SHEBOYGAN PUBLIC SAFETY DEPARTMENTS:

STUDY PROGRESS UPDATE

AUGUST 11, 2025

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Five Bugles Design + Mitchell Associates Architects

TEAM INTRODUCTION:

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Wendel / Five Bugles Design
Director of Emergency Services

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Wendel / Five Bugles Design
Architect

Over 140 years of combined public safety Experience

Over 300 Programming/ Feasibility Studies

Over 150 facilities designed & built

Services Wendel Offers:

- ARCHITECTURE
- INTERIOR DESIGN
- LANDSCAPE ARCHITECTURE
- HISTORICAL RESTORATION/ PRESERVATION
- PUBLIC SAFETY
- SUSTAINABILITY
- GRANT WRITING

- ENGINEERING
- CIVIL
- ELECTRICAL
- ENVIRONMENTAL
- MECHANICAL
- MUNICIPAL
- STRUCTURAL
- TRANSPORTATION
- RAILROAD
- ALTERNATIVE FUEL SOLUTIONS/CNG
- WATER/ WASTEWATER RETROFITS
- LAND SURVEYING
- GEOGRAPHIC INFORMATION SYSTEMS (GIS)
- PLANNING

- ENERGY EFFICIENCY
- ENERGY AUDITS
- COMMISSIONING
- PROFESSIONALLY ASSISTED PERFORMANCE CONTRACTING
- ALTERNATIVE FUNDING/GRANT PROGRAMS
- RETROFIT AND IMPLEMENTATION DESIGN
- GREEN BUILDING DESIGN
- MEASUREMENT & SAVINGS VERIFICATION (M&V)
- RENEWABLE TECHNOLOGIES

- CONSTRUCTION MANAGEMENT
- MASTER BUILDER
- PROGRESSIVE DESIGN/BUILD
- DESIGN/BID/BUILD
- CONSTRUCTION ADMINISTRATION
- CONSTRUCTION MANAGEMENT AT RISK (CMAR)
- CM AGENT
- GMP DESIGN/BUILD

wendel

MAP OF WENDEL OFFICES (WENDEL ICONS) AND STATES THAT WENDEL IS QUALIFIED TO DO BUSINESS IN (GREY SHADE)

IMMERSION™

300+ employees

16 offices

Five Bugles Design™

- Unmatched Experience
- Staff dedicated careers to emergency services facility design
- Public Safety Specialists
- Public Safety Projects ranging in size from 10,000 SF – 60,000SF
- National Credibility: judging, writing, speaking, attending, award-winning designs
- Sponsors/Presenters of State and National Organizations

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FIREHOUSE

F.I.E.R.O.
FIRE INDUSTRY EDUCATION RESOURCE ORGANIZATION

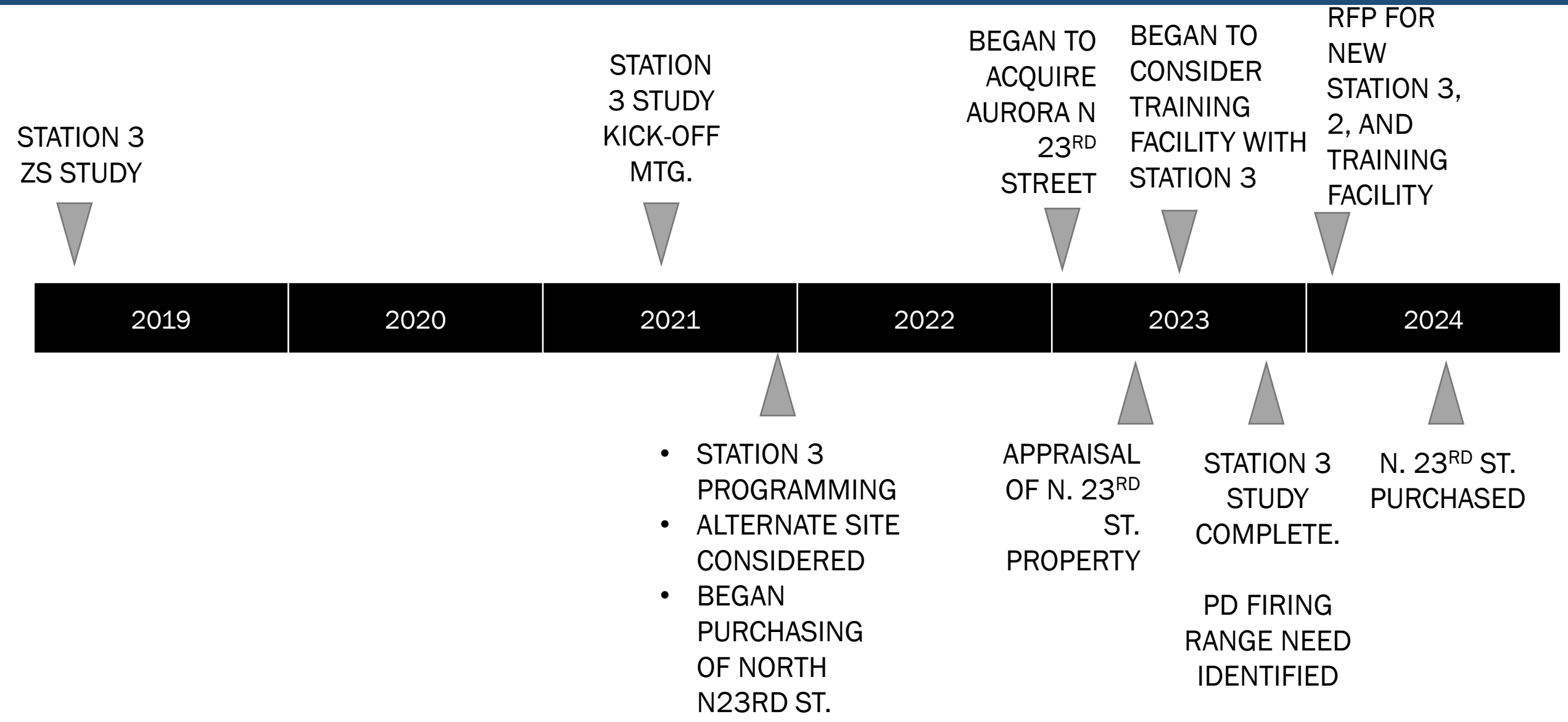
WFCEA
WISCONSIN FIRE CHIEFS EDUCATION ASSOCIATION

WISCONSIN STATE FIRE CHIEFS ASSOCIATION

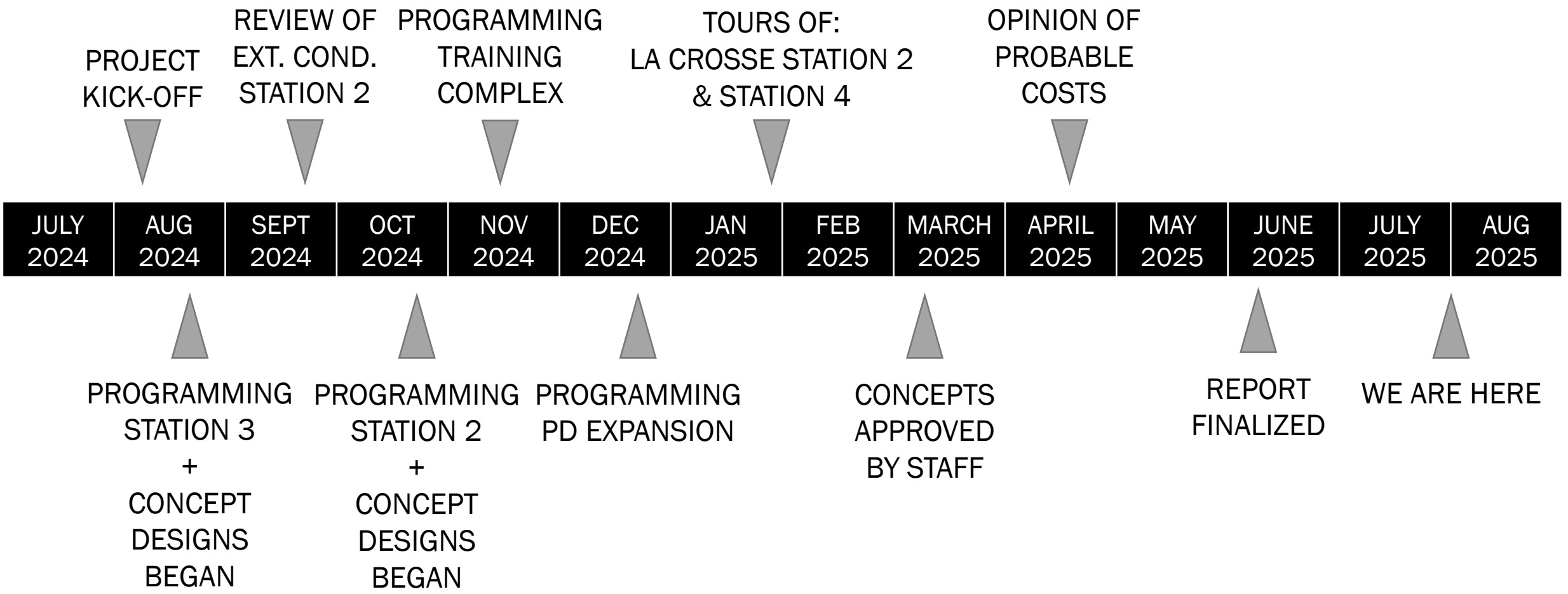
PRESENTATION OUTLINE

- Project to-date
- Existing Conditions
  - Fire Station 3 (Previous Study)
  - Fire Station 2
- Programming
- Concept Plans
  - Fire Station 3
  - Training:
    - Live Fire Burn Building
    - “Dirty Classroom” and Firing Range
  - Police Expansion
  - Fire Station 2
- What’s Next?

PROJECT TO-DATE



PROJECT TO-DATE



EXISTING CONDITIONS

Existing Conditions Assessment

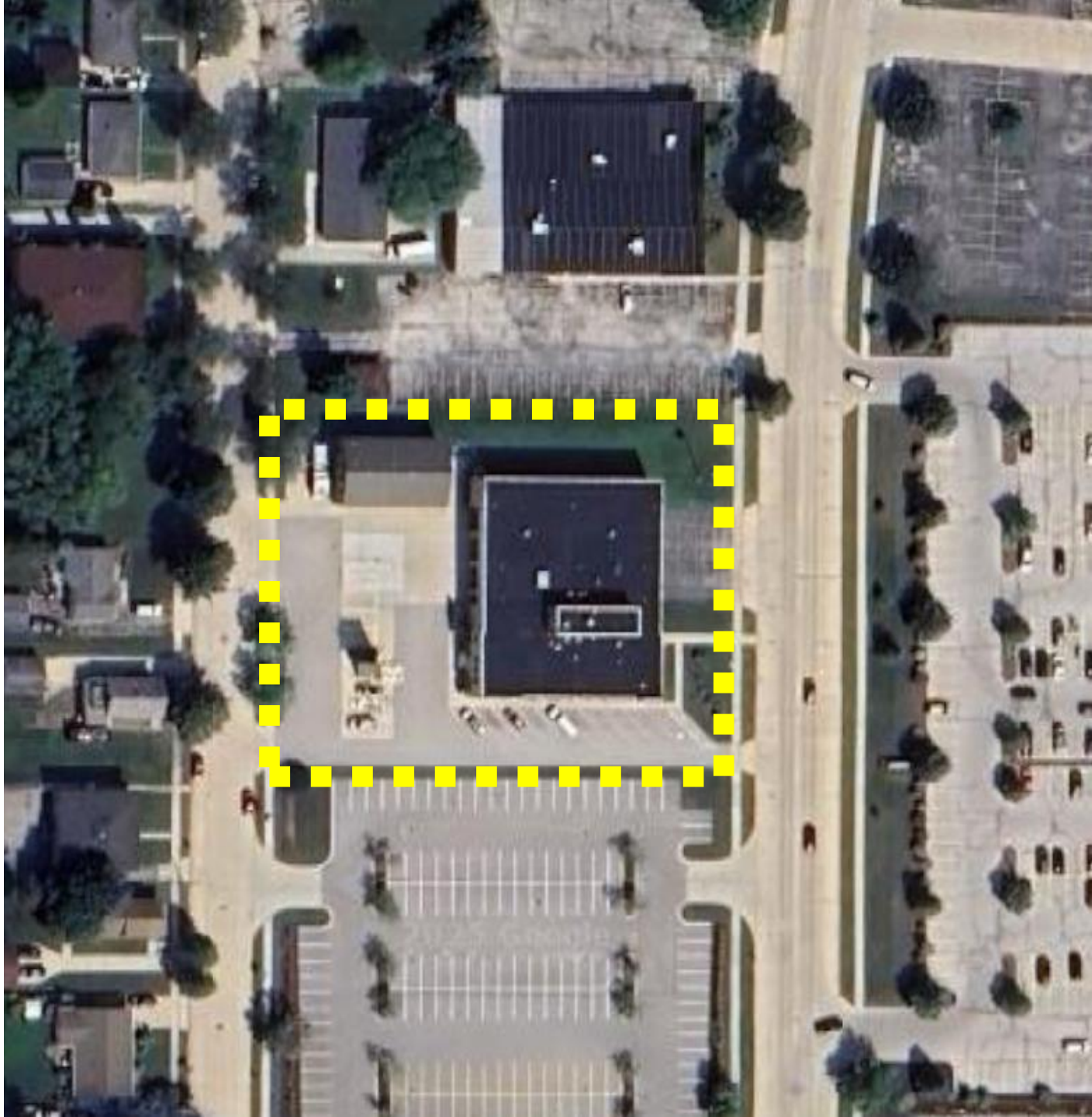
- Walk though of existing facilities
- Review floor plans
- Interviews with staff
- Consider:
  - IBC (International Building Code)
  - IEBC (International Existing Building Code) Structural Requirements
  - ADA (Americans With Disabilities Act)
  - NFPA Standards (National Fire Protection Association)
  - Needs of contemporary and future fire departments
- Could it be renovated?
- Phasing of construction:
  - Minimize the impacts and costs of renovations.
  - Can it be occupied while under construction?
  - Phasing the limits of demolition
  - Phasing to maintain existing services and keeping the bay accessible
  - Maintain egress during construction

Existing Conditions Assessment

- Common Fire Deficiencies:
  - Overall, undersized:
    - Office, storage, dorms, apparatus, etc.
    - No clearances around apparatus
  - Apparatus doors physically too small
  - No personal decontamination areas
  - No proper gear / PPE storage
  - Not designed for multiple genders
  - Dorms
    - No dorms
    - Spaces converted to dorms – do not meet code
  - Lack of visual and audible privacy:
    - Office, dorms, **toilet/shower rooms**
  - No Exercise Rooms
  - Does not meet ADA compliance

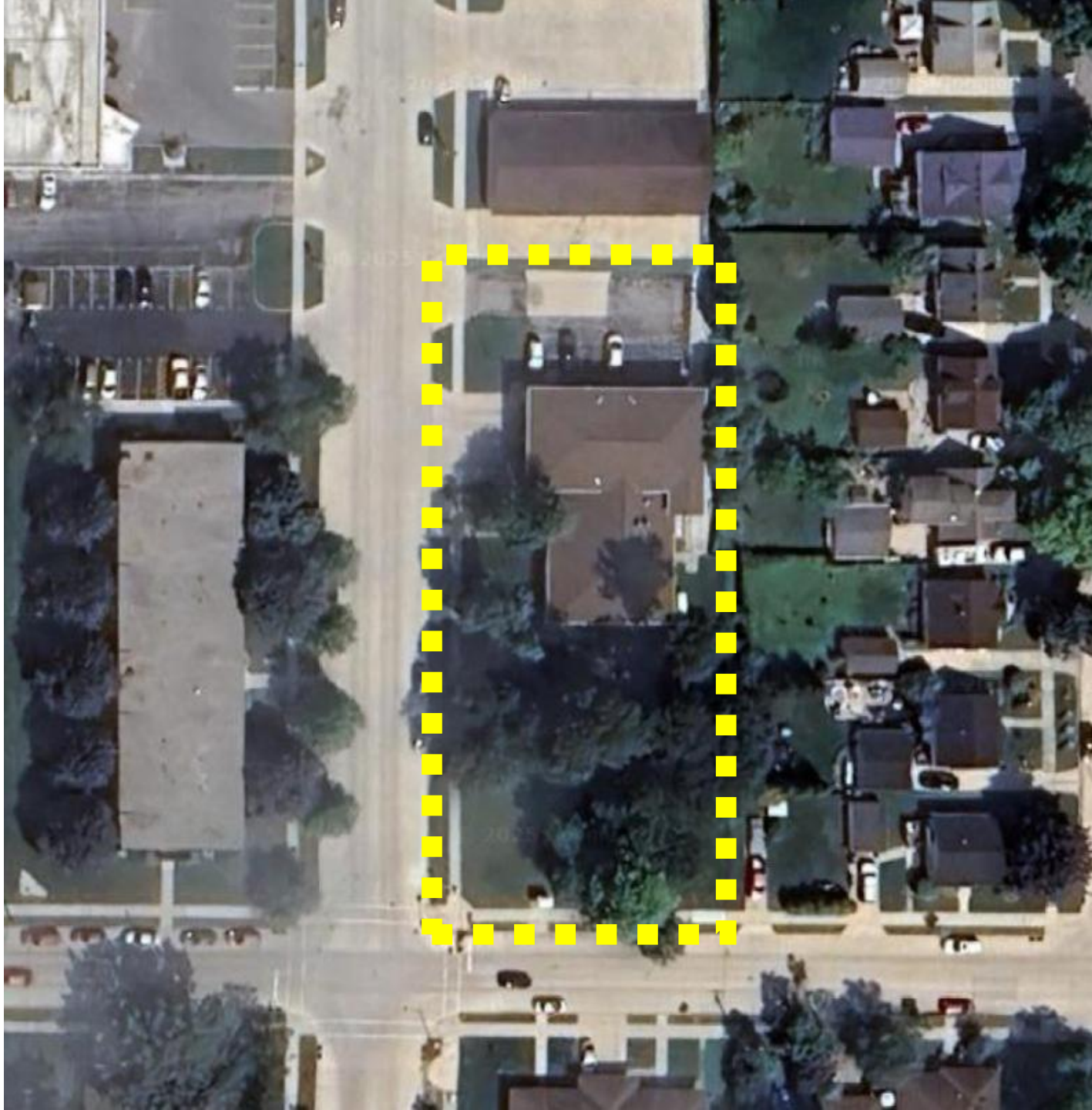
STATION 3 STUDY

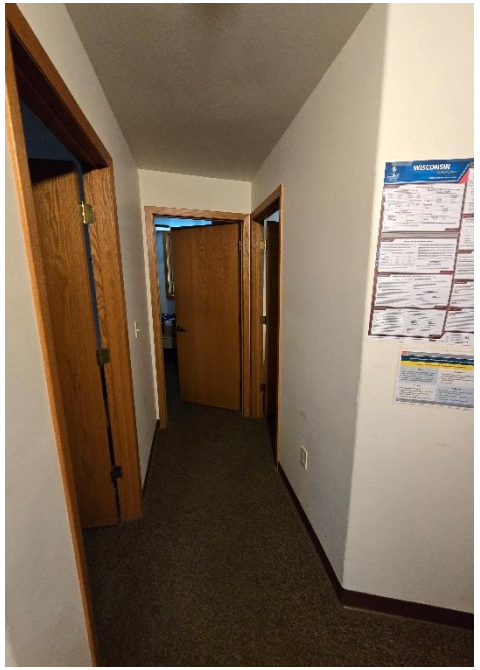
- Determined in 2021-2023 study that a full replacement was necessary.
- Current Station 3 work areas:
  - Administration
  - Station 3 duty crew
  - Department training tower
    - Tower was constructed in 1950’s
    - Not structurally sound
- All needs would need to be replaced in new Station 3
- Apparatus Support Bays on-site:
  - Reserve storage
  - Outgrown
    - Equipment is being stored outside

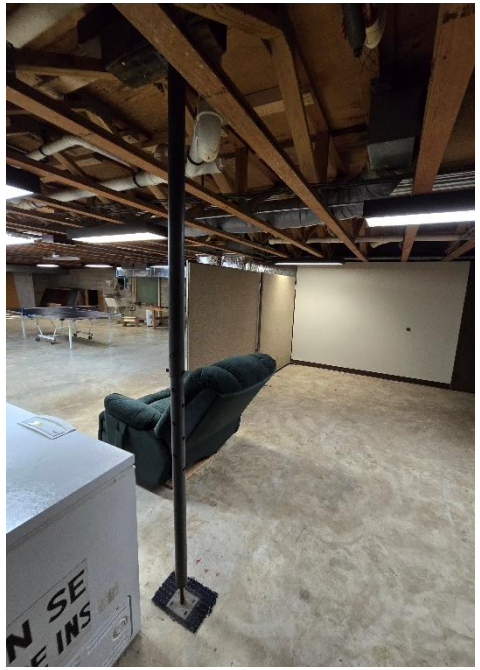


STATION 2
BUILDING INFORMATION

- Built in 1978/79
  - Emergency roof repair in 2020 due to failing apparatus bay support beams
- Landlocked on a city block
  - 0.7 Total acres
- 6,380 SF above grade
- 3,235 SF below grade







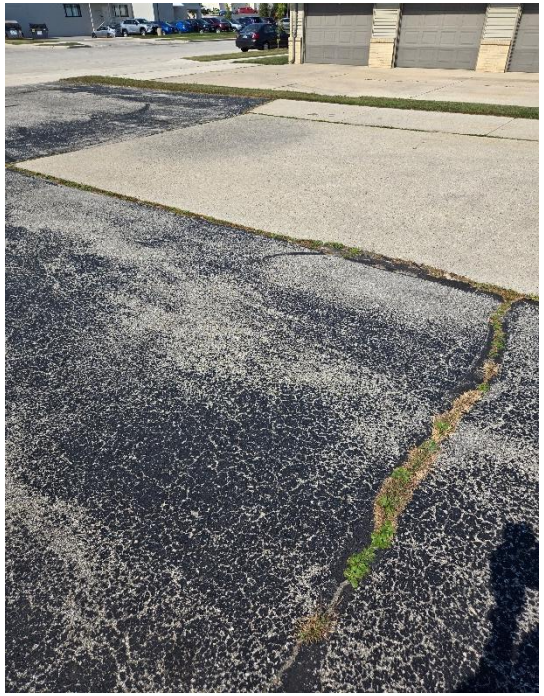
ASSESSMENT SUMMARY

- Does not meet current IBC
- Does not meet current ADA
- Does not meet current NFPA health & safety recommendations for contemporary fire stations
- Does not meet current NFPA turnout time recommendations
- Some interior & exterior finishes past useful life; need repair and/or replacement
- Under-sized for current needs

CONDITION SUMMARY

SITE

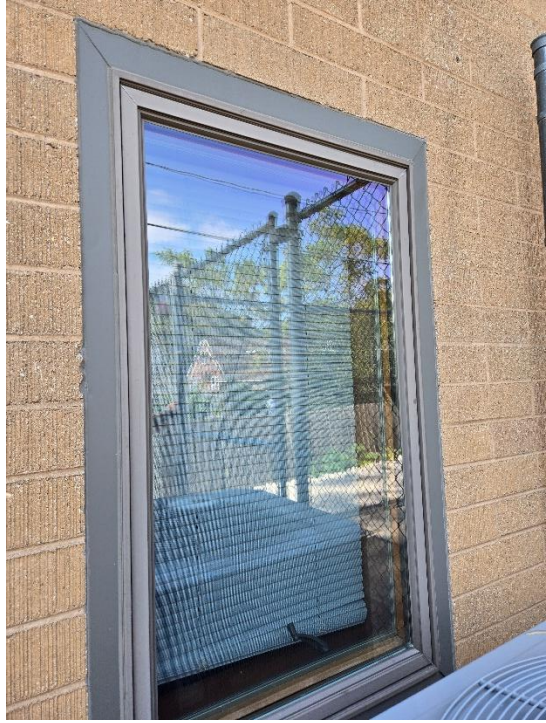
- Asphalt needs replacement
- Settlement:
  - Trip Hazards
  - Water infiltration along building
- ADA Compliance Issues
- Safety:
  - Parking to north – pedestrian travel across response apron

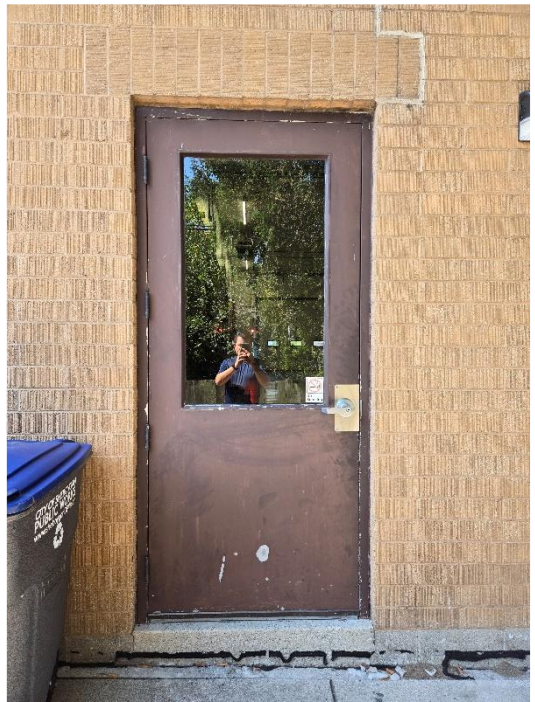


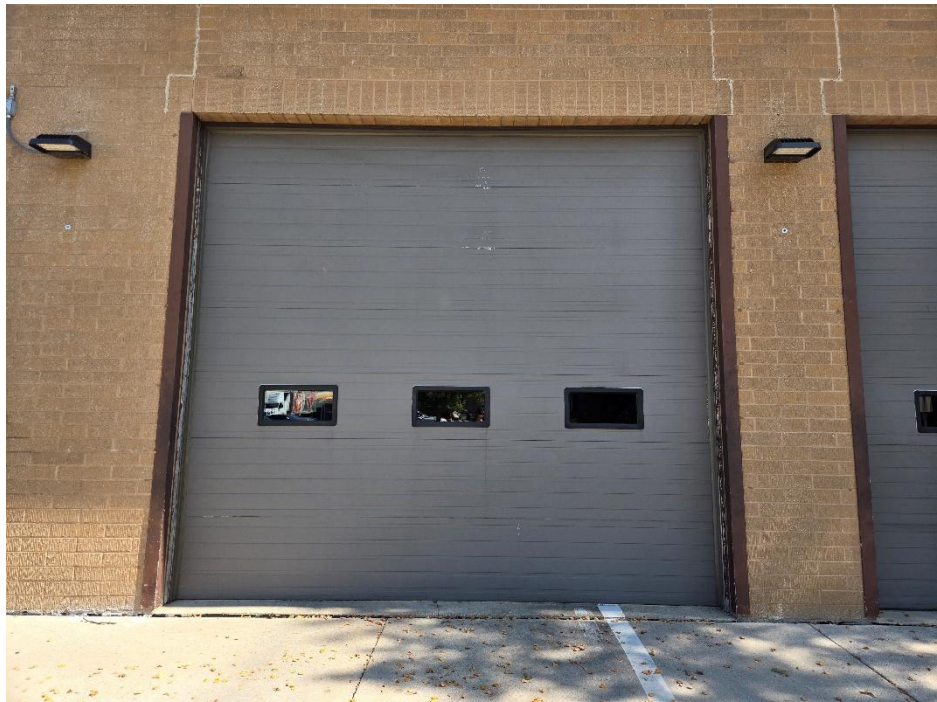
CONDITION SUMMARY:

EXTERIOR

- Deffered maintenance needs to be addressed
- Doors are not ADA complaint:
  - Thresholds
  - Approach
  - Hardware
- Windows are near end-of-life cycle
- Overhead doors:
  - Denting
  - Racking
  - Glazing seals broken



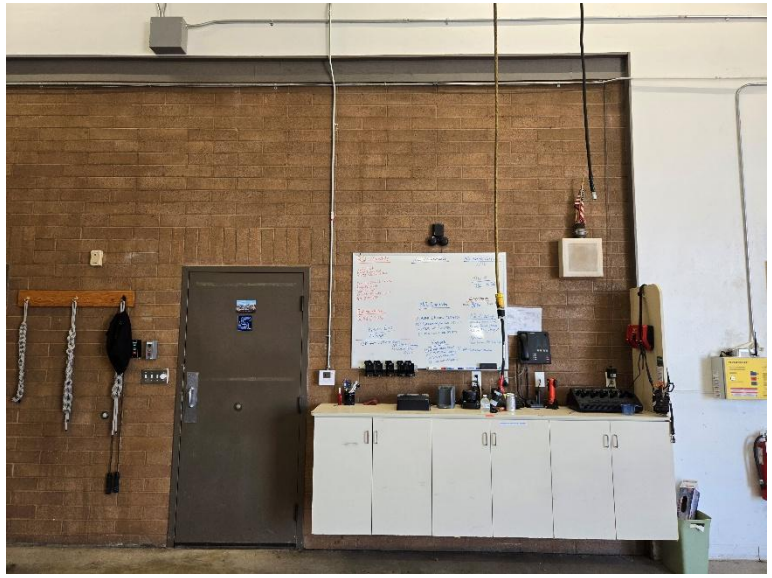


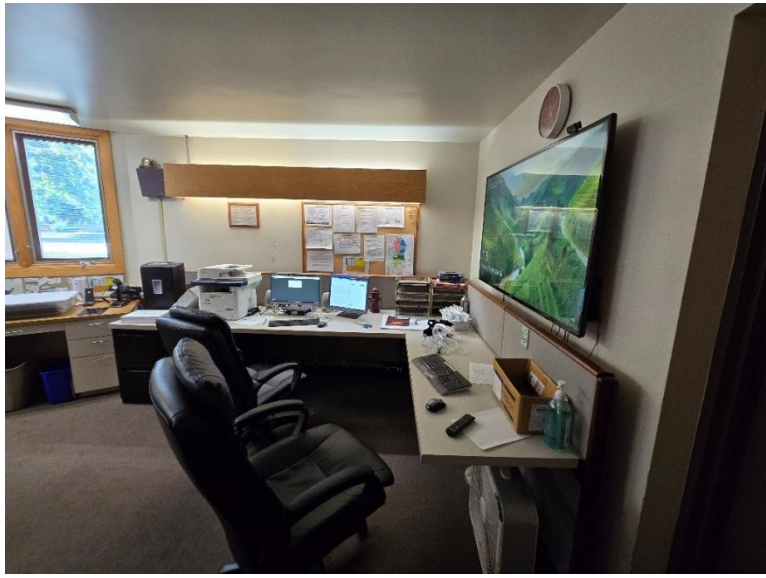


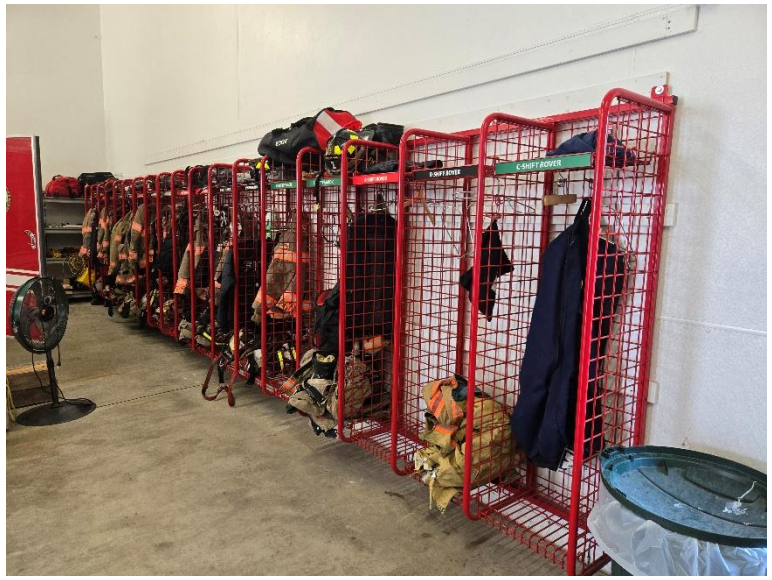
CONDITION SUMMARY:

INTERIOR

- No personnel decontamination:
  - Gear is stored in bay
  - No transition zone
  - No gear laundry
- Dorms do not meet code
- Basement ceiling heights not code compliant
- Poor acoustic control
- Structure can’t meet proposed loads for renovation







CONDITION SUMMARY:

POLICE EVIDENCE

- Undersized
  - Fleet storage
  - Maintenance storage:
    - Tires
    - Seats
  - Evidence storage
- Currently department stores evidence throughout city
  - Chain of custody concerns
  - Inefficient user experience
  - Inefficient monitoring & control of storage

SPACE NEEDS ANALYSIS

SPACE NEEDS ANALYSIS

- Operational Programming
  - Understand HOW you work
  - Confirm space Needs Analysis
  - Wants and Needs
- Planning for the Future
  - 50-Year Building

SPACE NEEDS ANALYSIS:

FIRE STATION 3

SPACE	PROGRAMMED
APPARATUS BAYS	13,230 SF
APPARATUS SUPPORT	5,895 SF
TRAINING / EMERGENCY OPERATIONS CENTER (EOC)	4,010 SF
ADMINISTRATION	6,110 SF
LIVING QUARTERS	6,585 SF
MECHANICAL, ELECTRICAL, SUPPORT	6,640 SF
TOTAL NEW CONSTRUCTION	50,920 SF

SPACE NEEDS ANALYSIS:

"DIRTY CLASSROOM" & FIRING RANGE

SPACE	PROGRAMMED
"DIRTY" CLASSROOM	2,150 SF
INDOOR FIRING RANGE	8,035 SF
STORAGE & UTILITIES	616 SF
TOTAL NEW CONSTRUCTION	10,801 SF

SPACE NEEDS ANALYSIS:

POLICE DEPARTMENT EXPANSION

SPACE	PROGRAMMED
EVIDENCE STORAGE	8,736 SF
MAINTENANCE BAY	2,174 SF
UTILITIES	200 SF
TOTAL NEW CONSTRUCTION	11,110 SF

SPACE NEEDS ANALYSIS:

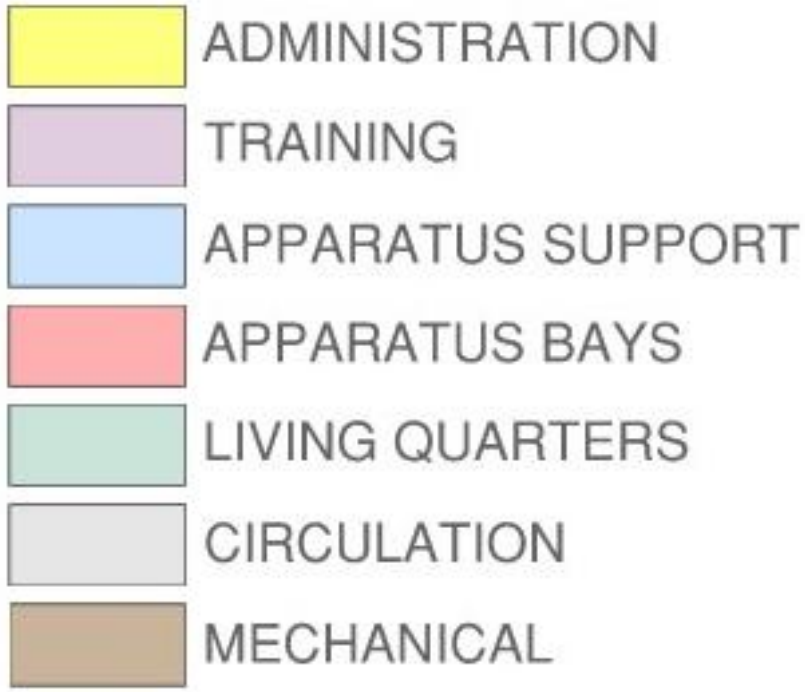
FIRE STATION 2

SPACE	PROGRAMMED
APPARATUS BAYS	3,820 SF
APPARATUS SUPPORT	2,790 SF
TRAINING	420 SF
ADMINISTRATION	985 SF
LIVING QUARTERS	3,490 SF
MECHANICAL, ELECTRICAL, SUPPORT	1,725 SF
TOTAL NEW CONSTRUCTION	13,230 SF

CONCEPTUAL DESIGN

CONCEPTUAL DESIGN

- Show relationships between spaces / departments
- Represent approximate sizes
- Colors represent each designated space types
- Full-size concept plans are in appendix of report



CONCEPTUAL DESIGN:
RESPONDER SAFETY

TOP 3 HEALTH & SAFETY CONCERNS ADDRESSED IN NEW FACILITIES:

STATION & DEPARTMENT CONSIDERATIONS:

Cardiac Arrest →

- Large fitness room
- Station alerting mechanisms
- Response lighting controls

Cancer →

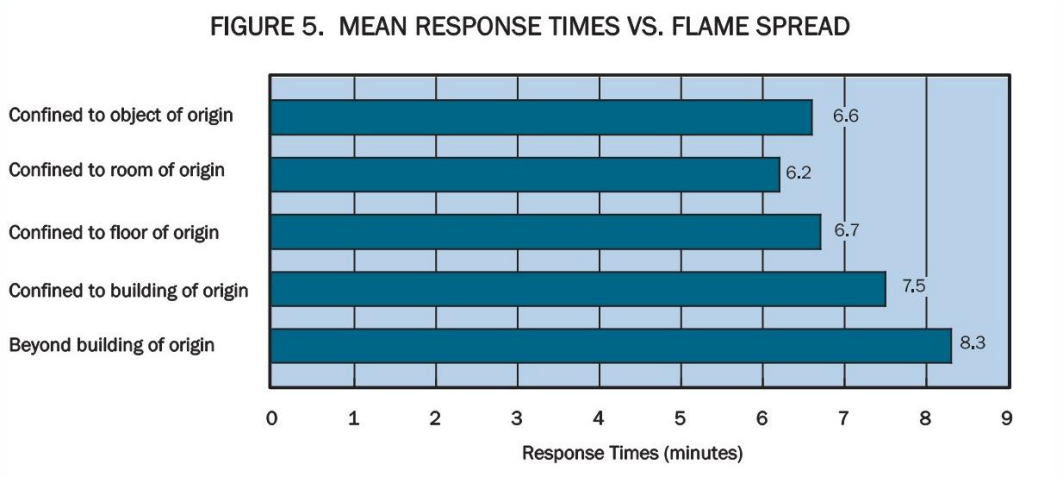
- Hot / Cold Zones
- Properly pressurizing mechanical systems.
- Proper gear storage
- Shower within the Hour

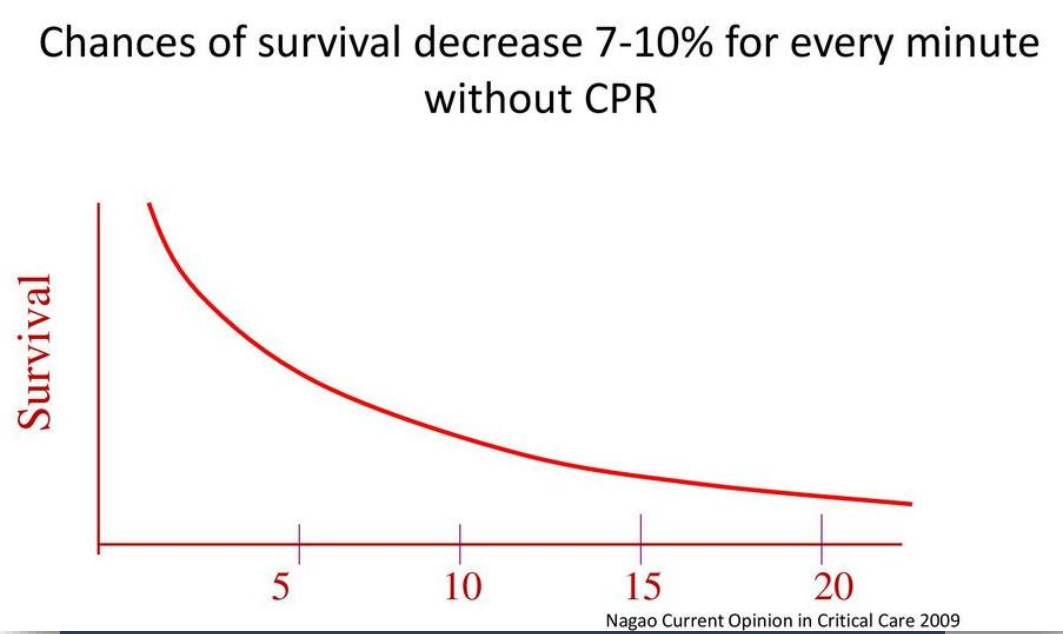
Mental Health →

- Creating comfortable home-like spaces
- Decompression areas
- Fitness room

WHAT IS RESPONSE TIME?

RESPONSE TIME = TURNOUT TIME + TRAVEL TO INCIDENT





WHY DOES RESPONSE TIME MATTER?

- **NFPA 1710** Standard:
  - Sets standard for response times
  - Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments
- **FIRE:**
  - Four personnel arrive within 5-minutes, 90% of the time
- **EMS:**
  - First basic life support (BLS) should arrive within 5-minutes

CONCEPTUAL DESIGN:

RESPONSE TIME MATTERS

NFPA 1710 Standards

Turnout time:

The period of time from notification of emergency personnel to the time the emergency vehicle responds.

Benchmarks	Response Objectives
Alarm answer	15 sec 95% of the time or 40 sec 99% of the time
Alarm processing	64 sec 95% of the time or 106 sec 99% of the time
Turnout - Fire	80 sec
Turnout - EMS	60 sec
First-due engine	240 sec (4 min) 90% of the time
Second-due engine	360 sec (6 min) 90% of the time
Initial full alarm - Low/ medium hazard	480 sec (8 min) 90% of the time
Initial full alarm - High hazard	610 sec (10 min 10 sec) 90% of the time

FROM NFPA 1710 KEY REQUIREMENTS FOR EMERGENCY SERVICES FACT SHEET

CONCEPTUAL DESIGN:

RESPONDER SAFETY

KEY NOTES FOR THIS PROJECT:

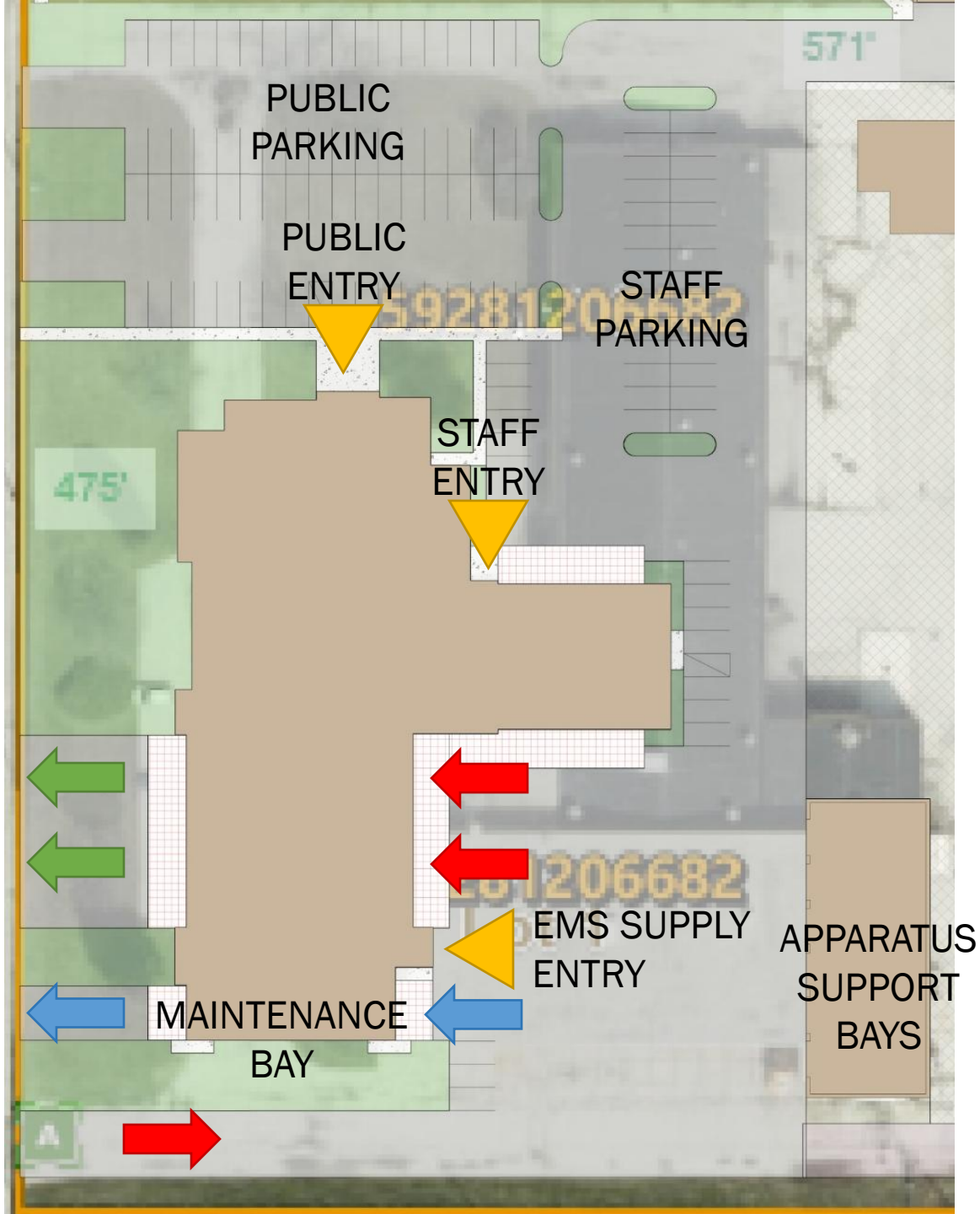
- Multi-Departmental Use:
  - Fire, Police, Public Works
  - All need training per OSHA, and/or ISO
  - All can use training facilities
  - All can use training props
  - Cross pollination of departments training together
- Needs have & continue to change
  - Designs are meant for today's and future needs
- Efficiency of training
  - 2021: Live-fire training cost $13,000
    - Travel – lodging, mileage, meals
    - Overtime
  - Whole department can train at once
- ISO training points
  - 4-stories
  - Waterflow

CONCEPTUAL DESIGN:

PUBLIC SAFETY CAMPUS

CONCEPTUAL DESIGN:

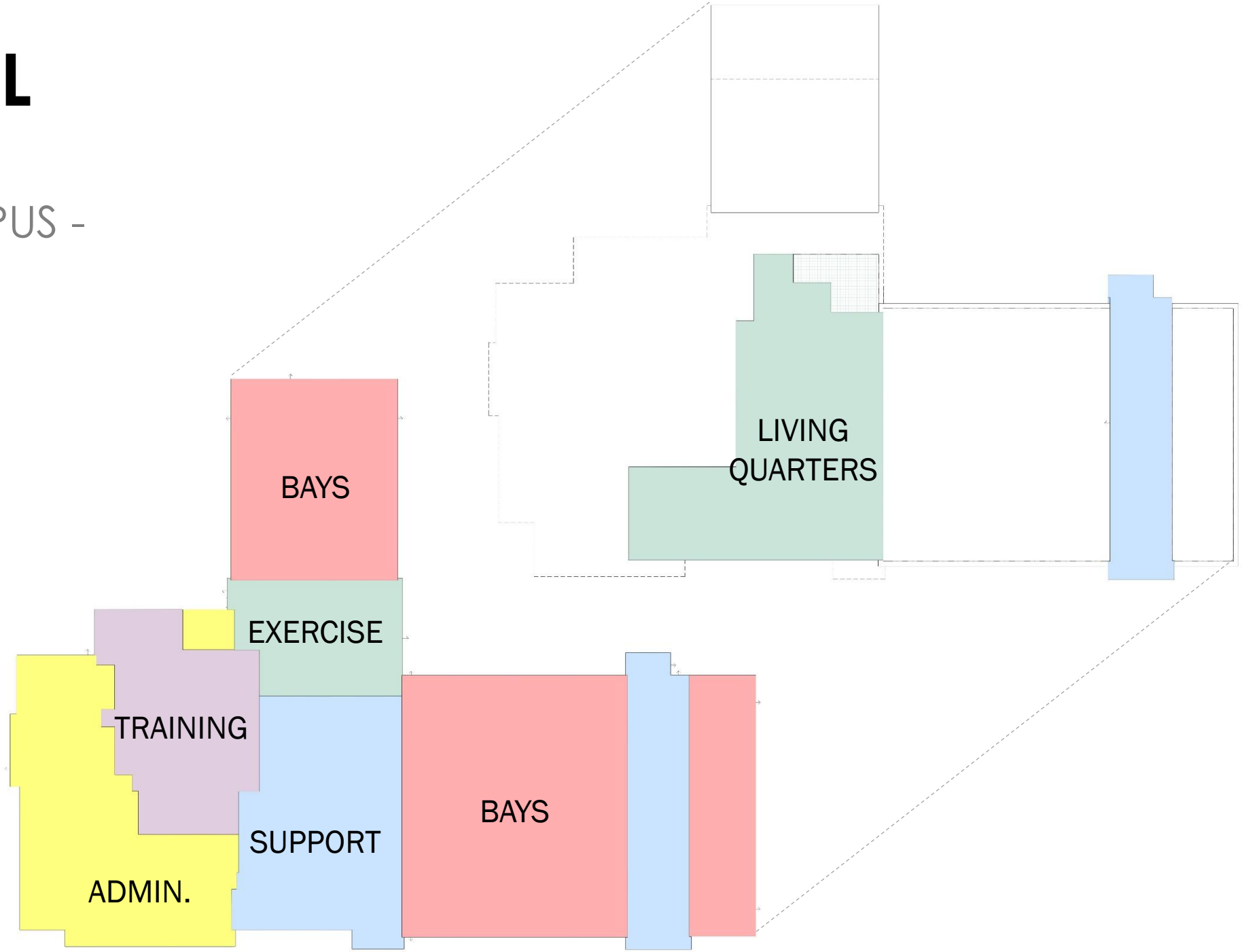
PUBLIC SAFETY CAMPUS - STATION 3 SITE



CONCEPTUAL DESIGN:

PUBLIC SAFETY CAMPUS - STATION 3 PLAN

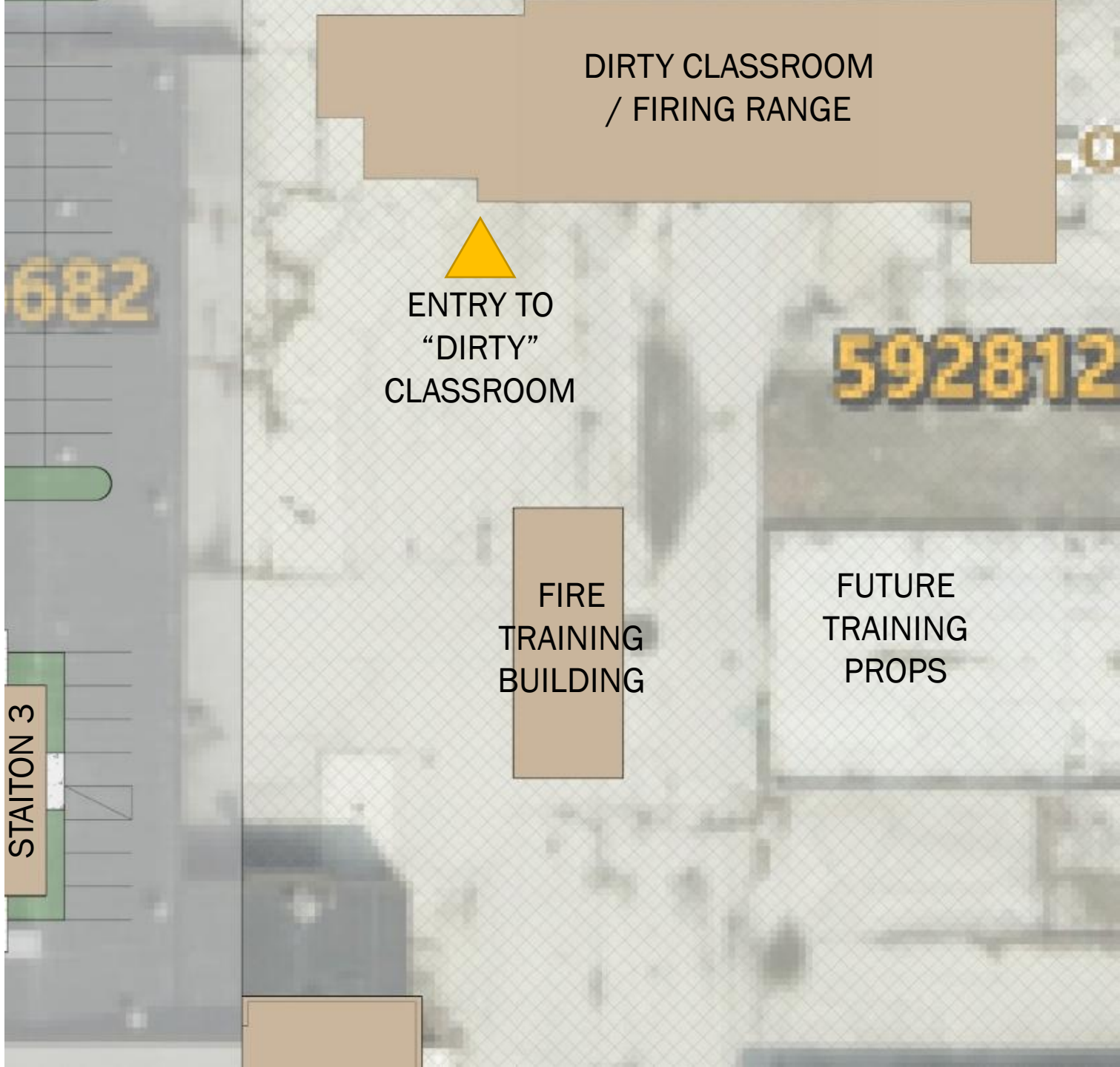
- 2-Stories
- 42,480 SF
- Key features:
  - Training room:
    - EOC
    - Voting
  - PD can share exercise
  - Department maintenance bay



CONCEPTUAL DESIGN:

PUBLIC SAFETY CAMPUS - FIRE TRAINING TOWER

- Will use Station 3 Parking
- To be used by FD, PD, and DPW
- Space for additional training props in the future



CONCEPTUAL DESIGN:

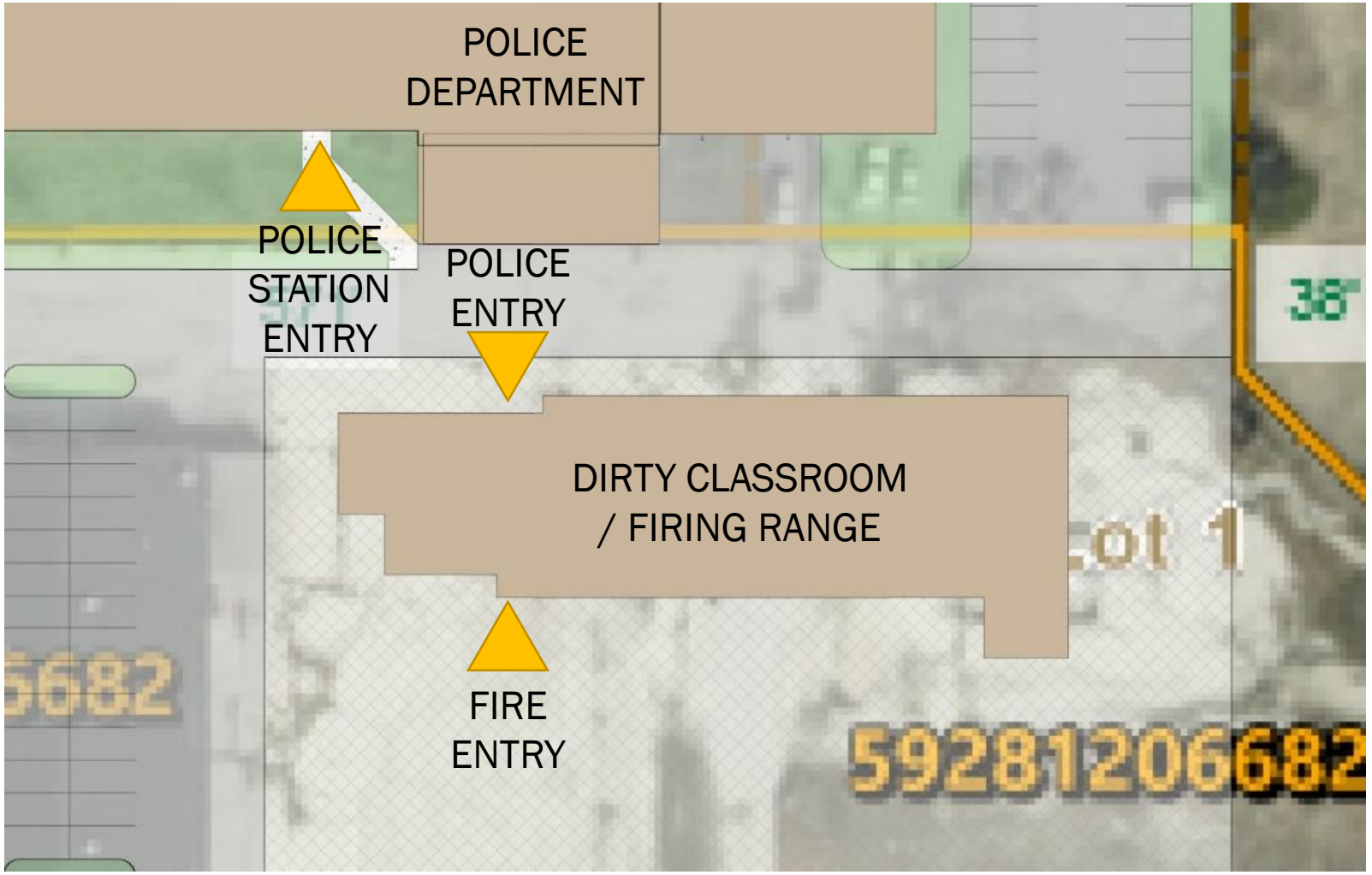
PUBLIC SAFETY CAMPUS - FIRE TRAINING TOWER

- 5-Stories
- Live-fire training
- Can be used by:
  - Fire
  - Police
  - Public Works

CONCEPTUAL DESIGN:

PUBLIC SAFETY CAMPUS - "DIRTY CLASSROOM" & FIRING RANGE

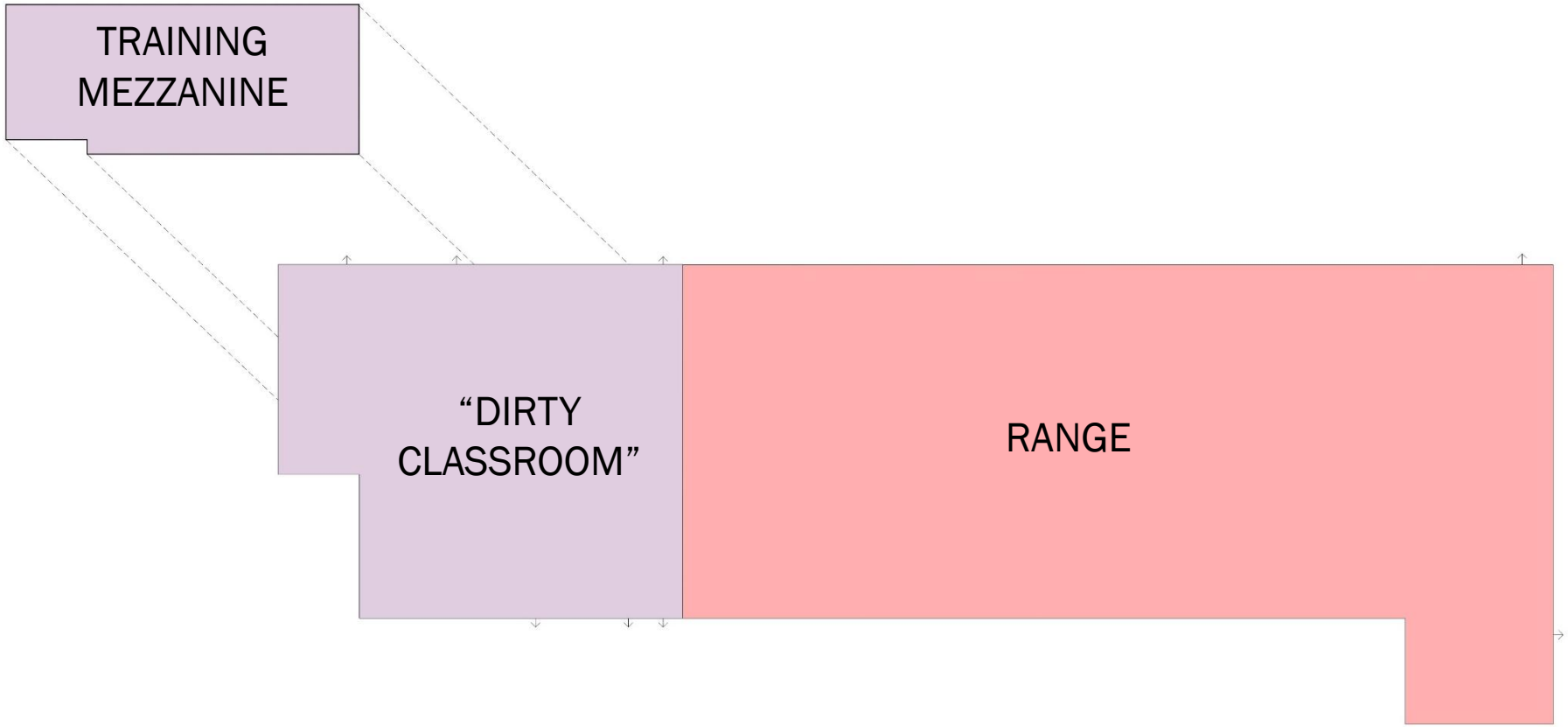
- Will use Station 3 Parking
- Entries for PD and FD



CONCEPTUAL DESIGN:

PUBLIC SAFETY CAMPUS - "DIRTY CLASSROOM" & FIRING RANGE

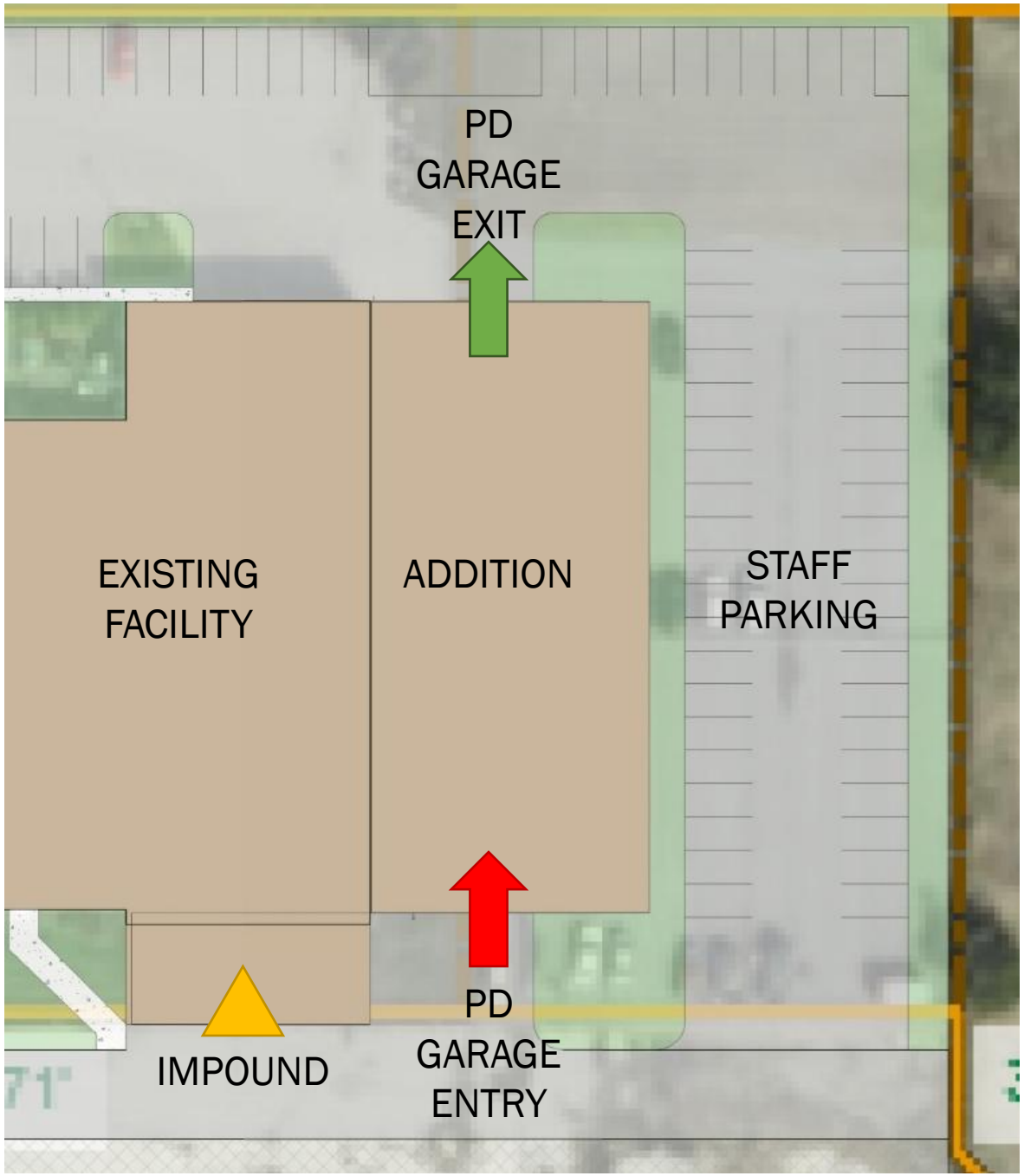
- Single-story
  - Training mezzanine
- "Dirty Classroom"
  - Used by:
    - PD
    - FD
    - Public Works
- Decon for FD
- Live-Fire Range



CONCEPTUAL DESIGN:

PUBLIC SAFETY CAMPUS - POLICE EXPANSION

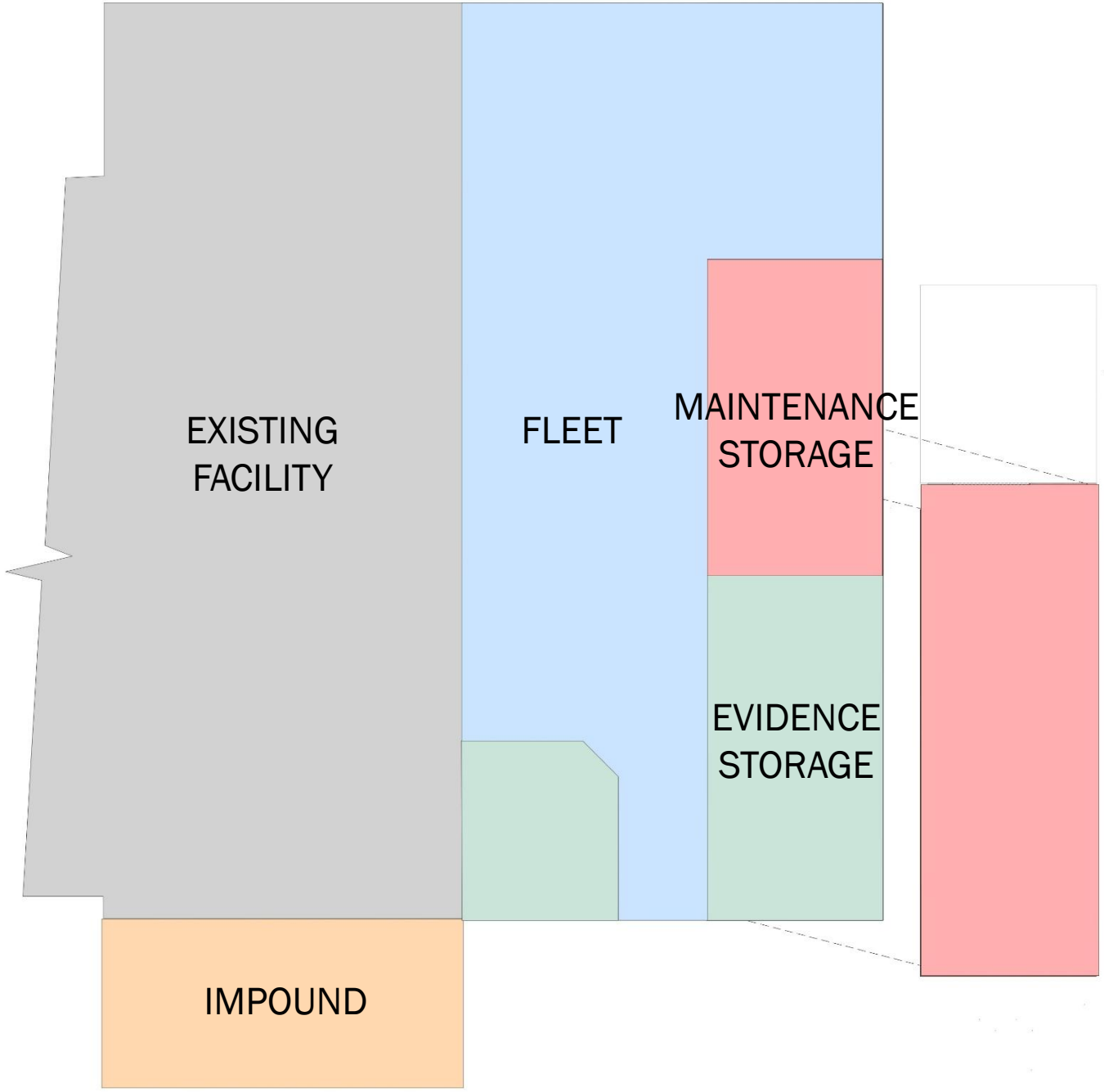
- Single-story
- Re-configure parking
- Re-locate impound



CONCEPTUAL DESIGN:

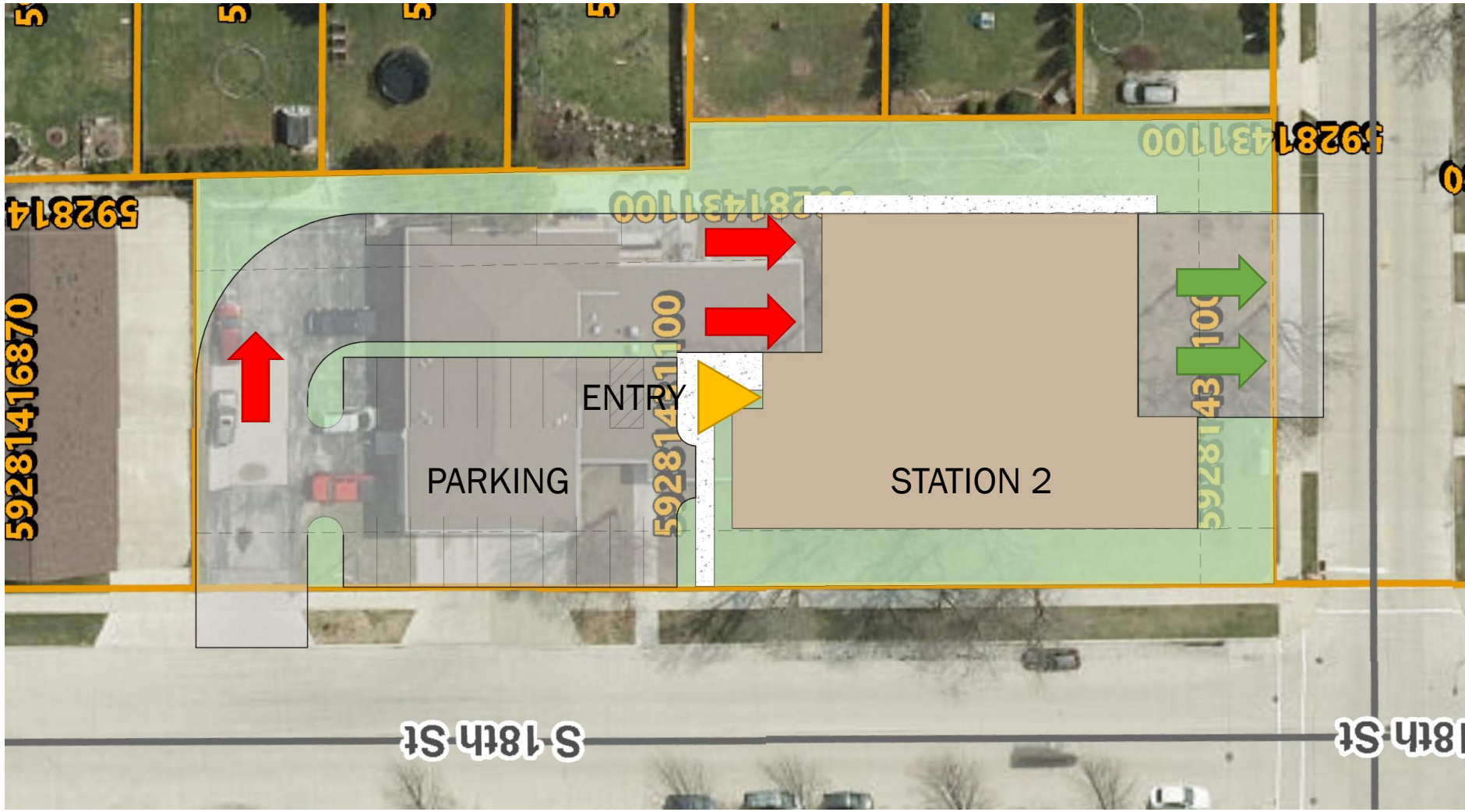
PUBLIC SAFETY CAMPUS - POLICE EXPANSION

- Single-story
  - Mezzanine
- Fleet Storage
- Evidence Storage
- Maintenance Storage
- Impound



CONCEPTUAL DESIGN:

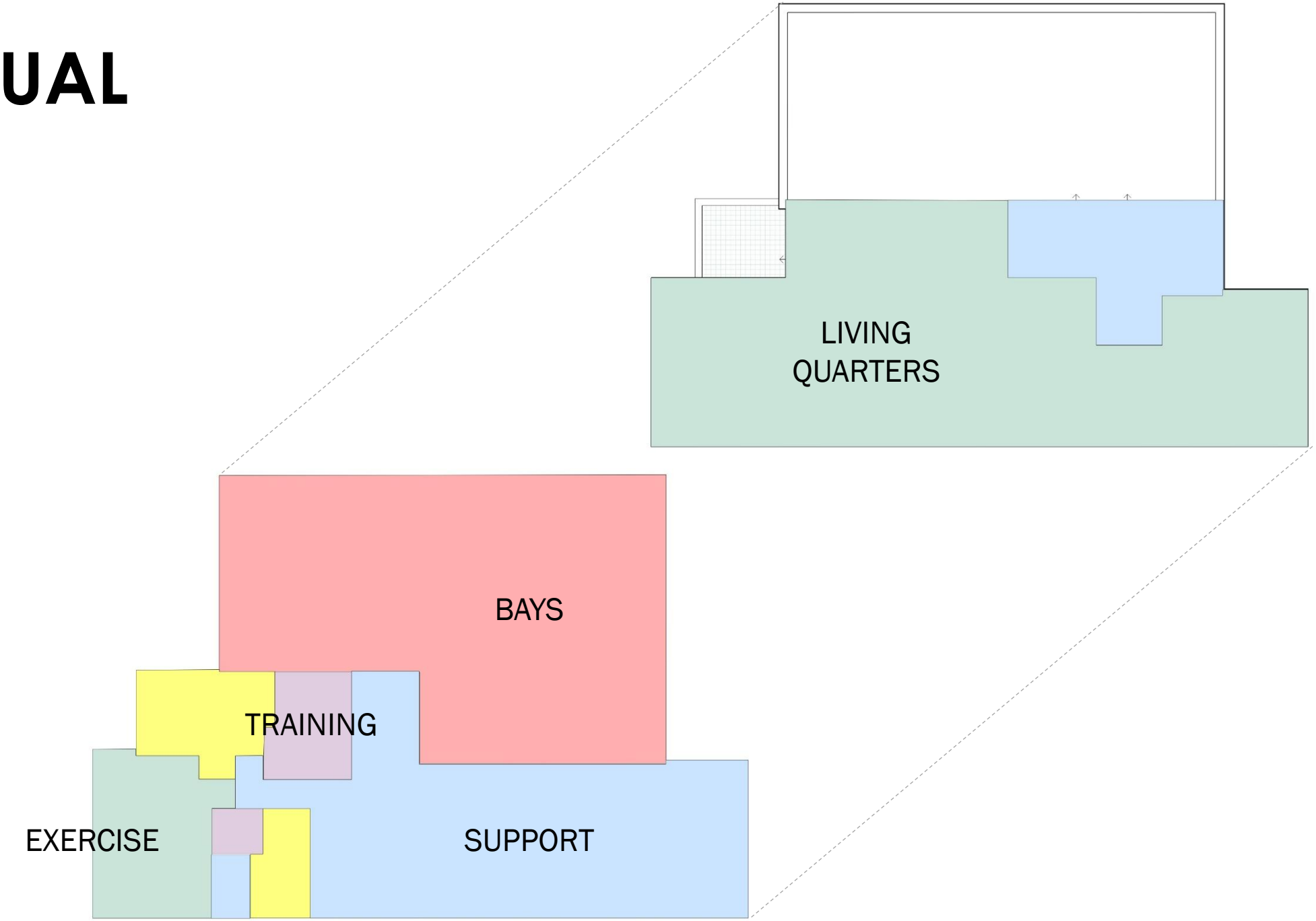
STATION 2 SITE



CONCEPTUAL DESIGN:

STATION 2 SITE

- 2-Stories
- 14,020 SF
- Key features:
  - Conference room:
    - Voting



SPACE NEEDS ANALYSIS vs CONCEPT

SPACE	PROGRAMMED	CONCEPT
STATION 3	50,920 SF	42,480 SF
“DIRTY” CLASSROOM & FIRING RANGE	10,801 SF	12,605 SF
PD EXPANSION	11,110 SF	15,285 SF
STATION 2	13,225 SF	14,020 SF

WHAT'S NEXT?

WHAT'S NEXT?:

We Are Here:

Concepts (Estimate)

Schematic Designs (Estimate)

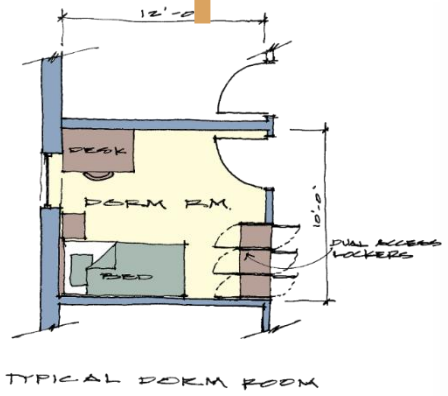
Design Development (Estimate)

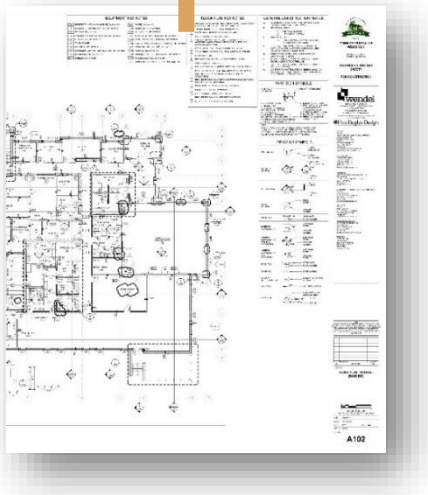
Construction Documents

Bidding

Construction

Occupancy





WHAT'S NEXT?:

SCHEMATIC DESIGN:

- Big picture items
- Confirming size, massing, general systems

DESIGN DEVELOPMENT:

- Details of design
- Specifics of systems, features, materials

CONSTRUCTION DOCUMENTS:

- Details of construction

PROPOSED SCHEDULE

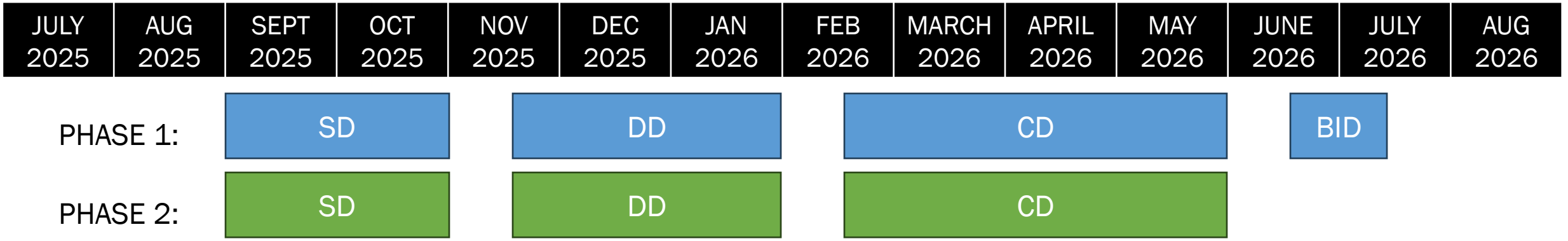
PHASED

- Proposing 2-Phases:
  - Phase 1: Station 3, Support Apparatus Bays, Fire Training Building, PD Expansion
  - Phase 2:“Dirty” Classroom/ Firing Range, Station 2
- All projects would be:
  - Designed at one time
- After design, two packages would be created:
  - Two bid periods
  - Two Construction periods
- Pros:
  - Lower initial costs
- Cons:
  - Higher over-all project costs
    - Duplication of mobilization costs.
  - Access to “Dirty” classroom for construction will impact parking.

NON-PHASED

- All projects would be:
  - Designed at one time
  - Bid together
  - Constructed together
- Pros:
  - Economy of scale
  - Shorter overall project
  - Can save money
- Cons:
  - Higher initial costs

PROPOSED SCHEDULE



PROPOSED SCHEDULE

OPINION OF PROBABLE COSTS

OPINION OF PROBABLE COSTS

	ESTIMATED COSTS
PHASE 1:	
STATION 3	$27,638,215
FIRE TRAINING BUILDING	$1,721,763
PD EXPANSION	$8,271,773
PHASE 1 TOTAL:	$37,631,751

	ESTIMATED COSTS
PHASE 2:	
“DIRTY” CLASSROOM / FIRING RANGE	$11,415,062
STATION 2	$9,198,702
PHASE 2 TOTAL:	$20,613,764
TOTAL	$58,245,515

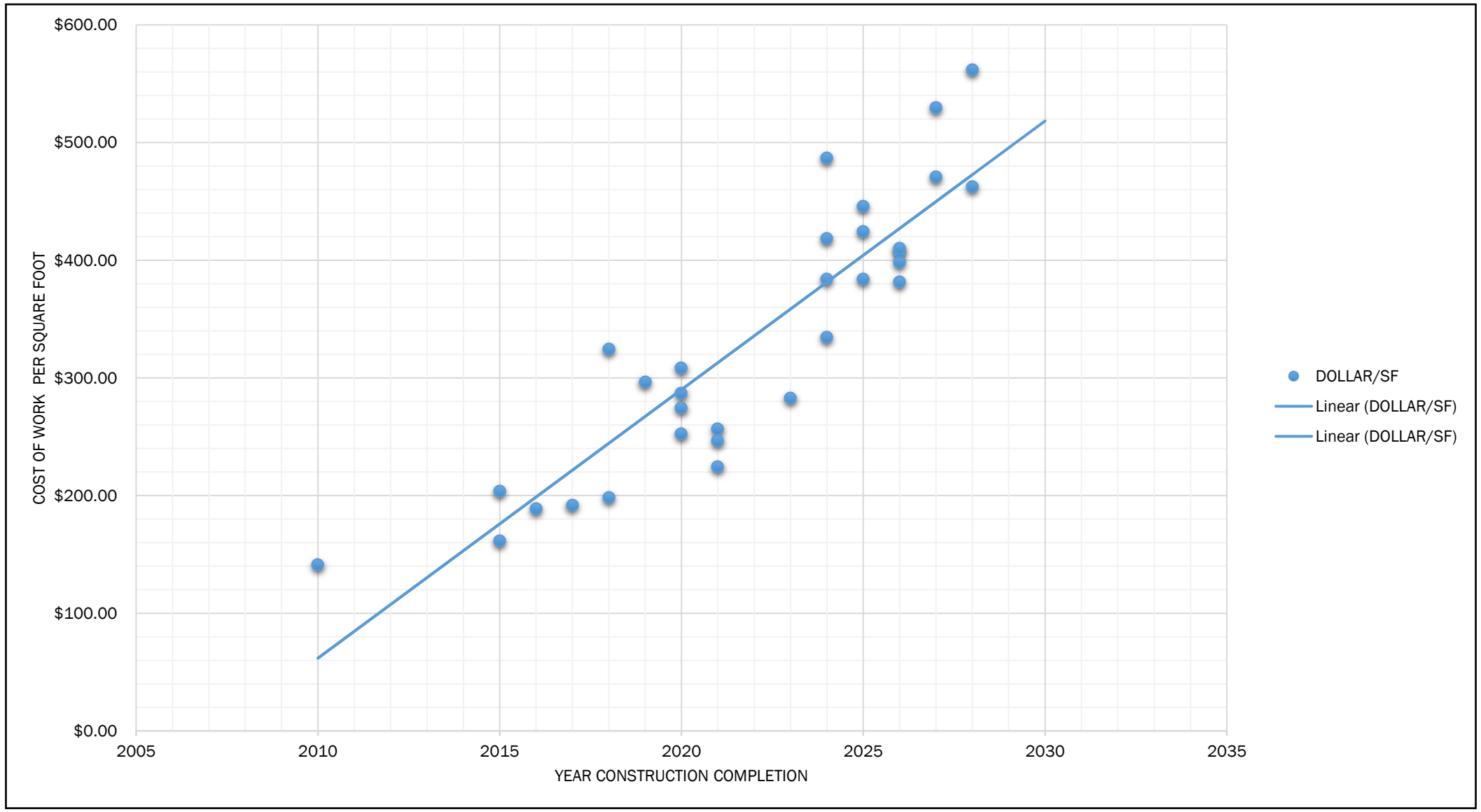
OPINION OF PROBABLE COSTS

TRAINING COMPLEX REDUCTIONS

	INITIAL TRAINING COMPLEX ESTIMATE	REDUCTION
FIRING RANGE	$9-12M	$11,415,062
MULTI-PURPOSE TRAINING FACILITY	$10-15M	
PROPS	$5-6M	FUTURE
FIRE TRAINING FACILITY	$4-6M	$1,721,763
MISC. SITE AND ACCESSORIES	$4-6M	FUTURE
TOTAL	$32-40M	$13,136,825

FACILITY STUDY

OPINION OF PROBABLE COSTS



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ESTIMATE OR BID	STATION	SIZE	BID YEAR	YEAR OF COMPLETION	COST OF WORK	DOLLAR/SF	CONSTRUCTION TYPE
BID	BLOOMINGTON, MN, STATION 3	30,000	2019	2020	$8,617,000	$287.23	MASONRY
BID	GREENVILLE, WI	24,680	2019	2020	$6,232,485	$252.53	MASONRY
BID	LA POINTE, WI	10,155	2019	2020	$2,788,820	$274.63	PEMB
BID	WAUSAU, WI	15,233	2019	2020	$4,697,832	$308.40	MASONRY
BID	MONROE, OH	20,100	2020	2021	$4,960,019	$246.77	PEMB
BID	RIVERSIDE, ROTHSCHILD, WI	17,450	2020	2021	$4,481,305	$256.81	PEMB
BID	SUAMICO, WI	22,050	2020	2021	$4,947,311	$224.37	MASONRY
BID	LA CROSSE, WI, STATION 2	20,680	2022	2023	$5,854,085	$283.08	MASONRY
BID	ST. PETER, MN	20,800	2022	2024	$8,704,045	$418.46	MASONRY / PRECAST
BID	CHISHOLM, MN	23,000	2023	2024	$11,199,947	$486.95	MASONRY
BID	OCONTO FALLS, WI	16,808	2023	2024	$6,449,672	$383.73	MASONRY
BID	LA CROSSE, WI, STATION 4	20,330	2023	2024	$6,798,383	$334.40	MASONRY
BID	GRAND HAVEN TOWNSHIP, MI	23,289	2024	2025	$9,882,039	$424.32	MASONRY
ESTIMATE (DD by CPMI)	BARABOO, WI, STATION 1	39,360	2024	2025	$15,114,800	$384.01	MASONRY
ESTIMATE (DD by CPMI)	BARABOO, WI, STATION 2	12,640	2024	2025	$5,635,000	$445.81	MASONRY
BID	COLD SPRING, MN	16,520	2024	2026	$6,577,986	$398.18	MASONRY
BID	PLATTEVILLE, WI	31,100	2025	2026	$12,657,000	$406.98	MASONRY
ESTIMATE (DD by MB)	UNION GROVE YORKVILLE, STATION 1	26,588	2025	2026	$10,901,072	$410.00	MASONRY
BID	HARRISON, WI STATION 1	26,292	2025	2026	$10,037,287	$381.76	MASONRY
ESTIMATE (DD by CM)	LAKESIDE STATION 1, NEWVILLE, WI	32,245	2026	2027	$15,184,459	$470.91	MASONRY
ESTIMATE (DD by CM)	LAKESIDE STATION 2, EDGERTON, WI	20,428	2026	2028	$9,443,644	$462.29	MASONRY / PEMB
ESTIMATE (DD by CM)	LAKESIDE STATION 3, MILTON, WI	16,676	2026	2028	$9,362,642	$561.44	MASONRY
ESTIMATE (DD by CM)	LAKESIDE STATION 4, MILTON, WI	20,791	2026	2027	$11,009,989	$529.56	MASONRY

COST OF WORK

CONSTRUCTION COSTS

PRE-ENGINEERED METAL BUILDINGS:

- Repairs anticipated: leaking due to building movement, replacement of panels,
- Anticipate major maintenance 20-30 years after construction
- Limited design options. Design impacts costs

CONVENTIONAL MASONRY:

- Long-term regular maintenance include: tuckpointing, minor damaged brick replacement, roof replacement
- Anticipate major maintenance 50-75 years after construction

ARCHITECTURAL PRECAST:

- Long-term maintenance include: tuckpointing/replacement of caulking between panels, roof replacement
- Anticipate major maintenance 30-50 years after construction
- Cost come down with panel repetition

QUESTIONS?


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