

Tamara Preiss  
Vice President  
Federal Regulatory Affairs



September 1, 2011

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**Ex Parte**

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

**Re: Service Rules for the 698-746, 747-762, and 777-792 MHz Bands, WT Docket No. 06-150; Petition for Rulemaking Regarding the Need for 700 MHz Mobile Equipment to be Capable of Operating on All Paired Commercial 700 MHz Frequency Blocks, RM-11592**

Dear Ms. Dortch:

On August 30, representatives of a number of Lower 700 MHz A block licensees met with the following staff from the Wireless Telecommunications Bureau to discuss the above-captioned proceedings: Rick Kaplan, Bureau Chief; Paul Murray, Assistant Bureau Chief; Tom Peters, Chief Engineer; and Nese Guendelsberger, Chief, Spectrum and Competition Policy Division. Attending for the licensees were John Scott and Tamara Preiss, Verizon; Michele Farquhar for Vulcan Wireless LLC; Melissa Newman for CenturyLink; Chip Pickering of Capital Resources, LLC, for Cavalier and Continuum LLC; George Wheeler for US Cellular; Ben Moncrief for Cellular South; Michael Lazarus for MetroPCS; and, by telephone, Scott Wills for Vulcan; Wirt Yerger for Cavalier; William Mounger for Continuum, LLC, and Joy McConnell-Couch for CenturyLink.

We discussed challenges faced by Lower 700 MHz A block licensees in deploying services in the A block due in part to changed circumstances since they acquired their licenses. We urged the Commission to address these challenges expeditiously given the long lead times to construct 700 MHz systems, particularly greenfield systems. We explained that the Commission's rules requiring wireless licensees to accord interference protection to Channel 51 operations effectively preclude A block licensees from providing service in certain geographic markets. These barriers to deployment have also impaired the development of equipment that operates in the Lower A block. We also discussed the need for clarity regarding penalties for failure to meet build-out requirements for both the A and B blocks of 700 MHz spectrum. In that regard, we noted that a number of parties had filed petitions for reconsideration asking the Commission to clarify the circumstances under which licensees might face penalties, such as fines and forfeitures, in addition to a two-year reduction in license term.<sup>1</sup> The attached materials were provided to Bureau staff during the discussion.

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<sup>1</sup> See, e.g., *Service Rules for the 698-746, 747-762, and 777-792 MHz Bands*, WT Docket No. 06-150, Petition of MetroPCS Communications, Inc. for Clarification and Reconsideration (filed Sept. 20, 2007), at 6-10; Blooston Rural Carriers Petition for Partial Reconsideration and/or Clarification (filed Sept. 24, 2007), at 11-18.

Marlene H. Dortch  
September 1, 2011  
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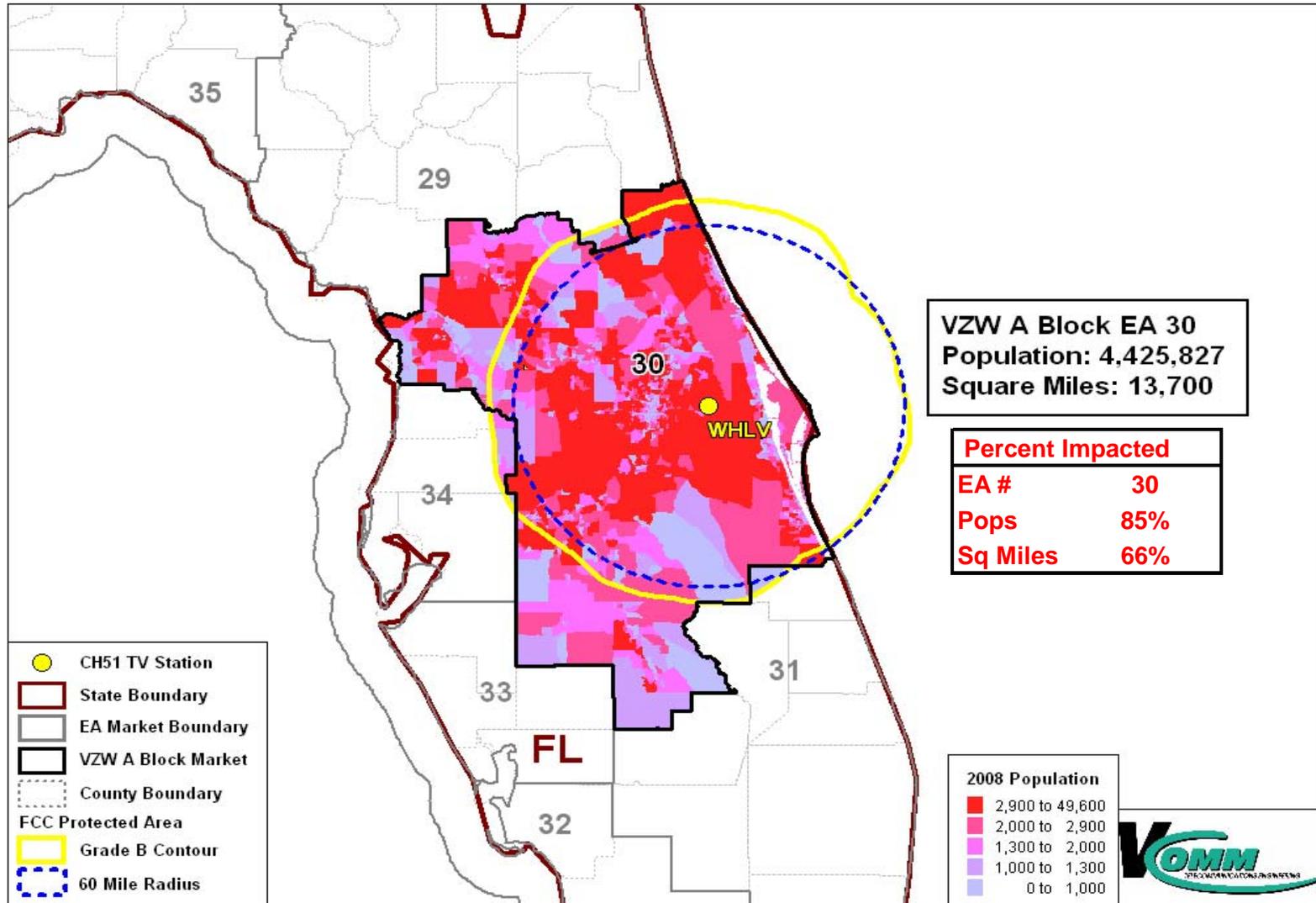
This letter is being filed electronically pursuant to Section 1.1206 of the Commission's Rules. Should you have any questions regarding this letter, please contact the undersigned.

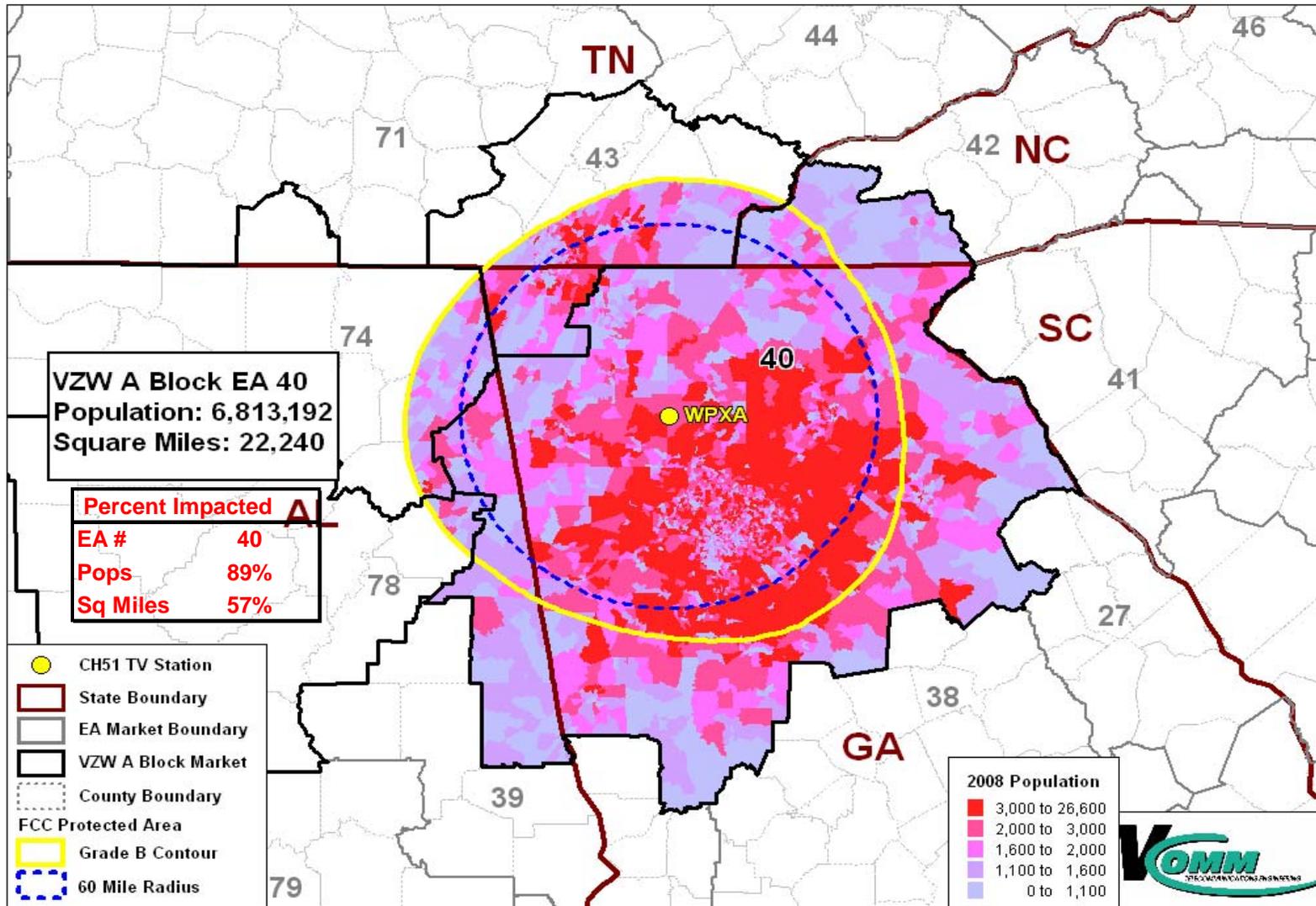
Sincerely,

A handwritten signature in black ink, appearing to read "James L. Quinn". The signature is written in a cursive style with a large initial "J" and a long, sweeping underline.

Attachments

cc: (by e-mail)  
Rick Kaplan  
Paul Murray  
Tom Peters  
Nese Guendelsberger





# Channel 51 Broadcasters in Vulcan Markets

## Channel 51 impact in Vulcan Markets

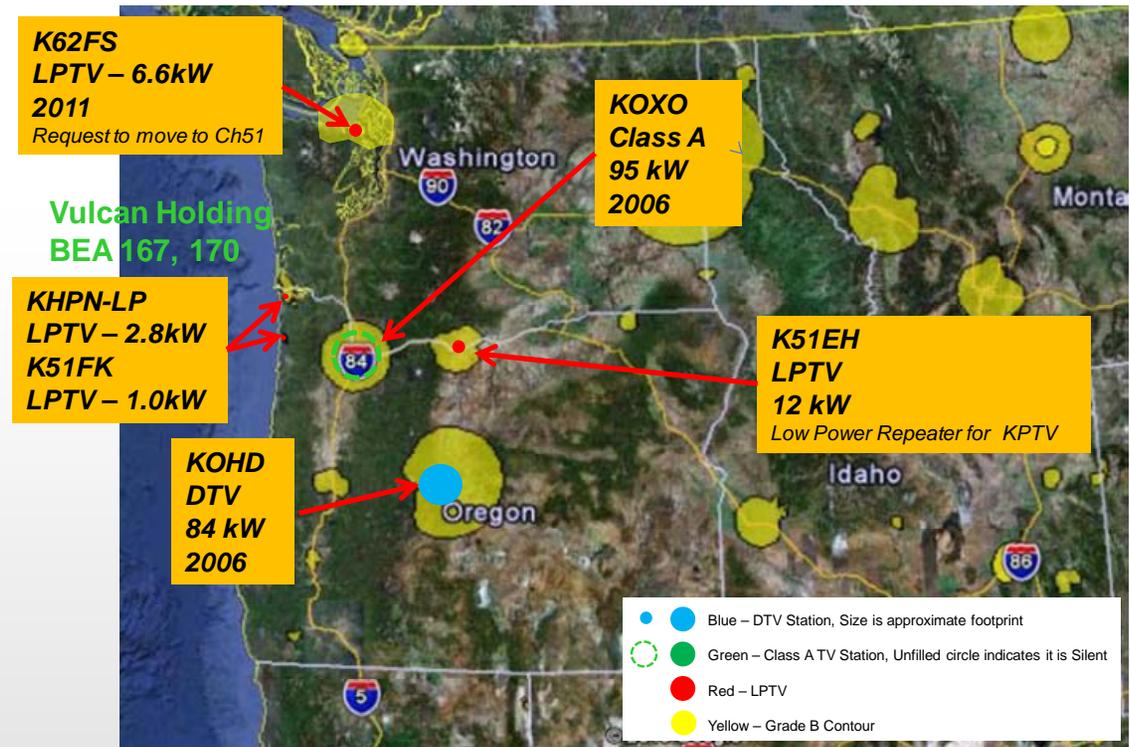
### EA 167

- KOHD - Full Power (protected)
- KOXO-CA - Class A (protected)
- KHPN-LP - Low Power (unprotected interferer)
- KMOR-LP - Low Power (unprotected interferer)
- K51EH - Low Power (unprotected interferer)
- K51FK - Low Power (unprotected interferer)

### EA 170

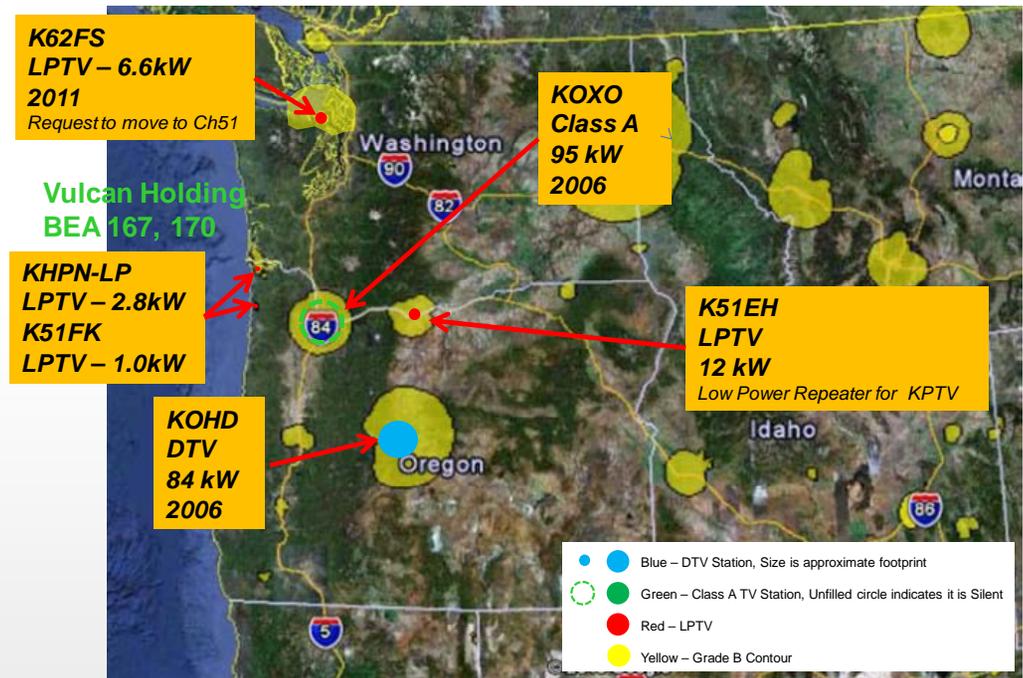
- KHPN-LP - Low Power (unprotected interferer)
- KOXO-CA - Class A (protection extends into EA170)

1. Protection of Full Power TV & Class A Stations is required by FCC Technical Rules
2. Protection zones & interference from TV transmission facilities impede A-Block deployment

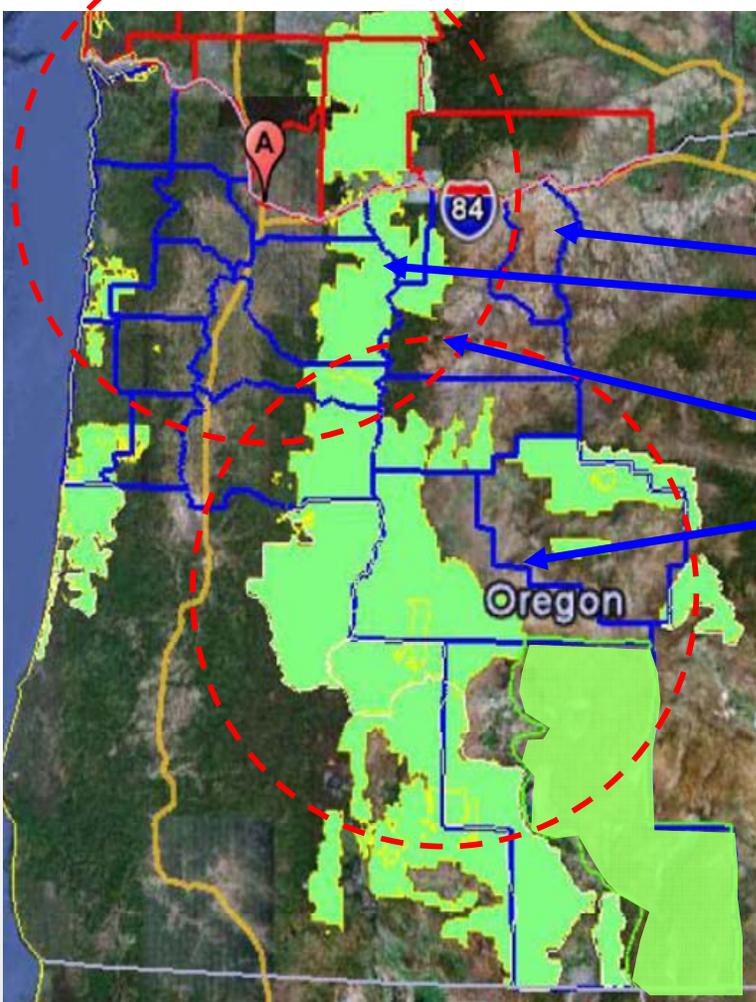


# Broadcaster Protection Significantly Reduces Buildable Geography and Further Reduces Desirable, High Density Areas

- KOHD and KOXO require up to 90 mile protection zones
- K51EH, KHPN, K51FK, while unprotected LPTVs, still create interference for Vulcan and need to be accounted for in deployment
- Broadcaster protection impacts areas best suited for cost-effective deployment and business plans for contiguous market deployments

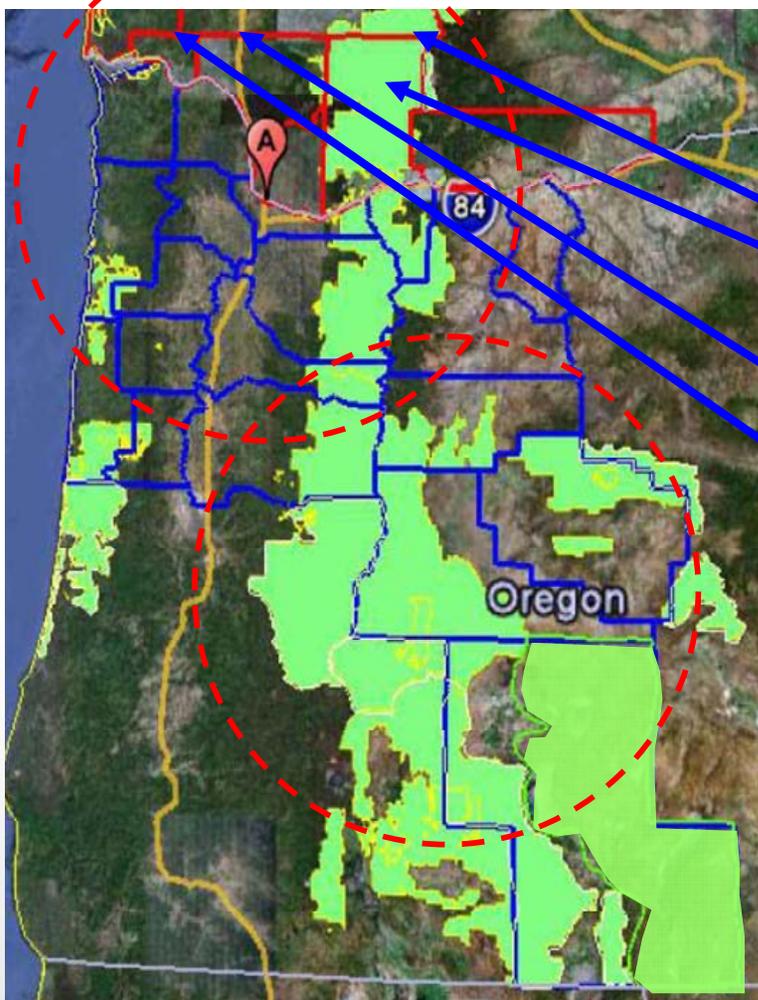


## Broadcaster Protection Does Not Allow 35% EA 167 Build-Out



	Sq Miles
Total Land Area - EA 167	31,843
Govt Land	13,683
<b>Total:</b>	<b>18,159</b>
KOXO & KOHD Protection	16,426
Available Build-Out Area	1,733
35% Build-out Requirement	6,356
Fraction of Available Build-out Area that can be built	9.5%

1. Broadcaster protection is required but the land mass contained within the protection zone is still counted as part of build-out requirements
2. Impact is that there isn't enough area to build out 35%
3. In addition, the terrain that is impacted was more suitable to cost-effective deployment
4. EA 167 encumbrance significantly impacts EA 170 contiguous spectrum build-out



## Broadcaster Protection Reduces Build-out Area Available in EA 170

	Sq Miles
Total Land Area - EA 170	26,587
Govt Land	10,362
<b>Total:</b>	<b>16,225</b>
<b>KOXO Protection</b>	<b>2,543</b>
<b>Available Build-Out Area</b>	<b>13,682</b>
<b>35% Build-out Requirement</b>	<b>5,679</b>
<b>Build-out area reduced by 16% leaving fraction of Available Area that can be built</b>	<b>84%</b>

1. Broadcaster protection is required but the land mass contained within the protection zone is still counted as part of build-out requirements
2. Broadcaster protection zone reduces EA 170 buildable area by over 15%
3. Must build out 66% of total land available to meet 35% build-out requirement
4. In addition, the terrain that is impacted was more suitable to cost-effective deployment



# Prototypical Market Build-out Schedule

LTE Implementation Schedule																								
Task	Month																							
	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	Planning Phase			Implementation Phase																				
Technology & Service Selection	█																							
Systems Integrator Contract	█	█																						
System Integrator Plan & Budget Finalized		█	█																					
RF Design				█	█	█																		
Data Center Acquisition for LTE						█	█	█																
Site Acquisition							█	█	█	█	█	█	█											
Backhaul Design & Procurement								█	█	█	█	█	█	█										
Vendor Contract Negotiations								█	█	█														
Equipment Procurement										█	█	█	█											
Permitting											█	█	█	█	█									
Construction															█	█	█	█	█	█				
Site Testing																				█	█	█		
Full System Acceptance for LTE System																						█	█	

TECHNICAL REPORT  
ANALYSIS OF CAVALIER WIRELESS, LLC  
A BLOCK ALLOCATION PROTECTION TO  
CHANNEL 51 OVER-THE-AIR STATIONS

Technical Report

This Technical Report reports on the allocation protection analysis that wireless A Block licensee *Cavalier Wireless, LLC* must provide to adjacent channel over-the-air DTV stations operating on Channel 51.<sup>1</sup> This analysis was performed pursuant to the protection methodology as detailed in Section 27.60(b)(2)(ii)(C) of the Commission's Rules.<sup>2</sup> This is believed to be the pertinent FCC allocation Rule as Cavalier intends to develop a network with the mobile units transmitting within the lower A Block spectrum [698 – 704MHz] located adjacent to Channel 51 [692 – 698 MHz].

This cited FCC Rule requires that the A Block mobile units operate outside of an exclusion zone defined to be 8 kilometers (5 miles) beyond the edge of the DTV Channel protected coverage contour. While there are no broadcast allocation restrictions on the locations of the base station sites transmitting within the upper A Block spectrum, the wireless network has to be designed in such a way as to ensure mobile units cannot operate within these exclusion zones.

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<sup>1</sup> The FCC also permits A Block licensees to enter into an interference agreement with the affected Channel 51 station in lieu of meeting its allocation Rules.

<sup>2</sup> TV/DTV interference protection criteria, 27.60(b)(2)(ii)(C), “*For control, fixed, and mobile stations (including portables) that operate in the 787–788 MHz and 805–806 MHz bands and control and mobile stations (including portables) that operate in the 698–757 MHz, 758–763 MHz, 776–787 MHz, and 788–793 MHz bands, adjacent channel protection shall be afforded by providing a minimum distance of 8 kilometers (5 miles) from all adjacent channel TV/DTV station hypothetical or equivalent Grade B contours (adjacent channel frequencies based on 0 dB protection for TV stations and –23 dB for DTV stations).*”

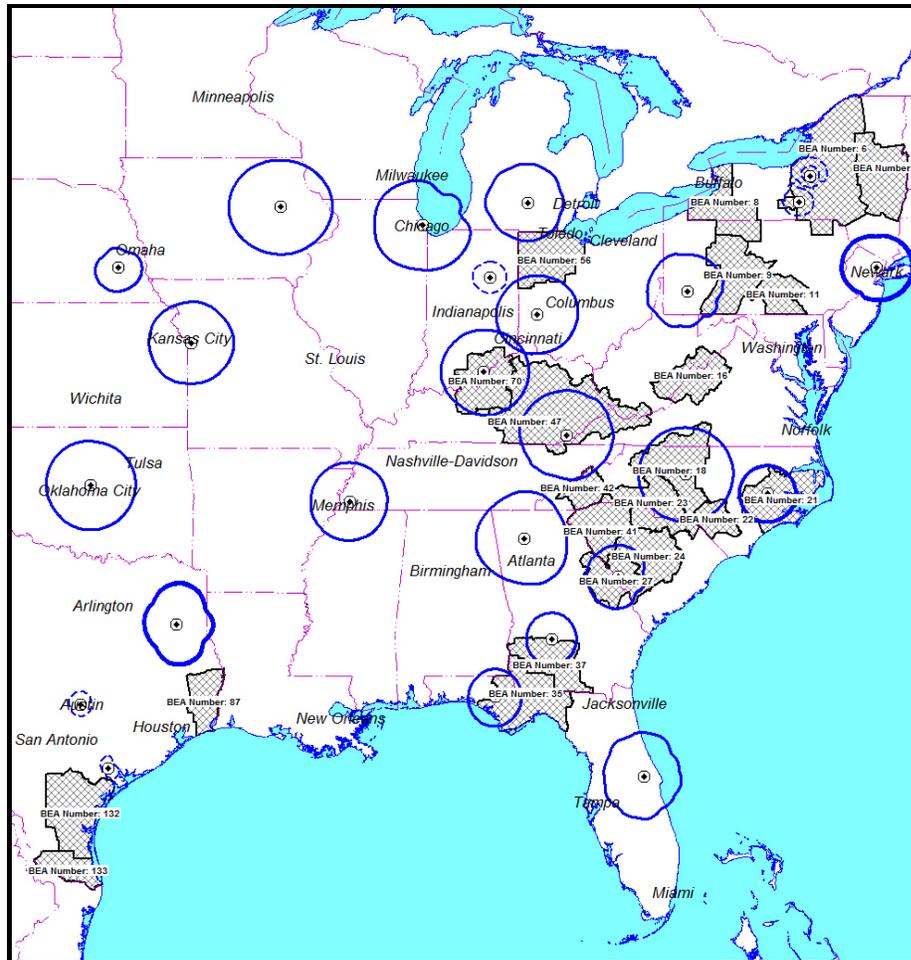
The FCC CDBS engineering database was employed to define the possibly affected full-service DTV and Class A stations operating on Channel 51. Low Power Television Stations (LPTV) and TV translators were not considered as they are secondary facilities that are subject to displacement from A Block licensees.

Based upon the supplied inventory of the Basic Economic Area (BEA) regions where Cavalier is the A Block licensee, a tabulation is provided below identifying any DTV stations that are affected by these regions.

<b>Cavalier Subject BEA Markets</b>		<b>Channel 51 DTV/Class A Stations Affected (Owner)</b>
BEA005	Albany-Schenectady-Troy NY	None
BEA006	Syracuse NY-PA	WHSU-CA, Syracuse, NY (Reynard) W16AX, Ithaca, NY (Pending Application) (Sinclair)
BEA008	Buffalo-Niagara Falls NY-PA	None
BEA009	State College PA	WTAE-TV, Pittsburgh, PA (Hearst)
BEA011	Harrisburg-Lebanon-Carlisle PA	None
BEA016	Staunton VA-WV	None
BEA018	Greensboro-Winston-Salem NC-VA	WFMY-TV, Greensboro, NC (Gannett)
BEA021	Greenville NC	WEPX-TV, Greenville, NC (ION)
BEA022	Fayetteville, NC	WFMY-TV, Greensboro, NC (Gannett)
BEA023	Charlotte-Gastonia NC-SC	WFMY-TV, Greensboro, NC (Gannett)
BEA024	Columbia SC	WFXG-DR, Augusta, GA (Raycom) (Pending FCC <i>Petition for Rule Making, MB 11-54</i> )
BEA027	Augusta-Aiken GA-SC	WFXG-DR, Augusta, GA (Raycom) (Pending FCC <i>Petition for Rule Making, MB 11-54</i> )
BEA035	Tallahassee FL-GA	WBIF, Marianna, FL (Word of God Fellowship)
BEA037	Albany GA	WSST-TV, Cordele, GA (Sunbelt-South)
BEA041	Greenville-Spartanburg SC-NC	WFXG-DR, Augusta, GA (Raycom) (Pending FCC <i>Petition for Rule Making, MB 11-54</i> )
BEA042	Asheville NC	WAGV, Harlan, KY (Living Faith Ministries)
BEA047	Lexington KY-TN-VA-WV	WAGV, Harlan, KY (Living Faith Ministries) WMYO, Salem, IN (Independence Television)
BEA056	Toledo OH	WLAJ, Lansing, MI (Freedom) WKEF, Dayton, OH (Sinclair)
BEA070	Louisville KY-IN	WMYO, Salem, IN (Independence Television)
BEA087	Beaumont-Port Arthur TX	None
BEA132	Corpus Christi TX	None
BEA133	McAllen-Edinburg-Mission TX	None
BEA147	Spokane WA-ID	None
BEA172	Honolulu HI	None

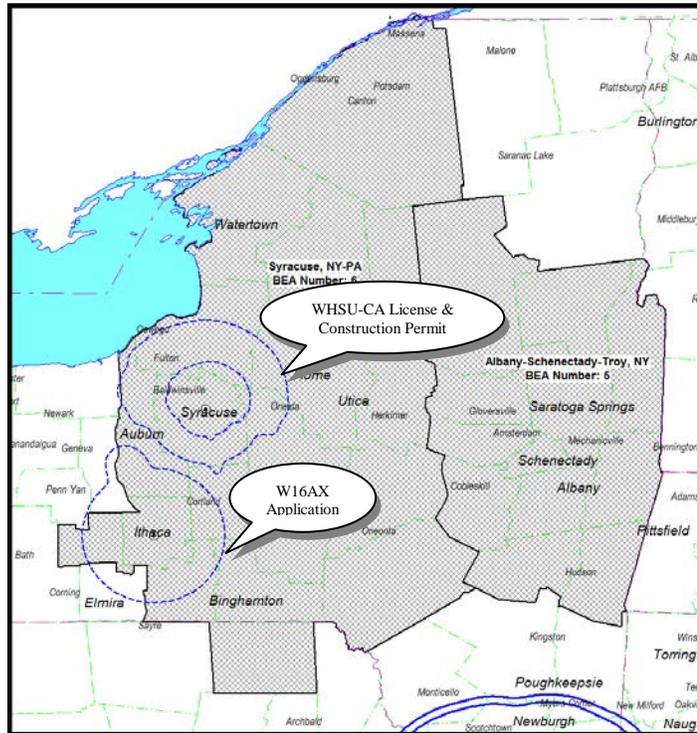
Table 1. Subject Cavalier Markets and Impacted DTV Channel 51 stations.

Shown below is a large scale map showing all the subject BEA's (shown by the cross-hatched regions) and the mobile unit exclusion zones (shown by the blue contours) calculated pursuant to the pertinent FCC Rules.

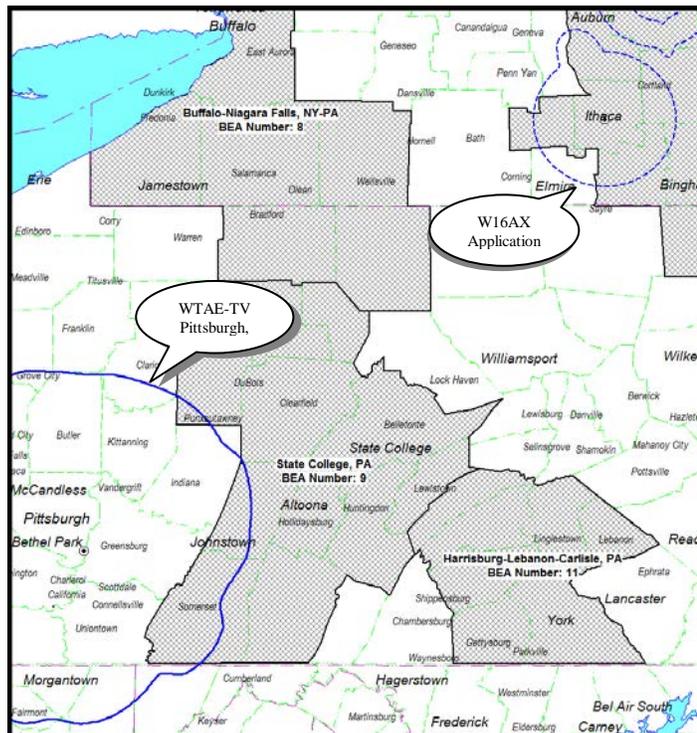


Map 1. Cavalier BEA's and Mobile Unit Exclusion Zones.

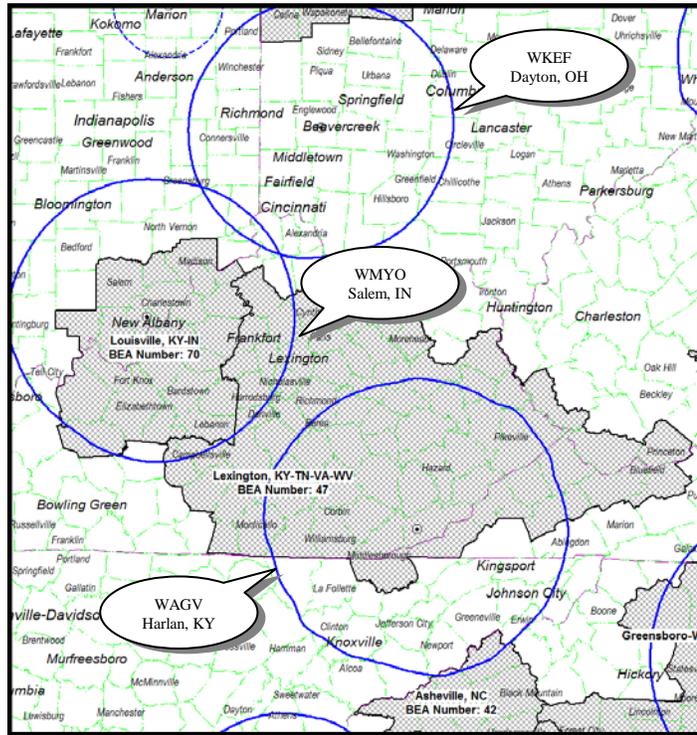
Below is a series of maps showing the expanded view of the subject BEA's and the A Block mobile unit exclusion zones.



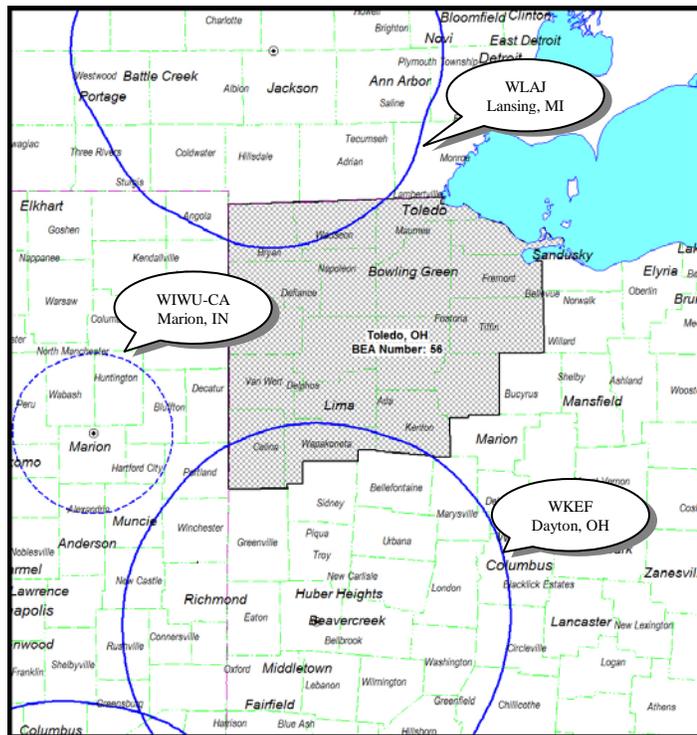
Map 2. Syracuse BEA.



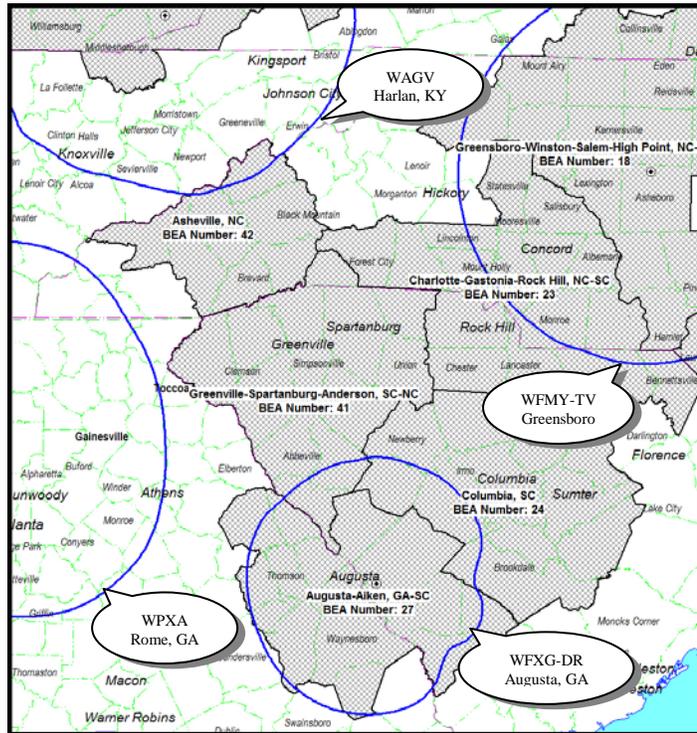
Map 3. State College BEA.



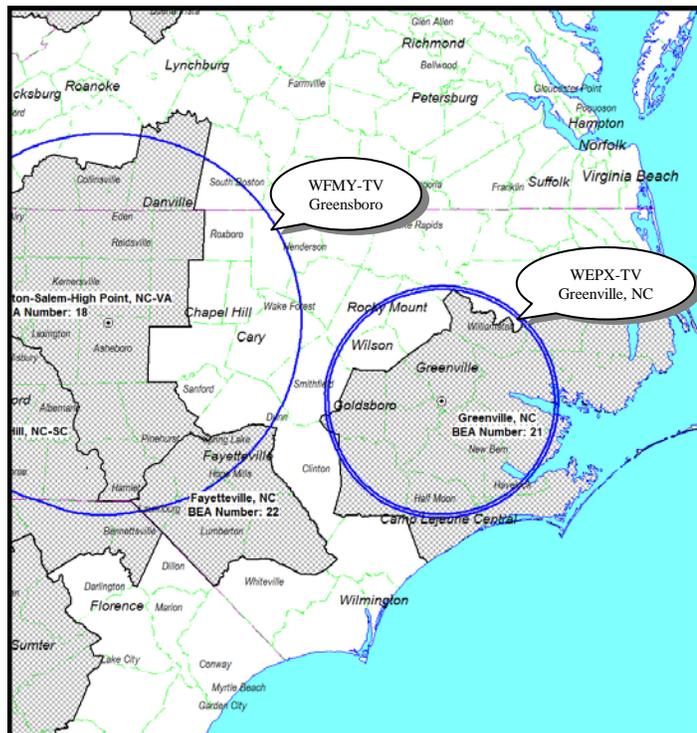
Map 4 Louisville & Lexington BEA.



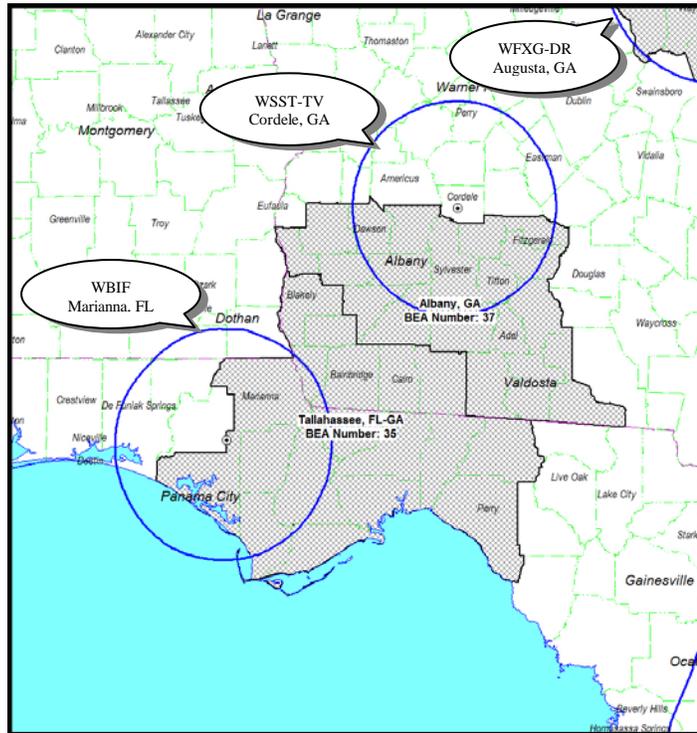
Map 5. Toledo BEA.



Map 6. Asheville, Greenville, Augusta, Columbia & Charlotte BEA's.



Map 7. Greensboro, Fayetteville & Greenville BEA's.



Map 8. Albany & Tallahassee BEA's.

Charles Cooper, P.E.

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941.329.6000

August 23, 2011