

# THE GROTON FARMS

Presentation on Site Design, Architecture,  
and Landscape Architecture

500 Main Street Groton – April 19, 2023





# AGENDA

- Site Context and Site Plan
- Architectural Design

*Jeremy Baldwin, AIA*  
*Maugel DeStefano Architects*

- Amenities and Site Lighting

*Michael Radner, ASLA, LEED AP*  
*Radner Design Associates*

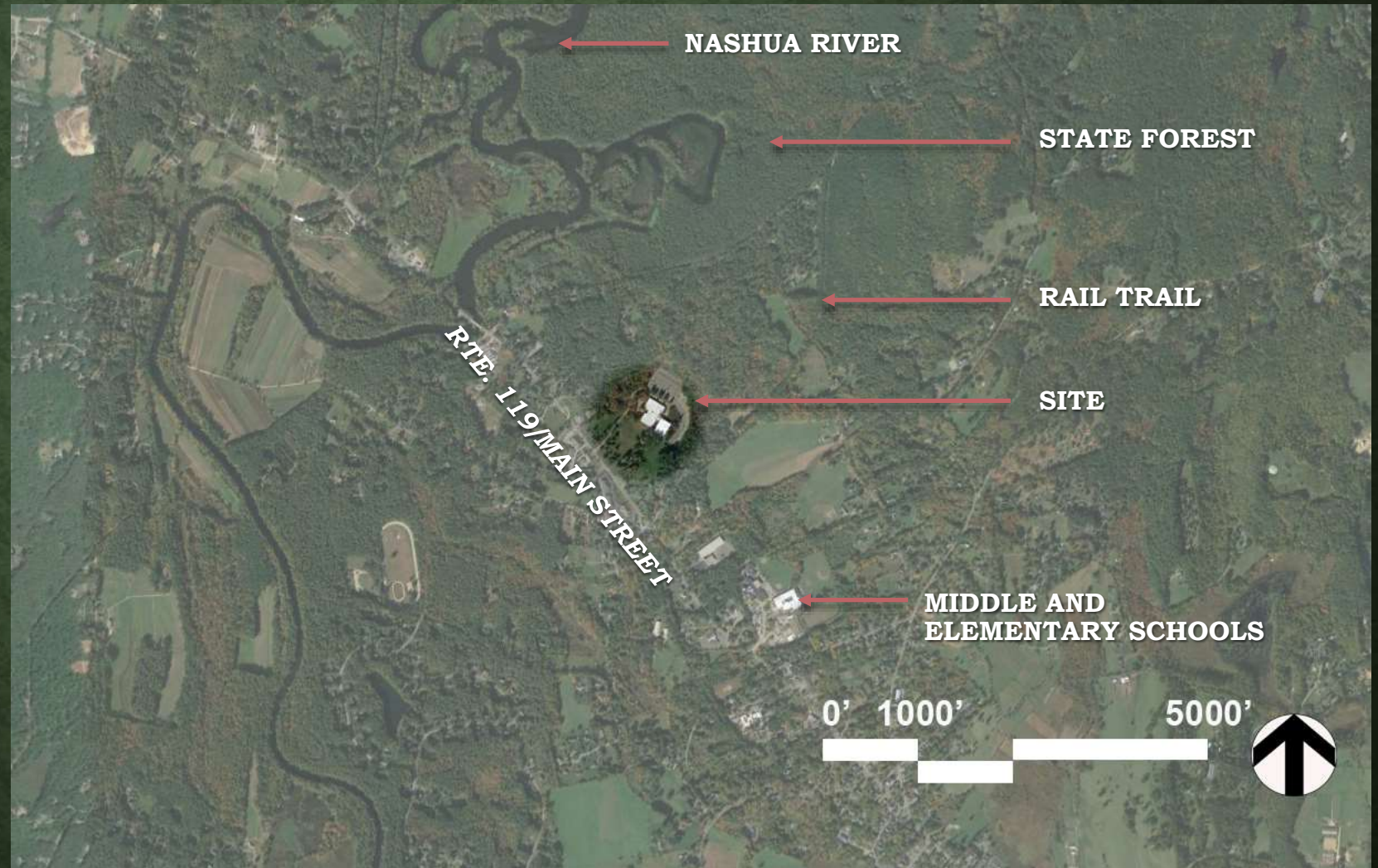
- Landscape Materials

*Toby Wolf, ASLA*  
*Wolf Landscape Architecture*



# SITE CONTEXT

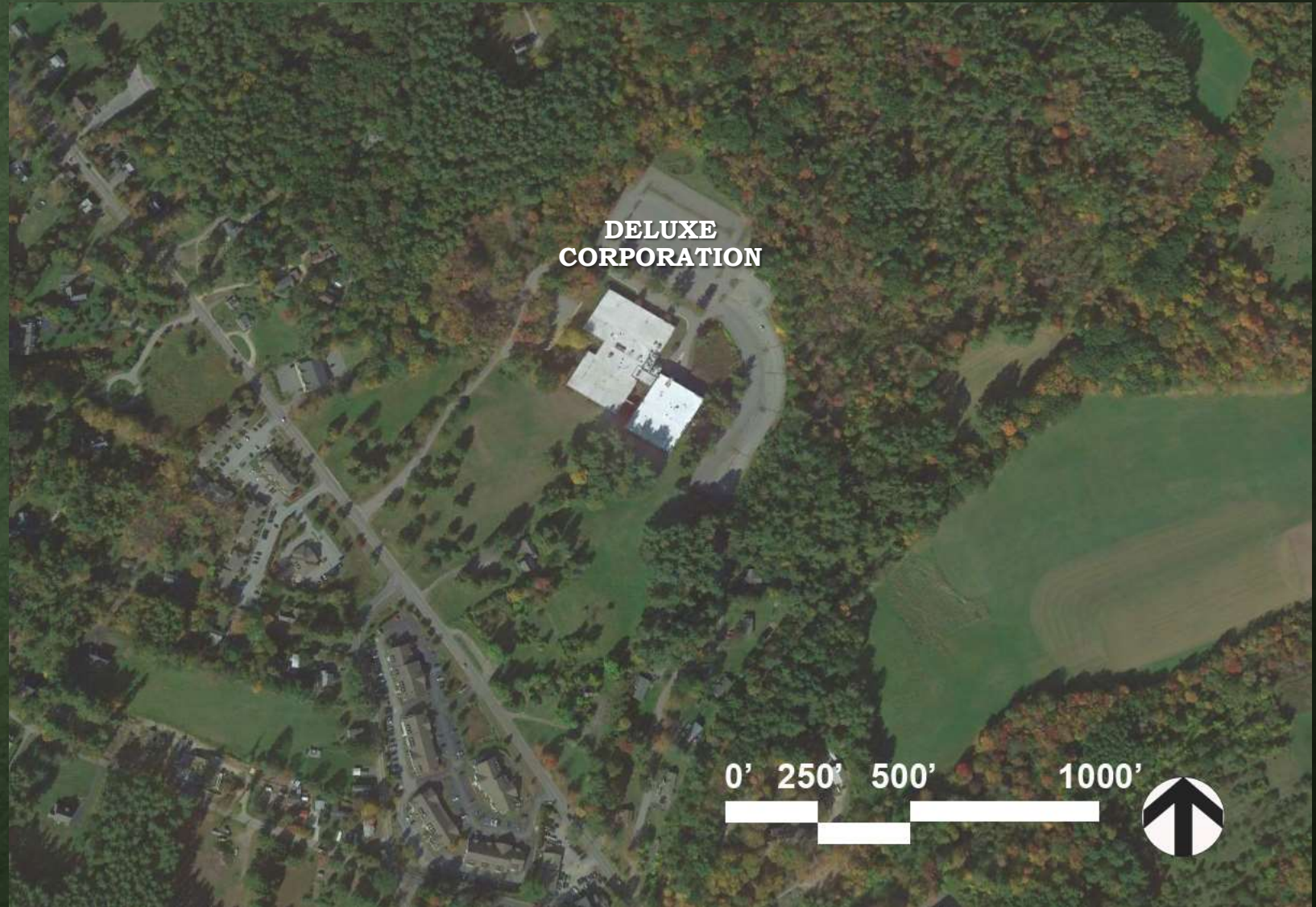
- Site Area
- Mill Run Plaza  
Across Street
- Surrounded by  
Woodlands
- Location of Nashua  
River
- Location of Rail Trail





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# SITE PLANNING

- Site Design
  - Larger buildings to rear of project
  - Clubhouse is the “Hub” of the Community
  - Arrangement of Buildings to Create Space
  - Vehicular and Pedestrian Circulation
  - Green Spaces
  - Minimize Building Footprints





# BIRD'S EYE VIEW





# BUILDING SITE LAYOUT

MULTI-FAMILY BUILDINGS

CLUBHOUSE AND PAVILION

TOWNHOMES

EMERGENCY ACCESS

MAIN STREET ENTRANCE





# BUILDING SITE LAYOUT





# SITE SCALE





# SITE ENTRY VIEW



**NOW**



**AFTER**



# SITE PLANNING

- Townhomes
  - Four Units per Building
  - Garage and Driveway Parking
  - Guest Parking
  - All Units Have Views to Greenspace
  - Sidewalks and Greenspace
  - Mail Kiosk
  - Patio or Deck





# TOWNHOMES





# TOWNHOMES

## Scale

- 8 Buildings
- 32 total dwellings
- Each building is Four Units
- 2 and 3-Bed units
- Each unit is between 1465 sf and 1660 sf
- Height - 42 feet to ridge

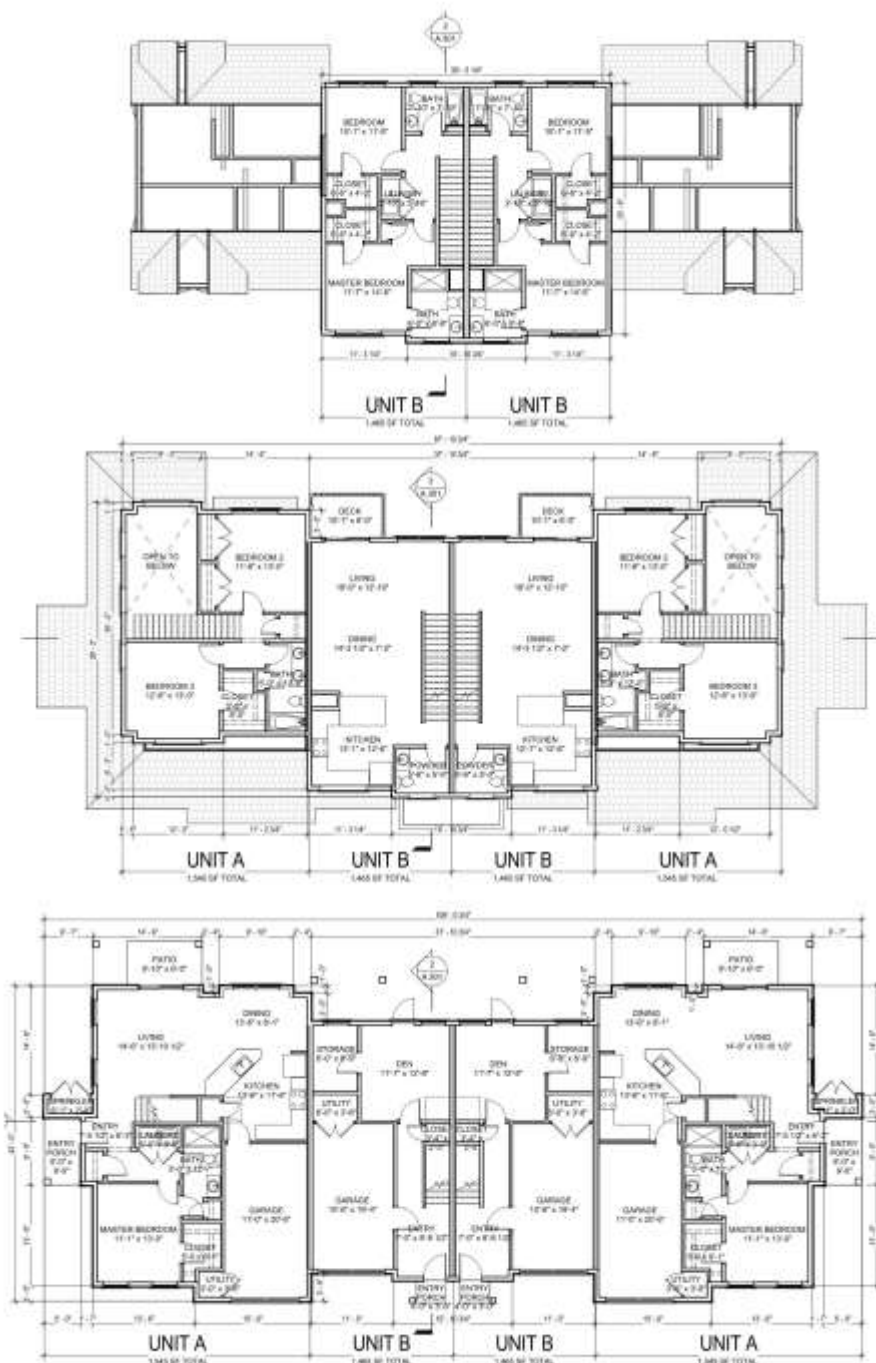
## Codes

- 2015 IRC
- 2018 IECC
- 2015 IMC
- 2015 IFC - Fully sprinklered

## Accessibility

*Townhomes are defined as "a single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof and with a yard or public way on not less than two sides ."*

**"Visit-ability"**  
**Aging-in-place**





# TOWNHOMES

## Aesthetics

- Pitched roofs
- Stone veneer base
- Clapboard and shingle siding

## Sustainability

- EV ready electrical in garage
- Roofs are designed to support future installation of solar panels





# ARCHITECTURE REVIEW

	2-BEDROOM	3-BEDROOM
Unit Count Market	9	15
Unit Count Affordable	3	5
Total Unit Count	12	20
Square Feet	Average 1465 SF	Average 1660 SF
Approximate Rent Market	TBD	TBD
Approximate Rent Affordable	TBD	TBD

# TOWNHOME UNITS



# SITE PLANNING

- Multifamily Buildings
  - 4 Stories
  - Arrangement of Buildings to Create Space and Relationship of Buildings
  - Efficient Building Footprints
  - Garage Buildings Available for Rent





# MULTIFAMILY





# MULTIFAMILY

## Scale

- 3 Building
- 56 Dwelling Units Each
- One and Two-Bed Dwelling Units
- 704 sf to 1278 sf each
- 4 stories
- Height – 58'-1"

## Codes

- 2015 IBC
- 2018 IECC
- 2015 IMC
- 2015 IFC - Fully sprinklered

## Aesthetics

- Cohesive colors and materials for all buildings
- Pitched roofs reduce building scale
- Stone veneer
- Clapboard
- Decks and porches

## Sustainability

- All Electric heating and cooling





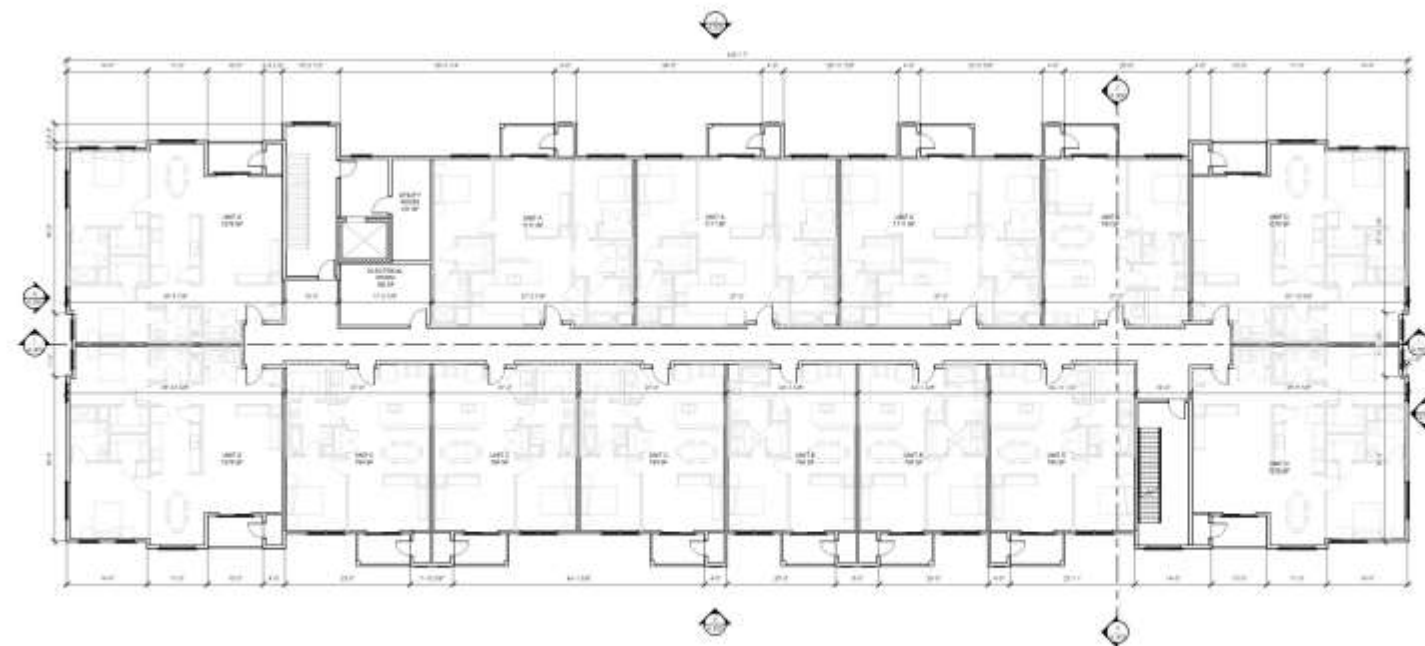
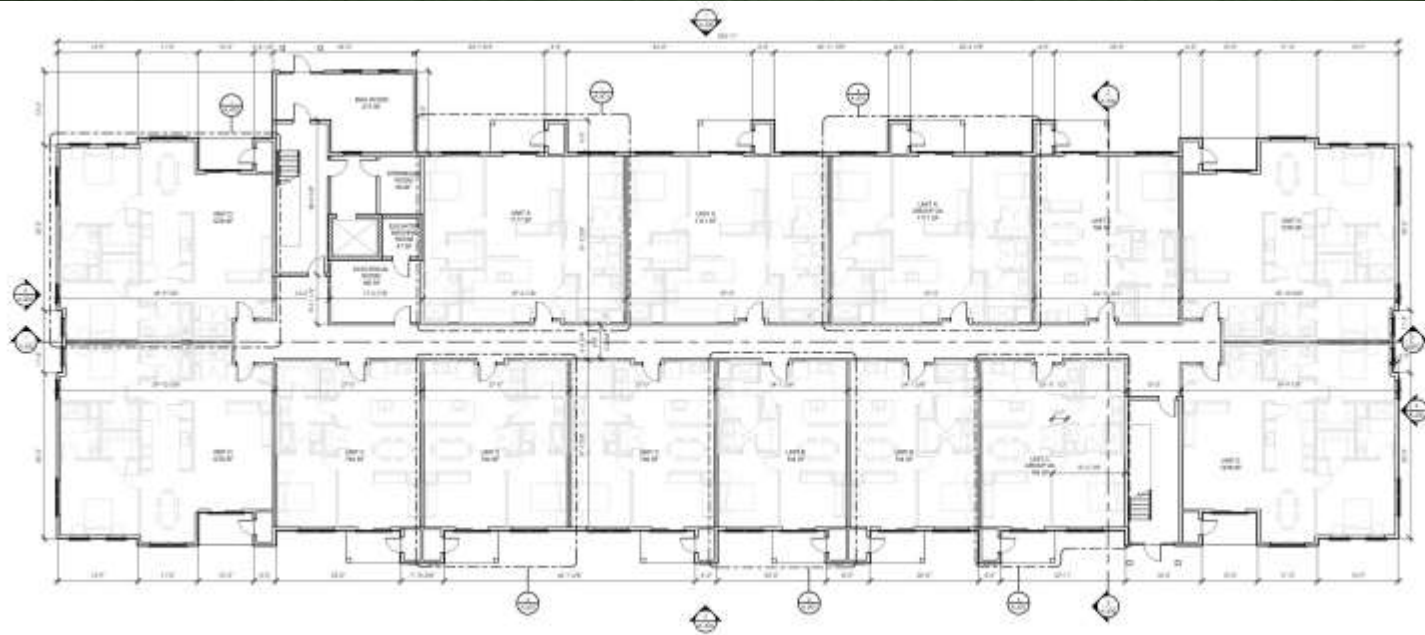
# MULTIFAMILY

## Accessibility

521 CMR – Massachusetts Architectural Access Board

- Elevators
- 95% - Group 1 Dwelling Units
  - Provide clear floor space and maneuvering space around fixtures and equipment
  - All doors along accessible routes must have 32" clear door widths.
  - All doors and cabinets must be provided with hardware that is easy to operate with one hand and that does not require tight grasping, tight pinching, or twisting of the wrist to operate.
  - Adaptability – The units must also have features that can be further modified without making structural changes to meet functional needs of an occupant with a disability.
    - Blocking for future installation of grab bars and wall hung sinks
- 5% - Group 2A Dwelling Units
  - Have features similar to Group 1, but in addition, the Group 2 units also have greater floor space requirements to allow wheelchair turning space. The bathing fixtures also require larger space needs than then Group 1 units.





## APPLICABLE CODES

**BUILDING** - 780 CMR -  
MASSACHUSETTS STATE  
BUILDING CODE 9TH EDITION  
(2015 IBC)  
**FIRE PROTECTION** - 527 CMR -  
MASSACHUSETTS FIRE  
PREVENTION REGULATIONS  
(2015 NFPA 1)  
**ACCESSIBILITY** - 521 CMR (MAAB)  
**ELECTRICAL** - 527 CMR 12.00 -  
MASSACHUSETTS  
ELECTRICAL CODE (2020  
NATIONAL ELECTRICAL  
CODE)  
**MECHANICAL** - 2015 IMC  
**PLUMBING** - 248 CMR -  
MASSACHUSETTS PLUMBING  
CODE  
**ENERGY CONSERVATION** - 2018 IECC  
& STRETCH ENERGY CODE

## OCCUPANCY CLASSIFICATIONS

R-2 USE GROUP (DWELLING UNITS)

## CONSTRUCTION TYPE

TYPE VA (1-HR COMBUSTIBLE )

## BUILDING SIZE

17,647 SF (FIRST FLOOR)  
16,590 SF (SECOND FLOOR)  
16,590 SF (THIRD FLOOR)  
16,590 SF (FOURTH FLOOR)  
**67,417 SF TOTAL**

## UNIT BREAKDOWN

2 BED UNIT A - 12

1 BED UNIT B - 8

1 BED UNIT C - 18  
GROUP 2A - 2

2 BED UNIT D - 14  
GROUP 2A - 2

**TOTAL UNITS - 56**  
1 BED ROOM UNITS 28  
2 BED ROOM UNITS 28

**BUILDING TOTAL 3**  
**TOTAL UNITS 168**



# MULTIFAMILY

	1-BEDROOM	2-BEDROOM
Unit Count Market	63	63
Unit Count Affordable	21	21
Total Unit Count	84	84
Square Feet	Average 749 SF	Average 1194 SF
Approximate Rent Market	TBD	TBD
Approximate Rent Affordable	TBD	TBD



# AMENITIES



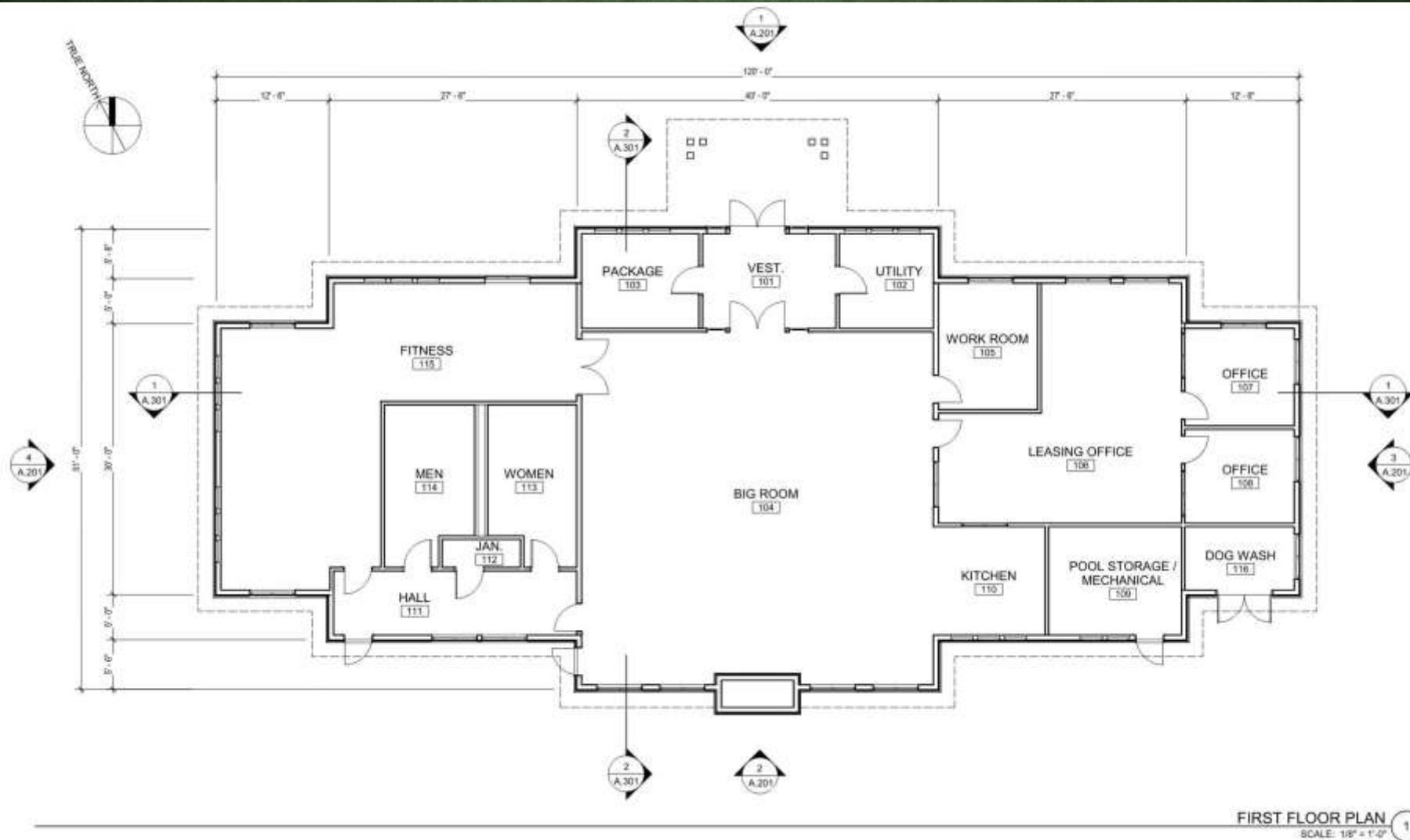


# CLUBHOUSE





# CLUBHOUSE





# AMENITIES AND SITE LIGHTING

- Pool
- Play Equipment
- Pavilion
- Dog Park
- Stormwater
- Trash, Recycling, and Maintenance





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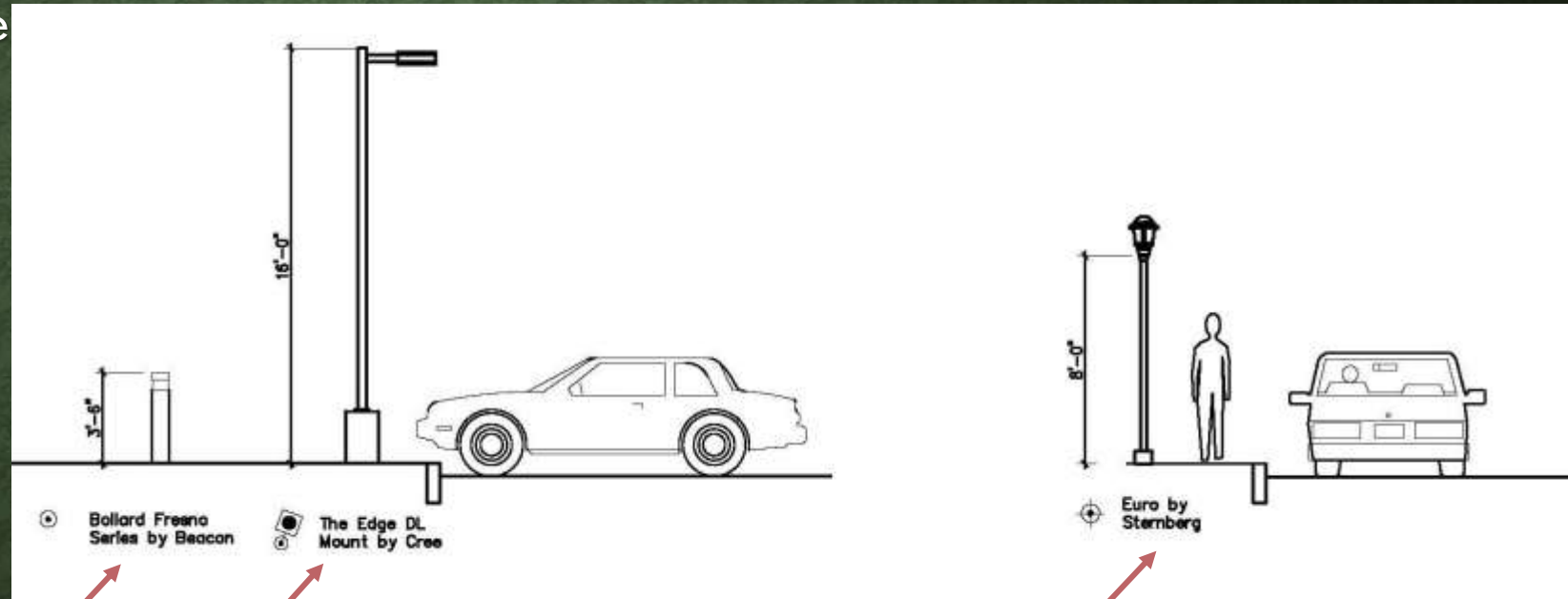




# AMENITIES AND SITE LIGHTING

## Lighting

- Pole Types and Heights
- Health, Safety, and Welfare
- Dark Sky Compliant
- Light Where We Want Light; None Where We Don't
- LED Light Source



**BOLLARD (PATH) LIGHT**  
**PARKING LOT LIGHT**  
**PEDESTRIAN SCALE LIGHT**



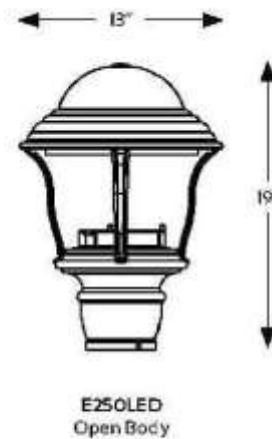
# AMENITIES AND SITE LIGHTING



1 BL1 – BOLLARD  
SCALE: NTS



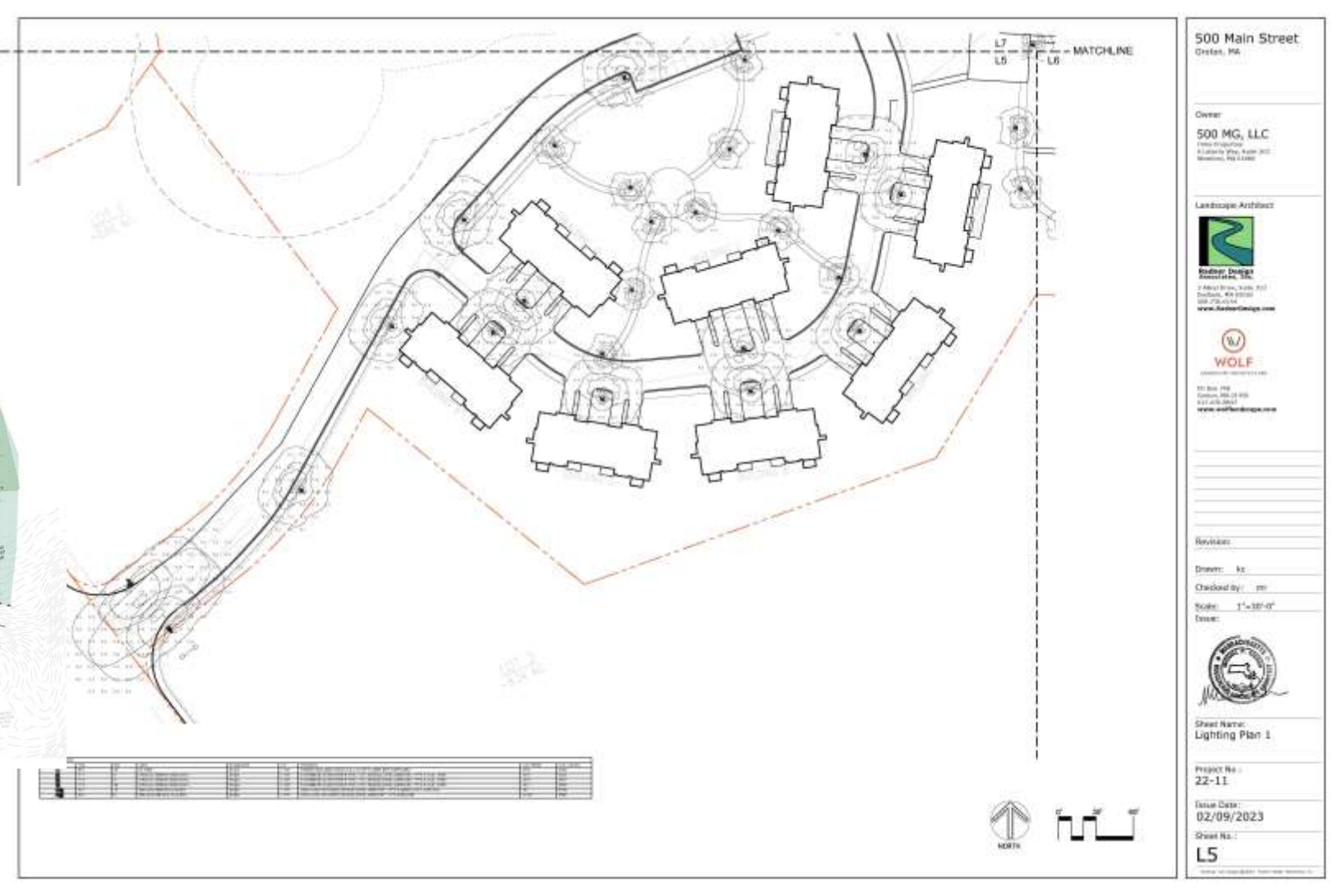
3 SL1 & SL3 – PARKING LOT LIGHT FIXTURE  
SCALE: NTS



2 PT1, PT2, PT3 – PEDESTRIAN LIGHT FIXTURE  
SCALE: NTS

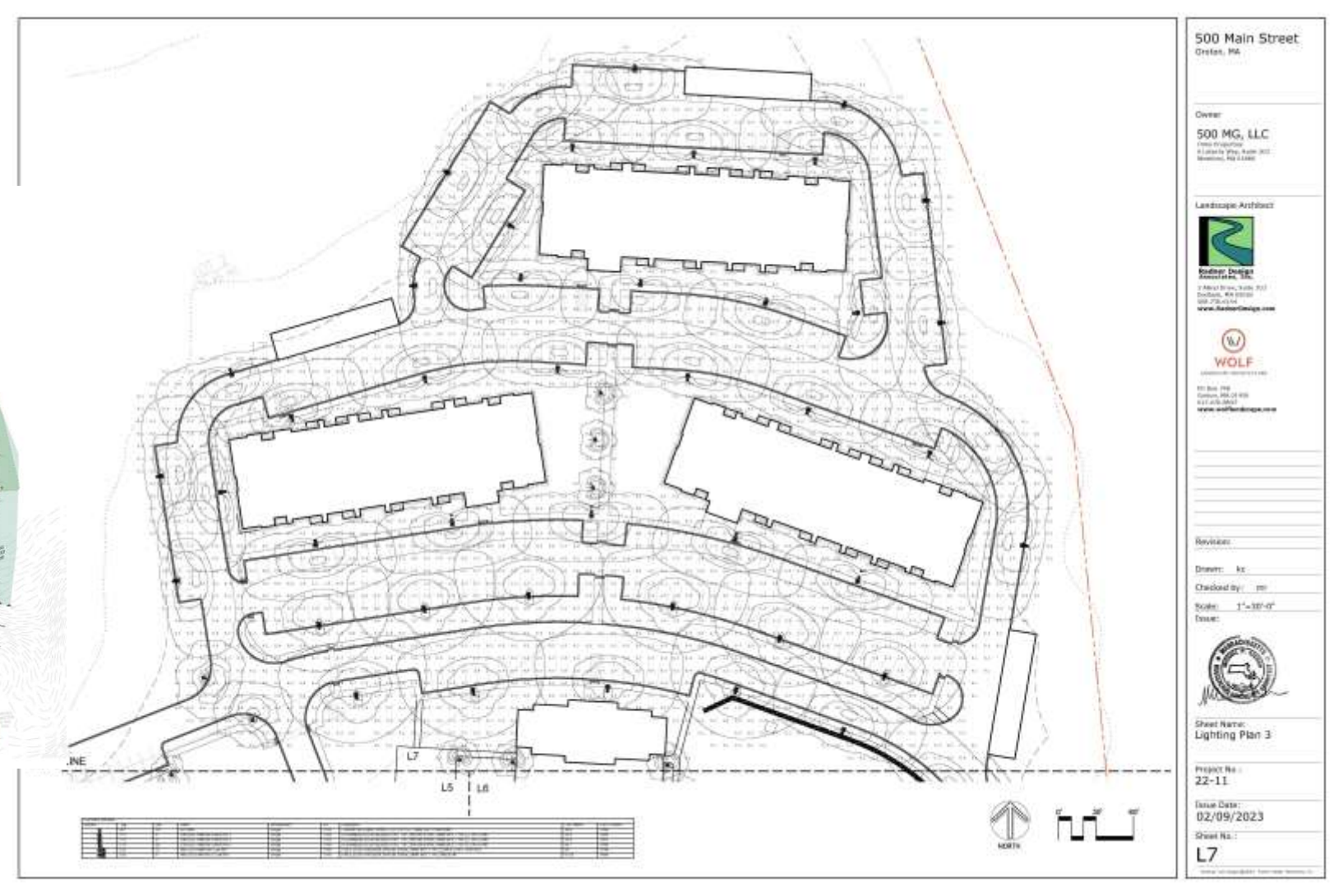


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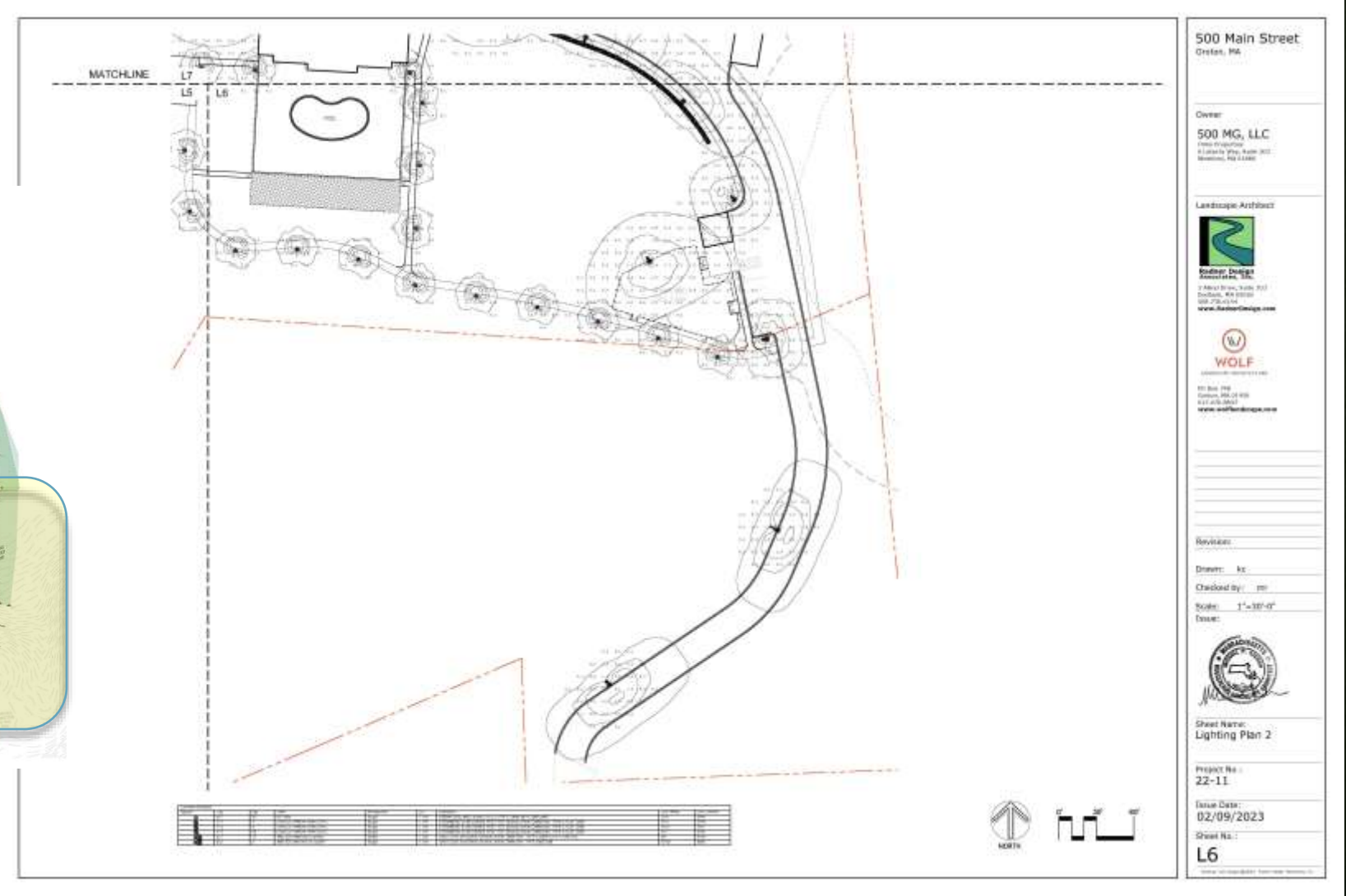


# AMENITIES AND SITE LIGHTING





# AMENITIES AND SITE LIGHTING






# LANDSCAPE

## Planting Design

### FACTORS IN PLANT SELECTION:

- Create a sense of place.
- Support biodiversity by using native plants  wherever suitable.
- Ensure longevity by using plants that tolerate salt and other stresses.
- Conserve resources by using drought-tolerant plants.
- Meet functional needs by fitting plants to their settings.



# LANDSCAPE

## Shade Trees for Open Areas



Red Maple   
*Acer rubrum*



Swamp White Oak   
*Quercus bicolor*

*All selections are preliminary*



# LANDSCAPE

## Narrower Trees for Smaller Spaces



Armstrong Maple   
*Acer rubrum 'Armstrong'*



Fastigate European Hornbeam  
*Carpinus betulus 'fastigate'*


*All selections are preliminary*



# LANDSCAPE

## Flowering Trees



Shadblow 'Lustre'   
*Amelanchier laevis* 'Lustre'



Eastern Redbud   
*Cercis canadensis*

*All selections are preliminary*



# LANDSCAPE

## Evergreen Trees



Emerald Green Arborvitae  
*Thuja 'Emerald Green'*



Oriental Spruce  
*Picea orientalis*



White Pine   
*Pinus strobus*


*All selections are preliminary*



# LANDSCAPE

## Shrubs



'Soft Touch' White Pine   
*Pinus strobus* 'Soft Touch'



'Arctic Fire' Red-Osier Dogwood   
*Cornus sericia* 'Arctic Fire'


*All selections are preliminary*



# LANDSCAPE

## Perennials, Grasses, and Groundcovers



Butterfly Weed   
*Asclepias tuberosa*



Lilyturf  
*Liriope Muscari*



'Shenandoah' Switchgrass   
*Panicum virgatum* 'Shenandoah'



'American Gold Rush' Black-Eyed Susan   
*Rudbeckia* 'American Gold Rush'

*All selections are preliminary*



**THANK YOU**