White County Highway Garage Project Development and outcomes Reynolds, IN





### **Presentation Agenda**

- Project Development History
  - What we replaced and why
  - The project delivery method
  - Site selection criteria
  - Site preparation requirements
  - Building & facility design Criteria
  - Facilities Development Specifications and Costs
  - Project results and operational benefits gained



# Why a new Highway Garage Campus and Operations Facility?

- The County's Highway Department had machinery, equipment, and materials scattered over 7 different sites, mostly unprotected from the elements
- Equipment had increased in size from the 1950s to where it could not be **safely** and adequately serviced and maintained
- With more than 30 employees, there was no sufficient space available to hold training and employee sessions
- The garage had simply outlasted its useful life



# White County Highway Departments Scope of Responsibility and Road/Asset Inventory

- 950 miles of roads to maintain
  - 550 miles hard surfaced
  - 400 miles stone surfaced
- 165 bridges
- 28 plow routes
- Multiple campgrounds
- 2 lakes
- 1 amusement part
- 30,000 cottages occupied throughout the summer
- 520 wind turbines (50 more in 2023)
- 4 solar farms under development, totaling 10,000 acres



# White County Highway Departments Scope of Responsibility and Road/Asset Inventory

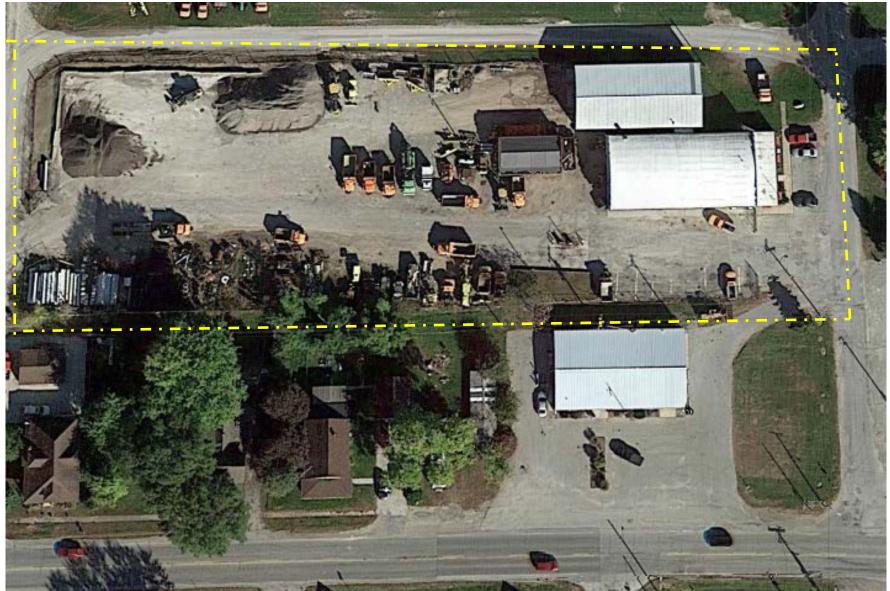
- 2022 budget = \$4.4 MVH
- 2022 windfarm road replacement = \$3.3M
- 2023 solar farm road and culvert replacement = \$6.8M
- 2024 wind and solar road replacement = \$?.?M



# Why a new Highway Garage Campus and Operations Facility?









White County Highway Garage Campus Pre-2021 Originally constructed in 1955 on 2.5 acres

# **Project Delivery Method**

- White County chose to utilize a consultant/construction manager delivery system. In this capacity, Garmong:
  - Worked with the Commissioners and Highway Superintendent to identify the most appropriate site from which to serve the County
  - Assisted the County with the selection and engagement of the design professionals
  - Directed the project development activities and assumed full responsibility for advancing the project
  - Developed and updated budgets at intervals throughout the design process to validate that designs could be constructed within budget
  - Advertised and bid the project on behalf of the County
  - Managed the contractors/vendors through the construction process
  - Provided project close-out oversight
  - Handled post occupancy warranty issues and resolution

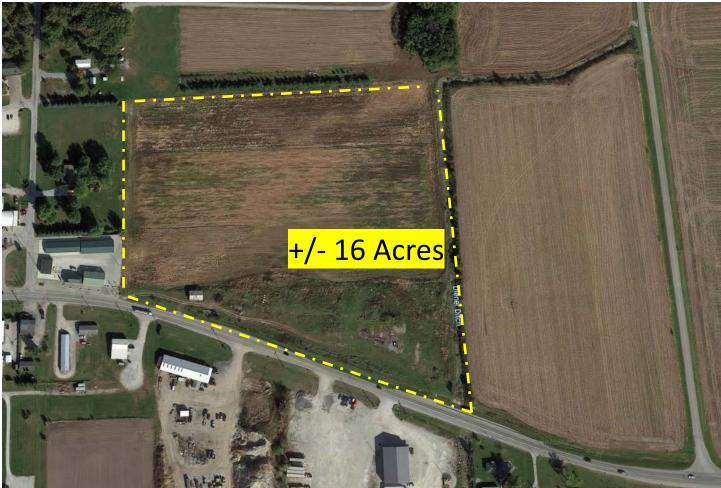


#### **Site Selection Criteria**

- A location central to the County's Highway System
- On a main artery with an existing cut or access
- Available to purchase from a "reasonable" landowner
- Large enough to serve the County's needs for +/- 50 years
- Free from environmental contamination issues



### New Highway Garage Site Pre-Development





# Site issues and mitigation steps

- Surveys indicated a discrepancy as to the actual acreage recorded in the plat
- While in the process of purchasing the site, DNR declared the site to have significant wetlands issues
- Water and sewer had not been extended to the site by the Town of Reynolds
- Soil bearing pressures were inadequate to support construction "as is"
- Site bordered upon residential neighbors screening required
- Certain adjoining property owners had "sprawled" onto the site
  Dan Zuerner



# **Campus & Building Site Criteria**

- Easy access and truck/equipment circulation
- Buildings needed to "command respect" without appearing to be too opulent at the taxpayer's expense
- Site needed to be fully secured
- All equipment enclosed and/or out of the weather
- Training & meeting space that could be utilized by other County agencies and civic organizations
- Large enough to accommodate anticipated growth in future equipment size
- Easy access to fuel island
- Specific and strategic materials storage
- Bid specifications as "friendly" as possible to local contractors



#### Site – Post Development





# **Facilities Development Specifications and Cost**

- Office and Maintenance Building 22,728 SF
- Heated Equipment Storage Building 4,772 SF
- Cold Equipment Storage Building 11,695 SF
- Salt, Sand, and Solution Mixing Barn 26,706 SF
- Plow Storage Shed 9,072 SF
- Patcher Storage Shed 3,024 SF
  Total under roof = 77,997

Total construction duration of approximately 14 months Total project hard & soft costs + FFE = < \$14M





### **Office & Maintenance Building**



- 240' x 96' = 23,040 SF and Accommodates:
- Office Administration
- Clerk
- Superintendent
- Assistant Superintendent
- Foreman
- Men's and Women's Restrooms
- Employee's men & Women's Restrooms, Lockers, and Showers
- Conference room / 15 seats



#### **Maintenance Service Bay Exterior**



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- 4 repair bays
- 2 fabrication/welder/hydraulic bays
- Storage of new/used oil, jacks, stands, and welder gas
- Tires, blade, air compressor, and hotsy

# **Training Room**



Training Room Accommodates:

- 35 front facing / 70 plus seating capacity in total
- Also functions as break room / lunch room
- The County makes this room available to local professional organizations for their meeting functions



#### **Map and Survey Room**



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- Plan sets and records for 163 bridges
- Plans and prints for all highway engineering
- Plow route mapping
- Federal aid project records

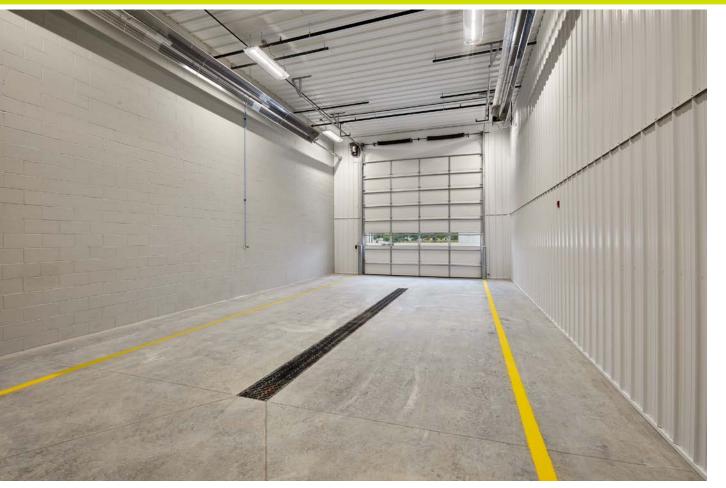
#### **Service Bays - Interior**



- 5 ton and 7 ton cranes covering 4 bays
- 64,000 lb drive through lift
- Twelve (12) 14,000 lb mobile lifts
- Large work/storage bench/computer/phone/2 way radio station
- Water/air/electric in between every door and on crane columns in the center
- Drinking fountain and restroom
- Central lube reels / 4 products plus grease
- Fab shop with welder/plasma/iron worker/hydraulic hose/fittings/crimper/steel rack/bandsaw/grinders/sanders/drill press/mag drill
- We build trucks, order beds, hydraulic system, plow fame, build box hitches, tool boxes, run wiring and air lines Saves County +/- \$40,000 per year



### Wash Bay



- Features:
  - Remote start hotsy
  - 2" water supply for mechanical wash
  - Allowed more trucks to be washed in the last year than the previous twenty years combined



#### Loading Dock and Parts Room



- Items are scanned in and out (inventoried)
- \$2M in parts inventory
- Transmissions/rear-ends/springs/brakes/plow parts, electrical parts, wipers, blowers, and filters in stock



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# Salt and Sand Storage and Mixing Bay



#### 272' x 100' = 27,200 SF

Storage and operational provisions include:

- 4,000 tons of salt
- 4,000 tons of sand
- 4,000 tons or road mix
- Houses an 8 ton batch mixer, really cutting down on the tonnage. Mix is a lot hotter.





# **Rolling Equipment Storage**



GARMONG Construction Services 150' x 80' = 12,000 SF Out of the elements storage for:

- Graders
- Rollers
- Backhoe
- Excavator
- Mini
- Drop deck
- Other trailers
- Pallet racking with tile fittings
- 80% of other required miscellaneous supplies

#### Heated Storage & Light Maintenance



80' x 62' = 4,960 SF This building serves to house:

- Jet vac truck
- Sweeper
- Broom
- Sign shop
- Tire Shop
- Heated workshop
- Painted guardrail
- Barricades

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#### **Snowplow covered storage**



#### GARMONG Construction Services

168' x 54' = 9,072 SF Provides protection from the elements for:

- 30+ snow plows
- 30+ V plows
- 7 pick-up plows
- Pushers for other equipment
- Barricade rack (200)
- High water stands (200)
- A few odds and ends
- Culver storage on the back side 15 spots for 10 x 20 culverts

# **Aggregate and Materials Storage**



GARMONG Construction Services Provides storage for:

- 10,000 tons of #11s
- 5,000 tons of #73s
- 1000 tons of #9s
- 1000 tons of #8s
- 1000 tons of #2s
- 2,000 tons of rip rap
- 1,000 open bin of sand or 12s or ?
- 250 moveable blocks

# Fueling island and fuel storage





• 30' x 30' cement pad with

canopy

- 2 dual hose road fueling stations
- 30' x 0' pad with 100' runway
- 12,000 gallons of road fuel storage
- 1,500 gallons of red fuel storage
- 500 gallons of gasoline storage
- 300 gallons of DEF
- All accessed and monitored via electronic car reader



# **Other Highway Department Campus Provisions:**

#### • A 72 x 42 = 3,042 SF storage building that houses:

- 4 total patchers
- 8,000 gallon total tank capacity
- Distributer



### **Things We Would Have Done Differently**



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#### Questions.....



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