# Eisenhower West Industrial Land Use Study

## Preliminary Findings

Community Meeting
May 13, 2009

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# Presentation Outline

- **Introduction**
  - Purpose of study and tonight's presentation
  - Progress to date
- **Existing Industrial Operations**
- **Summary of Market Findings**
- **Scenarios for Further Study**
  - Industrial Retention  Scenario
  - Redevelopment  Scenario
- **Alternatives Analysis**
  - Financial and fiscal
  - Air quality/environmental
- **Next Steps**

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# Introduction

- **Purpose of Study**
  - Compare economic and environmental conditions of existing industrial uses and redevelopment alternatives
  - Provide the background information necessary to inform the Eisenhower West Small Area Plan

Source: City of Alexandria, 2008.

# Introduction

- **Key Issues**
  - What are the economic and environmental costs and benefits of the existing industrial uses?
  - What are the location requirements of the current industries and where could they relocate if the sites were redeveloped?
  - What is the redevelopment potential of the area?
  - Would the potential value appreciation in redeveloping the site encourage the current operations to relocate?
  - What is the net fiscal impact to the city if the area redevelops?

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# Introduction

- **Progress To Date**
  - Stakeholder interviews
  - First public presentation: February 26
  - Market analysis
  - Analysis of current uses and relocation requirements
  - Development of alternative redevelopment scenarios
  - Analysis of comparative costs, benefits and impacts underway

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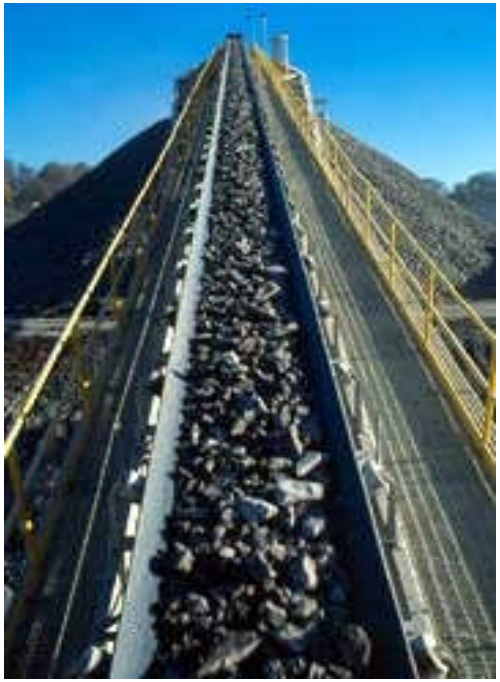
# Existing Industrial Operations

- **Vulcan Materials**
  - 17+ acre site
  - Sales and storage of aggregate (crushed stone)
  - Nearly all materials brought to site by rail directly from quarries
  - Alexandria facility sells 400,000 to 600,000 tons of material per year
  - 90 % of Alexandria sales are to Alexandria customers (Virginia Paving, City of Alexandria)
  - Publicly traded company headquartered in Birmingham, AL
  - Vulcan Materials operates several other facilities in the area
    - Three to seven employees; shared with Edsall Road facility
  - Most recent Special Use Permit approved in 1996



Source: City of Alexandria, 2009; ESRI; BAE, 2009.

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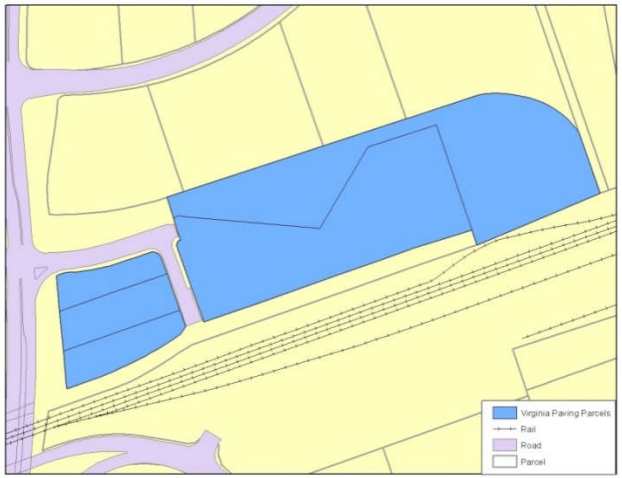
# Existing Industrial Operations

- **Virginia Paving Company**
  - 11+ acre site
  - Operating at current site since 1960
  - Subsidiary of Lane Construction Corporation, since 2001
    - Other Lane Construction/Virginia Paving operations in Northern Virginia and Maryland
  - Provides 100% of asphalt for Alexandria road projects
  - Provides asphalt and recycles used road material for reuse
  - Aggregate delivered to facility by rail
  - Most recent Special Use Permit (SUP) approved in 2006
  - Oil recycling facility (FCC Environmental) located on VA Paving property




Source: City of Alexandria, 2009; ESRI; BAE, 2009.

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# Existing Industrial Operations

- **Norfolk Southern Ethanol Transloading Facility**
  - Transloading facility for several decades
  - Ethanol transloading began operation in April 2008
  - Transloading operation run by RSI Leasing (private company)
  - Ethanol comes in on Norfolk Southern rail cars and is later transferred to tanker trucks
  - Recent Federal District Court decision (*Norfolk Southern Railway Co. v. City of Alexandria, et.al)*
  - Recent NSTB decision (*STB Finance Docket No. 35157)*
  - Norfolk Southern chose not to provide information or participate in this study

Source: City of Alexandria, 2009.

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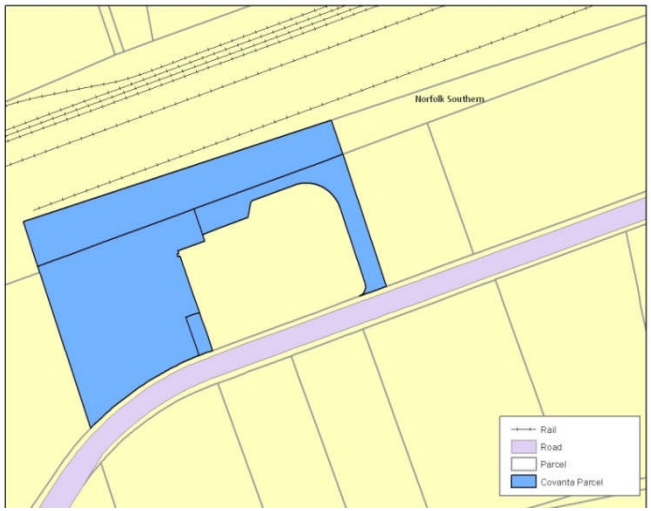
# Existing Industrial Operations

- **Covanta Energy From Waste (EFW) Facility**
  - 6.3 acre site currently at capacity
  - Processes about 975 tons of municipal waste daily
  - Produces about 23 MW of electricity from municipal waste, enough to power 20,000 homes
  - Reclaims metals from waste stream for recycling
  - Operates 24 hours a day, 365 days a year
  - Land and APC equipment jointly owned by Arlington County and Alexandria
  - Facility operated by Covanta Energy Corp. under lease agreements
  - Land and facility will revert to owners in 2025
  - Alexandria and Arlington committed to pay Covanta for services until 2013




Source: City of Alexandria, 2009; ESRI; BAE, 2009.

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# Market Analysis

- **Development Analysis Approach**
  - Understanding projected supply and demand trends:
    - How will future demand for office, retail and residential space be met?
  - Understand the potential for transit oriented development (TOD)
  - Provide market data for use in creating building alternatives and redevelopment land value analysis
- **Methodology**
  - Demographic and economic trends and projections analysis
  - Comparison  to projected future development activity
  - Evaluation of the study area compared to competing locations for development

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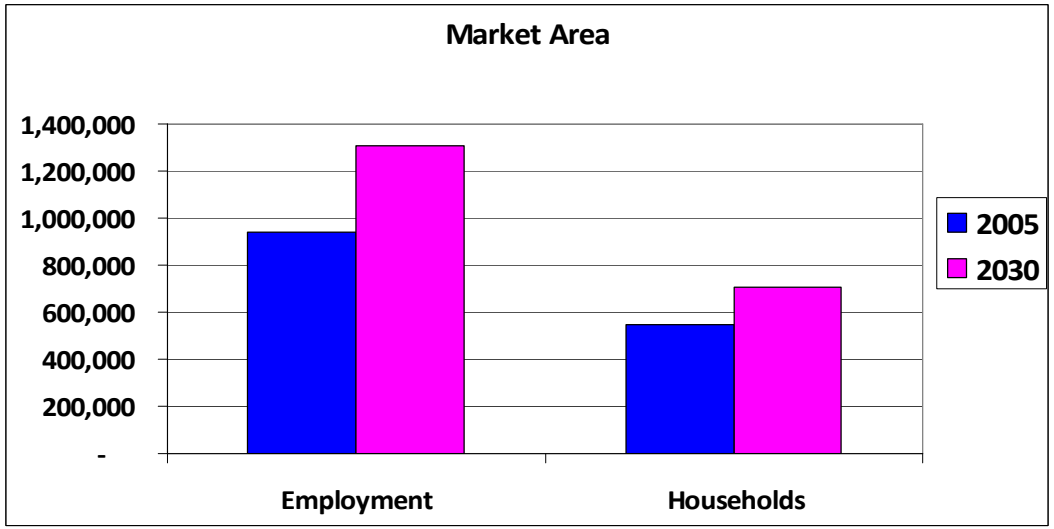
# Market Analysis

- **Northern VA Market Area**
  - Alexandria, Arlington County, Fairfax County, Cities of Falls Church and Fairfax
- **Market Area will add about 364,000 jobs and 156,000 households between 2005 and 2030, continuing 2000-2005 trends**
  - Traffic congestion, growing demand for infill and TOD will lead to increased capture of metro growth in Market Area




Source: Metropolitan Washington Council of Governments, 2008; BAE, 2009.

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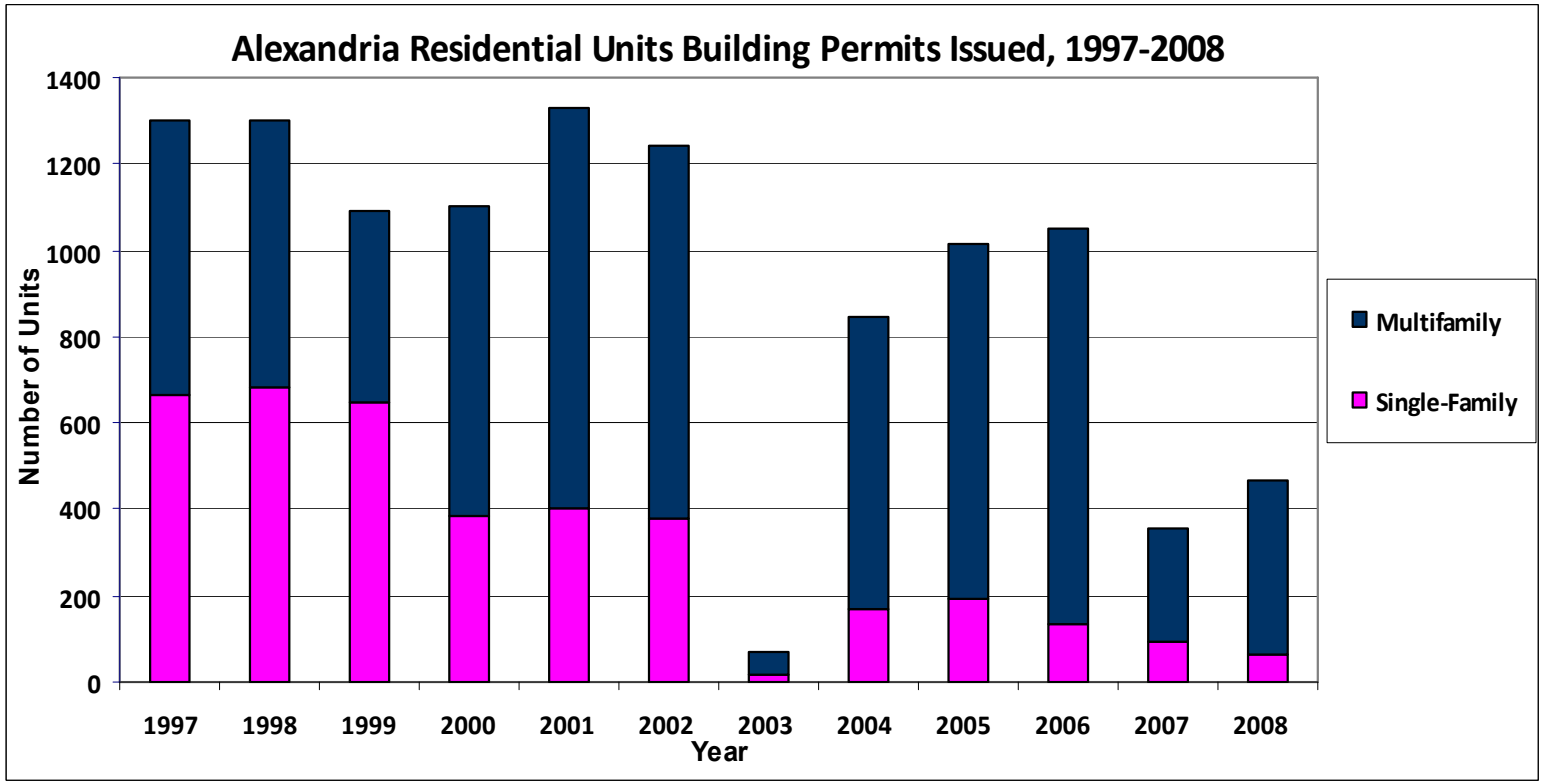
# Housing Market

- **Since 1997…**
  - Market Area averaged about 6,800 units annually
  - Alexandria has averaged about 930 new units annually
  - Alexandria has captured 14% of Market Area (annual averages)




Source: U.S. Dept. of Housing and Urban Development, 2009; BAE, 2009.

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# Retail Market

- **Earlier retail studies for Landmark/Van Dorn and other areas of the City point to unmet retail demand in Alexandria**
- **Retail sales in City of Alexandria and West End currently "leak" to other jurisdictions (source: RCLCO Retail Feasibility Study for Potomac Yard, 2008)**
  - In the West End, same study shows significant opportunities for food and beverage establishments in particular.
- **Currently, the Van Dorn Corridor can support over one million square feet of additional retail space (source: Gibbs Planning Group, Van Dorn Corridor Retail Market Study, 2008)**

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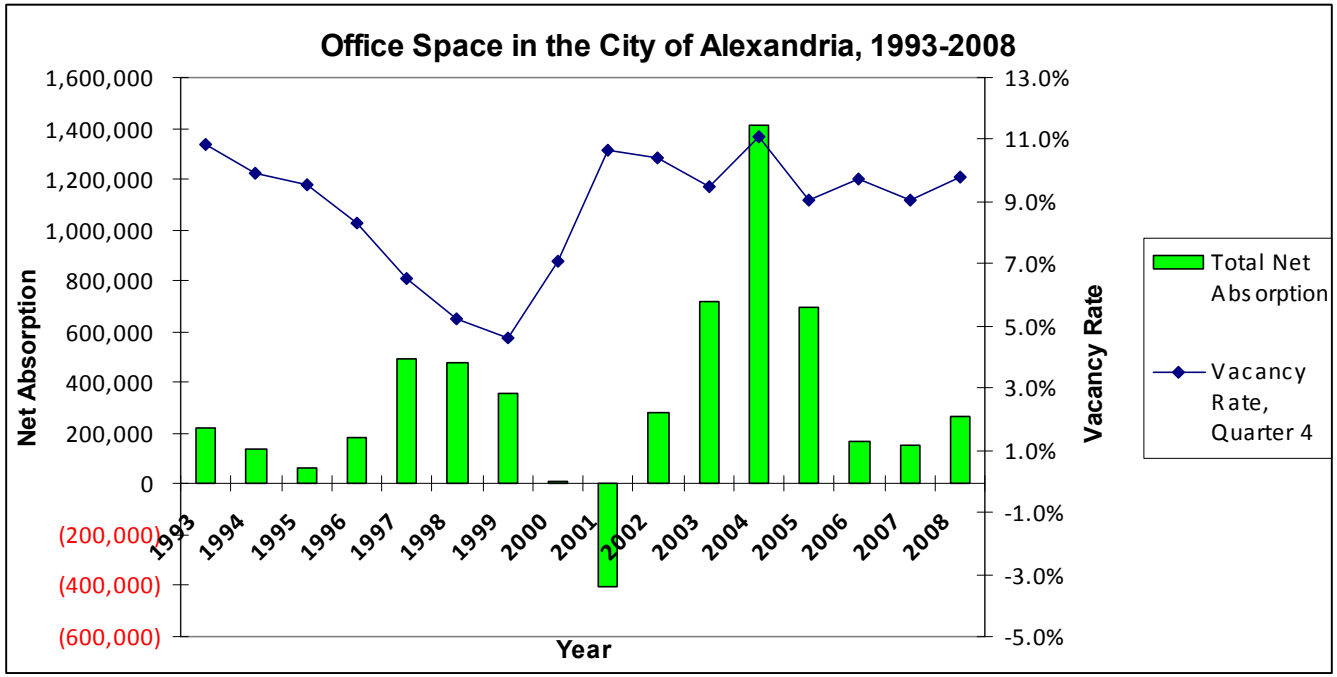
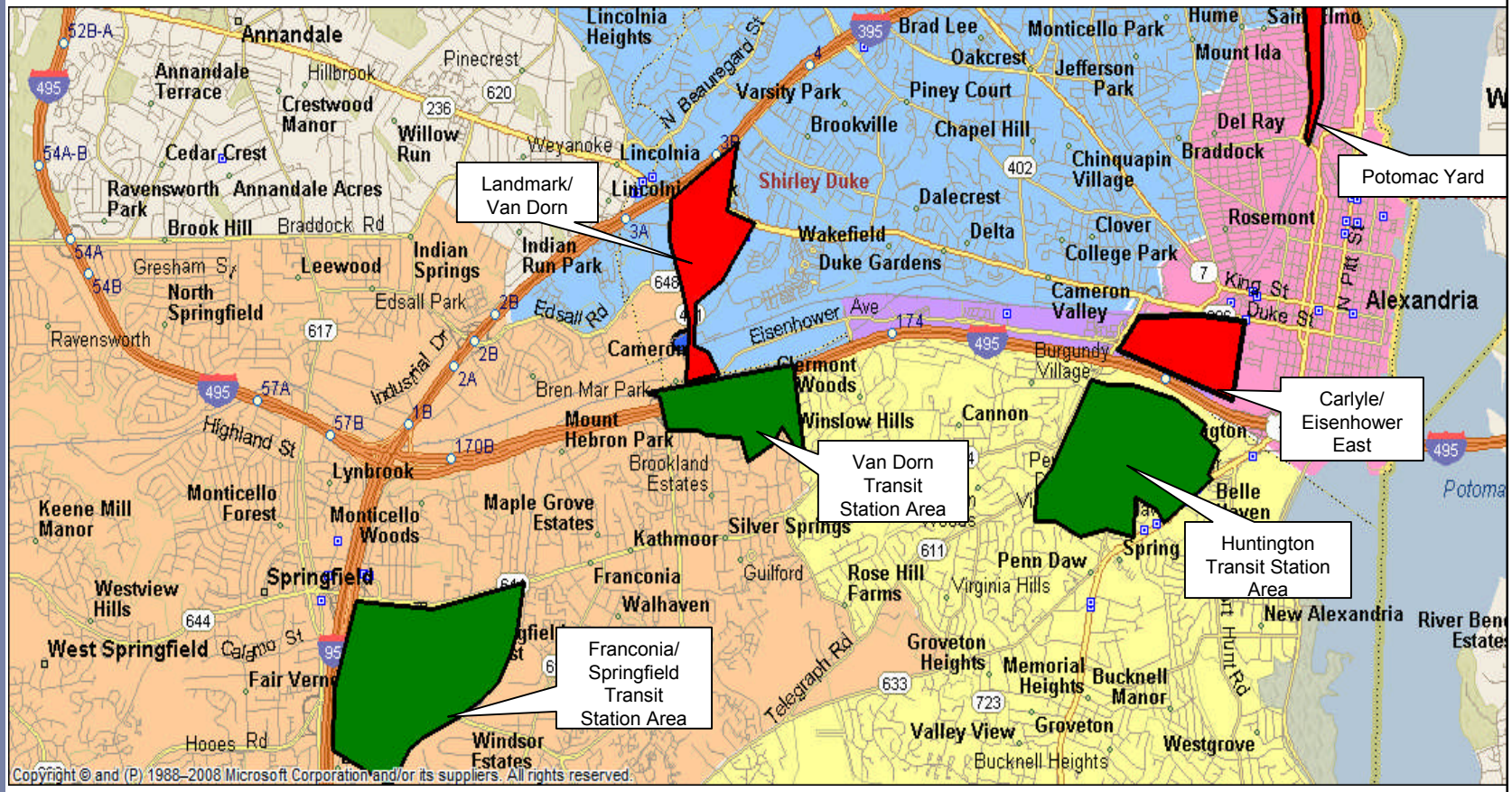
# Office Market

- **Alexandria's average new space - approximately 500,000 square feet per year**
  - More than 3 million square feet of new space added to Eisenhower submarket since 2000
- **Average net absorption - approximately 327,000 square feet per year**




Source: CoStar, 2009; Alexandria Economic Development Partnership, 2009; BAE, 2009.

# Pipeline Supply in Competing Locations




Future Development Pipeline in Competing Locations

Residential: 7,000 to 13,000 units

Office: 9.4 to 11.5 million square feet

Retail: 118,000 to 738,000 square feet

Source: City of Alexandria, 2009; Fairfax County, 2009; Microsoft, 2009; BAE, 2009.

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# Summary of Market Findings

- **Is there unmet future demand?**
- **Redevelopment of the study area will likely be long term**
  - Short term demand can be met by other planned development
  - The study area will be competing with more attractive redevelopment sites
- **Likely stronger market support for residential use than office or retail uses**
- **Neighborhood serving retail is appropriate**

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# Scenarios Analyzed

- **The Industrial Retention Scenario**
  - Maintains the existing zoning
  - All four industrial uses are assumed to remain for period analyzed

- **The Redevelopment Scenario**
  - Considers market trends and site conditions
  - Includes four hypothetical development alternatives
  - Allows for analysis of costs, benefits and impacts
  - Caveats:
    - Cannot predict all future conditions such as changes in regulations, new technologies, or changes in business conditions
    - Alternatives define intensity of development (number of residential units, commercial square footage) without designs

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# Industrial Retention Scenario

- **Economic Considerations: Current industrial uses generate almost $1.1 M per year to City**

| Entity | Fiscal Revenues |
|---|---|
| Vulcan | $140,000 |
| Virginia Paving/ FCC Environmental | $524,000 |
| Covanta | $427,000 |
| Norfolk Southern | N/A |

Source: City of Alexandria, 2009; HDR, Inc, 2009; BAE, 2009.

- **Additional Conditions**
  - Jobs: 233 in total; most employed at Covanta (48 employees) and Virginia Paving (180 employees).
  - Business relationships: 90% of Vulcan Materials' sales are to Alexandria customers, including Virginia Paving and the City of Alexandria.
  - City of Alexandria receives 100% of its asphalt from Virginia Paving

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# Industrial Retention Scenario

- **Air Quality Conditions: Current Industrial Uses**

| ALEXANDRIA | 2005 Emissions (tons/yr) | | | | | |
|---|---|---|---|---|---|---|
| **Source Type** | **CO** | **NOx** | **PM-10** | **PM-2.5** | **SO2** | **VOC** |
| **City of Alexandria** | | | | | | |
| Point Sources | 286 | 3,141 | 236 | 139 | 8,516 | 39 |
| Area Sources | 1,222 | 545 | 1,156 | 220 | 659 | 2,193 |
| Onroad Mobile Sources | 14,744 | 1,745 | 43 | 31 | 21 | 934 |
| Nonroad Mobile Sources | 7,493 | 154 | 19 | 18 | 10 | 445 |
| **Total for Alexandria** | **23,745** | **5,585** | **1,454** | **408** | **9,206** | **3,253** |
| **Industrial Sources in Eisenhower West Area** | | | | | | |
| Point Sources | 119 | 599 | 12 | 12 | 34 | 4 |
| Onroad Mobile Sources | 1 | 4 | 4 | 1 | <0.1 | <0.1 |
| **Total for Industrial Sources** | **76** | **592** | **12** | **8** | **18** | **6** |
| **% of City-wide Total** | **0.3%** | **10.6%** | **0.8%** | **2.0%** | **0.2%** | **0.2%** |

Source: MACTEC, 2009.

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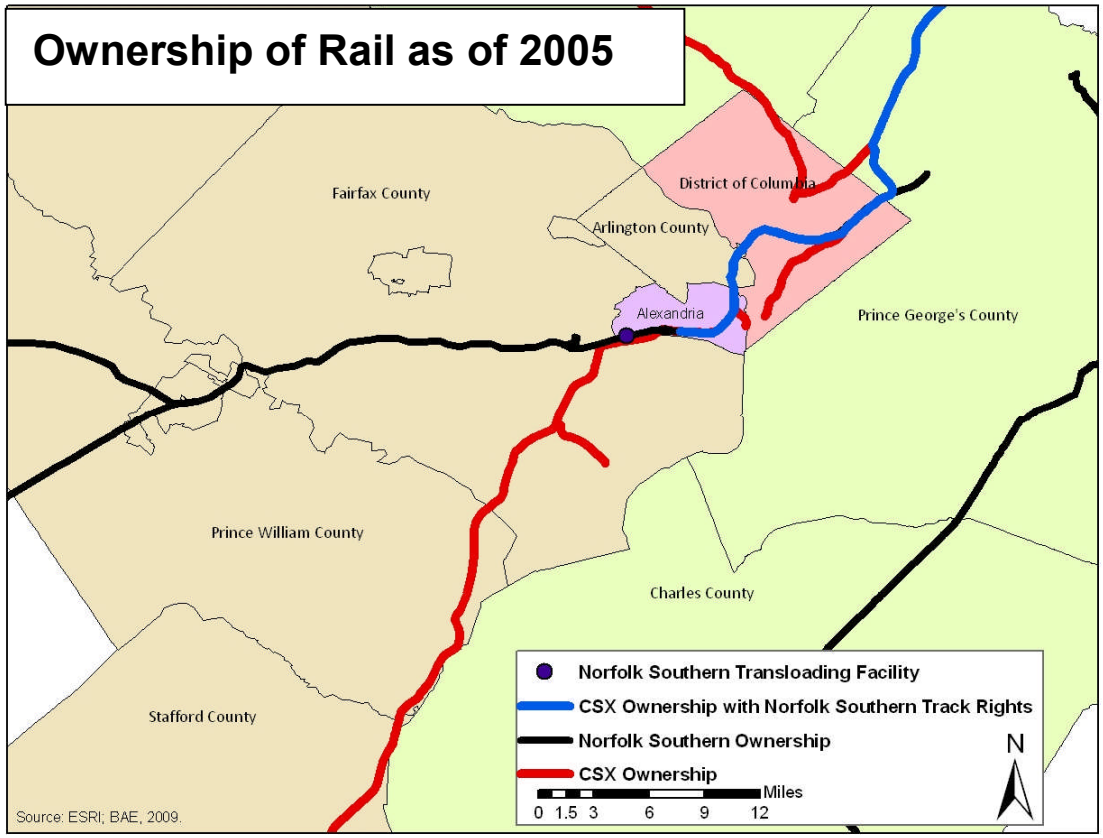
# Redevelopment: Relocation Challenges

- **Rail access needed by Virginia Paving, Vulcan, & transloading facility to bring materials to operation**
  - Rail access significantly reduces transportation costs and number of trucks on the road



# Redevelopment: Relocation Challenges

- **Proximity to End Users: Construction Material Delivery**
  - **Virginia Paving** - Asphalt sensitive to temperature fluctuations and traffic delays pose risk to delivery at proper temperature
    - Alexandria location offers competitive advantage, near dense markets
  - **Vulcan Materials** - Proximity to end users requires fewer trucks that can make repeat trips to a job site (jobs require specific materials in a defined window of time), allowing a more efficient operation
    - Nearby Vulcan Materials facility at Edsall Road cannot absorb all needs during peak demand periods due to capacity constraints
- **Proximity to End Users: Ethanol Transloading**
  - Ethanol must be transported from production facilities to end user (tank farms and gas stations) – only one successful test run using a short ethanol pipeline has been conducted
  - Transloading facilities locate as close to tank farms as possible, in order to minimize the risks posed by truck accidents involving ethanol
  - Ethanol transferred from rail cars on Study Area site goes to tank farms in Springfield and Fairfax City

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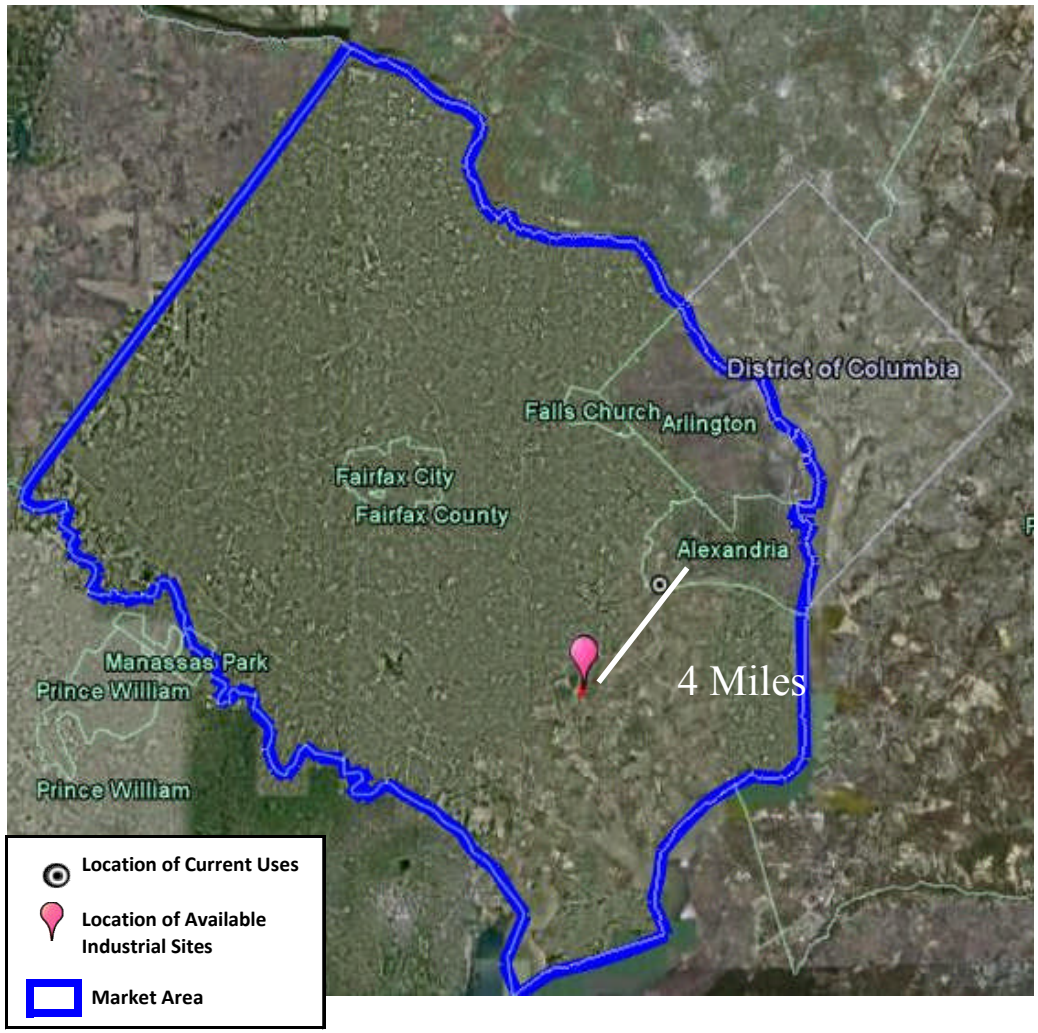
# Redevelopment: Potential Relocation Site

- **Potential Site for Relocation: I-95 Industrial Area of Springfield**

  - Zoning allows industrial uses, but heavy industrial not "by right"
  - Site improvements for rail access would be needed
  - CSX line, would charge fees




Source: CBRE, 2009; Google, 2009; BAE, 2009.

# Redevelopment: Relocation Challenges for Covanta Facility

- **City and County entered "put or pay" contract to 2013**
  - Bonds paid off in 2013
- **Covanta's site lease expires in 2025**
  - Facility has viable expected life past 2025
- **Options prior to 2025**
  - Construct another EfW facility at another site ($$$)
  - Construct a transfer station and dispose of waste remotely (not sustainable)
  - Construct an alternative waste facility at another site (not yet proven/reliable)
- **After 2025**
  - Same options as above, but without obligation to Covanta
  - City and County need to carefully explore potential environmental and economic benefits of extended use of Covanta facility vs. other options

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# Redevelopment: Considerations for Covanta Facility

- **Integral part of Alexandria's and Arlington's solid waste system**
- **Reliably handles all solid waste while meeting all emission requirements**
- **Handles waste in a sustainable manner:**
  - Location reduces truck-miles traveled
  - Produces renewable energy (offsets fossil fuels)
  - Recovers ferrous materials, reducing GHG
- **Major capital investment has viable expected life past 2025; bonds paid off in 2013.**
- **Complies with the principles of Alexandria's Eco-City Charter and City's solid waste management plan.**
- **Complies with Virginia and USEPA hierarchy: EfW is preferred solid waste management strategy over incineration or landfilling.**

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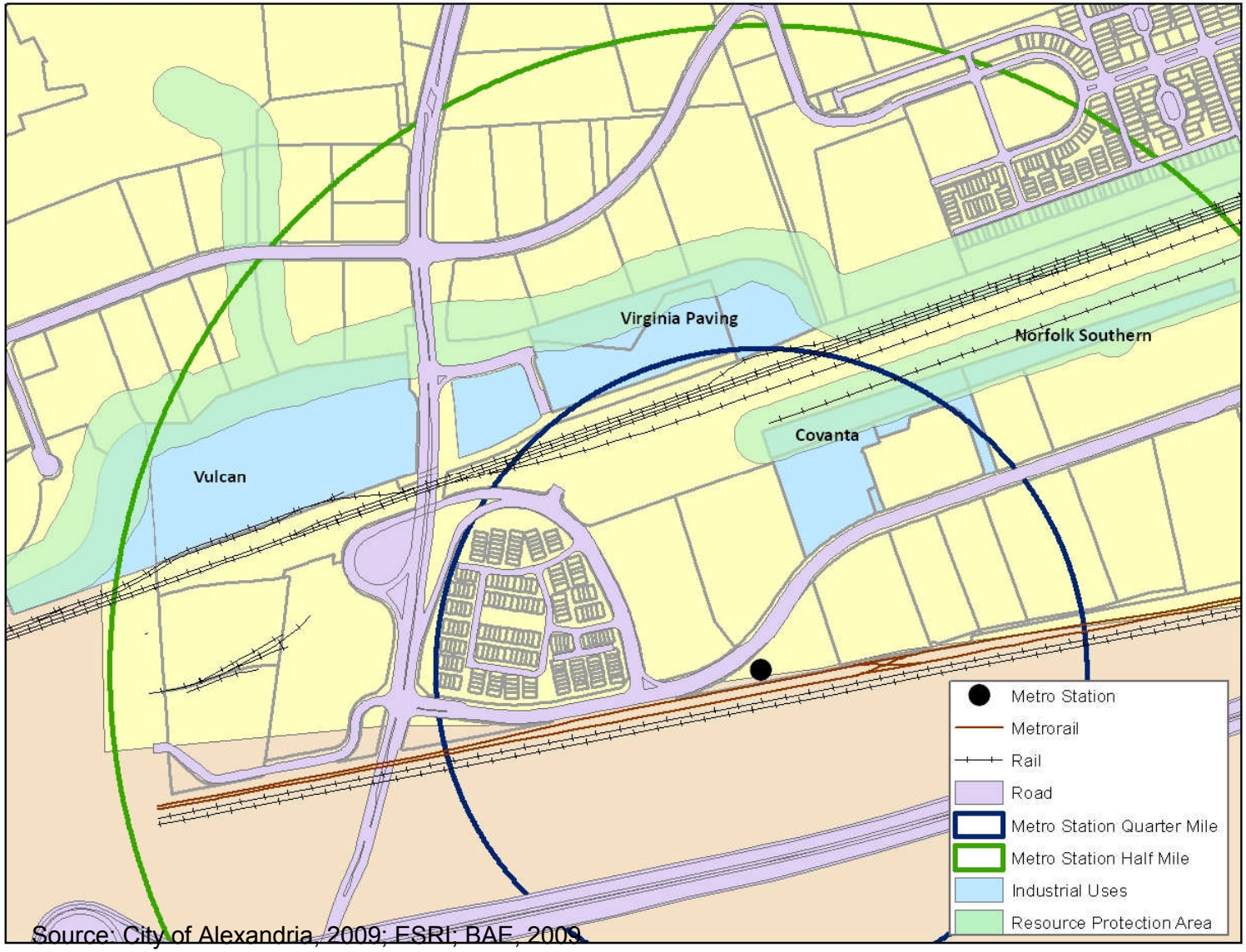
# Redevelopment: Site Conditions




Source: City of Alexandria, 2009; ESRI; BAE, 2009.

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# Redevelopment: Alternatives

- **Alternative A: Redevelop All Four Sites**
  - Relocate Virginia Paving, Vulcan Materials and ethanol transloading operation to I-95 Industrial Area in Springfield
  - Develop Virginia Paving at 50 residential units/acre (1.4 FAR) for developable portion of site (3.7 acres)
  - Develop Vulcan Materials Sites at 50 residential units/acre (1.5 FAR) for developable portion of site (10.6 acres)
  - Develop Covanta EfW and ethanol transloading sites with office space
    - Sites do not redevelop until after 2025 when land under EfW facility reverts back to Alexandria and Arlington
    - Aesthetic improvements to Covanta to facilitate redevelopment of other sites
    - 2.8 FAR for combined site
  - Replace EfW facility with waste hauling to a transfer station 25 miles away, and a disposal alternative within 125 miles

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# Redevelopment Scenario: Alternatives

- **Alternative B: Develop 3 Sites + Park**
  - Maintains Alternative A assumptions except Virginia Paving site developed into park/open space (0 FAR for Virginia Paving)

- **Alternative C: Develop 2 Sites (Retain Covanta/ Transloading Facility)**
  - Recognizes the significant investment in Covanta facility and its benefits to city
  - Assumes diminished development potential of rail property if Energy from Waste facility is retained, due to configuration, proximity and accessibility issues

- **Alternative D: TOD with Bridge Over Freight Rail Lines**
  - Connects the sites and creates better opportunity for TOD
  - Develops higher density residential (at 90 units/acre gross) to a portion of the properties south of the rail line, reduces office space square footage (3.0 FAR)
  - Incorporates cost of bridge into infrastructure costs

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# Redevelopment: Summary of Alternatives

| | Redevelopment Alternatives | | | |
|---|---|---|---|---|
| | A | B | C | D |
| Residential Units | 714 | 530 | 714 | 1,158 |
| Office, Square Feet | 1,100,000 | 1,100,000 | 0 | 600,000 |
| Retail, Square Feet | 50,000 | 50,000 | 40,000 | 50,000 |
| FAR, Developable Area | 2.0 | 1.7 | 0.9 | 2.0 |
| FAR, Total Area | 0.9 | 0.8 | 0.4 | 0.9 |

**Total Site: 49.5 acres**
**Developable Area: 23.2 acres**

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# Redevelopment: Financial Analysis

- **Preliminary analysis**
  - Does not yet include costs of business relocation or cessation
  - Does not incorporate increased cost for goods and services
- **Is redevelopment financially attractive to owners?**
  - Vulcan site has strongest redevelopment land values in each scenario – most developable land and lowest redevelopment costs
  - Development restrictions on Virginia Paving site constrain redevelopment value
  - Redevelopment of the rail property would enhance value – but would it be attractive to Norfolk Southern?
  - Redeveloping Covanta is financially challenging – significant investment in current facility
- **Alternative D produces the highest development values overall**
  - Requires $25 million infrastructure investment in new bridge
  - Attributes of TOD, including increased densities and reduced parking requirements, create value

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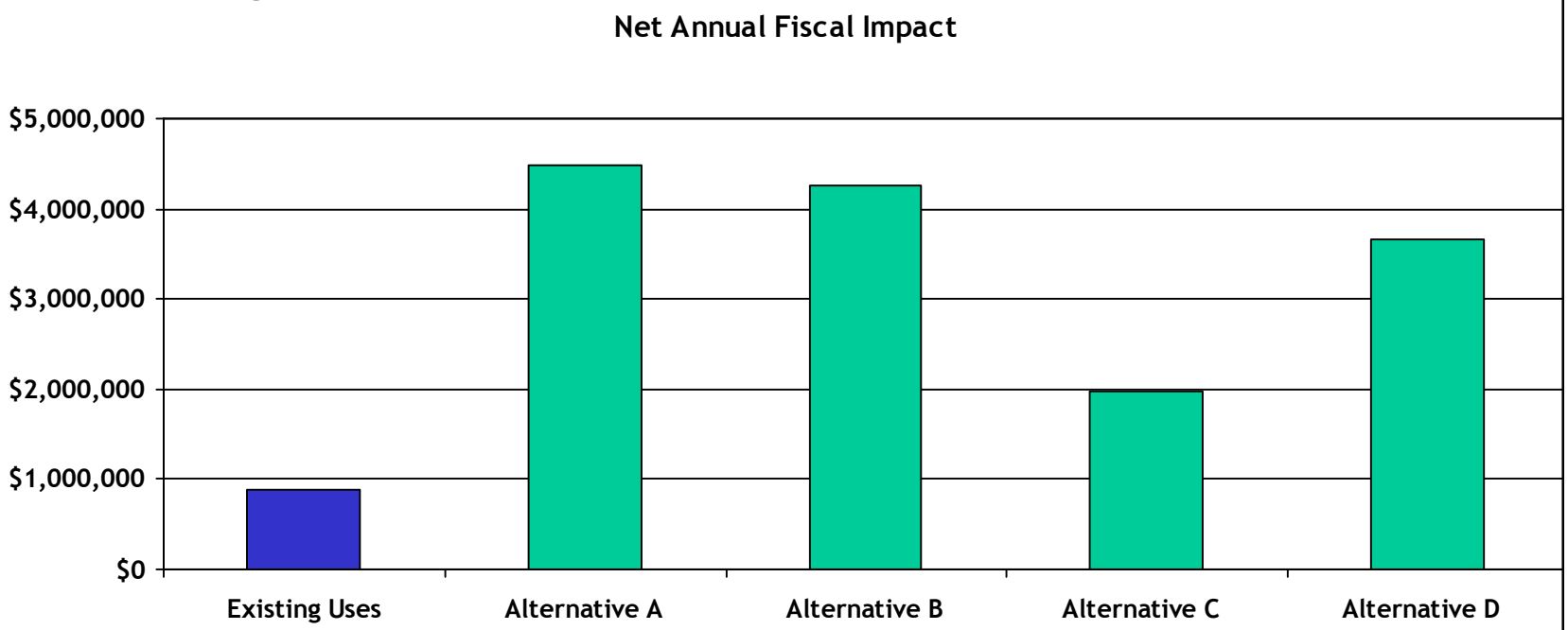
# Redevelopment: Fiscal Impact

- **Each scenario results in stronger positive fiscal impact compared to existing uses at build out**




- **Alternatives A and B are strongest due to highest office square footage**
- **Alternative C's smallest development program yields lowest fiscal impact; still higher than existing uses**
- **No alternative incorporates cost associated with the replacement of the City's solid waste infrastructure**

# Redevelopment Scenario

- **Redevelopment Conditions: Air Quality**
- **Alternative A: Baseline**
  - Relocation of industrial stationary sources will:
    - Improve PM10/PM2.5 air quality in the immediate West End area
    - Slightly degrade PM10/PM2.5 air quality in the Springfield area
    - Have little change in regional (ozone) air quality
  - Reduction in emissions from associated industrial truck traffic in the West End will be more than offset by new emissions from vehicle traffic associated with new residential, retail and office development
  - From a regional perspective,
    - Emissions from Virginia Paving and Vulcan Materials truck traffic will be about the same since these facilities will be relocated in close proximity to their customers
    - Emissions from Norfolk Southern truck traffic will decrease because the transloading facility will be closer to the Springfield tank farm
    - Emissions from Covanta truck traffic will increase substantially due to 25 mile travel distance to transfer station and 100 miles travel to alternative disposal

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# Redevelopment Scenario

- **Redevelopment Conditions: Air Quality**
- **Alternative B**
  - Impacts very similar to Alternative A
  - Slightly less emissions due to less traffic from new residential development
- **Alternative C**
  - Lower vehicle emissions than Alt. A/B/D due to less traffic associated with new residential/office/retail development
  - Retaining Covanta location reduces truck-miles traveled
- **Alternative D**
  - Impacts similar to Alternative A
  - Slightly less emissions due to less traffic from new commercial and higher density residential

# Redevelopment Alternatives

| | A | B | C | D |
|---|---|---|---|---|
| Financially Feasible? | | | | |
| Site Conditions & Constraints | | | | |
| Fiscal Impact Compared to Existing Uses | | | | |
| Air Quality Impacts Compared to Existing Uses | | | | |
| Relocation Costs | | | | |
| Impact on Cost of Goods & Services | | | | |

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# Next Steps

**Draft of Report**

- Planned June release

**Planning Commission Public Hearing**

**Council Public Hearing**

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# Contact Information

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