



Energy Performance Contracting Services for
**ELIZABETHTOWN AREA
SCHOOL DISTRICT**

February 10, 2026

**EAST HIGH STREET
ELEMENTARY SCHOOL**

QUANDEL



AGENDA

1. Introductions

2. East High Street Elementary

1. Existing Conditions
2. Scope Options
3. Schedule Milestones

3. GESA Process

4. Q&A

QUANDEL PRESENTATION TEAM



SHAWN NICHOLSON
Lead Engineer



ROB STRICKLER
EVP of Business Development



EAST HIGH STREET ELEMENTARY SCHOOL



EXISTING CONDITIONS

Central Plant Equipment

Water-Tube Boilers

- 15 Years Old
- ASHRAE Life Expectancy: 24-30 Years

Air-Cooled Chillers

- 15 Years Old
- ASHRAE Life Expectancy: 20 Years



EAST HIGH STREET ELEMENTARY SCHOOL

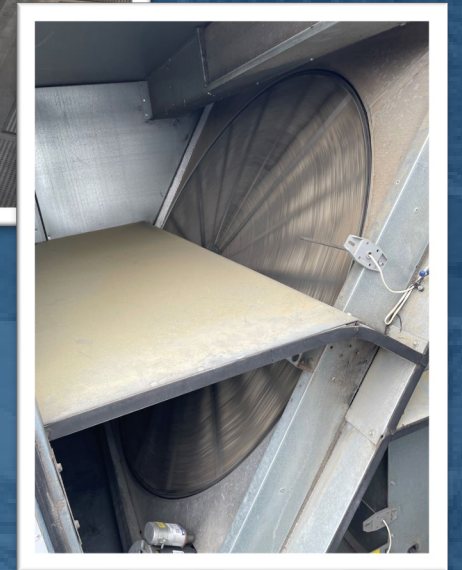
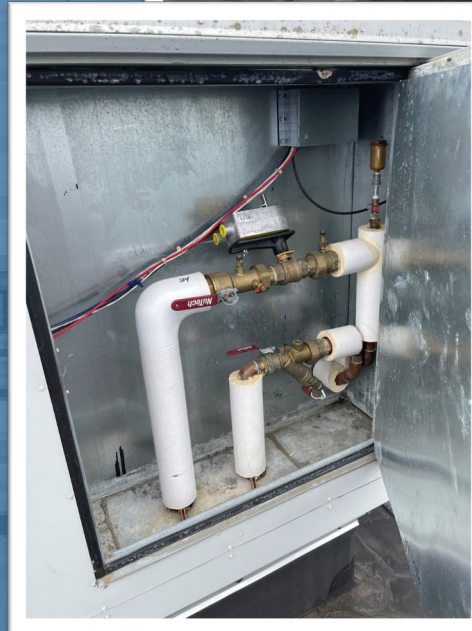


EXISTING CONDITIONS

Rooftop Equipment

Energy Recovery Units

- Responsible for Controlling Space Humidity
- Energy Recovery Wheels
- Heating & Cooling Coils
- Fans with Variable Speed Drives
- 15 Years Old
- ASHRAE Life Expectancy: 15 Years



EAST HIGH STREET ELEMENTARY SCHOOL



EXISTING CONDITIONS

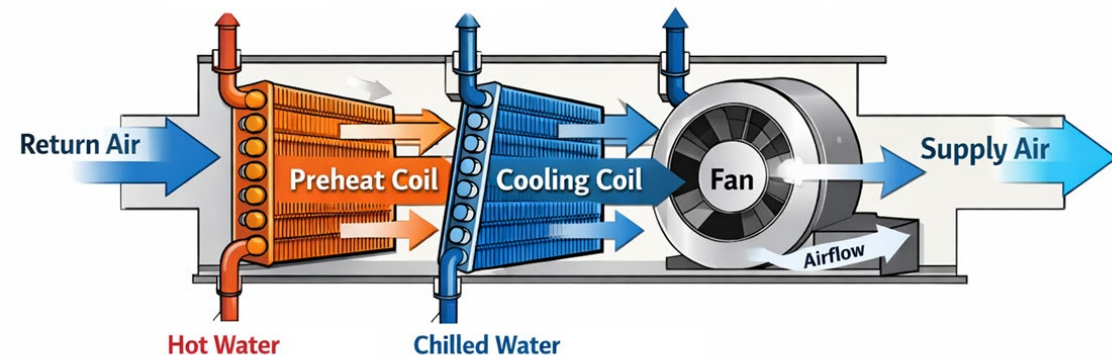
Classroom Equipment

Fan Coil Units

- Control Space Temperature
- Not Designed to Control Humidity
- Heating & Cooling Coils
- 15 Years Old
- ASHRAE Life Expectancy: 20 Years

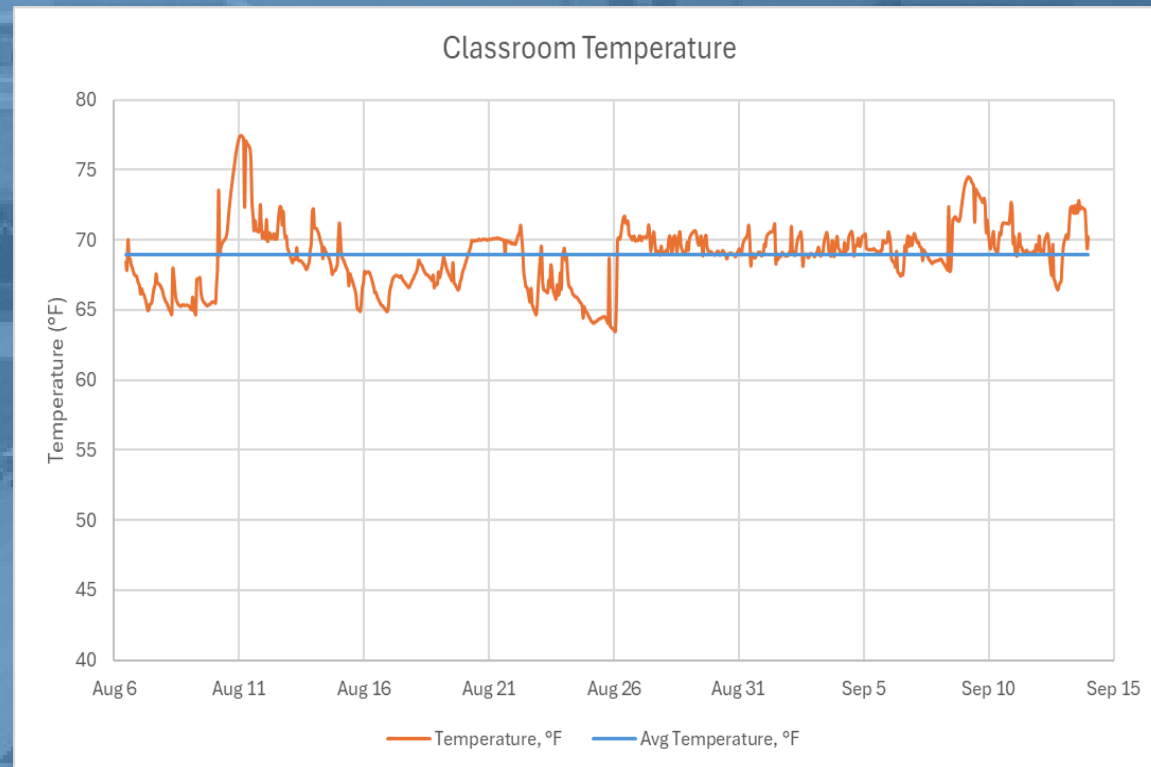


HVAC Airflow Diagram - Fan Coil Unit (Draw-Through)



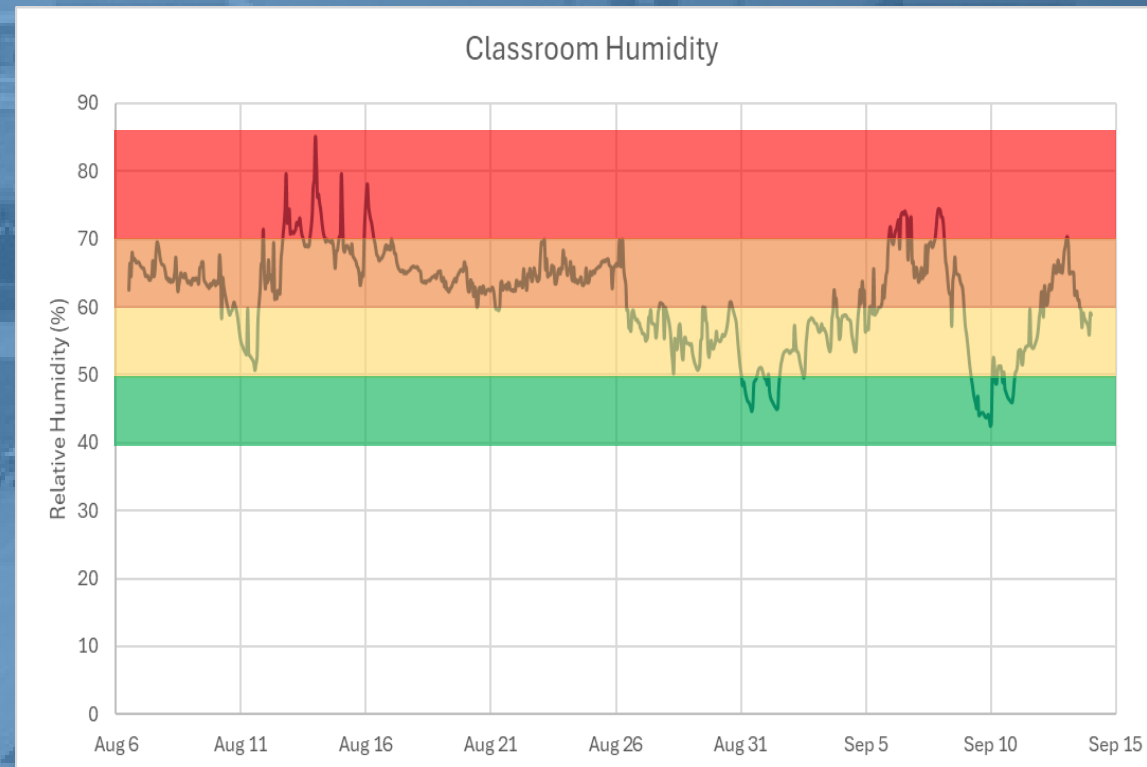
EAST HIGH STREET ELEMENTARY SCHOOL

EXISTING CONDITIONS



EAST HIGH STREET ELEMENTARY SCHOOL

EXISTING CONDITIONS





PROJECT DISCUSSION

EAST HIGH ELEMENTARY SCHOOL SCOPE OPTIONS EXPLORED

Option #1: Commissioning with Central Plant Equipment Replacement

Estimate= \$900,000

Pros:

- Lowest upfront cost
- Extends life of existing systems by 10 yrs. +/-
- Improves heating and cooling performance
- Minimal disruption, no new piping or terminal units

Cons:

- Extends life of existing systems by 10 yrs. +/-
- Lowest energy savings potential

Estimated 20-Year Ownership Cost

- \$7.3 Million

Option #2: Geothermal Heat Pump Central Utility Plant

Estimate= \$5M (before tax credits)

Pros:

- Improved energy efficiency
- Lower maintenance than individual units
- Opportunity for \$1.3M in tax credits
- New equipment to have 20 yrs. expected life and wellfield 50 yrs.

Cons:

- Some legacy equipment to remain (Fan Coils)
- Less room control / redundancy than Option #3

Estimated 20-Year Ownership Cost

- \$7.2 Million



PROJECT DISCUSSION

EAST HIGH ELEMENTARY SCHOOL SCOPE OPTION #3: INDIVIDUAL GEOTHERMAL HEAT PUMPS

Estimate = \$6.5M (before tax credits)

Pros:

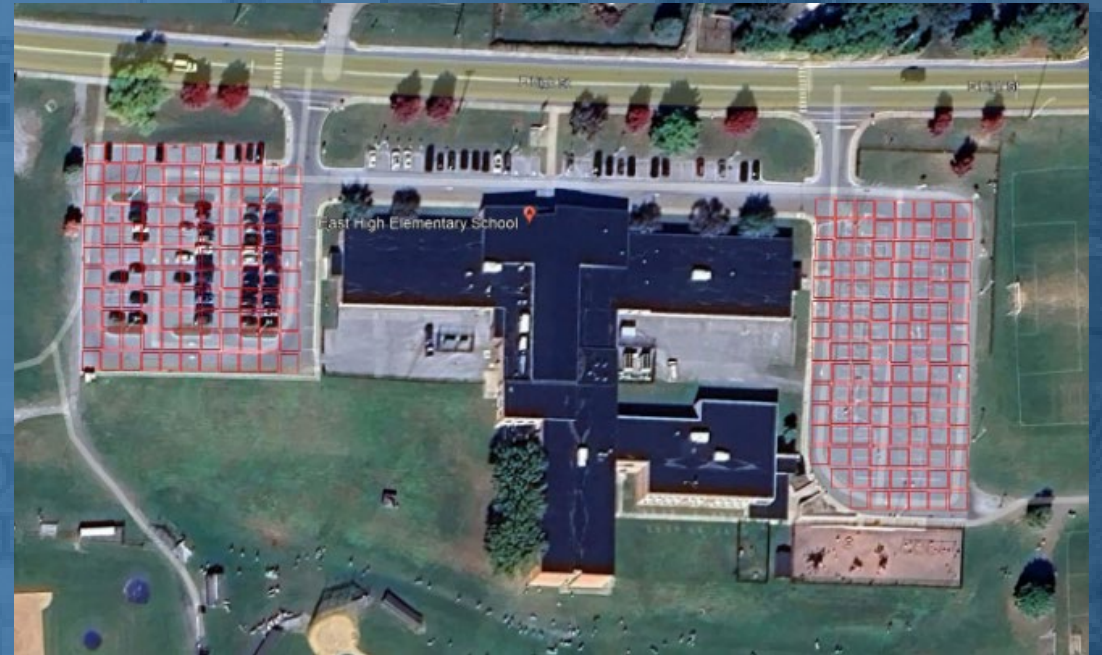
- Highest energy efficiency and long-term savings
- Full system replacement with new equipment
- Room-level temperature control improves comfort
- Eligible for \$1.725M in tax credits
- Geothermal wellfield offers 50+ year lifespan

System Impact

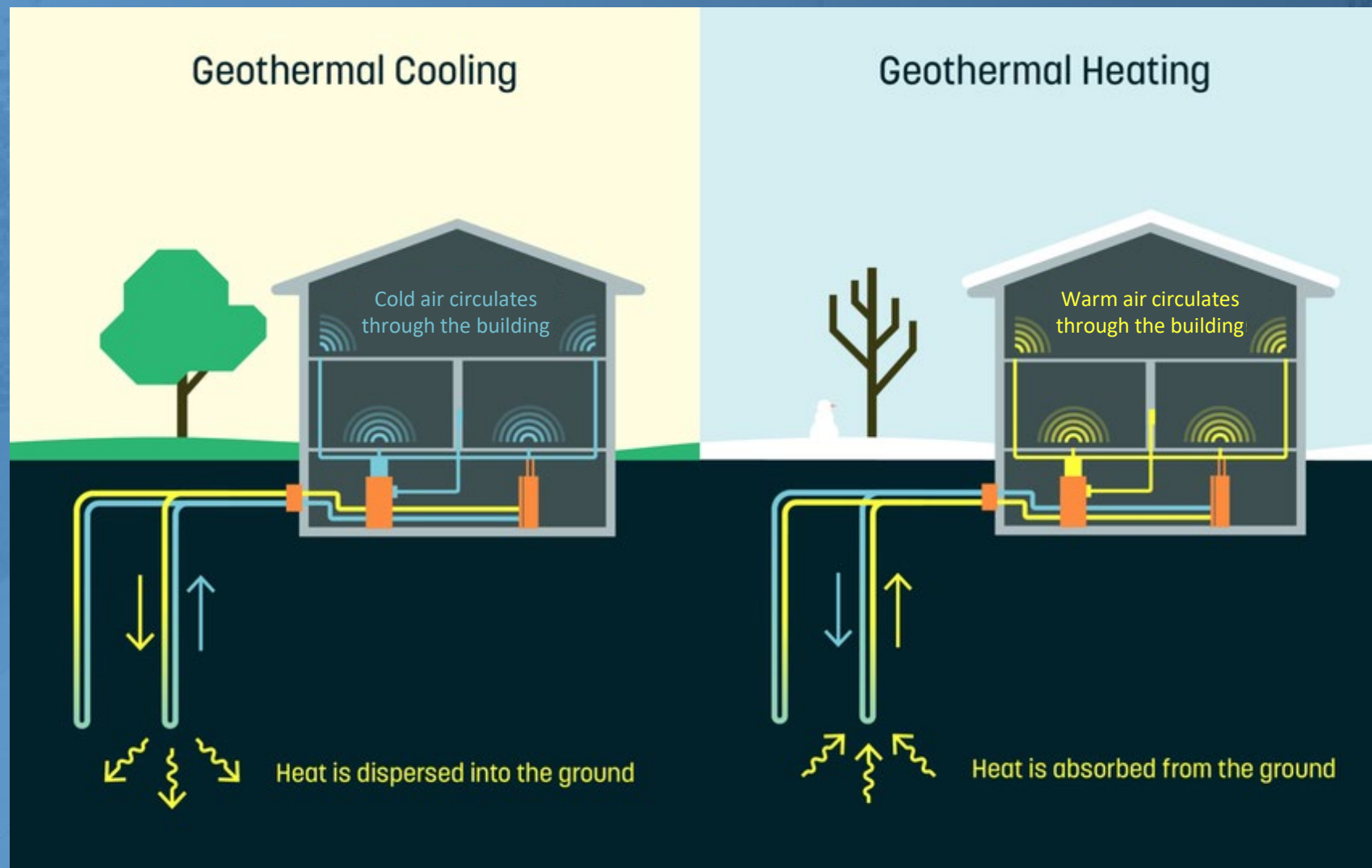
- New heat pumps in all classrooms and rooftop units
- New geothermal piping and BAS throughout
- Requires geothermal wellfield and parking lot restoration

Estimated 20-Year Ownership Cost

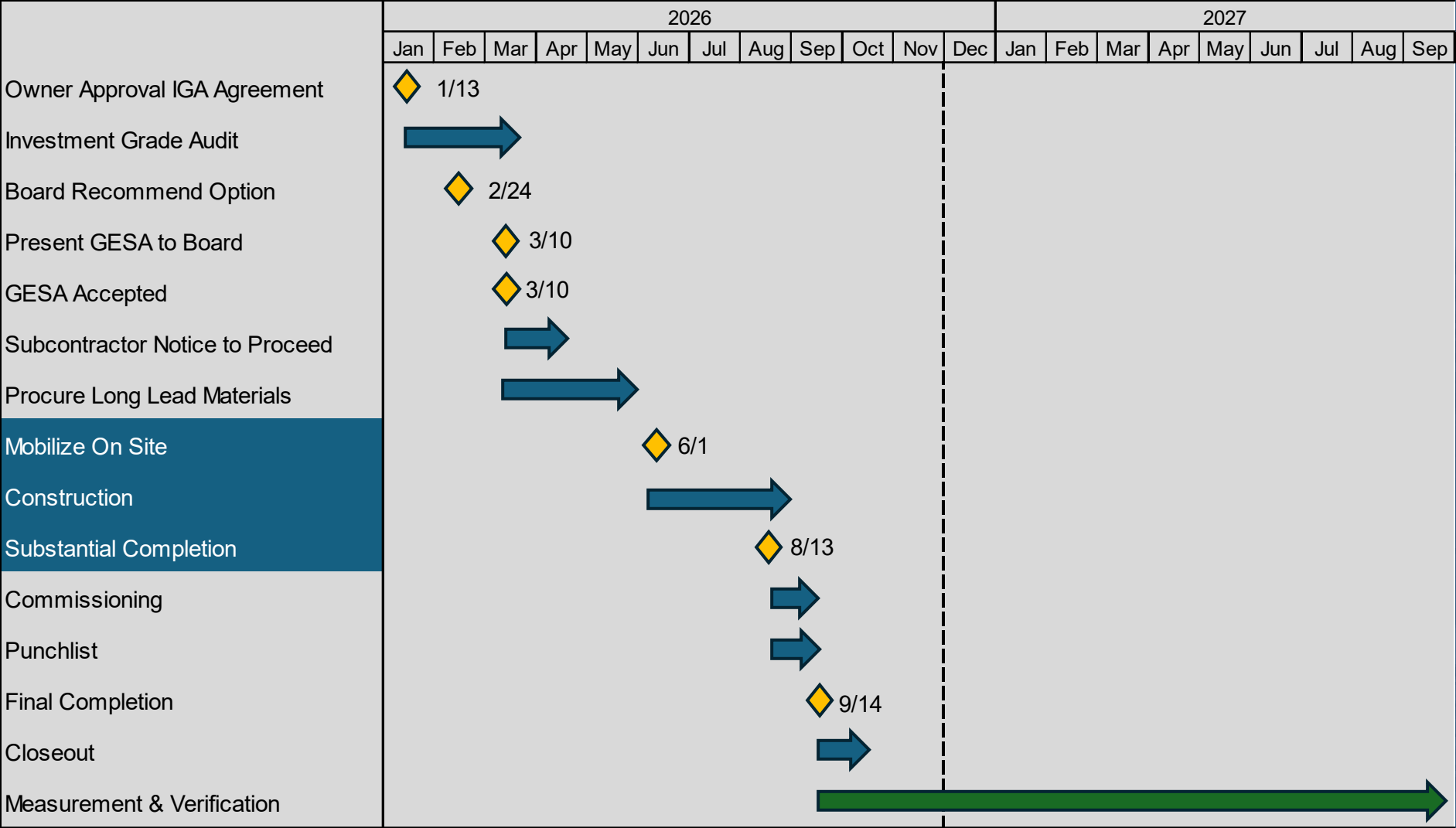
- \$6.6 Million



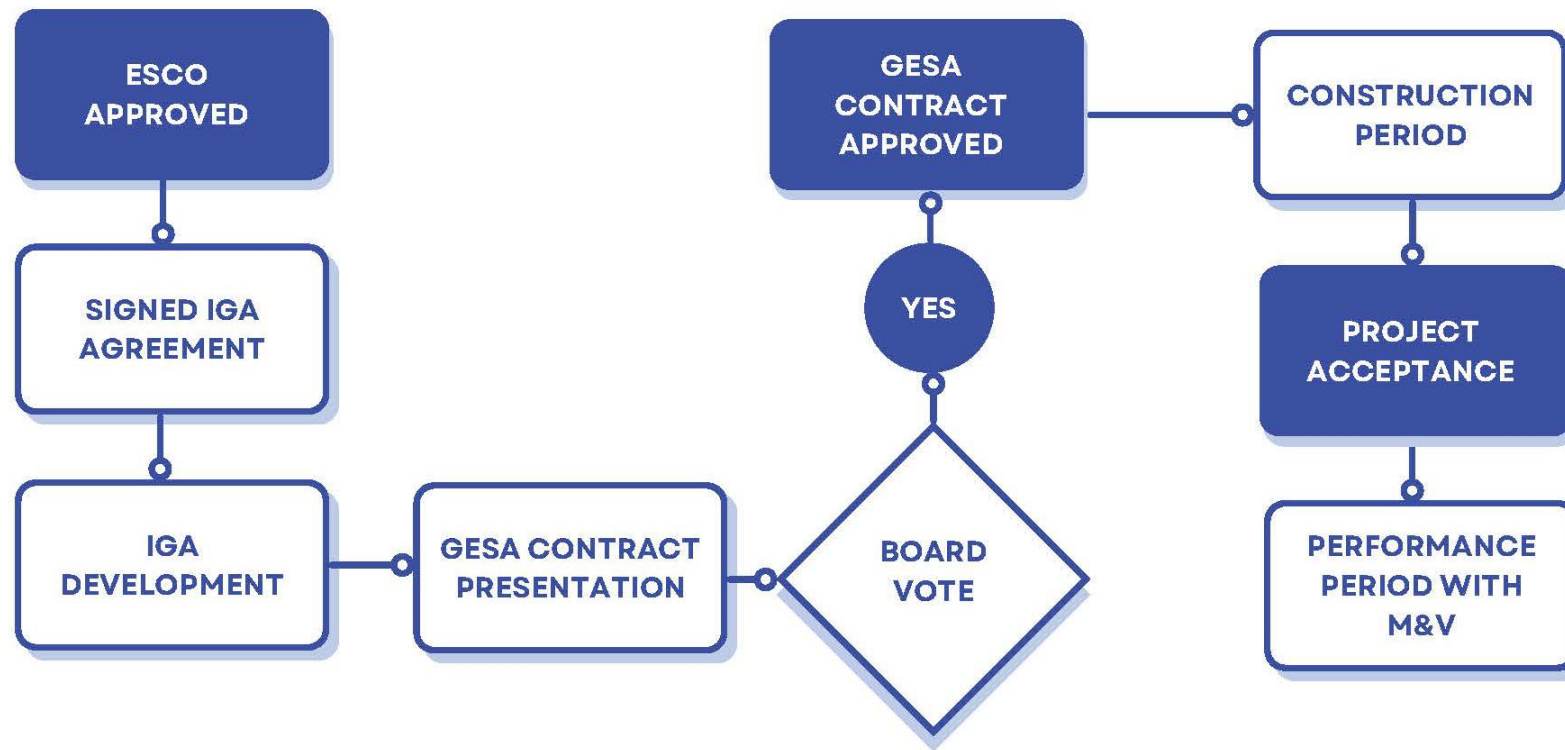
WHAT IS A GEOTHERMAL HEATPUMP SYSTEM?



PRELIMINARY PROJECT SCHEDULE



GESA PROJECT PROCESS





1. INVESTMENT GRADE AUDIT

Finalize project scope, cost, and energy savings in conjunction with the district.



2. CONSTRUCTION

140+ years of industry-leading construction management focused on safety, quality, schedule, and budget to help reach the district's project goals.



3. MEASUREMENT & VERIFICATION

Commissioning and performance assurance after construction to ensure operational satisfaction and energy savings guarantees are all met.



QUANDEL



1. INVESTMENT GRADE AUDIT

- Collaborate closely with district stakeholders to align scope with educational priorities.
- Conduct detailed analysis of existing systems and facility conditions.
- Model projected energy savings using industry-standard tools.
- Develop accurate construction cost estimates and financial models.
- Identify available utility rebates, tax credits, and funding strategies.
- Present clear, actionable options to support informed decision-making.

2: CONSTRUCTION



- **Safety: First. Last. Always!**
- **Minimize disruption to school operations.**
- **Coordinate with district events and schedules.**
- **Daily on-site supervision and trade coordination.**
- **Clear, consistent communication with all stakeholders.**
- **Focused on quality, budget, and schedule control.**



3: MEASUREMENT AND VERIFICATION

- Perform rigorous commissioning to ensure systems function as intended.
- Verify operational performance against design expectations.
- Monitor energy use to confirm savings and troubleshoot anomalies.
- Provide user training to maximize system performance and occupant comfort.
- Deliver ongoing reporting as required to support performance guarantees.

A blurred background of a classroom with several students raising their hands. The focus is on the hands and the text overlay.

Q & A



QUANDEL