CUMBERLAND COUNTY
NORTH CAROLINA

BOARD OF COMMISSIONERS

MEMORANDUM

TO: Facilities Committee Members (Commissioners Adams, Boose and Council)

FROM: Kellie Beam, Deputy Clerk to the Board KB

DATE: November 30, 2018

SUBJECT: Facilities Committee Special Meeting – Thursday, December 6, 2018

The regular meeting of the Board of Commissioners' committees (Finance, Policy and Facilities Committee) has been **CANCELLED** and rescheduled as a **SPECIAL MEETING** on Thursday, December 6, 2018 beginning at 8:30 a.m. at the **Department of Social Services, Conference Room C**. All committee meetings will start as soon as the previous committee adjourns.

AGENDA

1. Approval of Minutes – November 1, 2018 Special Meeting **(Pg. 2)**
2. Consideration of Permanent Easement for PWC Sewer Line Relocation at Headquarters Library **(Pg. 12)**
3. Consideration of Construction Contracts
   - A. Department of Social Services (DSS) Chiller Replacement **(Pg. 20)**
   - B. Replacement of Detention Center Boiler and Sewer Grinder Pump Installation **(Pg. 22)**
4. Consideration of Judge E. Maurice Braswell Cumberland County Courthouse Generator Evaluation and Recommendation **(Pg. 26)**
5. Consideration of Request to Transfer J.P. Riddle Stadium to Fayetteville Technical Community College (FTCC) **(Pg. 43)**
6. Consideration of Lease of Vacant County Property to the Vision Resource Center **(Pg. 45)**
7. Monthly Project Updates **(Pg. 47)**
8. Other Items of Business **(NO MATERIALS)**

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ITEM NO. 1

CUMBERLAND COUNTY FACILITIES COMMITTEE
CUMBERLAND COUNTY DEPARTMENT OF SOCIAL SERVICES
1225 RAMSEY STREET, CONFERENCE ROOM C
NOVEMBER 1, 2018
SPECIAL MEETING MINUTES

MEMBERS PRESENT:	Commissioner Glenn Adams, Facilities Committee Chairman Commissioner Jeannette Council
MEMBERS ABSENT:	Commissioner Michael Boose
OTHER COMMISSIONERS PRESENT:	Commissioner Marshall Faircloth Commissioner Jimmy Keefe
OTHERS PRESENT:	Amy Cannon, County Manager Melissa Cardinali, Assistant County Manager Duane Holder, Assistant County Manager Tracy Jackson, Assistant County Manager Rick Moorefield, County Attorney Jeffery Brown, County Engineer A.J. Riddle, Assistant County Engineer Vicki Evans, Finance Director Heather Harris, Budget Analyst Brenda Jackson, Social Services Director Julean Self, Human Resources Director Dr. Larry Keen, Fayetteville Technical Community College Jeremy Aagard, Swampdogs Candice White, Clerk to the Board Kellie Beam, Deputy Clerk to the Board

Commissioner Glenn Adams called the meeting to order.

1. APPROVAL OF MINUTES – OCTOBER 4, 2018 SPECIAL MEETING

MOTION:	Commissioner Council moved to approve the October 4, 2018 meeting minutes as presented.
SECOND:	Commissioner Adams
VOTE:	UNANIMOUS (2-0)

All references to any materials which are described in these minutes or incorporated into these minutes are to the materials that are contained in the same numbered item in the agenda for this meeting. These may be viewed online in the agenda set out on this webpage http://co.cumberland.nc.us/departments/commissioners-group/commissioners/committee-agendas-and-minutes

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2. CONSIDERATION OF RENEWAL OF LEASE AGREEMENT WITH HOMETOWN AMERICA SPORTS, INC.

BACKGROUND

Jeremy Aagard, General Manager for the SwampDogs, has requested an extension of the current lease agreement with an expiration date of December 31, 2018 (attached) as per the agreed upon process for requesting this extension. Representatives from Hometown America Sports, Inc. and Fayetteville Technical Community College have met and agreed upon a mutually beneficial relationship that includes shared use of J.P Riddle Stadium. Staff has been involved in discussions with both parties, and it is evident that each party is ready and willing to share the facility and assure it is utilized and maintained to the benefit of the community.

In order to advance this relationship, Hometown America Sports, Inc. desires to address the following items in the existing lease:

- Expand the cap of twenty (20) non-Coastal Plain League (CPL) events to fifty (50) non-CPL events.
- Allow four (4) consecutive one-year extensions to Hometown America Sports, Inc. starting in 2020 and ending in 2023 for the continued use of J.P. Riddle Stadium.

RECOMMENDATION/PROPOSED ACTION:

Staff recommends approval to move this item forward to the full Board of Commissioners as a Consent Agenda Item for further consideration at the November 5, 2018 regular meeting as a consent agenda item for: 1) the initial resolution of intent to lease certain real property, and 2) required 30-day advertising as per N.C.G.S. 160A-272.

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Commissioner Adams, Chair of the Facilities Committee, stated the background information and associated documents were provided prior to the meeting in the agenda packet. Tracy Jackson, Assistant County Manager, introduced Dr. Larry Keen, Fayetteville Technical Community College President, and Jeremy Aagard, Manager of the Swampdogs. Dr. Keen provided an update on Fayetteville Technical Community College's Baseball Program. Dr. Keen discussed a partnership between the Swampdogs and FTCC in which the community college's new baseball team will play their games at JP Riddle Stadium.

Commissioner Adams asked if Parks and Recreation is involved with the stadium because, if not, he believes the County should research the possibility of deeding the JP Riddle Stadium property to FTCC so the County does not have to be the "middle man" every time the contract needs to be renewed. Ms. Cannon stated Parks and Recreation is not involved with the JP Riddle Stadium, the County maintains the property working with Mr. Jeremy

Aagard. Commissioner Council asked County staff to research the matter regarding the possibility of deeding the JP Riddle Stadium over to FTCC and bring a recommendation back.

Commissioner Adams asked if the proposed agreement could be tweaked where the Swampdogs shall pay the County seven percent (7%) of the gross revenues derived from concessions at non-CPL events and pay Fayetteville Technical Community College three percent (3%) of the gross revenues derived from concessions at non-CPL events for a total of ten percent (10%). Jeremy Aagard, Swampdogs, stated the three percent increase would be a minimal piece. Dr. Keen stated the three percent would be helpful to Fayetteville Technical Community College.

MOTION: Commissioner Council moved to recommend to move this item to the full Board of Commissioners as a Consent Agenda Item for further consideration at the November 5, 2018 regular meeting for 1: the initial resolution of intent to lease certain real property, and 2: required 30-day advertising as per N.C.G.S. 160A-272 with the addition that the Swampdogs shall pay the County 7% of the gross revenues derived from concessions at non-CPL events and FTCC 3% of the gross revenues derived from concessions at non-CPL events.
SECOND: Commissioner Adams
VOTE: UNANIMOUS (2-0)

Commissioner Adams, Chairman of the Facilities Committee, requested Item #4 be discussed next.

4. CONSIDERATION OF CONTRACT FOR EAST SLOPE CLOSURE PROJECT AT THE ANN STREET LANDFILL

BACKGROUND:
There are specific areas within landfill cells one through eight that have reached the final elevations in which waste can be placed at the Ann Street Landfill. Therefore, these areas can be officially closed out or capped. Capping these areas will tremendously reduce the maintenance costs as well as increase the ability to maintain compliance with environmental regulations. The project scope includes surveying, clearing, site preparation, soil placement, geosynthetics, stormwater berms, stormwater pipes, landfill gas pipe and seeding.

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A non-mandatory pre-bid meeting was held on September 20, 2018, in which all specialty contractors were invited to attend. The bid opening was initially scheduled for October 11, 2018, however it had to be rescheduled due to Hurricane Michael. The bid opening was rescheduled for October 16, 2018. The lowest, responsible and responsive bid was submitted by Shamrock Environmental Corporation in the amount of $4,058,342.20. A 10% contingency is included in the contract amount. The project was included in the FY19 Budget in the amount of $3,550,000. Therefore, a budget ordinance amendment will be required to transfer money from Solid Waste Fund Balance in the amount of $508,343 in order to award the contract.

RECOMMENDATION/PROPOSED ACTION:
The Engineering & Infrastructure Director and County Management recommend that the Facilities Committee approve the following recommendations and forward it to the Board of Commissioners as a Consent Agenda Item for consideration at their November 19, 2018 regular meeting.

1. Accept the bids for the East Slope Closure Project at the Ann Street Landfill and award a contract to Shamrock Environmental Corporation in the amount of $4,058,342.20 inclusive of 10% for contingency purposes.

2. Approve Budget Ordinance Amendment #B191061 in the amount of $508,343 for additional funding needed to award a contract for the bid amount. This amount is the difference between the bid amount and the budgeted amount. The additional funding is being transferred from Solid Waste Fund Balance.

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Mr. Brown reviewed the background information and recommendation as recorded above.

Commissioner Adams, Chairman of the Facilities Committee, stated the background information and associated documents were provided prior to the meeting.

There were no questions or discussion.

MOTION: Commissioner Council moved to recommend to the full board approval to 1. Accept the bids for the East Slope Closure Project at the Ann Street Landfill and award a contract to Shamrock Environmental Corporation in the amount of $4,058,342.20 inclusive of 10% contingency purposes and 2. Approve Budget Ordinance Amendment #B191061 in the amount of $508,343 for additional funding needed to award a contract for the bid amount. This amount is the difference between the bid amount and the

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budgeted amount. The additional funding is being transferred from Solid Waste Fund Balance and request this be put on the Board of Commissioners November 19, 2018 meeting as a Consent Agenda Item.

SECOND: Commissioner Adams
VOTE: UNANIMOUS (2-0)

3. CONSIDERATION OF CONTRACT FOR PARKING LOT IMPROVEMENTS AT CROWN COMPLEX

BACKGROUND:
The Capital Improvement Plan (CIP) identified repairs for the East Parking Lot and the remaining portion of the Agri-Expo parking lots at the Crown Complex. The project consists of asphalt removal, asphalt paving and pavement markings for the both parking lots.

A pre-bid meeting was held on October 1, 2018, in which all local contractors were invited to attend. The bid opening was originally scheduled for October 15, 2018, but due to an insufficient number of bids, the bid opening had to be rescheduled. The bid meeting is scheduled for October 26, 2018. The received bids will be presented to the Facilities Committee at the November 1st meeting along with a recommendation to award a contract to the lowest, responsible and responsive bidder. A contingency amount will also be presented to the Facilities Committee for approval as part of the project to address any changes or additional work recommended by the Engineering & Infrastructure (E&I) Director and approved by the County Manager.

RECOMMENDATION/PROPOSED ACTION:
The Engineering and Infrastructure Director and County Management recommend that the Facilities Committee approve the following recommendations and forward them to the Board of Commissioners as a Consent Agenda item at their November 19th regular meeting:

1. Accept the bids and award a contract to the lowest, responsible and responsive bidder.

2. Establish a contingency to be used for additional work recommended by the E&I Director and approved by the County Manager.

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DRAFT

Jeffery Brown, Engineering & Infrastructure Director, reviewed the background information and recommendation as recorded above.

There were no questions or discussion.

MOTION: Commissioner Council moved to recommend to the full board approval to accept the bids and award a contract to Highland Paving Company, LLC. in the amount of $1,328,480, the lowest, responsible and responsive bidder and establish a contingency in the amount of $100,000 to be used for additional work recommended by the Engineering & Infrastructure Director and approved by the County Manager and forward to the Board of Commissioners as a Consent Agenda item at their November 19, 2018 regular meeting.
SECOND: Commissioner Adams
VOTE: UNANIMOUS (2-0)

5. DESIGN BUILD DELIVERY METHOD FOR CONSTRUCTION PROJECTS:

A. CONSIDERATION OF ESTABLISHMENT OF CRITERIA FOR DESIGN BUILD DELIVERY METHOD FOR CONSTRUCTION PROJECTS

BACKGROUND:
On August 23, 2013, Session Law 2013-401, House Bill 857, was signed into law, authorizing the governmental entities to utilize the design-build delivery method for construction contracts. The first step in the process for utilizing the design-build delivery method is that a governmental entity is to establish in writing the criteria used for determining the circumstances under which the design-build method is appropriate for a project. The criteria proposed is the following:

Criteria 1: The extent to which the County can adequately and thoroughly define the project requirements prior to the issuance of the request for qualifications (RFQ) for a design-builder. The design-build delivery method may be used if it is determined that, for the project, the County has professional personnel that are both qualified and experienced to thoroughly define project requirements prior to the issuance of a request for qualifications for a design-builder.

Criteria 2: The time constraints for the delivery of the project. The design-build delivery method may be used if a project has a firm date by which a facility must be operational,

and the normal delivery method is likely not be timely (typically RFQ, study, design, bid and construct). The size and cost of a project will dictate complexity and schedule.

Criteria 3: The ability to ensure that a quality project can be delivered. The design-build delivery method may be used if it is determined that, for the project, the County has professional and experienced personnel to ensure that the design-build firm will provide a quality project within the budget constraints established by the Board. Consideration will be given to the qualifications and experience of the personnel in the Engineering & Infrastructure Department.

Criteria 4: The capability of the County to manage and oversee the project, including the availability of experienced staff or outside consultants who are experienced with the design-build method of project delivery. The design-build delivery method may be used if it is determined that, for the project, the County has professional and experienced personnel that are knowledgeable of design-build projects, or, in the alternative, experienced consultants who are available to be retained to perform the construction management of a design-build contract.

Criteria 5: A good faith effort to comply with G.S. 143-128.2, G.S. 143-128.4, and to recruit and select small business entities. The design-build delivery method may be used if it is determined that, for the project, requirements will be imposed which will ensure that contractors will comply with the M/WBE goals.

Criteria 6: The criteria utilized by the County, including a comparison of the costs and benefits of using the design-build delivery method for a given project in lieu of the other delivery methods identified. The criteria utilized by the County when considering a design-build delivery method for a project will be as follows:

- Is the project well defined and does it include qualitative and quantitative characteristics that make a design-build contract more appropriate than other methods of delivery?
- Is the project timeline overly constrained and will it be necessary to have the project complete and operational within a short timeframe?
- Will it be necessary to have beneficial use of a portion of the project while it is under construction?
- Given the scope of the project, is there a maximum budget that must be adhered to in order to allow negotiations and flexibility to make appropriate decisions on scope as the project progresses?
- Does the design-build delivery method meet the ultimate operational goals established for a given project and the quality of product achieved as a result of a more fluid and flexible delivery method?

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In general terms, if it is determined that the expected expense of a design-build project will be no more than ten percent (10%) greater than the expected expense of a traditional RFQ, study, design, bid and construct project, the design-build delivery method may be utilized.

RECOMMENDATION/PROPOSED ACTION:
The Engineering & Infrastructure Director and County Management recommend that the Facilities Committee approve the establishment of criteria for a design-build delivery method for construction projects and forward it to the Board of Commissioners as a Consent Agenda item at their November 19th regular meeting.

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Mr. Brown reviewed the background information and recommendation as recorded above. Commissioner Adams the Board of Commissioners need to be able to see the criteria is met.

MOTION: Commissioner Council moved to recommend to the full board approval to establish the criteria for a design-build delivery method for construction projects and forward to the Board of Commissioners as a Consent Agenda item at their November 19, 2018 regular meeting.
SECOND: Commissioner Adams
VOTE: UNANIMOUS (2-0)

B. CONSIDERATION OF UTILIZING DESIGN BUILD DELIVERY METHOD FOR THE LANDSCAPING FACILITY PARKING LOT SLOPE STABILIZATION PROJECT

BACKGROUND:
The Capital Improvement Plan (CIP) identified slope stabilization repairs for the Landscaping Parking Lot. The Engineering and Infrastructure Department has reviewed the design-build delivery method for this project. The project meets the criteria based on the following:

Criteria 1: The Cumberland County Engineering & Infrastructure Department has professional personnel that are both qualified and experienced to thoroughly define the project requirements prior to the issuance of a request for qualifications for a design-builder.

Criteria 2: The Landscape Parking Lot Slope Stabilization has to be performed while maintaining accessibility to the parking lot. The parking lot is utilized by staff and there

are limited storage options for equipment. Additionally, the parking lot continues to face erosion issues by weather events, putting the limited space we have at risk. A traditional delivery method would not be timely, as the County would have to issue an RFQ, an engineering firm perform a study, complete a design, then bid and construct the project. A design-build delivery method would allow for the selected firm to begin their study, design and construction process upon being selected through the RFQ process.

Criteria 3: The Cumberland County Engineering & Infrastructure Department has professional and experienced personnel to ensure that the design-build firm will provide a quality project within the budget constraints established by the Board.

Criteria 4: The Cumberland County Engineering & Infrastructure Department has professional and experienced personnel that are knowledgeable of design-build projects. Should it become necessary to contract the construction management of a design-build contract, there are experienced consultants local to Cumberland County that are available.

Criteria 5: The County complies with G.S. 143-128.2, G.S. 143-128.4.

Criteria 6: The design-build process may reduce the project schedule by approximately three to six months. This has a direct benefit to the project budget. The design-build delivery method is not expected to involve any additional expense than the expected expense of a traditional RFQ, design, bid-construct project, but by reducing the timeframe of delivery, it eliminates the potential for price escalation that could occur if a traditional RFQ, design, bid-construct project was pursued. Additionally, reducing the project schedule directly impacts reducing the property loss occurring at the Landscaping Parking Lot and along the property's slope.

RECOMMENDATION/PROPOSED ACTION:
The Engineering & Infrastructure Director and County Management recommend that the Facilities Committee approve the design-build delivery method for the Landscaping Parking Lot Slope Stabilization Project and forward it to the Board of Commissioners for as a Consent Agenda item at their November 19th regular meeting.

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Mr. Brown reviewed the background information and recommendation as recorded above.

Commissioner Adams requested that the qualifications of the Engineering Staff be included for documentation purposes when forwarding this item to the Board of Commissioners.

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MOTION: Commissioner Council moved to recommend to the full board approval to the design-build delivery method for the Landscaping Parking Lot Slope Stabilization and forward to the Board of Commissioners as a Consent Agenda item at their November 19, 2018 regular meeting.
SECOND: Commissioner Adams
VOTE: UNANIMOUS (2-0)

6. MONTHLY PROJECT UPDATES

Mr. Brown provided a report to the Facilities Committee detailing monthly project updates.

7. OTHER ITEMS OF BUSINESS

There were no other items of business.

MEETING ADJOURNED AT 10:31 AM.

ITEM NO. 2

CUMBERLAND COUNTY
NORTH CAROLINA

ENGINEERING & INFRASTRUCTURE DEPARTMENT

Engineering Division · Facilities Management Division · Landscaping & Grounds Division · Public Utilities Division

MEMO FOR THE AGENDA OF THE
DECEMBER 6, 2018 MEETING OF THE FACILITIES COMMITTEE

TO:	**FACILITIES COMMITTEE MEMBERS**
FROM:	**JEFFERY P. BROWN, PE, E & I DIRECTOR**
THROUGH:	**AMY CANNON, COUNTY MANAGER**
DATE:	**NOVEMBER 27, 2018**
SUBJECT:	**CONSIDERATION OF PERMANENT EASEMENT FOR PWC SEWER LINE RELOCATION AT HEADQUARTERS LIBRARY**
Requested by:	**AMY CANNON, COUNTY MANAGER**
Presenter(s):	**JEFFERY P. BROWN, PE, E&I DIRECTOR**

Estimate of Committee Time Needed: 10 MINUTES

BACKGROUND:

Cumberland County Engineering & Infrastructure (E&I) Staff was contacted by Public Works Commission (PWC) Staff about the need for a permanent easement on County owned property. PWC has a project to replace the existing water and sewer mains underneath the CSX railroad tracks at the intersection of Maiden Lane and Ray Avenue. PWC is proposing to locate a sewer manhole just outside of the street right-of-way on the property for the Headquarters Library. This will allow the bore for the sewer line to extend across the traffic circle with no impacts to the pavement infrastructure.

A map of the permanent easement and the easement document has been attached. E&I Staff does not feel that granting this permanent easement to PWC would have a negative impact on Headquarters Library property nor on library operations.

RECOMMENDATION/PROPOSED ACTION:

The Engineering and Infrastructure Director and County Management recommend that the Facilities Committee approve granting a permanent easement to the Public Works Commission at the Headquarters Library and forward it to the Board of Commissioners for its approval at their December 6th meeting.

NORTH CAROLINA
CUMBERLAND COUNTY

UTILITY EASEMENT
(WATER & SANITARY SEWER)
PUBLIC WORKS COMMISSION

PWC EASEMENT NO. _____

Prepared by and Return to: Fayetteville Public Works Commission
Attn: Jim Autry

THIS INSTRUMENT made this _____ day of _____, 2018.

By: COUNTY OF CUMBERLAND, a body Politic and Corporate of the State of North Carolina, herein called Grantor,

To: Grantee: The City of Fayetteville, a municipal corporation, by and through Fayetteville Public Works Commission, a public authority, in accordance with Chapter VIA of the Charter of the City of Fayetteville,

WITNESSETH THAT

Grantor, for one dollar ($1.00) and other valuable consideration, hereby acknowledged as paid and received, has bargained and sold, and by these presents does grant, bargain, sell and convey to Grantee, its successors, licensees, and assigns, the perpetual right, easement and privilege to be exercised through the exclusive management and control of Fayetteville Public Works Commission ("FPWC") in accordance with Sections 6A.7 and 6A.9 of Chapter VIA of the Charter of the City of Fayetteville, as amended, for Grantee and FPWC and each of their contractors and agents to go in and upon and build, construct, reconstruct, operate and maintain water, sanitary sewer and fiber optic (any or all) lines, with such pipes, connections, manholes, and other attachments, equipment and accessories necessary or desirable in connection therewith (collectively, "Utility Equipment"), to have full ingress and egress, thereto and therefrom over adjoining lands of Grantor (using paved areas and established pathways where practical as reasonably determined by FPWC), to patrol, inspect, alter, improve, repair, relocate, add to, remove and replace any or all of such Utility Equipment, within the easement area, to keep clear all trees, undergrowth and other encroachments located within ten (10') feet of said lines (unless otherwise specified below) and to have all rights and privileges necessary or convenient for the full enjoyment or use of this easement, in, on, under, over, through and across certain land described as follows:

NORTH CAROLINA -- CUMBERLAND COUNTY – CROSS CREEK TOWNSHIP

The following described easement lies within that certain parcel of land located on the east side of Ray Avenue and the north side of Maiden Lane as described in the deed of record duly recorded in Deed Book 2981, Page 089, of the Cumberland County, North Carolina Registry.

Permanent Utility Easement

The following described permanent utility easement, containing 991.6 square feet more or less and being more particularly described as follows:

Beginning at an EXISTING IRON PIN with NAD 83 coordinates of North 475002.30' and East 2035824.42' and located on the Northeastern margin of Maiden Lane and being on the property line for PIN: 0347-55-8192 and being on the TIE LINE for the herein described permanent FAYPWC utility easement and being N88°19'16"W 361.76' to a COMPUTED POINT and the BEGINNING POINT of the herein described permanent FAYPWC utility easement; thence N88°19'16"W 48.28'; thence N32°10'00"W 24.08' to a COMPUTED POINT; thence S88°19'16"E 50.88' to a COMPUTED POINT; thence S26°41'42"E 22.73' to a COMPUTED POINT and the BEGINNING POINT of the herein described permanent FAYPWC utility easement containing 0.02 more or less acres as shown in greater detail on the attached PWC Drawing No. AS-15282A and labeled Exhibit "A."

For title reference, see the following in Cumberland County, N.C. Registry:
Deed Book 2981, Page 089; PWC Drawing No. AS-15282A; Pin No. 0437-11-55-6114-; "Maiden Lane Sanitary Sewer Relocation".

TO HAVE, TO HOLD, AND TO ENJOY said right, easement, and privilege as above fully defined and described in, on, under, over, through and across said land, and all privileges and appurtenances thereto belonging, to Grantee and Grantee's successors, licensees, and assigns, forever. And the Grantor covenants with the Grantee that Grantor is seized of the premises in fee simple and is the lawful owner, has the right to convey the easement, and that Grantor will warrant and defend the title to the same against the lawful claims of all person.

Grantor shall have the right to continue to use the land within said utility easement area(s) as described herein in any manner and for any purpose, including but not limited to the use of said easement area for access, ingress, egress, and parking, that does not, in the determination of either the Grantee or FPWC, obstruct or materially impair the actual use of the easement area(s) by Grantee or FPWC or any of each of their agents, and contractors.

Wherever used herein, the singular shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders as the context may require.

IN TESTIMONY WHEREOF, Grantor has signed and sealed this instrument,

COUNTY OF CUMBERLAND, a body politic and
Corporate of the State of North Carolina

_____(SEAL)
LARRY L. LANCASTER, CHAIRMAN
BOARD OF COMMISIONERS

ATTEST:

BY:_____
CANDICE H. WHITE, CLERK

(SEAL)

(No Markings, to include Notary Seal are to be outside of the margin lines)

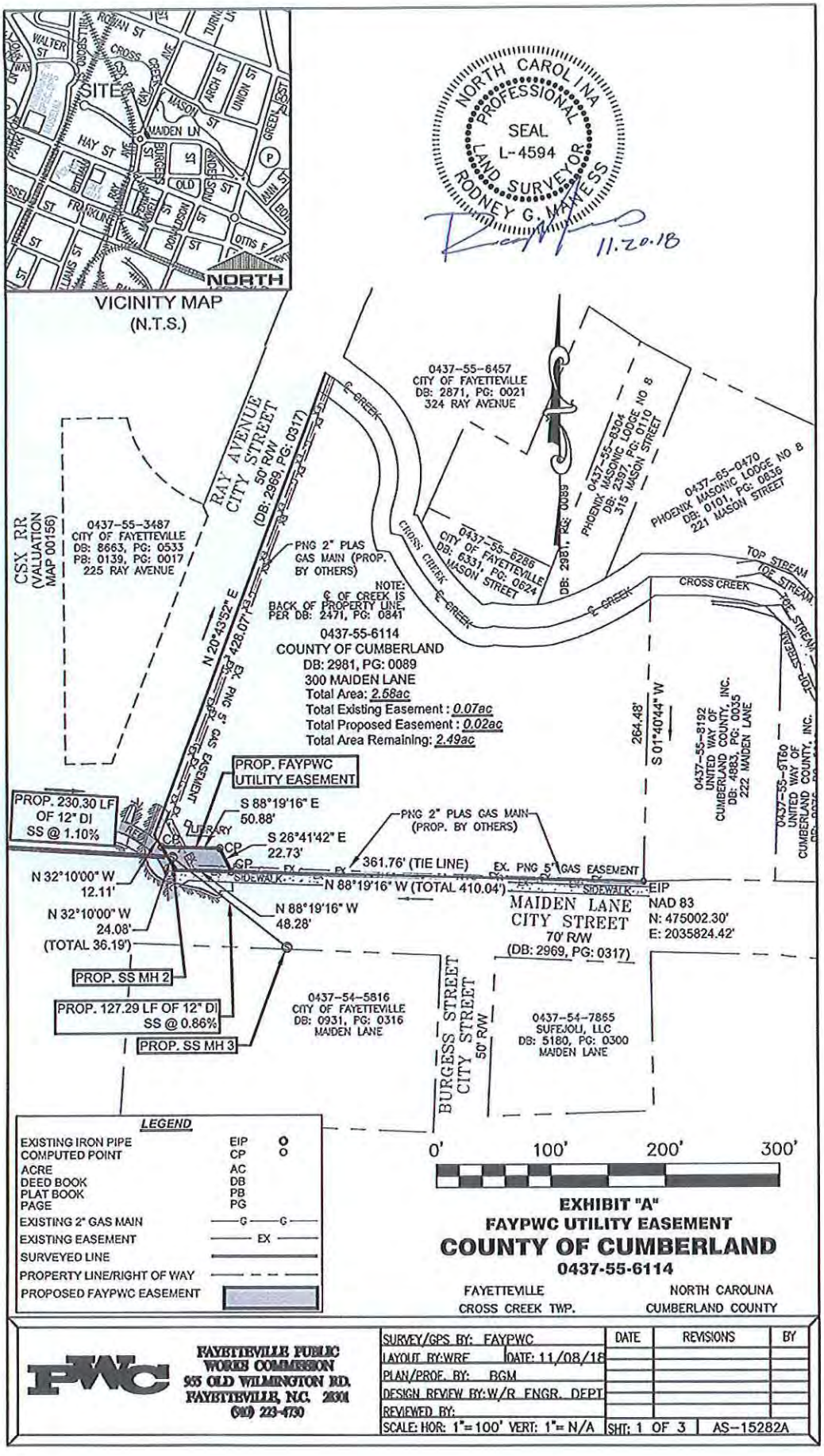
STATE OF NORTH CAROLINA
COUNTY OF CUMBERLAND

I, _____, a Notary Public in and for the State of North Carolina, certify that CANDICE H. WHITE personally appeared before me this day and acknowledged that she is the Clerk to the Board of Commissioners of Cumberland County; that LARRY L. LANCASTER is the Chairman of the Board of Commissioners; that the seal affixed to the foregoing instrument is the Official Seal of the Board; that this instrument was signed and sealed by the Chairman and attested by her as Clerk on behalf of the Board, all by its authority duly granted; and that CANDICE H. WHITE acknowledged this instrument to be the act and deed of the Board of Commissioners.

WITNESS my hand and notarial seal, this _____day of _____, 2018.

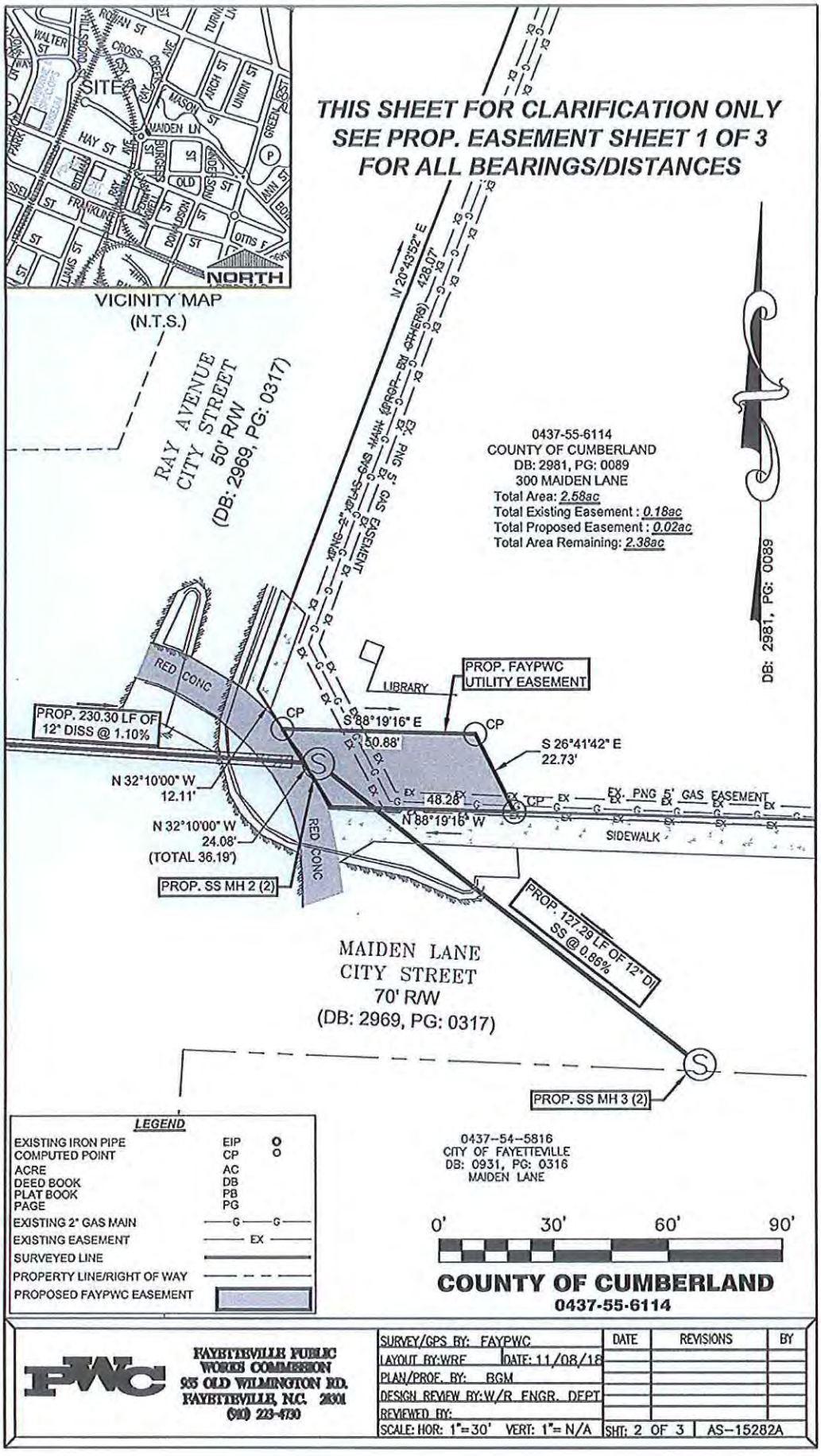
_____
Print Name: _____Notary Public
My Commission Expires: _____

(SEAL)



FAYETTEVILLE PUBLIC WORKS COMMISSION
955 OLD WILMINGTON RD.
FAYETTEVILLE, N.C. 28301
(910) 223-4730

SURVEY/GPS BY: FAYPWC	DATE	REVISIONS	BY
LAYOUT BY: WRF DATE: 11/08/18			
PLAN/PROF. BY: BGM			
DESIGN REVIEW BY: W/R ENGR. DEPT			
REVIEWED BY:			
SCALE: HOR: 1"=100' VERT: 1"= N/A	SHT: 1 OF 3	AS-15282A	



FAYETTEVILLE PUBLIC WORKS COMMISSION
955 OLD WILMINGTON RD.
FAYETTEVILLE, N.C. 28301
(910) 223-4730

SURVEY/GPS BY: FAYPWC	DATE	REVISIONS	BY
LAYOUT BY: WRF DATE: 11/08/18			
PLAN/PROF. BY: BGM			
DESIGN REVIEW BY: W/R ENGR. DEPT			
REVIEWED BY:			
SCALE: HOR: 1"=30' VERT: 1"= N/A	SHT: 2 OF 3	AS-15282A	

CUMBERLAND COUNTY
NORTH CAROLINA

I,Rodney G. Maness, PLS, certify that the survey is of another category, such as the recombination of existing parcels, a court-ordered survey, or other exemption or exception to the definition of subdivision. I also certify that this plat was drawn under my supervision from an actual survey made under my supervision (deed description recorded in Book 2981, Page 89 etc.) (other); that the boundaries not surveyed are clearly indicated as drawn from information found in Book 2471, Page 841; that the ratio of precision or positional accuracy as calculated is: 1:10,000; that this plat was prepared in accordance with G.S. 47-30 as amended. Witness my original signature, license number and seal this 19th day of November, A.D., 2018.

NORTH CAROLINA PROFESSIONAL SEAL L-4594 LAND SURVEYOR RODNEY G. MANESS

11.20.18

Professional Land Surveyor
License Number

NOTES:

1. This map has been prepared for easement acquisition only.
2. This map was prepared from recorded maps and deeds by others and is a partial survey.
3. The Surveyor has, to the best of his ability, examined the public records of Cumberland County, but does not certify title to any person or entity.
4. Property subject to any and all restrictions, easements of record, rights of way, as the same may appear of record in the Register of Deeds, Clerk of Court, County Tax Office, or which may have been acquired by prescriptive use.
5. Date of survey on 11/06/2018.
6. Proposed Easement corners not set.

DEED/PLAT REFERENCES

DB: 2981, PG: 0089
DB: 2471, PG: 0841
DB: 2969, PG: 0317

EXHIBIT "A"
FAYPWC UTILITY EASEMENT
COUNTY OF CUMBERLAND
0437-55-6114

FAYETTEVILLE CROSS CREEK TWP. NORTH CAROLINA CUMBERLAND COUNTY

FAYETTEVILLE PUBLIC WORKS COMMISSION
955 OLD WILMINGTON RD.
FAYETTEVILLE, N.C. 28301
(910) 223-4730

SURVEY/GPS BY: FAYPWC		DATE	REVISIONS	BY
LAYOUT BY:WRE	DATE: 11/08/18			
PLAN/PROF. BY: RGM				
MAP REVIEW BY: W/R ENGR. DEPT.				
REVIEWED BY:				
SCALE: HOR: 1"=N/A VERT: 1"= N/A		SHT: 3 OF 3	AS-15282A	

COUNTY OF CUMBERLAND

0437-55-6114

DEED BOOK: 2981, PAGE: 0089

The following described easement lies within that certain parcel of land on the Northern margin of Maiden Lane and the Eastern margin of Ray Avenue and being more fully described by deed duly recorded in Deed Book 2981 at Page 0089 of the Cumberland County, North Carolina Registry.

The following described permanent utility easement, containing 991.6 square feet more or less and being more particularly described as follows:

Beginning at an EXISTING IRON PIN with NAD 83 coordinates of North 475002.30' and East 2035824.42' and located on the Northeastern margin of Maiden Lane and being on the property line for PIN: 0347-55-8192 and being on the TIE LINE for the herein described permanent FAYPWC utility easement and being N88°19'16"W 361.76' to a COMPUTED POINT and the BEGINNING POINT of the herein described permanent FAYPWC utility easement; thence N88°19'16"W 48.28'; thence N32°10'00"W 24.08' to a COMPUTED POINT; thence S88°19'16"E 50.88' to a COMPUTED POINT; thence S26°41'42"E 22.73' to a COMPUTED POINT and the BEGINNING POINT of the herein described permanent FAYPWC utility easement containing 0.02 more or less acres as shown in greater detail on the attached FAYPWC drawing, Number: AS-15282A and labeled Exhibit "A".

ITEM NO. 3.A.

CUMBERLAND COUNTY
NORTH CAROLINA

ENGINEERING & INFRASTRUCTURE DEPARTMENT

Engineering Division · Facilities Management Division · Landscaping & Grounds Division · Public Utilities Division

MEMO FOR THE AGENDA OF THE DECEMBER 6, 2018 MEETING OF THE FACILITIES COMMITTEE

TO:	**FACILITIES COMMITTEE MEMBERS**
FROM:	**JEFFERY P. BROWN, PE, E & I DIRECTOR**
THROUGH:	**AMY CANNON, COUNTY MANAGER**
DATE:	**NOVEMBER 27, 2018**
SUBJECT:	**CONSIDERATION OF CONTRACT FOR DEPARTMENT OF SOCIAL SERVICES CHILLER REPLACEMENT PROJECT**
Requested by:	**AMY CANNON, COUNTY MANAGER**
Presenter(s):	**JEFFERY P. BROWN, PE, E&I DIRECTOR**
Estimate of Committee Time Needed:	**10 MINUTES**

BACKGROUND:

The Capital Improvement Plan (CIP) identified the replacement of both chillers at the Department of Social Services. The CIP that was approved as part of the FY 2019 budget adoption included one chiller for replacement in the current fiscal year with the second chiller to be replaced in FY 2020.

A pre-bid meeting was held on November 15, 2018, in which all local contractors were invited to attend. The bid opening is scheduled for November 29, 2018. The certified bid tab and a recommendation from Progressive Design Collaborative, LTD (PTC) on awarding a contract to the lowest, responsible and responsive bidder will be presented to the Facilities Committee at the December 6th meeting. A contingency amount will also be presented to the Facilities Committee for approval as part of the project to address any changes or additional work recommended by the Engineering & Infrastructure (E&I) Director and approved by the County Manager.

RECOMMENDATION/PROPOSED ACTION:

The Engineering and Infrastructure Director and County Management recommend that the Facilities Committee approve the following recommendations and forward them to the Board of Commissioners for its consideration at their December 6th meeting:

1. Accept the bids and award a contract to the lowest, responsible and responsive bidder.

2. Establish a contingency to be used for additional work recommended by the E&I Director and approved by the County Manager.

ITEM NO. 3.B.

CUMBERLAND COUNTY
NORTH CAROLINA

ENGINEERING & INFRASTRUCTURE DEPARTMENT

Engineering Division · Facilities Management Division · Landscaping & Grounds Division · Public Utilities Division

MEMO FOR THE AGENDA OF THE DECEMBER 6, 2018 MEETING OF THE FACILITIES COMMITTEE

TO: FACILITIES COMMITTEE MEMBERS

FROM: JEFFERY P. BROWN, PE, E & I DIRECTOR

THROUGH: AMY CANNON, COUNTY MANAGER

DATE: NOVEMBER 27, 2018

SUBJECT: CONSIDERATION OF CONTRACT FOR REPLACEMENT OF DETENTION CENTER BOILERS AND SEWER GRINDER PUMP INSTALLATION

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): JEFFERY P. BROWN, PE, E&I DIRECTOR

Estimate of Committee Time Needed: 10 MINUTES

BACKGROUND:

The Capital Improvement Plan (CIP) for FY 2019 identified the replacement of a pair of water heaters with boilers and storage tanks within the Detention Center. Additionally, the Public Works Commission (PWC) has notified the County of inappropriate waste being discharged from the Detention Center into the sanitary sewer collection system. These inappropriate items being improperly disposed of by inmates within the facility lead to sewer blockages and have the potential to cause sanitary sewer overflows with the sanitary sewer collection system. PWC has placed the County on notice that corrective actions are needed, or the County could be penalized. There are two different locations in which wastewater flows from the Detention Center into the PWC sewer collection system. To help address this issue, a sewer grinder pump is being installed at the Worth Street connection in this fiscal year.

A pre-bid meeting was held on November 2, 2018, in which all local contractors were invited to attend. The bid opening was held on November 15, 2018. One bid was received from Haire Plumbing and Mechanical Company, Inc, in the amount of $394,997. Following the bid opening, Engineering & Infrastructure Staff met with the contractor to explore value engineering opportunities to reduce the bid amount to the established budget for this project. Based upon these discussions, the contract bid price has been reduced to $379,997.

The certified bid tab and letter of recommendation to award a contract to the lowest, responsible and responsive bidder from Progressive Design Collaborative, LTD. (PDC) is attached.

RECOMMENDATION/PROPOSED ACTION:
The Engineering and Infrastructure Director and County Management recommend that the Facilities Committee approve the following recommendations and forward them to the Board of Commissioners for its consideration at their December 6th meeting:

1. Accept the bids and award a contract to the lowest, responsible and responsive bidder Haire Plumbing and Mechanical Company, Inc., in the amount of $379,997.00.

2. Establish a contingency in the amount of $ 18,000.00 to be used for additional work recommended by the E&I Director and approved by the County Manager.

Progressive Design Collaborative, Ltd
3101 Poplarwood Court, Suite 320
Raleigh, North Carolina 27604
919-790-9989

November 26, 2018

Mr. Jeffery Brown, P.E.
Engineering & Infrastructure (E&I) Director
130 Gillespie Street, Room 214
Fayetteville, NC 28301

Re: Cumberland County Jail
Plumbing Upgrades
PDC Project 18074

Mr. Brown:

Based on the attached bid tab for the referenced project and subsequent conversations with the Haire Plumbing to value engineer the project to be within budget, I am recommending Haire Plumbing be awarded the project for the amount of $379,997 to provide Plumbing Upgrades at Cumberland County Jail.

Sincerely,

Scott Ennis, P.E.
PROGRESSIVE DESIGN COLLABORATIVE, LTD.

Attachments:

Certified Bid Tabulation
Haire Plumbing Bid Submittal

Progressive Design Collaborative, Ltd
3101 Poplarwood Court, Suite 320
Raleigh, North Carolina 27604
919-790-9989

CERTIFIED BID TABULATION

Cumberland County Jail
Plumbing Upgrades
PDC 18074
November 15, 2018

CONTRACTOR	LICENSE #	MWBE	ADDENDUM 01	BASE BID
Haire Plumbing	PH4230	X	X	$394,997.00
Newcomb	No Bid			
Brady Services	No Bid			
Smith's Refrigeration	No Bid			
Harrelson Mechanical	No Bid			
Ivey Mechanical	No Bid			

This is to certify this bid tabulation to be true and correct:

Scott Ennis, P.E.
PROGRESSIVE DESIGN COLLABORATIVE, LTD.

NORTH CAROLINA PROFESSIONAL SEAL 027928 ENGINEER SCOTT L. ENNIS

11-18-18

ITEM NO. 4

CUMBERLAND COUNTY
NORTH CAROLINA

ENGINEERING & INFRASTRUCTURE DEPARTMENT

Engineering Division · Facilities Management Division · Landscaping & Grounds Division · Public Utilities Division

MEMO FOR THE AGENDA OF THE DECEMBER 6, 2018 MEETING OF THE FACILITIES COMMITTEE

TO:	**FACILITIES COMMITTEE MEMBERS**
FROM:	**JEFFERY P. BROWN, PE, E & I DIRECTOR**
THROUGH:	**AMY CANNON, COUNTY MANAGER**
DATE:	**NOVEMBER 28, 2018**
SUBJECT:	**CONSIDERATION OF JUDGE E. MAURICE BRASWELL CUMBERLAND COUNTY COURTHOUSE GENERATOR EVALUATION AND RECOMMENDATION**
Requested by:	**AMY CANNON, COUNTY MANAGER**
Presenter(s):	**JEFFERY P. BROWN, PE, E&I DIRECTOR**
Estimate of Committee Time Needed:	**10 MINUTES**

BACKGROUND:

The existing emergency generator that serves the Judge E. Maurice Braswell Cumberland County Courthouse is the original generator to the building and it is over forty years old. The generator provides emergency power for life safety features (fire pump, sprinkler system jockey pump, emergency lighting, etc.) and the Cumberland County IS Data Center. There has been a desire over the last several years to add additional electrical loads to the generator. For that reason, the Engineering & Infrastructure (E&I) Staff budgeted funding for a study in FY 19 and worked with Progressive Design Collaborative, Ltd (PDC) to complete an engineering evaluation of the current generator and the existing loads on the generator.

The engineering evaluation has been completed and has been attached for your review. It has been determined that if all the equipment that is currently is on emergency power were required to operate simultaneously during a commercial power outage, then generator could have a catastrophic failure. Since the existing electrical loading on the generator exceeds its design capacity and the age of the generator, the generator needs to be replaced to ensure that critical infrastructure always remains operational.

The evaluation provides several different options that are explained in detail within the report that has been attached. The desired solution is Option E. With this option, the single existing generator gets removed and is replaced with two 750 KVA generators.

The room that houses the existing generator will become the new emergency power distribution room and the two new generators will be installed in a grassed area directly outside of this room. The benefit of having two generators is that all critical functions will not be lost if a single generator fails to start or operate effectively during a time of need. This has been an issue with the current configuration. During Hurricane Florence, the existing generator failed to start, and the IS Data Center lost power which had a negative impact on emergency operations. This led to some of the equipment within the data center having to be replaced due to the power failure.

Based on the critical functions that are a necessity for this facility, it is being recommended that E&I Staff be able to move forward with completing the necessary engineering work required to replace the generator outside of the normal budget cycle. If approved by the Facilities Committee and the Board of Commissioners, E&I Staff would negotiate with the selected engineering firm for a price to compete the engineering work. This step would possibly allow the generator to be replaced prior to entering hurricane season in June of 2019. A completed project design will also allow the design engineer to determine a more accurate construction cost estimate.

RECOMMENDATION/PROPOSED ACTION:

The Engineering and Infrastructure Director and County Management recommend that the Facilities Committee approve the recommendation that the E&I Department move forward with the required engineering design work in having the existing generator at the Judge E. Maurice Braswell Courthouse be replaced and forward it to the Board of Commissioners for its consideration at their December 6th meeting.

CUMBERLAND COUNTY
NORTH CAROLINA

New Courthouse Building
Generator Study

November 5, 2018

Prepared by:
Robert Clark, P.E., Electrical

PDC Project 18080

pdc

Cumberland County, North Carolina
New Courthouse Building
Generator Study

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pdc

Executive Summary

Cumberland County, North Carolina (the County) engaged Progressive Design Collaborative, LTD (PDC) to study the emergency power system in the New Courthouse Building located in Fayetteville, North Carolina. The purpose of the study is to advise the County if additional load may be connected to the existing emergency power system. The Register of Deeds office desires to add a single phase Uninterruptible Power System (UPS) and a ductless split-system air conditioning unit to the emergency power system.

Unfortunately, there is insufficient capacity in the emergency power system to connect additional load. More importantly, the generator load study included in this report indicates that the existing generator *should* have 1250 kVA capacity, a shortfall of 1000 kVA from the existing available emergency power system. If the fire pump should start while the building is on emergency power, the generator could have a catastrophic failure. The alternator could be damaged beyond repair and/or the engine could stall or suffer extensive damage. This is discussed further in this report. Additionally, the feeder and circuit breaker feeding the two elevators should be confirmed to be sized appropriately for the load imposed by the new motors. If additional Automatic Transfer Switches (ATSs) were added with time-delay relays and coordinated so that the load is added in eight (8) steps, the generator could be as small as 500 kVA. Establishing the priorities for the 8 steps would require a consensus of all affected user groups. Overarching codes may dictate a part of the sequence. Refer to page 7 for the generator selection for a 1-step load addition unit, pages 8-16 for generator selection for the 8-step load addition with each step detailed.

When the lack of capacity was reported to the County Engineering and Infrastructure Department a meeting was called to discuss the matter and formulate a plan to alleviate the issue. The meeting was held September 27, 2018 at the Historic Courthouse in Fayetteville. The Options A through D were considered, and Option E was proposed. The consensus was to select Option E and add it to this report.

Existing Emergency Power System

When the Courthouse was constructed in 1976 the emergency electrical system was comprised of a 200 kW/250 kVA diesel-fueled generator serving a 400-amp Automatic Transfer Switch (ATS) with 480Y/277 volt power. That ATS transfers the power to circuit breaker panel EA from the normal source to the output of the generator upon loss of normal power and the generator having started, gotten up to speed and being able to support the connected load.
Panel EA, at that time, served the following loads:

- A 100 horsepower (HP) fire pump
- The sprinkler system jockey pump
- Two of the six traction elevators that used Direct Current (DC) motors when installed
- A 25 HP supply fan
- Circuit breaker panel EP on the ground floor via a 30-kVA transformer
- Circuit breaker panel EL3A on the third floor
- A since-removed 200 amp, 3-phase feed to an exterior panel

The 5th floor data center, known as the Cumberland County Data Center, was added to the emergency power system in 2003. It is served by two (2) 75 kVA isolation transformers.

pdc

As observed recently the approximate connected load is 620 amps if 80% of each circuit breaker trip rating is estimated to be the connected load. The National Electrical Code (NEC) allows for the use of diversity factors to permit a load greater than the panel capacity to be connected to it. The NEC also mandates not loading circuit breakers more than 80% of the circuit breaker's trip rating, hence the use of 80% above. The instantaneous ammeter readings varied greatly depending upon load cycling. Recent readings revealed a phase imbalance. The A phase carried a maximum observed load of 63 amps. The B phase carried a maximum observed load of 100 amps. The C phase carried a maximum observed load of 87 amps.
The normal feed to the ATS is protected by 400-amp fuses in the Main Distribution Panel. The emergency feed to the ATS is from the generator, which has a maximum output level of 301 amps. It is protected by a 400-amp generator output circuit breaker. Note the maximum allowable continuous amperage through the 400-amp circuit breaker is 320 amps, 106% of the 301 amps from the alternator of the generator set. Alternators usually are designed to withstand a temporary overload,
The main buss rating of Panel EA is 400 amps, or 320 amps using the NEC's required derating. The estimated actual load, if all connected loads are operating, is 429 amps. Excluding the fire pump lowers the estimated load to 305 amps. If neither elevator is operating, the load drops to 180 amps.

Electric motors, when started in a full-voltage/across-the-line manner, place a load on the infrastructure equal to several times the running amperage. That load is equal to the locked rotor amperage of said motor. The NEC has tables to allow for the estimation of locked rotor amps based upon the code letter the manufacturer is required to indicate on the motor's nameplate. The fire pump has the letter G on its nameplate, indicating that the motor would exert 5.6 to 6.29 kVA per HP in a locked rotor state. That equates to 560 to 629 kVA or 674 to 757 amps. That alone equates to 224% to 252% of the generator capacity. Since the fire pump motor is directly connected to a water pump the infrastructure would need to support the locked rotor state for several seconds, if not longer. Adding this locked rotor load to Panel EA would raise the momentary load to 854 to 937 amps. That would be 284% to 311% of the generator output capacity. The elevator motors have been replaced with alternating current (AC) motors with soft-start controllers so that the infrastructure does not receive locked rotor amps when the elevators start. The load addition is more gradual but would increase the generator overload that much more.

It should be noted that the generator, alternator (the part that produces the electricity) and the ATS are all over 40 years old. The best-case life expectancy of the equipment is about 25 years, making replacement parts expensive or unavailable. The starting batteries appeared to need to in need of cleaning and/or replacement.

To serve the Register of Deeds office's needs would require the re-feeding of the existing circuit breaker panel near the server rack as well as re-feeding the ductless split system air conditioner from a ground floor panel served by the generator. This work will be included in each of the estimates. These loads are approximately 2% of the existing load.

pdc

Remedial Options

Option A

Replace the existing emergency power system with one designed to serve the existing loads, including the fire pump, and provide for the anticipated load and some estimated future loads. The generator would be approximately 1600 kVA and the estimated cost for it, its fuel tank for 3 days of fuel at full load, piping and electrical work would be $2,050,000. With a tank large enough for 7 days fuel the estimated cost would be $2,125,000. Refer to page 8 for the sizing/selection report. Refer to pages 13-15 for the cost estimates.

Option B

Install a generator, ATS and distribution system dedicated to the fire pump alone. Install an interlock so that both elevators cannot start within 30 seconds of each other when the existing generator is running, lowering the calculated load to 305 amps. The fire pump generator would be approximately 200 kVA and the estimated cost would be $177,500 if installed in place of the existing generator, with its own tank capable of holding 3 days of fuel at full load and conduit into the building, changing to a tank capable of holding 7 days of fuel, the estimated cost would be $190,000. If installed in its own weatherproof, sound attenuated enclosure with a tank capable of holding 3 days of fuel at full load the estimated cost would be $242,500. If a tank capable of holding 7 days of fuel at full load is selected the estimated cost would be $255,000. Refer to page 9 for the sizing/selection report. Refer to pages 13-15 for the cost estimates.

Option C

Install a generator, ATS and distribution system dedicated to the fire pump and elevators. The fire pump and elevator generator would be approximately 200 kVA <u>if</u> the elevators are included in steps 2 and 3 and the estimated cost would $202,500 if installed in place of the existing generator, with its own tank capable of holding 3 days of fuel at full load and conduit into the building, changing to a tank capable of holding 7 days of fuel, the estimated cost would be $215,000. If installed in its own weatherproof, sound attenuated enclosure with a tank capable of holding 3 days of fuel at full load the estimated cost would be $267,500. If a tank capable of holding 7 days of fuel at full load is selected the estimated cost would be $280,000. Refer to page 10 for the sizing/selection report. Refer to pages 13-15 for the cost estimates.

Option D

Replace the existing generator with one having the capacity required to support the existing loads <u>excluding</u> the fire pump and elevators, and all anticipated new loads. The generator would have 1250 kVA capacity and would cost approximately $1,545,000 with a fuel tank capable of storing 3 days supply of fuel at full load or $1,560,000 if provided

with a fuel storage tank capable of storing 7 days. This would be in addition to the work in Option C and would installed in an area to be identified outside of the building. Refer to page 11 for the sizing report. Refer to pages 13-15 for the cost estimates.

Options C and D could cost approximately:
Option D + Option C (inside building) with 3 days of fuel storage: $1,710,000
Option D + Option C (inside building) with 7 days of fuel storage: $1,785,000
Option D + Option C (outside building) with 3 days of fuel storage: $1,775,000
Option D + Option C (outside building) with 7 days of fuel storage: $1,950,000

Option E

Remove the existing generator and its accessories. Prepare the existing room to become the new emergency power distribution room. Replace louvers with solid walls, condition the space, paint and change the lighting as necessary. Install new ATSs to serve the new emergency power branches, the generator master control panel to manage the generators to serve the loads as necessary and the service-entrance rated generator distribution panel to serve the ATSs, provide local disconnects and overcurrent protection and protect the feeders from the generators. The existing emergency electrical system would be revised to provide three (3) branches of emergency power like those in a healthcare facility. The Life Safety branch would serve emergency egress lighting, communication system(s) designated as essential and any other load necessary to protect human lives. The Critical branch would serve loads designated as essential to the Courthouse's functions during an outage of the utility power. The Equipment branch would provide power to the fire pump, noted elevators, designated space conditioning systems and any loads not needed to be served immediately upon loss of utility power. The Life Safety and Critical branches would be served within 10 seconds of the utility power outage, with the ATSs transferring as soon as the generators are capable of supporting the loads upon starting up. The Equipment branch ATS would transfer after a set time delay to allow for the generators to get up to speed, stabilize and support the other two branches.
Outside, in a location to be determined, two (2) 750 kVA generators will be installed. They each will have 1000-gallon base tanks to provide 24 hours of run time at full load. Reusing the existing 2000-gallon underground tank will lower the total capacity required to provide the necessary run time. To achieve three (3) days of run time at full load an additional 6,000 gallons of fuel storage would be required. To have seven (7) days of run time at full load an additional 13,000 gallons of fuel storage would be needed. Fuel circulation pump(s), fuel polisher(s) and appropriate piping would complete the system. Depending upon space availability the additional storage may be in one or multiple above-ground tanks. With a tank capacity of 3 days of fuel the estimated cost would be $1,400,000. Increasing to 7 days capacity would make the estimated cost $1,415,000. Refer to pages 13-15 for the cost estimates.

KOHLER. Power Systems

SUMMARY SIZING REPORT

Project information

Project name: Courthouse with present loads
Customer's name: Cumberland County, NC

Site requirements

Voltage:	277/480
Phase:	3
Frequency:	60Hz
Alt. Temp. Rise Duty:	130°C Standby
Qty of Gensets:	1
Fuel type:	Diesel
Country :	United States

Application:	Local Government
Emissions Requirement:	Stationary emergency (US EPA)
Altitude:	500 Feet
Max. Ambient Temp.:	77 Degrees F
Min. Genset Loading :	25 %
Max. Genset Loading :	90 %

Site load requirements summary

Running kW:	762.79
Running kVA:	773.29
Running P.F.:	0.99

Max. Starting kW:	883.38 in step 1
Max. Starting kVA:	1,340.82 in step 1

Generator selection

Genset Model:	1250REOZMD
Engine:	S12R-Y2PTAW-1
Emission level:	EPA Tier 2
BHP:	1,881.00
Displacement:	2,992.00
RPM:	1800

Alternator:	7M4052
Alternator Leads:	4 bus bars
Alt. Starting kVA at 35% V dip:	5,600.00
Cal Alt Temp rise with **site loads**:	80C
Excitation System :	PMG

Rated kW :	1,280.00
Site Rated kW :	1,280.00
UL 2200 Certified	

Generator Performance Summary

Voltage Dip Limit:	30.00 %
Frequency Dip Limit:	10.00 %
Harmonic Distortion Limit:	%

Calculated Voltage Dip:	12.01 %
Calculated Frequency Dip:	5.83 %
Calculated Harmonic Distortion:	0.00 %
Calculated Genset % Loaded:	59.59 %

Report prepared by: robert clark

Project information

Project name: Courthouse with present loads and spare capacity
Customer's name: Cumberland County, NC

Site requirements

Voltage:	277/480	Application:	Local Government
Phase:	3	Genset Application:	Stationary emergency
Frequency:	60Hz	Altitude:	500 Feet
Alt. Temp. Rise Duty:	130°C Standby	Max. Ambient Temp.:	77 Degrees F
Qty of Gensets:	1	Min. Genset Loading :	25 %
Fuel type:	Diesel	Max. Genset Loading :	90 %
Country :	United States		

Site load requirements summary

Running kW:	762.79	Max. Starting kW:	883.38 in step 1
Running kVA:	773.29	Max. Starting kVA:	1,340.82 in step 1
Running P.F.:	0.99		

Generator selection

Genset Model:	1600REOZMD	Alternator:	7M4054	Rated kW :	1,600.00
Engine:	S16R-Y2PTAW-1	Alternator Leads:	4 bus bars	Site Rated kW :	1,600.00
Emission level:	EPA Tier 2	Alt. Starting kVA at 35% V dip:	7,000.00	UL 2200 Certified	
BHP:	2,346.00	Excitation System :	PMG		
Displacement:	3,989.00				
RPM:	1800				

Generator Performance Summary

Voltage Dip Limit:	30.00 %	Calculated Voltage Dip:	9.54 %
Frequency Dip Limit:	10.00 %	Calculated Frequency Dip:	4.15 %
Harmonic Distortion Limit:	%	Calculated Harmonic Distortion:	0.00 %
		Calculated Genset % Loaded:	47.67 %

Report prepared by: robert clark

KOHLER. Power Systems

SUMMARY SIZING REPORT

Project information

Project name: Courthouse with present loads
Customer's name: Cumberland County, NC

Site requirements

Voltage:	277/480
Phase:	3
Frequency:	60Hz
Alt. Temp. Rise Duty:	130°C Standby
Qty of Gensets:	1
Fuel type:	Diesel
Country :	United States

Application:	Local Government
Emissions Requirement:	Stationary emergency (US EPA)
Altitude:	500 Feet
Max. Ambient Temp.:	77 Degrees F
Min. Genset Loading :	25 %
Max. Genset Loading :	90 %

Site load requirements summary

Running kW:	80.22
Running kVA:	93.27
Running P.F.:	0.86

Max. Starting kW:	178.50 in step 1
Max. Starting kVA:	595.00 in step 1

Generator selection

Genset Model:	200REOZJF
Engine:	6068HFG85
Emission level:	EPA Tier 3
BHP:	315.00
Displacement:	415.00
RPM:	1800

Alternator:	4UA13
Alternator Leads:	12
Alt. Starting kVA at 35% V dip:	980.00
Cal Alt Temp rise with site loads:	80C
Excitation System :	PMG

Rated kW :	200.00
Site Rated kW :	200.00
UL 2200 Certified	

Generator Performance Summary

Voltage Dip Limit:	30.00 %
Frequency Dip Limit:	10.00 %
Harmonic Distortion Limit:	%

Calculated Voltage Dip:	24.88 %
Calculated Frequency Dip:	5.44 %
Calculated Harmonic Distortion:	0.00 %
Calculated Genset % Loaded:	40.11 %

Report prepared by: robert clark

KOHLER. Power Systems

SUMMARY SIZING REPORT

Project information

Project name: Courthouse Fire Pump and Elevators only
Customer's name: Cumberland County, NC

Site requirements

Voltage:	277/480
Phase:	3
Frequency:	60Hz
Alt. Temp. Rise Duty:	130°C Standby
Qty of Gensets:	1
Fuel type:	Diesel
Country :	United States

Application:	Local Government
Emissions Requirement:	Stationary emergency (US EPA)
Altitude:	500 Feet
Max. Ambient Temp.:	77 Degrees F
Min. Genset Loading :	25 %
Max. Genset Loading :	90 %

Site load requirements summary

Running kW:	178.16
Running kVA:	208.49
Running P.F.:	0.85

Max. Starting kW:	178.50 in step 1
Max. Starting kVA:	595.00 in step 1

Generator selection

Genset Model:	200REOZJF
Engine:	6068HFG85
Emission level:	EPA Tier 3
BHP:	315.00
Displacement:	415.00
RPM:	1800

Alternator:	4UA13
Alternator Leads:	12
Alt. Starting kVA at 35% V dip:	980.00
Cal Alt Temp rise with site loads:	80C
Excitation System :	PMG

Rated kW :	200.00
Site Rated kW :	200.00
UL 2200 Certified	

Generator Performance Summary

Voltage Dip Limit:	30.00 %
Frequency Dip Limit:	10.00 %
Harmonic Distortion Limit:	%

Calculated Voltage Dip:	24.88 %
Calculated Frequency Dip:	5.44 %
Calculated Harmonic Distortion:	0.00 %
Calculated Genset % Loaded:	89.08 %

Report prepared by: robert clark

KOHLER. Power Systems

SUMMARY SIZING REPORT

Project information

Project name: Courthouse with present loads
Customer's name: Cumberland County, NC

Site requirements

Voltage:	277/480
Phase:	3
Frequency:	60Hz
Alt. Temp. Rise Duty:	130°C Standby
Qty of Gensets:	1
Fuel type:	Diesel
Country :	United States

Application:	Local Government
Emissions Requirement:	Stationary emergency (US EPA)
Altitude:	500 Feet
Max. Ambient Temp.:	77 Degrees F
Min. Genset Loading :	25 %
Max. Genset Loading :	90 %

Site load requirements summary

Running kW:	584.63
Running kVA:	584.93
Running P.F.:	1.00

Max. Starting kW:	639.91 in step 1
Max. Starting kVA:	660.34 in step 1

Generator selection

Genset Model:	1250REOZMD
Engine:	S12R-Y2PTAW-1
Emission level:	EPA Tier 2
BHP:	1,881.00
Displacement:	2,992.00
RPM:	1800

Alternator:	7M4050
Alternator Leads:	4 bus bars
Alt. Starting kVA at 35% V dip:	4,500.00
Cal Alt Temp rise with site loads:	80C
Excitation System :	PMG

Rated kW :	1,280.00
Site Rated kW :	1,280.00
UL 2200 Certified	

Generator Performance Summary

Voltage Dip Limit:	30.00 %
Frequency Dip Limit:	10.00 %
Harmonic Distortion Limit:	%

Calculated Voltage Dip:	7.98 %
Calculated Frequency Dip:	2.71 %
Calculated Harmonic Distortion:	0.00 %
Calculated Genset % Loaded:	45.67 %

Report prepared by: robert clark

KOHLER. Power Systems

SUMMARY SIZING REPORT

Project information

Project name: Courthouse with present loads and two generators
Customer's name: Cumberland County, NC

Site requirements

Voltage:	277/480
Phase:	3
Frequency:	60Hz
Alt. Temp. Rise Duty:	130°C Standby
Qty of Gensets:	2
Fuel type:	Diesel
Country :	United States

Application:	Local Government
Emissions Requirement:	Stationary emergency (US EPA)
Altitude:	500 Feet
Max. Ambient Temp.:	77 Degrees F
Min. Genset Loading :	25 %
Max. Genset Loading :	90 %

Site load requirements summary

Running kW:	762.79
Running kVA:	773.29
Running P.F.:	0.99

Max. Starting kW:	883.38 in step 1
Max. Starting kVA:	1,340.82 in step 1

Generator selection

Genset Model:	750REOZMD
Engine:	S12A2-Y2PTAW-2
Emission level:	EPA Tier 2
BHP:	1,207.00
Displacement:	2,071.00
RPM:	1800

Alternator:	5M4034
Alternator Leads:	10
Alt. Starting kVA at 35% V dip:	2,600.00
Cal Alt Temp rise with **site loads**:	N/A
Excitation System :	PMG

Rated kW :	750.00
Site Rated kW :	750.00
UL 2200 Certified	

Generator Performance Summary

Voltage Dip Limit:	30.00 %
Frequency Dip Limit:	10.00 %
Harmonic Distortion Limit:	%

Calculated Voltage Dip:	12.97 %
Calculated Frequency Dip:	5.71 %
Calculated Harmonic Distortion:	0.00 %
Calculated Genset % Loaded:	50.85 %

Report prepared by: robert clark

Software version: 1.0029.5.21

Tuesday, November 27, 2018

pdc

CUMBERLAND COUNTY
COURTHOUSE
FAYETTEVILLE, NORTH CAROLINA
PDC# 18080

ENGINEER'S OPINION OF PROBABLE COSTS
GENERATOR REPLACEMENT

OCTOBER 5, 2018

1600 KVA GENERATOR (Option A)	
Generator	$1,250,000
Duct Bank/entrance conduit	135,000
ATS (2000 amp, SE rated)	40,000
Emergency Distribution Panel	60,000
Demolition	25,000
Subtotal	$1,510,000
Miscellaneous costs	490,000
Total without fuel storage	$2,000,000
3 days fuel storage tank	$50,000
7 days fuel storage tank	$125,000
250 KVA GENERATOR (Option B inside building)	
Generator	$75,000
Duct Bank/entrance conduit	3,500
ATS (400 amp, SE rated)	7.500
Emergency Distribution Panel	10,000
Demolition	25,000
Subtotal	$121,000
Miscellaneous costs	39,000
Total without fuel storage	$160,000
3 days fuel storage tank	$17,500
7 days fuel storage tank	$30,000

pdc

250 KVA GENERATOR (Option B outside building)	
Generator	$100,000
Duct Bank/entrance conduit	35,000
ATS (400 amp, SE rated)	7,500
Emergency Distribution Panel	10,000
Demolition	25,000
Subtotal	$177,500
Miscellaneous costs	47,500
Total without fuel storage	$225,000
3 days fuel storage tank	$17,500
7 days fuel storage tank	$30,000
250 KVA GENERATOR (Option C inside building)	
Generator	$75,000
Duct Bank/entrance conduit	28,500
ATS (400 amp, SE rated)	7.500
Emergency Distribution Panel	10,000
Demolition	25,000
Subtotal	$146,000
Miscellaneous costs	39,000
Total without fuel storage	$185,000
3 days fuel storage tank	$17,500
7 days fuel storage tank	$30,000
250 KVA GENERATOR (Option C outside building)	
Generator	$100,000
Duct Bank/entrance conduit	35,000
ATS (400 amp, SE rated)	7,500
Emergency Distribution Panel	10,000
Demolition	25,000
Subtotal	$177,500
Miscellaneous costs	47,500
Total without fuel storage	$250,000
3 days fuel storage tank	$17,500
7 days fuel storage tank	$30,000
1250 KVA GENERATOR (Option D)	
Generator	$1,000,000
Duct Bank/entrance conduit	123,000
ATS (400 amp, SE rated)	35,000
Emergency Distribution Panel	40,000
Demolition	25,000
Subtotal	$1,223,000
Miscellaneous costs	490,000
Total without fuel storage	$1,500,000
3 days fuel storage tank	$45,000
7 days fuel storage tank	$60,000

pdc

Two 750 KVA GENERATORS (Option E)

Generators	$750,000
Duct Bank/entrance conduit	135,000
ATSs (400 amp, two 800 amp)	35,000
Emergency Distribution Panel	50,000
Demolition	35,000
Subtotal	$1,005,000
Miscellaneous costs	350,000
Total without fuel storage	$1,355,000
3 days fuel storage tank	$45,000
7 days fuel storage tank	$60,000

AMY H. CANNON
County Manager

MELISSA C. CARDINALI
Assistant County Manager

ITEM NO. 5

DUANE T. HOLDER
Assistant County Manager

TRACY JACKSON
Assistant County Manager

SALLY S. SHUTT
Assistant County Manager

CUMBERLAND COUNTY
NORTH CAROLINA

OFFICE OF THE COUNTY MANAGER

MEMO FOR THE AGENDA OF THE DECEMBER 6, 2018 MEETING OF THE FACILITIES COMMITTEE

TO: FACILITIES COMMITTEE

FROM: TRACY JACKSON, ASST. COUNTY MANAGER

THRU: AMY CANNON, COUNTY MANAGER

DATE: NOVEMBER 29, 2018

SUBJECT: CONSIDERATION OF REQUEST TO TRANSFER J.P. RIDDLE STADIUM AND ASSOCIATED REAL PROPERTY TO FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Requested by: Facilities Committee

Presenter(s): Amy Cannon, County Manager

Estimate of Committee Time Needed: 10 Minutes

BACKGROUND

At the November 1, 2018 Facilities Committee Meeting, the Committee recommended further discussion of transferring J.P. Riddle Stadium to Fayetteville Technical Community College (FTCC). Present at that meeting were Dr. Larry Keen, President of FTCC, and Jeremy Aagard, General Manager of the SwampDogs. Hometown America Sports, Inc. (d.b.a., Fayetteville SwampDogs) currently holds a lease that will expire on December 31, 2018, but the SwampDogs have requested a one-year extension of the lease as allowed in the current agreement with the County. Simultaneously, FTCC has expressed interest in utilizing J.P. Riddle for its 2019 baseball program, and arrangements have been made between the County, the SwampDogs, and FTCC so this can occur. The recent discussion at the November 1st Facilities Committee brought to light the potential benefits of allowing FTCC the become the potential owner of the stadium such as:

- Removes the challenges associated with three different parties managing resources and executing projects at the ballpark

- Greater opportunities for upgrades and enhancements to occur if FTCC is the lead instead of the County
- Enhanced opportunity for curriculum programs to expand learning and internship opportunities and provide service to the ballpark in areas such as:
    - Horticulture – landscaping & turf management
    - Culinary Arts – concession stand and kitchen operations
    - Marketing – advertising and promotions
    - Information Technology/Audio-Visual – scoreboard operations

It was the expressed desire of the Facilities Committee to explore this possibility further as a result of the aforementioned advantages.

RECOMMENDATION/PROPOSED ACTION:
This item is intended for further discussion by the Facilities Committee, and no formal action is being requested by Staff at this time.

AMY H. CANNON
County Manager

MELISSA C. CARDINALI
Assistant County Manager

ITEM NO. 6

DUANE T. HOLDER
Assistant County Manager

TRACY JACKSON
Assistant County Manager

SALLY S. SHUTT
Assistant County Manager

CUMBERLAND COUNTY
NORTH CAROLINA

OFFICE OF THE COUNTY MANAGER

MEMO FOR THE AGENDA OF THE DECEMBER 6, 2018
MEETING OF THE FACILITIES COMMITTEE

TO: FACILITIES COMMITTEE

FROM: AMY CANNON, COUNTY MANAGER Amy H Cannon

DATE: NOVEMBER 30, 2018

SUBJECT: CONSIDERATION OF LEASE OF VACANT COUNTY-OWNED PROPERTY TO THE VISION RESOURCE CENTER

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): AMY CANNON, COUNTY MANAGER

Estimate of Committee Time Needed: 10 Minutes

BACKGROUND

The Vision Resource Center (VRC) provides services to enhance the lives of adults and children with visual impairments by advocating for their needs, identifying and sharing information about community resources, providing education, skill development and socialization opportunities.

Services for the visually impaired are very limited. The Division of Blind Services of NCDHHS provides very basic services for a short duration to adults diagnosed with an impairment and for children age 14 and above. There are no public support services for birth to age 13.

The VRC receives referrals from the Division of Blind Services and from eye care providers in the community. VRC offers opportunities and resources to improve the quality of life of adults and children who are blind or visually impaired, focusing on four specific areas of need; independent living skills, physical and mental health, socialization and civic engagement. Youth activities focus on socialization to reduce isolation and prevent depression.

VRC approached county staff regarding assistance with their space needs to be eligible for the foundation grant, to provide adequate space for the specialized programming and to serve an expanded population. Currently the county owns property at 2736 Cedar Creek Road (known as the Alphin House) that has been vacant for most of the sixteen years since the county purchased the property. The house would be an ideal setting for independent skills training with a full kitchen, laundry area, bedroom and bathroom, space for a computer lab and an outdoor area for gardening and programs for children.

VRC is developing a plan to expand and enhance current services and to reach out to the underserved visually impaired population. VRC will provide specialized classes, training, information and support to help the visually impaired reach their full potential. The goal is to provide independent living skills training that will allow the participant to become gainfully employed and remain self-sufficient in their own home avoiding the need for institutional care. For visually impaired children, VRC will develop early childhood support services and activities, increase the awareness of educational devices that support blind and impaired student's academic goals for kindergarten through high school and provide counseling for children and their parents to facilitate adjustment to visual impairment.

Currently, VRC's ability to expand is limited by funding and space. VRC is applying for a foundation grant from LC Industries to support the specialized training and support services to create independence and employment opportunities. Currently, the VRC rents space for $2,400 annually from the City of Fayetteville at the Dorothy Gilmore Recreation. VRC is limited in the programming that can be provided from this facility due to other Parks and Recreation Programming.

RECOMMENDATION/PROPOSED ACTION:

Consider a lease of vacant county property at 2736 Cedar Creek Road to the Vision Resource Center at the current lease rate charged by the City of Fayetteville to provide space for programming to meet the unmet needs of the visually impaired in our community and to provide the required space for foundation grant eligibility.

AC/ct

CM113018-1

ITEM NO. 7

DECEMBER 2018 FACILITIES COMMMITTEE MONTHLY PROGRESS REPORT

Project Location	Construction Amount	Project Status	Contract Duration
Courthouse, Detention Center, Community Corrections, Headquarters Library Parking Lots	$174,251.53	The HQ Library lots are postponed until PNG completes their gas installation. All other projects are complete.	90 days
Veteran's Services Parking Lot	$135,462.33	Due to weather constraints, this project will start in early 2019.	35 days
Spring Lake Library and Family Resource Center Parking Lots	$203,544.50	The parking lots have been resurfaced and the curb ramps are built. The pavement marking installation is ongoing.	45 days
Building Envelope Repairs Project	$551,479.00	Contractor has performed work at Spring Lake Library and Family Resource Center. The work at the Judge E. Maurice Courthouse is completed. The contractor is installing sealant at Bradford Place and preparing cornices for installation. The contractor is working on waterproofing the Historic Courthouse parapet walls.	120 days
Crown Coliseum Membrane and Sealant	$1,735,100.00	Project is 75% completed. The contractor has completed the installation of sealant and the installation of the membrane on the dome. The contractor is now pursuing installation around the trough area. The contractor has been delayed due to weather events, but is pursuing the work diligently.	180 days
Judge E. Maurice Braswell Courthouse Room 564 Renovation	$173,497.00	Contractor is completing punch list items.	75 days
Crown Complex Stormwater Pond A	$642,212.50	Contractor is in the process of grading and installing drainage pipes on the project.	150 days
Crown Complex Stormwater Pond B	$705,040.00	Contractor is in the process of grading and installing drainage pipes on the project.	150 days
Overhills Park Water and Sewer District	$4,131,106.59	Contractor is preparing schedule to complete remaining items.	565 days

Updated: 11/29/2018