

# OPERATION BOOTSTRAP

## Update No. 1

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## **Introduction**

*Operation Bootstrap* describes the proposed complex of historic theme parks referred to as the Petersburg Parks. This is a very big project that is now in an advanced stage of concept development. It addresses a great many subjects and each carries with it an abundance of details.

During early October 2011, copies of *Operation Bootstrap* were provided to community leaders, knowledgeable historians and the City of Petersburg department heads. Feedback has been extremely positive, but also revealed a few errors and omissions. As the development process continues, new possibilities have since presented themselves. Many of these are made possible by the Petersburg Parks having trains that can operate anywhere in the United States. New information has resulted in the rethinking of previous conclusions.

The purpose of this update is correct the mistakes, provide new information, suggest better ways to accomplish goals and identify some newly discovered long-term opportunities. This process will continue.

This update also includes some newly-discovered historic information as it may prove useful.

## **Concept**

It may be beneficial to provide a more detailed explanation of the relationship of the Petersburg Parks to downtown economic revitalization.

Paramount Studios constructed King's Dominion for one purpose: to get money out of Virginia and funnel it to their corporate headquarters in California. Chain stores do the same thing.

The entire reason for the Petersburg Parks is to bring money into the city by attracting a large number of visitors. The main activity center will be River Street as it will house the railroad park. There will be no physical barriers between them, so park visitors can easily visit Old Towne, which is really a part of the critical mass. Considerable effort must be devoted to getting people further into the city, especially up Sycamore Street to Washington Street. These things will provide an enormous boost to the city's retail economy.

Main Street Petersburg will provide rental space for tenants. To the extent possible, space should only be rented to locally-owned businesses, as we want to keep money in the community.

The parks and the expanding retail economy will certainly create a great many jobs.

The parks will require many things. Keeping its many employees in period costumes will be a major task. They should be made locally, as should all souvenirs and the many other items the parks will continually consume. The parks should encourage new local businesses to provide the things that it needs.

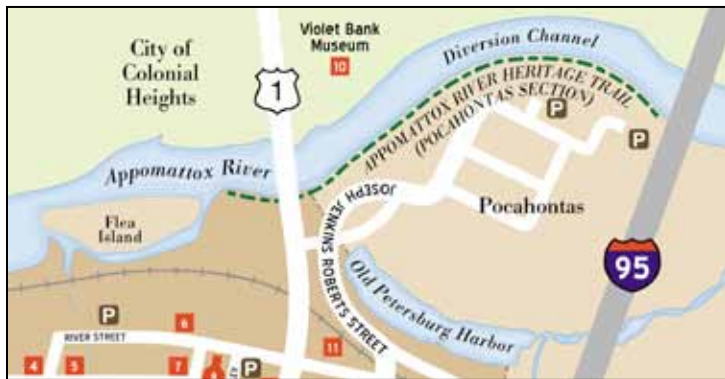
The parks can go beyond simply providing economic support. They can also provide cultural support. The Tri-city area needs a community center. It also needs entertainment, especially dances, for teenagers. The parks can provide these and many other things.

The Petersburg Parks' primary goal is to support the City of Petersburg. In addressing every appropriate situation, it should always ask, "How can this help the community?"

## Wilderness Area / Peter's Point



*Operation Bootstrap* calls for the wilderness area on the north end of Pocahontas Island to be used for the Peter's Point Nature Center. It stated that the lots were not identified on the tax maps and that the land probably belonged to the City of Petersburg. This assumption was based on the fact that the Appomattox River had historically been the dividing line between Petersburg and Colonial Heights, a sign on the Colonial Heights end of the Martin Luther King Bridge marks the dividing line between the two cities and the Petersburg Tourism Map shows that all of Pocahontas is in the city of Petersburg.



City of Petersburg Tourism Map

The sign and the map are both wrong. This land is in Colonial Heights. I revisited the online tax map of Pocahontas Island and several levels of zoom revealed fine print showing this boundary identified as being between Petersburg and Chesterfield County.

Dulaney Ward told me that this land belongs to the U.S. Corps of Engineers. I have since been told that the old Petersburg harbor - the land to be used for Lake Petersburg - is either owned or controlled by the Corps of Engineers. This needs to be researched. The Peter's Point Nature Park is not essential to the Petersburg Parks complex. It was added simply because the wilderness area seemed to be available and offered the opportunity for a unique theme park. However it is essential that the land be acquired as it will be needed for the main rail track around the park complex.

## Appomattox River Walk



Approximate River Walk Route

Under the heading, “Additional Land,” *Operation Bootstrap* incorrectly assumed that the land on the north side of the Appomattox River belonged to Norfolk and Western. It is a Colonial Heights park. Two weeks ago I was introduced to the *Appomattox River Walk Plan*. It calls for a nature trail to extend from the I-95 bridge to Harvell’s Dam.

The bridge piers for the Dunlop Farms branch of the Atlantic Coast Line Railroad are still in place. (Yellow arrow) A foot bridge can be constructed on them linking the River Walk with the Petersburg Parks.

## Water Powered Mill



The Appomattox River is part of Petersburg’s industrial heritage. During the 19th century, many mills used waterpower to operate their machinery. Among other things, Josh Greenwood is an industrial historian who has been deeply involved with the Appomattox River for many years. He owns land along its banks and maintains a website honoring its heritage - [Appomattoxriverfront.com](http://Appomattoxriverfront.com). Josh would like to see one of the early water-powered mills reconstructed. I agree as the mills were a large part of the city’s heritage.

The problem is where to put one. The Petersburg Parks are on Pochantos Island, which is considerably downstream of the falls. There is no drop in the fall of river, so there is no power to run a mill. That requires going upriver.

Josh's land is in Ettrick, just west of the bridge to Virginia State. (Blue circle) He says that the canals that provided the water power are still in place and can be easily put back into operation. The use of this remote location only becomes practical if the Petersburg Parks can work an arrangement with Norfolk Southern for use of its tracks. This would then become another stop on the Battersea Line.

Josh also said that it would be possible to extend the canal to Harvell's dam, which is at the west end of the Appomattox River Walk described above. (Red circle) The possibilities should be explored.

The technical problems may not make such an attraction possible, but the possibilities should be considered in planning the City of Industry theme park.

## Rethinking Main Street

*Operation Bootstrap Financial Considerations* was written several weeks after the main report. It noted that a great many seasonal employees would be needed and that housing them for the summer would cost \$2,000 per employee, which for phases 3 and 4 gets really expensive. It suggested building part of the first block of Main Street Petersburg to provide dormitory housing as the cost savings would pay the debt service. During the off season these rooms could be rented to overnight school field trip and tour bus groups, thus providing income. That is still a very viable plan.



Temporary parking lot shown in yellow.

It later occurred to me that the retail space will be difficult to rent because it is too far away from the parking lot. That situation can be corrected by temporarily using the land slated for Main Street blocks 2 and 3 for parking as those blocks will probably not be built for several years. This provides parking spaces close to the stores and the additional parking space will delay the need to construct parking buildings.

Use of this parking lot should be restricted to those visiting the stores. Petersburg Park visitors would use the main lot.

## Parking Lot Train Stations

Union Station will be the main train station for the parks complex. However, it is about a block-and-a-half from the parking lot. A small station should be constructed at the parking lot. It should be of the same configuration as that of the other parks - a small covered platform.

During phases 1 and 2 only the inner loop railroad tracks are in place, so its location is marked by the red box. Once the main line is complete, it will be moved to location shown by the blue box.



Rob White, president of the Historic Petersburg Foundation, recently loaned me his copy of the 3rd Quarter, 2007 edition of *Lines South*, published by the Atlantic Coast Line and Seaboard Air Line Railroad Historic Society. It contains an extensive article on the Atlantic Coast Line Petersburg facilities. The shown on the previous page comes from that article. I have found it to be extremely helpful in determining the city's recent rail configuration. I have superimposed labels on it showing the lines that have been abandoned.

The Atlantic Coast Line was a railroad that existed between 1900 and 1967, when it merged with the Seaboard Air Line Railroad, its long-time rival, to form the Seaboard Coast Line Railroad. Much of the original ACL network has existed as part of CSX Transportation since 1986.

In 1898, the Petersburg Railroad and the Richmond & Petersburg Railroad formally merged, and two years later the combined company took control of the ACL's routes south of Virginia, as well as the Norfolk & Carolina Railroad, which operated from Norfolk, Virginia to Tarboro, North Carolina.

*Operation Bootstrap* referred to the future parking lot as having formerly been owned by Norfolk and Western, as it was directly behind Union Station and Southside Station. The map shows that it was actually the yards of the Atlantic Coast Line.

## Petersburg Railroad Station



When I wrote *The Antebellum Railroads of Petersburg, Virginia*, I was unable to find a picture of the Petersburg Railroad Station. The *Lines South* article shows a postcard of it. The text states that it was constructed in 1892 by the Petersburg Railroad. It was in use as late as 1951.

Edward A Wyatt, historical assistant with the U.S. Department of the Interior wrote an undated article on the early Petersburg Railroad. In it, he wrote that on the night of November 28, 1837, a great fire destroyed the Petersburg Railroad Station and all of its support buildings. A second depot was constructed. It is not yet known if it was destroyed during the Civil War or not. If it was, then another would have been built and the above picture would be the fourth station to occupy the site. Otherwise, it would be the third.

## **New Petersburg Railroad Station**

Norfolk Southern Railroad is now laying the tracks for the new east coast rail service. Several weeks ago I attended a city council meeting in which NS representatives outlined plans for the new bridge that will cross Johnson Road. (This intersection is shown on the railroad map.) They stated that three sites were under consideration for the new train station. I have marked them on the map. Site 1 is in Ettrick. Site 2 would be near the Pepsi-Cola plant on Washington Street and Site 3 would be where the Norfolk Southern tracks (shown on the map as Norfolk & Western) would join with those of CSX (shown on the map as Atlantic Coast Line. It now appears that site 3 will be selected.

This is the beginning of the new high-speed rail corridor that will run the length of the east coast. The Petersburg Parks must take advantage of the marketing opportunities it provides. Once Main Street Petersburg can offer hotel rooms then vacation packages should be prepared that can be sold through travel agencies. It would consist of hotel room and park admissions. When customer demand warrants, the Petersburg Parks could run a train down to the new station to pick up visiting guests.

## **Railroad Tracks**

I visited a web site for a company that specializes in removing and relocating abandoned railroad tracks. It stated that tracks were often not conveyed with real estate as the railroad often had a right of way. I discussed this with realtor Mark Spectrue who brokered the sale. He stated that City Manager David Canada insisted that the tracks be conveyed and that they were. The tracks do belong to the City of Petersburg.

Mark said that the previous owner was a wine company.

## **100 Year Flood Plain**

The 100 Year Flood Plain was discussed at length in earlier versions of *Operation Bootstrap*, but this information was not included in the Version 407 which was released. All of Old Towne, and virtually all of the Petersburg Parks complex is located within it. Main Street Petersburg is in the 100 year flood plain. I have since discussed this with several authorities who have assured me that there are number of ways to meet legal requirements so that it can be built on the proposed site.

The flood plain affects all of Old Towne. The last flood was in 1972. Since then Lake Chesdin has been constructed. It provides a large reservoir for excess water. To my knowledge, the flood plain boundaries have not been reexamined since the lake was put into place. This should be researched as new adjusted flood plain boundaries can change many things. For example, the building that housed Ferguson's Plumbing was destroyed by the 1993 tornado, resulting in large hole in the streetscape. I was told that it could not be rebuilt because the lot was in the 100 year plain. Revised flood plain boundaries can change that.



## Main Parking Lot



*Operation Bootstrap* identified the proposed main parking lot as formerly belonging to Norfolk and Western. Newly discovered information, which follows, indicates that it was the Petersburg rail yards for the Atlantic Coast Line.

This parking lot will eventually need to be replaced by a multi-story parking building as customer traffic increases. Terry Ammons stated that the land is located in the Chesapeake Bay Watershed and so all structures must be set back from tributaries. From other sources, I have learned that a 100-foot setback is required. The tree-lined areas on the west shore and the position of the existing tracks comes close to meeting that requirement. However, this reduces the potential size of the parking lot and the later parking buildings.

## Employee Parking / Pocahontas Access



The *Petersburg Parks Employee Requirements* report concluded that Phase 3 would require 49 permanent employees functions and that phase 4 would require 92. Due to the long work week, 2.2 employees would be needed to cover each function. Temporary employees will be needed for the busy summer season. Employee parking must be provided.

*Operation Bootstrap* recognized the need for Pocahontas residents to be able to easily access their homes during the summer season when the ramp from Martin Luther King bridge is choked with visitors.

The city's landfill area can fill both needs. The proposed employee parking area is indicated by a blue rectangle. A new road running from Magazine Street to Bollingbrook Street (shown in yellow) should be constructed for the use of Pocahontas residents.

This road can also be used by Petersburg Park employees to access the service center, discussed later. It will also provide a convenient way to bring materials and supplies into the complex.

# **Locomotives**

## **New Information On Horsepower**

Locomotives specifications are always given in terms of wheel design (such as 4-4-0), diameter and length of the cylinders, and the diameter of the drive wheels. Cylinder width determines the driving force or thrust, the cylinder length controls how far it can push the connecting rod, which in turn pushes the wheels. Wheel diameter determines speed and the number of drive wheels influences traction.

I had never seen a single reference to horsepower until last week. A research paper cited the horsepower of the Bury 0-4-0 engines used by the Richmond and Petersburg Railroad, which were identical to those of the Petersburg Railroad, including its first engine the *Liverpool*. They only had 14 horsepower. The *Liverpool* routinely pulled 14 freight cars. Each weighed 4,500 pounds and carried a 6,000 pound load. One authority declared it to be the most powerful locomotives in the county for its size. This suggests that the new replica locomotives will require very little power and thus can use very small engines.

## **Simplified Locomotive Construction**

The locomotives may be easier to construct than originally thought. Earlier thinking was that a diesel engine would drive an air compressor, which would, in turn, operate the cylinders. In short, it would simply replace steam with compressed air. Another configuration is now under consideration. The engine, transmission, drive shaft, differential and axles from a small pickup truck could be used to drive the train. The length of the drive shaft and axles would have to be adjusted, but the axles would actually drive the wheels. However a diesel engine should be used instead of a gasoline engine as they are safer. In short, the locomotive is a pickup truck with a railroad engine body.

A number of companies make small compact steam boilers for industrial use. Those used by laundry dry cleaners are the ideal size to provide steam for effect and to operate the whistle. The Mole Richardson company of Hollywood makes smoke machines, routinely used for creating fog. Sound effects can be provided by digital systems. Thus it will be very easy for the Petersburg Parks to build its own locomotives.

## **Petersburg Parks Service Center**



There is a very large building on the north end of the Roper Lumber Yard. I obtained rough measurements using the scale on a satellite photograph. It suggests that the building is 125 feet wide by 225 feet long, thus yielding 28,125 square feet. It's huge.

This building should be used for all Petersburg Parks support functions. A short rail line should be run from the inner loop to it. This will permit using the building to construct all locomotives and rolling stock and that will result in considerable cost savings.

## **Appomattox Iron Works Machinery**

Reconstructing locomotives and rolling stock will require machine tools. Functionally those produced today are identical to those produced a hundred years ago, but are computer-operated and far more efficient. They are also very expensive. The Appomattox Iron Works had almost all the machines that will be needed. Lena Witt now owns them. They have been stored outside for over 20 years and have never been maintained. These were extremely heavy, well-built machines and have little rust. They should be purchased, serviced and put back into use. They will later be needed to reconstruct the Appomattox Locomotive Works.

Around 1990, I prepared a highly-detailed list, description and history of all the AIW machinery. I will be glad to make it available. If nothing else, it can serve as checklist to determine what is still on site.

Our locomotives and rolling stock will require castings. This will require the purchase of a modern electric furnace to melt the metal. New wood working machines will be needed to make patterns. This equipment is not expensive and can be paid for out of the funds allocated for railroad construction.

## The City Of Petersburg Locomotive



Replicas of Jupiter and No. 119

The Golden Spike ceremony was one of the most important events in American railroad history. It commemorated the completion of the first Transcontinental Railroad where the Central Pacific Railroad and the Union Pacific Railroad met on May 10, 1869 at Promontory Summit, north of the Great Salt Lake in Utah. The final joining of the rails spanning the continent was signified by the driving of the ceremonial Golden Spike.

Central Pacific #60, the *Jupiter*, was built in September, 1868 by the Schenectady Locomotive Works of New York. It originally had 60-inch drive wheels and weighed 65,450 pounds. The cylinders were 16" diameter by 24" stroke. *Jupiter* was scrapped in 1906.

Union Pacific No. 119 was built by the Rogers Locomotive and Machine Works of Paterson, New Jersey in 1868. It had 54-inch drive wheels and was 50 feet long. I have been unable to find any information on the cylinder size. It was scrapped for \$1,000 in 1903.

In 1957, Congress established the Golden Spike National Historic Site to preserve the area around Promontory Summit as closely as possible to its appearance in 1869. The National Park Service had replicas built of the two locomotives. Each Saturday during the summer months, the two engines are brought together, face-to-face for a re-enactment of the famous event.



City of Petersburg

Both *Jupiter* and No. 119 were of the popular 4-4-0 American Design (four lead wheels and four drive wheels.) The Baldwin-built 1852 *City of Petersburg* was one of the very first locomotives to use this design. It had the same 54" drive wheels as No. 119. The Golden Spike locomotives pulled trains half way across the United States. It is significant that both remained in use until the 20th century,

If the tracks had been in place when it was purchased in 1852, then *City of Petersburg* could have easily done the same thing. I include this because it dramatically demonstrates the importance of this engine.

## Fort Henry



Photographs of two forts gleaned from the Internet. No location is cited.

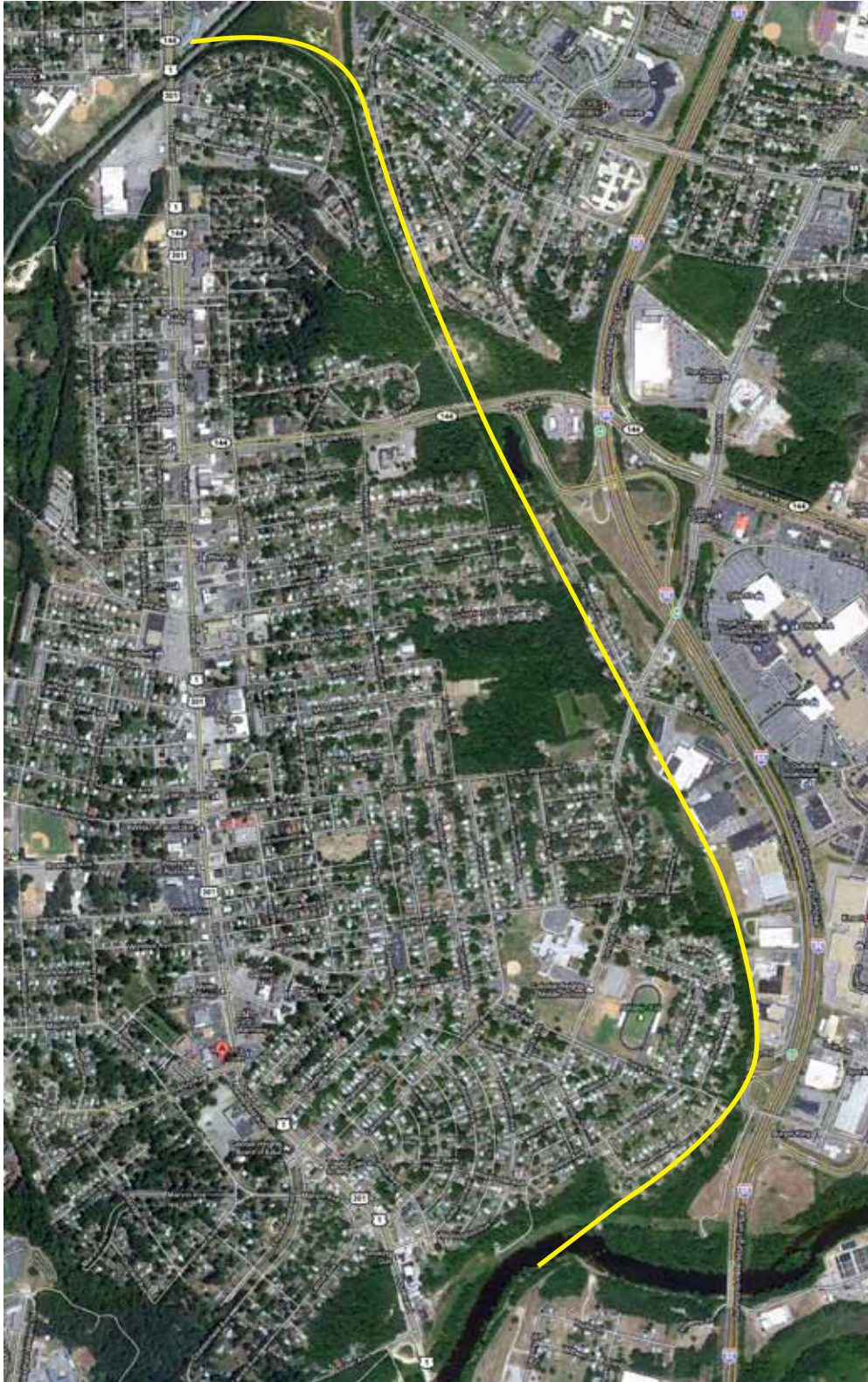
*Operation Bootstrap* stated that the appearance of Fort Henry is unknown. It noted that it was manned by only twelve men and was probably more like the primitive fort shown at left. I just reread Wyatt's *Petersburg Story* and he wrote that Abraham Wood was initially assigned 50 men for one year to construct the fort. After that it was to be manned by 12 men. Given this new information, it was probably a more substantial fort, like that shown at right.

Local historian James Ryan claims to descend from the first Peter Jones, and thus he would also descend from Abraham Wood, Peter Jones' father-in-law. Jim has extensively researched Fort Henry and believes it was made of stone. He referred me an extensive study of Fort Henry written by Patrick Henry Drewry that appeared in the *William and Mary Quarterly* during the 1930s. I have not yet obtained a copy of the article.

## Pocahontas Village Black Heritage Park

This park is to honor the heritage of Pocahontas Village, the nation's first community of Free Blacks. *Operation Bootstrap* noted that the name Pocahontas, although historically correct, is inappropriate as it denotes a native American attraction. It suggested that the park be named Freedom Village, which better identifies it. That suggestion has been warmly received, but modern day Pocahontas residents have not yet had the opportunity to comment on it.

## Colonial Heights Branch



Route of the Dunlop Branch

The *Lines South* railroad map shows the clearly shows the Atlantic Coast Line branch that went to Dunlop Farms. Satellite photographs reveals that the right of way is clear of obstructions. If it can be obtained, then new tracks can be laid. There are several large unused parcels of land along this right of way. One or more could be used for a Colonial Height station. It would require nothing more than a covered platform and a parking lot. It could be used by Colonial Heights residents to easily access the new Appomattox River Walk and it would make it very easy for them to visit the Petersburg Parks for day trips.

There are many ways that this can be accomplished. The City of Colonial Heights could own and operate its own railroad and that would work well if service was limited to the Appomattox River Walk. The original bridge piers across the Appomattox River diversion channel are still in place and a new bridge could be constructed on them. People could walk across the bridge to visit the parks. If the service is to include actually running trains into the Petersburg Parks or incorporating the Colonial Heights land into the Petersburg Parks, then other arrangements should be considered.

This by no means an immediate project. It should not be seriously considered until the Petersburg Parks are fully operational and well-established. That will probably be at least five years from now. This possibility is mentioned at this time simply because it should be taken into account in future planning.

## **Petersburg's Industrial Decline**

The introduction to *Operation Bootstrap* discussed the economic decline of Petersburg during the post-war years. It focused on residents moving to the suburbs and the change from family-owned stores to chain stores. It simply noted that Petersburg had lost many of its industries.

The industrial loss was far greater than I had thought possible. The *Line South* article on the Petersburg Railroads cited a 1949 Interstate Commerce Commission report that said that Petersburg then had 84 industries that had private or assigned sidings. So many of them failed or closed up that the Atlantic Coast Line discontinued rail service to the city. This probably happened prior to 1960, only ten years later. This newly-discovered fact is included because others may find it useful when discussing the city's economic situation.

## **Hollywood comes to Petersburg**

*Operation Bootstrap* pointed out the possibilities of renting trains for motion picture use. It also stated that a motion picture production designer should design the theme parks because they are more akin to movie sets than to modern construction projects. It took some time, but I put these two things together and realized that all of our parks can be rented as film sets. With its diverse architecture spanning 175 years, Main Street Petersburg will be the East Coast equivalent of Universal Studio's famous back lot.

A great many historic films are photographed in Virginia and such rentals can become a major source of income. Film crews will also require hotel rooms and meals. The Petersburg Parks will require screen credits as they will result in publicity. The City of Petersburg once had a motion picture office to attract filmmakers. The Petersburg Parks should certainly have one.

## **Economic Considerations**

*Operation Bootstrap* assumed that the land at Peter's Point and the Electric Building were owned by the City of Petersburg. That is not the case, so they must be acquired. The Electric Building should be renovated. The Appomattox Iron Works machinery must also be purchased. The budgets should be adjusted to reflect these additions.

## **Petersburg Post Cards**

The postcard of the Petersburg Railroad Station shown in the *Lines South* article was provided by Russell Davis. "Butch" was collecting Petersburg postcards when I first met him some twenty-five years ago. He has the largest collection of Petersburg postcards in existence. He has agreed to let me scan all that I want. This provides the opportunity to gain valuable reference images on the railroads, street cars and buildings. Butch has agreed to permit me to compile the collection on CDs which will be made widely available. Many of these images will probably be published to Petersburg-Parks.com.

## **Documentation**

My book, *The Antebellum Railroads of Petersburg, Virginia* is the first comprehensive history of the Petersburg railroads ever written. A great deal of the underlying source material is obscure and difficult to obtain, so I am now in the process of scanning it and then compiling the scans into easy-to-read reports. These will later be published to Petersburg-Parks.com. They will also be written to CDs that will be widely distributed to libraries. This will provide future historians with a great way to start their research.