

## NEBRASKA CAPITOL ENVIRONS COMMISSION

The Nebraska Capitol Environs Commission will hold a meeting on **Friday, December 17th, 2021**. The meeting will convene at **8:30 a.m.** in the City Council Chambers, Hearing Room 112 on the 1<sup>st</sup> Floor of the County/City Building, 555 S. 10<sup>th</sup> Street (10<sup>th</sup> & "K" Streets), Lincoln, Nebraska.

For more information, please contact the Lincoln/Lancaster County Planning Department at 402-441-7491.

#### **AGENDA**

December 17, 2021

- 1. Approval of meeting record of November 18, 2021
  - \* Memo from Collin Christopher

## **Public Hearing & Action**

2. Exterior work at 501 S 14<sup>th</sup> Street (State Building Division and the Office of the Chief Information Officer; UDR21091)

#### **Discussion**

- 3. Capitol Environs Facades Lifecycle Discussion
- 4. Staff updates & miscellaneous (including an update on 1020 Goodhue Blvd.)

#### **Accommodation Notice**

The City of Lincoln complies with Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973 guidelines. Ensuring the public's access to and participation in public meetings is a priority for the City of Lincoln. In the event you are in need of a reasonable accommodation in order to attend or participate in a public meeting conducted by the City of Lincoln, please contact the Director of Equity and Diversity, Lincoln Commission on Human Rights, at 402-441-7624 as soon as possible before the scheduled meeting date in order to make your request.

https://linclanc.sharepoint.com/sites/PlanningDept-Boards/Shared Documents/Boards/NCEC/Agendas/2021/121721.docx

#### **MEETING RECORD**

Advanced public notice of the Nebraska Capitol Environs Commission meeting was posted on the County-City bulletin board and the Planning Department's website. In addition, a public notice was emailed to the Lincoln Journal Star for publication on Wednesday, November 10, 2021.

NAME OF GROUP: NEBRASKA CAPITOL ENVIRONS COMMISSION

**DATE, TIME AND**Thursday, November 18, 2021, 11:10 a.m., Hearing Room 1510, PLACE OF MEETING:
Nebraska State Capitol, 15<sup>th</sup> St. and 'K' Streets, Lincoln, Nebraska.

MEMBERS IN Mary Campbell, Heidi Cuca, Delonte Johnson, Kile Johnson and Karen Nalow; Ann Post and David Quade absent.

OTHERS IN ATTENDANCE: Collin Christopher, Paul Barnes and Teresa McKinstry of the

Planning Department; Michelle Potts and David Collett from the State of Nebraska; Craig Aldridge from Lincoln Transportation

and Utilities; and other interested parties.

STATED PURPOSE

OF MEETING: Nebraska Capitol Environs Commission Meeting

Meeting started 11:10 a.m.

Chair Kile Johnson called the meeting to order and acknowledged the posting of the Open Meetings Act in the room.

K. Johnson then called for a motion approving the minutes of the regular meeting held September 24, 2021. Motion for approval made by D. Johnson, seconded by Nalow and carried 5-0: Campbell, Cuca, D. Johnson, K. Johnson and Nalow voting 'yes'; Post and Quade absent.

# EXTERIOR WORK AT 501 S. 14<sup>TH</sup> STREET PUBLIC HEARING:

November 18, 2021

Members present: Campbell, Cuca, D. Johnson, K. Johnson and Nalow; Post and Quade absent.

Michelle Potts, who manages property for the State of Nebraska as the State Building Division (SBD) Director, opened by stating that 501 S. 14<sup>th</sup> St. is under the SBD's purview. The building has been identified as the preferred location for the proposed antenna. The State has identified this as the best location due to the fact that it has a backup generator.

David Collett manages the statewide radio system for the State of Nebraska. He said the State has a need to place an antenna on top of the building to cover Capitol Security, Nebraska State Patrol and others in the area for radio communications. The City has decided to remove themselves from the statewide radio system. The 501 building was identified as the best place for an antenna primarily because it is next to

the Capitol but not on the Capitol. The signal propagates to the side. There is currently a problem at the Capitol with the current system in that there is no coverage in the basement. They expect this change will cover their needs for the area. They have the necessary space and technology to put the antenna on the 501 Building. Additionally, the building has a necessary backup generator. The antenna and pole are about three inches wide.

K. Johnson inquired about the range of communication? Collett responded that the signal goes out about six or seven miles. K. Johnson asked if the State looked at any alternatives. Collett replied yes, but noted that they didn't find an alternative location with a backup generator. K. Johnson asked if a backup generator would be at the State Office Building. Collett replied yes, but only for building control and lighting. The generator wouldn't run any equipment. Potts added that they usually have a backup generator in what they consider a 24/7 building.

K. Johnson stated that previously, Scott Gatewood had represented that the exterior material at the top of the 501 Building would go away. Gatewood had stated that the plan was to get rid of it. He sees a problem with placing another unscreened structure on top of the building. He believes a visible tower on top is contrary to all the work this Commission has done and focused on. He would like to see alternative sites developed. For example, he suspects this could be placed on top of the State Office Building quite easily. Perhaps there is also another building in the area that could do this. He fears that if an antenna goes up on the 501 building, the other stuff might never go away. The unscreened equipment would be contrary to the goals of the Nebraska Capitol Environs Commission.

Potts believes that Gatewood represented the equipment to be removed. In the short-term, there would still be some equipment on top. They would ask to place the structure there while the equipment is being removed. They would like to have the antenna placed as soon as possible. They would have to get a backup generator and a data center setup for the State Office Building. If they get to the stage where the equipment is removed, they would be in a better place to relocate the antenna.

Collett believes it is the current goal of the City to leave the state tower by the end of December 2021. There is a bit of a time constraint so that State Patrol does not lose radio access.

K. Johnson inquired what would be needed for the backup generator at the State Office Building. Potts replied that they haven't had time to look at that yet. It would need to be a data center type setting. Long-term, the State Office Building could be an option.

Campbell understands it could be two years before getting rid of the antenna. Potts stated that the air handler will become internal to the building. They hope to have this completed by the fall or summer of 2022.

Nalow is concerned with the idea of potentially allowing more equipment on top of this roof. She is concerned with allowing temporary solutions that could become permanent. Potts stated that the language of the approval could be altered. Their plan is to find a long-term location. She would have liked more time to find a location, but with the constraints, the 501 building is the best location.

Nalow understands from the images shown, it would be located to the east. Collett clarified it would be to the east of the air handler. He believes it would be approximately twelve feet above the air handler. The bottom needs to be above the handler so the pattern spreads out.

Nalow would like to see images of what this may look like. Collett stated that they have digital images, no hard copies. Potts stated that they looked at a standalone, but they were fearful it may be more apparent. They thought the air handler would block the view a little. Collett stated they are trying to accommodate the loss of those City antenna systems.

K. Johnson stated that he personally has a problem with this. He believes the applicant should further investigate the State Office Building. This has been a problem for years. The air handling equipment is contrary to the design standards that are in place. There is no screening. He thinks this should be tabled to further investigate a long-term solution or have the applicant work with the City of Lincoln to use their antenna system on a temporary basis while a long-term solution is found that isn't intrusive.

D. Johnson asked what megahertz this will use. Collett stated it will be close to the same frequency that cell phones use. There is no commercial use in the 700-megahertz range. D. Johnson knows that higher frequencies are able to go through buildings better. Collett noted that the 700 to 800-megahertz range is preferred. D. Johnson wondered if the problem areas are in the basement of the Capitol. Collett stated that the problem area is downtown. Capitol Security also works in the State Office Building. The problem with placing an antenna on top of the State Office Building is that there are departments there that need to be covered. D. Johnson asked how many watts. Collett responded 200 watts. He stated that there is an actual antenna, two antennas both six feet long, one points up and one down. They transmit and receive on opposite sites. They are a total twelve feet long.

Cuca is curious when the City made this decision and why. Collett stated that when the City put in their radio system four to five years ago, they decided to use the State radio system core processing. This allowed them to save about \$1 million. This last year, they received funds that allowed them to decide they wanted to build their own core. He doesn't fully understand the city's reasoning. For one, the City indicated the State wouldn't allow them access to make changes to the system. There is some level of access they want that has systemwide impacts. According to the City, they have the access they need, but not the access they want into the system. They are going to spend more money to operate separate from the State.

K. Johnson inquired if the City would possibly participate a little longer until the applicant finds another solution. Collett responded that the City has stated they are leaving in December and that is it.

D. Johnson wondered if there is anyone else in the state that has their own system. Collett replied yes, but this connects to the statewide core.

Collin Christopher stated that the information he received in preparing his staff report was that the City of Lincoln is planning to divest as early as the first quarter of 2022. Collett responded that he had heard December 2021. Motorola isn't sure if they can meet that date. He was told the end of December.

K. Johnson asked if to the applicant's knowledge, there is any limit on the City extending their date so they could work further on this. Collett stated there is a tenuous relationship between the City and his office.

Nalow would like to defer this request so this can be looked into further and other options explored. She questioned what that would mean for the applicant. Collett responded that their equipment from Motorola has already been ordered. They are in the process of determining where it needs to be placed. They could spend a little time looking for another alternative. They believe the 501 Building is the best

location from their perspective. If this was tabled for another month, he believes they would have time to come back with more information.

#### **ACTION:**

K. Johnson moved to continue public hearing and action until the next regular meeting in December 2021, seconded by Campbell and carried 5-0: Campbell, Cuca, D. Johnson, K. Johnson and Nalow voting 'yes'; Post and Quade absent.

K. Johnson stated that the Commission does not want an unscreened situation. They would like other possibilities explored. He thanked the applicant. He explained that the design standards call for anything on top of the building to be screened. From the perspective of looking up, what the applicant is proposing isn't the best view.

Nalow would look at the view to the Capitol as well. Everything on the roof is a distraction.

### LTU WATER MAIN REPLACEMEN PROJECTS UPDATE:

Craig Aldridge with Lincoln Transportation and Utilities (LTU) provided plans to the group. He is the project manager for a couple of water main replacement projects that he is working on behalf of Lincoln Water System. For the first project, the bulk of the work will occur on 'G' Street. A portion of the water main is being replaced on 'H' St. from 7<sup>th</sup> Street to 9<sup>th</sup> Street, and a portion on Randolph Street. There are a couple of runs from 7<sup>th</sup> Street to 8<sup>th</sup> Street, on 'G' Street and 'H' Street. The existing mains in this area are six and eight inches. They were installed in the late 1800s, early 1900s. He finds it amazing that they have lasted this long. They will replace those mains with six-inch mains. This is the standard for a primarily residential area. Ninety-nine percent of projects he has worked on in the past have been PVC mains, but ductal iron mains would also be acceptable from the City's perspective. The mains on the east/west runs on 'G' Street and 'H' Street in Capitol Avenue will be on the north side behind the back of curbs. There will be minimal disruption. The mains on 7<sup>th</sup> Street and 8<sup>th</sup> Street will be on the east side, Capitol Avenue on the west side. The mains are designed to be installed via a trenchless technology. This is a method where the mains can be tunneled in and it is a lot less disruptive. Now, 'G' Street is about 90 percent complete with the design. They need to wrap up a few things. They anticipate advertising this for bidding in December 2021. Their target is March 2022 as the start of construction. This is a large project, and they are anticipating it will take almost eight months to complete. December 2022 is the date they are targeting for completion. They don't allow contractors to seed in December. That would be pushed to spring of 2023. Regarding traffic impacts, typically these are constructed where contractors set up a rolling two to four block span with barricades and signage to dissuade through traffic, but they will stagger the barricades so local people can still access their drives. They are trying to minimize traffic as much as possible though, at least on 'G' Street. For side streets with the trenchless design, they will be able to maintain traffic to some degree. There shouldn't be much impact. There might be a temporary lane closure on 14<sup>th</sup> Street, but they should be able to maintain one lane on 16<sup>th</sup> Street and 17<sup>th</sup> Street at all times.

Christopher showed how this impacts the Capitol Environs on a small stretch of 'H' Street from 7<sup>th</sup> Street to 9<sup>th</sup> Street, along with a portion of 'G' Street from 14<sup>th</sup> Street to 17<sup>th</sup> Street. He believes a lot of this work will happen with minimal impacts to the above-grade surface, but he knows there was an identification of some street trees to be removed on 'G' Street.

Aldrige walked the area with City staff and identified trees that might have to be removed as part of the work. A few other trees were identified for removal by the Forestry Division (of the Lincoln Parks and Recreation Department) that they saw as possibly problematic. In total, there will be twelve trees removed as part of this project. They have tried to design this project knowing how important trees are to the residents. A lot of them happen to fall in areas where they have service connections. Once the main is in, the next step is to come back and transfer from the old main to the new main. If those services happen to fall under a tree, chances are the tree will need to come down. They work on saving the tree if they can. The sizes are 12-23 inch, 24-35 inch and over 36 inch. He believes only two of the trees identified are over 36. He thinks that Forestry has a program for providing vouchers for replacement trees that are more of the eight to ten-foot variety that will grow over time.

Lynn Johnson appreciates the coordination with Forestry and LTU staff. It is a benefit to have a multigenerational forest.

Campbell asked if the new infrastructure deal would cover any new trees. Aldridge is guessing it would cover water infrastructure, but most likely not trees. The users of water cover these projects. He doesn't know if any money will trickle down to wastewater infrastructure.

Nalow would like Aldridge to verify that typically streets in question within the Capitol Environs use the approach that they are not impacting pavement in this area, within the Mall area. Aldridge stated that there are a couple of ramps that have recently been replaced at 'G' Street and Goodhue Boulevard. He noticed some of the ramps will need to be removed for the work to be completed. Unfortunately, this happens. It doesn't look good to tear up work that was just done. We coordinate projects as best as we can. Infrastructure deteriorates at different rates. They have tried to avoid Goodhue Boulevard as much as possible. There is some rehab on 11<sup>th</sup> Street that is coming up next year and a piece of 8<sup>th</sup> Street needs to be redone next year. Language is in the contract that the contractors need to coordinate their work.

Christopher stated that there is a second project. This one doesn't look like it is as disruptive with only one tree being removed. However, it does cut through Centennial Mall.

Aldridge stated the second project is a proposed water main project along Q Street. There will be very little surface disruption. He also anticipates very little disruption at Centennial Mall. They have a surface connection on the east side of Centennial Mall by the east crosswalk. This won't disrupt the pavement along 'Q' Street, but the contractor will have to dig down to connect the service from the old main to the new main. He believes the hole will be about five feet by seven feet or six feet by eight feet.

Nalow asked if it would be possible to add some language that speaks to the concrete going back into the patch will have a similar aesthetic. She would like the concrete to blend in as much as possible. Aldridge didn't note any special pattern or coloration, but he will look again. Battleship gray is the standard color they put in. He noted some special patterning and coloration at Antelope Creek Parkway. He will take a second look and add a note. Nalow brings that to attention because sometimes where there is a larger patch job, it sometimes looks different than the surrounding concrete. Material in the Mall should be of the highest quality as possible.

K. Johnson noted that 427 Lincoln Mall has a circle in the sidewalk where a cut out section was replaced with a totally different appearance from the surrounding sidewalk. This is an example of what not to do.

Christopher inquired if there are any finish details the Commission can provide to LTU. Nalow believes it

is a standard finish. She is just concerned that it doesn't feel like a patch job when this is done. Aldridge noted that usually the bright white color is from the cure. He can look into if there are other colors of cure that could be used to give a softer feel and match better. He can add that language into the contract.

The Commissioners all agreed that this appears to be of no significant effect. The do not believe there is a need for LTU to come back for a formal presentation and action. Christopher believes that this gives City staff the direction they need. He will coordinate with Aldridge to address the Commissioners comments expressed today.

#### **OTHER:**

Christopher hopes for this commission to have a public hearing on Pershing Auditorium in December. If for some reason this group doesn't meet next month, Campbell's appointment ends in January 2022 and she has expressed a desire to not be reappointed. He expressed appreciation for all the work she has done over the years.

Everyone thanked Campbell for serving.

There being no further business the meeting was adjourned at 12:10 p.m.

https://linclanc.sharepoint.com/sites/PlanningDept-Boards/Shared Documents/Boards/NCEC/Minutes/2021/111821.docx

To: Nebraska Capitol Environs Commission

From: Collin Christopher

Re: Agenda for December 17, 2021

Date: December 9, 2021

#### Item 2: Exterior Work at 501/505 S 14th Street

Note: The public hearing for this item has been continued from the November meeting. While the summary that follows remains unchanged from November, the draft of the minutes from the November meeting have been attached to the full agenda packet for reference.

The State Building Division is requesting a certificate of appropriateness for the placement of an antenna on the roof of the state-owned building at 501 S 14<sup>th</sup> Street. What follows is background provided by the State, explaining the need for the antenna:

Around 2008, the Nebraska State Radio System was deployed with our partner NPPD. This started with 55 radio towers across the State in the VHF band, and dispatch console systems at six NSP Troop dispatch locations and three NPPD dispatch locations. Since that time, we have added an additional 10 radio sites and added numerous county and local console systems and users.

In 2018 the City of Lincoln joined the system, bringing with them three 800Mhz tower sites to cover the City and Lancaster County geographic areas. The 800Mhz sites provided in-building radio coverage throughout the City, including many interior locations of the Capitol Building, NSOB, 1536K, and other State building assets. NSP Capitol Security and Executive Protection Detail rely on this coverage daily for the performance of their duties.

The City of Lincoln recently announced that they will be divesting from the State Radio system as soon as early Q1 of 2022, and as a result the 800Mhz coverage in the City of Lincoln will no longer be available to State users, including the 800Mhz in-building coverage in many State buildings. Some areas will still be covered by the existing and overlapping VHF tower sites, but many buildings have spotty coverage using only this band.

The purpose of this proposed project is to create an 800Mhz radio site in the immediate area of the State buildings' geographic area to provide the in-building radio coverage vital to the State agencies that rely on it. Since the Radio System controller infrastructure is housed in the 501 Datacenter, it presents an opportunity to place a radio site topographically close to the controller, on a building with generator and UPS power, and at a place that provides required coverage, within a very attractive budget. The only real physical addition required is the placement of an antenna structure on the building roof.

To that end, we would like to add the proposed antenna equipment on the roof, mounted to the existing supporting structure for the air handling unit. Cabling from the antennas would traverse the roof to an existing roof penetration near the roof hatch and follow a chase to the basement where the actual radio transceiver equipment will be housed.

The building at 501 S 14<sup>th</sup> Street has been on the Capitol Environs Commission's radar over the years, given its prominent positioning on Capitol Square. In fact, the Design Standards specifically mention the building, as highlighted below:

#### **Design Standard 11: Buildings on Capitol Square**

The portion of the District facing the Capitol shall be maintained and improved as an area of top-quality but generally unobtrusive office, residential, and church buildings, with very well-designed and maintained

landscape and streetscape elements. The area shall combine construction of first-class new buildings with the preservation of historic landmarks and scrupulous maintenance of all improvements.

#### **Guideline 11.5:**

Mechanical units, cooling towers, chimneys, fire towers, stage towers or scenery lofts, noncommercial radio towers or satellite "dishes," or water towers may be permitted atop buildings in the District (in excess of the 57-foot limit) provided they are set back at least fifteen feet from any face of the building, and are screened with permanent materials compatible with the materials of the principal facades of the building. Addition of such screening on the State's building at 501 S. 14<sup>th</sup> St. is a goal of the Commission.

While the addition of a radio antenna atop this building would appear to be allowed per Guideline 11.5, it must also be set back fifteen feet from the building façade and properly screened. *The proposed antenna does appear to meet the setback requirement, but neither the existing mechanical equipment nor the proposed antenna are being screened per the guideline.* 

It is worth noting that in May of this year, Scott Gatewood of DLR presented to the Commission the State's plans to remove visible rooftop equipment by modernizing the building's mechanical structure in the coming years. Given that discussion and the fact that this proposal appears to represent a step in the opposite direction, it may be worthwhile for the Commission to revisit this topic with the State to understand where the current timeline stands for these upgrades and how the proposed antenna would be impacted. It may also be of interest to the Commission to understand if the State has explored alternative locations for the proposed antenna and whether any of those alternatives are feasible.

Even if the Commission determined that the proposal does not meet the Design Standards, it could be argued that a certificate of "exception on grounds of hardship" can be issued if the Commission believes that the City's actions have created the unique circumstances that led to this proposal. Below is the language from Chapter 27 of the Lincoln Municipal Code, explaining when a such a certificate is appropriate.

#### 27.56.120 Certificate; Approval or Denial.

Within forty-five days of the hearing, the Nebraska Capitol Environs Commission shall approve or deny the application. The Commission may:

- Issue a certificate of "appropriateness" after adopting a finding that the proposed work meets the Standards and would not unduly hinder the protection, enhancement, perpetuation, and use of the <u>Capitol Environs District</u>;
- b. Issue a certificate of "exception on grounds of hardship" after adopting a finding that refusal to issue the certificate would create an extreme hardship on the applicant, and that the plight of the applicant is due to unique circumstances, and that the potential hardship is the result of the application of the ordinance and is not the result of any act or omission by the applicant;
- c. Refuse to issue a certificate, after adopting a finding that the application is not consistent with the purpose of this ordinance and of the Standards, and does not meet any of the above criteria.

The Nebraska Capitol Environs Commission's decision must be accompanied by written findings of fact. No change shall be made in the application for any <u>building</u> permit or in plans for other regulated work after issuance of a certificate by the Commission or the Commission Chair without resubmittal of the application

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and approval in the same manner as provided above. (Ord. 20446 §15; February 13, 2017: prior Ord. 16698 §3; November 14, 1994).

All and all, this is a difficult proposal to consider, balancing the State's need to maintain radio coverage for their buildings within the Capitol Environs District with the expectation that rooftop equipment around Capitol Square not interfere with views to the Capitol. And though the proposed antenna may not significantly interfere with views to the Capitol on its own, it does add to a collection of equipment on this particular rooftop that has previously been targeted by the Commission for better screening.

Recommended Finding/Action: Rather than offering a recommended action, staff recommends that the Commission thoroughly discuss with the State their process for selecting this location, anticipated timelines for future improvements on this rooftop, and other concerns that they may have before considering the appropriate action.



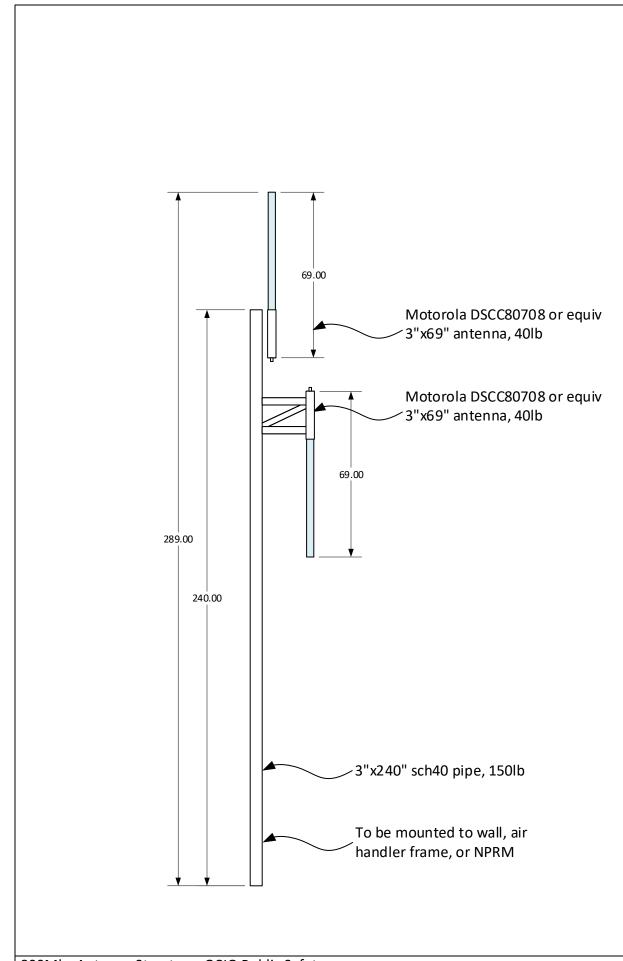
The above image offers a mocked-up look at the approximate location and scale of proposed antenna to be placed on the rooftop of  $501 S 14^{th}$  Street.

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## **Item 3: Capitol Environs Facades Lifecycle Discussion**

Based on inquiries directed to City staff about acceptable façade materials along the Malls, staff would like to have a discussion with the Commissioners on this topic in order to be able to better convey to interested parties what qualifies as a 75-year lifecycle façade.

https://linclanc.sharepoint.com/sites/PlanningDept-Boards/Shared Documents/Boards/NCEC/REPORTS/2021/12-December\2021decembermemo.docx



800Mhz Antenna Structure, OCIO Public Safety

11/10/2021

## **CC807 Series**

## 7/800 MHz Corporate Collinear Antennas

746-870 MHz



These industry leading PIM and PIP rated collinear arrays allow site operators to combine, with complete integrity, a large number of communications services into a single, low profile collinear antenna array.

The true corporate feed of these arrays maintains total pattern integrity over a very broad operating bandwidth, similar to that previously available only in exposed dipole configurations. This is now achieved in the preferred form factor of a fully enclosed fiberglass radome. The corporate collinears employ a unique corporate phasing system enabling precision control of the element placements ensuring phase purity resulting in exceptional bandwidth and electrical performance.

Gain is maximized and side lobes reduced dramatically. In a patent pending design approach the individual dipole elements including matching network are fabricated entirely of a flexible circuit board. The dipole elements are soldered to a brass support tube which is directly connected to the mounting tube and the lightning spike at the top of the antenna.

The result of this unique, incredibly strong design is:

- Peak Instantaneous Power rating (PIP) 25 kW
- Passive Intermodulation rating (PIM) -150 dBc
- High continuous power rating
- · Extraordinary bandwidth characteristics with superior pattern control
- Field invertible (most models)





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USA patent: 7,365,698

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## **CC807 Series**

## 7/800 MHz Corporate Collinear Antennas





Electrical Specifications							
Model Number	CC807-03	CC807-06	CC807-08	CC807-11			
Nominal Gain dBd (dBi)	3 (5.1)	6 (8.1)	8 (10.1)	10.5 (12.6)			
Frequency MHz	746 - 870						
Tuned Bandwidth MHz	124						
VSWR	<1.5:1						
Nominal Impedance Ω	50						
Downtilt	N/A	0° Std - 5° (1)	0° Std - 5° (1)	0° Std - 5° (1)			
Vertical Beamwidth°	28	17	9	4.5			
Horizontal Beamwidth	Omni +/- 0.5dB						
Input Power Watts	250	500	500	500			
Passive IM 3rd order (2x20W) dBc	-150						
Peak Instantaneous Power kW	25						

Mechanical Specifications							
Model Number		CC807-03	CC807-06	CC807-08	CC807-11		
Construction		Composite fiberglass sky blue radome aluminum mounting tube					
Length inches		48	69	114	206		
Weight lbs		9	16	27	49		
Radome Diameter inches		3					
Shipping Weight Ibs		18	25	40	88		
Shipping Dimensions inches	Н	6					
	W	6					
	L	56	75	119	220		
Termination		7/16" DIN fixed female					
Invertible Mounting		Yes (2)					
Suggested Clamps (not included)		UC1143					
Projected area ft²	No ice	0.9	1.4	2.5	4.9		
	with ice	1.2	1.7	3.1	6.2		
Lateral (Thrust) @ 100mph lbs		22	34	62	121		
Wind Gust Rating mph		>150					
Torque @ 100mph ft-lbs		15	54	205	761		

Note (1) Pre-set downtilt variations of 5 degrees are available in the following models CC807-08, CC807-11. Simply add -T5 at the end of the model being ordered. E.g. CC807-08-T5, CC807-11-T5

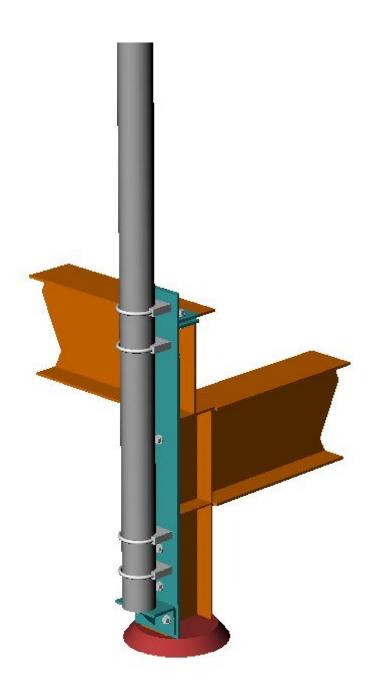
(2) Downtilt versions can not be field inverted.



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