

# Feasibility Study for the Freetown Council on Aging Building

Meeting Date: 07/13/2021



# PROPERTY OVERVIEW:

Property Address: 227 Chace Road, Freetown, MA 02702

Owner: Town of Freetown

CoOwner: Council on Aging Senior Center

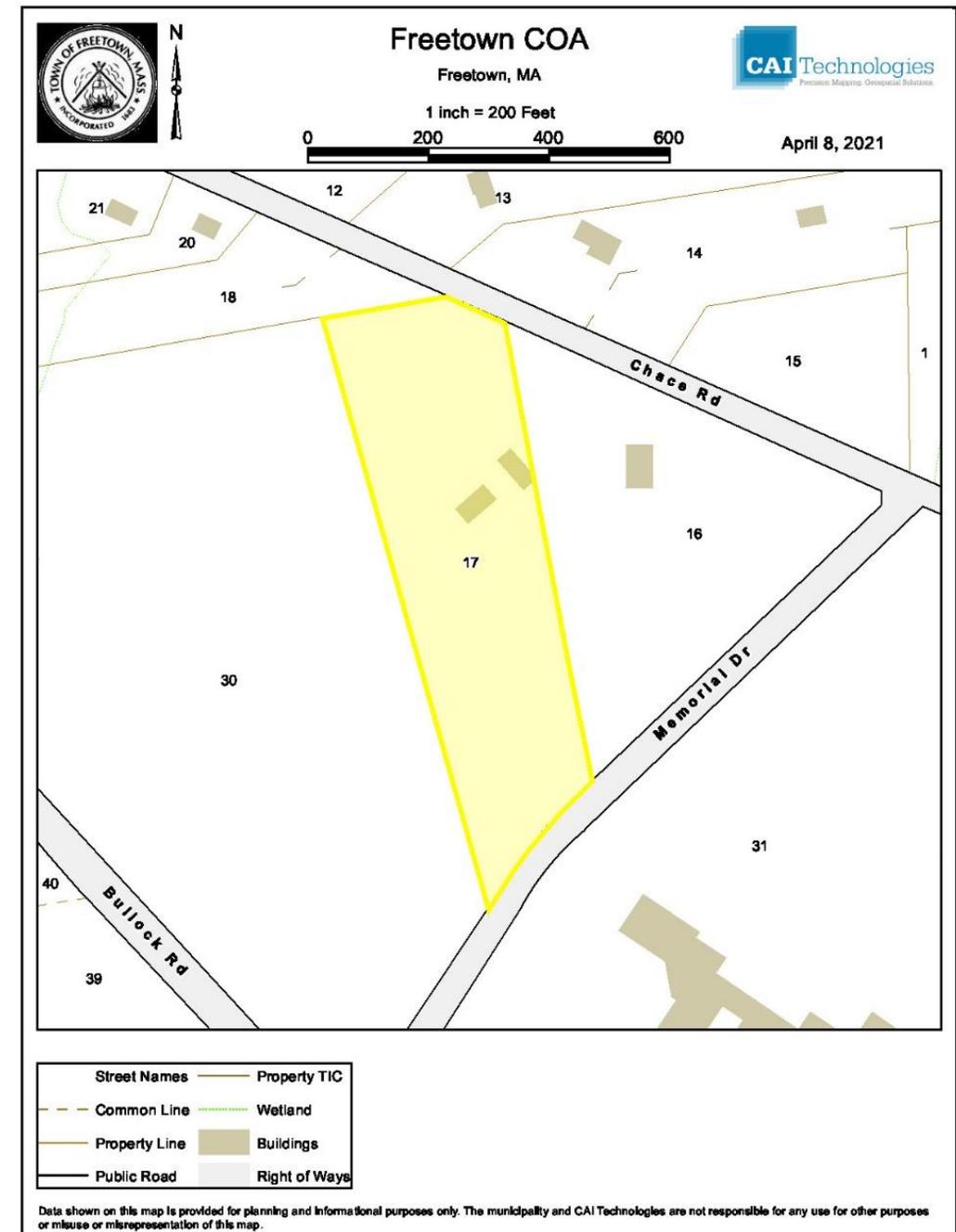
Parcel Number: 239-017      Property Type: E

Total Taxable Value: \$576,600.00

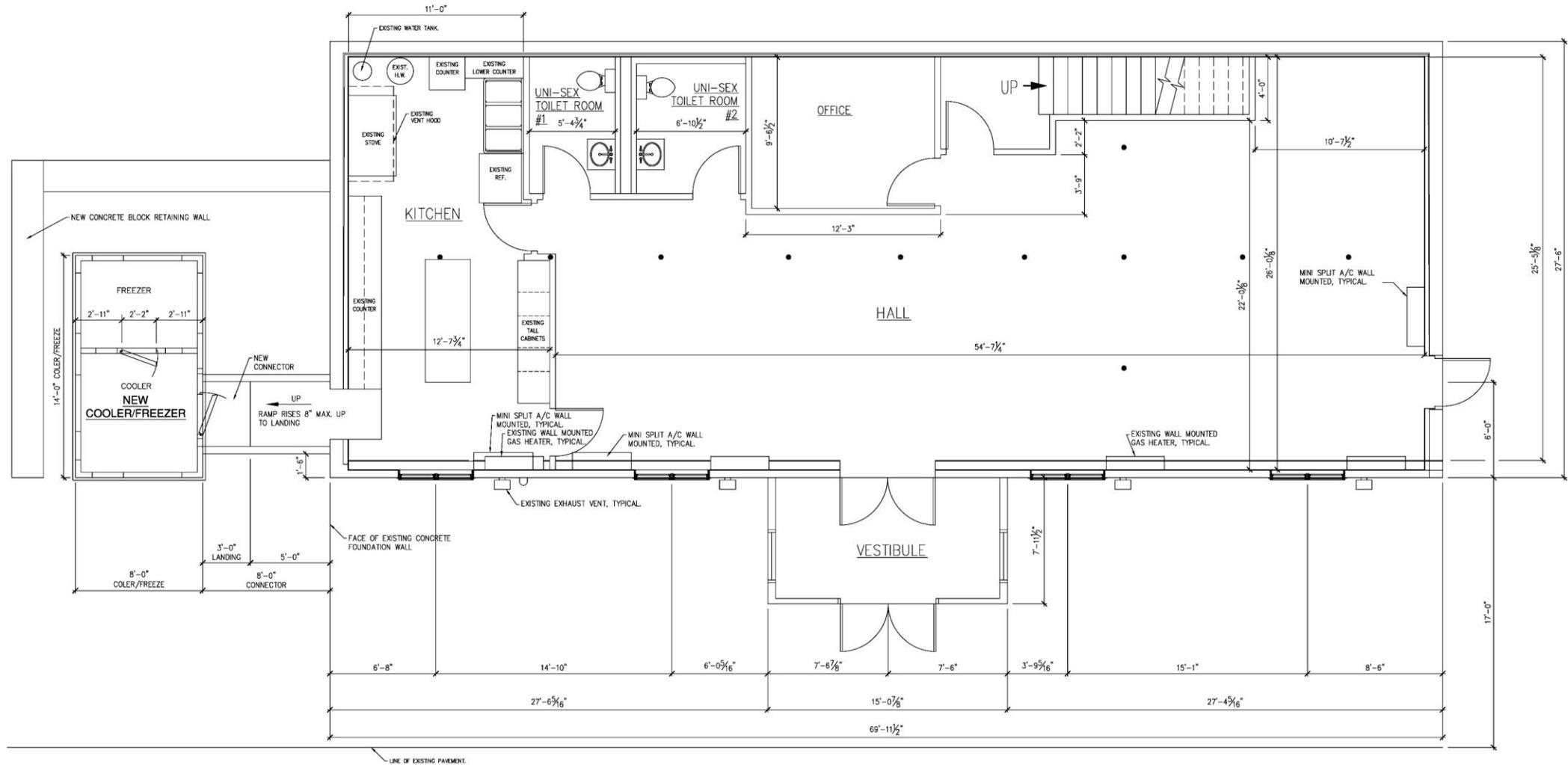
Total Land Value: \$318,000.00

**Total of All Buildings Value: \$227,500.00**

Area of Land: 5.3 Acres



# EXISTING CONDITIONS

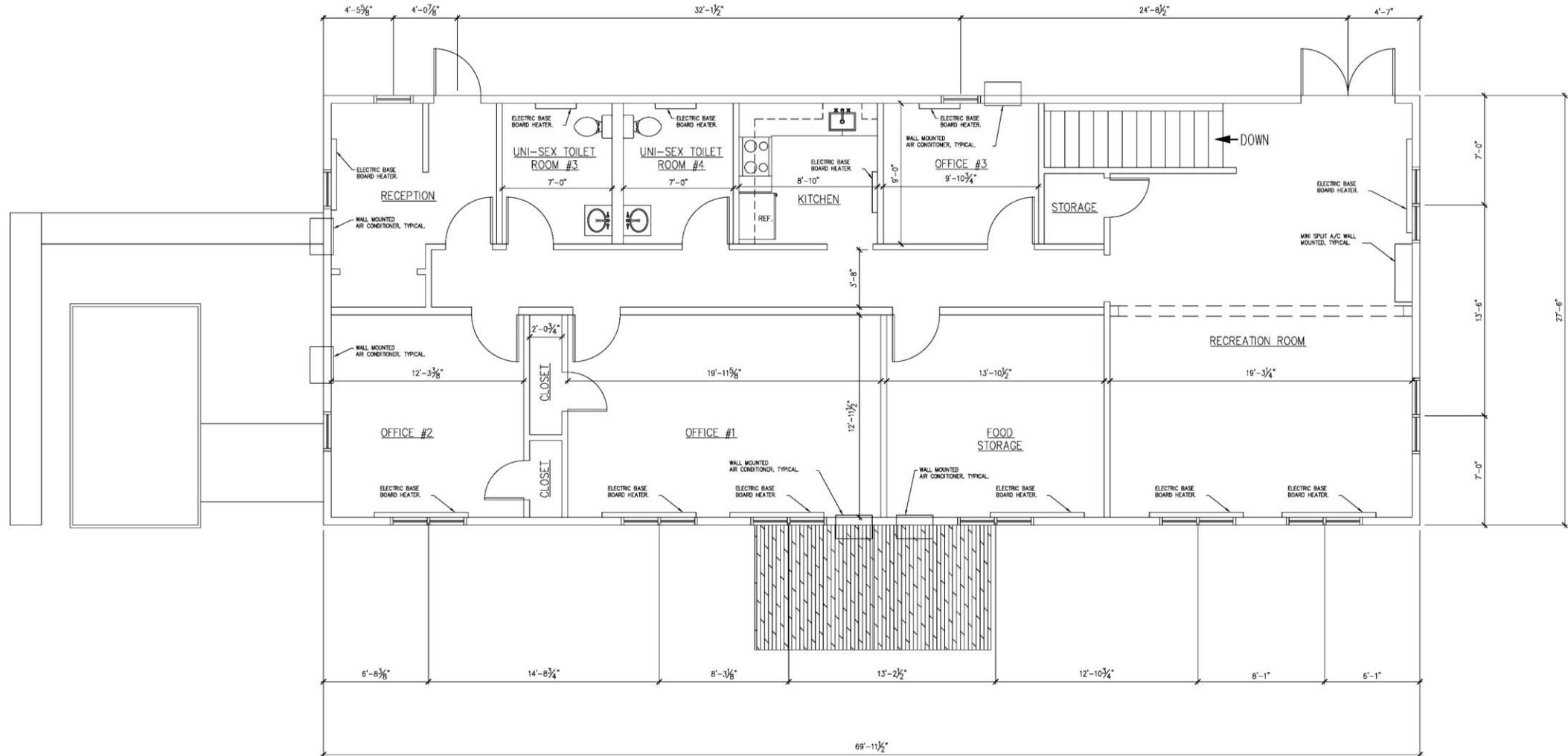


## Freetown COA - Existing Lower Level Floor Plan

**Lower Level Area: 2,196 Gross S.F. (including new Cooler/Freezer) and 2,084 Gross S.F. (without Freezer/Cooler)**

Constructed with four modular components limiting the use of the Hall due to closely spaced columns.

# EXISTING CONDITIONS



## Freetown COA - Existing Upper Level Floor Plan

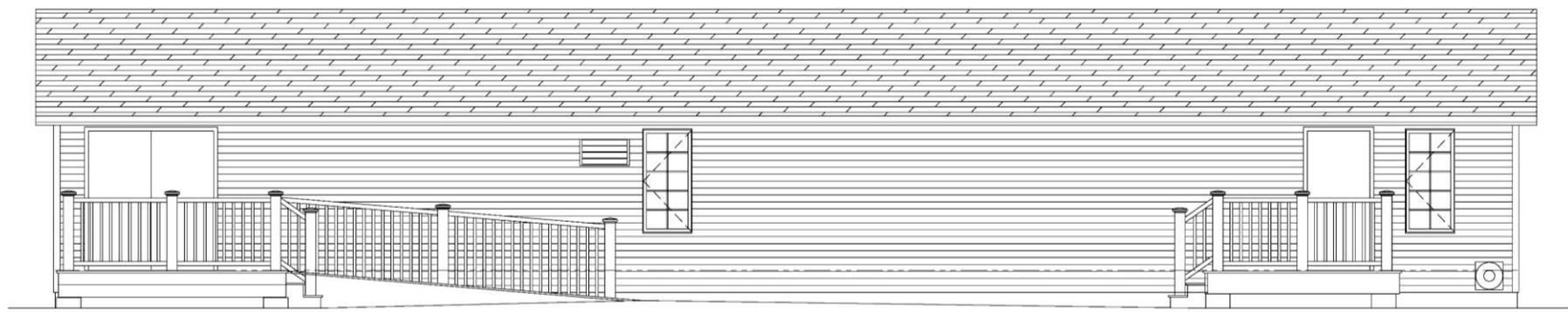
**Upper Level Area: 1,924 Gross S.F.**

**Total Building Area: 4,120 Gross S.F.**

# EXISTING CONDITIONS



Freetown COA - Existing North-East Elevation



Freetown COA - Existing South-West Elevation

# EXISTING CONDITIONS



Freetown COA - Existing North-West Elevation



Freetown COA - Existing South-East Elevation

# PROGRAM ANALYSIS

Note: Based on information obtained during meetings on February 23<sup>rd</sup> and June 22<sup>nd</sup> with several members of the Council on Aging Board and the Building Official, Jeff Chandler.

| Freetown COA                                   |                          |  |                          |  |                          |                |                          |
|--|--------------------------|--|--------------------------|--|--------------------------|----------------|--------------------------|
| PROGRAM ANALYSIS                               |                          | SCHEME - 1                                     |                          |  |                          | SCHEME - 2     |                          |
| Existing Space                                 | Existing Area (Net S.F.) | Proposed Space                                 | Proposed Area (Net S.F.) | Proposed Space                                 | Proposed Area (Net S.F.) | Proposed Space | Proposed Area (Net S.F.) |
| <b>LOWER LEVEL</b>                             |                          |  |                          |  |                          |                |                          |
| Hall   | 1,069 S.F.               | Hall   | 1,069 S.F.               | Hall   | 1,069 S.F.               |                |                          |
| Kitchen  | 302 S.F.                 | Kitchen  | 302 S.F.                 | Kitchen  | 302 S.F.                 |                |                          |
| Office   | 110 S.F.                 | Women's Toilet                                 | 47 S.F.                  | Women's Toilet                                 | 47 S.F.                  |                |                          |
| Vestibule                                      | 107 S.F.                 | H.C. Women's Toilet                            | 56 S.F.                  | H.C. Women's Toilet                            | 56 S.F.                  |                |                          |
| Uni-Sex Toilet Room #1                         | 47 S.F.                  | H.C. Men's Toilet                              | 62 S.F.                  | H.C. Men's Toilet                              | 62 S.F.                  |                |                          |
| Uni-Sex Toilet Room #2                         | 56 S.F.                  | Storage  | 43 S.F.                  | Storage  | 43 S.F.                  |                |                          |
|  |                          | Gathering/Function/Day Room                    | 527 S.F.                 |  |                          |                |                          |
|  |                          | Food Pantry                                    | 348 S.F.                 | Food Pantry                                    | 524 S.F.                 |                |                          |
|  |                          | Elevator Machine Room                          | 79 S.F.                  | Elevator Machine Room                          | 79 S.F.                  |                |                          |
|  |                          | Lobby  | 100 S.F.                 | Lobby  | 100 S.F.                 |                |                          |
|  |                          | Vestibule                                      | 105 S.F.                 | Vestibule                                      | 105 S.F.                 |                |                          |
| <b>Subtotal of Lower Level Existing Space:</b> | <b>1,691 S.F.</b>        | <b>Subtotal of Lower Level Proposed Space:</b> | <b>2,738 S.F.</b>        | <b>Subtotal of Lower Level Proposed Space:</b> | <b>2,387 S.F.</b>        |                |                          |
| <b>UPPER LEVEL</b>                             |                          |  |                          |  |                          |                |                          |
| Recreation Room                                | 474 S.F.                 | Enlarged Recreation Room                       | 698 S.F.                 | Enlarged Recreation Room                       | 597 S.F.                 |                |                          |
| Food Storage                                   | 180 S.F.                 | Private Consult Room                           | 110 S.F.                 | Private Consult Room                           | 110 S.F.                 |                |                          |
| Office #1                                      | 275 S.F.                 | Computer Room                                  | 250 S.F.                 | Office #4                                      | 132 S.F.                 |                |                          |
| Office #2                                      | 169 S.F.                 | Break/Meeting Room                             | 189 S.F.                 | Break/Meeting Room                             | 281 S.F.                 |                |                          |
| Office #3                                      | 89 S.F.                  | Storage  | 17 S.F.                  | Storage  | 17 S.F.                  |                |                          |
| Reception                                      | 117 S.F.                 | Office #1                                      | 89 S.F.                  | Office #1                                      | 89 S.F.                  |                |                          |
| Uni-Sex Toilet Room #3                         | 63 S.F.                  | Office #2                                      | 190 S.F.                 | Office #2                                      | 168 S.F.                 |                |                          |
| Uni-Sex Toilet Room #4                         | 63 S.F.                  | Office #3                                      | 287 S.F.                 | Office #3                                      | 257 S.F.                 |                |                          |
| Kitchen  | 76 S.F.                  | Kitchen  | 76 S.F.                  | Kitchen  | 76 S.F.                  |                |                          |
| Storage  | 17 S.F.                  | Men's Toilet Room                              | 63 S.F.                  | Men's Toilet Room                              | 63 S.F.                  |                |                          |
|  |                          | Women's Toilet Room                            | 63 S.F.                  | Women's Toilet Room                            | 63 S.F.                  |                |                          |
|  |                          | Reception/Waiting                              | 137 S.F.                 | Reception/Waiting                              | 137 S.F.                 |                |                          |
|  |                          | Vestibules                                     | 113 S.F.                 | Vestibules                                     | 113 S.F.                 |                |                          |
| <b>Subtotal of Upper Level Existing Space:</b> | <b>1,523 S.F.</b>        | <b>Subtotal of Upper Level Proposed Space:</b> | <b>2,282 S.F.</b>        | <b>Subtotal of Upper Level Proposed Space:</b> | <b>2,103 S.F.</b>        |                |                          |
| <b>Total Net S.F. of Existing Space:</b>       | <b>3,214 S.F.</b>        | <b>Total Net S.F. of Proposed Space:</b>       | <b>5,020 S.F.</b>        | <b>Total Net S.F. of Proposed Space:</b>       | <b>4,490 S.F.</b>        |                |                          |
| <b>Grossing Factor of Existing:</b>            | <b>1.28</b>              | <b>Grossing Factor of Proposed:</b>            | <b>1.34</b>              | <b>Grossing Factor of Proposed:</b>            | <b>1.34</b>              |                |                          |
| <b>Total Gross Existing Area:</b>              | <b>4,120 S.F.</b>        | <b>Total Gross Proposed Area:</b>              | <b>6,709 S.F.</b>        | <b>Total Gross Proposed Area:</b>              | <b>6,001 S.F.</b>        |                |                          |

# CODE COMPLIANCE: Overview

| ITEM   | EXISTING CODE COMPLIANCE | CODE UPGRADE<br>(IF NECESSARY)   |
|--|--------------------------|--|
| Existing Building Height                                 | Yes                      |  |
| Fire Resistance Rated Requirements for Building Elements | No                       | Need separation between A and B Occupancies of 2 hours.                        |
| Existing Fire Protection                                 | Yes for Fire Sprinklers  | Fire Alarm upgrade is recommended.   |
| Existing Means of Egress                                 | Yes                      | Ramp & Stair upgrades are recommended.   |
| Existing Plumbing Fixtures                               | No                       | Provide service sink and drinking fountain for both levels.                    |
| Existing Accessibility                                   | No                       | Provide a 2-stop elevator with a pit and machine room and stair/ramp upgrades. |
| Existing HVAC  | No                       | Does not currently meet air change standards.                                  |

\*Upgrades need only be completed if the building is added to or altered and/or the cost of construction exceeds \$68,250.00

# CODE COMPLIANCE: Existing Building Height

## 1. Existing Group Classification (Chapter 3)

(Upper Level)

(Lower Level)

Business (B)

Assembly (A-3)

## 2. Existing Construction Type (Chapter 6)

Type 5B Construction, Not Sprinkled (NS)

## 3. Existing Building Height (Chapter 5)

Business (B) & Assembly (A-3)

Allowable Height

Type 5B – 40 feet (Not Sprinkled)

A-3          1 Story Above Grade (NS)

B             2 Story Above Grade (NS)

18 feet (average)

Actual Height

Actual Stories Above Grade

1 Story

Existing Code Compliance:

**Yes**

# CODE COMPLIANCE: Fire Resistance Rated Requirements for Building Elements

## 4. Existing Building Area (Chapter 5)

Building Area: (Each Floor)

|                     |                   |
|---------------------|-------------------|
| Lower Level         | 2,246 square feet |
| Upper Level         | 1,874 square feet |
| Total Building Area | 4,120 square feet |

## 5. Fire Resistance Rated Requirements for Building Elements (Chapter 6, Table 601)

### Type 5B Construction

|    |  |                  |
|----|--|------------------|
| 1. | Primary Structural Frame:                              | <u>0 Hour(s)</u> |
| 2. | Bearing Walls:   |                  |
|    | Exterior   | <u>0 Hour(s)</u> |
|    | Interior   | <u>0 Hour(s)</u> |
| 3. | Nonbearing Walls and Partitions                        |                  |
|    | Exterior   | <u>0 Hour(s)</u> |
| 4. | Nonbearing Walls and Partitions                        |                  |
|    | Interior   | <u>0 Hour(s)</u> |
| 5. | Floor Construction and Associated<br>Secondary Members | <u>0 Hour(s)</u> |
| 6. | Roof Construction and Associated<br>Secondary Members  | <u>0 Hour(s)</u> |

Table 508.4 – Required Separation of Occupancies (Hours)

Occupancy type Assembly (A) requires a 2 hour separation from  
occupancy type Business (B).

Existing Code Compliance:

**No**

**Need separation between A and B Occupancies of 2 hours.**

# CODE COMPLIANCE: Existing Fire Protection

## 6. Existing Occupancy Load

Occupancy Load Per Floor:

### Lower Level

|                      |                       |              |
|----------------------|-----------------------|--------------|
| Assembly Group (A-3) | 1,100 s.f. / 15 net = | 74 occupants |
| Accessory to A-3     |                       | 5 occupants  |
| Ground Level Total:  |                       | 79 occupants |

### Upper Level

|                    |                          |              |
|--------------------|--------------------------|--------------|
| Business Group (B) | 1,874 s.f. / 100 gross = | 19 occupants |
|--------------------|--------------------------|--------------|

|        |  |              |
|--------|--|--------------|
| Total: |  | 98 occupants |
|--------|--|--------------|

## 7. Existing Fire Protection

No Existing Sprinkler System

Section 26G: Automatic sprinkler systems required for buildings and structures totaling more than 7,500 gross square feet.

Existing Gross Square Feet: 4,120 gross s.f. < 7,500 gross s.f.

As long as the building does not total more than 7,500 gross square feet after any and all additions, a sprinkler system will not be needed under Section 26G.

Existing Code Compliance:

**Yes**

**\*Fire Alarm upgrade is recommended.**

# CODE COMPLIANCE: Existing Means of Egress

## 8. Existing Means of Egress

Egress Based on Occupant Load (Table 1006.3.1)

Minimum Number of Exits per Story: 2

Existing Stairway Capacity

0.3 inch per occupant

98 occupants x 0.3 inches = 29.4 inches

Existing stairwell width = 44 inches > 29.4

Existing Code Compliance:

**Yes**

### **Business (B)**

Total: 19 occupants

Existing Egress Doors Capacity

Assuming half egress out each of the 2 exists on the Upper Level.

10 occupants x 0.20 inches = 2 inches < 36 inches existing egress doors

Common Path of Egress Travel

Business (B) Occupancy:

75 feet without sprinkler system and greater than 30 occupants

Existing Maximum Common Path of Travel: 22 feet < 75 feet

Exit Access Travel Distance (Table 1017.2)

Exit Access Travel for Business (B), Not Sprinkled (NS): 200 feet

Existing Exit Access Travel Distance: 76 feet < 200 feet

Existing Code Compliance:

**Yes**

# CODE COMPLIANCE: Existing Means of Egress (Continued...)

## Assembly (A-3)

Total: 79 occupants

### Existing Egress Doors Capacity

Assuming half egress out each of the 2 exists on the Lower Level.

40 occupants x 0.20 inches = 8" < 36" existing egress doors

### Common Path of Egress Travel

Maximum Common Path of Travel: 75 feet

Existing Maximum Common Path of Travel: 26 feet < 75 feet

### Exit Access Travel Distance (Table 1017.20)

Exit Access Travel for Assembly (A-3), Not Sprinkled (NS): 200 feet

Existing Exit Access Travel Distance: 78 feet < 200 feet

Existing Code Compliance: **Yes**

# CODE COMPLIANCE: Existing Plumbing Fixtures

## 9. Existing Plumbing Fixture Count

| Business (B) Plumbing Fixtures: Upper Level                        |                          |                   |                   |
|--|--------------------------|-------------------|-------------------|
| Business (B) Design Load = 19 occupants                            |                          |                   |                   |
| 248 CMR – 10.10 Table 1: Minimum Facilities For Building Occupancy |                          |                   |                   |
| Fixtures   | (B)<br>10 Male 10 Female | (B)<br>(Required) | Total<br>Existing |
| Water Closets - Female   | 1/20                     | 1                 | 1                 |
| Water Closets - Male   | 1/25                     | 1                 | 1                 |
| Urinals  | 33%                      | 0                 | 0                 |
| Lavatories – Female  | 1/50                     | 1                 | 1                 |
| Lavatories - Male  | 1/50                     | 1                 | 1                 |
| Drinking Fountains   | 1 per floor              | 1                 | 0                 |
| Service Sinks  | 1 per floor              | 1                 | 0                 |

# CODE COMPLIANCE: Existing Plumbing Fixtures (Continued)

| Assembly (A-3) Plumbing Fixtures: Lower Level                      |                            |                     |                   |
|--|----------------------------|---------------------|-------------------|
| Assembly (A-3) Design Load = 79 occupants                          |                            |                     |                   |
| 248 CMR – 10.10 Table 1: Minimum Facilities For Building Occupancy |                            |                     |                   |
| Fixtures   | (A-3)<br>40 Male 40 Female | (A-3)<br>(Required) | Total<br>Existing |
| Water Closets - Female   | 1/50                       | 1                   | 1                 |
| Water Closets - Male   | 1/100                      | 1                   | 1                 |
| Urinals  | 50%                        | 0                   | 0                 |
| Lavatories – Female  | 1 /200                     | 1                   | 1                 |
| Lavatories - Male  | 1/200                      | 1                   | 1                 |
| Drinking Fountains   | N/A                        | 1                   | 0                 |
| Service Sinks  | N/A                        | 1                   | 0                 |

Existing Code Compliance:

**No**

**Provide service sink and drinking fountain for Lower and Upper Levels.**

# CODE COMPLIANCE: Existing Accessibility

## 10. Existing Accessibility Requirements

3.3.2 If the work performed, including the exempted work, amounts to 30% or more of the full and fair cash value (see 521 CMR 5.38) of the building the entire building is required to comply with 521 CMR.

a. Where the cost of constructing an addition to a building amounts to 30% or more of the full and fair cash value of the existing building, both the addition and the existing building must be fully accessible.

Estimated cost of Additions & Renovations:

**\$1,660,400 Project Cost**

Value of Existing Building:  $\$227,500 \times 30\% = \$68,250$

$\$1,660,400 > \$68,250$

This requires the COA building to be upgraded to full MAAB Compliance.

521 CMR 28.00 – Elevators

In all multi-story buildings and facilities, each level including mezzanines, shall be served by a passenger elevator. If more than one elevator is provided, each passenger elevator shall comply with 521 CMR 28. Accessible elevators shall be on an accessible route and located within the space with which it is intended to serve. Elevators are not required under the following exceptions.

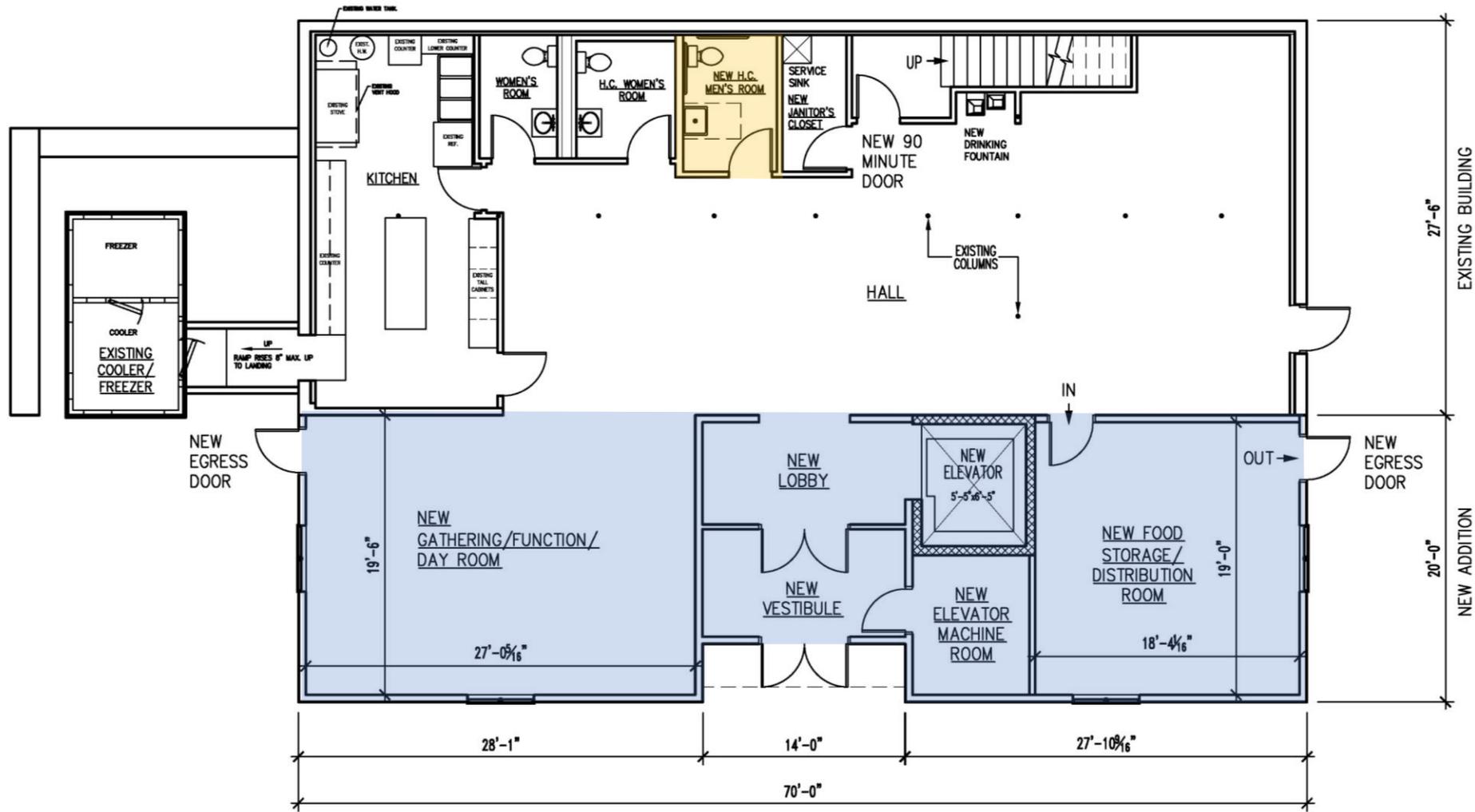
Existing Code Compliance:

**No**

**Provide a 2-stop elevator with a pit and a machine room.**

**Upgrades to existing ramps and stairs.**

# OPTION - 1: Scheme 1 - Renovated COA with 20' x 70' Addition



NEW ADDITION AREA: 1,343 S.F.

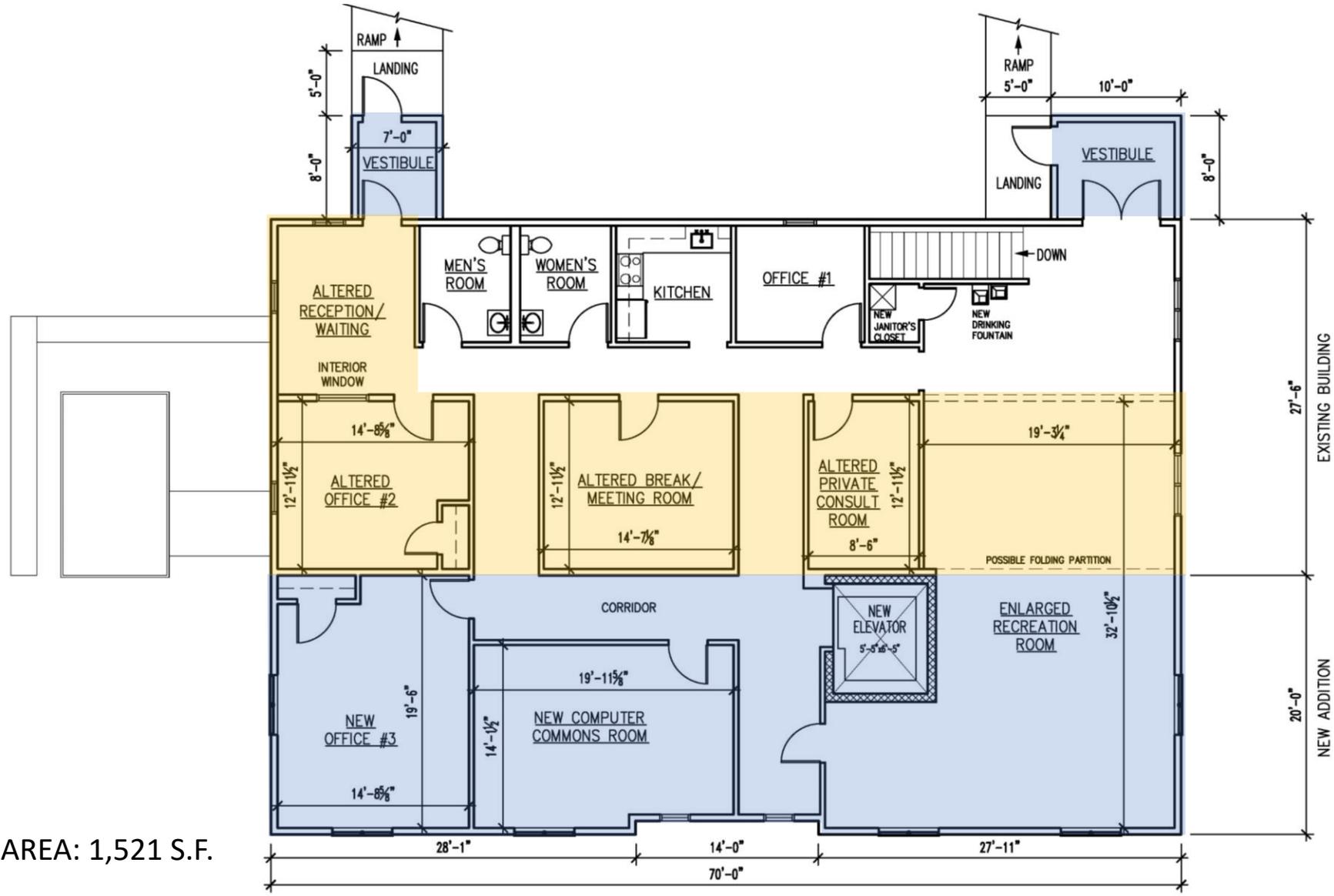
RENOVATED AREA: 74 S.F.

## SCHEME 1 - CONCEPTUAL LOWER LEVEL PLAN

SCALE: 1/8" = 1'-0"  
 AREA OF LOWER LEVEL EXISTING BUILDING: 2,196 S.F.  
 AREA OF LOWER LEVEL ADDITION: 1,222 S.F.  
 TOTAL: 3,418 S.F.



# OPTION - 1: Scheme 1 - Renovated COA with 20' x 70' Addition



NEW ADDITION AREA: 1,521 S.F.

RENOVATED AREA: 1,130 S.F.

**TOTAL WORK AREA: 4,068 S.F.**

## SCHEME 1 - CONCEPTUAL UPPER LEVEL PLAN

SCALE: 1/8" = 1'-0"  
 AREA OF UPPER LEVEL EXISTING BUILDING: 1,924 S.F.  
 AREA OF UPPER LEVEL ADDITION: 1,409 S.F.  
 TOTAL: 3,333 S.F.



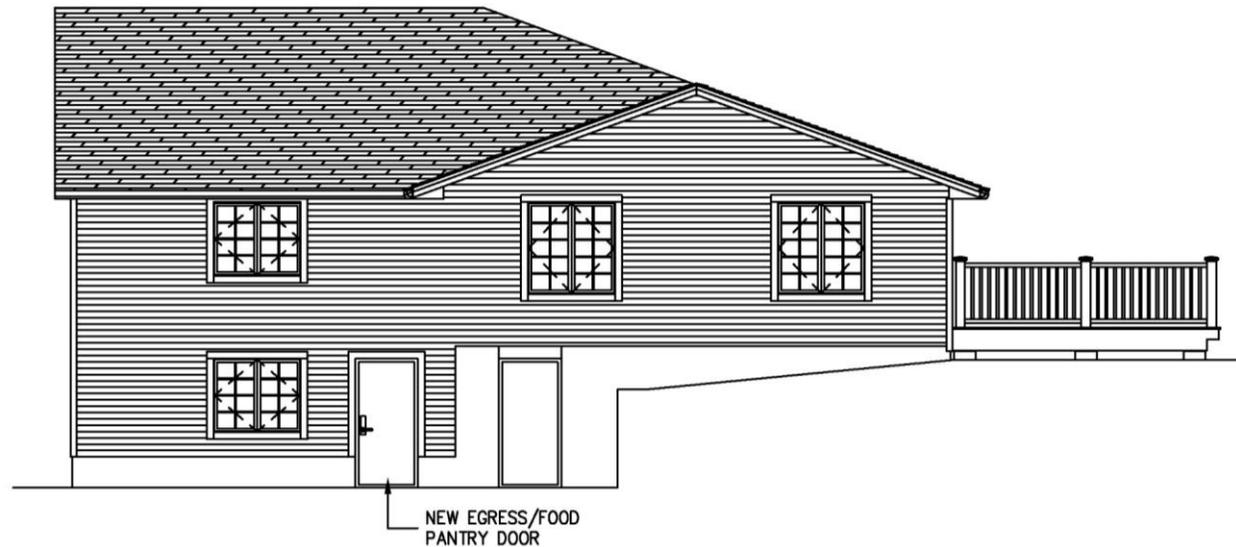
COMPASS GROUP ARCHITECTURE, LLC.  
 WWW.COMPASSGROUPARCH.COM

# OPTION - 1: Scheme 1 - Renovated COA with 20' x 70' Addition



CONCEPTUAL NORTH-EAST ELEVATION

SCALE: 1/8" = 1'-0"

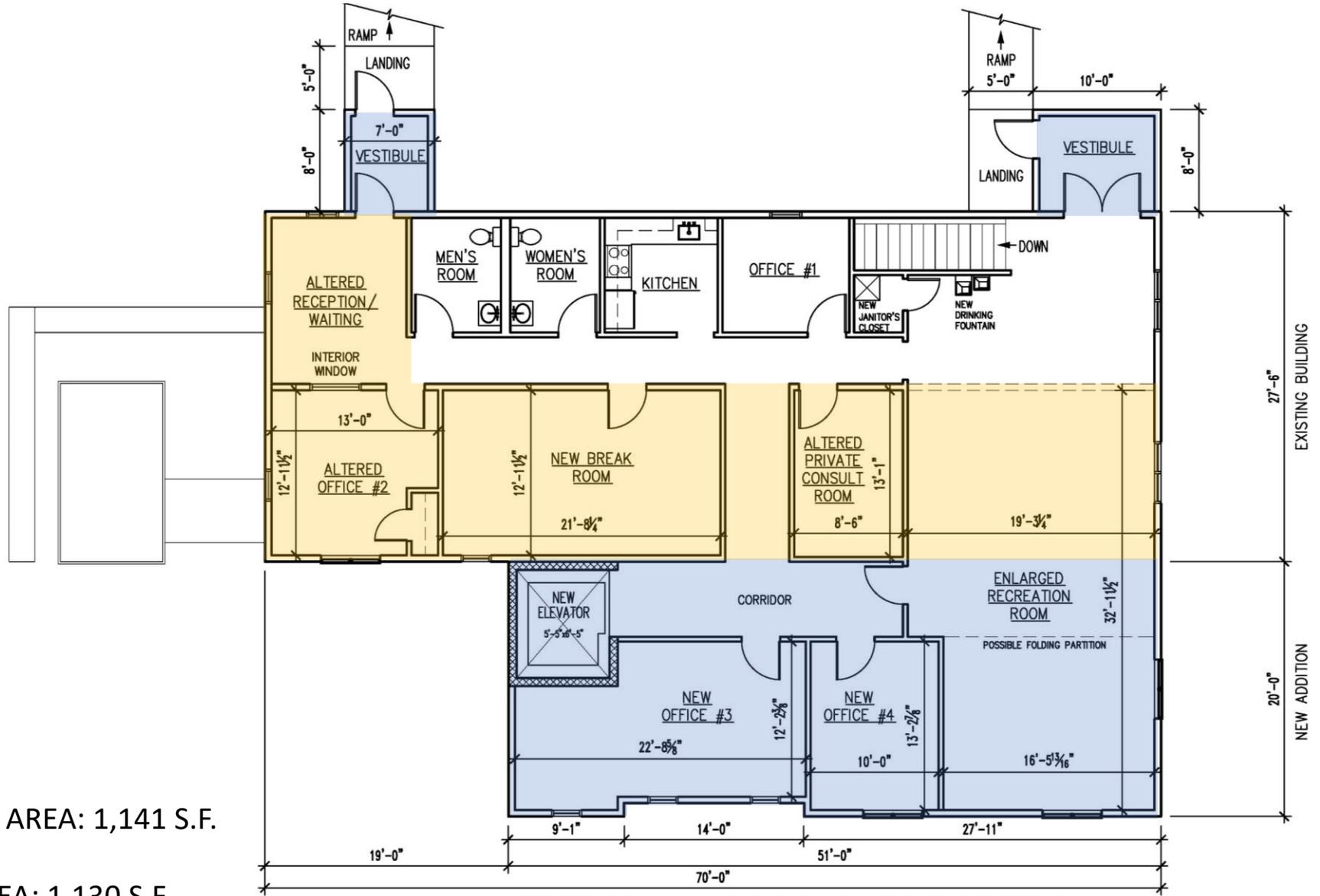


CONCEPTUAL NORTH-WEST ELEVATION

SCALE: 1/8" = 1'-0"



# OPTION - 1: Scheme 2 - Renovated COA with 20' x 51' Addition



 NEW ADDITION AREA: 1,141 S.F.

 RENOVATED AREA: 1,130 S.F.

TOTAL WORK AREA: **3,335 S.F.**

## SCHEME 2 - CONCEPTUAL UPPER LEVEL PLAN

SCALE: 1/8" = 1'-0"  
 AREA OF UPPER LEVEL EXISTING BUILDING: 1,924 S.F.  
 AREA OF UPPER LEVEL ADDITION: 1,057 S.F.  
 TOTAL: 2,981 S.F.

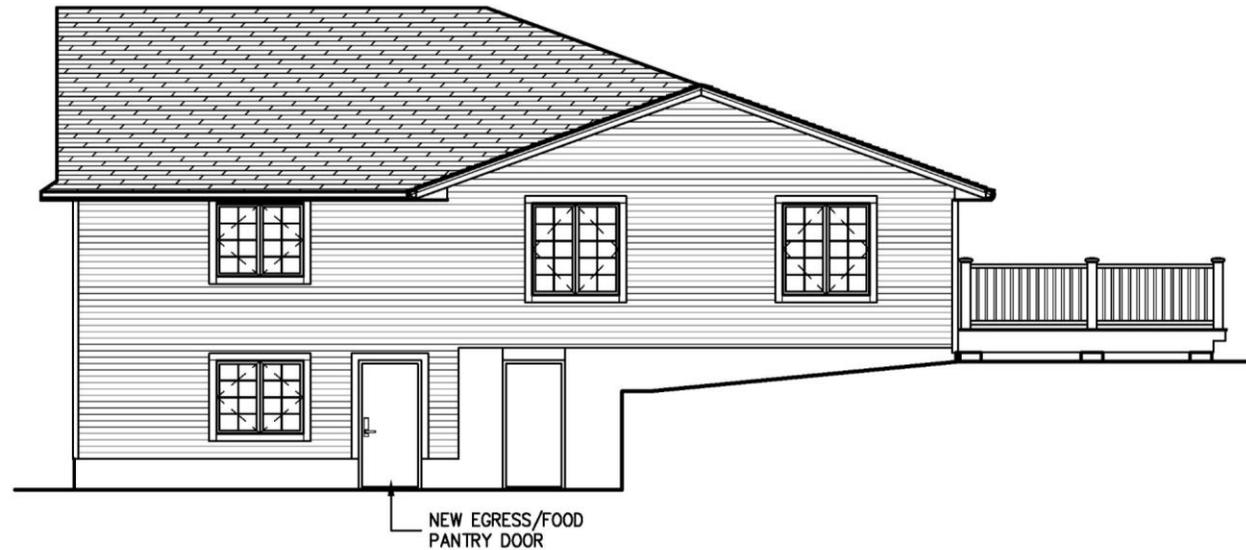


# OPTION - 1: Scheme 2 - Renovated COA with 20' x 51' Addition



**SCHEME 2 - CONCEPTUAL NORTH-EAST ELEVATION**

SCALE: 1/8" = 1'-0"



**SCHEME 2 - CONCEPTUAL NORTH-WEST ELEVATION**

SCALE: 1/8" = 1'-0"

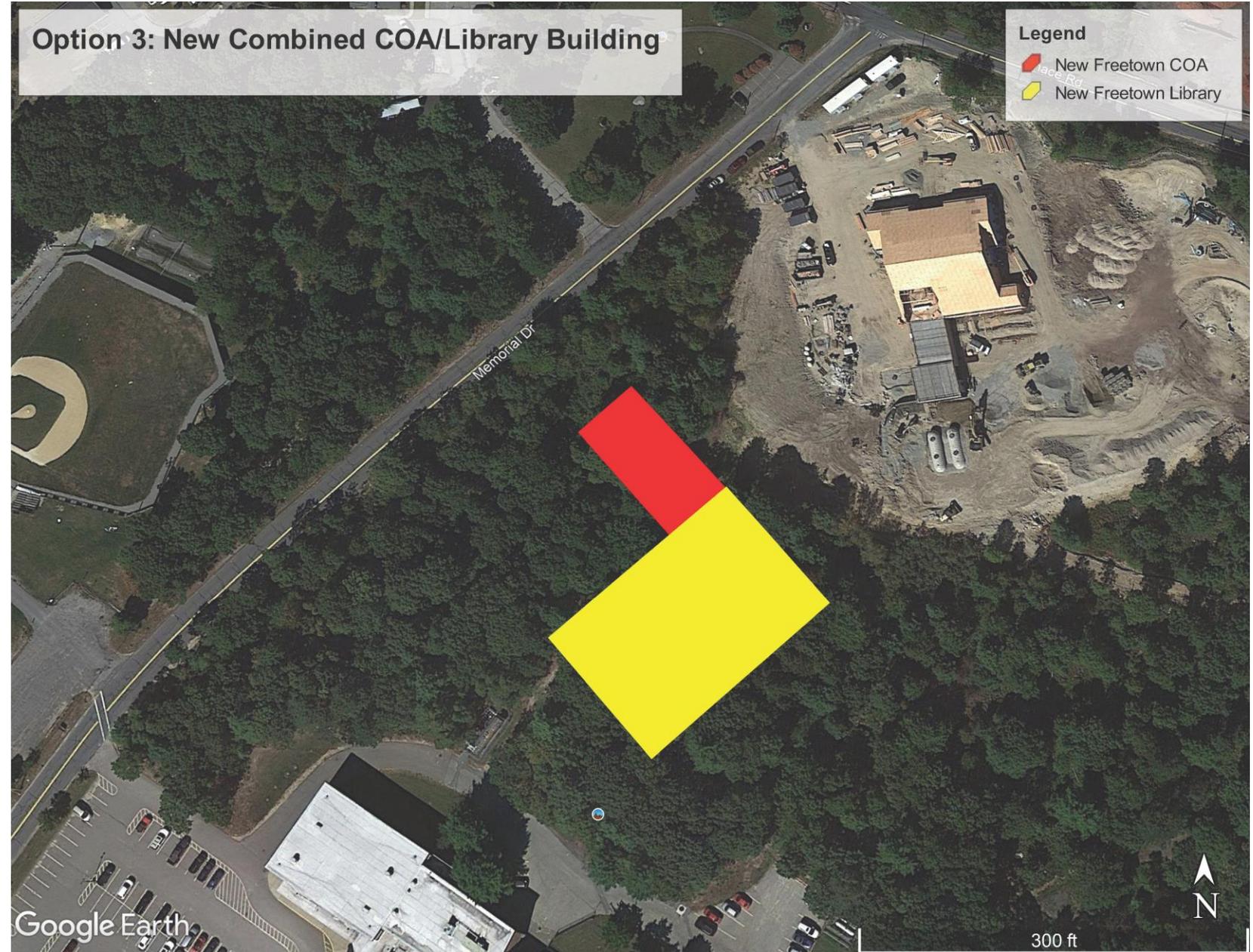
# Option 2: New COA Building

7,000 square feet x \$550 a square foot = \$3,850,000 Total Project Cost



# Option 3: New Combined COA/Library Building

7,000 + 17,000 square feet x \$500 a square foot = \$12,000,000 Total Project Cost



# SUMMARY

As per the requirements of the purchase Description for the Feasibility Study on the Council on Aging, dated 11/20/2020, Compass Group Architecture, LLC has analyzed three potential options:

1. The renovation of the existing Senior Center.

Scheme 1 New Addition Area: 2,864 S.F.  
Opinion of Cost: **\$1,921,450**

Scheme 2 New Addition Area: 2,129 S.F.  
Opinion of Cost: **\$1,660,400**

2. The construction of a new Senior Center.

Area: 7,000 S.F.  
Opinion of Cost: **\$3,850,000**

3. The construction of a new Senior Center/Library.

Area: 24,000 S.F.  
Opinion of Cost: **\$12,000,000**

| SCHEME 1                          |                |                    | SCHEME 2                          |                |                    |
|-----------------------------------|----------------|--------------------|-----------------------------------|----------------|--------------------|
| PRICE PER SQUARE FOOT             | SQUARE FOOTAGE | ESTIMATED PRICE    | PRICE PER SQUARE FOOT             | SQUARE FOOTAGE | ESTIMATED PRICE    |
| \$500 per S.F.<br>New Addition    | 2,864 S.F.     | \$1,432,000        | \$550 per S.F.<br>New Addition    | 2,129 S.F.     | \$1,170,950        |
| \$300 per S.F.<br>Renovated Areas | 1,204 S.F.     | \$361,200          | \$300 per S.F.<br>Renovated Areas | 1,204 S.F.     | \$361,200          |
| \$50 per S.F.<br>General Areas    | 2,565 S.F.     | \$128,250          | \$50 per S.F.<br>General Areas    | 2,565 S.F.     | \$128,250          |
| <b>Total Estimated Price</b>      |                | <b>\$1,921,450</b> |                                   |                | <b>\$1,660,400</b> |

**Compass Group Architecture, LLC recommends Option 1, Scheme 1 as the best value for the town of Freetown.**

# SUMMARY, continued

## Required Code Upgrades for the existing COA Building:

- The new work being done, and the entire existing building, needs to be brought into full compliance with 521 CMR, the Massachusetts Architectural Access Board Regulations.
- An additional handicap accessible toilet room will be required on the lower level. A new service sink and drinking fountain will be required on both levels.
- A new two-stop elevator will be required for both schemes.
- The upgraded building will not require fire sprinklers since it is less than 7,500 square feet in both schemes.
- A 2-hour fire separation is required between the lower (A-3 Assembly Use Group) and the upper level (B Business Use Group).
- New accessible entrance ramps will be required on both upper-level entries.
- Existing stairway requires upgrades.
- The HVAC systems will need to be upgraded for the entire building to meet air-change requirements.
- An upgraded fire alarm system is recommended for the entire building. An electrical service upgrade will be required to accommodate the HVAC and elevator upgrades.
- This analysis assumes that the existing sewage disposal system does not need to be upgraded.

# Minimum Expansion to the Existing COA Building\*

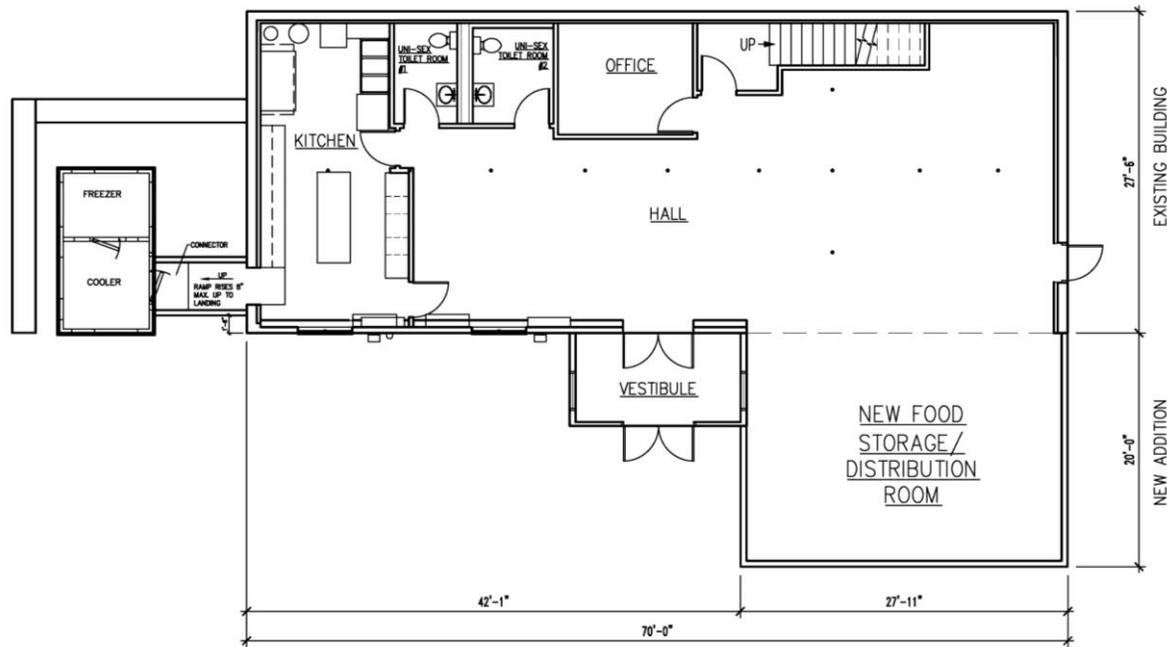
20' x 28' addition on the both levels for a total of **1,120 square feet**.

1,120 s.f. x \$600 per square foot = **\$672,000 Opinion of Cost**

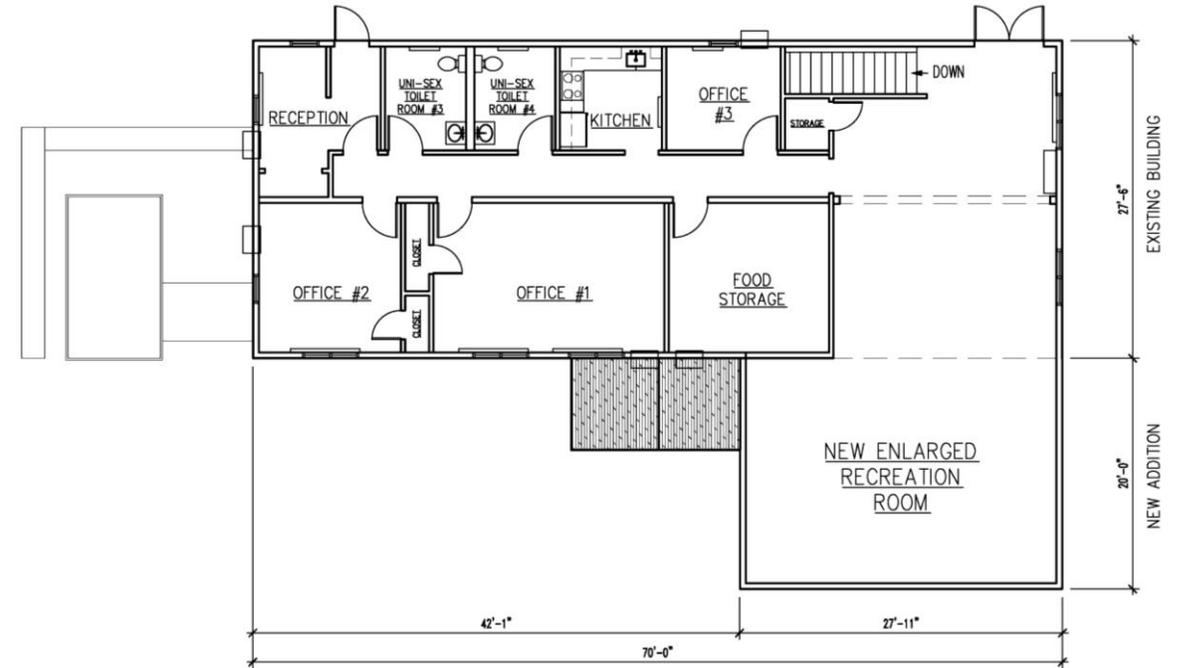
**\*Compass Group Architecture LLC does not recommend this option.**

**\*This option would require a variance from the Massachusetts Architectural Access Board (MAAB) pursuant to 521 CMR.**

**\*This scheme does not resolve any of the other existing issues or concerns, such as HVAC, Plumbing, etc.**



Minimum Expansion – Lower Level Floor Plan



Minimum Expansion – Upper Level Floor Plan