

**Research Infrastructure Deferred Maintenance Bonds**  
Per Act 187 (Life Sciences Act)

Act 187 authorized the issue of research infrastructure bonds totaling \$250 million. Of this amount, 88 percent (\$220 million) is for allocation to the three research universities and 12 percent (\$30 million) is for allocation to the four-year teaching and two-year institutions. The four-year teaching and two-year institutions can only use the funds for deferred maintenance projects. The \$30 million authorized for the eligible institutions must be allocated by the Commission on Higher Education as follows:

1. Sixty-five percent of the \$30 million must be allocated based on a reported deferred maintenance needs list from each eligible institution;
2. Thirty-five percent of the \$30 million must be allocated by full-time equivalent (FTE) enrollment for the prior academic year at each eligible institution.

The Commission will submit the allocation requests to the Joint Bond Review Committee and the Budget and Control Board for approval.

The allocation was based on the Commission's most recent Update of Deferred Maintenance (2003-2004) and the institutions' FTE enrollment for the 2003-2004 academic year. Table 1 shows the allocation methodology. Descriptions of the projects begin on page 2.

**Table 1**  
**Research Infrastructure Deferred Maintenance Bonds Allocation Methodology**

Institutions (Excluding Clemson, MUSC, USC)	Estimated * Deferred Maintenance on E&G Facilities	% of Total	\$30,000,000 Spread - 65% Based on Deferred Maintenance	2003-2004 Acad. Yr. FTE	% of Total	\$30,000,000 Spread - 35% Based on FTE	Sub-total of \$30,000,000 based on 65% / 35% Deferred Maintenance & FTE
The Citadel	\$ 31,030,631	11.6%	\$ 2,267,490	2,982	3.4%	\$ 355,661	\$ 2,623,151
Coastal Carolina	16,020,411	6.0%	1,170,654	5,549	6.3%	661,826	1,832,480
College of Charleston	19,566,647	7.3%	1,429,787	9,517	10.8%	1,135,087	2,564,873
Francis Marion	14,319,634	5.4%	1,046,373	2,928	3.3%	349,221	1,395,594
Lander	9,790,676	3.7%	715,431	2,340	2.7%	279,090	994,521
SC State	33,163,606	12.4%	2,423,352	3,864	4.4%	460,857	2,884,209
USC-Aiken	3,239,619	1.2%	236,728	2,614	3.0%	311,770	548,498
USC-Beaufort	2,587,077	1.0%	189,045	719	0.8%	85,755	274,799
USC-Spartanburg	8,467,646	3.2%	618,753	3,680	4.2%	438,911	1,057,665
Winthrop	26,418,859	9.9%	1,930,496	5,238	5.9%	624,733	2,555,229
USC-Lancaster	6,523,799	2.4%	476,711	604	0.7%	72,039	548,750
USC-Salkehatchie	3,516,021	1.3%	256,925	429	0.5%	51,167	308,092
USC-Sumter	7,311,977	2.7%	534,305	701	0.8%	83,608	617,913
USC-Union	1,270,036	0.5%	92,805	185	0.2%	22,065	114,870
Aiken TC	8,672,705	3.2%	633,737	1,586	1.8%	189,161	822,899
Central Carolina TC	4,834,012	1.8%	353,234	1,734	2.0%	206,813	560,047
Denmark TC	4,633,871	1.7%	338,609	1,155	1.3%	137,756	476,365
Florence-Darlington TC	10,697,728	4.0%	781,711	2,758	3.1%	328,945	1,110,656
Greenville TC	5,450,450	2.0%	398,279	7,206	8.2%	859,455	1,257,734
Horry-Georgetown TC	12,333,447	4.6%	901,238	3,322	3.8%	396,213	1,297,450
Midlands TC	6,541,967	2.5%	478,039	6,621	7.5%	789,683	1,267,721
Northeastern TC	680,923	0.3%	49,757	722	0.8%	86,112	135,869
Orangeburg-Calhoun TC	3,040,646	1.1%	222,188	1,756	2.0%	209,437	431,625
Piedmont TC	6,409,602	2.4%	468,367	2,987	3.4%	356,258	824,624
Spartanburg TC	1,882,585	0.7%	137,565	2,739	3.1%	326,679	464,244
TC of the Low Country	2,921,051	1.1%	213,449	1,066	1.2%	127,141	340,590
Tri-County TC	6,682,700	2.5%	488,323	2,962	3.4%	353,276	841,598
Trident TC	6,189,029	2.3%	452,249	7,165	8.1%	854,565	1,306,814
Williamsburg TC	1,468,601	0.6%	107,315	363	0.4%	43,295	150,609
York TC	1,191,785	0.4%	87,087	2,544	2.9%	303,421	390,508
	<b>\$ 266,857,741</b>	<b>100.0%</b>	<b>\$ 19,500,000</b>	<b>88,036</b>	<b>100.0%</b>	<b>\$ 10,500,000</b>	<b>\$30,000,000</b>

\* These data are based on detailed information for each building and building system as reported by the respective institution.

**The Citadel – \$2,623,151**

1. Campus-wide Roof & Building Envelope Repairs \$1,285,000 –repairs

**Description**

The proposed project will include campus-wide roof repair/replacement work and corrective work to building envelopes to include exterior waterproofing and painting. The buildings to be included in the project are: Grimsley Hall, Capers Hall, Public Safety, Byrd Hall, Duckett Hall, Chapel, Bond Hall, and 201 & 202 Richardson Avenue.

2. Campus-wide Mechanical & Electrical Work \$953,151 –repairs

**Description**

The proposed project will included campus-wide mechanical and electrical systems repairs, renovations, and/or replacements. The buildings to be included in the project are: Jenkins Hall, Boiler Plant, Grimsley Hall, Duckett Hall, Capers Hall, South Campus Water Booster Pump, PPLT Shops, & Library.

3. Boating Center Repairs \$105,000 –repairs

**Description**

The proposed project will include repairs to the exterior decks and railings, renovation of mechanical and electrical systems and interior building repairs.

4. Deferred Maintenance – Miscellaneous \$150,000 –refinishing

**Description**

The proposed project will include interior deferred maintenance to include refinishing the pool deck at Deas Hall.

5. Parking and Street Improvements \$130,000 –improvements

**Description**

The proposed project will include parking and street paving improvements to include filling, grading, marking, and repaving campus streets. The project will include Alumni Field and Lockwood Field.

**Total Citadel – \$2,623,151**

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**Coastal Carolina – \$1,832,480**

1. Kearns Hall \$1,350,000 –renovation

**Description**

The proposed project will replace the interior gutter system with an exterior gutter system and will replace all windows in Kearns Hall. The building houses the School of Education and was constructed in 1973. There have been no exterior renovations to the facility since it was constructed, and the deterioration of both the gutter and window systems make this a priority project. The galvanized and copper gutter system is enclosed within eight-inch block and brick work. The design prevents repair work to the system.

The project will also replace the mechanical system in the building, which includes the replacement of all controls, air handlers, chillers, boilers, and variable air volume boxes. A new mechanical system is necessary to correct and maintain climate control for classroom and office space housed in the facility.

2. Student Center Deferred Maintenance \$482,480 –replacement

Description

The Student Center Building needs a roof and other various repairs such as the replacement of the chiller/HVAC system.

**Total Coastal – \$1,832,480**

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**College of Charleston – \$2,564,873**

1. Deferred Maintenance – HVAC Systems \$500,000 –replacement

Description

The proposed project is for HVAC repairs and replacement at two buildings: 207 Calhoun Street and the Sottile Theatre.

2. Deferred Maintenance – Roofs \$1,440,000 –replacements

Description

The proposed project is for roof repairs and replacements for six buildings on the campus. The buildings include the Grice Marine Laboratory and the J.C. Long Building.

3. Deferred Maintenance – Miscellaneous \$624,873

Description

The proposed project will allow specified repairs and replacements on several campus buildings. Most of the repairs are for the exteriors of the buildings and include windows and siding, porch replacements, and painting.

**Total College of Charleston – \$2,564,873**

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**Francis Marion – \$1,395,594**

1. Deferred Maintenance \$1,395,594 –replacements

Description

The proposed project includes deferred maintenance projects to replace two HVAC systems, roof repairs, and miscellaneous exterior and interior repairs.

The Smith University Center and Hyman Fine Arts Center will both have the HVAC replaced and controls upgraded. Roof repairs and replacements will be completed for Founders Hall, Smith University Center, and McNair Science Building.

The last part of the project will allow repairs and renovations to several campus structures. This includes exterior items and interior to include: floor covering, FFE, and asbestos/mold removal.

**Total Francis Marion – \$1,395,594**

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**Lander – \$994,521**

1. Re-roofing of Grier Student Center

\$994,521 –repairs

**Description**

The proposed project is to re-roof the 20,000 square foot Grier Student Center roof. The Grier Student Center roof, 27 years old and has surpassed the useful life of the roofing materials.

The Grier Student Center roof system has failed and water intrusion is severe. The re-roofing scope includes removing the entire roof system down to the metal deck. Once exposed, the deck deterioration will be inspected and a corrosion evaluation will be performed. The projected scope has contingencies to replace up to 20% of the existing deck. It is anticipated that the remaining deck can be salvaged through the application of varying degrees of corrosion control treatments. Asbestos abatement procedures, as well as the necessary permitting, will be employed to accomplish the asbestos abatement and disposal. A modified bitumen roof system will be installed over new rigid thermal insulation. Extensive work is necessary to reconstruct the capping for the parapet walls, additional overflow scuppers will be installed, the existing roof drains will be investigated for possible replacement. If necessary, additional roof drains will be installed to ensure adequate removal of surface water.

**Total Lander – \$994,521**

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**SC State – \$2,884,209**

1. Lowman Hall Renovation

\$2,884,209 –renovation

**Description**

The proposed project is to renovate Lowman Hall, and the scope of the project includes design development, environmental remediation, limited interior renovation, and exterior renovation.

Lowman Hall is currently off-line and in a state of deterioration. The facility is the oldest existing building in its original design on campus and is listed on the National Register for Historic places. SCSU desires to preserve the character and historic nature of this existing campus image. The building is a three-story masonry and timber structure built in 1917 and served as the Men's Dormitory until May 1993. This 24,000 square foot building will be renovated to house The President's Office, Board of Trustees, Finance and Management, and Academic Affairs. These offices will relocate from the Donma Administration Building. With Lowman Hall on-line, the Donma Administration Building, located at the main entrance to campus, will serve as the Student Services Complex and Welcome Center, offering a one-stop shop for registration and information.

**Total SC State – \$2,884,209**

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**USC-Aiken – \$548,498**

**1. Science Building Roof Repairs**

**\$438,000 –repairs**

**Description**

The proposed project is to repair and restore the standing steam metal roof on the Science Building. The roof is the original to the building, constructed in 1989. Work will include pressure washing, rust removal, repainting, and replacement of insulation and panels.

The project is required to preclude further deterioration of the roof and to ensure water tight integrity.

**2. Library Air Handler Replacement**

**\$110,498 –replacement**

**Description**

The proposed project is to replace 30 year old air handlers and ducts in the north end of the Library Building. Replacing the air handlers is required to improve system reliability, air exchange, and energy efficiency.

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**Total USC-Aiken – \$548,498**

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**USC-Beaufort – \$274,799**

**1. Campus Buildings Exterior Repairs**

**\$85,000 –replacements**

**Description**

The proposed project is for exterior repairs to two buildings on the USCB-Beaufort campus. The metal roof on the Art Building is planned for replacement. The replacement will comply with the historic district requirements. The project also includes the replacement of the surface of the front steps at the main entrance to the building. Old quarry tile has failed and is slippery when wet.

The roof of the Barnwell House is planned for replacement in accordance with historic district requirements. The new roof is planned to be standing steam metal. The project also includes the replacement of rotted wood on columns, rails, and porch.

**2. Marine Science Building Renovations**

**\$47,299 –renovations**

**Description**

The proposed project is for various repairs to the Marine Science Building. The work will include carpet replacement in the physics laboratory. The sea water system in the laboratory building needs to be upgraded to provide more quantity and quality of sea water for the instruction and research being done in the building. Since the building is on the edge of tidal waters, currently it is only possible to pump sea water at high tide. The upgrade will allow pumping of sea water for longer periods of time each day.

The exhaust/ventilation system in the anatomy and physiology laboratory is inadequate and does not provide sufficient fresh air to those doing work in the lab. The new system will provide tempered fresh air and will exhaust the undesirable fumes.

### 3. Performing Arts Center Renovations

\$142,500 –renovations

#### Description

The proposed project is for various repairs to the Performing Arts Center. The work will include refurbishment of house lights in the theatre. Many of the old fixtures no longer work and need new internal parts. The dimmer panel also needs to be serviced by a technical service company. For safety during performances, adequate house lights are needed to enter and exit the theatre.

The carpet needs to be replaced in classrooms 100 and 203 and the first and second floor corridors. The work also includes upgrading the irrigation system in the front lawn to maintain lawn and plantings. The existing system has failed and does not provide sufficient water to the lawn and plantings. The remaining worn out air handlers in the HVAC system need to be replaced. Several have already been replaced.

**Total USC-Beaufort – \$274,799**

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### USC-Upstate – \$1,057,665

#### 1. Campus Buildings Deferred Maintenance /Mechanical Upgrades

\$557,665 –upgrades/repairs

#### Description

The proposed project will correct several items of deferred maintenance related to mechanical systems in various buildings on campus. The chiller in the Nursing Building will be replaced as it is beyond its useful life and requires constant attention. Bypass valves need to be added to cooling towers 2 and 3 in the Central Chiller System in Hodge Center. The addition is needed to provide heating and cooling capability to most of the academic facilities on campus.

A reheat or other appropriate system will be added to the Humanities and Performing Arts Center. High humidity has caused major and expensive damage to the lighting, sound, and other controls, along with the curtains, seating, and the remainder of the theatre. The project will also replace two hoods in one of the laboratories located in Smith Building. The hoods are severely corroded and are rapidly becoming unsafe to use. The replacement of the antiquated huge electric hot water heater in Hodge Center is needed. The heater provides domestic hot water for the facility with a dual-fueled, energy-efficient hot water heater. The current hot water heater required constant maintenance, is a high energy user, and is well past its normal life span.

Changes will also be made in the air distribution system in room 265 to cure extreme noise issues that prevent and make it very difficult to conduct classes in the room. The room is a tiered computer classroom, and it is virtually impossible to hear what is being taught in the rear of the room due to excessive noise from the HVAC system.

#### 2. Humanities & Performing Arts Center Roof Replacement

\$500,000 –replacement

#### Description

The proposed project is to replace the roof on the Humanities and Performing Arts Center. The roof is a single ply roof that has developed several recurring leaks requiring constant repairs. The new roof will be a built-up roof with a longer life expectancy, if the structure will support a built-up roof. Failure to replace the roof will result in continuing repairs. Leaks into the classroom and

theatre areas are damaging the facility and expensive equipment and disrupting classes. If the roof is not replaced, the damage and disruption will continue.

**Total USC-Upstate – \$1,057,665**

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**Winthrop – \$2,555,229**

**1. Kinard Annex Roof Replacement**

**\$320,000 –replacement**

**Description**

The proposed project has two phases. Phase I consist of removing asbestos from the attic area and replacing the interior ceilings and finishes on the third floor immediately below the attic space. Phase II includes completely replacing the entire roof system including rebuilding the dormers and parapet gutter systems.

**2. Alumni Drive Stormwater & Infrastructure Improvements**

**\$400,000 –improvements**

**Description**

Alumni Drive has become a heavily used entrance way to the Winthrop campus and is a vital part of campus vehicular circulation. In 2003, alteration to the campus driving patterns began when former Water Street, now Alumni Drive, were connected into a campus loop forming the primary circuit around three sides of campus. Curb and gutter systems are needed for storm water drainage which will be a major installation. Proper water drainage systems do not exist along the street at present. At the same time as storm drainage systems are installed, existing utilities will be buried to meld this street visually into the fabric of the campus. Sidewalks and lighting are also needed as a student safety factor due to heavy pedestrian traffic both along Alumni Drive as well as across it to newer student housing and parking areas.

**3. Heating/Air Conditioning Infrastructure Repairs**

**\$585,229 –repairs**

**Description**

The proposed project will include repairs and/or replacing valves, actuators, deteriorated piping in our steam and chilled water systems. Repair of these devices will work in concert with the new web-based computerized Energy Performance System. The project will also include removal of asbestos insulation necessary to perform the repair and the subsequent reinstallation of the new work. Benefits from the infrastructure project will increase the institution's energy savings.

**4. Academic Computer Center Roof Replacement**

**\$50,000 –replacement**

**Description**

The proposed project will replace the roof on the Academic Computer Center. The roof has had chronic leaks which have created an indoor air quality issue. The building houses the primary computer center for student and is open for use 24 hours a day. The 66 year old roof of the structure is of asbestos. The project entails abating the existing roof system followed by installation of a new roof.

**5. Tillman Roof Replacement**

**\$1,200,000 –replacement**

Description

The proposed project is to replace the roof on the historic Tillman facility. The slate roof is original to the 1894 construction. The roof has leaks in numerous places and there is damage to the wood underlayment of the slate. Continued repairs can no longer solve the leak problems. The slate shingles and cooper tiles will be removed and saved. Then the damaged wood structure will be repaired, new underlayment, cooper flashing, and gutters will be installed. Finally, the original slate and copper will be reinstalled, adding new pieces where required as some have been lost over the years.

**Total Winthrop – \$2,555,229**

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**USC-Lancaster – \$548,750**

1. Hubbard Hall HVAC Renovation

\$548,750 –renovation

Description

Hubbard Hall was constructed in 1964, and no major modifications have been made to the HVAC system. The building contains student classrooms, computer labs, an auditorium, faculty offices, and administrative offices. The project will provide improved control of heating and air conditioning systems in Hubbard Hall. The system will also be modified to provide for the introduction of fresh air to the facility. An energy audit conducted by the State Energy Office in 2002 reported that the facility uses 100% re-circulated air and presents a serious health issue. Renovations will help provide a more healthy and safe environment for students, faculty, and staff using the facility on a daily basis.

**Total USC-Lancaster – \$548,750**

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**USC-Salkehatchie - \$308,092**

1. Allendale Campus Deferred Maintenance Repairs/Renovations \$258,000 –repairs

Description

The proposed project will correct several problems of deferred maintenance relating to mechanical systems in various buildings on the campus. Various renovations and upgrades will be made in the Central Classroom Building. The facility will be re-wired, the computer control rooms will be renovated, and other miscellaneous mechanical improvements will be made to the building. The Hut Complex will be renovated to perform site improvements. It is proposed to refinish the hardwood floors, replace or repair numerous rotted wood members, improve water drainage close to the door, and make some parking lot improvements.

Two HVAC units will be replaced in the Science/Administration Building. The units are not expected to last through the summer of 2005. The existing Computer Center in the Library/Computer Science Building will be upgraded in terms of functionality and modernizations. The center was designed in the early 1990's and does not fit current needs. The facility will receive new data wiring, as well as roof repairs.

The Student Center is planned for interior refurbishment. The carpet needs to be replaced and some new wall finishes. Prior to installing a new roof, substantial water damage was caused from leaks in the roof. The carpet was ruined with water spots and mold build-up.

2. Walterboro Extension Repairs

\$50,092 –repairs

Description

The proposed project is to replace all exterior doors and associated hardware on the facility. The existing doors now have to be chained to be locked and have lost most of their functionality. Also, since the doors have little, if any, insulating properties some cost savings are predicted by installation of new doors.

**Total USC-Salkehatchie – \$308,092**

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**USC-Sumter – \$617,913**

1. Schwartz/Nettles Roof Replacement

\$300,000 –replacement

Description

The proposed project is to replace the aging roofs with new foam roofs. The Schwartz and Nettles Buildings were constructed in 1985. During the past two years, more and more leaks have been experienced throughout the buildings. After 20 years of service, the roofs need to be replaced. It is planned to replace the roofing system with a sprayed polyurethane foam (PUF).

2. Campus Building Interior Repairs

\$27,913 –repairs

Description

The proposed project is for interior repairs to the buildings on the USC-Sumter campus. Interior painting will be completed in the Nettles Building gymnasium. This is required for routine maintenance. After 20 years, the facility is showing its age. Also, the carpet will be replaced in the Schwartz Building. The carpet is 20 years old and is very worn in every classroom. The project will replace the carpet in seven classrooms and one seminar/conference room.

3. Campus Building Exterior Repairs

\$48,000 –repairs

Description

The proposed project is for exterior repairs to five buildings on the USC-Sumter campus. The buildings have exterior brick facades. The scope of the work will include repairs to soffits and columns, including resealing, waterproofing, and painting. The project will also include resealing and re-caulking around the windows and doors. The project is required to keep the buildings in good repair and to prevent deterioration.

4. Schwartz/Nettles HVAC Controls Replacement

\$242,000 –replacement

Description

The proposed project is to replace aging pneumatic HVAC controls in the Schwartz and Nettles Buildings. The buildings were constructed in 1985. More and more problems are being experienced with temperature and humidity controls. The system is out of date and replacement parts are expensive, if they can be found at all. After 20 years of service, the controllers need to be replaced.

It is planned to remove all pneumatic and electronic controls and upgrades to Direct Digital Controls (DDC). Each building will have a Building Control Unit (BCU) and one workstation for monitoring. All actuators will also be replaced.

**Total USC-Sumter – \$617,913**

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**USC-Union – \$114,870**

**1. Main Building Parking Lot Repairs**

\$24,870 –repairs

**Description**

The proposed project is to make repairs to the parking lot at the Main Building. Work will include repairing holes, patching existing surfacing, resealing the entire lot and re-striping. The project is needed to improve the lot which is in poor repair and to prevent further deterioration.

**2. Campus Buildings Repairs**

\$90,000 –repairs

**Description**

The proposed project is for repairs to the two oldest buildings on the Union campus. Central Building was constructed in 1891 and the Main Building was constructed in 1909. The top priority is exterior repairs with work to include repair and painting of exterior wood trim including windows and columns. Repairs to gutters, and downspouts will also be included if it is determined that they are contributing to moisture problems affecting the exterior wood trim. The project is needed to protect the building envelope, to prevent further deterioration, and to maintain the buildings in good repair.

If funds remain after exterior repairs are completed, the balance will be used to replace carpet and paint selected areas in the buildings. The work is required to maintain the appearance on the interior of the buildings.

**Total USC-Union – \$114,870**

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**Aiken TC – \$822,899**

**1. Building 100/200 Renovations – Area 1**

\$420,682 –renovations

**Description**

The proposed project is to perform limited renovations to the 100/200 building. The project will include painting all walls, doors, frames, and gypsum board ceilings. The ceiling tile will be replaced, and the existing light fixtures will be re-lamped. The toilet room will receive repairs and be refitted. Existing VAV valves will be replaced. The storefront at all four entrances will be replaced, as well as the doors from the hallways to the entrance lobbies.

**2. Building 400 Renovations – Area 2**

\$235,565 –renovations

**Description**

The proposed project is to perform limited renovations to the 400 building. Approximately 50% of the roof will be replaced that has yet to be repaired or replaced. Welding labs 402 and 406A will be completely refurbished to bring the labs to current industry standards for training. The welding test lab and the metal fabrication lab will also be refurbished. The welding labs' men

and women locker rooms will be refurbished. All labs will be re-lamped to bring them up to current standards.

3. Buildings 300/500 Renovations – Area 3 \$166,652 –renovations

Description

The proposed project is to perform limited renovations to the buildings 300 and 500. Approximately 25 % of the Building 500 roof not yet repaired or replaced will be fixed. Electromechanical Lab 303 will be refurbished for general classroom use after removing and relocating the lab to Building 500, room 516.

The following rooms will be refurbished: Faculty Office 303C, Classroom Storage Room 303B, Classroom Storage Room 303E, Facility Office 516B, and Lab Storage Room 516C. The Electromechanical Classroom 304 will also be refurbished for general classroom use. Room 516 will be refurbished to accept student training stations transferred from room 303. Room 516 has a higher ceiling and is better suited for deploying existing training equipment. All of the rooms will be re-lamped to current classroom standards.

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**Total Aiken TC – \$822,899**

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**Central Carolina TC – \$560,047**

1. Campus-wide Deferred Maintenance \$560,047 –renovations/repairs

Description

The proposed project will include needed repairs and renovations to campus buildings 100, 200, 300, 300A, 400, 500, 600, 700, 800, & 900. Some of the proposed repairs and renovations include: fire alarm system upgrades, roof replacement for two buildings and repair work on all other buildings, HVAC renovations, external painting for all buildings, electrical work for all buildings, handicapped access, and upgrading and retrofitting existing interior spaces in all buildings.

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**Total Central Carolina - \$560,047**

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**Denmark TC – \$476,365**

1. Building Renovations \$476,365 –renovations

Description

The proposed project is to renovate buildings 100 and 200. The restrooms in building 100 need to be renovated to address ADA compliance standards, as well as to address safety issues within the facilities. Entrance doors to the restrooms must also be repaired for compliance. Lighting upgrades will be addressed in the gym area, the stage, canteen, and offices within Building 100. The gym and stage floors have not been replaced in 12 years. The type of floor in the gym has a life expectancy of 10 years. Two HVAC units in Building 100 are more than 26 years old and are not energy efficient and need to be replaced. The offices in Building 100 will be repainted, and the floor covering will be replaced. The sound system will be replaced in the gym, which would be a cost savings for the institution, in that a system is rented for special occasions such as graduation and certain student activities.

The bleachers in Building 100 are worn out and most times are very difficult to safely move in or out. The gym and all offices in Building 100 need cabling upgrades in order for the staff to use digital telephones. The current system will not permit a call to be answered from call waiting. The change will increase the efficiency of the Division of Student Services. The security system in Building 100 is currently providing coverage for the interior of the bookstore. The system needs to be expanded to cover the loading dock, as well as, the cashier's station and hallway doors with a camera that is mounted by Public Safety.

The Continuing Education Building (Bldg. 200) needs to change the out of door system that will meet ADA standards, renovate the entire area to provide for the addition of a restroom that meets ADA standards, and the HVAC unit needs to be changed. The unit is 20 years old and is currently under repair.

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**Total Denmark TC – \$476,365**

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**Florence-Darlington TC – \$1,110,656**

**1. HVAC & Mechanical Projects**

\$498,320 –repairs

**Description**

The Energy Management Building provides cooling and heating for the majority of the nine buildings on the main campus. The system was retrofitted in 1998, with the replacement of the Cooling Tower. Now due to age, wear and tear, and deterioration of the internal components, both the boiler and chiller need to be replaced. They are both in excess of 30 years. The boiler has been slated for replacement for three years. Several episodes during the winter have left the majority of the main campus buildings without heat. The chiller has also begun failing several times over the past few years, most recently during the steamy heat wave that forced the institution to close buildings in the late afternoon as the heat rose to over 90 degrees in offices and classrooms. Both the boiler and chiller are single unit systems without a backup.

Building 100's HVAC system, installed in the late 1960's, still has the old pipe HVAC water supply system, allowing either heating or cooling, but not without the lag time to switch over from one to the other. The piping is buried underground and has deteriorated to the extent that underground leakages are occurring more frequently. The old system is inefficient and ineffective. The institution has considered retrofitting some areas of the building with BARD units, but the interior layout of the building is not conducive to these types of units. The BARD units must be placed on the exterior walls. The building will require an updated four-pipe system with appropriate piping, equipment, and upgraded electrical power.

The institution evaluated replacing the two-pipe system in Building 200, constructed in 1968, but determined that individual units would alleviate the poor air flow/circulation problems. Building 300 has the same condition, but would also require additional electrical power for the units. Building 400 has the two-pipe and four-pipe HVAC systems. The building has air flow and circulation problems contributing to the current mold/mildew problems in the classrooms and main campus library. The 2-AHU in the library needs to be replaced.

## 2. Safety Projects

\$173,000 –replacements

### Description

The institution engaged a study by an independent lighting engineer and a local utility company to evaluate the inadequate lighting fixtures on the main campus. The campus currently has 93 cobra head lights, which 23 are double headed. These lights provide inadequate security for students and staff during evening classes. The engineer recommended replacing the cobra head fixtures with a “shoe box” type fixture. The cobra head fixtures are designed to shine vertically down and do not provide a candle foot pattern adequate to allow light dispersal. The “shoe box” fixture is a square fixture that is typical to stadium or parking lot lights. This type of light is designed with a candle foot pattern to allow proper light dispersal.

A recent fire drill revealed that the campus-wide fire alarm panel is no longer operating as designed. The system was originally installed in 1962. The fire marshal has noted deficiencies with the fire warning system. Several alarm system contractors were contacted, and a recommendation was made to replace the system. After several field inspections and review of the drawings, it was determined to upgrade the entire system, as the main control system parts are no longer available to repair the system. The institution has also been experiencing problems with the 40-plus year old wiring system. The wiring system must be brought up to ADA compliance.

## 3. Mold, Mildew, Remediation & Air Filterization

\$190,498 –repairs

### Description

The institution has currently begun experiencing problems with mold and mildew on some of the books in the main campus library. After inspection of the area, several mold/mildew abatement contractors and air quality experts were contacted to inspect the building. An Air Quality Test was performed by a state-approved vendor, and the results were poor. The mold/mildew problem will be resolved, and the painting and refurbishing of library books and materials will be completed. The HVAC and roof replacement projects should improve air flow and prevent further problems associated with mold and mildew in the facility.

The building which houses the Advanced Welding Center has experienced an extremely high cost for heating and cooling. The “per square foot” utility cost is very high for this facility. The HVAC in this portion of Building 200 exchanges exterior air when heating and cooling. Presently, the exhaust system is vented directly to the outside. The proposed air filtration system is a closed-loop system which filters internal air and does not have to heat and cool outside air.

## 4. Roof Project

\$248,838 –replacements

### Description

An independent study conducted in 2000 determined that the roof on Building 100 needs full replacement. The building, constructed in the mid-1960's, has the original flat roof. The institution is constantly patching leaks on the building. There are only four original roof drains on the 22,250 square foot building. The roof retains water, and the excess spills off the front of the building. Due to standing water, the roof has begun to sag near the building's center and is in need of replacement.

Building 400 was also recommended for replacement, as it too has its original flat roof. The building, constructed in the late 1970's, is circular in shape and presents unique problems when it comes to sealing the various seams near the outer flashing. Over the years, the roof has leaked and allowed water to penetrate the interior and has created a mold/mildew problem in the facility, which houses classroom space and the main campus library.

Building 5000, constructed in 1975, has exterior flashing, as well as, areas where the membrane is cracking which need to be repaired or replaced. There is 705 linear feet of flashing and 150 square feet of membrane.

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**Total Florence-Darlington – \$1,110,656**

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**Greenville TC – \$1,257,734**

1. Barton Campus Re-roofing \$217,000 –replacement

Description

The proposed project involves re-roofing three existing buildings. The existing roofs will be removed down to the existing roof decking and replaced with like materials. The roofs involved in the project have outlived their life expectancy and are experiencing multiple leaks throughout the facilities. Buildings affected/included in the project are: the Child Development Center, Industrial B, and Industrial C.

2. Barton Campus Misc. Deferred Building Repairs \$312,000 –repairs

Description

The proposed project involves a variety of deferred maintenance items considered to be non-specialized in nature. The maintenance backlog listing includes: worn out carpet and tile flooring, painting, antiquated restroom fixtures, doors in disrepair, lift station pumps/controls, and water fountain pumps and controls. The repairs involve multiple buildings on the Barton Campus including: Administration, Allied Health, Dental, Charter High, Criminal Justice, Student Center, Technical Resource Center, Industrial Buildings B and C. Routine repairs involving these items have been exhausted. In many cases, these repairs will involve materials and equipment 35-plus years old.

3. Barton Campus Elevators Upgrade \$153,000 –upgrades

Description

The proposed project involves upgrading old, worn-out elevator equipment to include cab upgrades. Elevator equipment involved is 30-plus years old and replacement parts have become obsolete. Elevators included in the project are located in the following buildings: Allied Health, University Transfer, and Student Center.

4. Barton Campus HVAC & Lighting Upgrades \$575,734 –upgrades

Description

The proposed project involves miscellaneous variable air volume units, motors, valves, pumps, and lighting system replacements/upgrades. Equipment affected by the project is 30-plus years

old and has outlived its life expectancy. Replacement parts in many cases have become obsolete. Buildings included in the project are: Industrial C and D, Criminal Justice, and Student Center.

**Total Greenville TC – \$1,257,734**

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**Horry-Georgetown TC – \$1,297,450**

1. Renovation of Building 100 – Conway Campus \$250,000 –renovations

Description

The proposed project includes painting, carpeting, renovation of bathrooms, and new furniture. The building is showing wear and tear due to age and heavy usage.

2. Renovation of Building 200 – Conway Campus \$275,000 –renovations

Description

The proposed project includes painting, carpeting, tiling, renovation of bathroom, and new furniture. The building is showing wear and tear due to age and heavy usage.

3. Renovation of Building 200 – Grand Strand Campus \$150,000 –renovations

Description

The proposed project includes painting, carpeting and tiling. The building is showing wear and tear due to age and heavy usage.

4. Renovation of Building 100 – Grand Strand Campus \$100,000 –renovations

Description

The proposed project includes painting and carpeting. The building is showing wear and tear due to age and heavy usage.

5. Renovation of Building 100 – Georgetown Campus \$100,000 –renovations

Description

The proposed project includes painting, carpeting, and renovation of the bathrooms. The building is showing wear and tear due to age and heavy usage.

6. Renovation of Building 700 –Conway Campus \$100,000 –renovations

Description

The proposed project includes painting, carpeting, ceiling tiles, renovation of bathrooms, and room 707 (mini-auditorium) is below grade. The building is showing wear and tear due to age and heavy usage.

7. Renovation of Building 500 – Conway Campus \$50,000 –renovations

Description

The proposed project includes painting and carpeting. The building is showing wear and tear due to age and heavy usage.

8: Renovation of Building 1100 – Conway Campus \$75,000 –renovations

Description

The proposed project includes painting and wallpaper. The building is showing wear and tear due to age and heavy usage.

9. Upgrade Exterior Lighting – Conway Campus \$100,000 –upgrades

Description

The proposed project is to upgrade all exterior lighting for the safety of students, faculty, and guests.

**Total Horry-Georgetown – \$1,297,450**

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**Midlands TC – \$1,267,721**

1. Wade Martin Building RR Renovations/Repairs \$300,000 –renovations

Description

The proposed project is the complete renovation/repair of restrooms on all four floors of Wade Martin Building. The partitions and fixtures in these restrooms are over 10 years old and have exceeded their useful life. The finishes in the restrooms are over 30 years old and are in need of refurbishing. The project will completely replace all fixtures, finishes, and exhaust systems in the restrooms.

2. LET Building HVAC replacement \$600,000 –replacement

Description

The proposed project is to replace/repair the existing HVAC system in the LET Building on the Beltline campus. The project will include complete replacement of existing fan coil units associated with valves, piping, etc. in the LET Building. The project will also include the necessary upgrades of panels, valves, and appurtenances required. The current mechanical system/units are well over 15 years old and are beyond economic repair. The new system will provide a more efficient control system for the building.

3. Academic Center HVAC Controls Upgrade \$80,000 –replacement

Description

The proposed project is to replace the existing HVAC control system in the Academic Center on the Airport campus. The project will include complete replacement of the existing Tracer HVAC control system and associated valves, panels, and appurtenances required. The current system is over 16 years old, and the technology is well outdated. The new system will provide more efficient control system for the building.

4. Flooring Replacement College-wide

\$87,721 –replacements

Description

The proposed project will replace the floor covering at the Airport and Beltline campuses. The project includes the removal of existing floor coverings in the LET, WM Hall, Congaree Hall, and Granby Hall buildings corridors at the Airport and Beltline campuses. The project will also include the removal of existing stairwell tread coverings in the LET and WM Hall buildings. New floor coverings will be installed in the corridors and stairwells. The existing floor coverings in all the buildings are at least 8-10 years old and are beyond economic repair.

5. Ceiling Systems Replacement

\$200,000 –replacement

Description

The proposed project will replace the ceiling systems at the Beltline campus. The project includes the demolition of existing ceiling systems in the LET, WM, Library, and Richland Hall buildings at the Beltline campus. New ceiling systems will be installed to include seismic upgrades for new grid systems and associated lighting. The existing ceiling systems in all four buildings are at least 15 years old and are beyond economic repair.

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**Total Midlands TC– \$1,267,721**

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Northeastern TC– \$135,869

1. Ingram Hall – Bathroom Renovation

\$135,869 –renovation

Description

The bathrooms in Ingram Hall have not been renovated since the institution was built. Renovations are necessary.

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**Total Northeastern TC – \$135,869**

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Orangeburg-Calhoun TC – \$431,625

1. Roof Project

\$326,000 –replacement

Description

The proposed project is to replace the roofs on three classroom/training buildings. The three buildings are each approximately 25 years old. When they were constructed, they were built with flat roofs and used for industrial training. Today, they are all in use as either classrooms or training facilities. The roofs are all leaking and are in need of repair. The leaks are increasing and while the institution is able to perform most of the repairs itself, it is becoming obvious that the reasonable solution is to replace the roofs.

2. HVAC Renovation

\$105,625 –replacements

Description

The proposed project consists of two different HVAC renovations. In the Health Sciences classroom building, the control valves and actuator need to be replaced in each HVAC unit. The second part of the project is to replace the fan coil units in the Williams Administration Building. There are 28 units in the building. As many units will be replaced as funding will allow.

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**Total Orangeburg-Calhoun – \$431,625**

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**Piedmont TC – \$824,624**

1. Deferred Maintenance – Campus-wide

\$824,624 –repairs

**Description**

The proposed project will include HVAC, electrical, lighting, life and safety equipment, and general maintenance items such as carpet, painting, and storefront doors/hardware retrofits. The buildings to be included are: D, E, F, G, H, and M.

**Total Piedmont TC – \$824,624**

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**Spartanburg TC – \$464,244**

1. West Building HVAC renovation

\$464,244 –renovation

**Description**

The West Building is presently a two-pipe “dual temperature” HVAC system utilizing unit ventilators. The proposed project will upgrade the 30-plus year old system to a four-pipe variable air unit (VAV) system. The project will increase the efficiency of the building’s HVAC and improve the comfort levels for students, faculty, and staff.

The first phase is to modify the existing mechanical room. The second phase involves replacing unit ventilators with VAV system beginning in the D-wing and progressing to remaining C, B, and A wings of the building, in separate stages as future funding becomes available.

**Total Spartanburg-TC – \$464,244**

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**TC of the Lowcountry – \$340,590**

1. Building 12 HVAC Replacement

\$114,590 –replacements

**Description**

The proposed project consists of replacement of a 90-ton and 12.5-ton HVAC units on Building 12. The units were installed in 1987 and are requiring constant repairs to keep operational. The base metal has rusted and deteriorated to the point that leaks are beginning through the area of the units. With the replacements, the institution will make improvements to the Energy Management System for the building.

2. Building 12 Renovation

\$226,000 –renovation

**Description**

The proposed project consists of carpet and tile replacement, minor repairs to walls, floors and ceilings, refurbishing of permanent seating, and painting of the interior of the building. The building, constructed in 1987, houses the library, student canteen, auditorium, classrooms, and offices. The building is also used extensively for public functions, as well as serving student needs.

**Total TC of the Lowcountry – \$340,590**

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**Tri-County TC – \$841,598**

1. Deferred Maintenance

\$841,598 –repairs

Description

The proposed project will replace the roofs on Oconee Hall, the Hicks Library, and the Administration building. Interior renovations will be completed to Halbert Hall to meet the Veterinary Technology program needs. Interior renovations will also be completed to the Hicks Library and the Administration building. Reconfiguration of the space to meet college needs will also be included. Other interior renovations will be completed to meet program needs.

**Total Tri-County – \$841,598**

**Trident TC – \$1,306,814**

1. Replace Roof – Berkeley Campus

\$770,000 –replacement

Description

The roof on the Berkeley campus is 25 years old and is at the end of its useful life. The roof has been patched and repaired many times, but it needs to be replaced. The proposed project will replace the roof in its entirety. The total area of the roof is 75,242 square feet. In addition, the campus has a large amount of covered walkways connecting the various wings of the building. The overhead soffits of these walkways have deteriorated due to moisture and are falling down. The project will replace the roof and the building soffits.

2. Replace Boilers Buildings 100, 300 & 500

\$536,814 –replacement

Description

The proposed project will replace boilers in buildings 100, 300, and 500. The boilers are used for heating the buildings and generating hot water used in the laboratories and restrooms.

**Total Trident TC – \$1,306,814**

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**Williamsburg TC – \$150,609**

1. Roof Replacement

\$150,609 –replacement

Description

The roof on the Meriwether building is 20-plus years old, and the roof has been patched several times in attempts to make do until the funds were available to replace the roof. The water has caused interior damage to the building. After the roof repair is complete, the interior areas such as walls, ceiling tiles, and flooring will need to be replaced in some areas.

**Total Williamsburg TC – \$150,609**

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**York TC - \$390,508**

1. Standing Seam Metal Roof Construction Bldg. B ~~-----~~ \$260,000 =replacement

**Description**

The York Technical College Commission has created a policy that states the institution will no longer build any more flat roof systems and that any current flat roof system which needs to be replaced will have a sloped roof system, if feasible. The replaced roof systems preferably should be standing seam metal. The roof of the building was installed in 1985 and is approaching the end of its useful life. The building is the next building to be re-roofed. The institution wants to replace the roof just prior to leakage occurring. There is visible deterioration which is occurring that will soon result in leaking.

2. Hood Center Renovation

\$130,508 -renovation

**Description**

The proposed project is an interior renovation of the selected areas of the Baxter M. Hood Center. The renovation will include painting, replacing carpet, and vinyl base. The ceiling tile will also be replaced, and the VWC will be removed and replaced. The project will also include seminar table face carpeting, installing sound abatement panels in the conference room, cleaning floor tile in the restrooms, installing porcelain tile in the serving areas and installing rubber stair treads in the seminar and theatre.

**Total York TC - \$390,508**

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