

MINUTES OF TTF CG MEETING  
AMENDED

To: Distribution

From: Bob Hunnicutt, Tower Coordinator, Columbia Telecommunications

A meeting of the Telecommunications Transmission Facility Coordinating Group (TTF CG) was held on April 13, 2005. The following people were in attendance:

MEMBERS

Jane Lawton DTS (240) 777-3724

Pat Hanehan MCPS (301) 279-3609

Steve Batterden DPWT (240) 777-6063

Helen Xu DTS (240) 777-2804

Jim Krause WSSC (301) 206-4209

VIA CONFERENCE CALL

Carlton Gilbert M-NCPPC (301) 495-4576

Jennifer Bryant OMB (240) 777-2761

STAFF

Margie Williams DTS (240) 777-3762

Robert Hunnicutt CTC (410) 964-5700

Matt Wolff CTC (410) 964-5700

OTHER ATTENDEES

Steven Weber T-Mobile

Bill O'Brien Cingular

Mike Budde T-Mobile

John McClintock Crown Castle Solutions

Jackie Karp NB&C for Verizon/Crown Castle

Owen Jennings Crown Castle Solutions

Colman Burke Tectonic/ Nextel

M.G. Diamond Verizon Wireless

Discussion Item - Meeting Minutes: Jim Krause asked that the minutes clarify WSSC's position on Sprint's application to construct a monopole at WSSC's pumping station in Gaithersburg. He said the minutes stated WSSC's position was that it would not pursue that application as a Mandatory Referral. Jane Lawton replied that when she made that remark her intent was to restate what Mr. Krause wrote in his e-mail to her on the subject. Mr. Krause said WSSC's position was that it would not assert that it needed a 100-foot monopole for its antenna. Ms. Lawton asked Mr. Krause to state what WSSC's current position was for that application. Mr. Krause replied that if Sprint was willing to lower the monopole to a height of sixty feet, the level WSSC needed for the antennas, then WSSC could agree to present that application as a Mandatory Referral.

Motion: Pat Hanehan moved the minutes be approved with corrections as stated by Mr. Krause. Steve Batterden seconded the motion, and the minutes were approved as amended.

Discussion Item- State of Wireless Technology Presentation by Dr. Andrew Afferbach: Dr. Afferbach gave a presentation on wireless technology. Jane Lawton asked if Verizon was offering EVDO now. Dr. Afferbach replied that they were in some areas. Helen Xu added that the I-270 corridor was served by EVDO today. Ms. Lawton also asked if VOIP was available as a wireless service. Dr. Afferbach replied that at some point it may be but presently it is only a wire-live service.

Ms. Lawton asked if mesh networks covered all areas of San Francisco as implied in the presentation. Dr. Afferbach replied that the mesh network is only covered where there are a sufficient number of participants in

an area to make it work and that this was an ad-hoc initiative, not a planned network. Ms. Lawton asked if the City had a mesh initiative. Dr. Afflerbach replied that perhaps there is an initiative in the works but presently a mesh network is based solely upon individual subscriber participation.

Helen Xu asked if IDEN and CDMA were being replaced in Nextel's network and how much change did Nextel expect regarding user equipment. Dr. Afflerbach replied that he did not think current cell phones would be abandoned.

Pat Hanehan asked if proliferation of new technology and new services would increase the overall RF emissions for wireless services. Dr. Afflerbach replied that when discussing RF issues he usually emphasizes that there is more danger from the user equipment than from the cell sites. He added that he did expect there would be an overall increase in RF emissions, but cautioned that the FCC established limits on the emissions from individual sites. He said that he expected to see more antennas at lower elevations throughout the community in the future.

Ms. Lawton stated she anticipated regulatory changes in response to the many technology changes Dr. Afflerbach had described in his presentation. She said the DAS network would require a telecommunication franchise because of the deployment of fiber optic cables in the public right-of-way. She noted that the WiFi networks Dr. Afflerbach described would likely require the base station operators to apply for home occupation licenses pursuant to the zoning regulations. She said she anticipated impact on the current zoning regulations governing these kinds of services. M. G. Diamond noted that the TTFCG had approved attachment of microcells to utility poles and wondered if those applications required a franchise agreement from the County. Bob Hunnicutt stated he recalled two individual antenna attachments to Pepco poles, neither of which involved a deployment of fiber optic cables along the public rights-of-way like the DAS design required. Ms. Lawton agreed and said those were applications for individual microcells.

#### Consent Agenda Items:

1. Nextel application to attach twelve 48" antennas at the 130' level on an existing 150' monopole on the Pyle Property located at 211 Ednor Road in Silver Spring (Application #200503-01).
2. T-Mobile application to attach nine 54" antennas at the 80' level on an existing 120' monopole at the Airpark Industrial Center located at 7707 Airpark Road in Gaithersburg (Application #200503-04).
3. T-Mobile application to attach nine 54" antennas at the 90' level on the existing 83' Kensington House building located at 10225 Frederick Avenue in Kensington (Application #200503-06).
4. Cingular application to replace nine existing 27" antennas with up to nine 55" dual band antennas on the existing mounts on the rooftop of the six-story Potomac Water Filtration Plant located at 12200 River Road in Potomac (Application #200503-08).
5. Cingular application to replace nine existing 75" antennas with up to nine 55" dual band antennas on the existing mounts on the roof of the 11-story Hampshire Towers building located at 7401 New Hampshire Avenue in Takoma Park (Application #200503-09).

Ms. Lawton asked for a motion to recommend items 1 through 3. She said 4 and 5 would be voted on separately to make it clear that Mr. Hanehan would abstain from these two items.

Motion: Steve Batterden moved consent agenda items 1-3 be recommended. Pat Hanehan seconded the motion and items 1-3 were unanimously approved.

Motion: Helen Xu moved consent agenda items 4-5 be recommended. Steve Batterden seconded the motion and items 4 and 5 were approved with Pat Hanehan abstaining.

Action Item: Nextel application to attach twelve 48" antennas at the 110' level on an existing 150' monopole on Sherwood High School property located at 300 Olney-Sandy Spring Road in Sandy Spring (Application #200503-02).

Jane Lawton asked for clarification from the tower coordinator regarding the conditions for determining whether

an application is by-right or requires a Special Exception, and how applications that may require a Special Exception are handled. Mr. Hunnicutt explained that if the zoning code for an application required a Special Exception, such as a new monopole in a residential area, he would check the box for Special Exception on the recommendation form. In cases where there was already a Special Exception for a site and it appeared a modification to the Special Exception would be required, it was simply noted as a condition of his recommendation.

Matt Wolff summarized the application and noted the recommendation was conditioned on providing a structural analysis that showed the attachment could be made safely. Ms. Lawton said she would like the group to consider whether the recommendation form should be revised to add modification to a Special Exception as another category recommendation. Ms. Lawton asked how many carriers were currently attached to the monopole. Mr. Hunnicutt replied two were presently attached and asked Pat Hanehan to elaborate on prior applications for this site.

Mr. Hanehan stated that the school's position is that carriers who wish to attach to a site are permitted on a first-come first-serve basis. Thus, if a carrier has applied but has not yet acted on an application, and a subsequent carrier applies and is ready to attach to the monopole prior to the first carrier, the school would permit the second carrier to proceed. He said that is the case with the attachment at Sherwood High School, where Cingular and T-Mobile have both submitted applications to attach but had not yet done so. Consequently, the school would permit Nextel to attach ahead of Cingular and T-Mobile who apparently are not ready to activate that site. He stated that with regard to the Tower Coordinator's condition on a structural analysis, structural questions had been raised when the last carrier proposed to attach to this site.

Motion: Helen Xu moved the application be recommended. Steve Batterden seconded the motion, which was approved with Pat Hanehan abstaining.

Action Item: T-Mobile application to attach nine 54" antennas at the 167' level on an existing 180' monopole at the Wheaton Park Maintenance Yard located at 12012 Alpert Lane in Wheaton (Application #200503-05).

Matt Wolff summarized the application. He noted that a modification to the Special Exception may be required for this site to permit the use of additional ground space for the equipment cabinets. Bob Hunnicutt stated that based on his review of the Special Exception for this site, there was a 20'x 60' area approved for equipment at the base of the monopole. He noted this application required an additional area for equipment alongside the current equipment enclosure. He said he thought the use of additional space would require a Special Exception modification to permit the use of the additional ground space.

Ms. Lawton asked why this had not been a Mandatory Referral since it was on Park and Planning Commission property. Mr. Hunnicutt stated that the original tower proposed for this site had been on a different location on the park property near the ice rink and had gone through the Special Exception process. He noted this siting had been contested by residents and went through the courts before finally being approved at a different location, which is its current site near the maintenance depot. Steve Weber asked for the Special Exception case number. Mr. Wolff stated it was #SE-3004.

Motion: Pat Hanehan moved the application be recommended. Steve Batterden seconded the motion and it was unanimously approved.

Action Item: Verizon Wireless application to attach twelve 48" antennas on the building façade: six antennas at the 75' level and six antennas at the 90' level on the existing 110' Takoma Towers building located at 7051 Carroll Avenue in Takoma Park (Application #200503-07).

Matt Wolff summarized the application. He noted that this recommendation was conditioned on the approval of the Historic Preservation Committee since this property was a historic sight. Jackie Karp explained that the building itself is not historic, but the location of the building is in a historic district.

Jane Lawton asked if the antennas would be painted the same color as the building. Ms. Karp replied that was Verizon's plan for the attachment. Helen Xu asked why the antennas on the sides of the building were so much lower than the other antennas mounted on the rooftop. Ms. Karp replied that the engineers had determined that the antennas on that side of the building needed to be at a lower elevation for coverage reasons. She said that AT&T presently has pipe-mounted antennas that stick above the roofline, and noted

that the Verizon antennas mounted on the side of the building would be less intrusive than mounting additional antennas on the roof.

Ms. Lawton asked Ms. Karp to explain the sketch of the proposed attachment with regard to the number of antennas at each location. Ms. Karp replied there would be a total of twelve antennas at the site; eight at the lower level on the building façade and four at the rooftop level. Helen Xu expressed concern about the appearance of antennas mounted on the side of the building at such a low elevation. Ms. Karp stated that Verizon had met with Takoma Park's Façade Advisory Committee to discuss the attachment and the Committee had approved the application. She said Verizon would also seek approval from the Historic Preservation Committee at a meeting that evening. Ms. Xu said she still questioned the visual impact of the antennas on the side of the building and knew that the engineering issues could be addressed by adjusting the tilt of the antennas on the rooftop to meet Verizon's coverage needs.

M.G. Diamond questioned the authority of the TTFCG to challenge Verizon's engineering design. Ms. Lawton replied that the group was simply discussing the visual impact of the antennas on the side of the building, as they were obliged to do.

Pat Hanehan asked Ms. Xu if her objection was simply the visual impact of the antennas. Ms. Xu replied that it was. Ms. Lawton stated that she understood Ms. Xu's concern, but disagreed and thought that the application should be recommended and asked for the group's consensus.

Mr. Hunnicutt added that the zoning ordinance had contemplated attachments like this and cited §59-A-6.14 that provided for attachments in residential areas to structures a minimum of fifty feet tall, but that antennas could not be placed below the 50' level of the structure. Steve Batterden agreed that aesthetics could be an issue but said he was unsure whether it should be a concern of the group in this case.

Ms. Karp asked the group if they thought antennas mounted on the side of the building and painted to match the color of the building would be worse than having eight additional pole-mounted antennas on the rooftop. Ms. Lawton said she agreed with Helen Xu conceptually but did not support opposing the application because of the facade mounting. She added that the antennas were attached to a portion of the building that houses the elevator shafts, not resident apartments. She wondered if the group approved this application, would it set a precedent for other applications like this in the future. Mr. Hanehan noted that if the Façade Committee agreed this would be acceptable, it was not appropriate for the TTFCG to oppose the application. Ms. Karp stated she believed the antennas were less obtrusive at the lower elevation on the side of the building, which is not visible from the street.

Motion: Jim Krause moved the application be recommended conditional on the Historic Preservation Committee approval. Pat Hanehan seconded the motion and it was recommended with Helen Xu abstaining.

Action Item: Install a Crown Castle Solutions distributed antenna system (DAS) with a base station located at Bretton Woods Golf Course located at 15700 River Road in Germantown, and attach antennas to up to 15 wooden PEPCO utility poles (Application #200503-10).

Bob Hunnicutt summarized the application. He noted that this is the application he referred to earlier in the meeting where he had checked both the Special Exception and by-right attachment box on the Recommendation Form because of the unusual circumstances of the system design. He said that antennas could be attached by-right to Pepco poles, but locating the base station equipment may require a modification to a Special Exception. He explained that the Bretton Woods Recreational Facility was initially permitted by Special Exception and has had a number of modifying Special Exceptions over the years. He said the most recent Special Exception had approved expansion of the golf cart shed to a larger facility, and that Crown Castle proposes yet another expansion of the golf shed. He said the golf shed expansion and the use of the property for telecommunication purposes may be deemed by the Board of Appeals to require a Special Exception.

Jane Lawton commented that the group had to be careful to note in their review that they were not presuming to say what the Board of Appeals ought to do, but simply that the Board of Appeals may require a modification to a Special Exception. She said it was sufficient to advise the Board of Appeals and the carrier of their findings and then leave it up to the Board to advise the carrier what was required.

Mr. Hunnicutt explained that this was a speculative type of application in that there wasn't a carrier clearly representing that it would use these facilities. He noted the applicant had submitted a letter of intent from Sprint stating that they may use these facilities once constructed. He asked Mr. McClintock of Crown Castle if he would like to present any information regarding this application since it is a new kind of wireless service proposed for construction in the County.

Mr. McClintock noted that Dr. Afflerbach had already generally described DAS systems. He said for this Crown Castle Solutions DAS application, the design entailed a base station at the Bretton Woods facility with up to fifteen RANs distributed along the roadways near the facility. He said each RAN would have either an omni-directional or panel antenna as well as the related equipment cabinets on the utility pole. He noted that improvements in component design now permitted equipment cabinets to be smaller allowing space for a back-up battery storage compartment in the base of the equipment cabinet.

Ms. Lawton asked where on the pole the equipment cabinets would be attached. Mr. McClintock replied they would be at the eight foot level. Ms. Lawton noted that they appeared to be quite large in size and there may be some objections, especially on the rustic roads in the area as noted by the Tower Coordinator. She asked where on the pole the second equipment cabinet would be attached if it was required. Mr. McClintock replied it would be attached on the opposite side of the pole from the first cabinet. He said the cabinets were positioned on the pole high enough to be out of the way of traffic and pedestrians but still accessible to Crown Castle Solutions maintenance crews. He said this design was the equivalent of what would otherwise require three to four monopoles to cover. He noted that these antennas provide good coverage along the roadways and perhaps a few hundred feet on either side. In response to a question, he stated that for this siting the farthest cabinet would be about three to five miles from the base station. He noted that in other DAS locations, the cabinets had been up to ten miles away from the base station - all connected by fiber optic cables.

Ms. Lawton asked if there was one fiber constructed to each RAN, or if they were connected in series. Mr. McClintock explained there was a large bundle of fiber that ran along the roadways that provided each RAN with two fibers.

Pat Hanehan asked if a DAS network was a more expensive design than a monopole. Mr. McClintock replied that it was significantly more expensive but was capable of providing service to up to eight carriers with a total of no more than eight frequencies among them. Crown Castle representative, Owen Jennings distributed copies of the RF maps that were provided with the applications.

Matt Wolff summarized the Tower Coordinator's findings as detailed in the recommendation. Mr. Hunnicutt noted that the existing Sprint sites included the Gymkhana Club, the new Sprint monopole at Route 28, the Troop 52 Forest Preserve site, and a monopole farther out River Road towards Poolesville. Mr. Hunnicutt added that the individual RANs provided consistent coverage along the roadways between those sites and that the RAN is in very close proximity to the existing Sprint cell site. Mr. McClintock added that the DAS sites do not cause any interference with existing sites but would simply serve to add capacity along the roadways.

Ms. Lawton asked what constituted the need for a second box at each utility pole. Mr. McClintock replied that there were four card "slots" in each box and that when the service requirements exceeded the cards that could be contained in the first cabinet, a second cabinet was added.

Ms. Xu asked if the fiber construction was aerial or underground. Mr. McClintock replied that approximately 90% of the plant was to be constructed using aerial cables. He noted there was approximately a one-mile section along Montevideo Road where directional boring would be used to place cables underground. He said this was due to a gap in utility poles along Montevideo Road.

Dr. Afflerbach asked where the demarcation point was between the carrier's equipment and the DAS equipment. Mr. McClintock replied that the carrier would place its BTS equipment in the equipment compound and the demarcation point would be where the carrier's equipment cables connect with the DAS equipment. In response to a follow-up question from Dr. Afflerbach, Mr. McClintock said that each carrier provides its own back haul.

Mr. Hanehan asked if the letter of intent from Sprint indicated that Sprint would definitely join this network, once constructed. Mr. Hunnicutt asked Mr. McClintock to explain, as the letter was marked as confidential. Mr. McClintock explained that the agreement with Sprint was designed so that in the event that all of the

conditions for establishing this site were completed, Sprint would attach. He noted that Sprint had the option not to attach if any of the conditions of the network designs were changed. He stated that Crown Castle may have to go through the Special Exception process, that it had to get pole attachment agreements from the utility companies, and the final design had not yet been determined, therefore the conditions of the agreement between Sprint and Crown Castle Solutions may change after all those requirements are met.

Dr. Afflerbach asked if the DAS network could accommodate 700 MHz bandwidth. Mr. McClintock replied that it could accommodate 700 MHz as well as other technological changes that may occur in the future. He noted that the beauty of the DAS design was its flexibility in addressing new kinds of services and service requirements.

Motion: Pat Hanehan moved the application be recommended conditional the Tower Coordinator's recommendations. Helen Xu seconded the motion and it was unanimously approved.

Action Item: Nextel application to construct a new 120' monopole and attach twelve 48" antennas at the 100' level and basketball court lights at the 60' level. The monopole will be placed on White Oak Middle School property located at 12201 New Hampshire Avenue in Silver Spring (Application #200503-03).

Matt Wolff summarized the application. He noted the monopole may be visually intrusive to residents facing the side of the school property where the monopole would be constructed. He said this monopole would replace an existing site that Nextel proposed to discontinue in the near future. He noted that if there were community objections to the monopole, Nextel could consider flush mounting fewer antennas to minimize the profile of the structure. Jane Lawton asked if the siting met setback requirements. Mr. Wolff replied that it did. Pat Hanehan noted that although the monopole was 100 feet tall, because it was at a lower elevation down a hill from the residents nearest the monopole, the structure would appear to be more like 80 feet above the ground. Mr. Hunnicutt agreed that was the case.

Motion: Steve Batterden moved that the application be recommended. Jim Krause seconded the motion and the recommendation was approved with Pat Hanehan abstaining.

Discussion Item - Next Meeting: The next meeting of the TFCG is scheduled for Wednesday, May 11, 2005 at 2:00 p.m. in the second floor conference room #225 of the COB.