifts annually. Further details regarding the Portlock facility are as follows:

- Portlock maintains three working tracks, each less than 2,000 feet long to build trains.
- Portlock manages 1,190 slots for wheeled and stacked parking of containers.
- Portlock's current hours of operation are from 7:00 a.m. to 8:00 p.m. Monday through Friday and 7:00 AM to 5:00 PM Saturday and Sunday.
- Portlock has three train departures (the 233, 227 and 22A) scheduled daily, except on Saturday with two scheduled departures.
- Between NNMT and PMT Portlock handles about 85,000 port related lifts annually
- Another 40,000 lifts are generated from APM through its leased terminal in Portsmouth

As seen below in Figure 14, Portlock was not designed as an ICTF. Portlock has limited working tracks from which to load and unload intermodal containers. The yard is predominately storage tracks with a hump yard typical of the days when coal and box cars were the dominant shipments. According to Norfolk Southern, they expect the demand at Portlock to diminish. When APM opens in July, 2007, Norfolk Southern expects that the 40,000 lifts from APM will transfer to their on-dock rail.

Unrelated to intermodal rail, Portlock should also be expecting a decline through its yard for any Ford business it previously handled. Portlock does not receive significant volumes of intermodal rail originating at west coast ports via mini land bridge. Norfolk Southern has not disclosed future plans for Portlock.



Figure 14 Norfolk Southern's Portlock Yard

Portlock's capacity is therefore considered at 170,000 annual lifts although demand for this facility is expected to decline. Portlock may be a facility that is not needed in the future. This is discussed further in other sections of this report.

Norfolk International Terminals (NIT)

Seen in Figure 15, Norfolk International Terminals (NIT) in Norfolk, Virginia provides on-dock rail. NIT provides daily NS train service to the Virginia Inland Port in Front Royal, Virginia. NIT builds another four to six trains a day for Midwest destinations that are picked up by Norfolk Southern and coupled with trains out of Portlock. NIT's current lift capacity is approximately 250,000 according to VPA.



Figure 15 Norfolk International Terminals (NIT)

6.8 Planned Hampton Roads Lift Capacity

With a current capacity of 420,000 lifts from NIT and Portlock combined, Hampton Roads will need to increase lift capacity to handle the 1.1 million lifts forecasted. Later we discuss events that will likely result in demand for intermodal rail services in Hampton Roads being higher than 1.1 million lifts. The following increases in lift capacity are planned for the area.

Norfolk International Terminals

The terminal has expansion plans in place, as illustrated in Figure 16 that should allow the development of an additional six to eight trains a day by 2012. NIT's current capacity of 250,000 lifts will increase to about 500,000 lifts by 2012.



Figure 16 Norfolk International Terminals (NIT) Expansion Plans

APM Terminals International

The new APM terminal in Portsmouth, Virginia is projected to open in 2007. APM will have on-dock rail that will provide rail capacity built during two distinct phases. Phase 1 will be fully operational in 2007. The location of on-dock rail at APM is illustrated in Figure 17 below. APM announced that six tracks will be open for use throughout this phase. From analyzing aerial photos and information from other sources the tracks appear to be almost 2,000 feet long. Phase 2 of development will be completed in 2009 adding another 6 tracks. APM's on-dock rail capacity is estimated to be at least 300,000 lifts.



Figure 17 APM Terminal

Craney Island Marine Terminal

The Craney Island Marine Terminal shown in Figure 18 below is in the design phase of development, and is scheduled to open in 2017. Phase I of development will offer limited on-dock rail capacity, reaching full capacity by the end of Phase IV around 2032. Craney Island on-dock rail capacity is subject to final design changes but current plans would allow it to reach a capacity of 1,000,000 lifts by 2032.



Figure 18 Craney Island Marine Terminal

Therefore, rail capacity for the area as shown in Table 6 below is currently about 420,000 lifts a year and will increase over time reaching almost 2.0 million lifts around 2035.

Lift Capacity	2006	2010	2015	2020	2025	2030	2035
Portlock	170,000	170,000	170,000	170,000	170,000	170,000	170,000
NIT	250,000	250,000	500,000	500,000	500,000	500,000	500,000
APM	0	300,000	300,000	300,000	300,000	300,000	300,000
CIMT	0	0	0	200,000	400,000	600,000	1,000,000
Regional Capacity	420,000	720,000	970,000	1,170,000	1,370,000	1,570,000	1,970,000

Table 6 Projected Regional Capacity in Lifts

6.9 Comparison of Demand and Capacity

Port volumes and volumes moving by rail increase in tandem. Without additional growth over and above the current forecast, demand is expected to grow from 343,000 lifts to just over 1.1 million lifts.

Currently 23% of the containers that move through Virginia marine terminals travel by rail. The ports have a goal of increasing that to at least 35%.

Coupled with the overall forecast for growth, by examining Table 7, and comparing it to the projected capacity illustrated in Table 6, one will also note that if the VPA achieves its goal of 35% moving by rail, this demand would not exceed capacity until after 2030.

HAMPTON ROADS REGIONAL PORT RELATED RAIL DEMAND LIFTS							
	DEMAND in LIFTS						
	2006	2010	2015	2020	2025	2030	2035
4.2% Straight Line Growth	343,000	404,357	496,711	610,158	749,516	920,703	1,130,988
Percent of Containerized Cargo by Rail	23%	25%	27.50%	30%	32.50%	35%	35%
Adjusted Demand (Percent by Rail and Higher Demand)	343,000	439,519	832,966	1,116,232	1,485,440	1,965,072	2,413,888

Table 7 Projected Port Related Intermodal Rail Demand in Lifts

Considering these forecasts allows us to gather some understanding of current and potential demand for intermodal service. This in turn allows us to conclude that there will be significant demand for intermodal rail services and the projected capacity for the region can keep pace. An ICTF located in Isle of Wight County may present values to Norfolk Southern but it will not be from handling unmet demand.

6.10 Norfolk Southern Rail Network and Operations

At this point we can conclude that the demand for intermodal rail services will grow, increases in lift capacity are planned and an ICTF located in Isle of Wight is not justified solely on the basis of providing additional lift capacity for Hampton Roads. An ICTF in Isle of Wight will need to be additive in its contribution to the stakeholders. To complete the discussion on rail and rail cargo a few more areas should be addressed. The first is the Norfolk Southern network.

Norfolk Southern Rail Network

Norfolk Southern operates 21,000 miles of rail across 22 states as seen in Figure 19. As shown below, Norfolk Southern provides good access between the east coast and the Midwest. Norfolk Southern can extend its reach to the west coast through agreements with other railroads.

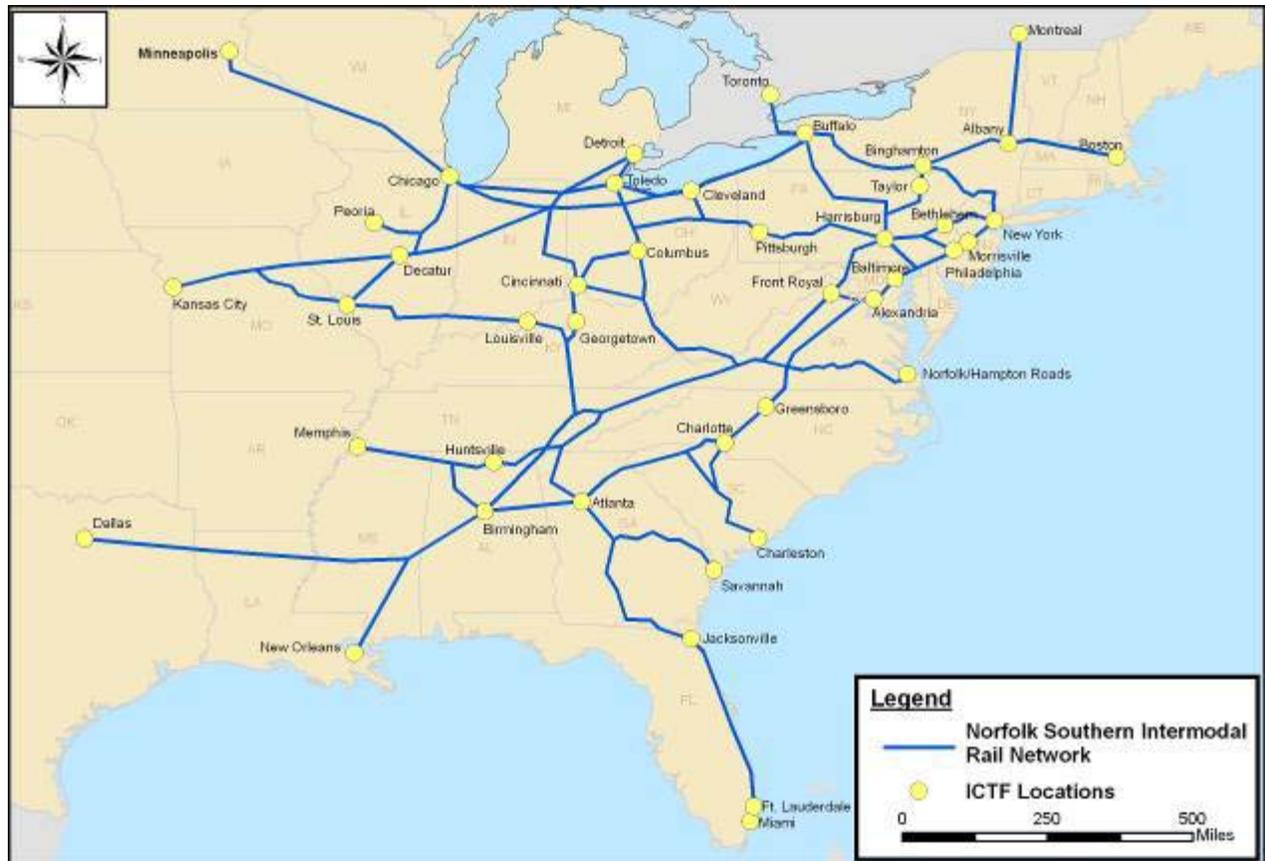


Figure 19 Norfolk Southern Intermodal Network

For containerized cargo, Norfolk Southern currently builds trains at Norfolk International Terminals and Portlock. As discussed in “planned lift capacity for Hampton Roads”, trains will also be built at the new APM marine terminal and Craney Island.

Crewe Railyard

Halfway between Norfolk, VA and Roanoke, VA is a rail yard called Crewe, VA. Crewe is viewed by Norfolk Southern as the location where trains will be serviced and regrouped based on the cargo destinations. Crewe is not close enough to the marine terminals to offer lift capacity. Crewe’s function will be to take trains arriving from NIT, Portlock, APM, Craney Island and potentially Isle of Wight and service them into trains heading for Chicago, Louisville, Columbus and other destinations.

Norfolk Southern is investing several million dollars to upgrade Crewe. Norfolk Southern has other investments in process to increase their capabilities. Working in conjunction with the Kansas City Southern railroad (KCS), Norfolk Southern is extending its reach to the southwest and Mexico. Norfolk Southern is also looking at network improvements that will result in more competitive north-south corridors from Atlanta to New York. All of these improvements will add to the value shippers perceive when considering if Virginia should be the port location for moving intermodal rail shipments.

Regionally, Norfolk Southern is working on two other projects of significance.

Heartland Corridor

According to Norfolk Southern the Heartland Corridor will be the east-west route with the highest available capacity when completed around 2010. The Heartland Corridor Initiative consist of a series of projects designed to significantly improve the mobility and increase rail freight capacity from the East coast through West Virginia, and onward to the Midwest. The initiative is intended to strengthen the economic vitality of the region and enhance efficiency and capacity of the nation's transportation network. The Heartland Corridor will provide faster double stack service to the Midwest from Virginia reducing the route by more than 200 miles and reducing transit times by a day. The transportation improvements of the Heartland Corridor translate into cost and time benefits for customers who use rail into and out of Virginia as illustrated below in Figure 20.

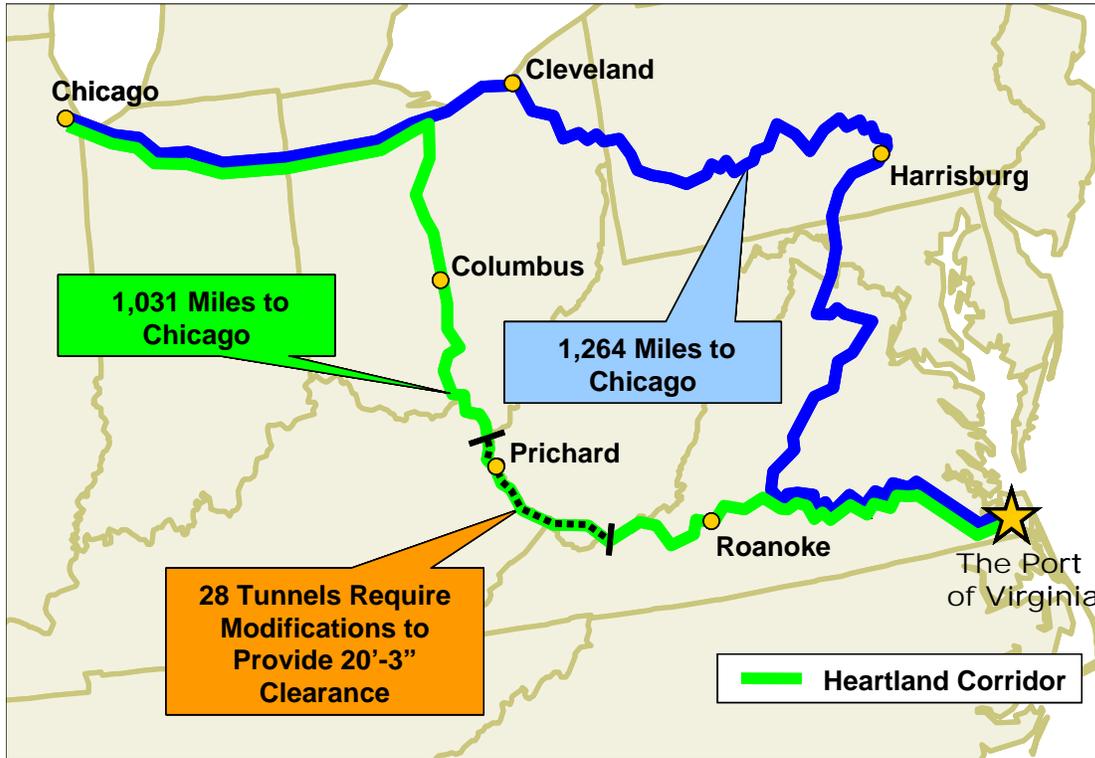


Figure 20 Heartland Corridor Route

Roanoke

There has been much publicized about a potential ICTF being developed near Roanoke, VA. This potential ICTF has met with mixed reactions from the citizens near Roanoke. If this ICTF eventually materializes there are two points relative to this opportunity worth mentioning:

1. The location of Roanoke is too far away from The Port of Virginia to impact the same movements that have been discussed thus far. Intermodal demand for an ICTF near Roanoke will come from different sources.
2. Norfolk Southern's expectation for Roanoke is approximately 15,000 lifts annually.

Therefore the development of the ICTF in Roanoke would have no effect on the opportunity being pursued by Isle of Wight.

Norfolk Southern's planned investments will provide shippers with an efficient, faster east-west rail corridor with capacity and room to grow. Shippers needing to ship between the east coast and the southwest extending into Mexico will also see improvements on the Norfolk Southern network.

6.11 Events Affecting Hampton Roads Intermodal Rail Demand

Overview

The existing and planned lift capacity for Hampton Roads should be sufficient over the next twenty five years for moving twenty and forty foot containers between rail and vessel that require no additional handling or storage. However, for Hampton Roads there are several events that can influence this demand favorably resulting in higher demand for intermodal rail services.

The results of this section demonstrate that it is prudent to plan for intermodal rail demand in Hampton Roads that exceeds the forecast of 1.1 million lifts by 2035 and perhaps even exceeds the 2.4 million lifts should the VPA reach their goal of cargo moved by rail being at least 35%. If a portion of the intermodal rail demand for Hampton Roads is generated, or better served, by an ICTF in Isle of Wight the size of that portion measured in lifts could be impacted by the size of the total demand. Several of these events are more likely if Isle of Wight achieves its plan of an intermodal park with an ICTF. Those will be discussed in detail in the next section.

Asian Cargo Shipped to East Coast Ports

Cargo arrives to East Coast ports from many destinations including Europe, South America, India and Asia. Much of the growth has been from the outsourced manufacturing of goods at a lower cost to Asia and India. The highest area of growth has been imports from Asia. This cargo has traditionally gone to west coast ports. Following a labor disruption on the west coast in 2002, the volume of Asian cargo entering the US via east coast ports is rising. The split of Asian cargo between regional port locations is shown below in figure 21.

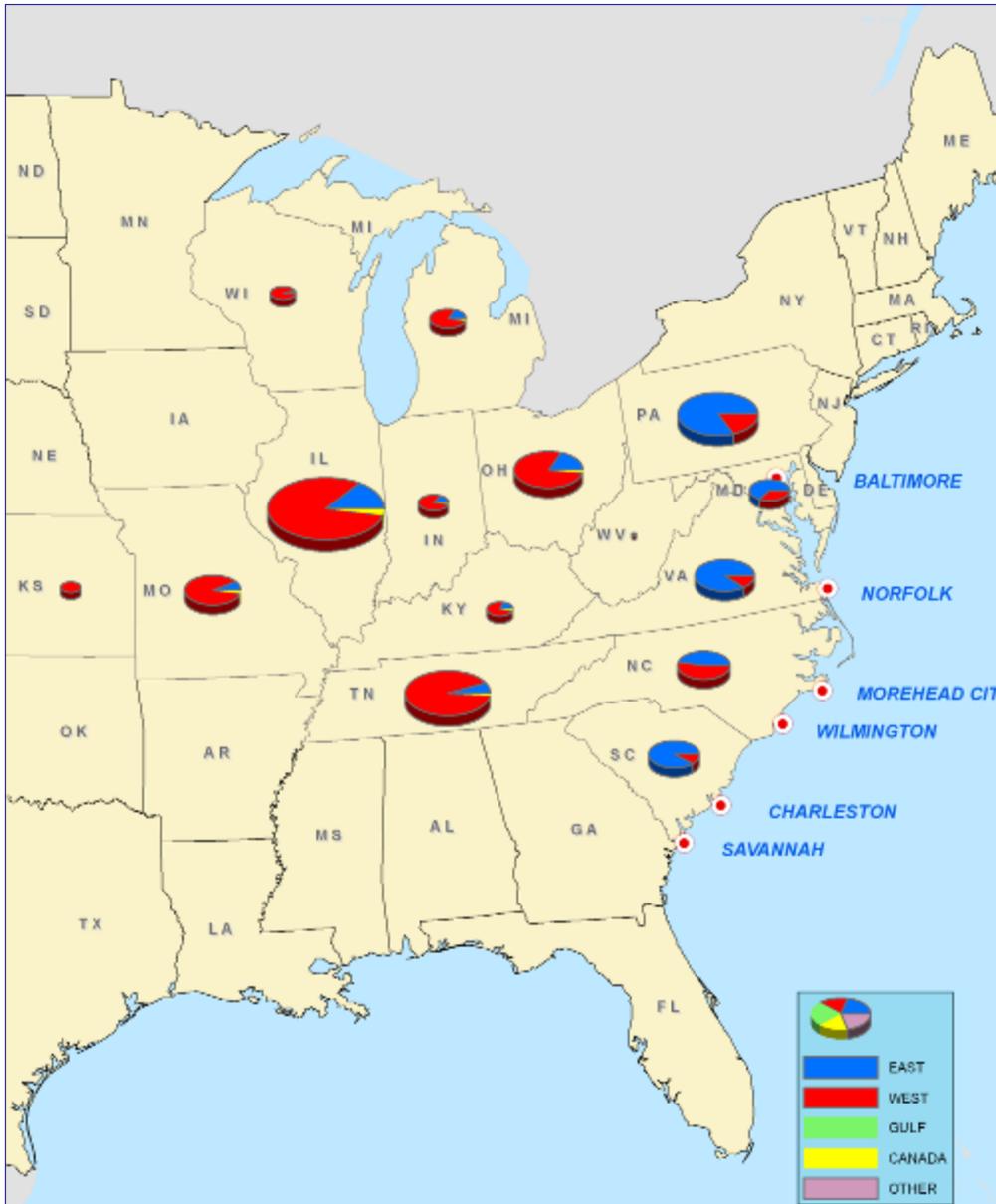


Figure 21 Port Allocation of Asian Import Business

East Coast ports receive the majority of Asian cargo that is destined for states on the Atlantic Seaboard. As you move inland the West Coast ports quickly become the port of choice for cargo originating from Asia.

East Coast ports however, are increasing the volumes of cargo they handle that originated in Asia and India some of which continues by rail to the Midwest. A number of factors have contributed to this. The most well-known was the labor disruption of West Coast ports in 2002. Importers learned not to put all of their eggs in one basket and began increasing Asian imports through East Coast ports. Capacity at West Coast ports and congestion has added to the increase of Asian freight moving to the East Coast. The Heartland corridor, continuing growth and congestion, increased use of the Suez Canal as a route to the East Coast and the eventual widening of the Panama Canal will continue to make the East Coast an increasingly attractive port of entry for imports from Asia and India.

Shown below is the breakdown amongst the East Coast ports of the Asian import freight they currently handle.

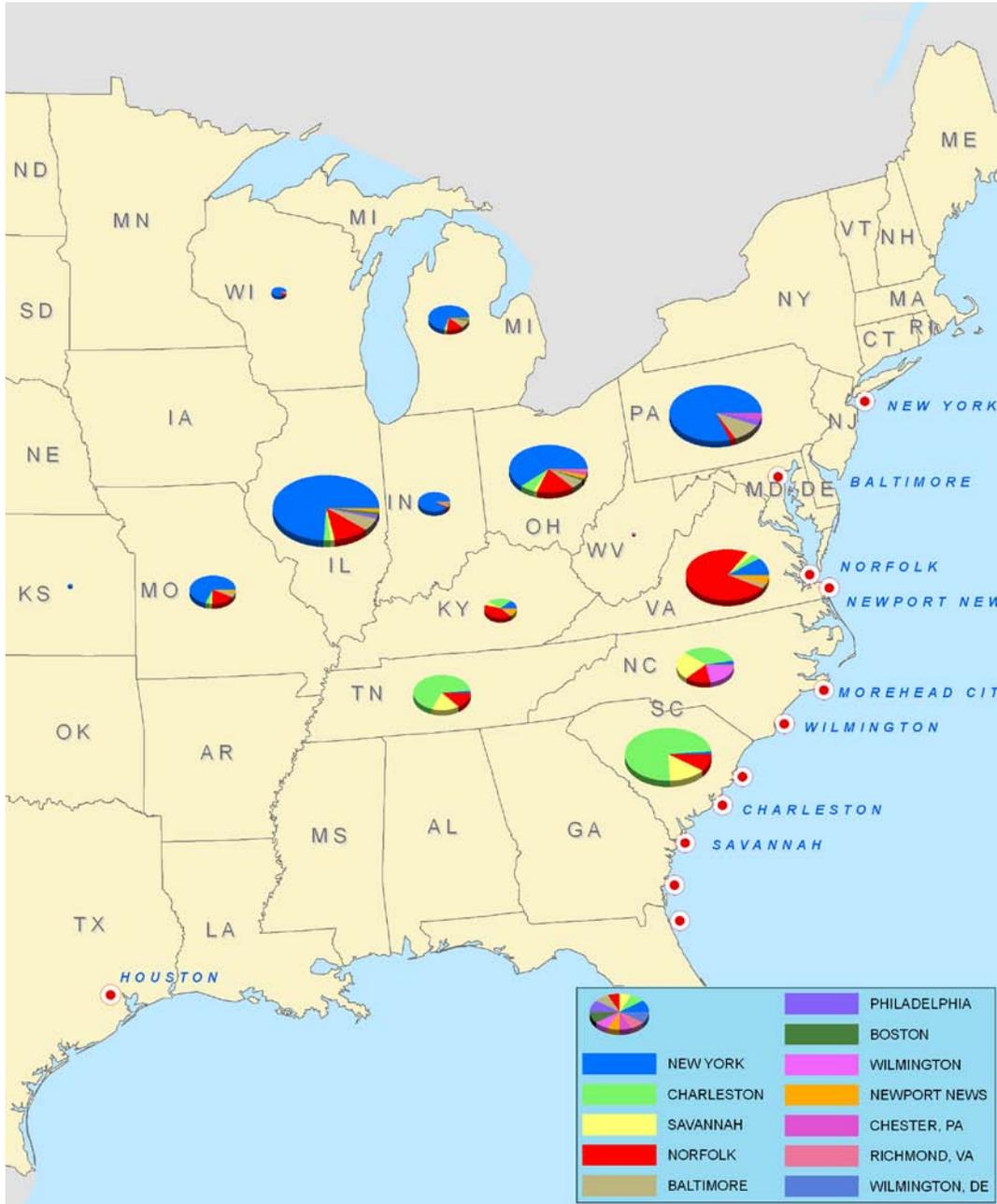


Figure 22 East Port Allocation of Import Business

New York has long been entrenched as the East Coast port that handled the majority of freight bound for Midwest locations such as Columbus and Chicago.

New York is experiencing congestion and capacity issues with its ports. Coupled with improvements in service and costs expected with the Heartland Corridor, an opportunity to influence the port of choice for this cargo exists.

Marine Terminal Capacity

The U.S. demand for containerized cargo will grow from 41.9 million TEU to an estimated 160 million TEU by 2035. This will result in over 80 million container movements. Marine terminals in the U.S. are reaching capacity. Forecasts predict that current capacity could be exhausted as early as 2010. Those ports that can increase capacity can achieve substantial gains. Ports that can keep capacity ahead of demand thereby continuing to move freight efficiently will be in a position to take freight from other ports that face capacity constraints and congestion.

This is very important to Virginia. With the largest port capacity expansion plan publicized in the U.S., The port of Virginia will be able to accept freight that wants to move away from congested ports. As additional productivity gains are then implemented, Virginia can stay in a lead position for efficient cargo movement and thereby be more selective in the freight it accepts. A percentage of every gain made moves by intermodal rail.

Without presenting the long list of automated and improved port processes considered viable, it is likely for The Port of Virginia to achieve at least twelve million TEU (6.9 million containers) by 2035.

Port Consolidation by Ocean Carriers

Maersk the world's largest ocean carrier recently announced that it will be consolidating the number of port locations where it offers services to the Midwest. Currently shippers have over 250 routing options. It is believed other ocean carriers providing door to door service will follow suit. This consolidation will generate economies of scale for Maersk. Norfolk Southern believes that New York, Virginia and Georgia will become the consolidation spots on the east coast for port shipments moving by intermodal rail to the Midwest. It would make sense for the APM terminal owned by Maersk to see a disproportionate share sent to Virginia. Additionally when one considers how this cargo will be allocated between these consolidated stops one needs to consider that Savannah is not an attractive route to some of the larger Midwest destinations such as; Chicago, Columbus and Cleveland.

All Water East Coast and West Coast Rail Rates

Rail rates from the west coast have increased dramatically, rising by 20% to 40% in the last two years. This makes the cost of transporting containerized freight to the Midwest less expensive through east coast ports. Door to door transit times using this route are seven to ten days longer than west coast ports and mini land bridge to the Midwest.

Summary of Positive Events

There is every opportunity for intermodal rail volumes to increase in Virginia over and above a straight line forecast. The marine terminals have plans that will increase capacity more than other U.S. ports. Norfolk Southern and VPA have the same goal of increasing the percent of port related cargo that moves by rail. The Heartland Corridor will provide capacity that other ports will not have. Consolidation by ocean carriers will drive more intermodal freight headed to the Midwest through Virginia. Costs from the west coast to the Midwest are increasing making east coast routes more attractive.

Therefore the events needed to reach an intermodal rail demand of 2.4 million lifts or more are favorable.

6.12 The Impact of an ICTF in Isle of Wight

When an ICTF is considered for Isle of Wight in light of the findings in the previous sections we must determine the impact on the key stakeholders.

An intermodal park developed in Isle of Wight benefits the Virginia Port Authority. Some of the businesses that occupy up to the 20 million square feet that could be built will be port users. If the availability of an ICTF is part of the equation that led them to select Virginia it benefits the VPA with more marine terminal cargo.

Equally, economic benefits are generated for Isle of Wight from the businesses that occupy and operate at the intermodal park generating jobs and tax revenues. An ICTF also benefits Isle of Wight unless it goes unused, did not attract any of the businesses to the intermodal park and another 2 million or more square feet of distribution centers should have been built in the area where the ICTF would be constructed.

Economic benefits would also be generated in the form of new business for Norfolk Southern. There are possible operational advantages that Norfolk Southern should consider.

There are four distinct opportunities listed below:

1. The market will demand Import container transloading into 48 and 53 foot domestic containers
2. Export consolidation is an untapped market and will bring new rail business to Hampton Roads
3. Marshalling trains in Isle of Wight as a consolidation point for rail shipments to and from NIT, Portlock, APM, Craney Island and an intermodal park in Isle of Wight might be more efficient
4. Some of the 20 million square feet constructed at the intermodal park might be occupied by new rail users

A marketing analysis was not performed as part of this study. Therefore we can not predict the volume of new intermodal rail business that will be generated from tenants at the intermodal park. Following is discussion on the other three opportunities.

Transloading Opportunity at Isle of Wight

As rail congestion continues to grow more 20 and 40 foot containers are unloaded and then reloaded into 48 and 53 foot domestic containers. In California, where port volumes have grown over 200% since 1997, about 20% of all west coast containers are transloaded before moving inland by rail to their destination. This trend will move to the east coast as demand and congestion increases. The congestion that will, in part, drive this is supported by previously mentioned forecasts and the May 2007 report issued by the American Association of State Highway and Transportation Officials (AASHTO) on America's Freight Challenge.

Currently, the marine terminals in Virginia are not designed for and will not be allocating space to handle transloading. The Portlock ICTF does not have a transloading facility located near its yard. When the 20% rate for container transloading experienced on the West coast is applied to the rail bound containers forecasted for Virginia as many as 400,000 to 500,000 containers might need to be transloaded by 2035.

Increasing congestion and the growth of cargo volumes will drive the shift to increase transloading on the east coast. There are cost advantages for shippers and transportation providers also. A 53 foot container provides 3,800 cubic feet of cargo capacity. A 40 foot international container provides 2,377 cubic feet of cargo capacity. The 53 foot container can carry 3.2 TEU or 60% more than the 40 foot container with 2 TEU. Twenty 53 foot domestic containers would carry the cargo equivalent of thirty-two 40 foot containers or sixty-four 20 foot containers.

Every container requires the same lift on and off of rail regardless of size. Train operating costs to move a 53 foot container are almost identical to the 40 or 20 foot container except for a small incremental fuel cost to move more cargo weight contained in a 53 foot container. The rail

transport equipment is available and in fact it is not uncommon to see 20 and 40 foot containers being moved in rail cars designed to hold 53 foot containers.

There are transloading costs that would need to be offset by lower intermodal transit costs. The 40 foot container must be drayed to a cross-dock. Current drayage rates average around \$65.00 and to Isle of Wight we considered an average around \$85.00 to account for some additional mileage. International containers would then need to be unloaded and re-stuffed into 53 foot domestic containers. According to American Port Services, the labor and cost required to transload cargo from 20 and 40 foot containers into domestic containers will vary depending on the condition of the freight. Freight in Cartons or palletized freight is transloaded quicker than loose freight. As a rule of thumb however, American Port Services estimates that transloading can usually be completed with four to eight hours of labor.

If a fully loaded labor rate of twenty dollars an hour is used then the cost of transloading would range between \$165 and \$245. If this transloading cost is lower than the difference between shipping one 53 foot domestic container and shipping 3.2 TEU by rail in international containers, then transloading provides transportation cost advantages.

Rail rates are often subject to private negotiations between the shipper and the railroad. However, we can conclude that if twenty 53 foot containers were transloaded using an average cost (\$205) between the ranges discussed, then one could expect to pay about \$4,100. In this example transloading would be more cost effective unless the rail rate for the twelve additional 40 foot containers needed to move the same amount of cargo was \$341.00 each. Privately negotiated rail rates were not available but a rate of \$341.00 to destinations like Chicago, Columbus, and Memphis would be lower than the operating costs the railroads publish in their financial reports. When Norfolk Southern's annual report allows us to determine their average intermodal rail rate is about \$605.00.

One prevalent reason this has not taken hold on the east coast is the availability of 48 and 53 foot domestic containers to transload international containerized freight into. According to Norfolk Southern, much of this equipment is loaded on the west coast, travels to Chicago and New York and then returns to the west coast empty. An opportunity exists for this equipment to move more loaded miles if it is diverted to Virginia, and loaded for Midwest points before making its way back to the west coast empty. The opportunity to bring this equipment to the area is even further enhanced if the export consolidation opportunity discussed previously can achieve momentum. While this is not a forgone conclusion, an ICTF in Isle of Wight, direct served by the Norfolk Southern, surrounded by millions of square feet of cross-dock and distribution center space would be able to offer this service as an added attraction while many other locations could not.

Export Consolidation Services

This is a sizable opportunity for everyone. There is a corridor of eleven states that are well served by the marine terminals in Virginia and the transportation infrastructure. In 2006 these states exported \$242 billion dollars in goods overseas. Not all of it went by ship, container or to a foreign port of call that is best served by an east coast port.

However, as shown in Table 8 \$79.4 billion went to markets such as Europe that are served by Virginia. While not all of these commodities went by container, the top commodities for these state exports are listed below and indicate that much of these exports went by vessel and by container:

- Transportation Equipment
- Machinery
- Electronics
- Chemicals
- Fabricated metals

Of the \$79.4 billion in goods exported from these states the U.S. Maritime Administration, U.S. Department of Commerce, Virginia Maritime Association and the Virginia Port Authority reported that the VPA marine terminals handled \$17.1 billion of the total of which \$13.4 billion was containerized.

ANALYSIS OF EXPORTS ALONG THE PORT OF VIRGINIA SERVED CORRIDOR													
(BILLIONS)													
State Reporting Exports	US Ranking	Number of Exporters	Destination Countries	Gross \$ Export	NAFTA Can/Mex	Asia	Australia & Other	Europe	Latin America	Middle East	Africa	Net East Coast Available	VPA On Ramp NS Lifts
Virginia	18	3,944	202	\$14.1	\$3.1	\$3.2	\$0.3	\$5.4	\$1.1	\$0.6	\$0.4	\$7.5	16,552
North Carolina	15	6,876	207	\$21.2	\$7.2	\$5.2	\$0.3	\$4.9	\$2.8	\$0.6	\$0.2	\$8.5	0
West Virginia	42	846	132	\$3.2	\$1.1	\$0.8	\$0.1	\$1.0	\$0.2	\$0.0	\$0.0	\$1.2	0
Kentucky	16	2,853	186	\$17.2	\$7.6	\$3.2	\$0.1	\$4.9	\$1.0	\$0.3	\$0.1	\$6.3	23,728
Tennessee	14	4,117	192	\$22.0	\$9.2	\$5.0	\$0.4	\$4.6	\$1.4	\$1.2	\$0.2	\$7.4	784
Ohio	9	11,114	205	\$37.8	\$21.0	\$5.2	\$0.8	\$7.1	\$1.5	\$1.8	\$0.4	\$10.8	30,128
Indiana	13	5,372	195	\$22.6	\$12.2	\$2.6	\$0.6	\$6.1	\$0.7	\$0.2	\$0.2	\$7.2	0
Michigan	6	10,314	195	\$40.4	\$28.5	\$3.7	\$0.3	\$5.0	\$1.6	\$1.1	\$0.2	\$7.9	9,177
Illinois	5	13,972	209	\$42.1	\$15.7	\$7.9	\$2.2	\$11.3	\$3.2	\$1.0	\$0.8	\$16.3	59,875
Missouri	19	4,018	191	\$12.8	\$6.1	\$3.6	\$0.3	\$2.0	\$0.5	\$0.2	\$0.1	\$2.8	7,580
Kansas	22	2,020	192	\$8.6	\$3.3	\$1.7	\$0.1	\$2.3	\$0.6	\$0.3	\$0.3	\$3.5	6,404
		65,446	191	\$242.0	\$115.0	\$42.1	\$5.5	\$54.6	\$14.6	\$7.3	\$2.9	\$79.4	154,228
VPA Reported Export Dollar Value												\$17.1	
East Coast Exports Available												\$62.3	
U.S. 2006 TOTAL EXPORT (Billions)				\$1,037.1									
Source US Department of Commerce													

Table 10 Analysis of Exports on the Virginia Served Corridor

This leaves \$62.3 billion that should be considered available to shift to Virginia. When the states of; Kentucky, Tennessee, Ohio, Indiana, Michigan, Illinois, Missouri and Kansas on this corridor are evaluated 80% of the cargo being discussed comes from states that would be best served by rail for these exports.

Acquiring this business requires a concerted effort and has not been accomplished by any one port area yet. Consider the difference between the 65,446 exporters listed by the US Department of Commerce as the exporters who generated this volume compared to the imports handled by a port, railroad or intermodal park that gets a WalMart, Home Depot, Target or other large retailer to select their location for opening a regional import warehouse. Although just about 80% of the volumes reported in Table 8 were generated by less than 20% of the total exporters identified according to the US Department of commerce, this still involves over 13,000 separate exporters.

Further consider that while the opportunity to more than double the port related export freight handled by; Norfolk Southern, VPA and the intermodal park lucky enough to land the export consolidation business is dramatic, it likely involves a combined selling effort by the port, railroad and intermodal park at the local municipal chamber of commerce level if not to each individual exporter. Further, involving the ocean carriers on evaluating vessel strings and routes for these exports might be required to land the business.

This opportunity is further enhanced when the exporters ship their cargo in 48 and 53 foot domestic containers to the intermodal park in Isle of Wight where it is then transloaded into 20 and 40 foot domestic containers.

There is value to the exporter being able to move a little over three TEU in one transportation move. Norfolk Southern is carrying three TEU of tonnage with one on-ramp and one-off ramp lift and Isle of Wight's intermodal park has cross-docks in operation handling the freight.

Discussed below, bringing 48- and 53-foot domestic equipment into Hampton Roads filled with export product positions Hampton Roads very well for transloading outbound cargo which is another opportunity for new business.

It is not possible to calculate the exact number of containers, lifts, TEU's and transportation movements that would be involved. There is a valid reference point to consider in that the \$13.4 billion in containerized exports reported by VPA moved in 590,506 containers. The VPA inbound intermodal rail movements from these states totaled 154,228 over a recent 12 month period of time. Currently only up to 26% of the exported containers reported by VPA are coming in by rail.

Further evidence of this opportunity can be seen when one compares the inbound export rail shipments on a state by state basis. For example, Kentucky reports exports to the regions highlighted in Table 10 \$6.3 billion and VPA reported 23,728 inbound rail movements. Tennessee on the other hand has a similar export volume reported of \$7.4 billion yet VPA only reports 784 inbound containers received by rail.

When evaluating Figure 23 below, how much of the \$60 billion in additional exports could move to Hampton Roads over time? As one of only three to four east coast ports positioned for this business doubling the current export volume is achievable.

The major competitor ports will be NY/NJ, and Savannah. Charleston may provide some competition into North Carolina and Tennessee. If Hampton Roads is able to acquire these customers and this cargo, it is in addition to the increases already forecasted for growth.

This report does not write a business plan nor perform an in depth market analysis for this business. However, with the addition of an intermodal park in Isle of Wight with an ICTF, Hampton Roads can make an offering to the market place that should be able to capture this opportunity in light of;

- Maersk to be followed by others consolidating the port locations where it will provide door to door services to the Midwest
- Service Improvements from the Heartland Corridor (OH, IL, WV)
- Hampton Roads relative position to Kentucky, Tennessee
- Taking a leadership position to consolidate the export sector and get in front of other regions not focusing on exports

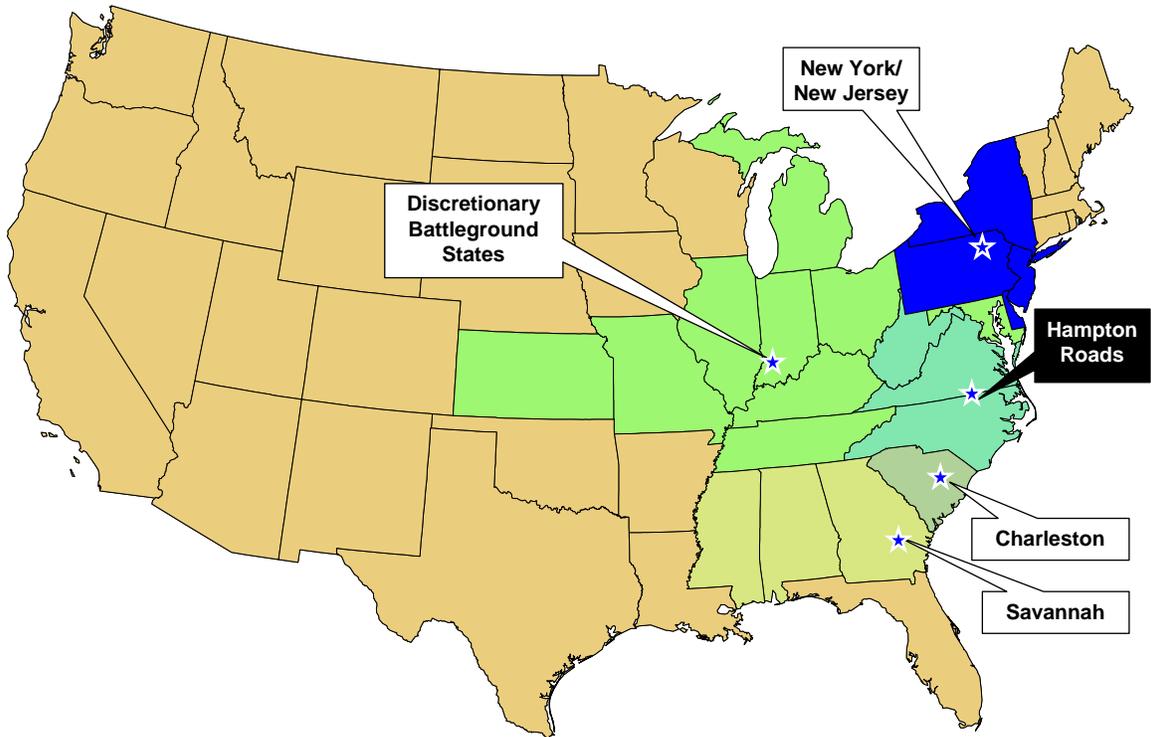


Figure 23 Intermodal Rail Corridors by Logical Port Preference

Our research into the market place indicates that the current trend has been to go after the large import retailer. Many places offer export and export consolidation services but none were discovered that marketed this service as part of their brand or primary offering.

Marshalling and Operations

Trains will go to and from NIT, APM, Craney Island, Portlock and potentially Isle of Wight. Isle of Wight could be used as a consolidation and deconsolidation point to sort these trains. This might create operational efficiencies for Norfolk Southern. Perhaps a shortline could be considered to handle rail movements between Isle of Wight and to the east towards the marine terminals.

If Crewe is used as the location to consolidate and deconsolidate trains it would still be prudent to look at Isle of Wight as a consolidation point. If a train crew can make round trips between Isle of Wight and Crewe in one shift allowing for both the transit time and time needed to check and couple trains, this might be advantageous if roundtrips between Crewe and NIT, APM, Craney Island and Portlock cannot be completed in one shift.

6.13 Rail Conclusions

Isle of Wight has developed a concept for a large Intermodal Park that could include an ICTF facility. The ICTF envisioned would have a capacity of up to 900,000 annual lifts.

We conclude that an ICTF in Isle of Wight should be pursued. It is likely that a combination of the following events occurring in varying degrees will justify this conclusion:

1. Export business can be identified and located to the intermodal park
2. Transloading import cargo into domestic containers will become a requirement for east coast transportation services
3. An efficient routing to bring 48 and 53 foot domestic containers to the region can be developed
4. The occupants of the 20 million square feet of space in the intermodal park will generate new rail business
5. An ICTF in Isle of Wight might also generate operational efficiencies for Norfolk Southern for routes between Hampton Roads and the Midwest.

Hampton Roads will be well positioned to attract considerable volumes of intermodal rail freight. Some of this freight would be well served at an ICTF in Isle of Wight.

- The capacity of Virginia's marine terminals are doubled or tripled with the openings of APM and Craney Island.
- This capacity will be consumed by overall growth of demand for containerized cargo in the U.S.
- The un-congested ports that can move cargo efficiently in the future will be more attractive than congested ports. Being more desirable provides an opportunity to be more selective and therefore partner with entities that generate more intermodal rail shipments
- The Heartland Corridor provides the only sizeable intermodal rail capacity from the east coast to the Midwest in the face of growing congestion
- Congestion in other ports increases as they cannot add as much capacity
- Ocean carriers providing door to door services consolidate east coast options to New York, Virginia and Georgia
- An ICTF in Isle of Wight does not compete with the planned functions of the facilities in Roanoke and Crewe

Norfolk Southern would prefer the 1,740 acre parcel be developed as a manufacturing site that relied heavily on rail freight to operate. This would guarantee new business for Norfolk Southern. This is an event that has a great deal of uncertainty and there is no specific manufacturer that was identified in this study that is considering the site at the current time. However there is room allocated in the concepts, and time for one or more manufacturers to locate to the intermodal park over the years that it is under development. For example, the Ford Plant in Norfolk, shown below in Figure 24 occupied 186 acres. If this facility was placed on the properties identified by Isle of Wight, it would occupy less than 10% of the developable acres.



Figure 24 186 Acres Occupied by Ford Plant

7 Opportunities, Constraints, Contingency Actions

When the property attributes, the concepts for development of an intermodal park, and the role intermodal rail can play are considered, Isle of Wight moving forward with this opportunity is appropriate. There are several important opportunities, constraints and possible contingency actions Isle of Wight should be aware of and address as they proceed. The following section discusses these

7.1 The Norfolk Southern Property

Opportunities

At 1,740 acres the Norfolk Southern property represents an opportunity for Isle of Wight to more than double the size of an intermodal park that would result from developing the Shirley T. Holland and International Paper properties.

Set between the two aforementioned properties, this would also provide continuous access across the intermodal park.

The Norfolk Southern property also provides the opportunity to consider developing an ICTF with its direct access to the Norfolk Southern rail line.

Constraints

Isle of Wight does not own this property. Norfolk Southern must be willing to sell the property.

Norfolk Southern has expressed skepticism in the past that demand for intermodal rail services would support an ICTF on this property.

The wetlands delineation conducted on this property was completed in 1992. Some change in the location of jurisdictional wetlands may have occurred over the last fifteen years which might add additional constraints to the development of this property.

Contingency Actions

If Norfolk Southern is willing to let Isle of Wight acquire the property, the purchase should be contingent on a new wetlands delineation.

If Norfolk Southern is not willing to sell the property to Isle of Wight in its entirety, Isle of Wight should consider a joint venture or partnering arrangement with Norfolk Southern that develops the property in stages along agreed to milestones. For example:

1. An agreement could be reached on developing the access road that connects Shirley T. Holland and International Paper using an agreed to route.
2. An agreement could be reached on the area between the high voltage transmission lines and the Norfolk Southern rail line being held in reserve as the location of a potential ICTF.
3. As Shirley T. Holland and International Paper are developed and occupied an agreement could be in place that allows the development to begin encroaching on the Norfolk Southern property if NS has not identified the rail served business they hope will occupy the property one day
4. An ICTF could be constructed in phases allowing some of the investment to be deferred until demand materializes. Working and storage tracks can be added as demand increases

Isle of Wight and the Virginia Port Authority should conduct a series of discussions with Norfolk Southern to present this opportunity and answer additional questions or concerns as they arise.

7.2 The International Paper Property

Opportunities

Isle of Wight has an agreement in principle with International Paper to acquire this property. If this property is acquired it increases the size of the current intermodal park by more than 100%

Constraints

This property has no utilities on site.

This property does not have direct access to the Shirley T. Holland property, US Route 460 or US Route 258.

Wetlands information is available for the International Paper property but a wetlands delineation was not available.

Contingency Actions

Isle of Wight should complete a wetlands delineation on this property.

Isle of Wight will need to connect to utilities and find an additional source of water and construct a water tower on this property for it to be developed.

Isle of Wight should ensure it has an easement from the International paper property to access US Route 258.

7.3 Transportation Access and US Route 460

Opportunities

There are opportunities presented by both the existing and planned transportation infrastructure in and surrounding the proposed site.

US Route 460 has been identified by Virginia for improvements that will result in an interstate quality route over the 55 miles between Petersburg and the Suffolk Bypass. This will provide sufficient vehicle capacity to support the development of all three subject properties

Existing roads near and through the subject properties provide a good foundation for developing an on-site road network that provides good traffic flows.

The existing US Route 460 has some capacity to support development of an intermodal park.

Constraints

The improvements to US Route 460 have been approved by the Virginia legislature but the funding mechanisms and construction schedules have yet to be implemented. There is some capacity on the existing road infrastructure for development to continue but US Route 460 today is not an ideal road as traffic increases.

The current US Route 460 improvement plan calls for interchanges at the Suffolk bypass and at US Route 258. These interchanges are approximately 9 miles apart. Under this plan, the US Route 258 interchange would be the only improved access point on US Route 460 to the Intermodal Park and the town of Windsor. This can cause high congestion levels if additional ingress/egress points for the Intermodal Park are not developed.

The alignment of the new US Route 460 improvements are proposed and subject to change as the design is completed and construction commences. This has the potential to impact the area needed for an ICTF.

Contingency Actions

Isle of Wight should proceed with the understanding that there is capacity on US Route 460 that can be used to access an intermodal park before the planned improvements are completed.

Isle of Wight cannot control funding being completed for the new US Route 460 but they should continue to aggressively lobby the state along with the Virginia Port Authority for this to move forward.

Isle of Wight should be actively engaged during the development, design and construction of US Route 460 focusing on several critical points:

1. The final alignment
2. Adding an interchange near Old Mill Road
3. The appropriate points where US Route 460 should be raised allowing for existing and future access roads to connect the Shirley T. Holland property with the Norfolk Southern property

While it may not be viable at this time Isle of Wight should monitor the zoning, easements and buffers covering the 6.5 miles from the southern tip of the International Paper property south to US Route 58. If US Route 460 improvements are seriously delayed or never materialize, this could become an acceptable route to get to the intermodal park.

7.4 Utilities and Infrastructure

Opportunities

There are existing utilities near the properties. Electricity, Communications and Wastewater have sufficient capacity

Constraints

Water and Natural Gas do not have sufficient capacity to fully develop these properties

Contingency Actions

Through the necessary funding mechanisms Isle of Wight should be prepared to construct two or more water towers with capacities up to two million gallons each on the properties as they are developed.

For water sourcing there are several options Isle of Wight should pursue. An aquifer currently supplies water to Isle of Wight and is considerable in size. It may contain sufficient capacity but will require digging more wells. The Lake Gaston supply line runs through the properties identified by Isle of Wight. Lake Gaston may be another source that Isle of Wight can access.

Columbia Gas believes that with a point of distribution connection built for these properties, its planned betterment projects could supply natural gas to an intermodal park by 2010.

The table previously presented on utility requirements outlines each utility and comments on needs.

7.5 Zoning and Master Planning

Opportunities

The three properties being considered by Isle of Wight at 2,748 acres present an opportunity to place similar and compatible businesses with similar infrastructure needs next to each other.

The three properties identified are surrounded by rural and mostly uninhabited properties. This presents Isle of Wight with an opportunity to design master plans for the surrounding area in anticipation of future growth. This will eliminate or minimize potential land use conflicts.

Constraints

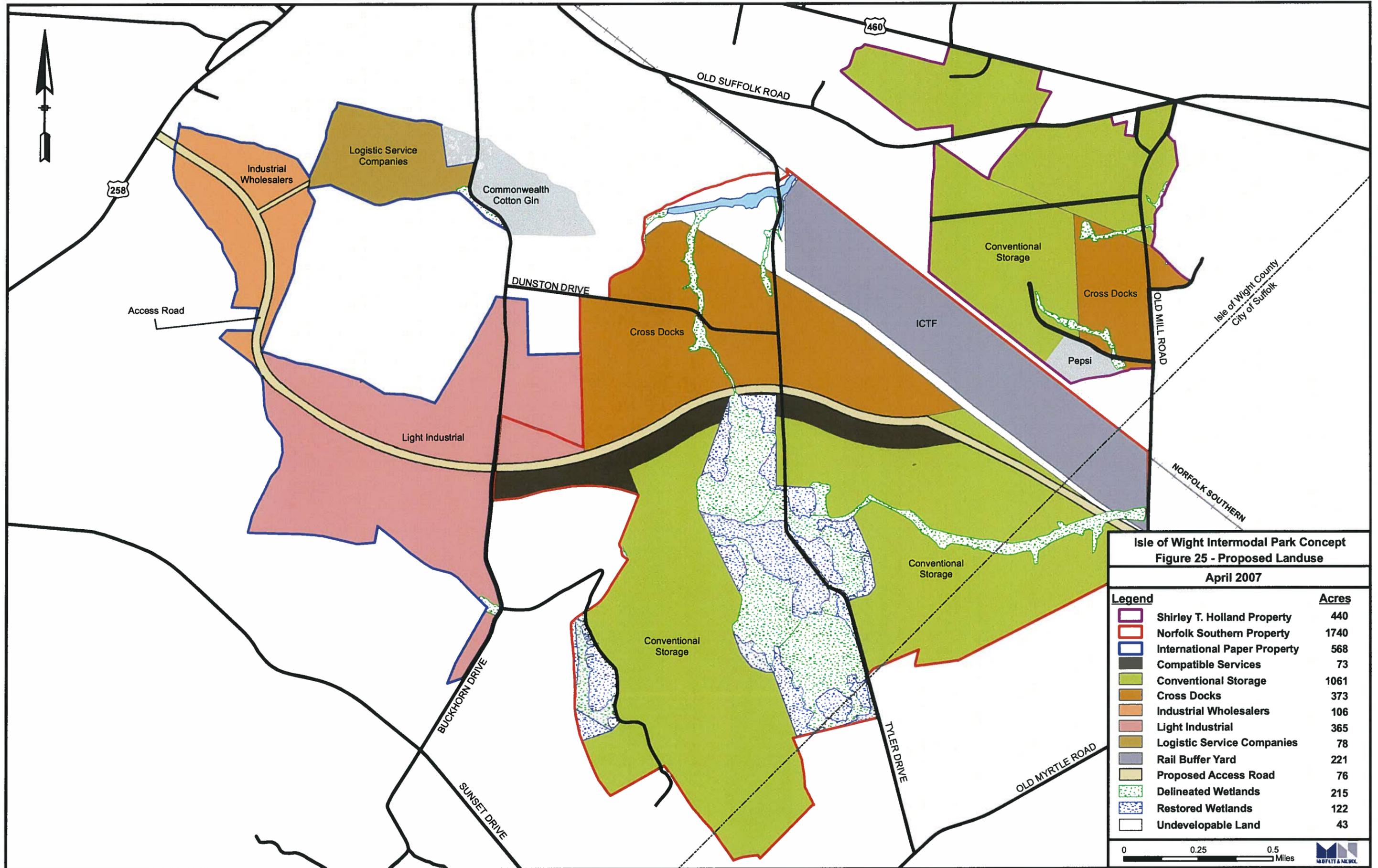
As the momentum and economic opportunity from the proposed intermodal park builds, developers of other economic sectors will see an opportunity. Employees will need places to live nearby. These employees will need places to shop. Family members who are not interested in working in the distribution and logistics sector create an expanded workforce available for other sectors such as; medical, financial and retail. Without a master plan, many of these developers could acquire properties that if developed near the intermodal park could curtail future expansion.

Developers and tenants would prefer to select a parcel from the total available. Without an internal property allocation that controls the types of distribution services to be constructed for particular areas, areas best suited for one type of service might be developed for other types strictly based on the chronological order in which tenants arrive to the intermodal park. For example, this report concludes that high volume cross-dock facilities that can transload cargo for rail shipments should be close to the ICTF. Without a zoning plan for the intermodal park, an industrial wholesaler who may find the proximity to the proposed interchange at Old Mill Road and visible frontage along the new US Route 460 attractive may want to build on a site that is ideal for a cross-dock.

Contingency Actions

A land use plan for the intermodal park as illustrated in Figure 21 can be prepared in advance. This would pre-assign areas for future development.

A master plan for the surrounding area could be developed. This master plan would anticipate not just the growth and possible expansion of industrial and distribution properties but also anticipated growth in residential, retail, educational, government services and other land uses. A good master plan could pre-zone and identify areas that would avoid land use conflicts. Figure 22 shows the three properties in relationship to the rest of Isle of Wight County.

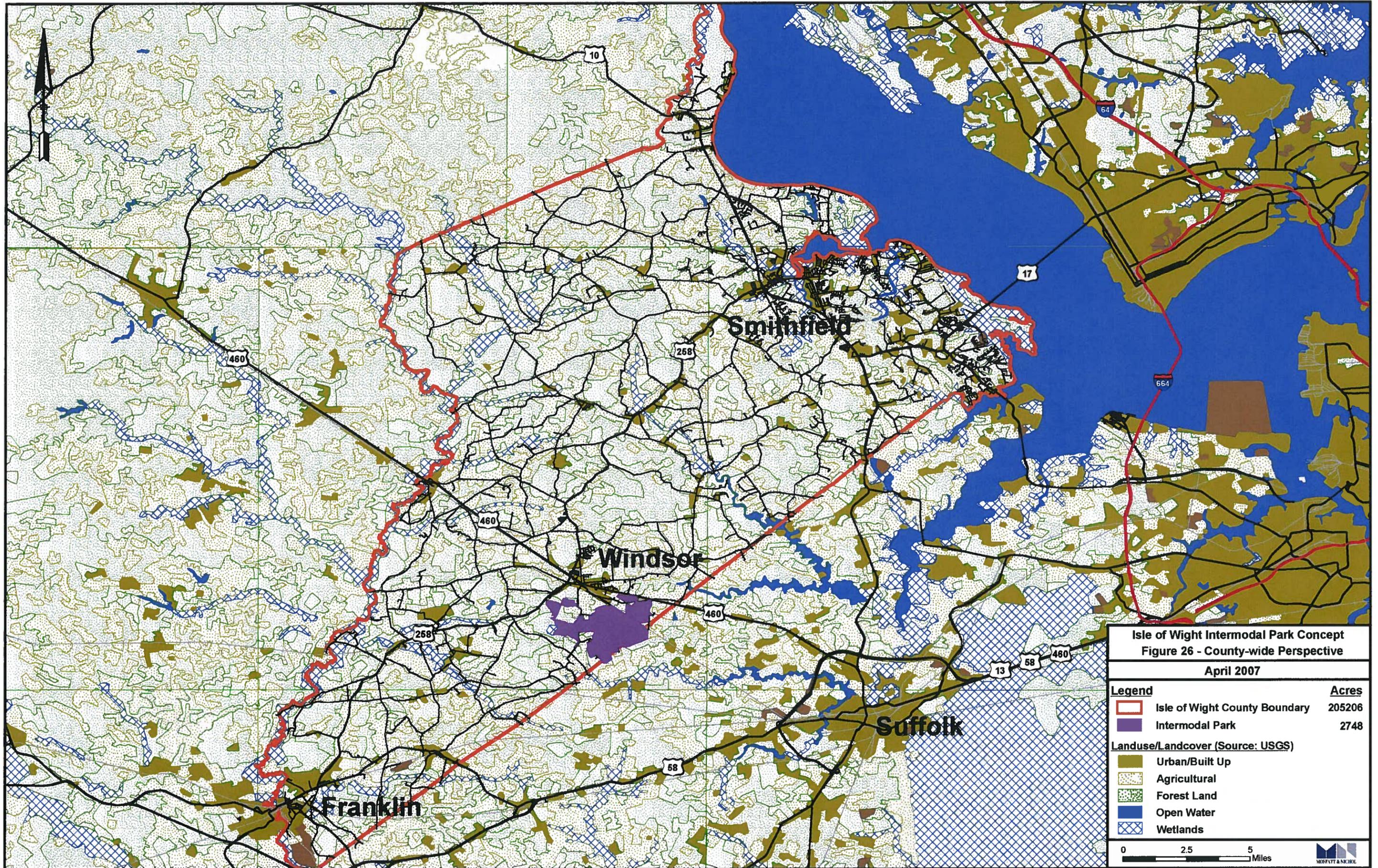


Isle of Wight Intermodal Park Concept
Figure 25 - Proposed Landuse

April 2007

Legend		Acres
	Shirley T. Holland Property	440
	Norfolk Southern Property	1740
	International Paper Property	568
	Compatible Services	73
	Conventional Storage	1061
	Cross Docks	373
	Industrial Wholesalers	106
	Light Industrial	365
	Logistic Service Companies	78
	Rail Buffer Yard	221
	Proposed Access Road	76
	Delineated Wetlands	215
	Restored Wetlands	122
	Undevelopable Land	43





7.8 Summary

The opportunity for Isle of Wight to develop an intermodal park on the three properties it has identified does not face any hurdles that cannot be overcome. There are constraints previously discussed that Isle of Wight must be aware of and manage as they proceed.

Isle of Wight is well positioned to be successful when one considers:

- The market and forecasted demand for additional distribution space
- Isle of Wight's proposed location compared to the corridors that freight travels along
- The size of the three properties identified with the advantage of shared boundaries
- The estimated condition of the properties
- The existing road and utility infrastructure
- The availability of solutions for additional infrastructure needs
- The advantages of an interstate quality route to and from these properties
- Access to rail
- The demand for rail services that can be generated
- The County's position and resources allocated for aggressively supporting this opportunity
- The support and backing of the Virginia Port Authority

All Projects have risks and constraints that need to be monitored and managed. The proposed intermodal park on 2,748 acres in Isle of Wight is no exception. Although none of the risks appear to be showstoppers the final outcome for Isle of Wight can be affected as these events containing risk materialize. Those events included in this study that can have a material impact on this opportunity are;

- Acquisition of the Norfolk Southern property
- Norfolk Southern's willingness to construct an ICTF
- Water Supply
- Natural Gas Supply
- The new US Route 460 not materializing as envisioned
- Private developers creating land use conflicts close to the intermodal park once they see momentum building and opportunities increasing

Tracking the events that contain these risks and executing contingency plans in place to influence the outcomes will keep Isle of Wight from getting caught off guard over the years during the development of an intermodal park.

8 Conclusions

The properties identified by Isle of Wight present a sizable 2,748 acre tract of land with about 2,200 acres that could be developed. The condition of the properties appears to be suitable and there are no show stoppers for utilities or infrastructure requirements. New business can come to the area that will generate more rail business for Norfolk Southern and there is a forecasted need for 20 to 60 million square feet in the area.

The Isle of Wight location offers competitive advantages that will help attract businesses:

- A tract of land close to the marine terminals that is measured in thousands of acres suitable for creating the economies of scale associated with intermodal parks
- Property attributes that allow for industrial development without any apparent showstoppers
- A rural setting for development that can avoid many land use conflicts
- Direct access to the major rail line for Hampton Roads
- Direct four lane routes between the intermodal park and the locations generating the freight
- planned improvements for an interstate quality route
- Located directly in the path of much of the freight movement that is driving this initiative
- Local government that will aggressively support this opportunity
- An export consolidation sector that is an untapped market and would be well served by an intermodal park concept like Isle of Wight is proposing
- Facilitates the development of cross-docks adjacent to an ICTF in Isle of Wight could provide services such as transloading

The sites identified by Isle of Wight present a very good option for developing an Intermodal Park. These sites:

- Individually represent an opportunity even though better in combination
- Are adjacent to other large rural parcels that allow land use conflicts to be avoided

Research and analysis indicate that the market for an Intermodal Park in Hampton Roads is favorable. History, current trends, and forecasts reveal that demand will grow for services associated with an Intermodal Park allowing Hampton Roads to emulate other US locations and create a logistics hub for the region.

In conclusion all data and information available supports that this opportunity will generate benefits for the key stakeholders over and above any other potential opportunity considered. It is our recommendation that Isle of Wight should proceed with this opportunity. It should continue to utilize the support it receives from the VPA. Discussions should occur with Norfolk Southern in the near-term to pursue the opportunities associated with the Norfolk Southern property.

9 Investment Estimates

The development of an intermodal park will generate a significant investment in Isle of Wight. A possible investment required for each scenario was estimated using the standards listed below.

Possible Costs for Required Investments*:

<u>Cost Category</u>	<u>Cost Factor</u>
Land Acquisition	\$15,000 per acre*1
Site Preparation:	
Clearing & Grading	\$7,500 per acre
Facility Construction Distribution Centers	\$52.00 per sq. ft.
Facility Construction Support Services and Retail	\$68.00 per sq. ft.
Road:	
Water/Sewer/Drainage	\$80 per foot
Asphalt heavy section (2-16 ft lanes)	\$200 per foot
Curb & Gutter (2 Sides)	\$40 per foot
Main Line Utilities to Pad Sites:	
Underground Gas POD Facility	\$300,000 each
Water Towers (2 Million Gallons)	\$1,200,000 each
Wetlands Mitigation:	\$50,000 per acre
Rail Yard:	
Track	\$550 per lf
Heavy Paving Rail Zone	\$500,000 per acre
Fencing Installed	\$28 per foot
Landscaping/Lighting/Signage	
Contingency	15%

*Costs are estimates. Estimates were acquired from sources experienced in the development of industrial sites. Costs are subject to change as material and labor prices change. Site conditions or site requirements have an impact on the investments required to develop a site.

*1 Land acquisition costs are for illustrative purposes and are subject to negotiated agreements between the parties. Estimated cost per acre was based on parcels of raw land currently available for sale in Isle of Wight

9.1 Scenario A Investments

SCENARIO A:				
<i>Probable Investment Requirements*:</i>				
<u>Major Investment Categories</u>	<u>\$</u>	<u>Unit</u>	<u>Units</u>	<u>Total Investment 2006 \$'s</u>
Land Preparation:				
Land Acquisition (\$/acre estimated, net of STH)	\$15,000	acre	2,308	\$34,620,000
Site Preparation:				
Clearing & Grading	\$7,500	acre	2,308	\$17,310,000
Facilities:				
Facility Construction Industrial Buildings	\$52	sq. ft.	19,846,465	\$1,032,016,180
Facility Construction Support Services/Office, Retail	\$68	sq. ft.	350,000	\$23,800,000
Road (per 2 lanes):				
Water/Sewer/Drainage to parcel entrances	\$80	lf	94,512	\$7,560,960
Asphalt heavy section (2-16 ft lanes)	\$200	lf	94,512	\$18,902,400
Curb & Gutter (2 sides)	\$40	lf	94,512	\$3,780,480
Utilities:				
Water Towers (2 million gallon)	\$1,200,000	each	2	\$2,400,000
Underground Gas	\$300,000	POD ea.	1	\$300,000
Wetlands:				
Wetlands Restoration & Mitigation:	\$50,000	acre	122	\$6,100,000
ICTF Rail Yard:				
Track	\$550	lf	95,580	\$52,569,000
Paving ICTF Yard (130 Acre)	\$500,000	acre	60	\$30,000,000
Container Yard Fencing Installed 5,332	\$28	lf	5,332	\$149,296
Contingency	15%	Total		\$184,426,247
ESTIMATED INVESTMENT MADE IN ISLE OF WIGHT				\$1,413,934,563

* Estimated investments are for illustrative purposes and subject to change based on changes to material, labor, ground conditions, unknown conditions, changes in permitting, changes in design or other unforeseen events. Landscaping is not included

Table 11 Scenario A Investments

9.2 Scenario B Investments

SCENARIO B:				
<i>Probable Investment Requirements*:</i>				<u>Total Investment</u>
<u>Major Investment Categories</u>	<u>\$</u>	<u>Unit</u>	<u>Units</u>	<u>2006 \$'s</u>
Land Preparation:				
1Land Acquisition (\$/acre estimated, net of STH)	\$15,000	acre	2,380	\$35,700,000
Site Preparation:				
Clearing & Grading	\$7,500	acre	2,380	\$17,850,000
Facilities:				
Facility Construction Industrial Buildings	\$52	sq. ft.	19,846,465	\$1,032,016,180
Facility Construction Support Services/Office, Retail	\$68	sq. ft.	350,000	\$23,800,000
Road (per 2 lanes):				
Water/Sewer/Drainage to parcel entrances	\$80	lf	94,512	\$7,560,960
Asphalt heavy section (2-16 ft lanes)	\$200	lf	94,512	\$18,902,400
Curb & Gutter (2 sides)	\$40	lf	94,512	\$3,780,480
Utilities:				
Water Towers (2 million gallon)	\$1,200,000	each	2	\$2,400,000
Underground Gas	\$300,000	POD ea.	1	\$300,000
Wetlands:				
Wetlands Restoration & Mitigation:	\$50,000	acre	122	\$6,100,000
ICTF Rail Yard:				
Track	\$550	lf	95,580	\$52,569,000
Paving ICTF Yard (130 Acre)	\$500,000	acre	60	\$30,000,000
Container Yard Fencing Installed 5,332	\$28	lf	5,332	\$149,296
Contingency	15%	Total		\$184,669,247
ESTIMATED INVESTMENT MADE IN ISLE OF WIGHT				\$1,415,797,563

* Estimated investments are for illustrative purposes and subject to change based on changes to material, labor, ground conditions, unknown conditions, changes in permitting, changes in design or other unforeseen events. Landscaping is not included

1 Additional acreage is available without the easement for US Route 460

Table 12 Scenario B Investments

9.3 Scenario C Investments

SCENARIO C:				
<i>Probable Investment Requirements*:</i>				
<u>Major Investment Categories</u>	<u>\$</u>	<u>Unit</u>	<u>Units</u>	<u>Total Investment 2006 \$'s</u>
Land Preparation:				
Land Acquisition (\$/acre estimated, net of STH)	\$15,000	acre	2,308	\$34,620,000
Site Preparation:				
Clearing & Grading	\$7,500	acre	2,308	\$17,310,000
Facilities:				
Facility Construction Industrial Buildings	\$52	sq. ft.	23,053,862	\$1,198,800,824
Facility Construction Support Services/Office, Retail	\$68	sq. ft.	350,000	\$23,800,000
Road (per 2 lanes):				
Water/Sewer/Drainage to parcel entrances	\$80	lf	91,344	\$7,307,520
Asphalt heavy section (2-16 ft lanes)	\$200	lf	91,344	\$18,268,800
Curb & Gutter (2 sides)	\$40	lf	91,344	\$3,653,760
Utilities:				
Water Towers (2 million gallon)	\$1,200,000	each	2	\$2,400,000
Underground Gas	\$300,000	POD ea.	1	\$300,000
Wetlands:				
Wetlands Restoration & Mitigation:	\$50,000	acre	122	\$6,100,000
Contingency	15%	Total		\$196,884,136
ESTIMATED INVESTMENT MADE IN ISLE OF WIGHT				\$1,509,445,040

* Estimated investments are for illustrative purposes and subject to change based on changes to material, labor, ground conditions, unknown conditions, changes in permitting, changes in design or other unforeseen events. Landscaping is not included

Table 13 Scenario C Investments

9.4 Scenario D Investments

SCENARIO D:				
<i>Probable Investment Requirements*:</i>				
<u>Major Investment Categories</u>	<u>\$</u>	<u>Unit</u>	<u>Units</u>	<u>Total Investment 2006 \$'s</u>
Land Preparation:				
Land Acquisition (\$/acre estimated, net of STH)	\$15,000	acre	568	\$8,520,000
Site Preparation:				
Clearing & Grading	\$7,500	acre	568	\$4,260,000
Facilities:				
Facility Construction Industrial Buildings	\$52	sq. ft.	10,052,659	\$522,738,268
Facility Construction Support Services/Office, Retail	\$68	sq. ft.	150,000	\$10,200,000
Road (per 2 lanes):				
Water/Sewer/Drainage to parcel entrances	\$80	lf	34,320	\$2,745,600
Asphalt heavy section (2-16 ft lanes)	\$200	lf	34,320	\$6,864,000
Curb & Gutter (2 sides)	\$40	lf	34,320	\$1,372,800
Utilities:				
Water Towers (2 million gallon)	\$1,200,000	each	1	\$1,200,000
Underground Gas	\$300,000	POD ea.	1	\$300,000
Wetlands:				
Wetlands Restoration & Mitigation:	\$50,000	acre	22	\$1,100,000
Contingency	15%	Total		\$83,895,100
ESTIMATED INVESTMENT MADE IN ISLE OF WIGHT				\$643,195,768

* Estimated investments are for illustrative purposes and subject to change based on changes to material, labor, ground conditions, unknown conditions, changes in permitting, changes in design or other unforeseen events. Landscaping is not included

Table 14 Scenario D Investments

10 Appendix

10.1 Case Studies

This section presents case studies of intermodal parks, port and freight distribution related developments and inland ports similar to what Isle of Wight is considering. The projects differ widely in some respects but all had one key element in common; a goal of developing economic activity around freight transportation and distribution services. As Isle of Wight explores its opportunities, these cases provide real world background on what is possible, what has been successful and what needs to be carefully considered.

Some of these projects have been more successful than others. A common theme of the more successful endeavors is;

- Adequate funding to create infrastructure and persevere as momentum builds
- Public and private champions for the projects
- An understanding of the market and the values these developments offered to the market place
- Locations where significant demand for distribution activity is present

10.2 Virginia Inland Port

The Virginia Inland Port was planned in the mid 1980s. The purpose of Virginia Inland Port (VIP) was to capture a larger market share for the Virginia Port Authority terminals. One advantage for VIP was the needed funding was in place. VIP started in 1989 with initial volumes around 9,000 containers.

Norfolk Southern runs a daily train between VIP and Norfolk International Terminals.

VIP is located in Front Royal, Virginia about 220 miles inland from the port. VIP has very good highway access located 2.5 miles from I-66 and less than ten miles away from I-81.

Since VIP opened distribution centers have located nearby. Since 1989 more than 6 million square feet has been constructed from private sector investments exceeding \$600 million. Direct employment from the growth in the area exceeds 7,000.

Lessons Learned – VIP has been extremely successful but it took several years for momentum to be built. Much of the growth has occurred in the area since 1999. Attracting an anchor tenant to help build momentum greatly supports the strategy of growing distribution and related services in an area that was predominately rural. In the case of VIP, Home Depot was one company who opened a distribution center near VIP recently. After persevering since 1989, with Home Depot's recent opening of a distribution center nearby VIP is provided with a consistent level of sustaining volume to the area.

10.3 Inland Empire

The inland empire is perhaps the most well-known case of economic development centered on the growth of transportation and distribution related services. In the early 1970s and through the 1980s the fruit groves and desert areas in eastern California began to give way to distribution centers and rail yards. The California coast was congested, Asian imports were on the rise and freight moving in both directions needed a place to be stored until it was ready for consumption and then handled prior to being transported.

The inland empire was an ideal location for the development of these distribution needs. The western boundary of the inland empire was located about 40 miles east of Los Angeles. While not too far away from the population center, land prices were low. US Route 66, east-west railroad access and transportation access in general was excellent. Large companies began to locate their west coast distribution operations in this area and momentum was achieved.

Thirty years later transportation and distribution continue to play a role in the economy of the Inland Empire with over 277 million square feet in use. Not all residents of the inland empire desired to work in distribution. The Inland Empire's economy has evolved from its agricultural and distribution based origins. The Inland Empire was reported by the U.S. as the fastest growing MSA in 2005, much of the growth has occurred in other areas outside of transportation and distribution. In 2005 transportation and distribution employment was only 4% of the Inland Empire's economy. Technology, services, medical, financial and other industries have taken the lead. The Inland Empire now claims a rich and diverse economy that goes well beyond its original foundation of distribution services.

Lessons Learned – Starting with a distribution services foundation, regions can evolve into diverse economies. As supporting services, new residents and other businesses come to an area that is experiencing economic growth and other industry segments find a skilled labor force.

10.4 Savannah, Georgia

Savannah Georgia is an ongoing example of leveraging port related growth to generate economic benefits from distribution related services. Until recently there was not much activity outside of the marine terminals run by the Georgia Port Authority (GPA). Following successes experienced in other regions and with abundant land nearby GPA developed a formal strategy to grow the distribution and transportation services industry in its area. GPA stood to gain from increased volumes flowing through its port if this was successful.

GPA took a lead position and purchased or arranged for purchase of land through its economic development arm the Savannah Economic Development Authority (SEDA).

Savannah has enjoyed much success resulting from a combination of offering pad ready sites, close proximity to the port with a good transportation infrastructure. Savannah has seen development of more than 10 million square feet of distribution related space. Another 30 million square feet is in various stages of development of which over 7 million square feet has received commitments from tenants. During this period Savannah has leapfrogged several ports and is now neck and neck with VPA to be the second largest port on the east coast.

Lessons Learned – The port authority played an active role in moving this opportunity forward. Upfront investments in land and infrastructure led to sites being ready in advance of the tenants. Savannah knew it had a good port location and could be a major player and the gateway to the southeast. GPA became a force and provided capital to get the dirt moving.

10.5 Alliance, Texas

Alliance is one of the most successful master planned developments in the country. Air, rail and highway systems were upgraded to offer a full range of intermodal services. Alliance also offers a free trade zone, and enterprise zone and inventory tax exemptions. Close to Dallas and Fort Worth the site now contains some 15,000 developed acres. The business park contains 24 million square feet resulting from a \$5 billion dollar investment from developers and now provides over 24,000 full time jobs.

BNSF operates an intermodal container transfer facility. In 2005 the yard handled 573,000 lifts.

Alliance Park was one of the first sites to understand and begin the trend towards providing synergies between business parks and intermodal yards. One of the developers at Alliance was a subsidiary of the Perot companies with deep pockets. Having a champion of the project on board with access to sufficient capital helped build and maintain momentum. Initially, there was some concern over additional drayage costs that would occur with the site not being adjacent to Dallas and Fort Worth. The developers and marketers for Alliance understood the total values from intermodal access, supply chain management and large volume distribution centers. Alliance was able to effectively sell these values into the market place.

Lessons Learned – Alliance had available land and a substantial consumer base in nearby Dallas – Fort Worth. Alliance strategically developed integrated intermodal services. Alliance correctly predicted that the market would value full logistics and distribution service offerings over traditional marketing for warehouses.

10.6 Detroit Intermodal Freight Terminal (DIFT)

Based on a study completed in 1994, Michigan with the support of GM, Ford and Chrysler sponsored a project to consolidate the intermodal yards of the four Class I railroads serving Detroit. The purpose of this project was to support the economic competitiveness of southeastern Michigan by improving intermodal freight transportation and the transferring of freight between truck and rail.

Although Norfolk Southern and CSX railroads have agreed that they both need to expand their capacity in the Detroit area this DIFT project has lasted more than ten years with very little progress made past studies.

A key stakeholder, the auto industry lost interest over time and the American automakers have suffered economic setbacks during this time frame. There have been multiple changes in the public officials over this time frame each with differing degrees of interest in the project. Additionally, the Class I railroads while agreeing on the need for additional capacity and better intermodal infrastructure are still competitors and reaching a consensus on the specifics has been difficult. Four sites have been considered and the one identified as the preferred site has changed several times. Thirteen years later Detroit is proposing to conduct an environmental impact study (EIS) as a next step.

Lessons Learned – It is critical to keep project champions, support and a vision in place. It is equally important to understand the major stakeholders and their agendas. DIFT has become a thirteen year study with no end in sight.

10.7 Global TransPark, North Carolina (GTP)

In 1992 Kinston North Carolina was selected as the site for Global TransPark (GTP). Kinston is about 70 miles southeast of Raleigh a similar distance from the port at Wilmington and close to I-95 and I-40.

The master plan called for a development exceeding 15,000 acres. Improved highway access was constructed and the plan included an intermodal rail yard with connections to Norfolk Southern and CSX.

GTP has experienced some activity but fallen far short of expectations. The largest transaction to date was the lease of 120,000 square feet in 2005. Continued public support for additional funding is starting to erode.

Lessons Learned – GTP highlights the importance of location and a business plan that understands the market for distribution services. Simply put, there is no significant consumer population, no major seaport and no major airport nearby. Kinston wanted to market dual access intermodal rail capabilities to move on either the Norfolk Southern or CSX. While GTP could get access to rail, it is not on a mainline for either railroad requiring circuitous and lengthy routings to move cargo by rail.

10.8 KC Smart Port

KC Smart Port is an economic development initiative designed to promote Kansas City as a logistics hub. KC Smart Port is not a facility but an organization formed to promote Kansas City as an inland port solution for the Midwest and the U.S. It is referenced because KC Smart Port has successfully obtained grants and monies to promote distribution and transportation for its region.

KC Smart Port has two primary missions:

1. To attract businesses that will help grow the areas transportation industry
2. To make it cheaper, faster and more efficient for companies to move goods to, from and through Kansas City

KC Smart Port received federal funding of \$1.25 million dollars for pilot projects. These projects have included RFID and wireless pilots.

Kansas City Smart Port has had success in attracting businesses to Kansas City including two new distribution centers.

Lessons Learned – Marketing is an important aspect of generating the desired economic benefits. All of the best laid plans, ideal locations and value to the marketplace still require customers to be aware of the opportunity. Federal funding, grants and other sources of capital to assist advancing the vision may be available and should be aggressively pursued.