



Industry Leadership



Innovation



Efficiency



Strategic Positioning

Broadcast Site Operational ideas

September 29th, 2022

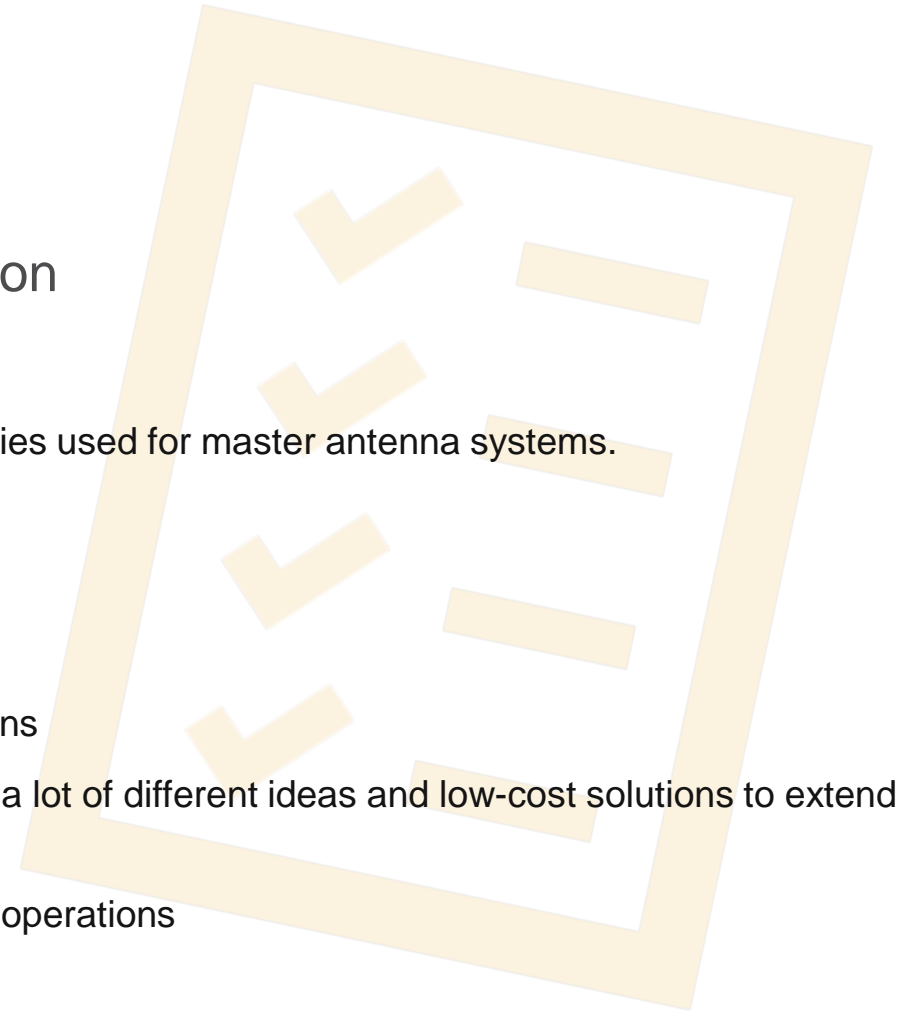


Housekeeping

Housekeeping

Organized to allow for questions through the presentation

- Some ideas are common sense and others we have implemented
- Site maintenance is critical. We will show you some of the latest technologies used for master antenna systems.
- Do you know how much fuel you have left in the generator? Remotely?
- There is always a safety and security aspect of broadcasting sites.
- What about those tower lights? Who is monitoring them?
- What is your maintenance schedule for the site? We have some suggestions
- Power failures and roof leaks are more common than you think. There are a lot of different ideas and low-cost solutions to extend the useful life of almost everything at a tower site.
- What is your plan B? There are many options for TV and radio to maintain operations



Agenda

Basic Site operations

Quick Background and Explanation

- Outage Duration, Timing, Costs, etc.
- Site documentation – What does this look like?

Safety and security

A couple of ideas we share

- Does your cell work at the site – land line?
- Fire and security alarm – are they necessary?
- Video recording at sites.

Site Examples and Videos





Clean the site

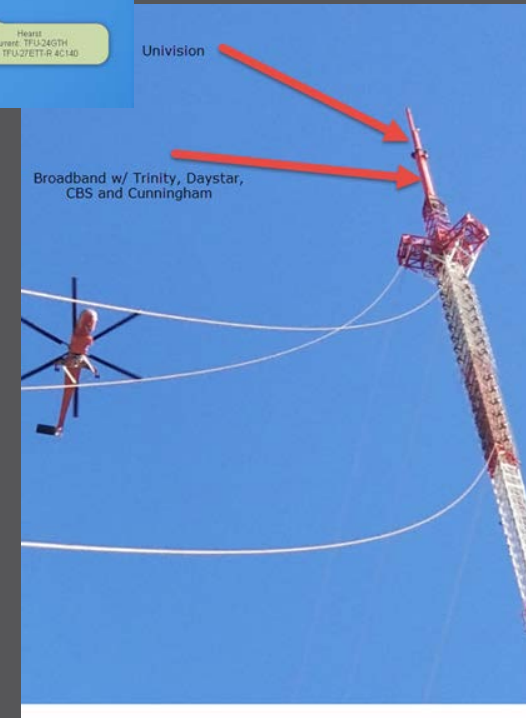
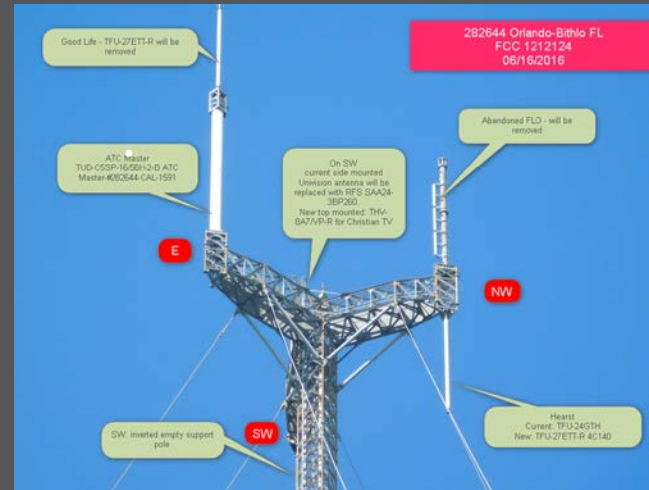
- Clean the equipment
- Clean the room
- Air filters – change on a regular schedule.
- Look for any water spots –
- HVAC maintenance – do you monitor the room temperature?
- Lead times on equipment replacements currently measured in months not hours.



Cameras?



Complex Broadcast solutions requires precise information



After repack
what did we
learn?

Document
Everything

Central
location
storage

If you had to send a person to the site
could can you provide details.



Now that copper is going away, what is
your plan to stay connected to your site?



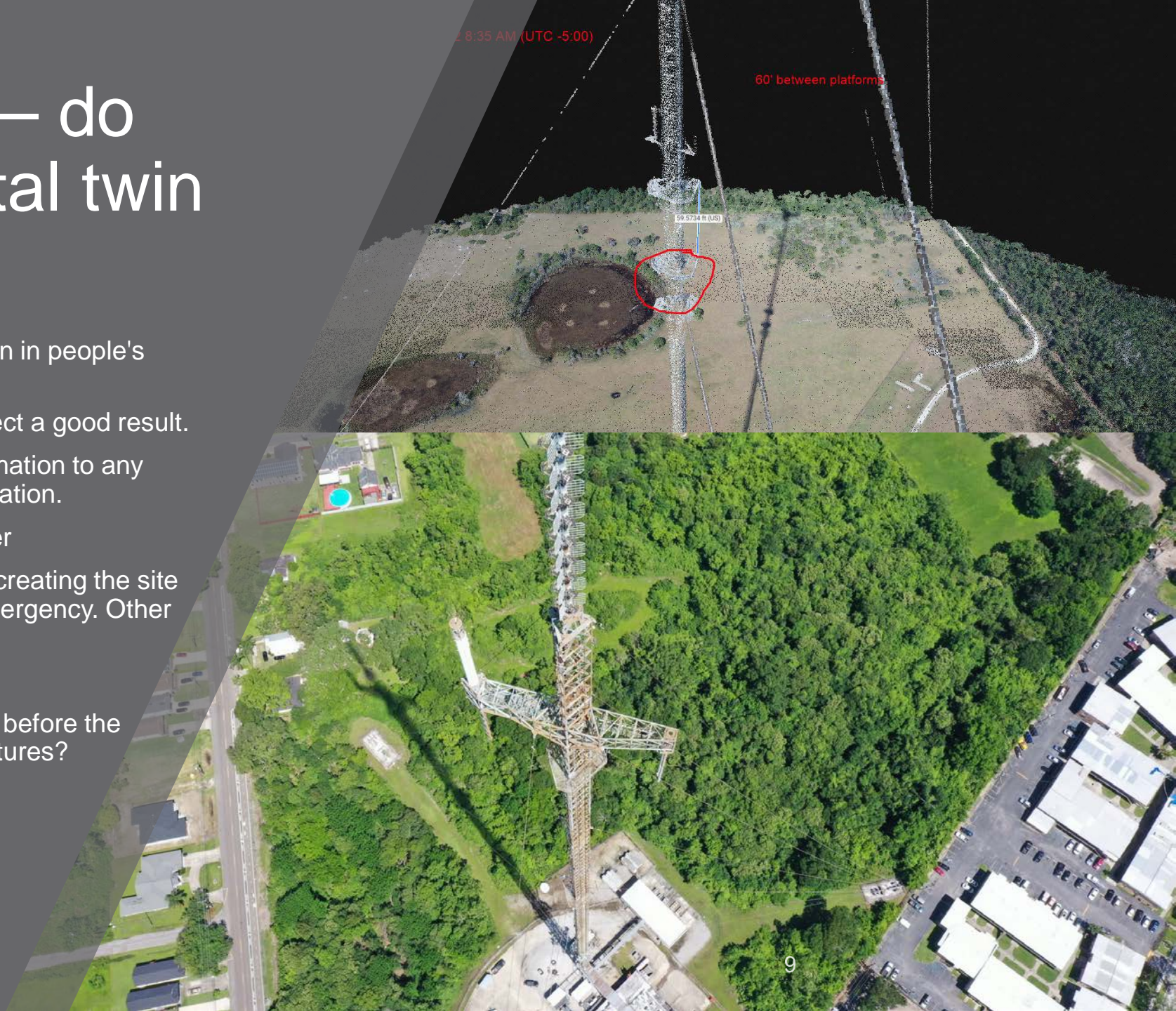
Fiber, Microwave, LTE solutions – what is
the cost benefit-

Data Collection – do you have a Digital twin

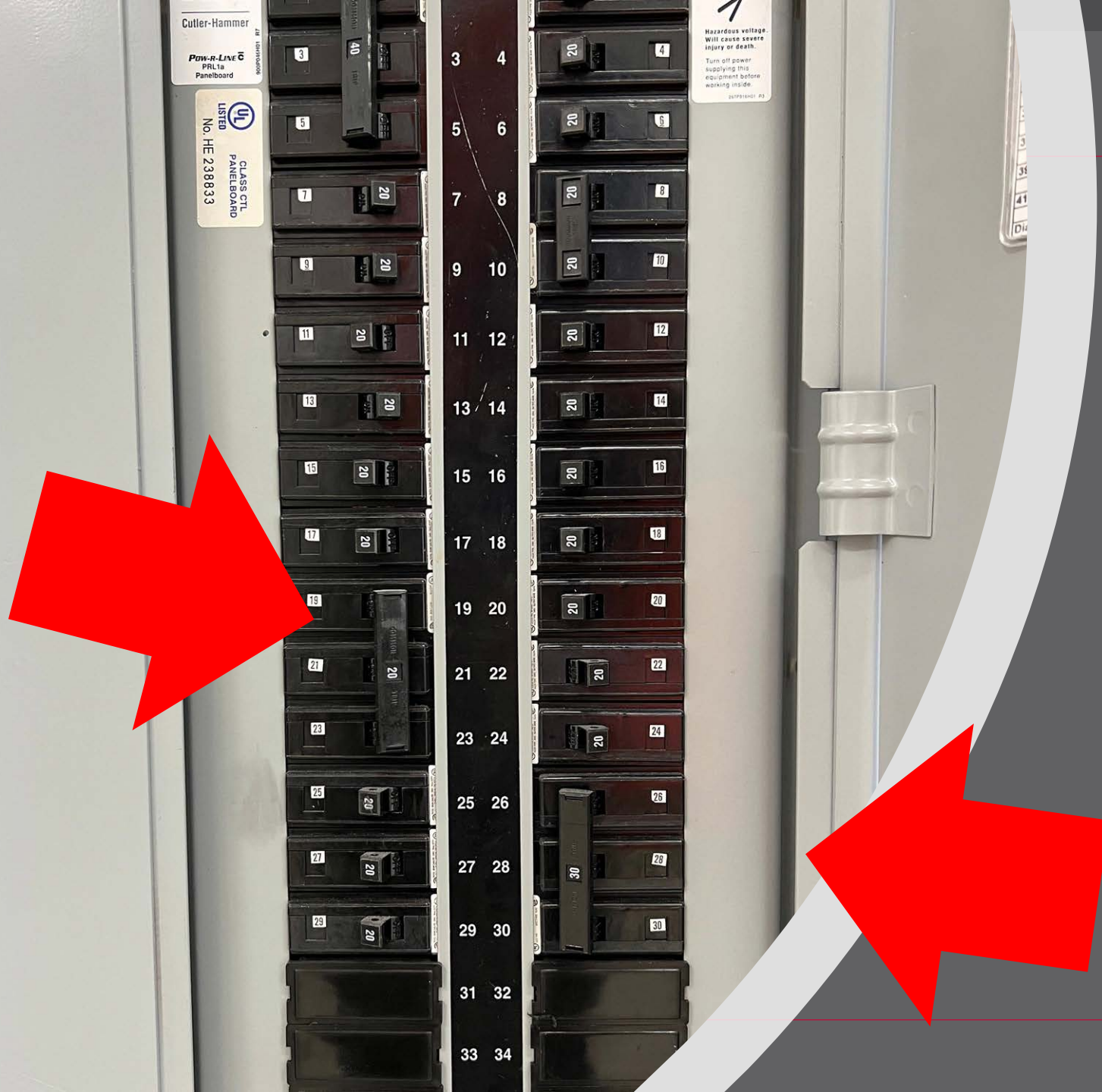
History

Site information:

- Most sites have a great story and lots of information in people's minds.
- If you send someone else to the site, can you expect a good result.
 - Creating a site virtually, you can PDF the information to any contractor or engineer to have the exact information.
 - What breaker panel – what breaker number
 - Interesting enough The time for collection and creating the site virtually will usually pay for itself during one emergency. Other stakeholders love pictures with timestamps.
- When Risk management wants to look at the site, before the damage, what can you share? How old are the pictures?



Can you tell
you vendor the
details before
they go?





Getting back in
operation
includes having
the details
When did it run
last? Under load?



Are you prepared for this? Fire and Ice.



This happened yesterday

Combiners do float -

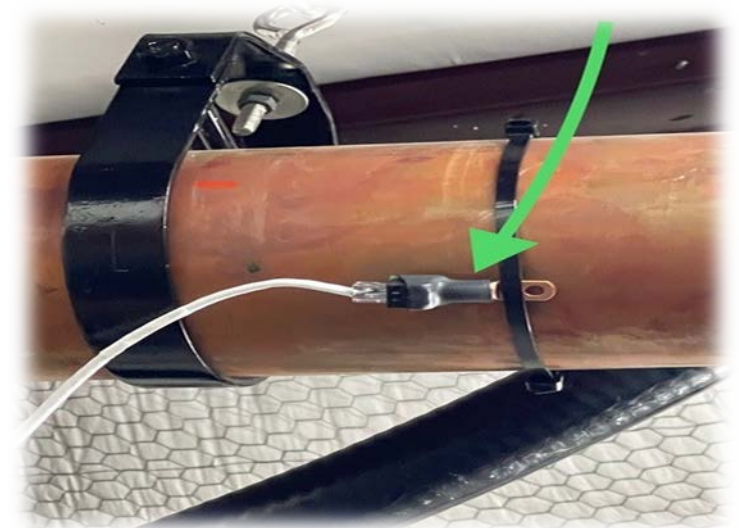




So, what is
their plan B

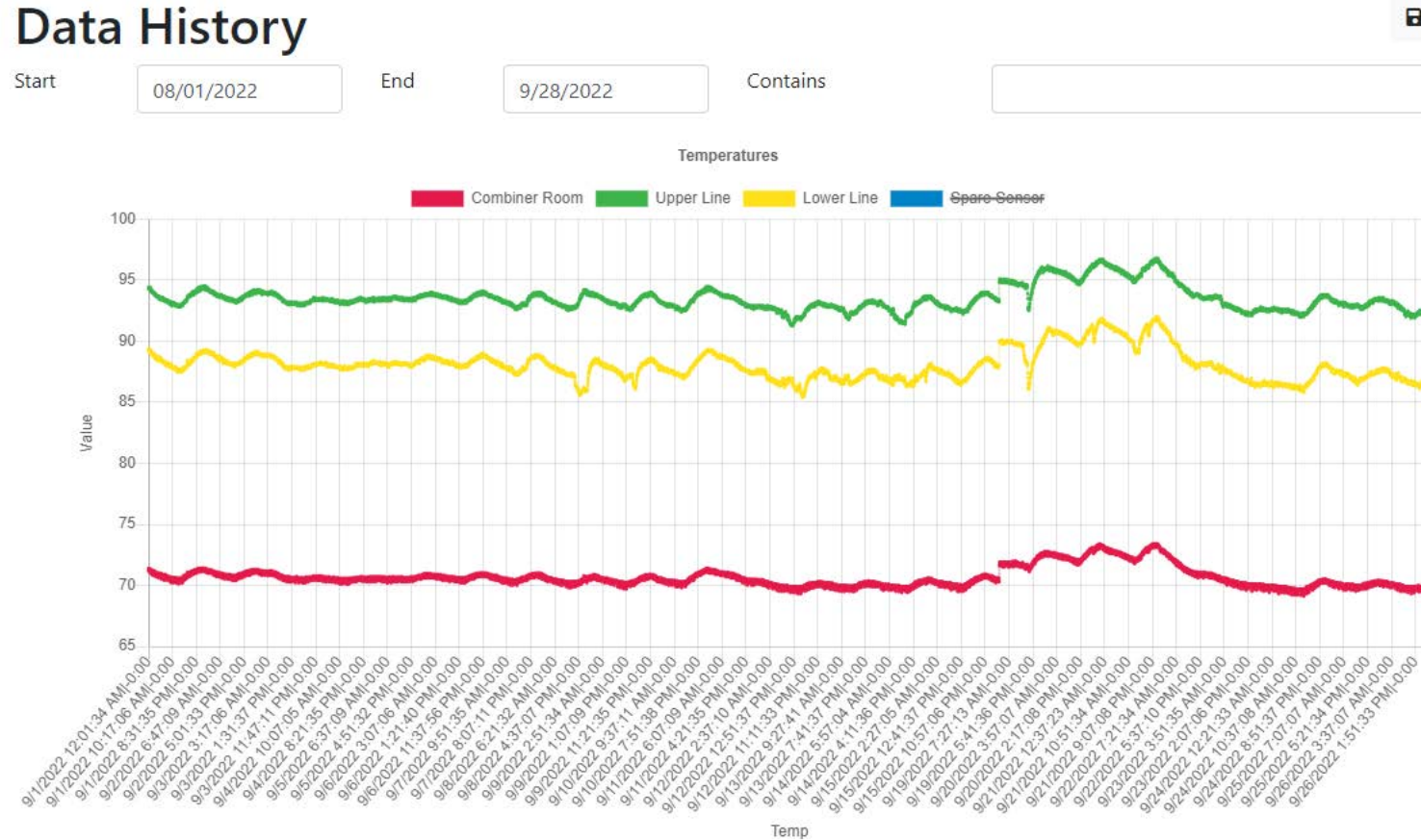
Monitoring

Aux Sites being monitored



Long term data storage is beneficial

Historical temperatures – last 60 days



Details matter

Needham MA Lifts

Summary

- (5) Removal Lifts
- (3) Install Lifts

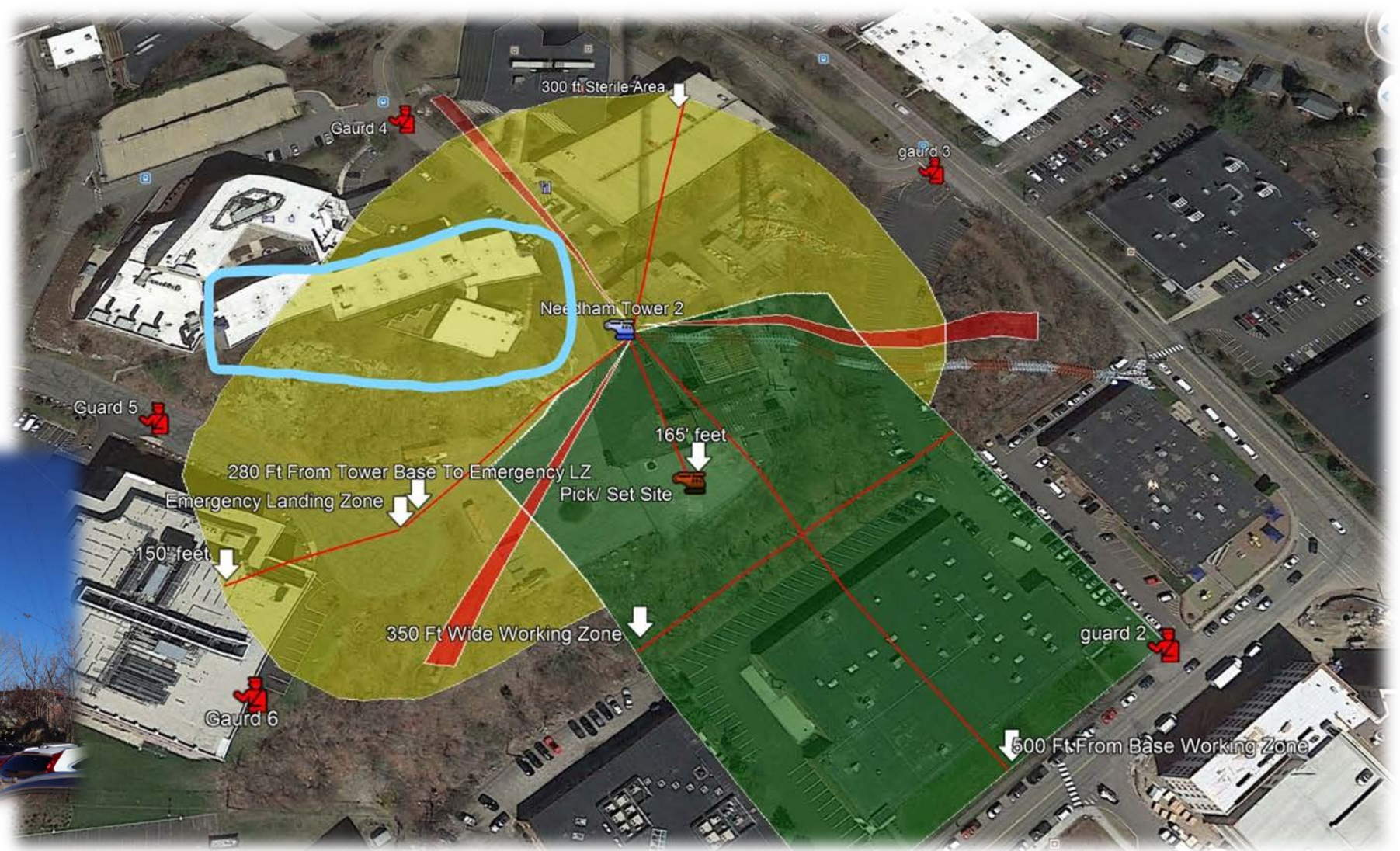


For those who own towers- do you have a fall zone

Sterile Area

Multiple Concerns

- Traffic Plan
- Close Commercial Buildings
- Numerous Picks
- Sheraton Hotel



Another unique site

Sterile Area Needed

- Trinity Antenna Pick
- Remove ALL the tenants from the trailer park – roughly 4hrs (if needed)
- Always an alternate day
- Flight plans need to be filed with the FAA



Questions?



AMERICAN TOWER®



08/24/2022