# Cloverleaf Truro Rental Housing List of Plans

| Trade | Set/Sheet Date | Sheet Number | Sheet Title | Notes |
|---|---|---|---|---|
| **Civil Engineering** | | | | |
| | | | | |
| Civil Engineering | September 16, 2020 | Sheet 1 of 6 | Engineering Site Plan | |
| Civil Engineering | September 16, 2020 | Sheet 2 of 6 | Engineering Sewage-Drainage Site Plan | |
| Civil Engineering | September 16, 2020 | Sheet 3 of 6 | Engineering Sewage Details | |
| Civil Engineering | September 16, 2020 | Sheet 4 of 6 | Engineering Site Details (Drainage) | |
| Civil Engineering | September 16, 2020 | Sheet 5 of 6 | Engineering Site Details (Drainage) | |
| Civil Engineering | September 16, 2020 | Sheet 6 of 6 | Engineering Erosion Control Plan | |
| Civil Engineering | September 3, 2020 | Two(2) Sheets | Swept-Path Analysis | |
| Civil Engineering | September 16, 2020 | One(1) Sheet | Water Shed Areas Plan | |
| | | | | |
| **Architectural Plans and Elevations: Buildings 1-3, 2-4, and 6-8** | | | | |
| | | | | |
| Architectural | September 4, 2020 | Cover | | |
| Architectural | September 4, 2020 | A1.1 | Unit 1, Unit 4, and Unit 8 Plans | |
| Architectural | September 4, 2020 | A1.2 | Third Level and Roof Plans | |
| Architectural | September 4, 2020 | A2.1 | Elevations | |
| | | | | |
| **Architectural Plans and Elevations: Building 5-7** | | | | |
| | | | | |
| Architectural | September 4, 2020 | Cover | | |
| Architectural | September 4, 2020 | A1.1 | Unit 5 and Unit 7 Floor Plans | |
| Architectural | September 4, 2020 | A1.2 | Foundation and Roof Plans | |
| Architectural | September 4, 2020 | A2.1 | Elevations | |
| | | | | |
| **Architectural Plans and Elevations: Buildings 9-11, 10-12, 17-19, and 18-20** | | | | |
| | | | | |
| Architectural | September 4, 2020 | Cover | | |
| Architectural | September 4, 2020 | A1.0 | Floor Plans | |
| Architectural | September 4, 2020 | A2.1 | Elevations | |
| | | | | |
| **Architectural Plans and Elevations: Buildings 13-15 and 14-16** | | | | |
| | | | | |
| Architectural | September 4, 2020 | Cover | | |
| Architectural | September 4, 2020 | A1.0 | Floor Plans | |
| Architectural | September 4, 2020 | A2.1 | Elevations | |
| | | | | |
| **Architectural Plans and Elevations: Building 21** | | | | |
| | | | | |
| Architectural | September 17, 2020 | Cover | | |
| Architectural | September 17, 2020 | A1.0 | Basement Floor Plan | |
| Architectural | September 17, 2020 | A1.1 | First Floor Plan | |
| Architectural | September 17, 2020 | A1.2 | Second Floor Plan | |
| Architectural | September 17, 2020 | A1.3 | Roof Plan | |
| Architectural | September 17, 2020 | A2.1 | Front and Back Elevations | |
| Architectural | September 17, 2020 | A2.2 | Left and Right Elevations | |
| | September 25, 2020 | 9.25.20 | Building Section Diagram | |
| | | | | |
| **Architectural Plans and Elevations: Buildings 22-24 and 23-25** | | | | |
| | | | | |
| Architectural | September 4, 2020 | Cover | | |
| Architectural | September 4, 2020 | A1.0 | Basement Floor Plan | |
| Architectural | September 4, 2020 | A1.1 | First Floor Plan | |
| Architectural | September 4, 2020 | A1.2 | Second Floor and Roof Plans | |
| Architectural | September 4, 2020 | A2.1 | Front and Back Elevations | |
| Architectural | September 4, 2020 | A2.2 | Side Elevations | |
| | | | | |
| **Miscellaneous Submissions** | | | | |
| | | | | |
| | October 12, 2020 | | Illustrated Site Plan | |
| | October 5, 2020 | | Landscape Planting, Fencing, Trash/Bike Storage, Exterior Lighting Plan | |
| | June 19, 2020 | P1.1 | Fence/Storage Images | |
| | October 5, 2020 | P1.2 | Exterior Palette/Lighting | |
| | June 19, 2020 | P1.3 | Interior Palette | |
| | October 5, 2020 | CR.1 | Control Room Schematic | |
| | February 20, 2020 | A3 | Building Height Calculations - 1-3, 2-4, 6-8 | |
| | February 20, 2020 | A3 | Building Height Calculations - 5-7 | |
| | August 31, 2020 | A3 | Building Height Calculations - 9-11, 10-12, 17-19, and 18-20 | Revised |
| | August 31, 2020 | A3 | Building Height Calculations - 13-15 and 14-16 | Revised |
| | September 24, 2020 | A3 | Building Height Calculations - 21 | Revised |
| | February 20, 2020 | A3 | Building Height Calculations - 22-24 and 23-25 | |
| | | | | |


ILLUSTRATED SITE PLAN

CLOVERLEAF TRURO RENTAL HOUSING

12 October 2020

0 30 60 90

# CLOVERLEAF TRURO RENTAL HOUSING
# BUILDINGS 1-3, 2-4, AND 6-8 (Buildings may be mirrored)

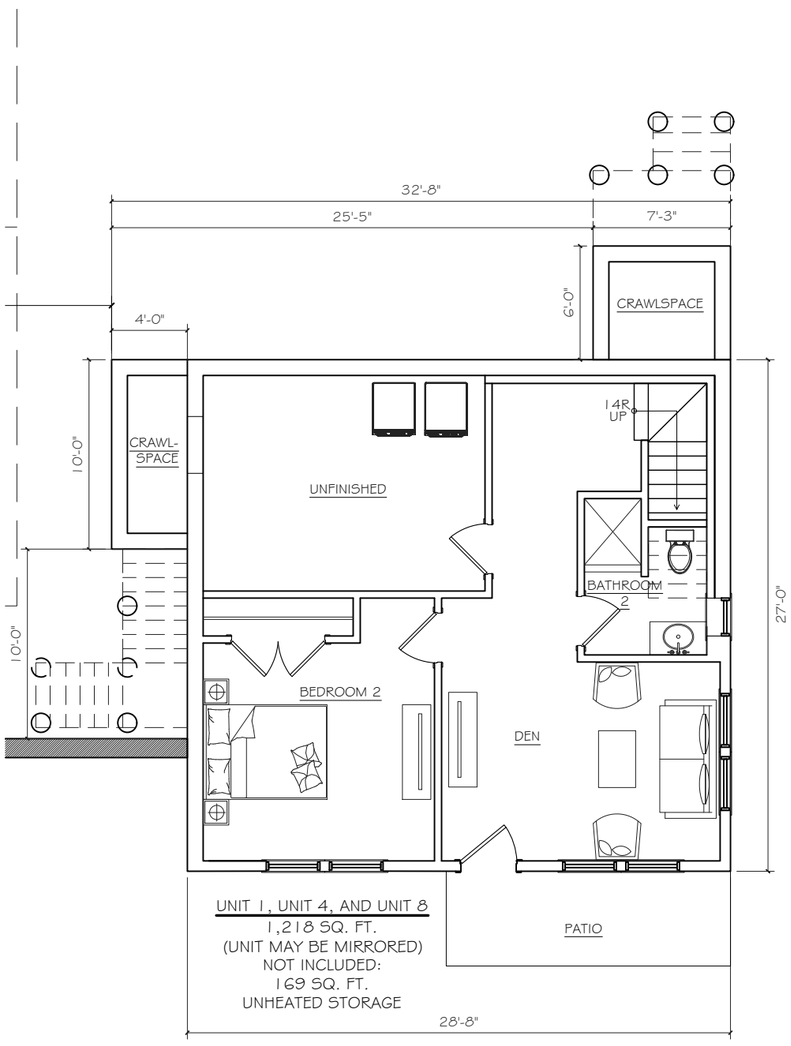
Truro, Massachusetts

**Friday, September 4, 2020**

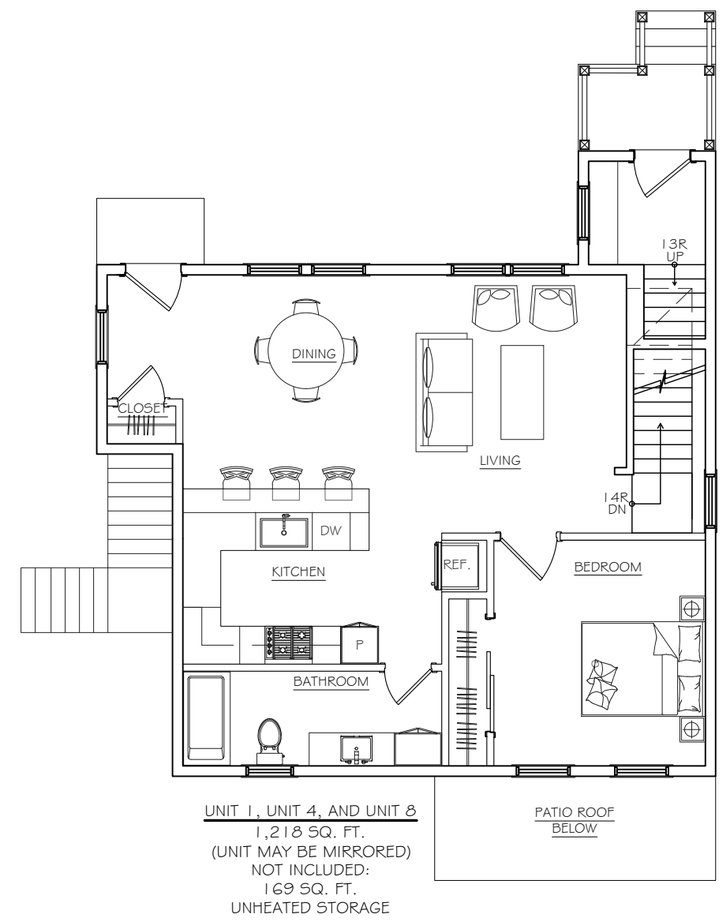

**Spring Hill Design**

INTERIORS ARCHITECTURE SPACE PLANNING

158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622




1 FIRST/GARDEN LEVEL PLAN UNIT 1, UNIT 4, AND UNIT 8
SCALE: 1/8" = 1'-0"




2 SECOND/MAIN ENTRY LEVEL PLAN UNIT 1, UNIT 4, AND UNIT 8
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

# UNIT 1, UNIT 4, AND UNIT 8 PLANS

CLOVERLEAF BUILDINGS 1-3, 2-4, AND 6-8
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
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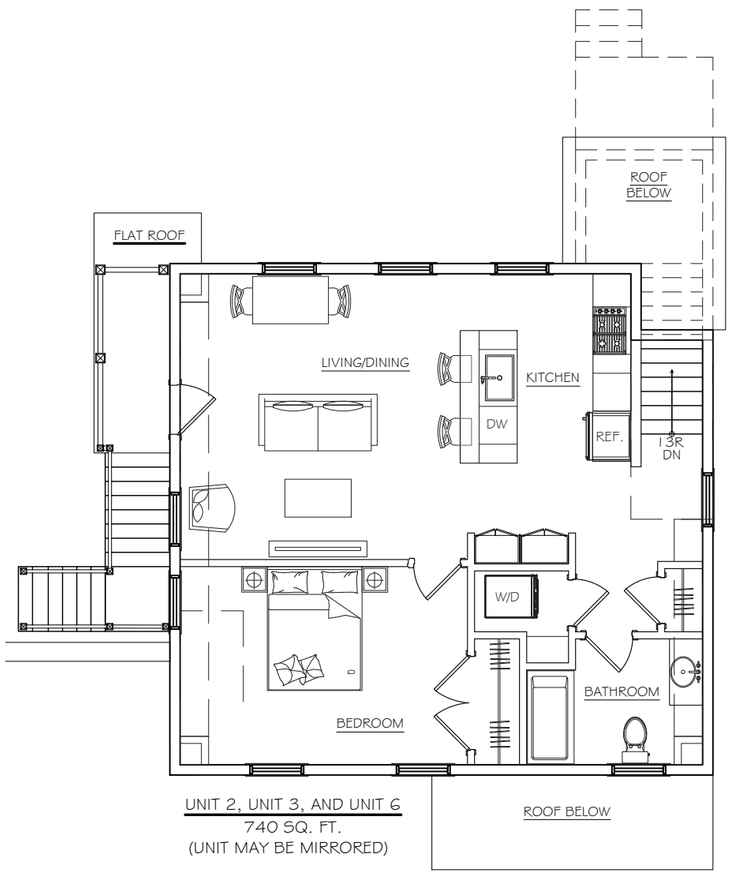
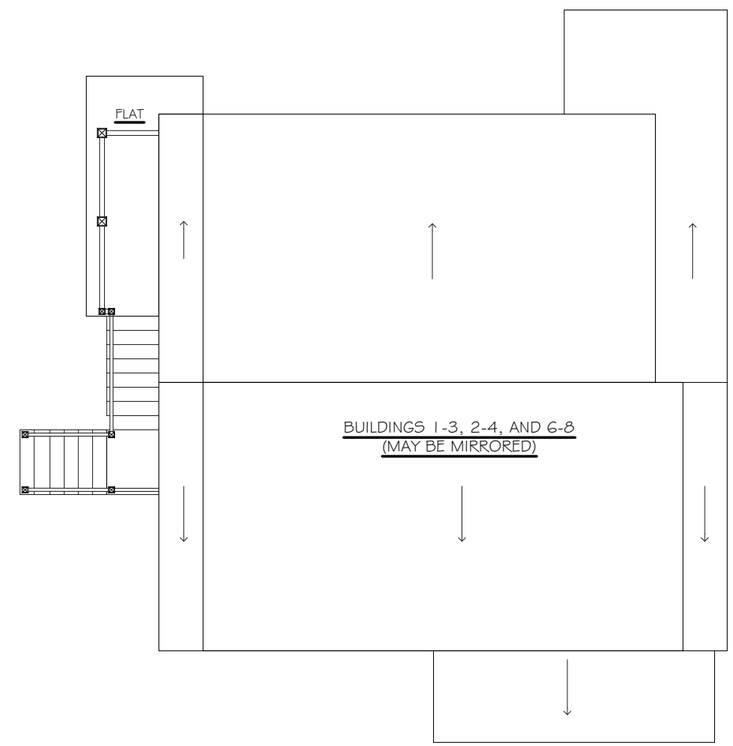
1/8" = 1'-0"

A1.1




1 THIRD LEVEL PLAN UNIT 2, UNIT 3, AND UNIT 6
SCALE: 1/8" = 1'-0"




2 BUILDINGS 1-3, 2-4, AND 6-8 ROOF PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

# THIRD LEVEL AND ROOF PLANS

CLOVERLEAF BUILDINGS 1-3, 2-4, AND 6-8
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
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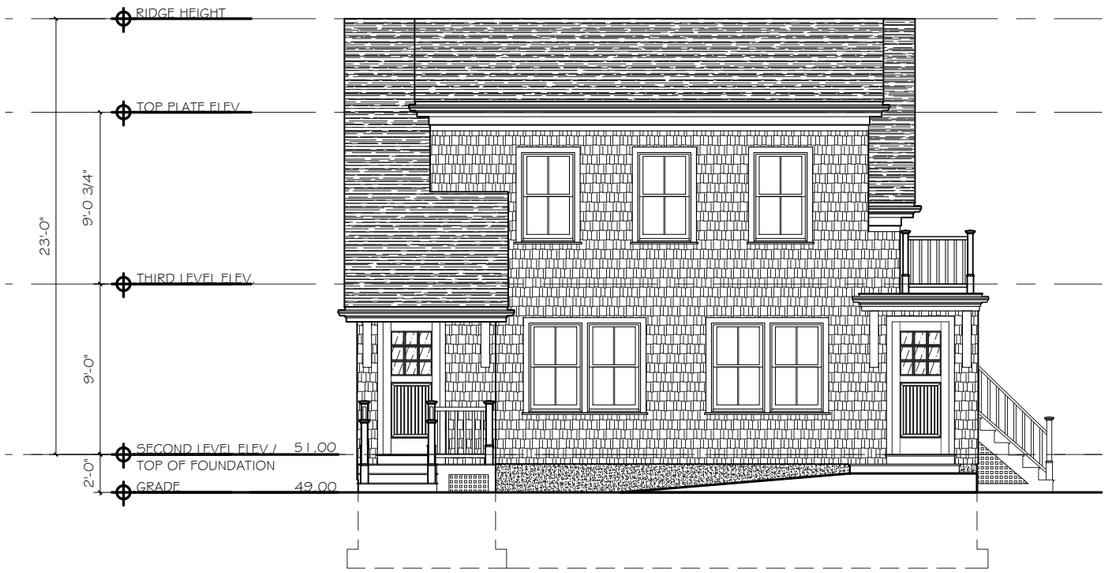
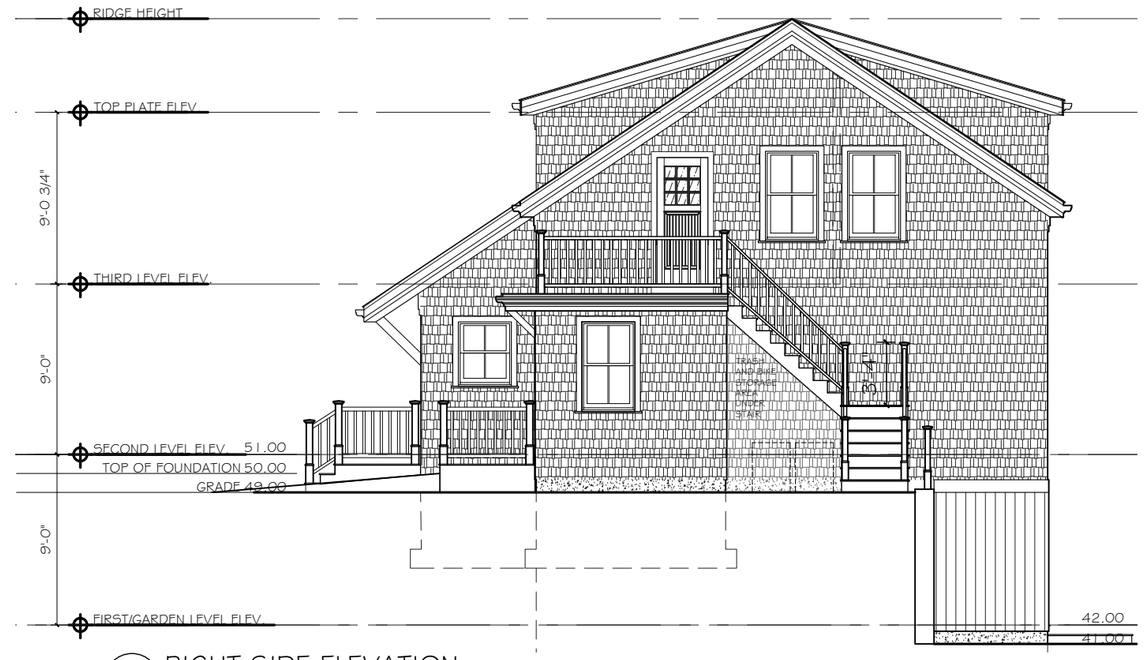
1/8" = 1'-0"

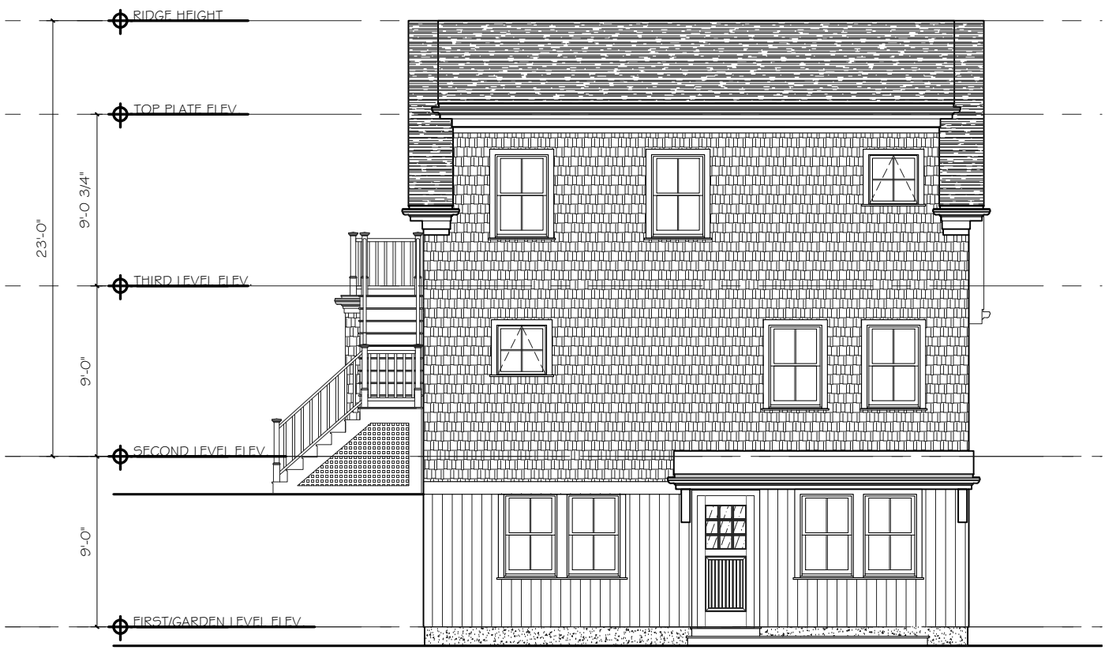
A1.2



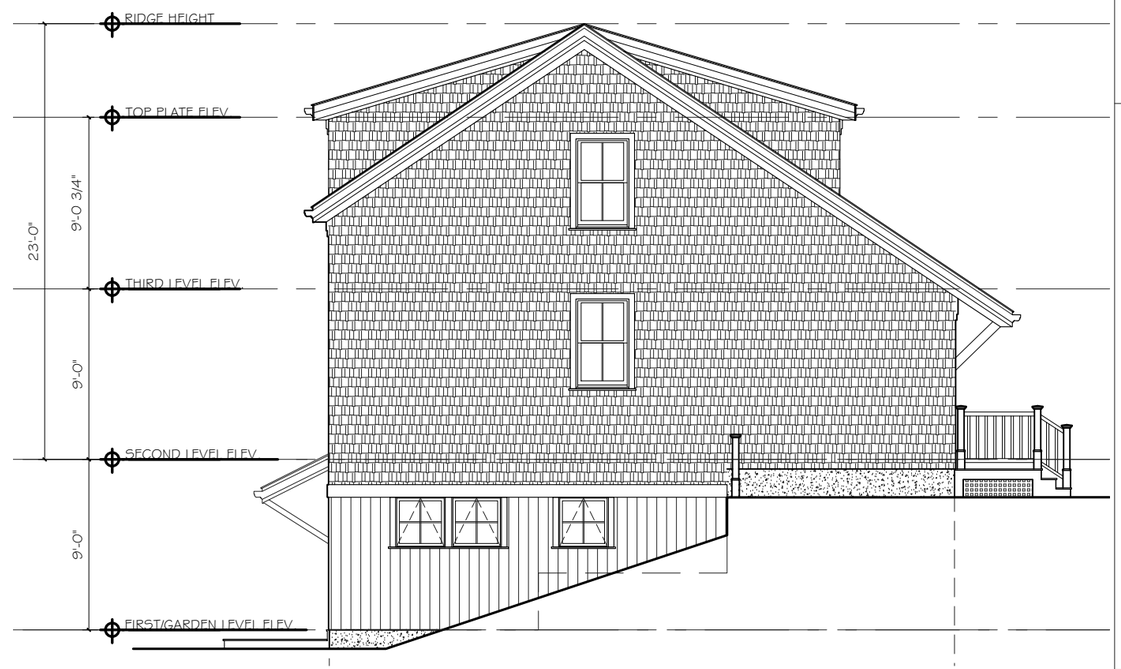

1 FRONT ELEVATION
SCALE: 1/8" = 1'-0"




2 RIGHT SIDE ELEVATION
SCALE: 1/8" = 1'-0"




3 BACK ELEVATION
SCALE: 1/8" = 1'-0"




4 LEFT SIDE ELEVATION
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

# FRONT ELEVATION

CLOVERLEAF BUILDINGS 1-3, 2-4, AND 6-8
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
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1/4" = 1'-0"

A2.1

# CLOVERLEAF TRURO RENTAL HOUSING
# BUILDING 5-7

Truro, Massachusetts

**Friday, September 4, 2020**


**Spring Hill Design**

INTERIORS ARCHITECTURE SPACE PLANNING

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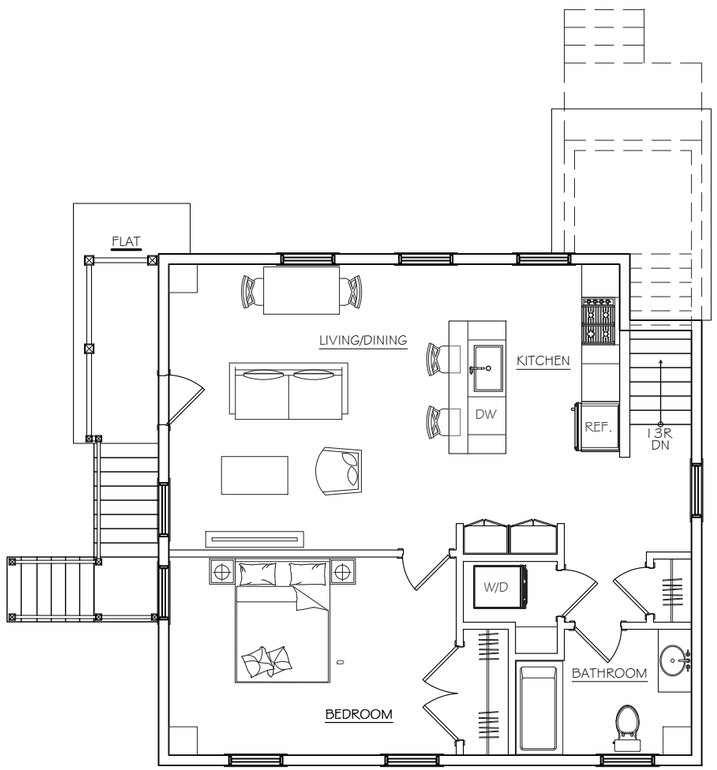
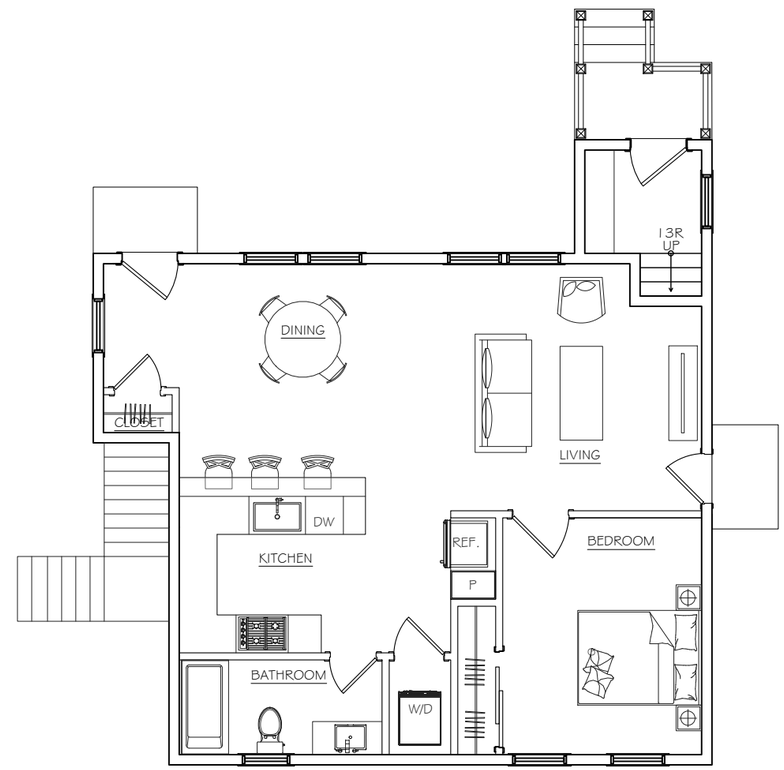



UNIT 5
752 SQ. FT.

1 UNIT 5 FLOOR PLAN
SCALE: 1/8" = 1'-0"




UNIT 7
742 SQ. FT.

2 UNIT 7 FLOOR PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

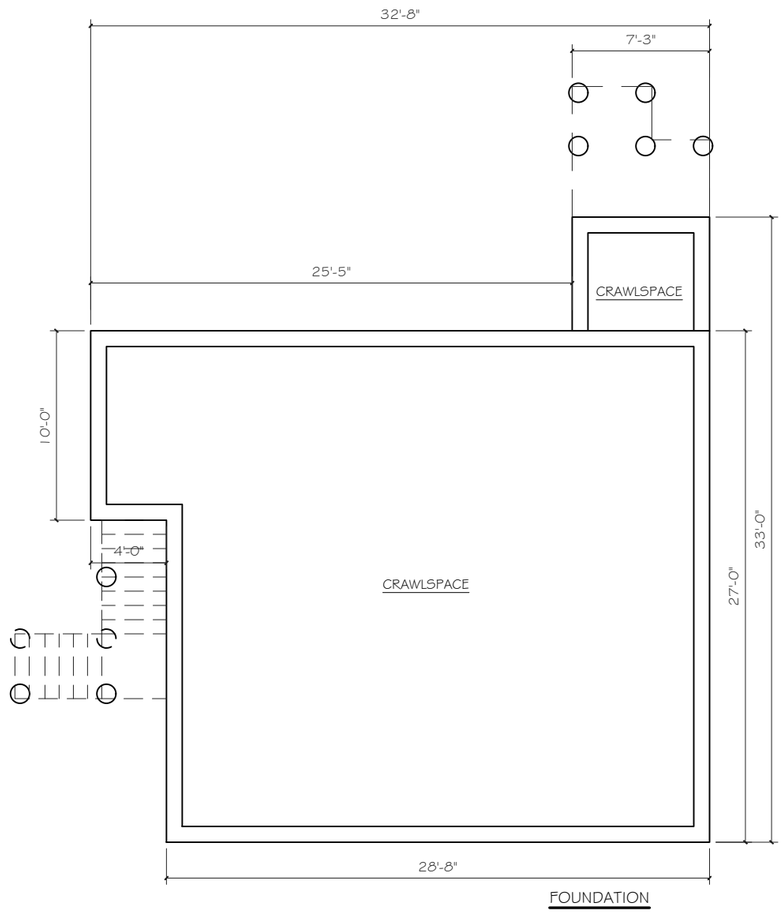
# UNITS 5 AND UNIT 7 FLOOR PLANS

CLOVERLEAF BUILDING 5-7
CLOVERLEAF TRURO RENTAL HOUSING

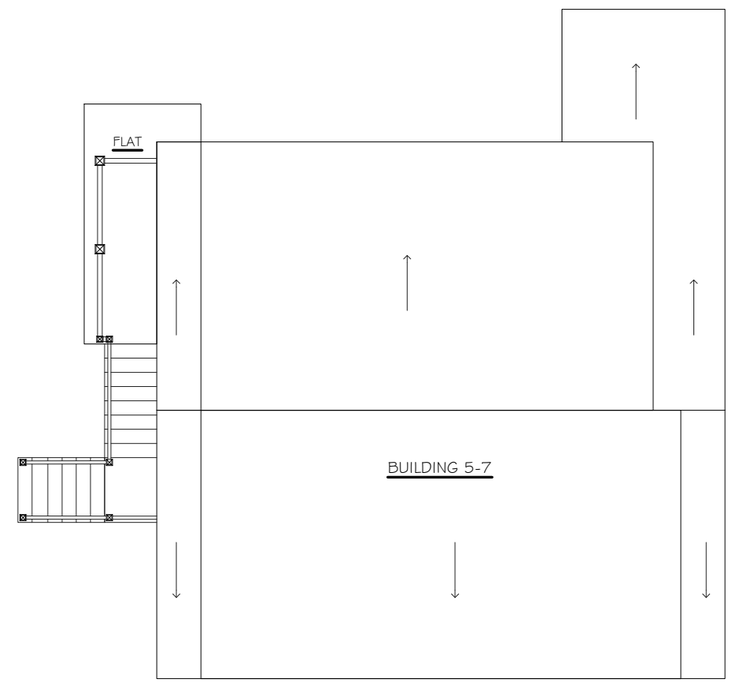
SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

1/8" = 1'-0"

A1.1




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




2 BUILDING 5-7 ROOF PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

# FOUNDATION AND ROOF PLANS

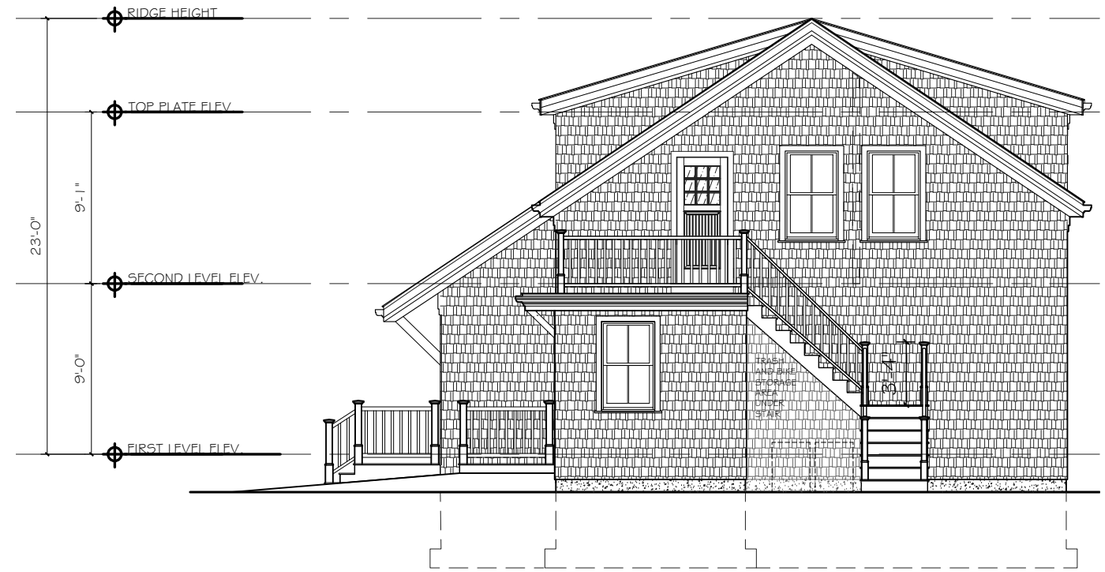
CLOVERLEAF BUILDING 5-7
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 – 617.6702.4622

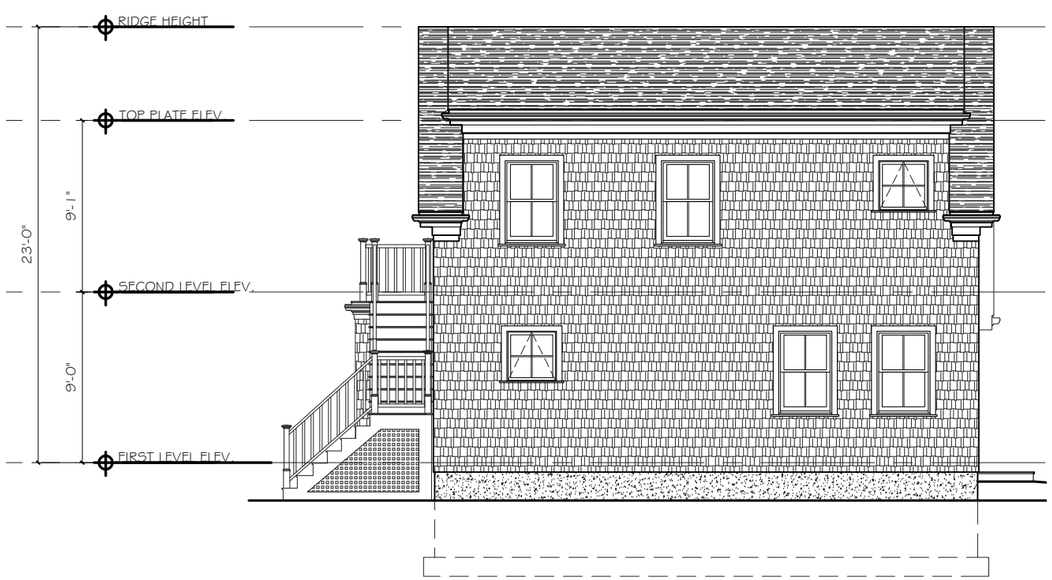
1/8" = 1'-0"

A1.2

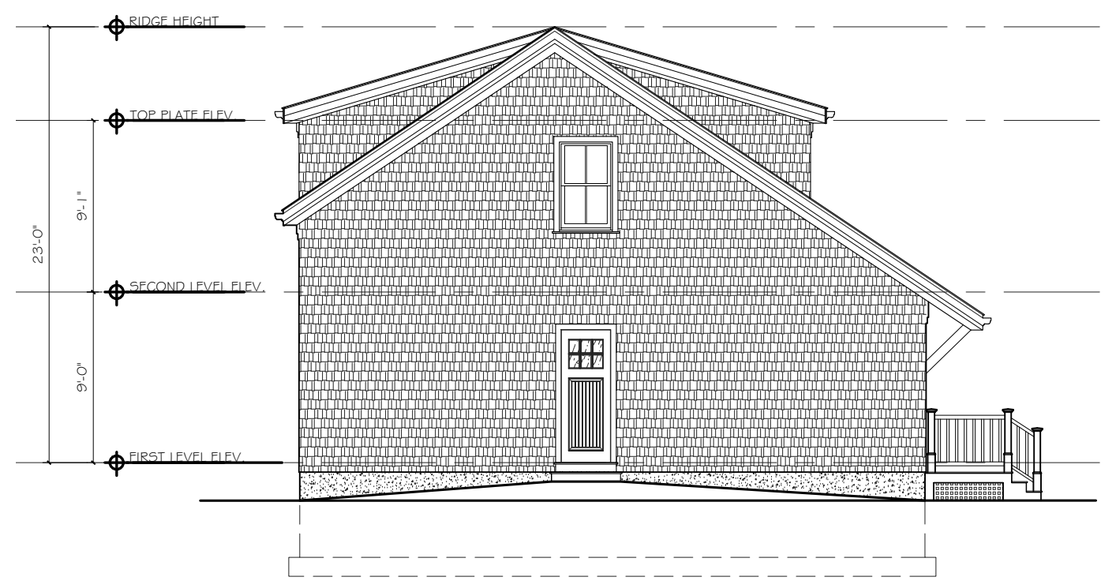

1 FRONT ELEVATION
SCALE: 1/8" = 1'-0"




2 RIGHT SIDE ELEVATION
SCALE: 1/8" = 1'-0"




3 BACK ELEVATION
SCALE: 1/8" = 1'-0"




4 LEFT SIDE ELEVATION
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

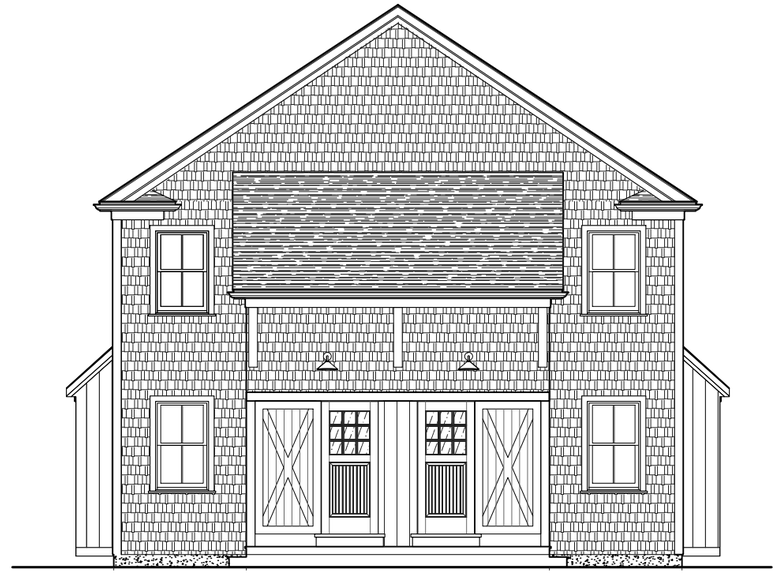
# FRONT ELEVATION

CLOVERLEAF BUILDING 5-7
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

1/8" = 1'-0"

A2.1



# CLOVERLEAF TRURO RENTAL HOUSING
## BUILDINGS 9-11, 10-12, 17-19, AND 18-20

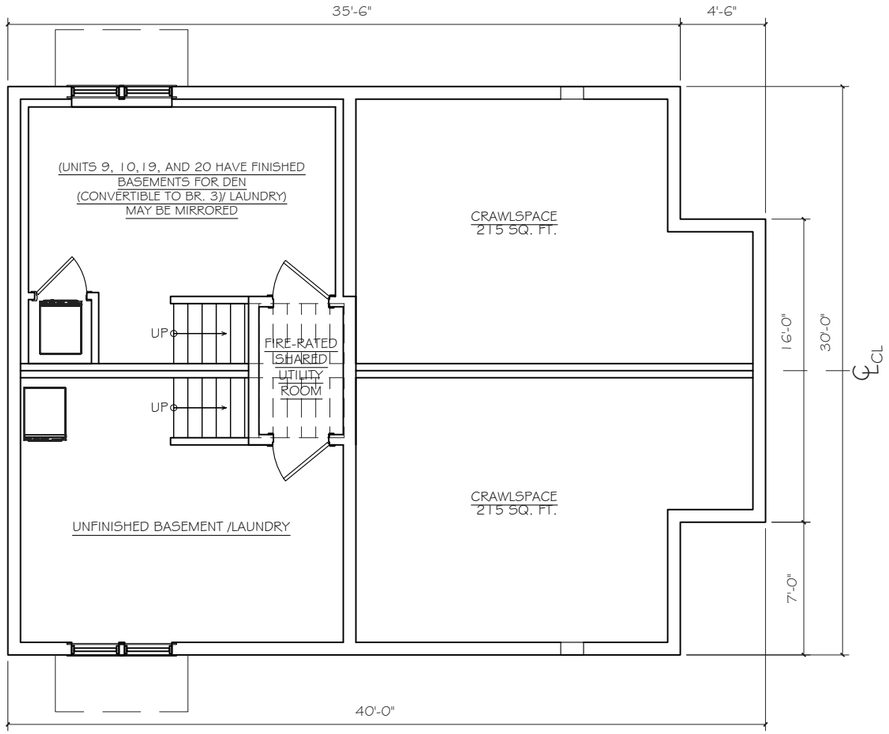
Truro, Massachusetts

**Friday, September 4, 2020**

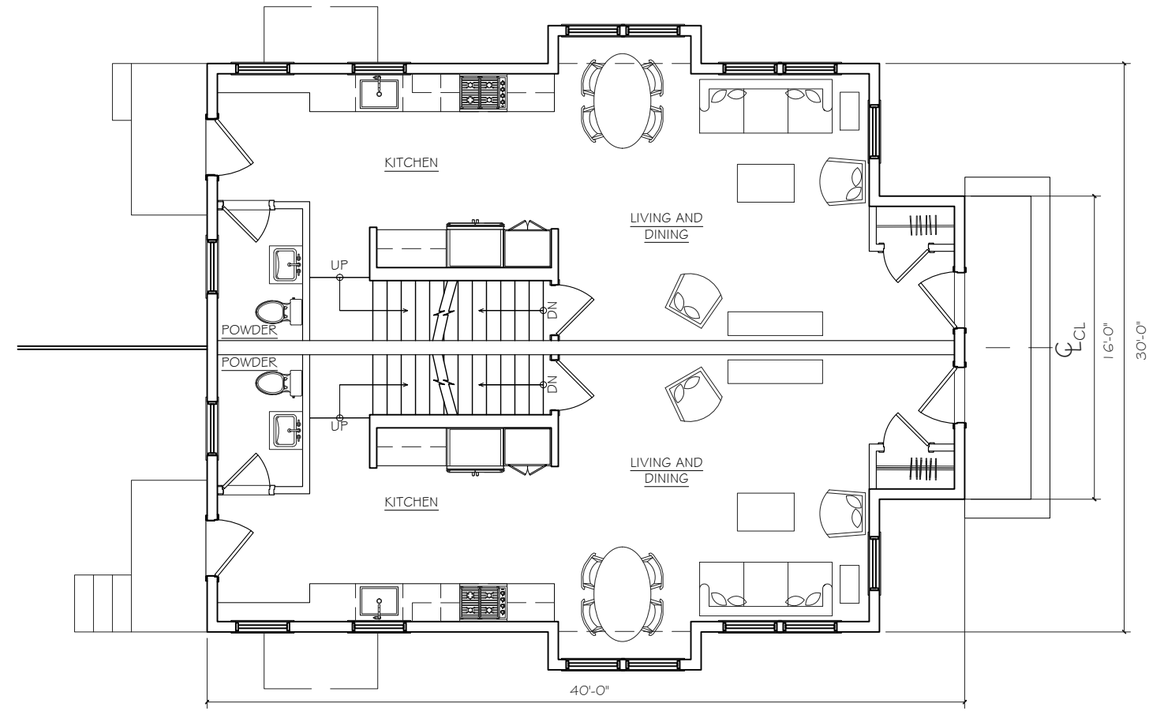

Spring Hill Design

INTERIORS ARCHITECTURE SPACE PLANNING

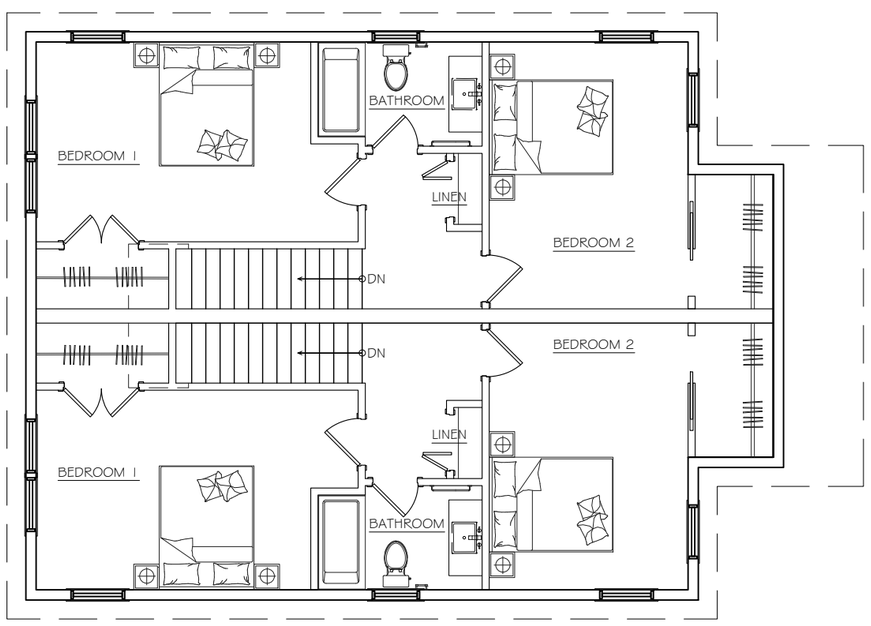
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622



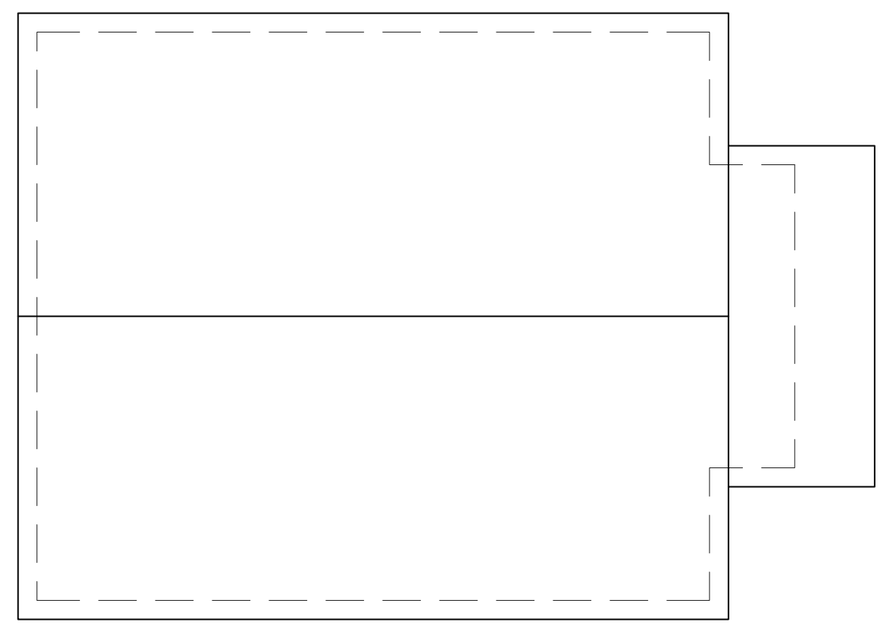

1 BASEMENT PLAN
SCALE: 1/8" = 1'-0"




2 FIRST LEVEL PLAN
SCALE: 1/8" = 1'-0"




3 SECOND LEVEL PLAN
SCALE: 1/8" = 1'-0"



2 ROOF PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

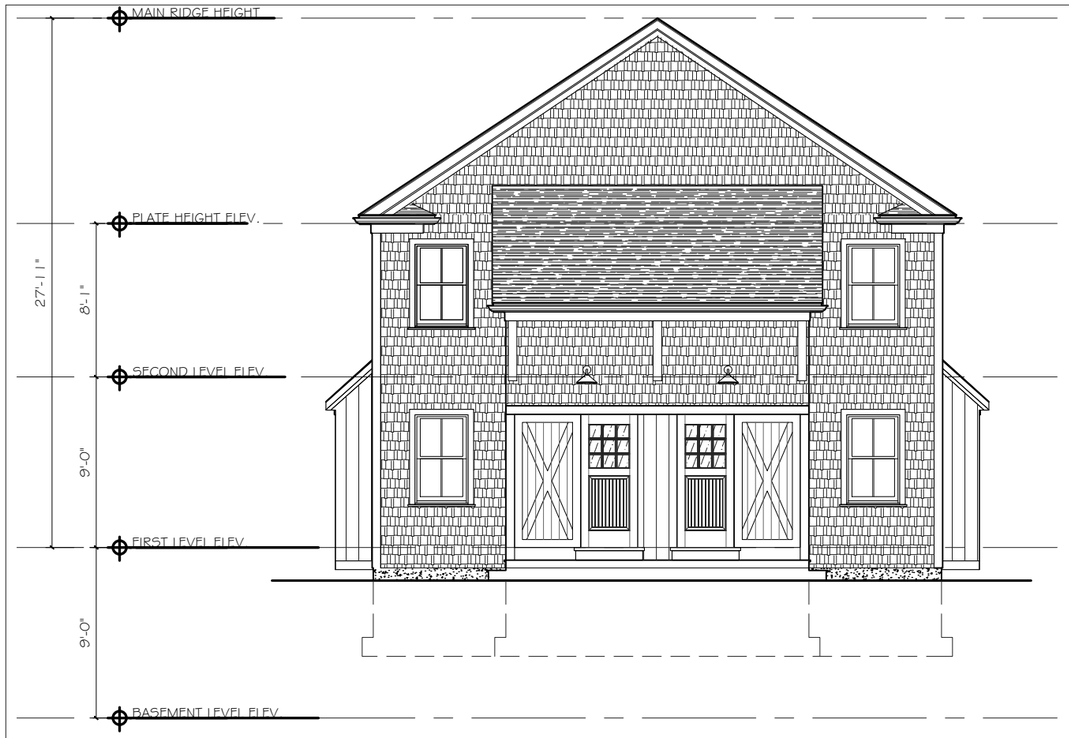
# FLOOR PLANS

CLOVERLEAF BUILDINGS 9-11, 10-12, 17-19, AND 18-20
CLOVERLEAF TRURO RENTAL HOUSING


SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

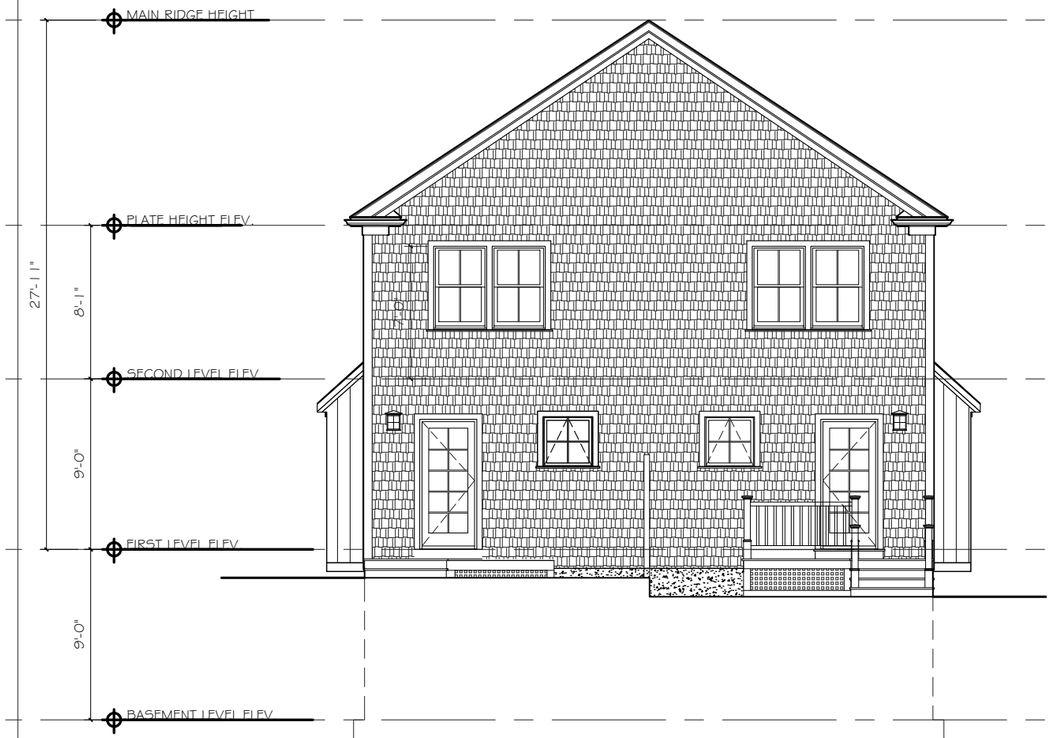

1/8" = 1'-0"

A1.0

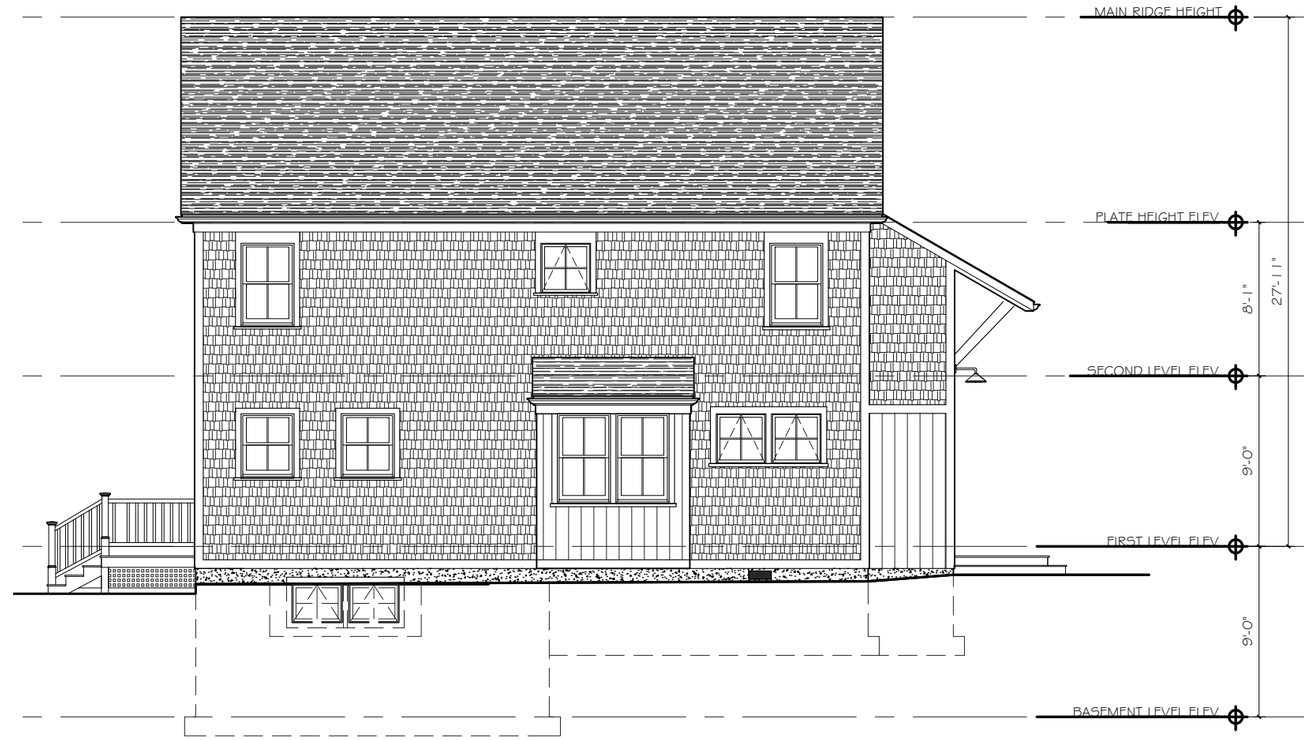



1 FRONT ELEVATION
SCALE: 1/8" = 1'-0"


2 SIDE ELEVATION 1 (SIDE MAY BE MIRRORED DEPENDING ON THE BUILDING)
SCALE: 1/8" = 1'-0"




3 BACK ELEVATION
SCALE: 1/8" = 1'-0"




4 SIDE ELEVATION 2 (SIDE MAY BE MIRRORED DEPENDING ON THE BUILDING)
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

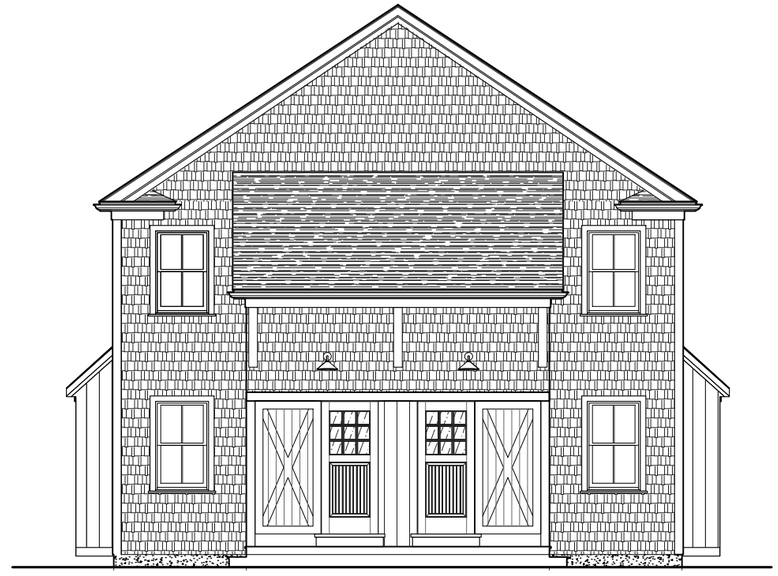
# ELEVATIONS

CLOVERLEAF BUILDINGS 9-11, 10-12, 17-19, AND 18-20
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

1/8" = 1'-0"

A2.1



# CLOVERLEAF TRURO RENTAL HOUSING BUILDINGS 13-15 AND 14-16

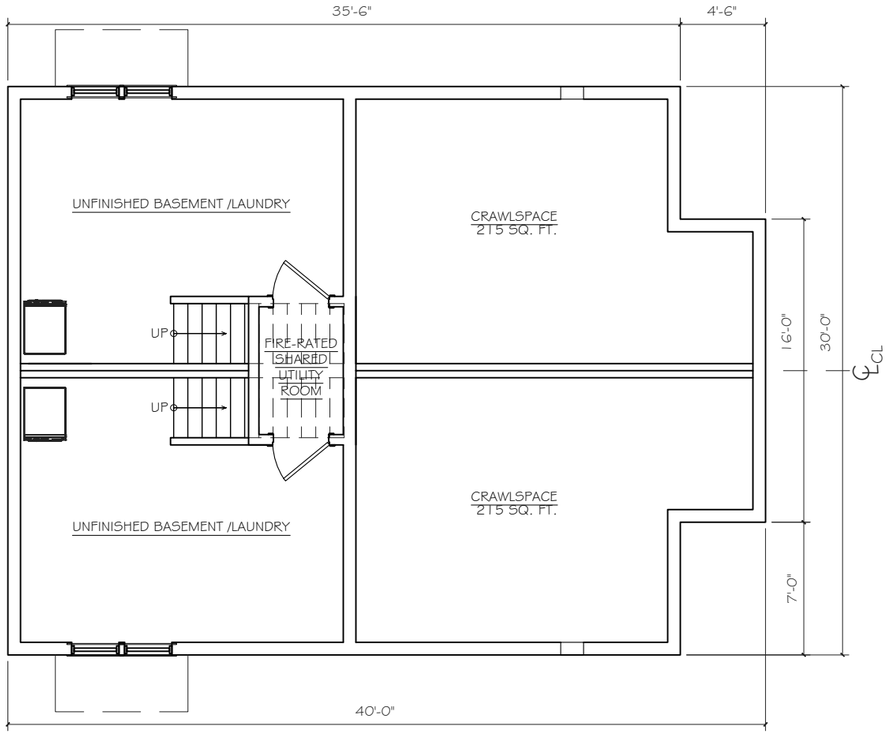
Truro, Massachusetts

**Friday, September 4, 2020**

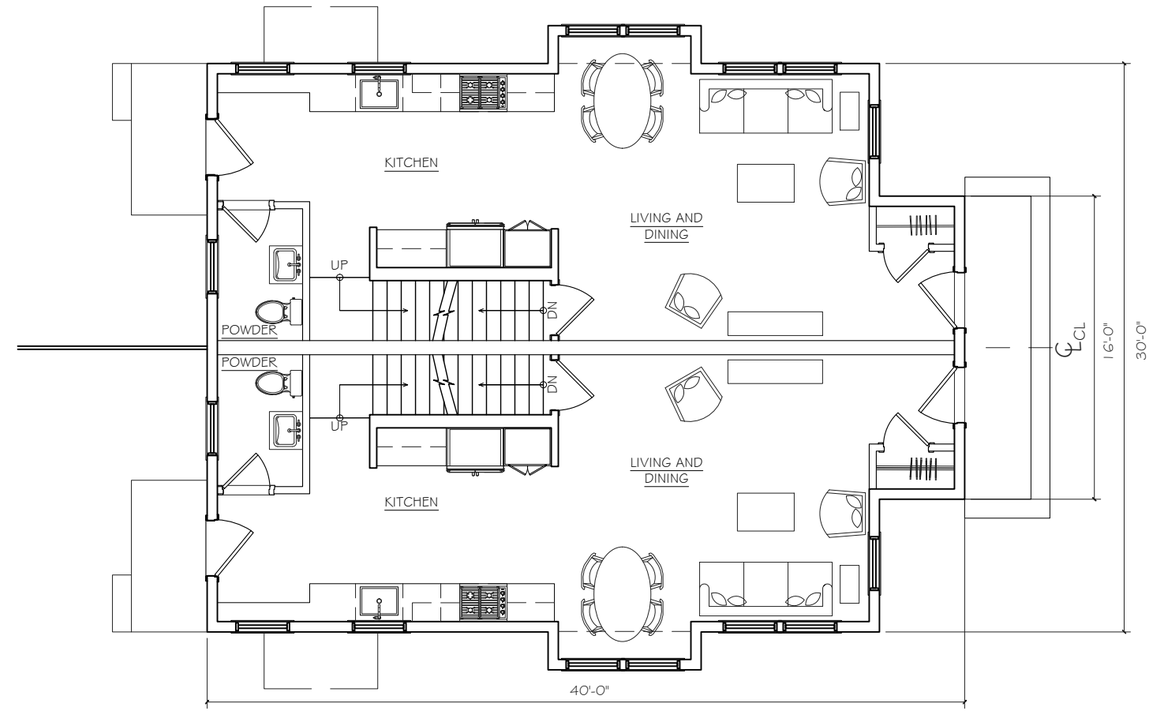

Spring Hill Design

INTERIORS ARCHITECTURE SPACE PLANNING

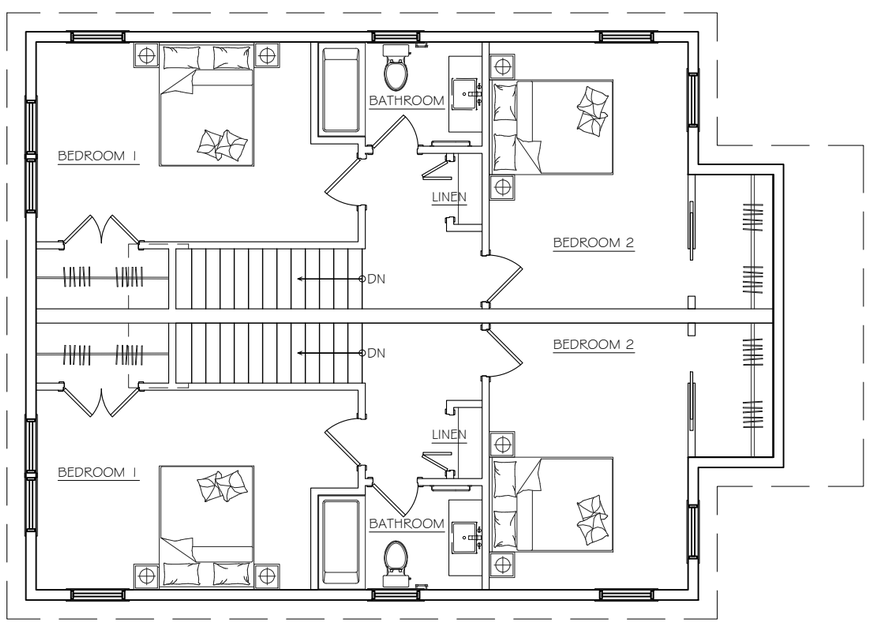
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622



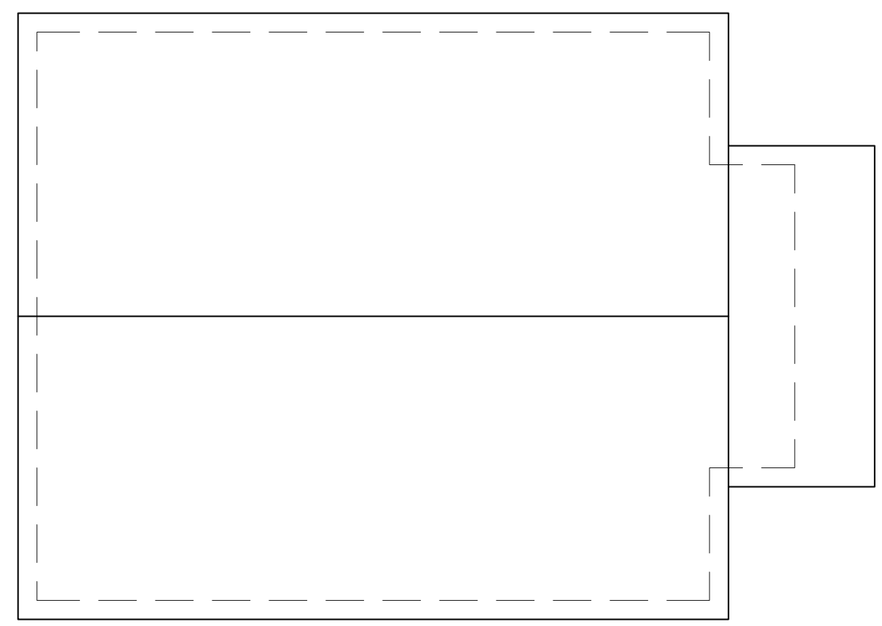

1 BASEMENT PLAN
SCALE: 1/8" = 1'-0"




2 FIRST LEVEL PLAN
SCALE: 1/8" = 1'-0"




3 SECOND LEVEL PLAN
SCALE: 1/8" = 1'-0"



2 ROOF PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

# FLOOR PLANS

CLOVERLEAF BUILDINGS 13-15 AND 14-16
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
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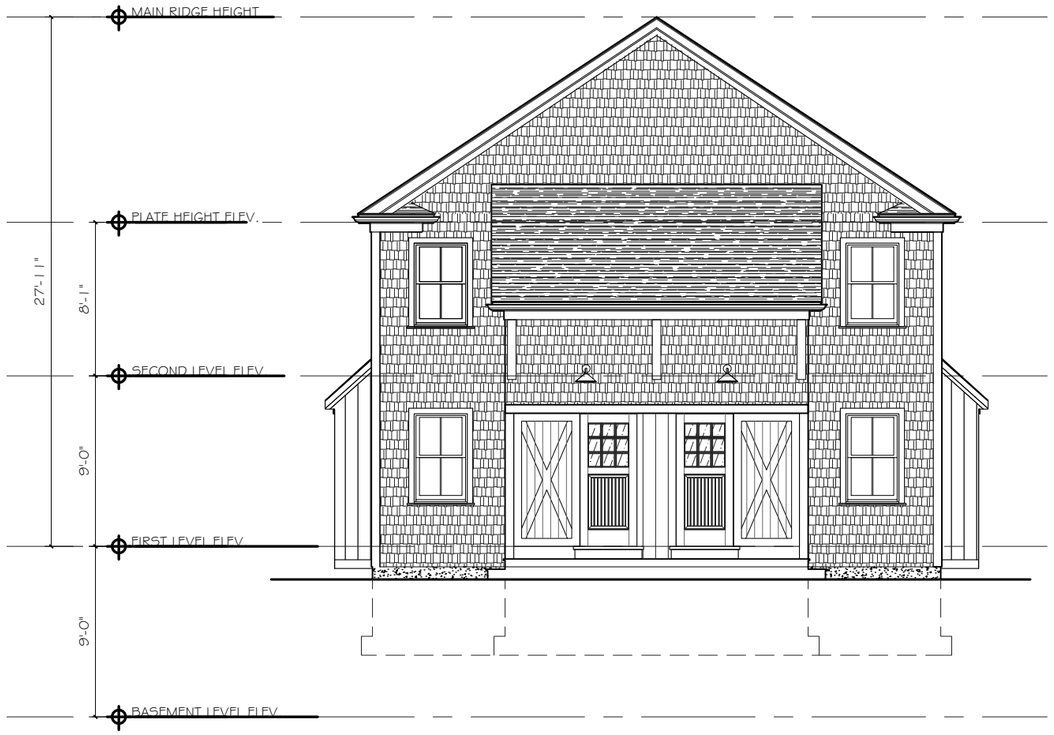
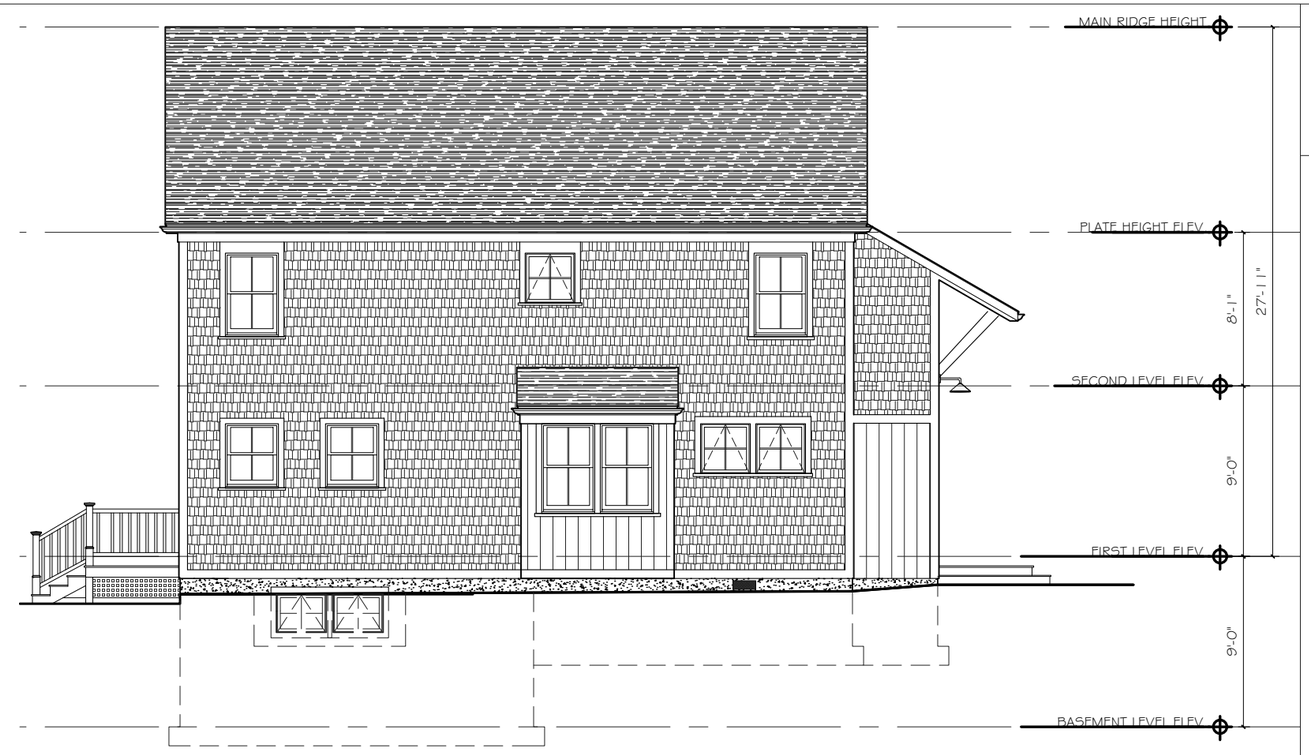
1/8" = 1'-0"

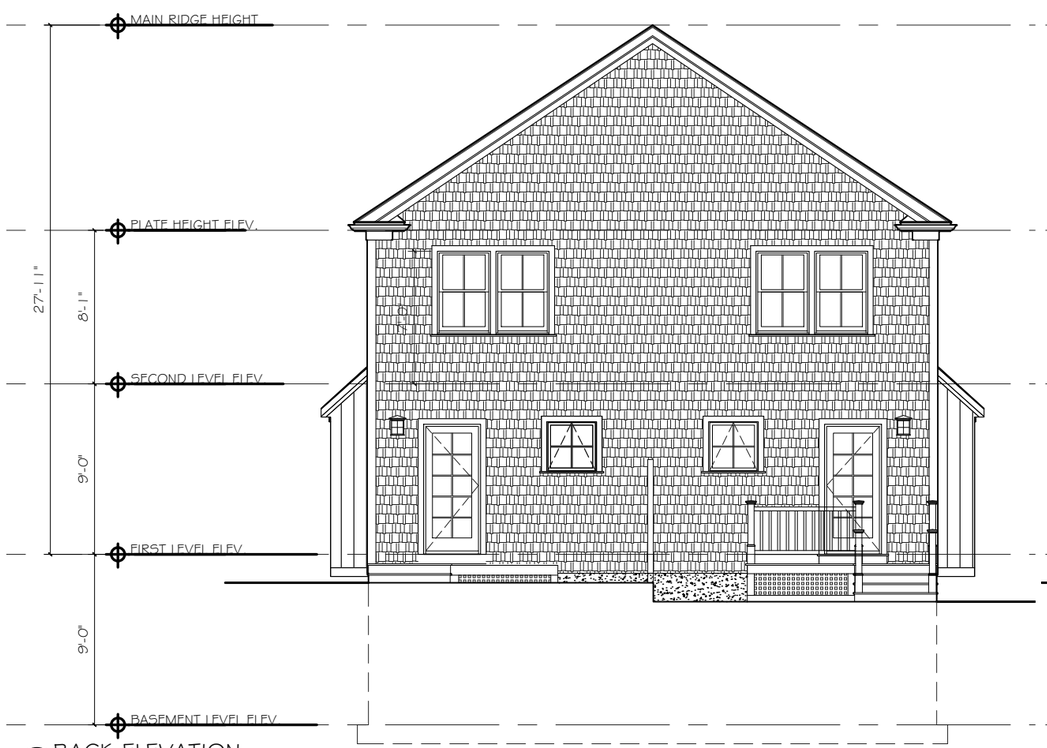
A1.0



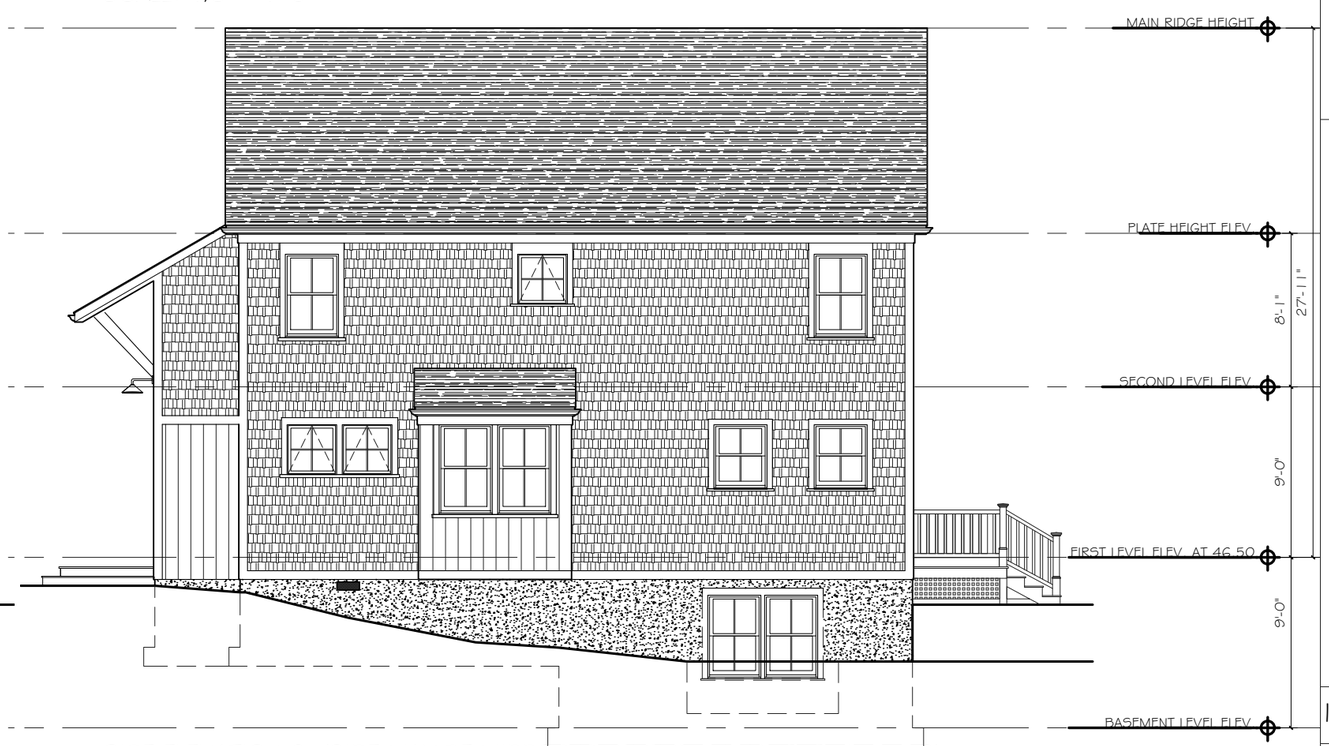

1 FRONT ELEVATION
SCALE: 1/8" = 1'-0"




2 SIDE ELEVATION 1 (SIDE MAY BE MIRRORED DEPENDING ON THE BUILDING)
SCALE: 1/8" = 1'-0"




3 BACK ELEVATION
SCALE: 1/8" = 1'-0"




4 SIDE ELEVATION 2 (SIDE MAY BE MIRRORED DEPENDING ON THE BUILDING)
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

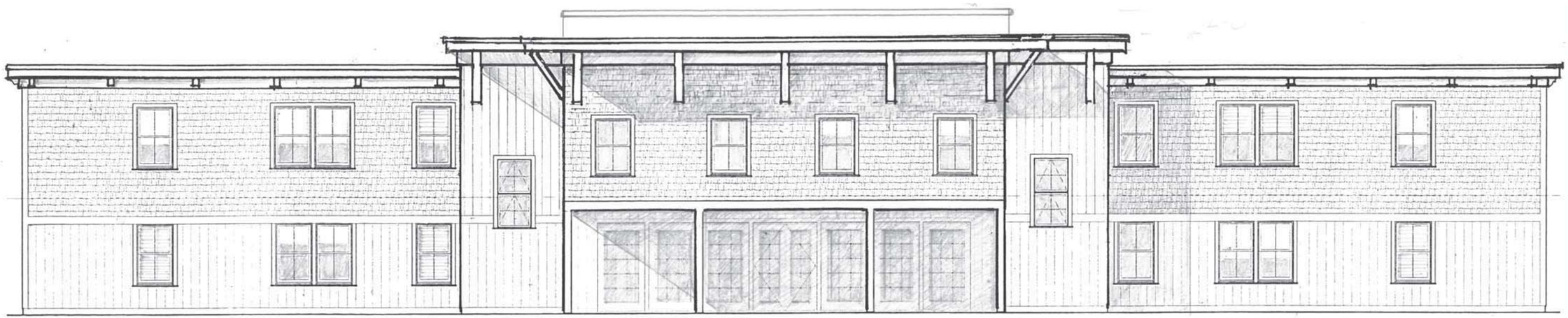
# ELEVATIONS

CLOVERLEAF BUILDINGS 13-15 AND 14-16
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

1/8" = 1'-0"

A2.1



# CLOVERLEAF TRURO RENTAL HOUSING
# BUILDING 21

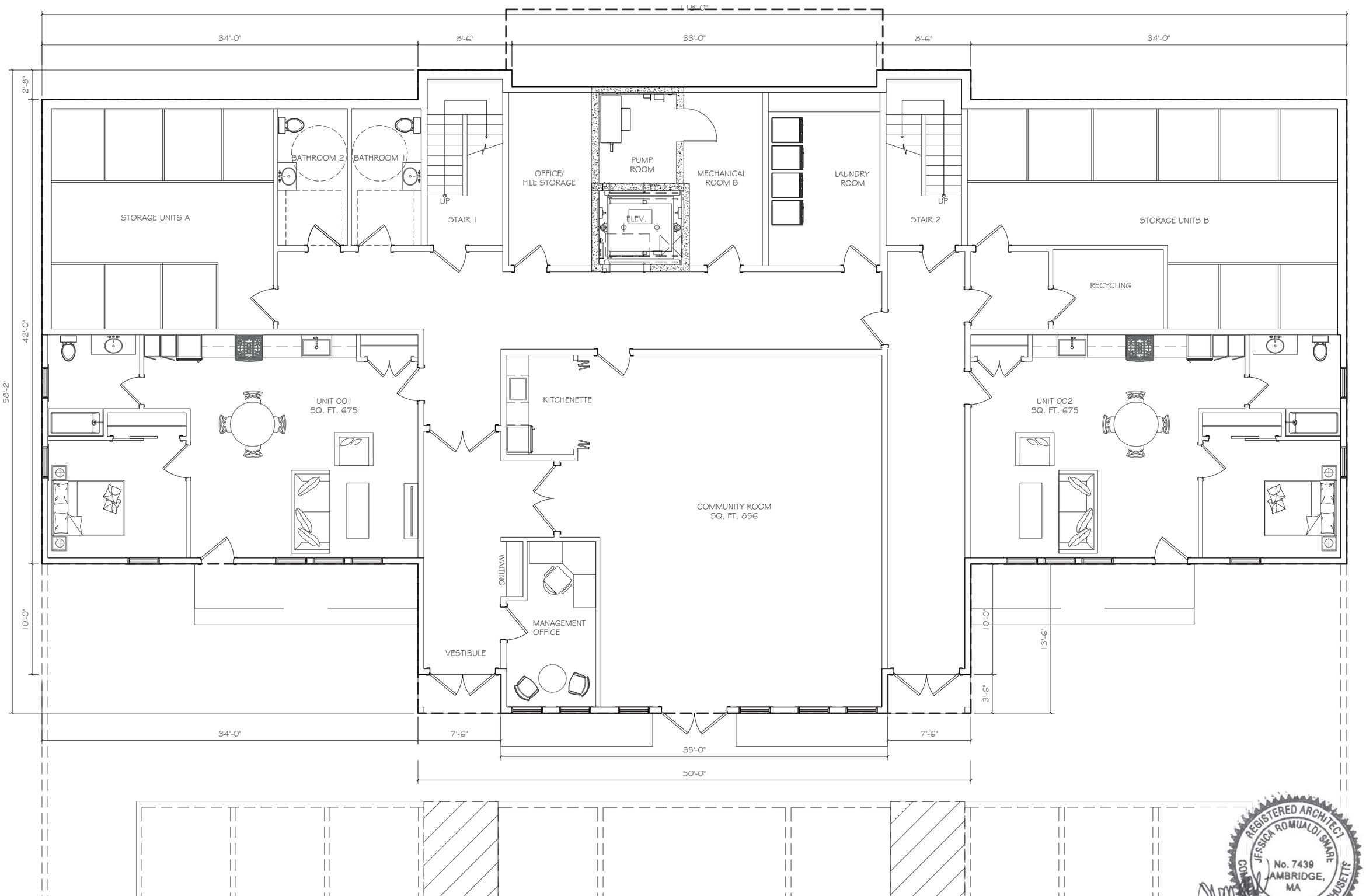
Truro, Massachusetts

**Thursday, September 17, 2020**


**Spring Hill Design**

INTERIORS ARCHITECTURE SPACE PLANNING

21 Dartmouth Street, Somerville, MA, 02145 ~ 617.623.1833




1 BASEMENT FLOOR PLAN
SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
JESSICA ROMUALDI SNARR
No. 7439
CAMBRIDGE, MA
COMMONWEALTH OF MASSACHUSETTS

DATE:
09.17.20

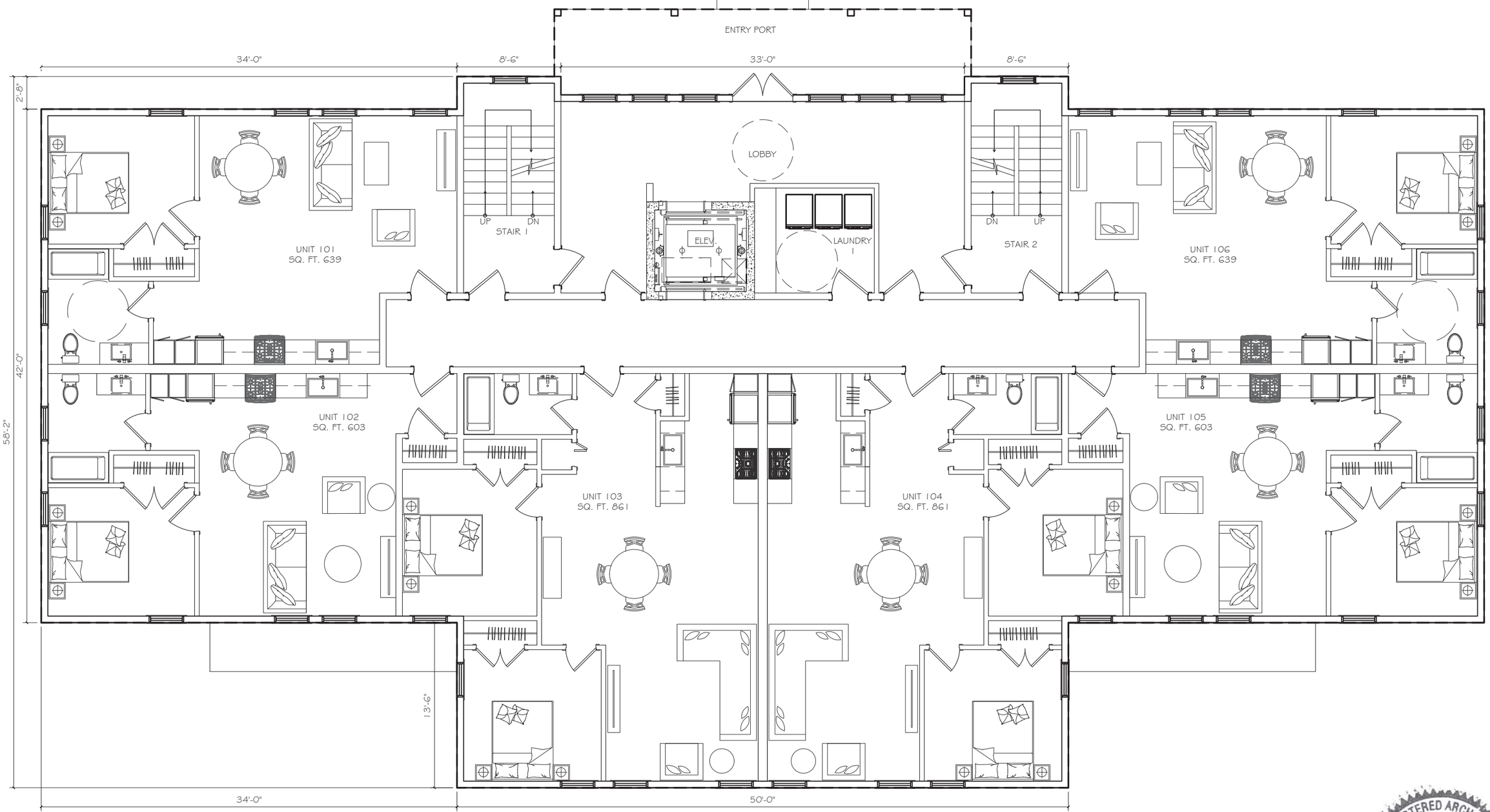
# BASEMENT FLOOR PLAN

CLOVERLEAF BUILDING 21
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 ~ 617.623.1833

1/8" = 1'-0"

A1.0




1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"


DATE:
09.17.20

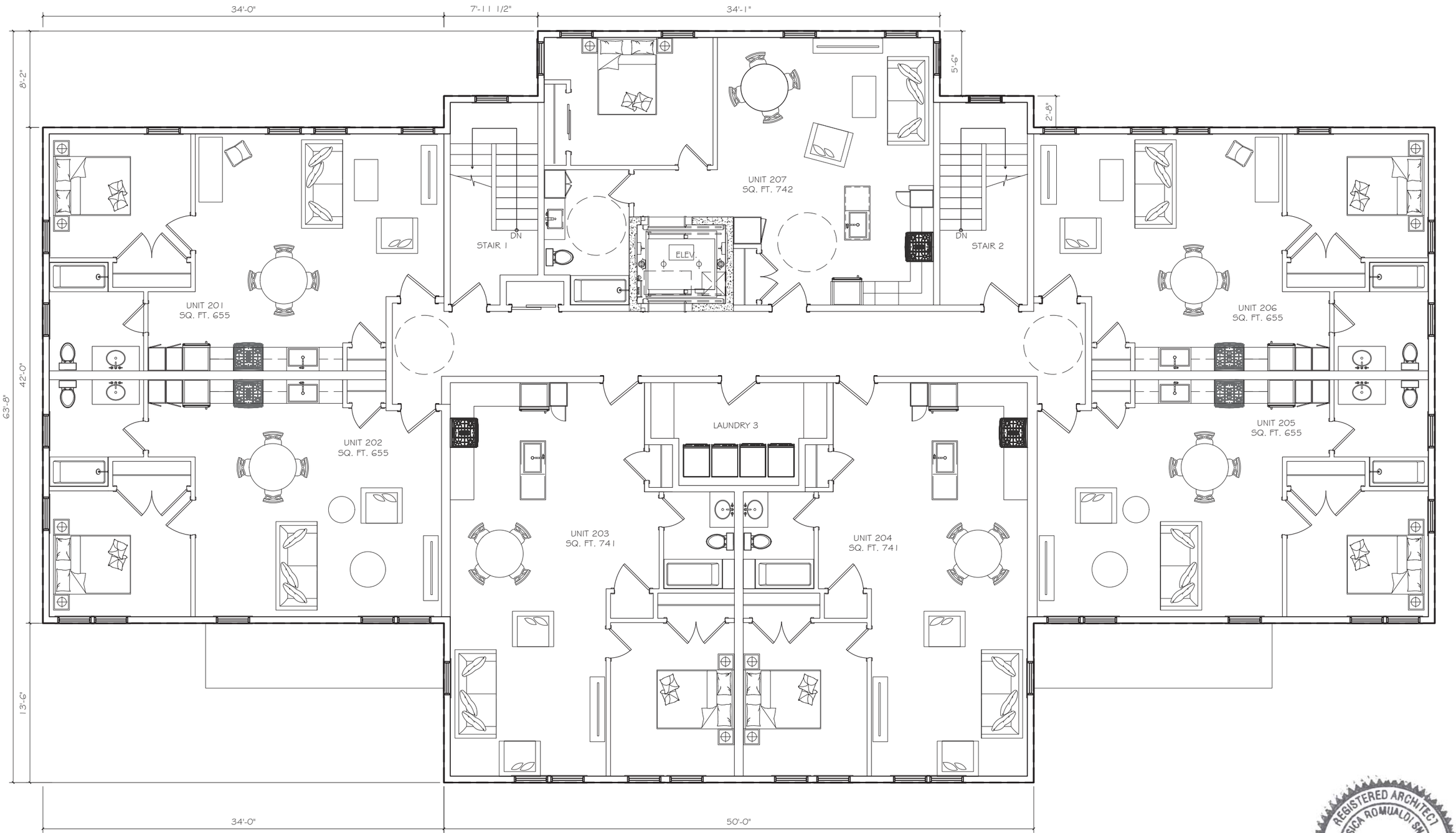
# FIRST FLOOR PLAN

CLOVERLEAF BUILDING 21
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 ~ 617.623.1833

1/8" = 1'-0"

A1.1




1 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.17.20

# SECOND FLOOR PLAN

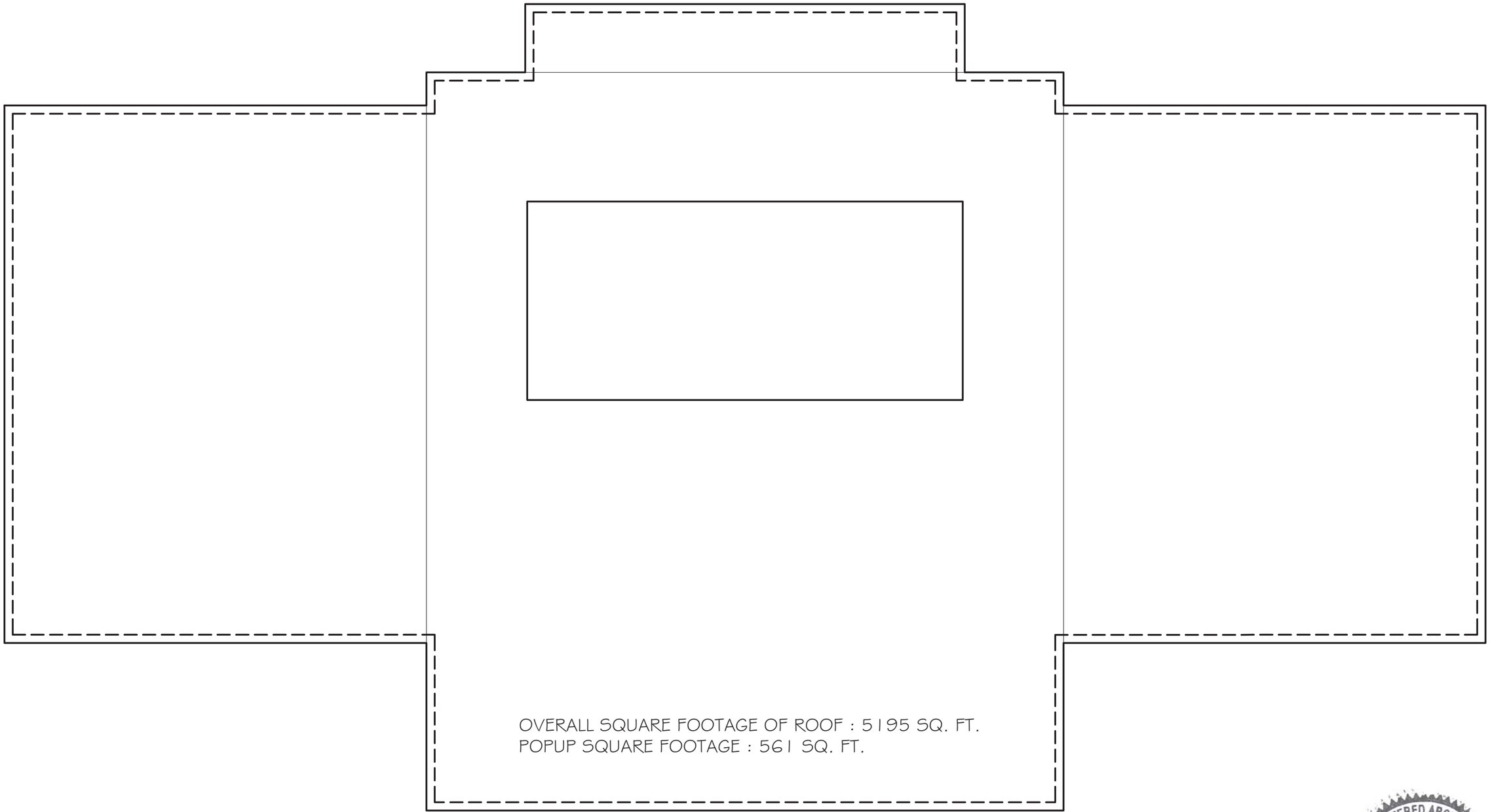
CLOVERLEAF BUILDING 21
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 ~ 617.623.1833

REGISTERED ARCHITECT
JESSICA ROMUALDI SNARR
No. 7439
CAMBRIDGE, MA
COMMONWEALTH OF MASSACHUSETTS

1/8" = 1'-0"

A1.2



OVERALL SQUARE FOOTAGE OF ROOF : 5195 SQ. FT.
POPUP SQUARE FOOTAGE : 561 SQ. FT.

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

REGISTERED ARCHITECT
JESSICA ROMUALDI SMARR
No. 7439
CAMBRIDGE, MA
COMMONWEALTH OF MASSACHUSETTS

DATE:
09.17.20

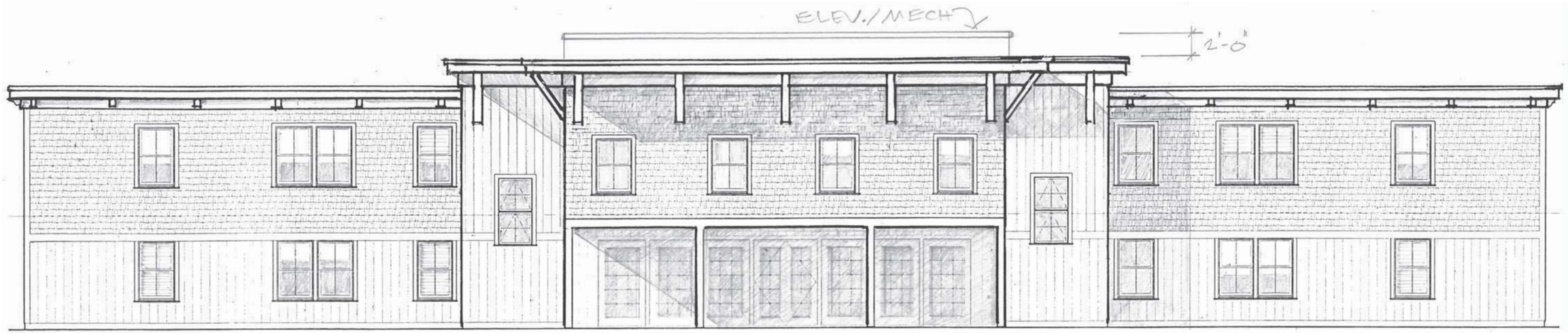
ROOF PLAN

CLOVERLEAF BUILDING 21
CLOVERLEAF TRURO RENTAL HOUSING

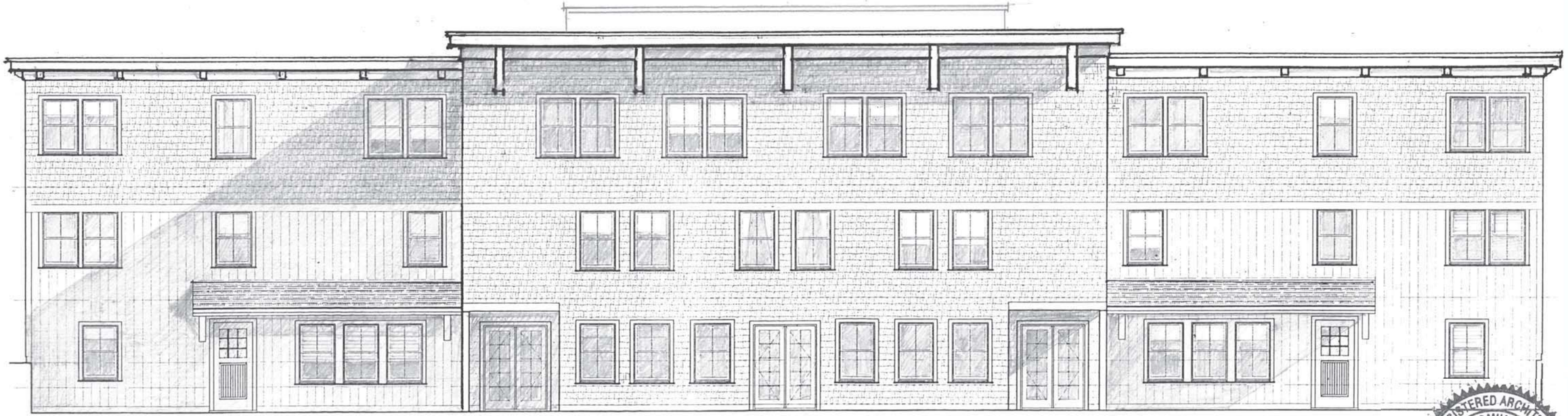
SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 ~ 617.623.1833

1/8" = 1'-0"

A1.3




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



2 BACK ELEVATION
SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
JESSICA ROMUALDI SNARE
No. 7439
CAMBRIDGE, MA
COMMONWEALTH OF MASSACHUSETTS

DATE:
09.17.20

# FRONT AND BACK ELEVATIONS

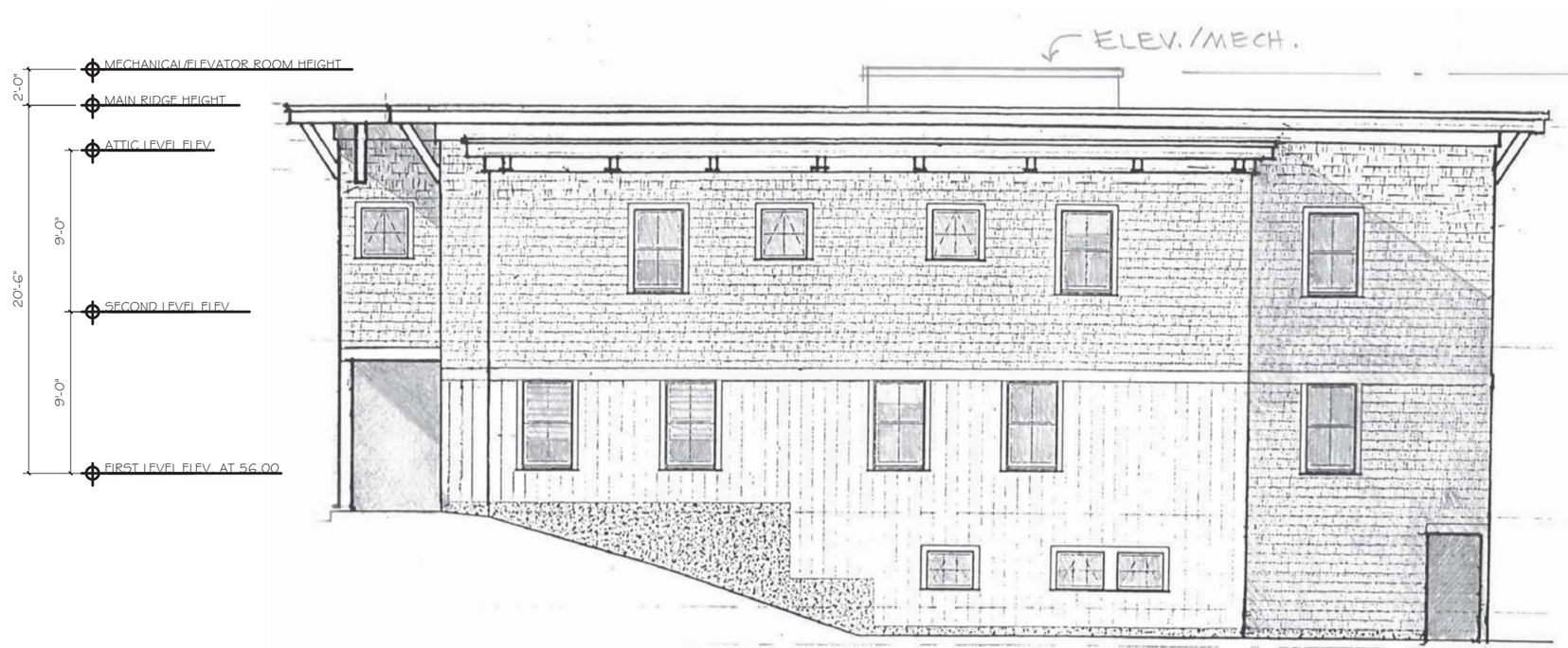
CLOVERLEAF BUILDING 21
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 ~ 617.623.1833

1/8" = 1'-0"

A2.1


1 LEFT SIDE ELEVATION
SCALE: 1/8" = 1'-0"




2 RIGHT SIDE ELEVATION
SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
JESSICA ROMUALDI SHARE
No. 7439
AMBRIDGE, MA
COMMONWEALTH OF MASSACHUSETTS

DATE:
09.17.20

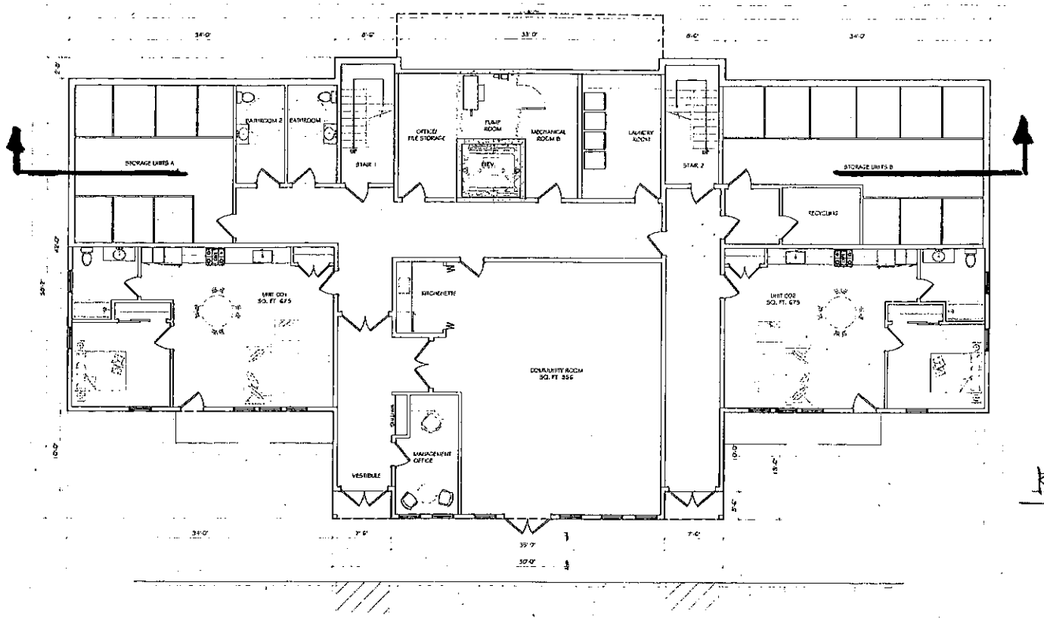
# LEFT AND RIGHT SIDE ELEVATIONS

CLOVERLEAF BUILDING 21
CLOVERLEAF TRURO RENTAL HOUSING

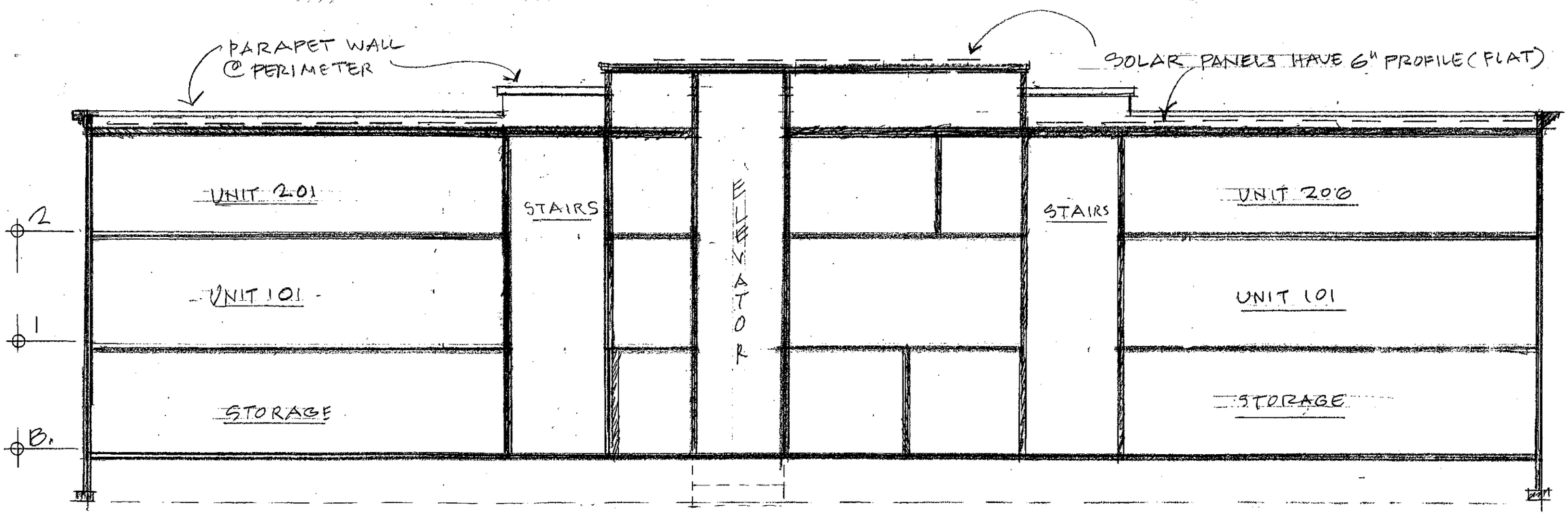
SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 ~ 617.623.1833

1/8" = 1'-0"

A2.2




KEY PLAN




SCHEMATIC SECTION

| | |
|---|---|
| 9.25.20 | 9.25.20 |

SCHEMATIC SECTION OF BUILDING 21
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
158 CENTRAL STREET
SOMERVILLE MA 02145

# CLOVERLEAF TRURO RENTAL HOUSING
# BUILDING 22-24 AND 23-25(MIRRORED)

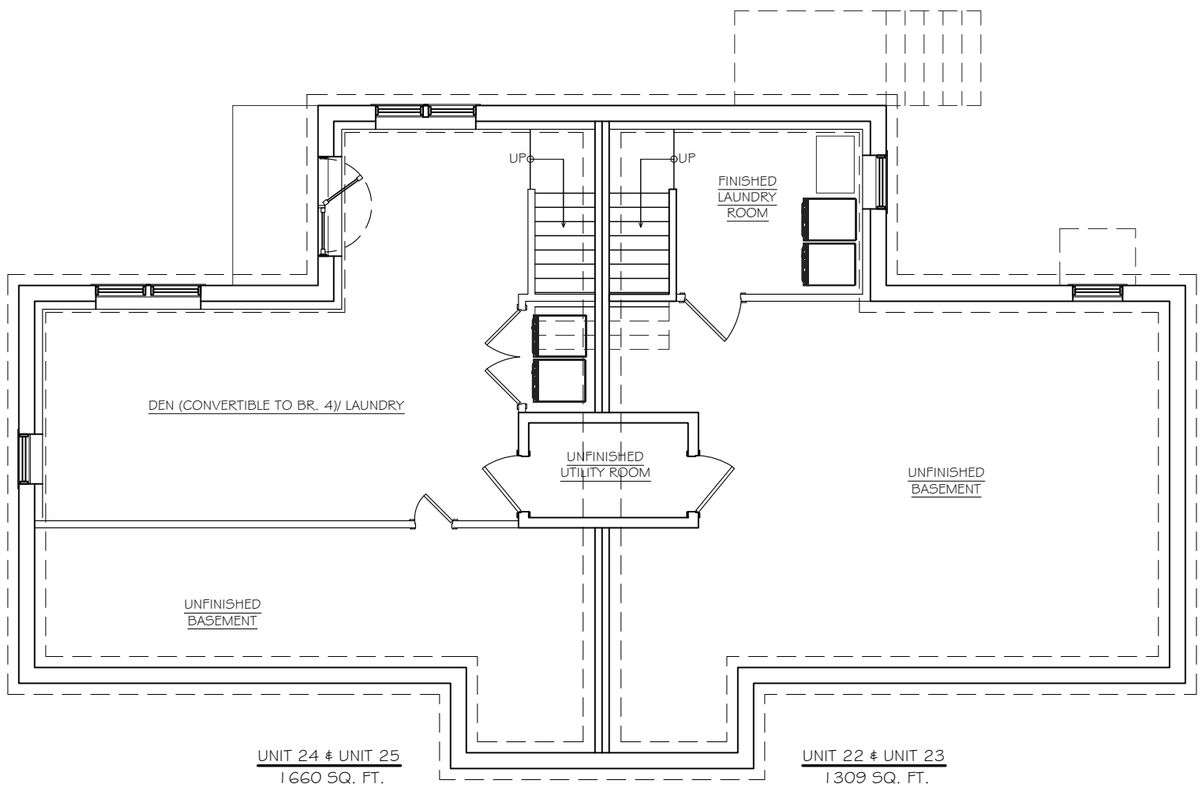
Truro, Massachusetts

**Friday, September 4, 2020**


**Spring Hill Design**

INTERIORS ARCHITECTURE SPACE PLANNING

158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622




1 BASEMENT FLOOR PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

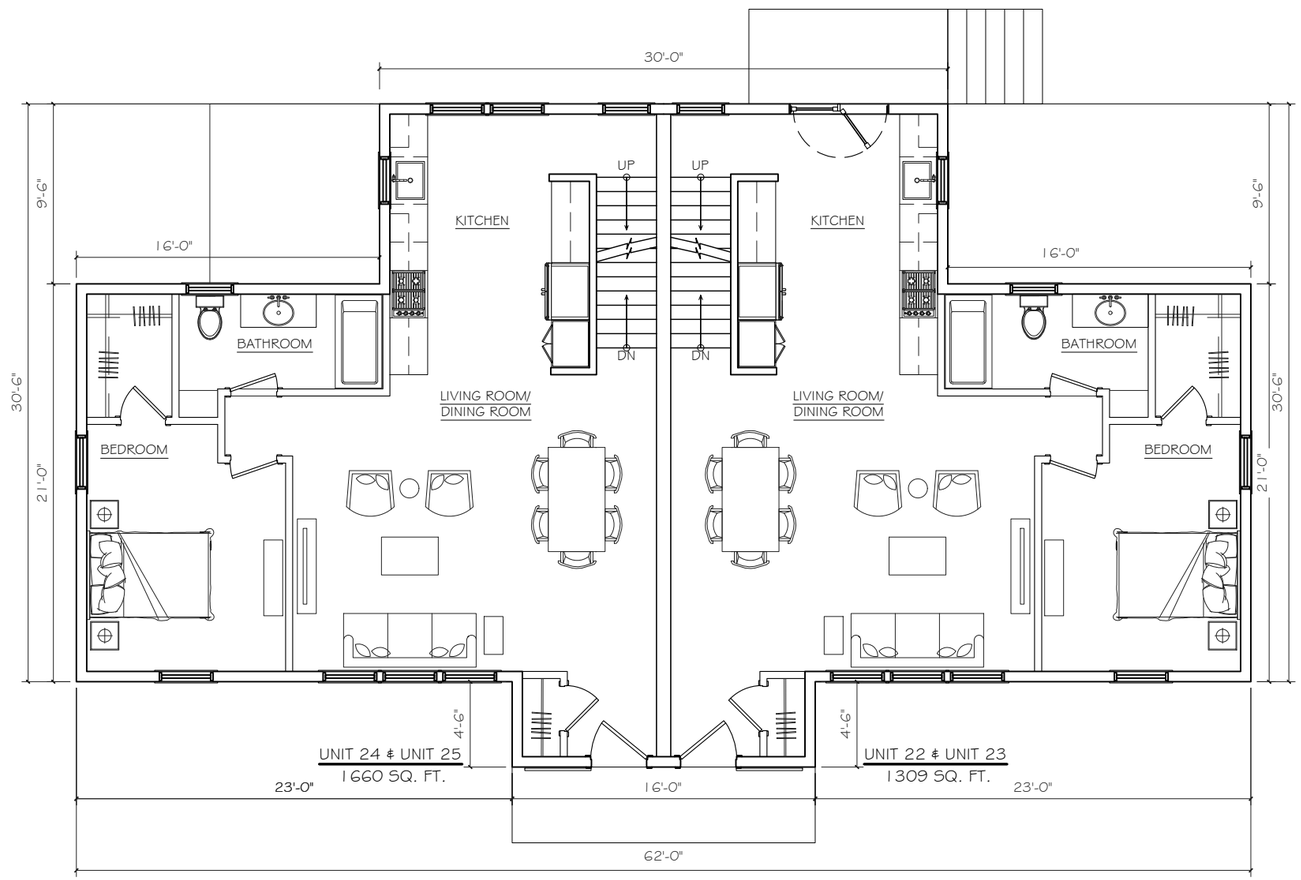
# BASEMENT FLOOR PLAN

CLOVERLEAF BUILDING 22-24 AND 23-25 (MIRRORED)
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

1/8" = 1'-0"

A1.0




1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

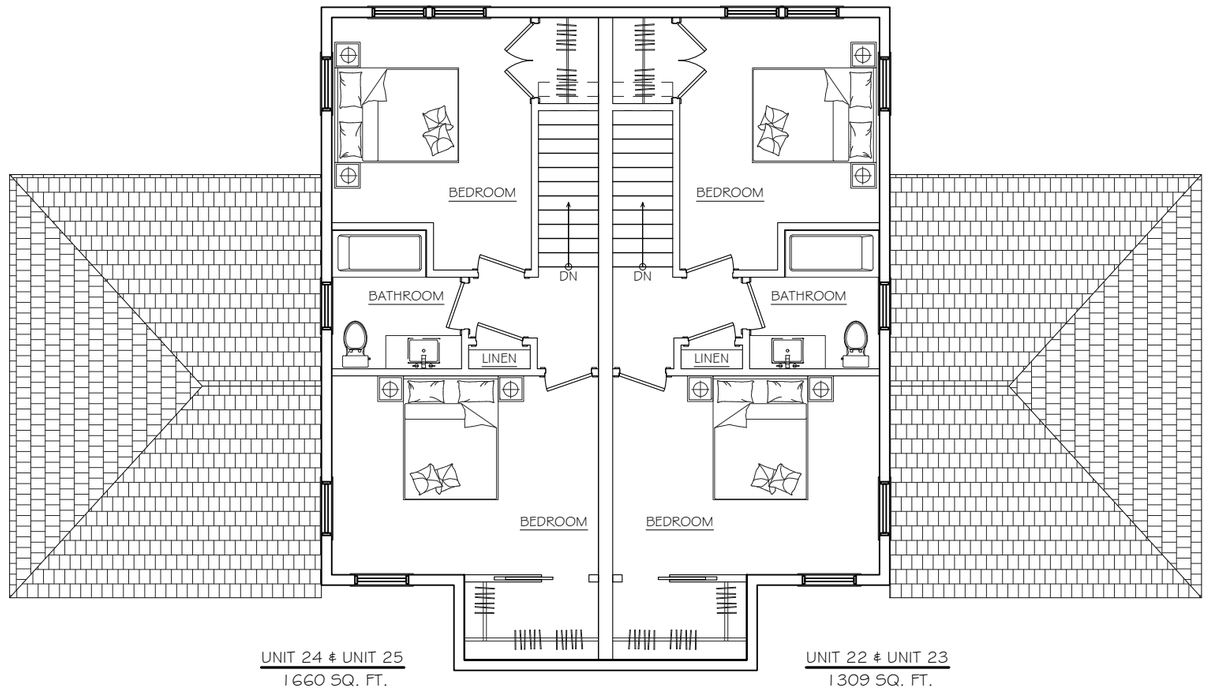
# FIRST FLOOR PLAN

CLOVERLEAF BUILDING 22-24 AND 23-25 (MIRRORED)
CLOVERLEAF TRURO RENTAL HOUSING

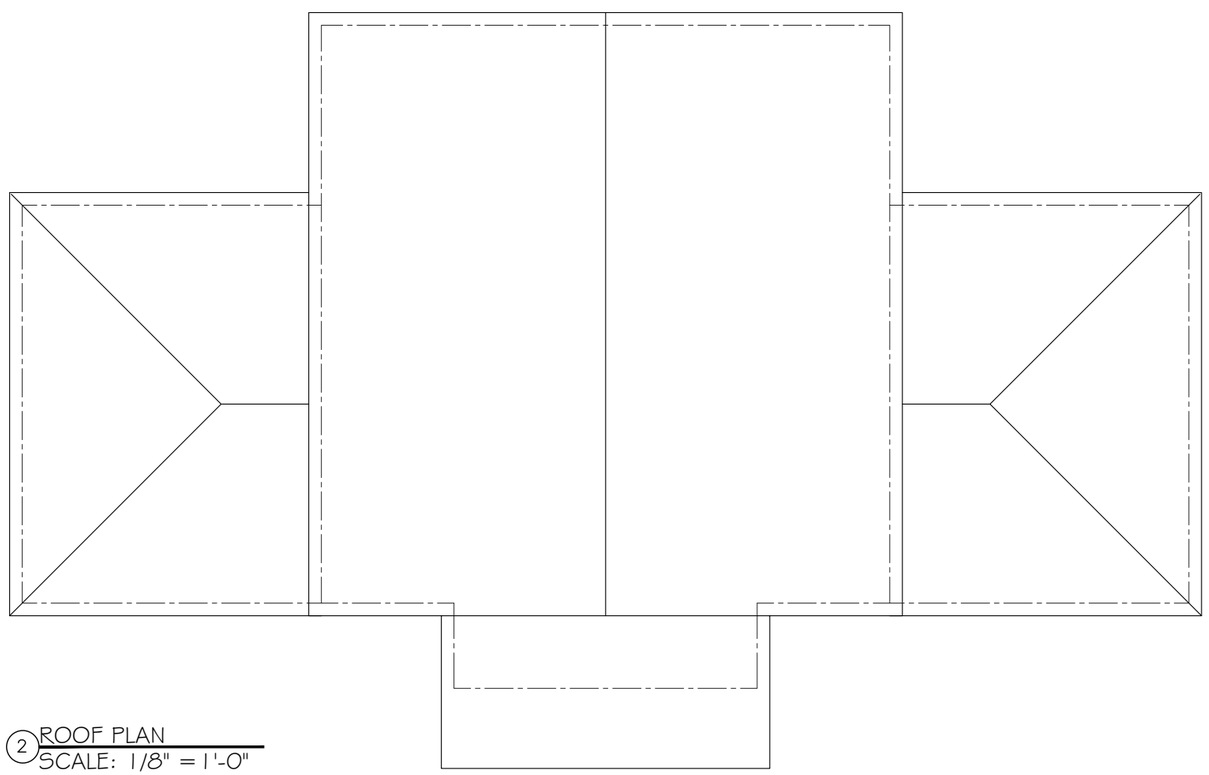
SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

1/8" = 1'-0"

A1.1




1 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 ROOF PLAN
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

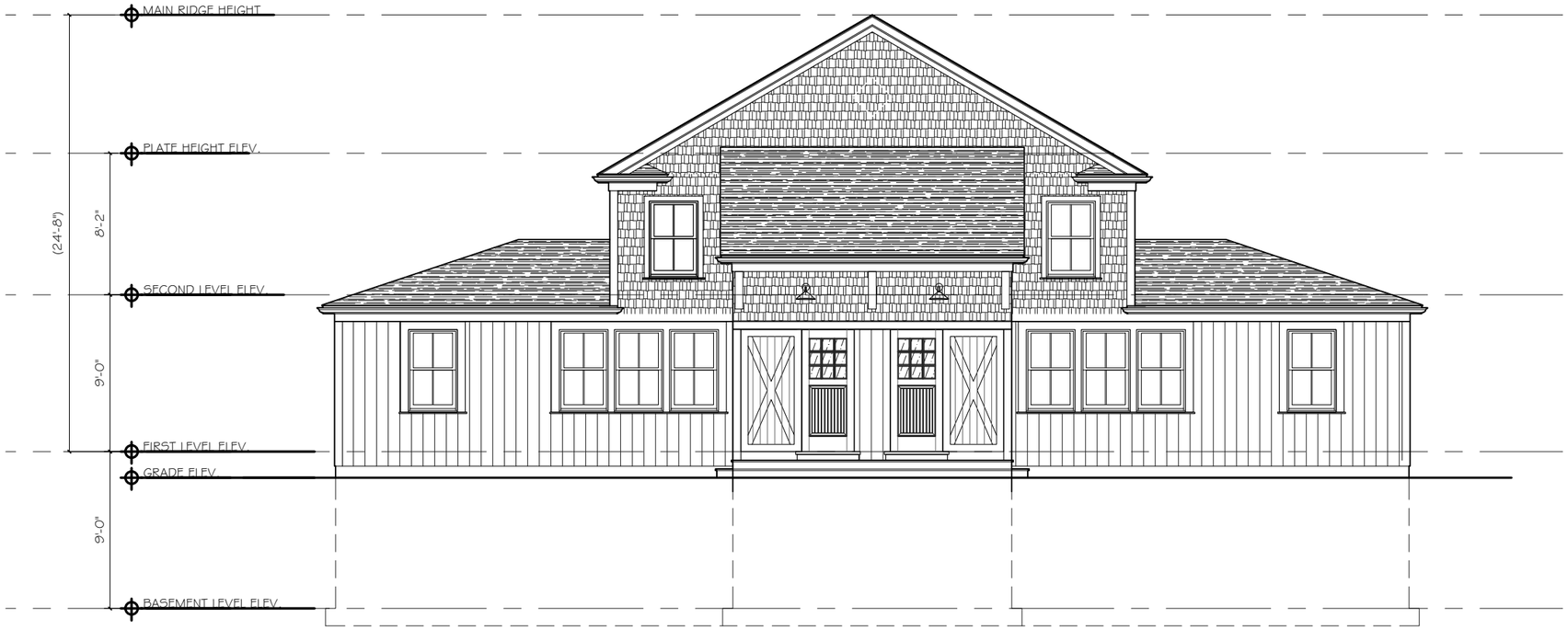
# SECOND FLOOR AND ROOF PLANS

CLOVERLEAF BUILDING 22-24 AND 23-25 (MIRRORED)
CLOVERLEAF TRURO RENTAL HOUSING

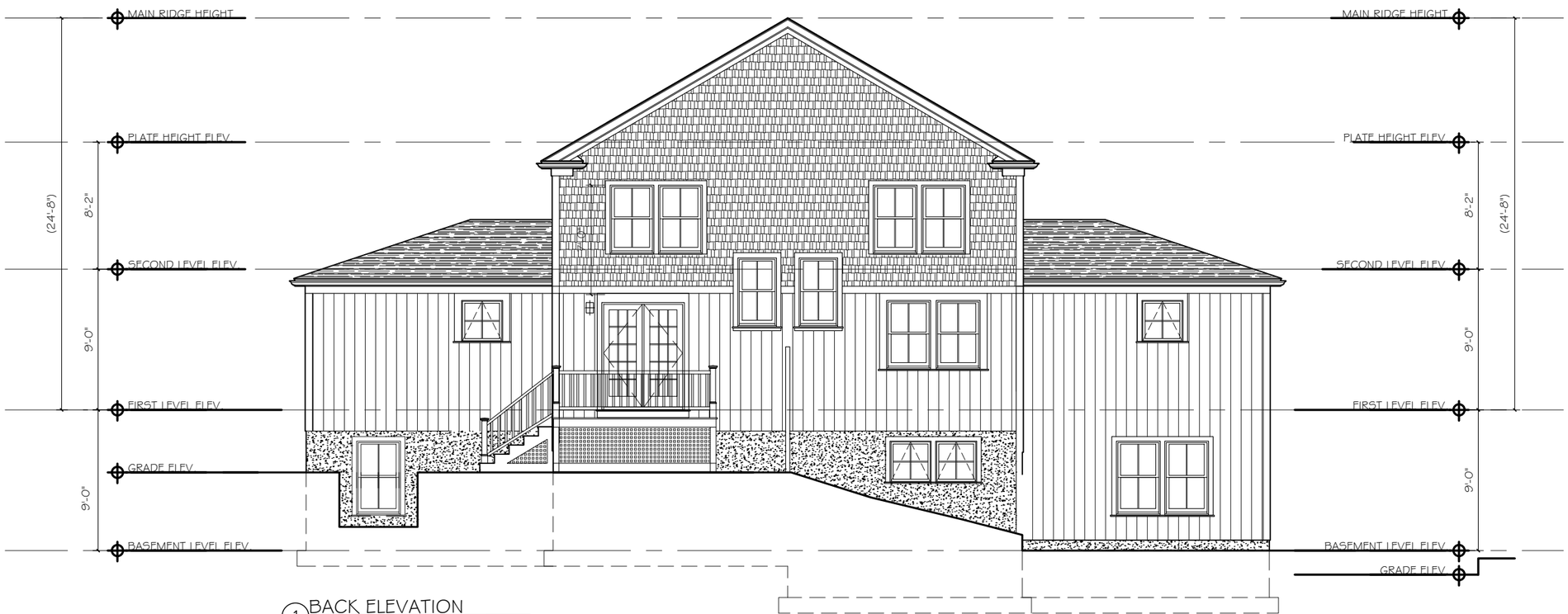
SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

1/8" = 1'-0"

A1.2




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




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

DATE:
09.04.20

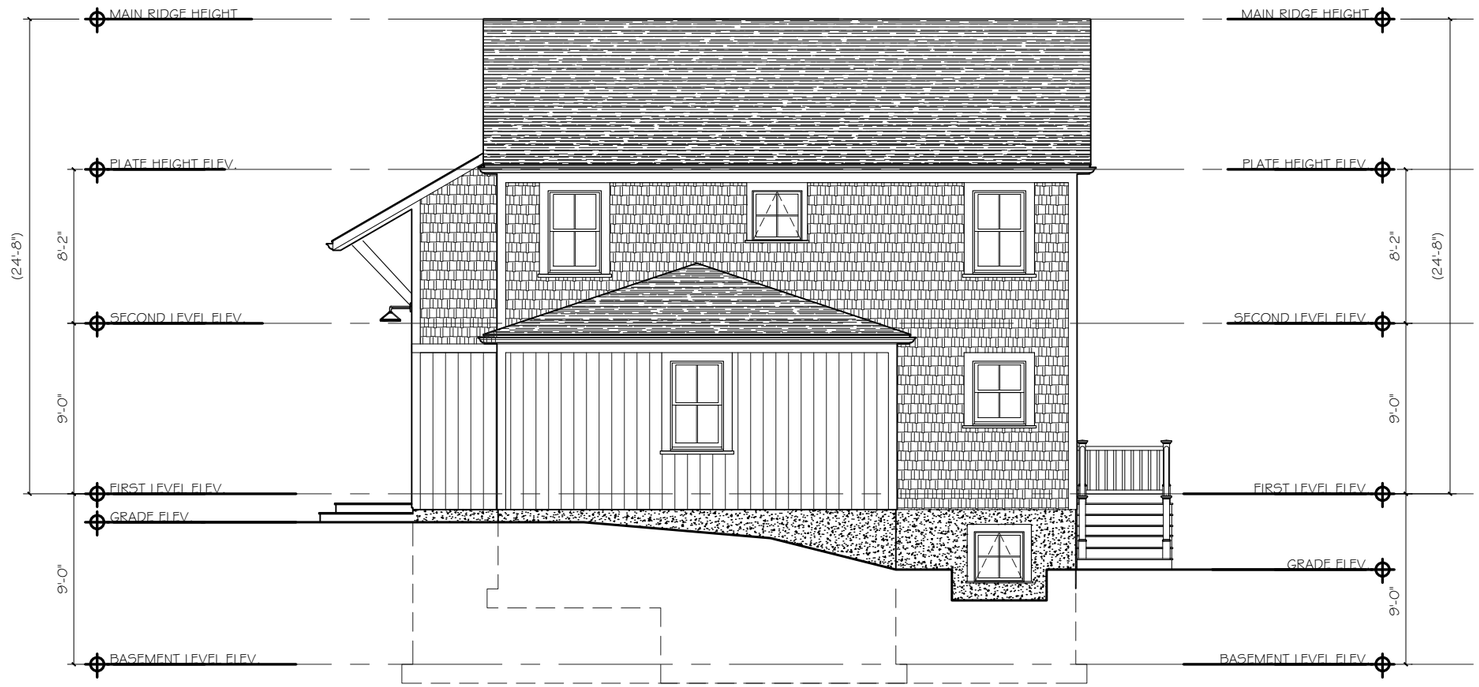
# FRONT AND BACK ELEVATIONS

CLOVERLEAF BUILDING 22-24 AND 23-25 (MIRRORED)
CLOVERLEAF TRURO RENTAL HOUSING

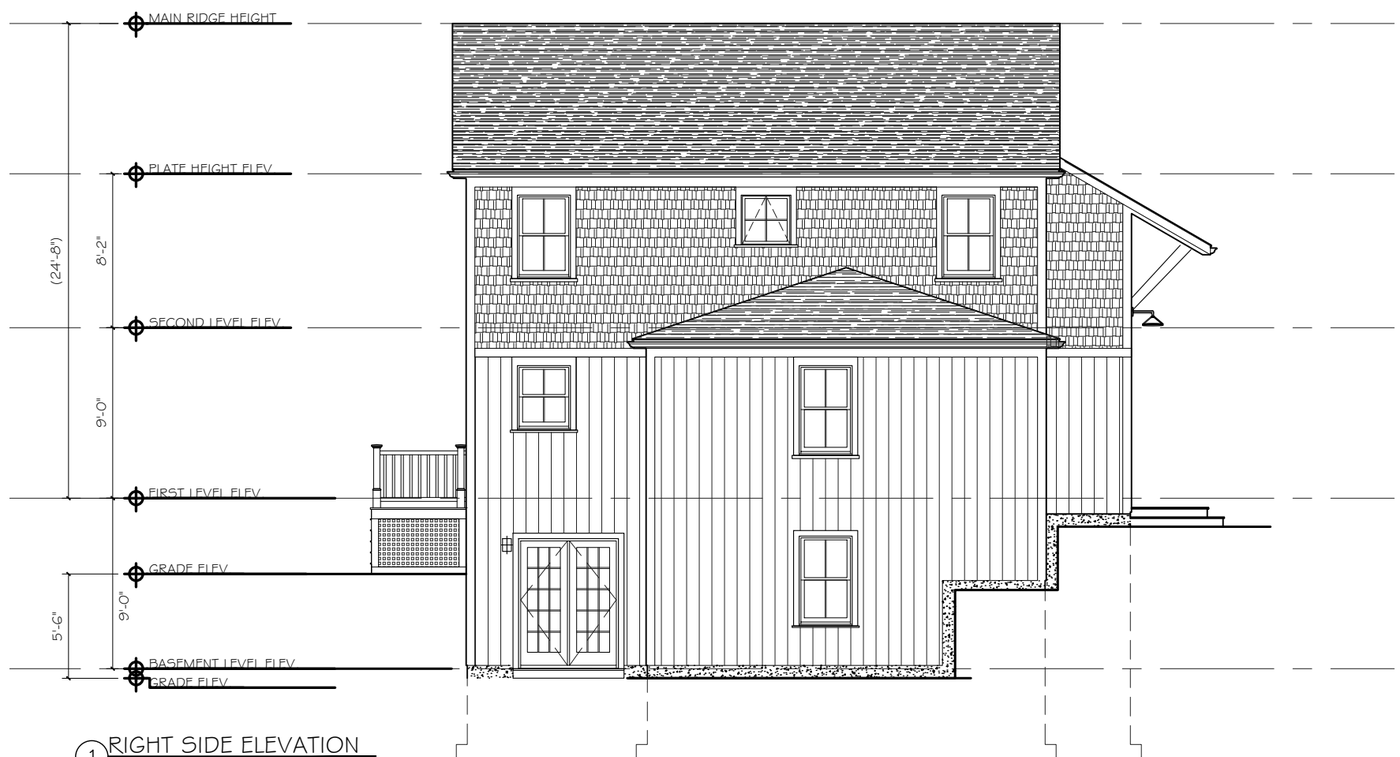
SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

1/8" = 1'-0"

A2.1




1 LEFT SIDE ELEVATION
SCALE: 1/8" = 1'-0"




1 RIGHT SIDE ELEVATION
SCALE: 1/8" = 1'-0"

DATE:
09.04.20

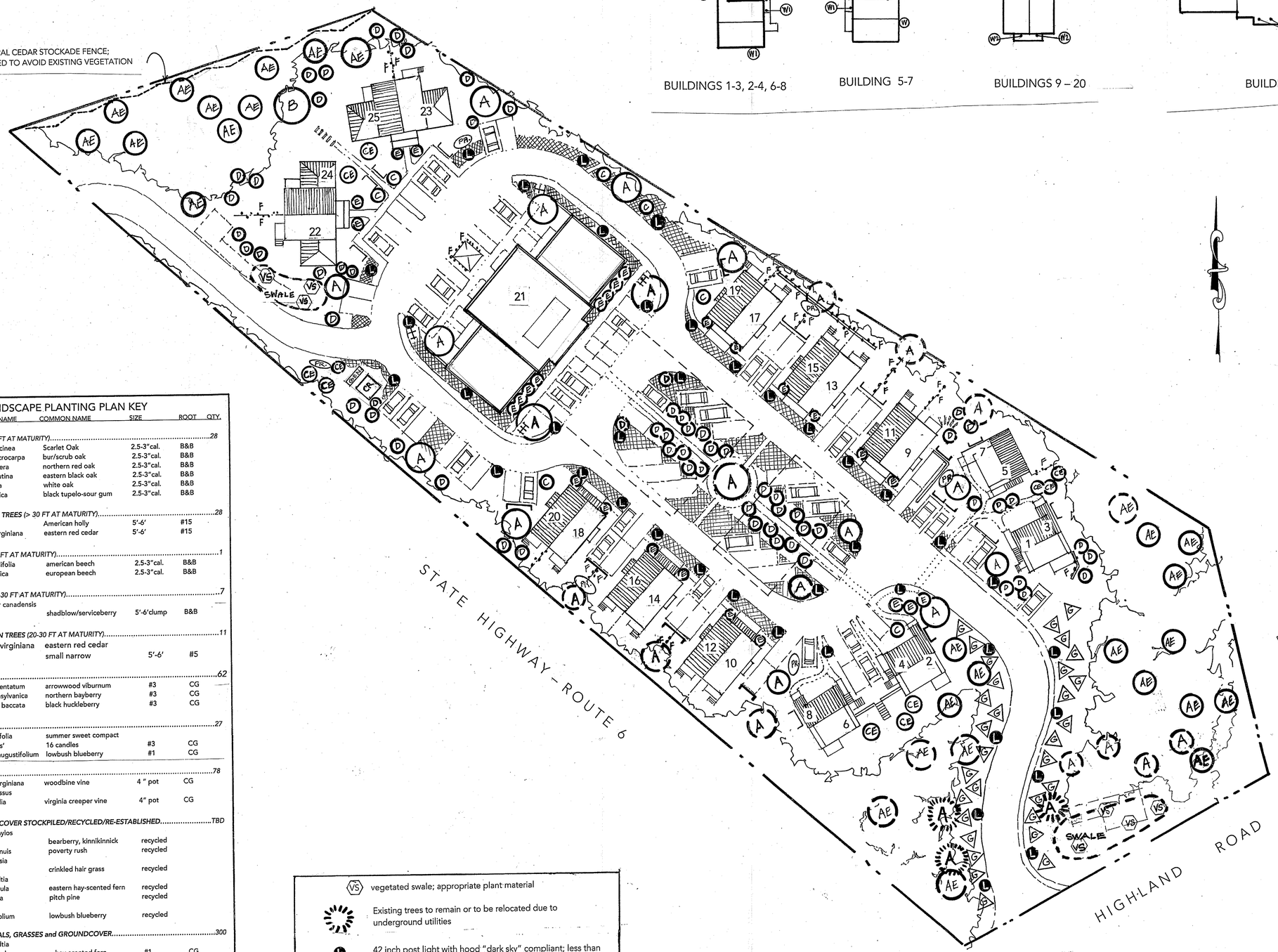
SIDE ELEVATIONS

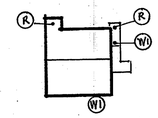
CLOVERLEAF BUILDING 22-24 AND 23-25 (MIRRORED)
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
158 Central Street, Somerville, MA, 02145 ~ 617.6702.4622

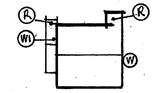
1/8" = 1'-0"

A2.2

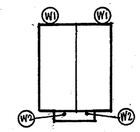


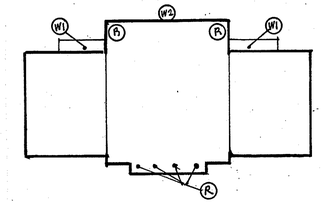
BUILDINGS 1-3, 2-4, 6-8



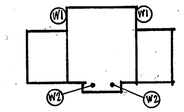
BUILDING 5-7



BUILDINGS 9 – 20



BUILDING 21



BUILDINGS 22-25

## BUILDING EXTERIOR LIGHTING SCHEDULE

- (R) Recessed LED lights in ceiling of overhangs at entry doors
- (W1) wall mount hooded dark sky light
- (W2) wall mount hooded dark sky light on gooseneck arm

(Reference "Exterior Palette / Lighting" drawing P1.2 for images)

## LANDSCAPE PLANTING PLAN KEY

| KEY | BOTANICAL NAME | COMMON NAME | SIZE | ROOT | QTY. |
|---|---|---|---|---|---|
| A | *TREES (> 30FT AT MATURITY)* | | | | 28 |
| | Quercus coccinea | Scarlet Oak | 2.5-3"cal. | B&B | |
| | Quercus macrocarpa | bur/scrub oak | 2.5-3"cal. | B&B | |
| | Quercus rubera | northern red oak | 2.5-3"cal. | B&B | |
| | Quercus velutina | eastern black oak | 2.5-3"cal. | B&B | |
| | Quercus alba | white oak | 2.5-3"cal. | B&B | |
| | Nyssa sylvatica | black tupelo-sour gum | 2.5-3"cal. | B&B | |
| AE | *EVERGREEN TREES (> 30 FT AT MATURITY)* | | | | 28 |
| | Ilex opaca | American holly | 5'-6' | #15 | |
| | Juniperus virginiana | eastern red cedar | 5'-6' | #15 | |
| B | *TREES (>50FT AT MATURITY)* | | | | 1 |
| | Fagus grandifolia | american beech | 2.5-3"cal. | B&B | |
| | Fagus sylvatica | european beech | 2.5-3"cal. | B&B | |
| C | *TREES (20-30 FT AT MATURITY)* | | | | 7 |
| | Amelanchier canadensis or A. lavis | shadblow/serviceberry | 5'-6'clump | B&B | |
| CE | *EVERGREEN TREES (20-30 FT AT MATURITY)* | | | | 11 |
| | Juniperus virginiana 'taylor" | eastern red cedar small narrow | 5'-6' | #5 | |
| D | *SHRUBS* | | | | 62 |
| | Vibernum dentatum | arrowwood viburnum | #3 | CG | |
| | Morella pensylvanica | northern bayberry | #3 | CG | |
| | Gaylussacia baccata | black huckleberry | #3 | CG | |
| E | *SHRUBS* | | | | 27 |
| | Clethra alnifolia '16 candles' | summer sweet compact 16 candles | #3 | CG | |
| | Vaccinium augustifolium | lowbush blueberry | #1 | CG | |
| F | *VINES* | | | | 78 |
| | Clematis virginiana | woodbine vine | 4 " pot | CG | |
| | Parthenocissus quinquifolia | virginia creeper vine | 4" pot | CG | |
| G | *GROUND COVER STOCKPILED/RECYCLED/RE-ESTABLISHED* | | | | TBD |
| | Arctostaphylos uva-ursi | bearberry, kinnikinnick | recycled | | |
| | Junccus tenuis | poverty rush | recycled | | |
| | Deschampsia flexuosa | crinkled hair grass | recycled | | |
| | Dennstaedtia punctilobula | eastern hay-scented fern | recycled | | |
| | Pinus rigida | pitch pine | recycled | | |
| | Vaccinium augustifolium | lowbush blueberry | recycled | | |
| | *PERENNIALS, GRASSES and GROUNDCOVER* | | | | 300 |
| | Dennstaedtia punctilobula | hay-scented fern | #1 | CG | |
| | Dryopteris intermedia | evergreen wood fern | #1 | CG | |
| | Deschampsia flexuosa | crinkled hair grass | flats plugs | | |
| | Deschampsia cespitosa | tufted hair grass | flats plugs | | |
| | Schizachyrium scoparium | little blue stem- 'prairie munchkin' | flats plugs | | |
| | Juncus tenius | poverty rush | seed * | | |
| | Deschampsia flexuosa flexuosa | Colonial Seed Company 'Harmony'or'Pilgrim'mix | seed * | | |

- Seeded grasses and some mulching at all other disturbed areas around the dwellings

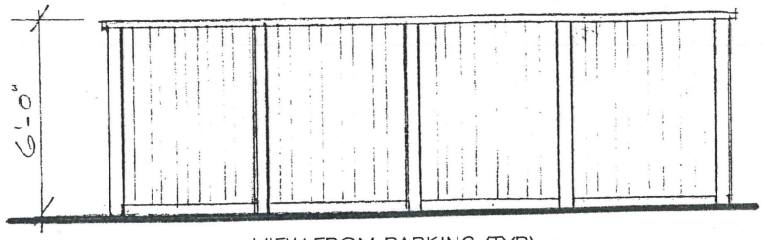
- (VS) vegetated swale; appropriate plant material
- Existing trees to remain or to be relocated due to underground utilities
- (L) 42 inch post light with hood "dark sky" compliant; less than 75 watt equivalent
- Supplemental trees in undisturbed areas as needed based on site conditions
- Seeded area - native grasses/snow storage potential
- (PR.) Underground propane; 250-500 gallon, tbd.

# LANDSCAPE PLANTING, FENCING, TRASH/BIKE STORAGE, EXTERIOR LIGHTING PLAN

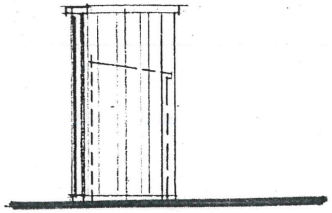
CLOVERLEAF TRURO RENTAL HOUSING
5 October 2020

0 30 60 90

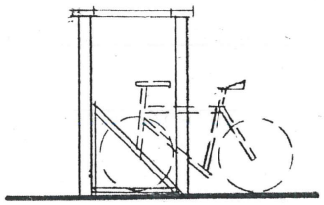
# BUILDING FENCING AND TRASH/BIKE STORAGE




VIEW FROM PARKING (TYP)



SIDE VIEW



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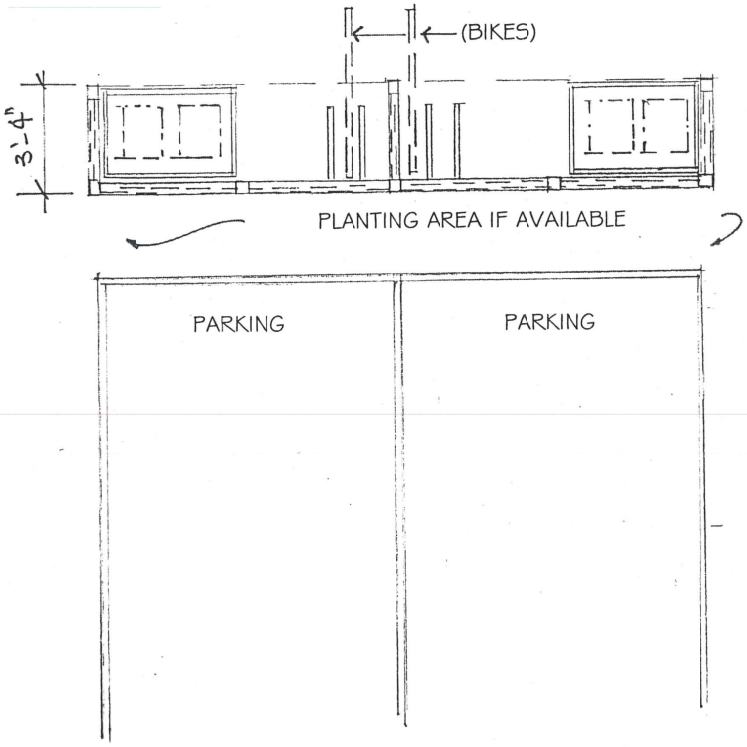
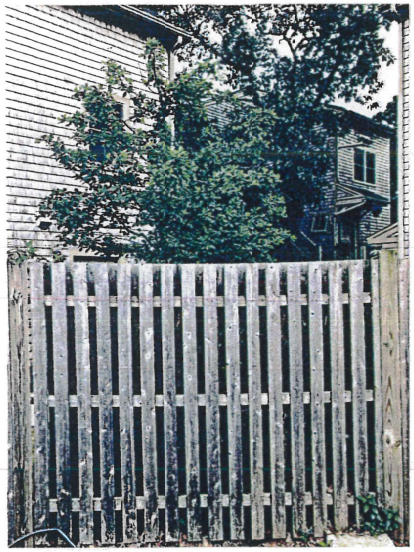



BUILDING 21 : EXAMPLE TRASH ENCLOSURE



SHADOW BOX PRIVACY FENCING

EXAMPLE TRASH BIN ENCLOSURE

DATE: 06.19.20

FENCE/STORAGE IMAGES

CLOVERLEAF TRURO RENTAL HOUSING
TRURO, MASSACHUSETTS

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 – 617.623.1833

NA

# MATERIALS PALETTE

## BUILDING EXTERIOR LIGHTING

EXTERIOR LIGHTING

EXTERIOR SITE LIGHTING
42" POST LIGHT WITH HOOD
LESS THAN 75 WATT EQUIV.

EXTERIOR LIGHTING

DATE:
10.05.20

EXTERIOR PALETTE/ LIGHTING

CLOVERLEAF TRURO RENTAL HOUSING
TRURO, MASSACHUSETTS

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 – 617.623.1833

NA

P1.2

# BUILDING INTERIOR PALETTE

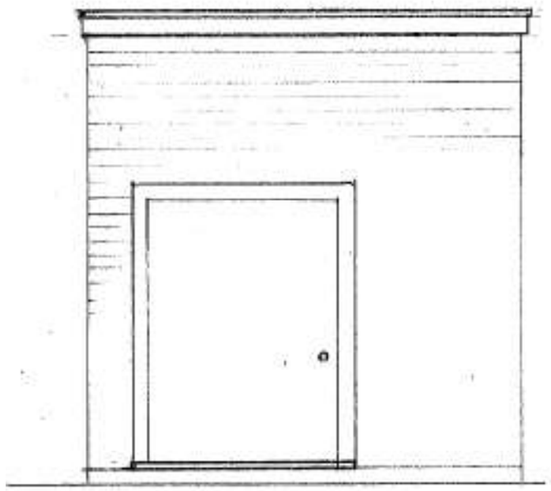
DATE:
06.19.20

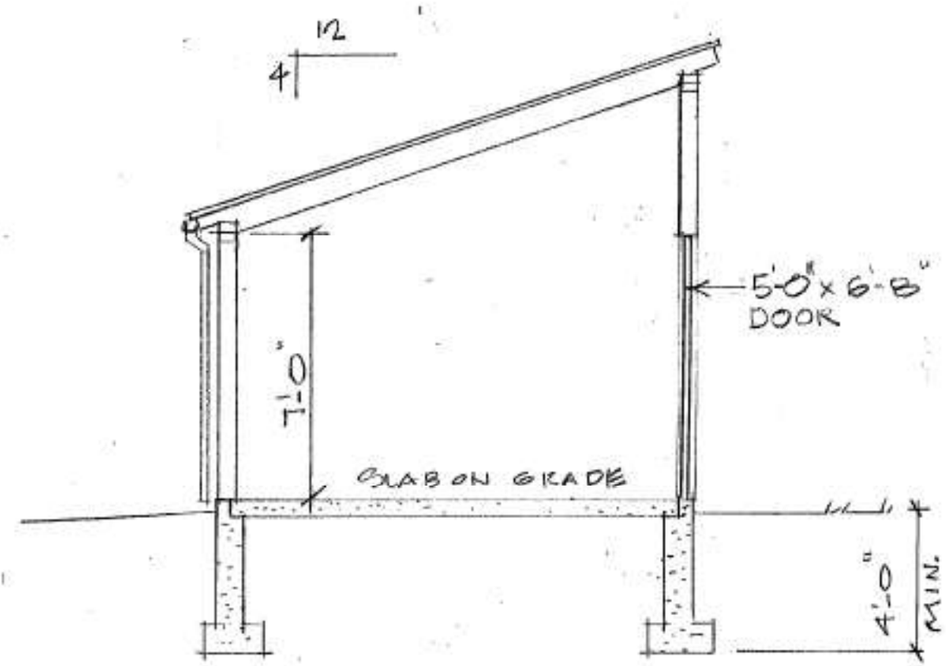
INTERIOR PALETTE

CLOVERLEAF TRURO RENTAL HOUSING
TRURO, MASSACHUSETTS

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 – 617.623.1833

NA



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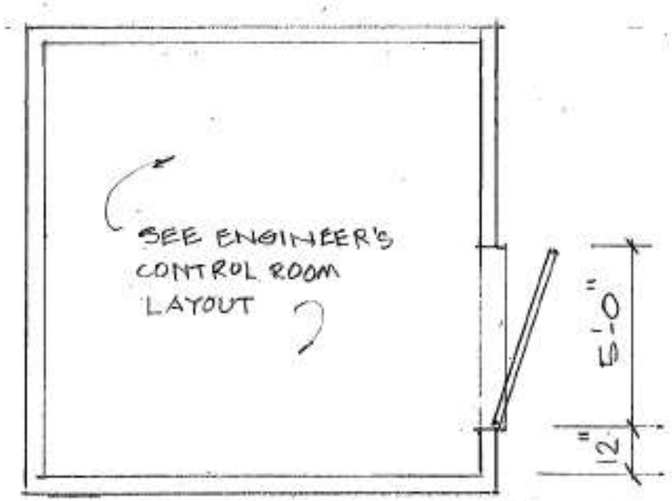



PLAN

DATE:
10.05.20

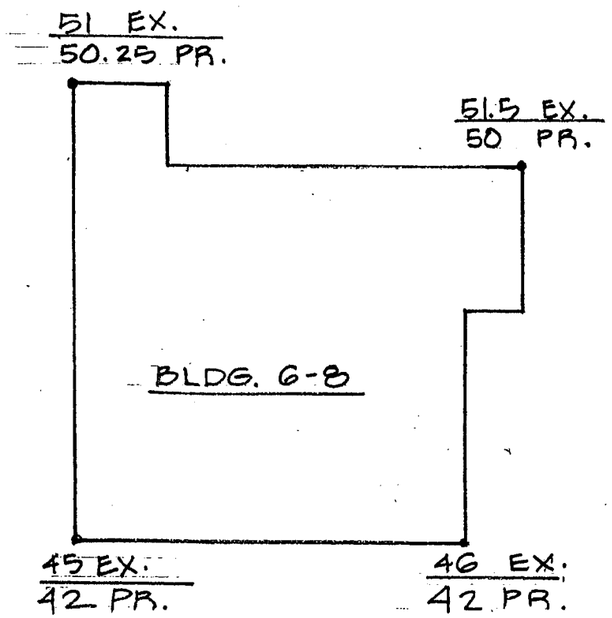
CONTROL ROOM SCHEMATIC DESIGN

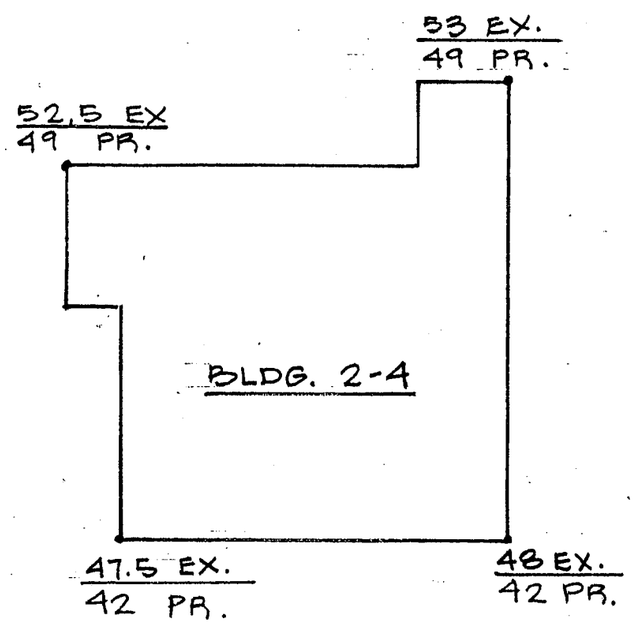
CLOVERLEAF TRURO RENTAL HOUSING
TRURO, MASSACHUSETTS

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville ,Massachusetts 02145 ~ 617.623.1833

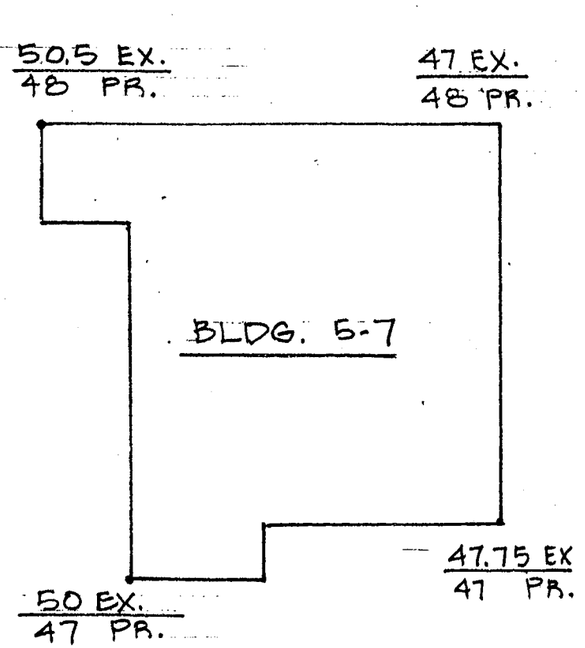
NA

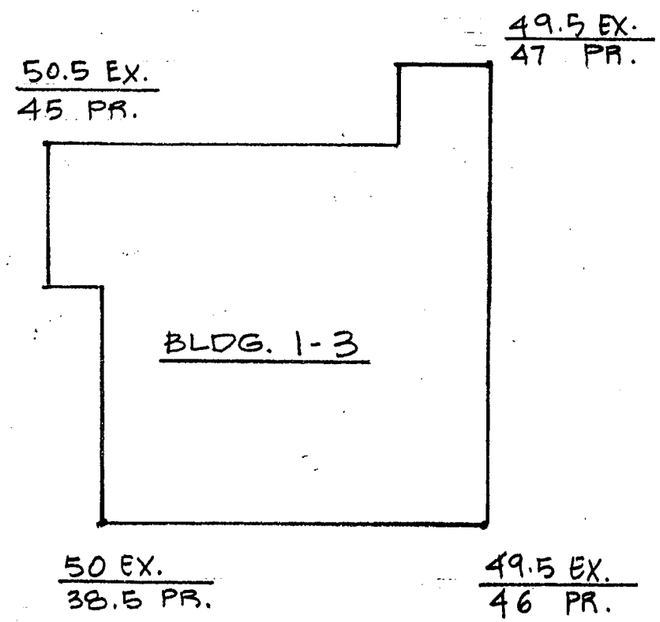
CR. 1

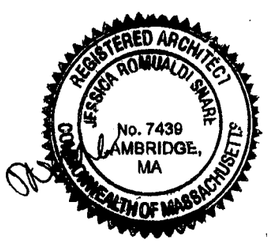



| | 6-8 | 2-4 | 5-7 | 1-3 |
|---|---|---|---|---|
| AVERAGE EXISTING GRADE | 48.3 | 50.25 | 48.8 | 49.8 |
| AVERAGE PROPOSED GRADE | 46 | 45.5 | 47.5 | 44.12 |
| AVG. BUILDING HEIGHT ABOVE EXISTING GRADE | 26.2 | 23.25 | 22.7 | 21.7 |
| AVG. BUILDING HEIGHT ABOVE PROPOSED GRADE | 28.5 | 28 | 24 | 27.38 |
| ACTUAL ELEVATION ABOVE SEA LEVEL TO PROPOSED RIDGE LINE | 74.5 | 73.5 | 71.5 | 71.5 |



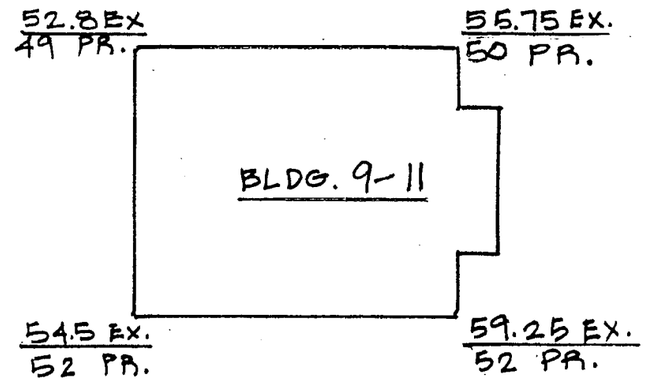

BUILDING HEIGHT CALCULATIONS

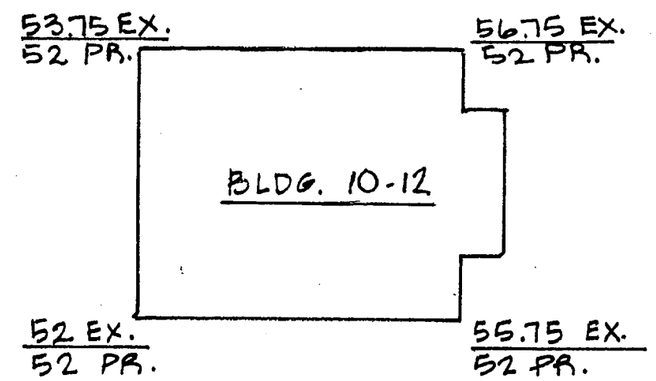
BUILDINGS 1-3, 2-4, 5-7, 6-8
CLOVERLEAF TRURO RENTAL HOUSING

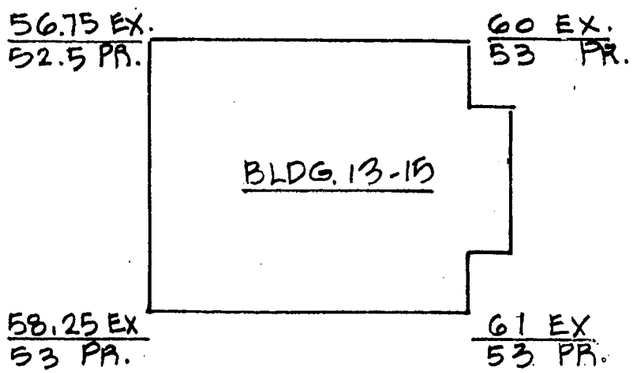
SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street, Somerville, Massachusetts 02145 ~ 617.623.1833

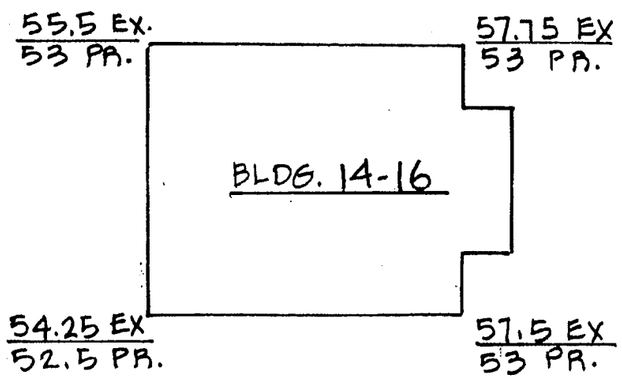
2.20.20

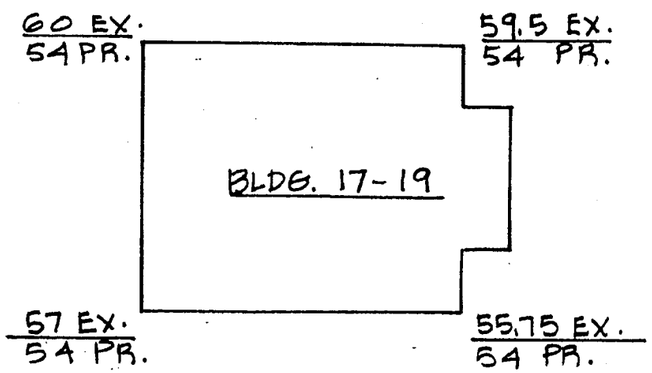
A-3

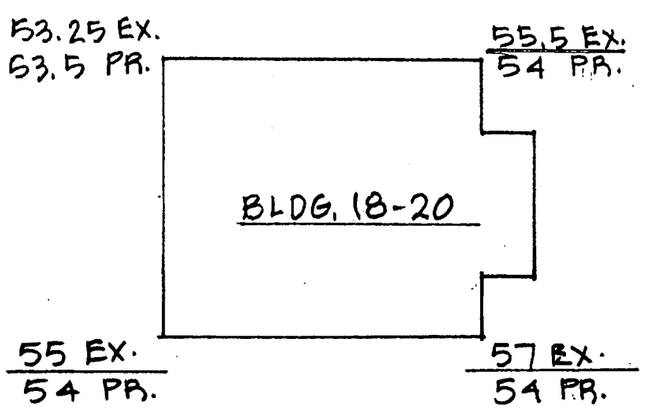



| | 9-11 | 10-12 | 13-15 | 14-16 | 17-19 | 18-20 |
|---|---|---|---|---|---|---|
| AVERAGE EXISTING GRADE | 55.5 | 54.5 | 59.0 | 56.25 | 58.0 | 55.18 |
| AVERAGE PROPOSED GRADE | 50.75 | 52.0 | 52.8 | 52.8 | 54.0 | 53.87 |
| BLDG. HEIGHT ABOVE EXISTING GRADE | 25'-3" | 27'-3" | 23'-9" | 26'-6" | 25'-9" | 28'-6" |
| BLDG. HEIGHT ABOVE PROPOSED GRADE | 29'-6" | 29'-9" | 29'-9" | 29'-11" | 29'-9" | 29'-9" |
| ACTUAL ELEVATION ABOVE SEA LEVEL TO PROPOSED RIDGELINE | 79.0 | 80.0 | 81.0 | 81.0 | 82.0 | 82.0 |

REGISTERED ARCHITECT
JESSICA ROMUALDI SNARE
No. 7439
CAMBRIDGE, MA
COMMONWEALTH OF MASSACHUSETTS

REVISED 8-31-20

BUILDING HEIGHT CALCULATIONS

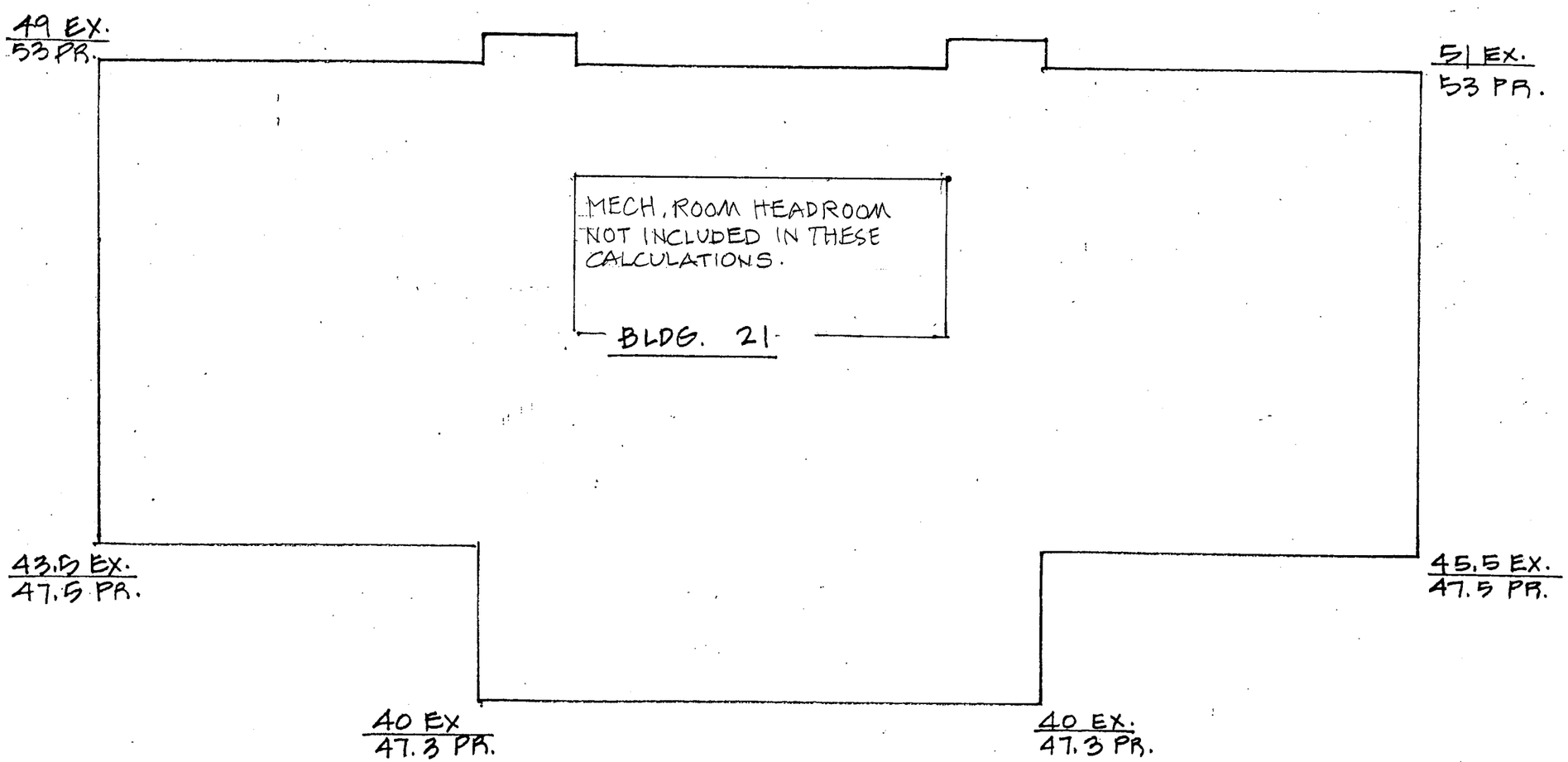
CLOVERLEAF 9-11, 10-12, 13-15, 14-16, 17-19, 18+20
CLOVERLEAF TRURO RENTAL HOUSING

SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street Somerville, Massachusetts 02145 – 617.623.1833

2-20-20

A3

| | |
|---|---|
| AVERAGE EXISTING GRADE | 44.8 |
| AVERAGE PROPOSED GRADE | 49.2 |
| BLDG. HEIGHT ABOVE AVG. EXISTING GRADE | 29.5 |
| BLDG. HEIGHT ABOVE AVG. PROPOSED GRADE | 25.3 |
| ACTUAL ELEVATION ABOVE SEA LEVEL TO PROPOSED RIDGELINE | 74.5 |




REVISED 9-24-20

BUILDING HEIGHT CALCULATIONS

CLOVERLEAF BLDG. 21

CLOVERLEAF TRURO RENTAL HOUSING


SPRING HILL DESIGN

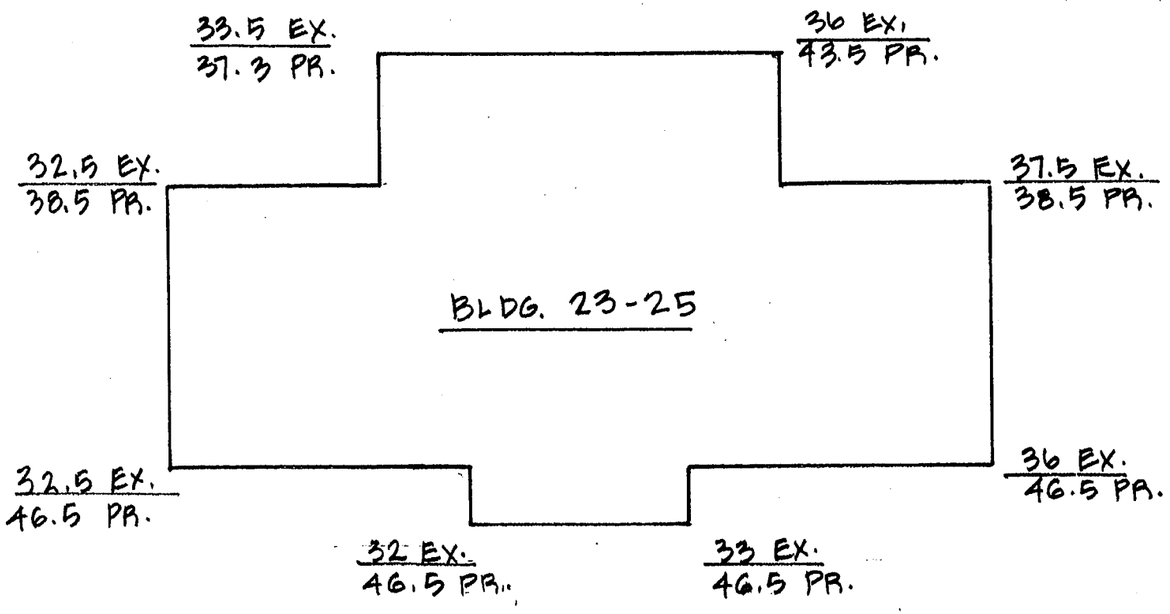
ARCHITECTURE INTERIORS SPACE PLANNING

21 Dartmouth Street Somerville, Massachusetts 02145 – 617.623.1833

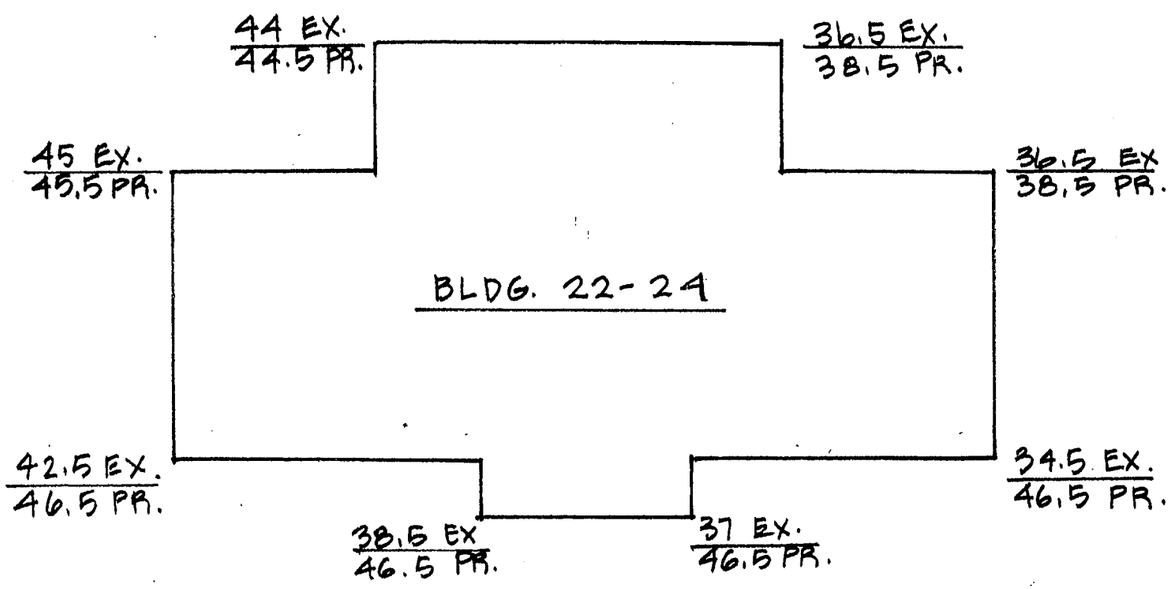

REGISTERED ARCHITECT
JESSICA ROMUALDI SNARE
No. 7439
CAMBRIDGE, MA
COMMONWEALTH OF MASSACHUSETTS

2-20-20

A3




| | 23-25 | 22-24 |
|---|---|---|
| AVERAGE EXISTING GRADE | 34.75 | 39.7 |
| AVERAGE PROPOSED GRADE | 43.0 | 44.12 |
| BLDG. HEIGHT ABOVE EXISTING GRADE (AVG.) | 36'-11" | 31'-11" |
| BLDG. HEIGHT ABOVE PROPOSED GRADE (AVG.) | 28'-8" | 29'-6" |
| ACTUAL ELEVATION ABOVE SEA LEVEL TO PROPOSED RIDGELINE | 71.8 | 71.8 |




REGISTERED ARCHITECT
JESSICA ROMUALDI SNARE
No. 7439
CAMBRIDGE, MA
COMMONWEALTH OF MASSACHUSETTS

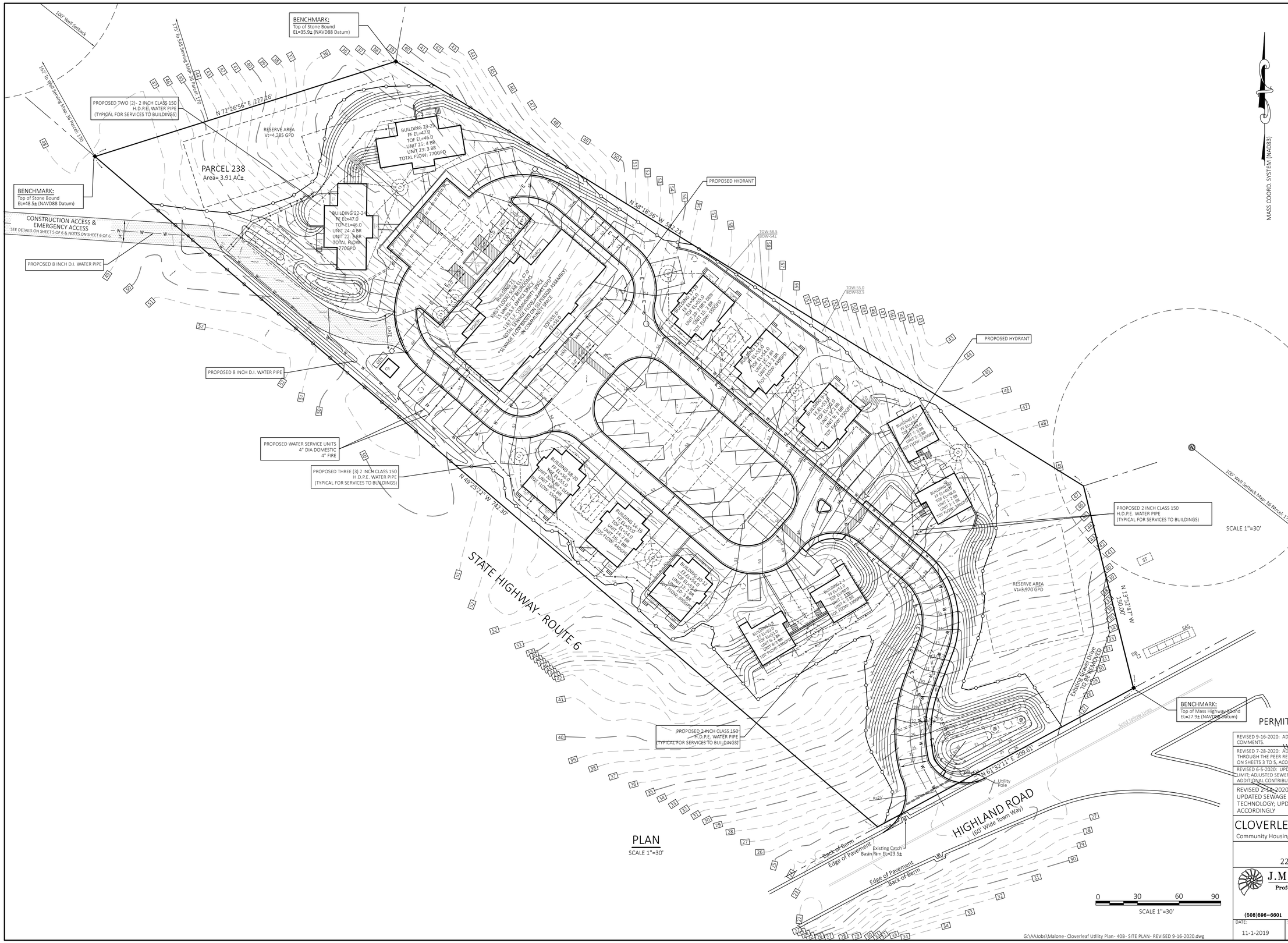
BUILDING HEIGHT CALCULATIONS

CLOVERLEAF 22-24, 23-25
CLOVERLEAF TRURO RENTAL HOUSING

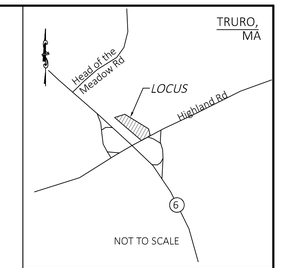
SPRING HILL DESIGN
ARCHITECTURE INTERIORS SPACE PLANNING
21 Dartmouth Street Somerville, Massachusetts 02145 - 617.623.1833

2-20-20

A3




PLAN
SCALE 1"=30'




PLAN BOOK 672 PAGE 34
ASSESSORS' MAP 36 PARCEL 238

## LEGEND

| | |
|---|---|
| 32 | EXISTING CONTOUR |
| 32 | PROPOSED CONTOUR |
| ×12.34 | EXISTING SPOT GRADE |
| 24x5 | PROPOSED SPOT GRADE |
| W | WATER SERVICE LINE |
| E | UNDERGROUND UTILITY SERVICE |
| G | GAS SERVICE LINE |
| | TEST HOLE / BORING LOCATION |
| ST | SEPTIC TANK |
| DB | DISTRIBUTION BOX |
| SAS | SOIL ABSORPTION SYSTEM |
| Reserve | RESERVED FOR FUTURE |
| | UTILITY POLE |
| | CATCH BASIN |
| | FIRE HYDRANT |
| W | WELL |
| | DRAINAGE MANHOLE |
| | CONCRETE BOUND, FOUND |
| | TOP OF BANK |
| | LIMIT OF WORK |
| | FENCE |
| PT | UNDERGROUND PROPANE TANK |
| | 12' x 6' LEACHING DRYWELL (ROOF) |
| | TRANSFORMER PAD- UTILITY CLUSTER |
| GEN | GENERATOR |

SHEET 1 OF 6
PERMIT SET- NOT FOR CONSTRUCTION

REVISED 9-16-2020: ADJUSTED GRADING AND DRAINAGE SO AS TO ADDRESS PEER REVIEW COMMENTS.

REVISED 7-28-2020: ADJUSTED SEWAGE SYSTEM AND DRAINAGE FACILITIES AS REQUESTED THROUGH THE PEER REVIEW. MODIFIED SWALE AND DRAINAGE FACILITIES; MODIFIED NOTES ON SHEETS 3 TO 5; ACCORDINGLY.

REVISED 6-5-2020: UPDATED SEWAGE SYSTEM TREATMENT TO INCLUDE 10 PPM NITROGEN LIMIT; ADJUSTED SEWER MANHOLE LAYOUT; ADJUSTED DRAINAGE TO INCLUDE SWALES AND ADDITIONAL CONTRIBUTORY AREAS; UPDATED NOTES AND DETAILS ACCORDINGLY

REVISED 2-14-2020: UPDATED BUILDING LAYOUT, ADJUSTED ENTRANCE; UPDATED SEWAGE SYSTEM COLLECTION AND ADDED I.A. TREATMENT TECHNOLOGY; UPDATED WATER SERVICE LAYOUT AND DRAINAGE ACCORDINGLY

# CLOVERLEAF TRURO RENTAL HOUSING

Community Housing Resource, Inc.; P.O. Box 1015, Provincetown, MA 02657

## SITE PLAN

22 HIGHLAND ROAD, TRURO, MA

J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services
1573 Main Street – Route 6A
P.O. Box 1773
(508)896-6601 Office Brewster, MA 02631 (508)896-6602 Fax

| DATE: | SCALE: | BY: | CHECK: | JOB NUMBER: |
|---|---|---|---|---|
| 11-1-2019 | As Noted | RFR | JMO | JMO-8446A |

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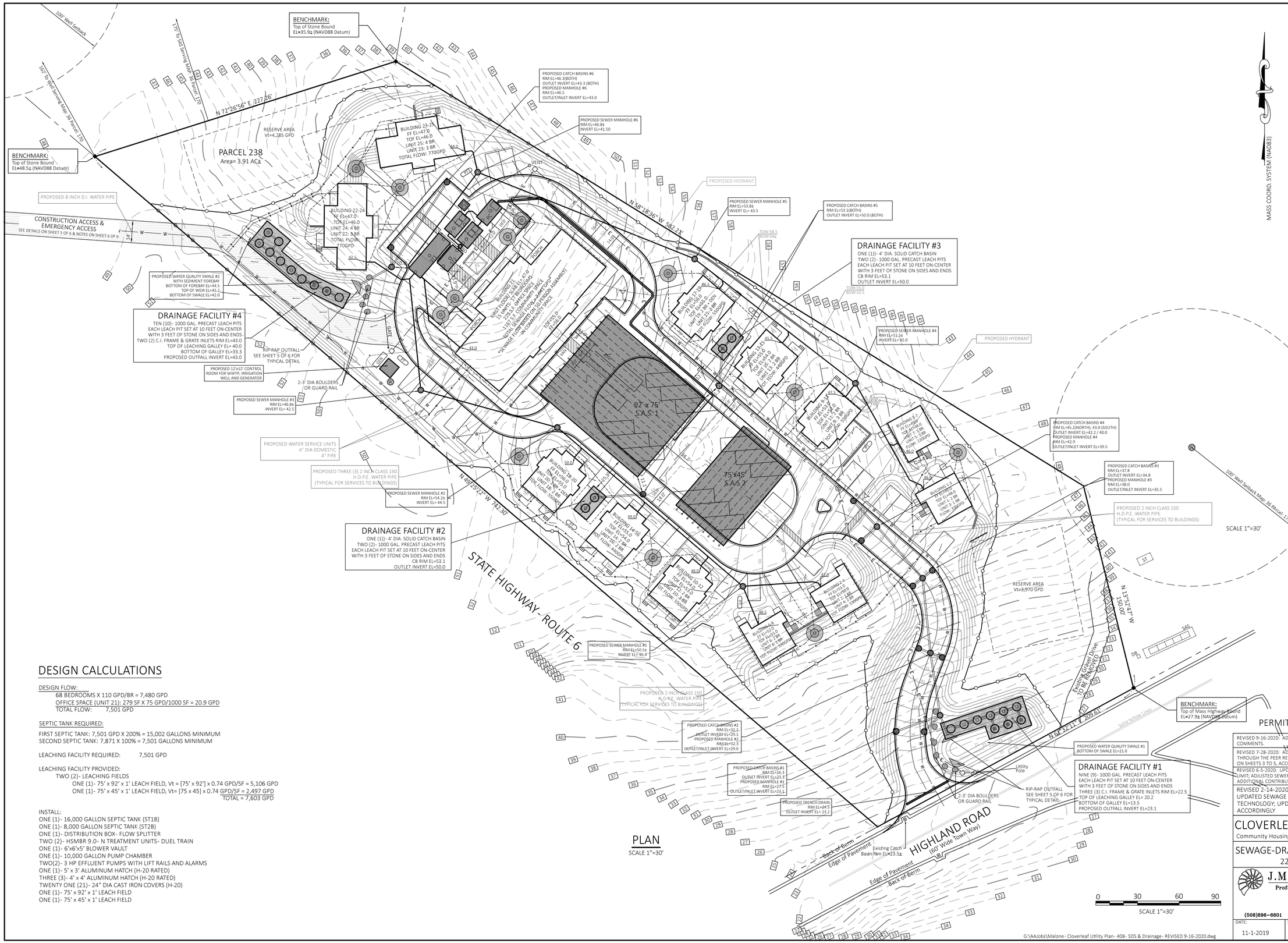



PLAN
SCALE 1"=30'

## DESIGN CALCULATIONS

DESIGN FLOW:
68 BEDROOMS X 110 GPD/BR = 7,480 GPD
OFFICE SPACE (UNIT 21): 279 SF X 75 GPD/1000 SF = 20.9 GPD
TOTAL FLOW: 7,501 GPD

SEPTIC TANK REQUIRED:

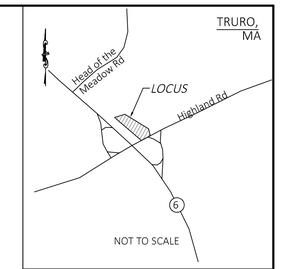
FIRST SEPTIC TANK: 7,501 GPD X 200% = 15,002 GALLONS MINIMUM
SECOND SEPTIC TANK: 7,871 X 100% = 7,501 GALLONS MINIMUM

LEACHING FACILITY REQUIRED: 7,501 GPD

LEACHING FACILITY PROVIDED:
TWO (2)- LEACHING FIELDS
ONE (1)- 75' x 92' x 1' LEACH FIELD, Vt = [75' x 92'] x 0.74 GPD/SF = 5,106 GPD
ONE (1)- 75' x 45' x 1' LEACH FIELD, Vt= [75 x 45] x 0.74 GPD/SF = 2,497 GPD
TOTAL = 7,603 GPD

INSTALL:
ONE (1)- 16,000 GALLON SEPTIC TANK (ST1B)
ONE (1)- 8,000 GALLON SEPTIC TANK (ST2B)
ONE (1)- DISTRIBUTION BOX- FLOW SPLITTER
TWO (2)- HSMBR 9.0- N TREATMENT UNITS- DUEL TRAIN
ONE (1)- 6'x6'x5' BLOWER VAULT
ONE (1)- 10,000 GALLON PUMP CHAMBER
TWO(2)- 3 HP EFFLUENT PUMPS WITH LIFT RAILS AND ALARMS
ONE (1)- 5' x 3' ALUMINUM HATCH (H-20 RATED)
THREE (3)- 4' x 4' ALUMINUM HATCH (H-20 RATED)
TWENTY ONE (21)- 24" DIA CAST IRON COVERS (H-20)
ONE (1)- 75' x 92' x 1' LEACH FIELD
ONE (1)- 75' x 45' x 1' LEACH FIELD

TRURO, MA




NOT TO SCALE

PLAN BOOK 672 PAGE 34
ASSESSORS' MAP 36 PARCEL 238

## LEGEND

| | |
|---|---|
| 32 | EXISTING CONTOUR |
| 32 | PROPOSED CONTOUR |
| ×12.34 | EXISTING SPOT GRADE |
| 24x5 | PROPOSED SPOT GRADE |
| W | WATER SERVICE LINE |
| E | UNDERGROUND UTILITY SERVICE |
| G | GAS SERVICE LINE |
| TB | TEST HOLE / BORING LOCATION |
| ST | SEPTIC TANK |
| DB | DISTRIBUTION BOX |
| SAS | SOIL ABSORPTION SYSTEM |
| Reserve | RESERVED FOR FUTURE |
| | UTILITY POLE |
| | CATCH BASIN |
| | FIRE HYDRANT |
| W | WELL |
| | DRAINAGE MANHOLE |
| | STORMWATER FLOW ARROW |
| | CONCRETE BOUND, FOUND |
| | TOP OF BANK |
| | LIMIT OF WORK |
| | FENCE |
| PT | UNDERGROUND PROPANE TANK |
| | 12' x 6' LEACHING DRYWELL (ROOF) |
| | TRANSFORMER PAD- UTILITY CLUSTER |
| GEN | GENERATOR |

SHEET 2 OF 6
PERMIT SET- NOT FOR CONSTRUCTION

REVISED 9-16-2020: ADJUSTED GRADING AND DRAINAGE SO AS TO ADDRESS PEER REVIEW COMMENTS.

REVISED 7-28-2020: ADJUSTED SEWAGE SYSTEM AND DRAINAGE FACILITIES AS REQUESTED THROUGH THE PEER REVIEW. MODIFIED SWALE AND DRAIANGE FACILITIES; MODIFIED NOTES ON SHEETS 3 TO 5, ACCORDINGLY.

REVISED 6-5-2020: UPDATED SEWAGE SYSTEM TREATMENT TO INCLUDE 10 PPM NITROGEN LIMIT; ADJUSTED SEWER MANHOLE LAYOUT; ADJUSTED DRAINAGE TO INCLUDE SWALES AND ADDITIONAL CONTRIBUTORY AREAS; UPDATED NOTES AND DETAILS ACCORDINGLY

REVISED 2-14-2020: UPDATED BUILDING LAYOUT, ADJUSTED ENTRANCE; UPDATED SEWAGE SYSTEM COLLECTION AND ADDED I.A. TREATMENT TECHNOLOGY; UPDATED WATER SERVICE LAYOUT AND DRAINAGE ACCORDINGLY

# CLOVERLEAF TRURO RENTAL HOUSING

Community Housing Resource, Inc.; P.O. Box 1015, Provincetown, MA 02657

## SEWAGE-DRAINAGE SITE PLAN- 40B PERMIT SET

22 HIGHLAND ROAD, TRURO, MA

J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services
1573 Main Street – Route 6A
P.O. Box 1773
(508)896-6601 Office Brewster, MA 02631 (508)896-6602 Fax

| DATE: | SCALE: | BY: | CHECK: | JOB NUMBER: |
|---|---|---|---|---|
| 11-1-2019 | As Noted | RFR | JMO | JMO-8446A |

G:\AAJobs\Malone- Cloverleaf Utility Plan- 40B- SDS & Drainage- REVISED 9-16-2020.dwg

## GENERAL NOTES:

A.) NEITHER DRIVEWAYS NOR PARKING AREAS ARE ALLOWED OVER SEPTIC SYSTEM UNLESS H-20 COMPONENTS ARE USED.

B.) THE DESIGNER WILL NOT BE RESPONSIBLE FOR THE SYSTEM AS DESIGNED UNLESS CONSTRUCTED AS SHOWN. ANY CHANGES SHALL BE APPROVED IN WRITING.

C.) CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCEMENT OF WORK.

## CONSTRUCTION NOTES:

1.) ALL CONSTRUCTION SHALL CONFORM TO THE STATE ENVIRONMENTAL CODE, TITLE 5, AND THE REQUIREMENTS OF THE LOCAL BOARD OF HEALTH.

2.) SEPTIC TANK(S), GREASE TRAP(S), DOSING CHAMBER(S) AND DISTRIBUTION BOX(ES) SHALL BE SET ON A LEVEL STABLE BASE WHICH HAS BEEN MECHANICALLY COMPACTED, OR ON A 6 INCH CRUSHED STONE BASE.

3.) SEPTIC TANK(S) SHALL MEET ASTM STANDARD C1127-93 AND SHALL HAVE AT LEAST THREE 20" DIAMETER MANHOLES. THE MINIMUM DEPTH FROM THE BOTTOM OF THE SEPTIC TANK TO THE FLOW LINE SHALL BE 48".

4.) SCHEDULE 40 PVC INLET AND OUTLET TEES SHALL EXTEND A MINIMUM OF 6" ABOVE THE FLOW LINE OF THE SEPTIC TANK AND SHALL BE INSTALLED ON THE CENTERLINE OF THE TANK DIRECTLY UNDER THE CLEANOUT MANHOLE.

5.) RAISE COVERS OF THE SEPTIC TANK AND DISTRIBUTION BOX WITH PRECAST CONCRETE WATER TIGHT RISERS OVER INLET AND OUTLET TEES TO WITHIN 6" OF FINISH GRADE, OR AS APPROVED BY THE LOCAL BOARD OF HEALTH AGENT.

6.) ALL SEWER PIPING SHALL CONSIST OF 6" SDR-35 OR EQUIVALENT. PIPE SHALL BE LAID ON A MINIMUM CONTINUOUS GRADE OF NOT LESS THAN 1% OR AS SPECIFIED.

7.) DISTRIBUTION LINES FOR SOIL ABSORPTION SYSTEM (AS REQUIRED) SHALL BE 1 1/2" DIA. SCHEDULE 40 PVC. SEE DETAILS FOR ADDITIONAL INFORMATION

8.) OUTLET PIPES FROM DISTRIBUTION BOX SHALL REMAIN LEVEL FOR AT LEAST 2' BEFORE PITCHING TO SOIL ABSORPTION SYSTEM. WATER TEST DISTRIBUTION BOX TO ASSURE EVEN DISTRIBUTION.

9.) DISTRIBUTION BOX SHALL HAVE A MINIMUM SUMP OF 6" MEASURED BELOW THE OUTLET INVERT.

10.) BASE AGGREGATE FOR THE LEACHING FACILITY SHALL CONSIST OF 3/4" TO 1-1/2" DOUBLE WASHED STONE FREE OF IRON, FINES AND DUST AND SHALL BE INSTALLED BELOW THE CROWN OF THE DISTRIBUTION LINE TO THE BOTTOM OF THE SOIL ABSORPTION SYSTEM. BASE AGGREGATE SHALL BE COVERED WITH A 2" LAYER OF 1/8" TO 1/2" DOUBLE WASHED STONE FREE OF IRON, FINES AND DUST.

11.) VENT SOIL ABSORPTION SYSTEM WHEN DISTRIBUTION LINES EXCEED 50 FEET; WHEN LOCATED EITHER IN WHOLE OR IN PART UNDER DRIVEWAYS, PARKING AREAS, TURNING AREAS OR OTHER IMPERVIOUS MATERIAL; OR WHEN PRESSURE DOSED.

12.) SOIL ABSORPTION SYSTEM SHALL BE COVERED WITH A MINIMUM OF 9" OF CLEAN MEDIUM SAND (EXCLUDING TOPSOIL).

13.) FINISH GRADE SHALL BE A MAXIMUM OF 36" OVER THE TOP OF ALL SYSTEM COMPONENTS, INCLUDING THE SEPTIC TANK, DISTRIBUTION BOX, DOSING CHAMBER AND SOIL ABSORPTION SYSTEM. SEPTIC TANKS SHALL HAVE A MINIMUM COVER OF 9".

14.) FROM THE DATE OF INSTALLATION OF THE SOIL ABSORPTION SYSTEM UNTIL RECEIPT OF A CERTIFICATE OF COMPLIANCE, THE PERIMETER OF THE SOIL ABSORPTION SYSTEM SHALL BE STAKED AND FLAGGED TO PREVENT THE USE OF SUCH AREA FOR ALL ACTIVITIES THAT MIGHT DAMAGE THE SYSTEM.

15.) THE BOARD OF HEALTH SHALL REQUIRE INSPECTION OF ALL CONSTRUCTION BY AN AGENT OF THE BOARD OF HEALTH (OR THE DESIGNER IF THIS SYSTEM REQUIRES A VARIANCE) AND MAY REQUIRE SUCH PERSON TO CERTIFY IN WRITING THAT ALL WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE TERMS OF THE PERMIT AND APPROVED PLANS. 48 HOURS ADVANCE NOTICE IS REQUESTED.

16.) two (2) 4" PVC INSPECTION PORT TO BE RAISED TO WITHIN 3" OF FINISH GRADE FOR EACH LEACHING FIELD. BOTH INSPECTION PORTS TO BE PROVIDED WITH CAST IRON CLEANOUT COVERS AT FINISH GRADE. REFER TO S.A.S. DETAIL.

17.) INSTALLER TO CONFIRM LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO START OF CONSTRUCTION.

18.) WATER/SEWER CROSSING: WASTELINE SHALL BE A 20' SECTION OF PVC PIPE CENTERED OVER THE WATER LINE TO MAXIMIZE DISTANCE TO JOINTS.

19.) BUILDING SEWER CLEAN-OUT: A 4" DIA PVC CLEAN OUT PIPE SHALL BE PROVIDED AT AT ALL BUILDING CONNECTIONS FOR THE SEWER LINES. CLEAN-OUT PIPE SHALL BE FINISHED WITH A 4 INCH DIA SCREW CAP BROUGHT TO FINISH GRADE.

20.) SEWER BENDS: A 4" DIA PVC CLEAN OUT SHALL BE PROPOVED AT ALL SEWER PIPE BENDS GREATER THAN 22.5°. THE CLEAN-OUT SHALL BE FINISHED WITH A 4" DIA SCREW CAP BROUGHT TO FINISH GRADE. THE SCREW CAP SHALL BE PROTECTED BY INSTALLING AN 8" DIA C.I. CURB BOX.

## SOIL LOGS:

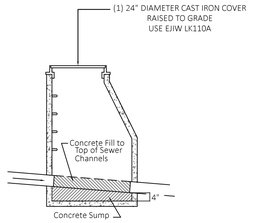
HAND AUGER 1: EL = 58.0±

| DEPTH FROM SURFACE (INCHES) | SOIL HORIZON | SOIL TEXTURE (USDA) | SOIL COLOR (MUNSELL) | SOIL MOTTLING | OTHER |
|---|---|---|---|---|---|
| 0-6 | A | FINE LOANY SAND | 10YR3/1 | | |
| 6-24 | C1 | COARSE SAND | 10YR7/8 | NONE | |
| 24-186 | C2 | COARSE SAND | 10YR6/4 | | |
| | | | | | NO WATER ENCOUNTERED |
| | | | | | |

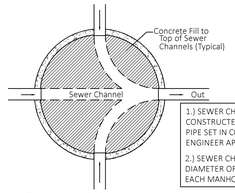
DATE OF TESTING: 10-16-2019
PERCOLATION RATE: LESS THAN 52 MIN/INCH IN C1 LAYERS (ASSUMED)
WITNESSED BY: ROBERT REEDY, EIT, J.M. O'REILLY & ASSOCIATES, INC.
NO GROUNDWATER WAS ENCOUNTERED
USE A LOADING RATE OF 0.74 GPD/SF FOR SIZING OF SOIL ABSORPTION SYSTEM.

## PROFILE OF SEWER MANHOLES:

NOT TO SCALE




Sewer Manhole
600 Gallon
Pre-cast Concrete Manhole with Off-set Cover




Sewer Manhole
PLAN VIEW
Not To Scale

1.) SEWER CHANNELS SHALL BE CONSTRUCTED OF BRICK OR PVC PIPE SET IN CONCRETE OR OF ENGINEER APPROVED EQUAL.

2.) SEWER CHANNELS MUST MATCH DIAMETER OF OUTLET PIPE FOR EACH MANHOLE

## PUMP DOSING PROGRAM:

1. BOTH PUMPS MUST BE CAPABLE OF PUMPING AT LEAST 90 GPM AGAINST A TOTAL DYNAMIC HEAD OF 30'± (USE (2) MYERS EFF. PUMP- 2 HP OR ENGINEER APPROVED EQUIVALENT).
2. BOTH PUMPS SHALL BE OPERATED ON A TIMER CYCLE.
   SAS #1 PUMP: SHALL RUN FOR MAXIMUM OF 5 MINUTES EVERY 30 MINUTES:
   TOTAL DOSE PER HOUR = 900 GALLONS;
   SAS #2 PUMP: PUMP SHALL RUN FOR A MAXIMUM OF 3 MINUTES EVERY 30 MINUTES:
   TOTAL DOSE PER HOUR = 540 GALLONS
3. FLOAT SYSTEM:
   LOW WATER FLOAT - BOTH PUMPS OFF
   OPERATIONAL FLOAT- BOTH PUMPS ARE AVAILABLE FOR CYCLE PUMPING
   HIGH WATER FLOAT- ALTERNATE PUMP ENGAUGES AND PUMPS TO LOW WATER FLOAT IS ENGAUGED
   HIGH WATER ALARM FLOAT- ALARM SOUNDS- REMOTE DIALER IS ENGAGED TO WWTP OPERATOR.

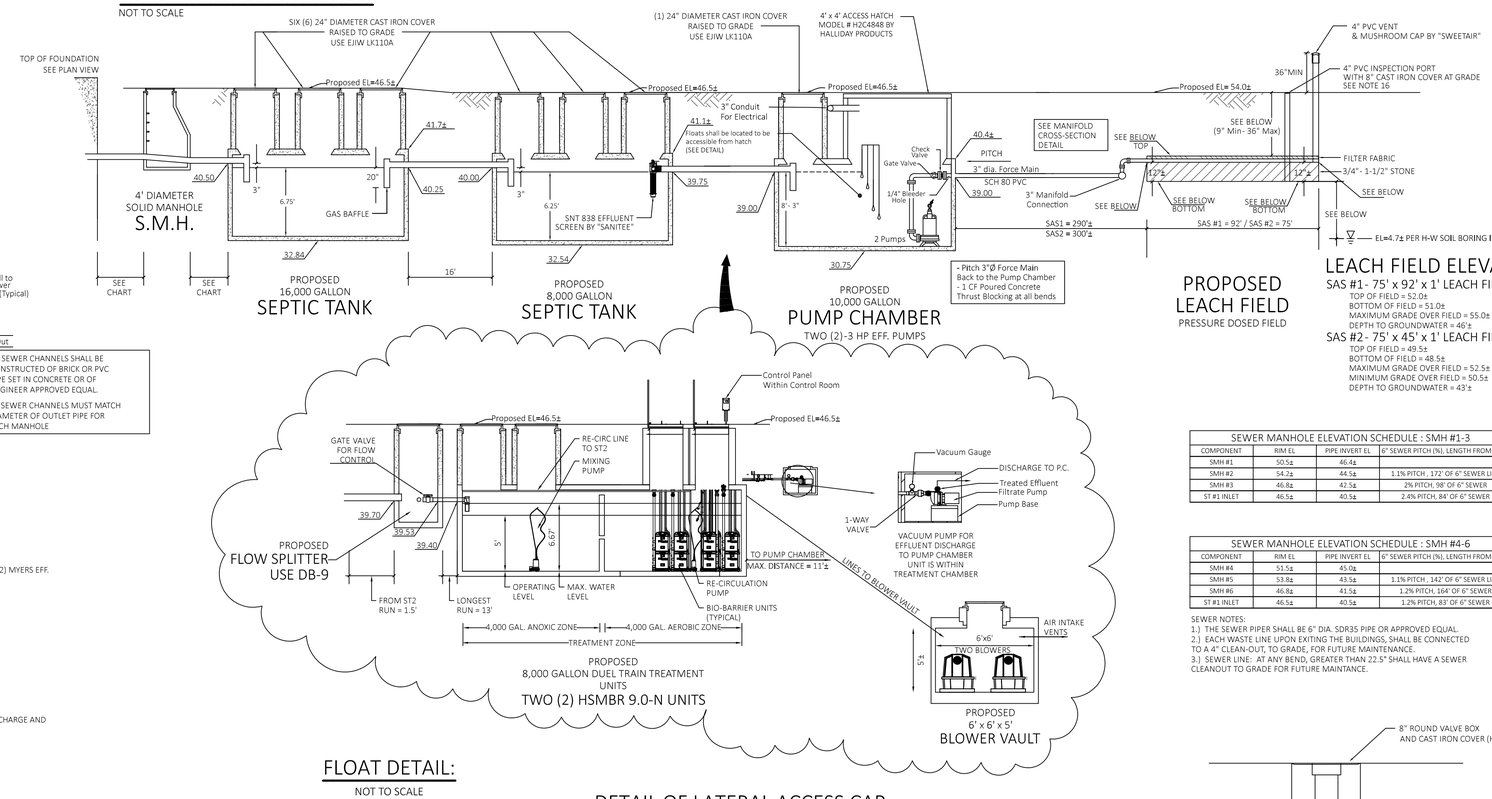
NOTE:
ONCE PUMPS INSTALLED WITHIN CHAMBER, TIMING AND DOSAGE SHALL BE ADJUSTED TO REFLECT ACTUAL PUMP DISCHARGE AND FLOW RATES.

## OPERATIONAL NOTES & REQUIREMENTS:

1.) ALL WIRING AND CONNECTIONS SHALL BE IN COMPLIANCE WITH THE MA STATE ELECTRICAL CODE AS WELL AS TO THE MANUFACTURER'S SPECIFICATIONS. ALL WORK SHALL BE COMPLETED BY A LICENSED ELECTRICIAN.
2.) THE ALARM SHALL CONSIST OF A RED WARNING LIGHT, AN AUDIBLE ALARM AND A REMOTE DIALER SO AS TO NOTIFY THE WWTP OPERATOR OF THE ALARM EVENT. LIGHT AND ALARM SHALL BE MOUNTED TO THE SIDE OF THE CONTROL BUILDING.
3.) ALL CORDS FOR PUMPS AND FLOATS SHALL BE CONTINUOUS FROM THE TREATMENT WORKS TO THE JUNCTION DISCONNECT BOX.
4.) JUNCTION DISCONNECT BOX SHALL BE LOCATED ADJACENT TO THE CONTROL BUILDING.

## SCHEMATIC FLOW PROFILE:

NOT TO SCALE




## LEACH FIELD ELEVATIONS:

SAS #1- 75' x 92' x 1' LEACH FIELD
TOP OF FIELD = 52.0±
BOTTOM OF FIELD = 51.0±
MAXIMUM GRADE OVER FIELD = 55.0±
DEPTH TO GROUNDWATER = 46'±

SAS #2- 75' x 45' x 1' LEACH FIELD
TOP OF FIELD = 49.5±
BOTTOM OF FIELD = 48.5±
MAXIMUM GRADE OVER FIELD = 52.5±
MINIMUM GRADE OVER FIELD = 50.5±
DEPTH TO GROUNDWATER = 43'±



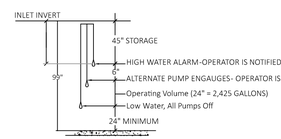

| SEWER MANHOLE ELEVATION SCHEDULE : SMH #1-3 | | | |
|---|---|---|---|
| COMPONENT | RIM EL | PIPE INVERT EL | 6" SEWER PITCH (%), LENGTH FROM PREV |
| SMH #1 | 50.5± | 46.4± | |
| SMH #2 | 54.2± | 44.5± | 1.1% PITCH , 172' OF 6" SEWER LINE |
| SMH #3 | 46.8± | 42.5± | 2% PITCH, 98' OF 6" SEWER |
| ST #1 INLET | 46.5± | 40.5± | 2.4% PITCH, 84' OF 6" SEWER |

| SEWER MANHOLE ELEVATION SCHEDULE : SMH #4-6 | | | |
|---|---|---|---|
| COMPONENT | RIM EL | PIPE INVERT EL | 6" SEWER PITCH (%), LENGTH FROM PREV |
| SMH #4 | 51.5± | 45.0± | |
| SMH #5 | 53.8± | 43.5± | 1.1% PITCH , 142' OF 6" SEWER LINE |
| SMH #6 | 46.8± | 41.5± | 1.2% PITCH, 164' OF 6" SEWER |
| ST #1 INLET | 46.5± | 40.5± | 1.2% PITCH, 83' OF 6" SEWER |

SEWER NOTES:
1.) THE SEWER PIPER SHALL BE 6" DIA. SDR35 PIPE OR APPROVED EQUAL.
2.) EACH WASTE LINE UPON EXITING THE BUILDINGS, SHALL BE CONNECTED TO A 4" CLEAN-OUT, TO GRADE, FOR FUTURE MAINTENANCE.
3.) SEWER LINE: AT ANY BEND, GREATER THAN 22.5° SHALL HAVE A SEWER CLEANOUT TO GRADE FOR FUTURE MAINTANCE.

## FLOAT DETAIL:

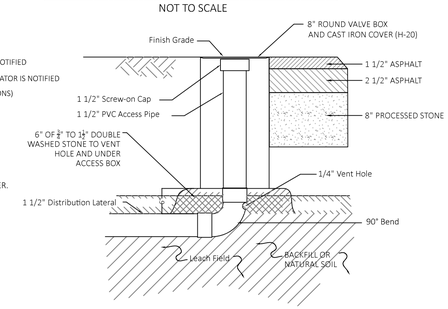
NOT TO SCALE

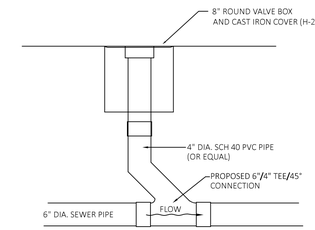



*FLOAT INSTALLATION NOTES:
1.) FLOATS SHALL BE INSTALLED WITH A CABLE WEIGHT AND SHALL NOT BE TETHERED TO THE DISCHARGE LINE IN ORDER TO ALLOW FOR THEM TO BE PULLED UP TO THE TOP OF PUMP CHAMBER.
2.) FLOATS SHALL BE INSTALLED SO THAT THEY CAN BE ACCESSED FROM OUTLET MANHOLE COVER.
3.) FLOATS MUST BE INSTALLED SO THAT THEY ARE FREE TO MOVE THROUGHOUT IT'S TRAVEL AND NOT CONTACT THE PUMP BODY, PIPING, OR OTHER OBJECTS.

## DETAIL OF LATERAL ACCESS CAP

NOT TO SCALE



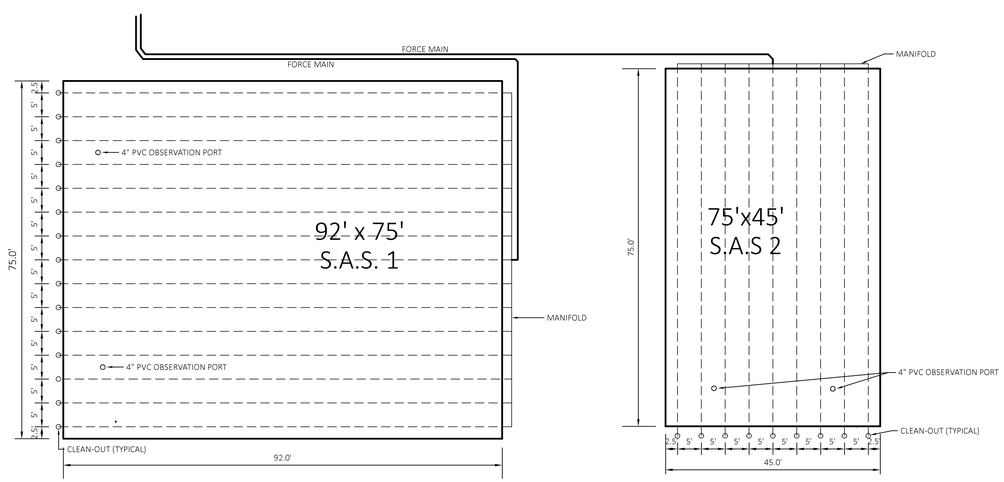




## CLEAN-OUT DETAIL

NOT TO SCALE:

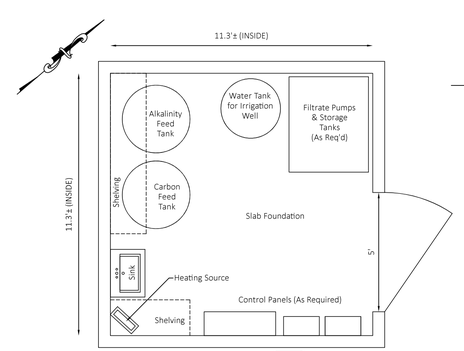
## SOIL ABSORPTION SYSTEM DETAIL:

NOT TO SCALE



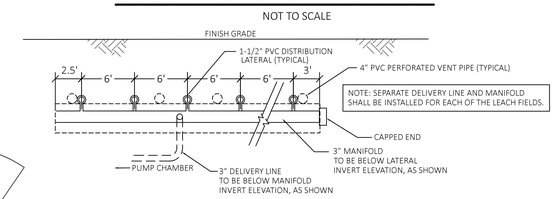

## CONTROL ROOM LAYOUT

SCALE: 1" = 3'




## MANIFOLD CROSS-SECTION DETAIL

NOT TO SCALE




NOTE: SEPARATE DELIVERY LINE AND MANIFOLD SHALL BE INSTALLED FOR EACH OF THE LEACH FIELDS.

0 30 60 90
SCALE 1"=30'

SHEET 3 OF 6
PERMIT SET- NOT FOR CONSTRUCTION

REVISED9-16-2020: ADJUSTED GRADING AND DRAINAGE SO AS TO ADDRESS PEER REVIEW COMMENTS.

REVISED 7-28-2020: ADJUSTED SEWAGE SYSTEM AND DRAINAGE FACILITIES AS REQUESTED THROUGH THE PEER REVIEW. MODIFIED SWALE AND DRAIANGE FACILITIES; MODIFIED NOTES ON SHEETS 3 TO 5, ACCORDINGLY.

REVISED 6-5-2020: UPDATED SEWAGE SYSTEM TREATMENT TO INCLUDE 10 PPM NITROGEN LIMIT; ADJUSTED SEWER MANHOLE LAYOUT; ADJUSTED DRAINAGE TO INCLUDE SWALES AND ADDITIONAL CONTRIBUTORY AREAS; UPDATED NOTES AND DETAILS ACCORDINGLY

REVISED 2-14-2020: UPDATED BUILDING LAYOUT, ADJUSTED ENTRANCE; UPDATED SEWAGE SYSTEM COLLECTION AND ADDED I.A. TREATMENT TECHNOLOGY; UPDATED WATER SERVICE LAYOUT AND DRAINAGE ACCORDINGLY

# CLOVERLEAF TRURO RENTAL HOUSING

Community Housing Resource, Inc.; P.O. Box 1015, Provincetown, MA 02657

# SEWAGE DETAILS- 40B PERMIT SET

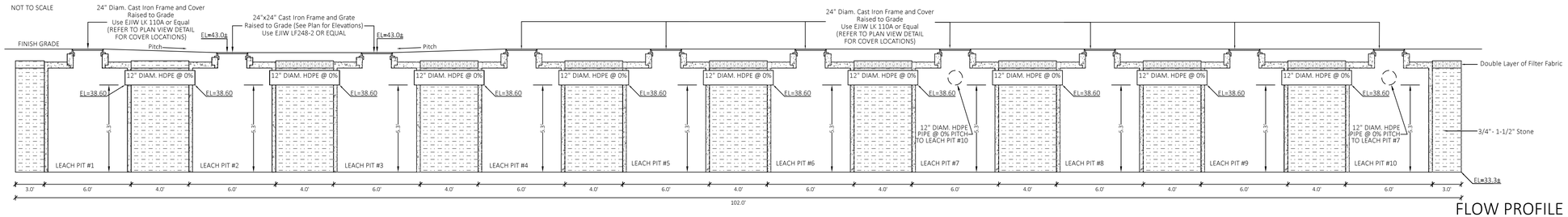
22 HIGHLAND ROAD, TRURO, MA


J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services
1573 Main Street – Route 6A
P.O. Box 1773
(508)896-6601 Office Brewster, MA 02631 (508)896-6602 Fax


| DATE: | SCALE: | BY: | CHECK: | JOB NUMBER: |
|---|---|---|---|---|
| 11-1-2019 | As Noted | RFR | JMO | JMO-8446A |

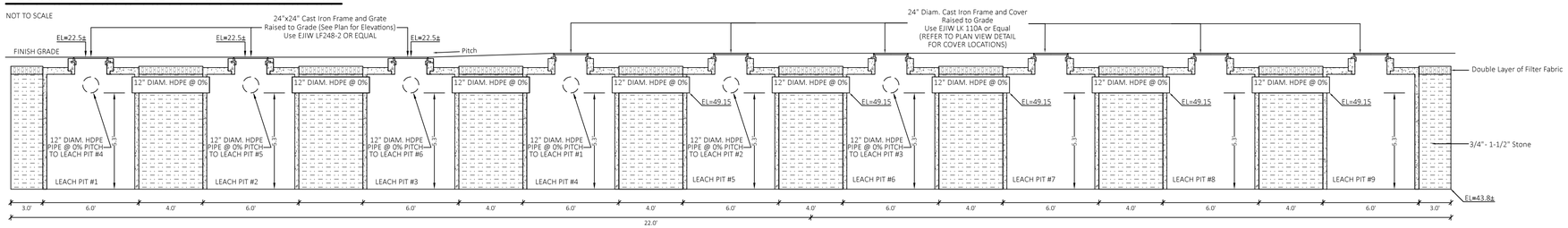
G:\AAJobs\Malone- Cloverleaf Utility Plan- 40B- SDS & Drainage- REVISED 9-16-2020.dwg

## FLOW PROFILE OF DRAINAGE FACILITY #4



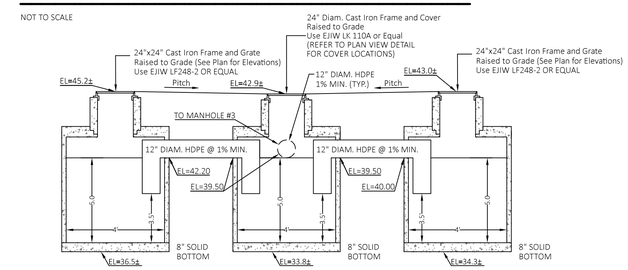

PROPOSED LEACHING FACILITY
USE TEN (10) 1000 GALLON PRECAST
LEACHING PIT UNITS
H-20 RATED UNITS AS MFG. BY SHOREY PRECAST
OR EQUAL

## FLOW PROFILE OF DRAINAGE FACILITY #1




PROPOSED LEACHING FACILITY
USE NINE (9) 1000 GALLON PRECAST
LEACHING PIT UNITS
H-20 RATED UNITS AS MFG. BY SHOREY PRECAST
OR EQUAL

## FLOW PROFILE OF CATCH BASINS & MANHOLE #4




PROPOSED SOLID 4-FOOT DIA. CATCH BASINS #4 (NORTH SIDE)

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

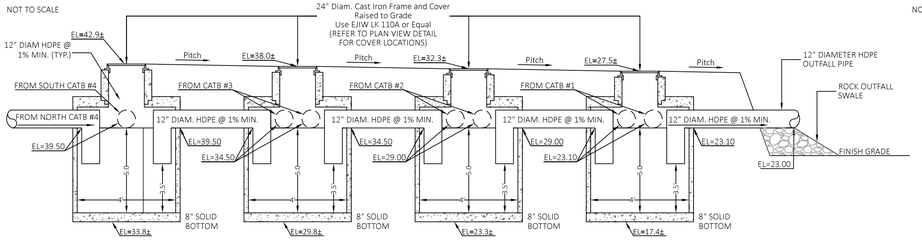
PROPOSED SOLID 4-FOOT DIA. MANHOLE #4

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED SOLID 4-FOOT DIA. CATCH BASINS #4 (SOUTH SIDE)

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

## FLOW PROFILE OF CATCH BASINS #1 - #4 AND OUTFALL PIPE




PROPOSED SOLID 4-FOOT DIA. MANHOLE #4

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED SOLID 4-FOOT DIA. MANHOLE #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

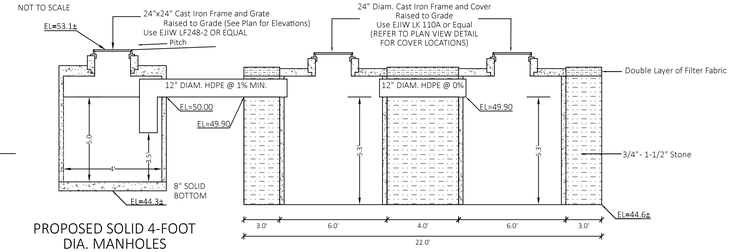
PROPOSED SOLID 4-FOOT DIA. MANHOLE #2

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED SOLID 4-FOOT DIA. MANHOLE #1

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

## FLOW PROFILE OF CATCH BASINS #5 & DRAINAGE FACILITIES #2 & #3

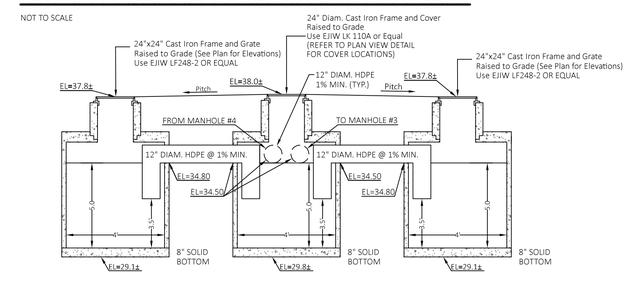



PROPOSED SOLID 4-FOOT DIA. MANHOLES (CATCH BASINS #5)

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED LEACHING FACILITY
USE TWO (2) 1000 GALLON PRECAST
LEACHING PIT UNITS
H-20 RATED UNITS AS MFG. BY SHOREY PRECAST
OR EQUAL

## FLOW PROFILE OF CATCH BASINS & MANHOLE #3




PROPOSED SOLID 4-FOOT DIA. CATCH BASIN #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

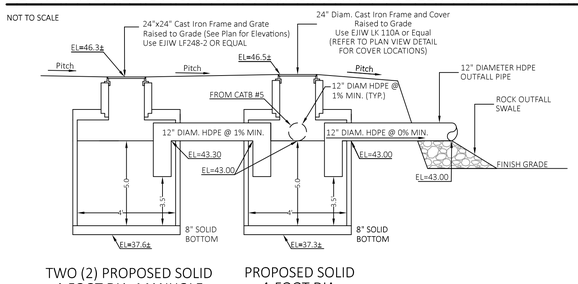
PROPOSED SOLID 4-FOOT DIA. MANHOLE #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED SOLID 4-FOOT DIA. CATCH BASIN #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

## FLOW PROFILE OF CATCH BASINS #6 MANHOLE AND OUTFALL PIPE



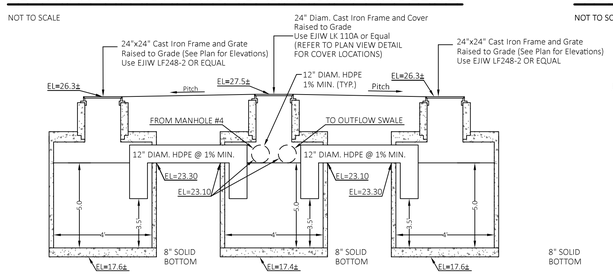

TWO (2) PROPOSED SOLID 4-FOOT DIA. MANHOLE (CATCH BASINS #6)

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED SOLID 4-FOOT DIA. MANHOLE #6

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

## FLOW PROFILE OF CATCH BASINS & MANHOLE #1




PROPOSED SOLID 4-FOOT DIA. CATCH BASIN #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

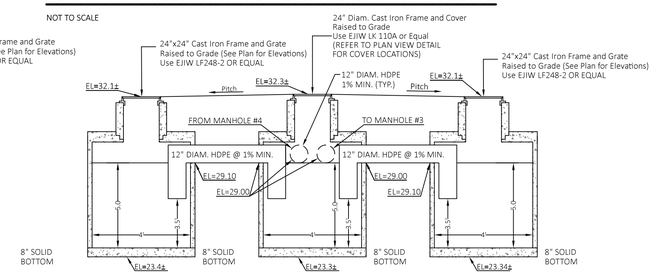
PROPOSED SOLID 4-FOOT DIA. MANHOLE #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED SOLID 4-FOOT DIA. CATCH BASIN #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

## FLOW PROFILE OF CATCH BASINS & MANHOLE #2




PROPOSED SOLID 4-FOOT DIA. CATCH BASIN #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED SOLID 4-FOOT DIA. MANHOLE #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

PROPOSED SOLID 4-FOOT DIA. CATCH BASIN #3

USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL 5-FOOT SUMP BELOW INVERT IS REQUIRED

0 30 60 90

SCALE 1"=30'

SHEET 4 OF 6
PERMIT SET- NOT FOR CONSTRUCTION

REVISED9-16-2020: ADJUSTED GRADING AND DRAINAGE SO AS TO ADDRESS PEER REVIEW COMMENTS.

REVISED 7-28-2020: ADJUSTED SEWAGE SYSTEM AND DRAINAGE FACILITIES AS REQUESTED THROUGH THE PEER REVIEW. MODIFIED SWALE AND DRAIANGE FACILITIES; MODIFIED NOTES ON SHEETS 3 TO 5, ACCORDINGLY.

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REVISED 2-14-2020: UPDATED BUILDING LAYOUT, ADJUSTED ENTRANCE; UPDATED SEWAGE SYSTEM COLLECTION AND ADDED I.A. TREATMENT TECHNOLOGY; UPDATED WATER SERRVICE LAYOUT AND DRAINAGE ACCORDINGLY

CLOVERLEAF TRURO RENTAL HOUSING
Community Housing Resource, Inc.; P.O. Box 1015, Provincetown, MA 02657

SITE DETAILS- 40B PERMIT SET
22 HIGHLAND ROAD, TRURO, MA

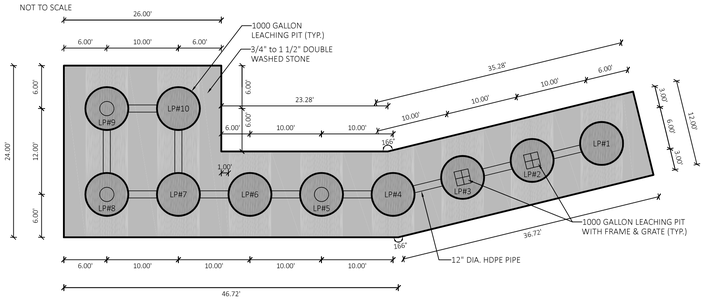
J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services
1573 Main Street – Route 6A
P.O. Box 1773
(508)896-6601 Office Brewster, MA 02631 (508)896-6602 Fax

| DATE: | SCALE: | BY: | CHECK: | JOB NUMBER: |
|---|---|---|---|---|
| 11-1-2019 | As Noted | RFR | JMO | JMO-8446A |

G:\AAJobs\Malone- Cloverleaf Utility Plan- 40B- SDS & Drainage- REVISED 9-16-2020.dwg

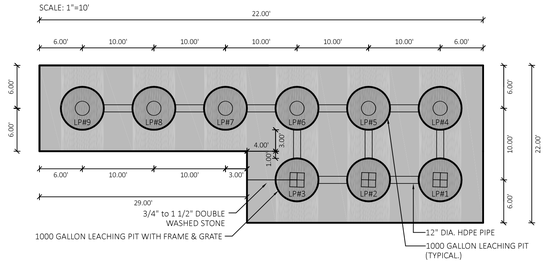
## FLOW PROFILE OF DRAINAGE FACILITY #4

NOT TO SCALE



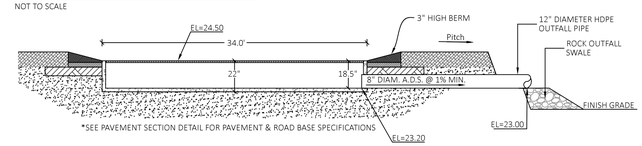

## LEACHING FACILITY #1

SCALE: 1"=10'




## DETAIL OF TRENCH DRAIN:

NOT TO SCALE

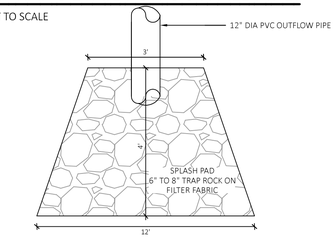



34' Trench Drain
11" Wide Drain X 16" Ht

USE H-20 TRENCH DRAIN
AS MANUFACTURED BY ACME-SHOREY

## RIP-RAP DETAIL FOR OUTFALL PIPE:

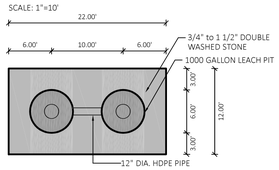
NOT TO SCALE




RIPRAP NOTES:
1.) RIPRAP SHALL BE PLACED INTO CLEAN SAND, FREE OF SILT AND DEBRIS.
2.) RIPRAP STONE SHALL BE 6" TO 8" CHINK STONE PLACED IN RANDOM PATTERN WITH UNEVEN SURFACE SO AS TO REDUCE DISCHARGE ENERGY.
3.) THE BED OF RIPRAP SHALL BE 1.5 FEET THICK.
4.) RIPRAP STONE SHALL BE LAID ON A DOUBLE LAYER OF FILTER FABRIC.

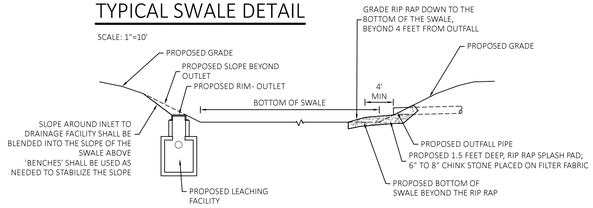
## LEACHING FACILITIES #2 & #3

SCALE: 1"=10'




## TYPICAL SWALE DETAIL

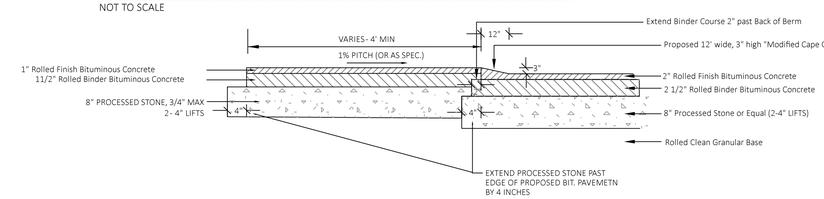
SCALE: 1"=10'

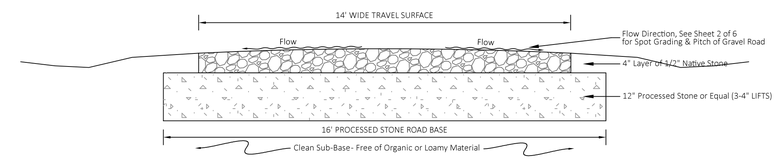



SWALE NOTES:
1.) THE BOTTOM AND SIDE SLOPES OF THE SWALE, UP TO THE TOP OF THE OUTFLOW PIPE FROM THE MANHOLE, SHALL BE COVERED WITH 6 INCHES OF LOAM AND SEEDED WITH A WET MEADOW SEED MIX. APPLICATION RATE SHALL BE PER MFG'S SPECIFICATIONS
2.) THE SLOPES ABOVE THE OUTFALL PIPE FROM MANHOLE SHALL BE COVERED WITH A MINIMUM OF 4 INCHES OF LOAM, COVERED WITH THE ON-SITE GROUND VEGETATION.
3.) ALL SLOPED AREAS SHALL BE COVERED WITH JUTE NETTING EROSION CLOTH, SECURED IN PLACE.

## SIDEWALK SECTION FOR MODIFIED CAPE COD BERM

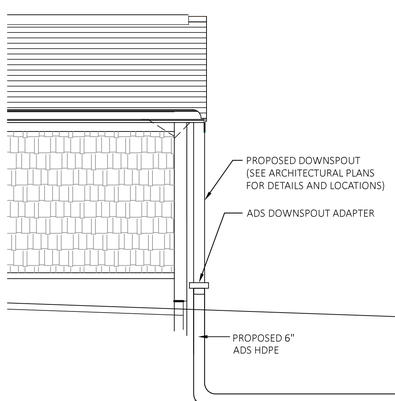
NOT TO SCALE



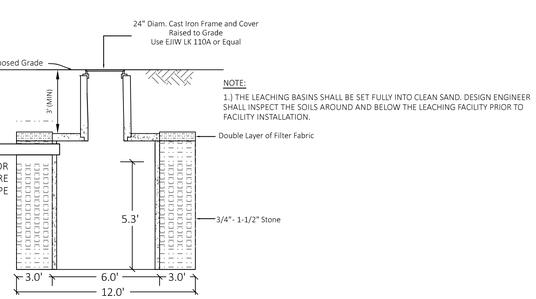

## EMERGENCY ACCESS DRIVE SECTION

NOT TO SCALE




## ROOF/LAWN DRYWELL DETAIL:

NOT TO SCALE




NOTE:
1.) THE LEACHING BASINS SHALL BE SET FULLY INTO CLEAN SAND. DESIGN ENGINEER SHALL INSPECT THE SOILS AROUND AND BELOW THE LEACHING FACILITY PRIOR TO FACILITY INSTALLATION.

1000 Gallon
Leach Pit

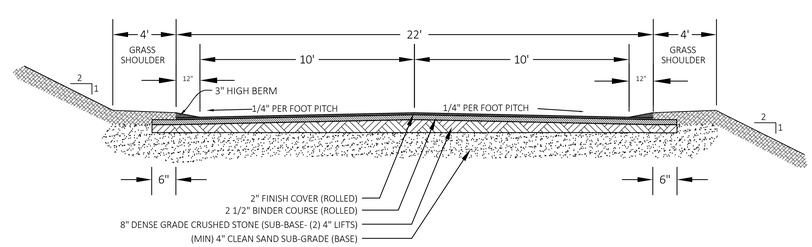
USE (6) LP-1000-H-20
AS MANUFACTURED BY SHOREY OR EQUAL
WITH 4' STONE AROUND

## ROOF RUN-OFF:

1.) ALL ROOF GUTTERS SHOULD BE DIRECTLY CONNECTED TO DRYWELLS USING 6" ADS PIPE
2.) DRYWELLS SHALL BE SET FULLY INTO CLEAN SAND. DESIGN ENGINEER SHALL INSPECT THE SOILS AROUND AND BELOW THE LEACHING FACILITY PRIOR TO FACILITY INSTALLATION.

## DRIVEWAY PAVEMENT SECTION (WITH CROWN):

NOT TO SCALE




PAVEMENT NOTE:
IN AREAS OF THE CENTER COURT AND BUILDING #21, THE PAVEMENT IS NOT CROWNED BUT SUPER-ELEVATED SO AS TO PUSH THE WATER TOWARDS THE RECEIVING CATCH BASINS.

0 30 60 90
SCALE 1"=30'

G:\AAJobs\Malone- Cloverleaf Utility Plan- 40B- SDS & Drainage- REVISED 9-16-2020.dwg

SHEET 5 OF 6
PERMIT SET- NOT FOR CONSTRUCTION

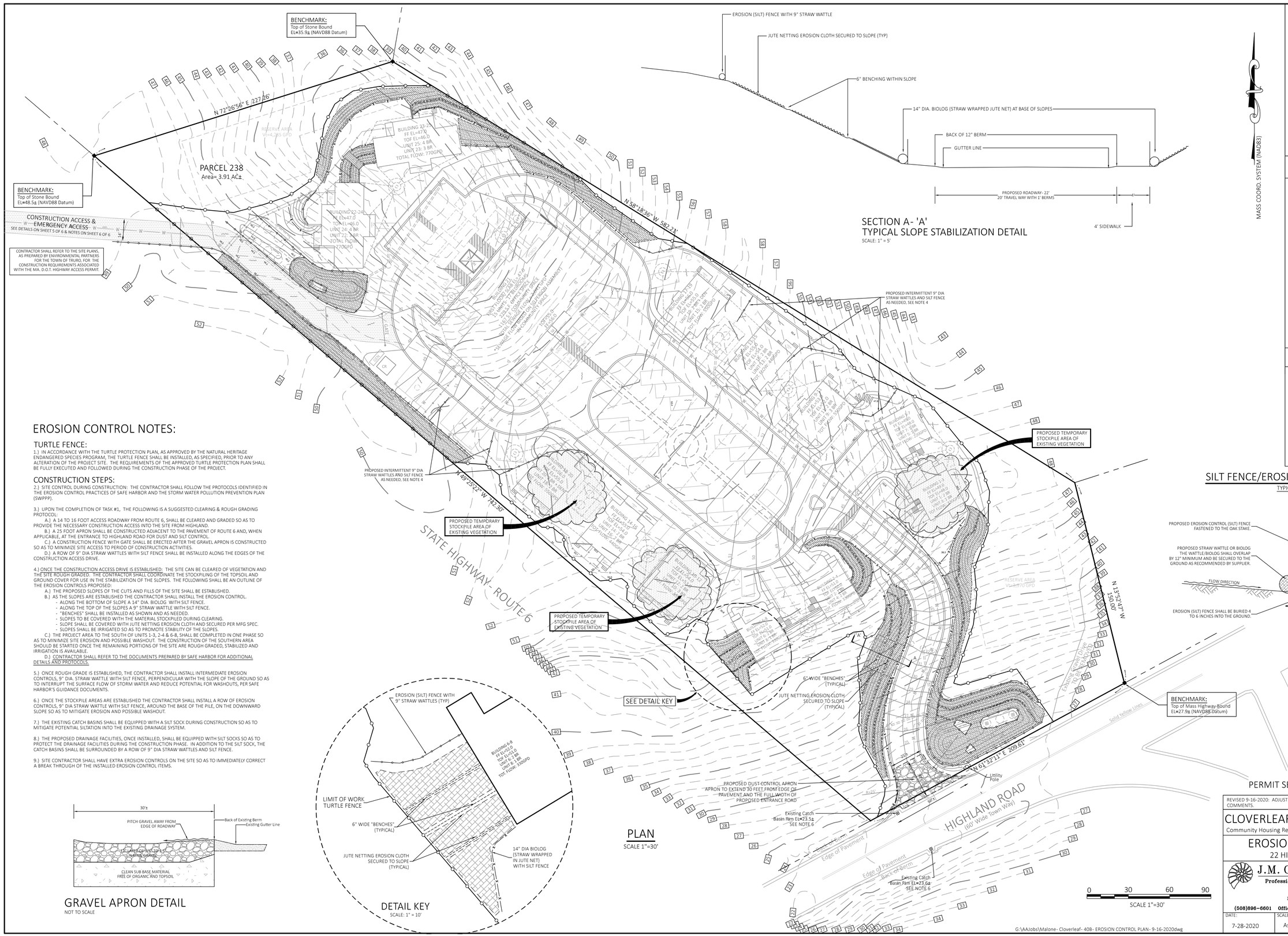
REVISED 9-16-2020: ADJUSTED GRADING AND DRAINAGE SO AS TO ADDRESS PEER REVIEW COMMENTS.
REVISED 7-28-2020: ADJUSTED SEWAGE SYSTEM AND DRAINAGE FACILITIES AS REQUESTED THROUGH THE PEER REVIEW. MODIFIED SWALE AND DRAIANGE FACILITIES; MODIFIED NOTES ON SHEETS 3 TO 5, ACCORDINGLY.
REVISED 6-5-2020: UPDATED SEWAGE SYSTEM TREATMENT TO INCLUDE 10 PPM NITROGEN LIMIT; ADJUSTED SEWER MANHOLE LAYOUT; ADJUSTED DRAINAGE TO INCLUDE SWALES AND ADDITIONAL CONTRIBUTORY AREAS; UPDATED NOTES AND DETAILS ACCORDINGLY
REVISED 2-14-2020: UPDATED BUILDING LAYOUT, ADJUSTED ENTRANCE; UPDATED SEWAGE SYSTEM COLLECTION AND ADDED I.A. TREATMENT TECHNOLOGY; UPDATED WATER SERVICE LAYOUT AND DRAINAGE ACCORDINGLY

CLOVERLEAF TRURO RENTAL HOUSING
Community Housing Resource, Inc.; P.O. Box 1015, Provincetown, MA 02657

SITE DETAILS- 40B PERMIT SET
22 HIGHLAND ROAD, TRURO, MA


J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services
1573 Main Street – Route 6A
P.O. Box 1773
(508)896-6601 Office Brewster, MA 02631 (508)896-6602 Fax


| DATE: | SCALE: | BY: | CHECK: | JOB NUMBER: |
|---|---|---|---|---|
| 11-1-2019 | As Noted | RFR | JMO | JMO-8446A |




## PLAN
SCALE 1"=30'




## SECTION A- 'A'
## TYPICAL SLOPE STABILIZATION DETAIL
SCALE: 1" = 5'




## DETAIL KEY
SCALE: 1" = 10'

## EROSION CONTROL NOTES:

### TURTLE FENCE:
1.) IN ACCORDANCE WITH THE TURTLE PROTECTION PLAN, AS APPROVED BY THE NATURAL HERITAGE ENDANGERED SPECIES PROGRAM, THE TURTLE FENCE SHALL BE INSTALLED, AS SPECIFIED, PRIOR TO ANY ALTERATION OF THE PROJECT SITE. THE REQUIREMENTS OF THE APPROVED TURTLE PROTECTION PLAN SHALL BE FULLY EXECUTED AND FOLLOWED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

### CONSTRUCTION STEPS:
2.) SITE CONTROL DURING CONSTRUCTION: THE CONTRACTOR SHALL FOLLOW THE PROTOCOLS IDENTIFIED IN THE EROSION CONTROL PRACTICES OF SAFE HARBOR AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).

3.) UPON THE COMPLETION OF TASK #1, THE FOLLOWING IS A SUGGESTED CLEARING & ROUGH GRADING PROTOCOL:
A.) A 14 TO 16 FOOT ACCESS ROADWAY FROM ROUTE 6, SHALL BE CLEARED AND GRADED SO AS TO PROVIDE THE NECESSARY CONSTRUCTION ACCESS INTO THE SITE FROM HIGHLAND.
B.) A 25 FOOT APRON SHALL BE CONSTRUCTED ADJACENT TO THE PAVEMENT OF ROUTE 6 AND, WHEN APPLICABLE, AT THE ENTRANCE TO HIGHLAND ROAD FOR DUST AND SILT CONTROL.
C.) A CONSTRUCTION FENCE WITH GATE SHALL BE ERECTED AFTER THE GRAVEL APRON IS CONSTRUCTED SO AS TO MINIMIZE SITE ACCESS TO PERIOD OF CONSTRUCTION ACTIVITIES.
D.) A ROW OF 9" DIA STRAW WATTLES WITH SILT FENCE SHALL BE INSTALLED ALONG THE EDGES OF THE CONSTRUCTION ACCESS DRIVE.

4.) ONCE THE CONSTRUCTION ACCESS DRIVE IS ESTABLISHED: THE SITE CAN BE CLEARED OF VEGETATION AND THE SITE ROUGH GRADED. THE CONTRACTOR SHALL COORDINATE THE STOCKPILING OF THE TOPSOIL AND GROUND COVER FOR USE IN THE STABILIZATION OF THE SLOPES. THE FOLLOWING SHALL BE AN OUTLINE OF THE EROSION CONTROLS PROPOSED:
A.) THE PROPOSED SLOPES OF THE CUTS AND FILLS OF THE SITE SHALL BE ESTABLISHED.
B.) AS THE SLOPES ARE ESTABLISHED THE CONTRACTOR SHALL INSTALL THE EROSION CONTROL.
- ALONG THE BOTTOM OF SLOPE A 14" DIA. BIOLOG WITH SILT FENCE.
- ALONG THE TOP OF THE SLOPES A 9" STRAW WATTLE WITH SILT FENCE.
- "BENCHES" SHALL BE INSTALLED AS SHOWN AND AS NEEDED.
- SLOPES TO BE COVERED WITH THE MATERIAL STOCKPILED DURING CLEARING.
- SLOPE SHALL BE COVERED WITH JUTE NETTING EROSION CLOTH AND SECURED PER MFG SPEC.
- SLOPES SHALL BE IRRIGATED SO AS TO PROMOTE STABILITY OF THE SLOPES.

C.) THE PROJECT AREA TO THE SOUTH OF UNITS 1-3, 2-4 & 6-8, SHALL BE COMPLETED IN ONE PHASE SO AS TO MINIMIZE SITE EROSION AND POSSIBLE WASHOUT. THE CONSTRUCTION OF THE SOUTHERN AREA SHOULD BE STARTED ONCE THE REMAINING PORTIONS OF THE SITE ARE ROUGH GRADED, STABILIZED AND IRRIGATION IS AVAILABLE.
D.) CONTRACTOR SHALL REFER TO THE DOCUMENTS PREPARED BY SAFE HARBOR FOR ADDITIONAL DETAILS AND PROTOCOLS.

5.) ONCE ROUGH GRADE IS ESTABLISHED, THE CONTRACTOR SHALL INSTALL INTERMEDIATE EROSION CONTROLS, 9" DIA. STRAW WATTLE WITH SILT FENCE, PERPENDICULAR WITH THE SLOPE OF THE GROUND SO AS TO INTERRUPT THE SURFACE FLOW OF STORM WATER AND REDUCE POTENTIAL FOR WASHOUTS, PER SAFE HARBOR'S GUIDANCE DOCUMENTS.

6.) ONCE THE STOCKPILE AREAS ARE ESTABLISHED THE CONTRACTOR SHALL INSTALL A ROW OF EROSION CONTROLS, 9" DIA STRAW WATTLE WITH SILT FENCE, AROUND THE BASE OF THE PILE, ON THE DOWNWARD SLOPE SO AS TO MITIGATE EROSION AND POSSIBLE WASHOUT.

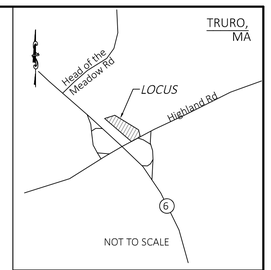
7.) THE EXISTING CATCH BASINS SHALL BE EQUIPPED WITH A SILT SOCK DURING CONSTRUCTION SO AS TO MITIGATE POTENTIAL SILTATION INTO THE EXISTING DRAINAGE SYSTEM.

8.) THE PROPOSED DRAINAGE FACILITIES, ONCE INSTALLED, SHALL BE EQUIPPED WITH SILT SOCKS SO AS TO PROTECT THE DRAINAGE FACILITIES DURING THE CONSTRUCTION PHASE. IN ADDITION TO THE SILT SOCK, THE CATCH BASINS SHALL BE SURROUNDED BY A ROW OF 9" DIA STRAW WATTLES AND SILT FENCE.

9.) SITE CONTRACTOR SHALL HAVE EXTRA EROSION CONTROLS ON THE SITE SO AS TO IMMEDIATELY CORRECT A BREAK THROUGH OF THE INSTALLED EROSION CONTROL ITEMS.




## GRAVEL APRON DETAIL
NOT TO SCALE




| | |
|---|---|
| PLAN BOOK 672 | PAGE 34 |
| ASSESSORS' MAP 36 | PARCEL 238 |

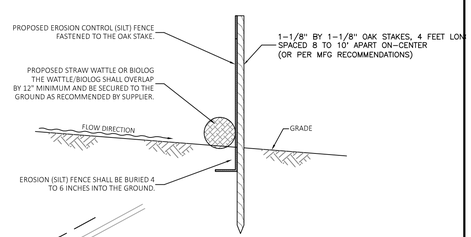
## LEGEND

| | |
|---|---|
| 32 | EXISTING CONTOUR |
| 32 | PROPOSED CONTOUR |
| ×12.34 | EXISTING SPOT GRADE |
| 24x5 | PROPOSED SPOT GRADE |
| W | WATER SERVICE LINE |
| E | UNDERGROUND UTILITY SERVICE |
| G | GAS SERVICE LINE |
| | TEST HOLE / BORING LOCATION |
| ST | SEPTIC TANK |
| DB | DISTRIBUTION BOX |
| SAS | SOIL ABSORPTION SYSTEM |
| Reserve | RESERVED FOR FUTURE |
| | UTILITY POLE |
| | CATCH BASIN |
| | FIRE HYDRANT |
| W | WELL |
| | DRAINAGE MANHOLE |
| | CONCRETE BOUND, FOUND |
| | TOP OF BANK |

## EROSION CONTROL KEY

| | |
|---|---|
| | LIMIT OF WORK TURTLE FENCE |
| | EROSION (SILT) FENCE & 9" STRAW WATTLE |
| | EROSION (SILT) FENCE & 14" DIA BIOLOG |
| | 6" WIDE "BENCHES" FOR BREAK IN SLOPE |
| | EROSION CONTROL BLANKETS |

## SILT FENCE/EROSION CONTROL DETAIL:
TYPICAL SECTION




SHEET 6 OF 6
PERMIT SET- NOT FOR CONSTRUCTION

REVISED 9-16-2020: ADJUSTED GRADING AND DRAINAGE SO AS TO ADDRESS PEER REVIEW COMMENTS.

# CLOVERLEAF TRURO RENTAL HOUSING
Community Housing Resource, Inc.; P.O. Box 1015, Provincetown, MA 02657

# EROSION CONTROL SITE PLAN
22 HIGHLAND ROAD, TRURO, MA

J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services
1573 Main Street - Route 6A
P.O. Box 1773
(508)896-6601 Office Brewster, MA 02631 (508)896-6602 Fax

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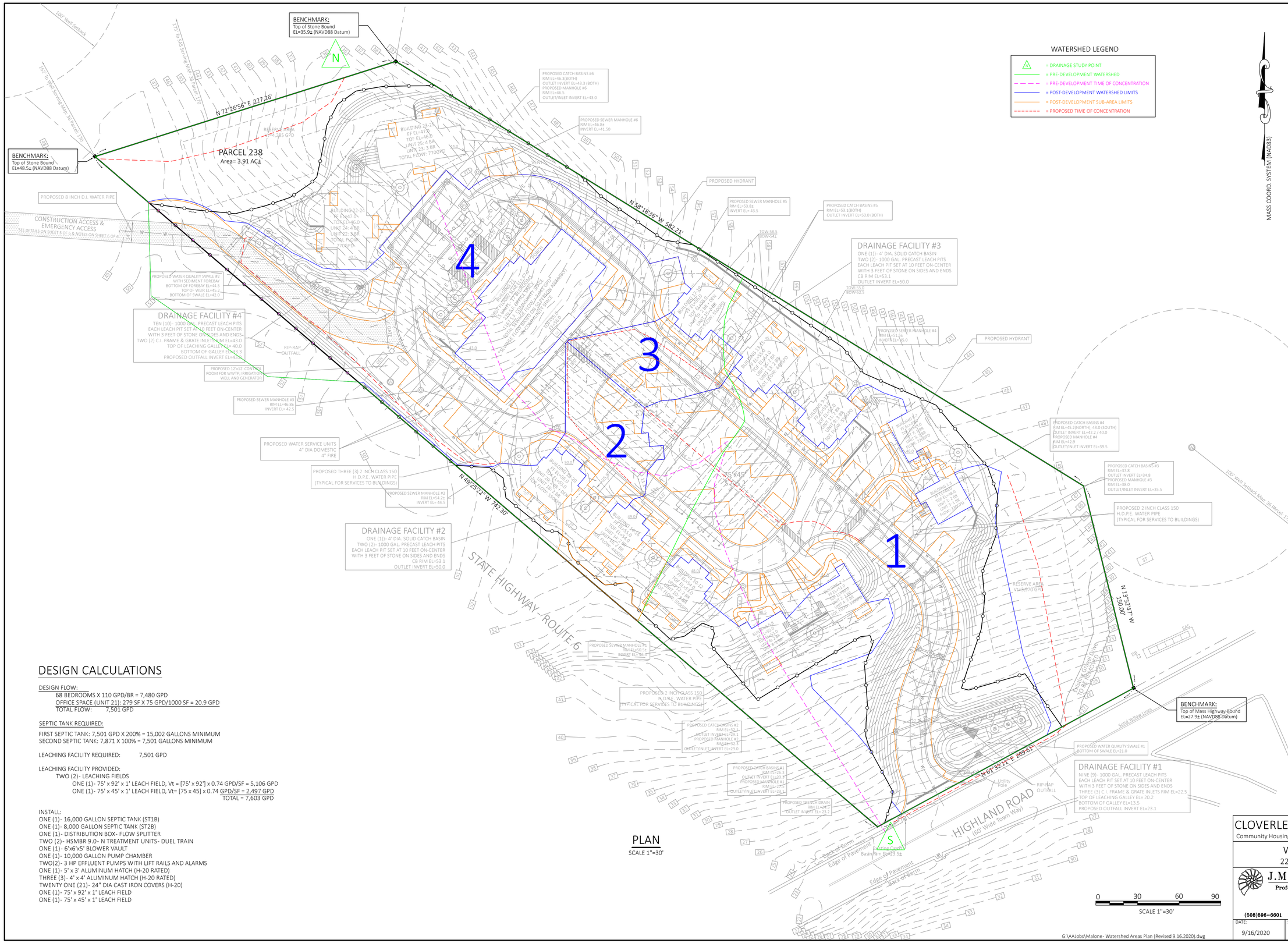
| 7-28-2020 | As Noted | JMO | JMO | JMO-8446A |



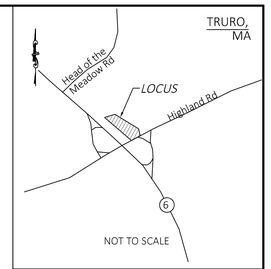

## PLAN

SCALE 1"=30'

## WATERSHED LEGEND

- △ = DRAINAGE STUDY POINT
- = PRE-DEVELOPMENT WATERSHED
- = PRE-DEVELOPMENT TIME OF CONCENTRATION
- = POST-DEVELOPMENT WATERSHED LIMITS
- = POST-DEVELOPMENT SUB-AREA LIMITS
- = PROPOSED TIME OF CONCENTRATION

MASS COORD. SYSTEM (NAD83)




PLAN BOOK 672 PAGE 34
ASSESSORS' MAP 36 PARCEL 238

## LEGEND

- 32 EXISTING CONTOUR
- 32 PROPOSED CONTOUR
- ×12.34 EXISTING SPOT GRADE
- 24x5 PROPOSED SPOT GRADE
- W WATER SERVICE LINE
- E UNDERGROUND UTILITY SERVICE
- G GAS SERVICE LINE
- TEST HOLE / BORING LOCATION
- ST SEPTIC TANK
- DB DISTRIBUTION BOX
- SAS SOIL ABSORPTION SYSTEM
- Reserve RESERVED FOR FUTURE
- UTILITY POLE
- CATCH BASIN
- FIRE HYDRANT
- WELL
- DRAINAGE MANHOLE
- STORMWATER FLOW ARROW
- CONCRETE BOUND, FOUND
- TOP OF BANK
- LIMIT OF WORK
- FENCE
- PT UNDERGROUND PROPANE TANK
- 12' x 6' LEACHING DRYWELL (ROOF)
- TRANSFORMER PAD- UTILITY CLUSTER
- GEN GENERATOR

## DESIGN CALCULATIONS

DESIGN FLOW:
68 BEDROOMS X 110 GPD/BR = 7,480 GPD
OFFICE SPACE (UNIT 21): 279 SF X 75 GPD/1000 SF = 20.9 GPD
TOTAL FLOW: 7,501 GPD

SEPTIC TANK REQUIRED:

FIRST SEPTIC TANK: 7,501 GPD X 200% = 15,002 GALLONS MINIMUM
SECOND SEPTIC TANK: 7,871 X 100% = 7,501 GALLONS MINIMUM

LEACHING FACILITY REQUIRED: 7,501 GPD

LEACHING FACILITY PROVIDED:
TWO (2)- LEACHING FIELDS
ONE (1)- 75' x 92' x 1' LEACH FIELD, Vt = [75' x 92'] x 0.74 GPD/SF = 5,106 GPD
ONE (1)- 75' x 45' x 1' LEACH FIELD, Vt= [75 x 45] x 0.74 GPD/SF = 2,497 GPD
TOTAL = 7,603 GPD

INSTALL:
ONE (1)- 16,000 GALLON SEPTIC TANK (ST1B)
ONE (1)- 8,000 GALLON SEPTIC TANK (ST2B)
ONE (1)- DISTRIBUTION BOX- FLOW SPLITTER
TWO (2)- HSMBR 9.0- N TREATMENT UNITS- DUEL TRAIN
ONE (1)- 6'x6'x5' BLOWER VAULT
ONE (1)- 10,000 GALLON PUMP CHAMBER
TWO(2)- 3 HP EFFLUENT PUMPS WITH LIFT RAILS AND ALARMS
ONE (1)- 5' x 3' ALUMINUM HATCH (H-20 RATED)
THREE (3)- 4' x 4' ALUMINUM HATCH (H-20 RATED)
TWENTY ONE (21)- 24" DIA CAST IRON COVERS (H-20)
ONE (1)- 75' x 92' x 1' LEACH FIELD
ONE (1)- 75' x 45' x 1' LEACH FIELD

# CLOVERLEAF TRURO RENTAL HOUSING

Community Housing Resource, Inc.; P.O. Box 1015, Provincetown, MA 02657

## WATERSHED AREAS PLAN

22 HIGHLAND ROAD, TRURO, MA

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Professional Engineering & Land Surveying Services
1573 Main Street – Route 6A
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|---|---|---|---|---|
| 9/16/2020 | As Noted | RFR | JMO | JMO-8446A |

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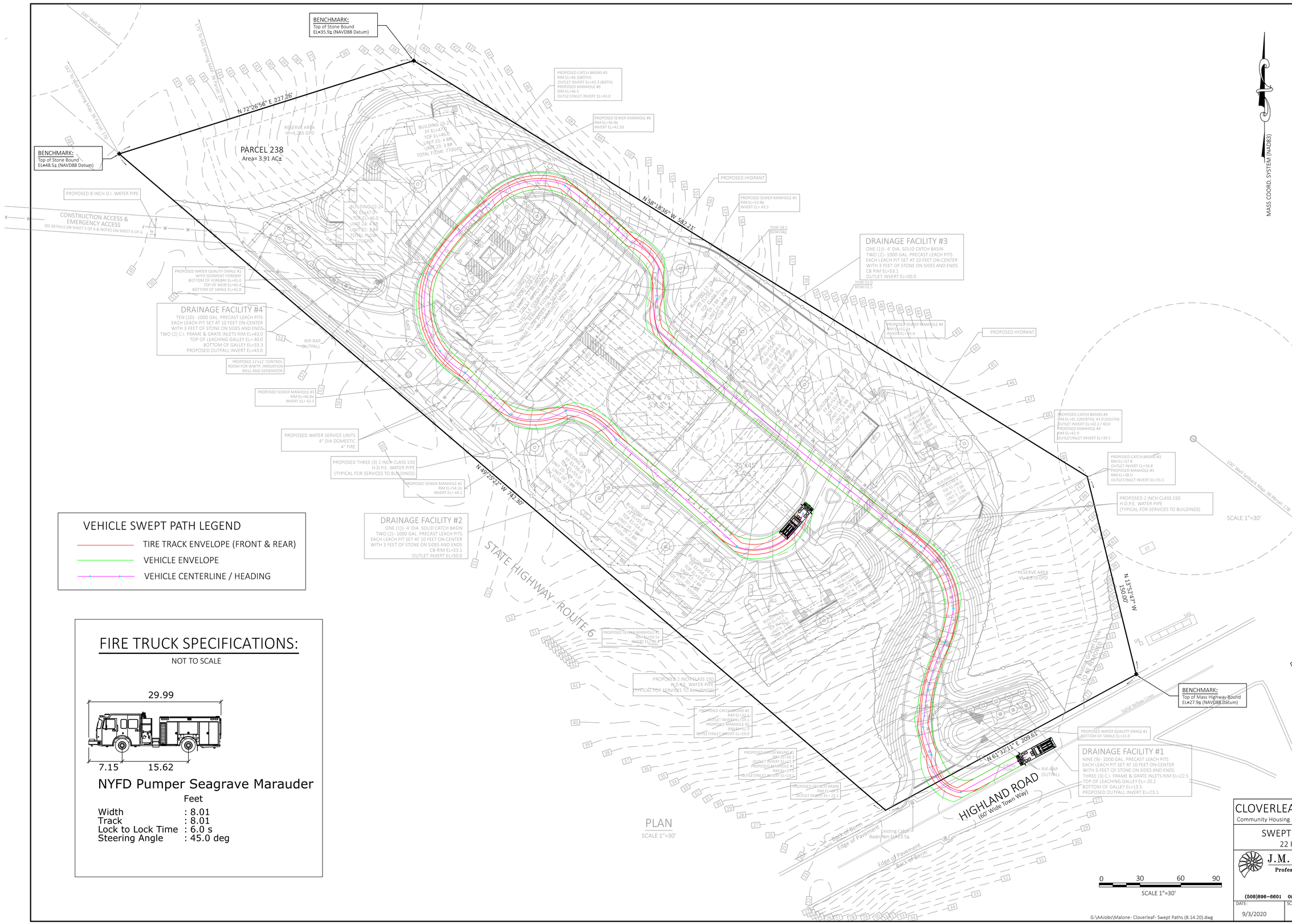


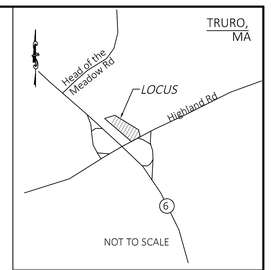


PLAN BOOK 672 PAGE 34
ASSESSORS' MAP 36 PARCEL 238

## LEGEND

- 32 EXISTING CONTOUR
- 32 PROPOSED CONTOUR
- ×12.34 EXISTING SPOT GRADE
- 24x5 PROPOSED SPOT GRADE
- W WATER SERVICE LINE
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- LIMIT OF WORK
- FENCE
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- 12' x 6' LEACHING DRYWELL (ROOF)
- TRANSFORMER PAD- UTILITY CLUSTER
- GEN GENERATOR

## VEHICLE SWEPT PATH LEGEND

- TIRE TRACK ENVELOPE (FRONT & REAR)
- VEHICLE ENVELOPE
- VEHICLE CENTERLINE / HEADING

## FIRE TRUCK SPECIFICATIONS:

NOT TO SCALE




NYFD Pumper Seagrave Marauder

| | Feet |
|---|---|
| Width | : 8.01 |
| Track | : 8.01 |
| Lock to Lock Time | : 6.0 s |
| Steering Angle | : 45.0 deg |

# CLOVERLEAF TRURO RENTAL HOUSING

Community Housing Resource, Inc.; P.O. Box 1015, Provincetown, MA 02657

## SWEPT PATH ANALYSIS- ENTRANCE

22 HIGHLAND ROAD, TRURO, MA

J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services
1573 Main Street – Route 6A
P.O. Box 1773
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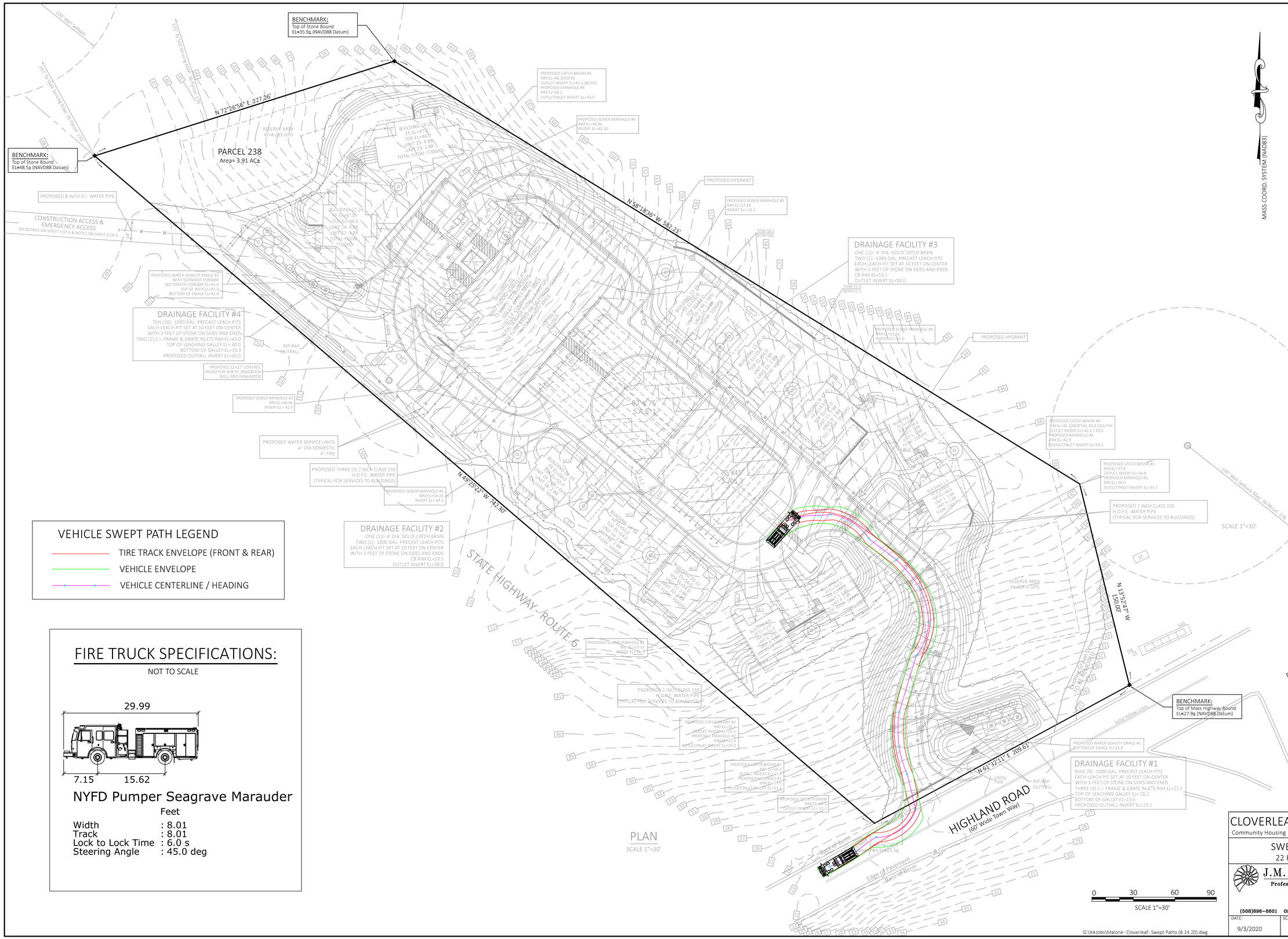
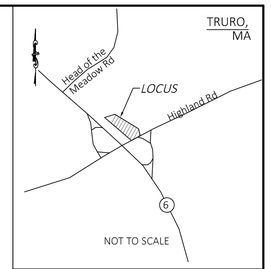
|---|---|---|---|---|
| 9/3/2020 | As Noted | RFR | JMO | JMO-8446A |




PLAN BOOK 672 PAGE 34
ASSESSORS' MAP 36 PARCEL 238

## LEGEND

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## VEHICLE SWEPT PATH LEGEND

- TIRE TRACK ENVELOPE (FRONT & REAR)
- VEHICLE ENVELOPE
- VEHICLE CENTERLINE / HEADING

## FIRE TRUCK SPECIFICATIONS:

NOT TO SCALE




### NYFD Pumper Seagrave Marauder

| | Feet |
|---|---|
| Width | : 8.01 |
| Track | : 8.01 |
| Lock to Lock Time | : 6.0 s |
| Steering Angle | : 45.0 deg |

# CLOVERLEAF TRURO RENTAL HOUSING

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## SWEPT PATH ANALYSIS- EXIT

22 HIGHLAND ROAD, TRURO, MA

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1573 Main Street – Route 6A
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