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McNeil Consulting Helping To Preserve History – Again

Our roofing consultants have been asked to help with a historical building project in Brigham City. The Box Elder Tabernacle is crowned with a metal clad center spire, which in recent years has been leaking extensively and endangering the organ which occupies a chamber directly below the spire. The owner called our office looking for help and a solution to the issue. After several discussions we determined that the best way to prevent water from



Box Elder Tabernacle



entering the building through the steeple would be to waterproof the structure beneath the metal. With as many joints and bends and seams as the tower has it is impossible to keep them all water tight.

Our solution involves carefully removing all of the existing metal wrap so that we can recreate the unique details of the tower. We will also provide some structural reinforcing to the wood framing that will be exposed. Once the structural upgrades have been completed the wood framing will be wrapped in a waterproofing membrane. That way any water that penetrates the metal skin will be blocked by the waterproof layer beneath. The finishing touch will be to re-clad the exterior with an embossed, pre-finished metal wrap, which will match the existing tower, including all of its intricate columns, casings, dentils and scalloped metal roof covering.



The tower is currently surrounded by scaffolding as the contractors are busy at work. When the project is complete we hope people will look up and ask, “What did they do?” That is a perfect sign that the historical preservation has been done right.



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Preserving history with laser scanning

Laser scanning technology might sound like something out of a science fiction film, but it's a real-world tool that provides a non-intrusive means of gathering vast amounts of data about specific buildings and structures. Laser scanning technology accurately captures all available visual information of a site or building, providing our clients with valuable visual insights.



The scan data collected would then be used to create an accurate as-built 3D model of the building. Thus giving the design team the ability to literally understand foundational and structural challenges. This makes laser scanning a valuable tool in protecting historic buildings for years to come.

If you feel sick for longer than a few days, you visit a doctor, right? At your appointment, the nurse will take your temperature, and your blood pressure, they'll ask you a series of questions and then look in your ears, eyes, nose and throat. Eventually, the doctor sees you, and if necessary, orders further tests including X-rays, PET scans, etc.

As structures like bridges and buildings get older, their integrity comes into question. Unfortunately, you can't take a building to the doctor and have it examined, but with laser scanning technology, we can provide the next best thing: a clear picture of what's going on with a

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Food Alley: A Dining Aficionados Paradise

Over the course of the last 35 years, we've had the opportunity to work on hundreds of civil engineering and survey projects, but Salt Lake City's proposed "Food Alley" is a job unlike any other.

McNeil Engineering's Civil Engineering and Survey Departments have completed engineering designs and an ALTA/NSPS Land Title Survey for this project.



Rendering of Salt Lake City's Food Alley

With a grand opening scheduled for sometime in early 2019, the countdown is on for our civil engineering and survey teams to complete the 48,000-square-foot job at hand.

Here's a closer look at the work our civil engineering and survey crews are participating in:

Sapa Investment Group is responsible for the development of the first Food Alley in the entire state of Utah. This \$10 million investment into the city's commercial district will add more than 700 jobs and inject millions of dollars into the downtown area, but "Food Alley" is so much more than a cute name or gimmick.

Once the facility is complete it will be located at 800 South and State Street and span nearly 50,000-square-feet. And while the scope is impressive, what's really exciting is the businesses that will be housed in this space: restaurants — 17 of them.

Currently, an Italian restaurant, sushi bar, ramen shop and beer bar are committed to food alley, but more eateries are expected to hop on board in the coming months.

In addition to a wide variety of dining options, developers hope to use the location to attract traveling chefs from around the country as well as local artists and entertainers. When complete, Food Alley will have a designated space for these guest chiefs to showcase their work for several weeks at a time.

McNeil Engineering is honored to play a role in this great project. We would like to congratulate Mai Nguyen and Sapa Investment Group for developing Salt Lake City's one and only Food Alley.

FUN FACT

How long does it take to climb Everest? Most expeditions to Everest take **around two months**. Climbers start arriving at the mountain's base camps in late March. On the more popular south side, base camp is at around 17,600 feet and sits at the foot of the icefall, the first major obstacle.



8 Construction Trends to Watch in 2018

After a robust 2017, commercial construction companies are anticipating an even stronger 2018. Let's take a look at some of the top trends to keep an eye on for the commercial construction industry in 2018. In 2017, we saw construction spending hit an all-time high and the industry is expected to carry that momentum into 2018.

Resiliency takes center stage

Resiliency is set to be one of the construction industry's watchwords for 2018 after last year's onslaught of hurricanes, heat waves, cold waves, flooding, tornadoes and wildfires.

Short on labor — still

The construction industry will continue to contend with a limited supply of skilled craft workers. Officials in various parts of the country have used words like "dire" and "scary" to describe the availability of qualified labor as younger individuals resist construction as a career option and more baby boomers retire.

Offsite construction on the rise

For much of 2017, offsite construction and investment in the delivery method was a key trend. Offsite startups like Kattera and FullStack snagged millions in funding, while a growing number of U.S. contractors partnered with pre-fab companies to fold the method into their operations.

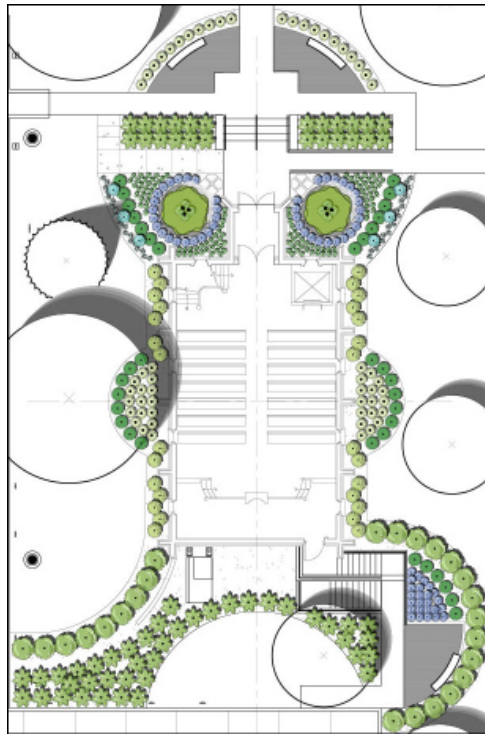
Investment up for public transportation

Former transportation secretary under President Barack Obama, Anthony R. Foxx, talked at Autodesk University in November about the state of infrastructure in the U.S. He said that focus now

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McNeil Landscape Architecture Broadens Historical Salt Lake Chapels Appeal

The White Memorial Chapel, located just south of the Utah State Capital in downtown Salt Lake City, Utah, was originally designed by Obed Taylor in the early 1880's. The current building is a reproduction erected in 1980 in the Gothic revival style and incorporates many elements from the original chapel, including the steeple (the first in Salt Lake City), stained glass windows, doors, benches and the pulpit.



White Memorial Chapel Landscape Design Plan

In 2018, the McNeil Landscape Architecture & Site Design team, led by principal Landscape Architect Scott Schoonover, was commissioned by the State of Utah Division of Facilities Construction & Management (DFCM) to design a landscape and irrigation remodel of the White Chapel grounds. The upgrades incorporate drought-tolerant xeric plants and species that are visually pleasing and ecologically friendly, new water-wise planting beds featuring a drip system, and remote rain/freeze irrigation sensors, which save water and money. This inventive symmetrical landscape design also includes decomposed granite walkways with concrete

seating areas that enhance and juxtapose the

chapels unique gothic architecture, adding to the picturesque setting—frequently used for weddings.

Altogether, the renovation produces a present-day organic design that enhances the chapel and encourages picture taking, while also creating a meditative environment for visitors to pause and enjoy the charm of the White Chapel and its beautiful surrounding vistas.



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is on integrating existing infrastructure because end-to-end systems already are in place.

Technology and automation tackling jobs

At Autodesk University in November, Autodesk CEO Andrew Anagnost grabbed the automation bull by the horns, saying, “Instead of worrying about automation taking our jobs, let’s have a conversation about where automation can take us.”

New policy regulation impacting businesses

The House and Senate approving President Donald Trump’s tax overhaul capped 2017. Although not construction-specific, it certainly will have a significant impact on businesses.

Giant companies expanding spaces

While last year saw the addition of new high-tech campus facilities from the likes of Google and Apple, 2017’s hype around a second new North American Amazon headquarters will likely fuel increased momentum for similar expansions in 2018.

AR/VR, wearables and drones transforming jobsites

In the face of mixed-reality headsets, such as Microsoft’s HoloLens, and wearable devices, such as Tri-ax’s Internet of Things-enabled sensors, it’s a safe bet that high-tech wearables and augmented and virtual reality will continue to infiltrate jobsites. Two of the greatest benefits these technologies offer are safety and efficiency — both areas where the construction industry tends to struggle.

To read the entire article click here:

<https://www.constructiondive.com/news/8-construction-trends-to-watch-in-2018/514284/>

Employee Anniversaries this Quarter

Employee	Date Started	Years of Service
Dan L Schaugaard	4/21/1999	19
David B Draper	5/22/2000	18
Walter C Travis IV	4/26/2006	12
Jacob H Felshaw	4/7/2008	10
Elizabeth A Draper	6/7/2010	8
Tevi Lawson-Avla	5/7/2012	6
Becky Scholes	5/6/2013	5
Noel A Enriquez	6/4/2014	4
Greg Ostermiller	05/01/17	1

Hideout Canyon

When you hear the name Hideout Canyon you probably picture something from an old John Wayne or Clint Eastwood western movie. You may even imagine Butch Cassidy and the Sun Dance Kid or the Wild Bunch gang sitting around a campfire sipping that hot cup of coffee while waiting for the posse to move past. You might be asking yourself just how many outlaws have hid in this canyon over the years.



Rendering of Settlement at Hideout Canyon

Actually, Hideout Canyon is a luxury residential community located close to Park City, Utah with majestic mountain views and overlooking Jordanelle Reservoir. One of the developments in this community is called Settlement at Hideout Canyon. According to their website it is a “fresh spin on modern mountain living.” So, no Butch Cassidy or the Wild Bunch Gang, just luxury living at its best. The Settlement will consist of three buildings with a total of 92 spacious 2 and 3 bedroom apartments.

McNeil Engineering’s Structural Engineering Department completed the structural engineering design for the project.

To learn more about Settlement at Hideout Canyon you can visit their website at:

<http://www.hideoutcanyon.com/>



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Netherlands' 3-D printed bridge gets installation date

After three years in the making, MX3D's 3-D printed, stainless steel bridge is set to be installed in 2019. The bridge, designed by Joris Laarman Lab, will span Oudezijds Achterburgwal, one of Amsterdam, Netherlands' oldest canals.



MX3D used in-house designed software and four industrial robots to print the bridge over a six-month period. The span measures 41 feet long and 20 feet wide and weighs nearly 10,000 pounds.

The bridge will now undergo testing of its structural integrity prior to installation.

**NEVER LET A
BAD SITUATION
BRING OUT THE
WORST IN YOU.
BE STRONG AND
CHOOSE TO BE
POSITIVE.**

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buildings'. From piping and wiring to roofing and wall integrity, if it can be seen laser scanning can provide a clear and comprehensive picture of everything that's going on.

Historic buildings that we have helped preserve

The laser scanning and survey team here at McNeil Engineering have had the pleasure of working to preserve a number of historic structures both here in Utah and around the world. Below is just a sampling of historical building McNeil Engineering has scanned.

- Masonic Temple – Salt Lake City, UT
- Garfield School – Salt Lake City, UT
- Casino Star Theater – Gunnison, UT
- Capitol Theater – Salt Lake City, UT
- Mumbai Mosques – India

[Click here to see a video of scan data collected of the Masonic Temple](#)

Laser scanning case study: The Psycho Hotel in Phoenix, AZ

One of our recent historical preservation projects involved the historical Barrister Place building in downtown Phoenix. This incredible building has a storied past and opened in 1915 as the Jefferson Hotel. At the time of its opening, The Jefferson Hotel was the tallest building in the state of Arizona, and became so famous that Alfred Hitchcock used it in the beginning of his classic horror movie "Psycho."



Barrister Building

We used 3D scanning to scan the exterior of the structure for our engineering partner in Phoenix, Hubbard Engineering who was retained by the City of Phoenix Economic Development Agency. Our use of 3D scanning created a highly accurate representation of existing conditions of the building for historical documentation prior to renovation work and future expansion.

Ultimately, our partner was able to use the information that we provided to make sound construction and safety decisions, a process that saved time and increased efficiency.

For more information about our 3D Laser Scan team and services, we invite you to visit our website. <http://mcneilengineering.com> or give Mike a call



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