



# MASTER PLANNING FOR THE FUTURE

DECEMBER 1, 2020

# Webinar Presenters



**TIM RIPP**  
AIA, LEED AP  
Architect



**JEFF CHADWICK**  
AIA, LEED AP  
Architect



**ADAM KENT**  
Mechanical Engineering



**WILLIAM POKOJSKI**  
Associate AIA  
Architecture



**DR. CHAD DENKER**  
David City Public Schools  
Superintendent





- 74-year history, founded in 1946 in Lincoln, NE
- In-house expertise in master planning, architecture, engineering, landscape architecture, and interior design
- Staff of 130+
- More than \$300 million worth of PK-12 work in the past 10 years
- Pre-bond and community engagement assistance
- Innovators in the design of educational facilities



# PK-12 SCHOOL EXPERIENCE



David City Public Schools



Twin River Schools



Freeman Public Schools



Pleasanton Public Schools



LPS, Kloefkorn Elementary School



LPS, Lincoln High School



Seward Middle School



Arapahoe Public School



District OR1, Elementary & Jr/Sr High



Elkhorn Valley Public Schools



Exeter-Milligan Schools



Friend Public Schools



Hastings Middle School



LPS, Moore Middle School



LPS, Lincoln East High School



West Holt Public Schools



# 65 SCHOOL PROJECTS, FOR MORE THAN 25 SCHOOL DISTRICTS



Arapahoe Public Schools  
Catholic Diocese of Lincoln  
Central City Public Schools  
Conestoga Public Schools  
David City Public Schools  
District OR-1 (Bennet & Palmyra)  
East Butler Public Schools  
Elkhorn Valley Schools  
Exeter-Milligan Public Schools  
Fillmore Central Public Schools  
Freeman Public Schools  
Friend Public Schools  
Hastings Public Schools  
Johnson County Central Public School  
Kearney Public Schools  
Lakeview Community Schools  
Leigh Community Schools  
Lincoln Christian Schools  
Lincoln Public Schools  
Osmond Community School  
Pleasanton Public Schools  
Schuyler Community Schools  
Scotus Central Catholic School  
Seward Public Schools  
Stapleton Public Schools  
Sterling Public Schools  
Syracuse Public Schools  
Thayer Central Community Schools  
Twin River Public Schools  
West Holt Public Schools  
West Point-Beemer Public Schools



# David City Public Schools – Project Experience

- The Clark Enersen Partners has completed 19 projects with district
- 5 with Dr. Chad Denker as Superintendent







- Elementary and Jr/Sr High
- Superintendent since 2013
- Implemented 5-, 10-, and 20-year plans







MOORE  
MIDDLE SCHOOL

**STATE FUNDING**



# State Funding Options

- General Fund
- QCPUF (Qualified Capital Purchase Undertaking Fund)
  - Current Levy Limit: 3 cents
- Special Building Fund
  - Current Levy Limit: 14 cents



# David City Public School – Financial History

- Various types of financing options
  - Tax Anticipation Note
  - Paid Cash
  - Lease-Purchase

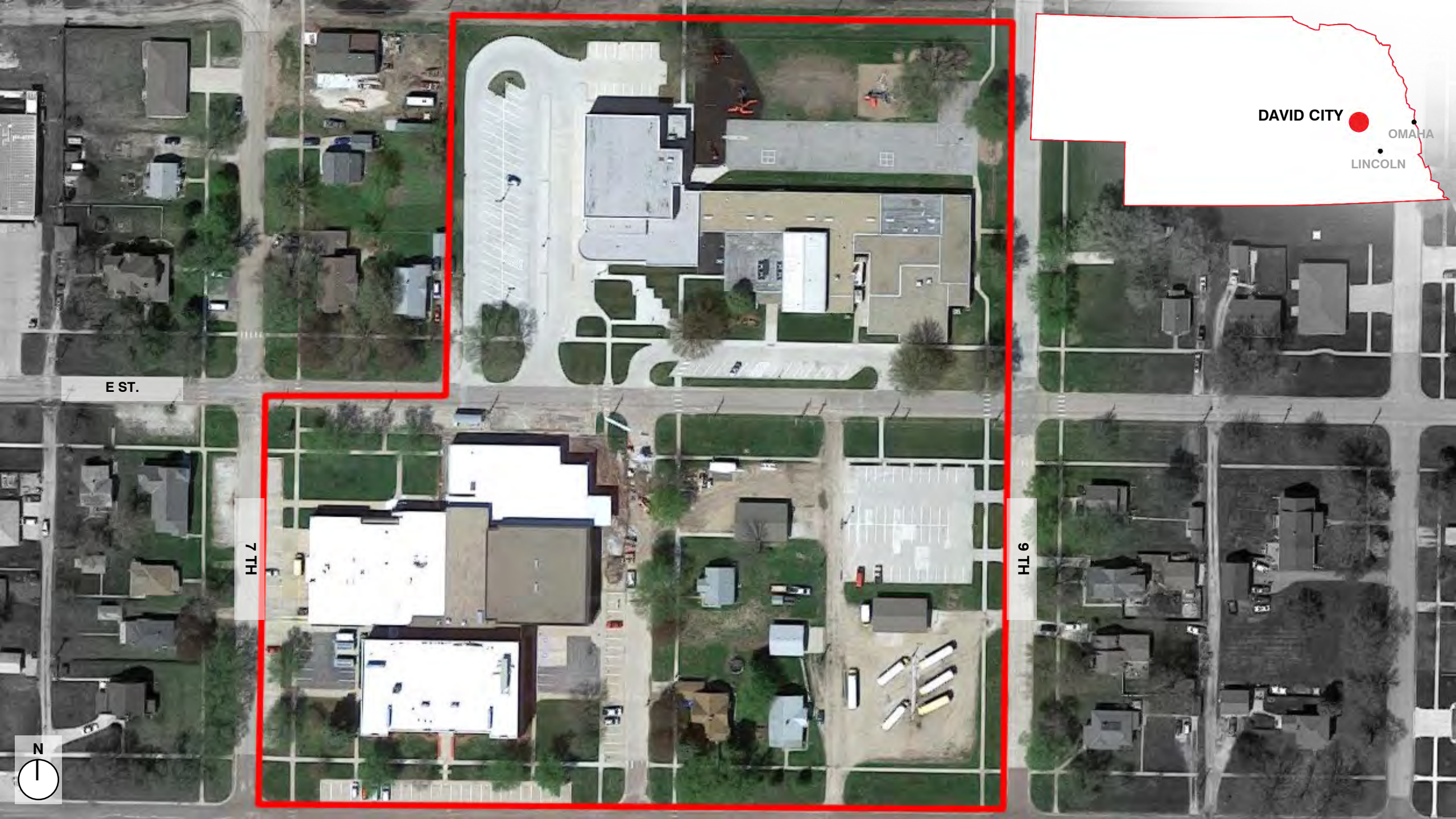






## APPROACH / METHODOLOGY





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DAVID CITY

OMAHA

LINCOLN





# David City Public School Projects

## LONG-TERM STRATEGIC PLAN

### Overview of Current Work

|                                  |          |
|----------------------------------|----------|
| Phase 1: Weight Room and Commons | Complete |
| Phase 2: Elementary Addition     | Complete |

### Current Proposed Plan Forward

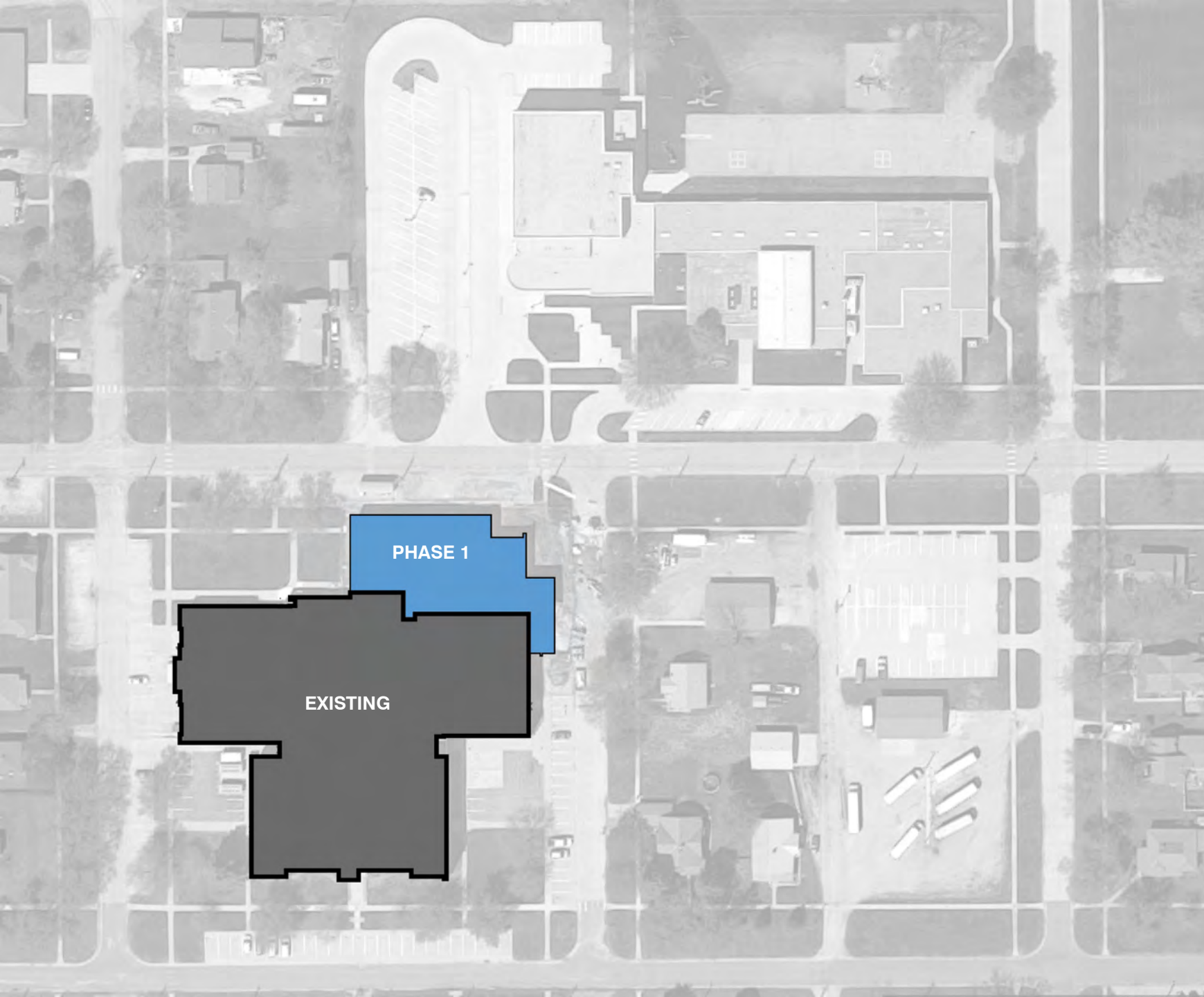
#### 5- to 10-Year Plan

|   |                   |
|---|-------------------|
| Phase 3: High School and District Offices | Complete Aug 2021 |
| Phase 4: Theatre and Gymnasium Addition   | 2024-2026         |

#### 20-Year Plan

|   |           |
|---|-----------|
| Phase 5: Locker Rooms and Wrestling Rooms | 2028-2038 |
| Phase 6: Classroom Addition OR Renovation | 2028-2038 |
| Phase 7: Bus Barn and Additional Parking  | 2028-2038 |





- **PHASE 1**

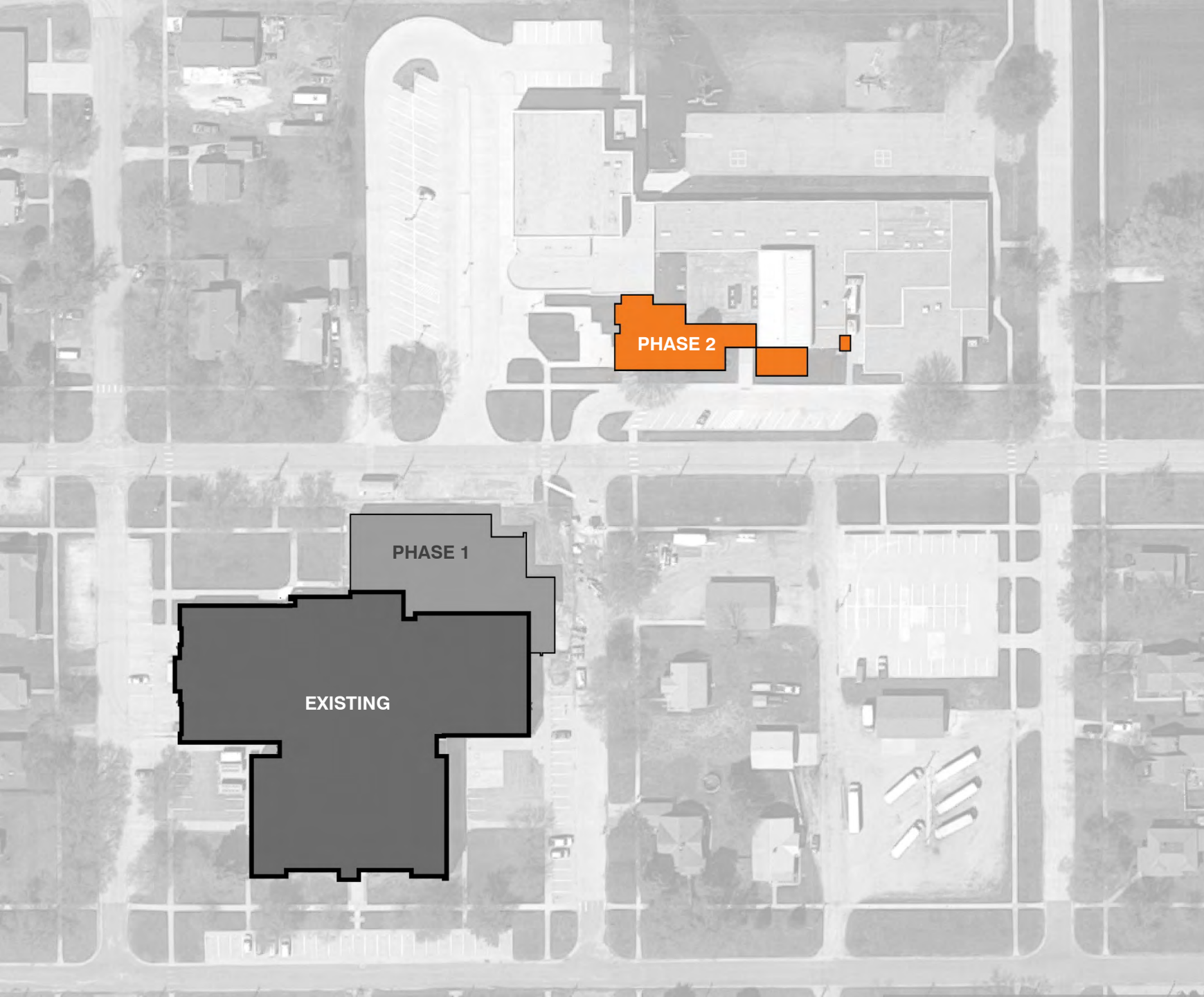
*Completed 2015*

- Activities entrance
- Commons
- Weight room
- Restrooms
- Concessions

Project Area - 10,000 SF

Project Cost - \$2,100,000





## ● PHASE 2

*Completed 2018*

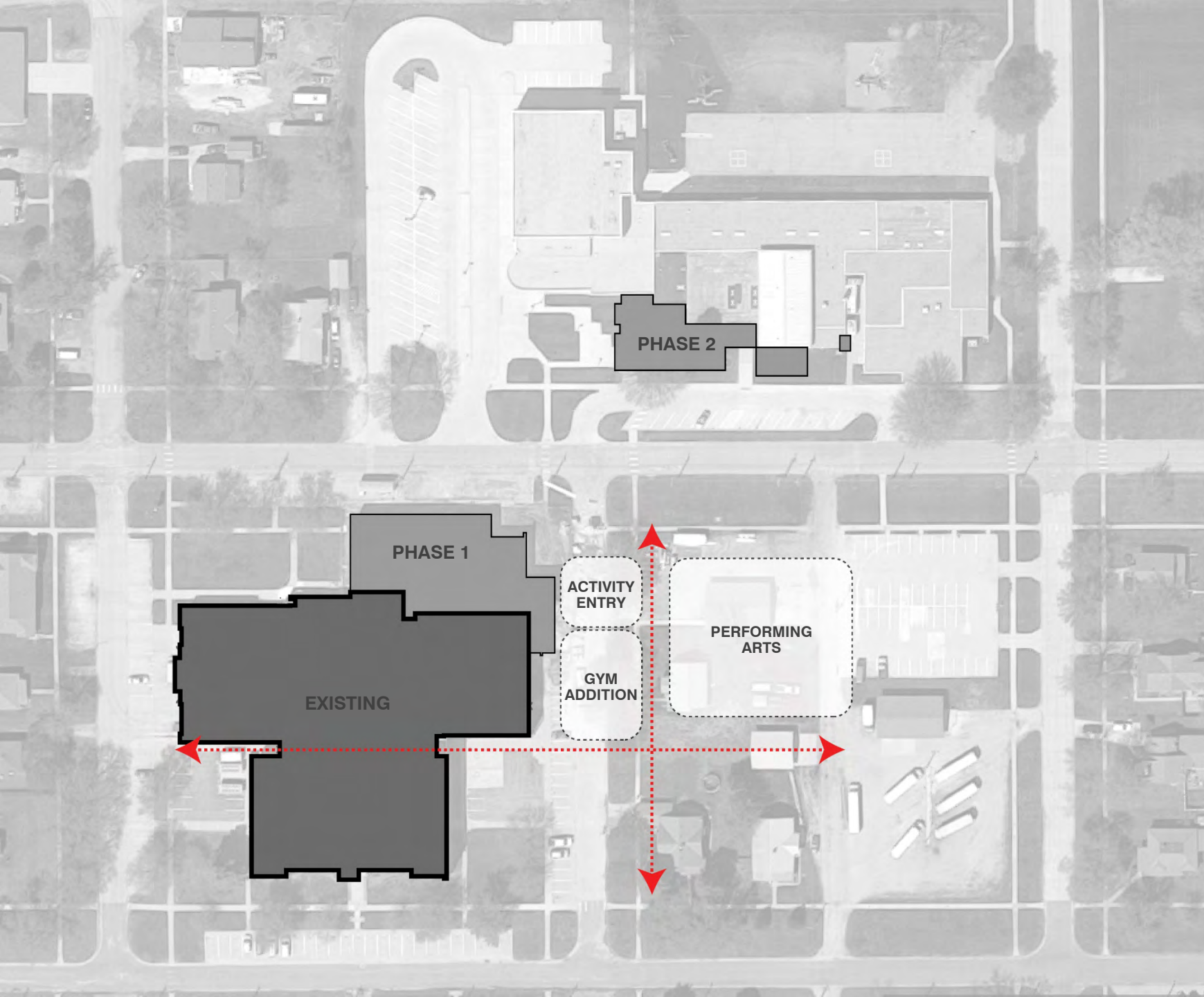
- Elementary cafeteria expansion
- Kitchen freezer
- 4 special education classrooms
- Offices
- Conference room

Project Area - 6,000 SF

Project Cost - \$1,400,000

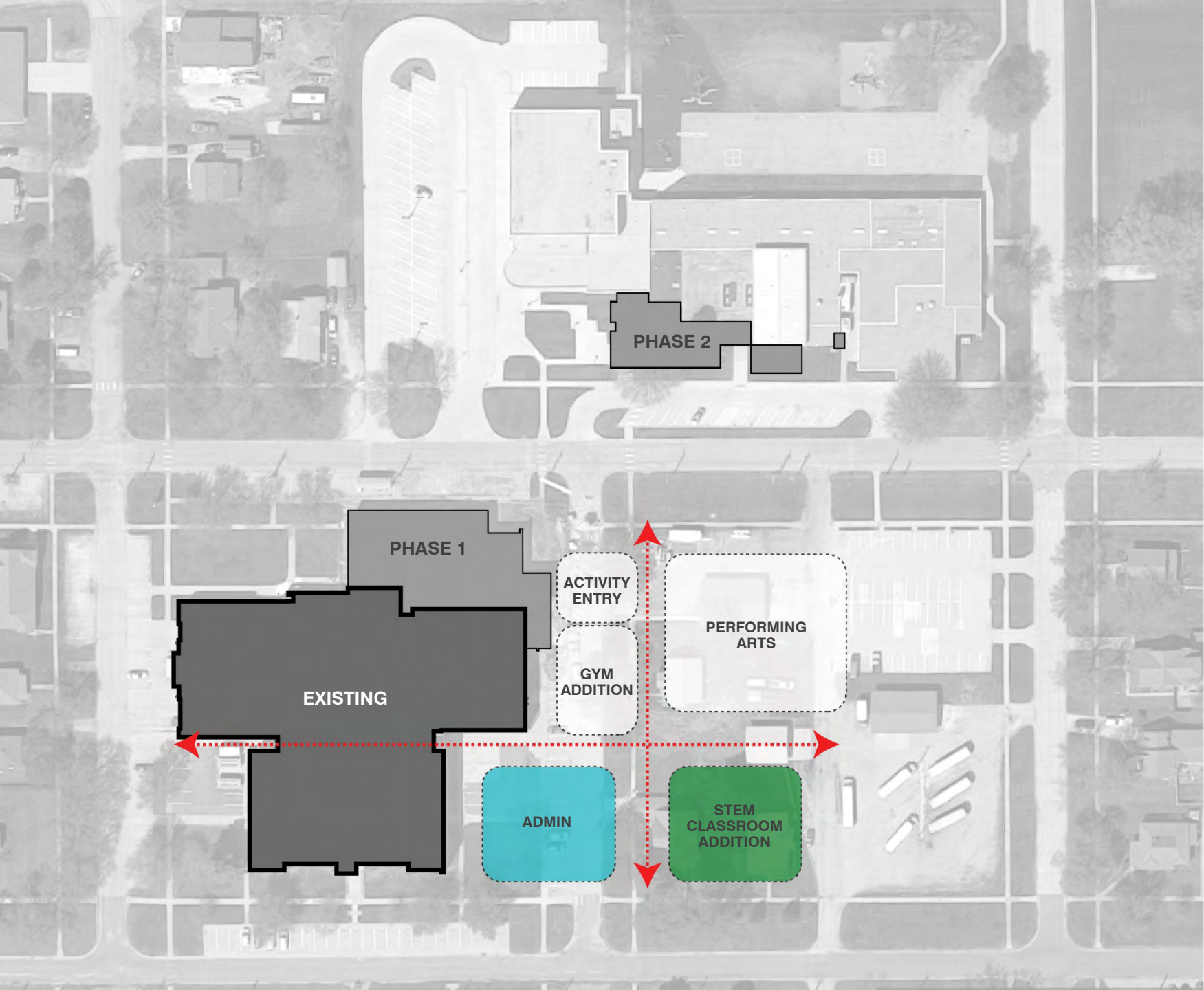


# SITE DIAGRAM

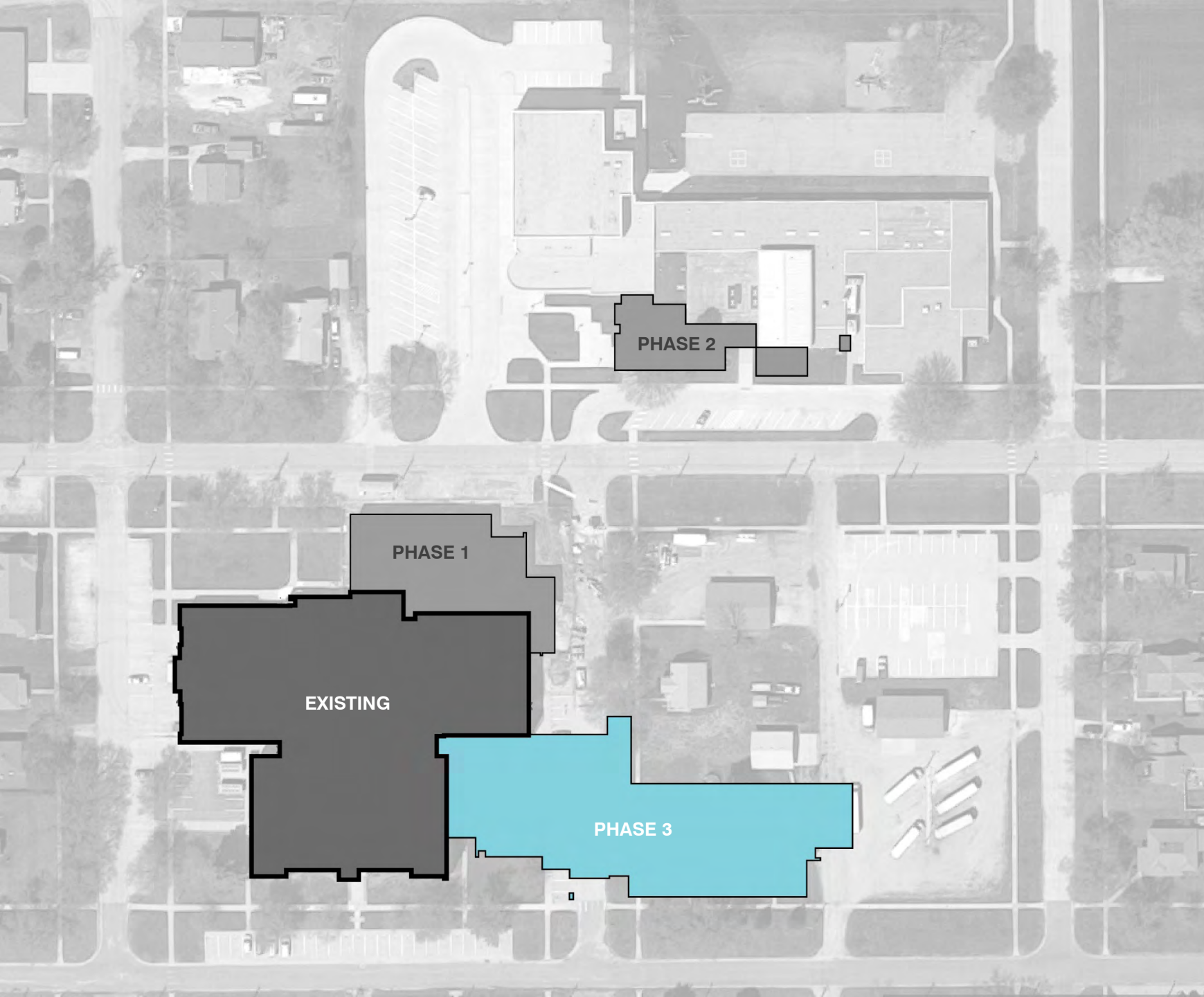




SITE DIAGRAM







## ● PHASE 3

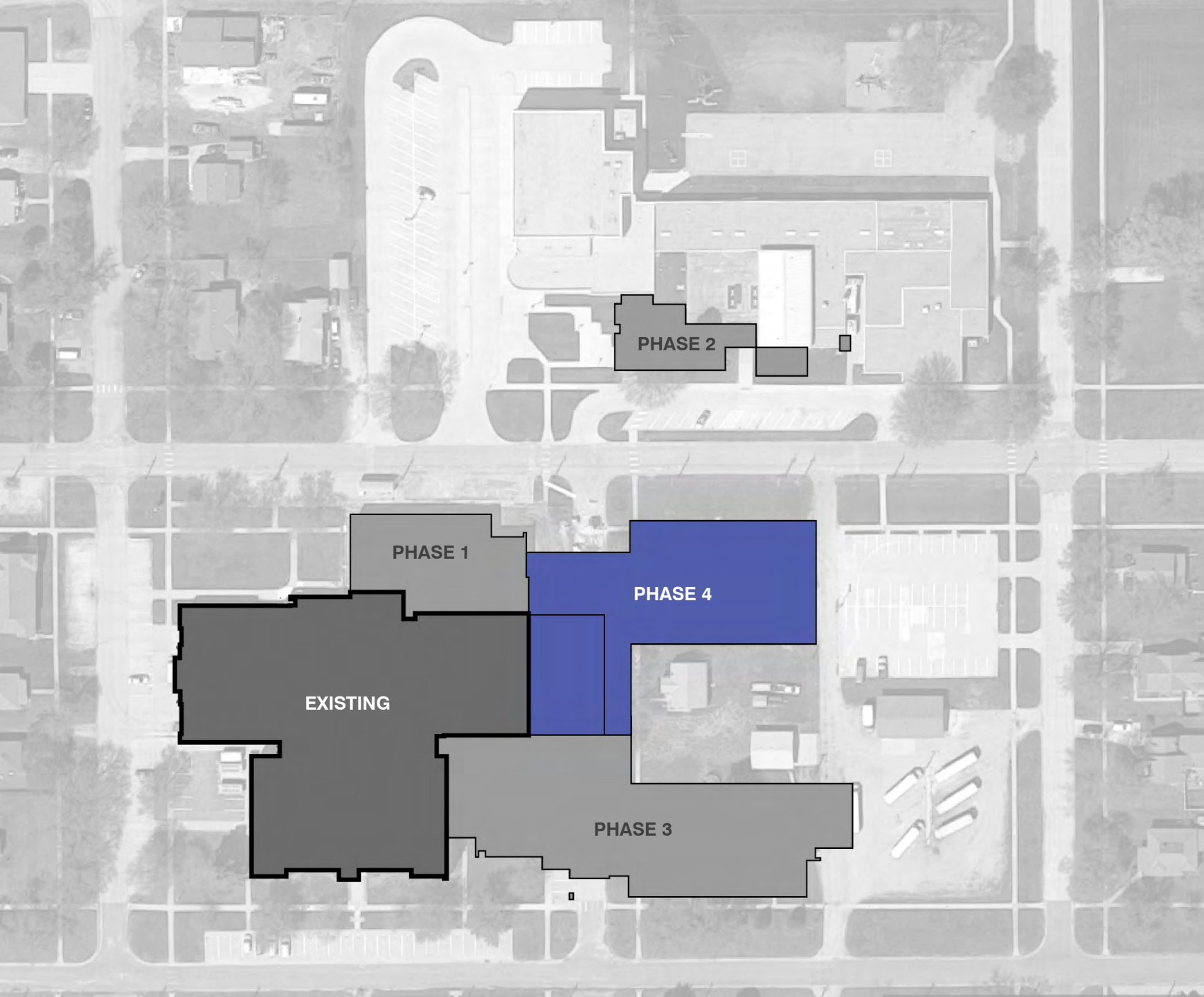
### *5-Year Plan – In Construction*

- 3 science classrooms
- 1 art classroom
- 3 math classrooms
- 1 special education classroom
- District and admin offices

Project Area - 30,000 SF

Project Cost - \$7,500,000

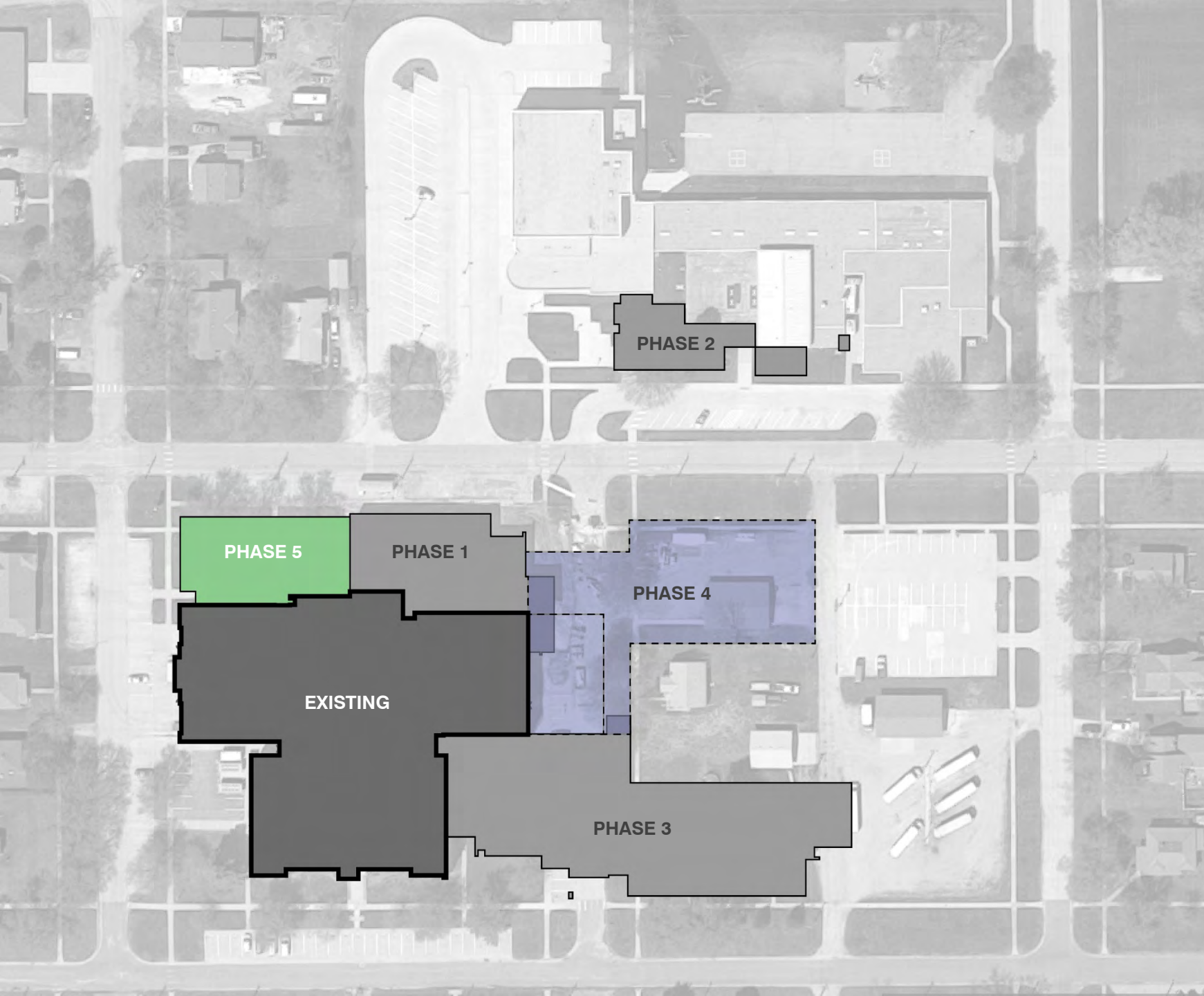




- **PHASE 4**

*10+ Year Plan*

- Theatre and gym addition
- Locker rooms and wrestling rooms
- 20 classrooms and 6 restrooms
- Bus barn/additional parking
- Competition gym

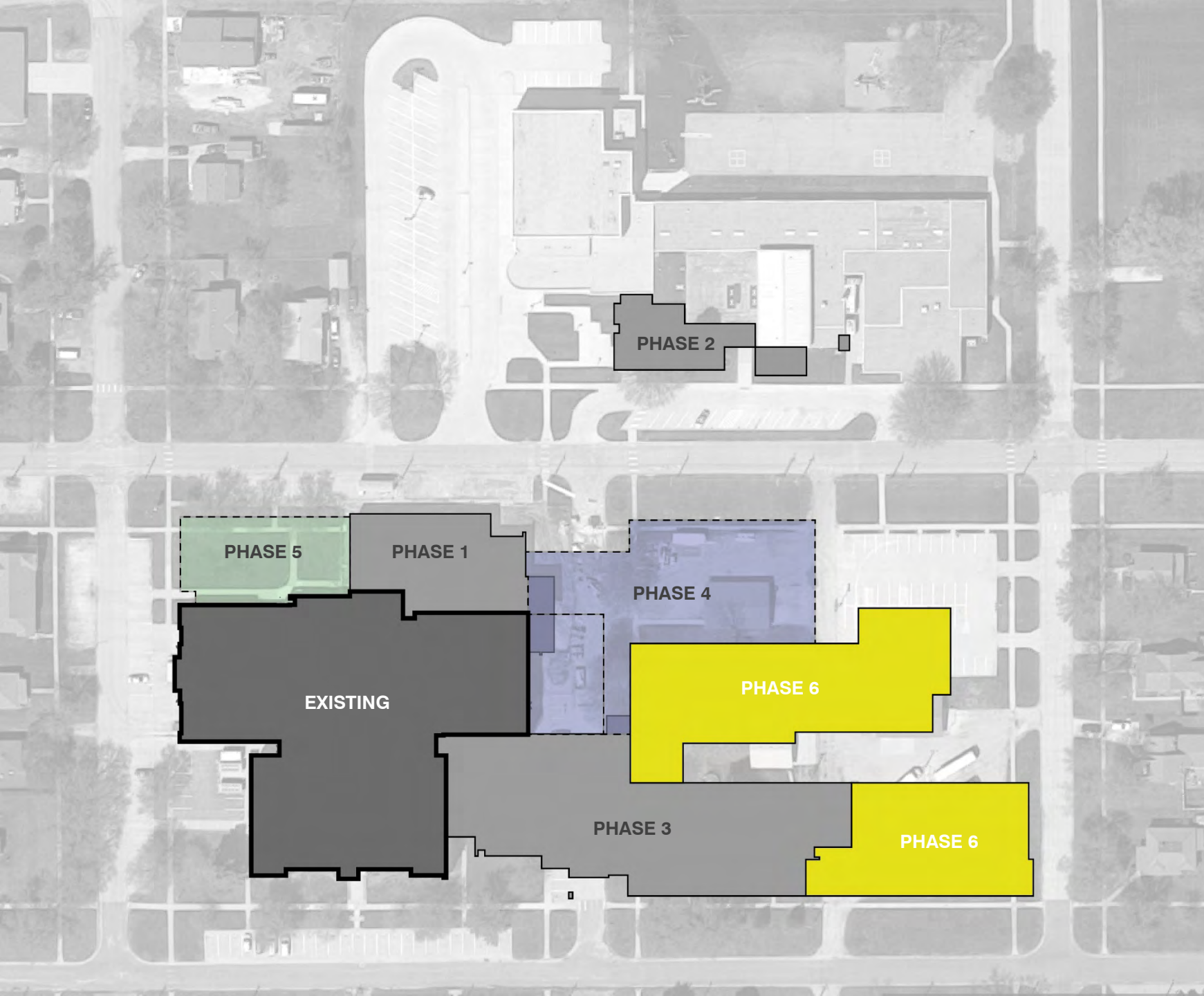


## ● PHASE 5

*20+ Year Plan*

- Locker Rooms
- Wrestling Rooms

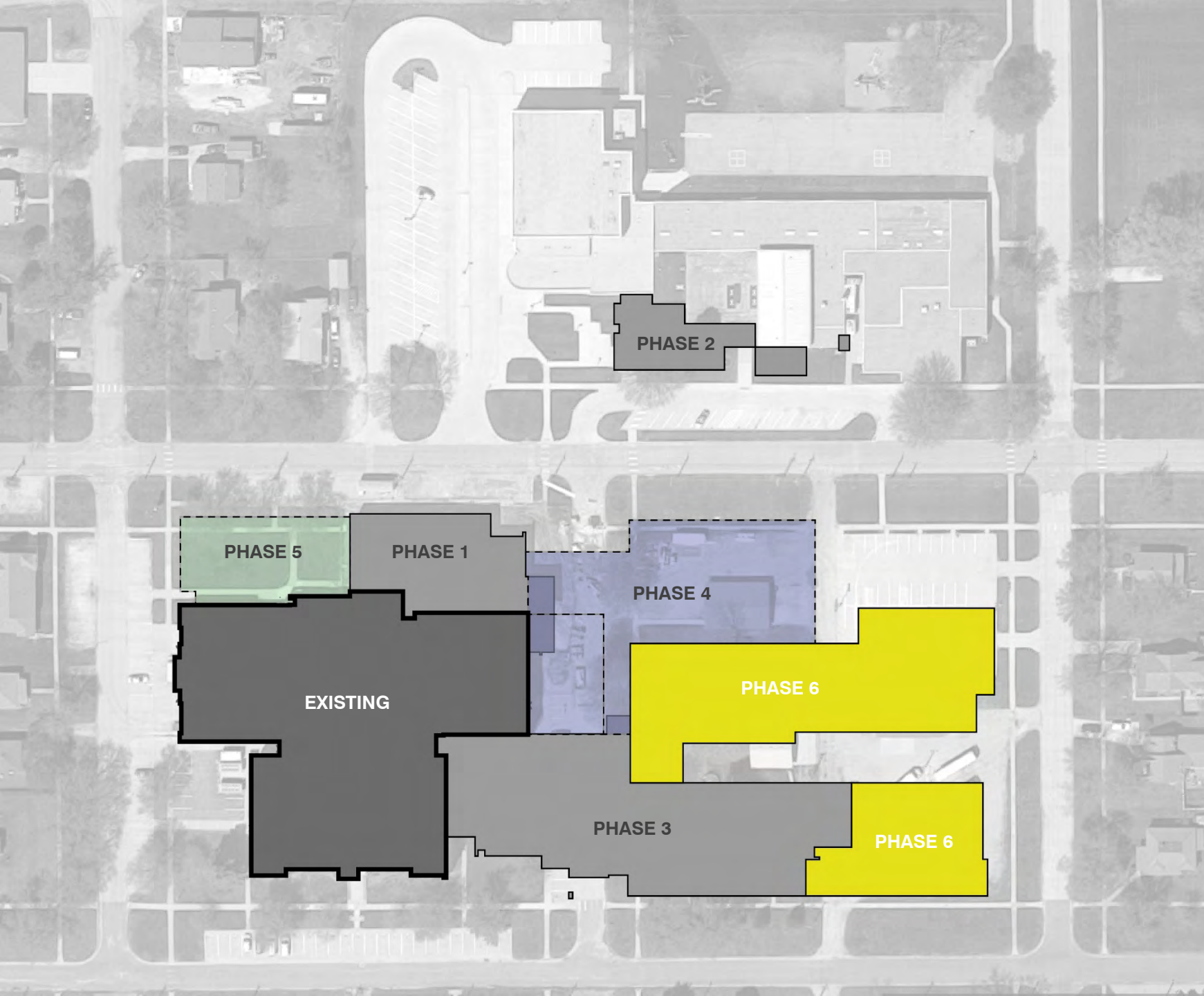




## ● PHASE 6

*20+ Year Plan*

- Classrooms
- Media center
- Restrooms



- **PHASE 6**

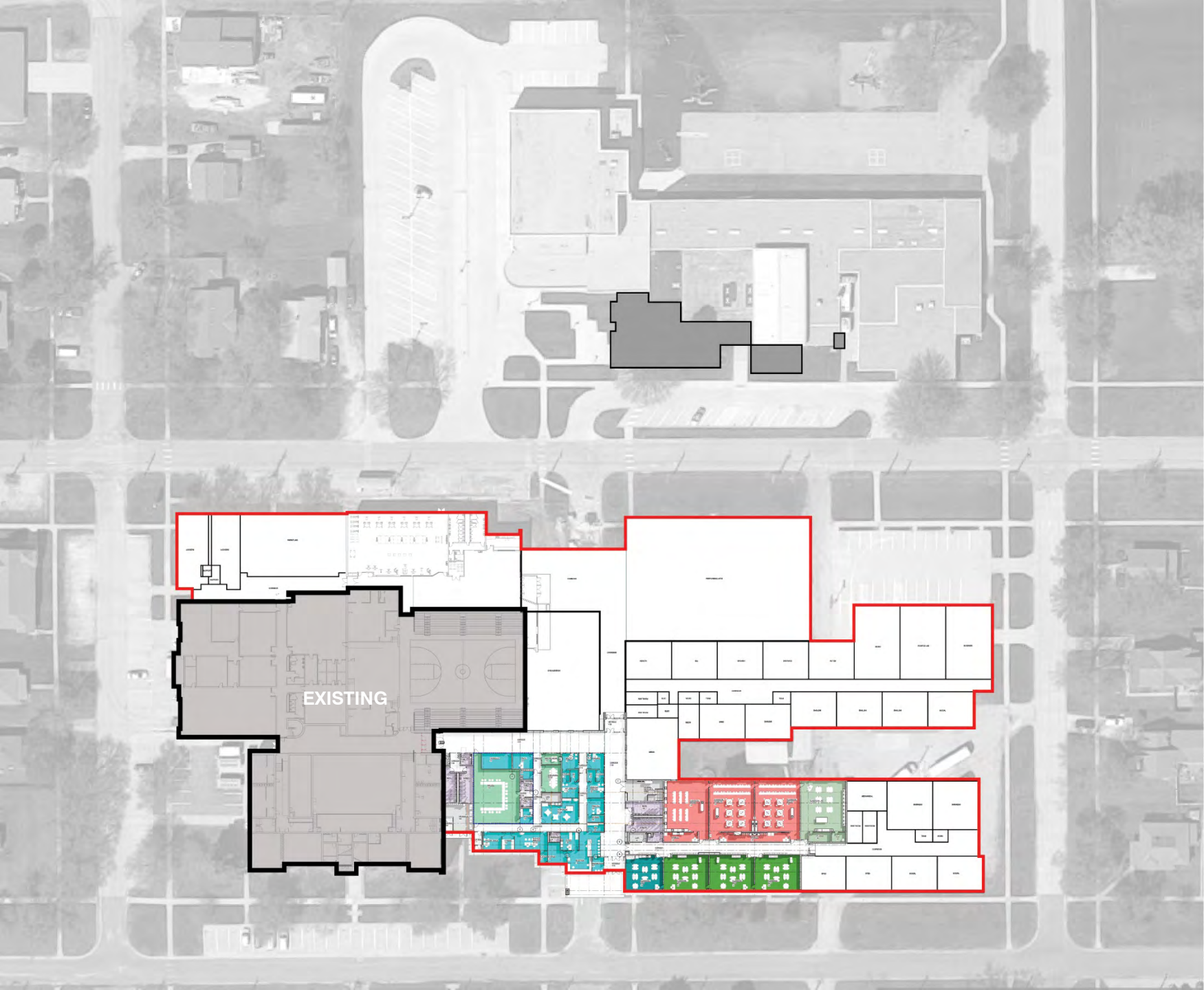
*20+ Year Plan*

- Classrooms
- Media center
- Restrooms



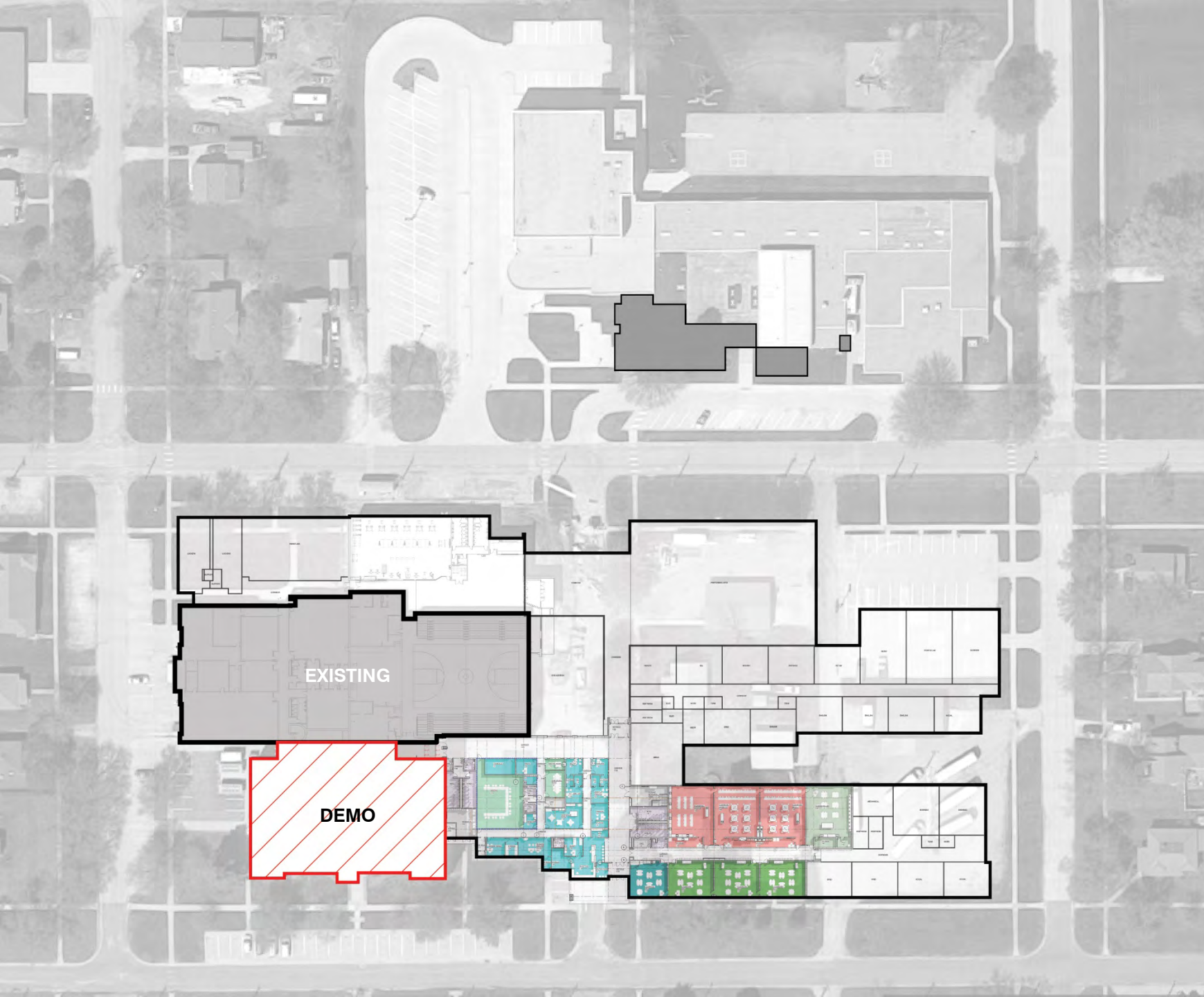
# MASTERPLAN

MASTERPLAN

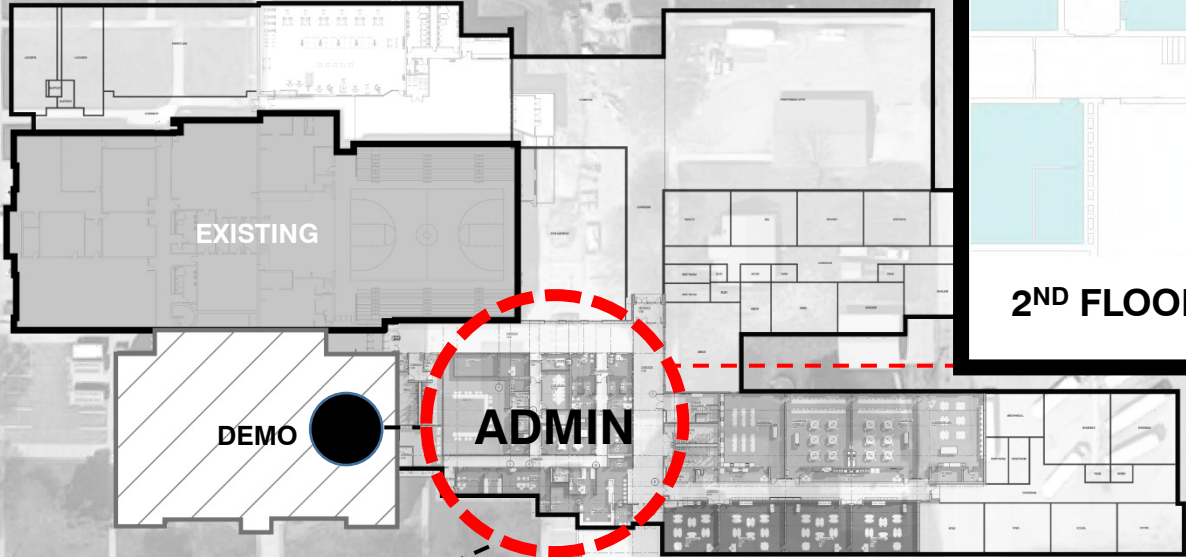




# MASTERPLAN



MASTERPLAN





# Long-Range Facility Plan

- **PHASE 1: Weight Rooms and Commons**

*Completed 2015*

Project Area - 10,700 SF

Project Cost - \$2,100,000

- **PHASE 2: Elementary Addition**

*Completed 2018*

Project Area - 6,000 SF

Project Cost - \$1,400,000

- **PHASE 3: Admin and High School Classrooms**

*5-Year Plan*

Project Area - 30,000 SF

Project Cost - \$7,500,000

- **PHASE 4: Theatre and Gym Addition**

*10-Year Plan*

Project Area - 26,500 SF

Project Cost - \$5,500,000

- **PHASE 5: Locker Rooms and Wrestling Rooms**

*20-Year Plan*

Project Area - 9,400-10,000 SF

Project Cost - \$2,500,000

- **PHASE 6: 20 Classrooms, Media Center, and 6 RRs**

Project Cost - \$7,000,000

Project Area - 28,000-37,300 SF

**OR Renovate Current 3 Story Building**

*20-Year Plan*

Project Cost - \$4,000,000

- **PHASE 7: Bus Barn and/or Additional Parking**

*20-Year Plan*

Project Area - TBD

Project Cost - \$500,000

- **PHASE 8: Competition Gym**

*20-Year Plan*

Project Area - 12,000 SF

Project Cost - \$4,000,000



## HOW TO START A PROJECT



# How Do I Start a Project

- 1 Analyze Existing Conditions
- 2 Identify Educational and Facility Needs
- 3 Facility Improvements / Code Improvements
- 4 Master Planning
- 5 Establishing Budget and Costs
- 6 Build Support / Community Engagement





# How Do I Start a Project

## **ANALYZE EXISTING CONDITIONS**

- Size and configuration of the facility
- Physical building constraints
- Condition of structural system and building envelope
- ADA/Accessibility
- Life Safety and Codes
- Site





# How Do I Start a Project

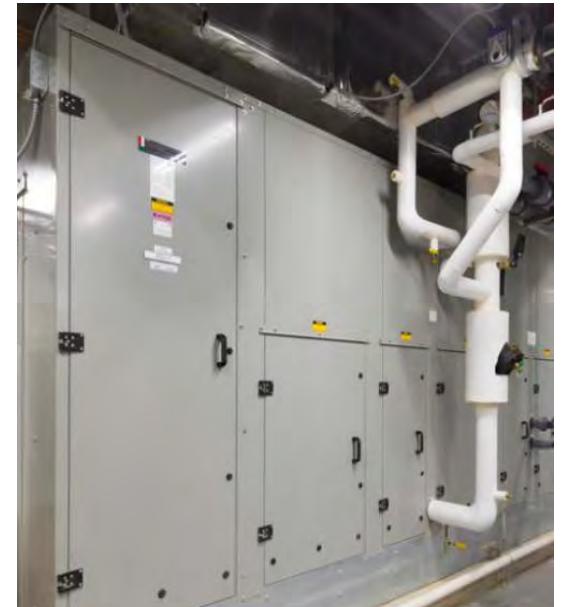
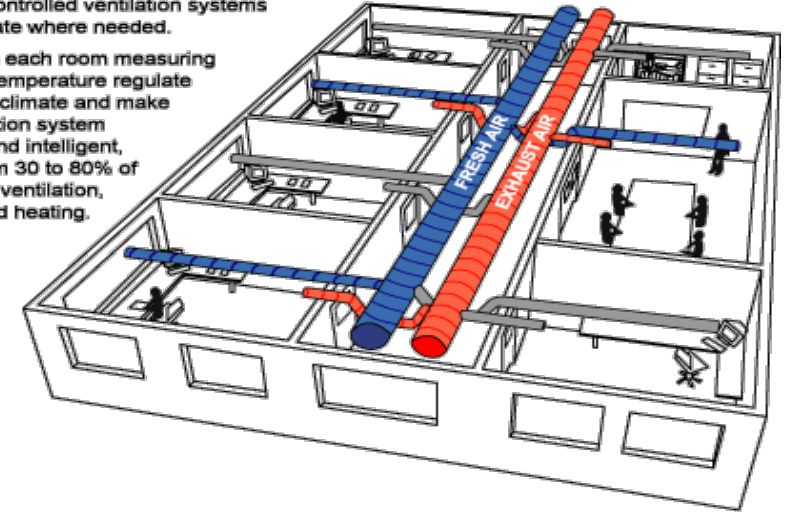
## ANALYZE EXISTING CONDITIONS

- Condition and location of existing infrastructure
  - Mechanical Systems
  - Plumbing/Sanitary and Storm
  - Fire Suppression
  - Electrical (power distribution and lighting)
  - Fiber Optic
  - Life Safety/Fire Alarm

### Demand Controlled Ventilation (DCV)

Demand controlled ventilation systems only ventilate where needed.

Sensors in each room measuring CO2 and temperature regulate the indoor climate and make the ventilation system dynamic and intelligent, saving from 30 to 80% of energy for ventilation, cooling and heating.



# How Do I Start a Project

## IDENTIFY NEEDS

- Gather input from various user groups
  - Building Committee
  - School Board, Administration, Faculty, and Staff
  - Students
  - Community and Business Leaders





# How Do I Start a Project

## IDENTIFY NEEDS

- Develop Program
  - Educational vs. Functional
  - Blend of Both
  - Think about future

Hasting Middle School Programming Worksheet

| Space Summary                    |  | # occupants | Qty | NSF ea | NSF subtotal |
|----------------------------------|--|-------------|-----|--------|--------------|
| <b>1.0 Administrative Spaces</b> |  |             |     |        |              |
| 1.1 Administration               |  |             |     |        |              |
| 1.1.1                            | Reception/General Office               |             | 1   |        |              |
| 1.1.2                            | Administrative Office                  | 10          | -   |        |              |
| 1.1.3                            | Administrative Conference Room - small | 12          | 1   |        |              |
| 1.1.4                            | Alternative Learning Center            |             | 1   |        |              |
| 1.1.5                            | Central Supplies Storage               | 20          | 1   |        |              |
| 1.1.6                            | Shared Conference Room - large         | 2           | 1   |        |              |
| 1.1.7                            | Teacher Conference/Copy Center         |             |     |        |              |
| 1.2 Guidance                     |  |             |     |        |              |
| 1.2.1                            | Counselor Office                       | 10          |     |        |              |
| 1.2.2                            | Counseling Conference Room - small     |             |     |        |              |
| 1.3 Nurse                        |  |             |     |        |              |
| 1.3.1                            | Nurse Office                           |             |     |        |              |
| 1.3.2                            | Nurse Station                          |             |     |        |              |
| 1.3.3                            | Sick Room                              |             |     |        |              |
| 1.3.4                            | Changing Room                          |             |     |        |              |
| 1.3.4                            | Restroom (unisex)                      |             |     |        |              |
| 1.4 Teacher Support              |  |             |     |        |              |
| 1.4.1                            | Teacher's Lounge                       |             |     |        |              |
| 1.4.2                            | Staff Toilet - Men                     |             |     |        |              |
| 1.4.3                            | Staff Toilet - Women                   |             |     |        |              |
| 1.4.4                            | Shared Team Room                       |             |     |        |              |
| 1.5 Technology Support           |  |             |     |        |              |
| 1.5.1                            | Tech Coordinator                       |             |     |        |              |
| 1.5.2                            | Network Serverity                      |             |     |        |              |
| <b>Administrative Subtotal</b>   |  |             |     |        |              |
| <b>2. Grade Pods</b>             |  |             |     |        |              |
| 2.1 6th Grade Pod (2 team)       |  |             |     |        |              |
| 2.1.1                            | English Classroom                      |             |     |        |              |
| 2.1.2                            | Math Classroom                         |             |     |        |              |
| 2.1.3                            | Social Studies Classroom               |             |     |        |              |
| 2.1.4                            | Reading Classroom                      |             |     |        |              |
| 2.1.5                            | Resource Classroom                     |             |     |        |              |
| 2.1.6                            | Science Classroom                      |             |     |        |              |
| 2.1.6                            | Locker/Storage                         |             |     |        |              |
| 2.1.9                            | Bathrooms                              |             |     |        |              |
| 2.2 7th Grade Pod (2 team)       |  |             |     |        |              |
| 2.2.1                            | English Classroom                      |             |     |        |              |
| 2.2.2                            | Math Classroom                         |             |     |        |              |
| 2.2.3                            | Social Studies Classroom               |             |     |        |              |
| 2.2.4                            | Reading Classroom                      |             |     |        |              |
| 2.2.5                            | Resource Classroom                     |             |     |        |              |
| 2.2.6                            | Science Classroom                      |             |     |        |              |
| 2.2.8                            | Locker/Storage                         |             |     |        |              |
| 2.2.9                            | Bathrooms                              |             |     |        |              |
| 2.3 8th Grade Pod                |  |             |     |        |              |

Hasting Middle School Programming Worksheet

| Space Summary                                 |                           | # occupants | Qty | NSF ea | NSF subtotal |
|---|---------------------------|-------------|-----|--------|--------------|
| <b>2.3.1 English Classroom</b>                |                           |             |     |        |              |
| 2.3.2   | Math Classroom            | 30          | 2   | 880    | 1,760        |
| 2.3.3   | Social Studies Classroom  | 30          | 2   | 880    | 1,760        |
| 2.3.4   | Health Classroom          | 30          | 2   | 880    | 1,760        |
| 2.3.5   | Resource Classroom        | 30          | 2   | 880    | 1,760        |
| 2.3.6   | Science Classroom/Storage | 30          | 2   | 880    | 1,760        |
| 2.3.8   | Locker/Storage            | 30          | 2   | 880    | 1,760        |
| 2.3.9   | Bathrooms                 | 150         | 2   | 1,280  | 2,560        |
| <b>Core Classrooms Subtotal</b>               |                           |             |     |        |              |
| <b>3.0 Specialized/Exploratory Classrooms</b> |                           |             |     |        |              |
| 3.1 Foreign Language                          |                           |             |     |        |              |
| 3.2.1   | Art Classroom - Clean     |             | 1   | 880    | 880          |
| 3.2.2   | Art Classroom - Dirty     |             |     |        |              |
| 3.2.3   | Kin Room                  | 30          | 1   | 935    | 935          |
| 3.2.4   | Workroom/Storage          | 30          | 1   | 935    | 935          |
| 3.3   | Music                     | 1           | 150 | 75     | 75           |

Hasting Middle School Programming Worksheet

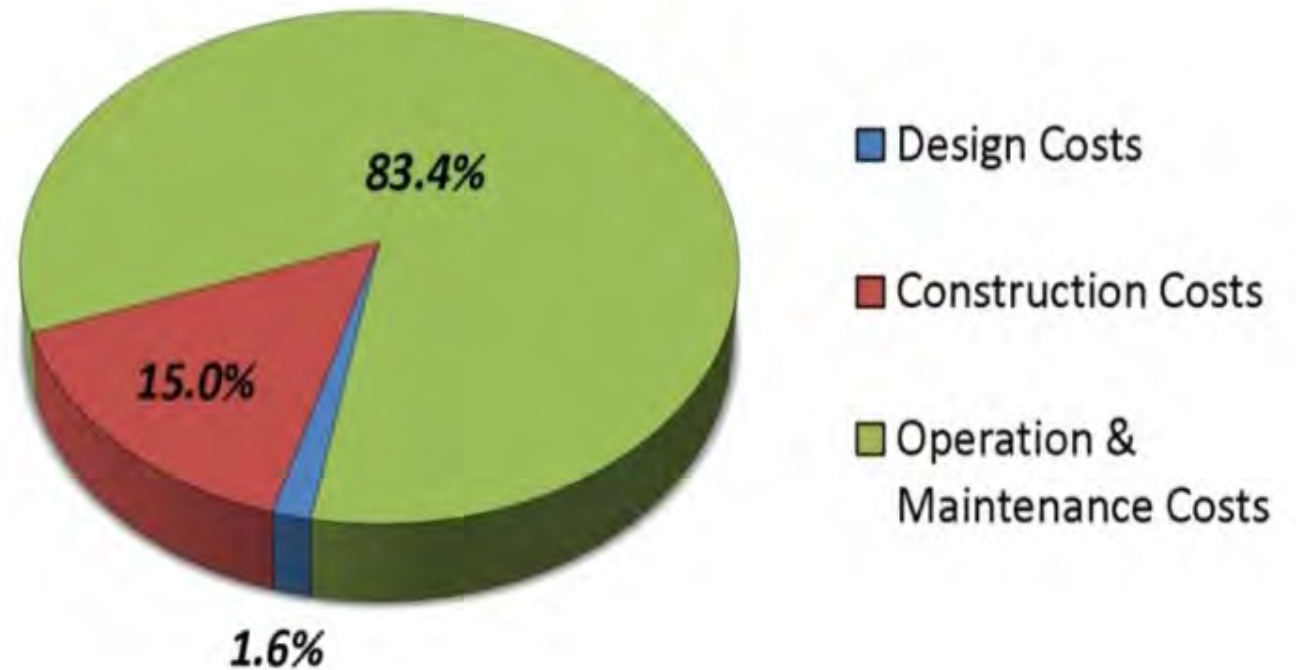
| Space Summary                             |                                 | # occupants | Qty   | NSF ea | NSF subtotal |
|---|---------------------------------|-------------|-------|--------|--------------|
| <b>4.0 Auxiliary Instructional Spaces</b> |                                 |             |       |        |              |
| 4.1 Library Media Center                  |                                 |             |       |        |              |
| 4.1.1                                     | Media Center/Stacks             |             |       |        |              |
| 4.1.2                                     | AV Storage                      | 60          | 1     | 4,400  | 4,400        |
| 4.1.3                                     | Conference Room                 | 1           | 150   | 150    | 150          |
| 4.2                                       | Computer Instruction            | 6           | 1     | 200    | 200          |
| 4.2.1                                     | Computer Lab                    |             |       |        |              |
| 4.3                                       | Physical Education/Athletics    | 30          | 1     | 880    | 880          |
| 4.3.1                                     | Gymnasium                       |             |       |        |              |
| 4.3.2                                     | Intramural Gym                  | 1,000       | 1     | 11,000 | 11,000       |
| 4.3.3                                     | Wrestling/Multi-purpose Room    |             |       |        |              |
| 4.3.4                                     | Strength & Exercise Room        |             |       |        |              |
| 4.3.5                                     | P.E. Storage                    | 1           | 3,200 | 3,200  | 3,200        |
| 4.3.6                                     | Boys Locker Room/Visitors       | 1           | 1,000 | 1,000  | 1,000        |
| 4.3.7                                     | Girls Locker/Visitors           | 1           | 200   | 200    | 200          |
| 4.3.8                                     | Coach Office/Shower/Toilet      | 2           | 800   | 1,600  | 1,600        |
| <b>Auxiliary Subtotal</b>                 |                                 |             |       |        |              |
| <b>5.0 Support Spaces</b>                 |                                 |             |       |        |              |
| 5.1 Food Service                          |                                 |             |       |        |              |
| 5.1.1                                     | Kitchen (Production)            |             |       |        |              |
| 5.1.2                                     | Dishwashing                     | 1           | 1,500 | 1,500  | 1,500        |
| 5.1.3                                     | Walk-in-Cooler/Freezer          | 1           | 210   | 210    | 210          |
| 5.1.4                                     | Dry Storage                     | 1           | 250   | 250    | 250          |
| 5.1.5                                     | Office                          | 1           | 170   | 170    | 170          |
| 5.1.6                                     | Breakroom/Laundry               | 1           | 120   | 120    | 120          |
| 5.1.7                                     | Concessions                     | 1           | 225   | 225    | 225          |
| 5.2                                       | Student Commons/Cafeteria       | 1           | 135   | 135    | 135          |
| 5.2.1                                     | Student Commons                 |             |       |        |              |
| 5.2.2                                     | Performance Commons             |             |       |        |              |
| 5.3                                       | Assembly & Miscellaneous Spaces | 300         | 1     | 4,200  | 4,200        |
| 5.3.1                                     | Auditorium                      |             |       |        |              |
| 5.3.2                                     | Public Restrooms                | 1           | 800   | 800    | 800          |
| 5.4                                       | Building Support                |             |       |        |              |
| 5.4.1                                     | Central Storage                 | 2           | 300   | 600    | 600          |
| 5.4.2                                     | Receiving Area/Dock             |             |       |        |              |
| 5.4.3                                     | Maintenance Shop                | 1           | 1,000 | 1,000  | 1,000        |
| 5.4.4                                     | Custodial                       | 1           | 600   | 600    | 600          |
| <b>Support Spaces Subtotal</b>            |                                 |             |       |        |              |
| <b>TOTAL NSF</b>                          |                                 |             |       |        |              |
| <b>Total GSF</b>                          |                                 |             |       |        |              |
| efficiency 73%                            |                                 |             |       |        |              |

4/6/2006, 2:39 PM The Clark Enersen Partners

# How Do I Start a Project

## FACILITY IMPROVEMENTS / CODE IMPROVEMENTS

- Prioritizing projects
  - What is more important to get done first
- Life Cycle Cost Analysis





# How Do I Start a Project

## MASTER PLANNING

- Coordinate phasing different programs
  - Be Strategic
  - Academic vs. Athletic
- Forecast infrastructure needs
- Revisit master plan periodically
  - Phases and timeframes
  - Educational delivery



# How Do I Start a Project

## ESTABLISHING BUDGET AND COSTS

| SCOPE   |                |          |               | BUDGET         |             |                 |          |   |
|---|----------------|----------|---------------|----------------|-------------|-----------------|----------|---|
| School  | Current Status | Priority | Decision Date | Prioritization |             |                 |          |   |
|   |                |          |               | Estimated Cost | Unit Prices | High Priorities | Medium   | Low   |
| M Mechanical:                                   |                |          | \$8,590,220   |                | \$8,360,220 |                 |          |   |
| 1 Well field                                    |                | H        |               | \$720,720      |             | \$720,720       | \$0      | \$0   |
| 2 Existing equipment                            |                | H        |               | \$0            |             | \$0             | \$0      | \$0   |
| 3 Tunnel exhaust                                |                | M        |               | \$18,000       |             | \$0             | \$18,000 | \$0   |
| 4 Existing drinking fountains (replace)         |                | L        |               | \$0            | \$900       | \$0             | \$0      | \$0   |
| 5 Storm sewer inlet repair                      | M-TL           | H        |               | \$5,000        |             | \$5,000         | \$0      | \$0   |
| 6 Water service/piping replacement              | M-TL           | H        |               | \$31,500       |             | \$31,500        | \$0      | \$0   |
| Upgrade backflow preventers, boiler room        | M / M-TL       | L        |               | \$0            |             | \$0             | \$0      | \$0   |
| 7 Classroom hot / cold water lines              | M-TL           | L        |               | \$0            |             | \$0             | \$0      | \$0   |
| 8 Classroom sink replacement                    | M-TL           | L        |               | \$0            | \$350       | \$0             | \$0      | \$0   |
| 9 Faucet / fixture replacement                  | M / M-TL       | H / M    |               | \$30,000       | \$600       | \$15,000        | \$15,000 | \$0   |
| 10 Roof drain upgrades                          | M-TL           | H        |               | \$30,000       |             | \$30,000        | \$0      | \$0   |
| Overflow drain upgrades                         |                | H        |               | \$10,000       |             | \$10,000        | \$0      | \$0   |
| 12 Add / upgrade wall hydrants                  | M-TL           | L        |               | \$0            | \$800       | \$0             | \$0      | \$0   |
| Upgrade yard hydrants / lawn irrigation         | M              |          |               | \$0            |             | \$0             | \$0      | \$0   |
| Wall vs yard hydrants                           | M              |          |               | \$0            |             | \$0             | \$0      | \$0   |
| 13 Upgrade water heaters                        | M-TL           | in M-18  |               | \$0            |             | \$0             | \$0      | \$0   |
| Boiler room, upgrade 1 to high efficient WH     | M              |          |               | \$0            |             | \$0             | \$0      | \$0   |
| 19 Sanitary sewer upgrades                      |                | L        |               | \$55,000       | \$0         | \$0             | \$55,000 |   |
| 20 Sanitary systems analysis by fluores         | by LPE         | L        |               | \$10,000       | \$0         | \$0             | \$10,000 |   |
| 21 Fire sprinkler service                       |                | H        |               | \$15,000       | \$15,000    | \$0             | \$0      |   |
| 21 Fire sprinkler                               |                |          |               | \$500,000      | \$500,000   | \$0             | \$0      | Crash early bid / try to acquire something in 8 wing / restore \$100,000              |
| 22 Gas service                                  |                | H        |               | \$5,000        | \$5,000     | \$0             | \$0      | consolidation of services (line to interrupt table) in boiler room                    |
| 23 Ductwork cleaning in ductwork to remote      |                | L        |               | \$25,000       | \$25,000    | \$0             | \$25,000 | reduced to low priority, do not clean gas ductwork                                    |
| 24 Shared Stadium restrooms (upgrades?)         | M              |          |               | \$20,000       | \$0         | \$0             | \$20,000 | reduced to low priority, do not clean gas ductwork                                    |
| 25 Monthly outside air intakes, lowest collect  | M              | in M-18  |               | \$0            | \$0         | \$0             | \$0      | reduced to low priority, do not clean gas ductwork                                    |
| 26 Install house bib in Culbertson garage       | M-TL           | L        |               | \$2,000        | \$0         | \$0             | \$2,000  | need to abandon some units / possibly install conversion the face of wall             |
| 27 Dirt collection replacement                  |                | H        |               | \$18,000       | \$18,000    | \$0             | \$0      | look at other funding sources for dirt collector (LPS buy the equipment \$7,000)      |
| 28 Kitchen hood replacement                     |                | H        |               | \$20,000       | \$20,000    | \$0             | \$0      | find and equipment in M-18, type 1 hood, no AHU                                       |
| 29 Swimming pool pipe replacement               |                | H        |               | \$15,000       | \$15,000    | \$0             | \$0      | pipe replaced by LPS, need work on the drains   |
| Swimming pool guffey and guffey                 | M              |          |               | \$50,000       | \$0         | \$50,000        | \$0      | adjust height of perimeter circulation guffey   |
| 30 Kitchens drain (sanitary) master replacement |                | H        |               | \$8,000        | \$8,000     | \$0             | \$0      | reduced to low priority, for (downwater) need location for intake pool sink           |
| 31 Restroom exhaust fan replacement             |                | H        |               | \$5,000        | \$5,000     | \$0             | \$0      | come to for from future   |
| 32 X-ray HCBW/HCBW piping                       |                | H        |               | \$0            | \$15,000    | \$0             | \$0      | need to determine scope / if pipe is in place consider if will need replaced / change |



# How Do I Start a Project

## BUILD SUPPORT / COMMUNITY ENGAGEMENT

- Identify key stakeholders to involve
  - School and community involvement
- Develop methods for information gathering and sharing
  - Public meetings
  - Social media
  - Online surveys
- Share an initial plan
  - Gather feedback
  - Not a blank slate





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**Questions?**