

**Site Analysis Study**  
*Central Virginia Partnership for Economic Development*



November 19, 2014  
To: Fluvanna County Board of Supervisors  
By: Joe Hines, PE, MBA & Craig Kotarski, PE, LEED

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### Study Scope

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- ✓ Evaluate 10 sites submitted
- ✓ Compare to target industries
  - Business & Financial Services
  - Information Technology / Data Centers
  - Transportation & Logistics
  - Chemical & Plastics
  - Forest & Wood Products
  - Light Manufacturing
- ✓ Charlottesville & Albemarle – Research & ID Site Criteria
  - Bioscience & medical devices
  - Agribusiness, food processing & tech

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## 2013 CVPED Announcements\*\*

Locality	Announce	New	Existing	Jobs	Investment*
Albemarle	1	0	1	0	\$0.70
Charlottesville	0	0	0	0	0
<b>Culpeper</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>450</b>	<b>\$170.71</b>
<b>Fluvanna</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Greene	0	0	0	0	0
Louisa	3	2	1	30	\$7.00
Nelson	2	1	1	0	\$7.05
Orange	1	1	0	40	\$4.50
<b>TOTALS</b>	<b>13</b>	<b>7</b>	<b>6</b>	<b>520</b>	<b>\$189.96</b>

\* Investment in millions \*\* Source VEDP Results 2013

**Culpeper – 87% of Jobs and 90% of Investment**



## VEDP's Perspective

- ✓ 60+% of inquiries are for existing buildings
- ✓ 70,000 SF is MEDIAN size Industrial Building
- ✓ 95,000 to 97,000 SF is the AVERAGE size
- ✓ Lack of 100+ acre “ready to go” sites

Project Road Runner



Project Bulldog



Project Cavalier



## Site Selection Magazine Site Selectors' Top Location Criteria

Rank	Site Selection Factor
1	State and local tax scheme
2	<b>Transportation Infrastructure</b>
3	<b>Utility Infrastructure</b>
4	<b>Land / Building prices &amp; supply</b>
5	<b>Ease of permitting &amp; regulatory procedures</b>
6	Existing Workforce Skills
7	<b>Local economic development strategy</b>
8	Legal climate (tort reform)
9	<b>Availability of incentives</b>
10	State economic development strategy

New in 2012  
Criteria



Source: Site Selection Magazine



## Economic Development Trends

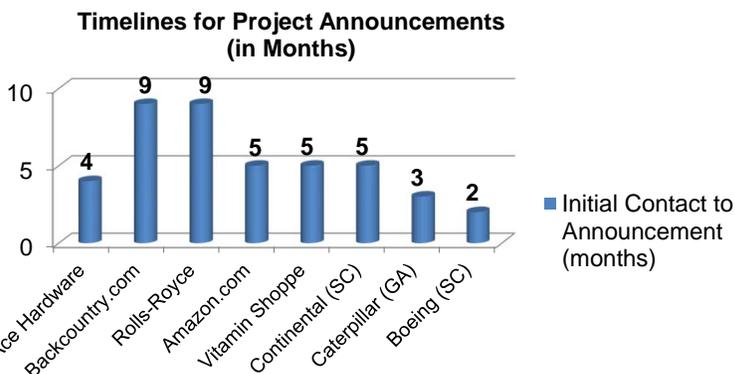
### A Consultant's Perspective...

- ✓ Prospects & consultants look at **regions**, NOT sites or localities
- ✓ Projects move in **months**
- ✓ **Speed to market** matters
- ✓ Need **"Ready to go"** sites
- ✓ **Internet** has **transformed** the process
- ✓ Looking for **solutions**, not sales
- ✓ Incentives do matter

**100% of your success is 70-80% out of your control...**



## How fast are prospects moving?



**\$2.36 billion investment & over 10,000 jobs**  
**July 30 – Boeing announced \$1.1 billion & 2,000 add'l jobs**



## Where does your site rank?



## Why is site rank important?

Tier	Development Timeline	Odds of Success	Prospect Ready Status	Major Considerations
Tier 1	4-8 yrs	< 10%	No	Willing Seller
Tier 2	3-6 yrs	< 20%	No	Controlled / Zoned
Tier 3	18-36 months	40-50%	Minimum	Planning / Significant Due Diligence
<b>Tier 4 *</b>	<b>9-18 months</b>	<b>70-80%</b>	<b>Preferred</b>	<b>Certifiable &amp; Infrastructure</b>
<b>Tier 5 *</b>	<b>3-9 months</b>	<b>&gt; 90%</b>	<b>Preferred</b>	<b>Shovel / Pad Ready</b>

\* **“Gamblers Odds”** Significantly increases your odds of success...



## Product Development vs. Product Fulfillment

### Product **Development** (Tier 1-3) – **Getting in the game...**

- ✓ Lacking infrastructure and/or sites
- ✓ Substantial investment of time, money & political capital
- ✓ Have sites but lacking due diligence, have substantial permitting hurdles, etc.
- ✓ Can take multiple years to develop into marketable product

### Product **Fulfillment** (Tier 4-5) – **You’re in the game...**

- ✓ Have a mature product with infrastructure & “ready to go” sites
- ✓ Pro-actively marketing for the region, locality & site
- ✓ Site is routinely being shown to active prospects



## Sites Evaluated

Number	Site	Locality	Total Acreage	Public or Private
1	Crown Jewel	Culpeper	130.58	Private
2	Dalro	Culpeper	165.6	Private
3	Wingspread	Culpeper	266.3	Private
4	Enterprise Point	Greene	70	Private
5	Fernclyff Business Park	Louisa	104	Private
6	Whitehouse Business Park	Louisa	288	Private
7	Colleen Business Park	Nelson	15	Private
8	King Property	Orange	2,300	Private
9	York Property	Orange	30	Public
10	Cosner Site	Fluvanna	107.7	Private



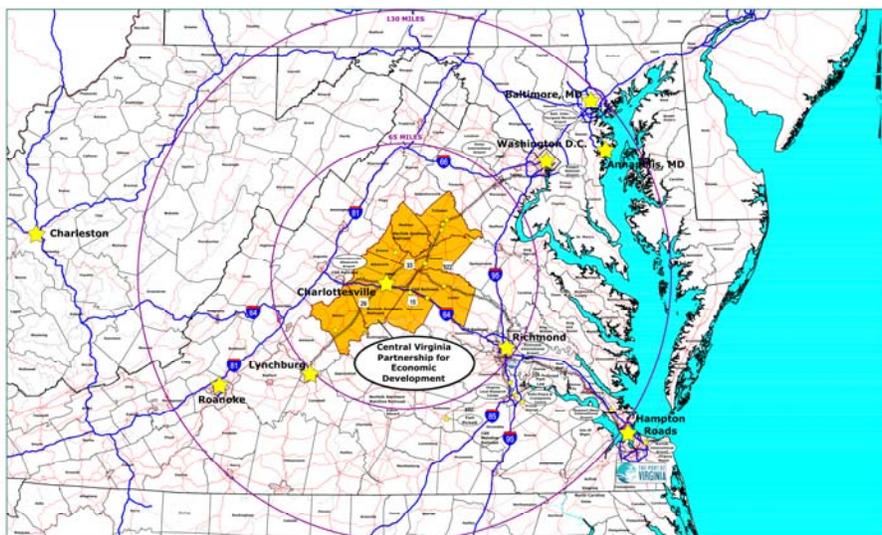
## Target Industries - Site Features

Industry	Building Size or Acreage Range	Single or Multi-Story	Traffic Demands	Water Demands <sup>(1)</sup>	Wastewater Demands	Power Demands	Natural Gas Demands
Business / Financial Services	20k SF to 100k SF	Multi	Low - Med	Low	Low	Low-High	None-low
Transportation & Logistics	100k SF to 1M SF	Single	Med-High	Low	Low	Low-Med	Low-Med
Information Tech / Data Centers	50k SF to 500k SF	Single or Multi	Low	High	Med-High	High	Med-High
Chemicals & Plastics	25 to 200 acres	Varies	Low-Med	Med-High	Med-High	Med-High	Med-High
Light Mfgr / Adv Mfgr	50k SF to 400k SF	Single	Low-Med	Low-Med	Low-Med	Low-Med	Low-Med
Wood Products	20 to 200 acres	Single	Low	Med-High	Med-High	Low-High	Low-High

(1) Most industries require a minimum fire flow capacity, which is usually 1,500 to 2,000 gpm for 2 hrs (180,000 to 240,000 gal fire storage)



## CVPED – Available Sites / Regional Map



Central Virginia Partnership for Economic Development  
Available Sites



## Site Visits

- ✓ Quite the array of sites
  - Salvage yard w/ junkyard dogs
  - Mature sites with nice park entrances
  - Railroad crossing into a cutover site
  
- ✓ Fluvanna Site Evaluated
  - Cosner Site



## CVPED Site Basics

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- ✓ 9 privately owned and 1 publicly owned sites
- ✓ 4 rail served sites
- ✓ 6 sites with Natural Gas availability
- ✓ 3 potential Rail & NG
- ✓ Electric Service Providers
  - 3 served by Dominion Power
  - 4 served by Central Virginia Elec Coop
  - 3 served by Rappahannock Elec Coop
- ✓ 2 sites zoned RA or A1 (agricultural)
- ✓ 2 sites not served by public water & sewer



## CVPED Site Sizes

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<u>Acreege Ranges:</u>	<u>Number:</u>
< 50 acres	2
50 to 100 acres	1
100 to 200 acres	4
200 to 400 acres	2
> 400 acres (King Property @ 2,300 acres)	1
<b>Total</b>	<b>10</b>



## Cosner – Site Basics

Number	Site	Locality	Total Acreage	Pod Acreage / Largest Contiguous	Water Capacity	Water Provider	Sewer Capacity	Sewer Provider	Rail	Natural Gas	Power	Telecom	Zoning	Tech or Enter Zone Designate	4-lane US Hwy / Distance	Interstate / Distance	Public / Private
10	Cosner Site	Fluvanna	107.7	107.70	Unknown	Well	Unknown	On-Site	N/A	N/A	CVEC	VZ	A1		US 250 / 0	I-64 / 3	Private

- ✓ Water Capacity: **Unknown**
- ✓ Water Provider: **Well**
- ✓ Sewer Capacity: **Unknown**
- ✓ Sewer Provider: **On-site Septic**
- ✓ Power: CVED
- ✓ Telecom: Verizon
- ✓ Distance to Interstate: ~3 miles

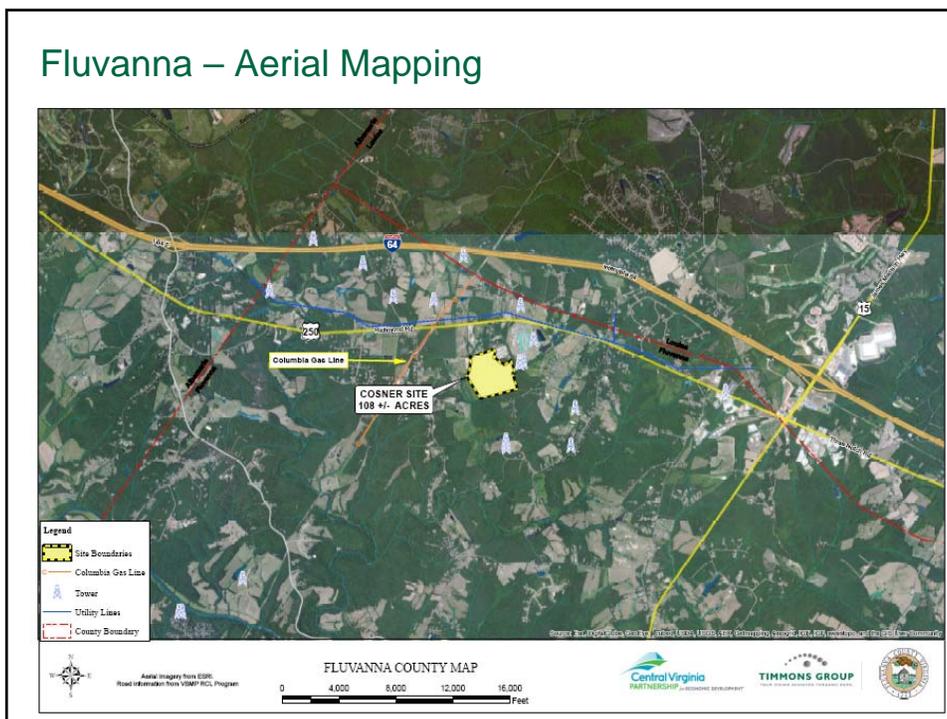


## Cosner - Due Diligence Items & Site Rank

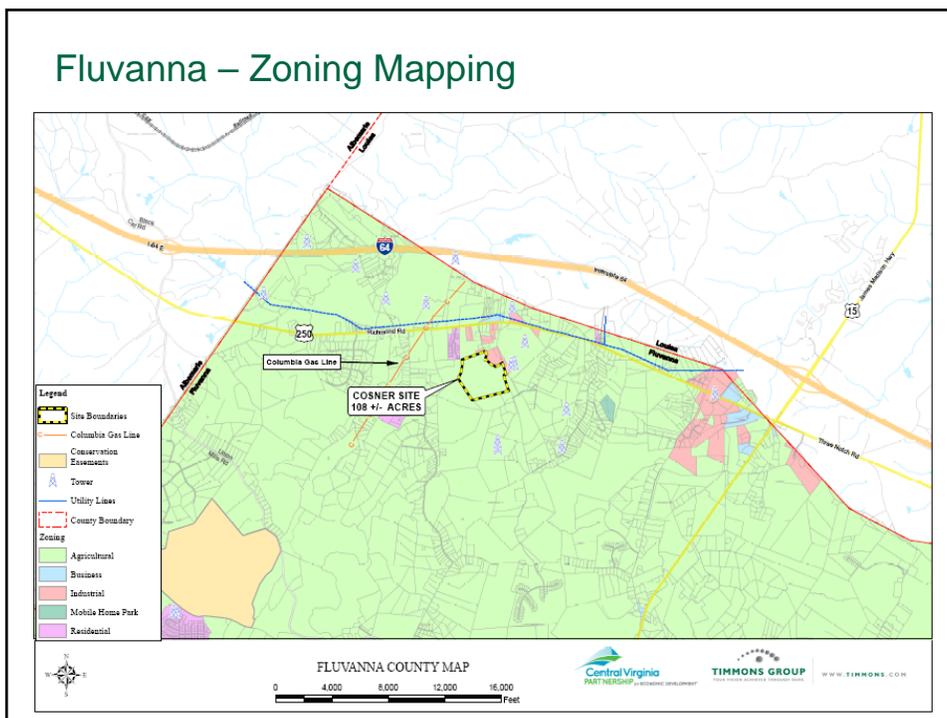
- ✓ Due Diligence Completed
  - Boundary survey
  - Various environmental reports
  - Nothing else
- ✓ Tier 1 Site
  - No control
  - Zoned A1
  - Lacking Utilities



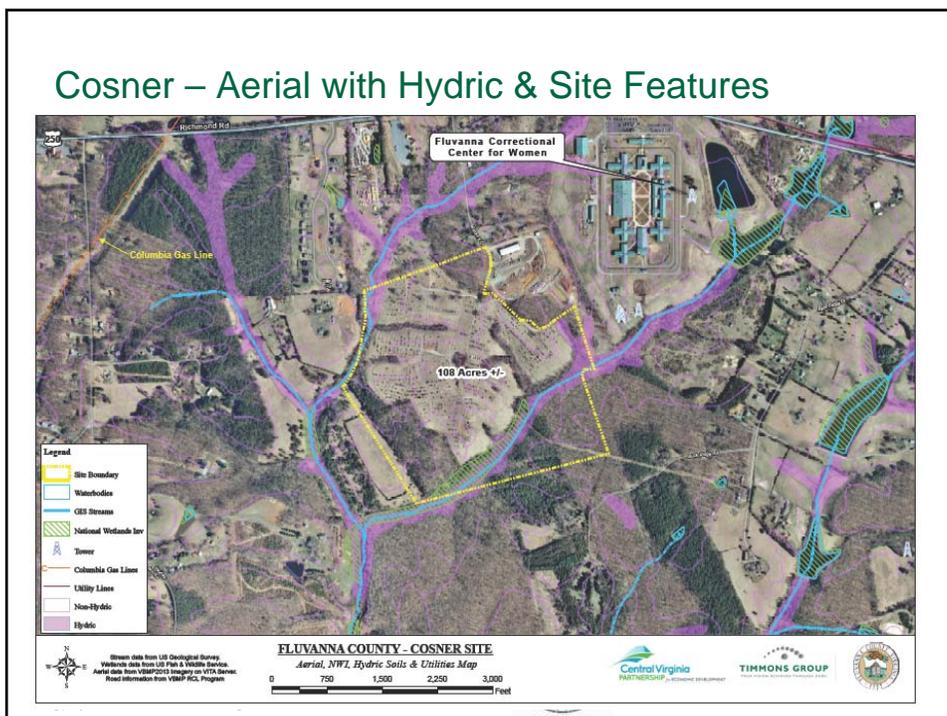
## Fluvanna – Aerial Mapping



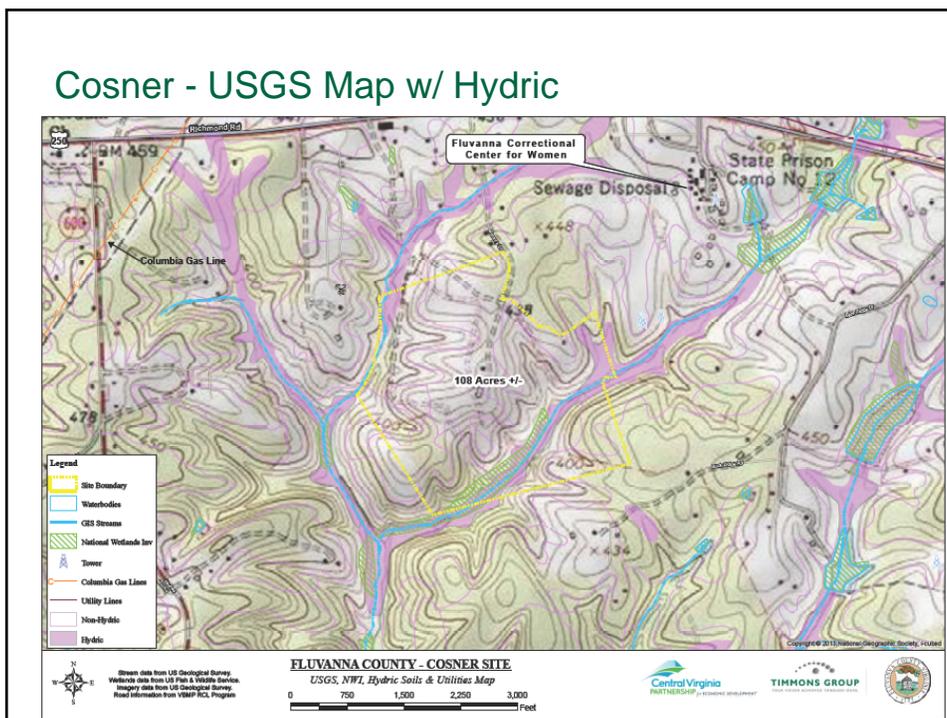
## Fluvanna – Zoning Mapping



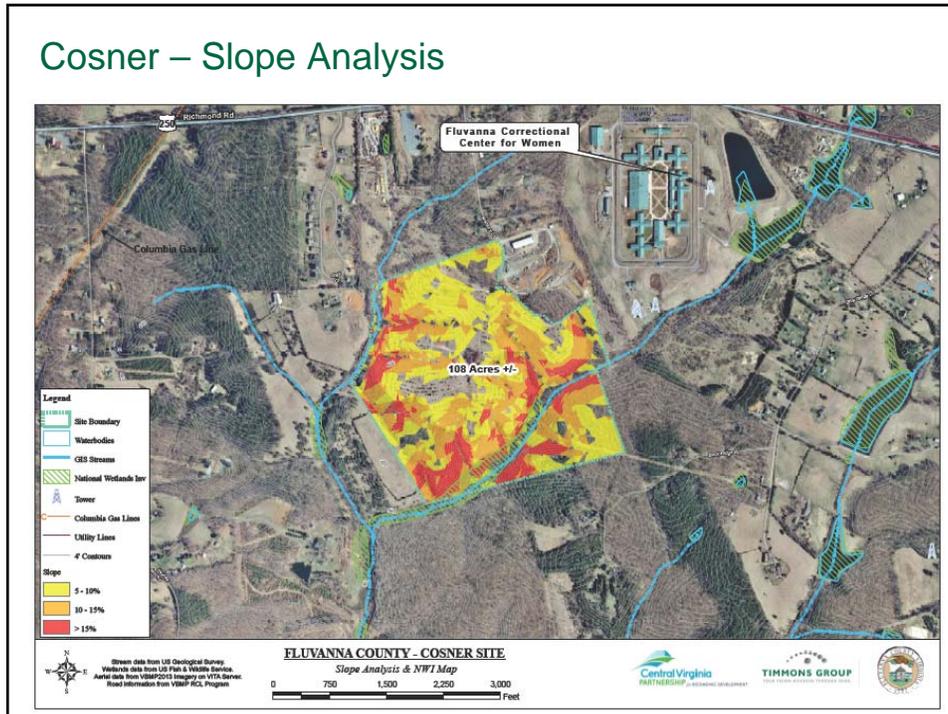
## Cosner – Aerial with Hydric & Site Features



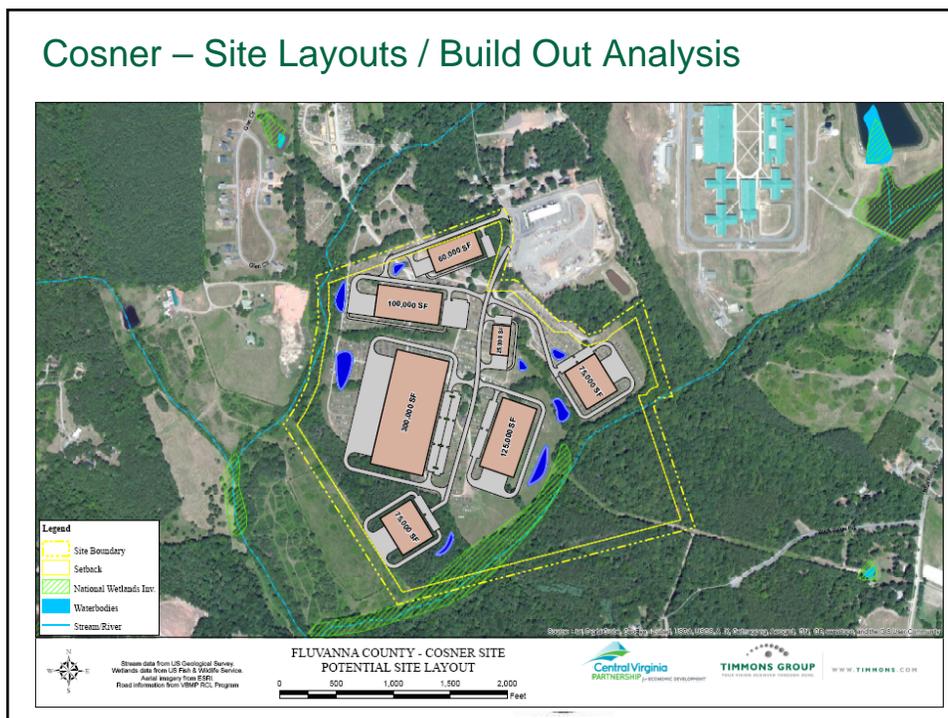
## Cosner - USGS Map w/ Hydric



## Cosner – Slope Analysis



## Cosner – Site Layouts / Build Out Analysis



## Cosner - Sites vs. Markets

Number	Site	Locality	TG Tier	Business / Financial Services	Info Tech / Data Centers (1)	Transportation & Logistics	Chemical & Plastics	Light Mfgr / Advanced Mfgr	Wood Processing
10	Cosner Site	Fluvanna	1		Y (CVEC)	Y		Y	Y

(1) It's important to note that power costs for data centers can vary greatly among service providers.

- ✓ Information Technology / Data Centers: Y (CVEC)
- ✓ Transportation & Logistics: Y
- ✓ Light Mfgr / Advanced Mfgr: Y
- ✓ Wood Processing: Y



## Cosner - Build-Out Potential / Analysis

No.	Site	Locality	TG Tier	Site Acreage	Buildout Potential	Building Size Range		Potential Yield SF / Acre
						Small	Largest	
10	Cosner Site	Fluvanna	1	107.7	760,000	25,000	300,000	<b>7,060</b>

- ✓ Site Acreage: 107.1 Acres
- ✓ Buildout Potential: 760,000 SF
- ✓ Smallest Footprint: 25,000 SF
- ✓ Largest Footprint: 300,000 SF
- ✓ **Potential Yield (SF / Acre): 7,060 SF / Acre**



## Cosner - Recommended Items

- ✓ Phase 1 ESA (after all cars have been removed)
- ✓ Preliminary Geotechnical Report
- ✓ Wetlands Delineation & COE Confirmation
- ✓ Topo Survey
- ✓ Need to get PUBLIC Water & Sewer to the site



## Charlottesville & Albemarle

- ✓ Bioscience & Medical Devices Site Analysis

Research Park	Location	Acres	Developed Square Footage
Innovation Research Park @ ODU	Norfolk, VA	75	200,000
INNOVATION @ Prince William	Manassas, VA	1500	3,000,000*
Cyber Park	Danville, VA	330	200,000*
University of Virginia Research Park	Charlottesville, VA	562	554,000
Virginia Biotechnology Research Park	Richmond, VA	34	1,300,000
Virginia Tech Corporate Research Center	Blacksburg, VA	230	2,000,000*
Fontaine Research Park	Charlottesville, VA	54	500,000
Howard Hughes Medical Institute, Janelia Farm Research Campus	Ashburn, VA	689	800,000
Innovation Village @ Rockingham	Harrisonburg, VA	365	40,000
Carolina North	Chapel Hill, NC	250	2,475,000
The Research Triangle Park	Durham, NC	7000	22,500,000

*italics represent approximate square footage*





## Typical Water Usage

- ✓ 30-40 Gal per SF per Yr
- ✓ Table @ 40 Gal per SF per Yr

Facility Size (SF)	Gal/Yr	GPD
100,000	4,000,000	11,000
150,000	6,000,000	16,400
200,000	8,000,000	21,900
250,000	10,000,000	27,400
<b>300,000</b>	<b>12,000,000</b>	<b>32,900</b>



## Agribusiness, Food Processing & Technology

- ✓ 4 categories of industries
  - Fruits & Vegetables
  - Meat, Poultry & Seafood
  - Beverage & Bottling
  - Dairy Operations
- ✓ Full range of site sizes
- ✓ Relatively heavy water usage (200k to 250k gpd on avg)
- ✓ *Potentially difficult wastewater (high BOD, COD & TSS)*



## Charlottesville & Albemarle

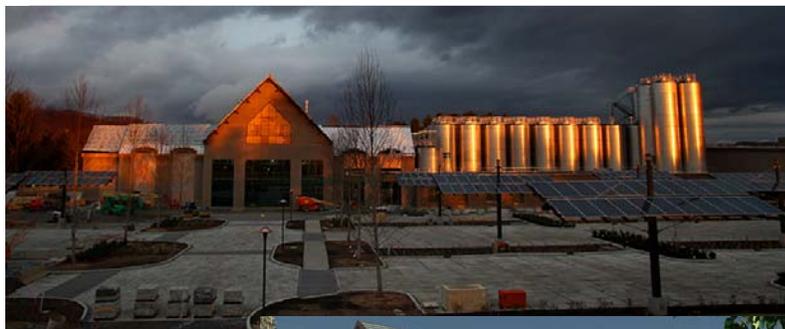
✓ Agribusiness, Food Processing & Technology – sample sites

Company	Location	Acreage	Developed Sq Ft
Kraft Foods	Frederick Co.	30	335,000
Sabra	Chesterfield	49	248,000
Sierra Nevada	Asheville, NC	190	300,000
New Belgium	Asheville, NC	17.5	150,000
Blue Mountain Brewery	Nelson	15	50,000
Shamrock Farms	Augusta	40	130,000
Green Mountain Coffee Roasters	Isle of Wight	64	330,000
WhiteWave Foods	Rockingham	90	302,000
Acme Smoked Fish	Wilmington, NC	25	140,000
Red Sun Farms	Dublin, VA	Up to 200	1,000,000 exp to 2,000,000

**No correlation between Acreage & Developed Sq Ft**



## Sierra Nevada Brewery - Asheville, NC



## Agribusiness – Water Demands

✓ Water demands based upon RFI's & VEDP Info

Project or Company Name*	Requested Water Capacity (GPD)	Industry Type
Fish Bowl	250,000	Brewery
Stone Brewery	225,000	Brewery
Bravo IV	250,000	Brewery
Porject JO	280,000	Brewery
Project Solutions Search	230,000	Agri-Business
Casper / Acme Smoked Fish	80,000	Agri-Business
Milky Way	1,000,000	Agri-Business
<b>Avg Water Demand w/ Milky Way</b>	<b>317,500</b>	
<b>Avg Water Demand w/o Milky Way</b>	<b>220,000</b>	



## Wastewater BOD's (Biochemical Oxygen Demand)

✓ High BOD means it needs more oxygen (air) to process the waste

✓ **PRETREATMENT IS A MUST**

Product	BOD5 (mg/l)	BOD5 Strength vs. Municipal Waste
Whole Milk	104,600	350 X
Skim Milk	67,000	223 X
Ice Cream	292,000	973 X
Brewery	5,600	20 X
Fish Processing	2,600	9 X
Meat Slaughterhouse	1,130	4 X
Meat Packinghouse	1,290	5 X
<b>Municipal Waste</b>	<b>250 to 300</b>	<b>1 X</b>
<b>Blood</b>	<b>1,000,000</b>	<b>3,333 X</b>



## CVPED - Site Rank Summary

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- ✓ Product Development: 8 sites
  - Tier 1 – 2 sites (Enterprise Point & Cosner)
  - Tier 2 – 3 sites (Crown Jewel, Whitehouse & King Property)
  - Tier 2/3 – 3 sites (Wingspread, Ferncliff & York)
  - Tier 3 – 0 sites
- ✓ Product Fulfillment: 2 sites
  - Tier 3/4 – 1 site (Colleen Bus Park)
  - Tier 4 – 1 site (Dalro)
  - Tier 5 – 0 sites

***Lacking marketable and/or mature product....***



## CVPED - General Observations

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- ✓ Diverse product mix
- ✓ Wide range of site sizes and assets
- ✓ Good water & sewer capacity on numerous sites
- ✓ Varying degrees of readiness
- ✓ Few publicly owned or controlled sites
- ✓ Lacking significant due diligence on a majority of sites
- ✓ Aside from King Property, lacking a larger publicly owned & infrastructured site



## CVPED - Recommendations

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- ✓ Complete as much due diligence as feasible on each site
  - Wetlands expire every 5-yrs, but fundamental to site preparedness
  - All other due diligence items last forever
- ✓ Try and gain public control of desired sites (option agreements?)
- ✓ Search for new sites to be publicly owned
- ✓ ***Give serious consideration to the Regional Park Concept even if it's just among a smaller subset of localities***



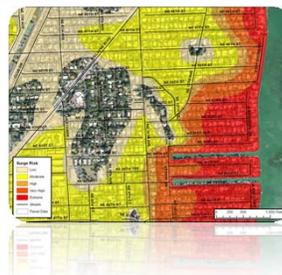
## Thanks for your time !

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## About Timmons Group

- ✓ Economic Development
- ✓ Prospect Recruitment
- ✓ Site Certification Programs
- ✓ Site Selection & Analysis
- ✓ Site Assessments
- ✓ Master Planning & Site Development
- ✓ Infrastructure Development
- ✓ GIS & Geospatial Services
- ✓ Site LoGIStics®



## Contact Info

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