



**LEBANON TREE ADVISORY BOARD
MARCH 6, 2023 - 5:30 PM
MEETING ROOM 1, CITY HALL OR
REMOTE VIA VIRTUAL PLATFORM
LEBANONNH.GOV/LIVE**

-
- 1. Call to Order**
 - 2. Approval of Minutes**
 - A. February 6, 2023 Minutes
 - 3. Old Business**
 - A. City Council Urban Heat Islands Presentation
 - B. Planning Board Site Plan Review Regulations - Update
 - C. Downtown Lebanon Plans, Economic Development Advisory Committee - Update
 - D. Arbor Day Plans
 - E. Tree Ordinance - Update
 - 4. New Business**
 - A. 2024 Funding
 - B. Site Plan Review - DRTC Cavendish Ct
 - 5. Other Business**
 - A. Next scheduled meeting: Monday May 1. 5:30 pm
 - 6. Adjournment**

Meetings are open for in-person and remote attendance. Members of the public that wish to attend remotely may do so by going to LebanonNH.gov/Live where you will find instructions on how to enter the meeting. Members of the public will be able to participate and ask questions through the City's virtual platform or by phone. Please note: Should technical difficulties occur during the meeting that disrupts virtual or phone connection(s), the meeting will continue without remote access capabilities.

City of Lebanon
Tree Advisory Board

Draft* Minutes, Monday, February 6, 2023 at 5:30pm
Meeting Room 2, City Hall or remote on LebanonNH.gov/Live
(*questions in red below)

MEMBERS PRESENT (7/7): Kathleen Corrigan, Charlie DePuy, Andrew Garthwaite, Kelsey Haigh, Susan Johnson, Mary Maxfield, Sarah Riley

MEMBERS ABSENT (0/7):

STAFF PRESENT: Paul Coats (Director, Lebanon Parks and Recreation)

1. CALL TO ORDER: The meeting was called to order at the usual time
2. APPROVAL OF MINUTES: Minutes of our last meeting on 1/3/23 were approved with some amendments.
3. OLD BUSINESS:
 - a. **Site Plan Review Regulations:**
 - i. We gave thanks to Kathleen and Sarah for their substantial input here. Does anyone have a copy of this input in order to add them to these minutes?
 - ii. We are discussing these regulations now in order to make an official statement that we send to all Planning Board members.
 - iii. We will present our statement to the Planning Board under "General Comments and Concerns" (?)
 - iv. (Charlie) On page 3, C.6. and C.7., Emphasize (best verb here? Not sure that was Charlie's word) the section in which landscaping requirements not be considered....if adequate parking cannot be provided.
 - v. (Charlie) Is there an impervious surface site plan requirement?
 - vi. Susan moved that we accept this input to our statement-input on the Site Plan Review Regulations, Section 6.2, B.1.a. Charlie seconded the motion.
 - vii. Susan recommended that we present this statement to the key subgroup of the Planning Board before this is officially discussed at

their public meeting. Andrew recommended that Kathleen and Sarah be involved with this.

b. Emerald Ash Borer and Elm Vaccinations:

- i. Since the last discussion on this topic,
 - Chippers, gave their quote for vaccinating the 2 elms in Colburn Park and 6 ashes on the pedestrian mall.
 - ~\$25/inch = \$1500 for the two ashes for a 3 year treatment for \$500/year
 - **Using Thiabendazole**
 - Bartlett and Greenshield gave quotes for the elms. The chemicals used here would be fungicides administered via injection into the trunks which would be drawn up the cambium—as opposed to broadcasting the fungicide into the soil which has a number of associated concerns.
 - Bartlett gave a quote of \$1760 for the elms, # of years 3?
 - Greenshield gave a quote of \$465/year for the elms
 - At present there is no sign of infection in the elms. Doing this work now would be much better than waiting until there is a problem.
 - (Paul) Injection would be done in May or June. We can do research on the treatments and associated pros/cons:
 - Thiabendazole—Bartlett wants to use
 - Propiconazole—Greenshield wants to use
 - Thiabendazole--Chippers
 - The ashes have 55 inches total
 - Chippers proposes 2 yr treatment/all 6 trees at \$1300
 - Bartlett “ “ “ “ for all 6 at \$590
 - Greenshield proposed annual treatment for \$662/year for 3 years
 - Eric from Greenshield is a beekeeper and concerned about pollinators. He says that using neonicotinoids (“neonics”) on ash trees would not be a problem because the chemical is no longer active by the time it reaches the leaves.
 - We are aware that concern about pollinators is not widespread.
- ii. Paul will look up the chemicals Chippers wants to use and present a summary of that info at our next meeting.
- iii. Susan will look up the chemicals and put the info into our shared folder.

- iv. Questions/points raised:
 - How about replacing those ash trees, digging out their stumps, and replacing them with new ones?
 - (Sarah) Let's protect the ash trees on the pedestrian mall unless it's determined that the treatments are very toxic.
 - (Andrew) Maybe it's okay to let some trees go and have a plan for replacing them.
- v. The Rotary is interested in trees, too, so we might ask for their involvement here.
- vi. (Andrew) Let's continue this discussion at our next meeting.
- vii. Paul wants to secure plans with these businesses so that we can be put on their spring schedule(s). We gave our support.

4. New Business

a. Airpark Road Facility Plan

- i. We disagree with the proposed waivers.
 - We think trees should be included.
 - Why forsythias and not local plantings?
 - No info on pre-existing trees with 12-inch diameters.
- ii. General comments:
 - Maples are overplanted.
 - Trees are needed around the loading area onto the lawn.
- iii. Kelsey will write up a summary of our discussion.
- iv. Paul will share our input with Tim.

b. Motion made to extend meeting 15 minutes to 7:15pm.

c. UHI presentation to City Council on 3/15/23 at 7pm.

- i. Charlie gave us a preview of that presentation:
 - Maps documenting the existence of urban heat islands in Lebanon.
 - Surveys and interviews providing input from people in Lebanon regarding the impacts of extreme heat.

d. More trees everywhere, including the School Street Cemetery

- i. Let's discuss this at next meeting.

5. MEETING ADJOURNED AT 7:21 PM– Motion to adjourn made by Andrew and seconded by several of us.

6. NEXT MEETING will be March 6 at 5:30pm.

Respectfully submitted,
 Mary Maxfield
 Recording Secretary

Urban Heat Islands In Lebanon, NH

Research completed by the Lebanon Tree Advisory Board et al.

Mary Maxfield, Charles DePuy, Miles Sturges, Sawyer Weale

Key Points

- 1. Lebanon has documented urban heat islands.
- 1. The hottest areas are characterized as tree-less and paved.
- 1. People in Lebanon are affected by summertime extreme heat.
- 1. Certain populations are particularly vulnerable to extreme heat.

maps

maps

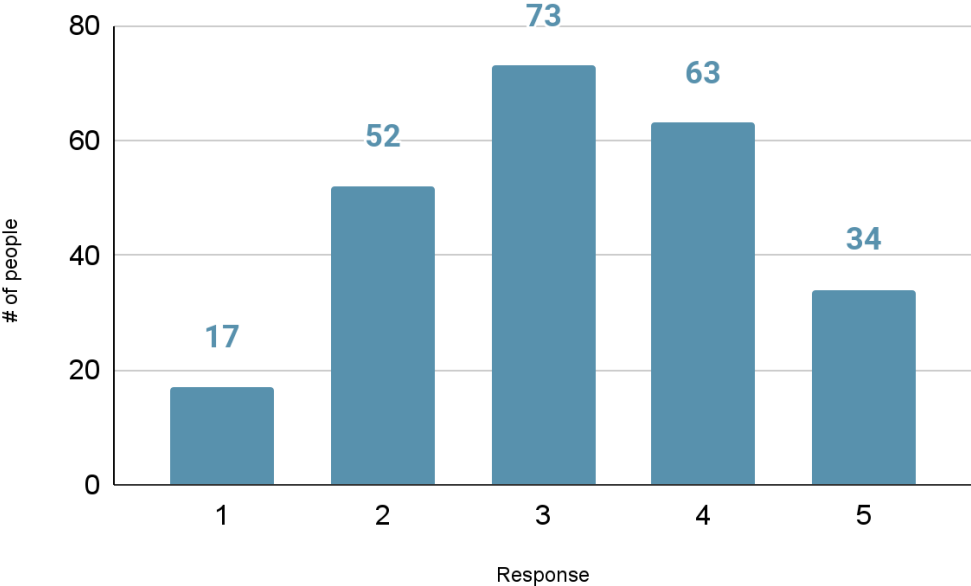
maps

maps

Survey Responses

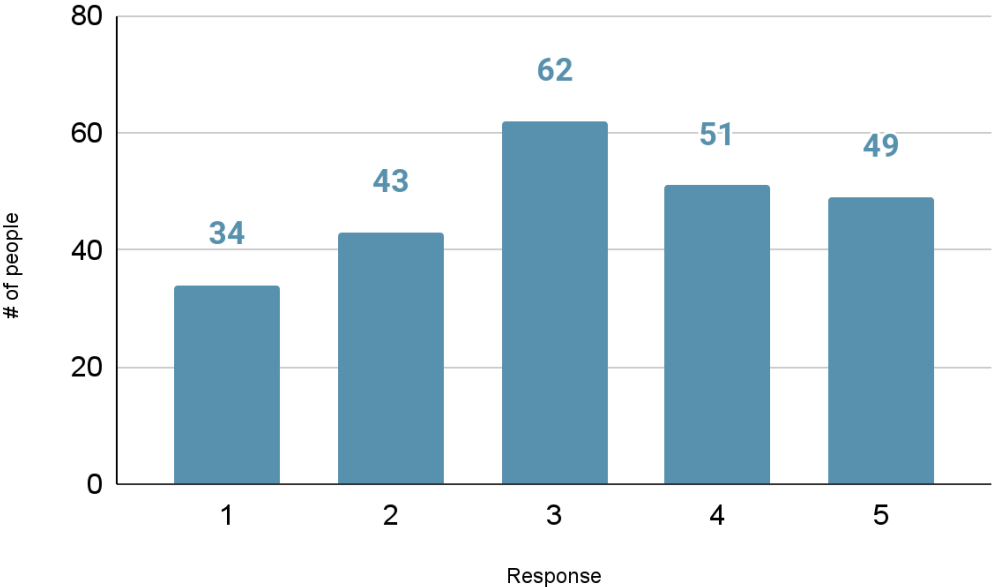
Survey responses to “I often feel affected by extreme summer heat in Lebanon.”

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)



Survey responses to “I am concerned about how heat impacts me, family and/or neighbors”

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)



Elaborations (from interviews) on **“I am concerned about how heat impacts me, family, and/or neighbors”**

I am concerned about the impact of heat:

8 - On people who cannot escape the heat

7 - On me

4 - On the elderly

3 - On my family

3 - On my neighbors whose apartments face the sun or pavement

1 - On people without transportation because they'd have fewer options

[and more]

Survey responses to “Are there certain places in Lebanon that are especially hot?”

87 - No trees/no shade/open areas/sun

84 - Streets/sidewalks/pavement/parking lots

40 - Route 12A (shopping area)

35 - Downtown Lebanon (area around Colburn Park)

18 - High-traffic areas (both pedestrian and vehicle)

13 - Dense development
Lebanon

13 - West

11 - Miracle Mile
Schools

11 -

7 - Main Street West Lebanon area

5 - Malls

5 - Places not near rivers/bodies of water

3 - Public areas/Areas close to public buildings

3 - Lebanon Pool
- Playgrounds

3

3 - Mechanic Street

2 - The Mall

2 - Hanover Street
- Kilton Library

1

[and more]

Survey responses to “Where do you go for relief from heat?”

107 - Near water

11 - Libraries

77 - Inside a building

7 - Parks

55 - Air conditioning and/or fans

5 - Other towns

43 - Tree cover or shade

[and more]

Interview Responses

Interview Responses to “I often feel affected by extreme summer heat in Lebanon.”

Community Members:

“I felt **sick**.”

“I couldn’t **cool down**.”

“I had to sleep **downstairs**.”

[and more]

High School Student:

“Sports practice time was often changed, but even then I would often **feel sick** during and have a **headache** afterward.”

Community member who has been living in their car for a year:

“It’s really hard to find **shade** for the un-homed and those living out of their cars.....It’s a challenge in itself to keep your **vehicle cool** or to keep wherever you are staying cool.”

Interview responses to “**Are there times when you don’t have a choice about being in the heat?**”

Common responses:

To walk the dog
rabbits

To garden or take care of chickens and

Sports practices
a choice

Basically all the time—no choice I don’t have

who lives in her car)

^(Community member

Work

[and more]

Interview responses to “What do you do to protect yourself from the heat?”

Frequently mentioned:

stay out of sun

stay hydrated

light

covering clothing

stay inside a building stay in area with air conditioning or fan

find areas near water or

“You can get these dark screen-shades that fit like a pillowcase over your...They’re gonna protect you from the direct sun but you’re also gonna let your heat out of your vehicle because you use them with your windows open. These vehicles can quickly reach **150 degrees**...it gets dangerous quick...

If you can’t get away from the heat [at night], you can [**sleep under your car**] if you can find where you have enough clearance, if you can find an indented area where it’s non-paved...if you’re little and your car is big enough that you can [sleep] underneath there just until you know you’re able to afford those window covers.

...it takes energy and a lot of forethought in order to keep safe...and you’re gonna be doing it with **extreme sleep deprivation.**”

–Lebanon community member who sleeps in car

4

**Reports of heat-related emergency room visits in July and August 2022
at Alice Peck Day Memorial Hospital**

Both Lebanon libraries serve as refuge for many during extreme heat.

Library staff shared that on extreme heat days many people come in, though the libraries don't ask why or collect data on why they come.

Some people will stay for hours or even all day, from 10-6, on the hottest days, getting water, air conditioning, and a safe place to stay.

On days of extreme heat, the libraries serve:

- All classes, but definitely some who are poor or unhoused.
- Same race demographic proportions as Lebanon population
- People without air conditioning
- The elderly

Lebanon Human Services: Certain groups are especially vulnerable to heat.

- The **unsheltered**
 - Sleeping in a place not intended for human habitation such as vehicles or tents
- The **unhoused**—Many more people are in this group
 - Couch-surfing
 - Motels
- People with **lower incomes** who live in a building:
 - But cannot afford air conditioning
 - With **little to no tree shade**.
- People with **underlying health conditions**.

Lebanon Human Services: Certain areas are especially vulnerable to heat.

Downtown Lebanon and West Lebanon

- Especially in downtown's older buildings containing many apartments
- These are densely populated neighborhoods
- Low tree density
- Large amounts of pavement

Lebanon Human Services: Advance Transit bus stops need trees

- Many of the bus stops are surrounded by pavement without tree or shade cover.
- People with underlying health conditions, such as heart failure, would be sensitive to extreme heat.
- Older adults, maybe someone who decided to give up their keys and now relies on the bus system may be more vulnerable to heat stroke than someone younger.
- People with mental health conditions that get agitated due to the physical discomfort of extreme heat are more vulnerable.
- People who rely on the bus system to get to their activities of daily living or simply to get to the library or other cooling station cannot simply use their car to get where they need to go.

Key Points

- 1. Lebanon has documented urban heat islands.
- 1. The hottest areas are characterized as tree-less and paved.
- 1. People in Lebanon are affected by summertime extreme heat.
- 1. Certain populations are particularly vulnerable to extreme heat.

Recommendations to the City Council

Necessary thanks to:

- Emily Walton - Dartmouth Sociology Department
- John Tietjen - Lebanon High School Science Department
- Luis Alvarez Leon - Dartmouth Geography Department
- Joe Earle and Emily Ballard - Dartmouth geography students

City of Lebanon Tree Ordinance - DRAFT

Definitions

Tree Advisory Board

The City has previously established a TAB (reference here) to facilitate the goals of this ordinance.

Tree Warden

The City will appoint a volunteer Tree Warden (reference here?) to facilitate the goals of this ordinance.

Public Tree

Public trees are defined as any tree or woody vegetation being rooted on land Owned by the City of Lebanon.

Street Tree

Street trees are defined as any tree or woody vegetation planted within the City Right of Way.

Setback Tree

Setback trees are defined as public shade trees planted on private property up to 20 feet from the edge of the right-of-way with the written consent of the property owner.

Planting

Street Tree Species to be Planted.

All species planted as Street Trees shall be from the approved list for the City of Lebanon (Appendix A), a copy of which shall be maintained in the Planning Services Department. The planting of nonconforming species can be appealed to the Tree Warden.

Planting Technique

All agents of the city shall be informed of the correct planting technique for trees and shrubs. Anyone planting on behalf of the City of Lebanon should first learn the difference between the root flare and the graft union. Trees shall be planted with the root flare left visible above the ground level. The Department of Recreation, Arts, and Parks has written information covering best practices for planting and mulching.

Mulching

If the City or its agents apply mulch around public trees in order to prevent damage from lawn equipment and/or to preserve moisture, they shall follow best practices: applying no more than 3" of mulch to the ground surface under the tree dripline, and taking care to prevent any mulch from touching the tree itself.

Spacing

Spacing of Street Trees shall be in accordance with the tree species size. No trees may be planted closer together than the following: Small Trees, 30 feet; Medium Trees, 40 feet; and Large Trees, 50 feet; except in special plantings designed or approved by a landscape architect.

Distance from Curb and Sidewalk.

The distance trees may be planted from curbs, edges of roads and sidewalks will be in accordance with the tree species size. No trees may be planted closer to any curb or sidewalk than the following: Small Trees, 2 feet; Medium Trees, 3 feet; and Large Trees, 4 feet. (Confirm with DPW/Dependent on Speed limit?).

Distance from Street Corners and Fire Hydrants.

No Street Tree shall be planted closer than 30 feet of any street corner measured from the point of nearest intersecting curbs or edges of roads. No Street Tree shall be planted closer than 10 feet of any fire hydrant. Exceptions may be granted only by approval of the City Tree Warden, after the Tree Warden's consultation with the Department of Public Works and the Tree Advisory Board as appropriate.

Utilities

No Street Trees other than those species listed as small trees (30' and under) may be planted under or within 10 lateral feet of any overhead utility wire. Medium and large trees shall be planted one-half the listed canopy diameter from any overhead utility line. Small trees shall be planted at least 5 feet, medium trees at least 10 feet, and large trees at least 15 feet from any underground utility line. Refer to (Appendix A) for overhead utilities recommendations.

Tree Pit Size

Where required for street trees, contained tree pits shall offer the soil volume equal to the mature size listed in Appendix A at a depth of 2 feet. Connected tree pits are allowed and subject to spacing guidelines in Appendix A. Exceptions will need to be signed in writing by the Tree Warden.

Maintenance

Public Tree Care

The City shall have the right to plant, prune, maintain and remove trees, plants and shrubs within the lines of all streets, alleys, avenues, lanes, squares and public grounds, as may be necessary to insure public safety or to preserve or enhance the symmetry and beauty of such public grounds. The City Tree Board may remove or cause or order to be removed, any tree or part thereof which is in an unsafe condition or which by reason of its nature is injurious to

sewers, electric power lines, gas lines, water lines, or other public improvements, or is affected with any injurious fungus, insect or other pest.

The City shall have the right to prune any tree or shrub on private property when it interferes with the proper spread of light along the street from a street light or interferes with visibility of any traffic control device or sign.

Tree Topping

It shall be unlawful as a normal practice for any person, firm, or city department to top any Street Tree, Park Tree, or other tree on public property. Topping is defined as the severe cutting back of limbs to stubs larger than three inches in diameter within the tree's crown to such a degree so as to remove the normal canopy and disfigure the tree. Trees severely damaged by storms or other causes, or certain trees under utility wires or other obstructions where other pruning practices are impractical may be exempted from this ordinance at the determination of the City Tree Board.

Removal

The City shall have the right to cause the removal of any dead or diseased trees on private property within the city, when such trees constitute a hazard to life and property, or harbor insects or disease which constitute a potential threat to other trees within the city. The City Tree Board will notify in writing the owners of such trees. Removal shall be done by said owners at their own expense within sixty days after the date of service of notice. In the event of failure of owners to comply with such provisions, the City shall have the authority to remove such trees and charge the cost of removal on the owners property tax notice.

General Provisions

Construction in Vicinity of City Trees.

Any construction within 10 lateral feet of Public Trees requires consultation with the City Tree Warden who may provide specific written recommendations for additional protection of trees. American National Standards Institute – A300 or the current version available at the Planning Department.

Arborist and Bond.

Before securing a contract with the City for arboricultural services, a contractor must have possession of liability insurance in the minimum amounts of \$1,000,000 aggregate, general liability per occurrence indemnifying the City or any person injured or damage resulting from the pursuit of such endeavors as herein described. All tree work performed on Public Trees must conform to the most recent ANSI A300 Standards.

Penalties

Any person violating any provision of this ordinance shall be subject to a fine of \$500.00 for each offense; and a separate offense shall be deemed committed on each day on which a violation occurs or continues.

APPENDIX A

See <https://lebanonnh.gov/DocumentCenter/View/877/Site-Plan-Regulations-PDF>

page 44. These aren't arranged by size yet.

Shade Trees for Dusty, Salty Locations

Acer ginnala	Amur maple
Crataegus spp.	Hawthorne
Gleditsia triacanthos	Honey locust
Tilia cordata	'Greenspire' Greenspire linden
Tilia cordata	Littleleaf linden

Evergreen Trees for Dusty, Salty Locations

Pinus nigra	Austrian pine
Pinus resinosa	Red pine
Pinus sylvestris	Scotch pine

Shrubs for Dusty, Salty Locations

Caragan arborescens	Siberian peashrub
Forsythia spp.	Forsythia
Ilex verticillata	Winterberry
Potentilla spp.	Potentilla
Rosa rugosa	Rugosa rose
Spiraea nipponica var.	'Snowmound' & 'van Houttei' spirea
Syringa	Dwarf Korean lilac
Syringa patula	'Miss Kim' lilac
Syringa vulgaris	Common lilac

Native plant species are preferred.

See list at

https://extension.unh.edu/sites/default/files/migrated_unmanaged_files/Resource000980_Rep1106.pdf

Invasive exotic plants cannot be used to satisfy landscaping requirements. Such exotic plants include, but are not limited to, the following species:

Acer plantanoides	Norway maple
Aedopodium podagraria	Bishopsweed, goutweed
Ailanthus altissima	Tree-of-heaven
Ampelopsis brevipedunculata	Porcelain berry
Berberis thunbergii	Japanese barberry
Berberis vulgaris	European (or common) barberry

<i>Celastrus orbiculatus</i>	Asian bittersweet
<i>Coronilla varia</i>	Crown vetch
<i>Cytisus scoparius</i>	Scotch broom
<i>Elaeagnus angustifolia</i>	Russian olive
<i>Elaeagnus umbellata</i>	Autumn olive
<i>Euonymus alata</i>	Burning bush
<i>Euonymus fortunei</i>	Climbing euonymus, wintercreeper
<i>Hedera helix</i>	English ivy
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Lonicera maackii</i>	Amur honeysuckle
<i>Lonicera morrowii</i>	Morrow's honeysuckle
<i>Lythrum salicaria</i>	Purple loosestrife
<i>Phragmites</i>	Common reed
<i>Rhamnus cathartica</i>	Common buckthorn, tall hedge
<i>Rhamnus frangula</i>	European buckthorn
<i>Rosa multiflora</i>	Multiflora rose, baby rose

DRTC

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

SITE PLAN AMENDMENT - PHASE 1

OWNERS/APPLICANTS

GRAFTON COUNTY ECONOMIC DEVELOPMENT COUNCIL, INC.
16 CAVENDISH COURT
LEBANON, NH 03766

NORTH COUNTRY COUNCIL
16 CAVENDISH COURT
LEBANON, NH 03766

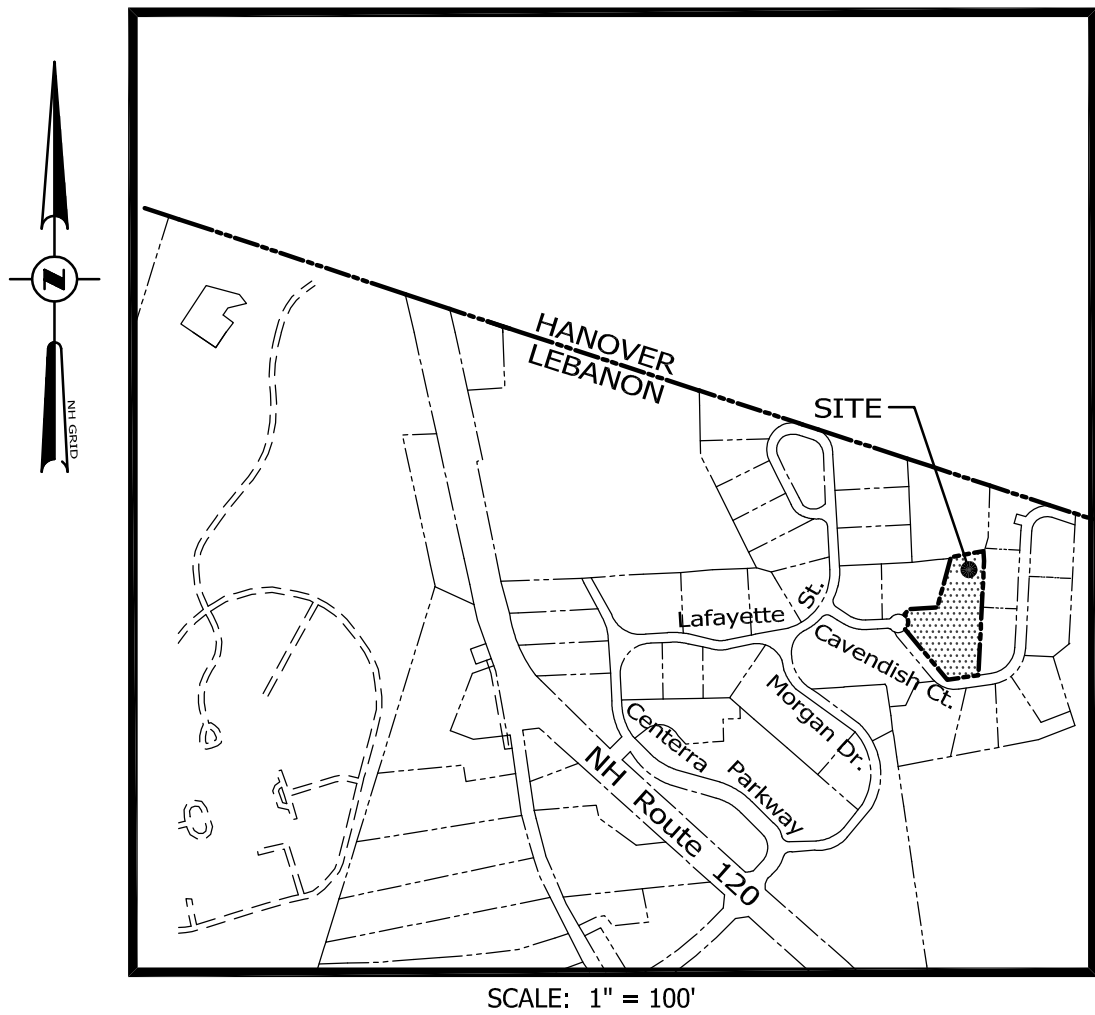
CONSULTANTS

CIVIL ENGINEER
DANIEL A. NASH, PE
ADVANCED GEOMATICS AND DESIGN
PO BOX 512
105 BANK STREET
LEBANON, NH 03766
advancedgeomatrics@comcast.net

CONTRACTOR/OWNER'S AGENT
JASON YEHLE
HAZEN HILL CONSTRUCTION
16 CAVENDISH COURT
LEBANON, NH 03766

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7	LANDSCAPE PLAN, DETAILS	L-3
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ZONING COMPARISON - IND-L DISTRICT			
	EXISTING	PROPOSED	REQUIRED
LOT SIZE	5.67 Acres	5.67Ac	2 Acres
FRONTAGE:			
CAVENDISH COURT	107'	107'	200'
FRONT YARD:	286'	286'	40'
SIDE YARD:	222'	222'	20'
REAR YARD:			
NORTH-SOUTH LINE	22'	22'	20'
EAST-WEST LINE	274'	274'	20'
BUILDING -FIRST FLOOR (s.f.):	33,731 s.f.	33,731 s.f.	
BUILDING -SECOND FLOOR (s.f.):	30,597 s.f.	30,597 s.f.	
BUILDING -TOTAL (s.f.):	64,328 s.f.	64,328 s.f.	
BLDG.COVERAGE(sf)	33,731 s.f.	33,731 s.f.	
% BLDG.COVERAGE	14%	14%	50%
IMPERVIOUS COV.(sf)	98,554sf	125,898sf	
% IMPERVIOUS COV.	40%	51%	NONE
HEIGHT	35'	35'	65' max.
USE:	RESEARCH LABORATORY		
PARKING: TOTAL (REG./HC.)	-		
-SURFACE N&W	32 (29/3)	66 (63/3)	
-SURFACE SOUTH	48 (46/2)	63 (61/2)	
-GARAGE	24	24	
-ALTERNATIVE FUEL SPACES	-	6	
-TOTAL	104 (99/5)	159 (154/5) (150%)	107 (161-150%)

- NOTES:
1.

THIS PARCEL IS SHOWN AS LOT 10-11-36 ON THE LEBANON TAX MAPS.
2.

THIS PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
3.

THIS PARCEL IS SUBJECT TO THE WETLANDS OVERLAY DISTRICT.
4.

THIS PARCEL IS NOT SUBJECT TO THE FLOOD OVERLAY DISTRICT.
5.

SUBJECT PARCEL IS ZONED IND-L AND IS PART OF THE OFFICE SECTOR OF CENTERRA PLANNED BUSINESS PARK.

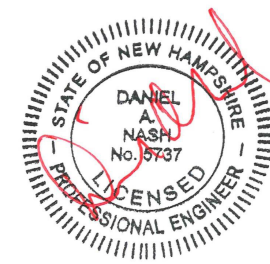
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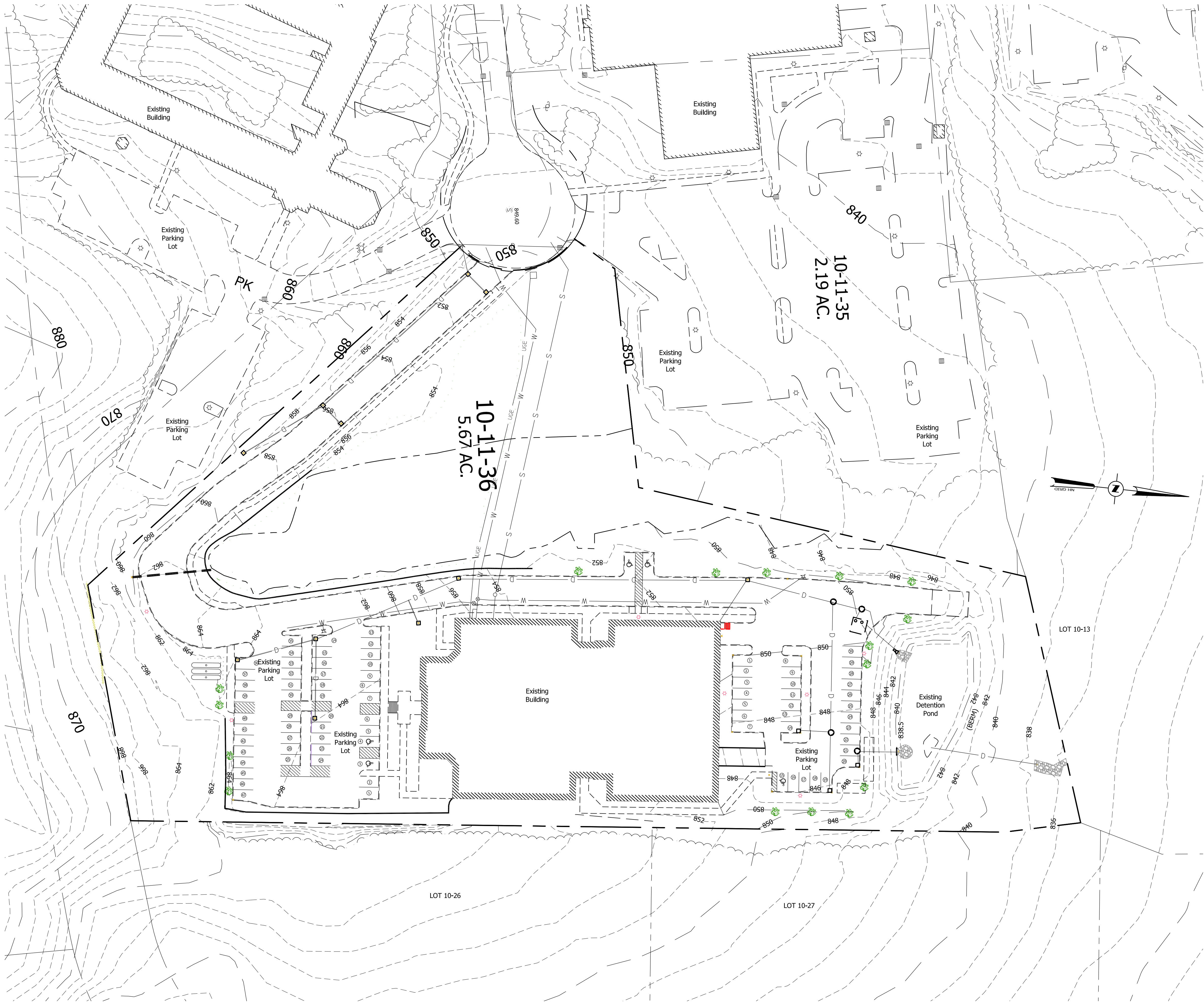
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~~10/10/2022~~

SITE PLAN

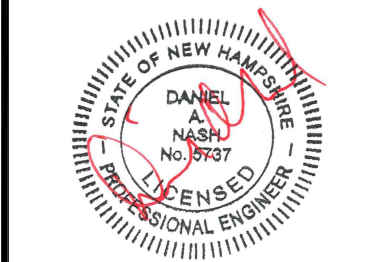
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EXISTING CONDITIONS PLAN
FOR
DRTC
IN
LEBANON, NEW HAMPSHIRE

ADVANCED GEOMATICS & DESIGN
18 BANK STREET - PO BOX 512
LEBANON, NEW HAMPSHIRE 03766
PHONE: (603) 448 6295 FAX: (603) 448 0531
E-MAIL: advancedgeomatics@adelphia.net



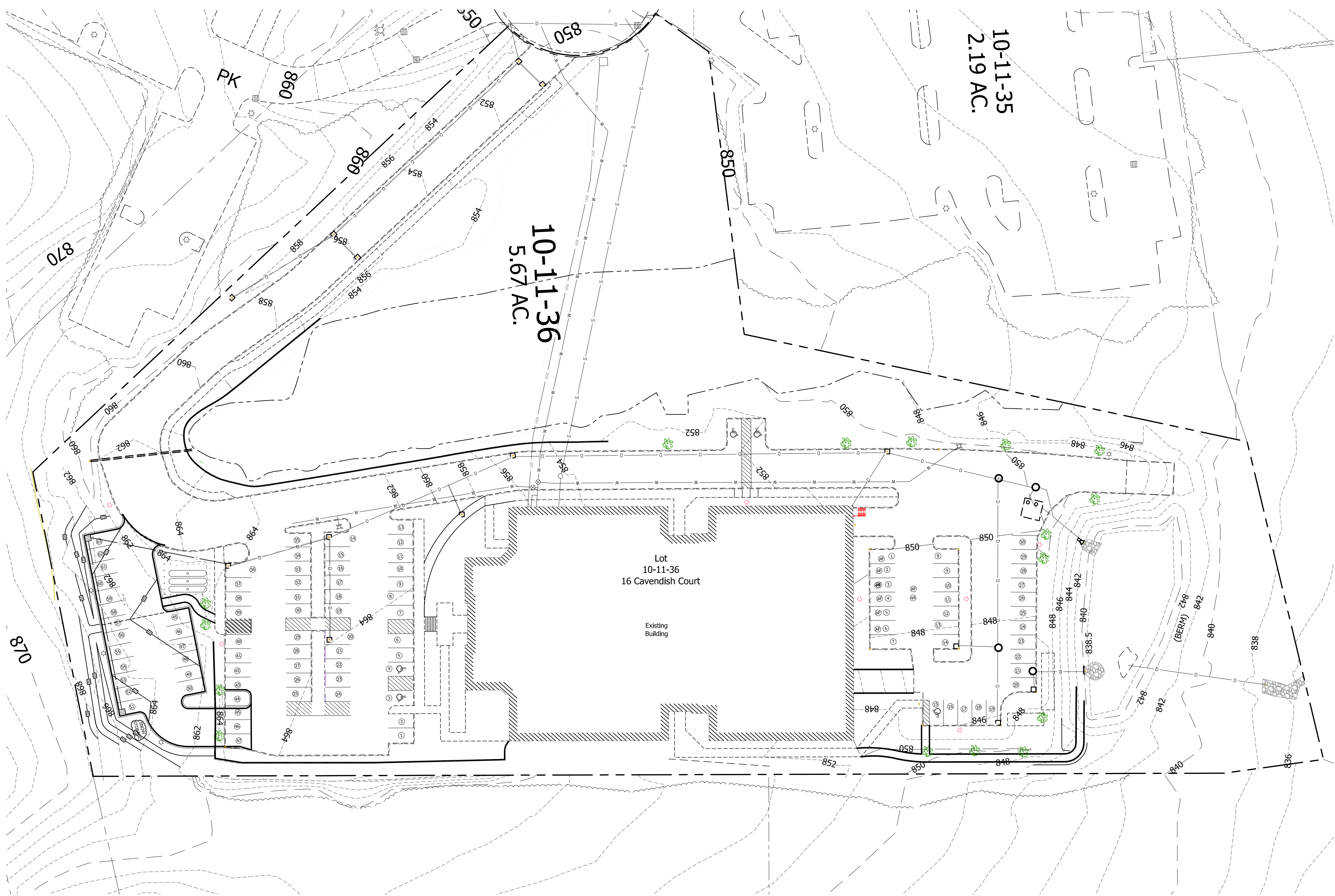
SURVEYED: GIS
DESIGNED:
DRAWN: KH
CHECKED: DAN
DATE: 11/02/2022

DRTC

EXISTING
CONDITIONS PLAN

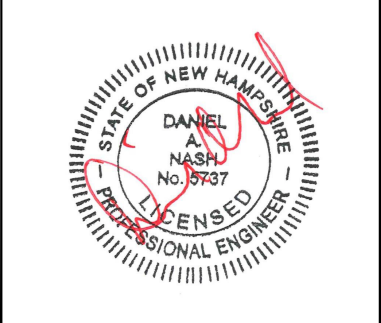
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DWG: 22011\22011-BA



OVERALL SITE PLAN
FOR
DRTC
IN
LEBANON, NEW HAMPSHIRE

ADVANCED GEOMATICS & DESIGN
105 BANK STREET - PO BOX 512
LEBANON, NEW HAMPSHIRE 03766
PHONE: (603) 448 6295
E-MAIL: advancedgeomatics@comcast.net



SURVEYED: GIS
DESIGNED: DAN
DRAWN: DAN
CHECKED: DAN
DATE: 10/10/2022

DRTC

OVERALL SITE PLAN

C-1

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ADVANCED GEOMATICS & DESIGN
DWG: 22011\22011-PL

#	REVISIONS	DATE
1	UPDATE	11/02/2022
2	TREATMENT SWALE	12/28/2022
3	PHASE 1	02/27/2023
4		
5		
6		
7		

Lot
0-11-36
rendish Court



Plant Legend				
Symbol	Qty	Common Name	Botanical Name	Container
Groundcovers\Evergreen				
	6	Early Cotoneaster	Cotoneaster adpressus praecox	#3 Cont.
Groundcovers\Ornamental Grass				
	31	Feather Reed Grass	Calamagrostis acutiflora 'Karl Foerster'	#3 Cont.
Shrubs\Deciduous				
	5	Red Sprite Winterberry	Ilex verticillata	#5 Cont.
	3	Snowmound Spirea	Spiraea nipponica	#5 Cont.
	8	Spicebush	Lindera benzoin	5-6' B&B
Shrubs\Evergreen				
	44	Bearberry	Arctostaphylos uva-ursi	#1 Cont.
	16	Purpureum Elegans Rhododendron	Rhododendron catawba 'Purpureum Elegans'	#5 Cont.
Trees\Deciduous				
	1	Autumn Brilliance Serviceberry	Amelanchier x grandiflora 'Autumn Brilliance'	6-7' Multi stem
	3	Heritage River Birch	Betula nigra 'Heritage'	8-10' Clump
	3	October Glory Maple	Acer rubrum 'October Glory'	2.5"-3" Cal.
Trees\Evergreen				
	1	White Fir	Abies concolor	7-8' Height

Shade Calculations:

Total Proposed Parking	30 % of Lot to be shaded	Trees to be Provided:
Total Proposed Parking Lot s.f.= 6,871 s.f.	67 % of Lot proposed to be shaded	9 Trees Provided (3 exist., 1 proposed Internal, 5 Trees Perimeter) 11 total Trees Provided 113 groundcovers, grasses, and shrubs provided.

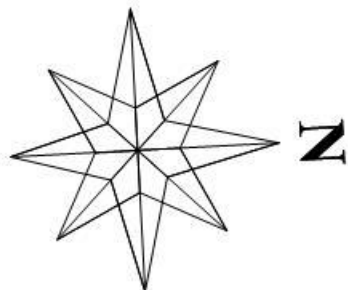
Landscape Plan
Prepared for:
DRTC
in:
Lebanon, New Hampshire

Date: October 24,2022

Sheet:

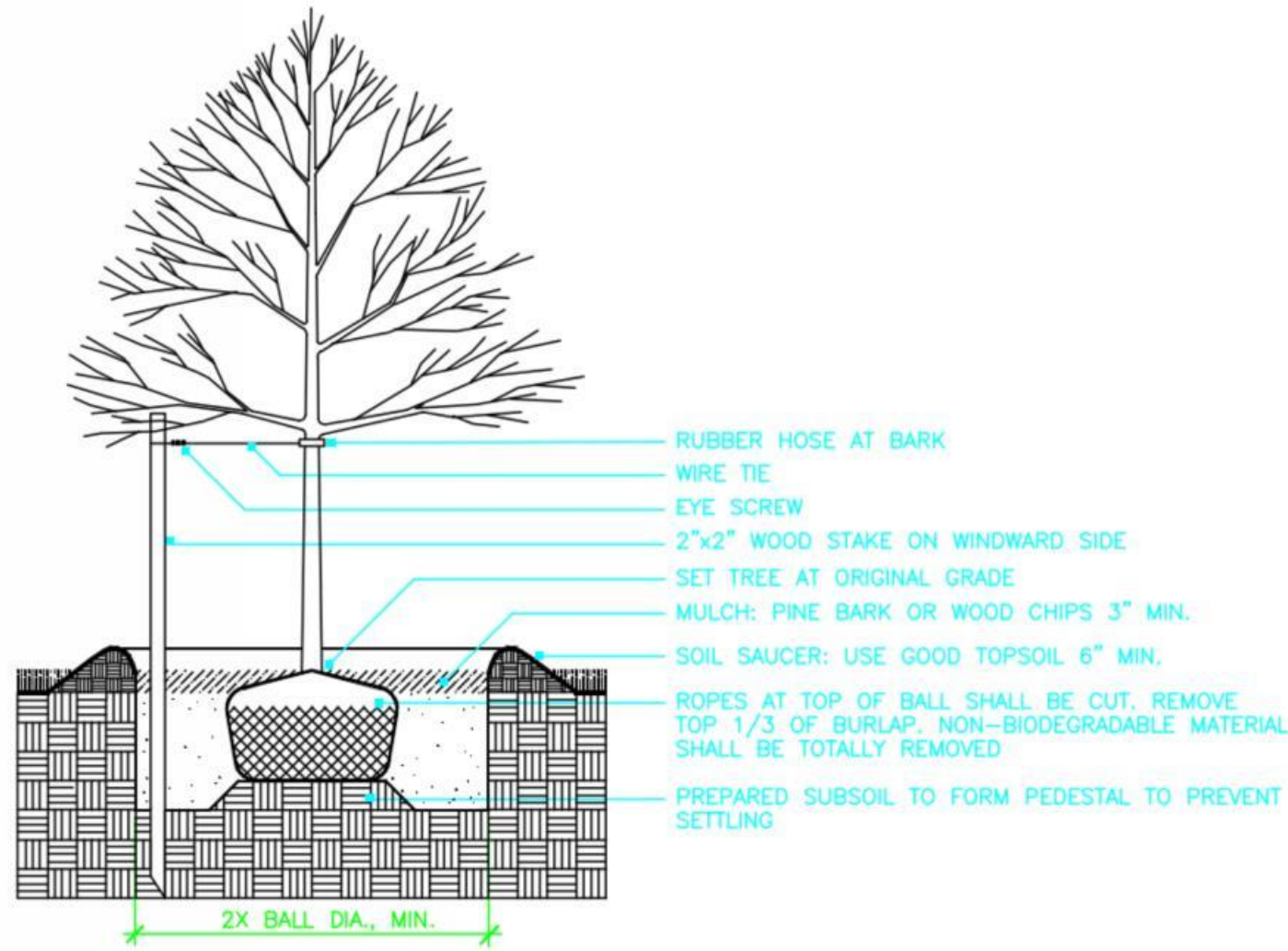
L-1

SHEET 6 OF 16

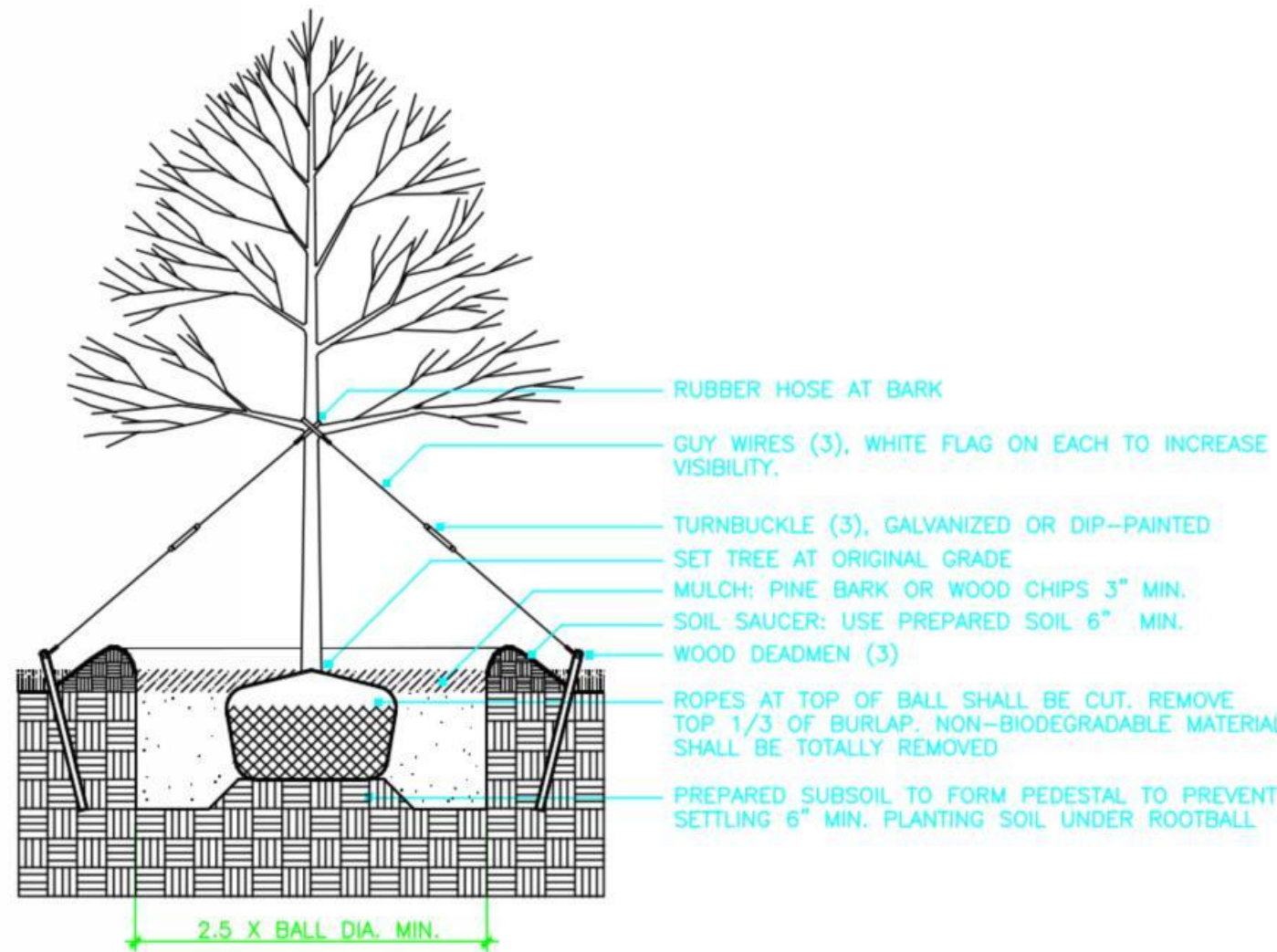


Mara landscape design, LLC

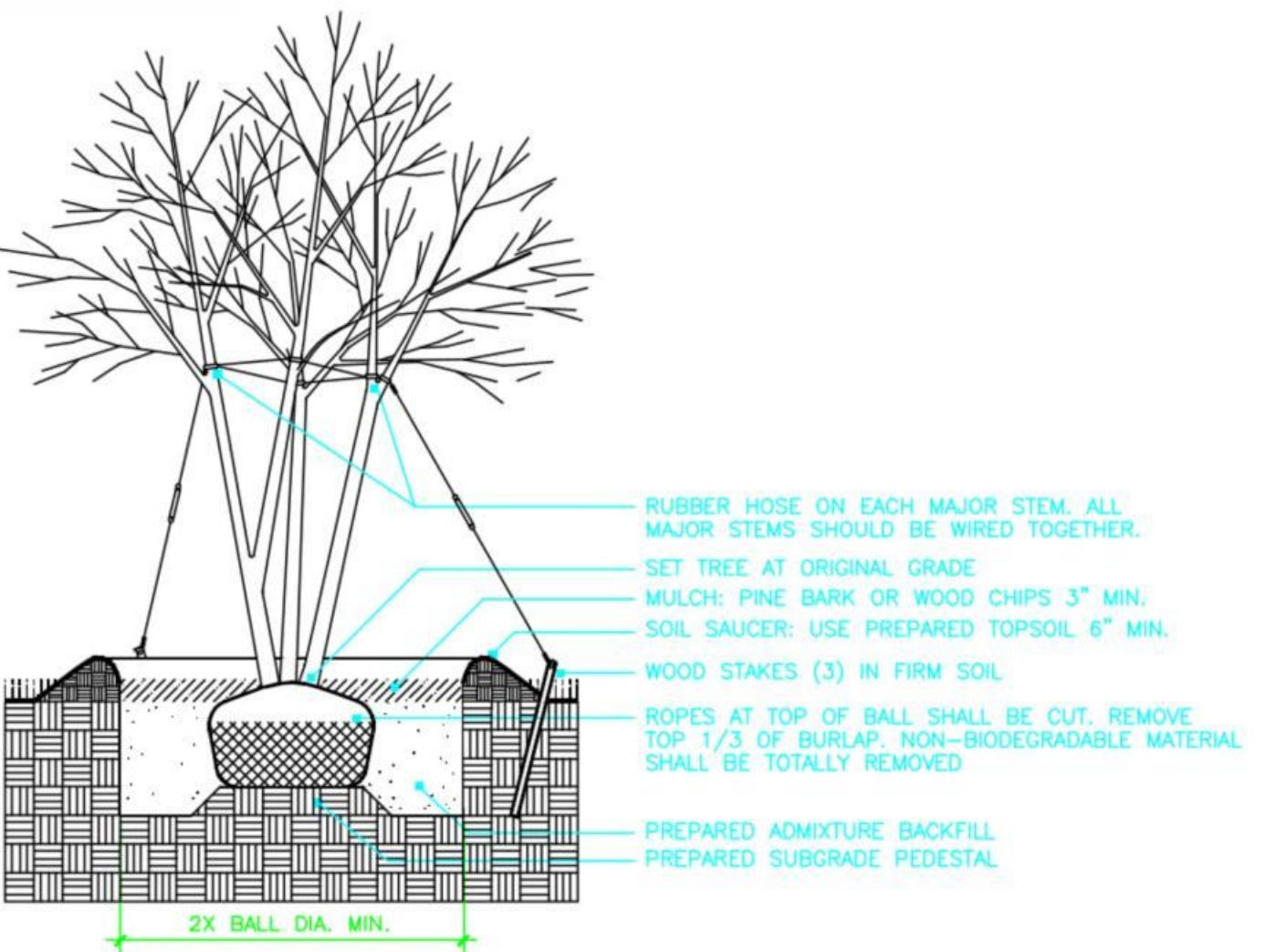
16 Myrtle Ave. Newburyport, MA 105 Bank St. Lebanon, NH
ph. 978.868.0331 email: maralandscape@gmail.com



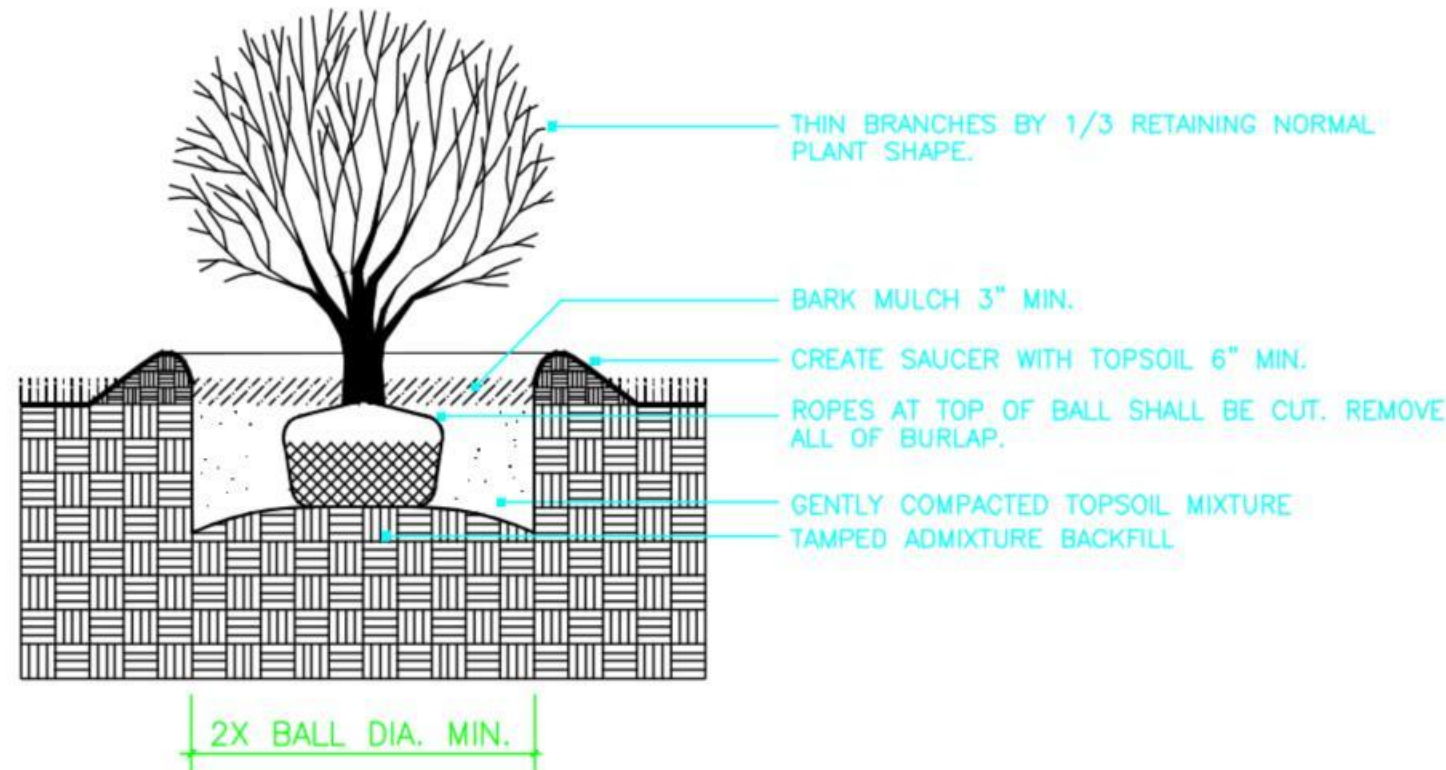
DECIDUOUS TREE PLANTING WITH STAKE AND WIRE TIE
NOT TO SCALE



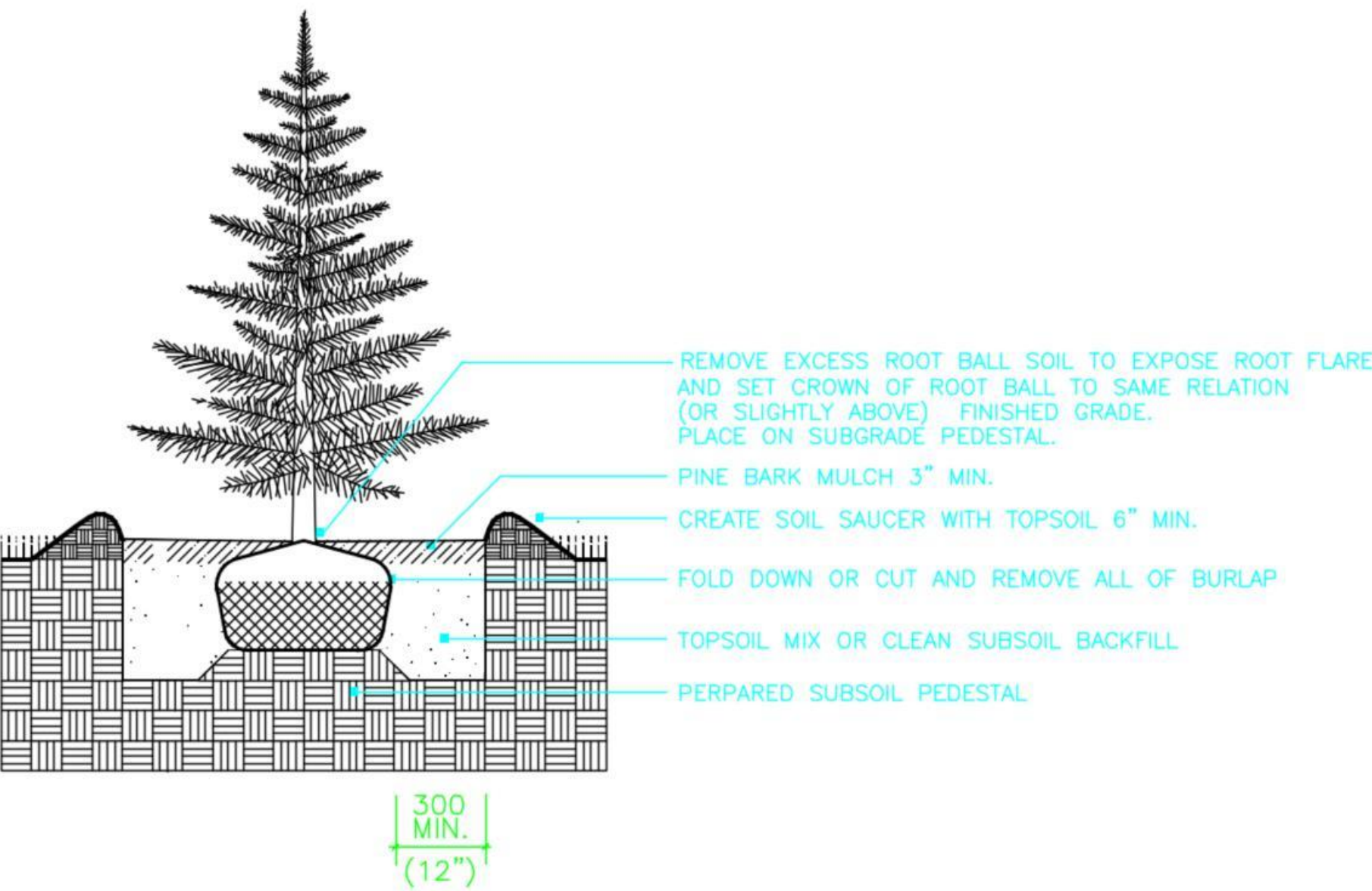
DECIDUOUS TREE PLANTING
NOT TO SCALE



MULTI-STEM TREE PLANTING (WINDY SITES)
NOT TO SCALE



BALL AND BURLAP SHRUB PLANTING
NOT TO SCALE



EVERGREEN TREE PLANTING

GENERAL LANDSCAPE NOTES:

- ALL UTILITIES SHALL BE LOCATED AND MARKED PRIOR TO ANY INSTALLATION. REPORT ANY CONFLICTS BETWEEN UTILITY LOCATIONS AND PROPOSED WORK TO MARA LANDSCAPE DESIGN LLC, TO DETERMINE ANY NECESSARY ADJUSTMENTS PRIOR TO INSTALLATION (REFER TO ENGINEER'S SITE PLAN FOR UTILITY LOCATIONS).
- LANDSCAPE CONTRACTOR SHALL PROVIDE A CERTIFIED SOIL ANALYSIS PRIOR TO EXISTING SOIL CONDITIONS FOR SEEDING AND PLANTINGS.
- ALL PLANTING METHODS WILL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
- PER CITY OF LEBANON, NH PLANNING REGULATIONS 6.2 B: ALL SHRUBS SHALL BE 24-30" IN HEIGHT AND/OR 18-24" IN SPREAD.
- ALL CONTAINER PLANTS INCLUDING GRASSES SHALL BE SET AT GRADE OF ORIGINAL GROWING CONDITIONS OR SLIGHTLY HIGHER TO RECEIVE NO MORE THAN 2" OF MULCH.
- PLANT LIST: A COMPLETE LIST OF PLANTS INCLUDING A SCHEDULE OF QUANTITIES, SIZES, TYPES, AND NAMES, IS INCLUDED ON SHEETS L-1 & L-2. IN THE EVENT OF DISCREPANCIES BETWEEN THE QUANTITIES OF PLANTS IN THE PLANT LIST AND THE DRAWINGS, THE PLAN SHALL GOVERN.
- ALL TREES AND SHRUBS SHALL BE NURSERY GROWN WITHIN A U.S.D.A. PLANT HARDINESS ZONE WHICH IS THE SAME AS, OR COLDER THAN, THE ZONE IN WHICH THE PROJECT IS LOCATED.
- PLANT SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED BY MARA LANDSCAPE DESIGN LLC AND THE CITY OF LEBANON, NH.
- MARA LANDSCAPE DESIGN LLC SHALL RESERVE THE RIGHT TO INSPECT ALL PLANTINGS AT ANY TIME TO INSURE SPECIFICATIONS AND PROCEDURES ARE ADHERED TO.
- BARK MULCH SHALL BE A PINE BARK OR CHIP, OR AGED PINE-HEMLOCK BLEND. DYED MULCHES ARE PROHIBITED.

Update:

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16 Myrtle Ave. Newburyport, MA 01850
978.868.0331
maralandscape@gmail.com

Landscape Planting Details
Prepared For:
DRTC
in:
Lebanon, New Hampshire

Date:

October 24, 2022

Scale:

NTS

Sheet:

L-3