Distributed Antenna System
Kenan Stadium, UNC at Chapel Hill
BI-WEEKLY PROGRESS MEETING
June 4, 2014

The bi-weekly progress meeting for the above referenced project was held on Wednesday, June 4, 2014 at 9:30 AM. The following representatives were present at the meeting:

Corley Redfoot Architects Inc.  Ken Smith
CTS  Charles McClendon
University of North Carolina  Dana Leeson, Richie Grimsley
Bass Nixon and Kennedy  Nate Hilton, James Spurling
Larry Nixon

1. Exceptions to Minutes of Last Meeting

This is the first bi-weekly progress meeting for the project; there are no previous project meeting minutes.

2. CTS Discussion & Comment

- On 6/3/14, Charlie McClendon circulated a Kenan Stadium Status Tracker and that updated document is part of these minutes.

- On 6/3/14, Dave Ramer circulated a Kenan Stadium Master Project Schedule. That schedule is a 36 x 48 spreadsheet. The activities from that spreadsheet with status as of 6/3/14 are attached to these minutes.

- Charlie noted that the status of Loudermilk is unchanged from the last meeting; CTS is waiting for the arrive of the exterior antennas and the stealth enclosures; all cabling has been tested with the exception of just one more final test. Charlie noted that the installation of the power plant would start in Loudermilk the week of June 16th.

- Charlie noted that the rack in Loudermilk in the Level 4 telecom room will have to be moved to make room for the power plant (which was originally located in the Level 3 telecom room). Charlie will contact Frank Hall with ITS to arrange this relocation.

- Charlie noted that in the Football Center the cabling is complete everywhere except Level 3; CTS is waiting for access panels to arrive and be installed in the Football Center.
In the North Box area, the conduit is 80% complete, the steps have been cored, and the antenna supports have been installed on the underside of the K-frames.

In the South Box area, the conduit is being routed over to the power plant area; the layout of the slab on grade for the power plant was reviewed in the field with Charlie and James Spurling; two bollards will be installed to protect the enclosure and the 6” high slab; the slab will be anchored to the asphalt with reinforcing dowels driven into the asphalt.

Charlie noted that CTS has discovered a raceway between the junction box in the north tarmac and the panelboard in the recessed area and asked if this raceway could be utilized instead of cutting the asphalt and installing a new raceway as shown on the CDs; the Owner prefers that this existing conduit be left open for future use by UNC Electrical Distribution if needed.

Charlie noted that a lot of the cast iron scuppers located at tarmac level were damaged and asked if they could all be cut flush with the face of the concrete wall so 1-5/8” kindorf could be used for mounting the conduit that will run in front of the scupper; the Owner advised that the scupper should be left as is and the kindorf increased in size to make the conduit clear the scuppers.

Charlie noted that he had six panels that would be mounted on the face of the wall at tarmac level at the west end zone; padding is now mounted on these walls; any new construction will have to be padded for safety; the Owner will supply Charlie with contact information for the padding manufacturer so he can have the manufacturer’s rep visit the site and determine what modifications can be made to accommodate the panels.

The tarmac has been sawn and partially removed for the underground conduit installation at the SE, NE, and NW corners; the conduit and panel installation has started on the face of the wall at the tarmac on the south side.

Charlie noted that CTS is very pleased with the progress so far and the work is currently on schedule.

Charlie said the power plants were scheduled to arrive on site the week of June 16.

3. **UNC Discussion & Comment**

- James Spurling recounted an incident with a large scissor lift on the brick plaza at concourse level at Loudermilk. The lift was too large to enter the
doors at the concourse level. The lift damaged brick pavers because of its weight concentration.

- James expressed concern about the paint matching at the tarmac where the asphalt has been removed for trenching. He said the brand and color of paint used by Parks could be obtained for CTS but there still might be variation because of age that required additional areas to be painted. The paint used is a special paint and repainting the entire tarmac area has been running between $700 and $800.

- James noted concern about the unprotected areas of removed asphalt particularly in the northwest corner at the tarmac and volunteered the use of the Owner’s mobile bike racks for use by CTS as temporary barricades at this area.

- James again noted that in late July or early August cleaning of the entire stadium would be underway in preparation for the first home football game and the contractors need to be aware of the pressure washing that takes place.

- James reviewed and approved the chalked out location for the south concourse power plant pad and bollards.

- James emphasized that the most important issue with the padding at the west tarmac was safety with the second issue being appearance.

- Richie Grimsley noted that he would aid in getting the contact information for the padding manufacturer.

- Nate Hilton said that he wanted to put a hold on all access panel installation in Loudermilk until he had a chance to look at all the proposed locations and verify that those locations are acceptable to the Owner.

4. **BNK Discussion & Comment**

- Larry Nixon noted that he has completed his evaluation of the fan coil unit in the north concourse telecom room and noted that it should maintain a maximum of 85 degrees with no issues even with the additional equipment. BNK feels there should be no problem with the unit.

5. **CRA Discussion & Comment**

- Ken Smith shared copies of the CTS Status Tracker and the Master Project Schedule with the meeting attendees.

- Ken Smith commented that the conduit installation continues to look good.
Ken reminded Charlie that the attendees for the first home football game will be expecting to have greatly improved cellular service because of all the publicity that has been given to the DAS installation. Charlie said that CTS will be monitoring the activity at the first game and will be able to see dropped calls, etc. as part of their monitoring process.

6. General Discussion & Comment

Ken Smith thanked the attendees for their time and advised everyone that the next monthly progress meeting is scheduled for Wednesday, June 18, 2014 at 9:30 AM.

The above items are the Designer’s summary of the discussions that took place during the meeting. Should any recipient of a copy of these Minutes disagree with or have a comment concerning any of the items, please respond in writing to the Designer within five (5) days of receipt of the Minutes. Otherwise, these Minutes will stand as correct and as an accurate record of the project status.

Respectfully submitted,

[Signature]

Ken Smith
KES/kes

Cc: Kenan DAS Team Members
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**Notes:**

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Final Optimization

- CTS - Fiber Testing - Head End to South Sidelines Remotes
- CTS - Fiber Testing - Head End to North Sidelines Remotes
- Camer BTS - Signal Available
- CTS - Fiber Testing - Head End to Football Remotes
- CTS - Fiber Testing - Head End to Loudermilk Remotes
- Camer BTS - Integration

- CTS - CTS Installation - BTS 10 to 10N - B1 P1 Cabling
- CTS - Fiber Testing - 266 Cable Head End to Loudermilk
- CTS - CTS Installation - Fusion Splicer 266 Fiber Cable
- CTS - CTS Installation - 10N-B Equipment
- CTS - CTS Installation - Main Patch Panel - Fiber
- CTS - CTS Installation - Equipment Racks

Head End / Carrier BTS

- Preliminary Optimization
- RF Validation
- Commissioning
- Installation of Switch Endnodes (6)
- Coax PIM Testing
- Installation of Building Mounted Outdoor Antennas (7)
- Fiber Testing to Remotes
- Installation of In-Building Antennas (56)
- Installation of 144 Strand Fiber Run from Loudermilk
- Installation of 10N-B Remotes (16)
- Installation of DC Power Wiring