DELAWARE VALLEY
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REGIONAL
PLANNING COMMISSION

Non-Passenger Rail Right-of-Way Assessment for Preservation

June, 2013

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Executive Summary

New Jersey Transit, through the FY2012 Unified Planning Work Program, asked DVRPC to create a method to score and rank non-passenger Rail Rights-of-Way (ROWs) for future preservation. This list and method is not a reflection of the ROW's current passenger or freight utility, although that was taken into consideration, but rather a consideration of the ROW's future utility to the region. The method ranks the ROWs against each other to help determine priority in ROW preservation. In today's difficult economic environment, preserving all ROWs is not a realistic possibility. The preservation of all ROWs is ultimately the goal, but for now, ROWs with the most future utility need to have priority over other ROWs.

The method detailed in this approach tries to be "future proof" in that it does not specify for which purpose the ROW should be preserved, just that that corridor and ROW should remain intact for future transit or transportation uses, including freight, passenger rail, bus transit, or other transportation needs. This method prioritizes the ROWs based on a set of criteria that take into consideration current and likely future conditions along the ROW in the DVRPC region. Not all rail lines were included in this analysis. ROWs currently being used for passenger service were not scored. It is a reasonable assumption that these ROWs will not be abandoned. Lines that are already listed as abandoned were also not included in this analysis, as it is assumed that an abandoned line has already had its ROW disassembled.

The ROWs in the study were scored and ranked by the following criteria:

1. Corridor Transit Score
2. Connecting Future Growth Areas
3. Connecting Plan Centers
4. Number of Freight Centers along the ROW
5. Environmental Justice along the ROW
6. Planned Projects
7. Interregional Connectivity

Each ROW was sorted from the highest value to lowest value for each criterion. Each ROW was then scored by its percentage of the highest value. All the scores were then averaged for a final scoring.

Based on this analysis, the Vineland Secondary was the highest-ranked ROW in the region. The lowest ranked ROW was the Southern Secondary. The table below summarizes the final scoring of ROWs in the region.

Right-of-Way Final Ranking

Line	"Transit Score" Score	Plan Center Score	Future Growth Score	Freight Center Score	EJ DOD Score	Planned Project Score	Interregional Connectivity Score	Final Score
Vineland Secondary	61	100	67	79	59	100	90	79.4
West Trenton Line	23	40	33	14	15	100	100	46.5
Penns Grove Secondary	32	40	50	100	46	0	50	45.4
Beesley's Point	61	40	50	21	54	0	90	45.3
Salem Running Track	32	60	100	7	44	0	50	41.9
Pemberton Branch	49	100	33	43	48	0	10	40.4
Trenton Industrial Track	100	20	17	0	100	0	10	35.2
Grenloch Industrial Track	70	40	0	21	38	0	10	25.6
Robbinsville Industrial	40	20	33	0	19	0	10	17.5
Southern Secondary	2	0	0	0	14	0	50	9.5

Source: DVRPC 2012

CHAPTER 1

Right-of-Way Evaluation

Introduction

The purpose of this study is to identify rail rights-of-way (ROWs) with the greatest potential for future use in order to prioritize them for preservation. DVRPC has undertaken two previous ROW studies: **Potential Reuse of Inactive Rail Lines** (DVRPC Publication 91040) in 1991 and **Abandoned Railroad Inventory and Policy Plan** (DVRPC Publication 97006) in 1997. Both studies catalogued inactive and abandoned rail lines in the DVRPC region and outlined strategies and potential reuses of the rights-of-way. The first study rationalized possible reuse of inactive rail lines by cataloguing inactive lines and screening them against future population and employment growth. Those lines are still abandoned or inactive today. That study used expected population and employment growth until 2010, and as such, the current study can be considered an update to that process. The more recent study provides a thorough history of the rail lines that operate and once operated in the DVRPC region.

Generally, as ROWs become available they should always be purchased and preserved for future use. However, fiscal constraint may make the purchase and preservation of all ROWs infeasible. In that regard, a method to evaluate and rank ROWs for their future potential as either a transit right-of-way, or for freight, is needed. In the state of New Jersey, once a rail operator has been granted approval to abandon a ROW by the Surface Transportation Board, they need to offer the ROW for sale to the state, county, and municipality that it is in. As defined in PL 48: 12-125.1, the state has right of first refusal to purchase the ROW, and this study is designed to help NJ Transit evaluate and prioritize ROWs for future acquisition.

In DVRPC's New Jersey region, there are currently 11 ROWs, either active or inactive, with the ROW intact. For this study, already abandoned ROWs were ignored as the ROW has already been dispersed. The ROWs evaluated are:

- West Trenton Line
- Robbinsville Industrial
- Pemberton Branch
- Beesley's Point Secondary
- Grenloch Industrial
- Vineland Secondary
- Penns Grove Secondary (including the Paulsboro Industrial and Shell Industrial)
- Salem Running Track
- Southern Running Track and Southern Secondary (analyzed together for this study)
- Trenton Industrial Track

Not included in this analysis are lines with active passenger service: Northeast Corridor, PATCO, River LINE, and Atlantic City line. Since these ROWs are already used for transit service, they are assumed to remain viable for passenger use in the future. Figure 1, on the opposite page, shows the current ROWs in the region.

The ROWs were screened against several of DVRPC's long-range plan goals, objectives, and criteria: Transit Score, connecting future growth areas, connecting freight centers, connecting DVRPC plan centers, environmental justice, regional interconnectivity, and planned projects along the ROW. This analysis is intended to ensure that the ROWs that are preserved are those that can best meet the expected growth and change in the region and contribute to achieving the goals of the long-range plan.

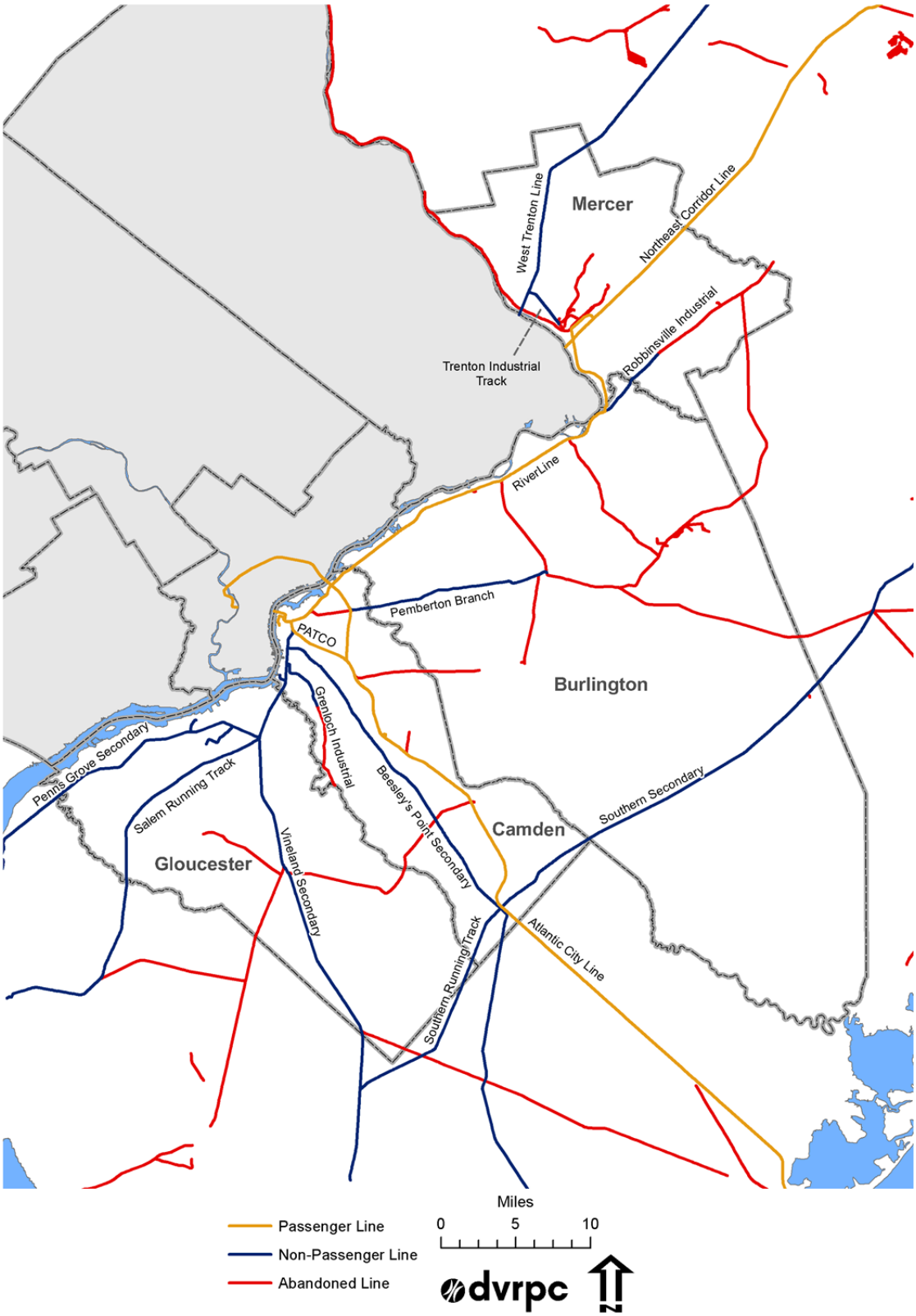
Ranking the Rights-of-Way

The ROWs were scored based on the following criteria:

- Corridor Transit Score
- Connecting Future Growth Areas
- Connecting Plan Centers
- Number of Freight Centers along the ROW
- Environmental justice along the ROW
- Planned Projects
- Interregional Connectivity

Each ROW was sorted from the highest value to lowest value for each criterion. Each ROW was then scored by its percentage of the highest value. For example, if the maximum number of connected freight centers is 11, each ROW is scored as a percentage of 11. After all the ROWs have been scored for each criterion, a composite score was created. The composite score is the average of all criteria scores for the ROW. The highest score that any ROW can possibly receive in this analysis is a 100 (a score of 100 for each of the seven criteria).

Figure 1: New Jersey Freight, Passenger, and Abandoned Rail Rights-of-Way



Source: DVRPC 2012 and NJDOT 2011

Corridor Transit Score:

Transit Score is a measure developed by DVRPC and NJ TRANSIT that summarizes the ability of a location to support transit services based on the densities of population, employment, and zero-car households. Transit Score is a proxy for transit service demand, with the higher the score the higher the likely demand, or the better the conditions to support transit service.

TAZs that the ROW passes through were selected and merged together to create a ROW corridor. Transit Score for the corridor was the average score of the individual TAZs that the ROW passes through. Figure 2 shows the ROWs and their Transit Score along the corridor. Table 1 summarizes the average Transit Score for each ROW.

Table 1: Average Transit Score along the Study ROW Corridors

Line	Average Transit Score	Score
Trenton Industrial Track	5.37	100
Grenloch Industrial Track	3.76	70
Vineland Secondary	3.28	61
Beesley's Point	3.27	61
Pemberton Branch	2.61	49
Robbinsville Industrial	2.17	40
Salem Running Track	1.73	32
Penns Grove Secondary	1.70	32
West Trenton Line	1.21	23
Southern Secondary	0.12	2

Source: DVRPC 2012

The Trenton Industrial Track had the highest average Transit Score, with a score of 5.37, which would be considered a medium-high Transit Score, and was scored a 100 for being the highest Transit Score in the group. The Grenloch Industrial Track, Vineland Secondary, Beesley's Point, and Pemberton Branch are also considered medium-high Transit Scores and were scored 70 through 49, respectively. The Robbinsville Industrial, Salem Running Track, Penns Grove Secondary, and West Trenton are considered medium Transit Scores and are scored 40 through 23, respectively. The Southern Running Track, with an average Transit Score of 0.12, would be considered a low Transit Score and was scored a two.

Figure 2: Transit Scores Along Study Corridors (by TAZ)

Source: DVRPC 2012 and NJDOT 2011

Connecting Future Growth Areas and Freight Centers:

Rights-of-way were also ranked based on their ability to connect Future Growth Areas and Freight Centers. Future Growth Areas are places that can anticipate higher levels of growth over the next several decades, as reflected in DVRPC's population and employment forecasts. The ability of a ROW to connect these growth areas is useful for future transit use. Freight Centers are groupings of warehouses and manufacturing facilities. The ability of a ROW to connect many Freight Centers is considered desirable for future freight use. Figure 3 shows the Future Growth Areas and Freight Centers connected by the rail ROWs.

For this analysis, all Future Growth Areas and Freight Centers that a ROW intersects, or was within 1,000 feet of, were selected. Table 2 and Table 3 summarize Freight Centers and Future Growth Areas in the study area, respectively.

Table 2: Freight Centers Rank

Line	Freight Centers	Score
Penns Grove Secondary	14	100
Vineland Secondary	11	79
Pemberton Branch	6	43
Beesley's Point	3	21
Grenloch Industrial Track	3	21
West Trenton Line	2	14
Salem Running Track	1	7
Trenton Industrial Track	0	0
Robbinsville Industrial	0	0
Southern Secondary	0	0

Source: DVRPC 2012

The Penns Grove Secondary connected the most Freight Centers with 14, and was scored a 100. The Vineland Secondary connected the next highest amount of Freight Centers with 11, and was scored a 79. The Pemberton Branch was scored a 43, with six Freight Centers connected. The Grenloch Industrial Track and the Beesley's Point both ranked a 21, with three Freight Centers connected. The West Trenton Line and Salem Running Track were scored a 14 and 7, respectively. The Trenton Industrial Track, Robbinsville Industrial, and Southern Secondary scored a 0, with no Freight Centers connected.

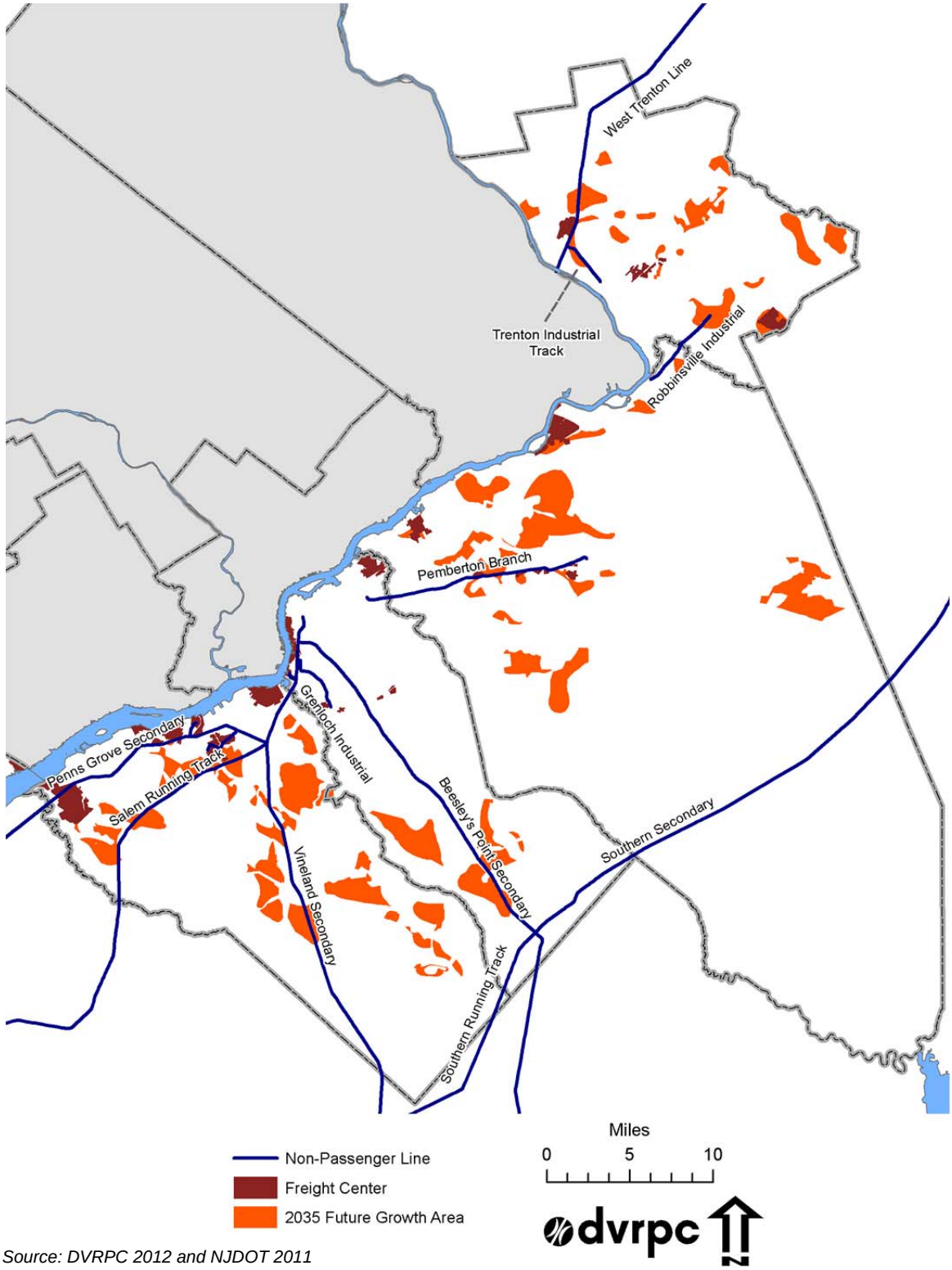
Table 3: Future Growth Areas Rank

Line	Future Growth Areas	Score
Salem Running Track	6	100
Vineland Secondary	4	67
Penns Grove Secondary	3	50
Beesley's Point	3	50
Pemberton Branch	2	33
West Trenton Line	2	33
Robbinsville Industrial	2	33
Trenton Industrial Track	1	17
Grenloch Industrial Track	0	0
Southern Secondary	0	0

Source: DVRPC 2012

The Salem Running Track connected the largest number of Future Growth Areas (six) and was ranked a 100. The Vineland Secondary connected the second-largest number of Future Growth Areas and was ranked a 67. The Penns Grove Secondary and the Beesley's Point line were tied with three Future Growth Areas connected and were both scored a 50. The Pemberton Branch, West Trenton Line, and Robbinsville Industrial all connected two Future Growth Areas and were all scored a 33. The Trenton Industrial Track connected one Future Growth Area and was scored a 17. Both the Grenloch Industrial and Southern Secondary connected no Future Growth Areas and were scored a 0.

Figure 3: Future Growth Areas and Freight Centers



Source: DVRPC 2012 and NJDOT 2011

Connecting DVRPC Plan Centers:

Plan Centers are either existing town centers or urban centers in the DVRPC region, or places that are anticipated to develop into centers of place in DVRPC's long-range plan.

Plan Centers that the ROW intersects, or were within 1,000 feet of, were selected and the ROW was then ranked by the total number of Plan Centers that were connected. Table 4 shows the total Plan Centers connected by each ROW. Figure 4 displays the Plan Centers and ROWs connecting them.

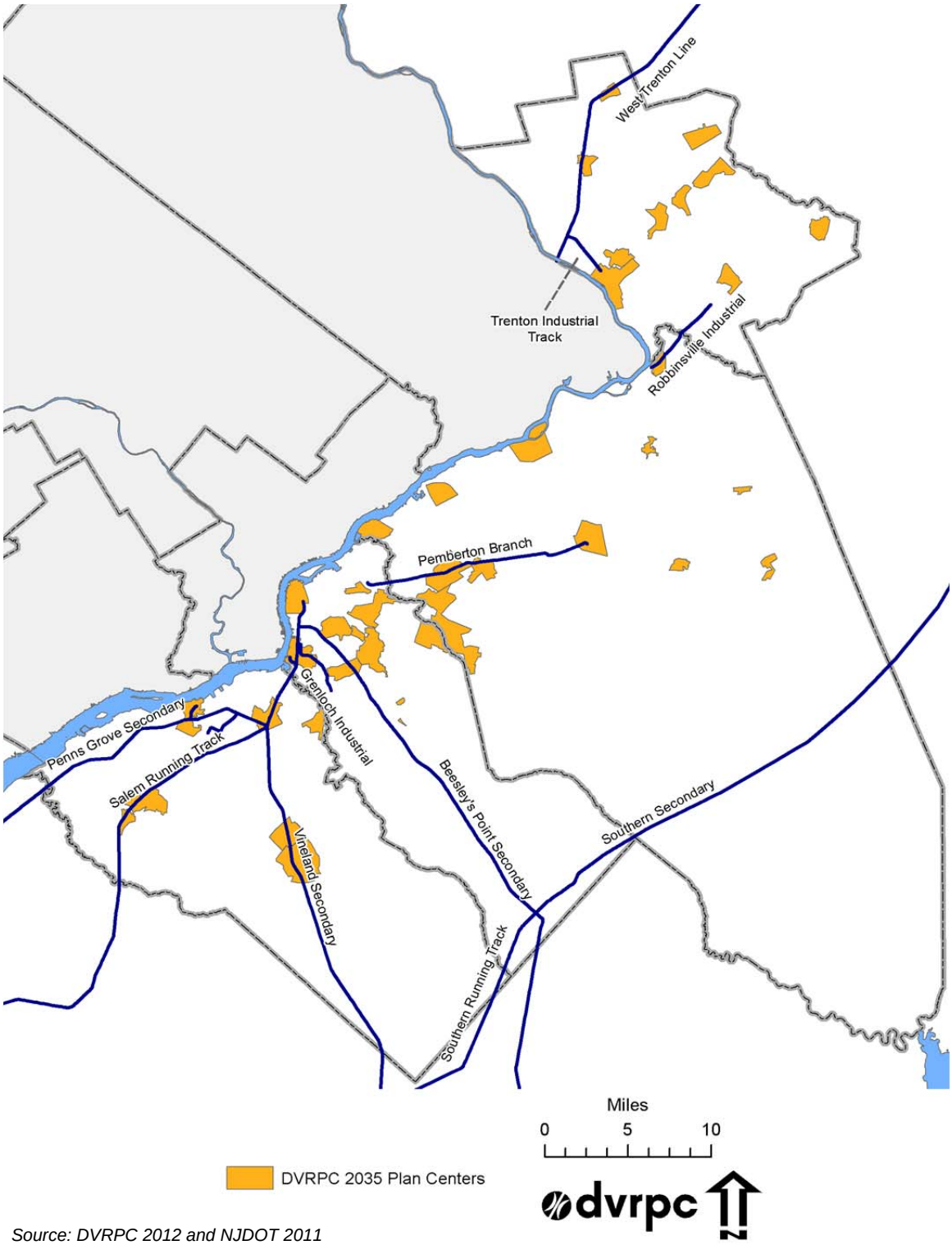
Table 4: Plan Centers Rank

Line	Plan Centers	Score
Vineland Secondary	5	100
Pemberton Branch	5	100
Salem Running Track	3	60
Penns Grove Secondary	2	40
Beesley's Point	2	40
Grenloch Industrial Track	2	40
West Trenton Line	2	40
Trenton Industrial Track	1	20
Robbinsville Industrial	1	20
Southern Secondary	0	0

Source: DVRPC 2012

Both the Vineland Secondary and the Pemberton Branch connected the most Plan Centers, and they were both given a score of 100. The Salem Running Track connected the second largest number of Plan Centers and was scored a 60. Penns Grove Secondary, Beesley's Point, Grenloch Industrial track, and West Trenton Line tied, with each connecting two Plan Centers, and were all scored a 40. The Trenton Industrial Track and Robbinsville Industrial both connected a single Plan Center and were scored a 20. The Southern Secondary, connecting no Plan Centers, was scored a 0.

Figure 4: Plan Centers



Source: DVRPC 2012 and NJDOT 2011

Environmental Justice along the Right-of-Way:

Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people in the planning process, regardless of race or income, as well as the consideration for disproportional impacts that projects can have on disadvantaged groups and neighborhoods. While the federal mandate for EJ identifies those two population groups, DVRPC goes beyond that to look at other potentially disadvantaged groups, population groups that may have unique planning challenges, or be transportation disadvantaged. In this way, the Commission can take a holistic approach to the planning process, making sure that all people in the region are represented and counted. There are eight population groups that may have specific planning related issues or challenges:

- Non-Hispanic minority
- Hispanic
- Carless households
- Households in poverty
- Persons with physical disabilities
- Female head of household with child
- Elderly (over 75 years old)
- Limited English Proficiency

The number of sensitive groups in each census tract is referred to as its Degree of Disadvantage (DOD). Each census tract can contain a concentration greater than the regional average for each individual population group previously discussed, and any census tract can contain zero to eight categories that have been recognized as regionally sensitive.

Each census tract is classified by the number Degrees of Disadvantage (DOD). The EJ for the ROW was determined by selecting all tracts that the ROW passed through and then averaging the DOD for the entire ROW. Table 5 shows the average DOD for the ROWs. Figure 5 shows the DODs along the ROWs in the study.

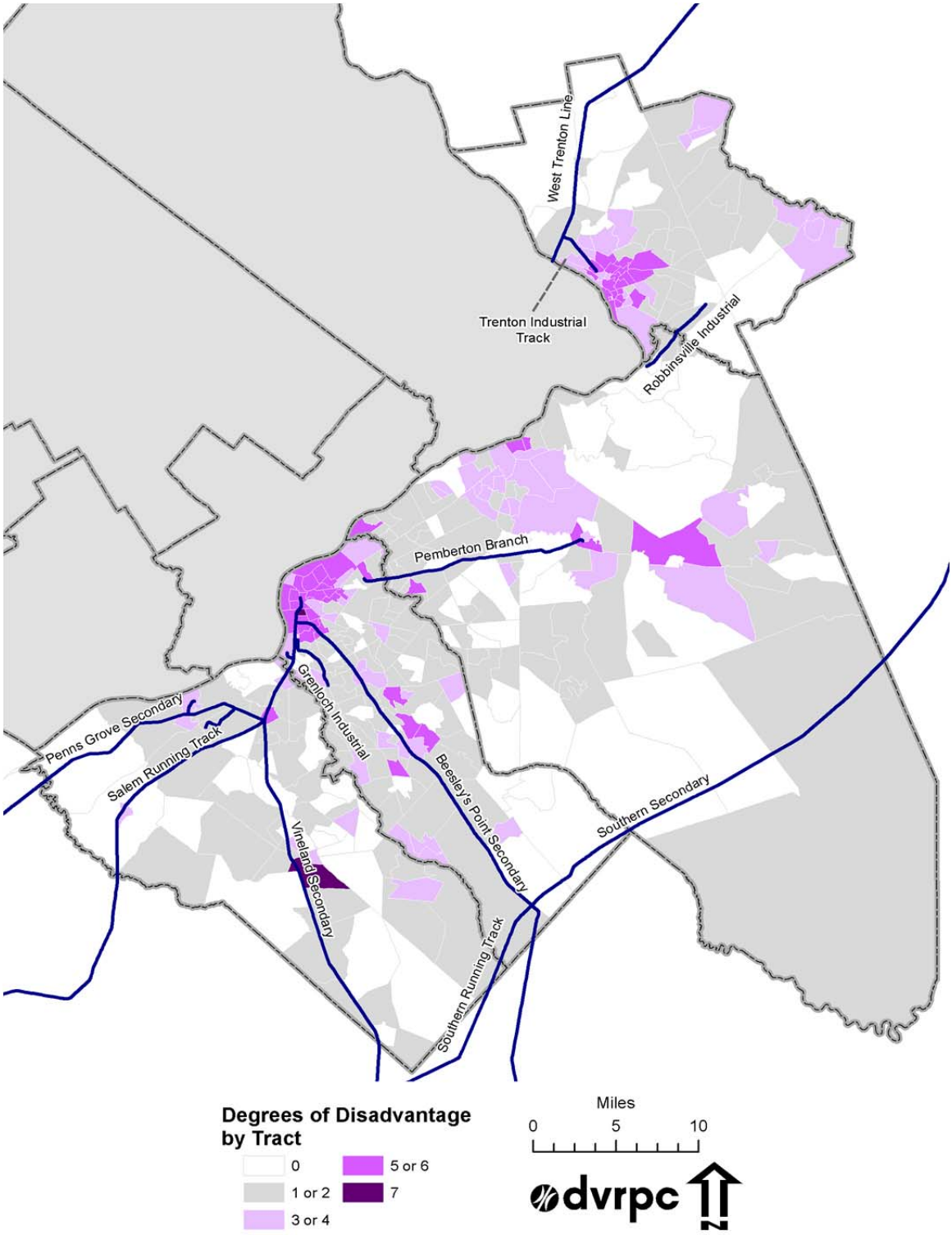
Table 5: Environmental Justice Rank

Line	Average EJ DOD	Rank
Trenton Industrial Track	4.00	100
Vineland Secondary	2.38	59
Beesley's Point	2.18	54
Pemberton Branch	1.92	48
Penns Grove Secondary	1.86	46
Salem Running Track	1.75	44
Grenloch Industrial Track	1.50	38
Robbinsville Industrial	0.75	19
West Trenton Line	0.60	15
Southern Secondary	0.57	14

Source: DVRPC 2012

The Trenton Industrial Track had the highest average DOD along its ROW, with an average DOD of 4.0, and was ranked a 100. The Southern Secondary had the lowest DOD of all the ROWs in the study, with an average DOD of .57, and was scored a 14.

Figure 5: Degrees of Disadvantage



Source: DVRPC 2012, NJDOT 2011, 2010 Decennial Census

Interregional Connectivity:

Interregional connectivity is a measure of the length of the line and the line's ability to connect with regions outside of the DVRPC region. The score tries to take into account how easily an individual line can connect to other regions by either connecting directly or through other ROWs that would also need to be protected or preserved. It also takes into account interregional connections. A line connecting Philadelphia to New York will be scored higher than a line or lines connecting sparsely populated areas. Since all lines indirectly connect to other regions through other lines, the lowest score a line could receive is a 10.

The West Trenton Line scores the highest with a 100. It connects Philadelphia and the Newark/New York region directly. It also has a rail bridge over the Delaware River that is shared only between freight service and SEPTA Regional Rail service. The Vineland Secondary and Beesley's Point lines were both scored a 90 for the length of the ROWs and for connecting population centers outside of the region. The Vineland Secondary connects Vineland, in Cumberland County, and Glassboro, in Gloucester County. Beesley's Point connects the shore region with Philadelphia. The Penns Grove Secondary, Salem Running Track, and Southern Secondary were all scored a 50 for the length of the lines and areas connected. The Salem Secondary and Penns Grove Secondary were scored lower due to their reliance on other ROWs to be in service for them to be of use. Whereas the Southern Secondary does connect interregionally with North Jersey, it does not connect with major population centers or projected growth areas. The remaining lines were scored lowest for being of shorter length and not directly connecting to the greater region. All lines south of Trenton were also scored lower because they all share the same rail bridge over the Delaware River.

Table 6: Interregional Connectivity

Line	Rank
West Trenton Line	100
Beesley's Point	90
Vineland Secondary	90
Penns Grove Secondary	50
Salem Running Track	50
Southern Secondary	50
Grenloch Industrial Track	10
Pemberton Branch	10
Robbinsville Industrial	10
Trenton Industrial Track	10

Source: DVRPC 2012

Planned Project:

Finally, ROWs that have recent or ongoing studies for passenger service restoration were given additional credit in the scoring. West Trenton Line and Vineland Secondary both fall in this catagory. An Environmental Impact Statement (EIS) is currently underway for extending

passenger rail service along the Vineland Secondary, and NJ Transit in 2007 published an Environmental Assessment (EA) on expanding passenger rail service along the West Trenton line. As a result of these two studies both lines were ranked 100 in the planned project score. Since at the time of this study no other projects were planned along the other ROWs, they were ranked a zero.

Right-of-Way Score

After each ROW was ranked by the different criteria, a composite score was created that is the average of each of the individual criteria ranks. The highest a ROW could possibly be scored was a 100. After the analysis, the Vineland Secondary scored the highest with a score of 79.4. The Southern Secondary, running north and south in the center of New Jersey, scored the lowest with a score of 9.5. The West Trenton Line scored the second highest with a 46.5, followed by the Penns Grove Secondary, Beesley's Point, Salem Running Track, Pemberton Line, Trenton Industrial Track, Grenloch Industrial Track, and the Robbinsville Industrial Track. Table 7 summarizes the results of the final scoring.

Table 7: Right-of-Way Final Ranking

Line	"Transit Score" Score	Plan Center Score	Future Growth Score	Freight Center Score	EJ DOD Score	Planned Project Score	Interregional Connectivity Score	Final Score
Vineland Secondary	61	100	67	79	59	100	90	79.4
West Trenton Line	23	40	33	14	15	100	100	46.5
Penns Grove Secondary	32	40	50	100	46	0	50	45.4
Beesley's Point	61	40	50	21	54	0	90	45.3
Salem Running Track	32	60	100	7	44	0	50	41.9
Pemberton Branch	49	100	33	43	48	0	10	40.4
Trenton Industrial Track	100	20	17	0	100	0	10	35.2
Grenloch Industrial Track	70	40	0	21	38	0	10	25.6
Robbinsville Industrial	40	20	33	0	19	0	10	17.5
Southern Secondary	2	0	0	0	14	0	50	9.5

Source: DVRPC 2012

Conclusions

One factor that was not directly included in the screening was risk for abandonment. As it stands, most of the ROWs in the study are still active freight lines. The West Trenton Line, for example, is the “Northeast Corridor of freight,” with a large portion of freight traffic in the northeast traveling along that line. That line is not in danger of being abandoned. In the DVRPC region, the Trenton Industrial Track, which is heavily encroached upon, Robbinsville Industrial, Pemberton Branch, and Southern Secondary can be said to be at some risk of abandonment due to ongoing pressure from development.

In a perfect world, all ROWs should be preserved. This method provides a rational approach to determine which ROW should have priority for preservation with the limited funds available. This method is not a comment on the ROW’s current utility but rather a look at its future use in the region as compared to the other ROWs in the region. In that regard, in comparison to the Southern Secondary, the Vineland Secondary should have priority in acquiring the ROW should it become available.

It is hoped that NJ Transit, and other planning partners, will use the priority ranking developed through this project as a framework to inform future ROW investment decisions.

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Abstract:

This method provides a rational approach to determine which ROW should have priority for preservation with limited funds available. This method is not a comment on the ROW's current utility but rather a look at its future use in the region as compared to the other ROWs in the region. The ROWs were screened against several of DVRPC's long-range plan elements: Transit Score, connecting future growth areas, connecting freight centers, connecting DVRPC plan centers, environmental justice, planned projects, and interregional connectivity.

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