Wireless Telecommunication Towers
Improving State Secondary Land Use Leasing Contracts for an Expanding Future

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Executive Summary

The continuous advancement of wireless telecommunications technology opens the door to exciting economic growth opportunities for the State of Maryland. According to a Global Mobile Data Traffic Forecast by Cisco Visual Networking, “Mobile data traffic in the U.S. will be 687 times greater in 2017 than it was in 2007.” While the State of Maryland was previously unprepared for such rapid expansion, there is a serious need for future preparation in order to address important safety, liability, environmental and other community concerns associated with wireless telecommunications equipment and facilities while capitalizing on revenue.

Throughout the U.S., including in Maryland, there have been numerous injuries and fatalities that have resulted from loose regulations on tower climber safety. Since these tower climbers are hired through layers of subcontractors, the wireless carriers are able to shield themselves from any liability. With approximately 60 to 64 towers and numerous other wireless facilities on Maryland Department of Transportation (MDOT) property, it is only an amount of time before one of these injuries, or fatalities, occur on state property.

The public has also voiced many complaints about the locations of this equipment in respect to their homes and schools, and the potential damage they have to the environment as well as their health. Many times this equipment destroys vegetation and creates an obstruction of scenic views, leaving local constituents unhappy.

Currently, this situation is only addressed through a recommended standard for leasing, valuation, and management. The “Cellular Communication Towers, Valuation” document states that telecommunications towers located on tax exempt (government) property require “special treatment.” However, this document does not specify what this special treatment entails, leaving it open to interpretation. Due to each county’s power in Maryland to create their own regulations for wireless telecommunications, we feel that our recommendation should be focused on improving the regulations associated with MDOT because wireless carriers often choose to lease property from MDOT along transportation corridors and on bridges and tunnels.

The following recommendations (in order of importance) seek to solve these issues and protect the state, the public, and the environment:

- **Wireless Telecommunications Master Licensing Agreement.** Through the formation of an intermodal telecommunications committee, create a contract that every wireless telecommunications carrier looking to lease MDOT property must adhere to.
- **Proactive Leasing.** Create a process that involves advertising property available for lease to wireless carriers. Although this could boost revenue greatly, it does not tackle the more important safety and environmental issues.

With a strong intermodal committee and a new policy for contracts, Maryland will be able to join the other proactive states in opening dialogue and preparing for the future of wireless telecommunications. A uniform Master Licensing Agreement will allow for consistency and thorough protection for the state, the public, and the environment, while ensuring MDOT is receiving market value for their property. Through this policy, Maryland will be identified as a bold, enterprising state with a mission to enhance safety and to protect its constituents and surrounding environment.
Rob Bonsall professionally rescued Isaac Dupree from the Maryland monopole when Dupree became hypothermic while working on the structure in temperatures on the top of the cell tower that were close to 5 degrees with the wind chill factor. Bonsall told reporters, "I don’t want to be recognized as a hero," explaining that he was just using his training to assist another co-worker.

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Introduction

Problem Definition
Many contracts between wireless carriers and the modals under the Maryland Department of Transportation (MDOT) were drafted in the 1990’s to secure long-term use of the land. These contracts overly favor the wireless providers, as MDOT did not expect such a rapid expansion of wireless telecommunications technology. Low rates and vague language have left MDOT bound to contracts that do not adequately protect the state, the public, or the environment. Although these current contracts cannot be modified or changed, it is important to ensure that the State does not put itself into anymore non-favorable binding agreements.

Safety and Liability Concerns
Today, wireless telecommunications towers pose a heavy risk of injuries, and in some cases fatalities. Because of their unique structure and purpose, wireless telecommunications towers and facility sites have the ability to pose a distinctive threat if misused or mismanaged. Although MDOT has luckily scraped by with no catastrophes, the same cannot be certain for the future.

In 2013, on private property, Sprint had a subcontractor performing maintenance on one of their towers. The forty-one year-old man, Michael Frontiero Cortes from Morovis, Puerto Rico, fell almost 200 feet to his death in Vienna, Maryland.  He had started climbing earlier that the year to support his four children. In January of 2013, a cell tower climber in Gaithersburg, MD was providing maintenance to one of the many telecommunications towers in Montgomery County.  Because workers are only prohibited from climbing towers in strong winds, Isaac Dupree scaled the tower and found himself stranded at the top in the winter weather. Current regulations do not prohibit tower workers from climbing towers in extreme temperatures, rather, it is left to their own judgment. Dupree became so inhibited by the cold that he became dehydrated and unable to function properly.

There is a broad range of wireless telecommunications tower risks and safety concerns. The leading causes include the following:  
- Faulty or misused equipment
- Inadequate protection and safety gear
- Lack of training
- Failure to enforce safety regulations
- Time pressure

Wireless carriers usually use subcontractors who then use another extension of subcontractors to manage the site or provide specific needs, such as cell tower climbers. With such a long succession of parties, it is extremely difficult to understand which party is liable for facility or tower injury or death. The Occupational Safety and Health Administration (OSHA) is trying to track which companies these subcontractors work for in order to discover how much liability these carriers are currently dodging.  MDOT, as well as other Maryland agencies, have the possibility of facing liability suits with such an unclear line of party contracts.

PBS Frontline Investigation produced a segment on “Cell Tower Deaths” in May of 2012.  The investigation focused on the relation between injuries/deaths and liability. PBS Frontline discovered, “Presently, the major cell phone carriers are attempting to shield themselves from liability with these cell phone tower deaths by implementing numerous layers of subcontracting to implement tower maintenance and construction.”  With telecommunications companies shielding themselves, MDOT and
state-owned property may be left liable as the property owner if Maryland does not take steps towards prevention and protection.

In November, 2013, OSHA said in its memo that they are “aware that there has been an acceleration in communication tower work during the past year due to cellular infrastructure upgrades and the agency is concerned about the possibility of future incidents.”  In 2013 alone there were more deaths from cell tower climbs than in 2011 and 2012 combined; will the death toll continue to climb? And if so, how long will it be until one of these fatalities occurs on State property? These are questions that cannot be answered now, therefore there is a need to address them immediately in order to protect the State and the tower climber workers themselves.

**Community Concerns**

Due to the growing need for more and advanced coverage, wireless telecommunications companies continue to request for the new construction and upgrade of their equipment. However, there have been increasing concerns voiced by communities and neighborhoods that find themselves subject to these new structures. Many communities fear the damage to aesthetic environments surrounding their homes or places of leisure. Others fear the dangers of building these towers near homes due to the inconclusive research on the harms of radiofrequency (RF) waves. As the Regional Land Use Advisory Commission found in one case, although most wish to benefit from wireless coverage, “they often oppose the construction of new towers because of appearance issues, real or perceived threats to the public health and safety, and the well being of migratory birds.”

With plans for new wireless telecommunications equipment to be constructed throughout the State of Maryland in the future with the growing industry of wireless telecommunications, it is likely that the surrounding environments will undoubtedly continue to be affected, and in some cases, damaged. Already in effect, the Federal Communications Commission requires wireless telecommunications equipment sites to follow guidelines established by the National Environmental Policy Act (NEPA). Every cell tower site must acknowledge potential impacts to the environment. However, it is well-known that NEPA compliance issues take a lengthy amount of time and many communities and localities believe environmental issues are being overlooked, “To this day, the Telecommunications Act of 1996 stifles the power of local government agencies to reject the construction of these towers based on environmental issues.”

Furthermore, the Regional Land Use Advisory Commission of North Carolina’s “Telecommunications Towers Study” determined, “The US Fish and Wildlife Service and various other groups have estimated that millions of birds are killed each year not only by colliding with the towers, but also by flying into guy wires that support them.” As more towers go up, it can be expected that the number of birds harmed will increase as well.

The World Health Organization (WHO) has been researching health risks of electromagnetic fields (EMF) since 1997. However, “Research on potential health effects from base station RF fields was deemed low priority since studies of cancer risk related to such exposure are unlikely to be feasible and informative because of the difficulty of reconstructing adequately long-term historical exposures.” Despite the current inability to prove that these potential harms from RF waves are real, the uncertainty creates a major concern for the community.

In an effort to increase revenues, some school systems are allowing wireless providers to put their wireless equipment (towers, antennas, etc.) on school property. Anne Arundel County plans to construct 40 towers by 2021, bringing in five million dollars in revenue. Residents are concerned about the
potential health risks caused by radiation emitted from cell phone towers to their children and the possibility of lower property values. Residents from Carderock Springs have also voiced their complaints about a tower going up near Carderock Springs Elementary School. Resident Roscetti said “the health ramifications of having a cell phone tower near an elementary school are inconclusive at best.” Over 100 Maryland residents gathered to discuss their concerns about building a tower behind Piney Orchard Elementary School last year.

Despite inconclusive research on the effects of radiation from these towers, citizens are still angered by the potential. These complaints should be taken into consideration in order to please Maryland residents residing near MDOT property that will be used for the construction of such equipment. When towers are proposed to be built on MDOT right-of-ways, usually these properties are situated near highways, which in turn find themselves near homes and schools. While MDOT will not be leasing school property to wireless carriers, the neighborhoods located near MDOT highways or other right-of-ways will have the same complaints and fears on the environment and their health.

Historical Context
Wireless communications is the fastest growing segment of the communications industry. In 1985, there were approximately 900 cell towers located throughout the U.S. And as of November, 2013, there are approximately 190,000 cell towers located throughout the U.S. In less than 30 years, around 100,000 cell towers were constructed. It has been forecasted that “global mobile data traffic will increase nearly 11-fold between 2013 and 2018.”

In the 1990s, the Maryland Department of Transportation (MDOT) signed agreements leasing state-owned property to telecommunications carriers in order to receive benefits for the government, but more importantly to extend coverage to the citizens of Maryland and increase connectivity and communication. Although technology and communication were gaining momentum to further develop and innovate, the State of Maryland, like many others, could not possibly foresee such a spark in the telecommunications industry to understand the full potential or the possible hazards that could occur. So, as contracts were presented to them as a primarily revenue making, coverage extending opportunity, they were agreed upon with loose conditions where indistinct language and guidelines have led to lax management operation.

Today, wireless carriers are constantly updating and adding equipment in order to keep up with the growing demand for greater and improved coverage. According to Verizon’s website, “While the telecommunications industry is more than a century old, the industry today finds itself in the middle of a communications revolution as broadband and wireless technologies radically transform the industry.” Verizon, like most wireless carriers, is not looking to slow down anytime soon. “4G traffic will be more than half of the total mobile traffic by 2018,” meaning that wireless carriers will need to update most of their equipment from 3G to 4G in the coming years. While many carriers have already started to do so, this will only continue to increase.

With little consideration given to the effects these leases may have on the environment or safety of workers and the public, structures were placed in appropriate places, many along highways, but were built as bulky steel configurations that are not as attractive as they could have been. There were no principles as to how the environment would be harmed, or how the wireless carriers could make up for the harm done to the environment. With no end in sight for the rapid innovation of wireless technologies, the State of Maryland should expect and prepare for this opportunity.
Policy Options

Current Policy
The State of Maryland abides by the mandated rules designated by the Federal Communications Commission (FCC). In 1996, the Federal Communications Commission’s federal overhaul legislation was signed into law as the Telecommunications Act, which updated the 1934 Communications Act. Although the primary objective of the Act of 1996 was to deregulate telecommunications markets and networks in order to allow for increased competition, the FCC specifically began to implement regulatory standards and guidelines for the future of wireless telecommunications sites, which was sure to take off in the coming years. However, the FCC continues to stress the authority given to states and localities in the construction and management of wireless telecommunications towers and sites.

Within the Telecommunications Act of 1996, states and local authorities are reserved the power to initiate and manage zoning and land use decisions for wireless sites and facilities. However, within those reserved powers, the FCC does limit regulation. The FCC states on the limitations of authority,

“Specifically, a state or local government may not unreasonably discriminate among providers of functionally equivalent services, may not regulate in a manner that prohibits or has the effect of prohibiting the provision of personal wireless services, must act on applications within a reasonable period of time, and must make any denial of an application in writing supported by substantial evidence in a written record. The statute also preempts local decisions premised directly or indirectly on the environmental effects of radio frequency (RF) emissions, assuming that the provider is in compliance with the Commission’s RF rules.”

The FCC issues general rules regarding the construction of a telecommunications tower or antenna site. According to the FCC, new tower construction must meet the following requirements:

1. Approval from the state or local governing authority for the proposed site;
2. Compliance with the National Environmental Policy Act (NEPA);
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3. Compliance with the National Historic Preservation Act (NHPA); and may require

4. Notification to the Federal Aviation Administration (FAA); and

5. Antenna Structure Registration (ASR) with the FCC

In addition to compliance with federal requirements, the State of Maryland, under the Department of Assessment and Taxation (MDAT), issues valuation and appraisal techniques for cellular communication towers. 2 The State issues a land classification system, of which the State simply recommends valuation, while each county in Maryland has its own regulations and guidelines for tower construction and leasing. However, according to the Cellular Communication Towers Valuation document produced by MDAT, it is the responsibility of the property owner to provide “special treatment” to communication towers that are located on exempt and utility operating property. 22 This includes property occupied by schools, religious buildings, non-profit organizations, government agencies, railways, telephone lines, electrical wires, and other operating utilities. As a Maryland State agency, MDOT must comply with this statute. However, there is no further language specifying what this special treatment entails, making it difficult for MDOT to implement adequate property management.

Comparison to Other States
Across the U.S., multiple states have reevaluated their leasing contracts for wireless telecommunication towers in respect to the environment, safety, security, and the surrounding communities. The following individual states have stressed the importance of definitive contracts that will provide for necessary guidelines for construction, management, and implementation.

California
The State of California took unprecedented steps to provide a proper and appropriate set of guidelines for telecommunication towers. In 1997, the State of California created the “Telecommunications (Wireless) Licensing Program.” 23 This program refers to a groundbreaking initiative on the licensing process for wireless telecommunications companies, as well as strict guidelines for implementation. The initiative is an astounding example of the process each state should seek when leasing property to wireless telecommunications carriers or third party contractors for cell towers. California looks at leasing their property to wireless telecommunications carriers in a proactive way in order to increase revenue. They keep a database of all leased properties, and all properties available for lease. The available properties are then advertised in the hopes that a wireless carrier will lease the property and increase California’s revenue.

New York
The State of New York implements standards for cell tower contracts in a peculiar way. Following the nationwide jurisdiction for the Telecommunications Act of 1996, the State of New York abides by the Telecommunication Site Manager Services Agreement. 24 The Agreement specifies that the New York Department of Transportation is responsible for not only its land, but also its “right-of-ways.” According to the Aesthetic and Environmental Design Guidelines for Wireless Sites of the Department of Transportation Property in New York State, “the Agreement calls for the coordination of public and private communications use at State-owned properties and strives for the development of multi-purpose, multi-user new tower structures on State lands.” 24 Although New York finds itself in a different situation, with a single wireless site management provider, the same guidelines can still be applied. New York’s wireless site manager, Crown Castle International Corp., is responsible for submitting investigations and research regarding each site. Along with site documentation, the wireless site
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manager must also provide an environmental report, the State Environmental Quality Review (SEQR), which includes an environmental impact report on the telecommunication tower site.\textsuperscript{24}

**North Carolina**

North Carolina has experienced some serious fatalities from cell tower safety issues, and they have since implemented cell tower specific safety regulations. In the North Carolina, effective February 2005, Administrative Code (NCAC) Subchapter 07F, “Communication Tower Standards” the responsibilities of the employer are laid out explicitly as well as rules for hazard identification and assessment, fall protection, radiation and training.\textsuperscript{25} North Carolina is one of only two states that currently have such cell tower specific safety regulations. While North Carolina’s focus is mainly on safety, they still do not have any environmental regulations in place. However, since its enactment, along with the 2007 “Wireless Facilities and Wireless Support Structures Act,” in one specific study, the Regional Land Use Advisory Commission determined that 36 out of 43 local governments surveyed in North Carolina enacted either basic or very comprehensive wireless telecommunications facility and tower standards.\textsuperscript{26} Local governments in North Carolina have taken a very positive step since the legislation that encouraged new guidelines and standards has been in effect.

**Massachusetts**

Recently, the Massachusetts Department of Transportation (MassDOT) has established a set of guidelines to specifically instruct granted lessees on the construction and management of new telecommunications sites on State Highway property. MassDOT initiated the “Utility Accommodation Policy on State Highway Right-of-Way” to direct the state agency on telecommunications tower contracts.\textsuperscript{27} The Policy is crucial to a safe and secure investment on MassDOT land, as the document reads, “this Utility Accommodation Policy will guide telecommunications and renewable energy service providers with the framework necessary for processing each stage of development from initial request for accommodation to final deployment of the facility”.\textsuperscript{27} The Accommodation Policy outlines the specific requirements and facts that the telecommunications company or contractor would have to abide by, including federal, state, and local ordinances, as well as, MassDOT regulations.

MassDOT requires, before the new tower is ever erected, a tower climber certification, to ensure safety precautions. One of the policy’s most significant impacts is derived from their security regulations. Access to a telecommunications tower facility on a MassDot’s right-of-way requires an official agreement between MassDOT and the service provider on a “controlled and restricted basis”.\textsuperscript{27} Massachusetts issues two types of lease agreements, Master and Site, with the maximum length of the Master Lease Agreement at five years. One of the major concerns Massachusetts addresses with its Utility Accommodation Policy is that of aesthetics. MassDOT intends the necessary construction of towers to be environmentally and community friendly as to not disturb the general view of the surrounding area.

Through a tree, shrubbery, and vegetation protection guideline for all telecommunications tower and utility construction, MassDOT ensures “enhanced visual qualities along State highways.”\textsuperscript{27} Since its enactment in 2013, Massachusetts found a way to face community and environmental concerns head on. They did not let any previous policies linger, which had the possibility of hindering their new guidelines with loopholes. In fact, as stated in the legislation, “This Utility Accommodation Policy supersedes and replaces all prior MassDOT policies and procedures, or portions therein, pertaining to the accommodation of public and private utilities.”\textsuperscript{27}
Conclusion
While some states have already made steps towards bettering their contracts with wireless telecommunications carriers, Maryland is not the only state that is behind. There are many approaches to how these improvements should be made and what the focus of the improvements should be. It would be in Maryland’s best interest to focus on safety, liability and environmental improvements. While one day it might be beneficial to take a proactive approach and boost revenue like California, the main focus for Maryland should first be creating a Wireless Telecommunications Master Agreement (contract) that will allow for the State of Maryland to have more benefits from these contracts than concerns.

Policy Recommendations
This is a complex, multi-faceted problem with no simple solution. Therefore, our recommendation is to create an intermodal telecommunications committee that will discuss how the Maryland Department of Transportation (MDOT) should manage the expansion of wireless communications towers. The committee will meet for a set duration of time. At the end of this designated period, the goal is for the committee to have produced a Wireless Telecommunications Master License Agreement, or contract, that every modal under MDOT can use for future business transactions with wireless carriers. This contract is meant to protect the State of Maryland, the public, and the environment from preventable harm. As designated by the committee, the contract must include stronger regulations to improve tower worker safety conditions, and must take the environmental impacts of new constructions into account, as well as the common community concerns.

Implementation
Implementing this policy for a Master License Agreement (contract) for wireless telecommunications carriers leasing Maryland Department of Transportation property should not have any significant impact on state funds. Once the contract is constructed, it will require committee meetings to occur regularly, however the committee can agree upon the frequency of these meetings. In order to construct the contract there will need to be multiple meetings held between representatives from all of the modals under MDOT. There will also be a need for attorney’s to review the legality of the requirements put forth in the contract.

We suggest the formation of an intermodal telecommunications committee. The telecommunications committee will consist of representatives from each modal of the Maryland Department of Transportation, along with selected engineers, resource sharing specialists, real estate specialists, and specialists from ITS. The committee will collaborate with the Maryland/DC Wireless Association, which consists of firms, cell carriers, tower companies, regulatory consultants, and law firms, to create a stronger network, while also gaining a more in depth view of the issues facing all sectors of the wireless telecommunications industry regarding worker safety, the environment, and the community. The intermodal committee will be primarily based on the existing Telecommunications Transmission Facility Coordinating Committee for Prince George’s County Maryland. The telecommunications committee, similar to the TTFCC, will convene to first construct a standard contract, but also to identify target service areas for new antennas and structures.

The committee’s first task will be to gather data from each MDOT modal to identify current tower and antenna locations. With the development of a map, similar to that of the TTFCC’s in Prince George’s County, the committee can identify the best places for future antennas and structures on MDOT property (see Appendix A for map). The committee would provide recommendations after reviewing applications submitted by wireless telecommunications carriers to MDOT. The intermodal
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The telecommunications committee will convene for an introductory meeting once each MDOT modal has been notified and selected based on wireless telecommunications equipment possession and future interest. From there, we suggest the committee meet regularly so the telecommunications committee can refer to our implementation of a Master Licensing Agreement (MLA) as a guidance document. The MLA will set new standards for contract guidelines regarding wireless telecommunications equipment. Over the course of several meetings in the first year, MDOT will use the telecommunications committee to construct a verified, final contract that will set the standard for all future telecommunications contracts on MDOT property. We intend to address three aspects of current contract policies we believe are being overlooked. The committee shall intend, in its best interest, to follow new guidelines on safety, environmental, and community concerns. Committee representatives from MDOT should refer to the methods we mentioned previously on new implementation policies. To do so, within new contracts, the committee shall insist that wireless telecommunications carriers provide a “facility location plan” that would address the concerns mentioned above for newly proposed antennas or structures.

The telecommunications committee will be provided with documents of other states to best understand and implement the strongest and most productive contract. Safety policies should rely on issues addressed by the “Communication Tower Standards” legislation issued by the North Carolina Department of Labor which focuses on hazard identification and prevention. We suggest that an inclement weather (temperature) restriction be added into the contract to prevent future incidents. Environmental and community concern policies should rely on the “Aesthetic and Environmental Design Guidelines for Wireless Sites” issued by the New York Department of Transportation, along with the Massachusetts “Utility Accommodation Policy.” The goal is to minimize the impact of the facility on the community. In Prince George’s County, the TTFCC required a T-Mobile tower to blend in with the community.

We suggest the need, as do others states, for a secure and sturdy future for wireless telecommunications equipment. We strongly recommend the committee require signage for radiofrequency safety around wireless telecommunications equipment. With an uncertain future, comes murky risks, and we wish to be proactive rather than reactive. On July 1, 2014, Kevin McManus from EBI Consulting spoke at a Radio Frequency/Electromagnetic Emissions Safety Training for some Maryland Transportation Authority (MDTA) employees and suggested, “Wording on signs needs to be concise and easily read from a distance of 5 feet. Signs should have a signal word, pictograph, and description of hazard. Sign should be affixed as closely as possible to the hazard.” It is important to not only protect our community and neighborhoods in Maryland, but also our workers, who take risks just to routinely maintain the equipment or structure. Giving proper trainings and clear warnings near the equipment will both be highly valuable safety measures.

The committee should intend to seek standards in the best interest of our constituents. With the continual growth of wireless telecommunications equipment, it is imperative that structures and facilities appear akin to the surrounding communities. We recommend requiring structures that adhere to a similar standard following that of New York’s “Aesthetic and Environmental Designs Guidelines for Wireless Sites.” Structures and equipment should enhance “visual quality” along highways and in communities.

To continue to “Keep Maryland Beautiful” and to protect our wildlife and environment, we suggest the committee issue environmental guidelines, similar to New York’s “State Environmental Quality Review.” We suggest that the committee write in a standard for developing an Environmental Quality Review within the contract. The Review will require wireless telecommunications carriers to describe plans on
how to have the least impact on the site by preserving and restoring trees, shrubbery, and vegetation in an environmental impact report. The committee should also look into the effects these facilities have had on wildlife in Maryland, especially in regards to birds and determine whether any realistic action can be taken to protect the wildlife.

Finally, the committee should seek to understand expanded revenue uses. With new standardized contracts updating every five years, MDOT and the State of Maryland will be sure to optimize its benefits in the future of the wireless telecommunications industry.

After its first year in commission, the committee shall submit an executive report to the Secretary of the Maryland Department of Transportation for review of its usefulness and effectiveness in implementing a newly designed contract for the fiscal year. The implementation process should be expected to take time to finalize. But with a strong intermodal committee consisting of representatives and specialists of interest, Maryland will be able to join the other proactive states in opening dialogue and preparing for the future of wireless telecommunications. Maryland will be identified as a bold, enterprising state with a mission to enhance safety and to protect its constituents and surrounding environment.

Benefits
If this policy is implemented, its primary benefits will be tower climber protection, reduced risk of environmental harm, public satisfaction, and increased revenue. As stated earlier, many of the current contracts between wireless carriers and MDOT agencies were written by the carrier, in favor of the carrier. By creating a policy for regulation of these contracts, MDOT can shield itself against the previously used vague language and start using contracts that put the best interests of the state, public, and environment first.

This policy calls for stricter safety regulations that wireless carriers must abide by. The goal of this is to decrease the number of worker injuries and fatalities through prevention efforts. Through a reduction in worker injuries, in turn the state should have a lower risk of liability issues. While carriers are dodging liability through layers of subcontractors, the state can prevent against liability while also protecting the workers from preventable harm. This is a double win for the State and will look good in the eyes of its constituents. The hope is that Maryland will be looked at as one of the leading states on wireless equipment safety. So far only two states, North Carolina and Wisconsin have taken steps towards this, Maryland should be the next.

Another benefit to implementing this policy is the creation of an intermodal committee. While other departments (such as the Information Technology departments) from each modal under MDOT have such committees that meet from time to time, there is no such committee that addresses wireless telecommunications issues. Opening a dialogue will allow for a consistent method of handling contracts with wireless telecommunications carriers throughout MDOT modals. This open dialogue will allow for more information sharing which will ideally result in a better understanding of the best methods for leasing MDOT property for wireless telecommunications uses.

Finally, there will be less risk of environmental harm. These facilities are constructed without any credence given to environmental impact, such as habitat destruction and accidental animal fatalities. Without being properly disguised, birds can fly into these structures, causing needless deaths, and they can obstruct scenic views in highly populated areas. Including an environmental mandate in future contracts would minimize the risk of environmental harm and keep the community happy.
Potential Problems
Although this recommendation seeks to protect the State of Maryland from ambiguous language that puts the state, public, and environment at risk, by creating a new contract, there is the concern that wireless telecommunications carriers may decide that they do not want to adhere to the new policy and thus find somewhere else to install their equipment. There are many privately owned properties that could serve as potential sites for wireless purposes, however, according to John Pestle, a telecommunications attorney, wireless companies “will pay a lot of money to stay put” and when they change sites, “the new tower has to be very close to the old one so as not to have a ‘gap’ in the cell company’s network.” Therefore, existing sites on MDOT property will still be so valuable to these companies that they will most likely forfeit and adhere to the new regulations rather than move their equipment somewhere else.

Another potential downside to this policy is that although creating radiofrequency (RF) regulations will not create any potential health problems, these regulations may be found unnecessary. The research remains inconclusive, and eventually research may prove that there are no harms. However, until then people will remain concerned about the potential health risks associated with exposure to RF signals emitted from wireless towers and antennas. Therefore, these regulations will help please the citizens of Maryland as well as Maryland State employees who must work or live near or around these facilities.

Conclusion
The development of a new leasing contract for Maryland State property presents the possibility for safety, security, and environmental successes within the wireless telecommunications industry. Numerous states have already taken the first steps towards proactive leasing with definitive guidelines to protect the state-owned property that wireless telecommunications companies build and manage towers on. New policies and standards for wireless telecommunications contracts have the ability to bring Maryland to the frontline of safety and security policies, along with enforcements that protect and maintain the environment and aesthetics of the surrounding community. Our constituents are our most vital asset, as many fill the jobs that keep our community connected. It is our job as the state to ensure our constituents are kept safe, their communities kept thriving, and connections expanding.

With a newly implemented Wireless Telecommunications Master Licensing Agreement, the State of Maryland can expect the utmost superior future construction and management of wireless telecommunications equipment in our districts on State-owned land, specifically that of the most affected, the Maryland Department of Transportation (MDOT). Our new contract guidelines do not seek to disturb the wireless telecommunications industry or its present operations, however, our guidelines do intend to set a standard to place the highest value on safety, security, and the environment, to secure jobs and community approval.
Appendix A
Endnotes


