The birth of an idea can just happen or be created by design. The more I thought about it, the more excited I became about having my own tower on my own property. To slide back a bit, often during the 1960’s, I would hike the two mile “trail” on Overlook Mountain to the ruins of the Overlook
Mountain House. During this period, there still existed extensive structure above the naked vertical walls that are seen today. In fact, during one of my visits, I was able to climb the inside staircase up to the cupola atop everything. What a great viewpoint. Two weeks later I heard that it had collapsed. This I couldn’t understand as I only weighed eighty pounds. Hiking another half mile was the observer cabin and fire tower. This tower was relocated from Gallis Hill, near Kingston, to its present site in 1950. During good weather, the observer would be inside the tower cabin watching for signs of smoke. Visits with him were always interesting as he pointed out features of the beautiful surrounding area: The different mountains, the Ashokan Reservoir, the Hudson River, and Woodstock. On one occasion he pointed out a black bear walking across the very trail I would be taking back to the ruins. Thanks a bunch. All these many visits to Overlook could very well be laying the foundation for the idea of having my own tower. For me, the reward of hiking was always to reach a great viewpoint, on top of the world looking out and down. From the cab of the tower, you could see everywhere. I was told that on a clear day you could see seven states. Just the excitement of being higher than normal, breathing fresher air, staring at the birds eye to eye, and almost able to reach the clouds was, and still is, a grand experience.

Restoration of a number of fire towers in the Catskills, five in fact, had already begun when I joined the team of interpreters (unofficial guides) who would take turns “manning” the Overlook cabin and fire tower. Two volunteer interpreters, out of twenty-four, would be on duty on Saturday, Sunday, and Holidays, from June through October. We would welcome other hikers and answer questions about the history of the tower (which stood
at an elevation of 3,150 feet), the Overlook Mountain house, the Catskills, the Timber rattlesnakes in the area, birds, and, if needed supply water to those who ran out or didn’t carry any. The observer cabin houses a great exhibit and interesting artifacts. When you’re inside you cannot help but think of what it was like for the tower observer to live alone, no TV, being on duty during the peak fire seasons, for that matter, the job itself.

It was at the end of my first year as an Overlook interpreter when a party was held for all the staff, maintenance crew, and all the interpreters. Near the base of the tower, as we were standing around sharing stories of the past year, I overheard a conversation whose subject caught my attention. The topic was the number of existing fire towers in the Northern Catskills and the Adirondacks which were abandoned. Well, there it was, the proverbial hundred watt light bulb came on and shone brightly. I wanted my own tower on my own property! But how? I approached our leader and organizer, Mr. Dick Voloshen, and shared my idea. He said, give me some time and I’ll get back to you. Well, I didn’t know what to expect so I put any further excitement and the idea on hold until I heard anything positive. Within two weeks, I had a name and phone number of Mr. Al Moulin of Esperance, NY, who had such a tower on his property. This information came from a tower historian of the Catskill and Adirondack Mountains, by the name of Mr. Martin Podskoch. I could not dial fast enough, the excitement was back. No answer. Later that day, Al answered and after introductions and a little history, I asked about the tower I heard he had on his property. “It’s still there in pieces and large sections all over the ground, covered with grasses.” To anyone, that sounded like a warning. I asked when I could visit and see if it’s what I’m looking for. “Sure, how about Tuesday?” This being Sunday, I
agreed to meet him at 10:00 AM, in two days; an eternity. Eighty miles later, door to door, we met and walked over to the property to see what was what. As we looked around at the piles of steel, Al shared some of the basic history of this fire tower and how it ended up on his property in pieces. Originally, the tower was erected atop Petersburg Mountain in 1940, in Schoharie County, in the Northern Catskills West of Albany near Summit, NY. It served for many years as a location for an observer to spot smoke and report what was seen in order that it could be investigated. The fire tower era lasted into the 1970’s when they were replaced by smoke detectors, greater population, detection companies which were on alert for domestic fires. In 1973, this tower was converted into a communications tower, no longer helping to guard the forests and surrounding towns. In 1999, Al discovered it was to be dismantled and lost forever to scrap. Well, he quickly approached those in charge and asked if he could take possession of the tower. After necessary condemnation and approval, the tower was transported over to Al’s property using two flatbed trucks and a crane which unloaded everything onto the grass field. Why? Al had the idea of having the tower reconstructed atop a ridge on his property which would have afforded him and all visitors a grand view of the Southern Adirondacks and the Northern Catskills. After a long survey of all the steel parts scattered all over the field covered by thick grass, Al and I looked at each other shaking our heads as to the poor condition of everything. As I recall, I asked Al what price he had in mind for all this steel. His reply, “My wife says, get it out of here”.  

It was in the fall of 2002 when I met Al and his wife Carol, so the tower had been sitting there for over three years. For various reasons, Al hadn’t moved forward with his tower project, fortunately for me. I returned
only twice before winter to the field of steel pieces to see if I could make any sense out of it all. First I discovered that this was a different type of tower than on Overlook. This one was an International Derrick (I.D.) compared to the Aeromotor on Overlook, as verified by a small metal plate attached to one long piece of steel. I couldn't help but step on pieces buried under the grass. I found many pieces of different lengths, sizes, weights, gauges, and shapes all in different states of condition, or rather, degrees of rusting. Many didn't realize that there was good steel under that rust! I began by matching similar or exact sized pieces. This was quickly turning into a rescue mission. I scoured the entire landscape, dug and pulled pieces out of the mud and clinging grasses, as I could not afford to miss a single piece. Then I noticed this pile. It was a mound of nuts, bolts, and washers all mixed in the mud. As the story goes, originally all these nuts, bolts and washers were contained in white buckets and covered with a tarp. Great. Well, someone needed buckets, so all these parts were dumped into a pile. Eight of my own buckets were used to transport this metal/mud soup to its future home in West Hurley.

Winter was upon this elevation and latitude earlier than down south in Ulster County so I had to wait until next spring to return to the recovery phase of all that steel. Was my work finished until spring? No. The eight buckets of small parts had to be rinsed five times to see clear water. Then the sorting began. Every type had different sizes. There were seven different size bolts. This indicated that they were used in specific locations as the tower was reconstructed. Most of these parts were still usable as they had originally been protected from the weather by galvanization. The threads on all the bolts were full of, you guessed it, mud. So, picture this, me sitting on...
my couch throughout the football season with a wire brush in one hand scraping the dirt out of the threads of each nut and bolt. Am I crazy yet? Some thought so, when they called me up and asked what I was doing.

However, I must admit that at no point during this entire project did I ever feel, think, or say in a negative mindset; why am I doing this? Onward! Always forward! Finally, the spring of 2003 arrived which meant more fun up North. I made my first of eight trips to the tower site and continued searching for single parts. What remained to be processed were many large sections, all of which had to be taken apart before being transported. Larger wrenches and sockets had to be purchased as these new sizes were larger than anything I had worked with before. Surprisingly, most nut and bolt assemblies “broke” and came apart with normal exertion. However, a few had to be persuaded using a hammer. I would work eight hours during each of these trips working on these large sections, which also included removing all the attached wooden treads (steps). At this time, progress was obvious as there were now many neat piles all over the field. Every trip I would carry home all the small parts I could fit into my trunk. The front of my car had a noticeable upward slant! There were stacks of wooden treads to be carried about 70 yards to the car. These treads had been soaked in a preservative in 1940 and were still strong enough to be used. Now how did I determine this? Later, down home, I tested each step by placing it atop two cinder blocks and jumping onto the middle (I live up in the woods on a hill so no one witnessed this activity). Because they were full of preservative, they were very heavy. You couldn’t carry more than two at a time for the entire 70 yards. All the time throughout all my visits in 2003, in the back of my mind was the question of how, not if, was I going to put all this back together again. A true
Humpty-Dumpty question. During my last two visits, I again checked the grounds for any parts I could have missed, and finished my final deconstruction of one set of stairs and realized I was finished with this phase of all this fun. I loaded all I could into my car and went home.

I live on Route 28A in the town of West Hurley, NY, on the south side of the Ashokan Reservoir where I “grew up” since 1955. Up and back of my house is all wooded land which crests along a three mile ridge and is now named “Ashokan Ridge” as of 2011 (this took me fifteen months to accomplish). Anyway, miles of trails take you all over this ridge and down into a valley which extends all the way to the spillway on the reservoir. These trails were cut through the woods to convey the tons of quarried bluestone out and to the docks along the Hudson River and to the sidewalks of New York City. Atop this ridge as a child, my sisters and I would do what kids do, climb trees and chase each other. We called this area Mountain Top, where my campsite and fire tower are situated today. Back then I remember catching a small glimpse of the reservoir from ground level, and small portions of the Catskill Mountains through the trees. In 2000 I built a small cabin on this ridge with the idea of making it part of a campsite, which is now comprised of the cabin, a firepit, one picnic table, and a ladies room. All this served as a great venue for parties, campfires, music, ghost stories, and friendly conversation while staring into the fire.

Now it was time to choose a location for the tower. I walked back and forth along a 40 yard stretch of the ridge line considering all kinds of factors in determining the best location to build the tower. I finally narrowed it down to two sites, then one. It would be situated just behind the cabin, surrounded by tall white pines. Only two small trees would have to be
removed and the site would be clear. Next on the long list was to decide where the piers would be located. Not knowing what was under the surface, I carried a heavy steel crow bar up to Mountain Top and began thrusting this bar into the ground vertically in the general areas where the piers would be situated. I was expecting bed rock or magma, whichever came first. During this time of good fortune, I struck bedrock at all four locations, with the deepest being 1.5 feet. I had obtained a copy of “Basic Steel Tower Plans of 1937” which furnished the necessary dimensions between the piers. I found my shovel and started digging into all this hardscrabble. My attitude at this time was, you finish one pit, only three to go; finish two and you’re half way there, etc. After all this digging, there were four bedrock squares staring straight up, each about 4 foot by 4 foot.

With all this progress at home, it was time to prepare the tower for transport to its new home. It was the beginning of the fall season when on a Thursday, I traveled the 80 miles to Esperance once again and carried as many pieces as possible in four hours down to a spot nearer the road, like a pre-staging, for in two days I had planned the Big Haul. I had reserved a 24 foot box truck to do the transfer; it just had to be loaded. I drove the truck up to Esperance with two of my friends, Dave Zygmunt and Nick Minglis, and for the next six hours loaded all that was remaining. Driving away from that site was another milestone. We could feel that we were many tons heavier, and it wasn’t because of our lunches. Our trip home was uneventful except having to stop for gas.

I must mention that Nick accompanied me on one of my earlier trips and helped re-bucket the hardware and helped carry pieces down the 70 yards to my car, with no verbal opinions (although later on I found out what he
initially thought of this project). Also, I must mention that on another trip, my girlfriend Rita had to come along to see in person what I was up to. After seeing what Al and I had viewed at our first meeting, she thought it but said nothing until much later, “Are you crazy?” She helped carry some very heavy metal plates down to my car.

In front of my home is a large, flat field. This is where we unloaded all the remaining pieces of steel. The larger, heavier, and longer pieces were placed on saw horses and ground boards so they wouldn’t get lost in the grass again. The next morning I looked out through the window and was satisfied to see an entire tower in pieces.

Because of the varied condition of the metal, I decided to search for the best products which would protect the steel in the future from nature’s worst. All of the pieces carried years of white oxidation and rust. A wire brush and elbow grease removed both from the surface of the steel of which there was a great deal to clean. After this brushing, a wash down with mineral spirits cleaned the metal surface which was now ready for a metal etching primer. Just applying the primer made a vast improvement in the appearance of every piece. After the primer was dry, I applied a watery aluminum weather proofing paint over the primer. Each piece was screaming, thank you! Every piece looked brand new. Now, all I had to do was repeat this process over 300 times and the tower would look as if it came out of the showroom. I located a tower which was a twin of mine west of Watkins Glen, NY, called Sugarhill. I needed information, so I climbed all over the tower for three hours and photographed all the important connection points and part numbers which were stamped into the metal when manufactured. By doing this, I was able to create my own construction
drawings, as there were none to be found. What also helped, I noticed that as the tower rose vertically, the parts and gauges became shorter and lighter.

While all the parts I had painted were drying, I returned to the four faceless pier pits with a generator which would supply electric power for a drill. I needed to drill three holes, 10 inches by ¾ inches in a triangular pattern into the bedrock at each pier site. Into these holes went 5/8 inch rebar with anchoring epoxy. The vertical height of the rebar was to be 80% of the height of the pier. With help from Patrick Mayone, we were able to determine the height of each pier by using a transit. This was necessary so that the tower would be level. Additional rebar was attached to the vertical rods in a horizontal pattern which made the pier structure stronger. To contain the cement for the pier shape, a sona-tube was used which is made of layers of cardboard formed into a tube. I cut each tube to the exact height of the pier. Now I had to find a volunteer to help mix cement. On a Saturday morning, Nick replied, “Let’s do it”. I hooked up a hose line from the house to the mixing site 375 feet away. While I’m on the subject, does anyone need a hose? One gallon of water mixed with one 80 pound bag of cement was the formula. Each bag came to the site using a converted wheelbarrow one at a time, which meant 34 trips. Each of us had a black rectangular mixing container and a garden hoe. After combining the cement and water, we mixed until it was the right consistency and shoveled the cement into the sona-tube which had to be positioned correctly on the bedrock. Then I “sticked” the cement to remove any air pockets. We mixed more cement until it filled the sona-tube. The cement covered all the rebar plus two 24 inch by 1 inch anchoring bolts which would secure the tower to the pier. One done! The first pier completed was the south pier. I positioned the piers
North, South, East and West so no one would get lost going up or down the
tower. We still had time and energy, so we poured the east pier. When
finished, Nick carved “2004” into the top surface. Two done!

There wasn’t any way a motorized vehicle could reach the campsite
plateau, so most of the long lighter pieces were walked up on my padded
shoulders. I used a wheelbarrow to transport the numerous smaller pieces
and stored all that could fit inside the cabin. Now for the heavier pieces, for
example, the base leg weighed in at 144 pounds, I used a four wheel garden
cart and pulled these pieces up the hills and positioned them on saw horses
until they were needed on “Assembly Day”. Another part of this project was
to paint the head of each bolt, and all the washers and nuts, silver. I couldn’t
find anyone willing to help, so I set up a one man assembly line.

As all of these parts were drying, Nick and I set up as before, the
pouring of the North pier which was taller than the East or South piers,
therefore more cement. Three done! Afterwards we both agreed that the
west and final pier would have to wait for another day. Why such detail you
ask? If you were ever to climb the “Knightower” you would have an idea of
how it was all put together and know that it’s not going anywhere. I hope all
who are interested will visit and enjoy the experience.

Another milestone is rapidly approaching, for as soon as the west pier
is finished, I can start building vertically. Four days later, all this came true
as we poured the west and tallest pier. Four done! Two days after each
pouring, the sona-tubes were cut off exposing all four sturdy sculptures.
At this time, all finished pieces for the first section were on site including seven buckets of painted bolts and equal the number for washers and nuts. Ready to go!

I knew I had to perfect a system of raising the legs. I decided to begin with the south, using three ropes, one for pulling and two for balancing the leg left and right. I found a pine tree in the direct line of pull. Using a come-along, I then raised the first piece into position atop the pier and bolted the leg to the threaded rods protruding from the pier. Time to take a picture. All this was repeated for the base leg in the east. The next step was to attach the two diagonals which made an “X” between the two legs. What determined which bolt to use was dependent upon the size hole and the total thickness of the pieces being bolted together. What fun! Then the stiffener struts were bolted on between the legs and diagonals. The north and west legs were more difficult as I had to pull from down below the ledge, again with three ropes and a come-along. With all these pieces bolted together, the main struts were next. They went from the top of each leg to one another. I hoisted the first strut up and as I went to bolt it on, it didn’t line up. I determined that I had to loosen all nuts and bolts to allow the structure to become square, then tighten everything again after all the struts were attached. Well, this worked and was very important that it did as there were no further problems in building vertically. Now the heaviest pieces had to be installed, the stair stringers. It was necessary for the three of us, Nick Minglis, Gary Feldman, and me, to carry all six stringers up to Mountain Top. A stringer is the outside support piece on both sides of the steps. With rope and pulley I raised one end of the left side stringer into position and bolted it to the box strut. I repeated this for the right side stringer. The box
struts are bolted between the main struts at an angle. Seeing is believing and understanding! Now I was ready to install the steps, but first I had to build a base for the lower ends of the stringers. When all these steps were positioned and bolted, I installed the platform boards which allow you to turn and climb the next set of stairs. The first section was complete except for the handrails. They would be in the way when carrying pieces up and down the stairs.

Again winter was upon the land so “work” on the tower site was halted until the spring of 2005. I still had more work to do on more bolts, nuts, and washers for the next two sections. What happened next halted construction altogether until late summer of 2005. In early spring, Bob Berman strongly advised me to obtain a building permit before going any further. The town of Hurley could demand that I take down what was already built. I submitted an application and appeared before the planning board and apologized which allowed us to move forward in the process of obtaining the required building permit. I originally knew that I needed a permit, however, I didn’t care for my very first conversation with the building inspector so I proceeded anyway, until now. At each monthly meeting they required more information. Eventually I was referred to the zoning board because the total height of the tower would be forty-three feet, eight feet more than their maximum of thirty-five feet. In time I was granted a variance to build a structure forty-three foot high. Now here comes the kicker. Because I was constructing the tower in a 2.5 acre zone, and not the 4.0 acre zone nearer to Route 28A, I did not need the approval of the planning board. The next day I had my building permit.

It’s already the fall of 2005 so I started to legally build the second section. It would be different. Every piece and every nut and bolt had to be
either carried or hoisted up to platform level using ropes and pulleys. What platform? The ground around the base of the tower was my platform from which I built the first section. Now I had to build a platform on top of the 1st section. From a local sawmill I ordered twenty pine boards which were twelve by two inches, and fifteen feet long. I raised four steel legs, not being used, onto the top of the first section. These steel legs would be the supports for the planks which were laid out over the steel legs. Voila! A platform!

The second section legs were the first to go up using the same trees used in raising the first section legs. When each leg reached the right angle, the two legs were joined with a metal splice with all the bolts tightened. The remaining assembly of the second section was the same as with the first section. However, when it came to hoisting the two stair stringers, I saved that for another day. The next day, feeling energetic, I was able to raise and bolt the two stair supports to their box strut. I spent the remainder of the day installing the treads onto this second set of stringers. Now I had a complete climbing and hauling path up to the top of the second section. Try to follow this next step. Next, I needed the platform presently on top of the first section, on top of the second section, so I could build the third section. The only way to accomplish this, after much thought, was to move all the pieces of the platform down to ground level and then hoist everything up to the top of the second section. This was made easier with the help of Stuart Grant, his wife Helene, and their son Steven. Then with the help of Dan Spencer, we raised all the platform boards. Progress!

The legs for the third section were “light” enough to be carried up on my padded shoulders rather than using that difficult garden cart. The remaining pieces were on site inside the cabin. The third section legs were
easier to raise and connect. On one occasion, Stuart Grant and I raised the legs from the platform, which he then held in place while I bolted the legs together. Now it's a repeat of the assembly of the two lower sections: legs, diagonals, stiffener struts, main struts, hangers, box struts, and the third pair of stair stringers and installed treads.

When I originally inventoried all the steel pieces, I found several (thirteen in fact) which were unusable. Benson steel in Saugerties fabricated the replacements. Also, the lower stair stringers had to be fashioned from four shorter stringers that I wouldn't be using. These were welded together by Lee Denman. The platform boards were delivered by John Shultis. I don't want to miss giving any of the credit due to those who had helped.

Since I was only partially reconstructing this tower, I had to design a viewing deck which would support more than one person. I built this deck support down on the field. I situated the main struts together with the box struts all bolted together which simulated their eventual positions on the tower. I began by cutting extra steel pieces using a metal cutting bladed hack saw, and bolting them together which formed a framework of support for the deck boards.

Next came a moment I will never forget. With all this fabricated steel installed, I hauled two platform boards up and onto the deck level. I crawled off the extension ladder onto these two planks. From my knees I stood up slowly, as there was nothing around me except a forty foot drop. I panned the view for the first time. It was beyond any expectations. I returned to the platform and decided, with increased enthusiasm, to finish this project so that many others could enjoy what I just witnessed: the Ashokan Reservoir
spread out along the base of the southern Catskills; the Shawangunk mountains; and the Mohonk Mountain House. A taller hill close by obstructs the easterly view towards Kingston. After some time I discovered I could see the Olana Estate, near the town of Hudson, some twenty-five miles away. It was time to get back to work.

With all the steel supports in place, all the vertical supports for the guard rails bolted onto the main struts, all that was remaining (it’s never finished) were the deck rails and the deck boards. With all this completed I still had to address the fact that all visitors were still climbing on hands and feet up to the deck. I started installing handrails from the first section up, which instantly turned all the monkeys back into people. For security, I added a locked gate partly up the first set of stairs. Around the entrance to the deck on top, I built safety rails, as all who came to visit were bothered by the square hole.

With all the construction completed, I called for the building inspector. Upon his inspection, all was satisfactory so my certificate of occupancy was assured in July of 2006.

Al and Carol Moulin came to visit after I informed them that it was “finished”. They were overwhelmed to see the tower standing once again. On the top deck, Carol called me over and whispered, “You know what you have done, don’t you, You have built Al’s dream.”

THE END

Barry Knight
April 2012