



# Stewart County Schools

**Infrastructure Improvement and Energy  
Conservation Program funded with  
Guaranteed Savings**

August 10, 2023



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August 10, 2023

Stewart County Schools Board of Education  
1031 Spring Street  
Dover, Tennessee 37058

Subject: **Energy Conservation and Infrastructure Improvement Program**

Dear Board of Education Members,

Trane is pleased to submit the results of our Investment Grade Audit of Stewart County School sites. *Thank you*, Board Members, Leadership and Staff who have been supportive along the way. In the following pages, we have outlined an energy conservation and infrastructure improvement program for the seven (7) sites listed in the ECM Matrix and Savings Summary tabs.

The results of our audit demonstrate a program that will have a positive impact to the schools by implementing improvements that will help fund themselves through the guaranteed utility/operational savings the improvements produce. This program is a great opportunity for Stewart County Schools to address aging infrastructure while being *soft* on the taxpayers. Basically, the program uses utility/operational savings produced by upgrading the infrastructure in your facilities to help pay for improvements and best of all; Trane guarantees the savings will occur or we write a check for the difference, period.

It is at this time we need your vote of approval to proceed with the program. There are several "baby steps" that will take place upon your approval: development of contract documents and all of the associated legal/financial reviews, securing of funding (EESI Loan, ESSER, etc.), TVA pre/post work inspections, and finally, boots on the ground for Stewart County Schools. Upon your approval, we are prepared to mobilize immediately to ensure a successful program for you.

The benefits of this program are too numerous to mention in this letter. Please take some time to review the enclosed summary documents for a clearer picture. Additionally, please do not hesitate to contact us with any questions you may have. We can be reached at 615-717-5799 or 865-755-5869 [randy.mauldin@trane.com](mailto:randy.mauldin@trane.com) or [oanevader@trane.com](mailto:oanevader@trane.com). Director Craig and your leadership staff have been instrumental in developing the program and can also answer questions, as well.

Trane is fortunate to be the Energy Services Partner of choice for Stewart County Schools. Thank you for the confidence that you place in Trane.

Sincerely,

A handwritten signature in black ink, appearing to read "Randy Mauldin".

Randy Mauldin  
Business Development Manager

A handwritten signature in black ink, appearing to read "Owen M. Nevader".

Owen M. Nevader, LEED™ AP  
Comprehensive Solutions Leader

Trane U.S., Inc.

Commercial HVAC NA  
601 Grassmere Park Drive Suite 10, Nashville, Tennessee 37211, Tel 615-242-0311

**TRANE**  
TECHNOLOGIES



August 10, 2023

Mike Craig  
Director of Schools  
Stewart County Schools  
1031 Spring Street  
Dover, Tennessee 37058

Subject: **Energy Conservation and Infrastructure Improvement Program**

Dear Director Craig,

Trane has completed our Investment Grade Audit of Stewart County Schools. This audit was conducted to further evaluate and develop an Energy Savings Performance-based Contract (ESPC) on your behalf. Basically, this type of program addresses aging infrastructure and dated technology and uses the associated (and guaranteed) energy/operational savings to pay for the improvements over time.

Along with our district wide auditing and engineering work, we were asked to specifically look at *ventilation effectiveness* at North Stewart Elementary school. As discussed, we are suggesting a phased approach to (1) correct ventilation deficiencies at North Stewart ES, (2) replace larger HVAC units that have reached their end-of-life in the Library, Cafeteria and Gym at North Stewart ES, (3) establish building automation & control at North Stewart ES to help offset energy costs, and (4) develop a district-wide ESPC program that will be funded via the State of Tennessee’s Energy Efficient Schools (EESI) program using guaranteed savings to pay for the improvements over time.

**Summary of recommendations:**

Installation of 3 dedicated outside air system (DOAS) Units @ North Stewart ES	\$900,000 – funded by ESSER funds
Replace the HVAC units in the Library, Cafeteria and Gym @ North Stewart ES	\$291,000 – funded with ESSER funds
Furnish & install DDC Building Automation & Control System @ North Stewart ES	\$223,329 – funded with ESSER funds
Implementation of a District-wide ESPC program (all sites)	\$1,171,026 – funded using EESI Loan, debt service funded with guaranteed savings

We truly appreciate the time and effort that the Stewart County Schools Staff and Maintenance Department has invested in assisting Trane in the development of this program. Steps 1-3 A North Stewart ES have been approved and funded and that work is underway. Our goal is to have the disruptive work completed during unoccupied times (summer break, nights, weekends, and breaks) so that when new units arrive, they can be set and placed into service.



The proposals for North Stewart ES have language inserted that allows the energy/operational savings associated with these improvements to be underwritten when Stewart County Schools proceeds with an ESPC program with Trane, allowing you to realize guaranteed savings on this work as well. What is presented here today is step 4, the district wide ESPC program.

At this time, we are outlining specific areas where facility improvements will address aging infrastructure within Stewart County Schools and use Utility/Operational savings to help fund the improvements, with the energy use savings guaranteed by Trane. **This program will produce a calculated value of \$1,606,829 in savings over a sixteen (16) year term, producing \$129,934 in excess savings after program costs. The project uses a 16-year financial term funded via the State of Tennessee's Energy Efficient Schools Initiative (EESI) with a very low .5% interest rate, which will offset Stewart County Schools' budget by funding \$1,171,026 in real property improvements plus ongoing measurement & verification services, and debt service costs. These program savings represent a 11.1% reduction in utility expenditures compared to the baseline for the seven (7) facilities that were evaluated. Moreover, savings continue to accrue after the loan is paid resulting in \$654,694 of net savings at 20 years ([see the Financial tab for a detailed program proforma](#)).**

The improvements outlined will establish the correct and desirable primary ventilation rates (CO<sub>2</sub> laden air out / outside air in) at North Stewart ES. The proposed Building Automation & Control system will allow efficient operation of the new (and existing) systems at the facility, providing a better comfort level throughout. Additionally, the initiatives your team is taking (addressing roofing concerns and flooring) will go a long way to support a healthier indoor environment. The ESPC program includes building automation controls, water/waste-water conservation at most facilities and a much-needed new domestic water pumping station at Dover ES. Please see the attached [ECM Matrix](#) for a summary of scope. The items in **green font** are included, the items in **red font** are not included at this time.

At this time, we are asking the Stewart County Board of Education to authorize Director Craig to finalize an ESPC program with Trane and secure funding via the State of Tennessee's EESI program. The faith you have placed in Trane is the ultimate vote of confidence, and we do not take that lightly. We are proud to be your trusted partner, and we look forward to implementing this program on your behalf.

Thank you again and please let us know if you have any questions.

Sincerely,



Randy Mauldin  
Business Development

C: Owen Nevader, Trane  
Jeromy Cotten, Trane  
Tyler Givens, Trane

**Stewart County Schools- ECM Matrix**

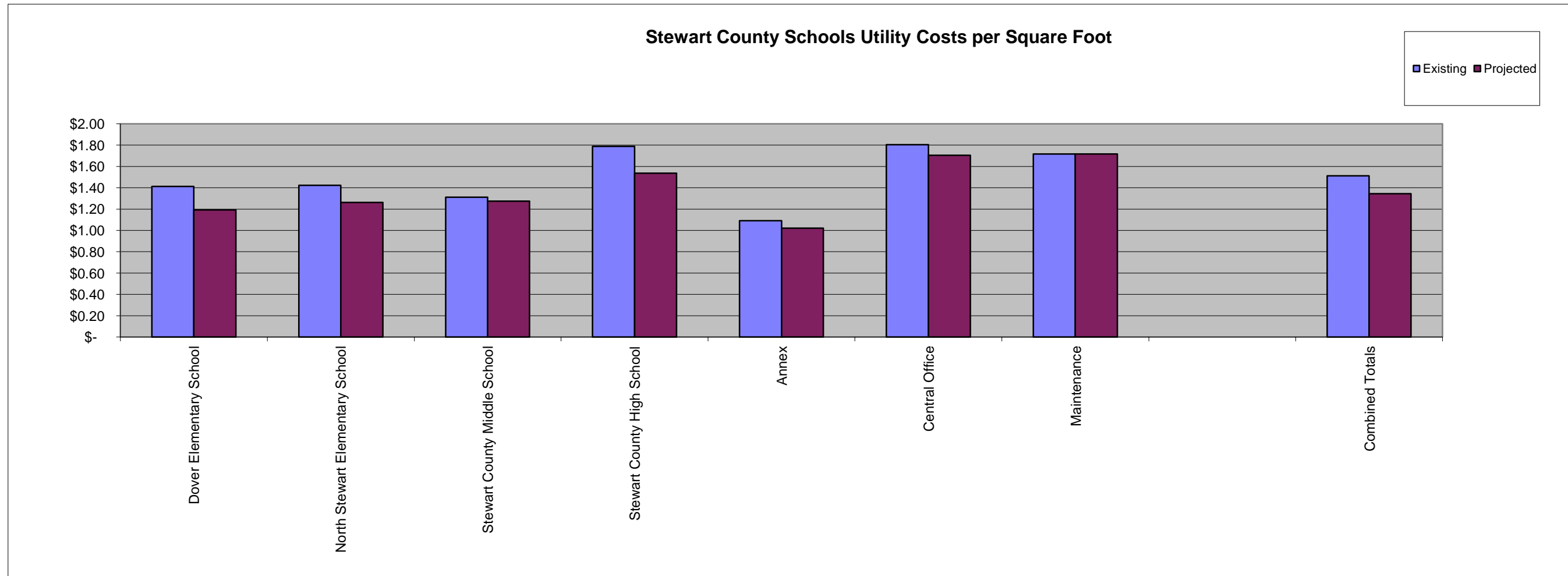
Facility Name	ECM Categories																					
	Interior Lighting Upgrades	Exterior Lighting Upgrades	School Zone Caution Light	HVAC Controls -BAS (Existing Equipment)	HVAC Controls- BAS (EOL)	HVAC Controls-Smart Thermostats	HVAC- Retrocommissioning	HVAC-EOL	HVAC EOL-To Address OA	HVAC-New	HVAC- New DOAS	HVAC 2-5 Years	HVAC 6-10 Years	Isolation Valves	Pump Upgrade	Chiller Upgrade	Water Heater	Domestic Water Booster Pump	Water Conservation	Parking Lot Paving	Roofing	
Annex Building							x (1)			x (2)											x	
Central Office							x												x			
Dover Elementary				x	x (12)	x (12)				x (3)					x (15)	x (4)	x(19)	x	x	x	x	
Maintenance										x (5)												
North Stewart				x	x (12)	x (12)				x (7)	x (8)	x (9)	x (6)	x (10)	x (11)					x	x	
Stewart County HS				x	x (13)	x (13)		x	x (14)(15)(17)					x	x (16)		x (19)		x	x		
Stewart County MS		x	x	x	x (12)	x (12)				x (21)					x(16)		x (22)		x		x	

- 1 15 Ton Pacakgae Unit, (2) 4 Ton Package
- 2 DOAS for offices
- 3 (2) Gym Units, Library, Office, (2) Cafeteria (1) Kitchen and Retro
- 4 Upgrade (2) Chiller
- 5 (1) Package Unit
- 6 (2) New DOAS units and (1) Existing Replacement
- 7 (5) RTU's (11) PUV's, (8) Ducstless Splits, (1) Split, (1) PTAC and (2) Fans Locker Room
- 8 (1) Gym , (1) Cafeteria and (1) Library Package Units
- 9 New Mini Splits in (2) Coahes Offices
- 10 (1) RTU and (1) Mini Split
- 11 (5) Bards, (5) Mini Splits

- 12 Hybrid BAS Control-PrePAC
- 13 Full BAS Control
- 14 (6) DOAS Units
- 15 Votech (8) Splits
- 16 Controls Valves, VFD and Flushing
- 17 Field House (2) Splits
- 18 New VAV Boxes for Office
- 19 EOL
- 20 New Water Heaters
- 21 All geothermal units
- 22 (2) New water heaters

## Executive Savings Summary

	Ft2	Existing Utility Costs		Savings		Projected Utility Costs			
		Total, \$	\$/Ft2	Calculated Savings, \$	Guaranteed Savings, \$	Calculated Total, \$	Guaranteed Total, \$	Calculated \$/ft2	Guaranteed \$/ft2
Dover Elementary School	80,879	\$ 114,238	\$ 1.41	\$ 20,057	\$ 17,867	\$ 94,181	\$ 96,371	\$ 1.16	\$ 1.19
North Stewart Elementary School	72,439	\$ 103,028	\$ 1.42	\$ 16,735	\$ 11,580	\$ 86,293	\$ 91,448	\$ 1.19	\$ 1.26
Stewart County Middle School	97,284	\$ 127,502	\$ 1.31	\$ 3,790	\$ 3,576	\$ 123,712	\$ 123,926	\$ 1.27	\$ 1.27
Stewart County High School	168,610	\$ 301,384	\$ 1.79	\$ 49,442	\$ 42,264	\$ 251,942	\$ 259,120	\$ 1.49	\$ 1.54
Annex	35,081	\$ 38,260	\$ 1.09	\$ 2,997	\$ 2,468	\$ 35,263	\$ 35,792	\$ 1.01	\$ 1.02
Central Office	4,134	\$ 7,456	\$ 1.80	\$ 482	\$ 409	\$ 6,974	\$ 7,047	\$ 1.69	\$ 1.70
Maintenance	7,200	\$ 12,353	\$ 1.72	\$ -	\$ -	\$ 12,353	\$ 12,353	\$ 1.72	\$ 1.72
<b>Combined Totals</b>	<b>465,627</b>	<b>\$ 704,221</b>	<b>\$ 1.51</b>	<b>\$ 93,503</b>	<b>\$ 78,165</b>	<b>\$ 610,718</b>	<b>\$ 626,056</b>	<b>\$ 1.31</b>	<b>\$ 1.34</b>

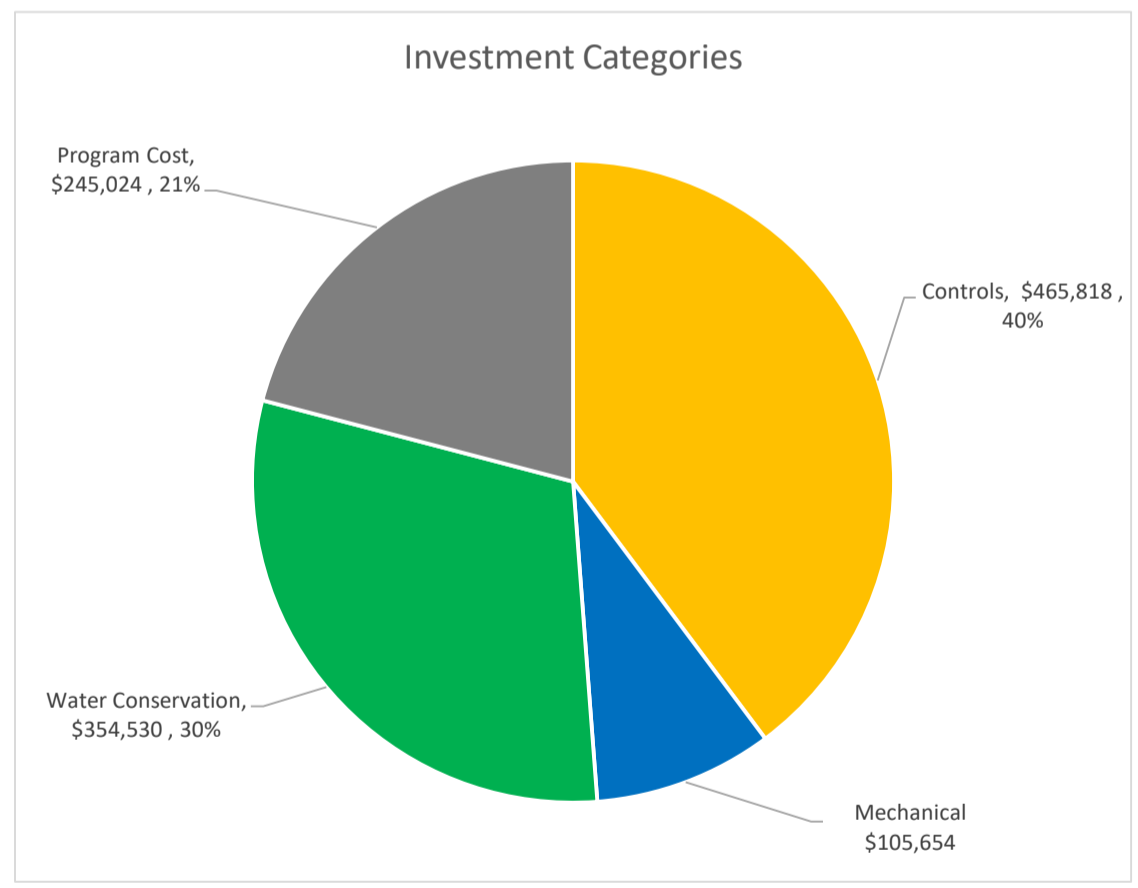


**Trane Partnership for Infrastructure Improvement & Operational Excellence**  
**Program Cash Flow Analysis**

**Stewart County Schools IGA Results**

Year	EESI Term															Total					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		16	17	18	19	20
<b>Program Savings</b>																					
Facility Energy Savings	\$ 78,165	\$ 80,510	\$ 82,925	\$ 85,413	\$ 87,975	\$ 90,615	\$ 93,333	\$ 96,133	\$ 99,017	\$ 101,988	\$ 105,047	\$ 108,199	\$ 111,445	\$ 114,788	\$ 118,232	\$ 121,779	\$ 125,432	\$ 129,195	\$ 133,071	\$ 137,063	\$ 2,100,323
Operational Savings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Cost Avoidance (and Construction Period Saving)	\$ 31,266																				\$ 31,266
<b>Annual Program Savings</b>	<b>\$ 109,431</b>	<b>\$ 80,510</b>	<b>\$ 82,925</b>	<b>\$ 85,413</b>	<b>\$ 87,975</b>	<b>\$ 90,615</b>	<b>\$ 93,333</b>	<b>\$ 96,133</b>	<b>\$ 99,017</b>	<b>\$ 101,988</b>	<b>\$ 105,047</b>	<b>\$ 108,199</b>	<b>\$ 111,445</b>	<b>\$ 114,788</b>	<b>\$ 118,232</b>	<b>\$ 121,779</b>	<b>\$ 125,432</b>	<b>\$ 129,195</b>	<b>\$ 133,071</b>	<b>\$ 137,063</b>	<b>\$ 2,131,589</b>
<b>Program Cumulative Savings</b>	<b>\$ 109,431</b>	<b>\$ 189,941</b>	<b>\$ 272,866</b>	<b>\$ 358,279</b>	<b>\$ 446,255</b>	<b>\$ 536,869</b>	<b>\$ 630,202</b>	<b>\$ 726,335</b>	<b>\$ 825,353</b>	<b>\$ 927,340</b>	<b>\$ 1,032,387</b>	<b>\$ 1,140,586</b>	<b>\$ 1,252,031</b>	<b>\$ 1,366,819</b>	<b>\$ 1,485,050</b>	<b>\$ 1,606,829</b>	<b>\$ 1,732,261</b>	<b>\$ 1,861,455</b>	<b>\$ 1,994,526</b>	<b>\$ 2,131,589</b>	
<b>Program Costs</b>																					
Principal & Interest	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ 76,171	\$ -	\$ -	\$ -	\$ -	\$ 1,218,734
Annual M&V/CEM Support	\$ 5,789	\$ 5,963	\$ 6,142	\$ 6,326	\$ 6,516	\$ 6,711	\$ 6,912	\$ 7,120	\$ 7,333	\$ 7,553	\$ 7,780	\$ 8,013	\$ 8,254	\$ 8,501	\$ 8,756	\$ 9,019	\$ -	\$ -	\$ -	\$ -	\$ 116,688
Trane Cloud Service Support	\$ 5,103	\$ 5,256	\$ 5,414	\$ 5,576	\$ 5,743	\$ 5,916	\$ 6,093	\$ 6,276	\$ 6,464	\$ 6,658	\$ 6,858	\$ 7,064	\$ 7,276	\$ 7,494	\$ 7,719	\$ 7,950	\$ -	\$ -	\$ -	\$ -	\$ 102,861
Annual Software Maintenance	\$ -	\$ 2,076	\$ 2,138	\$ 2,202	\$ 2,269	\$ 2,337	\$ 2,407	\$ 2,479	\$ 2,553	\$ 2,630	\$ 2,709	\$ 2,790	\$ 2,874	\$ 2,960	\$ 3,049	\$ 3,140	\$ -	\$ -	\$ -	\$ -	\$ 38,611
<b>Annual Program Costs</b>	<b>\$ 87,063</b>	<b>\$ 89,466</b>	<b>\$ 89,865</b>	<b>\$ 90,275</b>	<b>\$ 90,698</b>	<b>\$ 91,134</b>	<b>\$ 91,583</b>	<b>\$ 92,046</b>	<b>\$ 92,522</b>	<b>\$ 93,012</b>	<b>\$ 93,518</b>	<b>\$ 94,038</b>	<b>\$ 94,574</b>	<b>\$ 95,126</b>	<b>\$ 95,695</b>	<b>\$ 96,280</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,476,894</b>
<b>Program Cumulative Costs</b>	<b>\$ 87,063</b>	<b>\$ 176,529</b>	<b>\$ 266,393</b>	<b>\$ 356,668</b>	<b>\$ 447,367</b>	<b>\$ 538,501</b>	<b>\$ 630,084</b>	<b>\$ 722,130</b>	<b>\$ 814,652</b>	<b>\$ 907,664</b>	<b>\$ 1,001,181</b>	<b>\$ 1,095,219</b>	<b>\$ 1,189,793</b>	<b>\$ 1,284,919</b>	<b>\$ 1,380,614</b>	<b>\$ 1,476,894</b>	<b>\$ 1,476,894</b>	<b>\$ 1,476,894</b>	<b>\$ 1,476,894</b>	<b>\$ 1,476,894</b>	
<b>Cash Flow</b>																					
<b>Annual Net Cash Flow</b>	<b>\$22,368</b>	<b>(\$8,956)</b>	<b>(\$6,939)</b>	<b>(\$4,862)</b>	<b>(\$2,723)</b>	<b>(\$520)</b>	<b>\$1,750</b>	<b>\$4,088</b>	<b>\$6,495</b>	<b>\$8,975</b>	<b>\$11,530</b>	<b>\$14,161</b>	<b>\$16,871</b>	<b>\$19,662</b>	<b>\$22,537</b>	<b>\$25,498</b>	<b>\$125,432</b>	<b>\$129,195</b>	<b>\$133,071</b>	<b>\$137,063</b>	<b>\$654,694</b>
<b>Cumulative Net Cash Flow</b>	<b>\$ 22,368</b>	<b>\$ 13,412</b>	<b>\$ 6,473</b>	<b>\$ 1,611</b>	<b>\$ (1,112)</b>	<b>\$ (1,632)</b>	<b>\$ 118</b>	<b>\$ 4,206</b>	<b>\$ 10,701</b>	<b>\$ 19,676</b>	<b>\$ 31,206</b>	<b>\$ 45,367</b>	<b>\$ 62,237</b>	<b>\$ 81,899</b>	<b>\$ 104,436</b>	<b>\$ 129,934</b>	<b>\$ 255,366</b>	<b>\$ 384,561</b>	<b>\$ 517,632</b>	<b>\$ 654,694</b>	

ECM Category	Totals by ECM	
Lighting	\$ -	0%
Lighting (EESI)	\$ -	0%
Controls	\$ 465,818	40%
Electrical	\$ -	0%
Mechanical	\$ 105,654	9%
Water Conservation	\$ 354,530	30%
Weatherization/Envelope	\$ -	0%
Commissioning	\$ -	0%
Renewable Technology	\$ -	0%
Trane Energy Supply	\$ -	0%
Program Cost	\$ 245,024	21%
	\$ 1,171,026	100.0%



Program Financial Summary	
Program Construction Cost	\$ 1,171,026
Estimated TVA Utility Rebates	\$ 31,367
Alternative Funding (ESSER)	\$ -
Fund Balance	\$ -
Loan/Lease (EESI)	\$ 1,171,026
Year 1 - Program Savings	\$ 78,165
Year 1 - Simple Payback (years)	15.0
Term - Program Costs	\$ 1,476,894
Term - Program Savings	\$ 2,131,589
Term - Cumulative Payback Ratio	0.69
Annual Interest Rate	0.50%
Loan/Lease Term (years)	16
Payments per Year	12
Construction Interest Considered (yes/no)	no
Total Interest Payments	\$ 47,708
Annual Energy Cost Escalation Factor	3.0%
Annual Operational Cost Escalation Factor	3.0%
Annual Service Program Cost Escalation Factor	3.0%

unencumbered  
ESSER  
Fund Balance  
\$ 1,139,659 w/TVA rebate applied



# Stewart County Schools

**Infrastructure Improvement and Energy  
Conservation Program funded with  
Guaranteed Savings**

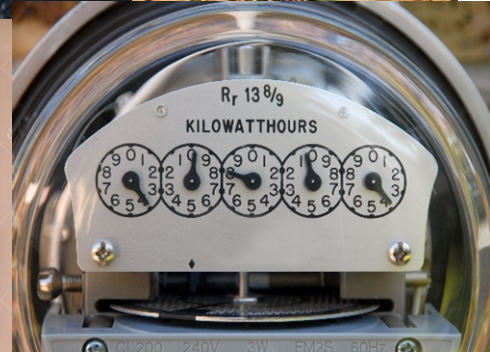
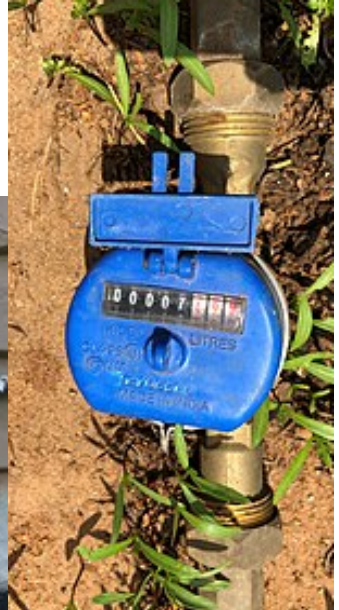
August 10, 2023





# Operation Issues facing our cities and schools

- Budgets
- Lack of funds
- Increasing costs of operations
- 20(+) year old equipment failing at the same time
- Less efficiency in older equipment
- R-22 HVAC Units
- Cost of replacements



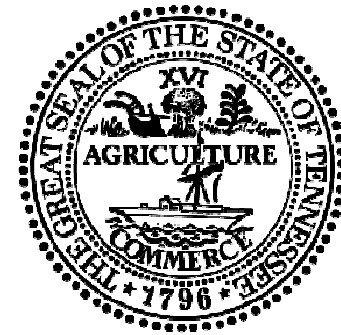
# What is Performance Contracting?

“The use of guaranteed savings from the maintenance and operations budget (utility dollars) as capital to make needed upgrades and modernizations to your building environmental systems, financed over a specified period of time.”



# State of Tennessee

- *ESCOs (Energy Service Companies) have been helping many local governments and public school systems throughout the state of TN over the years based on Tenn. Code Ann. § 12-4-115, which classifies this type of work as **Professional Services***
- *TCA, Section 49-2-203(a)(3) was amended in April 2013 classifying this work as **Professional Services** for Tennessee Public Schools:*



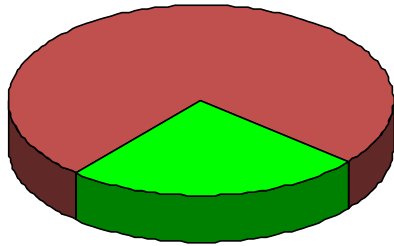
*“Section 49-2-203(a)(3), is amended by adding the following language as new subdivision (F):*

- *(F)(i) Notwithstanding any law to the contrary, contracts for energy-related services that include both engineering services and equipment and have as their purpose the reduction of energy costs in public schools or school facilities **shall be awarded on the basis of recognized competence and integrity and shall not be competitively bid.**”*



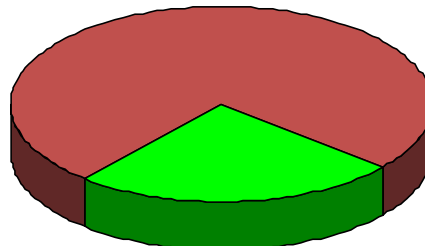
# How does this work?

Gas Costs



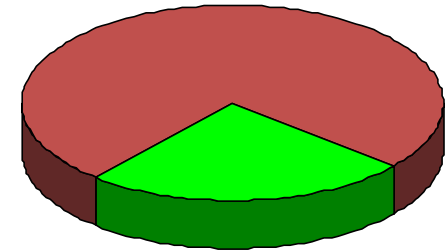
Savings

Electric Costs



Savings

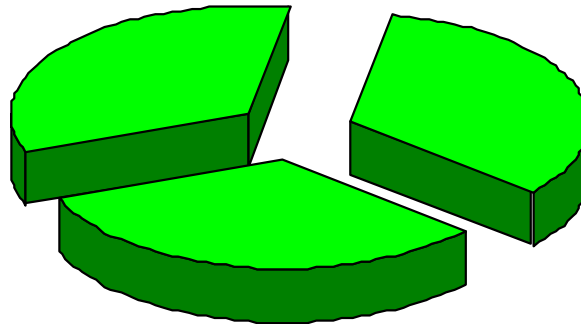
Water & Sewer Costs



Savings

**Savings** are from implementing Energy Conservation Measures

Utility Rebates and Incentives such as Grants are also used to offset program costs.

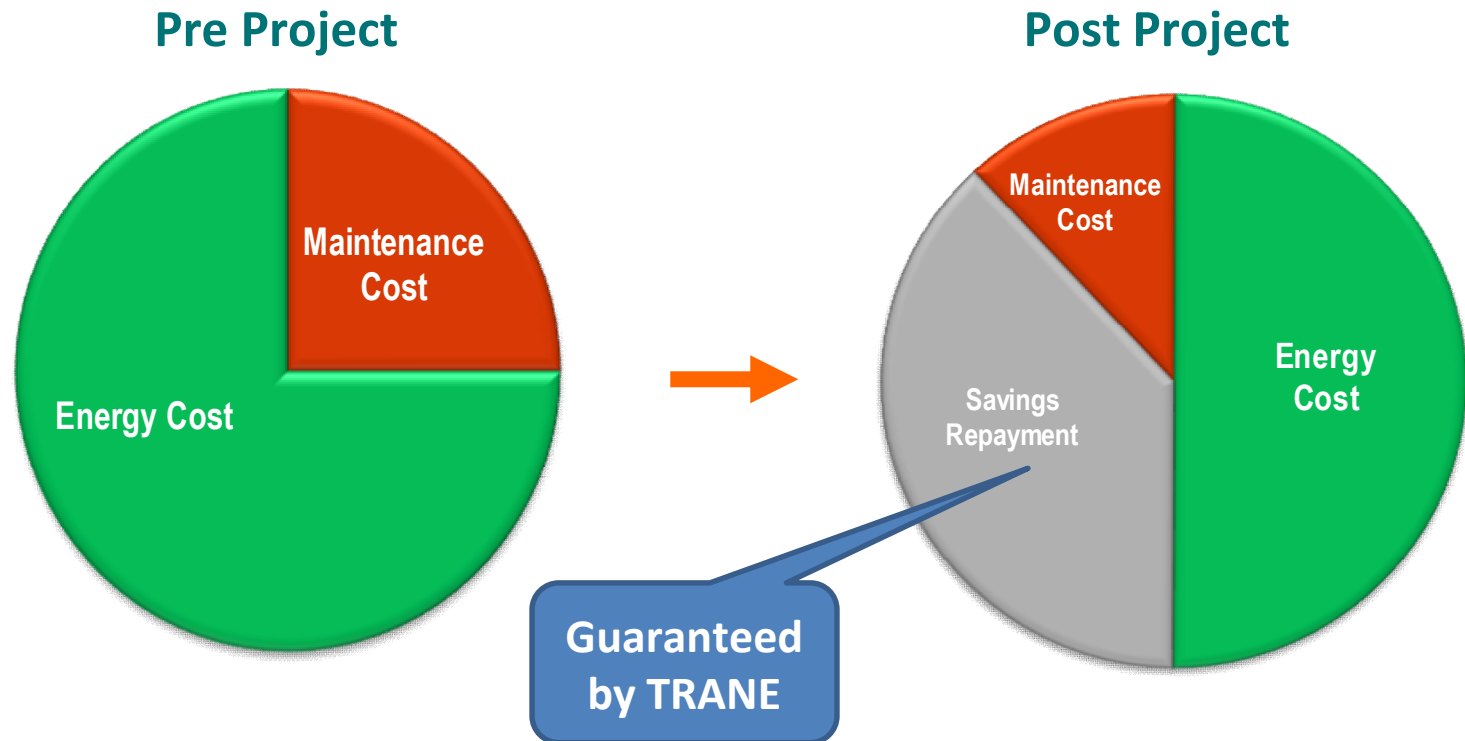


**Utility savings fund the Energy Conservation and Infrastructure improvement project**



# Reallocation of Current Utility Expenses

Annual savings are guaranteed by Trane. Reconciliations & “settlements” are performed annually. Program is developed so that annual savings  $\Rightarrow$  than annual cost of debt service.



*Note: The utility budget remains same, a portion of utility budget is re-allocated to pay financing cost*



# When to use Performance Contracting

- When improvements are NEEDED in your existing buildings to address:
  - Safety
  - Indoor Air Quality
  - Building Envelope
  - Lighting
  - Technology
  - Comfort
  - Efficiency
  - Ventilation
- And the school district and city's budget does not have funds available for deferred maintenance and improvements,
- And asking for “new money” is difficult,
- And capital is better directed to new construction,
- A COMPREHENSIVE SOLUTION that uses excess utility spend as a means to improve/update *existing* infrastructure just makes good sense and is a demonstration of ***Fiscal Responsibility to your County Taxpayers.***



# Stewart County Schools Facilities

- Dover Elementary
- North Stewart Elementary
- Stewart County High School
- Stewart County Middle School
- Annex Building
- Central Office
- Maintenance



# Findings

- Energy Costs exceed Trane's preliminary "target" by 11%
- Dated lighting systems (Interior & Exterior) that overuse energy and produce sub-standard light levels. Concerns from teachers and Principals.
- Heating & Air Conditioning Systems that have outlived their expected lives by 5 – 20 years.
- Identified design and performance issues with HVAC systems.
- Less than optimal ventilation (outside air in the classroom).
- Lack of centralized "building control" is contributing to less than desirable comfort levels, high energy costs and extra work for county maintenance staff. Buildings are "on" all the time.
- Building Envelope/Weatherization issues.
- Outdated plumbing technology that wastes water.



# Results

The result of the Investment Grade Audit Stewart County Schools invested in, the results indicate a program that addresses significant utility consuming infrastructure within Stewart County Schools Facilities and pays for these upgrades with utility and operational savings

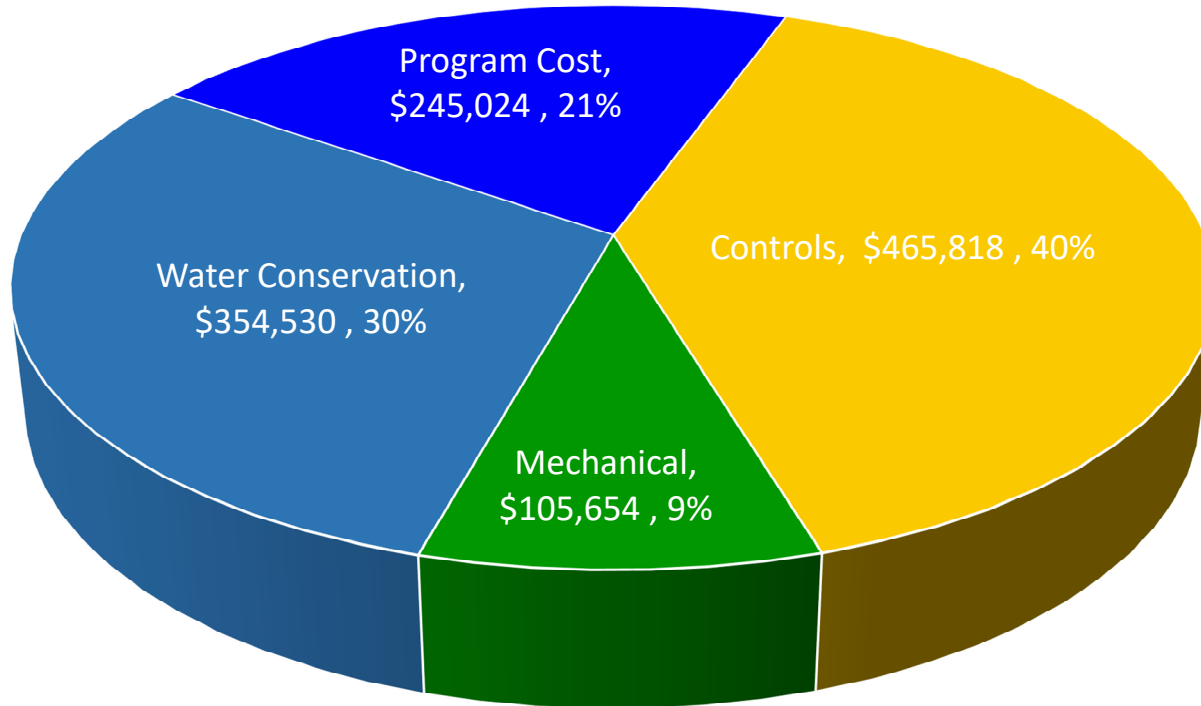
- guaranteed by TRANE.

**This will fund \$1,171,026** in real property improvements, ongoing measurement & verification services, cloud hosting and the cost of debt service while maintaining neutral-to-positive calculated cash flow throughout the term.



# Energy Funded Improvements

## Capital Improvements



Total Project =  
\$1,171,026

Guaranteed  
1<sup>st</sup> year Utility + Ops Savings  
~ \$78,165



# Improvements Identified

## Dover Elementary

Upgrade Domestic Water Booster Pump  
Water/Waste-Water Conservation

## Stewart County High School

HVAC Controls-BAS Upgrade  
Pump VFDs/Control Valve/Flush  
Water/Waste-Water Conservation

## Stewart County Middle School

Water/Waste-Water Conservation

## North Stewart Elementary

(3) DOAS Units-PreFunded  
(3) EOL HVAC Units-PreFunded  
BAS Control System-PreFunded

## Annex Building

HVAC Controls-Smart Thermostats

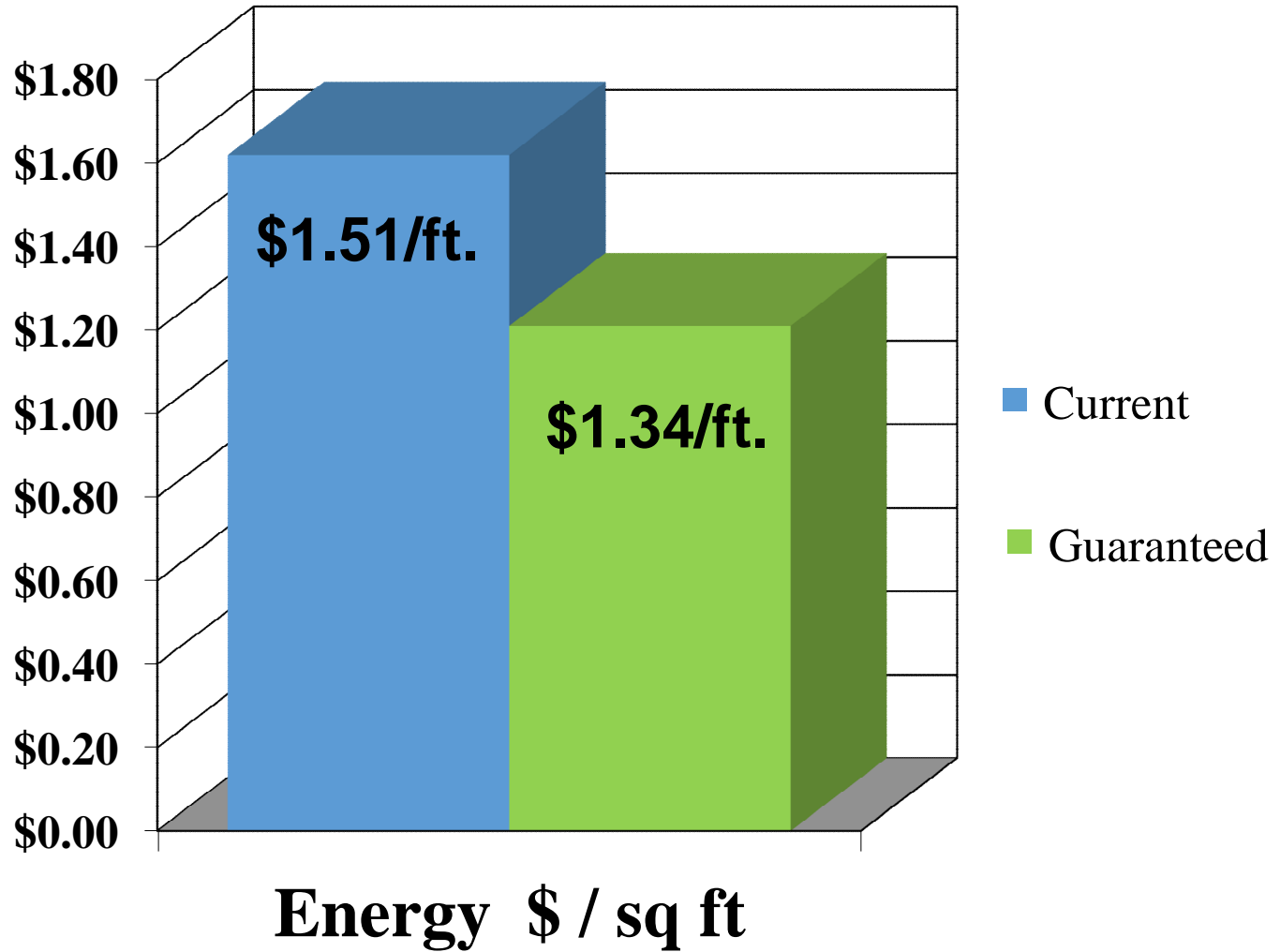
## Central Office

Smart Thermostats





# Results IMPACT



# Project Impact on the Environment

In addition to upgrading your facilities, a project with this magnitude of utility reduction does something else –

<b>CO<sub>2</sub> Emissions</b>	<b>1,413,959</b>	<b>Lbs. / yr.</b>
<b>Sulfur Dioxide</b>	<b>7,779</b>	<b>Lbs. / yr.</b>
<b>Nitrous Oxide</b>	<b>2,382</b>	<b>Lbs. / yr.</b>

It will reduce greenhouse gas emissions in Stewart County by ~ 1,413,959 pounds per year!

According to the United States EPA, this is equivalent to one of the following:

Removing over 128 vehicles from the road per year.

Planting over 15,616 trees per year.

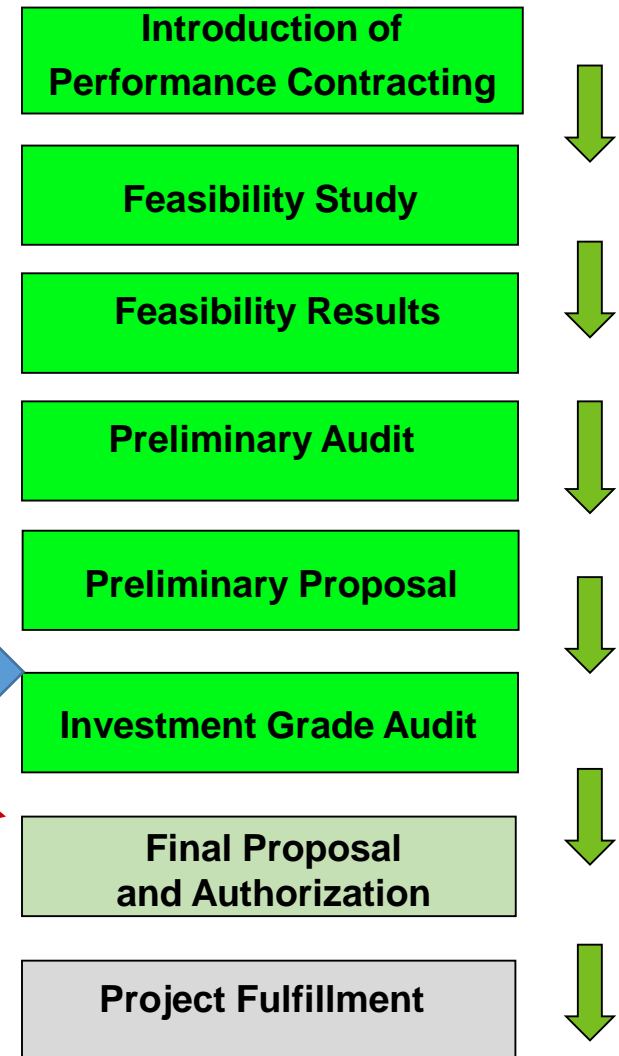
Recycling over 218 tons of waste per year, instead of sending it to a landfill.



# TRANE Program Steps

- If there is a shortfall in savings vs. the guarantee, Trane pays you the difference.
- If there is an overage on your savings greater than the guaranteed amount – you keep it!
  - Use only “guaranteed” savings (not estimated)
  - No shared savings, it’s yours.
  - Reconciled annually
  - “Transparent” Guarantee -
    - Savings Calculations are done at utility meter and utility bills.
    - **No formula, no software program**
  - All risk is on TRANE –  
\$18B company with all positive results.

First Financial Commitment



# Cost of doing nothing...

\$ 78,165 / year

\$ 6,513 / month

\$ 1,503 / week

\$ 214 / day



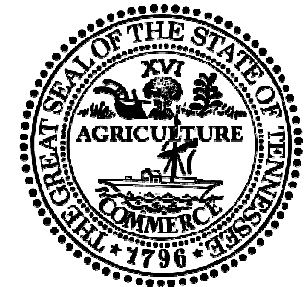
Instead of giving to the utility companies, this money could be going back into your city and school buildings to make tangible improvements tied to the capital improvement plans.



No Risk.

**All projects are reviewed and approved by:**

- ✓ TRANE Company
- ✓ State of Tennessee Energy Efficient Schools Initiative
- ✓ State of Tennessee Technical Advisory Council
- ✓ State of Tennessee Comptrollers Office
- ✓ Tennessee Valley Authority



Protecting our Schools, Counties and Taxpayers



# What next?

- **First Step** - Trane's Feasibility Analysis (**no cost to you**) will indicate whether or not opportunities exist to replace or upgrade infrastructure, funded through utility and operational savings.

Complete ✓

- **Second Step** - In order to further identify and develop opportunities that exists for a *guaranteed savings infrastructure improvement / utility reduction project*, we ask for a Letter To Proceed, which will authorize Trane to execute a "Preliminary Audit" (**no cost, no obligation to you**).

- Upon completion of the Preliminary Audit, we will be able to develop an Initial Proposal for a guaranteed energy / utility savings performance based contract with Trane.

Complete ✓

- Assuming you like what you see in the Initial Proposal, a Letter of Commitment (**Third step**) is issued to Trane to conduct a 3rd-party, Investment Grade Audit; necessary to finalize savings guarantees and construction documents – *this is the first time you will make a financial commitment to Trane.*

Complete ✓

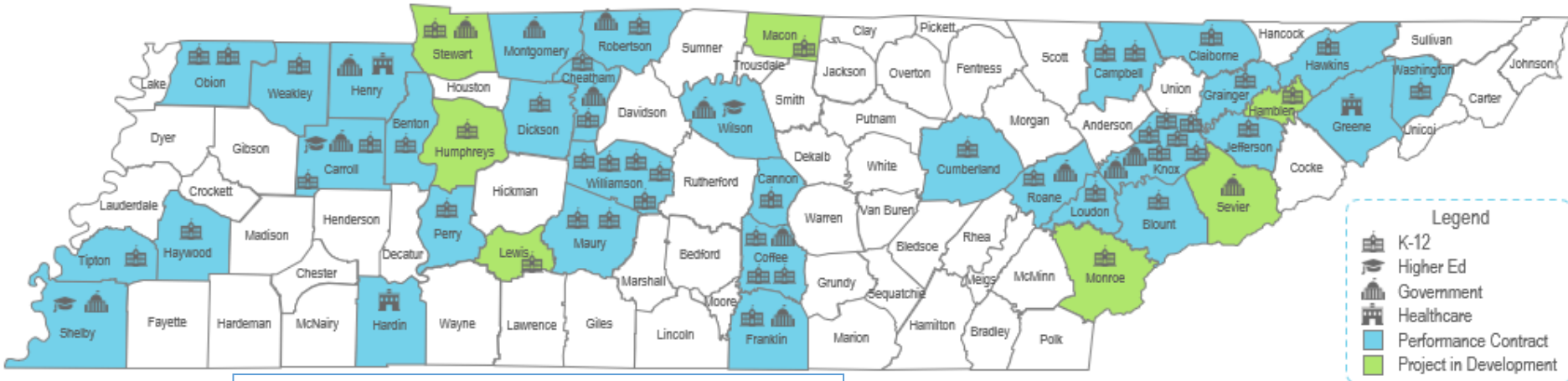


BOE Approval to proceed with the program.



# Tennessee Clients TRUSTING TRANE

## Tennessee Performance Contracting Projects



**Legend**

- K-12
- Higher Ed
- Government
- Healthcare
- Performance Contract
- Project in Development



*“Perry County partnered with TRANE because of their outstanding track record and the multiple great endorsements from school districts and communities across the state of Tennessee. The Energy Savings Grant is already saving Perry County Schools money and at the same time allowed for upgrades to lighting in all of our schools in a very cost-efficient manner. TRANE performed school building audits and we used our ESSER funds to make major infrastructure improvements to buildings that were in the most need for repair. The quality of work and the service from TRANE has been unbelievable. If we had a problem, they sent someone to take care of the problem that day. The Representatives from TRANE are easy to work with and without TRANE’s insight our project would not have been possible.”*

- Eric Lomax  
- Director of Perry County Schools



*Lenoir City Schools has benefited by working with the professionals at TRANE and EESI. We worked together to create a plan that upgraded outdated lighting, plumbing and HVAC systems with guaranteed savings that would pay for the upgrades. To date, we have realized triple the guaranteed savings that TRANE predicted. I couldn't be more pleased with the TRANE partnership that has supported our district through our energy efficient program.*

- Dr. Jeanne Barker  
- Director, Lenoir City Schools





# TRANE – Local Resources

- **Local Presence and Expertise**

- Over \$500M in projects in last 10 years in Tennessee
- Local Offices in Knoxville, Tri – Cities, Chattanooga, Nashville and Memphis
- Manufacturing Center – Clarksville, Tennessee
- **~1,800 TRANE Employees in Tennessee**



Nashville Office – Grassmere Business Park

- **Close Proximity & Rapid response**

- Local office, local support
- Local expertise
- Local training



TRANE Manufacturing  
Clarksville, Tennessee



Over \$190M / year in Tennessee  
tax revenues contributed  
by TRANE



# Questions

