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## YEAR OF THE CLIMBER

**Towers for Investment**

**New FCC Rules**

**Safety and Broadband**

**Fall Protection**

**Incident Investigations**

February 2015 /// Volume 12 /// No. 02



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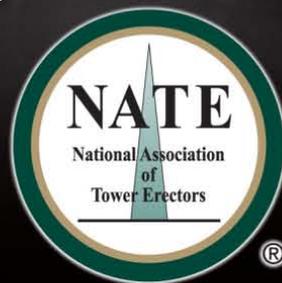
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# Safety: Good Business

You can take part in *AGL Magazine's* Year of the Climber. Send us what you believe others should know about safety and work methods for tower technicians. Send us what you believe others should know about steps employers should take to improve working conditions at tower sites.



It's not all on you. We're also going to gather and disseminate information that we believe will help workers perform tasks in a safe manner that also helps them deliver the productivity that employers seek. We'll publish viewpoints intended to reshape the culture in the tower industry to encourage employers at all levels to promote safety and health for their employees.

This is what we hear: Safety measures are essential, and unless the CEOs of the wireless carriers, general contractors, turf vendors and tower owners make safety for tower workers their highest priority and communicate it throughout their organizations and down the line to their contractors, sub-contractors and sub-subcontractors, tower workers will continue to have job-related illnesses and injuries, some with fatal consequences. Not everyone looks at it that way, but it's a viewpoint that is expressed often.

In his book *The Power of Habit*, Charles Duhigg details how in 1987, Paul O'Neill, as the new chief executive officer of Alcoa, stunned a group of in-

vestors and Wall Street analysts when they met him for the first time.

Duhigg quotes O'Neill as saying, "If you want to understand how Alcoa is doing, you need to look at our workplace safety figures. If we bring our injury rates down, it won't be because of cheer-leading or the nonsense you sometimes hear from other CEOs. It will be because the individuals at this company have agreed to become part of something important: They've devoted themselves to creating a habit of excellence. Safety will become an indicator that we're making progress in changing our habits across the entire institution. That's how we should be judged."

O'Neill used a focus on safety to bring Alcoa's profits to a record high and increase the value of shares in its stock by five times before he left.

The point is that safety is good business. At Alcoa, it led to success.

Let us encourage you to write articles and opinion pieces for *AGL Magazine*. CEOs, let us hear from you. Tower owners and owners of tower construction and maintenance companies, let us hear from you. Safety equipment manufacturers, safety trainers, researchers, educational institutions, government officials, let us hear from you.

And most of all, tower workers, let us hear from you.

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EDITORIAL COMMENT

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# Good Tower Happenings

It's nice to see new capital continuing to enter the small tower company market — for example, Melody

Wireless Infrastructure acquiring 908 towers from Wireless Capital Partners makes Melody one of the larger independent companies. It's good to see the continuation of the small

company dream. No tower company stays small for long; they grow or they get bought out. That explains why I now am in publishing.

Verizon selling its towers, probably to help raise the money they've been burning at the AWS auctions, continues the sell-off of tower assets by the large carriers. There's nothing wrong with that. It almost ensures we all have a shot at increasing the BBE count. History is repeating itself. Carriers are building towers out of necessity and then divesting when the piggybank gets a little low.

At the end of a week of "record snowfall," I'm dreaming of green grass and leaves on trees here in Virginia in about 10 weeks or so. Or heck, I can skip the wait and head for Florida. I'm looking forward to attending NATE Unite this month. We've seen so much activity on the safety front this year, and I've been highly impressed with NATE's actions (including my still terrifying tower climb with Todd Schlekeway). I'm eager to be there and hope to see you there, too.

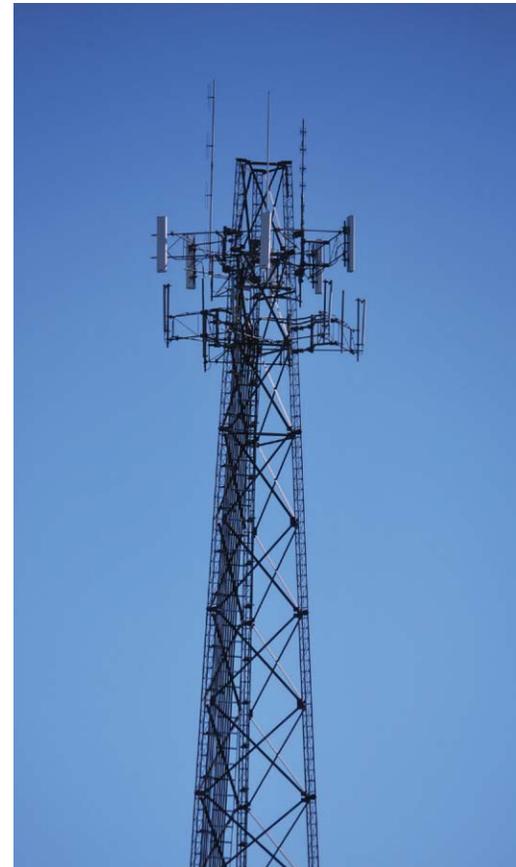
Here in northern Virginia, I've

seen a trend I know we've touched on before in AGL: towers on school property. Years ago, I did some work with the Henrico County government. For reference, the county is home to Richmond, Virginia. The county wanted to install cell sites on school property. It executed some ground leases and enjoyed the cash as a benefit to its taxpayers. It sounded like a pretty good win-win to me.

However, lately, I've seen a lot of pushback locally and in online discussion groups reviving the RF exposure issue and using it to gain overwhelming opposition to leases for towers. I just don't get it. This past month, I saw the citizens of a little community just south of me do battle with each other over a ground lease at a school. It was uncomfortable to watch. Moreover, it was infuriating to watch the deal get shot down for technically inaccurate and factually incorrect reasons.

As a parent of a 4th-grader and a 6th-grader, I see my kids as being old enough to have cell phones, and I want them to. And in the semi-rural area where I live, I want my kids' cell phones to have great coverage for two technical reasons: battery life and RF exposure. When a cell phone is far away from a base station, it has to transmit with higher power to communicate. Also, the cell phone has a much more limited ability to yell at the base station and then also the other way around. When a phone has to transmit at increased power, its battery life is greatly reduced. Plus, more energy is being radiated. For

me, as a parent and an RF engineer, where would I prefer energy not to be maximized? Pressed up to my kids' ears. The right place for cell sites, in my humble opinion, is as close to the



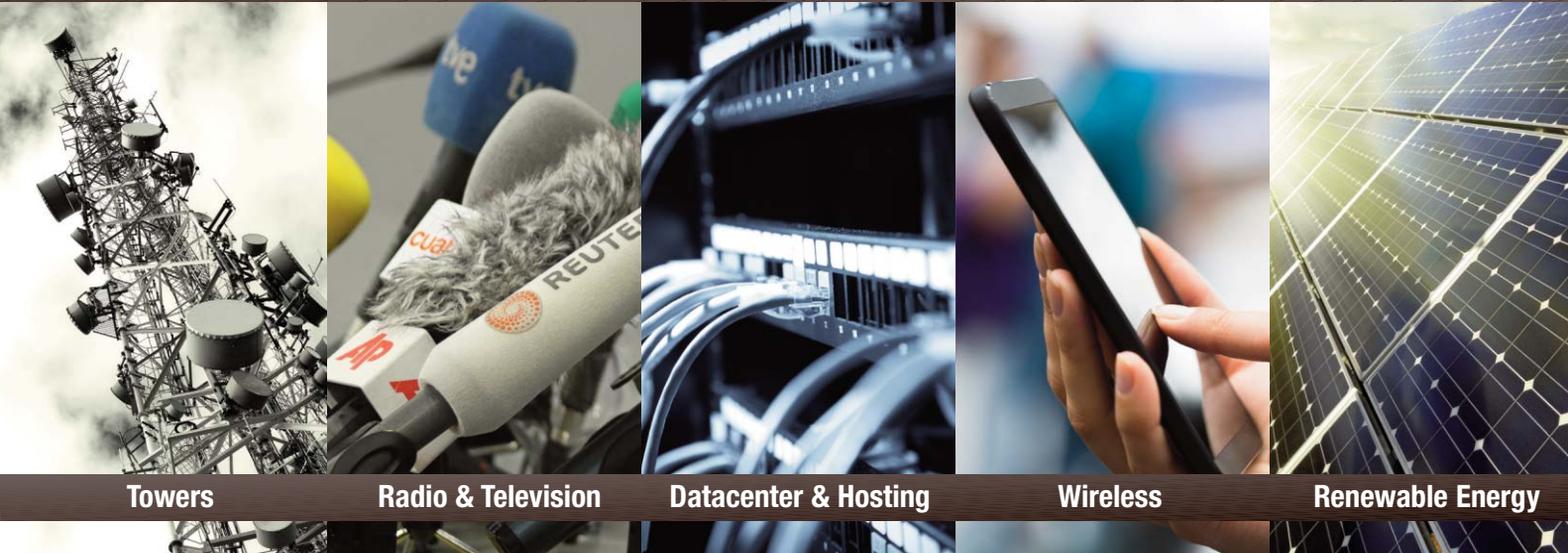
school as possible. And should there ever be a need for emergency communications in a school, I would like every nook and cranny of that school serviced with five bars of high-capacity cell service.

**Rich Biby, Publisher**  
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PUBLISHER'S NOTE

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# Why Investors Should View Towers as Highly Favorable Assets

From low maintenance capex to predictable cash flow and creditworthy tenants, tower companies offer advantages to real estate investors that other types of real estate companies don't.

By Don Bishop

BUSINESS

**A**t the Tower & Small Cell Summit in Las Vegas in September, Ric Prentiss, managing director and director of telecommunications research at Raymond James & Associates, spoke at the company's breakfast meeting. "I worked for BellSouth for 17 years doing engineering, finance, mergers and acquisitions, and international startups," Prentiss said. "My first tower report was written in January 1999, so I've been covering tower stocks more than 15 years. We've seen the birth, the boom, the bust, the rebirth, and the continuation of a really good story."

What follows are Prentiss' remarks from the session, edited for length and style.

American Tower has been a real estate investment trust (REIT) for two years, and Crown Castle International has been a REIT for eight or nine months as far as operating as a REIT is concerned. Although the cellular telephone and cell tower wireless industry has been around for more than 30 years, starting with the first commercial cell phone call in 1983, REIT investors view it as the new kid on the block. They'd rather invest in bricks and mortar,

not realizing that the clicks and wireless ubiquity are taking over. The real estate world needs to get educated on what's happening and where we're headed.

## High-quality Tenants

The tenants are key. In comparison, in a shopping mall where tenants may include Circuit City, Best Buy and Books-A-Million, you have businesses that have been shaken up and that have changed. I'd be scared to death investing in a shopping center because I really don't know that my kids are going to keep shopping at shopping malls. If you're a tower, small

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cell or distributed antenna system (DAS) company, if your U.S. tenants are AT&T Mobility, Verizon Wireless, Sprint and T-Mobile USA, and if you have foreign investments, your tenants there are strong operators, too. With high-quality tenants, real estate investing is less risky.

At first, the real estate investors were somewhat concerned about the concentrated customer base, that a large part of a tower company's revenue comes from AT&T, Verizon, Sprint and T-Mobile. They would question the wisdom of having more than one customer that represents more than 10 percent of the revenue. But for tower companies, it's a good thing they're good customers, the tower is a mission-critical piece of their delivery, and the relationship between the customer or

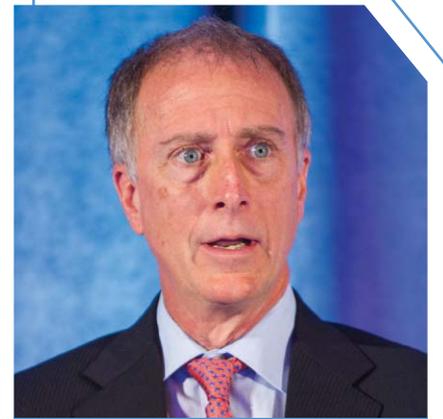
the tenant and the tower or small cell companies is symbiotic and important to maintain.

**Visibility and Certainty**

Wall Street values visibility and certainty. It dislikes uncertainty and volatility. When tower companies deliver a business model that beats and raises estimates consistently, that's a good thing.

When we were buying tower company shares at 13 times EBITDA (earnings before interest, taxes, depreciation and amortization), it was fairly early in the tower days. At the time, wireless carrier shares priced at 5 and 6 times EBITDA, maybe 10 times EBITDA for a fast-growing carrier.

People ask, "Wait, why am I paying so much more for a tower?"



Ric Prentiss, managing director and director of telecommunications research at Raymond James & Associates, at the Tower & Small Cell Summit. Photo by Don Bishop

One reason is the visibility and another is the low churn. In comparison, a good wireless carrier may have churn at a rate between a little less than 1 to 2 percent a month. Tower and small cell company cus-

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tomer churn is 1 or 2 percent a year. That's a dramatic difference for an investor.

**REIT Conversion**

When tower companies convert into REITs, they need not pay income taxes. After using up their net oper-

ating losses, then they pay a dividend, which investors would much rather see paid instead of paying taxes to the government. In comparison, wireless carriers have to pay taxes, although at the end of July, Windstream announced it received a favorable private letter ruling from the IRS

that allows it to put its cable and fiber assets into a REIT structure. Crown Castle International received a ruling that its DAS business qualifies for treatment as a REIT.

The chairman of the U.S. House Ways and Means Committee, David Camp (R-Mich.) proposed a number of changes to REIT rules that take aim at nontraditional REITs. But tax legislation is difficult to pass in any year and is unlikely to pass in a mid-term election cycle. It's telling that the IRS told Windstream it could be a REIT and said that DASs could be REITs. And it isn't just telecom. When you go to a REIT convention, you see many other kinds of companies that want to turn into REITs.

**Long-lived Assets**

The towers were explicitly pointed out in Camp's proposed legislation in the context of their depreciable life, questioning whether the depreciable life now is treated as being too short. Many tower owners depreciate towers over 10, 15 or 20 years. Yet the replacement capital is de minimis. The economic life of a tower could be 30, 40 or 50 years when you consider what's spent. So could you change the depreciation life to make it appear more like a real asset? The definition of "real" in "real asset" is a long-lived asset. Towers are truly long-lived assets, so if there were an attempt to exclude towers from the real estate definition of the IRS, it probably could be circumvented.

In the 40- to 50-year history of REIT legislation, there never has been a REIT removed from that status. It would be a major change for that to happen, but you can never say never in Washington.

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Tower companies have already converted to REITs, and SBA Communications could convert fairly quickly if they felt there was any issue in Washington coming about to restrict becoming a REIT. It then would be difficult for Washington to take that status away without having to make massive changes to the overall real estate structure of the United States, which could hurt the economy once again because it would change an economic engine that has been driven with real estate investment.

Thus, we don't see legislation passing during this election cycle, and maybe not in any election cycle. But clearly it is an issue of the IRS saying to Congress, "You guys figure it out." We think the towers will be OK though.

**Capital Expense**

The "DA" in EBITDA is "depreciation and amortization", and they are a mea-

sure of capital expense (capex) — the ongoing need to spend capital. Annually, carriers typically spend in the teens as a percentage of revenue to maintain their business. Tower companies may spend 2 percent of revenue per year as maintenance capital. DAS companies probably are a little different.

When I talk with investors, particularly real estate investors, I highlight the low maintenance capex, which at 2 percent is very low compared with a wireless carrier and compared with most real estate companies. The only type of real estate company with such low maintenance capex would be in the public storage business.

**Pre-tax Income Payout**

By another measure common with REITs, adjusted funds from operations (AFFO), along with free cash flow per share, towers compare favor-

ably. A REIT is supposed to pay out 90 percent of its pre-tax income as a dividend. American Tower and Crown Castle are paying a dividend that is only about a third of their cash flow. They are able to reinvest the other two-thirds of their cash flow because they still have some net operating losses to use up.

A real estate investor normally receives an 80 percent payout of free cash flow from a typical REIT. Investors do not yet receive that from American Tower or Crown Castle International, but the percentage will grow. That's something investors are also looking at. The dividends paid by American Tower and Crown Castle International are expected to grow 15 to 20 percent a year for at least the next five years. The combined company and dividend growth attracts real estate investors' atten-

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tion even though the yield (the size of the dividend versus the stock price) is fairly low. For tower companies, it's in the 1 to 2 percent range, and it probably will double in the next four to five years.

**DAS and Small Cells**

The distributed antenna system business represents about 2 percent of American Tower's revenue. It represents about 6 percent of Crown Castle International's revenue, growing at about 20

percent, but no disclosure. We would like the tower companies to help us get through the numbers for DAS, to help us get comfortable with their business volume. That's the only way we can give them the fair value for it.

In our opinion, the small cell business will get bigger toward the end of 2015 and bigger yet in 2016. The use of small cells represents a growth in the number of customers and their use of more gigabytes of data traffic, which is good for towers, too.

**Risk**

A possible risk involves a rise in interest rates. Tower stocks came under pressure in May 2014 because Fed Chairman Ben Bernanke made comments that led the market to believe interest rates would rise. I keep the interest rate for the 10-year Treasury bond on my computer screen next to quotes for foreign currency, tower stocks, carrier stocks and the REIT index. I could see Bernanke's comments affecting the tower stocks.

Another higher risk comes with owning network equipment because then you get into the technology risk, the G risk, as we call it, referring to the generations of cellular equipment from 1G to 4G. The advance of technology renders network equipment obsolete, which changes the capex part of the business model. Tower companies that provide electrical generators and that provide backhaul take on some higher risk.

**Fiber Business**

There are many private companies in the fiber business, and maybe they are looking for an exit strategy. If tower companies entered the fiber business, the economics might not be as attractive, the multiple might change a little bit, but the fiber business might offer sustained growth for a longer period. The result can be affected by whether the IRS treats fiber assets as qualifying for REIT status, as it has for Windstream, so it's important to watch whether some of the rules might change.

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sold by the largest wireless carrier in Mexico, America Movil, would come with risk. The company has not yet sold its towers, and it does not allow collocation on its towers. We expect a new entrant to come into the Mexican market. It could be somebody with a very similar sounding name on the U.S. side com-

ing into Mexico which, for a tower company, would be excellent.

If all of a sudden that tenant's a very name-brand three-letter company, it would be significant for investors. Also, the commitment to spend capital would be significant for companies involved in the Mexican wireless industry and for tower

renters. If you start seeing the embracing of a collocation model, if you start seeing a continued commitment to spend capital, and if you build networks, investors would expect a return on that capital, visibility and payback for debt and equity. You have to build a marketplace that, while competitive, earns a return. You have to be able to get the average revenue per user (ARPU). Thus, from a tower industry standpoint, we think it's positive that America Movil has announced that it will spin off.

It hasn't said what assets will be sold to bring its market share below 50 percent. But we expect it would be good in encouraging capital spending, good in encouraging a new entrant, and good in encouraging collocation. We believe it is a positive, and that we'll continue to see the trend across Latin America where carriers will continue to ask, "Can we monetize our assets?"

We are a little concerned about somebody's portfolio being just a little too big for some of the public guys to buy because we like to see the diversification — not getting overly concentrated in any one market because of political and currency risk. But we do believe what America Movil has announced so far, which is pretty vague, would be good for towers.

Another area of risk is the land risk. Tower companies don't own all the land beneath their towers. Real estate companies, investors in REITs, get a little uncomfortable with that. It's a good commitment on the part of tower companies both public and private to spend money



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within their discretionary capex, the leftover cash, and lock up more of that land and then extend the lease or get long-term easements.

In the third-quarter earnings conference call, Jim Taiclet, CEO of American Tower, talked about Voice over LTE and how it would be good for towers because it creates stress on the network edge, probably creating some coverage holes where carriers would have to add some capacity as they roll out Voice over LTE.

Another positive that offsets risk is the mobility that wireless carriers emphasize — the service consumers can use while driving around, while riding a train, and not just in a fixed location. Macros probably are the best solution for a mobility product.

We've talked with several carriers recently about the Comcast Wi-Fi concept. I did not come away with a grave concern from the wireless carriers because of the unlicensed nature of spectrum, the network maintenance required and the lack of the mobility with a Wi-Fi network unless Comcast were to buy licensed spectrum and build a wireless network with mobility.

### Future for Macrocells

We're not saying macrocells will have 100 percent of the business forever. We're saying small cells will continue to grow to be part of the long-term solution because to have capacity wireless carriers have to add many sites, and they cannot all be handled by macros. But it's unlikely to see macros turned down. They will probably become less of the solution in 2016, 2017 and 2018 than they are currently. But

for now and for speed to market, the ease for a carrier to use a macro helps. Maybe by the end of 2015 there could be a tipping point and you would see more small cells deployed to solve the capacity issue. But we don't see macros going away, we see small cells growing to augment and supplement that.

*Ric Prentiss led the Raymond James & Associates breakfast meeting at the Tower & Small Cell Summit in September in Las Vegas. The Summit is owned by UBM, and it is collocated with Super Mobility Week, owned by CTIA. The next Summit is Sept. 9-11, 2015, at the Sands Convention Center in Las Vegas.*

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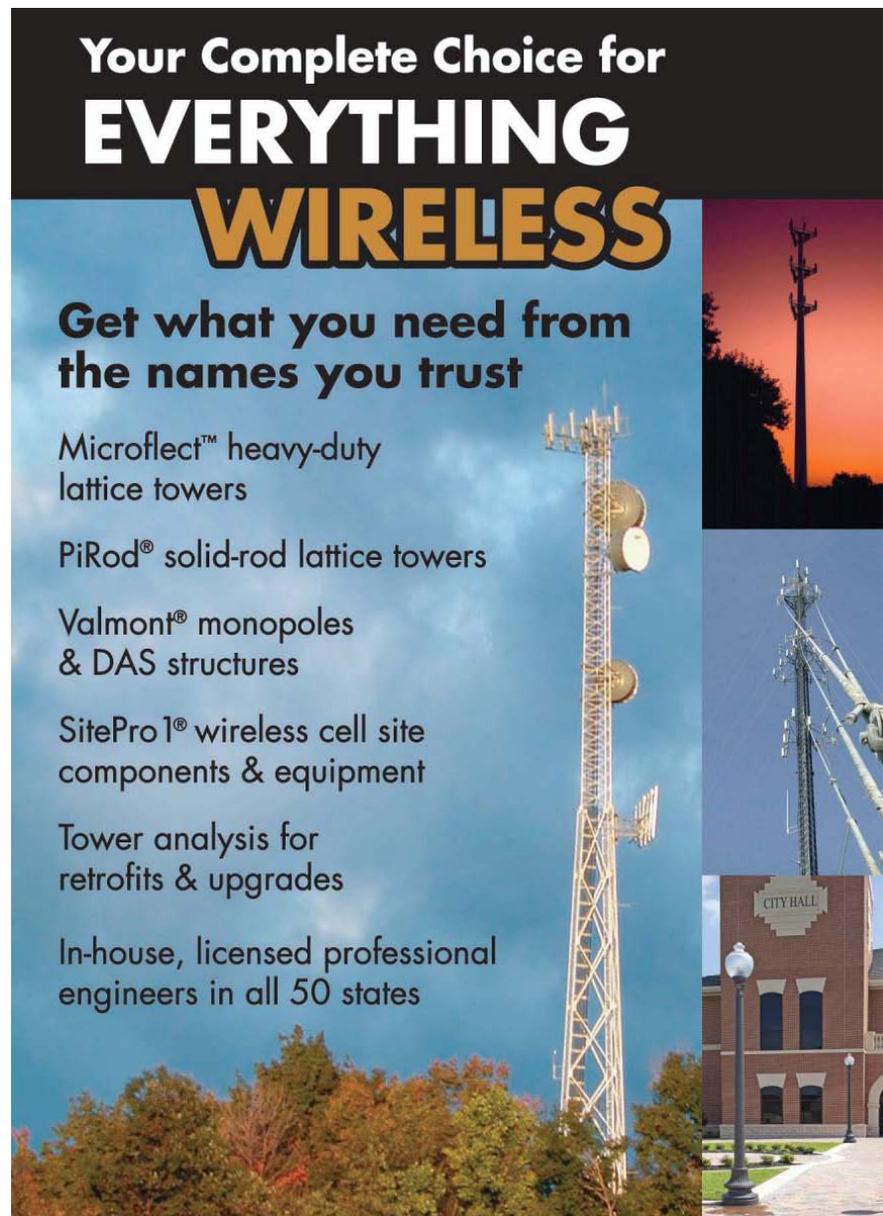
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# New FCC Rules Significantly Streamline Wireless Deployments

The FCC indicates that its efforts in this area remain ongoing, and we may see additional changes to environmental and historical review requirements for DAS networks and small cell facilities in the future.

By Lynn Witcher and Cynthia Hanson

**T**he Federal Communications Commission was created under the Communications Act of 1934 to regulate interstate and foreign commerce in communication by wire and radio. The Telecommunications Act of 1996 deregulated the converging broadcasting and telecommunications markets. Section 704 of the Telecommunications Act, codified at U.S.C. § 332(c), contains language intended to ensure, in part, that communications services infrastructure can be rapidly and efficiently deployed. The Act itself was intended to promote competition among providers in order to secure lower prices and higher-quality communication services for the American public. In its recent wireless infrastructure report and order, the FCC acknowledges that despite the widely recognized need for additional wireless infrastructure, the process of deploying these facilities can be expensive, burdensome and time consuming.

Although the Telecommunications Act confirmed that state and local

governments maintain certain authority over the placement, construction and modification of wireless facilities, the Act also provided protections to the service providers in the form of guidelines that the local jurisdictions must follow. For example, municipalities reviewing zoning applications for wireless facilities must act within a reasonable time after the request is submitted. This response period, referred to as the “shot clock,” was defined by the FCC as 90 days for a site modification or collocation, and 150 days for a new cell site, unless otherwise agreed. Any denial of an application must be in writing and must be supported by substantial evidence within the written record.

In continuance of its mission to ensure rapid and efficient wireless infrastructure deployments, the FCC has recently adopted new siting guidelines that will streamline local land use approvals and compliance with environmental and historical review requirements.

## Collocations and Modifications

Where a wireless facility modification or collocation falls under the Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act), also known as Section 6409 (47 U.S.C. § 1455(a)), there are new advantages to applying for zoning approvals under this section.

The Spectrum Act provided that state and local authorities cannot deny and must approve qualifying requests for modifications to eligible facilities. Unfortunately, the wireless industry and jurisdictions could not agree on when and how Section 6409 would apply. The intent of the Spectrum Act was to accelerate the speed of the collocation application approval process, but the FCC saw little evidence of accelerated approval time frames in practice. The FCC has now clarified that Section 6409 can apply to a wide range of projects, including antenna modifications, the addition of new fiber-optic lines, generator additions, collocations on an existing wireless facility, the placement of the first



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wireless facility on an existing building or other structure — even tower enhancements. To determine whether a project qualifies for treatment under Section 6409, see Figure 1 on page 24.

“Guide to Section 6409” on page 26 explains the definitions established by the FCC.

Aside from clarifying when Section 6409 applies, the FCC also issued important guidance with regard to what information a jurisdiction can require as part of the zoning application, how long it can review it, and what happens when the jurisdiction does not meet the review deadline. When reviewing a zoning application under 6409, the jurisdiction may only seek documentation necessary to confirm whether the project qualifies for treatment

under the section. For example, carriers cannot be asked to provide business case justifications supporting the need for the project. The jurisdictions will, however, continue to maintain their ability to condition approval on compliance with building, structural, electrical and other similar health and safety codes. Also, these projects must still comply with otherwise applicable federal requirements.

The FCC also created a shorter shot clock (60 days) for the review of Section 6409 applications. The shot clock begins to run upon the submission of the application, and the tolling and notices of incompleteness time frames applicable to Section 332 applications (more about this later) also will apply to Section

6409 applications. The consequence of a jurisdiction’s failure to complete its review in a timely manner is vastly different under Section 6409 as compared with Section 332.

Where a jurisdiction fails to rule on an application covered by Section 6409 within the new 60-day shot clock period (accounting for tolling), the request will be deemed granted. The approval takes effect after written notice to the jurisdiction that the approval time period has elapsed. Presumably, if the jurisdiction disagrees with this result, it is the jurisdiction that must seek relief in the courts and not the other way around, as is the case under Section 332. This “deemed granted” remedy alone may result in a significant acceleration of

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deployment projects and is a welcome relief for carriers that do not want to sue the local authorities for every violation of the shot clock.

### Other Wireless Projects

For projects that do not qualify under Section 6409, the FCC also has provided relief. In response to the continuing failure of many jurisdictions to comply with the shot-clock timelines, the FCC has now provided detailed clarification on how and when the Section 332 shot clock applies.

First, the shot clock begins to run when an application is submitted, not when it has been deemed complete by the jurisdiction. Second, in the event that an application is incomplete, the jurisdiction has 30 days to request the missing information, and it must also

identify the code section or publicly stated requirement that requires the missing information. Third, when the applicant resubmits the package, the local authority has 10 days to identify which previously requested pieces of information are still missing, and the jurisdiction cannot request new information outside the scope of its original request. Gone are the days when a jurisdiction could make serial requests for information and string together multiple tolling periods to artificially elongate the shot-clock approval timeframe. The FCC also addressed those jurisdictions employing a moratorium on zoning approvals of wireless facilities as a way to circumvent the shot clock by declaring that the shot clock will run regardless of such holds.

Because the Telecommunications

Act applies only to facilities providing "personal wireless service," there was some question as to whether zoning approvals for distributed antenna system (DAS) networks and small cells (which can be used for services outside personal wireless service) fell outside the purview of the Telecommunications Act and its shot-clock requirement. The FCC has confirmed that regardless of the other applications of DAS and small cells, where such technologies are used to provide personal wireless service, the Section 332 shot clock applies.

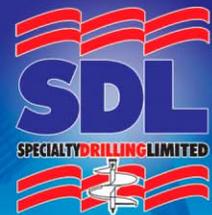
Unfortunately, the FCC stopped short of changing the effect of a jurisdiction's failure to meet the Section 332 shot-clock timelines. Any disputes regarding a local authority's failure to meet the Section 332 shot clock must be resolved in court. Also, local authorities



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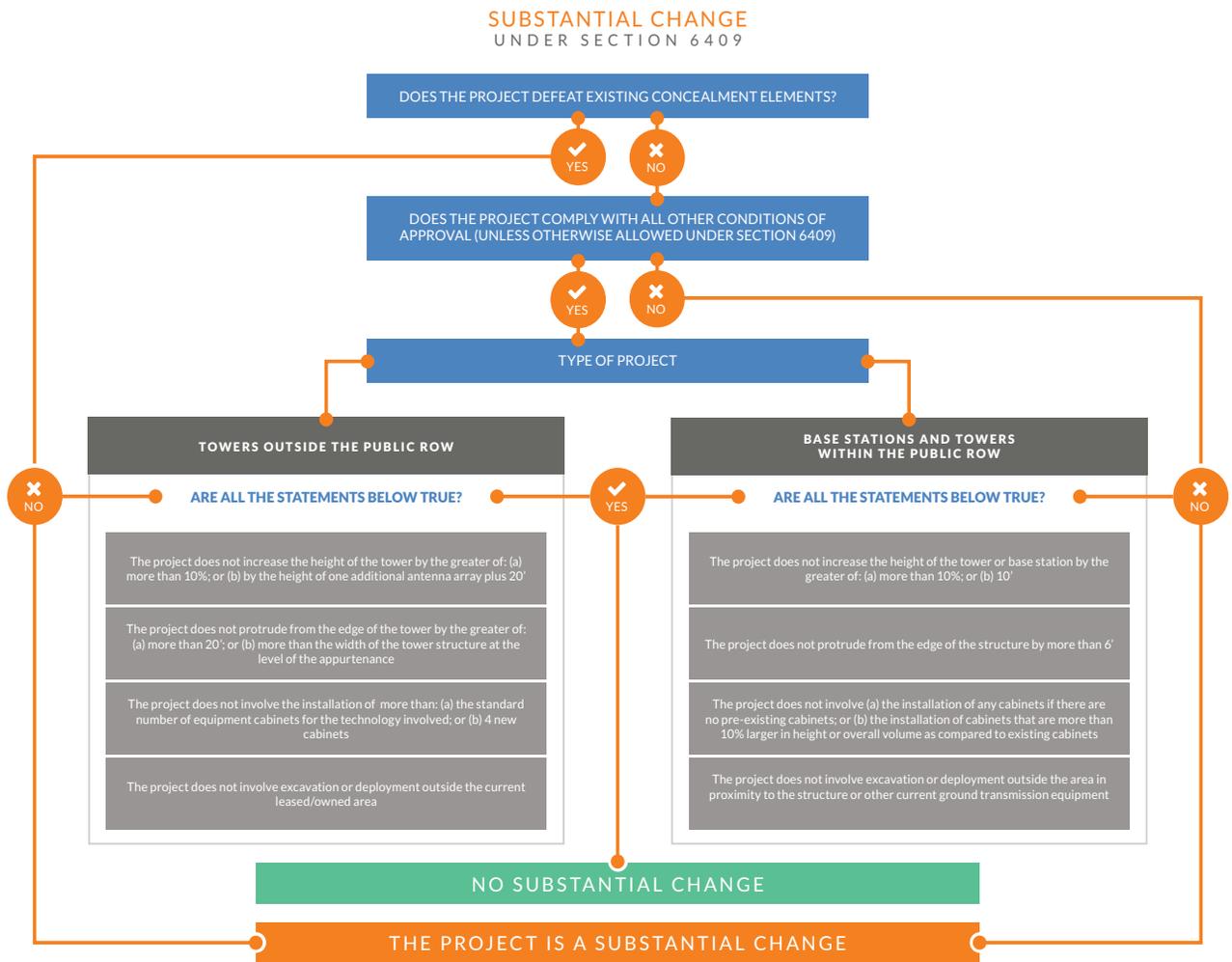
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Figure 1. Use this decision diagram to determine whether a project qualifies for treatment under Section 6409.

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maintain their right to request extraneous project information such as traffic studies, development impact reports, copies of the underlying lease or other owner consent. Accordingly, notwithstanding the significance of the Section 332 shot-clock clarifications, where a project qualifies under both the Telecommunications Act and the Spectrum Act, a carrier may wish to look to the streamlined process and stronger protections of the Spectrum Act.

**DAS and Small Cells**

As previously mentioned, the FCC has confirmed that DAS and small-cell facil-

ity deployments may qualify for the protections of Sections 332 and 6409. Further, in light of the smaller nature and therefore lessened environmental impact of these installations, the FCC has created new environmental and historical review exemptions for these minimally obtrusive facilities. Qualifying interior facilities, collocations and facilities in the rights of way will no longer need either an environmental assessment (EA) or environmental impact statement (EIS) of potential effects of the project under the National Environmental Policy Act of 1969 (NEPA). Specifically, the FCC amended current

NEPA categorical exclusions for antenna collocations on buildings and towers to include equipment associated with the antennas such as wiring, cabling, cabinets and backup power equipment and to cover collocations in a building's interior. This NEPA categorical exclusion for collocations was also extended to collocations on structures other than buildings and towers.

Further, with respect to any public right of way designated for communication towers, aboveground utility transmission lines or any associated structures and equipment, and which is actively used

## New Rules

- Section 6409 can apply to a range of projects, including antenna modifications, fiber adds, generator adds, collocations on an existing wireless facility, placement of the first wireless facility on an existing building or other structure, and even tower enhancements.
- A jurisdiction reviewing a 6409 application can only ask for information reasonably designed to establish whether the application qualifies for 6409 treatment.
- 6409 applications have a new, shorter shot clock — 60 days.
- When a jurisdiction fails to meet the 6409 shot clock, the application is deemed approved.
- The shot clock begins to run from the submission of an application.
- The jurisdiction has 30 days to tell you what's missing from your application and justify why that's needed.
- Upon resubmission, the jurisdiction has 10 days to tell you if you didn't provide all the previously requested information, and it cannot ask for anything new.
- The shot clock is not paused by a moratorium on zoning review.
- DAS and small cell installations may qualify for the protections afforded to macrosites under Sections 332 and 6409.
- Qualifying DAS and small cell installations are exempt from NEPA and Section 106 assessments.
- Qualifying COWs, COLTs and other temporary tower facilities are exempt from the 30-day ASR public notice requirement.

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**Guide to Section 6409**

**Section 6409 provides:**

The jurisdiction “may not deny and shall approve” an “eligible facilities request” for the modification of an “existing” “wireless tower” or “base station” that does not “substantially change” the physical dimensions of the tower or base station.

<b>As a matter of right (by right)</b>	No zoning required. This will vary by jurisdiction but examples may include the placement of facilities on water tanks and government-owned buildings.
<b>Base station</b>	Any <i>structure or equipment</i> at a fixed location that enables FCC-licensed or -authorized communications between user equipment and a communications network. “Base station” includes the support structure, regardless of its primary purpose. Includes buildings, water tanks, utility poles, light standards, etc. Can apply to DAS and small cell support structures. Does not include structures that might, but do not <i>actually</i> , support or house any wireless equipment at the time the application is filed.
<b>Collocation</b>	The placement of new equipment on an existing facility or the first wireless installation on a structure such as a building, water tank, etc.
<b>Eligible facilities request</b>	Projects that involve <i>collocation, removal, or replacement of transmission equipment.</i>
<b>Equipment</b>	Equipment used for any FCC-authorized wireless communications service. (note: The reach of Section 6409 is broader than that of Section 332, which applies only to equipment for “personal wireless service.”)
<b>Existing</b>	Previously or once approved. In other words, the tower or base station must have been reviewed and approved under the applicable local zoning process, or the existing equipment must have received another form of affirmative state or local regulatory approval such as from the state public utility commission. Facilities placed <i>as a matter of right</i> do not qualify as “existing.”
<b>Replacement</b>	Replacements of transmission equipment. Does not extend to a complete replacement of a tower, such as a drop and swap.
<b>Substantial changes</b>	<p>Six factors will be evaluated: (1) changes in height*; (2) changes in width; (3) any increase in the number of equipment cabinets; (4) any deployment or excavation beyond the site; (5) any defeat to existing concealment; and (6) compliance with the conditions of prior approvals.</p> <p><b>Any of the following constitute a substantial change:</b></p> <p><b>For towers outside the public right of way</b></p> <ul style="list-style-type: none"> <li>• The project increases the height of the tower by the greater of: (a) more than 10 percent; or (b) <i>by the height of one additional antenna array plus 20 feet.</i> The tower height can thus increase by 20 feet without being considered a substantial change.</li> <li>• The project protrudes from the edge of the tower by the greater of: (a) <i>more than 20 feet;</i> or (b) <i>more than the width of the tower structure</i> at the level of the appurtenance. The tower width can thus increase by 20 feet without being considered a substantial change.</li> <li>• The project involves the installation of more than: (a) <i>the standard number</i> of equipment cabinets for the technology involved; or (b) <i>four new cabinets.</i></li> <li>• The project involves excavation or deployment outside the current leased/owned area.</li> </ul> <p><b>For base stations and towers within the public right of way</b></p> <ul style="list-style-type: none"> <li>• The project increases the height of the tower or base station by the greater of: (a) <i>more than 10 percent;</i> or (b) <i>10 feet.</i> The tower or base station height can thus increase by 10 feet without being considered a substantial change.</li> <li>• The project protrudes from the edge of the structure by more than <i>6 feet.</i> The tower or base station can thus increase by 6 feet without being considered a substantial change.</li> <li>• The project involves: (a) the installation of <i>any</i> cabinets if there are no preexisting cabinets; or (b) the installation of cabinets that are <i>more than 10 percent larger in height or overall volume</i> as compared with existing cabinets.</li> <li>• The project involves excavation or deployment outside the area in proximity to the structure or other current ground transmission equipment.</li> </ul> <p><b>For All Projects</b></p> <p>The project would defeat the existing concealment elements of the tower or base station.</p> <p>The project does not comply with other conditions applicable under prior zoning approvals (unless the non-compliance is due to an increase in height, increase in width, addition of cabinets, or new excavation that does not exceed the “substantial change” thresholds identified previously).</p> <p><i>*Any changes in height are to be measured from the original support structure in cases where the deployments are or will be separated horizontally (such as on building rooftops). Otherwise, changes in height are to be measured from the dimensions of the tower or base station inclusive of appurtenances and modifications approved before Feb. 22, 2012.</i></p>
<b>Tower (wireless tower)</b>	Any structure built for the <i>sole or primary purpose</i> of supporting an FCC-licensed or authorized antenna and its associated facilities. Excludes buildings, water tanks, utility poles, light standards, etc.
<b>Transmission equipment</b>	Any equipment that facilitates transmission, including radio transceivers, antennas and any other equipment associated with or necessary to their operation, including regular and backup power equipment, and coaxial and fiber-optic cable. Can include “hardening” a tower or base station (i.e., improving the structural integrity of the tower or base station) <i>but only if necessary to support</i> a collocation, removal or replacement of transmission equipment otherwise covered by Section 6409. Includes commercial and public safety broadcast equipment.

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for such purpose, the FCC created a categorical exclusion for projects that will not result in a substantial increase in size over the existing utility or communications uses. The FCC order provides guidance on what constitutes a substantial increase in size.

A deployment would result in a substantial increase in size if it would exceed the height of existing support structures located in the right of way within the vicinity of the proposed construction by more than 10 percent or 20 feet, whichever is greater. If a deployment involves the installation of more than four new equipment cabinets or more than one new equipment shelter, it would be considered to make a substantial increase in size, as it would if it added an appurtenance to the body of the structure that would protrude from the edge of the structure more than 20 feet, or if it were more than the width of the structure at the level of the appurtenance, whichever is greater, except that the deployment may exceed this size limit if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable. A deployment would result in a substantial increase in size if it involves excavation outside the current site, defined as the area that is within the boundaries of the leased or owned property surrounding the deployment or that is in proximity to the structure and within the boundaries of the utility easement on which the facility is to be deployed, whichever is more restrictive.

Similarly, qualifying collocations on utility poles and transmission towers (but not light standards) and qualifying collocations on buildings and certain nontower structures will not require consultations with the state historic

preservation officer, the tribal historic preservation officer or the Advisory Council on Historic Preservation as otherwise required under the National Historic Preservation Act of 1966 (NHPA, also known as Section 106). In order to qualify for this exclusion and presuming no other exclusions otherwise apply, the collocated equipment, when measured with any other wireless deployment on the same structure must meet certain size and ground disturbance limitations. Any structure can now qualify for Section 106 exclusion, regardless of age — even if older than 45 years.

The FCC indicates that its efforts in this area remain ongoing, and we may see additional changes to environmental and historical review requirements for DAS networks and small cell facilities in the future.

### Other Changes

The FCC order also addresses the following ancillary points:

- In order to allow carriers to more effectively respond to emergencies, natural disasters, and planned and unplanned short-term spikes in demand, the FCC exempted certain temporary towers from the 30-day national and local antenna site registration notice requirement. These temporary towers cannot be in place for more than 60 days, require marking or lighting under FAA regulations, nor extend higher than 200 feet above ground level. Construction notice must be provided to the Federal Aviation Administration. Additionally, the depth of previous ground disturbance must exceed any new proposed ground disturbance, excluding footings or other anchors, by more than 2 feet.

- The FCC found that the practice of a municipality giving zoning approval preference to facilities located on municipality-owned property is not, on its face, invalid.
- The FCC's new rules do not in any way restrict a jurisdiction's ability to negotiate lease provisions for wireless facilities located on jurisdiction-owned properties.

### What to Expect

The FCC Order was published on Jan. 8, 2015, and the new rules go into effect using a staggered time frame. All changes not related to Section 6409 go into effect on Feb. 9. Most of the Section 6409 rules become effective on April 8. New FCC rules regarding the "deemed granted" zoning approval and the tolling of the shot clock require U.S. Office of Management and Budget review and approval. Once they are approved by the OMB, the FCC will publish these remaining rules in the *Federal Register* and list their effective date.

In the meantime, PCIA and CTIA have committed to working with the local governments to assist in implementing these new rules. We may see these industry groups create or collaborate on a checklist to help navigate the review process and requirements. We may also see educational materials in the forms of webinars and best practices manuals, as well as model ordinances and new application forms for 6409 projects.

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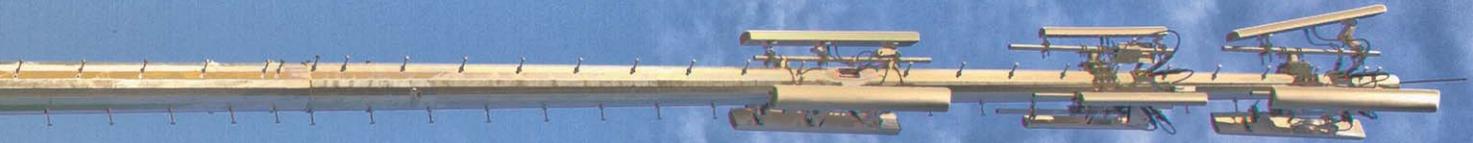
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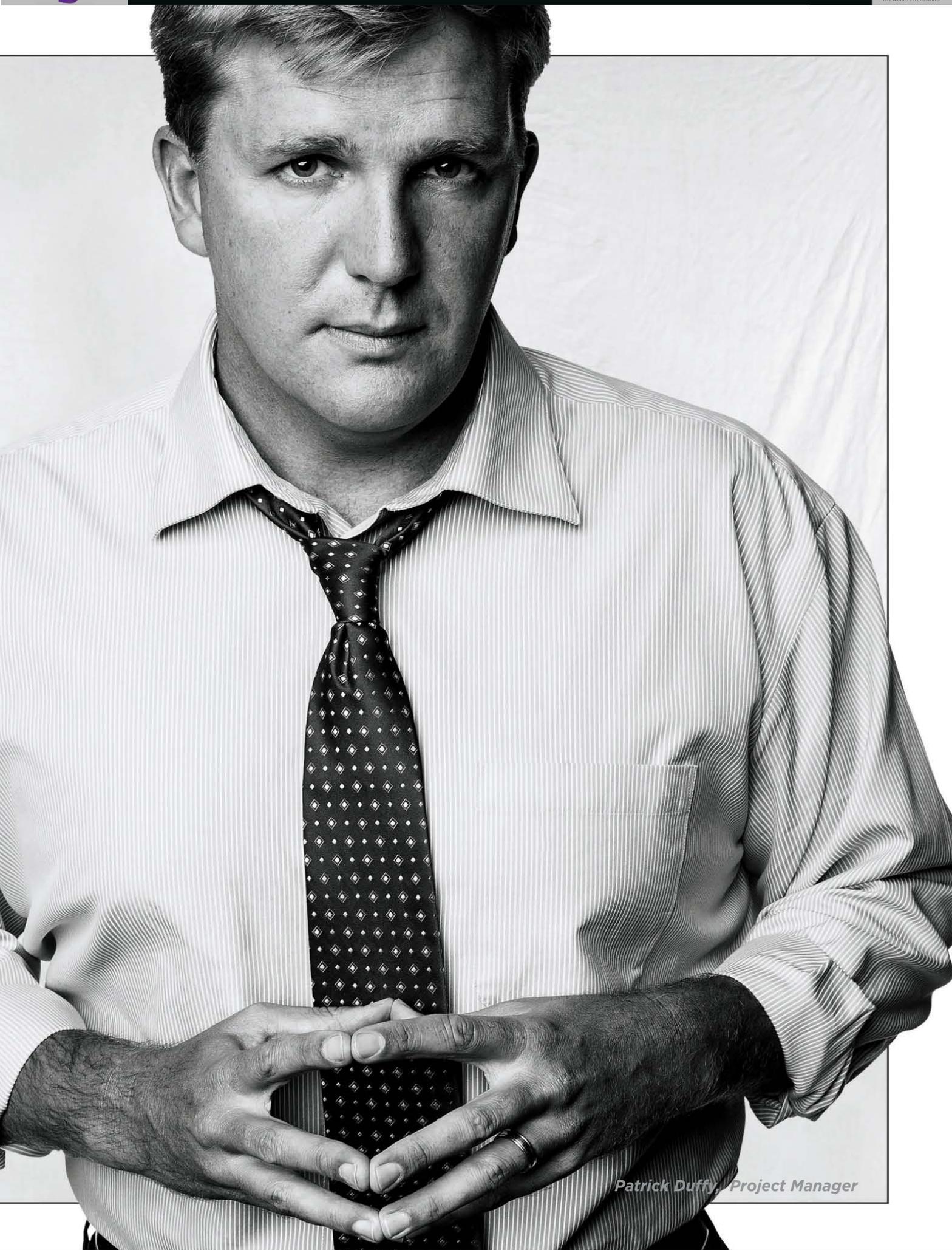
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YEAR OF THE CLIMBER

# YEAR OF THE CLIMBER

By Don Bishop

Exactly what would make working at tower sites safe enough to prevent injuries, including fatal injuries, depends on whom you ask. For some, it's better education and training. For others, it's the drafting of and adherence to standards. Supervision is the key, some say. Better equipment and better maintenance and inspection of the equipment would make a difference, some would tell you. Others put the onus on the CEOs of the wireless carriers, turf vendors and tower owners to effect a culture change in their companies that would translate into safety for workers. In the following pages, you'll read what it could take to make 2015, the Year of the Climber, a safer year for the men and women who construct and maintain the infrastructure on which wireless communications depends.



# Safety and Broadband Must Go Hand in Hand

The leaders of the U.S. Department of Labor and the Federal Communications Commission bring their agencies together in search of ways to better protect the safety and health of tower workers.

By Thomas E. Perez and Tom Wheeler

**T**he wireless industry is a powerful driver of growth in our economy. New facilities pop up all the time, giving the devices in our pockets and purses better service and faster broadband connections. Our country relies on these connections, but serving America's exploding demand for them shouldn't come at the cost of a worker's life.

Too often though, that's exactly what is happening. In 2013, 13 workers lost their lives in this industry. In 2014, another 12. The tower industry might be small, currently employing 10,000 to 15,000 workers, but it's quickly proving to be one of the most dangerous. And if we don't do something now, the number of fatalities will grow as fast as the industry does.

This is why on Oct. 14, 2014, the U.S. Department of Labor and the Federal Communications Commission joined together with telecommunications and tower industry leaders to address this heartbreaking problem. We know that we can only solve it if we work together, that we each have a role to play in stopping these sense-

less tragedies. It's also why we're proud to announce that our partnership on this issue will continue in the form of a joint working group the FCC and DOL have decided to form, with industry participation, to develop recommended practices for employers.

We know that no one intends for a tower construction project to take a life. Contracts for tower work are often written to ensure safety from top to bottom, but that message often gets diluted in a decentralized industry that uses so much subcontracting. We have to make sure the protections are making it from the folks on the ground to the person 1,000 feet in the air holding the wrench or wearing the harness.

This new working group represents a huge step forward, as we do everything in our power to make sure no family has to experience the anguish of losing a parent, child or sibling in a workplace fatality. We were also excited to announce today another component of these continued efforts to save worker lives: the new Registered Apprenticeship Program for Tower Technicians.

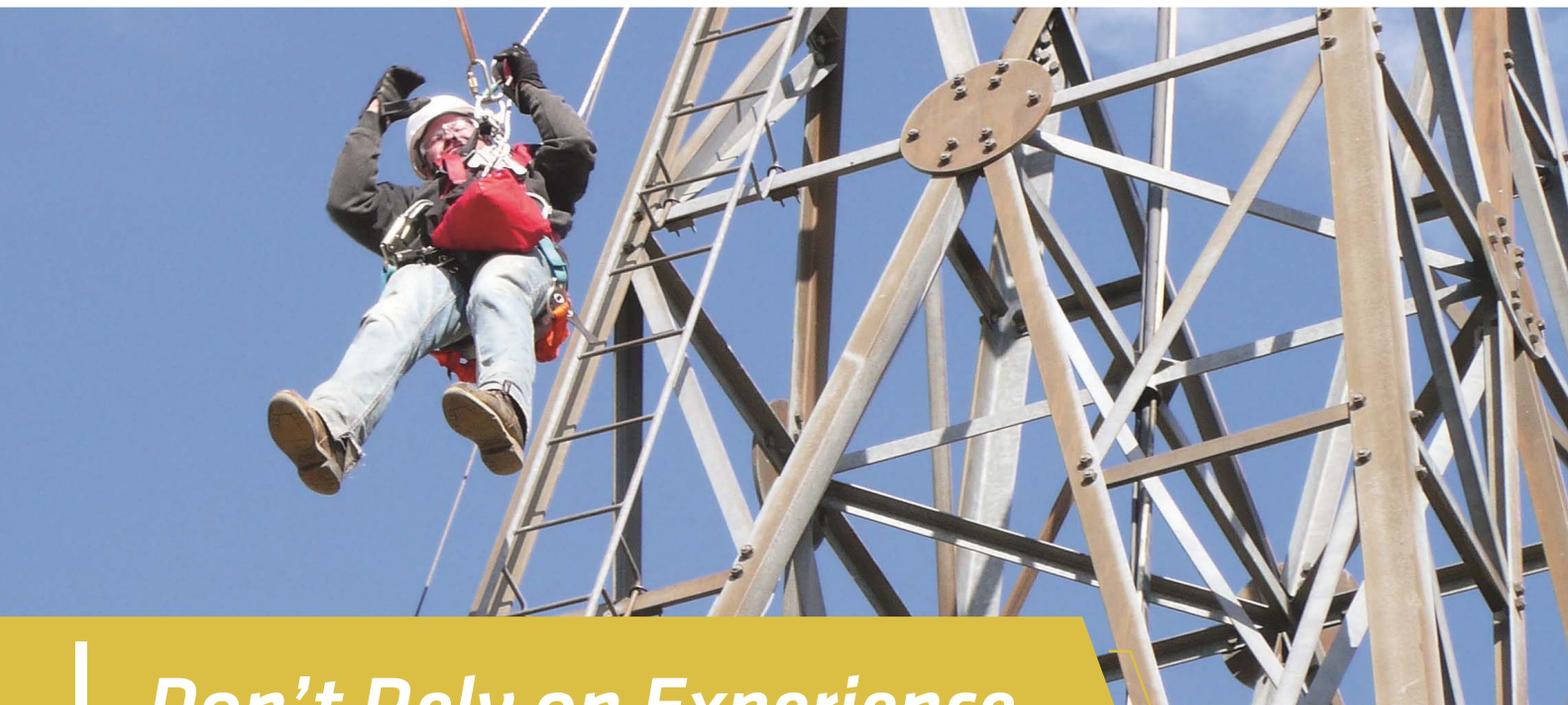
This apprenticeship program will make sure that tower technicians receive the safety training necessary to reduce injury on the job. As the telecom industry booms, it needs workers with the expertise to do the job safely.

The TIRAP (Telecommunications Industry Registered Apprenticeship Program) and the Oct. 14, 2014, Workshop on Tower Climber Safety and Industry Protection are a case study in the importance of partnership. It's a great example of federal agencies and forward-looking industry leaders breaking down barriers, identifying common goals, creating synergy and building a whole greater than the sum of our parts.

We look forward to this continued partnership and the effect it will have on the lives and livelihoods of American workers.

---

*Thomas E. Perez is U.S. secretary of labor, and Tom Wheeler is the FCC chairman. For publishing in AGL Magazine, this article was edited to update it from its original Oct. 15, 2014, version to reflect the number of tower worker fatalities for 2014 and for length and style.*



## Don't Rely on Experience to Be Your Fall Protection

EQUIPMENT

Industry veterans and new climbers alike should be gearing up with the proper fall protection equipment instead of simply relying on their climbing experience. Among the worst temptations is free-climbing.

By Steve Kosch

**T**ower climbing ranks among the most dangerous jobs in America, as Liz Day of ProPublica reports in “OSHA Takes a Closer Look at the Most Dangerous Job in America”<sup>1</sup>. Job tasks can include routine maintenance, repair and installation, but there is nothing routine about climbing hundreds of feet into the air and battling the elements to get a job done. The range of variables when workers are on a

tower — from weather to insects to temperature — can change in the blink of an eye. These conditions, paired with rapid growth in the industry, have led to a 10 times greater fatality rate among tower climbers than the construction industry (see “Methodology: How We Calculated the Tower Industry Death Rate”<sup>2</sup>).

The job is physically demanding, and workers need to be prepared for whatever they may encounter

when working hundreds of feet in the air. Part of that preparation is proper fall protection.

Workers who have been in the industry a long time are intuitive about how they climb on a tower, are comfortable with working at height, and have a good understanding of the best methods for climbing.

But often, when workers are most comfortable, they are most likely to fall. They may not be wearing fall

protection gear or going through every safety process in their work. Instead, they may be simply relying on their work experience to be their fall protection. That complacency, paired with unpredictable conditions hundreds of feet in the air, makes for a dangerous and sometimes deadly combination.

### Maintain 100 Percent Tie-off

Maintaining 100 percent tie-off means a climber is always connected to a restraint or fall-arrest system, and is always connected to the tower.

One of the most common and most dangerous misuses in tower climbing among both industry veterans and new workers is free climbing without any connection to the tower. This practice is highly dangerous and, unfortunately, quite common.

This complete lack of use of safety equipment is not only extremely dangerous, but also violates OSHA regulations. Workers should always wear fall-protection equipment when working above four feet and should maintain 100 percent tie-off.

At other times, workers will wear dual-leg lanyards while climbing. But, if they climb using a dual-leg lanyard or a retractable while holding the rebar hooks open in their grip, hooking them over the bars of the tower as they climb, they technically aren't maintaining 100 percent tie-off. The climbers must let the latch on the hook close completely in order for them to be completely connected. Workers might argue that if they were to slip, they would instinctively know to release the hook and close it so they were completely attached. How-

## Fall Protection

- *Wear fall-protection equipment when working above 4 feet*
- *Tie off 100 percent of the time* • *Release hook close while climbing*
- *Use proper outerwear and gloves, and eye protection*
- *Be prepared for self-rescue and rescue* • *Use descent devices*
- *Practice and train*

ever, when somebody falls, there's a tendency to grip or hold onto something rather than letting go. If a worker keeps holding on, that rebar hook will remain open. It is imperative to make sure the hook is completely closed after each movement.

A big complaint is that maintaining 100 percent tie-off with a dual-leg lanyard or retractable is more time-consuming and more strenuous for the worker. Although it is true that there is more motion happening when climbing properly, there is simply no tradeoff for working safely. Muscles will get used to the different motions, and it will become easier with practice.

Workers might also argue that they trust their own hands more than fall protection equipment. They may feel more secure with their own hands gripping the tower, but it's important to remember that that's what the equipment is designed to do. When you slip or fall, you don't have time to react, but the equipment is always there to help keep you safe.

### Changing Circumstances

Tower climbers often have to battle the elements. Wind, rain and snow can affect a worker's ability to climb. Additionally, weather can change quickly, with temperatures fluctuat-

ing at different heights. Climbers may also come into contact with insects or birds they may not expect.

As with any at-height work, having the proper equipment with the correct fit makes the climber safer and more comfortable and makes the job easier to do, which is even more important when conditions can be so volatile. This equipment can include fall protection harnesses, lanyards with functional rebar hooks, proper outerwear and gloves, and eye protection.

For tower maintenance, a routine job as easy as changing a strobe light can be complicated because it is being done hundreds of feet in the air. A worker might think this is an easy, quick job so they don't need to gear up properly because it will slow them down and take additional time. But that easy job needs to have the same safety precautions as any other job at height including a properly fitted harness, 100 percent tie-off and a rescue plan in place.

### Rescue Situations

As in any rescue scenario, the first few moments after an accident happens are critical. If a worker falls and needs to be rescued, a self-rescue is the fastest and most reliable means of rescue, if the worker

EQUIPMENT

/ YEAR OF THE CLIMBER /

is able to perform one.

For example, if a worker is climbing and falls while connected to her fall protection system, and the fall is very limited, the self-rescue may simply be reaching out and getting back onto the tower.

If self-rescue isn't an option, and the fallen person is stuck or unconscious, a fellow climber or a coworker on the ground will have to climb above the fallen person. The rescuer must disengage the fallen person from her fall protection system, and then lower her down to the ground with a descent device.

Descent devices are critical in rescue because the weight of the fallen person is supported by the tower and not by the individual performing the rescue.

A rescue plan is required under

the general industry OSHA standard. Employers must provide a means of rescue for their workers who work at heights.

But simply supplying a means of rescue isn't enough. Practice and training are essential for performing rescues at extreme heights. When practice and training are not done, employers risk a possible injury of both the worker and the rescuer.

Industry veterans and new climbers alike should be gearing up with the proper fall protection equipment instead of simply relying on their climbing experience. The right equipment paired with 100 percent tie-off can help reduce the fatality rate in the industry and make sure tower climbers go home safe every night.

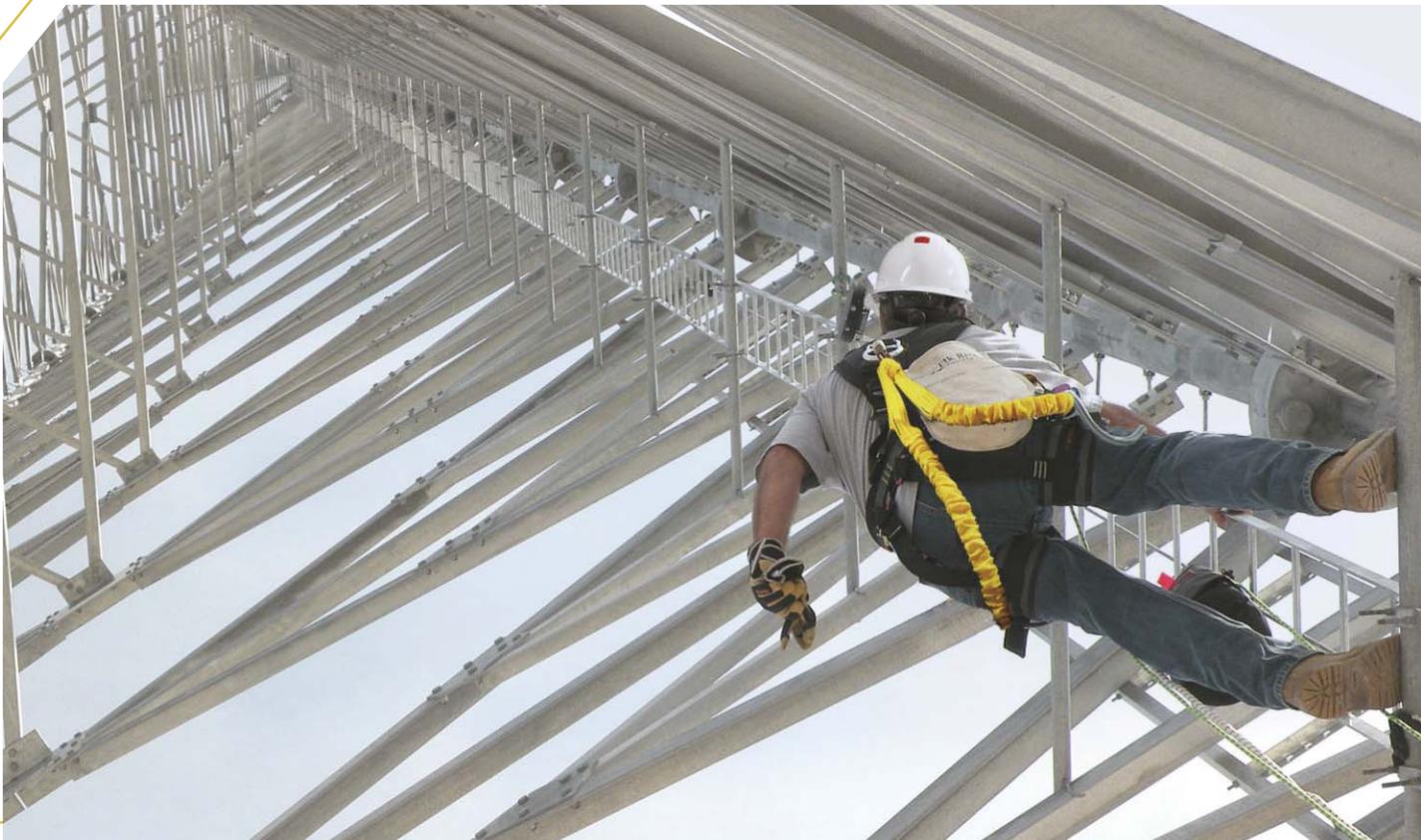
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*Steve Kosch is a technical specialist with 3M, a manufacturer of fall protection equipment with a 40-year history in safety products and services. 3M offers site evaluations, training and education, and ANSI-, OSHA- and CSA-certified products. Call 3M at 800.243.4630 or visit [www.3m.com/fallprotection](http://www.3m.com/fallprotection).*

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# It Must Stop

A mother who lost her son in a tower accident that could have been avoided provides a voice for her son and other fallen climbers and tower technicians through the OSHA website and with an appearance at a safety workshop at the FCC.

By Kathy Pierce

Chad Weller was a communication tower technician. He worked to bring you the cell service you use every day to text your friends or navigate your route to work. He loved his job, and he took great pride in providing this service for you and me.

Chad had a heart of gold and a contagious smile. It was a smile that could brighten anyone's day. He dreamed of being in the U.S. Navy, a place where he could serve his country with dignity and honor. He had plans to enlist this summer.

Chad never got the chance to fulfill that dream, because on March 19, 2014, he was killed in a tragic fall. The job he loved so much took his life and my only son. I will never see his smile again, his two sisters will never hear his laugh, and all his friends and family will never get the chance to see him grow into the man he aspired to be.

I'll never see him fall in love and get married or play with the children

he hoped to have some day. The light Chad brought to this world went out on that day in March, and I will never be the same. I lost my baby boy, my best friend and my hero, and what upsets me the most is that his death was senseless and preventable.

Chad was sent up a tower by himself in hazardous weather conditions wearing a harness that was two sizes too big for him. The tower was icy, a condition made worse by a sudden onslaught of rain, but still my son was told to climb.

His accident could have been prevented simply by:

- Not being sent up on the tower alone.
- Not being forced to work on a water tower in hazardous weather conditions; the tower had ice on it and it was raining.
- Chad's equipment had fallen out of the truck earlier in the day and was lost, but the foreman on site had placed Chad in an XL harness when Chad wore a medium and instructed him to climb the tower.

If basic protections were in place, my son would not have lost his life that day. Since Chad's death, I've dedicated myself to raising awareness about the dangers workers face in the telecommunications industry, especially tower climbers like Chad. I am an advocate because I want to make sure that no one feels a loss like mine, but already in 2014 11 families have. In 2013, 13 people lost their lives in this industry. Something's wrong and we have to fix it.

I am a voice for my son and all fallen climbers and tower technicians. I can only hope that Chad's story will help us unite to make a real difference.

*This article, edited for length and style, combines "It Must Stop," an Oct. 10, 2014, U.S. Department of Labor blog entry by Kathy Pierce, and her remarks of Oct. 14, 2014, at the Workshop on Tower Climber Safety and Injury Protection conducted at FCC headquarters in Washington.*

OPINION



**Tower Family**  
FOUNDATION



## Providing Support by Standing Together

“The Nevada Wireless Association supports the efforts of the Tower Family Foundation and has made them a recipient in our annual charity golf tournament. Best of luck to the Foundation as you continue to grow and help those in need!”

*Chris Wener*

*Nevada Wireless Association President*

“As a climber with 17 years of experience, I've seen firsthand the hurt and the pain caused by the loss of a fallen friend and fellow tower climber. I am grateful and humbled to know there is an organization that has resources to assist tower climbers and their families during times of need.”

*John Gates*

*Tower Climber from ATS*

“I want to thank everyone involved for making this happen! Synergy Concepts will be donating to the Tower Family Foundation and encourages other companies in the industry to donate as well.”

*Russ Chittendon*

*Vice President of Synergy Concepts, Inc.*

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[www.towerfamilyfoundation.org](http://www.towerfamilyfoundation.org)

# Incident Investigations – Communications Towers

The following communications tower incidents have been investigated by OSHA. Most of them were reported to OSHA, or OSHA learned about them from news reports or by other means. There have been tower incidents that OSHA did not investigate because they were not reported to OSHA as required.

- Nov. 22, 2013, Optica Network Technologies, Wichita, Kansas. A 25-year-old worker performing cell tower maintenance was killed when he fell 50 feet.
- Aug. 17, 2013, Custom Tower, Louise, Mississippi. A worker installing microwave dishes on a cell tower was killed when he fell 125 feet. The worker, who was not using a double lanyard, fell after disconnecting his positioning lanyard to reposition himself.
- Aug. 12, 2013, Transmit PM, Coats, North Carolina. A worker performing installation services for Sprint under the direction of Alcatel-Lucent died from a fall.
- July 8, 2013, Monarch Towers, Mountrail County, North Dakota. Two workers were adding structural supports to a 300-foot tower. One worker fell and struck the other, causing them both to die from a 250-foot fall.

OSHA INVESTIGATIONS



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- May 28, 2013, Byrd Telecom, Georgetown, Mississippi. Workers were raising a new antenna to the top of a tower to make the tower taller. While installing a hoisting device to raise the boom a cable broke, causing two men to fall to their deaths.
- April 3, 2013, Excell Communications, Birmingham, Alabama. No fatality, injury — worker survived a 140-foot fall.
- April 5, 2013, S25 Towerserv, Franklin, Pennsylvania. Two employees were hoisting new equipment on a tower, one employee was at approximately 190 feet, the other at 140 feet. The equipment being hoisted came loose, striking the lower employee, causing him to fall.
- March 19, 2013, Eduardo Corona, Laredo, Texas. While installing the last 10-foot section of a 90-foot tower, the bottom section collapsed, causing one employee to fall to the ground and die.
- Jan. 4, 2013, Ws Consulting & Construction, Mount Vernon, Washington. Employee fell 80 feet and died, had fall protection gear on, but the fall protection anchorage point failed.
- Aug. 11, 2011, Hayden Tower Service, Brookfield, Missouri. A worker dismantling a cellular tower fell 80 feet and later died in the hospital.
- Aug. 3, 2011, Sink Tower Erection, Hollister, North Carolina. A worker was making modifications to 300-foot cellular tower when he fell 50 feet and died.
- June 27, 2012, Midwest Steeplejacks, Lisbon, North Dakota. Employee was on a 300-foot telecommunication tower wearing an ExoFit XP tower climbing harness equipped with a positioning device and twin lanyards, using only one tie-off point. Employee unhooked his positioning device to reposition himself, and fell approximately 153 feet and died.
- Oct. 12, 2011, Ultimate Tower Service, Newton, Massachusetts. An employee was killed from fall while installing a new ladder on a 1,000-foot tower.

Source: OSHA



## Quantum Accelerates Tower Development

Not long ago AT&T halted Built-to-Suit tower construction across the country. This had major implications for tower developers as their capital was tied up in projects without tenants or revenue.

When funding other projects became necessary, these developers had to free up cash. But how could they hope to find a buyer for a tower with no tenants, revenues, or completion date?

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OSHA INVESTIGATIONS

# What to Expect from OSHA in 2015 and Beyond

2015 brought many changes related to employers' OSHA obligations and, consequently, employers should review their health and safety programs to ensure that they are prepared for OSHA's enhanced enforcement, new regulations and increased inspections.

By Mark A. Lies II and Kerry M. Mohan

**W**ith the new year comes another year of enhanced OSHA enforcement and new OSHA regulations. Further, following the shift of political power as a result of the midterm elections, questions arise as to whether OSHA will continue with its aggressive agenda of enhanced enforcement with increased citations and greater penalties or whether OSHA will respond to political pressure from Congress. In either case, the New Year will bring levels of uncertainty with the agency that we have not seen since President Barack Obama took office in 2009. The following information addresses OSHA's current and upcoming enforcement initiatives and trends, and OSHA's new record-keeping obligations and their implications, all of which will affect employers in 2015.

## OSHA's Enforcement Initiatives

Although a number of OSHA's enforcement initiatives may not technically

be considered new for 2015, we can expect that OSHA will continue to issue an increasing number of citations under the General Duty Clause and the multi-employer worksite doctrine. We can also expect OSHA to continue to focus its attention on the training and protection provided to temporary employees. Thus, it is important that employers remain aware of these issues to try to limit liability in 2015.

## General Duty Clause

Section 5(a)(1) of the Occupational Safety and Health Act ("the Act") provides that an employer: [S]hall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.

29 U.S.C.A. §654(a)(1). Section 5(a)(1), otherwise known as the General Duty Clause, imposes additional obligations on employers to protect

employees from hazards even when OSHA does not have a regulation specific to that hazard. To establish a General Duty Clause violation, OSHA must establish the following elements: (1) a condition or activity in the workplace created a hazard; (2) the employer or its industry recognized the hazard; (3) the hazard was likely to cause death or serious physical harm; and (4) a feasible means existed to eliminate or materially reduce the hazard. If OSHA cannot establish every element, the citation cannot be supported.

In 2015, we can expect OSHA to continue to use the General Duty Clause to issue citations related to, among others:

- Fall protection
- Workplace violence
- Arc flash — arc blast
- Ergonomics
- Heat illness — hypothermia
- Infectious diseases (such as Ebola)
- Permissible exposure levels (PELs)

below those established in existing OSHA regulations for hazardous materials

- Combustible dust

The list is not necessarily comprehensive. Remember, OSHA can issue a General Duty Clause citation based on virtually any hazard not already regulated by a specific OSHA health and safety standard. Accordingly, employers must conduct a thorough Job Hazard Analysis and take prompt action to abate all hazardous condi-

tions at the worksite, even if no specific OSHA standard exists.

### Multi-employer Doctrine

Under the Act, an employer's obligation to furnish a workplace free from recognized hazards is not limited to its own employees. Rather, under OSHA's multi-employer worksite doctrine, OSHA will issue citations not only to employers who expose their own employees to a hazardous condition (the "exposing employer"), but also to employers who: (1) created the

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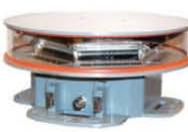
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hazardous condition (the “creating employer”); (2) exposed the employee to the hazard; (3) were responsible for correcting the hazardous condition, but failed to (the “correcting employer”); or (4) had the ability to prevent, abate, or correct the hazardous condition through the exercise of reasonable supervisory authority (the “controlling employer”).

During the past several years, we have seen an increase in OSHA using the multi-employer worksite doctrine, particularly in the construction industry, to issue citations to numerous employers based on a single incident, and we expect that this will continue in 2015. Thus, employers who work with subcontractors or on jobsites with multiple

employers must not only ensure that their programs are adequate and their employees are trained, but also ensure that their subcontractors or fellow employers adhere to OSHA’s standards. This liability is significant and can result in citations as well as criminal liability in the event of a fatality. In addition, OSHA has issued citations to host employers in the general industry category that have engaged independent contractors to perform work activities at the host employer’s worksite, relying upon the host employer’s status as the controlling employer.

### Temporary Employees

In 2014, OSHA implemented an initiative to protect temporary employees

under the premise that those workers are not provided the same level of training and protections as full-time employees. Under this initiative, OSHA inspectors are required to inquire during inspections whether the inspected worksite has temporary employees and determine whether those employees are exposed to hazardous conditions. Moreover, during the inspection, OSHA will also inquire as to whether the training provided to the temporary workers is in a language and vocabulary the workers can understand. If OSHA determines that the host employer failed to provide adequate training or protections to the temporary employees, OSHA could issue citations not only to the temporary staffing agency, but also the host employer under the

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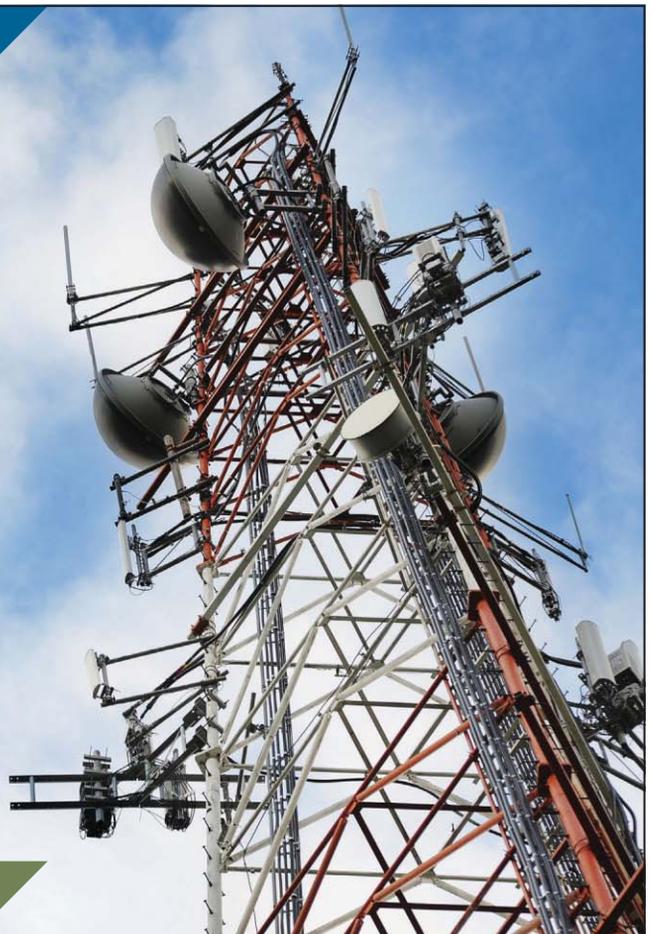
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multi-employer worksite doctrine. In order to enforce this initiative, OSHA has hired compliance officers who are bilingual (or certified interpreters) to conduct employee interviews to determine if the employees understood the training. If the training was in English and the employee is not fluent in English, then the training is not "effective" and the employer can be cited.

### False Certifications

OSHA is focusing on many regulations that require the employer to certify that the employee understood training or was qualified to perform certain work (e.g., personal protective equipment, lockout/tagout, forklift). If the agency can establish that the training was not provided or that the employees

cannot understand it because the training is in writing and the employee is illiterate or the training was conducted verbally in a language the employee could not understand, the agency may claim that the certifications are false, resulting in citations or potential criminal liability for the individual who signed the certification.

### New Record-keeping Regulations

OSHA's new record-keeping regulations went into effect on Jan. 1. Check your North American Industry Classification Code (NAICS), because you may now be subject to record keeping.

Under OSHA's rules that were in effect as of 2014, employers with 10 or fewer employees were exempt from maintaining OSHA 300, 301,

and 300A records, which track work-related injuries and illnesses. The current rule also exempted thousands of employers based on their Standard Industrial Classification (SIC) codes.

Under the new rule that went into effect on Jan. 1, the list of exempted employers based on the classification of their industry is based on NAICS codes. As a result, it is anticipated that millions of employers with more than 10 employees and that were once exempted from OSHA's record-keeping requirements now have to maintain OSHA 300, 301, and 300A records. Thus, it is imperative that employers check their NAICS code to determine whether they are now covered by OSHA's record-keeping requirements.

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### Injuries and Illnesses

Under the rule that was in effect in 2014, even if an employer was not required to maintain record-keeping logs or record injuries, all employers, regardless of size, were required to report to OSHA within eight hours an incident involving an employee death or the in-patient hospitalization of three or more employees. Under the new standard, all employers are required to report to OSHA:

- Within eight hours after the death of any employee as a result of a work-

related incident

- Within 24 hours after the in-patient hospitalization of one or more employees or the occurrence of an injury to an employee involving an amputation or loss of an eye, as a result of a work-related incident

The effect of this new rule will be dramatic because OSHA is required to inspect every report of death or injury as described. As a result, it has been estimated that OSHA will conduct an additional 10,000 inspections (up from approximately 40,000) per year solely

because of the increased reporting.

### Inspection Preparation

As previously mentioned, the number of OSHA inspections is expected to dramatically increase in 2015. Thus, more employers must become aware of their respective rights, as well as their employees' rights, during the OSHA inspection process. For instance, employers should learn what their rights are regarding the scope of the inspection, what documents the agency is and is not entitled to and how to respond to requests for employee interviews so that they do not waive their rights during the inspection process. Accordingly, it is critical that in the next several months employers train their supervisors and make employees aware of these rights. Unless the employer informs the employees of their rights, there is no way that the employees can knowingly exercise their rights.

### Conclusion

2015 has brought many changes related to employers' OSHA obligations and, consequently, employers should review their health and safety programs to ensure that they are prepared for OSHA's enhanced enforcement, new regulations and increased inspections. Only by taking affirmative action now can an employer ensure it is prepared for 2015.

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# Product Showcase: Safety



## Tower Climbing Harness

The WestFall Pro 88020 Ascend tower-climbing harness from **GME Supply Co.** was designed by industry experts with value in mind. Every aspect of the harness is intended to provide premium fall protection with comfort. The harness has six aluminum D-rings, a quick-connect chest strap and tongue-buckle leg straps. It offers a sleek, black design with a sewn-in hip pad and removable tool belt. The safety harness also offers an adjustable seat for all-day comfort. Other features include light weight, sleek black webbing with silver stitching, aluminum front, back, and side D-rings, breathable back and shoulder padding for increased comfort, extra utility attachment loops on seat and belt provide secure points for

hardware, tool lanyards, fall indicators for safety inspection, easily accessible lanyard parks, a weight limit up to 310 pounds and ANSI Z359.1-2007 certification.

[www.gmesupply.com](http://www.gmesupply.com)



## RF Safety Caution Signs

RF Safety Caution signs from **RF-Signs.com** indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. The signs can be used to alert against unsafe practices that may cause property damage. The manufacturer offers two types of caution signs: one that warns of potential emissions above the occupational exposure limit and one that warns of hazardous emissions on the tower. The signs, which mea-

sure 10 inches by 14 inches, are made from 0.040 aluminum painted with UV-resistant inks. The signs follow the ANSI specifications for hazard communications and are available in a bilingual (English/Spanish) version.

[www.rfsigns.com](http://www.rfsigns.com)



## Garments with RF Protection

The Naptex RF-shielding garment system from **UniTech Services Group**, RF Safety Division, is the result of more than 50 years of radiation protection expertise in garment design, including decades of lab testing and worldwide field use. The garments can be purchased or rented for occasional, short-term projects. The manufacturer also offers FCC-compliant tower signs. Standard designs ship quickly, with no additional charge for customization. All materials and sizes are available,

PRODUCT SHOWCASE

including adhesive labels.  
[www.unitech-rf.com](http://www.unitech-rf.com)



### Cable-safety Systems

**Valmont Site Pro 1** now offers cable-safety systems for both towers and monopoles. Sold as a complete kit that includes top and bottom brackets, as well as cable and nonmetallic cable guides, the products are custom-manufactured for each tower and ship in three to five days. Valmont also offers a safety catalog, which is incorporated into its main catalog and in the safety section of its website. Products include bags, cable grabs, carabiners, climbing harnesses, harness accessories, helmets, lanyards, personal safety products, climbers' positioning equipment, retracting climber lifelines, rigging products, rigging capstans, climbing and work ropes, rope accessories, rope grabs and DBI LAD-SAF flexible cable safety systems.

[www.sitepro1.com](http://www.sitepro1.com)

### Tower-Safety Training

**Comtrain** has long offered tower-safety and rescue training for all types of structures, industries and occupations. Since 1996, the company has provided climbing safety, fall protection and rescue training for hundreds of

companies and government organizations, including the U.S. Armed Forces. Among Comtrain's most popular courses is the tower construction, rigging and technology class. The company's courses meet the criteria for accepted practices in safety, health and environmental training (ANSI/ASSE Z490.1). They also meet the requirements of ANSI/ASSE Z359.2, minimum requirements for a comprehensive managed

fall protection program found in the ANSI/ASSE Z359 Fall Protection Code.  
[www.comtrainusa.com](http://www.comtrainusa.com)

### Fall-Arrest System

Designed to be used as a connecting device in a personal fall-arrest system, the **FrenchCreek Production** Rogue SRL system connects the user's harness to the anchorage point. The 8-inch subcompact, self-retracting

## GRADUATE UP TO A SMARTER LED LIGHT.



\* Patents Pending



Here's another brilliant idea from Hughey & Phillips: The **HORIZON™** LED Series. Recipient of a 2013 CTIA Emerging Technology Award, it's simply the smartest LED in its class. With features like WIFI control and monitoring, GPS sync, built-in self-testing and precision microprocessor control. This lightweight unit (under 20 pounds) is also easy to install, can be retrofitted using existing cabling and is fully field serviceable. So graduate up to the smarter **HORIZON™** Series LED with your choice of red (L-864), white (L-865) or dual (L-864/865). Make the smart call to Hughey & Phillips at 877.285.4466 or visit [hugheyandphillips.com](http://hugheyandphillips.com).

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DEPARTMENTS

lifeline provides freedom of movement to workers performing jobs at



various heights. As the worker moves toward or away from the device, the spring-tensioned webbing will retract

back into the unit or will draw out of it. The device automatically takes up the slack in the webbing, keeping it out of the way while minimizing free-fall distance should a fall occur. A centrifugal braking mechanism minimizes free fall distance. A visual load indicator warns the user that the unit has been involved in a fall. The unit is available in single-leg or dual-leg models. Meeting or exceeding industry standards, the fall-arrest system also features easy attachment; 360-degree swivel; an impact indicator for easy visible inspection; high-strength/lightweight subcompact housing; shortfall arrest, which will stop a fall within inches; and a 400-pound weight capacity.

[www.frenchcreekproduction.com](http://www.frenchcreekproduction.com)

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meet ANSI/OSHA 5,000-pound load requirements for fall protection safety. They feature easy field installation, a permanent brackets option and an anchor point for 100 percent fall protection. Engineered custom mounts are also available.

[www.tuf-tug.com](http://www.tuf-tug.com)

### Personal RF Monitor

The FieldSense Occupational from **FieldSense USA** is a personal RF monitor that enables technical personnel to avoid areas of antenna sites where they would be in danger of RF overexposure. The unit monitors the operational frequency range of all bands commonly used for mobile telecommunications. Features include a bright LED indicator of RF field strength and a loud alarm that warns of EMF overexposure

danger. The unit pinpoints and monitors active and idle antennas.



It is calibrated to ICNIRP occupational reference levels.

[www.fieldsense.com](http://www.fieldsense.com)

### Vertical Rescue System

The Deus GR33 tower escape and

rescue kit from **Deus Rescue** meets climbers' needs for escape, self-rescue and assisted rescue from towers up to 330 feet. The kit combines the Deus 3300 controlled-descent device with the Deus RTU lifting and hauling kit and other accessories to support almost any type of rescue. The Deus 3300 provides safe, reliable descent, using quadruple-redundant braking to protect against free fall.

[www.deusrescue.com](http://www.deusrescue.com)



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