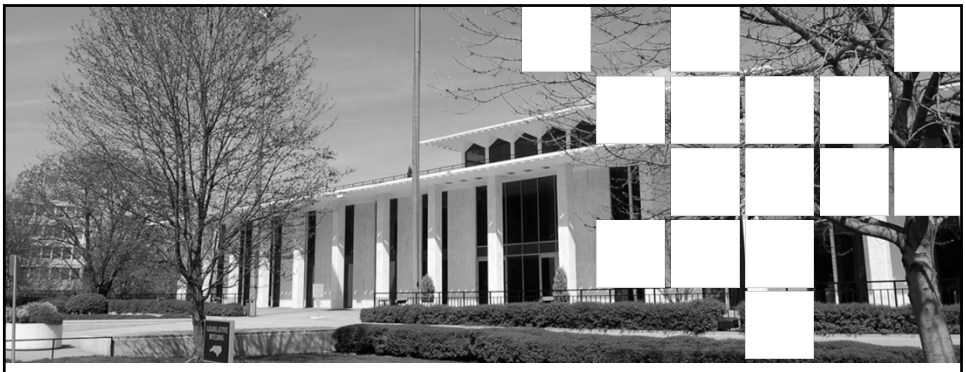

North Carolina Legislative Services Commission

Public School Construction Needs Survey and
Recommendations for Funding Options For Selected Districts

MGT of America Consulting, LLC
April 2017

MGT CONSULTING GROUP

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Agenda

- Background and Project Goals
- Project Schedule
- Methodology
- Facility Evaluations
  - Facility Condition based on national standards
  - Educational Suitability based on NC standards
- Financial Review
- Summary
- Questions / Discussion

2

Project Goals:

"Perform an independent evaluation of school construction needs and determine which of the local school administrative units have the highest facility needs in relation to their capacity to raise revenue to meet those needs."

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Project Scope
LEAs Evaluated

LEA NAME	DEPT. OF PUBLIC INSTRUCTION REGION	COUNT OF SCHOOLS	NUMBER OF STUDENTS	AREA IN SQUARE MILES
Anson	6	11	2,653	538
Bertie	1	8	2,398	741
Clay	8	3	1,259	221
Davie	5	12	6,257	261
Greene	2	6	2,977	266
Harnett	3	28	19,931	601
Jones	2	6	1,108	473
Scotland	4	11	5,624	320
Yancey	7	7	2,653	313

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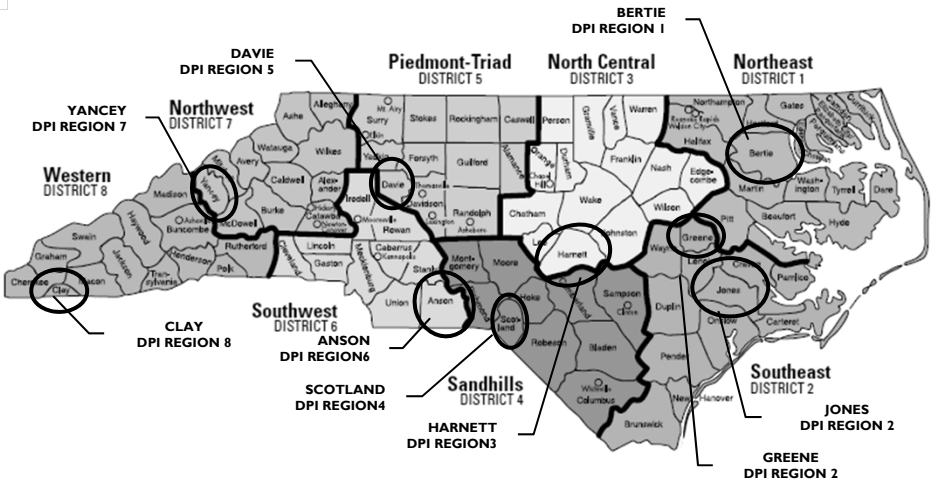
Project Scope
LEAs Evaluated



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Project Schedule and Methodology

TASKS		NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
1.0	PROJECT INITATION & MANAGEMENT									November - June
2.A	STATE & PILOT DISTRICT CONFERENCES									First week of November
2.B	LOCAL LEA CONFERENCES									First week of Dec. and first 2 weeks of Jan.
3.0	EVALUATIONS FOR HARNETT									November 14th – December 16th
4.0	EVALUATIONS FOR OTHER LEAS									Mid-December – mid-February
5.0	CAPACITY CALCULATIONS									Mid-January – end of February
6.0	TABULATION COMPARING NEEDS									Last week of February
7.0	REPORT WRITING									First week of Feb. – first week of Mar.
8.0	DELIVERY TO LEGISLATIVE COMMITTEES									March 6th -15th
9.0	FOLLOW-ON CONSULTATIONS									March 20th – June 30th

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Evaluation Methodology

Capacity and Utilization Process

- MGT uses a program-based capacity model to determine building capacity and utilization.
  - Developed student loading factors based on DPI Guidelines
  - Calculated capacity using MGT program-based model
  - Used several schools across a number of counties as examples of under / over utilization

Capacity & Utilization

UTILIZATION	DESCRIPTION
> 110%	**Inadequate space**
95 – 110%	**Approaching Inadequate space**
80 – 95%	**Adequate space**
70 – 80%	**Approaching Inefficient use of space**
< 69.99%	**Inefficient use of space**

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North Carolina Program Space Guidelines

ROOM TYPE	NUMBER OF CLASSROOMS X	STUDENTS/ CLASSROOM	= CAPACITY
HS General Classroom	35	22	770
Science MS/HS	7	18	126
Vocational MS/HS	15	15	225
Music MS/HS	2	22	44
P.E. MS/HS	4	50	200
Art MS/HS	1	22	22
Computer Lab	4	22	88
Secondary Special Education self-contained	2	10	20
Secondary Resource (pull-out)	3	0	0
Total Capacity (w/o scheduling factor) =1,495			
x High School scheduling factor of 75%			
Sample Harnett County High School Capacity =1,121			

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Program Based Space Analysis Model

INSTRUCTIONAL SPACE MODEL GUIDELINES	
ROOM TYPE	**LOADING FACTOR (STUDENTS/ROOM)**
Pre-Kindergarten	0
Kindergarten	18
ES General Classroom (1-3)	17
ES General Classroom (4-6)	26
MS General Classroom	26
HS General Classroom	22
Science MS/HS	26/18
Vocational MS/HS	0/15
Music MS/HS	0/22
P.E. MS/HS	0/50
Art MS/HS	0/22
Computer Lab	0/22
ES Special Education self-contained	10
MS Special Education self-contained	10
Elementary Resource (pull-out)	0
Secondary Resource (pull-out)	0

SCHEDULING FACTOR	
Elementary	95%
Middle	85%
High	75%

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Sample Use of Space

School	GRADE	K-12 ADM (2015-16)	ISM Capacity Excluding PK	UTILIZ
BERTIE MIDDLE	06-08	555	649	85%
BERTIE EARLY COLLEGE HIGH	09-12	169	397	43%
BERTIE HIGH SCHOOL	09-12	473	746	63%
GREENE COUNTY INTERMEDIATE	04-05	467	488	96%
SNOW HILL PRIMARY	PK-01	464	422	110%
WEST GREENE ELEMENTARY	02-03	501	349	144%
GREENE COUNTY MIDDLE	06-08	679	627	108%
GREENE CENTRAL HIGH	09-12	877	746	118%
ANDERSON CREEK PRIMARY	09-12	553	508	109%
ANGIER ELEMENTARY	03-05	453	660	69%

UTILIZATION
> 110%
95 – 110%
80 – 95%
70 – 80%
< 69.99%

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Suitability Evaluation Methodology

- Development of Educational Suitability and Technology Readiness criteria – based on DPI Guidelines

ENVIRONMENT	The overall environment of the schools with respect to creating a safe and positive learning environment.
CIRCULATION	Pedestrian/vehicular circulation and the appropriateness of site facilities and signage.
ENVIRONMENT BY ROOM TYPE	The existence and quality of facilities and spaces to support the educational program being offered. These include general classrooms, special learning spaces (e.g. music rooms, libraries, science labs), and support spaces (e.g. administrative offices, counseling offices, reception areas, kitchens, health clinics).
SIZE	The adequacy of the size of the program spaces.
LOCATION	The appropriateness of adjacencies (e.g., physical education space separated from quiet spaces).
STORAGE & FIXED EQUIPMENT	The appropriateness of fixed equipment, storage, and room surfaces (e.g., flooring, ceiling materials, and wall coverings) and specialized safety or program equipment (e.g., safety shower and eyewash in science labs, kiln and clay traps in art rooms).

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Suitability Evaluation Methodology

- Use DPI Guidelines to create *Suitability Guide*
- Meet with district staff for intake and schedule review
- Walk each school
  - Condition assessors – with facility staff
  - Suitability assessors – with principal/designee
- Score spaces based on program needs and *Guide* to create BASYS Suitability Reports
- Count spaces to determine CAPACITY of each school

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Facility Evaluation
Educational Suitability

90+	**Excellent:** The facility is designed to provide for and support the educational program offered. It may have a minor suitability issues but overall it meets the needs of the educational program.
80-89	**Good:** The facility is designed to provide for and support a majority of the educational program offered. It may have minor suitability issues but generally meets the needs of the educational program.
70-79	**Fair:** The facility has some problems meeting the needs of the educational program and will require remodeling/renovation.
60-69	**Poor:** The facility has numerous problems meeting the needs of the educational program and needs significant remodeling, additions, or replacement.
BELOW 60	**Unsatisfactory:** The facility is unsuitable in support of the educational program.

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Facility Evaluation
Technology Readiness

90+	**Excellent:** The facility has excellent infrastructure to support information technology.
80-89	**Good:** The facility has the infrastructure to support information technology.
70-79	**Fair:** The facility is lacking in some infrastructure to support information technology.
60-69	**Poor:** The facility is lacking significant infrastructure to support information technology.
BELOW 60	**Unsatisfactory:** The facility has little or no infrastructure to support information technology.

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BASYS Report Sample

Building Assessment System

Suitability Report - Full

Project #: 8272	County: Harnett	Site #: 370201002158	
Project: Assessments 2016	Region: 430	Site: TRITON HIGH	
Grade Config: 09-12	Site Type: High	Site Size: 0.00	

Suitability	Rating	Score	Possible Score	Percent Score
Suitability - HS				
Learning Environment				
Learning Style Variety	Fair	3.25	5.00	65.00
Interior Environment	Fair	1.30	2.00	65.00
Exterior Environment	Fair	0.98	1.50	65.00
General Classrooms				
Environment	Fair	2.54	3.90	65.00
Size	Good	7.80	9.75	80.00
Location	Good	2.34	2.93	80.00
Storage/Fixed Equip	Unsat	0.00	2.93	0.00
Self-Contained Special Ed				
Environment	Good	0.43	0.53	80.00
Size	Good	1.07	1.33	80.00
Location	Good	0.32	0.40	80.00
Storage/Fixed Equip	Good	0.32	0.40	80.00
Instructional Resource Rooms				
Environment	Fair	0.52	0.80	65.00
Size	Good	1.60	2.00	80.00
Location	Good	0.48	0.60	80.00
Storage/Fixed Equip	Fair	0.39	0.60	65.00
Science				
Environment	Good	0.66	0.83	80.00

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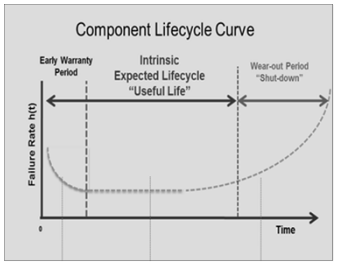
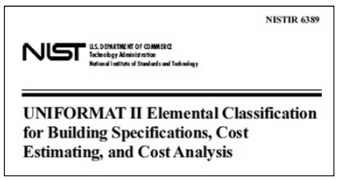
Condition Evaluation Methodology

- Rigorous, consistent, thorough surveys
- ASTM E2018-08 Standard Guide for Property Condition Evaluations
- Life-cycle analysis – remaining service life
- Goal: cost to achieve No Expired Systems
- Deficiencies based on Expired Service Life
- ASTM UNIFORMAT II Classification for All Building Elements
- RSMeans building construction cost data
- Cost models for each facility type
- Capital renewal projections – 5-yr. needs




NISTIR 6389

NIST U.S. DEPARTMENT OF COMMERCE Technology Administration National Institute of Standards and Technology

UNIFORMAT II Elemental Classification for Building Specifications, Cost Estimating, and Cost Analysis

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Facility Evaluations
Building and Site Condition

90+	**New or Like New:** The building and/or a majority of its systems are in very good condition and only require preventive maintenance; only a few, if any, systems have reached their expected life-cycle age. The total replacement cost of any "expired" systems is less than 10% of the current replacement value of the facility.
80-89	**Good:** The building and/or a majority of its systems are in good condition and only require routine maintenance; the total replacement cost of systems that have reached or exceed their expected service life (life-cycle age) is between 10 and 20% of the current replacement cost of the facility.
70-79	**Fair:** The building and/or some of its systems are in fair condition based on age and operations; the total replacement cost of systems that have reached or exceed their expected service life (life-cycle age) is between 20 and 30% of the current replacement cost of the facility.
60-69	**Poor:** The building and/or a significant number of its systems are in poor condition and require major repair, renovation, or replacement; the total replacement cost of systems that have reached or exceed their expected service life (life-cycle age) is between 30 and 40% of the current replacement cost of the facility.
BELOW 60	**Unsatisfactory:** The building and/or a majority of its systems should be replaced due to risk of system failure, inefficient operation and increased maintenance requirements; the total replacement cost of systems that have reached or exceed their expected service life (life-cycle age) is greater than 40% of the current replacement cost of the facility.

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LEA Self Survey / MGT – Parsons Assessments

DPI Facility Needs Assessment Tool

- G. S. 115C-521(a) requires LEA's to submit 5-year long-range capital plans; 2015/16 latest version.
- The Department of Public Instruction (DPI), School Planning Division developed a uniform reporting system:
  - Subjective Condition rating scale
  - Capacity focus to support additions and new schools
  - Renovation/Repair module for capital equipment and systems replacement; selectively used by districts
- DPI Condition rating scale is not at system level and does not generate "needs".

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MGT / Parsons Facility Evaluation Outcomes

- Facility/Cost Model Analysis
- Capital Renewal Forecast
- Catalogue Current Deficiencies
- Quantify Corrections and Cost Budgets
- Prioritize Facility Needs

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Difference in 2017 Evaluation Estimates From LEA Self-Estimates

Differences in Process:

- Parsons applies Life-Cycle analysis uniformly and rigorously to all systems in all buildings
  - Goal is to bring all systems to "not expired" status
- MGT estimates costs to fill suitability gaps
- Capacity calculations based on program delivery

Differences in Outcomes:

- DPI approach captures only what districts choose to submit
- Some districts feel there is little incentive to complete the survey

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Difference in 2017 Evaluation Estimates From LEA Self-Estimates

Smaller Difference – Anson County

SITE NAME	2017 MGT / PARSONS TOTAL BUDGET ESTIMATE	0 TO 5 YEARS 2015-16 FACILITY NEEDS SURVEY TOTAL	DIFFERENCE
Elementary Schools			
ANSONVILLE ELEMENTARY	$ 2,475,083	$717,675	$1,757,408
LILESVILLE ELEMENTARY	$6,674,606	$964,653	$5,709,953
MORVEN ELEMENTARY	$6,446,039	$950,068	$5,495,971
PEACHLAND-POLKTON ELEMENTARY	$7,788,442	$973,231	$6,815,211
WADESBORO ELEMENTARY	$15,395,928	$1,130,927	$14,265,001
WADESBORO PRIMARY	$5,408,109	$ -	$5,408,109
ELEMENTARY SCHOOL TOTAL	**$44,188,206**	**$4,736,554**	**$39,451,652**

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Difference in 2017 Evaluation Estimates From LEA Self-Estimates

Smaller Difference – Anson County *(Continued)*

SITE NAME	2017 MGT / PARSONS TOTAL BUDGET ESTIMATE	0 TO 5 YEARS 2015-16 FACILITY NEEDS SURVEY TOTAL	DIFFERENCE
Middle Schools			
ANSON MIDDLE	$31,340,207	$24,532,338	$6,807,869
MIDDLE SCHOOL TOTAL	**$31,340,207**	**$24,532,338**	**$6,807,869**
High Schools			
ANSON ACADEMY	$207,200	$186,819	$20,381
ANSON CO. EARLY COLLEGE HIGH	$1,186,566	$8,463	$1,178,103
ANSON HIGH SCHOOL	$22,845,705	$56,041,612	$(33,195,907)
ANSON NEW TECH HIGH	$286,200	$16,500	$269,700
HIGH SCHOOL TOTAL/AVERAGE	**$24,525,671**	**$56,253,394**	**$(31,727,723)**
DISTRICT TOTAL	**$100,054,084**	**$85,522,286**	**$14,531,798**

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Difference in 2017 Evaluation Estimates From LEA Self-Estimates

Larger Difference – Bertie County

SITE NAME	2017 MGT / PARSONS TOTAL BUDGET ESTIMATE	0 TO 5 YEARS 2015-16 FACILITY NEEDS SURVEY TOTAL	DIFFERENCE
Elementary Schools			
AULANDER ELEMENTARY	$8,023,594	$597,450	$7,426,144
COLERAIN ELEMENTARY	$2,458,028	$255,858	$2,202,170
WEST BERTIE ELEMENTARY	$11,354,088	$ -	$11,354,088
WINDSOR ELEMENTARY	$4,761,526	$1,087,491	$3,674,035
ELEMENTARY SCHOOL TOTAL	**$26,597,235**	**$1,940,799**	**$24,656,436**
Other Educational			
SKEWVILLE PRESCHOOL	$4,007,266	$ -	$4,007,266
OTHER EDUCATIONAL TOTAL	**$4,007,266**	$ -	**$ 4,007,266**

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Difference in 2017 Evaluation Estimates From LEA Self-Estimates

Larger Difference – Bertie County *(Continued)*

SITE NAME	2017 MGT / PARSONS TOTAL BUDGET ESTIMATE	0 TO 5 YEARS 2015-16 FACILITY NEEDS SURVEY TOTAL	DIFFERENCE
Middle Schools			
BERTIE MIDDLE	$1,362,445	$ -	$1,362,445
MIDDLE SCHOOL TOTAL	**$1,362,445**	**$ -**	**$1,362,445**
High Schools			
BERTIE EARLY COLLEGE HIGH	$13,426,305	$945,060	$12,481,245
BERTIE HIGH SCHOOL	$8,508,919	$ -	$8,508,919
HIGH SCHOOL TOTAL/AVERAGE	**$21,935,224**	**$945,060**	**$20,990,164**
DISTRICT TOTAL	**$53,902,170**	**$2,885,859**	**$51,016,311**

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Total Need by District

Combined Scores - Weighting Methodology

- The overall **condition score*** for a school is based on square footage of all the permanent buildings. The condition score is **weighted as 50%** of the combined score calculation.
- The **site score*** includes the driveways and walkways, the parking lots, the playfields, the utilities, fencing, etc. The site score is **weighted as 10%** of the combined score calculation.
- The overall **suitability score**** applies to all the buildings at the school. The suitability score is **weighted as 30%** of the combined score calculation.
- The **technology readiness score**** is based on infrastructure issues, such as having sufficient cooling and power outlets for computers. The technology score is **weighted as 10%** of the combined score calculation.

*Both Condition and Site were scored using eCOMET®.

** Both Suitability and Technology were scored using BASYS.

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Facility Needs Summary

Site Name	Combined Score (50/10/ 30/10)	2015-16 Current Utilization	2017 MGT / Parsons Total Budget Estimate	0 to 5 Years 2015-16 Facility Needs Survey Total	Difference
Anson County					
Anson County Total/Average	66	89%	$100,054,084	$85,522,286	$14,531,798
Bertie County					
Bertie County Total/Average	70	70%	$53,902,170	$2,885,859	$51,016,311
Clay County					
Clay County Total/Average	83	101%	$16,494,879	$0	$16,494,879
Davie County					
Davie County Total/Average	83	96%	$54,211,832	$2,566,120	$51,645,712
Greene County					
Greene County Total/Average	83	109%	$34,849,896	$9,098,980	$25,750,916

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Facility Needs Summary

Site Name	Combined Score (50/10/ 30/10)	2015-16 Current Utilization	2017 MGT / Parsons Total Budget Estimate	0 to 5 Years 2015-16 Facility Needs Survey Total	Difference
Harnett County					
Harnett County Total/Average	81	112%	$239,201,908	$148,691,065	$90,510,843
Jones County					
Jones County Total/Average	68	63%	$38,530,225	$31,384,794	$7,145,431
Scotland					
Scotland County Total/Average	79	92%	$59,532,489	$4,080,630	$55,451,859
Yancey County					
Yancey County Total/Average	71	87%	$33,424,596	$3,591,677	$29,832,919
All District					
All District Total/Average	76	99%	$630,202,078	$287,821,411	$342,380,667

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Financial Capacity

Financial Review

- Interviews with district and county staff
- Data collected – examples on the following pages

Financial Review
Data Example, Jones County

District Budget Information Example

District Budget FY2015-2016	Jones
Dept. of Public Instruction Region	2
Count of Schools	6
Number of Students	1108
Area in Square Miles	473
CIP 5-year Plan Need	$0
Lottery 2015-16	$169,367
Article 40 Revenue	$173,163
Article 42 Revenue	$125,140
Property Tax Revenue	$0
Taxes Fines / Forfeitures	$105,496
Proceeds of Capital Assets	$104,642
Donations / Grants	$674,665
Total Capital Budget	$1,352,473
Capital Revenue as Percent of Budget	10.56%
District Budget	$12,811,778
County Budget Allocation to District	$1,740,900
% County Allocation / Budget	13.6%

Financial Review
Data Example, Jones County

District Assessed Value and Property Tax Information Example

Assessed Valuation and Property Tax Information	Jones
Maximum Property Tax Rate	$1.50
Assessed Valuation	$813,248,643
Maximum Allowable Debt Service Amount	$65,059,891
Current Property Tax Revenue (assessed value x current tax rate)	$6,424,664
Maximum Property Tax Revenue (assessed value x maximum tax rate)	$12,198,730
Percentage of Property Tax Revenue	52.67%
GO Bond Debt	$0.00
Installment Debt	$2,029,071
Maximum Unused	$2,029,071

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Financial Review
Data Example, Jones County

District Capital Requirements Example

Capital Requirements as Determined by MGT Parsons	
Future Facility Need	$38,530,225
Financing Option	
20-year Revenue from 40 & 42 Sales Tax Funds	$5,720,600
Bond Revenue Needed	$32,809,625
Percentage of Capital Need Provided by 40 & 42 Sales Tax Funds	**14.8%**
Projected 20 -year Debt Service Annual Payment to cover School Facility Capital Need	**$2,160,201**
Property Tax Rate	$0.7900
Property Rate Increase to cover debt	$0.2660
Projected Annual Tax Rate Increase	**$1.0560**

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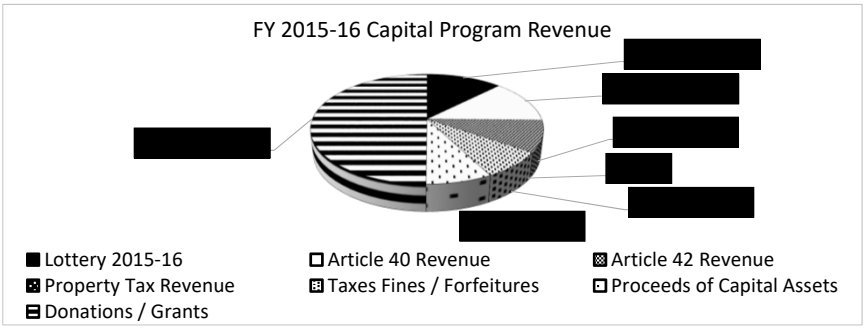
Financial Review
Data Example, Jones County

Historical County Revenue and Debt Capacity Information

Jones County	2008	2009	2010	2011	2012	2013	2014	2015
County Revenue	$13,070,081	$12,467,213	$12,316,883	$13,292,238	$12,995,361	$13,819,984	$12,997,163	$12,811,778
Debt Capacity	$55,809,550	$56,214,325	$57,323,119	$57,986,473	$58,793,276	$61,470,453	$62,986,817	$64,605,235
Debt Service	$2,303,056	$2,207,734	$2,319,882	$2,247,468	$2,052,160	$1,854,559	$2,072,162	$1,829,044



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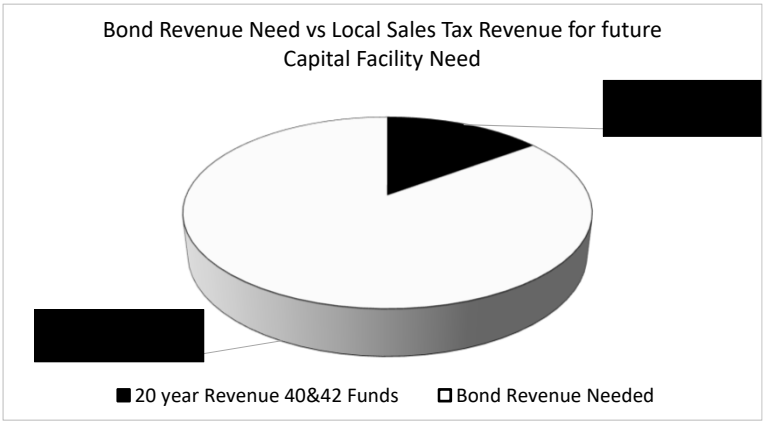
Financial Review
Data Example, Jones County



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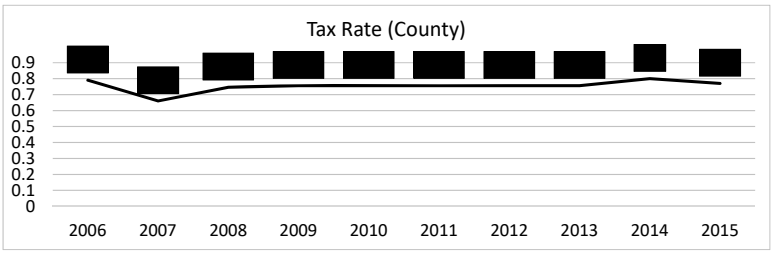
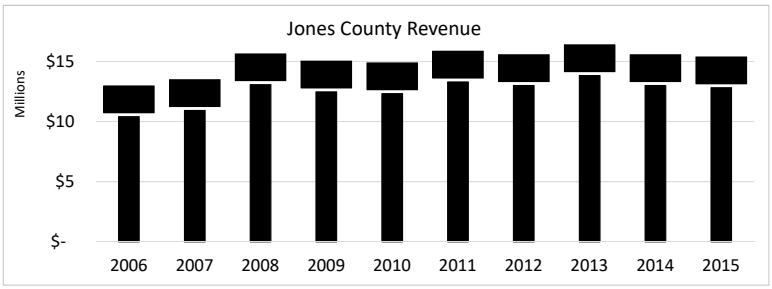
Financial Review
Data Example, Jones County





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Summary, Conclusions and Recommendations

Summary Findings

- Total facility needs 9 Districts: $630,202,078
  - Largest total dollar - Harnett County: $239,201,908
- Districts with the largest dollar need per student:
  - Anson County: $37,714
  - Jones County: $34,775
  - Average need/student 9 districts: $18,180
- Districts requiring highest tax rate to meet the facility needs:
  - Anson, Bertie, Jones, and Scotland: tax rate over $1.05
  - Statewide average tax rate: $0.66
  - 9 district average tax rate: $0.90

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Per Student Need by District

District	Per Student Capital Need*
Anson	$37,714
Bertie	$22,478
Clay	$13,102
Davie	$8,664
Greene	$11,706
Harnett	$12,002
Jones	$34,775
Scotland	$10,585
Yancey	$12,599
*based on total capital facility need	

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Conclusion and Recommendations

- Conclusions
  - Majority of capital funding in North Carolina comes from Local Property Tax Revenue
  - Capital need identified in every district reviewed
  - Low wealth counties require a higher level of effort
- Short-term Recommendation
  - Systematic review of the administration of DPI's School Facility Needs Survey and the process of implementation at the LEA level
- Long-term Recommendations
  - Potentially establish a revolving fund account
  - Alternative funding source
  - Consistent methodology for determining need
  - Prioritization of need

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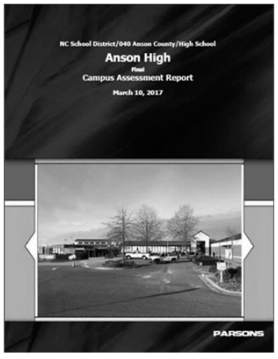
School-Level Data Available

- Individual school survey reports
- Combined capital renewal and FCI tabulations, ratings, rankings
- Suitability and Technology ratings and rankings
- Capacity and Utilization Reports
- Data comparisons
- Hundreds of photos for each facility
- Deficiencies with costs, photos, & remedies
- Metrics and Indices – FCI, RSL, CRV, etc.



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Questions / Discussion

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