

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Tom Jeffers Weezer Electric				
Title/Responsibility					
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	
1.2	Any unique features or physical limitations of the respective sites	several obstacles at the Circ
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code).	
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Circ - has parking, elevator & operation hours that slow down the job
1.6	Installation Strategies	

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	
2.2	The impact site location could have from Severe weather .	
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	<i>Less control at CIRC</i>

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	<i>WLP would be easier to maintain</i>

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons		
EXAMPLE	EXAMPLE <i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i>	EXAMPLE	EXAMPLE
7.1			
7.2			
7.3			
7.4			
7.5			

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Alphonso Jefferson				
Title/Responsibility	Assistant County Administrator				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	Based on documentation and information that has provided, the timeframe to achieve the desired operation of the P25 radio is best achieved by going with a standalone tower site in WLP.
1.2	Any unique features or physical limitations of the respective sites	WLP is a county owned parcel of land that does not impact the aesthetics of the park. This area was actually selected by the City of Hollywood as part of the County's extensive review of locations. In addition, this location does not impact the environment in WLP.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	<p>WLP – As a standalone tower, the County has full control of the site. Based on our data, the County does not believe there is a conservation easement issue and the land use restrictions are being resolved. The Board of County Commissioners have removed the restrictive covenants on the site. Any remaining issues are being addressed through the County Attorney's Office.</p> <p>Circ – The lease at Circ will be a challenge. It will require the County to receive approval on various installation and changes that may be needed for the P25 radio system. This could cause delays and other system performance issues.</p>
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	Repairs to the site can be performed more efficiently and effectively at the WLP site.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or	<p>WLP – Compared to Circ, I believe there are no issues associated with site access, and maintenance and repairs will be able to be completed quicker on this item.</p> <p>Circ - There are limitations associated with the site access of the site. I had</p>

	recovery at either sites.	an opportunity to walk the site, and I believe there are some access issues that will delay maintenance and repairs of the site compared to WLP.
1.6	Installation Strategies	Based on the documentation and information that has been provided, the installation at the Circ would be more cumbersome and time consuming.

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	Information on WLP site shows that design for the site will be able to address water level rise, storm surge and flooding.
2.2	The impact site location could have from Severe weather .	Depending on the severity of the weather, both sites will be impacted.
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	The County has experience in the disaster recovery restoration of standalone sites. As part of our emergency preparedness efforts, these sites are considered critical infrastructure. Not only is the primary source of power first to be restored, we also have the experience in clearing necessary sites after a post-weather event.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	Sites must meet the contracted resiliency standards.
3.3	Recommended or (where applicable) contractually required redundancy	Sites must meet the contracted resiliency standards.
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	Site must meet the contracted standards.
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	Yes. I believe the WLP site is the best for public safety. The information associated with both sites shows that the coverage is better aligned to the specifications and requirements of the P25 radio system. In addition, the installation is quicker and less costly compared to the Circ.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	There are significant costs differences between WLP and Circ. Based on documentation that has been provided, it will be more costly for installation, restoration and repair at the Circ site, compared to WLP.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	I believe the system was designed to try and limit impacts to both items discussed in this area for the WLP. However, in the event that there are operating cost issues associated with maintenance and damage, the County must be at a site that allows for quicker maintenance and repairs. A full design of the Circ site is pending. At this point, I am unable to determine this item Circ item meets these requirements.
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	The County believes tha the annual cost for the Circ site will be more costly than than WLP. Based on the site layout at the Circ, there are additional obstacles and challenges that must be encountered to perform routine/preventive maintenance.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	All items must meet the contractual coverage and peformance requirements.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	All items must meet the contractual coverage and peformance requirements.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	All items must meet the contractual coverage and peformance requirements.

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
7.1	WLP – All informtion to include FAA approval are ready for this site. This is a standalone sit that allows better coverage, installion and repair of equipment.
7.2	Circ – This site comes with several challenges to include the build-out of the necessary eupment room. In addition, this site was not designed for a radio system to be installed. There will be some disruption to the building that will require approval from the property owners. In addition, there are still outstanding approvals that are required such as FAA.
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Andria Wingett			
Title/Responsibility	Assistant Director, Development Services- The Planning Division was handling the project through the Site Plan process. Once the City Commission continued the item and asked Staff to work with Broward County to see if there is a better location, I stepped in as the lead. Planning's role is of a regulatory nature and not necessarily site selection, etc.			
Representing (Circle/Mark One)	<input checked="" type="radio"/> City	<input type="radio"/> County	<input type="radio"/> Motorola	<input type="radio"/>
Which site do you prefer? (Circle/Mark One)	<input type="radio"/> WLP Tower		<input checked="" type="radio"/> Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	WLP: Time needs to be factored in for the amendment of the deed restriction, which took place on May 7, 2019. Permits are needed from the Army Corps of Engineers (ACOE), South Florida Water Management District (SFWMD), Department of Environmental Protection (DPEP), Florida Aviation Administration (FAA) Circ: Traditional permitting required. Planning/Zoning gave administrative approval
1.2	Any unique features or physical limitations of the respective sites	WLP: County Park, bodies of water on both sides (one is off site) Circ: equipment will be on the roof with equipment on the lower level floors. Electric will have to be run up the building.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code).	There are many encumbrances on the property as a whole. Some of them may not affect the exact location of the tower. Are there restrictions on the funds that were used to purchase the property Conservation and Recreational Lands Program (C.A.R.L.) https://dos.myflorida.com/historical/archaeology/public-lands/program-history/ Circ: Traditional permitting required. Planning/Zoning gave administrative approval on April 9, 2019 for the design/installation at the time.
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	-

1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	WLP: currently has an access via an unimproved road Circ: Building has two elevators with a generator. Is located on a major arterial roadway (Federal HIGHWAY/US 1).
1.6	Installation Strategies	WLP: construct a tower and place equipment on it Circ: Place equipment on an existing building.

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	See lidar maps, see level projections, storm surge maps and wind maps from hurricanes. WLP: This location is in a more vulnerable area. Circ: none DISTANCES TO: WLP: ocean- 1 mile, Intracoastal- 500 feet, tidally influenced water- 1,324 feet (mangrove estuary) Circ: ocean- 1.6 miles Intracoastal-1.4 miles, tidally influenced water-0.6 miles (N. Northlake)
2.2	The impact site location could have from Severe weather .	WLP: In an evacuation zone. Closer to the coast, less structures to mitigate severe winds from tropical storms. More vulnerable location due to flooding. How easy can this site be recovered compared to Circ? Circ: While it too is in an evacuation zone. Federal Highway is the limit of this (street on the west).
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	WLP: If flooding occurs how will it be accessed for repairs and how will equipment be brought in? Circ: Is located on a major arterial roadway (Federal HIGHWAY/US 1). The building is built to today's building codes which are to withstand winds of over 120 mph (Russell can confirm the exact number)

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	-
3.2	Recommended or (where applicable) contractually required resiliency	-
3.3	Recommended or (where applicable) contractually required redundancy	-

3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	-
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	<p>WLP: When I have visited the site there appears to be homeless living in the woods at and around this location. The site is vulnerable as it is manned, located in an area with limited view of passerbeyers and/or security and has vegetation surrounding it.</p> <p>Cic: Access to the areas where equipment will be stored are restricted, security is "built in" to the existing building.</p>

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Cost's provided by the County's reports are not adequately projected
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	Cost's provided by the County's reports are not adequately projected
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	Cost's provided by the County's reports are not adequately projected.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	Circ can be designed to have equal or better coverage than WLP.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	Circ can be designed to have equal or better coverage than WLP.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	-

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <p>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</p> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
7.1	
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Alex Gil				
Title/Responsibility	SME				
Representing (Circle/Mark One)	City				
Which site do you prefer? (Circle/Mark One)	WLP Tower		Circ Site		
<p>I don't prefer either site. My opinion is based on the characteristics of the sites themselves.</p>					

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	<p>Given we construct towers and do installations on rooftops, in addition to performing disaster recovery, I analyzed both sites, because I am not against either of the sites. The analysis that was generated for both the WLP and CIRC sites (in my professional opinion) are incorrect and biased given our company actually performs this work for our clients currently.</p> <p>WLP A 300' tower will take at least the following in order to construct it (assuming all the permitting, zoning and clearing has been completed):</p> <ul style="list-style-type: none"> • 8 to 10 weeks to manufacture the tower • 1 week to ship it to site assuming it goes on a dedicated trailer from the Valmont factory directly to the WLP site • 6 to 8 weeks to drill the piles for each of the legs, set the piles, set the anchor bolts and pour the concrete • 2 days to cure and remove the forms and then clean the concrete to prepare it for the tower installation • A minimum of 30 to 45 days for 4500 psi concrete to cure and reach the typical requirement of 4500 psi in order for the tower to be assembled. • Using a crane, and 4 to 8 people, the tower can be assembled in 2 to 3 weeks including safety climb, climbing ladder, lighting and grounding (top, middle, bottom and the halo around the base). • 1 to 2 weeks to paint it (assuming some days of rain) • Once the tower is completely assembled, the shelter and the pad for the generator can be assembled. We do not recommend putting those in until AFTER the tower is built, because if something falls and lands on the shelter or generator it could cause significant damage. The compound should be able to be

		<p>assembled in approximately 3 to 4 weeks depending on weather, materials, inspections, etc.</p> <p>So we are talking approximately 3 to 4 months (minimum) to build the foundation and assemble the tower. This assumes that all the zoning, permitting, NEPA and environmental have been completed and the site is given a pass.</p> <p>CIRC</p> <p>The CIRC site was built with co-location tenants in mind. The room where the equipment is slated to go is right below the roof, and there are no wireless operators currently on the roof. So installing things will go quickly, because we are not working around the other tenants.</p> <p>Installation strategy is where I and KCI deviate:</p> <ul style="list-style-type: none"> • Installation of the microwave dishes and the antennas (6 are assumed but the contract states that normally there are only 3 and 1 spare) will not take more than a week to install including installing the mounts on the parapet walls, drilling holes through the parapet walls in order to feed the jumpers through and down to the coax. Coax run into the equipment room is no more than 50'. The microwave antennas do not need to go on the parapet walls. They can be installed on weighted platforms elevated high enough to maintain line of sight and then surrounded in stealth materials so they are not visible from the street. <ul style="list-style-type: none"> ◦ The platforms can be preassembled and raised directly to the roof with a crane or an articulating arm with a 3,000lb winch. ◦ If a crane is used, it can be done in the evening (after rush hour) or on a weekend in order to minimize inconveniences to tenants in the area. Especially given there are access roads on all sides, and the crane would likely be placed in the parking spaces in front of the Publix supermarket so it has no impact to the flow of traffic on the circle or N. Federal Hwy. • An environmentalized room would need to be built in the space allocated that would include air conditioning in order to maintain the necessary temperature and humidity per the Motorola specifications for their P25 equipment. Given the building is built of concrete and rebar, the walls of the room do not need to be built of heavy materials. They can be built with standard, light weight materials. HVAC's could go up on the roof or a split mount unit can be used to simplify it further. <ul style="list-style-type: none"> ◦ This entire process should not take more than a month, and it can be commenced immediately upon approval of the permits. • The equipment installation would need to be split. The P25 equipment would go in the equipment room, the batteries and generators would go down in the parking garage on a lower floor. This way we do not have overloading of the floor up on the roof requiring structural reinforcement. Depending on which configuration generates the least amount of loss (DC plant up on the roof or down in the parking garage). There are only 4 racks in the P25 line up according to the agreement. <ul style="list-style-type: none"> ◦ 4 racks do not take more than 2 weeks to install, and at most 3 to 5 days to integrate and cutover. 7 days max. ◦ All the P25 equipment can be brought up in the freight elevator and carried to the room once it is ready for installation. A crane is not necessary. • The conduit would need to be installed from the roof down to the parking garage where the batteries and generator would go, and that should take approximately 2 to 4 weeks. • A room for the batteries and generator could be built simultaneously while the room on the roof of the building is being
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		<p>built. The batteries and generator could be driven up to and delivered directly at the point of entry into the room and installed which will speed the pace of installation, and reduce the cost of delivery of the materials to site. The electrical cables will have been pulled by the electrician and left waiting for connection.</p> <p>Assuming permitting and approvals are all done, CIRC could be built in 2 to 3 months maximum depending on crew allocations and access to the site.</p>
1.2	Any unique features or physical limitations of the respective sites	<p>WLP is 300' SST located on a small plot of land between two retention ponds, and it is located right up against a hole on the municipal golf course. The existing access road is a dirt road with a little bit of gravel here and there. There is a single point of entry in order to get access to the site (822). Regardless of the amount of time and cost to construct that site, I have 2 main points of opposition to the site and they are all related to disaster recovery which is the primary purpose for a P25 network. To support first responders serving the needs of a community.</p> <p>WLP is 2'1" above sea level and it would be sandwiched between two retention ponds and a golf course. When the next storm hits, depending on the size of the storm, the highest probability is that the area will be flooded. The antennas will more than likely be torn away from the tower together with the microwave dish and possibly some or all of the coax. The installation strategy utilized for the site is to install all Antennas and Line on the very top of the tower (in order to get a wider coverage area). So there is no head room above the point of installation in order to rig the tower and use a winch/cathead in order to raise the replacement antennas and coax up on to the tower.</p> <p>That means that either a crane or helicopter will be necessary to safely perform the installation. A crane operator will not drive their crane into an area with a dirt and gravel access road that is currently under water. The weight of the crane will cause it to sink.</p> <p>That leaves a helicopter. Getting a heavy load helicopter specialized in performing this kind of work immediately after a storm is highly unlikely. It also requires a 4 man tower team that is trained to do installations on tower tops utilizing helicopters. Getting a helicopter and an appropriately trained tower is crew is not impossible by any means. It is just more difficult, because the County will be competing with the carriers (e.g. ATT, Verizon, Sprint, T-Mobile, etc) for those same crews, helicopters, etc., and the carriers will be offering more money to attract all the crews, cranes, heavy machinery, etc. That means that the most likely outcome after a sizeable hurricane is that the tower will not be able to be recovered until such time that the storm surge recedes and the area is permitted to dry sufficiently to accommodate the weight of a crane and a tower crew.</p> <p>The plan communicated to the BCC and CoH is that in the event that were to occur, they would use a Cell Site on Wheels (COW). A COW has approximately 12 to 18" of clearance between the ground and the base of the trailer. A COW is not a viable solution to recover the WLP in the event the tower takes damage, and recovering the Microwave and A&L is not fast enough. You can use the COW elsewhere, but the tower will likely not be more than 60 to 100' tall which means that it will lack the necessary coverage to support the area.</p> <p>Lastly, assuming the A&L does survive, and the area does flood, they are not going to be able to access the site with heavy vehicles in order to refill the generator tanks. BCC indicated that they would just use a boat to access the site. It is unsafe and dangerous to be motoring back and forth in debris strewn water with diesel filled tanks for the sole purpose of refilling the tank using 5 gallon fuel tanks.</p> <p>CIRC</p>

		<p>For a Disaster Recovery perspective, the CIRC Hotel is more attractive for the following reasons:</p> <ul style="list-style-type: none"> • It is well above the flood zone at 1.7 miles from the coast line versus 1 mile from the coast line for WLP • The building has access roads from multiple sides (e.g. 5, Polk Street, 820, etc.). Even if one access road takes damage, crews and materials could be moved to the site from another area and they will have a low likelihood of encountering flooded areas that are impassable. • The building affords more protection to the equipment (including the antennas and line). • If a tower crew is not available, a Motorola crew that is properly trained on A&L installation, can go up the stairs of the building and recover the site on their own. They are not held hostage waiting on a tower team that is trained to climb a tower. • Aside from the generator planned for in the agreement, the building itself has its own generator to serve the needs of the occupants. That can serve as an additional backup if necessary. • There is already power run to the building, so all that may be required is an upgrade and FPL during the recovery is more likely to prioritize getting a residential area (such as the CIRC building) with power over a park. <p>From a Disaster Recovery and resiliency perspective, the CIRC affords more protection and has a higher probability of being recovered within the first 24 to 48 hours over a 300' tower in a park that is sitting 1 mile from the ocean and 2'1" above sea level.</p> <p>Those 24 to 48 hours are the difference between saving lives or taking them.</p>
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	<p>The covenant for the construction of the tower on WLP has been removed, so I do not see any issues specific to the tower being constructed there. The permits still need to be addressed and the concerns of the CoH addressed before it is completely cleared and ready for construction.</p> <p>CIRC would need permits for the modifications to the building as well; however, given it is not affecting the environment or surrounding community, my expectation is that those permits could like be fast tracked to facilitate the installation given the local community would likely not oppose the installation on the roof.</p>
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	<p>WLP will require routine maintenance in order to protect the integrity of the steel and foundation given its proximity to the ocean. So there will need to be maintenance done to the entire tower on a monthly basis to insure nothing is exposed and begins rusting.</p> <p>CIRC maintenance is typically handled by the building owner. Only maintenance that I can foresee is routine inspections of the antennas on the roof, and maintenance of the generator which should be done regardless of which site is selected.</p>
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	<p>WLP</p> <p>The main issue affecting WLP would be constructing a proper road in order to reach the site, and I would suggest having an additional access road cut thru to the area where the water processing plant is located. This way the site is accessible from 2 sides.</p> <p>CIRC</p> <p>CIRC has a freight elevator up to the top floor. There is 2 additional sets of stairs for the last leg up to the area where the room is located. The comment that the room lacks an elevator is incorrect.</p>

		Aside from the above, CIRC has no access issues. There are multiple roads that permit access to the building, and even if the power goes and the generator does not turn on, the roof can still be accessed via a stairwell.
1.6	Installation Strategies	Please refer to 1.2.

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	<p>WLP is 2'1" above sea level sitting between 2 retention ponds with the intercoastal nearby and the ocean a mile away. As a company that builds towers, I personally would not recommend a client build a tower in a location like that. The area will very likely be subject to regular flooding.</p> <p>CIRC has none of these issues.</p>
2.2	The impact site location could have from Severe weather .	<p>As addressed above, the WLP site currently has a single point of access to the site, and if a hurricane hits the area it has a high probability of impeding access to the site.</p> <p>CIRC is 1.7 miles from the coastline and outside the floodzone. In addition, it has multiple roads for accessing the site. Any impacts from weather would be minimal and mostly associated with cuts in power which would be addressed by on site generators.</p>
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	<p>WLP would not depend on approval from a building owner for access; however, it would encounter the following:</p> <ul style="list-style-type: none"> The site as currently designed only has a single point of entry (822). If the road is damaged, access to the site will be impeded. If the water levels in the area rise, access to the site via vehicle will be limited. Technicians will need to access the shelter via boat. A COW cannot be utilized in areas where the storm surge is above 12". WLP will depend on a 4 man tower team in order to recover anything on the tower, and BCC will need to have the crew contracted before the storm hits. Afterwards, it will be impossible to find a 4 man team in the state of Florida. In the event the antennas, coax and microwave are damaged or torn off the tower, and the storm surge does not permit a crane to access the site, a helicopter will need to be utilized. <ul style="list-style-type: none"> The installation strategy designed by Motorola has the mounts on the highest point of the tower. A rooster tail with a cathead down on the ground may be attempted but at 300' that is dangerous given cross winds at that height. In addition, the antennas are 25' tall with the connection point on the base. At tower top, with cross winds, it is very difficult for a tower crew to hold the antennas at the base and connect them. That means a crane is required, because there is no place to rig above the installation point. <p>CIRC would require coordination with the building manager to access the site. If the elevator is out of service, 2 techs (a 4 man tower team is not necessary) could go to the roof by going up the staircase. Restoration could be accelerated by keeping spare antennas up on the roof in the room where the equipment is installed. The new antennas would be replaced and new jumpers run down to the coax.</p> <p>Having done disaster recovery after Irma and Maria, I can assure you that (given the location where the WLP site is to be installed) the CIRC site could be recovered faster.</p>

		<ul style="list-style-type: none"> • It does not require dependence on a 4 man tower team to recover the site • There is no need for a helicopter or crane • The area is not subject to flooding • The building affords the equipment installed more protection • There are multiple access roads that permit techs to reach the site and get it back on the area • Spare materials can be kept in the building so that it can be recovered quickly

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	<p>WLP engineering performed by Valmont is incorrectly. They did not account for proper exposure and topographic category. That site was engineered to reflect Exposure C, Category 1. It should be Exposure D, Category 1.</p> <p>CIRC rooftop installation needs to be analyzed to determine the type of mounts to be utilized for the antennas.</p>
3.2	Recommended or (where applicable) contractually required resiliency	The Motorola P25 solution is redundant and resilient.
3.3	Recommended or (where applicable) contractually required redundancy	<p>The power is not redundant or resilient. It assumes a single 175kw generator. The site should have redundant generators.</p> <p>The transmission is redundant at the level of the equipment (N+1); however, if the antennas are destroyed or damaged during a major storm, the site will go down unless redundancy is implemented in the form of a hard line (e.g. fiber).</p>
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	<p>Maintenance for either site would be acceptable. The P25 equipment is all installed indoors so neither site is impacted by rain.</p> <p>Assuming the WLP site has no access issues (e.g. weather, soggy access road, etc.), it will be easier for the technicians to access WLP than go up to the roof of the CIRC.</p> <p>CIRC would be easier for the generator maintenance and refueling given it is in the garage rather than outdoors exposed to the elements.</p>
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	Yes. My concerns are detailed above.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	<p>WLP construction pricing is fairly reasonable based on norms in the industry; however, the pricing needs to be revised to reflect 80' piles (unless it has already been accounted for).</p> <p>CIRC pricing assumptions are entirely unrealistic. The installation does not require a helicopter, and the building would only require the structural reinforcement laid out by KCI, MCP and Motorola if the batteries are installed up on the roof which is not necessary. My expectation (based on prior experience performing these installations for carriers in the US and Caribbean) is that the CIRC site should not exceed \$500 to 600k.</p> <ul style="list-style-type: none"> A crane is only needed for one day to raise the microwave antennas and platform mounts (in addition to other installation materials) up to the roof The materials can all be taken up via the freight elevator or in the case of the generator and batteries driven up to the room in the garage where they will be installed
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	<p>The estimates for maintenance are under estimated. There is ample evidence of other states and municipalities that contracted this same architecture with Motorola, and the costs for the tower maintenance were raised significantly after the contract was completed. In the case of the WLP tower, it should be even higher given the proximity to the ocean and retention ponds.</p> <p>CIRC was over estimated. The maintenance of the building and access is the responsibility of the building owner and accounted for in the lease. Only real maintenance will be generator maintenance and regular visits to inspect the P25, batteries and antennas on the roof.</p>
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	<p>Routine maintenance on the WLP site will require both Motorola technicians (assuming the same technicians will inspect the DC plant, battery strings and generator) and a minimum of a 2 man tiger team to go up the tower to perform routine and preventive maintenance of the antennas, coax and the tower itself including rust mitigation and prevention, painting, etc.</p> <p>CIRC site visit can be done solely by the Motorola technicians. It does not require tower technicians.</p>

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	<p>This is an item best addressed by the RF engineers; however, here are my observations:</p> <ul style="list-style-type: none"> Either site will provide good coverage. It really depends on what specific area the network is targeted to cover.

		<ul style="list-style-type: none"> • CIRC is a bit further south than WLP, so it will likely generate better coverage to the south and West, and weaker coverage to the north towards North Hollywood; however, this can be addressed with repeaters, different antenna models, etc. The important thing is to clearly identify coverage gaps. • Regardless of what the final RF coverage is, the network will still require additional BTS's and repeaters in order to fill coverage gaps, add capacity, etc. that will only become evident after the network has gone live and feedback is gathered in the form of input from users and drive testing in order to determine coverage gaps. • BCC consistently references 25db inbuilding coverage guarantees by Motorola. In truth, the contract clearly states that they are only providing guarantees of street level coverage and the 25db coverage is purely a simulation. They cannot guarantee in building coverage without going building by building performing measurements which is unrealistic and costly.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	<p>Both sites will incur shadowing given both sites are tall and will have buildings blocking the signal, and that shadowing will vary between the sites. Optimization will be required in order to help over come it regardless of which site is selected.</p> <p>In RF design, there is no such thing as a site that experiences no shadowing. Any time there are tall buildings (or tall obstructions) in the RF coverage area, shadowing will be a factor that must be accounted for.</p>
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	<p>I read the entire contract. Main items I see are:</p> <ul style="list-style-type: none"> • In building coverage is purely a simulation. Motorola in truth is not guaranteeing in building coverage. They are providing best effort with a simulation assuming 25db to the road; however, that will vary. • No contractual commitments for disaster recovery other than providing Motorola technicians once BCC deems a site safe to access. That needs to be adjusted to guarantee tower crews for any and all sites (including WLP). <p>Those are the primary items.</p>

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div> Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town. </div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
7.1	
7.2	
7.3	
7.4	
7.5	

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Nick Falgiatore				
Title/Responsibility	Senior Technology Specialist / Consultant				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	<p>West Lake Park – Construction can begin at West Lake Park once the City of Hollywood issues a construction permit. All regulatory approvals for this site are complete and an ASR has been issued. The permit package was submitted to Hollywood. The construction timeline is estimated at approximately 3 months to include clearing of the compound, installation of the chainwall platform, placement of the shelter, installation of the generator, and construction of the tower. An additional month is estimated for equipment installation.</p> <p>CIRC – Construction at the CIRC will require executing a lease with the building owner prior to construction. While the terms and conditions of the lease have been substantially agreed upon, the CIRC owners have not yet considered proposed building modifications or the aesthetic impact of different options being considered. Additionally there are several unresolved design issues, including floor loading for the DC plant battery bank and placement of the generator. The options to remedy these outstanding issues may have significant structural modification or aesthetic impacts to the building itself.</p> <p>Considering the outstanding design changes and the time required for gaining approval from the CIRC owners, it is estimated that 2 months will be required from the time negotiations and design updates start until the point that a lease is executed. A construction schedule at the CIRC was estimated by Motorola as 7 months based on discussions with the various subcontractors that would be responsible for the installation. Much of the timeline is based on constraints with delivering building materials and equipment to the building rooftop. This places the total construction timeline at 9 months.</p>

1.2	Any unique features or physical limitations of the respective sites	<p>WLP – The WLP site is located in a maintenance area in a County park. Due to the location of this site in a floodplain, the site was designed with a raised platform to elevate the shelter and generator above any potential floodwaters or storm surge. The complete site design has been submitted to Hollywood and construction of the shelter and tower had started before being placed on hold. There are unique or physical features that the County believes would impair construction or performance of this location.</p> <p>CIRC – There are several unique features and physical limitations that will impair construction and performance at the CIRC. These include:</p> <p>Coverage – The rooftop of the CIRC does not include a raised equipment room, providing no structure to sufficiently mount LMR antennas above the rooftop. The roof is also very large, and antenna cannot be located in the center of the rooftop due to the location of the chillers. This places a distance of approximately 80 feet from the antenna mounting locations to the edge of the building rooftop. This introduces coverage concerns with regard to shadowing from the building, and due to the potential for obstructions or maximum permissible exposure risks from individuals walking directly in front of the antennas on the rooftop. The County has proposed an approach to provide some reduction in shadowing by raising the antennas 10 feet on mounting poles, but FAA approval for this height increase has not yet been received. The result of the shadowing is a direct line of site obstruction for an angle 76 degrees to 83 degrees below horizontal. Additionally new construction is planned from structures in the immediate vicinity to the south and southwest of the Circ. While the plans for these structures do not indicate they will be taller than the Circ, they do introduce additional line of site obstructions that will impair signals from the Circ. Any future construction of buildings taller than the Circ will result in a substantial reduction in coverage where line of site is obstructed.</p> <p>Construction Complexity – The high cost and extended schedule for the CIRC is due primarily to unique features at the CIRC.</p> <p>The design for the CIRC includes constructing a concrete equipment room inside a large enclosed area one floor below the building rooftop. Due to the height of the building and the tiered structure, Motorola's contractors determined that either a high-rise crane or helicopter would be needed for delivering materials to the rooftop. Such a crane or helicopter would require permitting, road closures, and evacuation of the top building floors if a helicopter were utilized. Additional effort would then be required to stage the building materials and equipment in a manner that would allow for transporting to the rooftop. A total of three different lifts were accounted for within the schedule.</p> <p>Once the materials and equipment is transported to the rooftop, logistical challenges exist with transporting the materials down a floor to the location where the equipment room will be constructed. There are no stairs between the floors, so a hoist or crane system would need to be installed on the rooftop to transport the equipment.</p> <p>It was determined that the floor of the equipment room will not support the weight of the County's equipment. Specifically, the challenge is the weight of the DC plant batteries which are arranged on 4 x 1000 kWh strings. KCI explored several options for reinforcing the floor, but all options require disturbing the floor below which is occupied by building residents, and the building owner did not respond favorably when these options were considered. Locating the DC plant in an additional equipment room or floor will result in constraints with conductor sizing and the associated line losses.</p> <p>It was determined that the building's existing generator does not have sufficient capacity for the County's equipment, so a separate 100 kW generator will need to be supplied. The generator cannot be placed on the rooftop due to diesel fueling constraints. Natural gas was considered as</p>
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		<p>fuel source, but cannot be used due to the potential for service disruption during a hurricane. The diesel generator generator was initially going to be placed in the parking garage, but it was determined that the floor will not support the load and it would need to be placed in an alternate location in a room adjacent to the building generator. There is no means to fit the fully assembled generator into this location, which will require the generator to be disassembled and reassembled in location.</p> <p>A cable route is needed to transport 480V 3-phase power from the generator and transfer switch to the rooftop equipment room. Delivery of this power will require 3 conductors and low-voltage alarming cables. While unused risers are present above the 10th floor that should accommodate these conductors, core drilling will be required on the lower floors, and various obstructions throughout the path will need to be cleared.</p> <p>Maintenance – The CIRC equipment room will take substantially longer to access for maintenance compared to West Lake Park. This is due to the lengthy walk between the parking garage and the building entrance, the need to get a key from the front desk, the need to walk down a hallway and go up a flight of stairs to access the rooftop, and the need to traverse an extended path through an intermediate equipment room before the location of the radio equipment room can be accessed. The path requires equipment to be carried by hand up a flight of stairs, and obstructions along the floor will make it extremely difficult to use a cart/dolly along the rooftop. Any equipment that cannot be carried by hand (antennas, batteries, etc.) will need to be delivered by crane or helicopter. As identified in the construction constraints, these require special permitting which will further delay restoration times.</p>
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the CIRC site, any existing land use restrictions stated in the applicable code.	<p>West Lake Park – There are no further known barriers at West Lake Park beyond the City of Hollywood issuing a construction permit. The City has agreed to do this pending a selection of West Lake Park as the optimal location by the Independent Expert. The County has already lifted the restrictive covenant on the park and the Environmental Easement identified by Hollywood does not intersect the parcel where the site will be placed.</p> <p>CIRC – As previously stated a lease has yet to be executed with the CIRC, and the CIRC has not yet reviewed and approved any proposed equipment placements or building modifications.</p>
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	<p>West Lake Park – This site location is raw land. Clearing of brush at the location will be required prior to the start of construction.</p> <p>CIRC – There are several repairs or building modifications that will be necessary at the CIRC to allow for construction to begin. These include the following:</p> <ol style="list-style-type: none"> 1. Reinforcing of the floor below the equipment room to support the weight of the equipment unless an alternative solution for the DC plant floor loading is agreed upon 2. Construction of the equipment room inside the enclosed area one floor below the rooftop 3. Disassembly and reassembly of the generator to fit it within a viable location 4. Construction of a wall to segment off the County generator 5. Core drilling to provide risers for 480 V 3-phase power and alarming cables from the generator and ATC on the ground floor to the equipment room
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the CIRC Site rooftop etc, and limits to or lack of access affecting or	<p>West Lake Park – The West Lake Park site is accessed via a dirt road. The road is approximately 400' from the paved road which is accessed via the Park's main entrance. Motorola has not identified any concerns regarding the condition of the access road for supporting the construction equipment.</p>

	delaying maintenance, repairs, or recovery at either sites.	<p>Circ – As previously mentioned:</p> <p>The CIRC equipment room will take substantially longer to access for maintenance compared to West Lake Park. This is due to the lengthy walk between the parking garage and the building entrance, the need to get a key from the front desk, the need to walkdown a hallway and go up a flight of stairs to access the rooftop, and the need to traverse an extended path through an intermediate equipment room before the location of the radio equipment room can be accessed. The path requires equipment to be carried by hand up a flight of stairs, and obstructions along the floor will make it extremely difficult to use a cart/dolly along the rooftop. Any equipment that cannot be carried by hand (antennas, batteries, etc.) will need to be delivered by crane or helicopter. As identified in the construction constraints, these require special permitting which will further delay restoration times.</p>
1.6	Installation Strategies	<p>West Lake Park – Installation at West Lake Park is expected to follow a similar process to the County’s other raw land sites. The location will use a Chain Wall design to elevate the shelter and generator above the flood plane. A Chain Wall design is being utilized at several other locations that the County is actively constructing. A crane will be utilized for transferring the shelter from the delivery truck to the chain wall platform, and to erect the tower segments.</p> <p>Circ – As previously stated:</p> <p>The design for the CIRC includes constructing a concrete equipment room inside a large enclosed area one floor below the building rooftop. Due to the height of the building and the tiered structure, Motorola’s contractors determined that either a high-rise crane or helicopter would be needed for delivering materials to the rooftop. Such a crane or helicopter would require permitting, road closures, and evacuation of the top building floors if a helicopter were utilized. Additional effort would then be required to stage the building materials and equipment in a manner that would allow for transporting to the rooftop. A total of three different lifts were accounted for within the schedule.</p> <p>Once the materials and equipment is transported to the rooftop, logistical challenges exist with transporting the materials down a floor to the location where the equipment room will be constructed. There are no stairs between the floors, so a hoist or crane system would need to be installed on the rooftop to transport the equipment.</p> <p>It was determined that the floor of the equipment room will not support the weight of the County’s equipment. Specifically, the challenge is the weight of the DC plant batteries which are arranged on 4 x 1000 kWh strings. KCI explored several options for reinforcing the floor, but all options require disturbing the floor below which is occupied by building residents, and the building owner did not respond favorably when these options were considered. Locating the DC plant in an additional equipment room or floor will result in constraints with conductor sizing and the associated line losses.</p> <p>It was determined that the building’s existing generator does not have sufficient capacity for the County’s equipment, so a separate 100 kW generator will need to be supplied. The generator cannot be placed on the rooftop due to diesel fueling constraints. Natural gas was considered as fuel source, but cannot be used due to the potential for service disruption during a hurricane. The diesel generator generator was initially going to be placed in the parking garage, but it was determined that the floor will not support the load and it would need to be placed in an alternate location in a room adjacent to the building generator. There is no means to fit the fully assembled generator into this location, which will require the generator to be disassembled and reassembled in location.</p>

		A cable route is needed to transport 480V 3-phase power from the generator and transfer switch to the rooftop equipment room. Delivery of this power will require 3 conductors and low-voltage alarming cables. While unused risers are present above the 10 th floor that should accommodate these conductors, core drilling will be required on the lower floors, and various obstructions throughout the path will need to be cleared.
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	<p>West Lake Park – Careful consideration was made for this location to minimize the potential impact from flooding or storm surge. It is for this reason that the Chain Wall platform is being utilized, which will raise the equipment shelter to 9 feet above sea level. Flooding and Sea level rise experts have testified that this should provide ample protection of the equipment from the events of water level rise, storm surge, or flooding. Given that the site is designed for survivability from a Category 5 hurricane, the most anticipated condition expected is the need to refuel the generator if there is a prolonged power outage coinciding with a period of extended flooding. Depending on the severity of the flooding the County may leverage high water trucks or boats to access the site for refueling purposes if traditional fuel trucks can't access the location. As with previous hurricanes, the County has access to any required public safety or military resources to employ in disaster recovery scenarios, and has leveraged these resources in the past. The generator fuel tank has been designed to operate for 72 hours with the system operating under maximum load. Therefore, there should be ample time to address generator refueling.</p> <p>Circ – There is not anticipated to be a significant impact at the Circ from the effects of water level rise, storm surge, or flooding. No equipment is proposed to be placed on the ground floor. The refueling port for the generator will be on ground level, which may result in manual fueling directly into the generator if the fueling port is obstructed.</p>
2.2	The impact site location could have from Severe weather .	<p>West Lake Park – The radio system RFP required all proposed facilities be rated for winds associated with a category 5 hurricane. The Chain Wall, shelter, generator, and tower have all been rated for 180 mph 3-second gusts consistent with Florida Building Code and TIA222 Class 3 requirements.</p> <p>Circ – The building has been rated for a category 5 hurricane, and thus it is anticipated that the structure will provide protection for the equipment room constructed the floor below the rooftop. Antennas will be equally susceptible to wind effects as at West Lake Park.</p>
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	<p>West Lake Park - If repairs are required due to wind damage, and standard drive-up crane or gin pole can be utilized to complete the repairs. The County has extensive experience with disaster recovery scenarios resulting from past hurricanes, and has access to public safety or military resources that may be needed for service restoration.</p> <p>Circ – If antenna repairs or replacements are required due to wind damage, a standard drive-up crane cannot be utilized due to the building height, size, and layout. A high-rise crane would likely be required, and may be extremely difficult to secure following a hurricane. In the past the County has had to secure a military helicopter to assist with service restoration at one of the County's other condominium locations following a hurricane. Similarly, the County has access to required public safety or military resources, but repairs at the Circ will be more challenging.</p>

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	<p>West Lake Park – The tower was constructed per TIA222 Rev G, which was the only revision the structural firms were able to design to during the project design review. The Rev H specifications were reviewed, and it was determined they would result in no change to the tower design criteria. The tower was designed with the following parameters:</p> <p>Building Code: 2017 Florida Building Code (8th Ed) Basic Wind Speed (Vult): 180 mph Risk Category: III/IV Exposure Category: C Topographic Category: 1</p>
3.2	Recommended or (where applicable) contractually required resiliency	The contract required all new sites to be constructed to withstand a category 5 hurricane. Specific criteria were defined based on meeting the strictest standards of standards of the Florida Building Code and TIA222. This led to the 180 mph Vult design standard used for all facilities.
3.3	Recommended or (where applicable) contractually required redundancy	The contract identified that the system could employ no single point of failure, and specific both UPS and DC plant from times (72 hours and 8 hours respectively). The system utilizes redundant master sites, redundant prime results, loop-protected microwave, tertiary leased fiber, MPLS network routing, redundant antenna systems with a pre-mounted spare antenna, sites designed to maximize overlapping coverage, a secondary simulcast cell designed to function as a backup system, and a site-on-wheels that could be used to supplement coverage in a given area should a site become inoperable.
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	<p>The contract includes service level agreements for response and restoration times, as well as services for system monitoring, dispatch, repair, and parts replacement.</p> <p>West Lake Park – The West Lake Park site is similar in nature to many other free-standing tower sites operated by the County. The conditions associated with maintenance at this location are not expected to be any more challenging than other Broward County locations.</p> <p>Circ – For the reasons identified above regarding the time for access, the need to hand carry equipment up stairs and over a long distance, and the inability to lift large or heavy equipment to the rooftop without a crane, maintenance activities at the Circ are expected to be challenging. These issues will be present for all maintenance activities, including during both blue and grey sky events. Replacements of antennas due to lightning strikes or the repair of heavy equipment such as battery strings may necessitate crane lifts to deliver equipment to the rooftop. Given the crane restrictions this will introduce significant delays and costs associating with restoring equipment. The layout of the roof is such that a hoist system cannot be positioned to deliver small loads of equipment to the rooftop.</p>
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	<p>West Lake Park – I have no specific concerns regarding placement of the site in West Lake Park other than delays introduced from Hollywood not being willing to approve the construction permit.</p> <p>Circ – As noted above, I have significant concerns regarding the complexity of the installation at the Circ and the associated time it will take to execute</p>

		a lease and construct. My greatest overall concern with this site is the impact to the project schedule. I believe there will be a localized reduction in coverage surrounding the Circ due to shadowing from the building rooftop and from other nearby planned structures. I have identified the concerns regarding maintenance.
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4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	<p>West Lake Park - The construction cost for the West Lake Park site of \$770,000 was extrapolated by Motorola from the overall initial contract cost. This cost covers construction only, including the 300' self-supporting tower, 24' x 32' shelter, 100 kw generator, chain wall platform, and compound development. It is important to note that the costs associated for this location were bid through a competitive process, and therefore Motorola's profit margins for this location are likely lower than what they have quoted for the Circ. Any regular maintenance activities associated with the radio equipment are included within the maintenance contract. Maintenance of the facilities themselves inclusive of tower maintenance are not included within the maintenance contract and will be provided either by the County's Facilities division or contracted on an as-needed basis. Any major repairs resulting from a significant restoration effort following a natural disaster are not covered within the maintenance contract. The County's insurance coverage could potentially cover such costs.</p> <p>Circ – The construction costs at the Circ were quoted by Motorola based on input from numerous subcontractors that would be responsible for performing the work. The high costs of \$2.2 million (crane transportation) to \$2.8 million (helicopter transportation) factor in the complexities of the construction plus three different crane or helicopter lifts with the associated staging of equipment to be lifted. The crane quoted was for a specialty high-rise construction crane which would require road closures and special permitting. The helicopter would also require special permitting and would require the evacuation of the top three floors of the building. The radio equipment itself is covered under the maintenance contract, but any replacement antennas or heavy equipment that would would require a crane lift for maintenance activities is not covered and would be an added expense to the County.</p>
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	The costs for both sites reflect only the capital construction costs. The associated maintenancce costs are covered in the maintenance contract. Any significant restoration costs will be the responsibility of the County for both locations.
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	The County's contract with Motorola only includes maintenance activities associated with the radio equipment itself. The County maintains a separate contract directly with Kirms, which provides tower inspections, maintenancem, and repairs. The West Lake Park or Circ sites have not yet been added to the Kirms maintenance contract as of yet. The tower and construction work is initially covered by vendor or manufacturer warranties. The Kirms contract will be updated to ensure a continuity of maintenance activities for both locations.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	<p>It is expected that both sites will meet the 95% coverage criteria for portable radios operating inside of 25 dB buildings. This coverage criteria applies to the area that falls east of I95 to the ocean.</p> <p>As noted above the coverage provided by the Circ will be reduced due to shadowing from the building. At the worst case this is anticipated to impact coverage out 1/3 a mile from the Circ. The number of test tiles required for a statistically significant coverage test is 1,012 with a tile size of .28 x .28 miles. Therefore, even should all impacted tiles surrounding the Circ fail the expected impact would be to 4 test tiles or .4 % of the test area. There will nonetheless be an area of reduced coverage that is predicted to impact in-building coverage within downtown Hollywood.</p> <p>The West Lake Park site is located further east and closer to high-rise buildings along Hollywood Beach that will benefit from closer proximity and improved coverage in excess of 25 dB.</p>
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	<p>The anticipated shadowing from the Circ site has been discussed at length, and options to mitigate it have been explored. An FAA study has been submitted for obstruction evaluation to determine if raising the antenna heights by 10 feet can be authorized. Ideally antennas could be raised even further to further mitigate the effects of shadowing, but a greater height is less likely to receive FAA approval, requires a more substantial mounting structure to provide adequate wind loading requirements, has more of a negative aesthetic impact, and provides diminishing returns regarding the shadowed area. Downtilt will only focus more energy into the rooftop with a negligible improvement. Moving toward a sectorized design using sectorized antennas mounted on the sides of the building would provide some improvement to the shadowed areas, but would significantly increase the number of feedlines, increase the construction complexity, and reduce power focused at the horizon where it is also needed for building penetration.</p> <p>Coverage studies have been supplied that approximate the impact of the building shadowing. These studies were developed by manually modifying the antenna patterns to reduce vertical azimuths that would be obstructed by the building by 30 dB. Copies of the antenna pattern files are available upon request.</p> <p>There are already buildings planned immediately to the south and southwest of the Circ. The areas where there will be line of site obstruction from the Circ have been identified in the Circ feasibility study summary presentation.</p>
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	<p>Under the maintenance contract Motorola is responsible for responding to critical system outages within 1 hour and restoring service within 4 hours for critical issues.</p> <p>The contract defines specific requirements for Motorola to perform in disaster recovery scenarios. However, the costs associated with these standards are not included within the maintenance contract pricing.</p>

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div data-bbox="358 394 467 420"><i>EXAMPLE</i></div> <div data-bbox="256 428 1524 489"><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></div> <div data-bbox="721 394 829 420"><i>EXAMPLE</i></div> <div data-bbox="1101 394 1209 420"><i>EXAMPLE</i></div> <div data-bbox="358 493 467 518"><i>EXAMPLE</i></div> <div data-bbox="721 493 829 518"><i>EXAMPLE</i></div> <div data-bbox="1101 493 1209 518"><i>EXAMPLE</i></div>
7.1	<p>The criticality of completing construction of the new P25 system and cutting users over cannot be understated. The legacy SmartZone system relies on 6809 prime and site controllers, end-of-life Tadiran microwave, and numerous other end-of-life components that have resulted in higher component failure rates. In addition, the Fort Lauderdale Airport shooting and the Marjorie Stoneman Douglas shooting resulted in user traffic that overloaded the system control channel, resulting in unreliable communications for hours during both events. It is expected that another mass casualty event occurring within Broward County will result in a similar scenario. User confidence in the existing system has been lost, and the Marjorie Stoneman Douglas State commission has placed extreme pressure on the County to complete construction.</p> <p>The West Lake Park site was identified in 2018, with work being conducted on its development for over 3 years. The design had been completed, construction plans had been developed, and fabrication on the tower and shelter had been started. All regulatory approvals have been received, and construction at the site is ready to begin immediately following the completion of the tower and shelter fabrication.</p> <p>The City of Hollywood Commissioners agreed in early 2017 that the West Lake Park location was acceptable. It wasn't until public outreach meetings conducted in 2018 that local residents became aware of the tower, voiced their concerns to the City Commission, and ultimately swayed the City against this location. It was at that time that the Circ was raised as an alternative and a feasibility study for construction at the Circ was conducted. The City's consultant was only hired upon the completion of the feasibility study to specifically refute evaluated criteria that were not favorable for construction at the Circ.</p> <p>The County is implementing an additional condominium location in Deerfield Beach where there are no alternative locations for raw-land sites. The County has been resolving design concerns with the building owner for over 2 years. Despite what the City may believe, the construction of rooftop locations is not faster than raw land sites.</p>
7.2	<p>A lot of attention has been placed by the City of Hollywood on the resiliency of the West Lake Park location. It is important to note that the conditions at this site are near identical to many other sites operated by the County. The site is designed to the strictest standards, and the concerns identified would only occur during the rarest likelihood of a direct-hit category 5 hurricane. The concerns regarding the maintenance at the Circ site would occur during all weather conditions and are far more likely to occur. An event as common as a lightning strike disabling an antenna could require a crane lift that may ultimately result in weeks to restore service.</p>
7.3	<p>The County operates two rooftop locations on the existing system. Maintenance activities at these locations far more challenged when compared to the free standing sites due to the lengthy time required to access equipment rooms. These buildings allow for the use of hoist system to lift heavy equipment to the rooftop. The Circ presents even greater challenges due to a longer path the equipment room location, and the inability to use a hoist system. The County has needed to use a helicopter in the past for antenna replacement following a hurricane on one of these locations.</p>

7.4	<p>The City's consultant has proposed several options in public meetings to address the still unresolved issue of floor loading on the Circ. These include:</p> <ul style="list-style-type: none"> a. Shelter on garage – It has already been demonstrated that the garage will not support the weight of the generator. It is therefore highly unlikely the garage will support the weight of the equipment shelter. Additionally, placing the shelter on the garage will require running feedline up the side of the building and traversing multiple horizontal and vertical runs given the tiered design of the building. This will result in a significant aesthetic impact to which the building owner may not agree. b. DC Plant on Ground Floor – Running power cables from the generator to the rooftop was a significant challenge that needed to be overcome due to obstructions and a lack of risers connecting the full cable path. Core drilling was already going to be required for 480 volt 3-phase transmission. Placing the 48 V DC battery banks on the ground floor will result in extremely large conductors for which there is not likely a viable cable path. c. Generator in Room near Loading Bay – After the completion of the feasibility study the Circ engineer identified that the parking garage would not support the weight of the County's 100 kW generator. The alternative location for the generator is in a vacant room adjacent to the room that houses the building generator. There is not sufficient access to this location to move the fully assembled generator into the designated room due to its location up a flight of stairs, around a narrow corner, and through a doorway. Installation would therefore require disassembling the generator and fuel tank and reassembling them in the proper location. This presents significant logistical challenges which at a minimum will increase costs and installation times.
7.5	

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	José M. De Zayas				
Title/Responsibility	Radio Systems Manager				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	<p>Circ - equipment space provided by building is boiler room. Route to the/from the space is lengthy and presents several obstacles in the way (parking, roof drains, etc.). Will require an environmentally controlled space to be constructed, with a raised floor due to water intrusion. Most of the equipment/materials will need to be raised to the roof (crane/helicopter). Then, hand carried down into the boiler room. Building doesn't offer a freight elevator to the space. Antennas on roof top will require 10' masts and cable routes will have numerous bends. Commercial power routes still need to be determined and verified if the building has availability, may require a build out. Generator location that was provided by the building may require the generator and tank to be deconstructed and reconstructed within the space. Generator will also require fuel pump station at the street. This building clearly wasn't intended to have public safety radio system installed within it. Access to equipment area, generator and commercial power have their challenges. Construction time at this site will exceed the time required to build a raw site.</p> <p>WLP - equipment shelter is prefabricated, with all required subsystems (electrical, fire, etc.) pre installed. Raised platform and tower prefabricated and installed at the site. Onsite construction not hindered by obstructions. Commercial power location identified and easily accessible. Generator and tank can be delivered and installed without deconstruction. Restrictive covenant at park has been lifted. All known environmental requirements have been satisfied. All federal (FCC and FAA) approvals have been received. Site is ready to build.</p>
1.2	Any unique features or physical limitations of the respective sites	<p>Circ - it's a rooftop cond and these types of sites always pose limitations, ease of access, space, power, etc. This particular site has a tiered roofs, pose issues with getting materials/equipment to roof and the top. Where the antennas will be installed, has a large surface area. This large surface area poses issues with shadowing.</p> <p>WLP - this location is in a utility section of the park and will not limit or hinder park use.</p>

1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	<p>Circ – will require a third party long term lease agreement, which isn't necessary given that the county owns the property at WLP.</p> <p>WLP – county's owns the land. County's documentation doesn't show a conservation easement. If it is validated that there is a conservation easement (from what the city shows it's only several feet), site may be moved to avoid such easement.</p>
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	<p>Circ – routine maintenance and repairs will take longer. Labor for DC batteries and RF antennas replacement will be more expensive.</p> <p>WLP – site is easily accessible by technicians and tower crews.</p>
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	<p>Circ – it's already been described in the items above that the Circ poses access concerns. In addition, Circ will pose vehicle and pedestrian traffic concerns when crane/helicopter will be used for installation and routine maintenance/repairs.</p> <p>WLP – there is already a utility road (rock, not paved/asphalt) available at this site. This was found to be adequate by City Staff.</p>
1.6	Installation Strategies	<p>Circ – installation of the RF equipment and DC power systems are to remain within the same area to minimize cabling sizes, especially for the power system. Proposed location is the boiler room which will require a raised floor (which will require additional floor strengthening, not yet engineered), construction of environmentally controlled 20' x 30' space, installation of required conduits from ground floor through to the boiler room space, coordination with commercial power to determine appropriate connection point (may require use of buildings allocated commercial space taps, building owner must agree), installation of antenna masts, antennas mounts, antennas and lines (greater amount of bends on the lines). Determine best method of providing required equipment, materials, and supplies to the roof (crane, helicopter, both, or by hand).</p> <p>WLP – this is much more straight forward installation, construct proper foundations per engineer of record. Install pre-fabricated tower, platform, generator, fuel tank, and shelter. Installation of antenna mounts, antennas, and lines into shelter. Connect to commercial power.</p>

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	<p>Circ – no impacts with water level rise, storm surge. There is a risk of flooding due location being in a boiler room, having water based fire suppression nearby. It has been noted that even with minor rain events, area has shown water intrusion and water stains on the floor.</p> <p>WLP – no impact or concerns with water level rise, storm surge or flooding. Site being built per all applicable standards and codes for the area. Area is accessible</p>
2.2	The impact site location could have from Severe weather .	Site exposure will be similar for both locations.
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	<p>Site restoration for Circ will take longer due to it's location in a city center, use of crane/helicopter, requests to block road, coordination of effort and proper permissions, etc. This is true for blue sky events as well. Circ has greater risk during restoration.</p> <p>WLP has easier access and is away for the general public, no impact to surroundings. Therefore restoration time will be faster.</p>

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	WLP – is being engineered to the proper standards, compliance, type, exposure category. When project started EIA/TIA 222 Rev. H was just released and structural modeling software have not been updated to the new release. Nonetheless, Rev G and H were compared and found to have no differences with respect to the required structural specifications. Therefore County moved forward with Rev G. However, all finals inspections and analysis will be performed at Rev H.
3.2	Recommended or (where applicable) contractually required resiliency	I believe resiliency at WLP will be better given that the site is specifically built to the applicable standards and codes (shelter/tower pre-built). Circ site will have to be modified to meet requirements.
3.3	Recommended or (where applicable) contractually required redundancy	Redundancy will be the same for both.
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	The level of effort to maintain, repair, replace equipment and coax at Circ will be greater than that of WLP. This is evident by the locations of the equipment and generator at the building and the actual building itself (in the middle of a congested, residential area).
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	<p>I have coverage concerns at the Circ due to shadowing effects. As well as location being closer to the general public in a highly populated residential area. Additional concerns with the Circ are access, support, maintenance and restoration of equipment (blue or grey sky).</p> <p>Coverage at WLP will be optimal due to minimize shadowing effects. WLP offers a location away from densely populated area and faster mean time to repairs.</p>

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Circ will require to have a raised floor (strengthening of existing floor), environmentally controlled space, antenna mounts/masts, all which have to be built onsite. Also, the generator and tank will need to be disassembled, reassembled, and a fuel pumping station will need to be installed to fuel the generator. In addition, the level of effort of having a crane/helicopter to get equipment to roof and hand carried down to boiler room. Repairing, maintenance, replacement of equipment will also have a higher level of effort due to the location of the equipment and the risk associated with the location. All of the aforementioned will have a higher cost factor.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	The contract for the new P25 radio system was competitively bid; therefore, there was no increase to the capital expenditure.
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	All sites, regardless of rooftop or tower, will require regular, yearly inspections. Costs associated with the increase level of effort due to equipment location and access at the Circ will be higher, i.e. replacement of DC plant batteries, replacement of antennas, required notifications to repair/replace equipment. Most importantly is the mean time to repair equipment at Circ will be greater than WLP.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	We must keep in mind that County's responsibility is to have maximum coverage. Anything less, regardless how small the percentage, is not acceptable.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	I believe we've outlined all the critical factors above and with the additional documentation that was provided.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	I will leave this for Motorola to respond to.

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> </div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> </div>
7.1	WLP location provides optimal coverage on the east side of Hollywood, Hallandale Beach and Dania.
7.2	GM Shelby's initial response advises that a stand alone tower is the optimal solution. However, most commercial carriers avoid having lengthy discussions with getting them approved.
7.3	County owns the land at WLP and the restricted covenants have been lifted to allow the build of a E911 public safety radio communications tower at no additional costs to the residents of Broward County. Long term lease at Circ will cost County millions of dollars in unnecessary lease payments.
7.4	
7.5	

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Ronald Pender				
Title/Responsibility	Program Manager				
Representing (Circle/Mark One)	City	County	Motorola	✓ Aviat Networks	
Which site do you prefer? (Circle/Mark One)	WLP Tower No preference			Circ Site No preference	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	Installation of antennas, waveguide on a tower is easier than on a roof top. Roof tops take more time, require permits, structural analysis, possible roof reinforcements, site grounding is always a concern on roof tops. Frequencies have been secured for the WLP site in both directions. Circ Hotel has not been coordinated for frequencies. The area is highly congested, moving the site could upset the approved Microwave Frequency plan.
1.2	Any unique features or physical limitations of the respective sites	Roof top: Either build a structure on the roof or drop a prefab light weight shelter. Access to a suitable grounding system to suppress equipment damage from lightning.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code).	I have no expertise in this area.
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	Rooves periodically require new water proofing membranes, the antenna mounts and waveguide might have to be removed during the roof maintenance.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Roadways or site development is arranged by Motorola. Buildings typically require escorts, access is restricted. Access follows the owners availablilty which typically results in a daily late start and early finish. Our crews work a ten hour day. Owner/escort is not available 10 hours a day 6 days a week. Service elevators are usually not large enough to accommodate material or handle the weight of some of the material. Crane or helicopter are typically required.

1.6	Installation Strategies	Installation on a tower is straight forward. The antenna is installed on the tower per the manufacturers guidelines. The waveguide is run down the vertical cable ladder, transitions into the shelter and terminated above the radio rack. This is a standard installation model. Installing on a roof top entails more work each roof top is unique. The antenna has to be mounted on a tripod or ballast sled mount which is not recommended in a hurricane area. Therefore a P-Eng will have to design a mounting system to secure the mount and antenna to the roof. The waveguide also poses a problem. They can be installed on sleepers or cable trays which stand off the roof surface, the sleepers should be covered to prevent maintenance personnel from stepping on the waveguide and crushing it which will take down the site. I've seen waveguide installed around perimeter parapit walls. a similar risk is personnel backing into the waveguide and changing its dimensions. I have also seen an antenna installed on a roof, the waveguide run down the outside of a tall building to a shelter below. Manlifts or cranes required.
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	
2.2	The impact site location could have from Severe weather.	By severe weather I assume you mean hurricanes, in which case antennas may need re-alignment on either structure
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	Access to traditonal tower and shelter installations post weather events is easier than roof tops. Traditonal sites typically have their own back up generator power, Access to roof tops without elevators is cumbersome.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Constrher
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	You can build a site and design the tower to TIA 222 rev H which is the latest code. I have no reference to code compliance on a roof top.
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software	There is no manintenance contract between Aviat and Motorola. I believe but am not positive that Motorola may have a maintenance contract with Broward in their contract.

	maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	24hr/7day site access for roof tops in case of a catastrophic failure

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Proprietary information with respect to installation. Restoration or repair is N/A to Aviat
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	N/A to Aviat
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	N/A to Aviat

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	Aviat provides the backhaul between sites, P25 coverage is a question for Motorola.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	Regardless of which site is implemented, a new hi-rise erected on path could block/obstruct the Microwave link if the hi-rise infringes into the propagation Fresnel zone.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	Aviat is a sub to Motorola. Aviat is not privy to the P25 agreement between Motorola and Broward County.

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Danny Kaddoch				
Title/Responsibility	Electrical Contractor				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	Installation of electrical system for the new addition of the P25 project is approx 4 weeks, this does not include any additional time for permitting and Engineered drawings prior to commencement of work nor does this take into consideration any lead time for owner supplied material.
1.2	Any unique features or physical limitations of the respective sites	No
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	Not from an electrical installation point of view.
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	A preventative maintenance will be applicable to either site for the proper functioning of continued use for the equipment.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Circ does have limited access to the rooftop for delivery/installation of the communication equipment to be installed. No walk thru was attended for WLP site.
1.6	Installation Strategies	Crane to roof for all heavy equipment that cannot fit through a standard doorway.

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	The roof of Circ would not be affected. No walk thru was attended for WLP site.
2.2	The impact site location could have from Severe weather .	None
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	The Circ roof access is limited however the exposure to weather is minimal to none. No walk thru was attended for WLP site.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	N/A
3.2	Recommended or (where applicable) contractually required resiliency	N/A
3.3	Recommended or (where applicable) contractually required redundancy	There will be backup power in the event of failure form the utility.
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	All electrical equipment will need to have a maintenance and inspection yearly, regardless of site.
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	No

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	N/A
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	N/A
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	Roof access for personnell to work on equipment is sufficient, hotel door keys for roof and comm/elec rooms must be avalible at the front desk/maintenance.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	N/A
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	N/A
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	N/A

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div> Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town. </div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Dean Decker				
Title/Responsibility	Building Official				
Representing (Circle/Mark One)	(City)	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			{Circ Site}	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	westlake would require substantially more work. The site is low (less than 2" above sea level) and this project being considered critical infrastructure requires that all buildings, generators, and gas tanks being raised to base flood plus 2 ft. so 7 ft. above sea level. The circ is ready to go al that needs to be done is build a n equipment room on the 3 rd floor and run the cable to the roof. (\$94,000.00 quotate from the buildings electrical contractor)
1.2	Any unique features or physical limitations of the respective sites	Westlake is so low that maintenance would almost be impossible after a hurricane. They would not be able to service the tower or auxillary structures because of the high water. There would have a hard surface road installed also because of the fire department requirements. The circ is ready to go with just building a battery room.
1.3	Any title,ownership, or other real property issues affecting either site(e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	The county owns the park and the circ would charge rent
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	The westlake would have flooding issues that need to be addressed the circ is a new building .
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	The fire department says that a hardsurface road must be built to handle emergency vehicles because of the aux. blds.at the westlake site The circ the equipment would go on the third floor so you just have to drive up the parking garage ramp.
1.6	Installation Strategies	The circ run the cable to the roof, build out the equipment room and set the gas tank and generator. Westlake several piles would need to be put in place yo suppot the tower and equip. and a service road built

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	The circ has no issue the westlake site would require extensive site work and piling placement The site is also prone to flooding so access to the equipment would be compromised.
2.2	The impact site location could have from Severe weather .	Severe weather the westlake site would be unreachable and non functioning. At the circ spare antennas would be stored on the roof so a two man crew could install new 20' antennas in a matter of hours with no cranes. just bolt the new antenna in place
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	The site is so low at westlake after the storm repair would be a mess because of access. The circ just drive up to the equipment and start to work

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	Again site work is a problem for westlake no issue with the circ
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	Public safety would not be an issue at either site but the damage to the wild life and landscape would be an issue at westlake

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	The challenge of climbing a 300 foot tower at the park or taking an elevator to the roof at the circ an climbing up 1 flight of stairs is obvious
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	The fact that the site at west lake is very low and prone to flood makes westlake a sloppy unfriendly place to work

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	I have no expertise in this area but I have been told that the coverage would not be an issue in fact on the countys first report the said both sites were similar in coverage so that was the only issue they said was not a problem. When we blew holes in all there other reasons for denial at the circ they went back and said there is a coverage issue
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	The chance of vandalism would be much higher at the westlake site because of its remote location
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div> Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town. </div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Eric S. Kohl, PE					
Title/Responsibility	Practice Leader, Civil/Structural Design					
Representing (Circle/Mark One)	City	County	Motorola			
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site		

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	The CIRC will take considerably longer to install due to the buildout required for the equipment room. Working hours may be limited due to residents as well as challenges in getting equipment from point A to B. The WLP site may have some similar working hour constraints, but there can be activities occurring, such as staging materials or equipment that do not effect nearby residents. There are also items that can be built in parallel, such as the shelter at the manufacturing plant, prefabrication of steel platforms, tower sections, etc. From an approval standpoint, the requirements of the Corps of Engineers or some of the restrictive covenants are not unusual in nature and because other design and manufacturing can be completed behind the scenes (tower structural member fabrication or shelter manufacturing) often don't create appreciable differences in the final timeline
1.2	Any unique features or physical limitations of the respective sites	The CIRC will always have constraints from both a physical standpoint as well as owner wishes. As the use of the building for communications was not the primary purpose, any changes will require considerable thought, dollars and a potential negative aspect on other areas, such as architectural view, RF impact on residents and the loss of that part of the building for other purposes. The WLP will not have that impact. The design of the tower structure and shelter have a significant future growth built into it. The tower can be upgraded easily, should the amount of growth in the future or the building codes change with a higher wind load or other more stringent requirements. The CIRC may have a more difficult time meeting similar requirements further limiting its use in the future. Any communication site developed specifically for communications, such as WLP, maximizes the underlying infrastructure, such as power, fiber, layout to allow for the most efficiency, such as the backup generator, 10-ft from the shelter, the power feed from the utility company as well as the fiber drop from the communications, which are dedicated to this facility as opposed to a building or rooftop where these services are tapped into and rerouted that can result in loss of efficiency and limited ability to increase without considerable expense. Should more power be required within the CIRC, the upgrade cost will be considerably higher than the cost at WLP.

1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	From past experience, a lease is often a huge burden, from a cost standpoint as well as limitations to make changes to the system. For example, a new microwave antenna would require new lease agreements, be subject to owner approval from aesthetic, operational and structural impacts to the facility. It may also result in an increase in rent. The WLP site will be owned by the County, so that any change in either ground or tower will be subject to only internal approval and permitting procedures (that will ensure sufficient structural capacity/code suitability). With the new facility should the County desire, they can lease space on the tower and generate additional revenue or share with other local government for their communication needs that will reduce cost for these municipalities and reduce further need for elevated structures.
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	I spoke of maintenance challenges for the CIRC within the report, so will focus on WLP. The TIA standard requires maintenance inspections every 3 years (minimum) and this would result in minor repairs. Tower sites often require very little maintenance for the first 15 years or so and then after that corrosion will need to be removed and the tower painted with galvanization. Similar repairs will be required for the shelter and other outdoor components. The site will be elevated, so there is very little risk of flooding and the elevated components will be designed for this area. The communications equipment will face similar maintenance requirements at either location, but the repair truck can be parked outside the shelter allowing the technician ease of access and providing repair/replacement parts with minimal time for travel.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	I spoke of the CIRC previously, so will focus on WLP. WLP will have some additional expense for the installation of an access road from the existing road to the site. The existing road, similar to the CIRC's access roads, will be maintained regardless of the County communications location. From a disaster recovery standpoint, sites across the country face similar locational challenges and WLP is no different. The WLP is elevated to limit any impact from flooding and the access road to the site is above flood elevation as well. Tower maintainers are trained to make repairs to tower sites and with the ability to pull the truck up to the site, will be able to have all of the equipment within ready reach to install on the tower. For example, a microwave replacement on a tower would require a repair van with a tower crew simply pull up to the site followed by tower rigging and antenna installation without challenges to get the equipment to the location.
1.6	Installation Strategies	Not sure what this question is asking for. The WLP site is no different than several other sites that have already been installed and completed for the county. These have been installed very quickly and efficiently and several are ready to go on air.

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	This is a non impact. The WLP site will be elevated and the elevated portion designed for any storm surge. The tower and tower foundation are also designed accordingly. Should water level continue to rise, there will be more immediate impacts to the County and other lower lying areas resulting in remediation to alleviate these effected areas over the tower site.
2.2	The impact site location could have from Severe weather .	Again, this is either a non impact or the same for either site. Severe weather can knock microwaves out of alignment and cause power outages. This will be a similar impact in either location. Both sites (CIRC/WLP) are designed to withstand extreme weather. Other than challenges from repair as shown in other areas and within the report, either site is acceptable to resist severe weather.

2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	Refer to the report for the CIRC repair challenges. From the WLP site, the site being used for other services, will benefit from the multiple agencies cleaning up. The Park services will work on their areas and the Communication team will work on theirs. The nice thing is that trucks and other ground equipment (perhaps bull dozers or high water vehicles) can be used to get repair teams and equipment to the site for maintenance. This could be much more challenging on an elevated structure such as the CIRC. The fact that tenants and CIRC maintenance are also using the same elevators and other access means for their own personal recovery could also create challenges from a priority aspect depending on the extent of damage.
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3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	This is a non issue from either WLP or CIRC. Both can be designed sufficiently to meet the 2017 Florida Building Code and TIA tower standard. The tower at WLP perhaps will have more future capacity designed into it for an easier upgrade or equipment under the standard as the CIRC was not specifically designed for communications equipment, but either can be used with designs sufficient to meet the codes/standards.
3.2	Recommended or (where applicable) contractually required resiliency	Refer to report for CIRC. WLP also has designed in resiliency. All of the tower and components are designed for the 180 mph wind speed and other loading as required by the 2017 FLBC for a Risk Category III structure. Both sites will have the required resiliency. The only big difference which has been emphasized is that WLP site will be quicker to restore should unexpected damage occur. It is far easier to restore the ground equipment and access the tower, whereas if unthinkable occurs that damages the building, it will be much more challenging to restore the services there.
3.3	Recommended or (where applicable) contractually required redundancy	Redundancy is also accounted for in both. The CIRC has the future designed into the equipment room. The building can also have more antennas attached to it, if necessary. This may become more difficult over time, which is where the WLP stands out. At some point the RF may become too much for the safety of the residents whereas due to the height of the tower and the location of the antennas, there will not be any instances with future loading that may exceed FCC thresholds of RF emissions. Additional antennas may be designed and installed more quickly without concern of lease agreements or subject to outside owner approval.
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	This is one area that the WLP shines above the CIRC. Any maintenance, particularly that involving changing out equipment will be much more laborious, challenging and may even involve cranes or helicopters for large equipment with the CIRC. The WLP site being located on the ground will allow for the equipment to be easily delivered to the site and then typical tower rigging to install it on the tower or simply for the technician to bring the equipment to the shelter. Should he/she require another tool from the van that they may have forgotten, it is a two minute trip versus a 15 minute or more roundtrip to get the tool from the truck most likely parked in the garage outside.
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	The concerns of coverage for the CIRC are well documented in the report. The WLP will not have these same issues as the tower is in an area free of other tall structures and will not have any of the shadowing issues as described within the report. The antennas are placed on side arms that are away from the structure and not set back into the structure where interference could occur. The microwaves are also located in areas where there is no concern of RF emission safety as nothing can move in front of the antenna. Maintenance folks on the CIRC will need to be cognizant of the antennas and avoid any activities that may place them in front of the antennas. RF monitors should also be worn by workers, adding potential cost to trades not normally used to working in these conditions.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Both sites will have similar issues of installation in adverse weather. Technicians can not work in storms either on the roof or on the tower. The building or shelter will have equal ability for service. The one difference perhaps is that the technician will have to walk across the rooftop to access the equipment room exposing him/her to the high winds or lightning, which could be more dangerous and perhaps limit the ability to conduct the repairs within the equipment room. The shelter in the WLP site will not be exposed to similar issues. A flooding event at the park, could require the use of a boat or other high water vehicle for access. The equipment is elevated, so there is not a concern of damage to the equipment or the tower. In terms of restoration or repair from this event, as everything is elevated, there may be some removal of debris or other items that may have been blown into the shelter. The fence will keep much of the debris outside of the compound.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	I am not privy to the capital expenditure costs, however, there should not be any out of the ordinary costs for the WLP site. The CIRC lease may or may not have been budgeted for, particularly in addition to the expensive construction for the site.
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential CIRC rooftop installation, including those caused by the design of the access to the roof.	Same as above, not privy to the budgets. The WLP site should not be outside of any normal budgeted amounts as there should not be any out of the ordinary maintenance costs for this site.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	This is well outlined within the report. The WLP site will not experience any of the coverage issues that the CIRC could potentially face.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	Same as above.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	The biggest item of concern is the owner's view of aesthetics. To date, we have not met with the owner and we have been told third hand that there are no stealth requirements. This may or may not be the case for future installations. Should additional antennas be required, we can only speculate whether or not stealthing is required. This is where the guarantees are important is that the microwave manufacturer may not warranty the path quality should stealth be installed. I have not seen an agreement that concurs with a design without stealth and can only

		speculate on future requirements should a new or updated lease need to be generated for future growth.
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6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons		
EXAMPLE	EXAMPLE	EXAMPLE	EXAMPLE
	Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.		
7.1	EXAMPLE	EXAMPLE	EXAMPLE
7.2			
7.3			
7.4			
7.5			

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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	GERALD ZADIKOFF, PE				
Title/Responsibility	CEO				
Representing (Circle/Mark One)	City <input checked="" type="checkbox"/>	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			xxxX Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	CIRC site will be much easier from a timing point of view The WLP site will have issues with residents protesting and causing numerous delays among other things
1.2	Any unique features or physical limitations of the respective sites	In the event of a hurricane the WLP site will not have access for the first few days due to no road access ...these are critical times and the first 48 hours are when emergency services are needed. It is fronting the Atlantic and will have the antennas and other appurtenances blown off as breakaway connections are required by code otherwise the entire tower will fail.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	The WLP site is in a sensitive area CIRC has no restrictions as far as I have checked.
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	Repairs??? After a storm access to WLP will be nearly impossible due to flooding and only one road. Circ will have full access and use of installed hoist attached to the roof outside the building will work with ease.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Site access to WLP is a problem after a storm event. Roads will need to be elevated to +2 ft for a long span to eliminate flooding issues a very expensive proposition. Circ will make use of exterior hoists attached to a permanent roof tie in. This is typically used for construction when cranes are not used.
1.6	Installation Strategies	See above and Circ load will be using spread footers that do not attach to the Post tensioned slab – done numerous times

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	See above
2.2	The impact site location could have from Severe weather .	See above
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	See above

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	CIRC has no issues with satisfying EIA/TIA 222 Rev G or H. We are yet to see complete tower drawings satisfying Rev G or H for WLP site
3.2	Recommended or (where applicable) contractually required resiliency	Resiliency is the buzz word today....In a park and fronting the Ocean is not a resilient site. Circ will require a long term lease and maintenance plan built into the lease for resiliency.
3.3	Recommended or (where applicable) contractually required redundancy	Redundancy should be required for both sites as this is an emergency network. However, the loss of antennas during a storm will definitely impede WLP site
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	Maintenance in the front of the Ocean will be higher due to salt spray which occurs with any oceanfront construction.
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	I have issues with the wlp site due to its location fronting the ocean and acces to it after a storm event

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Wlp cost for construction will be a little less than CIRC. But foundations will be required to be very deep and caisson stype foundations. This is an expensive undertaking. Circ will have sread steel footing to disperse loads and cable runs will be equal to the tower. Costs will be +- 60K to 80K difference
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	Operating costs will be more for the WLP site due to excessive maintenance because of the approximity to the Ocean. Lease may be a little higher at CIRC, but I am not sure of this yet
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	See above

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	See our RF plan which as I believe you received a copy of CIRC does have excellent coverage Optimization will be required for both sites in my opinion
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	Neighbors at the WLP site will cause substantial delays in getting the site zoned and permitted as their property values will decrease due to a 300 ft tower between them and the Ocean
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	Not sure what kind of warranties the equipment manufacturer will give for a site fronting the Atlantic Ocean....needs to be verified.

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
7.1	Therehas been much correspondence between our engineers and the County and City with all our concerns. Please ask for the documents or we can furnish separately.
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Harry Kirms, Kirms Communications, LLC				
Title/Responsibility	Owner				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	WPL Tower: 3 weeks installations time not including approvals. Outside of SOW. Installation time includes tower, antenna and lines. Circ Site: 2 weeks installations time not including approvals. Outside of SOW. Only for antenna and line work.
1.2	Any unique features or physical limitations of the respective sites	Circ Site: Cannot hawl large equipment/material over side of building due to location. Will most likely need helicopter or large crane with closing road permits in order to get material to roof top.
1.3	Any title,ownership, or other real property issues affecting either site(e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	Both sites would need rust treament and basic general maintenance. Kirms has an annual maintenance contract to maintain all county locations.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Circ site: access extremely difficult going through elevator and then through elevator to actual installation. All roof top locations are typically more complicated for emergnecy service. WPL: Kirms is not doing road instatllation.
1.6	Installation Strategies	WPL: Typical greenfield site. Circ Site: Will need helicopter to deliver installation material/equipment.

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	Circ Site: concern would be building not allowing access due to weather. WLP: site elevation would need to be addressed during installation. Typically all tower sites are reachable by 4x4 vehicle.
2.2	The impact site location could have from Severe weather .	WPL: During hurricane, antennas, brackets and cabling could end up across the site or tower damage in park. Circ Site: During hurricane, antennas, brackets and cabling could end up on roof top or ground below.
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	WLP: After hurricane, typical response is one day with standard access to site to troubleshoot or replace antennas. Circ Site: will need access to building determined, replacement of antennas could require crane/helicopter when available as well as any road/ flight permits as required. After a storm, could be a couple weeks.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Cost for both WLP (tower, antenna, and cabling installation) and Circ (brackets, antennas, cabling, and cabling attachment brackets installation) are similar for Kirms with the exception that Kirms is having another contractor provide the helicopter for Circ. Note: Labor for hurricane repair would be similar excluding the additional cost of helicopter/crane for Circ.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	Routine/preventative maintenance will be similar.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> </div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> </div>
7.1	Circ Site: if Circ location is approved, what agreements will be in place for access, working times and working restrictions (i.e. noise, ect.) from the building to the contractors?
7.2	
7.3	
7.4	
7.5	

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Luis Lopez					
Title/Responsibility	City Engineer; ROW permitting; Capital Projects; site development traffic operations					
Representing (Circle/Mark One)	City X	County	Motorola			
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site X		

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	The Circ would have a shorter construction and installation time; all work required should be able to start from day one once supplies are ordered. Actual permitting would be a short duration also.
1.2	Any unique features or physical limitations of the respective sites	West Lake Park site is surrounded by low lying areas adjacent to tidal lakes and wetlands; also surrounded by vegetation and green park areas.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	Access after a tropical storm event would be difficult due to issues named above for the WLP site, tide, vegetation and lack of roads. During normal events the height requires special crews to perform the repairs on the tower. For the Circ site access coordination; utility or service lines ownership mix ups, refueling of emergency generators.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Access roads at the WLP would be required to regular access to the WLP site, fuel delivery, etc. Once construction is completed at the Circ site regular maintenance needs to be coordinated due to shared access; use of other facilities; parking availability, and most importantly fuel delivery to back up generator.

1.6	Installation Strategies	Related to Circ; minimize size of electrical equipment; that will reduce size of required fuel for generator. Install a natural gas generator; could be able to set direct feed from street natural gas or set up tank at ground level.
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	Minimal impact from tidal flooding or storm surge at Circ; serious threat at WLP.
2.2	The impact site location could have from Severe weather .	Both sites could be impacted; the Circ building it self it is not a rated emergency facility. But it may present less changes of equipment being damaged as it be placed high up on the roof most likley; due to flooding, trees falling or being hit by debris.
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	Easier access for evaluation and repairs at the Circ; generally a small team can evaluate, with no special equipment.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	Recommend Circ site; most componets that could be damaged should be quicker and much less costly to replace; small antenna; supports for antenna. Any wind damaged electronics.
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	The WLP site is remote and part of a fairl open park and natual area; fencing does not always keep people out of sentitive areas. The roof of Circ will be a dificult site to access.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	See above.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
7.1	
7.2	
7.3	
7.4	
7.5	

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Purvi A. Bhogaita				
Title/Responsibility	Real Property Director				
Representing (Circle/Mark One)	City	County X	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower X			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	
1.2	Any unique features or physical limitations of the respective sites	
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code).	There are numerous advantages to the WLP site compared to the CIRC. The County would be able to control the site as it relates to access, security, and use. In addition, having a tower on County-owned property would ensure continuity. The Conservation Easement that the City contends encumbers the WLP site does not affect the proposed location of the tower. The County would be a tenant at the CIRC property and therefore would be restricted to terms and conditions negotiated in the lease. There are inherent risks in leasing a property, especially from a private entity, including but not limited to rent escalations, continuity (concerns of continuation/renewals of lease) and consistency (concerns of changes in ownership and changes in terms of lease)
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	I don't have knowledge about the types of repairs. However, I would reiterate that access to make repairs and control over the site would be easier at WLP since it is County-owned.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	See 1.4 above. At the CIRC, the County would be limited to any restrictions placed by the property owner.

1.6	Installation Strategies	
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	
2.2	The impact site location could have from Severe weather .	
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> </div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> </div>
7.1	Cost: There is an added cost to the CIRC site as the County would be leasing the property. In the long run, this cost will continue to increase as dictated by market conditions. In addition, there is are risks associated with leasing property from private entities. Changes in ownership could mean the lease may not be renewed or changes in terms and conditions unfavorable to the County.
7.2	
7.3	
7.4	
7.5	

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Rene Harrod				
Title/Responsibility	County Attorney's Office				
Representing (Circle/Mark One)	City	<u>County</u>	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	
1.2	Any unique features or physical limitations of the respective sites	
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	WLP: Charter issue Circ: Lease issue
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	
1.6	Installation Strategies	

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	
2.2	The impact site location could have from Severe weather .	
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	Note the support and maintenance costs in the P25 Agreement for Years 2 to 10 include an additional 5% negotiated discount (see P25 Agreement, Exhibit B, Page 4 of 10, Note **).

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
7.1	
7.2	
7.3	
7.4	
7.5	

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	RUSSELL LONG				
Title/Responsibility	Assistant Building Official				
Representing (Circle/Mark One)	<input checked="" type="checkbox"/> (City) <input type="checkbox"/>	County	Motorola	<input type="checkbox"/>	<input type="checkbox"/>
Which site do you prefer? (Circle/Mark One)	WLP Tower			<input checked="" type="checkbox"/> (Circ Site) <input type="checkbox"/>	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	WLP- Low land, foundation issues, Structures need to be raised. Need to run commercial power to tower site. ----- CIRC- Existing Building, ease of access, Equipment installed in covered garage area, no tower, antennas on rooftop
1.2	Any unique features or physical limitations of the respective sites	WLP-Need Access road, foundation- wet land area, Protected wet land. Construction would destroy more wet land. ----- CIRC- Existing Building, equipment protected from enviroment,
1.3	Any title,ownership, or other real property issues affecting either site(e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	WLP-Broward County Owned Will Need Florida Fish and Wildlife Conservation Commission approval ----- CIRC- Need Lease by Owner
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	WLP- Maintain access road, normal repairs, most equipment exposed to weather elements. ----- CIRC- Less maintance, equipment more protected from weather elements
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	WLP- Problem during and after storm, mantinance personel need to climb tower for antenna repairs, time and safety issues. ----- CIRC-Existing Building, easier to access, can store more equipment on site For quicker repairs
1.6	Installation Strategies	WLP- Deep foundations, raise equipment, access road, ----- CIRC- Place all equipment on 3 rd floor parking garage. (not the rooftop)

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	WLP- Access could be an issue ----- CIRC- NONE , Existing structure
2.2	The impact site location could have from Severe weather .	WLP- Not protected, Could have major damage, timely repairs, Limited access after water rises, may not be safe to climb tower. ----- CIRC- Can be easily accessed, equipment more protected from weather
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	WLP- tower and equipment more acceptable to damage (open space) ----- CIRC- No Tower, Equipment more protected, equipment and antennas can be stored on site, for a quicker and easier repair.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	WLP- Need to construct Tower ----- CIRC- Existing Building
3.2	Recommended or (where applicable) contractually required resiliency	N/A
3.3	Recommended or (where applicable) contractually required redundancy	N/A
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	N/A
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	N/A

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	WLP- NEED TO CONSTRUCT TOWER, RAISE STRUCTURE AND EQUIPMENT ACCESS ROAD, ETC. ----- CIRC- Existing building, less cost associated with installation
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	N/A
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	WLP- equipment exposed to weather, hazards for workers climbing tower Repair Cost are more frequent ----- CIRC- Equipment more protected for weather, quicker access to rooftop antennas. Repair cost less frequent

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	N/A
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	N/A
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	N/A

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons		
EXAMPLE	EXAMPLE	EXAMPLE	EXAMPLE
	Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.		
7.1	EXAMPLE	EXAMPLE	EXAMPLE
7.2	<p>CIRC</p> <p>There is a better more cost efficient way for this installation than the proposed way that Broward County Sugested to run electrical through the building to the rooftop.</p> <p>Equipment should NOT be placed on rooftop.</p> <p>All equipment should be installed on the 3rd floor parking garage.</p> <p>Antenna cables ran on the outside of building to rooftop.</p>		
7.3			
7.4			
7.5			

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Sheryl Blasi				
Title/Responsibility	Project Manager, Telecom, Towers, Rooftops and Fiber				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	Installation of the Rooftop should not be longer than 2 weeks total. Installation of the tower would probably be 3 weeks.
1.2	Any unique features or physical limitations of the respective sites	None for Circ. In regards to the Park, With the high water retention, access to the site during or after heavy rain will be extremely difficult.
1.3	Any title,ownership, or other real property issues affecting either site(e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	None known
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	The Circ will be easier to maintain. Access to the roof is through the building. Equipment can also be hauled up on the side of the building for antenna issues or upgrades. For the tower, someone will have to climb up 300' to replace or upgrade equipment. That is extremely dangerous. Cranes will also be required. The Circ will be easier to make repairs necessary.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	The tower will need an access road installed from the road to the tower. Tower climbers will be needed to maintain equipment. If there is heavy rain and winds, it will affect WLP access. The Circ has elevators and stairs. There is no reason there should be limits to or lack of access affecting or delaying maintenance or repairs.
1.6	Installation Strategies	WLP installation will be erecting a tower, building an elevated foundation for Cabinets and an access road.

		Circ will be To install antennas on roof, equipment to be installed inside equipment room that is currently vacant. Equipment can be dragged up side of building.
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	WLP – Water level rise and storm surge and flooding can prevent access to the tower, can blow equipment off the tower, can destroy the tower itself, Generaotr and ground equipment will be destroyed if flooding occurs. Circ – Hurricane strnght Winds can damage antennas, but flooding is not an issue as equipment will be insidne the building.
2.2	The impact site location could have from Severe weather .	Same as above
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Tower is at a higher risk of damage or destruction due to location within one mile of ocean, flooding, wind damage.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	Tower and Circ will both provide the same coverage. Both have no interference.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	No – There is no shadowing for either site.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	None

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons		
EXAMPLE	EXAMPLE	EXAMPLE	EXAMPLE
	Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.		
7.1	EXAMPLE	EXAMPLE	EXAMPLE
	WLP – tower is high risk due to height and location. 300’ towers are only permitted in industrial areas for a reason. They can collapse, equipment can fall off – tower climbers can fall. This is a park where people gather on a daily basis. A tower is hazardous to the well being of anyone who is in the vicinity of it.		
7.2	Theft – Towers constantly have theft issues. This tower will open a door to theft and bring people with negative intentions to the area.		
7.3	Flooding – the tower is in a retention area. This tower is disruptive to the natural habitat and surrounding conditions.		
7.4			
7.5			

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Annika Ashton					
Title/Responsibility	Deputy County Attorney					
Representing (Circle/Mark One)	City	County XXX	Motorola			
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site		

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	No Comment.
1.2	Any unique features or physical limitations of the respective sites	No Comment.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	Broward County owns and controls the WLP Site. Broward County would lease the site at Circ and negotiate with owners. The County has waived the restriction on the WLP Parcel. .
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	No Comment.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	No Comment.
1.6	Installation Strategies	No Comment.

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	No Comment.
2.2	The impact site location could have from Severe weather .	No Comment.
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	No Comment.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	No Comment.
3.2	Recommended or (where applicable) contractually required resiliency	No Comment.
3.3	Recommended or (where applicable) contractually required redundancy	No Comment.
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	No Comment.
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	No Comment.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	No Comment.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	No Comment.
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	No Comment.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	No Comment.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	No Comment.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	No Comment.

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div> Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town. </div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Jeff Erhardt			
Title/Responsibility	Project Manager			
Representing (Circle/Mark One)	City	County	Motorola	
Which site do you prefer? (Circle/Mark One)	WLP Tower		Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	Installation time at WLP would be less as the shelter can be manufactured on an assembly line while the permits are being approved.
1.2	Any unique features or physical limitations of the respective sites	WLP has poor soils so the shelter and tower foundation or difficult. Circ is on the top of a hotel with no elevator access to the room. Getting materials to the top of the building is difficult. Ongoing maintenance at the Circ would be more difficult.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Site access to WLP should not be a problem as there is a maintenance road to the site already. It may require additional gravel, but that is not difficult. Circ would require a helicopter or crane to transport materials to the construction site
1.6	Installation Strategies	Transporting materials to the rooftop of Circ is problematic and complex.

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	
2.2	The impact site location could have from Severe weather .	Both sites would be designed for 180 mph winds. Power outages at the Circ would be more problematic than the WLP site. That is, the public safety equipment would be backed up similarly, however, electric outage at the hotel would make access to the roof difficult.
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	It is easier to do repairs and restoration on a greenfield site than on a rooftop. Also, see above comment.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	Both locations would be constructed to meet the applicable standards.
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	No.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Intuitively, it seems that the cost of repairs or maintenance would be less at the WLP site.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Marcy Hofle				
Title/Responsibility	Fire Prevention Officer III/Plan Reviewer				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	N/A
1.2	Any unique features or physical limitations of the respective sites	Need to provide Fire Department Access(Refer to NFPA 1 Chapter 18. Not shown on permit.
1.3	Any title,ownership, or other real property issues affecting either site(e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	N/A
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	N/A
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Need to provide Fire Department Access(Refer to NFPA 1 Chapter 18. Not shown on permit.) Note: Some concerns with the access road being able to support an \$86,000 lbs firetruck (no water). This is as relates to possible flooding conditions during a response. Paving may be required.
1.6	Installation Strategies	N/A

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	N/A
2.2	The impact site location could have from Severe weather .	N/A
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	N/A

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	N/A
3.2	Recommended or (where applicable) contractually required resiliency	N/A
3.3	Recommended or (where applicable) contractually required redundancy	N/A
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	N/A
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	If installing antennae on top of Hollywood Circ, must ensure that the buildings BDA system will remain funtional as designed.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	N/A
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	N/A
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	N/A

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	N/A
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	N/A
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	N/A

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> </div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> </div>
7.1	N/A
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Shivsingh Newaldass				
Title/Responsibility	Director of Development Services				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	From a practical perspective, including permitting and installation, the Circ Site is a more efficient option. FEMA requirements, soil condition, and engineering requirements for the WLP Tower may be more problematic.
1.2	Any unique features or physical limitations of the respective sites	WLP Tower is located in an area that is relatively unimproved. There may logistical challenges in case of extreme weather events.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	Private lease with Circ Site presents challenges associated with such agreements where the WLP Tower is wholly owned by the County.
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	With the assumption that the same constraints exist for the communication equipment, the foreseeable deviation to repairs for either site seems isolated to the structures them. Given that the tower is a stand-alone structure, exposed due to its proximity to the ocean, to salt water, there may be more repairs than the Circ Site, which is a newer building designed to the latest Florida Building Code.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Site access seems particularly challenging for the WLP Tower as it is an unapproved area with limited access and in an area prone to flooding. The Circ Site presents a challenge only in coordination, rather than physical limitations as back-up generators will kick in during outages and stairs present an opportunity to more easily move equipment.

1.6	Installation Strategies	Circ Site seems an easier alternative than constructing a new tower.
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	The sites may be impacted differently based on these events. During a storm surge or flooding, the WLP Tower will be harder to access.
2.2	The impact site location could have from Severe weather .	The sites may be impacted differently based on these events. During a severe weather event, the WLP Tower seems more vulnerable.
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	The sites may be impacted differently based on these events. Recuperation after a post-weather event seems to be more favorable at the Circ Site.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	Not familiar with this subject matter.
3.2	Recommended or (where applicable) contractually required resiliency	Practically speaking, the Circ Site seems to be at a location that is more resilient than a stand alone tower.
3.3	Recommended or (where applicable) contractually required redundancy	Not familiar with this subject matter.
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	Not familiar with this subject matter.
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	Circ Site seems a more secure location as the access is manned whereas the WLP Tower option is isolated, without any notable security measures.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Not familiar with this subject matter, but from information provided, there seems to be some real disparities in approach to assessing.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	Not familiar with this subject matter, but from information provided, there seems to be some real disparities in approach to assessing.
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	Not familiar with this subject matter, but from information provided, there seems to be some real disparities in approach to assessing.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	Not familiar with this subject matter.
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	Not familiar with this subject matter.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	Not familiar with this subject matter.

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div><i>EXAMPLE</i></div> <div><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></div> <div><i>EXAMPLE</i></div>
7.1	Both sites present unique aspects that appeal to different constituents. For an independent entity like the County, having unilateral control over equipment and access may be of paramount importance. For residents of the adjacent neighborhoods, a WLP Tower will intrude to the surrounding aesthetics. To County residents, the practicality of cost and functionality seems to favor the Circ Site.
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7.3	
7.4	
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Leslie A. Del Monte				
Title/Responsibility	Planning Manager				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	<p>Circ: Although the building was not built to accommodate the antennae equipment, it offers various options to increase the efficiency of installation from a time perspective. No construction of infrastructure is required to get to the required height.</p> <p>WLP: While there are perceived benefits to the efficiency of installing a prefabricated tower; building the adequate framework (particularly the foundations) may require more time and effort than has been anticipated (testing, engineering, construction).</p>
1.2	Any unique features or physical limitations of the respective sites	No obvious physical limitations that cannot be overcome with sufficient time and/or funds, on either site.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code).	As determined by the City Attorney's Office, communication antennae equipment, which is categorized as a utility, is not subject to zoning regulations. As such, installation at the Circ would only require Building Permit; while the construction of the actual tower (not installation of antennae) in WLP required Site Plan approval (Section 4.9 – GU Government Use District).
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	WLP may be less accessible for repairs during and after weather events.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	

1.6	Installation Strategies	
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	All relative to post-event maintenance and restoration (See 2.3).
2.2	The impact site location could have from Severe weather .	All relative to post-event maintenance and restoration (See 2.3).
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	WLP: Due to its surroundings, proximity to bodies of water, and location/elevation, WLP may have a much higher impact in these scenarios. There may be a greater impact to the accessibility due to the amount of surrounding vegetation. Service recovery may be prolonged if surrounding are is severely affected.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	Circ: Requires less infrastructure, therefore, the maintenance would primarily be focused on the equipment itself. WLP: In addition to the equipment, the accessory building, walkway, surrounding area, and tower would also have to be maintained.
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons		
EXAMPLE	EXAMPLE	EXAMPLE	EXAMPLE
	Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.		
7.1	EXAMPLE	EXAMPLE	EXAMPLE
7.2			
7.3			
7.4			
7.5			

Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Tracy L. Jackson					
Title/Responsibility	Director, Regional Emergency Services and Communications, Broward County					
Representing (Circle/Mark One)		County				
Which site do you prefer? (Circle/Mark One)	WLP Tower					

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	West Lake Park site is by far a quicker build and installation--approximately 120 days after permits received, we would have a tower and shelter on site.
1.2	Any unique features or physical limitations of the respective sites	West Lake site presents typical features of a stand alone site. CIRC presents a myriad of challenges, primarily construction based. Chief constraints are additional time to problem solve construction, power, cable routing, and unanticipated structural issues.
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	None to my knowledge. County Board has voted to eliminate any restrictions, as per County policy.
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	WLP will have typical repair costs. CIRC- Costs are sure to be higher than normal because of the space and access limitations, special considerations would need to be made.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	Maintenance, repair and recovery at the WLP site will be non issues, as the configuration of the site and surrounding property will not present any unanticipated challenges. Maintenance, repair and recovery at CIRC presents a host of issues related to site access. The serpentine access route, including narrow paths around rooftop equipment, several raised thresholds, and the fact that there is no service elevator means that a major limitation exists for routine maintenance and especially replacement of any thing larger than the standard elevators in the CIRC. We'd have to possibly bring out a crane, and/or a helicopter for an item which would normally be handled via freight elevator.

1.6	Installation Strategies	
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	Non issue- this same tower design is used all over South Florida. The shelter and generator are elevated to 6' above ground level on a chain wall platform, raising the total elevation to 9' above sea level. A chain wall is a form of raised foundation that elevates buildings above flood level. A note on storm surge: Created by winds, this natural occurrence is eliminated when the winds die down, meaning water quickly returns to the underlying flood plain. Also, no storm surge in verifiable recorded history has reached inland at 13 feet or higher.
2.2	The impact site location could have from Severe weather .	Non issue- towers are constructed to withstand this
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	Timely, safe and cost-efficient post-weather event repairs or restoration of service would best be accomplished by a standard siting in West Lake Park. As indicated in 1.5 above, access is the key factor in effecting repairs.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	Not sure what recommended means. We should only consider the site as designed to meet spec.
3.3	Recommended or (where applicable) contractually required redundancy	Not sure what recommended means. We should only consider the site as designed to meet spec. There is a built in redundancy within the system as designed.
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	Yes, 2 things related to being on top of a hotel. 1. Having less than optimal coverage for the public safety team is concerning to me. Any signal loss is dangerous, and not acceptable, and could result in a call for help not going thru. 2. Having an antenna or microwave dish flying off a roof in a densely

		<p>populated neighborhood and potentially injuring or killing someone is a grave concern for me. We have no need to endanger anyone, where we have a preferred location</p>
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4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	I'll let the experts weigh in on the specifics, but costs would be higher for each of these categories at the hotel versus the park.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	The project was fully funded from inception.
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	My understanding is that the coverage at the hotel site is not equal to or better than the West Lake Park site. Further, it seems the CIRC has plans to erect similar structures on Young circle, south of the existing building, which would certainly further impinge adjacent cities' coverage
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	My understanding is that due to shadowing and other issues, the coverage at the hotel site is not equal to or better than the West Lake Park site.
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <p><i>Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.</i></p> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Wilford Zephyr / Francois Domond				
Title/Responsibility	Senior Engineer – Utilities Plan Review				
Representing (Circle/Mark One)	City	County	Motorola		
Which site do you prefer? (Circle/Mark One)	WLP Tower			Circ Site (City prefers this site)	

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	The understanding is that the County has to install the communications tower as soon as possible to meet their scheduling goals but the City of Hollywood has no issues with the installation time.
1.2	Any unique features or physical limitations of the respective sites	The WLP Tower site is in flood zone AE5 (Base Flood Elevation of 5' NAVD88). This means that the finished floor elevation and lowest elevation of any equipments serving the site will need to be at elevation 7' NAVD88, to meet the minimum 2' above BFE requirement per the ASCE 24 publication. Some of the existing grades are below elevation 4' NAVD88.
1.3	Any title,ownership, or other real property issues affecting either site(e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code.	
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	The WLP site will certainly expose the proposed communication towers to the elements, and the exposure will prompt increase in maintenance and repairs.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	The WLP location is a low laying area prone to flooding; the Circ location is adjacent to a State of Florida approved evacuation route, Federal Highway. Therefore, access to the Circ site should be continuous and more reliable.
1.6	Installation Strategies	With our limited knowledge of installation of communications towers, but understanding that most structures built east of Federal Highway require the installation of pilings and extensive foundation preparation, it is safe to

		conclude that the installation at WLP will be exponentially more expensive and time consuming.
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2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	As discussed in section 1.2, the Base Flood Elevation for the WLP location is 5' NAVD. The structure and all electrical equipment serving the structure has to be designed using a Design Flood Elevation (DFE) of 7' NAVD88 at a minimum.
2.2	The impact site location could have from Severe weather .	The WLP location is a low laying area prone to flooding; the Circ location is adjacent to a State of Florida approved evacuation route, Federal Highway.
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	The WLP location is a low laying area prone to flooding; therefore, one can speculate that immediate access to the site post a major weather event for repairs will be a challenge. The Circ location is adjacent to a State of Florida approved evacuation route, Federal Highway; therefore, access should not be impacted or should be impacted to a minimum.

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	No concerns.

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	Due to the nature of the WLP location, we believe that installation, restoration and/or repairs should be more expensive.
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	Due to the nature of the WLP location, and the constant exposure to the elements, any routine/preventive maintenance to the equipment should be more expensive when compare to the Circ location.

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons
EXAMPLE	<div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div> <div>EXAMPLE</div>
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Interview Questionnaire

(Concerning WLP Tower and Circ Site)

Respondent's Name	Guillermo Salazar		
Title/Responsibility	Landscape plan reviewer		
Representing (Circle/Mark One)	City	County	Motorola
Which site do you prefer? (Circle/Mark One)	WLP Tower		Circ Site

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1. SITE PHYSICAL LOCATION

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
1.1	Installation Time of either site (including but not limited to removing any applicable restrictive covenants or obtaining any required governmental approvals other than those of county or city)	
1.2	Any unique features or physical limitations of the respective sites	
1.3	Any title, ownership, or other real property issues affecting either site (e.g. the conservation easement that city contends encumbers the WLP site, leased nature of the Circ site, any existing land use restrictions stated in the applicable code).	
1.4	Expected and reasonably foreseeable repairs based on the nature of the respective sites	For the WLP there would be cost associated to tree removals A mitigation permit fees, landscape plants, etc.
1.5	Site access including the cost of construction of any roadways required to access the WLP Site, lack of elevator access to the Circ Site rooftop etc, and limits to or lack of access affecting or delaying maintenance, repairs, or recovery at either sites.	
1.6	Installation Strategies	

2. ENVIRONMENTAL FACTORS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
2.1	The impact site location could have from Water level rise, storm surge or flooding	
2.2	The impact site location could have from Severe weather .	
2.3	The impact site location has on timely, safe and cost-efficient post-weather event repairs or restoration of service in the event of damage to the site	

3. SITE ENGINEERING

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
3.1	Engineering compliance (per the EIA/TIA 222 Rev. G and/or H standard , as applicable) including applicable type, exposure and topographical categories based on latitude and longitude of the sites.	
3.2	Recommended or (where applicable) contractually required resiliency	
3.3	Recommended or (where applicable) contractually required redundancy	
3.4	Any required (contractually or otherwise) maintenance of the equipment and infrastructure installed on-site (including both grey and blue skies), but excluding software maintenance or any systemwide maintenance equally required by for all sites.	
3.5	Do you have any concerns for either site related to public safety due to the installation, location, coverage or other issues?	

4. COSTS

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
4.1	The costs associated with installation, restoration or repair during blue skies and grey skies, including in connection with a major wind or water event.	
4.2	Was projected capital expenditure prudently increased to reduce subsequent operating costs or to reduce the risk of potential damage to the installed equipment.	
4.3	Costs associated with the applicable equipment's routine/preventive maintenance , including annual (or frequent) required cost to climb and inspect the WLP tower and challenges created by the potential Circ rooftop installation, including those caused by the design of the access to the roof.	

5. COVERAGE & CAPACITY

Provide your thoughts, comments, pros and/or cons like you see it for each of the numbered factors below. If you do not have feedback for any row/factor then leave that row blank.

No.	Factors	Thoughts, Comments, Pros and/or Cons
5.1	The expected radio coverage to be provided by the respective sites (once the P25 System is installed, integrated, optimized, operationally tested and cutover)	
5.2	Any additional factors that could affect the service provided by the respective sites, including but not limited to building obstructions or shadowing	
5.3	Availability of goods and services and any applicable contractual limitations on the source or specifications of goods and services, including any requirements to maintain performance guarantees or system/equipment warranties provided in the P25 agreement.	

6. ADDITIONAL INFORMATION

Please provide any additional information, thoughts, comments, pros and/or cons that are not covered in the previous sections that you think are relevant to the decision regarding either WLP Tower and/or Circ Site.

No.	Additional Information, Thoughts, Comments, Pros And Cons		
EXAMPLE	EXAMPLE Tower location: The tower height is currently planned to be 300 FT at elevation of 5 FT from Sea level. This is insufficient considering the Hilly terrain. The location needs to be moved to top of the hill so as to better cover the entire town.	EXAMPLE	EXAMPLE
7.1	Tower location: If tower was placed on the WLP Tower site it will impact certain trees and palms that will be disturbed and will require tree mitigation and increased expenses. Also landscape plans will have to be modified accordingly, permits fees, etc.		
7.2			
7.3			
7.4			
7.5			