Fort Wayne ENGINEERS' Club

Engineers' News **December 2022** **Vol. 85 No. 3**

www.FortWayneEngineersClub.org

December Social

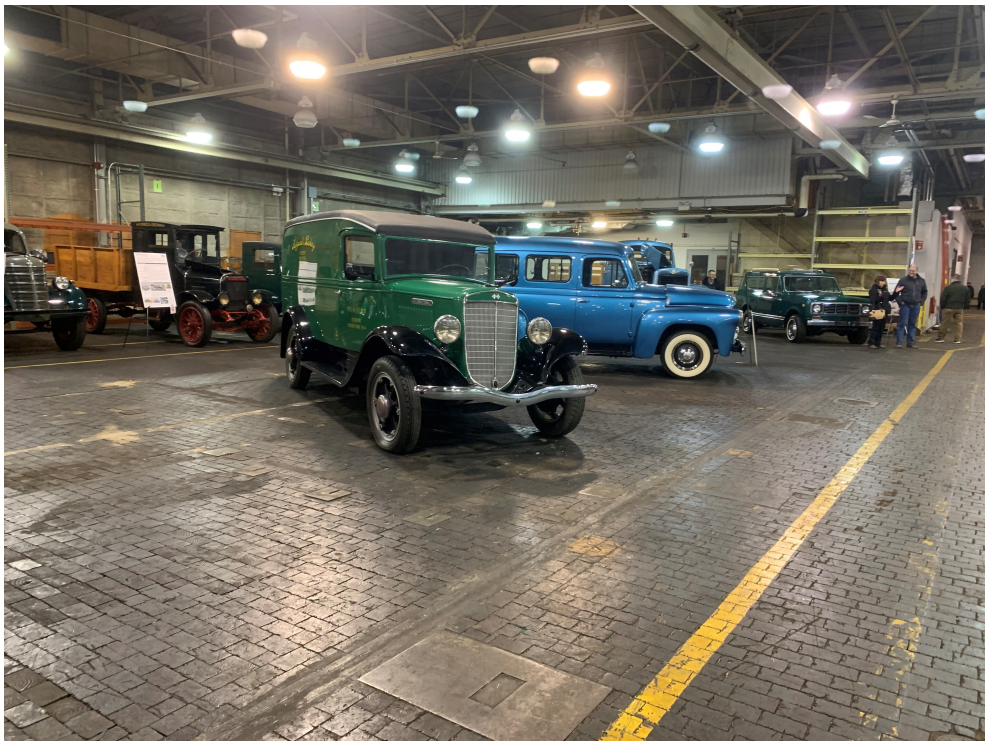
Harvester Homecoming

This year's event will again be at the former International Harvester Engineering Center - 2911 Meyer Rd and is hosted by the Harvester Homecoming organization

When: Thursday, December 1st 6:00 PM to 9:00 PM

Website: https://harvesterhomecoming.com/

Info: Pizza, snacks, and non-alcoholic drinks will be provided at the club's expense. Please join us for a fun night of eating, socializing, and touring the old International Harvester building as well as the many unique old trucks that are on display. **Admission is free!**



October Meeting #1 Summary

Indiana's First Skyscraper - The Lincoln Tower

Thursday, October 13th
The Lincoln Tower
116 E Berry St Fort Wayne, IN 46802

There was solid turnout on a clear Fall afternoon to explore the Tower and linger on its observation deck, effectively the roof at 23 stories above street level. Only the PNC and AEP buildings are higher.

Groundbreaking for a Lincoln National Bank and Trust building occurred in August of 1929, with construction continuing through the winter. We repeatedly pondered old-fashioned work on scaffolds at windblown heights. Completion coincided with the Depression and then faced World War II. It remained the tallest building of any type in Indiana until 1962 and in Fort Wayne until 1970. The skeleton is boxes of I-beams. The skin is Indiana limestone trimmed with gold leaf, granites, bronze, glass, lead, marble, and terra cotta. It is not perceptibly moved by wind, feeling rock solid.

For more, click here to read the full summary

October Tour #2 Summary

Thursday, October 27
Metal Technologies
1537 Auburn Dr, Auburn, IN 46706

11 Club members toured Metal Technologies in Auburn Indiana on Thursday October 27. The tour started in a conference room where we learned a little about the process. They produce two kinds of iron – ductile and gray. Ductile iron is a graphite-rich cast iron and has a higher strength durability than gray iron. Gray iron is the most common cast iron and is typically used for parts like disk brake rotors. Most of their raw material is from scrap, though some virgin pig iron is also used. The melting process is done in large coreless induction furnace. The induction heating involves switching the magnetic polarity of the scrap metal 120 times a second which actually causes the iron to melt itself down. That process requires a lot of electricity and as such Metal Technologies consumes nearly half of all Auburn's electrical needs.

For more, click here for the full summary

Items of Note

FWEC member Rod Vargo is Chair of the 27 year-old and all-volunteer Utility Advisory Group, which formally advises Fort Wayne City Utilities and often City Council. Your comments are welcome at rodvargo@comcast.net

Volunteer Positions within the Club

Membership and Contact Chair: Open
Northeast Indiana DiscoverE Chair: Open

Let us know if you're interested!

Volunteer

General Club Info

Fort Wayne Engineers Club dues are $0. Donations are welcome but strictly voluntary. In recent years, club funds have helped support Discover-E, the Regional Science and Engineering Fair, annual bridge building contests in schools, academic awards, networking events, mentoring, our website, and facilitating free tours.

Please see FortWayneEngineersClub.org, LinkedIn, or Facebook for updates on current Club activities, other news, and past newsletters.

Those participating in activities or hosting tours through FWEC do so strictly at their own risk, including disease exposures. Participation in club events is voluntary, free, nonprofit, and solely for the benefit of participants and the community at large. Anyone with an interest may participate unless restrictions are specified for specific events, such as minimum age or minimum safety attire.

Interested in hosting a tour?

Contact us today!

Host a Tour

FWEC Roster for FY2022-2023

President: Nate Berndt
Vice President: Nathaniel Wisel
Secretary: Marna Renteria
Treasurer: John Magsam
First-year Board Members: Ryan Stark, Ed Woodward
Second-year Board Member: Mike Magsam, Rod Vargo
Third-year Board Member: Dave Gordon, Bert Spellman

Editor of Engineer News: Pending
Membership and Contact Chair: Open
Northeast Indiana DiscoverE Chair: Open

Job posting and resumes listed

The club accepts both job openings from around the area, as well as resumes from those seeking employment. Please submit these to the following email address: Info@FortWayneEngineersClub.org

Advertise in the Engineers' News

The FWEC provides advertising space within the Engineers' News.
Advertisements are only $10 per issue and limited to ½ page of content.

Advertise Your Business

October Meeting #1 Summary Continued

The design is three sprawling stories underground which extend four or more stories aboveground. The tower, almost a spire, rises from the front of that base and tapers with height. Hard dimensions can be viewed online in the County Assessor's Property Record.

A saving grace has been almost no water intrusion for over 90 years. (Wikipedia has an interesting financial and ownership history.) Our hosts, Tippmann Properties, are still working and investing hard to keep this venerable maintenance-intensive building viable. Fortunately, it flanks the Allen County Courthouse in an ideal manner for attorney offices, and Tippmann has a parking structure attached at the fourth floor level. Their Old National Bank tenant appears a key partner.

Heating was originally coal-fired boilers three floors underground, with a roughly 24 inch chimney extending up through the observation deck. Coal had been hand shoveled and boilers watched around the clock. (Nothing said about ash removal.) The lowest level still supplies chilled water, piped through most of the building for air conditioning. Lower, middle, and upper sections of the tower have separate air exchange systems. The modern windows open.

Much of the second level underground is a retired vault for the original banking, safe deposit, and securities businesses. It is a walk-in safe approximately 50 feet long by 25 feet wide with a classic combination-lock steel door at each end. The doors are machinist's masterpieces weighing 48 tons and about three feet thick (concrete filled?) Six pins engage the front doorframe and 20 pins grasp the back. Two smaller vaults are elsewhere in the building.
The first floor, at ground level, includes the main entrance and monumental art deco lobby where teller's windows once managed old-fashioned routine banking. There are no stairs to discourage or impede customers using this level. The lobby suggests a German cathedral appropriate to the building's intent (per Wikipedia) and customer base as a monument to local immigrant commerce and industry. The public access part of the banking floor is nearly a half city block deep, surrounded by a second story balcony designed for rows of office desks and supervisors (overall, 85' wide). Floor and walls glisten with time worn marble, much of it Italian travertine. Vertical supports and lines slowly arch overhead, blending into a 3rd story vaulted ceiling (110' long) with extensive golden, silvered, painted, and plastered motifs. Each end of the vault has murals and statues suggesting a basilica. Sun lights the vault through translucent clerestory windows on the west side. Matching windows on the east are now offices overlooking the lobby.

This lobby is superbly repurposed for the current Old National Bank's modern investment offices and business/personal advisors. The original and repurposed designs seem seamless and enhance the workspace, rather than distract. Noise or conversations are muffled.

Recently renovated elevators serve 3 stories underground and 19 stories above. A further 3 stories and observation deck have only stairs. The elevator shafts receive natural light, so the old elevators likely did as well. Across from the elevators, formal marble staircases reach many levels. A deli with original soda fountain is open to the public.

Many floors are nicely redone as needed for various tenants. Others are as vintage as 1960's with features such as dropped ceilings. An experimental floor is being refurbished to reflect the building's original details and functionality. These include copious natural light, seemingly good old-fashioned air circulation, and visual sense of being in an important place (indoors and out).

The 9th through 17th floors taper to as little as 3100 square feet per floor. Each felt inviting due to venerable architectural arts such as flexible flow patterns and readily available windows. We were impressed at the moderate underlying rents per basic square foot.

The 20th floor and above are served primarily by utilitarian stairs and hallways about 3 feet wide, with perhaps ten original dark-stained wooden doorways here and there leading to spaces such as elevator hoists/relays and separate staff facilities for men and women. Most large buildings required full time staff(s) until about 1970, now largely automated.

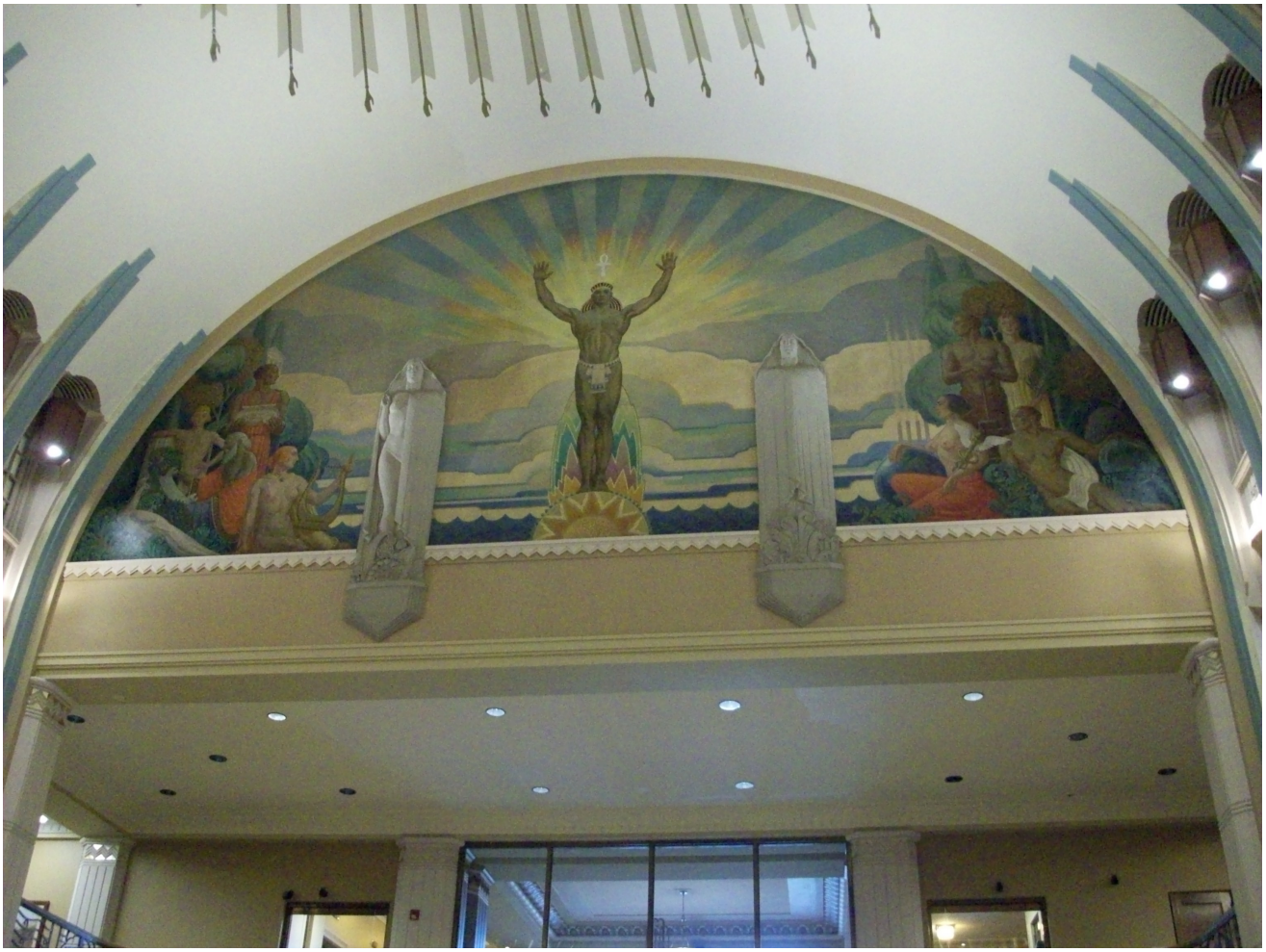
Water pressure was originally provided by an open-topped tank still on the 22nd floor. Large electrical and phone cables were needed in the 1920's, requiring space and access that have facilitated changes over the years. (Tours with AEP or architect MSKTD indicate electrical specs are a third less than 1970.) Hallway mail chutes seem useable, but the basement mailroom is likely long gone.

The observation deck has rain drains, yet another system running through the building. Also penetrating the deck were two 8-inch plumbing vents and the heating system chimney. Thick rubber tiles protect the deck's water barrier and provide solid footing for public access to an experience that exceeded expectations.

The center of the roof deck has thick boilerplate type steel riveted into a conical structure which supports an aircraft-warning beacon, crown structure, and flag pole. A mid-century 30-foot AM-FM/public-safety radio tower was removed, leaving a flagpole as spire (and lightning arrestor?). The vintage rotating beacon was retired to avoid dazzling people in the PNC building.

Everything is remarkably well maintained. Retaining old buildings requires an enormous amount of work and expense. We deeply appreciated this tour and came away impressed by the long term commitment of Tippmann Properties, their staff/our hosts, Old National Bank, and other tenants. Keeping this building viable is as much a public service as a business venture. A job well done.

Rod Vargo



October Meeting #2 Summary Continued

Once melted, the iron is transferred into a overhear tram car (see picture) and from there the clock starts ticking. They only have 13 minutes to finish pouring once the iron is transferred out of the furnace, so the tram quickly makes its way to one of four separate sand-casting lines. They process roughly 30 tons of iron per hour in this fast-paced environment. Common castings include brake rotors and drums, as well a small engine crankshafts and various housings. With 80% of all durable goods requiring a casting, there is a lot of business to be had and Metal Technologies had done a great job in diversifying their product line to help survive the occasional down-turn in the automotive industry. This tour was extremely interesting and gave me a new appreciation for all of the casting products that are part of our daily lives and we don't even think about. Many thanks to Doug Weaver – our tour guide and plant manager – as well a club officer Bert Spelman for setting up the tour.

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