1. **Call to Order**

2. **Approval of Minutes**
   - January 28, 2020

3. **Informational Items / Reports / Other Minutes / Updates**
   - Greater Peoria Sanitary District minutes
   - Facilities Master Plan
   - Sustainability Plan Update

4. **Resolutions**
   - Preliminary Engineering Agreement with Crawford, Murphy & Tilly, Inc. for bridge rehabilitation on Grange Hall Road
   - Cooperative Research Agreement with Bradley University

5. **Discussion**
   - Capital Improvement Planning

6. **Miscellaneous**

7. **Adjournment**
Call to Order
Chairman Salzer called the meeting to order at 3:00 p.m.

Approval of Minutes
A motion to approve the minutes of December 3, 2019 and December 17, 2019 was made by Dr. Blair and seconded by Ms. Pastucha. The motion carried.

Informational
- **Illinois Department of Transportation Documentation Review of Road District Motor Fuel Tax Funds**
  Mr. Gilles advised that the Illinois Department of Transportation (IDOT) performed a documentation review of Township Motor Fuel Tax Funds for the period January 1, 2017 through December 31, 2018. He stated that with the exception of several minor corrections, the overall report was in compliance and was accepted by IDOT.

- **Illinois Department of Transportation Documentation Review of County Motor Fuel Tax Funds**
  Mr. Gilles advised that the Illinois Department of Transportation (IDOT) performed a documentation review of County Motor Fuel Tax Funds for the period January 1, 2017 through December 31, 2018. He stated that with the exception of several minor corrections, the overall report was in compliance and was accepted by IDOT.

- **Greater Peoria Sanitary District Minutes**
  Mr. Salzer directed the committee to the minutes of December 17, 2019 included in the packet, and noted that Mr. Johnson of the Greater Peoria Sanitary District was present for any questions. There were no questions or comments from the committee.

- **Facilities Master Plan**
  Mr. O’Connell advised that two capital projects approved for FY 2020 have been included in the most recent plan. He stated that that two projects are the replacement of the domestic hot water line at the courthouse and the fire alarm upgrade at the Peoria County Jail. He noted that two additional projects added to the Plan are further work on ring road repairs at the Jail and parking lot resurfacing at the Juvenile Detention Center.
Resolutions

• Ordinance to lower speed limit in the Hendryx Manor Subdivision
A motion to approve was made by Dr. Blair and seconded by Ms. Pastucha. Mr. Gilles advised that the Medina Road Commissioner received a petition from the residents of the Hendryx Manor Subdivision to lower the speed limit within the subdivision due to concerns related to speeding. He stated that the subdivision was posted at 30 mph. He stated that the results of a speed study conducted indicated that a 25 mph speed limit would be justified, and staff recommends lowering the speed limit to 25 mph. The motion to approve carried unanimously.

• Preliminary Engineering Services Agreement with Terra Engineering for bridge on Dogtown Lane
A motion to approve was made by Mr. Dillon and seconded by Mr. Windish. Mr. Gilles advised that a bridge on Dogtown Lane near Elmwood is deteriorating, and based upon an inspection undertaken several months ago, IDOT has determined that a lane reduction is necessary due to cracking on outside beams. He advised that Federal funding is available and has been budgeted for the project, with construction scheduled for 2022. He stated that the county’s share of construction costs would total $340,000.00.

Mr. Gilles advised that staff recommends retaining Terra Engineering for preliminary engineering services and miscellaneous work for the project. The motion to approve carried unanimously.

• Survey Agreement Addendum Number 5 for Structural Cross Sections
A motion to approve was made by Ms. Pastucha and seconded by Dr. Blair. Mr. Gilles advised that the Federal Highway Administration recently completed an audit of the State of Illinois bridge inspection program. He stated that the review determined that the state is not taking upstream and downstream cross sections of bridges every five years as required by the Federal government.

Mr. Gilles advised that there are currently 180 structures within the county and township system, of which 50 are culverts. He stated that the Highway Department has a current service agreement with Mohr & Kerr Survey Services and are recommending that an Addendum be created to the agreement to allow Mohr & Kerr to assist by performing structural cross sections on the culverts. He advised that staff has budgeted $92,000.00 for the work to be completed by Mohr & Kerr. He commented that Highway Department staff will survey the bridges.

The motion to approve carried, with Mr. Windish abstaining.

Miscellaneous

Mr. Gilles advised that the County Board had previously approved an Engineering Agreement and a Federal Participation Program with IDOT to insert a culvert on Kickapoo Creek Road in Bartonville. He stated IDOT held a letting for the federally funded project in November, 2019 and no bids were received on the project. He advised that contractors had concerns as the structure is adjacent to a railroad with a higher embankment and also near Kickapoo Creek and its retaining walls. He stated that the project is a difficult one, and added that there were also concerns regarding a temporary retaining wall that would be required to be designed and built. He stated that after some modification of the bid, the project was let again on January 17, 2020 and received one bidder. He remarked that the lone bid came in approximately $1 million over the anticipated project budget. He stated that staff has spoken with their consultant to determine alternate and feasible solutions in order to bid the project this year.

Mr. Sorrel commented on previous discussion related to capital projects and the FY2020 budget, and noted staff’s commitment to present to committee a framework for a robust policy discussion and direction to staff on funding and prioritizing capital projects specifically related to buildings. He stated that staff will provide background information on how the process was originally created and previous evaluation criteria. He advised that the current process will also be discussed and
back-up documentation related to the Facilities Master Plan and the Facilities Space Utilization Plan will be provided. He commented that based upon discussion and committee direction, staff will be prepared to follow a new policy directive at the time of the preparation of the FY2021 spending plan.

**Adjournment**
The meeting was adjourned by Chairman Salzer at 3:46 p.m.

*Recorded and Transcribed by: Jan Kleffman*
The regular meeting of the Board of Trustees of the Greater Peoria Sanitary and Sewage Disposal District was held on Tuesday, January 21, 2020, at the office of the District, 2322 South Darst Street, in the City and County of Peoria, State of Illinois, and within the boundaries of said District at the hour of 9:35 A.M.

Roll call showed the following Trustees were present: Robert C. Gates, Matthew R. Bender, Gene Petty, Heather L. McCord, and Stephen M. Morris. Executive Director Brian F. Johnson, Attorney James F. Kane, Director of Administration Michelle R. Mortland, Director of Operations Thomas W. Meyer, Director of Planning and Construction Timothy F. Leach, Director of Finance Joseph C. Merkle, and Engineer III James E. Sloan were also present.

Chairperson Gates stated that there was a quorum, and that the meeting was duly and legally convened for the transaction of business.

Chairperson Gates opened the floor for public participation. There being no response, the public participation period was closed.

Operating reports for the Finance, Administration, Operations, and Planning and Construction Departments were thereafter discussed with various questions answered thereto.

Chairperson Gates asked if any items should be removed from the Consent Agenda, which included: approval of the minutes of the regular meeting held on Tuesday, December 17, 2019; payment of the list of bills, totaling $1,496,156.00; the recommendation of the Investment Committee’s recommendation for the following investment: Better Banks in the amount of $1,250,000.00 for a term of 12 months with a 1.81% yield; that delinquent accounts listed as Batch #186 Illinois American Water Company, Batch #89 Village of Peoria Heights, and Batch #91 Pleasant Valley Water Co. be forwarded for disconnection from service in accordance with the applicable water shutoff arrangements; and authorization for a loan payment in the amount of $376,847.55 to Illinois Environmental Protection Agency. There being no items to be removed, Trustee Bender moved to approve the items on the Consent Agenda, which motion was seconded by Trustee McCord. Following discussion and, on voice vote being taken, Trustees Gates, Bender, Petty, McCord, and Morris voted “Aye” and there were no “Nays”. Chairperson Gates declared the items on the Consent Agenda approved.

The Executive Director recommended approving a two-year agreement with CentralSquare Technologies, LLC (a/k/a Lucity) for computerized maintenance management cloud software license in the annual amount of $37,750.00 for the first year. Management further recommends approval of the software purchase with authority for the Executive Director to complete further necessary modifications and execute the agreement. Trustee McCord moved to approve the recommendation, including authorizing the Executive Director to execute the agreement, which motion was seconded by Trustee Morris. Following discussion and on roll call vote being taken, Trustees Gates, Bender, Petty, McCord, and Morris voted “Aye” and there were no “Nays”. Chairperson Gates stated that the motion carried.

The Executive Director next recommended approving an agreement with Greeley & Hansen in the amount of $632,093.00 for Spring and Caroline design/construction services, Phase I control gates, and preliminary design services for South, Sanger, and Darst. Management further recommends
approval of the services with authority for the Executive Director to complete further necessary modifications and execute the agreement. Trustee Petty moved to approve the recommendation, including authorizing the Executive Director to execute the agreement, which motion was seconded by Trustee Bender. Following discussion and on roll call vote being taken, Trustees Gates, Bender, Petty, McCord, and Morris voted “Aye” and there were no “Nays”. Chairperson Gates stated that the motion carried.

The Executive Director next recommended awarding the Broyhill pump station rehabilitation project to Walker Excavating Company, Inc. in the amount of $434,116.54. Trustee Bender moved to approve the recommendation, which motion was seconded by Trustee Gates. Following discussion and on roll call vote being taken, Trustees Gates, Bender, Petty, McCord, and Morris voted “Aye” and there were no “Nays”. Chairperson Gates stated that the motion carried.

The Executive Director next informed the Trustees about the FY 21 budget timeline.

Pursuant to Illinois law, the Trustees next reviewed a recommendation relating to previously held executive session minutes. Based upon such recommendation, Trustee Morris moved that all previously held minutes continue to be held as the need for confidentiality or privacy still exists. Trustee Petty seconded the motion. Following discussion and on voice vote being taken, Trustees Gates, Bender, Petty, McCord, and Morris voted “Aye” and there were no “Nays”. Chairperson Gates stated that the motion carried.

At the hour of 10:15 A.M., Trustee Bender moved the regular meeting be adjourned to Executive Session for the purpose of discussing employment, pursuant to 5 ILCS 120/2(c)(1), which motion was seconded by Trustee McCord. On voice vote being taken, Trustees Gates, Bender, Petty, McCord, and Morris voted “Aye” and there were no “Nays”. Chairperson Gates stated that the motion carried.

The regular meeting reconvened at 10:31 A.M. following the Executive Session.

There being no further business to come before the Board, the Chairperson declared the meeting adjourned at 10:32 A.M.

__________________________________
Clerk
<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>FACILITY</th>
<th>PROJECT</th>
<th>ISSUE</th>
<th>SOLUTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courthouse</td>
<td>County Clerk &amp; Recorder of Deeds</td>
<td>Courthouse</td>
<td>The County Clerk and Recorder of Deeds functions have been combined and the space on the first floor needs to be remodeled to accommodate these functions.</td>
<td>Remodel the current County Clerk area to accommodate this merger of functions.</td>
<td>Project completed 12-12-17.</td>
</tr>
<tr>
<td>Courthouse</td>
<td>Circuit Clerk &amp; Exterior Building Water Infiltration Issue</td>
<td>Courthouse</td>
<td>Water is infiltrating the building on the Jefferson Street side and running into the Circuit Clerk Office area.</td>
<td>Investigate where and how the water is infiltrating the building and eliminate the problem.</td>
<td>Project substantially complete 08-16-19.</td>
</tr>
<tr>
<td>Courthouse</td>
<td>Public Defender Area</td>
<td>Courthouse</td>
<td>Relocate the Public Defender Office into the Courthouse.</td>
<td>Identify, design, bid out, and build out space for the Public Defender Office in the Courthouse.</td>
<td>Options are being gathered and reviewed on how and where to proceed with this Project.</td>
</tr>
<tr>
<td>Courthouse</td>
<td>New Front Doors</td>
<td>Courthouse</td>
<td>Access/Egress Security</td>
<td>Renovate all entry and exit points including Sally Port</td>
<td>Delayed.</td>
</tr>
<tr>
<td>Courthouse</td>
<td>Judges Break Area</td>
<td>Courthouse</td>
<td>Area has original appliances and casework.</td>
<td>Update the appliances and casework.</td>
<td>Project completed 04-08-19.</td>
</tr>
<tr>
<td>Courthouse</td>
<td>Courts Remodel</td>
<td>Courthouse</td>
<td>Multiple deficiencies per current courts standards</td>
<td>Study, Reprogram, Plan &amp; Design Upgrades</td>
<td>Courtrooms 123, 222, 322, 221, and 121 completed and operational.</td>
</tr>
<tr>
<td>Courthouse</td>
<td>KVO Memorial</td>
<td>Courthouse</td>
<td>Create a war memorial honoring all veterans that have died while in service for all conflicts since WWII. KVO Committee was created to define, fund raise, and construct a war memorial honoring all veterans that died in duty since WWII.</td>
<td>Work Substantially complete on October 5, 2018. Dedication was October 20, 2018. Third statue due by summer of 2020. Remounting of statues completed.</td>
<td></td>
</tr>
<tr>
<td>Courthouse</td>
<td>Domestic Hot Water</td>
<td>Courthouse</td>
<td>The 3” domestic hot water line that runs from the &quot;Old Side&quot; to the &quot;New Side&quot; of the Courthouse is leaking and needs to be replaced.</td>
<td>Replace the 3” galvanized pipe and fittings with 3” PEX pipe and fittings.</td>
<td>Developing a Scope-Of-Work. Contractor and Engineer giving recommendations.</td>
</tr>
</tbody>
</table>
## Facilities Master Plan
### Project Status Update

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>FACILITY</th>
<th>PROJECT</th>
<th>ISSUE</th>
<th>SOLUTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brandywine Building</td>
<td>Election Commission Relocation</td>
<td>The Election Commission needs to vacate the City owned facility. New accommodations need to be found and fit-out for this move.</td>
<td>A lease has been entered into to allow for the Election Commission to relocate. The new facility needs to be properly fit-out.</td>
<td>Project was Substantially Complete on Monday, 09-17-18. User Group has moved into the Space 09-12-18.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Fire Alarm Upgrade Phase II</td>
<td>The Fire Alarm System (FAS) in the 1985 portion of the Jail is obsolete. The FAS in the Addition does not integrate with the Original Jail FAS. A new Code Compliant and UL Listed FAS will resolve these issues.</td>
<td>Replace both FAS with a single Code Compliant and UL Listed System</td>
<td>Thompson Electronics Company (TEC) PO P190378. Work has started and is going well. TEC and Sub Oberlander Electric working well.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Central Control</td>
<td>Central Control equipment at the Jail is the original from 1985 &amp; controls doors, alarms, cameras. It provides the electronic backbone of jail Security.</td>
<td>Final phase of project. Update cell block guard stations/control centers; intercom systems; &amp; additional video cameras</td>
<td>Project complete.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Generator / Transfer Switch</td>
<td>Generator &amp; Transfer Switch for 1985 Jail have far exceeded useful life &amp; parts are not available. 24/365 power is necessary at the Jail.</td>
<td>Replace Generator &amp; Transfer Switch for 1985 Jail</td>
<td>Project Completed.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Improvements</td>
<td>Mechanical systems in cell blocks of 1985 jail need replacement.</td>
<td>Electrical, Plumbing, HVAC, &amp; Locks will be replaced in 1 cell block per year for next 8 years.</td>
<td>AHU 1-9 upgrades the only current upgrades scheduled. ECSI has upgraded 98% of the controllers. Ruyle has completed the all water piping. Oberlander has completed 98% of their work.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Improvements</td>
<td>Cell locks at the Jail are beyond their useful life and require replacement.</td>
<td>Replace locks in batches as funds are appropriated</td>
<td>Ph 1 lock installation completed</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Improvements</td>
<td>Cell locks at the Jail are beyond their useful life and require replacement.</td>
<td>Replace locks in batches as funds are appropriated</td>
<td>Ph 2 in Capital Budget for 2017. Jail Administration deciding on next cell block(s). PO to follow.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Improvements HVAC AHUs 1-9 Upgrade</td>
<td>AHUs 1-9 are original 1985 Jail equipment. They operate on DOS based operating system and have minimal operating controls.</td>
<td>Upgrade the operating system to Automated Logic System that is used in HO and JDC. Upgrade control valves and install VFDs.</td>
<td>AHU 1-9 upgrades the only current upgrades scheduled. ECSI has upgraded 98% of the controllers. Ruyle has completed the all water piping. Oberlander has completed 98% of their work.</td>
</tr>
</tbody>
</table>

Updated: 2/19/2020
<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>FACILITY</th>
<th>PROJECT</th>
<th>ISSUE</th>
<th>SOLUTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jail</td>
<td>Rolling/Locking Gates at Receiving Area</td>
<td>The original rolling/locking gates of the original Jail have exhausted their useful life. New gates are required.</td>
<td>Replace the East Side rolling/locking gate in 2017. Budget for the West Side rolling/locking gate in 2018 Capital Budget.</td>
<td>Project Funds diverted to Ring Road Phase 2. Jail Administration and Facilities are reviewing &quot;work-around&quot; for East Gate operation.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Fire Alarm Upgrade Phase I</td>
<td>Fire alarm panel, many detectors and related equipment is at or beyond its useful life.</td>
<td>Phase 1 is to engage a consultant to design and develop specifications for a replacement system.</td>
<td>Phase I Completed. Phase II Work Awarded.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Jail Kitchen / Laundry Expansion</td>
<td>Need expanded capacity</td>
<td>Study physical, operational &amp; cost feasibility of expanding Jail</td>
<td>Delayed.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Ring Road Repair Phase 1</td>
<td>Wet weather this spring and summer has accelerated the life cycle replacement of the Jail's Ring Road.</td>
<td>Saw cut, remove, and replace multiple sections of concrete roadway.</td>
<td>Ph 1 completed 10-30-15.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Ring Road Repair Phase 2</td>
<td>Wet weather this spring and summer has accelerated the life cycle replacement of the Jail's Ring Road.</td>
<td>Saw cut, remove, and replace multiple sections of concrete roadway.</td>
<td>Ph 2 completed on 12-01-17.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Ring Road Repair Phase 3</td>
<td>Wet weather has accelerated the life cycle replacement need of the Jail's Ring Road and Loading Dock Area.</td>
<td>Saw cut, remove, and replace multiple sections of concrete roadway and loading dock area.</td>
<td>PO P190398 was issued to C&amp;G Concrete (C&amp;G) to do several areas. The loading dock may be added to this PO.</td>
</tr>
<tr>
<td></td>
<td>Jail</td>
<td>Masonry Tuck Pointing</td>
<td>Several areas of the Jail show masonry wall deterioration. There is a need to repair the masonry walls for structural integrity and water infiltration elimination.</td>
<td>Survey the exterior masonry walls, identify the areas that need attention, prepare and bid the repair work.</td>
<td>MWEA to provide a Scope-Of-Work so we can bid exterior masonry repairs.</td>
</tr>
<tr>
<td></td>
<td>Coroner / CAC</td>
<td>Gift Ave Roof &amp; Fascia</td>
<td>Sloped roof &amp; vertical fascia are beyond warranty &amp; useful life and leak.</td>
<td>Replace sloped roof &amp; vertical fascia</td>
<td>Project deferred due to funding.</td>
</tr>
<tr>
<td></td>
<td>JDC</td>
<td>JDC Parking Lot</td>
<td>Several areas of the JDC Parking lot and Driveway need to be milled, resurfaced, and striped.</td>
<td>Mill, resurface, and stripe the parking lot and driveway.</td>
<td>Scope-Of-Work is being developed for this work. Weather is a factor.</td>
</tr>
<tr>
<td></td>
<td>JDC</td>
<td>Building Automation System</td>
<td>To better control the HVAC systems at JDC, additional controllers are needed along with the infrastructure for the controllers to talk to the building automation system.</td>
<td>Design, procure, and install technology needed to achieve result.</td>
<td>Project complete.</td>
</tr>
</tbody>
</table>
## Facilities Master Plan

### Project Status Update

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>FACILITY</th>
<th>PROJECT</th>
<th>ISSUE</th>
<th>SOLUTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>JDC</td>
<td>JDC Site Grading</td>
<td>Sally Port Road washes out / floods preventing transport</td>
<td>Regrade drainage areas</td>
<td>Completed October 2015.</td>
<td></td>
</tr>
<tr>
<td>JDC</td>
<td>Central Control Equipment Upgrade</td>
<td>Central Control equipment at JDC is the original equipment and controls doors, alarms, cameras. It provides the electronic backbone of Security.</td>
<td>Initial phase of project. Update control center.</td>
<td>Work substantially complete.</td>
<td></td>
</tr>
<tr>
<td>PCAPS</td>
<td>PCAPS Quarantine</td>
<td>Isolation of sick animals</td>
<td>Create isolated area</td>
<td>Project complete.</td>
<td></td>
</tr>
<tr>
<td>PCAPS</td>
<td>PCAPS Entry</td>
<td>Separation of aggressive animals</td>
<td>Create new separate entry point</td>
<td>Project complete.</td>
<td></td>
</tr>
<tr>
<td>PCAPS</td>
<td>PCAPS Roof</td>
<td>Roof is beyond useful life and is leaking.</td>
<td>Install new roof, gutters, and downspouts.</td>
<td>Project complete.</td>
<td></td>
</tr>
<tr>
<td>PCAPS</td>
<td>PCAPS Parking Lot</td>
<td>Parking lot has multiple holes and needs to be milled and re-surfaced.</td>
<td>Mill, resurface, and stripe the parking lot.</td>
<td>Project complete.</td>
<td></td>
</tr>
<tr>
<td>PCAPS</td>
<td>PCAPS Interior Remodel</td>
<td>Interior front office needs to be upgraded.</td>
<td>Install ceiling, new HVAC and lighting into grid, and new caret.</td>
<td>Project completed.</td>
<td></td>
</tr>
</tbody>
</table>

Updated: 19/19/2020
# Facilities Master Plan
## Project Status Update

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>FACILITY</th>
<th>PROJECT</th>
<th>ISSUE</th>
<th>SOLUTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>Paper Records Storage</td>
<td>Record Storage &amp; Management</td>
<td>Conduct more in-depth analysis &amp; study</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Heddington Oaks</td>
<td>Paper Records Storage</td>
<td>Basement Storage Compartmentalization &amp; Security</td>
<td>See reference above to County-wide study</td>
<td>Records moved from Gift Avenue to H.O.</td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>Space Utilization</td>
<td>Space Utilization &amp; Operational Efficiency</td>
<td>Conduct Analysis/Study</td>
<td>Dewberry engaged to do initial usage study.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Departmental meeting space</td>
<td>Study size and number of shared meeting spaces</td>
<td>Dewberry engaged to do initial usage study.</td>
<td></td>
</tr>
<tr>
<td>EMA</td>
<td>EMA Options</td>
<td>Physical environment no longer conducive to operational mission</td>
<td>Develop a short &amp; long term facility replacement plan.</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roof Leaks</td>
<td>Replacement Bids Received</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>Future Use of HCWC Options</td>
<td>Adaptive Re-use for the public good w/o cost to Peoria County</td>
<td>Develop Business Plan to determine operational &amp; physical viability as self sustaining entity</td>
<td>Future Project. Discussion in progress with Federal Representatives.</td>
<td></td>
</tr>
<tr>
<td>HCWC</td>
<td>Future Use of HCWC Options</td>
<td>Property Financial &amp; Legal Liability for Peoria County</td>
<td>Sell property to entity approved by State of Illinois</td>
<td>Future Project. Discussion in progress with Federal Representatives.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Future Use of HCWC Options</td>
<td>Minimize as Financial &amp; Legal Liability</td>
<td>Demolish physical structures, clear land under County control and revert to natural prairie habitat</td>
<td>Front 9-Houses abated and demolished November 2014.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Future Use of HCWC Options</td>
<td>Eliminate as Financial &amp; Legal Liability</td>
<td>Revert ownership to State of Illinois</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Future Use of HCWC Options</td>
<td>Adaptive re-use as shooting range for Sheriff's Department</td>
<td>Public engagement response not supportive of this use</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Restroom &amp; Mechanical Systems Replacement</td>
<td>Sub-standard Restrooms &amp; Mechanical systems</td>
<td>Renovate restrooms &amp; Upgrade mechanical systems</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>JDC</td>
<td>Roof Replacement</td>
<td>Roofs at end of life cycle</td>
<td>Replace roofs</td>
<td>Capital Funding issues affecting this work.</td>
<td></td>
</tr>
</tbody>
</table>

Updated: 12/19/2020
Facilities Master Plan  
Project Status Update

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>FACILITY</th>
<th>PROJECT</th>
<th>ISSUE</th>
<th>SOLUTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDIUM</td>
<td>PCAPS</td>
<td>PCAPS Quarantine</td>
<td>Isolation of sick animals</td>
<td>Create isolated area</td>
<td>Project complete.</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>PCAPS</td>
<td>PCAPS Noise Reduction</td>
<td>Excessive noise level</td>
<td>Install Acoustical treatments</td>
<td>Complete mid-2015.</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>PCAPS</td>
<td>PCAPS Entry</td>
<td>Separation of aggressive animals</td>
<td>Create new separate entry point</td>
<td>Project complete.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>West Campus</td>
<td>Bel-Wood Kitchen Use</td>
<td>Need expanded capacity &amp; &quot;newer&quot; equipment</td>
<td>Study physical, operational &amp; cost feasibility of renovating portions of Bel-Wood</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bel-Wood Site Disposition</td>
<td>Future use &amp; value</td>
<td>Demolish building &amp; clear site of all improvements for outright sale or future alternate County use</td>
<td>Completed October 2015.</td>
</tr>
<tr>
<td>OCT</td>
<td>Courthouse</td>
<td>County Boardroom Accessibility</td>
<td>Public Accessibility to County Boardroom</td>
<td>Plan, Design &amp; Remodel</td>
<td>Future Project</td>
</tr>
<tr>
<td>OCT</td>
<td>Courthouse</td>
<td>County Admin Remodel</td>
<td>Operational inefficiencies &amp; HIPPA privacy</td>
<td>Revise office plan layout &amp; Remodel</td>
<td>Future Project</td>
</tr>
<tr>
<td>OCT</td>
<td>Courthouse</td>
<td>Courts Remodel</td>
<td>Multiple deficiencies per current courts standards</td>
<td>Study, Reprogram, Plan &amp; Design Upgrades</td>
<td>Courtrooms 222, 322, 221, 123, and 121 completed.</td>
</tr>
<tr>
<td>OCT</td>
<td>Courthouse</td>
<td>Probation Remodel</td>
<td>Privacy &amp; safe separation</td>
<td>Reconfigure space to provide better public access</td>
<td>Future Project</td>
</tr>
<tr>
<td>OCT</td>
<td>Courthouse</td>
<td>State's Attorney Remodel</td>
<td>Lack of contiguous functional space</td>
<td>Close off corridor to eliminate office separation</td>
<td>Future Project</td>
</tr>
<tr>
<td>OCT</td>
<td>Courthouse</td>
<td>Grand Jury Remodel</td>
<td>Grand jury room - upgrade quality of space</td>
<td>Renovate to create more professional &amp; presentable space</td>
<td>Future Project</td>
</tr>
<tr>
<td>OCT</td>
<td>ETSB</td>
<td>ETSB Remodel - ADA</td>
<td>Non-ADA compliant access</td>
<td>Replace existing access/egress ramp with ADA compliant access component</td>
<td>Future Project</td>
</tr>
<tr>
<td>OCT</td>
<td>Coroner / CAC</td>
<td>Countywide Record Storage</td>
<td>Inefficient, sub-standard storage environments</td>
<td>Renovate former juvenile cellblock, reconfigure old gymnasium area &amp; upgrade storage systems</td>
<td>Future Project. Annual (2016) record rotation completed.</td>
</tr>
<tr>
<td>OCT</td>
<td>Coroner / CAC</td>
<td>Coroner's Inquest Remodel</td>
<td>Sub-standard interior environment &amp; public space for hearings</td>
<td>Renovate Inquest Room and integrate SOA technologies for inquests &amp; training uses</td>
<td>Future Project</td>
</tr>
<tr>
<td>OCT</td>
<td>Coroner / CAC</td>
<td>Coroner Lobby Remodel</td>
<td>Sub-standard interior environment</td>
<td>Renovate Lobby area</td>
<td>Future Project</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>FACILITY</td>
<td>PROJECT</td>
<td>ISSUE</td>
<td>SOLUTION</td>
<td>STATUS</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>---------</td>
<td>-------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>PCCHD</td>
<td>New Health Dept Facility</td>
<td>Building condition &amp; configuration not conducive to effective &amp; efficient delivery of services</td>
<td>Replace building at current location or relocate to Gift Avenue site</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>PCCHD</td>
<td>New Health Dept Facility</td>
<td>Explore opportunities to locate other County departments or agencies in new complex, i.e.: coroner's office</td>
<td>Conduct in-depth analysis of programming needs, building, site and cost implications</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Replace Maxwell Station</td>
<td>Sub-standard Facilities</td>
<td>Developing Short &amp; Long Term Facility Replacement Plan</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Replace Fleet Garage</td>
<td>Sub-standard Facility</td>
<td>Replace Garage</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Replace Maxwell Station Salt Dome</td>
<td>Sub-standard Facility</td>
<td>Replace Facility</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Replace Maxwell Station Vehicle Storage</td>
<td>Sub-standard Facilities</td>
<td>Replace Facilities</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Replace Fueling Station</td>
<td>Sub-standard Fuel Tanks &amp; Fueling Station</td>
<td>Replace &amp; relocate</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Demolish Maxwell Station Yellow Bldg.</td>
<td>Sub-standard Facility</td>
<td>Abate hazardous materials, demolish &amp; remove</td>
<td>Completed August 2015.</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Addition to North Station Vehicle Storage</td>
<td>Lack of vehicle storage space</td>
<td>Construct Additional storage building &amp; renovate old section of vehicle storage bay</td>
<td>Future Project. Moved old Bel-Wood out building to North station in early 2015.</td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td>Salt Dome Upgrades</td>
<td>Need additional capacity &amp; safer loading system</td>
<td>Construct additional domes &amp; loading system</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Jail</td>
<td>Jail Kitchen / Laundry Expansion</td>
<td>Capacity &amp; Operational deficiencies</td>
<td>Expand core support functional areas - food service, laundry, personal &amp; evidence storage, recreational space</td>
<td>Deferred to cover higher bids for Jail Central Control and Jail Ring Road.</td>
<td></td>
</tr>
<tr>
<td>Jail</td>
<td>Jail Night Court Addition</td>
<td>Bed capacity &amp; operational efficiencies</td>
<td>Study feasibility and cost effectiveness of locating night court at jail</td>
<td>Future Project</td>
<td></td>
</tr>
<tr>
<td>Jail</td>
<td>Shooting Range</td>
<td>County controlled range</td>
<td>Study feasibility of developing range at Hanna City or Bel-Wood site</td>
<td>Future Project</td>
<td></td>
</tr>
</tbody>
</table>
## Facilities Master Plan
### Project Status Update

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>FACILITY</th>
<th>PROJECT</th>
<th>ISSUE</th>
<th>SOLUTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td>Courthouse</td>
<td>Department Relocation</td>
<td>Lack of natural light</td>
<td>Relocate offices to provide natural light</td>
<td>Future Project</td>
</tr>
<tr>
<td></td>
<td>Courthouse</td>
<td>Department Relocation</td>
<td>Office location</td>
<td>Office location in courthouse not essential for effective operation. Explore optimum location for County needs.</td>
<td>Future Project</td>
</tr>
<tr>
<td></td>
<td>RRC / VAC</td>
<td>Office Remodel</td>
<td>Minimal Public Visibility</td>
<td>Add site/building signage</td>
<td>Owner added some signage.</td>
</tr>
<tr>
<td></td>
<td>RRC / VAC</td>
<td>Office Remodel</td>
<td>More efficient office layout could accommodate additional small department</td>
<td>Space utilization analysis, planning</td>
<td>RRC moved to PCCHD. VAC moved into their new space.</td>
</tr>
<tr>
<td></td>
<td>West Campus</td>
<td>Property Disposal</td>
<td>Disposition of property</td>
<td>Sell property</td>
<td>Future Project</td>
</tr>
<tr>
<td></td>
<td>One Tech Plaza</td>
<td>Property Disposal</td>
<td>Disposition of property</td>
<td>Sell property</td>
<td>Future Project</td>
</tr>
<tr>
<td></td>
<td>West Campus</td>
<td>Develop Property</td>
<td>Optimize value &amp; return for Peoria County</td>
<td>Sell property using proceeds for capital improvement projects</td>
<td>Future Project</td>
</tr>
</tbody>
</table>

Updated: 2/19/2020
AGENDA BRIEFING

COMMITTEE: Infrastructure  
MEETING DATE: February 25, 2020  
LINE ITEM: n/a  
AMOUNT: n/a

ISSUE: Peoria County Sustainability Plan Update

The internal sustainability team was formed in 2010 to write a sustainability plan for internal operations. The team consisted of invested community members as well as staff. Utility tracking began in conjunction with this sustainability planning. Electricity, natural gas and water usage are collected for all county buildings from 2011 forward, some prior to that year. This information was initially reported quarterly to management services committee.

The sustainability plan outlines strategies for reduction of natural resource use; thereby reducing emissions, increasing efficiency and saving money. In addition to mapping out preferred actions, the plan also set up a revolving fund for departmental support of small sustainability projects. The $75,000 fund was established with money from the Recycling and Resource Conservation department budget. Lighting upgrades and native perennial plantings to reduce irrigation have been subsidized through this fund. Departments have applied for these funds when projects directly correlate to objectives in the sustainability plan.

The overarching goals of the plan was reduction of natural and financial resource use. The plan calls for a 2% reduction in electrical, natural gas and water usage.

Ongoing measures

Highway

Lighting upgrades at Highway’s Plank Rd. facilities (offices, fleet garage, maintenance building, and parking lot) were included in an Ameren grant for 2019 and qualified for $13,556 in Ameren public sector and small business incentives. Many T-12 fixtures were still in use in the office so the return on investment is expected to be quick. The project was completed in Mid-August.

Highway 2019 electrical use is 17.6% less than baseline year 2011.
Health Dept

A complete install of LED lights at the Health Department began in July 2019 and was completed at the end of September. Ameren incentives for this project total $8,004. Switching to LEDs and de-lamping will take the number of lights from 1111 T8s to 578 LED strips. Exterior building lights are also included in this project.

All Facilities Electric Use 2019

Facilities included: Bel-Wood, Care and Treatment, Courthouse, Dries Lane, Election Commission, EMA, Gift Ave, Hamilton parking deck, Heddington Oaks, Highway, Jail, JDC, PCAPS, and Health Department.

Notes: Heddington Oaks opened fall of 2013 and Bel-Wood facility was demolished early 2015, so there is about 15 months when both facilities had incurred utility expenses. Care and Treatment facility closed in 2014. Election Commission utilities were included when they moved into their facility on Brandywine fall of 2018.

All Facilities Natural Gas Use 2019

Facilities included: Bel-Wood, Care and Treatment, Courthouse, Dries Lane, Election Commission, EMA, Gift Ave, Hamilton parking deck, Heddington Oaks, Highway, Jail, JDC, PCAPS, and Health Department.

See notes from chart above.

COUNTY BOARD GOALS:

HEALTHY VIBRANT COMMUNITIES

INFRASTRUCTURE STEWARDSHIP

PREPARED BY: Becca Cottrell
DATE: February 19, 2020
DEPARTMENT: Sustainability & Resource Conservation
ISSUE: Resolution for Preliminary Engineering Agreement with Crawford, Murphy & Tilly, Inc. for Rehabilitation of Structure Number 072-3116 on Grange Hall Road.

BACKGROUND/DISCUSSION: Structure Number 072-3116 on Grange Hall Road (C.H. D32) is located ¾ mile east of Princeville Jubilee Road. The bridge was constructed in 1984 and has a Sufficiency Rating of 61.7. The expansion joints at each end of the bridge have failed and are allowing water to corrode the bridge beams, diaphragms, and bearings. Additionally, the paint on the bridge beams is faded and the beams are showing signs of light rust.

This resolution will allow the County to enter into a preliminary engineering agreement with Crawford, Murphy & Tilly, Inc. (CMT) to design rehabilitation plans for Structure Number 072-3116. Rehabilitation work will include replacement of the expansion joints at each end of the bridge, structural steel repair of the beam ends, replacement of the steel diaphragms and support bearings at each end of the bridge, and painting of the bridge beams.

The estimated cost of the rehabilitation is $500,000. The rehabilitation of the bridge will greatly extend the service life of the bridge and will prevent the County from having to undergo a multi-million-dollar replacement in the near future.

The project is located in District 16 (Windish).

COUNTY BOARD GOALS:

INFRASTRUCTURE STEWARDSHIP

STAFF RECOMMENDATION: Approve the Resolution

COMMITTEE ACTION:

PREPARED BY: Jeffrey D. Gilles
DEPARTMENT: Highway
DATE: February 7, 2020
GRANGE HALL ROAD BRIDGE LOCATION MAP
Str. 072-3116, Grange Hall Rd., 9/27/2018

Road Looking East

Stream US to DS, North Looking South

West Abutment

West Abutment, 2nd Beam from North Edge, Typical Corrosion
West Abutment, 2nd Diaphragm from South Edge, Hole

West Abutment, 1st Diaphragm from South Edge, Hole

West Pier

Superstructure, 1st Bay from South Edge, Cracks
Str. 072-3116, Grange Hall Rd., 9/27/2018

East Pier, South End

East Pier

Superstructure

East Abutment
Preliminary Engineering Services Agreement

| Municipality | Peoria County |
| Township      | Jubilee       |
| County        | Peoria        |
| Section       | 2020-1-CB     |

**THIS AGREEMENT** is made and entered into this _______ day of ________, 2020 between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Motor Fuel Tax Funds, allotted to the LA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT", will be used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

**Section Description**

<table>
<thead>
<tr>
<th>Name</th>
<th>Grange Hall Road Bridge (CH D52) over Kickapoo Creek</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route</td>
<td>Length Mi. 176 FT (Structure No. 072-3116)</td>
</tr>
<tr>
<td>Termini</td>
<td>Bridge Rehabilitation</td>
</tr>
</tbody>
</table>

**Description:**
Bridge Rehabilitation of SN 072-3116

**Agreement Provisions**

The Engineer Agrees,

1. To perform or be responsible for the performance of the following engineering services for the LA, in connection with the proposed improvements herein before described, and checked below:
   a. [x] Make such detailed surveys as are necessary for the preparation of detailed roadway plans
   b. [ ] Make stream and flood plain hydraulic surveys and gather high water data, and flood histories for the preparation of detailed bridge plans.
   c. [ ] Make or cause to be made such soil surveys or subsurface investigations including borings and soil profiles and analyses thereof as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations are to be made in accordance with the current requirements of the DEPARTMENT.
   d. [ ] Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
   e. [ ] Prepare Army Corps of Engineers Permit, Department of Natural Resources-Office of Water Resources Permit, Bridge waterway sketch, and/or Channel Change sketch, Utility plan and locations, and Railroad Crossing work agreements.
   f. [ ] Prepare Preliminary Bridge design and Hydraulic Report, (including economic analysis of bridge or culvert types) and high water effects on roadway overflows and bridge approaches.
   g. [x] Make complete general and detailed plans, special provisions, proposals and estimates of cost and furnish the LA with five (5) copies of the plans, special provisions, proposals and estimates. Additional copies of any or all documents, if required, shall be furnished to the LA by the ENGINEER at his actual cost for reproduction.
   h. [x] Furnish the LA with survey and drafts in quadruplicate of all necessary right-of-way dedications, construction easement and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.
   i. [ ] Assist the LA in the tabulation and interpretation of the contractors’ proposals

**Note:** Four copies to be submitted to the Regional Engineer
j. ☑ Prepare the necessary environmental documents in accordance with the procedures adopted by the DEPARTMENT’s Bureau of Local Roads & Streets.

k. ☐ Prepare the Project Development Report when required by the DEPARTMENT.

2. That all reports, plans, plats and special provisions to be furnished by the ENGINEER pursuant to the AGREEMENT, will be in accordance with current standard specifications and policies of the DEPARTMENT. It is being understood that all such reports, plats, plans and drafts shall, before being finally accepted, be subject to approval by the LA and the DEPARTMENT.

3. To attend conferences at any reasonable time when requested to do so by representatives of the LA or the Department.

4. In the event plans or surveys are found to be in error during construction of the SECTION and revisions of the plans or survey corrections are necessary, the ENGINEER agrees that he will perform such work without expense to the LA, even though final payment has been received by him. He shall give immediate attention to these changes so there will be a minimum delay to the Contractor.

5. That basic survey notes and sketches, charts, computations and other data prepared or obtained by the Engineer pursuant to this AGREEMENT will be made available, upon request, to the LA or the DEPARTMENT without cost and without restriction or limitations as to their use.

6. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by him and will show his professional seal where such is required by law.

7. Attached to, and part of, this AGREEMENT is Exhibit A & B. Exhibit A provides additional details about the proposed rehabilitation of Structure Number 072-3116 and the professional services to be provided by the ENGINEER which are the subject of this AGREEMENT. Exhibit A describes the information known to the LA and ENGINEER at the time the AGREEMENT is executed.

The LA Agrees,

1. To pay the ENGINEER as compensation for all services rendered in accordance with this Agreement on the basis of the Cost Plus Fixed Fee formula. The classifications of the employees used in the work should be consistent with the employee classifications for the services performed. If the personnel of the firm, including the Principal Engineer, perform routine services that should normally be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the work performed.

2. Traveling and other out-of-pocket expenses will be reimbursed to the ENGINEER at his actual cost. Subject to the approval of the LA, the ENGINEER may sublet part of the services. If the ENGINEER sublets part of this work, the LA will pay the cost to the ENGINEER plus a ten (10) percent service charge. "Cost to Engineer" to be verified by furnishing the LA and the DEPARTMENT copies of invoices from the party doing the work.

3. Compensation on the basis of the Cost Plus Fixed Fee formula is tabulated in the attached Exhibit B. Exhibits A and B summarize the tasks to be performed and the estimated effort to complete each task. The estimated effort is carried forward to compute the compensation limits as tabulated in Exhibit B. Exhibits A and B are part of the AGREEMENT.

4. That payments due the ENGINEER for services rendered in accordance with this AGREEMENT will be made without retainage upon receipt of monthly invoices from the ENGINEER. Such invoices shall be for partially completed work less all previous partial payments paid to the ENGINEER. Payments shall be made as soon as practicable after receipt of each invoice.

5. That, should the improvement be abandoned at any time after the ENGINEER has performed any part of the services provided for in this AGREEMENT, the LA shall reimburse the ENGINEER for all services provided to the point of abandonment in accordance with the Cost Plus Fixed Fee formula.

6. That, should the LA require changes in any of the detailed plans, specifications or estimates except for those required pursuant to paragraph 4 of THE ENGINEER AGREES, after they have been approved by the DEPARTMENT, the LA will pay the ENGINEER for such changes on the basis of the Cost Plus Fixed Fee formula. It is understood that “changes” as used in this paragraph shall in no way relieve the ENGINEER of his responsibility to prepare a complete and adequate set of plans and specifications.
It is Mutually Agreed,

1. That any difference between the ENGINEER and the LA concerning their interpretation of the provisions of this Agreement shall be referred to a committee of disinterested parties consisting of one member appointed by the ENGINEER, one member appointed by the LA and a third member appointed by the two other members for disposition and that the committee’s decision shall be final.

2. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at his last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all surveys, permits, agreements, preliminary bridge design & hydraulic report, drawings, specifications, partial and completed estimates and data, if any from traffic studies and soil survey and subsurface investigations with the understanding that all such material becomes the property of the LA. The ENGINEER shall be paid for any services completed and any services partially completed in accordance with Section 4 of THE LA AGREES.

3. That the ENGINEER warrants that he/she has not employed or retained any company or person, other than a bona fide employee working solely for the ENGINEER, to solicit or secure this contract, and that he/she has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the ENGINEER, any fee, commission, percentage, brokerage fee, gifts or any other consideration, contingent upon or resulting from the award or making of this contract. For Breach or violation of this warranty the LA shall have the right to annul this contract without liability.

IN WITNESS WHEREOF, the parties have caused the AGREEMENT to be executed in triplicate counterparts, each of which shall be considered as an original by their duly authorized officers.

Executed by the LA:  
Peoria County of the  
State of Illinois, acting by and through its County Board

ATTEST:  
By  
By

Title: Peoria County Clerk  
Title: County Administrator

(Seal)

Executed by the ENGINEER:  
Crawford, Murphy & Tilly, Inc.

ATTEST:  
By  
By

Title  
Title

Approved

Date

Department of Transportation

Regional Engineer
Grange Hall Road Bridge Rehabilitation

SN 072-3116

Section 2020-1-CB

Peoria County Highway Department has determined the bridge requires certain repairs. The following is a description of the existing bridge and known problems that require repair:

- The bridge is located approximately 0.75 miles east of Princeville-Jubilee Blacktop. The structure is a 176-foot-long 3-span steel girder structure with a cast in place concrete deck constructed in 1984.
- The Sufficiency Rating is 61.7.
- Expansion joints at each end have failed which has led to deterioration of the ends of the girders and diaphragms.
- Much of the girders have light rust.
- The concrete deck has minor transverse cracking with very minor leaching. The concrete deck has also been covered with an asphalt/aggregate seal coat.
- Testing has determined the bridge does not contain any asbestos materials.

Peoria County would like to hold a local letting in October or November of 2020.

Construction work would likely begin in spring of 2021.

The County has budgeted $500,000 of county controlled funds for the rehabilitation.

CMT staff will provide the following services:

- Perform a bridge inspection to confirm repair needs.
- Perform an Environmental Screening to confirm that the proposed work complies with state and local policies.
- Perform topographic surveys of the bridge and roadway approaches as necessary for studies and preparing bidding documents.
- Review roadside safety conditions of the approaches to the bridge. Identify upgrades or improvements, if applicable, to comply with current roadside safety policies.
- Prepare construction plans of the proposed improvements.
- Prepare cost opinions of proposed improvements.
- Prepare specifications, bidding, and contract documents for proposed improvements.
## EXHIBIT B

### COST ESTIMATE OF CONSULTANT SERVICES

**FIRM:** CRAWFORD, MURPHY AND TILLY, INC.  
**DATE:** 02/06/20

**ROUTE:** Grange Hall Road Bridge  
**OVERHEAD RATE (OH):** 167.22%

**SECTION:** 2020-1-CB  
**COMPLEXITY FACTOR (R):** 0

**COUNTY:** Peoria County  
Structure Number: 072-3116

### Formulas

- \((C) = (A) \times (B)\)
- \((D) = (C) \times (OH)\)
- \((F) = 0.145 \times (C + (R \times C) + (OH \times C) + E)\)
- \((H) = (C) + (D) + (E) + (F) + (G)\)

### Table

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MANHOURS</th>
<th>AVERAGE HOURLY RATE</th>
<th>PAYROLL</th>
<th>OVERHEAD &amp; FRINGE BENEFITS</th>
<th>DIRECT COSTS</th>
<th>FIXED FEE</th>
<th>SERVICE BY OTHERS</th>
<th>TOTAL</th>
<th>% OF GRAND TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Management &amp; Coordination</strong></td>
<td>24</td>
<td>$56.84</td>
<td>$1,364</td>
<td>$2,281</td>
<td>$529</td>
<td></td>
<td></td>
<td>$10,726</td>
<td>8.09%</td>
</tr>
<tr>
<td><strong>B. Project Development</strong></td>
<td>100</td>
<td>$32.77</td>
<td>$3,277</td>
<td>$5,480</td>
<td>$611</td>
<td>$1,358</td>
<td></td>
<td>$10,726</td>
<td>20.78%</td>
</tr>
<tr>
<td>01. Surveys and Mapping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>02. Environmental Screening</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>03. Bridge Inspection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>04. Roadside Safety Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05. Preliminary Cost Opinion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C. Plan Development</strong></td>
<td>320</td>
<td>$37.50</td>
<td>$12,001</td>
<td>$20,068</td>
<td>$4,650</td>
<td></td>
<td></td>
<td>$36,719</td>
<td>71.13%</td>
</tr>
<tr>
<td>01. Prefinal Plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>02. Final Plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>03. Specs, Estimates &amp; Contracts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>444</td>
<td>$16,642</td>
<td>$27,830</td>
<td>$611</td>
<td>$6,537</td>
<td></td>
<td></td>
<td>$51,620</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
# PAYROLL RATES

**FIRM NAME:** CRAWFORD, MURPHY AND TILLY, INC.  
**ROUTE:** Grange Hall Road Bridge  
**SECTION:** 2020-1-CB  
**COUNTY:** Peoria County

**ESCALATION FACTOR 0.00%**

**DATE:** 02/06/20

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>JANUARY 2020 RATES</th>
<th>ESCALATED RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Principal</td>
<td>$81.02</td>
<td>$81.02</td>
</tr>
<tr>
<td>20 Project Engineer II</td>
<td>$65.10</td>
<td>$65.10</td>
</tr>
<tr>
<td>30 Project Engineer I</td>
<td>$51.04</td>
<td>$51.04</td>
</tr>
<tr>
<td>40 Senior Engineer I</td>
<td>$37.58</td>
<td>$37.58</td>
</tr>
<tr>
<td>50 Engineer I</td>
<td>$29.53</td>
<td>$29.53</td>
</tr>
<tr>
<td>62 Environmental Specialist I</td>
<td>$25.53</td>
<td>$25.53</td>
</tr>
<tr>
<td>70 Land Surveyor</td>
<td>$41.23</td>
<td>$41.23</td>
</tr>
<tr>
<td>80 Senior Technician I</td>
<td>$36.60</td>
<td>$36.60</td>
</tr>
<tr>
<td>90 Technician II</td>
<td>$30.67</td>
<td>$30.67</td>
</tr>
<tr>
<td>100 Technician I</td>
<td>$22.10</td>
<td>$22.10</td>
</tr>
<tr>
<td>110 Administrative/Accounting Assistant</td>
<td>$21.04</td>
<td>$21.04</td>
</tr>
</tbody>
</table>
**PAYROLL ESCALATION TABLE**

**ANNIVERSARY RAISES**

<table>
<thead>
<tr>
<th>FIRM NAME:</th>
<th>CRAWFORD, MURPHY AND TILLY, INC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROUTE:</td>
<td>Grange Hall Road Bridge</td>
</tr>
<tr>
<td>SECTION:</td>
<td>2020-1-CB</td>
</tr>
<tr>
<td>COUNTY:</td>
<td>Peoria County</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTRACT TERM</th>
<th>8 MONTHS</th>
<th>OVERHEAD RATE</th>
<th>167.22%</th>
</tr>
</thead>
<tbody>
<tr>
<td>START DATE</td>
<td>4/1/2020</td>
<td>COMPLEXITY FACTOR</td>
<td>0</td>
</tr>
<tr>
<td>DATE OF NEXT PAYROLL INCREASE</td>
<td>1/1/2021</td>
<td>% OF ANNUAL RAISE</td>
<td>3.00%</td>
</tr>
<tr>
<td>COMPLETION DATE</td>
<td>11/30/2020</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ESCALATION PER YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date is 9.1 months before the next Payroll Increase</td>
</tr>
<tr>
<td>Completion Date is 1.0 months before the next Payroll Increase</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Months of Work</th>
<th>Current Year Rates</th>
<th>Year 2 Rates</th>
<th>Year 3 Rates</th>
<th>Year 4 Rates</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Escalation Factor</td>
<td>8.0 0.0 0.0 0.0 8.0</td>
<td>100.00% 0.00% 0.00% 0.00% 100.00%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CALCULATE THE ESCALATION FACTOR OVER THE CONTRACT TERM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00%</td>
</tr>
<tr>
<td>PAYROLL CLASSIFICATION</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Principal</td>
</tr>
<tr>
<td>Project Engineer II</td>
</tr>
<tr>
<td>Project Engineer I</td>
</tr>
<tr>
<td>Senior Engineer I</td>
</tr>
<tr>
<td>Engineer I</td>
</tr>
<tr>
<td>Environmental Specialist I</td>
</tr>
<tr>
<td>Land Surveyor</td>
</tr>
<tr>
<td>Senior Technician I</td>
</tr>
<tr>
<td>Technician II</td>
</tr>
<tr>
<td>Technician I</td>
</tr>
<tr>
<td>Administrative/Accounting Assistant</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

TOTALS
TO THE HONORABLE COUNTY BOARD

COUNTY OF PEORIA, ILLINOIS

Your Infrastructure Committee does hereby recommend passage of the following Resolution:

**RE: PRELIMINARY ENGINEERING AGREEMENT TO DESIGN BRIDGES WITHIN PEORIA COUNTY**

**RESOLUTION**

WHEREAS, Structure Number 072-3116 located on Grange Hall Road (C.H. D32) is in a state of deterioration; and

WHEREAS, your Infrastructure Committee, having considered the economic effects of the project, believes that the best interests of Peoria County will be served by the approval of a Preliminary Engineering Service Agreement for preliminary engineering to rehabilitate structures using the County Bridge Fund for:

Phase I and Phase II engineering for the rehabilitation of Structure Number 072-3116 on Grange Hall Road (C.H. D32), designated as Section 2020-1-CB, at a cost not to exceed $51,620.00 with Crawford, Murphy & Tilly, Inc.

NOW, THEREFORE BE IT RESOLVED, that the preliminary engineering agreement be approved, and that the County Administrator be designated as the officer to sign the engineering agreement; and

BE IT FURTHER RESOLVED that $51,620.00 be appropriated from the County Bridge fund for Phase I and Phase II engineering for Section 2020-1-CB on Grange Hall Road; and

BE IT FURTHER RESOLVED, that the County Treasurer be authorized to issue checks from the County Bridge Fund in payment of invoices for the engineering work.

RESPECTFULLY SUBMITTED,

INFRASTRUCTURE COMMITTEE
ISSUE: Resolution for Cooperative Research Agreement with Bradley University

BACKGROUND/DISCUSSION:
The objective of the agreement is for the Highway Department to maintain the County's Pavement Management Program through a partnership with Bradley University's Civil Engineering Department.

The Pavement Management Program was created with the assistance of Bradley University in 2008-2009. During that time, the entire County road network was inventoried and evaluated. Due to the wear and tear the roads receive, as well as the preventative maintenance methods that have been applied, it is necessary to periodically update the pavement conditions in the program. This contract will update one half of the County road network. Additionally, work under the agreement will measure the International Roughness Index (IRI) of the County Highways being studied. IRI is a commonly used measure of road surface damage and will be compared to the Pavement Condition Index of each road.

A Pavement Management Program has been defined as “a set of tools or methods that assist decision-makers in finding optimum strategies for providing, evaluating and maintaining pavements in a serviceable condition over a period of time”. The benefits of a Pavement Management Program are substantial and can help an agency “employ more cost-effective treatment strategies, allocate funds to the pavement sections that will give the best performance for the funds allocated, and improve the quality of the agency pavement network”. Specifically, the implementation of a Pavement Management Program provides a systematic procedure to search, organize, and save pavement information and allows agencies to understand the consequences of deferred maintenance. In addition, a Pavement Management Program seeks to minimize costs of individual projects, use available resources more efficiently, and support agency decision-making.

Data received from previous surveys are used to prioritize the annual seal coating program on Peoria County Highways. Additionally, this information is used each year to populate the Highway Department's report for the International City / County Management Association. The data has also been used for the financial analysis of the County's infrastructure.

In summary, this partnership with Bradley will obtain field data of the County roadway system, update the system database, and assist in pavement management related decisions.

COUNTY BOARD GOALS:

INFRASTRUCTURE STEWARDSHIP

STAFF RECOMMENDATION: Approve the Cooperative Research Agreement with Bradley University

COMMITTEE ACTION:

PREPARED BY: Jeffrey D. Gilles

DEPARTMENT: Highway

DATE: February 13, 2020
COOPERATIVE RESEARCH AGREEMENT
BETWEEN
BRADLEY UNIVERSITY
AND
PEORIA COUNTY

This AGREEMENT ("AGREEMENT") dated as of _______________________ (the "Effective Date"),
is between Peoria County ("DEPARTMENT") having offices at 6915 West Plank Road, Peoria Illinois, 61604-5246
and Bradley University ("UNIVERSITY") having offices at 1501 West Bradley Avenue, Peoria, Illinois 61625, and
sets forth the terms and conditions on which the UNIVERSITY will conduct research Agreements funded by
DEPARTMENT and is in force upon the date of signature. The term UNIVERSITY includes the UNIVERSITY and
all its satellite campuses.

No commitment is made by DEPARTMENT to contract and pay for research or other services, or for the
UNIVERSITY to conduct research or provide other services, other than the work specified in this AGREEMENT,
by the execution of this AGREEMENT alone. Commitments for research Agreements or other services can be made
only by the issuance of specified research AGREEMENT by DEPARTMENT.

This Contract sets forth the terms for the performance and administration of work as appended.

Exhibit A - Statement of Work
Exhibit B - AGREEMENT Budget

1. TERMS OF AGREEMENT
1.1 EXECUTION AND MODIFICATION:
1.1.1 Term: This AGREEMENT shall become effective upon signature by duly authorized
representatives of the DEPARTMENT and the UNIVERSITY.

1.1.2 Modification: Modifications to this AGREEMENT including the Statement of Work
(Exhibit A) and/or the Budget (Exhibit B) shall occur only by written AGREEMENT of the
authorized representatives of the DEPARTMENT and the UNIVERSITY

1.1.3 Termination: Notwithstanding anything to the contrary here, DEPARTMENT may
terminate, with or without cause, all or part of the services under the AGREEMENT by giving
at least thirty (30) days' prior written notice to the UNIVERSITY, which notice shall specify
the services to be terminated and the effective date of the termination.

1.2 PERIOD OF PERFORMANCE: The period of performance of this AGREEMENT shall begin on the date
in which the last party signs the contract and conclude 12 months later unless an extension is agreed to
in writing by authorized representatives of the DEPARTMENT and the UNIVERSITY

1.3 SCOPE OF WORK: The scope of work as specified in Exhibit A expresses fully that work which is to
be accomplished under the terms of this AGREEMENT.

1.4 REPORTS: The Principal Investigator/Project Director shall be available by telephone or in person, to
discuss the progress and results of an Agreement, as well as ongoing plans or proposed changes.

1.5 ESTIMATED PROJECT COST:

The DEPARTMENT shall reimburse the UNIVERSITY for all costs related to the Scope
of Work described in Exhibit A in an amount not to exceed Thirty-Seven Thousand
Ninety-Three Dollars ($37,093.00).

1.5.1 In the event DEPARTMENT terminates all or part of this AGREEMENT,
DEPARTMENT shall pay the UNIVERSITY compensation pursuant to AGREEMENT
for the actual costs and non-cancelable obligations incurred by the UNIVERSITY for all
services completed by the termination date, provided that DEPARTMENT did not
terminate all or part of the AGREEMENT because of the UNIVERSITY'S breach of this
AGREEMENT.
1.5.2 **Payment:** Two (2) copies of all invoices shall be submitted monthly. These shall detail all charges current to the date of the invoice and all current charges. Invoices shall be sent to

**County Engineer**  
**Peoria County Highway Department**  
**6915 West Plank Road**  
**Peoria, IL 61604-5246**

1.5.2.1 Each invoice shall include a unique identifying number
1.5.2.2 The Final invoice shall be marked clearly as FINAL
1.5.2.3 Payments under this contract shall be governed by the “Local Government Prompt Payment Act” 50 ILCS 550/l et seq.

1.5.3 **Allowable Costs:**

1.5.3.1 The UNIVERSITY'S usual policies governing salaries and wages and fringe benefits shall apply to all UNIVERSITY employees working under the terms of this AGREEMENT.
1.5.3.2 The UNIVERSITY'S standard policy on travel and travel reimbursement shall apply to all costs for travel and transportation directly related to and charged to this AGREEMENT.

1.5.4 The UNIVERSITY'S budget as attached hereto as Exhibit B is only an estimate of direct and indirect costs required to complete the Scope of Work defined in Exhibit A and there may be need to depart from line item estimations within this budget to cover as yet unanticipated requirements to fulfill the Scope of Work. However, the total amount to be paid under this AGREEMENT shall not exceed Thirty-Seven Thousand Ninety-Three Dollars ($37,093.00).

1.5.4.1 The UNIVERSITY is hereby authorized to reallocate budget funds that do not require prior approval in accordance with the DEPARTMENT'S policies.
1.5.4.2 Reallocation of line item budget funds requiring prior approval in accordance with the DEPARTMENT'S policies must have prior written approval of the UNIVERSITY's designated official prior to submitting the request to the DEPARTMENT.

1.5.5 **Contract-related Income:**

1.5.5.1 The UNIVERSITY shall maintain such records as may be necessary to comply with the requirements of this provision
1.5.5.2 Any Contract-related Income generated under the terms of this AGREEMENT shall be used to reduce expenditures chargeable to the AGREEMENT

1.5.6 **Accounts, Audits and Records:**

1.5.6.1 The UNIVERSITY shall use standard accounting procedures and practices in the execution of this AGREEMENT
1.5.6.2 The UNIVERSITY shall maintain all records, documents and other evidence sufficient to reflect properly all direct and indirect costs of whatever nature it claims to have been incurred for the performance of this AGREEMENT. The foregoing constitutes "records" for the purpose of this AGREEMENT
1.5.6.3 **Audit.** The UNIVERSITY grants to DEPARTMENT reasonable access to all pertinent ledgers, payroll data, books, records, correspondence, written instructions, drawings, receipts, vouchers, and other documents for audit purposes. The UNIVERSITY must segregate such documents and records in such a manner as to facilitate a complete audit and agrees that the audit may be
used as a basis for settlement of any charges. DEPARTMENT or its agents shall have the right, upon reasonable notice, to audit the UNIVERSITY'S documents and records during the UNIVERSITY'S normal business hours. Such documents and records shall be retained for two (2) years after the payment of the applicable invoice.

1.6 PRINCIPAL INVESTIGATOR/PROJECT DIRECTOR:

1.6.1 The Principal Investigator/Project Director for this AGREEMENT shall be

Dr. Kerrie Schattler, Professor
Department of Civil Engineering and Construction
Bradley University
1501 West Bradley Avenue
Peoria, IL 61625

1.6.2 The Principal Investigator/Project Director or her designee shall be responsible for the technical, scientific and programmatic aspects of the scope of work defined in Exhibit A.

1.7 INDEMNITY

1.7.1 The UNIVERSITY will save, indemnify, defend and hold harmless the DEPARTMENT, its agents, directors, and employees from any and all liability that may arise as a result of the negligent actions and/or omissions of the UNIVERSITY, its agents, and employees under performance of this AGREEMENT.

1.7.2 The DEPARTMENT will save, indemnify, defend and hold harmless the UNIVERSITY, its agents and employees from any and all liability that may arise as a result of the negligent actions or omissions of the DEPARTMENT, its agents and employees under performance of this AGREEMENT, to the extent allowed under Illinois Law.

1.8 NON DISCRIMINATION

1.8.1 The UNIVERSITY shall not discriminate against any employee or applicant for employment because of race, color, religion, gender, age, marital status, sexual orientation, ancestry, place of birth, status as a disabled veteran or Vietnam Era veteran or because of handicap, except where a bona fide occupational qualification exists.

UNIVERSITY will take affirmative action to comply with the provisions of Section 6.5-51 of the Peoria County Purchasing Ordinance as appended in Exhibit C.

UNIVERSITY will distribute copies of its commitment not to discriminate to all persons who participate in recruitment, screening, referral and selection of job applicants, and prospective job applicants.

UNIVERSITY agrees that the provisions of Section 6.5-51 of the Peoria County Purchasing Ordinance are hereby incorporated into this Agreement by reference, as if they were set out verbatim. UNIVERSITY further agrees that the provisions of the Illinois Human Rights Act (775 ILCS 5/1-101 et. seq.) as hereinafter amended, are hereby incorporated into this Agreement by reference and made a part hereof.

In addition to remedies and notwithstanding any other remedies the parties may have under this Agreement or at law, the DEPARTMENT may recover from UNIVERSITY by set-off against the unpaid portion of the contract price the sum of Five Hundred Dollars ($500.00) per day as liquidated damages and not as a penalty, for each day that
UNIVERSITY fails to comply with the affirmative action provisions of this Agreement as determined by the Director and the Peoria County Affirmative Action Committee. This said sum being fixed and agreed upon by and between the DEPARTMENT and UNIVERSITY because of the impracticability and extreme difficulty of affixing and ascertaining the actual damages which the DEPARTMENT would sustain in the event of such a breach of contract and said amount is agreed to be the amount of damages which the DEPARTMENT would sustain.

1.8.2 The UNIVERSITY shall comply with all provisions of Executive Order No. 11246 of September 24, 1965, and the rules, regulations and relevant orders of the Secretary of Labor.

1.8.3 In the event of the UNIVERSITY'S noncompliance with this Provision, this contract may be cancelled, terminated, or suspended in whole or in part as deemed appropriate by the DEPARTMENT.

1.9 INTELLECTUAL PROPERTY RIGHTS

1.9.1 DEPARTMENT INVENTIONS Rights to any invention, improvement, discovery, or work of authorship, whether or not patentable or copyrightable, which relates to this AGREEMENT and which was made solely by employees of DEPARTMENT without the use of the UNIVERSITY facilities, shall belong to DEPARTMENT (“DEPARTMENT INVENTIONS”). DEPARTMENT INVENTIONS shall not be subject to the terms and conditions of this Agreement.

1.9.2 UNIVERSITY INVENTIONS. Rights to any invention, improvement, discovery, or work of authorship, whether or not patentable, copyrightable, or held as a trade secret (other than those considered to be “Scholarly Works” or “Works for Hire”) which relates to this AGREEMENT and which was made solely by employees and/or agents of the UNIVERSITY shall belong to the UNIVERSITY (UNIVERSITY INVENTIONS). “Scholarly Works” are defined as materials produced by Bradley University faculty members as part of their usual teaching, service, and research activities, in tangible or electronic form, such as textbooks and other curricular materials, reference works, journal articles, novels, music, and photographs, which do not result directly as a specified deliverable from Agreements funded in whole or in part by the UNIVERSITY or under a sponsored activity agreement. Works for Hire are defined as per 17 USC § 101: definitions "work for hire" and apply to databases created under the scope of the Statement of Work appended as Exhibit A.

1.9.3 If the DEPARTMENT requests the UNIVERSITY to patent a UNIVERSITY INVENTION, the UNIVERSITY will do so, and DEPARTMENT will pay for, or reimburse the UNIVERSITY for, reasonable out-of-pocket costs associated with the filing, prosecution, and maintenance of the patent application associated with protecting a UNIVERSITY Invention. In consideration of DEPARTMENT'S sponsorship and payment of monies due, the UNIVERSITY hereby grants to DEPARTMENT, an irrevocable, worldwide, non-exclusive, paid-up license and right to make, have made, reproduce, use, have used, sell, offer to sell, and import all UNIVERSITY INVENTIONS directly resulting from work associated with this AGREEMENT without additional royalty or payment within DEPARTMENT'S Field of Use. The license does not include the right to sublicense a UNIVERSITY INVENTION to unaffiliated third parties without the UNIVERSITY'S consent.

1.9.4 JOINT INVENTIONS. Rights to any invention, improvement, discovery, or work of authorship, whether or not patentable or copyrightable, which relates to the Research Agreement and which was made jointly by one or more DEPARTMENT employees and one or more employees and/or agents of the UNIVERSITY or which are made solely by employees of DEPARTMENT utilizing UNIVERSITY facilities, shall belong to
DEPARTMENT, and the UNIVERSITY jointly (JOINT INVENTIONS) DEPARTMENT or UNIVERSITY can freely practice the claims of any resulting patent within its Field of Use without consultation with or accounting to the other owner. Before either party negotiates a license with a third party, in such a patent, however, the parties shall confer to determine whether their mutual cooperation in such licensing effort is desirable.

1.9.5 EXCLUSIVE LICENSE. The UNIVERSITY grants DEPARTMENT the first option to negotiate in good faith for an exclusive royalty-bearing license to make, have made, reproduce, use, have used, sell, offer to sell, and import any UNIVERSITY INVENTION and any JOINT INVENTION made in the course of work under this Agreement. Once a patent application filed by the UNIVERSITY is published under U.S. Patent Code and becomes public information, DEPARTMENT'S option to negotiate for an exclusive license shall extend for a period of one hundred eighty (180) days from the date DEPARTMENT receives notification of the publication. If the UNIVERSITY and DEPARTMENT are unable to negotiate agreeable terms, the UNIVERSITY will not, thereafter, enter into an exclusive license with anyone else under terms which are more favorable than those offered to DEPARTMENT without first offering DEPARTMENT'S designee, DEPARTMENT' the opportunity to obtain the exclusive license under such terms. In the event DEPARTMENT obtains an exclusive license to practice the claims of the JOINT INVENTION, the UNIVERSITY retains a non-exclusive, royalty free right to practice the claims of the Joint Invention for research and teaching.

1.9.6. INFRINGEMENT The University represents that to the best of its knowledge, Department's stated use of the Deliverables will not violate or infringe any intellectual property rights of a third party, including patent, copyright, trademark, and mask work, or constitute misappropriation of a trade secret. The UNIVERSITY will promptly notify Department, in writing, if it has reason to believe that any allegation of violation, infringement, misuse, or misappropriation will result from Department's stated use of the Deliverables.

2.0 CONFIDENTIALITY

2.1 The UNIVERSITY agrees not to use or disclose DEPARTMENT Information (as defined below) to any employee or agent or to any third party unless (i) the employee, agent, or third party has a need to know DEPARTMENT Information in order for the UNIVERSITY to perform its obligations under this Agreement or any Purchase Order, and (ii) the employee, agent, or third party is bound by UNIVERSITY policies requiring nondisclosure and/or has executed and delivered to the UNIVERSITY an agreement similar to this paragraph restricting his, her, or its use and disclosure of DEPARTMENT INFORMATION. DEPARTMENT INFORMATION includes documents, books, manuals, computer reports, software, data files, or information furnished by DEPARTMENT and designated proprietary by DEPARTMENT in writing, as well as those aspects of a Research Agreement agreed to by the parties to be confidential to DEPARTMENT. The obligations set forth in this paragraph shall remain in effect for a period of two (2) years after the end of a Research Agreement and shall apply only to DEPARTMENT INFORMATION that is not in the public domain, is not already known by the UNIVERSITY has not been independently developed or furnished to the UNIVERSITY, or is not required to be disclosed pursuant to law or court order. DEPARTMENT INFORMATION shall be clearly marked and identified on each document provided to the UNIVERSITY.

2.2 DEPARTMENT: DEPARTMENT agrees not to use or disclose UNIVERSITY INFORMATION (as defined below) to any employee or agent or to any third party. UNIVERSITY INFORMATION includes documents, books, manuals, computer reports, software, data files, or information designated proprietary by UNIVERSITY in writing, as well as those
aspects of a Research Agreement agreed to by the parties to be confidential to UNIVERSITY. The obligations set forth in this paragraph shall remain in effect for a period of two (2) years after the end of a Research Agreement and shall apply only to UNIVERSITY Information that is not in the public domain, is not already known by DEPARTMENT, has not been independently developed or furnished to the DEPARTMENT, or is not required to be disclosed pursuant to law or court order. Aspects of the Research Agreement identified as UNIVERSITY INFORMATION in the Research Agreement may be used by the DEPARTMENT for its own internal research purposes, subject to these confidentiality provisions. "University" information shall be clearly marked and identified on each document provided to DEPARTMENT as Confidential or Proprietary.

3.0. PUBLICATIONS

DEPARTMENT recognizes that under UNIVERSITY’S policy, the results of a Research Agreement must be publishable and agrees that researchers engaged in a Research Agreement shall be permitted to present the methods and results of that Research Agreement at symposia or at national or regional professional meetings and to publish them in journals, theses, dissertations, or otherwise at the option of the researchers; provided, however, that DEPARTMENT may have been given a copy of any proposed publication at least sixty (60) days in advance of submission to a publication. Where practical, materials for proposed presentations must be submitted to DEPARTMENT sufficiently in advance of the scheduled or proposed presentation to allow DEPARTMENT a reasonable opportunity to review those materials for patentable subject matter in need of protection or for the inadvertent disclosure of DEPARTMENT INFORMATION. During the review period, DEPARTMENT may object to the proposed presentation or publication either because there is patentable subject matter that needs protection or because there is an inadvertent disclosure of DEPARTMENT INFORMATION. If DEPARTMENT objects due to the potential for patentable subject matter, the UNIVERSITY agrees to delay publication for an additional period to allow filing for protection of the invention; however, this period may not exceed one hundred-twenty days (120) unless negotiated between DEPARTMENT and the UNIVERSITY. If DEPARTMENT objects to publication due to an inadvertent disclosure of DEPARTMENT INFORMATION the UNIVERSITY agrees to remove the DEPARTMENT INFORMATION. The UNIVERSITY hereby grants to DEPARTMENT the right, without further consideration, to duplicate, publish, or reprint any report produced by the UNIVERSITY but only for the internal use of DEPARTMENT, or as required by the Illinois Freedom of Information Act, as determined by the DEPARTMENT.

4.0 GENERAL.

4.2 BAILED PROPERTY.

Unless otherwise agreed in the Research Agreement Specification, all supplies, materials, equipment or other items and that DEPARTMENT furnished, either directly or indirectly, to the UNIVERSITY to perform any Research Agreement are and shall remain the property of DEPARTMENT. The UNIVERSITY shall bear the risks of loss and damage to DEPARTMENT’S property.

4.3 ADVERTISING.

Except with respect to internal business communications, communications with governmental agencies, or communications required by law, the UNIVERSITY and "Department" shall not use each other’s names or trademarks in publicity or advertising without first receiving written consent from the other.
4.4 **FORCE MAJEURE.**

Any delay or failure of either party to perform its obligations shall be excused if, and to the extent, caused by an event or occurrence beyond the reasonable control of that party and without its fault or negligence, such as acts of God, actions by any governmental authority (whether valid or invalid), fires floods, windstorms, explosions, riots, natural disasters, wars, sabotage, labor problems (including lockouts, strikes and slowdowns), inability to obtain power, material, labor, equipment or transportation, or court injunction or order.

4.5 **GOVERNMENTAL COMPLIANCE.**

DEPARTMENT and the UNIVERSITY agree to comply with all federal, state and local laws, executive orders, rules, regulations, and ordinances that may be applicable to the party’s performance of its obligations under this Agreement.

4.6 **NO IMPLIED WAIVER.**

The failure of either party at any time to require the performance of any provision of this Agreement or any Purchase Order issued under this Agreement shall in no way affect its right to require the performance at any time thereafter. Nor shall the waiver by either party of any provision constitute a waiver of any succeeding breach of the same or any other provision.

4.7 **NON-ASSIGNMENT.**

Neither party may assign or delegate its obligations under this Agreement without the other party’s prior written consent.

4.8 **RELATIONSHIP OF PARTIES.**

The UNIVERSITY and DEPARTMENT are independent contracting parties, and nothing in this Agreement shall make either party the agent or legal representative of the other for any purpose whatsoever. This Agreement does not grant either party any authority to assume or to create any obligation on behalf of or in the name of the other. The employees, students or agents of the DEPARTMENT are not now nor shall they be deemed to be employees of the UNIVERSITY and the employees of the DEPARTMENT are not now nor shall they be deemed to be employees of the UNIVERSITY.

4.9 **SEVERABILITY.**

If any term of this Agreement is invalid or unenforceable under any statute, regulation, ordinance, executive order, or other rule of law, that term shall be deemed reformed or deleted, but only to the extent necessary to comply with such statute, regulation, ordinance, executive order, or rule, and the remaining provisions of this Agreement shall remain in full force and effect.

4.10 **INTEGRATION:**

This Agreement, together with any attachments, exhibits, or supplements specifically referenced in it, constitutes the final and entire agreement between the UNIVERSITY and DEPARTMENT with respect to its subject matter and supersedes all prior or contemporaneous, oral or written representations and agreements. Any modification, alteration, or amendment to this Agreement must be in writing and signed by both parties.

4.11 **STATE OF GOVERNING LAW**

The validity and interpretation of this AGREEMENT, the legal relations of the parties to it, and the settlement of all disputes arising therefrom shall be governed by laws of the State of Illinois
4.12 TERMINATION FOR LACK OF FUNDING
The DEPARTMENT'S payment of funds for purposes of executing this agreement is subject to and conditioned upon the availability of funds for such purposes. The DEPARTMENT may terminate this AGREEMENT upon written notice to the UNIVERSITY at any time prior to the termination of this AGREEMENT if, in the sole discretion of the DEPARTMENT, funding becomes unavailable for this AGREEMENT or such funds are restricted. The UNIVERSITY shall be reimbursed for obligations which cannot be cancelled properly incurred prior to the date of notice of the termination.

IN WITNESS WHEREOF, the parties have caused this AGREEMENT to be effective as of _____________ with signatory approval of their duly authorized representatives.

PEORIA COUNTY
By: __________________________
Scott Sorrel
County Administrator
Date: _________________________
Attest: _______________________
R. Steve Sonnemaker
Peoria County Clerk
Date: _________________________

BRADLEY UNIVERSITY
By: __________________________
Pratima Gandhi
Controller
Date: _______________________
Attest: _______________________
Kerrie L. Schattler
Professor, Civil Engr. & Construction
Date: _______________________

VIII
39
EXHIBIT A – Statement of Work
PROPOSAL FOR:

MAINTENANCE OF PEORIA COUNTY’S
PAVEMENT MANAGEMENT SYSTEM:
SUMMER 2020 DATA COLLECTION

OPTION 2 – INCLUDES IRI DATA MEASURED WITH CELL PHONE APP

Submitted to: Peoria County Highway Department
6915 West Plank Road
Peoria, IL 61604-5246

Prepared by: Bradley University
Department of Civil Engineering and Construction
1501 W. Bradley Avenue
Peoria, IL 61625

Contact Person: Kerrie Schattler, Ph.D. – Principal Investigator
Professor, Civil Engineering and Construction
Bradley University
Tel: 309/677-2779
Fax: 309/677-2867
Email: kschattler@bradley.edu

Date: February 10, 2020
# Table of Contents

Table of Contents ........................................................................................................... 1
List of Figures .................................................................................................................. 1

1.0 INTRODUCTION ........................................................................................................ 1
   1.1 Overview and Benefits of Pavement Management Systems ..................................... 1
   1.2 Objectives and Scope .............................................................................................. 1

2.0 WORK PLAN .............................................................................................................. 2
   Task 1: Host a project kick-off meeting ........................................................................ 2
   Task 2: Collect pavement condition data via detailed walking surveys ...................... 2
   Task 3: Update the PMS databases ............................................................................. 9
   Task 4: Provide technical assistance to PCHD staff ................................................... 9
   Task 5: Use of Cell Phone App to Measure IRI .......................................................... 10

3.0 TIME SCHEDULE ..................................................................................................... 11

4.0 BUDGET .................................................................................................................. 12

5.0 QUALIFICATIONS ................................................................................................... 13

6.0 REFERENCES ......................................................................................................... 13
List of Figures

Figure 1. Sample Segmentation Sheet for Rohmann Avenue in Peoria Township ..................3

Figure 2. Field Data Collection Form for Asphalt-Surfaced Pavements (Front Page) ........5
Field Data Collection Form for Asphalt-Surfaced Pavements (Back Page) ....................6

Figure 3. Field Data Collection Form for Jointed Concrete Pavements (Front Page) ........7
Field Data Collection Form for Jointed Concrete Pavements (Back Page) ....................8

Figure 4. Sample Photograph of an Inspection Unit and Equipment Layout ..................9

Figure 5. Smartphones used to measure IRI .................................................................10
1.0 Introduction

1.1 Overview and Benefits of Pavement Management Systems
Pavement management systems (PMS) provide a systematic, objective and consistent procedure to evaluate existing and future pavement condition. They are used by agencies to assist in identifying cost-effective strategies for preserving their pavements and determining funding needs to achieve desired levels of service. Various analysis scenarios are efficiently managed through the use of computerized PMS such as PAVER, which rely on the critical input of pavement inventory and condition/distress information stored in their databases. Using current distress data collected from routine condition surveys, pavement analyses can then be performed based on pavement deterioration models, treatment rules, and cost models. An agency can use its pavement management system to evaluate various pavement rehabilitation, maintenance, and preservation strategies and estimate the impact of those strategies on the future condition of the pavement network for various budget levels.

The benefits of pavement management systems have long been documented, many of which include (1):
- More efficient use of available resources
- Ability to adjust and secure more funding for pavement maintenance and rehabilitation
- More accurate and accessible information on road systems
- Quantified condition of network
- Ability to track the performance of selected treatments
- Supportable needs analysis
- Ability to show impact of funding decisions
- Selection of more effective maintenance and rehabilitation strategies
- Improved communication between different groups working with pavements in the organization and with the public
- Ability to answer pavement questions from management, elected officials and the public
- Better coordination of work with utility agencies
- Improved credibility when dealing with management, elected officials and the public
- A sense of satisfaction knowing that the agency is doing the best possible job with available funds

The Peoria County Highway Department (PCHD) realized the benefits of PMS in maintaining county roads and partnered with faculty and students from Bradley University (BU) to develop and implement the initial PMS system. The PCHD’s fully functional PMS was delivered in 2008 and included populated databases of pavement inventory, condition/distress data, extensive photologs and analysis capabilities in PAVER (formerly known as MicroPAVER). Since then, the County has continued to maintain and update the pavement management system and had contracted the BU Project Team each year from 2011 to 2019 to collect and enter updated pavement distress data on half of the County’s road system per year. In order to sustain the County’s PMS and benefits of the system, it is critical that pavement condition/distress data be routinely collected and updated in databases. This will allow the PCHD to make continued decisions regarding pavement needs as well as to improve the analysis and prediction capabilities of the PMS history.

1.2 Objectives and Scope
The objective of this proposed project is to update the Peoria County Highway Department’s pavement management system by surveying the condition of the roads and populating the PMS databases in PAVER 7.0. The activities proposed to meet this objective are as follows:
- Obtain any details from the County on pavement maintenance activities conducted since the roads were surveyed in 2019.
- Collect and quantify the pavement condition data for half of the County’s roads including the asphalt-surfaced and jointed concrete roads via detailed walking surveys for the same sample of inspection units previously surveyed.
- Update the PMS databases in PAVER and deliver the updated system to the PCHD.
- Provide support and training to the PCHD staff on the PMS as needed.
2.0 Work Plan

Task 1: Host a project kick-off meeting

Upon successful award of the project, the BU Project Team can schedule a kick-off meeting with the Peoria County Highway Department engineers, as needed. The purpose would be to review the project scope, discuss the proposed work plan, obtain road and/or pavement related data, as needed, schedule the Flagger Safety training for the pavement inspectors and obtain safety equipment needed to conduct the surveys.

The BU Project Team will follow-up with County staff to obtain maintenance activity and treatment data, as available.

Task 2: Collect pavement condition data via detailed walking surveys

Prior to collecting field data on Peoria County roads, the inspectors must attend the Flagger Safety Training course and obtain certification in order to safely conduct pavement inspections on the County’s roads. It is expected the PMS inspectors will receive training during the first week of June 2020 at the PCHD’s office, during the County’s scheduled safety training program.

Trained two-person teams will be assigned to inspect the County road segments for quantification of pavement distresses according to the Pavement Condition Index (PCI) rating for the following townships and pavement types for the 2020/2021 project year:

1. Akron Township (Asphalt Concrete pavement)
2. Chillicothe Township (Asphalt Concrete pavement)
3. Elmwood Township (Asphalt Concrete pavement)
4. Hallock Township (Asphalt Concrete pavement)
5. Medina Township (Asphalt Concrete and Portland Cement Concrete pavements)
6. Millbrook Township (Asphalt Concrete pavement)
7. Peoria Township (Asphalt Concrete pavement)
8. Princeville Township (Asphalt Concrete pavement)
9. Richwoods Township (Asphalt Concrete and Portland Cement Concrete pavements)
10. Rosefield Township (Asphalt Concrete pavement)
11. Timber Township (Asphalt Concrete pavement)
12. Limestone Township (Portland Cement Concrete pavement only)
13. Kickapoo Township (Portland Cement Concrete pavement only)

Before the inspectors leave for the field, they will be instructed to obtain the segmentation sheet (a sample is shown in Figure 1), review the location of the segments assigned and obtain additional directions/maps if necessary, make copies of the data collection form(s) needed for the assigned road, and load the safety and measuring equipment into their vehicles.

In addition to following the specific flagging instruction, one member of the two-person team will be instructed to focus on traffic to ensure safety of the team by adhering to the following precautions:
- Be aware of your surroundings; listen and watch for approaching vehicles
- When an approaching vehicle is detected, make sure you and the inspector move to the shoulder
- ALWAYS wear your safety vest
- Set-up the cones and warning signs to provide advance warning to motorists
- Position the work vehicle in a manner to protect the survey team - upstream of the inspection area to serve as a buffer
Road: Rohmann Avenue  
From: Swords Avenue  
To: Ashland Avenue  
Lanes: 2  
Length: 0.24 Miles (1,267 ft)  
Township: Peoria

<table>
<thead>
<tr>
<th>Total Number of Sample Units</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Number of Inspection Units</td>
<td>7</td>
</tr>
<tr>
<td>Interval</td>
<td>1</td>
</tr>
<tr>
<td>Random Start</td>
<td>1</td>
</tr>
</tbody>
</table>

○ = Denotes Inspection Unit

Inspection Units:  
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

Length of inspection unit = 100'

Walking interval between consecutive inspection units = 0'

Inspection Unit #1 starts at Swords Avenue

Figure 1. Sample Segmentation Sheet for Rohmann Avenue in Peoria Township
Despite the safety precautions taken, the team must focus on safety, first and foremost. The BU Project Team may borrow warning signs, and flagger poles from the County during the pavement inspection periods. Safety vests will be purchased and worn by the Inspectors at all times in the field.

To begin the inspection, the inspectors will walk over each sample unit, measure each distress type and severity, and record the data on the data collection form for asphalt-surfaced pavements and/or jointed concrete pavements, which are shown Figures 2 and 3, respectively. One form is used for each inspection unit. Details on what measurements to take for specific distresses are included in the Asphalt Surfaced Roads & Parking Lots Distress Identification Manual (3) and the Concrete Surfaced Roads & Parking Lots Distress Identification Manual (4), which will be available to the teams at all times and referenced while performing the inspections in the field. They are specially designed for use during inspection and are indexed by distress type for user convenience. Descriptions of each distress type are summarized, as well as measurement criteria for each Severity Level being High, Medium or Low, instructions on How to Count them, and photographs for each of the severity levels to illustrate the various conditions and distresses. The specific distress types are listed below (3,4).

**Distress Types for Asphalt-Surfaced Roads**
1. Alligator/Fatigue Cracking
2. Bleeding
3. Block Cracking
4. Bumps and Sags
5. Corrugation
6. Depression
7. Edge Cracking
8. Joint Reflection Cracking
9. Lane/Shoulder Drop Off
10. Longitudinal & Transverse Cracking
11. Patching & Utility Cut Patching
12. Polished Aggregate
13. Potholes (number of potholes)
14. Railroad Crossing
15. Rutting
16. Shoving
17. Slippage Cracking
18. Swell
19. Raveling
20. Weathering

**Distress Types for Jointed-Concrete Roads**
21. Blowup/Buckling
22. Corner Break
23. Divided Slab
24. Durability ("D") Cracking
25. Faulting
26. Joint Seal Damage
27. Lane/Shoulder Drop-Off
28. Linear Cracking
29. Patching & Utility Cuts, Large
30. Patching, Small
31. Polished Aggregate
32. Popouts
33. Pumping
34. Punchouts
35. Railroad Crossing
36. Scaling, Map Cracking & Crazing
37. Shrinkage Cracks
38. Corner Spalling
39. Joint Spalling
**Inspector Information**

Pavement Inspected by: ________________________ and ________________________ Date: ____________

**Section Information**

Street: ________________________ Township: ________________________

From: ________________________ To: ________________________

Section Length: ________________________ No. Lanes: ________________________

**Inspection Unit Information**

Inspection Unit No: ________________________, in format: sequential #, (inspection unit #)

Inspection Unit Length: ________________________ Inspection Unit Width: ________________________

Inspection Unit Area: ________________________ Special? Y / N

Photo No. of overall inspection unit: ________________________ Camera No: ________________________

<table>
<thead>
<tr>
<th>Distress Type</th>
<th>Severity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>1. Alligator/Fatigue Cracking</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>2. Bleeding</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>3. Block Cracking</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>4. Bumps and Sags</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>5. Corrugation</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>6. Depression</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>7. Edge Cracking</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>8. Joint Reflection Cracking</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>9. Lane/Shoulder Drop Off</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>10. Longitudinal &amp; Transverse Cracking</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>12. Polished Aggregate</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>13. Potholes (number of potholes)</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>15. Rutting</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>16. Shoving</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>17. Slippage Cracking</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>18. Swell</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
<tr>
<td>20. Weathering</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
<td>sq. ft.</td>
</tr>
</tbody>
</table>

Figure 2. Field Data Collection Form for Asphalt-Surfaced Pavements (Front Page)
**Inspector Information**

Pavement Inspected by: ___________________________ and ___________________________ Date: ____________

**Section Information**

Street: ______________________________________ Township: ___________________________

From: ________________________________________ To: ___________________________

Section Length: ___________________________ No. Lanes: ___________________________

**Inspection Unit Information**

Inspection Unit No: ___________________________, in format: sequential #: (inspection unit #)

Inspection Unit Length: ___________________________

Inspection Unit Width: ___________________________ Special? Y / N

Photo No. of overall inspection unit: ___________________________ Camera No: ___________________________

**Slab Information**

Slab Length: ___________________________ Slab Width: ___________________________ No. Slabs in Inspection Unit: ___________________________

<table>
<thead>
<tr>
<th>Distress Type</th>
<th>Number of Slabs in Inspection Unit with Distress Type by Severity</th>
<th>Photo No(s). of Unusual Distresses (high severity)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>21. Blowup/Buckling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Corner Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Divided Slab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Durability (“D”) Cracking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Faulting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Joint Seal Damage (overall condition of sealant)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Lane/Shoulder Drop-Off</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Linear Cracking (longitudinal/transverse/diagonal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Patching, Large (&gt; 5.5 ft²) &amp; Utility Cuts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Patching, Small</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Polished Aggregate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Popouts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Pumping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Punchouts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. Railroad Crossing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Scaling, Map Cracking &amp; Crazing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. Shrinkage Cracks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. Corner Spalling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. Joint Spalling</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Joint Seal Damage is not counted on a slab-by-slab basis, but is rated based on the overall condition of the sealant over the entire inspection unit.

**Figure 3. Field Data Collection Form for Jointed Concrete Pavements (Front Page)**
Notes:

Sketch: Draw the layout of the inspection unit including the number of slabs, slab length, slab width and distress types and severities. Recall that all distresses are counted on a slab by slab basis except for Distress 26 – Joint Seal Damage, which is rated for the entire inspection unit.

*Overall Assessment of Joint Seal Damage (26): None Low Medium High*

*Circle One*
The survey teams will be instructed to note if roadway characteristics of the section are different from the characteristics depicted on the segmentation sheet (i.e. number of lanes, surface type, major pavement improvement, etc.). If so, detailed notes and measurements will be taken so that it can be re-segmented and corrected. If possible, the inspection teams may re-segment the section in the field, correct the segmentation sheet and then continue the inspection. They will be required to make notes on the segmentation sheets and take photographs of all the inspected segments. In addition, detailed notes and photographs will be taken of unusual or unexpected pavement distresses observed on County roads.

Traffic cones will be used to delineate the length of the inspection unit nearest to the shoulder. A tape measure will be laid out on the side of the road to aid in extracting measurements of the pavement distresses. To update the County’s photo-log of the inspection data, photographs will be taken of each inspection unit, as well as of any high severity distresses observed in the field. A sample photograph is depicted in Figure 4.

![Sample Photograph of an Inspection Unit and Equipment Layout](image)

**Figure 4. Sample Photograph of an Inspection Unit and Equipment Layout**

**Task 3: Update the PMS databases**

The data collected in the field will be summarized and converted into the proper form in the database and entered into the PCHD’s PMS software program, PAVER 7.0. Current data will be added to the various databases in PAVER, while preserving the historic data collected. This data will include:

- Current traffic volume data – to be obtained from IDOT’s website
- Current pavement inspection data with updated photolog of inspected segments
- Treatment data may be added to the PAVER databases (based on availability of data from PCHD)

Upon completion of the data collection and entry, the PAVER 7.0 software program will be installed on the PCHD’s computer. The updated PMS databases and digital photologs will be saved onto the PCHD’s computer, with electronic back-up files.

**Task 4: Provide technical assistance to PCHD staff, as needed**

The BU Project Team will provide technical assistance to PCHD staff as needed throughout the duration of the project. This may include assisting the PCHD staff in performing analyses to determine maintenance needs and planning, as well as on-site training for the PAVER 7.0.
Task 5. Use of Cell Phone App to Measure International Roughness Index (IRI)

Pavement damage is an important characteristic that indicates the condition of a road. Nowadays, the most commonly used measure of road-surface damage is the International Roughness Index (IRI). IRI is currently the most widely used and accepted indicator of road-surface roughness measuring index and is often represented in units of m/km or in./mile. IRI is computed by using a mathematical model of a quarter car, which represents the single-tire system, to measure the profile of the road. A higher IRI value indicates rougher or significantly distressed roads, whereas a lower IRI value suggests smoother roads.

Some standard methods and equipment have been used for measuring IRI, like a profilograph, response-type instruments mounted on vehicles, walking profilers, and inertial profilers. There are various pros and cons of each method. Nowadays, most highway agencies and local transportation agencies collect IRI data using a laser sensor or high-speed profilers. Such equipment measures surface profiles at normal traffic speeds and provides reasonably accurate IRI results. These types of devices are mounted on a full-size van or a trailer; therefore, they are difficult to use on roadways for short periods and are expensive, as well as delicate, complicated, and time-consuming; and they require a professional operator.

With the advent of smartphones, various applications are introduced on a daily basis for public use; the applications are easy to access and free to use. They are often available without Internet connection on smartphones. As a result, smartphone-based applications are used nowadays to quantify road roughness, as they are equipped with sensors and accelerometers. A built-in accelerometer in a cell phone can measure road roughness, and the relationship between the accelerometer data and road roughness has been shown to be linear. Figure 5 shows two smartphones on dashboard mount collecting IRI data.

![Image of smartphones on dashboard](image)

**Figure 5. Smartphones used to measure IRI**

Mounting smartphones installed roughness measuring application allows users to map road surface, less time consuming, easy to operate and widely accepted on a large-scale data collection. Previous studies showed that with the advent of inertial profilers, the use of these types of devices like sensors and accelerometers separately has diminished as now they are available in one smartphone which makes the assessment of road roughness easy and less time consuming and can accumulate the vertical displacement and suspension motion of vehicle, ride quality, and road roughness, all these factors at one place. However, multiple variables such as the type of vehicles (i.e., sedan car vs. truck), type of cell phones, cell phone mounts, the speed of vehicles, etc. affect the measurements of road roughness. This research will explore the use of a cell phone app in collecting Peoria County roads IRI data.
Collection of IRI Data

Dr. Hossain will oversee all aspects of Task 5. IRI data will be collected using one cell phone app called Roadroid and two cell phones, Samsung and LG, that use the Android operating system. One Samsung phone was purchased in 2016 using a IDOT/ICT grant fund, and one LG phone was purchased in 2019 using Peoria County grant fund. Those two phones will be used in the project. Roadroid offers a subscription option for IRI data collection by professionals, but they make the app free for research and teaching purposes. A request will be made to Roadroid to use the app for this research purpose so that the app can be used free of charge. A sedan car will be using, and dashboard mount will be used to collect the IRI data. One student researcher will be driving the car, and another student researcher will be operating the cell phone app. The car will be driving at the posted speed or 30-35 mph if the posted speed is not present. For each road segment, at least two data collectors will be collected driving one sedan car and using two cell phones and two cell phone mounts. Total of eight data will be collected for one road segment.

Analyze IRI Data & Compare with PCI Data

IRI data collected using Roadroid app will be analyzed using the web program provided by the Roadroid developers. The web program is free to use and provide highlighted road condition profile on Google map. The Roadroid web program also provides IRI value for every 200 m interval. The IRI data will be compared with the PCI data collected for the Peoria county roads. The comparison will provide some validity of the IRI data.

3.0 Time Schedule

In terms of the data collection efforts for pavement condition/distress data, the majority of the pavement inspections will be conducted during summer/fall months. The surveys for the PCHD entire road system will be conducted over a two-year period, with the County road system divided into two subsystems. The surveys for the first half of the system would be conducted during summer/fall of an odd year, and the second half of the system would be surveyed in an even year.

<table>
<thead>
<tr>
<th>Proposed Time Schedule for Maintenance of Peoria County's PMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TASK</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>No.</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

* Assuming last party signs contract by April 1, 2020

** Inspectors complete Flagger Certification Training
4.0 **BUDGET**

The total project budget detailing the salaries and wages, fringe benefits, supplies and travel costs for this proposal are shown in the table below.

<table>
<thead>
<tr>
<th>Maintenance of Peoria County Highway Department's Pavement Management System</th>
<th>Funds Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SALARIES AND WAGES</strong></td>
<td><strong>50% County Road System per year</strong></td>
</tr>
<tr>
<td><strong>Principal Investigator (PI)</strong></td>
<td>2 year cycle</td>
</tr>
<tr>
<td>Kerrie Schattler, Ph.D., Professor</td>
<td>$3,850</td>
</tr>
<tr>
<td>55 hours (Summer 2020) at $70.00 per hour</td>
<td></td>
</tr>
<tr>
<td>Dr. Mohammed Imran Hossain</td>
<td>$1,250</td>
</tr>
<tr>
<td>25 hours (Summer 2020) at $50.00 per hour</td>
<td></td>
</tr>
<tr>
<td><strong>Undergraduate Students</strong></td>
<td>$12,000</td>
</tr>
<tr>
<td>1,000 hours at $12.00 per hour</td>
<td></td>
</tr>
<tr>
<td>400 hours at $12.00 per hour</td>
<td>$4,800</td>
</tr>
<tr>
<td><strong>Total Salaries and Wages</strong></td>
<td><strong>$21,900</strong></td>
</tr>
<tr>
<td><strong>FRINGE BENEFITS</strong></td>
<td></td>
</tr>
<tr>
<td>Kerrie Schattler</td>
<td>$385</td>
</tr>
<tr>
<td>10.0% of Summer Salary</td>
<td></td>
</tr>
<tr>
<td>Mohammed Imran Hossain</td>
<td>$125</td>
</tr>
<tr>
<td>10.0% of Summer Salary</td>
<td></td>
</tr>
<tr>
<td><strong>Total Fringe Benefits</strong></td>
<td><strong>$510</strong></td>
</tr>
<tr>
<td><strong>TRAVEL</strong></td>
<td></td>
</tr>
<tr>
<td>2373 miles at $0.575 per mile</td>
<td>$1,364</td>
</tr>
<tr>
<td>2977 miles at $0.575 per mile</td>
<td>$1,712</td>
</tr>
<tr>
<td><strong>Total Travel</strong></td>
<td><strong>$3,076</strong></td>
</tr>
<tr>
<td><strong>SUPPLIES</strong></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous supplies</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Total Supplies</strong></td>
<td><strong>$0</strong></td>
</tr>
<tr>
<td><strong>TOTAL DIRECT COST</strong></td>
<td><strong>$25,486</strong></td>
</tr>
<tr>
<td><strong>INDIRECT COSTS</strong></td>
<td></td>
</tr>
<tr>
<td>53% of direct labor costs</td>
<td>$11,607</td>
</tr>
<tr>
<td><strong>Total Indirect Costs</strong></td>
<td><strong>$11,607</strong></td>
</tr>
<tr>
<td><strong>TOTAL COSTS</strong></td>
<td><strong>$37,093</strong></td>
</tr>
</tbody>
</table>
5.0 QUALIFICATIONS

Dr. Kerrie L. Schattler is designated as the Principal Investigator (PI) of the project. She joined the Department of Civil Engineering and Construction at Bradley University in 2005 as an Assistant Professor, was promoted to Associate Professor in 2011 and to full Professor in 2015. She was the PI on the grant with the Peoria County Highway Department to develop and implement the County’s initial Pavement Management System. This two-year project was completed in December 2008. She was also the Technical Advisor on the Maintenance of PCHD’s PMS project in 2011. For the 2012 and 2013 PCHD projects, Dr. Schattler provided opportunities for other CEC colleagues to get involved and eventually lead the PCHD pavement management system project. Starting in 2014, she resumed taking the lead on PCHD’s pavement management system data collection project.

Over the past 15 years at Bradley, Dr. Schattler has secured as PI over 1,338,000 in external research grants funded directly to Bradley which were/are being used to push the envelope in cutting edge research with the help of 92 graduate/undergraduate students and other CEC colleagues, under her direction. Some of these grants also involved collaborations with partnering universities and consulting firms – Wayne State University and Applied Pavement Technology – and as a result, the total amount of collaborative grants Dr. Schattler was involved in over $1,854,000. Sponsoring agencies of these grants include the Peoria County Highway Department (PCHD), Federal Highway Administration, and the Illinois Department of Transportation (IDOT)/Illinois Center for Transportation.

Dr. Mohammad Imran Hussain will be involved as a Co-PI of the proposed project. Dr. Hussain completed the sixth year at the Bradley University as a tenure track assistant professor and has been involved in externally funded research since then. Dr. Hussain completed three research projects over $416K with IDOT/ICT since 2015. Dr. Hussain has research experience in pavement engineering with publications in one book chapter, thirty-six journals, and twenty-five conference proceedings as a lead author as well as with collaborations. Dr. Hussain collaborated research with multi-disciplinary engineering programs and received Innovative Research Award from ICT in 2016 and Best Paper Award for extraordinary merits in pavement engineering in 2013, and Distinction in the Ph.D. dissertation in 2013. Until today, Dr. Hussain approved twelve research grants of value $935K as a Principal, Co-Principal Investigator (PI and Co-PI), consultant, and contributed as a member of the research team. Dr. Hussain has been teaching Pavement Design to undergraduate students at the Bradley University since 2014, and he secured curriculum development grant of value $10K from FHWA and USDOT and improved undergraduate and graduate courses and developed two courses titled Advanced Pavement Design and Pavement Management Systems. Dr. Hussain received the Caterpillar Faculty Achievement Award for teaching from the Bradley University for excellent teaching in 2017. Dr. Hussain is also the faculty advisor of Chi Epsilon of the Civil Engineering Honor Society at the Bradley University since 2017.

6.0 REFERENCES


Resolution for Improvement
Under the Illinois Highway Code

Resolution Type  Resolution Number  Section Number
Original  20-00182-05-ES

BE IT RESOLVED, by the Board of the County of Peoria, Illinois, that the following described street(s)/road(s)/structure be improved under the Illinois Highway Code. Work shall be done by Contract.

For Roadway/Street Improvements:

<table>
<thead>
<tr>
<th>Name of Street(s)/Road(s)</th>
<th>Length (miles)</th>
<th>Route</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For Structures:

<table>
<thead>
<tr>
<th>Name of Street(s)/Road(s)</th>
<th>Existing Structure No.</th>
<th>Route</th>
<th>Location</th>
<th>Feature Crossed</th>
</tr>
</thead>
</table>

BE IT FURTHER RESOLVED,

1. That the proposed improvement shall consist of maintenance of pavement management system by surveying the condition of the roads and populating the databases.

2. That there is hereby appropriated the sum of thirty seven thousand ninety three and 00/100 $37,093.00 for the improvement of said section from the Local Public Agency's allotment of Motor Fuel Tax funds.

BE IT FURTHER RESOLVED, that the Clerk is hereby directed to transmit four (4) certified originals of this resolution to the district office of the Department of Transportation.

I, Rachael Parker, Clerk in and for said County of Peoria, in the State aforesaid, and keeper of the records and files thereof, as provided by statute, do hereby certify the foregoing to be a true, perfect and complete original of a resolution adopted by the Board of Peoria at a meeting held on March 12, 2020.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this Day of Month, Year.

(SEAL)

Clerk Signature

Date

Approved

Regional Engineer
Department of Transportation

Date
NOTE: Form instructions should not be included when the form is submitted.

This form shall be used when a Local Public Agency (LPA) wants to construct an improvement using Motor Fuel Tax (MFT) funds. Refer to Chapter 9 of the Bureau of Local Roads and Streets Manual (BLRS Manual) for more detailed information. For signature requirements refer to Chapter 2, Section 3.05(b) of the BLRS Manual.

When filling out this form electronically, once a field is initially completed, fields requiring the same information will be auto-populated.

Resolution Number: Enter the resolution number as assigned by the LPA, if applicable.
Resolution Type: From the drop down box choose the type of resolution:
- Original would be used when passing a resolution for the first time for this project.
- Supplemental would be used when passing a resolution increasing appropriation above previously passed resolutions.
- Amended would be used when a previously passed resolution is being amended.
Section Number: Insert the section number of the improvement the resolution covers.
Governing Body Type: From the drop down box choose the type of administrative body. Choose Board for County; Council for a City or Town; President and Board of Trustees for a Village or Town.
LPA Type: From the drop down box choose the LPA body type. Types to choose from are: County, City, Town or Village.
Name of LPA: Insert the name of the LPA.
Contract or Day Labor: From the drop down choose either Contract or Day Labor.

Roadway/Street Improvements:
Name Street/Road: Insert the name of the Street/Road to be improved. For additional locations use the Add button.
Length: Insert the length of this segment of roadway being improved in miles.
Route: Insert the Route Number of the road/street to be improved if applicable.
From: Insert the beginning point of the improvement as it relates to the Street/Road listed to the left.
To: Insert the ending point of the improvement as it relates to the Street/Road listed to the left.

Structures:
Name Street/Road: Insert the name of the Street/Road on which the structure is located. For additional locations use the Add button.
Existing Structure No.: Insert the existing structure number this resolution covers, if no current structure insert n/a.
Route: Insert the Route number on which the structure is located.
Location: Insert the location of the structure.
Feature Crossed: Insert the feature the structure crosses.
1: Insert a description of the major items of work of the proposed improvement.
2: Insert the dollar value of the resolution for the proposed improvement to be paid for with MFT funds in words followed by in the same amount in numerical format in the ()
Name of Clerk: Insert the name of the LPA clerk.
LPA Type: Insert the type of clerk based on the LPA type. Types to choose from are: County, City, Town or Village.
Name of LPA: Insert the name of the LPA.
Governing Body Type: Insert the type of administrative body. Choose Board for County; Council for a City or Town; President and Board of Trustees for a Village or Town.
Name of LPA: Insert the name of the LPA.
Date: Insert the date of the meeting.
Day: Insert the day Clerk is signing the document.
Month, Year: Insert the month and year of the Clerk's signature.
Seal     The Clerk shall seal the document here.
Clerk Signature    Clerk shall sign here.
Approved    The Department of Transportation shall sign and date here once approved.

A minimum of three (3) certified signed originals must be submitted to the Regional Engineer’s District office. Following IDOT's approval, distribution will be as follows:

   Local Public Agency Clerk
   Engineer (Municipal, Consultant or County)
   District
TO THE HONORABLE COUNTY BOARD

COUNTY OF PEORIA, ILLINOIS

Your Infrastructure Committee does hereby recommend passage of the following Resolution:

RE: Approval of Pavement Management Agreement with Bradley University

RESOLUTION

WHEREAS, the County of Peoria is in need of maintaining its pavement management system for the County Highways, designated as Section Number 20-00182-05-ES; and

WHEREAS, Bradley University has the capability to obtain field data of the County's highway system and update the system database.

NOW THEREFORE BE IT RESOLVED, that the agreement with Bradley University for the pavement management system is hereby approved; and

BE IT FURTHER RESOLVED, that the sum of $37,093.00 is hereby appropriated from the County Motor Fuel Tax Fund for Section Number 209-00182-05-ES; and

BE IT FURTHER RESOLVED, that the County Administrator is hereby authorized to sign the agreement and that the County Treasurer is hereby authorized to issue checks from the County Motor Fuel Tax Fund for payment of invoices for the pavement management system work.

Respectfully Submitted,

Infrastructure Committee