

SC Commission on Higher Education

Maintenance Needs Review

Presentation for

**Senate Finance Committee Higher Education Special Study Committee
A Review of Institutional Planning Management, and Funding of Facility
Maintenance Needs by Public Institutions of Higher Learning**

December 11, 2012

Introduction

- What are *Maintenance Needs*?
- What is *Deferred Maintenance*?
- Review of CHE's Assessment of Maintenance Needs of South Carolina Public Institutions

Definitions

- **Deferred Maintenance** is a term that is sometimes used as a catch-all phrase to refer to all maintenance needs, but only represents a portion of the total need
- There is no single definition of “Deferred Maintenance”
- However, there is a general understanding and consensus among Institutions and CHE as to what is meant by maintenance needs
- Maintenance Needs are comprised of two parts:
 - Maintenance and Repairs
 - Deferred Maintenance

Maintenance & Repairs

- **Maintenance and repairs are activities directed toward keeping facilities in an acceptable condition**

Activities include:

- **Preventative maintenance**
- **Replacement of parts, systems, or components (renewal)**
- **Other activities needed to preserve or maintain the asset**

Deferred Maintenance

- Deferred maintenance and repairs include the part of facilities maintenance activities that are:
 - Postponed to align institutional priorities or plans
 - Postponed to achieve maximum benefit/savings through a more comprehensive project
 - Postponed due to a lack of available funding that can be used toward such needs

Review of CHE's Assessment of Maintenance Needs of South Carolina Public Institutions

- CHE collects institutional data and assessments of the condition of Educational and General (E&G) Buildings and Infrastructure
- Data is used to produce a **Summary of E&G Building and Infrastructure Maintenance Needs**

What are E&G Buildings?

For purposes of the CHE survey, buildings/facilities maintained by the institution that consist of 25% or more space dedicated to educational and general activities and that are more than 3,000 gross square feet (GSF)

Summary of Education and General (E&G) Building and Infrastructure Maintenance Needs
 Information Report as of 11/28/2012

Summary of E&G Building Maintenance Needs ¹ (Updated as of 2011 Survey)					Summary of E&G Infrastructure Maintenance Needs ² (Updated as of 2012 Survey)				Combined Summary (E&G Building & Infrastructure Maintenance Needs)			
Institution	Amount to Address E&G Maintenance Needs	Amount Per Year to Address E&G Maintenance Needs Over 20 Years	Amount Per Year to Maintain E&G Buildings at APPA Avg 3% ³	Total Needed Per Year to Address E&G Building Maintenance Needs	Amount to Address E&G Maintenance Needs	Amount Per Year to Address E&G Maintenance Needs Over 20 Years	Amount Per Year to Maintain E&G Infrastructure at APPA Avg 3% ³	Total Needed Per Year to Address E&G Infrastructure Maintenance Needs	Total Amount to Address E&G Maintenance Needs	Amount Per Year to Address E&G Maintenance Needs Over 20 Years	Amount Per Year to Maintain E&G Buildings & Infrastructure at APPA Avg 3% ³	Total Needed Per Year to Address E&G Maintenance Needs
Col:	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
		Col 1 / 20 yrs	[3]	Col 2 + Col 3		Col 5 / 20 yrs	[7]	Col 6 + Col 7	Col 1 + Col 5	Col 9 / 20 yrs	[11]	Col 10 + Col 11
Clemson	\$154,972,925	\$7,748,646	\$23,240,025	\$30,988,671	\$79,576,211	\$3,978,811	\$6,874,964	\$10,853,775	\$234,549,136	\$11,727,457	\$30,114,989	\$41,842,446
USC Columbia [†]	\$302,805,703	\$15,140,285	\$31,164,674	\$46,304,959	\$127,625,106	\$6,381,255	\$11,932,214	\$18,313,469	\$430,430,809	\$21,521,540	\$43,096,888	\$64,618,429
MUSC	\$103,484,724	\$5,174,236	\$23,084,339	\$28,258,575	\$813,506	\$40,675	\$465,265	\$505,940	\$104,298,231	\$5,214,912	\$23,549,604	\$28,764,515
Citadel	\$12,277,665	\$613,883	\$5,036,293	\$5,650,177	\$1,959,848	\$97,992	\$593,031	\$691,023	\$14,237,513	\$711,876	\$5,629,324	\$6,341,200
Coastal Carolina	\$60,333,188	\$3,016,659	\$6,004,437	\$9,021,097	\$2,504,843	\$125,242	\$526,293	\$651,536	\$62,838,031	\$3,141,902	\$6,530,731	\$9,672,632
College of Charleston	\$82,409,428	\$4,120,471	\$12,772,010	\$16,892,481	\$12,876,011	\$643,801	\$960,660	\$1,604,460	\$95,285,439	\$4,764,272	\$13,732,669	\$18,496,941
Francis Marion	\$9,221,503	\$461,075	\$5,180,699	\$5,641,774	\$6,422,597	\$321,130	\$859,630	\$1,180,760	\$15,644,100	\$782,205	\$6,040,328	\$6,822,533
Lander	\$6,111,854	\$305,593	\$2,888,655	\$3,194,248	\$1,424,722	\$71,236	\$392,622	\$463,858	\$7,536,576	\$376,829	\$3,281,277	\$3,658,106
SC State	\$54,379,934	\$2,718,997	\$6,112,126	\$8,831,123	\$9,307,645	\$465,382	\$755,880	\$1,221,262	\$63,687,579	\$3,184,379	\$6,868,006	\$10,052,385
USC Aiken	\$2,797,682	\$139,884	\$3,499,508	\$3,639,393	\$5,141,601	\$257,080	\$621,129	\$878,209	\$7,939,283	\$396,964	\$4,120,637	\$4,517,601
USC Beaufort	\$2,292,329	\$114,616	\$1,371,319	\$1,485,935	\$793,658	\$39,683	\$350,911	\$390,594	\$3,085,987	\$154,299	\$1,722,230	\$1,876,529
USC Upstate	\$11,171,434	\$558,572	\$3,666,787	\$4,225,358	\$1,296,624	\$64,831	\$1,166,688	\$1,231,520	\$12,468,058	\$623,403	\$4,833,475	\$5,456,878
Winthrop	\$37,288,506	\$1,864,425	\$10,018,594	\$11,883,019	\$5,685,534	\$284,277	\$1,115,449	\$1,399,726	\$42,974,040	\$2,148,702	\$11,134,043	\$13,282,745
USC Lancaster	\$13,815,071	\$690,754	\$1,427,005	\$2,117,759	\$6,027,637	\$301,382	\$421,071	\$722,453	\$19,842,708	\$992,135	\$1,848,076	\$2,840,212
USC Salkehatchie	\$6,093,063	\$304,653	\$560,738	\$865,391	\$914,309	\$45,715	\$205,388	\$251,104	\$7,007,372	\$350,369	\$766,126	\$1,116,495
USC Sumter	\$7,212,278	\$360,614	\$1,157,045	\$1,517,659	\$1,325,783	\$66,289	\$234,125	\$300,414	\$8,538,060	\$426,903	\$1,391,170	\$1,818,073
USC Union	\$599,391	\$29,970	\$236,536	\$266,505	\$531,863	\$26,593	\$43,355	\$69,948	\$1,131,253	\$56,563	\$279,891	\$336,454
Aiken TC	\$4,922,386	\$246,119	\$1,163,872	\$1,409,991	\$282,229	\$14,111	\$162,703	\$176,815	\$5,204,614	\$260,231	\$1,326,575	\$1,586,806
Central Carolina TC	\$1,170,053	\$58,503	\$1,718,967	\$1,777,469	\$12,148	\$607	\$127,392	\$127,999	\$1,182,200	\$59,110	\$1,846,358	\$1,905,469
Denmark TC	\$3,658,030	\$182,902	\$754,750	\$937,652	\$638,863	\$31,943	\$21,633	\$53,576	\$4,296,893	\$214,845	\$776,383	\$991,228
Florence-Darlington TC	\$17,662,208	\$883,110	\$3,433,150	\$4,316,261	\$1,852,323	\$92,616	\$140,061	\$232,677	\$19,514,531	\$975,727	\$3,573,211	\$4,548,938
Greenville TC	\$23,422,735	\$1,171,137	\$6,028,406	\$7,199,543	\$7,484,976	\$374,249	\$678,096	\$1,052,345	\$30,907,711	\$1,545,386	\$6,706,502	\$8,251,888
Horry-Georgetown TC	\$20,071,479	\$1,003,574	\$2,604,747	\$3,608,321	\$2,075,317	\$103,766	\$422,661	\$526,427	\$22,146,796	\$1,107,340	\$3,027,408	\$4,134,748
Midlands TC	\$2,146,435	\$107,322	\$3,361,412	\$3,468,734	\$11,000	\$550	\$473,807	\$474,357	\$2,157,435	\$107,872	\$3,835,219	\$3,943,091
Northeastern TC	\$0	\$0	\$714,329	\$714,329	\$12,921	\$646	\$5,995	\$6,641	\$12,921	\$646	\$720,323	\$720,969
Orangeburg-Calhoun TC	\$1,215,325	\$60,766	\$1,185,829	\$1,246,596	\$431,570	\$21,579	\$238,264	\$259,843	\$1,646,895	\$82,345	\$1,424,094	\$1,506,438
Piedmont TC	\$5,589,238	\$279,462	\$2,532,494	\$2,811,955	\$1,171,338	\$58,567	\$306,690	\$365,256	\$6,760,576	\$338,029	\$2,839,183	\$3,177,212
Spartanburg CC	\$9,838,567	\$491,928	\$2,830,728	\$3,322,656	\$854,157	\$42,708	\$72,642	\$115,350	\$10,692,724	\$534,636	\$2,903,370	\$3,438,006
TC of the Lowcountry	\$852,156	\$42,608	\$1,119,229	\$1,161,837	\$1,271,577	\$63,579	\$165,459	\$229,037	\$2,123,733	\$106,187	\$1,284,688	\$1,390,874
Tri-County TC	\$10,905,710	\$545,285	\$2,168,197	\$2,713,483	\$4,829,437	\$241,472	\$555,090	\$796,562	\$15,735,147	\$786,757	\$2,723,288	\$3,510,045
Trident TC	\$7,757,336	\$387,867	\$4,303,739	\$4,691,606	\$7,227,162	\$361,358	\$719,311	\$1,080,669	\$14,984,498	\$749,225	\$5,023,050	\$5,772,275
Williamsburg TC	\$1,874,820	\$93,741	\$259,200	\$352,941	\$280,764	\$14,038	\$51,349	\$65,387	\$2,155,583	\$107,779	\$310,548	\$418,327
York TC	\$622,273	\$31,114	\$2,259,237	\$2,290,351	\$1,705,261	\$85,263	\$191,757	\$277,020	\$2,327,534	\$116,377	\$2,450,994	\$2,567,371
TOTAL	\$978,975,429	\$48,948,771	\$173,859,078	\$222,807,849	\$294,368,538	\$14,718,427	\$31,851,583	\$46,570,009	\$1,273,343,967	\$63,667,198	\$205,710,660	\$269,377,858

¹2011 Building Condition Survey Update and Fall 2011 Building Data Summary were used to compile this report. Only facilities institutions maintain with 25% or more of space dedicated for Education & General (E&G) activities and more than 3,000 GSF are included.

²2012 Infrastructure Maintenance Needs Update was used to compile this report. E&G Infrastructure only and includes portion of E&G area the institution maintains. E&G Infrastructure portion is determined by the percent of E&G space or the actual amount of space as determined by the unit of measurement.

³E&G portion of replacement cost multiplied by 3% APPA (Association of Physical Plant Administrators) standard.

[†]Includes USC's School of Medicine - Columbia Campus.

Building Condition Survey

- Each fall, facilities data are collected from institutions
1,623 total buildings across 33 campuses in fall 2011
813 of these were E&G facilities
- Every three years, building condition surveys are conducted by Institutions and collected at CHE:
 - Institutions assess each of their buildings
 - Each building evaluated across 13 systems and 2 standards
Systems: 1) Foundation, 2) Exterior Walls, 3) Floor, 4) Roof,
5) Interior Walls, 6) Windows, 7) Doors, 8) Ceiling, 9) Heating,
10) Cooling, 11) Plumbing, 12) Electrical, and 13) Elevators
Standards: Safety and Design
 - Institutions may report interim updates as projects are completed

Assessing the Building Condition

Institutions rate each of the 13 Systems and 2 Standards on a 5-point scale where 1 is best condition and 5 is worst

Example of 1 System

Heating System 1 - 2 - 3 - 4 - 5	Rating
Heating Capacity	3
Temperature Control	3
Noise Level	2
Air Circulation & Vent	2
Reliability	2
Reasonable Energy Consumption	4
Filtration	2
Humidity	3
Average	2.625
Age of System:	varies
Heating Capacity-BTUs:	

Ratings of individual systems are aggregated and combined with multipliers to produce the overall building condition code:

Heating System 1 - 2 - 3 - 4 - 5	Rating
Heating Capacity	3
Temperature Control	3
Noise Level	2
Air Circulation & Vent	2
Reliability	2
Reasonable Energy Consumption	4
Filtration	2
Humidity	3
Average	2.625
Age of System:	varies
Heating Capacity-BTUs:	

Systems:	Average System Rating	Condition Code Multiplier (1=100%)	X	System % of Building	=	Current Value of System (1=100%)
Foundation	2.000	0.800	x	13%	=	0.1040
Exterior Walls	2.625	0.613	x	13%	=	0.0796
Floor	1.833	0.833	x	7%	=	0.0583
Roof	2.500	0.650	x	7%	=	0.0455
Interior Walls	2.500	0.650	x	3%	=	0.0195
Windows	3.400	0.380	x	2%	=	0.0076
Doors	2.000	0.800	x	1%	=	0.0080
Ceiling	2.500	0.650	x	3%	=	0.0195
Heating	2.625	0.613	x	10%	=	0.0613
Cooling	2.500	0.650	x	10%	=	0.0650
Plumbing	3.222	0.433	x	8%	=	0.0347
Electrical	2.375	0.688	x	8%	=	0.0550
Elevators	3.667	0.300	x	1%	=	0.0030
Standards					=	
Safety	1.333	0.933	x	5%	=	0.0467
Design	4.000	0.200	x	9%	=	0.0180
				100%		

Sum Total Building Condition Rating: 0.6260

Building Condition Code = Rating*100 and rounded to nearest whole number **63**

Rating Scale and Multiplier:

Average Rating (Grade)	1	2	3	4	5
Condition Code Category	Satisfactory	Remodel A	Remodel B	Remodel C	Replace
Condition Multiplier Value	1.0	0.80	0.50	0.20	0.00

Calculating the Maintenance Needs

Building Number 112, College of Nursing

Gross Area	55,276 sq. ft.	Building Condition Code	63
Total E&G Area	53,758 sq. ft.		
% of Building that is E&G	97%	Replacement Cost Value†	\$14,142,906

†Value is the Insurance Reserve Fund (IRF) Replacement Cost

1) Amount to Bring E&G Space to Original Condition = \$5,075,889

Calculation= (Replacement Cost Value * % E&G) * ((100 - Building Cond Code) * 0.01)

Resulting Value is the amount to bring the building back to 100%

2) Acceptable Maintenance Level at APPA Standard Condition Code of 90 = \$1,371,872

Calculation= (Replacement Cost Value * % E&G) * 10%

Resulting Value is the amount of acceptable maintenance needs

3) Total Amount Needed to Address E&G Maintenance Needs = \$3,704,027 (Summary Sheet Col 1)

Calculation = If Building Cond Code < 90%, Value from Line 1 (\$5,075,889) minus Value from Line 2 (1,371,872)

Resulting Value is the amount needed to address renewal in order to bring building back to APPA Standard of 90

4) Amount Per Year to Eliminate E&G Maintenance Needs Over 20 Years = \$185,201 (Summary Sheet Col 2)

Calculation= Value from Line 3 (\$3,704,027) divided by 20

Resulting Value is amount per year needed to address renewal spread over 20 years

5) Annual Amount Required to Maintain E&G Space -- APPA Average 3% = \$411,559 (Summary Sheet Col 3)

Calculation= (Replacement Cost Value * % E&G) * 3%

Value is maintenance needs amount to maintain campus buildings/systems at current level

6) Total Need Per Year to Address E&G Maintenance Needs = \$596,760 (Summary Sheet Col 4)

Calculation= Value from Line 4 (\$185,201) plus Value from Line 5 (\$411,559)

Value is total maintenance needs to maintain systems and address renewal

Individual Building Data Aggregated
to provide a Summary by Institution
of E&G Building Maintenance Needs



Summary of E&G Building Maintenance Needs ¹ (Updated as of 2011 Survey)				
Institution	Amount to Address E&G Maintenance Needs	Amount Per Year to Address E&G Maintenance Needs Over 20 Years	Amount Per Year to Maintain E&G Buildings at APPA Avg 3% ³	Total Needed Per Year to Address E&G Building Maintenance Needs
Col:	[1]	[2]	[3]	[4]
		Col 1 / 20 yrs		Col 2 + Col 3
Clemson	\$154,972,925	\$7,748,646	\$23,240,025	\$30,988,671
USC Columbia*	\$302,805,703	\$15,140,285	\$31,164,674	\$46,304,959
MUSC	\$103,484,724	\$5,174,236	\$23,084,339	\$28,258,575
Citadel	\$12,277,665	\$613,883	\$5,036,293	\$5,650,177
Coastal Carolina	\$60,333,188	\$3,016,659	\$6,004,437	\$9,021,097
College of Charleston	\$82,409,428	\$4,120,471	\$12,772,010	\$16,892,481
Francis Marion	\$9,221,503	\$461,075	\$5,180,699	\$5,641,774
Lander	\$6,111,854	\$305,593	\$2,888,655	\$3,194,248
SC State	\$54,379,934	\$2,718,997	\$6,112,126	\$8,831,123
USC Aiken	\$2,797,682	\$139,884	\$3,499,508	\$3,639,393
USC Beaufort	\$2,292,329	\$114,616	\$1,371,319	\$1,485,935
USC Upstate	\$11,171,434	\$558,572	\$3,666,787	\$4,225,358
Winthrop	\$37,288,506	\$1,864,425	\$10,018,594	\$11,883,019
USC Lancaster	\$13,815,071	\$690,754	\$1,427,005	\$2,117,759
USC Salkehatchie	\$6,093,063	\$304,653	\$560,738	\$865,391
USC Sumter	\$7,212,278	\$360,614	\$1,157,045	\$1,517,659
USC Union	\$599,391	\$29,970	\$236,536	\$266,505
Aiken TC	\$4,922,386	\$246,119	\$1,163,872	\$1,409,991
Central Carolina TC	\$1,170,053	\$58,503	\$1,718,967	\$1,777,469
Denmark TC	\$3,658,030	\$182,902	\$754,750	\$937,652
Florence-Darlington TC	\$17,662,208	\$883,110	\$3,433,150	\$4,316,261
Greenville TC	\$23,422,735	\$1,171,137	\$6,028,406	\$7,199,543
Horry-Georgetown TC	\$20,071,479	\$1,003,574	\$2,604,747	\$3,608,321
Midlands TC	\$2,146,435	\$107,322	\$3,361,412	\$3,468,734
Northeastern TC	\$0	\$0	\$714,329	\$714,329
Orangeburg-Calhoun TC	\$1,215,325	\$60,766	\$1,185,829	\$1,246,596
Piedmont TC	\$5,589,238	\$279,462	\$2,532,494	\$2,811,955
Spartanburg CC	\$9,838,567	\$491,928	\$2,830,728	\$3,322,656
TC of the Lowcountry	\$852,156	\$42,608	\$1,119,229	\$1,161,837
Tri-County TC	\$10,905,710	\$545,285	\$2,168,197	\$2,713,483
Trident TC	\$7,757,336	\$387,867	\$4,303,739	\$4,691,606
Williamsburg TC	\$1,874,820	\$93,741	\$259,200	\$352,941
York TC	\$622,273	\$31,114	\$2,259,237	\$2,290,351
TOTAL	\$978,975,429	\$48,948,771	\$173,859,078	\$222,807,849

*Includes USC's School of Medicine - Columbia Campus.

Assessing Infrastructure Condition

- Every three years, E&G Infrastructure Maintenance Needs are assessed by institutions and collected at CHE
- Infrastructure items, Quantity, Unit Cost, and Condition Codes are determined by the institution

Sample of Institutional Assessment of E&G Infrastructure Condition

Infrastructure Description	Unit of Measurement	Quantity (Q)	Unit Cost (U)	Replacement Value Q*UC	Infrastructure Condition Code
Paved Roads	SQYDS	115,308	\$45	\$5,188,860	90
Unpaved Roads	SQYDS	7,273	\$13	\$93,967	80
Sidewalks - Concrete	SQFT	442,407	\$6	\$2,654,442	95
Sidewalks - Brick	SQFT	14,551	\$16	\$229,178	90
Exterior Site Walls	SQFT	1,050	\$89	\$93,450	85
Street & Walkway Lighting	Each Pole	318	\$1,657	\$526,926	70
Sports Field Lighting	Each Pole	52	\$36,100	\$1,877,200	90
Campus Fire Protection	LF	7,551	\$98	\$739,998	70
Irrigation	#Heads	730	\$168	\$122,640	95
Water Features	Each	7	\$170,143	\$1,191,001	80
Steam Lines	Linear FT	7,360	\$536	\$3,944,960	50
Chilled Water Lines	Linear FT	18,383	\$238	\$4,375,154	75
Electrical u/g	Linear FT	44,939	\$89	\$3,999,571	80
High Voltage Distribution	Linear FT	18,725	\$239	\$4,475,275	70
Domestic Water	Linear FT	19,376	\$60	\$1,162,560	90
Fire Protection Water Towers	Each	1	\$470,120	\$470,120	95
Stormwater lines	Linear FT	28,356	\$136	\$3,856,416	50
Sewer lines	Linear FT	25,149	\$62	\$1,559,238	80
Data/telephone	Linear FT	76,940	\$1	\$84,634	97
Cable TV	Linear FT	7,353	\$15	\$106,619	90
Utility Tunnels	Linear FT	40	\$850	\$34,000	95
Parking Lot Lighting	Each Pole	48	\$5,935	\$284,880	65
Signage - Traffic	Lump Sum	556	\$50	\$27,800	95
Signage - Wayfinding	Lump Sum	169	\$200	\$33,800	95
Emergency phones	Each	40	\$650	\$26,000	90
Ext. Security Cameras	Each	27	\$850	\$22,950	95

Individual Building Data Aggregated to provide a Summary by Institution of E&G Infrastructure Maintenance Needs



Summary of E&G Infrastructure Maintenance Needs ² (Updated as of 2012 Survey)				
Institution	Amount to Address E&G Maintenance Needs	Amount Per Year to Address E&G Maintenance Needs Over 20 Years	Amount Per Year to Maintain E&G Infrastructure at APPA Avg 3% ³	Total Needed Per Year to Address E&G Infrastructure Maintenance Needs
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USC Columbia†	\$127,625,106	\$6,381,255	\$11,932,214	\$18,313,469
MUSC	\$813,506	\$40,675	\$465,265	\$505,940
Citadel	\$1,959,848	\$97,992	\$593,031	\$691,023
Coastal Carolina	\$2,504,843	\$125,242	\$526,293	\$651,536
College of Charleston	\$12,876,011	\$643,801	\$960,660	\$1,604,460
Francis Marion	\$6,422,597	\$321,130	\$859,630	\$1,180,760
Lander	\$1,424,722	\$71,236	\$392,622	\$463,858
SC State	\$9,307,645	\$465,382	\$755,880	\$1,221,262
USC Aiken	\$5,141,601	\$257,080	\$621,129	\$878,209
USC Beaufort	\$793,658	\$39,683	\$350,911	\$390,594
USC Upstate	\$1,296,624	\$64,831	\$1,166,688	\$1,231,520
Winthrop	\$5,685,534	\$284,277	\$1,115,449	\$1,399,726
USC Lancaster	\$6,027,637	\$301,382	\$421,071	\$722,453
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USC Sumter	\$1,325,783	\$66,289	\$234,125	\$300,414
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Horry-Georgetown TC	\$2,075,317	\$103,766	\$422,661	\$526,427
Midlands TC	\$11,000	\$550	\$473,807	\$474,357
Northeastern TC	\$12,921	\$646	\$5,995	\$6,641
Orangeburg-Calhoun TC	\$431,570	\$21,579	\$238,264	\$259,843
Piedmont TC	\$1,171,338	\$58,567	\$306,690	\$365,256
Spartanburg CC	\$854,157	\$42,708	\$72,642	\$115,350
TC of the Lowcountry	\$1,271,577	\$63,579	\$165,459	\$229,037
Tri-County TC	\$4,829,437	\$241,472	\$555,090	\$796,562
Trident TC	\$7,227,162	\$361,358	\$719,311	\$1,080,669
Williamsburg TC	\$280,764	\$14,038	\$51,349	\$65,387
York TC	\$1,705,261	\$85,263	\$191,757	\$277,020
TOTAL	\$294,368,538	\$14,718,427	\$31,851,583	\$46,570,009

†Includes USC's School of Medicine - Columbia Campus.

Calculated E&G Building Maintenance Needs and Calculated Infrastructure Needs are Added to Produce Summary Total Maintenance Needs Assessment



Combined Summary (E&G Building & Infrastructure Maintenance Needs)				
Institution	Total Amount to Address E&G Maintenance Needs	Amount Per Year to Address E&G Maintenance Needs Over 20 Years	Amount Per Year to Maintain E&G Buildings & Infrastructure at APPA Avg 3% ³	Total Needed Per Year to Address E&G Maintenance Needs
<i>Col:</i>	<i>[9]</i>	<i>[10]</i>	<i>[11]</i>	<i>[12]</i>
	Col 1 + Col 5	Col 9 / 20 yrs		Col 10 + Col 11
Clemson	\$234,549,136	\$11,727,457	\$30,114,989	\$41,842,446
USC Columbia†	\$430,430,809	\$21,521,540	\$43,096,888	\$64,618,429
MUSC	\$104,298,231	\$5,214,912	\$23,549,604	\$28,764,515
Citadel	\$14,237,513	\$711,876	\$5,629,324	\$6,341,200
Coastal Carolina	\$62,838,031	\$3,141,902	\$6,530,731	\$9,672,632
College of Charleston	\$95,285,439	\$4,764,272	\$13,732,669	\$18,496,941
Francis Marion	\$15,644,100	\$782,205	\$6,040,328	\$6,822,533
Lander	\$7,536,576	\$376,829	\$3,281,277	\$3,658,106
SC State	\$63,687,579	\$3,184,379	\$6,868,006	\$10,052,385
USC Aiken	\$7,939,283	\$396,964	\$4,120,637	\$4,517,601
USC Beaufort	\$3,085,987	\$154,299	\$1,722,230	\$1,876,529
USC Upstate	\$12,468,058	\$623,403	\$4,833,475	\$5,456,878
Winthrop	\$42,974,040	\$2,148,702	\$11,134,043	\$13,282,745
USC Lancaster	\$19,842,708	\$992,135	\$1,848,076	\$2,840,212
USC Salkehatchie	\$7,007,372	\$350,369	\$766,126	\$1,116,495
USC Sumter	\$8,538,060	\$426,903	\$1,391,170	\$1,818,073
USC Union	\$1,131,253	\$56,563	\$279,891	\$336,454
Aiken TC	\$5,204,614	\$260,231	\$1,326,575	\$1,586,806
Central Carolina TC	\$1,182,200	\$59,110	\$1,846,358	\$1,905,469
Denmark TC	\$4,296,893	\$214,845	\$776,383	\$991,228
Florence-Darlington TC	\$19,514,531	\$975,727	\$3,573,211	\$4,548,938
Greenville TC	\$30,907,711	\$1,545,386	\$6,706,502	\$8,251,888
Horry-Georgetown TC	\$22,146,796	\$1,107,340	\$3,027,408	\$4,134,748
Midlands TC	\$2,157,435	\$107,872	\$3,835,219	\$3,943,091
Northeastern TC	\$12,921	\$646	\$720,323	\$720,969
Orangeburg-Calhoun TC	\$1,646,895	\$82,345	\$1,424,094	\$1,506,438
Piedmont TC	\$6,760,576	\$338,029	\$2,839,183	\$3,177,212
Spartanburg CC	\$10,692,724	\$534,636	\$2,903,370	\$3,438,006
TC of the Lowcountry	\$2,123,733	\$106,187	\$1,284,688	\$1,390,874
Tri-County TC	\$15,735,147	\$786,757	\$2,723,288	\$3,510,045
Trident TC	\$14,984,498	\$749,225	\$5,023,050	\$5,772,275
Williamsburg TC	\$2,155,583	\$107,779	\$310,548	\$418,327
York TC	\$2,327,534	\$116,377	\$2,450,994	\$2,567,371
TOTAL	\$1,273,343,967	\$63,667,198	\$205,710,660	\$269,377,858

†Includes USC's School of Medicine - Columbia Campus.