



VILLAGE OF YELLOW SPRINGS

Infrastructure Update

WHAT IS INFRASTRUCTURE?

- Village-owned installation which the Village has a responsibility to maintain. This includes, but is not limited to:
 - Roads
 - Electric Distribution System
 - Wastewater Collection and Treatment Systems
 - Water Treatment and Distribution Systems
 - Storm Water Collection system
 - Parks and Recreation Facilities
 - Buildings and Grounds
 - Sidewalks

WHAT IS A CAPITAL IMPROVEMENT?

- The addition of a permanent structural change or the restoration of some aspect of a property that will either enhance the property's overall value, increase its useful life or adapt it to new uses
- Never less than \$5,000
- Capital improvement funds must come from each separate utility capital improvement fund

Lift Station



- Located at 405 U.S Rt 68 North, across from the Bryan Center
- Major upgrades in 1991
- Electrical upgrade in 2014
- Handles approximately 75% of the towns flow

Lift Station

New Generator



Total Price= \$ 38,720

- Purchased as an emergency in 2018
- Completed demolition of existing concrete pad, poured new concrete pad, and electrical wiring in house saving the Village approximately \$25,000 - \$30,000

Lift Station

Driveway



Total cost = \$3,355.10

- Repaired in 2018
- May need complete overhaul within next few years. Estimated cost = \$14,800

Lift Station

20 Hp pump replacement



Estimated cost = \$30,677

- Needs replacement in 2019
- Spent \$5,000 on major repairs to the pump in the last 2 years
- New pump = \$20,677
- New piping and installation = \$10,000

Lift Station

50 Hp pump replacement



Estimated cost = \$69,147 per pump

- These pumps only run in high flow conditions.
- Ideal to replace one pump in 2020 and the other in 2021.
- New pump = \$54,147
- New piping and installation = \$15,000

Wastewater Treatment Plant



- Located at 3835 Grinnell Road
- Major upgrades in 1988 and 2012
- Equipment and building have been well maintained but minor improvements are needed.

Wastewater Treatment Plant



Total cost = \$7,000

- Will be completed in 2018
- Includes repair to sidewalks, stairs and concrete tank repair
- Need to budget money yearly to repair/maintain

Wastewater Treatment Plant

Vac-Truck Dump Station



Estimated cost from \$40,000 to \$90,000

- Ideal to complete in 2019
- Option 1 is to re-engineer existing structure
- Option 2 is to build new structure on open land
- Price range depends on engineering firm hired and which option the Village would select.

Wastewater Treatment Plant

Sludge Dewatering



Estimated cost \$100,000 +

- Ideal to complete in 2020 or 2021
- Complete a study to figure out what would be the most cost effective and best option for us
- Currently Renergy is contracted for sludge removal. 4 year total = \$204,723
 - 2015=\$29,670
 - 2016=\$64,518
 - 2017=\$65,145
 - 2018=\$45,390+
- Upgrade aeration diffuser system, upgrade blower system, and put automatic actuators on all slide gates
- Apply for any grants to help complete these projects

WATER TREATMENT PLANT



- ▶ Located at 640 Jacoby Rd
- ▶ Built in 2017
- ▶ Should need no capital improvements for several years
- ▶ Budget money into capitol each year for future projects

WATER TREATMENT PLANT

Monitoring Well



Estimated price = \$3,000 to \$7,000

- ▶ Scheduled for 2019
- ▶ Part of the source water protection plan
- ▶ Cost may be a little higher to clear vegetation for drilling

WATER TOWERS

Painting and Coatings



Estimated Price \$400,000-
\$480,000

- ▶ Scheduled to be completed in 2020
- ▶ Coatings last completed in 2000
- ▶ Will schedule an inspection to make sure re-coating is needed in 2019

WATER TOWERS

Clearing fence
vegetation and repair
fence



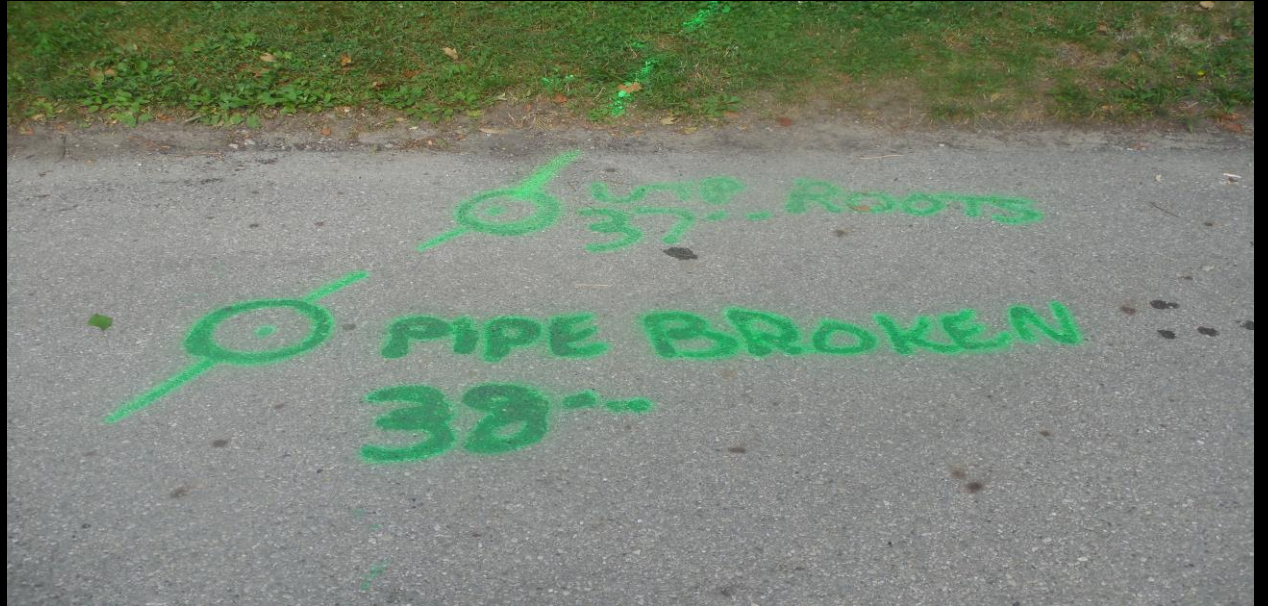
Estimated Price \$ TBD

- ▶ Village crews will clean vegetation away from fence line in 2018
- ▶ Will need to repair fence sections in 2019

Sanitary Sewer Collection

- **Corry St.** --- Replace 430' of 8" pipe, remove and replace two manholes. \$ 51,250.00 2019 C
- **Vectren Project** --- (N. High, N. Winter, N. Stafford, Pleasant, Union, Cliff St. Lincoln Ct.) --- They have found multiple issues with the sewer in this area by running camera up every line. Some issues are homeowner responsibility and some are village issues. Staff will develop a plan and budget to address the issues at hand. 2018 – 2019 V/C
- **Raise Manholes** --- x 20 2018 – 2019 V
- **West North College** --- replace sewer line from High St. to Tulley St. \$160,000 2021 C

Sanitary Sewer Collection



Sanitary Sewer equipment

- **Camera purchase --- Budget 35k to 50k**

This manhole was found while doing the CBE project by a remote camera (City of Fairborn). Locating this with a camera resulted in a large cost saving to the Village.

REPAIR SMALL JETTER --- 2019



Storm Sewer

WILLOW TREE 351 KING ST.



Kingsfield Drive



Storm Sewer

18" PIPE FILLED WITH ROOTS

Willow tree to be removed \$1000
2018 C

30 ft. of the storm must be dug up
and replaced \$ 11K 2018 C



Storm Sewer





Storm Sewer

- Wright St. --- Repaired by Village after large rain event, found that 18" storm had been cut and damaged years ago by a private water line installation. 2018 V est. Cost \$ 2000
- Dayton St. --- Village to dig up and find out what is causing the hole in blacktop around storm drain.
- Orton Rd. --- Previous staff dug hole on private property to try and relieve drainage problem, which has caused flooding issues. We have installed a electric pump to help out flooding problem. 2018 V cost TBD
- Rice Rd. --- This has been a trouble spot for years. The configuration of the drain tile needs to be reviewed or the drive altered to drain water before going over road and flooding neighbor.

Storm Sewer

- N. Winter --- we have had many issues on this street in the 200 block, budget to fix the drainage problem is \$ 72,377.00 2019 C
- Master drainage study report--- July 1991 done by Worl & Associates Inc. Given to me by Paul Abendroth
- Study storm system 2019 C
- RFP for budget 2018
- Go out for bid 2019

Streets

- Pot Holes --- a lot of holes have come from the bad winter. 2018 V
- Curb Repair/ Replacement --- we have a lot curb that are missing, damaged, grass taken over by vegetation.
- Curb Maintenance --- Street sweeping helps control the vegetation.
- Street Sweeper --- Has been broken since 2015 -2016
- New sweeper --- Cost \$ 265K
- Contract Sweeper --- \$ 12,600 a year it would take 20 years to recover the cost of buying a new sweeper.
- W. South College --- Just to do some repairs is \$ 3,894.00 2018 C

Streets







Streets Equipment Needed

- Lease New Bobcat--- 2018
- Repair to Hot Box --- 2018 \$ 4K C
- New Bed for TK 30 --- 2018-2019 \$ 16K
- New Plow for 2015 Dump --- 2019 \$15K
- Crack Seal Machine --- 2019-2020
- Brine / Beet Juice Mixer --- 2018-2019 pre – treat roads and add to salt to make last longer. (Tanner and I will be going to look at Centerville and Fairborn units.)
- V-Plow for the 2008 Dodge --- 2019 – 2020 \$ 7K

Sidewalks







Sidewalks



PRECISION CONCRETE CUTTING REPAIRS



Before



After Precision Concrete Cutting has completely and smoothly removed the trip hazard.

The information in this summary is confidential, and is to be used only by the intended recipient and Precision Concrete Cutting in evaluating the project. Any copying or unauthorized disclosure of this information is prohibited.

Sidewalks



PRICING OPTIONS

All Hazards 1/2" and Above

- 1:12 Slope Ratio
- Dust Abatement Used
- ADA Compliance
- 100% Clean-up / Waste Removal
- 1308 Trip Hazards
- 81 Identified Demolish and Replace
- \$82.16/Hazard

\$107,457.00

Early Approval Discount

- 1:12 Slope Ratio
- Dust Abatement Used
- ADA Compliance
- 100% Clean-up / Waste Removal
- 1308 Trip Hazards
- \$78.34/Hazard
- If Approved by 8/31/18

\$102,457.00

All options will be performed using our patented saw cutting technique resulting in an edge to edge repair of the sidewalk with a completely planar slope.

The information in this summary is confidential, and is to be used only by the intended recipient and Precision Concrete Cutting in evaluating the project. Any copying or unauthorized disclosure of this information is prohibited.

Sidewalks



COST SAVINGS

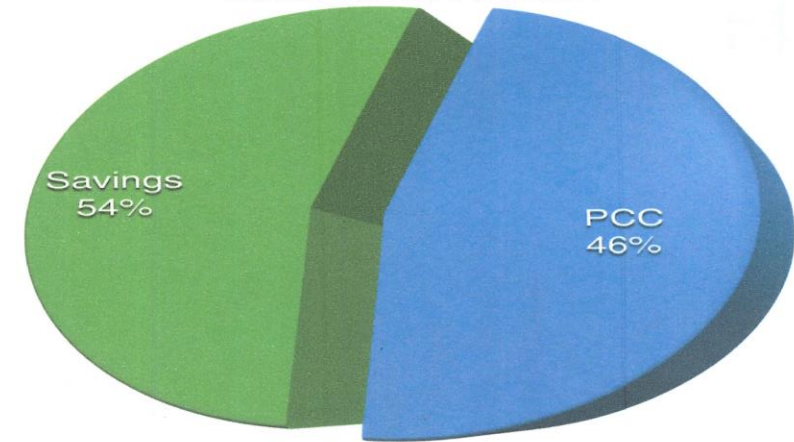
Based on an average panel size and an estimated replacement cost, we estimate the cost to remove and replace **1308** trip hazards (approx. **26,160** square feet) is **\$235,440.00**.

Total cost using Precision Concrete Cutting is \$107,457.00, an estimated savings of **\$127,983.00**.

Project Summary:

Total Trip Hazard Repairs	1308
Cost Using R&R	\$ 235,440
Cost Savings with PCC	\$ 127,983
Cost Using PCC	\$107,457

COST COMPARISON



The information in this summary is confidential, and is to be used only by the intended recipient and Precision Concrete Cutting in evaluating the project. Any copying or unauthorized disclosure of this information is prohibited.

Parks and Rec Facilities

- Bike Path
- Ellis Park
- Gaunt Park
- Swimming Pool

Bike Path



Bike Path



Bike Path



Bike Path

- Corry St. --- Work with the Glen to remove dead trees falling toward Bike Path and power lines.
- Get estimate on re-paving the Bike Paths on Xenia Ave, W. South College, E. Enon Rd., and Dayton St. 2019-2020 C

Ellis Park



Work with the Tree Committee and Village staff to clean up dead trees. 2018-2019 C/V

Ellis Park



- Working with Shook Construction on this as a Giving Back to the Village Project.

2018 C

Ellis Park



Ellis Park



- Staff has discussed doing away with the foot bridge, putting in a large drain tile to handle the small stream and remove all the large dead trees and over growth. Backfill with dirt and plant grass. This eliminates slip and trip hazards.

Ellis Park



- Working on getting cost for aluminum bridge to span 60'
- 2019-2020 C/V

Ellis Park

- This shelter house will need a new roof in 2020 to match the Shook Project. Estimated \$5k



Ellis Park

- Staff would love to see Ellis Park come back to life.
- Staff has some thoughts of maybe small playground, Fish Derby for Kids(may need to stock for this)
- Maybe put electric back out to shelter houses (lights and outlets).

Gaunt Park



- Update the dugouts with benches, gravel or concrete
- 2019-2020 V \$ 2K

Gaunt Park



- Add dugouts to the softball fields. 2020 C/V \$ 4500

Gaunt Park



- Musco Lighting --- Repairs to lights that are out. 2020 C \$6K
- Also an idea to slow down sled riders in the winter is to make a slow down ramp with dirt and plant grass. 2019-2020 C \$9K
- I believe staff can do this project for less money. 2018-2020 V \$2K

Gaunt Park



- Drive apron needs replaced.
2019-2020 C \$ 4K
- Seal coat/restripe the parking lot
2019 C \$ 4K

Swimming Pool



Swimming Pool



Swimming Pool

- Thanks to Council for allowing the improvements to the pool for the 2018 season.
- More work will be completed after the 2018 pool season has come to an end.
- Electric service upgrade
- New roof over the concession stand and bathrooms
- Needs for 2019 would be picnic tables and umbrella in kiddie pool area. V \$ 3K

WATER DISTRIBUTION SYSTEM



- Remote Water System.
- We have submitted for a grant for this project with a 16% Village match of \$130,957 Total project cost is \$818,480.
- This new system will allow so much to be done with customer being able to get high water usage alerts by phone or email. The utility office will be in real time with meter.
- Also be able to do leak detection to help find water loss.

WATER DISTRIBUTION SYSTEM

Unidirectional flushing is a technique for periodic cleaning of water supply pipes to remove deposits

Unidirectional Flushing will be starting late summer / early fall.

1. Marking and locating valves
2. Cleaning out valve boxes and start turning them at this time, we will start using the GIS to update the mapping.
3. Start shutting valves and opening valves to reverse the flow of water and clean the pipes
4. Repair and replacement to valves that will not turn or shut down.
5. Repair and replacement of bad hydrants
6. After the project is completed we will be repainting the hydrants in Town
7. ALSO WORKING WITH OHIO RURAL TO GET SYSTEM TO THE BEST POTENTIAL RESULT

WATER DISTRIBUTION SYSTEM

Replacing 2" or less water mains in the Village with 6" water mains 2020-2030

ALL THIS WORK MUST BE ENGINEERED AND EPA APPROVED.

Dawson from Walnut to Winter –350' Budget is \$31K

Fairfield between Polecat and DeWine's pond Budget is \$35K

Cemetery Street—Completed 2015

U.S. 68 North to Animal Clinic –975' Budget is \$ 85K

In alley between S. High and S. Stafford from Dayton to Limestone. -750' Budget is \$68K

Elm between Phillips and Winter -500' Budget is \$45K

Davis between S. Stafford and Xenia Ave.- 1100' Budget is \$99K

E. North College between Phillips and Xenia Ave. – 500'

Budget is \$ 45K

Center College from High to Livermore and from Tulley to Green Street. – 2355' Budget is \$212K

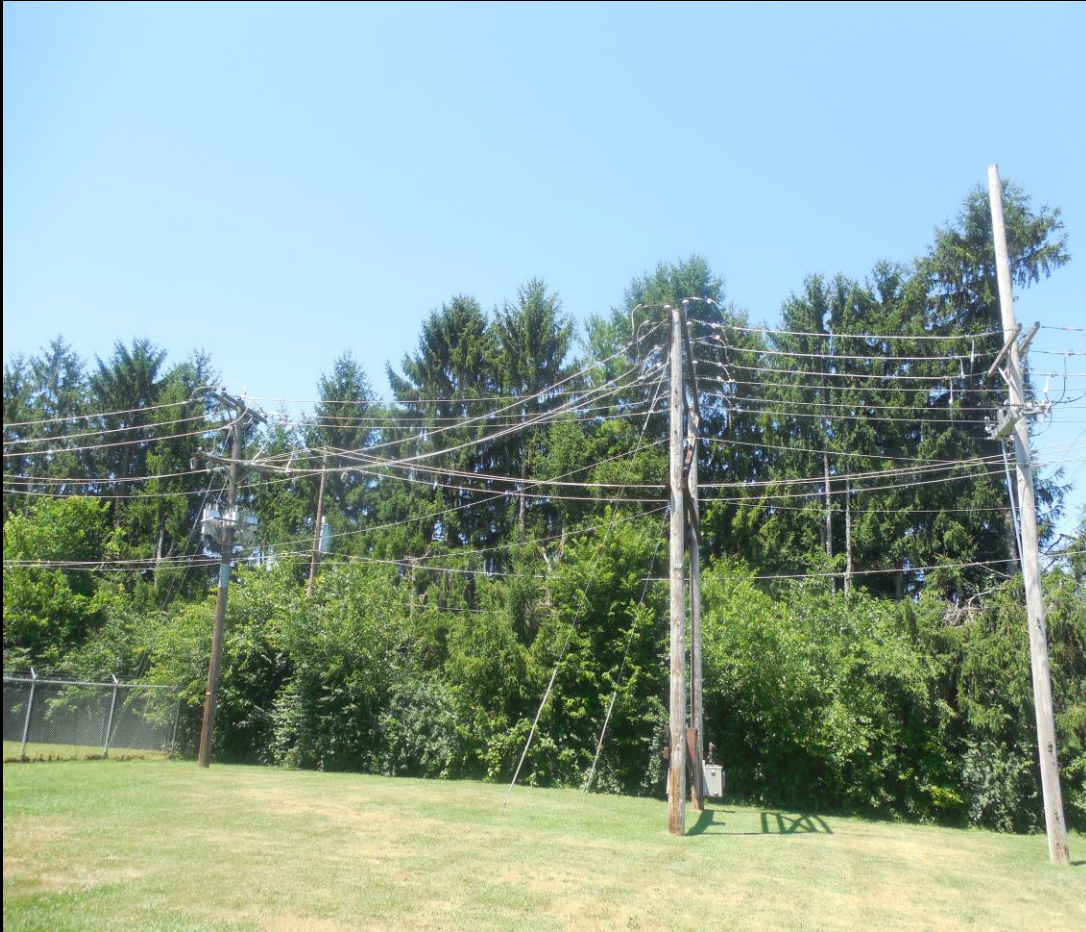
E. Herman from Livermore to the turnaround at the old golf course. -625' Budget is \$56K

Budget cost based on \$90 ft.

WATER DISTRIBUTION SYSTEM



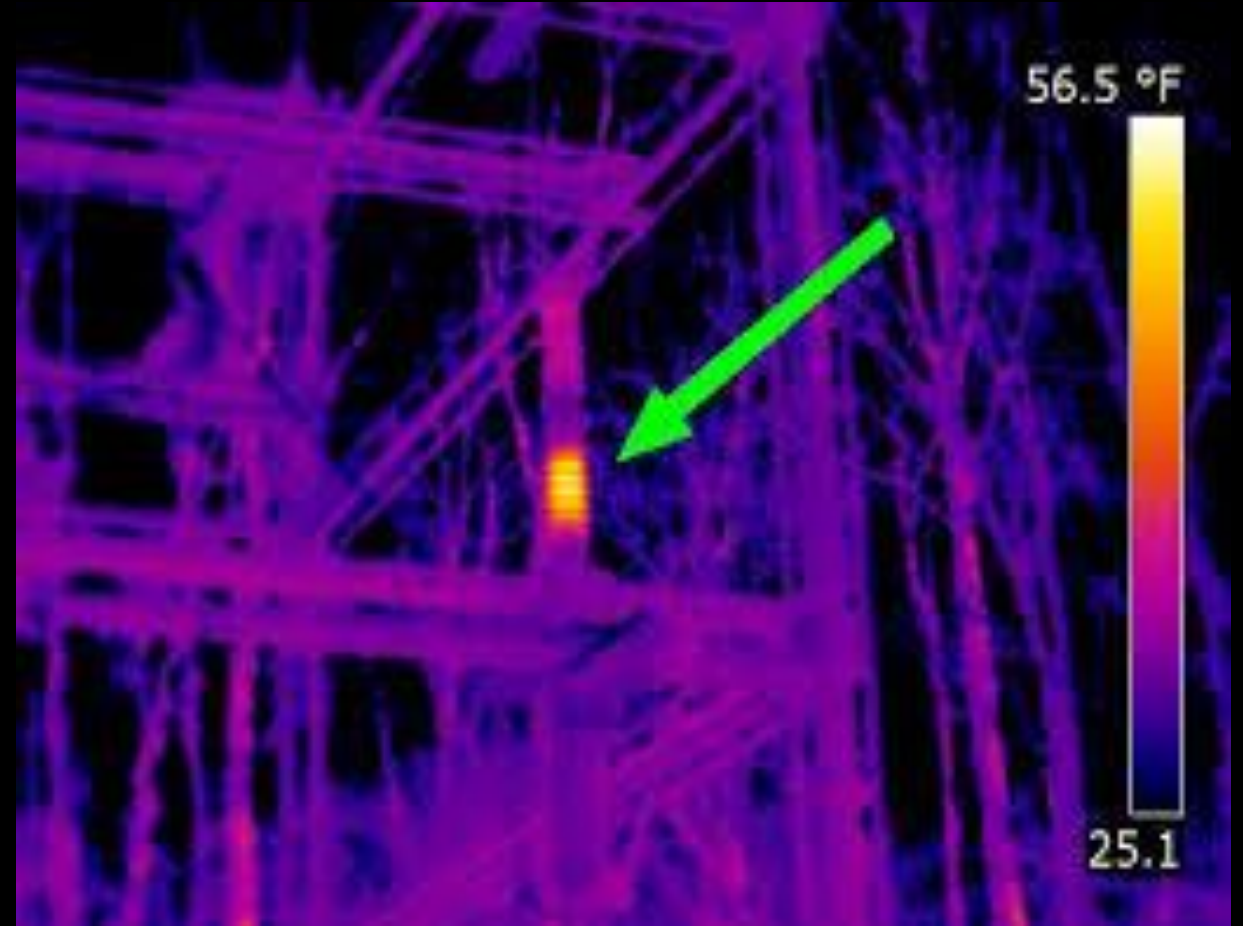
Electric System



- Working with DPL to give us a price for a by-pass switch.
- We can do maintenance in the yard safely.
- Eliminate hot spot.
- Come up with a different source for base. Too many weeds and not safe to mow or weed eat with gravel.

2020 DPL Cost TBD

Electric System



Electric System

- Electric Study for the Village RFP 2018 Budget 2019 C
- 3rd Circuit, Springs Way, Glass Farm, etc.--- Depending on the Study 2020 C
- 180 Poles to be replaced in town 2018-2021 C/V MATERIAL ONLY COST \$65K (Installing larger pole for future space for others)
- GIS the system 2019-2020 V/C (for hosting) \$15K
- Cut-outs replaced 2019 -2020 V \$10k
- Continue to do infrared check in Village to spot potential problems.
2019-2022 V
- Reclosure testing and replacement 2019- 2026 C/V \$ 150K
- SKADA for electric system 2023 C/V 100K

Electric System



- More aggressive tree trimming to cut back on outages.
- Also dropping below the communication for future.
- Talk about clearance around poles for the ability to climb or replace.

Electric System

Alley Clearing is a MUST



Electric System

ALLEYS MUST BE MAINTAINED FOR SAFETY AND RELIABILITY



Electric System

Pole Inspection Red Tags

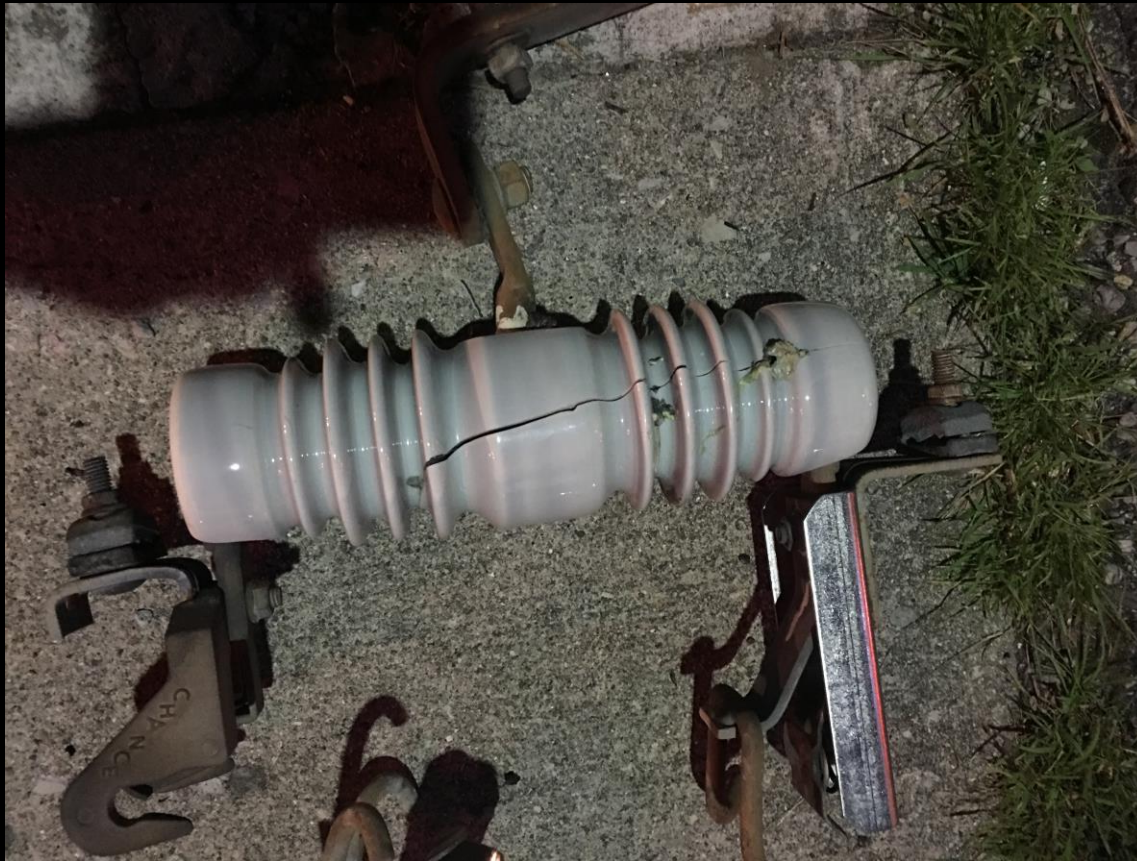


The pole FELL before we could change out.



Electric System

Cracked Cut-Out



Electric System



- Change all street lights to LED
- 2021-2022 V \$ 50k

Buildings & Grounds

- Sutton Farm
- Bryan Center
- Pottery Shop
- Downtown
- Train Station
 - Library

Sutton Farm-Crew Quarters



Thanks to Council For the Support
of New Crew Quarters!!!!

2018

Sutton Farm- Crew Quarters



Sutton Farm-Crew Quarters



Sutton Farm



Sutton Farm



Sutton Farm



- Corrugated siding, fascia, soffit,
- Garage doors, to become maintenance free. And make this barn last another 30yrs.
- 2019 budget 40K C (Material and Labor)

Sutton Farm



Sutton Farm



Sutton Farm

- Roof Insulation Repair/Recoat
- 10 year Warranty
- Quonset Hut – \$ 19,750 2020 C
- Barn - \$ 18,270 2020 C

Sutton Farm



Sutton Farm



Sutton Farm

- Garage door openers for large doors -2018 -2019 \$ 5K C/V (Electric)
- Heater for this building.
2019 -2020 \$ 15K C/V (Electric and Digging)
- Security fence- 2019-2020 \$ 20K C
- Security cameras 2018-2019 \$ 2K V
- Containment area for bad transformer – 2019 \$ 15K C
- Salt barn –TLC Wood replacement, paint and drop plastic door for weather to stay off salt 2019-2022 \$ 10K V/C
- Spoil pile removed ASAP \$ 60K Budget C
- Wish List-- have blacktop laid at farm 2020 \$ 150K C

Sutton Farm





- (2) 3 H.P Hot Water Pumps
 - Replacement "BUDGETARY" Cost.....\$4,500.00 each
- (2) 3.0 H.P. Chilled Water Pumps
 - Replacement "BUDGETARY" Cost.....\$4,500.00 each
- (5) Exhaust Fans Various Sizes
 - Replacement "BUDGETARY" Cost.....\$3,500.00 - \$4,500.00 each
- (6) Cabinet Heaters
 - Replacement "BUDGETARY" Cost.....\$4,500.00 each
- (1) 15.0 Ton Condensing Unit
 - Replacement "BUDGETARY" Cost.....\$12,500.00 each
- (1) 15.0 Ton Air Handler with DX Cooling Coils
 - Replacement "BUDGETARY" Cost.....\$19,000.00 each
- (2) Boilers Hi efficiency (Note: One (1) was replaced in 2015)
 - Replacement "BUDGETARY" Cost.....\$16,500.00 each
- (2) 30.0 Ton Self Contained Air Handlers with Compressors
 - Replacement "BUDGETARY" Cost.....\$55,000.00 each
- (2) 30.0 Ton Fluid Coolers (Note: One (1) was replaced in 2011)
 - Replacement "BUDGETARY" Cost.....\$25,000.00 each



Bryan Center

- HVAC SYSTEM
- New Controls—ASAP \$ 19,300 C
- Replace all VAV Controls – ASAP \$ 22,100 C
- 26 Manual Hot Water Control Valves – ASAP \$ 20,500 C
- One air conditioner unit needs to be replaced ASAP \$75,000 C

Bryan Center

Cut in a door from Colleen's office to hallway for security.



**Move Patti's door to create privacy 2018 C
\$3432**



Bryan Center

- Power wash building – 2019 Get Quotes C/V
- New sign –2019 V \$ 750
- Re-surface gym floor 2019 C \$ 4K
- Update bathrooms --2020 -2021 C \$30K
- Upgrade lighting in building to LED – 2022 C Get Quotes
- Paint first floor area – 2018-2019 V \$ 1500
- Added parking area – get plans started 2019 C \$ 2500
- Dumpster corral – 2020 C \$ 7500
- New trash cans – 2019-2020 V \$ 2K
- Picnic tables - 2019 – 2020 V \$ 5K
- Added Tesla charger – 2018-2019 V \$3500 (reimbursed by Tesla)
-

Bryan Center







Bryan Center



Pottery Shop

- Northeast side of the Pottery Shop has major structure issues going on with the foundation. Village will be excavating the area for the contractor to take a look and be able to give quote for repairs. 2018 budget for 2019 May need to install bracing during this time to prevent further damage. C/V
- Paint/seal block walls after repair work is complete. 2019 V \$1000
- Roof leaks- have a contractor repair leaks. 2019 C \$ 4K
- Install clean out and re-pipe to sewer. 2018 -2019 C \$3K V 1K
- Replace soffit material – 2020 C
- Update outside lighting with LED – 2020 V \$ 500

Pottery Shop



Pottery Shop



Downtown

- We have filled submitted a grant for 6 sets of crosswalk signals for town.
- This is for \$31,000 at 10% match
- Each set is \$ 5200
- The small one in the middle of Xenia Ave is approx. \$ 300 ea. And don't last long.

Rectangular Rapid-Flash Beacon (RRFB) LED Crosswalk Warning System

Solar powered. No AC required.

RRFBs are user-actuated amber LEDs that supplement warning signs at intersections without signals or mid-block crosswalks. Two arrays of alternately flashing LEDs use an irregular flash pattern (similar to emergency flashers on police vehicles), commanding the attention of drivers day and night. The RRFB has been shown to provide an 80% reduction to Yield-to-Pedestrian traffic, exceeding that of standard beacons. As a low cost alternative to traffic signals, it's no wonder why RRFB systems are taking the country by storm! The RRFB units install easily onto new or existing signal poles, and TAPCO can provide completed system with poles and hardware. The FHWA requires that RRFB systems are solely for use in pedestrian or school crossings, and must be pedestrian activated (actively or passively).

- TAPCO's RRFB LEDs are the brightest and most durable on the market
- Society of Automotive Engineers (SAE) standard J595 and FHWA compliant LED light intensity
- RRFB LEDs can flash on front and sides, alerting drivers and pedestrians simultaneously
- Solar powered, no AC power required (110V optional)
- Compatible with Intelligent Transportation Systems (ITS)
- MUTCD interim approval

Multiple LED lens sizes available (large lens shown here)

1 Pedestrian activates

2 BlinkerBeam® wirelessly activates the other RRFB unit

3 RRFB LED arrays flash synchronously

The RRFB has been tested and shown to provide an 80% reduction to Yield to Pedestrian traffic!*

*An Analysis of the Efficacy of Rectangular-shaped Rapid-Flash LED Beacons to Increase Yielding to Pedestrians Using Crosswalks on Multilane Roadways in the City of St. Petersburg, FL, Center for Education and Research in Safety

Downtown

- Dayton St. street lighting from Bike Path to Xenia Ave.
2018-2019 V \$3K
- Restroom located on the south end of town- 2021 C
- Bike parking on Xenia Ave. by bank. 2018-2019 C/V depending on quotes \$ 3K
- Short Street- Set meeting for further conversation 2018

Downtown



Downtown



Train Station

- Paint interior and exterior 2021-2022 C \$ 13K
- Restrooms- updates and repairs 2020 V \$ 3K

Train Station



Train Station



Library



Library

- Handicapped restroom – Greene County Library is having plans drawn up for the remodel of one bathroom to be turned into ADA Compliant. 2018
- 2019 – 2020 C \$ 25K
- South-facing windows inefficient 2020 C \$ 75K
- Handrails repair – 2018-2019 V \$ 500
- Handrails repainted after repairs – 2019 C \$1200

Tornado Sirens



Tornado Sirens





Thank You For Your Time