



**NORTH DAVIS FIRE DISTRICT
BOARD OF TRUSTEES**
Station 41, 381 North 3150 West
West Point City, UT 84015
(801)525-2850 ext. 102

*Tim Roper, Chairman
Howard Madsen, Vice-Chairman
Erik Craythorne, Member
Mark Shepherd, Member
Jerry Chatterton, Member
Nike Peterson, Member
Gary Petersen, Member
Scott Wiggill, Member
Chad Bangarter, Member*

*Mark Becraft, Fire Chief
John Taylor, Deputy Fire Chief*

**NORTH DAVIS FIRE DISTRICT
BOARD OF TRUSTEE WORK SESSION
MEETING MINUTES - JULY 15, 2021
5:30 PM**

Members of public were permitted to attend the meeting in person or via Zoom.

Board of Trustee Work Session – 5:30 PM

If the Work Session is not completed prior to the scheduled board meeting, the Work Session will continue until all items have been discussed; or be discussed during the scheduled Board of Trustees Meeting

Board Members Present: Chairman Timothy E. Roper, Vice-Chairman Howard Madsen, Gary Petersen, Scott Wiggill, Nike Peterson, Mark Shepherd, Erik Craythorne, and Chad Bangarter

Board Members Excused: Jerry Chatterton

Staff Present: Fire Chief Mark Becraft, Deputy Fire Chief John Taylor, District Clerk Misty Rogers, and Treasurer Nicole Nelson

Visitors: Mark Anderson (Zions Bank) and Kevin Blalock (Blalock and Partners), no visitors via Zoom

1. Discussion of the current and future needs of North Davis Fire District, including but not limited to the Capital Improvements Plan, growth, personnel, Station 42 renovation/needs, FY2022 Budget, and the Local Building Authority of North Davis Fire District

Chief Becraft turned the time over to Kevin Blalock from Blalock and Partners. Mr. Blalock stated that he put together a summary and digital presentation of how he arrived at the numbers for the feasibility study. He referred to the Feasibility Study (exhibit attached) and said in their opinion, Station 42 has outlived its useful life. Station 42 is not code or safety compliant or fire safe. They met with Clearfield City building and planning officials to get their thoughts of whether the fire station should be rebuilt at the current site or moved to another location. It sounded as if Clearfield City building and planning officials were in support of it remaining where it was. Mr. Blalock stated that a site survey and title report had been obtained and they were waiting on the results from the geotechnical study. During the review and early design process, what it would take to build a new code compliant station that would last for the next 50 years were considered. Mr. Blalock stated that they didn't want to get too far down the road until they knew how much the facility would cost and what the Board of Trustees felt comfortable approving.

Mr. Blalock shared what they relied on when making budget recommendations. They outlined the 17,000 square foot facility and then they presented their data base of historic fire station construction costs which ranged from Oregon, Idaho, Texas, Wyoming, Montana and Utah. In 2019 the average cost to build a fire station was about \$360 per square foot and in 2020 the cost increased from \$380 to \$385 per square foot. This year, UFA is in the process of renovating five stations and the first station they were estimating the cost at \$425 to \$440 per square foot. Mr. Blalock stated this was troubling to him because back in March when they first started looking at this study for the District, he was estimating the cost to be \$365 to \$380 per square foot. The delivery method that

Blalock recommends that NDFD follow a construction manager / general contractor method which brings the entity on earlier in the process and typically provides better control of the project. Blalock prepared two scenarios which accommodated the 17,000 square foot station and both scenarios came to about the same cost, approximately \$9,500,000. The easiest way to reduce costs was to cut some of the square footage. They looked at a 14,000 square foot facility with three bays and a smaller conference room which cut the cost down to about \$7,900,000. The third scenario would be a renovation of the existing facility and then in the future construction a third station on another site. They looked at this scenario as a phase of building the new facility now and then in two years renovating the existing facility. Renovating the existing building and adding a small third station in approximately two years would end up costing the District approximately \$13,200,000 which is a higher cost than rebuilding Station 42. Mr. Blalock's recommendation to the Board was to go with option two, the construction of a 17,000 square foot facility as it would provide a code compliant building that would allow for growth and last the District 50 years. This option could be done in a phased approach allowing either the people or the vehicles to remain housed at the existing site while a portion of the facility is being constructed. However, the total cost of the project would likely be higher because it is more expensive to phase the project.

Chief Becraft said it may be possible for the employees and equipment from Station 42 be housed at a temporary site within Freeport Center. This would eliminate the need for a phased approach and may be a cost savings to the District.

Board Member G. Petersen asked Mr. Blalock if he could look at other stations and come up with a per firefighter cost. He thought for the wellness of the firefighter and proper efficiency, that there should be a certain amount of square feet available for a certain number of crew members. Mr. Blalock answered that those metrics were more of a rule of thumb. The four-bay station was designed as a battalion station which dictates the number of bays. Where you get some savings were in the number of dorms. If you have an eight-person station or twelve-person station everything else is going to be about the same size to accommodate the number of people. Chief Becraft said he projected that the new station would house eight people and have two extra dorm rooms would be available for part-time employees and future growth.

Board Member Craythorne said in looking at the pictures in the feasibility study, many of the stations had second stories and he wanted to know if it would be more feasible and cost effective to build vertical. Mr. Blalock said whenever possible they try to construct single story fire stations, but if there were two more dorms, they might push for a second story.

Board Member Craythorne then asked the Chief if the training room for Station 42 could be decreased in size. Chief Becraft answered that yes, however the size of the training room is needed to accommodate crew trainings, classes and open houses. The size of the current training room at Station 42 does not meet the needs of the District. Chief Becraft then stated that the NDFD takes less risk sending people from Station 41 to Station 42 because more than likely, the next call would come in for Station 42.

Board Member N. Peterson said she would like to know what items are needed for Station 42 because in the future she didn't want to look back and say that they cut items which were actually needed because the District were financially strained. She also said that this was in the future, but she wanted to know when and where NDFD would build a third station if it were needed. Chief Becraft said some of his forward thinking was that if Station 42 could only be remodeled or the rebuild needed to be downsized, a third station (Station 43) would be built as a "band-aid" situation.

Board Member G. Petersen stated that when they discussed a third station in the past, the NDFD station radius of 3.5 miles is NFPA compliant and will service the District with in the current locations. If Clinton or Syracuse decided to join the district, their existing stations would fit well within the NFPA requirements. The only exception to that circle would be the unincorporated area of West Point near Hooper, but it's mainly farmland and even if homes were to be built, it would remain small.

Board Member N. Peterson asked if there were ways to calculate future costs of rising wages, insurance, etc. She stated that a new building and sustainability for the future are important. Treasurer Nelson indicated that she

included in the packet a projected three-year budget and discussed it with the Board. Chief Becraft mentioned that the projected budget did not include the grant funding. If the District is awarded any grant money the budget will be amended.

Board Member G. Petersen stated that if the District went ahead with the construction of a new station and the proposed projected three-year budget, it would be very tight budget for at least five years. It would require a commitment from the Chief that the District would not increase personnel, etc. Chief Becraft said with the increase of the nine paramedics, the District is also gaining nine firefighters. He said every year the District gets busier but he is hopeful to use part-timers to cover vacation and sick leave. Presently, the part-timers are used to cover the leave and committed spots where additional full-time staff are needed. Chief Becraft stated that he is hopeful that the District will be able to cover the calls throughout the next few years with the approved number of personnel.

Board Member G. Petersen said he wasn't sure he understood the process and wanted to know if there was room for multiple bidders. Mr. Blalock answered that they have been hired to start the feasibility study and then go through a design all the way through to construction. They would help to select a general contractor either early in the process or more traditional. He said with the numbers presented today, he was absolutely sure they could come back with better numbers once they go through a design process. They were trying to interpret the requested needs as well as their own best practice; everything from firefighter wellness as well as minimizing footsteps to make sure that they are doing everything right for the future. He mentioned that the cost of lumber right now for framing was \$40 per square foot and at this time last year it was \$18 per square foot. Wall Street Journal's future report indicates that the price of lumber was coming down, but it won't hit the construction market for 90 to 120 days. They're estimating that lumber might go down to \$28 or \$30 per square foot but it likely won't go back to \$18 per square foot. Board Member Shepherd indicated that building costs will go down but labor costs will not.

Mr. Blalock said their contract was based on a fee percentage of the cost of construction. They are doing everything they can to make sure the cost estimate is accurate, and if possible, drive it down. He then stated that once everyone was comfortable with the anticipated construction costs, then they will fix adjust their fee. Blalock strives to always drive the cost down. He said he was very confident that they could do better than the number that was presented tonight but was just being cautious and conservative with the unknown market.

Board Member Shepherd made a motion to adjourn the Work Session. Board Member N. Peterson seconded the motion. The motion passed.

**NORTH DAVIS FIRE DISTRICT BOARD OF TRUSTEE &
NORTH DAVIS FIRE DISTRICT LOCAL BUILDING AUTHORITY
BOARD MEETING MINUTES - JULY 15, 2021
IMMEDIATELY FOLLOWING THE WORK SESSION**

Members of public were permitted to attend the meetings in person or via Zoom. The Board of Trustees accepted citizen comments at the designated time via Zoom, email, or in person.

Board Members Present: Chairman Timothy E. Roper, Vice-Chairman Howard Madsen, Gary Petersen, Scott Wiggill, Nike Peterson, Mark Shepherd, Erik Craythorne, and Chad Bangerter

Board Members Excused: Jerry Chatterton

Staff Present: Fire Chief Mark Becraft, Deputy Fire Chief John Taylor, District Clerk Misty Rogers

Visitors: Mark Anderson (Zions Bank), no visitors via Zoom

1. Call to Order

2. **Invocation or Inspirational Thought** – Board Member Craythorne

3. **Pledge of Allegiance**

4. **Citizen Comment** – There were no public people in attendance via Zoom or in person.

5. **Consideration of Approval of Minutes from the June 17, 2021 Board of Trustee Meetings**

Board Member Shepherd made a motion to approve the minutes from June 17, 2021 Board of Trustee Meeting. Vice-Chairman Madsen seconded the motion. The motion passed.

6. **Consideration of Approval of the North Davis Fire District Bills for June 2021**

Board Member Wiggill asked what the expense for turnout gear to LN Curtis and Sons in the amount of \$15,046.50 was for. Chief Becraft answered that the Board of Trustees had previously amended the FY2021 Budget to include the purchase of extra sets of turnouts.

Board Member N. Peterson asked about the revenue item for the plan review and architectural egress fee for the Lotus project in the amount of \$150. Deputy Chief Taylor mentioned that every project had a plan review and architectural egress which had to do with exits to the building and fire extinguishers. It has to do with the architectural plans and not the site plans, with the exception of fire alarms and sprinklers which come later.

Board Member N. Peterson also asked about the payroll catchup items. Ms. Rogers mentioned that the full-time firefighters receive 30 checks per year. She then explained that full-time a firefighter pay cycle consists of 12-days, but they are paid every 14-days (bi-weekly). To receive their full pay, full-time firefighters receive four catchup checks per year (one each quarter).

Board Member Wiggill made a motion to approve the bills for June 2021. Board Member N. Peterson seconded the motion. The motion passed.

7. **Consideration of Approval of the North Davis Fire District Financial Report**

Chief Becraft stated that FY2021 has ended and FY2022 has begun.

Board Member Shepherd made a motion to approve the North Davis Fire District Financial Report. Board Member Craythorne seconded the motion. The motion passed

8. **Discussion of the North Davis Fire District Budget for FY2022 and Property Tax Rate for the 2021 Taxable Year. The Board of Trustees will hold a Truth in Taxation hearing to consider adopting the Property Tax Rate for the 2021 taxable year and a public hearing to consider the adoption of the FY2022 Budget on August 12, 2021 at 6:00 PM**

Ms. Rogers said she left this item on the agenda just in case the Board of Trustees wanted to discuss it further.

Board Member N. Peterson made a motion to adjourn from the Board of Trustee meeting and convene into the Local Building Authority meeting. Board Member G. Petersen seconded the motion. The motion passed

9. **Special Meeting of the Local Building Authority of North Davis Fire District, Utah**

Public Hearing (CANCELLED)

Consideration for adoption of Resolution # 2021RLBANDFD-03 of the Local Building Authority of North Davis Fire District, Utah authorizing the issuance and sale of not more than \$11,000,000 aggregate principal amount of Lease Revenue and Refunding Bonds, Series 2021 and superseding the resolution adopted by the Authority on June 17, 2021; and related matters.

Ms. Rogers explained that she listed the public hearing as being cancelled on the agenda because they originally had a public hearing scheduled tonight due to a parameter's resolution being adopted last month. However, because the amount on the parameter's resolution needed to be changed, the public hearing was cancelled but bond council asked that it be noticed in this way.

Chief Becraft stated that since the District is faced with higher costs it was in their best interest to not even pursue the last parameters resolution and to present a new resolution with the increased amount to the board.

Mr. Mark Anderson with Zions Bank said there wasn't a rush to do this but he wanted to capture an interest rate that was still favorable in today's environment. He said the economy suggests that rates should remain fairly low through the rest of the year but that's always subject to change.

Board Member G. Petersen asked when the bond rate was captured. Mr. Anderson answered that the bond rate will be captured the date that the bonds are sold. He said this resolution was basically increasing the amount being borrowed. He said if this Resolution is passed, a public hearing by the Local Building Authority would be set for August 12, 2021 at 6:30 pm. He said there would be no action needed, it would just be a public hearing for the issuance of bonds.

Board Member Shepherd motioned to approve Resolution # 2021RLBANFD-03 of the Local Building Authority of North Davis Fire District, Utah authorizing the issuance and sale of not more than \$11,000,000 aggregate principal amount of Lease Revenue and Refunding Bonds, Series 2021 and superseding the resolution adopted by the Authority on June 17, 2021; and related matters. Vice-Chairman Madsen seconded the motion. The motion passed.

Roll Call Vote:

Chairman Roper (non-voting)	Vice-Chairman Madsen – aye
Board Member Chatterton – excused	Board Member Craythorne - aye
Board Member G. Petersen – aye	Board Member N. Peterson – aye
Board Member Bangerter - aye	Board Member Wiggill – aye
Board Member Shepherd - aye	

Board Member G. Petersen motioned to adjourn the Local Building Authority meeting and reconvene into the regular Board of Trustees Meeting. Board Member Bangerter seconded the motion. The motion passed.

- 10. Consideration for adoption of Resolution 2021R-12 of the Board of Trustees (the "Board") of North Davis Fire District, Utah authorizing and approving the execution and delivery of a Master Lease Agreement, by and between the Board and the Local Building Authority of North Davis Fire District, Utah (the "Authority") and superseding a resolution adopted by the Board on June 17, 2021; authorizing the issuance and sale by the Authority of not more than \$11,000,000 aggregate principal amount of Lease Revenue and Refunding Bonds, Series 2021; and related matters.**

Board Member N. Peterson motioned to approve Resolution 2021R-12 of the Board of Trustees (the "Board") of North Davis Fire District, Utah authorizing and approving the execution and delivery of a Master Lease Agreement, by and between the Board and the Local Building Authority of North Davis Fire District, Utah (the "Authority") and superseding a resolution adopted by the Board on June 17, 2021; authorizing the issuance and sale by the Authority of not more than \$11,000,000 aggregate principal amount of Lease Revenue and Refunding Bonds, Series 2021; and related matters. Board Member Shepherd seconded the motion. The motion passed.

Roll Call Vote:

Chairman Roper (non-voting)	Vice-Chairman Madsen – aye
Board Member Chatterton – excused	Board Member Craythorne - aye
Board Member G. Petersen – aye	Board Member N. Peterson – aye
Board Member Bangerter – aye	Board Member Wiggill – aye
Board Member Shepherd - aye	

11. Fire Chiefs Report

Deputy Chief Taylor said over the 4th of July holiday weekend NDFD had been extremely busy, 56 calls were received. There was a significant brush fire, microburst winds, fireworks on a roof, etc. He then told the Board of Trustees that as he was responding with lights and sirens to a call in Clearfield people were shooting off aerials in the middle of the road in the area of 2300 West 800 North. Deputy Chief Taylor stated that the building fire in

Freeport occurred at a potato chip processing factory and the outcome could have been worse. The security cameras caught some movement and someone noticed it that fire immediately on their phone. The fire melted four containers that had 250 gallons each of cooking oil. Fortunately, the sprinklers hadn't gone off. If they had, the oil and mess would have gone into the sanitary sewer system and there would have been significant issues.

Chief Becraft mentioned the badge pinning ceremony where employees of NDFD were sworn in as firefighters, drivers and captains.

Board Member Wiggill mentioned that the chiefs and entire staff were to be commended for working on, putting together and having the people present during the meeting to provide the board with the information on the reconstruction of Station 42. Chairman Roper also wanted the Chief to let the firefighters know he and the Board of Trustees appreciated them and their work.

12. Other

13. Adjourn

Board Member G. Petersen made a motion to adjourn. Board Member N. Peterson seconded the motion. The motion passed.

Passed and adopted the 12 day of August 2021



Timothy E. Roper, Chairman

ATTEST:

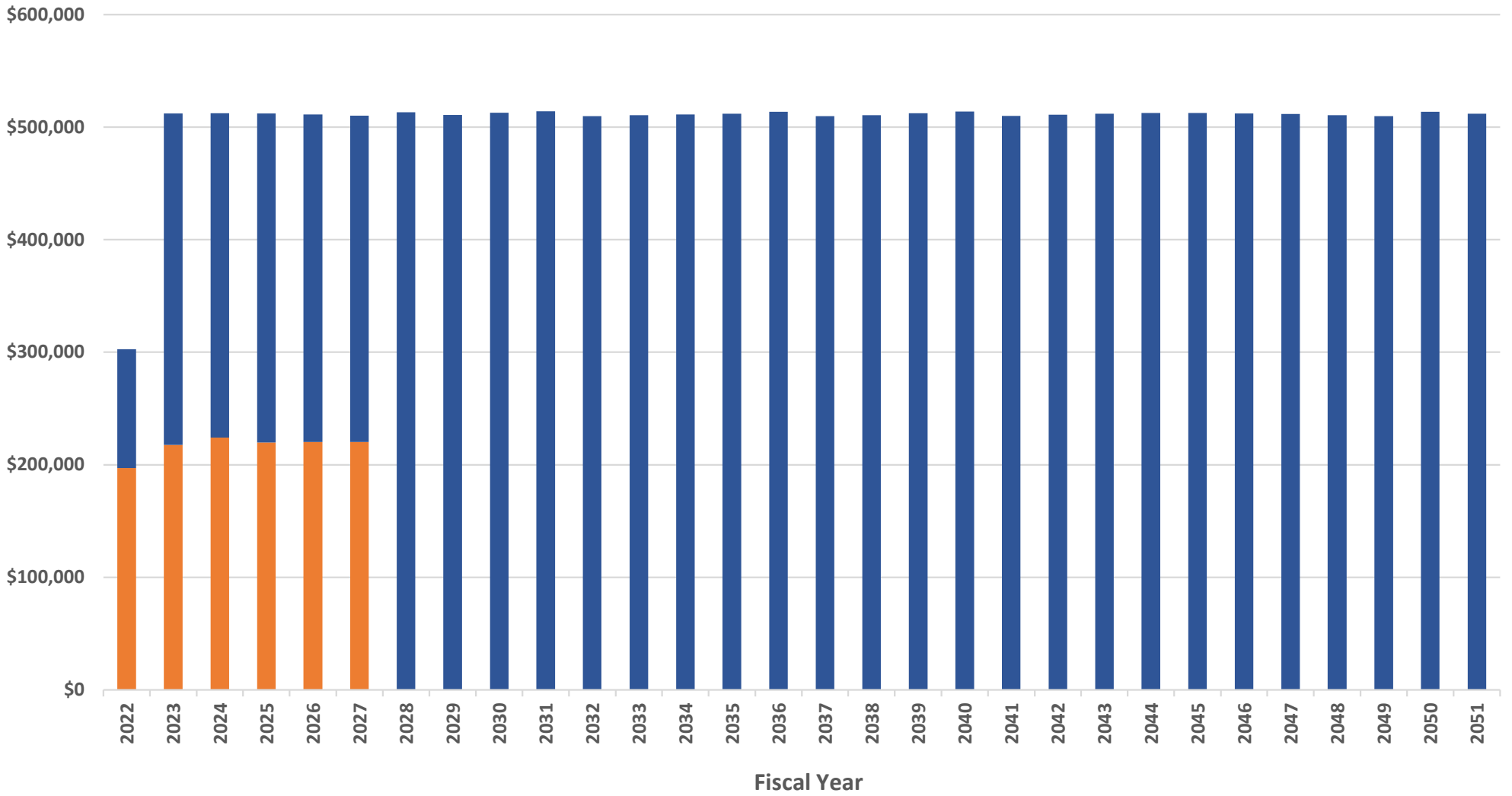


Misty Rogers, District Clerk



Local Building Authority of North Davis Fire District, Utah
Preliminary \$10,330,000 Lease Revenue and Refunding Bonds, Series 2021

Refund Series 2008 New Money





and
PARTNERS
blalock
architectural design studio

T C A
ARCHITECTURE + PLANNING + DESIGN

NORTH DAVIS FIRE DISTRICT

FIRE STATION 42

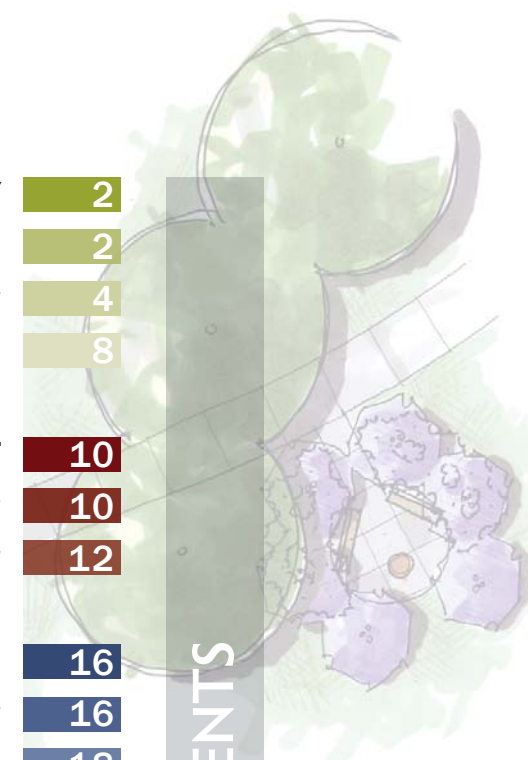
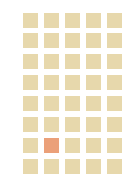
FEASIBILITY STUDY

07.02.2021



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TEAM MEMBERS

NORTH DAVIS FIRE DISTRICT:

Chief Mark Becraft - NDFD Fire Chief / CEO

North Davis Fire District retained the services of Blalock & Partners Architectural Design Studio and TCA Architecture + Planning + Design for the feasibility study.

BLALOCK AND PARTNERS:

Kevin Blalock, AIA - Principal

Sean Baron, AIA - Associate Principal

Bradeson Brinton - Associate

TCA:

Brian Harris, AIA, LEED AP BD+C - Principal



Blalock & Partners Architectural Design Studio
159 West Pierpont Ave.
Salt Lake City, UT 84101



ARCHITECTURE + PLANNING + DESIGN

TCA Architecture + Planning + Design
6211 Roosevelt Way
NE Seattle, WA 98115



Image: Salt Lake City Fire Station 03

PROJECT SUMMARY

TASK DESCRIPTION

North Davis Fire District (NDFD) contracted with Blalock & Partners Architectural Design Studio and TCA Architecture + Planning + Design (Design Team) to conduct a feasibility study on the NDFD Fire Station 42, located at 88 East Center St, Clearfield UT. The facility was constructed in 1980 to provide service to Clearfield City as a Volunteer Fire Department. In 2021, it is arguably one of the busiest fire stations in Utah, with an annual call volume of approx. 3200 calls, and an anticipated addition of a paramedic unit in 2022 with an additional 1500 calls. NDFD has determined that the existing facility is not adequate to meet the current and near future demand, and does not have the adequate accommodations for 8 to 10 personnel to function and respond under these current conditions. NDFD therefore tasked the Design Team with evaluating two possible scenarios:

1) Renovation of - and addition to - the existing facility;

2) Demolition of the existing facility and replacement with new construction.

NDFD provided the Design Team with several requirements for a facility (provided under either of the two scenarios) that would meet their current and anticipated needs, including:

- (9) firefighter dorms;
- (1) battalion chief dorm;
- Living quarters need to provide access for firefighter NFPA requirement of one minute turnout time;
- (4) drive through bays, exiting north onto Center Street.

Given the project goals and scenarios to be evaluated, **the primary task for this feasibility effort was 4-fold:**

1) Evaluate the existing facility;

2) Develop a conceptual program for the optimal facility;

3) Develop a conceptual site & floor plan for the optimal facility;

4) Develop opinions of probable costs for the two scenarios.

1) EXISTING FACILITY ASSESSMENT

The existing facility consists of a two story administration and residential wing on the east side of the building, and a 3 bay apparatus bay. The Design Team visited the existing fire station and took many photos and measurements to check for deficiencies in a few general categories:

- code compliance;
- firefighter wellness;
- overall site / building function.

In general, **the facility is in poor condition and does not adequately serve its purpose.** Many standard features that would be required of today's standard fire station are missing - no fire sprinkler system, no fire alarm system, no individual temperature controls in the dorm rooms... the list is lengthy.



More importantly, **there are concerns with the building structure itself.** Under the current IBC, fire stations are designated as Risk Category IV (Essential Facility) and are required to be fully operational after an earthquake or other significant event. Per the study titled *EARTHQUAKE PROBABILITIES FOR THE WASATCH FRONT REGION IN UTAH, IDAHO, AND WYOMING*, published by the USGS in 2016, the Wasatch Fault has a high probability of a 7.0 magnitude (or higher) earthquake event within the next 50 years. Therefore, the facility's structural seismic performance is of the utmost concern. The facility features load bearing CMU masonry walls which lack seismic performance as compared to other structural systems (i.e., steel frame). Additionally, there is a known aquifer that exists on site. This can create challenges with the soil's bearing capacity and liquefaction potential. The facility experienced significant settlement in its early years of existence, requiring a complete concrete floor slab replacement. If salvaging the existing structure was the desired approach for the new facility, then an exploratory effort would need to be conducted to verify the current condition of the substructure directly beneath the facility.

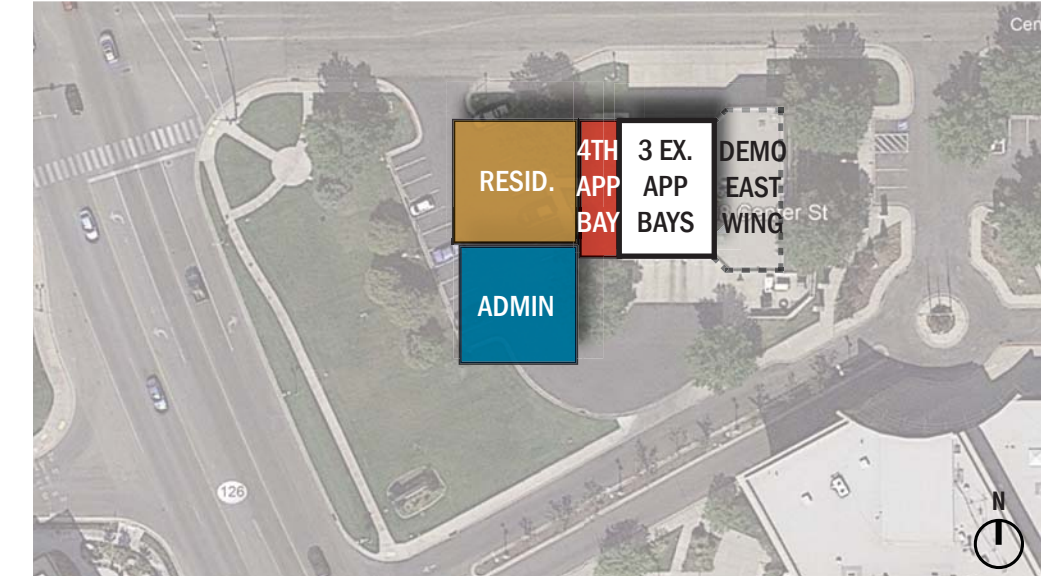
2) BUILDING PROGRAM

The initial step for confirmation of the size of the optimal facility was to identify all operationally necessary spaces, and determine their individual needs and sizes. Detailed summaries and diagrams for each space have been incorporated into this document. This process established a **target building size of 17,768 gross square feet.**

3) SITE PLANNING

Once the target facility square footage was established, the first step was to compare it with the square footage of the existing facility to determine its square footage deficiency.

Category	Existing SF	Target SF	Deficiency
Administration	2,700	3,389	689
Residential	2,700	4,021	1,321
App. Bay & Supp.	3,250	9,469	6,219
Gen. Bldg Support	600	889	289
totals	9,250	17,768	8,518



Scenario 1 Renovation / Addition: Study

Scenario 1 : Renovation / Addition

With the square footage deficiency now quantified, the design team then reviewed how the square footages of the existing administration area, residential area, and apparatus bays could be supplemented (given their current configuration and positions on the site) in the scenario of a renovation / addition. The review quickly revealed several challenges:

- The existing apparatus bay depth is approximately 70'. The apparatus fleet types and quantity (including apparatuses planned to be added to the fleet in the near future) dictate a depth of 80' minimum. Leaving the depth as-is would be feasible, but restricts the ability to stack certain apparatuses as desired by NDFD.
- The existing facility is tucked into the northeast corner of the site with the apparatus bays located on the west side of the facility. The only room for growth is to the west of the apparatus bays, so the additional required square footage to meet the target facility size would have to be constructed in that vicinity.
- The existing footprint of the two story admin/residential wing might be able to be reconfigured to accommodate either the target facility's required Administration square footage, or the Residential square footage, but not both.
- Attempting to add a third story would not be functional, and assumes that the existing structure and soil properties have the capacity for the additional load.

Since it doesn't make functional sense to have the residential wing on one side of the apparatus bay and the administration wing on the opposite side of the apparatus bay, then there appears to be only one viable solution for a renovation/addition scenario:

- Demolish the existing 2 story administration / residential wing;
- Construct the additional (4th) apparatus bay on the west side of the westernmost apparatus bay (alternatively, the 4th apparatus bay could be positioned on the east side where the 2 story east wing was demolished);
- Construct the new admin/residential wings to the west of the apparatus bays.

Though technically feasible, **the renovation / addition scenario does not appear to be an efficient use of city funds in the aim of creating an optimal fire station facility for NDFD.** Therefore, the Design Team focused the majority of their site study efforts on Scenario 2 - New Construction.

Scenario 2 : New Construction

The Design Team looked at a number of configurations and considerations, including one vs two story, an approach to allow the existing fire station to remain operational during construction, and even considered the possibility of an alternate site. An alternate site was quickly deemed unlikely by the project team for a couple reasons:

- A new site would require a land purchase or swap (with other Clearfield City owned land) which would likely add considerable time to the project schedule, as well as negatively impact project costs.
- The existing fire station location is optimal due to being on an arterial road (Main Street) with Center Street providing quick access westward to West Point.

Focusing on the existing site, the Design Team first reviewed the zoning requirements established in Clearfield City's Downtown Form Based Code. The Design Team reviewed the project and their understanding of the zoning requirements with Clearfield City Zoning in early June. From there, the Design Team was able to take the optimal facility components and develop a conceptual floor plan and site plan that met the zoning requirements, as well as facility component adjacency requirements.

4) COST OPINIONS

The design team established two cost opinions for the two scenarios. Those estimates are provided in detail at the end of this document, and are summarized here:

Scenario 1 : Renovation / Addition

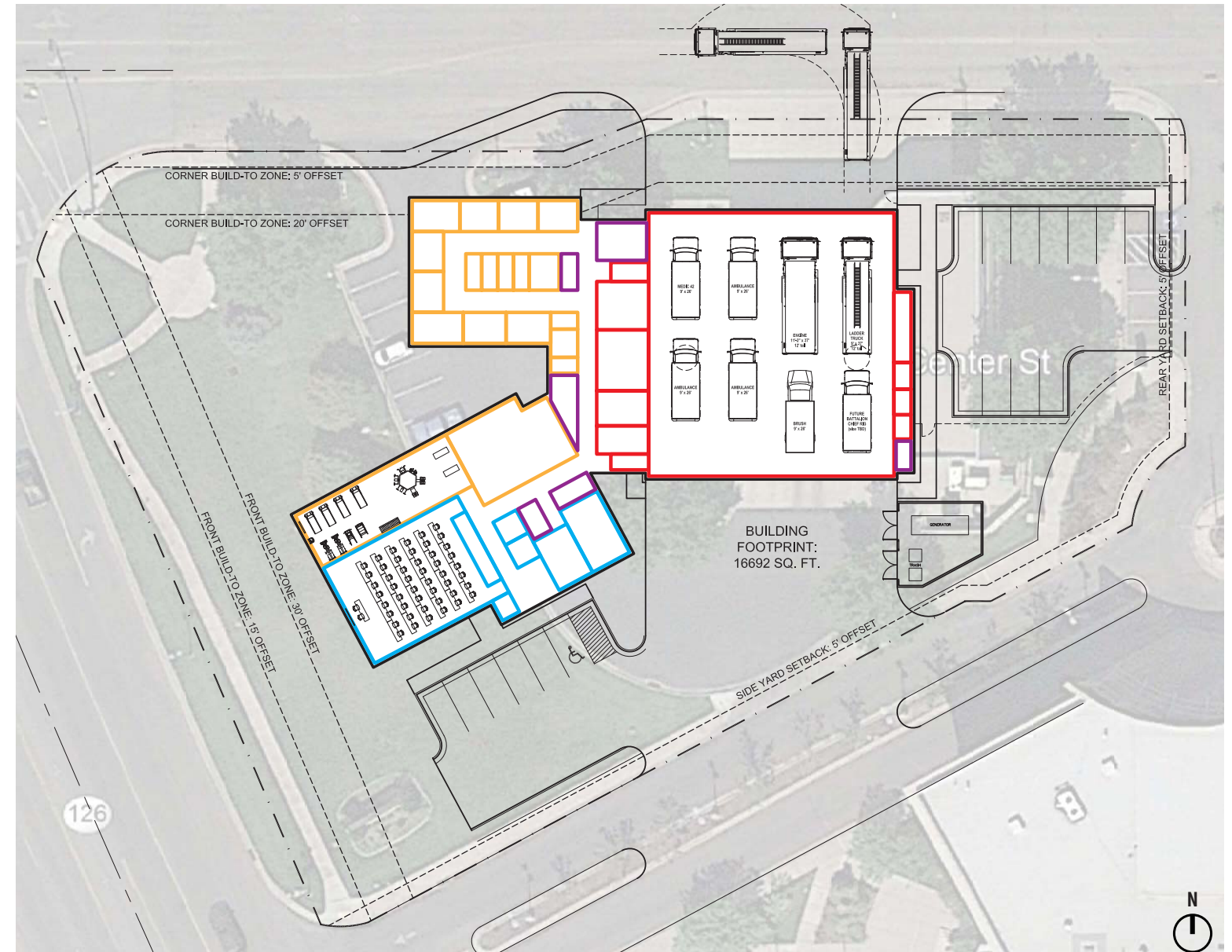
COST SUMMARY			
ITEM			COST ESTIMATE
Estimated Construction Costs			\$ 8,309,310
Soft Costs - Fees & Expenses for Construction			\$ 158,510
Soft Costs - Technology / FF&E Items			\$ 421,080
Soft Costs - A/E Fees			\$ 560,223
ESTIMATED PROJECT COSTS:			\$ 9,449,123

Scenario 2 : New Construction

COST SUMMARY			
ITEM			COST ESTIMATE
Estimated Construction Costs			\$ 8,488,025
Soft Costs - Fees & Expenses for Construction			\$ 158,510
Soft Costs - Technology / FF&E Items			\$ 427,680
Soft Costs - A/E Fees			\$ 571,342
ESTIMATED PROJECT COSTS:			\$ 9,645,558

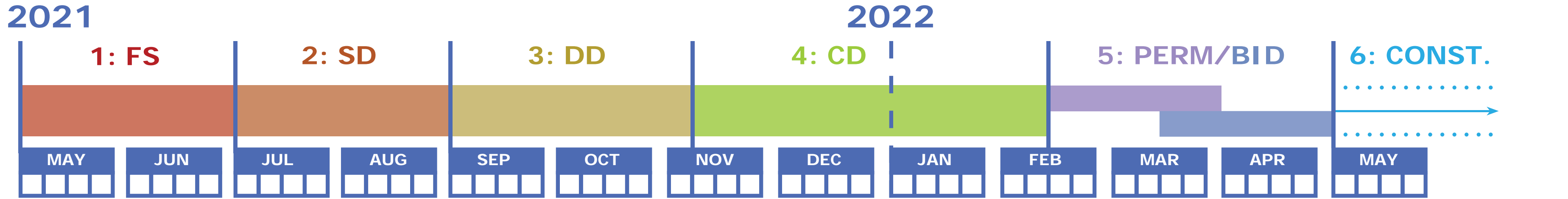
CM/GC PROJECT DELIVERY METHOD

The Design Team proposes a Construction Manager / General Contractor (CM/GC) project delivery method for the NDFD Fire Station 42 project. This entails the selection of a qualified local general contractor to bring on board as a project partner early in the design process to aid in accurate cost estimating, construction scheduling, design constructability review, etc. The same general contractor is retained to construct the building. This method has been utilized on several of the Design Team's recent projects and has yielded positive results for each one of them. It is a proven project delivery method that results in a quality product and ultimately reduces risk to all parties involved in the project.



Scenario 2 New Construction: Preferred Site and Floor Plan

PROJECT SCHEDULE



10 MONTHS						
<p>6 - 8 WEEKS</p> <p>Description: Feasibility Study</p> <p>Existing Facility Assessment, Conceptual Programming, Site Planning, Cost Opinions.</p> <p>NDFD project funding efforts</p>	<p>10 WEEKS</p> <p>Description: Schematic Design</p> <p>Development of preliminary design drawings (Floor Plans, Elevations, Building Sections), Design Visualizations and digital 3D models, material selections, along with presentations of a number of options and iterations for the owner to select from, ultimately arriving at one solution for further development.</p> <p>Blalock & Partners have recommended that the project team utilize a CM/GC project delivery method. It is recommended that the contracted entity be brought on board during this phase for a Schematic Design Budget to be developed.</p>	<p>10 WEEKS</p> <p>Description: Design Development</p> <p>Development of Drawings and Specifications. At this stage all members of the design team are actively involved; including but not limited to the Civil Engineer, Landscape Architect, Structural Engineer, Mechanical Engineer, and Electrical Engineer. Ultimately, the deliverable for the Design Development stage will allow for an accurate understanding of the budget for the project.</p> <p>The CM/GC entity would put together an updated budget at the end of this stage that includes takeoffs, and material and labor costs within each division.</p>	<p>14 WEEKS</p> <p>Description: Construction Documents</p> <p>All aspects of the design are detailed to completion to allow for accurate bidding. A complete drawings set including all disciplines is developed along with the Project Manual of specifications. Upon completion, the Permitting and Bidding Negotiation processes will begin.</p> <p>The CM/GC entity would provide 2-3 cost estimates during this stage with increasing levels of detail and accuracy.</p>	<p>5 - 6 WEEKS</p> <p>Description: Permitting</p> <p>Design Team submits a complete construction document sets to the local municipality for permit review. Design Team will respond to any and all comments from the reviewers and provide revised documents where necessary.</p>	<p>3 - 4 WEEKS</p> <p>Description: Bidding</p> <p>Bid process will be assisted by the architect and design team via Addenda as required, fielding bidding questions, and substitution requests.</p>	<p>10 - 12 MONTHS</p> <p>Description: Construction</p> <p>Construction timeline will depend on the construction schedule and sequencing / phasing determined by the project team. Design Team provides typical construction administration services including RFI and submittal responses, pay application review and approval, site visits, coordination meetings, etc.</p> <p>Post construction, the Design Team will be available for post-occupancy coordination, warranty walk through, and post occupancy feedback.</p>

EXISTING FACILITY ASSESSMENT

YEAR CONSTRUCTED: 1980

STRUCTURAL FRAME: CMU

SQUARE FOOTAGE (APPROXIMATE):

Apparatus bays:	3,250 SF
Admin/residential wing:	3,000 SF ea. floor
Total:	9,250 SF

OVERVIEW

The Design Team conducted a visual inspection of the entire facility to evaluate it within three general categories - code compliance, firefighter wellness, and overall site / building function. Below is a general list of deficiencies observed. The following pages include photos with more detailed information.

1) CODE COMPLIANCE

- ADA - non-compliant (entrance, clear width at doors, etc.);
- STRUCTURAL - CMU building; not satisfactory based upon IBC "Essential Facility" categorization;
- ENERGY CODE - non-compliant with current Energy Code (walls not insulated, lighting systems, etc.);
- LIFE SAFETY - no fire sprinkler system nor fire alarm system; Egress is non-compliant;
- PLUMBING FACILITIES - inadequate quantity.

2) FIREFIGHTER WELLNESS

- DECON / CALL RETURN SEQUENCING - not satisfactory;
- HVAC - no independent controls (dorms);
- DORMS - some without operable windows; poor sound control;
- EXERCISE / FITNESS - not "best practice", limited space;
- LIGHTING - fluorescent throughout; does not promote occupant health.

3) BUILDING / SITE FUNCTIONALITY

- BUILDING SETTLEMENT ISSUES - main floor lowered approx. 6". Extent & effect of aquifer needs to be carefully reviewed;
- DRIVE LANE FOR RETURNING APPARATUSES - radius of drive leading to south bay doors is too tight. Apparatus must 3-point turn, back into bays from Center Street, or enter wrong-way along city complex entrance drive to the south.

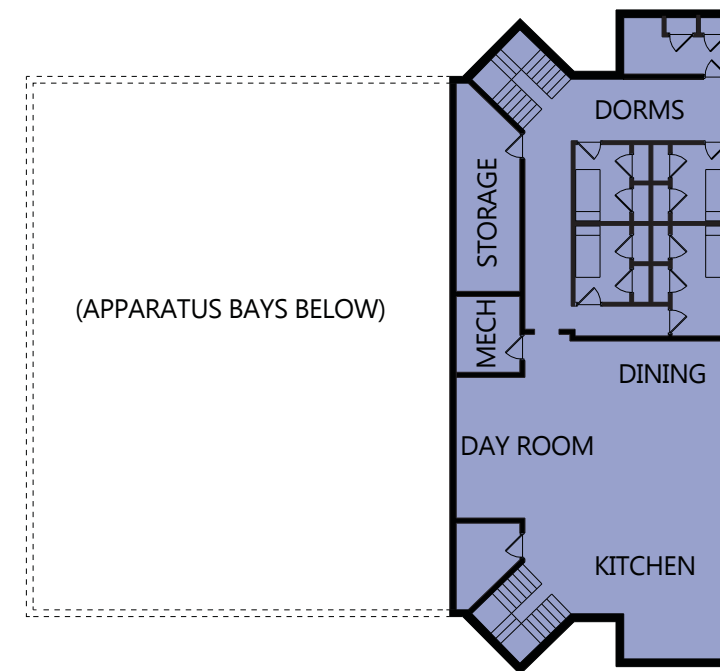
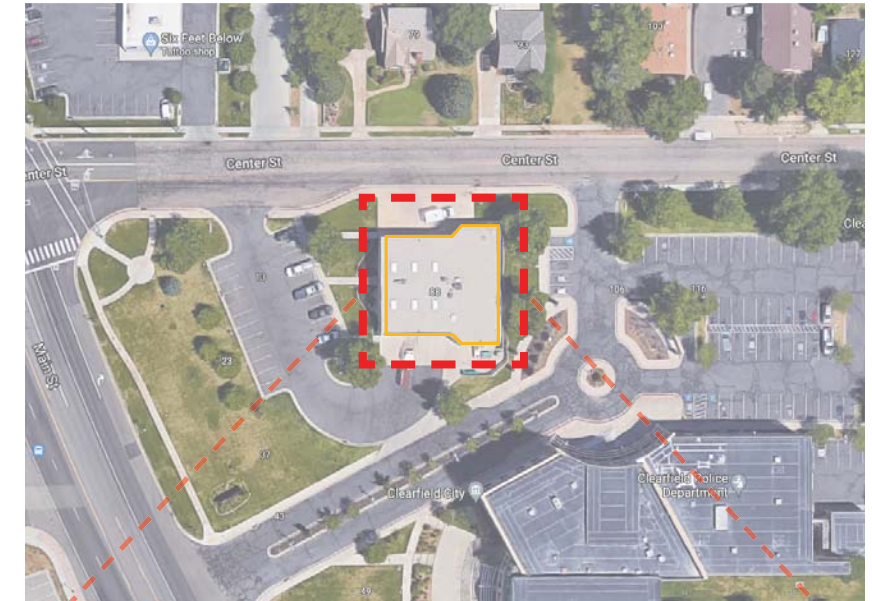


FRONT (NORTH) VIEW

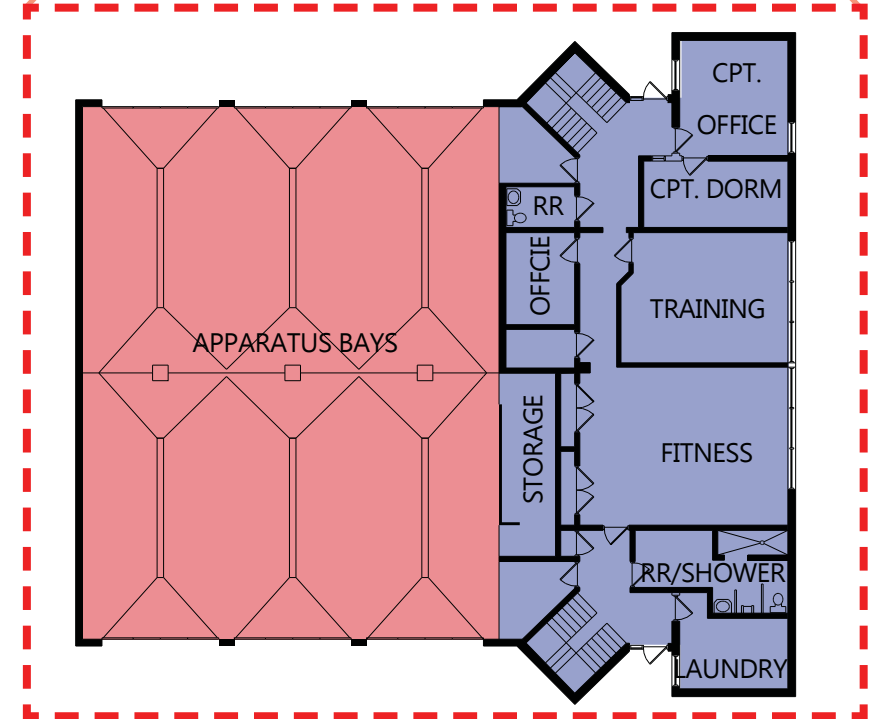


REAR (SOUTH) VIEW

APPARATUS BAY:	3,250 sf
ADMIN/RESIDENTIAL:	6,000 sf



SECOND FLOOR



FIRST FLOOR

EXISTING FACILITY ASSESSMENT

PHOTO DOCUMENTATION AND COMMENTARY



Building Entry

- ADA - non-compliant
- Building has experienced settlement, resulting in floor slab replacement and steps at various locations



Laundry Facilities

- Existing Laundry facilities are inefficient and limited, lacking proper adjacencies to ancillary uses.
- Limited storage and accessibility.



Public Restroom

- One single user unisex
- Restroom does not meet certain ADA requirements



Trash/Generator

- Facility lacks dedicated trash enclosure.
- Site lacks secure perimeter for building components and employee parking.



Mechanical Room

- HVAC - lack of zone specific control.
- Note: exterior walls are non-insulated, so heating/cooling system has to run for much longer durations to meet demand



Training Room

- Current setup lacks updated Audio/Video capabilities.
- Room lacks storage for training materials and supplies.



North Entry from App. Bay to Offices

- Building has experienced settlement, resulting in floor slab replacement and steps at various locations
- Step poses tripping hazard for firefighters entering app bays



South Entry from App. Bay to Offices

- Building has experienced settlement, resulting in floor slab replacement and steps at various locations
- Step poses tripping hazard for firefighters entering app bays



North Stair

- Egress non-compliant - Riser/tread and intermediate guardrail bar dimensions exceed code maximums (at both the north and south stair)
- Note: no elevator present, so second floor is not ADA accessible.



Storage

- Storage needs are currently not being met efficiently.
- Large storage areas currently located in exercise/fitness area.



Structural

- Building currently not satisfactory based upon 2018 "Essential Facility" categorization



Lighting

- Fluorescent lighting throughout building.
- Poor lighting conditions for work/live spaces.

EXISTING FACILITY ASSESSMENT

PHOTO DOCUMENTATION AND COMMENTARY



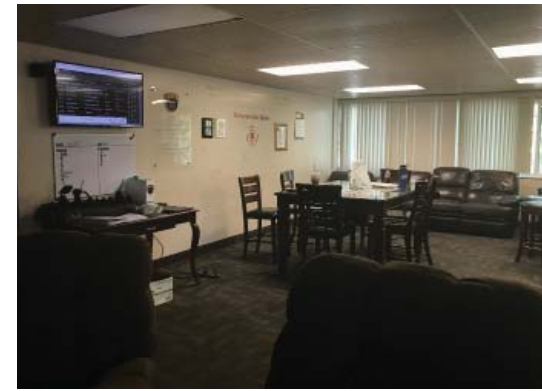
Locker/Shower Room

- Current single-user shower/locker facilities are inadequate for occupant load and outdated.
- Facility currently contains one shower/locker room for firefighters on the first level.
- No restroom located on second level adjacent to dorms.
- ADA - non-compliant



Gear Storage

- Limited resources prevent best practice DECON / RETURN CALL sequencing
- Lacking dedicated DECON processing.



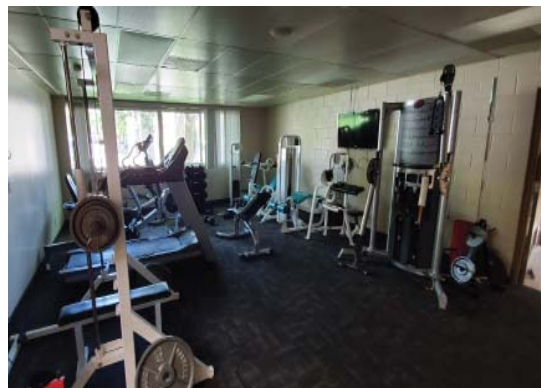
Dining / Kitchen / Day Room

- Outdated and inefficient configuration.
- Poor light quality, minimal daylighting.
- ADA - non-compliant



Dorms (Second Level)

- Dorm rooms lack operable windows, and in some cases no windows at all.
- Inadequate means of egress.
- Limited space in individual living quarters.
- Current configuration does not promote efficient sound control.



Fitness / Exercise Area

- Limited space and equipment.

PROGRAM SPACE SUMMARY

The Building Program for NDFD’s optimal fire station for the Centerville location has been established through several meetings with NDFD. All operationally necessary spaces have been defined, and preferred adjacencies established. The total target building size for the is 17,768 gross square feet with an efficiency factor of 1.25. The efficiency factor is a multiplier that accounts for square footages attributed to building components such as wall thickness and corridors, which are not specifically programmed, but are included in the total building square footage. The current floor plan study has a building size of 16,692 gross square feet, making it an efficient use of space with an efficiency factor of 1.16. Please note that during the Schematic Design phase, various floor plan iterations will be studied and reviewed with NDFD. The final floor plan selected may have a gross square footage that is different from the gross square footages indicated here; however, we do not anticipate the final square footage needing to be beyond 17,000 SF (given the current project goals and requirements).

The following pages illustrate diagrammatic building blocks for each of these spaces, and list various design considerations and preferred adjacencies.



Department/Space	Comments	Qty	Target per Program		Per Plan	
			Size (SF)	Total Net SF	Size (SF)	Total Net SF
Administration						
Entry Vestibule		1	49	49	49	49
Lobby		1	400	400	166	166
Public Restroom		2	64	128	64	128
Training Room	Includes 100 SF storage room	1	1605	1605	1701	1,701
Reports Office		1	216	216	216	216
Battalion Chief Office	165 SF office area + 148 SF sleeping/bath area	1	313	313	294	294
Administration SubTotal				2,711		2,554
Residential						
Kitchen		1	219	219	239	239
Dining	(350 SF Exterior Patio not included)	1	219	219	239	239
Dayroom		1	414	414	389	389
Residential Laundry		1	96	96	108	108
Exercise Room		1	836	836	1014	1,014
Firefighter Dorm	Varying sizes in current floor plan: (2) @ 150 SF, (2) @ 130 SF, (5) @ 120 SF	9	120	1080	130	1,170
Firefighter Restroom - ADA		1	80	80	80	80
Firefighter Restroom - non ADA	Varying sizes in current floor plan: (4) @ 55 SF, (1) @ 47 SF	5	47	235	54	270
Janitor Closet		1	38	38	47	47
Residential SubTotal				3,217		3,556
Apparatus Bay & Support						
Apparatus Bay	18' to 20' wide x 84' long drive-through bay	4	1638	6552	1638	6,552
Decontamination		1	106	106	122	122
Cleaning		1	152	152	152	152
Turnout Gear		1	269	269	269	269
Boot/Hand/Eye Wash Area		2	60	120	72	144
Medical Storage		1	156	156	189	189
Workshop Area		1	89	89	89	89
Apparatus Bay Storage		1	43	43	43	43
Compressor Room		1	50	50	50	50
Janitor Alcove		1	38	38	38	38
Apparatus Bays SubTotal				7,575		7,648
General Building Support						
Mechanical	Mech system TBD. Fire riser is planned to be included in mech room	1	300	300	202	202
Electrical	80 SF primary electrical room in admin area; 54 SF sub panel room in a	1	160	160	134	134
Riser Room	Can possibly combine with Mechanical Room	1	66	66	0	0
Data Room		1	80	80	69	69
General Storage	Varying sizes in current floor plan: (1) @ 138 SF, (1) @ 32 SF	1	105	105	170	170
General Building Support Subtotal				711		575
BUILDING TOTALS						
Total Net Square Footage:				14,214		14,333
Efficiency Factor			1.25		1.16	
Total Square Footage				17,768		16,692

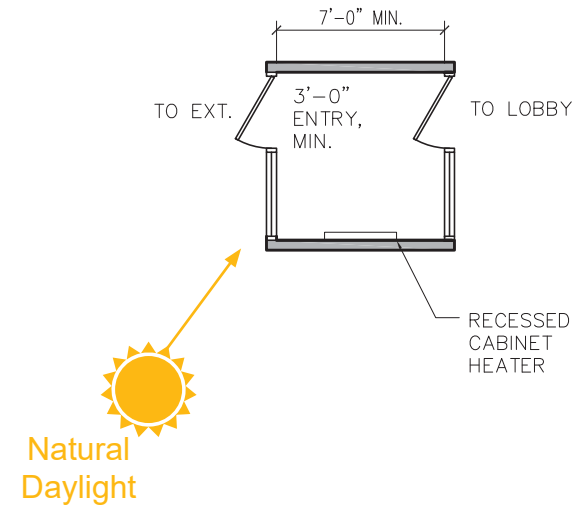
Administration

Entry Vestibule

Activities	Main entry into building
Adjacencies	Near visitor parking and lobby
Qty/NSF - Target	1 @ 49 NSF
Qty/NSF - Per Plan	1 @ 49 NSF
<hr/>	
Plumbing	None
HVAC	Recessed cabinet heater
Electrical /Technology	Typical building entry security and ADA requirements
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	None
Special Requirements and notes	None
<hr/>	
Floor Finish	Walk-off mat
Ceiling Finish	TBD
Wall Finish	TBD
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN: **None**

Diagram scale: 1/8" = 1'-0"



Natural Daylight

Administration

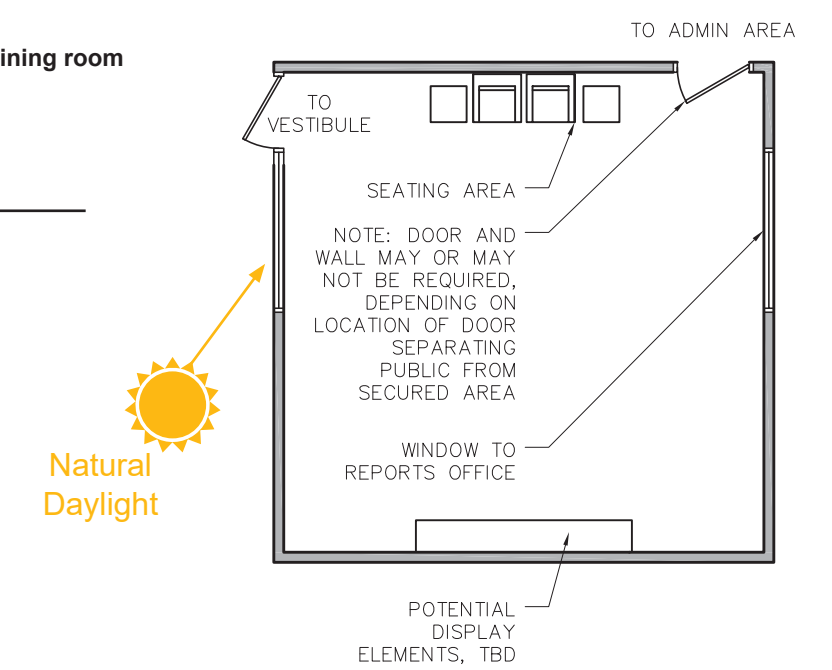
Lobby

Activities	Public entry/exit/general gathering
Adjacencies	Vestibule, public restrooms, reports office, training room
Qty/NSF - Target	1 @ 400 NSF
Qty/NSF - Per Plan	1 @ 166 NSF
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Plumbing	None
HVAC	Heating / Cooling
Electrical /Technology	TBD
AV Requirements	TBD
Millwork/Cabinets	None
Furnishings	Soft seating
Shelving	None
Storage	None
Special Requirements and notes	TBD
<hr/>	
Floor Finish	Exposed Ground, Polished, and Sealed Concrete
Ceiling Finish	TBD
Wall Finish	Painted Gypsum
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Any elements to be displayed?
- Quantity of seating desired?

Diagram scale: 1/8" = 1'-0"



Natural Daylight

Administration

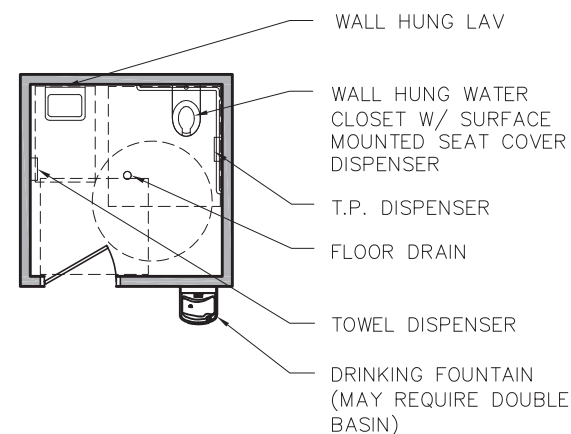
Public Restroom

Activities	Public restroom
Adjacencies	Lobby, training room
Qty/NSF - Target	2 @ 64 NSF
Qty/NSF - Per Plan	2 @ 64 NSF
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Plumbing	Standard for public restroom
HVAC	Exhaust
Electrical /Technology	Standard for public restroom
AV Requirements	None
Millwork/Cabinets	None
Furnishings	Standard public restroom accessories
Shelving	None
Storage	None
Special Requirements and notes	TBD
<hr/>	
Floor Finish	Exposed Ground, Polished, and Sealed Concrete
Ceiling Finish	Painted Gypsum
Wall Finish	Tile
Acoustical Treatments	STC rated wall construction

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Are paper goods & soap contracted out? need to confirm pt dispensers/all rr accessories are ada compliant (do not project more than 4")
- Are there different finishes available from contracted rr accessories entity? i.e. - s.s. in lieu of plastic.

Diagram scale: 1/8" = 1'-0"



Administration

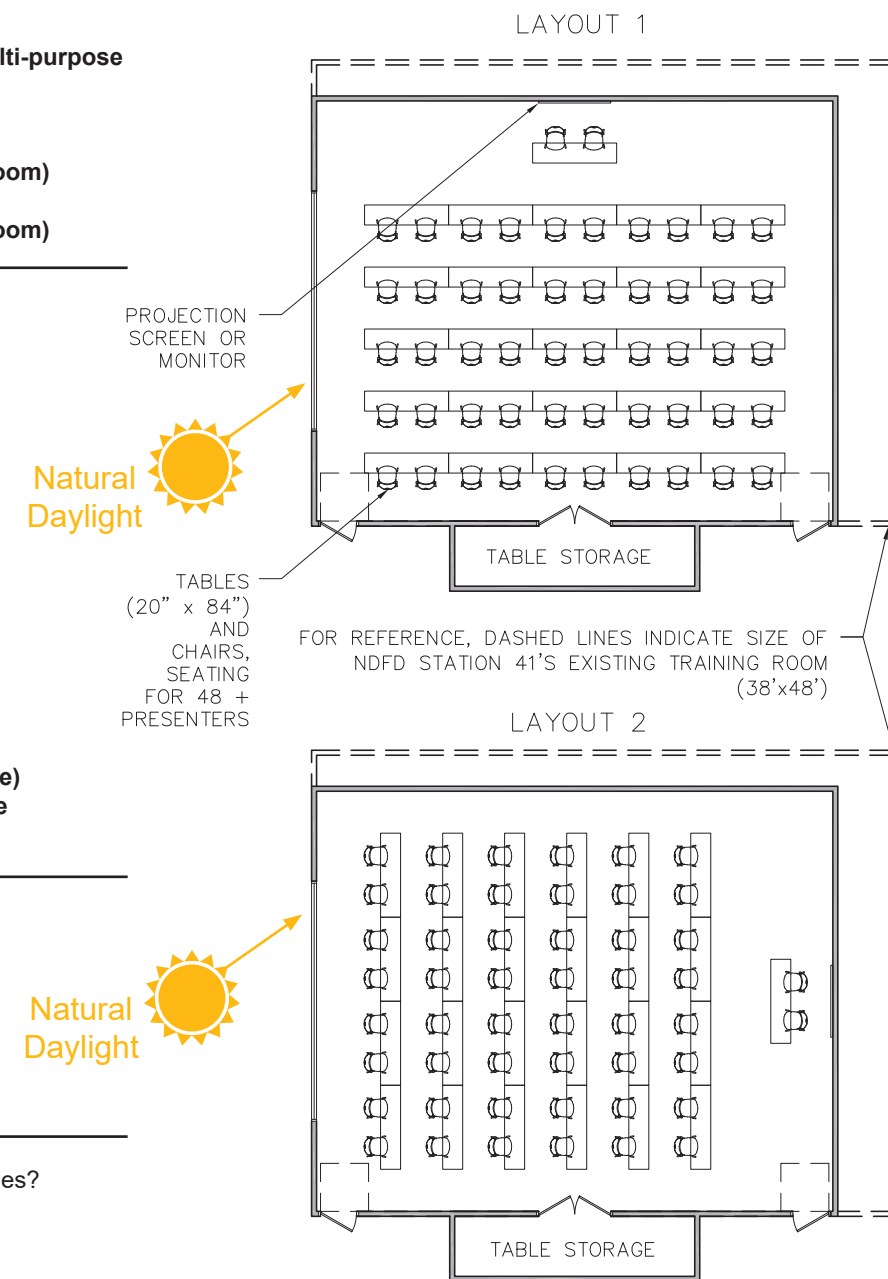
Training Room

Activities	Staff training, board meetings, general multi-purpose
Adjacencies	Lobby, public restrooms
Qty/NSF - Target	1 @ 1605 NSF (including 100 SF storage room)
Qty/NSF - Per Plan	1 @ 1701 NSF (including 121 SF storage room)
<hr/>	
Plumbing	None
HVAC	Heating / Cooling
Electrical /Technology	Full presentation abilities, fire alerting
AV Requirements	TBD
Millwork/Cabinets	None
Furnishings	Tables/chairs
Shelving	None
Storage	Dedicated room - tables/chairs/supplies
Special Requirements and notes	Two exits required (door position is flexible) Storage room to accomodate table qty/size
<hr/>	
Floor Finish	Carpet tile
Ceiling Finish	TBD
Wall Finish	Painted Gypsum
Acoustical Treatments	TBD

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Floor boxes (with power/data) needed for tables?
- Project screen or large monitor(s) desired?

Diagram scale: 1/16" = 1'-0"



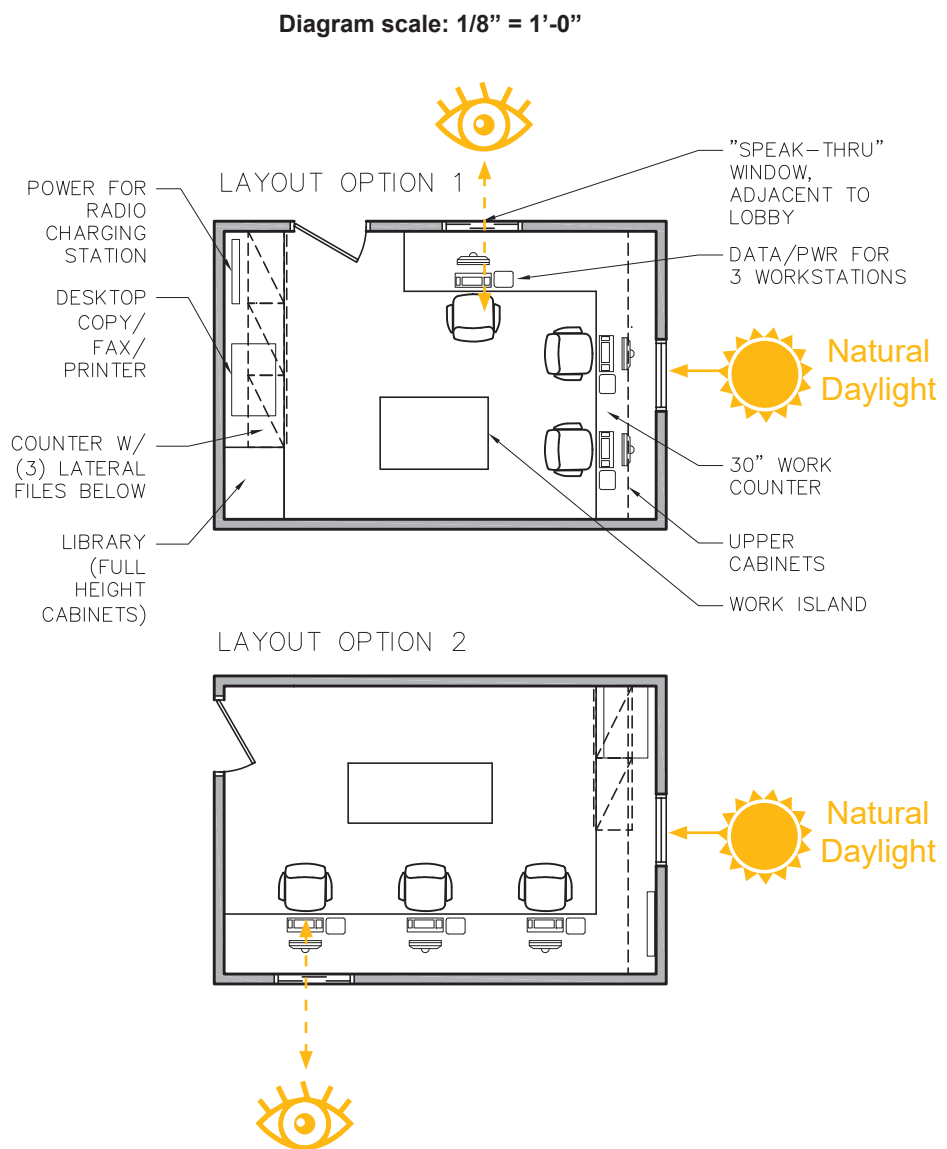
Administration

Reports Office

Activities	Reports office and Staff work area
Adjacencies	Lobby, crew area
Qty/NSF - Target	1 @ 216 NSF
Qty/NSF - Per Plan	1 @ 216 NSF
Plumbing	None
HVAC	Heating / Cooling
Electrical /Technology	Standard for work area
AV Requirements	TBD
Millwork/Cabinets	Work counter, upper/lower cabinets, work island
Furnishings	Task chairs
Shelving	TBD
Storage	Lateral files, full height cabinets
Special Requirements and notes	View/speak-through window into lobby
Floor Finish	Exposed Ground, Polished, and Sealed Concrete
Ceiling Finish	TBD
Wall Finish	Painted Gypsum
Acoustical Treatments	TBD

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- need to confirm storage requirements; library, lateral files
- charging station desired?
- copy/fax/printer type?
- work island desired?



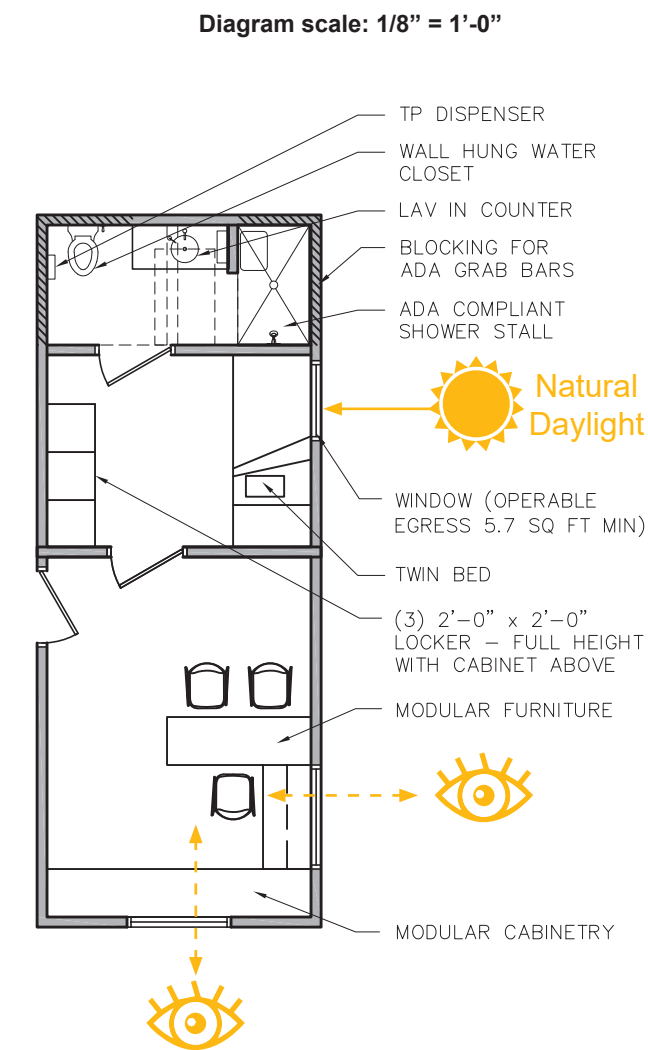
Administration

Battalion Chief Suite

Activities	Battalion Chief office, sleeping quarters, and restroom
Adjacencies	Apparatus bay, separate from other dorms
Qty/NSF - Target	1 @ 313 NSF
Qty/NSF - Per Plan	1 @ 294 NSF
Plumbing	Standard for private ADA convertible restroom
HVAC	Heating / Cooling
Electrical /Technology	Standard for office and suite
AV Requirements	TBD
Millwork/Cabinets	Suite: lockers and bed
Furnishings	Modular furniture/cabinetry, task chairs
Shelving	TBD
Storage	TBD
Special Requirements and notes	View into apparatus bays View to approaching apparatuses
Floor Finish	Office/suite: Carpet tile; Restroom: Tile
Ceiling Finish	Office/suite: TBD; Restroom: Painted Gypsum
Wall Finish	Office/suite: Painted Gypsum; Restroom: Tile
Acoustical Treatments	STC rated wall construction

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Fire alerting system?



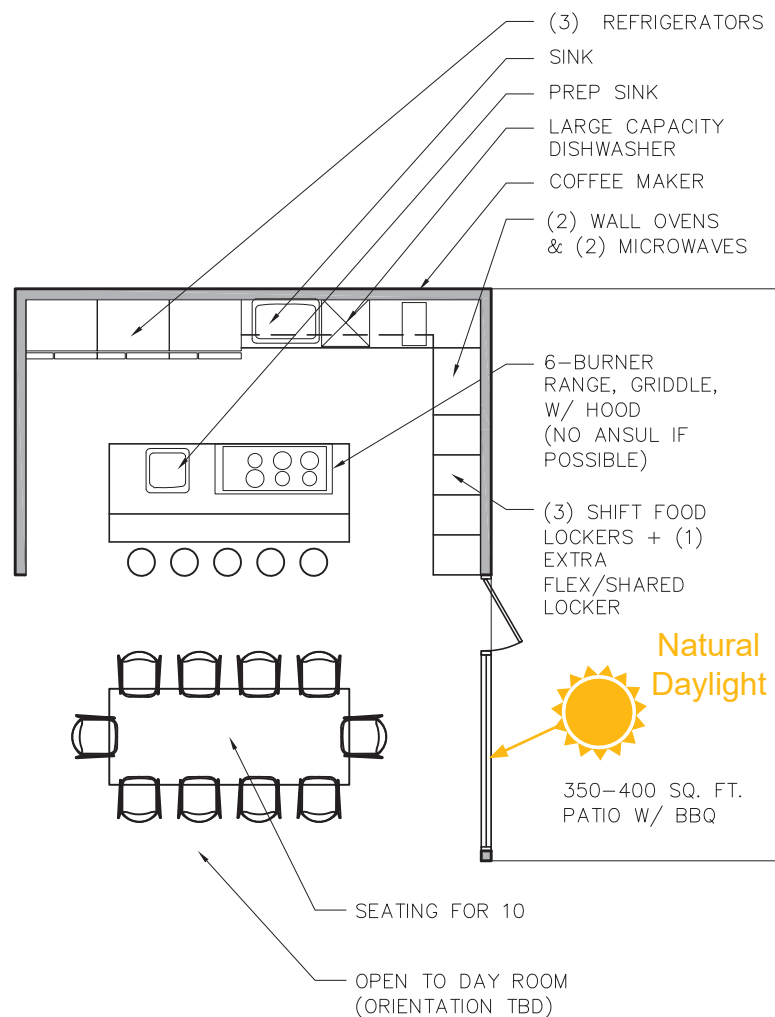
Residential

Kitchen & Dining

Activities	Cooking, eating, gathering
Adjacencies	Apparatus bays, dayroom, living areas
Qty/NSF - Target	1 @ 432 NSF
Qty/NSF - Per Plan	1 @ 478 NSF
Plumbing	Standard for kitchen
HVAC	Heating / Cooling
Electrical /Technology	Standard for kitchen
AV Requirements	TBD
Millwork/Cabinets	Kitchen counters, upper/lower cabinets, island
Furnishings	Stools, dining table and chairs
Shelving	TBD
Storage	Shift food "lockers"
Special Requirements and notes	Open to day room In-wall oven/microwave combo product will dictate required width/height
Floor Finish	Exposed Ground, Polished, and Sealed Concrete
Ceiling Finish	TBD
Wall Finish	Painted Gypsum
Acoustical Treatments	TBD

- ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:**
- confirm all appliance quantities and types
 - prep sink desired?
 - fire alerting system?

Diagram scale: 1/8" = 1'-0"



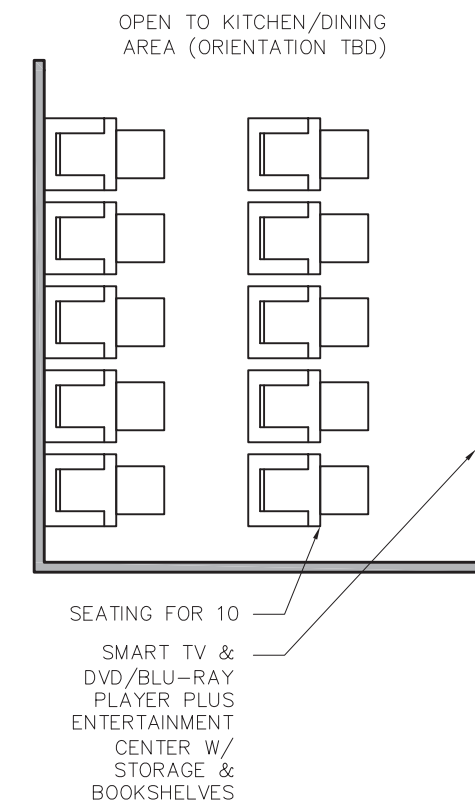
Residential

Dayroom

Activities	TV viewing, gathering
Adjacencies	Kitchen and dining, living areas, apparatus bays
Qty/NSF - Target	1 @ 414 NSF
Qty/NSF - Per Plan	1 @ 414 NSF
Plumbing	None
HVAC	Heating / Cooling
Electrical /Technology	Entertainment center devices
AV Requirements	TBD
Millwork/Cabinets	Entertainment center (optional built-in)
Furnishings	Entertainment center (optional product), lounge chairs
Shelving	TBD
Storage	TBD
Special Requirements and notes	Open to kitchen and dining Fire alerting system
Floor Finish	Carpet tile
Ceiling Finish	TBD
Wall Finish	Painted Gypsum
Acoustical Treatments	STC rated wall construction

- ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:**
- Speakers desired?

Diagram scale: 1/8" = 1'-0"



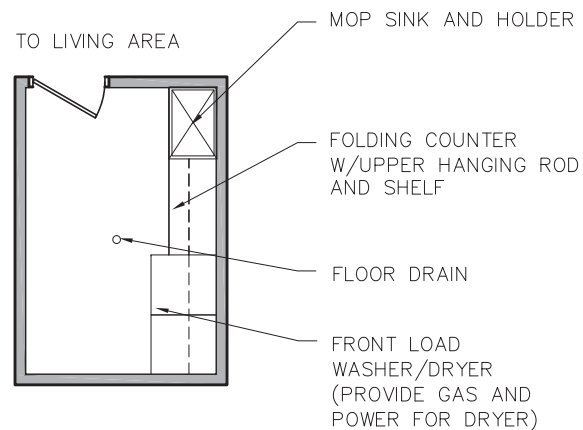
Residential

Residential Laundry

Activities	Laundry for employees
Adjacencies	Crew living area
Qty/NSF - Target	1 @ 96 NSF
Qty/NSF - Per Plan	1 @ 108 NSF
Plumbing	Standard for washer/dryer, gas, mop sink, floor drain
HVAC	Dryer exhaust; TBD
Electrical /Technology	Standard for washer/dryer
AV Requirements	None
Millwork/Cabinets	Counter with lower cabinets (optional)
Furnishings	Folding table (optional, in lieu of counter/cabinets)
Shelving	Above folding counter or table
Storage	None
Special Requirements and notes	None
Floor Finish	Exposed Ground, Polished, and Sealed Concrete
Ceiling Finish	Painted Gypsum
Wall Finish	Painted Gypsum
Acoustical Treatments	Possibly STC rated wall construction

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN: None

Diagram scale: 1/8" = 1'-0"



Residential

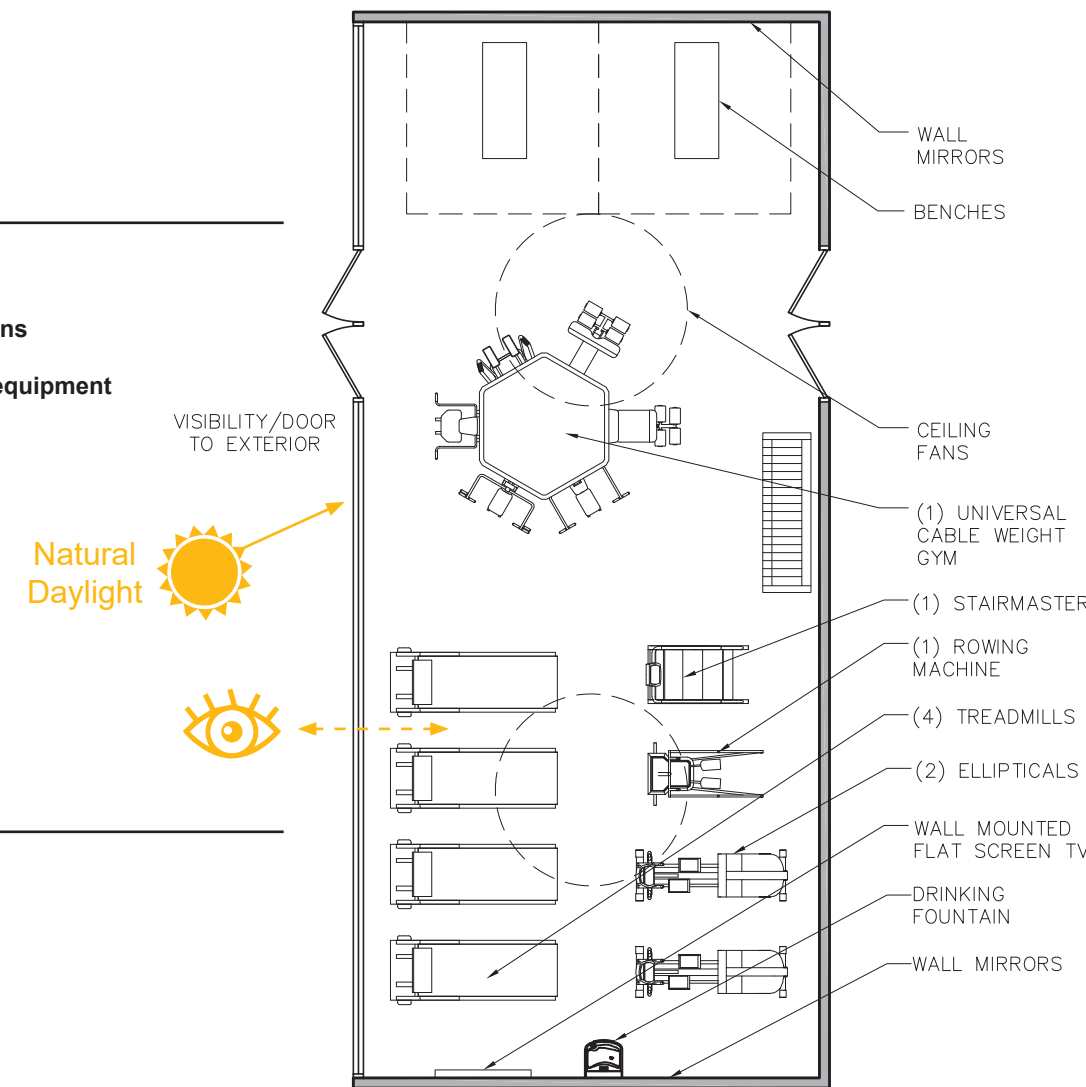
Exercise Room

Activities	Exercising
Adjacencies	Restrooms, exterior wall
Qty/NSF - Target	1 @ 836 NSF
Qty/NSF - Per Plan	1 @ 1014 NSF
Plumbing	Drinking fountain
HVAC	Heating / Cooling, Ceiling Fans
Electrical /Technology	TV monitors, power/data to equipment
AV Requirements	TBD
Millwork/Cabinets	None
Furnishings	Exercise equipment
Shelving	None
Storage	None
Special Requirements and notes	Mirrors across walls
Floor Finish	Rubber tile
Ceiling Finish	TBD
Wall Finish	Painted Gypsum / mirrors
Acoustical Treatments	STC rated wall construction

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Sound system desired?

Diagram scale: 1/8" = 1'-0"

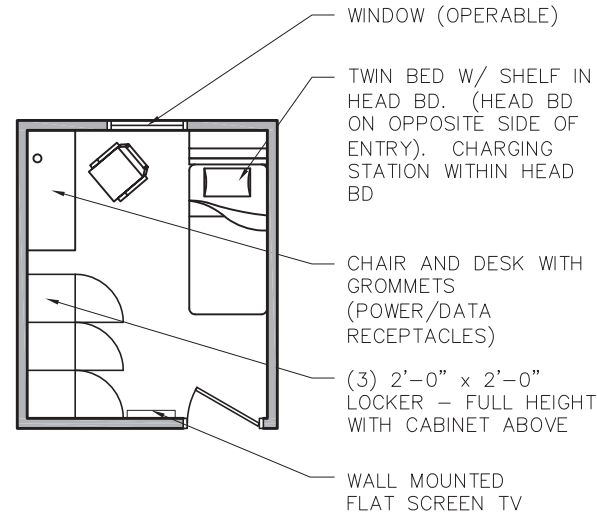


Residential

Firefighter Dorm

Activities	Firefighter sleeping and personal work area
Adjacencies	Crew living areas, close as possible to apparatus bays
Qty/NSF - Target	9 @ 120 NSF
Qty/NSF - Per Plan	9 @ 130 NSF (sizes vary)
Plumbing	None
HVAC	Heating / Cooling with individual controls
Electrical /Technology	Fire alerting system, power/data, TV
AV Requirements	None
Millwork/Cabinets	Lockers, bed platform with storage
Furnishings	Desk, task chair, twin bed
Shelving	None
Storage	Lockers (millwork)
Special Requirements and notes	None
Floor Finish	Carpet tile
Ceiling Finish	Painted Gypsum
Wall Finish	Painted Gypsum
Acoustical Treatments	STC rated wall construction

Diagram scale: 1/8" = 1'-0"



ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN: None

Residential

Firefighter Restroom - ADA

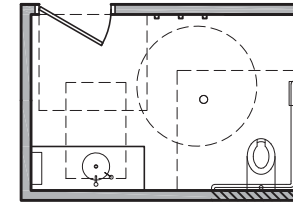
Activities	Restroom, shower
Adjacencies	Firefighter dorms, Cleaning
Qty/NSF - Target	1 @ 80 NSF
Qty/NSF - Per Plan	1 @ 80 NSF
Plumbing	Standard for ADA compliant restroom with shower
HVAC	Exhaust
Electrical /Technology	Standard for ADA compliant restroom
AV Requirements	None
Millwork/Cabinets	Optional: built in countertops with ADA clearance underneath
Furnishings	Standard public restroom accessories
Shelving	None
Storage	None
Special Requirements and notes	None
Floor Finish	Tile
Ceiling Finish	Painted Gypsum
Wall Finish	Tile
Acoustical Treatments	STC rated wall construction

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

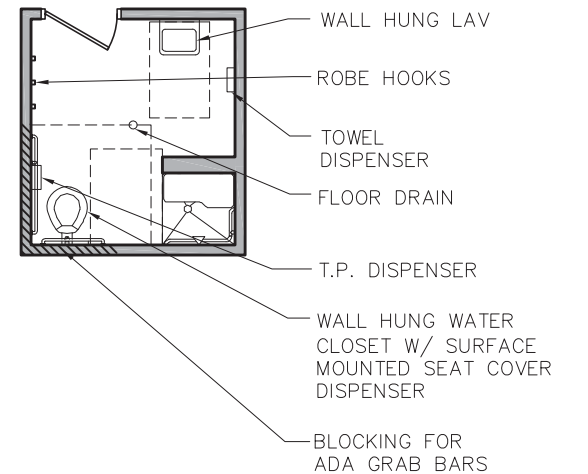
- Are paper goods & soap contracted out? need to confirm pt dispensers/all rr accessories are ada compliant (do not project more than 4")
- Are there different finishes available from contracted rr accessories entity? i.e. - s.s. in lieu of plastic.

Diagram scale: 1/8" = 1'-0"

LAYOUT OPTION 1



LAYOUT OPTION 2



Residential

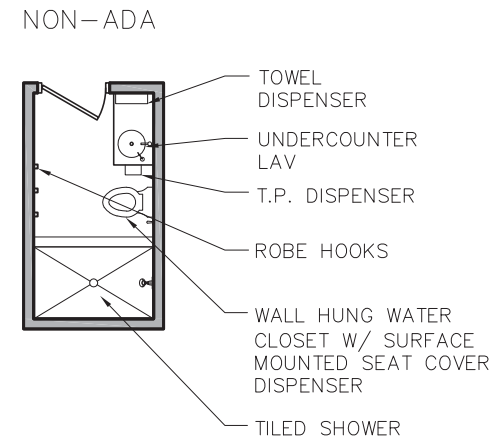
Firefighter Restroom - non ADA

Activities	Restroom, shower
Adjacencies	Firefighter dorms, Cleaning
Qty/NSF - Target	5 @ 47 NSF
Qty/NSF - Per Plan	5 @ 54 NSF
<hr/>	
Plumbing	Standard for restroom with shower
HVAC	Exhaust
Electrical /Technology	Standard for restroom
AV Requirements	None
Millwork/Cabinets	Built in vanity
Furnishings	Standard restroom accessories
Shelving	None
Storage	None
Special Requirements and notes	None
<hr/>	
Floor Finish	Tile
Ceiling Finish	Painted Gypsum
Wall Finish	Tile
Acoustical Treatments	STC rated wall construction

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Are paper goods & soap contracted out? need to confirm pt dispensers/all rr accessories are ada compliant (do not project more than 4")
- Are there different finishes available from contracted rr accessories entity? i.e. - s.s. in lieu of plastic.

Diagram scale: 1/8" = 1'-0"



Residential

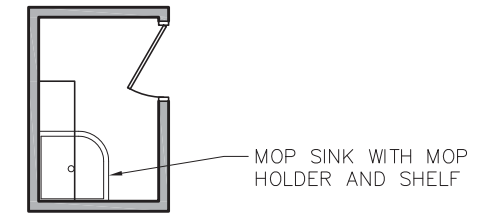
Janitor Closet

Activities	Janitorial storage
Adjacencies	Firefighter restrooms
Qty/NSF - Target	1 @ 38 NSF
Qty/NSF - Per Plan	1 @ 47 NSF
<hr/>	
Plumbing	Mop sink, hose bib
HVAC	None
Electrical /Technology	Standard for janitor closet
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	For misc janitorial supplies
Storage	None
Special Requirements and notes	Space / shelving for mops & squeegees, cleaning supplies, detergent, floor cleaner, etc.
<hr/>	
Floor Finish	Tile
Ceiling Finish	Painted Gypsum
Wall Finish	FRP
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

None

Diagram scale: 1/8" = 1'-0"



Apparatus Bay & Support

Apparatus Bay

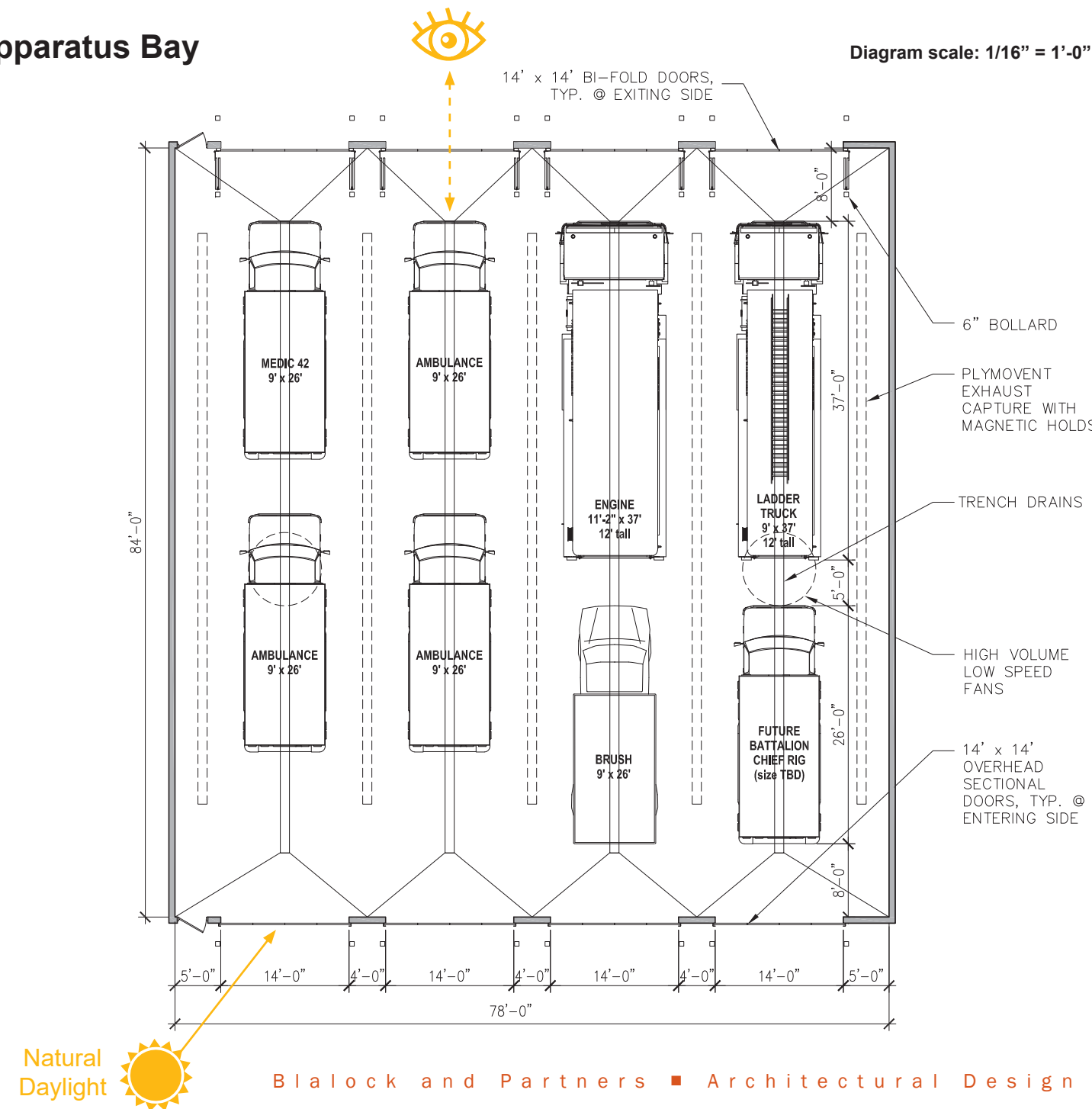
Activities	Apparatus Storage
Adjacencies	Crew Living, Support Areas, Hand/Eye/Boot Wash
Qty/NSF - Target	4 @ 1638 NSF
Qty/NSF - Per Plan	4 @ 1638 NSF
Plumbing	Trench drains, hose reels for tank filling, compressed air
HVAC	TBD (floor vs overhead radiant to be vetted through budget)
Electrical /Technology	Misc convenience outlets, power to overhead exhaust capture
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	None
Special Requirements and notes	Plymovent overhead exhaust capture system with magnetic holds, high volume low speed ceiling fans
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	TBD (durable finish up to 8' - diamond plate an option)
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Large doors TBD with budget (high-speed four-fold, bi-fold, high-speed coiling)
- 4' minimum clear between doors
- 17' clear height to bottom of roof structure

Apparatus Bay & Support

Apparatus Bay



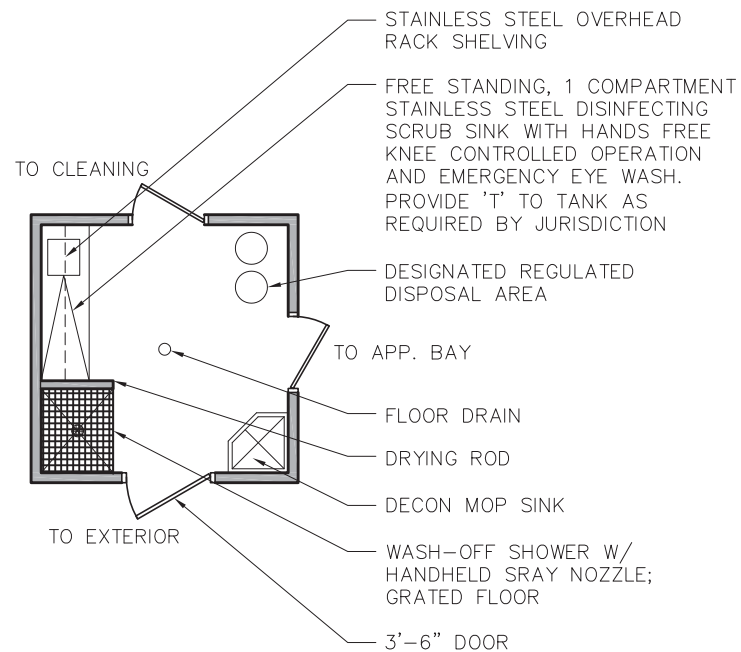
Apparatus Bay & Support

Decontamination

Activities	Call return decontamination
Adjacencies	Exterior, Apparatus Bay, Cleaning
Qty/NSF - Target	1 @ 106 NSF
Qty/NSF - Per Plan	1 @ 122 NSF
Plumbing	Floor drain, shower, mop sink, disinfecting scrub sink
HVAC	Exhaust and makeup air
Electrical /Technology	Convenience outlets
AV Requirements	None
Millwork/Cabinets	None
Furnishings	Shower accessories, disposal bins
Shelving	Stainless steel above disinfecting scrub sink
Storage	None
Special Requirements and notes	None
Floor Finish	Ground and sealed concrete
Ceiling Finish	Painted Gypsum, or Exposed and painted structure
Wall Finish	FRP
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN: None

Diagram scale: 1/8" = 1'-0"



Apparatus Bay & Support

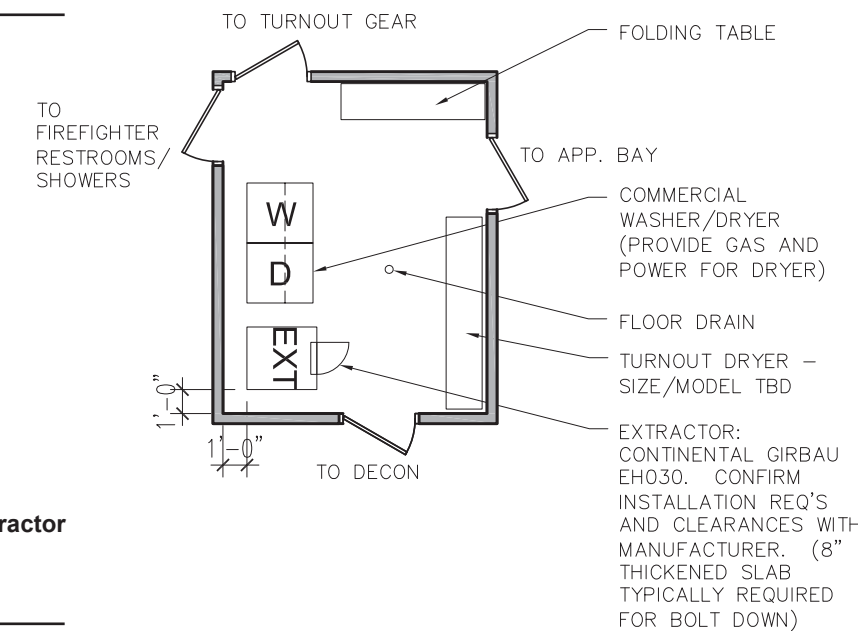
Cleaning

Activities	Equipment cleaning, drying, folding
Adjacencies	Apparatus bays, decontamination, firefighter showers, turnout gear
Qty/NSF - Target	1 @ 152 NSF
Qty/NSF - Per Plan	1 @ 152 NSF
Plumbing	Floor drain, washer and extractor connections
HVAC	Dryer exhaust
Electrical /Technology	Standard for commercial washer/dryer
AV Requirements	None
Millwork/Cabinets	None
Furnishings	Folding table
Shelving	TBD
Storage	None
Special Requirements and notes	Turnout dryer, specific floor/trench drain for extractor
Floor Finish	Ground and sealed concrete
Ceiling Finish	Painted Gypsum, or Exposed and painted structure
Wall Finish	FRP
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Extractor shown is currently owned by NDFD. Confirm whether or not this is desired to be reused in new station
- Turnout dryer model to be provided by NDFD

Diagram scale: 1/8" = 1'-0"



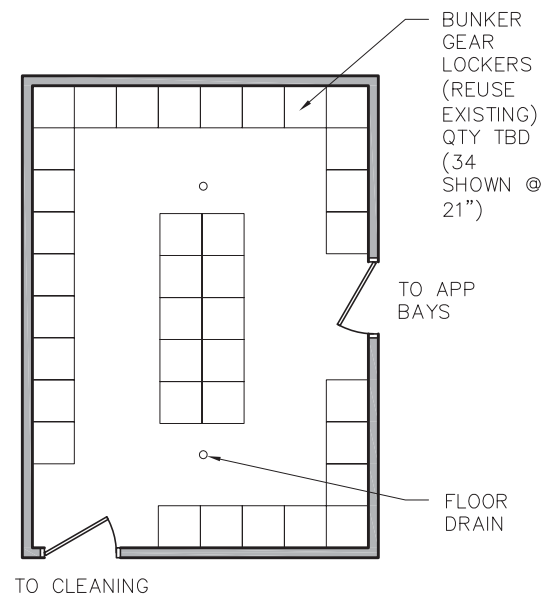
Apparatus Bay & Support

Turnout Gear

Activities	Turnout gear storage
Adjacencies	Apparatus Bay, Cleaning
Qty/NSF - Target	1 @ 269 NSF
Qty/NSF - Per Plan	1 @ 269 NSF
Plumbing	Floor drains
HVAC	TBD
Electrical /Technology	Convenience outlets
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	Turnout gear lockers
Special Requirements and notes	May need pony wall as backing to existing open back lockers
Floor Finish	Ground and sealed concrete
Ceiling Finish	Painted Gypsum, or Exposed and painted structure
Wall Finish	TBD
Acoustical Treatments	None

- ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:**
- Exhaust needed for drying gear, or is that handled completely by the turnout gear dryer in the Cleaning Room?
 - Does wall finish need to be water resistant?

Diagram scale: 1/8" = 1'-0"



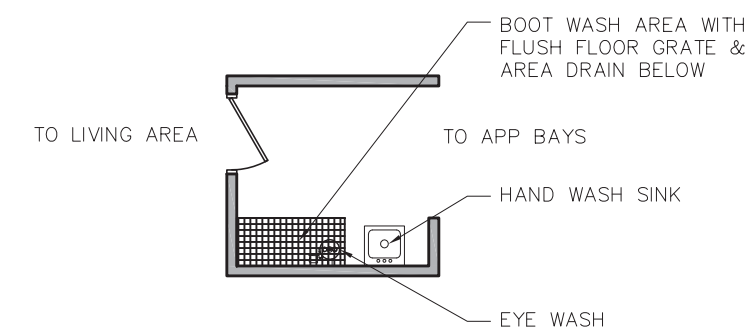
Apparatus Bay & Support

Boot / Hand / Eye Wash Area

Activities	Boot / hand / eye washing prior to entering station proper
Adjacencies	Apparatus bays, crew living area
Qty/NSF - Target	2 @ 60 NSF
Qty/NSF - Per Plan	2 @ 72 NSF
Plumbing	Floor drain below grate, eye wash, sink
HVAC	None
Electrical /Technology	Convenience outlets
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	None
Special Requirements and notes	"Vestibule" configuration with two doors not desired by NDFD
Floor Finish	Ground and sealed concrete, flush floor grate
Ceiling Finish	Painted Gypsum, or Exposed and painted structure
Wall Finish	FRP, Painted Gypsum
Acoustical Treatments	None

- ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:**
- None

Diagram scale: 1/8" = 1'-0"

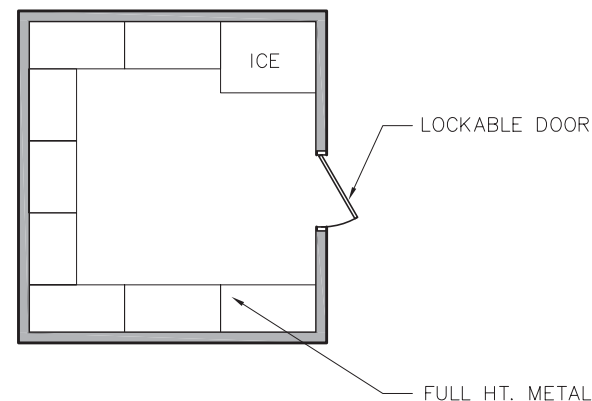


Apparatus Bay & Support

Medical Storage

Activities	Medical supplies storage, ice machine
Adjacencies	Apparatus Bay
Qty/NSF - Target	1 @ 156 NSF
Qty/NSF - Per Plan	1 @ 189 NSF
<hr/>	
Plumbing	Water supply to ice machine
HVAC	Heating / Cooling
Electrical /Technology	Convenience outlets, power for ice machine
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	Full height metal shelving
Storage	None
Special Requirements and notes	Oxygen storage - Fire rating of room to be verified
<hr/>	
Floor Finish	Ground and sealed concrete
Ceiling Finish	Painted Gypsum, or Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	None

Diagram scale: 1/8" = 1'-0"



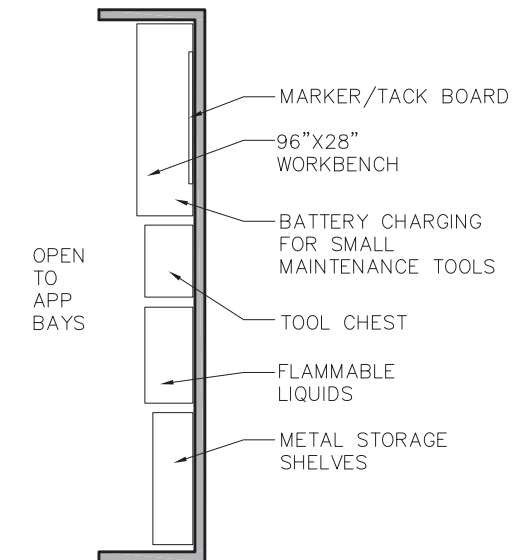
- ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:**
- NDFD to provide specs or model number for Knox medical storage system
 - Access controls (card reader) desired?

Apparatus Bay & Support

Workshop Area

Activities	General workshop / tool storage area
Adjacencies	Apparatus Bay
Qty/NSF - Target	1 @ 89 NSF
Qty/NSF - Per Plan	1 @ 89 NSF
<hr/>	
Plumbing	None
HVAC	None
Electrical /Technology	Convenience outlets, battery charging station
AV Requirements	None
Millwork/Cabinets	None
Furnishings	Misc tools / equipment
Shelving	Metal shelves
Storage	Tool chest, flammable liquid storage
Special Requirements and notes	None
<hr/>	
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	None

Diagram scale: 1/8" = 1'-0"



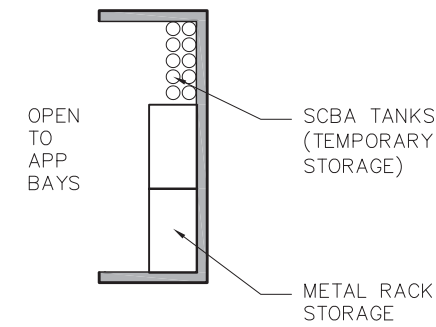
- ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:**
- Need to confirm all requirements of "workshop" area and equipment to be stored

Apparatus Bay & Support

Apparatus Bay Storage

Activities	Misc. apparatus bay supplies storage, temp SCBA storage
Adjacencies	Apparatus Bay
Qty/NSF - Target	1 @ 43 NSF
Qty/NSF - Per Plan	1 @ 43 NSF
Plumbing	None
HVAC	None
Electrical /Technology	Convenience outlets
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	Metal shelving
Storage	None
Special Requirements and notes	None
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	None

Diagram scale: 1/8" = 1'-0"



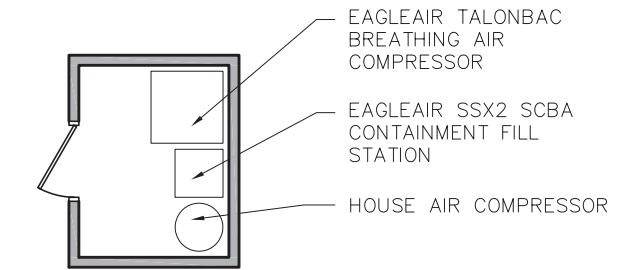
- ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:**
- NDFD to provide rough quantity of SCBA tanks that would be placed in this space
 - NDFD to indicate whether hoses will be stored in shelving or hung on wall, and provide hose quantity

Apparatus Bay & Support

Compressor Room

Activities	Room housing all facility compressors
Adjacencies	Apparatus Bay, away from station proper (sound)
Qty/NSF - Target	1 @ 50 NSF
Qty/NSF - Per Plan	1 @ 50 NSF
Plumbing	None
HVAC	None
Electrical /Technology	Convenience outlets, dedicated power to compressors
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	None
Special Requirements and notes	None
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	Possibly STC rated wall construction

Diagram scale: 1/8" = 1'-0"



- ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:**
- Verify required psi and size of house air compressor
 - Eagleair equipment shown is currently owned by NDFD, and planned on being reused in new facility. Actual dimensions to be confirmed

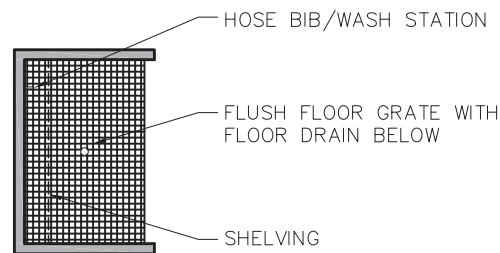
Apparatus Bay & Support

Janitor Alcove

Activities	Janitor sink and supplies dedicated to apparatus bays
Adjacencies	Apparatus Bay
Qty/NSF - Target	1 @ 38 NSF
Qty/NSF - Per Plan	1 @ 38 NSF
Plumbing	Mop sink, hose bib / wash station, floor drain
HVAC	None
Electrical /Technology	Standard for janitor closet
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	For misc janitorial supplies
Storage	None
Special Requirements and notes	Space / shelving for mops & squeegees, cleaning supplies, detergent, floor cleaner, etc.
Floor Finish	Flush floor grate
Ceiling Finish	Exposed and painted structure
Wall Finish	FRP
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN: None

Diagram scale: 1/8" = 1'-0"



General Building Support

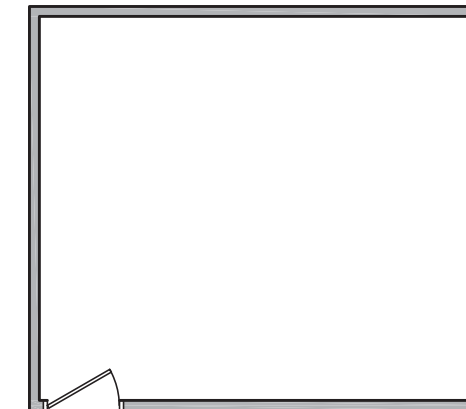
Mechanical

Activities	Mechanical equipment
Adjacencies	Not directly adjacent to firefighter dorms
Qty/NSF - Target	1 @ 300 NSF
Qty/NSF - Per Plan	1 @ 202 NSF
Plumbing	TBD
HVAC	TBD
Electrical /Technology	TBD
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	None
Special Requirements and notes	TBD
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	Possibly STC rated wall construction

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- May require separate space in apparatus bay due to potential project phasing. TBD with CMGC

Diagram scale: 1/8" = 1'-0"



General Building Support

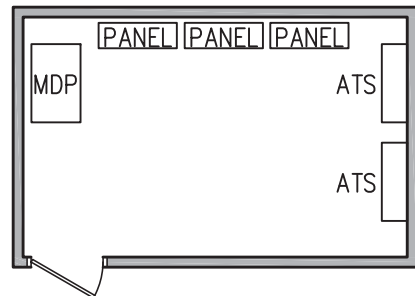
Electrical

Activities	Electrical panels / equipment
Adjacencies	Apparatus Bay
Qty/NSF - Target	1 @ 160 NSF
Qty/NSF - Per Plan	1 @ 80 NSF; 1 @ 54 NSF
Plumbing	None
HVAC	None
Electrical /Technology	TBD
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	None
Special Requirements and notes	None
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- May require separate space in apparatus bay due to potential project phasing. TBD with CMGC and electrical engineer. Current plan shows sub panel room off of apparatus bays

Diagram scale: 1/8" = 1'-0"



General Building Support

Riser Room

Activities	Fire riser
Adjacencies	Outside wall
Qty/NSF - Target	1 @ 66 NSF
Qty/NSF - Per Plan	(none)
Plumbing	Fire riser
HVAC	None
Electrical /Technology	Standard for fire riser room
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	None
Special Requirements and notes	Current plan has fire riser located in mechanical room
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Decide whether or not to keep fire riser in mechanical room

Diagram scale: 1/8" = 1'-0"



General Building Support

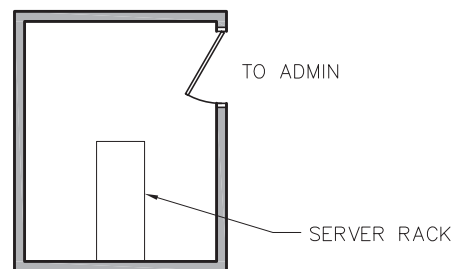
Data

Activities	Data racks / connections
Adjacencies	(space location is flexible)
Qty/NSF - Target	1 @ 80 NSF
Qty/NSF - Per Plan	1 @ 69 NSF
<hr/>	
Plumbing	None
HVAC	Cooling; potentially exhaust
Electrical /Technology	As required for typical data room
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	None
Storage	None
Special Requirements and notes	Rack / storage for servers and equipment to be coordinated with IT integrator
<hr/>	
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	STC Rated Wall Construction

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Confirm network requirements with IT integrator and tele-phone/internet provider

Diagram scale: 1/8" = 1'-0"



General Building Support

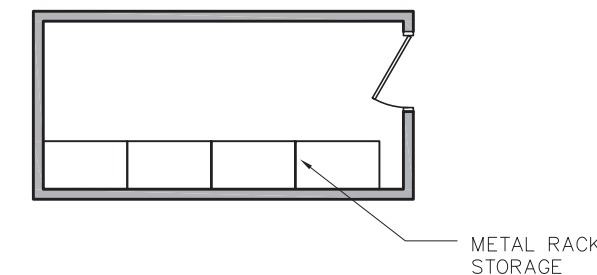
General Storage

Activities	Misc. general storage
Adjacencies	(space location is flexible)
Qty/NSF - Target	1 @ 105 NSF
Qty/NSF - Per Plan	1 @ 138 NSF; 1 @ 32 NSF
<hr/>	
Plumbing	None
HVAC	None
Electrical /Technology	Convenience outlets
AV Requirements	None
Millwork/Cabinets	None
Furnishings	None
Shelving	(as required for anticipated use)
Storage	(as required for anticipated use)
Special Requirements and notes	None
<hr/>	
Floor Finish	Ground and sealed concrete
Ceiling Finish	Exposed and painted structure
Wall Finish	Painted Gypsum
Acoustical Treatments	None

ITEMS REQUIRING CONFIRMATION DURING SCHEMATIC DESIGN:

- Determine required shelving and storage requirements, given their anticipated use

Diagram scale: 1/8" = 1'-0"



ZONING DETERMINANTS

Site Zone Classification

The existing fire station is located within the CV (Civic) zoning district, which falls under Clearfield City's Downtown Form-Based Code, adopted February 11, 2020. The primary zoning determinants from the Downtown Form-Based Code document are provided here.

5.0 Street & Streetscape Standards

5.11 State/Main Street Highway 126 - Urban Core Arterial

1. Intent

This Street Type is for State/Main, which is State Highway 126, in the Urban Core of Downtown Clearfield between 300 North and 700 South. This is a high capacity regional thoroughfare, that acknowledges the Downtown Clearfield context. Figure 5.11 (1).

2. General Requirements

State/Main Street - Urban Core shall be developed using the standards in Table 5.11 (1).



Table 5.11 (1) Urban Core Arterial Requirements

Permitted Adjacent Districts	UC, UR, CV, TC
Permitted Adjacent Building Types	Civic, Mixed-Use, Multi-Family, Office
Typical Right-of-Way Width	103'
Vehicular Realm	
Travel Lanes	2 lanes in each direction
Lane Width	11'
Turn Lanes	Per UDOT corridor agreement
Parking Lanes	Optional Parallel, as ROW allows
Pavement Width	72'
Median	12' Planted Median with turn lane pockets (includes 1' shy distance on each side of median)
Bicycle Facilities	7.5' Protected Bike Lanes (2' buffer; 5.5' travel lane)
Pedestrian Realm	
Pedestrian Facilities	Minimum 8' wide clear sidewalk
Street Buffer	Minimum 7.5' hardscape

Table 6.7 (1) Civic Building Type

	Zone Districts					
	UC	UR	TC	TR	CV	CC
Building Site Refer to 6.3.1						
Minimum Lot Width	50'					
Maximum Lot Width	none					
Maximum Impervious Coverage	70%	60%	60%	60%	60%	60%
Additional Semi-Pervious Coverage	10%	15%	10%	10%	15%	15%
Site Access & Parking Refer to 6.3.2						
Parking & Loading Location	rear yard		rear & interior side yard			
Vehicular Access	Alley only; if no alley exists, 1 driveway is permitted per non-primary street					
Building Location Refer to 6.3.3						
Multiple Principal Buildings	permitted					
Front Build-to Zone with Plaza or Porte Cochere	5'-20' up to 50'	5'-20' up to 50'	15'-30' up to 50'	15'-30' up to 50'	15'-30' up to 50'	15'-30' up to 50'
Corner Build-to Zone	0'-20'	0'-20'	5'-20'	5'-20'	5'-20'	5'-20'
Occupation of Corner	not required					
Front Property Line Coverage	not required					
Minimum Side Yard Setback	5'	5'	5'	5'	5'	5'
Minimum Rear Yard Setback	5'	5'	5'	5'	5'	5'
Building Massing Refer to 6.3.4						
Minimum Overall Height	2 story	2 story	1 story	1 story	1 story	1 story
Maximum Overall Height	No maximum	6 stories	6 stories	4 stories	6 stories	4 stories
Building Stepback	not required					
Ground Story: Minimum Height	12'	12'	12'	12'	12'	12'
Maximum Height	24'	24'	24'	24'	24'	24'
Upper Stories: Minimum Height	10'	10'	10'	10'	10'	10'
Maximum Height	20'	20'	20'	20'	20'	20'
Permitted Roof Types	parapet, pitched, flat					
Tower	permitted					
Street Facade Articulation/Details Refer to 6.3.5						
Blank Wall Limitations	not required					
Vertical Facade Divisions	not required					
Horizontal Facade Divisions	not required					
Front Facade Entrance Type	Arcade, Stoop					
Building Fenestration Refer to 6.3.6						
Minimum Ground Story Transparency	60%	60%	50%	50%	50%	50%
Minimum Upper Story Transparency	20%	20%	20%	20%	20%	20%
Principal Entrance Location	front or corner facade					
Required Number of Street Entrances	1 per each 100' of front facade	1 per each 150' of front facade				
Building Uses Refer to 6.3.7; Refer to Table 3.3 (2) for specific permitted uses in each General Category						
Ground Story	civic alone; civic with office, retail, or service					
Upper Story	civic alone; civic with office					
Parking within Building	permitted fully in basement; permitted in rear portion of all other floors					
Required Occupied Space	30' deep on all full floors					

Table 9.2 (1) Required Parking By Use

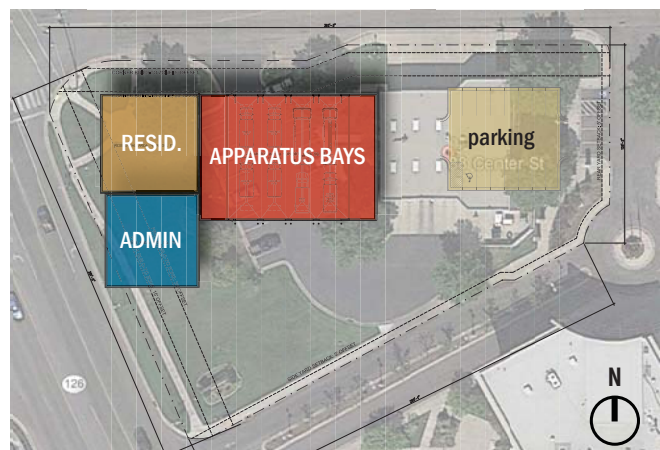
Residential ^{1,2}	
Multifamily, Studio & 1 Bedrooms	1.15 / Dwelling Unit ¹
Multifamily, 2 Bedrooms	1.725 / Dwelling Unit ¹
Multifamily, 3+ Bedrooms	2.3 / Dwelling Unit ¹
Lodging	1 / Room & 1 / 200 sq. ft. Office and Dining Area
Senior Housing, Multifamily	25% Reduction
Group Home	1 per 6 persons of Design Capacity
Civic/Institutional	
Assembly (Auditoriums; Churches/Places of Worship)	1 / 5 Seats
Transit Station	Per Zoning Administrator
Library / Museum / Post Office (no distribution)	1 / 600 sq. ft.
Police & Fire	Per Zoning Administrator
Post Office	1 / 400 sq. ft.
School: Pre K to Jr. High	1 / Classroom & 1 / 200 sq. ft. Office
School: High School, Higher Education, Specialized & Vocational/Technical	
Retail	

Parking Requirement Commentary

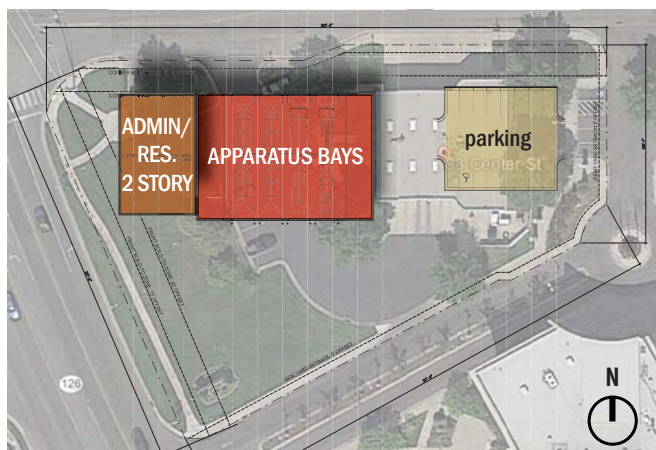
The parking requirements established with the Clearfield Zoning department are discussed in the *PREFERRED SITE AND FLOOR PLAN* section of this document.

SITE PLAN STUDIES

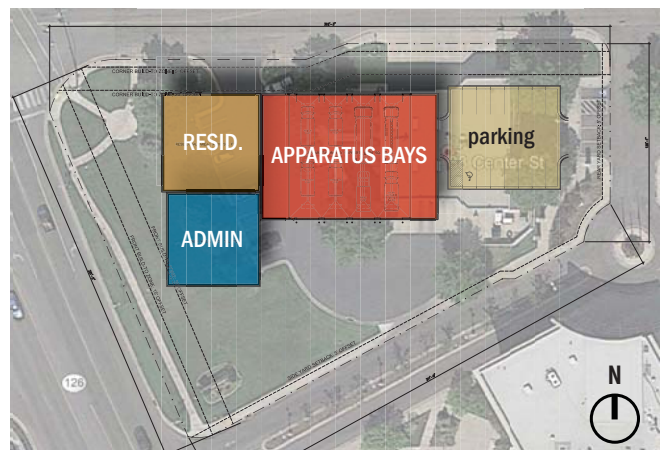
After establishing the target size for the new fire station and considering the site zoning determinants, the Design Team conducted rough test fits on the existing site to evaluate 4 potential strategies. The first two studies evaluated the possibility of constructing the new fire station west of the existing fire station, allowing the existing fire station to remain operational until the new fire station was completed. These first two studies also evaluated a one story vs two story admin/residential wing. The last two studies evaluated demolition of the existing fire station prior to the construction of the new fire station, and again evaluated a one story vs two story admin/residential wing. In all studies, the new apparatus bays were placed on the east side of the new facility footprint in order to allow adequate separation from the intersection of Center Street and Main Street to the west. Additionally, parking spaces (15 spaces per the original RFP) were kept to the east of the apparatus bays to allow the new fire station to occupy the prominent portion of the site. These 4 potential strategies were reviewed with NDFD and Clearfield Planning; **the consensus was that Strategy 3 would be the best strategy to pursue.**



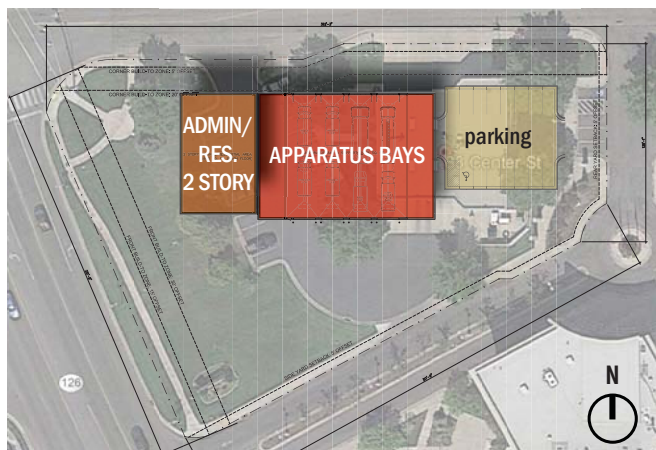
STRATEGY 1: EXISTING STATION OPERATIONAL; 1 STORY NEW STATION



STRATEGY 2: EXISTING STATION OPERATIONAL; 2 STORY NEW STATION



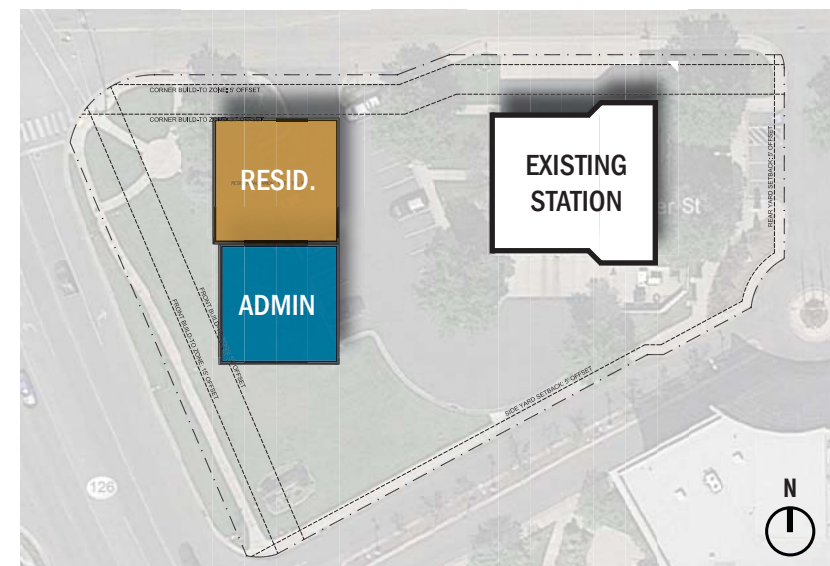
STRATEGY 3: EXISTING STATION DEMOLISHED; 1 STORY NEW STATION



STRATEGY 4: EXISTING STATION DEMOLISHED; 2 STORY NEW STATION

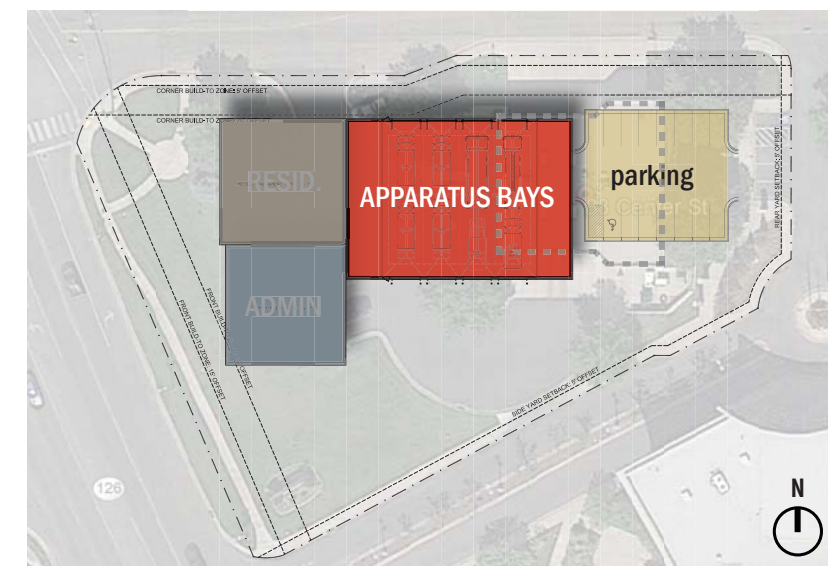
CONSTRUCTION PHASING

Once the site planning strategy was established, the concern regarding temporary housing for the firefighters and the logistics for allowing firefighting operations to continue during construction was discussed. The team decided that a phased construction approach could be a viable solution to those issues. This strategy will be reviewed in detail with the future CM/GC partner, as well as NDFD to determine the approach for housing and operating existing apparatuses.



PHASE 1:
Construct new admin/residential wing; existing fire station remains operational

- Demolish west parking lot;
- Construct admin/residential wing of new fire station facility;
- Maintain adequate construction clearance from existing fire station.



PHASE 2:
Demolish existing fire station; construct new apparatus bays

- Demolish existing fire station;
- Demolish existing site hardscape/softscape;
- Construct apparatus bays of new fire station facility;
- Construct new site hardscape/softscape.

PREFERRED SITE AND FLOOR PLAN

With the general positions of the admin/residential wing and apparatus bays established, the Design Team prepared a preliminary site and floor plan. A few iterations were reviewed with NDFD; the preferred plan is provided on the adjacent page. Key aspects include:

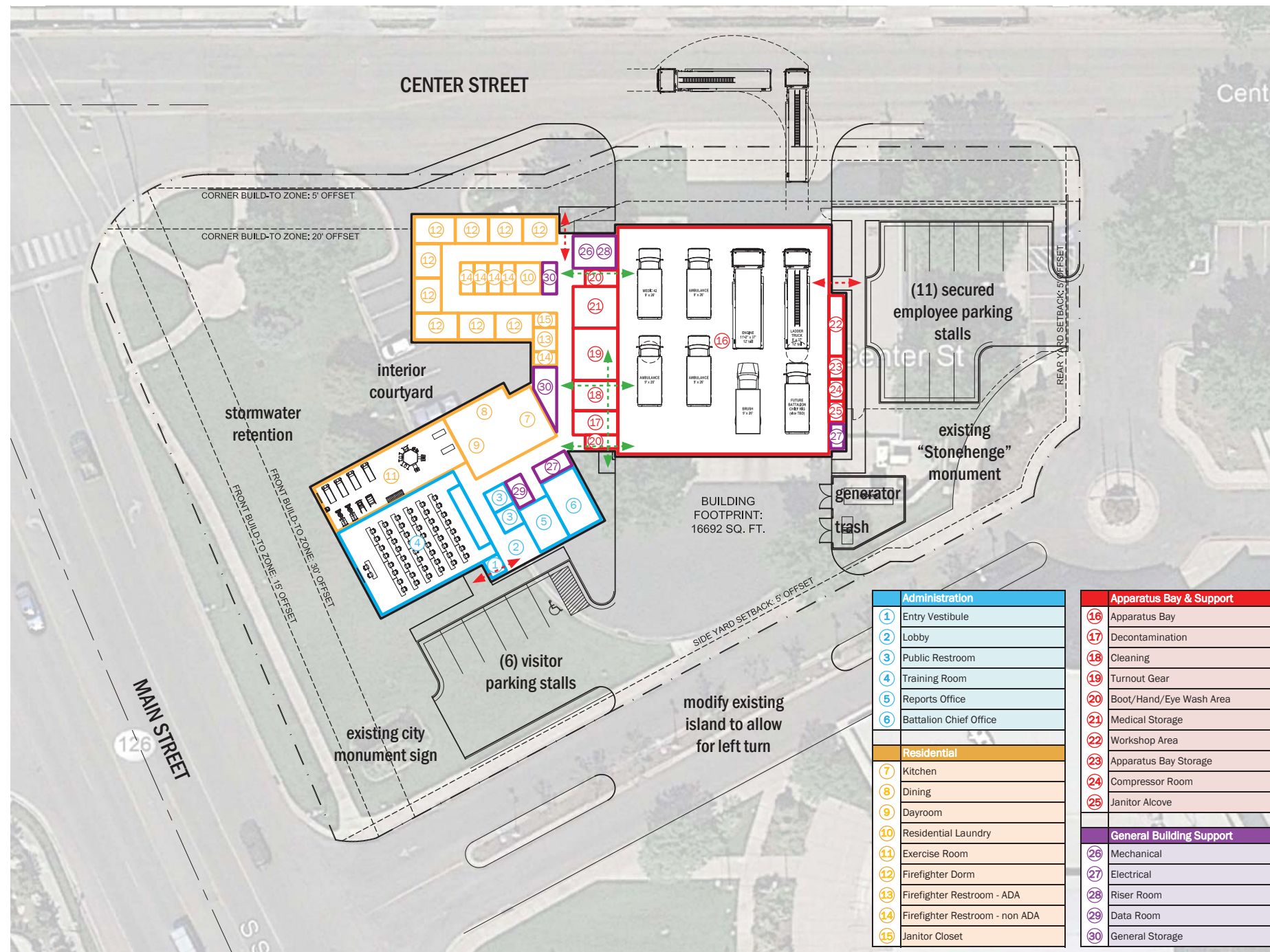
- Pull through apparatus bays;
- Firefighter dorms and kitchen/dining/day room placed in close proximity to apparatus bays to allow for quick turnout time;
- Decon sequence (decontamination - cleaning - turnout gear - showers) occurs between apparatus bays and residential portion of the station. Creates an efficient flow for the call return and decontamination process to minimize cross-contamination issues, and allows for containment of source contaminants;
- Separation of residential wing and admin wing to provide an opportunity for a central “courtyard”;
- Single loaded corridor to maximize floor plan efficiency;
- Allocation of space to west of building for storm water retention;
- Generator placed far away from residential wing for sound mitigation;
- Design respects existing Clearfield City monument sign at southwest corner of site, as well as “Stonehenge” feature on east side of site.

It should be noted that this site and floor plan is primarily intended to exhibit desired adjacencies between programmed building and site elements, and will serve as the basis for other iterations and studies during the Schematic Design phase. The final site and floor plan will likely vary from this plan.

Parking Requirements

Since the parking requirement is per the Zoning Administrator, NDFD and the Design Team proposed a quantity purely based on the anticipated need:

- (11) dedicated employee stalls;
- (6) dedicated visitor stalls;
- The training room is currently sized for up to (50) attendees and a few presenters. These larger events will not be a frequent occurrence, so NDFD and the Design Team proposed that attendees use the existing parking lot to the east of the existing fire station.



COST OPINIONS

General Comments

These cost opinions and budgets for Furniture, Fixtures and Equipment (FF&E) are based off of current trends and costs experienced in recent projects of similar nature. The Design Team has evaluated construction costs of fire stations over the past several years. Hard construction costs for typical fire stations can range anywhere from \$300 / square foot to \$450 / square foot, and soft costs can have a wide range of variability as well. Construction costs are influenced substantially by size, location, site area, complexity and time of construction. Furthermore, the current climate in the construction market has created a volatile situation where costs and lead times are difficult to predict. As such, these cost opinions should be regarded as a rough ballpark estimates. Detailed cost estimates will be provided periodically by the CMGC partner throughout the design and construction document phases.

SCENARIO 1: RENOVATION / ADDITION

ESTIMATED COST OF CONSTRUCTION					
	ITEM	QUANTITY	UNIT	COST ESTIMATE	
TOTAL CONSTRUCTION COST	Construction Costs: Building				
	RENOVATION - EXISTING BUILDING: Update existing apparatus bays of approx. 3,250 SF to meet project program requirements. Structural upgrades per Essential Facility Requirements	3,250	SF	\$ 275.00	\$ 893,750
	NEW CONSTRUCTION - BUILDING ADDITION: 1 additional apparatus bay and admin / residential wing - approx. 13,750 SF.	13,750	SF	\$ 425.00	\$ 5,843,750
	EXHAUST CAPTURE SYSTEM: Plymovent (basis-of-design) with magnetic holds for 4 bays. Placeholder budget	5	EA	\$ 45,000.00	\$ 225,000
	Construction Costs: Site				
	DEMOLITION: Demolish east wing; Selective demolition at app bays; softscape/hardscape demolition/modification per new site design. Placeholder budget	1	LS	\$ 100,000.00	\$ 100,000
	NEW CONSTRUCTION - SITE WORK: Improved site area of app. 65,340 SF (app. 1.5 acre); site development is app. 49,340 SF and includes hardscape, parking, landscape, site equipment, etc. [NOTE: NO SECURITY GATES or PERIMETER FENCING]	49,340	SF	\$ 9.00	\$ 444,060
	SOIL IMPROVEMENTS / DESIGN ADDRESSING AQUIFER - placeholder budget. Geotech to be reviewed with structural engineer and CMGC	1	LS	\$ 100,000.00	\$ 100,000
	SECURED PARKING - Perimeter Fencing	220	LF	\$ 75.00	\$ 16,500
	SECURED PARKING - Automated, Heavy-Duty Gate	1	LS	\$ 30,000.00	\$ 30,000
BASELINE CONSTRUCTION COSTS:					
				\$ 7,653,060	
	Testing & Special Inspections (1%)	1%		\$ 76,531	
SUBTOTAL CONSTRUCTION COSTS:					
				\$ 7,729,591	
	CM/GC CONTINGENCY [2.5%]	2.5%		\$ 193,240	
	OWNER'S CONSTRUCTION CONTINGENCY [5%]	5.0%		\$ 386,480	
TOTAL CONSTRUCTION COSTS:					
				\$ 8,309,310	
SOFT COSTS: CONSTRUCTION FEES					
FEES & EXPENSES PAID BY OWNER PRIOR TO CONSTRUCTION	COST ESTIMATE				
	Geotech Report & Soil Infiltration Test			\$ 22,100	
	Property / Topographic / ALTA Survey			\$ 3,500	
	Land Purchase			\$ -	
	Building Permit Fees			\$ 12,500	
	Fire Flow Analysis			\$ 2,500	
	Plan Review Fees			\$ -	
	Landscape / Irrigation Fee			\$ -	
	Utility Connection Fees (Rocky Mtn Power)			\$ 60,000	
	Utility Connection Fees (gas / water / sewer)			\$ 12,000	
Impact Fees - PUBLIC SAFETY (Parks, Police / Fire, etc.)			\$ 5,500		
Impact Fees - ROADWAYS			\$ 5,500		
Testing & Special Inspections (1%)	moved to construction costs above				
Printing / Advertising			\$ 2,500		
Temp Facilities / Move Management			\$ 10,000		
Data / Security			\$ 8,000		
Environmental			\$ -		
Public Art - 1%	1%			\$ -	
Soft Costs - Construction Fees SUBTOTAL:					
				\$ 144,100	
	10% Soft Costs Contingency:			\$ 14,410	
Soft Costs - Construction Fees TOTAL:					
				\$ 158,510	

SOFT COSTS: TECHNOLOGY and FF&E ITEMS				
	ITEM	QUANTITY	UNIT	COST ESTIMATE
OWNER PURCHASED ITEMS [OWNER OR CONTRACTOR INSTALLED]	FF&E:			
	Furniture	1	LS	\$ 70,000.00
	Generator:	1	LS	\$ 85,000.00
	Bunker Gear Lockers	30	ea	\$ 600.00
	Extractor	1	LS	\$ 11,500.00
	Metal Storage Shelving	1	LS	\$ 14,500.00
	APPLIANCES:			
	(3) Refrigerators; microwave; oven / range; hood; garbage disposal; (2) heavy duty residential washers; (2) heavy duty residential dryers;	1	LS	\$ 18,500.00
	COMPUTERS / MONITORS / BUSINESS EQUIPMENT:			\$ 6,000
	EXERCISE EQUIPMENT:			\$ 8,800
TEL / DATA EQUIPMENT:			\$ 15,000	
SECURITY / ACCESS CONTROL:			\$ 8,000	
FIRE ALERTING SYSTEM (US Dig Murray St pricing):			\$ 99,500	
SPECIFIC FIRE EQUIPMENT: Hose, Narcotics equip., ice machine, SCBA tanks			\$ 28,000	
Soft Costs - FF&E Items SUBTOTAL:				
				\$ 382,800
	10% Soft Costs Contingency:			\$ 38,280
Soft Costs - FF&E items TOTAL:				
				\$ 421,080
SOFT COSTS: PROFESSIONAL FEES				
PRE-CONST FEES	COST ESTIMATE			
	CM/GC Pre-Construction Fees			\$ 24,000
	Architecture & Engineering Fees - FEASIBILITY / SITE PLANNING / PROGRAMMING			\$ 8,800
	Architecture & Engineering Fees - DESIGN - CONSTRUCTION	6.00%		\$ 523,823
	Architecture & Engineering Fees - REIMBURSABLE EXPENSES			\$ 3,600
Soft Costs - Professional Fees TOTAL:				
				\$ 560,223
COST SUMMARY				
COST SUMMARY	COST ESTIMATE			
	Estimated Construction Costs			\$ 8,309,310
	Soft Costs - Fees & Expenses for Construction			\$ 158,510
	Soft Costs - Technology / FF&E Items			\$ 421,080
	Soft Costs - A/E Fees			\$ 560,223
ESTIMATED PROJECT COSTS:				
				\$ 9,449,123

SCENARIO 2: NEW CONSTRUCTION

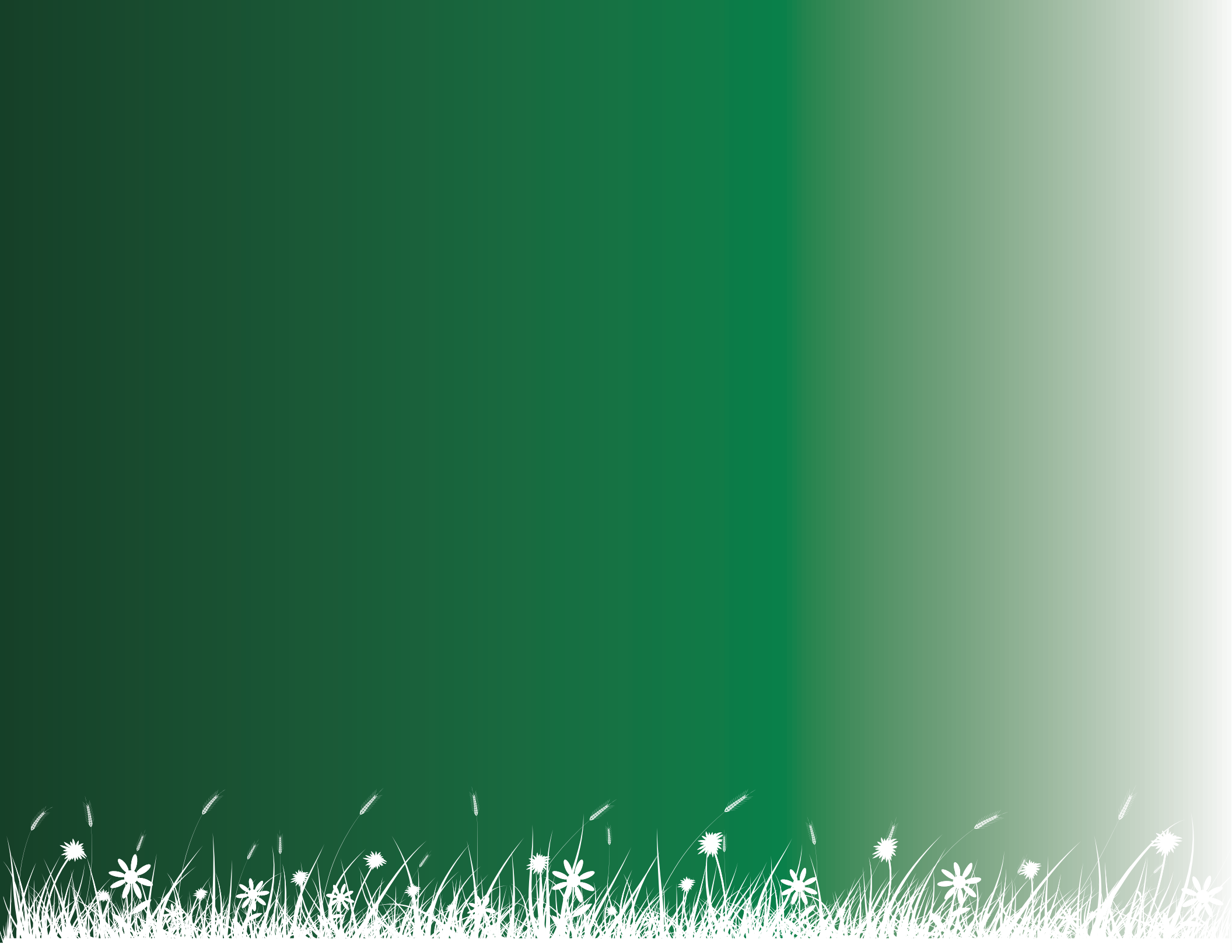
ESTIMATED COST OF CONSTRUCTION					
	ITEM	QUANTITY	UNIT	COST ESTIMATE	
TOTAL CONSTRUCTION COST	Construction Costs: Building				
	NEW CONSTRUCTION - BUILDING: Building area of approx. 17,000 SF; single-story construction; 4 App Bays; 9 dorms; Battalion Chief suite; kitchen / dining / day room; training / meeting room; exercise; laundry; decon sequencing, etc.	17,000	SF	\$ 405.00	\$ 6,885,000
	EXHAUST CAPTURE SYSTEM: Plymovent (basis-of-design) with magnetic holds for 4 bays. Placeholder budget	5	EA	\$ 45,000.00	\$ 225,000
	Construction Costs: Site				
	DEMOLITION: Tear down of existing building; softscape/hardscape demolition/modification per new site design. Placeholder budget	1	LS	\$ 150,000.00	\$ 150,000
	NEW CONSTRUCTION - SITE WORK: Improved site area of app. 65,340 SF (app. 1.5 acre); site development is app. 49,340 SF and includes hardscape, parking, landscape, site equipment, etc. [NOTE: NO SECURITY GATES or PERIMETER FENCING]	49,340	SF	\$ 9.00	\$ 444,060
	SOIL IMPROVEMENTS / DESIGN ADDRESSING AQUIFER - placeholder budget. Geotech to be reviewed with structural engineer and CMGC	1	LS	\$ 100,000.00	\$ 100,000
	SECURED PARKING - Perimeter Fencing	220	LF	\$ 75.00	\$ 16,500
	SECURED PARKING - Automated, Heavy-Duty Gate	1	LS	\$ 30,000.00	\$ 30,000
	BASELINE CONSTRUCTION COSTS:				
				\$ 7,850,560	
	Testing & Special Inspections (1%)	1%		\$ 78,506	
	Construction Phasing (remobilization) - vet w/ CMGC	1%		\$ 78,506	
SUBTOTAL CONSTRUCTION COSTS:					
				\$ 8,007,571	
	CM/GC CONTINGENCY [2%]	2.0%		\$ 160,151	
	OWNER'S CONSTRUCTION CONTINGENCY [4%]	4.0%		\$ 320,303	
TOTAL CONSTRUCTION COSTS:					
				\$ 8,488,025	
SOFT COSTS: CONSTRUCTION FEES					
FEES & EXPENSES PAID BY OWNER PRIOR TO CONSTRUCTION	COST ESTIMATE				
	Geotech Report & Soil Infiltration Test			\$ 22,100	
	Property / Topographic / ALTA Survey			\$ 3,500	
	Land Purchase			\$ -	
	Building Permit Fees			\$ 12,500	
	Fire Flow Analysis			\$ 2,500	
	Plan Review Fees			\$ -	
	Landscape / Irrigation Fee			\$ -	
	Utility Connection Fees (Rocky Mtn Power)			\$ 60,000	
	Utility Connection Fees (gas / water / sewer)			\$ 12,000	
Impact Fees - PUBLIC SAFETY (Parks, Police / Fire, etc.)			\$ 5,500		
Impact Fees - ROADWAYS			\$ 5,500		
Testing & Special Inspections (1%)	moved to construction costs above				
Printing / Advertising			\$ 2,500		
Temp Facilities / Move Management			\$ 10,000		
Data / Security			\$ 8,000		
Environmental			\$ -		
Public Art - 1%	1%			\$ -	
Soft Costs - Construction Fees SUBTOTAL:					
				\$ 144,100	
	10% Soft Costs Contingency:			\$ 14,410	
Soft Costs - Construction Fees TOTAL:					
				\$ 158,510	

Scenario 2 - potential cost saving measures

If the costs presented in these estimates exceed the project funding available, then there are options that can be explored to reduce costs, including:

- Elimination of (1) apparatus bay;
- Reduction of training room size;
- Elimination of security fencing and automated gate at employee parking lot.

SOFT COSTS: TECHNOLOGY and FF&E ITEMS				
	ITEM	QUANTITY	UNIT	COST ESTIMATE
OWNER PURCHASED ITEMS [OWNER OR CONTRACTOR INSTALLED]	FF&E:			
	Furniture	1	LS	\$ 70,000.00
	Generator:	1	LS	\$ 85,000.00
	Bunker Gear Lockers	30	ea	\$ 800.00
	Extractor	1	LS	\$ 11,500.00
	Metal Storage Shelving	1	LS	\$ 14,500.00
	(3) Refrigerators; microwave; oven / range; hood; garbage disposal; heavy duty residential dish washer; (2) heavy duty residential washers; (2) heavy duty residential dryers;	1	LS	\$ 18,500.00
	COMPUTERS / MONITORS / BUSINESS EQUIPMENT:			\$ 6,000
	EXERCISE EQUIPMENT:			\$ 8,800
	TEL / DATA EQUIPMENT:			\$ 15,000
SECURITY / ACCESS CONTROL:			\$ 8,000	
FIRE ALERTING SYSTEM (US Dig Murray St pricing):			\$ 99,500	
SPECIFIC FIRE EQUIPMENT: Hose, Narcotics equip., ice machine, SCBA tanks			\$ 28,000	
Soft Costs - FF&E Items SUBTOTAL:				
				\$ 388,800
	10% Soft Costs Contingency:			\$ 38,880
Soft Costs - FF&E items TOTAL:				
				\$ 427,680
SOFT COSTS: PROFESSIONAL FEES				
PRE-CONST FEES	COST ESTIMATE			
	CM/GC Pre-Construction Fees			\$ 24,000
	Architecture & Engineering Fees - FEASIBILITY / SITE PLANNING / PROGRAMMING			\$ 8,800
	Architecture & Engineering Fees - DESIGN - CONSTRUCTION	6.00%		\$ 534,942
	Architecture & Engineering Fees - REIMBURSABLE EXPENSES			\$ 3,600
Soft Costs - Professional Fees TOTAL:				
				\$ 571,342
COST SUMMARY				
COST SUMMARY	COST ESTIMATE			
	Estimated Construction Costs			\$ 8,488,025
	Soft Costs - Fees & Expenses for Construction			\$ 158,510
	Soft Costs - Technology / FF&E Items			\$ 427,680
	Soft Costs - A/E Fees			\$ 571,342
ESTIMATED PROJECT COSTS:				
				\$ 9,645,558



Local Building Authority of North Davis Fire District, Utah

\$10,330,000 Lease Revenue and Refunding Bonds

Series November 10, 2021

(Refund Series 2008 Revenue Bonds and 30 Year New Money Scenario)

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Local Building Authority of North Davis Fire District, Utah

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Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
11/10/2021	-	-	-	-	-
04/01/2022	175,000.00	5.000%	127,673.55	302,673.55	302,673.55
10/01/2022	-	-	158,612.50	158,612.50	-
04/01/2023	195,000.00	5.000%	158,612.50	353,612.50	512,225.00
10/01/2023	-	-	153,737.50	153,737.50	-
04/01/2024	205,000.00	5.000%	153,737.50	358,737.50	512,475.00
10/01/2024	-	-	148,612.50	148,612.50	-
04/01/2025	215,000.00	5.000%	148,612.50	363,612.50	512,225.00
10/01/2025	-	-	143,237.50	143,237.50	-
04/01/2026	225,000.00	5.000%	143,237.50	368,237.50	511,475.00
10/01/2026	-	-	137,612.50	137,612.50	-
04/01/2027	235,000.00	5.000%	137,612.50	372,612.50	510,225.00
10/01/2027	-	-	131,737.50	131,737.50	-
04/01/2028	250,000.00	5.000%	131,737.50	381,737.50	513,475.00
10/01/2028	-	-	125,487.50	125,487.50	-
04/01/2029	260,000.00	5.000%	125,487.50	385,487.50	510,975.00
10/01/2029	-	-	118,987.50	118,987.50	-
04/01/2030	275,000.00	5.000%	118,987.50	393,987.50	512,975.00
10/01/2030	-	-	112,112.50	112,112.50	-
04/01/2031	290,000.00	5.000%	112,112.50	402,112.50	514,225.00
10/01/2031	-	-	104,862.50	104,862.50	-
04/01/2032	300,000.00	3.000%	104,862.50	404,862.50	509,725.00
10/01/2032	-	-	100,362.50	100,362.50	-
04/01/2033	310,000.00	3.000%	100,362.50	410,362.50	510,725.00
10/01/2033	-	-	95,712.50	95,712.50	-
04/01/2034	320,000.00	3.000%	95,712.50	415,712.50	511,425.00
10/01/2034	-	-	90,912.50	90,912.50	-
04/01/2035	330,000.00	4.000%	90,912.50	420,912.50	511,825.00
10/01/2035	-	-	84,312.50	84,312.50	-
04/01/2036	345,000.00	4.000%	84,312.50	429,312.50	513,625.00
10/01/2036	-	-	77,412.50	77,412.50	-
04/01/2037	355,000.00	4.000%	77,412.50	432,412.50	509,825.00
10/01/2037	-	-	70,312.50	70,312.50	-
04/01/2038	370,000.00	2.250%	70,312.50	440,312.50	510,625.00
10/01/2038	-	-	66,150.00	66,150.00	-
04/01/2039	380,000.00	2.250%	66,150.00	446,150.00	512,300.00
10/01/2039	-	-	61,875.00	61,875.00	-
04/01/2040	390,000.00	2.250%	61,875.00	451,875.00	513,750.00
10/01/2040	-	-	57,487.50	57,487.50	-
04/01/2041	395,000.00	2.250%	57,487.50	452,487.50	509,975.00
10/01/2041	-	-	53,043.75	53,043.75	-
04/01/2042	405,000.00	2.250%	53,043.75	458,043.75	511,087.50
10/01/2042	-	-	48,487.50	48,487.50	-
04/01/2043	415,000.00	2.250%	48,487.50	463,487.50	511,975.00
10/01/2043	-	-	43,818.75	43,818.75	-
04/01/2044	425,000.00	2.375%	43,818.75	468,818.75	512,637.50
10/01/2044	-	-	38,771.88	38,771.88	-
04/01/2045	435,000.00	2.375%	38,771.88	473,771.88	512,543.76
10/01/2045	-	-	33,606.25	33,606.25	-
04/01/2046	445,000.00	2.375%	33,606.25	478,606.25	512,212.50
10/01/2046	-	-	28,321.88	28,321.88	-
04/01/2047	455,000.00	2.375%	28,321.88	483,321.88	511,643.76
10/01/2047	-	-	22,918.75	22,918.75	-
04/01/2048	465,000.00	2.375%	22,918.75	487,918.75	510,837.50
10/01/2048	-	-	17,396.88	17,396.88	-
04/01/2049	475,000.00	2.375%	17,396.88	492,396.88	509,793.76
10/01/2049	-	-	11,756.25	11,756.25	-
04/01/2050	490,000.00	2.375%	11,756.25	501,756.25	513,512.50
10/01/2050	-	-	5,937.50	5,937.50	-
04/01/2051	500,000.00	2.375%	5,937.50	505,937.50	511,875.00
Total	\$10,330,000.00	-	\$4,814,867.33	\$15,144,867.33	-

Yield Statistics

Bond Year Dollars	\$178,460.92
Average Life	17.276 Years
Average Coupon	2.6979954%

Net Interest Cost (NIC)	2.2927042%
True Interest Cost (TIC)	2.2304506%
Bond Yield for Arbitrage Purposes	2.1646799%
All Inclusive Cost (AIC)	2.3377378%

IRS Form 8038

Net Interest Cost	2.1685768%
Weighted Average Maturity	16.747 Years

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(Refund Series 2008 Revenue Bonds and 30 Year New Money Scenario)

Pricing Summary

Maturity	Type of Bond	Coupon	Yield	Maturity Value	Price	YTM	Call Date	Call Price	Dollar Price
04/01/2022	Serial Coupon	5.000%	0.520%	175,000.00	101.749%	-	-	-	178,060.75
04/01/2023	Serial Coupon	5.000%	0.570%	195,000.00	106.131%	-	-	-	206,955.45
04/01/2024	Serial Coupon	5.000%	0.650%	205,000.00	110.306%	-	-	-	226,127.30
04/01/2025	Serial Coupon	5.000%	0.770%	215,000.00	114.133%	-	-	-	245,385.95
04/01/2026	Serial Coupon	5.000%	0.900%	225,000.00	117.614%	-	-	-	264,631.50
04/01/2027	Serial Coupon	5.000%	1.060%	235,000.00	120.593%	-	-	-	283,393.55
04/01/2028	Serial Coupon	5.000%	1.150%	250,000.00	123.658%	-	-	-	309,145.00
04/01/2029	Serial Coupon	5.000%	1.250%	260,000.00	126.396%	-	-	-	328,629.60
04/01/2030	Serial Coupon	5.000%	1.340%	275,000.00	128.956%	-	-	-	354,629.00
04/01/2031	Serial Coupon	5.000%	1.460%	290,000.00	130.960%	-	-	-	379,784.00
04/01/2032	Serial Coupon	3.000%	1.570%	300,000.00	112.440%	c 1.690%	04/01/2031	100.000%	337,320.00
04/01/2033	Serial Coupon	3.000%	1.650%	310,000.00	111.699%	c 1.856%	04/01/2031	100.000%	346,266.90
04/01/2034	Serial Coupon	3.000%	1.730%	320,000.00	110.964%	c 1.997%	04/01/2031	100.000%	355,084.80
04/01/2035	Serial Coupon	4.000%	1.810%	330,000.00	118.834%	c 2.352%	04/01/2031	100.000%	392,152.20
04/01/2036	Serial Coupon	4.000%	1.890%	345,000.00	118.077%	c 2.497%	04/01/2031	100.000%	407,365.65
04/01/2037	Serial Coupon	4.000%	1.970%	355,000.00	117.326%	c 2.624%	04/01/2031	100.000%	416,507.30
04/01/2038	Serial Coupon	2.250%	2.000%	370,000.00	102.129%	c 2.096%	04/01/2031	100.000%	377,877.30
04/01/2039	Serial Coupon	2.250%	2.080%	380,000.00	101.442%	c 2.150%	04/01/2031	100.000%	385,479.60
04/01/2040	Serial Coupon	2.250%	2.110%	390,000.00	101.186%	c 2.171%	04/01/2031	100.000%	394,625.40
04/01/2041	Serial Coupon	2.250%	2.190%	395,000.00	100.505%	c 2.218%	04/01/2031	100.000%	396,994.75
04/01/2042	Serial Coupon	2.250%	2.220%	405,000.00	100.252%	c 2.234%	04/01/2031	100.000%	406,020.60
04/01/2043	Serial Coupon	2.250%	2.250%	415,000.00	100.000%	-	-	-	415,000.00
04/01/2044	Serial Coupon	2.375%	2.280%	425,000.00	100.797%	c 2.329%	04/01/2031	100.000%	428,387.25
04/01/2045	Serial Coupon	2.375%	2.310%	435,000.00	100.544%	c 2.345%	04/01/2031	100.000%	437,366.40
04/01/2046	Serial Coupon	2.375%	2.320%	445,000.00	100.460%	c 2.350%	04/01/2031	100.000%	447,047.00
04/01/2047	Serial Coupon	2.375%	2.330%	455,000.00	100.376%	c 2.355%	04/01/2031	100.000%	456,710.80
04/01/2048	Serial Coupon	2.375%	2.340%	465,000.00	100.292%	c 2.360%	04/01/2031	100.000%	466,357.80
04/01/2049	Serial Coupon	2.375%	2.350%	475,000.00	100.208%	c 2.365%	04/01/2031	100.000%	475,988.00
04/01/2050	Serial Coupon	2.375%	2.360%	490,000.00	100.124%	c 2.369%	04/01/2031	100.000%	490,607.60
04/01/2051	Serial Coupon	2.375%	2.370%	500,000.00	100.040%	c 2.373%	04/01/2031	100.000%	500,200.00
Total	-	-	-	\$10,330,000.00	-	-	-	-	\$11,110,101.45

Bid Information

Par Amount of Bonds	\$10,330,000.00
Reoffering Premium or (Discount)	780,101.45
Gross Production	\$11,110,101.45
Total Underwriter's Discount (0.550%)	\$(56,815.00)
Bid (107.002%)	11,053,286.45
Total Purchase Price	\$11,053,286.45
Bond Year Dollars	\$178,460.92
Average Life	17.276 Years
Average Coupon	2.6979954%
Net Interest Cost (NIC)	2.2927042%
True Interest Cost (TIC)	2.2304506%

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Local Building Authority of North Davis Fire District, Utah

\$10,330,000 Lease Revenue and Refunding Bonds

Series November 10, 2021

(Refund Series 2008 Revenue Bonds and 30 Year New Money Scenario)

Total Issue Sources And Uses

Dated 11/10/2021 | Delivered 11/10/2021

	08 Refunding	New Money	Issue Summary
Sources Of Funds			
Par Amount of Bonds	\$1,130,000.00	\$9,200,000.00	\$10,330,000.00
Reoffering Premium	137,875.55	642,225.90	780,101.45
Total Sources	\$1,267,875.55	\$9,842,225.90	\$11,110,101.45
Uses Of Funds			
Deposit to Project Construction Fund	-	9,650,000.00	9,650,000.00
Deposit to Current Refunding Fund	1,244,540.47	-	1,244,540.47
Costs of Issuance	12,032.91	97,967.09	110,000.00
Total Underwriter's Discount (0.550%)	6,215.00	50,600.00	56,815.00
Gross Bond Insurance Premium	3,900.39	41,534.21	45,434.60
Rounding Amount	1,186.78	2,124.60	3,311.38
Total Uses	\$1,267,875.55	\$9,842,225.90	\$11,110,101.45

North Davis Fire District, Utah

\$3,100,000 Revenue Bonds

Series 2008

(Amended as of February 21, 2013)

Prior Original Debt Service

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
04/01/2013	-	-	-	-	-
10/01/2013	-	-	42,976.70	42,976.70	-
04/01/2014	143,000.00	3.380%	42,976.70	185,976.70	228,953.40
10/01/2014	-	-	40,560.00	40,560.00	-
04/01/2015	150,000.00	3.380%	40,560.00	190,560.00	231,120.00
10/01/2015	-	-	38,025.00	38,025.00	-
04/01/2016	155,000.00	3.380%	38,025.00	193,025.00	231,050.00
10/01/2016	-	-	35,405.50	35,405.50	-
04/01/2017	160,000.00	3.380%	35,405.50	195,405.50	230,811.00
10/01/2017	-	-	32,701.50	32,701.50	-
04/01/2018	165,000.00	3.380%	32,701.50	197,701.50	230,403.00
10/01/2018	-	-	29,913.00	29,913.00	-
04/01/2019	170,000.00	3.380%	29,913.00	199,913.00	229,826.00
10/01/2019	-	-	27,040.00	27,040.00	-
04/01/2020	175,000.00	3.380%	27,040.00	202,040.00	229,080.00
10/01/2020	-	-	24,082.50	24,082.50	-
04/01/2021	185,000.00	3.380%	24,082.50	209,082.50	233,165.00
10/01/2021	-	-	20,956.00	20,956.00	-
04/01/2022	190,000.00	3.380%	20,956.00	210,956.00	231,912.00
10/01/2022	-	-	17,745.00	17,745.00	-
04/01/2023	195,000.00	3.380%	17,745.00	212,745.00	230,490.00
10/01/2023	-	-	14,449.50	14,449.50	-
04/01/2024	205,000.00	3.380%	14,449.50	219,449.50	233,899.00
10/01/2024	-	-	10,985.00	10,985.00	-
04/01/2025	210,000.00	3.380%	10,985.00	220,985.00	231,970.00
10/01/2025	-	-	7,436.00	7,436.00	-
04/01/2026	215,000.00	3.380%	7,436.00	222,436.00	229,872.00
10/01/2026	-	-	3,802.50	3,802.50	-
04/01/2027	225,000.00	3.380%	3,802.50	228,802.50	232,605.00
Total	\$2,543,000.00	-	\$692,156.40	\$3,235,156.40	-

Yield Statistics

Base date for Avg. Life & Avg. Coupon Calculation	11/10/2021
Average Life	2.988 Years
Average Coupon	3.3799999%
Weighted Average Maturity (Par Basis)	2.988 Years
Weighted Average Maturity (Original Price Basis)	2.988 Years

Refunding Bond Information

Refunding Dated Date	11/10/2021
Refunding Delivery Date	11/10/2021

North Davis Fire District, Utah

\$3,100,000 Revenue Bonds

Series 2008

(Amended as of February 21, 2013)

Debt Service To Maturity And To Call

Date	Refunded Bonds	Refunded Interest	D/S To Call	Principal	Coupon	Interest	Refunded D/S	Fiscal Total
11/10/2021	1,240,000.00	4,540.47	1,244,540.47	-	-	-	-	-
04/01/2022	-	-	-	190,000.00	3.380%	20,956.00	210,956.00	210,956.00
10/01/2022	-	-	-	-	-	17,745.00	17,745.00	-
04/01/2023	-	-	-	195,000.00	3.380%	17,745.00	212,745.00	230,490.00
10/01/2023	-	-	-	-	-	14,449.50	14,449.50	-
04/01/2024	-	-	-	205,000.00	3.380%	14,449.50	219,449.50	233,899.00
10/01/2024	-	-	-	-	-	10,985.00	10,985.00	-
04/01/2025	-	-	-	210,000.00	3.380%	10,985.00	220,985.00	231,970.00
10/01/2025	-	-	-	-	-	7,436.00	7,436.00	-
04/01/2026	-	-	-	215,000.00	3.380%	7,436.00	222,436.00	229,872.00
10/01/2026	-	-	-	-	-	3,802.50	3,802.50	-
04/01/2027	-	-	-	225,000.00	3.380%	3,802.50	228,802.50	232,605.00
Total	\$1,240,000.00	\$4,540.47	\$1,244,540.47	\$1,240,000.00	-	\$129,792.00	\$1,369,792.00	-

Yield Statistics

Base date for Avg. Life & Avg. Coupon Calculation	11/10/2021
Average Life	2.988 Years
Average Coupon	3.3799999%
Weighted Average Maturity (Par Basis)	2.988 Years
Weighted Average Maturity (Original Price Basis)	2.988 Years

Refunding Bond Information

Refunding Dated Date	11/10/2021
Refunding Delivery Date	11/10/2021

Local Building Authority of North Davis Fire District, Utah

\$1,130,000 Lease Revenue Refunding Bonds

Series November 10, 2021

(Refund Series 2008)

Summary Of Bonds Refunded

Issue	Maturity	Type	of Bond	Coupon	Maturity Value	Call Date	Call Price
Dated 4/01/2013 Delivered 4/01/2013							
2008 Rev	04/01/2022	Term 1	Coupon	3.380%	190,000	11/10/2021	100.000%
2008 Rev	04/01/2023	Term 1	Coupon	3.380%	195,000	11/10/2021	100.000%
2008 Rev	04/01/2024	Term 1	Coupon	3.380%	205,000	11/10/2021	100.000%
2008 Rev	04/01/2025	Term 1	Coupon	3.380%	210,000	11/10/2021	100.000%
2008 Rev	04/01/2026	Term 1	Coupon	3.380%	215,000	11/10/2021	100.000%
2008 Rev	04/01/2027	Term 1	Coupon	3.380%	225,000	11/10/2021	100.000%
Subtotal	-			-	\$1,240,000	-	-
Total	-			-	\$1,240,000	-	-

Local Building Authority of North Davis Fire District, Utah

\$1,130,000 Lease Revenue Refunding Bonds

Series November 10, 2021

(Refund Series 2008)

Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
11/10/2021	-	-	-	-	-
04/01/2022	175,000.00	5.000%	22,129.17	197,129.17	197,129.17
10/01/2022	-	-	23,875.00	23,875.00	-
04/01/2023	170,000.00	5.000%	23,875.00	193,875.00	217,750.00
10/01/2023	-	-	19,625.00	19,625.00	-
04/01/2024	185,000.00	5.000%	19,625.00	204,625.00	224,250.00
10/01/2024	-	-	15,000.00	15,000.00	-
04/01/2025	190,000.00	5.000%	15,000.00	205,000.00	220,000.00
10/01/2025	-	-	10,250.00	10,250.00	-
04/01/2026	200,000.00	5.000%	10,250.00	210,250.00	220,500.00
10/01/2026	-	-	5,250.00	5,250.00	-
04/01/2027	210,000.00	5.000%	5,250.00	215,250.00	220,500.00
Total	\$1,130,000.00	-	\$170,129.17	\$1,300,129.17	-

Yield Statistics

Bond Year Dollars	\$3,402.58
Average Life	3.011 Years
Average Coupon	5.0000001%
Net Interest Cost (NIC)	1.1305710%
True Interest Cost (TIC)	1.0402479%
Bond Yield for Arbitrage Purposes	2.1646799%
All Inclusive Cost (AIC)	1.4853277%

IRS Form 8038

Net Interest Cost	0.8180310%
Weighted Average Maturity	3.110 Years

Local Building Authority of North Davis Fire District, Utah

\$1,130,000 Lease Revenue Refunding Bonds

Series November 10, 2021

(Refund Series 2008)

Pricing Summary

Maturity	Type of Bond	Coupon	Yield	Maturity Value	Price	Dollar Price
04/01/2022	Serial Coupon	5.000%	0.520%	175,000.00	101.749%	178,060.75
04/01/2023	Serial Coupon	5.000%	0.570%	170,000.00	106.131%	180,422.70
04/01/2024	Serial Coupon	5.000%	0.650%	185,000.00	110.306%	204,066.10
04/01/2025	Serial Coupon	5.000%	0.770%	190,000.00	114.133%	216,852.70
04/01/2026	Serial Coupon	5.000%	0.900%	200,000.00	117.614%	235,228.00
04/01/2027	Serial Coupon	5.000%	1.060%	210,000.00	120.593%	253,245.30
Total	-	-	-	\$1,130,000.00	-	\$1,267,875.55

Bid Information

Par Amount of Bonds	\$1,130,000.00
Reoffering Premium or (Discount)	137,875.55
Gross Production	\$1,267,875.55
Total Underwriter's Discount (0.550%)	\$(6,215.00)
Bid (111.651%)	1,261,660.55
Total Purchase Price	\$1,261,660.55
Bond Year Dollars	\$3,402.58
Average Life	3.011 Years
Average Coupon	5.0000001%
Net Interest Cost (NIC)	1.1305710%
True Interest Cost (TIC)	1.0402479%

Local Building Authority of North Davis Fire District, Utah

\$1,130,000 Lease Revenue Refunding Bonds

Series November 10, 2021

(Refund Series 2008)

Gross Debt Service Comparison

Date	Principal	Coupon	Interest	New D/S	Old D/S	Savings	Fiscal Total
11/10/2021	-	-	-	(1,186.78)	-	1,186.78	-
04/01/2022	175,000.00	5.000%	22,129.17	197,129.17	210,956.00	13,826.83	15,013.61
10/01/2022	-	-	23,875.00	23,875.00	17,745.00	(6,130.00)	-
04/01/2023	170,000.00	5.000%	23,875.00	193,875.00	212,745.00	18,870.00	12,740.00
10/01/2023	-	-	19,625.00	19,625.00	14,449.50	(5,175.50)	-
04/01/2024	185,000.00	5.000%	19,625.00	204,625.00	219,449.50	14,824.50	9,649.00
10/01/2024	-	-	15,000.00	15,000.00	10,985.00	(4,015.00)	-
04/01/2025	190,000.00	5.000%	15,000.00	205,000.00	220,985.00	15,985.00	11,970.00
10/01/2025	-	-	10,250.00	10,250.00	7,436.00	(2,814.00)	-
04/01/2026	200,000.00	5.000%	10,250.00	210,250.00	222,436.00	12,186.00	9,372.00
10/01/2026	-	-	5,250.00	5,250.00	3,802.50	(1,447.50)	-
04/01/2027	210,000.00	5.000%	5,250.00	215,250.00	228,802.50	13,552.50	12,105.00
Total	\$1,130,000.00	-	\$170,129.17	\$1,298,942.39	\$1,369,792.00	\$70,849.61	-

PV Analysis Summary (Gross to Gross)

Gross PV Debt Service Savings	65,471.49
Contingency or Rounding Amount	1,186.78
Net Present Value Benefit	\$66,658.27
Net PV Benefit / \$1,240,000 Refunded Principal	5.376%
Net PV Benefit / \$1,130,000 Refunding Principal	5.899%
Average Annual Cash Flow Savings	11,808.27

Refunding Bond Information

Refunding Dated Date	11/10/2021
Refunding Delivery Date	11/10/2021

Local Building Authority of North Davis Fire District, Utah

\$9,200,000 Lease Revenue Bonds

Series November 10, 2021

(30 Year New Money)

Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
11/10/2021	-	-	-	-	-
04/01/2022	-	-	105,544.38	105,544.38	105,544.38
10/01/2022	-	-	134,737.50	134,737.50	-
04/01/2023	25,000.00	5.000%	134,737.50	159,737.50	294,475.00
10/01/2023	-	-	134,112.50	134,112.50	-
04/01/2024	20,000.00	5.000%	134,112.50	154,112.50	288,225.00
10/01/2024	-	-	133,612.50	133,612.50	-
04/01/2025	25,000.00	5.000%	133,612.50	158,612.50	292,225.00
10/01/2025	-	-	132,987.50	132,987.50	-
04/01/2026	25,000.00	5.000%	132,987.50	157,987.50	290,975.00
10/01/2026	-	-	132,362.50	132,362.50	-
04/01/2027	25,000.00	5.000%	132,362.50	157,362.50	289,725.00
10/01/2027	-	-	131,737.50	131,737.50	-
04/01/2028	250,000.00	5.000%	131,737.50	381,737.50	513,475.00
10/01/2028	-	-	125,487.50	125,487.50	-
04/01/2029	260,000.00	5.000%	125,487.50	385,487.50	510,975.00
10/01/2029	-	-	118,987.50	118,987.50	-
04/01/2030	275,000.00	5.000%	118,987.50	393,987.50	512,975.00
10/01/2030	-	-	112,112.50	112,112.50	-
04/01/2031	290,000.00	5.000%	112,112.50	402,112.50	514,225.00
10/01/2031	-	-	104,862.50	104,862.50	-
04/01/2032	300,000.00	3.000%	104,862.50	404,862.50	509,725.00
10/01/2032	-	-	100,362.50	100,362.50	-
04/01/2033	310,000.00	3.000%	100,362.50	410,362.50	510,725.00
10/01/2033	-	-	95,712.50	95,712.50	-
04/01/2034	320,000.00	3.000%	95,712.50	415,712.50	511,425.00
10/01/2034	-	-	90,912.50	90,912.50	-
04/01/2035	330,000.00	4.000%	90,912.50	420,912.50	511,825.00
10/01/2035	-	-	84,312.50	84,312.50	-
04/01/2036	345,000.00	4.000%	84,312.50	429,312.50	513,625.00
10/01/2036	-	-	77,412.50	77,412.50	-
04/01/2037	355,000.00	4.000%	77,412.50	432,412.50	509,825.00
10/01/2037	-	-	70,312.50	70,312.50	-
04/01/2038	370,000.00	2.250%	70,312.50	440,312.50	510,625.00
10/01/2038	-	-	66,150.00	66,150.00	-
04/01/2039	380,000.00	2.250%	66,150.00	446,150.00	512,300.00
10/01/2039	-	-	61,875.00	61,875.00	-
04/01/2040	390,000.00	2.250%	61,875.00	451,875.00	513,750.00
10/01/2040	-	-	57,487.50	57,487.50	-
04/01/2041	395,000.00	2.250%	57,487.50	452,487.50	509,975.00
10/01/2041	-	-	53,043.75	53,043.75	-
04/01/2042	405,000.00	2.250%	53,043.75	458,043.75	511,087.50
10/01/2042	-	-	48,487.50	48,487.50	-
04/01/2043	415,000.00	2.250%	48,487.50	463,487.50	511,975.00
10/01/2043	-	-	43,818.75	43,818.75	-
04/01/2044	425,000.00	2.375%	43,818.75	468,818.75	512,637.50
10/01/2044	-	-	38,771.88	38,771.88	-
04/01/2045	435,000.00	2.375%	38,771.88	473,771.88	512,543.76
10/01/2045	-	-	33,606.25	33,606.25	-
04/01/2046	445,000.00	2.375%	33,606.25	478,606.25	512,212.50
10/01/2046	-	-	28,321.88	28,321.88	-
04/01/2047	455,000.00	2.375%	28,321.88	483,321.88	511,643.76
10/01/2047	-	-	22,918.75	22,918.75	-
04/01/2048	465,000.00	2.375%	22,918.75	487,918.75	510,837.50
10/01/2048	-	-	17,396.88	17,396.88	-
04/01/2049	475,000.00	2.375%	17,396.88	492,396.88	509,793.76
10/01/2049	-	-	11,756.25	11,756.25	-
04/01/2050	490,000.00	2.375%	11,756.25	501,756.25	513,512.50
10/01/2050	-	-	5,937.50	5,937.50	-
04/01/2051	500,000.00	2.375%	5,937.50	505,937.50	511,875.00
Total	\$9,200,000.00	-	\$4,644,738.16	\$13,844,738.16	-

Yield Statistics

Bond Year Dollars	\$175,058.33
Average Life	19.028 Years
Average Coupon	2.6532517%

Net Interest Cost (NIC)	2.3152924%
True Interest Cost (TIC)	2.2598703%
Bond Yield for Arbitrage Purposes	2.1646799%
All Inclusive Cost (AIC)	2.3589769%

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Net Interest Cost	2.1978167%
Weighted Average Maturity	18.503 Years

Local Building Authority of North Davis Fire District, Utah

\$9,200,000 Lease Revenue Bonds

Series November 10, 2021

(30 Year New Money)

Pricing Summary

Maturity	Type of Bond	Coupon	Yield	Maturity Value	Price	YTM	Call Date	Call Price	Dollar Price
04/01/2023	Serial Coupon	5.000%	0.570%	25,000.00	106.131%	-	-	-	26,532.75
04/01/2024	Serial Coupon	5.000%	0.650%	20,000.00	110.306%	-	-	-	22,061.20
04/01/2025	Serial Coupon	5.000%	0.770%	25,000.00	114.133%	-	-	-	28,533.25
04/01/2026	Serial Coupon	5.000%	0.900%	25,000.00	117.614%	-	-	-	29,403.50
04/01/2027	Serial Coupon	5.000%	1.060%	25,000.00	120.593%	-	-	-	30,148.25
04/01/2028	Serial Coupon	5.000%	1.150%	250,000.00	123.658%	-	-	-	309,145.00
04/01/2029	Serial Coupon	5.000%	1.250%	260,000.00	126.396%	-	-	-	328,629.60
04/01/2030	Serial Coupon	5.000%	1.340%	275,000.00	128.956%	-	-	-	354,629.00
04/01/2031	Serial Coupon	5.000%	1.460%	290,000.00	130.960%	-	-	-	379,784.00
04/01/2032	Serial Coupon	3.000%	1.570%	300,000.00	112.440%	c 1.690%	04/01/2031	100.000%	337,320.00
04/01/2033	Serial Coupon	3.000%	1.650%	310,000.00	111.699%	c 1.856%	04/01/2031	100.000%	346,266.90
04/01/2034	Serial Coupon	3.000%	1.730%	320,000.00	110.964%	c 1.997%	04/01/2031	100.000%	355,084.80
04/01/2035	Serial Coupon	4.000%	1.810%	330,000.00	118.834%	c 2.352%	04/01/2031	100.000%	392,152.20
04/01/2036	Serial Coupon	4.000%	1.890%	345,000.00	118.077%	c 2.497%	04/01/2031	100.000%	407,365.65
04/01/2037	Serial Coupon	4.000%	1.970%	355,000.00	117.326%	c 2.624%	04/01/2031	100.000%	416,507.30
04/01/2038	Serial Coupon	2.250%	2.000%	370,000.00	102.129%	c 2.096%	04/01/2031	100.000%	377,877.30
04/01/2039	Serial Coupon	2.250%	2.080%	380,000.00	101.442%	c 2.150%	04/01/2031	100.000%	385,479.60
04/01/2040	Serial Coupon	2.250%	2.110%	390,000.00	101.186%	c 2.171%	04/01/2031	100.000%	394,625.40
04/01/2041	Serial Coupon	2.250%	2.190%	395,000.00	100.505%	c 2.218%	04/01/2031	100.000%	396,994.75
04/01/2042	Serial Coupon	2.250%	2.220%	405,000.00	100.252%	c 2.234%	04/01/2031	100.000%	406,020.60
04/01/2043	Serial Coupon	2.250%	2.250%	415,000.00	100.000%	-	-	-	415,000.00
04/01/2044	Serial Coupon	2.375%	2.280%	425,000.00	100.797%	c 2.329%	04/01/2031	100.000%	428,387.25
04/01/2045	Serial Coupon	2.375%	2.310%	435,000.00	100.544%	c 2.345%	04/01/2031	100.000%	437,366.40
04/01/2046	Serial Coupon	2.375%	2.320%	445,000.00	100.460%	c 2.350%	04/01/2031	100.000%	447,047.00
04/01/2047	Serial Coupon	2.375%	2.330%	455,000.00	100.376%	c 2.355%	04/01/2031	100.000%	456,710.80
04/01/2048	Serial Coupon	2.375%	2.340%	465,000.00	100.292%	c 2.360%	04/01/2031	100.000%	466,357.80
04/01/2049	Serial Coupon	2.375%	2.350%	475,000.00	100.208%	c 2.365%	04/01/2031	100.000%	475,988.00
04/01/2050	Serial Coupon	2.375%	2.360%	490,000.00	100.124%	c 2.369%	04/01/2031	100.000%	490,607.60
04/01/2051	Serial Coupon	2.375%	2.370%	500,000.00	100.040%	c 2.373%	04/01/2031	100.000%	500,200.00
Total	-	-	-	\$9,200,000.00	-	-	-	-	\$9,842,225.90

Bid Information

Par Amount of Bonds	\$9,200,000.00
Reoffering Premium or (Discount)	642,225.90
Gross Production	\$9,842,225.90
Total Underwriter's Discount (0.550%)	\$(50,600.00)
Bid (106.431%)	9,791,625.90
Total Purchase Price	\$9,791,625.90
Bond Year Dollars	\$175,058.33
Average Life	19.028 Years
Average Coupon	2.6532517%
Net Interest Cost (NIC)	2.3152924%
True Interest Cost (TIC)	2.2598703%

LBA Ref 08 & \$9M NM LRB 3 | New Money | 7/7/2021 | 2:23 PM