

**EISENHOWER WEST/
LANDMARK VAN DORN
IMPLEMENTATION
Advisory Group**

22 May 2017



Meeting Agenda

- Air Quality Analysis
- Phase 2 Infrastructure Plan and CIP Projects
- Additional Updates
- Questions and Next Steps



Air Quality Analysis

- Covanta has been partnering with the City on solid waste management since mid '80
 - Coexists with dense, adjacent mixed-use development and provides cost effective solution to the City's solid waste management
 - Is consistent with Eco-City charter and co-produces 23 MW of electricity, enough to power ~15,000 homes
 - Achieves excellent environmental records year in, year out



Air Quality Analysis

Purpose:

- With the adoption of the Eisenhower West SAP, there is a need to determine maximum air-quality-compliant heights for buildings currently planned for Van Dorn Metro Center neighborhood and investigate technically feasible mitigation options

Alexandria Study

- **Task 1** – Determine lowest possible baseline emission rates and impacts for existing uses
- **Results:** Current operation was found to be in compliance with both National Ambient Air Quality Standards (NAAQS) and the Virginia Significant Ambient Air Concentration (SAAC) standard
 - Under both normal operations and worst-case having emissions at the regulatory limit levels



Air Quality Analysis*

Pollutant	Averaging Time	Background ($\mu\text{g}/\text{m}^3$)	Covanta & Asphalt Paving ($\mu\text{g}/\text{m}^3$)	Results + Background ($\mu\text{g}/\text{m}^3$)	AAQS ($\mu\text{g}/\text{m}^3$)	Exceed Standard?
CO	1-hr	5.1	104.8	109.9	40,000	No
	8-hr	1.7	63.5	65.2	10,000	No
NO2	1-hr	62.3	91.6	154.0	188	No
	Annual	14.2	3.0	17.2	100	No
SO2	1-hr	8.3	39.5	47.8	196	No
	3-hr	13.0	35.9	48.9	1,300	No
	24-hr	5.0	11.2	16.2	366	No
	Annual	1.0	1.4	2.3	79	No
PM10	24-hr	24.3	10.2	34.5	150	No
PM2.5	24-hr	18.3	10.2	28.5	35	No
	Annual	7.6	1.4	9.1	12	No

*These calculations are based upon the maximum emissions limits allowed by the facility's operating permit. Emissions generated during normal operating conditions are typically much lower.

Air Quality Analysis*

Pollutant	Averaging Time	Covanta & Asphalt Paving ($\mu\text{g}/\text{m}^3$)	SAAC ($\mu\text{g}/\text{m}^3$)	Exceed Standard?
HCl	1-Hour	73.2523	187.5	No
Be	1-Hour	0.0001	0.1	No
	Annual	0.00E+00	0.004	No
Cd	1-Hour	0.0621	2.5	No
	Annual	0.0017	0.1	No
Pb	1-Hour	0.9441	7.5	No
	Annual	0.0254	0.3	No
Hg	1-Hour	0.3590	0.5	No
	Annual	0.0075	0.02	No
Dioxins/Furans ¹	1-Hour	0.0001	0.075	No
	Annual	0.00E+00	0.003	No

*These calculations are based upon the maximum emissions limits allowed by the facility's operating permit. Emissions generated during normal operating conditions are typically much lower.

Air Quality Analysis

Next Steps

- Task 2 - Determine maximum heights for which air quality at all Building Levels is in compliance – July 15
- Task 3 - Investigate technically feasible mitigation options and re-evaluate maximum heights – July 30
- Task 4 – Final report – August 30



Case Study: Minneapolis, MN

Waste to Energy Facility and Mixed Use Development

Covanta Facility is connected to:

- Target Field (MLB baseball park)
- A light rail station (Target Field Rail Station),
- An amphitheater, and other mixed- use development

Sustainable Features: Green roofs and other water reuse systems.



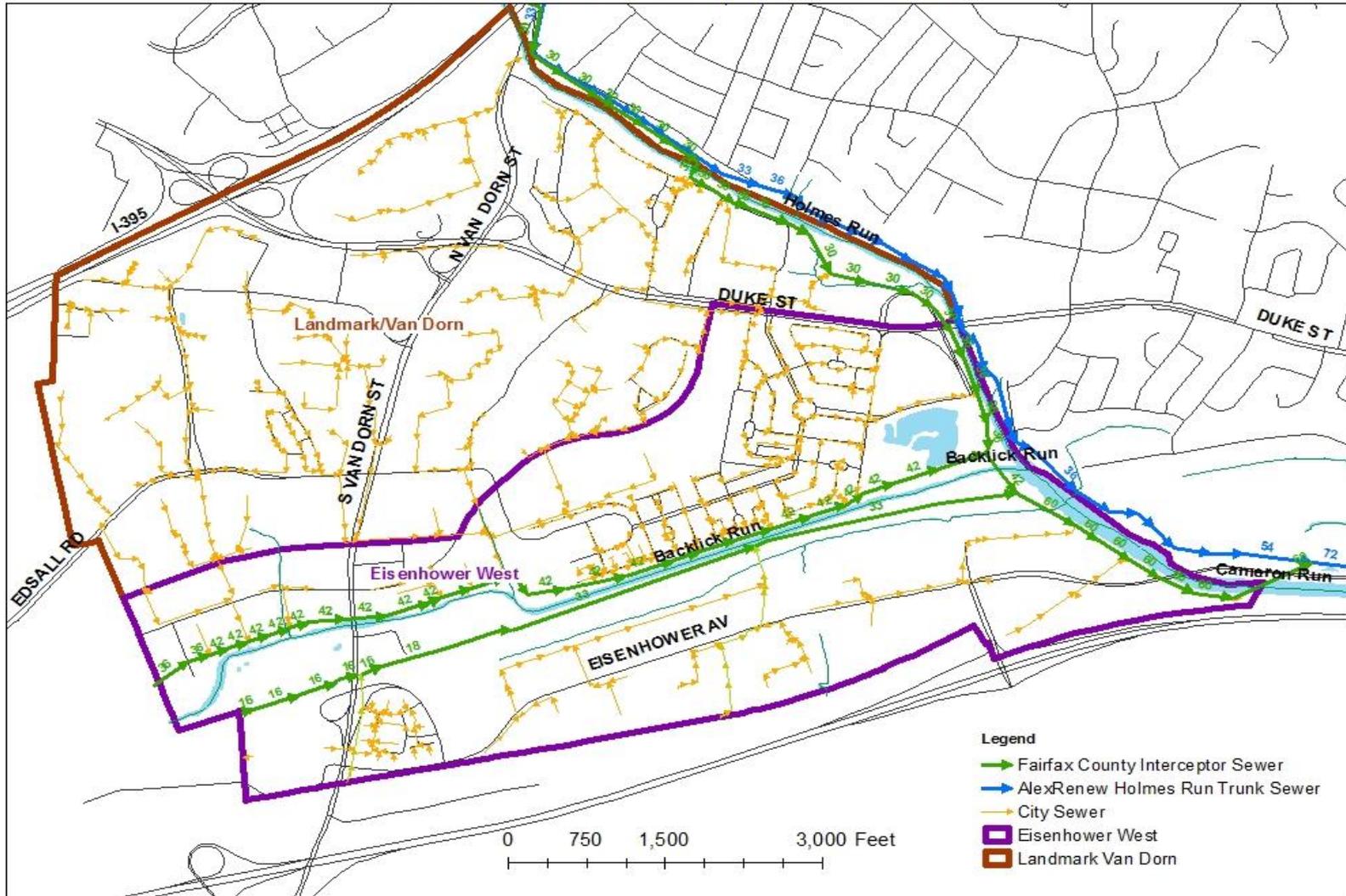
Phase 2 Infrastructure Plan

- Purpose: To perform analysis to facilitate infrastructure/SAP implementation and coordination
 - Framework streets Preliminary (10%) design
 - Sanitary sewer analysis
 - Sequencing of projects
- Notice to Proceed anticipated Summer 2017
- Additional analysis to be conducted (other studies):
 - Multimodal Bridge preliminary concept (funded FY18)
 - Farrington Connector preliminary concept (funded FY24)
 - Backlick Run stream restoration (TBD)



Sanitary Sewer Analysis

Eisenhower West/Landmark Van Dorn



Sanitary Sewer Analysis

- AlexRenew Holmes Run Trunk Sewer
 - Conveys flow from plan area sewers to the treatment plant
- Fairfax County Trunk Sewers
 - All City sewers from plan area into one of three Fairfax County trunk sewers and into AlexRenew Holmes Run Trunk Sewer
- City Collector Sewers
 - Total of 22.5 miles of sewer
 - 88 percent 10-inch diameter or less



Sanitary Sewer Analysis

- Purpose of Study
 - Assess existing sewer capacity and flows
 - Estimate future flows due to redevelopment
 - Identify capacity constraints
 - Identify required capacity improvements
 - Develop costs, timing and funding strategies

Sanitary Sewer Analysis

- Planned Schedule
 - Notice to Proceed June 2017
 - Fall 2017/Winter 2018
 - Assessment of existing capacity and flows
 - Assessment of future flows
 - Identification of capacity constraints
 - Spring 2018
 - Preliminary capacity improvements
 - Preliminary cost, timing, funding strategies
 - Fall 2018
 - Final findings and report

Multimodal Bridge



LEGEND:

- Transloading Facility
- Future Planned Road
- Current Development
- Greenhill Site proposed concept
- Option 1
- Option 2
- Option 2a
- Option 3
- Option 3a



Multimodal Bridge



LEGEND:

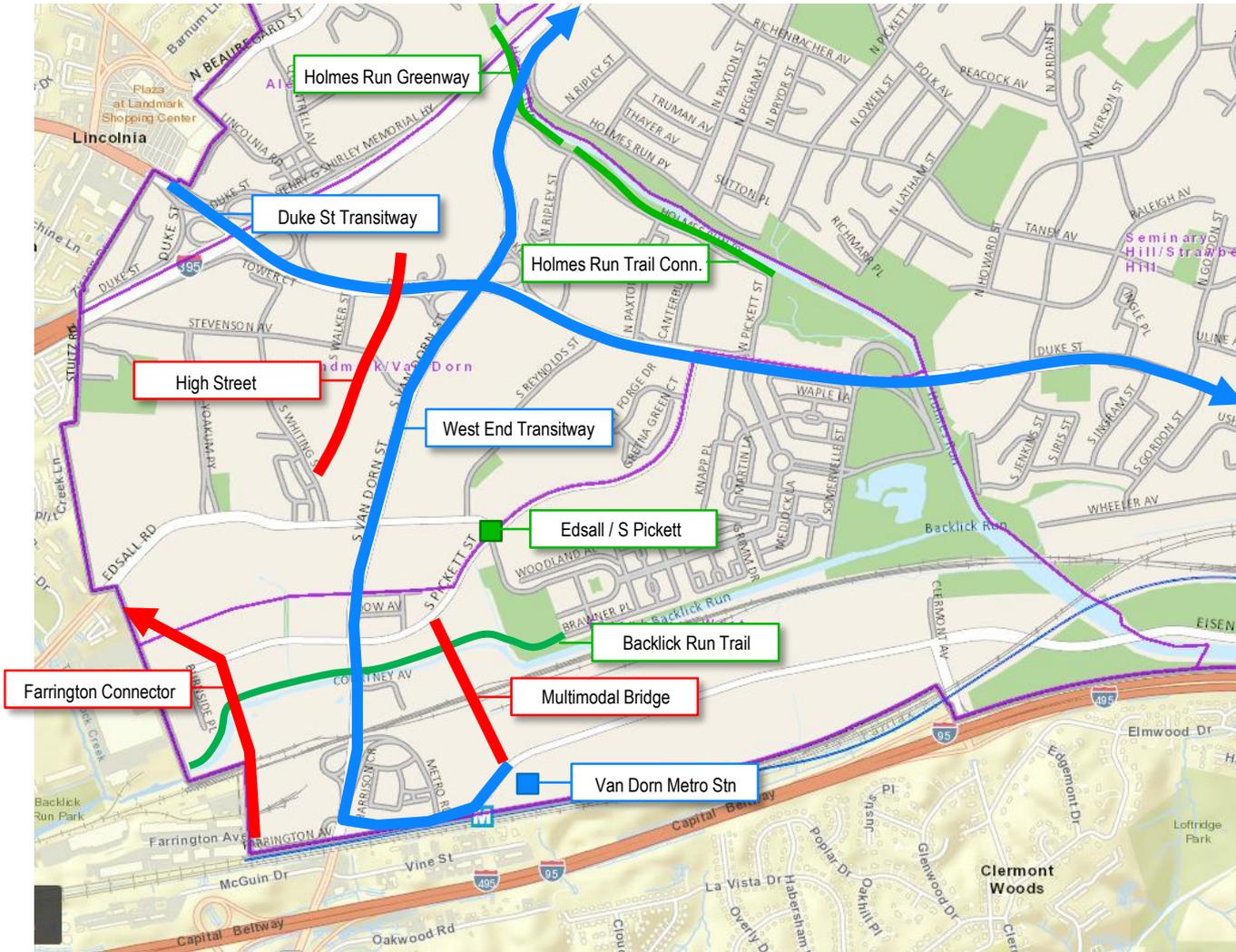
-  Bridge alignment for further Study
-  Option 3a from Eisenhower West Plan (Not to be precluded)
-  Transloading Facility
-  Future Planned Road
-  Current Development
-  Greenhill Site proposed concept

Multimodal Bridge

- Roadway Infrastructure Study to do additional analysis on Norfolk Southern proposed alignment
 - Coordination with Eisenhower West proposed street grid
 - Curvature / Geometrics
- Preliminary design of bridge through the City's CIP – FY18/19
- City to continue seeking grant opportunities for bridge construction



Related CIP Projects



- LEGEND:**
- █ Non-Motorized Project
 - █ Transit Project
 - █ Roadway Project



Additional Updates

- Edsall Road Mural
- Greenhill Meeting May 23rd
- Virginia Paving SUP
- Cameron Run Park Planning Process



Next Steps & Questions

DRAFT SCHEDULE

- **Summer 2017**
 - Phase 2 Infrastructure Plan Consultants Selected and Work Begins
 - Air Quality Analysis Continues
- **Fall 2017**
 - Phase 2 Infrastructure Plan Preliminary Analysis
 - Air Quality Analysis Findings
 - Development Updates as Needed
 - Virginia Paving SUP Docketed
 - Multimodal Bridge Preliminary Analysis
- **Winter 2018**
 - Phase 2 Infrastructure Plan Analysis Continued
 - Development Updates as Needed
- **Spring 2018**
 - Phase 2 Infrastructure Plan Analysis Continued
 - Development Updates as Needed
- **Fall 2018**
 - Phase 2 Infrastructure Plan Analysis Final Findings
 - Development Updates as Needed

